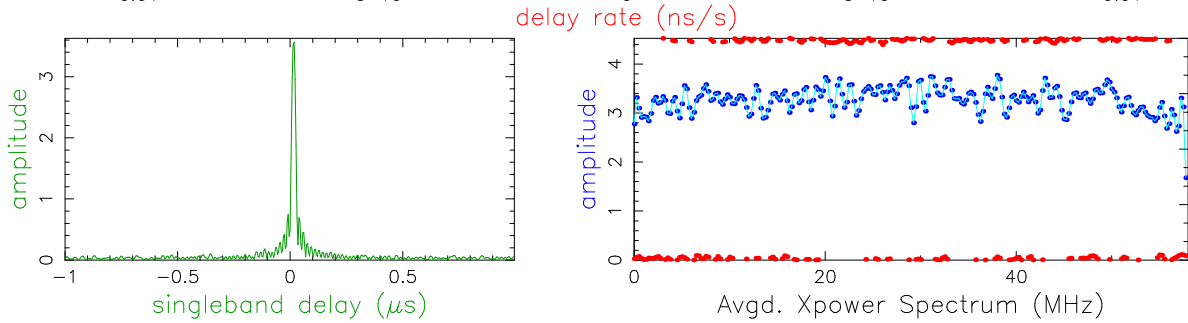


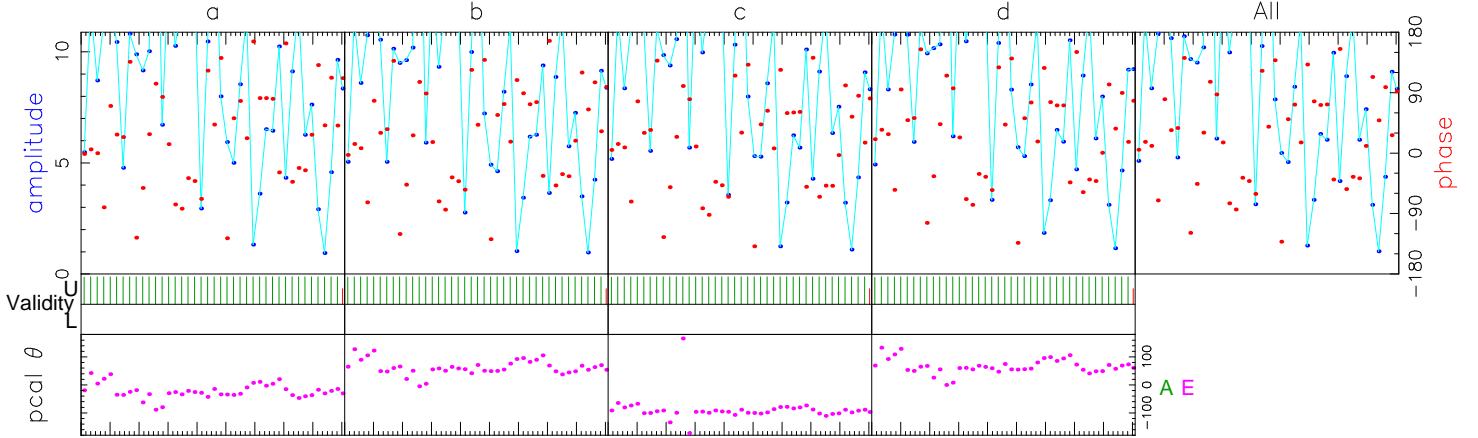
Fringe quality 5

SNR 155.1
 Int time 539.673
 Amp 3.628
 Phase -47.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.015473
 MBD -0.003811
 Fringe rate (Hz)
 0.036888
 Ion TEC 0.000
 Ref freq (MHz)
 86140.000
 AP (sec) 0.512



