EVN Session Overview — NOV03

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The following information is mainly drawn from station feedback. Please refer to the EVN feedback pages for more details (*http://www.evlbi.org/session/feedback.html*). Stations scheduled and observed successfully (sometimes with minor failures) are indicated by $\surd$. Stations scheduled but failed to observe, or produced no fringes for some reasons are indicated by a dash (–), no feedback from a station by the date of this report is indicated by a black dot (•). Abbreviations for the most common failures are listed below. Please send suggestions or additional info to Zsolt Paragi (*zparagi@jive.nl*).

A list of abbreviations:

FS – Field System errors/crash
HIGH – $T_{\rm sys}$ higher than usual (e.g. because of weather)
LATE – late start of observation
LO – incorrect LO frequency
LOCK – VCs/BBCs unlocked to maser
LINK – problems with the microwave link between Cm and Jb
HA-E – some scans missed due to to HA or elevation limit
PARI – high parity errors
PCAL – various problems with phasecal (unstable, high, missing)
PHAS – problems with phasing up some of the telescopes at Wb, mostly RTC and RTD (longest baselines)
POIN – pointing problems, some data may be affected or lost
RECE – receiver fault
RECO – problems with recorder, some data may be lost
RFI – RFI reported
SLEW – data loss due to limitations in slewing the telescope
TSYS – $T_{\rm sys}$ data are corrupted or missing in one or more channels
WIND – part of the experiment missed due to severe weather conditions (e.g. gusting winds, snowstorm etc.)
MISS – small parts of the experiment were missed due to any other reasons not included above (e.g. operator error)

3.6/13cm	Ef	Wb	Jb1	On20	Mc	Nt	Tr	Ur	Sh	Hh	Yb / Other
F03X1	$\surd^{\mathrm{SLEW}}$	$\surd$		$\surd^{\mathrm{MISS}}$	$\surd^{(1)}$	$\surd^{\mathrm{LATE}}_{\mathrm{RECO}}$		$\surd$	$\surd^{\mathrm{LATE}}_{\mathrm{RECO}}$	$\surd$	–
GG049A	$\surd$	$\surd^{(2)}$		$\surd$	$\surd$	$-^{(3)}_{\mathrm{RECE}}$		$\surd$	$\surd$	$\surd^{(4)}_{\mathrm{RECE}}$	
F03C1	$\surd^{(5)}_{\mathrm{TSYS}}$	$\surd^{(6)}_{\mathrm{PHAS}}$	$\surd^{(7)}_{\mathrm{RECO}}$	$\surd$	$\surd$	$\surd$					
GU003A	$\surd$										
CL03X2	$\surd$			$\surd$	$\surd$	$\surd$		$\surd$	$\surd$	•	
EC017C	$\surd^{(8)}_{\mathrm{RECO}}$			$\surd$	$\surd$	$-^{(9)}_{\mathrm{POIN}}$		$\surd^{\mathrm{PARI}}$	$-^{(10)}_{\mathrm{RECO}}$	$\surd$	$\surd^{(11)}_{\mathrm{WIND}}$

Comments on the 3.6/13cm session:

1. Mc in F03X1: used S/X setup – no LCP data were recorded.
2. Wb in GG049A: used 11 telescopes in the array, as 2 were known to have different polarization and 1 had some problem.
3. Nt in GG049A: the receiver was set to the wrong frequency.
4. Hh in GG049A: 20db gain loss in LCP channel from 296/23:39 UT to 297/02:05 UT. IF1 attenuation of IF1 decreased at 01:55 and restored at 02:05 UT.
5. Ef in F03C1: in the first six minutes the IF-levels were not ok.
6. Wb in F03C1: problems starting the backend. Some were due to static electricity in this dry weather. Laid an anti-static mat near the backend. Data before 10:20UT must be bad.
7. Jb in F03C1: problems with procedures means that probably only pass 1 is good. Pass 2 maybe okay but passes 3 and 4 probably overwrote pass 2. Try pass 1 first. Problem now fixed.
8. Ef in EC017: The first two scans were lost due to Mark5-trouble. Between UT2200-2240, computer problems (not related to the VLBI system) led to the loss of data.
9. Nt in EC017: The recorder lost the vacuum. Data lost from 14:15 to 15:40. Bonn correlator reported a factor of 14 fainter fringes in S-band, and a factor of 100 fainter than expected ones in the X-band. This indicates a pointing problem.
10. Sh in EC017: Lost five scans due to antenna control and recorder problems. Fringes could not be found in the Bonn correlator. There was no phasecal detected.
11. Geodetic stations in EC017: Algonquin and N_Alesund observed successfully. The latter had strong winds in the first 12 hours that caused off-source alarms.

