

EVN Session Overview — JUN05

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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 \checkmark . 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 (\bullet). 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:

ANT	– antenna control or mechanical failures
FORM	– formatter failure
FS	– Field System errors/crash
HIGH	– T_{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
LT	– Lovell Telescope was used in Jb
MkII	– MkII was used in Jb
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
SD	– a single dish was used in Wb
SCHE	– scheduling related problems (inadequate slewing time, HA-EL limitations etc.)
TSYS	– T_{sys} data are corrupted or missing in one or more channels
WIND,	– part of the experiment missed due to severe weather
SNOW	conditions (e.g. gusting winds, snowstorm etc.)

18cm	Cm	Ef	Wb	Jb1	On25	Mc	Nt	Tr ⁽¹⁾	Ur	Sh	Hh	Other
CL05L2		✓		✓	✓	✓	✓	✓	✓	✓	✓	
N05L2	✓	✓ ⁽²⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓ ^{RFI}	
EK020B	✓	✓ ⁽³⁾ _{SCHE}	✓ ⁽⁴⁾ _{RFI}	✓	✓	✓	– ⁽⁵⁾ _{RECO}	✓	✓		✓ ^{RFI}	
EB030	✓ ⁽⁶⁾ _{ANT}	✓ ⁽⁷⁾ _{WIND}	✓ ⁽⁸⁾ _{WIND}	✓	✓ ⁽⁹⁾ _{RECO}	✓	– ⁽¹⁰⁾ _{ANT}	✓	✓	✓	✓ ⁽¹¹⁾ _{RECO}	
ES054A	✓ ⁽⁶⁾ _{ANT}	✓ ⁽¹²⁾ _{FORM}	✓ ⁽¹³⁾ _{RECO}	✓	✓ ^{RFI}	✓	– ⁽¹⁰⁾ _{ANT}	✓ ^{PCAL}	✓	✓		✓ ⁽¹⁴⁾
ES053B	– ⁽¹⁵⁾ _{ANT}	✓ ^{RFI}	✓ ^{RFI}	– ⁽¹⁵⁾ _{ANT}	✓ ⁽¹⁶⁾ _{RFI}	✓		✓			✓ ^{RFI}	
ES054B	✓ ⁽¹⁷⁾ _{ANT}	✓ ⁽¹⁸⁾ _{FORM}	✓ ^{RFI}	✓	✓ ^{RFI}	✓	– ⁽¹⁰⁾ _{ANT}	✓ ⁽¹⁹⁾ _{RECO}	✓	✓ ⁽²⁰⁾		
N05L3	✓	✓ ⁽¹⁸⁾ _{FORM}	✓	✓	✓	✓ ⁽²¹⁾ _{LATE}	– ⁽¹⁰⁾ _{ANT}	✓	✓	✓	✓ ^{RFI}	
EA033	✓	✓ ⁽¹⁸⁾ _{FORM}	✓	✓	✓ ^{RFI}	✓	– ⁽¹⁰⁾ _{ANT}	✓	✓ ^{SCHE}	✓ ^{SCHE}	✓ ^{RFI}	
EJ007A	✓	✓ ⁽²²⁾ _{FORM}	✓ ^{RFI}	✓	✓ ^{RFI}	✓	– ⁽¹⁰⁾ _{ANT}	✓ ⁽²³⁾ _{LATE}	✓	✓		
N05L4	– ⁽²⁴⁾ _{RECO}	✓	✓ ⁽²⁵⁾	✓	✓	✓	– ⁽¹⁰⁾ _{ANT}	✓	✓	✓	✓ ^{RFI}	✓ ⁽²⁶⁾ _{LATE}
EJ007B	✓	✓ ⁽²⁷⁾ _{RECO}	✓	✓	✓ ^{RFI}	✓ ⁽²⁸⁾ _{FS}	– ⁽¹⁰⁾ _{ANT}	✓	✓	✓		
EK020C	✓	✓ ⁽²⁹⁾ _{RECO}	✓ ^{RFI}	✓	✓ ^{RFI}	✓	– ⁽¹⁰⁾ _{ANT}	✓	– ⁽³⁰⁾		✓ ^{RFI}	✓ ⁽³¹⁾ _{RECO}

