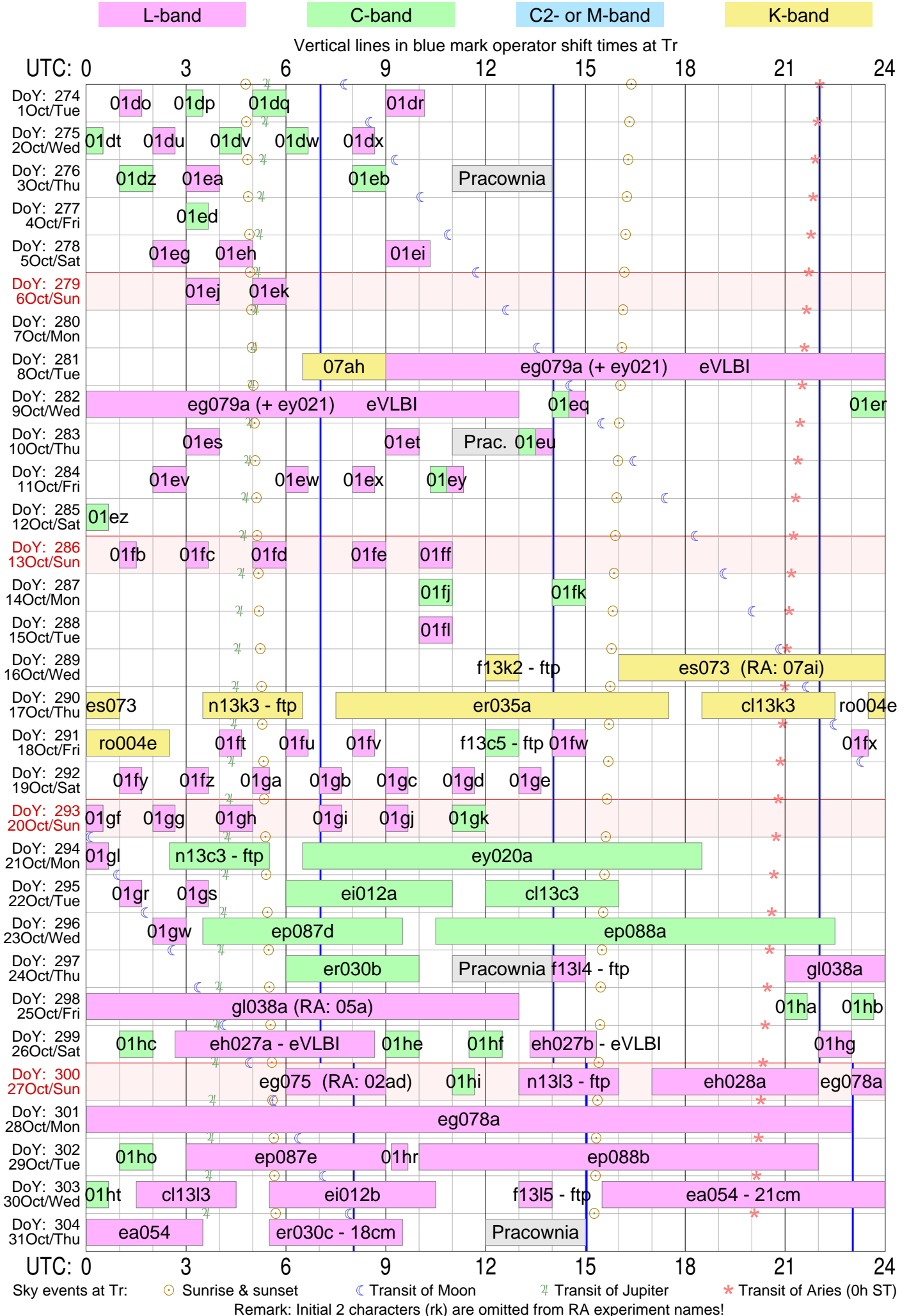


Tr VLBI schedule for Oct 2013



RadioAstron and EVN Experiments

October 2013

Użytkownik i hasło ftp dla logów i schedulów: grt K0&th%

ftp://webinet.asc.rssi.ru

Przykład dla log files: cd GRT_log_files/2013_08/2013_08_01_raks02aa

Przykład dla sched files: cd schedule/grtsched/RAKS/rk02aa

Name	Band	DoY	DoM	WD	UT_Start		UT_Stop		Uwagi
					h	m	h	m	
rk01do	L	274	1	Wto	1	00	1	40	
rk01dp	C	274	1	Wto	3	00	3	30	
rk01dq	C	274	1	Wto	5	00	6	00	
rk01dr	L	274	1	Wto	9	00	10	10	
rk01dt	C	275	2	Sro	0	00	0	30	
rk01du	L	275	2	Sro	2	00	2	40	
rk01dv	C	275	2	Sro	4	00	4	40	
rk01dw	C	275	2	Sro	6	00	6	40	
rk01dx	L	275	2	Sro	8	00	8	40	
rk01dz	C	276	3	Czw	1	00	2	00	
rk01ea	L	276	3	Czw	3	00	4	00	
rk01eb	C	276	3	Czw	8	00	9	00	
rk01ed	C	277	4	Pia	3	00	3	40	
rk01eg	L	278	5	Sob	2	00	3	00	
rk01eh	L	278	5	Sob	4	00	5	00	
rk01ei	L	278	5	Sob	9	00	10	20	
rk01ej	L	279	6	Nie	3	00	4	00	
rk01ek	L	279	6	Nie	5	00	6	00	
rk07ah	K	281	8	Wto	6	30	9	00	
eg079a	L	281	8	Wto	9	00	24+13	00	eVLBI
rk01eq	C&L	282	9	Sro	14	00	15	00	
rk01er	C	282	9	Sro	23	00	24	00	
rk01es	L	283	10	Czw	3	00	4	00	
rk01et	L	283	10	Czw	9	00	10	00	
rk01eu	C&L	283	10	Czw	13	00	14	00	
rk01ev	L	284	11	Pia	2	00	3	00	
rk01ew	L	284	11	Pia	6	00	6	40	
rk01ex	L	284	11	Pia	8	00	8	40	
rk01ey	C&L	284	11	Pia	10	20	11	20	
rk01ez	C	285	12	Sob	0	00	0	40	
rk01fb	L	286	13	Nie	1	00	1	30	
rk01fc	L	286	13	Nie	3	00	3	40	
rk01fd	L	286	13	Nie	5	00	6	00	
rk01fe	L	286	13	Nie	8	00	9	00	
rk01ff	L	286	13	Nie	10	00	11	00	
rk01fj	C	287	14	Pon	10	00	11	00	
rk01fk	C	287	14	Pon	14	00	15	00	
rk01fl	L	288	15	Wto	10	00	11	00	
f13k2	K	289	16	Sro	12	00	13	00	ftp
es073	K	289	16	Sro	16	00	24+01	00	RA: rk07ai
n13k3	K	290	17	Czw	3	30	6	30	ftp
er035a	K	290	17	Czw	7	30	17	30	
cl13k3	K	290	17	Czw	18	30	22	30	
ro004e	K	290	17	Czw	23	30	24+02	30	
rk01ft	L	291	18	Pia	4	00	4	40	
rk01fu	L	291	18	Pia	6	00	6	40	
rk01fv	L	291	18	Pia	8	00	8	40	
f13c5	C	291	18	Pia	12	00	13	00	ftp

rk01fw	L	291	18	Pia	14 00	15 00	
rk01fx	L	291	18	Pia	23 00	23 30	
rk01fy	L	292	19	Sob	1 00	1 40	
rk01fz	L	292	19	Sob	3 00	3 40	
rk01ga	L	292	19	Sob	5 00	5 30	
rk01gb	L	292	19	Sob	7 00	7 40	
rk01gc	L	292	19	Sob	9 00	9 40	
rk01gd	L	292	19	Sob	11 00	11 40	
rk01ge	L	292	19	Sob	13 00	13 40	
rk01gf	L	293	20	Nie	0 00	0 30	
rk01gg	L	293	20	Nie	2 00	2 40	
rk01gh	L	293	20	Nie	4 00	5 00	
rk01gi	L	293	20	Nie	7 00	7 40	
rk01gj	L	293	20	Nie	9 00	9 40	
rk01gk	C	293	20	Nie	11 00	12 00	
rk01gl	L	294	21	Pon	0 00	0 40	
n13c3	C	294	21	Pon	2 30	5 30	ftp
ey020a	C	294	21	Pon	6 30	18 30	
rk01gr	L	295	22	Wto	1 00	1 40	
rk01gs	L	295	22	Wto	3 00	3 40	
ei012a	C	295	22	Wto	6 00	11 00	
cl13c3	C	295	22	Wto	12 00	16 00	
rk01gw	L	296	23	Sro	2 00	3 00	
ep087d	C	296	23	Sro	3 30	9 30	
ep088a	C	296	23	Sro	10 30	22 30	
er030b	C	297	24	Czw	6 00	10 00	
f1314	L	297	24	Czw	14 00	15 00	ftp
gl038a	L	297	24	Czw	21 00	24+13 00	RA: rk05a do 14:30
rk01ha	C	298	25	Pia	21 00	21 40	
rk01hb	C	298	25	Pia	23 00	23 40	
rk01hc	C	299	26	Sob	1 00	2 00	
eh027a	L	299	26	Sob	2 40	8 40	eVLBI
rk01he	C	299	26	Sob	9 00	10 00	
rk01hf	C	299	26	Sob	11 30	12 30	
eh027b*	L	299	26	Sob	13 20	15 20	eVLBI*
rk01hg	L	299	26	Sob	22 00	23 00	
eg075	L	300	27	Nie	6 00	9 00	RA: rk02ad
rk01hi	C	300	27	Nie	11 00	11 40	
n1313	L	300	27	Nie	13 00	16 00	ftp
eh028a	L	300	27	Nie	17 00	22 00	
eg078a	L	300	27	Nie	23 00	24+23 00	
rk01ho	C	302	29	Wto	1 00	2 00	
ep087e	L	302	29	Wto	3 00	9 00	
rk01hr	L	302	29	Wto	9 10	9 40	
ep088b	L	302	29	Wto	10 00	22 00	
rk01ht	C	303	30	Sro	0 00	0 40	
cl1313	L	303	30	Sro	1 30	4 30	
ei012b	L	303	30	Sro	5 30	10 30	
f1315	L	303	30	Sro	13 00	14 00	ftp
ea054	L	303	30	Sro	15 30	103 30	21cm
er030c	L	304	31	Czw	5 30	9 30	18cm

Razem 99 eksperymentow

* eh027b nie ma osobnego skryptu — został on włączony do eh027a.snp !!!

Do zapisu obserwacji RadioAstronu dedykowany jest dyskpak

TR-00002/1600

montowany w banku A.

PART 1 1.3 cm

CODE	EVN	TELESCOPES	CORR	DISKS (TB)		DAY	UT-START	UT-STOP	COMMENTS
				TOT	/ST				
F13K2	Eb	Jb2 On20	Mc Nt Tr -- Mh Sv Zc Bd Ur Sh -- --	EVN	5.0	0.42	Eu 289	1200(16/10)-1300(16/10)	1.3cm FTP-FT 1024 Mbps
ES073	Eb	Jb2 On20	Mc Nt Tr(Ys)-- Sv Zc Bd Ur -- --[Ro]	ASC*	11.3	0.94	Eu 289	1600(16/10)-0100(17/10)	+RA; Ys starts UT 1730
				RO			289	2215(16/10)-0100(17/10)	
N13K3	Eb	Jb2 On20	Mc Nt Tr Ys Mh Sv Zc Bd Ur Sh Hh --	EVN	17.6	1.26	Eu 290	0330(17/10)-0630(17/10)	1.3cm NME + FTP-FT 1024 Mbps
ER035A	Eb	Jb2 On20	Mc Nt Tr Ys Mh Sv Zc Bd Ur Sh -- --	EVN	54.2	4.17	Eu 290	0730(17/10)-1730(17/10)	
CL13K3	Eb	Jb2 On20	Mc Nt Tr Ys Mh Sv Zc Bd Ur Sh Hh --	----	0.0	0.00	Eu 290	1830(17/10)-2230(17/10)	1.3cm FS-CAL
RO004E	Eb	Jb2 On20	Mc Nt Tr Ys Mh Sv Zc Bd Ur Sh Hh --	EVN	17.5	1.25	Eu 290	2330(17/10)-0230(18/10)	

PART 2 6 cm

CODE	EVN	TELESCOPES	CORR	DISKS (TB)		DAY	UT-START	UT-STOP	COMMENTS
				TOT	/ST				
F13C5	Eb	Wb Jb1 On25	Mc Nt Tr Ys -- -- -- Ur Sh Hh	EVN	2.3	0.21	Eu 291	1200(18/10)-1300(18/10)	6cm FTP-FT
N13C3	Eb	Wb Jb1 On25	Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh	EVN	8.8	0.63	Eu 294	0230(21/10)-0530(21/10)	6cm NME + FTP-FT
EY020A	Eb	Wb Jb1 On25	Mc Nt Tr Ys Sv Zc Bd Ur Sh --	EVN	65.0	5.00	Eu 294	0630(21/10)-1830(21/10)	
EI012A	Eb	Wb Jb1 On25	Mc Nt Tr Ys Sv Zc Bd Ur Sh --	EVN	27.1	2.08	Eu 295	0600(22/10)-1100(22/10)	+MERLIN
CL13C3	Eb	Wb Jb1 On25	Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh	----	0.0	0.00	Eu 295	1200(22/10)-1600(22/10)	6cm FS-CAL
EP087D	Eb	Wb Jb1 On25	Mc Nt Tr Ys Sv Zc Bd Ur Sh --	EVN	32.5	2.50	Eu 296	0330(23/10)-0930(23/10)	+MERLIN
EP088A	Eb	Wb(Jb1)On25	Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh	EVN	70.0	5.00	Eu 296	1030(23/10)-2230(23/10)	run-d; (Jb1) = may be replaced by Jb2
ER030B	Eb	Wb Jb1 On25	Mc Nt Tr Ys Sv Zc Bd Ur Sh Hh	EVN	23.4	1.67	Eu 297	0600(24/10)-1000(24/10)	(re-run); (Jb1) = may be replaced by Jb2

PART 3 18/21 cm

CODE	EVN	TELESCOPES	CORR	DISKS (TB)		DAY	UT-START	UT-STOP	COMMENTS	
				TOT	/ST					
F13L4	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh Hh -- --	EVN	2.8	0.21	Eu 297	1400(24/10)-1500(24/10)	18cm FTP-FT 512 Mbps	
GL038A	Eb	Wb Jb1 On25	Mc Nt Tr(Sv Zc Bd)Ur Sh -- -- --	Bonn	18.8	1.56	Eu 297	2100(24/10)-1200(25/10)	+RA Sv,Zc,Bd stop UT 1030	
							15.7	1.56	US 297 2100(24/10)-1200(25/10)	vlba
							1.6	1.56	(GB)297 2100(24/10)-1200(25/10)	GBT GBT out UT 2330-0030

EH027A	Eb	Wb Jb1 On25	Mc Nt Tr -- -- -- -- Sh Hh -- --	eEVN	0.0	0.00	Eu 299	0240(26/10)-0840(26/10)	==> e-VLBI (Set-up UT 0240-0440)	
EH027B	Eb	Wb Jb1 On25	Mc Nt Tr -- -- -- -- -- Ar --	eEVN	0.0	0.00	Eu 299	1320(26/10)-1520(26/10)	==> e-VLBI	

EG075	Eb	Wb Jb1 On25	Mc Nt Tr Sv -- -- -- -- -- Ar --	ASC*	2.9	0.32	Eu 300	0600(27/10)-0900(27/10)	+RA (==> resume disk recording !)	
							AR 300	0600(27/10)-0900(27/10)		
N13L3	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh Hh -- --	EVN	8.2	0.63	Eu 300	1300(27/10)-1600(27/10)	18cm NME + FTP-FT 512 Mbps	
EH028A	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh -- -- --	EVN	3.2	0.26	Eu 300	1700(27/10)-2200(27/10)	1612 MHz	
EG078A	Eb	Wb1 Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh -- --[Ro]	EVN	120.0	10.00	Eu 300	2300(27/10)-2300(28/10)	Wb1	
							RO 300	2300(27/10)-0940(28/10)	DSS-63 (not yet confirmed)	
EP087E	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh -- --	RO EVN	32.5	2.50	Eu 302	0300(29/10)-0900(29/10)	+MERLIN	
							RO 302	0300(29/10)-0900(29/10)	DSS-63	
EP088B	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh Hh -- --	EVN	65.0	5.00	Eu 302	1000(29/10)-2200(29/10)	run-d	
CL13L3	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh Hh -- --	----	0.0	0.00	Eu 303	0130(30/10)-0430(30/10)	18cm FS-CAL	
EI012B	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh -- -- --	EVN	25.0	2.08	Eu 303	0530(30/10)-1030(30/10)	+MERLIN	
F13L5	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur -- -- -- --	EVN	4.6	0.42	Eu 303	1300(30/10)-1400(30/10)	==> 21 cm FTP-FT	
EA054	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur -- -- -- --	EVN	55.0	5.00	Eu 303	1530(30/10)-0330(31/10)	==> 21 cm	
ER030C	Eb	Wb Jb1 On25	Mc Nt Tr Sv Zc Bd Ur Sh Hh -- --	EVN	21.7	1.67	Eu 304	0530(31/10)-0930(31/10)	==> 18 cm; re-run	

PART 4 90 cm

CODE	EVN	TELS.	CORR	DISKS (TB)		DAY	UT-START	UT-STOP	COMMENTS
				TOT	/ST				
CL13P1	Eb	Wb Jb1 --	----	0.0	0.00	Eu 306	1130(02/11)-1430(02/11)	90cm FS-CAL	
N13P1	Eb	Wb Jb1 --	EVN	0.5	0.16	Eu 306	1530(02/11)-1830(02/11)	90cm NME + FTP-FT (128 Mbps)	
GS033A	Eb	Wb Jb1[Ar]	ASC*	2.9	0.73	Eu 306	1930(02/11)-0900(03/11)	+RA	
							AR 307	0600(03/11)-0900(03/11)	GBT not available
							GB		

PART 5 3.6 cm

CODE	EVN	TELESCOPES	CORR	DISKS (TB)		DAY	UT-START	UT-STOP	COMMENTS
				TOT	/ST				
F13X2	Eb	Wb On20	Mc Nt Ys Sv Zc Bd Ur SH Hh	EVN	2.3	0.21	Eu 305	0800(01/11)-0900(01/11)	3.6cm FTP-FT; ==> PRECEDES 90cm SESSION !!!
EC042	Eb	Wb On20	Mc Nt Ys -- -- -- -- --	EVN	10.0	1.67	Eu 308	0030(04/11)-0430(04/11)	
ER030D	Eb	Wb On20	Mc Nt Ys Sv Zc Bd Ur Sh Hh	EVN	18.4	1.67	Eu 308	0530(04/11)-0930(04/11)	re-run
N13X4	Eb	Wb On20	Mc Nt Ys Sv Zc Bd Ur Sh Hh	EVN	6.9	0.63	Eu 308	1030(04/11)-1330(04/11)	3.6cm NME
CL13X3	Eb	Wb On20	Mc Nt Ys Sv Zc Bd Ur Sh Hh	----	0.0	0.00	Eu 308	1430(04/11)-1830(04/11)	3.6cm FS-CAL
EP087F	Eb	Wb On20	Mc Nt Ys Sv Zc Bd Ur Sh --	EVN	27.5	2.50	Eu 309	0230(05/11)-0830(05/11)	

A per-experiment summary for the Oct/November EVN observations

Experiments are listed alphabetically.

- EA054 — 21cm observations of NGC660, what seemed to have been an ordinary LINER or starburst galaxy but has developed a clear more AGN-like central component at radio wavelengths. It also has an HI absorption profile that may be changing on similar time-scales to the outburst. These would be the first VLBI observations in HI, looking for absorption in front of compact structures to investigate the small-scale gas kinematics. For continuum sensitivity, these are 21cm Gbps observations, which means most stations won't be able to cover the entire 128MHz frequency range (cf EM107 last session). Because of the additional desire to center the redshifted HI line in a subband, there was less flexibility in placing this 128MHz-wide frequency span.
- EC042 — Pilot X-band observations of the star Pollux, investigating its suitability for VLBI astrometry (which would ultimately seek to follow the reflex motion of the star arising from orbital motion of its exoplanet).
- EG075 — EVN+RadioAstron observations of giant pulses from the Crab pulsar at L-band. The baseline lengths available from terrestrial stations to the orbiting antenna lets us look at length scales in the scattering pattern that were previously impossible. This in turn could say something about the size/coherence of emission at the pulsar.
- EG078A — Continuing along the spirit of previous observations looking to make as deep as possible census of VLBI-detectable sources in the direction of the Hubble deep field, now with Gb/s recording rate and multiple phase-center correlation. It is anticipated that correlation output will be made for ~ 300 targets seen in deep VLA and/or e-MERLIN observations. There are two different schedules for this, one for small stations and another for larger ones that need multiple pointings to cover the primary beam of the smaller stations (Ef,Jb1,Ro; Wb is single dish).
- EH027A,B — Continuation of a long-running e-EVN campaign (since 2010) monitoring the knot in the jet of M87, about 72pc from the core. M87 is also active in gamma-rays; whether the high-energy emission originates nearer the core or this jet knot is an unresolved question. The e-EVN monitoring looks for correlations between structural evolution in the jet knot and gamma-ray flaring activity. The e-EVN has detected various sub-structures within the knot, some with different relative velocities.
- EH028A — Using 1612MHz OH masers to get the parallax distance of an OH/IR star, which could be compared also has a distance estimate using the phase-lag method (from the delay between the observed maxima of the light curves on the front and back edges of the shell [i.e., the blue- and red-ends of the velocity-distribution of the maser emission] and the angular diameter of the shell). First of four epochs.
- EI012A,B — A follow-up dual-frequency observation of an interesting source resulting from EI011 (session 3/2011; L-band only). The target is a gravitationally-lensed sub-mm galaxy from Herschel, with magnification that could be varying on spatial scales sampled by EVN observations. EI011 already showed the existence of an AGN in one of the two components closest to a caustic, with resolved structure. Deeper C- and L-band EVN observations would allow a better characterization of the relative contribution of an AGN to the overall radio power (i.e., the usual AGN vs. starburst question for high-redshift sub-mm or IR galaxies), as well as possibly providing further constraints to the gravitational lensing.
- EP087D,E,F — multi-frequency (L,C,X) observations continuing to monitor the compact sources in a merging galaxy system (i.e., driving lots of massive star formation leading to supernovae; there is also the sign of an AGN one of the nuclei).

EP088A,B — multi-frequency (L,C) imaging of a sample of luminous infra-red galaxies, made in conjunction with an e-MERLIN legacy project on the same targets. There are dozens of targets, being addressed a few at a time over several sessions (each with L- and C-band obs). Goals include separating contributions from AGN and starbursts to the overall energy budget, and detecting individual supernovae and/or supernova remnants.

ER030B,C,D — multi-frequency (L,C,X) observations of a luminous infra-red galaxy that has been shown in previous C-band EVN and e-MERLIN observations to host both a low-luminosity AGN and five supernovae and/or supernova remnants. Similar in approach/goals to EP088.

ER035A — K-band observations of a broad absorption line QSO that already has VLBA imaging as lower-frequency/lower-bitrate. The principal goal is to study of possible proper-motion in the jet component (speed and direction). The overarching goal is to constrain the relative geometries of the dusty torus, accretion disk, and BAL outflow, using the VLBI results with separate optical polarization observations.

ES073 — EVN+RadioAstron observations of water masers in W3 IRS5. The baseline lengths in this specific observation would range up to ~ 4 Earth diameters, thus probing maser-spot structure on finer scales (including perhaps at which B the get resolved out), and also possibly higher brightness temperatures as the resolved size goes down. Velocity structures and line widths on smaller scales can also be investigated.

EY020A — Phase-referencing of a Galactic X-ray transient that may be a tidally-disrupted star (continuing from EY018* and EY019 starting last year). The focus here is evidence for the existence of a superluminal jet. There are two different schedules for this, one for stations small enough to see an in-beam calibrator at the same time as the target, and another for those than need to slew between them (Ef,Wb).

GL038A — Global+RadioAstron observations of the very innermost regions of three well-known AGN, getting down below 1000 Schwarzschild radii. This specific epoch is the L-band portion for 0836+710, the farthest of the three ($z=2.712$). Ultimately, detecting the transition region to kinetic flow along the jet, perhaps via signatures of shocks and instabilities, would provide the big payoff for understanding more of the processes at work launching AGN jets. Other epochs would be C-/K-band observations of the three AGN (only 0836 has L-band).

GS033 — 90cm global+RadioAstron observations of the Crab pulsar. Similar to EG075.

RO004E — K-band observations of a radio quasar that is also bright in gamma rays, and underwent a gamma-ray flare on 22 March 2012. Six total epochs are planned (in 6 consecutive sessions) to follow the parsec-scale evolution of jet components associated with the flare. This is part of a wider multi-frequency monitoring campaign (X-ray, optical, radio) triggered by the flare.

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Checklist do obserwacji VLBI

(Obserwator zmieniający wypełnia osobną kolumnę!)

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

* 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

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

f13k2tr

K-BAND FTP TEST F13K2

PI: *Ciriaco Goddi*

Address: JIVE Postbus 2 7990 AA Dwingeloo The Netherlands
Phone: +31-521-596548 EMAIL: goddi@jive.nl
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Observing mode:

Notes: K-band ftp test for session 3/2013
 1 Gbps, 2-bit sampling, 16 MHz filters

COVER LETTER:

Dear EVN friends,

This is the schedule for the K-band ftp fringe-test on 16 October 2013, involving 15 antennas:
Eb Jb2 On20 Mc Nt Tr Mh Sv Zc Bd Ur Sh KVNYS KVNUS KVNTM.
Stations testing their new DBBC backends are also included, with different names: MC_DBBC and TR_DBBC (Td).
The ftp test uses a setup with 1 Gbps and consists of long integrations on standard fringe finder calibrators: 3C345 (2 Jy at 22 GHz) and J1800+3848 (0.6 Jy at 22 GHz).

There are two ftp fringe-test scans
(1) 12:09:00 UT (scan 2, 2 sec, 3C345)
(2) 12:45:00 UT (scan 6, 4 sec, J1800+3848)

Please make sure that the autoftp is set up correctly.

See you on Skype group chat
and
Good luck with the session!

Ciriaco Goddi
Support Scientist, JIVE
Skype account: ciriaco.goddi

Schedule for TORUN (Code Tr)

Page 2

K-band Ftp test F13K2

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 16 Oct 2013 Day 289 ---										
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										
12 00 00	3C345	14 54 55	67.3	114.9	-1.8		-45.1	0	0	12 00 00
12 04 00	---	14 58 56	67.8	116.3	-1.7		-44.5	240	31	12 00 01
12 06 00	3C345	15 00 56	68.1	117.1	-1.7		-44.1	113	31	12 06 00
12 10 00	---	15 04 57	68.6	118.6	-1.6		-43.3	240	62	12 06 01
12 12 00	3C345	15 06 57	68.9	119.3	-1.6		-42.9	113	62	12 12 00
12 22 00	---	15 16 59	70.2	123.4	-1.4		-40.7	600	139	12 12 01
12 24 00	3C345	15 18 59	70.4	124.3	-1.4		-40.2	113	139	12 24 00
12 34 00	---	15 29 01	71.6	128.9	-1.2		-37.4	600	217	12 24 01
12 38 00	J1800+3848	15 33 02	61.1	104.5	-2.5		-48.2	175	217	12 38 00
12 41 00	=1758+388	15 36 02	61.5	105.3	-2.4		-48.0	180	240	12 38 01
12 43 00	J1800+3848	15 38 02	61.8	105.9	-2.4		-47.8	113	240	12 43 00
12 47 00	=1758+388	15 42 03	62.4	107.0	-2.3		-47.5	240	271	12 43 01
12 50 00	J1800+3848	15 45 04	62.8	107.9	-2.3		-47.2	173	271	12 50 00
13 00 00	=1758+388	15 55 05	64.2	110.9	-2.1		-46.1	600	348	12 50 01

SETUP FILE INFORMATION:

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

==== Setup file: sess313.K1024

--- WARNING --- This group does not match an entry in the frequency catalog.

This might be ok because the catalog is not complete.

But be very careful to be sure that the setup is correct.

Setup group: 6 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

***** Setup for Td *****

Setup group: 12 Station: TR_DBBC Total bit rate: 1024
 Format: MARK5B Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 1.00

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
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	5	1	5	2	6	2	6
	3	7	3	7	4	8	4	8
BBC SB=	L	L	U	U	L	L	U	U
	L	L	U	U	L	L	U	U
IF =	A1	B1	A1	B1	A1	B1	A1	B1
	A1	B1	A1	B1	A1	B1	A1	B1

The following frequency sets based on these setups were used.

```

Frequency Set: 17 Setup file default.
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: 17

```

Track assignments are:

```

track1= 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS --

K-band Ftp test F13K2

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)		
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.812651	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 47 25.57562	0.52
* J1800+3848	17 58 44.703952	* 18 00 24.765361	18 00 52.029998	0.13
1758+388	38 48 32.47341	* 38 48 30.69739	38 48 54.85660	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)
3C345	66.8
J1800+3848	79.5

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

ULTRA-HIGH RESOLUTION OBSERVATIONS OF MASERS WITH
SPACE-VLBI

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

ULTRA-HIGH RESOLUTION OBSERVATIONS OF MASERS WITH SPACE-VLBI

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

--- Wed 16 Oct 2013 Day 289 ---

Next scan frequencies: 22228.00 22228.00 22228.00 22228.00
Next BBC frequencies: 728.00 728.00 728.00 728.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

16 00 00	W3IRS5	18 55 35	36.8	32.5	-7.5	-43.7	0	0	16 00 00
16 09 30	---	19 05 06	37.5	33.5	-7.4	-45.2	570	18	16 00 01
16 10 00	W3IRS5	19 05 36	37.6	33.5	-7.4	-45.3	24	18	16 10 00
16 19 30	---	19 15 08	38.4	34.5	-7.2	-46.8	570	36	16 10 01
16 20 00	W3IRS5	19 15 38	38.4	34.6	-7.2	-46.9	24	36	16 20 00
16 29 30	---	19 25 10	39.2	35.5	-7.0	-48.4	570	55	16 20 01
16 30 00	W3IRS5	19 25 40	39.3	35.6	-7.0	-48.4	24	55	16 30 00
16 40 00	---	19 35 41	40.2	36.6	-6.9	-50.0	600	74	16 30 01
16 41 00	0224+671	19 36 41	43.2	30.9	-6.9	-53.3	33	74	16 41 00
16 46 00	---	19 41 42	43.6	31.3	-6.8	-54.2	300	84	16 41 01
16 47 00	0212+735	19 42 42	47.9	24.1	-6.6	-62.2	30	84	16 47 00
16 52 00	---	19 47 43	48.2	24.4	-6.5	-63.2	300	93	16 47 01
16 55 00	2021+614	19 50 44	80.4	23.2	-0.5	-150.2	45	93	16 55 00
17 00 00	---	19 55 45	80.7	19.9	-0.4	-154.4	300	103	16 55 01
17 03 00	1849+670	19 58 45	73.6	-24.4	1.2	140.4	77	103	17 03 00
17 08 00	---	20 03 46	73.3	-25.7	1.2	138.0	300	112	17 03 01
17 11 00	W3IRS5	20 06 46	43.0	39.5	-6.3	-54.9	35	112	17 11 00
17 20 30	---	20 16 18	44.0	40.4	-6.2	-56.5	570	131	17 11 01
17 21 00	W3IRS5	20 16 48	44.0	40.4	-6.2	-56.5	24	131	17 21 00
17 24 30	---	20 20 19	44.4	40.8	-6.1	-57.1	210	137	17 21 01
17 25 00	W3IRS5	20 20 49	44.4	40.8	-6.1	-57.2	24	137	17 25 00
17 35 00	---	20 30 50	45.4	41.7	-5.9	-58.8	600	156	17 25 01

Schedule for TORUN (Code Tr)

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ULTRA-HIGH RESOLUTION OBSERVATIONS OF MASERS WITH SPACE-VLBI

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
--- Wed 16 Oct 2013 Day 289 ---										
17 36 00	0224+671	20 31 51	47.7	34.8	-6.0		-63.2	31	156	17 36 00
17 41 00	---	20 36 51	48.2	35.1	-5.9		-64.2	300	166	17 36 01
17 42 00	W3IRS5	20 37 51	46.1	42.3	-5.8		-59.9	31	166	17 42 00
17 51 30	---	20 47 23	47.1	43.1	-5.7		-61.4	570	184	17 42 01
17 52 00	W3IRS5	20 47 53	47.1	43.1	-5.6		-61.5	24	184	17 52 00
18 01 30	---	20 57 25	48.1	43.9	-5.5		-63.0	570	203	17 52 01
18 02 00	W3IRS5	20 57 55	48.2	43.9	-5.5		-63.1	24	203	18 02 00
18 11 30	---	21 07 26	49.2	44.7	-5.3		-64.7	570	221	18 02 01
18 12 00	W3IRS5	21 07 56	49.2	44.7	-5.3		-64.8	24	221	18 12 00
18 22 00	---	21 17 58	50.3	45.5	-5.1		-66.4	600	240	18 12 01
18 23 00	0224+671	21 18 58	51.9	37.5	-5.2		-72.1	29	240	18 23 00
18 28 00	---	21 23 59	52.4	37.7	-5.1		-73.1	300	250	18 23 01
18 29 00	0212+735	21 24 59	54.6	27.4	-4.9		-84.3	24	250	18 29 00
18 34 00	---	21 30 00	55.0	27.4	-4.8		-85.4	300	259	18 29 01
18 37 00	2021+614	21 33 01	77.3	-40.8	1.2		124.3	29	259	18 37 00
18 42 00	---	21 38 01	76.8	-42.2	1.3		121.8	300	269	18 37 01
18 47 00	W3IRS5	21 43 02	53.0	47.2	-4.7		-70.6	106	269	18 47 00
18 56 30	---	21 52 34	54.1	47.8	-4.6		-72.2	570	287	18 47 01
18 57 00	W3IRS5	21 53 04	54.1	47.8	-4.6		-72.3	24	287	18 57 00
19 06 30	---	22 02 35	55.2	48.4	-4.4		-73.9	570	305	18 57 01
19 07 00	W3IRS5	22 03 05	55.2	48.4	-4.4		-74.0	24	305	19 07 00
19 17 00	---	22 13 07	56.4	48.9	-4.2		-75.8	600	324	19 07 01
19 18 00	0224+671	22 14 07	57.1	39.4	-4.3		-83.2	26	324	19 18 00
19 23 00	---	22 19 08	57.6	39.5	-4.2		-84.3	300	334	19 18 01
19 24 00	W3IRS5	22 20 08	57.2	49.3	-4.1		-77.1	26	334	19 24 00
19 33 30	---	22 29 40	58.2	49.7	-4.0		-78.8	570	352	19 24 01
19 34 00	W3IRS5	22 30 10	58.3	49.7	-3.9		-78.9	24	352	19 34 00
19 43 30	---	22 39 41	59.4	50.1	-3.8		-80.7	570	371	19 34 01
19 44 00	W3IRS5	22 40 12	59.5	50.1	-3.8		-80.8	24	371	19 44 00
19 53 30	---	22 49 43	60.6	50.5	-3.6		-82.6	570	389	19 44 01
19 54 00	W3IRS5	22 50 13	60.6	50.5	-3.6		-82.7	24	389	19 54 00
20 04 00	---	23 00 15	61.8	50.7	-3.4		-84.7	600	408	19 54 01

Schedule for TORUN (Code Tr)

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ULTRA-HIGH RESOLUTION OBSERVATIONS OF MASERS WITH SPACE-VLBI

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 16 Oct 2013 Day 289 ---										
20 05 00	0224+671	23 01 15	61.6	39.7	-3.5		-93.9	23	408	20 05 00
20 10 00	---	23 06 16	62.1	39.6	-3.4		-95.2	300	418	20 05 01
20 11 30	0212+735	23 07 46	61.7	25.7	-3.2		-110.4	47	418	20 11 30
20 16 30	---	23 12 47	62.0	25.4	-3.1		-111.9	300	427	20 11 31
20 21 30	2021+614	23 17 48	65.4	-52.2	2.9		90.2	130	427	20 21 30
20 26 30	---	23 22 49	64.8	-52.2	3.0		89.1	300	437	20 21 31
20 28 30	1849+670	23 24 49	55.2	-39.4	4.6		78.7	70	437	20 28 30
20 33 30	---	23 29 50	54.7	-39.2	4.7		77.7	300	446	20 28 31
20 38 30	W3IRS5	23 34 50	65.8	51.0	-2.9		-92.1	104	446	20 38 30
20 48 00	---	23 44 22	66.9	50.9	-2.7		-94.3	570	465	20 38 31
20 48 30	W3IRS5	23 44 52	67.0	50.8	-2.7		-94.5	24	465	20 48 30
20 58 30	---	23 54 54	68.1	50.5	-2.5		-97.0	600	484	20 48 31
21 00 00	0224+671	23 56 24	66.8	37.3	-2.6		-108.8	49	484	21 00 00
21 05 00	---	00 01 25	67.2	36.8	-2.5		-110.4	300	493	21 00 01
21 06 00	W3IRS5	00 02 25	69.0	50.2	-2.4		-98.9	18	493	21 06 00
21 15 30	---	00 11 57	70.1	49.6	-2.2		-101.6	570	512	21 06 01
21 16 00	W3IRS5	00 12 27	70.2	49.6	-2.2		-101.7	24	512	21 16 00
21 25 30	---	00 21 58	71.3	48.8	-2.1		-104.5	570	530	21 16 01
21 26 00	W3IRS5	00 22 28	71.3	48.8	-2.1		-104.7	24	530	21 26 00
21 35 30	---	00 32 00	72.4	47.8	-1.9		-107.7	570	548	21 26 01
21 36 00	W3IRS5	00 32 30	72.4	47.7	-1.9		-107.9	24	548	21 36 00
21 46 00	---	00 42 32	73.5	46.4	-1.7		-111.4	600	567	21 36 01
21 47 00	0224+671	00 43 32	70.8	31.6	-1.8		-125.0	16	567	21 47 00
21 52 00	---	00 48 33	71.2	30.7	-1.7		-127.0	300	577	21 47 01
21 54 00	0212+735	00 50 33	67.3	15.7	-1.5		-144.1	75	577	21 54 00
21 59 00	---	00 55 34	67.5	15.0	-1.4		-146.0	300	587	21 54 01
22 04 00	2021+614	01 00 35	53.5	-48.3	4.6		70.9	158	587	22 04 00
22 09 00	---	01 05 35	52.9	-48.0	4.7		70.1	300	596	22 04 01
22 15 00	W3IRS5	01 11 36	76.5	40.3	-1.3		-123.7	167	596	22 15 00
22 24 30	---	01 21 08	77.4	37.4	-1.1		-128.7	570	614	22 15 01
22 25 00	W3IRS5	01 21 38	77.5	37.2	-1.1		-129.0	24	614	22 25 00
22 30 30	---	01 27 09	78.0	35.2	-1.0		-132.1	330	625	22 25 01

Schedule for TORUN (Code Tr)

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ULTRA-HIGH RESOLUTION OBSERVATIONS OF MASERS WITH SPACE-VLBI

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
--- Wed 16 Oct 2013 Day 289 ---										
22 31 00	W3IRS5	01 27 39	78.0	35.1	-1.0		-132.4	24	625	22 31 00
22 39 00	---	01 35 40	78.7	31.8	-0.9		-137.4	480	640	22 31 01
22 41 00	0224+671	01 37 41	74.4	18.8	-0.9		-149.7	80	640	22 41 00
22 46 00	---	01 42 41	74.6	17.3	-0.8		-152.4	300	650	22 41 01
22 48 00	W3IRS5	01 44 42	79.4	27.5	-0.7		-143.6	83	650	22 48 00
22 57 30	---	01 54 13	80.0	22.3	-0.5		-150.8	570	668	22 48 01
22 58 00	W3IRS5	01 54 43	80.0	22.0	-0.5		-151.2	23	668	22 58 00
23 07 30	---	02 04 15	80.5	16.1	-0.4		-159.2	570	686	22 58 01
23 08 00	W3IRS5	02 04 45	80.5	15.7	-0.4		-159.6	23	686	23 08 00
23 17 30	---	02 14 17	80.8	9.2	-0.2		-168.2	570	705	23 08 01
23 18 00	W3IRS5	02 14 47	80.8	8.8	-0.2		-168.6	23	705	23 18 00
23 28 00	---	02 24 48	80.9	1.5	-0.0		-178.1	600	724	23 18 01
23 30 00	0224+671	02 26 49	75.7	1.3	-0.1		-178.0	86	724	23 30 00
23 35 00	---	02 31 49	75.7	-0.7	0.0		178.9	300	733	23 30 01
23 37 00	0212+735	02 33 50	69.2	-2.9	0.2		173.7	82	733	23 37 00
23 42 00	---	02 38 51	69.1	-3.9	0.3		171.6	300	743	23 37 01
23 46 00	2021+614	02 42 51	42.7	-40.0	6.3		54.5	128	743	23 46 00
23 51 00	---	02 47 52	42.2	-39.6	6.4		53.7	300	753	23 46 01
23 53 00	1849+670	02 49 52	38.3	-25.4	8.0		41.4	77	753	23 53 00
23 58 00	---	02 54 53	38.0	-24.9	8.1		40.5	300	762	23 53 01
--- Thu 17 Oct 2013 Day 290 ---										
00 03 00	W3IRS5	02 59 54	79.9	-22.6	0.6		150.4	128	762	00 03 00
00 12 30	---	03 09 26	79.3	-27.8	0.7		143.2	570	780	00 03 01
00 13 00	W3IRS5	03 09 56	79.3	-28.0	0.7		142.8	23	780	00 13 00
00 20 30	---	03 17 27	78.7	-31.6	0.8		137.7	450	795	00 13 01
00 21 00	W3IRS5	03 17 57	78.7	-31.8	0.9		137.4	23	795	00 21 00
00 31 00	---	03 27 59	77.8	-35.8	1.0		131.2	600	814	00 21 01
00 33 00	0224+671	03 29 59	74.0	-21.1	1.0		145.8	75	814	00 33 00
00 38 00	---	03 35 00	73.7	-22.5	1.1		143.3	300	824	00 33 01
00 40 00	W3IRS5	03 37 00	77.0	-38.8	1.2		126.3	73	824	00 40 00
00 49 30	---	03 46 32	76.1	-41.5	1.3		121.6	570	842	00 40 01
00 50 00	W3IRS5	03 47 02	76.0	-41.6	1.3		121.3	24	842	00 50 00
01 00 00	---	03 57 03	75.0	-43.9	1.5		116.9	600	861	00 50 01

SETUP FILE INFORMATION:

=====
 Setup file: ra1cm2.set

Matching groups in ./es073.freq.sess313rdbe.dat:
 tr1cm

Setup group:	8	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=	21500.00	21500.00	21500.00	21500.00
Net SB=	L	L	U	U
IF SB =	U	U	U	U
Pol. =	RCP	LCP	RCP	LCP
BBC =	1	2	1	2
BBC SB=	L	L	U	U
IF =	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=	22228.00	22228.00	22228.00	22228.00
BBC fr=	728.00	728.00	728.00	728.00
Bandwd=	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	OFF OFF OFF OFF
PCALXB2=	M1 M2 M3 M4	OFF OFF OFF OFF
PCALFR1=	0 0 0 0	0 0 0 0
PCALFR2=	0 0 0 0	0 0 0 0

Track assignments are:
 track1= 2, 18, 3, 19
 barrel=roll_off

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	Source position (RA/Dec) (J2000)	(Date)	Error (mas)
* W3IRS5	02 21 53.253968	* 02 25 40.712000	02 26 48.133211	0.00
	61 52 21.48039	* 62 05 52.52200	62 09 34.03446	0.00
J0217+7349	02 12 49.921893	* 02 17 30.813373	02 18 56.259941	1.24
* 0212+735	73 35 40.08541	* 73 49 32.62174	73 53 18.98546	0.26
J0228+6721	02 24 41.169052	* 02 28 50.051489	02 30 04.387655	0.26
* 0224+671	67 07 39.70869	* 67 21 03.02932	67 24 41.10736	0.10
J1849+6705	18 49 16.505870	* 18 49 16.072283	18 49 15.288669	0.26
* 1849+670	67 02 07.88048	* 67 05 41.68022	67 07 08.10634	0.10
J2022+6136	20 21 13.300235	* 20 22 06.681753	20 22 22.448667	0.21
* 2021+614	61 27 18.15575	* 61 36 58.80476	61 40 07.47538	0.10

n13k3tr

NETWORK MONITORING EXPERIMENT

PI: *Ivan Agudo*

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Phone: +31-521-596549 EMAIL: agudo@jive.nl
Phone during observation: +31-521-596549

Notes: 1.3 cm NME for session 3/2013, 1 Gbps, 2-bit sampling, 16 MHz filters
 Additional DBBC testing data from Mc and Tr is expected.

COVER LETTER:

Dear EVN friends,

This is the schedule for the 1.3cm NME on Oct. 17 2013,
involving 17 stations: Eb Jb2 On20 Mc Nt Tr Ys Mh Sv Zc Bd Ur Sh Hh Ky Ku Kt
The NME uses a setup with 1 Gbps and consists of
integrations on strong calibrators (OJ287, 4C39.25, 0836+710, with
~5, ~8, and ~2.3 Jy at 15GHz as reported by the MOJAVE Team)
as well as phase-referencing cycles involving 4C39.25 and a continuum
calibrator (J0916+3854) as targets.

There are three ftp fringe-test scans starting at:

- (1) 03:35:40 UT (scan 2, 2 sec, OJ287)
- (2) 03:59:40 UT (scan 6, 2 sec, 4C39.25)
- (3) 05:52:50 UT (scan 65, 2 sec, 4C39.25)

See you on Skype group chat
and
Good luck with the session!

Ivan

Skype account: ivan-agudo

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 17 Oct 2013 Day 290 ---

```
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
```

```
03 30 00  OJ287          06 27 28  46.4 124.8 -2.5   -31.6    0     0   03 30 00
03 35 00  ---          06 32 29  47.0 126.3 -2.4   -31.0   300    39   03 30 01

03 35 40  OJ287          06 33 09  47.1 126.5 -2.4   -30.9    34    39   03 35 40
03 40 40  ---          06 38 10  47.7 128.0 -2.3   -30.2   300    77   03 35 41

03 42 40  OJ287          06 40 10  48.0 128.6 -2.3   -30.0   113    77   03 42 40
03 47 40  ---          06 45 11  48.5 130.1 -2.2   -29.3   300   116   03 42 41

03 48 20  OJ287          06 45 51  48.6 130.3 -2.2   -29.2    34   116   03 48 20
03 53 20  ---          06 50 52  49.2 131.9 -2.1   -28.4   300   155   03 48 21

03 54 00  4C39.25       06 51 32  59.9 102.1 -2.6   -49.1   -34   155   03 54 00
03 59 00  ---          06 56 33  60.6 103.4 -2.5   -48.7   266   194   03 54 01

03 59 40  4C39.25       06 57 13  60.7 103.5 -2.5   -48.7    34   194   03 59 40
04 04 40  ---          07 02 14  61.5 104.9 -2.4   -48.3   300   232   03 59 41

04 06 40  4C39.25       07 04 14  61.8 105.4 -2.4   -48.1   113   232   04 06 40
04 07 40  ---          07 05 14  61.9 105.7 -2.4   -48.0    60   240   04 06 41

04 08 20  J0916+3854    07 05 54  63.4 109.0 -2.2   -46.8    19   240   04 08 20
04 09 20  =0913+391    07 06 55  63.5 109.3 -2.2   -46.7    60   248   04 08 21

04 10 10  4C39.25       07 07 45  62.3 106.4 -2.3   -47.8    29   248   04 10 10
04 11 10  ---          07 08 45  62.4 106.7 -2.3   -47.7    60   255   04 10 11

04 12 00  J0916+3854    07 09 35  63.9 110.1 -2.1   -46.4    29   255   04 12 00
04 13 00  =0913+391    07 10 35  64.0 110.4 -2.1   -46.3    60   263   04 12 01

04 13 50  4C39.25       07 11 25  62.8 107.4 -2.3   -47.5    29   263   04 13 50
04 14 50  ---          07 12 25  62.9 107.7 -2.3   -47.4    60   271   04 13 51

04 15 40  J0916+3854    07 13 16  64.4 111.3 -2.1   -45.9    29   271   04 15 40
04 16 40  =0913+391    07 14 16  64.6 111.6 -2.1   -45.8    60   279   04 15 41

