Status of EVN Amplitude Calibration

Session 2/2011

The following table shows the median absolute amplitude error for EVN stations in the second session of 2011 (May/Jun). These results were derived from the pipeline amplitude self-calibration results. The number in brackets after each entry is the number of experiments that were used to determine the median error for that entry.

Station	18 cm	5 cm	6 cm
Jb1	0.06(7)		*
Ef	0.08(6)	0.04(5)	0.06(3)
Мс	0.13(6)	0.06(5)	0.03(1)
0n	0.10(7)	0.07(4)	0.10(3)
Tr	0.08(7)	0.03(5)	0.21(4)*
Wb	0.03(7)	0.09(5)	0.04(4)
Ys		0.04(5)	0.04(8)
Hh	0.04(1)	0.05(2)	0.07(4)
Ur	0.06(6)		0.10(4)
Sh	0.13(2)*	0.07(2)	0.07(4)
Bd	0.07(4)		0.07(3)
Sv	0.09(6)		0.08(3)
Zc	0.06(6)		0.25(3)*

The blank entries indicates insufficient data. The numbers above are the median absolute error in the antenna gain amplitude (as calculated from pipeline amplitude self calibration). A value above 0.1 indicates a significant error which should be investigated. In addition to the absolute errors summarized here, the EVN pipeline provides details on every experiment processed at JIVE including the sign and time variability of the errors. In each experiment, the self-calibration results of a bright and compact source were used to get the reliable results. EG051E and F were not included in the statitics as the source M87 is not a compact source. Nominal SEFDs, listed in the EVN status table, were used for Bd, Sv, and Zc in the antab files.

*Tr: Problems with its 6cm receiver: Tsys > 100 K and poor stability.

*Jb1: No meaningful number determined as Jb1 suffered siginificant sensitivity loss in EV018D and EP068C.

*Mc: Calibration was significantly affected by RFIs in side subbands at 18cm.

*Zc: Finges were quite weak in BBC 11 (IF 5-6, LL) and BBC 4 (IF 7-8, RR) in EV018D, EG051E and EG049B.

*Sh: No short baselines to Shanghai to do meaningful amplitude self calibration in the EVN pipeline. Carefuly manually data reduction indicates that Shanghai had proper amplitude calibration at 18 cm.

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