

Torun EVN Schedule for Feb/Mar 2013

0 3 6 9 12 15 18 21 24

Day 52 21.02/Czw			Check C1	f13c1	f13c2		cl13c1	ek033b
Day 53 22.02/Pia		ek033b		e-VLBI		es068a		
Day 54 23.02/Sob		eg066g		e-VLBI		es068b		
Day 55 24.02/Nie		eg066h						em097a
Day 56 25.02/Pon	em097a			ey019	n13c1			ep087a
Day 57 26.02/Wto	ep087a			ek033c				cl13k1
Day 58 27.02/Sro			cl13k1	Check K	n13k1	ro004c		ez024
Day 59 28.02/Czw		ez024			Check M/C2	n13m1		cl13m1
Day 60 1.03/Pia						es071a		
Day 61 2.03/Sob						eb052a		
Day 62 3.03/Nie						eb052b		
Day 63 4.03/Pon						eb052c		
Day 64 5.03/Wto						eb052d		
Day 67 8.03/Pia				Check L	f1311			
Day 68 9.03/Sob								gk047a
Day 69 10.03/Nie	gk047a							et028
Day 70 11.03/Pon					et028	n1311		em100a
Day 71 12.03/Wto	em100a				cl1311		em100b	em100c
Day 72 13.03/Sro		em100c		ed039b				ep087c
Day 73 14.03/Czw		ep087c					em100d	em100e

0 3 6 9 12 15 18 21 24

PART 1 6 cm

CODE	EVN	TELESCOPES	DISKS (TB)			DAY	UT-START	UT-STOP	COMMENTS
			CORR	TOT	/ST				
F13C1	Eb(Wb Jb1)	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh --	EVN	23.4	1.67	Eu	052	1000(21/02)-1200(21/02)	6cm FT-2Gbps (Jb, Wb @ 1Gbps ?)
F13C2	Eb Wb Jb1	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh --	EVN	3.0	0.21	Eu	052	1300(21/02)-1400(21/02)	6cm FTP-FT 512 Mbps
CL13C1	Eb Wb Jb1	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh --	----	0.0	0.00	Eu	052	1500(21/02)-2000(21/02)	6cm FS-CAL
EK033B	Eb Wb Jb1	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh --	----	48.8	3.76	Eu	052	2130(21/02)-0630(22/02)	Source group 1
ES068A	Eb Wb Jb1	On25 Mc Nt Tr Ys -- -- -- --[Sh]--	eEVN	0.0	0.00	Eu	053	0730(22/02)-1700(22/02)	e-VLBI (Sh until ca. UT 1020)
EG066E	Eb Wb Jb1	On25 Mc Nt Tr Ys -- -- -- --[Ar]	EVN	11.3	1.25	Eu	054	0445(23/02)-0745(23/02)	[Ar start UT 0515; Ar not confirmed]
ES068B	Eb Wb Jb1	On25 Mc Nt Tr Ys -- -- -- --[Sh]--	eEVN	0.0	0.00	Eu	054	0845(23/02)-1730(23/02)	e-VLBI (Sh until ca. UT 1020)
EG066H	Eb Wb Jb1	On25 Mc Nt Tr Ys -- -- -- --[Ar]	EVN	11.3	1.25	Eu	055	0445(24/02)-0745(24/02)	[Ar start UT 0515; Ar not confirmed]
EM097A	Eb Wb Jb1	On25 Mc Nt Tr Ys[Sv Zc Bd]Ur Sh Hh --	Bonn	35.0	2.50	Eu	055	1230(24/02)-0030(25/02)	[UT 1830-2130 no Sv Zc Bd]
EY019	Eb Wb Jb1	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh --	----	59.5	4.58	Eu	056	0130(25/02)-1300(25/02)	
N13C1	Eb Wb Jb1	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh --	EVN	5.9	0.42	Eu	056	1400(25/02)-1600(25/02)	6cm NME + FTP-FT 512 Mbps
EP087A	Eb Wb Jb1	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh --	----	32.5	2.50	Eu	056	2130(25/02)-0330(26/02)	+eMERLIN? (see Note (5))
EK033C	Eb Wb Jb1	On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh --	EVN	40.9	2.92	Eu	057	0600(26/02)-1300(26/02)	Source Group 3

PART 2 1.3 cm

CODE	EVN	TELESCOPES	DISKS (TB)			DAY	UT-START	UT-STOP	COMMENTS
			CORR	TOT	/ST				
CL13K1	Eb Jb2	On20 Mc Nt Tr Ys Mh Sv Zc Ur Sh Hh --	----	0.0	0.00	Eu	058	0600(27/02)-1000(27/02)	1.3cm FS-CAL
N13K1	Eb Jb2	On20 Mc Nt Tr Ys Mh Sv Zc Ur Sh Hh --	EVN	5.5	0.42	Eu	058	1100(27/02)-1300(27/02)	1.3cm NME + FT-FT 512 Mbps
RO004C	Eb Jb2	On20 Mc Nt Tr Ys Mh Sv Zc Ur Sh Hh --	EVN	15.1	1.25	Eu	058	1400(27/02)-1700(27/02)	
EZ024	Eb Jb2	On20 Mc Nt Tr Ys Mh[Sv Zc]Ur Sh Hh[Ro]	EVN	65.1	5.00	Eu	058	1800(27/02)-0600(28/02)	[UT 1830-2130 no Sv Zc]
						Ro	058	2000(27/02)-0005(28/02)	DSS 63

PART 3 5 cm

CODE	EVN	TELESCOPES	DISKS (TB)			DAY	UT-START	UT-STOP	COMMENTS
			CORR	TOT	/ST				
N13M1	Eb Wb1	Jb2 On25 Mc Nt Tr Ys Hh	EVN	3.8	0.42	Eu	059	1500(28/02)-1700(28/02)	5cm NME +FTP-FT 512 Mbps
CL13M1	Eb Wb1	Jb2 On25 Mc Nt Tr Ys Hh	----	0.0	0.00	Eu	059	1800(28/02)-2300(28/02)	5cm FS-CAL
ES071A	Eb Wb1	Jb2 On25 Mc Nt Tr Ys --	EVN	3.4	0.42	Eu	060	0730(01/03)-1530(01/03)	6.7 GHz methanol line
EB052A	Eb Wb1	Jb2 On25 Mc Nt Tr Ys Hh	EVN	4.7	0.53	Eu	061	0245(02/03)-1245(02/03)	6.7 GHz methanol line
EB052B	Eb Wb1	Jb2 On25 Mc Nt Tr Ys Hh	EVN	4.7	0.53	Eu	062	0245(03/03)-1245(03/03)	6.7 GHz methanol line
EB052C	Eb Wb1	Jb2 On25 Mc Nt Tr Ys Hh	EVN	4.7	0.53	Eu	063	0245(04/03)-1245(04/03)	6.7 GHz methanol line
EB052D	Eb Wb1	Jb2 On25 Mc Nt Tr Ys Hh	EVN	4.7	0.53	Eu	064	0245(05/03)-1245(05/03)	6.7 GHz methanol line

PART 4 3.6 cm

CODE	EVN	TELESCOPES	DISKS (TB)			DAY	UT-START	UT-STOP	COMMENTS
			CORR	TOT	/ST				
N13X1	Eb Wb	On20 Mc Nt Ys Sv Zc Bd Ur Sh --	EVN	4.6	0.42	Eu	065	1300(06/03)-1500(06/03)	3.6cm NME+FTP-FT 512 Mbps
ET026	Eb Wb	On20 Mc Nt Ys[Sv Zc Bd]Ur Sh[Ro]	EVN	80.0	6.67	Eu	065	1730(06/03)-0930(07/03)	3.6cm [UT 1830-2130 no Sv Zc Bd]
						Ro	065	1955(06/03)-0415(07/03)	3.6cm DSS63
CL13X1	Eb Wb	On20 Mc Nt Ys Sv Zc Bd Ur Sh --	----	0.0	0.00	Eu	066	1100(07/03)-1600(07/03)	3.6cm FS-CAL
EP087B	Eb Wb	On20 Mc Nt Ys Sv Zc Bd Ur Sh --	EVN	27.5	2.50	Eu	066	2130(07/03)-0330(08/03)	3.6cm

| PART 5 18 cm | (+3.6cm PRIDE)

CODE	EVN	TELESCOPES	DISKS (TB)			DAY	UT-START	UT-STOP	COMMENTS		
			CORR	TOT	/ST						
F13L1	Eb Wb	Jb1 On25 -- Nt Tr -- -- -- Ur Sh Hh --	EVN	3.8	0.42	Eu	067	1200(08/03)-1400(08/03)	18cm FTP-FT 512 Mbps		
GK047A	Eb Wb	Jb1 On25 -- Nt Tr --[Zc Bd]Ur Sh Hh --	Bonn	17.2	1.57	Eu	068	1000(09/03)-0100(10/03)	18cm; +Radioastron [Zc,Bd start UT 20:00]		
						0.8	0.83	US	068	1700(09/03)-0100(10/03)	18cm GBT
GK047B	-- --	On20 Mc -- --[Sv]-- -- -- -- -- Wz Mh	EVNs	7.9	1.57	Eu	068	1000(09/03)-0100(10/03)	>>> 3.6cm PRIDE <<< [Sv start UT 20:00]		
GK047C	Eb Wb	Jb1 ---- -- -- -- -- -- -- -- --(Ro)	Bonn	0.5	0.11	Eu	069	1400(10/03)-1500(10/03)	18cm; +Radioastron; DSS63 not confirmed		
GK047D	-- --	On20 Mc -- -- Sv -- -- -- -- -- Wz Mh	EVNs	0.6	0.11	Eu	069	1400(10/03)-1500(10/03)	>>> 3.6cm PRIDE <<<		
		Mc, Sv ==> 18cm									
ET028	Eb Wb	Jb1 On25 Mc Nt Tr[Sv]Zc Bd Ur Sh --	EVN	40.0	3.34	Eu	069	2100(10/03)-1300(11/03)	18cm [Sv starts UT 0100 11 March]		
N13L1	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh Hh --	EVN	5.5	0.42	Eu	070	1400(11/03)-1600(11/03)	18cm NME + FTP-FT 512 Mbps		
EM100A	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh Hh --	EVN	32.5	2.50	Eu	070	1900(11/03)-0100(12/03)	+eMERLIN (see Note (5)); 1130+00; [UT 1900-2130 no Sv Zc Bd]		
CL13L1	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh Hh --	----	0.0	0.00	Eu	071	0830(12/03)-1230(12/03)	18cm FS-CAL		
EM100B	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh --	EVN	25.0	2.09	Eu	071	1330(12/03)-1830(12/03)	+eMERLIN (see Note (5)); 0924+42/1444+41		
EM100C	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh --	EVN	35.0	2.92	Eu	071	2130(12/03)-0430(13/03)	+eMERLIN (see Note (5)); 0924+42/1444+41		
ED039B	Eb Wb	Jb1 On25 Mc Nt Tr -- -- -- -- --(Ar)--	EVN	8.1	1.00	Eu	072	0645(13/03)-0910(13/03)	(Ar not confirmed)		
EP087C	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh --	EVN	30.0	2.50	Eu	072	2130(13/03)-0330(14/03)	+eMERLIN? (see Note (5))		
EM100D	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh --	EVN	17.5	1.46	Eu	073	1500(14/03)-1830(14/03)	+eMERLIN (see Note (5)); 0941+39		
EM100E	Eb Wb	Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh --	EVN	12.6	1.05	Eu	073	2130(14/03)-2400(14/03)	+eMERLIN (see Note (5)); 0941+39		

| CODES USED IN SCHEDULE TABLE |

DISKS (TB) = EVN Mk5A disk allocation, in TBytes: TOT = total, /ST = per station

DAY = Project start day-of-year
Eu = Time allocation in "Europe" (EVN + ...)
US = Time allocation in USA (VLBA + ...)
AR = Time allocation at Arecibo
GB = Time allocation atGBT
Hh = Time allocation at Hartebeesthoek

CORR = Correlator: EVN - EVN Mk4 correlator at JIVE
eEVN - realtime correlation with Mk4 correlator at JIVE
EVNs - SFXC software correlator at JIVE
Bonn - MPiFR/BKG DiFX software correlator in Bonn
VLBA - DiFX software correlator in Socorro
Hays - Haystack Mk4 correlator
Swin - Swinburne DiFX software correlator
====> ASC - Astro Space Centre, Moscow
(Shipping instructions to follow)

(*) useable time = actual time available after subtraction of set-up time from DSN allocation

Project Code Suffix: A,B,.. etc indicates scheduling sequence for multi-segment projects or multiple scheduling attempts.

TELESCOPE CODES:

Eb = Effelsberg Wb = Westerbork Jb1 = Jodrell(Lovell) Jb2 = Jodrell(Mk2) Mc = Medicina
Nt = Noto Tr = Torun On20 = Onsala(20m=60ft) On25 = Onsala(25m=85ft) Ur = Urumqi
Sh = Sheshan Ys = Yeibes-40m Hh = Hartebeesthoek Mh = Metsahovi Ro = Robledo
Ar = Arecibo Cm = Cambridge MER = MERLIN Ny = Ny Alesund Wz = Wettzell
Ap = Algonquin Mr = Matera Go = Goldstone-70m DSS = DSN antenna Sm = Simiez
Sv = Svetloe Bd = Badary Zc = Zelenchukskaya Vm = Mizusawa Vs = Ishigaki-jima
Ym = Yamaguchi Wbl = Westerbork single-antenna WbX = see project schedule for WB telescope subarray.
vlba = VLBA

Telescope code in () = participation is not yet confirmed or is optional
Telescope code in { } = participation only with subset of frequencies (e.g. WSRT X-band only of S/X)
Telescope code in [] = time allocated for only part of the time

| PROJECT INFORMATION |

PROJECT CODE	INVESTIGATOR	PROJECT	Mb/s	T/S	POL	COMMENTS	CONTACT EMAIL ADDRESS
F13C1	JIVE	6cm FT	2048		L+R	fringe test	campbell@jive.nl
F13C2	JIVE	6cm FTP-FT	512		L+R	FTP-FT	campbell@jive.nl
CL13C1	Gunn	6cm FS-CAL	----		L+R	amplitude calibrations	agg@jb.man.ac.uk
EK033B	Kunert-Bajra.	BAL quasars	1024		L+R	Source Group 1	magda@astro.uni.torun.pl
ES068A	Spencer	Cygnus X-2	1024		L+R	e-VLBI	Ralph.Spencer@manchester.ac.uk
EG066G	Giroletti	Seyfert nuclei	1024		L+R		giroletti@ira.inaf.it
ES068B	Spencer	Cygnus X-2	1024		L+R	e-VLBI	Ralph.Spencer@manchester.ac.uk
EG066H	Giroletti	Seyfert nuclei	1024		L+R		giroletti@ira.inaf.it
EM097A	Mantovani	X-ray blazars	512		L+R		fmantovani@ira.inaf.it
EY019	Yang	Sw J1644+57	1024		L+R		yang@jive.nl
N13C1	JIVE	6cm NME	512		L+R	NME + FTP-FT	campbell@jive.nl
EP087A	Perez-Torres	Arp299	1024		L+R		torres@iaa.es
EK033C	Kunert-Bajra.	BAL quasars	1024		L+R	Source Group 3	magda@astro.uni.torun.pl
CL13K1	Gunn	1.3cm FS-CAL	----		L+R	amplitude calibrations	agg@jb.man.ac.uk
N13K1	JIVE	1.3cm NME	512		L+R	NME + FTP-FT	campbell@jive.nl
RO004C	Orienti	TXS0536+145	1024		L+R	ToO-project	orienti@ira.inaf.it
EZ024	Zackrisson	B1152+199	1024		L+R		ez@astro.su.se
N13M1	JIVE	5cm NME	512		L+R	NME + FTP-FT	campbell@jive.nl
CL13M1	Gunn	5cm FS-CAL	----		L+R	amplitude calibrations	agg@jb.man.ac.uk
ES071A	Sanna	CepheusA HW2	128		L+R	6.7 GHz methanol line	asanna@mpifr-bonn.mpg.de
EB052A	Bartkiewicz	maser prop.mot.	128		L+R	6.7 GHz methanol line	annan@astro.uni.torun.pl
EB052B	Bartkiewicz	maser prop.mot.	128		L+R	6.7 GHz methanol line	annan@astro.uni.torun.pl
EB052C	Bartkiewicz	maser prop.mot.	128		L+R	6.7 GHz methanol line	annan@astro.uni.torun.pl
EB052D	Bartkiewicz	maser prop.mot.	128		L+R	6.7 GHz methanol line	annan@astro.uni.torun.pl
N13X1	JIVE	3.6cm NME	512		L+R	NME + FTP-FT	campbell@jive.nl
ET026	Tudose	SN2011dh M51	1024		L+R	3.6cm only	tudose@spacescience.ro
CL13X1	Gunn	3.6cm FS-CAL	----		L+R	amplitude calibrations	agg@jb.man.ac.uk
EP087B	Perez-Torres	Arp299	1024		L+R	3.6cm only	torres@iaa.es
F13L1	JIVE	18cm FTP-FT	512		L+R	FTP-FT	campbell@jive.nl
GK047A	Kovalev	0642+449 - 18cm	256		L+R	with RadioAstron	yyk@asc.rssi.ru
GK047B	Kovalev	PRIDE - 3.6cm	256		R	target RadioAstron	yyk@asc.rssi.ru
GK047C	Kovalev	0642+449 - 18cm	256		L+R	with RadioAstron	yyk@asc.rssi.ru
GK047D	Kovalev	PRIDE - 3.6cm	256		R	target RadioAstron	yyk@asc.rssi.ru
ET028	Teeng	NGC 6251 jet	512		L+R		chihyinteng@gmail.com
N13L1	JIVE	18cm NME+FTPFT	512		L+R	NME + FTP-FT	campbell@jive.nl
EM100A	Mezcua	X-shaped gals.	1024		L+R	1130+00	mmezcuaiac.es
CL13L1	Gunn	18cm FS-CAL	----		L+R	amplitude calibrations	agg@jb.man.ac.uk
EM100B	Mezcua	X-shaped gals.	1024		L+R	0924+42,1444+41	mmezcuaiac.es
EM100C	Mezcua	X-shaped gals.	1024		L+R	0924+42,1444+41	mmezcuaiac.es
ED039B	Deane	Binary SMBHs	1024		L+R		roger.deane@ast.uct.ac.za
EP087C	Perez-Torres	Arp299	1024		L+R		torres@iaa.es
EM100D	Mezcua	X-shaped gals.	1024		L+R	0941+39	mmezcuaiac.es
EM100E	Mezcua	X-shaped gals.	1024		L+R	0941+39	mmezcuaiac.es

Mb/s = Recording bit-rate

Checklist do obserwacji VLBI

(Obserwator zmieniający wypełnia osobną kolumnę!)

	Kod eksperymentu ⇒	<table border="1" style="border-collapse: collapse; width: 100%; height: 100px;"> <tr><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> </table>																																																																
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<i>[przed obserwacją]</i>																																																																		
1. Ustawiono właściwe częstotści LO* (przypis)	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									1																																																								
2. Dystrybutor IF ma właściwe połączenia	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									2																																																								
3. Ustawiono właściwe poprawki pozycji RT	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									3																																																								
4. BBC mają właściwe poziomy (~16 000)	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									4																																																								
5. Jest właściwy stan „phase-cala” (On/Off)	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									5																																																								
6. Jest właściwy poziom „phase-cala”	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									6																																																								
7. Zgadza się czas formatera, FS i GPS/masera	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									7																																																								
8. Poprawki czasu (GPS - H) są rejestrowane	<table border="1" style="border-collapse: collapse; width: 100%; height: 20px;"> <tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr> </table>									8																																																								
	<table border="1" style="border-collapse: collapse; width: 100%; height: 100px;"> <tr><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td><td style="width: 12.5%; height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> </table>																																																																	
	Operator (inicjały) ⇒																																																																	

* Częstotści LO, jeśli nie zaznaczono inaczej, powinny być ustawione na:

2.300 GHz w paśmie L

4.200 GHz w paśmie C1

5.900 GHz w paśmie C2 (M)

Suma LO1+LO2 **17.15 + 4.35 = 21.500** GHz w paśmie K

Uwaga: Wartości odczytów i spostrzeżenia należy wpisywać do dziennika obserwacji.

Checklist (c.d.)

(Nowy obserwator wypełnia osobną kolumnę!)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

[przed obserwacją]

1.																		1
2.																		2
3.																		3
4.																		4
5.																		5
6.																		6
7.																		7
8.																		8

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Checklist do obserwacji VLBI (c.d.)

(Nowy obserwator wypełnia osobną kolumnę!)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

[przed obserwacją]

1.																		1
2.																		2
3.																		3
4.																		4
5.																		5
6.																		6
7.																		7
8.																		8

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

f13c1tr

2GBPS TEST IN SESSION: 1GBPS STATIONS
PI: JOPS

Address: JIVE
Phone: 0521-596-534 EMAIL: jops@jive.nl

Schedule for TORUN (Code Tr) Page 2

2Gbps test in session: 1Gbps stations

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Thu 21 Feb 2013 Day 52 ---

Next scan frequencies:	4948.00	4948.00	4948.00	4948.00	4948.00	4916.00	4916.00	4916.00	4916.00
	4884.00	4884.00	4884.00	4884.00	4884.00	4852.00	4852.00	4852.00	4852.00
Next BBC frequencies:	748.00	748.00	748.00	748.00	748.00	716.00	716.00	716.00	716.00
	684.00	684.00	684.00	684.00	684.00	652.00	652.00	652.00	652.00
Next scan bandwidths:	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10 00 00	3C454.3	21 20 12	48.7	144.3	-1.6	-21.4	0	0	10 00 00
10 08 00	---	21 28 13	49.4	147.1	-1.4	-19.9	480	62	10 00 01
10 09 00	3C454.3	21 29 13	49.5	147.4	-1.4	-19.7	53	62	10 09 00
10 17 00	---	21 37 15	50.1	150.3	-1.3	-18.1	480	124	10 09 01
10 18 00	3C454.3	21 38 15	50.2	150.6	-1.3	-17.9	53	124	10 18 00
10 26 00	---	21 46 16	50.8	153.5	-1.1	-16.2	480	186	10 18 01
10 30 00	0234+285	21 50 17	33.2	84.9	-4.8	-43.1	87	186	10 30 00
10 38 00	---	21 58 18	34.4	86.4	-4.7	-43.2	480	248	10 30 01
10 39 00	0234+285	21 59 18	34.6	86.6	-4.7	-43.2	54	248	10 39 00
10 47 00	---	22 07 20	35.8	88.2	-4.5	-43.3	480	310	10 39 01
10 48 00	0234+285	22 08 20	35.9	88.4	-4.5	-43.3	54	310	10 48 00
10 56 00	---	22 16 21	37.1	90.0	-4.4	-43.3	480	372	10 48 01
11 00 00	0234+285	22 20 22	37.7	90.8	-4.3	-43.3	233	372	11 00 00
11 08 00	---	22 28 23	38.9	92.4	-4.2	-43.2	480	434	11 00 01
11 09 00	0234+285	22 29 23	39.1	92.6	-4.2	-43.2	54	434	11 09 00
11 17 00	---	22 37 25	40.3	94.3	-4.0	-43.1	480	495	11 09 01
11 18 00	0234+285	22 38 25	40.4	94.5	-4.0	-43.1	54	495	11 18 00
11 26 00	---	22 46 26	41.6	96.2	-3.9	-43.0	480	557	11 18 01
11 30 00	0234+285	22 50 27	42.2	97.1	-3.8	-42.9	233	557	11 30 00
11 38 00	---	22 58 28	43.4	98.8	-3.7	-42.7	480	619	11 30 01
11 39 00	0234+285	22 59 28	43.6	99.0	-3.7	-42.6	54	619	11 39 00
11 47 00	---	23 07 30	44.7	100.8	-3.5	-42.3	480	681	11 39 01
11 48 00	0234+285	23 08 30	44.9	101.1	-3.5	-42.3	54	681	11 48 00
11 56 00	---	23 16 31	46.1	102.9	-3.4	-41.9	480	743	11 48 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: sess113.pfb

Matching groups in /aps3/sched10.2/catalogs/freq.dat:

tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group:	3	Station:	TORUN	Total bit rate:	1024
Format:	MKIV1:2	Bits per sample:	2	Sample rate:	32.000
Number of channels:	16	DBE type:		Speedup factor:	0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set:	4	Setup file default.	Used pcal sets:	1				
LO sum=	4948.00	4948.00	4948.00	4948.00	4916.00	4916.00	4916.00	4916.00
	4884.00	4884.00	4884.00	4884.00	4852.00	4852.00	4852.00	4852.00
BBC fr=	748.00	748.00	748.00	748.00	716.00	716.00	716.00	716.00
	684.00	684.00	684.00	684.00	652.00	652.00	652.00	652.00
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Matching frequency sets:	4							

The following pulse cal sets were used with this setup:

Pulse cal detection set:	1	PCAL = 1MHZ						
PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	1000	1000	1000	1000	1000	1000	1000	1000
PCALFR2=	1000	1000	1000	1000	1000	1000	1000	1000

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- 2Gbps test in session: 1Gbps stations
 Catalog positions marked with *.
 Precession of date coordinates is based on stop time of first scan.
 Names used in schedule marked with *.
 Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC).
 Scan hours are for recording scans only.
 Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0237+2848	02 34 55.589591	* 02 37 52.405678	02 38 39.659177	0.11
* 0234+285	28 35 11.40773	* 28 48 08.98998	28 51 35.44005	0.10
J2253+1608	22 51 29.519738	* 22 53 57.747937	22 54 36.387911	0.68
* 3C454.3	15 52 54.34810	* 16 08 53.56093	16 13 07.69286	0.72

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0234+285	73.7
3C454.3	28.0

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

f13c2tr

NETWORK MONITORING EXPERIMENT
PI: Jun YANG

Address: JIVE Postbus 2 7990 AA Dwingeloo The Netherlands
Phone: +31-521-596507 EMAIL: yang@jive.nl
Phone during observation: +31-521-596507

Notes: 6cm NME and ftp fringe test for session 1/2013
512 Mbps, L+R, 2-bit sampling, 8 MHz filters
Please send the disk pack by express to JIVE

COVER LETTER:

This is the schedule for the 6cm ftp fringe-test F13C2 on 21 Feb 2013 involving 15 antennas: Eb Wb Jb1 On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh Ir. There are also separate names for stations to test their new backends: Jm -- Jodrell1 MK5B backend. Od, Nd, Yd, Hd -- Onsala, Noto, Yebes, and Hart DBBC backends.

Two ftp-fringe tests are scheduled throughout the experiment:
13:09 UT (scan 2, 2 sec, 0234+285)
13:59 UT (scan 8, 2 sec, 0234+285)

Please make sure that the autoftp is set up correctly. Thanks!

Good luck with the session!

Jun Yang
Support Scientist, JIVE

Schedule for TORUN (Code Tr) Page 2
Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Thu 21 Feb 2013 Day 52 ---

Next scan frequencies:	4966.49	4966.49	4966.49	4966.49	4982.49	4982.49	4982.49	4982.49	4982.49
	4998.49	4998.49	4998.49	4998.49	5014.49	5014.49	5014.49	5014.49	5014.49
Next BBC frequencies:	766.49	766.49	766.49	766.49	782.49	782.49	782.49	782.49	782.49
	798.49	798.49	798.49	798.49	814.49	814.49	814.49	814.49	814.49
Next scan bandwidths:	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

13 00 00	0234+285	00 20 42	55.0	120.1	-2.3	-36.4	0	0	13 00 00
13 05 00	---	00 25 42	55.7	121.7	-2.2	-35.7	300	19	13 00 01
13 06 00	0234+285	00 26 43	55.8	122.0	-2.2	-35.6	54	19	13 06 00
13 10 00	---	00 30 43	56.3	123.3	-2.1	-35.0	240	35	13 06 01
13 14 00	0234+285	00 34 44	56.8	124.6	-2.1	-34.4	233	35	13 14 00
13 20 00	---	00 40 45	57.5	126.6	-2.0	-33.4	360	58	13 14 01

```

13 22 00 0234+285    00 42 45  57.8 127.3 -1.9    -33.1  113    58  13 22 00
13 30 00 ---          00 50 46  58.7 130.1 -1.8    -31.6  480    89  13 22 01

13 32 00 0234+285    00 52 47  59.0 130.8 -1.8    -31.3  113    89  13 32 00
13 40 00 ---          01 00 48  59.8 133.8 -1.6    -29.7  480   120  13 32 01

13 42 00 0234+285    01 02 48  60.1 134.5 -1.6    -29.3  113   120  13 42 00
13 50 00 ---          01 10 50  60.9 137.7 -1.5    -27.5  480   151  13 42 01

13 52 00 0234+285    01 12 50  61.1 138.5 -1.4    -27.0  113   151  13 52 00
14 00 00 ---          01 20 51  61.9 141.8 -1.3    -25.1  480   182  13 52 01

```

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: sess113.C512

Matching groups in /aps3/sched10.2/catalogs/freq.dat:

tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

```

Setup group:   5      Station: TORUN      Total bit rate:  512
Format: MKIV1:2      Bits per sample:  2      Sample rate: 16.000
Number of channels: 16  DBE type:          Speedup factor:  1.00

```

Disk used to record data.

```

1st LO=  4200.00  4200.00  4200.00  4200.00  4200.00  4200.00  4200.00  4200.00  4200.00
         4200.00  4200.00  4200.00  4200.00  4200.00  4200.00  4200.00  4200.00  4200.00
Net SB=   L      L      U      U      L      L      U      U
         L      L      U      U      L      L      U      U
Pol.  =   RCP    LCP    RCP    LCP    RCP    LCP    RCP    LCP
         RCP    LCP    RCP    LCP    RCP    LCP    RCP    LCP
BBC   =   1      2      1      2      3      4      3      4
         5      6      5      6      7      8      7      8
BBC SB=  L      L      U      U      L      L      U      U
         L      L      U      U      L      L      U      U
IF    =   C      A      C      A      C      A      C      A
         C      A      C      A      C      A      C      A

```

The following frequency sets based on these setups were used.

```

Frequency Set:  7  Setup file default.  Used pcal sets:  1
LO sum=  4966.49  4966.49  4966.49  4966.49  4982.49  4982.49  4982.49  4982.49
         4998.49  4998.49  4998.49  4998.49  5014.49  5014.49  5014.49  5014.49
BBC fr=   766.49  766.49  766.49  766.49  782.49  782.49  782.49  782.49
         798.49  798.49  798.49  798.49  814.49  814.49  814.49  814.49
Bandwd=   8.00    8.00    8.00    8.00    8.00    8.00    8.00    8.00
         8.00    8.00    8.00    8.00    8.00    8.00    8.00    8.00
Matching frequency sets:  7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1   S3   S5   S7   S9   S11  S13  S15
PCALXB2=  S2   S4   S6   S8  S10  S12  S14  S16
PCALFR1=  490  510  490  510  490  510  490  510
PCALFR2=  490  510  490  510  490  510  490  510

```

Track assignments are:

```

track1=  2, 10, 18, 26,  3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS -- Network Monitoring Experiment
 Catalog positions marked with *.
 Precession of date coordinates is based on stop time of first scan.
 Names used in schedule marked with *.
 Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC).
 Scan hours are for recording scans only.
 Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)			Error (mas)
	(B1950)	(J2000)	(Date)	
J0237+2848	02 34 55.589591	* 02 37 52.405678	02 38 39.657473	0.11
* 0234+285	28 35 11.40773	* 28 48 08.98998	28 51 35.43253	0.10

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0234+285	73.6

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

Kalibracja: cl13c1tr (eksperyment lokalny)

ek033btr

BAL QUASARS GROUP 1
PI: Magdalena Kunert-Bajraszewska

Address: Torun Centre for Astronomy, ul. Gagarina 11, Torun, Poland
Phone: +48 56 611 30 40 EMAIL: magda@astro.umk.pl
Fax: +48 56 611 30 09 Phone during observation: +48 56 611 30 20

Observing mode: Phase-referencing of BAL quasars (1Gb/s)

Notes: *****
** Please make sure PHASE CAL is OFF **

Schedule for TORUN (Code Tr) Page 2
BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are L0 sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Source Start / Stop Early Disk TPStart
Stop UT LST EL AZ HA UP ParA Dwell GBytes SYNC

--- Thu 21 Feb 2013 Day 52 ---

Table with columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, Early, Disk, TPStart, SYNC. It lists observation schedules for various sources like J0908+4150 and =0905+420, including scan frequencies, BBC frequencies, and bandwidths.

Schedule for TORUN (Code Tr)

Page 3

BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 21 Feb 2013 Day 52 ---										
21 55 40	J0908+4150	09 17 50	78.6	187.9	0.1		6.3	-38	186	No stop
21 57 10	=0905+420	09 19 20	78.6	189.3	0.2		7.5	52	197	21 55 41
21 57 10	0856+4242	09 19 20	79.0	201.3	0.4		17.3	-40	197	No stop
22 00 40	---	09 22 50	78.8	204.5	0.4		19.8	170	225	21 57 11
22 01 30	J0908+4150	09 23 41	78.4	193.3	0.2		10.7	12	225	22 01 30
22 02 30	=0905+420	09 24 41	78.4	194.2	0.3		11.4	60	232	22 01 31
22 02 30	0856+4242	09 24 41	78.6	206.1	0.5		21.0	-40	232	No stop
22 06 00	---	09 28 11	78.4	209.1	0.5		23.4	170	259	22 02 31
22 06 00	J0908+4150	09 28 11	78.3	197.4	0.3		13.9	-37	259	No stop
22 07 30	=0905+420	09 29 41	78.2	198.7	0.3		15.0	53	271	22 06 01
22 07 30	0856+4242	09 29 41	78.3	210.3	0.5		24.4	-39	271	No stop
22 11 00	---	09 33 12	78.0	213.2	0.6		26.5	171	298	22 07 31
22 11 40	J0908+4150	09 33 52	78.0	202.3	0.4		17.8	3	298	22 11 40
22 12 40	=0905+420	09 34 52	77.9	203.2	0.4		18.5	60	306	22 11 41
22 18 25	J1310+3233	09 40 38	47.4	97.3	-3.5		-44.9	117	306	22 18 25
22 25 25	=1308+328	09 47 39	48.4	98.8	-3.4		-44.7	420	360	22 18 26
22 26 55	J1335+4542	09 49 10	53.3	78.2	-3.8		-57.2	33	360	22 26 55
22 28 25	=1333+459	09 50 40	53.6	78.4	-3.8		-57.3	90	372	22 26 56
22 28 25	1333+4729	09 50 40	54.8	76.1	-3.7		-59.5	-18	372	No stop
22 31 55	---	09 54 10	55.3	76.6	-3.7		-59.7	192	399	22 28 26
22 31 55	J1335+4542	09 54 10	54.1	79.0	-3.7		-57.5	-19	399	No stop
22 33 25	=1333+459	09 55 41	54.3	79.2	-3.7		-57.5	71	410	22 31 56
22 33 25	1333+4729	09 55 41	55.5	76.9	-3.6		-59.8	-19	410	No stop
22 36 55	---	09 59 11	56.0	77.4	-3.6		-60.0	191	437	22 33 26
22 37 40	J1335+4542	09 59 56	54.9	79.9	-3.6		-57.7	26	437	22 37 40
22 38 40	=1333+459	10 00 57	55.1	80.1	-3.6		-57.8	60	445	22 37 41
22 38 40	1333+4729	10 00 57	56.3	77.7	-3.6		-60.1	-19	445	No stop
22 42 10	---	10 04 27	56.8	78.2	-3.5		-60.3	191	472	22 38 41
22 42 10	J1335+4542	10 04 27	55.6	80.6	-3.5		-57.9	-19	472	No stop
22 43 40	=1333+459	10 05 57	55.8	80.9	-3.5		-58.0	71	484	22 42 11
22 43 40	1333+4729	10 05 57	57.0	78.4	-3.5		-60.4	-19	484	No stop
22 47 10	---	10 09 28	57.5	79.0	-3.4		-60.6	191	511	22 43 41

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 21 Feb 2013 Day 52 ---										
22 47 55	J1335+4542	10 10 13	56.5	81.6	-3.4		-58.2	26	511	22 47 55
22 48 55	=1333+459	10 11 13	56.6	81.8	-3.4		-58.2	60	519	22 47 56
22 48 55	1333+4729	10 11 13	57.8	79.2	-3.4		-60.7	-19	519	No stop
22 52 25	---	10 14 44	58.3	79.8	-3.3		-60.9	191	546	22 48 56
22 52 25	J1335+4542	10 14 44	57.1	82.4	-3.4		-58.3	-19	546	No stop
22 53 55	=1333+459	10 16 14	57.3	82.6	-3.3		-58.4	71	557	22 52 26
22 53 55	1333+4729	10 16 14	58.5	80.0	-3.3		-60.9	-19	557	No stop
22 57 25	---	10 19 45	59.1	80.6	-3.2		-61.1	191	584	22 53 56
22 58 10	J1335+4542	10 20 30	58.0	83.3	-3.3		-58.5	25	584	22 58 10
22 59 10	=1333+459	10 21 30	58.1	83.5	-3.2		-58.6	60	592	22 58 11
22 59 10	1333+4729	10 21 30	59.3	80.9	-3.2		-61.2	-19	592	No stop
23 02 40	---	10 25 01	59.8	81.4	-3.1		-61.4	191	619	22 59 11
23 02 40	J1335+4542	10 25 01	58.7	84.1	-3.2		-58.7	-20	619	No stop
23 04 10	=1333+459	10 26 31	58.9	84.4	-3.2		-58.7	70	631	23 02 41
23 04 10	1333+4729	10 26 31	60.1	81.7	-3.1		-61.4	-20	631	No stop
23 07 40	---	10 30 01	60.6	82.2	-3.1		-61.6	190	658	23 04 11
23 08 25	J1335+4542	10 30 46	59.5	85.1	-3.1		-58.8	25	658	23 08 25
23 09 25	=1333+459	10 31 47	59.7	85.3	-3.1		-58.9	60	666	23 08 26
23 10 40	J1349+5341	10 33 02	61.2	68.8	-3.3		-70.8	27	666	23 10 40
23 11 40	=1347+539	10 34 02	61.3	68.9	-3.3		-70.9	60	674	23 10 41
23 11 40	1401+5208	10 34 02	59.1	70.6	-3.5		-67.1	-22	674	No stop
23 15 10	---	10 37 33	59.6	71.0	-3.4		-67.5	188	701	23 11 41
23 15 10	J1349+5341	10 37 33	61.8	69.3	-3.2		-71.3	-22	701	No stop
23 16 40	=1347+539	10 39 03	62.0	69.5	-3.2		-71.4	68	712	23 15 11
23 16 40	1401+5208	10 39 03	59.8	71.1	-3.4		-67.6	-22	712	No stop
23 20 10	---	10 42 33	60.3	71.5	-3.3		-67.9	188	739	23 16 41
23 20 50	J1349+5341	10 43 14	62.6	69.9	-3.1		-71.9	18	739	23 20 50
23 21 50	=1347+539	10 44 14	62.8	70.0	-3.1		-72.0	60	747	23 20 51
23 21 50	1401+5208	10 44 14	60.6	71.7	-3.3		-68.1	-22	747	No stop
23 25 20	---	10 47 44	61.1	72.2	-3.2		-68.4	188	774	23 21 51
23 25 20	J1349+5341	10 47 44	63.3	70.3	-3.0		-72.4	-22	774	No stop
23 26 50	=1347+539	10 49 15	63.5	70.5	-3.0		-72.6	68	786	23 25 21

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 21 Feb 2013 Day 52 ---										
23 26 50	1401+5208	10 49 15	61.3	72.3	-3.2		-68.6	-22	786	No stop
23 30 20	---	10 52 45	61.8	72.7	-3.2		-68.9	188	813	23 26 51
23 31 00	J1349+5341	10 53 25	64.1	70.9	-2.9		-73.0	18	813	23 31 00
23 32 00	=1347+539	10 54 25	64.2	71.0	-2.9		-73.2	60	821	23 31 01
23 32 00	1401+5208	10 54 25	62.0	72.9	-3.1		-69.1	-22	821	No stop
23 35 30	---	10 57 56	62.5	73.3	-3.1		-69.4	188	848	23 32 01
23 35 30	J1349+5341	10 57 56	64.7	71.3	-2.9		-73.6	-22	848	No stop
23 37 00	=1347+539	10 59 26	64.9	71.5	-2.8		-73.7	68	859	23 35 31
23 37 00	1401+5208	10 59 26	62.7	73.5	-3.0		-69.5	-22	859	No stop
23 40 30	---	11 02 57	63.2	73.9	-3.0		-69.9	188	886	23 37 01
23 41 10	J1349+5341	11 03 37	65.5	71.9	-2.8		-74.2	18	886	23 41 10
23 42 10	=1347+539	11 04 37	65.7	72.0	-2.8		-74.3	60	894	23 41 11
23 42 10	1401+5208	11 04 37	63.5	74.1	-3.0		-70.0	-22	894	No stop
23 45 40	---	11 08 08	64.0	74.5	-2.9		-70.3	188	921	23 42 11
23 45 40	J1349+5341	11 08 08	66.2	72.3	-2.7		-74.7	-22	921	No stop
23 47 10	=1347+539	11 09 38	66.4	72.5	-2.7		-74.9	68	933	23 45 41
23 47 10	1401+5208	11 09 38	64.2	74.7	-2.9		-70.5	-22	933	No stop
23 50 40	---	11 13 08	64.7	75.1	-2.8		-70.8	188	960	23 47 11
23 51 20	J1349+5341	11 13 49	67.0	72.9	-2.6		-75.3	18	960	23 51 20
23 52 20	=1347+539	11 14 49	67.1	73.0	-2.6		-75.5	60	968	23 51 21
23 53 50	J1510+5702	11 16 19	57.3	59.3	-3.9		-71.4	39	968	23 53 50
23 54 50	=1508+572	11 17 19	57.4	59.4	-3.9		-71.5	60	975	23 53 51
23 54 50	1457+5744	11 17 19	59.2	59.0	-3.7		-74.4	-20	975	No stop
23 58 20	---	11 20 50	59.6	59.2	-3.6		-74.9	190	1003	23 54 51
23 58 20	J1510+5702	11 20 50	57.9	59.6	-3.8		-72.0	-20	1003	No stop
23 59 50	=1508+572	11 22 20	58.1	59.8	-3.8		-72.2	70	1014	23 58 21
--- Start: Thu 21 Feb 2013 Day 52 -- Stop: Fri 22 Feb 2013 Day 53 ---										
23 59 50	1457+5744	11 22 20	59.8	59.4	-3.6		-75.1	-20	1014	No stop
00 03 20	---	11 25 51	60.3	59.6	-3.5		-75.7	190	1041	23 59 51
00 04 00	J1510+5702	11 26 31	58.6	60.1	-3.7		-72.8	20	1041	00 04 00
00 05 00	=1508+572	11 27 31	58.7	60.2	-3.7		-73.0	60	1049	00 04 01

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
00 05 00	1457+5744	11 27 31	60.5	59.7	-3.5		-75.9	-20	1049	No stop
00 08 30	---	11 31 01	61.0	59.9	-3.5		-76.5	190	1076	00 05 01
00 08 30	J1510+5702	11 31 01	59.2	60.4	-3.7		-73.5	-20	1076	No stop
00 10 00	=1508+572	11 32 32	59.4	60.5	-3.6		-73.7	70	1088	00 08 31
00 10 00	1457+5744	11 32 32	61.1	60.0	-3.4		-76.7	-20	1088	No stop
00 13 30	---	11 36 02	61.6	60.2	-3.4		-77.2	190	1115	00 10 01
00 14 10	J1510+5702	11 36 42	59.9	60.9	-3.6		-74.3	20	1115	00 14 10
00 15 10	=1508+572	11 37 42	60.1	60.9	-3.5		-74.4	60	1123	00 14 11
00 15 10	1457+5744	11 37 42	61.8	60.3	-3.3		-77.5	-20	1123	No stop
00 18 40	---	11 41 13	62.3	60.6	-3.3		-78.1	190	1150	00 15 11
00 18 40	J1510+5702	11 41 13	60.5	61.2	-3.5		-75.0	-20	1150	No stop
00 20 10	=1508+572	11 42 43	60.7	61.3	-3.5		-75.2	70	1161	00 18 41
00 20 10	1457+5744	11 42 43	62.5	60.6	-3.3		-78.3	-20	1161	No stop
00 23 40	---	11 46 14	62.9	60.9	-3.2		-78.9	190	1188	00 20 11
00 24 20	J1510+5702	11 46 54	61.3	61.6	-3.4		-75.8	20	1188	00 24 20
00 25 20	=1508+572	11 47 54	61.4	61.7	-3.4		-75.9	60	1196	00 24 21
00 25 20	1457+5744	11 47 54	63.2	60.9	-3.2		-79.1	-20	1196	No stop
00 28 50	---	11 51 25	63.6	61.1	-3.1		-79.7	190	1223	00 25 21
00 28 50	J1510+5702	11 51 25	61.9	61.9	-3.3		-76.5	-20	1223	No stop
00 30 20	=1508+572	11 52 55	62.1	62.0	-3.3		-76.7	70	1235	00 28 51
00 30 20	1457+5744	11 52 55	63.8	61.2	-3.1		-79.9	-20	1235	No stop
00 33 50	---	11 56 26	64.3	61.4	-3.0		-80.5	190	1262	00 30 21
00 34 30	J1510+5702	11 57 06	62.6	62.3	-3.2		-77.3	20	1262	00 34 30
00 35 30	=1508+572	11 58 06	62.8	62.3	-3.2		-77.5	60	1270	00 34 31
00 44 30	J0908+4150	12 07 07	58.5	267.2	3.0		53.6	116	1270	00 44 30
00 45 30	=0905+420	12 08 07	58.4	267.4	3.0		53.6	60	1277	00 44 31
00 45 30	0856+4242	12 08 07	57.1	271.1	3.2		54.7	-22	1277	No stop
00 49 00	---	12 11 38	56.6	271.8	3.2		54.7	188	1304	00 45 31
00 49 00	J0908+4150	12 11 38	57.8	268.1	3.0		53.6	-22	1304	No stop
00 50 30	=0905+420	12 13 08	57.6	268.4	3.1		53.6	68	1316	00 49 01

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
00 50 30	0856+4242	12 13 08	56.3	272.1	3.3		54.7	-22	1316	No stop
00 54 00	---	12 16 39	55.8	272.8	3.3		54.6	188	1343	00 50 31
00 54 40	J0908+4150	12 17 19	57.0	269.3	3.1		53.6	18	1343	00 54 40
00 55 40	=0905+420	12 18 19	56.8	269.5	3.1		53.6	60	1351	00 54 41
00 55 40	0856+4242	12 18 19	55.6	273.1	3.3		54.6	-22	1351	No stop
00 59 10	---	12 21 50	55.0	273.7	3.4		54.6	188	1378	00 55 41
00 59 10	J0908+4150	12 21 50	56.3	270.2	3.2		53.6	-22	1378	No stop
01 00 40	=0905+420	12 23 20	56.1	270.5	3.2		53.6	68	1390	00 59 11
01 00 40	0856+4242	12 23 20	54.8	274.0	3.4		54.5	-22	1390	No stop
01 04 10	---	12 26 51	54.3	274.7	3.5		54.5	188	1417	01 00 41
01 04 50	J0908+4150	12 27 31	55.4	271.3	3.3		53.6	18	1417	01 04 50
01 05 50	=0905+420	12 28 31	55.3	271.5	3.3		53.6	60	1424	01 04 51
01 05 50	0856+4242	12 28 31	54.0	275.0	3.5		54.4	-22	1424	No stop
01 09 20	---	12 32 01	53.5	275.6	3.6		54.4	188	1452	01 05 51
01 09 20	J0908+4150	12 32 01	54.8	272.2	3.4		53.6	-21	1452	No stop
01 10 50	=0905+420	12 33 32	54.5	272.5	3.4		53.6	69	1463	01 09 21
01 10 50	0856+4242	12 33 32	53.3	275.9	3.6		54.3	-22	1463	No stop
01 14 20	---	12 37 02	52.8	276.5	3.7		54.2	188	1490	01 10 51
01 15 00	J0908+4150	12 37 42	53.9	273.3	3.5		53.5	19	1490	01 15 00
01 16 00	=0905+420	12 38 42	53.8	273.5	3.5		53.5	60	1498	01 15 01
01 16 00	0856+4242	12 38 42	52.5	276.8	3.7		54.2	-21	1498	No stop
01 19 30	---	12 42 13	52.0	277.4	3.7		54.1	189	1525	01 16 01
01 19 30	J0908+4150	12 42 13	53.2	274.1	3.5		53.4	-21	1525	No stop
01 21 00	=0905+420	12 43 43	53.0	274.4	3.6		53.4	69	1537	01 19 31
01 21 00	0856+4242	12 43 43	51.8	277.7	3.8		54.0	-21	1537	No stop
01 24 30	---	12 47 14	51.2	278.3	3.8		53.9	189	1564	01 21 01
01 25 10	J0908+4150	12 47 54	52.4	275.2	3.6		53.3	19	1564	01 25 10
01 26 10	=0905+420	12 48 54	52.2	275.3	3.7		53.3	60	1572	01 25 11
01 26 10	0856+4242	12 48 54	51.0	278.6	3.9		53.8	-21	1572	No stop
01 29 40	---	12 52 25	50.5	279.2	3.9		53.7	189	1599	01 26 11

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
01 29 40	J0908+4150	12 52 25	51.7	276.0	3.7		53.2	-21	1599	No stop
01 31 10	=0905+420	12 53 55	51.5	276.2	3.7		53.2	69	1610	01 29 41
01 31 10	0856+4242	12 53 55	50.2	279.4	3.9		53.7	-21	1610	No stop
01 34 40	---	12 57 26	49.7	280.0	4.0		53.5	189	1637	01 31 11
01 35 20	J0908+4150	12 58 06	50.9	277.0	3.8		53.1	19	1637	01 35 20
01 36 20	=0905+420	12 59 06	50.7	277.2	3.8		53.0	60	1645	01 35 21
01 36 20	0856+4242	12 59 06	49.5	280.3	4.0		53.5	-21	1645	No stop
01 39 50	---	13 02 36	49.0	280.9	4.1		53.3	189	1672	01 36 21
01 39 50	J0908+4150	13 02 36	50.2	277.8	3.9		52.9	-21	1672	No stop
01 41 20	=0905+420	13 04 07	50.0	278.0	3.9		52.9	69	1684	01 39 51
01 41 20	0856+4242	13 04 07	48.7	281.1	4.1		53.2	-21	1684	No stop
01 44 50	---	13 07 37	48.2	281.7	4.2		53.1	189	1711	01 41 21
01 45 30	J0908+4150	13 08 17	49.4	278.8	4.0		52.7	19	1711	01 45 30
01 46 30	=0905+420	13 09 17	49.2	278.9	4.0		52.7	60	1719	01 45 31
01 46 30	0856+4242	13 09 17	48.0	282.0	4.2		53.0	-21	1719	No stop
01 50 00	---	13 12 48	47.5	282.6	4.3		52.8	189	1746	01 46 31
01 50 00	J0908+4150	13 12 48	48.7	279.6	4.1		52.6	-20	1746	No stop
01 51 30	=0905+420	13 14 18	48.5	279.8	4.1		52.5	70	1757	01 50 01
01 51 30	0856+4242	13 14 18	47.2	282.8	4.3		52.8	-21	1757	No stop
01 55 00	---	13 17 49	46.7	283.4	4.3		52.6	189	1784	01 51 31
01 55 30	J0908+4150	13 18 19	47.9	280.5	4.1		52.4	10	1784	01 55 30
01 56 30	=0905+420	13 19 19	47.7	280.7	4.2		52.3	60	1792	01 55 31
02 04 30	J1642+3948	13 27 20	54.5	91.9	-3.3		-51.4	87	1792	02 04 30
02 11 30	=3C345	13 34 22	55.6	93.3	-3.2		-51.3	420	1846	02 04 31
02 14 40	J1510+5702	13 37 32	76.2	64.3	-1.5		-96.5	100	1846	02 14 40
02 15 40	=1508+572	13 38 32	76.4	64.3	-1.5		-96.8	60	1854	02 14 41
02 15 40	1457+5744	13 38 32	77.8	59.9	-1.3		-103.6	-24	1854	No stop
02 19 10	---	13 42 03	78.3	59.3	-1.3		-104.9	186	1881	02 15 41
02 19 10	J1510+5702	13 42 03	76.8	64.0	-1.5		-97.8	-24	1881	No stop
02 20 40	=1508+572	13 43 33	77.0	63.9	-1.4		-98.2	66	1893	02 19 11

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
02 20 40	1457+5744	13 43 33	78.5	59.1	-1.2		-105.5	-25	1893	No stop
02 24 10	---	13 47 04	78.9	58.4	-1.2		-106.9	185	1920	02 20 41
02 24 50	J1510+5702	13 47 44	77.6	63.5	-1.4		-99.5	15	1920	02 24 50
02 25 50	=1508+572	13 48 44	77.7	63.4	-1.4		-99.8	60	1928	02 24 51
02 25 50	1457+5744	13 48 44	79.1	58.1	-1.2		-107.6	-26	1928	No stop
02 29 20	---	13 52 14	79.6	57.3	-1.1		-109.1	184	1955	02 25 51
02 29 20	J1510+5702	13 52 14	78.2	63.0	-1.3		-101.0	-26	1955	No stop
02 30 50	=1508+572	13 53 45	78.4	62.8	-1.3		-101.5	64	1966	02 29 21
02 30 50	1457+5744	13 53 45	79.8	56.9	-1.1		-109.8	-27	1966	No stop
02 34 20	---	13 57 15	80.2	55.9	-1.0		-111.5	183	1993	02 30 51
02 35 00	J1510+5702	13 57 55	79.0	62.1	-1.2		-103.0	12	1993	02 35 00
02 36 00	=1508+572	13 58 56	79.1	62.0	-1.2		-103.3	60	2001	02 35 01
02 36 00	1457+5744	13 58 56	80.4	55.4	-1.0		-112.3	-28	2001	No stop
02 39 30	---	14 02 26	80.9	54.3	-0.9		-114.2	182	2028	02 36 01
02 39 30	J1510+5702	14 02 26	79.5	61.4	-1.1		-104.7	-29	2028	No stop
02 41 00	=1508+572	14 03 56	79.7	61.1	-1.1		-105.3	61	2040	02 39 31
02 41 00	1457+5744	14 03 56	81.0	53.8	-0.9		-115.0	-30	2040	No stop
02 44 30	---	14 07 27	81.5	52.4	-0.8		-117.1	180	2067	02 41 01
02 45 10	J1510+5702	14 08 07	80.3	60.2	-1.0		-107.1	9	2067	02 45 10
02 46 10	=1508+572	14 09 07	80.4	59.9	-1.0		-107.5	60	2075	02 45 11
02 46 10	1457+5744	14 09 07	81.7	51.7	-0.8		-118.2	-32	2075	No stop
02 49 40	---	14 12 38	82.1	50.1	-0.8		-120.5	178	2102	02 46 11
02 49 40	J1510+5702	14 12 38	80.9	59.0	-1.0		-109.2	-33	2102	No stop
02 51 10	=1508+572	14 14 08	81.1	58.5	-0.9		-109.9	57	2113	02 49 41
02 51 10	1457+5744	14 14 08	82.2	49.3	-0.7		-121.6	-34	2113	No stop
02 54 40	---	14 17 39	82.6	47.4	-0.7		-124.2	176	2141	02 51 11
02 55 20	J1510+5702	14 18 19	81.6	57.2	-0.9		-112.1	5	2141	02 55 20
02 56 20	=1508+572	14 19 19	81.7	56.8	-0.9		-112.7	60	2148	02 55 21
02 56 20	1457+5744	14 19 19	82.8	46.4	-0.6		-125.6	-37	2148	No stop
02 59 50	---	14 22 50	83.2	44.0	-0.6		-128.6	173	2175	02 56 21

Schedule for TORUN (Code Tr)

Page 10

BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
02 59 50	J1510+5702	14 22 50	82.2	55.5	-0.8		-114.8	-37	2175	No stop
03 01 20	=1508+572	14 24 20	82.4	54.8	-0.8		-115.7	53	2187	02 59 51
03 01 20	1457+5744	14 24 20	83.3	43.0	-0.6		-130.0	-40	2187	No stop
03 04 50	---	14 27 50	83.7	40.2	-0.5		-133.5	170	2214	03 01 21
03 05 30	J1510+5702	14 28 30	82.9	52.8	-0.7		-118.6	0	2214	03 05 30
03 06 30	=1508+572	14 29 31	83.0	52.3	-0.7		-119.4	60	2222	03 05 31
03 06 30	1457+5744	14 29 31	83.9	38.7	-0.5		-135.3	-43	2222	No stop
03 10 00	---	14 33 01	84.2	35.4	-0.4		-139.4	167	2249	03 06 31
03 10 00	J1510+5702	14 33 01	83.4	50.2	-0.6		-122.1	-44	2249	No stop
03 11 30	=1508+572	14 34 31	83.6	49.2	-0.6		-123.4	46	2261	03 10 01
03 11 30	1457+5744	14 34 31	84.3	33.9	-0.4		-141.2	-47	2261	No stop
03 15 00	---	14 38 02	84.6	30.0	-0.3		-145.8	163	2288	03 11 31
03 15 40	J1510+5702	14 38 42	84.0	46.2	-0.5		-127.3	-7	2288	03 15 40
03 16 40	=1508+572	14 39 42	84.1	45.4	-0.5		-128.3	53	2295	03 15 41
03 16 40	1457+5744	14 39 42	84.7	28.0	-0.3		-148.2	-52	2295	No stop
03 20 10	---	14 43 13	84.9	23.5	-0.3		-153.4	158	2322	03 16 41
03 20 10	J1510+5702	14 43 13	84.5	42.2	-0.5		-132.2	-51	2322	No stop
03 21 40	=1508+572	14 44 43	84.6	40.8	-0.4		-134.0	39	2334	03 20 11
03 21 40	1457+5744	14 44 43	85.0	21.4	-0.2		-155.8	-56	2334	No stop
03 25 10	---	14 48 14	85.2	16.3	-0.2		-161.7	154	2361	03 21 41
03 25 50	J1510+5702	14 48 54	85.0	36.2	-0.4		-139.4	-14	2361	03 25 50
03 26 50	=1508+572	14 49 54	85.1	34.9	-0.3		-140.9	46	2369	03 25 51
03 34 50	J1335+4542	14 57 55	74.8	248.9	1.4		53.3	38	2369	03 34 50
03 35 50	=1333+459	14 58 55	74.6	249.3	1.4		53.5	60	2377	03 34 51
03 35 50	1333+4729	14 58 55	75.4	255.8	1.4		59.3	-28	2377	No stop
03 39 20	---	15 02 26	74.8	256.9	1.5		59.8	182	2404	03 35 51
03 39 20	J1335+4542	15 02 26	74.2	250.7	1.4		54.1	-27	2404	No stop
03 40 50	=1333+459	15 03 56	73.9	251.2	1.5		54.4	63	2415	03 39 21
03 40 50	1333+4729	15 03 56	74.6	257.4	1.5		60.0	-28	2415	No stop
03 44 20	---	15 07 27	74.1	258.5	1.6		60.4	182	2442	03 40 51

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
03 45 10	J1335+4542	15 08 17	73.3	252.8	1.5		55.1	23	2442	03 45 10
03 46 10	=1333+459	15 09 17	73.2	253.1	1.6		55.3	60	2450	03 45 11
03 46 10	1333+4729	15 09 17	73.8	259.1	1.6		60.6	-27	2450	No stop
03 49 40	---	15 12 48	73.3	260.1	1.6		61.0	183	2477	03 46 11
03 49 40	J1335+4542	15 12 48	72.7	254.3	1.6		55.8	-26	2477	No stop
03 51 10	=1333+459	15 14 18	72.5	254.8	1.6		56.0	64	2489	03 49 41
03 51 10	1333+4729	15 14 18	73.1	260.5	1.7		61.1	-27	2489	No stop
03 54 40	---	15 17 49	72.6	261.5	1.7		61.4	183	2516	03 51 11
03 55 30	J1335+4542	15 18 39	71.8	256.2	1.7		56.5	24	2516	03 55 30
03 56 30	=1333+459	15 19 39	71.7	256.5	1.7		56.6	60	2524	03 55 31
03 56 30	1333+4729	15 19 39	72.3	262.0	1.8		61.5	-26	2524	No stop
04 00 00	---	15 23 09	71.8	262.9	1.8		61.7	184	2551	03 56 31
04 00 00	J1335+4542	15 23 09	71.2	257.5	1.8		57.0	-26	2551	No stop
04 01 30	=1333+459	15 24 40	70.9	258.0	1.8		57.1	64	2562	04 00 01
04 01 30	1333+4729	15 24 40	71.6	263.3	1.8		61.8	-26	2562	No stop
04 05 00	---	15 28 10	71.0	264.2	1.9		62.0	184	2590	04 01 31
04 05 50	J1335+4542	15 29 00	70.3	259.2	1.9		57.5	25	2590	04 05 50
04 06 50	=1333+459	15 30 01	70.2	259.5	1.9		57.6	60	2597	04 05 51
04 06 50	1333+4729	15 30 01	70.8	264.6	1.9		62.1	-25	2597	No stop
04 10 20	---	15 33 31	70.2	265.4	2.0		62.2	185	2624	04 06 51
04 10 20	J1335+4542	15 33 31	69.6	260.4	2.0		57.9	-25	2624	No stop
04 11 50	=1333+459	15 35 01	69.4	260.8	2.0		58.0	65	2636	04 10 21
04 11 50	1333+4729	15 35 01	70.0	265.8	2.0		62.3	-25	2636	No stop
04 15 20	---	15 38 32	69.5	266.6	2.1		62.4	185	2663	04 11 51
04 16 10	J1335+4542	15 39 22	68.8	262.0	2.1		58.3	26	2663	04 16 10
04 17 10	=1333+459	15 40 22	68.6	262.2	2.1		58.3	60	2671	04 16 11
04 17 10	1333+4729	15 40 22	69.2	267.0	2.1		62.4	-25	2671	No stop
04 20 40	---	15 43 53	68.7	267.7	2.2		62.5	185	2698	04 17 11
04 20 40	J1335+4542	15 43 53	68.1	263.1	2.1		58.5	-24	2698	No stop
04 22 10	=1333+459	15 45 23	67.9	263.5	2.2		58.6	66	2710	04 20 41
04 22 10	1333+4729	15 45 23	68.5	268.1	2.2		62.5	-24	2710	No stop
04 25 40	---	15 48 54	67.9	268.8	2.2		62.5	186	2737	04 22 11

Schedule for TORUN (Code Tr)

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BAL quasars group 1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
04 26 30	J1335+4542	15 49 44	67.2	264.5	2.2		58.7	26	2737	04 26 30
04 27 30	=1333+459	15 50 44	67.1	264.7	2.2		58.8	60	2744	04 26 31
04 27 30	1333+4729	15 50 44	67.7	269.2	2.3		62.5	-24	2744	No stop
04 31 00	---	15 54 14	67.1	269.9	2.3		62.6	186	2771	04 27 31
04 31 00	J1335+4542	15 54 14	66.5	265.5	2.3		58.9	-24	2771	No stop
04 32 30	=1333+459	15 55 45	66.3	265.9	2.3		58.9	66	2783	04 31 01
04 32 30	1333+4729	15 55 45	66.9	270.2	2.4		62.6	-24	2783	No stop
04 36 00	---	15 59 15	66.4	270.9	2.4		62.5	186	2810	04 32 31
04 36 50	J1335+4542	16 00 05	65.7	266.8	2.4		59.0	27	2810	04 36 50
04 37 50	=1333+459	16 01 06	65.5	267.0	2.4		59.1	60	2818	04 36 51
04 37 50	1333+4729	16 01 06	66.1	271.2	2.5		62.5	-23	2818	No stop
04 41 20	---	16 04 36	65.6	271.9	2.5		62.5	187	2845	04 37 51
04 41 20	J1335+4542	16 04 36	65.0	267.8	2.5		59.1	-23	2845	No stop
04 42 50	=1333+459	16 06 06	64.8	268.1	2.5		59.1	67	2857	04 41 21
04 42 50	1333+4729	16 06 06	65.3	272.2	2.5		62.5	-23	2857	No stop
04 46 20	---	16 09 37	64.8	272.8	2.6		62.4	187	2884	04 42 51
04 47 10	J1335+4542	16 10 27	64.1	269.0	2.6		59.2	27	2884	04 47 10
04 48 10	=1333+459	16 11 27	64.0	269.2	2.6		59.2	60	2891	04 47 11
04 48 10	1333+4729	16 11 27	64.5	273.2	2.6		62.4	-23	2891	No stop
04 51 40	---	16 14 58	64.0	273.8	2.7		62.3	187	2919	04 48 11
04 51 40	J1335+4542	16 14 58	63.4	269.9	2.7		59.2	-22	2919	No stop
04 53 10	=1333+459	16 16 28	63.2	270.2	2.7		59.2	68	2930	04 51 41
04 53 10	1333+4729	16 16 28	63.8	274.1	2.7		62.3	-23	2930	No stop
04 56 40	---	16 19 59	63.3	274.7	2.8		62.2	187	2957	04 53 11
04 56 40	J1335+4542	16 19 59	62.7	270.9	2.7		59.2	-22	2957	No stop
04 58 10	=1333+459	16 21 29	62.5	271.2	2.8		59.2	68	2969	04 56 41
04 59 50	J1349+5341	16 23 09	67.4	286.8	2.6		75.7	54	2969	04 59 50
05 00 50	=1347+539	16 24 09	67.3	286.9	2.6		75.6	60	2977	04 59 51
05 00 50	1401+5208	16 24 09	68.6	281.7	2.4		73.1	-25	2977	No stop
05 04 20	---	16 27 40	68.1	282.1	2.4		72.8	185	3004	05 00 51
05 04 50	J1349+5341	16 28 10	66.7	287.3	2.6		75.1	5	3004	05 04 50
05 05 50	=1347+539	16 29 10	66.6	287.4	2.7		75.0	60	3011	05 04 51

Schedule for TORUN (Code Tr)

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BAL quasars group 1

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Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
05 05 50	1401+5208	16 29 10	67.9	282.3	2.5		72.7	-25	3011	No stop
05 09 20	---	16 32 41	67.3	282.7	2.5		72.4	185	3039	05 05 51
05 10 00	J1349+5341	16 33 21	66.0	287.8	2.7		74.6	15	3039	05 10 00
05 11 00	=1347+539	16 34 21	65.8	287.9	2.7		74.4	60	3046	05 10 01
05 11 00	1401+5208	16 34 21	67.1	282.9	2.5		72.2	-25	3046	No stop
05 14 30	---	16 37 52	66.6	283.3	2.6		71.9	185	3073	05 11 01
05 14 30	J1349+5341	16 37 52	65.3	288.2	2.8		74.0	-25	3073	No stop
05 16 00	=1347+539	16 39 22	65.1	288.4	2.8		73.9	65	3085	05 14 31
05 16 00	1401+5208	16 39 22	66.4	283.5	2.6		71.8	-25	3085	No stop
05 19 30	---	16 42 52	65.9	283.9	2.7		71.5	185	3112	05 16 01
05 20 10	J1349+5341	16 43 33	64.5	288.8	2.9		73.4	15	3112	05 20 10
05 21 10	=1347+539	16 44 33	64.4	288.9	2.9		73.3	60	3120	05 20 11
05 21 10	1401+5208	16 44 33	65.6	284.1	2.7		71.3	-24	3120	No stop
05 24 40	---	16 48 03	65.1	284.5	2.8		71.0	186	3147	05 21 11
05 24 40	J1349+5341	16 48 03	63.9	289.2	3.0		72.9	-24	3147	No stop
05 26 10	=1347+539	16 49 34	63.7	289.4	3.0		72.7	66	3159	05 24 41
05 26 10	1401+5208	16 49 34	64.9	284.7	2.8		70.9	-24	3159	No stop
05 29 40	---	16 53 04	64.4	285.1	2.9		70.6	186	3186	05 26 11
05 30 20	J1349+5341	16 53 44	63.1	289.8	3.1		72.3	16	3186	05 30 20
05 31 20	=1347+539	16 54 44	62.9	289.9	3.1		72.1	60	3193	05 30 21
05 31 20	1401+5208	16 54 44	64.1	285.3	2.9		70.4	-24	3193	No stop
05 34 50	---	16 58 15	63.6	285.7	2.9		70.1	186	3220	05 31 21
05 34 50	J1349+5341	16 58 15	62.4	290.3	3.1		71.8	-24	3220	No stop
05 36 20	=1347+539	16 59 45	62.2	290.4	3.2		71.6	66	3232	05 34 51
05 36 20	1401+5208	16 59 45	63.4	285.9	3.0		70.0	-24	3232	No stop
05 39 50	---	17 03 16	62.9	286.3	3.0		69.6	186	3259	05 36 21
05 40 30	J1349+5341	17 03 56	61.6	290.8	3.2		71.1	16	3259	05 40 30
05 41 30	=1347+539	17 04 56	61.5	290.9	3.2		71.0	60	3267	05 40 31
05 41 30	1401+5208	17 04 56	62.7	286.5	3.0		69.5	-24	3267	No stop
05 45 00	---	17 08 27	62.2	286.9	3.1		69.2	186	3294	05 41 31
05 45 00	J1349+5341	17 08 27	61.0	291.3	3.3		70.6	-24	3294	No stop
05 46 30	=1347+539	17 09 57	60.8	291.4	3.3		70.4	66	3306	05 45 01

Schedule for TORUN (Code Tr)

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BAL quasars group 1

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
05 46 30	1401+5208	17 09 57	61.9	287.1	3.1		69.0	-24	3306	No stop
05 50 00	---	17 13 27	61.4	287.5	3.2		68.7	186	3333	05 46 31
05 50 40	J1349+5341	17 14 08	60.2	291.9	3.4		70.0	16	3333	05 50 40
05 51 40	=1347+539	17 15 08	60.1	292.0	3.4		69.9	60	3340	05 50 41
05 51 40	1401+5208	17 15 08	61.2	287.7	3.2		68.5	-23	3340	No stop
05 55 10	---	17 18 38	60.7	288.1	3.3		68.2	187	3368	05 51 41
05 55 10	J1349+5341	17 18 38	59.6	292.3	3.5		69.5	-23	3368	No stop
05 56 40	=1347+539	17 20 09	59.4	292.5	3.5		69.3	67	3379	05 55 11
05 56 40	1401+5208	17 20 09	60.5	288.3	3.3		68.0	-23	3379	No stop
06 00 10	---	17 23 39	60.0	288.7	3.4		67.7	187	3406	05 56 41
06 00 50	J1349+5341	17 24 19	58.8	292.9	3.6		68.8	17	3406	06 00 50
06 01 50	=1347+539	17 25 19	58.7	293.0	3.6		68.7	60	3414	06 00 51
06 01 50	1401+5208	17 25 19	59.7	288.9	3.4		67.5	-23	3414	No stop
06 05 20	---	17 28 50	59.2	289.3	3.4		67.2	187	3441	06 01 51
06 05 20	J1349+5341	17 28 50	58.2	293.4	3.6		68.3	-23	3441	No stop
06 06 50	=1347+539	17 30 20	58.0	293.5	3.7		68.1	67	3453	06 05 21
06 06 50	1401+5208	17 30 20	59.0	289.5	3.5		67.1	-23	3453	No stop
06 10 20	---	17 33 51	58.5	289.9	3.5		66.7	187	3480	06 06 51
06 11 00	J1349+5341	17 34 31	57.4	294.0	3.7		67.7	17	3480	06 11 00
06 12 00	=1347+539	17 35 31	57.3	294.1	3.8		67.6	60	3488	06 11 01
06 12 00	1401+5208	17 35 31	58.3	290.1	3.6		66.6	-23	3488	No stop
06 15 30	---	17 39 02	57.8	290.5	3.6		66.2	187	3515	06 12 01
06 15 30	J1349+5341	17 39 02	56.8	294.4	3.8		67.2	-23	3515	No stop
06 17 00	=1347+539	17 40 32	56.6	294.6	3.8		67.0	67	3526	06 15 31
06 17 00	1401+5208	17 40 32	57.6	290.7	3.6		66.1	-23	3526	No stop
06 20 30	---	17 44 02	57.1	291.1	3.7		65.7	187	3553	06 17 01
06 21 10	J1349+5341	17 44 43	56.0	295.0	3.9		66.5	17	3553	06 21 10
06 22 10	=1347+539	17 45 43	55.9	295.1	3.9		66.4	60	3561	06 21 11
06 22 10	1401+5208	17 45 43	56.9	291.3	3.7		65.5	-22	3561	No stop
06 25 40	---	17 49 13	56.4	291.7	3.8		65.2	188	3588	06 22 11
06 26 20	J1349+5341	17 49 53	55.3	295.6	4.0		65.9	17	3588	06 26 20
06 27 20	=1347+539	17 50 54	55.2	295.7	4.0		65.8	60	3596	06 26 21

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: sess113.C1024

Matching groups in /usr/local/sched/catalogs/freq.dat:

tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 2 Station: TORUN Total bit rate: 1024
Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

Frequency Set: 5 Setup file default. Used pcal sets: 1

LO sum=	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
BBC fr=	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Matching frequency sets: 5

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- BAL quasars group 1

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* 0856+4242	08 53 23.127085	* 08 56 41.566000	08 57 36.195312	0.00
	42 54 26.90562	* 42 42 53.94000	42 39 40.25842	0.00
* 1333+4729	13 31 20.026433	* 13 33 25.079000	13 33 59.411486	0.00
	47 44 56.90705	* 47 29 35.35000	47 25 14.09843	0.00
* 1401+5208	13 59 35.717001	* 14 01 26.163000	14 01 56.454417	0.00
	52 23 01.09919	* 52 08 34.63000	52 04 27.46856	0.00
* 1457+5744	14 56 36.726593	* 14 57 56.263000	14 58 17.910676	0.00
	57 56 43.63422	* 57 44 46.90000	57 41 19.11996	0.00
* J0908+4150	09 05 20.976680	* 09 08 35.863346	09 09 29.533938	13.43
0905+420	42 02 55.89596	* 41 50 46.20456	41 47 22.19372	15.11
* J1310+3233	13 08 38.495364	* 13 10 59.402731	13 11 38.038611	0.12
1308+328	32 49 30.23280	* 32 33 34.44948	32 29 05.93573	0.10
* J1335+4542	13 33 15.707471	* 13 35 21.962254	13 35 56.594960	0.31
1333+459	45 57 56.43876	* 45 42 38.23173	45 38 18.03750	0.29
* J1349+5341	13 47 42.568696	* 13 49 34.656617	13 50 05.477639	0.17
1347+539	53 56 08.38322	* 53 41 17.04009	53 37 03.19771	0.10
* J1510+5702	15 08 45.204538	* 15 10 02.922371	15 10 23.983039	0.19
1508+572	57 14 02.08965	* 57 02 43.37582	56 59 25.86909	0.10
* J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.609598	0.77
3C345	39 54 10.81496	* 39 48 36.99402	39 46 55.80361	0.52

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)	Source	Sun distance (deg)
0856+4242	142.7	J1310+3233	135.1
1333+4729	125.2	J1335+4542	125.6
1401+5208	119.1	J1349+5341	120.1
1457+5744	109.7	J1510+5702	108.3
J0908+4150	144.6	J1642+3948	92.5

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg	8.4 GHz	17. deg
610 MHz	81. deg	15.0 GHz	12. deg
1.6 GHz	45. deg	22.0 GHz	9. deg
2.3 GHz	36. deg	43.0 GHz	6. deg
5.0 GHz	23. deg		

es068atr

E-EVN RUN ES068A (SPENCER)

PI: Ralph Spencer

Address: JIVE Oude Hoogeveensedijk 4 Dwingeloo Netherlands
Phone: +31 521 596 536 EMAIL: zparagi@jive.nl
Fax: +31 521 596 539 Phone during observation: +31 521 596 530

Observing mode: realtime e-vlbi

Notes: #####
Please, make sure PHASE CAL is OFF.
#####

Schedule for TORUN (Code Tr) Page 2
e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Table with columns: Start UT, Source, LST, EL, AZ, HA, UP, ParA, Early Dwell, Disk GBytes, TPStart SYNC. Includes scan frequencies and a detailed observation schedule for Fri 22 Feb 2013.

Schedule for TORUN (Code Tr)

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e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
09 37 00	CYGX-2	21 01 05	73.4	148.2	-0.7		-23.8	-25	932	No stop
09 40 00	---	21 04 05	73.7	150.2	-0.7		-22.4	155	955	09 37 01
09 40 00	J2134+4050	21 04 05	76.7	153.8	-0.5		-20.5	-25	955	No stop
09 42 00	---	21 06 06	76.9	155.3	-0.5		-19.4	95	970	09 40 01
09 42 00	CYGX-2	21 06 06	73.8	151.5	-0.7		-21.5	-25	970	No stop
09 45 00	---	21 09 06	74.0	153.4	-0.6		-20.0	155	993	09 42 01
09 45 40	J2134+4050	21 09 46	77.1	158.3	-0.4		-17.1	15	993	09 45 40
09 47 00	---	21 11 06	77.2	159.4	-0.4		-16.3	80	1004	09 45 41
09 47 00	CYGX-2	21 11 06	74.2	154.8	-0.6		-19.0	-25	1004	No stop
09 50 00	---	21 14 07	74.3	156.9	-0.5		-17.5	155	1027	09 47 01
09 50 00	J2134+4050	21 14 07	77.3	161.8	-0.3		-14.3	-26	1027	No stop
09 52 00	---	21 16 07	77.4	163.5	-0.3		-13.0	94	1043	09 50 01
09 52 00	CYGX-2	21 16 07	74.5	158.3	-0.5		-16.5	-25	1043	No stop
09 55 00	---	21 19 08	74.6	160.4	-0.4		-14.9	155	1066	09 52 01
09 55 40	J2134+4050	21 19 48	77.5	166.7	-0.3		-10.6	13	1066	09 55 40
09 57 00	---	21 21 08	77.6	167.8	-0.2		-9.7	80	1076	09 55 41
09 57 00	CYGX-2	21 21 08	74.7	161.8	-0.4		-13.8	-26	1076	No stop
10 00 00	---	21 24 09	74.8	164.0	-0.4		-12.2	154	1099	09 57 01
10 00 00	J2134+4050	21 24 09	77.7	170.4	-0.2		-7.6	-28	1099	No stop
10 02 00	---	21 26 09	77.7	172.2	-0.1		-6.2	92	1115	10 00 01
10 02 00	CYGX-2	21 26 09	74.9	165.5	-0.3		-11.1	-28	1115	No stop
10 05 00	---	21 29 09	75.0	167.7	-0.3		-9.4	152	1138	10 02 01
10 05 50	J2134+4050	21 29 59	77.8	175.6	-0.1		-3.5	20	1138	10 05 50
10 07 00	---	21 31 10	77.8	176.6	-0.1		-2.7	70	1147	10 05 51
10 09 00	BLLAC	21 33 10	78.1	151.9	-0.5		-22.5	54	1147	10 09 00
10 17 00	---	21 41 11	78.6	158.9	-0.4		-17.0	480	1209	10 09 01
10 19 00	J2134+4050	21 43 12	77.7	187.4	0.1		5.9	50	1209	10 19 00
10 27 00	---	21 51 13	77.5	194.4	0.3		11.4	480	1271	10 19 01
10 27 00	CYGX-2	21 51 13	75.3	184.6	0.1		3.5	-34	1271	No stop
10 30 00	---	21 54 13	75.2	186.9	0.2		5.3	146	1294	10 27 01
10 30 00	J2134+4050	21 54 13	77.4	196.9	0.3		13.4	-36	1294	No stop
10 32 00	---	21 56 14	77.3	198.6	0.4		14.7	84	1310	10 30 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
10 32 00	CYGX-2	21 56 14	75.2	188.5	0.2		6.5	-35	1310	No stop
10 35 00	---	21 59 14	75.1	190.7	0.2		8.2	145	1333	10 32 01
10 35 50	J2134+4050	22 00 04	77.1	201.7	0.4		17.1	13	1333	10 35 50
10 37 00	---	22 01 15	77.0	202.7	0.4		17.8	70	1342	10 35 51
10 37 00	CYGX-2	22 01 15	75.0	192.2	0.3		9.3	-35	1342	No stop
10 40 00	---	22 04 15	74.9	194.5	0.3		11.0	145	1365	10 37 01
10 40 00	J2134+4050	22 04 15	76.8	205.1	0.5		19.7	-37	1365	No stop
10 42 00	---	22 06 15	76.7	206.6	0.5		20.8	83	1381	10 40 01
10 42 00	CYGX-2	22 06 15	74.8	196.0	0.4		12.2	-36	1381	No stop
10 45 00	---	22 09 16	74.7	198.1	0.4		13.8	144	1404	10 42 01
10 45 50	J2134+4050	22 10 06	76.4	209.5	0.6		23.0	13	1404	10 45 50
10 47 00	---	22 11 16	76.3	210.4	0.6		23.7	70	1413	10 45 51
10 47 00	CYGX-2	22 11 16	74.6	199.6	0.4		14.9	-36	1413	No stop
10 50 00	---	22 14 17	74.5	201.7	0.5		16.5	144	1436	10 47 01
10 50 00	J2134+4050	22 14 17	76.1	212.5	0.7		25.3	-37	1436	No stop
10 52 00	---	22 16 17	75.9	214.0	0.7		26.3	83	1452	10 50 01
10 54 00	J2134+4050	22 18 17	75.8	215.3	0.7		27.4	112	1452	10 54 00
11 02 00	---	22 26 19	75.0	220.6	0.9		31.1	480	1513	10 54 01
11 02 00	CYGX-2	22 26 19	73.7	209.8	0.7		22.4	-36	1513	No stop
11 05 00	---	22 29 19	73.4	211.7	0.7		23.8	144	1537	11 02 01
11 05 00	J2134+4050	22 29 19	74.7	222.4	0.9		32.4	-37	1537	No stop
11 07 00	---	22 31 20	74.5	223.6	0.9		33.3	83	1552	11 05 01
11 07 00	CYGX-2	22 31 20	73.3	213.0	0.8		24.6	-36	1552	No stop
11 10 00	---	22 34 20	73.0	214.8	0.8		25.9	144	1575	11 07 01
11 10 50	J2134+4050	22 35 10	74.1	225.9	1.0		34.8	13	1575	11 10 50
11 12 00	---	22 36 20	74.0	226.5	1.0		35.2	70	1584	11 10 51
11 12 00	CYGX-2	22 36 20	72.9	216.0	0.9		26.8	-35	1584	No stop
11 15 00	---	22 39 21	72.6	217.8	0.9		28.0	145	1608	11 12 01
11 15 00	J2134+4050	22 39 21	73.7	228.2	1.1		36.3	-36	1608	No stop
11 17 00	---	22 41 21	73.4	229.3	1.1		37.0	84	1623	11 15 01
11 17 00	CYGX-2	22 41 21	72.4	218.9	0.9		28.8	-35	1623	No stop
11 20 00	---	22 44 22	72.1	220.6	1.0		29.9	145	1646	11 17 01

Schedule for TORUN (Code Tr) Page 5
 e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
11 20 50	J2134+4050	22 45 12	73.0	231.3	1.2		38.3	14	1646	11 20 50
11 22 00	---	22 46 22	72.8	231.8	1.2		38.7	70	1655	11 20 51
11 22 00	CYGX-2	22 46 22	71.9	221.7	1.0		30.7	-35	1655	No stop
11 25 00	---	22 49 22	71.6	223.3	1.1		31.7	145	1679	11 22 01
11 25 00	J2134+4050	22 49 22	72.5	233.3	1.2		39.6	-35	1679	No stop
11 27 00	---	22 51 23	72.2	234.3	1.3		40.2	85	1694	11 25 01
11 29 00	BLLAC	22 53 23	76.4	222.9	0.8		33.6	80	1694	11 29 00
11 37 00	---	23 01 24	75.5	227.9	1.0		37.1	480	1756	11 29 01
11 39 00	J2134+4050	23 03 25	70.7	239.6	1.5		43.3	83	1756	11 39 00
11 47 00	---	23 11 26	69.7	242.8	1.6		45.0	480	1818	11 39 01
11 47 00	CYGX-2	23 11 26	69.1	233.9	1.4		38.2	-33	1818	No stop
11 50 00	---	23 14 27	68.7	235.2	1.5		39.0	147	1841	11 47 01
11 50 00	J2134+4050	23 14 27	69.3	244.0	1.7		45.6	-33	1841	No stop
11 52 00	---	23 16 27	69.0	244.7	1.7		45.9	87	1857	11 50 01
11 52 00	CYGX-2	23 16 27	68.5	236.0	1.5		39.4	-32	1857	No stop
11 55 00	---	23 19 27	68.1	237.2	1.6		40.1	148	1880	11 52 01
11 55 50	J2134+4050	23 20 18	68.5	246.1	1.8		46.6	17	1880	11 55 50
11 57 00	---	23 21 28	68.3	246.5	1.8		46.8	70	1889	11 55 51
11 57 00	CYGX-2	23 21 28	67.9	238.0	1.6		40.5	-32	1889	No stop
12 00 00	---	23 24 28	67.5	239.2	1.7		41.1	148	1912	11 57 01
12 00 00	J2134+4050	23 24 28	67.9	247.6	1.8		47.2	-32	1912	No stop
12 02 00	---	23 26 29	67.6	248.2	1.9		47.5	88	1928	12 00 01
12 02 00	CYGX-2	23 26 29	67.2	240.0	1.7		41.5	-31	1928	No stop
12 05 00	---	23 29 29	66.8	241.1	1.7		42.1	149	1951	12 02 01
12 05 50	J2134+4050	23 30 19	67.1	249.5	1.9		48.1	18	1951	12 05 50
12 07 00	---	23 31 29	66.9	249.9	1.9		48.2	70	1960	12 05 51
12 09 00	J2134+4050	23 33 30	66.6	250.5	2.0		48.5	113	1960	12 09 00
12 17 00	---	23 41 31	65.5	253.0	2.1		49.4	480	2022	12 09 01
12 17 00	CYGX-2	23 41 31	65.2	245.3	1.9		44.1	-30	2022	No stop
12 20 00	---	23 44 32	64.8	246.3	2.0		44.6	150	2045	12 17 01
12 20 00	J2134+4050	23 44 32	65.1	253.9	2.2		49.7	-30	2045	No stop
12 22 00	---	23 46 32	64.8	254.4	2.2		49.9	90	2061	12 20 01

Schedule for TORUN (Code Tr) Page 6
 e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
12 22 00	CYGX-2	23 46 32	64.5	247.0	2.0		44.8	-30	2061	No stop
12 25 00	---	23 49 32	64.1	247.9	2.1		45.2	150	2084	12 22 01
12 25 50	J2134+4050	23 50 22	64.2	255.5	2.3		50.3	20	2084	12 25 50
12 27 00	---	23 51 33	64.0	255.8	2.3		50.4	70	2093	12 25 51
12 27 00	CYGX-2	23 51 33	63.8	248.6	2.1		45.5	-29	2093	No stop
12 30 00	---	23 54 33	63.4	249.5	2.2		45.8	151	2116	12 27 01
12 30 00	J2134+4050	23 54 33	63.6	256.7	2.3		50.6	-30	2116	No stop
12 32 00	---	23 56 34	63.3	257.2	2.4		50.8	90	2131	12 30 01
12 32 00	CYGX-2	23 56 34	63.1	250.1	2.2		46.1	-29	2131	No stop
12 35 00	---	23 59 34	62.7	251.0	2.2		46.4	151	2155	12 32 01
12 35 50	J2134+4050	00 00 24	62.7	258.2	2.4		51.0	21	2155	12 35 50
12 37 00	---	00 01 34	62.6	258.5	2.4		51.1	70	2164	12 35 51
12 37 00	CYGX-2	00 01 34	62.4	251.6	2.3		46.6	-29	2164	No stop
12 40 00	---	00 04 35	62.0	252.5	2.3		46.9	151	2187	12 37 01
12 40 00	J2134+4050	00 04 35	62.1	259.3	2.5		51.3	-29	2187	No stop
12 42 00	---	00 06 35	61.8	259.8	2.5		51.4	91	2202	12 40 01
12 42 00	CYGX-2	00 06 35	61.7	253.0	2.4		47.1	-28	2202	No stop
12 45 00	---	00 09 36	61.3	253.9	2.4		47.4	152	2226	12 42 01
12 45 40	J2134+4050	00 10 16	61.3	260.7	2.6		51.6	11	2226	12 45 40
12 47 00	---	00 11 36	61.1	261.0	2.6		51.7	80	2236	12 45 41
12 47 00	CYGX-2	00 11 36	61.0	254.4	2.4		47.5	-28	2236	No stop
12 50 00	---	00 14 36	60.5	255.2	2.5		47.8	152	2259	12 47 01
12 50 00	J2134+4050	00 14 36	60.6	261.7	2.7		51.8	-28	2259	No stop
12 52 00	---	00 16 37	60.3	262.2	2.7		51.9	92	2275	12 50 01
12 52 00	CYGX-2	00 16 37	60.2	255.8	2.5		47.9	-28	2275	No stop
12 55 00	---	00 19 37	59.8	256.5	2.6		48.2	152	2298	12 52 01
12 55 40	J2134+4050	00 20 17	59.8	263.1	2.8		52.1	12	2298	12 55 40
12 57 00	---	00 21 38	59.6	263.4	2.8		52.1	80	2308	12 55 41
12 57 00	CYGX-2	00 21 38	59.5	257.1	2.6		48.3	-27	2308	No stop
13 00 00	---	00 24 38	59.1	257.8	2.7		48.5	153	2331	12 57 01
13 00 00	J2134+4050	00 24 38	59.2	264.1	2.8		52.2	-28	2331	No stop
13 02 00	---	00 26 38	58.9	264.5	2.9		52.3	92	2347	13 00 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
13 02 00	CYGX-2	00 26 38	58.8	258.3	2.7		48.6	-27	2347	No stop
13 05 00	---	00 29 39	58.3	259.1	2.7		48.8	153	2370	13 02 01
13 05 40	J2134+4050	00 30 19	58.3	265.3	2.9		52.3	13	2370	13 05 40
13 07 00	---	00 31 39	58.1	265.6	2.9		52.4	80	2380	13 05 41
13 07 00	CYGX-2	00 31 39	58.0	259.6	2.8		48.9	-27	2380	No stop
13 10 00	---	00 34 40	57.6	260.3	2.8		49.0	153	2404	13 07 01
13 10 00	J2134+4050	00 34 40	57.7	266.3	3.0		52.4	-27	2404	No stop
13 12 00	---	00 36 40	57.4	266.7	3.0		52.5	93	2419	13 10 01
13 12 00	CYGX-2	00 36 40	57.3	260.8	2.9		49.1	-27	2419	No stop
13 15 00	---	00 39 41	56.9	261.5	2.9		49.3	153	2442	13 12 01
13 15 40	J2134+4050	00 40 21	56.8	267.5	3.1		52.5	13	2442	13 15 40
13 17 00	---	00 41 41	56.6	267.8	3.1		52.5	80	2453	13 15 41
13 17 00	CYGX-2	00 41 41	56.6	262.0	2.9		49.3	-26	2453	No stop
13 20 00	---	00 44 41	56.1	262.6	3.0		49.4	154	2476	13 17 01
13 20 00	J2134+4050	00 44 41	56.1	268.4	3.2		52.6	-27	2476	No stop
13 22 00	---	00 46 42	55.8	268.8	3.2		52.6	93	2491	13 20 01
13 22 00	CYGX-2	00 46 42	55.8	263.1	3.0		49.5	-26	2491	No stop
13 25 00	---	00 49 42	55.4	263.8	3.1		49.6	154	2515	13 22 01
13 25 40	J2134+4050	00 50 22	55.3	269.5	3.3		52.6	14	2515	13 25 40
13 27 00	---	00 51 43	55.1	269.8	3.3		52.6	80	2525	13 25 41
13 27 00	CYGX-2	00 51 43	55.1	264.2	3.1		49.7	-26	2525	No stop
13 30 00	---	00 54 43	54.6	264.9	3.2		49.7	154	2548	13 27 01
13 30 00	J2134+4050	00 54 43	54.6	270.4	3.3		52.6	-26	2548	No stop
13 32 00	---	00 56 43	54.3	270.8	3.4		52.6	94	2564	13 30 01
13 32 00	CYGX-2	00 56 43	54.3	265.3	3.2		49.8	-26	2564	No stop
13 35 00	---	00 59 44	53.9	266.0	3.2		49.8	154	2587	13 32 01
13 35 40	J2134+4050	01 00 24	53.8	271.5	3.4		52.6	14	2587	13 35 40
13 37 00	---	01 01 44	53.6	271.8	3.4		52.6	80	2597	13 35 41
13 37 00	CYGX-2	01 01 44	53.6	266.4	3.3		49.9	-26	2597	No stop
13 40 00	---	01 04 45	53.1	267.0	3.3		49.9	154	2620	13 37 01
13 40 00	J2134+4050	01 04 45	53.1	272.4	3.5		52.5	-26	2620	No stop
13 42 00	---	01 06 45	52.8	272.8	3.5		52.5	94	2636	13 40 01

Schedule for TORUN (Code Tr) Page 8
 e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
13 42 00	CYGX-2	01 06 45	52.8	267.5	3.4		49.9	-25	2636	No stop
13 45 00	---	01 09 45	52.4	268.1	3.4		50.0	155	2659	13 42 01
13 45 40	J2134+4050	01 10 26	52.3	273.4	3.6		52.5	14	2659	13 45 40
13 47 00	---	01 11 46	52.1	273.7	3.6		52.4	80	2670	13 45 41
13 47 00	CYGX-2	01 11 46	52.1	268.5	3.4		50.0	-25	2670	No stop
13 50 00	---	01 14 46	51.6	269.1	3.5		50.0	155	2693	13 47 01
13 50 00	J2134+4050	01 14 46	51.6	274.3	3.7		52.4	-25	2693	No stop
13 52 00	---	01 16 47	51.3	274.6	3.7		52.4	95	2708	13 50 01
13 52 00	CYGX-2	01 16 47	51.3	269.5	3.5		50.0	-25	2708	No stop
13 55 00	---	01 19 47	50.9	270.1	3.6		50.0	155	2731	13 52 01
13 55 40	J2134+4050	01 20 27	50.8	275.3	3.8		52.3	15	2731	13 55 40
13 57 00	---	01 21 47	50.6	275.6	3.8		52.2	80	2742	13 55 41
13 57 00	CYGX-2	01 21 47	50.6	270.5	3.6		50.0	-25	2742	No stop
14 00 00	---	01 24 48	50.1	271.1	3.7		50.0	155	2765	13 57 01
14 00 00	J2134+4050	01 24 48	50.1	276.1	3.8		52.2	-25	2765	No stop
14 02 00	---	01 26 48	49.8	276.5	3.9		52.1	95	2780	14 00 01
14 02 00	CYGX-2	01 26 48	49.8	271.5	3.7		50.0	-25	2780	No stop
14 05 00	---	01 29 49	49.4	272.1	3.7		50.0	155	2804	14 02 01
14 05 40	J2134+4050	01 30 29	49.3	277.1	3.9		52.0	15	2804	14 05 40
14 07 00	---	01 31 49	49.1	277.4	3.9		52.0	80	2814	14 05 41
14 07 00	CYGX-2	01 31 49	49.0	272.5	3.8		49.9	-25	2814	No stop
14 10 00	---	01 34 50	48.6	273.0	3.8		49.9	155	2837	14 07 01
14 10 00	J2134+4050	01 34 50	48.6	277.9	4.0		51.9	-25	2837	No stop
14 12 00	---	01 36 50	48.3	278.2	4.0		51.8	95	2853	14 10 01
14 12 00	CYGX-2	01 36 50	48.3	273.4	3.9		49.9	-24	2853	No stop
14 15 00	---	01 39 50	47.8	274.0	3.9		49.8	156	2876	14 12 01
14 15 40	J2134+4050	01 40 31	47.8	278.9	4.1		51.7	15	2876	14 15 40
14 17 00	---	01 41 51	47.6	279.1	4.1		51.7	80	2886	14 15 41
14 17 00	CYGX-2	01 41 51	47.5	274.4	3.9		49.8	-24	2886	No stop
14 20 00	---	01 44 51	47.1	274.9	4.0		49.7	156	2909	14 17 01
14 20 00	J2134+4050	01 44 51	47.2	279.6	4.2		51.6	-25	2909	No stop
14 22 00	---	01 46 52	46.9	280.0	4.2		51.5	95	2925	14 20 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
14 22 00	CYGX-2	01 46 52	46.8	275.3	4.0		49.7	-24	2925	No stop
14 25 00	---	01 49 52	46.3	275.9	4.1		49.6	156	2948	14 22 01
14 25 40	J2134+4050	01 50 32	46.3	280.6	4.3		51.3	16	2948	14 25 40
14 27 00	---	01 51 52	46.1	280.8	4.3		51.3	80	2959	14 25 41
14 27 00	CYGX-2	01 51 52	46.0	276.2	4.1		49.6	-24	2959	No stop
14 30 00	---	01 54 53	45.6	276.8	4.2		49.5	156	2982	14 27 01
14 30 00	J2134+4050	01 54 53	45.7	281.4	4.3		51.2	-24	2982	No stop
14 32 00	---	01 56 53	45.4	281.7	4.4		51.1	96	2997	14 30 01
14 32 00	CYGX-2	01 56 53	45.3	277.1	4.2		49.5	-24	2997	No stop
14 35 00	---	01 59 54	44.9	277.7	4.2		49.4	156	3020	14 32 01
14 35 40	J2134+4050	02 00 34	44.8	282.3	4.4		50.9	16	3020	14 35 40
14 37 00	---	02 01 54	44.6	282.5	4.4		50.8	80	3031	14 35 41
14 37 00	CYGX-2	02 01 54	44.6	278.0	4.3		49.3	-24	3031	No stop
14 40 00	---	02 04 55	44.1	278.6	4.3		49.2	156	3054	14 37 01
14 40 00	J2134+4050	02 04 55	44.2	283.0	4.5		50.7	-24	3054	No stop
14 42 00	---	02 06 55	43.9	283.4	4.5		50.6	96	3069	14 40 01
14 42 00	CYGX-2	02 06 55	43.8	278.9	4.4		49.2	-24	3069	No stop
14 45 00	---	02 09 55	43.4	279.5	4.4		49.1	156	3093	14 42 01
14 45 40	J2134+4050	02 10 35	43.4	284.0	4.6		50.4	16	3093	14 45 40
14 47 00	---	02 11 56	43.2	284.2	4.6		50.4	80	3103	14 45 41
14 47 00	CYGX-2	02 11 56	43.1	279.8	4.4		49.0	-24	3103	No stop
14 50 00	---	02 14 56	42.6	280.4	4.5		48.9	156	3126	14 47 01
14 50 00	J2134+4050	02 14 56	42.7	284.7	4.7		50.2	-24	3126	No stop
14 52 00	---	02 16 57	42.5	285.0	4.7		50.1	96	3142	14 50 01
14 52 00	CYGX-2	02 16 57	42.3	280.7	4.5		48.8	-23	3142	No stop
14 55 00	---	02 19 57	41.9	281.2	4.6		48.7	157	3165	14 52 01
14 55 40	J2134+4050	02 20 37	41.9	285.6	4.8		49.9	16	3165	14 55 40
14 57 00	---	02 21 57	41.7	285.9	4.8		49.8	80	3175	14 55 41
14 57 00	CYGX-2	02 21 57	41.6	281.6	4.6		48.6	-23	3175	No stop
15 00 00	---	02 24 58	41.1	282.1	4.7		48.5	157	3199	14 57 01
15 00 00	J2134+4050	02 24 58	41.3	286.3	4.8		49.7	-24	3199	No stop
15 02 00	---	02 26 58	41.0	286.7	4.9		49.6	96	3214	15 00 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
15 02 00	CYGX-2	02 26 58	40.9	282.4	4.7		48.4	-23	3214	No stop
15 05 00	---	02 29 59	40.4	283.0	4.7		48.3	157	3237	15 02 01
15 05 40	J2134+4050	02 30 39	40.5	287.3	4.9		49.3	17	3237	15 05 40
15 07 00	---	02 31 59	40.3	287.5	5.0		49.3	80	3248	15 05 41
15 07 00	CYGX-2	02 31 59	40.1	283.3	4.8		48.2	-23	3248	No stop
15 10 00	---	02 34 59	39.7	283.8	4.8		48.1	157	3271	15 07 01
15 10 00	J2134+4050	02 34 59	39.9	288.0	5.0		49.1	-23	3271	No stop
15 12 00	---	02 37 00	39.6	288.3	5.0		49.0	97	3286	15 10 01
15 12 00	CYGX-2	02 37 00	39.4	284.2	4.9		48.0	-23	3286	No stop
15 15 00	---	02 40 00	39.0	284.7	4.9		47.8	157	3309	15 12 01
15 15 40	J2134+4050	02 40 40	39.0	288.9	5.1		48.7	17	3309	15 15 40
15 17 00	---	02 42 01	38.9	289.1	5.1		48.6	80	3320	15 15 41
15 17 00	CYGX-2	02 42 01	38.7	285.0	4.9		47.7	-23	3320	No stop
15 20 00	---	02 45 01	38.2	285.5	5.0		47.6	157	3343	15 17 01
15 20 00	J2134+4050	02 45 01	38.4	289.6	5.2		48.5	-23	3343	No stop
15 22 00	---	02 47 01	38.1	289.9	5.2		48.3	97	3359	15 20 01
15 22 00	CYGX-2	02 47 01	37.9	285.8	5.0		47.5	-23	3359	No stop
15 25 00	---	02 50 02	37.5	286.4	5.1		47.3	157	3382	15 22 01
15 25 40	J2134+4050	02 50 42	37.6	290.5	5.3		48.1	17	3382	15 25 40
15 27 00	---	02 52 02	37.4	290.7	5.3		48.0	80	3392	15 25 41
15 27 00	CYGX-2	02 52 02	37.2	286.7	5.1		47.2	-23	3392	No stop
15 30 00	---	02 55 03	36.8	287.2	5.2		47.0	157	3415	15 27 01
15 30 00	J2134+4050	02 55 03	37.0	291.2	5.3		47.8	-23	3415	No stop
15 32 00	---	02 57 03	36.7	291.5	5.4		47.7	97	3431	15 30 01
15 32 00	CYGX-2	02 57 03	36.5	287.5	5.2		46.9	-23	3431	No stop
15 35 00	---	03 00 04	36.1	288.0	5.2		46.8	157	3454	15 32 01
15 35 40	J2134+4050	03 00 44	36.2	292.1	5.4		47.4	17	3454	15 35 40
15 37 00	---	03 02 04	36.0	292.3	5.5		47.3	80	3464	15 35 41
15 37 00	CYGX-2	03 02 04	35.8	288.4	5.3		46.6	-23	3464	No stop
15 40 00	---	03 05 04	35.3	288.9	5.3		46.5	157	3488	15 37 01
15 40 00	J2134+4050	03 05 04	35.6	292.8	5.5		47.1	-23	3488	No stop
15 42 00	---	03 07 05	35.3	293.1	5.5		46.9	97	3503	15 40 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
15 42 00	CYGX-2	03 07 05	35.1	289.2	5.4		46.3	-23	3503	No stop
15 45 00	---	03 10 05	34.6	289.7	5.4		46.2	157	3526	15 42 01
15 45 40	J2134+4050	03 10 45	34.8	293.7	5.6		46.7	17	3526	15 45 40
15 47 00	---	03 12 06	34.7	293.9	5.6		46.6	80	3537	15 45 41
15 47 00	CYGX-2	03 12 06	34.4	290.0	5.4		46.0	-22	3537	No stop
15 50 00	---	03 15 06	33.9	290.5	5.5		45.8	158	3560	15 47 01
15 50 00	J2134+4050	03 15 06	34.2	294.4	5.7		46.4	-23	3560	No stop
15 52 00	---	03 17 06	34.0	294.7	5.7		46.2	97	3575	15 50 01
15 52 00	CYGX-2	03 17 06	33.6	290.8	5.5		45.7	-22	3575	No stop
15 55 00	---	03 20 07	33.2	291.3	5.6		45.5	158	3598	15 52 01
15 55 40	J2134+4050	03 20 47	33.5	295.3	5.8		45.9	17	3598	15 55 40
15 57 00	---	03 22 07	33.3	295.5	5.8		45.8	80	3609	15 55 41
15 57 00	CYGX-2	03 22 07	32.9	291.7	5.6		45.4	-22	3609	No stop
16 00 00	---	03 25 08	32.5	292.2	5.7		45.2	158	3632	15 57 01
16 00 00	J2134+4050	03 25 08	32.9	295.9	5.8		45.6	-22	3632	No stop
16 02 00	---	03 27 08	32.6	296.3	5.9		45.4	98	3648	16 00 01
16 02 00	CYGX-2	03 27 08	32.2	292.5	5.7		45.1	-22	3648	No stop
16 05 00	---	03 30 08	31.8	293.0	5.7		44.9	158	3671	16 02 01
16 05 40	J2134+4050	03 30 49	32.1	296.8	5.9		45.1	18	3671	16 05 40
16 07 00	---	03 32 09	31.9	297.0	6.0		45.0	80	3681	16 05 41
16 07 00	CYGX-2	03 32 09	31.6	293.3	5.8		44.7	-22	3681	No stop
16 10 00	---	03 35 09	31.1	293.8	5.8		44.5	158	3704	16 07 01
16 10 00	J2134+4050	03 35 09	31.5	297.5	6.0		44.8	-22	3704	No stop
16 12 00	---	03 37 10	31.3	297.8	6.0		44.6	98	3720	16 10 01
16 12 00	CYGX-2	03 37 10	30.9	294.1	5.9		44.4	-22	3720	No stop
16 15 00	---	03 40 10	30.5	294.6	5.9		44.1	158	3743	16 12 01
16 15 40	J2134+4050	03 40 50	30.8	298.4	6.1		44.3	18	3743	16 15 40
16 17 00	---	03 42 10	30.6	298.6	6.1		44.2	80	3753	16 15 41
16 17 00	CYGX-2	03 42 10	30.2	294.9	5.9		44.0	-22	3753	No stop
16 20 00	---	03 45 11	29.8	295.4	6.0		43.8	158	3777	16 17 01
16 20 00	J2134+4050	03 45 11	30.2	299.1	6.2		44.0	-22	3777	No stop
16 22 00	---	03 47 11	29.9	299.4	6.2		43.8	98	3792	16 20 01

Schedule for TORUN (Code Tr) Page 12
 e-EVN run ES068A (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 22 Feb 2013 Day 53 ---										
16 22 00	CYGX-2	03 47 11	29.5	295.8	6.0		43.6	-22	3792	No stop
16 25 00	---	03 50 12	29.1	296.2	6.1		43.4	158	3815	16 22 01
16 25 40	J2134+4050	03 50 52	29.5	300.0	6.3		43.5	18	3815	16 25 40
16 27 00	---	03 52 12	29.3	300.2	6.3		43.4	80	3826	16 25 41
16 27 00	CYGX-2	03 52 12	28.8	296.6	6.1		43.2	-22	3826	No stop
16 30 00	---	03 55 13	28.4	297.1	6.2		43.0	158	3849	16 27 01
16 30 00	J2134+4050	03 55 13	28.9	300.7	6.3		43.1	-22	3849	No stop
16 32 00	---	03 57 13	28.6	301.0	6.4		42.9	98	3864	16 30 01
16 32 00	CYGX-2	03 57 13	28.2	297.4	6.2		42.9	-22	3864	No stop
16 35 00	---	04 00 13	27.8	297.9	6.3		42.6	158	3888	16 32 01
16 35 40	J2134+4050	04 00 54	28.2	301.6	6.4		42.6	18	3888	16 35 40
16 37 00	---	04 02 14	28.0	301.8	6.5		42.5	80	3898	16 35 41
16 37 00	CYGX-2	04 02 14	27.5	298.2	6.3		42.5	-22	3898	No stop
16 40 00	---	04 05 14	27.1	298.7	6.3		42.2	158	3921	16 37 01
16 40 00	J2134+4050	04 05 14	27.6	302.3	6.5		42.2	-22	3921	No stop
16 42 00	---	04 07 15	27.4	302.6	6.5		42.0	98	3937	16 40 01
16 42 00	CYGX-2	04 07 15	26.8	299.0	6.4		42.1	-22	3937	No stop
16 45 00	---	04 10 15	26.4	299.5	6.4		41.8	158	3960	16 42 01
16 45 40	J2134+4050	04 10 55	26.9	303.2	6.6		41.7	18	3960	16 45 40
16 47 00	---	04 12 15	26.7	303.4	6.6		41.6	80	3970	16 45 41
16 47 00	CYGX-2	04 12 15	26.2	299.8	6.5		41.6	-22	3970	No stop
16 50 00	---	04 15 16	25.8	300.3	6.5		41.4	158	3993	16 47 01
16 50 00	J2134+4050	04 15 16	26.4	303.8	6.7		41.3	-22	3993	No stop
16 52 00	---	04 17 16	26.1	304.2	6.7		41.1	98	4009	16 50 01
16 52 00	CYGX-2	04 17 16	25.5	300.7	6.5		41.2	-22	4009	No stop
16 55 00	---	04 20 17	25.1	301.2	6.6		41.0	158	4032	16 52 01
16 55 40	J2134+4050	04 20 57	25.7	304.7	6.8		40.8	18	4032	16 55 40
16 57 00	---	04 22 17	25.5	305.0	6.8		40.6	80	4042	16 55 41
16 58 00	BLLAC	04 23 17	30.0	301.8	6.3		43.7	29	4042	16 58 00
17 00 00	---	04 25 18	29.7	302.1	6.4		43.5	120	4058	16 58 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: 1024Mbps

Matching groups in /aps3/opt/share/sched_10.2/catalogs/freq.dat:
 tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 3 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 6 Setup file default. Used pcal sets: 1

LO sum=	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
BBC fr=	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Matching frequency sets: 6

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = OFF

PCALXB1=	S1	S2	S3	S4	S5	S6	S7	S8
PCALXB2=	M1	M2	M3	M4	M5	M6	M7	M8
PCALFR1=	0	0	0	0	0	0	0	0
PCALFR2=	0	0	0	0	0	0	0	0

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
 barrel=roll_off

SOURCES USED IN RECORDING SCANS -- e-EVN run ES068A (Spencer)

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* CYGX-2	21 42 36.838201	* 21 44 41.152410	21 45 13.184960	0.00
	38 05 27.29271	* 38 19 17.11590	38 22 57.33185	0.00
* J2134+4050	21 32 24.650110	* 21 34 24.106800	21 34 54.791732	0.00
	40 36 47.43457	* 40 50 11.33200	40 53 44.38639	0.00
J2202+4216	22 00 39.362504	* 22 02 43.291371	22 03 15.177228	0.14
* BLLAC	42 02 08.59073	* 42 16 39.97987	42 20 32.16830	0.10

The solar corona can cause unstable phases for sources too close to the Sun. SCHED provides warnings at individual scans for distances less than 10 degrees. The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
CYGX-2	49.2
J2134+4050	52.2
BLLAC	52.6

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

VARIABILITY AND SPECTRA IN SEYFERT PARSEC SCALE NUCLEI

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Observing mode: Phase-referencing, ngc4388, 6cm, 1Gb/s

Schedule for TORUN (Code Tr) Page 2

Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Sat 23 Feb 2013 Day 54 ---										
Next scan frequencies:										
		4942.49	4942.49	4942.49	4942.49	4974.49	4974.49			
		4974.49	4974.49	5006.49	5006.49	5006.49	5006.49			
		5038.49	5038.49	5038.49	5038.49					
Next BBC frequencies:										
		742.49	742.49	742.49	742.49	774.49	774.49			
		774.49	774.49	806.49	806.49	806.49	806.49			
		838.49	838.49	838.49	838.49					
Next scan bandwidths:										
		16.00	16.00	16.00	16.00	16.00	16.00			
		16.00	16.00	16.00	16.00	16.00	16.00			
		16.00	16.00	16.00	16.00					
04 45 00	M84	16 12 13	30.0	250.0	3.8		35.4	0	0	04 45 00
04 48 00	---	16 15 14	29.5	250.7	3.8		35.5	180	23	04 45 01
04 48 30	NGC4388	16 15 44	29.4	250.5	3.8		35.5	20	23	04 48 30
04 52 00	---	16 19 14	28.9	251.3	3.9		35.7	210	50	04 48 31
04 52 30	M84	16 19 45	28.9	251.7	3.9		35.8	20	50	04 52 30
04 53 30	---	16 20 45	28.8	252.0	3.9		35.8	60	58	04 52 31
04 54 00	NGC4388	16 21 15	28.6	251.8	3.9		35.8	20	58	04 54 00
04 58 00	---	16 25 15	28.0	252.7	4.0		36.0	240	89	04 54 01
04 58 30	M84	16 25 46	28.0	253.1	4.0		36.1	20	89	04 58 30
04 59 30	---	16 26 46	27.9	253.3	4.0		36.1	60	97	04 58 31
05 00 00	NGC4388	16 27 16	27.7	253.1	4.0		36.1	20	97	05 00 00
05 03 30	---	16 30 46	27.2	253.9	4.1		36.2	210	124	05 00 01
05 04 00	M84	16 31 16	27.2	254.3	4.1		36.4	20	124	05 04 00
05 05 00	---	16 32 17	27.1	254.5	4.1		36.4	60	132	05 04 01
05 05 30	NGC4388	16 32 47	26.9	254.3	4.1		36.3	20	132	05 05 30
05 09 30	---	16 36 47	26.4	255.2	4.2		36.5	240	163	05 05 31
05 10 00	M84	16 37 17	26.4	255.6	4.2		36.6	20	163	05 10 00
05 11 00	---	16 38 18	26.2	255.9	4.2		36.7	60	170	05 10 01

Schedule for TORUN (Code Tr)

Page 3

Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
05 11 30	NGC4388	16 38 48	26.1	255.7	4.2		36.6	20	170	05 11 30
05 15 00	---	16 42 18	25.6	256.4	4.3		36.7	210	197	05 11 31
05 15 30	M84	16 42 48	25.6	256.8	4.3		36.8	20	197	05 15 30
05 17 30	---	16 44 49	25.3	257.3	4.3		36.9	120	213	05 15 31
05 18 00	NGC4388	16 45 19	25.1	257.1	4.3		36.8	20	213	05 18 00
05 22 00	---	16 49 19	24.5	257.9	4.4		37.0	240	244	05 18 01
05 22 30	M84	16 49 50	24.5	258.3	4.4		37.1	20	244	05 22 30
05 23 30	---	16 50 50	24.4	258.6	4.4		37.1	60	252	05 22 31
05 24 00	NGC4388	16 51 20	24.2	258.4	4.4		37.1	20	252	05 24 00
05 27 30	---	16 54 50	23.7	259.1	4.5		37.2	210	279	05 24 01
05 28 00	M84	16 55 20	23.7	259.5	4.5		37.3	20	279	05 28 00
05 29 00	---	16 56 21	23.6	259.7	4.5		37.3	60	286	05 28 01
05 29 30	NGC4388	16 56 51	23.4	259.5	4.5		37.2	20	286	05 29 30
05 33 30	---	17 00 51	22.8	260.4	4.6		37.3	240	317	05 29 31
05 34 00	M84	17 01 21	22.8	260.8	4.6		37.4	20	317	05 34 00
05 35 00	---	17 02 22	22.7	261.0	4.6		37.5	60	325	05 34 01
05 35 30	NGC4388	17 02 52	22.5	260.8	4.6		37.4	20	325	05 35 30
05 39 00	---	17 06 22	22.0	261.5	4.7		37.5	210	352	05 35 31
05 39 30	M84	17 06 52	22.0	261.9	4.7		37.6	20	352	05 39 30
05 40 30	---	17 07 52	21.9	262.1	4.7		37.6	60	360	05 39 31
05 41 00	NGC4388	17 08 23	21.7	262.0	4.7		37.5	20	360	05 41 00
05 45 00	---	17 12 23	21.1	262.8	4.8		37.6	240	391	05 41 01
05 45 30	M84	17 12 53	21.1	263.2	4.8		37.7	20	391	05 45 30
05 46 30	---	17 13 53	21.0	263.4	4.8		37.7	60	399	05 45 31
05 47 00	NGC4388	17 14 24	20.8	263.2	4.8		37.7	20	399	05 47 00
05 50 30	---	17 17 54	20.3	263.9	4.9		37.7	210	426	05 47 01
05 51 00	M84	17 18 24	20.3	264.3	4.9		37.8	20	426	05 51 00
05 52 00	---	17 19 24	20.1	264.5	4.9		37.8	60	434	05 51 01
05 52 30	NGC4388	17 19 54	20.0	264.3	4.9		37.8	20	434	05 52 30
05 56 30	---	17 23 55	19.4	265.2	5.0		37.8	240	464	05 52 31
05 57 00	M84	17 24 25	19.4	265.6	5.0		37.9	20	464	05 57 00
05 58 00	---	17 25 25	19.2	265.8	5.0		37.9	60	472	05 57 01

Schedule for TORUN (Code Tr)

Page 4

Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
05 58 45	3C274	17 26 10	19.6	264.4	4.9		37.7	29	472	05 58 45
06 08 00	---	17 35 27	18.2	266.3	5.1		37.8	555	544	05 58 46
06 08 30	M84	17 35 57	17.7	267.9	5.2		38.0	14	544	06 08 30
06 10 30	---	17 37 57	17.4	268.3	5.2		38.0	120	559	06 08 31
06 11 00	NGC4388	17 38 27	17.2	268.1	5.2		37.9	20	559	06 11 00
06 15 00	---	17 42 28	16.6	268.9	5.3		38.0	240	590	06 11 01
06 15 30	M84	17 42 58	16.6	269.3	5.3		38.0	20	590	06 15 30
06 16 30	---	17 43 58	16.5	269.5	5.3		38.0	60	598	06 15 31
06 17 00	NGC4388	17 44 28	16.3	269.3	5.3		38.0	20	598	06 17 00
06 20 30	---	17 47 59	15.8	270.0	5.4		38.0	210	625	06 17 01
06 21 00	M84	17 48 29	15.8	270.4	5.4		38.0	20	625	06 21 00
06 22 00	---	17 49 29	15.6	270.6	5.4		38.0	60	633	06 21 01
06 22 30	NGC4388	17 49 59	15.5	270.4	5.4		38.0	20	633	06 22 30
06 26 30	---	17 54 00	14.9	271.2	5.5		38.0	240	664	06 22 31
06 27 00	M84	17 54 30	14.9	271.6	5.5		38.0	20	664	06 27 00
06 28 00	---	17 55 30	14.7	271.8	5.5		38.0	60	672	06 27 01
06 28 30	NGC4388	17 56 00	14.6	271.6	5.5		38.0	20	672	06 28 30
06 32 00	---	17 59 31	14.1	272.3	5.6		37.9	210	699	06 28 31
06 32 30	M84	18 00 01	14.1	272.7	5.6		38.0	20	699	06 32 30
06 33 30	---	18 01 01	13.9	272.9	5.6		38.0	60	706	06 32 31
06 34 00	NGC4388	18 01 31	13.8	272.7	5.6		37.9	20	706	06 34 00
06 38 00	---	18 05 32	13.2	273.5	5.7		37.9	240	737	06 34 01
06 38 30	M84	18 06 02	13.2	273.9	5.7		37.9	20	737	06 38 30
06 39 30	---	18 07 02	13.0	274.1	5.7		37.9	60	745	06 38 31
06 40 00	NGC4388	18 07 32	12.9	273.9	5.7		37.9	20	745	06 40 00
06 43 30	---	18 11 03	12.3	274.6	5.7		37.8	210	772	06 40 01
06 44 00	M84	18 11 33	12.3	275.0	5.8		37.8	20	772	06 44 00
06 45 00	---	18 12 33	12.2	275.2	5.8		37.8	60	780	06 44 01
06 45 30	NGC4388	18 13 03	12.0	275.0	5.8		37.8	20	780	06 45 30
06 49 00	---	18 16 34	11.5	275.7	5.8		37.8	210	807	06 45 31
06 49 30	M84	18 17 04	11.5	276.1	5.9		37.8	20	807	06 49 30
06 51 00	---	18 18 34	11.3	276.4	5.9		37.7	90	819	06 49 31

Schedule for TORUN (Code Tr)

Page 5

Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
06 51 45	3C274	18 19 19	11.6	275.1	5.8		37.8	29	819	06 51 45
07 01 00	---	18 28 36	10.3	276.9	6.0		37.6	555	890	06 51 46
07 01 30	M84	18 29 06	9.7	278.4	6.1		37.5	14	890	07 01 30
07 03 30	---	18 31 06	9.4	278.8	6.1		37.5	120	906	07 01 31
07 04 00	NGC4388	18 31 36	9.3	278.6	6.1		37.5	20	906	07 04 00
07 08 00	---	18 35 37	8.7	279.4	6.2		37.4	240	937	07 04 01
07 08 30	M84	18 36 07	8.7	279.8	6.2		37.4	20	937	07 08 30
07 09 30	---	18 37 07	8.5	280.0	6.2		37.3	60	944	07 08 31
07 10 00	NGC4388	18 37 37	8.4	279.8	6.2		37.3	20	944	07 10 00
07 13 30	---	18 41 08	7.9	280.5	6.2		37.2	210	972	07 10 01
07 14 00	M84	18 41 38	7.9	280.9	6.3		37.2	20	972	07 14 00
07 15 00	---	18 42 38	7.7	281.1	6.3		37.2	60	979	07 14 01
07 15 30	NGC4388	18 43 08	7.6	280.9	6.3		37.2	20	979	07 15 30
07 19 30	---	18 47 09	7.0	281.7	6.3		37.0	240	1010	07 15 31
07 20 00	M84	18 47 39	7.0	282.1	6.4		37.0	20	1010	07 20 00
07 21 00	---	18 48 39	6.8	282.3	6.4		37.0	60	1018	07 20 01
07 21 30	NGC4388	18 49 09	6.7	282.1	6.4		37.0	20	1018	07 21 30
07 25 00	---	18 52 40	6.2	282.8	6.4		36.9	210	1045	07 21 31
07 25 30	M84	18 53 10	6.2	283.1	6.5		36.8	20	1045	07 25 30
07 26 30	---	18 54 10	6.0	283.3	6.5		36.8	60	1053	07 25 31
07 27 00	NGC4388	18 54 40	5.9	283.2	6.5		36.8	20	1053	07 27 00
07 31 00	---	18 58 41	5.3	284.0	6.5		36.7	240	1084	07 27 01
07 31 30	M84	18 59 11	5.3	284.3	6.6		36.6	20	1084	07 31 30
07 32 30	---	19 00 11	5.1	284.5	6.6		36.6	60	1092	07 31 31
07 33 00	NGC4388	19 00 41	5.0	284.3	6.6		36.6	20	1092	07 33 00
07 36 30	---	19 04 12	4.5	285.0	6.6		36.5	210	1119	07 33 01
07 37 00	M84	19 04 42	4.5	285.4	6.6		36.4	20	1119	07 37 00
07 38 00	---	19 05 42	4.3	285.6	6.7		36.4	60	1126	07 37 01
07 38 30	NGC4388	19 06 12	4.2	285.4	6.7		36.4	20	1126	07 38 30
07 43 30	---	19 11 13	3.5	286.4	6.7		36.2	300	1165	07 38 31
07 44 00	M84	19 11 43	3.5	286.8	6.8		36.1	20	1165	07 44 00
07 45 00	---	19 12 43	3.3	287.0	6.8		36.1	60	1173	07 44 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: sess113.C1024

Matching groups in /irasoft/sched/catalogs/freq.dat:
 tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 3 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set:	6	Setup file default.	Used pcal sets:	1				
LO sum=	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
BBC fr=	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Bandwd=	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000
	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000
Matching frequency sets:	6							

The following pulse cal sets were used with this setup:

Pulse cal detection set:	1	PCAL = 1MHZ						
PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
 barrel=roll_off

SOURCES USED IN RECORDING SCANS -- Variability and spectra in Seyfert parsec scale nuclei

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* NGC4388	12 23 14.638661	* 12 25 46.781400	12 26 28.664758	0.00
	12 56 20.06864	* 12 39 43.76800	12 35 07.13652	0.00
J1225+1253	12 22 31.582012	* 12 25 03.743328	12 25 45.632790	0.11
* M84	13 09 49.76841	* 12 53 13.13902	12 48 36.37147	0.14
J1230+1223	12 28 17.569281	* 12 30 49.423383	12 31 31.215123	0.10
* 3C274	12 40 01.74883	* 12 23 28.04365	12 18 52.23902	0.10

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
NGC4388	150.5
M84	150.6
3C274	149.3

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

es068btr

E-EVN RUN ES068B (SPENCER)

PI: *Ralph Spencer*

Address: JIVE Oude Hoogeveensedijk 4 Dwingeloo Netherlands
 Phone: +31 521 596 536 EMAIL: zparagi@jive.nl
 Fax: +31 521 596 539 Phone during observation: +31 521 596 530

Observing mode: realtime e-vlbi

Notes: #####
 ##### Please, make sure PHASE CAL is OFF. #####
 #####

Schedule for TORUN (Code Tr) Page 2
 e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Sat 23 Feb 2013 Day 54 ---										
Next scan frequencies: 4942.49 4942.49 4942.49 4942.49 4974.49 4974.49 4974.49 4974.49										
5006.49 5006.49 5006.49 5006.49 5038.49 5038.49 5038.49 5038.49										
Next BBC frequencies: 742.49 742.49 742.49 742.49 774.49 774.49 774.49 774.49										
806.49 806.49 806.49 806.49 838.49 838.49 838.49 838.49										
Next scan bandwidths: 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
08 45 00	BLLAC	20 12 53	68.7	109.2	-1.8		-50.1	0	0	08 45 00
09 00 00	---	20 27 55	70.8	114.5	-1.6		-47.7	900	116	08 45 01
09 00 40	BLLAC	20 28 35	70.9	114.8	-1.6		-47.5	33	116	09 00 40
09 15 00	---	20 42 58	72.8	120.7	-1.3		-44.3	860	227	09 00 41
09 17 00	J2134+4050	20 44 58	75.2	140.3	-0.8		-30.5	67	227	09 17 00
09 22 00	---	20 49 59	75.6	143.6	-0.7		-28.1	300	266	09 17 01
09 22 00	CYGX-2	20 49 59	72.5	141.6	-0.9		-28.4	-26	266	No stop
09 25 00	---	20 52 59	72.8	143.3	-0.9		-27.2	154	289	09 22 01
09 25 00	J2134+4050	20 52 59	75.9	145.7	-0.7		-26.6	-26	289	No stop
09 27 00	---	20 55 00	76.1	147.1	-0.7		-25.6	94	304	09 25 01
09 27 00	CYGX-2	20 55 00	72.9	144.5	-0.8		-26.4	-26	304	No stop
09 30 00	---	20 58 00	73.2	146.3	-0.8		-25.1	154	328	09 27 01
09 30 40	J2134+4050	20 58 40	76.3	149.7	-0.6		-23.6	14	328	09 30 40
09 32 00	---	21 00 00	76.4	150.7	-0.6		-22.9	80	338	09 30 41
09 32 00	CYGX-2	21 00 00	73.4	147.6	-0.8		-24.3	-25	338	No stop
09 35 00	---	21 03 01	73.6	149.5	-0.7		-22.9	155	361	09 32 01
09 35 00	J2134+4050	21 03 01	76.7	153.0	-0.5		-21.2	-26	361	No stop
09 37 00	---	21 05 01	76.8	154.5	-0.5		-20.0	94	377	09 35 01

Schedule for TORUN (Code Tr)

Page 3

e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
09 37 00	CYGX-2	21 05 01	73.7	150.8	-0.7		-22.0	-25	377	No stop
09 40 00	---	21 08 02	74.0	152.7	-0.6		-20.5	155	400	09 37 01
09 40 40	J2134+4050	21 08 42	77.0	157.4	-0.4		-17.8	15	400	09 40 40
09 42 00	---	21 10 02	77.1	158.5	-0.4		-16.9	80	410	09 40 41
09 42 00	CYGX-2	21 10 02	74.1	154.1	-0.6		-19.6	-25	410	No stop
09 45 00	---	21 13 03	74.3	156.1	-0.5		-18.1	155	434	09 42 01
09 45 00	J2134+4050	21 13 03	77.3	160.9	-0.4		-15.0	-25	434	No stop
09 47 00	---	21 15 03	77.3	162.6	-0.3		-13.7	95	449	09 45 01
09 47 00	CYGX-2	21 15 03	74.4	157.5	-0.5		-17.0	-25	449	No stop
09 50 00	---	21 18 03	74.6	159.6	-0.5		-15.5	155	472	09 47 01
09 50 40	J2134+4050	21 18 44	77.5	165.7	-0.3		-11.3	13	472	09 50 40
09 52 00	---	21 20 04	77.5	166.9	-0.2		-10.4	80	483	09 50 41
09 52 00	CYGX-2	21 20 04	74.7	161.1	-0.4		-14.4	-26	483	No stop
09 55 00	---	21 23 04	74.8	163.2	-0.4		-12.8	154	506	09 52 01
09 55 00	J2134+4050	21 23 04	77.6	169.5	-0.2		-8.3	-28	506	No stop
09 57 00	---	21 25 05	77.7	171.3	-0.2		-6.9	92	521	09 55 01
09 57 00	CYGX-2	21 25 05	74.9	164.7	-0.3		-11.7	-28	521	No stop
10 00 00	---	21 28 05	75.0	166.9	-0.3		-10.0	152	544	09 57 01
10 00 40	J2134+4050	21 28 45	77.8	174.5	-0.1		-4.4	10	544	10 00 40
10 02 00	---	21 30 05	77.8	175.7	-0.1		-3.4	80	555	10 00 41
10 04 00	BLLAC	21 32 06	78.1	151.1	-0.5		-23.2	54	555	10 04 00
10 12 00	---	21 40 07	78.6	157.9	-0.4		-17.8	480	617	10 04 01
10 14 00	J2134+4050	21 42 07	77.7	186.4	0.1		5.1	50	617	10 14 00
10 22 00	---	21 50 09	77.5	193.4	0.3		10.6	480	679	10 14 01
10 22 00	CYGX-2	21 50 09	75.3	183.8	0.1		2.9	-34	679	No stop
10 25 00	---	21 53 09	75.2	186.1	0.1		4.7	146	702	10 22 01
10 25 00	J2134+4050	21 53 09	77.4	196.0	0.3		12.7	-36	702	No stop
10 27 00	---	21 55 10	77.3	197.7	0.3		14.0	84	717	10 25 01
10 27 00	CYGX-2	21 55 10	75.2	187.6	0.2		5.8	-34	717	No stop
10 30 00	---	21 58 10	75.1	189.9	0.2		7.6	146	741	10 27 01
10 30 50	J2134+4050	21 59 00	77.1	200.9	0.4		16.4	14	741	10 30 50
10 32 00	---	22 00 10	77.1	201.8	0.4		17.2	70	750	10 30 51

Schedule for TORUN (Code Tr) Page 4
 e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
10 32 00	CYGX-2	22 00 10	75.1	191.4	0.2		8.7	-35	750	No stop
10 35 00	---	22 03 11	75.0	193.7	0.3		10.4	145	773	10 32 01
10 35 00	J2134+4050	22 03 11	76.9	204.2	0.5		19.0	-37	773	No stop
10 37 00	---	22 05 11	76.8	205.8	0.5		20.2	83	788	10 35 01
10 37 00	CYGX-2	22 05 11	74.9	195.2	0.3		11.6	-35	788	No stop
10 40 00	---	22 08 12	74.8	197.4	0.4		13.2	145	812	10 37 01
10 40 50	J2134+4050	22 09 02	76.5	208.7	0.6		22.4	13	812	10 40 50
10 42 00	---	22 10 12	76.4	209.6	0.6		23.1	70	821	10 40 51
10 42 00	CYGX-2	22 10 12	74.7	198.8	0.4		14.3	-36	821	No stop
10 45 00	---	22 13 12	74.5	201.0	0.5		15.9	144	844	10 42 01
10 45 00	J2134+4050	22 13 12	76.2	211.8	0.6		24.7	-37	844	No stop
10 47 00	---	22 15 13	76.0	213.2	0.7		25.8	83	859	10 45 01
10 49 00	J2134+4050	22 17 13	75.9	214.6	0.7		26.8	112	859	10 49 00
10 57 00	---	22 25 14	75.1	219.9	0.8		30.6	480	921	10 49 01
10 57 00	CYGX-2	22 25 14	73.8	209.1	0.7		21.9	-36	921	No stop
11 00 00	---	22 28 15	73.5	211.1	0.7		23.3	144	944	10 57 01
11 00 00	J2134+4050	22 28 15	74.8	221.8	0.9		32.0	-37	944	No stop
11 02 00	---	22 30 15	74.6	223.0	0.9		32.8	83	960	11 00 01
11 02 00	CYGX-2	22 30 15	73.4	212.3	0.8		24.2	-36	960	No stop
11 05 00	---	22 33 16	73.1	214.2	0.8		25.5	144	983	11 02 01
11 05 50	J2134+4050	22 34 06	74.2	225.3	1.0		34.4	13	983	11 05 50
11 07 00	---	22 35 16	74.1	225.9	1.0		34.8	70	992	11 05 51
11 07 00	CYGX-2	22 35 16	72.9	215.4	0.8		26.3	-35	992	No stop
11 10 00	---	22 38 17	72.7	217.2	0.9		27.6	145	1015	11 07 01
11 10 00	J2134+4050	22 38 17	73.8	227.6	1.1		35.9	-36	1015	No stop
11 12 00	---	22 40 17	73.6	228.7	1.1		36.6	84	1031	11 10 01
11 12 00	CYGX-2	22 40 17	72.5	218.3	0.9		28.4	-35	1031	No stop
11 15 00	---	22 43 17	72.2	220.0	1.0		29.5	145	1054	11 12 01
11 15 50	J2134+4050	22 44 08	73.1	230.7	1.2		37.9	14	1054	11 15 50
11 17 00	---	22 45 18	73.0	231.3	1.2		38.3	70	1063	11 15 51
11 17 00	CYGX-2	22 45 18	72.0	221.1	1.0		30.3	-35	1063	No stop
11 20 00	---	22 48 18	71.7	222.8	1.1		31.3	145	1086	11 17 01

Schedule for TORUN (Code Tr)

Page 5

e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
Stop UT		LST	EL	AZ	HA					
--- Sat 23 Feb 2013 Day 54 ---										
11 20 00	J2134+4050	22 48 18	72.6	232.8	1.2		39.3	-36	1086	No stop
11 22 00	---	22 50 19	72.4	233.8	1.3		39.9	84	1102	11 20 01
11 24 00	BLLAC	22 52 19	76.5	222.2	0.8		33.1	80	1102	11 24 00
11 32 00	---	23 00 20	75.6	227.3	1.0		36.6	480	1164	11 24 01
11 34 00	J2134+4050	23 02 21	70.9	239.2	1.5		43.0	82	1164	11 34 00
11 42 00	---	23 10 22	69.8	242.4	1.6		44.8	480	1226	11 34 01
11 42 00	CYGX-2	23 10 22	69.2	233.4	1.4		38.0	-33	1226	No stop
11 45 00	---	23 13 22	68.9	234.7	1.5		38.7	147	1249	11 42 01
11 45 00	J2134+4050	23 13 22	69.4	243.6	1.6		45.4	-33	1249	No stop
11 47 00	---	23 15 23	69.1	244.3	1.7		45.7	87	1264	11 45 01
11 47 00	CYGX-2	23 15 23	68.6	235.6	1.5		39.2	-32	1264	No stop
11 50 00	---	23 18 23	68.3	236.8	1.6		39.9	148	1288	11 47 01
11 50 50	J2134+4050	23 19 13	68.6	245.7	1.7		46.4	17	1288	11 50 50
11 52 00	---	23 20 23	68.5	246.2	1.8		46.6	70	1297	11 50 51
11 52 00	CYGX-2	23 20 23	68.0	237.6	1.6		40.3	-32	1297	No stop
11 55 00	---	23 23 24	67.6	238.8	1.6		40.9	148	1320	11 52 01
11 55 00	J2134+4050	23 23 24	68.0	247.2	1.8		47.1	-32	1320	No stop
11 57 00	---	23 25 24	67.8	247.9	1.8		47.4	88	1335	11 55 01
11 57 00	CYGX-2	23 25 24	67.4	239.6	1.7		41.3	-31	1335	No stop
12 00 00	---	23 28 25	67.0	240.7	1.7		41.9	149	1359	11 57 01
12 00 50	J2134+4050	23 29 15	67.2	249.2	1.9		47.9	18	1359	12 00 50
12 02 00	---	23 30 25	67.1	249.5	1.9		48.1	70	1368	12 00 51
12 04 00	J2134+4050	23 32 25	66.8	250.2	2.0		48.4	113	1368	12 04 00
12 12 00	---	23 40 27	65.6	252.7	2.1		49.3	480	1430	12 04 01
12 12 00	CYGX-2	23 40 27	65.4	245.0	1.9		44.0	-30	1430	No stop
12 15 00	---	23 43 27	65.0	246.0	2.0		44.4	150	1453	12 12 01
12 15 00	J2134+4050	23 43 27	65.2	253.6	2.1		49.6	-30	1453	No stop
12 17 00	---	23 45 28	64.9	254.1	2.2		49.8	90	1468	12 15 01
12 17 00	CYGX-2	23 45 28	64.7	246.6	2.0		44.7	-30	1468	No stop
12 20 00	---	23 48 28	64.3	247.6	2.1		45.1	150	1492	12 17 01
12 20 50	J2134+4050	23 49 18	64.4	255.2	2.2		50.2	20	1492	12 20 50
12 22 00	---	23 50 28	64.2	255.5	2.3		50.3	70	1501	12 20 51

Schedule for TORUN (Code Tr) Page 6
 e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
12 22 00	CYGX-2	23 50 28	64.0	248.2	2.1		45.4	-29	1501	No stop
12 25 00	---	23 53 29	63.6	249.2	2.1		45.7	151	1524	12 22 01
12 25 00	J2134+4050	23 53 29	63.8	256.4	2.3		50.5	-30	1524	No stop
12 27 00	---	23 55 29	63.5	256.9	2.3		50.7	90	1539	12 25 01
12 27 00	CYGX-2	23 55 29	63.3	249.8	2.2		46.0	-29	1539	No stop
12 30 00	---	23 58 30	62.9	250.7	2.2		46.3	151	1562	12 27 01
12 30 50	J2134+4050	23 59 20	62.9	257.9	2.4		51.0	21	1562	12 30 50
12 32 00	---	00 00 30	62.7	258.2	2.4		51.1	70	1572	12 30 51
12 32 00	CYGX-2	00 00 30	62.6	251.3	2.3		46.5	-29	1572	No stop
12 35 00	---	00 03 31	62.1	252.1	2.3		46.8	151	1595	12 32 01
12 35 00	J2134+4050	00 03 31	62.3	259.0	2.5		51.2	-29	1595	No stop
12 37 00	---	00 05 31	62.0	259.5	2.5		51.4	91	1610	12 35 01
12 37 00	CYGX-2	00 05 31	61.9	252.7	2.3		47.0	-28	1610	No stop
12 40 00	---	00 08 31	61.4	253.6	2.4		47.3	152	1633	12 37 01
12 40 40	J2134+4050	00 09 11	61.4	260.4	2.6		51.6	11	1633	12 40 40
12 42 00	---	00 10 32	61.3	260.8	2.6		51.6	80	1644	12 40 41
12 42 00	CYGX-2	00 10 32	61.1	254.1	2.4		47.5	-28	1644	No stop
12 45 00	---	00 13 32	60.7	254.9	2.5		47.7	152	1667	12 42 01
12 45 00	J2134+4050	00 13 32	60.8	261.5	2.6		51.8	-28	1667	No stop
12 47 00	---	00 15 33	60.5	262.0	2.7		51.9	92	1682	12 45 01
12 47 00	CYGX-2	00 15 33	60.4	255.5	2.5		47.9	-28	1682	No stop
12 50 00	---	00 18 33	60.0	256.3	2.6		48.1	152	1706	12 47 01
12 50 40	J2134+4050	00 19 13	60.0	262.8	2.7		52.0	12	1706	12 50 40
12 52 00	---	00 20 33	59.8	263.1	2.8		52.1	80	1716	12 50 41
12 52 00	CYGX-2	00 20 33	59.7	256.8	2.6		48.2	-28	1716	No stop
12 55 00	---	00 23 34	59.2	257.6	2.6		48.4	152	1739	12 52 01
12 55 00	J2134+4050	00 23 34	59.3	263.8	2.8		52.2	-28	1739	No stop
12 57 00	---	00 25 34	59.0	264.3	2.8		52.2	92	1755	12 55 01
12 57 00	CYGX-2	00 25 34	58.9	258.1	2.7		48.5	-27	1755	No stop
13 00 00	---	00 28 35	58.5	258.8	2.7		48.7	153	1778	12 57 01
13 00 40	J2134+4050	00 29 15	58.5	265.1	2.9		52.3	13	1778	13 00 40
13 02 00	---	00 30 35	58.3	265.4	2.9		52.4	80	1788	13 00 41

Schedule for TORUN (Code Tr)

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e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
13 02 00	CYGX-2	00 30 35	58.2	259.3	2.8		48.8	-27	1788	No stop
13 05 00	---	00 33 35	57.8	260.0	2.8		49.0	153	1811	13 02 01
13 05 00	J2134+4050	00 33 35	57.8	266.0	3.0		52.4	-27	1811	No stop
13 07 00	---	00 35 36	57.5	266.5	3.0		52.5	93	1827	13 05 01
13 07 00	CYGX-2	00 35 36	57.5	260.5	2.8		49.1	-27	1827	No stop
13 10 00	---	00 38 36	57.0	261.2	2.9		49.2	153	1850	13 07 01
13 10 40	J2134+4050	00 39 16	57.0	267.3	3.1		52.5	13	1850	13 10 40
13 12 00	---	00 40 37	56.8	267.5	3.1		52.5	80	1861	13 10 41
13 12 00	CYGX-2	00 40 37	56.7	261.7	2.9		49.3	-27	1861	No stop
13 15 00	---	00 43 37	56.3	262.4	3.0		49.4	153	1884	13 12 01
13 15 00	J2134+4050	00 43 37	56.3	268.2	3.1		52.6	-27	1884	No stop
13 17 00	---	00 45 37	56.0	268.6	3.2		52.6	93	1899	13 15 01
13 17 00	CYGX-2	00 45 37	56.0	262.9	3.0		49.5	-26	1899	No stop
13 20 00	---	00 48 38	55.5	263.5	3.1		49.6	154	1922	13 17 01
13 20 40	J2134+4050	00 49 18	55.5	269.3	3.2		52.6	14	1922	13 20 40
13 22 00	---	00 50 38	55.3	269.6	3.3		52.6	80	1933	13 20 41
13 22 00	CYGX-2	00 50 38	55.2	264.0	3.1		49.6	-26	1933	No stop
13 25 00	---	00 53 39	54.8	264.6	3.1		49.7	154	1956	13 22 01
13 25 00	J2134+4050	00 53 39	54.8	270.2	3.3		52.6	-26	1956	No stop
13 27 00	---	00 55 39	54.5	270.6	3.3		52.6	94	1971	13 25 01
13 27 00	CYGX-2	00 55 39	54.5	265.1	3.2		49.7	-26	1971	No stop
13 30 00	---	00 58 40	54.0	265.7	3.2		49.8	154	1995	13 27 01
13 30 40	J2134+4050	00 59 20	54.0	271.3	3.4		52.6	14	1995	13 30 40
13 32 00	---	01 00 40	53.8	271.6	3.4		52.6	80	2005	13 30 41
13 32 00	CYGX-2	01 00 40	53.7	266.2	3.3		49.8	-26	2005	No stop
13 35 00	---	01 03 40	53.3	266.8	3.3		49.9	154	2028	13 32 01
13 35 00	J2134+4050	01 03 40	53.3	272.2	3.5		52.5	-26	2028	No stop
13 37 00	---	01 05 41	53.0	272.5	3.5		52.5	94	2044	13 35 01
13 37 00	CYGX-2	01 05 41	53.0	267.2	3.3		49.9	-25	2044	No stop
13 40 00	---	01 08 41	52.5	267.9	3.4		50.0	155	2067	13 37 01

Schedule for TORUN (Code Tr) Page 8
 e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
13 40 40	J2134+4050	01 09 21	52.4	273.2	3.6		52.5	14	2067	13 40 40
13 42 00	---	01 10 42	52.2	273.5	3.6		52.5	80	2077	13 40 41
13 42 00	CYGX-2	01 10 42	52.2	268.3	3.4		50.0	-25	2077	No stop
13 45 00	---	01 13 42	51.8	268.9	3.5		50.0	155	2101	13 42 01
13 45 00	J2134+4050	01 13 42	51.8	274.1	3.6		52.4	-25	2101	No stop
13 47 00	---	01 15 42	51.5	274.4	3.7		52.4	95	2116	13 45 01
13 47 00	CYGX-2	01 15 42	51.5	269.3	3.5		50.0	-25	2116	No stop
13 50 00	---	01 18 43	51.0	269.9	3.6		50.0	155	2139	13 47 01
13 50 40	J2134+4050	01 19 23	50.9	275.1	3.7		52.3	15	2139	13 50 40
13 52 00	---	01 20 43	50.7	275.4	3.8		52.3	80	2150	13 50 41
13 52 00	CYGX-2	01 20 43	50.7	270.3	3.6		50.0	-25	2150	No stop
13 55 00	---	01 23 44	50.3	270.9	3.6		50.0	155	2173	13 52 01
13 55 00	J2134+4050	01 23 44	50.3	275.9	3.8		52.2	-25	2173	No stop
13 57 00	---	01 25 44	50.0	276.3	3.8		52.2	95	2188	13 55 01
13 57 00	CYGX-2	01 25 44	50.0	271.3	3.7		50.0	-25	2188	No stop
14 00 00	---	01 28 45	49.5	271.9	3.7		50.0	155	2211	13 57 01
14 00 40	J2134+4050	01 29 25	49.4	276.9	3.9		52.1	15	2211	14 00 40
14 02 00	---	01 30 45	49.3	277.2	3.9		52.0	80	2222	14 00 41
14 02 00	CYGX-2	01 30 45	49.2	272.3	3.8		49.9	-25	2222	No stop
14 05 00	---	01 33 45	48.8	272.8	3.8		49.9	155	2245	14 02 01
14 05 00	J2134+4050	01 33 45	48.8	277.7	4.0		51.9	-25	2245	No stop
14 07 00	---	01 35 46	48.5	278.1	4.0		51.9	95	2261	14 05 01
14 07 00	CYGX-2	01 35 46	48.5	273.2	3.8		49.9	-25	2261	No stop
14 10 00	---	01 38 46	48.0	273.8	3.9		49.8	155	2284	14 07 01
14 10 40	J2134+4050	01 39 26	48.0	278.7	4.1		51.7	15	2284	14 10 40
14 12 00	---	01 40 46	47.8	278.9	4.1		51.7	80	2294	14 10 41
14 12 00	CYGX-2	01 40 46	47.7	274.2	3.9		49.8	-24	2294	No stop
14 15 00	---	01 43 47	47.3	274.7	4.0		49.8	156	2317	14 12 01
14 15 00	J2134+4050	01 43 47	47.3	279.5	4.1		51.6	-25	2317	No stop
14 17 00	---	01 45 47	47.0	279.8	4.2		51.5	95	2333	14 15 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
14 17 00	CYGX-2	01 45 47	47.0	275.1	4.0		49.7	-24	2333	No stop
14 20 00	---	01 48 48	46.5	275.7	4.1		49.7	156	2356	14 17 01
14 20 40	J2134+4050	01 49 28	46.5	280.4	4.2		51.4	16	2356	14 20 40
14 22 00	---	01 50 48	46.3	280.7	4.3		51.3	80	2366	14 20 41
14 22 00	CYGX-2	01 50 48	46.2	276.0	4.1		49.6	-24	2366	No stop
14 25 00	---	01 53 49	45.8	276.6	4.1		49.6	156	2390	14 22 01
14 25 00	J2134+4050	01 53 49	45.8	281.2	4.3		51.2	-24	2390	No stop
14 27 00	---	01 55 49	45.5	281.5	4.3		51.1	96	2405	14 25 01
14 27 00	CYGX-2	01 55 49	45.5	276.9	4.2		49.5	-24	2405	No stop
14 30 00	---	01 58 49	45.0	277.5	4.2		49.4	156	2428	14 27 01
14 30 40	J2134+4050	01 59 30	45.0	282.1	4.4		51.0	16	2428	14 30 40
14 32 00	---	02 00 50	44.8	282.4	4.4		50.9	80	2439	14 30 41
14 32 00	CYGX-2	02 00 50	44.7	277.9	4.3		49.4	-24	2439	No stop
14 35 00	---	02 03 50	44.3	278.4	4.3		49.3	156	2462	14 32 01
14 35 00	J2134+4050	02 03 50	44.4	282.9	4.5		50.8	-24	2462	No stop
14 37 00	---	02 05 51	44.1	283.2	4.5		50.7	96	2477	14 35 01
14 37 00	CYGX-2	02 05 51	44.0	278.7	4.3		49.2	-24	2477	No stop
14 40 00	---	02 08 51	43.5	279.3	4.4		49.1	156	2500	14 37 01
14 40 40	J2134+4050	02 09 31	43.5	283.8	4.6		50.5	16	2500	14 40 40
14 42 00	---	02 10 51	43.3	284.0	4.6		50.4	80	2511	14 40 41
14 42 00	CYGX-2	02 10 51	43.2	279.6	4.4		49.0	-24	2511	No stop
14 45 00	---	02 13 52	42.8	280.2	4.5		48.9	156	2534	14 42 01
14 45 00	J2134+4050	02 13 52	42.9	284.5	4.6		50.3	-24	2534	No stop
14 47 00	---	02 15 52	42.6	284.9	4.7		50.2	96	2550	14 45 01
14 47 00	CYGX-2	02 15 52	42.5	280.5	4.5		48.9	-24	2550	No stop
14 50 00	---	02 18 53	42.0	281.0	4.6		48.8	156	2573	14 47 01
14 50 40	J2134+4050	02 19 33	42.1	285.5	4.7		50.0	16	2573	14 50 40
14 52 00	---	02 20 53	41.9	285.7	4.8		49.9	80	2583	14 50 41
14 52 00	CYGX-2	02 20 53	41.7	281.4	4.6		48.7	-23	2583	No stop
14 55 00	---	02 23 54	41.3	281.9	4.6		48.6	157	2606	14 52 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
14 55 00	J2134+4050	02 23 54	41.4	286.2	4.8		49.7	-24	2606	No stop
14 57 00	---	02 25 54	41.2	286.5	4.8		49.6	96	2622	14 55 01
14 57 00	CYGX-2	02 25 54	41.0	282.3	4.7		48.5	-23	2622	No stop
15 00 00	---	02 28 54	40.6	282.8	4.7		48.3	157	2645	14 57 01
15 00 40	J2134+4050	02 29 34	40.6	287.1	4.9		49.4	17	2645	15 00 40
15 02 00	---	02 30 55	40.4	287.3	4.9		49.3	80	2655	15 00 41
15 02 00	CYGX-2	02 30 55	40.3	283.1	4.8		48.2	-23	2655	No stop
15 05 00	---	02 33 55	39.8	283.6	4.8		48.1	157	2679	15 02 01
15 05 00	J2134+4050	02 33 55	40.0	287.8	5.0		49.1	-23	2679	No stop
15 07 00	---	02 35 56	39.7	288.1	5.0		49.0	97	2694	15 05 01
15 07 00	CYGX-2	02 35 56	39.5	284.0	4.8		48.0	-23	2694	No stop
15 10 00	---	02 38 56	39.1	284.5	4.9		47.9	157	2717	15 07 01
15 10 40	J2134+4050	02 39 36	39.2	288.7	5.1		48.8	17	2717	15 10 40
15 12 00	---	02 40 56	39.0	288.9	5.1		48.7	80	2728	15 10 41
15 12 00	CYGX-2	02 40 56	38.8	284.8	4.9		47.8	-23	2728	No stop
15 15 00	---	02 43 57	38.4	285.3	5.0		47.6	157	2751	15 12 01
15 15 00	J2134+4050	02 43 57	38.6	289.4	5.2		48.5	-23	2751	No stop
15 17 00	---	02 45 57	38.3	289.7	5.2		48.4	97	2766	15 15 01
15 17 00	CYGX-2	02 45 57	38.1	285.7	5.0		47.5	-23	2766	No stop
15 20 00	---	02 48 58	37.7	286.2	5.1		47.4	157	2790	15 17 01
15 20 40	J2134+4050	02 49 38	37.8	290.3	5.2		48.2	17	2790	15 20 40
15 22 00	---	02 50 58	37.6	290.5	5.3		48.1	80	2800	15 20 41
15 22 00	CYGX-2	02 50 58	37.4	286.5	5.1		47.3	-23	2800	No stop
15 25 00	---	02 53 58	36.9	287.0	5.1		47.1	157	2823	15 22 01
15 25 00	J2134+4050	02 53 58	37.2	291.0	5.3		47.9	-23	2823	No stop
15 27 00	---	02 55 59	36.9	291.3	5.4		47.7	97	2839	15 25 01
15 27 00	CYGX-2	02 55 59	36.6	287.3	5.2		47.0	-23	2839	No stop
15 30 00	---	02 58 59	36.2	287.8	5.2		46.8	157	2862	15 27 01
15 30 40	J2134+4050	02 59 39	36.4	291.9	5.4		47.5	17	2862	15 30 40
15 32 00	---	03 01 00	36.2	292.1	5.4		47.4	80	2872	15 30 41

Schedule for TORUN (Code Tr)

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e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
15 32 00	CYGX-2	03 01 00	35.9	288.2	5.3		46.7	-23	2872	No stop
15 35 00	---	03 04 00	35.5	288.7	5.3		46.5	157	2895	15 32 01
15 35 00	J2134+4050	03 04 00	35.8	292.6	5.5		47.2	-23	2895	No stop
15 37 00	---	03 06 00	35.5	292.9	5.5		47.0	97	2911	15 35 01
15 37 00	CYGX-2	03 06 00	35.2	289.0	5.3		46.4	-23	2911	No stop
15 40 00	---	03 09 01	34.8	289.5	5.4		46.2	157	2934	15 37 01
15 40 40	J2134+4050	03 09 41	35.0	293.5	5.6		46.8	17	2934	15 40 40
15 42 00	---	03 11 01	34.8	293.7	5.6		46.7	80	2944	15 40 41
15 42 00	CYGX-2	03 11 01	34.5	289.8	5.4		46.1	-22	2944	No stop
15 45 00	---	03 14 02	34.1	290.3	5.5		45.9	158	2968	15 42 01
15 45 00	J2134+4050	03 14 02	34.4	294.2	5.7		46.4	-23	2968	No stop
15 47 00	---	03 16 02	34.1	294.5	5.7		46.3	97	2983	15 45 01
15 47 00	CYGX-2	03 16 02	33.8	290.7	5.5		45.8	-22	2983	No stop
15 50 00	---	03 19 03	33.4	291.2	5.6		45.6	158	3006	15 47 01
15 50 40	J2134+4050	03 19 43	33.6	295.1	5.7		46.0	17	3006	15 50 40
15 52 00	---	03 21 03	33.4	295.3	5.8		45.9	80	3017	15 50 41
15 52 00	CYGX-2	03 21 03	33.1	291.5	5.6		45.5	-22	3017	No stop
15 55 00	---	03 24 03	32.7	292.0	5.6		45.3	158	3040	15 52 01
15 55 00	J2134+4050	03 24 03	33.0	295.8	5.8		45.7	-23	3040	No stop
15 57 00	---	03 26 04	32.8	296.1	5.9		45.5	97	3055	15 55 01
15 57 00	CYGX-2	03 26 04	32.4	292.3	5.7		45.1	-22	3055	No stop
16 00 00	---	03 29 04	32.0	292.8	5.7		44.9	158	3079	15 57 01
16 00 40	J2134+4050	03 29 44	32.3	296.7	5.9		45.2	18	3079	16 00 40
16 02 00	---	03 31 05	32.1	296.9	5.9		45.1	80	3089	16 00 41
16 02 00	CYGX-2	03 31 05	31.7	293.1	5.8		44.8	-22	3089	No stop
16 05 00	---	03 34 05	31.3	293.6	5.8		44.6	158	3112	16 02 01
16 05 00	J2134+4050	03 34 05	31.7	297.3	6.0		44.9	-22	3112	No stop
16 07 00	---	03 36 05	31.4	297.7	6.0		44.7	98	3128	16 05 01
16 07 00	CYGX-2	03 36 05	31.0	293.9	5.8		44.4	-22	3128	No stop
16 10 00	---	03 39 06	30.6	294.4	5.9		44.2	158	3151	16 07 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
16 10 40	J2134+4050	03 39 46	30.9	298.2	6.1		44.4	18	3151	16 10 40
16 12 00	---	03 41 06	30.7	298.5	6.1		44.3	80	3161	16 10 41
16 12 00	CYGX-2	03 41 06	30.3	294.8	5.9		44.1	-22	3161	No stop
16 15 00	---	03 44 07	29.9	295.3	6.0		43.9	158	3184	16 12 01
16 15 00	J2134+4050	03 44 07	30.4	298.9	6.2		44.1	-22	3184	No stop
16 17 00	---	03 46 07	30.1	299.2	6.2		43.9	98	3200	16 15 01
16 17 00	CYGX-2	03 46 07	29.6	295.6	6.0		43.7	-22	3200	No stop
16 20 00	---	03 49 08	29.2	296.1	6.1		43.5	158	3223	16 17 01
16 20 40	J2134+4050	03 49 48	29.6	299.8	6.2		43.6	18	3223	16 20 40
16 22 00	---	03 51 08	29.4	300.0	6.3		43.5	80	3233	16 20 41
16 22 00	CYGX-2	03 51 08	29.0	296.4	6.1		43.3	-22	3233	No stop
16 25 00	---	03 54 08	28.6	296.9	6.1		43.1	158	3257	16 22 01
16 25 00	J2134+4050	03 54 08	29.0	300.5	6.3		43.2	-22	3257	No stop
16 27 00	---	03 56 09	28.8	300.8	6.4		43.0	98	3272	16 25 01
16 27 00	CYGX-2	03 56 09	28.3	297.2	6.2		42.9	-22	3272	No stop
16 30 00	---	03 59 09	27.9	297.7	6.2		42.7	158	3295	16 27 01
16 30 40	J2134+4050	03 59 49	28.3	301.4	6.4		42.7	18	3295	16 30 40
16 32 00	---	04 01 09	28.1	301.6	6.4		42.6	80	3306	16 30 41
16 32 00	CYGX-2	04 01 09	27.6	298.0	6.3		42.5	-22	3306	No stop
16 35 00	---	04 04 10	27.2	298.5	6.3		42.3	158	3329	16 32 01
16 35 00	J2134+4050	04 04 10	27.8	302.1	6.5		42.3	-22	3329	No stop
16 37 00	---	04 06 10	27.5	302.4	6.5		42.1	98	3344	16 35 01
16 37 00	CYGX-2	04 06 10	27.0	298.9	6.3		42.1	-22	3344	No stop
16 40 00	---	04 09 11	26.6	299.3	6.4		41.9	158	3368	16 37 01
16 40 40	J2134+4050	04 09 51	27.0	303.0	6.6		41.8	18	3368	16 40 40
16 42 00	---	04 11 11	26.9	303.2	6.6		41.7	80	3378	16 40 41
16 42 00	CYGX-2	04 11 11	26.3	299.7	6.4		41.7	-22	3378	No stop
16 45 00	---	04 14 12	25.9	300.2	6.5		41.5	158	3401	16 42 01
16 45 00	J2134+4050	04 14 12	26.5	303.7	6.7		41.4	-22	3401	No stop
16 47 00	---	04 16 12	26.2	304.0	6.7		41.2	98	3417	16 45 01

Schedule for TORUN (Code Tr)

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e-EVN run ES068B (Spencer)

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 23 Feb 2013 Day 54 ---										
16 47 00	CYGX-2	04 16 12	25.7	300.5	6.5		41.3	-22	3417	No stop
16 50 00	---	04 19 12	25.3	301.0	6.6		41.1	158	3440	16 47 01
16 50 40	J2134+4050	04 19 53	25.8	304.6	6.7		40.9	18	3440	16 50 40
16 52 00	---	04 21 13	25.6	304.8	6.8		40.7	80	3450	16 50 41
16 53 00	BLLAC	04 22 13	30.1	301.6	6.3		43.8	29	3450	16 53 00
16 55 00	---	04 24 13	29.9	301.9	6.3		43.6	120	3466	16 53 01
16 57 00	J2134+4050	04 26 14	25.0	305.6	6.9		40.2	89	3466	16 57 00
17 00 00	---	04 29 14	24.6	306.1	6.9		40.0	180	3489	16 57 01
17 00 00	CYGX-2	04 29 14	24.0	302.6	6.7		40.2	-21	3489	No stop
17 03 00	---	04 32 15	23.6	303.1	6.8		39.9	159	3512	17 00 01
17 03 00	J2134+4050	04 32 15	24.3	306.5	7.0		39.7	-22	3512	No stop
17 05 00	---	04 34 15	24.0	306.9	7.0		39.5	98	3528	17 03 01
17 05 00	CYGX-2	04 34 15	23.4	303.4	6.8		39.7	-21	3528	No stop
17 08 00	---	04 37 15	23.0	303.9	6.9		39.5	159	3551	17 05 01
17 08 40	J2134+4050	04 37 56	23.6	307.4	7.1		39.1	18	3551	17 08 40
17 10 00	---	04 39 16	23.4	307.7	7.1		39.0	80	3561	17 08 41
17 10 00	CYGX-2	04 39 16	22.7	304.3	6.9		39.3	-21	3561	No stop
17 13 00	---	04 42 16	22.4	304.8	7.0		39.0	159	3584	17 10 01
17 13 00	J2134+4050	04 42 16	23.1	308.1	7.1		38.7	-22	3584	No stop
17 15 00	---	04 44 17	22.8	308.5	7.2		38.5	98	3600	17 13 01
17 15 00	CYGX-2	04 44 17	22.1	305.1	7.0		38.8	-21	3600	No stop
17 18 00	---	04 47 17	21.8	305.6	7.0		38.5	159	3623	17 15 01
17 18 40	J2134+4050	04 47 57	22.4	309.1	7.2		38.1	18	3623	17 18 40
17 20 00	---	04 49 17	22.3	309.3	7.2		37.9	80	3633	17 18 41
17 20 00	CYGX-2	04 49 17	21.5	305.9	7.1		38.3	-21	3633	No stop
17 23 00	---	04 52 18	21.1	306.4	7.1		38.1	159	3657	17 20 01
17 23 00	J2134+4050	04 52 18	21.9	309.8	7.3		37.6	-21	3657	No stop
17 25 00	---	04 54 18	21.7	310.1	7.3		37.4	99	3672	17 23 01
17 25 00	CYGX-2	04 54 18	20.9	306.7	7.2		37.9	-21	3672	No stop
17 28 00	---	04 57 19	20.5	307.2	7.2		37.6	159	3695	17 25 01
17 28 50	J2134+4050	04 58 09	21.2	310.7	7.4		37.0	29	3695	17 28 50
17 30 00	---	04 59 19	21.1	310.9	7.4		36.9	70	3704	17 28 51

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: 1024Mbps

Matching groups in /aps3/opt/share/sched_10.2/catalogs/freq.dat:
 tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 3 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 6 Setup file default. Used pcal sets: 1

LO sum=	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
BBC fr=	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Matching frequency sets: 6

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = OFF

PCALXB1=	S1	S2	S3	S4	S5	S6	S7	S8
PCALXB2=	M1	M2	M3	M4	M5	M6	M7	M8
PCALFR1=	0	0	0	0	0	0	0	0
PCALFR2=	0	0	0	0	0	0	0	0

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
 barrel=roll_off

SOURCES USED IN RECORDING SCANS -- e-EVN run ES068B (Spencer)

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* CYGX-2	21 42 36.838201	* 21 44 41.152410	21 45 13.195000	0.00
	38 05 27.29271	* 38 19 17.11590	38 22 57.07230	0.00
* J2134+4050	21 32 24.650110	* 21 34 24.106800	21 34 54.803050	0.00
	40 36 47.43457	* 40 50 11.33200	40 53 44.11542	0.00
J2202+4216	22 00 39.362504	* 22 02 43.291371	22 03 15.184562	0.14
* BLLAC	42 02 08.59073	* 42 16 39.97987	42 20 31.89492	0.10

The solar corona can cause unstable phases for sources too close to the Sun. SCHED provides warnings at individual scans for distances less than 10 degrees. The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
CYGX-2	49.0
J2134+4050	52.0
BLLAC	52.3

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

VARIABILITY AND SPECTRA IN SEYFERT PARSEC SCALE NUCLEI

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Observing mode: Phase-referencing, ngc4501, 6cm, 1Gb/s

Schedule for TORUN (Code Tr) Page 2

Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