04 17 30  4C39.25       07 15 06  63.3 108.5 -2.2   -47.1    29   279   04 17 30
04 18 30  ---          07 16 06  63.5 108.8 -2.2   -47.0    60   286   04 17 31
```

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 17 Oct 2013 Day 290 ---										
04 19 20	J0916+3854	07 16 56	64.9	112.4	-2.0		-45.5	28	286	04 19 20
04 20 20	=0913+391	07 17 56	65.1	112.8	-2.0		-45.3	60	294	04 19 21
04 21 10	4C39.25	07 18 46	63.8	109.6	-2.2		-46.7	29	294	04 21 10
04 22 10	---	07 19 47	64.0	109.9	-2.1		-46.6	60	302	04 21 11
04 23 00	J0916+3854	07 20 37	65.4	113.6	-2.0		-44.9	28	302	04 23 00
04 24 00	=0913+391	07 21 37	65.6	114.0	-1.9		-44.8	60	310	04 23 01
04 24 50	4C39.25	07 22 27	64.4	110.7	-2.1		-46.3	28	310	04 24 50
04 25 50	---	07 23 27	64.5	111.0	-2.1		-46.1	60	317	04 24 51
04 26 40	J0916+3854	07 24 17	65.9	114.9	-1.9		-44.4	28	317	04 26 40
04 27 40	=0913+391	07 25 18	66.1	115.2	-1.9		-44.2	60	325	04 26 41
04 28 30	4C39.25	07 26 08	64.9	111.9	-2.0		-45.8	28	325	04 28 30
04 29 30	---	07 27 08	65.0	112.2	-2.0		-45.7	60	333	04 28 31
04 30 20	J0916+3854	07 27 58	66.4	116.1	-1.8		-43.8	28	333	04 30 20
04 31 20	=0913+391	07 28 58	66.6	116.5	-1.8		-43.6	60	341	04 30 21
04 32 10	4C39.25	07 29 48	65.4	113.1	-2.0		-45.3	28	341	04 32 10
04 33 10	---	07 30 48	65.5	113.4	-2.0		-45.1	60	348	04 32 11
04 34 00	J0916+3854	07 31 39	66.9	117.5	-1.8		-43.2	27	348	04 34 00
04 35 00	=0913+391	07 32 39	67.1	117.8	-1.8		-43.0	60	356	04 34 01
04 35 50	4C39.25	07 33 29	65.9	114.3	-1.9		-44.7	28	356	04 35 50
04 36 50	---	07 34 29	66.0	114.6	-1.9		-44.6	60	364	04 35 51
04 37 40	J0916+3854	07 35 19	67.4	118.8	-1.7		-42.5	27	364	04 37 40
04 38 40	=0913+391	07 36 19	67.6	119.2	-1.7		-42.3	60	372	04 37 41
04 39 30	4C39.25	07 37 10	66.4	115.6	-1.8		-44.2	28	372	04 39 30
04 40 30	---	07 38 10	66.5	115.9	-1.8		-44.0	60	379	04 39 31
04 41 20	J0916+3854	07 39 00	67.9	120.2	-1.6		-41.8	27	379	04 41 20
04 42 20	=0913+391	07 40 00	68.0	120.6	-1.6		-41.6	60	387	04 41 21
04 43 10	4C39.25	07 40 50	66.9	116.9	-1.8		-43.6	27	387	04 43 10
04 44 10	---	07 41 50	67.0	117.2	-1.8		-43.4	60	395	04 43 11
04 45 00	J0916+3854	07 42 40	68.4	121.7	-1.6		-41.0	27	395	04 45 00
04 46 00	=0913+391	07 43 41	68.5	122.1	-1.6		-40.8	60	403	04 45 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 17 Oct 2013 Day 290 ---										
04 46 50	4C39.25	07 44 31	67.4	118.2	-1.7		-42.9	27	403	04 46 50
04 47 50	---	07 45 31	67.5	118.6	-1.7		-42.7	60	410	04 46 51
04 48 40	J0916+3854	07 46 21	68.8	123.1	-1.5		-40.2	26	410	04 48 40
04 49 40	=0913+391	07 47 21	69.0	123.6	-1.5		-40.0	60	418	04 48 41
04 50 30	4C39.25	07 48 11	67.9	119.6	-1.7		-42.2	27	418	04 50 30
04 51 30	---	07 49 11	68.0	120.0	-1.6		-42.0	60	426	04 50 31
04 52 20	J0916+3854	07 50 02	69.3	124.7	-1.5		-39.3	26	426	04 52 20
04 53 20	=0913+391	07 51 02	69.4	125.1	-1.4		-39.1	60	434	04 52 21
04 54 10	4C39.25	07 51 52	68.3	121.0	-1.6		-41.5	26	434	04 54 10
04 55 10	---	07 52 52	68.5	121.4	-1.6		-41.2	60	441	04 54 11
04 56 00	J0916+3854	07 53 42	69.7	126.3	-1.4		-38.4	26	441	04 56 00
04 57 00	=0913+391	07 54 42	69.9	126.7	-1.4		-38.2	60	449	04 56 01
04 57 50	4C39.25	07 55 33	68.8	122.5	-1.5		-40.7	26	449	04 57 50
04 58 50	---	07 56 33	68.9	122.9	-1.5		-40.4	60	457	04 57 51
04 59 40	J0916+3854	07 57 23	70.2	127.9	-1.3		-37.5	25	457	04 59 40
05 00 40	=0913+391	07 58 23	70.3	128.4	-1.3		-37.2	60	464	04 59 41
05 01 30	4C39.25	07 59 13	69.3	124.0	-1.5		-39.8	26	464	05 01 30
05 02 30	---	08 00 13	69.4	124.4	-1.5		-39.6	60	472	05 01 31
05 03 20	J0916+3854	08 01 03	70.6	129.6	-1.3		-36.4	25	472	05 03 20
05 04 20	=0913+391	08 02 04	70.7	130.1	-1.3		-36.1	60	480	05 03 21
05 05 10	4C39.25	08 02 54	69.7	125.6	-1.4		-38.9	26	480	05 05 10
05 06 10	---	08 03 54	69.8	126.0	-1.4		-38.7	60	488	05 05 11
05 07 00	J0916+3854	08 04 44	71.0	131.4	-1.2		-35.3	25	488	05 07 00
05 08 00	=0913+391	08 05 44	71.2	131.9	-1.2		-35.0	60	495	05 07 01
05 08 50	4C39.25	08 06 34	70.2	127.2	-1.4		-38.0	25	495	05 08 50
05 09 50	---	08 07 34	70.3	127.7	-1.3		-37.7	60	503	05 08 51
05 10 40	J0916+3854	08 08 25	71.4	133.2	-1.2		-34.2	24	503	05 10 40
05 11 40	=0913+391	08 09 25	71.6	133.7	-1.1		-33.9	60	511	05 10 41
05 12 30	4C39.25	08 10 15	70.6	128.9	-1.3		-36.9	25	511	05 12 30
05 13 30	---	08 11 15	70.7	129.4	-1.3		-36.7	60	519	05 12 31

Schedule for TORUN (Code Tr)

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Network Monitoring Experiment

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 17 Oct 2013 Day 290 ---										
05 14 20	J0916+3854	08 12 05	71.8	135.1	-1.1		-33.0	24	519	05 14 20
05 15 20	=0913+391	08 13 05	71.9	135.6	-1.1		-32.6	60	526	05 14 21
05 16 10	4C39.25	08 13 56	71.0	130.7	-1.2		-35.9	25	526	05 16 10
05 17 10	---	08 14 56	71.1	131.2	-1.2		-35.6	60	534	05 16 11
05 18 00	J0916+3854	08 15 46	72.2	137.1	-1.0		-31.7	24	534	05 18 00
05 19 00	=0913+391	08 16 46	72.3	137.6	-1.0		-31.3	60	542	05 18 01
05 19 50	4C39.25	08 17 36	71.4	132.5	-1.2		-34.7	24	542	05 19 50
05 20 50	---	08 18 36	71.6	133.0	-1.2		-34.4	60	550	05 19 51
05 21 40	J0916+3854	08 19 26	72.6	139.1	-1.0		-30.3	23	550	05 21 40
05 22 40	=0913+391	08 20 27	72.7	139.7	-1.0		-29.9	60	557	05 21 41
05 23 30	4C39.25	08 21 17	71.8	134.4	-1.1		-33.5	24	557	05 23 30
05 24 30	---	08 22 17	71.9	134.9	-1.1		-33.2	60	565	05 23 31
05 25 20	J0916+3854	08 23 07	72.9	141.2	-0.9		-28.9	23	565	05 25 20
05 26 20	=0913+391	08 24 07	73.0	141.8	-0.9		-28.5	60	573	05 25 21
05 27 10	4C39.25	08 24 57	72.2	136.3	-1.0		-32.3	23	573	05 27 10
05 28 10	---	08 25 57	72.3	136.8	-1.0		-31.9	60	581	05 27 11
05 29 00	J0916+3854	08 26 48	73.3	143.4	-0.8		-27.4	22	581	05 29 00
05 30 00	=0913+391	08 27 48	73.4	144.0	-0.8		-27.0	60	588	05 29 01
05 30 50	4C39.25	08 28 38	72.6	138.3	-1.0		-30.9	23	588	05 30 50
05 31 50	---	08 29 38	72.7	138.9	-1.0		-30.5	60	596	05 30 51
05 32 40	J0916+3854	08 30 28	73.6	145.6	-0.8		-25.8	22	596	05 32 40
05 33 40	=0913+391	08 31 28	73.7	146.3	-0.8		-25.4	60	604	05 32 41
05 34 30	4C39.25	08 32 19	73.0	140.4	-0.9		-29.5	23	604	05 34 30
05 35 30	---	08 33 19	73.1	141.0	-0.9		-29.1	60	612	05 34 31
05 36 20	J0916+3854	08 34 09	73.9	148.0	-0.7		-24.1	22	612	05 36 20
05 37 20	=0913+391	08 35 09	74.0	148.6	-0.7		-23.7	60	619	05 36 21
05 38 10	4C39.25	08 35 59	73.3	142.6	-0.9		-28.0	22	619	05 38 10
05 39 10	---	08 36 59	73.4	143.2	-0.8		-27.6	60	627	05 38 11
05 40 00	J0916+3854	08 37 49	74.2	150.4	-0.7		-22.4	21	627	05 40 00
05 41 00	=0913+391	08 38 50	74.3	151.0	-0.6		-21.9	60	635	05 40 01

Schedule for TORUN (Code Tr)

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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 17 Oct 2013 Day 290 ---										
05 41 50	4C39.25	08 39 40	73.6	144.8	-0.8		-26.4	22	635	05 41 50
05 42 50	---	08 40 40	73.7	145.4	-0.8		-26.0	60	643	05 41 51
05 43 40	J0916+3854	08 41 30	74.5	152.8	-0.6		-20.6	21	643	05 43 40
05 44 40	=0913+391	08 42 30	74.5	153.5	-0.6		-20.1	60	650	05 43 41
05 45 30	4C39.25	08 43 20	73.9	147.1	-0.7		-24.8	22	650	05 45 30
05 46 30	---	08 44 21	74.0	147.7	-0.7		-24.3	60	658	05 45 31
05 47 20	J0916+3854	08 45 11	74.7	155.3	-0.5		-18.8	20	658	05 47 20
05 48 20	=0913+391	08 46 11	74.8	156.1	-0.5		-18.2	60	666	05 47 21
05 49 10	4C39.25	08 47 01	74.2	149.5	-0.7		-23.1	21	666	05 49 10
05 50 10	---	08 48 01	74.3	150.1	-0.7		-22.6	60	674	05 49 11
05 51 00	J0916+3854	08 48 51	74.9	158.0	-0.5		-16.8	20	674	05 51 00
05 52 00	=0913+391	08 49 51	75.0	158.7	-0.5		-16.3	60	681	05 51 01
05 52 50	4C39.25	08 50 42	74.5	151.9	-0.6		-21.3	21	681	05 52 50
05 57 50	---	08 55 42	74.8	155.4	-0.5		-18.8	300	720	05 52 51
05 59 50	0836+710	08 57 43	72.2	-4.0	0.2		172.7	-216	720	05 59 50
06 04 50	---	09 02 44	72.1	-5.3	0.3		170.2	84	759	05 59 51
06 05 30	0836+710	09 03 24	72.1	-5.5	0.3		169.9	34	759	06 05 30
06 10 30	---	09 08 24	72.0	-6.8	0.4		167.5	300	797	06 05 31
06 11 10	0836+710	09 09 05	72.0	-7.0	0.4		167.1	34	797	06 11 10
06 16 10	---	09 14 05	71.9	-8.3	0.5		164.7	300	836	06 11 11
06 16 50	0836+710	09 14 45	71.9	-8.5	0.5		164.4	34	836	06 16 50
06 21 50	---	09 19 46	71.8	-9.7	0.6		162.0	300	875	06 16 51
06 22 30	0836+710	09 20 26	71.8	-9.9	0.6		161.7	34	875	06 22 30
06 30 00	---	09 27 58	71.6	-11.7	0.8		158.2	450	933	06 22 31

SETUP FILE INFORMATION:

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

==== Setup file: sess313.K1024

--- WARNING --- This group does not match an entry in the frequency catalog.
This might be ok because the catalog is not complete.
But be very careful to be sure that the setup is correct.

Setup group: 7 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	22219.49
	22251.49	22251.49	22251.49	22251.49	22283.49	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	719.49
	751.49	751.49	751.49	751.49	783.49	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	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

***** DBBC (Td) *****

==== Setup file: sess313.K1024

--- WARNING --- This group does not match an entry in the frequency catalog.
 This might be ok because the catalog is not complete.
 But be very careful to be sure that the setup is correct.

Setup group: 14 Station: TR_DBBC Total bit rate: 1024
 Format: MARK5B Bits per sample: 2 Sample rate: 32.000
 Number of channels: 16 DBE type: Speedup factor: 1.00

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	5	1	5	2	6	2	6	
	3	7	3	7	4	8	4	8	
BBC SB=	L	L	U	U	L	L	U	U	
	L	L	U	U	L	L	U	U	
IF =	A1	B1	A1	B1	A1	B1	A1	B1	
	A1	B1	A1	B1	A1	B1	A1	B1	

The following frequency sets based on these setups were used.

Frequency Set: 19 Setup file default.

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: 19

Track assignments are:

track1= 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32
 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)		
J0841+7053	08 36 21.556645	* 08 41 24.365283	08 42 46.538282	0.31
* 0836+710	71 04 22.42740	* 70 53 42.17302	70 50 19.75249	0.10
J0854+2006	08 51 57.250618	* 08 54 48.874930	08 55 36.298664	0.11
0851+202	20 17 58.41733	* 20 06 30.64078	20 03 12.42132	0.10
* 0J287	rfc_2012b Petrov, 2012, unpublished 191510 observations			
* J0916+3854	09 13 39.517576	* 09 16 48.904600	09 17 40.826977	0.20
0913+391	39 07 02.11851	* 38 54 28.14666	38 50 45.86659	0.23
J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.380190	0.13
0923+392	39 15 23.56637	* 39 02 20.85177	38 58 31.03918	0.10
* 4C39.25	/aps3/sched10.2/catalogs/sources.vlba			

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)
0836+710	92.9
0J287	73.3
J0916+3854	75.5
4C39.25	73.8

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

THE NUCLEAR ENVIRONMENT OF THE FIRST RADIO LOUD BALQSO J1556+3517

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Notes: target/phase calibrator: J1556+3517 / J1602+3326. Fringe finder: 3C345
 Coherence test: J1606+3124. Amplitude calibrator: J1606+2717

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---

Next scan frequencies:	22187.49	22187.49	22187.49	22187.49	22219.49	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
07 30 00	3C345	10 28 08	28.7	61.0	-6.3		-43.1	0	0	07 30 00			
07 35 00	---	10 33 08	29.4	61.8	-6.2		-43.5	300	38	07 30 01			
07 35 15	3C345	10 33 23	29.4	61.8	-6.2		-43.5	9	38	07 35 15			
07 40 00	---	10 38 09	30.1	62.6	-6.1		-43.9	285	75	07 35 16			
07 45 11	J1606+2717	10 43 21	26.7	79.4	-5.4		-41.6	264	75	07 45 11			
07 47 11	=1604+274	10 45 22	27.0	79.8	-5.4		-41.7	120	90	07 45 12			
07 48 11	J1602+3326	10 46 22	32.4	76.0	-5.3		-44.3	26	90	07 48 11			
07 49 11	=1600+335	10 47 22	32.5	76.2	-5.3		-44.3	60	98	07 48 12			
07 49 11	J1606+3124	10 47 22	30.5	77.1	-5.3		-43.3	-21	98	No stop			
07 50 41	=1604+315	10 48 52	30.7	77.4	-5.3		-43.3	69	109	07 49 12			
07 50 56	J1602+3326	10 49 07	32.8	76.5	-5.2		-44.4	-7	109	07 50 56			
07 51 56	=1600+335	10 50 08	32.9	76.7	-5.2		-44.4	53	117	07 50 57			
07 51 56	J1606+3124	10 50 08	30.9	77.6	-5.3		-43.4	-21	117	No stop			
07 53 26	=1604+315	10 51 38	31.1	77.9	-5.3		-43.5	69	129	07 51 57			
07 53 41	J1602+3326	10 51 53	33.2	77.0	-5.2		-44.5	-7	129	07 53 41			
07 54 41	=1600+335	10 52 53	33.3	77.2	-5.2		-44.5	53	136	07 53 42			
07 55 41	J1602+3326	10 53 53	33.5	77.4	-5.1		-44.6	54	136	07 55 41			
07 56 41	=1600+335	10 54 53	33.6	77.5	-5.1		-44.6	60	144	07 55 42			

Schedule for TORUN (Code Tr)

Page 3

The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
07 56 41	J1556+3517	10 54 53	35.7	76.9	-5.0		-45.8	-22	144	No stop
07 58 11	---	10 56 24	36.0	77.2	-5.0		-45.8	68	156	07 56 42
07 58 26	J1602+3326	10 56 39	33.9	77.8	-5.1		-44.7	-7	156	07 58 26
07 59 26	=1600+335	10 57 39	34.0	78.0	-5.1		-44.7	53	163	07 58 27
07 59 26	J1556+3517	10 57 39	36.1	77.4	-5.0		-45.9	-22	163	No stop
08 00 56	---	10 59 09	36.4	77.7	-5.0		-45.9	68	175	07 59 27
08 01 11	J1602+3326	10 59 24	34.3	78.3	-5.1		-44.8	-7	175	08 01 11
08 02 11	=1600+335	11 00 24	34.4	78.5	-5.0		-44.8	53	182	08 01 12
08 02 11	J1556+3517	11 00 24	36.5	77.9	-4.9		-46.0	-22	182	No stop
08 03 41	---	11 01 54	36.8	78.2	-4.9		-46.0	68	194	08 02 12
08 03 56	J1602+3326	11 02 10	34.7	78.8	-5.0		-44.9	-7	194	08 03 56
08 04 56	=1600+335	11 03 10	34.8	79.0	-5.0		-44.9	53	202	08 03 57
08 04 56	J1556+3517	11 03 10	37.0	78.4	-4.9		-46.1	-22	202	No stop
08 06 26	---	11 04 40	37.2	78.6	-4.9		-46.1	68	213	08 04 57
08 06 41	J1602+3326	11 04 55	35.1	79.3	-5.0		-45.0	-7	213	08 06 41
08 07 41	=1600+335	11 05 55	35.2	79.5	-4.9		-45.0	53	221	08 06 42
08 07 41	J1556+3517	11 05 55	37.4	78.9	-4.9		-46.2	-22	221	No stop
08 09 11	---	11 07 25	37.6	79.1	-4.8		-46.2	68	232	08 07 42
08 09 26	J1602+3326	11 07 40	35.5	79.8	-4.9		-45.1	-7	232	08 09 26
08 10 26	=1600+335	11 08 41	35.6	80.0	-4.9		-45.1	53	240	08 09 27
08 10 26	J1556+3517	11 08 41	37.8	79.4	-4.8		-46.3	-22	240	No stop
08 11 56	---	11 10 11	38.0	79.6	-4.8		-46.3	68	252	08 10 27
08 12 11	J1602+3326	11 10 26	35.9	80.3	-4.9		-45.2	-7	252	08 12 11
08 13 11	=1600+335	11 11 26	36.1	80.5	-4.9		-45.2	53	259	08 12 12
08 13 11	J1556+3517	11 11 26	38.2	79.9	-4.8		-46.4	-22	259	No stop
08 14 41	---	11 12 56	38.4	80.1	-4.7		-46.4	68	271	08 13 12
08 14 56	J1602+3326	11 13 11	36.3	80.8	-4.8		-45.3	-7	271	08 14 56
08 15 56	=1600+335	11 14 11	36.5	81.0	-4.8		-45.3	53	278	08 14 57
08 15 56	J1556+3517	11 14 11	38.6	80.3	-4.7		-46.5	-22	278	No stop
08 17 26	---	11 15 42	38.8	80.6	-4.7		-46.5	68	290	08 15 57
08 17 41	J1602+3326	11 15 57	36.7	81.3	-4.8		-45.3	-7	290	08 17 41
08 18 41	=1600+335	11 16 57	36.9	81.5	-4.8		-45.4	53	298	08 17 42

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
08 18 41	J1556+3517	11 16 57	39.0	80.8	-4.7		-46.6	-22	298	No stop
08 20 11	---	11 18 27	39.2	81.1	-4.6		-46.6	68	309	08 18 42
08 20 26	J1602+3326	11 18 42	37.1	81.8	-4.7		-45.4	-7	309	08 20 26
08 21 26	=1600+335	11 19 42	37.3	82.0	-4.7		-45.4	53	317	08 20 27
08 21 26	J1556+3517	11 19 42	39.4	81.3	-4.6		-46.6	-22	317	No stop
08 22 56	---	11 21 13	39.6	81.6	-4.6		-46.7	68	328	08 21 27
08 23 11	J1602+3326	11 21 28	37.5	82.3	-4.7		-45.5	-7	328	08 23 11
08 24 11	=1600+335	11 22 28	37.7	82.5	-4.7		-45.5	53	336	08 23 12
08 24 11	J1556+3517	11 22 28	39.8	81.8	-4.6		-46.7	-22	336	No stop
08 25 41	---	11 23 58	40.0	82.1	-4.6		-46.8	68	348	08 24 12
08 25 56	J1602+3326	11 24 13	38.0	82.9	-4.6		-45.5	-7	348	08 25 56
08 26 56	=1600+335	11 25 13	38.1	83.0	-4.6		-45.6	53	355	08 25 57
08 26 56	J1556+3517	11 25 13	40.2	82.3	-4.5		-46.8	-22	355	No stop
08 28 26	---	11 26 44	40.4	82.6	-4.5		-46.8	68	367	08 26 57
08 28 41	J1602+3326	11 26 59	38.4	83.4	-4.6		-45.6	-7	367	08 28 41
08 29 41	=1600+335	11 27 59	38.5	83.6	-4.6		-45.6	53	374	08 28 42
08 30 23	J1606+2717	11 28 40	33.5	88.0	-4.6		-42.5	8	374	08 30 23
08 32 23	=1604+274	11 30 41	33.8	88.4	-4.6		-42.5	120	390	08 30 24
08 33 23	J1602+3326	11 31 41	39.1	84.2	-4.5		-45.7	26	390	08 33 23
08 34 23	=1600+335	11 32 41	39.2	84.4	-4.5		-45.7	60	397	08 33 24
08 34 23	J1556+3517	11 32 41	41.3	83.7	-4.4		-47.0	-22	397	No stop
08 35 53	---	11 34 11	41.6	84.0	-4.4		-47.0	68	409	08 34 24
08 36 08	J1602+3326	11 34 26	39.5	84.8	-4.5		-45.8	-7	409	08 36 08
08 37 08	=1600+335	11 35 26	39.6	85.0	-4.5		-45.8	53	417	08 36 09
08 37 08	J1556+3517	11 35 26	41.7	84.2	-4.4		-47.0	-22	417	No stop
08 38 38	---	11 36 57	42.0	84.5	-4.3		-47.1	68	428	08 37 09
08 38 53	J1602+3326	11 37 12	39.9	85.3	-4.4		-45.8	-7	428	08 38 53
08 39 53	=1600+335	11 38 12	40.0	85.5	-4.4		-45.8	53	436	08 38 54
08 39 53	J1556+3517	11 38 12	42.1	84.7	-4.3		-47.1	-22	436	No stop
08 41 23	---	11 39 42	42.4	85.0	-4.3		-47.1	68	447	08 39 54
08 41 38	J1602+3326	11 39 57	40.3	85.8	-4.4		-45.8	-7	447	08 41 38
08 42 38	=1600+335	11 40 57	40.5	86.0	-4.4		-45.9	53	455	08 41 39

Schedule for TORUN (Code Tr)

Page 5

The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
08 42 38	J1556+3517	11 40 57	42.6	85.3	-4.3		-47.1	-22	455	No stop
08 44 08	---	11 42 28	42.8	85.6	-4.2		-47.2	68	467	08 42 39
08 44 23	J1602+3326	11 42 43	40.7	86.3	-4.3		-45.9	-7	467	08 44 23
08 45 23	=1600+335	11 43 43	40.9	86.5	-4.3		-45.9	53	474	08 44 24
08 45 23	J1556+3517	11 43 43	43.0	85.8	-4.2		-47.2	-22	474	No stop
08 46 53	---	11 45 13	43.2	86.1	-4.2		-47.2	68	486	08 45 24
08 47 08	J1602+3326	11 45 28	41.1	86.9	-4.3		-45.9	-7	486	08 47 08
08 48 08	=1600+335	11 46 28	41.3	87.1	-4.3		-45.9	53	493	08 47 09
08 48 08	J1556+3517	11 46 28	43.4	86.3	-4.2		-47.2	-22	493	No stop
08 49 38	---	11 47 58	43.6	86.6	-4.2		-47.2	68	505	08 48 09
08 49 53	J1602+3326	11 48 13	41.5	87.4	-4.2		-45.9	-7	505	08 49 53
08 50 53	=1600+335	11 49 14	41.7	87.6	-4.2		-46.0	53	513	08 49 54
08 50 53	J1556+3517	11 49 14	43.8	86.8	-4.1		-47.3	-22	513	No stop
08 52 23	---	11 50 44	44.0	87.1	-4.1		-47.3	68	524	08 50 54
08 52 38	J1602+3326	11 50 59	42.0	87.9	-4.2		-46.0	-7	524	08 52 38
08 53 38	=1600+335	11 51 59	42.1	88.1	-4.2		-46.0	53	532	08 52 39
08 53 38	J1556+3517	11 51 59	44.2	87.4	-4.1		-47.3	-22	532	No stop
08 55 08	---	11 53 29	44.4	87.7	-4.1		-47.3	68	543	08 53 39
08 55 23	J1602+3326	11 53 44	42.4	88.5	-4.1		-46.0	-7	543	08 55 23
08 56 23	=1600+335	11 54 45	42.5	88.7	-4.1		-46.0	53	551	08 55 24
08 56 23	J1556+3517	11 54 45	44.6	87.9	-4.0		-47.3	-22	551	No stop
08 57 53	---	11 56 15	44.9	88.2	-4.0		-47.3	68	563	08 56 24
08 58 08	J1602+3326	11 56 30	42.8	89.0	-4.1		-46.0	-7	563	08 58 08
08 59 08	=1600+335	11 57 30	42.9	89.2	-4.1		-46.0	53	570	08 58 09
08 59 08	J1556+3517	11 57 30	45.0	88.4	-4.0		-47.3	-22	570	No stop
09 00 38	---	11 59 00	45.3	88.7	-4.0		-47.3	68	582	08 59 09
09 00 53	J1602+3326	11 59 15	43.2	89.6	-4.1		-46.0	-7	582	09 00 53
09 01 53	=1600+335	12 00 15	43.4	89.8	-4.0		-46.0	53	589	09 00 54
09 01 53	J1556+3517	12 00 15	45.5	89.0	-3.9		-47.3	-22	589	No stop
09 03 23	---	12 01 46	45.7	89.3	-3.9		-47.3	68	601	09 01 54
09 03 38	J1602+3326	12 02 01	43.6	90.1	-4.0		-46.0	-7	601	09 03 38
09 04 38	=1600+335	12 03 01	43.8	90.3	-4.0		-46.0	53	609	09 03 39

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
09 04 38	J1556+3517	12 03 01	45.9	89.5	-3.9		-47.3	-22	609	No stop
09 06 08	---	12 04 31	46.1	89.8	-3.9		-47.3	68	620	09 04 39
09 06 23	J1602+3326	12 04 46	44.0	90.7	-4.0		-46.0	-7	620	09 06 23
09 07 23	=1600+335	12 05 46	44.2	90.9	-3.9		-46.0	53	628	09 06 24
09 07 23	J1556+3517	12 05 46	46.3	90.1	-3.9		-47.3	-22	628	No stop
09 08 53	---	12 07 17	46.5	90.4	-3.8		-47.3	68	639	09 07 24
09 09 08	J1602+3326	12 07 32	44.4	91.2	-3.9		-46.0	-7	639	09 09 08
09 10 08	=1600+335	12 08 32	44.6	91.4	-3.9		-46.0	53	647	09 09 09
09 10 08	J1556+3517	12 08 32	46.7	90.6	-3.8		-47.3	-22	647	No stop
09 11 38	---	12 10 02	46.9	90.9	-3.8		-47.3	68	659	09 10 09
09 11 53	J1602+3326	12 10 17	44.9	91.8	-3.9		-46.0	-7	659	09 11 53
09 12 53	=1600+335	12 11 17	45.0	92.0	-3.9		-46.0	53	666	09 11 54
09 12 53	J1556+3517	12 11 17	47.1	91.2	-3.8		-47.3	-22	666	No stop
09 14 23	---	12 12 48	47.3	91.5	-3.7		-47.3	68	678	09 12 54
09 14 38	J1602+3326	12 13 03	45.3	92.4	-3.8		-46.0	-7	678	09 14 38
09 15 38	=1600+335	12 14 03	45.4	92.6	-3.8		-45.9	53	685	09 14 39
09 16 19	J1606+2717	12 14 44	40.4	97.5	-3.9		-42.0	8	685	09 16 19
09 18 19	=1604+274	12 16 44	40.7	97.9	-3.8		-42.0	120	701	09 16 20
09 19 19	J1602+3326	12 17 44	46.0	93.3	-3.7		-45.9	26	701	09 19 19
09 20 19	=1600+335	12 18 44	46.1	93.5	-3.7		-45.9	60	708	09 19 20
09 20 19	J1556+3517	12 18 44	48.2	92.7	-3.6		-47.3	-22	708	No stop
09 21 49	---	12 20 15	48.5	93.0	-3.6		-47.3	68	720	09 20 20
09 22 04	J1602+3326	12 20 30	46.4	93.9	-3.7		-45.9	-7	720	09 22 04
09 23 04	=1600+335	12 21 30	46.5	94.1	-3.7		-45.9	53	728	09 22 05
09 23 04	J1556+3517	12 21 30	48.6	93.3	-3.6		-47.2	-22	728	No stop
09 24 34	---	12 23 00	48.9	93.6	-3.6		-47.2	68	739	09 23 05
09 24 49	J1602+3326	12 23 15	46.8	94.5	-3.7		-45.8	-7	739	09 24 49
09 25 49	=1600+335	12 24 15	46.9	94.7	-3.6		-45.8	53	747	09 24 50
09 25 49	J1556+3517	12 24 15	49.1	93.9	-3.5		-47.2	-22	747	No stop
09 27 19	---	12 25 46	49.3	94.2	-3.5		-47.2	68	758	09 25 50
09 27 34	J1602+3326	12 26 01	47.2	95.1	-3.6		-45.8	-7	758	09 27 34
09 28 34	=1600+335	12 27 01	47.4	95.3	-3.6		-45.8	53	766	09 27 35

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
09 28 34	J1556+3517	12 27 01	49.5	94.5	-3.5		-47.2	-22	766	No stop
09 30 04	---	12 28 31	49.7	94.8	-3.5		-47.1	68	778	09 28 35
09 30 19	J1602+3326	12 28 46	47.6	95.7	-3.6		-45.7	-7	778	09 30 19
09 31 19	=1600+335	12 29 46	47.8	95.9	-3.5		-45.7	53	785	09 30 20
09 31 19	J1556+3517	12 29 46	49.9	95.1	-3.5		-47.1	-22	785	No stop
09 32 49	---	12 31 17	50.1	95.4	-3.4		-47.1	68	797	09 31 20
09 33 04	J1602+3326	12 31 32	48.0	96.3	-3.5		-45.7	-7	797	09 33 04
09 34 04	=1600+335	12 32 32	48.2	96.5	-3.5		-45.6	53	804	09 33 05
09 34 04	J1556+3517	12 32 32	50.3	95.7	-3.4		-47.0	-22	804	No stop
09 35 34	---	12 34 02	50.5	96.0	-3.4		-47.0	68	816	09 34 05
09 35 49	J1602+3326	12 34 17	48.4	96.9	-3.5		-45.6	-7	816	09 35 49
09 36 49	=1600+335	12 35 17	48.6	97.1	-3.5		-45.6	53	824	09 35 50
09 36 49	J1556+3517	12 35 17	50.7	96.3	-3.4		-47.0	-22	824	No stop
09 38 19	---	12 36 47	50.9	96.6	-3.3		-46.9	68	835	09 36 50
09 38 34	J1602+3326	12 37 02	48.9	97.5	-3.4		-45.5	-7	835	09 38 34
09 39 34	=1600+335	12 38 03	49.0	97.7	-3.4		-45.5	53	843	09 38 35
09 39 34	J1556+3517	12 38 03	51.1	96.9	-3.3		-46.9	-22	843	No stop
09 41 04	---	12 39 33	51.3	97.2	-3.3		-46.9	68	854	09 39 35
09 41 19	J1602+3326	12 39 48	49.3	98.1	-3.4		-45.4	-7	854	09 41 19
09 42 19	=1600+335	12 40 48	49.4	98.3	-3.4		-45.4	53	862	09 41 20
09 42 19	J1556+3517	12 40 48	51.5	97.5	-3.3		-46.8	-22	862	No stop
09 43 49	---	12 42 18	51.8	97.8	-3.2		-46.8	68	874	09 42 20
09 44 04	J1602+3326	12 42 33	49.7	98.7	-3.3		-45.3	-7	874	09 44 04
09 45 04	=1600+335	12 43 34	49.8	99.0	-3.3		-45.3	53	881	09 44 05
09 45 04	J1556+3517	12 43 34	51.9	98.1	-3.2		-46.7	-22	881	No stop
09 46 34	---	12 45 04	52.2	98.5	-3.2		-46.7	68	893	09 45 05
09 46 49	J1602+3326	12 45 19	50.1	99.4	-3.3		-45.2	-7	893	09 46 49
09 47 49	=1600+335	12 46 19	50.2	99.6	-3.3		-45.2	53	900	09 46 50
09 47 49	J1556+3517	12 46 19	52.3	98.7	-3.2		-46.6	-22	900	No stop
09 49 19	---	12 47 49	52.6	99.1	-3.2		-46.6	68	912	09 47 50

Schedule for TORUN (Code Tr)

Page 8

The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
09 49 34	J1602+3326	12 48 04	50.5	100.0	-3.2		-45.1	-7	912	09 49 34
09 50 34	=1600+335	12 49 04	50.6	100.2	-3.2		-45.1	53	920	09 49 35
09 50 34	J1556+3517	12 49 04	52.8	99.4	-3.1		-46.5	-22	920	No stop
09 52 04	---	12 50 35	53.0	99.7	-3.1		-46.5	68	931	09 50 35
09 52 19	J1602+3326	12 50 50	50.9	100.6	-3.2		-45.0	-7	931	09 52 19
09 53 19	=1600+335	12 51 50	51.0	100.9	-3.2		-45.0	53	939	09 52 20
09 53 19	J1556+3517	12 51 50	53.2	100.0	-3.1		-46.4	-22	939	No stop
09 54 49	---	12 53 20	53.4	100.4	-3.1		-46.3	68	950	09 53 20
09 55 04	J1602+3326	12 53 35	51.3	101.3	-3.2		-44.9	-7	950	09 55 04
09 56 04	=1600+335	12 54 35	51.5	101.5	-3.1		-44.8	53	958	09 55 05
09 56 04	J1556+3517	12 54 35	53.6	100.7	-3.0		-46.3	-22	958	No stop
09 57 34	---	12 56 06	53.8	101.0	-3.0		-46.2	68	970	09 56 05
09 57 49	J1602+3326	12 56 21	51.7	101.9	-3.1		-44.7	-7	970	09 57 49
09 58 49	=1600+335	12 57 21	51.9	102.2	-3.1		-44.7	53	977	09 57 50
09 58 49	J1556+3517	12 57 21	54.0	101.3	-3.0		-46.1	-22	977	No stop
10 00 19	---	12 58 51	54.2	101.7	-3.0		-46.1	68	989	09 58 50
10 00 34	J1602+3326	12 59 06	52.1	102.6	-3.1		-44.6	-7	989	10 00 34
10 01 34	=1600+335	13 00 06	52.3	102.8	-3.0		-44.5	53	996	10 00 35
10 02 37	3C345	13 01 10	50.6	86.7	-3.7		-51.3	16	996	10 02 37
10 06 37	---	13 05 10	51.2	87.4	-3.6		-51.3	240	1027	10 02 38
10 06 52	3C345	13 05 25	51.2	87.5	-3.6		-51.3	9	1027	10 06 52
10 10 37	---	13 09 11	51.8	88.2	-3.6		-51.4	225	1056	10 06 53
10 11 55	J1606+2717	13 10 29	48.5	110.7	-3.0		-39.2	18	1056	10 11 55
10 13 55	=1604+274	13 12 29	48.7	111.2	-2.9		-39.0	120	1071	10 11 56
10 14 55	J1602+3326	13 13 29	54.2	106.2	-2.8		-43.7	26	1071	10 14 55
10 15 55	=1600+335	13 14 30	54.4	106.5	-2.8		-43.6	60	1079	10 14 56
10 15 55	J1556+3517	13 14 30	56.5	105.6	-2.7		-45.1	-22	1079	No stop
10 17 25	---	13 16 00	56.7	106.0	-2.7		-45.0	68	1091	10 15 56
10 17 40	J1602+3326	13 16 15	54.6	106.9	-2.8		-43.5	-7	1091	10 17 40
10 18 40	=1600+335	13 17 15	54.8	107.2	-2.8		-43.4	53	1098	10 17 41

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
10 18 40	J1556+3517	13 17 15	56.9	106.3	-2.7		-44.9	-22	1098	No stop
10 20 10	---	13 18 45	57.1	106.7	-2.6		-44.8	68	1110	10 18 41
10 20 25	J1602+3326	13 19 00	55.0	107.6	-2.7		-43.3	-7	1110	10 20 25
10 21 25	=1600+335	13 20 01	55.1	107.9	-2.7		-43.2	53	1117	10 20 26
10 21 25	J1556+3517	13 20 01	57.3	107.1	-2.6		-44.7	-22	1117	No stop
10 22 55	---	13 21 31	57.5	107.5	-2.6		-44.5	68	1129	10 21 26
10 23 10	J1602+3326	13 21 46	55.4	108.4	-2.7		-43.1	-7	1129	10 23 10
10 24 10	=1600+335	13 22 46	55.5	108.6	-2.7		-43.0	53	1137	10 23 11
10 24 10	J1556+3517	13 22 46	57.7	107.8	-2.6		-44.4	-22	1137	No stop
10 25 40	---	13 24 16	57.9	108.2	-2.5		-44.3	68	1148	10 24 11
10 25 55	J1602+3326	13 24 31	55.8	109.1	-2.6		-42.8	-7	1148	10 25 55
10 26 55	=1600+335	13 25 31	55.9	109.4	-2.6		-42.7	53	1156	10 25 56
10 26 55	J1556+3517	13 25 31	58.1	108.6	-2.5		-44.2	-22	1156	No stop
10 28 25	---	13 27 02	58.3	109.0	-2.5		-44.1	68	1167	10 26 56
10 28 40	J1602+3326	13 27 17	56.2	109.9	-2.6		-42.6	-7	1167	10 28 40
10 29 40	=1600+335	13 28 17	56.3	110.1	-2.6		-42.5	53	1175	10 28 41
10 29 40	J1556+3517	13 28 17	58.5	109.4	-2.5		-43.9	-22	1175	No stop
10 31 10	---	13 29 47	58.7	109.8	-2.5		-43.8	68	1187	10 29 41
10 31 25	J1602+3326	13 30 02	56.6	110.6	-2.5		-42.3	-7	1187	10 31 25
10 32 25	=1600+335	13 31 02	56.7	110.9	-2.5		-42.2	53	1194	10 31 26
10 32 25	J1556+3517	13 31 02	58.8	110.1	-2.4		-43.7	-22	1194	No stop
10 33 55	---	13 32 33	59.1	110.6	-2.4		-43.5	68	1206	10 32 26
10 34 10	J1602+3326	13 32 48	57.0	111.4	-2.5		-42.0	-7	1206	10 34 10
10 35 10	=1600+335	13 33 48	57.1	111.7	-2.5		-41.9	53	1213	10 34 11
10 35 10	J1556+3517	13 33 48	59.2	110.9	-2.4		-43.4	-22	1213	No stop
10 36 40	---	13 35 18	59.4	111.4	-2.4		-43.2	68	1225	10 35 11
10 36 55	J1602+3326	13 35 33	57.3	112.2	-2.5		-41.8	-7	1225	10 36 55
10 37 55	=1600+335	13 36 33	57.5	112.5	-2.4		-41.7	53	1233	10 36 56
10 37 55	J1556+3517	13 36 33	59.6	111.7	-2.3		-43.1	-22	1233	No stop
10 39 25	---	13 38 03	59.8	112.2	-2.3		-42.9	68	1244	10 37 56

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
10 39 40	J1602+3326	13 38 19	57.7	113.0	-2.4		-41.5	-7	1244	10 39 40
10 40 40	=1600+335	13 39 19	57.9	113.3	-2.4		-41.4	53	1252	10 39 41
10 40 40	J1556+3517	13 39 19	60.0	112.6	-2.3		-42.8	-22	1252	No stop
10 42 10	---	13 40 49	60.2	113.0	-2.3		-42.6	68	1263	10 40 41
10 42 25	J1602+3326	13 41 04	58.1	113.8	-2.4		-41.2	-7	1263	10 42 25
10 43 25	=1600+335	13 42 04	58.2	114.1	-2.3		-41.0	53	1271	10 42 26
10 43 25	J1556+3517	13 42 04	60.4	113.4	-2.2		-42.5	-22	1271	No stop
10 44 55	---	13 43 34	60.6	113.8	-2.2		-42.3	68	1283	10 43 26
10 45 10	J1602+3326	13 43 49	58.5	114.6	-2.3		-40.8	-7	1283	10 45 10
10 46 10	=1600+335	13 44 50	58.6	115.0	-2.3		-40.7	53	1290	10 45 11
10 46 10	J1556+3517	13 44 50	60.8	114.2	-2.2		-42.1	-22	1290	No stop
10 47 40	---	13 46 20	61.0	114.7	-2.2		-41.9	68	1302	10 46 11
10 47 55	J1602+3326	13 46 35	58.9	115.5	-2.3		-40.5	-7	1302	10 47 55
10 48 55	=1600+335	13 47 35	59.0	115.8	-2.3		-40.4	53	1309	10 47 56
10 49 55	J1602+3326	13 48 35	59.1	116.1	-2.2		-40.2	54	1309	10 49 55
10 50 55	=1600+335	13 49 35	59.3	116.4	-2.2		-40.1	60	1317	10 49 56
10 50 55	J1606+3124	13 49 35	57.1	117.6	-2.3		-38.6	-22	1317	No stop
10 52 25	=1604+315	13 51 06	57.3	118.1	-2.3		-38.4	68	1329	10 50 56
10 52 40	J1602+3326	13 51 21	59.5	117.0	-2.2		-39.9	-7	1329	10 52 40
10 53 40	=1600+335	13 52 21	59.6	117.3	-2.2		-39.7	53	1336	10 52 41
10 53 40	J1606+3124	13 52 21	57.5	118.5	-2.2		-38.2	-22	1336	No stop
10 55 10	=1604+315	13 53 51	57.7	118.9	-2.2		-38.0	68	1348	10 53 41
10 55 25	J1602+3326	13 54 06	59.9	117.8	-2.1		-39.5	-7	1348	10 55 25
10 56 25	=1600+335	13 55 06	60.0	118.2	-2.1		-39.4	53	1356	10 55 26
10 57 09	J1606+2717	13 55 50	54.5	123.7	-2.2		-34.2	9	1356	10 57 09
10 59 09	=1604+274	13 57 50	54.8	124.3	-2.2		-33.9	120	1371	10 57 10
11 00 09	J1602+3326	13 58 51	60.5	119.4	-2.1		-38.8	25	1371	11 00 09
11 01 09	=1600+335	13 59 51	60.6	119.7	-2.0		-38.7	60	1379	11 00 10
11 01 09	J1556+3517	13 59 51	62.8	119.1	-2.0		-40.0	-22	1379	No stop
11 02 39	---	14 01 21	63.0	119.6	-1.9		-39.7	68	1390	11 01 10

Schedule for TORUN (Code Tr)

Page 11

The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
11 02 54	J1602+3326	14 01 36	60.8	120.3	-2.0		-38.4	-7	1390	11 02 54
11 03 54	=1600+335	14 02 36	61.0	120.6	-2.0		-38.2	53	1398	11 02 55
11 03 54	J1556+3517	14 02 36	63.1	120.1	-1.9		-39.5	-22	1398	No stop
11 05 24	---	14 04 06	63.3	120.6	-1.9		-39.3	68	1409	11 03 55
11 05 39	J1602+3326	14 04 22	61.2	121.2	-2.0		-38.0	-7	1409	11 05 39
11 06 39	=1600+335	14 05 22	61.3	121.6	-2.0		-37.8	53	1417	11 05 40
11 06 39	J1556+3517	14 05 22	63.5	121.0	-1.9		-39.1	-22	1417	No stop
11 08 09	---	14 06 52	63.7	121.6	-1.8		-38.8	68	1428	11 06 40
11 08 24	J1602+3326	14 07 07	61.6	122.2	-1.9		-37.5	-7	1428	11 08 24
11 09 24	=1600+335	14 08 07	61.7	122.5	-1.9		-37.3	53	1436	11 08 25
11 09 24	J1556+3517	14 08 07	63.8	122.0	-1.8		-38.6	-22	1436	No stop
11 10 54	---	14 09 37	64.0	122.6	-1.8		-38.3	68	1448	11 09 25
11 11 09	J1602+3326	14 09 52	61.9	123.2	-1.9		-37.0	-7	1448	11 11 09
11 12 09	=1600+335	14 10 53	62.0	123.5	-1.9		-36.9	53	1455	11 11 10
11 12 09	J1556+3517	14 10 53	64.2	123.0	-1.8		-38.1	-22	1455	No stop
11 13 39	---	14 12 23	64.4	123.6	-1.7		-37.8	68	1467	11 12 10
11 13 54	J1602+3326	14 12 38	62.2	124.1	-1.8		-36.5	-7	1467	11 13 54
11 14 54	=1600+335	14 13 38	62.4	124.5	-1.8		-36.4	53	1475	11 13 55
11 14 54	J1556+3517	14 13 38	64.5	124.1	-1.7		-37.5	-22	1475	No stop
11 16 24	---	14 15 08	64.7	124.6	-1.7		-37.2	68	1486	11 14 55
11 16 39	J1602+3326	14 15 23	62.6	125.1	-1.8		-36.0	-7	1486	11 16 39
11 17 39	=1600+335	14 16 24	62.7	125.5	-1.8		-35.8	53	1494	11 16 40
11 17 39	J1556+3517	14 16 24	64.9	125.1	-1.7		-37.0	-22	1494	No stop
11 19 09	---	14 17 54	65.1	125.7	-1.7		-36.7	68	1505	11 17 40
11 19 24	J1602+3326	14 18 09	62.9	126.2	-1.7		-35.5	-7	1505	11 19 24
11 20 24	=1600+335	14 19 09	63.0	126.5	-1.7		-35.3	53	1513	11 19 25
11 20 24	J1556+3517	14 19 09	65.2	126.2	-1.6		-36.4	-22	1513	No stop
11 21 54	---	14 20 39	65.4	126.8	-1.6		-36.1	68	1524	11 20 25
11 22 09	J1602+3326	14 20 54	63.3	127.2	-1.7		-35.0	-7	1524	11 22 09
11 23 09	=1600+335	14 21 54	63.4	127.6	-1.7		-34.8	53	1532	11 22 10

Schedule for TORUN (Code Tr)

Page 12

The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
11 23 09	J1556+3517	14 21 54	65.5	127.3	-1.6		-35.8	-22	1532	No stop
11 24 39	---	14 23 25	65.7	127.9	-1.6		-35.5	68	1544	11 23 10
11 24 54	J1602+3326	14 23 40	63.6	128.3	-1.6		-34.4	-7	1544	11 24 54
11 25 54	=1600+335	14 24 40	63.7	128.6	-1.6		-34.2	53	1551	11 24 55
11 25 54	J1556+3517	14 24 40	65.9	128.4	-1.5		-35.2	-22	1551	No stop
11 27 24	---	14 26 10	66.1	129.0	-1.5		-34.9	68	1563	11 25 55
11 27 39	J1602+3326	14 26 25	63.9	129.3	-1.6		-33.8	-7	1563	11 27 39
11 28 39	=1600+335	14 27 25	64.0	129.7	-1.6		-33.6	53	1571	11 27 40
11 28 39	J1556+3517	14 27 25	66.2	129.5	-1.5		-34.6	-22	1571	No stop
11 30 09	---	14 28 56	66.4	130.2	-1.5		-34.2	68	1582	11 28 40
11 30 24	J1602+3326	14 29 11	64.2	130.4	-1.6		-33.2	-7	1582	11 30 24
11 31 24	=1600+335	14 30 11	64.3	130.8	-1.5		-33.0	53	1590	11 30 25
11 31 24	J1556+3517	14 30 11	66.5	130.7	-1.4		-33.9	-22	1590	No stop
11 32 54	---	14 31 41	66.7	131.3	-1.4		-33.5	68	1601	11 31 25
11 33 09	J1602+3326	14 31 56	64.5	131.5	-1.5		-32.6	-7	1601	11 33 09
11 34 09	=1600+335	14 32 56	64.6	132.0	-1.5		-32.3	53	1609	11 33 10
11 34 09	J1556+3517	14 32 56	66.8	131.9	-1.4		-33.2	-22	1609	No stop
11 35 39	---	14 34 26	67.0	132.5	-1.4		-32.8	68	1620	11 34 10
11 35 54	J1602+3326	14 34 42	64.8	132.7	-1.5		-31.9	-7	1620	11 35 54
11 36 54	=1600+335	14 35 42	65.0	133.1	-1.4		-31.7	53	1628	11 35 55
11 36 54	J1556+3517	14 35 42	67.1	133.1	-1.4		-32.5	-22	1628	No stop
11 38 24	---	14 37 12	67.3	133.8	-1.3		-32.1	68	1640	11 36 55
11 38 39	J1602+3326	14 37 27	65.1	133.8	-1.4		-31.3	-7	1640	11 38 39
11 39 39	=1600+335	14 38 27	65.3	134.3	-1.4		-31.0	53	1647	11 38 40
11 39 39	J1556+3517	14 38 27	67.4	134.3	-1.3		-31.7	-22	1647	No stop
11 41 09	---	14 39 57	67.6	135.0	-1.3		-31.3	68	1659	11 39 40
11 41 24	J1602+3326	14 40 12	65.4	135.0	-1.4		-30.6	-7	1659	11 41 24
11 42 24	=1600+335	14 41 13	65.5	135.5	-1.4		-30.3	53	1667	11 41 25
11 43 08	J1606+2717	14 41 57	59.7	140.0	-1.4		-25.7	9	1667	11 43 08
11 45 08	=1604+274	14 43 58	59.9	140.8	-1.4		-25.3	120	1682	11 43 09

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
11 46 08	J1602+3326	14 44 58	65.9	137.1	-1.3		-29.3	24	1682	11 46 08
11 47 08	=1600+335	14 45 58	66.0	137.6	-1.3		-29.0	60	1690	11 46 09
11 47 08	J1556+3517	14 45 58	68.2	137.8	-1.2		-29.6	-22	1690	No stop
11 48 38	---	14 47 28	68.4	138.5	-1.2		-29.1	68	1701	11 47 09
11 48 53	J1602+3326	14 47 43	66.2	138.4	-1.2		-28.6	-7	1701	11 48 53
11 49 53	=1600+335	14 48 44	66.3	138.8	-1.2		-28.3	53	1709	11 48 54
11 49 53	J1556+3517	14 48 44	68.5	139.1	-1.1		-28.8	-22	1709	No stop
11 51 23	---	14 50 14	68.6	139.9	-1.1		-28.3	68	1720	11 49 54
11 51 38	J1602+3326	14 50 29	66.5	139.6	-1.2		-27.8	-7	1720	11 51 38
11 52 38	=1600+335	14 51 29	66.6	140.1	-1.2		-27.5	53	1728	11 51 39
11 52 38	J1556+3517	14 51 29	68.8	140.5	-1.1		-27.9	-22	1728	No stop
11 54 08	---	14 52 59	68.9	141.3	-1.1		-27.4	68	1740	11 52 39
11 54 23	J1602+3326	14 53 14	66.7	140.9	-1.2		-27.0	-7	1740	11 54 23
11 55 23	=1600+335	14 54 14	66.8	141.4	-1.1		-26.7	53	1747	11 54 24
11 55 23	J1556+3517	14 54 14	69.0	141.9	-1.0		-27.0	-22	1747	No stop
11 56 53	---	14 55 45	69.2	142.7	-1.0		-26.5	68	1759	11 55 24
11 57 08	J1602+3326	14 56 00	67.0	142.2	-1.1		-26.1	-7	1759	11 57 08
11 58 08	=1600+335	14 57 00	67.1	142.7	-1.1		-25.8	53	1766	11 57 09
11 58 08	J1556+3517	14 57 00	69.3	143.3	-1.0		-26.1	-22	1766	No stop
11 59 38	---	14 58 30	69.4	144.1	-1.0		-25.6	68	1778	11 58 09
11 59 53	J1602+3326	14 58 45	67.3	143.6	-1.1		-25.3	-7	1778	11 59 53
12 00 53	=1600+335	14 59 45	67.3	144.0	-1.0		-25.0	53	1786	11 59 54
12 00 53	J1556+3517	14 59 45	69.5	144.8	-1.0		-25.1	-22	1786	No stop
12 02 23	---	15 01 16	69.6	145.5	-0.9		-24.6	68	1797	12 00 54
12 02 38	J1602+3326	15 01 31	67.5	144.9	-1.0		-24.4	-7	1797	12 02 38
12 03 38	=1600+335	15 02 31	67.6	145.4	-1.0		-24.1	53	1805	12 02 39
12 03 38	J1556+3517	15 02 31	69.7	146.2	-0.9		-24.1	-22	1805	No stop
12 05 08	---	15 04 01	69.9	147.0	-0.9		-23.6	68	1816	12 03 39
12 05 23	J1602+3326	15 04 16	67.7	146.3	-1.0		-23.5	-7	1816	12 05 23
12 06 23	=1600+335	15 05 16	67.8	146.8	-1.0		-23.2	53	1824	12 05 24

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
12 06 23	J1556+3517	15 05 16	70.0	147.7	-0.9		-23.1	-22	1824	No stop
12 07 53	---	15 06 47	70.1	148.5	-0.8		-22.6	68	1836	12 06 24
12 08 08	J1602+3326	15 07 02	68.0	147.7	-0.9		-22.6	-7	1836	12 08 08
12 09 08	=1600+335	15 08 02	68.0	148.2	-0.9		-22.3	53	1843	12 08 09
12 09 08	J1556+3517	15 08 02	70.2	149.2	-0.8		-22.1	-22	1843	No stop
12 10 38	---	15 09 32	70.3	150.1	-0.8		-21.5	68	1855	12 09 09
12 10 53	J1602+3326	15 09 47	68.2	149.1	-0.9		-21.7	-7	1855	12 10 53
12 11 53	=1600+335	15 10 47	68.3	149.7	-0.9		-21.3	53	1862	12 10 54
12 11 53	J1556+3517	15 10 47	70.4	150.8	-0.8		-21.0	-22	1862	No stop
12 13 23	---	15 12 17	70.5	151.7	-0.7		-20.4	68	1874	12 11 54
12 13 38	J1602+3326	15 12 32	68.4	150.6	-0.8		-20.7	-7	1874	12 13 38
12 14 38	=1600+335	15 13 33	68.5	151.1	-0.8		-20.3	53	1882	12 13 39
12 14 38	J1556+3517	15 13 33	70.6	152.4	-0.7		-19.9	-22	1882	No stop
12 16 08	---	15 15 03	70.7	153.2	-0.7		-19.3	68	1893	12 14 39
12 16 23	J1602+3326	15 15 18	68.6	152.0	-0.8		-19.7	-7	1893	12 16 23
12 17 23	=1600+335	15 16 18	68.7	152.6	-0.8		-19.3	53	1901	12 16 24
12 17 23	J1556+3517	15 16 18	70.8	154.0	-0.7		-18.8	-22	1901	No stop
12 18 53	---	15 17 48	70.9	154.9	-0.7		-18.2	68	1912	12 17 24
12 19 08	J1602+3326	15 18 03	68.8	153.5	-0.7		-18.7	-7	1912	12 19 08
12 20 08	=1600+335	15 19 04	68.8	154.1	-0.7		-18.3	53	1920	12 19 09
12 20 08	J1556+3517	15 19 04	71.0	155.6	-0.6		-17.7	-22	1920	No stop
12 21 38	---	15 20 34	71.0	156.5	-0.6		-17.0	68	1932	12 20 09
12 21 53	J1602+3326	15 20 49	68.9	155.1	-0.7		-17.7	-7	1932	12 21 53
12 22 53	=1600+335	15 21 49	69.0	155.6	-0.7		-17.3	53	1939	12 21 54
12 22 53	J1556+3517	15 21 49	71.1	157.3	-0.6		-16.5	-22	1939	No stop
12 24 23	---	15 23 19	71.2	158.2	-0.6		-15.9	68	1951	12 22 54
12 24 38	J1602+3326	15 23 34	69.1	156.6	-0.7		-16.6	-7	1951	12 24 38
12 25 38	=1600+335	15 24 34	69.2	157.2	-0.6		-16.2	53	1958	12 24 39
12 25 38	J1556+3517	15 24 34	71.3	158.9	-0.5		-15.3	-22	1958	No stop
12 27 08	---	15 26 05	71.3	159.9	-0.5		-14.7	68	1970	12 25 39

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
12 27 23	J1602+3326	15 26 20	69.3	158.2	-0.6		-15.5	-7	1970	12 27 23
12 28 23	=1600+335	15 27 20	69.3	158.7	-0.6		-15.1	53	1978	12 27 24
12 29 08	J1606+2717	15 28 04	63.1	160.3	-0.7		-13.2	7	1978	12 29 08
12 31 08	=1604+274	15 30 05	63.2	161.3	-0.6		-12.5	120	1993	12 29 09
12 32 08	J1602+3326	15 31 05	69.5	160.9	-0.5		-13.6	23	1993	12 32 08
12 33 08	=1600+335	15 32 05	69.6	161.5	-0.5		-13.2	60	2001	12 32 09
12 33 08	J1556+3517	15 32 05	71.6	163.6	-0.4		-12.0	-22	2001	No stop
12 34 38	---	15 33 35	71.7	164.6	-0.4		-11.3	68	2012	12 33 09
12 34 53	J1602+3326	15 33 50	69.7	162.5	-0.5		-12.5	-6	2012	12 34 53
12 35 53	=1600+335	15 34 51	69.7	163.1	-0.5		-12.1	54	2020	12 34 54
12 35 53	J1556+3517	15 34 51	71.7	165.4	-0.4		-10.7	-22	2020	No stop
12 37 23	---	15 36 21	71.8	166.3	-0.3		-10.0	68	2031	12 35 54
12 37 38	J1602+3326	15 36 36	69.8	164.1	-0.4		-11.4	-6	2031	12 37 38
12 38 38	=1600+335	15 37 36	69.8	164.7	-0.4		-10.9	54	2039	12 37 39
12 38 38	J1556+3517	15 37 36	71.8	167.2	-0.3		-9.4	-21	2039	No stop
12 40 08	---	15 39 06	71.9	168.1	-0.3		-8.7	69	2051	12 38 39
12 40 23	J1602+3326	15 39 21	69.9	165.8	-0.4		-10.2	-6	2051	12 40 23
12 41 23	=1600+335	15 40 21	69.9	166.4	-0.4		-9.8	54	2058	12 40 24
12 41 23	J1556+3517	15 40 21	71.9	168.9	-0.3		-8.1	-21	2058	No stop
12 42 53	---	15 41 52	72.0	169.9	-0.3		-7.4	69	2070	12 41 24
12 43 08	J1602+3326	15 42 07	70.0	167.4	-0.3		-9.0	-6	2070	12 43 08
12 44 08	=1600+335	15 43 07	70.0	168.0	-0.3		-8.6	54	2077	12 43 09
12 44 08	J1556+3517	15 43 07	72.0	170.8	-0.2		-6.8	-21	2077	No stop
12 45 38	---	15 44 37	72.0	171.7	-0.2		-6.1	69	2089	12 44 09
12 45 53	J1602+3326	15 44 52	70.1	169.1	-0.3		-7.8	-6	2089	12 45 53
12 46 53	=1600+335	15 45 52	70.1	169.7	-0.3		-7.4	54	2097	12 45 54
12 46 53	J1556+3517	15 45 52	72.1	172.6	-0.2		-5.5	-21	2097	No stop
12 48 23	---	15 47 23	72.1	173.6	-0.2		-4.7	69	2108	12 46 54
12 48 38	J1602+3326	15 47 38	70.1	170.7	-0.3		-6.6	-6	2108	12 48 38
12 49 38	=1600+335	15 48 38	70.2	171.4	-0.2		-6.2	54	2116	12 48 39

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
12 49 38	J1556+3517	15 48 38	72.1	174.4	-0.1		-4.1	-21	2116	No stop
12 51 08	---	15 50 08	72.1	175.4	-0.1		-3.4	69	2127	12 49 39
12 51 23	J1602+3326	15 50 23	70.2	172.4	-0.2		-5.4	-6	2127	12 51 23
12 52 23	=1600+335	15 51 23	70.2	173.1	-0.2		-5.0	54	2135	12 51 24
12 52 23	J1556+3517	15 51 23	72.1	176.2	-0.1		-2.8	-21	2135	No stop
12 53 53	---	15 52 53	72.2	177.2	-0.1		-2.0	69	2147	12 52 24
12 54 08	J1602+3326	15 53 08	70.2	174.1	-0.2		-4.2	-6	2147	12 54 08
12 55 08	=1600+335	15 54 09	70.3	174.7	-0.1		-3.8	54	2154	12 54 09
12 55 08	J1556+3517	15 54 09	72.2	178.1	-0.0		-1.4	-22	2154	No stop
12 56 38	---	15 55 39	72.2	179.1	-0.0		-0.7	68	2166	12 55 09
12 56 53	J1602+3326	15 55 54	70.3	175.8	-0.1		-3.0	-6	2166	12 56 53
12 57 53	=1600+335	15 56 54	70.3	176.5	-0.1		-2.6	54	2173	12 56 54
12 57 53	J1556+3517	15 56 54	72.2	179.9	-0.0		-0.1	-22	2173	No stop
12 59 23	---	15 58 24	72.2	180.9	0.0		0.7	68	2185	12 57 54
12 59 38	J1602+3326	15 58 39	70.3	177.5	-0.1		-1.8	-6	2185	12 59 38
13 00 38	=1600+335	15 59 40	70.3	178.2	-0.0		-1.3	54	2193	12 59 39
13 00 38	J1556+3517	15 59 40	72.2	181.7	0.0		1.3	-22	2193	No stop
13 02 08	---	16 01 10	72.2	182.7	0.1		2.0	68	2204	13 00 39
13 02 23	J1602+3326	16 01 25	70.3	179.2	-0.0		-0.5	-7	2204	13 02 23
13 03 23	=1600+335	16 02 25	70.3	179.9	-0.0		-0.1	53	2212	13 02 24
13 03 23	J1556+3517	16 02 25	72.1	183.6	0.1		2.6	-23	2212	No stop
13 04 53	---	16 03 55	72.1	184.6	0.1		3.4	67	2223	13 03 24
13 05 08	J1602+3326	16 04 10	70.3	181.0	0.0		0.7	-7	2223	13 05 08
13 06 08	=1600+335	16 05 10	70.3	181.6	0.0		1.1	53	2231	13 05 09
13 06 08	J1556+3517	16 05 10	72.1	185.4	0.1		4.0	-23	2231	No stop
13 07 38	---	16 06 41	72.1	186.4	0.2		4.7	67	2243	13 06 09
13 07 53	J1602+3326	16 06 56	70.3	182.7	0.1		1.9	-7	2243	13 07 53
13 08 53	=1600+335	16 07 56	70.3	183.3	0.1		2.4	53	2250	13 07 54
13 08 53	J1556+3517	16 07 56	72.1	187.2	0.2		5.3	-23	2250	No stop
13 10 23	---	16 09 26	72.0	188.2	0.2		6.0	67	2262	13 08 54

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
13 10 38	J1602+3326	16 09 41	70.3	184.4	0.1		3.1	-7	2262	13 10 38
13 11 38	=1600+335	16 10 41	70.3	185.0	0.1		3.6	53	2269	13 10 39
13 11 38	J1556+3517	16 10 41	72.0	189.0	0.2		6.6	-23	2269	No stop
13 13 08	---	16 12 12	72.0	190.0	0.3		7.4	67	2281	13 11 39
13 13 23	J1602+3326	16 12 27	70.2	186.1	0.2		4.4	-8	2281	13 13 23
13 14 23	=1600+335	16 13 27	70.2	186.7	0.2		4.8	52	2289	13 13 24
13 16 13	3C345	16 15 17	75.9	157.3	-0.5		-17.5	35	2289	13 16 13
13 20 13	---	16 19 18	76.1	160.4	-0.4		-15.2	240	2319	13 16 14
13 20 28	3C345	16 19 33	76.1	160.6	-0.4		-15.1	8	2319	13 20 28
13 24 13	---	16 23 19	76.3	163.5	-0.3		-12.8	225	2348	13 20 29
13 27 05	J1606+2717	16 26 11	63.9	189.5	0.3		6.4	107	2348	13 27 05
13 29 05	=1604+274	16 28 11	63.9	190.5	0.3		7.1	120	2364	13 27 06
13 30 05	J1602+3326	16 29 11	69.8	196.2	0.4		11.6	24	2364	13 30 05
13 31 05	=1600+335	16 30 11	69.7	196.8	0.5		12.0	60	2371	13 30 06
13 31 05	J1556+3517	16 30 11	71.2	201.4	0.6		15.6	-25	2371	No stop
13 32 35	---	16 31 42	71.2	202.4	0.6		16.2	65	2383	13 31 06
13 32 50	J1602+3326	16 31 57	69.6	197.8	0.5		12.7	-9	2383	13 32 50
13 33 50	=1600+335	16 32 57	69.6	198.4	0.5		13.1	51	2390	13 32 51
13 33 50	J1556+3517	16 32 57	71.1	203.1	0.6		16.8	-25	2390	No stop
13 35 20	---	16 34 27	71.0	204.0	0.6		17.4	65	2402	13 33 51
13 35 35	J1602+3326	16 34 42	69.5	199.4	0.5		13.8	-9	2402	13 35 35
13 36 35	=1600+335	16 35 42	69.5	200.0	0.6		14.2	51	2410	13 35 36
13 36 35	J1556+3517	16 35 42	70.9	204.8	0.6		17.9	-25	2410	No stop
13 38 05	---	16 37 13	70.8	205.7	0.7		18.6	65	2421	13 36 36
13 38 20	J1602+3326	16 37 28	69.4	201.0	0.6		14.9	-9	2421	13 38 20
13 39 20	=1600+335	16 38 28	69.3	201.6	0.6		15.3	51	2429	13 38 21
13 39 20	J1556+3517	16 38 28	70.7	206.4	0.7		19.1	-25	2429	No stop
13 40 50	---	16 39 58	70.6	207.3	0.7		19.7	65	2440	13 39 21
13 41 05	J1602+3326	16 40 13	69.2	202.6	0.6		16.0	-9	2440	13 41 05
13 42 05	=1600+335	16 41 13	69.1	203.1	0.6		16.4	51	2448	13 41 06

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
13 42 05	J1556+3517	16 41 13	70.5	208.0	0.7		20.2	-25	2448	No stop
13 43 35	---	16 42 43	70.4	208.9	0.8		20.8	65	2460	13 42 06
13 43 50	J1602+3326	16 42 58	69.0	204.1	0.7		17.1	-9	2460	13 43 50
13 44 50	=1600+335	16 43 59	69.0	204.7	0.7		17.5	51	2467	13 43 51
13 44 50	J1556+3517	16 43 59	70.3	209.6	0.8		21.3	-25	2467	No stop
13 46 20	---	16 45 29	70.2	210.4	0.8		21.9	65	2479	13 44 51
13 46 35	J1602+3326	16 45 44	68.9	205.6	0.7		18.1	-9	2479	13 46 35
13 47 35	=1600+335	16 46 44	68.8	206.2	0.7		18.5	51	2486	13 46 36
13 47 35	J1556+3517	16 46 44	70.1	211.1	0.8		22.3	-25	2486	No stop
13 49 05	---	16 48 14	70.0	211.9	0.9		22.9	65	2498	13 47 36
13 49 20	J1602+3326	16 48 29	68.7	207.2	0.8		19.2	-9	2498	13 49 20
13 50 20	=1600+335	16 49 30	68.6	207.7	0.8		19.5	51	2506	13 49 21
13 50 20	J1556+3517	16 49 30	69.9	212.6	0.9		23.4	-25	2506	No stop
13 51 50	---	16 51 00	69.8	213.4	0.9		23.9	65	2517	13 50 21
13 52 05	J1602+3326	16 51 15	68.5	208.6	0.8		20.2	-10	2517	13 52 05
13 53 05	=1600+335	16 52 15	68.4	209.2	0.8		20.5	50	2525	13 52 06
13 53 05	J1556+3517	16 52 15	69.7	214.1	0.9		24.4	-25	2525	No stop
13 54 35	---	16 53 45	69.6	214.9	0.9		24.9	65	2536	13 53 06
13 54 50	J1602+3326	16 54 00	68.3	210.1	0.9		21.1	-10	2536	13 54 50
13 55 50	=1600+335	16 55 00	68.2	210.6	0.9		21.5	50	2544	13 54 51
13 55 50	J1556+3517	16 55 00	69.5	215.6	1.0		25.3	-25	2544	No stop
13 57 20	---	16 56 31	69.3	216.4	1.0		25.9	65	2556	13 55 51
13 57 35	J1602+3326	16 56 46	68.1	211.5	0.9		22.1	-10	2556	13 57 35
13 58 35	=1600+335	16 57 46	68.0	212.1	0.9		22.4	50	2563	13 57 36
13 58 35	J1556+3517	16 57 46	69.2	217.0	1.0		26.3	-25	2563	No stop
14 00 05	---	16 59 16	69.1	217.8	1.0		26.8	65	2575	13 58 36
14 00 20	J1602+3326	16 59 31	67.9	213.0	0.9		23.0	-10	2575	14 00 20
14 01 20	=1600+335	17 00 31	67.8	213.5	1.0		23.4	50	2582	14 00 21
14 01 20	J1556+3517	17 00 31	69.0	218.4	1.1		27.2	-25	2582	No stop
14 02 50	---	17 02 02	68.8	219.2	1.1		27.7	65	2594	14 01 21

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
14 03 05	J1602+3326	17 02 17	67.6	214.3	1.0		23.9	-10	2594	14 03 05
14 04 05	=1600+335	17 03 17	67.5	214.8	1.0		24.3	50	2602	14 03 06
14 05 05	J1602+3326	17 04 17	67.5	215.3	1.0		24.6	53	2602	14 05 05
14 06 05	=1600+335	17 05 17	67.4	215.8	1.0		24.9	60	2609	14 05 06
14 06 05	J1606+3124	17 05 17	65.8	211.8	1.0		21.8	-23	2609	No stop
14 07 35	=1604+315	17 06 47	65.7	212.6	1.0		22.2	67	2621	14 06 06
14 07 50	J1602+3326	17 07 02	67.2	216.7	1.1		25.5	-8	2621	14 07 50
14 08 50	=1600+335	17 08 03	67.1	217.2	1.1		25.8	52	2628	14 07 51
14 08 50	J1606+3124	17 08 03	65.6	213.2	1.0		22.6	-23	2628	No stop
14 10 20	=1604+315	17 09 33	65.5	213.9	1.0		23.1	67	2640	14 08 51
14 10 35	J1602+3326	17 09 48	67.0	218.0	1.1		26.3	-8	2640	14 10 35
14 11 35	=1600+335	17 10 48	66.9	218.5	1.1		26.6	52	2648	14 10 36
14 12 20	J1606+2717	17 11 33	61.6	211.0	1.1		20.3	12	2648	14 12 20
14 14 20	=1604+274	17 13 34	61.4	211.9	1.1		20.9	120	2663	14 12 21
14 15 20	J1602+3326	17 14 34	66.5	220.3	1.2		27.7	27	2663	14 15 20
14 16 20	=1600+335	17 15 34	66.4	220.7	1.2		28.0	60	2671	14 15 21
14 16 20	J1556+3517	17 15 34	67.4	225.6	1.3		31.7	-25	2671	No stop
14 17 50	---	17 17 04	67.3	226.3	1.3		32.1	65	2682	14 16 21
14 18 05	J1602+3326	17 17 19	66.2	221.5	1.2		28.5	-9	2682	14 18 05
14 19 05	=1600+335	17 18 20	66.1	222.0	1.3		28.8	51	2690	14 18 06
14 19 05	J1556+3517	17 18 20	67.1	226.9	1.4		32.5	-25	2690	No stop
14 20 35	---	17 19 50	67.0	227.5	1.4		32.9	65	2701	14 19 06
14 20 50	J1602+3326	17 20 05	66.0	222.8	1.3		29.2	-9	2701	14 20 50
14 21 50	=1600+335	17 21 05	65.9	223.2	1.3		29.5	51	2709	14 20 51
14 21 50	J1556+3517	17 21 05	66.8	228.1	1.4		33.2	-25	2709	No stop
14 23 20	---	17 22 35	66.7	228.7	1.4		33.6	65	2721	14 21 51
14 23 35	J1602+3326	17 22 50	65.7	224.0	1.3		30.0	-9	2721	14 23 35
14 24 35	=1600+335	17 23 50	65.6	224.4	1.4		30.2	51	2728	14 23 36
14 24 35	J1556+3517	17 23 50	66.5	229.3	1.4		33.9	-25	2728	No stop
14 26 05	---	17 25 21	66.4	229.9	1.5		34.2	65	2740	14 24 36

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
14 26 20	J1602+3326	17 25 36	65.4	225.2	1.4		30.7	-9	2740	14 26 20
14 27 20	=1600+335	17 26 36	65.3	225.6	1.4		30.9	51	2748	14 26 21
14 27 20	J1556+3517	17 26 36	66.2	230.4	1.5		34.5	-25	2748	No stop
14 28 50	---	17 28 06	66.0	231.0	1.5		34.9	65	2759	14 27 21
14 29 05	J1602+3326	17 28 21	65.1	226.4	1.4		31.4	-9	2759	14 29 05
14 30 05	=1600+335	17 29 21	65.0	226.8	1.4		31.6	51	2767	14 29 06
14 30 05	J1556+3517	17 29 21	65.9	231.6	1.5		35.2	-25	2767	No stop
14 31 35	---	17 30 52	65.7	232.2	1.6		35.5	65	2778	14 30 06
14 31 50	J1602+3326	17 31 07	64.8	227.5	1.5		32.1	-9	2778	14 31 50
14 32 50	=1600+335	17 32 07	64.7	227.9	1.5		32.3	51	2786	14 31 51
14 32 50	J1556+3517	17 32 07	65.6	232.7	1.6		35.8	-25	2786	No stop
14 34 20	---	17 33 37	65.4	233.3	1.6		36.1	65	2797	14 32 51
14 34 35	J1602+3326	17 33 52	64.5	228.7	1.5		32.7	-9	2797	14 34 35
14 35 35	=1600+335	17 34 52	64.4	229.1	1.5		32.9	51	2805	14 34 36
14 35 35	J1556+3517	17 34 52	65.2	233.8	1.6		36.4	-25	2805	No stop
14 37 05	---	17 36 22	65.0	234.4	1.7		36.7	65	2817	14 35 36
14 37 20	J1602+3326	17 36 38	64.2	229.8	1.6		33.3	-9	2817	14 37 20
14 38 20	=1600+335	17 37 38	64.0	230.2	1.6		33.5	51	2824	14 37 21
14 38 20	J1556+3517	17 37 38	64.9	234.8	1.7		37.0	-25	2824	No stop
14 39 50	---	17 39 08	64.7	235.4	1.7		37.3	65	2836	14 38 21
14 40 05	J1602+3326	17 39 23	63.8	230.9	1.6		33.9	-9	2836	14 40 05
14 41 05	=1600+335	17 40 23	63.7	231.3	1.6		34.1	51	2844	14 40 06
14 41 05	J1556+3517	17 40 23	64.6	235.9	1.7		37.5	-24	2844	No stop
14 42 35	---	17 41 53	64.4	236.5	1.7		37.8	66	2855	14 41 06
14 42 50	J1602+3326	17 42 08	63.5	231.9	1.7		34.5	-9	2855	14 42 50
14 43 50	=1600+335	17 43 09	63.4	232.3	1.7		34.7	51	2863	14 42 51
14 43 50	J1556+3517	17 43 09	64.2	236.9	1.8		38.0	-24	2863	No stop
14 45 20	---	17 44 39	64.0	237.5	1.8		38.3	66	2874	14 43 51
14 45 35	J1602+3326	17 44 54	63.2	233.0	1.7		35.1	-9	2874	14 45 35
14 46 35	=1600+335	17 45 54	63.1	233.4	1.7		35.3	51	2882	14 45 36

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
14 46 35	J1556+3517	17 45 54	63.9	237.9	1.8		38.5	-24	2882	No stop
14 48 05	---	17 47 24	63.7	238.5	1.8		38.8	66	2893	14 46 36
14 48 20	J1602+3326	17 47 39	62.9	234.0	1.8		35.6	-9	2893	14 48 20
14 49 20	=1600+335	17 48 40	62.7	234.4	1.8		35.8	51	2901	14 48 21
14 49 20	J1556+3517	17 48 40	63.5	238.9	1.9		39.0	-24	2901	No stop
14 50 50	---	17 50 10	63.3	239.4	1.9		39.3	66	2913	14 49 21
14 51 05	J1602+3326	17 50 25	62.5	235.1	1.8		36.1	-9	2913	14 51 05
14 52 05	=1600+335	17 51 25	62.4	235.4	1.8		36.3	51	2920	14 51 06
14 52 05	J1556+3517	17 51 25	63.1	239.9	1.9		39.5	-24	2920	No stop
14 53 35	---	17 52 55	63.0	240.4	1.9		39.8	66	2932	14 52 06
14 53 50	J1602+3326	17 53 10	62.2	236.1	1.8		36.6	-9	2932	14 53 50
14 54 50	=1600+335	17 54 10	62.1	236.4	1.9		36.8	51	2940	14 53 51
14 54 50	J1556+3517	17 54 10	62.8	240.8	2.0		40.0	-24	2940	No stop
14 56 20	---	17 55 41	62.6	241.3	2.0		40.2	66	2951	14 54 51
14 56 35	J1602+3326	17 55 56	61.8	237.0	1.9		37.1	-9	2951	14 56 35
14 57 35	=1600+335	17 56 56	61.7	237.4	1.9		37.3	51	2959	14 56 36
14 58 26	J1606+2717	17 57 47	57.1	229.2	1.8		30.7	20	2959	14 58 26
15 00 26	=1604+274	17 59 48	56.8	229.9	1.9		31.1	120	2974	14 58 27
15 01 26	J1602+3326	18 00 48	61.2	238.7	2.0		37.9	28	2974	15 01 26
15 02 26	=1600+335	18 01 48	61.1	239.1	2.0		38.1	60	2982	15 01 27
15 02 26	J1556+3517	18 01 48	61.8	243.4	2.1		41.1	-24	2982	No stop
15 03 56	---	18 03 18	61.6	243.9	2.1		41.3	66	2993	15 02 27
15 04 11	J1602+3326	18 03 33	60.9	239.7	2.0		38.4	-8	2993	15 04 11
15 05 11	=1600+335	18 04 33	60.7	240.0	2.0		38.5	52	3001	15 04 12
15 05 11	J1556+3517	18 04 33	61.4	244.3	2.1		41.5	-24	3001	No stop
15 06 41	---	18 06 04	61.2	244.7	2.1		41.7	66	3012	15 05 12
15 06 56	J1602+3326	18 06 19	60.5	240.6	2.1		38.8	-8	3012	15 06 56
15 07 56	=1600+335	18 07 19	60.4	240.9	2.1		38.9	52	3020	15 06 57
15 07 56	J1556+3517	18 07 19	61.0	245.1	2.2		41.9	-24	3020	No stop
15 09 26	---	18 08 49	60.8	245.6	2.2		42.1	66	3032	15 07 57

Schedule for TORUN (Code Tr)

Page 22

The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
15 09 41	J1602+3326	18 09 04	60.1	241.5	2.1		39.2	-8	3032	15 09 41
15 10 41	=1600+335	18 10 04	60.0	241.8	2.1		39.3	52	3039	15 09 42
15 10 41	J1556+3517	18 10 04	60.7	246.0	2.2		42.2	-24	3039	No stop
15 12 11	---	18 11 35	60.4	246.5	2.2		42.4	66	3051	15 10 42
15 12 26	J1602+3326	18 11 50	59.8	242.4	2.2		39.6	-8	3051	15 12 26
15 13 26	=1600+335	18 12 50	59.6	242.7	2.2		39.7	52	3059	15 12 27
15 13 26	J1556+3517	18 12 50	60.3	246.8	2.3		42.5	-23	3059	No stop
15 14 56	---	18 14 20	60.1	247.3	2.3		42.7	67	3070	15 13 27
15 15 11	J1602+3326	18 14 35	59.4	243.2	2.2		40.0	-8	3070	15 15 11
15 16 11	=1600+335	18 15 35	59.3	243.6	2.2		40.1	52	3078	15 15 12
15 16 11	J1556+3517	18 15 35	59.9	247.7	2.3		42.9	-23	3078	No stop
15 17 41	---	18 17 06	59.7	248.1	2.3		43.0	67	3089	15 16 12
15 17 56	J1602+3326	18 17 21	59.0	244.1	2.2		40.3	-8	3089	15 17 56
15 18 56	=1600+335	18 18 21	58.9	244.4	2.3		40.5	52	3097	15 17 57
15 18 56	J1556+3517	18 18 21	59.5	248.5	2.4		43.2	-23	3097	No stop
15 20 26	---	18 19 51	59.3	248.9	2.4		43.3	67	3108	15 18 57
15 20 41	J1602+3326	18 20 06	58.7	244.9	2.3		40.7	-8	3108	15 20 41
15 21 41	=1600+335	18 21 06	58.5	245.2	2.3		40.8	52	3116	15 20 42
15 21 41	J1556+3517	18 21 06	59.1	249.3	2.4		43.5	-23	3116	No stop
15 23 11	---	18 22 36	58.9	249.7	2.4		43.6	67	3128	15 21 42
15 23 26	J1602+3326	18 22 51	58.3	245.8	2.3		41.0	-8	3128	15 23 26
15 24 26	=1600+335	18 23 52	58.1	246.1	2.4		41.1	52	3135	15 23 27
15 24 26	J1556+3517	18 23 52	58.7	250.1	2.4		43.7	-23	3135	No stop
15 25 56	---	18 25 22	58.5	250.5	2.5		43.9	67	3147	15 24 27
15 26 11	J1602+3326	18 25 37	57.9	246.6	2.4		41.3	-8	3147	15 26 11
15 27 11	=1600+335	18 26 37	57.8	246.9	2.4		41.4	52	3155	15 26 12
15 27 11	J1556+3517	18 26 37	58.3	250.9	2.5		44.0	-23	3155	No stop
15 28 41	---	18 28 07	58.1	251.3	2.5		44.1	67	3166	15 27 12
15 28 56	J1602+3326	18 28 22	57.5	247.4	2.4		41.6	-8	3166	15 28 56
15 29 56	=1600+335	18 29 23	57.4	247.7	2.4		41.7	52	3174	15 28 57

Schedule for TORUN (Code Tr)

Page 23

The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
15 29 56	J1556+3517	18 29 23	58.0	251.6	2.5		44.3	-23	3174	No stop
15 31 26	---	18 30 53	57.7	252.0	2.6		44.4	67	3185	15 29 57
15 31 41	J1602+3326	18 31 08	57.1	248.2	2.5		41.9	-7	3185	15 31 41
15 32 41	=1600+335	18 32 08	57.0	248.5	2.5		42.0	53	3193	15 31 42
15 32 41	J1556+3517	18 32 08	57.6	252.4	2.6		44.5	-23	3193	No stop
15 34 11	---	18 33 38	57.3	252.8	2.6		44.6	67	3204	15 32 42
15 34 26	J1602+3326	18 33 53	56.8	249.0	2.5		42.2	-7	3204	15 34 26
15 35 26	=1600+335	18 34 53	56.6	249.3	2.5		42.3	53	3212	15 34 27
15 35 26	J1556+3517	18 34 53	57.2	253.1	2.6		44.7	-23	3212	No stop
15 36 56	---	18 36 24	56.9	253.5	2.7		44.8	67	3224	15 35 27
15 37 11	J1602+3326	18 36 39	56.4	249.8	2.6		42.5	-7	3224	15 37 11
15 38 11	=1600+335	18 37 39	56.2	250.0	2.6		42.5	53	3231	15 37 12
15 38 11	J1556+3517	18 37 39	56.8	253.9	2.7		44.9	-23	3231	No stop
15 39 41	---	18 39 09	56.6	254.2	2.7		45.1	67	3243	15 38 12
15 39 56	J1602+3326	18 39 24	56.0	250.5	2.6		42.7	-7	3243	15 39 56
15 40 56	=1600+335	18 40 24	55.8	250.8	2.6		42.8	53	3251	15 39 57
15 40 56	J1556+3517	18 40 24	56.4	254.6	2.7		45.1	-23	3251	No stop
15 42 26	---	18 41 55	56.2	255.0	2.7		45.3	67	3262	15 40 57
15 42 41	J1602+3326	18 42 10	55.6	251.3	2.7		42.9	-7	3262	15 42 41
15 43 41	=1600+335	18 43 10	55.4	251.5	2.7		43.0	53	3270	15 42 42
15 44 33	J1606+2717	18 44 02	51.3	243.8	2.6		37.3	21	3270	15 44 33
15 46 33	=1604+274	18 46 02	51.0	244.3	2.6		37.5	120	3285	15 44 34
15 47 33	J1602+3326	18 47 03	54.9	252.6	2.7		43.3	29	3285	15 47 33
15 48 33	=1600+335	18 48 03	54.7	252.8	2.8		43.4	60	3293	15 47 34
15 48 33	J1556+3517	18 48 03	55.3	256.5	2.8		45.7	-22	3293	No stop
15 50 03	---	18 49 33	55.0	256.9	2.9		45.8	68	3304	15 48 34
15 50 18	J1602+3326	18 49 48	54.5	253.3	2.8		43.6	-7	3304	15 50 18
15 51 18	=1600+335	18 50 48	54.4	253.6	2.8		43.6	53	3312	15 50 19
15 51 18	J1556+3517	18 50 48	54.9	257.2	2.9		45.8	-22	3312	No stop
15 52 48	---	18 52 18	54.6	257.6	2.9		45.9	68	3324	15 51 19

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
15 53 03	J1602+3326	18 52 33	54.1	254.0	2.8		43.8	-7	3324	15 53 03
15 54 03	=1600+335	18 53 34	54.0	254.3	2.8		43.8	53	3331	15 53 04
15 54 03	J1556+3517	18 53 34	54.5	257.9	2.9		46.0	-22	3331	No stop
15 55 33	---	18 55 04	54.2	258.3	3.0		46.1	68	3343	15 54 04
15 55 48	J1602+3326	18 55 19	53.7	254.7	2.9		43.9	-7	3343	15 55 48
15 56 48	=1600+335	18 56 19	53.6	255.0	2.9		44.0	53	3350	15 55 49
15 56 48	J1556+3517	18 56 19	54.0	258.6	3.0		46.1	-22	3350	No stop
15 58 18	---	18 57 49	53.8	258.9	3.0		46.2	68	3362	15 56 49
15 58 33	J1602+3326	18 58 04	53.3	255.4	2.9		44.1	-7	3362	15 58 33
15 59 33	=1600+335	18 59 05	53.2	255.7	2.9		44.2	53	3370	15 58 34
15 59 33	J1556+3517	18 59 05	53.6	259.2	3.0		46.3	-22	3370	No stop
16 01 03	---	19 00 35	53.4	259.6	3.1		46.3	68	3381	15 59 34
16 01 18	J1602+3326	19 00 50	52.9	256.1	3.0		44.3	-7	3381	16 01 18
16 02 18	=1600+335	19 01 50	52.8	256.3	3.0		44.4	53	3389	16 01 19
16 02 18	J1556+3517	19 01 50	53.2	259.9	3.1		46.4	-22	3389	No stop
16 03 48	---	19 03 20	53.0	260.2	3.1		46.4	68	3400	16 02 19
16 04 03	J1602+3326	19 03 35	52.5	256.8	3.0		44.5	-7	3400	16 04 03
16 05 03	=1600+335	19 04 35	52.3	257.0	3.0		44.5	53	3408	16 04 04
16 05 03	J1556+3517	19 04 35	52.8	260.5	3.1		46.5	-22	3408	No stop
16 06 33	---	19 06 06	52.6	260.9	3.2		46.6	68	3420	16 05 04
16 06 48	J1602+3326	19 06 21	52.1	257.4	3.1		44.6	-7	3420	16 06 48
16 07 48	=1600+335	19 07 21	51.9	257.7	3.1		44.7	53	3427	16 06 49
16 07 48	J1556+3517	19 07 21	52.4	261.2	3.2		46.6	-22	3427	No stop
16 09 18	---	19 08 51	52.2	261.5	3.2		46.7	68	3439	16 07 49
16 09 33	J1602+3326	19 09 06	51.7	258.1	3.1		44.7	-6	3439	16 09 33
16 10 33	=1600+335	19 10 06	51.5	258.3	3.1		44.8	54	3446	16 09 34
16 10 33	J1556+3517	19 10 06	52.0	261.8	3.2		46.7	-22	3446	No stop
16 12 03	---	19 11 37	51.8	262.1	3.2		46.8	68	3458	16 10 34
16 12 18	J1602+3326	19 11 52	51.3	258.8	3.2		44.9	-6	3458	16 12 18
16 13 18	=1600+335	19 12 52	51.1	259.0	3.2		44.9	54	3466	16 12 19

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
16 13 18	J1556+3517	19 12 52	51.6	262.4	3.3		46.8	-22	3466	No stop
16 14 48	---	19 14 22	51.4	262.7	3.3		46.8	68	3477	16 13 19
16 15 03	J1602+3326	19 14 37	50.9	259.4	3.2		45.0	-6	3477	16 15 03
16 16 03	=1600+335	19 15 37	50.7	259.6	3.2		45.0	54	3485	16 15 04
16 16 03	J1556+3517	19 15 37	51.2	263.0	3.3		46.9	-22	3485	No stop
16 17 33	---	19 17 08	51.0	263.4	3.3		46.9	68	3496	16 16 04
16 17 48	J1602+3326	19 17 23	50.5	260.1	3.2		45.1	-6	3496	16 17 48
16 18 48	=1600+335	19 18 23	50.3	260.3	3.3		45.2	54	3504	16 17 49
16 18 48	J1556+3517	19 18 23	50.8	263.6	3.4		47.0	-22	3504	No stop
16 20 18	---	19 19 53	50.6	264.0	3.4		47.0	68	3516	16 18 49
16 20 33	J1602+3326	19 20 08	50.1	260.7	3.3		45.2	-6	3516	16 20 33
16 21 33	=1600+335	19 21 08	49.9	260.9	3.3		45.3	54	3523	16 20 34
16 22 33	J1602+3326	19 22 08	49.8	261.1	3.3		45.3	54	3523	16 22 33
16 23 33	=1600+335	19 23 09	49.6	261.4	3.3		45.3	60	3531	16 22 34
16 23 33	J1606+3124	19 23 09	48.8	258.3	3.3		43.5	-21	3531	No stop
16 25 03	=1604+315	19 24 39	48.5	258.6	3.3		43.6	69	3542	16 23 34
16 25 18	J1602+3326	19 24 54	49.4	261.8	3.4		45.4	-6	3542	16 25 18
16 26 18	=1600+335	19 25 54	49.2	262.0	3.4		45.4	54	3550	16 25 19
16 26 18	J1606+3124	19 25 54	48.4	258.9	3.3		43.6	-21	3550	No stop
16 27 48	=1604+315	19 27 24	48.1	259.3	3.3		43.7	69	3562	16 26 19
16 28 03	J1602+3326	19 27 39	48.9	262.4	3.4		45.5	-6	3562	16 28 03
16 29 03	=1600+335	19 28 39	48.8	262.6	3.4		45.5	54	3569	16 28 04
16 29 54	J1606+2717	19 29 30	44.9	255.5	3.4		40.8	21	3569	16 29 54
16 31 54	=1604+274	19 31 30	44.6	256.0	3.4		40.9	120	3585	16 29 55
16 32 54	J1602+3326	19 32 30	48.2	263.5	3.5		45.6	30	3585	16 32 54
16 33 54	=1600+335	19 33 30	48.1	263.7	3.5		45.6	60	3592	16 32 55
16 33 54	J1556+3517	19 33 30	48.5	266.9	3.6		47.3	-21	3592	No stop
16 35 24	---	19 35 01	48.3	267.2	3.6		47.3	69	3604	16 33 55
16 35 39	J1602+3326	19 35 16	47.8	264.1	3.5		45.7	-6	3604	16 35 39
16 36 39	=1600+335	19 36 16	47.7	264.3	3.6		45.7	54	3612	16 35 40

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
16 36 39	J1556+3517	19 36 16	48.1	267.5	3.7		47.3	-21	3612	No stop
16 38 09	---	19 37 46	47.9	267.8	3.7		47.3	69	3623	16 36 40
16 38 24	J1602+3326	19 38 01	47.4	264.7	3.6		45.7	-6	3623	16 38 24
16 39 24	=1600+335	19 39 01	47.2	264.9	3.6		45.8	54	3631	16 38 25
16 39 24	J1556+3517	19 39 01	47.7	268.0	3.7		47.3	-21	3631	No stop
16 40 54	---	19 40 32	47.5	268.3	3.7		47.3	69	3642	16 39 25
16 41 09	J1602+3326	19 40 47	47.0	265.2	3.6		45.8	-6	3642	16 41 09
16 42 09	=1600+335	19 41 47	46.8	265.5	3.7		45.8	54	3650	16 41 10
16 42 09	J1556+3517	19 41 47	47.3	268.6	3.7		47.3	-21	3650	No stop
16 43 39	---	19 43 17	47.0	268.9	3.8		47.3	69	3661	16 42 10
16 43 54	J1602+3326	19 43 32	46.6	265.8	3.7		45.8	-6	3661	16 43 54
16 44 54	=1600+335	19 44 32	46.4	266.0	3.7		45.9	54	3669	16 43 55
16 44 54	J1556+3517	19 44 32	46.9	269.1	3.8		47.3	-21	3669	No stop
16 46 24	---	19 46 02	46.6	269.5	3.8		47.3	69	3681	16 44 55
16 46 39	J1602+3326	19 46 18	46.2	266.4	3.7		45.9	-6	3681	16 46 39
16 47 39	=1600+335	19 47 18	46.0	266.6	3.7		45.9	54	3688	16 46 40
16 47 39	J1556+3517	19 47 18	46.4	269.7	3.8		47.3	-21	3688	No stop
16 49 09	---	19 48 48	46.2	270.0	3.9		47.3	69	3700	16 47 40
16 49 24	J1602+3326	19 49 03	45.7	267.0	3.8		45.9	-6	3700	16 49 24
16 50 24	=1600+335	19 50 03	45.6	267.2	3.8		45.9	54	3708	16 49 25
16 50 24	J1556+3517	19 50 03	46.0	270.3	3.9		47.3	-21	3708	No stop
16 51 54	---	19 51 33	45.8	270.6	3.9		47.3	69	3719	16 50 25
16 52 09	J1602+3326	19 51 48	45.3	267.6	3.8		46.0	-5	3719	16 52 09
16 53 09	=1600+335	19 52 49	45.2	267.8	3.8		46.0	55	3727	16 52 10
16 53 09	J1556+3517	19 52 49	45.6	270.8	3.9		47.3	-21	3727	No stop
16 54 39	---	19 54 19	45.4	271.1	4.0		47.3	69	3738	16 53 10
16 54 54	J1602+3326	19 54 34	44.9	268.1	3.9		46.0	-5	3738	16 54 54
16 55 54	=1600+335	19 55 34	44.8	268.3	3.9		46.0	55	3746	16 54 55
16 55 54	J1556+3517	19 55 34	45.2	271.3	4.0		47.3	-21	3746	No stop
16 57 24	---	19 57 04	45.0	271.6	4.0		47.3	69	3757	16 55 55

Schedule for TORUN (Code Tr)

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The Nuclear Environment of the First Radio Loud BALQSO J1556+3517

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 17 Oct 2013 Day 290 ---										
16 57 39	J1602+3326	19 57 19	44.5	268.7	3.9		46.0	-5	3757	16 57 39
16 58 39	=1600+335	19 58 20	44.4	268.9	3.9		46.0	55	3765	16 57 40
16 58 39	J1556+3517	19 58 20	44.8	271.9	4.0		47.3	-21	3765	No stop
17 00 09	---	19 59 50	44.6	272.2	4.0		47.3	69	3777	16 58 40
17 00 24	J1602+3326	20 00 05	44.1	269.2	4.0		46.0	-5	3777	17 00 24
17 01 24	=1600+335	20 01 05	43.9	269.4	4.0		46.0	55	3784	17 00 25
17 01 24	J1556+3517	20 01 05	44.4	272.4	4.1		47.3	-21	3784	No stop
17 02 54	---	20 02 35	44.1	272.7	4.1		47.3	69	3796	17 01 25
17 03 09	J1602+3326	20 02 50	43.7	269.8	4.0		46.0	-5	3796	17 03 09
17 04 09	=1600+335	20 03 50	43.5	270.0	4.0		46.0	55	3804	17 03 10
17 04 09	J1556+3517	20 03 50	44.0	273.0	4.1		47.3	-21	3804	No stop
17 05 39	---	20 05 21	43.7	273.2	4.1		47.2	69	3815	17 04 10
17 05 54	J1602+3326	20 05 36	43.3	270.3	4.0		46.0	-5	3815	17 05 54
17 06 54	=1600+335	20 06 36	43.1	270.5	4.1		46.0	55	3823	17 05 55
17 06 54	J1556+3517	20 06 36	43.5	273.5	4.2		47.2	-20	3823	No stop
17 08 24	---	20 08 06	43.3	273.8	4.2		47.2	70	3834	17 06 55
17 08 39	J1602+3326	20 08 21	42.8	270.9	4.1		46.0	-5	3834	17 08 39
17 09 39	=1600+335	20 09 21	42.7	271.1	4.1		46.0	55	3842	17 08 40
17 09 39	J1556+3517	20 09 21	43.1	274.0	4.2		47.2	-20	3842	No stop
17 11 09	---	20 10 52	42.9	274.3	4.2		47.2	70	3853	17 09 40
17 11 24	J1602+3326	20 11 07	42.4	271.4	4.1		46.0	-5	3853	17 11 24
17 12 24	=1600+335	20 12 07	42.3	271.6	4.2		46.0	55	3861	17 11 25
17 12 24	J1556+3517	20 12 07	42.7	274.5	4.3		47.2	-20	3861	No stop
17 13 54	---	20 13 37	42.5	274.8	4.3		47.1	70	3873	17 12 25
17 14 09	J1602+3326	20 13 52	42.0	272.0	4.2		46.0	-5	3873	17 14 09
17 15 09	=1600+335	20 14 52	41.9	272.2	4.2		46.0	55	3880	17 14 10
17 15 56	J1606+2717	20 15 40	38.1	265.7	4.1		42.3	20	3880	17 15 56
17 17 56	=1604+274	20 17 41	37.8	266.2	4.2		42.4	120	3896	17 15 57
17 19 12	3C345	20 18 57	51.6	272.0	3.6		51.4	10	3896	17 19 12
17 24 12	---	20 23 58	50.9	273.0	3.7		51.3	300	3934	17 19 13
17 24 27	3C345	20 24 13	50.8	273.0	3.7		51.3	9	3934	17 24 27
17 29 12	---	20 28 58	50.1	273.9	3.8		51.2	285	3971	17 24 28

SETUP FILE INFORMATION:

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

=====
 Setup file: sess313.K1024

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

tr1cm Values from Bob Campbell by email (23-04-2013)

Setup group: 7 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
IF SB =	U	U	U	U	U	U	U	U	U
	U	U	U	U	U	U	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	22219.49
	22251.49	22251.49	22251.49	22251.49	22283.49	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	719.49
	751.49	751.49	751.49	751.49	783.49	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	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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* J1556+3517	15 54 40.599369	* 15 56 33.772000	15 57 03.932723	0.00
	35 26 35.04417	* 35 17 57.64000	35 15 51.96508	0.00
* J1602+3326	16 00 11.909331	* 16 02 07.263461	16 02 38.101160	0.12
1600+335	33 35 09.59253	* 33 26 53.07221	33 24 53.44266	0.10
* J1606+3124	16 04 10.611566	* 16 06 08.518385	16 06 40.128996	0.21
1604+315	31 32 47.72177	* 31 24 46.45776	31 22 51.16437	0.29
* J1606+2717	16 04 54.881876	* 16 06 58.300348	16 07 31.526590	0.32
1604+274	27 25 03.85147	* 27 17 05.58299	27 15 10.81157	0.50
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.790194	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 47 25.46068	0.52

EFFECT OF SOLAR CORONA

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)
J1556+3517	56.6
J1602+3326	56.1
J1606+3124	55.4
J1606+2717	52.9
3C345	66.5

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

Kalibracja: cl13k3tr (eksperyment lokalny)

EXPLORING THE RADIO EMISSION OF TXS 0536+145: A KEY BLAZAR FOR EBL STUDIES

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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.

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

--- Thu 17 Oct 2013 Day 290 ---

```
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
```

```
23 30 00 0536+145 02 30 45 36.5 117.6 -3.2 -33.4 0 0 23 30 00
23 35 00 --- 02 35 46 37.1 118.9 -3.1 -32.9 300 39 23 30 01

23 35 00 0536+145 02 35 46 37.1 118.9 -3.1 -32.9 -5 39 No stop
23 40 00 --- 02 40 47 37.8 120.1 -3.0 -32.5 295 77 23 35 01

23 40 15 0536+145 02 41 02 37.8 120.2 -3.0 -32.4 9 77 23 40 15
23 45 05 --- 02 45 53 38.4 121.5 -2.9 -32.0 290 115 23 40 16

23 45 05 0536+145 02 45 53 38.4 121.5 -2.9 -32.0 -5 115 No stop
23 50 05 --- 02 50 54 39.1 122.8 -2.8 -31.4 295 154 23 45 06

23 50 20 0536+145 02 51 09 39.1 122.9 -2.8 -31.4 9 154 23 50 20
23 55 10 --- 02 55 59 39.7 124.2 -2.7 -30.9 290 191 23 50 21
```

--- Start: Thu 17 Oct 2013 Day 290 -- Stop: Fri 18 Oct 2013 Day 291 ---

```
23 55 10 0536+145 02 55 59 39.7 124.2 -2.7 -30.9 -5 191 No stop
00 00 10 --- 03 01 00 40.3 125.5 -2.7 -30.3 295 230 23 55 11

00 00 50 0528+134 03 01 40 40.6 128.8 -2.5 -28.8 19 230 00 00 50
00 05 28 --- 03 06 19 41.1 130.1 -2.4 -28.2 278 266 00 00 51

00 06 08 0536+145 03 06 59 41.0 127.2 -2.6 -29.6 19 266 00 06 08
00 11 08 --- 03 12 00 41.6 128.6 -2.5 -29.0 300 304 00 06 09

00 11 08 0536+145 03 12 00 41.6 128.6 -2.5 -29.0 -5 304 No stop
00 16 08 --- 03 17 01 42.2 130.0 -2.4 -28.4 295 343 00 11 09
```


Schedule for TORUN (Code Tr)

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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
--- Fri 18 Oct 2013 Day 291 ---										
00 16 23	0536+145	03 17 16	42.3	130.1	-2.4		-28.3	9	343	00 16 23
00 21 13	---	03 22 07	42.8	131.5	-2.3		-27.7	290	380	00 16 24
00 21 13	0536+145	03 22 07	42.8	131.5	-2.3		-27.7	-5	380	No stop
00 26 13	---	03 27 07	43.4	133.0	-2.2		-27.0	295	419	00 21 14
00 26 28	0536+145	03 27 22	43.4	133.0	-2.2		-27.0	9	419	00 26 28
00 31 18	---	03 32 13	43.9	134.5	-2.1		-26.3	290	456	00 26 29
00 31 18	0536+145	03 32 13	43.9	134.5	-2.1		-26.3	-5	456	No stop
00 36 18	---	03 37 14	44.4	136.0	-2.1		-25.5	295	495	00 31 19
00 36 58	0528+134	03 37 54	44.5	139.5	-1.9		-23.6	19	495	00 36 58
00 41 36	---	03 42 33	44.9	141.0	-1.8		-22.9	278	531	00 36 59
00 42 16	0536+145	03 43 13	45.1	137.9	-2.0		-24.6	19	531	00 42 16
00 47 16	---	03 48 14	45.6	139.4	-1.9		-23.8	300	570	00 42 17
00 47 16	0536+145	03 48 14	45.6	139.4	-1.9		-23.8	-5	570	No stop
00 52 16	---	03 53 15	46.0	141.0	-1.8		-23.0	295	608	00 47 17
00 52 31	0536+145	03 53 30	46.1	141.1	-1.8		-22.9	9	608	00 52 31
00 57 21	---	03 58 21	46.5	142.7	-1.7		-22.1	290	646	00 52 32
00 57 21	0536+145	03 58 21	46.5	142.7	-1.7		-22.1	-5	646	No stop
01 02 21	---	04 03 21	47.0	144.3	-1.6		-21.2	295	685	00 57 22
01 02 36	0536+145	04 03 36	47.0	144.4	-1.6		-21.2	9	685	01 02 36
01 07 26	---	04 08 27	47.4	146.0	-1.5		-20.3	290	722	01 02 37
01 07 26	0536+145	04 08 27	47.4	146.0	-1.5		-20.3	-5	722	No stop
01 12 26	---	04 13 28	47.8	147.7	-1.5		-19.4	295	761	01 07 27
01 13 06	0528+134	04 14 08	47.5	151.4	-1.3		-17.2	18	761	01 13 06
01 17 44	---	04 18 47	47.9	153.0	-1.2		-16.3	278	797	01 13 07
01 18 24	0536+145	04 19 27	48.3	149.8	-1.4		-18.2	19	797	01 18 24
01 23 24	---	04 24 28	48.6	151.5	-1.3		-17.2	300	835	01 18 25
01 23 24	0536+145	04 24 28	48.6	151.5	-1.3		-17.2	-5	835	No stop
01 28 24	---	04 29 29	49.0	153.3	-1.2		-16.2	295	874	01 23 25
01 28 39	0536+145	04 29 44	49.0	153.4	-1.2		-16.2	9	874	01 28 39
01 33 29	---	04 34 35	49.3	155.1	-1.1		-15.2	290	911	01 28 40
01 33 29	0536+145	04 34 35	49.3	155.1	-1.1		-15.2	-5	911	No stop
01 38 29	---	04 39 35	49.6	156.9	-1.0		-14.1	295	950	01 33 30

Schedule for TORUN (Code Tr)

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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
--- Fri 18 Oct 2013 Day 291 ---										
01 38 44	0536+145	04 39 50	49.6	157.0	-1.0		-14.0	9	950	01 38 44
01 43 34	---	04 44 41	49.9	158.7	-0.9		-13.0	290	988	01 38 45
01 43 34	0536+145	04 44 41	49.9	158.7	-0.9		-13.0	-5	988	No stop
01 48 34	---	04 49 42	50.2	160.6	-0.8		-11.9	295	1026	01 43 35
01 49 14	0528+134	04 50 22	49.6	164.4	-0.7		-9.6	18	1026	01 49 14
01 53 52	---	04 55 01	49.8	166.1	-0.6		-8.5	278	1062	01 49 15
01 54 32	0536+145	04 55 41	50.5	162.8	-0.7		-10.6	18	1062	01 54 32
01 59 32	---	05 00 42	50.7	164.7	-0.7		-9.4	300	1101	01 54 33
01 59 32	0536+145	05 00 42	50.7	164.7	-0.7		-9.4	-5	1101	No stop
02 04 32	---	05 05 43	50.9	166.6	-0.6		-8.3	295	1140	01 59 33
02 04 47	0536+145	05 05 58	50.9	166.7	-0.6		-8.2	9	1140	02 04 47
02 09 37	---	05 10 48	51.0	168.5	-0.5		-7.1	290	1177	02 04 48
02 09 37	0536+145	05 10 48	51.0	168.5	-0.5		-7.1	-5	1177	No stop
02 14 37	---	05 15 49	51.2	170.4	-0.4		-5.9	295	1216	02 09 38
02 14 52	0536+145	05 16 04	51.2	170.5	-0.4		-5.9	9	1216	02 14 52
02 19 42	---	05 20 55	51.3	172.4	-0.3		-4.7	290	1253	02 14 53
02 19 42	0536+145	05 20 55	51.3	172.4	-0.3		-4.7	-5	1253	No stop
02 24 42	---	05 25 56	51.4	174.3	-0.2		-3.5	295	1292	02 19 43
02 25 22	0528+134	05 26 36	50.4	178.0	-0.1		-1.2	18	1292	02 25 22
02 30 00	---	05 31 15	50.4	179.8	-0.0		-0.1	278	1328	02 25 23

SETUP FILE INFORMATION:

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

==== Setup file: sess313.K1024

--- WARNING --- This group does not match an entry in the frequency catalog.
 This might be ok because the catalog is not complete.
 But be very careful to be sure that the setup is correct.

Setup group: 5 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= 16.000 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 for EBL studies

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)
J0530+1331	05 28 06.759218 * 05 30 56.416749 05 31 44.652247	0.10
* 0528+134	13 29 42.28877 * 13 31 55.14944 13 32 26.83285	0.10
J0539+1433	05 36 51.361472 * 05 39 42.365990 05 40 30.932876	0.10
* 0536+145	14 32 10.73030 * 14 33 45.56160 14 34 06.14477	0.10

rk01fttr

RADIOASTRON AGN SURVEY

PI: Yuri Kovalev

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN Survey

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 18 Oct 2013 Day 291 ---

----- L-band VLBI scans -----

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
04 00 00 0340+362 07 01 30 52.2 264.1 3.3 47.9 0 0 04 00 00
04 09 30 --- 07 11 01 50.8 266.1 3.4 48.1 570 18 04 00 01
04 10 00 0340+362 07 11 31 50.7 266.2 3.5 48.1 24 18 04 10 00
04 19 30 --- 07 21 03 49.3 268.2 3.6 48.2 570 36 04 10 01
04 20 00 0340+362 07 21 33 49.2 268.3 3.6 48.2 24 36 04 20 00
04 29 30 --- 07 31 04 47.8 270.2 3.8 48.3 570 55 04 20 01
04 30 00 0340+362 07 31 34 47.7 270.3 3.8 48.3 24 55 04 30 00
04 40 00 --- 07 41 36 46.2 272.3 4.0 48.2 600 74 04 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	5	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:	5			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0343+3622	03 40 14.791318	* 03 43 28.952407	03 44 24.958988	0.13
* 0340+362	36 12 44.44787	* 36 22 12.42957	36 24 44.08428	0.11

rk01futr

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 18 Oct 2013 Day 291 ---

----- L-band VLBI scans -----

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

06 00 00	0356+322	09 01 49	33.9	-79.6	5.0	44.4	0	0	06 00 00
06 09 30	---	09 11 21	32.4	-77.9	5.2	44.0	570	18	06 00 01
06 10 00	0356+322	09 11 51	32.4	-77.8	5.2	44.0	24	18	06 10 00
06 19 30	---	09 21 22	31.0	-76.1	5.3	43.6	570	36	06 10 01
06 20 00	0356+322	09 21 53	30.9	-76.0	5.4	43.6	24	36	06 20 00
06 29 30	---	09 31 24	29.5	-74.3	5.5	43.2	570	55	06 20 01
06 30 00	0356+322	09 31 54	29.5	-74.2	5.5	43.2	24	55	06 30 00
06 40 00	---	09 41 56	28.0	-72.4	5.7	42.7	600	74	06 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	5	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:	5			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0359+3220	03 56 34.795463	* 03 59 44.912919	04 00 39.603025	0.17
* 0356+322	32 12 19.24956	* 32 20 47.15553	32 23 01.89131	0.20

rk01fvtr

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 18 Oct 2013 Day 291 ---

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						
08 00 00	0528+134	11 02 09	15.2	272.4	5.5		38.1	0	0	08 00 00
08 09 30	---	11 11 41	13.8	274.3	5.7		38.0	570	18	08 00 01
08 10 00	0528+134	11 12 11	13.7	274.4	5.7		38.0	24	18	08 10 00
08 19 30	---	11 21 42	12.3	276.3	5.8		37.9	570	36	08 10 01
08 20 00	0528+134	11 22 12	12.2	276.4	5.8		37.9	24	36	08 20 00
08 29 30	---	11 31 44	10.8	278.2	6.0		37.7	570	55	08 20 01
08 30 00	0528+134	11 32 14	10.7	278.3	6.0		37.7	24	55	08 30 00
08 40 00	---	11 42 16	9.2	280.3	6.2		37.4	600	74	08 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 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
IF SB =      L      L      L      L
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:  5  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:  5

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0530+1331	05 28 06.759218	* 05 30 56.416749	05 31 44.654242	0.10
* 0528+134	13 29 42.28877	* 13 31 55.14944	13 32 26.79629	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	95.0
0528+134	121.6

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

f13c5tr

6CM FTP FRINGE TEST F13C5

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Notes: 6cm FTP Fringe Test for Session 3/2013, 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 F13C5 on 18 Oct 2013
involving 12 antennas: Eb Wb Jb1 On25 Mc Nt Tr Ys Ur Sh Hh Ir.
There are also separate names for stations to test their new backends:
Md and Td -- Medicina and Torun DBBC backends.

Three ftp-fringe tests are scheduled throughout the 1-hour experiment:
12:03 UT (scan 1, 1 sec, 1749+096)
12:31 UT (scan 4, 1 sec, 1749+096)
12:59 UT (scan 7, 1 sec, 1749+096)

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
6cm FTP Fringe Test F13C5

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 18 Oct 2013 Day 291 ---

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 00 00	1749+096	15 02 48	34.9	126.0	-2.8	-29.5	0	0	12 00 00
12 04 00	---	15 06 49	35.3	127.0	-2.8	-29.1	240	15	12 00 01
12 07 00	1749+096	15 09 50	35.7	127.8	-2.7	-28.8	173	15	12 07 00
12 15 00	---	15 17 51	36.6	130.0	-2.6	-27.8	480	46	12 07 01
12 15 30	1749+096	15 18 21	36.7	130.1	-2.6	-27.8	24	46	12 15 30
12 23 30	---	15 26 22	37.6	132.3	-2.4	-26.8	480	77	12 15 31

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
12 24 00	1749+096	15 26 52	37.7	132.5	-2.4		-26.7	24	77	12 24 00
12 32 00	---	15 34 54	38.5	134.7	-2.3		-25.6	480	108	12 24 01
12 35 00	1749+096	15 37 54	38.9	135.6	-2.2		-25.2	173	108	12 35 00
12 43 00	---	15 45 55	39.7	137.9	-2.1		-24.1	480	139	12 35 01
12 43 30	1749+096	15 46 26	39.7	138.0	-2.1		-24.0	24	139	12 43 30
12 51 30	---	15 54 27	40.5	140.4	-2.0		-22.8	480	170	12 43 31
12 52 00	1749+096	15 54 57	40.6	140.6	-2.0		-22.8	24	170	12 52 00
13 00 00	---	16 02 58	41.3	143.0	-1.8		-21.5	480	201	12 52 01

SETUP FILE INFORMATION:

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

==== Setup file: sess313.C512

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

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

Setup group: 4 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	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=	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 for Td *****

```
Setup group:  13          Station: TR_DBBC          Total bit rate:  512
Format: MARK5B          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       5       1       5       2       6       2       6
          3       7       3       7       4       8       4       8
BBC SB=  L       L       U       U       L       L       U       U
          L       L       U       U       L       L       U       U
IF    =   A1     B1     A1     B1     A1     B1     A1     B1
          A1     B1     A1     B1     A1     B1     A1     B1
```

The following frequency sets based on these setups were used.

```
Frequency Set:  14  Setup file default.
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:  14
```

Track assignments are:

```
track1=  2,  4,  6,  8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32
barrel=roll_off
```

SOURCES USED IN RECORDING SCANS -- 6cm FTP Fringe Test F13C5

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)	
J1751+0939	17 49 10.387929	* 17 51 32.818572	17 52 11.998285	0.10
* 1749+096	09 39 42.82574	* 09 39 00.72829	09 39 07.64361	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)
1749+096	67.2

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

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 18 Oct 2013 Day 291 ---

----- L-band VLBI scans -----

```
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

14 00 00 2007+777    17 03 08 60.5 17.6 -3.0   -119.7   0       0    14 00 00
14 09 30 ---          17 12 40 60.9 17.1 -2.9   -122.5  570     18    14 00 01

14 10 00 2007+777    17 13 10 60.9 17.1 -2.9   -122.7   25      18    14 10 00
14 19 30 ---          17 22 41 61.3 16.5 -2.7   -125.5  570     36    14 10 01

14 20 00 2007+777    17 23 11 61.3 16.4 -2.7   -125.7   25      36    14 20 00
14 29 30 ---          17 32 43 61.7 15.8 -2.5   -128.5  570     55    14 20 01

14 30 00 2007+777    17 33 13 61.8 15.8 -2.5   -128.7   25      55    14 30 00
14 39 30 ---          17 42 45 62.1 15.1 -2.4   -131.6  570     73    14 30 01

14 40 00 2007+777    17 43 15 62.2 15.1 -2.4   -131.8   25      73    14 40 00
14 49 30 ---          17 52 46 62.5 14.3 -2.2   -134.8  570     91    14 40 01

14 50 00 2007+777    17 53 16 62.5 14.3 -2.2   -134.9   25      91    14 50 00
15 00 00 ---          18 03 18 62.9 13.4 -2.0   -138.1  600    110    14 50 01
```

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	6	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:	6			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J2005+7752	20 07 20.430170	* 20 05 30.998498	20 05 00.970067	0.48
* 2007+777	77 43 58.12300	* 77 52 43.24753	77 55 35.06101	0.10

rk01fxtr

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Fax: +7-495-3332378 Phone during observation: +7-915-1546281

Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 18 Oct 2013 Day 291 ---

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
23 00 00 2251+158 02 04 37 37.8 243.6 3.2 34.1 0 0 23 00 00
23 09 30 --- 02 14 08 36.5 246.0 3.3 34.8 570 18 23 00 01
23 10 00 2251+158 02 14 38 36.4 246.1 3.3 34.9 24 18 23 10 00
23 19 30 --- 02 24 10 35.1 248.4 3.5 35.6 570 36 23 10 01
23 20 00 2251+158 02 24 40 35.1 248.5 3.5 35.6 24 36 23 20 00
23 30 00 --- 02 34 42 33.6 250.9 3.7 36.2 600 56 23 20 01

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2.set
Matching groups in ./freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 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
IF SB =      L      L      L      L
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: 6 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: 6

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
J2253+1608	22 51 29.519738	* 22 53 57.747937	22 54 40.291090	0.68
* 2251+158	15 52 54.34810	* 16 08 53.56093	16 13 35.16004	0.72

rk01fytr

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN Survey

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 19 Oct 2013 Day 292 ---

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

Table with 11 columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It lists observation schedules for source 0657+172 on Oct 19, 2013.

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	6	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:	6			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0700+1709	06 57 07.785942	* 07 00 01.525540	07 00 50.373716	0.11
* 0657+172	17 13 35.02507	* 17 09 21.70126	17 08 03.49547	0.10

rk01fztr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN Survey

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 19 Oct 2013 Day 292 ---

----- L-band VLBI scans -----

Table with 11 columns: Start UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It lists scan frequencies, BBC frequencies, and bandwidths, followed by a detailed schedule of scans with their respective parameters.

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 7 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
IF SB =	L	L	L	L
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: 6 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: 6

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0405-1308	04 03 13.979059	* 04 05 34.003394	04 06 14.239309	0.11
* 0403-132	-13 16 18.08449	*-13 08 13.69083	-13 05 56.41168	0.11

rk01gatr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 19 Oct 2013 Day 292 ---

----- L-band VLBI scans -----

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

05 00 00	0420-014	08 05 36	18.8	240.4	3.7	31.5	0	0	05 00 00
05 09 30	---	08 15 08	17.6	242.5	3.9	32.2	570	18	05 00 01
05 10 00	0420-014	08 15 38	17.5	242.6	3.9	32.2	24	18	05 10 00
05 19 30	---	08 25 09	16.2	244.7	4.0	32.9	570	36	05 10 01
05 20 00	0420-014	08 25 39	16.1	244.8	4.0	32.9	24	36	05 20 00
05 30 00	---	08 35 41	14.8	247.0	4.2	33.6	600	56	05 20 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	5	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:	5			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0423-0120	04 20 43.539850	* 04 23 15.800727	04 23 59.430391	0.10
* 0420-014	-01 27 28.70025	*-01 20 33.06555	-01 18 37.35941	0.10

rk01gbtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN Survey

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 19 Oct 2013 Day 292 ---

----- L-band VLBI scans -----

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

07 00 00	0528+134	10 05 56	23.6	261.0	4.6		37.6	0	0	07 00 00
07 09 30	---	10 15 27	22.2	263.0	4.7		37.8	570	18	07 00 01
07 10 00	0528+134	10 15 57	22.1	263.1	4.7		37.8	24	18	07 10 00
07 19 30	---	10 25 29	20.7	265.0	4.9		38.0	570	36	07 10 01
07 20 00	0528+134	10 25 59	20.6	265.1	4.9		38.0	24	36	07 20 00
07 29 30	---	10 35 31	19.2	267.1	5.1		38.1	570	55	07 20 01
07 30 00	0528+134	10 36 01	19.1	267.2	5.1		38.1	24	55	07 30 00
07 40 00	---	10 46 02	17.6	269.2	5.2		38.1	600	74	07 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	5	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:	5			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0530+1331	05 28 06.759218	* 05 30 56.416749	05 31 44.676977	0.10
* 0528+134	13 29 42.28877	* 13 31 55.14944	13 32 26.73192	0.10

rk01gctr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 19 Oct 2013 Day 292 ---

```
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
```

```
09 00 00 0716+714    12 06 15  55.2 -32.0  4.7      83.1    0      0    09 00 00
09 09 30 ---          12 15 47  54.4 -31.8  4.9      81.0   570    18    09 00 01

09 10 00 0716+714    12 16 17  54.4 -31.8  4.9      80.9    24    18    09 10 00
09 19 30 ---          12 25 49  53.6 -31.6  5.0      78.8   570    36    09 10 01

09 20 00 0716+714    12 26 19  53.6 -31.6  5.0      78.7    24    36    09 20 00
09 29 30 ---          12 35 50  52.9 -31.3  5.2      76.7   570    55    09 20 01

09 30 00 0716+714    12 36 20  52.8 -31.3  5.2      76.6    24    55    09 30 00
09 40 00 ---          12 46 22  52.0 -30.9  5.4      74.5   600    74    09 30 01
```

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```
Setup group:    6          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
IF SB =      L      L      L      L
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:  6  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:  6

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0721+7120	07 16 13.029741	* 07 21 53.448476	07 23 28.285564	0.31
* 0716+714	71 26 15.17406	* 71 20 36.36340	71 18 35.29013	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA      95.5
0716+714    100.6

```

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

```

rk01gdtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 19 Oct 2013 Day 292 ---

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

11 00 00	1803+784	14 06 35	57.8	18.6	-3.9	-106.3	0	0	11 00 00
11 09 30	---	14 16 07	58.3	18.4	-3.7	-108.8	570	18	11 00 01
11 10 00	1803+784	14 16 37	58.3	18.3	-3.7	-109.0	25	18	11 10 00
11 19 30	---	14 26 08	58.8	18.0	-3.6	-111.6	570	36	11 10 01
11 20 00	1803+784	14 26 38	58.8	18.0	-3.6	-111.7	25	36	11 20 00
11 29 30	---	14 36 10	59.2	17.6	-3.4	-114.4	570	55	11 20 01
11 30 00	1803+784	14 36 40	59.2	17.6	-3.4	-114.5	25	55	11 30 00
11 40 00	---	14 46 42	59.7	17.2	-3.2	-117.3	600	74	11 30 01

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 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
IF SB =      L      L      L      L
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:  6  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:  6

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J1800+7828	18 03 39.193525	* 18 00 45.683903	17 59 53.975669	0.50
* 1803+784	78 27 54.29744	* 78 28 04.01838	78 28 29.25315	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	95.5
1803+784	95.2

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

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 19 Oct 2013 Day 292 ---

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

Table with 11 columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It lists observation times and parameters for source 1928+738.

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2.set
Matching groups in ./freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 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
IF SB =           L           L           L           L
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:   6   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:   6

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J1927+7358	19 28 49.350195	* 19 27 48.495148	19 27 31.115915	0.37
* 1928+738	73 51 44.92742	* 73 58 01.56986	74 00 12.93453	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA           95.5
1928+738         99.1

```

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

```

rk01gfr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 20 Oct 2013 Day 293 ---

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

00 00 00	0048-097	03 08 43	21.0	216.6	2.3	21.3	0	0	00 00 00
00 09 30	---	03 18 15	20.1	218.9	2.4	22.5	570	18	00 00 01
00 10 00	0048-097	03 18 45	20.1	219.0	2.5	22.5	24	18	00 10 00
00 19 30	---	03 28 16	19.2	221.3	2.6	23.7	570	36	00 10 01
00 20 00	0048-097	03 28 47	19.1	221.4	2.6	23.8	24	36	00 20 00
00 30 00	---	03 38 48	18.1	223.8	2.8	24.9	600	56	00 20 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```
Setup group:      6      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
IF SB =      L      L      L      L
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: 6 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: 6
```

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
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0050-0929	00 48 09.975920	* 00 50 41.317387	00 51 24.810297	0.10
* 0048-097	-09 45 24.21202	*-09 29 05.21038	-09 24 27.12437	0.10

rk01ggtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 20 Oct 2013 Day 293 ---

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

02 00 00	0722+145	05 09 03	42.8	132.0	-2.3		-27.4	0	0	02 00 00
02 09 30	---	05 18 35	43.8	134.8	-2.1		-26.1	570	18	02 00 01
02 10 00	0722+145	05 19 05	43.9	135.0	-2.1		-26.0	24	18	02 10 00
02 19 30	---	05 28 36	44.9	137.9	-2.0		-24.6	570	36	02 10 01
02 20 00	0722+145	05 29 06	44.9	138.1	-1.9		-24.5	24	36	02 20 00
02 29 30	---	05 38 38	45.9	141.1	-1.8		-22.9	570	55	02 20 01
02 30 00	0722+145	05 39 08	45.9	141.2	-1.8		-22.8	24	55	02 30 00
02 40 00	---	05 49 10	46.8	144.5	-1.6		-21.1	600	74	02 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	6	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:	6			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0725+1425	07 22 26.966165	* 07 25 16.807763	07 26 04.434724	0.11
* 0722+145	14 31 12.28331	* 14 25 13.74656	14 23 27.21125	0.10

rk01ghtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 20 Oct 2013 Day 293 ---

----- L-band VLBI scans -----

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

04 00 00	0749+540	07 09 23	83.3	79.1	-0.7	-91.9	0	0	04 00 00
04 09 30	---	07 18 54	84.7	78.4	-0.6	-94.5	570	18	04 00 01
04 10 00	0749+540	07 19 24	84.8	78.3	-0.6	-94.7	24	18	04 10 00
04 19 30	---	07 28 56	86.2	76.2	-0.4	-98.7	570	36	04 10 01
04 20 00	0749+540	07 29 26	86.3	76.1	-0.4	-99.0	24	36	04 20 00
04 29 30	---	07 38 58	87.6	70.2	-0.3	-106.8	570	55	04 20 01
04 30 00	0749+540	07 39 28	87.7	69.6	-0.2	-107.4	22	55	04 30 00
04 39 30	---	07 48 59	88.9	45.1	-0.1	-133.8	570	73	04 30 01
04 40 00	0749+540	07 49 29	89.0	42.2	-0.1	-136.8	14	73	04 40 00
04 49 30	---	07 59 01	89.0	-43.9	0.1	135.1	570	91	04 40 01
04 50 00	0749+540	07 59 31	88.9	-46.6	0.1	132.3	14	91	04 50 00
05 00 00	---	08 09 33	87.6	-70.5	0.3	106.4	600	110	04 50 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	6	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
IF SB =	L	L	L	L
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:	6	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:	6			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0753+5352	07 49 06.444761	* 07 53 01.384572	07 54 06.661541	0.17
* 0749+540	54 00 46.40352	* 53 52 59.63704	53 50 28.97739	0.10

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
 RadioAstron AGN Survey

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 20 Oct 2013 Day 293 ---

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

```
07 00 00 1803+784    10 09 52 46.7 15.0 -7.8    -51.0    0      0    07 00 00
07 09 30 ---        10 19 24 47.1 15.4 -7.7    -53.0   570     18    07 00 01

07 10 00 1803+784    10 19 54 47.1 15.4 -7.7    -53.1    25     18    07 10 00
07 19 30 ---        10 29 25 47.5 15.8 -7.5    -55.1   570     36    07 10 01

07 20 00 1803+784    10 29 56 47.5 15.9 -7.5    -55.3    25     36    07 20 00
07 29 30 ---        10 39 27 47.9 16.3 -7.3    -57.3   570     55    07 20 01

07 30 00 1803+784    10 39 57 47.9 16.3 -7.3    -57.4    25     55    07 30 00
07 40 00 ---        10 49 59 48.4 16.7 -7.2    -59.6   600     74    07 30 01
```

SETUP FILE INFORMATION:

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

=====
 Setup file: ra18cm2.set
 Matching groups in ./freq.dat:
 tri18cm E-mail Borkowski 12Mar98, preferred alternative

```
Setup group:      9          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
IF SB =      L      L      L      L
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:  8  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:  8

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J1800+7828	18 03 39.193525	* 18 00 45.683903	17 59 53.882937	0.50
* 1803+784	78 27 54.29744	* 78 28 04.01838	78 28 29.17187	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	95.8
1803+784	95.4

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

rk01gjtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 20 Oct 2013 Day 293 ---

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							
09 00 00	2007+777	12 10 12	46.2	15.4	-7.9	-49.5	0	0	09 00 00		
09 09 30	---	12 19 44	46.6	15.8	-7.8	-51.5	570	18	09 00 01		
09 10 00	2007+777	12 20 14	46.6	15.9	-7.7	-51.6	25	18	09 10 00		
09 19 30	---	12 29 45	47.0	16.3	-7.6	-53.6	570	36	09 10 01		
09 20 00	2007+777	12 30 15	47.0	16.3	-7.6	-53.8	25	36	09 20 00		
09 29 30	---	12 39 47	47.4	16.7	-7.4	-55.8	570	55	09 20 01		
09 30 00	2007+777	12 40 17	47.4	16.8	-7.4	-55.9	25	55	09 30 00		
09 40 00	---	12 50 19	47.9	17.2	-7.2	-58.0	600	74	09 30 01		

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set
Matching groups in ./freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	5	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
IF SB =           L           L           L           L
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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J2005+7752	20 07 20.430170	* 20 05 30.998498	20 05 00.783382	0.48
* 2007+777	77 43 58.12300	* 77 52 43.24753	77 55 35.22208	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA          95.9
2007+777        101.5

```

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

```

rk01gktr

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 20 Oct 2013 Day 293 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
Next BBC frequencies: 636.00 636.00 636.00 636.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

11 00 00	0059+581	14 10 32	22.4	9.4-10.9	-10.8	0	0	11 00 00
11 09 30	---	14 20 03	22.6	10.7-10.7	-12.3	570	18	11 00 01
11 10 00	0059+581	14 20 33	22.7	10.7-10.7	-12.4	24	18	11 10 00
11 19 30	---	14 30 05	22.9	12.1-10.6	-13.9	570	36	11 10 01
11 20 00	0059+581	14 30 35	23.0	12.1-10.6	-14.0	24	36	11 20 00
11 29 30	---	14 40 07	23.3	13.4-10.4	-15.5	570	55	11 20 01
11 30 00	0059+581	14 40 37	23.3	13.5-10.4	-15.6	24	55	11 30 00
11 39 30	---	14 50 08	23.6	14.8-10.2	-17.1	570	73	11 30 01
11 40 00	0059+581	14 50 38	23.7	14.9-10.2	-17.2	24	73	11 40 00
11 49 30	---	15 00 10	24.0	16.2-10.1	-18.7	570	91	11 40 01
11 50 00	0059+581	15 00 40	24.1	16.2-10.1	-18.7	24	91	11 50 00
12 00 00	---	15 10 42	24.5	17.6 -9.9	-20.3	600	110	11 50 01

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 2 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
Bandwd=   16.00   16.00   16.00   16.00
Matching frequency sets:  3

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1  S3  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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0102+5824	00 59 43.470972	* 01 02 45.762380	01 03 40.164812	0.19
* 0059+581	58 08 04.84744	* 58 24 11.13659	58 28 46.80717	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	95.9
0059+581	131.5

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

rk01gltr

RADIOASTRON AGN SURVEY

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Phone during observation: +7-915-1546281

Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 21 Oct 2013 Day 294 ---

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

00 00 00	0016+731	03 12 40	63.0	-25.2	2.9	115.4	0	0	00 00 00
00 09 30	---	03 22 11	62.4	-25.8	3.0	112.6	570	18	00 00 01
00 10 00	0016+731	03 22 41	62.4	-25.9	3.0	112.5	24	18	00 10 00
00 19 30	---	03 32 13	61.8	-26.4	3.2	109.7	570	36	00 10 01
00 20 00	0016+731	03 32 43	61.7	-26.4	3.2	109.6	24	36	00 20 00
00 29 30	---	03 42 15	61.1	-26.8	3.4	106.9	570	55	00 20 01
00 30 00	0016+731	03 42 45	61.1	-26.9	3.4	106.8	24	55	00 30 00
00 40 00	---	03 52 46	60.4	-27.2	3.5	104.0	600	74	00 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	9	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
IF SB =	L	L	L	L
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:	10	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:	10			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0019+7327	00 16 54.195081	* 00 19 45.786359	00 20 40.005016	0.35
* 0016+731	73 10 51.40714	* 73 27 30.01758	73 32 18.69403	0.10

n13c3tr

NETWORK MONITORING EXPERIMENT N13C3

PI: Jun YANG

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Phone during observation: +31-521-596507

Notes: 6cm NME and FT Fringe Test for Session 3/2013
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 N13C3 on 21 Oct 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: Md and Td -- Medicina and Torun DBBC backends.

Four ftp-fringe tests are scheduled throughout the 3-hour experiment:

02:39:00 UT -- scan 2, 1 sec, 4C39.25
03:35:40 UT -- scan 20, 2 sec, 4C39.25
04:32:40 UT -- scan 38, 2 sec, 4C39.25
05:29:00 UT -- scan 56, 2 sec, 4C39.25

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

Good luck with the session!

Jun Yang
Support Scientist, JIVE
Skype: uaoagn

Schedule for TORUN (Code Tr) Page 2

Network Monitoring Experiment N13C3

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 21 Oct 2013 Day 294 ---

Next scan frequencies:	4966.49	4966.49	4966.49	4966.49	4982.49	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	5014.49
Next BBC frequencies:	766.49	766.49	766.49	766.49	782.49	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	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	8.00	8.00
02 30 00	4C39.25	05 43 04	49.7	87.2	-3.7	-50.5	0	0	02 30 00	
02 35 00	---	05 48 05	50.4	88.1	-3.7	-50.5	300	19	02 30 01	
02 36 00	4C39.25	05 49 05	50.6	88.3	-3.6	-50.5	54	19	02 36 00	
02 40 00	---	05 53 06	51.2	89.1	-3.6	-50.6	240	35	02 36 01	

Schedule for TORUN (Code Tr)

Page 3

Network Monitoring Experiment N13C3

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 21 Oct 2013 Day 294 ---										
02 44 00	4C39.25	05 57 07	51.8	89.9	-3.5		-50.6	233	35	02 44 00
02 50 00	---	06 03 08	52.7	91.1	-3.4		-50.6	360	58	02 44 01
02 50 30	J0923+3849	06 03 38	53.2	92.3	-3.3		-50.3	16	58	02 50 30
02 52 30	=0920+390	06 05 38	53.5	92.7	-3.3		-50.3	120	66	02 50 31
02 53 00	4C39.25	06 06 08	53.2	91.7	-3.4		-50.5	16	66	02 53 00
02 55 00	---	06 08 09	53.5	92.2	-3.3		-50.5	120	74	02 53 01
02 55 30	J0923+3849	06 08 39	54.0	93.3	-3.3		-50.2	16	74	02 55 30
02 57 30	=0920+390	06 10 39	54.3	93.8	-3.2		-50.2	120	81	02 55 31
02 58 00	4C39.25	06 11 09	53.9	92.8	-3.3		-50.5	16	81	02 58 00
03 00 00	---	06 13 09	54.2	93.2	-3.2		-50.5	120	89	02 58 01
03 00 30	J0923+3849	06 13 39	54.7	94.4	-3.2		-50.2	16	89	03 00 30
03 02 30	=0920+390	06 15 40	55.0	94.8	-3.1		-50.1	120	97	03 00 31
03 03 00	4C39.25	06 16 10	54.7	93.8	-3.2		-50.4	16	97	03 03 00
03 05 00	---	06 18 10	55.0	94.3	-3.2		-50.4	120	105	03 03 01
03 05 30	J0923+3849	06 18 40	55.5	95.5	-3.1		-50.0	15	105	03 05 30
03 07 30	=0920+390	06 20 41	55.8	95.9	-3.1		-50.0	120	112	03 05 31
03 08 00	4C39.25	06 21 11	55.4	94.9	-3.1		-50.3	16	112	03 08 00
03 10 00	---	06 23 11	55.7	95.4	-3.1		-50.3	120	120	03 08 01
03 10 30	J0923+3849	06 23 41	56.2	96.6	-3.0		-49.9	15	120	03 10 30
03 12 30	=0920+390	06 25 41	56.5	97.1	-3.0		-49.8	120	128	03 10 31
03 13 00	4C39.25	06 26 12	56.2	96.0	-3.0		-50.2	16	128	03 13 00
03 15 00	---	06 28 12	56.5	96.5	-3.0		-50.1	120	135	03 13 01
03 15 30	J0923+3849	06 28 42	57.0	97.8	-2.9		-49.7	15	135	03 15 30
03 17 30	=0920+390	06 30 42	57.3	98.2	-2.9		-49.7	120	143	03 15 31
03 18 00	4C39.25	06 31 12	56.9	97.2	-2.9		-50.0	15	143	03 18 00
03 20 00	---	06 33 13	57.2	97.6	-2.9		-50.0	120	151	03 18 01
03 20 30	J0923+3849	06 33 43	57.7	98.9	-2.8		-49.5	15	151	03 20 30
03 22 30	=0920+390	06 35 43	58.0	99.4	-2.8		-49.4	120	159	03 20 31
03 23 00	4C39.25	06 36 13	57.7	98.3	-2.9		-49.8	15	159	03 23 00
03 25 00	---	06 38 13	57.9	98.8	-2.8		-49.8	120	166	03 23 01
03 25 30	J0923+3849	06 38 44	58.5	100.1	-2.8		-49.3	15	166	03 25 30
03 27 30	=0920+390	06 40 44	58.7	100.6	-2.7		-49.2	120	174	03 25 31

Schedule for TORUN (Code Tr)

Page 4

Network Monitoring Experiment N13C3

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 21 Oct 2013 Day 294 ---										
03 28 00	4C39.25	06 41 14	58.4	99.5	-2.8		-49.6	15	174	03 28 00
03 30 00	---	06 43 14	58.7	100.0	-2.7		-49.5	120	182	03 28 01
03 30 40	4C39.25	06 43 54	58.8	100.2	-2.7		-49.5	34	182	03 30 40
03 36 40	---	06 49 55	59.7	101.7	-2.6		-49.2	360	205	03 30 41
03 40 40	4C39.25	06 53 56	60.3	102.7	-2.6		-48.9	233	205	03 40 40
03 46 40	---	06 59 57	61.1	104.3	-2.5		-48.5	360	228	03 40 41
03 47 10	J0923+3849	07 00 27	61.6	105.8	-2.4		-47.8	14	228	03 47 10
03 49 10	=0920+390	07 02 27	61.9	106.3	-2.4		-47.7	120	236	03 47 11
03 49 40	4C39.25	07 02 58	61.6	105.1	-2.4		-48.2	15	236	03 49 40
03 51 40	---	07 04 58	61.9	105.6	-2.4		-48.1	120	244	03 49 41
03 52 10	J0923+3849	07 05 28	62.3	107.2	-2.3		-47.4	14	244	03 52 10
03 54 10	=0920+390	07 07 28	62.6	107.7	-2.3		-47.2	120	252	03 52 11
03 54 40	4C39.25	07 07 58	62.3	106.5	-2.3		-47.8	15	252	03 54 40
03 56 40	---	07 09 59	62.6	107.0	-2.3		-47.6	120	259	03 54 41
03 57 10	J0923+3849	07 10 29	63.1	108.6	-2.2		-46.9	14	259	03 57 10
03 59 10	=0920+390	07 12 29	63.4	109.2	-2.2		-46.7	120	267	03 57 11
03 59 40	4C39.25	07 12 59	63.0	107.9	-2.2		-47.3	14	267	03 59 40
04 01 40	---	07 15 00	63.3	108.5	-2.2		-47.1	120	275	03 59 41
04 02 10	J0923+3849	07 15 30	63.8	110.1	-2.1		-46.3	14	275	04 02 10
04 04 10	=0920+390	07 17 30	64.1	110.7	-2.1		-46.1	120	283	04 02 11
04 04 40	4C39.25	07 18 00	63.7	109.4	-2.2		-46.8	14	283	04 04 40
04 06 40	---	07 20 00	64.0	110.0	-2.1		-46.5	120	290	04 04 41
04 07 10	J0923+3849	07 20 30	64.5	111.7	-2.1		-45.7	14	290	04 07 10
04 09 10	=0920+390	07 22 31	64.8	112.3	-2.0		-45.4	120	298	04 07 11
04 09 40	4C39.25	07 23 01	64.4	110.9	-2.1		-46.2	14	298	04 09 40
04 11 40	---	07 25 01	64.7	111.5	-2.0		-45.9	120	306	04 09 41
04 12 10	J0923+3849	07 25 31	65.2	113.3	-2.0		-45.0	14	306	04 12 10
04 14 10	=0920+390	07 27 32	65.5	113.9	-1.9		-44.7	120	314	04 12 11
04 14 40	4C39.25	07 28 02	65.1	112.5	-2.0		-45.5	14	314	04 14 40
04 16 40	---	07 30 02	65.4	113.2	-2.0		-45.3	120	321	04 14 41
04 17 10	J0923+3849	07 30 32	65.9	115.0	-1.9		-44.3	13	321	04 17 10
04 19 10	=0920+390	07 32 32	66.1	115.6	-1.9		-44.0	120	329	04 17 11

Schedule for TORUN (Code Tr)

Page 5

Network Monitoring Experiment N13C3

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 21 Oct 2013 Day 294 ---										
04 19 40	4C39.25	07 33 02	65.8	114.2	-1.9		-44.8	14	329	04 19 40
04 21 40	---	07 35 03	66.1	114.8	-1.9		-44.5	120	337	04 19 41
04 22 10	J0923+3849	07 35 33	66.5	116.7	-1.8		-43.5	13	337	04 22 10
04 24 10	=0920+390	07 37 33	66.8	117.4	-1.8		-43.1	120	344	04 22 11
04 24 40	4C39.25	07 38 03	66.5	115.9	-1.8		-44.0	13	344	04 24 40
04 26 40	---	07 40 04	66.8	116.6	-1.8		-43.7	120	352	04 24 41
04 27 20	4C39.25	07 40 44	66.9	116.8	-1.8		-43.6	34	352	04 27 20
04 33 20	---	07 46 45	67.7	119.0	-1.7		-42.5	360	375	04 27 21
04 37 20	4C39.25	07 50 45	68.2	120.6	-1.6		-41.7	233	375	04 37 20
04 43 20	---	07 56 46	69.0	123.0	-1.5		-40.4	360	399	04 37 21
04 43 50	J0923+3849	07 57 16	69.3	125.2	-1.4		-39.0	12	399	04 43 50
04 45 50	=0920+390	07 59 17	69.6	126.1	-1.4		-38.5	120	406	04 43 51
04 46 20	4C39.25	07 59 47	69.3	124.3	-1.5		-39.7	13	406	04 46 20
04 48 20	---	08 01 47	69.6	125.1	-1.4		-39.2	120	414	04 46 21
04 48 50	J0923+3849	08 02 17	69.9	127.4	-1.4		-37.7	12	414	04 48 50
04 50 50	=0920+390	08 04 18	70.2	128.3	-1.3		-37.2	120	422	04 48 51
04 51 20	4C39.25	08 04 48	70.0	126.4	-1.4		-38.4	12	422	04 51 20
04 53 20	---	08 06 48	70.2	127.3	-1.4		-37.9	120	430	04 51 21
04 53 50	J0923+3849	08 07 18	70.5	129.7	-1.3		-36.3	12	430	04 53 50
04 55 50	=0920+390	08 09 18	70.8	130.6	-1.2		-35.8	120	437	04 53 51
04 56 20	4C39.25	08 09 48	70.6	128.7	-1.3		-37.1	12	437	04 56 20
04 58 20	---	08 11 49	70.8	129.6	-1.3		-36.5	120	445	04 56 21
04 58 50	J0923+3849	08 12 19	71.1	132.1	-1.2		-34.8	11	445	04 58 50
05 00 50	=0920+390	08 14 19	71.3	133.1	-1.2		-34.2	120	453	04 58 51
05 01 20	4C39.25	08 14 49	71.1	131.1	-1.2		-35.6	12	453	05 01 20
05 03 20	---	08 16 50	71.4	132.1	-1.2		-35.0	120	461	05 01 21
05 03 50	J0923+3849	08 17 20	71.6	134.6	-1.1		-33.2	11	461	05 03 50
05 05 50	=0920+390	08 19 20	71.9	135.7	-1.1		-32.5	120	468	05 03 51
05 06 20	4C39.25	08 19 50	71.7	133.6	-1.1		-34.0	12	468	05 06 20
05 08 20	---	08 21 50	71.9	134.6	-1.1		-33.3	120	476	05 06 21
05 08 50	J0923+3849	08 22 21	72.2	137.3	-1.0		-31.5	11	476	05 08 50
05 10 50	=0920+390	08 24 21	72.4	138.4	-1.0		-30.7	120	484	05 08 51

Schedule for TORUN (Code Tr)

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Network Monitoring Experiment N13C3

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 21 Oct 2013 Day 294 ---

05 11 20	4C39.25	08 24 51	72.2	136.2	-1.1	-32.3	11	484	05 11 20
05 13 20	---	08 26 51	72.4	137.3	-1.0	-31.6	120	492	05 11 21
05 13 50	J0923+3849	08 27 21	72.7	140.1	-0.9	-29.6	11	492	05 13 50
05 15 50	=0920+390	08 29 22	72.9	141.2	-0.9	-28.8	120	499	05 13 51
05 16 20	4C39.25	08 29 52	72.7	139.0	-1.0	-30.4	11	499	05 16 20
05 18 20	---	08 31 52	72.9	140.1	-0.9	-29.7	120	507	05 16 21
05 18 50	J0923+3849	08 32 22	73.1	143.0	-0.9	-27.6	10	507	05 18 50
05 20 50	=0920+390	08 34 23	73.3	144.2	-0.8	-26.8	120	515	05 18 51
05 21 20	4C39.25	08 34 53	73.2	141.9	-0.9	-28.5	11	515	05 21 20
05 23 20	---	08 36 53	73.4	143.1	-0.9	-27.6	120	523	05 21 21
05 24 00	4C39.25	08 37 33	73.4	143.5	-0.8	-27.3	33	523	05 24 00
05 30 00	---	08 43 34	74.0	147.2	-0.7	-24.7	360	546	05 24 01

SETUP FILE INFORMATION:

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

==== Setup file: sess313.C512

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

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

```
Setup group: 4 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	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= 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 for Td *****

==== Setup file: sess313.C512

```

--- WARNING --- This group does not match an entry in the frequency catalog.
                This might be ok because the catalog is not complete.
                But be very careful to be sure that the setup is correct.

```

```

Setup group: 16 Station: TR_DBBC Total bit rate: 512
Format: MARK5B 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
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 5 1 5 2 6 2 6
        3 7 3 7 4 8 4 8
BBC SB= L L U U L L U U
        L L U U L L U U
IF = A1 B1 A1 B1 A1 B1 A1 B1
        A1 B1 A1 B1 A1 B1 A1 B1

```

The following frequency sets based on these setups were used.

```

Frequency Set: 17 Setup file default.
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: 17

```

Track assignments are:

track1= 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32
barrel=roll_off

SOURCES USED IN RECORDING SCANS -- Network Monitoring Experiment N13C3

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)		
* J0923+3849	09 20 06.318435	* 09 23 14.452935	09 24 06.090765	0.13
0920+390	39 02 32.11175	* 38 49 39.91002	38 45 52.12158	0.10
J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.493311	0.13
* 4C39.25	39 15 23.56637	* 39 02 20.85177	38 58 30.24957	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)
J0923+3849	78.0
4C39.25	77.4

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

ey020atr

EVN OBSERVATIONS OF SWIFT J1644+57 AT THE 4TH EPOCH

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Phone: +31 521 596507 EMAIL: yang@jive.nl
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Observing mode: 1024-16-2

Notes: Off Pcal, 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.JbOnMcNtTrYsSvZcBdUrSh

Schedule for TORUN (Code Tr) Page 2

EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
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	
06 30 00	3C286	09 43 44	43.4	95.6	-3.8		-43.9	0	0	06 30 00
06 35 00	---	09 48 45	44.1	96.7	-3.7		-43.8	300	39	06 30 01
06 37 00	3C345	09 50 45	24.0	55.0	-6.9		-39.8	21	39	06 37 00
06 42 00	---	09 55 46	24.6	55.8	-6.8		-40.3	300	77	06 37 01
06 44 00	J1638+5720	09 57 46	38.0	42.4	-6.7		-48.6	56	77	06 44 00
06 45 00	---	09 58 46	38.1	42.5	-6.7		-48.7	60	85	06 44 01
06 45 20	J1638+5720	09 59 06	38.1	42.6	-6.7		-48.8	14	85	06 45 20
06 46 10	---	09 59 57	38.2	42.7	-6.6		-48.9	50	92	06 45 21
06 46 20	TDF	10 00 07	37.8	41.7	-6.7		-48.2	-4	92	06 46 20
06 48 30	---	10 02 17	38.0	42.0	-6.7		-48.5	126	108	06 46 21
06 48 30	FIRST-1	10 02 17	38.0	42.0	-6.7		-48.5	-5	108	No stop
06 52 30	---	10 06 18	38.4	42.4	-6.6		-49.0	235	139	06 48 31
06 52 40	J1638+5720	10 06 28	38.9	43.4	-6.5		-49.8	-4	139	06 52 40
06 53 40	---	10 07 28	39.0	43.5	-6.5		-50.0	56	147	06 52 41
06 53 50	TDF	10 07 38	38.5	42.6	-6.6		-49.2	-4	147	06 53 50
06 56 00	---	10 09 48	38.7	42.8	-6.6		-49.5	126	164	06 53 51
06 56 00	FIRST-1	10 09 48	38.7	42.8	-6.6		-49.5	-5	164	No stop
07 00 00	---	10 13 49	39.2	43.2	-6.5		-50.1	235	195	06 56 01

Schedule for TORUN (Code Tr)

Page 3

EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
07 00 20	J1638+5720	10 14 09	39.7	44.3	-6.4		-50.9	6	195	07 00 20
07 01 10	---	10 14 59	39.8	44.3	-6.4		-51.0	50	201	07 00 21
07 01 20	TDF	10 15 09	39.3	43.4	-6.5		-50.3	-4	201	07 01 20
07 03 30	---	10 17 19	39.5	43.6	-6.5		-50.6	126	218	07 01 21
07 03 30	FIRST-1	10 17 19	39.5	43.6	-6.5		-50.6	-5	218	No stop
07 07 30	---	10 21 20	39.9	44.1	-6.4		-51.2	235	249	07 03 31
07 07 40	J1638+5720	10 21 30	40.5	45.1	-6.3		-51.9	-4	249	07 07 40
07 08 40	---	10 22 30	40.6	45.2	-6.3		-52.1	56	257	07 07 41
07 08 50	TDF	10 22 40	40.1	44.2	-6.4		-51.4	-4	257	07 08 50
07 11 00	---	10 24 51	40.3	44.5	-6.3		-51.7	126	274	07 08 51
07 11 00	FIRST-1	10 24 51	40.3	44.5	-6.3		-51.7	-5	274	No stop
07 15 00	---	10 28 51	40.7	44.9	-6.3		-52.2	235	304	07 11 01
07 15 20	J1638+5720	10 29 11	41.3	45.9	-6.2		-53.0	6	304	07 15 20
07 16 10	---	10 30 01	41.4	46.0	-6.1		-53.1	50	311	07 15 21
07 16 20	TDF	10 30 11	40.9	45.0	-6.2		-52.4	-4	311	07 16 20
07 18 30	---	10 32 22	41.1	45.3	-6.2		-52.7	126	328	07 16 21
07 18 30	FIRST-1	10 32 22	41.1	45.3	-6.2		-52.7	-5	328	No stop
07 22 30	---	10 36 23	41.5	45.7	-6.1		-53.3	235	359	07 18 31
07 22 40	J1638+5720	10 36 33	42.1	46.7	-6.0		-54.0	-4	359	07 22 40
07 23 40	---	10 37 33	42.2	46.8	-6.0		-54.2	56	366	07 22 41
07 23 50	TDF	10 37 43	41.7	45.8	-6.1		-53.5	-4	366	07 23 50
07 26 00	---	10 39 53	41.9	46.1	-6.1		-53.8	126	383	07 23 51
07 26 00	FIRST-1	10 39 53	41.9	46.1	-6.1		-53.8	-5	383	No stop
07 30 00	---	10 43 54	42.3	46.5	-6.0		-54.3	235	414	07 26 01
07 30 20	J1638+5720	10 44 14	42.9	47.5	-5.9		-55.1	6	414	07 30 20
07 31 10	---	10 45 04	43.0	47.6	-5.9		-55.2	50	421	07 30 21
07 31 20	TDF	10 45 14	42.5	46.6	-6.0		-54.5	-4	421	07 31 20
07 33 30	---	10 47 24	42.7	46.9	-6.0		-54.8	126	437	07 31 21
07 33 30	FIRST-1	10 47 24	42.7	46.9	-6.0		-54.8	-5	437	No stop
07 37 30	---	10 51 25	43.2	47.3	-5.9		-55.4	235	468	07 33 31
07 37 40	J1638+5720	10 51 35	43.8	48.3	-5.8		-56.1	-4	468	07 37 40
07 38 40	---	10 52 35	43.9	48.4	-5.8		-56.2	56	476	07 37 41

Schedule for TORUN (Code Tr)

Page 4

EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
07 38 50	TDF	10 52 45	43.3	47.4	-5.9		-55.6	-4	476	07 38 50
07 41 00	---	10 54 56	43.6	47.7	-5.8		-55.9	126	493	07 38 51
07 41 00	FIRST-1	10 54 56	43.6	47.7	-5.8		-55.9	-5	493	No stop
07 45 00	---	10 58 56	44.0	48.1	-5.8		-56.4	235	524	07 41 01
07 45 20	J1638+5720	10 59 16	44.6	49.1	-5.7		-57.2	6	524	07 45 20
07 46 10	---	11 00 06	44.7	49.2	-5.6		-57.3	50	530	07 45 21
07 46 20	TDF	11 00 16	44.2	48.2	-5.7		-56.6	-4	530	07 46 20
07 48 30	---	11 02 27	44.4	48.4	-5.7		-56.9	126	547	07 46 21
07 48 30	FIRST-1	11 02 27	44.4	48.4	-5.7		-56.9	-5	547	No stop
07 52 30	---	11 06 27	44.8	48.8	-5.6		-57.5	235	578	07 48 31
07 52 40	J1638+5720	11 06 37	45.5	49.8	-5.5		-58.2	-4	578	07 52 40
07 53 40	---	11 07 38	45.6	49.9	-5.5		-58.3	56	586	07 52 41
07 53 50	TDF	11 07 48	45.0	49.0	-5.6		-57.7	-4	586	07 53 50
07 56 00	---	11 09 58	45.2	49.2	-5.6		-58.0	126	603	07 53 51
07 56 00	FIRST-1	11 09 58	45.2	49.2	-5.6		-58.0	-5	603	No stop
08 00 00	---	11 13 59	45.7	49.6	-5.5		-58.5	235	634	07 56 01
08 00 20	J1638+5720	11 14 19	46.4	50.6	-5.4		-59.2	6	634	08 00 20
08 01 10	---	11 15 09	46.4	50.7	-5.4		-59.4	50	640	08 00 21
08 01 20	TDF	11 15 19	45.9	49.7	-5.5		-58.7	-4	640	08 01 20
08 03 30	---	11 17 29	46.1	49.9	-5.5		-59.0	126	657	08 01 21
08 03 30	FIRST-1	11 17 29	46.1	49.9	-5.5		-59.0	-5	657	No stop
08 07 30	---	11 21 30	46.6	50.3	-5.4		-59.6	235	688	08 03 31
08 07 40	J1638+5720	11 21 40	47.2	51.3	-5.3		-60.3	-4	688	08 07 40
08 08 40	---	11 22 40	47.3	51.4	-5.3		-60.4	56	695	08 07 41
08 08 50	TDF	11 22 50	46.7	50.5	-5.4		-59.8	-4	695	08 08 50
08 11 00	---	11 25 00	47.0	50.7	-5.3		-60.1	126	712	08 08 51
08 11 00	FIRST-1	11 25 00	47.0	50.7	-5.3		-60.1	-5	712	No stop
08 15 00	---	11 29 01	47.4	51.1	-5.3		-60.6	235	743	08 11 01
08 15 20	J1638+5720	11 29 21	48.1	52.1	-5.2		-61.3	6	743	08 15 20
08 16 10	---	11 30 11	48.2	52.2	-5.1		-61.4	50	750	08 15 21
08 16 20	TDF	11 30 21	47.6	51.2	-5.2		-60.8	-4	750	08 16 20
08 18 30	---	11 32 32	47.9	51.4	-5.2		-61.1	126	766	08 16 21

Schedule for TORUN (Code Tr)

Page 5

EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
08 18 30	FIRST-1	11 32 32	47.9	51.4	-5.2		-61.1	-5	766	No stop
08 22 30	---	11 36 32	48.3	51.8	-5.1		-61.7	235	797	08 18 31
08 22 40	J1638+5720	11 36 42	49.0	52.8	-5.0		-62.3	-4	797	08 22 40
08 23 40	---	11 37 43	49.1	52.9	-5.0		-62.5	56	805	08 22 41
08 23 50	TDF	11 37 53	48.5	51.9	-5.1		-61.9	-4	805	08 23 50
08 26 00	---	11 40 03	48.7	52.1	-5.1		-62.2	126	822	08 23 51
08 26 00	FIRST-1	11 40 03	48.7	52.1	-5.1		-62.2	-5	822	No stop
08 30 00	---	11 44 04	49.2	52.5	-5.0		-62.7	235	853	08 26 01
08 30 20	J1638+5720	11 44 24	49.9	53.5	-4.9		-63.4	6	853	08 30 20
08 31 10	---	11 45 14	50.0	53.6	-4.9		-63.5	50	859	08 30 21
08 31 20	TDF	11 45 24	49.4	52.6	-5.0		-62.9	-4	859	08 31 20
08 33 30	---	11 47 34	49.6	52.9	-5.0		-63.2	126	876	08 31 21
08 33 30	FIRST-1	11 47 34	49.6	52.9	-5.0		-63.2	-5	876	No stop
08 37 30	---	11 51 35	50.1	53.2	-4.9		-63.8	235	907	08 33 31
08 37 40	J1638+5720	11 51 45	50.8	54.2	-4.8		-64.4	-5	907	08 37 40
08 38 40	---	11 52 45	50.9	54.3	-4.8		-64.6	55	915	08 37 41
08 38 50	TDF	11 52 55	50.3	53.3	-4.9		-64.0	-4	915	08 38 50
08 41 00	---	11 55 05	50.5	53.5	-4.8		-64.3	126	932	08 38 51
08 41 00	FIRST-1	11 55 05	50.5	53.5	-4.8		-64.3	-5	932	No stop
08 45 00	---	11 59 06	51.0	53.9	-4.8		-64.8	235	963	08 41 01
08 45 20	J1638+5720	11 59 26	51.7	54.9	-4.7		-65.5	5	963	08 45 20
08 46 10	---	12 00 16	51.8	55.0	-4.6		-65.6	50	969	08 45 21
08 46 20	TDF	12 00 26	51.2	54.0	-4.7		-65.0	-4	969	08 46 20
08 48 30	---	12 02 37	51.5	54.2	-4.7		-65.3	126	986	08 46 21
08 48 30	FIRST-1	12 02 37	51.5	54.2	-4.7		-65.3	-5	986	No stop
08 52 30	---	12 06 37	51.9	54.6	-4.6		-65.9	235	1017	08 48 31
08 52 40	J1638+5720	12 06 47	52.7	55.6	-4.5		-66.5	-5	1017	08 52 40
08 53 40	---	12 07 47	52.8	55.7	-4.5		-66.7	55	1024	08 52 41
08 53 50	TDF	12 07 58	52.1	54.7	-4.6		-66.1	-4	1024	08 53 50
08 56 00	---	12 10 08	52.4	54.9	-4.6		-66.4	126	1041	08 53 51
08 56 00	FIRST-1	12 10 08	52.4	54.9	-4.6		-66.4	-5	1041	No stop
09 00 00	---	12 14 09	52.9	55.2	-4.5		-67.0	235	1072	08 56 01

Schedule for TORUN (Code Tr)

Page 6

EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
09 00 20	J1638+5720	12 14 29	53.6	56.2	-4.4		-67.6	5	1072	09 00 20
09 01 10	---	12 15 19	53.7	56.3	-4.4		-67.7	50	1079	09 00 21
09 01 20	TDF	12 15 29	53.0	55.4	-4.5		-67.1	-5	1079	09 01 20
09 03 30	---	12 17 39	53.3	55.6	-4.5		-67.5	125	1095	09 01 21
09 03 30	FIRST-1	12 17 39	53.3	55.6	-4.5		-67.5	-5	1095	No stop
09 07 30	---	12 21 40	53.8	55.9	-4.4		-68.0	235	1126	09 03 31
09 07 40	J1638+5720	12 21 50	54.5	56.9	-4.3		-68.6	-5	1126	09 07 40
09 08 40	---	12 22 50	54.7	57.0	-4.3		-68.8	55	1134	09 07 41
09 08 50	TDF	12 23 00	54.0	56.0	-4.4		-68.2	-5	1134	09 08 50
09 11 00	---	12 25 10	54.2	56.2	-4.3		-68.5	125	1151	09 08 51
09 11 00	FIRST-1	12 25 10	54.2	56.2	-4.3		-68.5	-5	1151	No stop
09 15 00	---	12 29 11	54.7	56.5	-4.3		-69.1	235	1182	09 11 01
09 15 20	J1638+5720	12 29 31	55.5	57.5	-4.1		-69.7	5	1182	09 15 20
09 16 10	---	12 30 21	55.6	57.6	-4.1		-69.8	50	1188	09 15 21
09 16 20	TDF	12 30 31	54.9	56.6	-4.2		-69.3	-5	1188	09 16 20
09 18 30	---	12 32 42	55.2	56.8	-4.2		-69.6	125	1205	09 16 21
09 18 30	FIRST-1	12 32 42	55.2	56.8	-4.2		-69.6	-5	1205	No stop
09 22 30	---	12 36 42	55.7	57.1	-4.1		-70.2	235	1236	09 18 31
09 22 40	J1638+5720	12 36 52	56.4	58.1	-4.0		-70.8	-5	1236	09 22 40
09 23 40	---	12 37 52	56.6	58.2	-4.0		-70.9	55	1244	09 22 41
09 23 50	TDF	12 38 02	55.8	57.2	-4.1		-70.4	-5	1244	09 23 50
09 26 00	---	12 40 13	56.1	57.4	-4.1		-70.7	125	1261	09 23 51
09 26 00	FIRST-1	12 40 13	56.1	57.4	-4.1		-70.7	-5	1261	No stop
09 30 00	---	12 44 13	56.6	57.7	-4.0		-71.3	235	1292	09 26 01
09 30 20	J1638+5720	12 44 34	57.4	58.7	-3.9		-71.9	5	1292	09 30 20
09 31 10	---	12 45 24	57.5	58.8	-3.9		-72.0	50	1298	09 30 21
09 31 20	TDF	12 45 34	56.8	57.8	-4.0		-71.5	-5	1298	09 31 20
09 33 30	---	12 47 44	57.1	58.0	-4.0		-71.8	125	1315	09 31 21
09 33 30	FIRST-1	12 47 44	57.1	58.0	-4.0		-71.8	-5	1315	No stop
09 37 30	---	12 51 45	57.6	58.3	-3.9		-72.4	235	1346	09 33 31
09 37 40	J1638+5720	12 51 55	58.4	59.3	-3.8		-72.9	-5	1346	09 37 40
09 38 40	---	12 52 55	58.5	59.4	-3.8		-73.1	55	1353	09 37 41

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
09 38 50	TDF	12 53 05	57.8	58.4	-3.9		-72.6	-5	1353	09 38 50
09 41 00	---	12 55 15	58.0	58.6	-3.8		-72.9	125	1370	09 38 51
09 41 00	FIRST-1	12 55 15	58.0	58.6	-3.8		-72.9	-5	1370	No stop
09 45 00	---	12 59 16	58.6	58.9	-3.8		-73.5	235	1401	09 41 01
09 45 20	J1638+5720	12 59 36	59.4	59.9	-3.6		-74.1	5	1401	09 45 20
09 46 10	---	13 00 26	59.5	59.9	-3.6		-74.2	50	1408	09 45 21
09 46 20	TDF	13 00 36	58.7	59.0	-3.7		-73.7	-5	1408	09 46 20
09 48 30	---	13 02 46	59.0	59.1	-3.7		-74.0	125	1424	09 46 21
09 48 30	FIRST-1	13 02 46	59.0	59.1	-3.7		-74.0	-5	1424	No stop
09 52 30	---	13 06 47	59.5	59.4	-3.6		-74.6	235	1455	09 48 31
09 52 40	J1638+5720	13 06 57	60.3	60.4	-3.5		-75.2	-5	1455	09 52 40
09 53 40	---	13 07 57	60.4	60.4	-3.5		-75.3	55	1463	09 52 41
09 53 50	TDF	13 08 07	59.7	59.5	-3.6		-74.8	-5	1463	09 53 50
09 56 00	---	13 10 18	60.0	59.7	-3.6		-75.1	125	1480	09 53 51
09 56 00	FIRST-1	13 10 18	60.0	59.7	-3.6		-75.1	-5	1480	No stop
10 00 00	---	13 14 18	60.5	59.9	-3.5		-75.8	235	1511	09 56 01
10 00 20	J1638+5720	13 14 38	61.3	60.9	-3.4		-76.3	5	1511	10 00 20
10 01 10	---	13 15 29	61.4	61.0	-3.4		-76.5	50	1517	10 00 21
10 01 20	TDF	13 15 39	60.7	60.0	-3.5		-76.0	-5	1517	10 01 20
10 03 30	---	13 17 49	61.0	60.2	-3.5		-76.3	125	1534	10 01 21
10 03 30	FIRST-1	13 17 49	61.0	60.2	-3.5		-76.3	-5	1534	No stop
10 07 30	---	13 21 50	61.5	60.4	-3.4		-76.9	235	1565	10 03 31
10 07 40	J1638+5720	13 22 00	62.3	61.4	-3.3		-77.5	-5	1565	10 07 40
10 08 40	---	13 23 00	62.4	61.4	-3.3		-77.6	55	1573	10 07 41
10 08 50	TDF	13 23 10	61.6	60.5	-3.4		-77.1	-5	1573	10 08 50
10 11 00	---	13 25 20	61.9	60.6	-3.3		-77.5	125	1590	10 08 51
10 11 00	FIRST-1	13 25 20	61.9	60.6	-3.3		-77.5	-5	1590	No stop
10 15 00	---	13 29 21	62.5	60.9	-3.3		-78.1	235	1621	10 11 01
10 15 20	J1638+5720	13 29 41	63.3	61.8	-3.1		-78.7	5	1621	10 15 20
10 16 10	---	13 30 31	63.4	61.9	-3.1		-78.8	50	1627	10 15 21

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
10 16 20	TDF	13 30 41	62.6	61.0	-3.2		-78.3	-5	1627	10 16 20
10 18 30	---	13 32 51	62.9	61.1	-3.2		-78.6	125	1644	10 16 21
10 18 30	FIRST-1	13 32 51	62.9	61.1	-3.2		-78.6	-5	1644	No stop
10 22 30	---	13 36 52	63.4	61.3	-3.1		-79.3	235	1675	10 18 31
10 22 40	J1638+5720	13 37 02	64.3	62.3	-3.0		-79.8	-6	1675	10 22 40
10 23 40	---	13 38 02	64.4	62.3	-3.0		-80.0	54	1682	10 22 41
10 23 50	TDF	13 38 12	63.6	61.4	-3.1		-79.5	-5	1682	10 23 50
10 26 00	---	13 40 23	63.9	61.5	-3.1		-79.9	125	1699	10 23 51
10 26 00	FIRST-1	13 40 23	63.9	61.5	-3.1		-79.9	-5	1699	No stop
10 30 00	---	13 44 23	64.4	61.7	-3.0		-80.5	235	1730	10 26 01
10 30 20	J1638+5720	13 44 43	65.3	62.7	-2.9		-81.1	4	1730	10 30 20
10 31 10	---	13 45 33	65.4	62.7	-2.9		-81.2	50	1737	10 30 21
10 31 20	TDF	13 45 44	64.6	61.8	-3.0		-80.7	-5	1737	10 31 20
10 33 30	---	13 47 54	64.9	61.9	-3.0		-81.1	125	1753	10 31 21
10 33 30	FIRST-1	13 47 54	64.9	61.9	-3.0		-81.1	-5	1753	No stop
10 37 30	---	13 51 55	65.4	62.1	-2.9		-81.8	235	1784	10 33 31
10 37 40	J1638+5720	13 52 05	66.3	63.0	-2.8		-82.3	-6	1784	10 37 40
10 38 40	---	13 53 05	66.4	63.1	-2.8		-82.5	54	1792	10 37 41
10 38 50	TDF	13 53 15	65.6	62.1	-2.9		-82.0	-5	1792	10 38 50
10 41 00	---	13 55 25	65.9	62.2	-2.8		-82.4	125	1809	10 38 51
10 41 00	FIRST-1	13 55 25	65.9	62.2	-2.8		-82.4	-5	1809	No stop
10 45 00	---	13 59 26	66.4	62.4	-2.8		-83.1	235	1840	10 41 01
10 45 20	J1638+5720	13 59 46	67.3	63.3	-2.6		-83.6	4	1840	10 45 20
10 46 10	---	14 00 36	67.4	63.4	-2.6		-83.8	50	1846	10 45 21
10 46 20	TDF	14 00 46	66.6	62.5	-2.7		-83.3	-5	1846	10 46 20
10 48 30	---	14 02 56	66.9	62.6	-2.7		-83.7	125	1863	10 46 21
10 48 30	FIRST-1	14 02 56	66.9	62.6	-2.7		-83.7	-5	1863	No stop
10 52 30	---	14 06 57	67.4	62.7	-2.6		-84.4	235	1894	10 48 31
10 52 40	J1638+5720	14 07 07	68.3	63.6	-2.5		-84.9	-6	1894	10 52 40
10 53 40	---	14 08 07	68.4	63.6	-2.5		-85.1	54	1902	10 52 41

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
10 53 50	TDF	14 08 17	67.6	62.7	-2.6		-84.6	-5	1902	10 53 50
10 56 00	---	14 10 28	67.9	62.8	-2.6		-85.0	125	1919	10 53 51
10 56 00	FIRST-1	14 10 28	67.9	62.8	-2.6		-85.0	-5	1919	No stop
11 00 00	---	14 14 28	68.4	62.9	-2.5		-85.8	235	1950	10 56 01
11 00 20	J1638+5720	14 14 48	69.3	63.8	-2.4		-86.4	4	1950	11 00 20
11 01 10	---	14 15 38	69.4	63.8	-2.4		-86.5	50	1956	11 00 21
11 01 20	TDF	14 15 48	68.6	63.0	-2.5		-86.0	-5	1956	11 01 20
11 03 30	---	14 17 59	68.9	63.0	-2.4		-86.4	125	1973	11 01 21
11 03 30	FIRST-1	14 17 59	68.9	63.0	-2.4		-86.4	-5	1973	No stop
11 07 30	---	14 21 59	69.4	63.1	-2.4		-87.2	235	2004	11 03 31
11 07 40	J1638+5720	14 22 09	70.3	64.0	-2.3		-87.8	-6	2004	11 07 40
11 08 40	---	14 23 10	70.5	64.0	-2.3		-88.0	54	2011	11 07 41
11 08 50	TDF	14 23 20	69.6	63.1	-2.4		-87.4	-6	2011	11 08 50
11 11 00	---	14 25 30	69.9	63.2	-2.3		-87.9	124	2028	11 08 51
11 11 00	FIRST-1	14 25 30	69.9	63.2	-2.3		-87.9	-5	2028	No stop
11 15 00	---	14 29 31	70.5	63.2	-2.3		-88.7	235	2059	11 11 01
11 15 20	J1638+5720	14 29 51	71.4	64.0	-2.1		-89.3	4	2059	11 15 20
11 16 10	---	14 30 41	71.5	64.1	-2.1		-89.5	50	2066	11 15 21
11 16 20	TDF	14 30 51	70.6	63.2	-2.2		-88.9	-6	2066	11 16 20
11 18 30	---	14 33 01	70.9	63.2	-2.2		-89.4	124	2082	11 16 21
11 18 30	FIRST-1	14 33 01	70.9	63.2	-2.2		-89.4	-5	2082	No stop
11 22 30	---	14 37 02	71.5	63.2	-2.1		-90.2	235	2113	11 18 31
11 22 40	J1638+5720	14 37 12	72.4	64.0	-2.0		-90.9	-6	2113	11 22 40
11 23 40	---	14 38 12	72.5	64.0	-2.0		-91.1	54	2121	11 22 41
11 23 50	TDF	14 38 22	71.6	63.2	-2.1		-90.5	-6	2121	11 23 50
11 26 00	---	14 40 33	71.9	63.2	-2.1		-91.0	124	2138	11 23 51
11 26 00	FIRST-1	14 40 33	71.9	63.2	-2.1		-91.0	-5	2138	No stop
11 30 00	---	14 44 33	72.5	63.2	-2.0		-91.9	235	2169	11 26 01
11 30 20	J1638+5720	14 44 53	73.4	63.9	-1.9		-92.6	4	2169	11 30 20
11 31 10	---	14 45 43	73.5	63.9	-1.9		-92.8	50	2175	11 30 21

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
11 31 20	TDF	14 45 53	72.6	63.2	-2.0		-92.2	-6	2175	11 31 20
11 33 30	---	14 48 04	72.9	63.1	-1.9		-92.7	124	2192	11 31 21
11 33 30	FIRST-1	14 48 04	72.9	63.1	-1.9		-92.7	-5	2192	No stop
11 37 30	---	14 52 04	73.5	63.0	-1.9		-93.6	235	2223	11 33 31
11 37 40	J1638+5720	14 52 14	74.4	63.7	-1.8		-94.3	-6	2223	11 37 40
11 38 40	---	14 53 15	74.5	63.7	-1.8		-94.6	54	2231	11 37 41
11 38 50	TDF	14 53 25	73.7	63.0	-1.9		-93.9	-6	2231	11 38 50
11 41 00	---	14 55 35	73.9	62.9	-1.8		-94.5	124	2248	11 38 51
11 41 00	FIRST-1	14 55 35	73.9	62.9	-1.8		-94.5	-5	2248	No stop
11 45 00	---	14 59 36	74.5	62.7	-1.8		-95.5	235	2279	11 41 01
11 45 20	J1638+5720	14 59 56	75.4	63.4	-1.6		-96.3	4	2279	11 45 20
11 46 10	---	15 00 46	75.5	63.3	-1.6		-96.5	50	2285	11 45 21
11 46 20	TDF	15 00 56	74.7	62.7	-1.7		-95.8	-6	2285	11 46 20
11 48 30	---	15 03 06	74.9	62.5	-1.7		-96.4	124	2302	11 46 21
11 48 30	FIRST-1	15 03 06	74.9	62.5	-1.7		-96.4	-5	2302	No stop
11 52 30	---	15 07 07	75.5	62.3	-1.6		-97.5	235	2333	11 48 31
11 52 40	J1638+5720	15 07 17	76.4	62.8	-1.5		-98.4	-6	2333	11 52 40
11 53 40	---	15 08 17	76.5	62.7	-1.5		-98.7	54	2340	11 52 41
11 53 50	TDF	15 08 27	75.7	62.2	-1.6		-97.9	-6	2340	11 53 50
11 56 00	---	15 10 37	75.9	62.0	-1.6		-98.5	124	2357	11 53 51
11 56 00	FIRST-1	15 10 37	75.9	62.0	-1.6		-98.5	-5	2357	No stop
12 00 00	---	15 14 38	76.5	61.7	-1.5		-99.7	235	2388	11 56 01
12 00 20	J1638+5720	15 14 58	77.4	62.1	-1.4		-100.7	4	2388	12 00 20
12 01 10	---	15 15 48	77.5	62.0	-1.4		-101.0	50	2395	12 00 21
12 01 20	TDF	15 15 58	76.7	61.5	-1.5		-100.1	-6	2395	12 01 20
12 03 30	---	15 18 09	76.9	61.3	-1.4		-100.8	124	2411	12 01 21
12 03 30	FIRST-1	15 18 09	76.9	61.3	-1.4		-100.8	-5	2411	No stop
12 07 30	---	15 22 09	77.5	60.8	-1.4		-102.1	235	2442	12 03 31
12 07 40	J1638+5720	15 22 19	78.4	61.1	-1.3		-103.2	-6	2442	12 07 40
12 08 40	---	15 23 20	78.5	60.9	-1.3		-103.6	54	2450	12 07 41

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
12 08 50	TDF	15 23 30	77.6	60.6	-1.4		-102.6	-6	2450	12 08 50
12 11 00	---	15 25 40	77.9	60.3	-1.3		-103.3	124	2467	12 08 51
12 11 00	FIRST-1	15 25 40	77.9	60.3	-1.3		-103.3	-5	2467	No stop
12 15 00	---	15 29 41	78.5	59.7	-1.3		-104.8	235	2498	12 11 01
12 15 20	J1638+5720	15 30 01	79.4	59.7	-1.1		-106.2	4	2498	12 15 20
12 16 10	---	15 30 51	79.5	59.5	-1.1		-106.5	50	2504	12 15 21
12 16 20	TDF	15 31 01	78.6	59.5	-1.2		-105.3	-6	2504	12 16 20
12 18 30	---	15 33 11	78.9	59.0	-1.2		-106.2	124	2521	12 16 21
12 18 30	FIRST-1	15 33 11	78.9	59.0	-1.2		-106.2	-5	2521	No stop
12 22 30	---	15 37 12	79.4	58.2	-1.1		-107.8	235	2552	12 18 31
12 22 40	J1638+5720	15 37 22	80.3	58.0	-1.0		-109.4	-6	2552	12 22 40
12 23 40	---	15 38 22	80.5	57.7	-1.0		-109.9	54	2560	12 22 41
12 23 50	TDF	15 38 32	79.6	57.9	-1.1		-108.4	-6	2560	12 23 50
12 26 00	---	15 40 42	79.9	57.4	-1.1		-109.4	124	2577	12 23 51
12 26 00	FIRST-1	15 40 42	79.9	57.4	-1.1		-109.4	-5	2577	No stop
12 30 00	---	15 44 43	80.4	56.3	-1.0		-111.3	235	2608	12 26 01
12 30 20	J1638+5720	15 45 03	81.3	55.6	-0.9		-113.4	4	2608	12 30 20
12 31 10	---	15 45 53	81.4	55.3	-0.9		-113.9	50	2614	12 30 21
12 31 20	TDF	15 46 03	80.5	55.9	-1.0		-112.0	-6	2614	12 31 20
12 33 30	---	15 48 14	80.8	55.2	-0.9		-113.1	124	2631	12 31 21
12 33 30	FIRST-1	15 48 14	80.8	55.2	-0.9		-113.1	-5	2631	No stop
12 37 30	---	15 52 14	81.3	53.8	-0.9		-115.4	235	2662	12 33 31
12 37 40	J1638+5720	15 52 24	82.2	52.6	-0.8		-117.9	-6	2662	12 37 40
12 38 40	---	15 53 24	82.3	52.1	-0.8		-118.6	54	2670	12 37 41
12 38 50	TDF	15 53 34	81.5	53.3	-0.9		-116.2	-6	2670	12 38 50
12 41 00	---	15 55 45	81.7	52.4	-0.8		-117.5	124	2686	12 38 51
12 41 00	FIRST-1	15 55 45	81.7	52.4	-0.8		-117.5	-5	2686	No stop
12 45 00	---	15 59 45	82.2	50.5	-0.8		-120.2	235	2717	12 41 01
12 45 20	J1638+5720	16 00 06	83.1	48.5	-0.6		-123.6	2	2717	12 45 20
12 46 10	---	16 00 56	83.2	47.9	-0.6		-124.3	50	2724	12 45 21

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
12 46 20	TDF	16 01 06	82.3	49.8	-0.7		-121.1	-7	2724	12 46 20
12 48 30	---	16 03 16	82.6	48.7	-0.7		-122.8	123	2740	12 46 21
12 48 30	FIRST-1	16 03 16	82.6	48.7	-0.7		-122.8	-5	2740	No stop
12 52 30	---	16 07 17	83.0	46.2	-0.6		-126.0	235	2771	12 48 31
12 52 40	J1638+5720	16 07 27	83.9	43.2	-0.5		-130.4	-11	2771	12 52 40
12 53 40	---	16 08 27	84.0	42.3	-0.5		-131.5	49	2779	12 52 41
12 53 50	TDF	16 08 37	83.2	45.3	-0.6		-127.2	-10	2779	12 53 50
12 56 00	---	16 10 47	83.4	43.8	-0.6		-129.2	120	2796	12 53 51
12 56 00	FIRST-1	16 10 47	83.4	43.8	-0.6		-129.2	-5	2796	No stop
13 00 00	---	16 14 48	83.8	40.6	-0.5		-133.2	235	2827	12 56 01
13 00 20	J1638+5720	16 15 08	84.6	35.9	-0.4		-139.3	-5	2827	13 00 20
13 01 10	---	16 15 58	84.7	34.9	-0.4		-140.4	45	2833	13 00 21
13 01 20	TDF	16 16 08	83.9	39.5	-0.5		-134.6	-14	2833	13 01 20
13 03 30	---	16 18 19	84.1	37.5	-0.4		-137.1	116	2850	13 01 21
13 03 30	FIRST-1	16 18 19	84.1	37.5	-0.4		-137.1	-5	2850	No stop
13 07 30	---	16 22 19	84.5	33.3	-0.4		-142.0	235	2881	13 03 31
13 07 40	J1638+5720	16 22 29	85.2	26.7	-0.3		-150.0	-19	2881	13 07 40
13 08 40	---	16 23 29	85.3	25.3	-0.2		-151.6	41	2889	13 07 41
13 08 50	TDF	16 23 39	84.6	31.8	-0.4		-143.8	-18	2889	13 08 50
13 11 00	---	16 25 50	84.8	29.2	-0.3		-146.8	112	2906	13 08 51
13 11 00	FIRST-1	16 25 50	84.8	29.2	-0.3		-146.8	-5	2906	No stop
13 15 00	---	16 29 50	85.0	24.0	-0.3		-152.9	235	2937	13 11 01
13 15 20	J1638+5720	16 30 10	85.6	14.8	-0.1		-163.5	-14	2937	13 15 20
13 16 10	---	16 31 01	85.6	13.3	-0.1		-165.1	36	2943	13 15 21
13 16 20	TDF	16 31 11	85.1	22.1	-0.2		-155.0	-22	2943	13 16 20
13 18 30	---	16 33 21	85.2	19.0	-0.2		-158.7	108	2960	13 16 21
13 18 30	FIRST-1	16 33 21	85.2	19.0	-0.2		-158.7	-5	2960	No stop
13 22 30	---	16 37 22	85.4	12.7	-0.1		-165.8	235	2991	13 18 31
13 22 40	J1638+5720	16 37 32	85.8	1.7	-0.0		-178.1	-28	2991	13 22 40
13 23 40	---	16 38 32	85.8	-0.1	0.0		179.8	32	2999	13 22 41

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
13 23 50	TDF	16 38 42	85.4	10.5	-0.1		-168.2	-25	2999	13 23 50
13 26 00	---	16 40 52	85.5	6.9	-0.1		-172.3	105	3015	13 23 51
13 26 00	FIRST-1	16 40 52	85.5	6.9	-0.1		-172.3	-5	3015	No stop
13 30 00	---	16 44 53	85.5	0.0	-0.0		-180.0	235	3046	13 26 01
13 30 20	J1638+5720	16 45 13	85.7	-12.2	0.1		166.4	-20	3046	13 30 20
13 31 10	---	16 46 03	85.6	-13.6	0.1		164.8	30	3053	13 30 21
13 31 20	TDF	16 46 13	85.5	-2.2	0.0		177.5	-26	3053	13 31 20
13 33 30	---	16 48 23	85.5	-5.9	0.1		173.3	104	3069	13 31 21
13 33 30	FIRST-1	16 48 23	85.5	-5.9	0.1		173.3	-5	3069	No stop
13 37 30	---	16 52 24	85.4	-12.6	0.1		165.9	235	3100	13 33 31
13 37 40	J1638+5720	16 52 34	85.3	-24.1	0.2		153.0	-29	3100	13 37 40
13 38 40	---	16 53 34	85.3	-25.5	0.3		151.4	31	3108	13 37 41
13 38 50	TDF	16 53 44	85.3	-14.7	0.1		163.4	-25	3108	13 38 50
13 41 00	---	16 55 55	85.3	-18.1	0.2		159.6	105	3125	13 38 51
13 41 00	FIRST-1	16 55 55	85.3	-18.1	0.2		159.6	-5	3125	No stop
13 45 00	---	16 59 55	85.0	-23.9	0.3		153.0	235	3156	13 41 01
13 45 20	J1638+5720	17 00 15	84.8	-34.2	0.4		141.4	-16	3156	13 45 20
13 46 10	---	17 01 06	84.7	-35.1	0.4		140.2	34	3162	13 45 21
13 46 20	TDF	17 01 16	85.0	-25.7	0.3		150.9	-23	3162	13 46 20
13 48 30	---	17 03 26	84.8	-28.6	0.3		147.6	107	3179	13 46 21
13 48 30	FIRST-1	17 03 26	84.8	-28.6	0.3		147.6	-5	3179	No stop
13 52 30	---	17 07 27	84.5	-33.3	0.4		142.1	235	3210	13 48 31
13 52 40	J1638+5720	17 07 37	84.1	-41.6	0.5		132.4	-22	3210	13 52 40
13 53 40	---	17 08 37	84.0	-42.5	0.5		131.3	38	3218	13 52 41
13 53 50	TDF	17 08 47	84.4	-34.7	0.4		140.4	-20	3218	13 53 50
13 56 00	---	17 10 57	84.2	-36.9	0.4		137.7	110	3235	13 53 51
13 56 00	FIRST-1	17 10 57	84.2	-36.9	0.4		137.7	-5	3235	No stop
14 00 00	---	17 14 58	83.8	-40.6	0.5		133.2	235	3266	13 56 01
14 00 20	J1638+5720	17 15 18	83.3	-47.5	0.6		124.9	-9	3266	14 00 20
14 01 10	---	17 16 08	83.2	-48.0	0.6		124.2	41	3272	14 00 21

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
14 01 20	TDF	17 16 18	83.7	-41.7	0.5		131.8	-17	3272	14 01 20
14 03 30	---	17 18 28	83.5	-43.4	0.6		129.7	113	3289	14 01 21
14 03 30	FIRST-1	17 18 28	83.5	-43.4	0.6		129.7	-5	3289	No stop
14 07 30	---	17 22 29	83.0	-46.2	0.6		126.1	235	3320	14 03 31
14 07 40	J1638+5720	17 22 39	82.4	-51.7	0.7		119.2	-16	3320	14 07 40
14 08 40	---	17 23 39	82.3	-52.2	0.8		118.5	44	3328	14 07 41
14 08 50	TDF	17 23 49	82.9	-47.1	0.6		124.9	-15	3328	14 08 50
14 11 00	---	17 26 00	82.6	-48.4	0.7		123.2	115	3344	14 08 51
14 11 00	FIRST-1	17 26 00	82.6	-48.4	0.7		123.2	-5	3344	No stop
14 15 00	---	17 30 00	82.2	-50.5	0.8		120.2	235	3375	14 11 01
14 15 20	J1638+5720	17 30 20	81.5	-55.1	0.9		114.3	-4	3375	14 15 20
14 16 10	---	17 31 10	81.4	-55.4	0.9		113.8	46	3382	14 15 21
14 16 20	TDF	17 31 20	82.0	-51.1	0.8		119.3	-13	3382	14 16 20
14 18 30	---	17 33 31	81.8	-52.1	0.8		117.9	117	3398	14 16 21
14 18 30	FIRST-1	17 33 31	81.8	-52.1	0.8		117.9	-5	3398	No stop
14 22 30	---	17 37 31	81.3	-53.8	0.9		115.4	235	3429	14 18 31
14 22 40	J1638+5720	17 37 42	80.6	-57.5	1.0		110.3	-12	3429	14 22 40
14 23 40	---	17 38 42	80.5	-57.8	1.0		109.8	48	3437	14 22 41
14 23 50	TDF	17 38 52	81.1	-54.3	0.9		114.6	-12	3437	14 23 50
14 26 00	---	17 41 02	80.9	-55.0	0.9		113.4	118	3454	14 23 51
14 26 00	FIRST-1	17 41 02	80.9	-55.0	0.9		113.4	-5	3454	No stop
14 30 00	---	17 45 03	80.4	-56.3	1.0		111.3	235	3485	14 26 01
14 30 20	J1638+5720	17 45 23	79.6	-59.4	1.1		106.8	-1	3485	14 30 20
14 31 10	---	17 46 13	79.5	-59.6	1.1		106.5	49	3491	14 30 21
14 31 20	TDF	17 46 23	80.2	-56.7	1.0		110.7	-10	3491	14 31 20
14 33 30	---	17 48 33	79.9	-57.2	1.1		109.6	120	3508	14 31 21
14 33 30	FIRST-1	17 48 33	79.9	-57.2	1.1		109.6	-5	3508	No stop
14 37 30	---	17 52 34	79.4	-58.2	1.1		107.8	235	3539	14 33 31
14 37 40	J1638+5720	17 52 44	78.6	-60.8	1.2		103.9	-9	3539	14 37 40
14 38 40	---	17 53 44	78.5	-61.0	1.3		103.5	51	3547	14 37 41

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
14 38 50	TDF	17 53 54	79.3	-58.5	1.1		107.3	-9	3547	14 38 50
14 41 00	---	17 56 05	79.0	-58.9	1.2		106.4	121	3564	14 38 51
14 41 00	FIRST-1	17 56 05	79.0	-58.9	1.2		106.4	-5	3564	No stop
14 45 00	---	18 00 05	78.5	-59.7	1.3		104.8	235	3595	14 41 01
14 45 20	J1638+5720	18 00 25	77.6	-61.9	1.4		101.2	2	3595	14 45 20
14 46 10	---	18 01 15	77.5	-62.0	1.4		100.9	50	3601	14 45 21
14 46 20	TDF	18 01 25	78.3	-59.9	1.3		104.3	-8	3601	14 46 20
14 48 30	---	18 03 36	78.0	-60.2	1.3		103.5	122	3618	14 46 21
14 48 30	FIRST-1	18 03 36	78.0	-60.2	1.3		103.5	-5	3618	No stop
14 52 30	---	18 07 36	77.5	-60.8	1.4		102.1	235	3649	14 48 31
14 52 40	J1638+5720	18 07 46	76.6	-62.7	1.5		98.9	-7	3649	14 52 40
14 53 40	---	18 08 47	76.5	-62.8	1.5		98.6	53	3657	14 52 41
14 53 50	TDF	18 08 57	77.3	-61.0	1.4		101.7	-7	3657	14 53 50
14 56 00	---	18 11 07	77.0	-61.2	1.4		101.0	123	3673	14 53 51
14 56 00	FIRST-1	18 11 07	77.0	-61.2	1.4		101.0	-5	3673	No stop
15 00 00	---	18 15 08	76.5	-61.7	1.5		99.7	235	3704	14 56 01
15 00 20	J1638+5720	18 15 28	75.6	-63.3	1.6		96.7	4	3704	15 00 20
15 01 10	---	18 16 18	75.5	-63.3	1.6		96.5	50	3711	15 00 21
15 01 20	TDF	18 16 28	76.3	-61.8	1.5		99.3	-6	3711	15 01 20
15 03 30	---	18 18 38	76.0	-62.0	1.6		98.7	124	3728	15 01 21
15 03 30	FIRST-1	18 18 38	76.0	-62.0	1.6		98.7	-5	3728	No stop
15 07 30	---	18 22 39	75.5	-62.3	1.6		97.5	235	3758	15 03 31
15 07 40	J1638+5720	18 22 49	74.6	-63.6	1.7		94.8	-6	3758	15 07 40
15 08 40	---	18 23 49	74.5	-63.7	1.8		94.5	54	3766	15 07 41
15 08 50	TDF	18 23 59	75.3	-62.4	1.7		97.1	-5	3766	15 08 50
15 11 00	---	18 26 09	75.0	-62.5	1.7		96.6	125	3783	15 08 51
15 11 00	FIRST-1	18 26 09	75.0	-62.5	1.7		96.6	-5	3783	No stop
15 15 00	---	18 30 10	74.5	-62.7	1.8		95.5	235	3814	15 11 01
15 15 20	J1638+5720	18 30 30	73.6	-63.9	1.9		92.9	4	3814	15 15 20
15 16 10	---	18 31 20	73.5	-63.9	1.9		92.7	50	3820	15 15 21

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
15 16 20	TDF	18 31 30	74.3	-62.8	1.8		95.2	-5	3820	15 16 20
15 18 30	---	18 33 41	74.0	-62.9	1.8		94.6	125	3837	15 16 21
15 18 30	FIRST-1	18 33 41	74.0	-62.9	1.8		94.6	-5	3837	No stop
15 22 30	---	18 37 41	73.5	-63.0	1.9		93.6	235	3868	15 18 31
15 22 40	J1638+5720	18 37 51	72.6	-64.0	2.0		91.3	-6	3868	15 22 40
15 23 40	---	18 38 52	72.5	-64.0	2.0		91.0	54	3876	15 22 41
15 23 50	TDF	18 39 02	73.3	-63.0	1.9		93.3	-6	3876	15 23 50
15 26 00	---	18 41 12	73.0	-63.1	1.9		92.8	124	3893	15 23 51
15 26 00	FIRST-1	18 41 12	73.0	-63.1	1.9		92.8	-5	3893	No stop
15 30 00	---	18 45 13	72.5	-63.2	2.0		91.9	235	3924	15 26 01
15 30 20	J1638+5720	18 45 33	71.6	-64.1	2.1		89.6	4	3924	15 30 20
15 31 10	---	18 46 23	71.5	-64.1	2.1		89.4	50	3930	15 30 21
15 31 20	TDF	18 46 33	72.3	-63.2	2.0		91.6	-6	3930	15 31 20
15 33 30	---	18 48 43	72.0	-63.2	2.1		91.1	124	3947	15 31 21
15 33 30	FIRST-1	18 48 43	72.0	-63.2	2.1		91.1	-5	3947	No stop
15 37 30	---	18 52 44	71.5	-63.2	2.1		90.2	235	3978	15 33 31
15 37 40	J1638+5720	18 52 54	70.6	-64.0	2.2		88.1	-6	3978	15 37 40
15 38 40	---	18 53 54	70.4	-64.0	2.3		87.9	54	3986	15 37 41
15 38 50	TDF	18 54 04	71.3	-63.2	2.2		90.0	-6	3986	15 38 50
15 41 00	---	18 56 14	71.0	-63.2	2.2		89.5	124	4002	15 38 51
15 41 00	FIRST-1	18 56 14	71.0	-63.2	2.2		89.5	-5	4002	No stop
15 45 00	---	19 00 15	70.5	-63.2	2.3		88.7	235	4033	15 41 01
15 45 20	J1638+5720	19 00 35	69.5	-63.9	2.4		86.6	4	4033	15 45 20
15 46 10	---	19 01 25	69.4	-63.8	2.4		86.5	50	4040	15 45 21
15 46 20	TDF	19 01 35	70.3	-63.2	2.3		88.4	-6	4040	15 46 20
15 48 30	---	19 03 46	70.0	-63.2	2.3		88.0	124	4057	15 46 21
15 48 30	FIRST-1	19 03 46	70.0	-63.2	2.3		88.0	-5	4057	No stop
15 52 30	---	19 07 46	69.5	-63.1	2.4		87.2	235	4087	15 48 31
15 52 40	J1638+5720	19 07 56	68.5	-63.7	2.5		85.3	-6	4087	15 52 40
15 53 40	---	19 08 56	68.4	-63.6	2.5		85.1	54	4095	15 52 41

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
15 53 50	TDF	19 09 07	69.3	-63.1	2.4		86.9	-6	4095	15 53 50
15 56 00	---	19 11 17	69.0	-63.0	2.4		86.5	124	4112	15 53 51
15 56 00	FIRST-1	19 11 17	69.0	-63.0	2.4		86.5	-5	4112	No stop
16 00 00	---	19 15 18	68.4	-62.9	2.5		85.8	235	4143	15 56 01
16 00 20	J1638+5720	19 15 38	67.5	-63.4	2.6		83.9	4	4143	16 00 20
16 01 10	---	19 16 28	67.4	-63.4	2.6		83.8	50	4149	16 00 21
16 01 20	TDF	19 16 38	68.3	-62.9	2.5		85.5	-6	4149	16 01 20
16 03 30	---	19 18 48	68.0	-62.8	2.6		85.1	124	4166	16 01 21
16 03 30	FIRST-1	19 18 48	68.0	-62.8	2.6		85.1	-5	4166	No stop
16 07 30	---	19 22 49	67.4	-62.7	2.6		84.4	235	4197	16 03 31
16 07 40	J1638+5720	19 22 59	66.5	-63.1	2.7		82.6	-6	4197	16 07 40
16 08 40	---	19 23 59	66.4	-63.1	2.8		82.5	54	4205	16 07 41
16 08 50	TDF	19 24 09	67.3	-62.7	2.7		84.2	-6	4205	16 08 50
16 11 00	---	19 26 19	67.0	-62.6	2.7		83.8	124	4222	16 08 51
16 11 00	FIRST-1	19 26 19	67.0	-62.6	2.7		83.8	-5	4222	No stop
16 15 00	---	19 30 20	66.4	-62.4	2.8		83.1	235	4253	16 11 01
16 15 20	J1638+5720	19 30 40	65.5	-62.7	2.9		81.3	4	4253	16 15 20
16 16 10	---	19 31 30	65.4	-62.7	2.9		81.2	50	4259	16 15 21
16 16 20	TDF	19 31 40	66.3	-62.4	2.8		82.8	-6	4259	16 16 20
16 18 30	---	19 33 51	66.0	-62.3	2.8		82.5	124	4276	16 16 21
16 18 30	FIRST-1	19 33 51	66.0	-62.3	2.8		82.5	-5	4276	No stop
16 22 30	---	19 37 51	65.4	-62.1	2.9		81.8	235	4307	16 18 31
16 22 40	J1638+5720	19 38 01	64.5	-62.4	3.0		80.1	-6	4307	16 22 40
16 23 40	---	19 39 01	64.4	-62.3	3.0		80.0	54	4315	16 22 41
16 23 50	TDF	19 39 11	65.3	-62.0	2.9		81.6	-6	4315	16 23 50
16 26 00	---	19 41 22	65.0	-61.9	2.9		81.2	124	4331	16 23 51
16 26 00	FIRST-1	19 41 22	65.0	-61.9	2.9		81.2	-5	4331	No stop
16 30 00	---	19 45 22	64.4	-61.7	3.0		80.5	235	4362	16 26 01
16 30 20	J1638+5720	19 45 42	63.5	-61.9	3.1		78.9	4	4362	16 30 20
16 31 10	---	19 46 33	63.4	-61.9	3.1		78.8	50	4369	16 30 21

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
16 31 20	TDF	19 46 43	64.3	-61.7	3.0		80.3	-6	4369	16 31 20
16 33 30	---	19 48 53	64.0	-61.5	3.1		79.9	124	4386	16 31 21
16 33 30	FIRST-1	19 48 53	64.0	-61.5	3.1		79.9	-5	4386	No stop
16 37 30	---	19 52 54	63.5	-61.3	3.1		79.3	235	4416	16 33 31
16 37 40	J1638+5720	19 53 04	62.5	-61.5	3.2		77.7	-6	4416	16 37 40
16 38 40	---	19 54 04	62.4	-61.4	3.3		77.6	54	4424	16 37 41
16 38 50	TDF	19 54 14	63.3	-61.2	3.2		79.1	-6	4424	16 38 50
16 41 00	---	19 56 24	63.0	-61.1	3.2		78.7	124	4441	16 38 51
16 41 00	FIRST-1	19 56 24	63.0	-61.1	3.2		78.7	-5	4441	No stop
16 45 00	---	20 00 25	62.5	-60.9	3.3		78.1	235	4472	16 41 01
16 45 20	J1638+5720	20 00 45	61.5	-61.0	3.4		76.6	4	4472	16 45 20
16 46 10	---	20 01 35	61.4	-60.9	3.4		76.4	50	4478	16 45 21
16 46 20	TDF	20 01 45	62.3	-60.8	3.3		77.9	-6	4478	16 46 20
16 48 30	---	20 03 55	62.0	-60.7	3.3		77.5	124	4495	16 46 21
16 48 30	FIRST-1	20 03 55	62.0	-60.7	3.3		77.5	-5	4495	No stop
16 52 30	---	20 07 56	61.5	-60.4	3.4		76.9	235	4526	16 48 31
16 52 40	J1638+5720	20 08 06	60.6	-60.5	3.5		75.5	-6	4526	16 52 40
16 53 40	---	20 09 06	60.4	-60.4	3.5		75.3	54	4534	16 52 41
16 53 50	TDF	20 09 16	61.3	-60.3	3.4		76.7	-6	4534	16 53 50
16 56 00	---	20 11 27	61.0	-60.2	3.4		76.4	124	4551	16 53 51
16 56 00	FIRST-1	20 11 27	61.0	-60.2	3.4		76.4	-5	4551	No stop
17 00 00	---	20 15 27	60.5	-59.9	3.5		75.8	235	4582	16 56 01
17 00 20	J1638+5720	20 15 47	59.6	-60.0	3.6		74.3	4	4582	17 00 20
17 01 10	---	20 16 38	59.4	-59.9	3.6		74.2	50	4588	17 00 21
17 01 20	TDF	20 16 48	60.3	-59.8	3.5		75.6	-6	4588	17 01 20
17 03 30	---	20 18 58	60.0	-59.7	3.6		75.2	124	4605	17 01 21
17 03 30	FIRST-1	20 18 58	60.0	-59.7	3.6		75.2	-5	4605	No stop
17 07 30	---	20 22 59	59.5	-59.4	3.6		74.6	235	4636	17 03 31
17 07 40	J1638+5720	20 23 09	58.6	-59.4	3.7		73.2	-6	4636	17 07 40
17 08 40	---	20 24 09	58.5	-59.3	3.8		73.1	54	4644	17 07 41

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
17 08 50	TDF	20 24 19	59.4	-59.3	3.7		74.4	-6	4644	17 08 50
17 11 00	---	20 26 29	59.1	-59.2	3.7		74.1	124	4660	17 08 51
17 11 00	FIRST-1	20 26 29	59.1	-59.2	3.7		74.1	-5	4660	No stop
17 15 00	---	20 30 30	58.6	-58.9	3.8		73.5	235	4691	17 11 01
17 15 20	J1638+5720	20 30 50	57.6	-58.8	3.9		72.1	4	4691	17 15 20
17 16 10	---	20 31 40	57.5	-58.8	3.9		72.0	50	4698	17 15 21
17 16 20	TDF	20 31 50	58.4	-58.8	3.8		73.3	-6	4698	17 16 20
17 18 30	---	20 34 00	58.1	-58.6	3.8		73.0	124	4715	17 16 21
17 18 30	FIRST-1	20 34 00	58.1	-58.6	3.8		73.0	-5	4715	No stop
17 22 30	---	20 38 01	57.6	-58.3	3.9		72.4	235	4746	17 18 31
17 22 40	J1638+5720	20 38 11	56.7	-58.3	4.0		71.0	-6	4746	17 22 40
17 23 40	---	20 39 11	56.5	-58.2	4.0		70.9	54	4753	17 22 41
17 23 50	TDF	20 39 21	57.4	-58.2	3.9		72.2	-6	4753	17 23 50
17 26 00	---	20 41 32	57.1	-58.1	3.9		71.9	124	4770	17 23 51
17 26 00	FIRST-1	20 41 32	57.1	-58.1	3.9		71.9	-5	4770	No stop
17 30 00	---	20 45 32	56.6	-57.7	4.0		71.3	235	4801	17 26 01
17 30 20	J1638+5720	20 45 52	55.7	-57.6	4.1		69.9	4	4801	17 30 20
17 31 10	---	20 46 42	55.6	-57.6	4.1		69.8	50	4807	17 30 21
17 31 20	TDF	20 46 53	56.5	-57.6	4.0		71.1	-6	4807	17 31 20
17 33 30	---	20 49 03	56.2	-57.5	4.1		70.8	124	4824	17 31 21
17 33 30	FIRST-1	20 49 03	56.2	-57.5	4.1		70.8	-5	4824	No stop
17 37 30	---	20 53 04	55.7	-57.1	4.1		70.2	235	4855	17 33 31
17 37 40	J1638+5720	20 53 14	54.8	-57.0	4.2		68.9	-6	4855	17 37 40
17 38 40	---	20 54 14	54.6	-56.9	4.3		68.8	54	4863	17 37 41
17 38 50	TDF	20 54 24	55.5	-57.0	4.2		70.0	-6	4863	17 38 50
17 41 00	---	20 56 34	55.2	-56.9	4.2		69.7	124	4880	17 38 51
17 41 00	FIRST-1	20 56 34	55.2	-56.9	4.2		69.7	-5	4880	No stop
17 45 00	---	21 00 35	54.7	-56.5	4.3		69.1	235	4911	17 41 01
17 45 20	J1638+5720	21 00 55	53.8	-56.4	4.4		67.8	4	4911	17 45 20
17 46 10	---	21 01 45	53.7	-56.3	4.4		67.7	50	4917	17 45 21
17 46 20	TDF	21 01 55	54.6	-56.4	4.3		68.9	-6	4917	17 46 20
17 48 30	---	21 04 05	54.3	-56.2	4.3		68.6	124	4934	17 46 21

Schedule for TORUN (Code Tr)

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EVN Observations of Swift J1644+57 at the 4th epoch

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 21 Oct 2013 Day 294 ---										
17 48 30	FIRST-1	21 04 05	54.3	-56.2	4.3		68.6	-5	4934	No stop
17 52 30	---	21 08 06	53.8	-55.9	4.4		68.0	235	4965	17 48 31
17 52 40	J1638+5720	21 08 16	52.9	-55.7	4.5		66.8	-6	4965	17 52 40
17 53 40	---	21 09 16	52.8	-55.6	4.5		66.6	54	4973	17 52 41
17 53 50	TDF	21 09 26	53.6	-55.8	4.4		67.8	-6	4973	17 53 50
17 56 00	---	21 11 37	53.4	-55.6	4.4		67.5	124	4989	17 53 51
17 56 00	FIRST-1	21 11 37	53.4	-55.6	4.4		67.5	-5	4989	No stop
18 00 00	---	21 15 37	52.9	-55.3	4.5		67.0	235	5020	17 56 01
18 00 20	J1638+5720	21 15 57	51.9	-55.0	4.6		65.7	4	5020	18 00 20
18 01 10	---	21 16 47	51.8	-55.0	4.6		65.6	50	5027	18 00 21
18 01 20	TDF	21 16 57	52.7	-55.1	4.5		66.8	-6	5027	18 01 20
18 03 30	---	21 19 08	52.4	-54.9	4.6		66.5	124	5044	18 01 21
18 03 30	FIRST-1	21 19 08	52.4	-54.9	4.6		66.5	-5	5044	No stop
18 07 30	---	21 23 08	51.9	-54.6	4.6		65.9	235	5075	18 03 31
18 07 40	J1638+5720	21 23 18	51.0	-54.4	4.7		64.7	-6	5075	18 07 40
18 08 40	---	21 24 19	50.9	-54.3	4.8		64.5	54	5082	18 07 41
18 08 50	TDF	21 24 29	51.8	-54.5	4.7		65.7	-6	5082	18 08 50
18 11 00	---	21 26 39	51.5	-54.3	4.7		65.4	124	5099	18 08 51
18 11 00	FIRST-1	21 26 39	51.5	-54.3	4.7		65.4	-5	5099	No stop
18 15 00	---	21 30 40	51.0	-53.9	4.8		64.8	235	5130	18 11 01
18 15 20	J1638+5720	21 31 00	50.1	-53.7	4.9		63.6	4	5130	18 15 20
18 16 10	---	21 31 50	50.0	-53.6	4.9		63.5	50	5136	18 15 21
18 16 20	TDF	21 32 00	50.9	-53.8	4.8		64.7	-6	5136	18 16 20
18 18 30	---	21 34 10	50.6	-53.6	4.8		64.3	124	5153	18 16 21
18 18 30	FIRST-1	21 34 10	50.6	-53.6	4.8		64.3	-5	5153	No stop
18 22 30	---	21 38 11	50.1	-53.2	4.9		63.8	235	5184	18 18 31
18 22 40	J1638+5720	21 38 21	49.2	-53.0	5.0		62.6	-6	5184	18 22 40
18 23 40	---	21 39 21	49.1	-52.9	5.0		62.5	54	5192	18 22 41
18 23 50	TDF	21 39 31	50.0	-53.1	4.9		63.6	-6	5192	18 23 50
18 26 00	---	21 41 41	49.7	-52.9	4.9		63.3	124	5209	18 23 51
18 26 00	FIRST-1	21 41 41	49.7	-52.9	4.9		63.3	-5	5209	No stop
18 30 00	---	21 45 42	49.2	-52.5	5.0		62.7	235	5240	18 26 01

SETUP FILE INFORMATION:

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

=====
 Setup file: sess313.C1024

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

Setup group: 1 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 Swift J1644+57 at the 4th epoch

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 54.392167	0.00
	57 41 16.13000	* 57 35 51.01031	57 34 41.62182	0.00
* FIRST-1	16 43 47.242390	* 16 44 41.306125	16 44 54.392167	0.00
	57 41 16.13000	* 57 35 51.01031	57 34 41.62182	0.00
* J1638+5720	16 37 17.425183	* 16 38 13.456298	16 38 27.047416	0.00
	57 26 15.76133	* 57 20 23.97905	57 19 06.72335	0.00
J1331+3030	13 28 49.657778	* 13 31 08.288070	13 31 45.308904	0.20
* 3C286	30 45 58.64061	* 30 30 32.95925	30 26 22.11677	0.19
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.713331	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 47 24.80420	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	77.7
FIRST-1	77.7
J1638+5720	76.9
3C286	41.4
3C345	65.4

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

rk01grtr

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 22 Oct 2013 Day 295 ---

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

01 00 00	0133+476	04 16 46	64.6	274.5	2.6	63.3	0	0	01 00 00
01 09 30	---	04 26 18	63.1	276.1	2.8	63.0	570	18	01 00 01
01 10 00	0133+476	04 26 48	63.1	276.2	2.8	63.0	24	18	01 10 00
01 19 30	---	04 36 19	61.6	277.8	3.0	62.6	570	36	01 10 01
01 20 00	0133+476	04 36 50	61.6	277.9	3.0	62.6	24	36	01 20 00
01 29 30	---	04 46 21	60.2	279.4	3.1	62.2	570	55	01 20 01
01 30 00	0133+476	04 46 51	60.1	279.5	3.1	62.1	24	55	01 30 00
01 40 00	---	04 56 53	58.6	281.0	3.3	61.6	600	74	01 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	10	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
IF SB =	L	L	L	L
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:	10	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:	10			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0136+4751	01 33 55.103060	* 01 36 58.594805	01 37 52.527218	0.15
* 0133+476	47 36 12.85363	* 47 51 29.10002	47 55 48.26242	0.10

rk01gstr

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN Survey

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 22 Oct 2013 Day 295 ---

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

Table with 11 columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It contains multiple rows of observation data for source 0106+612.

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	10	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
IF SB =	L	L	L	L
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:	10	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:	10			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0109+6133	01 06 36.621965	* 01 09 46.344482	01 10 43.251208	0.49
* 0106+612	61 17 32.64077	* 61 33 30.45526	61 38 03.24243	0.11

ei012atr

THE AGN IN H-BOOTES2, EVN+EMERLIN

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Observing mode: 1024 Mbps

Notes: 6 cm, dual pol.