Comments on the 18/21cm session:

1. Tr BBC#3 was unlocked all the time – this affected all experiments that used 8 BBCs. Used Rubidium frequency standard in the whole session, because the H-maser had been sent to the manufacturer for refurbishment.
2. Ef in N05L2: first scan lost
3. Ef in EK020B: Very low in elevation during the first hour – antenna partly shadowed by surrounding hills.
4. Wb in EK020B: Phase cal unit was switched off by hand (as well as being turned off in the procedure file) Severe RFI at 1595.14MHz seen sometimes.
5. Nt in EK020B: Problems with the MK5 recorder during the first day of observation. After this, a failure of the encoder of an azimuth engine stopped the antenna.
6. Cm in EB030: Several elevation motor trips – odd few minutes lost here and there.

7. Ef in EB030: Thunderstorm: stopped UT 16:15–16:55 (3 June). Most T_{sys} measurements lost due to inadequate slewing time.
8. Wb in EB030: RTC in the array from 06:30 to 09:56 on Friday (the PI requested both RTC and RTD out). On Friday evening (16:32) one of the telescopes had a reset caused by nearby lightning strike. Logfile was accidentally overwritten.
9. On in EB030: Lost about 30 minutes on day 154 around 17:00 UT, because the Mk5 hanged. There may be a problem with scan#40 (scan.check fails). Some bad T_{sys} measurements due to RFI. Rather bad weather with some rain.
10. Nt in the L-band session: about at 23:00 UT on 4 June (during EB030) one of the azimuth engines failed. Observations suspended in Noto till it can be fixed/replaced.
11. Hh in EB030: The Mark5A failed to record correctly after an automatic bank switch at 23:33 UT on day 154, though the record pointer did increment. The FS only gave an error at disk_record=off at 00:15 UT. Mark5 manually rebooted and recording restarted at 00:45 UT. Intermittent RFI throughout the experiment.
12. Ef in ES054A: Formatter problems: tracks 2,3,4 (head 2) were faulty, consequently, USB data of VC6 and VC8 were lost.
13. Wb in ES054A: Lost recording after the bank switch at about 11:25 UT. Had to reboot the Mk5 unit and recording resumed at 12:27 UT.
14. Ro in ES054A: VC#5 (286.49MHz) degraded by RFI. Not observed from 14:19 UT till 14:44 UT because source elevations were above Ro70 antenna EL s/w pre-limit.
15. Cm and Jb in ES053B: Error in MERLIN control software meant that no source changes were performed after 00:00 UT – telescope probably remained on J1733-13. Error not corrected until 04:15 UT.
16. On in ES053B: Unable to lock VC02 from 01:38 UT.
17. Cm in ES054B: Antenna developed mechanical fault in elevation drive around 13:00 UT. Intermittent drive problems until 17:34 UT when telescope was taken offline for repair. Fixed and back on source by 18:49 UT.
18. Ef recorder change: MkIV formatter broke during ES054B. Recorded half of ES054B, as well as N05L3 and EA033 with the VLBA terminal on tape.
19. Tr in ES054B: Serious problem with disk pack (MED-0020), and trouble with Mk5–FS communication. Data were lost from 16:52 to 17:00 UT. Another disk pack was used eventually.
20. Sh in ES054B: Lost some data from 15:09 to 15:11 UT in scan No0066.
21. Mc in N05L3: Recorded scans only from 40 to the end.

