

EVN Amplitude Calibration

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Calibration Accuracy

Session 1/2011

Station	18 cm	5 cm	6 cm
Jb	0.08 (2)	0.12 {3} *	0.10 (4)
Ef	0.08 (2)	0.02 (3)	0.05 (4)
Mc	0.12 (2) *	0.10 (3)	0.05 (4)
On	0.08 (2)	0.14 (3) *	0.09 (4)
Tr	0.07 (2)	0.05 (2)	0.03 (4)
Wb	0.03 (2)	0.06 (3)	0.03 (4)
Ys		0.02 (3)	0.04 (4)
Hh	0.04 (1)	0.04 (1)	0.05 (3)
Ur	0.12 (2) *		0.04 (3)
Sh	0.13 (2)	0.05 (1)	0.07 (3)
Bd	0.09 (2)		0.04 (3)
Sv	0.08 (2)		0.07 (3)
Zc	0.14 (2) *		0.22 (3) *

Session 3/2010

Station	18 cm	5 cm	{ 1.3 cm }
Jb	0.09 (11)		{ 4.31 (3) }
Ef	0.04 (9)	0.03 (4)	{ 0.09 (4) }
Mc	0.13 (11) *	0.06 (4)	{ 0.12 (4) }
On	0.21 (10) *	0.15 (4)	{ 0.34 (4) }
Tr	0.08 (10)	0.04 (4)	
Wb	0.03 (11)	0.10 (4)	
Ys		0.03 (4)	{ 0.11 (4) }
Hh	0.03 (3)		
Bd	0.06 (8)		
Sv	0.09 (6)		
Zc	0.27 (7) *		
Mh			{ 0.37 (2) }
Ro			{ 0.08 (1) }

Numbers here are the median absolute error in the antenna gain amplitude. This number will be approx half the error in the SEFD and is the same that you see in AIPS gain plots. The number in brackets after each entry is the number of experiments that were used to determine the median error for that entry.

Badary, Svetloe, Zenlenchuuskaya

Dummy antabfs files were used.

SEFD

18cm (Old) - Bd: 300 Jy, Sv: 300 Jy, Zc: 400 Jy
-- From the EVN pipeline results.

18cm (New) - Bd: 330 Jy, Sv: 360 Jy, Zc: 300 Jy
6cm (New) - Bd: 200 Jy, Sv: 250 Jy, Zc: 400 Jy

-- The new SEFDs were determined from N11L3 and N11C1 via manually self-calibration in Difmap.

-- They have been used to make antab files since Session 2/2011.

Onsala

Session 3/2010

- New IF system very sensitive to RFI at 18cm.
- Bad weather in Winter.

Session 1/2011

- Significantly less affected by bad weather.
- New IF system is stable now.
- Sensitive to bad amplitude calibration of other stations as its relatively low sensitivity ($\text{Weight}=1/\text{Sigma}^2$) at 5cm.
- Jb2 and Kn had pretty low correlation amplitude at 5cm.

Urumqi at 18cm

-- Over-estimated its Tsys by a factor 1.2.

Medicina at 18 cm

-- Ok. Slightly large gain factor was related to the improper calibration of Zc as its relatively low sensitivity at 18cm.

Shanghai

-- The amplitude self-calibration with a point source was inapplicable on the long baselines to Shanghai.

Jodrell Bank

-- Jb1/18cm had an improved amplitude calibration.
-- Now, Top 1 problem is its sensitivity loss.

K-Band EVN Observations

EVN Stations

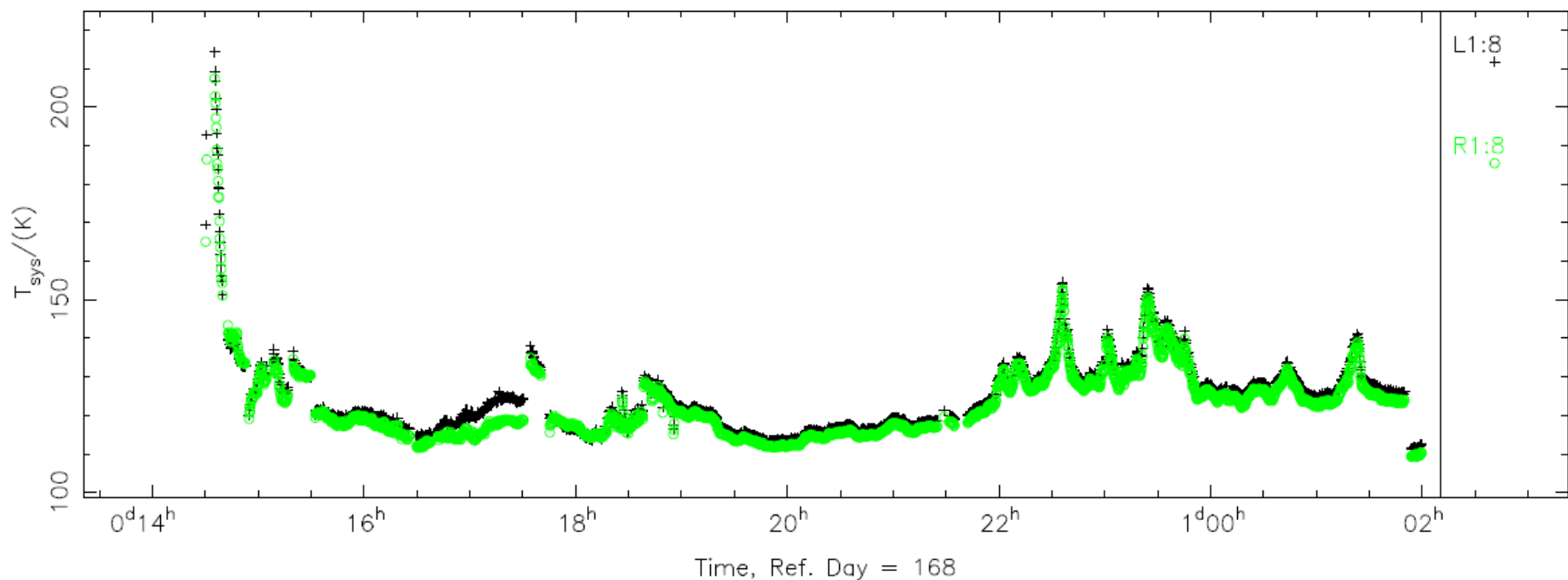
- Available now : Ef, Ro, Ys, Jb2, On, Mh, Sv, Zc, Sh, Hh
- Mc receiver was moved to Sardinia.
- Nt will be back in 2012
- Sv and Zc will be in EE008A on 6 Sep 2011.
- Ur receiver will be ready at the end of Sep. 2011.

Current status

- Amplitude calibration was poor.
- Opacity-free gain curve is not available at Nt, Jb, Ro
- No Tsys data from Jb2 & Cm.
- Less experiments were performed.

JB2 tpi plot in RT011

T_{sys} for JB in experiment RT011



T_{sys} data were not properly scaled as T_{cal} was unknown at 22 GHz.

Timely delivery of data

- Timely delivery can significantly speed up the correlation, post review, and pipeline processes and make more disk packs be available in the upcoming session.
- Feedbacks, rxg, **antab** and uvflg files should be delivered **within 2 weeks after the end of a session and ASAP** in the case of **e-VLBI** experiments.
- Automatically uploading log files and gps data are very welcome.