EVN Amplitude Calibration

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Session 2015-1

- The following table gives the **median absolute error** in the antenna gain amplitude. This number will be approximately 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.

	21cm	18cm	6cm	5cm
AR	0.04 (1)			
BD		0.20 (4)	0.04 (4)	
EF	0.08 (1)	0.04 (5)	0.02 (5)	0.37 (8)
HH		0.06 (1)	0.05 (1)	0.21 (6)
JB	0.18 (1)	0.09 (4)	0.29 (4)	0.43 (8)
MC	0.10 (1)	0.09 (5)	0.05 (5)	0.41 (8)
NT			0.08 (5)	0.65 (7)
ON	0.07 (1)	0.02 (3)	0.03 (5)	0.38 (8)
SH		0.79 (4)	0.09 (2)	0.36 (2)
SR		0.26 (2)		0.23 (8)
SV		0.09 (4)	0.06 (3)	
TR	0.06 (1)	0.38 (4)	0.22 (3)	0.33 (8)
WB	0.07 (1)	0.03 (4)	0.04 (5)	0.43 (8)
YS			0.07 (4)	0.43 (8)
ZC		0.08 (4)	0.22 (3)	

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EF	0.08 (1)	0.04 (5)	0.02 (5)	0.37 (8)
HH		0.06 (1)	0.05 (1)	0.21 (6)
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SR		0.26 (2)		0.23 (8)
SV		0.09 (4)	0.06 (3)	
TR	0.06 (1)	0.38 (4)	0.22 (3)	0.33 (8)
WB	0.07 (1)	0.03 (4)	0.04 (5)	0.43 (8)
YS			0.07 (4)	0.43 (8)
ZC		0.08 (4)	0.22 (3)	

The powerful effect of erroneous gain curves

```
GAIN SR  ELEV DPFU=0.6,0.6    FREQ=5300,7500
POLY=-9.0000E-06,1.3900E-03,9.3981E-01



GAIN SR  ELEV DPFU=0.6,0.6    FREQ=5300,7500
POLY=9.3981E-01,1.3900E-03,-9.0000E-06
```