Schedule for TORUN (Code Tr) Page 2

The AGN in H-Bootes2, EVN+eMERLIN

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					ParA	Early Dwell	Disk GBytes	TPStart SYNC
		LST	EL	AZ	HA	UP				

--- Tue 22 Oct 2013 Day 295 ---										
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										
06 00 00	J1159+2914	09 17 36	52.0	112.6	-2.7	-39.4	0	0	06 00 00	
06 04 50	=1156+295	09 22 26	52.6	114.0	-2.6	-38.9	290	37	06 00 01	
06 07 20	J1426+3625	09 24 57	36.5	75.9	-5.0	-46.3	59	37	06 07 20	
06 08 20	=1424+366	09 25 57	36.6	76.1	-5.0	-46.4	60	45	06 07 21	
06 08 20	HBOOTES2	09 25 57	35.3	77.1	-5.1	-45.5	-18	45	No stop	
06 11 50	---	09 29 27	35.9	77.7	-5.0	-45.7	192	72	06 08 21	
06 11 50	J1426+3625	09 29 27	37.1	76.7	-5.0	-46.5	-18	72	No stop	
06 13 10	=1424+366	09 30 48	37.3	77.0	-4.9	-46.6	62	82	06 11 51	
06 13 10	HBOOTES2	09 30 48	36.0	78.0	-5.0	-45.7	-18	82	No stop	
06 16 40	---	09 34 18	36.6	78.6	-4.9	-45.8	192	109	06 13 11	
06 17 20	J1426+3625	09 34 58	38.0	77.7	-4.9	-46.8	22	109	06 17 20	
06 18 20	=1424+366	09 35 59	38.1	77.9	-4.9	-46.8	60	116	06 17 21	
06 18 20	HBOOTES2	09 35 59	36.8	78.9	-4.9	-45.9	-18	116	No stop	
06 21 50	---	09 39 29	37.3	79.5	-4.8	-46.0	192	143	06 18 21	
06 21 50	J1426+3625	09 39 29	38.6	78.5	-4.8	-46.9	-18	143	No stop	
06 23 10	=1424+366	09 40 49	38.8	78.7	-4.8	-47.0	62	154	06 21 51	
06 23 10	HBOOTES2	09 40 49	37.5	79.8	-4.8	-46.1	-18	154	No stop	
06 26 40	---	09 44 20	38.0	80.4	-4.7	-46.2	192	180	06 23 11	

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 22 Oct 2013 Day 295 ---										
06 27 20	J1426+3625	09 45 00	39.4	79.4	-4.7		-47.1	22	180	06 27 20
06 28 20	=1424+366	09 46 00	39.6	79.6	-4.7		-47.2	60	188	06 27 21
06 28 20	HBOOTES2	09 46 00	38.3	80.7	-4.7		-46.2	-18	188	No stop
06 31 50	---	09 49 31	38.8	81.3	-4.7		-46.3	192	215	06 28 21
06 31 50	J1426+3625	09 49 31	40.1	80.2	-4.6		-47.3	-18	215	No stop
06 33 10	=1424+366	09 50 51	40.3	80.5	-4.6		-47.3	62	225	06 31 51
06 33 10	HBOOTES2	09 50 51	39.0	81.6	-4.6		-46.4	-18	225	No stop
06 36 40	---	09 54 22	39.5	82.2	-4.6		-46.5	192	252	06 33 11
06 37 20	J1426+3625	09 55 02	40.9	81.2	-4.5		-47.5	22	252	06 37 20
06 38 20	=1424+366	09 56 02	41.1	81.4	-4.5		-47.5	60	260	06 37 21
06 38 20	HBOOTES2	09 56 02	39.8	82.5	-4.5		-46.5	-18	260	No stop
06 41 50	---	09 59 32	40.3	83.2	-4.5		-46.6	192	287	06 38 21
06 41 50	J1426+3625	09 59 32	41.6	82.1	-4.5		-47.6	-18	287	No stop
06 43 10	=1424+366	10 00 53	41.8	82.3	-4.4		-47.6	62	297	06 41 51
06 43 10	HBOOTES2	10 00 53	40.5	83.4	-4.5		-46.6	-18	297	No stop
06 46 40	---	10 04 23	41.0	84.1	-4.4		-46.7	192	324	06 43 11
06 47 20	J1426+3625	10 05 03	42.4	83.1	-4.4		-47.7	22	324	06 47 20
06 48 20	=1424+366	10 06 03	42.6	83.2	-4.4		-47.8	60	332	06 47 21
06 48 20	HBOOTES2	10 06 03	41.3	84.4	-4.4		-46.8	-18	332	No stop
06 51 50	---	10 09 34	41.8	85.0	-4.3		-46.8	192	358	06 48 21
06 51 50	J1426+3625	10 09 34	43.1	83.9	-4.3		-47.9	-18	358	No stop
06 53 10	=1424+366	10 10 54	43.3	84.1	-4.3		-47.9	62	369	06 51 51
06 53 10	HBOOTES2	10 10 54	42.0	85.3	-4.3		-46.8	-18	369	No stop
06 56 40	---	10 14 25	42.5	86.0	-4.2		-46.9	192	396	06 53 11
06 57 20	J1426+3625	10 15 05	43.9	84.9	-4.2		-48.0	22	396	06 57 20
06 58 20	=1424+366	10 16 05	44.1	85.1	-4.2		-48.0	60	403	06 57 21
06 58 20	HBOOTES2	10 16 05	42.8	86.3	-4.2		-46.9	-18	403	No stop
07 01 50	---	10 19 36	43.3	86.9	-4.2		-47.0	192	430	06 58 21
07 01 50	J1426+3625	10 19 36	44.6	85.8	-4.1		-48.0	-18	430	No stop
07 03 10	=1424+366	10 20 56	44.8	86.0	-4.1		-48.1	62	440	07 01 51
07 06 10	J1159+2914	10 23 56	60.3	134.1	-1.6		-29.6	70	440	07 06 10
07 11 10	=1156+295	10 28 57	60.8	136.0	-1.5		-28.5	300	479	07 06 11

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 22 Oct 2013 Day 295 ---										
07 14 00	J1426+3625	10 31 48	46.4	88.1	-3.9		-48.2	59	479	07 14 00
07 15 00	=1424+366	10 32 48	46.6	88.3	-3.9		-48.2	60	486	07 14 01
07 15 00	HBOOTES2	10 32 48	45.3	89.5	-3.9		-47.0	-18	486	No stop
07 18 10	---	10 35 58	45.8	90.2	-3.9		-47.0	172	511	07 15 01
07 18 10	J1426+3625	10 35 58	47.0	88.9	-3.9		-48.2	-18	511	No stop
07 19 30	=1424+366	10 37 19	47.2	89.2	-3.8		-48.2	62	521	07 18 11
07 19 30	HBOOTES2	10 37 19	46.0	90.4	-3.9		-47.0	-18	521	No stop
07 23 00	---	10 40 49	46.5	91.1	-3.8		-47.0	192	548	07 19 31
07 23 40	J1426+3625	10 41 29	47.9	90.0	-3.8		-48.2	22	548	07 23 40
07 24 40	=1424+366	10 42 29	48.0	90.2	-3.7		-48.2	60	556	07 23 41
07 24 40	HBOOTES2	10 42 29	46.7	91.5	-3.8		-47.0	-18	556	No stop
07 28 10	---	10 46 00	47.3	92.2	-3.7		-47.0	192	582	07 24 41
07 28 10	J1426+3625	10 46 00	48.5	90.9	-3.7		-48.2	-18	582	No stop
07 29 30	=1424+366	10 47 20	48.7	91.2	-3.7		-48.2	62	593	07 28 11
07 29 30	HBOOTES2	10 47 20	47.5	92.5	-3.7		-47.0	-18	593	No stop
07 33 00	---	10 50 51	48.0	93.2	-3.6		-47.0	192	620	07 29 31
07 33 40	J1426+3625	10 51 31	49.4	92.1	-3.6		-48.2	22	620	07 33 40
07 34 40	=1424+366	10 52 31	49.5	92.3	-3.6		-48.2	60	627	07 33 41
07 34 40	HBOOTES2	10 52 31	48.2	93.5	-3.6		-46.9	-18	627	No stop
07 38 10	---	10 56 02	48.8	94.3	-3.5		-46.9	192	654	07 34 41
07 38 10	J1426+3625	10 56 02	50.0	93.0	-3.5		-48.1	-18	654	No stop
07 39 30	=1424+366	10 57 22	50.2	93.3	-3.5		-48.1	62	664	07 38 11
07 39 30	HBOOTES2	10 57 22	49.0	94.6	-3.5		-46.9	-18	664	No stop
07 43 00	---	11 00 52	49.5	95.3	-3.5		-46.8	192	691	07 39 31
07 43 40	J1426+3625	11 01 33	50.9	94.2	-3.4		-48.0	22	691	07 43 40
07 44 40	=1424+366	11 02 33	51.0	94.4	-3.4		-48.0	60	699	07 43 41
07 44 40	HBOOTES2	11 02 33	49.7	95.7	-3.4		-46.7	-18	699	No stop
07 48 10	---	11 06 03	50.3	96.5	-3.4		-46.7	192	726	07 44 41
07 48 10	J1426+3625	11 06 03	51.5	95.1	-3.4		-48.0	-18	726	No stop
07 49 30	=1424+366	11 07 23	51.7	95.4	-3.3		-47.9	62	736	07 48 11
07 49 30	HBOOTES2	11 07 23	50.5	96.8	-3.4		-46.6	-18	736	No stop
07 53 00	---	11 10 54	51.0	97.5	-3.3		-46.5	192	763	07 49 31

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 22 Oct 2013 Day 295 ---										
07 53 40	J1426+3625	11 11 34	52.4	96.3	-3.3		-47.8	22	763	07 53 40
07 54 40	=1424+366	11 12 34	52.5	96.6	-3.2		-47.8	60	771	07 53 41
07 54 40	HBOOTES2	11 12 34	51.2	97.9	-3.3		-46.5	-18	771	No stop
07 58 10	---	11 16 05	51.8	98.7	-3.2		-46.3	192	797	07 54 41
07 58 10	J1426+3625	11 16 05	53.0	97.3	-3.2		-47.7	-18	797	No stop
07 59 30	=1424+366	11 17 25	53.2	97.6	-3.2		-47.6	62	808	07 58 11
07 59 30	HBOOTES2	11 17 25	52.0	99.0	-3.2		-46.3	-18	808	No stop
08 03 00	---	11 20 56	52.5	99.8	-3.1		-46.1	192	835	07 59 31
08 03 40	J1426+3625	11 21 36	53.9	98.6	-3.1		-47.5	22	835	08 03 40
08 04 40	=1424+366	11 22 36	54.0	98.8	-3.1		-47.5	60	842	08 03 41
08 04 40	HBOOTES2	11 22 36	52.7	100.2	-3.1		-46.1	-18	842	No stop
08 08 10	---	11 26 07	53.2	101.1	-3.0		-45.9	192	869	08 04 41
08 08 10	J1426+3625	11 26 07	54.5	99.6	-3.0		-47.3	-18	869	No stop
08 09 30	=1424+366	11 27 27	54.7	100.0	-3.0		-47.3	62	879	08 08 11
08 09 30	HBOOTES2	11 27 27	53.4	101.4	-3.0		-45.9	-18	879	No stop
08 13 00	---	11 30 57	54.0	102.2	-3.0		-45.7	192	906	08 09 31
08 13 40	J1426+3625	11 31 37	55.3	101.0	-2.9		-47.1	22	906	08 13 40
08 14 40	=1424+366	11 32 38	55.5	101.2	-2.9		-47.0	60	914	08 13 41
08 14 40	HBOOTES2	11 32 38	54.2	102.6	-2.9		-45.6	-18	914	No stop
08 18 10	---	11 36 08	54.7	103.5	-2.9		-45.4	192	941	08 14 41
08 18 10	J1426+3625	11 36 08	56.0	102.1	-2.9		-46.8	-18	941	No stop
08 19 30	=1424+366	11 37 28	56.2	102.4	-2.8		-46.7	62	951	08 18 11
08 19 30	HBOOTES2	11 37 28	54.9	103.8	-2.9		-45.3	-18	951	No stop
08 23 00	---	11 40 59	55.4	104.7	-2.8		-45.1	192	978	08 19 31
08 23 40	J1426+3625	11 41 39	56.8	103.4	-2.8		-46.5	22	978	08 23 40
08 24 40	=1424+366	11 42 39	57.0	103.7	-2.7		-46.4	60	986	08 23 41
08 24 40	HBOOTES2	11 42 39	55.7	105.1	-2.8		-44.9	-18	986	No stop
08 28 10	---	11 46 10	56.2	106.1	-2.7		-44.7	192	1012	08 24 41
08 28 10	J1426+3625	11 46 10	57.5	104.6	-2.7		-46.2	-18	1012	No stop
08 29 30	=1424+366	11 47 30	57.7	104.9	-2.7		-46.1	62	1023	08 28 11
08 29 30	HBOOTES2	11 47 30	56.4	106.4	-2.7		-44.6	-18	1023	No stop
08 33 00	---	11 51 01	56.9	107.3	-2.6		-44.3	192	1050	08 29 31

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 22 Oct 2013 Day 295 ---										
08 33 40	J1426+3625	11 51 41	58.3	106.0	-2.6		-45.8	22	1050	08 33 40
08 34 40	=1424+366	11 52 41	58.4	106.3	-2.6		-45.7	60	1057	08 33 41
08 34 40	HBOOTES2	11 52 41	57.1	107.8	-2.6		-44.2	-18	1057	No stop
08 38 10	---	11 56 11	57.6	108.8	-2.5		-43.9	192	1084	08 34 41
08 38 10	J1426+3625	11 56 11	58.9	107.3	-2.5		-45.4	-18	1084	No stop
08 39 30	=1424+366	11 57 32	59.1	107.6	-2.5		-45.3	62	1094	08 38 11
08 39 30	HBOOTES2	11 57 32	57.8	109.1	-2.5		-43.7	-18	1094	No stop
08 43 00	---	12 01 02	58.3	110.1	-2.5		-43.4	192	1121	08 39 31
08 43 40	J1426+3625	12 01 42	59.7	108.8	-2.4		-44.9	22	1121	08 43 40
08 44 40	=1424+366	12 02 43	59.9	109.1	-2.4		-44.8	60	1129	08 43 41
08 44 40	HBOOTES2	12 02 43	58.5	110.6	-2.4		-43.2	-18	1129	No stop
08 48 10	---	12 06 13	59.0	111.6	-2.4		-42.9	192	1156	08 44 41
08 48 10	J1426+3625	12 06 13	60.3	110.1	-2.3		-44.4	-18	1156	No stop
08 49 30	=1424+366	12 07 33	60.5	110.5	-2.3		-44.3	62	1166	08 48 11
08 49 30	HBOOTES2	12 07 33	59.2	112.0	-2.4		-42.7	-18	1166	No stop
08 53 00	---	12 11 04	59.7	113.0	-2.3		-42.3	192	1193	08 49 31
08 53 40	J1426+3625	12 11 44	61.1	111.7	-2.3		-43.8	21	1193	08 53 40
08 54 40	=1424+366	12 12 44	61.3	112.0	-2.2		-43.7	60	1201	08 53 41
08 54 40	HBOOTES2	12 12 44	59.9	113.5	-2.3		-42.1	-18	1201	No stop
08 58 10	---	12 16 15	60.4	114.6	-2.2		-41.7	192	1228	08 54 41
08 58 10	J1426+3625	12 16 15	61.7	113.1	-2.2		-43.3	-19	1228	No stop
08 59 30	=1424+366	12 17 35	61.9	113.5	-2.2		-43.1	61	1238	08 58 11
09 01 20	3C286	12 19 25	63.8	142.7	-1.2		-25.0	37	1238	09 01 20
09 06 20	---	12 24 26	64.2	144.9	-1.1		-23.6	300	1276	09 01 21
09 07 40	OQ208	12 25 46	59.0	132.8	-1.7		-30.1	40	1276	09 07 40
09 12 40	---	12 30 47	59.5	134.6	-1.6		-29.1	300	1315	09 07 41
09 14 10	J1426+3625	12 32 17	63.9	118.3	-1.9		-41.0	42	1315	09 14 10
09 15 10	=1424+366	12 33 18	64.0	118.7	-1.9		-40.9	60	1322	09 14 11
09 15 10	HBOOTES2	12 33 18	62.7	120.2	-1.9		-39.2	-18	1322	No stop
09 18 40	---	12 36 48	63.1	121.4	-1.9		-38.6	192	1349	09 15 11
09 18 40	J1426+3625	12 36 48	64.5	119.9	-1.8		-40.3	-19	1349	No stop
09 20 00	=1424+366	12 38 08	64.7	120.4	-1.8		-40.0	61	1359	09 18 41

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 22 Oct 2013 Day 295 ---										
09 20 00	HBOOTES2	12 38 08	63.3	121.9	-1.8		-38.4	-18	1359	No stop
09 23 30	---	12 41 39	63.7	123.2	-1.8		-37.8	192	1386	09 20 01
09 24 10	J1426+3625	12 42 19	65.2	121.9	-1.7		-39.3	21	1386	09 24 10
09 25 10	=1424+366	12 43 19	65.3	122.3	-1.7		-39.1	60	1394	09 24 11
09 25 10	HBOOTES2	12 43 19	63.9	123.8	-1.8		-37.5	-19	1394	No stop
09 28 40	---	12 46 50	64.4	125.1	-1.7		-36.8	191	1421	09 25 11
09 28 40	J1426+3625	12 46 50	65.8	123.6	-1.7		-38.4	-19	1421	No stop
09 30 00	=1424+366	12 48 10	66.0	124.2	-1.7		-38.1	61	1431	09 28 41
09 30 00	HBOOTES2	12 48 10	64.5	125.6	-1.7		-36.5	-19	1431	No stop
09 33 30	---	12 51 41	65.0	127.0	-1.6		-35.8	191	1458	09 30 01
09 34 10	J1426+3625	12 52 21	66.5	125.8	-1.6		-37.2	21	1458	09 34 10
09 35 10	=1424+366	12 53 21	66.6	126.2	-1.6		-37.0	60	1466	09 34 11
09 35 10	HBOOTES2	12 53 21	65.2	127.6	-1.6		-35.4	-19	1466	No stop
09 38 40	---	12 56 51	65.6	129.1	-1.5		-34.6	191	1492	09 35 11
09 38 40	J1426+3625	12 56 51	67.0	127.7	-1.5		-36.2	-19	1492	No stop
09 40 00	=1424+366	12 58 12	67.2	128.2	-1.5		-35.9	61	1503	09 38 41
09 40 00	HBOOTES2	12 58 12	65.7	129.6	-1.5		-34.3	-19	1503	No stop
09 43 30	---	13 01 42	66.1	131.1	-1.5		-33.5	191	1530	09 40 01
09 44 10	J1426+3625	13 02 22	67.7	130.0	-1.4		-34.8	21	1530	09 44 10
09 45 10	=1424+366	13 03 22	67.8	130.4	-1.4		-34.6	60	1537	09 44 11
09 45 10	HBOOTES2	13 03 22	66.3	131.8	-1.4		-33.1	-19	1537	No stop
09 48 40	---	13 06 53	66.7	133.3	-1.4		-32.2	191	1564	09 45 11
09 48 40	J1426+3625	13 06 53	68.2	132.0	-1.3		-33.7	-19	1564	No stop
09 50 00	=1424+366	13 08 13	68.3	132.6	-1.3		-33.3	61	1574	09 48 41
09 50 00	HBOOTES2	13 08 13	66.9	133.9	-1.3		-31.8	-19	1574	No stop
09 53 30	---	13 11 44	67.2	135.5	-1.3		-30.9	191	1601	09 50 01
09 54 10	J1426+3625	13 12 24	68.8	134.5	-1.2		-32.1	21	1601	09 54 10
09 55 10	=1424+366	13 13 24	68.9	135.0	-1.2		-31.8	60	1609	09 54 11
09 55 10	HBOOTES2	13 13 24	67.4	136.2	-1.3		-30.4	-19	1609	No stop
09 58 40	---	13 16 55	67.8	137.9	-1.2		-29.4	191	1636	09 55 11
09 58 40	J1426+3625	13 16 55	69.2	136.7	-1.2		-30.8	-19	1636	No stop
10 00 00	=1424+366	13 18 15	69.4	137.4	-1.1		-30.3	61	1646	09 58 41

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 22 Oct 2013 Day 295 ---										
10 00 00	HBOOTES2	13 18 15	67.9	138.5	-1.2		-29.0	-19	1646	No stop
10 03 30	---	13 21 46	68.2	140.2	-1.1		-27.9	191	1673	10 00 01
10 04 10	J1426+3625	13 22 26	69.8	139.5	-1.1		-29.0	21	1673	10 04 10
10 05 10	=1424+366	13 23 26	69.9	140.0	-1.1		-28.7	60	1681	10 04 11
10 05 10	HBOOTES2	13 23 26	68.4	141.0	-1.1		-27.4	-19	1681	No stop
10 08 40	---	13 26 56	68.7	142.8	-1.0		-26.3	191	1708	10 05 11
10 08 40	J1426+3625	13 26 56	70.2	141.8	-1.0		-27.5	-19	1708	No stop
10 10 00	=1424+366	13 28 17	70.4	142.5	-1.0		-27.0	61	1718	10 08 41
10 10 00	HBOOTES2	13 28 17	68.9	143.5	-1.0		-25.8	-19	1718	No stop
10 13 30	---	13 31 47	69.2	145.3	-1.0		-24.6	191	1745	10 10 01
10 14 10	J1426+3625	13 32 27	70.7	144.8	-0.9		-25.5	21	1745	10 14 10
10 15 10	=1424+366	13 33 27	70.8	145.3	-0.9		-25.1	60	1752	10 14 11
10 15 10	HBOOTES2	13 33 27	69.3	146.2	-0.9		-24.1	-19	1752	No stop
10 18 40	---	13 36 58	69.6	148.0	-0.9		-22.8	191	1779	10 15 11
10 18 40	J1426+3625	13 36 58	71.1	147.3	-0.8		-23.8	-19	1779	No stop
10 20 00	=1424+366	13 38 18	71.2	148.1	-0.8		-23.2	61	1789	10 18 41
10 20 00	HBOOTES2	13 38 18	69.7	148.8	-0.8		-22.3	-19	1789	No stop
10 23 30	---	13 41 49	70.0	150.7	-0.8		-21.0	191	1816	10 20 01
10 24 10	J1426+3625	13 42 29	71.5	150.5	-0.7		-21.5	21	1816	10 24 10
10 25 10	=1424+366	13 43 29	71.6	151.1	-0.7		-21.1	60	1824	10 24 11
10 25 10	HBOOTES2	13 43 29	70.1	151.6	-0.8		-20.3	-19	1824	No stop
10 28 40	---	13 47 00	70.3	153.7	-0.7		-19.0	191	1851	10 25 11
10 28 40	J1426+3625	13 47 00	71.8	153.2	-0.7		-19.6	-19	1851	No stop
10 30 00	=1424+366	13 48 20	71.9	154.0	-0.6		-19.1	61	1861	10 28 41
10 30 00	HBOOTES2	13 48 20	70.4	154.4	-0.7		-18.4	-19	1861	No stop
10 33 30	---	13 51 50	70.6	156.5	-0.6		-17.0	191	1888	10 30 01
10 34 10	J1426+3625	13 52 31	72.2	156.6	-0.6		-17.2	21	1888	10 34 10
10 35 10	=1424+366	13 53 31	72.3	157.3	-0.6		-16.8	60	1896	10 34 11
10 35 10	HBOOTES2	13 53 31	70.7	157.5	-0.6		-16.3	-19	1896	No stop
10 38 40	---	13 57 01	70.9	159.6	-0.5		-14.8	191	1923	10 35 11
10 38 40	J1426+3625	13 57 01	72.5	159.5	-0.5		-15.1	-19	1923	No stop
10 40 00	=1424+366	13 58 22	72.5	160.4	-0.5		-14.5	61	1933	10 38 41

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 22 Oct 2013 Day 295 ---										
10 40 00	HBOOTES2	13 58 22	71.0	160.4	-0.5		-14.2	-19	1933	No stop
10 43 30	---	14 01 52	71.2	162.6	-0.5		-12.7	191	1960	10 40 01
10 44 10	J1426+3625	14 02 32	72.7	163.1	-0.4		-12.5	21	1960	10 44 10
10 45 10	=1424+366	14 03 32	72.8	163.8	-0.4		-12.0	60	1967	10 44 11
10 45 10	HBOOTES2	14 03 32	71.2	163.6	-0.4		-11.9	-19	1967	No stop
10 48 40	---	14 07 03	71.4	165.8	-0.4		-10.3	191	1994	10 45 11
10 48 40	J1426+3625	14 07 03	72.9	166.1	-0.3		-10.3	-19	1994	No stop
10 50 00	=1424+366	14 08 23	72.9	167.0	-0.3		-9.6	61	2004	10 48 41
10 50 00	HBOOTES2	14 08 23	71.4	166.6	-0.3		-9.7	-19	2004	No stop
10 53 30	---	14 11 54	71.5	168.9	-0.3		-8.1	191	2031	10 50 01
10 54 10	J1426+3625	14 12 34	73.1	169.9	-0.2		-7.5	21	2031	10 54 10
10 55 10	=1424+366	14 13 34	73.1	170.5	-0.2		-7.0	60	2039	10 54 11
10 55 10	HBOOTES2	14 13 34	71.6	170.0	-0.3		-7.3	-19	2039	No stop
10 58 40	---	14 17 05	71.7	172.2	-0.2		-5.7	191	2066	10 55 11
10 58 40	J1426+3625	14 17 05	73.2	173.0	-0.2		-5.2	-19	2066	No stop
11 00 00	=1424+366	14 18 25	73.2	173.9	-0.1		-4.5	61	2076	10 58 41

SETUP FILE INFORMATION:

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
IF SB =	U	U	U	U	U	U	U	U	U
	U	U	U	U	U	U	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= 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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* HBOOTES2	14 26 19.788961	* 14 28 25.472000	14 28 58.798985	0.00
	35 09 08.88345	* 34 55 47.11000	34 52 14.73752	0.00
* J1159+2914	11 56 57.786211	* 11 59 31.833912	12 00 13.358367	0.11
1156+295	29 31 25.73868	* 29 14 43.82678	29 10 04.58588	0.10
J1331+3030	13 28 49.657778	* 13 31 08.288070	13 31 45.316619	0.20
* 3C286	30 45 58.64061	* 30 30 32.95925	30 26 21.85366	0.19
J1407+2827	14 04 45.615156	* 14 07 00.394414	14 07 36.411075	0.24
* OQ208 6	28 41 29.23519	* 28 27 14.69022	28 23 26.35007	0.34
* J1426+3625	14 24 32.676812	* 14 26 37.087493	14 27 10.009794	0.13
1424+366	36 38 36.02416	* 36 25 09.57347	36 21 35.66441	0.11

EFFECT OF SOLAR CORONA

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)
HBOOTES2	47.0	OQ208	39.8
J1159+2914	48.0	J1426+3625	48.4
3C286	41.8		

Kalibracja: cl13c3tr (eksperyment lokalny)

rk01gwtr

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 23 Oct 2013 Day 296 ---

----- L-band VLBI scans -----

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

02 00 00	0212+735	05 20 53	62.3	-25.2	3.0	113.1	0	0	02 00 00
02 09 30	---	05 30 24	61.6	-25.7	3.2	110.3	570	18	02 00 01
02 10 00	0212+735	05 30 54	61.6	-25.7	3.2	110.2	24	18	02 10 00
02 19 30	---	05 40 26	61.0	-26.1	3.4	107.5	570	36	02 10 01
02 20 00	0212+735	05 40 56	61.0	-26.2	3.4	107.4	24	36	02 20 00
02 29 30	---	05 50 27	60.3	-26.5	3.5	104.8	570	55	02 20 01
02 30 00	0212+735	05 50 58	60.3	-26.6	3.5	104.6	24	55	02 30 00
02 39 30	---	06 00 29	59.6	-26.9	3.7	102.1	570	73	02 30 01
02 40 00	0212+735	06 00 59	59.6	-26.9	3.7	102.0	24	73	02 40 00
02 49 30	---	06 10 31	59.0	-27.1	3.9	99.5	570	91	02 40 01
02 50 00	0212+735	06 11 01	58.9	-27.1	3.9	99.3	24	91	02 50 00
03 00 00	---	06 21 02	58.2	-27.3	4.0	96.8	600	110	02 50 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra18cm2.set

Matching groups in ./freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group:	10	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
IF SB =	L	L	L	L
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:	10	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:	10			

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0217+7349	02 12 49.921893	* 02 17 30.813373	02 18 56.469883	1.24
* 0212+735	73 35 40.08541	* 73 49 32.62174	73 53 20.98962	0.26

ep087dtr

ARP 299-A AT 1 GB/S
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Observing mode: 1024 Mbps

Notes: Phase-ref of Arp 299 with the full EVN
 Eleventh epoch obs-ns at 6cm; seventh with the full EVN

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 23 Oct 2013 Day 296 ---

```
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
```

```
03 30 00 4C39.25            06 51 07 59.9 102.0 -2.6            -49.1    0            0    03 30 00
03 33 00 ---                06 54 08 60.3 102.7 -2.6            -48.9    180           23    03 30 01

03 33 00 4C39.25            06 54 08 60.3 102.7 -2.6            -48.9    -5            23    No stop
03 35 00 ---                06 56 08 60.6 103.3 -2.5            -48.8    115           39    03 33 01

03 43 00 J1128+5925           07 04 10 54.2 53.0 -4.4            -70.1    364           39    03 43 00
03 43 30 ---                07 04 40 54.3 53.0 -4.4            -70.1    30            43    03 43 01

03 43 30 ARP299            07 04 40 54.0 54.3 -4.4            -69.0    -15           43    No stop
03 47 20 ---                07 08 30 54.4 54.7 -4.3            -69.5    215           72    03 43 31

03 47 20 J1128+5925           07 08 30 54.8 53.3 -4.3            -70.7    -15           72    No stop
03 48 20 ---                07 09 30 54.9 53.4 -4.3            -70.9    45            80    03 47 21

03 48 20 ARP299            07 09 30 54.5 54.7 -4.3            -69.7    -16           80    No stop
03 52 20 ---                07 13 31 55.0 55.0 -4.3            -70.3    224           111   03 48 21

03 53 00 J1128+5925           07 14 11 55.4 53.7 -4.2            -71.6    24            111   03 53 00
03 53 30 ---                07 14 41 55.5 53.7 -4.2            -71.7    30            115   03 53 01

03 53 30 ARP299            07 14 41 55.2 55.1 -4.2            -70.5    -16           115   No stop
03 57 30 ---                07 18 42 55.7 55.4 -4.2            -71.1    224           146   03 53 31

03 57 30 J1128+5925           07 18 42 56.0 54.0 -4.2            -72.3    -16           146   No stop
03 58 30 ---                07 19 42 56.1 54.1 -4.2            -72.5    44            154   03 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
--- Wed 23 Oct 2013 Day 296 ---										
03 58 30	ARP299	07 19 42	55.8	55.5	-4.2		-71.2	-16	154	No stop
04 02 30	---	07 23 43	56.3	55.8	-4.1		-71.8	224	185	03 58 31
04 02 30	J1128+5925	07 23 43	56.6	54.4	-4.1		-73.1	-16	185	No stop
04 03 30	---	07 24 43	56.7	54.4	-4.1		-73.3	44	192	04 02 31
04 03 30	ARP299	07 24 43	56.4	55.9	-4.1		-72.0	-16	192	No stop
04 07 30	---	07 28 44	56.9	56.2	-4.0		-72.6	224	223	04 03 31
04 08 10	J1128+5925	07 29 24	57.3	54.7	-4.0		-74.0	24	223	04 08 10
04 08 40	---	07 29 54	57.4	54.8	-4.0		-74.1	30	227	04 08 11
04 08 40	ARP299	07 29 54	57.1	56.3	-4.0		-72.8	-16	227	No stop
04 12 40	---	07 33 54	57.6	56.5	-3.9		-73.4	224	258	04 08 41
04 12 40	J1128+5925	07 33 54	57.8	55.0	-3.9		-74.8	-16	258	No stop
04 13 40	---	07 34 55	58.0	55.1	-3.9		-74.9	44	266	04 12 41
04 13 40	ARP299	07 34 55	57.7	56.6	-3.9		-73.6	-16	266	No stop
04 17 40	---	07 38 55	58.2	56.9	-3.8		-74.2	224	297	04 13 41
04 17 40	J1128+5925	07 38 55	58.5	55.3	-3.8		-75.6	-16	297	No stop
04 18 40	---	07 39 55	58.6	55.4	-3.8		-75.7	44	304	04 17 41
04 18 40	ARP299	07 39 55	58.3	57.0	-3.8		-74.3	-16	304	No stop
04 22 40	---	07 43 56	58.8	57.2	-3.8		-75.0	224	335	04 18 41
04 23 20	J1128+5925	07 44 36	59.2	55.7	-3.7		-76.5	24	335	04 23 20
04 23 50	---	07 45 06	59.2	55.7	-3.7		-76.6	30	339	04 23 21
04 23 50	ARP299	07 45 06	59.0	57.3	-3.7		-75.1	-16	339	No stop
04 27 50	---	07 49 07	59.5	57.6	-3.7		-75.8	224	370	04 23 51
04 27 50	J1128+5925	07 49 07	59.7	55.9	-3.7		-77.3	-16	370	No stop
04 28 50	---	07 50 07	59.9	56.0	-3.6		-77.4	44	378	04 27 51
04 28 50	ARP299	07 50 07	59.6	57.6	-3.7		-75.9	-16	378	No stop
04 32 50	---	07 54 08	60.1	57.9	-3.6		-76.6	224	409	04 28 51
04 32 50	J1128+5925	07 54 08	60.4	56.2	-3.6		-78.1	-17	409	No stop
04 33 50	---	07 55 08	60.5	56.2	-3.6		-78.3	43	417	04 32 51
04 33 50	ARP299	07 55 08	60.3	57.9	-3.6		-76.7	-17	417	No stop
04 37 50	---	07 59 09	60.8	58.2	-3.5		-77.4	223	448	04 33 51
04 38 30	J1128+5925	07 59 49	61.1	56.5	-3.5		-79.1	23	448	04 38 30
04 39 00	---	08 00 19	61.1	56.5	-3.5		-79.1	30	452	04 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
--- Wed 23 Oct 2013 Day 296 ---										
04 39 00	ARP299	08 00 19	60.9	58.2	-3.5		-77.6	-17	452	No stop
04 43 00	---	08 04 19	61.4	58.5	-3.4		-78.2	223	483	04 39 01
04 43 00	J1128+5925	08 04 19	61.6	56.7	-3.4		-79.8	-17	483	No stop
04 44 00	---	08 05 20	61.8	56.8	-3.4		-80.0	43	490	04 43 01
04 44 00	ARP299	08 05 20	61.6	58.5	-3.4		-78.4	-17	490	No stop
04 48 00	---	08 09 20	62.1	58.7	-3.3		-79.1	223	521	04 44 01
04 48 00	J1128+5925	08 09 20	62.3	56.9	-3.3		-80.7	-17	521	No stop
04 49 00	---	08 10 20	62.4	57.0	-3.3		-80.9	43	529	04 48 01
04 49 00	ARP299	08 10 20	62.2	58.8	-3.3		-79.2	-17	529	No stop
04 53 00	---	08 14 21	62.7	59.0	-3.2		-79.9	223	560	04 49 01
04 53 40	J1128+5925	08 15 01	63.0	57.2	-3.2		-81.7	23	560	04 53 40
04 54 10	---	08 15 31	63.0	57.2	-3.2		-81.8	30	564	04 53 41
04 54 10	ARP299	08 15 31	62.9	59.0	-3.2		-80.1	-17	564	No stop
04 58 10	---	08 19 32	63.4	59.2	-3.2		-80.8	223	595	04 54 11
04 58 10	J1128+5925	08 19 32	63.5	57.4	-3.2		-82.5	-17	595	No stop
04 59 10	---	08 20 32	63.7	57.4	-3.1		-82.7	43	603	04 58 11
04 59 10	ARP299	08 20 32	63.5	59.3	-3.1		-81.0	-17	603	No stop
05 03 10	---	08 24 33	64.0	59.5	-3.1		-81.6	223	634	04 59 11
05 03 10	J1128+5925	08 24 33	64.2	57.5	-3.1		-83.5	-17	634	No stop
05 04 10	---	08 25 33	64.3	57.6	-3.1		-83.6	43	641	05 03 11
05 04 10	ARP299	08 25 33	64.2	59.5	-3.1		-81.8	-18	641	No stop
05 08 10	---	08 29 34	64.7	59.7	-3.0		-82.5	222	672	05 04 11
05 08 50	J1128+5925	08 30 14	64.9	57.7	-3.0		-84.5	22	672	05 08 50
05 09 20	---	08 30 44	65.0	57.7	-3.0		-84.6	30	676	05 08 51
05 09 20	ARP299	08 30 44	64.8	59.7	-3.0		-82.7	-18	676	No stop
05 13 20	---	08 34 44	65.3	59.9	-2.9		-83.5	222	707	05 09 21
05 13 20	J1128+5925	08 34 44	65.5	57.8	-2.9		-85.4	-18	707	No stop
05 14 20	---	08 35 45	65.6	57.8	-2.9		-85.6	42	715	05 13 21
05 14 20	ARP299	08 35 45	65.5	59.9	-2.9		-83.6	-18	715	No stop
05 18 20	---	08 39 45	66.0	60.0	-2.8		-84.4	222	746	05 14 21
05 18 20	J1128+5925	08 39 45	66.1	57.9	-2.8		-86.4	-18	746	No stop
05 19 20	---	08 40 45	66.2	58.0	-2.8		-86.6	42	754	05 18 21

Schedule for TORUN (Code Tr)

Page 5

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 23 Oct 2013 Day 296 ---										
05 19 20	ARP299	08 40 45	66.1	60.1	-2.8		-84.6	-18	754	No stop
05 23 20	---	08 44 46	66.7	60.2	-2.7		-85.3	222	784	05 19 21
05 24 00	J1128+5925	08 45 26	66.8	58.0	-2.7		-87.5	22	784	05 24 00
05 24 30	---	08 45 56	66.9	58.0	-2.7		-87.6	30	788	05 24 01
05 24 30	ARP299	08 45 56	66.8	60.2	-2.7		-85.5	-18	788	No stop
05 28 30	---	08 49 57	67.3	60.3	-2.7		-86.3	222	819	05 24 31
05 28 30	J1128+5925	08 49 57	67.4	58.1	-2.7		-88.4	-18	819	No stop
05 29 30	---	08 50 57	67.5	58.1	-2.6		-88.6	42	827	05 28 31
05 29 30	ARP299	08 50 57	67.5	60.3	-2.6		-86.5	-18	827	No stop
05 33 30	---	08 54 58	68.0	60.4	-2.6		-87.3	222	858	05 29 31
05 33 30	J1128+5925	08 54 58	68.0	58.1	-2.6		-89.5	-19	858	No stop
05 34 30	---	08 55 58	68.2	58.1	-2.6		-89.7	41	866	05 33 31
05 34 30	ARP299	08 55 58	68.1	60.4	-2.6		-87.5	-19	866	No stop
05 38 30	---	08 59 59	68.6	60.5	-2.5		-88.3	221	897	05 34 31
05 39 10	J1128+5925	09 00 39	68.8	58.1	-2.5		-90.7	21	897	05 39 10
05 39 40	---	09 01 09	68.8	58.1	-2.5		-90.8	30	901	05 39 11
05 39 40	ARP299	09 01 09	68.8	60.5	-2.5		-88.5	-19	901	No stop
05 43 40	---	09 05 09	69.3	60.5	-2.4		-89.3	221	932	05 39 41
05 43 40	J1128+5925	09 05 09	69.3	58.1	-2.4		-91.7	-19	932	No stop
05 44 40	---	09 06 10	69.5	58.1	-2.4		-91.9	41	939	05 43 41
05 44 40	ARP299	09 06 10	69.4	60.5	-2.4		-89.6	-19	939	No stop
05 48 40	---	09 10 10	70.0	60.5	-2.3		-90.4	221	970	05 44 41
05 48 40	J1128+5925	09 10 10	70.0	58.0	-2.3		-92.8	-19	970	No stop
05 49 40	---	09 11 10	70.1	58.0	-2.3		-93.1	41	978	05 48 41
05 49 40	ARP299	09 11 10	70.1	60.5	-2.3		-90.6	-19	978	No stop
05 53 40	---	09 15 11	70.6	60.5	-2.2		-91.5	221	1009	05 49 41
05 54 20	J1128+5925	09 15 51	70.7	57.9	-2.2		-94.2	21	1009	05 54 20
05 54 50	---	09 16 21	70.8	57.9	-2.2		-94.3	30	1013	05 54 21
05 54 50	ARP299	09 16 21	70.8	60.5	-2.2		-91.8	-19	1013	No stop
05 58 50	---	09 20 22	71.3	60.4	-2.1		-92.7	221	1044	05 54 51
05 58 50	J1128+5925	09 20 22	71.3	57.7	-2.1		-95.3	-20	1044	No stop
05 59 50	---	09 21 22	71.4	57.7	-2.1		-95.5	40	1052	05 58 51

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
--- Wed 23 Oct 2013 Day 296 ---										
05 59 50	ARP299	09 21 22	71.4	60.4	-2.1		-92.9	-20	1052	No stop
06 03 50	---	09 25 23	72.0	60.3	-2.1		-93.9	220	1083	05 59 51
06 03 50	J1128+5925	09 25 23	71.9	57.5	-2.1		-96.6	-20	1083	No stop
06 04 50	---	09 26 23	72.0	57.5	-2.0		-96.8	40	1090	06 03 51
06 04 50	ARP299	09 26 23	72.1	60.3	-2.0		-94.1	-20	1090	No stop
06 08 50	---	09 30 24	72.6	60.1	-2.0		-95.1	220	1121	06 04 51
06 09 30	J1128+5925	09 31 04	72.6	57.2	-2.0		-98.1	20	1121	06 09 30
06 10 00	---	09 31 34	72.7	57.2	-2.0		-98.2	30	1125	06 09 31
06 10 00	ARP299	09 31 34	72.8	60.1	-2.0		-95.4	-20	1125	No stop
06 14 00	---	09 35 34	73.3	59.9	-1.9		-96.4	220	1156	06 10 01
06 14 00	J1128+5925	09 35 34	73.2	56.9	-1.9		-99.3	-20	1156	No stop
06 15 00	---	09 36 35	73.3	56.9	-1.9		-99.6	40	1164	06 14 01
06 15 00	ARP299	09 36 35	73.4	59.8	-1.9		-96.7	-20	1164	No stop
06 19 00	---	09 40 35	73.9	59.6	-1.8		-97.8	220	1195	06 15 01
06 19 00	J1128+5925	09 40 35	73.8	56.5	-1.8		-100.8	-21	1195	No stop
06 20 00	---	09 41 35	74.0	56.4	-1.8		-101.1	39	1203	06 19 01
06 20 00	ARP299	09 41 35	74.1	59.5	-1.8		-98.0	-21	1203	No stop
06 24 00	---	09 45 36	74.6	59.3	-1.7		-99.2	219	1233	06 20 01
06 24 40	J1128+5925	09 46 16	74.5	56.0	-1.7		-102.5	19	1233	06 24 40
06 25 10	---	09 46 46	74.6	55.9	-1.7		-102.7	30	1237	06 24 41
06 25 10	ARP299	09 46 46	74.7	59.2	-1.7		-99.5	-21	1237	No stop
06 29 10	---	09 50 47	75.2	58.8	-1.6		-100.7	219	1268	06 25 11
06 29 10	J1128+5925	09 50 47	75.1	55.5	-1.6		-104.0	-21	1268	No stop
06 30 10	---	09 51 47	75.2	55.4	-1.6		-104.3	39	1276	06 29 11
06 30 10	ARP299	09 51 47	75.4	58.7	-1.6		-101.0	-21	1276	No stop
06 34 10	---	09 55 48	75.9	58.3	-1.6		-102.3	219	1307	06 30 11
06 34 10	J1128+5925	09 55 48	75.7	54.8	-1.6		-105.7	-22	1307	No stop
06 35 10	---	09 56 48	75.8	54.7	-1.5		-106.0	38	1315	06 34 11
06 35 10	ARP299	09 56 48	76.0	58.2	-1.5		-102.6	-22	1315	No stop
06 39 10	---	10 00 48	76.5	57.7	-1.5		-104.0	218	1346	06 35 11
06 39 50	J1128+5925	10 01 29	76.4	54.0	-1.5		-107.8	18	1346	06 39 50
06 40 20	---	10 01 59	76.5	53.9	-1.4		-107.9	30	1350	06 39 51

Schedule for TORUN (Code Tr)

Page 7

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 23 Oct 2013 Day 296 ---										
06 40 20	ARP299	10 01 59	76.7	57.5	-1.5		-104.4	-22	1350	No stop
06 44 20	---	10 05 59	77.2	56.9	-1.4		-105.8	218	1381	06 40 21
06 44 20	J1128+5925	10 05 59	77.0	53.2	-1.4		-109.5	-22	1381	No stop
06 45 20	---	10 07 00	77.1	53.0	-1.4		-109.9	38	1388	06 44 21
06 45 20	ARP299	10 07 00	77.3	56.7	-1.4		-106.2	-22	1388	No stop
06 49 20	---	10 11 00	77.8	56.0	-1.3		-107.7	218	1419	06 45 21
06 49 20	J1128+5925	10 11 00	77.6	52.2	-1.3		-111.6	-23	1419	No stop
06 50 20	---	10 12 00	77.7	51.9	-1.3		-112.0	37	1427	06 49 21
06 50 20	ARP299	10 12 00	77.9	55.8	-1.3		-108.1	-22	1427	No stop
06 54 20	---	10 16 01	78.4	55.0	-1.2		-109.8	218	1458	06 50 21
06 55 00	J1128+5925	10 16 41	78.2	50.8	-1.2		-114.1	17	1458	06 55 00
06 55 30	---	10 17 11	78.3	50.7	-1.2		-114.3	30	1462	06 55 01
06 55 30	ARP299	10 17 11	78.6	54.7	-1.2		-110.3	-23	1462	No stop
06 59 30	---	10 21 12	79.1	53.8	-1.1		-112.1	217	1493	06 55 31
06 59 30	J1128+5925	10 21 12	78.7	49.6	-1.1		-116.3	-23	1493	No stop
07 00 30	---	10 22 12	78.9	49.3	-1.1		-116.8	37	1501	06 59 31
07 00 30	ARP299	10 22 12	79.2	53.5	-1.1		-112.6	-23	1501	No stop
07 04 30	---	10 26 13	79.7	52.3	-1.1		-114.6	217	1532	07 00 31
07 04 30	J1128+5925	10 26 13	79.3	48.0	-1.0		-118.9	-24	1532	No stop
07 05 30	---	10 27 13	79.4	47.7	-1.0		-119.4	36	1539	07 04 31
07 05 30	ARP299	10 27 13	79.8	52.0	-1.0		-115.1	-23	1539	No stop
07 09 30	---	10 31 13	80.3	50.7	-1.0		-117.3	217	1570	07 05 31
07 10 10	J1128+5925	10 31 54	79.9	46.0	-1.0		-122.1	16	1570	07 10 10
07 10 40	---	10 32 24	80.0	45.8	-0.9		-122.4	30	1574	07 10 11
07 10 40	ARP299	10 32 24	80.4	50.3	-0.9		-117.9	-24	1574	No stop
07 14 40	---	10 36 24	80.8	48.7	-0.9		-120.3	216	1605	07 10 41
07 14 40	J1128+5925	10 36 24	80.4	44.1	-0.9		-124.9	-24	1605	No stop
07 15 40	---	10 37 24	80.5	43.7	-0.9		-125.6	36	1613	07 14 41
07 15 40	ARP299	10 37 24	81.0	48.3	-0.9		-120.9	-24	1613	No stop
07 19 40	---	10 41 25	81.4	46.5	-0.8		-123.6	216	1644	07 15 41
07 19 40	J1128+5925	10 41 25	80.9	41.8	-0.8		-128.3	-25	1644	No stop
07 20 40	---	10 42 25	81.0	41.3	-0.8		-129.0	35	1652	07 19 41

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 23 Oct 2013 Day 296 ---										
07 20 40	ARP299	10 42 25	81.5	46.0	-0.8		-124.3	-24	1652	No stop
07 24 40	---	10 46 26	81.9	43.9	-0.7		-127.3	216	1682	07 20 41
07 25 20	J1128+5925	10 47 06	81.5	38.7	-0.7		-132.6	15	1682	07 25 20
07 25 50	---	10 47 36	81.5	38.4	-0.7		-133.0	30	1686	07 25 21
07 25 50	ARP299	10 47 36	82.1	43.2	-0.7		-128.2	-24	1686	No stop
07 29 50	---	10 51 37	82.5	40.7	-0.6		-131.5	216	1717	07 25 51
07 29 50	J1128+5925	10 51 37	81.9	35.9	-0.6		-136.3	-25	1717	No stop
07 30 50	---	10 52 37	82.0	35.3	-0.6		-137.2	35	1725	07 29 51
07 30 50	ARP299	10 52 37	82.6	40.0	-0.6		-132.4	-24	1725	No stop
07 34 50	---	10 56 38	82.9	37.1	-0.5		-136.1	216	1756	07 30 51
07 34 50	J1128+5925	10 56 38	82.3	32.4	-0.5		-140.8	-25	1756	No stop
07 35 50	---	10 57 38	82.4	31.7	-0.5		-141.8	35	1764	07 34 51
07 35 50	ARP299	10 57 38	83.0	36.3	-0.5		-137.1	-24	1764	No stop
07 39 50	---	11 01 38	83.4	33.0	-0.5		-141.3	216	1795	07 35 51
07 40 30	J1128+5925	11 02 19	82.7	27.9	-0.4		-146.5	15	1795	07 40 30
07 41 00	---	11 02 49	82.8	27.5	-0.4		-147.0	30	1799	07 40 31
07 41 00	ARP299	11 02 49	83.5	31.9	-0.4		-142.6	-23	1799	No stop
07 45 00	---	11 06 49	83.8	28.1	-0.4		-147.3	217	1830	07 41 01
07 45 00	J1128+5925	11 06 49	83.0	24.0	-0.4		-151.4	-24	1830	No stop
07 46 00	---	11 07 49	83.1	23.0	-0.4		-152.6	36	1837	07 45 01
07 46 00	ARP299	11 07 49	83.8	27.1	-0.4		-148.5	-22	1837	No stop
07 50 00	---	11 11 50	84.1	22.7	-0.3		-153.7	218	1868	07 46 01
07 50 00	J1128+5925	11 11 50	83.3	19.1	-0.3		-157.3	-23	1868	No stop
07 51 00	---	11 12 50	83.4	18.1	-0.3		-158.6	37	1876	07 50 01
07 51 00	ARP299	11 12 50	84.1	21.6	-0.3		-155.0	-21	1876	No stop
07 55 00	---	11 16 51	84.3	16.7	-0.2		-160.7	219	1907	07 51 01
07 55 40	J1128+5925	11 17 31	83.6	13.1	-0.2		-164.5	19	1907	07 55 40
07 56 10	---	11 18 01	83.6	12.6	-0.2		-165.2	30	1911	07 55 41
07 56 10	ARP299	11 18 01	84.4	15.2	-0.2		-162.4	-19	1911	No stop
08 00 10	---	11 22 02	84.5	10.0	-0.1		-168.5	221	1942	07 56 11
08 00 10	J1128+5925	11 22 02	83.7	8.1	-0.1		-170.5	-18	1942	No stop
08 01 10	---	11 23 02	83.7	6.9	-0.1		-171.9	42	1950	08 00 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 23 Oct 2013 Day 296 ---										
08 01 10	ARP299	11 23 02	84.5	8.6	-0.1		-170.1	-16	1950	No stop
08 05 10	---	11 27 03	84.6	3.1	-0.0		-176.4	224	1981	08 01 11
08 05 10	J1128+5925	11 27 03	83.7	2.3	-0.0		-177.3	-16	1981	No stop
08 06 10	---	11 28 03	83.8	1.1	-0.0		-178.7	44	1988	08 05 11
08 06 10	ARP299	11 28 03	84.6	1.7	-0.0		-178.0	-16	1988	No stop
08 10 10	---	11 32 03	84.6	-3.8	0.0		175.6	224	2019	08 06 11
08 10 50	J1128+5925	11 32 44	83.7	-4.4	0.1		174.8	24	2019	08 10 50
08 11 20	---	11 33 14	83.7	-5.0	0.1		174.1	30	2023	08 10 51
08 11 20	ARP299	11 33 14	84.6	-5.4	0.1		173.7	-16	2023	No stop
08 15 20	---	11 37 14	84.5	-10.9	0.1		167.5	224	2054	08 11 21
08 15 20	J1128+5925	11 37 14	83.7	-9.6	0.1		168.7	-16	2054	No stop
08 16 20	---	11 38 14	83.6	-10.7	0.2		167.4	44	2062	08 15 21
08 16 20	ARP299	11 38 14	84.5	-12.2	0.1		165.9	-17	2062	No stop
08 20 20	---	11 42 15	84.3	-17.3	0.2		160.0	223	2093	08 16 21
08 20 20	J1128+5925	11 42 15	83.5	-15.1	0.2		162.1	-18	2093	No stop
08 21 20	---	11 43 15	83.4	-16.2	0.2		160.9	42	2101	08 20 21
08 21 20	ARP299	11 43 15	84.3	-18.6	0.2		158.5	-20	2101	No stop
08 25 20	---	11 47 16	84.1	-23.3	0.3		153.0	220	2131	08 21 21
08 26 00	J1128+5925	11 47 56	83.2	-20.9	0.3		155.1	20	2131	08 26 00
08 26 30	---	11 48 26	83.2	-21.4	0.3		154.5	30	2135	08 26 01
08 26 30	ARP299	11 48 26	84.0	-24.6	0.3		151.5	-22	2135	No stop
08 30 30	---	11 52 27	83.7	-28.8	0.4		146.5	218	2166	08 26 31
08 30 30	J1128+5925	11 52 27	83.0	-25.2	0.4		149.9	-21	2166	No stop
08 31 30	---	11 53 27	82.9	-26.1	0.4		148.8	39	2174	08 30 31
08 31 30	ARP299	11 53 27	83.6	-29.7	0.4		145.3	-23	2174	No stop
08 35 30	---	11 57 28	83.3	-33.4	0.5		140.7	217	2205	08 31 31
08 35 30	J1128+5925	11 57 28	82.6	-29.5	0.5		144.6	-22	2205	No stop
08 36 30	---	11 58 28	82.5	-30.3	0.5		143.6	38	2213	08 35 31
08 36 30	ARP299	11 58 28	83.2	-34.3	0.5		139.7	-24	2213	No stop
08 40 30	---	12 02 28	82.9	-37.5	0.6		135.6	216	2244	08 36 31
08 41 10	J1128+5925	12 03 09	82.2	-33.8	0.6		139.1	17	2244	08 41 10
08 41 40	---	12 03 39	82.1	-34.1	0.6		138.7	30	2248	08 41 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 23 Oct 2013 Day 296 ---										
08 41 40	ARP299	12 03 39	82.8	-38.4	0.6		134.5	-24	2248	No stop
08 45 40	---	12 07 39	82.4	-41.1	0.6		130.9	216	2279	08 41 41
08 45 40	J1128+5925	12 07 39	81.8	-36.8	0.6		135.2	-23	2279	No stop
08 46 40	---	12 08 39	81.7	-37.4	0.7		134.3	37	2286	08 45 41
08 46 40	ARP299	12 08 39	82.3	-41.8	0.7		130.1	-24	2286	No stop
08 50 40	---	12 12 40	81.9	-44.1	0.7		126.9	216	2317	08 46 41
08 50 40	J1128+5925	12 12 40	81.3	-39.8	0.7		131.1	-23	2317	No stop
08 51 40	---	12 13 40	81.2	-40.3	0.7		130.4	37	2325	08 50 41
08 51 40	ARP299	12 13 40	81.8	-44.7	0.7		126.1	-24	2325	No stop
08 55 40	---	12 17 41	81.3	-46.7	0.8		123.3	216	2356	08 51 41
08 56 20	J1128+5925	12 18 21	80.7	-42.7	0.8		127.0	17	2356	08 56 20
08 56 50	---	12 18 51	80.7	-42.9	0.8		126.7	30	2360	08 56 21
08 56 50	ARP299	12 18 51	81.2	-47.3	0.8		122.5	-24	2360	No stop
09 00 50	---	12 22 52	80.8	-49.0	0.9		119.9	216	2391	08 56 51
09 00 50	J1128+5925	12 22 52	80.3	-44.7	0.9		124.1	-23	2391	No stop
09 01 50	---	12 23 52	80.2	-45.1	0.9		123.4	37	2399	09 00 51
09 01 50	ARP299	12 23 52	80.7	-49.4	0.9		119.3	-24	2399	No stop
09 05 50	---	12 27 53	80.2	-50.9	1.0		117.0	216	2430	09 01 51
09 05 50	J1128+5925	12 27 53	79.7	-46.7	1.0		121.0	-23	2430	No stop
09 06 50	---	12 28 53	79.6	-47.1	1.0		120.5	37	2437	09 05 51
09 06 50	ARP299	12 28 53	80.1	-51.2	1.0		116.4	-23	2437	No stop
09 10 50	---	12 32 53	79.6	-52.5	1.1		114.3	217	2468	09 06 51
09 11 30	J1128+5925	12 33 34	79.1	-48.6	1.1		117.9	17	2468	09 11 30
09 12 00	---	12 34 04	79.1	-48.8	1.1		117.6	30	2472	09 11 31
09 12 00	ARP299	12 34 04	79.5	-52.8	1.1		113.7	-23	2472	No stop
09 16 00	---	12 38 04	79.0	-53.9	1.1		111.8	217	2503	09 12 01
09 16 00	J1128+5925	12 38 04	78.6	-50.0	1.2		115.6	-23	2503	No stop
09 17 00	---	12 39 04	78.5	-50.2	1.2		115.1	37	2511	09 16 01
09 17 00	ARP299	12 39 04	78.9	-54.2	1.2		111.4	-23	2511	No stop
09 21 00	---	12 43 05	78.4	-55.1	1.2		109.6	217	2542	09 17 01
09 21 40	J1128+5925	12 43 45	77.9	-51.4	1.2		113.0	18	2542	09 21 40
09 22 10	---	12 44 15	77.9	-51.6	1.3		112.7	30	2546	09 21 41

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
--- Wed 23 Oct 2013 Day 296 ---										
09 22 10	ARP299	12 44 15	78.2	-55.4	1.2		109.1	-23	2546	No stop
09 25 00	---	12 47 06	77.9	-55.9	1.3		107.9	147	2568	09 22 11
09 25 00	J1128+5925	12 47 06	77.5	-52.2	1.3		111.5	-22	2568	No stop
09 26 00	---	12 48 06	77.4	-52.4	1.3		111.1	38	2575	09 25 01
09 26 00	ARP299	12 48 06	77.7	-56.1	1.3		107.5	-22	2575	No stop
09 29 00	---	12 51 06	77.4	-56.6	1.4		106.4	158	2599	09 26 01
09 29 00	J1128+5925	12 51 06	77.1	-53.0	1.4		109.8	-22	2599	No stop
09 30 00	---	12 52 07	76.9	-53.2	1.4		109.4	38	2606	09 29 01

SETUP FILE INFORMATION:

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

==== Setup file: sess313.C1024

Matching groups in /Users/torres/sched102/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: 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 = 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 --

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 58 50 18.17319	* 11 28 33.622010 * 58 33 46.61000	11 29 18.155063 58 29 00.65253	0.00 0.00
* J1128+5925	11 25 23.181652 59 41 46.14397	* 11 28 13.340676 * 59 25 14.79866	11 28 57.991164 59 20 28.68068	0.00 0.00
J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.567709	0.13
* 4C39.25	39 15 23.56637	* 39 02 20.85177	38 58 29.79946	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	75.7
J1128+5925	76.4
4C39.25	79.3

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:

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

ep088atr

LIRGI - SOURCE GROUP 1 - RUN D

PI: *Miguel A. Perez-Torres*

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 EVN LIRGI sources
 First 6cm observing epoch of NGC0695, VV250a, VV705, IRASF17132, NGC6670b and NGC7674

Schedule for TORUN (Code Tr) Page 2

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
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	
10 30 00	3C345	13 52 16	58.3	97.3	-2.9		-50.8	0	0	10 30 00
10 33 34	---	13 55 51	58.8	98.1	-2.8		-50.7	214	27	10 30 01
10 33 34	3C345	13 55 51	58.8	98.1	-2.8		-50.7	-5	27	No stop
10 37 12	---	13 59 30	59.3	99.0	-2.7		-50.5	213	55	10 33 35
10 37 12	J1521+4336	13 59 30	73.4	116.6	-1.4		-47.8	-67	55	No stop
10 39 32	---	14 01 50	73.7	117.6	-1.3		-47.3	73	73	10 37 13
10 40 12	VV705	14 02 30	73.6	121.8	-1.3		-44.0	17	73	10 40 12
10 43 52	---	14 06 11	74.1	123.5	-1.2		-42.9	220	101	10 40 13
10 43 52	J1521+4336	14 06 11	74.2	119.5	-1.3		-46.1	-23	101	No stop
10 45 22	---	14 07 41	74.4	120.3	-1.2		-45.7	67	113	10 43 53
10 46 02	VV705	14 08 21	74.4	124.6	-1.2		-42.2	17	113	10 46 02
10 49 42	---	14 12 02	74.8	126.5	-1.1		-41.0	220	141	10 46 03
10 49 42	J1521+4336	14 12 02	75.0	122.4	-1.2		-44.4	-23	141	No stop
10 51 02	---	14 13 22	75.2	123.0	-1.1		-44.0	57	151	10 49 43
10 51 02	VV705	14 13 22	75.0	127.2	-1.1		-40.6	-24	151	No stop
10 54 42	---	14 17 02	75.4	129.3	-1.0		-39.2	196	179	10 51 03
10 54 42	J1521+4336	14 17 02	75.6	125.0	-1.1		-42.8	-23	179	No stop
10 56 02	---	14 18 23	75.8	125.7	-1.1		-42.3	57	190	10 54 43

Schedule for TORUN (Code Tr)

Page 3

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
10 56 42	VV705	14 19 03	75.6	130.4	-1.0		-38.5	16	190	10 56 42
11 00 22	---	14 22 43	76.1	132.6	-0.9		-37.0	220	218	10 56 43
11 00 22	J1521+4336	14 22 43	76.3	128.1	-1.0		-40.7	-24	218	No stop
11 01 42	---	14 24 04	76.5	128.9	-1.0		-40.2	56	228	11 00 23
11 02 22	VV705	14 24 44	76.3	133.8	-0.9		-36.1	16	228	11 02 22
11 06 02	---	14 28 24	76.7	136.2	-0.8		-34.4	220	256	11 02 23
11 06 02	J1521+4336	14 28 24	77.0	131.6	-0.9		-38.3	-24	256	No stop
11 07 22	---	14 29 45	77.1	132.4	-0.9		-37.7	56	266	11 06 03
11 07 22	VV705	14 29 45	76.8	137.1	-0.8		-33.8	-25	266	No stop
11 11 02	---	14 33 25	77.2	139.6	-0.8		-32.0	195	295	11 07 23
11 11 02	J1521+4336	14 33 25	77.5	134.8	-0.8		-36.0	-24	295	No stop
11 12 22	---	14 34 45	77.7	135.8	-0.8		-35.3	56	305	11 11 03
11 13 02	VV705	14 35 25	77.4	141.0	-0.7		-30.9	15	305	11 13 02
11 16 42	---	14 39 06	77.7	143.8	-0.7		-28.9	220	333	11 13 03
11 16 42	J1521+4336	14 39 06	78.1	138.9	-0.7		-33.0	-24	333	No stop
11 18 02	---	14 40 26	78.2	139.8	-0.7		-32.3	56	343	11 16 43
11 18 42	VV705	14 41 06	77.9	145.3	-0.6		-27.7	15	343	11 18 42
11 22 22	---	14 44 47	78.2	148.2	-0.6		-25.5	220	371	11 18 43
11 22 22	J1521+4336	14 44 47	78.6	143.2	-0.6		-29.8	-24	371	No stop
11 23 42	---	14 46 07	78.8	144.3	-0.6		-28.9	56	382	11 22 23
11 23 42	VV705	14 46 07	78.3	149.3	-0.5		-24.7	-26	382	No stop
11 27 22	---	14 49 48	78.6	152.4	-0.5		-22.3	194	410	11 23 43
11 27 22	J1521+4336	14 49 48	79.1	147.4	-0.5		-26.6	-24	410	No stop
11 28 42	---	14 51 08	79.2	148.5	-0.5		-25.7	56	420	11 27 23
11 29 22	VV705	14 51 48	78.7	154.1	-0.4		-20.9	14	420	11 29 22
11 33 02	---	14 55 29	78.9	157.4	-0.4		-18.3	220	448	11 29 23
11 33 02	J1521+4336	14 55 29	79.5	152.4	-0.4		-22.6	-24	448	No stop
11 34 22	---	14 56 49	79.6	153.6	-0.4		-21.6	56	458	11 33 03
11 35 02	VV705	14 57 29	79.0	159.2	-0.4		-16.8	14	458	11 35 02
11 38 42	---	15 01 10	79.2	162.7	-0.3		-14.1	220	487	11 35 03
11 38 42	J1521+4336	15 01 10	79.9	157.8	-0.4		-18.3	-24	487	No stop
11 40 02	---	15 02 30	79.9	159.1	-0.3		-17.2	56	497	11 38 43

Schedule for TORUN (Code Tr)

Page 4

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
11 40 02	VV705	15 02 30	79.3	164.0	-0.3		-13.1	-25	497	No stop
11 43 42	---	15 06 11	79.4	167.5	-0.2		-10.2	195	525	11 40 03
11 43 42	J1521+4336	15 06 11	80.1	162.8	-0.3		-14.2	-24	525	No stop
11 45 02	---	15 07 31	80.2	164.2	-0.2		-13.1	56	535	11 43 43
11 45 42	VV705	15 08 11	79.5	169.5	-0.2		-8.6	15	535	11 45 42
11 49 22	---	15 11 51	79.5	173.2	-0.1		-5.6	220	563	11 45 43
11 49 22	J1521+4336	15 11 51	80.3	168.7	-0.2		-9.3	-23	563	No stop
11 50 42	---	15 13 12	80.4	170.1	-0.2		-8.2	57	574	11 49 23
11 51 22	VV705	15 13 52	79.6	175.2	-0.1		-3.9	16	574	11 51 22
11 55 02	---	15 17 32	79.6	179.0	-0.0		-0.9	220	602	11 51 23
11 55 02	J1521+4336	15 17 32	80.4	174.8	-0.1		-4.3	-22	602	No stop
11 56 22	---	15 18 53	80.5	176.3	-0.1		-3.1	58	612	11 55 03
11 56 22	VV705	15 18 53	79.6	180.3	0.0		0.3	-24	612	No stop
12 00 02	---	15 22 33	79.6	184.1	0.1		3.3	196	640	11 56 23
12 00 02	J1521+4336	15 22 33	80.5	180.3	0.0		0.2	-22	640	No stop
12 01 22	---	15 23 53	80.5	181.8	0.0		1.5	58	650	12 00 03
12 02 02	VV705	15 24 34	79.6	186.1	0.1		5.0	17	650	12 02 02
12 05 42	---	15 28 14	79.5	189.8	0.2		8.0	220	679	12 02 03
12 05 42	J1521+4336	15 28 14	80.4	186.5	0.1		5.4	-20	679	No stop
12 07 02	---	15 29 34	80.4	187.9	0.1		6.6	60	689	12 05 43
12 07 42	VV705	15 30 14	79.4	191.8	0.2		9.6	18	689	12 07 42
12 11 22	---	15 33 55	79.3	195.4	0.3		12.5	220	717	12 07 43
12 11 22	J1824+5651	15 33 55	65.7	63.9	-2.8		-80.6	-277	717	No stop
12 16 52	---	15 39 26	66.4	64.2	-2.7		-81.5	53	759	12 11 23
12 16 52	NGC6670B	15 39 26	65.5	56.5	-2.9		-86.6	-30	759	No stop
12 20 40	---	15 43 15	66.0	56.5	-2.8		-87.4	198	788	12 16 53
12 20 40	J1824+5651	15 43 15	66.9	64.4	-2.7		-82.2	-31	788	No stop
12 22 00	---	15 44 35	67.1	64.5	-2.7		-82.4	49	799	12 20 41
12 22 40	NGC6670B	15 45 15	66.2	56.6	-2.8		-87.8	9	799	12 22 40
12 26 28	---	15 49 04	66.7	56.6	-2.7		-88.6	228	828	12 22 41
12 26 28	J1824+5651	15 49 04	67.7	64.7	-2.6		-83.1	-31	828	No stop
12 27 48	---	15 50 24	67.9	64.7	-2.6		-83.4	49	838	12 26 29

Schedule for TORUN (Code Tr)

Page 5

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
12 27 48	NGC6670B	15 50 24	66.9	56.6	-2.7		-88.9	-31	838	No stop
12 31 36	---	15 54 12	67.4	56.6	-2.7		-89.7	197	867	12 27 49
12 31 36	J1824+5651	15 54 12	68.4	64.9	-2.5		-84.0	-32	867	No stop
12 32 56	---	15 55 33	68.6	64.9	-2.5		-84.2	48	878	12 31 37
12 32 56	NGC6670B	15 55 33	67.5	56.6	-2.6		-89.9	-32	878	No stop
12 36 44	---	15 59 21	68.0	56.6	-2.6		-90.8	196	907	12 32 57
12 36 44	J1824+5651	15 59 21	69.1	65.1	-2.4		-84.9	-32	907	No stop
12 38 14	---	16 00 51	69.3	65.1	-2.4		-85.2	58	918	12 36 45
12 38 54	NGC6670B	16 01 32	68.3	56.6	-2.5		-91.3	8	918	12 38 54
12 42 42	---	16 05 20	68.7	56.6	-2.5		-92.1	228	947	12 38 55
12 42 42	J1824+5651	16 05 20	69.9	65.2	-2.3		-86.0	-32	947	No stop
12 44 02	---	16 06 40	70.1	65.3	-2.3		-86.2	48	958	12 42 43
12 44 02	NGC6670B	16 06 40	68.9	56.5	-2.5		-92.4	-32	958	No stop
12 47 50	---	16 10 29	69.4	56.5	-2.4		-93.3	196	987	12 44 03
12 47 50	J1824+5651	16 10 29	70.6	65.4	-2.2		-87.0	-33	987	No stop
12 49 10	---	16 11 49	70.8	65.4	-2.2		-87.2	47	997	12 47 51
12 49 10	NGC6670B	16 11 49	69.6	56.4	-2.4		-93.6	-33	997	No stop
12 52 58	---	16 15 38	70.0	56.3	-2.3		-94.6	195	1026	12 49 11
12 52 58	J1824+5651	16 15 38	71.3	65.5	-2.1		-87.9	-33	1026	No stop
12 54 28	---	16 17 08	71.5	65.5	-2.1		-88.2	57	1038	12 52 59
12 55 08	NGC6670B	16 17 48	70.3	56.3	-2.3		-95.1	7	1038	12 55 08
12 58 56	---	16 21 37	70.8	56.1	-2.2		-96.0	228	1067	12 55 09
12 58 56	J1824+5651	16 21 37	72.2	65.5	-2.0		-89.1	-34	1067	No stop
13 00 16	---	16 22 57	72.3	65.5	-2.0		-89.4	46	1077	12 58 57
13 00 16	NGC6670B	16 22 57	70.9	56.1	-2.2		-96.4	-34	1077	No stop
13 04 04	---	16 26 46	71.4	55.9	-2.1		-97.4	194	1106	13 00 17
13 04 04	J1824+5651	16 26 46	72.9	65.5	-2.0		-90.2	-34	1106	No stop
13 05 24	---	16 28 06	73.0	65.5	-1.9		-90.5	46	1117	13 04 05
13 05 24	NGC6670B	16 28 06	71.6	55.8	-2.1		-97.7	-34	1117	No stop
13 09 12	---	16 31 55	72.1	55.6	-2.0		-98.8	194	1146	13 05 25
13 09 12	J1824+5651	16 31 55	73.6	65.5	-1.9		-91.3	-35	1146	No stop
13 10 42	---	16 33 25	73.8	65.5	-1.8		-91.6	55	1157	13 09 13

Schedule for TORUN (Code Tr)

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LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
13 11 22	NGC6670B	16 34 05	72.3	55.5	-2.0		-99.4	5	1157	13 11 22
13 15 10	---	16 37 54	72.8	55.2	-1.9		-100.4	228	1187	13 11 23
13 15 10	J1824+5651	16 37 54	74.4	65.4	-1.8		-92.7	-35	1187	No stop
13 16 30	---	16 39 14	74.6	65.4	-1.8		-93.0	45	1197	13 15 11
13 16 30	NGC6670B	16 39 14	73.0	55.1	-1.9		-100.8	-36	1197	No stop
13 20 18	---	16 43 02	73.4	54.8	-1.8		-102.0	192	1226	13 16 31
13 20 18	J1824+5651	16 43 02	75.1	65.3	-1.7		-93.9	-36	1226	No stop
13 21 38	---	16 44 23	75.3	65.2	-1.7		-94.2	44	1236	13 20 19
13 21 38	NGC6670B	16 44 23	73.6	54.6	-1.8		-102.4	-36	1236	No stop
13 25 26	---	16 48 11	74.1	54.3	-1.8		-103.6	192	1265	13 21 39
13 25 26	J1824+5651	16 48 11	75.8	65.0	-1.6		-95.2	-36	1265	No stop
13 26 56	---	16 49 41	76.0	65.0	-1.6		-95.6	54	1277	13 25 27
13 27 36	NGC6670B	16 50 22	74.3	54.0	-1.7		-104.3	3	1277	13 27 36
13 31 24	---	16 54 10	74.8	53.6	-1.7		-105.6	228	1306	13 27 37
13 31 24	J1824+5651	16 54 10	76.6	64.7	-1.5		-96.8	-37	1306	No stop
13 32 44	---	16 55 30	76.8	64.6	-1.5		-97.1	43	1316	13 31 25
13 32 44	NGC6670B	16 55 30	75.0	53.4	-1.6		-106.0	-38	1316	No stop
13 36 32	---	16 59 19	75.4	52.8	-1.6		-107.4	190	1346	13 32 45
13 36 32	J1824+5651	16 59 19	77.3	64.3	-1.4		-98.2	-38	1346	No stop
13 37 52	---	17 00 39	77.5	64.1	-1.4		-98.6	42	1356	13 36 33
13 37 52	NGC6670B	17 00 39	75.6	52.6	-1.6		-107.8	-38	1356	No stop
13 41 40	---	17 04 28	76.0	52.0	-1.5		-109.3	190	1385	13 37 53
13 41 40	J1824+5651	17 04 28	78.0	63.8	-1.3		-99.8	-38	1385	No stop
13 43 10	---	17 05 58	78.2	63.6	-1.3		-100.3	52	1396	13 41 41
13 43 50	NGC6670B	17 06 38	76.3	51.6	-1.5		-110.1	1	1396	13 43 50
13 47 38	---	17 10 27	76.7	50.9	-1.4		-111.6	228	1426	13 43 51
13 47 38	J1824+5651	17 10 27	78.8	63.0	-1.2		-101.8	-39	1426	No stop
13 48 58	---	17 11 47	79.0	62.8	-1.2		-102.3	41	1436	13 47 39
13 48 58	NGC6670B	17 11 47	76.9	50.6	-1.4		-112.2	-40	1436	No stop
13 52 46	---	17 15 36	77.3	49.8	-1.3		-113.8	188	1465	13 48 59
13 52 46	J1824+5651	17 15 36	79.5	62.2	-1.1		-103.7	-40	1465	No stop
13 54 06	---	17 16 56	79.7	61.9	-1.1		-104.2	40	1475	13 52 47

Schedule for TORUN (Code Tr)

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LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
13 54 06	NGC6670B	17 16 56	77.5	49.5	-1.3		-114.4	-40	1475	No stop
13 57 54	---	17 20 45	77.9	48.5	-1.2		-116.2	188	1505	13 54 07
13 57 54	J1824+5651	17 20 45	80.2	61.2	-1.1		-105.8	-40	1505	No stop
13 59 24	---	17 22 15	80.4	60.8	-1.0		-106.4	50	1516	13 57 55
14 00 04	NGC6670B	17 22 55	78.1	47.9	-1.2		-117.2	-1	1516	14 00 04
14 03 52	---	17 26 44	78.6	46.8	-1.1		-119.2	227	1545	14 00 05
14 03 52	J1824+5651	17 26 44	80.9	59.7	-1.0		-108.5	-40	1545	No stop
14 05 12	---	17 28 04	81.1	59.3	-0.9		-109.1	40	1555	14 03 53
14 05 52	NGC6670B	17 28 44	78.8	46.2	-1.1		-120.2	-1	1555	14 05 52
14 09 40	---	17 32 33	79.2	44.9	-1.0		-122.3	227	1585	14 05 53
14 09 40	J1824+5651	17 32 33	81.7	57.9	-0.9		-111.5	-41	1585	No stop
14 11 00	---	17 33 53	81.9	57.4	-0.8		-112.2	39	1595	14 09 41
14 11 00	J1302+5748	17 33 53	53.0	-55.0	4.5		67.2	-239	1595	No stop
14 20 00	---	17 42 54	51.9	-54.2	4.7		65.9	301	1664	14 11 01
14 20 40	VV250A	17 43 34	54.8	-48.4	4.5		73.2	13	1664	14 20 40
14 24 20	---	17 47 15	54.4	-48.1	4.5		72.6	220	1692	14 20 41
14 24 20	J1302+5748	17 47 15	51.3	-53.9	4.7		65.3	-26	1692	No stop
14 25 50	---	17 48 45	51.1	-53.7	4.8		65.1	64	1704	14 24 21
14 26 30	VV250A	17 49 25	54.1	-48.0	4.6		72.2	14	1704	14 26 30
14 30 10	---	17 53 06	53.7	-47.8	4.6		71.6	220	1732	14 26 31
14 30 10	J1302+5748	17 53 06	50.6	-53.3	4.8		64.5	-26	1732	No stop
14 31 40	---	17 54 36	50.4	-53.2	4.9		64.2	64	1743	14 30 11
14 31 40	VV250A	17 54 36	53.5	-47.7	4.6		71.3	-26	1743	No stop
14 35 20	---	17 58 17	53.1	-47.4	4.7		70.7	194	1772	14 31 41
14 35 20	J1302+5748	17 58 17	50.0	-52.9	4.9		63.7	-26	1772	No stop
14 36 50	---	17 59 47	49.8	-52.7	4.9		63.5	64	1783	14 35 21
14 36 50	VV250A	17 59 47	53.0	-47.4	4.7		70.5	-26	1783	No stop
14 40 30	---	18 03 28	52.6	-47.1	4.8		69.8	194	1811	14 36 51
14 40 30	J1302+5748	18 03 28	49.4	-52.4	5.0		63.0	-26	1811	No stop
14 42 00	---	18 04 58	49.2	-52.2	5.0		62.8	64	1823	14 40 31
14 42 40	VV250A	18 05 38	52.3	-47.0	4.8		69.5	14	1823	14 42 40
14 46 20	---	18 09 19	51.9	-46.7	4.9		68.9	220	1851	14 42 41

Schedule for TORUN (Code Tr)

Page 8

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
14 46 20	J1302+5748	18 09 19	48.7	-51.8	5.1		62.2	-26	1851	No stop
14 47 50	---	18 10 49	48.5	-51.7	5.1		62.0	64	1862	14 46 21
14 47 50	VV250A	18 10 49	51.8	-46.6	4.9		68.6	-26	1862	No stop
14 51 30	---	18 14 29	51.4	-46.4	5.0		68.0	194	1891	14 47 51
14 51 30	J1302+5748	18 14 29	48.1	-51.3	5.2		61.4	-26	1891	No stop
14 53 00	---	18 16 00	47.9	-51.2	5.2		61.2	64	1902	14 51 31
14 53 00	VV250A	18 16 00	51.2	-46.2	5.0		67.7	-26	1902	No stop
14 56 40	---	18 19 40	50.8	-46.0	5.1		67.1	194	1930	14 53 01
14 56 40	J1302+5748	18 19 40	47.5	-50.8	5.3		60.7	-27	1930	No stop
14 58 10	---	18 21 10	47.3	-50.7	5.3		60.5	63	1942	14 56 41
14 58 50	VV250A	18 21 51	50.6	-45.8	5.1		66.8	14	1942	14 58 50
15 02 30	---	18 25 31	50.2	-45.6	5.2		66.2	220	1970	14 58 51
15 02 30	J1302+5748	18 25 31	46.8	-50.3	5.4		59.9	-27	1970	No stop
15 04 00	---	18 27 01	46.6	-50.1	5.4		59.7	63	1981	15 02 31
15 04 00	VV250A	18 27 01	50.0	-45.4	5.2		65.9	-26	1981	No stop
15 07 40	---	18 30 42	49.6	-45.2	5.2		65.3	194	2010	15 04 01
15 07 40	J1302+5748	18 30 42	46.2	-49.8	5.5		59.2	-27	2010	No stop
15 09 10	---	18 32 12	46.0	-49.6	5.5		59.0	63	2021	15 07 41
15 09 10	VV250A	18 32 12	49.5	-45.1	5.3		65.1	-27	2021	No stop
15 12 50	---	18 35 53	49.1	-44.8	5.3		64.5	193	2049	15 09 11
15 12 50	J1302+5748	18 35 53	45.6	-49.3	5.5		58.5	-27	2049	No stop
15 14 20	---	18 37 23	45.4	-49.1	5.6		58.2	63	2061	15 12 51
15 15 00	VV250A	18 38 03	48.8	-44.6	5.4		64.1	13	2061	15 15 00
15 18 40	---	18 41 44	48.4	-44.3	5.4		63.5	220	2089	15 15 01
15 18 40	J1302+5748	18 41 44	44.9	-48.7	5.6		57.6	-27	2089	No stop
15 20 10	---	18 43 14	44.8	-48.5	5.7		57.4	63	2100	15 18 41
15 20 10	VV250A	18 43 14	48.3	-44.2	5.5		63.3	-27	2100	No stop
15 23 50	---	18 46 55	47.9	-43.9	5.5		62.7	193	2129	15 20 11
15 23 50	J1302+5748	18 46 55	44.4	-48.1	5.7		56.9	-27	2129	No stop
15 25 20	---	18 48 25	44.2	-48.0	5.8		56.7	63	2140	15 23 51
15 25 20	VV250A	18 48 25	47.8	-43.8	5.5		62.5	-27	2140	No stop
15 29 00	---	18 52 06	47.4	-43.5	5.6		61.9	193	2168	15 25 21

Schedule for TORUN (Code Tr)

Page 9

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
15 29 00	J1302+5748	18 52 06	43.8	-47.6	5.8		56.2	-27	2168	No stop
15 30 30	---	18 53 36	43.6	-47.5	5.8		56.0	63	2180	15 29 01
15 31 10	VV250A	18 54 16	47.1	-43.3	5.6		61.5	13	2180	15 31 10
15 34 50	---	18 57 56	46.8	-43.0	5.7		60.9	220	2208	15 31 11
15 34 50	J1302+5748	18 57 56	43.1	-47.0	5.9		55.4	-28	2208	No stop
15 36 20	---	18 59 27	43.0	-46.8	5.9		55.1	62	2220	15 34 51
15 36 20	VV250A	18 59 27	46.6	-42.9	5.7		60.7	-27	2220	No stop
15 40 00	---	19 03 07	46.2	-42.6	5.8		60.1	193	2248	15 36 21
15 40 00	J1302+5748	19 03 07	42.6	-46.5	6.0		54.6	-28	2248	No stop
15 41 30	---	19 04 38	42.4	-46.3	6.0		54.4	62	2259	15 40 01
15 41 30	VV250A	19 04 38	46.1	-42.4	5.8		59.9	-28	2259	No stop
15 45 10	---	19 08 18	45.7	-42.1	5.9		59.3	192	2287	15 41 31
15 45 10	J1302+5748	19 08 18	42.0	-45.9	6.1		53.9	-28	2287	No stop
15 46 40	---	19 09 48	41.9	-45.8	6.1		53.7	62	2299	15 45 11
15 47 20	VV250A	19 10 29	45.5	-41.9	5.9		58.9	12	2299	15 47 20
15 51 00	---	19 14 09	45.1	-41.6	6.0		58.3	220	2327	15 47 21
15 51 00	J1302+5748	19 14 09	41.4	-45.3	6.2		53.1	-28	2327	No stop
15 52 30	---	19 15 39	41.2	-45.1	6.2		52.9	62	2339	15 51 01
15 52 30	VV250A	19 15 39	45.0	-41.5	6.0		58.1	-28	2339	No stop
15 56 10	---	19 19 20	44.6	-41.2	6.1		57.5	192	2367	15 52 31
15 56 10	J1302+5748	19 19 20	40.8	-44.7	6.3		52.4	-28	2367	No stop
15 57 40	---	19 20 50	40.7	-44.6	6.3		52.1	62	2378	15 56 11
15 57 40	VV250A	19 20 50	44.5	-41.0	6.1		57.3	-28	2378	No stop
16 01 20	---	19 24 31	44.1	-40.7	6.1		56.7	192	2406	15 57 41
16 01 20	J1302+5748	19 24 31	40.3	-44.2	6.4		51.6	-28	2406	No stop
16 02 50	---	19 26 01	40.1	-44.0	6.4		51.4	62	2418	16 01 21
16 03 30	VV250A	19 26 41	43.9	-40.5	6.2		56.3	12	2418	16 03 30
16 07 10	---	19 30 22	43.5	-40.2	6.2		55.8	220	2446	16 03 31
16 07 10	J1302+5748	19 30 22	39.7	-43.5	6.4		50.8	-28	2446	No stop
16 08 40	---	19 31 52	39.5	-43.4	6.5		50.6	62	2458	16 07 11
16 08 40	VV250A	19 31 52	43.4	-40.0	6.3		55.5	-28	2458	No stop
16 12 20	---	19 35 33	43.0	-39.7	6.3		54.9	192	2486	16 08 41

Schedule for TORUN (Code Tr)

Page 10

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
16 12 20	J1302+5748	19 35 33	39.2	-43.0	6.5		50.1	-29	2486	No stop
16 13 50	---	19 37 03	39.0	-42.8	6.6		49.8	61	2497	16 12 21
16 13 50	VV250A	19 37 03	42.9	-39.6	6.3		54.7	-28	2497	No stop
16 17 30	---	19 40 44	42.5	-39.2	6.4		54.1	192	2525	16 13 51
16 17 30	J1302+5748	19 40 44	38.6	-42.4	6.6		49.3	-29	2525	No stop
16 19 00	---	19 42 14	38.5	-42.2	6.6		49.1	61	2537	16 17 31
16 19 40	VV250A	19 42 54	42.3	-39.0	6.4		53.8	12	2537	16 19 40
16 23 20	---	19 46 34	42.0	-38.7	6.5		53.2	220	2565	16 19 41
16 23 20	J1302+5748	19 46 34	38.0	-41.7	6.7		48.5	-29	2565	No stop
16 24 50	---	19 48 05	37.9	-41.6	6.7		48.3	61	2577	16 23 21
16 25 30	VV250A	19 48 45	41.8	-38.5	6.5		52.9	11	2577	16 25 30
16 29 10	---	19 52 25	41.4	-38.1	6.6		52.3	220	2605	16 25 31
16 29 10	J1302+5748	19 52 25	37.5	-41.1	6.8		47.7	-29	2605	No stop
16 30 40	---	19 53 56	37.3	-40.9	6.8		47.4	61	2616	16 29 11
16 30 40	J1740+5211	19 53 56	70.0	-79.1	2.2		74.2	-135	2616	No stop
16 37 10	---	20 00 27	69.0	-78.3	2.3		73.6	255	2666	16 30 41
16 37 50	IRASF17132	20 01 07	65.4	-72.9	2.8		73.2	13	2666	16 37 50
16 41 30	---	20 04 47	64.9	-72.6	2.8		72.8	220	2694	16 37 51
16 41 30	J1740+5211	20 04 47	68.4	-77.8	2.4		73.2	-27	2694	No stop
16 43 00	---	20 06 18	68.2	-77.6	2.4		73.1	63	2706	16 41 31
16 43 40	IRASF17132	20 06 58	64.5	-72.3	2.9		72.6	13	2706	16 43 40
16 47 20	---	20 10 38	64.0	-71.9	2.9		72.2	220	2734	16 43 41
16 47 20	J1740+5211	20 10 38	67.5	-77.1	2.5		72.7	-27	2734	No stop
16 48 40	---	20 11 59	67.3	-77.0	2.5		72.6	53	2744	16 47 21
16 48 40	IRASF17132	20 11 59	63.8	-71.8	3.0		72.1	-27	2744	No stop
16 52 20	---	20 15 39	63.3	-71.4	3.0		71.7	193	2772	16 48 41
16 52 20	J1740+5211	20 15 39	66.8	-76.5	2.6		72.3	-27	2772	No stop
16 53 40	---	20 16 59	66.6	-76.4	2.6		72.2	53	2783	16 52 21
16 53 40	IRASF17132	20 16 59	63.1	-71.3	3.0		71.6	-27	2783	No stop
16 57 20	---	20 20 40	62.6	-70.9	3.1		71.2	193	2811	16 53 41
16 57 20	J1740+5211	20 20 40	66.1	-75.9	2.7		71.8	-27	2811	No stop
16 58 40	---	20 22 00	65.9	-75.8	2.7		71.7	53	2821	16 57 21

Schedule for TORUN (Code Tr)

Page 11

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
16 59 20	IRASF17132	20 22 40	62.3	-70.7	3.1		70.9	13	2821	16 59 20
17 03 00	---	20 26 21	61.8	-70.3	3.2		70.6	220	2849	16 59 21
17 03 00	J1740+5211	20 26 21	65.2	-75.3	2.8		71.3	-27	2849	No stop
17 04 20	---	20 27 41	65.0	-75.1	2.8		71.2	53	2860	17 03 01
17 05 00	IRASF17132	20 28 21	61.5	-70.1	3.2		70.3	13	2860	17 05 00
17 08 40	---	20 32 02	61.0	-69.7	3.3		69.9	220	2888	17 05 01
17 08 40	J1740+5211	20 32 02	64.4	-74.6	2.9		70.8	-27	2888	No stop
17 10 00	---	20 33 22	64.2	-74.4	2.9		70.7	53	2898	17 08 41
17 10 00	IRASF17132	20 33 22	60.8	-69.5	3.3		69.8	-27	2898	No stop
17 13 40	---	20 37 03	60.3	-69.2	3.4		69.4	193	2926	17 10 01
17 13 40	J1740+5211	20 37 03	63.7	-74.0	2.9		70.3	-26	2926	No stop
17 15 00	---	20 38 23	63.5	-73.9	3.0		70.2	54	2936	17 13 41
17 15 00	IRASF17132	20 38 23	60.1	-69.0	3.4		69.3	-27	2936	No stop
17 18 40	---	20 42 04	59.6	-68.6	3.5		68.9	193	2964	17 15 01
17 18 40	J1740+5211	20 42 04	63.0	-73.4	3.0		69.9	-26	2964	No stop
17 20 00	---	20 43 24	62.8	-73.3	3.0		69.8	54	2975	17 18 41
17 20 40	IRASF17132	20 44 04	59.3	-68.4	3.5		68.6	13	2975	17 20 40
17 24 20	---	20 47 44	58.8	-68.0	3.6		68.2	220	3003	17 20 41
17 24 20	J1740+5211	20 47 44	62.2	-72.8	3.1		69.3	-26	3003	No stop
17 25 40	---	20 49 05	62.0	-72.6	3.1		69.2	54	3013	17 24 21
17 26 20	IRASF17132	20 49 45	58.5	-67.8	3.6		68.0	13	3013	17 26 20
17 30 00	---	20 53 25	58.0	-67.4	3.6		67.6	220	3041	17 26 21
17 30 00	J1740+5211	20 53 25	61.3	-72.1	3.2		68.8	-26	3041	No stop
17 31 20	---	20 54 46	61.1	-72.0	3.2		68.7	54	3052	17 30 01
17 31 20	IRASF17132	20 54 46	57.8	-67.3	3.7		67.5	-27	3052	No stop
17 35 00	---	20 58 26	57.3	-66.9	3.7		67.1	193	3080	17 31 21
17 35 00	J1740+5211	20 58 26	60.6	-71.5	3.3		68.3	-26	3080	No stop
17 36 20	---	20 59 46	60.4	-71.4	3.3		68.2	54	3090	17 35 01
17 36 20	IRASF17132	20 59 46	57.1	-66.7	3.8		66.9	-27	3090	No stop
17 40 00	---	21 03 27	56.6	-66.3	3.8		66.5	193	3118	17 36 21
17 40 00	J1740+5211	21 03 27	59.9	-71.0	3.4		67.8	-26	3118	No stop
17 41 20	---	21 04 47	59.7	-70.8	3.4		67.7	54	3128	17 40 01

Schedule for TORUN (Code Tr)

Page 12

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
17 42 00	IRASF17132	21 05 27	56.3	-66.1	3.8		66.3	14	3128	17 42 00
17 45 40	---	21 09 08	55.8	-65.7	3.9		65.9	220	3156	17 42 01
17 45 40	J1740+5211	21 09 08	59.1	-70.3	3.5		67.3	-26	3156	No stop
17 47 00	---	21 10 28	58.9	-70.1	3.5		67.1	54	3167	17 45 41
17 47 40	IRASF17132	21 11 08	55.6	-65.5	3.9		65.7	14	3167	17 47 40
17 51 20	---	21 14 49	55.1	-65.1	4.0		65.3	220	3195	17 47 41
17 51 20	J1740+5211	21 14 49	58.3	-69.6	3.6		66.7	-26	3195	No stop
17 52 40	---	21 16 09	58.1	-69.5	3.6		66.6	54	3205	17 51 21
17 52 40	IRASF17132	21 16 09	54.9	-64.9	4.0		65.1	-26	3205	No stop
17 56 20	---	21 19 50	54.4	-64.5	4.1		64.7	194	3233	17 52 41
17 56 20	J1740+5211	21 19 50	57.6	-69.1	3.6		66.2	-26	3233	No stop
17 57 40	---	21 21 10	57.4	-68.9	3.7		66.1	54	3244	17 56 21
17 57 40	IRASF17132	21 21 10	54.2	-64.4	4.1		64.6	-26	3244	No stop
18 01 20	---	21 24 51	53.7	-64.0	4.2		64.2	194	3272	17 57 41
18 01 20	J1740+5211	21 24 51	56.9	-68.5	3.7		65.7	-26	3272	No stop
18 02 40	---	21 26 11	56.7	-68.3	3.8		65.6	54	3282	18 01 21
18 03 20	IRASF17132	21 26 51	53.4	-63.8	4.2		64.0	14	3282	18 03 20
18 07 00	---	21 30 31	52.9	-63.4	4.3		63.5	220	3310	18 03 21
18 07 00	J1740+5211	21 30 31	56.1	-67.8	3.8		65.1	-26	3310	No stop
18 08 20	---	21 31 52	55.9	-67.7	3.8		65.0	54	3320	18 07 01
18 09 00	IRASF17132	21 32 32	52.7	-63.1	4.3		63.3	14	3320	18 09 00
18 12 40	---	21 36 12	52.2	-62.7	4.4		62.9	220	3348	18 09 01
18 12 40	J1740+5211	21 36 12	55.3	-67.2	3.9		64.5	-26	3348	No stop
18 14 00	---	21 37 33	55.1	-67.0	3.9		64.4	54	3359	18 12 41
18 14 00	IRASF17132	21 37 33	52.0	-62.6	4.4		62.8	-26	3359	No stop
18 17 40	---	21 41 13	51.5	-62.2	4.4		62.3	194	3387	18 14 01
18 17 40	J1740+5211	21 41 13	54.6	-66.6	4.0		64.0	-25	3387	No stop
18 19 00	---	21 42 33	54.4	-66.4	4.0		63.9	55	3397	18 17 41
18 19 00	IRASF17132	21 42 33	51.3	-62.0	4.5		62.2	-26	3397	No stop
18 22 40	---	21 46 14	50.8	-61.6	4.5		61.8	194	3425	18 19 01
18 22 40	J1740+5211	21 46 14	53.9	-66.0	4.1		63.5	-25	3425	No stop
18 24 00	---	21 47 34	53.8	-65.9	4.1		63.4	55	3436	18 22 41

Schedule for TORUN (Code Tr)

Page 13

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
18 24 40	IRASF17132	21 48 14	50.6	-61.4	4.6		61.6	14	3436	18 24 40
18 28 20	---	21 51 55	50.1	-61.0	4.6		61.1	220	3464	18 24 41
18 28 20	J1740+5211	21 51 55	53.2	-65.4	4.2		62.9	-25	3464	No stop
18 29 40	---	21 53 15	53.0	-65.2	4.2		62.8	55	3474	18 28 21
18 30 20	IRASF17132	21 53 55	49.8	-60.7	4.7		60.9	14	3474	18 30 20
18 34 00	---	21 57 36	49.4	-60.3	4.7		60.5	220	3502	18 30 21
18 34 00	J1740+5211	21 57 36	52.4	-64.7	4.3		62.3	-25	3502	No stop
18 35 20	---	21 58 56	52.2	-64.5	4.3		62.2	55	3512	18 34 01
18 35 20	IRASF17132	21 58 56	49.2	-60.2	4.7		60.3	-25	3512	No stop
18 39 00	---	22 02 37	48.7	-59.8	4.8		59.9	195	3540	18 35 21
18 39 00	J1740+5211	22 02 37	51.7	-64.1	4.4		61.8	-25	3540	No stop
18 40 20	---	22 03 57	51.5	-64.0	4.4		61.7	55	3551	18 39 01
18 40 20	IRASF17132	22 03 57	48.5	-59.6	4.8		59.8	-25	3551	No stop
18 44 00	---	22 07 38	48.1	-59.2	4.9		59.3	195	3579	18 40 21
18 44 00	J1740+5211	22 07 38	51.0	-63.5	4.4		61.3	-25	3579	No stop
18 45 20	---	22 08 58	50.9	-63.4	4.5		61.1	55	3589	18 44 01
18 46 00	IRASF17132	22 09 38	47.8	-59.0	4.9		59.1	15	3589	18 46 00
18 49 40	---	22 13 18	47.3	-58.5	5.0		58.7	220	3617	18 46 01
18 49 40	J1740+5211	22 13 18	50.3	-62.9	4.5		60.7	-25	3617	No stop
18 51 00	---	22 14 39	50.1	-62.7	4.6		60.5	55	3628	18 49 41
18 51 40	IRASF17132	22 15 19	47.1	-58.3	5.0		58.5	15	3628	18 51 40
18 55 20	---	22 18 59	46.6	-57.9	5.1		58.0	220	3656	18 51 41
18 55 20	J1740+5211	22 18 59	49.5	-62.2	4.6		60.0	-25	3656	No stop
18 56 40	---	22 20 20	49.3	-62.0	4.7		59.9	55	3666	18 55 21
18 56 40	J2327+0940	22 20 20	44.5	156.2	-1.1		-14.3	-456	3666	No stop
19 04 30	---	22 28 11	45.0	158.8	-1.0		-12.7	14	3726	18 56 41
19 05 10	NGC7674	22 28 51	44.1	159.2	-1.0		-12.5	24	3726	19 05 10
19 08 50	---	22 32 32	44.3	160.4	-0.9		-11.7	220	3754	19 05 11
19 08 50	J2327+0940	22 32 32	45.2	160.3	-0.9		-11.9	-16	3754	No stop
19 09 50	---	22 33 32	45.3	160.6	-0.9		-11.6	44	3762	19 08 51
19 10 30	NGC7674	22 34 12	44.4	161.0	-0.9		-11.4	24	3762	19 10 30
19 14 10	---	22 37 53	44.6	162.2	-0.8		-10.7	220	3790	19 10 31

Schedule for TORUN (Code Tr)

Page 14

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
19 14 10	J2327+0940	22 37 53	45.5	162.1	-0.8		-10.8	-16	3790	No stop
19 15 10	---	22 38 53	45.5	162.5	-0.8		-10.6	44	3798	19 14 11
19 15 10	NGC7674	22 38 53	44.6	162.6	-0.8		-10.5	-16	3798	No stop
19 18 50	---	22 42 33	44.8	163.8	-0.8		-9.7	204	3826	19 15 11
19 18 50	J2327+0940	22 42 33	45.7	163.8	-0.8		-9.8	-16	3826	No stop
19 19 50	---	22 43 33	45.7	164.1	-0.7		-9.6	44	3834	19 18 51
19 19 50	NGC7674	22 43 33	44.8	164.2	-0.8		-9.5	-16	3834	No stop
19 23 30	---	22 47 14	45.0	165.5	-0.7		-8.8	204	3862	19 19 51
19 23 30	J2327+0940	22 47 14	45.9	165.4	-0.7		-8.8	-16	3862	No stop
19 24 30	---	22 48 14	45.9	165.7	-0.7		-8.6	44	3869	19 23 31
19 25 10	NGC7674	22 48 54	45.0	166.0	-0.7		-8.4	24	3869	19 25 10
19 28 50	---	22 52 35	45.2	167.3	-0.6		-7.7	220	3898	19 25 11
19 28 50	J2327+0940	22 52 35	46.1	167.3	-0.6		-7.7	-16	3898	No stop
19 29 50	---	22 53 35	46.1	167.6	-0.6		-7.5	44	3905	19 28 51
19 29 50	NGC7674	22 53 35	45.2	167.7	-0.6		-7.5	-16	3905	No stop
19 33 30	---	22 57 16	45.3	168.9	-0.5		-6.7	204	3933	19 29 51
19 33 30	J2327+0940	22 57 16	46.2	168.9	-0.5		-6.7	-16	3933	No stop
19 34 30	---	22 58 16	46.2	169.3	-0.5		-6.5	44	3941	19 33 31
19 34 30	NGC7674	22 58 16	45.3	169.3	-0.5		-6.5	-16	3941	No stop
19 38 10	---	23 01 56	45.4	170.6	-0.4		-5.7	204	3969	19 34 31
19 38 10	J2327+0940	23 01 56	46.3	170.6	-0.4		-5.7	-16	3969	No stop
19 39 10	---	23 02 57	46.4	170.9	-0.4		-5.5	44	3977	19 38 11
19 39 50	NGC7674	23 03 37	45.5	171.2	-0.4		-5.4	24	3977	19 39 50
19 43 30	---	23 07 17	45.6	172.4	-0.4		-4.6	220	4005	19 39 51
19 43 30	J2327+0940	23 07 17	46.4	172.5	-0.3		-4.6	-16	4005	No stop
19 44 30	---	23 08 18	46.5	172.8	-0.3		-4.4	44	4013	19 43 31
19 44 30	NGC7674	23 08 18	45.6	172.8	-0.3		-4.4	-16	4013	No stop
19 48 10	---	23 11 58	45.6	174.1	-0.3		-3.6	204	4041	19 44 31
19 48 10	J2327+0940	23 11 58	46.5	174.2	-0.3		-3.6	-16	4041	No stop
19 49 10	---	23 12 58	46.5	174.5	-0.3		-3.3	44	4049	19 48 11
19 49 10	NGC7674	23 12 58	45.6	174.4	-0.3		-3.4	-16	4049	No stop
19 52 50	---	23 16 39	45.7	175.7	-0.2		-2.6	204	4077	19 49 11

Schedule for TORUN (Code Tr)

Page 15

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
19 52 50	J2327+0940	23 16 39	46.6	175.8	-0.2		-2.5	-16	4077	No stop
19 53 50	---	23 17 39	46.6	176.2	-0.2		-2.3	44	4084	19 52 51
19 54 30	NGC7674	23 18 19	45.7	176.3	-0.2		-2.2	24	4084	19 54 30
19 58 10	---	23 22 00	45.7	177.6	-0.1		-1.4	220	4113	19 54 31
19 58 10	J2327+0940	23 22 00	46.6	177.7	-0.1		-1.4	-16	4113	No stop
19 59 10	---	23 23 00	46.6	178.1	-0.1		-1.2	44	4120	19 58 11
19 59 10	NGC7674	23 23 00	45.7	178.0	-0.1		-1.2	-16	4120	No stop
20 02 50	---	23 26 41	45.8	179.3	-0.0		-0.4	204	4148	19 59 11
20 02 50	J2327+0940	23 26 41	46.7	179.4	-0.0		-0.4	-16	4148	No stop
20 03 50	---	23 27 41	46.7	179.8	-0.0		-0.1	44	4156	20 02 51
20 03 50	NGC7674	23 27 41	45.8	179.6	-0.0		-0.2	-16	4156	No stop
20 07 30	---	23 31 21	45.8	180.9	0.0		0.6	204	4184	20 03 51
20 07 30	J2327+0940	23 31 21	46.6	181.1	0.1		0.7	-16	4184	No stop
20 08 30	---	23 32 21	46.6	181.5	0.1		0.9	44	4192	20 07 31
20 09 10	NGC7674	23 33 02	45.8	181.5	0.1		0.9	24	4192	20 09 10
20 12 50	---	23 36 42	45.7	182.8	0.1		1.7	220	4220	20 09 11
20 12 50	J2327+0940	23 36 42	46.6	183.0	0.1		1.8	-16	4220	No stop
20 13 50	---	23 37 42	46.6	183.4	0.2		2.1	44	4228	20 12 51
20 13 50	NGC7674	23 37 42	45.7	183.2	0.2		1.9	-16	4228	No stop
20 17 30	---	23 41 23	45.7	184.5	0.2		2.7	204	4256	20 13 51
20 17 30	J2327+0940	23 41 23	46.6	184.7	0.2		2.9	-16	4256	No stop
20 18 30	---	23 42 23	46.6	185.1	0.2		3.1	44	4264	20 17 31
20 18 30	NGC7674	23 42 23	45.7	184.9	0.2		2.9	-16	4264	No stop
20 22 10	---	23 46 04	45.6	186.1	0.3		3.7	204	4292	20 18 31
20 22 10	J2327+0940	23 46 04	46.5	186.4	0.3		3.9	-16	4292	No stop
20 23 10	---	23 47 04	46.5	186.7	0.3		4.1	44	4300	20 22 11
20 23 50	NGC7674	23 47 44	45.6	186.7	0.3		4.1	24	4300	20 23 50
20 27 30	---	23 51 25	45.5	188.0	0.4		4.9	220	4328	20 23 51
20 27 30	J2327+0940	23 51 25	46.4	188.3	0.4		5.0	-16	4328	No stop
20 28 30	---	23 52 25	46.4	188.6	0.4		5.2	44	4335	20 27 31
20 28 30	NGC7674	23 52 25	45.5	188.4	0.4		5.1	-16	4335	No stop
20 32 10	---	23 56 05	45.4	189.7	0.5		5.9	204	4364	20 28 31

Schedule for TORUN (Code Tr)

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LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
20 32 10	J2327+0940	23 56 05	46.3	189.9	0.5		6.0	-16	4364	No stop
20 33 10	---	23 57 05	46.3	190.3	0.5		6.3	44	4371	20 32 11
20 33 10	NGC7674	23 57 05	45.4	190.0	0.5		6.1	-16	4371	No stop
20 36 50	---	00 00 46	45.3	191.3	0.5		6.8	204	4399	20 33 11
20 36 50	J2327+0940	00 00 46	46.2	191.6	0.5		7.0	-16	4399	No stop
20 37 50	---	00 01 46	46.1	191.9	0.6		7.2	44	4407	20 36 51
20 38 30	NGC7674	00 02 26	45.2	191.9	0.6		7.2	24	4407	20 38 30
20 42 10	---	00 06 07	45.1	193.2	0.6		8.0	220	4435	20 38 31
20 42 10	J2327+0940	00 06 07	46.0	193.5	0.6		8.2	-16	4435	No stop
20 43 10	---	00 07 07	46.0	193.8	0.6		8.4	44	4443	20 42 11
20 43 50	NGC7674	00 07 47	45.1	193.7	0.7		8.3	24	4443	20 43 50
20 47 30	---	00 11 28	44.9	195.0	0.7		9.1	220	4471	20 43 51
20 47 30	J2327+0940	00 11 28	45.8	195.3	0.7		9.3	-16	4471	No stop
20 48 30	---	00 12 28	45.7	195.7	0.7		9.5	44	4479	20 47 31
20 48 30	J0152+2207	00 12 28	53.6	138.4	-1.7		-25.5	-128	4479	No stop
20 52 00	---	00 15 59	54.0	139.6	-1.6		-24.8	82	4506	20 48 31
20 52 00	NGC0695	00 15 59	54.5	139.7	-1.6		-24.9	-13	4506	No stop
20 55 40	---	00 19 39	54.9	141.0	-1.5		-24.2	207	4534	20 52 01
20 55 40	J0152+2207	00 19 39	54.3	141.0	-1.6		-24.1	-13	4534	No stop
20 56 40	---	00 20 39	54.4	141.3	-1.5		-23.9	47	4541	20 55 41
20 57 20	NGC0695	00 21 19	55.0	141.6	-1.5		-23.8	27	4541	20 57 20
21 01 00	---	00 25 00	55.3	143.0	-1.5		-23.1	220	4570	20 57 21
21 01 00	J0152+2207	00 25 00	54.8	142.9	-1.5		-23.0	-13	4570	No stop
21 02 00	---	00 26 00	54.9	143.3	-1.5		-22.8	47	4577	21 01 01
21 02 00	NGC0695	00 26 00	55.4	143.4	-1.4		-22.8	-13	4577	No stop
21 05 40	---	00 29 41	55.8	144.8	-1.4		-22.0	207	4605	21 02 01
21 05 40	J0152+2207	00 29 41	55.2	144.7	-1.4		-22.0	-13	4605	No stop
21 06 40	---	00 30 41	55.3	145.1	-1.4		-21.8	47	4613	21 05 41
21 06 40	NGC0695	00 30 41	55.8	145.1	-1.4		-21.8	-13	4613	No stop
21 10 20	---	00 34 22	56.2	146.6	-1.3		-21.0	207	4641	21 06 41
21 10 20	J0152+2207	00 34 22	55.6	146.5	-1.3		-21.0	-13	4641	No stop
21 11 20	---	00 35 22	55.7	146.8	-1.3		-20.8	47	4649	21 10 21

Schedule for TORUN (Code Tr)

Page 17

LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
21 12 00	NGC0695	00 36 02	56.3	147.2	-1.3		-20.6	27	4649	21 12 00
21 15 40	---	00 39 42	56.6	148.7	-1.2		-19.8	220	4677	21 12 01
21 15 40	J0152+2207	00 39 42	56.1	148.5	-1.2		-19.8	-13	4677	No stop
21 16 40	---	00 40 43	56.1	148.9	-1.2		-19.6	47	4685	21 15 41
21 16 40	NGC0695	00 40 43	56.7	149.0	-1.2		-19.6	-13	4685	No stop
21 20 20	---	00 44 23	56.9	150.5	-1.1		-18.7	207	4713	21 16 41
21 20 20	J0152+2207	00 44 23	56.4	150.4	-1.1		-18.7	-13	4713	No stop
21 21 20	---	00 45 23	56.5	150.8	-1.1		-18.5	47	4721	21 20 21
21 21 20	NGC0695	00 45 23	57.0	150.9	-1.1		-18.4	-13	4721	No stop
21 25 00	---	00 49 04	57.3	152.4	-1.0		-17.5	207	4749	21 21 21
21 25 00	J0152+2207	00 49 04	56.8	152.2	-1.1		-17.6	-13	4749	No stop
21 26 00	---	00 50 04	56.8	152.6	-1.1		-17.3	47	4756	21 25 01
21 26 40	NGC0695	00 50 44	57.4	153.1	-1.0		-17.1	27	4756	21 26 40
21 30 20	---	00 54 25	57.6	154.6	-1.0		-16.2	220	4785	21 26 41
21 30 20	J0152+2207	00 54 25	57.1	154.4	-1.0		-16.3	-13	4785	No stop
21 31 20	---	00 55 25	57.2	154.8	-1.0		-16.0	47	4792	21 30 21
21 31 20	NGC0695	00 55 25	57.7	155.0	-0.9		-16.0	-13	4792	No stop
21 35 00	---	00 59 06	57.9	156.5	-0.9		-15.0	207	4820	21 31 21
21 35 00	J0152+2207	00 59 06	57.4	156.3	-0.9		-15.1	-13	4820	No stop
21 36 00	---	01 00 06	57.5	156.7	-0.9		-14.8	47	4828	21 35 01
21 36 00	NGC0695	01 00 06	58.0	157.0	-0.9		-14.7	-13	4828	No stop
21 39 40	---	01 03 46	58.2	158.5	-0.8		-13.8	207	4856	21 36 01
21 39 40	J0152+2207	01 03 46	57.7	158.3	-0.8		-13.9	-13	4856	No stop
21 40 40	---	01 04 47	57.7	158.7	-0.8		-13.6	47	4864	21 39 41
21 41 20	NGC0695	01 05 27	58.3	159.2	-0.8		-13.3	27	4864	21 41 20
21 45 00	---	01 09 07	58.5	160.8	-0.7		-12.3	220	4892	21 41 21
21 45 00	J0152+2207	01 09 07	58.0	160.5	-0.7		-12.5	-13	4892	No stop
21 46 00	---	01 10 07	58.0	161.0	-0.7		-12.2	47	4900	21 45 01
21 46 00	NGC0695	01 10 07	58.5	161.2	-0.7		-12.1	-13	4900	No stop
21 49 40	---	01 13 48	58.7	162.8	-0.6		-11.1	207	4928	21 46 01
21 49 40	J0152+2207	01 13 48	58.2	162.6	-0.7		-11.2	-13	4928	No stop
21 50 40	---	01 14 48	58.2	163.0	-0.6		-10.9	47	4936	21 49 41

Schedule for TORUN (Code Tr)

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LIRGI - Source group 1 - Run d

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 23 Oct 2013 Day 296 ---										
21 50 40	NGC0695	01 14 48	58.7	163.3	-0.6		-10.8	-13	4936	No stop
21 54 20	---	01 18 29	58.9	164.9	-0.6		-9.8	207	4964	21 50 41
21 54 20	J0152+2207	01 18 29	58.4	164.6	-0.6		-9.9	-13	4964	No stop
21 55 20	---	01 19 29	58.4	165.0	-0.6		-9.7	47	4972	21 54 21
21 56 00	NGC0695	01 20 09	59.0	165.6	-0.5		-9.3	27	4972	21 56 00
21 59 40	---	01 23 50	59.1	167.3	-0.5		-8.3	220	5000	21 56 01
21 59 40	J0152+2207	01 23 50	58.6	166.9	-0.5		-8.4	-13	5000	No stop
22 00 40	---	01 24 50	58.6	167.4	-0.5		-8.2	47	5007	21 59 41
22 00 40	NGC0695	01 24 50	59.1	167.7	-0.5		-8.0	-13	5007	No stop
22 04 20	---	01 28 30	59.2	169.3	-0.4		-6.9	207	5036	22 00 41
22 04 20	J0152+2207	01 28 30	58.7	169.0	-0.4		-7.1	-13	5036	No stop
22 05 20	---	01 29 31	58.8	169.4	-0.4		-6.8	47	5043	22 04 21
22 05 20	NGC0695	01 29 31	59.3	169.8	-0.4		-6.6	-13	5043	No stop
22 09 00	---	01 33 11	59.3	171.4	-0.3		-5.6	207	5071	22 05 21
22 09 00	J0152+2207	01 33 11	58.9	171.1	-0.3		-5.8	-13	5071	No stop
22 10 00	---	01 34 11	58.9	171.5	-0.3		-5.5	47	5079	22 09 01
22 10 40	NGC0695	01 34 52	59.4	172.2	-0.3		-5.1	27	5079	22 10 40
22 14 20	---	01 38 32	59.4	173.9	-0.2		-4.0	220	5107	22 10 41
22 14 20	J0152+2207	01 38 32	59.0	173.4	-0.2		-4.2	-13	5107	No stop
22 15 20	---	01 39 32	59.0	173.9	-0.2		-4.0	47	5115	22 14 21
22 15 20	NGC0695	01 39 32	59.5	174.3	-0.2		-3.7	-13	5115	No stop
22 19 00	---	01 43 13	59.5	176.0	-0.1		-2.6	207	5143	22 15 21
22 19 00	J0152+2207	01 43 13	59.0	175.5	-0.2		-2.9	-13	5143	No stop
22 20 00	---	01 44 13	59.0	176.0	-0.1		-2.6	47	5151	22 19 01
22 20 00	NGC0695	01 44 13	59.5	176.4	-0.1		-2.3	-13	5151	No stop
22 23 40	---	01 47 54	59.5	178.1	-0.1		-1.2	207	5179	22 20 01
22 23 40	J0152+2207	01 47 54	59.1	177.7	-0.1		-1.5	-13	5179	No stop
22 24 40	---	01 48 54	59.1	178.1	-0.1		-1.2	47	5187	22 23 41
22 25 20	NGC0695	01 49 34	59.6	178.9	-0.0		-0.7	27	5187	22 25 20
22 29 00	---	01 53 15	59.6	180.5	0.0		0.4	220	5215	22 25 21
22 29 00	J0152+2207	01 53 15	59.1	180.1	0.0		0.0	-13	5215	No stop
22 30 00	---	01 54 15	59.1	180.5	0.0		0.3	47	5222	22 29 01

SETUP FILE INFORMATION:

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

=====
Setup file: sess313.C1024

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

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

Setup group: 6 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
IF SB =	U	U	U	U	U	U	U	U	U
	U	U	U	U	U	U	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=	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 = 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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* NGC0695	01 48 27.865737 22 20 04.49740	* 01 51 14.360000 * 22 34 53.60000	01 52 02.617018 22 39 05.35542	0.00 0.00
* J0152+2207	01 49 31.744135 21 52 20.74791	* 01 52 18.059046 * 22 07 07.69979	01 53 06.256067 22 11 18.79034	0.00 0.00
* VV250A	13 13 41.827997 62 23 17.94084	* 13 15 34.960000 * 62 07 28.80000	13 16 03.023607 62 03 04.86643	0.00 0.00
* J1302+5748	13 00 47.131441 58 04 43.18811	* 13 02 52.465277 * 57 48 37.60932	13 03 24.410544 57 44 08.43731	0.00 0.00
* VV705	15 16 19.300379 42 55 38.34595	* 15 18 06.120000 * 42 44 45.10000	15 18 34.047929 42 41 57.47975	0.00 0.00
* J1521+4336	15 20 04.906466 43 47 20.02030	* 15 21 49.613879 * 43 36 39.26817	15 22 16.933299 43 33 55.40680	0.00 0.00
* IRASF17132	17 13 13.492841 53 13 49.22408	* 17 14 19.790000 * 53 10 28.60000	17 14 36.719108 53 09 55.41918	0.00 0.00
* J1740+5211	17 39 29.003552 52 13 10.43849	* 17 40 36.977849 * 52 11 43.40743	17 40 54.654453 52 11 43.29506	0.00 0.00
* NGC6670B	18 32 54.385680 59 50 53.33524	* 18 33 34.300000 * 59 53 18.20000	18 33 44.473719 59 54 24.97273	0.00 0.00
* J1824+5651	18 23 14.951499 56 49 18.07202	* 18 24 07.068377 * 56 51 01.49083	18 24 20.630431 56 51 56.39248	0.00 0.00
* NGC7674	23 25 24.417983 08 30 12.56310	* 23 27 56.720000 * 08 46 44.10000	23 28 40.421047 08 51 31.81773	0.00 0.00
* J2327+0940	23 25 01.451380 09 23 38.17562	* 23 27 33.580562 * 09 40 09.46273	23 28 17.243622 09 44 57.30846	0.00 0.00
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.679950	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 47 24.38230	0.52

EFFECT OF SOLAR CORONA

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)
NGC0695	169.0	J1740+5211	80.3
J0152+2207	169.4	NGC6670B	90.4
VV250A	74.0	J1824+5651	88.1
J1302+5748	70.1	NGC7674	144.3
VV705	57.7	J2327+0940	144.3
J1521+4336	58.8	3C345	64.8
IRASF17132	77.7		

IC883 EVN OBSERVATIONS

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Observing mode: 1024 Mbps

Notes: 6 cm, dual pol.

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 24 Oct 2013 Day 297 ---										
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										
06 00 00	J1159+2914	09 25 29	53.0	114.8	-2.6		-38.6	0	0	06 00 00
06 04 00	=1156+295	09 29 29	53.6	116.0	-2.5		-38.2	240	31	06 00 01
06 06 00	J1317+3425	09 31 30	46.3	92.0	-3.8		-46.6	57	31	06 06 00
06 07 00	=1315+346	09 32 30	46.5	92.2	-3.8		-46.6	60	38	06 06 01
06 07 00	IC883	09 32 30	45.9	91.9	-3.8		-46.4	-14	38	No stop
06 10 40	---	09 36 10	46.4	92.6	-3.8		-46.4	206	67	06 07 01
06 10 40	J1317+3425	09 36 10	47.0	92.9	-3.7		-46.6	-14	67	No stop
06 12 00	=1315+346	09 37 31	47.2	93.2	-3.7		-46.6	66	77	06 10 41
06 12 00	IC883	09 37 31	46.6	92.9	-3.7		-46.4	-14	77	No stop
06 15 40	---	09 41 11	47.2	93.7	-3.7		-46.3	206	105	06 12 01
06 16 20	J1317+3425	09 41 51	47.9	94.1	-3.6		-46.5	26	105	06 16 20
06 17 20	=1315+346	09 42 51	48.0	94.4	-3.6		-46.5	60	113	06 16 21
06 17 20	IC883	09 42 51	47.4	94.0	-3.6		-46.3	-14	113	No stop
06 21 00	---	09 46 32	48.0	94.8	-3.6		-46.2	206	141	06 17 21
06 21 00	J1317+3425	09 46 32	48.6	95.1	-3.5		-46.4	-14	141	No stop
06 22 20	=1315+346	09 47 52	48.8	95.4	-3.5		-46.4	66	151	06 21 01
06 22 20	IC883	09 47 52	48.2	95.1	-3.6		-46.2	-14	151	No stop
06 26 00	---	09 51 33	48.7	95.9	-3.5		-46.1	206	179	06 22 21

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 24 Oct 2013 Day 297 ---										
06 26 40	J1317+3425	09 52 13	49.4	96.4	-3.4		-46.3	26	179	06 26 40
06 27 40	=1315+346	09 53 13	49.6	96.6	-3.4		-46.3	60	187	06 26 41
06 27 40	IC883	09 53 13	49.0	96.2	-3.5		-46.1	-14	187	No stop
06 31 20	---	09 56 54	49.5	97.1	-3.4		-46.0	206	215	06 27 41
06 31 20	J1317+3425	09 56 54	50.1	97.4	-3.4		-46.2	-14	215	No stop
06 32 40	=1315+346	09 58 14	50.3	97.7	-3.3		-46.1	66	225	06 31 21
06 32 40	IC883	09 58 14	49.7	97.4	-3.4		-46.0	-14	225	No stop
06 36 20	---	10 01 55	50.3	98.2	-3.3		-45.9	206	253	06 32 41
06 37 00	J1317+3425	10 02 35	51.0	98.7	-3.3		-46.0	26	253	06 37 00
06 38 00	=1315+346	10 03 35	51.1	98.9	-3.2		-45.9	60	261	06 37 01
06 38 00	IC883	10 03 35	50.5	98.6	-3.3		-45.8	-14	261	No stop
06 41 40	---	10 07 15	51.0	99.4	-3.2		-45.7	206	289	06 38 01
06 41 40	J1317+3425	10 07 15	51.7	99.8	-3.2		-45.8	-14	289	No stop
06 43 00	=1315+346	10 08 36	51.9	100.1	-3.2		-45.7	66	300	06 41 41
06 43 00	IC883	10 08 36	51.2	99.7	-3.2		-45.6	-14	300	No stop
06 46 40	---	10 12 16	51.8	100.6	-3.1		-45.4	206	328	06 43 01
06 47 20	J1317+3425	10 12 56	52.5	101.1	-3.1		-45.5	26	328	06 47 20
06 48 20	=1315+346	10 13 57	52.7	101.3	-3.1		-45.5	60	335	06 47 21
06 48 20	IC883	10 13 57	52.0	101.0	-3.1		-45.4	-14	335	No stop
06 52 00	---	10 17 37	52.6	101.8	-3.1		-45.2	206	364	06 48 21
06 52 00	J1317+3425	10 17 37	53.2	102.2	-3.0		-45.3	-14	364	No stop
06 53 20	=1315+346	10 18 57	53.4	102.5	-3.0		-45.2	66	374	06 52 01
06 53 20	IC883	10 18 57	52.8	102.2	-3.0		-45.1	-14	374	No stop
06 57 00	---	10 22 38	53.3	103.1	-3.0		-44.9	206	402	06 53 21
06 57 40	J1317+3425	10 23 18	54.0	103.6	-2.9		-45.0	26	402	06 57 40
06 58 40	=1315+346	10 24 18	54.2	103.9	-2.9		-44.9	60	410	06 57 41
06 58 40	IC883	10 24 18	53.6	103.5	-2.9		-44.8	-14	410	No stop
07 02 20	---	10 27 59	54.1	104.4	-2.9		-44.6	206	438	06 58 41
07 03 00	J1317+3425	10 28 39	54.8	105.0	-2.8		-44.6	26	438	07 03 00
07 04 00	=1315+346	10 29 39	55.0	105.2	-2.8		-44.6	60	445	07 03 01
07 06 00	J1159+2914	10 31 39	61.1	137.1	-1.5		-27.9	42	445	07 06 00
07 12 00	=1156+295	10 37 40	61.7	139.5	-1.4		-26.5	360	492	07 06 01

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 24 Oct 2013 Day 297 ---										
07 14 00	J1317+3425	10 39 41	56.4	107.9	-2.6		-43.8	41	492	07 14 00
07 15 00	=1315+346	10 40 41	56.5	108.1	-2.6		-43.7	60	499	07 14 01
07 15 00	IC883	10 40 41	55.9	107.7	-2.7		-43.7	-14	499	No stop
07 18 40	---	10 44 22	56.4	108.7	-2.6		-43.4	206	527	07 15 01
07 18 40	J1317+3425	10 44 22	57.1	109.1	-2.6		-43.4	-14	527	No stop
07 20 00	=1315+346	10 45 42	57.3	109.5	-2.5		-43.3	66	538	07 18 41
07 20 00	IC883	10 45 42	56.6	109.0	-2.6		-43.3	-14	538	No stop
07 23 40	---	10 49 22	57.2	110.0	-2.5		-42.9	206	566	07 20 01
07 24 20	J1317+3425	10 50 02	57.9	110.7	-2.5		-42.9	26	566	07 24 20
07 25 20	=1315+346	10 51 03	58.0	111.0	-2.5		-42.8	60	573	07 24 21
07 25 20	IC883	10 51 03	57.4	110.5	-2.5		-42.8	-14	573	No stop
07 29 00	---	10 54 43	57.9	111.6	-2.4		-42.4	206	602	07 25 21
07 29 00	J1317+3425	10 54 43	58.5	112.1	-2.4		-42.4	-14	602	No stop
07 30 20	=1315+346	10 56 03	58.7	112.5	-2.4		-42.2	66	612	07 29 01
07 30 20	IC883	10 56 03	58.1	111.9	-2.4		-42.2	-14	612	No stop
07 34 00	---	10 59 44	58.6	113.0	-2.4		-41.8	206	640	07 30 21
07 34 40	J1317+3425	11 00 24	59.3	113.8	-2.3		-41.7	26	640	07 34 40
07 35 40	=1315+346	11 01 24	59.5	114.1	-2.3		-41.6	60	648	07 34 41
07 35 40	IC883	11 01 24	58.8	113.5	-2.3		-41.7	-14	648	No stop
07 39 20	---	11 05 05	59.3	114.6	-2.3		-41.2	206	676	07 35 41
07 39 20	J1317+3425	11 05 05	60.0	115.2	-2.2		-41.2	-14	676	No stop
07 40 40	=1315+346	11 06 25	60.1	115.6	-2.2		-41.0	66	686	07 39 21
07 40 40	IC883	11 06 25	59.5	115.0	-2.2		-41.1	-14	686	No stop
07 44 20	---	11 10 06	60.0	116.2	-2.2		-40.6	206	714	07 40 41
07 45 00	J1317+3425	11 10 46	60.7	117.0	-2.1		-40.4	26	714	07 45 00
07 46 00	=1315+346	11 11 46	60.9	117.3	-2.1		-40.3	60	722	07 45 01
07 46 00	IC883	11 11 46	60.2	116.7	-2.2		-40.4	-14	722	No stop
07 49 40	---	11 15 27	60.7	117.9	-2.1		-39.8	206	750	07 46 01
07 49 40	J1317+3425	11 15 27	61.3	118.5	-2.0		-39.7	-14	750	No stop
07 51 00	=1315+346	11 16 47	61.5	119.0	-2.0		-39.5	66	760	07 49 41
07 51 00	IC883	11 16 47	60.9	118.3	-2.1		-39.6	-14	760	No stop
07 54 40	---	11 20 27	61.4	119.6	-2.0		-39.1	206	788	07 51 01

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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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 24 Oct 2013 Day 297 ---										
07 55 20	J1317+3425	11 21 08	62.1	120.4	-2.0		-38.8	26	788	07 55 20
07 56 20	=1315+346	11 22 08	62.2	120.8	-1.9		-38.7	60	796	07 55 21
07 56 20	IC883	11 22 08	61.6	120.1	-2.0		-38.8	-14	796	No stop
08 00 00	---	11 25 48	62.1	121.4	-1.9		-38.2	206	824	07 56 21
08 00 00	J1317+3425	11 25 48	62.7	122.1	-1.9		-38.1	-14	824	No stop
08 01 20	=1315+346	11 27 09	62.9	122.5	-1.9		-37.8	66	835	08 00 01
08 01 20	IC883	11 27 09	62.3	121.8	-1.9		-38.0	-14	835	No stop
08 05 00	---	11 30 49	62.7	123.2	-1.8		-37.4	206	863	08 01 21
08 05 40	J1317+3425	11 31 29	63.4	124.1	-1.8		-37.0	26	863	08 05 40
08 06 40	=1315+346	11 32 29	63.5	124.5	-1.8		-36.8	60	870	08 05 41
08 06 40	IC883	11 32 29	62.9	123.8	-1.8		-37.1	-14	870	No stop
08 10 20	---	11 36 10	63.4	125.1	-1.8		-36.4	206	899	08 06 41
08 10 20	J1317+3425	11 36 10	64.0	125.9	-1.7		-36.1	-14	899	No stop
08 11 40	=1315+346	11 37 30	64.1	126.4	-1.7		-35.9	66	909	08 10 21
08 11 40	IC883	11 37 30	63.5	125.6	-1.7		-36.1	-14	909	No stop
08 15 20	---	11 41 11	64.0	127.0	-1.7		-35.4	206	937	08 11 41
08 16 00	J1317+3425	11 41 51	64.7	128.1	-1.6		-34.9	26	937	08 16 00
08 17 00	=1315+346	11 42 51	64.8	128.5	-1.6		-34.7	60	945	08 16 01
08 17 00	IC883	11 42 51	64.2	127.7	-1.6		-35.0	-14	945	No stop
08 20 40	---	11 46 32	64.6	129.1	-1.6		-34.2	206	973	08 17 01
08 20 40	J1317+3425	11 46 32	65.2	129.9	-1.5		-33.9	-14	973	No stop
08 22 00	=1315+346	11 47 52	65.4	130.5	-1.5		-33.6	66	983	08 20 41
08 22 00	IC883	11 47 52	64.8	129.6	-1.6		-33.9	-14	983	No stop
08 25 40	---	11 51 33	65.2	131.1	-1.5		-33.1	206	1011	08 22 01
08 26 20	J1317+3425	11 52 13	65.8	132.3	-1.4		-32.5	26	1011	08 26 20
08 27 20	=1315+346	11 53 13	66.0	132.7	-1.4		-32.3	60	1019	08 26 21
08 27 20	IC883	11 53 13	65.4	131.8	-1.5		-32.7	-14	1019	No stop
08 31 00	---	11 56 53	65.8	133.4	-1.4		-31.8	206	1047	08 27 21
08 31 00	J1317+3425	11 56 53	66.4	134.3	-1.4		-31.4	-14	1047	No stop
08 32 20	=1315+346	11 58 14	66.5	134.9	-1.3		-31.0	66	1057	08 31 01
08 32 20	IC883	11 58 14	65.9	134.0	-1.4		-31.4	-14	1057	No stop
08 36 00	---	12 01 54	66.3	135.6	-1.3		-30.5	206	1085	08 32 21

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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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
--- Thu 24 Oct 2013 Day 297 ---										
08 36 40	J1317+3425	12 02 34	67.0	136.9	-1.3		-29.8	26	1085	08 36 40
08 37 40	=1315+346	12 03 35	67.1	137.3	-1.2		-29.5	60	1093	08 36 41
08 37 40	IC883	12 03 35	66.5	136.3	-1.3		-30.0	-14	1093	No stop
08 41 20	---	12 07 15	66.9	138.0	-1.2		-29.0	206	1121	08 37 41
08 41 20	J1317+3425	12 07 15	67.4	139.1	-1.2		-28.5	-14	1121	No stop
08 42 40	=1315+346	12 08 35	67.6	139.7	-1.2		-28.1	66	1132	08 41 21
08 42 40	IC883	12 08 35	67.0	138.6	-1.2		-28.6	-14	1132	No stop
08 46 20	---	12 12 16	67.4	140.4	-1.1		-27.5	206	1160	08 42 41
08 47 00	J1317+3425	12 12 56	68.0	141.8	-1.1		-26.7	25	1160	08 47 00
08 48 00	=1315+346	12 13 56	68.1	142.3	-1.1		-26.4	60	1167	08 47 01
08 48 00	IC883	12 13 56	67.5	141.2	-1.1		-27.0	-14	1167	No stop
08 51 40	---	12 17 37	67.9	143.0	-1.1		-25.9	206	1196	08 48 01
08 51 40	J1317+3425	12 17 37	68.4	144.1	-1.0		-25.2	-15	1196	No stop
08 53 00	=1315+346	12 18 57	68.5	144.8	-1.0		-24.8	65	1206	08 51 41
08 53 00	IC883	12 18 57	68.0	143.6	-1.0		-25.5	-14	1206	No stop
08 56 40	---	12 22 38	68.3	145.5	-1.0		-24.3	206	1234	08 53 01
08 57 20	J1317+3425	12 23 18	68.9	147.1	-0.9		-23.3	25	1234	08 57 20
08 58 20	=1315+346	12 24 18	69.0	147.6	-0.9		-22.9	60	1242	08 57 21
08 58 20	IC883	12 24 18	68.5	146.3	-0.9		-23.7	-15	1242	No stop
09 02 00	---	12 27 59	68.7	148.3	-0.9		-22.4	205	1270	08 58 21
09 02 00	J1317+3425	12 27 59	69.2	149.6	-0.8		-21.6	-16	1270	No stop
09 03 20	=1315+346	12 29 19	69.3	150.3	-0.8		-21.1	64	1280	09 02 01
09 03 20	IC883	12 29 19	68.9	149.0	-0.9		-21.9	-15	1280	No stop
09 07 00	---	12 32 59	69.1	150.9	-0.8		-20.6	205	1308	09 03 21
09 07 40	J1317+3425	12 33 39	69.7	152.7	-0.7		-19.5	24	1308	09 07 40
09 08 40	=1315+346	12 34 40	69.7	153.3	-0.7		-19.1	60	1316	09 07 41
09 08 40	IC883	12 34 40	69.3	151.9	-0.8		-20.0	-15	1316	No stop
09 12 20	---	12 38 20	69.5	153.9	-0.7		-18.6	205	1344	09 08 41
09 12 20	J1317+3425	12 38 20	70.0	155.3	-0.7		-17.7	-16	1344	No stop
09 13 40	=1315+346	12 39 40	70.0	156.1	-0.6		-17.1	64	1354	09 12 21
09 13 40	IC883	12 39 40	69.6	154.7	-0.7		-18.1	-15	1354	No stop
09 17 20	---	12 43 21	69.8	156.8	-0.6		-16.6	205	1382	09 13 41
09 18 00	J1317+3425	12 44 01	70.3	158.6	-0.6		-15.4	24	1382	09 18 00
09 19 00	=1315+346	12 45 01	70.3	159.2	-0.6		-14.9	60	1390	09 18 01

Schedule for TORUN (Code Tr)

Page 7

IC883 EVN observations

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 24 Oct 2013 Day 297 ---										
09 19 00	IC883	12 45 01	69.9	157.7	-0.6		-16.0	-16	1390	No stop
09 22 40	---	12 48 42	70.1	159.9	-0.5		-14.4	204	1418	09 19 01
09 22 40	J1317+3425	12 48 42	70.5	161.4	-0.5		-13.4	-17	1418	No stop
09 24 00	=1315+346	12 50 02	70.6	162.2	-0.5		-12.8	63	1428	09 22 41
09 24 00	IC883	12 50 02	70.2	160.7	-0.5		-13.9	-16	1428	No stop
09 27 40	---	12 53 43	70.4	162.9	-0.5		-12.3	204	1457	09 24 01
09 28 20	J1317+3425	12 54 23	70.8	164.9	-0.4		-10.9	23	1457	09 28 20
09 29 20	=1315+346	12 55 23	70.8	165.5	-0.4		-10.5	60	1464	09 28 21
09 29 20	IC883	12 55 23	70.4	163.9	-0.4		-11.6	-16	1464	No stop
09 33 00	---	12 59 04	70.6	166.1	-0.4		-10.0	204	1492	09 29 21
09 33 00	J1317+3425	12 59 04	70.9	167.8	-0.3		-8.8	-17	1492	No stop
09 34 20	=1315+346	13 00 24	71.0	168.6	-0.3		-8.2	63	1503	09 33 01
09 34 20	IC883	13 00 24	70.6	166.9	-0.3		-9.4	-16	1503	No stop
09 38 00	---	13 04 04	70.7	169.2	-0.3		-7.8	204	1531	09 34 21
09 38 40	J1317+3425	13 04 45	71.1	171.4	-0.2		-6.3	23	1531	09 38 40
09 39 40	=1315+346	13 05 45	71.1	172.0	-0.2		-5.8	60	1539	09 38 41
09 39 40	IC883	13 05 45	70.8	170.2	-0.3		-7.1	-17	1539	No stop
09 43 20	---	13 09 25	70.9	172.5	-0.2		-5.4	203	1567	09 39 41
09 43 20	J1317+3425	13 09 25	71.2	174.4	-0.1		-4.1	-17	1567	No stop
09 44 40	=1315+346	13 10 46	71.2	175.2	-0.1		-3.5	63	1577	09 43 21
09 44 40	IC883	13 10 46	70.9	173.4	-0.2		-4.8	-17	1577	No stop
09 48 20	---	13 14 26	70.9	175.7	-0.1		-3.1	203	1605	09 44 41
09 49 00	J1317+3425	13 15 06	71.2	178.0	-0.1		-1.5	22	1605	09 49 00
09 50 00	=1315+346	13 16 06	71.2	178.6	-0.0		-1.0	60	1613	09 49 01
09 50 00	IC883	13 16 06	71.0	176.8	-0.1		-2.3	-17	1613	No stop
09 53 40	---	13 19 47	71.0	179.1	-0.0		-0.7	203	1641	09 50 01
09 53 40	J1317+3425	13 19 47	71.3	181.0	0.0		0.7	-18	1641	No stop
09 55 00	=1315+346	13 21 07	71.2	181.9	0.0		1.4	62	1651	09 53 41
09 55 00	IC883	13 21 07	71.0	179.9	-0.0		-0.0	-17	1651	No stop
09 58 20	---	13 24 28	71.0	182.1	0.1		1.5	183	1677	09 55 01
09 59 00	J1317+3425	13 25 08	71.2	184.4	0.1		3.2	22	1677	09 59 00
10 00 00	=1315+346	13 26 08	71.2	185.1	0.1		3.7	60	1684	09 59 01

SETUP FILE INFORMATION:

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

=====
Setup file: sess313CG.setini

Matching groups in /opt/sched_11.0/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
IF SB =	U	U	U	U	U	U	U	U	U
	U	U	U	U	U	U	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=	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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* IC883	13 18 17.013691	* 13 20 35.318400	13 21 12.176704	0.00
	34 24 04.67349	* 34 08 22.35200	34 04 04.70159	0.00
* J1159+2914	11 56 57.786211	* 11 59 31.833912	12 00 13.401269	0.11
1156+295	29 31 25.73868	* 29 14 43.82678	29 10 04.02951	0.10
* J1317+3425	13 15 17.789368	* 13 17 36.494178	13 18 13.457826	0.13
1315+346	34 41 02.60427	* 34 25 15.93238	34 20 56.78048	0.11

EFFECT OF SOLAR CORONA

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)
IC883	46.6
J1159+2914	49.6
J1317+3425	47.0

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

f13l4tr

FTP FRINGE TEST

PI: *Ivan Agudo*

Address: JIVE Postbus 2 7990 AA Dwingeloo The Netherlands
Phone: +31-521-596549 EMAIL: agudo@jive.nl
Phone during observation: +31-521-596549

Notes: 18cm FTP Fringe Test for session 3/2013
 512 Mbps, 2-bit sampling, 8 MHz filters
 Send the disk pack by express to JIVE
 Additional DBBC testing data from Mc and Tr is expected.

COVER LETTER:

Dear EVN friends,

This is the schedule for the 18cm FTP-FT on October 24 2013,
involving 14 stations: Eb Wb Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh Hh Ir
The test uses a standard setup with 512 Mbps and consists of two
ftp fringe tests, interspersed with a longer set of scans on
2005+403 (~2.5 Jy source at 1.4 GHz).

The two ftp fringe-test scans, start at:

- (1) 13:04:30 UT (scan 2, 2 sec)
- (2) 13:53:00 UT (scan 8, 2 sec)

See you on Skype group chat
and
Good luck with the session!

Ivan
Skype account: ivan-agudo

Schedule for TORUN (Code Tr)

Page 2

FTP Fringe 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
--- Thu 24 Oct 2013 Day 297 ---										
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	2005+403	17 26 47	60.2	98.4	-2.7		-51.4	0	0	14 00 00
14 04 00	---	17 30 48	60.8	99.4	-2.6		-51.2	240	15	14 00 01
14 04 30	2005+403	17 31 18	60.8	99.5	-2.6		-51.2	24	15	14 04 30
14 08 30	---	17 35 19	61.4	100.5	-2.5		-51.0	240	31	14 04 31
14 10 30	2005+403	17 37 19	61.7	101.0	-2.5		-50.9	114	31	14 10 30
14 18 30	---	17 45 21	62.9	103.1	-2.4		-50.3	480	62	14 10 31
14 19 00	2005+403	17 45 51	63.0	103.2	-2.4		-50.3	24	62	14 19 00
14 27 00	---	17 53 52	64.1	105.4	-2.2		-49.6	480	93	14 19 01
14 27 30	2005+403	17 54 22	64.2	105.5	-2.2		-49.6	24	93	14 27 30
14 35 30	---	18 02 23	65.4	107.9	-2.1		-48.8	480	124	14 27 31
14 36 00	2005+403	18 02 53	65.4	108.0	-2.1		-48.7	24	124	14 36 00
14 44 00	---	18 10 55	66.6	110.5	-2.0		-47.7	480	155	14 36 01
14 44 30	2005+403	18 11 25	66.6	110.7	-1.9		-47.7	24	155	14 44 30
14 52 30	---	18 19 26	67.8	113.4	-1.8		-46.5	480	186	14 44 31
14 53 00	2005+403	18 19 56	67.8	113.5	-1.8		-46.4	24	186	14 53 00
14 57 00	---	18 23 57	68.4	115.0	-1.7		-45.8	240	201	14 53 01
14 59 00	2005+403	18 25 57	68.7	115.7	-1.7		-45.4	113	201	14 59 00
15 00 00	---	18 26 57	68.8	116.1	-1.7		-45.2	60	205	14 59 01

SETUP FILE INFORMATION:

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

==== Setup file: sess313.L512

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

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 4	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	
	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: 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 = 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
    
```