```
-----
Start UT  Source          Start / Stop          Early  Disk  TPStart
Stop UT          LST    EL    AZ    HA    UP    ParA  Dwell  GBytes  SYNC
-----
```

--- Sun 24 Feb 2013 Day 55 ---

```
Next scan frequencies: 4942.49 4942.49 4942.49 4942.49 4974.49 4974.49
                      4974.49 4974.49 5006.49 5006.49 5006.49 5006.49
                      5038.49 5038.49 5038.49 5038.49
Next BBC frequencies: 742.49 742.49 742.49 742.49 774.49 774.49
                      774.49 774.49 806.49 806.49 806.49 806.49
                      838.49 838.49 838.49 838.49
Next scan bandwidths: 16.00 16.00 16.00 16.00 16.00 16.00
                      16.00 16.00 16.00 16.00 16.00 16.00
                      16.00 16.00 16.00 16.00
```

```
04 45 00 M87          16 16 10 29.8 249.3 3.7      35.1    0      0    04 45 00
04 48 00 ---          16 19 10 29.4 250.0 3.8      35.3   180    23    04 45 01

04 48 30 NGC4501     16 19 40 31.1 251.2 3.8      35.9    10    23    04 48 30
04 52 00 ---          16 23 11 30.6 252.0 3.8      36.1   210    50    04 48 31

04 52 30 M87          16 23 41 28.8 251.0 3.9      35.5     9    50    04 52 30
04 53 30 ---          16 24 41 28.6 251.2 3.9      35.6    60    58    04 52 31

04 54 00 NGC4501     16 25 11 30.4 252.4 3.9      36.2    10    58    04 54 00
04 57 30 ---          16 28 42 29.8 253.2 3.9      36.4   210    85    04 54 01

04 58 00 M87          16 29 12 28.0 252.2 4.0      35.8     9    85    04 58 00
04 59 00 ---          16 30 12 27.8 252.5 4.0      35.9    60    93    04 58 01

04 59 30 NGC4501     16 30 42 29.6 253.7 4.0      36.5    10    93    04 59 30
05 03 00 ---          16 34 13 29.1 254.5 4.0      36.7   210   120    04 59 31

05 03 30 M87          16 34 43 27.2 253.5 4.1      36.1     9   120    05 03 30
05 04 30 ---          16 35 43 27.0 253.7 4.1      36.2    60   128    05 03 31

05 05 00 NGC4501     16 36 13 28.8 254.9 4.1      36.8    10   128    05 05 00
05 08 30 ---          16 39 44 28.3 255.7 4.1      36.9   210   155    05 05 01
```

Schedule for TORUN (Code Tr)

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Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
05 09 00	M87	16 40 14	26.4	254.7	4.1		36.4	9	155	05 09 00
05 10 00	---	16 41 14	26.2	254.9	4.2		36.4	60	163	05 09 01
05 10 30	NGC4501	16 41 44	28.0	256.1	4.2		37.0	10	163	05 10 30
05 15 00	---	16 46 15	27.3	257.1	4.2		37.2	270	197	05 10 31
05 15 30	M87	16 46 45	25.4	256.1	4.3		36.6	9	197	05 15 30
05 17 30	---	16 48 45	25.1	256.5	4.3		36.7	120	213	05 15 31
05 18 00	NGC4501	16 49 15	26.9	257.8	4.3		37.3	10	213	05 18 00
05 21 30	---	16 52 46	26.3	258.5	4.3		37.4	210	240	05 18 01
05 22 10	M87	16 53 26	24.5	257.6	4.4		36.9	19	240	05 22 10
05 23 30	---	16 54 46	24.3	257.8	4.4		36.9	80	250	05 22 11
05 24 00	NGC4501	16 55 16	26.0	259.1	4.4		37.5	10	250	05 24 00
05 27 30	---	16 58 47	25.5	259.8	4.4		37.6	210	277	05 24 01
05 28 00	M87	16 59 17	23.6	258.8	4.5		37.1	9	277	05 28 00
05 29 00	---	17 00 17	23.5	259.0	4.5		37.1	60	285	05 28 01
05 29 30	NGC4501	17 00 47	25.2	260.2	4.5		37.6	10	285	05 29 30
05 33 00	---	17 04 18	24.6	261.0	4.5		37.7	210	312	05 29 31
05 33 40	M87	17 04 58	22.8	260.0	4.6		37.3	19	312	05 33 40
05 35 00	---	17 06 18	22.6	260.3	4.6		37.3	80	323	05 33 41
05 35 30	NGC4501	17 06 48	24.3	261.5	4.6		37.8	10	323	05 35 30
05 39 00	---	17 10 19	23.7	262.2	4.6		37.9	210	350	05 35 31
05 39 30	M87	17 10 49	21.9	261.2	4.7		37.4	9	350	05 39 30
05 40 30	---	17 11 49	21.7	261.4	4.7		37.4	60	357	05 39 31
05 41 00	NGC4501	17 12 19	23.4	262.7	4.7		37.9	10	357	05 41 00
05 44 30	---	17 15 50	22.9	263.4	4.7		38.0	210	384	05 41 01
05 45 10	M87	17 16 30	21.0	262.4	4.7		37.5	19	384	05 45 10
05 46 30	---	17 17 50	20.9	262.7	4.8		37.6	80	395	05 45 11
05 47 00	NGC4501	17 18 20	22.6	263.9	4.8		38.0	10	395	05 47 00
05 50 30	---	17 21 51	22.0	264.6	4.8		38.1	210	422	05 47 01
05 51 00	M87	17 22 21	20.2	263.6	4.8		37.6	9	422	05 51 00
05 52 00	---	17 23 21	20.0	263.8	4.9		37.7	60	430	05 51 01
05 52 30	NGC4501	17 23 51	21.7	265.0	4.9		38.1	10	430	05 52 30
05 56 00	---	17 27 22	21.2	265.8	4.9		38.2	210	457	05 52 31

Schedule for TORUN (Code Tr)

Page 4

Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
05 56 40	M87	17 28 02	19.3	264.8	4.9		37.7	19	457	05 56 40
05 58 00	---	17 29 22	19.1	265.1	5.0		37.8	80	467	05 56 41
05 58 30	3C274	17 29 52	19.1	265.2	5.0		37.8	24	467	05 58 30
06 05 00	---	17 36 23	18.1	266.5	5.1		37.8	390	517	05 58 31
06 05 30	M87	17 36 53	18.0	266.6	5.1		37.8	24	517	06 05 30
06 07 30	---	17 38 53	17.7	267.0	5.1		37.9	120	533	06 05 31
06 08 00	NGC4501	17 39 24	19.4	268.2	5.1		38.3	10	533	06 08 00
06 11 30	---	17 42 54	18.9	268.9	5.2		38.3	210	560	06 08 01
06 12 00	M87	17 43 24	17.0	267.9	5.2		37.9	9	560	06 12 00
06 13 30	---	17 44 54	16.8	268.2	5.2		37.9	90	572	06 12 01
06 14 30	NGC4501	17 45 55	18.4	269.5	5.2		38.3	40	572	06 14 30
06 17 30	---	17 48 55	18.0	270.1	5.3		38.3	180	595	06 14 31
06 18 00	M87	17 49 25	16.1	269.1	5.3		37.9	9	595	06 18 00
06 19 00	---	17 50 25	16.0	269.3	5.3		37.9	60	603	06 18 01
06 19 30	NGC4501	17 50 55	17.7	270.5	5.3		38.3	10	603	06 19 30
06 23 00	---	17 54 26	17.1	271.2	5.4		38.3	210	630	06 19 31
06 23 30	M87	17 54 56	15.3	270.2	5.4		37.9	9	630	06 23 30
06 25 00	---	17 56 26	15.1	270.5	5.4		37.9	90	641	06 23 31
06 26 00	NGC4501	17 57 26	16.7	271.8	5.4		38.3	40	641	06 26 00
06 29 00	---	18 00 27	16.2	272.4	5.5		38.3	180	664	06 26 01
06 29 30	M87	18 00 57	14.4	271.4	5.5		37.9	9	664	06 29 30
06 30 30	---	18 01 57	14.2	271.6	5.5		37.9	60	672	06 29 31
06 31 00	NGC4501	18 02 27	15.9	272.8	5.5		38.2	10	672	06 31 00
06 34 30	---	18 05 58	15.4	273.5	5.6		38.2	210	699	06 31 01
06 35 00	M87	18 06 28	13.6	272.5	5.6		37.9	9	699	06 35 00
06 36 30	---	18 07 58	13.3	272.8	5.6		37.9	90	711	06 35 01
06 37 30	NGC4501	18 08 58	15.0	274.1	5.6		38.2	40	711	06 37 30
06 40 30	---	18 11 59	14.5	274.7	5.7		38.2	180	734	06 37 31
06 41 00	M87	18 12 29	12.7	273.7	5.7		37.8	9	734	06 41 00
06 42 00	---	18 13 29	12.5	273.9	5.7		37.8	60	742	06 41 01
06 42 30	NGC4501	18 13 59	14.2	275.1	5.7		38.1	10	742	06 42 30
06 46 00	---	18 17 30	13.7	275.8	5.7		38.1	210	769	06 42 31

Schedule for TORUN (Code Tr)

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Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
06 46 30	M87	18 18 00	11.8	274.8	5.8		37.8	9	769	06 46 30
06 48 00	---	18 19 30	11.6	275.1	5.8		37.7	90	781	06 46 31
06 49 00	NGC4501	18 20 30	13.2	276.3	5.8		38.0	40	781	06 49 00
06 52 00	---	18 23 31	12.8	276.9	5.8		38.0	180	804	06 49 01
06 52 30	M87	18 24 01	10.9	276.0	5.9		37.7	9	804	06 52 30
06 53 30	---	18 25 01	10.8	276.2	5.9		37.7	60	812	06 52 31
06 54 00	3C274	18 25 31	10.7	276.3	5.9		37.7	24	812	06 54 00
07 00 30	---	18 32 02	9.7	277.6	6.0		37.5	390	862	06 54 01
07 01 00	M87	18 32 32	9.7	277.7	6.0		37.5	24	862	07 01 00
07 03 00	---	18 34 33	9.4	278.1	6.1		37.5	120	877	07 01 01
07 03 30	NGC4501	18 35 03	11.1	279.2	6.0		37.7	10	877	07 03 30
07 07 00	---	18 38 33	10.6	279.9	6.1		37.6	210	904	07 03 31
07 07 30	M87	18 39 03	8.7	278.9	6.1		37.4	9	904	07 07 30
07 09 00	---	18 40 34	8.5	279.2	6.2		37.3	90	916	07 07 31
07 10 00	NGC4501	18 41 34	10.1	280.5	6.1		37.6	40	916	07 10 00
07 13 00	---	18 44 34	9.7	281.0	6.2		37.5	180	939	07 10 01
07 13 30	M87	18 45 04	7.8	280.1	6.2		37.2	9	939	07 13 30
07 14 30	---	18 46 04	7.7	280.3	6.2		37.2	60	947	07 13 31
07 15 00	NGC4501	18 46 35	9.4	281.4	6.2		37.4	10	947	07 15 00
07 18 30	---	18 50 05	8.9	282.1	6.3		37.3	210	974	07 15 01
07 19 00	M87	18 50 35	7.0	281.2	6.3		37.1	9	974	07 19 00
07 20 30	---	18 52 05	6.8	281.5	6.3		37.0	90	986	07 19 01
07 21 30	NGC4501	18 53 06	8.4	282.7	6.3		37.2	40	986	07 21 30
07 24 30	---	18 56 06	8.0	283.3	6.4		37.1	180	1009	07 21 31
07 25 00	M87	18 56 36	6.1	282.4	6.4		36.9	9	1009	07 25 00
07 26 00	---	18 57 36	6.0	282.6	6.4		36.9	60	1017	07 25 01
07 26 30	NGC4501	18 58 06	7.7	283.7	6.4		37.0	10	1017	07 26 30
07 30 00	---	19 01 37	7.2	284.4	6.5		36.9	210	1044	07 26 31
07 30 30	M87	19 02 07	5.3	283.5	6.5		36.7	9	1044	07 30 30
07 32 00	---	19 03 37	5.1	283.8	6.5		36.7	90	1055	07 30 31
07 33 00	NGC4501	19 04 37	6.7	285.0	6.5		36.8	40	1055	07 33 00
07 36 00	---	19 07 38	6.3	285.5	6.6		36.7	180	1079	07 33 01

Schedule for TORUN (Code Tr) Page 6

Variability and spectra in Seyfert parsec scale nuclei

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
07 36 30	M87	19 08 08	4.4	284.7	6.6		36.5	9	1079	07 36 30
07 37 30	---	19 09 08	4.3	284.9	6.6		36.4	60	1086	07 36 31
07 38 00	NGC4501	19 09 38	6.0	285.9	6.6		36.6	10	1086	07 38 00
07 43 00	---	19 14 39	5.3	286.9	6.7		36.4	300	1125	07 38 01
07 43 30	M87	19 15 09	3.4	286.0	6.7		36.2	9	1125	07 43 30
07 45 00	---	19 16 39	3.2	286.3	6.8		36.1	90	1137	07 43 31

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.C1024

Matching groups in /irasoft/sched/catalogs/freq.dat:

tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 3 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

Frequency Set:	6	Setup file default.	Used pcal sets:	1				
LO sum=	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
BBC fr=	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Bandwd=	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000
	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000
Matching frequency sets:	6							

The following pulse cal sets were used with this setup:

```
Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1   S3   S5   S7   S9   S11  S13  S15
PCALXB2=  S2   S4   S6   S8   S10  S12  S14  S16
PCALFR1=  490  510  490  510  490  510  490  510
PCALFR2=  490  510  490  510  490  510  490  510
```

Track assignments are:

```
track1=  2, 10, 18, 26,  3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off
```

SOURCES USED IN RECORDING SCANS -- Variability and spectra in Seyfert parsec scale nuclei

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* NGC4501	12 29 27.708170	* 12 31 59.152900	12 32 40.841096	0.00
	14 41 46.19433	* 14 25 13.16900	14 20 37.20402	0.00
J1230+1223	12 28 17.569281	* 12 30 49.423383	12 31 31.233829	0.10
* 3C274	12 40 01.74883	* 12 23 28.04365	12 18 52.20174	0.10
* M87		12h30m49.423383s		
		12d23'28.04365"		

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
NGC4501	149.7
3C274	150.1
M87	150.1

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{(-0.6)}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

EVN OBSERVATIONS OF A NEW SAMPLE OF FAINT BLAZARS

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Observing mode: Continuum

Schedule for TORUN (Code Tr) Page 2

EVN observations of a new sample of faint blazars

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Sun 24 Feb 2013 Day 55 ---										
Next scan frequencies: 4966.49 4966.49 4966.49 4966.49 4982.49 4982.49 4982.49 4982.49										
4998.49 4998.49 4998.49 4998.49 5014.49 5014.49 5014.49 5014.49										
Next BBC frequencies: 766.49 766.49 766.49 766.49 782.49 782.49 782.49 782.49										
798.49 798.49 798.49 798.49 814.49 814.49 814.49 814.49										
Next scan bandwidths: 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
12 30 00	J0319+4130	00 02 26	55.3	89.0	-3.3		-53.4	0	0	12 30 00
12 45 00	=0316+413	00 17 29	57.5	92.0	-3.1		-53.3	900	58	12 30 01
12 48 00	J0449+1121	00 20 29	22.6	101.5	-4.5		-36.9	35	58	12 48 00
12 51 00	=0446+112	00 23 30	23.1	102.1	-4.4		-36.8	180	70	12 48 01
12 51 41	J0421.5+1433	00 24 11	29.7	106.1	-4.0		-36.6	2	70	12 51 41
12 57 41	---	00 30 12	30.6	107.5	-3.9		-36.3	360	93	12 51 42
12 58 28	J0502.5+1338	00 30 59	24.0	99.3	-4.5		-37.6	8	93	12 58 28
13 04 28	---	00 37 00	24.9	100.6	-4.4		-37.4	360	116	12 58 29
13 05 01	J0510.0+1800	00 37 33	27.3	96.1	-4.6		-38.9	8	116	13 05 01
13 11 01	---	00 43 34	28.2	97.4	-4.5		-38.8	360	139	13 05 02
13 11 53	J0518.2+0624	00 44 26	17.9	103.5	-4.6		-36.0	0	139	13 11 53
13 17 53	---	00 50 27	18.7	104.8	-4.5		-35.8	360	163	13 11 54
13 18 21	J0513.8+0156	00 50 55	15.8	108.5	-4.4		-34.7	3	163	13 18 21
13 24 21	---	00 56 56	16.7	109.8	-4.3		-34.4	360	186	13 18 22
13 30 21	J1026.4+6746	01 02 57	34.2	16.7	-9.4		-27.1	158	186	13 30 21
13 36 21	---	01 08 58	34.5	17.3	-9.3		-28.1	360	209	13 30 22
13 37 20	J0931.9+5533	01 09 57	27.4	31.2	-8.4		-33.3	17	209	13 37 20
13 43 20	---	01 15 58	27.9	32.0	-8.3		-34.2	360	232	13 37 21
13 45 12	J0651.9+6955	01 17 50	50.6	32.6	-5.6		-70.2	13	232	13 45 12
13 51 12	---	01 23 51	51.1	32.8	-5.5		-71.4	360	255	13 45 13

Schedule for TORUN (Code Tr)

Page 3

EVN observations of a new sample of faint blazars

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
13 51 34	J0646.8+6807	01 24 14	51.0	35.8	-5.4		-70.4	2	255	13 51 34
13 57 34	---	01 30 15	51.5	36.1	-5.3		-71.6	360	279	13 51 35
13 58 34	J0638+5933	01 31 15	49.3	49.2	-5.1		-63.7	19	279	13 58 34
14 01 34	=0633+595	01 34 16	49.6	49.4	-5.1		-64.2	180	290	13 58 35
14 05 34	J1026.4+6746	01 38 16	35.9	20.3	-8.8		-33.2	166	290	14 05 34
14 11 34	---	01 44 17	36.2	20.9	-8.7		-34.3	360	314	14 05 35
14 12 34	J0931.9+5533	01 45 17	30.3	35.8	-7.8		-38.3	15	314	14 12 34
14 18 34	---	01 51 18	30.9	36.6	-7.7		-39.2	360	337	14 12 35
14 20 26	J0651.9+6955	01 53 11	53.5	33.9	-5.0		-77.4	14	337	14 20 26
14 26 26	---	01 59 12	54.0	34.1	-4.9		-78.7	360	360	14 20 27
14 26 50	J0646.8+6807	01 59 35	54.2	37.3	-4.8		-77.5	2	360	14 26 50
14 32 50	---	02 05 36	54.7	37.5	-4.7		-78.7	360	383	14 26 51
14 38 50	J0535.1-0239	02 11 37	19.9	124.3	-3.4		-29.8	173	383	14 38 50
14 44 50	---	02 17 38	20.6	125.7	-3.3		-29.2	360	406	14 38 51
14 45 43	J0447.9-0322	02 18 31	25.4	137.7	-2.5		-23.9	14	406	14 45 43
14 51 43	---	02 24 32	26.0	139.2	-2.4		-23.1	360	430	14 45 44
14 52 19	J0435.1-0811	02 25 09	22.8	144.6	-2.2		-20.6	11	430	14 52 19
14 58 19	---	02 31 10	23.3	146.1	-2.1		-19.8	360	453	14 52 20
14 58 41	J0427.2-0756	02 31 32	24.2	148.1	-1.9		-18.7	5	453	14 58 41
15 04 41	---	02 37 33	24.6	149.7	-1.8		-17.8	360	476	14 58 42
15 06 00	J0449+1121	02 38 52	40.8	135.6	-2.2		-25.4	4	476	15 06 00
15 09 00	=0446+112	02 41 52	41.1	136.4	-2.1		-25.0	180	488	15 06 01
15 09 41	J0421.5+1433	02 42 33	46.8	143.4	-1.7		-21.7	6	488	15 09 41
15 15 41	---	02 48 34	47.3	145.4	-1.6		-20.6	360	511	15 09 42
15 16 28	J0502.5+1338	02 49 22	42.5	133.4	-2.2		-26.7	8	511	15 16 28
15 22 28	---	02 55 23	43.1	135.1	-2.1		-25.8	360	534	15 16 29
15 23 03	J0510.0+1800	02 55 57	46.3	130.2	-2.2		-28.8	9	534	15 23 03
15 29 03	---	03 01 58	46.9	132.1	-2.1		-28.0	360	557	15 23 04
15 30 00	J0518.2+0624	03 02 56	35.7	136.8	-2.3		-24.4	1	557	15 30 00
15 36 00	---	03 08 57	36.3	138.5	-2.2		-23.6	360	581	15 30 01
15 36 35	J0513.8+0156	03 09 32	32.7	142.0	-2.1		-21.7	8	581	15 36 35
15 42 35	---	03 15 33	33.3	143.6	-2.0		-20.9	360	604	15 36 36

Schedule for TORUN (Code Tr)

Page 4

EVN observations of a new sample of faint blazars

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
15 48 35	J0535.1-0239	03 21 34	27.6	141.4	-2.2		-22.0	323	604	15 48 35
15 54 35	---	03 27 35	28.1	143.0	-2.1		-21.2	360	627	15 48 36
15 55 28	J0447.9-0322	03 28 28	31.1	156.5	-1.3		-13.9	11	627	15 55 28
16 01 28	---	03 34 29	31.4	158.2	-1.2		-12.9	360	650	15 55 29
16 02 05	J0435.1-0811	03 35 06	27.4	163.0	-1.0		-10.2	8	650	16 02 05
16 08 05	---	03 41 07	27.6	164.7	-0.9		-9.2	360	674	16 02 06
16 08 28	J0427.2-0756	03 41 30	28.2	166.9	-0.8		-7.9	5	674	16 08 28
16 14 28	---	03 47 31	28.4	168.6	-0.7		-6.9	360	697	16 08 29
16 16 10	J0421.5+1433	03 49 13	50.9	167.2	-0.6		-7.9	3	697	16 16 10
16 22 10	---	03 55 14	51.1	169.5	-0.5		-6.5	360	720	16 16 11
16 22 57	J0502.5+1338	03 56 02	48.4	155.0	-1.1		-15.2	3	720	16 22 57
16 28 57	---	04 02 03	48.7	157.1	-1.0		-13.9	360	743	16 22 58
16 29 32	J0510.0+1800	04 02 38	52.5	152.7	-1.1		-16.8	7	743	16 29 32
16 35 32	---	04 08 39	52.9	155.0	-1.0		-15.5	360	766	16 29 33
16 36 30	J0518.2+0624	04 09 37	41.2	156.8	-1.2		-13.8	0	766	16 36 30
16 42 30	---	04 15 38	41.6	158.7	-1.1		-12.7	360	790	16 36 31
16 43 06	J0513.8+0156	04 16 14	37.5	161.5	-1.0		-11.0	7	790	16 43 06
16 49 06	---	04 22 15	37.7	163.4	-0.9		-9.9	360	813	16 43 07
16 50 06	J0449+1121	04 23 15	47.9	170.2	-0.4		-6.0	8	813	16 50 06
16 53 06	=0446+112	04 26 16	48.0	171.3	-0.4		-5.3	180	824	16 50 07
17 03 06	J1026.4+6746	04 36 17	48.5	34.9	-5.9		-64.8	311	824	17 03 06
17 09 06	---	04 42 18	49.0	35.2	-5.8		-65.9	360	848	17 03 07
17 10 06	J0931.9+5533	04 43 18	49.6	56.5	-4.8		-62.1	2	848	17 10 06
17 16 06	---	04 49 19	50.4	57.1	-4.7		-62.8	360	871	17 10 07
17 18 33	J0651.9+6955	04 51 46	68.3	28.0	-2.0		-124.8	66	871	17 18 33
17 24 33	---	04 57 47	68.7	27.2	-1.9		-127.0	360	894	17 18 34
17 24 55	J0646.8+6807	04 58 09	70.1	30.4	-1.8		-125.3	1	894	17 24 55
17 30 55	---	05 04 10	70.6	29.5	-1.7		-127.6	360	917	17 24 56
17 31 59	J0638+5933	05 05 15	75.6	54.2	-1.6		-106.2	0	917	17 31 59
17 34 59	=0633+595	05 08 16	75.9	53.7	-1.5		-107.2	180	929	17 32 00
17 40 59	J1026.4+6746	05 14 17	51.8	36.9	-5.2		-72.0	254	929	17 40 59
17 46 59	---	05 20 17	52.4	37.2	-5.1		-73.2	360	952	17 41 00

Schedule for TORUN (Code Tr)

Page 5

EVN observations of a new sample of faint blazars

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
17 48 17	J0931.9+5533	05 21 36	54.5	60.3	-4.2		-67.0	17	952	17 48 17
17 54 17	---	05 27 37	55.3	60.8	-4.1		-67.7	360	975	17 48 18
17 56 44	J0651.9+6955	05 30 04	70.7	21.7	-1.4		-139.8	54	975	17 56 44
18 02 44	---	05 36 05	71.0	20.5	-1.3		-142.3	360	999	17 56 45
18 03 05	J0646.8+6807	05 36 26	72.7	22.7	-1.2		-141.5	1	999	18 03 05
18 09 05	---	05 42 27	73.1	21.2	-1.1		-144.3	360	1022	18 03 06
18 19 05	J0724.3-0715	05 52 29	26.5	154.2	-1.5		-15.3	322	1022	18 19 05
18 25 05	---	05 58 30	26.9	155.8	-1.4		-14.4	360	1045	18 19 06
18 26 01	J0816.0-0736	05 59 26	22.6	142.7	-2.3		-21.5	14	1045	18 26 01
18 32 01	---	06 05 27	23.2	144.2	-2.2		-20.7	360	1068	18 26 02
18 33 10	J0927.7-0900	06 06 36	14.6	128.1	-3.4		-28.6	22	1068	18 33 10
18 39 10	---	06 12 37	15.3	129.5	-3.3		-28.0	360	1092	18 33 11
18 42 40	J0535.1-0239	06 16 07	33.6	192.1	0.7		7.2	70	1092	18 42 40
18 54 40	---	06 28 09	33.2	195.7	0.9		9.3	720	1138	18 42 41
18 55 33	J0447.9-0322	06 29 02	29.7	209.2	1.7		17.1	11	1138	18 55 33
19 07 33	---	06 41 04	28.8	212.5	1.9		18.8	720	1184	18 55 34
19 08 09	J0435.1-0811	06 41 41	23.2	214.2	2.1		19.9	2	1184	19 08 09
19 20 09	---	06 53 43	22.1	217.2	2.3		21.5	720	1231	19 08 10
19 20 34	J0427.2-0756	06 54 08	21.6	219.4	2.4		22.6	7	1231	19 20 34
19 32 34	---	07 06 10	20.4	222.3	2.6		24.1	720	1277	19 20 35
19 36 54	J0927.7-0900	07 10 31	21.3	143.1	-2.3		-21.4	86	1277	19 36 54
19 42 54	---	07 16 32	21.8	144.6	-2.2		-20.6	360	1301	19 36 55
19 44 06	J0816.0-0736	07 17 43	28.0	163.4	-1.0		-10.0	19	1301	19 44 06
19 50 06	---	07 23 44	28.2	165.0	-0.9		-9.0	360	1324	19 44 07
19 51 02	J0724.3-0715	07 24 41	29.6	179.9	-0.0		-0.0	12	1324	19 51 02
19 57 02	---	07 30 42	29.6	181.6	0.1		1.0	360	1347	19 51 03
20 00 02	J0421.5+1433	07 33 43	36.3	242.8	3.2		33.5	43	1347	20 00 02
20 06 02	---	07 39 44	35.5	244.3	3.3		34.0	360	1370	20 00 03
20 06 50	J0502.5+1338	07 40 31	39.8	233.3	2.6		29.7	10	1370	20 06 50
20 12 50	---	07 46 32	39.1	234.9	2.7		30.4	360	1393	20 06 51
20 13 26	J0510.0+1800	07 47 08	43.7	236.0	2.6		31.6	5	1393	20 13 26
20 19 26	---	07 53 09	42.9	237.7	2.7		32.2	360	1417	20 13 27

Schedule for TORUN (Code Tr)

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EVN observations of a new sample of faint blazars

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
20 20 23	J0518.2+0624	07 54 06	33.7	228.4	2.6		26.9	9	1417	20 20 23
20 26 23	---	08 00 07	33.0	230.0	2.7		27.6	360	1440	20 20 24
20 26 59	J0513.8+0156	08 00 43	28.5	228.9	2.8		26.9	5	1440	20 26 59
20 32 59	---	08 06 44	27.8	230.4	2.9		27.6	360	1463	20 27 00
20 36 40	J0927.7-0900	08 10 26	25.7	158.5	-1.3		-12.9	62	1463	20 36 40
20 42 40	---	08 16 27	26.0	160.2	-1.2		-11.9	360	1486	20 36 41
20 43 54	J0816.0-0736	08 17 41	29.2	180.2	0.0		0.1	19	1486	20 43 54
20 49 54	---	08 23 42	29.2	182.0	0.1		1.2	360	1510	20 43 55
20 50 51	J0724.3-0715	08 24 39	28.3	196.9	1.0		10.1	12	1510	20 50 51
20 56 51	---	08 30 40	28.0	198.5	1.1		11.1	360	1533	20 50 52
20 59 51	J0449+1121	08 33 41	29.2	248.5	3.7		34.7	66	1533	20 59 51
21 02 51	=0446+112	08 36 41	28.7	249.2	3.8		34.9	180	1544	20 59 52
21 05 51	J0535.1-0239	08 39 42	22.3	230.9	3.1		27.8	127	1544	21 05 51
21 11 51	---	08 45 43	21.6	232.3	3.2		28.4	360	1568	21 05 52
21 12 44	J0447.9-0322	08 46 36	14.9	242.9	4.0		32.4	14	1568	21 12 44
21 18 44	---	08 52 37	14.1	244.2	4.1		32.8	360	1591	21 12 45
21 19 20	J0435.1-0811	08 53 14	8.3	244.4	4.3		33.2	1	1591	21 19 20
21 25 20	---	08 59 15	7.4	245.6	4.4		33.5	360	1614	21 19 21
21 25 44	J0427.2-0756	08 59 38	6.5	247.5	4.5		34.1	7	1614	21 25 44
21 31 44	---	09 05 39	5.7	248.7	4.6		34.4	360	1637	21 25 45
21 36 04	J0927.7-0900	09 10 00	27.7	174.8	-0.3		-3.1	96	1637	21 36 04
21 42 04	---	09 16 01	27.8	176.5	-0.2		-2.1	360	1661	21 36 05
21 43 17	J0816.0-0736	09 17 15	27.9	197.0	1.0		10.2	18	1661	21 43 17
21 49 17	---	09 23 16	27.6	198.6	1.1		11.2	360	1684	21 43 18
21 50 14	J0724.3-0715	09 24 13	24.5	212.8	2.0		19.2	14	1684	21 50 14
21 56 14	---	09 30 14	24.0	214.4	2.1		20.0	360	1707	21 50 15
21 59 14	J0421.5+1433	09 33 14	19.0	269.2	5.2		38.3	56	1707	21 59 14
22 05 14	---	09 39 15	18.1	270.4	5.3		38.4	360	1730	21 59 15
22 06 01	J0502.5+1338	09 40 02	23.3	261.6	4.6		37.7	13	1730	22 06 01
22 12 01	---	09 46 03	22.4	262.8	4.7		37.8	360	1753	22 06 02

Schedule for TORUN (Code Tr)

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EVN observations of a new sample of faint blazars

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 24 Feb 2013 Day 55 ---										
22 12 32	J0510.0+1800	09 46 34	26.9	264.4	4.6		38.9	0	1753	22 12 32
22 18 32	---	09 52 35	26.0	265.6	4.7		39.0	360	1777	22 12 33
22 19 25	J0518.2+0624	09 53 28	17.9	256.5	4.6		36.0	9	1777	22 19 25
22 25 25	---	09 59 29	17.0	257.7	4.7		36.2	360	1800	22 19 26
22 25 55	J0513.8+0156	10 00 00	12.7	256.1	4.8		35.7	0	1800	22 25 55
22 31 55	---	10 06 01	11.8	257.3	4.9		35.9	360	1823	22 25 56
22 35 37	J0927.7-0900	10 09 43	27.2	191.5	0.7		6.9	74	1823	22 35 37
22 47 37	---	10 21 45	26.8	194.8	0.9		8.9	720	1870	22 35 38
22 48 51	J0816.0-0736	10 22 59	23.6	214.5	2.1		20.0	19	1870	22 48 51
23 00 51	---	10 35 01	22.6	217.5	2.3		21.6	720	1916	22 48 52
23 01 47	J0724.3-0715	10 35 58	17.4	230.3	3.2		27.8	16	1916	23 01 47
23 13 47	---	10 48 00	16.0	233.0	3.4		28.9	720	1962	23 01 48
23 23 47	J1026.4+6746	10 58 01	74.9	348.8	0.5		162.2	349	1962	23 23 47
23 29 47	---	11 04 02	74.8	346.8	0.6		158.8	360	1986	23 23 48
23 31 57	J0931.9+5533	11 06 12	76.3	289.4	1.6		90.3	0	1986	23 31 57
23 37 57	---	11 12 13	75.4	289.4	1.7		89.1	360	2009	23 31 58
23 40 24	J0651.9+6955	11 14 41	56.8	325.2	4.4		85.9	61	2009	23 40 24
23 46 24	---	11 20 42	56.3	325.3	4.5		84.5	360	2032	23 40 25
23 46 45	J0646.8+6807	11 21 03	55.6	322.2	4.5		80.7	0	2032	23 46 45
23 52 45	---	11 27 04	55.0	322.4	4.6		79.4	360	2055	23 46 46
23 53 45	J0638+5933	11 28 04	51.5	309.2	4.8		66.6	19	2055	23 53 45
23 56 45	=0633+595	11 31 04	51.1	309.5	4.9		66.2	180	2067	23 53 46
--- Mon 25 Feb 2013 Day 56 ---										
00 00 06	J1026.4+6746	11 34 25	73.3	337.6	1.1		142.9	103	2067	00 00 06
00 06 06	---	11 40 26	73.0	336.1	1.2		140.1	360	2090	00 00 07
00 07 52	J0931.9+5533	11 42 13	71.2	290.3	2.2		83.8	0	2090	00 07 52
00 13 52	---	11 48 14	70.3	290.6	2.3		82.9	360	2113	00 07 53
00 16 19	J0651.9+6955	11 50 42	53.8	326.0	5.0		78.1	61	2113	00 16 19
00 22 19	---	11 56 43	53.3	326.2	5.1		76.8	360	2137	00 16 20
00 22 39	J0646.8+6807	11 57 02	52.3	323.5	5.1		73.4	0	2137	00 22 39
00 28 39	---	12 03 03	51.8	323.8	5.2		72.2	360	2160	00 22 40

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: sess113.C512

Matching groups in /home/marco/sched_10.2/catalogs/freq.dat:

tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 2 Station: TORUN Total bit rate: 512
Format: MKIV1:2 Bits per sample: 2 Sample rate: 16.000
Number of channels: 16 DBE type: Speedup factor: 1.00

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 3 Setup file default. Used pcal sets: 1

LO sum=	4966.49	4966.49	4966.49	4966.49	4982.49	4982.49	4982.49	4982.49
	4998.49	4998.49	4998.49	4998.49	5014.49	5014.49	5014.49	5014.49
BBC fr=	766.49	766.49	766.49	766.49	782.49	782.49	782.49	782.49
	798.49	798.49	798.49	798.49	814.49	814.49	814.49	814.49
Bandwd=	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

Matching frequency sets: 3

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- EVN observations of a new sample of faint blazars
 Catalog positions marked with *.
 Precession of date coordinates is based on stop time of first scan.
 Names used in schedule marked with *.
 Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC).
 Scan hours are for recording scans only.
 Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* J0421.5+1433	04 18 43.690142 14 27 00.05677	* 04 21 33.110000 * 14 34 03.00000	04 22 18.792377 14 35 47.52398	0.00 0.00
* J0427.2-0756	04 24 49.069927 -08 03 04.37716	* 04 27 14.210000 *-07 56 24.83000	04 27 53.312681 -07 54 54.09460	0.00 0.00
* J0435.1-0811	04 32 43.633428 -08 17 10.78020	* 04 35 08.384000 *-08 11 03.17000	04 35 47.426809 -08 09 41.18005	0.00 0.00
* J0447.9-0322	04 45 24.800110 -03 27 58.46152	* 04 47 54.753000 *-03 22 43.19000	04 48 35.278300 -03 21 33.91752	0.00 0.00
* J0502.5+1338	04 59 43.844691 13 33 56.76239	* 05 02 33.223000 * 13 38 11.30000	05 03 19.096812 13 39 09.65605	0.00 0.00
* J0510.0+1800	05 07 07.503321 17 56 58.89574	* 05 10 02.386000 * 18 00 41.83000	05 10 49.793488 18 01 33.06172	0.00 0.00
* J0513.8+0156	05 11 16.007420 01 53 30.16159	* 05 13 51.944000 * 01 56 56.12000	05 14 34.227409 01 57 37.47056	0.00 0.00
* J0518.2+0624	05 15 34.903975 06 21 15.24620	* 05 18 15.987000 * 06 24 22.51000	05 18 59.685925 06 25 00.22211	0.00 0.00
* J0535.1-0239	05 32 41.622211 -02 41 00.72101	* 05 35 12.273000 *-02 39 07.02000	05 35 53.238929 -02 38 51.98316	0.00 0.00
* J0646.8+6807	06 41 24.207543 68 10 54.36440	* 06 46 41.500000 * 68 07 42.95000	06 48 08.586093 68 06 53.55080	0.00 0.00
* J0651.9+6955	06 46 21.954802 69 58 59.51734	* 06 51 54.557000 * 69 55 26.31000	06 53 25.910981 69 54 31.03388	0.00 0.00
* J0724.3-0715	07 21 51.480645 -07 09 24.38665	* 07 24 17.325000 *-07 15 19.71000	07 24 57.507322 -07 17 11.02651	0.00 0.00
* J0816.0-0736	08 13 42.098096 -07 27 55.83361	* 08 16 08.485000 *-07 37 12.29000	08 16 48.991374 -07 39 56.53979	0.00 0.00
* J0927.7-0900	09 25 19.677026 -08 47 16.45068	* 09 27 46.934000 *-09 00 22.24000	09 28 27.840505 -09 04 05.93270	0.00 0.00
* J0931.9+5533	09 28 24.882098 55 46 28.43341	* 09 31 58.093000 * 55 33 13.08000	09 32 56.953181 55 29 32.93160	0.00 0.00
* J1026.4+6746	10 22 52.943152 68 01 29.01655	* 10 26 33.115000 * 67 46 12.52000	10 27 34.347092 67 41 58.90858	0.00 0.00

* J0319+4130	03 16 29.567260	* 03 19 48.160090	03 20 41.512374	1.30
0316+413	41 19 51.91699	* 41 30 42.10412	41 33 37.79825	2.72
* J0449+1121	04 46 21.217284	* 04 49 07.671104	04 49 52.683306	0.10
0446+112	11 16 17.84557	* 11 21 28.59636	11 22 41.46784	0.10
* J0638+5933	06 33 36.766652	* 06 38 02.871902	06 39 15.737149	0.72
0633+595	59 35 58.24772	* 59 33 22.21386	59 32 41.28514	0.44

The solar corona can cause unstable phases for sources too close to the Sun. SCHED provides warnings at individual scans for distances less than 10 degrees. The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
J0421.5+1433	89.9
J0427.2-0756	87.7
J0435.1-0811	89.5
J0447.9-0322	93.5
J0502.5+1338	99.6
J0510.0+1800	101.9
J0513.8+0156	100.7
J0518.2+0624	102.5
J0535.1-0239	105.2
J0646.8+6807	110.7
J0651.9+6955	110.2
J0724.3-0715	130.5
J0816.0-0736	142.3
J0927.7-0900	155.8
J0931.9+5533	132.2
J1026.4+6746	121.5
J0319+4130	83.0
J0449+1121	96.1
J0638+5933	113.6

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

EVN OBSERVATIONS OF THE RELATIVISTIC TIDAL DISRUPTION EVENT
 PI: Jun Yang

Address: JIVE 7990 AA, Dwingeloo The Netherlands
 Phone: +31 521 596507 EMAIL: yang@jive.nl
 Fax: +31 521 596 539 Phone during observation: +31 521 596507

Observing mode: 1024-16-2

Notes: 1024 Mbps, 16x16 MHz, RCP & LCP, 2 bit sampling, MC: 1 bit sampling
 Vex file for Wb, Ef and SFXC: ey018a.vex.EfWb
 Vex file for the other telescopes: ey018a.vex.OnMcTrYsSvZcBdUrShMtJb

Schedule for TORUN (Code Tr) Page 2

EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

 Start UT Source Start / Stop Early Disk TPStart
 Stop UT LST EL AZ HA UP ParA Dwell GBytes SYNC

--- Mon 25 Feb 2013 Day 56 ---

Next scan frequencies:	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49	5038.49	5038.49	5038.49
Next BBC frequencies:	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49	838.49	838.49	838.49
Next scan bandwidths:	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
01 30 00	3C286	13 04 34	66.8	165.0	-0.5		-10.4	0	0	01 30 00	
01 35 00	---	13 09 35	67.0	167.7	-0.4		-8.5	300	39	01 30 01	
01 37 00	3C345	13 11 36	52.2	88.7	-3.5		-51.4	-53	39	01 37 00	
01 42 00	---	13 16 36	52.9	89.7	-3.4		-51.4	247	77	01 37 01	
01 44 00	J1638+5720	13 18 37	61.8	61.2	-3.3		-76.9	48	77	01 44 00	
01 45 00	---	13 19 37	62.0	61.2	-3.3		-77.1	60	85	01 44 01	
01 45 20	J1638+5720	13 19 57	62.0	61.3	-3.3		-77.1	14	85	01 45 20	
01 46 10	---	13 20 47	62.1	61.3	-3.3		-77.3	50	92	01 45 21	
01 46 20	TDF	13 20 57	61.4	60.4	-3.4		-76.8	-5	92	01 46 20	
01 48 30	---	13 23 07	61.6	60.5	-3.4		-77.1	125	108	01 46 21	
01 48 30	FIRST-1	13 23 07	61.6	60.5	-3.4		-77.1	-5	108	No stop	
01 52 30	---	13 27 08	62.2	60.8	-3.3		-77.7	235	139	01 48 31	
01 52 40	J1638+5720	13 27 18	63.0	61.7	-3.2		-78.3	-5	139	01 52 40	
01 53 40	---	13 28 18	63.1	61.8	-3.2		-78.4	55	147	01 52 41	
01 53 50	TDF	13 28 28	62.3	60.8	-3.3		-77.9	-5	147	01 53 50	
01 56 00	---	13 30 39	62.6	61.0	-3.2		-78.3	125	164	01 53 51	
01 56 00	FIRST-1	13 30 39	62.6	61.0	-3.2		-78.3	-5	164	No stop	
02 00 00	---	13 34 39	63.2	61.2	-3.2		-78.9	235	195	01 56 01	

Schedule for TORUN (Code Tr)

Page 3

EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
02 00 20	J1638+5720	13 34 59	64.0	62.2	-3.1		-79.5	4	195	02 00 20
02 01 10	---	13 35 50	64.1	62.2	-3.0		-79.6	50	201	02 00 21
02 01 20	TDF	13 36 00	63.3	61.3	-3.1		-79.1	-5	201	02 01 20
02 03 30	---	13 38 10	63.6	61.4	-3.1		-79.5	125	218	02 01 21
02 03 30	FIRST-1	13 38 10	63.6	61.4	-3.1		-79.5	-5	218	No stop
02 07 30	---	13 42 11	64.1	61.6	-3.0		-80.1	235	249	02 03 31
02 07 40	J1638+5720	13 42 21	65.0	62.6	-2.9		-80.7	-6	249	02 07 40
02 08 40	---	13 43 21	65.1	62.6	-2.9		-80.8	54	257	02 07 41
02 08 50	TDF	13 43 31	64.3	61.7	-3.0		-80.3	-5	257	02 08 50
02 11 00	---	13 45 41	64.6	61.8	-3.0		-80.7	125	274	02 08 51
02 11 00	FIRST-1	13 45 41	64.6	61.8	-3.0		-80.7	-5	274	No stop
02 15 00	---	13 49 42	65.1	62.0	-2.9		-81.4	235	304	02 11 01
02 15 20	J1638+5720	13 50 02	66.0	62.9	-2.8		-81.9	4	304	02 15 20
02 16 10	---	13 50 52	66.1	63.0	-2.8		-82.1	50	311	02 15 21
02 16 20	TDF	13 51 02	65.3	62.1	-2.9		-81.6	-5	311	02 16 20
02 18 30	---	13 53 12	65.6	62.2	-2.9		-82.0	125	328	02 16 21
02 18 30	FIRST-1	13 53 12	65.6	62.2	-2.9		-82.0	-5	328	No stop
02 22 30	---	13 57 13	66.1	62.3	-2.8		-82.7	235	359	02 18 31
02 22 40	J1638+5720	13 57 23	67.0	63.3	-2.7		-83.2	-6	359	02 22 40
02 23 40	---	13 58 23	67.1	63.3	-2.7		-83.4	54	366	02 22 41
02 23 50	TDF	13 58 33	66.3	62.4	-2.8		-82.9	-5	366	02 23 50
02 26 00	---	14 00 44	66.6	62.5	-2.7		-83.3	125	383	02 23 51
02 26 00	FIRST-1	14 00 44	66.6	62.5	-2.7		-83.3	-5	383	No stop
02 30 00	---	14 04 44	67.1	62.6	-2.7		-84.0	235	414	02 26 01
02 30 20	J1638+5720	14 05 04	68.0	63.6	-2.6		-84.5	4	414	02 30 20
02 31 10	---	14 05 54	68.1	63.6	-2.5		-84.7	50	421	02 30 21
02 31 20	TDF	14 06 04	67.3	62.7	-2.6		-84.2	-5	421	02 31 20
02 33 30	---	14 08 15	67.6	62.8	-2.6		-84.6	125	437	02 31 21
02 33 30	FIRST-1	14 08 15	67.6	62.8	-2.6		-84.6	-5	437	No stop
02 37 30	---	14 12 16	68.1	62.9	-2.5		-85.3	235	468	02 33 31
02 37 40	J1638+5720	14 12 26	69.0	63.8	-2.4		-85.9	-6	468	02 37 40
02 38 40	---	14 13 26	69.1	63.8	-2.4		-86.1	54	476	02 37 41

Schedule for TORUN (Code Tr)

Page 4

EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
02 38 50	TDF	14 13 36	68.3	62.9	-2.5		-85.6	-5	476	02 38 50
02 41 00	---	14 15 46	68.6	63.0	-2.5		-86.0	125	493	02 38 51
02 41 00	FIRST-1	14 15 46	68.6	63.0	-2.5		-86.0	-5	493	No stop
02 45 00	---	14 19 47	69.1	63.1	-2.4		-86.7	235	524	02 41 01
02 45 20	J1638+5720	14 20 07	70.0	64.0	-2.3		-87.3	4	524	02 45 20
02 46 10	---	14 20 57	70.2	64.0	-2.3		-87.5	50	530	02 45 21
02 46 20	TDF	14 21 07	69.3	63.1	-2.4		-87.0	-6	530	02 46 20
02 48 30	---	14 23 17	69.6	63.1	-2.4		-87.4	124	547	02 46 21
02 48 30	FIRST-1	14 23 17	69.6	63.1	-2.4		-87.4	-5	547	No stop
02 52 30	---	14 27 18	70.2	63.2	-2.3		-88.2	235	578	02 48 31
02 52 40	J1638+5720	14 27 28	71.0	64.1	-2.2		-88.8	-6	578	02 52 40
02 53 40	---	14 28 28	71.2	64.1	-2.2		-89.0	54	586	02 52 41
02 53 50	TDF	14 28 38	70.3	63.2	-2.3		-88.5	-6	586	02 53 50
02 56 00	---	14 30 49	70.6	63.2	-2.2		-88.9	124	603	02 53 51
02 56 00	FIRST-1	14 30 49	70.6	63.2	-2.2		-88.9	-5	603	No stop
03 00 00	---	14 34 49	71.2	63.3	-2.2		-89.7	235	634	02 56 01
03 00 20	J1638+5720	14 35 09	72.1	64.1	-2.1		-90.4	4	634	03 00 20
03 01 10	---	14 35 59	72.2	64.1	-2.0		-90.6	50	640	03 00 21
03 01 20	TDF	14 36 09	71.3	63.3	-2.1		-90.0	-6	640	03 01 20
03 03 30	---	14 38 20	71.6	63.3	-2.1		-90.5	124	657	03 01 21
03 03 30	FIRST-1	14 38 20	71.6	63.3	-2.1		-90.5	-5	657	No stop
03 07 30	---	14 42 20	72.2	63.2	-2.0		-91.4	235	688	03 03 31
03 07 40	J1638+5720	14 42 30	73.1	64.0	-1.9		-92.0	-6	688	03 07 40
03 08 40	---	14 43 31	73.2	64.0	-1.9		-92.2	54	695	03 07 41
03 08 50	TDF	14 43 41	72.4	63.2	-2.0		-91.6	-6	695	03 08 50
03 11 00	---	14 45 51	72.6	63.2	-2.0		-92.1	124	712	03 08 51
03 11 00	FIRST-1	14 45 51	72.6	63.2	-2.0		-92.1	-5	712	No stop
03 15 00	---	14 49 52	73.2	63.1	-1.9		-93.1	235	743	03 11 01
03 15 20	J1638+5720	14 50 12	74.1	63.8	-1.8		-93.8	4	743	03 15 20
03 16 10	---	14 51 02	74.2	63.8	-1.8		-94.0	50	750	03 15 21
03 16 20	TDF	14 51 12	73.4	63.1	-1.9		-93.4	-6	750	03 16 20
03 18 30	---	14 53 22	73.6	63.0	-1.9		-93.9	124	766	03 16 21

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
03 18 30	FIRST-1	14 53 22	73.6	63.0	-1.9		-93.9	-5	766	No stop
03 22 30	---	14 57 23	74.2	62.9	-1.8		-94.9	235	797	03 18 31
03 22 40	J1638+5720	14 57 33	75.1	63.5	-1.7		-95.6	-6	797	03 22 40
03 23 40	---	14 58 33	75.2	63.5	-1.7		-95.9	54	805	03 22 41
03 23 50	TDF	14 58 43	74.4	62.8	-1.8		-95.2	-6	805	03 23 50
03 26 00	---	15 00 53	74.7	62.7	-1.7		-95.8	124	822	03 23 51
03 26 00	FIRST-1	15 00 53	74.7	62.7	-1.7		-95.8	-5	822	No stop
03 30 00	---	15 04 54	75.2	62.5	-1.7		-96.9	235	853	03 26 01
03 30 20	J1638+5720	15 05 14	76.1	63.0	-1.6		-97.7	4	853	03 30 20
03 31 10	---	15 06 04	76.2	63.0	-1.5		-98.0	50	859	03 30 21
03 31 20	TDF	15 06 14	75.4	62.4	-1.6		-97.2	-6	859	03 31 20
03 33 30	---	15 08 25	75.7	62.2	-1.6		-97.8	124	876	03 31 21
03 33 30	FIRST-1	15 08 25	75.7	62.2	-1.6		-97.8	-5	876	No stop
03 37 30	---	15 12 25	76.2	61.9	-1.5		-99.0	235	907	03 33 31
03 37 40	J1638+5720	15 12 35	77.1	62.4	-1.4		-99.9	-6	907	03 37 40
03 38 40	---	15 13 36	77.2	62.3	-1.4		-100.2	54	915	03 37 41
03 38 50	TDF	15 13 46	76.4	61.8	-1.5		-99.4	-6	915	03 38 50
03 41 00	---	15 15 56	76.7	61.6	-1.5		-100.0	124	932	03 38 51
03 41 00	FIRST-1	15 15 56	76.7	61.6	-1.5		-100.0	-5	932	No stop
03 45 00	---	15 19 57	77.2	61.1	-1.4		-101.3	235	963	03 41 01
03 45 20	J1638+5720	15 20 17	78.1	61.4	-1.3		-102.4	4	963	03 45 20
03 46 10	---	15 21 07	78.2	61.3	-1.3		-102.7	50	969	03 45 21
03 46 20	TDF	15 21 17	77.4	61.0	-1.4		-101.8	-6	969	03 46 20
03 48 30	---	15 23 27	77.6	60.7	-1.4		-102.5	124	986	03 46 21
03 48 30	FIRST-1	15 23 27	77.6	60.7	-1.4		-102.5	-5	986	No stop
03 52 30	---	15 27 28	78.2	60.1	-1.3		-103.9	235	1017	03 48 31
03 52 40	J1638+5720	15 27 38	79.1	60.2	-1.2		-105.2	-6	1017	03 52 40
03 53 40	---	15 28 38	79.2	60.0	-1.2		-105.6	54	1024	03 52 41
03 53 50	TDF	15 28 48	78.3	59.9	-1.3		-104.4	-6	1024	03 53 50
03 56 00	---	15 30 58	78.6	59.5	-1.2		-105.2	124	1041	03 53 51
03 56 00	FIRST-1	15 30 58	78.6	59.5	-1.2		-105.2	-5	1041	No stop
04 00 00	---	15 34 59	79.1	58.7	-1.2		-106.8	235	1072	03 56 01

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
04 00 20	J1638+5720	15 35 19	80.1	58.6	-1.1		-108.4	4	1072	04 00 20
04 01 10	---	15 36 09	80.2	58.4	-1.0		-108.8	50	1079	04 00 21
04 01 20	TDF	15 36 19	79.3	58.5	-1.1		-107.4	-6	1079	04 01 20
04 03 30	---	15 38 30	79.6	58.0	-1.1		-108.3	124	1095	04 01 21
04 03 30	FIRST-1	15 38 30	79.6	58.0	-1.1		-108.3	-5	1095	No stop
04 07 30	---	15 42 30	80.1	57.0	-1.0		-110.2	235	1126	04 03 31
04 07 40	J1638+5720	15 42 40	81.0	56.5	-0.9		-112.0	-6	1126	04 07 40
04 08 40	---	15 43 40	81.1	56.2	-0.9		-112.6	54	1134	04 07 41
04 08 50	TDF	15 43 51	80.3	56.6	-1.0		-110.8	-6	1134	04 08 50
04 11 00	---	15 46 01	80.5	56.0	-1.0		-111.9	124	1151	04 08 51
04 11 00	FIRST-1	15 46 01	80.5	56.0	-1.0		-111.9	-5	1151	No stop
04 15 00	---	15 50 02	81.0	54.7	-0.9		-114.0	235	1182	04 11 01
04 15 20	J1638+5720	15 50 22	82.0	53.6	-0.8		-116.5	4	1182	04 15 20
04 16 10	---	15 51 12	82.1	53.2	-0.8		-117.0	50	1188	04 15 21
04 16 20	TDF	15 51 22	81.2	54.2	-0.9		-114.8	-6	1188	04 16 20
04 18 30	---	15 53 32	81.5	53.3	-0.9		-116.1	124	1205	04 16 21
04 18 30	FIRST-1	15 53 32	81.5	53.3	-0.9		-116.1	-5	1205	No stop
04 22 30	---	15 57 33	81.9	51.6	-0.8		-118.6	235	1236	04 18 31
04 22 40	J1638+5720	15 57 43	82.8	50.0	-0.7		-121.7	-7	1236	04 22 40
04 23 40	---	15 58 43	82.9	49.4	-0.7		-122.5	53	1244	04 22 41
04 23 50	TDF	15 58 53	82.1	51.0	-0.8		-119.5	-6	1244	04 23 50
04 26 00	---	16 01 03	82.3	49.9	-0.7		-121.0	124	1261	04 23 51
04 26 00	FIRST-1	16 01 03	82.3	49.9	-0.7		-121.0	-5	1261	No stop
04 30 00	---	16 05 04	82.8	47.7	-0.7		-124.1	235	1292	04 26 01
04 30 20	J1638+5720	16 05 24	83.7	44.9	-0.6		-128.3	0	1292	04 30 20
04 31 10	---	16 06 14	83.8	44.2	-0.5		-129.1	50	1298	04 30 21
04 31 20	TDF	16 06 24	82.9	46.9	-0.6		-125.2	-9	1298	04 31 20
04 33 30	---	16 08 35	83.2	45.4	-0.6		-127.1	121	1315	04 31 21
04 33 30	FIRST-1	16 08 35	83.2	45.4	-0.6		-127.1	-5	1315	No stop
04 37 30	---	16 12 35	83.6	42.5	-0.5		-130.8	235	1346	04 33 31
04 37 40	J1638+5720	16 12 45	84.4	38.4	-0.4		-136.3	-13	1346	04 37 40
04 38 40	---	16 13 45	84.5	37.4	-0.4		-137.5	47	1353	04 37 41

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
04 38 50	TDF	16 13 55	83.7	41.4	-0.5		-132.2	-13	1353	04 38 50
04 41 00	---	16 16 06	83.9	39.6	-0.5		-134.5	117	1370	04 38 51
04 41 00	FIRST-1	16 16 06	83.9	39.6	-0.5		-134.5	-5	1370	No stop
04 45 00	---	16 20 06	84.3	35.7	-0.4		-139.1	235	1401	04 41 01
04 45 20	J1638+5720	16 20 27	85.1	29.6	-0.3		-146.7	-7	1401	04 45 20
04 46 10	---	16 21 17	85.1	28.5	-0.3		-148.0	43	1408	04 45 21
04 46 20	TDF	16 21 27	84.4	34.3	-0.4		-140.8	-16	1408	04 46 20
04 48 30	---	16 23 37	84.6	31.9	-0.4		-143.7	114	1424	04 46 21
04 48 30	FIRST-1	16 23 37	84.6	31.9	-0.4		-143.7	-5	1424	No stop
04 52 30	---	16 27 38	84.9	27.0	-0.3		-149.4	235	1455	04 48 31
04 52 40	J1638+5720	16 27 48	85.5	18.8	-0.2		-159.0	-22	1455	04 52 40
04 53 40	---	16 28 48	85.6	17.1	-0.2		-160.9	38	1463	04 52 41
04 53 50	TDF	16 28 58	85.0	25.3	-0.3		-151.4	-21	1463	04 53 50
04 56 00	---	16 31 08	85.1	22.3	-0.2		-154.9	109	1480	04 53 51
04 56 00	FIRST-1	16 31 08	85.1	22.3	-0.2		-154.9	-5	1480	No stop
05 00 00	---	16 35 09	85.3	16.3	-0.2		-161.7	235	1511	04 56 01
05 00 20	J1638+5720	16 35 29	85.8	5.5	-0.0		-173.9	-17	1511	05 00 20
05 01 10	---	16 36 19	85.8	3.9	-0.0		-175.6	33	1517	05 00 21
05 01 20	TDF	16 36 29	85.4	14.2	-0.1		-164.1	-24	1517	05 01 20
05 03 30	---	16 38 39	85.4	10.6	-0.1		-168.1	106	1534	05 01 21
05 03 30	FIRST-1	16 38 39	85.4	10.6	-0.1		-168.1	-5	1534	No stop
05 07 30	---	16 42 40	85.5	3.9	-0.0		-175.7	235	1565	05 03 31
05 07 40	J1638+5720	16 42 50	85.7	-8.0	0.1		171.1	-30	1565	05 07 40
05 08 40	---	16 43 50	85.7	-9.8	0.1		169.1	30	1573	05 07 41
05 08 50	TDF	16 44 00	85.5	1.6	-0.0		-178.2	-26	1573	05 08 50
05 11 00	---	16 46 11	85.5	-2.2	0.0		177.6	104	1590	05 08 51
05 11 00	FIRST-1	16 46 11	85.5	-2.2	0.0		177.6	-5	1590	No stop
05 15 00	---	16 50 11	85.5	-9.0	0.1		170.0	235	1621	05 11 01
05 15 20	J1638+5720	16 50 31	85.4	-21.0	0.2		156.6	-20	1621	05 15 20
05 16 10	---	16 51 22	85.4	-22.3	0.2		155.1	30	1627	05 15 21

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
05 16 20	TDF	16 51 32	85.4	-11.2	0.1		167.5	-26	1627	05 16 20
05 18 30	---	16 53 42	85.4	-14.7	0.1		163.5	104	1644	05 16 21
05 18 30	FIRST-1	16 53 42	85.4	-14.7	0.1		163.5	-5	1644	No stop
05 22 30	---	16 57 43	85.2	-20.8	0.2		156.6	235	1675	05 18 31
05 22 40	J1638+5720	16 57 53	85.0	-31.3	0.3		144.7	-27	1675	05 22 40
05 23 40	---	16 58 53	84.9	-32.6	0.3		143.2	33	1682	05 22 41
05 23 50	TDF	16 59 03	85.1	-22.7	0.2		154.4	-24	1682	05 23 50
05 26 00	---	17 01 13	85.0	-25.7	0.3		150.9	106	1699	05 23 51
05 26 00	FIRST-1	17 01 13	85.0	-25.7	0.3		150.9	-5	1699	No stop
05 30 00	---	17 05 14	84.7	-30.8	0.3		145.0	235	1730	05 26 01
05 30 20	J1638+5720	17 05 34	84.3	-39.8	0.5		134.6	-13	1730	05 30 20
05 31 10	---	17 06 24	84.2	-40.6	0.5		133.7	37	1737	05 30 21
05 31 20	TDF	17 06 34	84.6	-32.3	0.4		143.2	-21	1737	05 31 20
05 33 30	---	17 08 44	84.4	-34.7	0.4		140.4	109	1753	05 31 21
05 33 30	FIRST-1	17 08 44	84.4	-34.7	0.4		140.4	-5	1753	No stop
05 37 30	---	17 12 45	84.0	-38.7	0.5		135.6	235	1784	05 33 31
05 37 40	J1638+5720	17 12 55	83.5	-45.9	0.6		127.0	-20	1784	05 37 40
05 38 40	---	17 13 55	83.4	-46.6	0.6		126.1	40	1792	05 37 41
05 38 50	TDF	17 14 05	83.9	-39.9	0.5		134.1	-18	1792	05 38 50
05 41 00	---	17 16 16	83.7	-41.7	0.5		131.8	112	1809	05 38 51
05 41 00	FIRST-1	17 16 16	83.7	-41.7	0.5		131.8	-5	1809	No stop
05 45 00	---	17 20 16	83.3	-44.8	0.6		128.0	235	1840	05 41 01
05 45 20	J1638+5720	17 20 36	82.7	-50.7	0.7		120.6	-7	1840	05 45 20
05 46 10	---	17 21 26	82.6	-51.2	0.7		120.0	43	1846	05 45 21
05 46 20	TDF	17 21 37	83.1	-45.7	0.6		126.8	-16	1846	05 46 20
05 48 30	---	17 23 47	82.9	-47.1	0.6		124.9	114	1863	05 46 21
05 48 30	FIRST-1	17 23 47	82.9	-47.1	0.6		124.9	-5	1863	No stop
05 52 30	---	17 27 48	82.5	-49.4	0.7		121.8	235	1894	05 48 31
05 52 40	J1638+5720	17 27 58	81.8	-54.2	0.8		115.6	-15	1894	05 52 40
05 53 40	---	17 28 58	81.7	-54.6	0.8		115.0	45	1902	05 52 41

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
05 53 50	TDF	17 29 08	82.3	-50.1	0.7		120.8	-14	1902	05 53 50
05 56 00	---	17 31 18	82.0	-51.2	0.8		119.3	116	1919	05 53 51
05 56 00	FIRST-1	17 31 18	82.0	-51.2	0.8		119.3	-5	1919	No stop
06 00 00	---	17 35 19	81.6	-52.9	0.8		116.7	235	1950	05 56 01
06 00 20	J1638+5720	17 35 39	80.8	-56.9	1.0		111.3	-3	1950	06 00 20
06 01 10	---	17 36 29	80.7	-57.2	1.0		110.9	47	1956	06 00 21
06 01 20	TDF	17 36 39	81.4	-53.5	0.9		115.9	-12	1956	06 01 20
06 03 30	---	17 38 49	81.1	-54.3	0.9		114.6	118	1973	06 01 21
06 03 30	FIRST-1	17 38 49	81.1	-54.3	0.9		114.6	-5	1973	No stop
06 07 30	---	17 42 50	80.7	-55.7	1.0		112.4	235	2004	06 03 31
06 07 40	J1638+5720	17 43 00	79.9	-58.9	1.1		107.8	-11	2004	06 07 40
06 08 40	---	17 44 00	79.8	-59.1	1.1		107.4	49	2011	06 07 41
06 08 50	TDF	17 44 10	80.5	-56.1	1.0		111.7	-11	2011	06 08 50
06 11 00	---	17 46 21	80.2	-56.7	1.0		110.6	119	2028	06 08 51
06 11 00	FIRST-1	17 46 21	80.2	-56.7	1.0		110.6	-5	2028	No stop
06 15 00	---	17 50 21	79.7	-57.7	1.1		108.8	235	2059	06 11 01
06 15 20	J1638+5720	17 50 41	78.9	-60.5	1.2		104.6	0	2059	06 15 20
06 16 10	---	17 51 31	78.8	-60.6	1.2		104.3	50	2066	06 15 21
06 16 20	TDF	17 51 41	79.5	-58.0	1.1		108.2	-9	2066	06 16 20
06 18 30	---	17 53 52	79.3	-58.5	1.1		107.2	121	2082	06 16 21
06 18 30	FIRST-1	17 53 52	79.3	-58.5	1.1		107.2	-5	2082	No stop
06 22 30	---	17 57 52	78.7	-59.3	1.2		105.6	235	2113	06 18 31
06 22 40	J1638+5720	17 58 02	77.9	-61.6	1.3		102.0	-9	2113	06 22 40
06 23 40	---	17 59 03	77.8	-61.8	1.3		101.6	51	2121	06 22 41
06 23 50	TDF	17 59 13	78.6	-59.6	1.2		105.1	-8	2121	06 23 50
06 26 00	---	18 01 23	78.3	-59.9	1.3		104.3	122	2138	06 23 51
06 26 00	FIRST-1	18 01 23	78.3	-59.9	1.3		104.3	-5	2138	No stop
06 30 00	---	18 05 24	77.8	-60.5	1.3		102.8	235	2169	06 26 01
06 30 20	J1638+5720	18 05 44	76.9	-62.5	1.5		99.5	2	2169	06 30 20
06 31 10	---	18 06 34	76.8	-62.6	1.5		99.2	50	2175	06 30 21

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
06 31 20	TDF	18 06 44	77.6	-60.7	1.4		102.4	-7	2175	06 31 20
06 33 30	---	18 08 54	77.3	-61.0	1.4		101.6	123	2192	06 31 21
06 33 30	FIRST-1	18 08 54	77.3	-61.0	1.4		101.6	-5	2192	No stop
06 37 30	---	18 12 55	76.8	-61.5	1.5		100.4	235	2223	06 33 31
06 37 40	J1638+5720	18 13 05	75.9	-63.1	1.6		97.3	-7	2223	06 37 40
06 38 40	---	18 14 05	75.8	-63.2	1.6		97.1	53	2231	06 37 41
06 38 50	TDF	18 14 15	76.6	-61.6	1.5		99.9	-6	2231	06 38 50
06 41 00	---	18 16 26	76.3	-61.8	1.5		99.3	124	2248	06 38 51
06 41 00	FIRST-1	18 16 26	76.3	-61.8	1.5		99.3	-5	2248	No stop
06 45 00	---	18 20 26	75.8	-62.1	1.6		98.1	235	2279	06 41 01
06 45 20	J1638+5720	18 20 46	74.9	-63.6	1.7		95.3	4	2279	06 45 20
06 46 10	---	18 21 36	74.8	-63.6	1.7		95.1	50	2285	06 45 21
06 46 20	TDF	18 21 46	75.6	-62.2	1.6		97.7	-6	2285	06 46 20
06 48 30	---	18 23 57	75.3	-62.4	1.7		97.1	124	2302	06 46 21
06 48 30	FIRST-1	18 23 57	75.3	-62.4	1.7		97.1	-5	2302	No stop
06 52 30	---	18 27 57	74.8	-62.6	1.7		96.0	235	2333	06 48 31
06 52 40	J1638+5720	18 28 07	73.9	-63.9	1.8		93.5	-6	2333	06 52 40
06 53 40	---	18 29 08	73.8	-63.9	1.8		93.2	54	2340	06 52 41
06 53 50	TDF	18 29 18	74.6	-62.7	1.7		95.7	-5	2340	06 53 50
06 56 00	---	18 31 28	74.3	-62.8	1.8		95.1	125	2357	06 53 51
06 56 00	FIRST-1	18 31 28	74.3	-62.8	1.8		95.1	-5	2357	No stop
07 00 00	---	18 35 29	73.8	-63.0	1.8		94.1	235	2388	06 56 01
07 00 20	J1638+5720	18 35 49	72.9	-64.0	2.0		91.7	4	2388	07 00 20
07 01 10	---	18 36 39	72.8	-64.0	2.0		91.5	50	2395	07 00 21
07 01 20	TDF	18 36 49	73.6	-63.0	1.9		93.8	-6	2395	07 01 20
07 03 30	---	18 38 59	73.3	-63.1	1.9		93.3	124	2411	07 01 21
07 03 30	FIRST-1	18 38 59	73.3	-63.1	1.9		93.3	-5	2411	No stop
07 07 30	---	18 43 00	72.8	-63.2	2.0		92.4	235	2442	07 03 31
07 07 40	J1638+5720	18 43 10	71.9	-64.1	2.1		90.1	-6	2442	07 07 40
07 08 40	---	18 44 10	71.8	-64.1	2.1		89.9	54	2450	07 07 41

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
07 08 50	TDF	18 44 20	72.6	-63.2	2.0		92.1	-6	2450	07 08 50
07 11 00	---	18 46 30	72.3	-63.2	2.0		91.6	124	2467	07 08 51
07 11 00	FIRST-1	18 46 30	72.3	-63.2	2.0		91.6	-5	2467	No stop
07 15 00	---	18 50 31	71.8	-63.3	2.1		90.7	235	2498	07 11 01
07 15 20	J1638+5720	18 50 51	70.9	-64.0	2.2		88.5	4	2498	07 15 20
07 16 10	---	18 51 41	70.7	-64.0	2.2		88.3	50	2504	07 15 21
07 16 20	TDF	18 51 51	71.6	-63.3	2.1		90.4	-6	2504	07 16 20
07 18 30	---	18 54 02	71.3	-63.3	2.2		89.9	124	2521	07 16 21
07 18 30	FIRST-1	18 54 02	71.3	-63.3	2.2		89.9	-5	2521	No stop
07 22 30	---	18 58 02	70.8	-63.2	2.2		89.1	235	2552	07 18 31
07 22 40	J1638+5720	18 58 12	69.9	-63.9	2.3		87.1	-6	2552	07 22 40
07 23 40	---	18 59 13	69.7	-63.9	2.3		86.9	54	2560	07 22 41
07 23 50	TDF	18 59 23	70.6	-63.2	2.2		88.8	-6	2560	07 23 50
07 26 00	---	19 01 33	70.3	-63.2	2.3		88.4	124	2577	07 23 51
07 26 00	FIRST-1	19 01 33	70.3	-63.2	2.3		88.4	-5	2577	No stop
07 30 00	---	19 05 34	69.8	-63.2	2.3		87.6	235	2608	07 26 01
07 30 20	J1638+5720	19 05 54	68.8	-63.7	2.5		85.6	4	2608	07 30 20
07 31 10	---	19 06 44	68.7	-63.7	2.5		85.5	50	2614	07 30 21
07 31 20	TDF	19 06 54	69.6	-63.1	2.4		87.3	-6	2614	07 31 20
07 33 30	---	19 09 04	69.3	-63.1	2.4		86.9	124	2631	07 31 21
07 33 30	FIRST-1	19 09 04	69.3	-63.1	2.4		86.9	-5	2631	No stop
07 37 30	---	19 13 05	68.7	-63.0	2.5		86.2	235	2662	07 33 31
07 37 40	J1638+5720	19 13 15	67.8	-63.5	2.6		84.3	-6	2662	07 37 40
07 38 40	---	19 14 15	67.7	-63.5	2.6		84.1	54	2670	07 37 41
07 38 50	TDF	19 14 25	68.6	-63.0	2.5		85.9	-6	2670	07 38 50
07 41 00	---	19 16 35	68.3	-62.9	2.5		85.5	124	2686	07 38 51
07 41 00	FIRST-1	19 16 35	68.3	-62.9	2.5		85.5	-5	2686	No stop
07 45 00	---	19 20 36	67.7	-62.8	2.6		84.8	235	2717	07 41 01
07 45 20	J1638+5720	19 20 56	66.8	-63.2	2.7		83.0	4	2717	07 45 20
07 46 10	---	19 21 46	66.7	-63.2	2.7		82.8	50	2724	07 45 21

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
07 46 20	TDF	19 21 56	67.6	-62.8	2.6		84.5	-6	2724	07 46 20
07 48 30	---	19 24 07	67.3	-62.7	2.7		84.1	124	2740	07 46 21
07 48 30	FIRST-1	19 24 07	67.3	-62.7	2.7		84.1	-5	2740	No stop
07 52 30	---	19 28 07	66.7	-62.5	2.7		83.4	235	2771	07 48 31
07 52 40	J1638+5720	19 28 17	65.8	-62.9	2.8		81.7	-6	2771	07 52 40
07 53 40	---	19 29 17	65.7	-62.8	2.8		81.5	54	2779	07 52 41
07 53 50	TDF	19 29 27	66.6	-62.5	2.7		83.2	-6	2779	07 53 50
07 56 00	---	19 31 38	66.3	-62.4	2.8		82.8	124	2796	07 53 51
07 56 00	FIRST-1	19 31 38	66.3	-62.4	2.8		82.8	-5	2796	No stop
08 00 00	---	19 35 38	65.7	-62.2	2.8		82.1	235	2827	07 56 01
08 00 20	J1638+5720	19 35 59	64.8	-62.5	3.0		80.4	4	2827	08 00 20
08 01 10	---	19 36 49	64.7	-62.5	3.0		80.3	50	2833	08 00 21
08 01 20	TDF	19 36 59	65.6	-62.2	2.9		81.9	-6	2833	08 01 20
08 03 30	---	19 39 09	65.3	-62.1	2.9		81.5	124	2850	08 01 21
08 03 30	FIRST-1	19 39 09	65.3	-62.1	2.9		81.5	-5	2850	No stop
08 07 30	---	19 43 10	64.7	-61.9	3.0		80.9	235	2881	08 03 31
08 07 40	J1638+5720	19 43 20	63.8	-62.1	3.1		79.3	-6	2881	08 07 40
08 08 40	---	19 44 20	63.7	-62.0	3.1		79.1	54	2889	08 07 41
08 08 50	TDF	19 44 30	64.6	-61.8	3.0		80.6	-6	2889	08 08 50
08 11 00	---	19 46 40	64.3	-61.7	3.0		80.3	124	2906	08 08 51
08 11 00	FIRST-1	19 46 40	64.3	-61.7	3.0		80.3	-5	2906	No stop
08 15 00	---	19 50 41	63.7	-61.5	3.1		79.6	235	2937	08 11 01
08 15 20	J1638+5720	19 51 01	62.8	-61.6	3.2		78.1	4	2937	08 15 20
08 16 10	---	19 51 51	62.7	-61.6	3.2		77.9	50	2943	08 15 21
08 16 20	TDF	19 52 01	63.6	-61.4	3.1		79.4	-6	2943	08 16 20
08 18 30	---	19 54 12	63.3	-61.3	3.2		79.1	124	2960	08 16 21
08 18 30	FIRST-1	19 54 12	63.3	-61.3	3.2		79.1	-5	2960	No stop
08 22 30	---	19 58 12	62.8	-61.0	3.2		78.4	235	2991	08 18 31
08 22 40	J1638+5720	19 58 22	61.8	-61.2	3.3		76.9	-6	2991	08 22 40
08 23 40	---	19 59 22	61.7	-61.1	3.3		76.8	54	2999	08 22 41

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
08 23 50	TDF	19 59 32	62.6	-61.0	3.2		78.2	-6	2999	08 23 50
08 26 00	---	20 01 43	62.3	-60.8	3.3		77.9	124	3015	08 23 51
08 26 00	FIRST-1	20 01 43	62.3	-60.8	3.3		77.9	-5	3015	No stop
08 30 00	---	20 05 43	61.8	-60.6	3.3		77.2	235	3046	08 26 01
08 30 20	J1638+5720	20 06 03	60.8	-60.7	3.5		75.7	4	3046	08 30 20
08 31 10	---	20 06 54	60.7	-60.6	3.5		75.6	50	3053	08 30 21
08 31 20	TDF	20 07 04	61.6	-60.5	3.4		77.0	-6	3053	08 31 20
08 33 30	---	20 09 14	61.3	-60.4	3.4		76.7	124	3069	08 31 21
08 33 30	FIRST-1	20 09 14	61.3	-60.4	3.4		76.7	-5	3069	No stop
08 37 30	---	20 13 15	60.8	-60.1	3.5		76.1	235	3100	08 33 31
08 37 40	J1638+5720	20 13 25	59.9	-60.2	3.6		74.6	-6	3100	08 37 40
08 38 40	---	20 14 25	59.7	-60.1	3.6		74.5	54	3108	08 37 41
08 38 50	TDF	20 14 35	60.6	-60.0	3.5		75.9	-6	3108	08 38 50
08 41 00	---	20 16 45	60.3	-59.9	3.5		75.5	124	3125	08 38 51
08 41 00	FIRST-1	20 16 45	60.3	-59.9	3.5		75.5	-5	3125	No stop
08 45 00	---	20 20 46	59.8	-59.6	3.6		74.9	235	3156	08 41 01
08 45 20	J1638+5720	20 21 06	58.9	-59.6	3.7		73.5	4	3156	08 45 20
08 46 10	---	20 21 56	58.8	-59.5	3.7		73.4	50	3162	08 45 21
08 46 20	TDF	20 22 06	59.6	-59.5	3.6		74.7	-6	3162	08 46 20
08 48 30	---	20 24 16	59.4	-59.3	3.7		74.4	124	3179	08 46 21
08 48 30	FIRST-1	20 24 16	59.4	-59.3	3.7		74.4	-5	3179	No stop
08 52 30	---	20 28 17	58.8	-59.1	3.7		73.8	235	3210	08 48 31
08 52 40	J1638+5720	20 28 27	57.9	-59.0	3.8		72.4	-6	3210	08 52 40
08 53 40	---	20 29 27	57.8	-59.0	3.8		72.3	54	3218	08 52 41
08 53 50	TDF	20 29 37	58.7	-59.0	3.7		73.6	-6	3218	08 53 50
08 56 00	---	20 31 48	58.4	-58.8	3.8		73.3	124	3235	08 53 51
08 56 00	FIRST-1	20 31 48	58.4	-58.8	3.8		73.3	-5	3235	No stop
09 00 00	---	20 35 48	57.9	-58.5	3.8		72.7	235	3266	08 56 01
09 00 20	J1638+5720	20 36 08	56.9	-58.4	4.0		71.3	4	3266	09 00 20
09 01 10	---	20 36 59	56.8	-58.4	4.0		71.2	50	3272	09 00 21

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
09 01 20	TDF	20 37 09	57.7	-58.4	3.9		72.5	-6	3272	09 01 20
09 03 30	---	20 39 19	57.4	-58.2	3.9		72.2	124	3289	09 01 21
09 03 30	FIRST-1	20 39 19	57.4	-58.2	3.9		72.2	-5	3289	No stop
09 07 30	---	20 43 20	56.9	-57.9	4.0		71.6	235	3320	09 03 31
09 07 40	J1638+5720	20 43 30	56.0	-57.8	4.1		70.3	-6	3320	09 07 40
09 08 40	---	20 44 30	55.9	-57.8	4.1		70.1	54	3328	09 07 41
09 08 50	TDF	20 44 40	56.7	-57.8	4.0		71.4	-6	3328	09 08 50
09 11 00	---	20 46 50	56.5	-57.7	4.0		71.1	124	3344	09 08 51
09 11 00	FIRST-1	20 46 50	56.5	-57.7	4.0		71.1	-5	3344	No stop
09 15 00	---	20 50 51	56.0	-57.3	4.1		70.5	235	3375	09 11 01
09 15 20	J1638+5720	20 51 11	55.0	-57.2	4.2		69.2	4	3375	09 15 20
09 16 10	---	20 52 01	54.9	-57.1	4.2		69.1	50	3382	09 15 21
09 16 20	TDF	20 52 11	55.8	-57.2	4.1		70.3	-6	3382	09 16 20
09 18 30	---	20 54 21	55.5	-57.1	4.2		70.0	124	3398	09 16 21
09 18 30	FIRST-1	20 54 21	55.5	-57.1	4.2		70.0	-5	3398	No stop
09 22 30	---	20 58 22	55.0	-56.7	4.2		69.4	235	3429	09 18 31
09 22 40	J1638+5720	20 58 32	54.1	-56.6	4.3		68.1	-6	3429	09 22 40
09 23 40	---	20 59 32	54.0	-56.5	4.4		68.0	54	3437	09 22 41
09 23 50	TDF	20 59 42	54.8	-56.6	4.2		69.2	-6	3437	09 23 50
09 26 00	---	21 01 53	54.6	-56.4	4.3		68.9	124	3454	09 23 51
09 26 00	FIRST-1	21 01 53	54.6	-56.4	4.3		68.9	-5	3454	No stop
09 30 00	---	21 05 53	54.1	-56.1	4.3		68.3	235	3485	09 26 01
09 30 20	J1638+5720	21 06 13	53.1	-55.9	4.5		67.1	4	3485	09 30 20
09 31 10	---	21 07 03	53.0	-55.8	4.5		66.9	50	3491	09 30 21
09 31 20	TDF	21 07 13	53.9	-56.0	4.4		68.1	-6	3491	09 31 20
09 33 30	---	21 09 24	53.6	-55.8	4.4		67.8	124	3508	09 31 21
09 33 30	FIRST-1	21 09 24	53.6	-55.8	4.4		67.8	-5	3508	No stop
09 37 30	---	21 13 25	53.1	-55.5	4.5		67.3	235	3539	09 33 31
09 37 40	J1638+5720	21 13 35	52.2	-55.3	4.6		66.0	-6	3539	09 37 40
09 38 40	---	21 14 35	52.1	-55.2	4.6		65.9	54	3547	09 37 41

Schedule for TORUN (Code Tr) Page 15

EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
09 38 50	TDF	21 14 45	53.0	-55.3	4.5		67.1	-6	3547	09 38 50
09 41 00	---	21 16 55	52.7	-55.2	4.5		66.8	124	3564	09 38 51
09 41 00	FIRST-1	21 16 55	52.7	-55.2	4.5		66.8	-5	3564	No stop
09 45 00	---	21 20 56	52.2	-54.8	4.6		66.2	235	3595	09 41 01
09 45 20	J1638+5720	21 21 16	51.3	-54.6	4.7		65.0	4	3595	09 45 20
09 46 10	---	21 22 06	51.2	-54.5	4.7		64.8	50	3601	09 45 21
09 46 20	TDF	21 22 16	52.1	-54.7	4.6		66.0	-6	3601	09 46 20
09 48 30	---	21 24 26	51.8	-54.5	4.7		65.7	124	3618	09 46 21
09 48 30	FIRST-1	21 24 26	51.8	-54.5	4.7		65.7	-5	3618	No stop
09 52 30	---	21 28 27	51.3	-54.1	4.7		65.1	235	3649	09 48 31
09 52 40	J1638+5720	21 28 37	50.4	-53.9	4.8		63.9	-6	3649	09 52 40
09 53 40	---	21 29 37	50.3	-53.8	4.9		63.8	54	3657	09 52 41
09 53 50	TDF	21 29 47	51.1	-54.0	4.7		65.0	-6	3657	09 53 50
09 56 00	---	21 31 58	50.9	-53.8	4.8		64.7	124	3673	09 53 51
09 56 00	FIRST-1	21 31 58	50.9	-53.8	4.8		64.7	-5	3673	No stop
10 00 00	---	21 35 58	50.4	-53.4	4.9		64.1	235	3704	09 56 01
10 00 20	J1638+5720	21 36 18	49.5	-53.2	5.0		62.9	4	3704	10 00 20
10 01 10	---	21 37 08	49.4	-53.1	5.0		62.8	50	3711	10 00 21
10 01 20	TDF	21 37 18	50.2	-53.3	4.9		63.9	-6	3711	10 01 20
10 03 30	---	21 39 29	50.0	-53.1	4.9		63.6	124	3728	10 01 21
10 03 30	FIRST-1	21 39 29	50.0	-53.1	4.9		63.6	-5	3728	No stop
10 07 30	---	21 43 29	49.5	-52.7	5.0		63.0	235	3758	10 03 31
10 07 40	J1638+5720	21 43 39	48.6	-52.5	5.1		61.8	-6	3758	10 07 40
10 08 40	---	21 44 40	48.5	-52.4	5.1		61.7	54	3766	10 07 41
10 08 50	TDF	21 44 50	49.3	-52.6	5.0		62.8	-6	3766	10 08 50
10 11 00	---	21 47 00	49.1	-52.4	5.0		62.5	124	3783	10 08 51
10 11 00	FIRST-1	21 47 00	49.1	-52.4	5.0		62.5	-5	3783	No stop
10 15 00	---	21 51 01	48.6	-52.0	5.1		62.0	235	3814	10 11 01
10 15 20	J1638+5720	21 51 21	47.7	-51.7	5.2		60.8	4	3814	10 15 20
10 16 10	---	21 52 11	47.6	-51.6	5.2		60.7	50	3820	10 15 21
10 16 20	TDF	21 52 21	48.4	-51.9	5.1		61.8	-6	3820	10 16 20
10 18 30	---	21 54 31	48.2	-51.7	5.2		61.5	124	3837	10 16 21

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
10 18 30	FIRST-1	21 54 31	48.2	-51.7	5.2		61.5	-5	3837	No stop
10 22 30	---	21 58 32	47.7	-51.3	5.2		60.9	235	3868	10 18 31
10 22 40	J1638+5720	21 58 42	46.8	-51.0	5.3		59.8	-6	3868	10 22 40
10 23 40	---	21 59 42	46.7	-50.9	5.4		59.6	54	3876	10 22 41
10 23 50	TDF	21 59 52	47.5	-51.2	5.2		60.7	-6	3876	10 23 50
10 26 00	---	22 02 02	47.3	-51.0	5.3		60.4	124	3893	10 23 51
10 26 00	FIRST-1	22 02 02	47.3	-51.0	5.3		60.4	-5	3893	No stop
10 30 00	---	22 06 03	46.8	-50.6	5.4		59.9	235	3924	10 26 01
10 30 20	J1638+5720	22 06 23	45.9	-50.2	5.5		58.7	4	3924	10 30 20
10 31 10	---	22 07 13	45.8	-50.1	5.5		58.6	50	3930	10 30 21
10 31 20	TDF	22 07 23	46.7	-50.5	5.4		59.7	-6	3930	10 31 20
10 33 30	---	22 09 34	46.4	-50.2	5.4		59.4	124	3947	10 31 21
10 33 30	FIRST-1	22 09 34	46.4	-50.2	5.4		59.4	-5	3947	No stop
10 37 30	---	22 13 34	46.0	-49.8	5.5		58.8	235	3978	10 33 31
10 37 40	J1638+5720	22 13 44	45.1	-49.5	5.6		57.7	-6	3978	10 37 40
10 38 40	---	22 14 45	45.0	-49.4	5.6		57.6	54	3986	10 37 41
10 38 50	TDF	22 14 55	45.8	-49.7	5.5		58.7	-6	3986	10 38 50
10 41 00	---	22 17 05	45.6	-49.5	5.5		58.4	124	4002	10 38 51
10 41 00	FIRST-1	22 17 05	45.6	-49.5	5.5		58.4	-5	4002	No stop
10 45 00	---	22 21 06	45.1	-49.1	5.6		57.8	235	4033	10 41 01
10 45 20	J1638+5720	22 21 26	44.2	-48.7	5.7		56.6	4	4033	10 45 20
10 46 10	---	22 22 16	44.1	-48.6	5.7		56.5	50	4040	10 45 21
10 46 20	TDF	22 22 26	44.9	-48.9	5.6		57.6	-6	4040	10 46 20
10 48 30	---	22 24 36	44.7	-48.7	5.7		57.3	124	4057	10 46 21
10 48 30	FIRST-1	22 24 36	44.7	-48.7	5.7		57.3	-5	4057	No stop
10 52 30	---	22 28 37	44.3	-48.3	5.7		56.7	235	4087	10 48 31
10 52 40	J1638+5720	22 28 47	43.4	-47.9	5.8		55.6	-6	4087	10 52 40
10 53 40	---	22 29 47	43.3	-47.8	5.9		55.5	54	4095	10 52 41
10 53 50	TDF	22 29 57	44.1	-48.2	5.8		56.6	-6	4095	10 53 50
10 56 00	---	22 32 07	43.9	-48.0	5.8		56.3	124	4112	10 53 51
10 56 00	FIRST-1	22 32 07	43.9	-48.0	5.8		56.3	-5	4112	No stop
11 00 00	---	22 36 08	43.4	-47.5	5.9		55.7	235	4143	10 56 01

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
11 00 20	J1638+5720	22 36 28	42.5	-47.1	6.0		54.6	4	4143	11 00 20
11 01 10	---	22 37 18	42.4	-47.0	6.0		54.4	50	4149	11 00 21
11 01 20	TDF	22 37 28	43.3	-47.4	5.9		55.5	-6	4149	11 01 20
11 03 30	---	22 39 39	43.0	-47.2	5.9		55.2	124	4166	11 01 21
11 03 30	FIRST-1	22 39 39	43.0	-47.2	5.9		55.2	-5	4166	No stop
11 07 30	---	22 43 39	42.6	-46.8	6.0		54.6	235	4197	11 03 31
11 07 40	J1638+5720	22 43 49	41.7	-46.3	6.1		53.5	-6	4197	11 07 40
11 08 40	---	22 44 49	41.6	-46.2	6.1		53.4	54	4205	11 07 41
11 08 50	TDF	22 45 00	42.4	-46.6	6.0		54.5	-6	4205	11 08 50
11 11 00	---	22 47 10	42.2	-46.4	6.0		54.2	124	4222	11 08 51
11 11 00	FIRST-1	22 47 10	42.2	-46.4	6.0		54.2	-5	4222	No stop
11 15 00	---	22 51 11	41.8	-46.0	6.1		53.6	235	4253	11 11 01
11 15 20	J1638+5720	22 51 31	40.9	-45.5	6.2		52.5	4	4253	11 15 20
11 16 10	---	22 52 21	40.8	-45.4	6.2		52.3	50	4259	11 15 21
11 16 20	TDF	22 52 31	41.6	-45.8	6.1		53.4	-6	4259	11 16 20
11 18 30	---	22 54 41	41.4	-45.6	6.2		53.1	124	4276	11 16 21
11 18 30	FIRST-1	22 54 41	41.4	-45.6	6.2		53.1	-5	4276	No stop
11 22 30	---	22 58 42	41.0	-45.1	6.2		52.5	235	4307	11 18 31
11 22 40	J1638+5720	22 58 52	40.1	-44.7	6.3		51.4	-6	4307	11 22 40
11 23 40	---	22 59 52	40.0	-44.6	6.4		51.3	54	4315	11 22 41
11 23 50	TDF	23 00 02	40.8	-45.0	6.3		52.4	-5	4315	11 23 50
11 26 00	---	23 02 12	40.6	-44.8	6.3		52.0	125	4331	11 23 51
11 26 00	FIRST-1	23 02 12	40.6	-44.8	6.3		52.0	-5	4331	No stop
11 30 00	---	23 06 13	40.2	-44.3	6.4		51.5	235	4362	11 26 01
11 30 20	J1638+5720	23 06 33	39.3	-43.8	6.5		50.4	4	4362	11 30 20
11 31 10	---	23 07 23	39.2	-43.7	6.5		50.2	50	4369	11 30 21
11 31 20	TDF	23 07 33	40.0	-44.2	6.4		51.3	-5	4369	11 31 20
11 33 30	---	23 09 44	39.8	-43.9	6.4		51.0	125	4386	11 31 21
11 33 30	FIRST-1	23 09 44	39.8	-43.9	6.4		51.0	-5	4386	No stop
11 37 30	---	23 13 44	39.4	-43.5	6.5		50.4	235	4416	11 33 31
11 37 40	J1638+5720	23 13 54	38.5	-43.0	6.6		49.3	-6	4416	11 37 40
11 38 40	---	23 14 54	38.4	-42.9	6.6		49.2	54	4424	11 37 41

Schedule for TORUN (Code Tr)

Page 18

EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
11 38 50	TDF	23 15 04	39.2	-43.4	6.5		50.2	-5	4424	11 38 50
11 41 00	---	23 17 15	39.0	-43.1	6.5		49.9	125	4441	11 38 51
11 41 00	FIRST-1	23 17 15	39.0	-43.1	6.5		49.9	-5	4441	No stop
11 45 00	---	23 21 15	38.6	-42.7	6.6		49.4	235	4472	11 41 01
11 45 20	J1638+5720	23 21 36	37.8	-42.2	6.7		48.3	4	4472	11 45 20
11 46 10	---	23 22 26	37.7	-42.1	6.7		48.1	50	4478	11 45 21
11 46 20	TDF	23 22 36	38.5	-42.5	6.6		49.2	-5	4478	11 46 20
11 48 30	---	23 24 46	38.3	-42.3	6.7		48.9	125	4495	11 46 21
11 48 30	FIRST-1	23 24 46	38.3	-42.3	6.7		48.9	-5	4495	No stop
11 52 30	---	23 28 47	37.9	-41.8	6.7		48.3	235	4526	11 48 31
11 52 40	J1638+5720	23 28 57	37.0	-41.3	6.8		47.2	-6	4526	11 52 40
11 53 40	---	23 29 57	36.9	-41.2	6.9		47.1	54	4534	11 52 41
11 53 50	TDF	23 30 07	37.7	-41.7	6.8		48.1	-5	4534	11 53 50
11 56 00	---	23 32 17	37.5	-41.4	6.8		47.8	125	4551	11 53 51
11 56 00	FIRST-1	23 32 17	37.5	-41.4	6.8		47.8	-5	4551	No stop
12 00 00	---	23 36 18	37.1	-41.0	6.9		47.2	235	4582	11 56 01
12 00 20	J1638+5720	23 36 38	36.3	-40.4	7.0		46.1	4	4582	12 00 20
12 01 10	---	23 37 28	36.2	-40.3	7.0		46.0	50	4588	12 00 21
12 01 20	TDF	23 37 38	37.0	-40.8	6.9		47.0	-5	4588	12 01 20
12 03 30	---	23 39 48	36.8	-40.6	6.9		46.7	125	4605	12 01 21
12 03 30	FIRST-1	23 39 48	36.8	-40.6	6.9		46.7	-5	4605	No stop
12 07 30	---	23 43 49	36.4	-40.1	7.0		46.2	235	4636	12 03 31
12 07 40	J1638+5720	23 43 59	35.6	-39.6	7.1		45.1	-5	4636	12 07 40
12 08 40	---	23 44 59	35.5	-39.4	7.1		44.9	55	4644	12 07 41
12 08 50	TDF	23 45 09	36.2	-40.0	7.0		46.0	-5	4644	12 08 50
12 11 00	---	23 47 20	36.0	-39.7	7.0		45.7	125	4660	12 08 51
12 11 00	FIRST-1	23 47 20	36.0	-39.7	7.0		45.7	-5	4660	No stop
12 15 00	---	23 51 20	35.7	-39.2	7.1		45.1	235	4691	12 11 01
12 15 20	J1638+5720	23 51 40	34.8	-38.7	7.2		44.0	5	4691	12 15 20
12 16 10	---	23 52 31	34.8	-38.6	7.2		43.9	50	4698	12 15 21
12 16 20	TDF	23 52 41	35.5	-39.1	7.1		44.9	-5	4698	12 16 20
12 18 30	---	23 54 51	35.3	-38.8	7.2		44.6	125	4715	12 16 21

Schedule for TORUN (Code Tr)

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EVN Observations of the Relativistic Tidal Disruption Event

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
12 18 30	FIRST-1	23 54 51	35.3	-38.8	7.2		44.6	-5	4715	No stop
12 22 30	---	23 58 52	34.9	-38.4	7.2		44.0	235	4746	12 18 31
12 22 40	J1638+5720	23 59 02	34.1	-37.8	7.3		42.9	-5	4746	12 22 40
12 23 40	---	00 00 02	34.1	-37.7	7.4		42.8	55	4753	12 22 41
12 23 50	TDF	00 00 12	34.8	-38.2	7.3		43.8	-5	4753	12 23 50
12 26 00	---	00 02 22	34.6	-37.9	7.3		43.5	125	4770	12 23 51
12 26 00	FIRST-1	00 02 22	34.6	-37.9	7.3		43.5	-5	4770	No stop
12 30 00	---	00 06 23	34.3	-37.5	7.4		42.9	235	4801	12 26 01
12 30 20	J1638+5720	00 06 43	33.4	-36.9	7.5		41.8	5	4801	12 30 20
12 31 10	---	00 07 33	33.4	-36.8	7.5		41.7	50	4807	12 30 21
12 31 20	TDF	00 07 43	34.1	-37.3	7.4		42.7	-5	4807	12 31 20
12 33 30	---	00 09 53	33.9	-37.0	7.4		42.4	125	4824	12 31 21
12 33 30	FIRST-1	00 09 53	33.9	-37.0	7.4		42.4	-5	4824	No stop
12 37 30	---	00 13 54	33.6	-36.6	7.5		41.8	235	4855	12 33 31
12 37 40	J1638+5720	00 14 04	32.8	-36.0	7.6		40.8	-5	4855	12 37 40
12 38 40	---	00 15 04	32.7	-35.8	7.6		40.6	55	4863	12 37 41
12 38 50	TDF	00 15 14	33.5	-36.4	7.5		41.6	-5	4863	12 38 50
12 41 00	---	00 17 25	33.3	-36.1	7.5		41.3	125	4880	12 38 51
12 41 00	FIRST-1	00 17 25	33.3	-36.1	7.5		41.3	-5	4880	No stop
12 45 00	---	00 21 25	32.9	-35.7	7.6		40.8	235	4911	12 41 01
12 45 20	J1638+5720	00 21 45	32.1	-35.0	7.7		39.7	5	4911	12 45 20
12 46 10	---	00 22 35	32.0	-34.9	7.7		39.5	50	4917	12 45 21
12 46 20	TDF	00 22 46	32.8	-35.5	7.6		40.6	-5	4917	12 46 20
12 48 30	---	00 24 56	32.6	-35.2	7.7		40.2	125	4934	12 46 21
12 48 30	FIRST-1	00 24 56	32.6	-35.2	7.7		40.2	-5	4934	No stop
12 52 30	---	00 28 57	32.3	-34.7	7.7		39.7	235	4965	12 48 31
12 52 40	J1638+5720	00 29 07	31.5	-34.1	7.8		38.6	-5	4965	12 52 40
12 53 40	---	00 30 07	31.4	-34.0	7.9		38.4	55	4973	12 52 41
12 53 50	TDF	00 30 17	32.1	-34.6	7.8		39.5	-5	4973	12 53 50
12 56 00	---	00 32 27	32.0	-34.3	7.8		39.1	125	4989	12 53 51
12 56 00	FIRST-1	00 32 27	32.0	-34.3	7.8		39.1	-5	4989	No stop
13 00 00	---	00 36 28	31.6	-33.8	7.9		38.6	235	5020	12 56 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: sess113.C1024

Matching groups in /aps3/sched10.2/catalogs/freq.dat:
 tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 2 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 4 Setup file default. Used pcal sets: 1

LO sum=	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
BBC fr=	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Matching frequency sets: 4

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = OFF

PCALXB1=	S1	S2	S3	S4	S5	S6	S7	S8
PCALXB2=	M1	M2	M3	M4	M5	M6	M7	M8
PCALFR1=	0	0	0	0	0	0	0	0
PCALFR2=	0	0	0	0	0	0	0	0

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
 barrel=roll_off

SOURCES USED IN RECORDING SCANS -- EVN Observations of the Relativistic Tidal Disruption Event

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* TDF	16 43 47.242390	* 16 44 41.306125	16 44 55.384472	0.00
	57 41 16.13000	* 57 35 51.01031	57 34 09.09598	0.00
* FIRST-1	16 43 47.242390	* 16 44 41.306125	16 44 55.384472	0.00
	57 41 16.13000	* 57 35 51.01031	57 34 09.09598	0.00
* J1638+5720	16 37 17.425183	* 16 38 13.456298	16 38 28.120421	0.00
	57 26 15.76133	* 57 20 23.97905	57 18 34.82646	0.00
J1331+3030	13 28 49.657778	* 13 31 08.288070	13 31 46.309728	0.20
* 3C286	30 45 58.64061	* 30 30 32.95925	30 26 12.92405	0.19
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.721939	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 46 55.43714	0.52

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
TDF	96.2
FIRST-1	96.2
J1638+5720	97.0
3C286	133.5
3C345	94.0

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

n13c1tr

NETWORK MONITORING EXPERIMENT

PI: *Gabriele Surcis*

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Phone: +31-521-596508 EMAIL: surcis@jive.nl
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Notes: 6cm NME and ftp fringe test for session 1/2013
 (512 Mbps, L+R, 2-bit sampling, 8 MHz filters)
 Please send the disk pack by express to JIVE

COVER LETTER:

This is the schedule for the 6cm NME and ftp fringe-test on 25 February 2013 involving 15 antennas: Eb Wb Jb1 On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh Ir (Jm Od Nd Yd Hd).

The NME uses a standard setup with 512 Mbps and consists of long integrations on strong calibrators like 0234+285 and DA193 as well as phase-referencing parts with a continuum source as target.

The schedule also include an additional wb-test scans after the regular NME. The involved antennas are Wb, Tr, Ys, and On (Yd and Od). There will be a ftp-fringe test for each scan.

Three ftp-fringe tests are scheduled throughout the experiment:

~14:07:58 (scan 2, 2 sec, 0234+285)
~15:03:56 (scan 15, 2 sec, DA193)
~15:57:58 (scan 27, 2 sec, DA193)

Four ftp-fringe extra tests are schedules for (Wb, Tr, Ys, and On)

first ftp (scan=28) starts 16:09:56 ends 16:10:00
second ftp (scan=29) starts 16:18:56 ends 16:19:00
third ftp (scan=30) starts 16:28:56 ends 16:29:00
fourth ftp (scan=31) starts 16:38:56 ends 16:39:00

Please make sure that the autoftp is set up correctly. Thanks!

Good luck with the session!

Gabriele

Schedule for TORUN (Code Tr)

Page 2

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
Next scan frequencies: 4966.49 4966.49 4966.49 4966.49 4982.49 4982.49 4982.49 4982.49										
4998.49 4998.49 4998.49 4998.49 5014.49 5014.49 5014.49 5014.49										
Next BBC frequencies: 766.49 766.49 766.49 766.49 782.49 782.49 782.49 782.49										
798.49 798.49 798.49 798.49 814.49 814.49 814.49 814.49										
Next scan bandwidths: 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
14 00 00	0234+285	01 36 38	63.2	148.7	-1.0		-20.9	0	0	14 00 00
14 04 00	---	01 40 38	63.5	150.5	-1.0		-19.7	240	15	14 00 01
14 05 00	0234+285	01 41 38	63.6	151.0	-1.0		-19.4	53	15	14 05 00
14 09 00	---	01 45 39	63.9	152.9	-0.9		-18.2	240	31	14 05 01
14 10 00	0234+285	01 46 39	63.9	153.3	-0.9		-17.9	53	31	14 10 00
14 12 00	---	01 48 40	64.1	154.3	-0.8		-17.3	120	39	14 10 01
14 16 00	DA193	01 52 40	47.4	82.7	-4.1		-50.8	81	39	14 16 00
14 19 00	---	01 55 41	47.8	83.2	-4.0		-50.9	180	50	14 16 01
14 19 00	0548+378	01 55 41	47.1	86.0	-4.0		-49.4	-20	50	No stop
14 24 00	---	02 00 42	47.9	86.9	-3.9		-49.5	280	70	14 19 01
14 24 00	DA193	02 00 42	48.6	84.1	-3.9		-51.0	-20	70	No stop
14 27 00	---	02 03 42	49.0	84.7	-3.9		-51.1	160	81	14 24 01
14 27 30	0548+378	02 04 12	48.4	87.6	-3.8		-49.5	10	81	14 27 30
14 32 30	---	02 09 13	49.1	88.6	-3.7		-49.5	300	101	14 27 31
14 32 30	DA193	02 09 13	49.9	85.7	-3.8		-51.2	-20	101	No stop
14 35 30	---	02 12 13	50.3	86.3	-3.7		-51.3	160	112	14 32 31
14 35 30	0548+378	02 12 13	49.6	89.2	-3.7		-49.6	-20	112	No stop
14 40 30	---	02 17 14	50.3	90.2	-3.6		-49.6	280	132	14 35 31
14 41 00	DA193	02 17 44	51.1	87.3	-3.6		-51.3	10	132	14 41 00
14 44 00	---	02 20 45	51.6	87.9	-3.6		-51.4	180	143	14 41 01
14 44 00	0548+378	02 20 45	50.9	90.9	-3.5		-49.6	-21	143	No stop
14 49 00	---	02 25 46	51.6	91.9	-3.5		-49.5	279	163	14 44 01
14 50 00	DA193	02 26 46	52.5	89.1	-3.5		-51.4	40	163	14 50 00
14 53 00	---	02 29 46	52.9	89.7	-3.4		-51.4	180	174	14 50 01
14 53 00	0548+378	02 29 46	52.2	92.7	-3.4		-49.5	-21	174	No stop
14 58 00	---	02 34 47	53.0	93.8	-3.3		-49.4	279	194	14 53 01

Schedule for TORUN (Code Tr)

Page 3

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
14 59 00	DA193	02 35 47	53.8	90.9	-3.3		-51.4	39	194	14 59 00
15 01 00	---	02 37 48	54.1	91.3	-3.3		-51.4	120	201	14 59 01
15 02 00	DA193	02 38 48	54.3	91.5	-3.3		-51.4	54	201	15 02 00
15 06 00	---	02 42 48	54.9	92.3	-3.2		-51.4	240	217	15 02 01
15 07 00	DA193	02 43 49	55.1	92.5	-3.2		-51.4	54	217	15 07 00
15 10 00	---	02 46 49	55.5	93.2	-3.2		-51.3	180	228	15 07 01
15 10 00	0548+378	02 46 49	54.8	96.4	-3.1		-49.1	-21	228	No stop
15 15 00	---	02 51 50	55.5	97.6	-3.0		-49.0	279	248	15 10 01
15 15 30	DA193	02 52 20	56.3	94.3	-3.1		-51.2	9	248	15 15 30
15 18 30	---	02 55 21	56.8	95.0	-3.0		-51.2	180	259	15 15 31
15 18 30	0548+378	02 55 21	56.0	98.4	-3.0		-48.9	-22	259	No stop
15 23 30	---	03 00 21	56.8	99.5	-2.9		-48.6	278	279	15 18 31
15 24 00	DA193	03 00 51	57.6	96.2	-2.9		-51.0	9	279	15 24 00
15 27 00	---	03 03 52	58.1	96.9	-2.9		-50.9	180	290	15 24 01
15 27 00	0548+378	03 03 52	57.3	100.4	-2.8		-48.5	-22	290	No stop
15 32 00	---	03 08 53	58.0	101.6	-2.7		-48.2	278	310	15 27 01
15 32 00	DA193	03 08 53	58.8	98.1	-2.8		-50.7	-22	310	No stop
15 35 00	---	03 11 53	59.2	98.8	-2.7		-50.6	158	321	15 32 01
15 36 00	0548+378	03 12 53	58.6	102.6	-2.7		-48.0	38	321	15 36 00
15 41 00	---	03 17 54	59.4	103.9	-2.6		-47.6	300	341	15 36 01
15 41 00	DA193	03 17 54	60.1	100.2	-2.6		-50.3	-22	341	No stop
15 44 00	---	03 20 55	60.6	101.0	-2.6		-50.1	158	352	15 41 01
15 44 00	0548+378	03 20 55	59.8	104.7	-2.5		-47.4	-22	352	No stop
15 49 00	---	03 25 56	60.5	106.1	-2.5		-47.0	278	372	15 44 01
15 50 00	DA193	03 26 56	61.5	102.5	-2.5		-49.7	38	372	15 50 00
15 55 00	---	03 31 57	62.2	103.8	-2.4		-49.4	300	391	15 50 01
15 56 00	DA193	03 32 57	62.3	104.1	-2.4		-49.3	54	391	15 56 00
16 00 00	---	03 36 57	62.9	105.2	-2.3		-49.0	240	406	15 56 01

Schedule for TORUN (Code Tr)

Page 4

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Mon 25 Feb 2013 Day 56 ---

Next scan frequencies:	4966.49	4966.49	4982.49	4982.49	4998.49	4998.49	5014.49	5014.49
Next BBC frequencies:	766.49	766.49	782.49	782.49	798.49	798.49	814.49	814.49
Next scan bandwidths:	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

16 03 00	DA193	03 39 58	63.4	106.0	-2.3	-48.7	173	406	16 03 00
16 10 00	---	03 46 59	64.4	108.1	-2.2	-48.0	420	420	16 03 25

Next scan frequencies:	4966.49	4966.49	4982.49	4982.49
Next BBC frequencies:	766.49	766.49	782.49	782.49
Next scan bandwidths:	8.00	8.00	8.00	8.00

16 13 00	DA193	03 49 59	64.8	109.0	-2.1	-47.7	173	420	16 13 00
16 20 00	---	03 57 01	65.8	111.2	-2.0	-46.8	420	427	16 13 25

16 23 00	DA193	04 00 01	66.2	112.2	-1.9	-46.4	173	427	16 23 00
16 30 00	---	04 07 02	67.2	114.5	-1.8	-45.3	420	434	16 23 01

16 33 00	DA193	04 10 03	67.6	115.6	-1.8	-44.8	173	434	16 33 00
16 40 00	---	04 17 04	68.5	118.2	-1.7	-43.6	420	440	16 33 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.C512

Matching groups in /aps3/sched10.2/catalogs/freq.dat:

tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group:	5	Station:	TORUN	Total bit rate:	512
Format:	MKIV1:2	Bits per sample:	2	Sample rate:	16.000
Number of channels:	16	DBE type:		Speedup factor:	1.00

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
BBC SB=	L	L	U	U	L	L	U	U	U
IF =	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 7 Setup file default. Used pcal sets: 1
LO sum= 4966.49 4966.49 4966.49 4966.49 4982.49 4982.49 4982.49 4982.49
        4998.49 4998.49 4998.49 4998.49 5014.49 5014.49 5014.49 5014.49
BBC fr= 766.49 766.49 766.49 766.49 782.49 782.49 782.49 782.49
        798.49 798.49 798.49 798.49 814.49 814.49 814.49 814.49
Bandwd= 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
        8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
Matching frequency sets: 7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

==== Setup file: sess113.C8usb

```

Matching groups in /aps3/sched10.2/catalogs/freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

```

```

Setup group: 22 Station: TORUN Total bit rate: 256
Format: MKIV1:2 Bits per sample: 2 Sample rate: 16.000
Number of channels: 8 DBE type: Speedup factor: 1.00

```

Disk used to record data.

```

1st LO= 4200.00 4200.00 4200.00 4200.00 4200.00 4200.00 4200.00 4200.00 4200.00
Net SB= U U U U U U U U U
Pol. = RCP LCP RCP LCP RCP LCP RCP LCP
BBC = 1 2 3 4 5 6 7 8
BBC SB= U U U U U U U U
IF = C A C A C A C A

```

The following frequency sets based on these setups were used.

```

Frequency Set: 23 Setup file default. Used pcal sets: 2
LO sum= 4966.49 4966.49 4982.49 4982.49 4998.49 4998.49 5014.49 5014.49
BBC fr= 766.49 766.49 782.49 782.49 798.49 798.49 814.49 814.49
Bandwd= 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
Matching frequency sets: 23

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 2 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S1 S3 S5 S7
PCALXB2= S2 S4 S6 S8 S2 S4 S6 S8
PCALFR1= 510 510 510 510 6510 6510 6510 6510
PCALFR2= 510 510 510 510 6510 6510 6510 6510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27
barrel=roll_off

```

==== Setup file: sess113.C4usb

Matching groups in /aps3/sched10.2/catalogs/freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 26 Station: TORUN Total bit rate: 128
Format: MKIV1:2 Bits per sample: 2 Sample rate: 16.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00
Net SB=	U	U	U	U
Pol. =	RCP	LCP	RCP	LCP
BBC =	1	2	3	4
BBC SB=	U	U	U	U
IF =	C	A	C	A

The following frequency sets based on these setups were used.

Frequency Set: 27 Setup file default. Used pcal sets: 3
LO sum= 4966.49 4966.49 4982.49 4982.49
BBC fr= 766.49 766.49 782.49 782.49
Bandwd= 8.00 8.00 8.00 8.00
Matching frequency sets: 27

The following pulse cal sets were used with this setup:

Pulse cal detection set: 3 PCAL = 1MHZ
PCALXB1= S1 S3 S1 S3 S1 S2 S3 S4
PCALXB2= S2 S4 S2 S4 M1 M2 M3 M4
PCALFR1= 510 510 6510 6510 0 0 0 0
PCALFR2= 510 510 6510 6510 0 0 0 0

Track assignments are:

track1= 2, 10, 18, 26
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- Network Monitoring Experiment

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
J0237+2848	02 34 55.589591	* 02 37 52.405678	02 38 39.584037	0.11
* 0234+285	28 35 11.40773	* 28 48 08.98998	28 51 35.13252	0.10
J0552+3754	05 48 52.231755	* 05 52 17.936920	05 53 13.927785	0.13
* 0548+378	37 53 44.15048	* 37 54 25.28236	37 54 33.33372	0.11
J0555+3948	05 52 01.407174	* 05 55 30.805616	05 56 27.822805	0.13
* DA193	39 48 21.94578	* 39 48 49.16493	39 48 53.96926	0.10

ep087atr

ARP 299-A AT 1 GB^s
 PI: Miguel A. Perez-Torres

Address: IAA - CSIC Glorieta de la Astronomia s/n 18008 Granada, Spain
 Phone: +34-958230644 EMAIL: torres@iaa.es
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Observing mode: 1024 Mbps

Notes: Phase-ref of Arp 299 with the full EVM
 Tenth epoch obs-ns at 6cm; sixth with full EVM

Schedule for TORUN (Code Tr) Page 2

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

 Start UT Source Start / Stop Early Disk TPStart
 Stop UT LST EL AZ HA UP ParA Dwell GBytes SYNC

--- Mon 25 Feb 2013 Day 56 ---

Next scan frequencies:	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
Next BBC frequencies:	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Next scan bandwidths:	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

21 30 00	4C39.25	09 07 52	75.5	164.3	-0.3	-12.1	0	0	21 30 00
21 33 00	---	09 10 52	75.6	166.6	-0.3	-10.3	180	23	21 30 01
21 33 00	4C39.25	09 10 52	75.6	166.6	-0.3	-10.3	-5	23	No stop
21 35 00	---	09 12 52	75.6	168.1	-0.3	-9.1	115	39	21 33 01
21 43 00	J1128+5925	09 20 54	71.3	57.7	-2.1	-95.4	244	39	21 43 00
21 43 30	---	09 21 24	71.4	57.7	-2.1	-95.5	30	43	21 43 01
21 43 30	ARP299	09 21 24	71.4	60.4	-2.1	-92.9	-20	43	No stop
21 47 20	---	09 25 14	71.9	60.3	-2.1	-93.8	210	72	21 43 31
21 47 20	J1128+5925	09 25 14	71.9	57.5	-2.1	-96.5	-20	72	No stop
21 48 20	---	09 26 15	72.0	57.5	-2.0	-96.8	40	80	21 47 21
21 48 20	ARP299	09 26 15	72.1	60.3	-2.1	-94.1	-20	80	No stop
21 52 20	---	09 30 15	72.6	60.1	-2.0	-95.1	220	111	21 48 21
21 53 00	J1128+5925	09 30 55	72.6	57.2	-2.0	-98.0	20	111	21 53 00
21 53 30	---	09 31 25	72.7	57.2	-2.0	-98.2	30	115	21 53 01
21 53 30	ARP299	09 31 25	72.7	60.1	-2.0	-95.3	-20	115	No stop
21 57 30	---	09 35 26	73.3	59.9	-1.9	-96.4	220	146	21 53 31
21 57 30	J1128+5925	09 35 26	73.2	56.9	-1.9	-99.3	-20	146	No stop
21 58 30	---	09 36 26	73.3	56.9	-1.9	-99.6	40	154	21 57 31

Schedule for TORUN (Code Tr)

Page 3

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
21 58 30	ARP299	09 36 26	73.4	59.8	-1.9		-96.6	-20	154	No stop
22 02 30	---	09 40 27	73.9	59.6	-1.8		-97.7	220	185	21 58 31
22 02 30	J1128+5925	09 40 27	73.8	56.5	-1.8		-100.7	-21	185	No stop
22 03 30	---	09 41 27	73.9	56.5	-1.8		-101.0	39	192	22 02 31
22 03 30	ARP299	09 41 27	74.0	59.5	-1.8		-98.0	-21	192	No stop
22 07 30	---	09 45 28	74.6	59.3	-1.7		-99.1	219	223	22 03 31
22 08 10	J1128+5925	09 46 08	74.5	56.0	-1.7		-102.5	19	223	22 08 10
22 08 40	---	09 46 38	74.6	56.0	-1.7		-102.6	30	227	22 08 11
22 08 40	ARP299	09 46 38	74.7	59.2	-1.7		-99.5	-21	227	No stop
22 12 40	---	09 50 39	75.2	58.8	-1.6		-100.7	219	258	22 08 41
22 12 40	J1128+5925	09 50 39	75.1	55.5	-1.6		-103.9	-21	258	No stop
22 13 40	---	09 51 39	75.2	55.4	-1.6		-104.3	39	266	22 12 41
22 13 40	ARP299	09 51 39	75.3	58.7	-1.6		-101.0	-21	266	No stop
22 17 40	---	09 55 39	75.9	58.3	-1.6		-102.2	219	297	22 13 41
22 17 40	J1128+5925	09 55 39	75.7	54.9	-1.6		-105.6	-22	297	No stop
22 18 40	---	09 56 40	75.8	54.7	-1.5		-106.0	38	304	22 17 41
22 18 40	ARP299	09 56 40	76.0	58.2	-1.5		-102.6	-22	304	No stop
22 22 40	---	10 00 40	76.5	57.7	-1.5		-103.9	218	335	22 18 41
22 23 20	J1128+5925	10 01 20	76.4	54.0	-1.5		-107.7	18	335	22 23 20
22 23 50	---	10 01 50	76.5	53.9	-1.5		-107.9	30	339	22 23 21
22 23 50	ARP299	10 01 50	76.6	57.5	-1.5		-104.3	-22	339	No stop
22 27 50	---	10 05 51	77.2	56.9	-1.4		-105.8	218	370	22 23 51
22 27 50	J1128+5925	10 05 51	76.9	53.2	-1.4		-109.4	-22	370	No stop
22 28 50	---	10 06 51	77.1	53.0	-1.4		-109.8	38	378	22 27 51
22 28 50	ARP299	10 06 51	77.3	56.7	-1.4		-106.1	-22	378	No stop
22 32 50	---	10 10 52	77.8	56.0	-1.3		-107.7	218	409	22 28 51
22 32 50	J1128+5925	10 10 52	77.5	52.2	-1.3		-111.5	-23	409	No stop
22 33 50	---	10 11 52	77.7	52.0	-1.3		-111.9	37	417	22 32 51
22 33 50	ARP299	10 11 52	77.9	55.8	-1.3		-108.1	-22	417	No stop
22 37 50	---	10 15 53	78.4	55.0	-1.2		-109.7	218	448	22 33 51
22 38 30	J1128+5925	10 16 33	78.2	50.9	-1.2		-114.0	17	448	22 38 30
22 39 00	---	10 17 03	78.3	50.7	-1.2		-114.3	30	452	22 38 31

Schedule for TORUN (Code Tr)

Page 4

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
22 39 00	ARP299	10 17 03	78.5	54.8	-1.2		-110.2	-23	452	No stop
22 43 00	---	10 21 04	79.0	53.8	-1.1		-112.0	217	483	22 39 01
22 43 00	J1128+5925	10 21 04	78.7	49.6	-1.1		-116.2	-23	483	No stop
22 44 00	---	10 22 04	78.8	49.3	-1.1		-116.7	37	490	22 43 01
22 44 00	ARP299	10 22 04	79.2	53.5	-1.1		-112.5	-23	490	No stop
22 48 00	---	10 26 04	79.6	52.4	-1.1		-114.5	217	521	22 44 01
22 48 00	J1128+5925	10 26 04	79.3	48.1	-1.0		-118.8	-24	521	No stop
22 49 00	---	10 27 05	79.4	47.8	-1.0		-119.3	36	529	22 48 01
22 49 00	ARP299	10 27 05	79.8	52.1	-1.0		-115.0	-23	529	No stop
22 53 00	---	10 31 05	80.2	50.8	-1.0		-117.2	217	560	22 49 01
22 53 40	J1128+5925	10 31 45	79.9	46.1	-1.0		-122.0	16	560	22 53 40
22 54 10	---	10 32 15	80.0	45.9	-0.9		-122.3	30	564	22 53 41
22 54 10	ARP299	10 32 15	80.4	50.3	-1.0		-117.8	-24	564	No stop
22 58 10	---	10 36 16	80.8	48.8	-0.9		-120.2	216	595	22 54 11
22 58 10	J1128+5925	10 36 16	80.4	44.2	-0.9		-124.8	-24	595	No stop
22 59 10	---	10 37 16	80.5	43.8	-0.9		-125.5	36	603	22 58 11
22 59 10	ARP299	10 37 16	80.9	48.4	-0.9		-120.8	-24	603	No stop
23 03 10	---	10 41 17	81.4	46.5	-0.8		-123.5	216	634	22 59 11
23 03 10	J1128+5925	10 41 17	80.9	41.9	-0.8		-128.2	-25	634	No stop
23 04 10	---	10 42 17	81.0	41.4	-0.8		-128.9	35	641	23 03 11
23 04 10	ARP299	10 42 17	81.5	46.1	-0.8		-124.2	-24	641	No stop
23 08 10	---	10 46 18	81.9	43.9	-0.7		-127.1	216	672	23 04 11
23 08 50	J1128+5925	10 46 58	81.5	38.8	-0.7		-132.4	15	672	23 08 50
23 09 20	---	10 47 28	81.5	38.5	-0.7		-132.8	30	676	23 08 51
23 09 20	ARP299	10 47 28	82.0	43.3	-0.7		-128.1	-24	676	No stop
23 13 20	---	10 51 29	82.4	40.8	-0.6		-131.4	216	707	23 09 21
23 13 20	J1128+5925	10 51 29	81.9	36.0	-0.6		-136.2	-25	707	No stop
23 14 20	---	10 52 29	82.0	35.4	-0.6		-137.0	35	715	23 13 21
23 14 20	ARP299	10 52 29	82.5	40.1	-0.6		-132.2	-24	715	No stop
23 18 20	---	10 56 29	82.9	37.2	-0.5		-136.0	216	746	23 14 21
23 18 20	J1128+5925	10 56 29	82.3	32.6	-0.5		-140.7	-25	746	No stop
23 19 20	---	10 57 30	82.4	31.8	-0.5		-141.6	35	754	23 18 21

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 25 Feb 2013 Day 56 ---										
23 19 20	ARP299	10 57 30	83.0	36.5	-0.5		-136.9	-24	754	No stop
23 23 20	---	11 01 30	83.3	33.1	-0.5		-141.1	216	784	23 19 21
23 24 00	J1128+5925	11 02 10	82.7	28.1	-0.4		-146.3	15	784	23 24 00
23 24 30	---	11 02 40	82.8	27.7	-0.4		-146.9	30	788	23 24 01
23 24 30	ARP299	11 02 40	83.4	32.1	-0.4		-142.4	-23	788	No stop
23 28 30	---	11 06 41	83.7	28.3	-0.4		-147.0	217	819	23 24 31
23 28 30	J1128+5925	11 06 41	83.0	24.1	-0.4		-151.2	-24	819	No stop
23 29 30	---	11 07 41	83.1	23.2	-0.4		-152.4	36	827	23 28 31
23 29 30	ARP299	11 07 41	83.8	27.2	-0.4		-148.3	-22	827	No stop
23 33 30	---	11 11 42	84.1	22.9	-0.3		-153.4	218	858	23 29 31
23 33 30	J1128+5925	11 11 42	83.3	19.3	-0.3		-157.1	-23	858	No stop
23 34 30	---	11 12 42	83.4	18.3	-0.3		-158.3	37	866	23 33 31
23 34 30	ARP299	11 12 42	84.1	21.8	-0.3		-154.8	-21	866	No stop
23 38 30	---	11 16 43	84.3	16.9	-0.2		-160.4	219	897	23 34 31
23 39 10	J1128+5925	11 17 23	83.5	13.3	-0.2		-164.3	19	897	23 39 10
23 39 40	---	11 17 53	83.6	12.8	-0.2		-164.9	30	901	23 39 11
23 39 40	ARP299	11 17 53	84.4	15.5	-0.2		-162.2	-19	901	No stop
23 43 40	---	11 21 54	84.5	10.2	-0.1		-168.2	221	932	23 39 41
23 43 40	J1128+5925	11 21 54	83.7	8.3	-0.1		-170.3	-18	932	No stop
23 44 40	---	11 22 54	83.7	7.1	-0.1		-171.6	42	939	23 43 41
23 44 40	ARP299	11 22 54	84.5	8.9	-0.1		-169.8	-16	939	No stop
23 48 40	---	11 26 54	84.6	3.4	-0.0		-176.1	224	970	23 44 41
23 48 40	J1128+5925	11 26 54	83.7	2.5	-0.0		-177.1	-16	970	No stop
23 49 40	---	11 27 54	83.7	1.3	-0.0		-178.5	44	978	23 48 41
23 49 40	ARP299	11 27 54	84.6	2.0	-0.0		-177.7	-16	978	No stop
23 53 40	---	11 31 55	84.6	-3.6	0.0		175.9	224	1009	23 49 41
23 54 20	J1128+5925	11 32 35	83.7	-4.2	0.1		175.1	24	1009	23 54 20
23 54 50	---	11 33 05	83.7	-4.8	0.1		174.4	30	1013	23 54 21
23 54 50	ARP299	11 33 05	84.6	-5.2	0.1		174.0	-16	1013	No stop
23 58 50	---	11 37 06	84.5	-10.6	0.1		167.8	224	1044	23 54 51

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Start: Mon 25 Feb 2013 Day 56 -- Stop: Tue 26 Feb 2013 Day 57 ---										
23 58 50	J1128+5925	11 37 06	83.7	-9.4	0.1		169.0	-16	1044	No stop
23 59 50	---	11 38 06	83.6	-10.5	0.2		167.6	44	1052	23 58 51
23 59 50	ARP299	11 38 06	84.5	-12.0	0.1		166.2	-17	1052	No stop
00 03 50	---	11 42 07	84.3	-17.1	0.2		160.3	223	1083	23 59 51
00 03 50	J1128+5925	11 42 07	83.5	-14.9	0.2		162.4	-18	1083	No stop
00 04 50	---	11 43 07	83.5	-16.0	0.2		161.1	42	1090	00 03 51
00 04 50	ARP299	11 43 07	84.3	-18.3	0.2		158.8	-20	1090	No stop
00 08 50	---	11 47 08	84.1	-23.1	0.3		153.3	220	1121	00 04 51
00 09 30	J1128+5925	11 47 48	83.2	-20.7	0.3		155.3	20	1121	00 09 30
00 10 00	---	11 48 18	83.2	-21.2	0.3		154.7	30	1125	00 09 31
00 10 00	ARP299	11 48 18	84.0	-24.4	0.3		151.7	-22	1125	No stop
00 14 00	---	11 52 18	83.7	-28.6	0.4		146.7	218	1156	00 10 01
00 14 00	J1128+5925	11 52 18	83.0	-25.0	0.4		150.1	-21	1156	No stop
00 15 00	---	11 53 19	82.9	-25.9	0.4		149.0	39	1164	00 14 01
00 15 00	ARP299	11 53 19	83.6	-29.6	0.4		145.5	-23	1164	No stop
00 19 00	---	11 57 19	83.3	-33.3	0.5		141.0	217	1195	00 15 01
00 19 00	J1128+5925	11 57 19	82.6	-29.3	0.5		144.8	-22	1195	No stop
00 20 00	---	11 58 19	82.5	-30.1	0.5		143.8	38	1203	00 19 01
00 20 00	ARP299	11 58 19	83.3	-34.1	0.5		139.9	-23	1203	No stop
00 24 00	---	12 02 20	82.9	-37.3	0.5		135.8	217	1233	00 20 01
00 24 40	J1128+5925	12 03 00	82.2	-33.6	0.6		139.3	17	1233	00 24 40
00 25 10	---	12 03 30	82.1	-34.0	0.6		138.8	30	1237	00 24 41
00 25 10	ARP299	12 03 30	82.8	-38.2	0.6		134.7	-24	1237	No stop
00 29 10	---	12 07 31	82.4	-41.0	0.6		131.1	216	1268	00 25 11
00 29 10	J1128+5925	12 07 31	81.8	-36.7	0.6		135.3	-23	1268	No stop
00 30 10	---	12 08 31	81.7	-37.3	0.7		134.5	37	1276	00 29 11
00 30 10	ARP299	12 08 31	82.3	-41.6	0.7		130.3	-24	1276	No stop
00 34 10	---	12 12 32	81.9	-44.0	0.7		127.0	216	1307	00 30 11
00 34 10	J1128+5925	12 12 32	81.3	-39.6	0.7		131.3	-23	1307	No stop
00 35 10	---	12 13 32	81.2	-40.2	0.7		130.5	37	1315	00 34 11
00 35 10	ARP299	12 13 32	81.8	-44.6	0.7		126.3	-24	1315	No stop
00 39 10	---	12 17 33	81.4	-46.6	0.8		123.4	216	1346	00 35 11

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
00 39 50	J1128+5925	12 18 13	80.8	-42.6	0.8		127.2	17	1346	00 39 50
00 40 20	---	12 18 43	80.7	-42.8	0.8		126.8	30	1350	00 39 51
00 40 20	ARP299	12 18 43	81.2	-47.2	0.8		122.6	-24	1350	No stop
00 44 20	---	12 22 43	80.8	-48.9	0.9		120.0	216	1381	00 40 21
00 44 20	J1128+5925	12 22 43	80.3	-44.6	0.9		124.2	-23	1381	No stop
00 45 20	---	12 23 44	80.2	-45.0	0.9		123.6	37	1388	00 44 21
00 45 20	ARP299	12 23 44	80.7	-49.3	0.9		119.4	-24	1388	No stop
00 49 20	---	12 27 44	80.2	-50.8	1.0		117.1	216	1419	00 45 21
00 49 20	J1128+5925	12 27 44	79.8	-46.6	1.0		121.1	-23	1419	No stop
00 50 20	---	12 28 44	79.6	-47.0	1.0		120.6	37	1427	00 49 21
00 50 20	ARP299	12 28 44	80.1	-51.1	1.0		116.5	-23	1427	No stop
00 54 20	---	12 32 45	79.6	-52.4	1.1		114.4	217	1458	00 50 21
00 55 00	J1128+5925	12 33 25	79.1	-48.6	1.1		118.0	17	1458	00 55 00
00 55 30	---	12 33 55	79.1	-48.7	1.1		117.7	30	1462	00 55 01
00 55 30	ARP299	12 33 55	79.5	-52.8	1.1		113.8	-23	1462	No stop
00 59 30	---	12 37 56	79.0	-53.9	1.1		111.9	217	1493	00 55 31
00 59 30	J1128+5925	12 37 56	78.6	-49.9	1.1		115.7	-23	1493	No stop
01 00 30	---	12 38 56	78.5	-50.2	1.2		115.2	37	1501	00 59 31
01 00 30	ARP299	12 38 56	78.9	-54.1	1.2		111.4	-23	1501	No stop
01 04 30	---	12 42 57	78.4	-55.1	1.2		109.7	217	1532	01 00 31
01 04 30	J1128+5925	12 42 57	78.0	-51.2	1.2		113.4	-22	1532	No stop
01 05 30	---	12 43 57	77.9	-51.5	1.2		112.9	38	1539	01 04 31
01 05 30	ARP299	12 43 57	78.3	-55.3	1.2		109.2	-23	1539	No stop
01 09 30	---	12 47 58	77.8	-56.1	1.3		107.6	217	1570	01 05 31
01 10 10	J1128+5925	12 48 38	77.4	-52.5	1.3		110.9	18	1570	01 10 10
01 10 40	---	12 49 08	77.3	-52.6	1.3		110.7	30	1574	01 10 11
01 10 40	ARP299	12 49 08	77.6	-56.3	1.3		107.2	-22	1574	No stop
01 14 40	---	12 53 08	77.1	-57.0	1.4		105.6	218	1605	01 10 41
01 14 40	J1128+5925	12 53 08	76.8	-53.4	1.4		109.1	-22	1605	No stop
01 15 40	---	12 54 09	76.7	-53.6	1.4		108.7	38	1613	01 14 41
01 15 40	ARP299	12 54 09	77.0	-57.1	1.4		105.3	-22	1613	No stop
01 19 40	---	12 58 09	76.5	-57.7	1.5		103.9	218	1644	01 15 41

Schedule for TORUN (Code Tr)

Page 8

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
01 19 40	J1128+5925	12 58 09	76.2	-54.2	1.5		107.1	-22	1644	No stop
01 20 40	---	12 59 09	76.1	-54.4	1.5		106.8	38	1652	01 19 41
01 20 40	ARP299	12 59 09	76.4	-57.8	1.5		103.5	-22	1652	No stop
01 24 40	---	13 03 10	75.8	-58.3	1.6		102.2	218	1682	01 20 41
01 25 20	J1128+5925	13 03 50	75.5	-55.1	1.6		105.1	19	1682	01 25 20
01 25 50	---	13 04 20	75.5	-55.1	1.6		105.0	30	1686	01 25 21
01 25 50	ARP299	13 04 20	75.7	-58.4	1.6		101.8	-21	1686	No stop
01 29 50	---	13 08 21	75.2	-58.8	1.7		100.6	219	1717	01 25 51
01 29 50	J1128+5925	13 08 21	75.0	-55.6	1.7		103.6	-21	1717	No stop
01 30 50	---	13 09 21	74.8	-55.7	1.7		103.3	39	1725	01 29 51
01 30 50	ARP299	13 09 21	75.1	-58.9	1.7		100.3	-21	1725	No stop
01 34 50	---	13 13 22	74.5	-59.3	1.7		99.1	219	1756	01 30 51
01 34 50	J1128+5925	13 13 22	74.3	-56.2	1.7		102.0	-21	1756	No stop
01 35 50	---	13 14 22	74.2	-56.2	1.8		101.7	39	1764	01 34 51
01 35 50	ARP299	13 14 22	74.4	-59.3	1.8		98.8	-21	1764	No stop
01 39 50	---	13 18 23	73.9	-59.6	1.8		97.7	219	1795	01 35 51
01 40 30	J1128+5925	13 19 03	73.6	-56.7	1.8		100.3	20	1795	01 40 30
01 41 00	---	13 19 33	73.6	-56.7	1.8		100.2	30	1799	01 40 31
01 41 00	ARP299	13 19 33	73.7	-59.7	1.8		97.4	-21	1799	No stop
01 45 00	---	13 23 33	73.2	-59.9	1.9		96.3	219	1830	01 41 01
01 45 00	J1128+5925	13 23 33	73.1	-57.0	1.9		99.0	-20	1830	No stop
01 46 00	---	13 24 34	72.9	-57.1	1.9		98.7	40	1837	01 45 01
01 46 00	ARP299	13 24 34	73.1	-60.0	1.9		96.0	-20	1837	No stop
01 50 00	---	13 28 34	72.6	-60.1	2.0		95.0	220	1868	01 46 01
01 50 00	J1128+5925	13 28 34	72.4	-57.3	2.0		97.6	-20	1868	No stop
01 51 00	---	13 29 34	72.3	-57.4	2.0		97.4	40	1876	01 50 01
01 51 00	ARP299	13 29 34	72.4	-60.2	2.0		94.8	-20	1876	No stop
01 55 00	---	13 33 35	71.9	-60.3	2.1		93.8	220	1907	01 51 01
01 55 40	J1128+5925	13 34 15	71.7	-57.6	2.1		96.1	20	1907	01 55 40
01 56 10	---	13 34 45	71.6	-57.6	2.1		96.0	30	1911	01 55 41
01 56 10	ARP299	13 34 45	71.8	-60.3	2.1		93.5	-20	1911	No stop
02 00 10	---	13 38 46	71.2	-60.4	2.2		92.6	220	1942	01 56 11

Schedule for TORUN (Code Tr)

Page 9

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
02 00 10	J1128+5925	13 38 46	71.1	-57.8	2.2		95.0	-20	1942	No stop
02 01 10	---	13 39 46	71.0	-57.8	2.2		94.8	40	1950	02 00 11
02 01 10	ARP299	13 39 46	71.1	-60.4	2.2		92.3	-20	1950	No stop
02 05 10	---	13 43 47	70.6	-60.5	2.2		91.4	220	1981	02 01 11
02 05 10	J1128+5925	13 43 47	70.5	-57.9	2.2		93.8	-19	1981	No stop
02 06 10	---	13 44 47	70.4	-57.9	2.3		93.6	41	1988	02 05 11
02 06 10	ARP299	13 44 47	70.4	-60.5	2.3		91.2	-19	1988	No stop
02 10 10	---	13 48 48	69.9	-60.5	2.3		90.3	221	2019	02 06 11
02 10 50	J1128+5925	13 49 28	69.8	-58.0	2.3		92.5	21	2019	02 10 50
02 11 20	---	13 49 58	69.7	-58.0	2.3		92.3	30	2023	02 10 51
02 11 20	ARP299	13 49 58	69.8	-60.5	2.3		90.1	-19	2023	No stop
02 15 20	---	13 53 58	69.2	-60.5	2.4		89.2	221	2054	02 11 21
02 15 20	J1128+5925	13 53 58	69.2	-58.1	2.4		91.4	-19	2054	No stop
02 16 20	---	13 54 59	69.1	-58.1	2.4		91.2	41	2062	02 15 21
02 16 20	ARP299	13 54 59	69.1	-60.5	2.4		89.0	-19	2062	No stop
02 20 20	---	13 58 59	68.6	-60.5	2.5		88.2	221	2093	02 16 21
02 20 20	J1128+5925	13 58 59	68.6	-58.1	2.5		90.3	-19	2093	No stop
02 21 20	---	13 59 59	68.4	-58.1	2.5		90.1	41	2101	02 20 21
02 21 20	ARP299	13 59 59	68.5	-60.5	2.5		88.0	-19	2101	No stop
02 25 20	---	14 04 00	67.9	-60.4	2.6		87.2	221	2131	02 21 21
02 26 00	J1128+5925	14 04 40	67.8	-58.1	2.6		89.1	21	2131	02 26 00
02 26 30	---	14 05 10	67.8	-58.1	2.6		89.0	30	2135	02 26 01
02 26 30	ARP299	14 05 10	67.8	-60.4	2.6		87.0	-18	2135	No stop
02 30 30	---	14 09 11	67.3	-60.3	2.7		86.2	222	2166	02 26 31
02 30 30	J1128+5925	14 09 11	67.3	-58.1	2.7		88.2	-18	2166	No stop
02 31 30	---	14 10 11	67.1	-58.1	2.7		88.0	42	2174	02 30 31
02 31 30	ARP299	14 10 11	67.1	-60.3	2.7		86.0	-18	2174	No stop
02 35 30	---	14 14 12	66.6	-60.2	2.7		85.3	222	2205	02 31 31
02 35 30	J1128+5925	14 14 12	66.6	-58.0	2.8		87.2	-18	2205	No stop
02 36 30	---	14 15 12	66.5	-58.0	2.8		87.0	42	2213	02 35 31
02 36 30	ARP299	14 15 12	66.5	-60.1	2.8		85.1	-18	2213	No stop
02 40 30	---	14 19 13	66.0	-60.0	2.8		84.3	222	2244	02 36 31

Schedule for TORUN (Code Tr)

Page 10

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
02 41 10	J1128+5925	14 19 53	65.9	-57.9	2.8		86.0	22	2244	02 41 10
02 41 40	---	14 20 23	65.8	-57.9	2.9		85.9	30	2248	02 41 11
02 41 40	ARP299	14 20 23	65.8	-60.0	2.9		84.1	-18	2248	No stop
02 45 40	---	14 24 23	65.3	-59.8	2.9		83.4	222	2279	02 41 41
02 45 40	J1128+5925	14 24 23	65.3	-57.8	2.9		85.2	-18	2279	No stop
02 46 40	---	14 25 24	65.2	-57.8	2.9		85.0	42	2286	02 45 41
02 46 40	ARP299	14 25 24	65.2	-59.8	2.9		83.2	-18	2286	No stop
02 50 40	---	14 29 24	64.6	-59.7	3.0		82.5	222	2317	02 46 41
02 50 40	J1128+5925	14 29 24	64.7	-57.7	3.0		84.2	-18	2317	No stop
02 51 40	---	14 30 24	64.6	-57.6	3.0		84.0	42	2325	02 50 41
02 51 40	ARP299	14 30 24	64.5	-59.6	3.0		82.3	-18	2325	No stop
02 55 40	---	14 34 25	64.0	-59.4	3.1		81.6	222	2356	02 51 41
02 56 20	J1128+5925	14 35 05	64.0	-57.5	3.1		83.2	22	2356	02 56 20
02 56 50	---	14 35 35	63.9	-57.4	3.1		83.1	30	2360	02 56 21
02 56 50	ARP299	14 35 35	63.8	-59.4	3.1		81.4	-17	2360	No stop
03 00 50	---	14 39 36	63.3	-59.2	3.2		80.7	223	2391	02 56 51
03 00 50	J1128+5925	14 39 36	63.4	-57.3	3.2		82.3	-17	2391	No stop
03 01 50	---	14 40 36	63.3	-57.3	3.2		82.2	43	2399	03 00 51
03 01 50	ARP299	14 40 36	63.2	-59.2	3.2		80.5	-17	2399	No stop
03 05 50	---	14 44 37	62.7	-59.0	3.3		79.9	223	2430	03 01 51
03 05 50	J1128+5925	14 44 37	62.8	-57.1	3.3		81.4	-17	2430	No stop
03 06 50	---	14 45 37	62.6	-57.1	3.3		81.3	43	2437	03 05 51
03 06 50	ARP299	14 45 37	62.5	-58.9	3.3		79.7	-17	2437	No stop
03 10 50	---	14 49 38	62.0	-58.7	3.3		79.0	223	2468	03 06 51
03 11 30	J1128+5925	14 50 18	62.1	-56.9	3.4		80.4	23	2468	03 11 30
03 12 00	---	14 50 48	62.0	-56.8	3.4		80.3	30	2472	03 11 31
03 12 00	ARP299	14 50 48	61.9	-58.6	3.4		78.8	-17	2472	No stop
03 16 00	---	14 54 48	61.4	-58.4	3.4		78.2	223	2503	03 12 01
03 16 00	J1128+5925	14 54 48	61.5	-56.6	3.4		79.6	-17	2503	No stop
03 17 00	---	14 55 49	61.4	-56.6	3.4		79.5	43	2511	03 16 01
03 17 00	ARP299	14 55 49	61.2	-58.4	3.4		78.0	-17	2511	No stop
03 21 00	---	14 59 49	60.7	-58.1	3.5		77.3	223	2542	03 17 01

Schedule for TORUN (Code Tr) Page 11
 Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
03 21 40	J1128+5925	15 00 29	60.8	-56.4	3.5		78.7	23	2542	03 21 40
03 22 10	---	15 00 59	60.7	-56.3	3.5		78.6	30	2546	03 21 41
03 22 10	ARP299	15 00 59	60.6	-58.1	3.5		77.2	-17	2546	No stop
03 25 00	---	15 03 50	60.2	-57.9	3.6		76.7	153	2568	03 22 11
03 25 00	J1128+5925	15 03 50	60.4	-56.2	3.6		78.1	-17	2568	No stop
03 26 00	---	15 04 50	60.2	-56.1	3.6		77.9	43	2575	03 25 01
03 26 00	ARP299	15 04 50	60.1	-57.8	3.6		76.5	-17	2575	No stop
03 29 00	---	15 07 51	59.7	-57.7	3.6		76.1	163	2599	03 26 01
03 29 00	J1128+5925	15 07 51	59.9	-56.0	3.6		77.4	-17	2599	No stop
03 30 00	---	15 08 51	59.7	-55.9	3.7		77.3	43	2606	03 29 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.C1024

Matching groups in /Users/torres/sched102/catalogs/freq.dat:
 tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 4 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

```

Frequency Set: 7 Setup file default. Used pcal sets: 1
LO sum= 4942.49 4942.49 4942.49 4942.49 4974.49 4974.49 4974.49 4974.49
        5006.49 5006.49 5006.49 5006.49 5038.49 5038.49 5038.49 5038.49
BBC fr= 742.49 742.49 742.49 742.49 774.49 774.49 774.49 774.49
        806.49 806.49 806.49 806.49 838.49 838.49 838.49 838.49
Bandwd= 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
        16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
Matching frequency sets: 7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS --

Arp 299-A at 1 Gb/s

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec) (B1950)	Source position (RA/Dec) (J2000)	(Date)	Error (mas)
* ARP299	11 25 44.174219	* 11 28 33.622010	11 29 20.699598	0.00
	58 50 18.17319	* 58 33 46.61000	58 29 10.02614	0.00
* J1128+5925	11 25 23.181652	* 11 28 13.340676	11 29 00.639422	0.00
	59 41 46.14397	* 59 25 14.79866	59 20 38.33606	0.00
J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.727649	0.13
* 4C39.25	39 15 23.56637	* 39 02 20.85177	38 58 42.43640	0.10

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

```

Source      Sun distance (deg)
ARP299      129.2
J1128+5925  128.4
4C39.25     146.0

```

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

```

5.0 GHz      23. deg
8.4 GHz      17. deg

```


ek033ctr

BAL QUASARS GROUP 3
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Observing mode: Phase-referencing of BAL quasars (1Gb/s)

Notes: *****
** Please make sure PHASE CAL is OFF **

Schedule for TORUN (Code Tr) Page 2
BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Tue 26 Feb 2013 Day 57 ---

----- fringe finder -----

Next scan frequencies:	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49	4974.49	
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49	5038.49	
Next BBC frequencies:	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49	774.49	
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49	838.49	
Next scan bandwidths:	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	
06 00 00	J2148+0657	17 39 15	22.0	108.5	-4.2		-35.0	0	0	06 00 00
06 09 00	=2145+067	17 48 17	23.2	110.5	-4.0		-34.5	540	70	06 00 01
06 12 30	J2118-0636	17 51 47	16.1	125.5	-3.5		-29.5	166	70	06 12 30
06 13 30	=2116-068	17 52 48	16.2	125.8	-3.4		-29.4	60	77	06 12 31
06 13 30	2107-0620	17 52 48	17.7	128.1	-3.3		-28.4	-19	77	No stop
06 17 00	---	17 56 18	18.1	128.9	-3.2		-28.0	191	105	06 13 31
06 17 00	J2118-0636	17 56 18	16.6	126.6	-3.4		-29.0	-19	105	No stop
06 18 30	=2116-068	17 57 48	16.8	126.9	-3.4		-28.9	71	116	06 17 01
06 18 30	2107-0620	17 57 48	18.3	129.2	-3.2		-27.9	-19	116	No stop
06 22 00	---	18 01 19	18.7	130.1	-3.1		-27.5	191	143	06 18 31
06 22 40	J2118-0636	18 01 59	17.3	127.9	-3.3		-28.5	21	143	06 22 40
06 23 40	=2116-068	18 02 59	17.4	128.1	-3.3		-28.4	60	151	06 22 41
06 23 40	2107-0620	18 02 59	18.9	130.4	-3.1		-27.4	-19	151	No stop
06 27 10	---	18 06 30	19.3	131.3	-3.0		-27.0	191	178	06 23 41
06 27 10	J2118-0636	18 06 30	17.8	128.9	-3.2		-28.1	-19	178	No stop
06 28 40	=2116-068	18 08 00	18.0	129.2	-3.2		-27.9	71	190	06 27 11

Schedule for TORUN (Code Tr)

Page 3

BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
06 28 40	2107-0620	18 08 00	19.5	131.6	-3.0		-26.8	-19	190	No stop
06 32 10	---	18 11 31	19.9	132.4	-3.0		-26.5	191	217	06 28 41
06 32 50	J2118-0636	18 12 11	18.5	130.2	-3.1		-27.5	21	217	06 32 50
06 33 50	=2116-068	18 13 11	18.6	130.4	-3.1		-27.4	60	225	06 32 51
06 33 50	2107-0620	18 13 11	20.0	132.8	-2.9		-26.3	-19	225	No stop
06 37 20	---	18 16 41	20.4	133.7	-2.9		-25.9	191	252	06 33 51
06 37 20	J2118-0636	18 16 41	19.0	131.3	-3.0		-27.0	-19	252	No stop
06 38 50	=2116-068	18 18 12	19.2	131.6	-3.0		-26.9	71	263	06 37 21
06 38 50	2107-0620	18 18 12	20.6	134.0	-2.8		-25.7	-19	263	No stop
06 42 20	---	18 21 42	21.0	134.9	-2.8		-25.3	191	290	06 38 51
06 43 00	J2118-0636	18 22 22	19.6	132.6	-3.0		-26.4	21	290	06 43 00
06 44 00	=2116-068	18 23 23	19.7	132.8	-2.9		-26.3	60	298	06 43 01
06 44 00	2107-0620	18 23 23	21.1	135.3	-2.8		-25.2	-19	298	No stop
06 47 30	---	18 26 53	21.5	136.1	-2.7		-24.8	191	325	06 44 01
06 47 30	J2118-0636	18 26 53	20.1	133.7	-2.9		-25.9	-19	325	No stop
06 49 00	=2116-068	18 28 23	20.3	134.0	-2.9		-25.8	71	337	06 47 31
06 49 00	2107-0620	18 28 23	21.7	136.5	-2.7		-24.6	-19	337	No stop
06 52 30	---	18 31 54	22.0	137.3	-2.6		-24.2	191	364	06 49 01
06 53 10	J2118-0636	18 32 34	20.7	135.0	-2.8		-25.3	21	364	06 53 10
06 54 10	=2116-068	18 33 34	20.8	135.3	-2.8		-25.2	60	372	06 53 11
06 54 10	2107-0620	18 33 34	22.2	137.8	-2.6		-24.0	-19	372	No stop
06 57 40	---	18 37 05	22.6	138.6	-2.5		-23.5	191	399	06 54 11
06 57 40	J2118-0636	18 37 05	21.2	136.1	-2.7		-24.8	-19	399	No stop
06 59 10	=2116-068	18 38 35	21.4	136.5	-2.7		-24.6	71	410	06 57 41
06 59 10	2107-0620	18 38 35	22.7	139.0	-2.5		-23.4	-19	410	No stop
07 02 40	---	18 42 06	23.0	139.9	-2.4		-22.9	191	437	06 59 11
07 03 20	J2118-0636	18 42 46	21.8	137.5	-2.6		-24.1	21	437	07 03 20
07 04 20	=2116-068	18 43 46	21.9	137.7	-2.6		-24.0	60	445	07 03 21
07 04 20	2107-0620	18 43 46	23.2	140.3	-2.4		-22.7	-19	445	No stop
07 07 50	---	18 47 16	23.5	141.2	-2.4		-22.3	191	472	07 04 21
07 07 50	J2118-0636	18 47 16	22.3	138.6	-2.5		-23.6	-19	472	No stop
07 09 20	=2116-068	18 48 47	22.4	139.0	-2.5		-23.4	71	484	07 07 51

Schedule for TORUN (Code Tr)

Page 4

BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
07 09 20	2107-0620	18 48 47	23.7	141.5	-2.3		-22.1	-19	484	No stop
07 12 50	---	18 52 17	24.0	142.4	-2.3		-21.6	191	511	07 09 21
07 13 30	J2118-0636	18 52 57	22.8	140.0	-2.4		-22.9	21	511	07 13 30
07 14 30	=2116-068	18 53 58	22.9	140.2	-2.4		-22.7	60	519	07 13 31
07 14 30	2107-0620	18 53 58	24.2	142.8	-2.2		-21.4	-20	519	No stop
07 18 00	---	18 57 28	24.5	143.7	-2.2		-20.9	190	546	07 14 31
07 18 00	J2118-0636	18 57 28	23.2	141.1	-2.4		-22.3	-19	546	No stop
07 19 30	=2116-068	18 58 58	23.4	141.5	-2.3		-22.1	71	557	07 18 01
07 19 30	2107-0620	18 58 58	24.6	144.1	-2.2		-20.7	-20	557	No stop
07 23 00	---	19 02 29	24.9	145.0	-2.1		-20.3	190	584	07 19 31
07 23 40	J2118-0636	19 03 09	23.8	142.6	-2.3		-21.6	21	584	07 23 40
07 24 40	=2116-068	19 04 09	23.9	142.8	-2.3		-21.4	60	592	07 23 41
07 24 40	2107-0620	19 04 09	25.1	145.4	-2.1		-20.0	-20	592	No stop
07 28 10	---	19 07 40	25.3	146.4	-2.0		-19.6	190	619	07 24 41
07 28 10	J2118-0636	19 07 40	24.2	143.7	-2.2		-21.0	-19	619	No stop
07 29 40	=2116-068	19 09 10	24.3	144.1	-2.2		-20.8	71	631	07 28 11
07 29 40	2107-0620	19 09 10	25.5	146.7	-2.0		-19.3	-20	631	No stop
07 33 10	---	19 12 41	25.8	147.7	-1.9		-18.9	190	658	07 29 41
07 33 50	J2118-0636	19 13 21	24.7	145.1	-2.1		-20.2	21	658	07 33 50
07 34 50	=2116-068	19 14 21	24.8	145.4	-2.1		-20.1	60	666	07 33 51
07 34 50	2107-0620	19 14 21	25.9	148.1	-1.9		-18.6	-20	666	No stop
07 38 20	---	19 17 51	26.2	149.0	-1.8		-18.1	190	693	07 34 51
07 38 20	J2118-0636	19 17 51	25.1	146.3	-2.0		-19.6	-20	693	No stop
07 39 50	=2116-068	19 19 22	25.2	146.7	-2.0		-19.4	70	704	07 38 21
07 39 50	2107-0620	19 19 22	26.3	149.4	-1.8		-17.9	-20	704	No stop
07 43 20	---	19 22 52	26.5	150.3	-1.8		-17.4	190	732	07 39 51
07 44 00	J2118-0636	19 23 32	25.5	147.8	-1.9		-18.8	20	732	07 44 00
07 45 00	=2116-068	19 24 33	25.6	148.0	-1.9		-18.7	60	739	07 44 01
07 45 00	2107-0620	19 24 33	26.7	150.8	-1.7		-17.1	-20	739	No stop
07 48 30	---	19 28 03	26.9	151.7	-1.7		-16.6	190	766	07 45 01
07 48 30	J2118-0636	19 28 03	25.9	149.0	-1.9		-18.2	-20	766	No stop
07 50 00	=2116-068	19 29 33	26.0	149.4	-1.8		-17.9	70	778	07 48 31

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
----- fringe finder -----										
07 50 00	2107-0620	19 29 33	27.0	152.1	-1.7		-16.4	-20	778	No stop
07 53 30	---	19 33 04	27.3	153.1	-1.6		-15.9	190	805	07 50 01
07 54 10	J2118-0636	19 33 44	26.3	150.5	-1.8		-17.3	20	805	07 54 10
07 55 40	=2116-068	19 35 14	26.4	150.9	-1.7		-17.1	90	817	07 54 11
07 58 20	J2253+1608	19 37 55	36.9	114.7	-3.3		-34.6	72	817	07 58 20
08 05 20	=3C454.3	19 44 56	37.8	116.5	-3.2		-34.0	420	871	07 58 21
08 06 50	J2229+0114	19 46 26	28.1	131.9	-2.7		-26.5	39	871	08 06 50
08 07 50	=2227+009	19 47 26	28.2	132.2	-2.7		-26.4	60	879	08 06 51
08 07 50	2238+0016	19 47 26	26.4	130.4	-2.9		-27.2	-21	879	No stop
08 11 20	---	19 50 57	26.8	131.3	-2.8		-26.8	189	906	08 07 51
	Source only	8.9 degrees from the Sun.								
08 11 20	J2229+0114	19 50 57	28.6	133.1	-2.7		-26.0	-21	906	No stop
08 12 50	=2227+009	19 52 27	28.8	133.5	-2.6		-25.8	69	917	08 11 21
08 12 50	2238+0016	19 52 27	26.9	131.7	-2.8		-26.6	-21	917	No stop
08 16 20	---	19 55 58	27.3	132.6	-2.7		-26.2	189	944	08 12 51
	Source only	8.9 degrees from the Sun.								
08 17 00	J2229+0114	19 56 38	29.2	134.5	-2.6		-25.3	19	944	08 17 00
08 18 00	=2227+009	19 57 38	29.3	134.8	-2.5		-25.2	60	952	08 17 01
08 18 00	2238+0016	19 57 38	27.5	133.0	-2.7		-26.0	-21	952	No stop
08 21 30	---	20 01 09	27.9	133.9	-2.6		-25.6	189	979	08 18 01
	Source only	8.9 degrees from the Sun.								
08 21 30	J2229+0114	20 01 09	29.7	135.7	-2.5		-24.8	-21	979	No stop
08 23 00	=2227+009	20 02 39	29.9	136.1	-2.5		-24.6	69	991	08 21 31
08 23 00	2238+0016	20 02 39	28.1	134.3	-2.6		-25.5	-20	991	No stop
08 26 30	---	20 06 09	28.4	135.2	-2.6		-25.0	190	1018	08 23 01
	Source only	8.9 degrees from the Sun.								
08 27 10	J2229+0114	20 06 50	30.3	137.2	-2.4		-24.1	19	1018	08 27 10
08 28 10	=2227+009	20 07 50	30.4	137.5	-2.4		-24.0	60	1026	08 27 11
08 28 10	2238+0016	20 07 50	28.6	135.6	-2.5		-24.8	-20	1026	No stop
08 31 40	---	20 11 20	29.0	136.5	-2.5		-24.4	190	1053	08 28 11
	Source only	8.9 degrees from the Sun.								
08 31 40	J2229+0114	20 11 20	30.8	138.4	-2.3		-23.5	-21	1053	No stop
08 33 10	=2227+009	20 12 50	30.9	138.8	-2.3		-23.3	69	1064	08 31 41

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
08 33 10	2238+0016	20 12 50	29.1	136.9	-2.4		-24.2	-20	1064	No stop
08 36 40	---	20 16 21	29.5	137.8	-2.4		-23.8	190	1092	08 33 11
	Source only	8.9 degrees from the Sun.								
08 37 20	J2229+0114	20 17 01	31.3	139.9	-2.2		-22.7	20	1092	08 37 20
08 38 20	=2227+009	20 18 01	31.4	140.2	-2.2		-22.6	60	1099	08 37 21
08 38 20	2238+0016	20 18 01	29.6	138.3	-2.4		-23.6	-20	1099	No stop
08 41 50	---	20 21 32	30.0	139.2	-2.3		-23.1	190	1126	08 38 21
	Source only	8.9 degrees from the Sun.								
08 41 50	J2229+0114	20 21 32	31.7	141.1	-2.1		-22.1	-20	1126	No stop
08 43 20	=2227+009	20 23 02	31.9	141.6	-2.1		-21.9	70	1138	08 41 51
08 43 20	2238+0016	20 23 02	30.1	139.6	-2.3		-22.9	-20	1138	No stop
08 46 50	---	20 26 33	30.5	140.5	-2.2		-22.4	190	1165	08 43 21
	Source only	8.9 degrees from the Sun.								
08 47 30	J2229+0114	20 27 13	32.3	142.7	-2.1		-21.3	20	1165	08 47 30
08 48 30	=2227+009	20 28 13	32.4	143.0	-2.0		-21.2	60	1173	08 47 31
08 48 30	2238+0016	20 28 13	30.6	141.0	-2.2		-22.2	-20	1173	No stop
08 52 00	---	20 31 44	31.0	141.9	-2.1		-21.7	190	1200	08 48 31
	Source only	8.9 degrees from the Sun.								
08 52 00	J2229+0114	20 31 44	32.7	144.0	-2.0		-20.7	-20	1200	No stop
08 53 30	=2227+009	20 33 14	32.8	144.4	-2.0		-20.5	70	1212	08 52 01
08 53 30	2238+0016	20 33 14	31.1	142.3	-2.1		-21.5	-20	1212	No stop
08 57 00	---	20 36 44	31.4	143.3	-2.0		-21.0	190	1239	08 53 31
	Source only	8.9 degrees from the Sun.								
08 57 40	J2229+0114	20 37 25	33.2	145.5	-1.9		-19.9	20	1239	08 57 40
08 58 40	=2227+009	20 38 25	33.2	145.8	-1.9		-19.7	60	1246	08 57 41
08 58 40	2238+0016	20 38 25	31.6	143.8	-2.0		-20.8	-20	1246	No stop
09 02 10	---	20 41 55	31.9	144.7	-2.0		-20.3	190	1273	08 58 41
	Source only	8.9 degrees from the Sun.								
09 02 10	J2229+0114	20 41 55	33.5	146.8	-1.8		-19.2	-20	1273	No stop
09 03 40	=2227+009	20 43 25	33.7	147.2	-1.8		-19.0	70	1285	09 02 11
09 03 40	2238+0016	20 43 25	32.0	145.1	-1.9		-20.1	-20	1285	No stop
09 07 10	---	20 46 56	32.3	146.1	-1.9		-19.6	190	1312	09 03 41
	Source only	8.9 degrees from the Sun.								
09 07 50	J2229+0114	20 47 36	34.0	148.4	-1.7		-18.3	20	1312	09 07 50
09 08 50	=2227+009	20 48 36	34.1	148.7	-1.7		-18.2	60	1320	09 07 51

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
09 08 50	2238+0016	20 48 36	32.4	146.6	-1.8		-19.3	-20	1320	No stop
09 12 20	---	20 52 07	32.7	147.6	-1.8		-18.8	190	1347	09 08 51
	Source only	8.9 degrees from the Sun.								
09 12 20	J2229+0114	20 52 07	34.3	149.7	-1.6		-17.6	-20	1347	No stop
09 13 50	=2227+009	20 53 37	34.5	150.2	-1.6		-17.4	70	1359	09 12 21
09 13 50	2238+0016	20 53 37	32.9	148.0	-1.8		-18.6	-20	1359	No stop
09 17 20	---	20 57 08	33.1	149.0	-1.7		-18.0	190	1386	09 13 51
	Source only	8.9 degrees from the Sun.								
09 18 00	J2229+0114	20 57 48	34.8	151.4	-1.5		-16.7	20	1386	09 18 00
09 19 00	=2227+009	20 58 48	34.8	151.7	-1.5		-16.6	60	1393	09 18 01
09 19 00	2238+0016	20 58 48	33.3	149.5	-1.7		-17.8	-19	1393	No stop
09 22 30	---	21 02 19	33.5	150.5	-1.6		-17.2	191	1421	09 19 01
	Source only	8.9 degrees from the Sun.								
09 22 30	J2229+0114	21 02 19	35.1	152.7	-1.5		-16.0	-20	1421	No stop
09 24 00	=2227+009	21 03 49	35.2	153.1	-1.4		-15.7	70	1432	09 22 31
09 24 00	2238+0016	21 03 49	33.6	150.9	-1.6		-17.0	-19	1432	No stop
09 27 30	---	21 07 19	33.9	151.9	-1.5		-16.4	191	1459	09 24 01
	Source only	8.9 degrees from the Sun.								
09 28 10	J2229+0114	21 08 00	35.5	154.4	-1.4		-15.1	21	1459	09 28 10
09 29 10	=2227+009	21 09 00	35.5	154.7	-1.4		-14.9	60	1467	09 28 11
09 29 10	2238+0016	21 09 00	34.0	152.4	-1.5		-16.2	-19	1467	No stop
09 32 40	---	21 12 30	34.2	153.4	-1.4		-15.6	191	1494	09 29 11
	Source only	8.9 degrees from the Sun.								
09 32 40	J2229+0114	21 12 30	35.7	155.7	-1.3		-14.3	-19	1494	No stop
09 34 10	=2227+009	21 14 01	35.8	156.2	-1.3		-14.0	71	1506	09 32 41
09 34 10	2238+0016	21 14 01	34.3	153.8	-1.4		-15.4	-19	1506	No stop
09 37 40	---	21 17 31	34.6	154.9	-1.4		-14.8	191	1533	09 34 11
	Source only	8.9 degrees from the Sun.								
09 38 20	J2229+0114	21 18 11	36.1	157.4	-1.2		-13.3	21	1533	09 38 20
09 39 20	=2227+009	21 19 11	36.1	157.7	-1.2		-13.2	60	1541	09 38 21

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
----- flux calibrator -----										
09 42 00	J0006-0623	21 21 52	21.1	135.4	-2.8		-25.1	89	1541	09 42 00
09 49 00	=0003-066	21 28 53	21.9	137.1	-2.6		-24.3	420	1595	09 42 01
09 52 20	J2118-0636	21 32 13	30.3	183.7	0.2		2.2	93	1595	09 52 20
09 53 20	=2116-068	21 33 14	30.3	184.0	0.2		2.4	60	1602	09 52 21
09 53 20	2107-0620	21 33 14	30.4	187.1	0.4		4.3	-21	1602	No stop
09 56 50	---	21 36 44	30.3	188.1	0.5		4.9	189	1630	09 53 21
09 56 50	J2118-0636	21 36 44	30.2	185.0	0.3		3.0	-21	1630	No stop
09 58 20	=2116-068	21 38 14	30.2	185.4	0.3		3.3	69	1641	09 56 51
09 58 20	2107-0620	21 38 14	30.3	188.5	0.5		5.1	-21	1641	No stop
10 01 50	---	21 41 45	30.2	189.5	0.6		5.7	189	1668	09 58 21
10 02 30	J2118-0636	21 42 25	30.2	186.6	0.4		4.0	19	1668	10 02 30
10 04 00	=2116-068	21 43 55	30.1	187.0	0.4		4.3	90	1680	10 02 31
10 04 00	2107-0620	21 43 55	30.2	190.1	0.6		6.1	-21	1680	No stop
10 07 30	---	21 47 26	30.1	191.2	0.6		6.7	189	1707	10 04 01
10 07 30	J2118-0636	21 47 26	30.1	188.0	0.5		4.9	-21	1707	No stop
10 09 00	=2116-068	21 48 56	30.0	188.5	0.5		5.1	69	1719	10 07 31
10 09 00	2107-0620	21 48 56	30.0	191.6	0.7		7.0	-21	1719	No stop
10 12 30	---	21 52 27	29.9	192.6	0.7		7.6	189	1746	10 09 01
10 13 10	J2118-0636	21 53 07	29.9	189.7	0.6		5.8	19	1746	10 13 10
10 14 40	=2116-068	21 54 37	29.9	190.1	0.6		6.1	90	1757	10 13 11
10 14 40	2107-0620	21 54 37	29.8	193.2	0.8		7.9	-21	1757	No stop
10 18 10	---	21 58 08	29.7	194.2	0.8		8.5	189	1784	10 14 41
10 18 10	J2118-0636	21 58 08	29.8	191.1	0.6		6.7	-21	1784	No stop
10 19 40	=2116-068	21 59 38	29.7	191.5	0.7		6.9	69	1796	10 18 11
10 19 40	2107-0620	21 59 38	29.6	194.6	0.8		8.8	-21	1796	No stop
10 23 10	---	22 03 09	29.5	195.6	0.9		9.4	189	1823	10 19 41
10 23 50	J2118-0636	22 03 49	29.6	192.7	0.7		7.6	19	1823	10 23 50
10 25 20	=2116-068	22 05 19	29.6	193.1	0.8		7.9	90	1835	10 23 51

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
10 25 20	2107-0620	22 05 19	29.4	196.2	0.9		9.7	-21	1835	No stop
10 28 50	---	22 08 49	29.3	197.2	1.0		10.3	189	1862	10 25 21
10 28 50	J2118-0636	22 08 49	29.4	194.1	0.8		8.5	-20	1862	No stop
10 30 20	=2116-068	22 10 20	29.4	194.6	0.8		8.7	70	1873	10 28 51
10 30 20	2107-0620	22 10 20	29.2	197.6	1.0		10.5	-21	1873	No stop
10 33 50	---	22 13 50	29.0	198.6	1.1		11.1	189	1901	10 30 21
10 34 30	J2118-0636	22 14 30	29.2	195.7	0.9		9.4	20	1901	10 34 30
10 36 00	=2116-068	22 16 01	29.2	196.1	0.9		9.7	90	1912	10 34 31
10 38 00	J2229+0114	22 18 01	38.2	176.0	-0.2		-2.4	64	1912	10 38 00
10 39 00	=2227+009	22 19 01	38.2	176.3	-0.2		-2.2	60	1920	10 38 01
10 39 00	2238+0016	22 19 01	37.1	173.6	-0.3		-3.8	-20	1920	No stop
10 42 30	---	22 22 32	37.1	174.7	-0.3		-3.2	190	1947	10 39 01
	Source only	8.9 degrees from the Sun.								
10 42 30	J2229+0114	22 22 32	38.2	177.5	-0.1		-1.5	-20	1947	No stop
10 44 00	=2227+009	22 24 02	38.2	177.9	-0.1		-1.2	70	1959	10 42 31
10 44 00	2238+0016	22 24 02	37.2	175.2	-0.3		-2.9	-20	1959	No stop
10 47 30	---	22 27 33	37.2	176.3	-0.2		-2.2	190	1986	10 44 01
	Source only	8.9 degrees from the Sun.								
10 48 10	J2229+0114	22 28 13	38.2	179.3	-0.0		-0.4	20	1986	10 48 10
10 49 10	=2227+009	22 29 13	38.2	179.6	-0.0		-0.3	60	1993	10 48 11
10 49 10	2238+0016	22 29 13	37.2	176.8	-0.2		-1.9	-20	1993	No stop
10 52 40	---	22 32 43	37.2	177.9	-0.1		-1.3	190	2021	10 49 11
	Source only	8.9 degrees from the Sun.								
10 52 40	J2229+0114	22 32 43	38.2	180.7	0.0		0.4	-20	2021	No stop
10 54 10	=2227+009	22 34 14	38.2	181.2	0.1		0.7	70	2032	10 52 41
10 54 10	2238+0016	22 34 14	37.2	178.4	-0.1		-1.0	-20	2032	No stop
10 57 40	---	22 37 44	37.3	179.5	-0.0		-0.3	190	2059	10 54 11
	Source only	8.9 degrees from the Sun.								
10 58 20	J2229+0114	22 38 24	38.2	182.5	0.1		1.5	20	2059	10 58 20
10 59 20	=2227+009	22 39 25	38.2	182.8	0.1		1.7	60	2067	10 58 21
10 59 20	2238+0016	22 39 25	37.3	180.0	0.0		0.0	-20	2067	No stop
11 02 50	---	22 42 55	37.2	181.1	0.1		0.7	190	2094	10 59 21
	Source only	8.9 degrees from the Sun.								