# SEFD (t) = Tsys(t) / gain = Tsys(t) / (DPFU * poly(elevation))
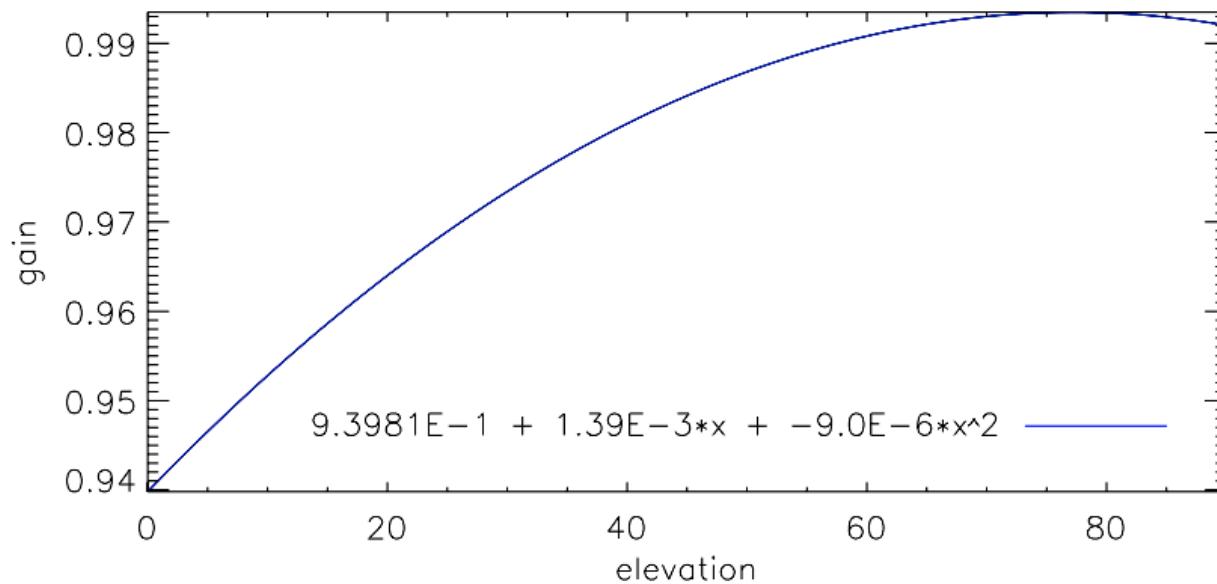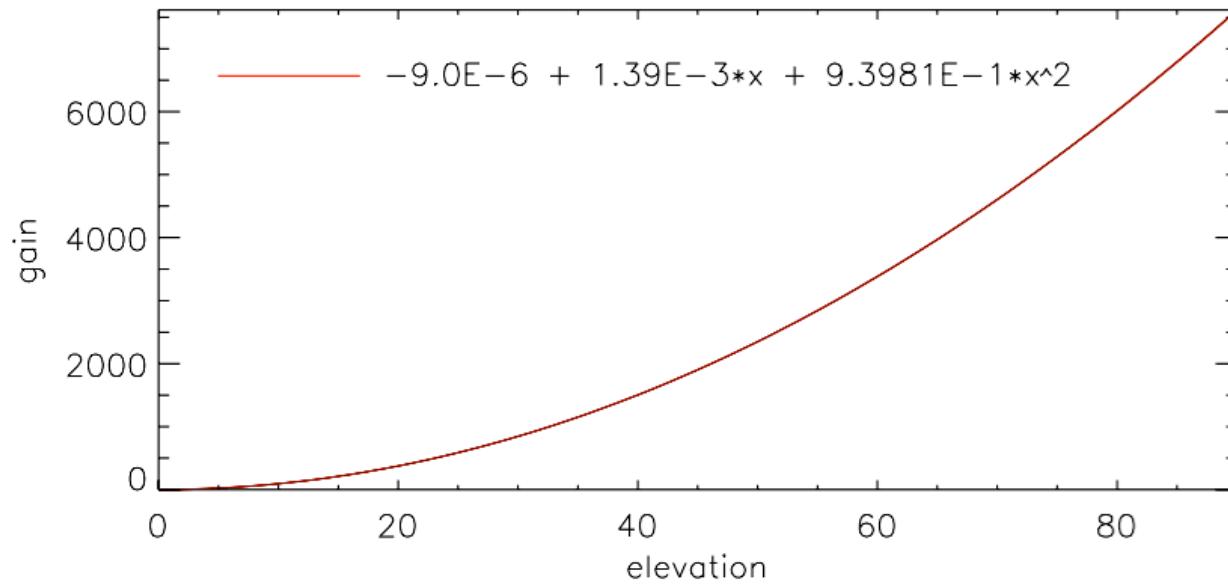
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- The following table gives the **median absolute error** in the antenna gain amplitude. This number will be approximately half the error in the SEFD and is the same that you see in AIPS gain plots. The number in brackets after each entry is the number of experiments that were used.

	21cm	18cm	6cm	3.6cm	7mm
AR			0.08 (1)		
BD	0.09 (1)	0.06 (5)	0.09 (6)	0.27 (4)	
EF	0.07 (2)	0.03 (5)	0.03 (9)	0.05 (6)	0.08 (2)
HH		0.11 (3)	0.02 (6)	0.05 (6)	
JB	0.40 (1)	0.27 (4)	0.14 (9)		
KT					0.23 (1)
KU					0.24 (1)
KY					0.20 (1)
MC		0.11 (5)	0.24 (9)	0.34 (6)	
MH					0.14 (2)
NT			0.09 (9)	0.14 (6)	
O8	0.18 (2)	0.06 (5)	0.07 (9)		
O6				0.07 (6)	0.20 (2)
SH		0.21 (5)	0.09 (4)	0.55 (1)	
SV	0.13 (1)	0.10 (5)	0.07 (8)	0.22 (5)	
T6		0.28 (1)	0.80 (2)	0.13 (2)	
TR	0.22 (1)	0.21 (5)	0.06 (8)		
WB	0.04 (2)	0.04 (5)	0.03 (9)	0.16 (5)	
WZ				0.33 (1)	
YS			0.03 (9)	0.06 (6)	0.14 (2)
ZC	0.15 (1)	0.07 (5)	0.27 (8)	0.18 (5)	