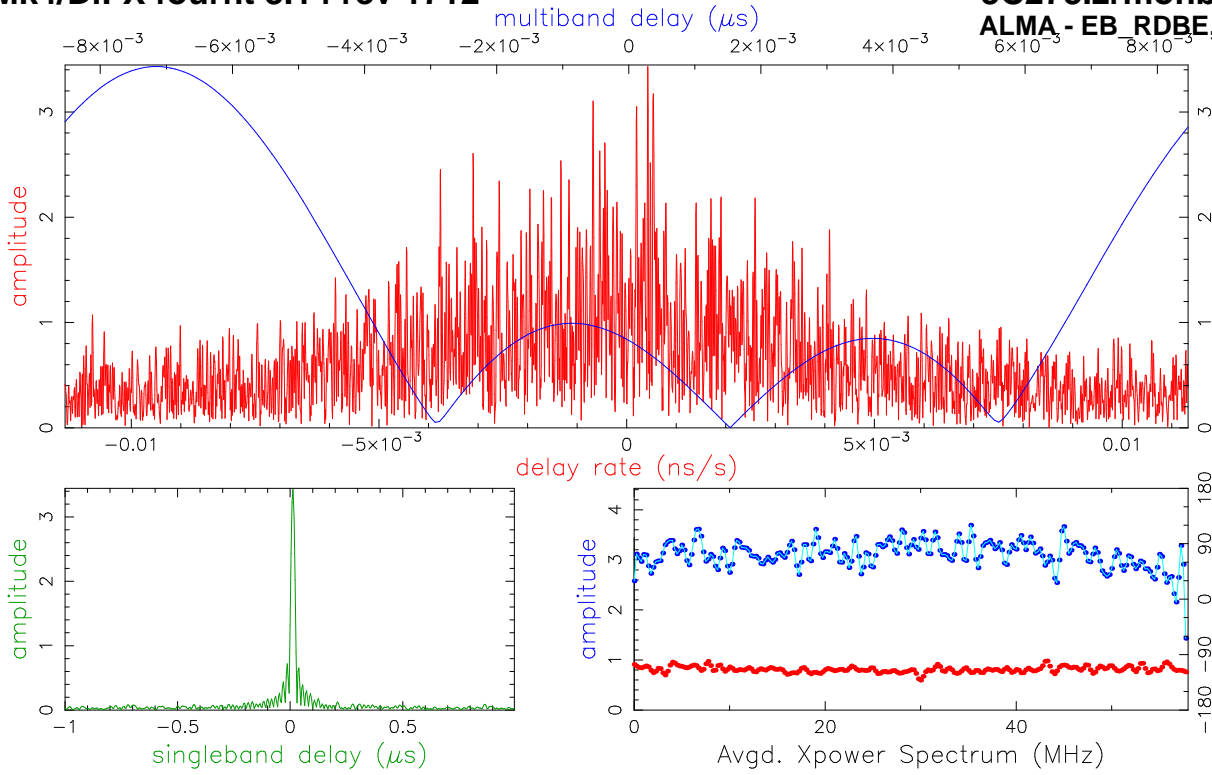
Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:142840
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.699s
 +2°03' 8.598"

Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



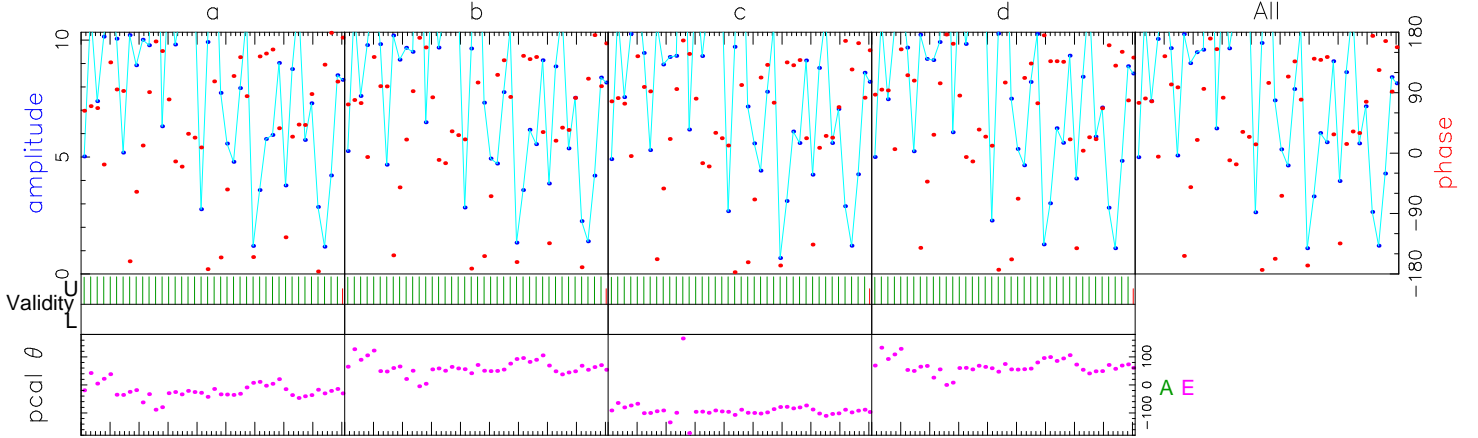
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------------------|
| 22.3 | 22.2 | 13.2 | 26.2 | Phase | 21.0 |
| 3.6 | 3.5 | 3.6 | 3.6 | Ampl. | 3.6 |
| 236.6 | 236.3 | 236.5 | 236.9 | Sbd box | 236.6 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| A 0 | 0 | 0 | 0 | PC freqs | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| A:E 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| A:E 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| A 1000 | 1000 | 1000 | 1000 | PC amp | |
| E 1000 | 1000 | 1000 | 1000 | | |
| A W00UL | W01UL | W02UL | W03UL | Chan ids | |
| E W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |
| Group delay (usec)(sbd) | 2.53869522965E+03 | Apriori delay (usec) | 2.53868197369E+03 | Resid mbdelay (usec) | -3.81070E-03 +/- 1.6E-05 |
| Sband delay (usec) | 2.53869744624E+03 | Apriori clock (usec) | -2.1344812E+03 | Resid sbdelay (usec) | 1.54726E-02 +/- 6.1E-05 |
| Phase delay (usec) | 2.53868197436E+03 | Apriori clockrate (us/s) | 1.7578703E-06 | Resid phdelay (usec) | 6.76491E-07 +/- 2.4E-08 |
| Delay rate (us/s) | 1.45181659828E+00 | Apriori rate (us/s) | 1.45181617004E+00 | Resid rate (us/s) | 4.28238E-07 +/- 7.6E-11 |
| Total phase (deg) | 29.5 | Apriori accel (us/s/s) | -2.93186848506E-05 | Resid phase (deg) | -47.3 +/- 0.7 |