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
11 02 50	J2229+0114	22 42 55	38.2	183.9	0.2		2.4	-20	2094	No stop
11 04 20	=2227+009	22 44 25	38.1	184.4	0.2		2.7	70	2106	11 02 51
11 04 20	2238+0016	22 44 25	37.2	181.6	0.1		0.9	-20	2106	No stop
11 07 50	---	22 47 56	37.2	182.7	0.1		1.6	190	2133	11 04 21
	Source only	8.9 degrees from the Sun.								
11 08 30	J2229+0114	22 48 36	38.1	185.7	0.3		3.4	20	2133	11 08 30
11 09 30	=2227+009	22 49 36	38.1	186.1	0.3		3.6	60	2141	11 08 31
11 09 30	2238+0016	22 49 36	37.2	183.2	0.2		1.9	-20	2141	No stop
11 13 00	---	22 53 07	37.2	184.3	0.2		2.6	190	2168	11 09 31
	Source only	8.9 degrees from the Sun.								
11 13 00	J2229+0114	22 53 07	38.0	187.2	0.4		4.3	-20	2168	No stop
11 14 30	=2227+009	22 54 37	38.0	187.6	0.4		4.6	70	2179	11 13 01
11 14 30	2238+0016	22 54 37	37.2	184.8	0.3		2.9	-20	2179	No stop
11 18 00	---	22 58 08	37.1	185.9	0.3		3.5	190	2206	11 14 31
	Source only	8.9 degrees from the Sun.								
11 18 40	J2229+0114	22 58 48	37.9	189.0	0.5		5.4	20	2206	11 18 40
11 19 40	=2227+009	22 59 48	37.9	189.3	0.5		5.6	60	2214	11 18 41
11 19 40	2238+0016	22 59 48	37.1	186.4	0.3		3.8	-20	2214	No stop
11 23 10	---	23 03 18	37.0	187.5	0.4		4.5	190	2241	11 19 41
	Source only	8.9 degrees from the Sun.								
11 23 10	J2229+0114	23 03 18	37.8	190.4	0.5		6.2	-20	2241	No stop
11 24 40	=2227+009	23 04 49	37.7	190.9	0.6		6.5	70	2253	11 23 11
11 24 40	2238+0016	23 04 49	37.0	188.0	0.4		4.8	-20	2253	No stop
11 28 10	---	23 08 19	36.9	189.1	0.5		5.4	190	2280	11 24 41
	Source only	8.9 degrees from the Sun.								
11 28 50	J2229+0114	23 08 59	37.6	192.2	0.6		7.3	20	2280	11 28 50
11 29 50	=2227+009	23 10 00	37.6	192.5	0.7		7.5	60	2288	11 28 51
11 31 50	J2118-0636	23 12 00	25.8	211.4	1.9		18.3	62	2288	11 31 50
11 32 50	=2116-068	23 13 00	25.7	211.6	1.9		18.5	60	2295	11 31 51
11 32 50	2107-0620	23 13 00	25.1	214.5	2.1		20.0	-20	2295	No stop
11 36 20	---	23 16 31	24.8	215.4	2.1		20.5	190	2322	11 32 51
11 36 20	J2118-0636	23 16 31	25.4	212.5	2.0		19.0	-20	2322	No stop
11 37 50	=2116-068	23 18 01	25.3	212.9	2.0		19.2	70	2334	11 36 21

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
11 37 50	2107-0620	23 18 01	24.6	215.8	2.2		20.7	-20	2334	No stop
11 41 20	---	23 21 31	24.3	216.7	2.2		21.2	190	2361	11 37 51
11 42 00	J2118-0636	23 22 12	24.9	214.0	2.0		19.8	20	2361	11 42 00
11 43 30	=2116-068	23 23 42	24.8	214.4	2.1		20.0	90	2373	11 42 01
11 43 30	2107-0620	23 23 42	24.1	217.2	2.3		21.4	-20	2373	No stop
11 47 00	---	23 27 12	23.8	218.1	2.3		21.9	190	2400	11 43 31
11 47 00	J2118-0636	23 27 12	24.5	215.3	2.1		20.4	-20	2400	No stop
11 48 30	=2116-068	23 28 43	24.4	215.7	2.2		20.6	70	2411	11 47 01
11 48 30	2107-0620	23 28 43	23.7	218.5	2.3		22.1	-20	2411	No stop
11 52 00	---	23 32 13	23.3	219.4	2.4		22.5	190	2439	11 48 31
11 52 40	J2118-0636	23 32 53	24.0	216.7	2.2		21.2	20	2439	11 52 40
11 54 10	=2116-068	23 34 24	23.9	217.1	2.2		21.4	90	2450	11 52 41
11 54 10	2107-0620	23 34 24	23.1	219.9	2.4		22.8	-20	2450	No stop
11 57 40	---	23 37 54	22.8	220.8	2.5		23.3	190	2477	11 54 11
11 57 40	J2118-0636	23 37 54	23.6	218.0	2.3		21.9	-20	2477	No stop
11 59 10	=2116-068	23 39 24	23.4	218.4	2.3		22.0	70	2489	11 57 41
11 59 10	2107-0620	23 39 24	22.6	221.2	2.5		23.4	-20	2489	No stop
12 02 40	---	23 42 55	22.3	222.0	2.6		23.9	190	2516	11 59 11
12 03 20	J2118-0636	23 43 35	23.0	219.4	2.4		22.6	20	2516	12 03 20
12 04 50	=2116-068	23 45 05	22.9	219.8	2.4		22.8	90	2528	12 03 21
12 04 50	2107-0620	23 45 05	22.1	222.6	2.6		24.1	-20	2528	No stop
12 08 20	---	23 48 36	21.7	223.4	2.7		24.5	190	2555	12 04 51
12 08 20	J2118-0636	23 48 36	22.5	220.7	2.5		23.2	-20	2555	No stop
12 09 50	=2116-068	23 50 06	22.4	221.0	2.5		23.4	70	2566	12 08 21
12 09 50	2107-0620	23 50 06	21.5	223.8	2.7		24.7	-20	2566	No stop
12 13 20	---	23 53 37	21.2	224.6	2.7		25.1	190	2593	12 09 51
12 14 00	J2118-0636	23 54 17	22.0	222.1	2.6		23.9	20	2593	12 14 00
12 15 30	=2116-068	23 55 47	21.8	222.4	2.6		24.1	90	2605	12 14 01
12 17 30	J2229+0114	23 57 47	35.1	207.0	1.5		15.8	56	2605	12 17 30
12 18 30	=2227+009	23 58 48	35.1	207.3	1.5		16.0	60	2613	12 17 31
12 18 30	2238+0016	23 58 48	34.7	204.4	1.3		14.4	-20	2613	No stop
12 22 00	---	00 02 18	34.5	205.4	1.4		14.9	190	2640	12 18 31
	Source only	8.9 degrees from the Sun.								

Schedule for TORUN (Code Tr)

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BAL quasars group 3

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 26 Feb 2013 Day 57 ---										
12 22 00	J2229+0114	00 02 18	34.8	208.3	1.5		16.6	-20	2640	No stop
12 23 30	=2227+009	00 03 48	34.7	208.8	1.6		16.8	70	2651	12 22 01
12 23 30	2238+0016	00 03 48	34.4	205.9	1.4		15.2	-20	2651	No stop
12 27 00	---	00 07 19	34.2	206.9	1.5		15.8	190	2679	12 23 31
	Source only	8.9 degrees from the Sun.								
12 27 40	J2229+0114	00 07 59	34.4	210.0	1.6		17.5	20	2679	12 27 40
12 28 40	=2227+009	00 08 59	34.3	210.3	1.6		17.6	60	2686	12 27 41
12 28 40	2238+0016	00 08 59	34.1	207.4	1.5		16.0	-20	2686	No stop
12 32 10	---	00 12 30	33.8	208.4	1.6		16.6	190	2713	12 28 41
	Source only	8.9 degrees from the Sun.								
12 32 10	J2229+0114	00 12 30	34.1	211.3	1.7		18.2	-20	2713	No stop
12 33 40	=2227+009	00 14 00	34.0	211.7	1.7		18.4	70	2725	12 32 11
12 33 40	2238+0016	00 14 00	33.7	208.8	1.6		16.8	-20	2725	No stop
12 37 10	---	00 17 31	33.4	209.8	1.6		17.4	190	2752	12 33 41
	Source only	8.9 degrees from the Sun.								
12 37 50	J2229+0114	00 18 11	33.6	212.9	1.8		19.0	20	2752	12 37 50
12 38 50	=2227+009	00 19 11	33.5	213.2	1.8		19.2	60	2760	12 37 51
12 38 50	2238+0016	00 19 11	33.3	210.3	1.7		17.6	-20	2760	No stop
12 42 20	---	00 22 41	33.1	211.3	1.7		18.2	190	2787	12 38 51
	Source only	8.9 degrees from the Sun.								
12 42 20	J2229+0114	00 22 41	33.2	214.2	1.9		19.7	-20	2787	No stop
12 43 50	=2227+009	00 24 12	33.1	214.6	1.9		19.9	70	2799	12 42 21
12 43 50	2238+0016	00 24 12	32.9	211.7	1.7		18.4	-20	2799	No stop
12 47 20	---	00 27 42	32.7	212.7	1.8		18.9	190	2826	12 43 51
	Source only	8.9 degrees from the Sun.								
12 48 00	J2229+0114	00 28 22	32.8	215.8	2.0		20.6	20	2826	12 48 00
12 49 00	=2227+009	00 29 23	32.7	216.1	2.0		20.7	60	2833	12 48 01
12 49 00	2238+0016	00 29 23	32.5	213.2	1.8		19.2	-20	2833	No stop
12 52 30	---	00 32 53	32.2	214.2	1.9		19.7	190	2860	12 49 01
	Source only	8.9 degrees from the Sun.								
12 52 30	J2229+0114	00 32 53	32.4	217.0	2.0		21.2	-20	2860	No stop
12 54 00	=2227+009	00 34 23	32.2	217.4	2.1		21.4	70	2872	12 52 31
12 54 00	2238+0016	00 34 23	32.1	214.6	1.9		19.9	-20	2872	No stop
12 57 30	---	00 37 54	31.8	215.6	2.0		20.4	190	2899	12 54 01
	Source only	8.9 degrees from the Sun.								
12 58 10	J2229+0114	00 38 34	31.8	218.6	2.1		22.0	20	2899	12 58 10
12 59 10	=2227+009	00 39 34	31.7	218.9	2.2		22.1	60	2907	12 58 11

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: sess113.C1024

Matching groups in /usr/local/sched/catalogs/freq.dat:

tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 2 Station: TORUN Total bit rate: 1024
Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 5 Setup file default. Used pcal sets: 1

LO sum=	4942.49	4942.49	4942.49	4942.49	4974.49	4974.49	4974.49	4974.49
	5006.49	5006.49	5006.49	5006.49	5038.49	5038.49	5038.49	5038.49
BBC fr=	742.49	742.49	742.49	742.49	774.49	774.49	774.49	774.49
	806.49	806.49	806.49	806.49	838.49	838.49	838.49	838.49
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Matching frequency sets: 5

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

SOURCES USED IN RECORDING SCANS --

BAL quasars group 3

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
* 2107-0620	21 05 18.722314	* 21 07 57.680000	21 08 39.120387	0.00
	-06 32 19.39507	*-06 20 10.51000	-06 16 56.43810	0.00
* 2238+0016	22 36 09.854156	* 22 38 43.570000	22 39 23.604209	0.00
	00 01 10.30551	* 00 16 48.15000	00 20 55.30620	0.00
* J0006-0623	00 03 40.288767	* 00 06 13.892888	00 06 53.987406	0.10
0003-066	-06 40 17.30000	*-06 23 35.33543	-06 19 14.61645	0.10
* J2118-0636	21 16 04.337902	* 21 18 43.242185	21 19 24.646933	0.23
2116-068	-06 48 58.36242	*-06 36 17.99871	-06 32 55.78678	0.49
* J2148+0657	21 45 36.078475	* 21 48 05.458673	21 48 44.362997	0.26
2145+067	06 43 40.90461	* 06 57 38.60421	07 01 19.92208	0.26
* J2229+0114	22 27 18.531413	* 22 29 51.801914	22 30 31.718043	0.61
2227+009	00 59 33.23389	* 01 14 56.72254	01 19 00.28277	0.74
* J2253+1608	22 51 29.519738	* 22 53 57.747937	22 54 36.396190	0.68
3C454.3	15 52 54.34810	* 16 08 53.56093	16 13 07.05503	0.72

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)	Source	Sun distance (deg)
2107-0620	22.4	J2148+0657	19.9
2238+0016	8.9	J2229+0114	10.1
J0006-0623	22.0	J2253+1608	25.1
J2118-0636	19.7		

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg	8.4 GHz	17. deg
610 MHz	81. deg	15.0 GHz	12. deg
1.6 GHz	45. deg	22.0 GHz	9. deg
2.3 GHz	36. deg	43.0 GHz	6. deg
5.0 GHz	23. deg		

Koniec C-band [C1]

Kalibracja: cl13k1tr (eksperyment lokalny)

n13k1tr

NETWORK MONITORING EXPERIMENT

PI: *Jun YANG*

Address: JIVE Postbus 2 7990 AA Dwingeloo The Netherlands
Phone: +31-521-596507 EMAIL: yang@jive.nl
Phone during observation: +31-521-596507

Notes: 1.3 cm NME for session 3/2012
 1024 Mbps, 2-bit sampling, 16 MHz filters, USB and LSB
 Send the disk pack by express to JIVE

COVER LETTER:

The KVN stations are expected to be in N13K1.

There are five ftp fringe-test scans

- (1) 11:14:00 UT (scan 4, 4 sec, 0234+285)
- (2) 11:28:00 UT (scan 7, 4 sec, 0355+508)
- (3) 11:59:00 UT (scan 13, 4 sec, 3C84)
- (4) 12:29:00 UT (scan 19, 4 sec, OriKL1)
- (5) 12:59:00 UT (scan 25, 4 sec, 3C84)

0234+285: ~4.03 Jy at 15 GHz on 2012-01-2 (MOJAVE).

0355+508: ~9.4 Jy at 15 GHz on 2012-01-15 (MOJAVE).

3C84: ~28 Jy at 15 GHz on 2012-11-28 (MOJAVE).

OriKL1: Water masers in Orion with a peak flux density >~100 Jy.

See you in Skype group chat!

Jun YANG

Skype account: uaoagn

Schedule for TORUN (Code Tr)

Page 2

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Wed 27 Feb 2013 Day 58 ---

Next scan frequencies:	22187.49	22187.49	22187.49	22187.49	22187.49	22219.49	22219.49	22219.49	22219.49	22219.49	22219.49	22219.49	22219.49
	22251.49	22251.49	22251.49	22251.49	22251.49	22283.49	22283.49	22283.49	22283.49	22283.49	22283.49	22283.49	22283.49
Next BBC frequencies:	687.49	687.49	687.49	687.49	687.49	719.49	719.49	719.49	719.49	719.49	719.49	719.49	719.49
	751.49	751.49	751.49	751.49	751.49	783.49	783.49	783.49	783.49	783.49	783.49	783.49	783.49
Next scan bandwidths:	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

11 00 00	0234+285	22 44 01	41.3	95.7	-3.9	-43.0	0	0	11 00 00
11 03 00	---	22 47 02	41.7	96.3	-3.9	-43.0	180	23	11 00 01
11 03 30	0234+285	22 47 32	41.8	96.4	-3.9	-42.9	24	23	11 03 30
11 06 30	---	22 50 32	42.2	97.1	-3.8	-42.9	180	46	11 03 31
11 07 00	0234+285	22 51 02	42.3	97.2	-3.8	-42.9	24	46	11 07 00
11 10 00	---	22 54 03	42.8	97.8	-3.7	-42.8	180	70	11 07 01
11 11 00	0234+285	22 55 03	42.9	98.1	-3.7	-42.8	54	70	11 11 00
11 15 00	---	22 59 04	43.5	99.0	-3.7	-42.6	240	101	11 11 01
11 19 00	0355+508	23 03 04	46.3	61.4	-5.0	-56.9	149	101	11 19 00
11 22 00	---	23 06 05	46.7	61.7	-4.9	-57.2	180	124	11 19 01
11 22 30	0355+508	23 06 35	46.8	61.8	-4.9	-57.2	24	124	11 22 30
11 25 30	---	23 09 35	47.2	62.2	-4.8	-57.5	180	147	11 22 31
11 26 00	0355+508	23 10 05	47.3	62.2	-4.8	-57.6	24	147	11 26 00
11 29 00	---	23 13 06	47.7	62.6	-4.8	-57.9	180	170	11 26 01
11 33 00	3C84	23 17 07	48.5	80.7	-4.1	-52.4	190	170	11 33 00
11 37 00	---	23 21 07	49.1	81.4	-4.0	-52.5	240	201	11 33 01
11 37 30	3C84	23 21 37	49.2	81.5	-4.0	-52.5	24	201	11 37 30
11 41 30	---	23 25 38	49.8	82.2	-3.9	-52.7	240	232	11 37 31
11 42 00	3C84	23 26 08	49.8	82.2	-3.9	-52.7	24	232	11 42 00
11 46 00	---	23 30 09	50.4	83.0	-3.8	-52.8	240	263	11 42 01
11 46 30	3C84	23 30 39	50.5	83.0	-3.8	-52.8	24	263	11 46 30
11 50 30	---	23 34 39	51.1	83.8	-3.8	-52.9	240	294	11 46 31
11 51 00	3C84	23 35 10	51.2	83.9	-3.8	-52.9	24	294	11 51 00
11 55 00	---	23 39 10	51.8	84.6	-3.7	-53.0	240	325	11 51 01
11 56 00	3C84	23 40 10	51.9	84.8	-3.7	-53.0	54	325	11 56 00
12 00 00	---	23 44 11	52.5	85.5	-3.6	-53.1	240	356	11 56 01

Schedule for TORUN (Code Tr)

Page 3

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
12 04 00	0234+285	23 48 12	50.6	110.8	-2.8		-39.9	176	356	12 04 00
12 08 00	---	23 52 12	51.2	111.9	-2.8		-39.5	240	387	12 04 01
12 08 30	0234+285	23 52 42	51.3	112.0	-2.8		-39.5	24	387	12 08 30
12 11 30	---	23 55 43	51.7	112.8	-2.7		-39.2	180	410	12 08 31
12 12 00	0234+285	23 56 13	51.7	113.0	-2.7		-39.1	24	410	12 12 00
12 15 00	---	23 59 13	52.2	113.8	-2.7		-38.8	180	434	12 12 01
12 34 00	0234+285	00 18 17	54.7	119.4	-2.3		-36.7	1132	434	12 34 00
12 37 00	---	00 21 17	55.1	120.3	-2.3		-36.3	180	457	12 34 01
12 38 00	0234+285	00 22 17	55.2	120.6	-2.3		-36.2	54	457	12 38 00
12 41 00	---	00 25 18	55.6	121.5	-2.2		-35.8	180	480	12 38 01
12 42 00	0234+285	00 26 18	55.7	121.8	-2.2		-35.6	54	480	12 42 00
12 45 00	---	00 29 18	56.1	122.8	-2.2		-35.2	180	503	12 42 01
12 48 00	3C84	00 32 19	59.8	95.2	-2.8		-53.1	109	503	12 48 00
12 51 00	---	00 35 19	60.2	95.9	-2.8		-53.0	180	526	12 48 01
12 51 30	3C84	00 35 49	60.3	96.0	-2.7		-53.0	24	526	12 51 30
12 54 30	---	00 38 50	60.7	96.7	-2.7		-52.9	180	550	12 51 31
12 55 00	3C84	00 39 20	60.8	96.8	-2.7		-52.8	24	550	12 55 00
13 00 00	---	00 44 21	61.6	98.0	-2.6		-52.6	300	588	12 55 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: sess113.KG

Matching groups in ./freq.sess113K.dat:
 tr1cm

Setup group:	4	Station:	TORUN	Total bit rate:	1024
Format:	MKIV1:2	Bits per sample:	2	Sample rate:	32.000
Number of channels:	16	DBE type:		Speedup factor:	0.50

Disk used to record data.

1st LO=	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00
	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set:	6	Setup file default.	Used pcal sets:	1				
LO sum=	22187.49	22187.49	22187.49	22187.49	22219.49	22219.49	22219.49	22219.49
	22251.49	22251.49	22251.49	22251.49	22283.49	22283.49	22283.49	22283.49
BBC fr=	687.49	687.49	687.49	687.49	719.49	719.49	719.49	719.49
	751.49	751.49	751.49	751.49	783.49	783.49	783.49	783.49
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Matching frequency sets:	6							

The following pulse cal sets were used with this setup:

Pulse cal detection set:	1	PCAL = 1MHZ						
PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
 barrel=roll_off

SOURCES USED IN RECORDING SCANS --

Network Monitoring Experiment

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* ORIKL1	05 32 46.550813 -05 24 24.86387	* 05 35 14.030000 *-05 22 31.40000	05 35 54.078984 -05 22 17.32398	0.00 0.00
J0237+2848	02 34 55.589591	* 02 37 52.405678	02 38 39.540355	0.11
* 0234+285	28 35 11.40773	* 28 48 08.98998	28 51 34.91227	0.10
J0319+4130	03 16 29.567260	* 03 19 48.160090	03 20 41.427072	1.30
* 3C84	41 19 51.91699	* 41 30 42.10412	41 33 37.53042	2.72
J0359+5057	03 55 45.261370	* 03 59 29.747271	04 00 30.284895	0.16
* 0355+508	50 49 20.28582	* 50 57 50.16177	51 00 10.32546	0.10

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
ORIKL1	102.3
0234+285	67.8
3C84	80.5
0355+508	89.8

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

EXPLORING THE RADIO EMISSION OF TXS 0536+145: A KEY BLAZAR FOR EBL STUDI
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Fax: +39 051 639 9431 Phone during observation: +39 051 639 9388

Notes: #####
Please, make sure PHASE CAL is OFF.
#####

Schedule for TORUN (Code Tr) Page 2
Exploring the radio emission of TXS 0536+145: A key blazar for EBL studi
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Table with columns: Start UT, Source, Stop UT, LST, Start / Stop (EL, AZ, HA, UP), ParA, Early Dwell, Disk GBytes, TPStart SYNC.

--- Wed 27 Feb 2013 Day 58 ---

Next scan frequencies: 22187.49 22187.49 22187.49 22187.49 22219.49 22219.49
22219.49 22219.49 22251.49 22251.49 22251.49 22251.49
22283.49 22283.49 22283.49 22283.49
Next BBC frequencies: 687.49 687.49 687.49 687.49 719.49 719.49
719.49 719.49 751.49 751.49 751.49 751.49
783.49 783.49 783.49 783.49
Next scan bandwidths: 16.00 16.00 16.00 16.00 16.00 16.00
16.00 16.00 16.00 16.00 16.00 16.00
16.00 16.00 16.00 16.00

Table with columns: Start UT, Source, Stop UT, LST, Start / Stop (EL, AZ, HA, UP), ParA, Early Dwell, Disk GBytes, TPStart SYNC. Contains multiple rows of scan data.

Schedule for TORUN (Code Tr)

Page 3

Exploring the radio emission of TXS 0536+145: A key blazar for EBL studi

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
14 47 05	0528+134	02 31 43	36.9	120.8	-3.0		-32.1	9	324	14 47 05
14 47 20	---	02 31 59	36.9	120.8	-3.0		-32.0	15	326	14 47 06
14 48 00	0536+145	02 32 39	36.7	118.1	-3.1		-33.2	20	326	14 48 00
14 53 20	---	02 37 59	37.4	119.4	-3.0		-32.7	320	367	14 48 01
14 54 00	0536+145	02 38 40	37.5	119.6	-3.0		-32.6	34	367	14 54 00
14 59 20	---	02 44 00	38.2	121.0	-2.9		-32.1	320	408	14 54 01
15 00 00	0536+145	02 44 41	38.3	121.2	-2.9		-32.1	34	408	15 00 00
15 05 20	---	02 50 01	39.0	122.6	-2.8		-31.5	320	450	15 00 01
15 06 00	0536+145	02 50 42	39.0	122.7	-2.8		-31.5	34	450	15 06 00
15 11 20	---	02 56 02	39.7	124.2	-2.7		-30.9	320	491	15 06 01
15 12 00	0536+145	02 56 43	39.8	124.4	-2.7		-30.8	34	491	15 12 00
15 17 20	---	03 02 03	40.5	125.8	-2.6		-30.2	320	532	15 12 01
15 18 00	0536+145	03 02 44	40.5	126.0	-2.6		-30.1	34	532	15 18 00
15 23 20	---	03 08 04	41.2	127.5	-2.5		-29.5	320	574	15 18 01
15 24 00	0536+145	03 08 45	41.3	127.7	-2.5		-29.4	34	574	15 24 00
15 29 20	---	03 14 05	41.9	129.2	-2.4		-28.7	320	615	15 24 01
15 30 00	0536+145	03 14 46	42.0	129.4	-2.4		-28.7	34	615	15 30 00
15 35 20	---	03 20 06	42.6	130.9	-2.3		-28.0	320	656	15 30 01
15 36 00	0536+145	03 20 47	42.7	131.1	-2.3		-27.9	34	656	15 36 00
15 41 20	---	03 26 07	43.3	132.7	-2.2		-27.1	320	697	15 36 01
15 42 00	0536+145	03 26 47	43.3	132.9	-2.2		-27.0	34	697	15 42 00
15 47 20	---	03 32 08	43.9	134.5	-2.1		-26.3	320	739	15 42 01
15 48 00	0536+145	03 32 48	44.0	134.7	-2.1		-26.2	34	739	15 48 00
15 53 20	---	03 38 09	44.5	136.3	-2.0		-25.4	320	780	15 48 01
15 54 00	0536+145	03 38 49	44.6	136.5	-2.0		-25.3	34	780	15 54 00
15 59 20	---	03 44 10	45.2	138.2	-1.9		-24.4	320	821	15 54 01
16 00 00	0536+145	03 44 50	45.2	138.4	-1.9		-24.3	34	821	16 00 00
16 05 20	---	03 50 11	45.7	140.1	-1.8		-23.5	320	863	16 00 01
16 06 00	0536+145	03 50 51	45.8	140.3	-1.8		-23.4	34	863	16 06 00
16 11 20	---	03 56 12	46.3	142.0	-1.7		-22.5	320	904	16 06 01
16 12 20	0528+134	03 57 12	46.2	145.7	-1.6		-20.4	38	904	16 12 20
16 16 50	---	04 01 43	46.6	147.2	-1.5		-19.5	270	939	16 12 21

Schedule for TORUN (Code Tr) Page 4

Exploring the radio emission of TXS 0536+145: A key blazar for EBL studi

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
16 17 05	0528+134	04 01 58	46.6	147.3	-1.5		-19.5	9	939	16 17 05
16 17 20	---	04 02 13	46.6	147.4	-1.5		-19.4	15	941	16 17 06
16 18 00	0536+145	04 02 53	46.9	144.2	-1.6		-21.3	19	941	16 18 00
16 23 20	---	04 08 14	47.4	146.0	-1.5		-20.3	320	982	16 18 01
16 24 00	0536+145	04 08 54	47.4	146.2	-1.5		-20.2	34	982	16 24 00
16 29 20	---	04 14 15	47.9	148.0	-1.4		-19.2	320	1023	16 24 01
16 30 00	0536+145	04 14 55	47.9	148.2	-1.4		-19.1	34	1023	16 30 00
16 35 20	---	04 20 16	48.3	150.1	-1.3		-18.0	320	1064	16 30 01
16 36 00	0536+145	04 20 56	48.4	150.3	-1.3		-17.9	34	1064	16 36 00
16 41 20	---	04 26 17	48.8	152.1	-1.2		-16.8	320	1106	16 36 01
16 42 00	0536+145	04 26 57	48.8	152.4	-1.2		-16.7	34	1106	16 42 00
16 47 20	---	04 32 18	49.2	154.3	-1.1		-15.6	320	1147	16 42 01
16 48 00	0536+145	04 32 58	49.2	154.5	-1.1		-15.5	34	1147	16 48 00
16 53 20	---	04 38 19	49.6	156.4	-1.0		-14.4	320	1188	16 48 01
16 54 00	0536+145	04 38 59	49.6	156.7	-1.0		-14.2	34	1188	16 54 00
17 00 00	---	04 45 00	49.9	158.9	-0.9		-12.9	360	1235	16 54 01

SETUP FILE INFORMATION:

==== Setup file: sess113.K1024

Matching groups in ./freq.sess113K.dat: tr1cm

Setup group: 4 Station: TORUN Total bit rate: 1024
Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00
	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 6 Setup file default. Used pcal sets: 1
LO sum= 22187.49 22187.49 22187.49 22187.49 22219.49 22219.49 22219.49 22219.49
        22251.49 22251.49 22251.49 22251.49 22283.49 22283.49 22283.49 22283.49
BBC fr= 687.49 687.49 687.49 687.49 719.49 719.49 719.49 719.49
        751.49 751.49 751.49 751.49 783.49 783.49 783.49 783.49
Bandwd= 16.000 16.000 16.000 16.000 16.000 16.000 16.000 16.000
        16.000 16.000 16.000 16.000 16.000 16.000 16.000 16.000
Matching frequency sets: 6

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS -- Exploring the radio emission of TXS 0536+145: A key blazar f

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec) (B1950)	Source position (RA/Dec) (J2000)	(Date)	Error (mas)
J0530+1331	05 28 06.759218	* 05 30 56.416749	05 31 42.433622	0.10
* 0528+134	13 29 42.28877	* 13 31 55.14944	13 32 20.39757	0.10
J0539+1433	05 36 51.361472	* 05 39 42.365990	05 40 28.789329	0.10
* 0536+145	14 32 10.73030	* 14 33 45.56160	14 34 00.83594	0.10

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

```

Source      Sun distance (deg)
0528+134    103.6
0536+145    105.8

```

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

```

1.6 GHz      45. deg
2.3 GHz      36. deg
5.0 GHz      23. deg
8.4 GHz      17. deg
15.0 GHz     12. deg
22.0 GHz     9. deg

```

ez024tr

EVN 1.3CM

PI: Erik Zackrisson

Address: Stockholm Observatory, Sweden

Phone: 46 31 772 5503

EMAIL: ez@astro.su.se

Observing mode: 1.3cm 1024-8-2

Schedule for TORUN (Code Tr)

Page 2

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Wed 27 Feb 2013 Day 58 ---

Next scan frequencies:	22187.49	22187.49	22187.49	22187.49	22187.49	22219.49	22219.49	22219.49	22219.49	22219.49	22219.49	22219.49	22219.49
	22251.49	22251.49	22251.49	22251.49	22251.49	22283.49	22283.49	22283.49	22283.49	22283.49	22283.49	22283.49	22283.49
Next BBC frequencies:	687.49	687.49	687.49	687.49	687.49	719.49	719.49	719.49	719.49	719.49	719.49	719.49	719.49
	751.49	751.49	751.49	751.49	751.49	783.49	783.49	783.49	783.49	783.49	783.49	783.49	783.49
Next scan bandwidths:	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18 00 30	4C39.25	05 45 40	50.1	87.7	-3.7	-50.5	0	0	18 00 30				
18 09 30	---	05 55 12	51.5	89.5	-3.5	-50.6	540	70	18 00 31				
18 09 45	4C39.25	05 54 57	51.5	89.5	-3.5	-50.6	7	70	18 09 45				
18 10 00	---	05 55 12	51.5	89.5	-3.5	-50.6	15	72	18 09 46				
18 15 06	J1157	06 00 19	13.5	80.3	-6.0	-38.1	148	72	18 15 06				
18 15 51	---	06 01 19	13.6	80.5	-5.9	-38.2	45	77	18 15 07				
18 16 16	B1152	06 01 29	16.4	79.0	-5.9	-38.7	1	77	18 16 16				
18 18 16	---	06 03 29	16.6	79.4	-5.9	-38.8	120	93	18 16 17				
18 18 40	J1157	06 03 53	14.0	81.0	-5.9	-38.2	0	93	18 18 40				
18 19 40	---	06 04 53	14.2	81.1	-5.9	-38.2	60	101	18 18 41				
18 20 05	B1152	06 05 18	16.9	79.7	-5.8	-38.8	1	101	18 20 05				
18 22 05	---	06 07 19	17.2	80.1	-5.8	-38.9	120	116	18 20 06				
18 22 29	J1157	06 07 43	14.6	81.7	-5.8	-38.3	0	116	18 22 29				
18 23 29	---	06 08 43	14.7	81.9	-5.8	-38.3	60	124	18 22 30				
18 23 54	B1152	06 09 08	17.5	80.5	-5.8	-38.9	1	124	18 23 54				
18 25 54	---	06 11 08	17.8	80.8	-5.7	-39.0	120	139	18 23 55				
18 26 18	J1157	06 11 32	15.1	82.4	-5.8	-38.4	0	139	18 26 18				
18 27 18	---	06 12 33	15.3	82.6	-5.8	-38.4	60	147	18 26 19				
18 28 32	J1125+2610	06 13 47	27.5	82.4	-5.2	-41.5	15	147	18 28 32				
18 29 47	=1123+264	06 15 18	27.7	82.7	-5.2	-41.5	75	157	18 28 33				
18 30 02	J1125+2610	06 15 18	27.7	82.7	-5.2	-41.5	8	157	18 30 02				
18 30 17	=1123+264	06 15 33	27.8	82.7	-5.2	-41.5	15	159	18 30 03				

Schedule for TORUN (Code Tr)

Page 3

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
18 31 31	J1157	06 16 46	15.9	83.5	-5.7		-38.5	15	159	18 31 31
18 32 16	---	06 17 46	16.1	83.7	-5.7		-38.5	45	165	18 31 32
18 32 40	B1152	06 17 56	18.8	82.1	-5.6		-39.2	1	165	18 32 40
18 34 40	---	06 19 56	19.1	82.5	-5.6		-39.2	120	180	18 32 41
18 35 05	J1157	06 20 21	16.5	84.2	-5.6		-38.6	0	180	18 35 05
18 36 05	---	06 21 21	16.6	84.4	-5.6		-38.6	60	188	18 35 06
18 36 29	B1152	06 21 45	19.4	82.9	-5.6		-39.2	0	188	18 36 29
18 38 29	---	06 23 46	19.7	83.3	-5.5		-39.3	120	203	18 36 30
18 38 54	J1157	06 24 10	17.0	84.9	-5.6		-38.6	0	203	18 38 54
18 39 54	---	06 25 10	17.2	85.1	-5.6		-38.6	60	211	18 38 55
18 40 18	B1152	06 25 35	19.9	83.6	-5.5		-39.3	0	211	18 40 18
18 42 18	---	06 27 35	20.2	84.0	-5.5		-39.3	120	226	18 40 19
18 42 42	J1157	06 27 59	17.6	85.7	-5.5		-38.7	0	226	18 42 42
18 43 42	---	06 29 00	17.8	85.9	-5.5		-38.7	60	234	18 42 43
18 45 07	J1125+2610	06 30 25	30.0	85.6	-4.9		-41.8	26	234	18 45 07
18 46 22	=1123+264	06 31 55	30.2	85.9	-4.9		-41.8	75	244	18 45 08
18 46 37	J1125+2610	06 31 55	30.2	85.9	-4.9		-41.8	8	244	18 46 37
18 46 52	=1123+264	06 32 10	30.3	85.9	-4.9		-41.8	15	246	18 46 38
18 48 06	J1157	06 33 24	18.4	86.7	-5.4		-38.7	15	246	18 48 06
18 48 51	---	06 34 24	18.6	86.9	-5.4		-38.7	45	252	18 48 07
18 49 23	B1152	06 34 41	21.3	85.4	-5.4		-39.4	8	252	18 49 23
18 51 23	---	06 36 42	21.6	85.8	-5.3		-39.5	120	267	18 49 24
18 51 47	J1157	06 37 06	19.0	87.4	-5.4		-38.7	0	267	18 51 47
18 52 47	---	06 38 06	19.1	87.6	-5.3		-38.8	60	275	18 51 48
18 53 19	B1152	06 38 38	21.9	86.2	-5.3		-39.5	8	275	18 53 19
18 55 19	---	06 40 39	22.2	86.6	-5.3		-39.5	120	290	18 53 20
18 55 52	J1157	06 41 12	19.6	88.3	-5.3		-38.8	9	290	18 55 52
18 56 52	---	06 42 12	19.7	88.5	-5.3		-38.8	60	298	18 55 53
18 57 25	B1152	06 42 45	22.5	87.0	-5.2		-39.5	9	298	18 57 25
18 59 25	---	06 44 45	22.8	87.4	-5.2		-39.5	120	314	18 57 26
18 59 58	J1157	06 45 18	20.2	89.1	-5.2		-38.8	9	314	18 59 58
19 00 58	---	06 46 19	20.4	89.3	-5.2		-38.8	60	321	18 59 59

Schedule for TORUN (Code Tr)

Page 4

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
19 02 24	J1125+2610	06 47 44	32.6	89.0	-4.6		-42.0	26	321	19 02 24
19 03 39	=1123+264	06 49 14	32.8	89.3	-4.6		-42.0	75	331	19 02 25
19 03 54	J1125+2610	06 49 14	32.8	89.3	-4.6		-42.0	8	331	19 03 54
19 04 09	=1123+264	06 49 29	32.9	89.3	-4.6		-42.0	15	333	19 03 55
19 05 32	J1157	06 50 53	21.0	90.2	-5.1		-38.8	25	333	19 05 32
19 06 17	---	06 51 53	21.2	90.4	-5.1		-38.8	45	339	19 05 33
19 06 50	B1152	06 52 12	23.9	88.8	-5.1		-39.6	9	339	19 06 50
19 08 50	---	06 54 12	24.2	89.2	-5.0		-39.6	120	354	19 06 51
19 09 23	J1157	06 54 45	21.6	91.0	-5.1		-38.8	9	354	19 09 23
19 10 23	---	06 55 45	21.8	91.2	-5.0		-38.8	60	362	19 09 24
19 10 56	B1152	06 56 18	24.5	89.7	-5.0		-39.6	9	362	19 10 56
19 12 56	---	06 58 19	24.8	90.1	-5.0		-39.6	120	377	19 10 57
19 13 29	J1157	06 58 52	22.2	91.8	-5.0		-38.8	9	377	19 13 29
19 14 29	---	06 59 52	22.4	92.0	-5.0		-38.8	60	385	19 13 30
19 15 03	B1152	07 00 25	25.1	90.5	-4.9		-39.6	9	385	19 15 03
19 17 03	---	07 02 25	25.4	90.9	-4.9		-39.6	120	401	19 15 04
19 17 36	J1157	07 02 58	22.9	92.6	-4.9		-38.7	9	401	19 17 36
19 18 36	---	07 03 59	23.0	92.8	-4.9		-38.7	60	408	19 17 37
19 20 01	J1125+2610	07 05 24	35.2	92.5	-4.4		-41.9	26	408	19 20 01
19 21 16	=1123+264	07 06 54	35.5	92.8	-4.3		-41.9	75	418	19 20 02
19 21 31	J1125+2610	07 06 54	35.5	92.8	-4.3		-41.9	8	418	19 21 31
19 21 46	=1123+264	07 07 09	35.5	92.9	-4.3		-41.9	15	420	19 21 32
19 23 09	J1157	07 08 33	23.7	93.8	-4.8		-38.7	25	420	19 23 09
19 23 54	---	07 09 33	23.8	94.0	-4.8		-38.7	45	426	19 23 10
19 24 27	B1152	07 09 52	26.6	92.4	-4.8		-39.6	9	426	19 24 27
19 26 27	---	07 11 52	26.9	92.8	-4.7		-39.5	120	441	19 24 28
19 27 01	J1157	07 12 25	24.3	94.5	-4.8		-38.6	9	441	19 27 01
19 28 01	---	07 13 25	24.4	94.8	-4.7		-38.6	60	449	19 27 02
19 28 34	B1152	07 13 58	27.2	93.2	-4.7		-39.5	9	449	19 28 34
19 30 34	---	07 15 59	27.5	93.6	-4.7		-39.5	120	464	19 28 35
19 31 07	J1157	07 16 32	24.9	95.4	-4.7		-38.6	9	464	19 31 07
19 32 07	---	07 17 32	25.0	95.6	-4.7		-38.6	60	472	19 31 08

Schedule for TORUN (Code Tr)

Page 5

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
19 32 40	B1152	07 18 05	27.8	94.1	-4.6		-39.5	9	472	19 32 40
19 34 40	---	07 20 05	28.1	94.5	-4.6		-39.5	120	488	19 32 41
19 35 13	J1157	07 20 38	25.5	96.2	-4.6		-38.5	9	488	19 35 13
19 36 13	---	07 21 39	25.6	96.5	-4.6		-38.5	60	495	19 35 14
19 36 46	B1152	07 22 12	28.4	94.9	-4.6		-39.4	9	495	19 36 46
19 38 46	---	07 24 12	28.7	95.3	-4.5		-39.4	120	511	19 36 47
19 40 00	J1125+2610	07 25 27	38.2	96.7	-4.0		-41.6	25	511	19 40 00
19 41 15	=1123+264	07 26 57	38.5	97.0	-4.0		-41.6	75	521	19 40 01
19 42 39	J1157	07 28 06	26.6	97.8	-4.5		-38.4	25	521	19 42 39
19 43 24	---	07 29 06	26.8	98.0	-4.5		-38.3	45	526	19 42 40
19 43 57	B1152	07 29 24	29.5	96.4	-4.4		-39.3	9	526	19 43 57
19 45 57	---	07 31 25	29.8	96.8	-4.4		-39.3	120	542	19 43 58
19 46 30	J1157	07 31 58	27.2	98.6	-4.4		-38.3	9	542	19 46 30
19 47 30	---	07 32 58	27.3	98.8	-4.4		-38.2	60	550	19 46 31
19 48 03	B1152	07 33 31	30.1	97.3	-4.4		-39.2	9	550	19 48 03
19 50 03	---	07 35 31	30.4	97.7	-4.3		-39.2	120	565	19 48 04
19 50 36	J1157	07 36 05	27.8	99.5	-4.4		-38.2	9	565	19 50 36
19 51 36	---	07 37 05	27.9	99.7	-4.4		-38.1	60	573	19 50 37
19 52 09	B1152	07 37 38	30.7	98.2	-4.3		-39.1	9	573	19 52 09
19 54 09	---	07 39 38	31.0	98.6	-4.3		-39.1	120	588	19 52 10
19 54 42	J1157	07 40 11	28.4	100.4	-4.3		-38.0	9	588	19 54 42
19 55 42	---	07 41 11	28.5	100.6	-4.3		-38.0	60	596	19 54 43
19 56 15	B1152	07 41 45	31.3	99.0	-4.2		-39.0	9	596	19 56 15
19 58 15	---	07 43 45	31.6	99.5	-4.2		-39.0	120	612	19 56 16
19 59 30	J1125+2610	07 45 00	41.1	101.0	-3.7		-41.0	25	612	19 59 30
20 00 45	=1123+264	07 46 30	41.4	101.3	-3.7		-41.0	75	621	19 59 31
20 01 00	J1125+2610	07 46 30	41.4	101.3	-3.7		-41.0	8	621	20 01 00
20 01 15	=1123+264	07 46 45	41.4	101.4	-3.7		-41.0	15	623	20 01 01
20 02 39	J1157	07 48 09	29.6	102.1	-4.2		-37.8	25	623	20 02 39
20 03 24	---	07 49 09	29.7	102.3	-4.2		-37.7	45	629	20 02 40

Schedule for TORUN (Code Tr)

Page 6

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
20 03 57	B1152	07 49 27	32.5	100.7	-4.1		-38.8	9	629	20 03 57
20 05 57	---	07 51 28	32.8	101.1	-4.1		-38.7	120	644	20 03 58
20 06 30	J1157	07 52 01	30.1	102.9	-4.1		-37.6	9	644	20 06 30
20 07 30	---	07 53 01	30.3	103.2	-4.1		-37.6	60	652	20 06 31
20 08 03	B1152	07 53 34	33.1	101.6	-4.0		-38.6	9	652	20 08 03
20 10 03	---	07 55 34	33.4	102.0	-4.0		-38.6	120	668	20 08 04
20 11 17	J1125+2610	07 56 49	42.9	103.7	-3.5		-40.5	25	668	20 11 17
20 12 32	=1123+264	07 58 19	43.1	104.0	-3.5		-40.4	75	677	20 11 18
20 12 47	J1125+2610	07 58 19	43.1	104.0	-3.5		-40.4	8	677	20 12 47
20 13 02	=1123+264	07 58 34	43.1	104.1	-3.5		-40.4	15	679	20 12 48
20 15 29	4C39.25	08 01 01	69.5	124.8	-1.4		-39.4	34	679	20 15 29
20 24 44	---	08 10 33	70.6	129.0	-1.3		-36.9	555	751	20 15 30
20 24 59	4C39.25	08 10 33	70.6	129.0	-1.3		-36.9	7	751	20 24 59
20 25 14	---	08 10 48	70.7	129.2	-1.3		-36.8	15	753	20 25 00
20 28 25	J1157	08 14 00	33.3	107.9	-3.7		-36.6	37	753	20 28 25
20 29 10	---	08 15 00	33.5	108.1	-3.7		-36.5	45	759	20 28 26
20 29 43	B1152	08 15 18	36.2	106.5	-3.7		-37.7	9	759	20 29 43
20 31 43	---	08 17 18	36.5	107.0	-3.6		-37.6	120	774	20 29 44
20 32 16	J1157	08 17 51	33.9	108.8	-3.7		-36.4	9	774	20 32 16
20 33 16	---	08 18 51	34.0	109.0	-3.7		-36.3	60	782	20 32 17
20 33 49	B1152	08 19 25	36.8	107.4	-3.6		-37.4	9	782	20 33 49
20 35 49	---	08 21 25	37.1	107.9	-3.6		-37.3	120	797	20 33 50
20 36 22	J1157	08 21 58	34.5	109.7	-3.6		-36.1	9	797	20 36 22
20 37 22	---	08 22 58	34.6	110.0	-3.6		-36.1	60	805	20 36 23
20 37 55	B1152	08 23 31	37.4	108.4	-3.5		-37.2	9	805	20 37 55
20 39 55	---	08 25 32	37.7	108.9	-3.5		-37.1	120	821	20 37 56
20 40 28	J1157	08 26 05	35.0	110.7	-3.5		-35.9	9	821	20 40 28
20 41 28	---	08 27 05	35.2	110.9	-3.5		-35.8	60	828	20 40 29
20 42 53	J1125+2610	08 28 30	47.4	111.5	-3.0		-38.5	26	828	20 42 53
20 44 08	=1123+264	08 30 00	47.6	111.9	-2.9		-38.4	75	838	20 42 54

Schedule for TORUN (Code Tr)

Page 7

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
20 44 23	J1125+2610	08 30 00	47.6	111.9	-2.9		-38.4	8	838	20 44 23
20 44 38	=1123+264	08 30 15	47.7	111.9	-2.9		-38.3	15	840	20 44 24
20 46 02	J1157	08 31 40	35.8	112.0	-3.4		-35.5	25	840	20 46 02
20 46 47	---	08 32 40	36.0	112.3	-3.4		-35.4	45	846	20 46 03
20 47 20	B1152	08 32 58	38.7	110.7	-3.4		-36.6	9	846	20 47 20
20 49 20	---	08 34 58	39.0	111.2	-3.4		-36.5	120	861	20 47 21
20 49 53	J1157	08 35 31	36.3	113.0	-3.4		-35.2	9	861	20 49 53
20 50 53	---	08 36 31	36.5	113.2	-3.4		-35.2	60	869	20 49 54
20 51 26	B1152	08 37 05	39.3	111.7	-3.3		-36.3	9	869	20 51 26
20 53 26	---	08 39 05	39.6	112.2	-3.3		-36.2	120	884	20 51 27
20 53 59	J1157	08 39 38	36.9	114.0	-3.3		-34.9	9	884	20 53 59
20 54 59	---	08 40 38	37.1	114.2	-3.3		-34.8	60	892	20 54 00
20 55 32	B1152	08 41 11	39.9	112.7	-3.2		-36.0	9	892	20 55 32
20 57 32	---	08 43 12	40.2	113.2	-3.2		-35.9	120	908	20 55 33
20 58 05	J1157	08 43 45	37.5	115.0	-3.2		-34.6	9	908	20 58 05
20 59 05	---	08 44 45	37.6	115.2	-3.2		-34.5	60	915	20 58 06
21 00 30	J1125+2610	08 46 10	49.8	116.2	-2.7		-36.9	26	915	21 00 30
21 01 45	=1123+264	08 47 40	50.0	116.6	-2.6		-36.7	75	925	21 00 31
21 02 00	J1125+2610	08 47 40	50.0	116.6	-2.6		-36.7	8	925	21 02 00
21 02 15	=1123+264	08 47 56	50.1	116.7	-2.6		-36.7	15	927	21 02 01
21 03 29	J1157	08 49 09	38.2	116.3	-3.2		-34.2	15	927	21 03 29
21 04 14	---	08 50 09	38.3	116.6	-3.1		-34.1	45	933	21 03 30
21 04 47	B1152	08 50 28	41.2	115.0	-3.1		-35.3	9	933	21 04 47
21 06 47	---	08 52 28	41.4	115.5	-3.1		-35.1	120	948	21 04 48
21 07 20	J1157	08 53 01	38.7	117.3	-3.1		-33.8	9	948	21 07 20
21 08 20	---	08 54 01	38.9	117.6	-3.1		-33.7	60	956	21 07 21
21 08 53	B1152	08 54 34	41.7	116.1	-3.0		-34.9	9	956	21 08 53
21 10 53	---	08 56 35	42.0	116.6	-3.0		-34.7	120	972	21 08 54
21 11 41	J1157	08 57 23	39.3	118.4	-3.0		-33.4	24	972	21 11 41
21 12 26	---	08 58 23	39.4	118.7	-3.0		-33.3	45	977	21 11 42

Schedule for TORUN (Code Tr)

Page 8

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
21 12 59	B1152	08 58 41	42.3	117.1	-3.0		-34.6	9	977	21 12 59
21 14 59	---	09 00 41	42.5	117.7	-2.9		-34.4	120	993	21 13 00
21 15 32	J1157	09 01 14	39.8	119.4	-3.0		-33.1	9	993	21 15 32
21 16 32	---	09 02 15	39.9	119.7	-2.9		-33.0	60	1001	21 15 33
21 17 05	B1152	09 02 48	42.8	118.2	-2.9		-34.2	8	1001	21 17 05
21 19 05	---	09 04 48	43.1	118.8	-2.9		-34.0	120	1016	21 17 06
21 19 38	J1157	09 05 21	40.3	120.5	-2.9		-32.7	9	1016	21 19 38
21 20 38	---	09 06 21	40.5	120.8	-2.9		-32.6	60	1024	21 19 39
21 21 11	B1152	09 06 54	43.4	119.3	-2.8		-33.8	8	1024	21 21 11
21 23 11	---	09 08 55	43.6	119.9	-2.8		-33.5	120	1039	21 21 12
21 23 44	J1157	09 09 28	40.9	121.6	-2.8		-32.2	9	1039	21 23 44
21 24 44	---	09 10 28	41.0	121.9	-2.8		-32.1	60	1047	21 23 45
21 26 09	J1125+2610	09 11 53	53.2	123.8	-2.2		-33.8	26	1047	21 26 09
21 27 24	=1123+264	09 13 24	53.4	124.3	-2.2		-33.5	75	1057	21 26 10
21 27 39	J1125+2610	09 13 24	53.4	124.3	-2.2		-33.5	7	1057	21 27 39
21 27 54	=1123+264	09 13 39	53.4	124.3	-2.2		-33.5	15	1059	21 27 40
21 29 18	J1157	09 15 03	41.6	123.1	-2.7		-31.6	26	1059	21 29 18
21 30 03	---	09 16 03	41.7	123.4	-2.7		-31.5	45	1064	21 29 19
21 30 36	B1152	09 16 21	44.6	121.9	-2.7		-32.8	8	1064	21 30 36
21 32 36	---	09 18 22	44.8	122.5	-2.6		-32.5	120	1080	21 30 37
21 33 09	J1157	09 18 55	42.1	124.2	-2.7		-31.2	9	1080	21 33 09
21 34 09	---	09 19 55	42.2	124.5	-2.6		-31.1	60	1088	21 33 10
21 34 42	B1152	09 20 28	45.1	123.1	-2.6		-32.3	8	1088	21 34 42
21 36 42	---	09 22 28	45.4	123.6	-2.6		-32.0	120	1103	21 34 43
21 37 16	J1157	09 23 01	42.6	125.3	-2.6		-30.7	9	1103	21 37 16
21 38 16	---	09 24 02	42.7	125.6	-2.6		-30.6	60	1111	21 37 17
21 38 49	B1152	09 24 35	45.6	124.2	-2.5		-31.8	8	1111	21 38 49
21 40 49	---	09 26 35	45.9	124.8	-2.5		-31.6	120	1126	21 38 50
21 41 22	J1157	09 27 08	43.1	126.5	-2.5		-30.2	9	1126	21 41 22
21 42 22	---	09 28 08	43.2	126.8	-2.5		-30.1	60	1134	21 41 23

Schedule for TORUN (Code Tr)

Page 9

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
21 43 47	J1125+2610	09 29 34	55.3	129.5	-2.0		-31.0	26	1134	21 43 47
21 45 02	=1123+264	09 31 04	55.5	130.0	-1.9		-30.8	75	1144	21 43 48
21 45 17	J1125+2610	09 31 04	55.5	130.0	-1.9		-30.8	7	1144	21 45 17
21 45 32	=1123+264	09 31 19	55.5	130.1	-1.9		-30.7	15	1146	21 45 18
21 46 56	J1157	09 32 43	43.7	128.1	-2.4		-29.5	26	1146	21 46 56
21 47 41	---	09 33 43	43.9	128.4	-2.4		-29.4	45	1152	21 46 57
21 48 14	B1152	09 34 02	46.8	127.0	-2.4		-30.6	8	1152	21 48 14
21 50 14	---	09 36 02	47.0	127.6	-2.3		-30.3	120	1167	21 48 15
21 50 47	J1157	09 36 35	44.2	129.2	-2.4		-29.0	8	1167	21 50 47
21 51 47	---	09 37 35	44.3	129.5	-2.3		-28.9	60	1175	21 50 48
21 52 20	B1152	09 38 08	47.3	128.2	-2.3		-30.1	8	1175	21 52 20
21 54 20	---	09 40 09	47.5	128.8	-2.3		-29.8	120	1190	21 52 21
21 54 53	J1157	09 40 42	44.7	130.4	-2.3		-28.5	8	1190	21 54 53
21 55 53	---	09 41 42	44.8	130.7	-2.3		-28.4	60	1198	21 54 54
21 56 26	B1152	09 42 15	47.7	129.5	-2.2		-29.5	8	1198	21 56 26
21 58 26	---	09 44 15	48.0	130.1	-2.2		-29.2	120	1213	21 56 27
21 58 59	J1157	09 44 48	45.1	131.6	-2.2		-27.9	8	1213	21 58 59
21 59 59	---	09 45 49	45.2	131.9	-2.2		-27.8	60	1221	21 59 00
22 01 24	J1125+2610	09 47 14	57.3	135.8	-1.7		-27.8	26	1221	22 01 24
22 02 39	=1123+264	09 48 44	57.4	136.3	-1.6		-27.5	75	1231	22 01 25
22 02 54	J1125+2610	09 48 44	57.4	136.3	-1.6		-27.5	7	1231	22 02 54
22 03 09	=1123+264	09 48 59	57.4	136.4	-1.6		-27.5	15	1233	22 02 55
22 04 33	J1157	09 50 24	45.7	133.3	-2.1		-27.1	26	1233	22 04 33
22 05 18	---	09 51 24	45.9	133.6	-2.1		-27.0	45	1239	22 04 34
22 05 51	B1152	09 51 42	48.8	132.4	-2.1		-28.1	8	1239	22 05 51
22 07 51	---	09 53 42	49.0	133.0	-2.0		-27.8	120	1254	22 05 52
22 08 24	J1157	09 54 15	46.2	134.5	-2.1		-26.5	8	1254	22 08 24
22 09 24	---	09 55 15	46.3	134.8	-2.1		-26.4	60	1262	22 08 25
22 09 57	B1152	09 55 49	49.3	133.7	-2.0		-27.4	8	1262	22 09 57
22 11 57	---	09 57 49	49.5	134.3	-2.0		-27.1	120	1277	22 09 58

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
22 12 30	J1157	09 58 22	46.6	135.8	-2.0		-25.9	8	1277	22 12 30
22 13 30	---	09 59 22	46.7	136.1	-2.0		-25.7	60	1285	22 12 31
22 14 03	B1152	09 59 55	49.7	135.0	-1.9		-26.8	8	1285	22 14 03
22 16 03	---	10 01 56	49.9	135.7	-1.9		-26.4	120	1301	22 14 04
22 16 36	J1157	10 02 29	47.0	137.1	-1.9		-25.2	8	1301	22 16 36
22 17 36	---	10 03 29	47.1	137.4	-1.9		-25.1	60	1308	22 16 37
22 19 02	J1125+2610	10 04 54	59.0	142.5	-1.4		-24.0	27	1308	22 19 02
22 20 17	=1123+264	10 06 25	59.1	143.1	-1.3		-23.7	75	1318	22 19 03
22 20 32	J1125+2610	10 06 25	59.1	143.1	-1.3		-23.7	7	1318	22 20 32
22 20 47	=1123+264	10 06 40	59.1	143.2	-1.3		-23.6	15	1320	22 20 33
22 22 11	J1157	10 08 04	47.6	138.9	-1.8		-24.3	27	1320	22 22 11
22 22 56	---	10 09 04	47.7	139.2	-1.8		-24.2	45	1326	22 22 12
22 23 29	B1152	10 09 22	50.7	138.1	-1.8		-25.2	8	1326	22 23 29
22 25 29	---	10 11 22	50.9	138.8	-1.7		-24.8	120	1341	22 23 30
22 26 02	J1157	10 11 56	48.0	140.2	-1.8		-23.7	8	1341	22 26 02
22 27 02	---	10 12 56	48.1	140.5	-1.8		-23.5	60	1349	22 26 03
22 27 35	B1152	10 13 29	51.1	139.5	-1.7		-24.4	8	1349	22 27 35
22 29 35	---	10 15 29	51.3	140.2	-1.7		-24.1	120	1364	22 27 36
22 30 08	J1157	10 16 02	48.4	141.5	-1.7		-22.9	8	1364	22 30 08
22 31 08	---	10 17 02	48.4	141.8	-1.7		-22.8	60	1372	22 30 09
22 31 41	B1152	10 17 36	51.5	141.0	-1.6		-23.7	8	1372	22 31 41
22 33 41	---	10 19 36	51.7	141.7	-1.6		-23.3	120	1388	22 31 42
22 34 14	J1157	10 20 09	48.7	142.9	-1.6		-22.2	8	1388	22 34 14
22 35 14	---	10 21 09	48.8	143.2	-1.6		-22.0	60	1395	22 34 15
22 36 39	J1125+2610	10 22 34	60.5	149.8	-1.1		-19.6	28	1395	22 36 39
22 37 54	=1123+264	10 24 05	60.6	150.5	-1.0		-19.2	75	1405	22 36 40
22 38 09	J1125+2610	10 24 05	60.6	150.5	-1.0		-19.2	7	1405	22 38 09
22 38 24	=1123+264	10 24 20	60.6	150.6	-1.0		-19.2	15	1407	22 38 10
22 39 48	J1157	10 25 44	49.2	144.8	-1.5		-21.2	27	1407	22 39 48
22 40 33	---	10 26 44	49.3	145.1	-1.5		-21.0	45	1413	22 39 49

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
22 41 06	B1152	10 27 02	52.3	144.3	-1.5		-21.8	8	1413	22 41 06
22 43 06	---	10 29 02	52.5	145.0	-1.4		-21.4	120	1428	22 41 07
22 43 39	J1157	10 29 35	49.6	146.1	-1.5		-20.4	8	1428	22 43 39
22 44 39	---	10 30 36	49.6	146.5	-1.5		-20.3	60	1436	22 43 40
22 45 12	B1152	10 31 09	52.7	145.8	-1.4		-21.0	8	1436	22 45 12
22 47 12	---	10 33 09	52.9	146.5	-1.4		-20.6	120	1452	22 45 13
22 47 45	J1157	10 33 42	49.9	147.5	-1.4		-19.6	8	1452	22 47 45
22 48 45	---	10 34 42	50.0	147.9	-1.4		-19.5	60	1459	22 47 46
22 49 18	B1152	10 35 16	53.0	147.3	-1.3		-20.2	8	1459	22 49 18
22 51 18	---	10 37 16	53.2	148.0	-1.3		-19.7	120	1475	22 49 19
22 51 51	J1157	10 37 49	50.2	149.0	-1.3		-18.8	8	1475	22 51 51
22 52 51	---	10 38 49	50.3	149.3	-1.3		-18.6	60	1482	22 51 52
22 54 16	J1125+2610	10 40 14	61.6	157.7	-0.8		-14.7	28	1482	22 54 16
22 55 31	=1123+264	10 41 44	61.7	158.3	-0.7		-14.3	75	1492	22 54 17
22 55 46	J1125+2610	10 41 44	61.7	158.3	-0.7		-14.3	7	1492	22 55 46
22 56 01	=1123+264	10 41 59	61.7	158.5	-0.7		-14.2	15	1494	22 55 47
22 57 13	J1157	10 43 12	50.6	150.9	-1.3		-17.7	16	1494	22 57 13
22 57 58	---	10 44 12	50.7	151.3	-1.2		-17.5	45	1500	22 57 14
22 58 31	B1152	10 44 30	53.8	150.7	-1.2		-18.2	8	1500	22 58 31
23 00 31	---	10 46 30	53.9	151.5	-1.2		-17.7	120	1515	22 58 32
23 01 04	J1157	10 47 03	50.9	152.3	-1.2		-16.9	8	1515	23 01 04
23 02 04	---	10 48 03	51.0	152.7	-1.2		-16.7	60	1523	23 01 05
23 02 37	B1152	10 48 37	54.0	152.3	-1.1		-17.2	8	1523	23 02 37
23 04 37	---	10 50 37	54.2	153.0	-1.1		-16.8	120	1539	23 02 38
23 05 25	J1157	10 51 25	51.2	153.9	-1.1		-16.0	23	1539	23 05 25
23 06 10	---	10 52 25	51.3	154.3	-1.1		-15.8	45	1544	23 05 26
23 06 43	B1152	10 52 44	54.3	153.9	-1.1		-16.3	8	1544	23 06 43
23 08 43	---	10 54 44	54.5	154.6	-1.0		-15.8	120	1560	23 06 44
23 09 16	J1157	10 55 17	51.4	155.3	-1.1		-15.2	8	1560	23 09 16
23 10 16	---	10 56 17	51.5	155.7	-1.0		-14.9	60	1568	23 09 17

Schedule for TORUN (Code Tr)

Page 12

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
23 10 49	B1152	10 56 51	54.6	155.5	-1.0		-15.3	8	1568	23 10 49
23 12 49	---	10 58 51	54.7	156.3	-1.0		-14.9	120	1583	23 10 50
23 13 22	J1157	10 59 24	51.7	156.9	-1.0		-14.3	8	1583	23 13 22
23 14 22	---	11 00 24	51.8	157.2	-1.0		-14.0	60	1591	23 13 23
23 14 56	B1152	11 00 58	54.8	157.1	-0.9		-14.4	8	1591	23 14 56
23 16 56	---	11 02 58	55.0	157.9	-0.9		-13.9	120	1606	23 14 57
23 17 29	J1157	11 03 31	51.9	158.4	-0.9		-13.3	8	1606	23 17 29
23 18 29	---	11 04 31	52.0	158.8	-0.9		-13.1	60	1614	23 17 30
23 18 49	J1157	11 04 51	52.0	158.9	-0.9		-13.0	14	1614	23 18 49
23 19 49	---	11 05 52	52.1	159.3	-0.9		-12.8	60	1622	23 18 50
23 21 13	J1125+2610	11 07 15	62.8	170.5	-0.3		-6.4	30	1622	23 21 13
23 22 28	=1123+264	11 08 46	62.8	171.2	-0.3		-5.9	75	1632	23 21 14
23 23 50	J1157	11 09 54	52.3	160.8	-0.8		-11.9	29	1632	23 23 50
23 24 35	---	11 10 54	52.3	161.2	-0.8		-11.6	45	1637	23 23 51
23 25 09	B1152	11 11 12	55.4	161.2	-0.7		-11.9	8	1637	23 25 09
23 27 09	---	11 13 13	55.5	162.0	-0.7		-11.3	120	1653	23 25 10
23 27 42	J1157	11 13 46	52.4	162.3	-0.7		-11.0	8	1653	23 27 42
23 28 42	---	11 14 46	52.5	162.7	-0.7		-10.7	60	1661	23 27 43
23 29 16	B1152	11 15 20	55.6	162.9	-0.7		-10.8	8	1661	23 29 16
23 31 16	---	11 17 20	55.7	163.7	-0.6		-10.3	120	1676	23 29 17
23 31 49	J1157	11 17 54	52.6	163.9	-0.7		-10.0	8	1676	23 31 49
23 32 49	---	11 18 54	52.7	164.3	-0.7		-9.8	60	1684	23 31 50
23 33 23	B1152	11 19 27	55.8	164.6	-0.6		-9.8	8	1684	23 33 23
23 35 23	---	11 21 28	55.8	165.4	-0.6		-9.2	120	1699	23 33 24
23 35 56	J1157	11 22 01	52.8	165.5	-0.6		-9.0	8	1699	23 35 56
23 36 56	---	11 23 01	52.8	165.9	-0.6		-8.8	60	1707	23 35 57
23 37 16	J1157	11 23 21	52.8	166.1	-0.6		-8.7	14	1707	23 37 16
23 38 16	---	11 24 22	52.9	166.5	-0.6		-8.4	60	1715	23 37 17
23 39 38	J1125+2610	11 25 44	63.0	179.6	-0.0		-0.3	31	1715	23 39 38
23 40 53	=1123+264	11 27 15	63.0	180.3	0.0		0.2	75	1724	23 39 39

Schedule for TORUN (Code Tr)

Page 13

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 27 Feb 2013 Day 58 ---										
23 42 15	J1157	11 28 22	53.0	168.0	-0.5		-7.5	30	1724	23 42 15
23 43 00	---	11 29 22	53.0	168.4	-0.5		-7.2	45	1730	23 42 16
23 43 34	B1152	11 29 40	56.1	168.8	-0.4		-7.1	8	1730	23 43 34
23 45 34	---	11 31 41	56.2	169.7	-0.4		-6.6	120	1746	23 43 35
23 46 07	J1157	11 32 14	53.1	169.6	-0.4		-6.5	8	1746	23 46 07
23 47 07	---	11 33 14	53.1	170.0	-0.4		-6.3	60	1753	23 46 08
23 47 41	B1152	11 33 48	56.2	170.6	-0.4		-6.0	8	1753	23 47 41
23 49 41	---	11 35 49	56.3	171.4	-0.3		-5.5	120	1769	23 47 42
23 50 14	J1157	11 36 22	53.2	171.2	-0.4		-5.5	8	1769	23 50 14
23 51 14	---	11 37 22	53.2	171.6	-0.3		-5.2	60	1777	23 50 15
23 51 48	B1152	11 37 56	56.3	172.3	-0.3		-4.9	8	1777	23 51 48
23 53 48	---	11 39 56	56.3	173.2	-0.3		-4.4	120	1792	23 51 49
23 54 22	J1157	11 40 30	53.3	172.9	-0.3		-4.5	8	1792	23 54 22
23 55 22	---	11 41 30	53.3	173.3	-0.3		-4.2	60	1800	23 54 23
23 55 42	J1157	11 41 50	53.3	173.4	-0.3		-4.1	14	1800	23 55 42
23 56 42	---	11 42 50	53.4	173.8	-0.3		-3.9	60	1808	23 55 43
23 58 03	J1125+2610	11 44 11	62.8	188.7	0.3		5.8	32	1808	23 58 03
23 59 18	=1123+264	11 45 42	62.8	189.4	0.3		6.3	75	1817	23 58 04
23 59 33	J1125+2610	11 45 42	62.8	189.4	0.3		6.3	7	1817	23 59 33
23 59 48	=1123+264	11 45 57	62.8	189.5	0.3		6.3	15	1819	23 59 34
--- Thu 28 Feb 2013 Day 59 ---										
00 01 08	J1157	11 47 17	53.4	175.6	-0.2		-2.8	31	1819	00 01 08
00 01 53	---	11 48 17	53.4	176.0	-0.2		-2.5	45	1825	00 01 09
00 02 26	B1152	11 48 36	56.5	176.8	-0.1		-2.0	8	1825	00 02 26
00 04 26	---	11 50 36	56.5	177.7	-0.1		-1.5	120	1841	00 02 27
00 05 00	J1157	11 51 10	53.5	177.1	-0.1		-1.8	8	1841	00 05 00
00 06 00	---	11 52 10	53.5	177.5	-0.1		-1.5	60	1848	00 05 01
00 06 34	B1152	11 52 44	56.5	178.6	-0.1		-0.9	9	1848	00 06 34
00 08 34	---	11 54 44	56.5	179.5	-0.0		-0.3	120	1864	00 06 35

Schedule for TORUN (Code Tr)

Page 14

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
00 09 07	J1157	11 55 18	53.5	178.8	-0.0		-0.8	8	1864	00 09 07
00 10 07	---	11 56 18	53.5	179.2	-0.0		-0.5	60	1871	00 09 08
00 10 41	B1152	11 56 52	56.5	180.4	0.0		0.2	9	1871	00 10 41
00 12 41	---	11 58 53	56.5	181.2	0.0		0.8	120	1887	00 10 42
00 13 15	J1157	11 59 26	53.5	180.5	0.0		0.3	8	1887	00 13 15
00 14 15	---	12 00 26	53.5	180.9	0.0		0.5	60	1895	00 13 16
00 15 34	J1125+2610	12 01 46	62.2	197.1	0.6		11.3	32	1895	00 15 34
00 16 49	=1123+264	12 03 16	62.1	197.8	0.6		11.8	75	1904	00 15 35
00 17 04	J1125+2610	12 03 16	62.1	197.8	0.6		11.8	7	1904	00 17 04
00 17 19	=1123+264	12 03 31	62.1	197.9	0.6		11.9	15	1906	00 17 05
00 18 37	J1157	12 04 49	53.5	182.6	0.1		1.6	32	1906	00 18 37
00 19 22	---	12 05 49	53.4	183.0	0.1		1.9	45	1912	00 18 38
00 19 56	B1152	12 06 08	56.4	184.3	0.2		2.7	9	1912	00 19 56
00 21 56	---	12 08 08	56.4	185.2	0.2		3.3	120	1928	00 19 57
00 22 29	J1157	12 08 42	53.4	184.2	0.2		2.6	9	1928	00 22 29
00 23 29	---	12 09 42	53.4	184.6	0.2		2.9	60	1935	00 22 30
00 24 03	B1152	12 10 16	56.4	186.1	0.2		3.9	9	1935	00 24 03
00 26 03	---	12 12 17	56.3	186.9	0.3		4.4	120	1951	00 24 04
00 26 37	J1157	12 12 50	53.4	185.8	0.2		3.7	9	1951	00 26 37
00 27 37	---	12 13 51	53.3	186.3	0.3		3.9	60	1959	00 26 38
00 28 11	B1152	12 14 24	56.3	187.8	0.3		5.0	9	1959	00 28 11
00 30 11	---	12 16 25	56.3	188.7	0.3		5.5	120	1974	00 28 12
00 30 44	J1157	12 16 59	53.3	187.5	0.3		4.7	9	1974	00 30 44
00 31 44	---	12 17 59	53.3	187.9	0.3		4.9	60	1982	00 30 45
00 33 04	J1125+2610	12 19 19	61.3	205.2	0.9		16.5	31	1982	00 33 04
00 34 19	=1123+264	12 20 49	61.2	205.9	0.9		17.0	75	1991	00 33 05
00 34 34	J1125+2610	12 20 49	61.2	205.9	0.9		17.0	7	1991	00 34 34
00 34 49	=1123+264	12 21 04	61.1	206.0	0.9		17.0	15	1993	00 34 35
00 36 07	J1157	12 22 23	53.2	189.7	0.4		6.0	30	1993	00 36 07
00 36 52	---	12 23 23	53.1	190.1	0.4		6.3	45	1999	00 36 08

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
00 37 26	B1152	12 23 42	56.1	191.7	0.5		7.4	9	1999	00 37 26
00 39 26	---	12 25 42	56.0	192.6	0.5		8.0	120	2015	00 37 27
00 40 00	J1157	12 26 16	53.1	191.2	0.5		7.0	9	2015	00 40 00
00 41 00	---	12 27 16	53.0	191.6	0.5		7.2	60	2022	00 40 01
00 41 33	B1152	12 27 50	55.9	193.5	0.5		8.5	9	2022	00 41 33
00 43 33	---	12 29 50	55.9	194.3	0.6		9.0	120	2038	00 41 34
00 44 07	J1157	12 30 24	52.9	192.8	0.5		8.0	9	2038	00 44 07
00 45 07	---	12 31 24	52.9	193.2	0.6		8.2	60	2046	00 44 08
00 45 41	B1152	12 31 58	55.8	195.2	0.6		9.6	9	2046	00 45 41
00 47 41	---	12 33 58	55.7	196.0	0.6		10.1	120	2061	00 45 42
00 48 14	J1157	12 34 32	52.8	194.5	0.6		9.0	9	2061	00 48 14
00 49 14	---	12 35 32	52.8	194.8	0.6		9.2	60	2069	00 48 15
00 50 39	J1125+2610	12 36 57	60.0	212.8	1.2		21.3	34	2069	00 50 39
00 51 54	=1123+264	12 38 27	59.9	213.5	1.2		21.6	75	2079	00 50 40
00 52 09	J1125+2610	12 38 27	59.9	213.5	1.2		21.6	7	2079	00 52 09
00 52 24	=1123+264	12 38 42	59.8	213.6	1.2		21.7	15	2081	00 52 10
00 53 47	J1157	12 40 05	52.6	196.6	0.7		10.3	34	2081	00 53 47
00 54 32	---	12 41 05	52.5	197.0	0.7		10.6	45	2086	00 53 48
00 55 05	B1152	12 41 24	55.4	199.0	0.8		12.0	9	2086	00 55 05
00 57 05	---	12 43 24	55.3	199.8	0.8		12.5	120	2102	00 55 06
00 57 39	J1157	12 43 58	52.4	198.1	0.8		11.2	9	2102	00 57 39
00 58 39	---	12 44 58	52.3	198.5	0.8		11.5	60	2110	00 57 40
00 59 13	B1152	12 45 32	55.1	200.7	0.8		13.0	9	2110	00 59 13
01 01 13	---	12 47 32	55.0	201.5	0.9		13.5	120	2125	00 59 14
01 01 46	J1157	12 48 05	52.2	199.7	0.8		12.2	9	2125	01 01 46
01 02 46	---	12 49 06	52.1	200.1	0.8		12.4	60	2133	01 01 47
01 03 19	B1152	12 49 39	54.9	202.3	0.9		14.0	9	2133	01 03 19
01 05 19	---	12 51 40	54.8	203.1	0.9		14.5	120	2148	01 03 20
01 05 53	J1157	12 52 13	52.0	201.3	0.9		13.1	9	2148	01 05 53
01 06 53	---	12 53 13	51.9	201.6	0.9		13.4	60	2156	01 05 54

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
01 08 21	J1125+2610	12 54 42	58.4	220.0	1.5		25.4	37	2156	01 08 21
01 09 36	=1123+264	12 56 12	58.2	220.6	1.5		25.8	75	2166	01 08 22
01 09 51	J1125+2610	12 56 12	58.2	220.6	1.5		25.8	7	2166	01 09 51
01 10 06	=1123+264	12 56 27	58.2	220.6	1.5		25.8	15	2168	01 09 52
01 11 23	J1157	12 57 44	51.7	203.3	1.0		14.4	26	2168	01 11 23
01 12 08	---	12 58 44	51.6	203.7	1.0		14.6	45	2173	01 11 24
01 12 41	B1152	12 59 02	54.3	206.0	1.1		16.2	9	2173	01 12 41
01 14 41	---	13 01 02	54.2	206.8	1.1		16.7	120	2189	01 12 42
01 15 14	J1157	13 01 35	51.4	204.8	1.1		15.2	9	2189	01 15 14
01 16 14	---	13 02 35	51.4	205.2	1.1		15.4	60	2197	01 15 15
01 16 47	B1152	13 03 09	54.1	207.6	1.1		17.2	9	2197	01 16 47
01 18 47	---	13 05 09	53.9	208.4	1.2		17.6	120	2212	01 16 48
01 19 35	J1157	13 05 57	51.1	206.4	1.1		16.2	24	2212	01 19 35
01 20 20	---	13 06 57	51.1	206.8	1.1		16.4	45	2218	01 19 36
01 20 53	B1152	13 07 15	53.8	209.2	1.2		18.1	9	2218	01 20 53
01 22 53	---	13 09 16	53.6	209.9	1.2		18.5	120	2233	01 20 54
01 23 26	J1157	13 09 49	50.9	207.8	1.2		17.0	9	2233	01 23 26
01 24 26	---	13 10 49	50.8	208.2	1.2		17.2	60	2241	01 23 27
01 24 59	B1152	13 11 22	53.5	210.7	1.3		19.0	9	2241	01 24 59
01 26 59	---	13 13 23	53.3	211.5	1.3		19.4	120	2257	01 25 00
01 27 32	J1157	13 13 56	50.6	209.3	1.3		17.8	9	2257	01 27 32
01 28 32	---	13 14 56	50.5	209.6	1.3		18.1	60	2264	01 27 33
01 29 05	B1152	13 15 29	53.1	212.3	1.3		19.9	9	2264	01 29 05
01 31 05	---	13 17 30	53.0	213.0	1.4		20.3	120	2280	01 29 06
01 31 38	J1157	13 18 03	50.3	210.8	1.3		18.7	9	2280	01 31 38
01 32 38	---	13 19 03	50.2	211.1	1.3		18.9	60	2288	01 31 39
01 34 10	J1125+2610	13 20 35	55.7	229.4	1.9		30.5	40	2288	01 34 10
01 35 25	=1123+264	13 22 05	55.5	229.9	1.9		30.8	75	2297	01 34 11
01 35 40	J1125+2610	13 22 05	55.5	229.9	1.9		30.8	7	2297	01 35 40
01 35 55	=1123+264	13 22 20	55.5	230.0	1.9		30.8	15	2299	01 35 41

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
01 37 24	J1157	13 23 49	49.8	212.8	1.4		19.8	39	2299	01 37 24
01 38 09	---	13 24 50	49.7	213.1	1.4		20.0	45	2305	01 37 25
01 38 42	B1152	13 25 08	52.3	215.8	1.5		21.9	9	2305	01 38 42
01 40 42	---	13 27 08	52.2	216.5	1.5		22.3	120	2320	01 38 43
01 41 15	J1157	13 27 41	49.5	214.1	1.5		20.6	9	2320	01 41 15
01 42 15	---	13 28 41	49.4	214.5	1.5		20.8	60	2328	01 41 16
01 42 48	B1152	13 29 14	52.0	217.2	1.6		22.7	9	2328	01 42 48
01 44 48	---	13 31 15	51.8	217.9	1.6		23.1	120	2344	01 42 49
01 45 21	J1157	13 31 48	49.1	215.5	1.6		21.4	9	2344	01 45 21
01 46 21	---	13 32 48	49.1	215.9	1.6		21.5	60	2351	01 45 22
01 46 54	B1152	13 33 21	51.6	218.7	1.6		23.5	10	2351	01 46 54
01 48 54	---	13 35 21	51.4	219.4	1.7		23.8	120	2367	01 46 55
01 49 27	J1157	13 35 55	48.8	216.9	1.6		22.1	9	2367	01 49 27
01 50 27	---	13 36 55	48.7	217.3	1.6		22.3	60	2375	01 49 28
01 52 00	J1125+2610	13 38 27	53.5	235.3	2.2		33.3	42	2375	01 52 00
01 53 15	=1123+264	13 39 57	53.3	235.8	2.2		33.6	75	2384	01 52 01
01 53 30	J1125+2610	13 39 57	53.3	235.8	2.2		33.6	7	2384	01 53 30
01 53 45	=1123+264	13 40 13	53.3	235.8	2.2		33.6	15	2386	01 53 31
01 55 15	J1157	13 41 43	48.2	218.9	1.7		23.2	41	2386	01 55 15
01 56 00	---	13 42 43	48.2	219.2	1.7		23.3	45	2392	01 55 16
01 56 33	B1152	13 43 01	50.6	222.0	1.8		25.2	10	2392	01 56 33
01 58 33	---	13 45 01	50.4	222.6	1.8		25.6	120	2408	01 56 34
01 59 06	J1157	13 45 35	47.9	220.1	1.8		23.8	10	2408	01 59 06
02 00 06	---	13 46 35	47.8	220.5	1.8		24.0	60	2415	01 59 07
02 00 39	B1152	13 47 08	50.2	223.3	1.9		25.9	10	2415	02 00 39
02 02 39	---	13 49 08	50.0	224.0	1.9		26.3	120	2431	02 00 40
02 03 12	J1157	13 49 41	47.5	221.5	1.9		24.5	10	2431	02 03 12
02 04 12	---	13 50 41	47.4	221.8	1.9		24.7	60	2439	02 03 13
02 04 45	B1152	13 51 15	49.8	224.7	1.9		26.6	10	2439	02 04 45
02 06 45	---	13 53 15	49.6	225.3	2.0		27.0	120	2454	02 04 46

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
02 07 18	J1157	13 53 48	47.1	222.8	1.9		25.2	10	2454	02 07 18
02 08 18	---	13 54 48	47.0	223.1	1.9		25.4	60	2462	02 07 19
02 09 50	J1125+2610	13 56 20	51.3	240.7	2.5		35.7	42	2462	02 09 50
02 11 05	=1123+264	13 57 51	51.1	241.2	2.5		35.8	75	2471	02 09 51
02 11 20	J1125+2610	13 57 51	51.1	241.2	2.5		35.8	8	2471	02 11 20
02 11 35	=1123+264	13 58 06	51.0	241.2	2.5		35.9	15	2473	02 11 21
02 13 05	J1157	13 59 36	46.5	224.6	2.0		26.1	41	2473	02 13 05
02 13 50	---	14 00 36	46.4	224.9	2.0		26.3	45	2479	02 13 06
02 14 23	B1152	14 00 54	48.7	227.8	2.1		28.2	10	2479	02 14 23
02 16 23	---	14 02 54	48.5	228.4	2.1		28.5	120	2495	02 14 24
02 16 56	J1157	14 03 28	46.0	225.8	2.1		26.7	10	2495	02 16 56
02 17 56	---	14 04 28	45.9	226.1	2.1		26.9	60	2502	02 16 57
02 18 29	B1152	14 05 01	48.3	229.1	2.2		28.8	10	2502	02 18 29
02 20 29	---	14 07 01	48.1	229.7	2.2		29.1	120	2518	02 18 30
02 21 02	J1157	14 07 34	45.6	227.1	2.2		27.3	10	2518	02 21 02
02 22 02	---	14 08 35	45.5	227.4	2.2		27.5	60	2526	02 21 03
02 22 35	B1152	14 09 08	47.8	230.3	2.2		29.4	10	2526	02 22 35
02 24 35	---	14 11 08	47.6	231.0	2.3		29.7	120	2541	02 22 36
02 25 08	J1157	14 11 41	45.1	228.3	2.2		27.9	10	2541	02 25 08
02 26 08	---	14 12 41	45.0	228.6	2.2		28.0	60	2549	02 25 09
02 27 40	J1125+2610	14 14 14	48.9	245.7	2.8		37.6	43	2549	02 27 40
02 28 55	=1123+264	14 15 44	48.7	246.1	2.8		37.7	75	2559	02 27 41
02 29 10	J1125+2610	14 15 44	48.7	246.1	2.8		37.7	8	2559	02 29 10
02 29 25	=1123+264	14 15 59	48.6	246.2	2.8		37.7	15	2560	02 29 11
02 30 55	J1157	14 17 29	44.5	230.1	2.3		28.7	42	2560	02 30 55
02 31 40	---	14 18 29	44.4	230.3	2.3		28.8	45	2566	02 30 56
02 32 13	B1152	14 18 47	46.7	233.2	2.4		30.7	11	2566	02 32 13
02 34 13	---	14 20 48	46.4	233.8	2.4		31.0	120	2582	02 32 14
02 34 46	J1157	14 21 21	44.0	231.2	2.4		29.2	10	2582	02 34 46
02 35 46	---	14 22 21	43.9	231.5	2.4		29.4	60	2590	02 34 47

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
02 36 20	B1152	14 22 55	46.2	234.5	2.4		31.2	11	2590	02 36 20
02 38 20	---	14 24 55	45.9	235.0	2.5		31.5	120	2605	02 36 21
02 38 53	J1157	14 25 28	43.5	232.4	2.5		29.8	10	2605	02 38 53
02 39 53	---	14 26 28	43.4	232.7	2.5		29.9	60	2613	02 38 54
02 40 26	B1152	14 27 02	45.7	235.6	2.5		31.7	11	2613	02 40 26
02 42 26	---	14 29 02	45.4	236.2	2.6		32.0	120	2628	02 40 27
02 43 00	J1157	14 29 36	43.1	233.6	2.5		30.3	10	2628	02 43 00
02 44 00	---	14 30 36	42.9	233.8	2.5		30.4	60	2636	02 43 01
02 45 32	J1125+2610	14 32 08	46.4	250.4	3.1		39.0	45	2636	02 45 32
02 46 47	=1123+264	14 33 39	46.2	250.8	3.1		39.2	75	2646	02 45 33
02 47 02	J1125+2610	14 33 39	46.2	250.8	3.1		39.2	8	2646	02 47 02
02 47 17	=1123+264	14 33 54	46.1	250.9	3.1		39.2	15	2648	02 47 03
02 48 47	J1157	14 35 24	42.3	235.2	2.6		31.0	43	2648	02 48 47
02 49 32	---	14 36 24	42.2	235.5	2.6		31.1	45	2653	02 48 48
02 50 05	B1152	14 36 43	44.5	238.4	2.7		32.9	11	2653	02 50 05
02 52 05	---	14 38 43	44.2	238.9	2.7		33.1	120	2669	02 50 06
02 52 38	J1157	14 39 16	41.9	236.3	2.7		31.4	11	2669	02 52 38
02 53 38	---	14 40 16	41.7	236.5	2.7		31.5	60	2677	02 52 39
02 54 12	B1152	14 40 50	43.9	239.5	2.7		33.3	12	2677	02 54 12
02 56 12	---	14 42 51	43.7	240.1	2.8		33.5	120	2692	02 54 13
02 56 45	J1157	14 43 24	41.3	237.4	2.8		31.8	11	2692	02 56 45
02 57 45	---	14 44 24	41.2	237.6	2.8		32.0	60	2700	02 56 46
02 58 20	B1152	14 44 58	43.4	240.6	2.8		33.7	12	2700	02 58 20
03 00 20	---	14 46 58	43.1	241.2	2.8		33.9	120	2715	02 58 21
03 00 53	J1157	14 47 32	40.8	238.5	2.8		32.3	11	2715	03 00 53
03 01 53	---	14 48 32	40.7	238.8	2.8		32.4	60	2723	03 00 54
03 03 25	J1125+2610	14 50 04	43.8	254.8	3.4		40.2	45	2723	03 03 25
03 04 40	=1123+264	14 51 34	43.6	255.2	3.4		40.3	75	2733	03 03 26
03 04 55	J1125+2610	14 51 34	43.6	255.2	3.4		40.3	8	2733	03 04 55
03 05 10	=1123+264	14 51 49	43.5	255.2	3.4		40.3	15	2735	03 04 56

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
03 06 39	J1157	14 53 19	40.1	240.0	2.9		32.9	44	2735	03 06 39
03 07 24	---	14 54 19	39.9	240.3	2.9		33.0	45	2740	03 06 40
03 07 58	B1152	14 54 38	42.1	243.2	3.0		34.7	12	2740	03 07 58
03 09 58	---	14 56 38	41.8	243.7	3.0		34.9	120	2756	03 07 59
03 10 31	J1157	14 57 12	39.6	241.0	3.0		33.2	11	2756	03 10 31
03 11 31	---	14 58 12	39.4	241.3	3.0		33.3	60	2764	03 10 32
03 12 05	B1152	14 58 46	41.5	244.3	3.0		35.0	12	2764	03 12 05
03 14 05	---	15 00 46	41.3	244.8	3.1		35.2	120	2779	03 12 06
03 14 38	J1157	15 01 20	39.0	242.1	3.1		33.6	11	2779	03 14 38
03 15 38	---	15 02 20	38.9	242.4	3.1		33.7	60	2787	03 14 39
03 16 13	B1152	15 02 54	41.0	245.3	3.1		35.4	12	2787	03 16 13
03 18 13	---	15 04 55	40.7	245.8	3.1		35.6	120	2802	03 16 14
03 18 46	J1157	15 05 28	38.5	243.2	3.1		34.0	11	2802	03 18 46
03 19 46	---	15 06 28	38.3	243.4	3.1		34.1	60	2810	03 18 47
03 21 17	J1125+2610	15 07 59	41.2	258.9	3.7		41.0	45	2810	03 21 17
03 22 32	=1123+264	15 09 30	41.0	259.3	3.7		41.1	75	2820	03 21 18
03 22 47	J1125+2610	15 09 30	41.0	259.3	3.7		41.1	8	2820	03 22 47
03 23 02	=1123+264	15 09 45	40.9	259.3	3.7		41.1	15	2822	03 22 48
03 24 30	J1157	15 11 13	37.7	244.6	3.2		34.5	44	2822	03 24 30
03 25 15	---	15 12 14	37.6	244.9	3.2		34.6	45	2828	03 24 31
03 25 48	B1152	15 12 32	39.7	247.7	3.3		36.1	11	2828	03 25 48
03 27 48	---	15 14 32	39.4	248.2	3.3		36.3	120	2843	03 25 49
03 28 22	J1157	15 15 05	37.2	245.6	3.3		34.8	11	2843	03 28 22
03 29 22	---	15 16 05	37.0	245.8	3.3		34.9	60	2851	03 28 23
03 29 55	B1152	15 16 38	39.1	248.7	3.3		36.4	11	2851	03 29 55
03 31 55	---	15 18 39	38.8	249.2	3.4		36.6	120	2866	03 29 56
03 32 43	J1157	15 19 27	36.6	246.6	3.4		35.1	26	2866	03 32 43
03 33 28	---	15 20 27	36.4	246.9	3.4		35.2	45	2872	03 32 44
03 34 01	B1152	15 20 46	38.5	249.7	3.4		36.7	12	2872	03 34 01
03 36 01	---	15 22 46	38.2	250.2	3.4		36.9	120	2888	03 34 02

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
03 36 35	J1157	15 23 20	36.0	247.6	3.4		35.4	11	2888	03 36 35
03 37 35	---	15 24 20	35.9	247.8	3.4		35.5	60	2895	03 36 36
03 38 09	B1152	15 24 54	37.9	250.7	3.5		37.0	13	2895	03 38 09
03 40 09	---	15 26 54	37.6	251.2	3.5		37.1	120	2911	03 38 10
03 40 42	J1157	15 27 28	35.5	248.6	3.5		35.7	11	2911	03 40 42
03 41 42	---	15 28 28	35.3	248.8	3.5		35.7	60	2919	03 40 43
03 42 16	B1152	15 29 02	37.3	251.7	3.6		37.2	13	2919	03 42 16
03 44 16	---	15 31 02	37.1	252.2	3.6		37.4	120	2934	03 42 17
03 44 49	J1157	15 31 36	34.9	249.6	3.6		35.9	11	2934	03 44 49
03 45 49	---	15 32 36	34.7	249.8	3.6		36.0	60	2942	03 44 50
03 47 18	J1125+2610	15 34 05	37.3	264.6	4.1		41.7	45	2942	03 47 18
03 48 33	=1123+264	15 35 35	37.1	264.9	4.1		41.8	75	2951	03 47 19
03 48 48	J1125+2610	15 35 35	37.1	264.9	4.1		41.8	8	2951	03 48 48
03 49 03	=1123+264	15 35 50	37.0	265.0	4.2		41.8	15	2953	03 48 49
03 50 30	J1157	15 37 17	34.1	250.9	3.7		36.3	43	2953	03 50 30
03 51 15	---	15 38 18	33.9	251.1	3.7		36.4	45	2959	03 50 31
03 51 49	B1152	15 38 36	36.0	253.9	3.7		37.8	12	2959	03 51 49
03 53 49	---	15 40 37	35.7	254.4	3.7		37.9	120	2975	03 51 50
03 54 22	J1157	15 41 10	33.5	251.8	3.7		36.5	11	2975	03 54 22
03 55 22	---	15 42 10	33.4	252.0	3.7		36.6	60	2982	03 54 23
03 55 56	B1152	15 42 44	35.4	254.9	3.8		38.0	13	2982	03 55 56
03 57 56	---	15 44 45	35.1	255.3	3.8		38.1	120	2998	03 55 57
03 58 29	J1157	15 45 18	32.9	252.7	3.8		36.7	11	2998	03 58 29
03 59 29	---	15 46 18	32.8	253.0	3.8		36.8	60	3006	03 58 30
04 00 03	B1152	15 46 52	34.8	255.8	3.8		38.2	13	3006	04 00 03
04 02 03	---	15 48 52	34.5	256.3	3.9		38.3	120	3021	04 00 04
04 02 36	J1157	15 49 25	32.3	253.7	3.9		37.0	11	3021	04 02 36
04 03 36	---	15 50 26	32.2	253.9	3.9		37.0	60	3029	04 02 37
04 05 04	J1125+2610	15 51 53	34.6	268.3	4.4		41.9	44	3029	04 05 04
04 06 19	=1123+264	15 53 24	34.4	268.6	4.4		41.9	75	3039	04 05 05

Schedule for TORUN (Code Tr)

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EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
04 06 34	J1125+2610	15 53 24	34.4	268.6	4.4		41.9	8	3039	04 06 34
04 06 49	=1123+264	15 53 39	34.4	268.7	4.5		41.9	15	3040	04 06 35
04 08 14	J1157	15 55 04	31.5	255.0	3.9		37.2	43	3040	04 08 14
04 08 59	---	15 56 04	31.4	255.2	4.0		37.3	45	3046	04 08 15
04 09 33	B1152	15 56 23	33.4	257.9	4.0		38.6	12	3046	04 09 33
04 11 33	---	15 58 23	33.1	258.4	4.0		38.6	120	3062	04 09 34
04 12 06	J1157	15 58 57	31.0	255.8	4.0		37.4	11	3062	04 12 06
04 13 06	---	15 59 57	30.8	256.0	4.0		37.4	60	3069	04 12 07
04 13 40	B1152	16 00 31	32.8	258.9	4.1		38.7	12	3069	04 13 40
04 15 40	---	16 02 31	32.5	259.3	4.1		38.8	120	3085	04 13 41
04 16 13	J1157	16 03 04	30.4	256.7	4.1		37.6	11	3085	04 16 13
04 17 13	---	16 04 04	30.2	257.0	4.1		37.6	60	3093	04 16 14
04 17 46	B1152	16 04 38	32.2	259.8	4.1		38.8	12	3093	04 17 46
04 19 46	---	16 06 38	31.9	260.2	4.2		38.9	120	3108	04 17 47
04 20 19	J1157	16 07 11	29.8	257.6	4.1		37.7	11	3108	04 20 19
04 21 19	---	16 08 12	29.6	257.9	4.2		37.8	60	3116	04 20 20
04 22 45	J1125+2610	16 09 38	32.0	271.8	4.7		41.9	43	3116	04 22 45
04 24 00	=1123+264	16 11 08	31.7	272.1	4.7		41.9	75	3126	04 22 46
04 24 15	J1125+2610	16 11 08	31.7	272.1	4.7		41.9	8	3126	04 24 15
04 24 30	=1123+264	16 11 23	31.7	272.2	4.7		41.9	15	3128	04 24 16
04 25 54	J1157	16 12 47	28.9	258.9	4.2		37.9	42	3128	04 25 54
04 26 39	---	16 13 47	28.8	259.1	4.3		38.0	45	3133	04 25 55
04 27 13	B1152	16 14 06	30.8	261.8	4.3		39.1	12	3133	04 27 13
04 29 13	---	16 16 06	30.5	262.2	4.3		39.2	120	3149	04 27 14
04 29 45	J1157	16 16 39	28.4	259.7	4.3		38.1	11	3149	04 29 45
04 30 45	---	16 17 39	28.2	259.9	4.3		38.1	60	3157	04 29 46
04 31 19	B1152	16 18 13	30.1	262.7	4.4		39.2	12	3157	04 31 19
04 33 19	---	16 20 13	29.8	263.1	4.4		39.3	120	3172	04 31 20
04 33 52	J1157	16 20 46	27.8	260.6	4.4		38.2	11	3172	04 33 52
04 34 52	---	16 21 46	27.6	260.8	4.4		38.2	60	3180	04 33 53

Schedule for TORUN (Code Tr)

Page 23

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
04 35 25	B1152	16 22 20	29.5	263.5	4.4		39.3	12	3180	04 35 25
04 37 25	---	16 24 20	29.2	263.9	4.5		39.3	120	3195	04 35 26
04 37 58	J1157	16 24 53	27.1	261.4	4.4		38.3	11	3195	04 37 58
04 38 58	---	16 25 53	27.0	261.6	4.5		38.3	60	3203	04 37 59
04 40 22	J1125+2610	16 27 18	29.3	275.3	5.0		41.7	42	3203	04 40 22
04 41 37	=1123+264	16 28 48	29.1	275.6	5.0		41.7	75	3213	04 40 23
04 41 52	J1125+2610	16 28 48	29.1	275.6	5.0		41.7	8	3213	04 41 52
04 42 07	=1123+264	16 29 03	29.1	275.6	5.0		41.7	15	3215	04 41 53
04 43 30	J1157	16 30 26	26.3	262.6	4.5		38.4	41	3215	04 43 30
04 44 15	---	16 31 26	26.2	262.8	4.6		38.4	45	3220	04 43 31
04 44 48	B1152	16 31 44	28.1	265.5	4.6		39.4	12	3220	04 44 48
04 46 48	---	16 33 44	27.8	265.9	4.6		39.5	120	3236	04 44 49
04 47 20	J1157	16 34 17	25.7	263.4	4.6		38.5	11	3236	04 47 20
04 48 20	---	16 35 17	25.6	263.6	4.6		38.5	60	3244	04 47 21
04 48 54	B1152	16 35 51	27.5	266.3	4.7		39.5	12	3244	04 48 54
04 50 54	---	16 37 51	27.2	266.7	4.7		39.5	120	3259	04 48 55
04 51 26	J1157	16 38 23	25.1	264.3	4.7		38.6	11	3259	04 51 26
04 52 26	---	16 39 24	25.0	264.5	4.7		38.6	60	3267	04 51 27
04 53 00	B1152	16 39 57	26.9	267.2	4.7		39.5	12	3267	04 53 00
04 55 00	---	16 41 57	26.6	267.6	4.8		39.6	120	3282	04 53 01
04 55 32	J1157	16 42 30	24.5	265.1	4.7		38.6	11	3282	04 55 32
04 56 32	---	16 43 30	24.4	265.3	4.8		38.6	60	3290	04 55 33
04 57 55	J1125+2610	16 44 53	26.7	278.6	5.3		41.4	42	3290	04 57 55
04 59 10	=1123+264	16 46 23	26.5	278.9	5.3		41.3	75	3300	04 57 56
04 59 25	J1125+2610	16 46 23	26.5	278.9	5.3		41.3	8	3300	04 59 25
04 59 40	=1123+264	16 46 39	26.4	279.0	5.3		41.3	15	3302	04 59 26
05 01 01	J1157	16 48 00	23.7	266.2	4.8		38.7	40	3302	05 01 01
05 01 46	---	16 49 00	23.5	266.4	4.8		38.7	45	3308	05 01 02
05 02 19	B1152	16 49 18	25.5	269.1	4.9		39.6	12	3308	05 02 19
05 04 19	---	16 51 18	25.2	269.5	4.9		39.6	120	3323	05 02 20

Schedule for TORUN (Code Tr)

Page 24

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
05 04 51	J1157	16 51 51	23.1	267.0	4.9		38.7	11	3323	05 04 51
05 05 51	---	16 52 51	23.0	267.2	4.9		38.7	60	3331	05 04 52
05 06 24	B1152	16 53 24	24.9	269.9	5.0		39.6	12	3331	05 06 24
05 08 24	---	16 55 24	24.6	270.3	5.0		39.6	120	3346	05 06 25
05 08 57	J1157	16 55 57	22.5	267.9	5.0		38.8	11	3346	05 08 57
05 09 57	---	16 56 57	22.4	268.1	5.0		38.8	60	3354	05 08 58
05 10 30	B1152	16 57 30	24.3	270.7	5.0		39.6	12	3354	05 10 30
05 12 30	---	16 59 30	24.0	271.1	5.1		39.6	120	3369	05 10 31
05 13 02	J1157	17 00 03	21.9	268.7	5.0		38.8	11	3369	05 13 02
05 14 02	---	17 01 03	21.7	268.9	5.0		38.8	60	3377	05 13 03
05 15 24	J1125+2610	17 02 25	24.1	281.9	5.6		40.9	41	3377	05 15 24
05 16 39	=1123+264	17 03 55	23.9	282.2	5.6		40.8	75	3387	05 15 25
05 16 54	J1125+2610	17 03 55	23.9	282.2	5.6		40.8	8	3387	05 16 54
05 17 09	=1123+264	17 04 10	23.9	282.2	5.6		40.8	15	3389	05 16 55
05 18 29	J1157	17 05 30	21.1	269.8	5.1		38.8	40	3389	05 18 29
05 19 14	---	17 06 30	20.9	270.0	5.1		38.8	45	3395	05 18 30
05 19 46	B1152	17 06 48	22.9	272.5	5.2		39.5	11	3395	05 19 46
05 21 46	---	17 08 48	22.6	272.9	5.2		39.5	120	3410	05 19 47
05 22 18	J1157	17 09 20	20.5	270.5	5.2		38.8	11	3410	05 22 18
05 23 18	---	17 10 21	20.3	270.7	5.2		38.8	60	3418	05 22 19
05 23 51	B1152	17 10 53	22.3	273.3	5.2		39.5	12	3418	05 23 51
05 25 51	---	17 12 54	22.0	273.7	5.3		39.5	120	3433	05 23 52
05 26 23	J1157	17 13 26	19.9	271.4	5.3		38.8	11	3433	05 26 23
05 27 23	---	17 14 26	19.7	271.6	5.3		38.8	60	3441	05 26 24
05 27 56	B1152	17 14 59	21.6	274.1	5.3		39.5	12	3441	05 27 56
05 29 56	---	17 16 59	21.3	274.5	5.3		39.4	120	3457	05 27 57
05 30 28	J1157	17 17 31	19.3	272.2	5.3		38.8	10	3457	05 30 28
05 31 28	---	17 18 31	19.1	272.4	5.3		38.8	60	3464	05 30 29
05 32 48	J1125+2610	17 19 52	21.6	285.1	5.9		40.2	40	3464	05 32 48
05 34 03	=1123+264	17 21 22	21.4	285.4	5.9		40.1	75	3474	05 32 49

Schedule for TORUN (Code Tr)

Page 25

EVN 1.3cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
05 34 18	J1125+2610	17 21 22	21.4	285.4	5.9		40.1	8	3474	05 34 18
05 34 33	=1123+264	17 21 37	21.3	285.5	5.9		40.1	15	3476	05 34 19
05 35 52	J1157	17 22 56	18.5	273.2	5.4		38.7	39	3476	05 35 52
05 36 37	---	17 23 57	18.3	273.4	5.4		38.7	45	3482	05 35 53
05 37 09	B1152	17 24 14	20.3	275.9	5.5		39.3	11	3482	05 37 09
05 39 09	---	17 26 14	20.0	276.3	5.5		39.3	120	3497	05 37 10
05 39 41	J1157	17 26 46	17.9	274.0	5.5		38.7	10	3497	05 39 41
05 40 41	---	17 27 46	17.7	274.2	5.5		38.7	60	3505	05 39 42
05 41 14	B1152	17 28 19	19.6	276.7	5.5		39.3	11	3505	05 41 14
05 43 14	---	17 30 19	19.3	277.1	5.6		39.2	120	3520	05 41 15
05 43 45	J1157	17 30 51	17.3	274.8	5.5		38.6	10	3520	05 43 45
05 44 45	---	17 31 51	17.1	275.0	5.6		38.6	60	3528	05 43 46
05 45 18	B1152	17 32 24	19.0	277.5	5.6		39.2	11	3528	05 45 18
05 47 18	---	17 34 24	18.7	277.9	5.6		39.1	120	3544	05 45 19
05 47 50	J1157	17 34 56	16.7	275.6	5.6		38.6	10	3544	05 47 50
05 48 50	---	17 35 56	16.5	275.8	5.6		38.6	60	3551	05 47 51
05 50 09	J1125+2610	17 37 16	19.1	288.3	6.2		39.4	39	3551	05 50 09
05 51 24	=1123+264	17 38 46	18.9	288.6	6.2		39.3	75	3561	05 50 10
05 51 39	J1125+2610	17 38 46	18.9	288.6	6.2		39.3	8	3561	05 51 39
05 51 54	=1123+264	17 39 01	18.8	288.7	6.2		39.3	15	3563	05 51 40
05 53 12	J1157	17 40 19	15.9	276.6	5.7		38.5	38	3563	05 53 12
05 53 57	---	17 41 19	15.7	276.8	5.7		38.5	45	3569	05 53 13
05 54 29	B1152	17 41 36	17.7	279.3	5.8		39.0	11	3569	05 54 29
05 56 29	---	17 43 37	17.4	279.7	5.8		38.9	120	3584	05 54 30
05 57 00	J1157	17 44 08	15.3	277.4	5.8		38.4	10	3584	05 57 00
05 58 00	---	17 45 09	15.1	277.6	5.8		38.4	60	3592	05 57 01
05 58 33	B1152	17 45 41	17.1	280.1	5.8		38.9	11	3592	05 58 33
06 00 03	---	17 47 11	16.8	280.4	5.9		38.8	90	3604	05 58 34

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: sess113.K1024

Matching groups in ./freq.sess113K.dat:
tr1cm

Setup group:	4	Station:	TORUN	Total bit rate:	1024
Format:	MKIV1:2	Bits per sample:	2	Sample rate:	32.000
Number of channels:	16	DBE type:		Speedup factor:	0.50

Disk used to record data.