***** Setup for Td *****

```

Setup group: 15 Station: TR_DBBC Total bit rate: 512
Format: MARK5B 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	
	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	5	1	5	2	6	2	6	
	3	7	3	7	4	8	4	8	
BBC SB=	U	U	L	L	U	U	L	L	
	U	U	L	L	U	U	L	L	
IF =	A1	B1	A1	B1	A1	B1	A1	B1	
	A1	B1	A1	B1	A1	B1	A1	B1	

The following frequency sets based on these setups were used.

```

Frequency Set: 16 Setup file default.
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: 16

```

Track assignments are:

```

track1= 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32
barrel=roll_off

```

SOURCES USED IN RECORDING SCANS --

FTP Fringe 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)		Error
	(B1950)	(J2000)	(Date)
			(mas)
J2007+4029	20 05 59.558893	* 20 07 44.944844	20 08 14.585970 0.30
* 2005+403	40 21 01.80221	* 40 29 48.60406	40 32 41.18056 0.23

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)
2005+403	99.9

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

PROBING THE INNERMOST REGIONS OF AGN JETS AND THEIR MAGNETIC FIELDS

PI: *Andrei Lobanov*

Address: MPIfR Bonn Auf dem Huegel 69 53121 Bonn, Germany
 Phone: +49 228 525 191 EMAIL: alobanov@mpifr-bonn.mpg.de
 Fax: +49 228 525 229 Phone during observation: +7 903 661 48 65

Observing mode: L-band, dual-pol
 Please, send Mk5 disk packs to MPIfR-Bonn

Schedule for TORUN (Code Tr)

Page 2

Probing the innermost regions of AGN jets and their magnetic fields

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 24 Oct 2013 Day 297 ---

```
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

22 20 00 0836+710    01 48 10 45.1 26.9 -6.9   -55.8    0    0  22 20 00
22 29 30 ---        01 57 41 45.8 27.5 -6.8   -57.6   570   18  22 20 01

22 30 00 0836+710    01 58 11 45.8 27.5 -6.7   -57.7    24   18  22 30 00
22 39 30 ---        02 07 43 46.5 28.1 -6.6   -59.5   570   36  22 30 01

22 40 00 0836+710    02 08 13 46.5 28.1 -6.6   -59.6    24   36  22 40 00
22 49 30 ---        02 17 44 47.2 28.7 -6.4   -61.5   570   55  22 40 01

22 50 00 0836+710    02 18 15 47.2 28.7 -6.4   -61.6    24   55  22 50 00
22 59 30 ---        02 27 46 47.9 29.3 -6.3   -63.4   570   73  22 50 01

23 00 00 0836+710    02 28 16 48.0 29.3 -6.2   -63.5    24   73  23 00 00
23 10 00 ---        02 38 18 48.7 29.8 -6.1   -65.5   600   92  23 00 01

23 10 30 0836+710    02 38 48 48.8 29.9 -6.1   -65.6    24   92  23 10 30
23 20 00 ---        02 48 19 49.5 30.3 -5.9   -67.5   570  110  23 10 31

23 20 30 0836+710    02 48 50 49.5 30.4 -5.9   -67.6    24  110  23 20 30
23 30 00 ---        02 58 21 50.2 30.8 -5.7   -69.5   570  129  23 20 31

23 30 30 0836+710    02 58 51 50.3 30.8 -5.7   -69.6    24  129  23 30 30
23 40 00 ---        03 08 23 51.0 31.2 -5.6   -71.5   570  147  23 30 31

23 40 30 0836+710    03 08 53 51.1 31.3 -5.6   -71.6    24  147  23 40 30
23 50 00 ---        03 18 24 51.8 31.6 -5.4   -73.6   570  165  23 40 31

23 50 30 0836+710    03 18 54 51.8 31.6 -5.4   -73.7    24  165  23 50 30
23 59 59 ---        03 28 26 52.6 32.0 -5.2   -75.7   569  183  23 50 31
```

Schedule for TORUN (Code Tr)

Page 3

Probing the innermost regions of AGN jets and their magnetic fields

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 25 Oct 2013 Day 298 ---										
00 00 30	0836+710	03 28 56	52.6	32.0	-5.2		-75.8	24	183	00 00 30
00 10 00	---	03 38 28	53.4	32.3	-5.1		-77.8	570	202	00 00 31
00 10 30	0836+710	03 38 58	53.4	32.3	-5.1		-77.9	24	202	00 10 30
00 20 00	---	03 48 29	54.2	32.6	-4.9		-80.0	570	220	00 10 31
00 21 00	0836+710	03 49 29	54.3	32.6	-4.9		-80.2	54	220	00 21 00
00 30 30	---	03 59 01	55.1	32.8	-4.7		-82.2	570	238	00 21 01
00 31 00	0836+710	03 59 31	55.1	32.8	-4.7		-82.4	24	238	00 31 00
00 40 30	---	04 09 03	55.9	33.0	-4.6		-84.5	570	256	00 31 01
00 41 00	0836+710	04 09 33	55.9	33.0	-4.6		-84.6	24	256	00 41 00
00 50 30	---	04 19 04	56.7	33.1	-4.4		-86.8	570	275	00 41 01
00 51 00	0836+710	04 19 34	56.7	33.1	-4.4		-86.9	24	275	00 51 00
01 00 30	---	04 29 06	57.5	33.1	-4.2		-89.1	570	293	00 51 01
01 01 00	0836+710	04 29 36	57.6	33.1	-4.2		-89.2	24	293	01 01 00
01 11 00	---	04 39 38	58.4	33.1	-4.1		-91.6	600	312	01 01 01
01 11 30	0836+710	04 40 08	58.4	33.1	-4.0		-91.7	24	312	01 11 30
01 17 00	---	04 45 39	58.9	33.1	-4.0		-93.0	330	323	01 11 31
01 17 30	0836+710	04 46 09	58.9	33.1	-3.9		-93.1	24	323	01 17 30
01 27 00	---	04 55 40	59.7	33.0	-3.8		-95.5	570	341	01 17 31
01 27 30	0836+710	04 56 10	59.7	33.0	-3.8		-95.6	24	341	01 27 30
01 37 00	---	05 05 42	60.5	32.8	-3.6		-98.0	570	359	01 27 31
01 37 30	0836+710	05 06 12	60.5	32.8	-3.6		-98.2	24	359	01 37 30
01 47 00	---	05 15 44	61.3	32.5	-3.5		-100.6	570	377	01 37 31
01 47 30	0836+710	05 16 14	61.4	32.5	-3.4		-100.8	24	377	01 47 30
01 57 00	---	05 25 45	62.1	32.1	-3.3		-103.3	570	396	01 47 31
01 57 30	0836+710	05 26 15	62.2	32.1	-3.3		-103.5	24	396	01 57 30
02 07 00	---	05 35 47	62.9	31.7	-3.1		-106.1	570	414	01 57 31
02 07 30	0836+710	05 36 17	63.0	31.7	-3.1		-106.2	24	414	02 07 30
02 17 00	---	05 45 49	63.7	31.1	-2.9		-109.0	570	432	02 07 31

Schedule for TORUN (Code Tr)

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Probing the innermost regions of AGN jets and their magnetic fields

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 25 Oct 2013 Day 298 ---										
02 18 00	0836+710	05 46 49	63.8	31.1	-2.9		-109.2	54	432	02 18 00
02 27 30	---	05 56 20	64.5	30.4	-2.8		-112.1	570	450	02 18 01
02 28 00	0836+710	05 56 50	64.6	30.4	-2.8		-112.2	24	450	02 28 00
02 37 30	---	06 06 22	65.3	29.7	-2.6		-115.1	570	468	02 28 01
02 38 00	0836+710	06 06 52	65.3	29.6	-2.6		-115.3	24	468	02 38 00
02 47 30	---	06 16 24	66.0	28.8	-2.4		-118.3	570	487	02 38 01
02 48 00	0836+710	06 16 54	66.0	28.7	-2.4		-118.5	24	487	02 48 00
02 57 30	---	06 26 25	66.7	27.7	-2.3		-121.6	570	505	02 48 01
02 58 00	0836+710	06 26 55	66.8	27.7	-2.3		-121.8	24	505	02 58 00
03 08 00	---	06 36 57	67.4	26.5	-2.1		-125.2	600	524	02 58 01
03 08 30	0836+710	06 37 27	67.5	26.5	-2.1		-125.4	24	524	03 08 30
03 14 00	---	06 42 58	67.8	25.7	-2.0		-127.4	330	535	03 08 31
03 14 30	0836+710	06 43 28	67.9	25.7	-2.0		-127.5	24	535	03 14 30
03 24 00	---	06 53 00	68.5	24.4	-1.8		-131.0	570	553	03 14 31
03 24 30	0836+710	06 53 30	68.5	24.3	-1.8		-131.2	24	553	03 24 30
03 34 00	---	07 03 01	69.1	22.8	-1.7		-134.8	570	571	03 24 31
03 34 30	0836+710	07 03 31	69.1	22.7	-1.7		-135.0	24	571	03 34 30
03 44 00	---	07 13 03	69.6	21.1	-1.5		-138.8	570	589	03 34 31
03 44 30	0836+710	07 13 33	69.7	21.0	-1.5		-139.0	24	589	03 44 30
03 54 00	---	07 23 04	70.2	19.2	-1.3		-142.9	570	608	03 44 31
03 54 30	0836+710	07 23 35	70.2	19.1	-1.3		-143.1	24	608	03 54 30
04 04 00	---	07 33 06	70.6	17.2	-1.2		-147.2	570	626	03 54 31
04 04 30	0836+710	07 33 36	70.7	17.1	-1.2		-147.4	24	626	04 04 30
04 14 00	---	07 43 08	71.0	15.1	-1.0		-151.6	570	644	04 04 31
04 15 00	0836+710	07 44 08	71.1	14.9	-1.0		-152.0	54	644	04 15 00
04 24 30	---	07 53 39	71.4	12.7	-0.8		-156.4	570	662	04 15 01
04 25 00	0836+710	07 54 10	71.4	12.5	-0.8		-156.6	24	662	04 25 00
04 34 30	---	08 03 41	71.7	10.2	-0.7		-161.0	570	681	04 25 01
04 35 00	0836+710	08 04 11	71.7	10.1	-0.6		-161.3	24	681	04 35 00
04 44 30	---	08 13 43	72.0	7.7	-0.5		-165.8	570	699	04 35 01

Schedule for TORUN (Code Tr)

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Probing the innermost regions of AGN jets and their magnetic fields

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 25 Oct 2013 Day 298 ---										
04 45 00	0836+710	08 14 13	72.0	7.6	-0.5		-166.0	24	699	04 45 00
04 54 30	---	08 23 44	72.1	5.1	-0.3		-170.7	570	717	04 45 01
04 55 00	0836+710	08 24 14	72.1	5.0	-0.3		-170.9	24	717	04 55 00
05 05 00	---	08 34 16	72.2	2.3	-0.1		-175.8	600	736	04 55 01
05 05 30	0836+710	08 34 46	72.2	2.2	-0.1		-176.1	24	736	05 05 30
05 11 00	---	08 40 17	72.3	0.7	-0.0		-178.8	330	747	05 05 31
05 11 30	0836+710	08 40 47	72.3	0.5	-0.0		-179.0	24	747	05 11 30
05 21 00	---	08 50 19	72.2	-2.0	0.1		176.3	570	765	05 11 31
05 21 30	0836+710	08 50 49	72.2	-2.2	0.1		176.0	24	765	05 21 30
05 31 00	---	09 00 20	72.1	-4.7	0.3		171.4	570	783	05 21 31
05 31 30	0836+710	09 00 50	72.1	-4.8	0.3		171.1	24	783	05 31 30
05 41 00	---	09 10 22	72.0	-7.3	0.5		166.5	570	802	05 31 31
05 41 30	0836+710	09 10 52	72.0	-7.5	0.5		166.3	24	802	05 41 30
05 51 00	---	09 20 24	71.8	-9.9	0.6		161.7	570	820	05 41 31
05 51 30	0836+710	09 20 54	71.8	-10.0	0.6		161.5	24	820	05 51 30
06 01 00	---	09 30 25	71.5	-12.3	0.8		157.0	570	838	05 51 31
06 01 30	0836+710	09 30 55	71.5	-12.4	0.8		156.8	24	838	06 01 30
06 11 00	---	09 40 27	71.1	-14.6	1.0		152.5	570	856	06 01 31
06 12 00	0836+710	09 41 27	71.1	-14.9	1.0		152.0	54	856	06 12 00
06 21 30	---	09 50 59	70.7	-16.9	1.1		147.8	570	875	06 12 01
06 22 00	0836+710	09 51 29	70.7	-17.0	1.1		147.6	24	875	06 22 00
06 31 30	---	10 01 00	70.2	-19.0	1.3		143.5	570	893	06 22 01
06 32 00	0836+710	10 01 30	70.2	-19.1	1.3		143.3	24	893	06 32 00
06 41 30	---	10 11 02	69.7	-20.8	1.5		139.4	570	911	06 32 01
06 42 00	0836+710	10 11 32	69.7	-20.9	1.5		139.2	24	911	06 42 00
06 51 30	---	10 21 04	69.2	-22.6	1.6		135.4	570	929	06 42 01
06 52 00	0836+710	10 21 34	69.1	-22.6	1.6		135.2	24	929	06 52 00
07 02 00	---	10 31 35	68.5	-24.2	1.8		131.4	600	948	06 52 01

Schedule for TORUN (Code Tr)

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Probing the innermost regions of AGN jets and their magnetic fields

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 25 Oct 2013 Day 298 ---									
07 02 30	0836+710	10 32 05	68.5	-24.3	1.8	131.2	24	948	07 02 30
07 08 00	---	10 37 36	68.2	-25.1	1.9	129.2	330	959	07 02 31
07 08 30	0836+710	10 38 06	68.1	-25.1	1.9	129.0	24	959	07 08 30
07 18 00	---	10 47 38	67.5	-26.4	2.1	125.6	570	977	07 08 31
07 18 30	0836+710	10 48 08	67.5	-26.5	2.1	125.4	24	977	07 18 30
07 28 00	---	10 57 40	66.8	-27.6	2.2	122.1	570	996	07 18 31
07 28 30	0836+710	10 58 10	66.8	-27.6	2.3	122.0	24	996	07 28 30
07 38 00	---	11 07 41	66.1	-28.6	2.4	118.8	570	1014	07 28 31
07 38 30	0836+710	11 08 11	66.1	-28.7	2.4	118.6	24	1014	07 38 30
07 48 00	---	11 17 43	65.4	-29.5	2.6	115.6	570	1032	07 38 31
07 48 30	0836+710	11 18 13	65.3	-29.6	2.6	115.4	24	1032	07 48 30
07 58 00	---	11 27 45	64.6	-30.3	2.7	112.5	570	1050	07 48 31
07 58 30	0836+710	11 28 15	64.6	-30.4	2.8	112.4	24	1050	07 58 30
08 08 00	---	11 37 46	63.9	-31.0	2.9	109.5	570	1068	07 58 31
08 09 00	0836+710	11 38 46	63.8	-31.1	2.9	109.2	54	1068	08 09 00
08 18 30	---	11 48 18	63.0	-31.6	3.1	106.5	570	1087	08 09 01
08 19 00	0836+710	11 48 48	63.0	-31.6	3.1	106.4	24	1087	08 19 00
08 28 30	---	11 58 20	62.2	-32.1	3.3	103.7	570	1105	08 19 01
08 29 00	0836+710	11 58 50	62.2	-32.1	3.3	103.6	24	1105	08 29 00
08 38 30	---	12 08 21	61.4	-32.4	3.4	101.0	570	1123	08 29 01
08 39 00	0836+710	12 08 51	61.4	-32.5	3.4	100.9	24	1123	08 39 00
08 48 30	---	12 18 23	60.6	-32.7	3.6	98.4	570	1141	08 39 01
08 49 00	0836+710	12 18 53	60.6	-32.7	3.6	98.3	24	1141	08 49 00
08 59 00	---	12 28 55	59.8	-32.9	3.8	95.7	600	1161	08 49 01
08 59 30	0836+710	12 29 25	59.7	-33.0	3.8	95.6	24	1161	08 59 30
09 05 00	---	12 34 56	59.3	-33.0	3.9	94.2	330	1171	08 59 31
09 05 30	0836+710	12 35 26	59.2	-33.0	3.9	94.1	24	1171	09 05 30
09 15 00	---	12 44 57	58.5	-33.1	4.0	91.8	570	1189	09 05 31
09 15 30	0836+710	12 45 27	58.4	-33.1	4.0	91.7	24	1189	09 15 30
09 25 00	---	12 54 59	57.6	-33.1	4.2	89.4	570	1208	09 15 31

Schedule for TORUN (Code Tr)

Page 7

Probing the innermost regions of AGN jets and their magnetic fields

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 25 Oct 2013 Day 298 ---										
09 25 30	0836+710	12 55 29	57.6	-33.1	4.2		89.3	24	1208	09 25 30
09 35 00	---	13 05 00	56.8	-33.1	4.4		87.1	570	1226	09 25 31
09 35 30	0836+710	13 05 31	56.8	-33.1	4.4		87.0	24	1226	09 35 30
09 45 00	---	13 15 02	56.0	-33.0	4.5		84.8	570	1244	09 35 31
09 45 30	0836+710	13 15 32	56.0	-33.0	4.5		84.7	24	1244	09 45 30
09 55 00	---	13 25 04	55.2	-32.8	4.7		82.6	570	1262	09 45 31
09 55 30	0836+710	13 25 34	55.1	-32.8	4.7		82.5	24	1262	09 55 30
10 05 00	---	13 35 05	54.4	-32.6	4.9		80.4	570	1281	09 55 31
10 06 00	0836+710	13 36 06	54.3	-32.6	4.9		80.2	54	1281	10 06 00
10 15 30	---	13 45 37	53.5	-32.3	5.0		78.1	570	1299	10 06 01
10 16 00	0836+710	13 46 07	53.5	-32.3	5.1		78.0	24	1299	10 16 00
10 25 30	---	13 55 39	52.7	-32.0	5.2		76.0	570	1317	10 16 01
10 26 00	0836+710	13 56 09	52.7	-32.0	5.2		75.9	24	1317	10 26 00
10 35 30	---	14 05 40	51.9	-31.7	5.4		73.9	570	1335	10 26 01
10 36 00	0836+710	14 06 11	51.9	-31.7	5.4		73.8	24	1335	10 36 00
10 45 30	---	14 15 42	51.1	-31.3	5.5		71.8	570	1354	10 36 01
10 46 00	0836+710	14 16 12	51.1	-31.3	5.6		71.7	24	1354	10 46 00
10 56 00	---	14 26 14	50.3	-30.8	5.7		69.7	600	1373	10 46 01
10 56 30	0836+710	14 26 44	50.3	-30.8	5.7		69.6	24	1373	10 56 30
11 02 00	---	14 32 15	49.9	-30.6	5.8		68.5	330	1383	10 56 31
11 02 30	0836+710	14 32 45	49.8	-30.5	5.8		68.4	24	1383	11 02 30
11 12 00	---	14 42 16	49.1	-30.1	6.0		66.5	570	1402	11 02 31
11 12 30	0836+710	14 42 47	49.1	-30.1	6.0		66.4	24	1402	11 12 30
11 22 00	---	14 52 18	48.3	-29.6	6.2		64.5	570	1420	11 12 31
11 22 30	0836+710	14 52 48	48.3	-29.5	6.2		64.4	24	1420	11 22 30
11 32 00	---	15 02 20	47.6	-29.0	6.3		62.6	570	1438	11 22 31
11 32 30	0836+710	15 02 50	47.6	-29.0	6.3		62.5	24	1438	11 32 30
11 42 00	---	15 12 21	46.9	-28.4	6.5		60.6	570	1456	11 32 31
11 42 30	0836+710	15 12 51	46.8	-28.4	6.5		60.5	24	1456	11 42 30
11 52 00	---	15 22 23	46.2	-27.8	6.7		58.7	570	1475	11 42 31
11 52 30	0836+710	15 22 53	46.1	-27.8	6.7		58.6	24	1475	11 52 30
12 02 00	---	15 32 25	45.5	-27.2	6.8		56.8	570	1493	11 52 31

Schedule for TORUN (Code Tr)

Page 8

Probing the innermost regions of AGN jets and their magnetic fields

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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
-----
--- Fri 25 Oct 2013  Day 298 ---

12 03 00  0836+710      15 33 25  45.4 -27.1  6.8      56.6   54   1493  12 03 00
12 12 30  ---                15 42 56  44.8 -26.5  7.0      54.8   570  1511  12 03 01

12 13 00  0836+710      15 43 26  44.7 -26.5  7.0      54.7   24   1511  12 13 00
12 22 30  ---                15 52 58  44.1 -25.8  7.2      52.9   570  1529  12 13 01

12 23 00  0836+710      15 53 28  44.1 -25.8  7.2      52.8   24   1529  12 23 00
12 32 30  ---                16 03 00  43.5 -25.1  7.3      51.0   570  1548  12 23 01

12 33 00  0836+710      16 03 30  43.4 -25.1  7.3      50.9   24   1548  12 33 00
12 42 30  ---                16 13 01  42.8 -24.4  7.5      49.1   570  1566  12 33 01

12 43 00  0836+710      16 13 31  42.8 -24.4  7.5      49.0   24   1566  12 43 00
12 53 00  ---                16 23 33  42.2 -23.6  7.7      47.2   600  1585  12 43 01

12 53 30  0836+710      16 24 03  42.1 -23.6  7.7      47.1   24   1585  12 53 30
12 59 00  ---                16 29 34  41.8 -23.2  7.8      46.0   330  1596  12 53 31

```

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2.set

Matching groups in ./gl038a.freq.sess313rdbe.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```

Setup group:   14          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
IF SB =      L      L      L      L
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: 7 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: 7

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error
	(B1950)	(J2000)		(mas)
J0841+7053	08 36 21.556645	* 08 41 24.365283	08 42 47.118679	0.31
* 0836+710	71 04 22.42740	* 70 53 42.17302	70 50 18.47640	0.10

EFFECT OF SOLAR CORONA

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)
0836+710	98.0

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

rk01hatr

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 25 Oct 2013 Day 298 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
 Next BBC frequencies: 636.00 636.00 636.00 636.00
 Next scan bandwidths: 16.00 16.00 16.00 16.00

21 00 00	2037+511	00 31 53	55.3	-68.8	3.9	63.7	0	0	21 00 00
21 09 30	---	00 41 25	54.0	-67.6	4.0	62.8	570	18	21 00 01
21 10 00	2037+511	00 41 55	53.9	-67.5	4.0	62.8	24	18	21 10 00
21 19 30	---	00 51 26	52.6	-66.4	4.2	61.8	570	36	21 10 01
21 20 00	2037+511	00 51 56	52.5	-66.3	4.2	61.8	24	36	21 20 00
21 29 30	---	01 01 28	51.2	-65.2	4.4	60.8	570	55	21 20 01
21 30 00	2037+511	01 01 58	51.2	-65.1	4.4	60.8	24	55	21 30 00
21 40 00	---	01 12 00	49.8	-63.9	4.5	59.8	600	74	21 30 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
Bandwd=   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  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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J2038+5119	20 37 07.456979	* 20 38 37.034734	20 39 02.625163	0.16
* 2037+511	51 08 35.76950	* 51 19 12.66253	51 22 36.85095	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	98.0
2037+511	105.5

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

rk01hbtr

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 25 Oct 2013 Day 298 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
Next BBC frequencies: 636.00 636.00 636.00 636.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

Table with 11 columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It lists observation times and parameters for source 0836+710.

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
Bandwd=   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  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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0841+7053	08 36 21.556645	* 08 41 24.365283	08 42 47.207977	0.31
* 0836+710	71 04 22.42740	* 70 53 42.17302	70 50 18.34516	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	98.0
0836+710	98.4

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

rk01hctr

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 26 Oct 2013 Day 299 ---

----- C-band VLBI scans -----

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
Next BBC frequencies: 636.00 636.00 636.00 636.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

Table with columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Early Dwell, Disk GBytes, TPStart SYNC. Contains scan data for 2013-10-26.

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00  636.00  636.00  636.00
Bandwd=   16.00  16.00  16.00  16.00
Matching frequency sets:  3

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1  S3  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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J2253+1608	22 51 29.519738	* 22 53 57.747937	22 54 40.235538	0.68
* 2251+158	15 52 54.34810	* 16 08 53.56093	16 13 35.63435	0.72

EFFECT OF SOLAR CORONA

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)
FAKERA	98.1
2251+158	134.5

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

Schedule for TORUN (Code Tr)

Page 3

e-EVN run EH027A-B (Hada)

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 26 Oct 2013  Day 299 ---

05 10 40  M87             08 43 54  29.4 110.0 -3.8   -35.3   34   1087  05 10 35
05 25 00  ---             08 58 16  31.4 113.4 -3.6   -34.3   860   1197  05 10 36

05 25 40  M87             08 58 56  31.5 113.5 -3.5   -34.3   34   1197  05 25 35
05 40 00  ---             09 13 18  33.4 117.0 -3.3   -33.2   860   1308  05 25 36

05 40 40  M87             09 13 59  33.5 117.2 -3.3   -33.2   34   1308  05 40 35
05 55 00  ---             09 28 21  35.4 120.8 -3.1   -31.9   860   1419  05 40 36

05 55 40  M87             09 29 01  35.5 120.9 -3.0   -31.8   34   1419  05 55 35
06 10 00  ---             09 43 23  37.3 124.7 -2.8   -30.4   860   1530  05 55 36

06 10 40  M87             09 44 03  37.4 124.8 -2.8   -30.3   34   1530  06 10 35
06 25 00  ---             09 58 26  39.1 128.7 -2.6   -28.7   860   1640  06 10 36

06 25 40  M87             09 59 06  39.2 128.9 -2.5   -28.6   34   1640  06 25 35
06 40 00  ---             10 13 28  40.8 133.0 -2.3   -26.7   860   1751  06 25 36

06 40 40  M87             10 14 08  40.9 133.2 -2.3   -26.6   34   1751  06 40 35
06 55 00  ---             10 28 31  42.4 137.4 -2.0   -24.6   860   1862  06 40 36

06 55 40  M87             10 29 11  42.5 137.6 -2.0   -24.5   34   1862  06 55 35
07 10 00  ---             10 43 33  43.9 142.0 -1.8   -22.2   860   1972  06 55 36

07 10 40  M87             10 44 13  44.0 142.2 -1.8   -22.1   34   1972  07 10 35
07 25 00  ---             10 58 36  45.2 146.8 -1.5   -19.6   860   2083  07 10 36

07 25 40  M87             10 59 16  45.3 147.1 -1.5   -19.5   34   2083  07 25 35
07 40 00  ---             11 13 38  46.4 151.8 -1.3   -16.9   860   2194  07 25 36

07 40 40  M87             11 14 18  46.4 152.1 -1.3   -16.7   34   2194  07 40 35
07 55 00  ---             11 28 41  47.3 157.0 -1.0   -13.9   860   2305  07 40 36

07 55 40  M87             11 29 21  47.4 157.3 -1.0   -13.7   34   2305  07 55 35
08 10 00  ---             11 43 43  48.1 162.4 -0.8   -10.7   860   2415  07 55 36

08 10 40  M87             11 44 23  48.1 162.6 -0.8   -10.6   34   2415  08 10 35
08 25 00  ---             11 58 46  48.7 167.8 -0.5    -7.4   860   2526  08 10 36

08 28 00  1308+326         12 01 46  65.7 142.2 -1.2   -25.8   103   2526  08 27 55
08 40 00  ---             12 13 48  66.8 148.0 -1.0   -22.1   720   2619  08 27 56

##### Tu mozna przerwac obserwacje i zapuscic rk01he + rk01hf #####
                (wydruki RA sa na dalszych stronach)

08 40 40  1308+326         12 14 28  66.8 148.3 -0.9   -21.9   33   2619  08 40 35
08 55 00  ---             12 28 50  67.8 155.7 -0.7   -17.0   860   2730  08 40 36

```

Schedule for TORUN (Code Tr) Page 4
 e-EVN run EH027A-B (Hada)

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 26 Oct 2013 Day 299 ---

```
08 55 40 1308+326    12 29 31  67.9 156.1 -0.7    -16.7   33    2730  08 55 35
09 10 00 ---          12 43 53  68.6 164.1 -0.5    -11.3   860    2840  08 55 36
```

rk01hf konczy sie o 12:30, a o 13:20 zaczyna sie druga czesc niniejszego #####
 ##### skryptu, wiec gdzies tu mozna wrocic, by moc sprawdzic obecosc listkow #####

```
12 29 40 J1118+1234    16 04 06  21.3 262.4  4.7      37.6   34    4285  12 29 35
12 44 00 =1116+128     16 18 28  19.1 265.4  5.0      37.8   860    4396  12 29 36

12 44 40 J1118+1234    16 19 08  19.0 265.5  5.0      37.8   34    4396  12 44 35
12 59 00 =1116+128     16 33 31  16.9 268.4  5.2      37.9   860    4506  12 44 36

12 59 40 J1118+1234    16 34 11  16.8 268.6  5.2      37.9   34    4506  12 59 35
13 14 00 =1116+128     16 48 33  14.6 271.4  5.5      37.9   860    4617  12 59 36

13 20 00 M87          16 54 34  24.3 257.8  4.4      36.9   307    4617  13 19 55
13 35 00 ---          17 09 36  22.1 261.0  4.6      37.4   900    4733  13 19 56

13 35 40 M87          17 10 17  22.0 261.1  4.6      37.4   34    4733  13 35 35
13 50 00 ---          17 24 39  19.8 264.1  4.9      37.7   860    4844  13 35 36

13 50 40 M87          17 25 19  19.7 264.2  4.9      37.7   34    4844  13 50 35
14 05 00 ---          17 39 41  17.6 267.2  5.1      37.9   860    4954  13 50 36

14 05 40 M87          17 40 22  17.5 267.3  5.1      37.9   34    4954  14 05 35
14 20 00 ---          17 54 44  15.3 270.2  5.4      37.9   860    5065  14 05 36

14 20 40 M87          17 55 24  15.2 270.3  5.4      37.9   34    5065  14 20 35
14 35 00 ---          18 09 46  13.1 273.2  5.6      37.9   860    5176  14 20 36

14 35 40 M87          18 10 26  13.0 273.3  5.6      37.9   34    5176  14 35 35
14 50 00 ---          18 24 49  10.8 276.2  5.9      37.7   860    5286  14 35 36

14 50 40 M87          18 25 29  10.7 276.3  5.9      37.7   34    5286  14 50 35
15 05 00 ---          18 39 51   8.6 279.1  6.1      37.4   860    5397  14 50 36

15 05 40 M87          18 40 31   8.5 279.2  6.2      37.3   34    5397  15 05 35
15 20 00 ---          18 54 54   6.4 282.1  6.4      36.9   860    5508  15 05 36
```

SETUP FILE INFORMATION:

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

=====
Setup file: sess313.L1024

Matching groups in /aps3/sched11.0/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
IF SB =	L	L	L	L	L	L	L	L	L
	L	L	L	L	L	L	L	L	L
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 = 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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.683570	0.13
* 4C39.25	39 15 23.56637	* 39 02 20.85177	38 58 29.20429	0.10
* J1118+1234	11 16 20.775213	* 11 18 57.301435	11 19 40.082278	0.10
1116+128	12 51 06.68995	* 12 34 41.71795	12 30 07.80186	0.11
J1230+1223	12 28 17.569280	* 12 30 49.423382	12 31 30.664924	0.10
* M87	12 40 01.74884	* 12 23 28.04366	12 18 55.61315	0.10
J1310+3220	13 08 07.560132	* 13 10 28.663851	13 11 06.394870	0.12
* 1308+326	32 36 40.23870	* 32 20 43.78277	32 16 21.05212	0.10

EFFECT OF SOLAR CORONA

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)
4C39.25	82.2
J1118+1234	47.7
M87	33.8
1308+326	46.5

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

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RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 26 Oct 2013 Day 299 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
Next BBC frequencies: 636.00 636.00 636.00 636.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

Table with columns: Start UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, TPStart. Contains scan schedule data for 2013-10-26.

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      C      A      C      A

```

The following frequency sets based on these setups were used.

```

Frequency Set:  2  Setup file default.  Used pcal sets:  1
LO sum=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
Bandwd=   16.00   16.00   16.00   16.00
Matching frequency sets:  2

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0700+1709	06 57 07.785942	* 07 00 01.525540	07 00 50.616516	0.11
* 0657+172	17 13 35.02507	* 17 09 21.70126	17 08 02.83298	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	98.2
0657+172	108.5

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

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 26 Oct 2013 Day 299 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00

Next BBC frequencies: 636.00 636.00 636.00 636.00

Next scan bandwidths: 16.00 16.00 16.00 16.00

11 30 00	0836+710	15 04 16	47.5	-28.9	6.4		62.2	0	0	11 30 00
11 39 30	---	15 13 47	46.8	-28.4	6.5		60.3	570	18	11 30 01
11 40 00	0836+710	15 14 18	46.7	-28.3	6.5		60.2	24	18	11 40 00
11 49 30	---	15 23 49	46.1	-27.7	6.7		58.4	570	36	11 40 01
11 50 00	0836+710	15 24 19	46.0	-27.7	6.7		58.3	24	36	11 50 00
11 59 30	---	15 33 51	45.4	-27.1	6.9		56.5	570	55	11 50 01
12 00 00	0836+710	15 34 21	45.3	-27.1	6.9		56.4	24	55	12 00 00
12 09 30	---	15 43 52	44.7	-26.5	7.0		54.6	570	73	12 00 01
12 10 00	0836+710	15 44 23	44.7	-26.4	7.0		54.5	24	73	12 10 00
12 19 30	---	15 53 54	44.0	-25.8	7.2		52.7	570	91	12 10 01
12 20 00	0836+710	15 54 24	44.0	-25.7	7.2		52.6	24	91	12 20 00
12 30 00	---	16 04 26	43.4	-25.0	7.4		50.7	600	110	12 20 01

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1	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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
Bandwd=   16.00   16.00   16.00   16.00
Matching frequency sets:  3

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1  S3  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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0841+7053	08 36 21.556645	* 08 41 24.365283	08 42 47.253015	0.31
* 0836+710	71 04 22.42740	* 70 53 42.17302	70 50 18.28495	0.10

EFFECT OF SOLAR CORONA

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)
0836+710    98.7

```

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
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

```

rk01hgtr

RADIOASTRON AGN SURVEY

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 26 Oct 2013 Day 299 ---

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

Table with 11 columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It lists observation times and parameters for multiple scans.

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2.set
Matching groups in ./freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 3 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
IF SB =      L      L      L      L
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

```

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.

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

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours	
			Scan	Baseline
1150+812	ra18cm2.set	1 2 3 4	0.958	5.750

EFFECT OF SOLAR CORONA

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)
FAKERA	98.4
1150+812	95.1

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

RADIO ASTRON OBSERVATIONS OF CRAB PULSAR
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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron observations of Crab pulsar

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 27 Oct 2013 Day 300 ---

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

05 58 00	CRAB	09 35 18	35.3	259.7	4.0	39.6	0	0	Stopped
05 59 00	---	09 36 18	35.2	259.9	4.0	39.6	60	0	
06 00 00	CRAB	09 37 18	35.0	260.1	4.0	39.7	54	0	06 00 00
06 09 30	---	09 46 50	33.6	262.2	4.2	39.9	570	18	06 00 01
06 10 00	CRAB	09 47 20	33.6	262.3	4.2	39.9	24	18	06 10 00
06 19 30	---	09 56 51	32.1	264.3	4.4	40.1	570	36	06 10 01
06 20 00	CRAB	09 57 22	32.1	264.4	4.4	40.1	24	36	06 20 00
06 29 30	---	10 06 53	30.6	266.4	4.5	40.3	570	55	06 20 01
06 30 00	CRAB	10 07 23	30.6	266.5	4.5	40.3	24	55	06 30 00
06 39 30	---	10 16 55	29.1	268.4	4.7	40.4	570	73	06 30 01
06 40 00	CRAB	10 17 25	29.1	268.5	4.7	40.4	24	73	06 40 00
06 49 30	---	10 26 56	27.6	270.5	4.9	40.4	570	91	06 40 01
06 50 00	CRAB	10 27 26	27.5	270.6	4.9	40.4	24	91	06 50 00
06 59 30	---	10 36 58	26.1	272.4	5.0	40.3	570	109	06 50 01
07 00 00	CRAB	10 37 28	26.0	272.5	5.0	40.3	24	109	07 00 00
07 09 30	---	10 47 00	24.6	274.4	5.2	40.2	570	128	07 00 01
07 10 00	CRAB	10 47 30	24.5	274.5	5.2	40.2	24	128	07 10 00
07 19 30	---	10 57 01	23.1	276.3	5.4	40.1	570	146	07 10 01
07 20 00	CRAB	10 57 31	23.0	276.4	5.4	40.1	24	146	07 20 00
07 29 30	---	11 07 03	21.6	278.3	5.5	39.9	570	164	07 20 01
07 30 00	CRAB	11 07 33	21.5	278.4	5.5	39.9	24	164	07 30 00
07 39 30	---	11 17 05	20.1	280.2	5.7	39.6	570	182	07 30 01

Schedule for TORUN (Code Tr)

Page 3

RadioAstron observations of Crab pulsar

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 27 Oct 2013  Day 300 ---

07 40 00  CRAB           11 17 35  20.1 280.3  5.7      39.6   24   182  07 40 00
07 49 30  ---           11 27 06  18.7 282.1  5.9      39.3  570   201  07 40 01

07 50 00  CRAB           11 27 36  18.6 282.2  5.9      39.3   24   201  07 50 00
07 59 30  ---           11 37 08  17.2 284.0  6.0      38.9  570   219  07 50 01

08 00 00  CRAB           11 37 38  17.1 284.1  6.0      38.9   24   219  08 00 00
08 09 30  ---           11 47 10  15.7 285.9  6.2      38.5  570   237  08 00 01

08 10 00  CRAB           11 47 40  15.7 286.0  6.2      38.5   24   237  08 10 00
08 19 30  ---           11 57 11  14.3 287.8  6.4      38.1  570   255  08 10 01

08 20 00  CRAB           11 57 41  14.2 287.9  6.4      38.1   24   255  08 20 00
08 29 30  ---           12 07 13  12.9 289.6  6.5      37.6  570   274  08 20 01

08 30 00  CRAB           12 07 43  12.8 289.7  6.5      37.6   24   274  08 30 00
08 39 30  ---           12 17 14  11.5 291.5  6.7      37.1  570   292  08 30 01

08 40 00  CRAB           12 17 45  11.4 291.6  6.7      37.0   24   292  08 40 00
08 49 30  ---           12 27 16  10.1 293.4  6.9      36.5  570   310  08 40 01

08 50 00  CRAB           12 27 46  10.0 293.5  6.9      36.4   24   310  08 50 00
09 00 00  ---           12 37 48   8.6 295.4  7.0      35.8  600   329  08 50 01

```

SETUP FILE INFORMATION:

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

==== Setup file: ra18cm2_autolevel.set

Matching groups in ./eg075.freq.sess313rdbe.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```

Setup group: 3          Station: TORUN          Total bit rate: 256
Format: MKIV1:4        Bits per sample: 2          Sample rate: 32.000
Number of channels: 4  DBE type:

```

Disk used to record data.

Setup not used for recording data.

```

1st LO= 2300.00  2300.00  2300.00  2300.00
Net SB=   L      L      U      U
IF SB =   L      L      L      L
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: 7 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: 7

```

The following pulse cal sets were used with this setup:

```

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

```

==== Setup file: ra18cm2.set

tr18cm E-mail Borkowski 12Mar98, preferred alternative

```

Setup group: 13 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
IF SB = L L L L
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: 16 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: 16

```

The following pulse cal sets were used with this setup:

```

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

```

Track assignments are:

```

track1= 2, 18, 3, 19
barrel=roll_off

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	Source position (RA/Dec) (J2000)	(Date)	Error (mas)
* CRAB	05 31 31.427725	* 05 34 31.973000	05 35 23.552586	0.00
	21 58 54.40670	* 22 00 52.06000	22 01 16.54303	0.00

RADIOASTRON AGN SURVEY

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Fax: +7-495-3332378 Phone during observation: +7-915-1546281

Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN Survey

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 data for Sun 27 Oct 2013, Day 300.

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      C      A      C      A

```

The following frequency sets based on these setups were used.

```

Frequency Set:  2  Setup file default.  Used pcal sets:  1
LO sum=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
Bandwd=   16.00   16.00   16.00   16.00
Matching frequency sets:  2

```

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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
J0841+7053	08 36 21.556645	* 08 41 24.365283	08 42 47.336496	0.31
* 0836+710	71 04 22.42740	* 70 53 42.17302	70 50 18.18247	0.10

EFFECT OF SOLAR CORONA

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)
0836+710    99.4

```

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

```


n13l3tr

NETWORK MONITORING EXPERIMENT

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Notes: 18cm NME for session 3/2013, 512 Mbps, 2-bit sampling, 8 MHz filters
 Additional DBBC testing data from Mc and Tr is expected.

UWAGA: Zapis na obu rekorderach!! #####
=====

COVER LETTER:

Dear EVN friends,

This is the schedule for the 18cm NME on October 27 2013,
involving 14 stations: Eb Wb Jb1 On25 Mc Nt Tr Sv Zc Bd Ur Sh Hh Ir
The NME uses a standard setup with 512 Mbps and consists of
four ftp fringe tests, interspersed with a long phase referencing
cycle involving 2201+315 (4C+31.63, ~2 Jy source at 1.4 GHz) and
a close position reference calibrator (J2157+3127, ~0.44Jy in S band
and ~1.27deg away).

The four ftp fringe-test scans, all of them on 2201+315, start at:

- (1) 13:12:30 UT (scan 4, 2 sec)
- (2) 14:15:30 UT (scan 17, 2 sec)
- (3) 15:23:00 UT (scan 31, 2 sec)
- (4) 15:52:30 UT (scan 37, 2 sec)

See you on Skype group chat
and
Good luck with the session!