6cm	Ef	Wb	Jb1[(1)]	On25	Mc	Nt	Tr[(2)]	Ur	Sh	Hh	Ar
GM048C	$\surd$		$-^{\rm LO}$	$\surd^{(3)}$	$\surd^{(4)}_{\rm WIND}$	$\surd^{(5)}_{\rm POIN}$	$-$				
N03C1	$\surd$	$\surd^{(6)}_{\rm RECO}$	$-^{\rm LO}$	$\surd$	$\surd^{(7)}$	$\surd$	$-$	$\surd$	$\surd$	$\surd$	
EH016A	$\surd$	$\surd^{(6)}_{\rm RECO}$	$\surd^{\rm LO}$	$\surd$	$\surd^{(8)}_{\rm TSYS}$	$\surd$	$-$	$\surd^{(9)}_{\rm RECE}$		$\surd$	
GU003C	$\surd$	$\surd$	$-^{\rm LO}$	$\surd$	$\surd$	$\surd$	$-$				
EH013	$\surd$	$\surd^{(10)}_{\rm MISS}$	$\surd^{\rm LO}$	$\surd$	$\surd$	$\surd$	$-$	$\surd^{(9)}_{\rm RECE}$	$\surd^{(11)}_{\rm MISS}$	$\surd$	
GT005	$\surd^{(12)}_{\rm HA-E}$	$\surd^{(13)}_{\rm HA-E}$			$\surd^{(14)}_{\rm MISS}$	$\surd$	$-$				$\bullet$
CL03C2	$\surd$		$\surd$	$\surd$	$\surd$	$\surd$		$\bullet$	$\surd$	$\bullet$	
D03C3	$\surd$	$\surd^{(15)}_{\rm HA-E}$	$-^{\rm LO}$	$\surd$	$\surd$	$-^{(16)}$					
EH015A	$\surd^{(17)}_{\rm WIND}$	$\surd^{(18)}_{\rm HA-E}$	$\surd^{\rm LO}$	$\surd^{(19)}_{\rm WIND}$	$\surd$	$\surd$	$-$	$\surd^{(9)}_{\rm RECE}$	$\surd^{(20)}_{\rm HA-E}$	$\surd$	
EM050	$\surd^{(21)}_{\rm MISS}$	$\surd^{(22)}_{\rm WIND}$	$\surd^{\rm LO}$	$\surd^{\rm HA-E}_{\rm RECE?}$	$\surd$	$\surd$	$-$	$\surd^{(9)}_{\rm RECE}$	$\surd$		
EF011	$\surd$	$\surd$	$\surd^{\rm LO}$	$\surd^{(23)}_{\rm RECE}$	$\surd$	$\surd$	$-$	$\surd^{(9)}_{\rm RECE}$	$\surd$	$\surd$	
EH015B	$\surd^{(24)}_{\rm HIGH}$	$\surd^{(25)}_{\rm HA-E}$	$\surd^{\rm LO}$	$\surd^{(26)}_{\rm RECE}$	$\surd$	$\surd$	$-$	$\surd^{(9)}_{\rm RECE}$	$\surd^{(27)}_{\rm HA-E}$	$\surd$	
EJ006	$\surd$	$\surd$	$\surd^{\rm LO}$	$\surd^{(28)}_{\rm RECE}$	$\surd$	$\surd$	$-$	$\surd^{(9)}_{\rm RECE}$	$\surd^{(29)}_{\rm MISS}$	$\surd$	