1st LO=	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00
	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00	21500.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set:	7	Setup file default.	Used pcal sets:	1				
LO sum=	22187.49	22187.49	22187.49	22187.49	22219.49	22219.49	22219.49	22219.49
	22251.49	22251.49	22251.49	22251.49	22283.49	22283.49	22283.49	22283.49
BBC fr=	687.49	687.49	687.49	687.49	719.49	719.49	719.49	719.49
	751.49	751.49	751.49	751.49	783.49	783.49	783.49	783.49
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Matching frequency sets:	7							

The following pulse cal sets were used with this setup:

Pulse cal detection set:	1	PCAL = 1MHZ						
PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- EVN 1.3cm

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
* B1152	11 52 43.909508	* 11 55 18.297100	11 56 00.896489	0.00
	19 56 23.87904	* 19 39 42.23000	19 35 03.07734	0.00
* J1157	11 55 00.750376	* 11 57 34.836270	11 58 17.356706	0.00
	16 55 41.52546	* 16 38 59.65005	16 34 20.70012	0.00
J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.711832	0.13
0923+392	39 15 23.56637	* 39 02 20.85177	38 58 42.76667	0.10
* 4C39.25	/opt/sched/sched_10.2/catalogs/sources.vlba			
* J1125+2610	11 23 14.869303	* 11 25 53.711923	11 26 37.557288	0.11
1123+264	26 26 49.99097	* 26 10 19.97857	26 05 43.62023	0.10

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
B1152	159.1
J1157	160.1
4C39.25	144.6
J1125+2610	159.3

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

Koniec K-band

n13m1tr

NETWORK MONITORING EXPERIMENT

PI: *Gabriele Surcis*

Address: JIVE Postbus 2 7990 AA Dwingeloo The Netherlands
Phone: +31-521-596508 EMAIL: surcis@jive.nl
Phone during observation: +31-521-596508

Notes: 5cm NME and ftp fringe test for session 1/2013
 (512 Mbps, L+R, 2-bit sampling, 2 MHz filters)
 Please send the disk pack by express to JIVE
 Please DO NOT use the phase cal signal.

COVER LETTER:

This is the schedule for the 5cm NME and ftp fringe-test on 28 February 2013 involving 9 antennas: Eb Wb1 Jb2 On25 Mc Nt Tr Ys Hh (Jm, Od, Nd, Yd, Hd). The NME uses a standard setup with 512 Mbps. The schedule consists of long integrations on strong calibrators like 0528+134 as well as phase-referencing parts with a continuum source as targets.

Three ftp-fringe tests are scheduled throughout the experiment:

15:09:58 (scan 2, 2 sec, 0528+134)
16:08:56 (scan 19, 4 sec, 0528+134)
16:52:56 (scan 34, 4 sec, 0528+134)

Please make sure that the autoftp is set up correctly. Thanks!

Good luck with the session!

Gabriele

Schedule for TORUN (Code Tr)

Page 2

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
Next scan frequencies: 6662.52 6662.52 6662.52 6662.52 6666.52 6666.52 6666.52 6666.52										
6670.52 6670.52 6670.52 6670.52 6674.52 6674.52 6674.52 6674.52										
Next BBC frequencies: 762.52 762.52 762.52 762.52 766.52 766.52 766.52 766.52										
770.52 770.52 770.52 770.52 774.52 774.52 774.52 774.52										
Next scan bandwidths: 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
15 00 00	0528+134	02 48 37	39.0	125.2	-2.7		-30.3	0	0	15 00 00
15 05 00	---	02 53 38	39.6	126.6	-2.6		-29.7	300	5	15 00 01
15 06 00	0528+134	02 54 38	39.7	126.9	-2.6		-29.6	54	5	15 06 00
15 11 00	---	02 59 39	40.3	128.2	-2.5		-29.0	300	10	15 06 01
15 13 00	0528+134	03 01 39	40.6	128.8	-2.5		-28.8	113	10	15 13 00
15 23 00	---	03 11 41	41.7	131.7	-2.3		-27.5	600	19	15 13 01
15 24 00	J0522+1415	03 12 41	43.4	133.9	-2.2		-26.5	40	19	15 24 00
15 26 00	=0519+142	03 14 41	43.6	134.5	-2.1		-26.2	120	21	15 24 01
15 26 00	0528+134	03 14 41	42.0	132.5	-2.3		-27.1	-19	21	No stop
15 29 00	---	03 17 42	42.4	133.4	-2.2		-26.7	161	24	15 26 01
15 29 00	J0522+1415	03 17 42	43.9	135.4	-2.1		-25.8	-19	24	No stop
15 31 00	=0519+142	03 19 42	44.1	136.0	-2.1		-25.5	101	26	15 29 01
15 31 00	0528+134	03 19 42	42.6	134.0	-2.2		-26.4	-19	26	No stop
15 34 00	---	03 22 43	42.9	134.9	-2.1		-25.9	161	29	15 31 01
15 35 00	J0522+1415	03 23 43	44.5	137.3	-2.0		-24.9	41	29	15 35 00
15 37 00	=0519+142	03 25 43	44.7	137.9	-2.0		-24.6	120	31	15 35 01
15 37 00	0528+134	03 25 43	43.2	135.8	-2.1		-25.5	-19	31	No stop
15 40 00	---	03 28 44	43.5	136.7	-2.0		-25.1	161	34	15 37 01
15 40 00	J0522+1415	03 28 44	45.0	138.8	-1.9		-24.1	-19	34	No stop
15 42 00	=0519+142	03 30 44	45.2	139.4	-1.9		-23.8	101	36	15 40 01
15 42 00	0528+134	03 30 44	43.8	137.3	-2.0		-24.8	-19	36	No stop
15 45 00	---	03 33 45	44.1	138.2	-2.0		-24.3	161	39	15 42 01
15 46 00	J0522+1415	03 34 45	45.6	140.7	-1.8		-23.1	41	39	15 46 00
15 48 00	=0519+142	03 36 45	45.8	141.4	-1.8		-22.8	120	41	15 46 01
15 48 00	0528+134	03 36 45	44.4	139.2	-1.9		-23.8	-19	41	No stop
15 51 00	---	03 39 46	44.6	140.1	-1.9		-23.3	161	44	15 48 01
15 51 00	J0522+1415	03 39 46	46.1	142.3	-1.7		-22.3	-19	44	No stop
15 53 00	=0519+142	03 41 46	46.3	143.0	-1.7		-21.9	101	45	15 51 01

Schedule for TORUN (Code Tr)

Page 3

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
15 53 00	0528+134	03 41 46	44.8	140.7	-1.8		-23.0	-19	45	No stop
15 56 00	---	03 44 46	45.1	141.7	-1.8		-22.5	161	48	15 53 01
15 57 00	J0522+1415	03 45 47	46.6	144.3	-1.6		-21.2	41	48	15 57 00
15 59 00	=0519+142	03 47 47	46.8	144.9	-1.6		-20.8	120	50	15 57 01
15 59 00	0528+134	03 47 47	45.4	142.7	-1.7		-22.0	-19	50	No stop
16 02 00	---	03 50 47	45.7	143.6	-1.7		-21.5	161	53	15 59 01
16 03 00	0528+134	03 51 47	45.8	144.0	-1.7		-21.3	54	53	16 03 00
16 05 00	---	03 53 48	45.9	144.6	-1.6		-21.0	120	55	16 03 01
16 06 00	0528+134	03 54 48	46.0	144.9	-1.6		-20.8	54	55	16 06 00
16 11 00	---	03 59 49	46.4	146.6	-1.5		-19.9	300	60	16 06 01
16 12 00	0528+134	04 00 49	46.5	146.9	-1.5		-19.7	53	60	16 12 00
16 14 00	---	04 02 49	46.7	147.6	-1.5		-19.3	120	62	16 12 01
16 14 00	J0522+1415	04 02 49	48.0	150.0	-1.3		-18.0	-19	62	No stop
16 16 00	=0519+142	04 04 50	48.2	150.7	-1.3		-17.6	101	64	16 14 01
16 16 00	0528+134	04 04 50	46.8	148.3	-1.4		-19.0	-19	64	No stop
16 19 00	---	04 07 50	47.1	149.3	-1.4		-18.4	161	67	16 16 01
16 20 00	J0522+1415	04 08 50	48.5	152.1	-1.2		-16.8	41	67	16 20 00
16 22 00	=0519+142	04 10 51	48.6	152.8	-1.2		-16.4	120	69	16 20 01
16 22 00	0528+134	04 10 51	47.3	150.3	-1.3		-17.8	-19	69	No stop
16 25 00	---	04 13 51	47.5	151.3	-1.3		-17.2	161	72	16 22 01
16 25 00	J0522+1415	04 13 51	48.8	153.9	-1.2		-15.8	-20	72	No stop
16 27 00	=0519+142	04 15 51	48.9	154.6	-1.1		-15.4	100	74	16 25 01
16 27 00	0528+134	04 15 51	47.7	152.0	-1.3		-16.8	-19	74	No stop
16 30 00	---	04 18 52	47.9	153.1	-1.2		-16.2	161	76	16 27 01
16 31 00	J0522+1415	04 19 52	49.2	156.0	-1.1		-14.6	40	76	16 31 00
16 33 00	=0519+142	04 21 52	49.3	156.7	-1.0		-14.2	120	78	16 31 01
16 33 00	0528+134	04 21 52	48.1	154.1	-1.2		-15.6	-19	78	No stop
16 36 00	---	04 24 53	48.3	155.2	-1.1		-15.0	161	81	16 33 01
16 36 00	J0522+1415	04 24 53	49.5	157.8	-1.0		-13.5	-20	81	No stop
16 38 00	=0519+142	04 26 53	49.6	158.6	-0.9		-13.1	100	83	16 36 01
16 39 00	0528+134	04 27 53	48.5	156.2	-1.1		-14.4	41	83	16 39 00
16 42 00	---	04 30 54	48.6	157.3	-1.0		-13.8	180	86	16 39 01

Schedule for TORUN (Code Tr)

Page 4

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 28 Feb 2013 Day 59 ---										
16 42 00	0528+134	04 30 54	48.6	157.3	-1.0		-13.8	-5	86	No stop
16 45 00	---	04 33 54	48.8	158.4	-1.0		-13.2	175	89	16 42 01
16 45 00	J0522+1415	04 33 54	49.9	161.1	-0.8		-11.6	-20	89	No stop
16 47 00	=0519+142	04 35 55	50.0	161.9	-0.8		-11.1	100	91	16 45 01
16 48 00	0528+134	04 36 55	49.0	159.5	-0.9		-12.5	40	91	16 48 00
16 50 00	---	04 38 55	49.1	160.2	-0.9		-12.1	120	93	16 48 01
16 51 00	0528+134	04 39 55	49.1	160.6	-0.9		-11.9	53	93	16 51 00
16 55 00	---	04 43 56	49.3	162.0	-0.8		-11.0	240	97	16 51 01
16 56 00	0528+134	04 44 56	49.4	162.4	-0.8		-10.8	53	97	16 56 00
17 00 00	---	04 48 57	49.5	163.9	-0.7		-9.9	240	101	16 56 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.M512

Matching groups in /aps3/sched10.2/catalogs/freq.dat:

tr5cm Values confirmed by E-mail Borkowski (JFD 26Oct98)

Setup group: 5 Station: TORUN Total bit rate: 128
 Format: MKIV1:1 Bits per sample: 2 Sample rate: 4.000
 Number of channels: 16 DBE type: Speedup factor: 2.00

Disk used to record data.

1st LO=	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 7 Setup file default. Used pcal sets: 1
LO sum= 6662.52 6662.52 6662.52 6662.52 6666.52 6666.52 6666.52 6666.52
        6670.52 6670.52 6670.52 6670.52 6674.52 6674.52 6674.52 6674.52
BBC fr= 762.52 762.52 762.52 762.52 766.52 766.52 766.52 766.52
        770.52 770.52 770.52 770.52 774.52 774.52 774.52 774.52
Bandwd= 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00
        2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00
Matching frequency sets: 7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = OFF
PCALXB1= S1 S2 S3 S4 S5 S6 S7 S8
PCALXB2= M1 M2 M3 M4 M5 M6 M7 M8
PCALFR1= 0 0 0 0 0 0 0 0
PCALFR2= 0 0 0 0 0 0 0 0

```

Track assignments are:

```

track1= 2, 6, 10, 14, 18, 22, 26, 30, 3, 7, 11, 15, 19, 23, 27, 31
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS -- Network Monitoring Experiment
 Catalog positions marked with *.
 Precession of date coordinates is based on stop time of first scan.
 Names used in schedule marked with *.
 Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC).
 Scan hours are for recording scans only.
 Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec) (B1950)	Source position (RA/Dec) (J2000)	(Date)	Error (mas)
* J0522+1415	05 19 54.695573	* 05 22 45.146686	05 23 31.315431	1.17
0519+142	14 12 41.00356	* 14 15 29.28247	14 16 04.33284	0.86
J0530+1331	05 28 06.759218	* 05 30 56.416749	05 31 42.409391	0.10
* 0528+134	13 29 42.28877	* 13 31 55.14944	13 32 20.35334	0.10

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
J0522+1415	100.7
0528+134	102.6

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg	8.4 GHz	17. deg
610 MHz	81. deg	15.0 GHz	12. deg
1.6 GHz	45. deg	22.0 GHz	9. deg
2.3 GHz	36. deg	43.0 GHz	6. deg
5.0 GHz	23. deg		

3D VELOCITY FIELD OF THE METHANOL GAS AROUND CEPHEUS A HW2

PI: *Alberto Sanna*

Address: Max-Planck-Institut fuer Radioastronomie, Auf dem Huegel 69, 53121 Bonn, Germany
 Phone: +49 (0)228 525304 EMAIL: asanna@mpifr-bonn.mpg.de
 Phone during observation: +49 (0)228 525304

Observing mode: Phase referencing and Polariz. obs. of 1 source at 6.7 GHz

Notes:

Phase-cal OFF

Schedule for TORUN (Code Tr) Page 2

3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart
Stop UT	LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Fri 1 Mar 2013 Day 60 ---									
Next scan frequencies: 6665.59 6665.59 6665.59 6665.59 6669.59 6669.59 6669.59 6669.59									
6673.59 6673.59 6673.59 6673.59 6677.59 6677.59 6677.59 6677.59									
Next BBC frequencies: 765.59 765.59 765.59 765.59 769.59 769.59 769.59 769.59									
773.59 773.59 773.59 773.59 777.59 777.59 777.59 777.59									
Next scan bandwidths: 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00									
2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00									
07 30 00	J1331+3030	19 21 20	25.4	-72.4	5.8	41.6	0	0	07 30 00
07 40 00	---	19 31 21	24.0	-70.6	6.0	41.1	600	10	07 30 01
07 49 00	J2202+4216	19 40 23	64.0	99.9	-2.4	-53.2	185	10	07 49 00
07 57 00	---	19 48 24	65.2	102.0	-2.2	-52.6	480	17	07 49 01
08 06 00	CEPHEUSA	19 57 26	64.9	51.2	-3.0	-90.3	423	17	08 06 00
08 08 00	---	19 59 26	65.2	51.2	-3.0	-90.7	120	19	08 06 01
08 08 00	J2302+6405	19 59 26	64.4	46.4	-3.1	-93.6	-25	19	No stop
08 09 30	---	20 00 56	64.5	46.4	-3.0	-94.0	65	21	08 08 01
08 09 45	J2302+6405	20 01 11	64.6	46.4	-3.0	-94.1	9	21	08 09 45
08 11 15	---	20 02 42	64.7	46.3	-3.0	-94.4	90	22	08 09 46
08 11 15	CEPHEUSA	20 02 42	65.6	51.2	-2.9	-91.5	-25	22	No stop
08 13 15	---	20 04 42	65.8	51.1	-2.9	-91.9	95	24	08 11 16
08 13 15	J2302+6405	20 04 42	65.0	46.3	-3.0	-94.9	-25	24	No stop
08 16 15	---	20 07 42	65.3	46.2	-2.9	-95.7	155	27	08 13 16
08 16 15	CEPHEUSA	20 07 42	66.1	51.1	-2.8	-92.6	-25	27	No stop
08 18 15	---	20 09 43	66.4	51.1	-2.8	-93.1	95	29	08 16 16
08 18 15	J2302+6405	20 09 43	65.5	46.2	-2.9	-96.2	-25	29	No stop
08 21 15	---	20 12 43	65.8	46.1	-2.8	-96.9	155	32	08 18 16

Schedule for TORUN (Code Tr)

Page 3

3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
08 21 15	CEPHEUSA	20 12 43	66.7	51.0	-2.7		-93.8	-25	32	No stop
08 23 15	---	20 14 44	67.0	51.0	-2.7		-94.3	95	34	08 21 16
08 23 15	J2302+6405	20 14 44	66.0	46.0	-2.8		-97.4	-25	34	No stop
08 24 45	---	20 16 14	66.2	46.0	-2.8		-97.8	65	35	08 23 16
08 25 00	J2302+6405	20 16 29	66.2	45.9	-2.8		-97.9	9	35	08 25 00
08 26 30	---	20 17 59	66.4	45.9	-2.8		-98.3	90	37	08 25 01
08 26 30	CEPHEUSA	20 17 59	67.3	50.9	-2.6		-95.1	-25	37	No stop
08 28 30	---	20 19 59	67.6	50.9	-2.6		-95.6	95	39	08 26 31
08 28 30	J2302+6405	20 19 59	66.6	45.8	-2.7		-98.8	-25	39	No stop
08 31 30	---	20 23 00	66.9	45.7	-2.7		-99.6	155	42	08 28 31
08 31 30	CEPHEUSA	20 23 00	67.9	50.8	-2.6		-96.3	-25	42	No stop
08 33 30	---	20 25 00	68.2	50.7	-2.5		-96.8	95	44	08 31 31
08 33 30	J2302+6405	20 25 00	67.1	45.6	-2.6		-100.1	-25	44	No stop
08 36 30	---	20 28 01	67.5	45.4	-2.6		-101.0	155	46	08 33 31
08 36 30	CEPHEUSA	20 28 01	68.5	50.6	-2.5		-97.6	-25	46	No stop
08 38 30	---	20 30 01	68.7	50.5	-2.4		-98.1	95	48	08 36 31
08 38 30	J2302+6405	20 30 01	67.7	45.3	-2.6		-101.5	-25	48	No stop
08 40 00	---	20 31 31	67.8	45.2	-2.5		-101.9	65	50	08 38 31
08 40 15	J2302+6405	20 31 46	67.9	45.2	-2.5		-102.0	9	50	08 40 15
08 41 45	---	20 33 17	68.0	45.1	-2.5		-102.4	90	51	08 40 16
08 41 45	CEPHEUSA	20 33 17	69.1	50.3	-2.4		-99.0	-25	51	No stop
08 43 45	---	20 35 17	69.4	50.2	-2.4		-99.6	95	53	08 41 46
08 43 45	J2302+6405	20 35 17	68.2	45.0	-2.5		-103.0	-25	53	No stop
08 46 45	---	20 38 17	68.6	44.8	-2.4		-103.9	155	56	08 43 46
08 46 45	CEPHEUSA	20 38 17	69.7	50.0	-2.3		-100.4	-25	56	No stop
08 48 45	---	20 40 18	69.9	49.9	-2.3		-100.9	95	58	08 46 46
08 48 45	J2302+6405	20 40 18	68.8	44.6	-2.4		-104.5	-26	58	No stop
08 51 45	---	20 43 18	69.1	44.4	-2.3		-105.4	154	61	08 48 46
08 51 45	CEPHEUSA	20 43 18	70.3	49.7	-2.2		-101.8	-26	61	No stop
08 53 45	---	20 45 19	70.5	49.6	-2.2		-102.4	94	63	08 51 46
08 53 45	J2302+6405	20 45 19	69.3	44.2	-2.3		-106.0	-26	63	No stop
08 55 15	---	20 46 49	69.5	44.1	-2.3		-106.4	64	64	08 53 46

Schedule for TORUN (Code Tr)

Page 4

3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
08 55 30	J2302+6405	20 47 04	69.5	44.1	-2.3		-106.5	9	64	08 55 30
08 57 00	---	20 48 34	69.6	43.9	-2.2		-107.0	90	66	08 55 31
08 57 00	CEPHEUSA	20 48 34	70.9	49.3	-2.1		-103.3	-26	66	No stop
08 59 00	---	20 50 34	71.1	49.1	-2.1		-104.0	94	68	08 57 01
09 01 48	J2202+4216	20 53 23	74.1	125.7	-1.2		-41.3	0	68	09 01 48
09 09 48	---	21 01 24	75.1	130.0	-1.0		-38.5	480	75	09 01 49
09 12 48	CEPHEUSA	21 04 24	72.7	47.7	-1.9		-108.4	0	75	09 12 48
09 14 48	---	21 06 25	72.9	47.4	-1.8		-109.1	120	77	09 12 49
09 14 48	J2302+6405	21 06 25	71.5	42.0	-1.9		-112.9	-26	77	No stop
09 16 18	---	21 07 55	71.6	41.8	-1.9		-113.4	64	79	09 14 49
09 16 33	J2302+6405	21 08 10	71.6	41.7	-1.9		-113.5	9	79	09 16 33
09 18 03	---	21 09 40	71.8	41.5	-1.9		-114.0	90	80	09 16 34
09 18 03	CEPHEUSA	21 09 40	73.2	47.0	-1.8		-110.2	-26	80	No stop
09 20 03	---	21 11 40	73.5	46.7	-1.8		-110.9	94	82	09 18 04
09 20 03	J2302+6405	21 11 40	72.0	41.2	-1.9		-114.7	-26	82	No stop
09 23 03	---	21 14 41	72.3	40.8	-1.8		-115.8	154	85	09 20 04
09 23 03	CEPHEUSA	21 14 41	73.8	46.2	-1.7		-112.0	-26	85	No stop
09 25 03	---	21 16 41	74.0	45.9	-1.7		-112.8	94	87	09 23 04
09 25 03	J2302+6405	21 16 41	72.5	40.4	-1.8		-116.6	-26	87	No stop
09 28 03	---	21 19 42	72.8	39.9	-1.7		-117.8	154	90	09 25 04
09 28 03	CEPHEUSA	21 19 42	74.3	45.4	-1.6		-113.9	-26	90	No stop
09 30 03	---	21 21 42	74.5	45.0	-1.6		-114.7	94	92	09 28 04
09 30 03	J2302+6405	21 21 42	73.0	39.6	-1.7		-118.5	-26	92	No stop
09 31 33	---	21 23 12	73.1	39.3	-1.7		-119.1	64	93	09 30 04
09 31 48	J2302+6405	21 23 27	73.1	39.3	-1.7		-119.2	9	93	09 31 48
09 33 18	---	21 24 58	73.3	39.0	-1.6		-119.8	90	95	09 31 49
09 33 18	CEPHEUSA	21 24 58	74.9	44.4	-1.5		-116.1	-26	95	No stop
09 35 18	---	21 26 58	75.1	44.0	-1.5		-116.9	94	97	09 33 19
09 35 18	J2302+6405	21 26 58	73.5	38.6	-1.6		-120.7	-26	97	No stop
09 38 18	---	21 29 58	73.7	38.0	-1.6		-121.9	154	100	09 35 19
09 38 18	CEPHEUSA	21 29 58	75.4	43.4	-1.4		-118.2	-26	100	No stop
09 40 18	---	21 31 59	75.6	42.9	-1.4		-119.0	94	102	09 38 19

Schedule for TORUN (Code Tr)

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3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
09 40 18	J2302+6405	21 31 59	73.9	37.6	-1.5		-122.8	-26	102	No stop
09 43 18	---	21 34 59	74.2	36.9	-1.5		-124.1	154	105	09 40 19
09 43 18	CEPHEUSA	21 34 59	75.9	42.2	-1.4		-120.4	-25	105	No stop
09 45 18	---	21 37 00	76.1	41.7	-1.3		-121.3	95	106	09 43 19
09 45 18	J2302+6405	21 37 00	74.4	36.5	-1.4		-125.0	-26	106	No stop
09 46 48	---	21 38 30	74.5	36.1	-1.4		-125.7	64	108	09 45 19
09 47 03	J2302+6405	21 38 45	74.5	36.1	-1.4		-125.8	9	108	09 47 03
09 48 33	---	21 40 15	74.7	35.7	-1.4		-126.5	90	109	09 47 04
09 48 33	CEPHEUSA	21 40 15	76.4	40.9	-1.3		-122.9	-25	109	No stop
09 50 33	---	21 42 15	76.6	40.3	-1.2		-123.9	95	111	09 48 34
09 50 33	J2302+6405	21 42 15	74.8	35.2	-1.3		-127.4	-25	111	No stop
09 53 33	---	21 45 16	75.1	34.4	-1.3		-128.8	155	114	09 50 34
09 53 33	CEPHEUSA	21 45 16	76.9	39.4	-1.2		-125.4	-25	114	No stop
09 55 33	---	21 47 16	77.1	38.8	-1.2		-126.4	95	116	09 53 34
09 55 33	J2302+6405	21 47 16	75.3	33.9	-1.3		-129.8	-25	116	No stop
09 58 33	---	21 50 17	75.5	33.0	-1.2		-131.3	155	119	09 55 34
09 58 33	CEPHEUSA	21 50 17	77.4	37.9	-1.1		-128.0	-24	119	No stop
10 00 33	---	21 52 17	77.6	37.2	-1.1		-129.1	96	121	09 58 34
10 00 33	J2302+6405	21 52 17	75.7	32.4	-1.2		-132.3	-25	121	No stop
10 02 03	---	21 53 47	75.8	32.0	-1.2		-133.1	65	122	10 00 34
10 02 18	J2302+6405	21 54 02	75.8	31.9	-1.2		-133.2	9	122	10 02 18
10 03 48	---	21 55 33	75.9	31.5	-1.1		-134.0	90	124	10 02 19
10 03 48	CEPHEUSA	21 55 33	77.9	36.0	-1.0		-131.0	-24	124	No stop
10 05 48	---	21 57 33	78.1	35.3	-1.0		-132.1	96	126	10 03 49
10 16 55	J2202+4216	22 08 43	79.2	185.4	0.1		4.4	365	126	10 16 55
10 24 55	---	22 16 44	79.0	193.2	0.2		10.7	480	134	10 16 56
10 30 50	CEPHEUSA	22 22 39	79.9	23.4	-0.6		-149.4	0	134	10 30 50
10 32 50	---	22 24 40	80.0	22.2	-0.5		-151.0	120	135	10 30 51
10 32 50	J2302+6405	22 24 40	77.9	20.3	-0.6		-151.4	-22	135	No stop
10 34 20	---	22 26 10	78.0	19.6	-0.6		-152.4	68	137	10 32 51
10 34 35	J2302+6405	22 26 25	78.0	19.5	-0.6		-152.6	9	137	10 34 35
10 36 05	---	22 27 55	78.0	18.8	-0.6		-153.6	90	138	10 34 36

Schedule for TORUN (Code Tr)

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3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
10 36 05	CEPHEUSA	22 27 55	80.2	20.2	-0.5		-153.6	-22	138	No stop
10 38 05	---	22 29 56	80.3	19.0	-0.4		-155.3	98	140	10 36 06
10 38 05	J2302+6405	22 29 56	78.1	17.8	-0.6		-155.0	-22	140	No stop
10 41 05	---	22 32 56	78.3	16.4	-0.5		-157.1	158	143	10 38 06
10 41 05	CEPHEUSA	22 32 56	80.5	17.0	-0.4		-157.9	-22	143	No stop
10 43 05	---	22 34 56	80.5	15.7	-0.4		-159.6	98	145	10 41 06
10 43 05	J2302+6405	22 34 56	78.3	15.4	-0.5		-158.6	-22	145	No stop
10 46 05	---	22 37 57	78.5	13.9	-0.4		-160.7	158	148	10 43 06
10 46 05	CEPHEUSA	22 37 57	80.7	13.7	-0.3		-162.3	-22	148	No stop
10 48 05	---	22 39 57	80.7	12.3	-0.3		-164.1	98	150	10 46 06
10 48 05	J2302+6405	22 39 57	78.5	12.8	-0.4		-162.2	-22	150	No stop
10 49 35	---	22 41 27	78.6	12.0	-0.4		-163.3	68	151	10 48 06
10 49 50	J2302+6405	22 41 42	78.6	11.9	-0.4		-163.5	8	151	10 49 50
10 51 20	---	22 43 13	78.6	11.1	-0.3		-164.6	90	153	10 49 51
10 51 20	CEPHEUSA	22 43 13	80.8	10.0	-0.2		-167.1	-22	153	No stop
10 53 20	---	22 45 13	80.9	8.6	-0.2		-169.0	98	155	10 51 21
10 53 20	J2302+6405	22 45 13	78.7	10.0	-0.3		-166.1	-22	155	No stop
10 56 20	---	22 48 14	78.8	8.4	-0.2		-168.4	158	158	10 53 21
10 56 20	CEPHEUSA	22 48 14	80.9	6.4	-0.1		-171.8	-22	158	No stop
10 58 20	---	22 50 14	81.0	4.9	-0.1		-173.7	98	160	10 56 21
10 58 20	J2302+6405	22 50 14	78.8	7.3	-0.2		-169.9	-22	160	No stop
11 01 20	---	22 53 14	78.9	5.6	-0.2		-172.3	158	163	10 58 21
11 01 20	CEPHEUSA	22 53 14	81.0	2.7	-0.1		-176.6	-22	163	No stop
11 03 20	---	22 55 15	81.0	1.2	-0.0		-178.5	98	165	11 01 21
11 03 20	J2302+6405	22 55 15	78.9	4.5	-0.1		-173.8	-22	165	No stop
11 04 50	---	22 56 45	78.9	3.6	-0.1		-175.0	68	166	11 03 21
11 05 05	J2302+6405	22 57 00	78.9	3.5	-0.1		-175.2	8	166	11 05 05
11 06 35	---	22 58 30	78.9	2.7	-0.1		-176.3	90	167	11 05 06
11 06 35	CEPHEUSA	22 58 30	81.0	-1.3	0.0		178.4	-23	167	No stop
11 08 35	---	23 00 31	81.0	-2.8	0.1		176.4	97	169	11 06 36
11 08 35	J2302+6405	23 00 31	78.9	1.5	-0.0		-177.9	-23	169	No stop
11 11 35	---	23 03 31	78.9	-0.2	0.0		179.7	157	172	11 08 36

Schedule for TORUN (Code Tr)

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3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
11 11 35	CEPHEUSA	23 03 31	80.9	-5.0	0.1		173.6	-25	172	No stop
11 13 35	---	23 05 31	80.9	-6.5	0.1		171.7	95	174	11 11 36
11 13 35	J2302+6405	23 05 31	78.9	-1.3	0.0		178.2	-25	174	No stop
11 16 35	---	23 08 32	78.9	-3.0	0.1		175.8	155	177	11 13 36
11 16 35	CEPHEUSA	23 08 32	80.9	-8.7	0.2		168.8	-27	177	No stop
11 18 35	---	23 10 32	80.8	-10.1	0.2		167.0	93	179	11 16 36
11 18 35	J2302+6405	23 10 32	78.9	-4.2	0.1		174.3	-26	179	No stop
11 20 05	---	23 12 02	78.9	-5.0	0.1		173.1	64	180	11 18 36
11 20 20	J2302+6405	23 12 17	78.9	-5.1	0.2		172.9	8	180	11 20 20
11 21 50	---	23 13 48	78.8	-6.0	0.2		171.7	90	182	11 20 21
11 21 50	CEPHEUSA	23 13 48	80.7	-12.4	0.3		164.0	-28	182	No stop
11 23 50	---	23 15 48	80.6	-13.8	0.3		162.2	92	184	11 21 51
11 32 32	J2202+4216	23 24 31	72.7	239.7	1.4		44.6	0	184	11 32 32
11 40 32	---	23 32 33	71.7	243.1	1.5		46.4	480	192	11 32 33
11 48 51	CEPHEUSA	23 40 54	79.3	331.3	0.7		142.0	303	192	11 48 51
11 50 51	---	23 42 54	79.1	330.3	0.8		140.6	120	194	11 48 52
11 50 51	J2302+6405	23 42 54	77.8	339.2	0.7		150.6	-32	194	No stop
11 52 21	---	23 44 24	77.7	338.5	0.7		149.6	58	195	11 50 52
11 52 36	J2302+6405	23 44 39	77.7	338.4	0.7		149.5	9	195	11 52 36
11 54 06	---	23 46 10	77.6	337.7	0.7		148.5	90	196	11 52 37
11 54 06	CEPHEUSA	23 46 10	78.9	328.8	0.8		138.4	-33	196	No stop
11 56 06	---	23 48 10	78.7	327.9	0.9		137.0	87	198	11 54 07
11 56 06	J2302+6405	23 48 10	77.5	336.9	0.7		147.2	-32	198	No stop
11 59 06	---	23 51 10	77.3	335.6	0.8		145.3	148	201	11 56 07
11 59 06	CEPHEUSA	23 51 10	78.5	326.6	0.9		135.1	-33	201	No stop
12 01 06	---	23 53 11	78.3	325.8	0.9		133.9	87	203	11 59 07
12 01 06	J2302+6405	23 53 11	77.2	334.8	0.8		144.1	-33	203	No stop
12 04 06	---	23 56 11	77.0	333.6	0.9		142.2	147	206	12 01 07
12 04 06	CEPHEUSA	23 56 11	78.0	324.7	1.0		132.1	-33	206	No stop
12 06 06	---	23 58 12	77.9	323.9	1.0		130.9	87	208	12 04 07

Schedule for TORUN (Code Tr)

Page 8

3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
12 06 06	J2302+6405	23 58 12	76.9	332.9	0.9		141.1	-33	208	No stop
12 07 36	---	23 59 42	76.8	332.3	0.9		140.2	57	210	12 06 07
12 07 51	J2302+6405	23 59 57	76.8	332.2	0.9		140.0	9	210	12 07 51
12 09 21	---	00 01 27	76.6	331.7	1.0		139.2	90	211	12 07 52
12 09 21	CEPHEUSA	00 01 27	77.6	322.8	1.1		129.0	-33	211	No stop
12 11 21	---	00 03 27	77.4	322.1	1.1		127.9	87	213	12 09 22
12 11 21	J2302+6405	00 03 27	76.5	331.0	1.0		138.0	-32	213	No stop
12 14 21	---	00 06 28	76.3	329.9	1.1		136.4	148	216	12 11 22
12 14 21	CEPHEUSA	00 06 28	77.1	321.1	1.2		126.3	-33	216	No stop
12 16 21	---	00 08 28	76.9	320.5	1.2		125.3	87	218	12 14 22
12 16 21	J2302+6405	00 08 28	76.1	329.3	1.1		135.3	-32	218	No stop
12 19 21	---	00 11 29	75.9	328.3	1.1		133.7	148	221	12 16 22
12 19 21	CEPHEUSA	00 11 29	76.6	319.6	1.2		123.8	-33	221	No stop
12 21 21	---	00 13 29	76.4	319.1	1.3		122.8	87	223	12 19 22
12 21 21	J2302+6405	00 13 29	75.7	327.7	1.2		132.6	-32	223	No stop
12 22 51	---	00 14 59	75.6	327.3	1.2		131.9	58	224	12 21 22
12 23 06	J2302+6405	00 15 14	75.6	327.2	1.2		131.7	9	224	12 23 06
12 24 36	---	00 16 45	75.5	326.8	1.2		131.0	90	225	12 23 07
12 24 36	CEPHEUSA	00 16 45	76.1	318.2	1.3		121.3	-32	225	No stop
12 26 36	---	00 18 45	75.9	317.7	1.4		120.3	88	227	12 24 37
12 26 36	J2302+6405	00 18 45	75.3	326.2	1.3		130.0	-32	227	No stop
12 29 36	---	00 21 45	75.1	325.4	1.3		128.5	148	230	12 26 37
12 29 36	CEPHEUSA	00 21 45	75.6	317.0	1.4		119.0	-32	230	No stop
12 31 36	---	00 23 46	75.4	316.6	1.4		118.1	88	232	12 29 37
12 31 36	J2302+6405	00 23 46	74.9	324.9	1.3		127.6	-31	232	No stop
12 33 06	---	00 25 16	74.7	324.5	1.4		126.9	59	234	12 31 37
12 33 21	J2302+6405	00 25 31	74.7	324.4	1.4		126.7	9	234	12 33 21
12 34 51	---	00 27 01	74.6	324.1	1.4		126.1	90	235	12 33 22
12 34 51	CEPHEUSA	00 27 01	75.1	315.9	1.5		116.7	-32	235	No stop
12 36 51	---	00 29 02	74.8	315.5	1.5		115.9	88	237	12 34 52

Schedule for TORUN (Code Tr)

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3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
12 49 23	J2202+4216	00 41 35	61.7	263.8	2.6		53.9	628	237	12 49 23
12 57 23	---	00 49 36	60.5	265.6	2.8		54.1	480	245	12 49 24
13 11 11	CEPHEUSA	01 03 27	71.1	310.8	2.1		103.8	720	245	13 11 11
13 13 11	---	01 05 27	70.8	310.7	2.1		103.2	120	247	13 11 12
13 13 11	J2302+6405	01 05 27	70.9	317.3	2.0		111.0	-28	247	No stop
13 14 41	---	01 06 57	70.8	317.2	2.1		110.5	62	248	13 13 12
13 14 56	J2302+6405	01 07 12	70.7	317.1	2.1		110.4	9	248	13 14 56
13 16 26	---	01 08 42	70.6	317.0	2.1		109.9	90	250	13 14 57
13 16 26	CEPHEUSA	01 08 42	70.5	310.4	2.2		102.3	-28	250	No stop
13 18 26	---	01 10 43	70.2	310.3	2.2		101.7	92	252	13 16 27
13 18 26	J2302+6405	01 10 43	70.4	316.8	2.1		109.2	-28	252	No stop
13 21 26	---	01 13 43	70.1	316.4	2.2		108.2	152	255	13 18 27
13 21 26	CEPHEUSA	01 13 43	69.9	310.1	2.3		100.8	-28	255	No stop
13 23 26	---	01 15 44	69.7	309.9	2.3		100.3	92	256	13 21 27
13 23 26	J2302+6405	01 15 44	69.9	316.2	2.2		107.6	-28	256	No stop
13 26 26	---	01 18 44	69.5	316.0	2.3		106.7	152	259	13 23 27
13 26 26	CEPHEUSA	01 18 44	69.3	309.8	2.4		99.4	-27	259	No stop
13 28 26	---	01 20 44	69.1	309.7	2.4		98.9	93	261	13 26 27
13 28 26	J2302+6405	01 20 44	69.3	315.8	2.3		106.1	-27	261	No stop
13 29 56	---	01 22 15	69.2	315.7	2.3		105.6	63	263	13 28 27
13 30 11	J2302+6405	01 22 30	69.1	315.6	2.3		105.5	9	263	13 30 11
13 31 41	---	01 24 00	69.0	315.5	2.3		105.1	90	264	13 30 12
13 31 41	CEPHEUSA	01 24 00	68.7	309.5	2.5		98.0	-27	264	No stop
13 33 41	---	01 26 00	68.5	309.4	2.5		97.5	93	266	13 31 42
13 33 41	J2302+6405	01 26 00	68.8	315.4	2.4		104.5	-27	266	No stop
13 36 41	---	01 29 01	68.5	315.2	2.4		103.6	153	269	13 33 42
13 36 41	CEPHEUSA	01 29 01	68.1	309.3	2.5		96.7	-27	269	No stop
13 38 41	---	01 31 01	67.9	309.2	2.6		96.2	93	271	13 36 42
13 38 41	J2302+6405	01 31 01	68.3	315.0	2.5		103.0	-27	271	No stop
13 41 41	---	01 34 02	67.9	314.8	2.5		102.2	153	274	13 38 42

Schedule for TORUN (Code Tr)

Page 10

3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
13 41 41	CEPHEUSA	01 34 02	67.5	309.1	2.6		95.5	-26	274	No stop
13 43 41	---	01 36 02	67.3	309.1	2.7		95.0	94	276	13 41 42
13 43 41	J2302+6405	01 36 02	67.7	314.7	2.5		101.6	-26	276	No stop
13 45 11	---	01 37 32	67.6	314.6	2.6		101.2	64	277	13 43 42
13 45 26	J2302+6405	01 37 47	67.5	314.6	2.6		101.1	9	277	13 45 26
13 46 56	---	01 39 17	67.4	314.5	2.6		100.7	90	279	13 45 27
13 46 56	CEPHEUSA	01 39 17	66.9	309.0	2.7		94.2	-26	279	No stop
13 48 56	---	01 41 18	66.7	309.0	2.7		93.7	94	281	13 46 57
14 04 31	J2202+4216	01 56 55	50.4	278.6	3.9		53.4	854	281	14 04 31
14 12 31	---	02 04 56	49.3	279.9	4.0		53.1	480	288	14 04 32
14 15 21	CEPHEUSA	02 07 47	63.6	308.9	3.2		87.8	97	288	14 15 21
14 17 21	---	02 09 47	63.4	308.9	3.2		87.3	120	290	14 15 22
14 17 21	J2302+6405	02 09 47	64.1	313.6	3.1		93.0	-24	290	No stop
14 18 51	---	02 11 18	63.9	313.5	3.1		92.6	66	292	14 17 22
14 19 06	J2302+6405	02 11 33	63.9	313.5	3.1		92.6	9	292	14 19 06
14 20 36	---	02 13 03	63.7	313.5	3.2		92.2	90	293	14 19 07
14 20 36	CEPHEUSA	02 13 03	63.0	308.9	3.3		86.7	-24	293	No stop
14 22 36	---	02 15 03	62.7	309.0	3.3		86.3	96	295	14 20 37
14 22 36	J2302+6405	02 15 03	63.5	313.5	3.2		91.7	-24	295	No stop
14 25 36	---	02 18 04	63.2	313.5	3.2		91.0	156	298	14 22 37
14 25 36	CEPHEUSA	02 18 04	62.4	309.0	3.4		85.6	-24	298	No stop
14 27 36	---	02 20 04	62.2	309.1	3.4		85.2	96	300	14 25 37
14 27 36	J2302+6405	02 20 04	63.0	313.5	3.3		90.6	-24	300	No stop
14 30 36	---	02 23 05	62.6	313.5	3.3		89.9	156	303	14 27 37
14 30 36	CEPHEUSA	02 23 05	61.8	309.1	3.4		84.6	-24	303	No stop
14 32 36	---	02 25 05	61.6	309.2	3.5		84.2	96	305	14 30 37
14 32 36	J2302+6405	02 25 05	62.4	313.5	3.4		89.5	-24	305	No stop
14 34 06	---	02 26 35	62.2	313.5	3.4		89.1	66	306	14 32 37
14 34 21	J2302+6405	02 26 50	62.2	313.5	3.4		89.1	9	306	14 34 21
14 35 51	---	02 28 20	62.1	313.5	3.4		88.7	90	308	14 34 22

Schedule for TORUN (Code Tr)

Page 11

3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---										
14 35 51	CEPHEUSA	02 28 20	61.2	309.3	3.5		83.6	-23	308	No stop
14 37 51	---	02 30 21	61.0	309.3	3.6		83.2	97	310	14 35 52
14 37 51	J2302+6405	02 30 21	61.8	313.5	3.5		88.3	-23	310	No stop
14 40 51	---	02 33 21	61.5	313.5	3.5		87.6	157	313	14 37 52
14 40 51	CEPHEUSA	02 33 21	60.6	309.4	3.6		82.6	-23	313	No stop
14 42 51	---	02 35 22	60.4	309.5	3.6		82.2	97	314	14 40 52
14 42 51	J2302+6405	02 35 22	61.3	313.6	3.5		87.2	-23	314	No stop
14 45 51	---	02 38 22	61.0	313.6	3.6		86.6	157	317	14 42 52
14 45 51	CEPHEUSA	02 38 22	60.0	309.6	3.7		81.6	-23	317	No stop
14 47 51	---	02 40 22	59.8	309.6	3.7		81.2	97	319	14 45 52
14 47 51	J2302+6405	02 40 22	60.7	313.6	3.6		86.1	-23	319	No stop
14 49 21	---	02 41 53	60.6	313.6	3.6		85.8	67	321	14 47 52
14 49 36	J2302+6405	02 42 08	60.6	313.6	3.6		85.8	9	321	14 49 36
14 51 06	---	02 43 38	60.4	313.7	3.7		85.4	90	322	14 49 37
14 51 06	CEPHEUSA	02 43 38	59.4	309.8	3.8		80.6	-23	322	No stop
14 53 06	---	02 45 38	59.2	309.8	3.8		80.3	97	324	14 51 07
14 53 06	J2302+6405	02 45 38	60.2	313.7	3.7		85.0	-23	324	No stop
14 56 06	---	02 48 39	59.8	313.8	3.8		84.4	157	327	14 53 07
14 56 06	CEPHEUSA	02 48 39	58.8	309.9	3.9		79.7	-22	327	No stop
14 58 06	---	02 50 39	58.6	310.0	3.9		79.3	98	329	14 56 07
14 58 06	J2302+6405	02 50 39	59.6	313.8	3.8		84.0	-22	329	No stop
15 01 06	---	02 53 40	59.3	313.9	3.8		83.4	158	332	14 58 07
15 01 06	CEPHEUSA	02 53 40	58.3	310.2	3.9		78.8	-22	332	No stop
15 03 06	---	02 55 40	58.0	310.2	4.0		78.4	98	334	15 01 07
15 03 06	J2302+6405	02 55 40	59.1	313.9	3.9		83.0	-22	334	No stop
15 04 36	---	02 57 10	58.9	314.0	3.9		82.7	68	335	15 03 07
15 04 51	J2302+6405	02 57 25	58.9	314.0	3.9		82.6	9	335	15 04 51
15 06 21	---	02 58 55	58.7	314.0	3.9		82.3	90	337	15 04 52
15 06 21	CEPHEUSA	02 58 55	57.7	310.4	4.0		77.8	-22	337	No stop
15 08 21	---	03 00 56	57.4	310.5	4.1		77.4	98	339	15 06 22

Schedule for TORUN (Code Tr) Page 12

3D velocity field of the methanol gas around Cepheus A HW2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA UP	ParA Dwell	GBytes	SYNC
--- Fri 1 Mar 2013 Day 60 ---								
15 08 21	J2302+6405	03 00 56	58.5	314.1	4.0	81.9 -22	339	No stop
15 11 21	---	03 03 56	58.2	314.2	4.0	81.3 158	342	15 08 22
15 11 21	CEPHEUSA	03 03 56	57.1	310.6	4.1	76.9 -22	342	No stop
15 13 21	---	03 05 57	56.9	310.7	4.2	76.5 98	344	15 11 22
15 13 21	J2302+6405	03 05 57	58.0	314.2	4.0	80.9 -22	344	No stop
15 14 51	---	03 07 27	57.8	314.3	4.1	80.6 68	345	15 13 22
15 15 06	J2302+6405	03 07 42	57.8	314.3	4.1	80.6 9	345	15 15 06
15 16 36	---	03 09 12	57.6	314.3	4.1	80.3 90	346	15 15 07
15 16 36	CEPHEUSA	03 09 12	56.5	310.9	4.2	75.9 -22	346	No stop
15 18 36	---	03 11 12	56.3	311.0	4.2	75.6 98	348	15 16 37
15 20 33	J2202+4216	03 13 10	39.4	291.0	5.2	49.3 41	348	15 20 33
15 28 33	---	03 21 11	38.3	292.2	5.3	48.8 480	356	15 20 34

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.M128

Matching groups in /aps3/sched10.2/catalogs/freq.dat:

tr5cm Values confirmed by E-mail Borkowski (JFD 26Oct98)

Setup group: 6 Station: TORUN Total bit rate: 128
 Format: MKIV1:1 Bits per sample: 2 Sample rate: 4.000
 Number of channels: 16 DBE type: Speedup factor: 2.00

Disk used to record data.

1st LO=	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 7 Based on FREQ, BW, and/or DOPPLER in schedule. Used pcal sets: 1
LO sum= 6665.59 6665.59 6665.59 6665.59 6669.59 6669.59 6669.59 6669.59
        6673.59 6673.59 6673.59 6673.59 6677.59 6677.59 6677.59 6677.59
BBC fr= 765.59 765.59 765.59 765.59 769.59 769.59 769.59 769.59
        773.59 773.59 773.59 773.59 777.59 777.59 777.59 777.59
Bandwd= 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00
        2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00
Matching frequency sets: 7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = OFF
PCALXB1= S1 S2 S3 S4 S5 S6 S7 S8
PCALXB2= M1 M2 M3 M4 M5 M6 M7 M8
PCALFR1= 0 0 0 0 0 0 0 0
PCALFR2= 0 0 0 0 0 0 0 0

```

Track assignments are:

```

track1= 2, 6, 10, 14, 18, 22, 26, 30, 3, 7, 11, 15, 19, 23, 27, 31
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS -- 3D velocity field of the methanol gas around Cepheus A HW2

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* CEPHEUSA	22 54 18.964445	* 22 56 17.905100	22 56 47.922408	0.00
	61 45 47.36537	* 62 01 49.58400	62 06 08.34154	0.00
* J2302+6405	23 00 41.944885	* 23 02 41.314960	23 03 11.337734	0.00
	63 49 43.23614	* 64 05 52.84888	64 10 14.17319	0.00
* J1331+3030	13 28 49.657778	* 13 31 08.288070	13 31 46.392744	0.00
	30 45 58.64060	* 30 30 32.95924	30 26 13.26216	0.00
* J2202+4216	22 00 39.362504	* 22 02 43.291371	22 03 15.217077	0.00
	42 02 08.59073	* 42 16 39.97987	42 20 30.27615	0.00

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

```

Source      Sun distance (deg)
CEPHEUSA   69.5
J2302+6405 71.6
J1331+3030 135.7
J2202+4216 50.9

```

NATURE OF METHANOL MASER RINGS

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 Fax: +48 56 6113009 Phone during observation: +48 56 6113010

Observing mode: MKV, 128 Mbps

Notes: Please, make sure the PHASE CAL is OFF.
 SPECTRAL LINE observations, a PHASE REF experiment
 11min. gap for Effelsberg after the scan 88 (UT 07:43:15-07:54:15)

Schedule for TORUN (Code Tr) Page 2

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Sat 2 Mar 2013 Day 61 ---										
Next scan frequencies: 6664.72 6664.72 6664.72 6664.72 6668.72 6668.72 6668.72 6668.72										
6672.72 6672.72 6672.72 6672.72 6676.72 6676.72 6676.72 6676.72										
Next BBC frequencies: 764.72 764.72 764.72 764.72 768.72 768.72 768.72 768.72										
772.72 772.72 772.72 772.72 776.72 776.72 776.72 776.72										
Next scan bandwidths: 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
02 45 00	3C345	14 39 30	65.1	109.8	-2.1		-47.3	0	0	02 45 00
03 00 00	---	14 54 32	67.2	114.8	-1.8		-45.2	900	15	02 45 01
03 00 40	3C345	14 55 12	67.3	115.0	-1.8		-45.1	34	15	03 00 40
03 15 40	---	15 10 15	69.3	120.7	-1.6		-42.2	900	29	03 00 41
03 16 20	3C345	15 10 55	69.4	120.9	-1.5		-42.1	33	29	03 16 20
03 31 20	---	15 25 57	71.3	127.5	-1.3		-38.3	900	44	03 16 21
03 35 07	J1825-0737	15 29 44	18.7	133.2	-2.9		-26.2	16	44	03 35 07
03 36 52	=1822-076	15 31 30	18.9	133.6	-2.9		-26.0	105	45	03 35 08
03 36 52	G23.207	15 31 30	16.8	132.0	-3.1		-26.8	-22	45	No stop
03 40 07	---	15 34 45	17.2	132.8	-3.0		-26.5	173	48	03 36 53
03 40 07	J1825-0737	15 34 45	19.3	134.4	-2.9		-25.7	-22	48	No stop
03 41 52	=1822-076	15 36 31	19.5	134.8	-2.8		-25.5	83	50	03 40 08
03 41 52	G23.389	15 36 31	17.9	133.4	-3.0		-26.2	-19	50	No stop
03 45 07	---	15 39 46	18.3	134.1	-2.9		-25.8	176	53	03 41 53
03 45 07	J1825-0737	15 39 46	19.8	135.6	-2.8		-25.1	-19	53	No stop
03 46 52	=1822-076	15 41 31	20.0	136.0	-2.7		-24.9	86	55	03 45 08
03 47 32	G23.657	15 42 11	18.5	134.3	-2.9		-25.8	21	55	03 47 32
03 50 47	---	15 45 27	18.8	135.0	-2.8		-25.4	195	58	03 47 33

Schedule for TORUN (Code Tr)

Page 3

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
03 51 27	J1825-0737	15 46 07	20.5	137.1	-2.7		-24.4	20	58	03 51 27
03 53 12	=1822-076	15 47 52	20.6	137.5	-2.6		-24.2	105	60	03 51 28
03 53 12	G23.207	15 47 52	18.6	135.8	-2.8		-25.1	-21	60	No stop
03 56 27	---	15 51 08	18.9	136.6	-2.7		-24.7	174	63	03 53 13
03 56 27	J1825-0737	15 51 08	21.0	138.3	-2.6		-23.8	-22	63	No stop
03 58 12	=1822-076	15 52 53	21.1	138.7	-2.6		-23.6	83	65	03 56 28
03 58 12	G23.389	15 52 53	19.7	137.2	-2.7		-24.3	-19	65	No stop
04 01 27	---	15 56 09	20.0	138.0	-2.6		-24.0	176	68	03 58 13
04 01 27	J1825-0737	15 56 09	21.5	139.5	-2.5		-23.2	-19	68	No stop
04 03 12	=1822-076	15 57 54	21.6	140.0	-2.5		-22.9	86	69	04 01 28
04 03 52	G23.657	15 58 34	20.2	138.2	-2.6		-23.9	21	69	04 03 52
04 07 07	---	16 01 50	20.5	138.9	-2.6		-23.5	195	73	04 03 53
04 07 47	J1825-0737	16 02 30	22.1	141.1	-2.4		-22.4	21	73	04 07 47
04 09 32	=1822-076	16 04 15	22.2	141.5	-2.4		-22.1	105	74	04 07 48
04 09 32	G23.207	16 04 15	20.2	139.7	-2.5		-23.1	-21	74	No stop
04 12 47	---	16 07 31	20.6	140.5	-2.5		-22.7	174	77	04 09 33
04 12 47	J1825-0737	16 07 31	22.5	142.3	-2.3		-21.7	-21	77	No stop
04 14 32	=1822-076	16 09 16	22.7	142.8	-2.3		-21.5	84	79	04 12 48
04 14 32	G23.389	16 09 16	21.3	141.2	-2.4		-22.4	-19	79	No stop
04 17 47	---	16 12 31	21.6	142.0	-2.4		-21.9	176	82	04 14 33
04 17 47	J1825-0737	16 12 31	23.0	143.6	-2.2		-21.1	-19	82	No stop
04 19 32	=1822-076	16 14 17	23.1	144.0	-2.2		-20.8	86	84	04 17 48
04 20 12	G23.657	16 14 57	21.7	142.2	-2.3		-21.9	21	84	04 20 12
04 23 27	---	16 18 12	22.0	143.0	-2.3		-21.4	195	87	04 20 13
04 24 07	J1825-0737	16 18 52	23.5	145.2	-2.1		-20.2	21	87	04 24 07
04 25 52	=1822-076	16 20 38	23.7	145.6	-2.1		-20.0	105	89	04 24 08
04 25 52	G23.207	16 20 38	21.8	143.8	-2.3		-21.1	-21	89	No stop
04 29 07	---	16 23 53	22.1	144.6	-2.2		-20.6	174	92	04 25 53
04 29 07	J1825-0737	16 23 53	24.0	146.5	-2.0		-19.6	-21	92	No stop
04 30 52	=1822-076	16 25 39	24.1	146.9	-2.0		-19.3	84	94	04 29 08
04 30 52	G23.389	16 25 39	22.7	145.3	-2.1		-20.2	-18	94	No stop
04 34 07	---	16 28 54	23.0	146.1	-2.1		-19.8	177	97	04 30 53

Schedule for TORUN (Code Tr)

Page 4

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
04 34 07	J1825-0737	16 28 54	24.4	147.8	-2.0		-18.9	-19	97	No stop
04 35 52	=1822-076	16 30 39	24.5	148.2	-1.9		-18.6	86	98	04 34 08
04 36 32	G23.657	16 31 20	23.2	146.3	-2.1		-19.7	21	98	04 36 32
04 39 47	---	16 34 35	23.4	147.1	-2.0		-19.3	195	102	04 36 33
04 40 27	J1825-0737	16 35 15	24.9	149.4	-1.9		-18.0	21	102	04 40 27
04 42 12	=1822-076	16 37 00	25.0	149.9	-1.8		-17.7	105	103	04 40 28
04 42 12	G23.207	16 37 00	23.2	147.9	-2.0		-18.9	-21	103	No stop
04 45 27	---	16 40 16	23.4	148.7	-1.9		-18.4	174	106	04 42 13
04 45 27	J1825-0737	16 40 16	25.3	150.7	-1.8		-17.2	-21	106	No stop
04 47 12	=1822-076	16 42 01	25.4	151.2	-1.7		-17.0	84	108	04 45 28
04 47 12	G23.389	16 42 01	24.1	149.4	-1.9		-18.0	-18	108	No stop
04 50 27	---	16 45 17	24.3	150.3	-1.8		-17.5	177	111	04 47 13
04 50 27	J1825-0737	16 45 17	25.6	152.0	-1.7		-16.5	-18	111	No stop
04 52 12	=1822-076	16 47 02	25.7	152.5	-1.7		-16.3	87	113	04 50 28
04 52 52	G23.657	16 47 42	24.5	150.5	-1.8		-17.4	22	113	04 52 52
04 56 07	---	16 50 58	24.7	151.3	-1.7		-16.9	195	116	04 52 53
04 56 47	J1825-0737	16 51 38	26.0	153.7	-1.6		-15.6	21	116	04 56 47
04 58 32	=1822-076	16 53 23	26.2	154.2	-1.5		-15.3	105	118	04 56 48
04 58 32	G23.207	16 53 23	24.4	152.1	-1.7		-16.5	-20	118	No stop
05 01 47	---	16 56 39	24.6	152.9	-1.7		-16.1	175	121	04 58 33
05 01 47	J1825-0737	16 56 39	26.4	155.0	-1.5		-14.8	-20	121	No stop
05 03 32	=1822-076	16 58 24	26.5	155.5	-1.5		-14.5	85	123	05 01 48
05 03 32	G23.389	16 58 24	25.2	153.7	-1.6		-15.6	-18	123	No stop
05 06 47	---	17 01 39	25.5	154.6	-1.5		-15.1	177	126	05 03 33
05 06 47	J1825-0737	17 01 39	26.7	156.4	-1.4		-14.0	-18	126	No stop
05 08 32	=1822-076	17 03 25	26.8	156.9	-1.4		-13.8	87	127	05 06 48
05 09 12	G23.657	17 04 05	25.6	154.8	-1.5		-15.0	22	127	05 09 12
05 12 27	---	17 07 20	25.8	155.6	-1.5		-14.5	195	131	05 09 13
05 13 07	J1825-0737	17 08 01	27.0	158.1	-1.3		-13.1	21	131	05 13 07
05 14 52	=1822-076	17 09 46	27.1	158.6	-1.3		-12.8	105	132	05 13 08
05 14 52	G23.207	17 09 46	25.5	156.4	-1.4		-14.1	-20	132	No stop
05 18 07	---	17 13 01	25.6	157.3	-1.4		-13.6	175	135	05 14 53

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
05 18 07	J1825-0737	17 13 01	27.3	159.5	-1.2		-12.3	-20	135	No stop
05 19 52	=1822-076	17 14 47	27.4	159.9	-1.2		-12.0	85	137	05 18 08
05 19 52	G23.389	17 14 47	26.3	158.1	-1.3		-13.1	-17	137	No stop
05 23 07	---	17 18 02	26.4	158.9	-1.3		-12.6	178	140	05 19 53
05 23 07	J1825-0737	17 18 02	27.6	160.8	-1.1		-11.5	-17	140	No stop
05 24 52	=1822-076	17 19 47	27.7	161.3	-1.1		-11.2	88	142	05 23 08
05 25 32	G23.657	17 20 28	26.6	159.1	-1.3		-12.5	21	142	05 25 32
05 28 47	---	17 23 43	26.7	160.0	-1.2		-12.0	195	145	05 25 33
05 29 27	J1825-0737	17 24 23	27.9	162.6	-1.0		-10.5	21	145	05 29 27
05 31 12	=1822-076	17 26 08	28.0	163.1	-1.0		-10.2	105	147	05 29 28
05 31 12	G23.207	17 26 08	26.4	160.8	-1.2		-11.5	-20	147	No stop
05 34 27	---	17 29 24	26.5	161.7	-1.1		-11.0	175	150	05 31 13
05 34 27	J1825-0737	17 29 24	28.1	164.0	-0.9		-9.6	-20	150	No stop
05 36 12	=1822-076	17 31 09	28.2	164.4	-0.9		-9.3	85	152	05 34 28
05 36 12	G23.389	17 31 09	27.1	162.5	-1.0		-10.5	-17	152	No stop
05 39 27	---	17 34 25	27.2	163.4	-1.0		-10.0	178	155	05 36 13
05 39 27	J1825-0737	17 34 25	28.3	165.4	-0.9		-8.8	-18	155	No stop
05 41 12	=1822-076	17 36 10	28.4	165.8	-0.8		-8.5	87	157	05 39 28
05 41 52	G23.657	17 36 50	27.4	163.6	-1.0		-9.9	21	157	05 41 52
05 45 07	---	17 40 06	27.5	164.5	-0.9		-9.3	195	160	05 41 53
05 45 47	J1825-0737	17 40 46	28.5	167.1	-0.8		-7.8	21	160	05 45 47
05 47 32	=1822-076	17 42 31	28.6	167.6	-0.7		-7.5	105	161	05 45 48
05 47 32	G23.207	17 42 31	27.1	165.2	-0.9		-8.9	-19	161	No stop
05 50 47	---	17 45 47	27.2	166.1	-0.8		-8.4	176	165	05 47 33
05 50 47	J1825-0737	17 45 47	28.7	168.5	-0.7		-6.9	-19	165	No stop
05 52 32	=1822-076	17 47 32	28.7	169.0	-0.6		-6.6	86	166	05 50 48
05 52 32	G23.389	17 47 32	27.7	167.0	-0.8		-7.8	-18	166	No stop
05 55 47	---	17 50 48	27.8	167.9	-0.7		-7.3	177	169	05 52 33
05 55 47	J1825-0737	17 50 48	28.8	169.9	-0.6		-6.1	-18	169	No stop
05 57 32	=1822-076	17 52 33	28.9	170.4	-0.6		-5.8	87	171	05 55 48
05 58 12	G23.657	17 53 13	28.0	168.1	-0.7		-7.2	21	171	05 58 12
06 01 27	---	17 56 28	28.0	169.0	-0.7		-6.6	195	174	05 58 13

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
06 02 07	J1825-0737	17 57 09	29.0	171.7	-0.5		-5.0	21	174	06 02 07
06 03 52	=1822-076	17 58 54	29.0	172.2	-0.5		-4.7	105	176	06 02 08
06 03 52	G23.207	17 58 54	27.6	169.7	-0.6		-6.2	-19	176	No stop
06 07 07	---	18 02 09	27.7	170.6	-0.6		-5.7	176	179	06 03 53
06 07 07	J1825-0737	18 02 09	29.1	173.1	-0.4		-4.2	-19	179	No stop
06 08 52	=1822-076	18 03 55	29.1	173.6	-0.4		-3.9	86	181	06 07 08
06 08 52	G23.389	18 03 55	28.2	171.6	-0.5		-5.1	-18	181	No stop
06 12 07	---	18 07 10	28.3	172.5	-0.4		-4.6	177	184	06 08 53
06 12 07	J1825-0737	18 07 10	29.2	174.6	-0.3		-3.3	-18	184	No stop
06 13 52	=1822-076	18 08 55	29.2	175.1	-0.3		-3.0	87	186	06 12 08
06 14 32	G23.657	18 09 36	28.4	172.7	-0.4		-4.4	21	186	06 14 32
06 17 47	---	18 12 51	28.4	173.6	-0.4		-3.9	195	189	06 14 33
06 18 27	J1825-0737	18 13 31	29.2	176.4	-0.2		-2.2	20	189	06 18 27
06 20 12	=1822-076	18 15 17	29.2	176.9	-0.2		-1.9	105	190	06 18 28
06 20 12	G23.207	18 15 17	27.9	174.3	-0.3		-3.5	-19	190	No stop
06 23 27	---	18 18 32	28.0	175.2	-0.3		-2.9	176	194	06 20 13
06 23 27	J1825-0737	18 18 32	29.3	177.8	-0.1		-1.3	-20	194	No stop
06 25 12	=1822-076	18 20 17	29.3	178.3	-0.1		-1.0	85	195	06 23 28
06 25 12	G23.389	18 20 17	28.4	176.2	-0.2		-2.3	-18	195	No stop
06 28 27	---	18 23 33	28.5	177.1	-0.2		-1.8	177	198	06 25 13
06 28 27	J1825-0737	18 23 33	29.3	179.2	-0.0		-0.5	-18	198	No stop
06 30 12	=1822-076	18 25 18	29.3	179.7	-0.0		-0.2	87	200	06 28 28
06 30 52	G23.657	18 25 58	28.6	177.3	-0.2		-1.6	21	200	06 30 52
06 34 07	---	18 29 14	28.6	178.2	-0.1		-1.1	195	203	06 30 53
06 34 47	J1825-0737	18 29 54	29.3	181.0	0.1		0.6	20	203	06 34 47
06 36 32	=1822-076	18 31 39	29.3	181.5	0.1		0.9	105	205	06 34 48
06 36 32	G23.207	18 31 39	28.1	178.9	-0.1		-0.7	-19	205	No stop
06 39 47	---	18 34 55	28.1	179.8	-0.0		-0.1	176	208	06 36 33
06 39 47	J1825-0737	18 34 55	29.3	182.4	0.1		1.5	-20	208	No stop
06 41 32	=1822-076	18 36 40	29.2	182.9	0.2		1.8	85	210	06 39 48
06 41 32	G23.389	18 36 40	28.5	180.8	0.0		0.5	-18	210	No stop
06 44 47	---	18 39 56	28.5	181.7	0.1		1.0	177	213	06 41 33

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
06 44 47	J1825-0737	18 39 56	29.2	183.9	0.2		2.3	-18	213	No stop
06 46 32	=1822-076	18 41 41	29.2	184.4	0.3		2.6	87	215	06 44 48
06 47 12	G23.657	18 42 21	28.6	181.9	0.1		1.2	21	215	06 47 12
06 50 27	---	18 45 37	28.6	182.8	0.2		1.7	195	218	06 47 13
06 51 07	J1825-0737	18 46 17	29.1	185.7	0.3		3.4	20	218	06 51 07
06 52 52	=1822-076	18 48 02	29.1	186.2	0.4		3.7	105	219	06 51 08
06 52 52	G23.207	18 48 02	28.0	183.5	0.2		2.1	-19	219	No stop
06 56 07	---	18 51 17	28.0	184.4	0.3		2.7	176	223	06 52 53
06 56 07	J1825-0737	18 51 17	29.1	187.1	0.4		4.3	-20	223	No stop
06 57 52	=1822-076	18 53 03	29.0	187.6	0.4		4.6	85	224	06 56 08
06 57 52	G23.389	18 53 03	28.4	185.4	0.3		3.3	-18	224	No stop
07 01 07	---	18 56 18	28.3	186.3	0.4		3.8	177	227	06 57 53
07 01 07	J1825-0737	18 56 18	29.0	188.5	0.5		5.1	-18	227	No stop
07 02 52	=1822-076	18 58 04	28.9	189.0	0.5		5.4	87	229	07 01 08
07 03 32	G23.657	18 58 44	28.4	186.5	0.4		3.9	21	229	07 03 32
07 06 47	---	19 01 59	28.4	187.4	0.4		4.5	195	232	07 03 33
07 07 27	J1825-0737	19 02 39	28.8	190.3	0.6		6.2	20	232	07 07 27
07 09 12	=1822-076	19 04 25	28.8	190.8	0.6		6.5	105	234	07 07 28
07 09 12	G23.207	19 04 25	27.8	188.0	0.5		4.9	-20	234	No stop
07 12 27	---	19 07 40	27.7	188.9	0.5		5.4	175	237	07 09 13
07 12 27	J1825-0737	19 07 40	28.7	191.7	0.7		7.0	-20	237	No stop
07 14 12	=1822-076	19 09 25	28.6	192.2	0.7		7.3	85	239	07 12 28
07 14 12	G23.389	19 09 25	28.1	189.9	0.6		6.0	-18	239	No stop
07 17 27	---	19 12 41	28.0	190.9	0.6		6.6	177	242	07 14 13
07 17 27	J1825-0737	19 12 41	28.5	193.1	0.8		7.9	-19	242	No stop
07 19 12	=1822-076	19 14 26	28.4	193.6	0.8		8.2	86	244	07 17 28
07 19 52	G23.657	19 15 06	28.0	191.1	0.7		6.7	21	244	07 19 52
07 23 07	---	19 18 22	27.9	192.0	0.7		7.2	195	247	07 19 53
07 23 07	J1825-0737	19 18 22	28.3	194.7	0.9		8.8	-20	247	No stop
07 24 52	=1822-076	19 20 07	28.2	195.2	0.9		9.1	85	248	07 23 08

Schedule for TORUN (Code Tr)

Page 8

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
07 28 15	3C345	19 23 31	59.9	260.1	2.7		50.3	59	248	07 28 15
07 43 15	---	19 38 33	57.7	263.6	2.9		50.9	900	263	07 28 16
07 54 15	J1825-0737	19 49 35	26.8	203.2	1.4		13.8	519	263	07 54 15
07 56 00	=1822-076	19 51 21	26.7	203.7	1.4		14.1	105	265	07 54 16
07 56 00	G23.207	19 51 21	26.0	200.9	1.3		12.5	-20	265	No stop
07 59 15	---	19 54 36	25.9	201.8	1.3		13.0	175	268	07 56 01
07 59 15	J1825-0737	19 54 36	26.5	204.6	1.5		14.6	-20	268	No stop
08 01 00	=1822-076	19 56 21	26.4	205.0	1.5		14.9	85	269	07 59 16
08 01 00	G23.389	19 56 21	26.1	202.8	1.4		13.6	-18	269	No stop
08 04 15	---	19 59 37	25.9	203.7	1.4		14.1	177	273	08 01 01
08 04 15	J1825-0737	19 59 37	26.1	205.9	1.6		15.4	-19	273	No stop
08 06 00	=1822-076	20 01 22	26.0	206.4	1.6		15.6	86	274	08 04 16
08 06 40	G23.657	20 02 02	25.9	203.9	1.4		14.2	21	274	08 06 40
08 09 55	---	20 05 18	25.7	204.8	1.5		14.7	195	277	08 06 41
08 10 35	J1825-0737	20 05 58	25.7	207.6	1.7		16.3	20	277	08 10 35
08 12 20	=1822-076	20 07 43	25.6	208.1	1.7		16.6	105	279	08 10 36
08 12 20	G23.207	20 07 43	25.1	205.3	1.5		15.0	-20	279	No stop
08 15 35	---	20 10 59	24.9	206.1	1.6		15.5	175	282	08 12 21
08 15 35	J1825-0737	20 10 59	25.4	208.9	1.7		17.0	-20	282	No stop
08 17 20	=1822-076	20 12 44	25.2	209.4	1.8		17.3	85	284	08 15 36
08 17 20	G23.389	20 12 44	25.0	207.1	1.6		16.1	-18	284	No stop
08 20 35	---	20 16 00	24.8	208.0	1.7		16.6	177	287	08 17 21
08 20 35	J1825-0737	20 16 00	25.0	210.2	1.8		17.8	-19	287	No stop
08 22 20	=1822-076	20 17 45	24.9	210.7	1.9		18.0	86	289	08 20 36
08 23 00	G23.657	20 18 25	24.8	208.2	1.7		16.7	21	289	08 23 00
08 26 15	---	20 21 40	24.6	209.1	1.8		17.2	195	292	08 23 01
08 26 55	J1825-0737	20 22 21	24.5	211.9	1.9		18.7	20	292	08 26 55
08 28 40	=1822-076	20 24 06	24.4	212.3	2.0		18.9	105	294	08 26 56
08 28 40	G23.207	20 24 06	23.9	209.5	1.8		17.4	-20	294	No stop
08 31 55	---	20 27 21	23.7	210.4	1.9		17.9	175	297	08 28 41

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
08 31 55	J1825-0737	20 27 21	24.1	213.2	2.0		19.4	-20	297	No stop
08 33 40	=1822-076	20 29 07	23.9	213.6	2.0		19.6	85	299	08 31 56
08 33 40	G23.389	20 29 07	23.8	211.4	1.9		18.4	-18	299	No stop
08 36 55	---	20 32 22	23.6	212.2	2.0		18.9	177	302	08 33 41
08 36 55	J1825-0737	20 32 22	23.7	214.4	2.1		20.0	-18	302	No stop
08 38 40	=1822-076	20 34 08	23.5	214.9	2.1		20.3	87	303	08 36 56
08 39 20	G23.657	20 34 48	23.6	212.5	2.0		19.0	21	303	08 39 20
08 42 35	---	20 38 03	23.3	213.3	2.0		19.5	195	307	08 39 21
08 43 15	J1825-0737	20 38 43	23.1	216.0	2.2		20.9	20	307	08 43 15
08 45 00	=1822-076	20 40 29	23.0	216.5	2.2		21.1	105	308	08 43 16
08 45 00	G23.207	20 40 29	22.6	213.7	2.1		19.7	-20	308	No stop
08 48 15	---	20 43 44	22.4	214.5	2.1		20.1	175	311	08 45 01
08 48 15	J1825-0737	20 43 44	22.7	217.3	2.3		21.5	-20	311	No stop
08 50 00	=1822-076	20 45 29	22.5	217.7	2.3		21.8	85	313	08 48 16
08 50 00	G23.389	20 45 29	22.5	215.5	2.2		20.7	-18	313	No stop
08 53 15	---	20 48 45	22.2	216.4	2.2		21.1	177	316	08 50 01
08 53 15	J1825-0737	20 48 45	22.2	218.6	2.4		22.2	-18	316	No stop
08 55 00	=1822-076	20 50 30	22.0	219.0	2.4		22.4	87	318	08 53 16
08 55 40	G23.657	20 51 10	22.2	216.6	2.3		21.2	21	318	08 55 40
08 58 55	---	20 54 26	21.9	217.4	2.3		21.6	195	321	08 55 41
08 59 35	J1825-0737	20 55 06	21.6	220.1	2.5		23.0	21	321	08 59 35
09 01 20	=1822-076	20 56 51	21.4	220.5	2.5		23.2	105	323	08 59 36
09 01 20	G23.207	20 56 51	21.2	217.8	2.4		21.9	-20	323	No stop
09 04 35	---	21 00 07	20.9	218.6	2.4		22.3	175	326	09 01 21
09 04 35	J1825-0737	21 00 07	21.1	221.3	2.6		23.6	-20	326	No stop
09 06 20	=1822-076	21 01 52	20.9	221.8	2.6		23.8	85	328	09 04 36
09 06 20	G23.389	21 01 52	21.0	219.6	2.5		22.8	-18	328	No stop
09 09 35	---	21 05 08	20.7	220.4	2.5		23.2	177	331	09 06 21
09 09 35	J1825-0737	21 05 08	20.6	222.6	2.6		24.2	-18	331	No stop
09 11 20	=1822-076	21 06 53	20.4	223.0	2.7		24.4	87	332	09 09 36

Schedule for TORUN (Code Tr) Page 10

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
09 12 00	G23.657	21 07 33	20.7	220.6	2.5		23.3	21	332	09 12 00
09 15 15	---	21 10 49	20.3	221.4	2.6		23.7	195	336	09 12 01
09 15 55	J1825-0737	21 11 29	20.0	224.1	2.8		24.9	21	336	09 15 55
09 17 40	=1822-076	21 13 14	19.8	224.5	2.8		25.1	105	337	09 15 56
09 17 40	G23.207	21 13 14	19.6	221.8	2.6		23.9	-20	337	No stop
09 20 55	---	21 16 29	19.3	222.5	2.7		24.3	175	340	09 17 41
09 20 55	J1825-0737	21 16 29	19.4	225.3	2.8		25.5	-20	340	No stop
09 22 40	=1822-076	21 18 15	19.2	225.7	2.9		25.7	85	342	09 20 56
09 22 40	G23.389	21 18 15	19.3	223.5	2.7		24.7	-18	342	No stop
09 25 55	---	21 21 30	19.0	224.3	2.8		25.1	177	345	09 22 41
09 25 55	J1825-0737	21 21 30	18.9	226.5	2.9		26.1	-18	345	No stop
09 27 40	=1822-076	21 23 16	18.7	226.9	2.9		26.2	87	347	09 25 56
09 28 20	G23.657	21 23 56	19.0	224.5	2.8		25.2	21	347	09 28 20
09 31 35	---	21 27 11	18.7	225.3	2.9		25.6	195	350	09 28 21
09 32 15	J1825-0737	21 27 51	18.2	227.9	3.0		26.7	21	350	09 32 15
09 34 00	=1822-076	21 29 37	18.0	228.4	3.1		26.9	105	352	09 32 16
09 34 00	G23.207	21 29 37	17.9	225.6	2.9		25.7	-20	352	No stop
09 37 15	---	21 32 52	17.6	226.4	3.0		26.1	175	355	09 34 01
09 37 15	J1825-0737	21 32 52	17.6	229.1	3.1		27.3	-20	355	No stop
09 39 00	=1822-076	21 34 37	17.4	229.5	3.1		27.4	85	357	09 37 16
09 39 00	G23.389	21 34 37	17.6	227.4	3.0		26.5	-18	357	No stop
09 42 15	---	21 37 53	17.2	228.1	3.1		26.9	177	360	09 39 01
09 42 15	J1825-0737	21 37 53	17.0	230.3	3.2		27.8	-18	360	No stop
09 44 00	=1822-076	21 39 38	16.8	230.7	3.2		27.9	87	361	09 42 16
09 44 40	G23.657	21 40 18	17.2	228.4	3.1		27.0	21	361	09 44 40
09 47 55	---	21 43 34	16.9	229.1	3.1		27.3	195	365	09 44 41
09 48 35	J1825-0737	21 44 14	16.3	231.7	3.3		28.4	21	365	09 48 35
09 50 20	=1822-076	21 45 59	16.1	232.1	3.3		28.6	105	366	09 48 36
09 50 20	G23.207	21 45 59	16.1	229.4	3.2		27.5	-20	366	No stop
09 53 35	---	21 49 15	15.8	230.2	3.2		27.8	175	369	09 50 21
09 53 35	J1825-0737	21 49 15	15.7	232.9	3.4		28.9	-20	369	No stop
09 55 20	=1822-076	21 51 00	15.5	233.2	3.4		29.0	85	371	09 53 36

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
09 55 20	G23.389	21 51 00	15.7	231.1	3.3		28.2	-18	371	No stop
09 58 35	---	21 54 16	15.3	231.9	3.3		28.5	177	374	09 55 21
09 58 35	J1825-0737	21 54 16	15.1	234.0	3.5		29.3	-18	374	No stop
10 00 20	=1822-076	21 56 01	14.9	234.4	3.5		29.5	87	376	09 58 36
10 01 00	G23.657	21 56 41	15.3	232.1	3.4		28.6	21	376	10 01 00
10 04 15	---	21 59 57	14.9	232.8	3.4		28.9	195	379	10 01 01
10 04 55	J1825-0737	22 00 37	14.3	235.4	3.6		29.9	21	379	10 04 55
10 06 40	=1822-076	22 02 22	14.1	235.8	3.6		30.1	105	381	10 04 56
10 06 40	G23.207	22 02 22	14.2	233.1	3.4		29.1	-19	381	No stop
10 09 55	---	22 05 38	13.8	233.8	3.5		29.4	176	384	10 06 41
10 09 55	J1825-0737	22 05 38	13.7	236.5	3.7		30.3	-20	384	No stop
10 11 40	=1822-076	22 07 23	13.5	236.9	3.7		30.5	85	386	10 09 56
10 11 40	G23.389	22 07 23	13.8	234.8	3.6		29.7	-18	386	No stop
10 14 55	---	22 10 38	13.4	235.5	3.6		30.0	177	389	10 11 41
10 14 55	J1825-0737	22 10 38	13.1	237.6	3.7		30.8	-18	389	No stop
10 16 40	=1822-076	22 12 24	12.9	238.0	3.8		30.9	87	390	10 14 56
10 17 20	G23.657	22 13 04	13.3	235.8	3.6		30.1	21	390	10 17 20
10 20 35	---	22 16 19	12.9	236.5	3.7		30.4	195	394	10 17 21
10 21 15	J1825-0737	22 16 59	12.3	239.0	3.8		31.3	21	394	10 21 15
10 23 00	=1822-076	22 18 45	12.0	239.4	3.9		31.4	105	395	10 21 16
10 23 00	G23.207	22 18 45	12.2	236.7	3.7		30.5	-19	395	No stop
10 26 15	---	22 22 00	11.8	237.4	3.8		30.8	176	398	10 23 01
10 26 15	J1825-0737	22 22 00	11.6	240.1	3.9		31.7	-20	398	No stop
10 28 00	=1822-076	22 23 45	11.4	240.4	4.0		31.8	85	400	10 26 16
10 28 00	G23.389	22 23 45	11.7	238.4	3.8		31.1	-18	400	No stop
10 31 15	---	22 27 01	11.3	239.1	3.9		31.4	177	403	10 28 01
10 31 15	J1825-0737	22 27 01	11.0	241.1	4.0		32.0	-18	403	No stop
10 33 00	=1822-076	22 28 46	10.7	241.5	4.0		32.2	87	405	10 31 16
10 33 40	G23.657	22 29 26	11.3	239.3	3.9		31.5	21	405	10 33 40
10 36 55	---	22 32 42	10.8	240.0	4.0		31.7	195	408	10 33 41
10 37 35	J1825-0737	22 33 22	10.1	242.5	4.1		32.5	21	408	10 37 35
10 39 20	=1822-076	22 35 07	9.9	242.9	4.1		32.6	105	410	10 37 36

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 2 Mar 2013 Day 61 ---										
10 39 20	G23.207	22 35 07	10.1	240.2	4.0		31.8	-19	410	No stop
10 42 35	---	22 38 23	9.7	240.9	4.0		32.1	176	413	10 39 21
10 42 35	J1825-0737	22 38 23	9.4	243.6	4.2		32.8	-20	413	No stop
10 44 20	=1822-076	22 40 08	9.2	243.9	4.2		33.0	85	415	10 42 36
10 44 20	G23.389	22 40 08	9.6	241.9	4.1		32.4	-18	415	No stop
10 47 35	---	22 43 24	9.1	242.6	4.2		32.6	177	418	10 44 21
10 47 35	J1825-0737	22 43 24	8.8	244.6	4.3		33.2	-18	418	No stop
10 49 20	=1822-076	22 45 09	8.5	245.0	4.3		33.3	87	419	10 47 36
10 50 00	G23.657	22 45 49	9.1	242.8	4.2		32.7	22	419	10 50 00
10 53 15	---	22 49 05	8.7	243.5	4.2		32.9	195	423	10 50 01
10 53 55	J1825-0737	22 49 45	7.9	245.9	4.4		33.6	21	423	10 53 55
10 55 40	=1822-076	22 51 30	7.7	246.3	4.4		33.7	105	424	10 53 56
10 55 40	G23.207	22 51 30	7.9	243.7	4.3		33.0	-19	424	No stop
10 58 55	---	22 54 46	7.5	244.4	4.3		33.2	176	427	10 55 41
10 58 55	J1825-0737	22 54 46	7.2	247.0	4.5		33.9	-20	427	No stop
11 00 40	=1822-076	22 56 31	7.0	247.3	4.5		34.0	85	429	10 58 56
11 00 40	G23.389	22 56 31	7.4	245.3	4.4		33.5	-18	429	No stop
11 03 55	---	22 59 46	6.9	246.0	4.4		33.7	177	432	11 00 41
11 03 55	J1825-0737	22 59 46	6.5	248.0	4.6		34.2	-18	432	No stop
11 05 40	=1822-076	23 01 32	6.3	248.4	4.6		34.3	87	434	11 03 56
11 06 20	G23.657	23 02 12	6.9	246.2	4.4		33.7	22	434	11 06 20
11 09 35	---	23 05 27	6.5	246.9	4.5		33.9	195	437	11 06 21
11 10 15	J1825-0737	23 06 07	5.6	249.3	4.7		34.5	21	437	11 10 15
11 12 00	=1822-076	23 07 53	5.4	249.7	4.7		34.6	105	439	11 10 16
11 12 00	G23.207	23 07 53	5.7	247.1	4.5		34.0	-19	439	No stop
11 15 15	---	23 11 08	5.2	247.8	4.6		34.2	176	442	11 12 01
11 15 15	J1825-0737	23 11 08	4.9	250.3	4.7		34.8	-20	442	No stop
11 17 00	=1822-076	23 12 54	4.7	250.7	4.8		34.9	85	444	11 15 16
11 17 00	G23.389	23 12 54	5.1	248.7	4.6		34.4	-18	444	No stop
11 20 15	---	23 16 09	4.7	249.4	4.7		34.6	177	447	11 17 01
11 20 15	J1825-0737	23 16 09	4.2	251.4	4.8		35.0	-18	447	No stop
11 22 00	=1822-076	23 17 54	4.0	251.7	4.9		35.1	87	449	11 20 16

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: sess113.EB052

Matching groups in /usr/local/sched/catalogs/freq.dat:

tr5cm Values confirmed by E-mail Borkowski (JFD 26Oct98)

Setup group:	5	Station:	TORUN	Total bit rate:	128
Format:	MKIV1:1	Bits per sample:	2	Sample rate:	4.000
Number of channels:	16	DBE type:		Speedup factor:	2.00

Disk used to record data.