Ivan
 Skype account: ivan-agudo

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
--- Sun 27 Oct 2013 Day 300 ---										
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										
13 00 00	2201+315	16 38 27	29.9	75.7	-5.4		-43.2	0	0	13 00 00
13 04 00	---	16 42 28	30.5	76.4	-5.4		-43.4	240	15	13 00 01
13 04 00	2201+315	16 42 28	30.5	76.4	-5.4		-43.4	-5	15	No stop
13 08 00	---	16 46 29	31.1	77.1	-5.3		-43.5	235	31	13 04 01
13 08 00	2201+315	16 46 29	31.1	77.1	-5.3		-43.5	-5	31	No stop
13 12 00	---	16 50 29	31.7	77.8	-5.2		-43.7	235	46	13 08 01
13 12 30	2201+315	16 50 59	31.7	77.9	-5.2		-43.7	24	46	13 12 30
13 16 30	---	16 55 00	32.3	78.6	-5.1		-43.9	240	62	13 12 31
13 18 30	J2157+3127	16 57 00	33.2	80.3	-5.0		-44.0	105	62	13 18 30
13 22 30	=2155+312	17 01 01	33.8	81.1	-5.0		-44.1	240	77	13 18 31
13 23 00	2201+315	17 01 31	33.3	79.8	-5.0		-44.1	15	77	13 23 00
13 27 30	---	17 06 02	33.9	80.6	-5.0		-44.2	270	95	13 23 01
13 28 00	J2157+3127	17 06 32	34.7	82.1	-4.9		-44.2	15	95	13 28 00
13 32 00	=2155+312	17 10 33	35.3	82.8	-4.8		-44.3	240	110	13 28 01
13 32 30	2201+315	17 11 03	34.7	81.6	-4.9		-44.4	15	110	13 32 30
13 37 00	---	17 15 33	35.4	82.4	-4.8		-44.5	270	128	13 32 31
13 37 30	J2157+3127	17 16 03	36.1	83.9	-4.7		-44.5	14	128	13 37 30
13 41 30	=2155+312	17 20 04	36.7	84.6	-4.6		-44.5	240	143	13 37 31
13 42 00	2201+315	17 20 34	36.1	83.3	-4.7		-44.6	15	143	13 42 00
13 46 30	---	17 25 05	36.8	84.2	-4.6		-44.7	270	161	13 42 01
13 47 00	J2157+3127	17 25 35	37.5	85.7	-4.5		-44.6	14	161	13 47 00
13 51 00	=2155+312	17 29 36	38.1	86.4	-4.5		-44.7	240	176	13 47 01
13 51 30	2201+315	17 30 06	37.5	85.1	-4.6		-44.8	15	176	13 51 30
13 56 00	---	17 34 36	38.2	86.0	-4.5		-44.8	270	194	13 51 31
13 56 30	J2157+3127	17 35 07	38.9	87.5	-4.4		-44.7	14	194	13 56 30
14 00 30	=2155+312	17 39 07	39.5	88.3	-4.3		-44.8	240	209	13 56 31
14 01 00	2201+315	17 39 37	39.0	87.0	-4.4		-44.9	15	209	14 01 00
14 05 30	---	17 44 08	39.6	87.8	-4.3		-44.9	270	226	14 01 01

Schedule for TORUN (Code Tr)

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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
--- Sun 27 Oct 2013 Day 300 ---										
14 06 00	J2157+3127	17 44 38	40.4	89.4	-4.2		-44.8	14	226	14 06 00
14 10 00	=2155+312	17 48 39	41.0	90.2	-4.2		-44.8	240	242	14 06 01
14 10 30	2201+315	17 49 09	40.4	88.8	-4.2		-45.0	14	242	14 10 30
14 15 00	---	17 53 40	41.1	89.7	-4.2		-45.0	270	259	14 10 31
14 15 30	2201+315	17 54 10	41.1	89.8	-4.2		-45.0	24	259	14 15 30
14 19 30	---	17 58 10	41.7	90.6	-4.1		-45.0	240	275	14 15 31
14 21 30	2201+315	18 00 11	42.0	91.0	-4.1		-45.0	114	275	14 21 30
14 25 30	---	18 04 11	42.6	91.8	-4.0		-44.9	240	290	14 21 31
14 26 00	J2157+3127	18 04 41	43.4	93.4	-3.9		-44.7	14	290	14 26 00
14 30 00	=2155+312	18 08 42	44.0	94.3	-3.8		-44.6	240	306	14 26 01
14 30 30	2201+315	18 09 12	43.4	92.9	-3.9		-44.9	14	306	14 30 30
14 35 00	---	18 13 43	44.1	93.8	-3.8		-44.8	270	323	14 30 31
14 35 30	J2157+3127	18 14 13	44.8	95.5	-3.7		-44.5	14	323	14 35 30
14 39 30	=2155+312	18 18 14	45.4	96.3	-3.7		-44.4	240	339	14 35 31
14 40 00	2201+315	18 18 44	44.8	94.9	-3.8		-44.8	14	339	14 40 00
14 44 30	---	18 23 14	45.5	95.8	-3.7		-44.7	270	356	14 40 01
14 45 00	J2157+3127	18 23 45	46.2	97.5	-3.6		-44.3	14	356	14 45 00
14 49 00	=2155+312	18 27 45	46.8	98.4	-3.5		-44.2	240	372	14 45 01
14 49 30	2201+315	18 28 15	46.2	96.9	-3.6		-44.6	14	372	14 49 30
14 54 00	---	18 32 46	46.9	97.9	-3.5		-44.4	270	389	14 49 31
14 54 30	J2157+3127	18 33 16	47.6	99.7	-3.4		-44.0	13	389	14 54 30
14 58 30	=2155+312	18 37 17	48.2	100.6	-3.3		-43.8	240	404	14 54 31
14 59 00	2201+315	18 37 47	47.7	99.0	-3.4		-44.3	14	404	14 59 00
15 03 30	---	18 42 18	48.3	100.1	-3.4		-44.1	270	422	14 59 01
15 04 00	J2157+3127	18 42 48	49.0	101.9	-3.3		-43.6	13	422	15 04 00
15 08 00	=2155+312	18 46 48	49.6	102.8	-3.2		-43.4	240	437	15 04 01
15 08 30	2201+315	18 47 18	49.1	101.2	-3.3		-43.9	14	437	15 08 30
15 13 00	---	18 51 49	49.7	102.3	-3.2		-43.7	270	455	15 08 31
15 13 30	J2157+3127	18 52 19	50.4	104.1	-3.1		-43.1	13	455	15 13 30
15 17 30	=2155+312	18 56 20	51.0	105.1	-3.0		-42.8	240	470	15 13 31
15 18 00	2201+315	18 56 50	50.5	103.5	-3.1		-43.4	13	470	15 18 00
15 22 30	---	19 01 21	51.1	104.6	-3.0		-43.2	270	488	15 18 01

Schedule for TORUN (Code Tr)
 Network Monitoring Experiment

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Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 27 Oct 2013 Day 300 ---										
15 23 00	2201+315	19 01 51	51.2	104.7	-3.0		-43.1	24	488	15 23 00
15 27 00	---	19 05 51	51.8	105.7	-3.0		-42.9	240	503	15 23 01
15 29 00	2201+315	19 07 52	52.1	106.2	-2.9		-42.7	114	503	15 29 00
15 33 00	---	19 11 52	52.6	107.3	-2.9		-42.5	240	519	15 29 01
15 33 30	J2157+3127	19 12 22	53.3	109.3	-2.8		-41.7	13	519	15 33 30
15 37 30	=2155+312	19 16 23	53.9	110.3	-2.7		-41.3	240	534	15 33 31
15 38 00	2201+315	19 16 53	53.4	108.6	-2.8		-42.1	13	534	15 38 00
15 42 30	---	19 21 24	54.0	109.8	-2.7		-41.7	270	552	15 38 01
15 43 00	J2157+3127	19 21 54	54.6	111.9	-2.6		-40.8	12	552	15 43 00
15 47 00	=2155+312	19 25 55	55.2	113.0	-2.5		-40.4	240	567	15 43 01
15 47 30	2201+315	19 26 25	54.7	111.1	-2.6		-41.2	13	567	15 47 30
15 52 00	---	19 30 56	55.3	112.4	-2.5		-40.8	270	584	15 47 31
15 52 30	2201+315	19 31 26	55.4	112.6	-2.5		-40.7	24	584	15 52 30
15 56 30	---	19 35 26	56.0	113.7	-2.5		-40.3	240	600	15 52 31
15 58 30	2201+315	19 37 27	56.2	114.3	-2.4		-40.1	113	600	15 58 30
16 00 00	---	19 38 57	56.4	114.7	-2.4		-39.9	90	606	15 58 31

SETUP FILE INFORMATION:

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

==== Setup file: sess313.L512

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

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 4 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: 6 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: 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
    
```

***** Setup for Td *****

```

Setup group: 15 Station: TR_DBBC Total bit rate: 512
Format: MARK5B 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 5 1 5 2 6 2 6
        3 7 3 7 4 8 4 8
BBC SB= U U L L U U L L
        U U L L U U L L
IF = A1 B1 A1 B1 A1 B1 A1 B1
        A1 B1 A1 B1 A1 B1 A1 B1
    
```

The following frequency sets based on these setups were used.

```

Frequency Set: 14 Setup file default.
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: 14
    
```

Track assignments are:

```

track1= 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32
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)		
* J2157+3127	21 55 15.930441	* 21 57 28.823886	21 58 06.899933	0.12
2155+312	31 12 41.62468	* 31 27 01.35172	31 31 21.90937	0.11
J2203+3145	22 01 01.441998	* 22 03 14.975789	22 03 53.278261	0.27
* 2201+315	31 31 05.87505	* 31 45 38.26998	31 50 02.15359	0.32

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)
J2157+3127	120.0
2201+315	121.2

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

Schedule for TORUN (Code Tr)

Page 3

Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

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 27 Oct 2013 Day 300 ---										
17 45 39	J0333+6536	21 24 53	45.8	36.2	-6.2		-59.4	15	29	17 45 39
17 47 09	---	21 26 24	46.0	36.3	-6.1		-59.7	90	30	17 45 40
17 47 09	OH138.0+7.2	21 26 24	46.7	37.1	-6.0		-61.2	-15	30	No stop
17 50 39	---	21 29 54	47.0	37.3	-5.9		-61.8	195	34	17 47 10
17 50 39	J0322+6610	21 29 54	47.6	36.7	-5.9		-62.9	-14	34	No stop
17 52 09	---	21 31 24	47.7	36.8	-5.9		-63.1	76	35	17 50 40
17 52 09	OH138.0+7.2	21 31 24	47.2	37.4	-5.9		-62.0	-13	35	No stop
17 55 39	---	21 34 55	47.5	37.7	-5.9		-62.6	197	38	17 52 10
17 56 09	J0333+6536	21 35 25	46.8	37.0	-6.0		-61.3	15	38	17 56 09
17 57 39	---	21 36 55	46.9	37.1	-6.0		-61.5	90	40	17 56 10
17 57 39	OH138.0+7.2	21 36 55	47.7	37.8	-5.8		-63.0	-15	40	No stop
18 01 09	---	21 40 26	48.0	38.1	-5.8		-63.6	195	43	17 57 40
18 01 09	J0322+6610	21 40 26	48.5	37.4	-5.7		-64.7	-13	43	No stop
18 02 39	---	21 41 56	48.7	37.5	-5.7		-65.0	77	45	18 01 10
18 02 39	OH138.0+7.2	21 41 56	48.1	38.2	-5.7		-63.9	-13	45	No stop
18 06 09	---	21 45 27	48.5	38.4	-5.7		-64.5	197	48	18 02 40
18 06 39	J0333+6536	21 45 57	47.7	37.7	-5.8		-63.1	15	48	18 06 39
18 08 09	---	21 47 27	47.9	37.9	-5.8		-63.4	90	49	18 06 40
18 08 09	OH138.0+7.2	21 47 27	48.7	38.6	-5.7		-64.9	-15	49	No stop
18 11 39	---	21 50 58	49.0	38.8	-5.6		-65.5	195	53	18 08 10
18 11 39	J0322+6610	21 50 58	49.5	38.1	-5.5		-66.7	-13	53	No stop
18 13 09	---	21 52 28	49.6	38.2	-5.5		-66.9	77	54	18 11 40
18 13 09	OH138.0+7.2	21 52 28	49.1	38.9	-5.6		-65.8	-13	54	No stop
18 16 39	---	21 55 58	49.5	39.1	-5.5		-66.4	197	58	18 13 10
18 17 09	J0333+6536	21 56 28	48.7	38.5	-5.6		-65.0	15	58	18 17 09
18 18 39	---	21 57 59	48.9	38.6	-5.6		-65.2	90	59	18 17 10
18 18 39	OH138.0+7.2	21 57 59	49.7	39.2	-5.5		-66.7	-15	59	No stop
18 22 09	---	22 01 29	50.0	39.5	-5.4		-67.4	195	62	18 18 40
18 22 09	J0322+6610	22 01 29	50.5	38.7	-5.4		-68.6	-13	62	No stop
18 23 39	---	22 03 00	50.6	38.8	-5.3		-68.9	77	64	18 22 10
18 23 39	OH138.0+7.2	22 03 00	50.1	39.5	-5.4		-67.6	-13	64	No stop
18 27 09	---	22 06 30	50.5	39.8	-5.3		-68.3	197	67	18 23 40

Schedule for TORUN (Code Tr)

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Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

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 27 Oct 2013 Day 300 ---										
18 27 39	J0333+6536	22 07 00	49.7	39.1	-5.5		-66.9	15	67	18 27 39
18 29 09	---	22 08 30	49.8	39.2	-5.4		-67.1	90	69	18 27 40
18 29 09	OH138.0+7.2	22 08 30	50.7	39.9	-5.3		-68.6	-16	69	No stop
18 32 39	---	22 12 01	51.0	40.1	-5.2		-69.3	194	72	18 29 10
18 32 39	J0322+6610	22 12 01	51.5	39.3	-5.2		-70.5	-13	72	No stop
18 34 09	---	22 13 31	51.6	39.4	-5.2		-70.8	77	73	18 32 40
18 34 09	OH138.0+7.2	22 13 31	51.1	40.2	-5.2		-69.6	-13	73	No stop
18 37 39	---	22 17 02	51.5	40.4	-5.2		-70.2	197	77	18 34 10
18 38 09	J0333+6536	22 17 32	50.7	39.8	-5.3		-68.8	15	77	18 38 09
18 39 39	---	22 19 02	50.9	39.9	-5.3		-69.0	90	78	18 38 10
18 39 39	OH138.0+7.2	22 19 02	51.7	40.5	-5.1		-70.6	-16	78	No stop
18 43 09	---	22 22 33	52.0	40.7	-5.1		-71.2	194	82	18 39 40
18 43 09	J0322+6610	22 22 33	52.5	39.8	-5.0		-72.5	-13	82	No stop
18 44 39	---	22 24 03	52.6	39.9	-5.0		-72.8	77	83	18 43 10
18 44 39	OH138.0+7.2	22 24 03	52.2	40.8	-5.0		-71.5	-13	83	No stop
18 48 09	---	22 27 34	52.5	40.9	-5.0		-72.2	197	86	18 44 40
18 48 39	J0333+6536	22 28 04	51.7	40.4	-5.1		-70.7	15	86	18 48 39
18 50 09	---	22 29 34	51.9	40.5	-5.1		-71.0	90	88	18 48 40
18 50 09	OH138.0+7.2	22 29 34	52.7	41.0	-4.9		-72.5	-16	88	No stop
18 53 39	---	22 33 04	53.1	41.2	-4.9		-73.2	194	91	18 50 10
18 53 39	J0322+6610	22 33 04	53.5	40.3	-4.8		-74.5	-13	91	No stop
18 55 09	---	22 34 35	53.6	40.4	-4.8		-74.8	77	93	18 53 40
18 55 09	OH138.0+7.2	22 34 35	53.2	41.3	-4.9		-73.5	-14	93	No stop
18 58 39	---	22 38 05	53.6	41.5	-4.8		-74.1	196	96	18 55 10
18 59 09	J0333+6536	22 38 35	52.8	40.9	-4.9		-72.7	14	96	18 59 09
19 00 39	---	22 40 06	52.9	41.0	-4.9		-72.9	90	97	18 59 10
19 00 39	OH138.0+7.2	22 40 06	53.8	41.6	-4.8		-74.5	-16	97	No stop
19 04 09	---	22 43 36	54.1	41.7	-4.7		-75.2	194	101	19 00 40
19 04 09	J0322+6610	22 43 36	54.5	40.8	-4.7		-76.6	-14	101	No stop
19 05 39	---	22 45 06	54.7	40.8	-4.6		-76.9	76	102	19 04 10
19 05 39	OH138.0+7.2	22 45 06	54.3	41.8	-4.7		-75.5	-14	102	No stop
19 09 09	---	22 48 37	54.6	41.9	-4.6		-76.1	196	106	19 05 40

Schedule for TORUN (Code Tr)

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Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

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 27 Oct 2013 Day 300 ---										
19 09 39	J0333+6536	22 49 07	53.8	41.4	-4.8		-74.7	14	106	19 09 39
19 11 09	---	22 50 37	53.9	41.5	-4.7		-74.9	90	107	19 09 40
19 11 09	OH138.0+7.2	22 50 37	54.8	42.0	-4.6		-76.5	-16	107	No stop
19 14 39	---	22 54 08	55.2	42.2	-4.5		-77.2	194	110	19 11 10
19 14 39	J0322+6610	22 54 08	55.6	41.2	-4.5		-78.6	-14	110	No stop
19 16 09	---	22 55 38	55.7	41.2	-4.5		-78.9	76	112	19 14 40
19 16 09	OH138.0+7.2	22 55 38	55.3	42.2	-4.5		-77.5	-14	112	No stop
19 19 39	---	22 59 09	55.7	42.4	-4.5		-78.2	196	115	19 16 10
19 20 09	J0333+6536	22 59 39	54.8	41.9	-4.6		-76.7	14	115	19 20 09
19 21 39	---	23 01 09	55.0	42.0	-4.6		-77.0	90	117	19 20 10
19 21 39	OH138.0+7.2	23 01 09	55.9	42.4	-4.4		-78.6	-16	117	No stop
19 25 09	---	23 04 40	56.2	42.6	-4.4		-79.3	194	120	19 21 40
19 26 19	F0217+7349	23 05 50	61.5	25.8	-3.2		-109.9	22	120	19 26 19
19 31 19	---	23 10 51	61.9	25.5	-3.1		-111.3	300	125	19 26 20
19 32 25	J0322+6610	23 11 57	57.3	41.7	-4.2		-82.3	19	125	19 32 25
19 33 55	---	23 13 27	57.5	41.7	-4.2		-82.6	90	126	19 32 26
19 33 55	OH138.0+7.2	23 13 27	57.1	42.8	-4.2		-81.0	-14	126	No stop
19 37 25	---	23 16 58	57.5	42.9	-4.2		-81.8	196	130	19 33 56
19 37 55	J0333+6536	23 17 28	56.6	42.6	-4.3		-80.2	14	130	19 37 55
19 39 25	---	23 18 58	56.8	42.6	-4.3		-80.5	90	131	19 37 56
19 39 25	OH138.0+7.2	23 18 58	57.7	43.0	-4.1		-82.2	-16	131	No stop
19 42 55	---	23 22 29	58.0	43.1	-4.1		-82.9	194	134	19 39 26
19 42 55	J0322+6610	23 22 29	58.4	41.9	-4.0		-84.5	-15	134	No stop
19 44 25	---	23 23 59	58.5	42.0	-4.0		-84.8	75	136	19 42 56
19 44 25	OH138.0+7.2	23 23 59	58.2	43.1	-4.0		-83.2	-15	136	No stop
19 47 55	---	23 27 30	58.6	43.2	-4.0		-83.9	195	139	19 44 26
19 48 25	J0333+6536	23 28 00	57.7	42.9	-4.1		-82.3	14	139	19 48 25
19 49 55	---	23 29 30	57.9	42.9	-4.1		-82.6	90	141	19 48 26
19 49 55	OH138.0+7.2	23 29 30	58.8	43.2	-3.9		-84.4	-16	141	No stop
19 53 25	---	23 33 01	59.1	43.3	-3.9		-85.1	194	144	19 49 56

Schedule for TORUN (Code Tr)

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Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

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 27 Oct 2013 Day 300 ---										
19 53 25	J0322+6610	23 33 01	59.4	42.1	-3.8		-86.8	-15	144	No stop
19 54 55	---	23 34 31	59.6	42.1	-3.8		-87.1	75	145	19 53 26
19 54 55	OH138.0+7.2	23 34 31	59.3	43.3	-3.9		-85.4	-15	145	No stop
19 58 25	---	23 38 01	59.6	43.4	-3.8		-86.2	195	149	19 54 56
19 58 55	J0333+6536	23 38 32	58.8	43.1	-3.9		-84.5	14	149	19 58 55
20 00 25	---	23 40 02	59.0	43.1	-3.9		-84.9	90	150	19 58 56
20 00 25	OH138.0+7.2	23 40 02	59.9	43.4	-3.8		-86.6	-16	150	No stop
20 03 55	---	23 43 32	60.2	43.4	-3.7		-87.4	194	154	20 00 26
20 03 55	J0322+6610	23 43 32	60.5	42.2	-3.7		-89.1	-15	154	No stop
20 05 25	---	23 45 03	60.7	42.2	-3.6		-89.4	75	155	20 03 56
20 05 25	OH138.0+7.2	23 45 03	60.4	43.5	-3.7		-87.7	-15	155	No stop
20 08 55	---	23 48 33	60.7	43.5	-3.6		-88.5	195	158	20 05 26
20 09 25	J0333+6536	23 49 03	59.9	43.3	-3.8		-86.8	14	158	20 09 25
20 10 55	---	23 50 34	60.0	43.3	-3.7		-87.1	90	160	20 09 26
20 10 55	OH138.0+7.2	23 50 34	60.9	43.5	-3.6		-88.9	-16	160	No stop
20 14 25	---	23 54 04	61.3	43.5	-3.5		-89.7	194	163	20 10 56
20 14 25	J0322+6610	23 54 04	61.6	42.2	-3.5		-91.5	-15	163	No stop
20 15 55	---	23 55 34	61.7	42.2	-3.5		-91.9	75	165	20 14 26
20 15 55	OH138.0+7.2	23 55 34	61.5	43.5	-3.5		-90.1	-15	165	No stop
20 19 25	---	23 59 05	61.8	43.5	-3.5		-90.9	195	168	20 15 56
20 19 55	J0333+6536	23 59 35	61.0	43.3	-3.6		-89.1	14	168	20 19 55
20 21 25	---	00 01 05	61.1	43.3	-3.6		-89.5	90	169	20 19 56
20 21 25	OH138.0+7.2	00 01 05	62.0	43.5	-3.4		-91.3	-16	169	No stop
20 24 55	---	00 04 36	62.4	43.5	-3.4		-92.2	194	173	20 21 26
20 24 55	J0322+6610	00 04 36	62.6	42.1	-3.3		-94.0	-16	173	No stop
20 26 25	---	00 06 06	62.8	42.0	-3.3		-94.4	74	174	20 24 56
20 26 25	OH138.0+7.2	00 06 06	62.5	43.5	-3.3		-92.5	-16	174	No stop
20 29 55	---	00 09 37	62.9	43.4	-3.3		-93.4	194	178	20 26 26
20 30 25	J0333+6536	00 10 07	62.0	43.3	-3.4		-91.5	14	178	20 30 25
20 31 55	---	00 11 37	62.2	43.3	-3.4		-91.9	90	179	20 30 26

Schedule for TORUN (Code Tr)

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Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

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 27 Oct 2013 Day 300 ---										
20 31 55	OH138.0+7.2	00 11 37	63.1	43.4	-3.2		-93.8	-16	179	No stop
20 35 25	---	00 15 08	63.5	43.3	-3.2		-94.7	194	182	20 31 56
20 35 25	J0322+6610	00 15 08	63.7	41.8	-3.1		-96.6	-16	182	No stop
20 36 55	---	00 16 38	63.8	41.8	-3.1		-97.0	74	184	20 35 26
20 36 55	OH138.0+7.2	00 16 38	63.6	43.3	-3.2		-95.1	-16	184	No stop
20 40 25	---	00 20 08	64.0	43.2	-3.1		-95.9	194	187	20 36 56
20 40 55	J0333+6536	00 20 38	63.1	43.2	-3.2		-94.0	14	187	20 40 55
20 42 25	---	00 22 09	63.3	43.2	-3.2		-94.4	90	189	20 40 56
20 42 25	OH138.0+7.2	00 22 09	64.2	43.2	-3.1		-96.4	-16	189	No stop
20 45 55	---	00 25 39	64.6	43.1	-3.0		-97.3	194	192	20 42 26
20 45 55	J0322+6610	00 25 39	64.7	41.5	-3.0		-99.3	-16	192	No stop
20 47 25	---	00 27 10	64.9	41.4	-2.9		-99.7	74	193	20 45 56
20 47 25	OH138.0+7.2	00 27 10	64.7	43.0	-3.0		-97.7	-16	193	No stop
20 50 55	---	00 30 40	65.1	42.9	-2.9		-98.6	194	197	20 47 26
20 51 25	J0333+6536	00 31 10	64.2	43.0	-3.1		-96.6	14	197	20 51 25
20 52 55	---	00 32 40	64.4	42.9	-3.0		-97.0	90	198	20 51 26
20 52 55	OH138.0+7.2	00 32 40	65.3	42.8	-2.9		-99.1	-16	198	No stop
20 56 25	---	00 36 11	65.6	42.7	-2.8		-100.1	194	202	20 52 56
20 56 25	J0322+6610	00 36 11	65.8	41.0	-2.8		-102.2	-17	202	No stop
20 57 55	---	00 37 41	65.9	40.9	-2.8		-102.6	73	203	20 56 26
20 57 55	OH138.0+7.2	00 37 41	65.8	42.6	-2.8		-100.5	-17	203	No stop
21 01 25	---	00 41 12	66.1	42.4	-2.8		-101.4	193	206	20 57 56
21 01 55	J0333+6536	00 41 42	65.3	42.6	-2.9		-99.4	14	206	21 01 55
21 03 25	---	00 43 12	65.4	42.6	-2.9		-99.8	90	208	21 01 56
21 03 25	OH138.0+7.2	00 43 12	66.3	42.3	-2.7		-102.0	-16	208	No stop
21 06 55	---	00 46 43	66.7	42.1	-2.7		-103.0	194	211	21 03 26
21 06 55	J0322+6610	00 46 43	66.8	40.4	-2.6		-105.2	-17	211	No stop
21 08 25	---	00 48 13	67.0	40.3	-2.6		-105.6	73	213	21 06 56
21 08 25	OH138.0+7.2	00 48 13	66.9	42.0	-2.6		-103.4	-17	213	No stop
21 11 55	---	00 51 44	67.2	41.8	-2.6		-104.4	193	216	21 08 26

Schedule for TORUN (Code Tr)

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Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

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 27 Oct 2013 Day 300 ---										
21 12 25	J0333+6536	00 52 14	66.4	42.1	-2.7		-102.2	14	216	21 12 25
21 13 55	---	00 53 44	66.5	42.0	-2.7		-102.6	90	217	21 12 26
21 13 55	OH138.0+7.2	00 53 44	67.4	41.7	-2.5		-105.0	-16	217	No stop
21 17 25	---	00 57 14	67.8	41.4	-2.5		-106.0	194	221	21 13 56
21 17 25	J0322+6610	00 57 14	67.8	39.6	-2.4		-108.3	-17	221	No stop
21 18 55	---	00 58 45	68.0	39.5	-2.4		-108.8	73	222	21 17 26
21 18 55	OH138.0+7.2	00 58 45	67.9	41.3	-2.5		-106.4	-17	222	No stop
21 22 25	---	01 02 15	68.2	41.0	-2.4		-107.5	193	226	21 18 56
21 22 55	J0333+6536	01 02 45	67.4	41.5	-2.5		-105.2	14	226	21 22 55
21 24 25	---	01 04 16	67.6	41.4	-2.5		-105.6	90	227	21 22 56
21 24 25	OH138.0+7.2	01 04 16	68.4	40.9	-2.4		-108.1	-16	227	No stop
21 27 55	---	01 07 46	68.8	40.5	-2.3		-109.2	194	230	21 24 26
21 27 55	J0322+6610	01 07 46	68.8	38.6	-2.3		-111.6	-17	230	No stop
21 29 25	---	01 09 16	69.0	38.5	-2.2		-112.1	73	232	21 27 56
21 29 25	OH138.0+7.2	01 09 16	68.9	40.4	-2.3		-109.7	-17	232	No stop
21 32 55	---	01 12 47	69.3	40.0	-2.2		-110.8	193	235	21 29 26
21 33 25	J0333+6536	01 13 17	68.4	40.6	-2.4		-108.4	14	235	21 33 25
21 34 55	---	01 14 47	68.6	40.5	-2.3		-108.8	90	237	21 33 26
21 34 55	OH138.0+7.2	01 14 47	69.5	39.8	-2.2		-111.5	-16	237	No stop
21 38 25	---	01 18 18	69.8	39.4	-2.1		-112.6	194	240	21 34 56
21 40 51	F0102+5824	01 20 44	84.1	-22.3	0.3		154.2	8	240	21 40 51
21 45 51	---	01 25 45	83.8	-27.7	0.4		147.7	300	245	21 40 52

SETUP FILE INFORMATION:

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

==== Setup file: sess313.L128

Matching groups in /home/hb/bin/SCHED/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 3	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=	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
IF SB =	L	L	L	L	L	L	L	L	L
	L	L	L	L	L	L	L	L	L
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 Based on FREQ, BW, and/or DOPPLER in schedule. Used pcal sets: 1

LO sum=	1609.53	1609.53	1609.53	1609.53	1613.53	1613.53	1613.53	1613.53
	1617.53	1617.53	1617.53	1617.53	1621.53	1621.53	1621.53	1621.53
BBC fr=	690.47	690.47	690.47	690.47	686.47	686.47	686.47	686.47
	682.47	682.47	682.47	682.47	678.47	678.47	678.47	678.47
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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* 3C84	03 16 29.567270	* 03 19 48.160100	03 20 45.921944	0.00
	41 19 51.91597	* 41 30 42.10310	41 33 39.09523	0.00
* F0217+7349	02 12 49.921919	* 02 17 30.813400	02 18 56.593029	0.00
	73 35 40.08567	* 73 49 32.62200	73 53 22.67842	0.00
* F0102+5824	00 59 43.470991	* 01 02 45.762400	01 03 40.192062	0.00
	58 08 04.84785	* 58 24 11.13700	58 28 49.03177	0.00
* J0322+6610	03 17 57.999024	* 03 22 27.228812	03 23 47.000472	0.00
	65 59 45.07766	* 66 10 28.30547	66 13 18.97213	0.00
* J0333+6536	03 29 25.878099	* 03 33 56.737993	03 35 16.760545	0.00
	65 26 52.21323	* 65 36 56.18412	65 39 34.72130	0.00
* OH138.0+7.2	03 20 41.852264	* 03 25 08.800001	03 26 27.789924	0.00
	65 21 32.90423	* 65 32 07.00001	65 34 54.93914	0.00

ULTRA DEEP EVN OBSERVATIONS OF HDF NORTH

PI: Michael Garrett

Address: ASTRON Postbus 2 7990 AA Dwingeloo The Netherlands
 Phone: +31-521-595126 EMAIL: garrett@astron.nl

Notes: Off P-Cal, Use large-size dispacks. Contact: Michael Garrett
 WSRT: Requesting single dish
 Ef, Jb, Ro70, and SFXC use the vex file of eg078a.vex.EfJbRo
 The small telescopes use the vex file of eg078a.vex.WbOnMcNtTrSvZcBdUrSh

Schedule for TORUN (Code Tr) Page 2

Ultra Deep EVN Observations of HDF North

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 27 Oct 2013 Day 300 ---										
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										
23 00 00	J1241+602	02 40 06	25.8	15.7-10.0			-19.2	0	0	23 00 00
23 05 00	---	02 45 07	26.0	16.4 -9.9			-20.0	300	39	23 00 01
23 05 30	J1241+602	02 45 37	26.0	16.5 -9.9			-20.1	24	39	23 05 30
23 07 00	---	02 47 07	26.1	16.7 -9.9			-20.3	90	50	23 05 31
23 07 10	J1234+619	02 47 17	27.9	16.9 -9.8			-21.8	-11	50	23 07 10
23 08 40	---	02 48 47	28.0	17.1 -9.8			-22.0	79	62	23 07 11
23 08 40	EFJB-P1	02 48 47	28.1	16.7 -9.8			-21.7	-11	62	No stop
23 16 10	---	02 56 18	28.4	17.6 -9.7			-22.9	439	120	23 08 41
23 16 30	J1234+619	02 56 39	28.4	18.1 -9.6			-23.3	9	120	23 16 30
23 18 00	---	02 58 09	28.4	18.3 -9.6			-23.6	90	132	23 16 31
23 18 00	EFJB-P1	02 58 09	28.5	17.8 -9.7			-23.2	-11	132	No stop
23 25 30	---	03 05 40	28.9	18.8 -9.5			-24.4	439	190	23 18 01
23 25 30	J1234+619	03 05 40	28.8	19.2 -9.5			-24.8	-11	190	No stop
23 27 00	---	03 07 10	28.9	19.4 -9.5			-25.0	79	201	23 25 31
23 27 00	EFJB-P1	03 07 10	29.0	18.9 -9.5			-24.7	-11	201	No stop
23 34 30	---	03 14 42	29.3	19.9 -9.4			-25.9	439	259	23 27 01
23 35 00	J1241+602	03 15 12	27.4	20.3 -9.4			-24.8	9	259	23 35 00
23 36 30	---	03 16 42	27.5	20.4 -9.4			-25.0	90	271	23 35 01

Schedule for TORUN (Code Tr)

Page 3

Ultra Deep EVN Observations of HDF North

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 27 Oct 2013 Day 300 ---										
23 36 40	J1234+619	03 16 52	29.4	20.6	-9.3		-26.6	-11	271	23 36 40
23 38 10	---	03 18 22	29.4	20.7	-9.3		-26.8	79	283	23 36 41
23 38 10	EFJB-P2	03 18 22	29.5	20.3	-9.3		-26.5	-11	283	No stop
23 45 40	---	03 25 53	29.9	21.2	-9.2		-27.7	439	341	23 38 11
23 46 00	J1234+619	03 26 13	29.9	21.7	-9.1		-28.1	9	341	23 46 00
23 47 30	---	03 27 44	30.0	21.9	-9.1		-28.3	90	352	23 46 01
23 47 30	EFJB-P2	03 27 44	30.0	21.4	-9.2		-28.0	-11	352	No stop
23 55 00	---	03 35 15	30.4	22.3	-9.0		-29.2	439	410	23 47 31
23 55 00	J1234+619	03 35 15	30.4	22.8	-9.0		-29.6	-11	410	No stop
23 56 30	---	03 36 45	30.5	22.9	-9.0		-29.8	79	422	23 55 01
--- Start: Sun 27 Oct 2013 Day 300 -- Stop: Mon 28 Oct 2013 Day 301 ---										
23 56 30	EFJB-P2	03 36 45	30.5	22.5	-9.0		-29.4	-11	422	No stop
00 04 00	---	03 44 16	31.0	23.4	-8.9		-30.7	439	480	23 56 31
00 04 30	J1241+602	03 44 46	29.1	24.0	-9.0		-29.4	9	480	00 04 30
00 06 00	---	03 46 17	29.2	24.1	-8.9		-29.7	90	492	00 04 31
00 06 10	J1234+619	03 46 27	31.1	24.1	-8.8		-31.3	-11	492	00 06 10
00 07 40	---	03 47 57	31.1	24.3	-8.8		-31.6	79	503	00 06 11
00 07 40	EFJB-P3	03 47 57	31.2	23.8	-8.8		-31.2	-11	503	No stop
00 15 10	---	03 55 28	31.7	24.7	-8.7		-32.4	439	561	00 07 41
00 15 30	J1234+619	03 55 48	31.6	25.2	-8.6		-32.8	9	561	00 15 30
00 17 00	---	03 57 18	31.7	25.4	-8.6		-33.1	90	573	00 15 31
00 17 00	EFJB-P3	03 57 18	31.8	24.9	-8.7		-32.7	-11	573	No stop
00 24 30	---	04 04 50	32.3	25.8	-8.5		-33.9	439	631	00 17 01
00 24 30	J1234+619	04 04 50	32.2	26.2	-8.5		-34.3	-11	631	No stop
00 26 00	---	04 06 20	32.3	26.4	-8.5		-34.5	79	643	00 24 31
00 26 00	EFJB-P3	04 06 20	32.3	25.9	-8.5		-34.2	-11	643	No stop
00 33 30	---	04 13 51	32.8	26.8	-8.4		-35.4	439	701	00 26 01
00 34 00	J1241+602	04 14 21	31.0	27.6	-8.5		-34.1	9	701	00 34 00
00 35 30	---	04 15 52	31.1	27.7	-8.4		-34.3	90	712	00 34 01
00 35 40	J1234+619	04 16 02	33.0	27.5	-8.3		-36.1	-11	712	00 35 40
00 37 10	---	04 17 32	33.1	27.7	-8.3		-36.3	79	724	00 35 41

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
00 37 10	EFJB-P4	04 17 32	33.1	27.2	-8.3		-36.0	-11	724	No stop
00 44 40	---	04 25 03	33.6	28.0	-8.2		-37.2	439	782	00 37 11
00 45 00	J1234+619	04 25 23	33.6	28.6	-8.2		-37.5	9	782	00 45 00
00 46 30	---	04 26 53	33.8	28.7	-8.1		-37.8	90	793	00 45 01
00 46 30	EFJB-P4	04 26 53	33.8	28.3	-8.2		-37.5	-11	793	No stop
00 54 00	---	04 34 25	34.3	29.1	-8.0		-38.7	439	852	00 46 31
00 54 00	J1234+619	04 34 25	34.3	29.6	-8.0		-39.0	-11	852	No stop
00 55 30	---	04 35 55	34.4	29.7	-8.0		-39.2	79	863	00 54 01
00 55 30	EFJB-P4	04 35 55	34.4	29.3	-8.0		-38.9	-11	863	No stop
01 03 00	---	04 43 26	35.0	30.1	-7.9		-40.1	439	921	00 55 31
01 03 30	J1241+602	04 43 56	33.2	31.0	-8.0		-38.6	10	921	01 03 30
01 05 00	---	04 45 26	33.3	31.2	-7.9		-38.9	90	933	01 03 31
01 05 10	J1234+619	04 45 36	35.1	30.8	-7.8		-40.7	-11	933	01 05 10
01 06 40	---	04 47 07	35.3	31.0	-7.8		-41.0	79	944	01 05 11
01 06 40	HDF-N	04 47 07	35.2	30.5	-7.8		-40.7	-11	944	No stop
01 14 10	---	04 54 38	35.8	31.3	-7.7		-41.9	439	1003	01 06 41
01 14 30	J1234+619	04 54 58	35.9	31.8	-7.7		-42.2	9	1003	01 14 30
01 16 00	---	04 56 28	36.0	32.0	-7.6		-42.5	90	1014	01 14 31
01 16 00	HDF-N	04 56 28	36.0	31.5	-7.7		-42.2	-11	1014	No stop
01 23 30	---	05 03 59	36.6	32.3	-7.6		-43.3	439	1072	01 16 01
01 23 30	J1234+619	05 03 59	36.6	32.8	-7.5		-43.6	-11	1072	No stop
01 25 00	---	05 05 30	36.7	32.9	-7.5		-43.9	79	1084	01 23 31
01 25 00	HDF-N	05 05 30	36.7	32.4	-7.5		-43.6	-11	1084	No stop
01 32 30	---	05 13 01	37.3	33.2	-7.4		-44.8	439	1142	01 25 01
01 33 00	J1241+602	05 13 31	35.6	34.4	-7.5		-43.2	10	1142	01 33 00
01 34 30	---	05 15 01	35.7	34.6	-7.5		-43.4	90	1153	01 33 01
01 34 40	J1234+619	05 15 11	37.5	34.0	-7.3		-45.4	-11	1153	01 34 40
01 36 10	---	05 16 41	37.7	34.1	-7.3		-45.6	79	1165	01 34 41
01 36 10	EFJB-P1	05 16 41	37.6	33.6	-7.3		-45.3	-11	1165	No stop
01 43 40	---	05 24 13	38.2	34.4	-7.2		-46.5	439	1223	01 36 11
01 44 00	J1234+619	05 24 33	38.3	34.9	-7.2		-46.9	9	1223	01 44 00
01 45 30	---	05 26 03	38.4	35.1	-7.1		-47.1	90	1235	01 44 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
01 45 30	EFJB-P1	05 26 03	38.4	34.6	-7.2		-46.8	-11	1235	No stop
01 53 00	---	05 33 34	39.0	35.3	-7.1		-48.0	439	1293	01 45 31
01 53 00	J1234+619	05 33 34	39.1	35.8	-7.0		-48.3	-11	1293	No stop
01 54 30	---	05 35 05	39.2	36.0	-7.0		-48.5	79	1304	01 53 01
01 54 30	EFJB-P1	05 35 05	39.2	35.5	-7.0		-48.2	-11	1304	No stop
02 02 00	---	05 42 36	39.8	36.2	-6.9		-49.4	439	1362	01 54 31
02 02 30	J1241+602	05 43 06	38.2	37.6	-7.0		-47.7	10	1362	02 02 30
02 04 00	---	05 44 36	38.4	37.8	-7.0		-47.9	90	1374	02 02 31
02 04 10	J1234+619	05 44 46	40.1	37.0	-6.8		-50.0	-10	1374	02 04 10
02 05 40	---	05 46 16	40.2	37.1	-6.8		-50.3	80	1386	02 04 11
02 05 40	EFJB-P2	05 46 16	40.2	36.6	-6.9		-50.0	-11	1386	No stop
02 13 10	---	05 53 48	40.8	37.3	-6.7		-51.2	439	1444	02 05 41
02 13 30	J1234+619	05 54 08	41.0	37.9	-6.7		-51.5	9	1444	02 13 30
02 15 00	---	05 55 38	41.1	38.0	-6.7		-51.7	90	1455	02 13 31
02 15 00	EFJB-P2	05 55 38	41.0	37.5	-6.7		-51.5	-11	1455	No stop
02 22 30	---	06 03 09	41.7	38.2	-6.6		-52.7	439	1513	02 15 01
02 22 30	J1234+619	06 03 09	41.8	38.7	-6.5		-52.9	-11	1513	No stop
02 24 00	---	06 04 39	41.9	38.9	-6.5		-53.2	79	1525	02 22 31
02 24 00	EFJB-P2	06 04 39	41.8	38.4	-6.5		-52.9	-11	1525	No stop
02 31 30	---	06 12 11	42.5	39.1	-6.4		-54.1	439	1583	02 24 01
02 32 00	J1241+602	06 12 41	41.0	40.7	-6.5		-52.1	11	1583	02 32 00
02 33 30	---	06 14 11	41.2	40.8	-6.5		-52.3	90	1595	02 32 01
02 33 40	J1234+619	06 14 21	42.9	39.8	-6.3		-54.7	-10	1595	02 33 40
02 35 10	---	06 15 51	43.0	39.9	-6.3		-54.9	80	1606	02 33 41
02 35 10	EFJB-P3	06 15 51	42.9	39.4	-6.4		-54.7	-11	1606	No stop
02 42 40	---	06 23 22	43.6	40.1	-6.2		-55.9	439	1664	02 35 11
02 43 00	J1234+619	06 23 42	43.8	40.7	-6.2		-56.2	9	1664	02 43 00
02 44 30	---	06 25 13	43.9	40.8	-6.2		-56.4	90	1676	02 43 01
02 44 30	EFJB-P3	06 25 13	43.8	40.3	-6.2		-56.2	-11	1676	No stop
02 52 00	---	06 32 44	44.5	40.9	-6.1		-57.4	439	1734	02 44 31
02 52 00	J1234+619	06 32 44	44.7	41.5	-6.0		-57.6	-11	1734	No stop
02 53 30	---	06 34 14	44.8	41.6	-6.0		-57.8	79	1746	02 52 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
02 53 30	EFJB-P3	06 34 14	44.7	41.1	-6.1		-57.6	-11	1746	No stop
03 01 00	---	06 41 45	45.4	41.7	-5.9		-58.8	439	1804	02 53 31
03 01 30	J1241+602	06 42 16	44.0	43.6	-6.0		-56.6	11	1804	03 01 30
03 03 00	---	06 43 46	44.2	43.7	-6.0		-56.8	90	1815	03 01 31
03 03 10	J1234+619	06 43 56	45.8	42.4	-5.8		-59.4	-10	1815	03 03 10
03 04 40	---	06 45 26	45.9	42.6	-5.8		-59.6	80	1827	03 03 11
03 04 40	EFJB-P4	06 45 26	45.8	42.1	-5.9		-59.4	-11	1827	No stop
03 12 10	---	06 52 57	46.5	42.7	-5.7		-60.6	439	1885	03 04 41
03 12 30	J1234+619	06 53 17	46.7	43.2	-5.7		-60.8	8	1885	03 12 30
03 14 00	---	06 54 48	46.9	43.4	-5.7		-61.1	90	1897	03 12 31
03 14 00	EFJB-P4	06 54 48	46.7	42.8	-5.7		-60.9	-11	1897	No stop
03 21 30	---	07 02 19	47.5	43.5	-5.6		-62.1	439	1955	03 14 01
03 21 30	J1234+619	07 02 19	47.7	44.0	-5.5		-62.3	-12	1955	No stop
03 23 00	---	07 03 49	47.8	44.1	-5.5		-62.5	78	1966	03 21 31
03 23 00	EFJB-P4	07 03 49	47.7	43.6	-5.6		-62.3	-11	1966	No stop
03 30 30	---	07 11 20	48.4	44.2	-5.4		-63.6	439	2024	03 23 01
03 31 00	J1241+602	07 11 50	47.1	46.3	-5.5		-61.1	12	2024	03 31 00
03 32 30	---	07 13 21	47.3	46.4	-5.5		-61.3	90	2036	03 31 01
03 32 40	J1234+619	07 13 31	48.8	44.9	-5.4		-64.1	-9	2036	03 32 40
03 34 10	---	07 15 01	49.0	45.0	-5.3		-64.3	81	2048	03 32 41
03 34 10	HDF-N	07 15 01	48.8	44.5	-5.4		-64.2	-11	2048	No stop
03 41 40	---	07 22 32	49.6	45.0	-5.2		-65.4	439	2106	03 34 11
03 42 00	J1234+619	07 22 52	49.8	45.6	-5.2		-65.6	8	2106	03 42 00
03 43 30	---	07 24 22	50.0	45.7	-5.2		-65.9	90	2117	03 42 01
03 43 30	HDF-N	07 24 22	49.8	45.2	-5.2		-65.7	-12	2117	No stop
03 51 00	---	07 31 54	50.6	45.7	-5.1		-66.9	438	2175	03 43 31
03 51 00	J1234+619	07 31 54	50.8	46.3	-5.0		-67.1	-12	2175	No stop
03 52 30	---	07 33 24	51.0	46.4	-5.0		-67.3	78	2187	03 51 01
03 52 30	HDF-N	07 33 24	50.8	45.8	-5.1		-67.2	-12	2187	No stop
04 00 00	---	07 40 55	51.6	46.4	-4.9		-68.4	438	2245	03 52 31
04 00 30	J1241+602	07 41 25	50.4	48.8	-5.0		-65.6	11	2245	04 00 30
04 02 00	---	07 42 55	50.6	48.9	-5.0		-65.9	90	2257	04 00 31

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
04 02 10	J1234+619	07 43 05	52.0	47.1	-4.9		-68.9	-9	2257	04 02 10
04 03 40	---	07 44 36	52.2	47.2	-4.8		-69.2	81	2268	04 02 11
04 03 40	EFJB-P1	07 44 36	52.0	46.6	-4.9		-69.0	-12	2268	No stop
04 11 10	---	07 52 07	52.8	47.1	-4.8		-70.3	438	2326	04 03 41
04 11 30	J1234+619	07 52 27	53.1	47.7	-4.7		-70.5	8	2326	04 11 30
04 13 00	---	07 53 57	53.2	47.8	-4.7		-70.8	90	2338	04 11 31
04 13 00	EFJB-P1	07 53 57	53.0	47.2	-4.7		-70.6	-12	2338	No stop
04 20 30	---	08 01 28	53.9	47.7	-4.6		-71.9	438	2396	04 13 01
04 20 30	J1234+619	08 01 28	54.1	48.3	-4.6		-72.0	-12	2396	No stop
04 22 00	---	08 02 59	54.2	48.4	-4.5		-72.3	78	2408	04 20 31
04 22 00	EFJB-P1	08 02 59	54.0	47.8	-4.6		-72.1	-12	2408	No stop
04 29 30	---	08 10 30	54.9	48.2	-4.4		-73.4	438	2466	04 22 01
04 30 00	J1241+602	08 11 00	53.8	51.0	-4.5		-70.3	10	2466	04 30 00
04 31 30	---	08 12 30	54.0	51.1	-4.5		-70.5	90	2477	04 30 01
04 31 40	J1234+619	08 12 40	55.3	48.9	-4.4		-74.0	-8	2477	04 31 40
04 33 10	---	08 14 11	55.5	49.0	-4.3		-74.2	82	2489	04 31 41
04 33 10	EFJB-P2	08 14 11	55.3	48.5	-4.4		-74.1	-12	2489	No stop
04 40 40	---	08 21 42	56.1	48.9	-4.3		-75.4	438	2547	04 33 11
04 41 00	J1234+619	08 22 02	56.4	49.4	-4.2		-75.6	8	2547	04 41 00
04 42 30	---	08 23 32	56.6	49.5	-4.2		-75.9	90	2559	04 41 01
04 42 30	EFJB-P2	08 23 32	56.3	49.0	-4.2		-75.7	-12	2559	No stop
04 50 00	---	08 31 03	57.2	49.3	-4.1		-77.1	438	2617	04 42 31
04 50 00	J1234+619	08 31 03	57.4	49.9	-4.1		-77.2	-12	2617	No stop
04 51 30	---	08 32 34	57.6	50.0	-4.0		-77.5	78	2628	04 50 01
04 51 30	EFJB-P2	08 32 34	57.4	49.4	-4.1		-77.4	-12	2628	No stop
04 59 00	---	08 40 05	58.2	49.8	-4.0		-78.7	438	2686	04 51 31
04 59 30	J1241+602	08 40 35	57.3	53.0	-4.0		-75.1	9	2686	04 59 30
05 01 00	---	08 42 05	57.5	53.0	-4.0		-75.4	90	2698	04 59 31
05 01 10	J1234+619	08 42 15	58.7	50.4	-3.9		-79.2	-10	2698	05 01 10
05 02 40	---	08 43 45	58.9	50.5	-3.9		-79.5	80	2710	05 01 11

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
05 02 40	EFJB-P3	08 43 45	58.6	49.9	-3.9		-79.4	-12	2710	No stop
05 10 10	---	08 51 17	59.5	50.2	-3.8		-80.8	438	2768	05 02 41
05 10 30	J1234+619	08 51 37	59.8	50.8	-3.7		-81.0	8	2768	05 10 30
05 12 00	---	08 53 07	60.0	50.8	-3.7		-81.3	90	2779	05 10 31
05 12 00	EFJB-P3	08 53 07	59.7	50.3	-3.7		-81.2	-12	2779	No stop
05 19 30	---	09 00 38	60.6	50.5	-3.6		-82.6	438	2837	05 12 01
05 19 30	J1234+619	09 00 38	60.9	51.1	-3.6		-82.7	-12	2837	No stop
05 21 00	---	09 02 08	61.0	51.1	-3.5		-83.0	78	2849	05 19 31
05 21 00	EFJB-P3	09 02 08	60.8	50.6	-3.6		-82.9	-12	2849	No stop
05 28 30	---	09 09 40	61.6	50.8	-3.5		-84.4	438	2907	05 21 01
05 29 00	J1241+602	09 10 10	60.9	54.5	-3.5		-80.2	8	2907	05 29 00
05 30 30	---	09 11 40	61.1	54.5	-3.5		-80.5	90	2919	05 29 01
05 30 40	J1234+619	09 11 50	62.2	51.4	-3.4		-84.9	-11	2919	05 30 40
05 32 10	---	09 13 20	62.4	51.4	-3.4		-85.2	79	2930	05 30 41
05 32 10	EFJB-P4	09 13 20	62.1	50.8	-3.4		-85.1	-12	2930	No stop
05 39 40	---	09 20 51	62.9	51.0	-3.3		-86.7	438	2988	05 32 11
05 40 00	J1234+619	09 21 12	63.3	51.6	-3.2		-86.8	8	2988	05 40 00
05 41 30	---	09 22 42	63.5	51.6	-3.2		-87.1	90	3000	05 40 01
05 41 30	EFJB-P4	09 22 42	63.2	51.0	-3.2		-87.1	-12	3000	No stop
05 49 00	---	09 30 13	64.0	51.1	-3.1		-88.7	438	3058	05 41 31
05 49 00	J1234+619	09 30 13	64.3	51.7	-3.1		-88.7	-12	3058	No stop
05 50 30	---	09 31 43	64.5	51.7	-3.1		-89.0	78	3069	05 49 01
05 50 30	EFJB-P4	09 31 43	64.2	51.1	-3.1		-89.0	-12	3069	No stop
05 58 00	---	09 39 15	65.1	51.1	-3.0		-90.6	438	3128	05 50 31
05 58 30	J1241+602	09 39 45	64.5	55.5	-3.0		-85.8	6	3128	05 58 30
06 00 00	---	09 41 15	64.7	55.5	-3.0		-86.1	90	3139	05 58 31
06 00 10	J1234+619	09 41 25	65.7	51.7	-2.9		-91.2	-13	3139	06 00 10
06 01 40	---	09 42 55	65.8	51.6	-2.9		-91.5	77	3151	06 00 11
06 01 40	HDF-N	09 42 55	65.5	51.1	-2.9		-91.5	-12	3151	No stop
06 09 10	---	09 50 26	66.4	51.0	-2.8		-93.2	438	3209	06 01 41

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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
--- Mon 28 Oct 2013 Day 301 ---										
06 09 30	J1234+619	09 50 46	66.8	51.5	-2.7		-93.4	8	3209	06 09 30
06 11 00	---	09 52 17	66.9	51.5	-2.7		-93.7	90	3220	06 09 31
06 11 00	HDF-N	09 52 17	66.6	51.0	-2.8		-93.6	-12	3220	No stop
06 18 30	---	09 59 48	67.5	50.8	-2.6		-95.5	438	3278	06 11 01
06 18 30	J1234+619	09 59 48	67.8	51.3	-2.6		-95.5	-12	3278	No stop
06 20 00	---	10 01 18	68.0	51.3	-2.6		-95.9	78	3290	06 18 31
06 20 00	HDF-N	10 01 18	67.7	50.7	-2.6		-95.8	-12	3290	No stop
06 27 30	---	10 08 49	68.5	50.5	-2.5		-97.8	438	3348	06 20 01
06 28 00	J1241+602	10 09 19	68.2	55.6	-2.5		-92.0	5	3348	06 28 00
06 29 30	---	10 10 50	68.4	55.6	-2.5		-92.4	90	3360	06 28 01
06 29 40	J1234+619	10 11 00	69.1	50.9	-2.4		-98.4	-14	3360	06 29 40
06 31 10	---	10 12 30	69.3	50.8	-2.4		-98.8	76	3371	06 29 41
06 31 10	EFJB-P1	10 12 30	69.0	50.3	-2.4		-98.7	-12	3371	No stop
06 38 40	---	10 20 01	69.8	49.9	-2.3		-100.8	438	3429	06 31 11
06 39 00	J1234+619	10 20 21	70.2	50.4	-2.2		-101.0	8	3429	06 39 00
06 40 30	---	10 21 51	70.4	50.3	-2.2		-101.4	90	3441	06 39 01
06 40 30	EFJB-P1	10 21 51	70.0	49.7	-2.3		-101.3	-12	3441	No stop
06 48 00	---	10 29 23	70.9	49.2	-2.1		-103.5	438	3499	06 40 31
06 48 00	J1234+619	10 29 23	71.3	49.7	-2.1		-103.6	-12	3499	No stop
06 49 30	---	10 30 53	71.4	49.5	-2.1		-104.1	78	3511	06 48 01
06 49 30	EFJB-P1	10 30 53	71.1	49.0	-2.1		-104.0	-12	3511	No stop
06 57 00	---	10 38 24	71.9	48.3	-2.0		-106.3	438	3569	06 49 31
06 57 30	J1241+602	10 38 54	71.8	54.6	-2.1		-99.5	3	3569	06 57 30
06 59 00	---	10 40 25	72.0	54.5	-2.0		-99.9	90	3580	06 57 31
06 59 10	J1234+619	10 40 35	72.5	48.5	-1.9		-107.2	-17	3580	06 59 10
07 00 40	---	10 42 05	72.7	48.4	-1.9		-107.7	73	3592	06 59 11
07 00 40	EFJB-P2	10 42 05	72.3	47.9	-1.9		-107.5	-12	3592	No stop
07 08 10	---	10 49 36	73.2	47.0	-1.8		-110.1	438	3650	07 00 41
07 08 30	J1234+619	10 49 56	73.6	47.3	-1.7		-110.4	8	3650	07 08 30
07 10 00	---	10 51 26	73.7	47.1	-1.7		-110.9	90	3662	07 08 31

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
07 10 00	EFJB-P2	10 51 26	73.4	46.7	-1.8		-110.7	-12	3662	No stop
07 17 30	---	10 58 58	74.2	45.5	-1.6		-113.5	438	3720	07 10 01
07 17 30	J1234+619	10 58 58	74.5	45.9	-1.6		-113.8	-12	3720	No stop
07 19 00	---	11 00 28	74.7	45.6	-1.6		-114.4	78	3731	07 17 31
07 19 00	EFJB-P2	11 00 28	74.3	45.3	-1.6		-114.1	-12	3731	No stop
07 26 30	---	11 07 59	75.1	43.8	-1.5		-117.2	438	3789	07 19 01
07 27 00	J1241+602	11 08 29	75.4	51.4	-1.6		-109.0	0	3789	07 27 00
07 28 30	---	11 09 59	75.6	51.1	-1.5		-109.5	90	3801	07 27 01
07 28 40	J1234+619	11 10 09	75.7	43.6	-1.4		-118.4	-20	3801	07 28 40
07 30 10	---	11 11 40	75.9	43.3	-1.4		-119.1	70	3813	07 28 41
07 30 10	EFJB-P3	11 11 40	75.5	43.0	-1.4		-118.8	-12	3813	No stop
07 37 40	---	11 19 11	76.3	41.2	-1.3		-122.2	438	3871	07 30 11
07 38 00	J1234+619	11 19 31	76.7	41.3	-1.3		-122.8	8	3871	07 38 00
07 39 30	---	11 21 01	76.8	40.8	-1.2		-123.5	90	3882	07 38 01
07 39 30	EFJB-P3	11 21 01	76.4	40.7	-1.3		-123.1	-12	3882	No stop
07 47 00	---	11 28 32	77.2	38.5	-1.1		-126.9	438	3940	07 39 31
07 47 00	J1234+619	11 28 32	77.6	38.5	-1.1		-127.4	-12	3940	No stop
07 48 30	---	11 30 03	77.7	38.0	-1.1		-128.3	78	3952	07 47 01
07 48 30	EFJB-P3	11 30 03	77.3	38.0	-1.1		-127.7	-12	3952	No stop
07 56 00	---	11 37 34	78.0	35.4	-1.0		-131.9	438	4010	07 48 31
07 56 30	J1241+602	11 38 04	78.7	44.3	-1.1		-122.3	-3	4010	07 56 30
07 58 00	---	11 39 34	78.9	43.8	-1.0		-123.1	87	4022	07 56 31
07 58 10	J1234+619	11 39 44	78.6	34.4	-0.9		-134.0	-24	4022	07 58 10
07 59 40	---	11 41 14	78.7	33.7	-0.9		-134.9	66	4033	07 58 11
07 59 40	EFJB-P4	11 41 14	78.3	34.0	-0.9		-134.1	-12	4033	No stop
08 07 10	---	11 48 46	78.9	30.7	-0.8		-139.0	438	4091	07 59 41
08 07 30	J1234+619	11 49 06	79.3	30.2	-0.8		-140.2	8	4091	08 07 30
08 09 00	---	11 50 36	79.4	29.4	-0.7		-141.2	90	4103	08 07 31
08 09 00	EFJB-P4	11 50 36	79.0	29.9	-0.8		-140.2	-12	4103	No stop
08 16 30	---	11 58 07	79.6	26.1	-0.7		-145.6	438	4161	08 09 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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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 28 Oct 2013 Day 301 ---										
08 16 30	J1234+619	11 58 07	79.9	25.4	-0.6		-146.8	-13	4161	No stop
08 18 00	---	11 59 38	80.0	24.6	-0.6		-148.0	77	4173	08 16 31
08 18 00	EFJB-P4	11 59 38	79.7	25.3	-0.6		-146.7	-12	4173	No stop
08 25 30	---	12 07 09	80.1	21.0	-0.5		-152.6	438	4231	08 18 01
08 26 00	J1241+602	12 07 39	81.4	29.8	-0.6		-142.9	-3	4231	08 26 00
08 27 30	---	12 09 09	81.5	28.8	-0.5		-144.3	87	4242	08 26 01
08 27 40	J1234+619	12 09 19	80.6	18.6	-0.4		-156.0	-26	4242	08 27 40
08 29 10	---	12 10 49	80.6	17.6	-0.4		-157.4	64	4254	08 27 41
08 29 10	HDF-N	12 10 49	80.3	18.7	-0.4		-155.7	-14	4254	No stop
08 36 40	---	12 18 21	80.6	13.8	-0.3		-162.2	436	4312	08 29 11
08 37 00	J1234+619	12 18 41	80.9	12.1	-0.3		-164.5	4	4312	08 37 00
08 38 30	---	12 20 11	81.0	11.0	-0.2		-165.9	90	4324	08 37 01
08 38 30	HDF-N	12 20 11	80.7	12.5	-0.3		-163.9	-15	4324	No stop
08 46 00	---	12 27 42	80.9	7.2	-0.2		-170.8	435	4382	08 38 31
08 46 00	J1234+619	12 27 42	81.1	5.4	-0.1		-173.1	-17	4382	No stop
08 47 30	---	12 29 12	81.2	4.3	-0.1		-174.6	73	4393	08 46 01
08 47 30	HDF-N	12 29 12	80.9	6.1	-0.1		-172.2	-16	4393	No stop
08 55 00	---	12 36 44	81.0	0.5	-0.0		-179.4	434	4451	08 47 31
08 57 00	3C345	12 38 44	47.2	82.5	-4.1		-50.8	-59	4451	08 57 00
09 03 00	---	12 44 45	48.1	83.6	-4.0		-51.0	301	4498	08 57 01
09 06 30	J1241+602	12 48 15	82.8	-6.1	0.1		172.6	16	4498	09 06 30
09 08 00	---	12 49 46	82.8	-7.6	0.1		170.8	90	4509	09 06 31
09 08 10	J1234+619	12 49 56	81.0	-11.4	0.3		165.4	-13	4509	09 08 10
09 09 40	---	12 51 26	80.9	-12.5	0.3		164.0	77	4521	09 08 11
09 09 40	EFJB-P1	12 51 26	80.8	-10.3	0.2		166.8	-18	4521	No stop
09 17 10	---	12 58 57	80.5	-15.4	0.4		160.0	432	4579	09 09 41
09 17 30	J1234+619	12 59 17	80.6	-18.0	0.4		156.9	1	4579	09 17 30
09 19 00	---	13 00 48	80.5	-18.9	0.4		155.5	90	4591	09 17 31
09 19 00	EFJB-P1	13 00 48	80.4	-16.7	0.4		158.4	-18	4591	No stop
09 26 30	---	13 08 19	80.1	-21.4	0.5		152.1	432	4649	09 19 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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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 28 Oct 2013 Day 301 ---										
09 26 30	J1234+619	13 08 19	80.1	-23.6	0.6		149.3	-19	4649	No stop
09 28 00	---	13 09 49	80.0	-24.5	0.6		148.1	71	4660	09 26 31
09 28 00	EFJB-P1	13 09 49	80.0	-22.3	0.5		150.9	-18	4660	No stop
09 35 30	---	13 17 20	79.5	-26.5	0.7		145.1	432	4718	09 28 01
09 36 00	J1241+602	13 17 50	81.3	-30.7	0.6		141.8	7	4718	09 36 00
09 37 30	---	13 19 21	81.2	-31.7	0.6		140.5	90	4730	09 36 01
09 37 40	J1234+619	13 19 31	79.4	-29.7	0.7		140.8	-11	4730	09 37 40
09 39 10	---	13 21 01	79.3	-30.4	0.8		139.8	79	4742	09 37 41
09 39 10	EFJB-P2	13 21 01	79.3	-28.3	0.7		142.4	-18	4742	No stop
09 46 40	---	13 28 32	78.7	-31.9	0.9		137.3	432	4800	09 39 11
09 47 00	J1234+619	13 28 52	78.6	-34.0	0.9		134.6	2	4800	09 47 00
09 48 30	---	13 30 22	78.5	-34.6	0.9		133.6	90	4811	09 47 01
09 48 30	EFJB-P2	13 30 22	78.6	-32.6	0.9		136.1	-17	4811	No stop
09 56 00	---	13 37 54	77.9	-35.6	1.0		131.5	433	4869	09 48 31
09 56 00	J1234+619	13 37 54	77.8	-37.5	1.1		129.2	-17	4869	No stop
09 57 30	---	13 39 24	77.7	-38.0	1.1		128.3	73	4881	09 56 01
09 57 30	EFJB-P2	13 39 24	77.8	-36.2	1.0		130.7	-17	4881	No stop
10 05 00	---	13 46 55	77.1	-38.7	1.2		126.5	433	4939	09 57 31
10 05 30	J1241+602	13 47 25	78.6	-44.7	1.1		121.6	3	4939	10 05 30
10 07 00	---	13 48 55	78.4	-45.2	1.1		120.8	90	4951	10 05 31
10 07 10	J1234+619	13 49 05	76.8	-41.0	1.2		123.2	-13	4951	10 07 10
10 08 40	---	13 50 36	76.6	-41.4	1.3		122.5	77	4962	10 07 11
10 08 40	EFJB-P3	13 50 36	76.8	-39.8	1.2		124.7	-16	4962	No stop
10 16 10	---	13 58 07	76.0	-41.8	1.3		121.0	434	5020	10 08 41
10 16 30	J1234+619	13 58 27	75.8	-43.4	1.4		118.8	4	5020	10 16 30
10 18 00	---	13 59 57	75.7	-43.7	1.4		118.2	90	5032	10 16 31
10 18 00	EFJB-P3	13 59 57	75.8	-42.3	1.4		120.2	-16	5032	No stop
10 25 30	---	14 07 28	75.1	-44.0	1.5		116.9	434	5090	10 18 01
10 25 30	J1234+619	14 07 28	74.9	-45.3	1.5		115.0	-16	5090	No stop
10 27 00	---	14 08 59	74.7	-45.6	1.6		114.4	74	5102	10 25 31

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 28 Oct 2013 Day 301 ---										
10 27 00	EFJB-P3	14 08 59	74.9	-44.3	1.5		116.3	-15	5102	No stop
10 34 30	---	14 16 30	74.1	-45.6	1.7		113.3	435	5160	10 27 01
10 35 00	J1241+602	14 17 00	75.2	-51.6	1.6		108.5	3	5160	10 35 00
10 36 30	---	14 18 30	75.1	-51.8	1.6		107.9	90	5171	10 35 01
10 36 40	J1234+619	14 18 40	73.7	-47.2	1.7		110.7	-14	5171	10 36 40
10 38 10	---	14 20 11	73.5	-47.4	1.8		110.2	76	5183	10 36 41
10 38 10	EFJB-P4	14 20 11	73.7	-46.2	1.7		111.9	-15	5183	No stop
10 45 40	---	14 27 42	72.9	-47.3	1.8		109.2	435	5241	10 38 11
10 46 00	J1234+619	14 28 02	72.6	-48.4	1.9		107.5	6	5241	10 46 00
10 47 30	---	14 29 32	72.5	-48.6	1.9		107.0	90	5253	10 46 01
10 47 30	EFJB-P4	14 29 32	72.7	-47.5	1.9		108.6	-14	5253	No stop
10 55 00	---	14 37 03	71.8	-48.4	2.0		106.1	436	5311	10 47 31
10 55 00	J1234+619	14 37 03	71.6	-49.4	2.0		104.6	-14	5311	No stop
10 56 30	---	14 38 34	71.4	-49.5	2.1		104.1	76	5322	10 55 01
10 56 30	EFJB-P4	14 38 34	71.7	-48.5	2.0		105.6	-14	5322	No stop
11 04 00	---	14 46 05	70.8	-49.2	2.1		103.3	436	5380	10 56 31
11 04 30	J1241+602	14 46 35	71.7	-54.6	2.1		99.1	4	5380	11 04 30
11 06 00	---	14 48 05	71.5	-54.7	2.1		98.7	90	5392	11 04 31
11 06 10	J1234+619	14 48 15	70.3	-50.3	2.2		101.2	-14	5392	11 06 10
11 07 40	---	14 49 45	70.1	-50.4	2.2		100.8	76	5404	11 06 11
11 07 40	EFJB-P3	14 49 45	70.4	-49.5	2.2		102.2	-13	5404	No stop
11 15 10	---	14 57 17	69.5	-50.0	2.3		100.1	437	5462	11 07 41
11 15 30	J1234+619	14 57 37	69.2	-50.8	2.4		98.7	7	5462	11 15 30
11 17 00	---	14 59 07	69.1	-50.9	2.4		98.3	90	5473	11 15 31
11 17 00	EFJB-P3	14 59 07	69.3	-50.1	2.4		99.6	-13	5473	No stop
11 24 30	---	15 06 38	68.5	-50.5	2.5		97.6	437	5531	11 17 01
11 24 30	J1234+619	15 06 38	68.2	-51.2	2.5		96.3	-13	5531	No stop
11 26 00	---	15 08 08	68.0	-51.3	2.6		95.9	77	5543	11 24 31
11 26 00	EFJB-P3	15 08 08	68.3	-50.5	2.5		97.2	-13	5543	No stop
11 33 30	---	15 15 40	67.4	-50.8	2.6		95.3	437	5601	11 26 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
11 34 00	J1241+602	15 16 10	68.0	-55.6	2.6		91.7	5	5601	11 34 00
11 35 30	---	15 17 40	67.8	-55.7	2.6		91.4	90	5613	11 34 01
11 35 40	J1234+619	15 17 50	66.9	-51.5	2.7		93.6	-13	5613	11 35 40
11 37 10	---	15 19 20	66.7	-51.6	2.7		93.2	77	5624	11 35 41
11 37 10	EFJB-P4	15 19 20	67.0	-50.9	2.7		94.4	-12	5624	No stop
11 44 40	---	15 26 51	66.1	-51.0	2.8		92.6	438	5682	11 37 11
11 45 00	J1234+619	15 27 12	65.8	-51.6	2.9		91.4	8	5682	11 45 00
11 46 30	---	15 28 42	65.6	-51.7	2.9		91.1	90	5694	11 45 01
11 46 30	EFJB-P4	15 28 42	65.9	-51.1	2.9		92.2	-12	5694	No stop
11 54 00	---	15 36 13	65.0	-51.1	3.0		90.5	438	5752	11 46 31
11 54 00	J1234+619	15 36 13	64.7	-51.7	3.0		89.4	-12	5752	No stop
11 55 30	---	15 37 43	64.5	-51.7	3.0		89.1	78	5764	11 54 01
11 55 30	EFJB-P4	15 37 43	64.8	-51.1	3.0		90.2	-12	5764	No stop
12 03 00	---	15 45 14	64.0	-51.1	3.1		88.5	438	5822	11 55 31
12 03 30	J1241+602	15 45 45	64.4	-55.4	3.1		85.5	6	5822	12 03 30
12 05 00	---	15 47 15	64.2	-55.4	3.1		85.2	90	5833	12 03 31
12 05 10	J1234+619	15 47 25	63.4	-51.6	3.2		87.0	-12	5833	12 05 10
12 06 40	---	15 48 55	63.2	-51.6	3.2		86.7	78	5845	12 05 11
12 06 40	EFJB-P1	15 48 55	63.5	-51.0	3.2		87.7	-11	5845	No stop
12 14 10	---	15 56 26	62.7	-50.9	3.3		86.2	439	5903	12 06 41
12 14 30	J1234+619	15 56 46	62.3	-51.4	3.4		85.1	8	5903	12 14 30
12 16 00	---	15 58 17	62.1	-51.4	3.4		84.8	90	5914	12 14 31
12 16 00	EFJB-P1	15 58 17	62.4	-50.9	3.3		85.8	-11	5914	No stop
12 23 30	---	16 05 48	61.6	-50.7	3.5		84.3	439	5973	12 16 01
12 23 30	J1234+619	16 05 48	61.2	-51.2	3.5		83.3	-12	5973	No stop
12 25 00	---	16 07 18	61.1	-51.1	3.5		83.0	78	5984	12 23 31
12 25 00	EFJB-P1	16 07 18	61.4	-50.7	3.5		84.0	-12	5984	No stop
12 32 30	---	16 14 49	60.5	-50.5	3.6		82.5	438	6042	12 25 01
12 33 00	J1241+602	16 15 19	60.7	-54.4	3.6		80.0	7	6042	12 33 00
12 34 30	---	16 16 50	60.5	-54.4	3.6		79.7	90	6054	12 33 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
12 34 40	J1234+619	16 17 00	59.9	-50.8	3.7		81.2	-12	6054	12 34 40
12 36 10	---	16 18 30	59.7	-50.8	3.7		80.9	78	6065	12 34 41
12 36 10	EFJB-P2	16 18 30	60.1	-50.4	3.7		81.8	-12	6065	No stop
12 43 40	---	16 26 01	59.2	-50.1	3.8		80.4	438	6123	12 36 11
12 44 00	J1234+619	16 26 21	58.8	-50.5	3.9		79.4	8	6123	12 44 00
12 45 30	---	16 27 51	58.7	-50.4	3.9		79.1	90	6135	12 44 01
12 45 30	EFJB-P2	16 27 51	59.0	-50.0	3.8		80.0	-12	6135	No stop
12 53 00	---	16 35 23	58.1	-49.7	4.0		78.6	438	6193	12 45 31
12 53 00	J1234+619	16 35 23	57.8	-50.1	4.0		77.8	-12	6193	No stop
12 54 30	---	16 36 53	57.6	-50.0	4.0		77.5	78	6205	12 53 01
12 54 30	EFJB-P2	16 36 53	58.0	-49.7	4.0		78.3	-12	6205	No stop
13 02 00	---	16 44 24	57.1	-49.3	4.1		77.0	438	6263	12 54 31
13 02 30	J1241+602	16 44 54	57.1	-52.9	4.0		74.9	8	6263	13 02 30
13 04 00	---	16 46 24	57.0	-52.8	4.1		74.6	90	6274	13 02 31
13 04 10	J1234+619	16 46 35	56.5	-49.5	4.2		75.8	-11	6274	13 04 10
13 05 40	---	16 48 05	56.3	-49.4	4.2		75.5	79	6286	13 04 11
13 05 40	EFJB-P3	16 48 05	56.7	-49.1	4.2		76.3	-12	6286	No stop
13 13 10	---	16 55 36	55.8	-48.7	4.3		75.0	438	6344	13 05 41
13 13 30	J1234+619	16 55 56	55.4	-49.0	4.4		74.1	8	6344	13 13 30
13 15 00	---	16 57 26	55.3	-48.9	4.4		73.9	90	6356	13 13 31
13 15 00	EFJB-P3	16 57 26	55.6	-48.6	4.3		74.6	-12	6356	No stop
13 22 30	---	17 04 58	54.8	-48.2	4.5		73.3	438	6414	13 15 01
13 22 30	J1234+619	17 04 58	54.4	-48.5	4.5		72.6	-12	6414	No stop
13 24 00	---	17 06 28	54.3	-48.4	4.5		72.3	78	6425	13 22 31
13 24 00	EFJB-P3	17 06 28	54.6	-48.1	4.5		73.1	-12	6425	No stop
13 31 30	---	17 13 59	53.8	-47.7	4.6		71.8	438	6483	13 24 01
13 32 00	J1241+602	17 14 29	53.7	-50.9	4.5		70.1	9	6483	13 32 00
13 33 30	---	17 15 59	53.5	-50.8	4.6		69.8	90	6495	13 32 01
13 33 40	J1234+619	17 16 09	53.2	-47.7	4.7		70.7	-11	6495	13 33 40
13 35 10	---	17 17 40	53.0	-47.6	4.7		70.4	79	6507	13 33 41

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
13 35 10	EFJB-P4	17 17 40	53.4	-47.4	4.7		71.2	-12	6507	No stop
13 42 40	---	17 25 11	52.6	-47.0	4.8		69.9	438	6565	13 35 11
13 43 00	J1234+619	17 25 31	52.1	-47.1	4.8		69.1	8	6565	13 43 00
13 44 30	---	17 27 01	52.0	-47.0	4.9		68.8	90	6576	13 43 01
13 44 30	EFJB-P4	17 27 01	52.4	-46.8	4.8		69.6	-12	6576	No stop
13 52 00	---	17 34 32	51.5	-46.3	5.0		68.3	438	6634	13 44 31
13 52 00	J1234+619	17 34 32	51.2	-46.5	5.0		67.6	-12	6634	No stop
13 53 30	---	17 36 03	51.0	-46.4	5.0		67.3	78	6646	13 52 01
13 53 30	EFJB-P4	17 36 03	51.4	-46.2	5.0		68.1	-12	6646	No stop
14 01 00	---	17 43 34	50.6	-45.7	5.1		66.8	438	6704	13 53 31
14 01 30	J1241+602	17 44 04	50.3	-48.7	5.0		65.4	9	6704	14 01 30
14 03 00	---	17 45 34	50.1	-48.6	5.1		65.2	90	6716	14 01 31
14 03 10	J1234+619	17 45 44	49.9	-45.7	5.2		65.8	-10	6716	14 03 10
14 04 40	---	17 47 14	49.8	-45.6	5.2		65.5	80	6727	14 03 11
14 04 40	EFJB-P1	17 47 14	50.2	-45.4	5.2		66.2	-12	6727	No stop
14 12 10	---	17 54 46	49.4	-44.8	5.3		65.0	438	6785	14 04 41
14 12 30	J1234+619	17 55 06	48.9	-45.0	5.3		64.2	8	6785	14 12 30
14 14 00	---	17 56 36	48.8	-44.8	5.4		64.0	90	6797	14 12 31
14 14 00	EFJB-P1	17 56 36	49.2	-44.7	5.3		64.7	-12	6797	No stop
14 21 30	---	18 04 07	48.4	-44.1	5.4		63.5	438	6855	14 14 01
14 21 30	J1234+619	18 04 07	48.0	-44.2	5.5		62.8	-12	6855	No stop
14 23 00	---	18 05 37	47.8	-44.1	5.5		62.5	78	6867	14 21 31
14 23 00	EFJB-P1	18 05 37	48.2	-44.0	5.5		63.2	-12	6867	No stop
14 30 30	---	18 13 09	47.4	-43.4	5.6		62.0	438	6925	14 23 01
14 31 00	J1241+602	18 13 39	47.0	-46.2	5.5		60.9	10	6925	14 31 00
14 32 30	---	18 15 09	46.8	-46.0	5.6		60.6	90	6936	14 31 01
14 32 40	J1234+619	18 15 19	46.8	-43.3	5.7		61.0	-10	6936	14 32 40
14 34 10	---	18 16 49	46.7	-43.2	5.7		60.8	80	6948	14 32 41
14 34 10	EFJB-P2	18 16 49	47.1	-43.1	5.7		61.4	-12	6948	No stop
14 41 40	---	18 24 21	46.3	-42.5	5.8		60.2	438	7006	14 34 11

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
14 42 00	J1234+619	18 24 41	45.9	-42.5	5.8		59.5	8	7006	14 42 00
14 43 30	---	18 26 11	45.7	-42.4	5.9		59.3	90	7018	14 42 01
14 43 30	EFJB-P2	18 26 11	46.1	-42.3	5.8		59.9	-12	7018	No stop
14 51 00	---	18 33 42	45.4	-41.7	5.9		58.7	438	7076	14 43 31
14 51 00	J1234+619	18 33 42	45.0	-41.7	6.0		58.1	-12	7076	No stop
14 52 30	---	18 35 12	44.8	-41.6	6.0		57.8	78	7087	14 51 01
14 52 30	EFJB-P2	18 35 12	45.2	-41.5	6.0		58.5	-12	7087	No stop
15 00 00	---	18 42 44	44.5	-40.9	6.1		57.3	438	7145	14 52 31
15 00 30	J1241+602	18 43 14	43.9	-43.5	6.0		56.4	11	7145	15 00 30
15 02 00	---	18 44 44	43.7	-43.3	6.0		56.2	90	7157	15 00 31
15 02 10	J1234+619	18 44 54	43.9	-40.7	6.2		56.3	-9	7157	15 02 10
15 03 40	---	18 46 24	43.7	-40.6	6.2		56.1	81	7169	15 02 11
15 03 40	EFJB-P3	18 46 24	44.1	-40.6	6.2		56.7	-12	7169	No stop
15 11 10	---	18 53 55	43.4	-39.9	6.3		55.5	438	7227	15 03 41
15 11 30	J1234+619	18 54 15	42.9	-39.9	6.3		54.8	8	7227	15 11 30
15 13 00	---	18 55 46	42.8	-39.7	6.3		54.6	90	7238	15 11 31
15 13 00	EFJB-P3	18 55 46	43.2	-39.7	6.3		55.2	-12	7238	No stop
15 20 30	---	19 03 17	42.5	-39.0	6.4		54.0	438	7296	15 13 01
15 20 30	J1234+619	19 03 17	42.1	-39.0	6.5		53.4	-12	7296	No stop
15 22 00	---	19 04 47	41.9	-38.9	6.5		53.2	78	7308	15 20 31
15 22 00	EFJB-P3	19 04 47	42.3	-38.9	6.5		53.8	-12	7308	No stop
15 29 30	---	19 12 18	41.6	-38.2	6.6		52.6	438	7366	15 22 01
15 30 00	J1241+602	19 12 48	40.9	-40.5	6.5		51.9	11	7366	15 30 00
15 31 30	---	19 14 19	40.7	-40.4	6.5		51.7	90	7378	15 30 01
15 31 40	J1234+619	19 14 29	41.0	-38.0	6.7		51.6	-9	7378	15 31 40
15 33 10	---	19 15 59	40.9	-37.8	6.7		51.4	81	7389	15 31 41
15 33 10	EFJB-P4	19 15 59	41.3	-37.8	6.6		52.0	-12	7389	No stop
15 40 40	---	19 23 30	40.6	-37.1	6.8		50.8	438	7447	15 33 11
15 41 00	J1234+619	19 23 50	40.2	-37.1	6.8		50.2	8	7447	15 41 00
15 42 30	---	19 25 21	40.0	-36.9	6.8		49.9	90	7459	15 41 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
15 42 30	EFJB-P4	19 25 21	40.4	-36.9	6.8		50.5	-12	7459	No stop
15 50 00	---	19 32 52	39.8	-36.2	6.9		49.3	438	7517	15 42 31
15 50 00	J1234+619	19 32 52	39.4	-36.2	7.0		48.8	-12	7517	No stop
15 51 30	---	19 34 22	39.2	-36.0	7.0		48.5	78	7529	15 50 01
15 51 30	EFJB-P4	19 34 22	39.6	-36.0	6.9		49.1	-12	7529	No stop
15 59 00	---	19 41 53	39.0	-35.3	7.1		47.9	438	7587	15 51 31
15 59 30	J1241+602	19 42 23	38.1	-37.5	7.0		47.4	12	7587	15 59 30
16 01 00	---	19 43 54	38.0	-37.3	7.0		47.2	90	7598	15 59 31
16 01 10	J1234+619	19 44 04	38.4	-35.0	7.2		47.0	-9	7598	16 01 10
16 02 40	---	19 45 34	38.3	-34.9	7.2		46.8	81	7610	16 01 11
16 02 40	EFJB-P1	19 45 34	38.7	-34.9	7.1		47.3	-12	7610	No stop
16 10 10	---	19 53 05	38.0	-34.1	7.3		46.1	438	7668	16 02 41
16 10 30	J1234+619	19 53 25	37.6	-34.0	7.3		45.5	8	7668	16 10 30
16 12 00	---	19 54 55	37.5	-33.9	7.3		45.3	90	7680	16 10 31
16 12 00	EFJB-P1	19 54 55	37.9	-33.9	7.3		45.9	-12	7680	No stop
16 19 30	---	20 02 27	37.2	-33.2	7.4		44.7	438	7738	16 12 01
16 19 30	J1234+619	20 02 27	36.9	-33.1	7.5		44.1	-12	7738	No stop
16 21 00	---	20 03 57	36.7	-32.9	7.5		43.9	78	7749	16 19 31
16 21 00	EFJB-P1	20 03 57	37.1	-33.0	7.4		44.4	-12	7749	No stop
16 28 30	---	20 11 28	36.5	-32.2	7.6		43.2	438	7807	16 21 01
16 29 00	J1241+602	20 11 58	35.5	-34.3	7.5		43.0	12	7807	16 29 00
16 30 30	---	20 13 28	35.4	-34.1	7.5		42.7	90	7819	16 29 01
16 30 40	J1234+619	20 13 38	36.0	-31.9	7.6		42.4	-8	7819	16 30 40
16 32 10	---	20 15 09	35.8	-31.7	7.7		42.1	82	7830	16 30 41
16 32 10	EFJB-P2	20 15 09	36.2	-31.8	7.6		42.7	-12	7830	No stop
16 39 40	---	20 22 40	35.6	-31.0	7.8		41.5	438	7889	16 32 11
16 40 00	J1234+619	20 23 00	35.2	-30.9	7.8		40.9	8	7889	16 40 00
16 41 30	---	20 24 30	35.1	-30.7	7.8		40.7	90	7900	16 40 01
16 41 30	EFJB-P2	20 24 30	35.5	-30.8	7.8		41.2	-12	7900	No stop
16 49 00	---	20 32 01	34.9	-30.0	7.9		40.0	438	7958	16 41 31

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
16 49 00	J1234+619	20 32 01	34.5	-29.9	8.0		39.5	-12	7958	No stop
16 50 30	---	20 33 32	34.4	-29.7	8.0		39.2	78	7970	16 49 01
16 50 30	EFJB-P2	20 33 32	34.8	-29.8	7.9		39.7	-12	7970	No stop
16 58 00	---	20 41 03	34.2	-29.0	8.1		38.6	438	8028	16 50 31
16 58 30	J1241+602	20 41 33	33.1	-30.9	8.0		38.4	13	8028	16 58 30
17 00 00	---	20 43 03	33.0	-30.7	8.0		38.2	90	8040	16 58 31
17 00 10	J1234+619	20 43 13	33.7	-28.7	8.1		37.7	-8	8040	17 00 10
17 01 40	---	20 44 44	33.6	-28.5	8.2		37.5	82	8051	17 00 11
17 01 40	EFJB-P3	20 44 44	34.0	-28.6	8.1		38.0	-12	8051	No stop
17 09 10	---	20 52 15	33.4	-27.8	8.2		36.8	438	8109	17 01 41
17 09 30	J1234+619	20 52 35	33.0	-27.6	8.3		36.2	8	8109	17 09 30
17 11 00	---	20 54 05	32.9	-27.4	8.3		36.0	90	8121	17 09 31
17 11 00	EFJB-P3	20 54 05	33.3	-27.6	8.3		36.5	-12	8121	No stop
17 18 30	---	21 01 36	32.8	-26.7	8.4		35.3	438	8179	17 11 01
17 18 30	J1234+619	21 01 36	32.4	-26.6	8.4		34.8	-12	8179	No stop
17 20 00	---	21 03 07	32.3	-26.4	8.5		34.5	78	8190	17 18 31
17 20 00	EFJB-P3	21 03 07	32.7	-26.5	8.4		35.0	-12	8190	No stop
17 27 30	---	21 10 38	32.2	-25.7	8.6		33.8	438	8249	17 20 01
17 28 00	J1241+602	21 11 08	30.9	-27.4	8.5		33.9	12	8249	17 28 00
17 29 30	---	21 12 38	30.8	-27.2	8.5		33.6	90	8260	17 28 01
17 29 40	J1234+619	21 12 48	31.7	-25.3	8.6		33.0	-7	8260	17 29 40
17 31 10	---	21 14 18	31.6	-25.1	8.7		32.8	83	8272	17 29 41
17 31 10	EFJB-P4	21 14 18	32.0	-25.3	8.6		33.3	-12	8272	No stop
17 38 40	---	21 21 50	31.5	-24.4	8.7		32.0	438	8330	17 31 11
17 39 00	J1234+619	21 22 10	31.1	-24.2	8.8		31.5	8	8330	17 39 00
17 40 30	---	21 23 40	31.0	-24.0	8.8		31.3	90	8341	17 39 01
17 40 30	EFJB-P4	21 23 40	31.4	-24.2	8.8		31.8	-12	8341	No stop
17 48 00	---	21 31 11	30.9	-23.3	8.9		30.5	438	8399	17 40 31
17 48 00	J1234+619	21 31 11	30.6	-23.1	8.9		30.1	-12	8399	No stop
17 49 30	---	21 32 41	30.5	-23.0	9.0		29.8	78	8411	17 48 01