22. Ef in EJ007A: EVN spare formatter arrived from Medicina. However had some problems in the beginning (some loose contacts due to transport). From 15:47 UT everything was OK.
23. Tr in EJ007A: First 7 scans lost (till 15:32 UT) because of prolonged demonstration and tests of the OCRA system.
24. Cm in N05L4: Appears to have stopped recording at approximately 04:30 UT – problem communicating with Mk5, unknown reason.
25. Wb in N05L4: Real time array control system got stuck from 07:33 to 08:45 UT. Array calibration is lost from 06:00 to 08:45 UT.
26. Ar in N05L4: Data recording started at about 08:19 UT, but at that time the telescope was slewing, hence actual data got recorded only by about 08:20 UT. The first scan on the disc has no "scan name".
27. Ef in EJ007B: MK5 problems; data lost between 14:00–15:20 UT.
28. Mc in EJ007B: FS blocked from 13:09 to 15:09 UT.
29. EF in EK020C: Problems (probably with the connection between FS and MK5) led to the loss of data between 23:20–23:48 UT.
30. Ur in EK020C: Did not observe by mistake: used version 1 of the block schedule instead of version 3.
31. Ar in EK020C: FS lost contact to the Mk5. About half of the experiment was lost.

6cm	Ef	Wb	Jb1	On25	Mc	Nt	Tr ⁽¹⁾	Ur	Sh	Hh	Ar
N05C2	√ ⁽²⁾	√	√ ⁽³⁾ _{RECO}	√	√	− ⁽⁴⁾ _{ANT}	√		√	√	√
EG034	√ ⁽⁵⁾ _{RECO}	√	√	√	√	− ⁽⁴⁾ _{ANT}	√			√ ⁽⁶⁾ _{LATE}	
EI008	√ ⁽⁷⁾ _{FS}	√	√	√ ⁽⁸⁾ _{RECO}	√	− ⁽⁴⁾ _{ANT}	√				
GB049C	√	√ ⁽⁹⁾ _{RECO}	√	√	√ ⁽¹⁰⁾ _{RECO}		√				
CL05C2	√		√ ^{LT}	√	√		√			√	
GT006	√ ⁽¹¹⁾	√	√ ^{MKII}								√
EP049C	√ ⁽¹²⁾	√ ⁽¹³⁾ _{RECO}	√ ^{LT}								

Comments on the 6cm session:

1. Tr BBC#3 was unlocked all the time – this affected all experiments that used 8 BBCs. Used Rubidium frequency standard in the whole session, because the H-maser had been sent to the manufacturer for refurbishment.
2. Ef in N05C2: Heavy rain between 20:15–20:50 UT.
3. Jb in N05C2: Problem appending to disk pack at start of experiment. Changed pack immediately. First 10 minutes data lost.
4. Nt in the C-band session: One of the azimuth engines failed still during the L-band session. It could not be fixed – there were no observations in Noto.
5. Ef in EG034: Data lost from 02:16 UT till the end due to Mk5 problems.
6. Hh in EG034: Lost first 8 minutes due to operator error.
7. Ef in EI008: FS crash led to the loss of data between 10:46–11:06 UT.
8. On in EI008: Scan_check problems with 3 scans (9, 24, 37).
9. Wb in GB049C: Vacuum loss on the tape recording at 17:56, restarted 18:24. Vacuum loss again at 20:21, restarted 20:37. And again at 21:16, restarted 21:18.
10. Mc in GB049C: Various technical problems. Start recorded data at 18:52 UT.
11. Ef in GT006: Several measurements of time difference fm-gps failed.
12. Ef in EP049C: Several measurements of time difference fm-gps failed. One scan (04:20–04:23 UT) was lost – antenna went into wrong direction.

13. Wb in EP049C: Mark5 recording stuck at 12:52 – restarted 13:52 (after EndM5, SSReset and Mark5A). Again Mark5 stuck at 14:43 and restarted 15:07 (complete reboot of mark5 was much more effective). FS computer keyboard and mouse stopped reacting about 20:15 so FS commands issued via 'inject_snap'.