1st LO=	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 6 Based on FREQ, BW, and/or DOPPLER in schedule. Used pcal sets: 1

LO sum=	6664.72	6664.72	6664.72	6664.72	6668.72	6668.72	6668.72	6668.72
	6672.72	6672.72	6672.72	6672.72	6676.72	6676.72	6676.72	6676.72
BBC fr=	764.72	764.72	764.72	764.72	768.72	768.72	768.72	768.72
	772.72	772.72	772.72	772.72	776.72	776.72	776.72	776.72
Bandwd=	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Matching frequency sets: 6

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = OFF

PCALXB1=	S1	S2	S3	S4	S5	S6	S7	S8
PCALXB2=	M1	M2	M3	M4	M5	M6	M7	M8
PCALFR1=	0	0	0	0	0	0	0	0
PCALFR2=	0	0	0	0	0	0	0	0

Track assignments are:

track1= 2, 6, 10, 14, 18, 22, 26, 30, 3, 7, 11, 15, 19, 23, 27, 31
 barrel=roll_off

SOURCES USED IN RECORDING SCANS -- Nature of methanol maser rings

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* G23.207	18 32 11.143328 -08 51 41.10858	* 18 34 55.212100 *-08 49 14.89200	18 35 38.667922 -08 48 33.38477	0.00 0.00
* G23.389	18 30 30.744294 -08 26 16.42841	* 18 33 14.324700 *-08 23 57.47200	18 33 57.659696 -08 23 18.03440	0.00 0.00
* G23.657	18 32 08.103442 -08 20 47.27971	* 18 34 51.565000 *-08 18 21.30400	18 35 34.859474 -08 17 40.02670	0.00 0.00
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.881503	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 46 55.22314	0.52
* J1825-0737	18 22 54.910260	* 18 25 37.609553	18 26 20.751568	0.22
1822-076	-07 39 15.96775	*-07 37 30.01383	-07 36 59.62763	0.34

The solar corona can cause unstable phases for sources too close to the Sun. SCHED provides warnings at individual scans for distances less than 10 degrees. The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
G23.207	63.7
G23.389	64.1
G23.657	63.7
3C345	96.4
J1825-0737	66.1

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

NATURE OF METHANOL MASER RINGS

PI: *Anna Bartkiewicz*

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 Phone: +48 56 6113040 EMAIL: annan@astro.uni.torun.pl
 Fax: +48 56 6113009 Phone during observation: +48 56 6113010

Observing mode: MKV, 128 Mbps

Notes: Please, make sure the PHASE CAL is OFF.
 SPECTRAL LINE observations, a PHASE REF experiment
 11min. gap for Effelsberg after the scan 82 (UT 07:11:14-07:22:14)

Schedule for TORUN (Code Tr) Page 2

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Sun 3 Mar 2013 Day 62 ---										
Next scan frequencies: 6665.17 6665.17 6665.17 6665.17 6669.17 6669.17 6669.17 6669.17										
6673.17 6673.17 6673.17 6673.17 6677.17 6677.17 6677.17 6677.17										
Next BBC frequencies: 765.17 765.17 765.17 765.17 769.17 769.17 769.17 769.17										
773.17 773.17 773.17 773.17 777.17 777.17 777.17 777.17										
Next scan bandwidths: 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
02 45 00	3C345	14 43 26	65.7	111.1	-2.0		-46.8	0	0	02 45 00
03 00 00	---	14 58 29	67.8	116.2	-1.7		-44.5	900	15	02 45 01
03 00 40	3C345	14 59 09	67.8	116.4	-1.7		-44.4	34	15	03 00 40
03 15 40	---	15 14 11	69.8	122.3	-1.5		-41.3	900	29	03 00 41
03 19 26	J1825-0737	15 17 58	17.4	130.5	-3.1		-27.4	15	29	03 19 26
03 21 11	=1822-076	15 19 43	17.6	130.9	-3.1		-27.3	105	31	03 19 27
03 21 11	G24.635	15 19 43	16.3	128.1	-3.3		-28.5	-20	31	No stop
03 24 26	---	15 22 58	16.7	128.9	-3.3		-28.1	175	34	03 21 12
03 24 26	J1825-0737	15 22 58	18.0	131.6	-3.1		-26.9	-20	34	No stop
03 26 11	=1822-076	15 24 44	18.2	132.0	-3.0		-26.7	85	36	03 24 27
03 26 11	G25.411	15 24 44	17.7	128.9	-3.2		-28.1	-21	36	No stop
03 29 26	---	15 27 59	18.1	129.6	-3.2		-27.8	174	39	03 26 12
03 29 26	J1825-0737	15 27 59	18.5	132.8	-3.0		-26.4	-21	39	No stop
03 31 11	=1822-076	15 29 44	18.7	133.2	-2.9		-26.2	84	40	03 29 27
03 31 51	G26.598	15 30 25	19.0	129.1	-3.2		-27.9	17	40	03 31 51
03 35 06	---	15 33 40	19.3	129.8	-3.1		-27.6	195	44	03 31 52
03 35 46	J1825-0737	15 34 20	19.2	134.3	-2.9		-25.7	16	44	03 35 46
03 37 31	=1822-076	15 36 06	19.4	134.7	-2.8		-25.5	105	45	03 35 47

Schedule for TORUN (Code Tr)

Page 3

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
03 37 31	G24.635	15 36 06	18.2	131.9	-3.0		-26.8	-20	45	No stop
03 40 46	---	15 39 21	18.6	132.6	-3.0		-26.5	175	48	03 37 32
03 40 46	J1825-0737	15 39 21	19.8	135.5	-2.8		-25.1	-20	48	No stop
03 42 31	=1822-076	15 41 06	19.9	135.9	-2.8		-24.9	85	50	03 40 47
03 42 31	G25.411	15 41 06	19.6	132.7	-2.9		-26.4	-21	50	No stop
03 45 46	---	15 44 22	19.9	133.4	-2.9		-26.0	174	53	03 42 32
03 45 46	J1825-0737	15 44 22	20.3	136.7	-2.7		-24.6	-21	53	No stop
03 47 31	=1822-076	15 46 07	20.5	137.1	-2.7		-24.4	84	55	03 45 47
03 48 11	G26.598	15 46 47	20.8	132.9	-2.9		-26.2	17	55	03 48 11
03 51 26	---	15 50 03	21.2	133.7	-2.8		-25.9	195	58	03 48 12
03 52 06	J1825-0737	15 50 43	20.9	138.2	-2.6		-23.8	16	58	03 52 06
03 53 51	=1822-076	15 52 28	21.1	138.6	-2.6		-23.6	105	60	03 52 07
03 53 51	G24.635	15 52 28	20.0	135.8	-2.8		-25.0	-20	60	No stop
03 57 06	---	15 55 44	20.3	136.5	-2.7		-24.6	175	63	03 53 52
03 57 06	J1825-0737	15 55 44	21.4	139.4	-2.5		-23.2	-20	63	No stop
03 58 51	=1822-076	15 57 29	21.6	139.9	-2.5		-23.0	85	65	03 57 07
03 58 51	G25.411	15 57 29	21.3	136.6	-2.7		-24.5	-21	65	No stop
04 02 06	---	16 00 45	21.7	137.4	-2.6		-24.2	174	68	03 58 52
04 02 06	J1825-0737	16 00 45	21.9	140.7	-2.4		-22.6	-21	68	No stop
04 03 51	=1822-076	16 02 30	22.1	141.1	-2.4		-22.4	84	69	04 02 07
04 04 31	G26.598	16 03 10	22.6	136.9	-2.6		-24.4	16	69	04 04 31
04 07 46	---	16 06 25	22.9	137.7	-2.6		-24.0	195	73	04 04 32
04 08 26	J1825-0737	16 07 06	22.5	142.2	-2.3		-21.8	16	73	04 08 26
04 10 11	=1822-076	16 08 51	22.7	142.7	-2.3		-21.6	105	74	04 08 27
04 10 11	G24.635	16 08 51	21.6	139.7	-2.5		-23.1	-20	74	No stop
04 13 26	---	16 12 06	22.0	140.5	-2.4		-22.7	175	77	04 10 12
04 13 26	J1825-0737	16 12 06	23.0	143.5	-2.2		-21.1	-21	77	No stop
04 15 11	=1822-076	16 13 52	23.1	143.9	-2.2		-20.9	84	79	04 13 27
04 15 11	G25.411	16 13 52	23.0	140.6	-2.4		-22.6	-21	79	No stop
04 18 26	---	16 17 07	23.3	141.4	-2.3		-22.1	174	82	04 15 12
04 18 26	J1825-0737	16 17 07	23.4	144.7	-2.2		-20.5	-21	82	No stop
04 20 11	=1822-076	16 18 53	23.5	145.2	-2.1		-20.2	84	84	04 18 27

Nature of methanol maser rings

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SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
04 20 51	G26.598	16 19 33	24.2	141.0	-2.4		-22.3	16	84	04 20 51
04 24 06	---	16 22 48	24.5	141.8	-2.3		-21.9	195	87	04 20 52
04 24 46	J1825-0737	16 23 28	23.9	146.4	-2.0		-19.6	16	87	04 24 46
04 26 31	=1822-076	16 25 14	24.1	146.8	-2.0		-19.4	105	89	04 24 47
04 26 31	G24.635	16 25 14	23.2	143.8	-2.2		-21.0	-20	89	No stop
04 29 46	---	16 28 29	23.5	144.6	-2.2		-20.5	175	92	04 26 32
04 29 46	J1825-0737	16 28 29	24.3	147.6	-2.0		-18.9	-21	92	No stop
04 31 31	=1822-076	16 30 14	24.5	148.1	-1.9		-18.7	84	94	04 29 47
04 31 31	G25.411	16 30 14	24.4	144.7	-2.1		-20.4	-21	94	No stop
04 34 46	---	16 33 30	24.7	145.6	-2.1		-20.0	174	97	04 31 32
04 34 46	J1825-0737	16 33 30	24.7	148.9	-1.9		-18.2	-22	97	No stop
04 36 31	=1822-076	16 35 15	24.9	149.4	-1.9		-18.0	83	98	04 34 47
04 37 11	G26.598	16 35 55	25.6	145.1	-2.1		-20.2	16	98	04 37 11
04 40 26	---	16 39 11	25.9	146.0	-2.0		-19.7	195	102	04 37 12
04 41 06	J1825-0737	16 39 51	25.2	150.6	-1.8		-17.3	16	102	04 41 06
04 42 51	=1822-076	16 41 36	25.3	151.1	-1.7		-17.1	105	103	04 41 07
04 42 51	G24.635	16 41 36	24.5	148.0	-1.9		-18.7	-21	103	No stop
04 46 06	---	16 44 52	24.8	148.8	-1.9		-18.3	174	106	04 42 52
04 46 06	J1825-0737	16 44 52	25.6	151.9	-1.7		-16.6	-21	106	No stop
04 47 51	=1822-076	16 46 37	25.7	152.4	-1.7		-16.3	84	108	04 46 07
04 47 51	G25.411	16 46 37	25.8	149.0	-1.9		-18.1	-21	108	No stop
04 51 06	---	16 49 53	26.0	149.8	-1.8		-17.7	174	111	04 47 52
04 51 06	J1825-0737	16 49 53	25.9	153.2	-1.6		-15.8	-22	111	No stop
04 52 51	=1822-076	16 51 38	26.0	153.7	-1.6		-15.6	83	113	04 51 07
04 53 31	G26.598	16 52 18	27.0	149.4	-1.8		-17.9	16	113	04 53 31
04 56 46	---	16 55 34	27.2	150.3	-1.8		-17.4	195	116	04 53 32
04 57 26	J1825-0737	16 56 14	26.3	154.9	-1.5		-14.9	16	116	04 57 26
04 59 11	=1822-076	16 57 59	26.5	155.4	-1.5		-14.6	105	118	04 57 27
04 59 11	G24.635	16 57 59	25.8	152.2	-1.7		-16.4	-21	118	No stop
05 02 26	---	17 01 14	26.0	153.1	-1.6		-15.9	174	121	04 59 12
05 02 26	J1825-0737	17 01 14	26.7	156.3	-1.4		-14.1	-21	121	No stop
05 04 11	=1822-076	17 03 00	26.8	156.7	-1.4		-13.8	84	123	05 02 27

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

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Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
05 04 11	G25.411	17 03 00	27.0	153.3	-1.6		-15.7	-21	123	No stop
05 07 26	---	17 06 15	27.2	154.2	-1.5		-15.3	174	126	05 04 12
05 07 26	J1825-0737	17 06 15	27.0	157.6	-1.3		-13.3	-22	126	No stop
05 09 11	=1822-076	17 08 01	27.0	158.1	-1.3		-13.1	83	127	05 07 27
05 09 51	G26.598	17 08 41	28.1	153.8	-1.5		-15.4	16	127	05 09 51
05 13 06	---	17 11 56	28.4	154.7	-1.5		-14.9	195	131	05 09 52
05 13 46	J1825-0737	17 12 36	27.3	159.3	-1.2		-12.3	16	131	05 13 46
05 15 31	=1822-076	17 14 22	27.4	159.8	-1.2		-12.1	105	132	05 13 47
05 15 31	G24.635	17 14 22	26.8	156.6	-1.4		-13.9	-21	132	No stop
05 18 46	---	17 17 37	27.0	157.5	-1.3		-13.4	174	135	05 15 32
05 18 46	J1825-0737	17 17 37	27.6	160.7	-1.1		-11.5	-21	135	No stop
05 20 31	=1822-076	17 19 22	27.6	161.2	-1.1		-11.3	84	137	05 18 47
05 20 31	G25.411	17 19 22	28.0	157.8	-1.3		-13.2	-21	137	No stop
05 23 46	---	17 22 38	28.2	158.7	-1.3		-12.7	174	140	05 20 32
05 23 46	J1825-0737	17 22 38	27.8	162.1	-1.1		-10.7	-22	140	No stop
05 25 31	=1822-076	17 24 23	27.9	162.6	-1.0		-10.5	83	142	05 23 47
05 26 11	G26.598	17 25 03	29.1	158.3	-1.3		-12.9	16	142	05 26 11
05 29 26	---	17 28 19	29.3	159.3	-1.2		-12.3	195	145	05 26 12
05 30 06	J1825-0737	17 28 59	28.1	163.8	-1.0		-9.7	16	145	05 30 06
05 31 51	=1822-076	17 30 44	28.1	164.3	-0.9		-9.4	105	147	05 30 07
05 31 51	G24.635	17 30 44	27.7	161.1	-1.1		-11.3	-21	147	No stop
05 35 06	---	17 34 00	27.9	162.0	-1.1		-10.8	174	150	05 31 52
05 35 06	J1825-0737	17 34 00	28.3	165.2	-0.9		-8.9	-21	150	No stop
05 36 51	=1822-076	17 35 45	28.3	165.7	-0.8		-8.6	84	152	05 35 07
05 36 51	G25.411	17 35 45	28.8	162.3	-1.0		-10.6	-21	152	No stop
05 40 06	---	17 39 01	29.0	163.2	-1.0		-10.1	174	155	05 36 52
05 40 06	J1825-0737	17 39 01	28.5	166.6	-0.8		-8.1	-22	155	No stop
05 41 51	=1822-076	17 40 46	28.5	167.1	-0.8		-7.8	83	157	05 40 07
05 42 31	G26.598	17 41 26	30.0	162.9	-1.0		-10.2	16	157	05 42 31
05 45 46	---	17 44 42	30.1	163.9	-0.9		-9.7	195	160	05 42 32
05 46 26	J1825-0737	17 45 22	28.7	168.4	-0.7		-7.0	16	160	05 46 26
05 48 11	=1822-076	17 47 07	28.7	168.9	-0.7		-6.7	105	161	05 46 27

Nature of methanol maser rings

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Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
05 48 11	G24.635	17 47 07	28.4	165.6	-0.8		-8.7	-21	161	No stop
05 51 26	---	17 50 23	28.5	166.5	-0.8		-8.1	174	165	05 48 12
05 51 26	J1825-0737	17 50 23	28.8	169.8	-0.6		-6.1	-21	165	No stop
05 53 11	=1822-076	17 52 08	28.9	170.3	-0.6		-5.9	84	166	05 51 27
05 53 11	G25.411	17 52 08	29.5	166.9	-0.8		-7.9	-21	166	No stop
05 56 26	---	17 55 23	29.6	167.8	-0.7		-7.3	174	169	05 53 12
05 56 26	J1825-0737	17 55 23	28.9	171.2	-0.5		-5.3	-22	169	No stop
05 58 11	=1822-076	17 57 09	29.0	171.7	-0.5		-5.0	83	171	05 56 27
05 58 51	G26.598	17 57 49	30.6	167.6	-0.7		-7.4	17	171	05 58 51
06 02 06	---	18 01 04	30.7	168.5	-0.7		-6.9	195	174	05 58 52
06 02 46	J1825-0737	18 01 44	29.1	173.0	-0.4		-4.2	16	174	06 02 46
06 04 31	=1822-076	18 03 30	29.1	173.5	-0.4		-3.9	105	176	06 02 47
06 04 31	G24.635	18 03 30	28.9	170.2	-0.6		-5.9	-21	176	No stop
06 07 46	---	18 06 45	29.0	171.1	-0.5		-5.4	174	179	06 04 32
06 07 46	J1825-0737	18 06 45	29.1	174.4	-0.3		-3.4	-22	179	No stop
06 09 31	=1822-076	18 08 30	29.2	174.9	-0.3		-3.1	83	181	06 07 47
06 09 31	G25.411	18 08 30	29.9	171.5	-0.5		-5.1	-21	181	No stop
06 12 46	---	18 11 46	30.0	172.5	-0.4		-4.5	174	184	06 09 32
06 12 46	J1825-0737	18 11 46	29.2	175.9	-0.2		-2.5	-22	184	No stop
06 14 31	=1822-076	18 13 31	29.2	176.4	-0.2		-2.2	83	186	06 12 47
06 15 11	G26.598	18 14 11	31.0	172.3	-0.4		-4.6	17	186	06 15 11
06 18 26	---	18 17 27	31.1	173.3	-0.4		-4.1	195	189	06 15 12
06 19 06	J1825-0737	18 18 07	29.3	177.7	-0.1		-1.4	16	189	06 19 06
06 20 51	=1822-076	18 19 52	29.3	178.2	-0.1		-1.1	105	190	06 19 07
06 20 51	G24.635	18 19 52	29.3	174.8	-0.3		-3.1	-21	190	No stop
06 24 06	---	18 23 08	29.3	175.7	-0.2		-2.6	174	194	06 20 52
06 24 06	J1825-0737	18 23 08	29.3	179.1	-0.1		-0.6	-22	194	No stop
06 25 51	=1822-076	18 24 53	29.3	179.6	-0.0		-0.3	83	195	06 24 07
06 25 51	G25.411	18 24 53	30.2	176.2	-0.2		-2.3	-21	195	No stop
06 29 06	---	18 28 09	30.2	177.2	-0.2		-1.7	174	198	06 25 52
06 29 06	J1825-0737	18 28 09	29.3	180.5	0.0		0.3	-22	198	No stop
06 30 51	=1822-076	18 29 54	29.3	181.0	0.1		0.6	83	200	06 29 07

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

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Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
06 31 31	G26.598	18 30 34	31.2	177.1	-0.2		-1.8	17	200	06 31 31
06 34 46	---	18 33 50	31.3	178.0	-0.1		-1.2	195	203	06 31 32
06 35 26	J1825-0737	18 34 30	29.3	182.3	0.1		1.4	17	203	06 35 26
06 37 11	=1822-076	18 36 15	29.3	182.8	0.2		1.7	105	205	06 35 27
06 37 11	G24.635	18 36 15	29.4	179.5	-0.0		-0.3	-21	205	No stop
06 40 26	---	18 39 31	29.4	180.4	0.0		0.2	174	208	06 37 12
06 40 26	J1825-0737	18 39 31	29.2	183.7	0.2		2.3	-22	208	No stop
06 42 11	=1822-076	18 41 16	29.2	184.2	0.2		2.6	83	210	06 40 27
06 42 11	G25.411	18 41 16	30.3	180.9	0.1		0.6	-21	210	No stop
06 45 26	---	18 44 31	30.3	181.9	0.1		1.1	174	213	06 42 12
06 45 26	J1825-0737	18 44 31	29.2	185.2	0.3		3.1	-21	213	No stop
06 47 11	=1822-076	18 46 17	29.1	185.7	0.3		3.4	84	215	06 45 27
06 47 51	G26.598	18 46 57	31.3	181.8	0.1		1.1	17	215	06 47 51
06 51 06	---	18 50 12	31.2	182.8	0.2		1.7	195	218	06 47 52
06 51 06	J1825-0737	18 50 12	29.1	186.8	0.4		4.1	-23	218	No stop
06 52 51	=1822-076	18 51 58	29.0	187.3	0.4		4.4	82	219	06 51 07
06 56 14	3C345	18 55 21	64.0	252.6	2.2		48.2	58	219	06 56 14
07 11 14	---	19 10 24	61.8	256.8	2.4		49.5	900	234	06 56 15
07 22 14	J1825-0737	19 21 26	28.2	195.5	0.9		9.3	518	234	07 22 14
07 23 59	=1822-076	19 23 11	28.1	196.0	0.9		9.6	105	236	07 22 15
07 23 59	G24.635	19 23 11	28.6	192.8	0.8		7.7	-21	236	No stop
07 27 14	---	19 26 26	28.5	193.7	0.8		8.2	174	239	07 24 00
07 27 14	J1825-0737	19 26 26	28.0	196.9	1.0		10.1	-21	239	No stop
07 28 59	=1822-076	19 28 12	27.9	197.4	1.0		10.4	84	240	07 27 15
07 28 59	G25.411	19 28 12	29.3	194.3	0.8		8.6	-20	240	No stop
07 32 14	---	19 31 27	29.2	195.3	0.9		9.2	175	244	07 29 00
07 32 14	J1825-0737	19 31 27	27.7	198.3	1.1		11.0	-21	244	No stop
07 33 59	=1822-076	19 33 13	27.6	198.8	1.1		11.2	84	245	07 32 15
07 34 39	G26.598	19 33 53	30.2	195.4	0.9		9.2	16	245	07 34 39
07 37 54	---	19 37 08	30.1	196.3	0.9		9.7	195	248	07 34 40

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

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Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
07 38 34	J1825-0737	19 37 48	27.4	200.0	1.2		12.0	16	248	07 38 34
07 40 19	=1822-076	19 39 34	27.3	200.5	1.2		12.3	105	250	07 38 35
07 40 19	G24.635	19 39 34	28.0	197.3	1.0		10.4	-21	250	No stop
07 43 34	---	19 42 49	27.8	198.2	1.1		10.9	174	253	07 40 20
07 43 34	J1825-0737	19 42 49	27.2	201.4	1.3		12.8	-21	253	No stop
07 45 19	=1822-076	19 44 34	27.1	201.9	1.3		13.0	84	255	07 43 35
07 45 19	G25.411	19 44 34	28.6	198.9	1.1		11.3	-20	255	No stop
07 48 34	---	19 47 50	28.5	199.8	1.2		11.8	175	258	07 45 20
07 48 34	J1825-0737	19 47 50	26.9	202.8	1.4		13.6	-21	258	No stop
07 50 19	=1822-076	19 49 35	26.8	203.2	1.4		13.8	84	260	07 48 35
07 50 59	G26.598	19 50 15	29.5	200.0	1.2		11.9	16	260	07 50 59
07 54 14	---	19 53 31	29.3	200.9	1.2		12.4	195	263	07 51 00
07 54 54	J1825-0737	19 54 11	26.5	204.5	1.5		14.5	16	263	07 54 54
07 56 39	=1822-076	19 55 56	26.4	204.9	1.5		14.8	105	265	07 54 55
07 56 39	G24.635	19 55 56	27.2	201.8	1.3		13.0	-21	265	No stop
07 59 54	---	19 59 12	27.0	202.7	1.4		13.5	174	268	07 56 40
07 59 54	J1825-0737	19 59 12	26.2	205.8	1.5		15.3	-21	268	No stop
08 01 39	=1822-076	20 00 57	26.1	206.3	1.6		15.6	84	269	07 59 55
08 01 39	G25.411	20 00 57	27.7	203.4	1.4		13.9	-20	269	No stop
08 04 54	---	20 04 13	27.5	204.3	1.4		14.4	175	273	08 01 40
08 04 54	J1825-0737	20 04 13	25.8	207.1	1.6		16.0	-20	273	No stop
08 06 39	=1822-076	20 05 58	25.7	207.6	1.7		16.3	85	274	08 04 55
08 07 19	G26.598	20 06 38	28.5	204.5	1.4		14.5	15	274	08 07 19
08 10 34	---	20 09 54	28.3	205.4	1.5		15.0	195	277	08 07 20
08 11 14	J1825-0737	20 10 34	25.4	208.8	1.7		17.0	15	277	08 11 14
08 12 59	=1822-076	20 12 19	25.3	209.3	1.8		17.2	105	279	08 11 15
08 12 59	G24.635	20 12 19	26.2	206.2	1.6		15.5	-20	279	No stop
08 16 14	---	20 15 34	26.0	207.1	1.6		16.0	175	282	08 13 00
08 16 14	J1825-0737	20 15 34	25.0	210.1	1.8		17.7	-21	282	No stop
08 17 59	=1822-076	20 17 20	24.9	210.6	1.8		17.9	84	284	08 16 15

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
08 17 59	G25.411	20 17 20	26.7	207.8	1.7		16.4	-20	284	No stop
08 21 14	---	20 20 35	26.4	208.7	1.7		16.9	175	287	08 18 00
08 21 14	J1825-0737	20 20 35	24.6	211.4	1.9		18.4	-21	287	No stop
08 22 59	=1822-076	20 22 21	24.5	211.9	1.9		18.7	84	289	08 21 15
08 23 39	G26.598	20 23 01	27.4	209.0	1.7		17.0	15	289	08 23 39
08 26 54	---	20 26 16	27.2	209.8	1.8		17.5	195	292	08 23 40
08 27 34	J1825-0737	20 26 56	24.1	213.1	2.0		19.3	15	292	08 27 34
08 29 19	=1822-076	20 28 42	24.0	213.5	2.0		19.5	105	294	08 27 35
08 29 19	G24.635	20 28 42	25.0	210.5	1.8		17.9	-20	294	No stop
08 32 34	---	20 31 57	24.8	211.4	1.9		18.4	175	297	08 29 20
08 32 34	J1825-0737	20 31 57	23.7	214.3	2.1		20.0	-21	297	No stop
08 34 19	=1822-076	20 33 42	23.6	214.8	2.1		20.2	84	299	08 32 35
08 34 19	G25.411	20 33 42	25.5	212.1	1.9		18.8	-21	299	No stop
08 37 34	---	20 36 58	25.2	213.0	2.0		19.2	174	302	08 34 20
08 37 34	J1825-0737	20 36 58	23.3	215.6	2.2		20.7	-21	302	No stop
08 39 19	=1822-076	20 38 43	23.1	216.0	2.2		20.9	84	303	08 37 35
08 39 59	G26.598	20 39 23	26.1	213.3	2.0		19.3	15	303	08 39 59
08 43 14	---	20 42 39	25.9	214.2	2.0		19.8	195	307	08 40 00
08 43 54	J1825-0737	20 43 19	22.7	217.2	2.3		21.5	14	307	08 43 54
08 45 39	=1822-076	20 45 04	22.5	217.6	2.3		21.7	105	308	08 43 55
08 45 39	G24.635	20 45 04	23.7	214.7	2.1		20.2	-20	308	No stop
08 48 54	---	20 48 20	23.4	215.5	2.2		20.6	175	311	08 45 40
08 48 54	J1825-0737	20 48 20	22.2	218.4	2.4		22.1	-20	311	No stop
08 50 39	=1822-076	20 50 05	22.1	218.9	2.4		22.4	85	313	08 48 55
08 50 39	G25.411	20 50 05	24.1	216.4	2.2		21.0	-21	313	No stop
08 53 54	---	20 53 21	23.8	217.2	2.3		21.4	174	316	08 50 40
08 53 54	J1825-0737	20 53 21	21.8	219.7	2.4		22.8	-21	316	No stop
08 55 39	=1822-076	20 55 06	21.6	220.1	2.5		23.0	84	318	08 53 55
08 56 19	G26.598	20 55 46	24.7	217.5	2.3		21.6	14	318	08 56 19
08 59 34	---	20 59 02	24.4	218.4	2.3		22.0	195	321	08 56 20
09 00 14	J1825-0737	20 59 42	21.2	221.2	2.6		23.5	14	321	09 00 14
09 01 59	=1822-076	21 01 27	21.0	221.7	2.6		23.8	105	323	09 00 15

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
09 01 59	G24.635	21 01 27	22.2	218.8	2.4		22.3	-20	323	No stop
09 05 14	---	21 04 43	21.9	219.6	2.4		22.7	175	326	09 02 00
09 05 14	J1825-0737	21 04 43	20.7	222.5	2.6		24.1	-20	326	No stop
09 06 59	=1822-076	21 06 28	20.5	222.9	2.7		24.3	85	328	09 05 15
09 06 59	G25.411	21 06 28	22.5	220.5	2.5		23.1	-21	328	No stop
09 10 14	---	21 09 43	22.2	221.3	2.5		23.5	174	331	09 07 00
09 10 14	J1825-0737	21 09 43	20.1	223.7	2.7		24.7	-22	331	No stop
09 11 59	=1822-076	21 11 29	20.0	224.1	2.8		24.9	83	332	09 10 15
09 12 39	G26.598	21 12 09	23.2	221.6	2.5		23.6	14	332	09 12 39
09 15 54	---	21 15 24	22.8	222.5	2.6		24.0	195	336	09 12 40
09 16 34	J1825-0737	21 16 04	19.5	225.2	2.8		25.5	14	336	09 16 34
09 18 19	=1822-076	21 17 50	19.3	225.6	2.9		25.6	105	337	09 16 35
09 18 19	G24.635	21 17 50	20.6	222.8	2.7		24.3	-20	337	No stop
09 21 34	---	21 21 05	20.3	223.6	2.7		24.7	175	340	09 18 20
09 21 34	J1825-0737	21 21 05	18.9	226.4	2.9		26.0	-20	340	No stop
09 23 19	=1822-076	21 22 50	18.7	226.8	2.9		26.2	85	342	09 21 35
09 23 19	G25.411	21 22 50	20.9	224.5	2.7		25.1	-22	342	No stop
09 26 34	---	21 26 06	20.5	225.2	2.8		25.4	173	345	09 23 20
09 26 34	J1825-0737	21 26 06	18.4	227.5	3.0		26.5	-22	345	No stop
09 28 19	=1822-076	21 27 51	18.2	227.9	3.0		26.7	83	347	09 26 35
09 28 59	G26.598	21 28 31	21.5	225.7	2.8		25.6	14	347	09 28 59
09 32 14	---	21 31 47	21.1	226.4	2.9		25.9	195	350	09 29 00
09 32 54	J1825-0737	21 32 27	17.7	229.0	3.1		27.2	13	350	09 32 54
09 34 39	=1822-076	21 34 12	17.5	229.4	3.1		27.4	105	352	09 32 55
09 34 39	G24.635	21 34 12	18.9	226.7	2.9		26.2	-20	352	No stop
09 37 54	---	21 37 28	18.5	227.5	3.0		26.5	175	355	09 34 40
09 37 54	J1825-0737	21 37 28	17.1	230.2	3.2		27.7	-20	355	No stop
09 39 39	=1822-076	21 39 13	16.9	230.6	3.2		27.9	85	357	09 37 55
09 39 39	G25.411	21 39 13	19.1	228.4	3.0		26.9	-22	357	No stop
09 42 54	---	21 42 29	18.7	229.1	3.1		27.2	173	360	09 39 40
09 42 54	J1825-0737	21 42 29	16.5	231.3	3.3		28.2	-22	360	No stop
09 44 39	=1822-076	21 44 14	16.3	231.7	3.3		28.4	83	361	09 42 55

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
09 45 19	G26.598	21 44 54	19.6	229.5	3.1		27.3	13	361	09 45 19
09 48 34	---	21 48 10	19.3	230.3	3.1		27.7	195	365	09 45 20
09 49 14	J1825-0737	21 48 50	15.8	232.8	3.4		28.8	13	365	09 49 14
09 50 59	=1822-076	21 50 35	15.6	233.2	3.4		29.0	105	366	09 49 15
09 50 59	G24.635	21 50 35	17.0	230.5	3.2		27.9	-19	366	No stop
09 54 14	---	21 53 51	16.6	231.3	3.3		28.2	176	369	09 51 00
09 54 14	J1825-0737	21 53 51	15.2	233.9	3.5		29.3	-20	369	No stop
09 55 59	=1822-076	21 55 36	14.9	234.3	3.5		29.5	85	371	09 54 15
09 55 59	G25.411	21 55 36	17.2	232.1	3.3		28.5	-22	371	No stop
09 59 14	---	21 58 51	16.8	232.9	3.3		28.8	173	374	09 56 00
09 59 14	J1825-0737	21 58 51	14.5	235.0	3.5		29.8	-23	374	No stop
10 00 59	=1822-076	22 00 37	14.3	235.4	3.6		29.9	82	376	09 59 15
10 01 39	G26.598	22 01 17	17.7	233.3	3.3		28.9	13	376	10 01 39
10 04 54	---	22 04 32	17.3	234.1	3.4		29.3	195	379	10 01 40
10 05 34	J1825-0737	22 05 12	13.8	236.4	3.6		30.3	13	379	10 05 34
10 07 19	=1822-076	22 06 58	13.5	236.8	3.7		30.5	105	381	10 05 35
10 07 19	G24.635	22 06 58	15.1	234.2	3.5		29.4	-19	381	No stop
10 10 34	---	22 10 13	14.7	235.0	3.5		29.7	176	384	10 07 20
10 10 34	J1825-0737	22 10 13	13.1	237.5	3.7		30.7	-20	384	No stop
10 12 19	=1822-076	22 11 59	12.9	237.9	3.8		30.9	85	386	10 10 35
10 12 19	G25.411	22 11 59	15.2	235.8	3.6		30.0	-22	386	No stop
10 15 34	---	22 15 14	14.8	236.6	3.6		30.3	173	389	10 12 20
10 15 34	J1825-0737	22 15 14	12.5	238.6	3.8		31.1	-23	389	No stop
10 17 19	=1822-076	22 16 59	12.3	239.0	3.8		31.3	82	390	10 15 35
10 17 59	G26.598	22 17 39	15.7	237.0	3.6		30.4	13	390	10 17 59
10 21 14	---	22 20 55	15.3	237.8	3.7		30.7	195	394	10 18 00
10 21 54	J1825-0737	22 21 35	11.7	240.0	3.9		31.6	13	394	10 21 54
10 23 39	=1822-076	22 23 20	11.4	240.4	3.9		31.8	105	395	10 21 55
10 23 39	G24.635	22 23 20	13.0	237.9	3.8		30.9	-19	395	No stop
10 26 54	---	22 26 36	12.6	238.6	3.8		31.1	176	398	10 23 40
10 26 54	J1825-0737	22 26 36	11.0	241.1	4.0		32.0	-20	398	No stop
10 28 39	=1822-076	22 28 21	10.8	241.4	4.0		32.1	85	400	10 26 55

Schedule for TORUN (Code Tr)

Page 12

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 3 Mar 2013 Day 62 ---										
10 28 39	G25.411	22 28 21	13.1	239.4	3.8		31.4	-23	400	No stop
10 31 54	---	22 31 37	12.7	240.2	3.9		31.6	172	403	10 28 40
10 31 54	J1825-0737	22 31 37	10.4	242.1	4.1		32.4	-23	403	No stop
10 33 39	=1822-076	22 33 22	10.1	242.5	4.1		32.5	82	405	10 31 55
10 34 19	G26.598	22 34 02	13.6	240.6	3.9		31.7	13	405	10 34 19
10 37 34	---	22 37 18	13.2	241.4	3.9		32.0	195	408	10 34 20
10 38 14	J1825-0737	22 37 58	9.5	243.5	4.2		32.8	13	408	10 38 14
10 39 59	=1822-076	22 39 43	9.3	243.8	4.2		32.9	105	410	10 38 15
10 39 59	G24.635	22 39 43	10.9	241.4	4.0		32.1	-20	410	No stop
10 43 14	---	22 42 59	10.5	242.1	4.1		32.4	175	413	10 40 00
10 43 14	J1825-0737	22 42 59	8.8	244.5	4.3		33.2	-20	413	No stop
10 44 59	=1822-076	22 44 44	8.6	244.9	4.3		33.3	85	415	10 43 15
10 44 59	G25.411	22 44 44	11.0	243.0	4.1		32.6	-23	415	No stop
10 48 14	---	22 47 59	10.6	243.7	4.2		32.8	172	418	10 45 00
10 48 14	J1825-0737	22 47 59	8.1	245.6	4.4		33.5	-23	418	No stop
10 49 59	=1822-076	22 49 45	7.9	245.9	4.4		33.6	82	419	10 48 15
10 50 39	G26.598	22 50 25	11.4	244.2	4.2		32.9	13	419	10 50 39
10 53 54	---	22 53 40	11.0	244.9	4.2		33.1	195	423	10 50 40
10 54 34	J1825-0737	22 54 20	7.3	246.9	4.5		33.9	12	423	10 54 34
10 56 19	=1822-076	22 56 06	7.0	247.3	4.5		34.0	105	424	10 54 35
10 56 19	G24.635	22 56 06	8.7	244.9	4.3		33.3	-20	424	No stop
10 59 34	---	22 59 21	8.3	245.5	4.4		33.5	175	427	10 56 20
10 59 34	J1825-0737	22 59 21	6.6	247.9	4.6		34.2	-20	427	No stop
11 01 19	=1822-076	23 01 07	6.3	248.3	4.6		34.3	85	429	10 59 35
11 01 19	G25.411	23 01 07	8.8	246.4	4.4		33.6	-23	429	No stop
11 04 34	---	23 04 22	8.3	247.1	4.4		33.8	172	432	11 01 20
11 04 34	J1825-0737	23 04 22	5.9	249.0	4.6		34.4	-23	432	No stop
11 06 19	=1822-076	23 06 07	5.6	249.3	4.7		34.5	82	434	11 04 35
11 06 59	G26.598	23 06 48	9.2	247.6	4.4		33.9	13	434	11 06 59
11 10 14	---	23 10 03	8.7	248.3	4.5		34.1	195	437	11 07 00
11 10 14	J1825-0737	23 10 03	5.1	250.1	4.7		34.7	-28	437	No stop
11 11 59	=1822-076	23 11 48	4.8	250.5	4.8		34.8	77	439	11 10 15

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: sess113.EB052

Matching groups in /usr/local/sched/catalogs/freq.dat:

tr5cm Values confirmed by E-mail Borkowski (JFD 26Oct98)

Setup group: 5 Station: TORUN Total bit rate: 128
 Format: MKIV1:1 Bits per sample: 2 Sample rate: 4.000
 Number of channels: 16 DBE type: Speedup factor: 2.00

Disk used to record data.

1st LO=	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 6 Based on FREQ, BW, and/or DOPPLER in schedule. Used pcal sets: 1

LO sum=	6665.17	6665.17	6665.17	6665.17	6669.17	6669.17	6669.17	6669.17
	6673.17	6673.17	6673.17	6673.17	6677.17	6677.17	6677.17	6677.17
BBC fr=	765.17	765.17	765.17	765.17	769.17	769.17	769.17	769.17
	773.17	773.17	773.17	773.17	777.17	777.17	777.17	777.17
Bandwd=	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Matching frequency sets: 6

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = OFF

PCALXB1=	S1	S2	S3	S4	S5	S6	S7	S8
PCALXB2=	M1	M2	M3	M4	M5	M6	M7	M8
PCALFR1=	0	0	0	0	0	0	0	0
PCALFR2=	0	0	0	0	0	0	0	0

Track assignments are:

track1= 2, 6, 10, 14, 18, 22, 26, 30, 3, 7, 11, 15, 19, 23, 27, 31
 barrel=roll_off

SOURCES USED IN RECORDING SCANS --

Nature of methanol maser rings

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* G24.635	18 34 40.178572 -07 34 19.04262	* 18 37 22.712700 *-07 31 42.14400	18 38 05.774691 -07 30 58.18414	0.00 0.00
* G25.411	18 34 35.423527 -06 41 07.02131	* 18 37 16.921100 *-06 38 30.50200	18 37 59.707378 -06 37 46.92733	0.00 0.00
* G26.598	18 37 15.599389 -05 41 32.63902	* 18 39 55.925700 *-05 38 44.64200	18 40 38.385550 -05 37 58.32351	0.00 0.00
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.915804	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 46 55.22181	0.52
* J1825-0737	18 22 54.910260	* 18 25 37.609553	18 26 20.780283	0.22
1822-076	-07 39 15.96775	*-07 37 30.01383	-07 36 59.60946	0.34

The solar corona can cause unstable phases for sources too close to the Sun. SCHED provides warnings at individual scans for distances less than 10 degrees. The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
G24.635	64.1
G25.411	64.2
G26.598	63.6
3C345	96.9
J1825-0737	67.0

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

NATURE OF METHANOL MASER RINGS

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 Phone: +48 56 6113040 EMAIL: annan@astro.uni.torun.pl
 Fax: +48 56 6113009 Phone during observation: +48 56 6113010

Observing mode: MKV, 128 Mbps

Notes: Please, make sure the PHASE CAL is OFF.
 SPECTRAL LINE observations, a PHASE REF experiment
 11min. gap for Effelsberg after the scan 82 (UT 07:11:03-07:22:03)

Schedule for TORUN (Code Tr) Page 2

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Mon 4 Mar 2013 Day 63 ---										
Next scan frequencies: 6664.65 6664.65 6664.65 6664.65 6668.65 6668.65 6668.65 6668.65 6668.65										
6672.65 6672.65 6672.65 6672.65 6676.65 6676.65 6676.65 6676.65 6676.65										
Next BBC frequencies: 764.65 764.65 764.65 764.65 768.65 768.65 768.65 768.65 768.65										
772.65 772.65 772.65 772.65 776.65 776.65 776.65 776.65 776.65										
Next scan bandwidths: 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
02 45 00	3C345	14 47 23	66.2	112.3	-1.9		-46.3	0	0	02 45 00
03 00 00	---	15 02 25	68.3	117.6	-1.7		-43.8	900	15	02 45 01
03 00 40	3C345	15 03 05	68.4	117.9	-1.7		-43.7	34	15	03 00 40
03 15 40	---	15 18 08	70.3	124.0	-1.4		-40.4	900	29	03 00 41
03 19 16	J1834-0301	15 21 44	20.9	127.0	-3.2		-28.7	16	29	03 19 16
03 21 01	=1831-030	15 23 29	21.1	127.5	-3.2		-28.5	105	31	03 19 17
03 21 01	G28.817	15 23 29	19.7	125.7	-3.3		-29.2	-19	31	No stop
03 24 16	---	15 26 45	20.1	126.5	-3.3		-28.9	176	34	03 21 02
03 24 16	J1834-0301	15 26 45	21.5	128.2	-3.1		-28.2	-19	34	No stop
03 26 01	=1831-030	15 28 30	21.7	128.6	-3.1		-28.0	86	36	03 24 17
03 26 01	G30.400	15 28 30	20.6	125.1	-3.3		-29.4	-22	36	No stop
03 29 16	---	15 31 46	21.0	125.9	-3.3		-29.1	173	39	03 26 02
03 29 16	J1834-0301	15 31 46	22.1	129.4	-3.1		-27.7	-22	39	No stop
03 31 01	=1831-030	15 33 31	22.3	129.8	-3.0		-27.5	83	40	03 29 17
03 31 41	G31.047	15 34 11	22.2	126.3	-3.2		-29.0	18	40	03 31 41
03 34 56	---	15 37 27	22.6	127.0	-3.2		-28.7	195	44	03 31 42
03 35 36	J1834-0301	15 38 07	22.8	130.9	-2.9		-27.0	18	44	03 35 36
03 37 21	=1831-030	15 39 52	23.0	131.4	-2.9		-26.8	105	45	03 35 37

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
03 37 21	G28.817	15 39 52	21.6	129.6	-3.1		-27.6	-18	45	No stop
03 40 36	---	15 43 08	22.0	130.4	-3.0		-27.3	177	48	03 37 22
03 40 36	J1834-0301	15 43 08	23.4	132.2	-2.9		-26.5	-19	48	No stop
03 42 21	=1831-030	15 44 53	23.6	132.6	-2.8		-26.3	86	50	03 40 37
03 42 21	G30.400	15 44 53	22.6	129.0	-3.1		-27.9	-22	50	No stop
03 45 36	---	15 48 08	23.0	129.8	-3.0		-27.5	173	53	03 42 22
03 45 36	J1834-0301	15 48 08	23.9	133.4	-2.8		-25.9	-22	53	No stop
03 47 21	=1831-030	15 49 54	24.1	133.8	-2.8		-25.7	83	55	03 45 37
03 48 01	G31.047	15 50 34	24.2	130.2	-2.9		-27.3	18	55	03 48 01
03 51 16	---	15 53 49	24.5	131.0	-2.9		-27.0	195	58	03 48 02
03 51 56	J1834-0301	15 54 29	24.6	135.0	-2.7		-25.2	17	58	03 51 56
03 53 41	=1831-030	15 56 15	24.8	135.4	-2.6		-25.0	105	60	03 51 57
03 53 41	G28.817	15 56 15	23.5	133.5	-2.8		-25.9	-18	60	No stop
03 56 56	---	15 59 30	23.8	134.3	-2.7		-25.5	177	63	03 53 42
03 56 56	J1834-0301	15 59 30	25.1	136.2	-2.6		-24.6	-18	63	No stop
03 58 41	=1831-030	16 01 16	25.3	136.6	-2.6		-24.4	87	65	03 56 57
03 58 41	G30.400	16 01 16	24.5	132.9	-2.8		-26.1	-22	65	No stop
04 01 56	---	16 04 31	24.8	133.8	-2.7		-25.7	173	68	03 58 42
04 01 56	J1834-0301	16 04 31	25.7	137.5	-2.5		-24.0	-22	68	No stop
04 03 41	=1831-030	16 06 16	25.8	137.9	-2.5		-23.8	83	69	04 01 57
04 04 21	G31.047	16 06 56	26.0	134.2	-2.7		-25.5	18	69	04 04 21
04 07 36	---	16 10 12	26.3	135.0	-2.6		-25.1	195	73	04 04 22
04 08 16	J1834-0301	16 10 52	26.3	139.1	-2.4		-23.2	17	73	04 08 16
04 10 01	=1831-030	16 12 37	26.5	139.5	-2.4		-23.0	105	74	04 08 17
04 10 01	G28.817	16 12 37	25.2	137.6	-2.5		-23.9	-18	74	No stop
04 13 16	---	16 15 53	25.5	138.4	-2.5		-23.5	177	77	04 10 02
04 13 16	J1834-0301	16 15 53	26.8	140.4	-2.3		-22.6	-18	77	No stop
04 15 01	=1831-030	16 17 38	27.0	140.8	-2.3		-22.3	87	79	04 13 17
04 15 01	G30.400	16 17 38	26.2	137.0	-2.5		-24.2	-22	79	No stop
04 18 16	---	16 20 54	26.5	137.9	-2.5		-23.8	173	82	04 15 02
04 18 16	J1834-0301	16 20 54	27.3	141.7	-2.2		-21.9	-23	82	No stop
04 20 01	=1831-030	16 22 39	27.4	142.1	-2.2		-21.7	82	84	04 18 17

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
04 20 41	G31.047	16 23 19	27.7	138.4	-2.4		-23.5	18	84	04 20 41
04 23 56	---	16 26 35	28.0	139.2	-2.3		-23.1	195	87	04 20 42
04 24 36	J1834-0301	16 27 15	27.8	143.3	-2.1		-21.0	17	87	04 24 36
04 26 21	=1831-030	16 29 00	28.0	143.8	-2.1		-20.8	105	89	04 24 37
04 26 21	G28.817	16 29 00	26.8	141.8	-2.2		-21.8	-18	89	No stop
04 29 36	---	16 32 16	27.1	142.6	-2.2		-21.4	177	92	04 26 22
04 29 36	J1834-0301	16 32 16	28.3	144.7	-2.0		-20.4	-18	92	No stop
04 31 21	=1831-030	16 34 01	28.4	145.1	-2.0		-20.1	87	94	04 29 37
04 31 21	G30.400	16 34 01	27.8	141.3	-2.2		-22.1	-22	94	No stop
04 34 36	---	16 37 16	28.1	142.1	-2.2		-21.7	173	97	04 31 22
04 34 36	J1834-0301	16 37 16	28.7	146.0	-2.0		-19.6	-23	97	No stop
04 36 21	=1831-030	16 39 02	28.9	146.5	-1.9		-19.4	82	98	04 34 37
04 37 01	G31.047	16 39 42	29.2	142.7	-2.1		-21.3	17	98	04 37 01
04 40 16	---	16 42 57	29.5	143.6	-2.1		-20.9	195	102	04 37 02
04 40 56	J1834-0301	16 43 37	29.2	147.7	-1.9		-18.7	17	102	04 40 56
04 42 41	=1831-030	16 45 23	29.4	148.2	-1.8		-18.5	105	103	04 40 57
04 42 41	G28.817	16 45 23	28.2	146.1	-2.0		-19.6	-18	103	No stop
04 45 56	---	16 48 38	28.5	147.0	-1.9		-19.1	177	106	04 42 42
04 45 56	J1834-0301	16 48 38	29.6	149.1	-1.8		-18.0	-18	106	No stop
04 47 41	=1831-030	16 50 24	29.8	149.6	-1.7		-17.7	87	108	04 45 57
04 47 41	G30.400	16 50 24	29.3	145.6	-2.0		-19.8	-23	108	No stop
04 50 56	---	16 53 39	29.5	146.5	-1.9		-19.4	172	111	04 47 42
04 50 56	J1834-0301	16 53 39	30.0	150.5	-1.7		-17.3	-23	111	No stop
04 52 41	=1831-030	16 55 24	30.1	150.9	-1.7		-17.0	82	113	04 50 57
04 53 21	G31.047	16 56 04	30.7	147.1	-1.9		-19.0	17	113	04 53 21
04 56 36	---	16 59 20	30.9	148.0	-1.8		-18.5	195	116	04 53 22
04 57 16	J1834-0301	17 00 00	30.5	152.2	-1.6		-16.3	17	116	04 57 16
04 59 01	=1831-030	17 01 45	30.6	152.7	-1.6		-16.0	105	118	04 57 17
04 59 01	G28.817	17 01 45	29.5	150.5	-1.7		-17.2	-18	118	No stop
05 02 16	---	17 05 01	29.8	151.4	-1.6		-16.7	177	121	04 59 02
05 02 16	J1834-0301	17 05 01	30.8	153.6	-1.5		-15.5	-18	121	No stop
05 04 01	=1831-030	17 06 46	30.9	154.1	-1.5		-15.2	87	123	05 02 17

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
05 04 01	G30.400	17 06 46	30.6	150.1	-1.7		-17.4	-23	123	No stop
05 07 16	---	17 10 02	30.8	151.0	-1.6		-16.9	172	126	05 04 02
05 07 16	J1834-0301	17 10 02	31.1	155.0	-1.4		-14.7	-23	126	No stop
05 09 01	=1831-030	17 11 47	31.2	155.5	-1.4		-14.4	82	127	05 07 17
05 09 41	G31.047	17 12 27	31.9	151.7	-1.6		-16.5	17	127	05 09 41
05 12 56	---	17 15 43	32.1	152.6	-1.5		-16.0	195	131	05 09 42
05 13 36	J1834-0301	17 16 23	31.5	156.8	-1.3		-13.7	17	131	05 13 36
05 15 21	=1831-030	17 18 08	31.6	157.3	-1.3		-13.4	105	132	05 13 37
05 15 21	G28.817	17 18 08	30.7	155.1	-1.4		-14.7	-18	132	No stop
05 18 36	---	17 21 24	30.9	156.0	-1.4		-14.2	177	135	05 15 22
05 18 36	J1834-0301	17 21 24	31.8	158.2	-1.2		-12.9	-19	135	No stop
05 20 21	=1831-030	17 23 09	31.9	158.8	-1.2		-12.6	86	137	05 18 37
05 20 21	G30.400	17 23 09	31.7	154.7	-1.4		-14.9	-23	137	No stop
05 23 36	---	17 26 24	31.9	155.6	-1.4		-14.4	172	140	05 20 22
05 23 36	J1834-0301	17 26 24	32.1	159.7	-1.1		-12.0	-23	140	No stop
05 25 21	=1831-030	17 28 10	32.2	160.2	-1.1		-11.8	82	142	05 23 37
05 26 01	G31.047	17 28 50	33.0	156.4	-1.3		-13.9	17	142	05 26 01
05 29 16	---	17 32 05	33.2	157.3	-1.3		-13.4	195	145	05 26 02
05 29 56	J1834-0301	17 32 45	32.4	161.5	-1.0		-11.0	17	145	05 29 56
05 31 41	=1831-030	17 34 31	32.5	162.0	-1.0		-10.7	105	147	05 29 57
05 31 41	G28.817	17 34 31	31.6	159.7	-1.1		-12.0	-18	147	No stop
05 34 56	---	17 37 46	31.8	160.7	-1.1		-11.5	177	150	05 31 42
05 34 56	J1834-0301	17 37 46	32.6	163.0	-1.0		-10.1	-19	150	No stop
05 36 41	=1831-030	17 39 32	32.7	163.5	-0.9		-9.8	86	152	05 34 57
05 36 41	G30.400	17 39 32	32.7	159.4	-1.2		-12.2	-23	152	No stop
05 39 56	---	17 42 47	32.8	160.3	-1.1		-11.7	172	155	05 36 42
05 39 56	J1834-0301	17 42 47	32.8	164.5	-0.9		-9.3	-23	155	No stop
05 41 41	=1831-030	17 44 32	32.9	165.0	-0.8		-9.0	82	157	05 39 57
05 42 21	G31.047	17 45 13	33.9	161.2	-1.0		-11.2	17	157	05 42 21
05 45 36	---	17 48 28	34.0	162.1	-1.0		-10.6	195	160	05 42 22
05 46 16	J1834-0301	17 49 08	33.1	166.3	-0.8		-8.2	17	160	05 46 16
05 48 01	=1831-030	17 50 53	33.1	166.8	-0.7		-7.9	105	161	05 46 17

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
05 48 01	G28.817	17 50 53	32.4	164.5	-0.9		-9.3	-19	161	No stop
05 51 16	---	17 54 09	32.5	165.4	-0.8		-8.7	176	165	05 48 02
05 51 16	J1834-0301	17 54 09	33.2	167.8	-0.7		-7.3	-19	165	No stop
05 53 01	=1831-030	17 55 54	33.3	168.3	-0.7		-7.0	86	166	05 51 17
05 53 01	G30.400	17 55 54	33.4	164.2	-0.9		-9.4	-23	166	No stop
05 56 16	---	17 59 10	33.6	165.1	-0.8		-8.9	172	169	05 53 02
05 56 16	J1834-0301	17 59 10	33.4	169.3	-0.6		-6.4	-23	169	No stop
05 58 01	=1831-030	18 00 55	33.4	169.8	-0.6		-6.1	82	171	05 56 17
05 58 41	G31.047	18 01 35	34.6	166.0	-0.8		-8.3	17	171	05 58 41
06 01 56	---	18 04 51	34.7	167.0	-0.7		-7.8	195	174	05 58 42
06 02 36	J1834-0301	18 05 31	33.6	171.2	-0.5		-5.3	17	174	06 02 36
06 04 21	=1831-030	18 07 16	33.6	171.7	-0.5		-5.0	105	176	06 02 37
06 04 21	G28.817	18 07 16	32.9	169.3	-0.6		-6.4	-19	176	No stop
06 07 36	---	18 10 32	33.0	170.2	-0.5		-5.9	176	179	06 04 22
06 07 36	J1834-0301	18 10 32	33.7	172.7	-0.4		-4.4	-19	179	No stop
06 09 21	=1831-030	18 12 17	33.7	173.2	-0.4		-4.1	86	181	06 07 37
06 09 21	G30.400	18 12 17	34.0	169.0	-0.6		-6.6	-23	181	No stop
06 12 36	---	18 15 33	34.1	170.0	-0.6		-6.0	172	184	06 09 22
06 12 36	J1834-0301	18 15 33	33.7	174.2	-0.3		-3.5	-23	184	No stop
06 14 21	=1831-030	18 17 18	33.8	174.7	-0.3		-3.2	82	186	06 12 37
06 15 01	G31.047	18 17 58	35.1	171.0	-0.5		-5.4	18	186	06 15 01
06 18 16	---	18 21 13	35.1	172.0	-0.4		-4.8	195	189	06 15 02
06 18 56	J1834-0301	18 21 54	33.8	176.1	-0.2		-2.4	17	189	06 18 56
06 20 41	=1831-030	18 23 39	33.8	176.6	-0.2		-2.0	105	190	06 18 57
06 20 41	G28.817	18 23 39	33.3	174.1	-0.3		-3.5	-19	190	No stop
06 23 56	---	18 26 54	33.3	175.1	-0.3		-2.9	176	194	06 20 42
06 23 56	J1834-0301	18 26 54	33.9	177.6	-0.1		-1.5	-19	194	No stop
06 25 41	=1831-030	18 28 40	33.9	178.1	-0.1		-1.1	86	195	06 23 57
06 25 41	G30.400	18 28 40	34.4	174.0	-0.3		-3.6	-23	195	No stop
06 28 56	---	18 31 55	34.4	175.0	-0.3		-3.0	172	198	06 25 42
06 28 56	J1834-0301	18 31 55	33.9	179.1	-0.1		-0.5	-23	198	No stop
06 30 41	=1831-030	18 33 40	33.9	179.6	-0.0		-0.2	82	200	06 28 57

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
06 31 21	G31.047	18 34 21	35.3	176.0	-0.2		-2.4	18	200	06 31 21
06 34 36	---	18 37 36	35.4	177.0	-0.2		-1.8	195	203	06 31 22
06 35 16	J1834-0301	18 38 16	33.9	181.0	0.1		0.6	17	203	06 35 16
06 37 01	=1831-030	18 40 02	33.9	181.5	0.1		0.9	105	205	06 35 17
06 37 01	G28.817	18 40 02	33.4	179.0	-0.1		-0.6	-19	205	No stop
06 40 16	---	18 43 17	33.4	180.0	-0.0		-0.0	176	208	06 37 02
06 40 16	J1834-0301	18 43 17	33.9	182.5	0.1		1.5	-19	208	No stop
06 42 01	=1831-030	18 45 02	33.9	183.0	0.2		1.8	86	210	06 40 17
06 42 01	G30.400	18 45 02	34.5	178.9	-0.1		-0.6	-23	210	No stop
06 45 16	---	18 48 18	34.5	179.9	-0.0		-0.0	172	213	06 42 02
06 45 16	J1834-0301	18 48 18	33.8	184.0	0.2		2.4	-23	213	No stop
06 47 01	=1831-030	18 50 03	33.8	184.5	0.3		2.7	82	215	06 45 17
06 47 41	G31.047	18 50 43	35.4	181.0	0.1		0.6	18	215	06 47 41
06 50 56	---	18 53 59	35.4	182.0	0.1		1.2	195	218	06 47 42
06 50 56	J1834-0301	18 53 59	33.8	185.7	0.3		3.4	-22	218	No stop
06 52 41	=1831-030	18 55 44	33.7	186.2	0.3		3.8	83	219	06 50 57
06 56 03	3C345	18 59 07	63.5	253.7	2.3		48.6	53	219	06 56 03
07 11 03	---	19 14 09	61.3	257.7	2.5		49.8	900	234	06 56 04
07 22 03	J1834-0301	19 25 11	32.9	195.0	0.8		9.0	514	234	07 22 03
07 23 48	=1831-030	19 26 57	32.8	195.5	0.9		9.3	105	236	07 22 04
07 23 48	G28.817	19 26 57	32.7	193.0	0.7		7.8	-19	236	No stop
07 27 03	---	19 30 12	32.6	193.9	0.8		8.3	176	239	07 23 49
07 27 03	J1834-0301	19 30 12	32.7	196.5	0.9		9.8	-19	239	No stop
07 28 48	=1831-030	19 31 57	32.6	197.0	1.0		10.1	86	240	07 27 04
07 28 48	G30.400	19 31 57	33.8	193.1	0.7		7.8	-22	240	No stop
07 32 03	---	19 35 13	33.7	194.0	0.8		8.4	173	244	07 28 49
07 32 03	J1834-0301	19 35 13	32.5	197.9	1.0		10.7	-23	244	No stop
07 33 48	=1831-030	19 36 58	32.4	198.4	1.0		11.0	82	245	07 32 04
07 34 28	G31.047	19 37 38	34.4	195.3	0.8		9.1	19	245	07 34 28
07 37 43	---	19 40 54	34.3	196.2	0.9		9.7	195	248	07 34 29

Schedule for TORUN (Code Tr)

Page 8

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
07 38 23	J1834-0301	19 41 34	32.2	199.8	1.1		11.7	18	248	07 38 23
07 40 08	=1831-030	19 43 19	32.1	200.3	1.1		12.0	105	250	07 38 24
07 40 08	G28.817	19 43 19	32.0	197.7	1.0		10.6	-19	250	No stop
07 43 23	---	19 46 35	31.9	198.7	1.1		11.1	176	253	07 40 09
07 43 23	J1834-0301	19 46 35	31.9	201.2	1.2		12.6	-19	253	No stop
07 45 08	=1831-030	19 48 20	31.8	201.7	1.2		12.9	86	255	07 43 24
07 45 08	G30.400	19 48 20	33.1	197.9	1.0		10.7	-22	255	No stop
07 48 23	---	19 51 36	33.0	198.9	1.1		11.2	173	258	07 45 09
07 48 23	J1834-0301	19 51 36	31.6	202.6	1.3		13.4	-23	258	No stop
07 50 08	=1831-030	19 53 21	31.5	203.1	1.3		13.7	82	260	07 48 24
07 50 48	G31.047	19 54 01	33.7	200.1	1.1		11.9	18	260	07 50 48
07 54 03	---	19 57 17	33.5	201.1	1.2		12.5	195	263	07 50 49
07 54 43	J1834-0301	19 57 57	31.2	204.5	1.4		14.4	18	263	07 54 43
07 56 28	=1831-030	19 59 42	31.1	204.9	1.4		14.7	105	265	07 54 44
07 56 28	G28.817	19 59 42	31.2	202.4	1.3		13.3	-19	265	No stop
07 59 43	---	20 02 57	31.0	203.4	1.3		13.8	176	268	07 56 29
07 59 43	J1834-0301	20 02 57	30.9	205.9	1.5		15.2	-19	268	No stop
08 01 28	=1831-030	20 04 43	30.8	206.4	1.5		15.5	86	269	07 59 44
08 01 28	G30.400	20 04 43	32.3	202.7	1.3		13.4	-22	269	No stop
08 04 43	---	20 07 58	32.1	203.6	1.3		13.9	173	273	08 01 29
08 04 43	J1834-0301	20 07 58	30.6	207.3	1.6		16.0	-22	273	No stop
08 06 28	=1831-030	20 09 44	30.5	207.8	1.6		16.3	83	274	08 04 44
08 07 08	G31.047	20 10 24	32.7	204.9	1.4		14.6	18	274	08 07 08
08 10 23	---	20 13 39	32.5	205.8	1.4		15.2	195	277	08 07 09
08 11 03	J1834-0301	20 14 19	30.1	209.0	1.7		17.0	17	277	08 11 03
08 12 48	=1831-030	20 16 05	30.0	209.5	1.7		17.2	105	279	08 11 04
08 12 48	G28.817	20 16 05	30.2	207.0	1.5		15.9	-19	279	No stop
08 16 03	---	20 19 20	29.9	207.9	1.6		16.4	176	282	08 12 49
08 16 03	J1834-0301	20 19 20	29.8	210.4	1.7		17.7	-19	282	No stop
08 17 48	=1831-030	20 21 05	29.6	210.9	1.8		18.0	86	284	08 16 04

Schedule for TORUN (Code Tr) Page 9

Nature of methanol maser rings

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
08 17 48	G30.400	20 21 05	31.2	207.3	1.5		16.0	-22	284	No stop
08 21 03	---	20 24 21	31.0	208.2	1.6		16.5	173	287	08 17 49
08 21 03	J1834-0301	20 24 21	29.4	211.8	1.8		18.5	-22	287	No stop
08 22 48	=1831-030	20 26 06	29.2	212.3	1.9		18.7	83	289	08 21 04
08 23 28	G31.047	20 26 46	31.6	209.5	1.7		17.2	17	289	08 23 28
08 26 43	---	20 30 02	31.3	210.4	1.7		17.7	195	292	08 23 29
08 27 23	J1834-0301	20 30 42	28.9	213.5	1.9		19.4	17	292	08 27 23
08 29 08	=1831-030	20 32 27	28.7	214.0	2.0		19.6	105	294	08 27 24
08 29 08	G28.817	20 32 27	29.0	211.5	1.8		18.3	-19	294	No stop
08 32 23	---	20 35 43	28.7	212.4	1.9		18.8	176	297	08 29 09
08 32 23	J1834-0301	20 35 43	28.4	214.8	2.0		20.1	-19	297	No stop
08 34 08	=1831-030	20 37 28	28.3	215.3	2.0		20.3	86	299	08 32 24
08 34 08	G30.400	20 37 28	30.0	211.9	1.8		18.5	-21	299	No stop
08 37 23	---	20 40 44	29.8	212.8	1.9		19.0	174	302	08 34 09
08 37 23	J1834-0301	20 40 44	28.0	216.2	2.1		20.8	-22	302	No stop
08 39 08	=1831-030	20 42 29	27.8	216.6	2.1		21.0	83	303	08 37 24
08 39 48	G31.047	20 43 09	30.3	214.1	1.9		19.7	17	303	08 39 48
08 43 03	---	20 46 25	30.0	214.9	2.0		20.1	195	307	08 39 49
08 43 43	J1834-0301	20 47 05	27.4	217.8	2.2		21.6	17	307	08 43 43
08 45 28	=1831-030	20 48 50	27.3	218.3	2.2		21.9	105	308	08 43 44
08 45 28	G28.817	20 48 50	27.6	215.9	2.1		20.7	-19	308	No stop
08 48 43	---	20 52 05	27.3	216.8	2.1		21.1	176	311	08 45 29
08 48 43	J1834-0301	20 52 05	27.0	219.1	2.3		22.3	-19	311	No stop
08 50 28	=1831-030	20 53 51	26.8	219.6	2.3		22.5	86	313	08 48 44
08 50 28	G30.400	20 53 51	28.6	216.3	2.1		20.8	-21	313	No stop
08 53 43	---	20 57 06	28.4	217.2	2.1		21.3	174	316	08 50 29
08 53 43	J1834-0301	20 57 06	26.5	220.4	2.4		23.0	-21	316	No stop
08 55 28	=1831-030	20 58 52	26.3	220.9	2.4		23.2	84	318	08 53 44
08 56 08	G31.047	20 59 32	28.8	218.5	2.2		21.9	17	318	08 56 08
08 59 23	---	21 02 47	28.5	219.3	2.3		22.4	195	321	08 56 09
09 00 03	J1834-0301	21 03 27	25.9	222.1	2.5		23.8	16	321	09 00 03
09 01 48	=1831-030	21 05 13	25.7	222.5	2.5		24.0	105	323	09 00 04

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
09 01 48	G28.817	21 05 13	26.1	220.2	2.4		22.8	-19	323	No stop
09 05 03	---	21 08 28	25.8	221.0	2.4		23.2	176	326	09 01 49
09 05 03	J1834-0301	21 08 28	25.3	223.3	2.6		24.4	-19	326	No stop
09 06 48	=1831-030	21 10 13	25.2	223.8	2.6		24.6	86	328	09 05 04
09 06 48	G30.400	21 10 13	27.1	220.6	2.4		23.0	-21	328	No stop
09 10 03	---	21 13 29	26.8	221.4	2.4		23.4	174	331	09 06 49
09 10 03	J1834-0301	21 13 29	24.8	224.6	2.6		25.0	-21	331	No stop
09 11 48	=1831-030	21 15 14	24.6	225.0	2.7		25.2	84	332	09 10 04
09 12 28	G31.047	21 15 54	27.2	222.7	2.5		24.1	16	332	09 12 28
09 15 43	---	21 19 10	26.9	223.6	2.5		24.5	195	336	09 12 29
09 16 23	J1834-0301	21 19 50	24.1	226.2	2.7		25.7	16	336	09 16 23
09 18 08	=1831-030	21 21 35	24.0	226.6	2.8		25.9	105	337	09 16 24
09 18 08	G28.817	21 21 35	24.4	224.3	2.6		24.8	-18	337	No stop
09 21 23	---	21 24 51	24.1	225.1	2.7		25.2	177	340	09 18 09
09 21 23	J1834-0301	21 24 51	23.6	227.4	2.8		26.3	-19	340	No stop
09 23 08	=1831-030	21 26 36	23.4	227.8	2.9		26.5	86	342	09 21 24
09 23 08	G30.400	21 26 36	25.5	224.7	2.6		25.0	-21	342	No stop
09 26 23	---	21 29 52	25.1	225.6	2.7		25.4	174	345	09 23 09
09 26 23	J1834-0301	21 29 52	23.0	228.6	2.9		26.8	-22	345	No stop
09 28 08	=1831-030	21 31 37	22.8	229.0	2.9		27.0	83	347	09 26 24
09 28 48	G31.047	21 32 17	25.5	226.9	2.7		26.0	16	347	09 28 48
09 32 03	---	21 35 33	25.1	227.7	2.8		26.4	195	350	09 28 49
09 32 43	J1834-0301	21 36 13	22.3	230.1	3.0		27.5	16	350	09 32 43
09 34 28	=1831-030	21 37 58	22.1	230.6	3.1		27.7	105	352	09 32 44
09 34 28	G28.817	21 37 58	22.6	228.3	2.9		26.7	-18	352	No stop
09 37 43	---	21 41 14	22.3	229.1	3.0		27.0	177	355	09 34 29
09 37 43	J1834-0301	21 41 14	21.7	231.3	3.1		28.0	-19	355	No stop
09 39 28	=1831-030	21 42 59	21.5	231.7	3.1		28.2	86	357	09 37 44
09 39 28	G30.400	21 42 59	23.7	228.8	2.9		26.9	-22	357	No stop
09 42 43	---	21 46 14	23.3	229.6	3.0		27.2	173	360	09 39 29
09 42 43	J1834-0301	21 46 14	21.1	232.5	3.2		28.5	-22	360	No stop
09 44 28	=1831-030	21 48 00	20.9	232.9	3.2		28.7	83	361	09 42 44

Schedule for TORUN (Code Tr)

Page 11

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
09 45 08	G31.047	21 48 40	23.7	230.9	3.0		27.8	16	361	09 45 08
09 48 23	---	21 51 55	23.3	231.7	3.1		28.1	195	365	09 45 09
09 49 03	J1834-0301	21 52 35	20.4	234.0	3.3		29.1	15	365	09 49 03
09 50 48	=1831-030	21 54 21	20.2	234.4	3.3		29.3	105	366	09 49 04
09 50 48	G28.817	21 54 21	20.8	232.2	3.2		28.4	-18	366	No stop
09 54 03	---	21 57 36	20.4	233.0	3.2		28.7	177	369	09 50 49
09 54 03	J1834-0301	21 57 36	19.8	235.2	3.4		29.6	-18	369	No stop
09 55 48	=1831-030	21 59 22	19.5	235.6	3.4		29.7	87	371	09 54 04
09 55 48	G30.400	21 59 22	21.8	232.7	3.2		28.6	-22	371	No stop
09 59 03	---	22 02 37	21.4	233.5	3.2		28.9	173	374	09 55 49
09 59 03	J1834-0301	22 02 37	19.1	236.3	3.5		30.0	-22	374	No stop
10 00 48	=1831-030	22 04 22	18.9	236.7	3.5		30.2	83	376	09 59 04
10 01 28	G31.047	22 05 02	21.7	234.8	3.3		29.4	16	376	10 01 28
10 04 43	---	22 08 18	21.3	235.5	3.3		29.7	195	379	10 01 29
10 05 23	J1834-0301	22 08 58	18.3	237.8	3.6		30.6	15	379	10 05 23
10 07 08	=1831-030	22 10 43	18.1	238.2	3.6		30.7	105	381	10 05 24
10 07 08	G28.817	22 10 43	18.8	236.0	3.5		29.9	-18	381	No stop
10 10 23	---	22 13 59	18.4	236.7	3.5		30.2	177	384	10 07 09
10 10 23	J1834-0301	22 13 59	17.7	238.9	3.7		31.0	-18	384	No stop
10 12 08	=1831-030	22 15 44	17.5	239.3	3.7		31.1	87	386	10 10 24
10 12 08	G30.400	22 15 44	19.8	236.5	3.5		30.1	-22	386	No stop
10 15 23	---	22 19 00	19.3	237.3	3.5		30.4	173	389	10 12 09
10 15 23	J1834-0301	22 19 00	17.0	240.0	3.7		31.4	-23	389	No stop
10 17 08	=1831-030	22 20 45	16.8	240.4	3.8		31.5	82	390	10 15 24
10 17 48	G31.047	22 21 25	19.6	238.6	3.6		30.8	15	390	10 17 48
10 21 03	---	22 24 41	19.2	239.3	3.6		31.1	195	394	10 17 49
10 21 43	J1834-0301	22 25 21	16.2	241.4	3.8		31.9	15	394	10 21 43
10 23 28	=1831-030	22 27 06	16.0	241.8	3.9		32.0	105	395	10 21 44
10 23 28	G28.817	22 27 06	16.7	239.7	3.7		31.3	-18	395	No stop
10 26 43	---	22 30 22	16.3	240.4	3.8		31.5	177	398	10 23 29
10 26 43	J1834-0301	22 30 22	15.6	242.5	3.9		32.2	-18	398	No stop
10 28 28	=1831-030	22 32 07	15.3	242.9	4.0		32.4	87	400	10 26 44

Schedule for TORUN (Code Tr)

Page 12

Nature of methanol maser rings

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SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
10 28 28	G30.400	22 32 07	17.7	240.2	3.7		31.5	-23	400	No stop
10 31 43	---	22 35 22	17.2	241.0	3.8		31.7	172	403	10 28 29
10 31 43	J1834-0301	22 35 22	14.9	243.6	4.0		32.6	-23	403	No stop
10 33 28	=1831-030	22 37 08	14.6	244.0	4.0		32.7	82	405	10 31 44
10 34 08	G31.047	22 37 48	17.5	242.2	3.8		32.1	15	405	10 34 08
10 37 23	---	22 41 03	17.1	243.0	3.9		32.3	195	408	10 34 09
10 38 03	J1834-0301	22 41 43	14.0	245.0	4.1		33.0	15	408	10 38 03
10 39 48	=1831-030	22 43 29	13.8	245.4	4.1		33.1	105	410	10 38 04
10 39 48	G28.817	22 43 29	14.5	243.3	4.0		32.5	-18	410	No stop
10 43 03	---	22 46 44	14.1	244.0	4.1		32.7	177	413	10 39 49
10 43 03	J1834-0301	22 46 44	13.3	246.1	4.2		33.3	-18	413	No stop
10 44 48	=1831-030	22 48 30	13.1	246.4	4.2		33.5	87	415	10 43 04
10 44 48	G30.400	22 48 30	15.5	243.9	4.0		32.7	-23	415	No stop
10 48 03	---	22 51 45	15.0	244.6	4.1		32.9	172	418	10 44 49
10 48 03	J1834-0301	22 51 45	12.6	247.1	4.3		33.6	-23	418	No stop
10 49 48	=1831-030	22 53 30	12.4	247.5	4.3		33.8	82	419	10 48 04
10 50 28	G31.047	22 54 10	15.3	245.8	4.1		33.2	15	419	10 50 28
10 53 43	---	22 57 26	14.8	246.5	4.2		33.4	195	423	10 50 29
10 54 23	J1834-0301	22 58 06	11.8	248.5	4.4		34.0	15	423	10 54 23
10 56 08	=1831-030	22 59 51	11.5	248.9	4.4		34.1	105	424	10 54 24
10 56 08	G28.817	22 59 51	12.3	246.8	4.3		33.6	-18	424	No stop
10 59 23	---	23 03 07	11.8	247.5	4.3		33.8	177	427	10 56 09
10 59 23	J1834-0301	23 03 07	11.1	249.5	4.5		34.3	-18	427	No stop
11 01 08	=1831-030	23 04 52	10.8	249.9	4.5		34.4	87	429	10 59 24
11 01 08	G30.400	23 04 52	13.2	247.4	4.3		33.7	-23	429	No stop
11 04 23	---	23 08 08	12.8	248.1	4.3		33.9	172	432	11 01 09
11 04 23	J1834-0301	23 08 08	10.4	250.6	4.6		34.6	-23	432	No stop
11 06 08	=1831-030	23 09 53	10.1	251.0	4.6		34.6	82	434	11 04 24
11 06 48	G31.047	23 10 33	13.0	249.3	4.4		34.2	15	434	11 06 48
11 10 03	---	23 13 49	12.6	250.0	4.4		34.4	195	437	11 06 49
11 10 43	J1834-0301	23 14 29	9.5	251.9	4.7		34.9	15	437	11 10 43
11 12 28	=1831-030	23 16 14	9.2	252.3	4.7		34.9	105	439	11 10 44

Schedule for TORUN (Code Tr)

Page 13

Nature of methanol maser rings

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SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 4 Mar 2013 Day 63 ---										
11 12 28	G28.817	23 16 14	10.0	250.3	4.5		34.5	-18	439	No stop
11 15 43	---	23 19 30	9.5	250.9	4.6		34.7	177	442	11 12 29
11 15 43	J1834-0301	23 19 30	8.7	253.0	4.7		35.1	-18	442	No stop
11 17 28	=1831-030	23 21 15	8.5	253.3	4.8		35.2	87	444	11 15 44
11 17 28	G30.400	23 21 15	11.0	250.9	4.5		34.6	-23	444	No stop
11 20 43	---	23 24 30	10.5	251.5	4.6		34.8	172	447	11 17 29
11 20 43	J1834-0301	23 24 30	8.0	254.0	4.8		35.3	-23	447	No stop
11 22 28	=1831-030	23 26 16	7.8	254.4	4.9		35.4	82	449	11 20 44
11 23 08	G31.047	23 26 56	10.7	252.8	4.7		35.0	15	449	11 23 08
11 26 23	---	23 30 11	10.2	253.5	4.7		35.2	195	452	11 23 09
11 26 23	J1834-0301	23 30 11	7.2	255.2	4.9		35.5	-25	452	No stop
11 28 08	=1831-030	23 31 57	6.9	255.5	5.0		35.6	80	453	11 26 24

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.EB052

Matching groups in /usr/local/sched/catalogs/freq.dat:

tr5cm Values confirmed by E-mail Borkowski (JFD 26Oct98)

Setup group: 5 Station: TORUN Total bit rate: 128
 Format: MKIV1:1 Bits per sample: 2 Sample rate: 4.000
 Number of channels: 16 DBE type: Speedup factor: 2.00

Disk used to record data.

1st LO=	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 6 Based on FREQ, BW, and/or DOPPLER in schedule. Used pcal sets: 1
LO sum= 6664.65 6664.65 6664.65 6664.65 6668.65 6668.65 6668.65 6668.65
        6672.65 6672.65 6672.65 6672.65 6676.65 6676.65 6676.65 6676.65
BBC fr= 764.65 764.65 764.65 764.65 768.65 768.65 768.65 768.65
        772.65 772.65 772.65 772.65 776.65 776.65 776.65 776.65
Bandwd= 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00
        2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00
Matching frequency sets: 6
    
```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = OFF
PCALXB1= S1 S2 S3 S4 S5 S6 S7 S8
PCALXB2= M1 M2 M3 M4 M5 M6 M7 M8
PCALFR1= 0 0 0 0 0 0 0 0
PCALFR2= 0 0 0 0 0 0 0 0
    
```

Track assignments are:

```

track1= 2, 6, 10, 14, 18, 22, 26, 30, 3, 7, 11, 15, 19, 23, 27, 31
barrel=roll_off
    
```

SOURCES USED IN RECORDING SCANS -- Nature of methanol maser rings

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* G28.817	18 39 59.517167	* 18 42 37.347900	18 43 19.158792	0.00
	-03 32 40.59396	*-03 29 40.92100	-03 28 52.14816	0.00
* G30.400	18 45 15.750941	* 18 47 52.299700	18 48 33.741249	0.00
	-02 26 38.30410	*-02 23 16.05300	-02 22 21.59381	0.00
* G31.047	18 44 08.303183	* 18 46 43.855000	18 47 25.036073	0.00
	-01 34 11.55375	*-01 30 54.15500	-01 30 01.25849	0.00
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.952198	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 46 55.21406	0.52
* J1834-0301	18 31 36.772712	* 18 34 14.074653	18 34 55.788343	0.12
1831-030	-03 03 43.12343	*-03 01 19.62724	-03 00 40.67002	0.16

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
G28.817	64.1
G30.400	62.9
G31.047	63.3
3C345	97.3
J1834-0301	66.2

NATURE OF METHANOL MASER RINGS

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 Phone: +48 56 6113040 EMAIL: annan@astro.uni.torun.pl
 Fax: +48 56 6113009 Phone during observation: +48 56 6113010

Observing mode: MKV, 128 Mbps

Notes: Please, make sure the PHASE CAL is OFF.
 SPECTRAL LINE observations, a PHASE REF experiment
 11min. gap for Effelsberg after the scan 73 (UT 06:39:24-06:50:24)

Schedule for TORUN (Code Tr) Page 2

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Tue 5 Mar 2013 Day 64 ---										
Next scan frequencies: 6664.86 6664.86 6664.86 6664.86 6668.86 6668.86 6668.86 6668.86 6668.86										
6672.86 6672.86 6672.86 6672.86 6676.86 6676.86 6676.86 6676.86 6676.86										
Next BBC frequencies: 764.86 764.86 764.86 764.86 768.86 768.86 768.86 768.86 768.86										
772.86 772.86 772.86 772.86 776.86 776.86 776.86 776.86 776.86										
Next scan bandwidths: 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00										
02 45 00	3C345	14 51 19	66.8	113.7	-1.9		-45.7	0	0	02 45 00
03 00 00	---	15 06 22	68.8	119.1	-1.6		-43.0	900	15	02 45 01
03 00 40	3C345	15 07 02	68.9	119.4	-1.6		-42.9	33	15	03 00 40
03 15 40	---	15 22 04	70.8	125.7	-1.4		-39.4	900	29	03 00 41
03 19 16	J1834-0301	15 25 41	21.4	128.0	-3.2		-28.3	17	29	03 19 16
03 21 01	=1831-030	15 27 26	21.6	128.4	-3.1		-28.1	105	31	03 19 17
03 21 01	G31.581	15 27 26	21.5	124.0	-3.4		-29.9	-24	31	No stop
03 24 16	---	15 30 42	21.9	124.8	-3.3		-29.6	171	34	03 21 02
03 24 16	J1834-0301	15 30 42	22.0	129.2	-3.1		-27.8	-24	34	No stop
03 26 01	=1831-030	15 32 27	22.2	129.6	-3.0		-27.6	81	36	03 24 17
03 26 01	G31.581	15 32 27	22.1	125.2	-3.3		-29.4	-24	36	No stop
03 29 16	---	15 35 42	22.5	126.0	-3.2		-29.1	171	39	03 26 02
03 29 56	J1834-0301	15 36 23	22.6	130.5	-3.0		-27.2	16	39	03 29 56
03 31 41	=1831-030	15 38 08	22.8	130.9	-2.9		-27.0	105	40	03 29 57
03 31 41	J1907+0127	15 38 08	22.7	120.8	-3.5		-31.1	-35	40	No stop
03 33 26	=1904+013	15 39 53	23.0	121.2	-3.5		-30.9	70	42	03 31 42
03 33 26	G33.980	15 39 53	24.2	124.7	-3.2		-29.6	-22	42	No stop
03 36 41	---	15 43 09	24.6	125.5	-3.2		-29.3	173	45	03 33 27

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
03 36 41	J1907+0127	15 43 09	23.4	121.9	-3.4		-30.6	-22	45	No stop
03 38 26	=1904+013	15 44 54	23.6	122.4	-3.4		-30.5	83	47	03 36 42
03 39 06	G34.751	15 45 34	25.3	125.3	-3.2		-29.3	20	47	03 39 06
03 42 21	---	15 48 50	25.7	126.1	-3.1		-29.0	195	50	03 39 07
03 42 21	J1907+0127	15 48 50	24.1	123.3	-3.3		-30.1	-20	50	No stop
03 44 06	=1904+013	15 50 35	24.3	123.7	-3.3		-30.0	85	52	03 42 22
03 44 06	G33.980	15 50 35	25.5	127.3	-3.1		-28.5	-22	52	No stop
03 47 21	---	15 53 50	25.9	128.1	-3.0		-28.2	173	55	03 44 07
03 47 21	J1907+0127	15 53 50	24.7	124.5	-3.2		-29.7	-22	55	No stop
03 49 06	=1904+013	15 55 36	24.9	124.9	-3.2		-29.5	83	57	03 47 22
03 49 46	G34.751	15 56 16	26.6	127.9	-3.0		-28.3	20	57	03 49 46
03 53 01	---	15 59 31	27.0	128.7	-2.9		-27.9	195	60	03 49 47
03 53 01	J1907+0127	15 59 31	25.4	125.8	-3.1		-29.1	-20	60	No stop
03 54 46	=1904+013	16 01 17	25.6	126.3	-3.1		-29.0	85	61	03 53 02
03 55 46	J1834-0301	16 02 17	25.4	136.9	-2.5		-24.3	24	61	03 55 46
03 57 31	=1831-030	16 04 02	25.6	137.3	-2.5		-24.0	105	63	03 55 47
03 57 31	G31.581	16 04 02	25.8	132.8	-2.8		-26.1	-24	63	No stop
04 00 46	---	16 07 18	26.1	133.7	-2.7		-25.8	171	66	03 57 32
04 00 46	J1834-0301	16 07 18	25.9	138.2	-2.5		-23.6	-24	66	No stop
04 02 31	=1831-030	16 09 03	26.1	138.6	-2.4		-23.4	81	68	04 00 47
04 02 31	G31.581	16 09 03	26.3	134.1	-2.7		-25.6	-24	68	No stop
04 05 46	---	16 12 18	26.7	134.9	-2.6		-25.2	171	71	04 02 32
04 06 26	J1834-0301	16 12 59	26.5	139.6	-2.4		-22.9	16	71	04 06 26
04 08 11	=1831-030	16 14 44	26.7	140.1	-2.3		-22.7	105	73	04 06 27
04 08 11	J1907+0127	16 14 44	27.2	129.6	-2.9		-27.6	-36	73	No stop
04 09 56	=1904+013	16 16 29	27.4	130.0	-2.9		-27.4	69	75	04 08 12
04 09 56	G33.980	16 16 29	28.5	133.8	-2.6		-25.7	-23	75	No stop
04 13 11	---	16 19 45	28.8	134.6	-2.6		-25.3	172	78	04 09 57
04 13 11	J1907+0127	16 19 45	27.8	130.8	-2.8		-27.0	-22	78	No stop
04 14 56	=1904+013	16 21 30	28.0	131.3	-2.8		-26.8	83	79	04 13 12
04 15 36	G34.751	16 22 10	29.5	134.5	-2.6		-25.4	19	79	04 15 36
04 18 51	---	16 25 26	29.9	135.3	-2.5		-25.0	195	82	04 15 37

Schedule for TORUN (Code Tr)

Page 4

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
04 18 51	J1907+0127	16 25 26	28.4	132.3	-2.7		-26.4	-20	82	No stop
04 20 36	=1904+013	16 27 11	28.6	132.7	-2.7		-26.2	85	84	04 18 52
04 20 36	G33.980	16 27 11	29.6	136.5	-2.4		-24.4	-23	84	No stop
04 23 51	---	16 30 26	30.0	137.4	-2.4		-24.0	172	87	04 20 37
04 23 51	J1907+0127	16 30 26	29.0	133.5	-2.6		-25.8	-22	87	No stop
04 25 36	=1904+013	16 32 12	29.2	134.0	-2.6		-25.6	83	89	04 23 52
04 26 16	G34.751	16 32 52	30.6	137.3	-2.4		-24.0	19	89	04 26 16
04 29 31	---	16 36 07	31.0	138.2	-2.3		-23.6	195	92	04 26 17
04 29 31	J1907+0127	16 36 07	29.6	135.0	-2.5		-25.1	-21	92	No stop
04 31 16	=1904+013	16 37 53	29.8	135.5	-2.5		-24.9	84	94	04 29 32
04 32 16	J1834-0301	16 38 53	28.8	146.4	-1.9		-19.4	23	94	04 32 16
04 34 01	=1831-030	16 40 38	29.0	146.9	-1.9		-19.2	105	96	04 32 17
04 34 01	G31.581	16 40 38	29.5	142.3	-2.1		-21.6	-24	96	No stop
04 37 16	---	16 43 54	29.8	143.2	-2.1		-21.1	171	99	04 34 02
04 37 16	J1834-0301	16 43 54	29.3	147.8	-1.9		-18.7	-24	99	No stop
04 39 01	=1831-030	16 45 39	29.4	148.3	-1.8		-18.4	81	100	04 37 17
04 39 01	G31.581	16 45 39	29.9	143.6	-2.1		-20.9	-24	100	No stop
04 42 16	---	16 48 54	30.2	144.5	-2.0		-20.4	171	104	04 39 02
04 42 56	J1834-0301	16 49 35	29.7	149.3	-1.8		-17.9	16	104	04 42 56
04 44 41	=1831-030	16 51 20	29.8	149.8	-1.7		-17.6	105	105	04 42 57
04 44 41	J1907+0127	16 51 20	31.2	139.0	-2.3		-23.2	-36	105	No stop
04 46 26	=1904+013	16 53 05	31.3	139.5	-2.2		-23.0	69	107	04 44 42
04 46 26	G33.980	16 53 05	32.1	143.5	-2.0		-20.9	-23	107	No stop
04 49 41	---	16 56 21	32.4	144.4	-2.0		-20.5	172	110	04 46 27
04 49 41	J1907+0127	16 56 21	31.6	140.4	-2.2		-22.5	-23	110	No stop
04 51 26	=1904+013	16 58 06	31.8	140.9	-2.2		-22.3	82	112	04 49 42
04 52 06	G34.751	16 58 46	33.1	144.3	-1.9		-20.5	19	112	04 52 06
04 55 21	---	17 02 02	33.4	145.3	-1.9		-20.0	195	115	04 52 07
04 55 21	J1907+0127	17 02 02	32.2	141.9	-2.1		-21.7	-21	115	No stop
04 57 06	=1904+013	17 03 47	32.3	142.4	-2.1		-21.5	84	117	04 55 22
04 57 06	G33.980	17 03 47	33.0	146.5	-1.8		-19.4	-23	117	No stop
05 00 21	---	17 07 02	33.3	147.4	-1.8		-18.9	172	120	04 57 07

Schedule for TORUN (Code Tr)

Page 5

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
05 00 21	J1907+0127	17 07 02	32.6	143.3	-2.0		-21.0	-23	120	No stop
05 02 06	=1904+013	17 08 48	32.8	143.8	-2.0		-20.8	82	121	05 00 22
05 02 46	G34.751	17 09 28	34.0	147.4	-1.8		-18.9	18	121	05 02 46
05 06 01	---	17 12 43	34.3	148.3	-1.7		-18.4	195	125	05 02 47
05 06 01	J1907+0127	17 12 43	33.1	144.9	-1.9		-20.2	-21	125	No stop
05 07 46	=1904+013	17 14 29	33.3	145.4	-1.9		-19.9	84	126	05 06 02
05 08 46	J1834-0301	17 15 29	31.5	156.6	-1.3		-13.8	23	126	05 08 46
05 10 31	=1831-030	17 17 14	31.6	157.1	-1.3		-13.6	105	128	05 08 47
05 10 31	G31.581	17 17 14	32.4	152.4	-1.5		-16.2	-24	128	No stop
05 13 46	---	17 20 30	32.7	153.3	-1.5		-15.7	171	131	05 10 32
05 13 46	J1834-0301	17 20 30	31.8	158.0	-1.2		-13.0	-25	131	No stop
05 15 31	=1831-030	17 22 15	31.9	158.5	-1.2		-12.7	80	133	05 13 47
05 15 31	G31.581	17 22 15	32.8	153.8	-1.5		-15.4	-24	133	No stop
05 18 46	---	17 25 30	33.0	154.7	-1.4		-14.8	171	136	05 15 32
05 19 26	J1834-0301	17 26 11	32.1	159.6	-1.1		-12.1	15	136	05 19 26
05 21 11	=1831-030	17 27 56	32.2	160.1	-1.1		-11.8	105	138	05 19 27
05 21 11	J1907+0127	17 27 56	34.4	149.2	-1.7		-17.9	-36	138	No stop
05 22 56	=1904+013	17 29 41	34.5	149.7	-1.6		-17.6	69	139	05 21 12
05 22 56	G33.980	17 29 41	35.0	153.9	-1.4		-15.3	-24	139	No stop
05 26 11	---	17 32 57	35.2	154.9	-1.4		-14.8	171	142	05 22 57
05 26 11	J1907+0127	17 32 57	34.8	150.7	-1.6		-17.1	-23	142	No stop
05 27 56	=1904+013	17 34 42	34.9	151.2	-1.6		-16.8	82	144	05 26 12
05 28 36	G34.751	17 35 22	35.9	154.9	-1.3		-14.8	18	144	05 28 36
05 31 51	---	17 38 38	36.1	155.9	-1.3		-14.2	195	147	05 28 37
05 31 51	J1907+0127	17 38 38	35.2	152.3	-1.5		-16.2	-22	147	No stop
05 33 36	=1904+013	17 40 23	35.3	152.9	-1.5		-15.9	83	149	05 31 52
05 33 36	G33.980	17 40 23	35.6	157.1	-1.2		-13.5	-24	149	No stop
05 36 51	---	17 43 38	35.8	158.1	-1.2		-13.0	171	152	05 33 37
05 36 51	J1907+0127	17 43 38	35.5	153.8	-1.4		-15.4	-23	152	No stop
05 38 36	=1904+013	17 45 24	35.6	154.3	-1.4		-15.1	82	154	05 36 52
05 39 16	G34.751	17 46 04	36.5	158.1	-1.2		-12.9	18	154	05 39 16
05 42 31	---	17 49 19	36.7	159.1	-1.1		-12.4	195	157	05 39 17

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
05 42 31	J1907+0127	17 49 19	35.9	155.5	-1.3		-14.4	-22	157	No stop
05 44 16	=1904+013	17 51 05	36.0	156.0	-1.3		-14.1	83	159	05 42 32
05 45 16	J1834-0301	17 52 05	33.2	167.2	-0.7		-7.7	23	159	05 45 16
05 47 01	=1831-030	17 53 50	33.2	167.7	-0.7		-7.4	105	160	05 45 17
05 47 01	G31.581	17 53 50	34.5	163.1	-0.9		-10.1	-24	160	No stop
05 50 16	---	17 57 06	34.7	164.0	-0.9		-9.5	171	164	05 47 02
05 50 16	J1834-0301	17 57 06	33.3	168.7	-0.6		-6.8	-24	164	No stop
05 52 01	=1831-030	17 58 51	33.4	169.2	-0.6		-6.5	81	165	05 50 17
05 52 01	G31.581	17 58 51	34.7	164.6	-0.8		-9.2	-24	165	No stop
05 55 16	---	18 02 06	34.9	165.5	-0.8		-8.6	171	168	05 52 02
05 55 56	J1834-0301	18 02 47	33.5	170.4	-0.5		-5.8	16	168	05 55 56
05 57 41	=1831-030	18 04 32	33.5	170.9	-0.5		-5.5	105	170	05 55 57
05 57 41	J1907+0127	18 04 32	36.7	160.1	-1.1		-11.8	-36	170	No stop
05 59 26	=1904+013	18 06 17	36.8	160.6	-1.0		-11.5	69	172	05 57 42
05 59 26	G33.980	18 06 17	36.9	165.0	-0.8		-8.9	-24	172	No stop
06 02 41	---	18 09 33	37.0	166.0	-0.7		-8.4	171	175	05 59 27
06 02 41	J1907+0127	18 09 33	37.0	161.6	-1.0		-10.9	-23	175	No stop
06 04 26	=1904+013	18 11 18	37.1	162.2	-0.9		-10.6	82	177	06 02 42
06 05 06	G34.751	18 11 58	37.7	166.1	-0.7		-8.3	18	177	06 05 06
06 08 21	---	18 15 14	37.8	167.1	-0.7		-7.7	195	180	06 05 07
06 08 21	J1907+0127	18 15 14	37.2	163.4	-0.9		-9.9	-22	180	No stop
06 10 06	=1904+013	18 16 59	37.3	163.9	-0.8		-9.6	83	181	06 08 22
06 10 06	G33.980	18 16 59	37.3	168.3	-0.6		-7.0	-24	181	No stop
06 13 21	---	18 20 14	37.4	169.3	-0.6		-6.4	171	185	06 10 07
06 13 21	J1907+0127	18 20 14	37.4	164.9	-0.8		-9.0	-24	185	No stop
06 15 06	=1904+013	18 22 00	37.5	165.5	-0.8		-8.7	81	186	06 13 22
06 15 46	G34.751	18 22 40	38.0	169.5	-0.6		-6.3	17	186	06 15 46
06 19 01	---	18 25 55	38.1	170.5	-0.5		-5.7	195	189	06 15 47
06 19 01	J1907+0127	18 25 55	37.6	166.7	-0.7		-7.9	-22	189	No stop
06 20 46	=1904+013	18 27 41	37.7	167.3	-0.7		-7.6	83	191	06 19 02
06 24 24	3C345	18 31 19	67.4	244.9	1.8		45.0	49	191	06 24 24
06 39 24	---	18 46 22	65.3	249.9	2.0		47.2	900	206	06 24 25

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
06 50 24	J1834-0301	18 57 24	33.7	186.7	0.4		4.1	514	206	06 50 24
06 52 09	=1831-030	18 59 09	33.7	187.3	0.4		4.4	105	207	06 50 25
06 52 09	G31.581	18 59 09	35.7	183.0	0.2		1.8	-23	207	No stop
06 55 24	---	19 02 25	35.7	184.0	0.2		2.4	172	210	06 52 10
06 55 24	J1834-0301	19 02 25	33.6	188.2	0.5		4.9	-24	210	No stop
06 57 09	=1831-030	19 04 10	33.6	188.8	0.5		5.3	81	212	06 55 25
06 57 09	G31.581	19 04 10	35.7	184.5	0.2		2.7	-23	212	No stop
07 00 24	---	19 07 25	35.6	185.5	0.3		3.3	172	215	06 57 10
07 01 04	J1834-0301	19 08 05	33.5	189.9	0.6		6.0	16	215	07 01 04
07 02 49	=1831-030	19 09 51	33.4	190.5	0.6		6.3	105	217	07 01 05
07 02 49	J1907+0127	19 09 51	38.4	180.6	0.0		0.4	-34	217	No stop
07 04 34	=1904+013	19 11 36	38.4	181.2	0.1		0.7	71	219	07 02 50
07 04 34	G33.980	19 11 36	37.7	185.5	0.3		3.3	-24	219	No stop
07 07 49	---	19 14 52	37.7	186.6	0.3		3.9	171	222	07 04 35
07 07 49	J1907+0127	19 14 52	38.4	182.2	0.1		1.3	-23	222	No stop
07 09 34	=1904+013	19 16 37	38.3	182.8	0.1		1.7	82	224	07 07 50
07 10 14	G34.751	19 17 17	38.3	186.9	0.4		4.1	17	224	07 10 14
07 13 29	---	19 20 33	38.2	187.9	0.4		4.7	195	227	07 10 15
07 13 29	J1907+0127	19 20 33	38.3	184.0	0.2		2.4	-22	227	No stop
07 15 14	=1904+013	19 22 18	38.3	184.6	0.2		2.8	83	228	07 13 30
07 15 14	G33.980	19 22 18	37.5	188.9	0.5		5.3	-24	228	No stop
07 18 29	---	19 25 33	37.4	189.9	0.5		5.9	171	232	07 15 15
07 18 29	J1907+0127	19 25 33	38.2	185.6	0.3		3.4	-23	232	No stop
07 20 14	=1904+013	19 27 19	38.2	186.2	0.3		3.7	82	233	07 18 30
07 20 54	G34.751	19 27 59	38.1	190.2	0.5		6.1	17	233	07 20 54
07 24 09	---	19 31 14	38.0	191.3	0.6		6.7	195	236	07 20 55
07 24 09	J1907+0127	19 31 14	38.2	187.4	0.4		4.5	-22	236	No stop
07 25 54	=1904+013	19 33 00	38.1	188.0	0.4		4.8	83	238	07 24 10
07 26 54	J1834-0301	19 34 00	32.5	197.6	1.0		10.5	25	238	07 26 54
07 28 39	=1831-030	19 35 45	32.5	198.1	1.0		10.8	105	240	07 26 55

Nature of methanol maser rings

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
07 28 39	G31.581	19 35 45	34.9	194.2	0.8		8.5	-23	240	No stop
07 31 54	---	19 39 01	34.8	195.2	0.8		9.0	172	243	07 28 40
07 31 54	J1834-0301	19 39 01	32.3	199.0	1.1		11.3	-23	243	No stop
07 33 39	=1831-030	19 40 46	32.2	199.5	1.1		11.6	82	245	07 31 55
07 33 39	G31.581	19 40 46	34.7	195.7	0.9		9.3	-23	245	No stop
07 36 54	---	19 44 01	34.6	196.7	0.9		9.9	172	248	07 33 40
07 37 34	J1834-0301	19 44 41	32.0	200.7	1.2		12.3	17	248	07 37 34
07 39 19	=1831-030	19 46 27	31.9	201.2	1.2		12.5	105	249	07 37 35
07 39 19	J1907+0127	19 46 27	37.8	192.2	0.6		7.3	-36	249	No stop
07 41 04	=1904+013	19 48 12	37.7	192.8	0.7		7.6	69	251	07 39 20
07 41 04	G33.980	19 48 12	36.6	196.9	0.9		10.1	-23	251	No stop
07 44 19	---	19 51 28	36.5	197.9	1.0		10.7	172	254	07 41 05
07 44 19	J1907+0127	19 51 28	37.6	193.8	0.7		8.2	-23	254	No stop
07 46 04	=1904+013	19 53 13	37.5	194.3	0.8		8.6	82	256	07 44 20
07 46 44	G34.751	19 53 53	37.1	198.3	1.0		10.9	17	256	07 46 44
07 49 59	---	19 57 08	36.9	199.3	1.0		11.5	195	259	07 46 45
07 49 59	J1907+0127	19 57 08	37.4	195.6	0.8		9.3	-22	259	No stop
07 51 44	=1904+013	19 58 54	37.3	196.1	0.9		9.6	83	261	07 50 00
07 51 44	G33.980	19 58 54	36.1	200.2	1.1		12.0	-23	261	No stop
07 54 59	---	20 02 09	36.0	201.2	1.1		12.5	172	264	07 51 45
07 54 59	J1907+0127	20 02 09	37.2	197.1	0.9		10.2	-23	264	No stop
07 56 44	=1904+013	20 03 55	37.1	197.7	0.9		10.5	82	266	07 55 00
07 57 24	G34.751	20 04 35	36.6	201.6	1.1		12.8	18	266	07 57 24
08 00 39	---	20 07 50	36.4	202.6	1.2		13.3	195	269	07 57 25
08 00 39	J1907+0127	20 07 50	36.9	198.9	1.0		11.2	-22	269	No stop
08 02 24	=1904+013	20 09 36	36.8	199.4	1.0		11.5	83	270	08 00 40
08 03 24	J1834-0301	20 10 36	30.4	208.0	1.6		16.4	22	270	08 03 24
08 05 09	=1831-030	20 12 21	30.3	208.5	1.6		16.7	105	272	08 03 25
08 05 09	G31.581	20 12 21	33.1	205.0	1.4		14.7	-24	272	No stop
08 08 24	---	20 15 37	32.8	205.9	1.4		15.2	171	275	08 05 10

Schedule for TORUN (Code Tr) Page 9

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
08 08 24	J1834-0301	20 15 37	30.0	209.4	1.7		17.2	-24	275	No stop
08 10 09	=1831-030	20 17 22	29.9	209.9	1.7		17.4	81	277	08 08 25
08 10 09	G31.581	20 17 22	32.7	206.4	1.5		15.5	-24	277	No stop
08 13 24	---	20 20 37	32.5	207.4	1.5		16.0	171	280	08 10 10
08 14 04	J1834-0301	20 21 17	29.6	210.9	1.8		18.0	15	280	08 14 04
08 15 49	=1831-030	20 23 03	29.5	211.4	1.8		18.3	105	282	08 14 05
08 15 49	J1907+0127	20 23 03	36.1	203.5	1.3		13.8	-38	282	No stop
08 17 34	=1904+013	20 24 48	36.0	204.0	1.3		14.1	67	284	08 15 50
08 17 34	G33.980	20 24 48	34.5	207.9	1.5		16.3	-23	284	No stop
08 20 49	---	20 28 04	34.3	208.9	1.6		16.8	172	287	08 17 35
08 20 49	J1907+0127	20 28 04	35.8	205.0	1.3		14.7	-22	287	No stop
08 22 34	=1904+013	20 29 49	35.7	205.5	1.4		15.0	83	288	08 20 50
08 23 14	G34.751	20 30 29	34.9	209.3	1.6		17.1	18	288	08 23 14
08 26 29	---	20 33 44	34.6	210.3	1.6		17.6	195	292	08 23 15
08 26 29	J1907+0127	20 33 44	35.4	206.7	1.4		15.6	-22	292	No stop
08 28 14	=1904+013	20 35 30	35.3	207.2	1.5		15.9	83	293	08 26 30
08 28 14	G33.980	20 35 30	33.8	211.0	1.7		18.0	-23	293	No stop
08 31 29	---	20 38 45	33.5	211.9	1.7		18.5	172	296	08 28 15
08 31 29	J1907+0127	20 38 45	35.0	208.1	1.5		16.5	-22	296	No stop
08 33 14	=1904+013	20 40 31	34.9	208.7	1.5		16.7	83	298	08 31 30
08 33 54	G34.751	20 41 11	34.1	212.4	1.8		18.8	18	298	08 33 54
08 37 09	---	20 44 26	33.8	213.3	1.8		19.3	195	301	08 33 55
08 37 09	J1907+0127	20 44 26	34.6	209.8	1.6		17.4	-22	301	No stop
08 38 54	=1904+013	20 46 12	34.5	210.3	1.6		17.6	83	303	08 37 10
08 39 54	J1834-0301	20 47 12	27.4	217.9	2.2		21.7	20	303	08 39 54
08 41 39	=1831-030	20 48 57	27.3	218.3	2.2		21.9	105	305	08 39 55
08 41 39	G31.581	20 48 57	30.3	215.2	2.0		20.3	-25	305	No stop
08 44 54	---	20 52 13	30.0	216.1	2.0		20.7	170	308	08 41 40
08 44 54	J1834-0301	20 52 13	27.0	219.2	2.3		22.3	-25	308	No stop
08 46 39	=1831-030	20 53 58	26.8	219.6	2.3		22.6	80	309	08 44 55

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
08 46 39	G31.581	20 53 58	29.9	216.6	2.1		21.0	-25	309	No stop
08 49 54	---	20 57 13	29.6	217.5	2.1		21.4	170	313	08 46 40
08 50 34	J1834-0301	20 57 53	26.4	220.6	2.4		23.1	14	313	08 50 34
08 52 19	=1831-030	20 59 39	26.2	221.1	2.4		23.3	105	314	08 50 35
08 52 19	J1907+0127	20 59 39	33.4	214.1	1.9		19.7	-41	314	No stop
08 54 04	=1904+013	21 01 24	33.3	214.6	1.9		20.0	64	316	08 52 20
08 54 04	G33.980	21 01 24	31.6	218.2	2.1		21.8	-22	316	No stop
08 57 19	---	21 04 40	31.2	219.1	2.2		22.3	173	319	08 54 05
08 57 19	J1907+0127	21 04 40	33.0	215.6	1.9		20.4	-22	319	No stop
08 59 04	=1904+013	21 06 25	32.8	216.0	2.0		20.7	83	321	08 57 20
08 59 44	G34.751	21 07 05	31.8	219.6	2.2		22.5	18	321	08 59 44
09 02 59	---	21 10 20	31.5	220.5	2.2		23.0	195	324	08 59 45
09 02 59	J1907+0127	21 10 20	32.5	217.1	2.0		21.3	-21	324	No stop
09 04 44	=1904+013	21 12 06	32.3	217.6	2.1		21.5	84	326	09 03 00
09 04 44	G33.980	21 12 06	30.5	221.1	2.3		23.3	-22	326	No stop
09 07 59	---	21 15 21	30.2	222.0	2.4		23.7	173	329	09 04 45
09 07 59	J1907+0127	21 15 21	32.0	218.5	2.1		22.0	-21	329	No stop
09 09 44	=1904+013	21 17 07	31.9	219.0	2.2		22.2	84	330	09 08 00
09 10 24	G34.751	21 17 47	30.7	222.5	2.4		23.9	19	330	09 10 24
09 13 39	---	21 21 02	30.4	223.3	2.4		24.4	195	334	09 10 25
09 13 39	J1907+0127	21 21 02	31.5	220.1	2.2		22.7	-21	334	No stop
09 15 24	=1904+013	21 22 48	31.3	220.5	2.2		23.0	84	335	09 13 40
09 16 24	J1834-0301	21 23 48	23.7	227.1	2.8		26.1	18	335	09 16 24
09 18 09	=1831-030	21 25 33	23.5	227.6	2.8		26.3	105	337	09 16 25
09 18 09	G31.581	21 25 33	26.8	224.9	2.6		25.1	-26	337	No stop
09 21 24	---	21 28 49	26.4	225.7	2.7		25.4	169	340	09 18 10
09 21 24	J1834-0301	21 28 49	23.2	228.3	2.9		26.7	-26	340	No stop
09 23 09	=1831-030	21 30 34	23.0	228.8	2.9		26.9	79	342	09 21 25
09 23 09	G31.581	21 30 34	26.2	226.1	2.7		25.7	-26	342	No stop
09 26 24	---	21 33 49	25.9	226.9	2.7		26.0	169	345	09 23 10

Schedule for TORUN (Code Tr)

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Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

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SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
09 27 04	J1834-0301	21 34 29	22.5	229.7	3.0		27.3	14	345	09 27 04
09 28 49	=1831-030	21 36 15	22.3	230.1	3.0		27.5	105	347	09 27 05
09 28 49	J1907+0127	21 36 15	30.0	224.1	2.5		24.7	-42	347	No stop
09 30 34	=1904+013	21 38 00	29.8	224.6	2.5		24.9	63	348	09 28 50
09 30 34	G33.980	21 38 00	27.8	227.8	2.7		26.4	-21	348	No stop
09 33 49	---	21 41 16	27.4	228.7	2.8		26.8	174	352	09 30 35
09 33 49	J1907+0127	21 41 16	29.4	225.4	2.6		25.3	-21	352	No stop
09 35 34	=1904+013	21 43 01	29.2	225.9	2.6		25.5	84	353	09 33 50
09 36 14	G34.751	21 43 41	27.9	229.2	2.8		27.0	19	353	09 36 14
09 39 29	---	21 46 56	27.6	230.0	2.9		27.4	195	356	09 36 15
09 39 29	J1907+0127	21 46 56	28.8	226.9	2.7		26.0	-21	356	No stop
09 41 14	=1904+013	21 48 42	28.6	227.3	2.7		26.2	84	358	09 39 30
09 41 14	G33.980	21 48 42	26.6	230.5	2.9		27.6	-22	358	No stop
09 44 29	---	21 51 57	26.2	231.3	3.0		28.0	173	361	09 41 15
09 44 29	J1907+0127	21 51 57	28.3	228.2	2.7		26.6	-21	361	No stop
09 46 14	=1904+013	21 53 43	28.1	228.6	2.8		26.8	84	363	09 44 30
09 46 54	G34.751	21 54 23	26.7	231.8	3.0		28.2	19	363	09 46 54
09 50 09	---	21 57 38	26.3	232.6	3.0		28.5	195	366	09 46 55
09 50 09	J1907+0127	21 57 38	27.6	229.6	2.8		27.2	-20	366	No stop
09 51 54	=1904+013	21 59 24	27.4	230.0	2.9		27.4	85	368	09 50 10
09 52 54	J1834-0301	22 00 24	19.4	235.8	3.4		29.8	16	368	09 52 54
09 54 39	=1831-030	22 02 09	19.2	236.2	3.5		30.0	105	369	09 52 55
09 54 39	G31.581	22 02 09	22.6	233.8	3.2		29.0	-26	369	No stop
09 57 54	---	22 05 25	22.2	234.6	3.3		29.3	169	373	09 54 40
09 57 54	J1834-0301	22 05 25	18.8	236.9	3.5		30.3	-27	373	No stop
09 59 39	=1831-030	22 07 10	18.6	237.3	3.5		30.4	78	374	09 57 55
09 59 39	G31.581	22 07 10	22.0	235.0	3.3		29.5	-27	374	No stop
10 02 54	---	22 10 25	21.6	235.8	3.4		29.8	168	377	09 59 40
10 03 34	J1834-0301	22 11 05	18.1	238.2	3.6		30.7	13	377	10 03 34
10 05 19	=1831-030	22 12 51	17.8	238.6	3.6		30.9	105	379	10 03 35
10 05 19	J1907+0127	22 12 51	25.8	233.3	3.1		28.8	-44	379	No stop
10 07 04	=1904+013	22 14 36	25.6	233.8	3.1		29.0	61	381	10 05 20

Schedule for TORUN (Code Tr) Page 12

Nature of methanol maser rings

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Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
10 07 04	G33.980	22 14 36	23.5	236.8	3.3		30.2	-22	381	No stop
10 10 19	---	22 17 52	23.0	237.5	3.4		30.4	173	384	10 07 05
10 10 19	J1907+0127	22 17 52	25.2	234.6	3.2		29.3	-22	384	No stop
10 12 04	=1904+013	22 19 37	25.0	235.0	3.2		29.5	83	386	10 10 20
10 12 44	G34.751	22 20 17	23.5	238.1	3.4		30.7	19	386	10 12 44
10 15 59	---	22 23 32	23.1	238.8	3.5		30.9	195	389	10 12 45
10 15 59	J1907+0127	22 23 32	24.5	235.9	3.3		29.8	-20	389	No stop
10 17 44	=1904+013	22 25 18	24.3	236.3	3.3		30.0	85	390	10 16 00
10 17 44	G33.980	22 25 18	22.1	239.3	3.5		31.1	-22	390	No stop
10 20 59	---	22 28 33	21.7	240.0	3.6		31.3	173	394	10 17 45
10 20 59	J1907+0127	22 28 33	23.9	237.1	3.3		30.3	-22	394	No stop
10 22 44	=1904+013	22 30 19	23.7	237.5	3.4		30.4	83	395	10 21 00
10 23 24	G34.751	22 30 59	22.1	240.6	3.6		31.5	20	395	10 23 24
10 26 39	---	22 34 14	21.7	241.3	3.6		31.8	195	398	10 23 25
10 26 39	J1907+0127	22 34 14	23.2	238.4	3.4		30.8	-20	398	No stop
10 28 24	=1904+013	22 36 00	22.9	238.8	3.5		30.9	85	400	10 26 40
10 29 24	J1834-0301	22 37 00	14.7	244.0	4.0		32.7	15	400	10 29 24
10 31 09	=1831-030	22 38 45	14.4	244.3	4.1		32.8	105	402	10 29 25
10 31 09	G31.581	22 38 45	17.9	242.2	3.8		32.1	-27	402	No stop
10 34 24	---	22 42 01	17.5	242.9	3.9		32.3	168	405	10 31 10
10 34 24	J1834-0301	22 42 01	14.0	245.1	4.1		33.0	-27	405	No stop
10 36 09	=1831-030	22 43 46	13.7	245.4	4.1		33.2	78	407	10 34 25
10 36 09	G31.581	22 43 46	17.3	243.3	3.9		32.5	-27	407	No stop
10 39 24	---	22 47 01	16.8	244.0	4.0		32.7	168	410	10 36 10
10 40 04	J1834-0301	22 47 41	13.2	246.3	4.2		33.4	13	410	10 40 04
10 41 49	=1831-030	22 49 27	13.0	246.7	4.2		33.5	105	412	10 40 05
10 41 49	J1907+0127	22 49 27	21.2	241.9	3.7		32.0	-44	412	No stop
10 43 34	=1904+013	22 51 12	21.0	242.3	3.7		32.1	61	413	10 41 50
10 43 34	G33.980	22 51 12	18.7	245.1	4.0		33.0	-23	413	No stop
10 46 49	---	22 54 28	18.2	245.8	4.0		33.2	172	416	10 43 35
10 46 49	J1907+0127	22 54 28	20.5	243.1	3.8		32.4	-22	416	No stop
10 48 34	=1904+013	22 56 13	20.3	243.5	3.8		32.5	83	418	10 46 50

Schedule for TORUN (Code Tr)

Page 13

Nature of methanol maser rings

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 5 Mar 2013 Day 64 ---										
10 49 14	G34.751	22 56 53	18.7	246.4	4.0		33.4	20	418	10 49 14
10 52 29	---	23 00 08	18.2	247.1	4.1		33.6	195	421	10 49 15
10 52 29	J1907+0127	23 00 08	19.8	244.4	3.9		32.8	-20	421	No stop
10 54 14	=1904+013	23 01 54	19.5	244.7	3.9		32.9	85	423	10 52 30
10 54 14	G33.980	23 01 54	17.2	247.5	4.1		33.7	-23	423	No stop
10 57 29	---	23 05 09	16.7	248.2	4.2		33.9	172	426	10 54 15
10 57 29	J1907+0127	23 05 09	19.1	245.5	4.0		33.1	-23	426	No stop
10 59 14	=1904+013	23 06 55	18.8	245.9	4.0		33.2	82	428	10 57 30
10 59 54	G34.751	23 07 35	17.2	248.7	4.2		34.0	20	428	10 59 54
11 03 09	---	23 10 50	16.7	249.4	4.3		34.2	195	431	10 59 55
11 03 09	J1907+0127	23 10 50	18.3	246.7	4.0		33.5	-20	431	No stop
11 04 54	=1904+013	23 12 36	18.1	247.1	4.1		33.6	85	433	11 03 10
11 05 54	J1834-0301	23 13 36	9.6	251.7	4.6		34.8	14	433	11 05 54
11 07 39	=1831-030	23 15 21	9.3	252.1	4.7		34.9	105	434	11 05 55
11 07 39	G31.581	23 15 21	12.9	250.2	4.4		34.4	-27	434	No stop
11 10 54	---	23 18 37	12.4	250.8	4.5		34.6	168	437	11 07 40
11 10 54	J1834-0301	23 18 37	8.9	252.8	4.7		35.1	-28	437	No stop
11 12 39	=1831-030	23 20 22	8.6	253.1	4.8		35.1	77	439	11 10 55
11 12 39	G31.581	23 20 22	12.2	251.2	4.5		34.7	-27	439	No stop
11 15 54	---	23 23 37	11.7	251.9	4.6		34.8	168	442	11 12 40
11 16 34	J1834-0301	23 24 17	8.0	253.9	4.8		35.3	12	442	11 16 34
11 18 19	=1831-030	23 26 03	7.8	254.3	4.9		35.4	105	444	11 16 35
11 19 14	J1907+0127	23 26 57	16.0	250.2	4.3		34.4	10	444	11 19 14
11 20 59	=1904+013	23 28 43	15.8	250.6	4.3		34.5	105	446	11 19 15
11 20 59	G33.980	23 28 43	13.4	253.2	4.6		35.1	-23	446	No stop
11 24 14	---	23 31 58	12.9	253.9	4.6		35.2	172	449	11 21 00
11 24 14	J1907+0127	23 31 58	15.3	251.3	4.4		34.7	-23	449	No stop
11 25 59	=1904+013	23 33 43	15.1	251.7	4.4		34.8	82	450	11 24 15
11 26 39	G34.751	23 34 24	13.3	254.4	4.6		35.4	20	450	11 26 39
11 29 54	---	23 37 39	12.9	255.1	4.7		35.5	195	454	11 26 40
11 29 54	J1907+0127	23 37 39	14.5	252.5	4.5		35.0	-20	454	No stop
11 31 39	=1904+013	23 39 24	14.3	252.9	4.5		35.0	85	455	11 29 55

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: sess113.EB052

Matching groups in /usr/local/sched/catalogs/freq.dat:

tr5cm Values confirmed by E-mail Borkowski (JFD 26Oct98)

Setup group: 5 Station: TORUN Total bit rate: 128
 Format: MKIV1:1 Bits per sample: 2 Sample rate: 4.000
 Number of channels: 16 DBE type: Speedup factor: 2.00

Disk used to record data.