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
17 49 30	EFJB-P4	21 32 41	30.8	-23.1	8.9		30.3	-12	8411	No stop
17 57 00	---	21 40 13	30.4	-22.2	9.0		29.1	438	8469	17 49 31
17 57 30	J1241+602	21 40 43	29.0	-23.8	9.0		29.2	11	8469	17 57 30
17 59 00	---	21 42 13	28.9	-23.6	9.0		29.0	90	8481	17 57 31
17 59 10	J1234+619	21 42 23	29.9	-21.8	9.1		28.3	-7	8481	17 59 10
18 00 40	---	21 43 53	29.8	-21.6	9.2		28.0	83	8492	17 59 11
18 00 40	EFJB-P1	21 43 53	30.2	-21.8	9.1		28.5	-12	8492	No stop
18 08 10	---	21 51 24	29.8	-20.9	9.2		27.3	438	8550	18 00 41
18 08 30	J1234+619	21 51 45	29.4	-20.7	9.3		26.7	8	8550	18 08 30
18 10 00	---	21 53 15	29.3	-20.5	9.3		26.5	90	8562	18 08 31
18 10 00	EFJB-P1	21 53 15	29.7	-20.7	9.3		27.0	-12	8562	No stop
18 17 30	---	22 00 46	29.3	-19.8	9.4		25.8	438	8620	18 10 01
18 17 30	J1234+619	22 00 46	28.9	-19.6	9.4		25.3	-12	8620	No stop
18 19 00	---	22 02 16	28.9	-19.4	9.5		25.0	78	8632	18 17 31
18 19 00	EFJB-P1	22 02 16	29.2	-19.6	9.4		25.5	-12	8632	No stop
18 26 30	---	22 09 47	28.9	-18.7	9.5		24.3	438	8690	18 19 01
18 27 00	J1241+602	22 10 18	27.4	-20.1	9.5		24.6	11	8690	18 27 00
18 28 30	---	22 11 48	27.3	-19.9	9.5		24.3	90	8701	18 27 01
18 28 40	J1234+619	22 11 58	28.4	-18.2	9.6		23.5	-7	8701	18 28 40
18 30 10	---	22 13 28	28.3	-18.0	9.6		23.2	83	8713	18 28 41
18 30 10	EFJB-P2	22 13 28	28.7	-18.2	9.6		23.7	-12	8713	No stop
18 37 40	---	22 20 59	28.3	-17.3	9.7		22.5	438	8771	18 30 11
18 38 00	J1234+619	22 21 19	28.0	-17.1	9.8		22.0	8	8771	18 38 00
18 39 30	---	22 22 50	27.9	-16.9	9.8		21.7	90	8783	18 38 01
18 39 30	EFJB-P2	22 22 50	28.2	-17.1	9.8		22.2	-12	8783	No stop
18 47 00	---	22 30 21	27.9	-16.2	9.9		21.0	438	8841	18 39 31
18 47 00	J1234+619	22 30 21	27.6	-15.9	9.9		20.5	-12	8841	No stop
18 48 30	---	22 31 51	27.5	-15.8	10.0		20.2	78	8852	18 47 01
18 48 30	EFJB-P2	22 31 51	27.9	-16.0	9.9		20.7	-12	8852	No stop
18 56 00	---	22 39 22	27.6	-15.0	10.0		19.5	438	8910	18 48 31

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
18 56 30	J1241+602	22 39 52	26.0	-16.3	10.0		19.8	10	8910	18 56 30
18 58 00	---	22 41 23	25.9	-16.1	10.0		19.6	90	8922	18 56 31
18 58 10	J1234+619	22 41 33	27.2	-14.5	10.1		18.7	-8	8922	18 58 10
18 59 40	---	22 43 03	27.1	-14.3	10.1		18.4	82	8934	18 58 11
18 59 40	EFJB-P3	22 43 03	27.4	-14.6	10.1		18.9	-12	8934	No stop
19 07 10	---	22 50 34	27.1	-13.7	10.2		17.7	438	8992	18 59 41
19 07 30	J1234+619	22 50 54	26.8	-13.4	10.3		17.1	8	8992	19 07 30
19 09 00	---	22 52 24	26.8	-13.2	10.3		16.9	90	9003	19 07 31
19 09 00	EFJB-P3	22 52 24	27.1	-13.4	10.3		17.4	-12	9003	No stop
19 16 30	---	22 59 56	26.8	-12.5	10.4		16.1	438	9061	19 09 01
19 16 30	J1234+619	22 59 56	26.5	-12.2	10.4		15.7	-12	9061	No stop
19 18 00	---	23 01 26	26.5	-12.0	10.4		15.4	78	9073	19 16 31
19 18 00	EFJB-P3	23 01 26	26.8	-12.3	10.4		15.9	-11	9073	No stop
19 25 30	---	23 08 57	26.5	-11.3	10.5		14.6	439	9131	19 18 01
19 26 00	J1241+602	23 09 27	24.9	-12.4	10.5		15.1	10	9131	19 26 00
19 27 30	---	23 10 57	24.8	-12.2	10.5		14.8	90	9143	19 26 01
19 27 40	J1234+619	23 11 08	26.2	-10.8	10.6		13.8	-8	9143	19 27 40
19 29 10	---	23 12 38	26.1	-10.6	10.6		13.6	82	9154	19 27 41
19 29 10	EFJB-P4	23 12 38	26.4	-10.9	10.6		14.0	-11	9154	No stop
19 36 40	---	23 20 09	26.2	-9.9	10.7		12.8	439	9212	19 29 11
19 37 00	J1234+619	23 20 29	25.9	-9.6	10.8		12.3	9	9212	19 37 00
19 38 30	---	23 21 59	25.9	-9.4	10.8		12.0	90	9224	19 37 01
19 38 30	EFJB-P4	23 21 59	26.2	-9.7	10.7		12.5	-11	9224	No stop
19 46 00	---	23 29 31	26.0	-8.7	10.9		11.2	439	9282	19 38 31
19 46 00	J1234+619	23 29 31	25.7	-8.4	10.9		10.8	-11	9282	No stop
19 47 30	---	23 31 01	25.7	-8.3	10.9		10.5	79	9294	19 46 01
19 47 30	EFJB-P4	23 31 01	26.0	-8.5	10.9		11.0	-11	9294	No stop
19 55 00	---	23 38 32	25.8	-7.6	11.0		9.8	439	9352	19 47 31
19 55 30	J1241+602	23 39 02	24.1	-8.5	10.9		10.3	10	9352	19 55 30
19 57 00	---	23 40 32	24.0	-8.3	11.0		10.0	90	9363	19 55 31

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
19 57 10	J1234+619	23 40 42	25.5	-7.0	11.1		8.9	-9	9363	19 57 10
19 58 40	---	23 42 13	25.5	-6.8	11.1		8.7	81	9375	19 57 11
19 58 40	EFJB-P1	23 42 13	25.7	-7.1	11.1		9.1	-11	9375	No stop
20 06 10	---	23 49 44	25.6	-6.1	11.2		7.9	439	9433	19 58 41
20 06 30	J1234+619	23 50 04	25.3	-5.8	11.3		7.4	9	9433	20 06 30
20 08 00	---	23 51 34	25.3	-5.6	11.3		7.2	90	9445	20 06 31
20 08 00	EFJB-P1	23 51 34	25.6	-5.9	11.2		7.6	-11	9445	No stop
20 15 30	---	23 59 05	25.5	-4.9	11.4		6.4	439	9503	20 08 01
20 15 30	J1234+619	23 59 05	25.2	-4.6	11.4		5.9	-11	9503	No stop
20 17 00	---	00 00 36	25.2	-4.4	11.4		5.7	79	9514	20 15 31
20 17 00	EFJB-P1	00 00 36	25.5	-4.7	11.4		6.1	-11	9514	No stop
20 24 30	---	00 08 07	25.4	-3.8	11.5		4.9	439	9572	20 17 01
20 25 00	J1241+602	00 08 37	23.6	-4.5	11.4		5.5	9	9572	20 25 00
20 26 30	---	00 10 07	23.5	-4.3	11.5		5.2	90	9584	20 25 01
20 26 40	J1234+619	00 10 17	25.1	-3.2	11.6		4.1	-9	9584	20 26 40
20 28 10	---	00 11 47	25.1	-3.0	11.6		3.8	81	9596	20 26 41
20 28 10	EFJB-P2	00 11 47	25.3	-3.3	11.6		4.2	-11	9596	No stop
20 35 40	---	00 19 19	25.3	-2.3	11.7		3.0	439	9654	20 28 11
20 36 00	J1234+619	00 19 39	25.0	-2.0	11.7		2.5	9	9654	20 36 00
20 37 30	---	00 21 09	25.0	-1.8	11.8		2.3	90	9665	20 36 01
20 37 30	EFJB-P2	00 21 09	25.3	-2.1	11.7		2.7	-11	9665	No stop
20 45 00	---	00 28 40	25.2	-1.1	11.9		1.4	439	9723	20 37 31
20 45 00	J1234+619	00 28 40	25.0	-0.8	11.9		1.0	-11	9723	No stop
20 46 30	---	00 30 10	25.0	-0.6	11.9		0.8	79	9735	20 45 01
20 46 30	EFJB-P2	00 30 10	25.2	-0.9	11.9		1.2	-11	9735	No stop
20 54 00	---	00 37 42	25.2	0.0	-12.0		-0.0	439	9793	20 46 31
20 54 30	J1241+602	00 38 12	23.4	-0.5	11.9		0.6	9	9793	20 54 30
20 56 00	---	00 39 42	23.4	-0.3	12.0		0.4	90	9805	20 54 31
20 56 10	J1234+619	00 39 52	25.0	0.7	-11.9		-0.8	-10	9805	20 56 10
20 57 40	---	00 41 22	25.0	0.9	-11.9		-1.1	80	9816	20 56 11

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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
--- Mon 28 Oct 2013 Day 301 ---										
20 57 40	EFJB-P3	00 41 22	25.2	0.5-11.9			-0.7	-11	9816	No stop
21 05 10	---	00 48 54	25.3	1.5-11.8			-1.9	439	9874	20 57 41
21 05 30	J1234+619	00 49 14	25.0	1.9-11.8			-2.4	9	9874	21 05 30
21 07 00	---	00 50 44	25.0	2.1-11.7			-2.6	90	9886	21 05 31
21 07 00	EFJB-P3	00 50 44	25.3	1.7-11.8			-2.2	-11	9886	No stop
21 14 30	---	00 58 15	25.3	2.7-11.7			-3.5	439	9944	21 07 01
21 14 30	J1234+619	00 58 15	25.1	3.0-11.6			-3.9	-10	9944	No stop
21 16 00	---	00 59 45	25.1	3.2-11.6			-4.1	80	9956	21 14 31
21 16 00	EFJB-P3	00 59 45	25.3	2.9-11.6			-3.7	-10	9956	No stop
21 23 30	---	01 07 17	25.4	3.9-11.5			-5.0	440	10014	21 16 01
21 24 00	J1241+602	01 07 47	23.5	3.5-11.6			-4.2	9	10014	21 24 00
21 25 30	---	01 09 17	23.5	3.7-11.5			-4.4	90	10025	21 24 01
21 25 40	J1234+619	01 09 27	25.2	4.5-11.4			-5.7	-10	10025	21 25 40
21 27 10	---	01 10 57	25.2	4.7-11.4			-6.0	80	10037	21 25 41
21 27 10	EFJB-P4	01 10 57	25.4	4.3-11.4			-5.6	-10	10037	No stop
21 34 40	---	01 18 28	25.5	5.3-11.3			-6.8	440	10095	21 27 11
21 35 00	J1234+619	01 18 48	25.3	5.7-11.3			-7.3	9	10095	21 35 00
21 36 30	---	01 20 19	25.3	5.9-11.2			-7.5	90	10106	21 35 01
21 36 30	EFJB-P4	01 20 19	25.5	5.5-11.3			-7.1	-10	10106	No stop
21 44 00	---	01 27 50	25.7	6.5-11.2			-8.4	440	10165	21 36 31
21 44 00	J1234+619	01 27 50	25.5	6.9-11.1			-8.8	-11	10165	No stop
21 45 30	---	01 29 20	25.5	7.1-11.1			-9.0	79	10176	21 44 01
21 45 30	EFJB-P4	01 29 20	25.7	6.7-11.1			-8.6	-10	10176	No stop
21 53 00	---	01 36 51	25.8	7.7-11.0			-9.9	440	10234	21 45 31
21 53 30	J1241+602	01 37 21	23.9	7.4-11.1			-9.0	9	10234	21 53 30
21 55 00	---	01 38 52	23.9	7.6-11.1			-9.3	90	10246	21 53 31
21 55 10	J1234+619	01 39 02	25.7	8.3-10.9			-10.6	-10	10246	21 55 10
21 56 40	---	01 40 32	25.7	8.5-10.9			-10.9	80	10257	21 55 11
21 56 40	EFJB-P1	01 40 32	25.9	8.1-10.9			-10.5	-10	10257	No stop
22 04 10	---	01 48 03	26.1	9.1-10.8			-11.7	440	10315	21 56 41
22 04 30	J1234+619	01 48 23	25.9	9.5-10.8			-12.2	9	10315	22 04 30
22 06 00	---	01 49 54	25.9	9.7-10.7			-12.4	90	10327	22 04 31

Schedule for TORUN (Code Tr)

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Ultra Deep EVN Observations of HDF North

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 28 Oct 2013 Day 301 ---										
22 06 00	EFJB-P1	01 49 54	26.1	9.3-10.8			-12.0	-11	10327	No stop
22 13 30	---	01 57 25	26.3	10.3-10.7			-13.2	439	10385	22 06 01
22 13 30	J1234+619	01 57 25	26.1	10.7-10.6			-13.7	-11	10385	No stop
22 15 00	---	01 58 55	26.2	10.9-10.6			-13.9	79	10397	22 13 31
22 15 00	EFJB-P1	01 58 55	26.4	10.5-10.6			-13.5	-11	10397	No stop
22 22 30	---	02 06 26	26.6	11.4-10.5			-14.7	439	10455	22 15 01
22 23 00	J1241+602	02 06 56	24.6	11.4-10.6			-13.8	9	10455	22 23 00
22 24 30	---	02 08 27	24.7	11.6-10.6			-14.1	90	10466	22 23 01
22 24 40	J1234+619	02 08 37	26.5	12.1-10.4			-15.5	-11	10466	22 24 40
22 26 10	---	02 10 07	26.5	12.3-10.4			-15.7	79	10478	22 24 41
22 26 10	EFJB-P2	02 10 07	26.7	11.9-10.5			-15.3	-11	10478	No stop
22 33 40	---	02 17 38	26.9	12.8-10.3			-16.6	439	10536	22 26 11
22 34 00	J1234+619	02 17 58	26.8	13.3-10.3			-17.0	9	10536	22 34 00
22 35 30	---	02 19 28	26.8	13.5-10.3			-17.3	90	10548	22 34 01
22 35 30	EFJB-P2	02 19 28	27.0	13.1-10.3			-16.9	-11	10548	No stop
22 43 00	---	02 27 00	27.2	14.0-10.2			-18.1	439	10606	22 35 31
22 43 00	J1234+619	02 27 00	27.1	14.4-10.1			-18.5	-11	10606	No stop
22 44 30	---	02 28 30	27.2	14.6-10.1			-18.7	79	10617	22 43 01
22 44 30	EFJB-P2	02 28 30	27.3	14.2-10.1			-18.4	-11	10617	No stop
22 52 00	---	02 36 01	27.6	15.1-10.0			-19.6	439	10675	22 44 31
22 54 00	DA193	02 38 01	54.2	91.3	-3.3		-51.4	-48	10675	22 54 00
23 00 00	---	02 44 02	55.1	92.6	-3.2		-51.3	312	10722	22 54 01

SETUP FILE INFORMATION:

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

=====
Setup file: sess313.L1024

Matching groups in /aps3/sched10.2/catalogs/freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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=	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: 4 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: 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 -- Ultra Deep EVN Observations of HDF North

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)	
* J1241+602	12 39 16.511005 60 37 07.62444	* 12 41 29.590564 * 60 20 41.32233	12 42 03.577260 60 16 01.99973 0.00 0.00
* J1234+619	12 31 56.132262 62 15 03.88430	* 12 34 11.743000 * 61 58 32.48000	12 34 46.273970 61 53 50.68312 0.00 0.00
* HDF-N	12 34 36.033130 62 29 27.67047	* 12 36 50.000000 * 62 12 58.00000	12 37 24.032776 62 08 16.91562 0.00 0.00
* EFJB-P1	12 34 36.033130 62 29 27.67047	* 12 36 50.000000 * 62 12 58.00000	12 37 24.032776 62 08 16.91562 0.00 0.00
* EFJB-P2	12 34 36.033130 62 29 27.67047	* 12 36 50.000000 * 62 12 58.00000	12 37 24.032776 62 08 16.91562 0.00 0.00
* EFJB-P3	12 34 36.033130 62 29 27.67047	* 12 36 50.000000 * 62 12 58.00000	12 37 24.032776 62 08 16.91562 0.00 0.00
* EFJB-P4	12 34 36.033130 62 29 27.67047	* 12 36 50.000000 * 62 12 58.00000	12 37 24.032776 62 08 16.91562 0.00 0.00
J0555+3948	05 52 01.407174	* 05 55 30.805616	05 56 30.557707 0.13
* DA193	39 48 21.94578	* 39 48 49.16493	39 48 42.36774 0.10
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.616164 0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 47 23.28531 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)
J1241+602	75.7	EFJB-P3	77.6
J1234+619	77.5	EFJB-P4	77.6
HDF-N	77.6	DA193	124.2
EFJB-P1	77.6	3C345	63.7
EFJB-P2	77.6		

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		

rk01hotr

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 29 Oct 2013 Day 302 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
Next BBC frequencies: 636.00 636.00 636.00 636.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

01 00 00	0727-115	04 44 22	16.1	137.4	-2.8		-24.5	0	0	01 00 00
01 09 30	---	04 53 54	17.0	139.6	-2.6		-23.4	570	18	01 00 01
01 10 00	0727-115	04 54 24	17.1	139.7	-2.6		-23.4	24	18	01 10 00
01 19 30	---	05 03 55	18.0	142.0	-2.5		-22.2	570	36	01 10 01
01 20 00	0727-115	05 04 25	18.0	142.1	-2.4		-22.1	24	36	01 20 00
01 29 30	---	05 13 57	18.9	144.4	-2.3		-20.9	570	55	01 20 01
01 30 00	0727-115	05 14 27	18.9	144.5	-2.3		-20.9	24	55	01 30 00
01 39 30	---	05 23 59	19.7	146.8	-2.1		-19.6	570	73	01 30 01
01 40 00	0727-115	05 24 29	19.8	146.9	-2.1		-19.5	24	73	01 40 00
01 49 30	---	05 34 00	20.5	149.3	-1.9		-18.3	570	91	01 40 01
01 50 00	0727-115	05 34 30	20.6	149.4	-1.9		-18.2	24	91	01 50 00
02 00 00	---	05 44 32	21.3	151.9	-1.8		-16.8	600	110	01 50 01

SETUP FILE INFORMATION:

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

=====
Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0730-1141	07 27 58.097814	* 07 30 19.112474	07 30 59.027865	0.10
* 0727-115	-11 34 52.58107	*-11 41 12.60063	-11 42 57.06245	0.10

EFFECT OF SOLAR CORONA

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)
0727-115    97.5

```

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

```


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
--- Tue 29 Oct 2013 Day 302 ---										
03 33 00	J1128+5925	07 17 47	55.9	53.9	-4.2		-72.2	24	199	03 33 00
03 33 30	---	07 18 17	55.9	54.0	-4.2		-72.3	30	203	03 33 01
03 33 30	ARP299	07 18 17	55.6	55.4	-4.2		-71.0	-16	203	No stop
03 38 00	---	07 22 48	56.2	55.7	-4.1		-71.7	254	237	03 33 31
03 38 00	J1128+5925	07 22 48	56.5	54.3	-4.1		-73.0	-16	237	No stop
03 39 10	---	07 23 58	56.6	54.4	-4.1		-73.2	54	246	03 38 01
03 39 10	ARP299	07 23 58	56.3	55.8	-4.1		-71.9	-16	246	No stop
03 43 40	---	07 28 29	56.9	56.2	-4.0		-72.6	254	281	03 39 11
03 44 20	J1128+5925	07 29 09	57.3	54.7	-4.0		-74.0	24	281	03 44 20
03 44 50	---	07 29 39	57.3	54.7	-4.0		-74.1	30	285	03 44 21
03 44 50	ARP299	07 29 39	57.0	56.2	-4.0		-72.7	-16	285	No stop
03 49 20	---	07 34 10	57.6	56.6	-3.9		-73.4	254	320	03 44 51
03 49 20	J1128+5925	07 34 10	57.9	55.0	-3.9		-74.8	-16	320	No stop
03 50 30	---	07 35 20	58.0	55.1	-3.9		-75.0	54	329	03 49 21
03 50 30	ARP299	07 35 20	57.7	56.6	-3.9		-73.6	-16	329	No stop
03 55 00	---	07 39 51	58.3	56.9	-3.8		-74.3	254	364	03 50 31
03 55 40	J1128+5925	07 40 31	58.7	55.4	-3.8		-75.8	24	364	03 55 40
03 56 10	---	07 41 01	58.7	55.5	-3.8		-75.9	30	368	03 55 41
03 56 10	ARP299	07 41 01	58.5	57.0	-3.8		-74.5	-16	368	No stop
04 00 40	---	07 45 32	59.0	57.3	-3.7		-75.2	254	403	03 56 11
04 00 40	J1128+5925	07 45 32	59.3	55.7	-3.7		-76.7	-16	403	No stop
04 01 40	---	07 46 32	59.4	55.8	-3.7		-76.8	44	410	04 00 41
04 01 40	ARP299	07 46 32	59.2	57.4	-3.7		-75.4	-16	410	No stop
04 06 10	---	07 51 03	59.7	57.7	-3.6		-76.1	254	445	04 01 41
04 06 50	J1128+5925	07 51 43	60.1	56.1	-3.6		-77.7	24	445	04 06 50
04 07 20	---	07 52 13	60.1	56.1	-3.6		-77.8	30	449	04 06 51
04 07 20	ARP299	07 52 13	59.9	57.7	-3.6		-76.3	-17	449	No stop
04 11 50	---	07 56 44	60.5	58.0	-3.5		-77.0	253	484	04 07 21
04 11 50	J1128+5925	07 56 44	60.7	56.3	-3.5		-78.5	-17	484	No stop
04 13 00	---	07 57 54	60.8	56.4	-3.5		-78.7	53	493	04 11 51
04 13 00	ARP299	07 57 54	60.6	58.1	-3.5		-77.2	-17	493	No stop
04 17 30	---	08 02 25	61.2	58.3	-3.4		-77.9	253	528	04 13 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
--- Tue 29 Oct 2013 Day 302 ---										
04 18 10	J1128+5925	08 03 05	61.5	56.6	-3.4		-79.6	23	528	04 18 10
04 18 40	---	08 03 35	61.5	56.7	-3.4		-79.7	30	532	04 18 11
04 18 40	ARP299	08 03 35	61.3	58.4	-3.4		-78.1	-17	532	No stop
04 23 10	---	08 08 05	61.9	58.7	-3.4		-78.9	253	566	04 18 41
04 23 10	J1128+5925	08 08 05	62.1	56.9	-3.3		-80.5	-17	566	No stop
04 24 20	---	08 09 16	62.2	56.9	-3.3		-80.7	53	575	04 23 11
04 24 20	ARP299	08 09 16	62.1	58.7	-3.3		-79.0	-17	575	No stop
04 28 50	---	08 13 46	62.6	59.0	-3.3		-79.8	253	610	04 24 21
04 29 30	J1128+5925	08 14 27	62.9	57.2	-3.2		-81.6	23	610	04 29 30
04 30 00	---	08 14 57	63.0	57.2	-3.2		-81.7	30	614	04 29 31
04 30 00	ARP299	08 14 57	62.8	59.0	-3.2		-80.0	-17	614	No stop
04 34 30	---	08 19 27	63.4	59.2	-3.2		-80.8	253	649	04 30 01
04 34 30	J1128+5925	08 19 27	63.5	57.4	-3.2		-82.5	-17	649	No stop
04 35 30	---	08 20 28	63.7	57.4	-3.1		-82.7	43	657	04 34 31
04 35 30	ARP299	08 20 28	63.5	59.3	-3.1		-80.9	-17	657	No stop
04 40 00	---	08 24 58	64.1	59.5	-3.1		-81.7	253	692	04 35 31
04 40 40	J1128+5925	08 25 38	64.3	57.6	-3.1		-83.7	23	692	04 40 40
04 41 10	---	08 26 08	64.4	57.6	-3.0		-83.8	30	695	04 40 41
04 41 10	ARP299	08 26 08	64.2	59.5	-3.1		-81.9	-18	695	No stop
04 45 40	---	08 30 39	64.8	59.7	-3.0		-82.7	252	730	04 41 11
04 45 40	J1128+5925	08 30 39	65.0	57.7	-3.0		-84.6	-18	730	No stop
04 46 50	---	08 31 49	65.1	57.8	-3.0		-84.8	52	739	04 45 41
04 46 50	ARP299	08 31 49	65.0	59.8	-3.0		-82.9	-18	739	No stop
04 51 20	---	08 36 20	65.6	59.9	-2.9		-83.7	252	774	04 46 51
04 52 00	J1128+5925	08 37 00	65.8	57.9	-2.9		-85.8	22	774	04 52 00
04 52 30	---	08 37 30	65.8	57.9	-2.9		-85.9	30	778	04 52 01
04 52 30	ARP299	08 37 30	65.7	60.0	-2.9		-84.0	-18	778	No stop
04 57 00	---	08 42 01	66.3	60.1	-2.8		-84.8	252	813	04 52 31
04 57 00	J1128+5925	08 42 01	66.4	58.0	-2.8		-86.8	-18	813	No stop
04 58 10	---	08 43 11	66.5	58.0	-2.8		-87.0	52	822	04 57 01
04 58 10	ARP299	08 43 11	66.4	60.1	-2.8		-85.0	-18	822	No stop
05 02 40	---	08 47 42	67.0	60.3	-2.7		-85.9	252	857	04 58 11

Schedule for TORUN (Code Tr)

Page 5

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 29 Oct 2013 Day 302 ---										
05 03 20	J1128+5925	08 48 22	67.2	58.1	-2.7		-88.1	22	857	05 03 20
05 03 50	---	08 48 52	67.3	58.1	-2.7		-88.2	30	861	05 03 21
05 03 50	ARP299	08 48 52	67.2	60.3	-2.7		-86.1	-18	861	No stop
05 08 20	---	08 53 23	67.8	60.4	-2.6		-87.0	252	895	05 03 51
05 08 20	J1128+5925	08 53 23	67.8	58.1	-2.6		-89.1	-18	895	No stop
05 09 20	---	08 54 23	68.0	58.1	-2.6		-89.3	42	903	05 08 21
05 09 20	ARP299	08 54 23	67.9	60.4	-2.6		-87.2	-19	903	No stop
05 13 50	---	08 58 54	68.5	60.5	-2.5		-88.1	251	938	05 09 21
05 14 30	J1128+5925	08 59 34	68.6	58.1	-2.5		-90.4	21	938	05 14 30
05 15 00	---	09 00 04	68.7	58.1	-2.5		-90.6	30	942	05 14 31
05 15 00	ARP299	09 00 04	68.6	60.5	-2.5		-88.3	-19	942	No stop
05 19 30	---	09 04 35	69.2	60.5	-2.4		-89.2	251	977	05 15 01
05 19 30	J1128+5925	09 04 35	69.3	58.1	-2.4		-91.6	-19	977	No stop
05 20 40	---	09 05 45	69.4	58.1	-2.4		-91.8	51	986	05 19 31
05 20 40	ARP299	09 05 45	69.4	60.5	-2.4		-89.5	-19	986	No stop
05 25 10	---	09 10 16	70.0	60.5	-2.3		-90.4	251	1021	05 20 41
05 25 50	J1128+5925	09 10 56	70.1	58.0	-2.3		-93.0	21	1021	05 25 50
05 26 20	---	09 11 26	70.1	58.0	-2.3		-93.1	30	1024	05 25 51
05 26 20	ARP299	09 11 26	70.1	60.5	-2.3		-90.7	-19	1024	No stop
05 30 50	---	09 15 57	70.7	60.5	-2.2		-91.7	251	1059	05 26 21
05 30 50	J1128+5925	09 15 57	70.7	57.9	-2.2		-94.2	-19	1059	No stop
05 32 00	---	09 17 07	70.9	57.8	-2.2		-94.5	51	1068	05 30 51
05 32 00	ARP299	09 17 07	70.9	60.5	-2.2		-91.9	-19	1068	No stop
05 36 30	---	09 21 38	71.5	60.4	-2.1		-93.0	251	1103	05 32 01
05 37 10	J1128+5925	09 22 18	71.5	57.7	-2.1		-95.8	20	1103	05 37 10
05 37 40	---	09 22 48	71.6	57.6	-2.1		-95.9	30	1107	05 37 11
05 37 40	ARP299	09 22 48	71.6	60.4	-2.1		-93.2	-20	1107	No stop
05 42 10	---	09 27 18	72.2	60.2	-2.0		-94.3	250	1142	05 37 41
05 42 10	J1128+5925	09 27 18	72.2	57.4	-2.0		-97.1	-20	1142	No stop
05 43 10	---	09 28 19	72.3	57.4	-2.0		-97.3	40	1150	05 42 11
05 43 10	ARP299	09 28 19	72.3	60.2	-2.0		-94.6	-20	1150	No stop
05 47 40	---	09 32 49	72.9	60.0	-1.9		-95.7	250	1184	05 43 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
--- Tue 29 Oct 2013 Day 302 ---										
05 48 20	J1128+5925	09 33 29	72.9	57.1	-1.9		-98.7	20	1184	05 48 20
05 48 50	---	09 34 00	73.0	57.0	-1.9		-98.9	30	1188	05 48 21
05 48 50	ARP299	09 34 00	73.1	60.0	-1.9		-96.0	-20	1188	No stop
05 53 20	---	09 38 30	73.7	59.7	-1.8		-97.2	250	1223	05 48 51
05 53 20	J1128+5925	09 38 30	73.6	56.7	-1.8		-100.2	-21	1223	No stop
05 54 30	---	09 39 40	73.7	56.6	-1.8		-100.5	49	1232	05 53 21
05 54 30	ARP299	09 39 40	73.8	59.7	-1.8		-97.5	-21	1232	No stop
05 59 00	---	09 44 11	74.4	59.4	-1.8		-98.8	249	1267	05 54 31
05 59 40	J1128+5925	09 44 51	74.4	56.1	-1.7		-102.1	19	1267	05 59 40
06 00 10	---	09 45 21	74.4	56.1	-1.7		-102.2	30	1271	05 59 41
06 00 10	ARP299	09 45 21	74.5	59.3	-1.7		-99.1	-21	1271	No stop
06 04 40	---	09 49 52	75.1	58.9	-1.7		-100.4	249	1306	06 00 11
06 04 40	J1128+5925	09 49 52	75.0	55.6	-1.7		-103.7	-21	1306	No stop
06 05 50	---	09 51 02	75.1	55.5	-1.6		-104.1	49	1315	06 04 41
06 05 50	ARP299	09 51 02	75.3	58.8	-1.6		-100.8	-21	1315	No stop
06 10 20	---	09 55 33	75.9	58.3	-1.6		-102.2	249	1350	06 05 51
06 11 00	J1128+5925	09 56 13	75.8	54.8	-1.5		-105.8	18	1350	06 11 00
06 11 30	---	09 56 43	75.8	54.7	-1.5		-106.0	30	1353	06 11 01
06 11 30	ARP299	09 56 43	76.0	58.2	-1.5		-102.6	-22	1353	No stop
06 16 00	---	10 01 14	76.6	57.6	-1.5		-104.1	248	1388	06 11 31
06 16 00	J1128+5925	10 01 14	76.4	54.0	-1.5		-107.7	-22	1388	No stop
06 17 00	---	10 02 14	76.5	53.9	-1.4		-108.0	38	1396	06 16 01
06 17 00	ARP299	10 02 14	76.7	57.5	-1.5		-104.5	-22	1396	No stop
06 21 30	---	10 06 45	77.3	56.8	-1.4		-106.1	248	1431	06 17 01
06 22 10	J1128+5925	10 07 25	77.1	52.9	-1.4		-110.1	18	1431	06 22 10
06 22 40	---	10 07 55	77.2	52.8	-1.4		-110.3	30	1435	06 22 11
06 22 40	ARP299	10 07 55	77.4	56.6	-1.4		-106.5	-22	1435	No stop
06 27 10	---	10 12 26	78.0	55.7	-1.3		-108.3	248	1470	06 22 41
06 27 10	J1128+5925	10 12 26	77.7	51.8	-1.3		-112.2	-23	1470	No stop
06 28 20	---	10 13 36	77.9	51.6	-1.3		-112.7	47	1479	06 27 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 29 Oct 2013 Day 302 ---										
06 28 20	ARP299	10 13 36	78.1	55.5	-1.3		-108.8	-23	1479	No stop
06 32 50	---	10 18 07	78.7	54.5	-1.2		-110.7	247	1513	06 28 21
06 33 30	J1128+5925	10 18 47	78.5	50.3	-1.2		-115.1	17	1513	06 33 30
06 34 00	---	10 19 17	78.5	50.1	-1.2		-115.3	30	1517	06 33 31
06 34 00	ARP299	10 19 17	78.8	54.2	-1.2		-111.2	-23	1517	No stop
06 38 30	---	10 23 48	79.4	53.1	-1.1		-113.4	247	1552	06 34 01
06 38 30	J1128+5925	10 23 48	79.0	48.8	-1.1		-117.6	-24	1552	No stop
06 39 40	---	10 24 58	79.2	48.4	-1.1		-118.2	46	1561	06 38 31
06 39 40	ARP299	10 24 58	79.5	52.7	-1.1		-113.9	-23	1561	No stop
06 44 10	---	10 29 29	80.0	51.3	-1.0		-116.3	247	1596	06 39 41
06 44 50	J1128+5925	10 30 09	79.7	46.7	-1.0		-121.1	16	1596	06 44 50
06 45 20	---	10 30 39	79.8	46.5	-1.0		-121.4	30	1600	06 44 51
06 45 20	ARP299	10 30 39	80.2	50.9	-1.0		-116.9	-24	1600	No stop
06 49 50	---	10 35 10	80.7	49.2	-0.9		-119.5	246	1635	06 45 21
06 49 50	J1128+5925	10 35 10	80.3	44.7	-0.9		-124.1	-24	1635	No stop
06 50 50	---	10 36 10	80.4	44.2	-0.9		-124.7	36	1642	06 49 51
06 50 50	ARP299	10 36 10	80.8	48.8	-0.9		-120.2	-24	1642	No stop
06 55 20	---	10 40 40	81.3	46.8	-0.8		-123.1	246	1677	06 50 51
06 56 00	J1128+5925	10 41 21	80.9	41.8	-0.8		-128.3	15	1677	06 56 00
06 56 30	---	10 41 51	81.0	41.6	-0.8		-128.6	30	1681	06 56 01
06 56 30	ARP299	10 41 51	81.4	46.3	-0.8		-123.9	-24	1681	No stop
07 01 00	---	10 46 21	81.9	43.9	-0.7		-127.2	246	1716	06 56 31
07 01 00	J1128+5925	10 46 21	81.4	39.1	-0.7		-132.0	-25	1716	No stop
07 02 10	---	10 47 32	81.5	38.5	-0.7		-132.9	45	1725	07 01 01
07 02 10	ARP299	10 47 32	82.0	43.2	-0.7		-128.1	-24	1725	No stop
07 06 40	---	10 52 02	82.5	40.4	-0.6		-131.9	246	1760	07 02 11
07 07 20	J1128+5925	10 52 42	82.0	35.2	-0.6		-137.2	15	1760	07 07 20
07 07 50	---	10 53 13	82.0	34.9	-0.6		-137.7	30	1764	07 07 21
07 07 50	ARP299	10 53 13	82.6	39.6	-0.6		-132.9	-24	1764	No stop
07 12 20	---	10 57 43	83.0	36.3	-0.5		-137.2	246	1799	07 07 51
07 12 20	J1128+5925	10 57 43	82.4	31.6	-0.5		-141.9	-25	1799	No stop
07 13 30	---	10 58 53	82.5	30.7	-0.5		-143.0	45	1808	07 12 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
--- Tue 29 Oct 2013 Day 302 ---										
07 13 30	ARP299	10 58 53	83.1	35.3	-0.5		-138.4	-24	1808	No stop
07 18 00	---	11 03 24	83.5	31.4	-0.4		-143.2	246	1842	07 13 31
07 18 40	J1128+5925	11 04 04	82.9	26.4	-0.4		-148.4	16	1842	07 18 40
07 19 10	---	11 04 34	82.9	26.0	-0.4		-148.9	30	1846	07 18 41
07 19 10	ARP299	11 04 34	83.6	30.3	-0.4		-144.6	-23	1846	No stop
07 23 40	---	11 09 05	83.9	25.7	-0.3		-150.1	247	1881	07 19 11
07 23 40	J1128+5925	11 09 05	83.2	21.8	-0.3		-154.0	-23	1881	No stop
07 24 40	---	11 10 05	83.2	20.9	-0.3		-155.2	37	1889	07 23 41
07 24 40	ARP299	11 10 05	84.0	24.7	-0.3		-151.4	-22	1889	No stop
07 29 10	---	11 14 36	84.2	19.5	-0.2		-157.5	248	1924	07 24 41
07 29 50	J1128+5925	11 15 16	83.5	15.5	-0.2		-161.6	18	1924	07 29 50
07 30 20	---	11 15 46	83.5	15.0	-0.2		-162.2	30	1928	07 29 51
07 30 20	ARP299	11 15 46	84.3	18.1	-0.2		-159.1	-20	1928	No stop
07 34 50	---	11 20 17	84.5	12.3	-0.2		-165.8	250	1962	07 30 21
07 34 50	J1128+5925	11 20 17	83.6	10.0	-0.1		-168.1	-19	1962	No stop
07 36 00	---	11 21 27	83.7	8.7	-0.1		-169.7	51	1971	07 34 51
07 36 00	ARP299	11 21 27	84.5	10.8	-0.1		-167.6	-17	1971	No stop
07 40 30	---	11 25 58	84.6	4.6	-0.1		-174.7	253	2006	07 36 01
07 41 10	J1128+5925	11 26 38	83.7	2.7	-0.0		-176.8	24	2006	07 41 10
07 41 40	---	11 27 08	83.7	2.1	-0.0		-177.5	30	2010	07 41 11
07 41 40	ARP299	11 27 08	84.6	3.0	-0.0		-176.5	-16	2010	No stop
07 46 10	---	11 31 39	84.6	-3.3	0.0		176.3	254	2045	07 41 41
07 46 10	J1128+5925	11 31 39	83.7	-3.1	0.0		176.3	-16	2045	No stop
07 47 20	---	11 32 49	83.7	-4.5	0.1		174.7	54	2054	07 46 11
07 47 20	ARP299	11 32 49	84.6	-4.9	0.1		174.4	-16	2054	No stop
07 51 50	---	11 37 20	84.5	-11.0	0.1		167.3	254	2089	07 47 21
07 52 30	J1128+5925	11 38 00	83.6	-10.4	0.2		167.7	24	2089	07 52 30
07 53 00	---	11 38 30	83.6	-11.0	0.2		167.0	30	2093	07 52 31
07 53 00	ARP299	11 38 30	84.5	-12.5	0.2		165.6	-17	2093	No stop
07 57 30	---	11 43 01	84.3	-18.3	0.2		158.9	253	2128	07 53 01
07 57 30	J1128+5925	11 43 01	83.5	-15.9	0.2		161.2	-18	2128	No stop
07 58 30	---	11 44 01	83.4	-17.0	0.3		159.9	42	2135	07 57 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
--- Tue 29 Oct 2013 Day 302 ---										
07 58 30	ARP299	11 44 01	84.2	-19.5	0.2		157.5	-20	2135	No stop
08 03 00	---	11 48 32	84.0	-24.7	0.3		151.4	250	2170	07 58 31
08 03 40	J1128+5925	11 49 12	83.2	-22.2	0.3		153.6	20	2170	08 03 40
08 04 10	---	11 49 42	83.1	-22.6	0.3		153.1	30	2174	08 03 41
08 04 10	ARP299	11 49 42	83.9	-25.9	0.3		149.9	-22	2174	No stop
08 08 40	---	11 54 13	83.6	-30.5	0.4		144.4	248	2209	08 04 11
08 08 40	J1128+5925	11 54 13	82.8	-26.7	0.4		148.0	-22	2209	No stop
08 09 50	---	11 55 23	82.8	-27.7	0.4		146.8	48	2218	08 08 41
08 09 50	ARP299	11 55 23	83.5	-31.6	0.4		143.0	-23	2218	No stop
08 14 20	---	11 59 53	83.1	-35.5	0.5		138.2	247	2253	08 09 51
08 15 00	J1128+5925	12 00 34	82.4	-31.9	0.5		141.5	17	2253	08 15 00
08 15 30	---	12 01 04	82.3	-32.3	0.5		141.1	30	2257	08 15 01
08 15 30	ARP299	12 01 04	83.0	-36.4	0.5		137.0	-24	2257	No stop
08 20 00	---	12 05 34	82.6	-39.7	0.6		132.8	246	2291	08 15 31
08 20 00	J1128+5925	12 05 34	82.0	-35.4	0.6		136.9	-23	2291	No stop
08 21 10	---	12 06 45	81.9	-36.2	0.6		135.9	47	2300	08 20 01
08 21 10	ARP299	12 06 45	82.5	-40.5	0.6		131.7	-24	2300	No stop
08 25 40	---	12 11 15	82.0	-43.3	0.7		128.0	246	2335	08 21 11
08 26 20	J1128+5925	12 11 55	81.4	-39.3	0.7		131.7	17	2335	08 26 20
08 26 50	---	12 12 26	81.3	-39.6	0.7		131.3	30	2339	08 26 21
08 26 50	ARP299	12 12 26	81.9	-44.0	0.7		127.1	-24	2339	No stop
08 31 20	---	12 16 56	81.4	-46.4	0.8		123.8	246	2374	08 26 51
08 31 20	J1128+5925	12 16 56	80.9	-42.0	0.8		128.0	-23	2374	No stop
08 32 20	---	12 17 56	80.8	-42.5	0.8		127.3	37	2382	08 31 21
08 32 20	ARP299	12 17 56	81.3	-46.8	0.8		123.1	-24	2382	No stop
08 36 50	---	12 22 27	80.8	-48.8	0.9		120.2	246	2417	08 32 21
08 37 30	J1128+5925	12 23 07	80.3	-44.8	0.9		123.9	17	2417	08 37 30
08 38 00	---	12 23 37	80.2	-45.0	0.9		123.6	30	2420	08 37 31
08 38 00	ARP299	12 23 37	80.7	-49.3	0.9		119.4	-24	2420	No stop
08 42 30	---	12 28 08	80.2	-51.0	1.0		116.8	246	2455	08 38 01
08 42 30	J1128+5925	12 28 08	79.7	-46.8	1.0		120.9	-23	2455	No stop
08 43 40	---	12 29 18	79.6	-47.2	1.0		120.2	47	2464	08 42 31

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

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Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 29 Oct 2013 Day 302 ---										
08 43 40	ARP299	12 29 18	80.0	-51.4	1.0		116.2	-23	2464	No stop
08 48 10	---	12 33 49	79.5	-52.8	1.1		113.9	247	2499	08 43 41
08 48 50	J1128+5925	12 34 29	79.0	-48.9	1.1		117.4	17	2499	08 48 50
08 49 20	---	12 34 59	78.9	-49.1	1.1		117.2	30	2503	08 48 51
08 49 20	ARP299	12 34 59	79.4	-53.1	1.1		113.3	-23	2503	No stop
08 53 50	---	12 39 30	78.8	-54.3	1.2		111.2	247	2538	08 49 21
08 53 50	J1128+5925	12 39 30	78.4	-50.4	1.2		114.9	-23	2538	No stop
08 54 50	---	12 40 30	78.3	-50.6	1.2		114.4	37	2546	08 53 51
08 54 50	ARP299	12 40 30	78.7	-54.5	1.2		110.7	-23	2546	No stop
08 58 50	---	12 44 31	78.2	-55.4	1.3		109.0	217	2577	08 54 51
08 59 30	J1128+5925	12 45 11	77.8	-51.8	1.3		112.3	18	2577	08 59 30
09 00 00	---	12 45 41	77.7	-51.9	1.3		112.1	30	2580	08 59 31

SETUP FILE INFORMATION:

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

==== Setup file: sess313.L1024

Matching groups in /Users/torres/sched102/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: 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 = 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 --

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)		(Date)	Error (mas)
	(B1950)	(J2000)		
* ARP299	11 25 44.174219	* 11 28 33.622010	11 29 18.369141	0.00
	58 50 18.17319	* 58 33 46.61000	58 28 58.71046	0.00
* J1128+5925	11 25 23.181652	* 11 28 13.340676	11 28 58.209833	0.00
	59 41 46.14397	* 59 25 14.79866	59 20 26.73348	0.00
J0927+3902	09 23 55.319217	* 09 27 03.013938	09 27 54.790581	0.13
* 4C39.25	39 15 23.56637	* 39 02 20.85177	38 58 28.71324	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      79.5
J1128+5925  80.2
4C39.25     84.8

```

rk01hrtr

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN Survey

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 29 Oct 2013 Day 302 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
Next BBC frequencies: 636.00 636.00 636.00 636.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

Table with 11 columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It lists observation times for source 0657+172.

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set

Matching groups in ./freq.dat:

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

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00   636.00   636.00   636.00
Bandwd=   16.00   16.00   16.00   16.00
Matching frequency sets:  3

```

The following pulse cal sets were used with this setup:

```

Pulse cal detection set:  1  PCAL = 1MHZ
PCALXB1=  S1  S3  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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0700+1709	06 57 07.785942	* 07 00 01.525540	07 00 50.704791	0.11
* 0657+172	17 13 35.02507	* 17 09 21.70126	17 08 02.68599	0.10

EFFECT OF SOLAR CORONA

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)
FAKERA	99.3
0657+172	111.4

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

ep088btr

LIRGI - SOURCE GROUP 1 - RUN D

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 Fax: +34-958814530 Phone during observation: +34-665252538

Observing mode: 1024 Mbps

Notes: Phase-ref of EVN LIRGI sources
 First 18cm observing epoch of NGC0695, VV250a, VV705, IRASF17132, NGC6670b and NGC7674

Schedule for TORUN (Code Tr) Page 2

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
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										
10 00 00	3C345	13 45 51	57.3	95.8	-3.0		-51.0	0	0	10 00 00
10 03 34	---	13 49 25	57.8	96.6	-2.9		-50.9	214	27	10 00 01
10 03 34	3C345	13 49 25	57.8	96.6	-2.9		-50.9	-5	27	No stop
10 07 12	---	13 53 04	58.4	97.5	-2.8		-50.8	213	55	10 03 35
10 07 12	J1521+4336	13 53 04	72.5	114.0	-1.5		-49.2	-67	55	No stop
10 09 32	---	13 55 24	72.8	114.9	-1.4		-48.7	73	73	10 07 13
10 10 12	VV705	13 56 04	72.8	118.9	-1.4		-45.7	18	73	10 10 12
10 15 58	---	14 01 51	73.6	121.5	-1.3		-44.2	346	118	10 10 13
10 15 58	J1521+4336	14 01 51	73.7	117.6	-1.3		-47.3	-22	118	No stop
10 17 28	---	14 03 22	73.9	118.3	-1.3		-46.9	68	129	10 15 59
10 18 08	VV705	14 04 02	73.8	122.5	-1.2		-43.6	17	129	10 18 08
10 23 54	---	14 09 49	74.6	125.4	-1.1		-41.8	346	173	10 18 09
10 23 54	J1521+4336	14 09 49	74.7	121.3	-1.2		-45.1	-23	173	No stop
10 25 14	---	14 11 09	74.9	121.9	-1.2		-44.7	57	184	10 23 55
10 25 54	VV705	14 11 49	74.8	126.4	-1.1		-41.1	16	184	10 25 54
10 31 40	---	14 17 36	75.5	129.6	-1.0		-39.0	346	228	10 25 55
10 31 40	J1521+4336	14 17 36	75.7	125.3	-1.1		-42.6	-23	228	No stop
10 33 00	---	14 18 56	75.9	126.0	-1.1		-42.1	57	238	10 31 41

Schedule for TORUN (Code Tr)

Page 3

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
10 33 40	VV705	14 19 36	75.7	130.7	-1.0		-38.2	16	238	10 33 40
10 39 26	---	14 25 23	76.3	134.3	-0.9		-35.8	346	282	10 33 41
10 39 26	J1521+4336	14 25 23	76.6	129.7	-0.9		-39.6	-24	282	No stop
10 40 46	---	14 26 44	76.8	130.5	-0.9		-39.1	56	293	10 39 27
10 41 26	VV705	14 27 24	76.6	135.5	-0.9		-34.9	15	293	10 41 26
10 47 12	---	14 33 11	77.1	139.4	-0.8		-32.1	346	337	10 41 27
10 47 12	J1521+4336	14 33 11	77.5	134.7	-0.8		-36.1	-24	337	No stop
10 48 32	---	14 34 31	77.6	135.6	-0.8		-35.4	56	347	10 47 13
10 49 12	VV705	14 35 11	77.3	140.9	-0.7		-31.0	15	347	10 49 12
10 54 58	---	14 40 58	77.9	145.2	-0.6		-27.8	346	391	10 49 13
10 54 58	J1521+4336	14 40 58	78.3	140.2	-0.7		-32.0	-24	391	No stop
10 56 18	---	14 42 18	78.4	141.3	-0.7		-31.2	56	402	10 54 59
10 56 58	VV705	14 42 58	78.0	146.7	-0.6		-26.6	15	402	10 56 58
11 02 44	---	14 48 45	78.5	151.5	-0.5		-23.0	346	446	10 56 59
11 02 44	J1521+4336	14 48 45	79.0	146.5	-0.6		-27.2	-24	446	No stop
11 04 04	---	14 50 05	79.1	147.6	-0.5		-26.4	56	456	11 02 45
11 04 44	VV705	14 50 45	78.6	153.2	-0.5		-21.6	14	456	11 04 44
11 10 30	---	14 56 32	79.0	158.4	-0.4		-17.5	346	500	11 04 45
11 10 30	J1521+4336	14 56 32	79.6	153.4	-0.4		-21.8	-24	500	No stop
11 11 50	---	14 57 53	79.7	154.6	-0.4		-20.8	56	511	11 10 31
11 12 30	VV705	14 58 33	79.1	160.2	-0.3		-16.1	14	511	11 12 30
11 18 16	---	15 04 20	79.3	165.7	-0.2		-11.6	346	555	11 12 31
11 18 16	J1521+4336	15 04 20	80.0	160.9	-0.3		-15.7	-24	555	No stop
11 19 36	---	15 05 40	80.1	162.3	-0.3		-14.6	56	565	11 18 17
11 20 16	VV705	15 06 20	79.4	167.7	-0.2		-10.0	15	565	11 20 16
11 26 02	---	15 12 07	79.5	173.5	-0.1		-5.3	346	610	11 20 17
11 26 02	J1521+4336	15 12 07	80.3	169.0	-0.2		-9.1	-23	610	No stop
11 27 22	---	15 13 27	80.4	170.4	-0.1		-7.9	57	620	11 26 03
11 28 02	VV705	15 14 07	79.6	175.5	-0.1		-3.7	16	620	11 28 02
11 33 48	---	15 19 54	79.6	181.4	0.0		1.1	346	664	11 28 03
11 33 48	J1521+4336	15 19 54	80.5	177.4	-0.0		-2.2	-22	664	No stop
11 35 08	---	15 21 14	80.5	178.9	-0.0		-0.9	58	674	11 33 49

Schedule for TORUN (Code Tr)

Page 4

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
11 35 48	VV705	15 21 55	79.6	183.4	0.1		2.8	17	674	11 35 48
11 41 34	---	15 27 42	79.5	189.2	0.2		7.5	346	719	11 35 49
11 41 34	J1521+4336	15 27 42	80.4	185.9	0.1		4.9	-21	719	No stop
11 42 54	---	15 29 02	80.4	187.4	0.1		6.1	59	729	11 41 35
11 43 34	VV705	15 29 42	79.4	191.2	0.2		9.2	18	729	11 43 34
11 49 20	---	15 35 29	79.2	196.9	0.3		13.7	346	773	11 43 35
11 49 20	J1521+4336	15 35 29	80.2	194.2	0.2		11.7	-19	773	No stop
11 50 40	---	15 36 49	80.2	195.6	0.2		12.9	61	783	11 49 21
11 51 20	VV705	15 37 29	79.1	198.8	0.3		15.2	20	783	11 51 20
11 57 06	---	15 43 16	78.8	204.1	0.4		19.5	346	828	11 51 21
11 57 06	J1521+4336	15 43 16	79.9	202.1	0.3		18.2	-17	828	No stop
11 58 26	---	15 44 36	79.8	203.4	0.4		19.2	63	838	11 57 07
11 58 26	J1824+5651	15 44 36	67.1	64.5	-2.7		-82.4	-292	838	No stop
12 03 56	---	15 50 07	67.9	64.7	-2.6		-83.3	38	880	11 58 27
12 04 36	NGC6670B	15 50 47	66.9	56.6	-2.7		-88.9	9	880	12 04 36
12 10 22	---	15 56 34	67.6	56.6	-2.6		-90.2	346	924	12 04 37
12 10 22	J1824+5651	15 56 34	68.7	65.0	-2.5		-84.4	-32	924	No stop
12 11 42	---	15 57 54	68.9	65.0	-2.4		-84.7	48	935	12 10 23
12 12 22	NGC6670B	15 58 35	67.9	56.6	-2.6		-90.6	8	935	12 12 22
12 18 08	---	16 04 22	68.6	56.6	-2.5		-91.9	346	979	12 12 23
12 18 08	J1824+5651	16 04 22	69.8	65.2	-2.3		-85.8	-32	979	No stop
12 19 28	---	16 05 42	70.0	65.2	-2.3		-86.1	48	989	12 18 09
12 20 08	NGC6670B	16 06 22	68.9	56.5	-2.5		-92.4	8	989	12 20 08
12 25 54	---	16 12 09	69.6	56.4	-2.4		-93.7	346	1033	12 20 09
12 25 54	J1824+5651	16 12 09	70.9	65.4	-2.2		-87.3	-33	1033	No stop
12 27 14	---	16 13 29	71.0	65.4	-2.2		-87.5	47	1044	12 25 55
12 27 54	NGC6670B	16 14 09	69.9	56.4	-2.3		-94.2	7	1044	12 27 54
12 33 40	---	16 19 56	70.6	56.2	-2.2		-95.6	346	1088	12 27 55
12 33 40	J1824+5651	16 19 56	71.9	65.5	-2.1		-88.8	-34	1088	No stop
12 35 10	---	16 21 26	72.1	65.5	-2.0		-89.1	56	1100	12 33 41
12 35 50	NGC6670B	16 22 06	70.8	56.1	-2.2		-96.2	6	1100	12 35 50
12 41 36	---	16 27 53	71.6	55.8	-2.1		-97.7	346	1144	12 35 51

Schedule for TORUN (Code Tr)

Page 5

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
12 41 36	J1824+5651	16 27 53	73.0	65.5	-1.9		-90.4	-34	1144	No stop
12 42 56	---	16 29 14	73.2	65.5	-1.9		-90.7	46	1154	12 41 37
12 43 36	NGC6670B	16 29 54	71.8	55.7	-2.1		-98.2	5	1154	12 43 36
12 49 22	---	16 35 41	72.5	55.4	-2.0		-99.8	346	1198	12 43 37
12 49 22	J1824+5651	16 35 41	74.1	65.5	-1.8		-92.1	-35	1198	No stop
12 50 42	---	16 37 01	74.3	65.4	-1.8		-92.5	45	1209	12 49 23
12 51 22	NGC6670B	16 37 41	72.8	55.2	-1.9		-100.4	5	1209	12 51 22
12 57 08	---	16 43 28	73.5	54.7	-1.8		-102.1	346	1253	12 51 23
12 57 08	J1824+5651	16 43 28	75.1	65.2	-1.7		-94.0	-36	1253	No stop
12 58 38	---	16 44 58	75.3	65.2	-1.7		-94.4	54	1264	12 57 09
12 59 18	NGC6670B	16 45 38	73.8	54.5	-1.8		-102.8	4	1264	12 59 18
13 05 04	---	16 51 25	74.5	53.9	-1.7		-104.6	346	1309	12 59 19
13 05 04	J1824+5651	16 51 25	76.2	64.9	-1.5		-96.0	-37	1309	No stop
13 06 24	---	16 52 45	76.4	64.8	-1.5		-96.4	43	1319	13 05 05
13 07 04	NGC6670B	16 53 26	74.7	53.7	-1.7		-105.3	3	1319	13 07 04
13 12 50	---	16 59 12	75.4	52.9	-1.6		-107.3	346	1363	13 07 05
13 12 50	J1824+5651	16 59 12	77.3	64.3	-1.4		-98.2	-38	1363	No stop
13 14 10	---	17 00 33	77.5	64.2	-1.4		-98.6	42	1373	13 12 51
13 14 50	NGC6670B	17 01 13	75.6	52.6	-1.5		-108.0	2	1373	13 14 50
13 20 36	---	17 07 00	76.3	51.6	-1.4		-110.2	346	1418	13 14 51
13 20 36	J1824+5651	17 07 00	78.3	63.5	-1.3		-100.6	-39	1418	No stop
13 22 06	---	17 08 30	78.5	63.3	-1.3		-101.2	51	1429	13 20 37
13 22 46	NGC6670B	17 09 10	76.6	51.2	-1.4		-111.1	1	1429	13 22 46
13 28 32	---	17 14 57	77.2	49.9	-1.3		-113.5	346	1474	13 22 47
13 28 32	J1824+5651	17 14 57	79.4	62.3	-1.2		-103.5	-39	1474	No stop
13 29 52	---	17 16 17	79.6	62.0	-1.1		-104.0	41	1484	13 28 33
13 30 32	NGC6670B	17 16 57	77.5	49.5	-1.3		-114.4	0	1484	13 30 32
13 36 18	---	17 22 44	78.1	48.0	-1.2		-117.1	346	1528	13 30 33
13 36 18	J1824+5651	17 22 44	80.4	60.7	-1.0		-106.7	-40	1528	No stop
13 37 38	---	17 24 05	80.6	60.4	-1.0		-107.3	40	1538	13 36 19
13 38 18	NGC6670B	17 24 45	78.4	47.4	-1.1		-118.1	-1	1538	13 38 18
13 44 04	---	17 30 32	79.0	45.6	-1.1		-121.2	345	1583	13 38 19

Schedule for TORUN (Code Tr)

Page 6

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
13 44 04	J1824+5651	17 30 32	81.4	58.6	-0.9		-110.4	-41	1583	No stop
13 45 34	---	17 32 02	81.6	58.1	-0.9		-111.2	49	1594	13 44 05
13 46 14	NGC6670B	17 32 42	79.2	44.8	-1.0		-122.4	-1	1594	13 46 14
13 52 00	---	17 38 29	79.8	42.6	-0.9		-125.8	345	1638	13 46 15
13 52 40	J1824+5651	17 39 09	82.5	55.3	-0.8		-115.5	0	1638	13 52 40
13 54 00	---	17 40 29	82.7	54.7	-0.7		-116.4	80	1649	13 52 41
13 54 00	J1302+5748	17 40 29	52.2	-54.5	4.6		66.2	-233	1649	No stop
14 03 00	---	17 49 31	51.1	-53.7	4.8		65.0	307	1718	13 54 01
14 03 40	VV250A	17 50 11	54.0	-48.0	4.6		72.1	14	1718	14 03 40
14 09 26	---	17 55 58	53.4	-47.6	4.7		71.1	346	1762	14 03 41
14 09 26	J1302+5748	17 55 58	50.3	-53.1	4.9		64.1	-26	1762	No stop
14 10 56	---	17 57 28	50.1	-52.9	4.9		63.8	64	1774	14 09 27
14 11 36	VV250A	17 58 08	53.2	-47.5	4.7		70.7	14	1774	14 11 36
14 17 22	---	18 03 55	52.5	-47.1	4.8		69.8	346	1818	14 11 37
14 17 22	J1302+5748	18 03 55	49.3	-52.3	5.0		62.9	-26	1818	No stop
14 18 52	---	18 05 25	49.1	-52.2	5.0		62.7	64	1829	14 17 23
14 19 32	VV250A	18 06 05	52.3	-46.9	4.8		69.4	14	1829	14 19 32
14 25 18	---	18 11 52	51.6	-46.5	4.9		68.4	346	1874	14 19 33
14 25 18	J1302+5748	18 11 52	48.4	-51.6	5.1		61.8	-26	1874	No stop
14 26 48	---	18 13 23	48.2	-51.4	5.2		61.6	64	1885	14 25 19
14 27 28	VV250A	18 14 03	51.4	-46.4	5.0		68.1	14	1885	14 27 28
14 33 14	---	18 19 50	50.8	-46.0	5.1		67.1	346	1929	14 27 29
14 33 14	J1302+5748	18 19 50	47.5	-50.8	5.3		60.7	-27	1929	No stop
14 34 44	---	18 21 20	47.3	-50.7	5.3		60.5	63	1941	14 33 15
14 35 24	VV250A	18 22 00	50.5	-45.8	5.1		66.8	14	1941	14 35 24
14 41 10	---	18 27 47	49.9	-45.4	5.2		65.8	346	1985	14 35 25
14 41 10	J1302+5748	18 27 47	46.5	-50.1	5.4		59.6	-27	1985	No stop
14 42 40	---	18 29 17	46.4	-49.9	5.4		59.4	63	1997	14 41 11
14 43 20	VV250A	18 29 57	49.7	-45.2	5.2		65.4	13	1997	14 43 20
14 49 06	---	18 35 44	49.1	-44.8	5.3		64.5	346	2041	14 43 21
14 49 06	J1302+5748	18 35 44	45.6	-49.3	5.5		58.5	-27	2041	No stop
14 50 36	---	18 37 15	45.5	-49.1	5.6		58.3	63	2053	14 49 07

Schedule for TORUN (Code Tr)

Page 7

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
14 51 16	VV250A	18 37 55	48.9	-44.6	5.4		64.2	13	2053	14 51 16
14 57 02	---	18 43 42	48.2	-44.2	5.5		63.2	346	2097	14 51 17
14 57 02	J1302+5748	18 43 42	44.7	-48.5	5.7		57.4	-27	2097	No stop
14 58 32	---	18 45 12	44.6	-48.3	5.7		57.1	63	2108	14 57 03
14 59 12	VV250A	18 45 52	48.0	-44.0	5.5		62.9	13	2108	14 59 12
15 04 58	---	18 51 39	47.4	-43.5	5.6		61.9	346	2153	14 59 13
15 04 58	J1302+5748	18 51 39	43.8	-47.7	5.8		56.2	-27	2153	No stop
15 06 28	---	18 53 09	43.7	-47.5	5.8		56.0	63	2164	15 04 59
15 07 08	VV250A	18 53 49	47.2	-43.4	5.6		61.6	13	2164	15 07 08
15 12 54	---	18 59 36	46.6	-42.9	5.7		60.7	346	2209	15 07 09
15 12 54	J1302+5748	18 59 36	43.0	-46.8	5.9		55.1	-28	2209	No stop
15 14 24	---	19 01 06	42.8	-46.7	6.0		54.9	62	2220	15 12 55
15 15 04	VV250A	19 01 47	46.4	-42.7	5.8		60.3	13	2220	15 15 04
15 20 50	---	19 07 34	45.8	-42.2	5.9		59.4	346	2264	15 15 05
15 20 50	J1302+5748	19 07 34	42.1	-46.0	6.1		54.0	-28	2264	No stop
15 22 20	---	19 09 04	41.9	-45.8	6.1		53.8	62	2276	15 20 51
15 23 00	VV250A	19 09 44	45.6	-42.0	5.9		59.0	12	2276	15 23 00
15 28 46	---	19 15 31	45.0	-41.5	6.0		58.1	346	2320	15 23 01
15 28 46	J1302+5748	19 15 31	41.2	-45.2	6.2		52.9	-28	2320	No stop
15 30 16	---	19 17 01	41.1	-45.0	6.2		52.7	62	2332	15 28 47
15 30 56	VV250A	19 17 41	44.8	-41.3	6.0		57.8	12	2332	15 30 56
15 36 42	---	19 23 28	44.2	-40.8	6.1		56.9	346	2376	15 30 57
15 36 42	J1302+5748	19 23 28	40.4	-44.3	6.3		51.8	-28	2376	No stop
15 38 12	---	19 24 58	40.2	-44.1	6.4		51.6	62	2387	15 36 43
15 38 52	VV250A	19 25 38	44.0	-40.6	6.2		56.5	12	2387	15 38 52
15 44 38	---	19 31 25	43.4	-40.1	6.3		55.6	346	2432	15 38 53
15 44 38	J1302+5748	19 31 25	39.6	-43.4	6.5		50.6	-29	2432	No stop
15 46 08	---	19 32 56	39.4	-43.3	6.5		50.4	61	2443	15 44 39
15 46 48	VV250A	19 33 36	43.2	-39.9	6.3		55.3	12	2443	15 46 48
15 52 34	---	19 39 23	42.7	-39.4	6.4		54.3	346	2488	15 46 49

Schedule for TORUN (Code Tr)

Page 8

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---									
15 52 34	J1302+5748	19 39 23	38.8	-42.5	6.6	49.5	-29	2488	No stop
15 54 04	---	19 40 53	38.6	-42.4	6.6	49.3	61	2499	15 52 35
15 54 04	J1740+5211	19 40 53	71.9	279.3	2.0	W 75.2	-661	2499	No stop
16 00 34	---	19 47 24	70.9	280.1	2.1	W 74.7	0	2549	15 54 05
16 01 14	IRASF17132	19 48 04	67.3	285.7	2.6	74.6	12	2549	16 01 14
16 07 00	---	19 53 51	66.4	286.3	2.7	74.0	346	2593	16 01 15
16 07 00	J1740+5211	19 53 51	70.0	280.9	2.2	74.2	-27	2593	No stop
16 08 30	---	19 55 21	69.8	281.0	2.2	74.0	63	2605	16 07 01
16 09 10	IRASF17132	19 56 01	66.1	286.5	2.7	73.8	13	2605	16 09 10
16 14 56	---	20 01 48	65.3	287.1	2.8	73.2	346	2649	16 09 11
16 14 56	J1740+5211	20 01 48	68.8	281.8	2.3	73.5	-27	2649	No stop
16 16 16	---	20 03 09	68.6	282.0	2.4	73.4	53	2659	16 14 57
16 16 56	IRASF17132	20 03 49	65.0	287.3	2.8	73.0	13	2659	16 16 56
16 22 42	---	20 09 36	64.2	287.9	2.9	72.3	346	2704	16 16 57
16 22 42	J1740+5211	20 09 36	67.7	282.8	2.5	72.8	-27	2704	No stop
16 24 02	---	20 10 56	67.5	282.9	2.5	72.7	53	2714	16 22 43
16 24 42	IRASF17132	20 11 36	63.9	288.2	2.9	72.1	13	2714	16 24 42
16 30 28	---	20 17 23	63.1	288.8	3.0	71.5	346	2758	16 24 43
16 30 28	J1740+5211	20 17 23	66.5	283.7	2.6	72.1	-27	2758	No stop
16 31 48	---	20 18 43	66.3	283.8	2.6	72.0	53	2768	16 30 29
16 32 28	IRASF17132	20 19 23	62.8	289.0	3.1	71.3	13	2768	16 32 28
16 38 14	---	20 25 10	62.0	289.6	3.2	70.7	346	2813	16 32 29
16 38 14	J1740+5211	20 25 10	65.4	284.6	2.7	71.4	-27	2813	No stop
16 39 34	---	20 26 30	65.2	284.8	2.8	71.3	53	2823	16 38 15
16 40 14	IRASF17132	20 27 11	61.7	289.8	3.2	70.5	13	2823	16 40 14
16 46 00	---	20 32 58	60.9	290.4	3.3	69.8	346	2867	16 40 15
16 46 00	J1740+5211	20 32 58	64.3	285.5	2.9	70.7	-27	2867	No stop
16 47 20	---	20 34 18	64.1	285.7	2.9	70.6	53	2877	16 46 01
16 48 00	IRASF17132	20 34 58	60.6	290.6	3.3	69.6	13	2877	16 48 00
16 53 46	---	20 40 45	59.8	291.2	3.4	69.0	346	2922	16 48 01
16 53 46	J1740+5211	20 40 45	63.2	286.4	3.0	70.0	-26	2922	No stop
16 55 06	---	20 42 05	63.0	286.6	3.0	69.9	54	2932	16 53 47

Schedule for TORUN (Code Tr)

Page 9

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
16 55 46	IRASF17132	20 42 45	59.5	291.4	3.5		68.8	13	2932	16 55 46
17 01 32	---	20 48 32	58.7	292.1	3.6		68.2	346	2976	16 55 47
17 01 32	J1740+5211	20 48 32	62.0	287.3	3.1		69.3	-26	2976	No stop
17 02 52	---	20 49 52	61.8	287.5	3.1		69.1	54	2986	17 01 33
17 03 32	IRASF17132	20 50 32	58.4	292.3	3.6		67.9	13	2986	17 03 32
17 09 18	---	20 56 19	57.6	292.9	3.7		67.3	346	3031	17 03 33
17 09 18	J1740+5211	20 56 19	60.9	288.2	3.3		68.5	-26	3031	No stop
17 10 38	---	20 57 40	60.7	288.4	3.3		68.4	54	3041	17 09 19
17 11 18	IRASF17132	20 58 20	57.3	293.1	3.7		67.1	13	3041	17 11 18
17 17 04	---	21 04 07	56.5	293.7	3.8		66.5	346	3085	17 11 19
17 17 04	J1740+5211	21 04 07	59.8	289.1	3.4		67.8	-26	3085	No stop
17 18 24	---	21 05 27	59.6	289.3	3.4		67.6	54	3096	17 17 05
17 19 04	IRASF17132	21 06 07	56.2	294.0	3.9		66.2	14	3096	17 19 04
17 24 50	---	21 11 54	55.5	294.6	4.0		65.6	346	3140	17 19 05
17 24 50	J1740+5211	21 11 54	58.7	290.0	3.5		67.0	-26	3140	No stop
17 26 10	---	21 13 14	58.5	290.2	3.5		66.9	54	3150	17 24 51
17 26 50	IRASF17132	21 13 54	55.2	294.8	4.0		65.4	14	3150	17 26 50
17 32 36	---	21 19 41	54.4	295.4	4.1		64.7	346	3194	17 26 51
17 32 36	J1740+5211	21 19 41	57.6	290.9	3.6		66.2	-26	3194	No stop
17 33 56	---	21 21 01	57.4	291.1	3.7		66.1	54	3205	17 32 37
17 34 36	IRASF17132	21 21 41	54.1	295.7	4.1		64.5	14	3205	17 34 36
17 40 22	---	21 27 28	53.3	296.3	4.2		63.9	346	3249	17 34 37
17 40 22	J1740+5211	21 27 28	56.5	291.8	3.8		65.4	-26	3249	No stop
17 41 42	---	21 28 49	56.3	292.0	3.8		65.3	54	3259	17 40 23
17 42 22	IRASF17132	21 29 29	53.1	296.5	4.2		63.7	14	3259	17 42 22
17 48 08	---	21 35 16	52.3	297.2	4.3		63.0	346	3303	17 42 23
17 48 08	J1740+5211	21 35 16	55.5	292.7	3.9		64.6	-26	3303	No stop
17 49 28	---	21 36 36	55.3	292.9	3.9		64.5	54	3314	17 48 09
17 50 08	IRASF17132	21 37 16	52.0	297.4	4.4		62.8	14	3314	17 50 08
17 55 54	---	21 43 03	51.3	298.0	4.5		62.1	346	3358	17 50 09
17 55 54	J1740+5211	21 43 03	54.4	293.6	4.0		63.8	-25	3358	No stop
17 57 14	---	21 44 23	54.2	293.8	4.1		63.7	55	3368	17 55 55

Schedule for TORUN (Code Tr)

Page 10

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
17 57 54	IRASF17132	21 45 03	51.0	298.3	4.5		61.9	14	3368	17 57 54
18 03 40	---	21 50 50	50.2	298.9	4.6		61.3	346	3412	17 57 55
18 03 40	J1740+5211	21 50 50	53.3	294.5	4.2		63.0	-25	3412	No stop
18 05 00	---	21 52 10	53.1	294.7	4.2		62.9	55	3423	18 03 41
18 05 40	IRASF17132	21 52 51	50.0	299.1	4.6		61.0	14	3423	18 05 40
18 11 26	---	21 58 38	49.2	299.8	4.7		60.4	346	3467	18 05 41
18 11 26	J1740+5211	21 58 38	52.2	295.4	4.3		62.2	-25	3467	No stop
18 12 46	---	21 59 58	52.1	295.6	4.3		62.1	55	3477	18 11 27
18 13 26	IRASF17132	22 00 38	49.0	300.0	4.8		60.1	15	3477	18 13 26
18 19 12	---	22 06 25	48.2	300.7	4.9		59.5	346	3522	18 13 27
18 19 12	J1740+5211	22 06 25	51.2	296.3	4.4		61.4	-25	3522	No stop
18 20 32	---	22 07 45	51.0	296.5	4.4		61.3	55	3532	18 19 13
18 20 32	J2327+0940	22 07 45	43.7	152.0	-1.3		-16.6	-301	3532	No stop
18 28 22	---	22 15 36	44.2	154.6	-1.2		-15.2	169	3592	18 20 33
18 29 02	NGC7674	22 16 16	43.4	155.0	-1.2		-14.9	24	3592	18 29 02
18 34 48	---	22 22 03	43.8	156.9	-1.1		-13.8	346	3636	18 29 03
18 34 48	J2327+0940	22 22 03	44.6	156.8	-1.1		-13.9	-16	3636	No stop
18 35 48	---	22 23 04	44.7	157.1	-1.1		-13.7	44	3644	18 34 49
18 36 28	NGC7674	22 23 44	43.9	157.5	-1.1		-13.5	24	3644	18 36 28
18 42 14	---	22 29 31	44.2	159.4	-1.0		-12.3	346	3688	18 36 29
18 42 14	J2327+0940	22 29 31	45.1	159.3	-1.0		-12.5	-16	3688	No stop
18 43 14	---	22 30 31	45.1	159.6	-1.0		-12.3	44	3696	18 42 15
18 43 54	NGC7674	22 31 11	44.3	160.0	-1.0		-12.0	24	3696	18 43 54
18 49 40	---	22 36 58	44.5	161.9	-0.9		-10.9	346	3740	18 43 55
18 49 40	J2327+0940	22 36 58	45.4	161.8	-0.9		-11.0	-16	3740	No stop
18 50 40	---	22 37 58	45.5	162.2	-0.8		-10.8	44	3748	18 49 41
18 51 20	NGC7674	22 38 38	44.6	162.5	-0.8		-10.5	24	3748	18 51 20
18 57 06	---	22 44 25	44.9	164.5	-0.7		-9.4	346	3792	18 51 21
18 57 06	J2327+0940	22 44 25	45.8	164.4	-0.7		-9.4	-16	3792	No stop
18 58 06	---	22 45 25	45.8	164.8	-0.7		-9.2	44	3800	18 57 07
18 58 46	NGC7674	22 46 05	44.9	165.1	-0.7		-9.0	24	3800	18 58 46
19 04 32	---	22 51 52	45.1	167.1	-0.6		-7.8	346	3844	18 58 47

Schedule for TORUN (Code Tr)

Page 11

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
19 04 32	J2327+0940	22 51 52	46.0	167.0	-0.6		-7.9	-16	3844	No stop
19 05 32	---	22 52 52	46.1	167.4	-0.6		-7.7	44	3852	19 04 33
19 06 12	NGC7674	22 53 33	45.2	167.6	-0.6		-7.5	24	3852	19 06 12
19 11 58	---	22 59 19	45.4	169.7	-0.5		-6.3	346	3896	19 06 13
19 11 58	J2327+0940	22 59 19	46.3	169.6	-0.5		-6.3	-16	3896	No stop
19 12 58	---	23 00 20	46.3	170.0	-0.5		-6.1	44	3904	19 11 59
19 13 38	NGC7674	23 01 00	45.4	170.2	-0.5		-5.9	24	3904	19 13 38
19 19 24	---	23 06 47	45.5	172.3	-0.4		-4.7	346	3948	19 13 39
19 19 24	J2327+0940	23 06 47	46.4	172.3	-0.4		-4.7	-16	3948	No stop
19 20 24	---	23 07 47	46.5	172.7	-0.3		-4.5	44	3956	19 19 25
19 21 04	NGC7674	23 08 27	45.6	172.9	-0.3		-4.3	24	3956	19 21 04
19 26 50	---	23 14 14	45.7	174.9	-0.2		-3.1	346	4000	19 21 05
19 26 50	J2327+0940	23 14 14	46.6	175.0	-0.2		-3.1	-16	4000	No stop
19 27 50	---	23 15 14	46.6	175.3	-0.2		-2.8	44	4008	19 26 51
19 28 30	NGC7674	23 15 54	45.7	175.5	-0.2		-2.7	24	4008	19 28 30
19 34 16	---	23 21 41	45.7	177.5	-0.1		-1.5	346	4052	19 28 31
19 34 16	J2327+0940	23 21 41	46.6	177.6	-0.1		-1.4	-16	4052	No stop
19 35 16	---	23 22 41	46.6	178.0	-0.1		-1.2	44	4060	19 34 17
19 35 56	NGC7674	23 23 21	45.8	178.1	-0.1		-1.1	24	4060	19 35 56
19 41 42	---	23 29 08	45.8	180.2	0.0		0.1	346	4104	19 35 57
19 41 42	J2327+0940	23 29 08	46.7	180.3	0.0		0.2	-16	4104	No stop
19 42 42	---	23 30 09	46.7	180.7	0.0		0.4	44	4112	19 41 43
19 43 22	NGC7674	23 30 49	45.8	180.8	0.0		0.5	24	4112	19 43 22
19 49 08	---	23 36 36	45.7	182.8	0.1		1.7	346	4156	19 43 23
19 49 08	J2327+0940	23 36 36	46.6	183.0	0.1		1.8	-16	4156	No stop
19 50 08	---	23 37 36	46.6	183.3	0.2		2.0	44	4164	19 49 09
19 50 48	NGC7674	23 38 16	45.7	183.4	0.2		2.1	24	4164	19 50 48
19 56 34	---	23 44 03	45.7	185.4	0.3		3.3	346	4208	19 50 49
19 56 34	J2327+0940	23 44 03	46.5	185.6	0.3		3.4	-16	4208	No stop
19 57 34	---	23 45 03	46.5	186.0	0.3		3.7	44	4216	19 56 35
19 58 14	NGC7674	23 45 43	45.6	186.0	0.3		3.7	24	4216	19 58 14
20 04 00	---	23 51 30	45.5	188.1	0.4		4.9	346	4260	19 58 15

Schedule for TORUN (Code Tr)

Page 12

LIRGI - Source group 1 - Run d

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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 29 Oct 2013 Day 302 ---										
20 04 00	J2327+0940	23 51 30	46.4	188.3	0.4		5.1	-16	4260	No stop
20 05 00	---	23 52 30	46.4	188.7	0.4		5.3	44	4268	20 04 01
20 05 40	NGC7674	23 53 10	45.5	188.6	0.4		5.2	24	4268	20 05 40
20 11 26	---	23 58 57	45.3	190.7	0.5		6.5	346	4312	20 05 41
20 11 26	J2327+0940	23 58 57	46.2	191.0	0.5		6.6	-16	4312	No stop
20 12 26	---	23 59 57	46.2	191.3	0.5		6.9	44	4319	20 11 27
20 12 26	J0152+2207	23 59 57	52.3	134.1	-1.9		-27.8	-128	4319	No stop
20 15 56	---	00 03 28	52.7	135.3	-1.8		-27.1	82	4346	20 12 27
20 16 36	NGC0695	00 04 08	53.3	135.5	-1.8		-27.1	27	4346	20 16 36
20 22 22	---	00 09 55	53.9	137.5	-1.7		-26.1	346	4391	20 16 37
20 22 22	J0152+2207	00 09 55	53.4	137.5	-1.7		-26.0	-13	4391	No stop
20 23 22	---	00 10 55	53.5	137.9	-1.7		-25.8	47	4398	20 22 23
20 24 02	NGC0695	00 11 35	54.1	138.1	-1.7		-25.7	27	4398	20 24 02
20 29 48	---	00 17 22	54.6	140.2	-1.6		-24.6	346	4443	20 24 03
20 29 48	J0152+2207	00 17 22	54.1	140.1	-1.6		-24.6	-13	4443	No stop
20 30 48	---	00 18 22	54.2	140.5	-1.6		-24.4	47	4450	20 29 49
20 31 28	NGC0695	00 19 03	54.8	140.8	-1.6		-24.3	27	4450	20 31 28
20 37 14	---	00 24 50	55.3	142.9	-1.5		-23.1	346	4495	20 31 29
20 37 14	J0152+2207	00 24 50	54.8	142.9	-1.5		-23.0	-13	4495	No stop
20 38 14	---	00 25 50	54.9	143.2	-1.5		-22.8	47	4502	20 37 15
20 38 54	NGC0695	00 26 30	55.5	143.6	-1.4		-22.7	27	4502	20 38 54
20 44 40	---	00 32 17	56.0	145.8	-1.3		-21.5	346	4547	20 38 55
20 44 40	J0152+2207	00 32 17	55.5	145.7	-1.3		-21.5	-13	4547	No stop
20 45 40	---	00 33 17	55.5	146.0	-1.3		-21.2	47	4554	20 44 41
20 46 20	NGC0695	00 33 57	56.1	146.4	-1.3		-21.1	27	4554	20 46 20
20 52 06	---	00 39 44	56.6	148.7	-1.2		-19.8	346	4599	20 46 21
20 52 06	J0152+2207	00 39 44	56.1	148.5	-1.2		-19.8	-13	4599	No stop
20 53 06	---	00 40 44	56.2	148.9	-1.2		-19.6	47	4606	20 52 07
20 53 46	NGC0695	00 41 24	56.7	149.3	-1.2		-19.4	27	4606	20 53 46
20 59 32	---	00 47 11	57.1	151.6	-1.1		-18.0	346	4651	20 53 47
20 59 32	J0152+2207	00 47 11	56.6	151.5	-1.1		-18.0	-13	4651	No stop
21 00 32	---	00 48 11	56.7	151.9	-1.1		-17.8	47	4658	20 59 33

Schedule for TORUN (Code Tr)

Page 13

LIRGI - Source group 1 - Run d

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 29 Oct 2013 Day 302 ---										
21 01 12	NGC0695	00 48 51	57.3	152.3	-1.1		-17.6	27	4658	21 01 12
21 06 58	---	00 54 38	57.7	154.7	-1.0		-16.2	346	4702	21 01 13
21 06 58	J0152+2207	00 54 38	57.1	154.5	-1.0		-16.2	-13	4702	No stop
21 07 58	---	00 55 39	57.2	154.9	-1.0		-16.0	47	4710	21 06 59
21 08 38	NGC0695	00 56 19	57.8	155.4	-0.9		-15.7	27	4710	21 08 38
21 14 24	---	01 02 06	58.1	157.8	-0.8		-14.2	346	4754	21 08 39
21 14 24	J0152+2207	01 02 06	57.6	157.6	-0.9		-14.3	-13	4754	No stop
21 15 24	---	01 03 06	57.7	158.0	-0.8		-14.1	47	4762	21 14 25
21 16 04	NGC0695	01 03 46	58.2	158.5	-0.8		-13.8	27	4762	21 16 04
21 21 50	---	01 09 33	58.5	161.0	-0.7		-12.2	346	4806	21 16 05
21 21 50	J0152+2207	01 09 33	58.0	160.7	-0.7		-12.4	-13	4806	No stop
21 22 50	---	01 10 33	58.0	161.2	-0.7		-12.1	47	4814	21 21 51
21 23 30	NGC0695	01 11 13	58.6	161.7	-0.7		-11.8	27	4814	21 23 30
21 29 16	---	01 17 00	58.8	164.2	-0.6		-10.2	346	4858	21 23 31
21 29 16	J0152+2207	01 17 00	58.3	163.9	-0.6		-10.3	-13	4858	No stop
21 30 16	---	01 18 00	58.4	164.4	-0.6		-10.1	47	4866	21 29 17
21 30 56	NGC0695	01 18 40	58.9	165.0	-0.6		-9.7	27	4866	21 30 56
21 36 42	---	01 24 27	59.1	167.5	-0.5		-8.1	346	4910	21 30 57
21 36 42	J0152+2207	01 24 27	58.6	167.2	-0.5		-8.3	-13	4910	No stop
21 37 42	---	01 25 27	58.6	167.6	-0.5		-8.0	47	4918	21 36 43
21 38 22	NGC0695	01 26 08	59.2	168.3	-0.4		-7.6	27	4918	21 38 22
21 44 08	---	01 31 54	59.3	170.9	-0.3		-5.9	346	4962	21 38 23
21 44 08	J0152+2207	01 31 54	58.8	170.5	-0.4		-6.2	-13	4962	No stop
21 45 08	---	01 32 55	58.9	170.9	-0.3		-5.9	47	4970	21 44 09
21 45 48	NGC0695	01 33 35	59.4	171.6	-0.3		-5.4	27	4970	21 45 48
21 51 34	---	01 39 22	59.5	174.2	-0.2		-3.7	346	5014	21 45 49
21 51 34	J0152+2207	01 39 22	59.0	173.8	-0.2		-4.0	-13	5014	No stop
21 52 34	---	01 40 22	59.0	174.3	-0.2		-3.7	47	5022	21 51 35
21 53 14	NGC0695	01 41 02	59.5	175.0	-0.2		-3.3	27	5022	21 53 14
21 59 00	---	01 46 49	59.5	177.6	-0.1		-1.5	346	5066	21 53 15
21 59 00	J0152+2207	01 46 49	59.1	177.2	-0.1		-1.8	-13	5066	No stop
22 00 00	---	01 47 49	59.1	177.6	-0.1		-1.5	47	5074	21 59 01

SETUP FILE INFORMATION:

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

=====
Setup file: sess313.L1024

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

tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 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
IF SB =	L	L	L	L	L	L	L	L	L
	L	L	L	L	L	L	L	L	L
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
	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 = 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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* NGC0695	01 48 27.865737	* 01 51 14.360000	01 52 02.658974	0.00
	22 20 04.49740	* 22 34 53.60000	22 39 05.98854	0.00
* J0152+2207	01 49 31.744135	* 01 52 18.059046	01 53 06.298683	0.00
	21 52 20.74791	* 22 07 07.69979	22 11 19.40603	0.00
* VV250A	13 13 41.827997	* 13 15 34.960000	13 16 03.116174	0.00
	62 23 17.94084	* 62 07 28.80000	62 03 02.57300	0.00
* J1302+5748	13 00 47.131441	* 13 02 52.465277	13 03 24.513352	0.00
	58 04 43.18811	* 57 48 37.60932	57 44 06.20799	0.00
* VV705	15 16 19.300379	* 15 18 06.120000	15 18 34.017725	0.00
	42 55 38.34595	* 42 44 45.10000	42 41 55.61809	0.00
* J1521+4336	15 20 04.906466	* 15 21 49.613879	15 22 16.898679	0.00
	43 47 20.02030	* 43 36 39.26817	43 33 53.53960	0.00
* IRASF17132	17 13 13.492841	* 17 14 19.790000	17 14 36.566598	0.00
	53 13 49.22408	* 53 10 28.60000	53 09 53.97251	0.00
* J1740+5211	17 39 29.003552	* 17 40 36.977849	17 40 54.489988	0.00
	52 13 10.43849	* 52 11 43.40743	52 11 42.03692	0.00
* NGC6670B	18 32 54.385680	* 18 33 34.300000	18 33 44.229329	0.00
	59 50 53.33524	* 59 53 18.20000	59 54 24.10549	0.00
* J1824+5651	18 23 14.951499	* 18 24 07.068377	18 24 20.414929	0.00
	56 49 18.07202	* 56 51 01.49083	56 51 55.44885	0.00
* NGC7674	23 25 24.417983	* 23 27 56.720000	23 28 40.378309	0.00
	08 30 12.56310	* 08 46 44.10000	08 51 31.90400	0.00
* J2327+0940	23 25 01.451380	* 23 27 33.580562	23 28 17.200430	0.00
	09 23 38.17562	* 09 40 09.46273	09 44 57.42042	0.00
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.593066	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 47 22.91680	0.52

EFFECT OF SOLAR CORONA

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)
NGC0695	169.3	J1740+5211	79.2
J0152+2207	169.8	NGC6670B	89.6
VV250A	76.6	J1824+5651	87.0
J1302+5748	73.0	NGC7674	138.7
VV705	58.1	J2327+0940	138.7
J1521+4336	59.2	3C345	63.4
IRASF17132	76.9		

rk01httr

RADIOASTRON AGN SURVEY

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN Survey

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 30 Oct 2013 Day 303 ---

Next scan frequencies: 4836.00 4836.00 4836.00 4836.00
Next BBC frequencies: 636.00 636.00 636.00 636.00
Next scan bandwidths: 16.00 16.00 16.00 16.00

Table with 12 columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Dwell, GBytes, SYNC. It lists observation times and parameters for source 0106+013.

SETUP FILE INFORMATION:

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

==== Setup file: ra6cm2.set
Matching groups in ./freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

Setup group: 1 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=  4200.00  4200.00  4200.00  4200.00
Net SB=      L      L      U      U
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      2      1      2
BBC SB=      L      L      U      U
IF    =      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=  4836.00  4836.00  4836.00  4836.00
BBC fr=   636.00  636.00  636.00  636.00
Bandwd=   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  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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
J0108+0135	01 06 04.517940	* 01 08 38.771109	01 09 23.232429	0.32
* 0106+013	01 19 01.13991	* 01 35 00.31729	01 39 33.10312	0.37

EFFECT OF SOLAR CORONA

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)
0106+013    159.2

```

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		

THE AGN IN H-BOOTES2, EVN+EMERLIN

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Observing mode: 1024 Mbps

Notes: 18 cm, dual pol.