Comments on the 6cm session:

1. Jb in 3/2003 session: Used the Lovell telescope! The sensitivity in C-band with the new surface is about twice as the sensitivity of Westerbork. The LO synthesizer was not producing the frequency it was set to – during most experiments in the session. The difference was about 200 kHz. No fringes have been found for Jb so far neither in Socorro nor in JIVE, except in the fringe test (F03C1) when the LO was still OK.
2. Tr in 3/2003 session: the recorder was broken during the session.
3. On in GM048C: Tracking problem between 21:18–21:52.
4. Mc in GM048C: Heavy rain for almost all the observing time.
5. Nt in GM048C: From 11:00 to 13:37 UT the pointing parameters were wrong.
6. Wb in N03C1 and EH016A: due to a capstan motor failure cannot record on tape – used Mk5 instead.

7. Mc in N03C1: Patch panel was not configured properly. Low amplitude from VC02 and VC04 (RCP channels).

8. Mc in EH016A: Incorrect setting of IFD at start. First $T_{\rm sys}$ for VC02 and VC04 are wrong.

9. Ur in C-band session: Used the unucooled receiver. $T_{\rm sys}$ info in logs might be wrong. $T_{\rm sys} = 174.5$ K in EH016A, and $T_{\rm sys} = 62$ K in EH015B.

10. Wb in EH013: Lost data from 08:55 to 09:13 UT and 09:43 to 10:02 UT with correlator and hardware problems (serial links). The cause is unknown.

11. Sh in EH013: Lost scans 4–6 because of antenna control problems.

12. Ef in GT005: From UT1436 on, all sources were below the elevation limit.

13. Wb in GT005: Large numbers of source out of HA range. Stopped at 13:52 as all sources after that were unobservable.

14. Mc in GT005: No valid data in VC05 and VC06 in the first scan (09:02-09:07) for wrong IF3 set (also their first $T_{\rm sys}$ value were wrong). Antenna off-source in the last scans (14:17-14:19 and 14:20-14:57) because of elevation soft-limit.

15. Wb in D03C3: After 08:46 the source was outside of the available hour angle range. Also had hardware problems (serial links again) from 06:11 to 07:24 and 07:40 to 07:54UT. The cause is still uncertain, but maybe linked to a heavy loading of the main control workstation (waw03).

16. Nt in D03C3: The schedule was generated for a VLBA recorder instead of for MK5, and this caused problems to the field system. The experiment was completely lost.

17. Ef in EH015A: Stopped because of high winds between UT1814-1940. During some scans, the antenna was partly shadowed by the surrounding hills.

18. Wb in EH015A: VERY many scans are outside HA range. Stopped at 22:53 as all scans after that were unobservable.

19. On in EH015A: TO HIGH WIND: Antenna stowed at 00:06. Problem with IF2. Bad data from 23:00 (even VCs).

20. Sh in EH015A: Started the schedule at scan no0057, because of the scans 1–56 are out of antenna limit.

21. Ef in EM050: A problem with the control of the gregorian subreflector led to the loss of data between UT1117-1142.

22. Wb in EM050: Some telescopes reset due to nearby lighting strikes about 16UT.

23. On in EF011: Problem with IF2. Bad data for even VCs. Operator didnt execute label command in time for tape to start(05:57).

24. Ef in EH015B: Between UT2300-0000, sources were at very low elevations. The antenna was partly shadowed by surrounding hills. Hence, some $T_{\rm sys}$ measurements were not ok.

