EVN Amplitude Calibration

Dmitry Duev, JIVE

Quality of Calibration – Session 2014-3

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Station     18/21cm        6cm          5cm        3.6cm        0.7cm
-------------------------------------------------------------------------------
Bd          0.18(5)      0.08(6)                   0.16(3)
Ef          0.06(6)      0.02(7)      0.02(3)      0.07(3)
Hh          0.08(4)      0.03(6)                   0.12(2)
Jb          0.14(5)      0.14(7)      0.21(3)
Ku                                                              0.03(1)
Ky                                                              0.04(1)
Mh                                                              0.40(1)
Nt                       0.06(7)                   0.28(1)      0.16(1)
On          0.08(6)      0.04(7)      0.03(3)      0.07(3)      0.05(1)
Sh          0.22(5)      0.07(6)                   0.07(1)
Sr          0.02(1)                   0.00(1)
Sv          0.08(5)      0.04(7)                   0.28(3)
Tr          0.09(5)      0.04(7)      0.04(2)
Wb          0.06(6)      0.02(7)      0.06(3)      0.03(1)
Ys                       0.06(7)      0.05(3)      0.05(2)      0.04(1)
Zc          0.05(5)      0.05(7)                   0.17(3)
===============================================================================
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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.

Quality of Calibration – Session 2014-3

L-band

- For the case of Ef and Tr, the computed SEFD values (sensitivities) from all L-band observations pipelined are lower than the nominal ones.

C-band

- Jb: No optimum .rxg file to make appropriate antab files for reliable (a priori) amplitude calibration.

M-band

- Nt: Slightly different sensitivities in RR and LL produced non-optimal self-calibration gains at M-band.

X-band

- Nt: LCP IFs show noisy (not useful) data in N14X1 and ER030G.

Quality of Calibration – Session 2014-2

Station	18cm	6cm	5cm	1.3cm	0.7cm
Ar			0.04(4)		
Bd	0.23(6)	0.05(5)		0.13(2)	
Ef	0.05(7)	0.02(5)	0.02(10)	0.06(3)	0.15(2)
Hh	0.06(3)	0.03(3)			
Jb	0.32(2)	0.64(2)	0.14(13)	0.44(2)	
Kt					0.15(2)
Ku				0.13(2)	0.19(2)
Ky				0.18(2)	0.12(2)
Mh				0.11(3)	
Nt	0.07(5)	0.07(5)	0.18(9)	0.13(3)	
On	0.08(7)	0.04(5)	0.08(7)	0.18(3)	0.19(2)
Ro	0.31(1)				
Sh	0.08(6)	0.05(5)	0.09(1)	0.25(2)	
Sr	0.02(2)		0.03(1)	0.22(1)	
Sv	0.10(7)	0.14(5)		0.30(2)	
T6	0.21(1)	0.02(1)	0.02(2)		
Tr	0.08(6)	0.06(5)	0.09(10)	0.06(1)	
Wb	0.05(7)	0.02(5)	0.06(13)		
Ys		0.04(5)	0.02(9)	0.05(3)	0.13(2)
Zc	0.12(7)	0.07(5)		0.20(2)	

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.

Quality of Calibration – Session 2014-2

L-band

- For the case of Ef and Tr, the computed SEFD values (sensitivities) from all L-band observations pipelined are lower than the nominal ones.
- T6: Only data of N14L2 were used, which is insufficient to make conclusive remarks.
- Ro: RCP IFs show noisy data.

C-band

- Jb: No optimum .rxg file to make appropriate antab files for reliable (a priori) amplitude calibration.

M-band

- Nt: Slightly different sensitivities in RR and LL produced non-optimal self-calibration gains at M-band.

K-band

- Jb: Did not provide good Tsys tables. Dummy tables based on nominal SEFD had to be used, which affected amplitude calibration.

Timely delivery of ANTAB-files

- Now described in the list of Permanent Action Items (now a merge of the Bologna Rules and the previous Permanent Action Items):

  https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/Permanent_Action_Items

- In particular:
  - "Stations must aim to produce ANTABFS-, UVFLG- and RXG-files within 2 weeks after the end of a session."
  - "ANTABFS files for eVLBI experiments should be produced as soon as possible (< 24 hours after the experiment)"

- Timely delivery can significantly speed up correlation (if no delays on uploading log files), post review, and pipeline processes

- Make more disk packs available for the upcoming session.

- Automatically uploading log files and GPS data is very welcome