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 30 Oct 2013 Day 303 ---										
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										
05 30 00	J1159+2914	09 19 03	52.2	113.0	-2.7		-39.3	0	0	05 30 00
05 34 50	=1156+295	09 23 54	52.8	114.4	-2.6		-38.8	290	37	05 30 01
05 37 20	J1426+3625	09 26 24	36.7	76.2	-5.0		-46.4	58	37	05 37 20
05 38 20	=1424+366	09 27 24	36.8	76.4	-5.0		-46.4	60	45	05 37 21
05 38 20	HBOOTES2	09 27 24	35.5	77.4	-5.0		-45.6	-18	45	No stop
05 41 50	---	09 30 55	36.1	78.0	-5.0		-45.7	192	72	05 38 21
05 41 50	J1426+3625	09 30 55	37.4	77.0	-4.9		-46.6	-18	72	No stop
05 43 10	=1424+366	09 32 15	37.6	77.2	-4.9		-46.6	62	82	05 41 51
05 43 10	HBOOTES2	09 32 15	36.3	78.2	-4.9		-45.8	-18	82	No stop
05 46 40	---	09 35 46	36.8	78.9	-4.9		-45.9	192	109	05 43 11
05 47 20	J1426+3625	09 36 26	38.2	77.9	-4.8		-46.8	22	109	05 47 20
05 48 20	=1424+366	09 37 26	38.3	78.1	-4.8		-46.9	60	116	05 47 21
05 48 20	HBOOTES2	09 37 26	37.0	79.2	-4.9		-46.0	-18	116	No stop
05 51 50	---	09 40 57	37.5	79.8	-4.8		-46.1	192	143	05 48 21
05 51 50	J1426+3625	09 40 57	38.8	78.7	-4.8		-47.0	-18	143	No stop
05 53 10	=1424+366	09 42 17	39.0	79.0	-4.7		-47.0	62	154	05 51 51
05 53 10	HBOOTES2	09 42 17	37.7	80.0	-4.8		-46.1	-18	154	No stop
05 56 40	---	09 45 47	38.3	80.7	-4.7		-46.2	192	180	05 53 11
05 57 20	J1426+3625	09 46 28	39.6	79.7	-4.7		-47.2	22	180	05 57 20
05 58 20	=1424+366	09 47 28	39.8	79.9	-4.7		-47.2	60	188	05 57 21

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 30 Oct 2013 Day 303 ---										
05 58 20	HBOOTES2	09 47 28	38.5	81.0	-4.7		-46.3	-18	188	No stop
06 01 50	---	09 50 58	39.0	81.6	-4.6		-46.4	192	215	05 58 21
06 01 50	J1426+3625	09 50 58	40.3	80.5	-4.6		-47.3	-18	215	No stop
06 03 10	=1424+366	09 52 18	40.5	80.7	-4.6		-47.4	62	225	06 01 51
06 03 10	HBOOTES2	09 52 18	39.2	81.8	-4.6		-46.4	-18	225	No stop
06 06 40	---	09 55 49	39.7	82.5	-4.6		-46.5	192	252	06 03 11
06 07 20	J1426+3625	09 56 29	41.1	81.5	-4.5		-47.5	22	252	06 07 20
06 08 20	=1424+366	09 57 29	41.3	81.7	-4.5		-47.5	60	260	06 07 21
06 08 20	HBOOTES2	09 57 29	40.0	82.8	-4.5		-46.6	-18	260	No stop
06 11 50	---	10 01 00	40.5	83.4	-4.5		-46.6	192	287	06 08 21
06 11 50	J1426+3625	10 01 00	41.8	82.3	-4.4		-47.6	-18	287	No stop
06 13 10	=1424+366	10 02 20	42.0	82.6	-4.4		-47.7	62	297	06 11 51
06 13 10	HBOOTES2	10 02 20	40.7	83.7	-4.4		-46.7	-18	297	No stop
06 16 40	---	10 05 51	41.2	84.3	-4.4		-46.7	192	324	06 13 11
06 17 20	J1426+3625	10 06 31	42.6	83.3	-4.3		-47.8	22	324	06 17 20
06 18 20	=1424+366	10 07 31	42.8	83.5	-4.3		-47.8	60	332	06 17 21
06 18 20	HBOOTES2	10 07 31	41.5	84.6	-4.4		-46.8	-18	332	No stop
06 21 50	---	10 11 02	42.0	85.3	-4.3		-46.8	192	358	06 18 21
06 21 50	J1426+3625	10 11 02	43.3	84.2	-4.3		-47.9	-18	358	No stop
06 23 10	=1424+366	10 12 22	43.5	84.4	-4.2		-47.9	62	369	06 21 51
06 23 10	HBOOTES2	10 12 22	42.2	85.6	-4.3		-46.9	-18	369	No stop
06 26 40	---	10 15 52	42.7	86.2	-4.2		-46.9	192	396	06 23 11
06 27 20	J1426+3625	10 16 32	44.1	85.2	-4.2		-48.0	22	396	06 27 20
06 28 20	=1424+366	10 17 33	44.3	85.4	-4.2		-48.0	60	403	06 27 21
06 28 20	HBOOTES2	10 17 33	43.0	86.5	-4.2		-46.9	-18	403	No stop
06 31 50	---	10 21 03	43.5	87.2	-4.1		-47.0	192	430	06 28 21
06 31 50	J1426+3625	10 21 03	44.8	86.0	-4.1		-48.1	-18	430	No stop
06 33 10	=1424+366	10 22 23	45.0	86.3	-4.1		-48.1	62	440	06 31 51
06 36 10	J1159+2914	10 25 24	60.4	134.6	-1.6		-29.3	69	440	06 36 10
06 41 10	=1156+295	10 30 25	61.0	136.6	-1.5		-28.2	300	479	06 36 11
06 44 00	J1426+3625	10 33 15	46.6	88.4	-3.9		-48.2	58	479	06 44 00
06 45 00	=1424+366	10 34 15	46.8	88.6	-3.9		-48.2	60	486	06 44 01

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 30 Oct 2013 Day 303 ---										
06 45 00	HBOOTES2	10 34 15	45.5	89.8	-3.9		-47.0	-18	486	No stop
06 48 10	---	10 37 26	46.0	90.4	-3.9		-47.0	172	511	06 45 01
06 48 10	J1426+3625	10 37 26	47.3	89.2	-3.8		-48.2	-18	511	No stop
06 49 30	=1424+366	10 38 46	47.5	89.5	-3.8		-48.2	62	521	06 48 11
06 49 30	HBOOTES2	10 38 46	46.2	90.7	-3.8		-47.0	-18	521	No stop
06 53 00	---	10 42 17	46.7	91.4	-3.8		-47.0	192	548	06 49 31
06 53 40	J1426+3625	10 42 57	48.1	90.3	-3.7		-48.2	22	548	06 53 40
06 54 40	=1424+366	10 43 57	48.2	90.5	-3.7		-48.2	60	556	06 53 41
06 54 40	HBOOTES2	10 43 57	47.0	91.8	-3.8		-47.0	-18	556	No stop
06 58 10	---	10 47 28	47.5	92.5	-3.7		-47.0	192	582	06 54 41
06 58 10	J1426+3625	10 47 28	48.8	91.2	-3.7		-48.2	-18	582	No stop
06 59 30	=1424+366	10 48 48	49.0	91.5	-3.6		-48.2	62	593	06 58 11
06 59 30	HBOOTES2	10 48 48	47.7	92.8	-3.7		-47.0	-18	593	No stop
07 03 00	---	10 52 18	48.2	93.5	-3.6		-46.9	192	620	06 59 31
07 03 40	J1426+3625	10 52 58	49.6	92.4	-3.6		-48.2	22	620	07 03 40
07 04 40	=1424+366	10 53 59	49.7	92.6	-3.6		-48.2	60	627	07 03 41
07 04 40	HBOOTES2	10 53 59	48.5	93.9	-3.6		-46.9	-18	627	No stop
07 08 10	---	10 57 29	49.0	94.6	-3.5		-46.8	192	654	07 04 41
07 08 10	J1426+3625	10 57 29	50.3	93.3	-3.5		-48.1	-18	654	No stop
07 09 30	=1424+366	10 58 49	50.5	93.6	-3.5		-48.1	62	664	07 08 11
07 09 30	HBOOTES2	10 58 49	49.2	94.9	-3.5		-46.8	-18	664	No stop
07 13 00	---	11 02 20	49.7	95.6	-3.4		-46.7	192	691	07 09 31
07 13 40	J1426+3625	11 03 00	51.1	94.5	-3.4		-48.0	22	691	07 13 40
07 14 40	=1424+366	11 04 00	51.2	94.7	-3.4		-48.0	60	699	07 13 41
07 14 40	HBOOTES2	11 04 00	50.0	96.0	-3.4		-46.7	-18	699	No stop
07 18 10	---	11 07 31	50.5	96.8	-3.4		-46.6	192	726	07 14 41
07 18 10	J1426+3625	11 07 31	51.8	95.4	-3.3		-47.9	-18	726	No stop
07 19 30	=1424+366	11 08 51	52.0	95.7	-3.3		-47.9	62	736	07 18 11
07 19 30	HBOOTES2	11 08 51	50.7	97.1	-3.3		-46.6	-18	736	No stop
07 23 00	---	11 12 22	51.2	97.9	-3.3		-46.5	192	763	07 19 31
07 23 40	J1426+3625	11 13 02	52.6	96.7	-3.2		-47.8	22	763	07 23 40
07 24 40	=1424+366	11 14 02	52.7	96.9	-3.2		-47.8	60	771	07 23 41

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 30 Oct 2013 Day 303 ---										
07 24 40	HBOOTES2	11 14 02	51.5	98.2	-3.2		-46.4	-18	771	No stop
07 28 10	---	11 17 32	52.0	99.0	-3.2		-46.3	192	797	07 24 41
07 28 10	J1426+3625	11 17 32	53.3	97.7	-3.2		-47.6	-18	797	No stop
07 29 30	=1424+366	11 18 53	53.5	98.0	-3.1		-47.6	62	808	07 28 11
07 29 30	HBOOTES2	11 18 53	52.2	99.4	-3.2		-46.2	-18	808	No stop
07 33 00	---	11 22 23	52.7	100.2	-3.1		-46.1	192	835	07 29 31
07 33 40	J1426+3625	11 23 03	54.1	98.9	-3.1		-47.4	22	835	07 33 40
07 34 40	=1424+366	11 24 03	54.2	99.2	-3.1		-47.4	60	842	07 33 41
07 34 40	HBOOTES2	11 24 03	52.9	100.6	-3.1		-46.0	-18	842	No stop
07 38 10	---	11 27 34	53.5	101.4	-3.0		-45.8	192	869	07 34 41
07 38 10	J1426+3625	11 27 34	54.7	100.0	-3.0		-47.3	-18	869	No stop
07 39 30	=1424+366	11 28 54	54.9	100.3	-3.0		-47.2	62	879	07 38 11
07 39 30	HBOOTES2	11 28 54	53.7	101.7	-3.0		-45.8	-18	879	No stop
07 43 00	---	11 32 25	54.2	102.6	-2.9		-45.6	192	906	07 39 31
07 43 40	J1426+3625	11 33 05	55.6	101.3	-2.9		-47.0	22	906	07 43 40
07 44 40	=1424+366	11 34 05	55.7	101.6	-2.9		-46.9	60	914	07 43 41
07 44 40	HBOOTES2	11 34 05	54.4	103.0	-2.9		-45.5	-18	914	No stop
07 48 10	---	11 37 36	54.9	103.9	-2.9		-45.3	192	941	07 44 41
07 48 10	J1426+3625	11 37 36	56.2	102.4	-2.8		-46.7	-18	941	No stop
07 49 30	=1424+366	11 38 56	56.4	102.8	-2.8		-46.7	62	951	07 48 11
07 49 30	HBOOTES2	11 38 56	55.1	104.2	-2.8		-45.2	-18	951	No stop
07 53 00	---	11 42 27	55.6	105.1	-2.8		-45.0	192	978	07 49 31
07 53 40	J1426+3625	11 43 07	57.0	103.8	-2.7		-46.4	22	978	07 53 40
07 54 40	=1424+366	11 44 07	57.2	104.1	-2.7		-46.3	60	986	07 53 41
07 54 40	HBOOTES2	11 44 07	55.9	105.5	-2.7		-44.8	-18	986	No stop
07 58 10	---	11 47 37	56.4	106.4	-2.7		-44.6	192	1012	07 54 41
07 58 10	J1426+3625	11 47 37	57.7	105.0	-2.7		-46.1	-18	1012	No stop
07 59 30	=1424+366	11 48 58	57.9	105.3	-2.6		-46.0	62	1023	07 58 11
07 59 30	HBOOTES2	11 48 58	56.6	106.8	-2.7		-44.5	-18	1023	No stop
08 03 00	---	11 52 28	57.1	107.7	-2.6		-44.2	192	1050	07 59 31
08 03 40	J1426+3625	11 53 08	58.5	106.4	-2.6		-45.7	22	1050	08 03 40
08 04 40	=1424+366	11 54 08	58.6	106.7	-2.6		-45.6	60	1057	08 03 41

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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 30 Oct 2013 Day 303 ---										
08 04 40	HBOOTES2	11 54 08	57.3	108.2	-2.6		-44.1	-18	1057	No stop
08 08 10	---	11 57 39	57.8	109.2	-2.5		-43.7	192	1084	08 04 41
08 08 10	J1426+3625	11 57 39	59.1	107.7	-2.5		-45.3	-18	1084	No stop
08 09 30	=1424+366	11 58 59	59.3	108.0	-2.5		-45.2	62	1094	08 08 11
08 09 30	HBOOTES2	11 58 59	58.0	109.5	-2.5		-43.6	-18	1094	No stop
08 13 00	---	12 02 30	58.5	110.5	-2.4		-43.3	192	1121	08 09 31
08 13 40	J1426+3625	12 03 10	59.9	109.2	-2.4		-44.8	22	1121	08 13 40
08 14 40	=1424+366	12 04 10	60.1	109.5	-2.4		-44.7	60	1129	08 13 41
08 14 40	HBOOTES2	12 04 10	58.7	111.0	-2.4		-43.1	-18	1129	No stop
08 18 10	---	12 07 41	59.2	112.0	-2.4		-42.7	192	1156	08 14 41
08 18 10	J1426+3625	12 07 41	60.6	110.5	-2.3		-44.3	-18	1156	No stop
08 19 30	=1424+366	12 09 01	60.7	110.9	-2.3		-44.1	62	1166	08 18 11
08 19 30	HBOOTES2	12 09 01	59.4	112.4	-2.3		-42.6	-18	1166	No stop
08 23 00	---	12 12 31	59.9	113.5	-2.3		-42.2	192	1193	08 19 31
08 23 40	J1426+3625	12 13 12	61.3	112.2	-2.2		-43.7	21	1193	08 23 40
08 24 40	=1424+366	12 14 12	61.5	112.5	-2.2		-43.6	60	1201	08 23 41
08 24 40	HBOOTES2	12 14 12	60.1	114.0	-2.2		-42.0	-18	1201	No stop
08 28 10	---	12 17 42	60.6	115.1	-2.2		-41.5	192	1228	08 24 41
08 28 10	J1426+3625	12 17 42	61.9	113.6	-2.2		-43.1	-19	1228	No stop
08 29 30	=1424+366	12 19 03	62.1	114.0	-2.1		-42.9	61	1238	08 28 11
08 31 20	3C286	12 20 53	63.9	143.3	-1.2		-24.6	37	1238	08 31 20
08 36 20	---	12 25 54	64.4	145.6	-1.1		-23.2	300	1276	08 31 21
08 37 40	OQ208	12 27 14	59.2	133.3	-1.7		-29.8	40	1276	08 37 40
08 42 40	---	12 32 15	59.7	135.2	-1.6		-28.8	300	1315	08 37 41
08 44 10	J1426+3625	12 33 45	64.1	118.9	-1.9		-40.8	42	1315	08 44 10
08 45 10	=1424+366	12 34 45	64.2	119.2	-1.9		-40.6	60	1322	08 44 11
08 45 10	HBOOTES2	12 34 45	62.9	120.7	-1.9		-39.0	-18	1322	No stop
08 48 40	---	12 38 16	63.3	121.9	-1.8		-38.4	192	1349	08 45 11
08 48 40	J1426+3625	12 38 16	64.7	120.5	-1.8		-40.0	-19	1349	No stop
08 50 00	=1424+366	12 39 36	64.9	120.9	-1.8		-39.8	61	1359	08 48 41
08 50 00	HBOOTES2	12 39 36	63.5	122.4	-1.8		-38.2	-18	1359	No stop
08 53 30	---	12 43 06	63.9	123.7	-1.8		-37.5	192	1386	08 50 01

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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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
--- Wed 30 Oct 2013 Day 303 ---										
08 54 10	J1426+3625	12 43 47	65.4	122.5	-1.7		-39.0	21	1386	08 54 10
08 55 10	=1424+366	12 44 47	65.5	122.9	-1.7		-38.8	60	1394	08 54 11
08 55 10	HBOOTES2	12 44 47	64.1	124.3	-1.7		-37.2	-19	1394	No stop
08 58 40	---	12 48 17	64.6	125.7	-1.7		-36.5	191	1421	08 55 11
08 58 40	J1426+3625	12 48 17	66.0	124.2	-1.6		-38.1	-19	1421	No stop
09 00 00	=1424+366	12 49 38	66.1	124.7	-1.6		-37.8	61	1431	08 58 41
09 00 00	HBOOTES2	12 49 38	64.7	126.2	-1.7		-36.2	-19	1431	No stop
09 03 30	---	12 53 08	65.1	127.6	-1.6		-35.5	191	1458	09 00 01
09 04 10	J1426+3625	12 53 48	66.6	126.4	-1.6		-36.9	21	1458	09 04 10
09 05 10	=1424+366	12 54 48	66.8	126.8	-1.5		-36.7	60	1466	09 04 11
09 05 10	HBOOTES2	12 54 48	65.3	128.2	-1.6		-35.1	-19	1466	No stop
09 08 40	---	12 58 19	65.8	129.7	-1.5		-34.3	191	1492	09 05 11
09 08 40	J1426+3625	12 58 19	67.2	128.3	-1.5		-35.8	-19	1492	No stop
09 10 00	=1424+366	12 59 39	67.3	128.8	-1.5		-35.5	61	1503	09 08 41
09 10 00	HBOOTES2	12 59 39	65.9	130.2	-1.5		-34.0	-19	1503	No stop
09 13 30	---	13 03 10	66.3	131.7	-1.4		-33.1	191	1530	09 10 01
09 14 10	J1426+3625	13 03 50	67.8	130.6	-1.4		-34.5	21	1530	09 14 10
09 15 10	=1424+366	13 04 50	67.9	131.1	-1.4		-34.2	60	1537	09 14 11
09 15 10	HBOOTES2	13 04 50	66.5	132.4	-1.4		-32.7	-19	1537	No stop
09 18 40	---	13 08 21	66.9	133.9	-1.3		-31.8	191	1564	09 15 11
09 18 40	J1426+3625	13 08 21	68.3	132.7	-1.3		-33.3	-19	1564	No stop
09 20 00	=1424+366	13 09 41	68.5	133.3	-1.3		-32.9	61	1574	09 18 41
09 20 00	HBOOTES2	13 09 41	67.0	134.5	-1.3		-31.4	-19	1574	No stop
09 23 30	---	13 13 11	67.4	136.1	-1.3		-30.5	191	1601	09 20 01
09 24 10	J1426+3625	13 13 51	68.9	135.2	-1.2		-31.7	21	1601	09 24 10
09 25 10	=1424+366	13 14 52	69.0	135.7	-1.2		-31.4	60	1609	09 24 11
09 25 10	HBOOTES2	13 14 52	67.6	136.9	-1.2		-30.0	-19	1609	No stop
09 28 40	---	13 18 22	67.9	138.6	-1.2		-29.0	191	1636	09 25 11
09 28 40	J1426+3625	13 18 22	69.4	137.4	-1.1		-30.3	-19	1636	No stop
09 30 00	=1424+366	13 19 42	69.5	138.1	-1.1		-29.9	61	1646	09 28 41
09 30 00	HBOOTES2	13 19 42	68.0	139.2	-1.2		-28.6	-19	1646	No stop
09 33 30	---	13 23 13	68.4	140.9	-1.1		-27.5	191	1673	09 30 01

Schedule for TORUN (Code Tr)

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The AGN in H-Bootes2, EVN+eMERLIN

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Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 30 Oct 2013 Day 303 ---										
09 34 10	J1426+3625	13 23 53	69.9	140.2	-1.1		-28.5	21	1673	09 34 10
09 35 10	=1424+366	13 24 53	70.0	140.7	-1.0		-28.2	60	1681	09 34 11
09 35 10	HBOOTES2	13 24 53	68.5	141.8	-1.1		-26.9	-19	1681	No stop
09 38 40	---	13 28 24	68.9	143.5	-1.0		-25.8	191	1708	09 35 11
09 38 40	J1426+3625	13 28 24	70.4	142.6	-1.0		-26.9	-19	1708	No stop
09 40 00	=1424+366	13 29 44	70.5	143.3	-1.0		-26.5	61	1718	09 38 41
09 40 00	HBOOTES2	13 29 44	69.0	144.2	-1.0		-25.3	-19	1718	No stop
09 43 30	---	13 33 15	69.3	146.0	-0.9		-24.1	191	1745	09 40 01
09 44 10	J1426+3625	13 33 55	70.8	145.6	-0.9		-24.9	21	1745	09 44 10
09 45 10	=1424+366	13 34 55	70.9	146.1	-0.9		-24.5	60	1752	09 44 11
09 45 10	HBOOTES2	13 34 55	69.4	146.9	-0.9		-23.5	-19	1752	No stop
09 48 40	---	13 38 26	69.7	148.8	-0.8		-22.3	191	1779	09 45 11
09 48 40	J1426+3625	13 38 26	71.2	148.1	-0.8		-23.2	-19	1779	No stop
09 50 00	=1424+366	13 39 46	71.3	148.9	-0.8		-22.6	61	1789	09 48 41
09 50 00	HBOOTES2	13 39 46	69.8	149.6	-0.8		-21.8	-19	1789	No stop
09 53 30	---	13 43 16	70.1	151.5	-0.8		-20.4	191	1816	09 50 01
09 54 10	J1426+3625	13 43 56	71.6	151.4	-0.7		-20.9	21	1816	09 54 10
09 55 10	=1424+366	13 44 57	71.7	152.0	-0.7		-20.5	60	1824	09 54 11
09 55 10	HBOOTES2	13 44 57	70.2	152.5	-0.7		-19.8	-19	1824	No stop
09 58 40	---	13 48 27	70.4	154.5	-0.7		-18.4	191	1851	09 55 11
09 58 40	J1426+3625	13 48 27	71.9	154.1	-0.6		-19.0	-19	1851	No stop
10 00 00	=1424+366	13 49 47	72.0	154.9	-0.6		-18.4	61	1861	09 58 41
10 00 00	HBOOTES2	13 49 47	70.5	155.3	-0.7		-17.8	-19	1861	No stop
10 03 30	---	13 53 18	70.7	157.3	-0.6		-16.4	191	1888	10 00 01
10 04 10	J1426+3625	13 53 58	72.3	157.5	-0.6		-16.6	21	1888	10 04 10
10 05 10	=1424+366	13 54 58	72.3	158.2	-0.5		-16.1	60	1896	10 04 11
10 05 10	HBOOTES2	13 54 58	70.8	158.3	-0.6		-15.7	-19	1896	No stop
10 08 40	---	13 58 29	71.0	160.5	-0.5		-14.2	191	1923	10 05 11
10 08 40	J1426+3625	13 58 29	72.5	160.4	-0.5		-14.5	-19	1923	No stop
10 10 00	=1424+366	13 59 49	72.6	161.3	-0.5		-13.8	61	1933	10 08 41
10 10 00	HBOOTES2	13 59 49	71.1	161.3	-0.5		-13.6	-19	1933	No stop
10 13 30	---	14 03 20	71.2	163.5	-0.4		-12.0	191	1960	10 10 01

Schedule for TORUN (Code Tr) Page 9
 The AGN in H-Bootes2, EVN+eMERLIN

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 30 Oct 2013 Day 303 ---										
10 14 10	J1426+3625	14 04 00	72.8	164.1	-0.4		-11.8	21	1960	10 14 10
10 15 10	=1424+366	14 05 00	72.8	164.7	-0.4		-11.3	60	1967	10 14 11
10 15 10	HBOOTES2	14 05 00	71.3	164.5	-0.4		-11.3	-19	1967	No stop
10 18 40	---	14 08 30	71.4	166.7	-0.3		-9.7	191	1994	10 15 11
10 18 40	J1426+3625	14 08 30	72.9	167.1	-0.3		-9.6	-19	1994	No stop
10 20 00	=1424+366	14 09 51	73.0	168.0	-0.3		-8.9	61	2004	10 18 41
10 20 00	HBOOTES2	14 09 51	71.5	167.6	-0.3		-9.1	-19	2004	No stop
10 23 30	---	14 13 21	71.6	169.8	-0.3		-7.4	191	2031	10 20 01
10 24 10	J1426+3625	14 14 01	73.1	170.9	-0.2		-6.8	21	2031	10 24 10
10 25 10	=1424+366	14 15 02	73.1	171.6	-0.2		-6.3	60	2039	10 24 11
10 25 10	HBOOTES2	14 15 02	71.6	170.9	-0.2		-6.7	-19	2039	No stop
10 28 40	---	14 18 32	71.7	173.2	-0.2		-5.0	191	2066	10 25 11
10 28 40	J1426+3625	14 18 32	73.2	174.0	-0.1		-4.5	-19	2066	No stop
10 30 00	=1424+366	14 19 52	73.2	174.9	-0.1		-3.8	61	2076	10 28 41

SETUP FILE INFORMATION:

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

=====
 Setup file: sess313LG.setini

Matching groups in /opt/sched_11.0/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
IF SB =	L	L	L	L	L	L	L	L	L
	L	L	L	L	L	L	L	L	L
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 = 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

```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* HBOOTES2	14 26 19.788961	* 14 28 25.472000	14 28 58.818805	0.00
	35 09 08.88345	* 34 55 47.11000	34 52 12.38158	0.00
* J1159+2914	11 56 57.786211	* 11 59 31.833912	12 00 13.522955	0.11
1156+295	29 31 25.73868	* 29 14 43.82678	29 10 02.49986	0.10
J1331+3030	13 28 49.657778	* 13 31 08.288070	13 31 45.396158	0.20
* 3C286	30 45 58.64061	* 30 30 32.95925	30 26 19.59509	0.19
J1407+2827	14 04 45.615156	* 14 07 00.394414	14 07 36.455986	0.24
* OQ208	28 41 29.23519	* 28 27 14.69022	28 23 24.19004	0.34
* J1426+3625	14 24 32.676812	* 14 26 37.087493	14 27 10.030331	0.13
1424+366	36 38 36.02416	* 36 25 09.57347	36 21 33.25587	0.11

EFFECT OF SOLAR CORONA

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)
HBOOTES2	48.8	OQ208	42.3
J1159+2914	54.5	J1426+3625	50.3
3C286	45.7		

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:

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

L-BAND 21-CM FTP TEST F13L5

PI: *Ciriaco Goddi*

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COVER LETTER:

This is the schedule for the L-band 21-cm ftp fringe-test on 30 October 2013, involving 11 antennas: Eb Wb Jb1 On25 Mc Nt Tr Sv Zc Bd Ur.

The ftp test uses a standard setup and consists of long integrations on standard fringe finder calibrators: 3C345 (3.6 Jy at 1.6 GHz) and 2007+777 (0.7 Jy at 1.6 GHz).

Two ftp tests are scheduled:

~13:09 UT (scan 2, 2 sec, 3C345)
 ~13:47 UT (scan 6, 4 sec, 2007+777)

Please make sure that the autoftp is set up correctly.

See you on Skype group chat
 and
 Good luck with the session!

Ciriaco Goddi
 Support Scientist, JIVE
 Skype account: ciriaco.goddi

Schedule for TORUN (Code Tr) Page 2

L-band 21-cm Ftp test F13L5

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 30 Oct 2013 Day 303 ---

Next scan frequencies:	1380.00	1380.00	1380.00	1380.00	1380.00	1396.00	1396.00	1396.00	1396.00
	1412.00	1412.00	1412.00	1412.00	1412.00	1428.00	1428.00	1428.00	1428.00
Next BBC frequencies:	920.00	920.00	920.00	920.00	920.00	904.00	904.00	904.00	904.00
	888.00	888.00	888.00	888.00	888.00	872.00	872.00	872.00	872.00
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	3C345	16 50 17	76.6	185.7	0.1	4.5	0	0	13 00 00
13 04 00	---	16 54 18	76.6	189.0	0.2	7.0	240	15	13 00 01
13 06 00	3C345	16 56 18	76.5	190.7	0.2	8.3	111	15	13 06 00
13 10 00	---	17 00 19	76.4	193.9	0.3	10.8	240	31	13 06 01

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
13 12 00	3C345	17 02 19	76.3	195.5	0.3		12.1	112	31	13 12 00
13 20 00	---	17 10 20	75.9	201.7	0.4		16.8	480	62	13 12 01
13 22 00	3C345	17 12 21	75.8	203.2	0.5		18.0	112	62	13 22 00
13 30 00	---	17 20 22	75.3	209.0	0.6		22.3	480	93	13 22 01
13 40 00	2007+777	17 30 24	61.6	376.0	-2.6		-127.8	251	93	13 40 00
13 42 00	---	17 32 24	61.7	375.8	-2.5		-128.5	120	101	13 40 01
13 44 00	2007+777	17 34 24	61.8	375.7	-2.5		-129.1	114	101	13 44 00
13 48 00	---	17 38 25	62.0	375.4	-2.4		-130.3	240	116	13 44 01
13 50 00	2007+777	17 40 25	62.1	375.3	-2.4		-130.9	114	116	13 50 00
14 00 00	---	17 50 27	62.4	374.5	-2.2		-134.0	600	155	13 50 01

SETUP FILE INFORMATION:

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

==== Setup file: sess313.H512

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	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=	1380.00	1380.00	1380.00	1380.00	1396.00	1396.00	1396.00	1396.00
	1412.00	1412.00	1412.00	1412.00	1428.00	1428.00	1428.00	1428.00
BBC fr=	920.00	920.00	920.00	920.00	904.00	904.00	904.00	904.00
	888.00	888.00	888.00	888.00	872.00	872.00	872.00	872.00
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: 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 -- L-band 21-cm Ftp test F13L5

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)
J1642+3948	16 41 17.606228	* 16 42 58.809965	16 43 25.574179	0.77
* 3C345	39 54 10.81496	* 39 48 36.99402	39 47 22.64396	0.52
J2005+7752	20 07 20.430170	* 20 05 30.998498	20 04 59.620397	0.48
* 2007+777	77 43 58.12300	* 77 52 43.24753	77 55 35.53550	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)
3C345	63.3
2007+777	102.9

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

ea054tr

EA054 - NGC660 HI

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Schedule for TORUN (Code Tr) Page 2
 EA054 - NGC660 HI

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 30 Oct 2013 Day 303 ---										
Next scan frequencies: 1328.63 1328.63 1328.63 1328.63 1360.54 1360.54 1360.54 1360.54										
1392.45 1392.45 1392.45 1392.45 1424.36 1424.36 1424.36 1424.36										
Next BBC frequencies: 971.37 971.37 971.37 971.37 939.46 939.46 939.46 939.46										
907.55 907.55 907.55 907.55 875.64 875.64 875.64 875.64										
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										
15 30 00	3C84	19 20 42	17.8	42.9	-8.0		-33.1	0	0	15 30 00
15 45 00	---	19 35 44	19.4	45.3	-7.8		-34.8	900	115	15 30 01
15 46 30	J0143+1215	19 37 14	8.8	81.1	-6.1		-37.4	3	115	15 46 30
15 49 30	---	19 40 15	9.2	81.7	-6.1		-37.5	180	138	15 46 31
15 49 30	NGC660	19 40 15	10.4	81.0	-6.1		-37.6	-18	138	No stop
15 56 30	---	19 47 16	11.4	82.3	-5.9		-37.8	402	192	15 49 31
15 57 00	J0143+1215	19 47 46	10.4	83.2	-5.9		-37.6	13	192	15 57 00
16 00 00	---	19 50 47	10.8	83.8	-5.9		-37.7	180	215	15 57 01
16 00 00	NGC660	19 50 47	12.0	83.0	-5.9		-37.8	-18	215	No stop
16 07 00	---	19 57 48	13.0	84.4	-5.8		-38.0	402	269	16 00 01
16 07 30	J0143+1215	19 58 18	11.9	85.3	-5.8		-37.8	13	269	16 07 30
16 10 30	---	20 01 18	12.4	85.9	-5.7		-37.8	180	292	16 07 31
16 10 30	NGC660	20 01 18	13.5	85.1	-5.7		-38.0	-18	292	No stop
16 17 30	---	20 08 19	14.6	86.5	-5.6		-38.1	402	346	16 10 31
16 18 00	J0143+1215	20 08 49	13.5	87.4	-5.6		-37.9	13	346	16 18 00
16 21 00	---	20 11 50	14.0	88.0	-5.5		-37.9	180	369	16 18 01
16 21 00	NGC660	20 11 50	15.1	87.2	-5.5		-38.1	-18	369	No stop
16 28 00	---	20 18 51	16.2	88.6	-5.4		-38.2	402	422	16 21 01
16 28 30	J0143+1215	20 19 21	15.1	89.5	-5.4		-37.9	13	422	16 28 30
16 31 30	---	20 22 22	15.5	90.1	-5.4		-37.9	180	445	16 28 31

Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 30 Oct 2013 Day 303 ---										
16 31 30	NGC660	20 22 22	16.7	89.3	-5.4		-38.2	-18	445	No stop
16 38 30	---	20 29 23	17.7	90.7	-5.2		-38.2	402	499	16 31 31
16 39 00	J0143+1215	20 29 53	16.7	91.6	-5.2		-37.9	13	499	16 39 00
16 42 00	---	20 32 53	17.1	92.2	-5.2		-37.9	180	522	16 39 01
16 42 00	NGC660	20 32 53	18.3	91.4	-5.2		-38.2	-18	522	No stop
16 49 00	---	20 39 55	19.3	92.8	-5.1		-38.1	402	576	16 42 01
16 49 30	J0143+1215	20 40 25	18.2	93.7	-5.1		-37.8	13	576	16 49 30
16 52 30	---	20 43 25	18.7	94.3	-5.0		-37.8	180	599	16 49 31
16 52 30	NGC660	20 43 25	19.9	93.5	-5.0		-38.1	-18	599	No stop
16 59 30	---	20 50 26	20.9	94.9	-4.9		-38.0	402	653	16 52 31
17 00 00	J0143+1215	20 50 56	19.8	95.8	-4.9		-37.7	13	653	17 00 00
17 03 00	---	20 53 57	20.3	96.5	-4.8		-37.6	180	676	17 00 01
17 03 00	NGC660	20 53 57	21.4	95.6	-4.8		-38.0	-18	676	No stop
17 10 00	---	21 00 58	22.5	97.1	-4.7		-37.8	402	730	17 03 01
17 10 30	J0143+1215	21 01 28	21.4	98.0	-4.7		-37.5	13	730	17 10 30
17 13 30	---	21 04 29	21.8	98.6	-4.7		-37.4	180	753	17 10 31
17 13 30	NGC660	21 04 29	23.0	97.8	-4.7		-37.8	-18	753	No stop
17 20 30	---	21 11 30	24.0	99.3	-4.5		-37.6	402	806	17 13 31
17 21 00	J0143+1215	21 12 00	22.9	100.2	-4.5		-37.2	13	806	17 21 00
17 24 00	---	21 15 00	23.4	100.9	-4.5		-37.1	180	829	17 21 01
17 24 00	NGC660	21 15 00	24.6	100.0	-4.5		-37.5	-18	829	No stop
17 31 00	---	21 22 01	25.6	101.5	-4.4		-37.3	402	883	17 24 01
17 31 30	J0143+1215	21 22 32	24.5	102.5	-4.4		-36.9	13	883	17 31 30
17 34 30	---	21 25 32	24.9	103.1	-4.3		-36.8	180	906	17 31 31
17 34 30	NGC660	21 25 32	26.1	102.3	-4.3		-37.2	-18	906	No stop
17 41 30	---	21 32 33	27.1	103.8	-4.2		-36.9	402	960	17 34 31
17 42 00	J0143+1215	21 33 03	26.0	104.7	-4.2		-36.5	13	960	17 42 00
17 45 00	---	21 36 04	26.5	105.4	-4.1		-36.3	180	983	17 42 01
17 45 00	NGC660	21 36 04	27.6	104.6	-4.1		-36.7	-18	983	No stop
17 52 00	---	21 43 05	28.7	106.1	-4.0		-36.4	402	1037	17 45 01
17 52 30	J0143+1215	21 43 35	27.6	107.1	-4.0		-36.0	13	1037	17 52 30
17 55 30	---	21 46 35	28.0	107.7	-4.0		-35.8	180	1060	17 52 31

Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 30 Oct 2013 Day 303 ---										
17 55 30	NGC660	21 46 35	29.2	106.9	-4.0		-36.3	-18	1060	No stop
18 02 30	---	21 53 37	30.2	108.5	-3.8		-35.9	402	1114	17 55 31
18 03 00	J0143+1215	21 54 07	29.1	109.4	-3.8		-35.4	13	1114	18 03 00
18 06 00	---	21 57 07	29.5	110.1	-3.8		-35.2	180	1137	18 03 01
18 06 00	NGC660	21 57 07	30.7	109.3	-3.8		-35.7	-18	1137	No stop
18 13 00	---	22 04 08	31.7	110.9	-3.7		-35.3	402	1190	18 06 01
18 13 30	J0143+1215	22 04 38	30.5	111.9	-3.7		-34.8	13	1190	18 13 30
18 16 30	---	22 07 39	30.9	112.6	-3.6		-34.6	180	1213	18 13 31
18 16 30	NGC660	22 07 39	32.2	111.8	-3.6		-35.0	-18	1213	No stop
18 23 30	---	22 14 40	33.1	113.4	-3.5		-34.6	402	1267	18 16 31
18 24 00	J0143+1215	22 15 10	32.0	114.3	-3.5		-34.1	12	1267	18 24 00
18 27 00	---	22 18 11	32.4	115.1	-3.4		-33.8	180	1290	18 24 01
18 27 00	NGC660	22 18 11	33.6	114.3	-3.4		-34.3	-18	1290	No stop
18 34 00	---	22 25 12	34.6	116.0	-3.3		-33.8	402	1344	18 27 01
18 34 30	J0143+1215	22 25 42	33.4	116.9	-3.3		-33.2	12	1344	18 34 30
18 37 30	---	22 28 42	33.8	117.6	-3.3		-33.0	180	1367	18 34 31
18 37 30	NGC660	22 28 42	35.0	116.8	-3.3		-33.5	-18	1367	No stop
18 44 30	---	22 35 44	36.0	118.6	-3.1		-32.9	402	1421	18 37 31
18 45 00	J0143+1215	22 36 14	34.8	119.5	-3.1		-32.3	12	1421	18 45 00
18 48 00	---	22 39 14	35.2	120.3	-3.1		-32.1	180	1444	18 45 01
18 48 00	NGC660	22 39 14	36.4	119.5	-3.1		-32.6	-18	1444	No stop
18 55 00	---	22 46 15	37.3	121.3	-3.0		-31.9	402	1498	18 48 01
18 55 30	J0143+1215	22 46 45	36.2	122.2	-3.0		-31.3	12	1498	18 55 30
18 58 30	---	22 49 46	36.5	123.0	-2.9		-31.0	180	1521	18 55 31
18 58 30	NGC660	22 49 46	37.8	122.2	-2.9		-31.5	-18	1521	No stop
19 05 30	---	22 56 47	38.7	124.0	-2.8		-30.8	402	1574	18 58 31
19 06 00	J0143+1215	22 57 17	37.5	124.9	-2.8		-30.3	12	1574	19 06 00
19 09 00	---	23 00 18	37.8	125.7	-2.7		-29.9	180	1597	19 06 01
19 09 00	NGC660	23 00 18	39.1	125.0	-2.7		-30.4	-18	1597	No stop
19 16 00	---	23 07 19	40.0	126.9	-2.6		-29.6	402	1651	19 09 01
19 16 30	J0143+1215	23 07 49	38.8	127.8	-2.6		-29.1	12	1651	19 16 30
19 19 30	---	23 10 49	39.1	128.6	-2.6		-28.7	180	1674	19 16 31

Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 30 Oct 2013 Day 303 ---										
19 21 30	3C84	23 12 50	47.9	79.9	-4.1		-52.2	8	1674	19 21 30
19 31 30	---	23 22 51	49.3	81.7	-4.0		-52.6	600	1751	19 21 31
19 33 30	J0143+1215	23 24 52	40.7	132.6	-2.3		-26.9	3	1751	19 33 30
19 38 30	---	23 29 52	41.3	134.0	-2.2		-26.2	300	1789	19 33 31
19 38 30	NGC660	23 29 52	42.5	133.3	-2.2		-26.7	-18	1789	No stop
19 45 30	---	23 36 54	43.3	135.4	-2.1		-25.7	402	1843	19 38 31
19 46 00	J0143+1215	23 37 24	42.1	136.2	-2.1		-25.2	12	1843	19 46 00
19 49 00	---	23 40 24	42.4	137.1	-2.1		-24.7	180	1866	19 46 01
19 49 00	NGC660	23 40 24	43.7	136.5	-2.1		-25.2	-18	1866	No stop
19 56 00	---	23 47 25	44.4	138.6	-1.9		-24.1	402	1920	19 49 01
19 56 30	J0143+1215	23 47 55	43.1	139.4	-1.9		-23.6	12	1920	19 56 30
19 59 30	---	23 50 56	43.4	140.3	-1.9		-23.1	180	1943	19 56 31
19 59 30	NGC660	23 50 56	44.7	139.7	-1.9		-23.6	-18	1943	No stop
20 06 30	---	23 57 57	45.4	141.9	-1.8		-22.4	402	1997	19 59 31
20 07 00	J0143+1215	23 58 27	44.1	142.7	-1.8		-21.9	12	1997	20 07 00
20 10 00	---	00 01 28	44.4	143.6	-1.7		-21.4	180	2020	20 07 01
20 10 00	NGC660	00 01 28	45.7	143.1	-1.7		-21.8	-18	2020	No stop
20 17 00	---	00 08 29	46.3	145.4	-1.6		-20.6	402	2074	20 10 01
20 17 30	J0143+1215	00 08 59	45.0	146.1	-1.6		-20.1	12	2074	20 17 30
20 20 30	---	00 11 59	45.3	147.0	-1.5		-19.5	180	2097	20 17 31
20 20 30	NGC660	00 11 59	46.6	146.5	-1.5		-19.9	-18	2097	No stop
20 27 30	---	00 19 00	47.2	148.9	-1.4		-18.6	402	2150	20 20 31
20 28 00	J0143+1215	00 19 31	45.9	149.5	-1.4		-18.2	12	2150	20 28 00
20 31 00	---	00 22 31	46.1	150.5	-1.4		-17.6	180	2173	20 28 01
20 31 00	NGC660	00 22 31	47.4	150.1	-1.4		-18.0	-19	2173	No stop
20 38 00	---	00 29 32	48.0	152.5	-1.2		-16.6	401	2227	20 31 01
20 38 30	J0143+1215	00 30 02	46.6	153.1	-1.2		-16.2	12	2227	20 38 30
20 41 30	---	00 33 03	46.8	154.1	-1.2		-15.6	180	2250	20 38 31
20 41 30	NGC660	00 33 03	48.2	153.7	-1.2		-15.9	-19	2250	No stop
20 48 30	---	00 40 04	48.6	156.2	-1.1		-14.4	401	2304	20 41 31
20 49 00	J0143+1215	00 40 34	47.3	156.7	-1.1		-14.1	12	2304	20 49 00
20 52 00	---	00 43 34	47.5	157.8	-1.0		-13.5	180	2327	20 49 01

Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 30 Oct 2013 Day 303 ---										
20 52 00	NGC660	00 43 34	48.8	157.4	-1.0		-13.7	-19	2327	No stop
20 59 00	---	00 50 36	49.2	160.0	-0.9		-12.2	401	2381	20 52 01
20 59 30	J0143+1215	00 51 06	47.9	160.4	-0.9		-11.9	12	2381	20 59 30
21 02 30	---	00 54 06	48.0	161.5	-0.8		-11.2	180	2404	20 59 31
21 02 30	NGC660	00 54 06	49.4	161.3	-0.8		-11.5	-19	2404	No stop
21 09 30	---	01 01 07	49.7	163.8	-0.7		-9.9	401	2458	21 02 31
21 10 00	J0143+1215	01 01 37	48.4	164.2	-0.7		-9.6	11	2458	21 10 00
21 13 00	---	01 04 38	48.5	165.3	-0.7		-9.0	180	2481	21 10 01
21 13 00	NGC660	01 04 38	49.9	165.1	-0.7		-9.1	-19	2481	No stop
21 20 00	---	01 11 39	50.1	167.8	-0.5		-7.5	401	2534	21 13 01
21 20 30	J0143+1215	01 12 09	48.7	168.1	-0.5		-7.3	11	2534	21 20 30
21 23 30	---	01 15 10	48.8	169.2	-0.5		-6.6	180	2557	21 20 31
21 23 30	NGC660	01 15 10	50.2	169.1	-0.5		-6.7	-19	2557	No stop
21 30 30	---	01 22 11	50.4	171.7	-0.4		-5.1	401	2611	21 23 31
21 31 00	J0143+1215	01 22 41	49.0	171.9	-0.4		-4.9	11	2611	21 31 00
21 34 00	---	01 25 41	49.1	173.1	-0.3		-4.3	180	2634	21 31 01
21 34 00	NGC660	01 25 41	50.5	173.1	-0.3		-4.3	-19	2634	No stop
21 41 00	---	01 32 43	50.6	175.8	-0.2		-2.6	401	2688	21 34 01
21 41 30	J0143+1215	01 33 13	49.2	175.9	-0.2		-2.5	11	2688	21 41 30
21 44 30	---	01 36 13	49.2	177.0	-0.1		-1.9	180	2711	21 41 31
21 44 30	NGC660	01 36 13	50.6	177.1	-0.1		-1.8	-19	2711	No stop
21 51 30	---	01 43 14	50.6	179.8	0.0		-0.1	401	2765	21 44 31
21 52 00	J0143+1215	01 43 44	49.2	179.8	0.0		-0.1	11	2765	21 52 00
21 55 00	---	01 46 45	49.2	180.9	0.0		0.6	180	2788	21 52 01
21 55 00	NGC660	01 46 45	50.6	181.1	0.0		0.7	-19	2788	No stop
22 02 00	---	01 53 46	50.6	183.8	0.2		2.4	401	2842	21 55 01
22 02 30	J0143+1215	01 54 16	49.2	183.7	0.2		2.3	11	2842	22 02 30
22 05 30	---	01 57 17	49.2	184.9	0.2		3.0	180	2865	22 02 31
22 05 30	NGC660	01 57 17	50.5	185.1	0.2		3.2	-19	2865	No stop
22 12 30	---	02 04 18	50.4	187.8	0.3		4.8	401	2918	22 05 31

Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 30 Oct 2013 Day 303 ---										
22 13 00	J0143+1215	02 04 48	49.0	187.7	0.3		4.7	11	2918	22 13 00
22 16 00	---	02 07 48	49.0	188.8	0.4		5.4	180	2941	22 13 01
22 16 00	NGC660	02 07 48	50.3	189.2	0.4		5.6	-18	2941	No stop
22 23 00	---	02 14 49	50.1	191.8	0.5		7.3	402	2995	22 16 01
22 23 30	J0143+1215	02 15 20	48.8	191.5	0.5		7.1	12	2995	22 23 30
22 26 30	---	02 18 20	48.7	192.6	0.6		7.7	180	3018	22 23 31
22 26 30	NGC660	02 18 20	50.0	193.1	0.6		8.1	-18	3018	No stop
22 33 30	---	02 25 21	49.8	195.7	0.7		9.6	402	3072	22 26 31
22 34 00	J0143+1215	02 25 51	48.4	195.4	0.7		9.4	12	3072	22 34 00
22 37 00	---	02 28 52	48.3	196.5	0.7		10.0	180	3095	22 34 01
22 37 00	NGC660	02 28 52	49.6	197.0	0.8		10.4	-18	3095	No stop
22 44 00	---	02 35 53	49.3	199.6	0.9		12.0	402	3149	22 37 01
22 44 30	J0143+1215	02 36 23	47.9	199.2	0.9		11.7	12	3149	22 44 30
22 47 30	---	02 39 23	47.8	200.3	0.9		12.3	180	3172	22 44 31
22 47 30	NGC660	02 39 23	49.1	200.9	0.9		12.7	-18	3172	No stop
22 54 30	---	02 46 25	48.7	203.4	1.0		14.2	402	3226	22 47 31
22 55 00	J0143+1215	02 46 55	47.4	202.9	1.0		13.8	12	3226	22 55 00
22 58 00	---	02 49 55	47.2	204.0	1.1		14.5	180	3249	22 55 01
22 58 00	NGC660	02 49 55	48.5	204.6	1.1		14.9	-18	3249	No stop
23 05 00	---	02 56 56	48.0	207.1	1.2		16.4	402	3302	22 58 01
23 05 30	J0143+1215	02 57 26	46.7	206.6	1.2		15.9	12	3302	23 05 30
23 08 30	---	03 00 27	46.5	207.6	1.3		16.5	180	3325	23 05 31
23 11 10	3C120	03 03 07	38.8	150.5	-1.5		-17.3	30	3325	23 11 10
23 21 10	---	03 13 09	39.5	153.5	-1.3		-15.6	600	3402	23 11 11
23 23 10	J0143+1215	03 15 09	45.4	212.5	1.5		19.3	-13	3402	23 23 10
23 26 10	---	03 18 10	45.1	213.5	1.6		19.8	167	3425	23 23 11
23 26 10	NGC660	03 18 10	46.4	214.3	1.6		20.4	-18	3425	No stop
23 33 10	---	03 25 11	45.8	216.6	1.7		21.6	402	3479	23 26 11
23 33 40	J0143+1215	03 25 41	44.5	215.9	1.7		21.1	12	3479	23 33 40
23 36 40	---	03 28 42	44.2	216.9	1.7		21.6	180	3502	23 33 41

Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 30 Oct 2013  Day 303 ---

23 36 40  NGC660          03 28 42  45.5 217.7  1.7      22.2  -18   3502  No stop
23 43 40  ---                03 35 43  44.8 220.0  1.9      23.4  402   3556  23 36 41

23 44 10  J0143+1215        03 36 13  43.5 219.2  1.9      22.9   12   3556  23 44 10
23 47 10  ---                03 39 13  43.3 220.1  1.9      23.3  180   3579  23 44 11

23 47 10  NGC660          03 39 13  44.5 221.1  1.9      24.0  -18   3579  No stop
23 54 10  ---                03 46 14  43.8 223.2  2.0      25.0  402   3633  23 47 11

23 54 40  J0143+1215        03 46 44  42.5 222.4  2.0      24.5   12   3633  23 54 40
23 57 40  ---                03 49 45  42.2 223.3  2.1      25.0  180   3656  23 54 41

--- Start: Wed 30 Oct 2013  Day 303 -- Stop: Thu 31 Oct 2013  Day 304 ---

23 57 40  NGC660          03 49 45  43.4 224.3  2.1      25.6  -18   3656  No stop
00 04 40  ---                03 56 46  42.7 226.4  2.2      26.6  402   3709  23 57 41

00 05 10  J0143+1215        03 57 16  41.4 225.6  2.2      26.0   12   3709  00 05 10
00 08 10  ---                04 00 17  41.1 226.4  2.3      26.5  180   3732  00 05 11

00 08 10  NGC660          04 00 17  42.3 227.4  2.3      27.1  -17   3732  No stop
00 15 10  ---                04 07 18  41.5 229.4  2.4      28.0  403   3786  00 08 11

00 15 40  J0143+1215        04 07 48  40.3 228.6  2.4      27.5   12   3786  00 15 40
00 18 40  ---                04 10 48  39.9 229.5  2.4      27.8  180   3809  00 15 41

00 18 40  NGC660          04 10 48  41.1 230.4  2.4      28.5  -17   3809  No stop
00 25 40  ---                04 17 50  40.3 232.4  2.6      29.3  403   3863  00 18 41

00 26 10  J0143+1215        04 18 20  39.0 231.5  2.6      28.8   12   3863  00 26 10
00 29 10  ---                04 21 20  38.7 232.4  2.6      29.1  180   3886  00 26 11

00 29 10  NGC660          04 21 20  39.8 233.4  2.6      29.7  -17   3886  No stop
00 36 10  ---                04 28 21  39.0 235.3  2.7      30.5  403   3940  00 29 11

00 36 40  J0143+1215        04 28 51  37.8 234.4  2.7      30.0   13   3940  00 36 40
00 39 40  ---                04 31 52  37.4 235.2  2.8      30.3  180   3963  00 36 41

00 39 40  NGC660          04 31 52  38.5 236.2  2.8      30.9  -17   3963  No stop
00 46 40  ---                04 38 53  37.7 238.1  2.9      31.6  403   4017  00 39 41

00 47 10  J0143+1215        04 39 23  36.5 237.2  2.9      31.1   13   4017  00 47 10
00 50 10  ---                04 42 24  36.1 238.0  3.0      31.4  180   4040  00 47 11

```


Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 31 Oct 2013 Day 304 ---										
00 50 10	NGC660	04 42 24	37.2	239.0	3.0		32.0	-17	4040	No stop
00 57 10	---	04 49 25	36.3	240.8	3.1		32.7	403	4093	00 50 11
00 57 40	J0143+1215	04 49 55	35.1	239.9	3.1		32.1	13	4093	00 57 40
01 00 40	---	04 52 55	34.7	240.6	3.1		32.4	180	4116	00 57 41
01 00 40	NGC660	04 52 55	35.8	241.7	3.2		33.0	-17	4116	No stop
01 07 40	---	04 59 56	34.9	243.4	3.3		33.6	403	4170	01 00 41
01 08 10	J0143+1215	05 00 27	33.7	242.5	3.3		33.0	13	4170	01 08 10
01 11 10	---	05 03 27	33.3	243.2	3.3		33.3	180	4193	01 08 11
01 11 10	NGC660	05 03 27	34.4	244.3	3.3		33.8	-17	4193	No stop
01 18 10	---	05 10 28	33.5	246.0	3.4		34.4	403	4247	01 11 11
01 18 40	J0143+1215	05 10 58	32.3	245.1	3.4		33.9	13	4247	01 18 40
01 21 40	---	05 13 59	31.9	245.8	3.5		34.1	180	4270	01 18 41
01 21 40	NGC660	05 13 59	33.0	246.8	3.5		34.6	-17	4270	No stop
01 28 40	---	05 21 00	32.0	248.5	3.6		35.1	403	4324	01 21 41
01 29 10	J0143+1215	05 21 30	30.9	247.6	3.6		34.6	13	4324	01 29 10
01 32 10	---	05 24 31	30.5	248.3	3.7		34.8	180	4347	01 29 11
01 32 10	NGC660	05 24 31	31.5	249.3	3.7		35.3	-17	4347	No stop
01 39 10	---	05 31 32	30.5	250.9	3.8		35.7	403	4401	01 32 11
01 39 40	J0143+1215	05 32 02	29.4	250.0	3.8		35.3	13	4401	01 39 40
01 42 40	---	05 35 02	29.0	250.7	3.8		35.5	180	4424	01 39 41
01 42 40	NGC660	05 35 02	30.0	251.7	3.9		35.9	-17	4424	No stop
01 49 40	---	05 42 03	29.0	253.3	4.0		36.3	403	4477	01 42 41
01 50 10	J0143+1215	05 42 33	27.9	252.4	4.0		35.9	13	4477	01 50 10
01 53 10	---	05 45 34	27.5	253.1	4.0		36.0	180	4500	01 50 11
01 53 10	NGC660	05 45 34	28.5	254.1	4.0		36.5	-17	4500	No stop
02 00 10	---	05 52 35	27.5	255.6	4.1		36.8	403	4554	01 53 11
02 00 40	J0143+1215	05 53 05	26.4	254.7	4.1		36.4	13	4554	02 00 40
02 03 40	---	05 56 06	25.9	255.4	4.2		36.5	180	4577	02 00 41
02 03 40	NGC660	05 56 06	27.0	256.4	4.2		36.9	-17	4577	No stop
02 10 40	---	06 03 07	26.0	257.9	4.3		37.2	403	4631	02 03 41

Schedule for TORUN (Code Tr)

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EA054 - NGC660 HI

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 31 Oct 2013 Day 304 ---										
02 11 10	J0143+1215	06 03 37	24.9	257.0	4.3		36.8	13	4631	02 11 10
02 14 10	---	06 06 37	24.4	257.7	4.4		36.9	180	4654	02 11 11
02 14 10	NGC660	06 06 37	25.4	258.7	4.4		37.3	-17	4654	No stop
02 21 10	---	06 13 39	24.4	260.2	4.5		37.5	403	4708	02 14 11
02 21 40	J0143+1215	06 14 09	23.3	259.3	4.5		37.1	13	4708	02 21 40
02 24 40	---	06 17 09	22.9	259.9	4.5		37.2	180	4731	02 21 41
02 24 40	NGC660	06 17 09	23.9	260.9	4.6		37.6	-17	4731	No stop
02 31 40	---	06 24 10	22.8	262.4	4.7		37.8	403	4785	02 24 41
02 32 10	J0143+1215	06 24 40	21.7	261.5	4.7		37.4	13	4785	02 32 10
02 35 10	---	06 27 41	21.3	262.1	4.7		37.5	180	4808	02 32 11
02 35 10	NGC660	06 27 41	22.3	263.1	4.7		37.9	-17	4808	No stop
02 42 10	---	06 34 42	21.3	264.6	4.8		38.0	403	4861	02 35 11
02 42 40	J0143+1215	06 35 12	20.2	263.7	4.8		37.7	13	4861	02 42 40
02 45 40	---	06 38 13	19.7	264.3	4.9		37.7	180	4884	02 42 41
02 45 40	NGC660	06 38 13	20.8	265.3	4.9		38.0	-17	4884	No stop
02 52 40	---	06 45 14	19.7	266.7	5.0		38.1	403	4938	02 45 41
02 53 10	J0143+1215	06 45 44	18.6	265.8	5.0		37.8	13	4938	02 53 10
02 56 10	---	06 48 44	18.2	266.4	5.1		37.8	180	4961	02 53 11
02 58 50	3C120	06 51 25	34.6	223.1	2.3		24.3	58	4961	02 58 50
03 08 50	---	07 01 26	33.6	225.8	2.5		25.6	600	5038	02 58 51
03 09 20	J0143+1215	07 01 56	16.2	269.1	5.3		37.9	-72	5038	03 09 20
03 12 20	---	07 04 57	15.7	269.7	5.3		37.9	108	5061	03 09 21
03 12 20	NGC660	07 04 57	16.7	270.7	5.4		38.2	-16	5061	No stop
03 19 20	---	07 11 58	15.7	272.1	5.5		38.1	404	5115	03 12 21
03 19 50	J0143+1215	07 12 28	14.6	271.2	5.5		37.9	13	5115	03 19 50
03 22 50	---	07 15 29	14.1	271.8	5.5		37.9	180	5138	03 19 51
03 22 50	NGC660	07 15 29	15.2	272.8	5.5		38.1	-16	5138	No stop
03 29 50	---	07 22 30	14.1	274.2	5.6		38.1	404	5192	03 22 51

SETUP FILE INFORMATION:

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

=====
 Setup file: sess313.H1024

Matching groups in /usr/local/sched_11/catalogs/freq.dat:

tr18cm E-mail Borkowski 12Mar98, preferred alternative

***** Only 200.00 of 256.00 MHz total bandwidth is within the IFs
 in the setup file before any FREQ or DOPPLER shifts.

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=	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
IF SB =	L	L	L	L	L	L	L	L	L
	L	L	L	L	L	L	L	L	L
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 Based on FREQ, BW, and/or DOPPLER in schedule. Used pcal sets: 1
 **** Warning Only 181.08 MHz of 256.00 MHz in scheduled channels is within IFs.
 LO sum= 1328.63 1328.63 1328.63 1328.63 1360.54 1360.54 1360.54 1360.54
 1392.45 1392.45 1392.45 1392.45 1424.36 1424.36 1424.36 1424.36
 BBC fr= 971.37 971.37 971.37 971.37 939.46 939.46 939.46 939.46
 907.55 907.55 907.55 907.55 875.64 875.64 875.64 875.64
 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 = 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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* NGC660	01 40 21.634647 13 23 39.27430	* 01 43 02.291000 * 13 38 44.30000	01 43 48.775499 13 43 01.38702	0.00 0.00
* J0143+1215	01 40 51.136762 12 00 38.81443	* 01 43 31.092000 * 12 15 42.93400	01 44 17.359026 12 19 59.66137	0.00 0.00
J0319+4130	03 16 29.567260	* 03 19 48.160090	03 20 45.961110	1.30
* 3C84	41 19 51.91699	* 41 30 42.10412	41 33 39.60731	2.72
J0433+0521	04 30 31.602058	* 04 33 11.095527	04 33 57.000391	0.47
* 3C120	05 14 59.61643	* 05 21 15.61921	05 22 58.02970	0.35

EFFECT OF SOLAR CORONA

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)
NGC660	171.0
J0143+1215	170.9
3C84	149.6
3C120	146.2

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

IC883 EVN OBSERVATIONS

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Pontificia Universidad Catolica de Chile
 EMAIL: cromero@astro.puc.cl

Observing mode: 1024 Mbps

Notes: 18 cm, dual pol.

Schedule for TORUN (Code Tr) Page 2

IC883 EVN observations

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 31 Oct 2013 Day 304 ---									
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									
05 30 00	J1159+2914	09 23 00	52.7	114.1	-2.6	-38.9	0	0	05 30 00
05 34 00	=1156+295	09 27 00	53.2	115.2	-2.6	-38.5	240	31	05 30 01
05 36 00	J1317+3425	09 29 01	46.0	91.5	-3.8	-46.6	57	31	05 36 00
05 37 00	=1315+346	09 30 01	46.1	91.7	-3.8	-46.6	60	38	05 36 01
05 37 00	IC883	09 30 01	45.5	91.4	-3.9	-46.4	-14	38	No stop
05 40 00	---	09 33 01	45.9	92.0	-3.8	-46.4	166	61	05 37 01
05 40 00	J1317+3425	09 33 01	46.6	92.3	-3.8	-46.6	-14	61	No stop
05 41 20	=1315+346	09 34 21	46.8	92.6	-3.7	-46.6	66	72	05 40 01
05 41 20	IC883	09 34 21	46.1	92.2	-3.8	-46.4	-14	72	No stop
05 45 10	---	09 38 12	46.7	93.0	-3.7	-46.4	216	101	05 41 21
05 45 50	J1317+3425	09 38 52	47.4	93.5	-3.7	-46.5	26	101	05 45 50
05 46 50	=1315+346	09 39 52	47.6	93.7	-3.6	-46.5	60	109	05 45 51
05 46 50	IC883	09 39 52	47.0	93.4	-3.7	-46.4	-14	109	No stop
05 50 40	---	09 43 43	47.5	94.2	-3.6	-46.3	216	138	05 46 51
05 50 40	J1317+3425	09 43 43	48.2	94.5	-3.6	-46.5	-14	138	No stop
05 52 00	=1315+346	09 45 03	48.4	94.8	-3.6	-46.4	66	148	05 50 41
05 52 00	IC883	09 45 03	47.7	94.5	-3.6	-46.3	-14	148	No stop
05 55 50	---	09 48 54	48.3	95.3	-3.5	-46.2	216	178	05 52 01

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 31 Oct 2013 Day 304 ---										
05 56 30	J1317+3425	09 49 34	49.0	95.8	-3.5		-46.4	26	178	05 56 30
05 57 30	=1315+346	09 50 34	49.2	96.0	-3.5		-46.3	60	186	05 56 31
05 57 30	IC883	09 50 34	48.6	95.7	-3.5		-46.2	-14	186	No stop
06 01 20	---	09 54 25	49.1	96.5	-3.4		-46.1	216	215	05 57 31
06 01 20	J1317+3425	09 54 25	49.8	96.9	-3.4		-46.2	-14	215	No stop
06 02 40	=1315+346	09 55 45	50.0	97.2	-3.4		-46.2	66	225	06 01 21
06 02 40	IC883	09 55 45	49.3	96.8	-3.4		-46.0	-14	225	No stop
06 06 30	---	09 59 36	49.9	97.7	-3.4		-45.9	216	255	06 02 41
06 07 10	J1317+3425	10 00 16	50.6	98.2	-3.3		-46.0	26	255	06 07 10
06 08 10	=1315+346	10 01 16	50.8	98.4	-3.3		-46.0	60	262	06 07 11
06 08 10	IC883	10 01 16	50.2	98.0	-3.3		-45.9	-14	262	No stop
06 12 00	---	10 05 06	50.7	98.9	-3.3		-45.7	216	292	06 08 11
06 12 00	J1317+3425	10 05 06	51.4	99.3	-3.2		-45.9	-14	292	No stop
06 13 20	=1315+346	10 06 27	51.6	99.6	-3.2		-45.8	66	302	06 12 01
06 13 20	IC883	10 06 27	50.9	99.2	-3.2		-45.7	-14	302	No stop
06 17 10	---	10 10 17	51.5	100.1	-3.2		-45.5	216	332	06 13 21
06 17 50	J1317+3425	10 10 57	52.2	100.6	-3.1		-45.6	26	332	06 17 50
06 18 50	=1315+346	10 11 58	52.4	100.9	-3.1		-45.6	60	339	06 17 51
06 18 50	IC883	10 11 58	51.7	100.5	-3.2		-45.5	-14	339	No stop
06 22 40	---	10 15 48	52.3	101.4	-3.1		-45.3	216	369	06 18 51
06 22 40	J1317+3425	10 15 48	52.9	101.8	-3.0		-45.4	-14	369	No stop
06 24 00	=1315+346	10 17 08	53.1	102.1	-3.0		-45.3	66	379	06 22 41
06 24 00	IC883	10 17 08	52.5	101.7	-3.1		-45.2	-14	379	No stop
06 27 50	---	10 20 59	53.1	102.6	-3.0		-45.0	216	408	06 24 01
06 28 30	J1317+3425	10 21 39	53.8	103.2	-2.9		-45.1	26	408	06 28 30
06 29 30	=1315+346	10 22 39	53.9	103.5	-2.9		-45.0	60	416	06 28 31
06 29 30	IC883	10 22 39	53.3	103.1	-3.0		-44.9	-14	416	No stop
06 33 20	---	10 26 30	53.9	104.0	-2.9		-44.7	216	445	06 29 31
06 33 20	J1317+3425	10 26 30	54.5	104.4	-2.9		-44.8	-14	445	No stop
06 34 40	=1315+346	10 27 50	54.7	104.8	-2.8		-44.7	66	456	06 33 21
06 36 40	J1159+2914	10 29 51	60.9	136.4	-1.5		-28.3	42	456	06 36 40
06 42 40	=1156+295	10 35 52	61.5	138.8	-1.4		-26.9	360	502	06 36 41

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 31 Oct 2013 Day 304 ---										
06 44 40	J1317+3425	10 37 52	56.1	107.4	-2.7		-44.0	42	502	06 44 40
06 45 40	=1315+346	10 38 52	56.3	107.6	-2.7		-43.9	60	509	06 44 41
06 45 40	IC883	10 38 52	55.7	107.2	-2.7		-43.8	-14	509	No stop
06 48 40	---	10 41 52	56.1	108.0	-2.7		-43.6	166	532	06 45 41
06 48 40	J1317+3425	10 41 52	56.7	108.4	-2.6		-43.6	-14	532	No stop
06 50 00	=1315+346	10 43 13	56.9	108.8	-2.6		-43.5	66	543	06 48 41
06 50 00	IC883	10 43 13	56.3	108.4	-2.6		-43.5	-14	543	No stop
06 53 50	---	10 47 03	56.8	109.4	-2.6		-43.1	216	572	06 50 01
06 54 30	J1317+3425	10 47 43	57.5	110.1	-2.5		-43.1	26	572	06 54 30
06 55 30	=1315+346	10 48 44	57.7	110.3	-2.5		-43.0	60	580	06 54 31
06 55 30	IC883	10 48 44	57.1	109.9	-2.5		-43.0	-14	580	No stop
06 59 20	---	10 52 34	57.6	110.9	-2.5		-42.6	216	609	06 55 31
06 59 20	J1317+3425	10 52 34	58.2	111.4	-2.4		-42.6	-14	609	No stop
07 00 40	=1315+346	10 53 54	58.4	111.8	-2.4		-42.5	66	620	06 59 21
07 00 40	IC883	10 53 54	57.8	111.3	-2.5		-42.5	-14	620	No stop
07 04 30	---	10 57 45	58.3	112.4	-2.4		-42.1	216	649	07 00 41
07 05 10	J1317+3425	10 58 25	59.0	113.2	-2.3		-42.0	26	649	07 05 10
07 06 10	=1315+346	10 59 25	59.2	113.5	-2.3		-41.9	60	657	07 05 11
07 06 10	IC883	10 59 25	58.6	112.9	-2.4		-41.9	-14	657	No stop
07 10 00	---	11 03 16	59.1	114.1	-2.3		-41.4	216	686	07 06 11
07 10 00	J1317+3425	11 03 16	59.7	114.6	-2.2		-41.4	-14	686	No stop
07 11 20	=1315+346	11 04 36	59.9	115.0	-2.2		-41.2	66	696	07 10 01
07 11 20	IC883	11 04 36	59.3	114.5	-2.3		-41.3	-14	696	No stop
07 15 10	---	11 08 27	59.8	115.7	-2.2		-40.8	216	726	07 11 21
07 15 50	J1317+3425	11 09 07	60.5	116.5	-2.2		-40.6	26	726	07 15 50
07 16 50	=1315+346	11 10 07	60.6	116.8	-2.1		-40.5	60	733	07 15 51
07 16 50	IC883	11 10 07	60.0	116.2	-2.2		-40.6	-14	733	No stop
07 20 40	---	11 13 58	60.5	117.4	-2.1		-40.0	216	763	07 16 51
07 20 40	J1317+3425	11 13 58	61.1	118.0	-2.1		-39.9	-14	763	No stop
07 22 00	=1315+346	11 15 18	61.3	118.5	-2.0		-39.7	66	773	07 20 41
07 22 00	IC883	11 15 18	60.7	117.9	-2.1		-39.9	-14	773	No stop
07 25 50	---	11 19 09	61.2	119.1	-2.0		-39.3	216	803	07 22 01

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 31 Oct 2013 Day 304 ---										
07 26 30	J1317+3425	11 19 49	61.9	120.0	-2.0		-39.1	26	803	07 26 30
07 27 30	=1315+346	11 20 49	62.0	120.3	-2.0		-38.9	60	810	07 26 31
07 27 30	IC883	11 20 49	61.4	119.7	-2.0		-39.0	-14	810	No stop
07 31 20	---	11 24 40	61.9	121.0	-1.9		-38.4	216	840	07 27 31
07 31 20	J1317+3425	11 24 40	62.5	121.6	-1.9		-38.3	-14	840	No stop
07 32 40	=1315+346	11 26 00	62.7	122.1	-1.9		-38.0	66	850	07 31 21
07 32 40	IC883	11 26 00	62.1	121.4	-1.9		-38.2	-14	850	No stop
07 36 30	---	11 29 50	62.6	122.8	-1.9		-37.5	216	879	07 32 41
07 37 10	J1317+3425	11 30 30	63.3	123.7	-1.8		-37.2	26	879	07 37 10
07 38 10	=1315+346	11 31 31	63.4	124.1	-1.8		-37.0	60	887	07 37 11
07 38 10	IC883	11 31 31	62.8	123.4	-1.8		-37.2	-14	887	No stop
07 42 00	---	11 35 21	63.3	124.8	-1.8		-36.5	216	916	07 38 11
07 42 00	J1317+3425	11 35 21	63.9	125.5	-1.7		-36.3	-14	916	No stop
07 43 20	=1315+346	11 36 41	64.0	126.1	-1.7		-36.0	66	927	07 42 01
07 43 20	IC883	11 36 41	63.4	125.3	-1.7		-36.3	-14	927	No stop
07 47 10	---	11 40 32	63.9	126.8	-1.7		-35.5	216	956	07 43 21
07 47 50	J1317+3425	11 41 12	64.6	127.8	-1.6		-35.1	26	956	07 47 50
07 48 50	=1315+346	11 42 12	64.7	128.2	-1.6		-34.9	60	964	07 47 51
07 48 50	IC883	11 42 12	64.1	127.4	-1.6		-35.2	-14	964	No stop
07 52 40	---	11 46 03	64.6	128.9	-1.6		-34.3	216	993	07 48 51
07 52 40	J1317+3425	11 46 03	65.1	129.7	-1.5		-34.0	-14	993	No stop
07 54 00	=1315+346	11 47 23	65.3	130.3	-1.5		-33.7	66	1004	07 52 41
07 54 00	IC883	11 47 23	64.7	129.4	-1.6		-34.0	-14	1004	No stop
07 57 50	---	11 51 14	65.2	131.0	-1.5		-33.2	216	1033	07 54 01
07 58 30	J1317+3425	11 51 54	65.8	132.2	-1.4		-32.6	26	1033	07 58 30
07 59 30	=1315+346	11 52 54	65.9	132.6	-1.4		-32.4	60	1041	07 58 31
07 59 30	IC883	11 52 54	65.4	131.7	-1.5		-32.8	-14	1041	No stop
08 03 20	---	11 56 45	65.8	133.3	-1.4		-31.8	216	1070	07 59 31
08 03 20	J1317+3425	11 56 45	66.3	134.3	-1.4		-31.4	-14	1070	No stop
08 04 40	=1315+346	11 58 05	66.5	134.9	-1.3		-31.0	66	1080	08 03 21
08 04 40	IC883	11 58 05	65.9	133.9	-1.4		-31.5	-14	1080	No stop
08 08 30	---	12 01 56	66.3	135.6	-1.3		-30.5	216	1110	08 04 41

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 31 Oct 2013 Day 304 ---										
08 09 10	J1317+3425	12 02 36	67.0	136.9	-1.3		-29.8	26	1110	08 09 10
08 10 10	=1315+346	12 03 36	67.1	137.3	-1.2		-29.5	60	1117	08 09 11
08 10 10	IC883	12 03 36	66.5	136.3	-1.3		-30.0	-14	1117	No stop
08 14 00	---	12 07 27	66.9	138.1	-1.2		-29.0	216	1147	08 10 11
08 14 00	J1317+3425	12 07 27	67.4	139.1	-1.2		-28.4	-14	1147	No stop
08 15 20	=1315+346	12 08 47	67.6	139.8	-1.2		-28.0	66	1157	08 14 01
08 15 20	IC883	12 08 47	67.0	138.7	-1.2		-28.6	-14	1157	No stop
08 19 10	---	12 12 37	67.4	140.5	-1.1		-27.4	216	1187	08 15 21
08 19 50	J1317+3425	12 13 17	68.0	142.0	-1.1		-26.6	25	1187	08 19 50
08 20 50	=1315+346	12 14 18	68.1	142.5	-1.1		-26.3	60	1194	08 19 51
08 20 50	IC883	12 14 18	67.6	141.3	-1.1		-26.9	-14	1194	No stop
08 24 40	---	12 18 08	67.9	143.2	-1.1		-25.7	216	1224	08 20 51
08 24 40	J1317+3425	12 18 08	68.4	144.4	-1.0		-25.1	-15	1224	No stop
08 26 00	=1315+346	12 19 28	68.6	145.1	-1.0		-24.6	65	1234	08 24 41
08 26 00	IC883	12 19 28	68.0	143.9	-1.0		-25.3	-14	1234	No stop
08 29 50	---	12 23 19	68.4	145.8	-1.0		-24.0	216	1263	08 26 01
08 30 30	J1317+3425	12 23 59	68.9	147.4	-0.9		-23.1	25	1263	08 30 30
08 31 30	=1315+346	12 24 59	69.0	148.0	-0.9		-22.7	60	1271	08 30 31
08 31 30	IC883	12 24 59	68.5	146.7	-0.9		-23.5	-15	1271	No stop
08 35 20	---	12 28 50	68.8	148.7	-0.9		-22.1	215	1300	08 31 31
08 35 20	J1317+3425	12 28 50	69.3	150.0	-0.8		-21.3	-16	1300	No stop
08 36 40	=1315+346	12 30 10	69.4	150.8	-0.8		-20.8	64	1311	08 35 21
08 36 40	IC883	12 30 10	68.9	149.4	-0.9		-21.6	-15	1311	No stop
08 40 30	---	12 34 01	69.2	151.5	-0.8		-20.2	215	1340	08 36 41
08 41 10	J1317+3425	12 34 41	69.7	153.3	-0.7		-19.1	24	1340	08 41 10
08 42 10	=1315+346	12 35 41	69.8	153.8	-0.7		-18.7	60	1348	08 41 11
08 42 10	IC883	12 35 41	69.3	152.4	-0.8		-19.6	-15	1348	No stop
08 46 00	---	12 39 32	69.6	154.6	-0.7		-18.1	215	1377	08 42 11
08 46 00	J1317+3425	12 39 32	70.0	156.0	-0.6		-17.2	-16	1377	No stop
08 47 20	=1315+346	12 40 52	70.1	156.8	-0.6		-16.6	64	1388	08 46 01
08 47 20	IC883	12 40 52	69.7	155.3	-0.7		-17.6	-15	1388	No stop
08 51 10	---	12 44 43	69.9	157.5	-0.6		-16.1	215	1417	08 47 21

Schedule for TORUN (Code Tr)

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IC883 EVN observations

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 31 Oct 2013 Day 304 ---										
08 51 50	J1317+3425	12 45 23	70.4	159.5	-0.5		-14.8	24	1417	08 51 50
08 52 50	=1315+346	12 46 23	70.4	160.1	-0.5		-14.4	60	1425	08 51 51
08 52 50	IC883	12 46 23	70.0	158.5	-0.6		-15.4	-16	1425	No stop
08 56 40	---	12 50 14	70.2	160.8	-0.5		-13.8	214	1454	08 52 51
08 56 40	J1317+3425	12 50 14	70.6	162.4	-0.5		-12.7	-17	1454	No stop
08 58 00	=1315+346	12 51 34	70.7	163.2	-0.4		-12.2	63	1464	08 56 41
08 58 00	IC883	12 51 34	70.3	161.6	-0.5		-13.3	-16	1464	No stop
09 01 50	---	12 55 24	70.4	163.9	-0.4		-11.6	214	1494	08 58 01
09 02 30	J1317+3425	12 56 04	70.8	165.9	-0.4		-10.2	23	1494	09 02 30
09 03 30	=1315+346	12 57 05	70.9	166.6	-0.4		-9.7	60	1501	09 02 31
09 03 30	IC883	12 57 05	70.5	164.9	-0.4		-10.9	-16	1501	No stop
09 07 20	---	13 00 55	70.6	167.2	-0.3		-9.2	214	1531	09 03 31
09 07 20	J1317+3425	13 00 55	71.0	169.0	-0.3		-8.0	-17	1531	No stop
09 08 40	=1315+346	13 02 15	71.0	169.8	-0.3		-7.4	63	1541	09 07 21
09 08 40	IC883	13 02 15	70.7	168.1	-0.3		-8.6	-16	1541	No stop
09 12 30	---	13 06 06	70.8	170.5	-0.3		-6.9	214	1571	09 08 41
09 13 10	J1317+3425	13 06 46	71.1	172.7	-0.2		-5.3	23	1571	09 13 10
09 14 10	=1315+346	13 07 46	71.2	173.3	-0.2		-4.9	60	1578	09 13 11
09 14 10	IC883	13 07 46	70.8	171.5	-0.2		-6.1	-17	1578	No stop
09 18 00	---	13 11 37	70.9	173.9	-0.2		-4.4	213	1608	09 14 11
09 18 00	J1317+3425	13 11 37	71.2	175.8	-0.1		-3.1	-18	1608	No stop
09 19 20	=1315+346	13 12 57	71.2	176.6	-0.1		-2.5	62	1618	09 18 01
09 19 20	IC883	13 12 57	70.9	174.8	-0.1		-3.8	-17	1618	No stop
09 23 10	---	13 16 48	71.0	177.2	-0.1		-2.0	213	1647	09 19 21
09 23 50	J1317+3425	13 17 28	71.3	179.5	-0.0		-0.4	22	1647	09 23 50
09 24 50	=1315+346	13 18 28	71.3	180.2	0.0		0.1	60	1655	09 23 51
09 24 50	IC883	13 18 28	71.0	178.3	-0.0		-1.3	-17	1655	No stop
09 28 40	---	13 22 19	71.0	180.7	0.0		0.5	213	1684	09 24 51
09 28 40	J1317+3425	13 22 19	71.2	182.6	0.1		1.9	-18	1684	No stop
09 30 00	=1315+346	13 23 39	71.2	183.5	0.1		2.5	62	1695	09 28 41

SETUP FILE INFORMATION:

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

=====
 Setup file: sess313LG.setini

Matching groups in /opt/sched_11.0/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
IF SB =	L	L	L	L	L	L	L	L	L
	L	L	L	L	L	L	L	L	L
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 = 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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec)		(Date)	Error (mas)
	(B1950)	(J2000)		
* IC883	13 18 17.013691	* 13 20 35.318400	13 21 12.251776	0.00
	34 24 04.67349	* 34 08 22.35200	34 04 02.66281	0.00
* J1159+2914	11 56 57.786211	* 11 59 31.833912	12 00 13.539031	0.11
1156+295	29 31 25.73868	* 29 14 43.82678	29 10 02.27488	0.10
* J1317+3425	13 15 17.789368	* 13 17 36.494178	13 18 13.535626	0.13
1315+346	34 41 02.60427	* 34 25 15.93238	34 20 54.73606	0.11

EFFECT OF SOLAR CORONA

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:

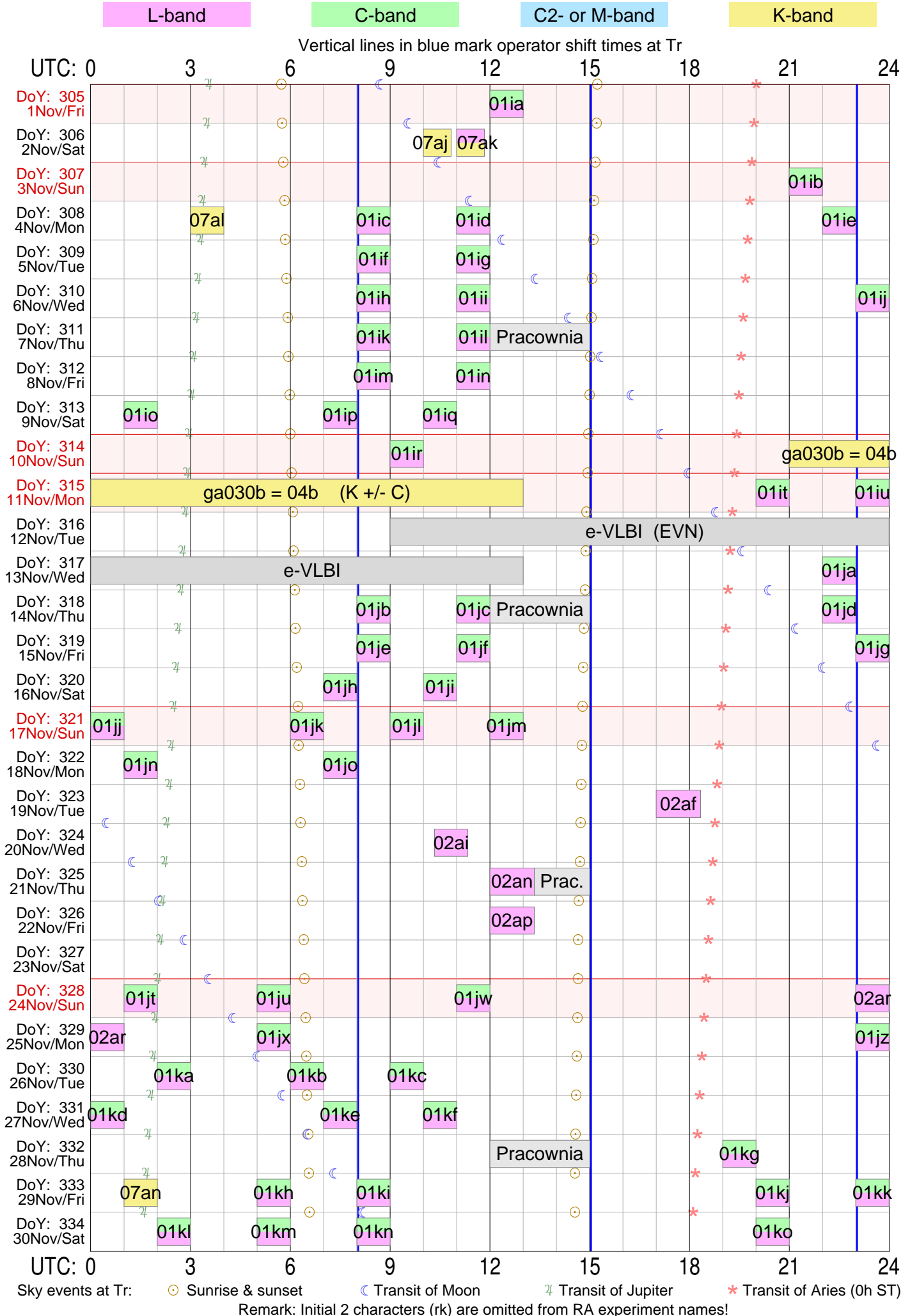
Source	Sun distance (deg)
IC883	50.4
J1159+2914	55.3
J1317+3425	50.9

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

Tr VLBI schedule for Nov 2013



Informacje o skryptach kalibracyjnych cl13*.snp

Astronomical Observatory, Piwnice near Torun

Date: 2013.10.22 Tuesday MJD = 56587.4137938 DJ = 2456587.9137938 DoY = 295
 11:55:51.78EET = 9:55:51.78UTC TST = 13:14:06.61 MST = 13:14:06.03

Source	UTC (above 10 deg) [h]			To Sun [deg]	Size ["]	Flux density [Jy]			
	Rise	Transit	Set			18cm	6cm	5cm	1.3cm
3c48	* 14.27	22.3689	6.53	157.8	2	14.2	5.3	4.0	1.2
3c123	* 17.62	1.3519	9.01	136.6	23	42.1	15.8	11.7	3.3
TaurusA	19.39	2.3058	9.16	125.0	300	894.9	648.1	590.2	410.9
3c147	* *****	2.4438	*****	118.5	1	19.6	7.5	5.6	1.7
3c161	22.81	3.1784	7.48	108.5	3	16.5	6.5	4.8	1.2?
3c218	2.40	6.0193	9.63	65.9	47	36.5	13.3	9.9	3.3?
VirgoA	3.26	9.2230	15.19	30.3	200	178.2	75.4	58.5	21.3?
3c286	* 2.48	10.2247	17.97	41.8	2	13.9	7.3	5.9	2.5
3c295	* *****	10.8935	*****	63.5	5	19.8	6.4	4.4	1.0
3c309.1	*****	11.6774	*****	83.7	2	6.6	3.1	2.5	1.0
3c348	8.23	13.5498	18.87	48.3	170	39.5	12.2	8.5	1.9?
3c353	9.26	14.0383	18.81	53.7	210	49.8	21.3	16.4	5.5?
CygA	7.37	16.6766	2.05	99.4	115	1424.2	371.9	252.0	55.8
CasA'13	*****	20.0696	*****	125.1	240	1361.9	620.4	494.0	204.4
DR21	7.65	17.3341	3.08	106.9	20				17.0

* - fluxes according to Perley&Butler (2012), ? - unreliable flux at 22GHz

Skrypty: cl13k3tr, cl13c3tr i cl13l3tr używają źródła 3c123

Skrypty: cl13c3v i cl13l3v używają źródła Virgo A

Skrypty: cl13c3c i cl13l3c używają źródła Cygnus A

Skrypt: cl13c3c8 używa źródła 3c348

Skrypt: cl13k3d używa źródła DR21

Można je zapuszczać, gdy dane źródło znajduje się wyżej niż 10 stopni nad horyzontem — ten przedział czasu zawiera powyższa tabelka (kolumny Rise i Set, tj. wschód i zachód UT).

Plan użycia dysk-pacaków na Mark5A w sesji EVN 3/2013

(wersja 2.0, 2013.10.25)

Projekt	Zapotrzebowanie		Packi		Uwagi
	-----GB---	-----VSN/GB--	Bank A	Bank B	
K-band					
f13k2	EVN	348	IAAE-010/8000		ftp, tez DBBC
es073	ASC	861	UVLBI-48/3200		<==== Korel. Bonn !!!
n13k3	EVN	933	IAAE-010/8000		ftp, tez DBBC
er035a	EVN	3971	IAAE-010/8000		
cl13k3	----	0			
ro004e	EVN	1328	IAAE-010/8000		
C-band					
f13c5	EVN	201	IAAE-010/8000		ftp, tez DBBC
n13c3	EVN	546	IAAE-010/8000	zostaje 673/800GB-->	ftp, tez DBBC
ey020a	EVN	5240	TR+00050/8000		
ei012a	EVN	2076	TR+00050/8000		zostaje 684/490 GB-->
cl13c3	----	0			
ep087d	EVN	2606	awaria FESTO		
ep088a	EVN	5264	---		
er030b	EVN	1684	---		
L-band					
f1314	EVN	205	MPI-0151/2000	zostaje 111 GB	ftp, tez DBBC
gl038a	Bonn	~1560	UVLBI-48/3200		<==== Korel. Bonn !!!
eh027a&b	eEVN	0	-----		e-VLBI
eg075	ASC	~320	UVLBI-48/3200		<==== Korel. Bonn !!!
n1313	EVN	606	IAAE-010/8000	zostaje 200 GB	ftp, tez DBBC
eh028a	EVN	245	LANL+003/6000		
eg078a	EVN	10722	LANL+003/6000	OS0D-076/6000	zostaje <1033 GB -->
ep087e	EVN	2580	---	JOD+0075/8000	
ep088b	EVN	5115	---	JOD+0075/8000	zostaje 305 GB -->
cl1313	----	0			
ei012b	EVN	2076	MPI-0151/2000	JOD+0075/8000	zostaje <24 GB
---			TR+00050/8000		(na wszelki wypadek)
f1315	EVN	155	TR+00050/8000	zostaje ~345 GB	ftp
ea054	EVN	5192	MPI-0602/6000		
er030c	EVN	1695=	MPI-0602/6000	OS0D-076/6000	zostaje <146 GB

NRA0-026/2000 i NTO-0005/2000 — sesja EVN na Mark5B (bank A)
 OS0D-066/2000 — dedykowany do testów Mark5B + DBBC
 TR-00002/1600 — dedykowany do RadioAstronu (bank A)

Rezerwa: TR+00041/8000, JOD-0050/6000, UAO-0016/2000 i USN-0203/2000

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rk01getr	86
rk01gftr	88
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