1st LO=	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00	5900.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set: 6 Based on FREQ, BW, and/or DOPPLER in schedule. Used pcal sets: 1

LO sum=	6664.86	6664.86	6664.86	6664.86	6668.86	6668.86	6668.86	6668.86
	6672.86	6672.86	6672.86	6672.86	6676.86	6676.86	6676.86	6676.86
BBC fr=	764.86	764.86	764.86	764.86	768.86	768.86	768.86	768.86
	772.86	772.86	772.86	772.86	776.86	776.86	776.86	776.86
Bandwd=	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Matching frequency sets: 6

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = OFF

PCALXB1=	S1	S2	S3	S4	S5	S6	S7	S8
PCALXB2=	M1	M2	M3	M4	M5	M6	M7	M8
PCALFR1=	0	0	0	0	0	0	0	0
PCALFR2=	0	0	0	0	0	0	0	0

Track assignments are:

track1= 2, 6, 10, 14, 18, 22, 26, 30, 3, 7, 11, 15, 19, 23, 27, 31
 barrel=roll_off

SOURCES USED IN RECORDING SCANS -- Nature of methanol maser rings
 Catalog positions marked with *.
 Precession of date coordinates is based on stop time of first scan.
 Names used in schedule marked with *.
 Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC).
 Scan hours are for recording scans only.
 Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* G31.581	18 46 06.787946	* 18 48 41.941000	18 49 23.038440	0.00
	-01 13 28.37087	*-01 10 02.52800	-01 09 07.48310	0.00
* G33.980	18 50 52.244185	* 18 53 25.018300	18 54 05.456007	0.00
	00 51 39.90379	* 00 55 25.97600	00 56 25.80015	0.00
* G34.751	18 52 33.186719	* 18 55 05.223000	18 55 45.455095	0.00
	01 30 43.05444	* 01 34 36.26100	01 35 37.80100	0.00
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.990346	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 46 55.19292	0.52
* J1834-0301	18 31 36.772712	* 18 34 14.074653	18 34 55.822036	0.12
1831-030	-03 03 43.12343	*-03 01 19.62724	-03 00 40.67256	0.16
* J1907+0127	19 04 39.788400	* 19 07 11.996158	19 07 52.215828	0.24
1904+013	01 22 24.59956	* 01 27 08.96154	01 28 24.21459	0.31

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
G31.581	63.8
G33.980	62.8
G34.751	62.5
3C345	97.8
J1834-0301	67.2
J1907+0127	59.5

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

Koniec M-band [C2]

f13l1tr

FTP TEST
PI: Ciriaco Goddi

Address: JIVE Postbus 2 7990 AA Dwingeloo The Netherlands
Phone: +31-521-596548 EMAIL: goddi@jive.nl
Phone during observation: +31-521-596548

COVER LETTER:

This is the schedule for the L-band ftp fringe-test on 08 March 2013 involving 9 antennas: Ef Wb Jb1 On25 Nt Tr Ur Sh Hh

The ftp test uses a standard setup and consists of long integrations on a strong source 0234+285 - a standard fringe finder.

Four ftp tests are scheduled:
~11:09 UT (scan 2, 2 sec, 0234+285)
~11:30 UT (scan 4, 2 sec, 0234+285)
~11:51 UT (scan 6, 2 sec, 0234+285)
~11:51 UT (scan 8, 2 sec, 0234+285)

Please make sure that the autoftp is set up correctly.

Good luck with the session!

Ciriaco

Schedule for TORUN (Code Tr) Page 2

Ftp test

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Fri 8 Mar 2013 Day 67 ---

Next scan frequencies:	1634.49	1634.49	1634.49	1634.49	1650.49	1650.49	1650.49	1650.49	1650.49	1650.49
	1666.49	1666.49	1666.49	1666.49	1682.49	1682.49	1682.49	1682.49	1682.49	1682.49
Next BBC frequencies:	665.51	665.51	665.51	665.51	665.51	649.51	649.51	649.51	649.51	649.51
	633.51	633.51	633.51	633.51	633.51	617.51	617.51	617.51	617.51	617.51
Next scan bandwidths:	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
12 00 00	0234+285	00 19 40	54.9	119.8	-2.3	-36.5	0	0	12 00 00	
12 05 00	---	00 24 41	55.5	121.3	-2.2	-35.8	300	19	12 00 01	
12 06 00	0234+285	00 25 41	55.7	121.6	-2.2	-35.7	54	19	12 06 00	
12 11 00	---	00 30 42	56.3	123.2	-2.1	-35.0	300	39	12 06 01	

12 13 00	0234+285	00 32 42	56.6	123.9	-2.1	-34.7	113	39	12 13 00
12 22 00	---	00 41 44	57.7	126.9	-1.9	-33.2	540	74	12 13 01
12 24 00	0234+285	00 43 44	57.9	127.6	-1.9	-32.9	113	74	12 24 00
12 33 00	---	00 52 45	58.9	130.8	-1.8	-31.3	540	108	12 24 01
12 34 00	0234+285	00 53 46	59.1	131.2	-1.7	-31.1	53	108	12 34 00
12 39 00	---	00 58 46	59.6	133.0	-1.7	-30.1	300	128	12 34 01
12 41 00	0234+285	01 00 47	59.8	133.8	-1.6	-29.7	113	128	12 41 00
12 50 00	---	01 09 48	60.8	137.3	-1.5	-27.7	540	163	12 41 01
12 52 00	0234+285	01 11 49	61.0	138.1	-1.4	-27.3	113	163	12 52 00
13 01 00	---	01 20 50	61.9	141.8	-1.3	-25.1	540	197	12 52 01
13 02 00	0234+285	01 21 50	62.0	142.2	-1.3	-24.8	53	197	13 02 00
13 07 00	---	01 26 51	62.4	144.4	-1.2	-23.6	300	217	13 02 01
13 09 00	0234+285	01 28 51	62.6	145.2	-1.2	-23.0	113	217	13 09 00
13 18 00	---	01 37 53	63.3	149.3	-1.0	-20.5	540	252	13 09 01
13 20 00	0234+285	01 39 53	63.5	150.2	-1.0	-19.9	113	252	13 20 00
13 29 00	---	01 48 55	64.1	154.4	-0.8	-17.2	540	286	13 20 01
13 30 00	0234+285	01 49 55	64.2	154.9	-0.8	-16.9	53	286	13 30 00
13 35 00	---	01 54 56	64.5	157.3	-0.7	-15.3	300	306	13 30 01
13 37 00	0234+285	01 56 56	64.6	158.3	-0.7	-14.7	113	306	13 37 00
13 46 00	---	02 05 57	65.0	162.8	-0.5	-11.7	540	341	13 37 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.L512

Matching groups in /aps3/sched10.2/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	3	Station:	TORUN	Total bit rate:	512
Format:	MKIV1:2	Bits per sample:	2	Sample rate:	16.000
Number of channels:	16	DBE type:		Speedup factor:	1.00

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U
	L	L	U	U	L	L	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP
BBC =	1	2	1	2	3	4	3	4
	5	6	5	6	7	8	7	8
BBC SB=	U	U	L	L	U	U	L	L
	U	U	L	L	U	U	L	L
IF =	C	A	C	A	C	A	C	A
	C	A	C	A	C	A	C	A

The following frequency sets based on these setups were used.

```

Frequency Set: 5 Setup file default. Used pcal sets: 1
LO sum= 1634.49 1634.49 1634.49 1634.49 1650.49 1650.49 1650.49 1650.49
        1666.49 1666.49 1666.49 1666.49 1682.49 1682.49 1682.49 1682.49
BBC fr= 665.51 665.51 665.51 665.51 649.51 649.51 649.51 649.51
        633.51 633.51 633.51 633.51 617.51 617.51 617.51 617.51
Bandwd= 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
        8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
Matching frequency sets: 5

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS --

Ftp test

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
J0237+2848	02 34 55.589591	* 02 37 52.405678	02 38 39.421291	0.11
* 0234+285	28 35 11.40773	* 28 48 08.98998	28 51 34.00276	0.10

gk047atr

RADIOASTRON-EVN-GB-EV: 0642+449

PI: *Yuri Kovalev*

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Fax: +7-495-3332378 Phone during observation: +7-915-1546281

Observing mode: L-band, dual-pol

Notes: L-band, Radioastron-compatible frequency setup. PCAL is ON
 Mk5 disk packs should be sent for correlation to Bonn

Schedule for TORUN (Code Tr) Page 2

Radioastron-EVN-Gb-Ev: 0642+449

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT Source Start / Stop Early Disk TPStart
Stop UT LST EL AZ HA UP ParA Dwell GBytes SYNC

--- Sat 9 Mar 2013 Day 68 ---

Next scan frequencies: 1668.00 1668.00 1668.00 1668.00
Next BBC frequencies: 632.00 632.00 632.00 632.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

10 00 00	0642+449	22 23 17	18.3	37.1	-8.4		-30.7	0	0	10 00 00
10 09 30	---	22 32 48	19.1	38.6	-8.2		-31.9	570	18	10 00 01
10 10 00	0642+449	22 33 19	19.2	38.7	-8.2		-32.0	24	18	10 10 00
10 19 30	---	22 42 50	20.1	40.2	-8.1		-33.2	570	37	10 10 01
10 20 00	0642+449	22 43 20	20.1	40.3	-8.1		-33.2	24	37	10 20 00
10 29 30	---	22 52 52	21.1	41.8	-7.9		-34.4	570	55	10 20 01
10 30 00	0642+449	22 53 22	21.1	41.9	-7.9		-34.4	24	55	10 30 00
10 39 30	---	23 02 53	22.1	43.4	-7.7		-35.6	570	74	10 30 01
10 40 00	0642+449	23 03 23	22.1	43.5	-7.7		-35.6	24	74	10 40 00
10 49 20	---	23 12 45	23.1	44.9	-7.6		-36.7	560	92	10 40 01
10 49 50	0642+449	23 13 15	23.2	45.0	-7.6		-36.8	24	92	10 49 50
10 59 10	---	23 22 37	24.2	46.4	-7.4		-37.8	560	110	10 49 51
10 59 40	0642+449	23 23 07	24.2	46.5	-7.4		-37.9	24	110	10 59 40
11 09 00	---	23 32 28	25.3	47.9	-7.3		-39.0	560	128	10 59 41
11 09 30	0642+449	23 32 58	25.3	48.0	-7.2		-39.0	24	128	11 09 30
11 18 50	---	23 42 20	26.4	49.4	-7.1		-40.0	560	146	11 09 31
11 19 20	0642+449	23 42 50	26.4	49.5	-7.1		-40.1	24	146	11 19 20
11 28 40	---	23 52 11	27.5	50.9	-6.9		-41.1	560	164	11 19 21
11 29 10	0642+449	23 52 42	27.6	51.0	-6.9		-41.2	24	164	11 29 10
11 38 30	---	00 02 03	28.7	52.4	-6.8		-42.1	560	182	11 29 11

Schedule for TORUN (Code Tr)

Page 3

Radioastron-EVN-Gb-Ev: 0642+449

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 9 Mar 2013 Day 68 ---										
11 39 00	0642+449	00 02 33	28.7	52.5	-6.7		-42.2	24	182	11 39 00
11 48 20	---	00 11 55	29.9	53.9	-6.6		-43.2	560	200	11 39 01
11 49 00	0642+449	00 12 35	29.9	54.0	-6.6		-43.2	34	200	11 49 00
11 58 30	---	00 22 06	31.1	55.4	-6.4		-44.2	570	218	11 49 01
11 59 00	0642+449	00 22 36	31.2	55.5	-6.4		-44.2	24	218	11 59 00
12 08 30	---	00 32 08	32.4	56.9	-6.3		-45.2	570	237	11 59 01
12 09 00	0642+449	00 32 38	32.4	57.0	-6.2		-45.2	24	237	12 09 00
12 18 30	---	00 42 10	33.6	58.4	-6.1		-46.1	570	255	12 09 01
12 19 00	0642+449	00 42 40	33.7	58.4	-6.1		-46.2	24	255	12 19 00
12 28 30	---	00 52 11	34.9	59.8	-5.9		-47.1	570	274	12 19 01
12 29 00	0642+449	00 52 41	35.0	59.9	-5.9		-47.1	24	274	12 29 00
12 38 00	---	01 01 43	36.2	61.2	-5.8		-47.9	540	291	12 29 01
12 38 30	0642+449	01 02 13	36.2	61.3	-5.8		-48.0	24	291	12 38 30
12 47 30	---	01 11 14	37.4	62.6	-5.6		-48.8	540	308	12 38 31
12 48 00	0642+449	01 11 44	37.5	62.7	-5.6		-48.8	24	308	12 48 00
12 57 00	---	01 20 46	38.7	64.0	-5.4		-49.6	540	326	12 48 01
12 57 30	0642+449	01 21 16	38.8	64.1	-5.4		-49.6	24	326	12 57 30
13 06 30	---	01 30 17	40.0	65.5	-5.3		-50.4	540	343	12 57 31
13 07 00	0642+449	01 30 48	40.1	65.5	-5.3		-50.4	24	343	13 07 00
13 16 00	---	01 39 49	41.3	66.9	-5.1		-51.1	540	361	13 07 01
13 16 30	0642+449	01 40 19	41.4	66.9	-5.1		-51.2	24	361	13 16 30
13 25 30	---	01 49 21	42.6	68.3	-5.0		-51.9	540	378	13 16 31
13 26 00	0642+449	01 49 51	42.7	68.3	-5.0		-51.9	24	378	13 26 00
13 35 00	---	01 58 52	44.0	69.7	-4.8		-52.6	540	395	13 26 01
13 36 00	0642+449	01 59 52	44.1	69.8	-4.8		-52.7	54	395	13 36 00
13 45 30	---	02 09 24	45.5	71.3	-4.6		-53.3	570	414	13 36 01
13 46 00	0642+449	02 09 54	45.5	71.4	-4.6		-53.4	24	414	13 46 00
13 55 30	---	02 19 26	46.9	72.8	-4.5		-54.0	570	432	13 46 01
13 56 00	0642+449	02 19 56	47.0	72.9	-4.5		-54.0	24	432	13 56 00
14 05 30	---	02 29 27	48.3	74.3	-4.3		-54.6	570	451	13 56 01
14 06 00	0642+449	02 29 57	48.4	74.4	-4.3		-54.7	24	451	14 06 00
14 15 30	---	02 39 29	49.8	75.9	-4.1		-55.2	570	469	14 06 01

Schedule for TORUN (Code Tr)

Page 4

Radioastron-EVN-Gb-Ev: 0642+449

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 9 Mar 2013 Day 68 ---										
14 16 00	0642+449	02 39 59	49.9	76.0	-4.1		-55.2	24	469	14 16 00
14 25 00	---	02 49 00	51.2	77.4	-4.0		-55.7	540	486	14 16 01
14 25 30	0642+449	02 49 30	51.3	77.5	-4.0		-55.8	24	486	14 25 30
14 34 30	---	02 58 32	52.6	78.9	-3.8		-56.2	540	504	14 25 31
14 35 00	0642+449	02 59 02	52.7	79.0	-3.8		-56.2	24	504	14 35 00
14 44 00	---	03 08 04	54.0	80.5	-3.7		-56.6	540	521	14 35 01
14 44 30	0642+449	03 08 34	54.1	80.6	-3.6		-56.7	24	521	14 44 30
14 53 30	---	03 17 35	55.4	82.1	-3.5		-57.0	540	539	14 44 31
14 54 00	0642+449	03 18 05	55.5	82.2	-3.5		-57.0	24	539	14 54 00
15 03 00	---	03 27 07	56.8	83.7	-3.3		-57.3	540	556	14 54 01
15 08 26	0851+202	03 32 33	21.4	84.7	-5.4		-39.5	177	556	15 08 26
15 17 46	---	03 42 15	22.8	86.6	-5.2		-39.7	560	574	15 08 27
15 23 00	0642+449	03 47 10	59.8	87.4	-3.0		-57.8	163	574	15 23 00
15 32 30	---	03 56 41	61.2	89.2	-2.8		-57.9	570	593	15 23 01
15 33 00	0642+449	03 57 12	61.3	89.3	-2.8		-57.9	24	593	15 33 00
15 42 30	---	04 06 43	62.8	91.2	-2.7		-57.8	570	611	15 33 01
15 43 00	0642+449	04 07 13	62.8	91.3	-2.7		-57.8	24	611	15 43 00
15 52 30	---	04 16 45	64.3	93.3	-2.5		-57.7	570	629	15 43 01
15 53 00	0642+449	04 17 15	64.3	93.4	-2.5		-57.7	24	629	15 53 00
16 02 30	---	04 26 46	65.8	95.6	-2.3		-57.4	570	648	15 53 01
16 07 28	0851+202	04 31 46	30.3	96.7	-4.4		-39.4	150	648	16 07 28
16 16 38	---	04 41 17	31.7	98.7	-4.2		-39.2	550	665	16 07 29
16 21 47	0642+449	04 46 06	68.6	100.4	-2.0		-56.4	157	665	16 21 47
16 30 57	---	04 55 38	70.0	103.1	-1.9		-55.6	550	683	16 21 48
16 31 39	0642+449	04 56 00	70.1	103.2	-1.9		-55.5	34	683	16 31 39
16 40 49	---	05 05 32	71.5	106.1	-1.7		-54.4	550	701	16 31 40
16 41 31	0642+449	05 05 54	71.5	106.3	-1.7		-54.4	34	701	16 41 31
16 50 41	---	05 15 25	72.9	109.5	-1.5		-52.9	550	719	16 41 32
16 55 40	0851+202	05 20 05	37.4	107.3	-3.6		-37.6	150	719	16 55 40
17 04 50	---	05 29 36	38.7	109.6	-3.4		-37.0	550	736	16 55 41
17 10 00	0642+449	05 34 28	75.5	117.4	-1.2		-48.8	160	736	17 10 00
17 19 30	---	05 43 59	76.7	122.1	-1.1		-45.8	570	755	17 10 01

Schedule for TORUN (Code Tr)

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Radioastron-EVN-Gb-Ev: 0642+449

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 9 Mar 2013 Day 68 ---										
17 20 00	0642+449	05 44 29	76.8	122.4	-1.1		-45.6	23	755	17 20 00
17 29 30	---	05 54 01	78.0	128.0	-0.9		-41.9	570	773	17 20 01
17 30 00	0642+449	05 54 31	78.0	128.3	-0.9		-41.6	23	773	17 30 00
17 39 30	---	06 04 02	79.1	134.9	-0.7		-36.8	570	792	17 30 01
17 40 00	0642+449	06 04 32	79.2	135.3	-0.7		-36.6	23	792	17 40 00
17 49 30	---	06 14 04	80.1	143.1	-0.6		-30.5	570	810	17 40 01
17 50 10	0642+449	06 14 44	80.2	143.7	-0.5		-30.1	32	810	17 50 10
17 58 40	---	06 23 36	80.9	152.3	-0.4		-23.2	510	826	17 50 11
17 59 22	0642+449	06 23 58	80.9	152.6	-0.4		-22.9	33	826	17 59 22
18 07 52	---	06 32 49	81.4	162.3	-0.2		-14.9	510	843	17 59 23
18 12 51	0851+202	06 37 29	47.6	127.8	-2.3		-30.3	157	843	18 12 51
18 22 21	---	06 47 20	48.8	130.8	-2.1		-28.9	570	861	18 12 52
18 26 57	1328+307	06 51 37	18.4	63.4	-6.7		-38.5	125	861	18 26 57
18 36 27	---	07 01 28	19.7	65.2	-6.5		-39.2	570	880	18 26 58
18 48 06	0642+449	07 12 50	80.8	209.1	0.4		24.4	411	880	18 48 06
18 56 26	---	07 21 31	80.1	217.3	0.6		30.9	500	896	18 48 07
18 57 00	0642+449	07 21 45	80.0	217.5	0.6		31.1	25	896	18 57 00
19 06 30	---	07 31 17	79.1	225.3	0.7		37.0	570	914	18 57 01
19 07 00	0642+449	07 31 47	79.0	225.6	0.7		37.3	23	914	19 07 00
19 16 30	---	07 41 18	78.0	232.2	0.9		42.0	570	933	19 07 01
19 17 00	0642+449	07 41 48	77.9	232.5	0.9		42.2	23	933	19 17 00
19 26 30	---	07 51 20	76.7	238.0	1.1		45.9	570	951	19 17 01
19 27 00	0642+449	07 51 50	76.7	238.3	1.1		46.1	23	951	19 27 00
19 36 30	---	08 01 22	75.4	243.0	1.2		49.0	570	969	19 27 01
19 45 00	1328+307	08 09 53	29.4	77.4	-5.4		-42.8	163	969	19 45 00
19 51 20	---	08 16 34	30.4	78.6	-5.3		-43.1	380	982	19 45 01
20 00 45	0642+449	08 25 41	72.0	252.6	1.6		53.9	205	982	20 00 45
20 07 45	---	08 33 02	71.0	255.0	1.8		54.9	420	995	20 00 46
20 13 57	0851+202	08 38 55	56.8	172.8	-0.3		-4.6	189	995	20 13 57
20 20 47	---	08 46 06	56.9	175.9	-0.2		-2.6	410	1008	20 13 58
20 26 14	1328+307	08 51 14	35.5	85.1	-4.7		-43.9	129	1008	20 26 14
20 32 34	---	08 57 55	36.5	86.4	-4.6		-44.0	380	1021	20 26 15

Schedule for TORUN (Code Tr)

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Radioastron-EVN-Gb-Ev: 0642+449

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 9 Mar 2013 Day 68 ---										
20 44 00	0642+449	09 09 03	65.6	264.6	2.4		57.5	317	1021	20 44 00
20 53 30	---	09 18 34	64.2	266.7	2.5		57.7	570	1039	20 44 01
20 54 00	0642+449	09 19 04	64.1	266.8	2.5		57.7	24	1039	20 54 00
21 03 30	---	09 28 36	62.7	268.8	2.7		57.9	570	1057	20 54 01
21 04 00	0642+449	09 29 06	62.6	268.9	2.7		57.9	24	1057	21 04 00
21 13 30	---	09 38 38	61.2	270.9	2.9		57.9	570	1076	21 04 01
21 14 00	0642+449	09 39 08	61.1	271.0	2.9		57.9	24	1076	21 14 00
21 23 30	---	09 48 39	59.7	272.8	3.0		57.8	570	1094	21 14 01
21 24 00	0642+449	09 49 09	59.6	272.9	3.0		57.8	24	1094	21 24 00
21 34 00	---	09 59 11	58.1	274.7	3.2		57.6	600	1113	21 24 01
21 40 56	0851+202	10 06 08	54.3	209.2	1.2		18.1	266	1113	21 40 56
21 50 56	---	10 16 29	53.5	213.1	1.3		20.4	600	1133	21 40 57
21 57 40	1328+307	10 22 55	49.2	104.5	-3.1		-42.4	171	1133	21 57 40
22 07 50	---	10 33 26	50.7	107.2	-3.0		-41.7	610	1153	21 57 41
22 20 19	0642+449	10 45 37	51.2	282.5	4.0		55.8	385	1153	22 20 19
22 30 19	---	10 55 59	49.7	284.2	4.1		55.2	600	1172	22 20 20
22 31 00	0642+449	10 56 20	49.7	284.2	4.1		55.2	34	1172	22 31 00
22 40 30	---	11 05 52	48.3	285.7	4.3		54.6	570	1190	22 31 01
22 41 00	0642+449	11 06 22	48.2	285.8	4.3		54.6	24	1190	22 41 00
22 50 30	---	11 15 53	46.9	287.2	4.5		54.0	570	1209	22 41 01
22 51 00	0642+449	11 16 24	46.8	287.3	4.5		53.9	24	1209	22 51 00
23 00 30	---	11 25 55	45.4	288.8	4.6		53.3	570	1227	22 51 01
23 01 00	0642+449	11 26 25	45.3	288.8	4.6		53.3	24	1227	23 01 00
23 10 30	---	11 35 57	44.0	290.3	4.8		52.6	570	1245	23 01 01
23 11 00	0642+449	11 36 27	43.9	290.3	4.8		52.6	24	1245	23 11 00
23 21 10	---	11 46 38	42.5	291.9	5.0		51.8	610	1265	23 11 01
23 28 50	0851+202	11 54 20	42.5	243.6	3.0		34.9	345	1265	23 28 50
23 39 00	---	12 04 51	41.0	246.3	3.2		35.8	610	1285	23 28 51
23 46 57	1328+307	12 12 30	63.1	139.7	-1.3		-26.8	245	1285	23 46 57
23 57 07	---	12 23 02	64.1	144.3	-1.1		-24.0	610	1304	23 46 58

Schedule for TORUN (Code Tr)

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Radioastron-EVN-Gb-Ev: 0642+449

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

```

-----
Start UT  Source          Start / Stop          Early   Disk   TPStart
Stop UT          LST      EL    AZ    HA  UP   ParA Dwell  GBytes  SYNC
-----
--- Sun 10 Mar 2013  Day 69 ---

00 09 11  0642+449      12 34 47  36.0 299.0  5.8      47.8  401   1304  00 09 11
00 19 21  ---          12 45 19  34.6 300.5  6.0      46.8  610   1324  00 09 12

00 20 00  0642+449      12 45 38  34.6 300.6  6.0      46.8   32   1324  00 20 00
00 29 30  ---          12 55 10  33.3 302.0  6.1      45.9  570   1342  00 20 01

00 30 00  0642+449      12 55 40  33.3 302.0  6.1      45.9   24   1342  00 30 00
00 39 30  ---          13 05 11  32.1 303.5  6.3      45.0  570   1361  00 30 01

00 40 00  0642+449      13 05 41  32.0 303.5  6.3      44.9   24   1361  00 40 00
00 49 30  ---          13 15 13  30.8 304.9  6.5      44.0  570   1379  00 40 01

00 50 00  0642+449      13 15 43  30.8 305.0  6.5      43.9   24   1379  00 50 00
00 59 30  ---          13 25 15  29.6 306.4  6.6      42.9  570   1398  00 50 01

```

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.L256

Matching groups in /usr/local/sched/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```

Setup group: 4          Station: TORUN          Total bit rate: 256
Format: MKIV1:4        Bits per sample: 2       Sample rate: 32.000
Number of channels: 4  DBE type:          Speedup factor: 1.00

```

Disk used to record data.

```

1st LO= 2300.00  2300.00  2300.00  2300.00
Net SB=      L      L      U      U
Pol. =      RCP      LCP      RCP      LCP
BBC  =      1      2      1      2
BBC SB=      U      U      L      L
IF   =      C      A      C      A

```

The following frequency sets based on these setups were used.

```

Frequency Set: 4 Setup file default. Used pcal sets: 1
LO sum= 1668.00  1668.00  1668.00  1668.00
BBC fr= 632.00  632.00  632.00  632.00
Bandwd= 16.00  16.00  16.00  16.00
Matching frequency sets: 4

```

The following pulse cal sets were used with this setup:

```
Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1   S3   S1   S3   S1   S2   S3   S4
PCALXB2=  S2   S4   S2   S4   M1   M2   M3   M4
PCALFR1= 1000 1000 13000 13000   0   0   0   0
PCALFR2= 1000 1000 13000 13000   0   0   0   0
```

Track assignments are:

```
track1=  2, 18,  3, 19
barrel=roll_off
```

SOURCES USED IN RECORDING SCANS -- Radioastron-EVN-Gb-Ev: 0642+449
 Catalog positions marked with *.
 Precession of date coordinates is based on stop time of first scan.
 Names used in schedule marked with *.
 Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC).
 Scan hours are for recording scans only.
 Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0646+4451	06 42 53.021452	* 06 46 32.025999	06 47 31.646758	0.14
* 0642+449	44 54 30.82734	* 44 51 16.59009	44 50 22.84237	0.10
J0854+2006	08 51 57.250618	* 08 54 48.874930	08 55 36.082187	0.11
* 0851+202	20 17 58.41733	* 20 06 30.64078	20 03 15.97687	0.10
* 1328+307	13 28 49.657778	* 13 31 08.288070	13 31 46.592508	0.20
3C286	30 45 58.64061	* 30 30 32.95925	30 26 13.73130	0.19

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0642+449	108.3
0851+202	141.3
1328+307	139.5

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

NGC6251 JET AND THE AMBIENT PROFILE

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Observing mode: EVN 18cm/MK5A

Schedule for TORUN (Code Tr) Page 2

NGC6251 jet and the ambient profile

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 10 Mar 2013 Day 69 ---										
Next scan frequencies: 1634.49 1634.49 1634.49 1634.49 1650.49 1650.49 1650.49 1650.49										
1666.49 1666.49 1666.49 1666.49 1682.49 1682.49 1682.49 1682.49										
Next BBC frequencies: 665.51 665.51 665.51 665.51 649.51 649.51 649.51 649.51										
633.51 633.51 633.51 633.51 617.51 617.51 617.51 617.51										
Next scan bandwidths: 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
21 00 30	OQ208	09 29 32	34.4	87.3	-4.6		-43.0	0	0	21 00 25
21 05 00	---	09 34 33	35.2	88.2	-4.6		-43.0	270	18	21 00 26
21 17 31	NGC6251	09 46 36	51.0	11.7	-6.7		-69.6	583	18	21 17 26
21 30 36	---	10 00 03	51.5	12.0	-6.5		-72.7	785	69	21 17 27
21 30 56	NGC6251	10 00 03	51.5	12.0	-6.5		-72.7	14	69	21 30 51
21 44 21	---	10 13 30	51.9	12.2	-6.3		-75.9	805	121	21 30 52
21 44 41	NGC6251	10 13 50	51.9	12.2	-6.3		-76.0	15	121	21 44 36
21 58 06	---	10 27 17	52.3	12.3	-6.1		-79.2	805	173	21 44 37
21 58 26	NGC6251	10 27 37	52.3	12.3	-6.1		-79.3	15	173	21 58 21
22 11 51	---	10 41 05	52.8	12.4	-5.8		-82.6	805	225	21 58 22
22 12 11	NGC6251	10 41 25	52.8	12.4	-5.8		-82.6	15	225	22 12 06
22 25 36	---	10 54 52	53.2	12.5	-5.6		-85.9	805	278	22 12 07
22 25 56	NGC6251	10 55 12	53.2	12.5	-5.6		-86.0	15	278	22 25 51
22 39 21	---	11 08 39	53.7	12.5	-5.4		-89.3	805	330	22 25 52
22 39 41	NGC6251	11 08 59	53.7	12.5	-5.4		-89.4	15	330	22 39 36
22 53 06	---	11 22 26	54.1	12.5	-5.1		-92.7	805	382	22 39 37
22 53 26	NGC6251	11 22 46	54.1	12.5	-5.1		-92.8	15	382	22 53 21
23 06 51	---	11 36 14	54.6	12.5	-4.9		-96.2	805	434	22 53 22

Schedule for TORUN (Code Tr)

Page 3

NGC6251 jet and the ambient profile

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Start: Sun 10 Mar 2013 Day 69 -- Stop: Mon 11 Mar 2013 Day 70 ---										
23 13 08	OQ208	11 42 31	53.7	118.4	-2.4		-36.9	151	434	23 13 03
23 17 48	---	11 47 32	54.4	119.9	-2.3		-36.3	280	453	23 13 04
23 24 08	NGC6251	11 53 34	55.1	12.3	-4.6		-100.6	150	453	23 24 03
23 37 13	---	12 07 01	55.6	12.2	-4.4		-104.1	785	504	23 24 04
23 37 33	NGC6251	12 07 01	55.6	12.2	-4.4		-104.1	14	504	23 37 28
23 50 58	---	12 20 28	56.0	11.9	-4.2		-107.6	805	556	23 37 29
23 51 18	NGC6251	12 20 48	56.0	11.9	-4.2		-107.7	15	556	23 51 13
00 04 43	---	12 34 15	56.4	11.7	-3.9		-111.2	805	608	23 51 14
00 05 03	NGC6251	12 34 35	56.4	11.7	-3.9		-111.3	15	608	00 04 58
00 18 28	---	12 48 03	56.8	11.4	-3.7		-114.9	805	661	00 04 59
00 18 48	NGC6251	12 48 23	56.8	11.4	-3.7		-115.0	15	661	00 18 43
00 32 13	---	13 01 50	57.2	11.0	-3.5		-118.6	805	713	00 18 44
00 32 33	NGC6251	13 02 10	57.2	11.0	-3.5		-118.7	15	713	00 32 28
00 45 58	---	13 15 37	57.6	10.6	-3.3		-122.4	805	765	00 32 29
00 46 18	NGC6251	13 15 57	57.6	10.6	-3.3		-122.5	15	765	00 46 13
00 59 43	---	13 29 24	58.0	10.1	-3.0		-126.2	805	817	00 46 14
01 00 03	NGC6251	13 29 44	58.0	10.1	-3.0		-126.3	15	817	00 59 58
01 13 28	---	13 43 12	58.3	9.6	-2.8		-130.1	805	870	00 59 59
01 23 16	OQ208	13 53 01	65.1	172.3	-0.2		-5.2	251	870	01 23 11
01 27 56	---	13 58 01	65.2	175.0	-0.2		-3.4	280	888	01 23 12
01 37 35	NGC6251	14 07 23	58.9	8.5	-2.4		-137.0	232	888	01 37 30
01 50 40	---	14 20 50	59.2	7.9	-2.2		-140.9	785	939	01 37 31
01 51 00	NGC6251	14 20 50	59.2	7.9	-2.2		-140.9	14	939	01 50 55
02 04 25	---	14 34 17	59.4	7.2	-1.9		-144.8	805	991	01 50 56
02 04 45	NGC6251	14 34 37	59.5	7.2	-1.9		-144.9	15	991	02 04 40
02 18 10	---	14 48 04	59.7	6.5	-1.7		-148.9	805	1043	02 04 41
02 18 30	NGC6251	14 48 24	59.7	6.4	-1.7		-149.0	15	1043	02 18 25
02 31 55	---	15 01 51	59.9	5.7	-1.5		-152.9	805	1096	02 18 26
02 32 15	NGC6251	15 02 12	59.9	5.6	-1.5		-153.0	15	1096	02 32 10
02 45 40	---	15 15 39	60.1	4.9	-1.3		-157.1	805	1148	02 32 11
02 46 00	NGC6251	15 15 59	60.1	4.8	-1.3		-157.2	15	1148	02 45 55
02 59 25	---	15 29 26	60.3	4.0	-1.0		-161.2	805	1200	02 45 56

Schedule for TORUN (Code Tr)

Page 4

NGC6251 jet and the ambient profile

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
02 59 45	NGC6251	15 29 46	60.3	4.0	-1.0		-161.3	15	1200	02 59 40
03 13 10	---	15 43 13	60.4	3.1	-0.8		-165.4	805	1253	02 59 41
03 13 30	NGC6251	15 43 33	60.4	3.1	-0.8		-165.5	15	1253	03 13 25
03 26 55	---	15 57 01	60.5	2.3	-0.6		-169.6	805	1305	03 13 26
03 30 24	J2005+7752	16 00 30	57.4	19.9	-4.1		-102.5	158	1305	03 30 19
03 35 04	=2007+777	16 05 31	57.7	19.8	-4.0		-103.8	280	1323	03 30 20
03 38 38	NGC6251	16 08 45	60.5	1.5	-0.4		-173.2	163	1323	03 38 33
03 51 43	---	16 22 12	60.6	0.6	-0.1		-177.3	785	1374	03 38 34
03 52 03	NGC6251	16 22 12	60.6	0.6	-0.1		-177.3	14	1374	03 51 58
04 05 28	---	16 35 39	60.6	-0.3	0.1		178.6	805	1426	03 51 59
04 05 48	NGC6251	16 36 00	60.6	-0.3	0.1		178.5	15	1426	04 05 43
04 19 13	---	16 49 27	60.6	-1.2	0.3		174.4	805	1479	04 05 44
04 19 33	NGC6251	16 49 47	60.6	-1.2	0.3		174.3	15	1479	04 19 28
04 32 58	---	17 03 14	60.5	-2.1	0.5		170.2	805	1531	04 19 29
04 33 18	NGC6251	17 03 34	60.5	-2.1	0.5		170.1	15	1531	04 33 13
04 46 43	---	17 17 01	60.4	-3.0	0.8		166.0	805	1583	04 33 14
04 47 03	NGC6251	17 17 21	60.4	-3.0	0.8		165.9	15	1583	04 46 58
05 00 28	---	17 30 48	60.3	-3.9	1.0		161.8	805	1635	04 46 59
05 00 48	NGC6251	17 31 09	60.3	-3.9	1.0		161.7	15	1635	05 00 43
05 14 13	---	17 44 36	60.1	-4.7	1.2		157.7	805	1688	05 00 44
05 14 33	NGC6251	17 44 56	60.1	-4.8	1.2		157.6	15	1688	05 14 28
05 27 58	---	17 58 23	59.9	-5.6	1.5		153.5	805	1740	05 14 29
05 31 27	J2005+7752	18 01 52	62.9	13.6	-2.1		-137.7	155	1740	05 31 22
05 36 07	=2007+777	18 06 53	63.0	13.2	-2.0		-139.3	280	1758	05 31 23
05 39 40	NGC6251	18 10 08	59.8	-6.2	1.7		150.1	160	1758	05 39 35
05 52 45	---	18 23 35	59.5	-7.0	1.9		146.1	785	1809	05 39 36
05 53 05	NGC6251	18 23 35	59.5	-7.0	1.9		146.1	14	1809	05 53 00
06 06 30	---	18 37 02	59.3	-7.7	2.1		142.1	805	1861	05 53 01
06 06 50	NGC6251	18 37 22	59.3	-7.7	2.1		142.0	15	1861	06 06 45
06 20 15	---	18 50 49	59.0	-8.3	2.3		138.2	805	1914	06 06 46
06 20 35	NGC6251	18 51 09	59.0	-8.3	2.3		138.1	15	1914	06 20 30
06 34 00	---	19 04 36	58.7	-9.0	2.6		134.2	805	1966	06 20 31

Schedule for TORUN (Code Tr)

Page 5

NGC6251 jet and the ambient profile

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
06 34 20	NGC6251	19 04 56	58.7	-9.0	2.6		134.1	15	1966	06 34 15
06 47 45	---	19 18 24	58.3	-9.5	2.8		130.3	805	2018	06 34 16
06 48 05	NGC6251	19 18 44	58.3	-9.6	2.8		130.2	15	2018	06 48 00
07 01 30	---	19 32 11	58.0	-10.1	3.0		126.4	805	2071	06 48 01
07 01 50	NGC6251	19 32 31	58.0	-10.1	3.0		126.3	15	2071	07 01 45
07 15 15	---	19 45 58	57.6	-10.5	3.2		122.6	805	2123	07 01 46
07 15 35	NGC6251	19 46 18	57.6	-10.6	3.3		122.5	15	2123	07 15 30
07 29 00	---	19 59 45	57.2	-11.0	3.5		118.8	805	2175	07 15 31
07 32 29	J2005+7752	20 03 15	65.2	0.2	0.0		-179.4	165	2175	07 32 24
07 37 09	=2007+777	20 08 16	65.2	-0.4	0.1		178.8	280	2193	07 32 25
07 40 43	NGC6251	20 11 30	56.9	-11.3	3.7		115.6	169	2193	07 40 38
07 53 48	---	20 24 57	56.5	-11.6	3.9		112.0	785	2244	07 40 39
07 54 08	NGC6251	20 24 57	56.5	-11.6	3.9		112.0	14	2244	07 54 03
08 07 33	---	20 38 24	56.1	-11.9	4.1		108.5	805	2297	07 54 04
08 07 53	NGC6251	20 38 44	56.1	-11.9	4.1		108.4	15	2297	08 07 48
08 21 18	---	20 52 12	55.6	-12.1	4.4		104.9	805	2349	08 07 49
08 21 38	NGC6251	20 52 32	55.6	-12.1	4.4		104.8	15	2349	08 21 33
08 35 03	---	21 05 59	55.2	-12.3	4.6		101.3	805	2401	08 21 34
08 35 23	NGC6251	21 06 19	55.2	-12.3	4.6		101.2	15	2401	08 35 18
08 48 48	---	21 19 46	54.8	-12.4	4.8		97.8	805	2453	08 35 19
08 49 08	NGC6251	21 20 06	54.8	-12.4	4.8		97.7	15	2453	08 49 03
09 02 33	---	21 33 33	54.3	-12.5	5.0		94.3	805	2506	08 49 04
09 02 53	NGC6251	21 33 53	54.3	-12.5	5.0		94.2	15	2506	09 02 48
09 16 18	---	21 47 21	53.9	-12.5	5.3		90.8	805	2558	09 02 49
09 16 38	NGC6251	21 47 41	53.9	-12.5	5.3		90.8	15	2558	09 16 33
09 30 03	---	22 01 08	53.4	-12.5	5.5		87.4	805	2610	09 16 34
09 33 32	J2005+7752	22 04 37	63.0	-13.3	2.0		138.8	159	2610	09 33 27
09 38 12	=2007+777	22 09 38	62.8	-13.7	2.1		137.1	280	2629	09 33 28
09 41 45	NGC6251	22 12 52	53.0	-12.5	5.7		84.6	164	2629	09 41 40
09 54 50	---	22 26 20	52.6	-12.4	5.9		81.3	785	2680	09 41 41
09 55 10	NGC6251	22 26 20	52.6	-12.4	5.9		81.3	14	2680	09 55 05
10 08 35	---	22 39 47	52.2	-12.3	6.1		78.1	805	2732	09 55 06

Schedule for TORUN (Code Tr)

Page 6

NGC6251 jet and the ambient profile

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
10 08 55	NGC6251	22 40 07	52.2	-12.3	6.1		78.0	15	2732	10 08 50
10 22 20	---	22 53 34	51.7	-12.1	6.4		74.8	805	2784	10 08 51
10 22 40	NGC6251	22 53 54	51.7	-12.1	6.4		74.7	15	2784	10 22 35
10 36 05	---	23 07 21	51.3	-11.9	6.6		71.5	805	2836	10 22 36
10 36 25	NGC6251	23 07 41	51.3	-11.9	6.6		71.5	15	2836	10 36 20
10 49 50	---	23 21 09	50.9	-11.6	6.8		68.3	805	2889	10 36 21
10 50 10	NGC6251	23 21 29	50.9	-11.6	6.8		68.2	15	2889	10 50 05
11 03 35	---	23 34 56	50.5	-11.4	7.1		65.1	805	2941	10 50 06
11 03 55	NGC6251	23 35 16	50.5	-11.4	7.1		65.0	15	2941	11 03 50
11 17 20	---	23 48 43	50.1	-11.0	7.3		61.9	805	2993	11 03 51
11 17 40	NGC6251	23 49 03	50.1	-11.0	7.3		61.9	15	2993	11 17 35
11 31 05	---	00 02 30	49.7	-10.7	7.5		58.8	805	3045	11 17 36
11 34 34	J2005+7752	00 06 00	57.6	-19.8	4.0		103.4	165	3045	11 34 29
11 39 14	=2007+777	00 11 01	57.3	-19.9	4.1		102.0	280	3064	11 34 30
11 42 48	NGC6251	00 14 15	49.4	-10.4	7.7		56.1	170	3064	11 42 43
11 55 53	---	00 27 42	49.0	-10.0	7.9		53.1	785	3115	11 42 44
11 56 13	NGC6251	00 27 42	49.0	-10.0	7.9		53.1	14	3115	11 56 08
12 09 38	---	00 41 09	48.7	-9.6	8.2		50.0	805	3167	11 56 09
12 09 58	NGC6251	00 41 29	48.6	-9.6	8.2		50.0	15	3167	12 09 53
12 23 23	---	00 54 57	48.3	-9.1	8.4		47.0	805	3219	12 09 54
12 23 43	NGC6251	00 55 17	48.3	-9.1	8.4		46.9	15	3219	12 23 38
12 37 08	---	01 08 44	48.0	-8.7	8.6		43.9	805	3271	12 23 39
12 37 28	NGC6251	01 09 04	48.0	-8.7	8.6		43.8	15	3271	12 37 23
12 51 48	---	01 23 26	47.7	-8.1	8.9		40.6	860	3327	12 37 24
12 55 17	J2005+7752	01 26 56	53.4	-20.3	5.4		83.2	169	3327	12 55 12
12 59 57	=2007+777	01 31 56	53.1	-20.2	5.4		82.0	280	3346	12 55 13

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: et028-512

Matching groups in /aps3/sched10.2/catalogs/freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 512
Format: MKIV1:2 Bits per sample: 2 Sample rate: 16.000
Number of channels: 16 DBE type: Speedup factor: 1.00

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

Frequency Set: 7 Setup file default. Used pcal sets: 1

LO sum=	1634.49	1634.49	1634.49	1634.49	1650.49	1650.49	1650.49	1650.49
	1666.49	1666.49	1666.49	1666.49	1682.49	1682.49	1682.49	1682.49
BBC fr=	665.51	665.51	665.51	665.51	649.51	649.51	649.51	649.51
	633.51	633.51	633.51	633.51	617.51	617.51	617.51	617.51
Bandwd=	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

Matching frequency sets: 7

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- NGC6251 jet and the ambient profile
 Catalog positions marked with *.
 Precession of date coordinates is based on stop time of first scan.
 Names used in schedule marked with *.
 Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC).
 Scan hours are for recording scans only.
 Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J1407+2827	14 04 45.615156	* 14 07 00.394414	14 07 37.566935	0.24
* OQ208	28 41 29.23519	* 28 27 14.69022	28 23 14.82395	0.34
J1632+8232	16 37 56.926918	* 16 32 31.969887	16 31 07.093780	0.78
* NGC6251	82 38 18.49823	* 82 32 16.39987	82 30 20.42166	0.10
* J2005+7752	20 07 20.430170	* 20 05 30.998498	20 04 57.472864	0.48
2007+777	77 43 58.12300	* 77 52 43.24753	77 54 52.72002	0.10

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
OQ208	134.4
NGC6251	95.4
J2005+7752	85.9

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

n13l1tr

NETWORK MONITORING EXPERIMENT

PI: *Ciriaco Goddi*

Address: JIVE Postbus 2 7990 AA Dwingeloo The Netherlands
Phone: +31-521-596548
EMAIL: goddi@jive.nl
Fax:
Phone during observation: +31-521-596548

Notes: 18cm NME for session 1/2013
 512 Mbps, 2-bit sampling, 8 MHz filters
 Send the disk pack by express to JIVE
 DBBC testing data from On, Hh, Nt and Ir are expected.

COVER LETTER:

Dear EVN friends,

This is the schedule for the 18cm NME and ftp fringe-test on 11 March 2013, involving 14 antennas: Eb Wb Jb1 On25 Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh Ir. The NME uses a standard setup with 512 Mbps and consists of long integrations on strong calibrators like DA193 and 0528+134 as well as phase-referencing cycles with continuum sources as targets.

Three ftp tests are scheduled:

- (1) 14:09:00 UT (scan 2, 2 sec, DA193)
- (2) 15:05:00 UT (scan 15, 2 sec, 0528+134)
- (3) 15:57:00 UT (scan 30, 2 sec, 0528+134)

Please make sure that the autoftp is set up correctly.

Good luck with the session!

Ciriaco

Schedule for TORUN (Code Tr)

Page 2

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
Next scan frequencies: 1634.49 1634.49 1634.49 1634.49 1650.49 1650.49 1650.49 1650.49										
1666.49 1666.49 1666.49 1666.49 1682.49 1682.49 1682.49 1682.49										
Next BBC frequencies: 665.51 665.51 665.51 665.51 649.51 649.51 649.51 649.51										
633.51 633.51 633.51 633.51 617.51 617.51 617.51 617.51										
Next scan bandwidths: 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00										
14 00 00	DA193	02 31 49	53.3	90.1	-3.4		-51.4	0	0	14 00 00
14 04 00	---	02 35 50	53.9	90.9	-3.3		-51.4	240	15	14 00 01
14 06 00	DA193	02 37 50	54.2	91.3	-3.3		-51.4	114	15	14 06 00
14 10 00	---	02 41 51	54.8	92.1	-3.2		-51.4	240	31	14 06 01
14 10 30	DA193	02 42 21	54.8	92.2	-3.2		-51.4	24	31	14 10 30
14 17 00	---	02 48 52	55.8	93.6	-3.1		-51.3	390	56	14 10 31
14 18 00	DA193	02 49 52	56.0	93.8	-3.1		-51.3	54	56	14 18 00
14 20 00	---	02 51 53	56.3	94.2	-3.1		-51.2	120	64	14 18 01
14 20 30	DA193	02 52 23	56.3	94.3	-3.1		-51.2	24	64	14 20 30
14 22 30	---	02 54 23	56.6	94.8	-3.0		-51.2	120	72	14 20 31
14 23 00	J0552+3754	02 54 53	56.0	98.3	-3.0		-48.9	8	72	14 23 00
14 27 00	=0548+378	02 58 54	56.6	99.2	-2.9		-48.7	240	87	14 23 01
14 27 30	DA193	02 59 24	57.4	95.9	-3.0		-51.0	9	87	14 27 30
14 29 30	---	03 01 24	57.7	96.3	-2.9		-51.0	120	95	14 27 31
14 30 00	J0552+3754	03 01 54	57.0	99.9	-2.9		-48.6	8	95	14 30 00
14 34 00	=0548+378	03 05 55	57.6	100.9	-2.8		-48.4	240	110	14 30 01
14 34 30	DA193	03 06 25	58.4	97.5	-2.8		-50.8	8	110	14 34 30
14 36 30	---	03 08 25	58.7	98.0	-2.8		-50.7	120	118	14 34 31
14 37 00	J0552+3754	03 08 55	58.0	101.6	-2.7		-48.2	8	118	14 37 00
14 41 00	=0548+378	03 12 56	58.6	102.6	-2.7		-48.0	240	134	14 37 01
14 41 30	DA193	03 13 26	59.5	99.2	-2.7		-50.5	8	134	14 41 30
14 43 30	---	03 15 27	59.8	99.6	-2.7		-50.4	120	141	14 41 31
14 44 00	J0552+3754	03 15 57	59.1	103.4	-2.6		-47.8	8	141	14 44 00
14 48 00	=0548+378	03 19 57	59.7	104.4	-2.6		-47.5	240	157	14 44 01
14 48 30	DA193	03 20 27	60.5	100.9	-2.6		-50.2	8	157	14 48 30
14 50 30	---	03 22 28	60.8	101.4	-2.6		-50.0	120	165	14 48 31
14 51 00	J0552+3754	03 22 58	60.1	105.2	-2.5		-47.2	8	165	14 51 00
14 55 00	=0548+378	03 26 58	60.7	106.3	-2.4		-46.9	240	180	14 51 01

Schedule for TORUN (Code Tr)

Page 3

Network Monitoring Experiment

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
14 58 00	0528+134	03 29 59	43.7	137.1	-2.0		-24.9	102	180	14 58 00
15 02 00	---	03 34 00	44.1	138.3	-2.0		-24.2	240	195	14 58 01
15 04 00	0528+134	03 36 00	44.3	138.9	-1.9		-23.9	113	195	15 04 00
15 06 00	---	03 38 00	44.5	139.6	-1.9		-23.6	120	203	15 04 01
15 07 00	0528+134	03 39 00	44.6	139.9	-1.9		-23.5	54	203	15 07 00
15 09 00	---	03 41 01	44.8	140.5	-1.8		-23.1	120	211	15 07 01
15 09 30	0528+134	03 41 31	44.8	140.7	-1.8		-23.0	24	211	15 09 30
15 11 30	---	03 43 31	45.0	141.3	-1.8		-22.7	120	219	15 09 31
15 12 00	J0539+1433	03 44 01	45.1	138.1	-1.9		-24.5	9	219	15 12 00
15 16 00	=0536+145	03 48 02	45.5	139.4	-1.9		-23.8	240	234	15 12 01
15 16 30	0528+134	03 48 32	45.5	142.9	-1.7		-21.9	8	234	15 16 30
15 18 30	---	03 50 32	45.6	143.5	-1.7		-21.5	120	242	15 16 31
15 19 00	J0539+1433	03 51 02	45.8	140.3	-1.8		-23.3	9	242	15 19 00
15 23 00	=0536+145	03 55 03	46.2	141.6	-1.8		-22.7	240	257	15 19 01
15 23 30	0528+134	03 55 33	46.1	145.2	-1.6		-20.7	8	257	15 23 30
15 25 30	---	03 57 33	46.3	145.8	-1.6		-20.3	120	265	15 23 31
15 26 00	J0539+1433	03 58 04	46.5	142.6	-1.7		-22.1	9	265	15 26 00
15 30 00	=0536+145	04 02 04	46.8	143.9	-1.6		-21.4	240	281	15 26 01
15 30 30	0528+134	04 02 34	46.7	147.5	-1.5		-19.4	8	281	15 30 30
15 32 30	---	04 04 35	46.8	148.2	-1.5		-19.0	120	288	15 30 31
15 33 00	J0539+1433	04 05 05	47.1	144.9	-1.6		-20.9	9	288	15 33 00
15 37 00	=0536+145	04 09 05	47.5	146.2	-1.5		-20.2	240	304	15 33 01
15 37 30	0528+134	04 09 35	47.2	149.9	-1.4		-18.1	8	304	15 37 30
15 39 30	---	04 11 36	47.4	150.6	-1.3		-17.7	120	312	15 37 31
15 40 00	J0539+1433	04 12 06	47.7	147.3	-1.5		-19.6	9	312	15 40 00
15 44 00	=0536+145	04 16 06	48.0	148.6	-1.4		-18.8	240	327	15 40 01
15 44 30	0528+134	04 16 37	47.7	152.3	-1.3		-16.7	8	327	15 44 30
15 46 30	---	04 18 37	47.9	153.0	-1.2		-16.3	120	335	15 44 31
15 47 00	J0539+1433	04 19 07	48.3	149.7	-1.4		-18.3	9	335	15 47 00
15 51 00	=0536+145	04 23 08	48.5	151.0	-1.3		-17.5	240	350	15 47 01
15 53 00	0528+134	04 25 08	48.3	155.3	-1.1		-15.0	98	350	15 53 00
16 00 00	---	04 32 09	48.7	157.8	-1.0		-13.5	420	377	15 53 01

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
Setup file: sess113.L512

Matching groups in /aps3/sched10.2/catalogs/freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 512
Format: MKIV1:2 Bits per sample: 2 Sample rate: 16.000
Number of channels: 16 DBE type: Speedup factor: 1.00

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

Frequency Set: 7 Setup file default. Used pcal sets: 1

LO sum=	1634.49	1634.49	1634.49	1634.49	1650.49	1650.49	1650.49	1650.49
	1666.49	1666.49	1666.49	1666.49	1682.49	1682.49	1682.49	1682.49
BBC fr=	665.51	665.51	665.51	665.51	649.51	649.51	649.51	649.51
	633.51	633.51	633.51	633.51	617.51	617.51	617.51	617.51
Bandwd=	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

Matching frequency sets: 7

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- Network Monitoring Experiment

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0530+1331	05 28 06.759218	* 05 30 56.416749	05 31 42.227682	0.10
* 0528+134	13 29 42.28877	* 13 31 55.14944	13 32 20.17821	0.10
* J0539+1433	05 36 51.361474	* 05 39 42.365992	05 40 28.584312	0.10
0536+145	14 32 10.73036	* 14 33 45.56166	14 34 00.64915	0.10
* J0552+3754	05 48 52.231755	* 05 52 17.936920	05 53 13.622374	0.13
0548+378	37 53 44.15048	* 37 54 25.28236	37 54 33.67474	0.11
J0555+3948	05 52 01.407174	* 05 55 30.805616	05 56 27.509602	0.13
* DA193	39 48 21.94578	* 39 48 49.16493	39 48 54.38748	0.10

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0528+134	91.8
J0539+1433	94.0
J0552+3754	97.2
DA193	97.8

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

em100atr

EVN+MERLIN-18CM-J1130+0058

PI: Mar Mezcua

Address: C/ Via Lactea s/n, 38200 La Laguna, S/C de Tenerife, Spain
Phone: +34 922 605 751 EMAIL: mezcua@iac.es
Fax: +34 922 605 751 Phone during observation: +34 922 605 751

Observing mode: Continuum

Notes: fringe finder: J1058+0133
phase reference calibrator: J1133+0040

Schedule for TORUN (Code Tr) Page 2
eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Source Start / Stop Early Disk TPStart
Stop UT LST EL AZ HA UP ParA Dwell GBytes SYNC

--- Mon 11 Mar 2013 Day 70 ---

Table with columns: Next scan frequencies, Next BBC frequencies, Next scan bandwidths, and a main observation schedule table with columns: Start UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, TPStart, SYNC.

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
19 26 30	J1130+0058	07 59 13	22.0	120.6	-3.5		-31.1	16	170	19 26 30
19 29 30	---	08 02 14	22.4	121.3	-3.5		-30.9	180	194	19 26 31
19 30 00	J1133+0040	08 02 44	21.8	120.9	-3.5		-31.0	16	194	19 30 00
19 31 30	=1130+009	08 04 14	22.0	121.2	-3.5		-30.9	90	205	19 30 01
19 32 00	J1130+0058	08 04 44	22.7	121.9	-3.4		-30.7	16	205	19 32 00
19 35 00	---	08 07 44	23.1	122.6	-3.4		-30.4	180	228	19 32 01
19 35 30	J1133+0040	08 08 15	22.5	122.2	-3.4		-30.6	16	228	19 35 30
19 37 00	=1130+009	08 09 45	22.7	122.5	-3.4		-30.4	90	240	19 35 31
19 37 30	J1130+0058	08 10 15	23.4	123.2	-3.3		-30.2	16	240	19 37 30
19 40 30	---	08 13 15	23.8	123.9	-3.3		-29.9	180	263	19 37 31
19 41 00	J1133+0040	08 13 45	23.2	123.5	-3.3		-30.1	16	263	19 41 00
19 42 30	=1130+009	08 15 16	23.4	123.8	-3.3		-29.9	90	275	19 41 01
19 43 00	J1130+0058	08 15 46	24.1	124.5	-3.3		-29.7	16	275	19 43 00
19 46 00	---	08 18 46	24.4	125.2	-3.2		-29.4	180	298	19 43 01
19 46 30	J1133+0040	08 19 16	23.9	124.8	-3.2		-29.6	16	298	19 46 30
19 48 00	=1130+009	08 20 47	24.1	125.1	-3.2		-29.4	90	310	19 46 31
19 48 30	J1130+0058	08 21 17	24.7	125.8	-3.2		-29.1	16	310	19 48 30
19 51 30	---	08 24 17	25.1	126.5	-3.1		-28.9	180	333	19 48 31
19 52 00	J1133+0040	08 24 47	24.6	126.1	-3.2		-29.0	16	333	19 52 00
19 53 30	=1130+009	08 26 17	24.7	126.4	-3.1		-28.9	90	344	19 52 01
19 54 00	J1130+0058	08 26 48	25.4	127.1	-3.1		-28.6	16	344	19 54 00
19 57 00	---	08 29 48	25.8	127.9	-3.0		-28.3	180	368	19 54 01
19 57 30	J1133+0040	08 30 18	25.2	127.4	-3.1		-28.5	16	368	19 57 30
19 59 00	=1130+009	08 31 48	25.4	127.8	-3.0		-28.3	90	379	19 57 31
19 59 30	J1130+0058	08 32 18	26.1	128.5	-3.0		-28.0	16	379	19 59 30
20 02 30	---	08 35 19	26.4	129.2	-2.9		-27.7	180	403	19 59 31
20 03 00	J1133+0040	08 35 49	25.9	128.8	-3.0		-27.9	16	403	20 03 00
20 04 30	=1130+009	08 37 19	26.0	129.1	-2.9		-27.8	90	414	20 03 01
20 05 00	J1130+0058	08 37 49	26.7	129.8	-2.9		-27.5	16	414	20 05 00
20 08 00	---	08 40 50	27.0	130.6	-2.8		-27.1	180	437	20 05 01
20 08 30	J1133+0040	08 41 20	26.5	130.1	-2.9		-27.3	16	437	20 08 30
20 10 00	=1130+009	08 42 50	26.7	130.5	-2.9		-27.2	90	449	20 08 31

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
20 10 30	J1130+0058	08 43 20	27.3	131.2	-2.8		-26.9	16	449	20 10 30
20 13 30	---	08 46 21	27.7	132.0	-2.7		-26.5	180	472	20 10 31
20 14 00	J1133+0040	08 46 51	27.1	131.5	-2.8		-26.7	16	472	20 14 00
20 15 30	=1130+009	08 48 21	27.3	131.9	-2.8		-26.6	90	484	20 14 01
20 16 00	J1130+0058	08 48 51	27.9	132.6	-2.7		-26.2	16	484	20 16 00
20 19 00	---	08 51 52	28.3	133.4	-2.7		-25.9	180	507	20 16 01
20 19 30	J1133+0040	08 52 22	27.7	132.9	-2.7		-26.1	16	507	20 19 30
20 21 00	=1130+009	08 53 52	27.9	133.3	-2.7		-25.9	90	519	20 19 31
20 21 30	J1130+0058	08 54 22	28.6	134.0	-2.6		-25.6	16	519	20 21 30
20 24 30	---	08 57 23	28.9	134.8	-2.6		-25.2	180	542	20 21 31
20 25 00	J1133+0040	08 57 53	28.3	134.3	-2.6		-25.5	16	542	20 25 00
20 26 30	=1130+009	08 59 23	28.5	134.7	-2.6		-25.3	90	554	20 25 01
20 27 00	J1130+0058	08 59 53	29.1	135.4	-2.5		-24.9	16	554	20 27 00
20 30 00	---	09 02 53	29.5	136.2	-2.5		-24.5	180	577	20 27 01
20 30 30	J1133+0040	09 03 24	28.9	135.7	-2.5		-24.8	16	577	20 30 30
20 32 00	=1130+009	09 04 54	29.1	136.1	-2.5		-24.6	90	588	20 30 31
20 32 30	J1130+0058	09 05 24	29.7	136.9	-2.4		-24.2	16	588	20 32 30
20 35 30	---	09 08 24	30.0	137.7	-2.4		-23.9	180	612	20 32 31
20 36 00	J1133+0040	09 08 54	29.5	137.2	-2.4		-24.1	16	612	20 36 00
20 37 30	=1130+009	09 10 25	29.7	137.6	-2.4		-23.9	90	623	20 36 01
20 38 00	J1130+0058	09 10 55	30.3	138.3	-2.3		-23.5	16	623	20 38 00
20 41 00	---	09 13 55	30.6	139.1	-2.3		-23.1	180	646	20 38 01
20 41 30	J1133+0040	09 14 25	30.1	138.6	-2.3		-23.4	16	646	20 41 30
20 43 00	=1130+009	09 15 56	30.2	139.0	-2.3		-23.2	90	658	20 41 31
20 43 30	J1130+0058	09 16 26	30.8	139.8	-2.2		-22.8	16	658	20 43 30
20 46 30	---	09 19 26	31.1	140.6	-2.2		-22.4	180	681	20 43 31
20 47 00	J1133+0040	09 19 56	30.6	140.1	-2.2		-22.7	17	681	20 47 00
20 48 30	=1130+009	09 21 27	30.7	140.5	-2.2		-22.5	90	693	20 47 01
20 49 00	J1130+0058	09 21 57	31.3	141.3	-2.2		-22.1	16	693	20 49 00
20 52 00	---	09 24 57	31.6	142.1	-2.1		-21.6	180	716	20 49 01
20 52 30	J1133+0040	09 25 27	31.1	141.6	-2.1		-21.9	17	716	20 52 30
20 54 00	=1130+009	09 26 57	31.3	142.0	-2.1		-21.7	90	728	20 52 31

Schedule for TORUN (Code Tr)

Page 5

eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC	

---	Mon 11 Mar 2013	Day	70	---							
20 55 00	J1058+0133	09 27 58	35.0	151.7	-1.5		-16.5	26	728	20 55 00	
20 59 30	=1055+018	09 32 28	35.4	153.1	-1.4		-15.8	270	763	20 55 01	
21 00 30	J1133+0040	09 33 28	31.8	143.8	-2.0		-20.8	26	763	21 00 30	
21 02 00	=1130+009	09 34 59	32.0	144.2	-2.0		-20.6	90	774	21 00 31	
21 02 30	J1130+0058	09 35 29	32.6	145.0	-1.9		-20.1	16	774	21 02 30	
21 05 30	---	09 38 29	32.8	145.9	-1.9		-19.7	180	797	21 02 31	
21 06 00	J1133+0040	09 38 59	32.3	145.3	-1.9		-20.0	17	797	21 06 00	
21 07 30	=1130+009	09 40 30	32.5	145.7	-1.9		-19.8	90	809	21 06 01	
21 08 00	J1130+0058	09 41 00	33.0	146.6	-1.8		-19.3	17	809	21 08 00	
21 11 00	---	09 44 00	33.3	147.4	-1.8		-18.9	180	832	21 08 01	
21 11 30	J1133+0040	09 44 30	32.8	146.8	-1.8		-19.2	17	832	21 11 30	
21 13 00	=1130+009	09 46 01	32.9	147.3	-1.8		-19.0	90	844	21 11 31	
21 13 30	J1130+0058	09 46 31	33.5	148.1	-1.7		-18.5	17	844	21 13 30	
21 16 30	---	09 49 31	33.7	149.0	-1.7		-18.0	180	867	21 13 31	
21 17 00	J1133+0040	09 50 01	33.2	148.4	-1.7		-18.3	17	867	21 17 00	
21 18 30	=1130+009	09 51 31	33.4	148.8	-1.7		-18.1	90	879	21 17 01	
21 19 00	J1130+0058	09 52 02	33.9	149.7	-1.7		-17.6	17	879	21 19 00	
21 22 00	---	09 55 02	34.1	150.6	-1.6		-17.2	180	902	21 19 01	
21 22 30	J1133+0040	09 55 32	33.7	150.0	-1.6		-17.5	17	902	21 22 30	
21 24 00	=1130+009	09 57 02	33.8	150.4	-1.6		-17.3	90	913	21 22 31	
21 24 30	J1130+0058	09 57 32	34.3	151.3	-1.6		-16.8	17	913	21 24 30	
21 27 30	---	10 00 33	34.5	152.2	-1.5		-16.3	180	937	21 24 31	
21 28 00	J1133+0040	10 01 03	34.1	151.5	-1.5		-16.6	17	937	21 28 00	
21 29 30	=1130+009	10 02 33	34.2	152.0	-1.5		-16.4	90	948	21 28 01	
21 30 00	J1130+0058	10 03 03	34.7	152.9	-1.5		-15.9	17	948	21 30 00	
21 33 00	---	10 06 04	34.9	153.8	-1.4		-15.4	180	972	21 30 01	
21 33 30	J1133+0040	10 06 34	34.4	153.1	-1.5		-15.7	17	972	21 33 30	
21 35 00	=1130+009	10 08 04	34.6	153.6	-1.4		-15.5	90	983	21 33 31	
21 36 00	J1058+0133	10 09 04	37.4	164.2	-0.8		-9.4	24	983	21 36 00	
21 40 30	=1055+018	10 13 35	37.5	165.6	-0.8		-8.6	270	1018	21 36 01	
21 41 30	J1130+0058	10 14 35	35.4	156.3	-1.3		-14.0	26	1018	21 41 30	
21 44 30	---	10 17 36	35.6	157.2	-1.2		-13.5	180	1041	21 41 31	
21 45 00	J1133+0040	10 18 06	35.2	156.5	-1.3		-13.8	17	1041	21 45 00	
21 46 30	=1130+009	10 19 36	35.3	157.0	-1.2		-13.6	90	1053	21 45 01	

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC	

---	Mon 11 Mar 2013	Day	70	---							
21 47 00	J1130+0058	10 20 06	35.8	157.9	-1.2		-13.0	17	1053	21 47 00	
21 50 00	---	10 23 07	35.9	158.9	-1.1		-12.5	180	1076	21 47 01	
21 50 30	J1133+0040	10 23 37	35.5	158.2	-1.2		-12.9	17	1076	21 50 30	
21 52 00	=1130+009	10 25 07	35.6	158.6	-1.1		-12.6	90	1088	21 50 31	
21 53 00	J1130+0058	10 26 07	36.1	159.8	-1.1		-12.0	47	1088	21 53 00	
21 56 00	---	10 29 08	36.2	160.7	-1.0		-11.5	180	1111	21 53 01	
21 56 30	J1133+0040	10 29 38	35.8	160.0	-1.1		-11.9	17	1111	21 56 30	
21 58 00	=1130+009	10 31 08	35.9	160.4	-1.0		-11.6	90	1123	21 56 31	
21 58 30	J1130+0058	10 31 38	36.4	161.4	-1.0		-11.0	17	1123	21 58 30	
22 01 30	---	10 34 38	36.5	162.4	-0.9		-10.5	180	1146	21 58 31	
22 02 00	J1133+0040	10 35 09	36.1	161.7	-1.0		-10.9	17	1146	22 02 00	
22 03 30	=1130+009	10 36 39	36.2	162.1	-1.0		-10.6	90	1157	22 02 01	
22 04 30	J1130+0058	10 37 39	36.6	163.3	-0.9		-10.0	47	1157	22 04 30	
22 07 30	---	10 40 39	36.8	164.2	-0.8		-9.4	180	1181	22 04 31	
22 08 00	J1133+0040	10 41 10	36.4	163.5	-0.9		-9.8	17	1181	22 08 00	
22 09 30	=1130+009	10 42 40	36.4	164.0	-0.9		-9.6	90	1192	22 08 01	
22 10 00	J1130+0058	10 43 10	36.9	165.0	-0.8		-9.0	17	1192	22 10 00	
22 13 00	---	10 46 10	37.0	165.9	-0.7		-8.4	180	1215	22 10 01	
22 13 30	J1133+0040	10 46 40	36.6	165.2	-0.8		-8.8	17	1215	22 13 30	
22 15 00	=1130+009	10 48 11	36.6	165.7	-0.8		-8.6	90	1227	22 13 31	
22 15 30	J1130+0058	10 48 41	37.1	166.7	-0.7		-8.0	16	1227	22 15 30	
22 18 30	---	10 51 41	37.2	167.6	-0.7		-7.4	180	1250	22 15 31	
22 19 00	J1133+0040	10 52 11	36.8	166.9	-0.7		-7.8	17	1250	22 19 00	
22 20 30	=1130+009	10 53 42	36.8	167.4	-0.7		-7.6	90	1262	22 19 01	
22 21 00	J1130+0058	10 54 12	37.2	168.4	-0.6		-6.9	16	1262	22 21 00	
22 24 00	---	10 57 12	37.3	169.3	-0.6		-6.4	180	1285	22 21 01	
22 24 30	J1133+0040	10 57 42	37.0	168.6	-0.6		-6.8	17	1285	22 24 30	
22 26 00	=1130+009	10 59 13	37.0	169.1	-0.6		-6.5	90	1297	22 24 31	
22 26 30	J1130+0058	10 59 43	37.4	170.1	-0.5		-5.9	16	1297	22 26 30	
22 29 30	---	11 02 43	37.5	171.1	-0.5		-5.4	180	1320	22 26 31	
22 30 00	J1133+0040	11 03 13	37.1	170.3	-0.5		-5.8	17	1320	22 30 00	
22 31 30	=1130+009	11 04 43	37.2	170.8	-0.5		-5.5	90	1332	22 30 01	
22 32 00	J1130+0058	11 05 14	37.5	171.8	-0.4		-4.9	16	1332	22 32 00	
22 35 00	---	11 08 14	37.6	172.8	-0.4		-4.3	180	1355	22 32 01	

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
22 35 30	J1133+0040	11 08 44	37.2	172.0	-0.4		-4.8	17	1355	22 35 30
22 37 00	=1130+009	11 10 14	37.3	172.5	-0.4		-4.5	90	1366	22 35 31
22 37 30	J1130+0058	11 10 44	37.6	173.6	-0.3		-3.9	16	1366	22 37 30
22 40 30	---	11 13 45	37.7	174.5	-0.3		-3.3	180	1390	22 37 31
22 41 00	J1133+0040	11 14 15	37.3	173.8	-0.3		-3.7	17	1390	22 41 00
22 42 30	=1130+009	11 15 45	37.4	174.2	-0.3		-3.5	90	1401	22 41 01
22 43 00	J1130+0058	11 16 15	37.7	175.3	-0.2		-2.8	16	1401	22 43 00
22 46 00	---	11 19 16	37.7	176.3	-0.2		-2.2	180	1424	22 43 01
22 46 30	J1133+0040	11 19 46	37.4	175.5	-0.2		-2.7	17	1424	22 46 30
22 48 00	=1130+009	11 21 16	37.4	176.0	-0.2		-2.4	90	1436	22 46 31
22 48 30	J1130+0058	11 21 46	37.8	177.1	-0.2		-1.8	16	1436	22 48 30
22 51 30	---	11 24 47	37.8	178.0	-0.1		-1.2	180	1459	22 48 31
22 52 00	J1133+0040	11 25 17	37.5	177.2	-0.1		-1.7	17	1459	22 52 00
22 53 30	=1130+009	11 26 47	37.5	177.7	-0.1		-1.4	90	1471	22 52 01
22 54 00	J1130+0058	11 27 17	37.8	178.8	-0.1		-0.7	16	1471	22 54 00
22 57 00	---	11 30 18	37.8	179.8	-0.0		-0.1	180	1494	22 54 01
22 57 30	J1133+0040	11 30 48	37.5	179.0	-0.1		-0.6	17	1494	22 57 30
22 59 00	=1130+009	11 32 18	37.5	179.4	-0.0		-0.3	90	1506	22 57 31
22 59 30	J1130+0058	11 32 48	37.8	180.5	0.0		0.3	16	1506	22 59 30
23 02 30	---	11 35 49	37.8	181.5	0.1		0.9	180	1529	22 59 31
23 03 00	J1133+0040	11 36 19	37.5	180.7	0.0		0.4	17	1529	23 03 00
23 04 30	=1130+009	11 37 49	37.5	181.2	0.1		0.7	90	1541	23 03 01
23 05 00	J1130+0058	11 38 19	37.8	182.3	0.1		1.4	16	1541	23 05 00
23 08 00	---	11 41 19	37.8	183.2	0.2		1.9	180	1564	23 05 01
23 08 30	J1133+0040	11 41 50	37.5	182.5	0.1		1.5	16	1564	23 08 30
23 10 00	=1130+009	11 43 20	37.5	182.9	0.2		1.8	90	1575	23 08 31
23 10 30	J1130+0058	11 43 50	37.7	184.0	0.2		2.4	16	1575	23 10 30
23 13 30	---	11 46 50	37.7	185.0	0.3		3.0	180	1599	23 10 31
23 14 00	J1133+0040	11 47 20	37.4	184.2	0.2		2.5	16	1599	23 14 00
23 15 30	=1130+009	11 48 51	37.4	184.7	0.2		2.8	90	1610	23 14 01
23 16 00	J1130+0058	11 49 21	37.7	185.8	0.3		3.5	16	1610	23 16 00
23 19 00	---	11 52 21	37.6	186.7	0.4		4.0	180	1633	23 16 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
23 19 30	J1133+0040	11 52 51	37.4	185.9	0.3		3.6	16	1633	23 19 30
23 21 00	=1130+009	11 54 22	37.3	186.4	0.3		3.8	90	1645	23 19 31
23 21 30	J1130+0058	11 54 52	37.6	187.5	0.4		4.5	16	1645	23 21 30
23 24 30	---	11 57 52	37.5	188.5	0.4		5.1	180	1668	23 21 31
23 25 00	J1133+0040	11 58 22	37.3	187.6	0.4		4.6	16	1668	23 25 00
23 26 30	=1130+009	11 59 52	37.2	188.1	0.4		4.9	90	1680	23 25 01
23 27 00	J1130+0058	12 00 23	37.4	189.2	0.5		5.5	16	1680	23 27 00
23 30 00	---	12 03 23	37.4	190.2	0.5		6.1	180	1703	23 27 01
23 30 30	J1133+0040	12 03 53	37.1	189.4	0.5		5.6	16	1703	23 30 30
23 32 00	=1130+009	12 05 23	37.1	189.8	0.5		5.9	90	1715	23 30 31
23 32 30	J1130+0058	12 05 53	37.3	191.0	0.6		6.6	16	1715	23 32 30
23 35 30	---	12 08 54	37.2	191.9	0.6		7.1	180	1738	23 32 31
23 36 00	J1133+0040	12 09 24	37.0	191.1	0.6		6.6	16	1738	23 36 00
23 37 30	=1130+009	12 10 54	37.0	191.6	0.6		6.9	90	1750	23 36 01
23 38 00	J1130+0058	12 11 24	37.1	192.7	0.7		7.6	16	1750	23 38 00
23 41 00	---	12 14 25	37.0	193.6	0.7		8.1	180	1773	23 38 01
23 41 30	J1133+0040	12 14 55	36.8	192.8	0.7		7.6	16	1773	23 41 30
23 43 00	=1130+009	12 16 25	36.8	193.3	0.7		7.9	90	1784	23 41 31
23 43 30	J1130+0058	12 16 55	36.9	194.4	0.8		8.6	16	1784	23 43 30
23 46 30	---	12 19 56	36.8	195.3	0.8		9.1	180	1808	23 43 31
23 47 00	J1133+0040	12 20 26	36.6	194.5	0.8		8.7	16	1808	23 47 00
23 48 30	=1130+009	12 21 56	36.6	195.0	0.8		8.9	90	1819	23 47 01
23 49 00	J1130+0058	12 22 26	36.7	196.1	0.9		9.6	16	1819	23 49 00
23 52 00	---	12 25 27	36.6	197.0	0.9		10.1	180	1842	23 49 01
23 52 30	J1133+0040	12 25 57	36.4	196.2	0.9		9.6	16	1842	23 52 30
23 54 00	=1130+009	12 27 27	36.3	196.7	0.9		9.9	90	1854	23 52 31
23 54 30	J1130+0058	12 27 57	36.5	197.8	0.9		10.6	16	1854	23 54 30
23 57 30	---	12 30 58	36.3	198.7	1.0		11.1	180	1877	23 54 31
23 58 00	J1133+0040	12 31 28	36.2	197.9	1.0		10.6	16	1877	23 58 00
23 59 30	=1130+009	12 32 58	36.1	198.3	1.0		10.9	90	1889	23 58 01
--- Tue 12 Mar 2013 Day 71 ---										
00 00 00	J1130+0058	12 33 28	36.2	199.5	1.0		11.5	16	1889	00 00 00
00 03 00	---	12 36 28	36.1	200.4	1.1		12.1	180	1912	00 00 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 11 Mar 2013 Day 70 ---										
00 03 30	J1133+0040	12 36 59	35.9	199.6	1.0		11.6	16	1912	00 03 30
00 05 00	=1130+009	12 38 29	35.8	200.0	1.1		11.9	90	1924	00 03 31
00 05 30	J1130+0058	12 38 59	35.9	201.1	1.1		12.5	16	1924	00 05 30
00 08 30	---	12 41 59	35.8	202.0	1.2		13.0	180	1947	00 05 31
00 09 00	J1133+0040	12 42 29	35.6	201.2	1.1		12.6	16	1947	00 09 00
00 10 30	=1130+009	12 44 00	35.5	201.7	1.2		12.8	90	1959	00 09 01
00 11 00	J1130+0058	12 44 30	35.6	202.8	1.2		13.5	16	1959	00 11 00
00 14 00	---	12 47 30	35.4	203.7	1.3		14.0	180	1982	00 11 01
00 14 30	J1133+0040	12 48 00	35.3	202.9	1.2		13.5	16	1982	00 14 30
00 16 00	=1130+009	12 49 31	35.2	203.3	1.3		13.7	90	1993	00 14 31
00 16 30	J1130+0058	12 50 01	35.3	204.4	1.3		14.4	16	1993	00 16 30
00 19 30	---	12 53 01	35.1	205.3	1.4		14.9	180	2017	00 16 31
00 20 00	J1133+0040	12 53 31	35.0	204.5	1.3		14.4	16	2017	00 20 00
00 21 30	=1130+009	12 55 01	34.9	204.9	1.3		14.7	90	2028	00 20 01
00 22 00	J1130+0058	12 55 32	34.9	206.1	1.4		15.3	16	2028	00 22 00
00 25 00	---	12 58 32	34.7	206.9	1.5		15.8	180	2051	00 22 01
00 25 30	J1133+0040	12 59 02	34.6	206.1	1.4		15.3	16	2051	00 25 30
00 27 00	=1130+009	13 00 32	34.5	206.6	1.4		15.6	90	2063	00 25 31
00 27 30	J1130+0058	13 01 02	34.6	207.7	1.5		16.2	16	2063	00 27 30
00 30 30	---	13 04 03	34.3	208.6	1.5		16.7	180	2086	00 27 31
00 31 00	J1133+0040	13 04 33	34.2	207.7	1.5		16.2	16	2086	00 31 00
00 32 30	=1130+009	13 06 03	34.1	208.2	1.5		16.5	90	2098	00 31 01
00 33 00	J1130+0058	13 06 33	34.2	209.3	1.6		17.1	16	2098	00 33 00
00 36 00	---	13 09 34	33.9	210.1	1.6		17.6	180	2121	00 33 01
00 36 30	J1133+0040	13 10 04	33.8	209.3	1.6		17.1	16	2121	00 36 30
00 38 00	=1130+009	13 11 34	33.7	209.8	1.6		17.3	90	2133	00 36 31
00 38 30	J1130+0058	13 12 04	33.7	210.9	1.7		17.9	16	2133	00 38 30
00 41 30	---	13 15 05	33.5	211.7	1.7		18.4	180	2156	00 38 31
00 42 00	J1133+0040	13 15 35	33.4	210.9	1.7		18.0	16	2156	00 42 00
00 43 30	=1130+009	13 17 05	33.3	211.3	1.7		18.2	90	2168	00 42 01

Schedule for TORUN (Code Tr) Page 10
 eEVN+MERLIN-18CM-J1130+0058

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
00 44 00	J1130+0058	13 17 35	33.3	212.4	1.8		18.8	16	2168	00 44 00
00 47 00	---	13 20 36	33.1	213.3	1.8		19.2	180	2191	00 44 01
00 47 30	J1133+0040	13 21 06	33.0	212.5	1.8		18.8	16	2191	00 47 30
00 49 00	=1130+009	13 22 36	32.9	212.9	1.8		19.0	90	2202	00 47 31
00 49 30	J1130+0058	13 23 06	32.9	214.0	1.9		19.6	16	2202	00 49 30
00 52 30	---	13 26 07	32.6	214.8	1.9		20.1	180	2226	00 49 31
00 53 00	J1133+0040	13 26 37	32.5	214.0	1.9		19.6	16	2226	00 53 00
00 54 30	=1130+009	13 28 07	32.4	214.4	1.9		19.9	90	2237	00 53 01
00 55 00	J1130+0058	13 28 37	32.4	215.5	2.0		20.4	16	2237	00 55 00
00 58 00	---	13 31 37	32.1	216.4	2.0		20.9	180	2261	00 55 01
00 58 30	J1133+0040	13 32 08	32.1	215.6	2.0		20.4	16	2261	00 58 30
01 00 00	=1130+009	13 33 38	31.9	216.0	2.0		20.7	90	2272	00 58 31

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.L1024

Matching groups in /homes/vlbsoft/sched10.2/catalogs/freq.dat:
 tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 4 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 7 Setup file default. Used pcal sets: 1
LO sum= 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49
        1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49
BBC fr= 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51
        625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51
Bandwd= 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
        16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
Matching frequency sets: 7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

```

SOURCES USED IN RECORDING SCANS -- eEVN+MERLIN-18CM-J1130+0058
Catalog positions marked with *. Precession of date coordinates
is based on stop time of first scan. Names used in schedule marked with *.
Short names used in VLA and SNAP files marked with +.
Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
No adjustments are made for rates (DRA, DDEC). Scan hours are for recording
scans only. Baseline hours are only counted for scans above horizon at both ends.

```

Source	Source position (RA/Dec) (B1950)	Source position (RA/Dec) (J2000)	(Date)	Error (mas)
* J1130+0058	11 27 47.490914	* 11 30 21.423000	11 31 04.140596	0.00
	01 14 56.03512	* 00 58 23.04998	00 53 46.51494	0.00
* J1058+0133	10 55 55.313729	* 10 58 29.605207	10 59 12.406276	0.10
1055+018	01 50 03.53709	* 01 33 58.82359	01 29 28.98260	0.10
* J1133+0040	11 30 46.181479	* 11 33 20.055793	11 34 02.759786	0.10
1130+009	00 57 27.49165	* 00 40 52.83713	00 36 15.94773	0.11

The solar corona can cause unstable phases for sources too close to the Sun. SCHED provides warnings at individual scans for distances less than 10 degrees. The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
J1130+0058	177.5
J1058+0133	172.4
J1133+0040	176.9

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg

em100btr

E EVN+MERLIN-18CM-J0923+4233

PI: Mar Mezcua

Address: C/ Via Lactea s/n, 38200 La Laguna, S/C de Tenerife, Spain
Phone: +34 922 605 751 EMAIL: mezcua@iac.es
Fax: +34 922 605 751 Phone during observation: +34 922 605 751

Observing mode: Continuum

Notes: Fringe finder: 4C39.25 (J0927+3902)
Phase reference calibrator: J0920+4441

Schedule for TORUN (Code Tr) Page 2
eEVN+MERLIN-18CM-J0923+4233

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Table with columns: Start UT, Source, Start / Stop (LST, EL, AZ, HA, UP), ParA, Early Dwell, Disk GBytes, TPStart SYNC. Includes scan frequencies, BBC frequencies, and bandwidths for various observation times.

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0923+4233

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
13 56 35	J0920+4441	02 32 20	28.0	52.0	-6.8		-41.6	13	165	13 56 35
13 59 30	=0917+449	02 35 16	28.4	52.4	-6.8		-42.0	175	188	13 56 36
14 00 05	J0924+4233	02 35 51	26.4	53.5	-6.8		-40.9	14	188	14 00 05
14 01 30	---	02 37 16	26.6	53.7	-6.8		-41.0	85	199	14 00 06
14 02 05	J0920+4441	02 37 51	28.7	52.8	-6.7		-42.2	13	199	14 02 05
14 05 00	=0917+449	02 40 47	29.1	53.2	-6.7		-42.5	175	221	14 02 06
14 05 35	J0924+4233	02 41 22	27.1	54.3	-6.7		-41.4	14	221	14 05 35
14 07 00	---	02 42 47	27.3	54.6	-6.7		-41.6	85	232	14 05 36
14 07 35	J0920+4441	02 43 22	29.4	53.6	-6.6		-42.8	13	232	14 07 35
14 10 30	=0917+449	02 46 18	29.7	54.0	-6.6		-43.1	175	255	14 07 36
14 11 05	J0924+4233	02 46 53	27.8	55.2	-6.6		-42.0	14	255	14 11 05
14 12 30	---	02 48 18	27.9	55.4	-6.6		-42.1	85	266	14 11 06
14 13 05	J0920+4441	02 48 53	30.0	54.4	-6.5		-43.4	13	266	14 13 05
14 16 00	=0917+449	02 51 49	30.4	54.9	-6.5		-43.6	175	288	14 13 06
14 16 35	J0924+4233	02 52 24	28.4	56.1	-6.6		-42.5	14	288	14 16 35
14 18 00	---	02 53 49	28.6	56.3	-6.5		-42.6	85	299	14 16 36
14 18 35	J0920+4441	02 54 24	30.7	55.3	-6.5		-43.9	13	299	14 18 35
14 21 30	=0917+449	02 57 19	31.1	55.7	-6.4		-44.2	175	322	14 18 36
14 22 05	J0924+4233	02 57 55	29.1	56.9	-6.5		-43.0	14	322	14 22 05
14 23 30	---	02 59 20	29.3	57.1	-6.4		-43.2	85	333	14 22 06
14 24 05	J0920+4441	02 59 55	31.4	56.1	-6.4		-44.4	13	333	14 24 05
14 27 00	=0917+449	03 02 50	31.8	56.5	-6.3		-44.7	175	355	14 24 06
14 27 35	J0924+4233	03 03 25	29.8	57.8	-6.4		-43.5	14	355	14 27 35
14 29 00	---	03 04 51	30.0	58.0	-6.3		-43.7	85	366	14 27 36
14 29 35	J0920+4441	03 05 26	32.1	56.9	-6.3		-45.0	13	366	14 29 35
14 32 30	=0917+449	03 08 21	32.5	57.3	-6.2		-45.3	175	389	14 29 36
14 33 05	J0924+4233	03 08 56	30.5	58.6	-6.3		-44.0	14	389	14 33 05
14 34 30	---	03 10 22	30.7	58.8	-6.3		-44.2	85	400	14 33 06
14 35 05	J0920+4441	03 10 57	32.8	57.7	-6.2		-45.5	14	400	14 35 05
14 38 00	=0917+449	03 13 52	33.2	58.1	-6.1		-45.8	175	423	14 35 06
14 38 35	J0924+4233	03 14 27	31.2	59.5	-6.2		-44.5	14	423	14 38 35
14 40 00	---	03 15 53	31.4	59.7	-6.2		-44.7	85	434	14 38 36

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0923+4233

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
14 40 35	J0920+4441	03 16 28	33.5	58.5	-6.1		-46.0	14	434	14 40 35
14 43 30	=0917+449	03 19 23	33.9	59.0	-6.0		-46.3	175	456	14 40 36
14 44 05	J0924+4233	03 19 58	32.0	60.3	-6.1		-45.0	14	456	14 44 05
14 45 30	---	03 21 23	32.1	60.5	-6.1		-45.2	85	467	14 44 06
14 46 05	J0920+4441	03 21 59	34.2	59.3	-6.0		-46.6	14	467	14 46 05
14 49 00	=0917+449	03 24 54	34.6	59.8	-5.9		-46.8	175	490	14 46 06
14 49 35	J0924+4233	03 25 29	32.7	61.1	-6.0		-45.5	14	490	14 49 35
14 51 00	---	03 26 54	32.9	61.4	-6.0		-45.6	85	501	14 49 36
14 51 35	J0920+4441	03 27 29	34.9	60.2	-5.9		-47.1	14	501	14 51 35
14 54 30	=0917+449	03 30 25	35.3	60.6	-5.9		-47.3	175	523	14 51 36
14 55 05	J0924+4233	03 31 00	33.4	62.0	-5.9		-46.0	14	523	14 55 05
14 56 30	---	03 32 25	33.6	62.2	-5.9		-46.1	85	534	14 55 06
14 57 05	J0920+4441	03 33 00	35.6	61.0	-5.8		-47.6	14	534	14 57 05
15 00 00	=0917+449	03 35 56	36.0	61.4	-5.8		-47.8	175	557	14 57 06
15 00 35	J0924+4233	03 36 31	34.1	62.8	-5.8		-46.4	14	557	15 00 35
15 02 00	---	03 37 56	34.3	63.1	-5.8		-46.6	85	568	15 00 36
15 02 35	J0920+4441	03 38 31	36.4	61.8	-5.7		-48.0	14	568	15 02 35
15 05 30	=0917+449	03 41 27	36.7	62.2	-5.7		-48.3	175	590	15 02 36
15 06 05	J0924+4233	03 42 02	34.9	63.7	-5.7		-46.9	14	590	15 06 05
15 07 30	---	03 43 27	35.1	63.9	-5.7		-47.0	85	601	15 06 06
15 08 05	J0920+4441	03 44 02	37.1	62.6	-5.6		-48.5	14	601	15 08 05
15 11 00	=0917+449	03 46 58	37.5	63.0	-5.6		-48.8	175	624	15 08 06
15 11 35	J0924+4233	03 47 33	35.6	64.5	-5.6		-47.3	14	624	15 11 35
15 13 00	---	03 48 58	35.8	64.8	-5.6		-47.5	85	635	15 11 36
15 13 35	J0920+4441	03 49 33	37.8	63.4	-5.5		-49.0	14	635	15 13 35
15 16 30	=0917+449	03 52 29	38.2	63.9	-5.5		-49.3	175	657	15 13 36
15 17 05	J0924+4233	03 53 04	36.4	65.4	-5.5		-47.8	14	657	15 17 05
15 18 30	---	03 54 29	36.6	65.6	-5.5		-47.9	85	668	15 17 06
15 19 05	J0920+4441	03 55 04	38.6	64.2	-5.4		-49.5	14	668	15 19 05
15 22 00	=0917+449	03 57 59	39.0	64.7	-5.4		-49.7	175	691	15 19 06
15 22 35	J0924+4233	03 58 35	37.1	66.2	-5.5		-48.2	14	691	15 22 35
15 24 00	---	04 00 00	37.3	66.4	-5.4		-48.3	85	702	15 22 36

Schedule for TORUN (Code Tr)

Page 5

eEVN+MERLIN-18CM-J0923+4233

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
15 24 35	J0920+4441	04 00 35	39.3	65.1	-5.4		-49.9	14	702	15 24 35
15 27 30	=0917+449	04 03 30	39.7	65.5	-5.3		-50.2	175	724	15 24 36
15 28 05	J0924+4233	04 04 05	37.9	67.1	-5.4		-48.6	14	724	15 28 05
15 29 30	---	04 05 31	38.1	67.3	-5.3		-48.7	85	735	15 28 06
15 30 05	J0920+4441	04 06 06	40.1	65.9	-5.3		-50.4	14	735	15 30 05
15 33 00	=0917+449	04 09 01	40.5	66.3	-5.2		-50.6	175	758	15 30 06
15 33 35	J0924+4233	04 09 36	38.7	67.9	-5.3		-49.0	14	758	15 33 35
15 35 00	---	04 11 02	38.9	68.2	-5.2		-49.1	85	769	15 33 36
15 35 35	J0920+4441	04 11 37	40.8	66.7	-5.2		-50.8	14	769	15 35 35
15 38 30	=0917+449	04 14 32	41.2	67.1	-5.1		-51.0	175	792	15 35 36
15 39 05	J0924+4233	04 15 07	39.4	68.8	-5.2		-49.4	14	792	15 39 05
15 40 30	---	04 16 32	39.6	69.0	-5.2		-49.5	85	803	15 39 06
15 41 05	J0920+4441	04 17 08	41.6	67.5	-5.1		-51.2	14	803	15 41 05
15 44 00	=0917+449	04 20 03	42.0	67.9	-5.0		-51.5	175	825	15 41 06
15 44 35	J0924+4233	04 20 38	40.2	69.6	-5.1		-49.8	14	825	15 44 35
15 46 00	---	04 22 03	40.4	69.9	-5.1		-49.9	85	836	15 44 36
15 47 00	J0927+3902	04 23 04	37.9	73.1	-5.1		-47.6	36	836	15 47 00
15 52 30	=0923+392	04 28 34	38.7	74.0	-5.0		-47.9	330	879	15 47 01
15 53 30	J0924+4233	04 29 35	41.5	71.0	-4.9		-50.4	36	879	15 53 30
15 54 55	---	04 31 00	41.7	71.3	-4.9		-50.5	85	890	15 53 31
15 55 30	J0920+4441	04 31 35	43.6	69.7	-4.8		-52.3	14	890	15 55 30
15 58 25	=0917+449	04 34 30	44.0	70.1	-4.8		-52.5	175	912	15 55 31
15 59 00	J0924+4233	04 35 06	42.2	71.9	-4.8		-50.7	14	912	15 59 00
16 00 25	---	04 36 31	42.4	72.1	-4.8		-50.8	85	923	15 59 01
16 01 00	J0920+4441	04 37 06	44.4	70.5	-4.7		-52.7	14	923	16 01 00
16 03 55	=0917+449	04 40 01	44.8	70.9	-4.7		-52.9	175	946	16 01 01
16 04 30	J0924+4233	04 40 36	43.0	72.8	-4.8		-51.1	14	946	16 04 30
16 05 55	---	04 42 02	43.2	73.0	-4.7		-51.2	85	957	16 04 31
16 06 30	J0920+4441	04 42 37	45.2	71.3	-4.7		-53.1	14	957	16 06 30
16 09 25	=0917+449	04 45 32	45.6	71.8	-4.6		-53.3	175	979	16 06 31
16 10 00	J0924+4233	04 46 07	43.8	73.7	-4.7		-51.4	14	979	16 10 00
16 11 25	---	04 47 33	44.0	73.9	-4.6		-51.5	85	990	16 10 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0923+4233

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
16 12 00	J0920+4441	04 48 08	46.0	72.2	-4.6		-53.5	14	990	16 12 00
16 14 55	=0917+449	04 51 03	46.4	72.6	-4.5		-53.6	175	1013	16 12 01
16 15 30	J0924+4233	04 51 38	44.6	74.5	-4.6		-51.7	14	1013	16 15 30
16 16 55	---	04 53 03	44.8	74.8	-4.5		-51.8	85	1024	16 15 31
16 17 30	J0920+4441	04 53 39	46.8	73.0	-4.5		-53.8	14	1024	16 17 30
16 20 25	=0917+449	04 56 34	47.2	73.5	-4.4		-54.0	175	1046	16 17 31
16 21 00	J0924+4233	04 57 09	45.4	75.4	-4.5		-52.0	15	1046	16 21 00
16 22 25	---	04 58 34	45.6	75.7	-4.5		-52.1	85	1057	16 21 01
16 23 00	J0920+4441	04 59 09	47.5	73.9	-4.4		-54.2	14	1057	16 23 00
16 25 55	=0917+449	05 02 05	48.0	74.3	-4.3		-54.3	175	1080	16 23 01
16 26 30	J0924+4233	05 02 40	46.2	76.3	-4.4		-52.3	15	1080	16 26 30
16 27 55	---	05 04 05	46.4	76.6	-4.4		-52.4	85	1091	16 26 31
16 28 30	J0920+4441	05 04 40	48.3	74.7	-4.3		-54.5	14	1091	16 28 30
16 31 25	=0917+449	05 07 36	48.8	75.2	-4.2		-54.7	175	1113	16 28 31
16 32 00	J0924+4233	05 08 11	47.0	77.2	-4.3		-52.6	15	1113	16 32 00
16 33 25	---	05 09 36	47.2	77.5	-4.3		-52.7	85	1124	16 32 01
16 34 00	J0920+4441	05 10 11	49.1	75.6	-4.2		-54.8	14	1124	16 34 00
16 36 55	=0917+449	05 13 07	49.6	76.0	-4.1		-55.0	175	1147	16 34 01
16 37 30	J0924+4233	05 13 42	47.8	78.1	-4.2		-52.9	15	1147	16 37 30
16 38 55	---	05 15 07	48.1	78.4	-4.2		-52.9	85	1158	16 37 31
16 39 30	J0920+4441	05 15 42	49.9	76.4	-4.1		-55.1	14	1158	16 39 30
16 42 25	=0917+449	05 18 38	50.4	76.9	-4.1		-55.3	175	1181	16 39 31
16 43 00	J0924+4233	05 19 13	48.7	79.1	-4.1		-53.1	15	1181	16 43 00
16 44 25	---	05 20 38	48.9	79.3	-4.1		-53.2	85	1192	16 43 01
16 45 00	J0920+4441	05 21 13	50.8	77.3	-4.0		-55.4	14	1192	16 45 00
16 47 55	=0917+449	05 24 09	51.2	77.8	-4.0		-55.6	175	1214	16 45 01
16 48 30	J0924+4233	05 24 44	49.5	80.0	-4.0		-53.3	15	1214	16 48 30
16 49 55	---	05 26 09	49.7	80.2	-4.0		-53.4	85	1225	16 48 31
16 50 30	J0920+4441	05 26 44	51.6	78.2	-3.9		-55.7	14	1225	16 50 30
16 53 25	=0917+449	05 29 39	52.0	78.7	-3.9		-55.8	175	1248	16 50 31
16 54 00	J0924+4233	05 30 15	50.3	80.9	-3.9		-53.5	15	1248	16 54 00
16 55 25	---	05 31 40	50.5	81.2	-3.9		-53.6	85	1259	16 54 01
16 56 00	J0920+4441	05 32 15	52.4	79.1	-3.8		-56.0	14	1259	16 56 00
16 58 55	=0917+449	05 35 10	52.8	79.6	-3.8		-56.1	175	1281	16 56 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0923+4233

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
16 59 30	J0924+4233	05 35 45	51.1	81.9	-3.8		-53.7	15	1281	16 59 30
17 00 55	---	05 37 11	51.3	82.1	-3.8		-53.8	85	1292	16 59 31
17 01 30	J0920+4441	05 37 46	53.2	80.0	-3.7		-56.2	14	1292	17 01 30
17 04 25	=0917+449	05 40 41	53.6	80.5	-3.7		-56.3	175	1315	17 01 31
17 05 00	J0924+4233	05 41 16	51.9	82.8	-3.7		-53.9	15	1315	17 05 00
17 06 25	---	05 42 42	52.1	83.1	-3.7		-54.0	85	1326	17 05 01
17 07 00	J0920+4441	05 43 17	54.0	80.9	-3.6		-56.4	14	1326	17 07 00
17 09 55	=0917+449	05 46 12	54.4	81.4	-3.6		-56.6	175	1348	17 07 01
17 10 30	J0924+4233	05 46 47	52.7	83.8	-3.6		-54.1	15	1348	17 10 30
17 11 55	---	05 48 12	53.0	84.1	-3.6		-54.1	85	1359	17 10 31
17 12 30	J0920+4441	05 48 48	54.8	81.9	-3.6		-56.7	14	1359	17 12 30
17 15 25	=0917+449	05 51 43	55.3	82.3	-3.5		-56.8	175	1382	17 12 31
17 16 00	J0924+4233	05 52 18	53.6	84.8	-3.6		-54.2	15	1382	17 16 00
17 17 25	---	05 53 43	53.8	85.1	-3.5		-54.2	85	1393	17 16 01
17 18 00	J0920+4441	05 54 18	55.6	82.8	-3.5		-56.9	14	1393	17 18 00
17 20 55	=0917+449	05 57 14	56.1	83.3	-3.4		-56.9	175	1415	17 18 01
17 21 30	J0924+4233	05 57 49	54.4	85.8	-3.5		-54.3	15	1415	17 21 30
17 22 55	---	05 59 14	54.6	86.1	-3.4		-54.4	85	1426	17 21 31
17 23 30	J0920+4441	05 59 49	56.5	83.8	-3.4		-57.0	14	1426	17 23 30
17 26 25	=0917+449	06 02 45	56.9	84.3	-3.3		-57.1	175	1449	17 23 31
17 27 00	J0924+4233	06 03 20	55.2	86.8	-3.4		-54.4	15	1449	17 27 00
17 28 25	---	06 04 45	55.4	87.1	-3.3		-54.4	85	1460	17 27 01
17 29 00	J0920+4441	06 05 20	57.3	84.7	-3.3		-57.2	14	1460	17 29 00
17 31 55	=0917+449	06 08 16	57.7	85.3	-3.2		-57.2	175	1482	17 29 01
17 32 30	J0924+4233	06 08 51	56.0	87.9	-3.3		-54.5	15	1482	17 32 30
17 33 55	---	06 10 16	56.3	88.2	-3.3		-54.5	85	1493	17 32 31
17 34 30	J0920+4441	06 10 51	58.1	85.7	-3.2		-57.3	14	1493	17 34 30
17 37 25	=0917+449	06 13 47	58.6	86.3	-3.1		-57.4	175	1516	17 34 31
17 38 00	J0924+4233	06 14 22	56.9	89.0	-3.2		-54.5	15	1516	17 38 00
17 39 25	---	06 15 47	57.1	89.2	-3.2		-54.5	85	1527	17 38 01
17 40 00	J0920+4441	06 16 22	58.9	86.7	-3.1		-57.4	14	1527	17 40 00
17 42 55	=0917+449	06 19 18	59.4	87.3	-3.0		-57.5	175	1550	17 40 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0923+4233

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
17 43 30	J0924+4233	06 19 53	57.7	90.1	-3.1		-54.5	15	1550	17 43 30
17 44 55	---	06 21 18	57.9	90.3	-3.1		-54.5	85	1561	17 43 31
17 45 30	J0920+4441	06 21 53	59.8	87.8	-3.0		-57.5	14	1561	17 45 30
17 48 25	=0917+449	06 24 48	60.2	88.3	-3.0		-57.5	175	1583	17 45 31
17 49 00	J0924+4233	06 25 24	58.5	91.2	-3.0		-54.5	15	1583	17 49 00
17 50 25	---	06 26 49	58.7	91.5	-3.0		-54.5	85	1594	17 49 01
17 51 00	J0920+4441	06 27 24	60.6	88.8	-2.9		-57.5	14	1594	17 51 00
17 53 55	=0917+449	06 30 19	61.0	89.4	-2.9		-57.6	175	1617	17 51 01
17 54 30	J0924+4233	06 30 54	59.4	92.3	-2.9		-54.5	15	1617	17 54 30
17 55 55	---	06 32 20	59.6	92.6	-2.9		-54.5	85	1628	17 54 31
17 56 30	J0920+4441	06 32 55	61.4	89.9	-2.8		-57.6	14	1628	17 56 30
17 59 25	=0917+449	06 35 50	61.9	90.5	-2.8		-57.6	175	1650	17 56 31
18 00 00	J0924+4233	06 36 25	60.2	93.5	-2.8		-54.4	15	1650	18 00 00
18 01 25	---	06 37 51	60.4	93.8	-2.8		-54.4	85	1661	18 00 01
18 02 00	J0920+4441	06 38 26	62.3	91.0	-2.7		-57.5	14	1661	18 02 00
18 04 55	=0917+449	06 41 21	62.7	91.6	-2.7		-57.5	175	1684	18 02 01
18 05 30	J0924+4233	06 41 56	61.0	94.7	-2.7		-54.3	15	1684	18 05 30
18 06 55	---	06 43 22	61.2	95.0	-2.7		-54.2	85	1695	18 05 31
18 07 30	J0920+4441	06 43 57	63.1	92.2	-2.6		-57.5	14	1695	18 07 30
18 10 25	=0917+449	06 46 52	63.5	92.8	-2.6		-57.4	175	1717	18 07 31
18 11 00	J0924+4233	06 47 27	61.8	95.9	-2.6		-54.1	14	1717	18 11 00
18 12 25	---	06 48 52	62.0	96.3	-2.6		-54.1	85	1728	18 11 01
18 13 00	J0920+4441	06 49 28	63.9	93.4	-2.5		-57.4	14	1728	18 13 00
18 15 55	=0917+449	06 52 23	64.3	94.0	-2.5		-57.3	175	1751	18 13 01
18 16 30	J0924+4233	06 52 58	62.7	97.2	-2.5		-53.9	14	1751	18 16 30
18 17 55	---	06 54 23	62.9	97.6	-2.5		-53.8	85	1762	18 16 31
18 18 30	J0920+4441	06 54 58	64.7	94.6	-2.4		-57.3	14	1762	18 18 30
18 21 25	=0917+449	06 57 54	65.2	95.2	-2.4		-57.2	175	1784	18 18 31
18 22 00	J0924+4233	06 58 29	63.5	98.5	-2.5		-53.7	14	1784	18 22 00
18 23 25	---	06 59 54	63.7	98.9	-2.4		-53.6	85	1795	18 22 01
18 24 25	J0927+3902	07 00 54	61.3	104.5	-2.5		-48.4	34	1795	18 24 25
18 29 55	=0923+392	07 06 25	62.1	106.0	-2.4		-47.9	330	1838	18 24 26

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

=====
 Setup file: sess113.L1024

Matching groups in /homes/vlbsoft/sched10.2/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	3	Station:	TORUN	Total bit rate:	1024
Format:	MKIV1:2	Bits per sample:	2	Sample rate:	32.000
Number of channels:	16	DBE type:		Speedup factor:	0.50

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	
BBC =	1	2	1	2	3	4	3	4	
	5	6	5	6	7	8	7	8	
BBC SB=	U	U	L	L	U	U	L	L	
	U	U	L	L	U	U	L	L	
IF =	C	A	C	A	C	A	C	A	
	C	A	C	A	C	A	C	A	

The following frequency sets based on these setups were used.

