EVN Performance and Reliability

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Outline

- Recent EVN Highlights
- Early View of Session 3/2013
- Major failure in Session 2/2013
- Major failure in Session 1/2013

Collection Highlights

- ☺ Succesfully demonstrated 4Gbps e-VLBI on Sept 18th, 2013.
- ☺ The KVN has now became an associate memeber of the EVN (as from Jan 2014).
- ☺ A new C/L band receiver was installed in the Onsala 25m radio telescope after Session 1/2013.

FTP Fringe Tests in Oct/Nov 2013

F13K2: No fringes to Ur (high Tsys) and Mh (pointing)

N13K3: Problem with pointing was found and solved at Mh in N13K3.

F13C5: Jb1 found a faulty LO drive.

N13C3: Success

F13L4: Only fringes between baselines shorter than ~700km (Ef with Jb, Mc, Tr, Wb) were found due to an inadequate selection of the calibrator 2005+403, at 4 deg from the plane of the galaxy, and therefore heavily affected by interstellar scattering.

N13L3: Success

F13L5: No ftp data from Nt due to failure of extracting the data

F13X2: No fringes to Ys in BBCs 2, 4, 6, and 8. No fringes to Sv in BBC 1, 2, 4, 9, 10, and 12.

N13P1: Ef swapped polarisation.

N13X4: OK

EVN Feedback

Tr: The fringes went very weak in EY020A after the report of FS hanging due to problem with the communication with antenna. Out EP087D and EP087A due to failure of antenna control device (FESTO) .

Sv: LCP receiver was warm in EP087D. Problems with antenna in EG078A and EP087E.

On: Out ER030B , EP087E, and EP088B due to too much wind.

Ef: Out EG078A and ER030D because of bad weather.

Sh: Warm receiver in all the L-band experiments.

Major failure in Session 2/2013

Ef: Out at 3.6cm due to a receiver failure.

Sv, Zc, Bd: Problems with Russian Custom, not all the EVN disk packs arrived on time.

Nt: Significantly low sensitivity/high Tsys in RCP subbands.

Jb: No standard EVN feedback.

Major failure in Session 1/2013

Ef: No observations for most of the time in 10 EVN user experiments due to snow.

Mc: Significantly low sensitivity at L band due to the receiver was not properly positioned.

Jb1: Low (0.1x) correlation amplitude at 5 GHz in all the user experiments due to a problem with its HM11 cable.

Jb2: The K-band receiver was not cooled and there might be pointing error as well.

Ur: The recording system was set in geodetic mode in all the C and K band 512/1024 Mbps experiments. This caused no fringes in 7 subbands.

Sv, Zc, Bd: Disk modules were not received in time due some issues with Russian Custom.