EB056

- f(x) = -6.5585E-01 + x * 5.9347E-02 + x * x * -5.3176E-04
- g(x) = 7.6065E-01 + x * 9.6163E-03 + x * x * -9.6586E-05
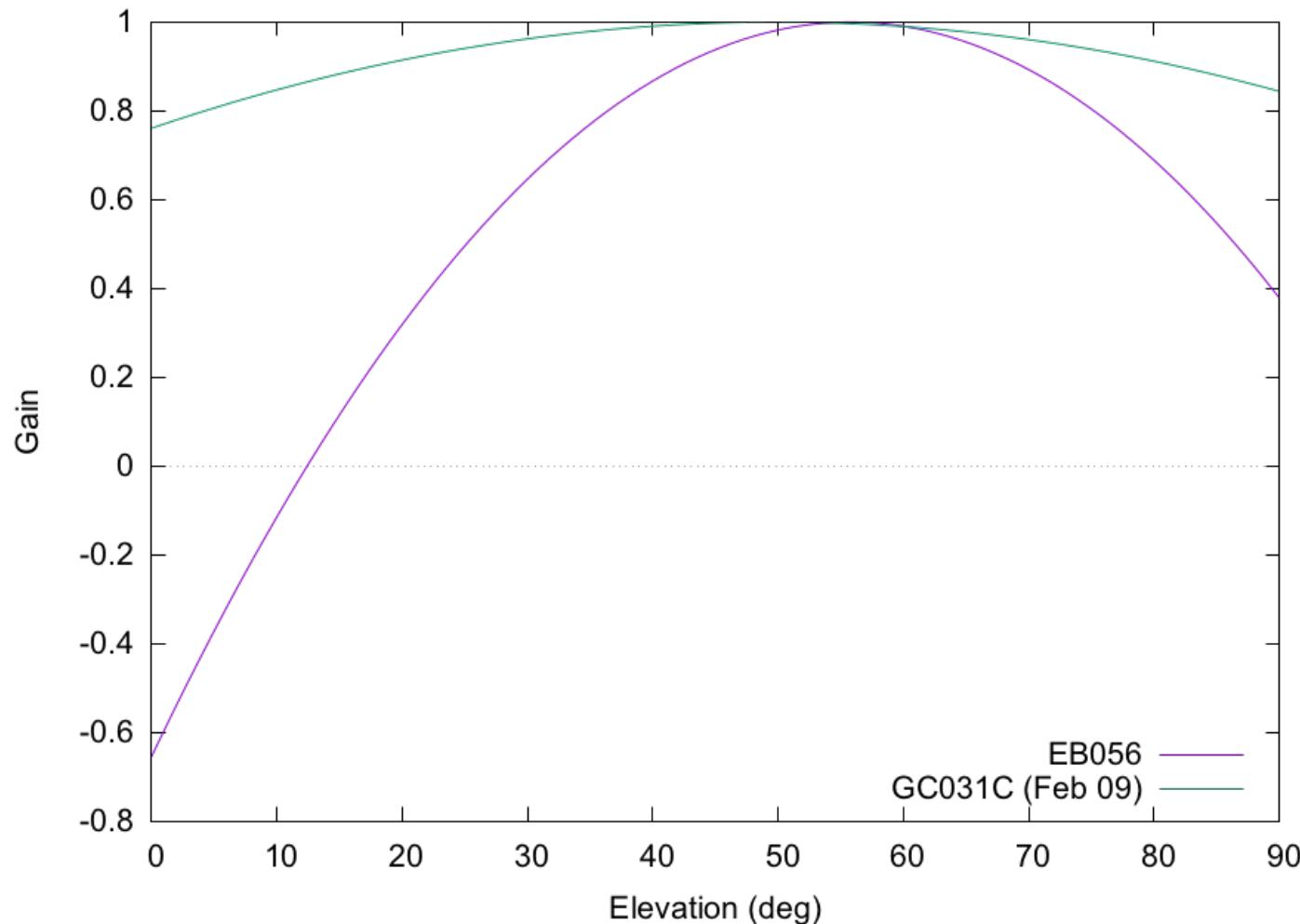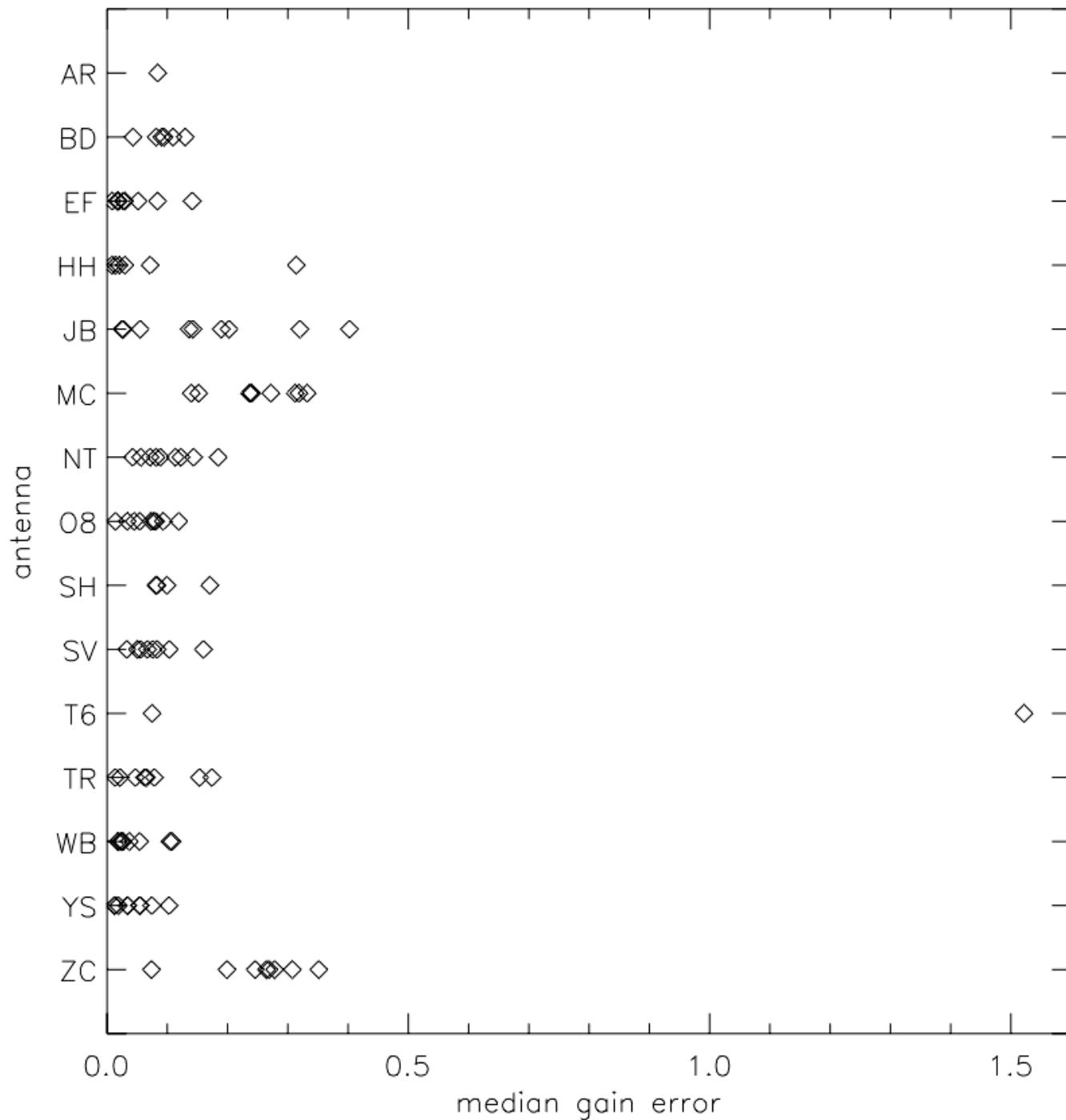
How YOU can help

- We need these files from the stations
    - antabfs
    - log
    - Up-to-date rxg
    - Feedback!

Antabfs and feedback name and shame

- **JB**
- **NT**
  - WZ
  - AR
  - T6