Frequency Set:	6	Setup file default.	Used pcal sets:	1				
LO sum=	1610.49	1610.49	1610.49	1610.49	1642.49	1642.49	1642.49	1642.49
	1674.49	1674.49	1674.49	1674.49	1706.49	1706.49	1706.49	1706.49
BBC fr=	689.51	689.51	689.51	689.51	657.51	657.51	657.51	657.51
	625.51	625.51	625.51	625.51	593.51	593.51	593.51	593.51
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Matching frequency sets:	6							

The following pulse cal sets were used with this setup:

Pulse cal detection set:	1	PCAL = 1MHZ						
PCALXB1=	S1	S3	S5	S7	S9	S11	S13	S15
PCALXB2=	S2	S4	S6	S8	S10	S12	S14	S16
PCALFR1=	490	510	490	510	490	510	490	510
PCALFR2=	490	510	490	510	490	510	490	510

Track assignments are:

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
 barrel=roll_off

SOURCES USED IN RECORDING SCANS -- eEVN+MERLIN-18CM-J0923+4233

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* J0924+4233	09 21 34.309330	* 09 24 46.980000	09 25 39.971036	0.00
	42 46 43.46597	* 42 33 47.10000	42 30 13.36376	0.00
* J0920+4441	09 17 41.919222	* 09 20 58.458485	09 21 52.502049	0.14
0917+449	44 54 39.62449	* 44 41 53.98501	44 38 23.65753	0.10
* J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.642615	0.13
0923+392	39 15 23.56637	* 39 02 20.85177	38 58 44.64719	0.10

The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
J0924+4233	131.6
J0920+4441	129.6
J0927+3902	134.4

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

em100ctr

EEVN+MERLIN-18CM-J1444+4147

PI: *Mar Mezcua*

Address: C/ Via Lactea s/n, 38200 La Laguna, S/C de Tenerife, Spain
 Phone: +34 922 605 751 EMAIL: mezcua@iac.es
 Fax: +34 922 605 751 Phone during observation: +34 922 605 751

Observing mode: Continuum

Notes: Fringe finder: 3C345 (J1642+3948)
 Phase reference calibrator: J1434+4203

Schedule for TORUN (Code Tr) Page 2
 eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Tue 12 Mar 2013 Day 71 ---										
Next scan frequencies: 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49										
1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49										
Next BBC frequencies: 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51										
625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51										
Next scan bandwidths: 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
21 30 00	J1444+4147	10 07 00	43.6	74.8	-4.6	-50.9	0	0	21 30 00	
21 34 00	---	10 11 01	44.2	75.4	-4.6	-51.2	240	31	21 30 01	
21 34 40	J1434+4203	10 11 41	45.9	76.9	-4.4	-51.9	20	31	21 34 40	
21 37 30	=1432+422	10 14 31	46.3	77.4	-4.3	-52.0	170	53	21 34 41	
21 38 10	J1444+4147	10 15 11	44.8	76.1	-4.5	-51.4	20	53	21 38 10	
21 39 30	---	10 16 31	45.0	76.3	-4.5	-51.4	80	63	21 38 11	
21 40 10	J1434+4203	10 17 12	46.7	77.8	-4.3	-52.2	20	63	21 40 10	
21 43 00	=1432+422	10 20 02	47.1	78.3	-4.2	-52.3	170	85	21 40 11	
21 43 40	J1444+4147	10 20 42	45.6	77.0	-4.4	-51.6	20	85	21 43 40	
21 45 00	---	10 22 02	45.8	77.3	-4.4	-51.7	80	95	21 43 41	
21 45 40	J1434+4203	10 22 42	47.5	78.7	-4.2	-52.4	20	95	21 45 40	
21 48 30	=1432+422	10 25 33	48.0	79.2	-4.2	-52.5	170	117	21 45 41	
21 49 10	J1444+4147	10 26 13	46.4	78.0	-4.3	-51.9	20	117	21 49 10	
21 50 30	---	10 27 33	46.6	78.2	-4.3	-52.0	80	128	21 49 11	
21 51 10	J1434+4203	10 28 13	48.4	79.7	-4.1	-52.6	20	128	21 51 10	
21 54 00	=1432+422	10 31 04	48.8	80.2	-4.1	-52.8	170	150	21 51 11	
21 54 40	J1444+4147	10 31 44	47.2	78.9	-4.2	-52.1	20	150	21 54 40	
21 56 00	---	10 33 04	47.4	79.1	-4.2	-52.2	80	160	21 54 41	

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
21 56 40	J1434+4203	10 33 44	49.2	80.6	-4.0		-52.9	20	160	21 56 40
21 59 30	=1432+422	10 36 35	49.6	81.1	-4.0		-53.0	170	182	21 56 41
22 00 10	J1444+4147	10 37 15	48.0	79.8	-4.1		-52.4	20	182	22 00 10
22 01 30	---	10 38 35	48.2	80.0	-4.1		-52.4	80	192	22 00 11
22 02 10	J1434+4203	10 39 15	50.0	81.6	-3.9		-53.1	20	192	22 02 10
22 05 00	=1432+422	10 42 06	50.4	82.1	-3.9		-53.1	170	214	22 02 11
22 05 40	J1444+4147	10 42 46	48.9	80.8	-4.0		-52.6	20	214	22 05 40
22 07 00	---	10 44 06	49.1	81.0	-4.0		-52.6	80	225	22 05 41
22 07 40	J1434+4203	10 44 46	50.8	82.5	-3.8		-53.2	20	225	22 07 40
22 10 30	=1432+422	10 47 37	51.2	83.0	-3.8		-53.3	170	246	22 07 41
22 11 10	J1444+4147	10 48 17	49.7	81.7	-3.9		-52.8	20	246	22 11 10
22 12 30	---	10 49 37	49.9	81.9	-3.9		-52.8	80	257	22 11 11
22 13 10	J1434+4203	10 50 17	51.6	83.5	-3.7		-53.4	20	257	22 13 10
22 16 00	=1432+422	10 53 07	52.1	84.0	-3.7		-53.5	170	279	22 13 11
22 16 40	J1444+4147	10 53 48	50.5	82.7	-3.8		-53.0	20	279	22 16 40
22 18 00	---	10 55 08	50.7	82.9	-3.8		-53.0	80	289	22 16 41
22 18 40	J1434+4203	10 55 48	52.5	84.5	-3.6		-53.5	20	289	22 18 40
22 21 30	=1432+422	10 58 38	52.9	85.0	-3.6		-53.6	170	311	22 18 41
22 22 10	J1444+4147	10 59 18	51.3	83.7	-3.8		-53.1	20	311	22 22 10
22 23 30	---	11 00 39	51.5	83.9	-3.7		-53.1	80	321	22 22 11
22 24 10	J1434+4203	11 01 19	53.3	85.5	-3.6		-53.7	20	321	22 24 10
22 27 00	=1432+422	11 04 09	53.7	86.0	-3.5		-53.7	170	343	22 24 11
22 27 40	J1444+4147	11 04 49	52.1	84.7	-3.7		-53.2	20	343	22 27 40
22 29 00	---	11 06 10	52.3	84.9	-3.6		-53.3	80	354	22 27 41
22 29 40	J1434+4203	11 06 50	54.1	86.5	-3.5		-53.8	20	354	22 29 40
22 32 30	=1432+422	11 09 40	54.5	87.1	-3.4		-53.8	170	375	22 29 41
22 33 10	J1444+4147	11 10 20	53.0	85.7	-3.6		-53.4	20	375	22 33 10
22 34 30	---	11 11 40	53.2	85.9	-3.5		-53.4	80	386	22 33 11
22 35 10	J1434+4203	11 12 21	54.9	87.6	-3.4		-53.8	20	386	22 35 10
22 38 00	=1432+422	11 15 11	55.4	88.1	-3.3		-53.9	170	408	22 35 11
22 38 40	J1444+4147	11 15 51	53.8	86.7	-3.5		-53.5	20	408	22 38 40
22 40 00	---	11 17 11	54.0	86.9	-3.5		-53.5	80	418	22 38 41

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
22 40 40	J1434+4203	11 17 51	55.8	88.6	-3.3		-53.9	20	418	22 40 40
22 43 30	=1432+422	11 20 42	56.2	89.2	-3.2		-53.9	170	440	22 40 41
22 44 10	J1444+4147	11 21 22	54.6	87.7	-3.4		-53.5	20	440	22 44 10
22 45 30	---	11 22 42	54.8	88.0	-3.4		-53.5	80	450	22 44 11
22 46 10	J1434+4203	11 23 22	56.6	89.7	-3.2		-53.9	20	450	22 46 10
22 49 00	=1432+422	11 26 13	57.0	90.3	-3.1		-53.9	170	472	22 46 11
22 49 40	J1444+4147	11 26 53	55.5	88.8	-3.3		-53.6	20	472	22 49 40
22 51 00	---	11 28 13	55.7	89.1	-3.3		-53.6	80	483	22 49 41
22 51 40	J1434+4203	11 28 53	57.4	90.8	-3.1		-53.9	20	483	22 51 40
22 54 30	=1432+422	11 31 44	57.8	91.4	-3.0		-53.9	170	504	22 51 41
22 55 10	J1444+4147	11 32 24	56.3	89.9	-3.2		-53.6	20	504	22 55 10
22 56 30	---	11 33 44	56.5	90.2	-3.2		-53.6	80	515	22 55 11
22 57 10	J1434+4203	11 34 24	58.2	92.0	-3.0		-53.8	20	515	22 57 10
23 00 00	=1432+422	11 37 15	58.7	92.6	-3.0		-53.8	170	537	22 57 11
23 00 40	J1444+4147	11 37 55	57.1	91.0	-3.1		-53.6	20	537	23 00 40
23 02 00	---	11 39 15	57.3	91.3	-3.1		-53.6	80	547	23 00 41
23 02 40	J1434+4203	11 39 55	59.1	93.1	-2.9		-53.8	20	547	23 02 40
23 05 30	=1432+422	11 42 46	59.5	93.7	-2.9		-53.7	170	569	23 02 41
23 06 10	J1444+4147	11 43 26	57.9	92.2	-3.0		-53.5	20	569	23 06 10
23 07 30	---	11 44 46	58.1	92.4	-3.0		-53.5	80	579	23 06 11
23 08 10	J1434+4203	11 45 26	59.9	94.3	-2.8		-53.7	20	579	23 08 10
23 11 00	=1432+422	11 48 16	60.3	95.0	-2.8		-53.6	170	601	23 08 11
23 11 40	J1444+4147	11 48 57	58.8	93.3	-2.9		-53.5	20	601	23 11 40
23 13 00	---	11 50 17	59.0	93.6	-2.9		-53.4	80	612	23 11 41
23 13 40	J1434+4203	11 50 57	60.7	95.6	-2.7		-53.5	20	612	23 13 40
23 16 30	=1432+422	11 53 47	61.1	96.2	-2.7		-53.4	170	634	23 13 41
23 17 10	J1444+4147	11 54 27	59.6	94.5	-2.8		-53.3	20	634	23 17 10
23 18 30	---	11 55 48	59.8	94.8	-2.8		-53.3	80	644	23 17 11
23 19 10	J1434+4203	11 56 28	61.5	96.8	-2.6		-53.3	20	644	23 19 10
23 22 00	=1432+422	11 59 18	62.0	97.5	-2.6		-53.2	170	666	23 19 11
23 22 40	J1444+4147	11 59 58	60.4	95.7	-2.7		-53.2	20	666	23 22 40
23 24 00	---	12 01 19	60.6	96.0	-2.7		-53.2	80	676	23 22 41

Schedule for TORUN (Code Tr)

Page 5

eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 12 Mar 2013 Day 71 ---										
23 26 00	J1642+3948	12 03 19	42.0	76.4	-4.7		-49.4	36	676	23 26 00
23 30 30	=3C345	12 07 50	42.7	77.2	-4.6		-49.6	270	711	23 26 01
23 33 20	J1444+4147	12 10 40	62.0	98.2	-2.6		-52.8	84	711	23 33 20
23 34 40	---	12 12 00	62.2	98.6	-2.5		-52.7	80	721	23 33 21
23 35 20	J1434+4203	12 12 40	63.9	100.8	-2.4		-52.5	20	721	23 35 20
23 38 10	=1432+422	12 15 31	64.4	101.5	-2.3		-52.3	170	743	23 35 21
23 38 50	J1444+4147	12 16 11	62.8	99.6	-2.5		-52.5	20	743	23 38 50
23 40 10	---	12 17 31	63.0	99.9	-2.5		-52.4	80	754	23 38 51
23 40 50	J1434+4203	12 18 11	64.8	102.2	-2.3		-52.1	20	754	23 40 50
23 43 40	=1432+422	12 21 02	65.2	103.0	-2.2		-51.9	170	775	23 40 51
23 44 20	J1444+4147	12 21 42	63.6	101.0	-2.4		-52.2	20	775	23 44 20
23 45 40	---	12 23 02	63.8	101.3	-2.4		-52.1	80	786	23 44 21
23 46 20	J1434+4203	12 23 42	65.6	103.7	-2.2		-51.7	20	786	23 46 20
23 49 10	=1432+422	12 26 33	66.0	104.5	-2.1		-51.5	170	808	23 46 21
23 49 50	J1444+4147	12 27 13	64.5	102.4	-2.3		-51.8	20	808	23 49 50
23 51 10	---	12 28 33	64.6	102.8	-2.3		-51.7	80	818	23 49 51
23 51 50	J1434+4203	12 29 13	66.4	105.3	-2.1		-51.2	20	818	23 51 50
23 54 40	=1432+422	12 32 04	66.8	106.1	-2.0		-50.9	170	840	23 51 51
23 55 20	J1444+4147	12 32 44	65.3	103.9	-2.2		-51.4	20	840	23 55 20
23 56 40	---	12 34 04	65.5	104.3	-2.2		-51.2	80	850	23 55 21
--- Start: Tue 12 Mar 2013 Day 71 -- Stop: Wed 13 Mar 2013 Day 72 ---										
23 57 20	J1434+4203	12 34 44	67.2	106.9	-2.0		-50.6	20	850	23 57 20
00 00 10	=1432+422	12 37 35	67.6	107.8	-2.0		-50.3	170	872	23 57 21
00 00 50	J1444+4147	12 38 15	66.1	105.5	-2.1		-50.8	21	872	00 00 50
00 02 10	---	12 39 35	66.3	105.9	-2.1		-50.7	80	883	00 00 51
00 02 50	J1434+4203	12 40 15	67.9	108.7	-1.9		-50.0	20	883	00 02 50
00 05 40	=1432+422	12 43 05	68.4	109.6	-1.9		-49.6	170	904	00 02 51
00 06 20	J1444+4147	12 43 46	66.9	107.1	-2.0		-50.3	21	904	00 06 20
00 07 40	---	12 45 06	67.0	107.5	-2.0		-50.1	80	915	00 06 21
00 08 30	J1434+4203	12 45 56	68.8	110.5	-1.8		-49.2	30	915	00 08 30
00 11 30	=1432+422	12 48 56	69.2	111.5	-1.8		-48.7	180	938	00 08 31

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
00 12 20	J1444+4147	12 49 47	67.7	109.0	-1.9		-49.5	30	938	00 12 20
00 13 50	---	12 51 17	67.9	109.5	-1.9		-49.3	90	950	00 12 21
00 14 40	J1434+4203	12 52 07	69.6	112.6	-1.7		-48.2	30	950	00 14 40
00 17 40	=1432+422	12 55 07	70.0	113.7	-1.7		-47.7	180	973	00 14 41
00 18 30	J1444+4147	12 55 58	68.6	111.0	-1.8		-48.7	30	973	00 18 30
00 20 00	---	12 57 28	68.8	111.6	-1.8		-48.5	90	984	00 18 31
00 20 50	J1434+4203	12 58 18	70.5	114.9	-1.6		-47.1	29	984	00 20 50
00 23 50	=1432+422	13 01 18	70.9	116.1	-1.6		-46.5	180	1008	00 20 51
00 24 40	J1444+4147	13 02 09	69.4	113.2	-1.7		-47.7	29	1008	00 24 40
00 26 10	---	13 03 39	69.7	113.7	-1.7		-47.4	90	1019	00 24 41
00 27 00	J1434+4203	13 04 29	71.3	117.3	-1.5		-45.9	29	1019	00 27 00
00 30 00	=1432+422	13 07 29	71.7	118.6	-1.5		-45.2	180	1043	00 27 01
00 30 50	J1444+4147	13 08 20	70.3	115.5	-1.6		-46.6	29	1043	00 30 50
00 32 20	---	13 09 50	70.5	116.0	-1.6		-46.3	90	1054	00 30 51
00 33 10	J1434+4203	13 10 40	72.1	119.9	-1.4		-44.5	28	1054	00 33 10
00 36 10	=1432+422	13 13 40	72.5	121.2	-1.3		-43.7	180	1077	00 33 11
00 37 00	J1444+4147	13 14 31	71.1	117.9	-1.5		-45.3	28	1077	00 37 00
00 38 30	---	13 16 01	71.3	118.5	-1.5		-45.0	90	1089	00 37 01
00 39 20	J1434+4203	13 16 51	72.9	122.7	-1.3		-42.9	27	1089	00 39 20
00 42 20	=1432+422	13 19 51	73.3	124.1	-1.2		-42.0	180	1112	00 39 21
00 43 10	J1444+4147	13 20 42	71.9	120.5	-1.4		-43.9	27	1112	00 43 10
00 44 40	---	13 22 12	72.1	121.1	-1.4		-43.5	90	1124	00 43 11
00 45 30	J1434+4203	13 23 02	73.7	125.6	-1.2		-41.0	27	1124	00 45 30
00 48 30	=1432+422	13 26 02	74.0	127.2	-1.1		-40.1	180	1147	00 45 31
00 49 20	J1444+4147	13 26 53	72.7	123.3	-1.3		-42.3	27	1147	00 49 20
00 50 50	---	13 28 23	72.9	124.0	-1.3		-41.9	90	1159	00 49 21
00 51 40	J1434+4203	13 29 13	74.4	128.8	-1.1		-39.0	26	1159	00 51 40
00 54 40	=1432+422	13 32 13	74.8	130.5	-1.0		-37.9	180	1182	00 51 41
00 55 30	J1444+4147	13 33 04	73.5	126.2	-1.2		-40.5	26	1182	00 55 30
00 57 00	---	13 34 34	73.7	127.0	-1.2		-40.0	90	1193	00 55 31
00 57 50	J1434+4203	13 35 24	75.1	132.3	-1.0		-36.7	25	1193	00 57 50
01 00 50	=1432+422	13 38 25	75.4	134.1	-0.9		-35.5	180	1217	00 57 51

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
01 01 40	J1444+4147	13 39 15	74.2	129.4	-1.1		-38.4	25	1217	01 01 40
01 03 10	---	13 40 45	74.4	130.3	-1.1		-37.9	90	1228	01 01 41
01 04 00	J1434+4203	13 41 35	75.8	136.0	-0.9		-34.1	24	1228	01 04 00
01 07 00	=1432+422	13 44 36	76.1	137.9	-0.8		-32.8	180	1252	01 04 01
01 07 50	J1444+4147	13 45 26	74.9	132.9	-1.0		-36.1	24	1252	01 07 50
01 09 20	---	13 46 56	75.1	133.8	-1.0		-35.5	90	1263	01 07 51
01 10 10	J1434+4203	13 47 46	76.4	140.1	-0.8		-31.2	23	1263	01 10 10
01 13 10	=1432+422	13 50 47	76.7	142.1	-0.7		-29.7	180	1286	01 10 11
01 14 00	J1444+4147	13 51 37	75.6	136.6	-0.9		-33.6	23	1286	01 14 00
01 15 30	---	13 53 07	75.7	137.6	-0.9		-32.9	90	1298	01 14 01
01 16 20	J1434+4203	13 53 57	77.0	144.4	-0.7		-28.1	22	1298	01 16 20
01 19 20	=1432+422	13 56 58	77.2	146.6	-0.6		-26.4	180	1321	01 16 21
01 20 10	J1444+4147	13 57 48	76.2	140.6	-0.8		-30.7	22	1321	01 20 10
01 21 40	---	13 59 18	76.3	141.6	-0.8		-30.0	90	1333	01 20 11
01 23 40	J1642+3948	14 01 18	59.6	99.4	-2.7		-50.4	20	1333	01 23 40
01 27 40	=3C345	14 05 19	60.2	100.4	-2.6		-50.2	240	1364	01 23 41
01 30 40	J1444+4147	14 08 19	77.1	148.1	-0.6		-25.1	71	1364	01 30 40
01 32 00	---	14 09 40	77.2	149.2	-0.6		-24.4	80	1374	01 30 41
01 32 50	J1434+4203	14 10 30	78.2	157.6	-0.4		-18.0	19	1374	01 32 50
01 35 50	=1432+422	14 13 30	78.3	160.2	-0.4		-15.9	180	1397	01 32 51
01 36 40	J1444+4147	14 14 20	77.6	152.8	-0.5		-21.6	20	1397	01 36 40
01 38 10	---	14 15 51	77.7	154.1	-0.5		-20.6	90	1409	01 36 41
01 39 00	J1434+4203	14 16 41	78.5	163.0	-0.3		-13.6	18	1409	01 39 00
01 42 00	=1432+422	14 19 41	78.6	165.8	-0.2		-11.4	180	1432	01 39 01
01 42 50	J1444+4147	14 20 31	77.9	158.0	-0.4		-17.6	19	1432	01 42 50
01 44 20	---	14 22 02	78.0	159.2	-0.4		-16.6	90	1444	01 42 51
01 45 10	J1434+4203	14 22 52	78.7	168.8	-0.2		-9.1	17	1444	01 45 10
01 48 10	=1432+422	14 25 52	78.8	171.6	-0.1		-6.8	180	1467	01 45 11
01 49 00	J1444+4147	14 26 42	78.2	163.3	-0.3		-13.3	18	1467	01 49 00
01 50 30	---	14 28 13	78.3	164.7	-0.3		-12.3	90	1479	01 49 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

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TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
01 51 20	J1434+4203	14 29 03	78.9	174.6	-0.1		-4.3	16	1479	01 51 20
01 54 20	=1432+422	14 32 03	78.9	177.5	-0.0		-2.0	180	1502	01 51 21
01 55 10	J1444+4147	14 32 53	78.5	169.0	-0.2		-8.9	17	1502	01 55 10
01 56 40	---	14 34 24	78.5	170.4	-0.2		-7.8	90	1513	01 55 11
01 57 30	J1434+4203	14 35 14	78.9	180.6	0.0		0.5	15	1513	01 57 30
02 00 30	=1432+422	14 38 14	78.9	183.5	0.1		2.8	180	1537	01 57 31
02 01 20	J1444+4147	14 39 04	78.6	174.7	-0.1		-4.2	17	1537	02 01 20
02 02 50	---	14 40 35	78.6	176.1	-0.1		-3.1	90	1548	02 01 21
02 03 40	J1434+4203	14 41 25	78.8	186.5	0.1		5.3	15	1548	02 03 40
02 06 40	=1432+422	14 44 25	78.8	189.4	0.2		7.6	180	1572	02 03 41
02 07 30	J1444+4147	14 45 15	78.6	180.6	0.0		0.5	17	1572	02 07 30
02 09 00	---	14 46 46	78.6	182.0	0.0		1.6	90	1583	02 07 31
02 09 50	J1434+4203	14 47 36	78.7	192.4	0.2		10.0	15	1583	02 09 50
02 12 50	=1432+422	14 50 36	78.6	195.2	0.3		12.2	180	1606	02 09 51
02 13 40	J1444+4147	14 51 26	78.6	186.4	0.1		5.2	17	1606	02 13 40
02 15 10	---	14 52 57	78.6	187.8	0.1		6.3	90	1618	02 13 41
02 16 00	J1434+4203	14 53 47	78.4	198.0	0.3		14.5	15	1618	02 16 00
02 19 00	=1432+422	14 56 47	78.3	200.7	0.4		16.6	180	1641	02 16 01
02 19 50	J1444+4147	14 57 37	78.4	192.2	0.2		9.8	17	1641	02 19 50
02 21 20	---	14 59 08	78.4	193.5	0.2		10.9	90	1653	02 19 51
02 22 10	J1434+4203	14 59 58	78.1	203.5	0.4		18.8	16	1653	02 22 10
02 25 10	=1432+422	15 02 58	77.9	206.0	0.5		20.7	180	1676	02 22 11
02 26 00	J1444+4147	15 03 49	78.2	197.7	0.3		14.2	18	1676	02 26 00
02 27 30	---	15 05 19	78.1	199.1	0.3		15.2	90	1688	02 26 01
02 28 20	J1434+4203	15 06 09	77.7	208.6	0.5		22.7	16	1688	02 28 20
02 31 20	=1432+422	15 09 09	77.5	211.0	0.6		24.6	180	1711	02 28 21
02 32 10	J1444+4147	15 10 00	77.9	203.1	0.4		18.4	19	1711	02 32 10
02 33 40	---	15 11 30	77.8	204.3	0.4		19.4	90	1722	02 32 11
02 34 30	J1434+4203	15 12 20	77.2	213.4	0.6		26.4	17	1722	02 34 30
02 37 30	=1432+422	15 15 20	77.0	215.6	0.7		28.1	180	1746	02 34 31

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
02 38 20	J1444+4147	15 16 11	77.5	208.1	0.5		22.3	19	1746	02 38 20
02 39 50	---	15 17 41	77.4	209.3	0.6		23.2	90	1757	02 38 21
02 40 40	J1434+4203	15 18 31	76.7	217.9	0.7		29.8	18	1757	02 40 40
02 43 40	=1432+422	15 21 31	76.4	220.0	0.8		31.3	180	1781	02 40 41
02 44 30	J1444+4147	15 22 22	77.0	212.9	0.6		25.9	20	1781	02 44 30
02 46 00	---	15 23 52	76.9	214.0	0.7		26.8	90	1792	02 44 31
02 47 00	J1434+4203	15 24 52	76.1	222.2	0.8		32.9	29	1792	02 47 00
02 50 00	=1432+422	15 27 52	75.8	224.1	0.9		34.2	180	1815	02 47 01
02 51 00	J1444+4147	15 28 53	76.4	217.6	0.7		29.4	31	1815	02 51 00
02 52 30	---	15 30 23	76.3	218.6	0.8		30.2	90	1827	02 51 01
02 53 30	J1434+4203	15 31 23	75.4	226.2	0.9		35.7	30	1827	02 53 30
02 56 30	=1432+422	15 34 24	75.1	228.0	1.0		36.9	180	1850	02 53 31
02 57 30	J1444+4147	15 35 24	75.8	221.9	0.8		32.5	32	1850	02 57 30
02 59 00	---	15 36 54	75.7	222.9	0.9		33.2	90	1862	02 57 31
03 00 00	J1434+4203	15 37 54	74.7	230.0	1.1		38.2	31	1862	03 00 00
03 03 00	=1432+422	15 40 55	74.3	231.6	1.1		39.3	180	1885	03 00 01
03 04 00	J1444+4147	15 41 55	75.1	226.0	1.0		35.3	33	1885	03 04 00
03 05 30	---	15 43 25	75.0	226.8	1.0		35.9	90	1897	03 04 01
03 06 30	J1434+4203	15 44 25	73.9	233.4	1.2		40.5	32	1897	03 06 30
03 09 30	=1432+422	15 47 26	73.5	234.9	1.2		41.4	180	1920	03 06 31
03 10 30	J1444+4147	15 48 26	74.4	229.7	1.1		37.8	34	1920	03 10 30
03 12 00	---	15 49 56	74.2	230.5	1.1		38.4	90	1931	03 10 31
03 13 00	J1434+4203	15 50 56	73.1	236.6	1.3		42.4	33	1931	03 13 00
03 16 00	=1432+422	15 53 57	72.7	238.0	1.3		43.3	180	1955	03 13 01
03 17 00	J1444+4147	15 54 57	73.6	233.1	1.2		40.1	34	1955	03 17 00
03 18 30	---	15 56 27	73.5	233.9	1.2		40.5	90	1966	03 17 01
03 19 30	J1434+4203	15 57 27	72.3	239.6	1.4		44.2	34	1966	03 19 30
03 22 30	=1432+422	16 00 28	71.9	240.9	1.4		44.9	180	1990	03 19 31
03 23 30	J1444+4147	16 01 28	72.8	236.3	1.3		42.0	35	1990	03 23 30
03 25 00	---	16 02 58	72.7	237.0	1.3		42.4	90	2001	03 23 31
03 26 00	J1434+4203	16 03 58	71.4	242.3	1.5		45.7	35	2001	03 26 00
03 29 00	=1432+422	16 06 59	71.0	243.6	1.5		46.3	180	2024	03 26 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
03 30 00	J1444+4147	16 07 59	72.0	239.2	1.4		43.8	36	2024	03 30 00
03 31 30	---	16 09 29	71.8	239.9	1.4		44.1	90	2036	03 30 01
03 32 30	J1434+4203	16 10 29	70.5	244.9	1.6		47.0	35	2036	03 32 30
03 35 30	=1432+422	16 13 30	70.1	246.0	1.6		47.6	180	2059	03 32 31
03 36 30	J1444+4147	16 14 30	71.2	242.0	1.5		45.3	36	2059	03 36 30
03 38 00	---	16 16 00	71.0	242.6	1.5		45.6	90	2071	03 36 31
03 39 00	J1434+4203	16 17 00	69.6	247.3	1.7		48.2	36	2071	03 39 00
03 42 00	=1432+422	16 20 01	69.2	248.4	1.8		48.7	180	2094	03 39 01
03 43 00	J1444+4147	16 21 01	70.3	244.6	1.6		46.6	37	2094	03 43 00
03 44 30	---	16 22 31	70.1	245.1	1.6		46.9	90	2106	03 43 01
03 45 30	J1434+4203	16 23 32	68.7	249.6	1.8		49.2	37	2106	03 45 30
03 48 30	=1432+422	16 26 32	68.3	250.5	1.9		49.6	180	2129	03 45 31
03 49 30	J1444+4147	16 27 32	69.4	246.9	1.7		47.8	37	2129	03 49 30
03 51 00	---	16 29 02	69.2	247.5	1.7		48.0	90	2141	03 49 31
03 52 00	J1434+4203	16 30 03	67.8	251.7	1.9		50.1	37	2141	03 52 00
03 55 00	=1432+422	16 33 03	67.4	252.6	2.0		50.4	180	2164	03 52 01
03 56 00	J1444+4147	16 34 03	68.5	249.2	1.8		48.8	38	2164	03 56 00
03 57 30	---	16 35 34	68.3	249.7	1.8		49.0	90	2175	03 56 01
03 58 30	J1434+4203	16 36 34	66.9	253.7	2.0		50.8	38	2175	03 58 30
04 01 30	=1432+422	16 39 34	66.4	254.6	2.1		51.1	180	2199	03 58 31
04 02 30	J1444+4147	16 40 34	67.6	251.3	1.9		49.7	38	2199	04 02 30
04 04 00	---	16 42 05	67.3	251.8	2.0		49.9	90	2210	04 02 31
04 05 00	J1434+4203	16 43 05	65.9	255.6	2.1		51.5	38	2210	04 05 00
04 08 00	=1432+422	16 46 05	65.5	256.4	2.2		51.8	180	2233	04 05 01
04 09 00	J1444+4147	16 47 05	66.6	253.3	2.0		50.4	39	2233	04 09 00
04 10 30	---	16 48 36	66.4	253.8	2.1		50.6	90	2245	04 09 01
04 11 30	J1434+4203	16 49 36	65.0	257.4	2.2		52.0	38	2245	04 11 30
04 14 30	=1432+422	16 52 36	64.5	258.2	2.3		52.3	180	2268	04 11 31
04 15 30	J1444+4147	16 53 36	65.7	255.2	2.1		51.1	39	2268	04 15 30
04 17 00	---	16 55 07	65.5	255.7	2.2		51.2	90	2280	04 15 31
04 18 00	J1434+4203	16 56 07	64.0	259.1	2.4		52.5	39	2280	04 18 00
04 21 00	=1432+422	16 59 07	63.6	259.9	2.4		52.7	180	2303	04 18 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J1444+4147

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
04 22 00	J1444+4147	17 00 08	64.7	257.0	2.3		51.6	39	2303	04 22 00
04 23 30	---	17 01 38	64.5	257.4	2.3		51.8	90	2315	04 22 01
04 24 30	J1434+4203	17 02 38	63.1	260.7	2.5		52.9	39	2315	04 24 30
04 27 30	=1432+422	17 05 38	62.6	261.5	2.5		53.0	180	2338	04 24 31
04 28 30	J1444+4147	17 06 39	63.8	258.8	2.4		52.1	40	2338	04 28 30
04 30 00	---	17 08 09	63.6	259.2	2.4		52.2	90	2350	04 28 31

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.L1024

Matching groups in /homes/vlbsoft/sched10.2/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 4 Station: TORUN Total bit rate: 1024
Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

Frequency Set: 7 Setup file default. Used pcal sets: 1
LO sum= 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49
1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49
BBC fr= 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51
625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51
Bandwd= 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
Matching frequency sets: 7

The following pulse cal sets were used with this setup:

```
Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1   S3   S5   S7   S9   S11  S13  S15
PCALXB2=  S2   S4   S6   S8   S10  S12  S14  S16
PCALFR1=  490  510  490  510  490  510  490  510
PCALFR2=  490  510  490  510  490  510  490  510
```

Track assignments are:

```
track1=  2, 10, 18, 26,  3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off
```

SOURCES USED IN RECORDING SCANS -- eEVN+MERLIN-18CM-J1444+4147

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
* J1444+4147	14 42 12.635334	* 14 44 07.250000	14 44 38.951566	0.00
	42 00 28.78718	* 41 47 50.30000	41 44 14.55800	0.00
* J1434+4203	14 32 09.397450	* 14 34 05.694468	14 34 37.894608	0.21
1432+422	42 16 22.41651	* 42 03 15.99139	41 59 32.84881	0.25
* J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 26.260951	0.77
3C345	39 54 10.81496	* 39 48 36.99402	39 46 55.02427	0.52

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
J1444+4147	122.2
J1434+4203	123.7
J1642+3948	101.4

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

ed039btr

BSMBHs

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Phone: 0785822308 EMAIL: roger.deane@ast.uct.ac.za
Fax: 555 1001 Phone during observation: 0785822308

Observing mode: Phase-referencing of weak (~1 mJy src)

Schedule for TORUN (Code Tr) Page 2
BSMBHs

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Table with columns: Start UT, Source, LST, EL, AZ, HA, UP, ParA, Early Dwell, Disk GBytes, TPStart SYNC. Includes frequency and bandwidth data, and a detailed observation schedule for Wed 13 Mar 2013.

Schedule for TORUN (Code Tr)

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bSMBHs

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
----- p-ref -----										
07 13 20	J1358+1119	19 51 56	10.0	275.4	5.9		37.6	-16	194	No stop
07 14 40	---	19 53 16	9.8	275.7	5.9		37.5	64	204	07 13 21
07 14 40	BSMBH6	19 53 16	8.9	275.4	5.9		37.4	-16	204	No stop
07 18 10	---	19 56 46	8.4	276.1	6.0		37.4	194	231	07 14 41
07 18 50	J1358+1119	19 57 27	9.2	276.5	6.0		37.5	24	231	07 18 50
07 22 50	---	20 01 27	8.6	277.3	6.0		37.4	240	262	07 18 51
07 24 50	J1504+1029	20 03 28	17.6	264.0	5.0		37.4	72	262	07 24 50
07 26 50	---	20 05 28	17.3	264.4	5.0		37.4	120	277	07 24 51
07 26 50	BSMBH3	20 05 28	17.6	265.2	5.0		37.6	-13	277	No stop
07 30 20	---	20 08 58	17.1	265.9	5.1		37.6	197	304	07 26 51
07 31 00	J1504+1029	20 09 39	16.6	265.2	5.1		37.5	27	304	07 31 00
07 32 20	---	20 10 59	16.4	265.5	5.1		37.5	80	315	07 31 01
07 32 20	BSMBH3	20 10 59	16.8	266.3	5.1		37.7	-13	315	No stop
07 35 50	---	20 14 29	16.3	267.1	5.2		37.7	197	342	07 32 21
07 36 30	J1504+1029	20 15 10	15.8	266.4	5.2		37.5	27	342	07 36 30
07 37 50	---	20 16 30	15.6	266.6	5.2		37.6	80	352	07 36 31
07 37 50	BSMBH3	20 16 30	16.0	267.5	5.2		37.7	-13	352	No stop
07 41 20	---	20 20 00	15.4	268.2	5.3		37.7	197	379	07 37 51
07 42 00	J1504+1029	20 20 40	15.0	267.5	5.3		37.6	27	379	07 42 00
07 43 20	---	20 22 01	14.8	267.7	5.3		37.6	80	390	07 42 01
07 43 20	BSMBH3	20 22 01	15.1	268.6	5.3		37.7	-13	390	No stop
07 46 50	---	20 25 31	14.6	269.3	5.4		37.7	197	417	07 43 21
07 47 30	J1504+1029	20 26 11	14.2	268.6	5.4		37.6	27	417	07 47 30
07 48 50	---	20 27 32	14.0	268.9	5.4		37.6	80	427	07 47 31
07 48 50	BSMBH3	20 27 32	14.3	269.7	5.4		37.7	-13	427	No stop
07 52 20	---	20 31 02	13.8	270.4	5.5		37.7	197	454	07 48 51
07 53 00	J1504+1029	20 31 42	13.3	269.7	5.4		37.6	27	454	07 53 00
07 54 20	---	20 33 02	13.1	270.0	5.5		37.6	80	464	07 53 01
07 54 20	BSMBH3	20 33 02	13.5	270.8	5.5		37.7	-13	464	No stop
07 57 50	---	20 36 33	13.0	271.5	5.6		37.7	197	492	07 54 21

Schedule for TORUN (Code Tr)

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bSMBHs

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
07 58 30	J1504+1029	20 37 13	12.5	270.8	5.5		37.6	27	492	07 58 30
07 59 50	---	20 38 33	12.3	271.1	5.6		37.6	80	502	07 58 31
07 59 50	BSMBH3	20 38 33	12.7	271.9	5.6		37.7	-13	502	No stop
08 03 20	---	20 42 04	12.1	272.6	5.6		37.7	197	529	07 59 51
08 04 00	J1504+1029	20 42 44	11.7	271.9	5.6		37.6	27	529	08 04 00
08 05 20	---	20 44 04	11.5	272.2	5.6		37.6	80	539	08 04 01
08 05 20	BSMBH3	20 44 04	11.8	273.0	5.7		37.7	-13	539	No stop
08 08 50	---	20 47 35	11.3	273.7	5.7		37.7	197	566	08 05 21
08 09 30	J1504+1029	20 48 15	10.8	273.0	5.7		37.6	27	566	08 09 30
08 10 50	---	20 49 35	10.6	273.2	5.7		37.6	80	577	08 09 31
08 10 50	BSMBH3	20 49 35	11.0	274.1	5.8		37.6	-13	577	No stop
08 14 20	---	20 53 06	10.5	274.8	5.8		37.6	197	604	08 10 51
08 15 00	J1504+1029	20 53 46	10.0	274.1	5.8		37.5	27	604	08 15 00
08 16 20	---	20 55 06	9.8	274.3	5.8		37.5	80	614	08 15 01
08 16 20	BSMBH3	20 55 06	10.2	275.2	5.9		37.6	-13	614	No stop
08 19 50	---	20 58 37	9.7	275.8	5.9		37.5	197	641	08 16 21
08 20 30	J1504+1029	20 59 17	9.2	275.2	5.9		37.5	27	641	08 20 30
08 21 50	---	21 00 37	9.0	275.4	5.9		37.4	80	652	08 20 31
08 21 50	BSMBH3	21 00 37	9.4	276.2	6.0		37.5	-13	652	No stop
08 25 20	---	21 04 08	8.8	276.9	6.0		37.4	197	679	08 21 51
08 26 00	J1504+1029	21 04 48	8.4	276.3	6.0		37.4	27	679	08 26 00
08 27 20	---	21 06 08	8.2	276.5	6.0		37.3	80	689	08 26 01
08 27 20	BSMBH3	21 06 08	8.5	277.3	6.0		37.4	-13	689	No stop
08 30 50	---	21 09 38	8.0	278.0	6.1		37.3	197	716	08 27 21
08 31 30	J1504+1029	21 10 19	7.6	277.3	6.1		37.3	27	716	08 31 30
08 32 50	---	21 11 39	7.4	277.6	6.1		37.2	80	726	08 31 31
08 32 50	BSMBH3	21 11 39	7.7	278.4	6.1		37.3	-13	726	No stop
08 36 20	---	21 15 09	7.2	279.1	6.2		37.2	197	754	08 32 51
08 37 00	J1504+1029	21 15 49	6.7	278.4	6.2		37.2	27	754	08 37 00
08 38 20	---	21 17 10	6.5	278.7	6.2		37.1	80	764	08 37 01
08 38 20	BSMBH3	21 17 10	6.9	279.5	6.2		37.1	-13	764	No stop
08 41 50	---	21 20 40	6.4	280.2	6.3		37.0	197	791	08 38 21

Schedule for TORUN (Code Tr)

Page 5

bSMBHs

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
08 42 30	J1504+1029	21 21 20	5.9	279.5	6.3		37.0	27	791	08 42 30
08 43 50	---	21 22 41	5.7	279.8	6.3		37.0	80	801	08 42 31
08 43 50	BSMBH3	21 22 41	6.1	280.6	6.3		37.0	-13	801	No stop
08 47 20	---	21 26 11	5.6	281.3	6.4		36.9	197	828	08 43 51
08 48 00	J1504+1029	21 26 51	5.1	280.6	6.4		36.9	27	828	08 48 00
08 49 20	---	21 28 11	4.9	280.9	6.4		36.8	80	839	08 48 01
08 49 20	BSMBH3	21 28 11	5.3	281.7	6.4		36.8	-13	839	No stop
08 52 50	---	21 31 42	4.8	282.4	6.5		36.7	197	866	08 49 21
08 53 30	J1504+1029	21 32 22	4.3	281.7	6.5		36.7	27	866	08 53 30
08 54 50	---	21 33 42	4.1	282.0	6.5		36.7	80	876	08 53 31
08 54 50	BSMBH3	21 33 42	4.5	282.8	6.5		36.7	-13	876	No stop
08 58 20	---	21 37 13	3.9	283.5	6.6		36.5	197	903	08 54 51
08 59 00	J1504+1029	21 37 53	3.5	282.8	6.5		36.5	27	903	08 59 00
09 00 20	---	21 39 13	3.3	283.1	6.6		36.5	80	913	08 59 01
09 00 20	BSMBH3	21 39 13	3.7	283.9	6.6		36.5	-13	913	No stop
09 03 50	---	21 42 44	3.1	284.5	6.7		36.3	197	941	09 00 21

SETUP FILE INFORMATION:

==== Setup file: sess113.L1024

Matching groups in /home/deane/sched10.2/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 3 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 5 Setup file default. Used pcal sets: 1
LO sum= 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49
        1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49
BBC fr= 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51
        625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51
Bandwd= 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
        16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
Matching frequency sets: 5

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS -- bSMBHs

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* BSMBH3	15 00 18.957612	* 15 02 43.178946	15 03 22.736177	0.00
	11 27 40.88624	* 11 15 57.06460	11 12 41.54884	0.00
* BSMBH6	13 54 18.349604	* 13 56 46.107014	13 57 26.867638	0.00
	10 40 46.46565	* 10 26 09.09074	10 22 06.10778	0.00
* J1504+1029	15 02 00.157713	* 15 04 24.979782	15 05 04.693947	0.00
	10 41 17.74000	* 10 29 39.19858	10 26 25.31714	0.00
* J1358+1119	13 55 55.265093	* 13 58 22.419676	13 59 03.009380	0.00
	11 34 06.86594	* 11 19 32.91845	11 15 30.72217	0.00
* J1333+1649	13 31 09.997625	* 13 33 35.782638	13 34 16.059658	0.14
1331+170	17 04 25.70277	* 16 49 04.01462	16 44 47.82751	0.17

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)	Source	Sun distance (deg)
BSMBH3	127.4	J1358+1119	143.1
BSMBH6	143.6	J1333+1649	147.3
J1504+1029	127.1		

ep087ctr

ARP 299-A AT 1 GB^s
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Address: IAA - CSIC, Glorieta de la Astronomia s/n, 18008 Granada, Spain
 Phone: +34-958230644 EMAIL: torres@iaa.es
 Fax: +34-958814530 Phone during observation: +34-665252538

Observing mode: 1024 Mbps

Notes: Phase-ref of Arp 299 with the full EVN
 Full EVN observations at 18cm

Schedule for TORUN (Code Tr) Page 2

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Wed 13 Mar 2013 Day 72 ---										
Next scan frequencies: 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49										
1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49										
Next BBC frequencies: 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51										
625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51										
Next scan bandwidths: 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
21 30 00	3C273	10 10 56	31.4	138.2	-2.3		-23.6	0	0	21 30 00
21 33 00	---	10 13 57	31.7	139.0	-2.3		-23.2	180	23	21 30 01
21 39 00	J1128+5925	10 19 58	78.6	49.9	-1.2		-115.7	168	23	21 39 00
21 39 30	---	10 20 28	78.7	49.8	-1.1		-115.9	30	27	21 39 01
21 39 30	ARP299	10 20 28	79.0	53.9	-1.1		-111.8	-23	27	No stop
21 42 30	---	10 23 28	79.3	53.1	-1.1		-113.2	157	50	21 39 31
21 42 30	J1128+5925	10 23 28	79.0	48.9	-1.1		-117.4	-24	50	No stop
21 43 40	---	10 24 39	79.1	48.5	-1.1		-118.0	46	59	21 42 31
21 43 40	ARP299	10 24 39	79.5	52.8	-1.1		-113.8	-23	59	No stop
21 48 10	---	10 29 09	80.0	51.4	-1.0		-116.1	247	94	21 43 41
21 48 50	J1128+5925	10 29 50	79.7	46.8	-1.0		-120.9	16	94	21 48 50
21 49 20	---	10 30 20	79.8	46.6	-1.0		-121.2	30	98	21 48 51
21 49 20	ARP299	10 30 20	80.1	51.0	-1.0		-116.7	-24	98	No stop
21 53 50	---	10 34 50	80.7	49.4	-0.9		-119.3	246	133	21 49 21
21 53 50	J1128+5925	10 34 50	80.2	44.8	-0.9		-123.9	-24	133	No stop
21 54 50	---	10 35 51	80.4	44.4	-0.9		-124.5	36	141	21 53 51
21 54 50	ARP299	10 35 51	80.8	48.9	-0.9		-120.0	-24	141	No stop
21 59 20	---	10 40 21	81.3	47.0	-0.8		-122.9	246	175	21 54 51

Schedule for TORUN (Code Tr)

Page 3

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
22 00 00	J1128+5925	10 41 01	80.9	42.0	-0.8		-128.0	15	175	22 00 00
22 00 30	---	10 41 31	80.9	41.7	-0.8		-128.4	30	179	22 00 01
22 00 30	ARP299	10 41 31	81.4	46.4	-0.8		-123.7	-24	179	No stop
22 05 00	---	10 46 02	81.9	44.1	-0.7		-127.0	246	214	22 00 31
22 05 00	J1128+5925	10 46 02	81.4	39.3	-0.7		-131.7	-25	214	No stop
22 06 10	---	10 47 12	81.5	38.7	-0.7		-132.6	45	223	22 05 01
22 06 10	ARP299	10 47 12	82.0	43.4	-0.7		-127.9	-24	223	No stop
22 10 40	---	10 51 43	82.5	40.6	-0.6		-131.6	246	258	22 06 11
22 11 20	J1128+5925	10 52 23	82.0	35.4	-0.6		-136.9	15	258	22 11 20
22 11 50	---	10 52 53	82.0	35.1	-0.6		-137.4	30	262	22 11 21
22 11 50	ARP299	10 52 53	82.6	39.8	-0.6		-132.6	-24	262	No stop
22 16 20	---	10 57 24	83.0	36.5	-0.5		-136.8	246	297	22 11 51
22 16 20	J1128+5925	10 57 24	82.4	31.9	-0.5		-141.5	-25	297	No stop
22 17 30	---	10 58 34	82.5	31.0	-0.5		-142.7	45	306	22 16 21
22 17 30	ARP299	10 58 34	83.1	35.6	-0.5		-138.0	-24	306	No stop
22 22 00	---	11 03 05	83.5	31.7	-0.4		-142.8	246	341	22 17 31
22 22 40	J1128+5925	11 03 45	82.8	26.7	-0.4		-148.0	16	341	22 22 40
22 23 10	---	11 04 15	82.9	26.3	-0.4		-148.5	30	344	22 22 41
22 23 10	ARP299	11 04 15	83.6	30.6	-0.4		-144.2	-23	344	No stop
22 27 40	---	11 08 46	83.9	26.1	-0.3		-149.6	247	379	22 23 11
22 27 40	J1128+5925	11 08 46	83.2	22.2	-0.3		-153.6	-23	379	No stop
22 28 40	---	11 09 46	83.2	21.2	-0.3		-154.8	37	387	22 27 41
22 28 40	ARP299	11 09 46	84.0	25.0	-0.3		-150.9	-22	387	No stop
22 33 10	---	11 14 17	84.2	19.9	-0.3		-157.0	248	422	22 28 41
22 33 50	J1128+5925	11 14 57	83.5	15.9	-0.2		-161.2	18	422	22 33 50
22 34 20	---	11 15 27	83.5	15.4	-0.2		-161.8	30	426	22 33 51
22 34 20	ARP299	11 15 27	84.3	18.5	-0.2		-158.6	-20	426	No stop
22 38 50	---	11 19 58	84.5	12.8	-0.2		-165.3	250	461	22 34 21
22 38 50	J1128+5925	11 19 58	83.6	10.4	-0.2		-167.7	-19	461	No stop
22 40 00	---	11 21 08	83.7	9.1	-0.1		-169.2	51	470	22 38 51
22 40 00	ARP299	11 21 08	84.5	11.2	-0.1		-167.1	-17	470	No stop
22 44 30	---	11 25 39	84.6	5.1	-0.1		-174.1	253	504	22 40 01

Schedule for TORUN (Code Tr)

Page 4

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
22 45 10	J1128+5925	11 26 19	83.7	3.2	-0.0		-176.3	24	504	22 45 10
22 45 40	---	11 26 49	83.7	2.6	-0.0		-177.0	30	508	22 45 11
22 45 40	ARP299	11 26 49	84.6	3.5	-0.0		-176.0	-16	508	No stop
22 50 10	---	11 31 20	84.6	-2.7	0.0		176.8	254	543	22 45 41
22 50 10	J1128+5925	11 31 20	83.7	-2.7	0.0		176.8	-16	543	No stop
22 51 20	---	11 32 30	83.7	-4.1	0.1		175.2	54	552	22 50 11
22 51 20	ARP299	11 32 30	84.6	-4.4	0.1		175.0	-16	552	No stop
22 55 50	---	11 37 01	84.5	-10.5	0.1		167.9	254	587	22 51 21
22 56 30	J1128+5925	11 37 41	83.6	-10.0	0.1		168.2	24	587	22 56 30
22 57 00	---	11 38 11	83.6	-10.6	0.2		167.5	30	591	22 56 31
22 57 00	ARP299	11 38 11	84.5	-12.1	0.1		166.1	-17	591	No stop
23 01 30	---	11 42 41	84.3	-17.8	0.2		159.4	253	626	22 57 01
23 01 30	J1128+5925	11 42 41	83.5	-15.5	0.2		161.6	-18	626	No stop
23 02 30	---	11 43 42	83.4	-16.6	0.2		160.4	42	634	23 01 31
23 02 30	ARP299	11 43 42	84.2	-19.0	0.2		158.0	-20	634	No stop
23 07 00	---	11 48 12	84.0	-24.2	0.3		151.8	250	668	23 02 31
23 07 40	J1128+5925	11 48 52	83.2	-21.8	0.3		154.1	20	668	23 07 40
23 08 10	---	11 49 23	83.1	-22.3	0.3		153.5	30	672	23 07 41
23 08 10	ARP299	11 49 23	83.9	-25.5	0.3		150.3	-22	672	No stop
23 12 40	---	11 53 53	83.6	-30.1	0.4		144.8	248	707	23 08 11
23 12 40	J1128+5925	11 53 53	82.9	-26.4	0.4		148.4	-22	707	No stop
23 13 50	---	11 55 03	82.8	-27.4	0.4		147.2	48	716	23 12 41
23 13 50	ARP299	11 55 03	83.5	-31.2	0.4		143.5	-23	716	No stop
23 18 20	---	11 59 34	83.1	-35.2	0.5		138.6	247	751	23 13 51
23 19 00	J1128+5925	12 00 14	82.4	-31.6	0.5		141.9	17	751	23 19 00
23 19 30	---	12 00 44	82.4	-32.0	0.5		141.4	30	755	23 19 01
23 19 30	ARP299	12 00 44	83.0	-36.1	0.5		137.4	-24	755	No stop
23 24 00	---	12 05 15	82.6	-39.5	0.6		133.1	246	790	23 19 31
23 24 00	J1128+5925	12 05 15	82.0	-35.2	0.6		137.3	-23	790	No stop
23 25 10	---	12 06 25	81.9	-35.9	0.6		136.3	47	799	23 24 01
23 25 10	ARP299	12 06 25	82.5	-40.3	0.6		132.1	-24	799	No stop
23 29 40	---	12 10 56	82.1	-43.1	0.7		128.3	246	833	23 25 11

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 13 Mar 2013 Day 72 ---										
23 30 20	J1128+5925	12 11 36	81.4	-39.1	0.7		132.0	17	833	23 30 20
23 30 50	---	12 12 06	81.4	-39.4	0.7		131.6	30	837	23 30 21
23 30 50	ARP299	12 12 06	81.9	-43.8	0.7		127.4	-24	837	No stop
23 35 20	---	12 16 37	81.5	-46.2	0.8		124.1	246	872	23 30 51
23 35 20	J1128+5925	12 16 37	80.9	-41.8	0.8		128.3	-23	872	No stop
23 36 20	---	12 17 37	80.8	-42.3	0.8		127.6	37	880	23 35 21
23 36 20	ARP299	12 17 37	81.4	-46.6	0.8		123.4	-24	880	No stop
23 40 50	---	12 22 08	80.9	-48.7	0.9		120.4	246	915	23 36 21
23 41 30	J1128+5925	12 22 48	80.3	-44.6	0.9		124.1	17	915	23 41 30
23 42 00	---	12 23 18	80.2	-44.9	0.9		123.8	30	919	23 41 31
23 42 00	ARP299	12 23 18	80.7	-49.1	0.9		119.7	-24	919	No stop
23 46 30	---	12 27 49	80.2	-50.8	1.0		117.1	246	953	23 42 01
23 46 30	J1128+5925	12 27 49	79.7	-46.6	1.0		121.1	-23	953	No stop
23 47 40	---	12 28 59	79.6	-47.1	1.0		120.4	47	963	23 46 31
23 47 40	ARP299	12 28 59	80.1	-51.2	1.0		116.4	-23	963	No stop
23 52 10	---	12 33 30	79.5	-52.6	1.1		114.1	247	997	23 47 41
23 52 50	J1128+5925	12 34 10	79.0	-48.8	1.1		117.6	17	997	23 52 50
23 53 20	---	12 34 40	79.0	-48.9	1.1		117.4	30	1001	23 52 51
23 53 20	ARP299	12 34 40	79.4	-53.0	1.1		113.5	-23	1001	No stop
23 57 50	---	12 39 11	78.8	-54.2	1.2		111.3	247	1036	23 53 21
23 57 50	J1128+5925	12 39 11	78.5	-50.2	1.2		115.1	-23	1036	No stop
23 59 00	---	12 40 21	78.3	-50.6	1.2		114.6	47	1045	23 57 51
--- Start: Wed 13 Mar 2013 Day 72 -- Stop: Thu 14 Mar 2013 Day 73 ---										
23 59 00	ARP299	12 40 21	78.7	-54.5	1.2		110.8	-23	1045	No stop
00 03 30	---	12 44 52	78.2	-55.5	1.3		108.9	247	1080	23 59 01
00 04 10	J1128+5925	12 45 32	77.7	-51.8	1.3		112.2	18	1080	00 04 10
00 04 40	---	12 46 02	77.7	-51.9	1.3		112.0	30	1084	00 04 11
00 04 40	ARP299	12 46 02	78.0	-55.7	1.3		108.4	-22	1084	No stop
00 09 10	---	12 50 33	77.4	-56.5	1.4		106.6	248	1119	00 04 41
00 09 10	J1128+5925	12 50 33	77.1	-52.9	1.4		110.1	-22	1119	No stop
00 10 10	---	12 51 33	77.0	-53.1	1.4		109.7	38	1126	00 09 11

Schedule for TORUN (Code Tr)

Page 6

Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
00 10 10	ARP299	12 51 33	77.3	-56.7	1.4		106.2	-22	1126	No stop
00 14 40	---	12 56 03	76.7	-57.4	1.4		104.6	248	1161	00 10 11
00 15 20	J1128+5925	12 56 44	76.4	-54.0	1.5		107.7	18	1161	00 15 20
00 15 50	---	12 57 14	76.3	-54.1	1.5		107.5	30	1165	00 15 21
00 15 50	ARP299	12 57 14	76.6	-57.6	1.5		104.2	-22	1165	No stop
00 20 20	---	13 01 44	76.0	-58.1	1.5		102.7	248	1200	00 15 51
00 20 20	J1128+5925	13 01 44	75.8	-54.8	1.5		105.9	-21	1200	No stop
00 21 30	---	13 02 55	75.6	-54.9	1.6		105.4	49	1209	00 20 21
00 21 30	ARP299	13 02 55	75.9	-58.3	1.6		102.3	-21	1209	No stop
00 26 00	---	13 07 25	75.3	-58.7	1.6		100.9	249	1244	00 21 31
00 26 40	J1128+5925	13 08 05	75.0	-55.6	1.7		103.7	19	1244	00 26 40
00 27 10	---	13 08 36	74.9	-55.6	1.7		103.5	30	1248	00 26 41
00 27 10	ARP299	13 08 36	75.2	-58.9	1.7		100.5	-21	1248	No stop
00 31 40	---	13 13 06	74.6	-59.2	1.7		99.2	249	1282	00 27 11
00 31 40	J1128+5925	13 13 06	74.4	-56.1	1.7		102.1	-21	1282	No stop
00 32 50	---	13 14 16	74.2	-56.2	1.8		101.7	49	1292	00 31 41
00 32 50	ARP299	13 14 16	74.4	-59.3	1.7		98.8	-21	1292	No stop
00 37 20	---	13 18 47	73.8	-59.6	1.8		97.6	249	1326	00 32 51
00 38 00	J1128+5925	13 19 27	73.6	-56.7	1.8		100.2	20	1326	00 38 00
00 38 30	---	13 19 57	73.5	-56.7	1.8		100.0	30	1330	00 38 01
00 38 30	ARP299	13 19 57	73.7	-59.7	1.8		97.3	-20	1330	No stop
00 43 00	---	13 24 28	73.1	-59.9	1.9		96.1	250	1365	00 38 31
00 43 00	J1128+5925	13 24 28	72.9	-57.1	1.9		98.8	-20	1365	No stop
00 44 00	---	13 25 28	72.8	-57.1	1.9		98.5	40	1373	00 43 01
00 44 00	ARP299	13 25 28	73.0	-60.0	1.9		95.8	-20	1373	No stop
00 48 30	---	13 29 59	72.4	-60.2	2.0		94.7	250	1408	00 44 01
00 49 10	J1128+5925	13 30 39	72.2	-57.4	2.0		97.1	20	1408	00 49 10
00 49 40	---	13 31 09	72.1	-57.4	2.0		97.0	30	1412	00 49 11
00 49 40	ARP299	13 31 09	72.2	-60.2	2.0		94.4	-20	1412	No stop
00 54 10	---	13 35 40	71.6	-60.3	2.1		93.3	250	1446	00 49 41
00 54 10	J1128+5925	13 35 40	71.5	-57.6	2.1		95.8	-20	1446	No stop
00 55 20	---	13 36 50	71.4	-57.7	2.1		95.5	50	1455	00 54 11

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
00 55 20	ARP299	13 36 50	71.5	-60.4	2.1		93.0	-20	1455	No stop
00 59 50	---	13 41 21	70.9	-60.4	2.2		92.0	250	1490	00 55 21
01 00 30	J1128+5925	13 42 01	70.7	-57.9	2.2		94.2	21	1490	01 00 30
01 01 00	---	13 42 31	70.7	-57.9	2.2		94.1	30	1494	01 00 31
01 01 00	ARP299	13 42 31	70.7	-60.5	2.2		91.7	-19	1494	No stop
01 05 30	---	13 47 02	70.2	-60.5	2.3		90.7	251	1529	01 01 01
01 05 30	J1128+5925	13 47 02	70.1	-58.0	2.3		93.0	-19	1529	No stop
01 06 40	---	13 48 12	69.9	-58.0	2.3		92.8	51	1538	01 05 31
01 06 40	ARP299	13 48 12	70.0	-60.5	2.3		90.5	-19	1538	No stop
01 11 10	---	13 52 43	69.4	-60.5	2.4		89.5	251	1573	01 06 41
01 11 50	J1128+5925	13 53 23	69.3	-58.1	2.4		91.6	21	1573	01 11 50
01 12 20	---	13 53 53	69.2	-58.1	2.4		91.5	30	1577	01 11 51
01 12 20	ARP299	13 53 53	69.3	-60.5	2.4		89.3	-19	1577	No stop
01 16 50	---	13 58 24	68.7	-60.5	2.5		88.3	251	1612	01 12 21
01 16 50	J1128+5925	13 58 24	68.6	-58.1	2.5		90.5	-19	1612	No stop
01 17 50	---	13 59 24	68.5	-58.1	2.5		90.2	41	1619	01 16 51
01 17 50	ARP299	13 59 24	68.5	-60.5	2.5		88.1	-19	1619	No stop
01 22 20	---	14 03 55	68.0	-60.4	2.6		87.2	251	1654	01 17 51
01 23 00	J1128+5925	14 04 35	67.8	-58.1	2.6		89.1	21	1654	01 23 00
01 23 30	---	14 05 05	67.8	-58.1	2.6		89.0	30	1658	01 23 01
01 23 30	ARP299	14 05 05	67.8	-60.4	2.6		87.0	-18	1658	No stop
01 28 00	---	14 09 36	67.2	-60.3	2.7		86.1	252	1693	01 23 31
01 28 00	J1128+5925	14 09 36	67.2	-58.1	2.7		88.1	-18	1693	No stop
01 29 10	---	14 10 46	67.1	-58.0	2.7		87.9	52	1702	01 28 01
01 29 10	ARP299	14 10 46	67.1	-60.3	2.7		85.9	-18	1702	No stop
01 33 40	---	14 15 16	66.5	-60.1	2.8		85.1	252	1737	01 29 11
01 34 20	J1128+5925	14 15 57	66.4	-58.0	2.8		86.8	22	1737	01 34 20
01 34 50	---	14 16 27	66.3	-58.0	2.8		86.7	30	1741	01 34 21
01 34 50	ARP299	14 16 27	66.3	-60.1	2.8		84.8	-18	1741	No stop
01 39 20	---	14 20 57	65.7	-60.0	2.9		84.0	252	1775	01 34 51

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
01 39 20	J1128+5925	14 20 57	65.8	-57.9	2.9		85.8	-18	1775	No stop
01 40 30	---	14 22 08	65.6	-57.8	2.9		85.6	52	1784	01 39 21
01 40 30	ARP299	14 22 08	65.6	-59.9	2.9		83.8	-18	1784	No stop
01 45 00	---	14 26 38	65.0	-59.8	3.0		83.0	252	1819	01 40 31
01 45 40	J1128+5925	14 27 18	65.0	-57.7	3.0		84.6	22	1819	01 45 40
01 46 10	---	14 27 49	64.9	-57.7	3.0		84.5	30	1823	01 45 41
01 46 10	ARP299	14 27 49	64.8	-59.7	3.0		82.8	-18	1823	No stop
01 50 40	---	14 32 19	64.3	-59.5	3.0		82.0	252	1858	01 46 11
01 50 40	J1128+5925	14 32 19	64.3	-57.6	3.1		83.7	-18	1858	No stop
01 51 40	---	14 33 19	64.2	-57.5	3.1		83.5	42	1866	01 50 41
01 51 40	ARP299	14 33 19	64.1	-59.5	3.1		81.8	-18	1866	No stop
01 56 10	---	14 37 50	63.5	-59.3	3.1		81.0	252	1901	01 51 41
01 56 50	J1128+5925	14 38 30	63.5	-57.3	3.2		82.5	23	1901	01 56 50
01 57 20	---	14 39 00	63.5	-57.3	3.2		82.4	30	1904	01 56 51
01 57 20	ARP299	14 39 00	63.4	-59.2	3.2		80.8	-17	1904	No stop
02 01 50	---	14 43 31	62.8	-59.0	3.2		80.0	253	1939	01 57 21
02 01 50	J1128+5925	14 43 31	62.9	-57.1	3.2		81.6	-17	1939	No stop
02 03 00	---	14 44 41	62.8	-57.1	3.3		81.4	53	1948	02 01 51
02 03 00	ARP299	14 44 41	62.7	-59.0	3.3		79.8	-17	1948	No stop
02 07 30	---	14 49 12	62.1	-58.7	3.3		79.1	253	1983	02 03 01
02 08 10	J1128+5925	14 49 52	62.1	-56.9	3.3		80.5	23	1983	02 08 10
02 08 40	---	14 50 22	62.0	-56.9	3.4		80.4	30	1987	02 08 11
02 08 40	ARP299	14 50 22	61.9	-58.7	3.4		78.9	-17	1987	No stop
02 13 10	---	14 54 53	61.4	-58.4	3.4		78.1	253	2022	02 08 41
02 13 10	J1128+5925	14 54 53	61.5	-56.6	3.4		79.6	-17	2022	No stop
02 14 20	---	14 56 03	61.3	-56.6	3.5		79.4	53	2031	02 13 11
02 14 20	ARP299	14 56 03	61.2	-58.4	3.4		78.0	-17	2031	No stop
02 18 50	---	15 00 34	60.6	-58.1	3.5		77.2	253	2066	02 14 21
02 19 30	J1128+5925	15 01 14	60.7	-56.3	3.5		78.5	23	2066	02 19 30
02 20 00	---	15 01 44	60.6	-56.3	3.5		78.5	30	2070	02 19 31

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
02 20 00	ARP299	15 01 44	60.5	-58.0	3.5		77.0	-17	2070	No stop
02 24 30	---	15 06 15	59.9	-57.7	3.6		76.3	253	2104	02 20 01
02 24 30	J1128+5925	15 06 15	60.1	-56.1	3.6		77.7	-17	2104	No stop
02 25 30	---	15 07 15	59.9	-56.0	3.6		77.5	43	2112	02 24 31
02 25 30	ARP299	15 07 15	59.8	-57.7	3.6		76.1	-17	2112	No stop
02 30 00	---	15 11 46	59.2	-57.4	3.7		75.4	253	2147	02 25 31
02 30 40	J1128+5925	15 12 26	59.3	-55.7	3.7		76.7	23	2147	02 30 40
02 31 10	---	15 12 56	59.2	-55.7	3.7		76.6	30	2151	02 30 41
02 31 10	ARP299	15 12 56	59.1	-57.3	3.7		75.2	-16	2151	No stop
02 35 40	---	15 17 27	58.5	-57.0	3.8		74.5	254	2186	02 31 11
02 35 40	J1128+5925	15 17 27	58.7	-55.4	3.8		75.8	-16	2186	No stop
02 36 50	---	15 18 37	58.5	-55.3	3.8		75.7	54	2195	02 35 41
02 36 50	ARP299	15 18 37	58.3	-57.0	3.8		74.4	-16	2195	No stop
02 41 20	---	15 23 08	57.8	-56.6	3.9		73.7	254	2230	02 36 51
02 42 00	J1128+5925	15 23 48	57.9	-55.0	3.9		74.8	24	2230	02 42 00
02 42 30	---	15 24 18	57.8	-55.0	3.9		74.7	30	2233	02 42 01
02 42 30	ARP299	15 24 18	57.6	-56.6	3.9		73.5	-16	2233	No stop
02 47 00	---	15 28 49	57.1	-56.2	4.0		72.8	254	2268	02 42 31
02 47 00	J1128+5925	15 28 49	57.3	-54.7	4.0		74.0	-16	2268	No stop
02 48 10	---	15 29 59	57.1	-54.6	4.0		73.8	54	2277	02 47 01
02 48 10	ARP299	15 29 59	56.9	-56.2	4.0		72.6	-16	2277	No stop
02 52 40	---	15 34 29	56.4	-55.8	4.1		71.9	254	2312	02 48 11
02 53 20	J1128+5925	15 35 10	56.5	-54.3	4.1		73.0	24	2312	02 53 20
02 53 50	---	15 35 40	56.4	-54.3	4.1		72.9	30	2316	02 53 21
02 53 50	ARP299	15 35 40	56.2	-55.7	4.1		71.7	-16	2316	No stop
02 58 20	---	15 40 10	55.7	-55.4	4.2		71.1	254	2351	02 53 51
02 58 20	J1128+5925	15 40 10	55.9	-53.9	4.2		72.2	-16	2351	No stop
02 59 20	---	15 41 11	55.8	-53.9	4.2		72.0	44	2359	02 58 21
02 59 20	ARP299	15 41 11	55.5	-55.3	4.2		70.9	-16	2359	No stop
03 03 50	---	15 45 41	55.0	-55.0	4.3		70.2	254	2393	02 59 21

Schedule for TORUN (Code Tr)

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Arp 299-A at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

```

-----
Start UT  Source          Start / Stop          Early  Disk  TPStart
Stop UT          LST      EL  AZ  HA  UP  ParA  Dwell  GBytes  SYNC
-----
--- Thu 14 Mar 2013  Day 73 ---

03 04 30  J1128+5925  15 46 21  55.1 -53.5  4.3      71.2   24   2393  03 04 30
03 05 00  ---          15 46 51  55.1 -53.5  4.3      71.1   30   2397  03 04 31

03 05 00  ARP299      15 46 51  54.8 -54.9  4.3      70.0  -16   2397  No stop
03 09 30  ---          15 51 22  54.3 -54.6  4.4      69.4  254   2432  03 05 01

03 09 30  J1128+5925  15 51 22  54.5 -53.1  4.4      70.4  -16   2432  No stop
03 10 40  ---          15 52 32  54.4 -53.1  4.4      70.3   54   2441  03 09 31

03 10 40  ARP299      15 52 32  54.1 -54.5  4.4      69.2  -16   2441  No stop
03 15 10  ---          15 57 03  53.6 -54.1  4.5      68.5  254   2476  03 10 41

03 15 50  J1128+5925  15 57 43  53.8 -52.7  4.5      69.5   24   2476  03 15 50
03 16 20  ---          15 58 13  53.7 -52.6  4.5      69.4   30   2480  03 15 51

03 16 20  ARP299      15 58 13  53.4 -54.0  4.5      68.4  -15   2480  No stop
03 20 50  ---          16 02 44  52.9 -53.6  4.6      67.7  255   2515  03 16 21

03 20 50  J1128+5925  16 02 44  53.2 -52.3  4.6      68.7  -15   2515  No stop
03 21 50  ---          16 03 44  53.1 -52.2  4.6      68.5   45   2522  03 20 51

03 21 50  ARP299      16 03 44  52.8 -53.6  4.6      67.5  -15   2522  No stop
03 25 20  ---          16 07 15  52.4 -53.3  4.6      67.0  195   2550  03 21 51

03 26 00  J1128+5925  16 07 55  52.6 -51.9  4.6      67.9   25   2550  03 26 00
03 26 30  ---          16 08 25  52.5 -51.8  4.7      67.8   30   2553  03 26 01

03 26 30  ARP299      16 08 25  52.2 -53.2  4.7      66.8  -15   2553  No stop
03 29 00  ---          16 10 55  51.9 -53.0  4.7      66.5  135   2573  03 26 31

03 29 00  J1128+5925  16 10 55  52.2 -51.6  4.7      67.4  -15   2573  No stop
03 30 00  ---          16 11 56  52.1 -51.6  4.7      67.3   45   2580  03 29 01

```

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.L1024

Matching groups in /Users/torres/sched102/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```

Setup group:      4          Station: TORUN          Total bit rate: 1024
Format: MKIV1:2   Bits per sample: 2     Sample rate: 32.000
Number of channels: 16  DBE type:          Speedup factor: 0.50

```

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 7 Setup file default. Used pcal sets: 1
LO sum= 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49
        1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49
BBC fr= 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51
        625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51
Bandwd= 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
        16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
Matching frequency sets: 7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS --

Arp 299-A at 1 Gb/s

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		Error (mas)
	(B1950)	(J2000)	
* ARP299	11 25 44.174219	* 11 28 33.622010	11 29 20.861097 0.00
	58 50 18.17319	* 58 33 46.61000	58 29 14.05509 0.00
* J1128+5925	11 25 23.181652	* 11 28 13.340676	11 29 00.802154 0.00
	59 41 46.14397	* 59 25 14.79866	59 20 42.41699 0.00
J1229+0203	12 26 33.245833	* 12 29 06.699729	12 29 49.246015 1.05
* 3C273	02 19 43.30578	* 02 03 08.59828	01 58 33.24825 1.38

em100dtr

eEVN+MERLIN-18CM-J0941+3944

PI: Mar Mezcua

Address: C/ Via Lactea s/n, 38200 La Laguna, S/C de Tenerife, Spain
Phone: +34 922 605 751 EMAIL: mezcua@iac.es
Fax: +34 922 605 751 Phone during observation: +34 922 605 751

Observing mode: Continuum

Notes: Fringe finder: 4C39.25 (J0927+3902)
Phase reference calibrator: J0939+4141

Schedule for TORUN (Code Tr) Page 2
eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Table with columns: Start UT, Source, Start LST, Stop EL, Stop AZ, HA, UP, ParA, Early Dwell, Disk GBytes, TPStart SYNC. Includes scan frequencies, BBC frequencies, and bandwidths for various observation times.

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
15 26 35	J0941+3944	04 10 28	34.6	68.0	-5.5		-46.4	16	165	15 26 35
15 29 30	---	04 13 24	35.0	68.5	-5.5		-46.6	175	188	15 26 36
15 30 05	J0939+4141	04 13 59	36.6	67.1	-5.4		-47.7	15	188	15 30 05
15 31 30	=0936+419	04 15 24	36.8	67.3	-5.4		-47.8	85	199	15 30 06
15 32 05	J0941+3944	04 15 59	35.3	68.9	-5.4		-46.7	16	199	15 32 05
15 35 00	---	04 18 55	35.7	69.4	-5.4		-46.9	175	221	15 32 06
15 35 35	J0939+4141	04 19 30	37.4	68.0	-5.4		-48.1	16	221	15 35 35
15 37 00	=0936+419	04 20 55	37.6	68.2	-5.3		-48.2	85	232	15 35 36
15 37 35	J0941+3944	04 21 30	36.1	69.8	-5.3		-47.1	16	232	15 37 35
15 40 30	---	04 24 26	36.5	70.3	-5.3		-47.3	175	255	15 37 36
15 41 05	J0939+4141	04 25 01	38.1	68.8	-5.3		-48.5	16	255	15 41 05
15 42 30	=0936+419	04 26 26	38.3	69.0	-5.2		-48.6	85	266	15 41 06
15 43 05	J0941+3944	04 27 01	36.9	70.7	-5.3		-47.4	16	266	15 43 05
15 46 00	---	04 29 56	37.3	71.2	-5.2		-47.6	175	288	15 43 06
15 46 35	J0939+4141	04 30 32	38.9	69.7	-5.2		-48.9	16	288	15 46 35
15 48 00	=0936+419	04 31 57	39.1	69.9	-5.1		-49.0	85	299	15 46 36
15 48 35	J0941+3944	04 32 32	37.7	71.6	-5.2		-47.8	16	299	15 48 35
15 51 30	---	04 35 27	38.1	72.1	-5.1		-47.9	175	322	15 48 36
15 52 05	J0939+4141	04 36 02	39.7	70.6	-5.1		-49.3	16	322	15 52 05
15 53 30	=0936+419	04 37 28	39.9	70.8	-5.1		-49.4	85	333	15 52 06
15 54 05	J0941+3944	04 38 03	38.5	72.5	-5.1		-48.1	16	333	15 54 05
15 57 00	---	04 40 58	38.9	73.0	-5.0		-48.3	175	355	15 54 06
15 57 35	J0939+4141	04 41 33	40.5	71.4	-5.0		-49.6	16	355	15 57 35
15 59 00	=0936+419	04 42 59	40.7	71.7	-5.0		-49.7	85	366	15 57 36
15 59 35	J0941+3944	04 43 34	39.3	73.4	-5.0		-48.4	16	366	15 59 35
16 02 30	---	04 46 29	39.7	73.9	-4.9		-48.6	175	389	15 59 36
16 03 05	J0939+4141	04 47 04	41.3	72.3	-4.9		-50.0	16	389	16 03 05
16 04 30	=0936+419	04 48 30	41.5	72.6	-4.9		-50.0	85	400	16 03 06
16 05 05	J0941+3944	04 49 05	40.0	74.3	-4.9		-48.7	16	400	16 05 05
16 08 00	---	04 52 00	40.5	74.8	-4.8		-48.9	175	423	16 05 06
16 08 35	J0939+4141	04 52 35	42.0	73.2	-4.8		-50.3	16	423	16 08 35
16 10 00	=0936+419	04 54 00	42.3	73.4	-4.8		-50.4	85	434	16 08 36

Schedule for TORUN (Code Tr)

Page 4

eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
16 10 35	J0941+3944	04 54 36	40.8	75.3	-4.8		-49.0	16	434	16 10 35
16 13 30	---	04 57 31	41.3	75.8	-4.7		-49.1	175	456	16 10 36
16 14 05	J0939+4141	04 58 06	42.8	74.1	-4.7		-50.6	16	456	16 14 05
16 15 30	=0936+419	04 59 31	43.0	74.3	-4.7		-50.7	85	467	16 14 06
16 16 05	J0941+3944	05 00 06	41.6	76.2	-4.7		-49.3	16	467	16 16 05
16 19 00	---	05 03 02	42.1	76.7	-4.7		-49.4	175	490	16 16 06
16 19 35	J0939+4141	05 03 37	43.6	75.0	-4.6		-50.9	16	490	16 19 35
16 21 00	=0936+419	05 05 02	43.8	75.2	-4.6		-51.0	85	501	16 19 36
16 21 35	J0941+3944	05 05 37	42.5	77.1	-4.6		-49.5	16	501	16 21 35
16 24 30	---	05 08 33	42.9	77.6	-4.6		-49.6	175	523	16 21 36
16 25 05	J0939+4141	05 09 08	44.4	75.9	-4.5		-51.2	16	523	16 25 05
16 26 30	=0936+419	05 10 33	44.6	76.1	-4.5		-51.3	85	534	16 25 06
16 27 05	J0941+3944	05 11 08	43.3	78.1	-4.5		-49.8	16	534	16 27 05
16 30 00	---	05 14 04	43.7	78.6	-4.5		-49.9	175	557	16 27 06
16 30 35	J0939+4141	05 14 39	45.2	76.8	-4.4		-51.5	16	557	16 30 35
16 32 00	=0936+419	05 16 04	45.5	77.0	-4.4		-51.5	85	568	16 30 36
16 32 35	J0941+3944	05 16 39	44.1	79.0	-4.4		-50.0	16	568	16 32 35
16 35 30	---	05 19 35	44.5	79.5	-4.4		-50.1	175	590	16 32 36
16 36 05	J0939+4141	05 20 10	46.1	77.7	-4.3		-51.7	16	590	16 36 05
16 37 30	=0936+419	05 21 35	46.3	78.0	-4.3		-51.8	85	601	16 36 06
16 38 05	J0941+3944	05 22 10	44.9	80.0	-4.3		-50.2	16	601	16 38 05
16 41 00	---	05 25 06	45.3	80.5	-4.3		-50.3	175	624	16 38 06
16 41 35	J0939+4141	05 25 41	46.9	78.6	-4.3		-52.0	16	624	16 41 35
16 43 00	=0936+419	05 27 06	47.1	78.9	-4.2		-52.0	85	635	16 41 36
16 43 35	J0941+3944	05 27 41	45.7	80.9	-4.2		-50.4	16	635	16 43 35
16 46 30	---	05 30 36	46.1	81.4	-4.2		-50.5	175	657	16 43 36
16 47 05	J0939+4141	05 31 12	47.7	79.6	-4.2		-52.2	16	657	16 47 05
16 48 30	=0936+419	05 32 37	47.9	79.8	-4.1		-52.3	85	668	16 47 06
16 49 05	J0941+3944	05 33 12	46.5	81.9	-4.2		-50.6	16	668	16 49 05
16 52 00	---	05 36 07	47.0	82.4	-4.1		-50.7	175	691	16 49 06
16 52 35	J0939+4141	05 36 42	48.5	80.5	-4.1		-52.4	16	691	16 52 35
16 54 00	=0936+419	05 38 08	48.7	80.8	-4.0		-52.5	85	702	16 52 36

Schedule for TORUN (Code Tr)

Page 5

eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
16 54 35	J0941+3944	05 38 43	47.3	82.9	-4.1		-50.7	16	702	16 54 35
16 57 30	---	05 41 38	47.8	83.4	-4.0		-50.8	175	724	16 54 36
16 58 05	J0939+4141	05 42 13	49.3	81.5	-4.0		-52.6	16	724	16 58 05
16 59 30	=0936+419	05 43 39	49.5	81.7	-4.0		-52.7	85	735	16 58 06
17 00 05	J0941+3944	05 44 14	48.2	83.9	-4.0		-50.9	16	735	17 00 05
17 03 00	---	05 47 09	48.6	84.4	-3.9		-50.9	175	758	17 00 06
17 03 35	J0939+4141	05 47 44	50.1	82.4	-3.9		-52.8	16	758	17 03 35
17 05 00	=0936+419	05 49 09	50.3	82.7	-3.9		-52.8	85	769	17 03 36
17 05 35	J0941+3944	05 49 45	49.0	84.9	-3.9		-51.0	16	769	17 05 35
17 08 30	---	05 52 40	49.4	85.4	-3.8		-51.1	175	792	17 05 36
17 09 05	J0939+4141	05 53 15	51.0	83.4	-3.8		-53.0	16	792	17 09 05
17 10 30	=0936+419	05 54 40	51.2	83.7	-3.8		-53.0	85	803	17 09 06
17 11 05	J0941+3944	05 55 15	49.8	85.9	-3.8		-51.1	16	803	17 11 05
17 14 00	---	05 58 11	50.3	86.5	-3.7		-51.1	175	825	17 11 06
17 14 35	J0939+4141	05 58 46	51.8	84.4	-3.7		-53.1	16	825	17 14 35
17 16 00	=0936+419	06 00 11	52.0	84.7	-3.7		-53.1	85	836	17 14 36
17 17 00	J0927+3902	06 01 11	52.4	90.7	-3.4		-50.6	33	836	17 17 00
17 21 30	=0923+392	06 05 42	53.1	91.6	-3.4		-50.5	270	871	17 17 01
17 22 30	J0939+4141	06 06 42	53.0	85.9	-3.6		-53.3	33	871	17 22 30
17 23 55	=0936+419	06 08 08	53.2	86.1	-3.5		-53.3	85	882	17 22 31
17 24 30	J0941+3944	06 08 43	51.8	88.5	-3.6		-51.3	16	882	17 24 30
17 27 25	---	06 11 38	52.3	89.1	-3.5		-51.3	175	904	17 24 31
17 28 00	J0939+4141	06 12 13	53.8	86.9	-3.5		-53.3	16	904	17 28 00
17 29 25	=0936+419	06 13 38	54.0	87.2	-3.5		-53.4	85	915	17 28 01
17 30 00	J0941+3944	06 14 14	52.7	89.6	-3.5		-51.3	16	915	17 30 00
17 32 55	---	06 17 09	53.1	90.1	-3.4		-51.3	175	938	17 30 01
17 33 30	J0939+4141	06 17 44	54.6	87.9	-3.4		-53.4	16	938	17 33 30
17 34 55	=0936+419	06 19 09	54.8	88.2	-3.4		-53.4	85	949	17 33 31
17 35 30	J0941+3944	06 19 44	53.5	90.7	-3.4		-51.3	16	949	17 35 30
17 38 25	---	06 22 40	53.9	91.3	-3.3		-51.3	175	972	17 35 31
17 39 00	J0939+4141	06 23 15	55.4	89.0	-3.3		-53.4	16	972	17 39 00
17 40 25	=0936+419	06 24 40	55.7	89.3	-3.3		-53.5	85	983	17 39 01

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
17 41 00	J0941+3944	06 25 15	54.3	91.8	-3.3		-51.2	16	983	17 41 00
17 43 55	---	06 28 11	54.8	92.4	-3.2		-51.2	175	1005	17 41 01
17 44 30	J0939+4141	06 28 46	56.3	90.1	-3.2		-53.5	16	1005	17 44 30
17 45 55	=0936+419	06 30 11	56.5	90.4	-3.2		-53.5	85	1016	17 44 31
17 46 30	J0941+3944	06 30 46	55.1	92.9	-3.2		-51.2	16	1016	17 46 30
17 49 25	---	06 33 42	55.6	93.6	-3.1		-51.1	175	1039	17 46 31
17 50 00	J0939+4141	06 34 17	57.1	91.2	-3.1		-53.4	16	1039	17 50 00
17 51 25	=0936+419	06 35 42	57.3	91.5	-3.1		-53.4	85	1050	17 50 01
17 52 00	J0941+3944	06 36 17	56.0	94.1	-3.1		-51.1	16	1050	17 52 00
17 54 55	---	06 39 13	56.4	94.8	-3.1		-51.0	175	1072	17 52 01
17 55 30	J0939+4141	06 39 48	57.9	92.4	-3.0		-53.4	16	1072	17 55 30
17 56 55	=0936+419	06 41 13	58.1	92.7	-3.0		-53.4	85	1083	17 55 31
17 57 30	J0941+3944	06 41 48	56.8	95.3	-3.0		-51.0	16	1083	17 57 30
18 00 25	---	06 44 44	57.2	96.0	-3.0		-50.9	175	1106	17 57 31
18 01 00	J0939+4141	06 45 19	58.8	93.5	-2.9		-53.3	16	1106	18 01 00
18 02 25	=0936+419	06 46 44	59.0	93.9	-2.9		-53.3	85	1117	18 01 01
18 03 00	J0941+3944	06 47 19	57.6	96.6	-2.9		-50.8	15	1117	18 03 00
18 05 55	---	06 50 14	58.1	97.2	-2.9		-50.7	175	1139	18 03 01
18 06 30	J0939+4141	06 50 50	59.6	94.7	-2.8		-53.2	16	1139	18 06 30
18 07 55	=0936+419	06 52 15	59.8	95.1	-2.8		-53.2	85	1150	18 06 31
18 08 30	J0941+3944	06 52 50	58.4	97.8	-2.8		-50.6	15	1150	18 08 30
18 11 25	---	06 55 45	58.9	98.5	-2.8		-50.5	175	1173	18 08 31
18 12 00	J0939+4141	06 56 20	60.4	96.0	-2.7		-53.0	16	1173	18 12 00
18 13 25	=0936+419	06 57 46	60.6	96.3	-2.7		-53.0	85	1184	18 12 01
18 14 00	J0941+3944	06 58 21	59.3	99.1	-2.7		-50.4	15	1184	18 14 00
18 16 55	---	07 01 16	59.7	99.8	-2.7		-50.2	175	1206	18 14 01
18 17 30	J0939+4141	07 01 51	61.2	97.3	-2.6		-52.8	15	1206	18 17 30
18 18 55	=0936+419	07 03 17	61.4	97.6	-2.6		-52.8	85	1217	18 17 31
18 19 30	J0941+3944	07 03 52	60.1	100.5	-2.6		-50.1	15	1217	18 19 30
18 22 25	---	07 06 47	60.5	101.2	-2.6		-49.9	175	1240	18 19 31
18 23 00	J0939+4141	07 07 22	62.0	98.6	-2.6		-52.6	15	1240	18 23 00
18 24 25	=0936+419	07 08 48	62.3	98.9	-2.5		-52.5	85	1251	18 23 01

Schedule for TORUN (Code Tr) Page 7
 eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
 Early: Seconds between end of slew and start. Dwell: On source seconds.
 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
18 25 00	J0941+3944	07 09 23	60.9	101.9	-2.5		-49.8	15	1251	18 25 00
18 27 55	---	07 12 18	61.3	102.6	-2.5		-49.6	175	1273	18 25 01
18 28 30	J0939+4141	07 12 53	62.9	99.9	-2.5		-52.3	15	1273	18 28 30
18 29 55	=0936+419	07 14 18	63.1	100.3	-2.4		-52.2	85	1284	18 28 31

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.L1024

Matching groups in /homes/vlbsoft/sched10.2/catalogs/freq.dat:
 tri8cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 3 Station: TORUN Total bit rate: 1024
 Format: MKIV1:2 Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 0.50

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

Frequency Set:	6	Setup file default.						Used	pcal sets:	1
LO sum=	1610.49	1610.49	1610.49	1610.49	1642.49	1642.49	1642.49	1642.49	1642.49	
	1674.49	1674.49	1674.49	1674.49	1706.49	1706.49	1706.49	1706.49	1706.49	
BBC fr=	689.51	689.51	689.51	689.51	657.51	657.51	657.51	657.51	657.51	
	625.51	625.51	625.51	625.51	593.51	593.51	593.51	593.51	593.51	
Bandwd=	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	
Matching frequency sets:	6									

The following pulse cal sets were used with this setup:

```
Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1   S3   S5   S7   S9   S11  S13  S15
PCALXB2=  S2   S4   S6   S8   S10  S12  S14  S16
PCALFR1=  490  510  490  510  490  510  490  510
PCALFR2=  490  510  490  510  490  510  490  510
```

Track assignments are:

```
track1=  2, 10, 18, 26,  3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off
```

SOURCES USED IN RECORDING SCANS -- eEVN+MERLIN-18CM-J0941+3944

Catalog positions marked with *.

Precession of date coordinates is based on stop time of first scan.

Names used in schedule marked with *.

Short names used in VLA and SNAP files marked with +.

Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900

No adjustments are made for rates (DRA, DDEC).

Scan hours are for recording scans only.

Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
* J0941+3944	09 38 18.266980	* 09 41 24.034000	09 42 15.150767	0.00
	39 58 22.22489	* 39 44 41.87000	39 40 55.74556	0.00
* J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.608619	0.13
0923+392	39 15 23.56637	* 39 02 20.85177	38 58 44.97731	0.10
* J0939+4141	09 36 41.225341	* 09 39 49.615846	09 40 41.450074	0.24
0936+419	41 55 30.51681	* 41 41 54.19116	41 38 09.57011	0.31

The solar corona can cause unstable phases for sources too close to the Sun.

SCHED provides warnings at individual scans for distances less than 10 degrees.

The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
J0941+3944	134.2
J0927+3902	132.7
J0939+4141	132.5

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of $60 \text{ deg } F^{-0.6}$ where F is in GHz.

For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

em100etr

EEVN+MERLIN-18CM-J0941+3944

PI: *Mar Mezcua*

Address: C/ Via Lactea s/n, 38200 La Laguna, S/C de Tenerife, Spain
 Phone: +34 922 605 751 EMAIL: mezcua@iac.es
 Fax: +34 922 605 751 Phone during observation: +34 922 605 751

Observing mode: Continuum

Notes: Fringe finder: 4C39.25 (J0927+3902)
 Phase reference calibrator: J0939+4141

Schedule for TORUN (Code Tr) Page 2
 eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
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 Disk: GBytes recorded to this point.
 TPStart: Recording start time. Frequencies are LO sum (band edge).
 SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC

--- Thu 14 Mar 2013 Day 73 ---										
Next scan frequencies: 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49										
1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49										
Next BBC frequencies: 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51										
625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51										
Next scan bandwidths: 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
21 30 00	J0939+4141	10 14 53	77.2	210.0	0.6	23.7	0	0	21 30 00	
21 32 00	=0936+419	10 16 53	77.0	211.6	0.6	24.9	120	15	21 30 01	
21 32 50	J0941+3944	10 17 43	75.3	207.8	0.6	21.4	27	15	21 32 50	
21 35 40	---	10 20 34	75.1	209.8	0.6	22.8	170	37	21 32 51	
21 36 30	J0939+4141	10 21 24	76.7	214.9	0.7	27.4	26	37	21 36 30	
21 37 50	=0936+419	10 22 44	76.5	215.9	0.7	28.1	80	48	21 36 31	
21 38 40	J0941+3944	10 23 34	74.8	211.9	0.7	24.3	26	48	21 38 40	
21 41 30	---	10 26 25	74.6	213.7	0.7	25.7	170	70	21 38 41	
21 42 20	J0939+4141	10 27 15	76.1	219.0	0.8	30.4	25	70	21 42 20	
21 43 40	=0936+419	10 28 35	76.0	219.9	0.8	31.0	80	80	21 42 21	
21 44 30	J0941+3944	10 29 25	74.4	215.7	0.8	27.1	26	80	21 44 30	
21 47 20	---	10 32 16	74.1	217.5	0.8	28.3	170	102	21 44 31	
21 48 10	J0939+4141	10 33 06	75.6	222.8	0.9	33.1	25	102	21 48 10	
21 49 30	=0936+419	10 34 26	75.4	223.6	0.9	33.7	80	112	21 48 11	
21 50 20	J0941+3944	10 35 16	73.8	219.3	0.9	29.6	26	112	21 50 20	
21 53 10	---	10 38 07	73.5	221.0	0.9	30.8	170	134	21 50 21	
21 54 00	J0939+4141	10 38 57	74.9	226.3	1.0	35.5	25	134	21 54 00	
21 55 20	=0936+419	10 40 17	74.8	227.1	1.0	36.1	80	145	21 54 01	

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
21 56 10	J0941+3944	10 41 07	73.2	222.7	1.0		32.0	26	145	21 56 10
21 59 00	---	10 43 58	73.0	224.3	1.0		33.0	170	166	21 56 11
21 59 50	J0939+4141	10 44 48	74.3	229.6	1.1		37.7	25	166	21 59 50
22 01 10	=0936+419	10 46 08	74.1	230.4	1.1		38.2	80	177	21 59 51
22 02 00	J0941+3944	10 46 58	72.6	225.9	1.1		34.1	26	177	22 02 00
22 04 50	---	10 49 49	72.3	227.4	1.1		35.1	170	199	22 02 01
22 05 40	J0939+4141	10 50 39	73.6	232.7	1.2		39.7	25	199	22 05 40
22 07 00	=0936+419	10 51 59	73.4	233.4	1.2		40.2	80	209	22 05 41
22 07 50	J0941+3944	10 52 49	72.0	229.0	1.2		36.1	26	209	22 07 50
22 10 40	---	10 55 40	71.7	230.4	1.2		36.9	170	231	22 07 51
22 11 30	J0939+4141	10 56 30	72.9	235.6	1.3		41.5	25	231	22 11 30
22 12 50	=0936+419	10 57 50	72.7	236.2	1.3		41.9	80	241	22 11 31
22 13 40	J0941+3944	10 58 40	71.3	231.8	1.3		37.8	26	241	22 13 40
22 16 30	---	11 01 31	71.0	233.1	1.3		38.6	170	263	22 13 41
22 17 20	J0939+4141	11 02 21	72.2	238.3	1.4		43.1	25	263	22 17 20
22 18 40	=0936+419	11 03 41	72.0	238.9	1.4		43.5	80	274	22 17 21
22 19 40	J0927+3902	11 04 41	68.2	239.3	1.6		41.6	32	274	22 19 40
22 24 10	=0923+392	11 09 12	67.7	241.0	1.7		42.5	270	308	22 19 41
22 25 10	J0939+4141	11 10 12	71.1	241.6	1.5		45.0	33	308	22 25 10
22 26 30	=0936+419	11 11 32	71.0	242.2	1.5		45.3	80	319	22 25 11
22 27 20	J0941+3944	11 12 22	69.6	237.9	1.5		41.4	26	319	22 27 20
22 30 10	---	11 15 13	69.3	239.1	1.5		42.0	170	341	22 27 21
22 31 00	J0939+4141	11 16 03	70.4	243.9	1.6		46.2	26	341	22 31 00
22 32 20	=0936+419	11 17 23	70.2	244.5	1.6		46.5	80	351	22 31 01
22 33 10	J0941+3944	11 18 13	68.9	240.3	1.6		42.6	26	351	22 33 10
22 36 00	---	11 21 04	68.5	241.4	1.6		43.2	170	373	22 33 11
22 36 50	J0939+4141	11 21 54	69.6	246.1	1.7		47.3	26	373	22 36 50
22 38 10	=0936+419	11 23 14	69.4	246.6	1.7		47.5	80	383	22 36 51
22 39 00	J0941+3944	11 24 04	68.1	242.5	1.7		43.8	26	383	22 39 00
22 41 50	---	11 26 55	67.7	243.5	1.7		44.3	170	405	22 39 01
22 42 40	J0939+4141	11 27 45	68.7	248.2	1.8		48.2	26	405	22 42 40
22 44 00	=0936+419	11 29 05	68.6	248.7	1.8		48.4	80	415	22 42 41

Schedule for TORUN (Code Tr)

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eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 14 Mar 2013 Day 73 ---										
22 44 50	J0941+3944	11 29 55	67.3	244.6	1.8		44.8	27	415	22 44 50
22 47 40	---	11 32 46	66.9	245.6	1.8		45.3	170	437	22 44 51
22 48 30	J0939+4141	11 33 36	67.9	250.2	1.9		49.1	26	437	22 48 30
22 49 50	=0936+419	11 34 56	67.7	250.6	1.9		49.3	80	448	22 48 31
22 50 40	J0941+3944	11 35 46	66.5	246.6	1.9		45.7	27	448	22 50 40
22 53 30	---	11 38 37	66.1	247.6	1.9		46.2	170	470	22 50 41
22 54 20	J0939+4141	11 39 27	67.1	252.0	2.0		49.8	27	470	22 54 20
22 55 40	=0936+419	11 40 47	66.9	252.4	2.0		50.0	80	480	22 54 21
22 56 30	J0941+3944	11 41 37	65.7	248.6	2.0		46.6	27	480	22 56 30
22 59 20	---	11 44 28	65.3	249.5	2.0		46.9	170	502	22 56 31
23 00 10	J0939+4141	11 45 18	66.3	253.8	2.1		50.5	27	502	23 00 10
23 01 30	=0936+419	11 46 38	66.1	254.2	2.1		50.6	80	512	23 00 11
23 02 20	J0941+3944	11 47 28	64.9	250.4	2.1		47.3	27	512	23 02 20
23 05 10	---	11 50 19	64.5	251.3	2.1		47.6	170	534	23 02 21
23 06 00	J0939+4141	11 51 09	65.4	255.5	2.2		51.1	27	534	23 06 00
23 07 20	=0936+419	11 52 29	65.2	255.8	2.2		51.2	80	544	23 06 01
23 08 10	J0941+3944	11 53 19	64.1	252.2	2.2		48.0	27	544	23 08 10
23 11 00	---	11 56 10	63.6	253.0	2.2		48.3	170	566	23 08 11
23 11 50	J0939+4141	11 57 00	64.6	257.1	2.3		51.5	27	566	23 11 50
23 13 10	=0936+419	11 58 20	64.4	257.4	2.3		51.6	80	577	23 11 51
23 14 00	J0941+3944	11 59 10	63.2	253.8	2.3		48.5	28	577	23 14 00
23 16 50	---	12 02 01	62.8	254.6	2.3		48.8	170	599	23 14 01
23 17 40	J0939+4141	12 02 51	63.7	258.6	2.4		52.0	27	599	23 17 40
23 19 00	=0936+419	12 04 11	63.5	259.0	2.4		52.1	80	609	23 17 41
23 19 50	J0941+3944	12 05 01	62.4	255.5	2.4		49.1	28	609	23 19 50
23 22 40	---	12 07 51	62.0	256.2	2.4		49.3	170	631	23 19 51
23 23 30	J0939+4141	12 08 42	62.8	260.1	2.5		52.3	28	631	23 23 30
23 24 50	=0936+419	12 10 02	62.6	260.5	2.5		52.4	80	641	23 23 31
23 25 40	J0941+3944	12 10 52	61.5	257.0	2.5		49.5	28	641	23 25 40
23 28 30	---	12 13 42	61.1	257.8	2.5		49.7	170	663	23 25 41
23 29 20	J0939+4141	12 14 33	62.0	261.6	2.6		52.6	28	663	23 29 20
23 30 40	=0936+419	12 15 53	61.8	261.9	2.6		52.7	80	674	23 29 21

Schedule for TORUN (Code Tr)

Page 5

eEVN+MERLIN-18CM-J0941+3944

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are LO sum (band edge).

SYNC: Time correlator is expected to sync up.

```

-----
Start UT  Source          Start / Stop      Early   Disk   TPStart
Stop UT          LST      EL    AZ    HA  UP   ParA Dwell  GBytes  SYNC
-----
--- Thu 14 Mar 2013  Day 73 ---

23 31 30  J0941+3944  12 16 43  60.7 258.5  2.6      49.9   28    674  23 31 30
23 34 20  ---          12 19 33  60.2 259.2  2.6      50.0  170    695  23 31 31

23 35 10  J0939+4141  12 20 24  61.1 262.9  2.7      52.9   28    695  23 35 10
23 36 30  =0936+419   12 21 44  60.9 263.3  2.7      52.9   80    706  23 35 11

23 37 20  J0941+3944  12 22 34  59.8 260.0  2.7      50.2   28    706  23 37 20
23 40 10  ---          12 25 24  59.4 260.7  2.7      50.3  170    728  23 37 21

23 41 00  J0939+4141  12 26 15  60.2 264.3  2.8      53.1   28    728  23 41 00
23 42 20  =0936+419   12 27 35  60.0 264.6  2.8      53.1   80    738  23 41 01

23 43 10  J0941+3944  12 28 25  58.9 261.4  2.8      50.5   29    738  23 43 10
23 46 00  ---          12 31 15  58.5 262.1  2.8      50.6  170    760  23 43 11

23 46 50  J0939+4141  12 32 05  59.4 265.6  2.9      53.2   29    760  23 46 50
23 48 10  =0936+419   12 33 26  59.2 265.9  2.9      53.3   80    770  23 46 51

23 49 00  J0941+3944  12 34 16  58.1 262.8  2.9      50.7   29    770  23 49 00
23 51 50  ---          12 37 06  57.6 263.4  2.9      50.8  170    792  23 49 01

23 52 40  J0939+4141  12 37 56  58.5 266.9  3.0      53.3   29    792  23 52 40
23 54 00  =0936+419   12 39 17  58.3 267.1  3.0      53.4   80    803  23 52 41

23 54 50  J0941+3944  12 40 07  57.2 264.1  3.0      50.9   29    803  23 54 50
23 57 40  ---          12 42 57  56.8 264.7  3.0      51.0  170    824  23 54 51

23 58 30  J0939+4141  12 43 47  57.6 268.1  3.1      53.4   29    824  23 58 30
23 59 50  =0936+419   12 45 08  57.4 268.4  3.1      53.4   80    835  23 58 31

```

SETUP FILE INFORMATION:

NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

==== Setup file: sess113.L1024

Matching groups in /homes/vlbsoft/sched10.2/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```

Setup group:      4          Station: TORUN          Total bit rate: 1024
Format: MKIV1:2   Bits per sample: 2      Sample rate: 32.000
Number of channels: 16  DBE type:          Speedup factor: 0.50

```

Disk used to record data.

1st LO=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U	U
	L	L	U	U	L	L	U	U	U
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP	LCP
BBC =	1	2	1	2	3	4	3	4	4
	5	6	5	6	7	8	7	8	8
BBC SB=	U	U	L	L	U	U	L	L	L
	U	U	L	L	U	U	L	L	L
IF =	C	A	C	A	C	A	C	A	A
	C	A	C	A	C	A	C	A	A

The following frequency sets based on these setups were used.

```

Frequency Set: 7 Setup file default. Used pcal sets: 1
LO sum= 1610.49 1610.49 1610.49 1610.49 1642.49 1642.49 1642.49 1642.49
        1674.49 1674.49 1674.49 1674.49 1706.49 1706.49 1706.49 1706.49
BBC fr= 689.51 689.51 689.51 689.51 657.51 657.51 657.51 657.51
        625.51 625.51 625.51 625.51 593.51 593.51 593.51 593.51
Bandwd= 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
        16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00
Matching frequency sets: 7

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set: 1 PCAL = 1MHZ
PCALXB1= S1 S3 S5 S7 S9 S11 S13 S15
PCALXB2= S2 S4 S6 S8 S10 S12 S14 S16
PCALFR1= 490 510 490 510 490 510 490 510
PCALFR2= 490 510 490 510 490 510 490 510

```

Track assignments are:

```

track1= 2, 10, 18, 26, 3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS -- eEVN+MERLIN-18CM-J0941+3944
 Catalog positions marked with *. Precession of date coordinates is based on stop time of first scan. Names used in schedule marked with *. Short names used in VLA and SNAP files marked with +.
 Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
 No adjustments are made for rates (DRA, DDEC). Scan hours are for recording scans only. Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec)		Error
	(B1950)	(J2000)	(Date) (mas)
* J0941+3944	09 38 18.266980	* 09 41 24.034000	09 42 15.147084 0.00
	39 58 22.22489	* 39 44 41.87000	39 40 55.78697 0.00
* J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.604574 0.13
0923+392	39 15 23.56637	* 39 02 20.85177	38 58 45.01562 0.10
* J0939+4141	09 36 41.225341	* 09 39 49.615846	09 40 41.446201 0.24
0936+419	41 55 30.51681	* 41 41 54.19116	41 38 09.61352 0.31

Koniec L-band

Koniec I sesji VLBI (Jan–Feb 2013)

Plan użycia disk-packów w sesji EVN 1/2013

(wersja 5, 2013.03.08)

Pro- jekt	Zapotrze- bowanie	===== Bank A	===== Bank B	Uwagi
	----GB---	-----GB-	-----GB-	
(6 cm)				
f13c1	743 +	JIVE-062/2000		
f13c2	182 +	JIVE-062/2000		
ek033b	3596 +	SHAO+038/4000		zostaje 404 ->
es068a		-----	-----	e-VLBI
eg066g	1173 +	SHAO+038/4000	MED-0007/2000	zostaje <1231 ->
es068b		-----	-----	e-VLBI
eg066h	1137 +	-----	MED-0007/2000	zostaje <94 GB
em097a	2160 +	NT0-0007/2000	WSRT-064/2000	<==== Korelator Bonn !!!
ey019	5020 +	JIVE-062/2000	NRAO-207/4000	zostaje <55 GB
n13c1	440 +	WSRT-042/2000		
ep087a	2606 +	WSRT-042/2000	MED-0016/2000	na WSRT zostalo 1085 ->
		MPI-0161/2000		zostalo 1752 ->
ek033c	2907 +	TR-00028/2000	JIVE-010/1480	zostalo 410 GB
(1.3 cm)				
n13k1	588 +	USN-0203/2000		
ro004c	1235 +	USN-0203/2000		zostalo 200 ->
ez024	3604 +	WSRT-046/2000	NT0-0011/2000	zostalo 580 GB
(5 cm)				
n13m1	101 +	USN-0203/2000		zostalo 100 GB
es071a	356 +	MPI-0161/2000		zostaje 1396 ->
eb052a	449 +	WSRT-042/2000	(NT0-0011/2000)*	* = na wszelki wypadek
eb052b	439 +	WSRT-042/2000		zostaje 197 GB
eb052c	453 +	MPI-0161/2000		zostaje 1001 [zostalo 1032] ->
eb052d	455 +	MPI-0161/2000		zostaje 548 [579] ->
(18 cm)				
f13l1	395 +	MPI-0161/2000		zostaje 93 [124] GB
gk047a	1398 +	-----	WSRT-064/2000	<==== Korelator Bonn !!! (442 GB)
et028	3346 +	JOD-0015/2000	UA0-0016/2000	zostaje <654 ->
n13l1	377 +	JOD-0028/3200		
em100a	2272 +	JOD-0028/3200		
em100b	1838 +	JOD-0028/3200	TR-00024/2000	zostaje <713 ->
em100c	2350 +	JOD-0042/3200		zostaje 850 ->
ed039b	941 +	NRAO-148/2000		
ep087c	2580 +	USN-0189/2000	TR-00024/2000	zostaje <133 GB
em100d	1284 +	NRAO-148/2000	UA0-0016/2000	zostaje <429 GB
em100e	835	JOD-0042/3200	(UA0-0016/2000)*	zostaje 15 GB (UA0-0016 na wszelki wypadek)

Razem 45260 GB do zapisania na packach o sumarycznej pojemnosci 47880 GB

Rezerwa: OSOD-066/2000, VIPSU-02/2000, MED-0048/4000

RadioAstron: NT0-0005/2000

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