25. Wb in EH015B: The last hours of this schedule were out of hour angle range, so we stopped at 22:55UT.

26. On in EH015B: Worked to solve problem with IF2, solved 13:09, missed first scans.

27. Sh in EH015B: Started the experiment at the scan No00057, because of the scans 1–56 were out of the antenna limit.

28. On in EJ006: Main problem with IF2 solved just after the experiment started, missed first scans. Still TSYS for IF2 was higher than normal.

29. Sh in EJ006: Lost data between UT:04:42:20 and UT:04:47:26, because antenna control problems.

18cm	Cm	Ef	Wb	Jb1	On25	Mc	Nt	Tr[1]	Ur	Sh	Hh	Ar
GI001A		$\surd^{\mathrm{RFI}}$	$\surd^{(2)}_{\mathrm{RFI}}$	$\surd$	$\surd$	$\surd$	$\surd^{\mathrm{RFI}}$	–	$\surd$	$\surd$	$\surd^{\mathrm{RFI}}$	
N03L3	–	$\surd^{\mathrm{RFI}}$	$\surd^{(3)}_{\mathrm{RECO}}$	$\surd^{(4)}$	$\surd$	$\surd$	$\surd$	–	$\surd$	$\surd$	$\surd$	$\surd$
EK015B		$\surd^{(5)}_{\mathrm{RECO}}$	$\surd^{(6)}_{\mathrm{RECO}}$	$\surd^{(7)}_{\mathrm{LATE}}$	$\surd$	$\surd$	$\surd^{(8)}_{\mathrm{RECO}}$	–	$\surd^{(9)}_{\mathrm{HA-E}}$	$\surd$		
GD017A		$\surd^{\mathrm{RFI}}$	$\surd$	$\surd^{(10)}$		$\surd^{(11)}_{\mathrm{RFI}}$	$\surd$	–				•
CL03L3		$\surd$		$\surd$	$\surd$	$\surd$	$\surd$		•	$\surd$	•	
EH016B		$\surd^{\mathrm{RFI}}$	$\surd^{\mathrm{RFI}}$	$\surd$	$\surd$	$\surd$	•	–	$\surd^{(12)}_{\mathrm{HA-E}}$		$\surd^{\mathrm{RFI}}$	

Comments on the 18/21cm session:

1. Tr in 3/2003 session: recorder was broken.
2. Wb in GI001A: Severe problems with RFI, as the observing band used is way too close to Iridium. Also note that IFD=NOR,NOR was used. Formatter out of synch 13:54 to 14:35 UT (reset by hand then).
3. Wb in N03L3: Just before (up to 2minutes before!) had problems with the tape drive. Very Bad EMI in first BBCs (Iridium?). During N03L3 one scan was sent over the 1 Gbps link to JIVE and recorded on Mk5 there. These data produced normal fringes. Lost Mk5 recording 21:50-21:56UT (following the eVLBI test), because the Mk5 had to be restarted.
4. Jb in N03L3: Telescope control failed between 01:47 and 01:49 UT.
5. Ef in EK015B: Due to MK5 problems, not data was recorded between UT0400-0444. Few Tsys measurements (on 3C274) were not ok.
6. Wb in EK015B: Problems starting parallel Mk5 recordings on a new diskpack. Seems like it needs ”erase=reset” with a blank pack in A. Parallel Mk5 started at 05:19UT. Second pack starts at 21:20UT.
7. Jb in EK015B: Problems with tape at start. Schedule started at scan 9 at 04:55 UT. Schedule restarted at 19:25 and 20:05 due to tape problems. Apparently no loss of data.
8. Nt in EK015B: Data lost from 03:25 UT to the end, due to vacuum problems.
9. Ur in EK015B: From 10:03 to 18:30 and from 21:03 to 23:35 the source is outside telescope limits.
10. Jb in GD017A: Damaged tape replaced prior to data recording.
11. Mc in GD017A: Rain and clouds for most of the observing time.
12. Ur in EH016B: From 13:34(UT) to 17:30(UT) the sources were outside of telescope limit.