RMS 73.8 Theor. 2.4 Amplitude 3.628 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 73.8 2.4 Search (4096X16) 3.454 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 181.1 4.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 ph/frq (deg) 6.7 0.7 Inc. seg. avg. 8.653 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
 amp/frq (%) 1.7 1.3 Inc. frq. avg. 3.580 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00
 A: az 60.0 el 46.4 pa -127.2 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) -8374.954 -10347.402 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE.W.11.zrmonb



Fringe quality 5
SNR 147.3
Int time 539.731
Amp 3.446
Phase 18.8
PFD 0.0e+00
Delays (us)
SBD 0.012094
MBD -0.007153
Fringe rate (Hz)
0.036907
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:142843
2017:170:130423
RA & Dec (J2000)
12h29m 6.699s
+2°03' 8.598"

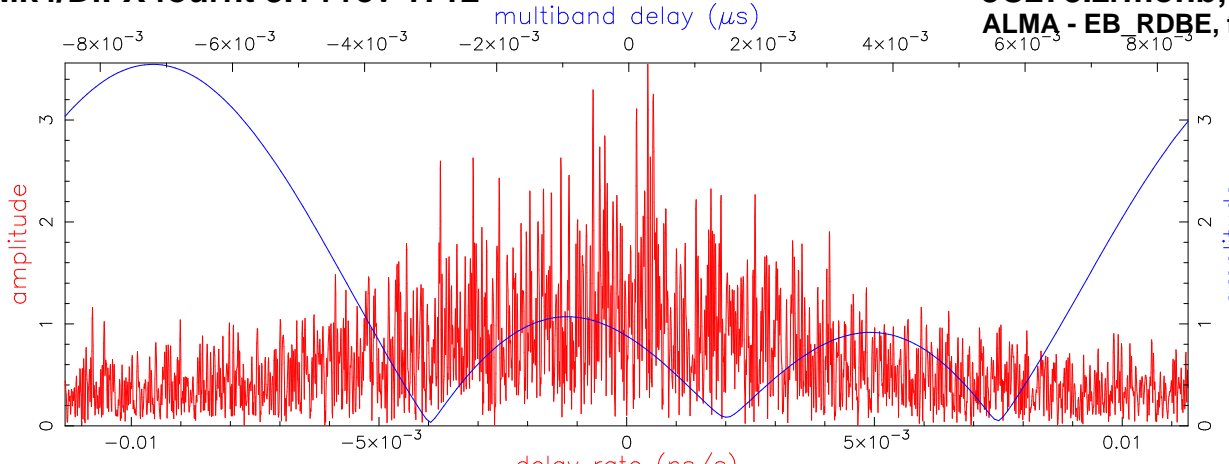
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|------------|----------|----------|----------|------------|-------|
| 87.5 | 88.3 | 83.5 | 89.1 | Phase | 87.1 |
| 3.4 | 3.5 | 3.5 | 3.4 | Ampl. | 3.4 |
| 235.9 | 235.7 | 235.7 | 236.0 | Sbd box | 235.8 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| A 0 | 0 | 0 | 0 | PC freqs | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| A:E 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| A:E 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| A 1000 | 1000 | 1000 | 1000 | PC amp | |
| E 1000 | 1000 | 1000 | 1000 | | |
| A W00UR | W01UR | W02UR | W03UR | Chan ids | |
| E W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |

Group delay (usec)(sbd) 2.53869188759E+03 Apriori delay (usec) 2.53868197369E+03 Resid mbdelay (usec) -7.15276E-03 +/- 1.6E-05
Sband delay (usec) 2.53869406748E+03 Apriori clock (usec) -2.1344812E+03 Resid sbdelay (usec) 1.20938E-02 +/- 6.5E-05
Phase delay (usec) 2.53868197649E+03 Apriori clockrate (us/s) 1.7578703E-06 Resid phdelay (usec) 2.80803E-06 +/- 2.5E-08
Delay rate (us/s) 1.45181659849E+00 Apriori rate (us/s) 1.45181617004E+00 Resid rate (us/s) 4.28451E-07 +/- 8.0E-11
Total phase (deg) 95.6 Apriori accel (us/s/s) -2.93186848506E-05 Resid phase (deg) 18.8 +/- 0.8
RMS Theor. Amplitude 3.446 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 73.1 2.5 Search (4096X16) 3.337 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 180.0 4.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
ph/frq (deg) 3.0 0.8 Inc. seg. avg. 8.192 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
amp/frq (%) 0.7 1.4 Inc. frq. avg. 3.435 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00

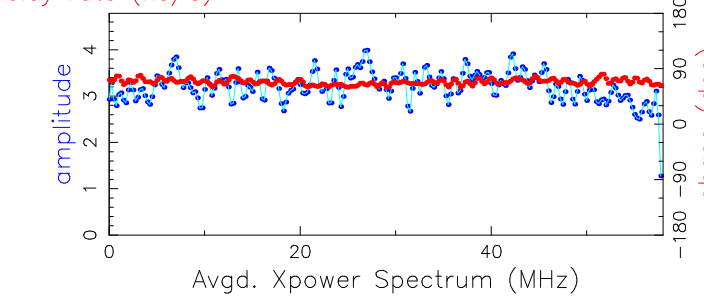
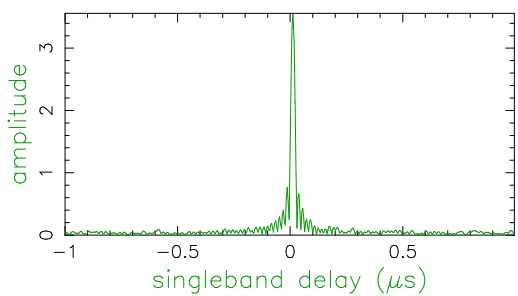
A: az 60.0 el 46.4 pa -127.2 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) -8374.954 -10347.402 simultaneous interpolator
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE.W.12.zrmonb



Fringe quality 5

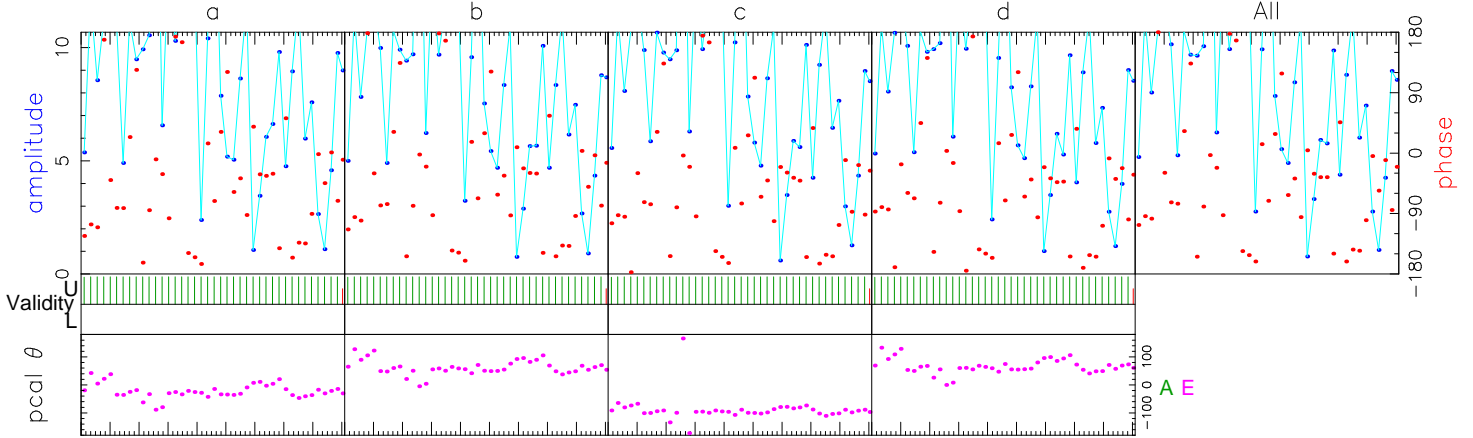
SNR 152.1
Int time 539.680
Amp 3.560
Phase -157.6
PFD 0.0e+00
Delays (us)
SBD 0.012154
MBD -0.007208
Fringe rate (Hz)
0.036905
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:142846
2017:170:130423
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"



Avgd. Xpower Spectrum (MHz)

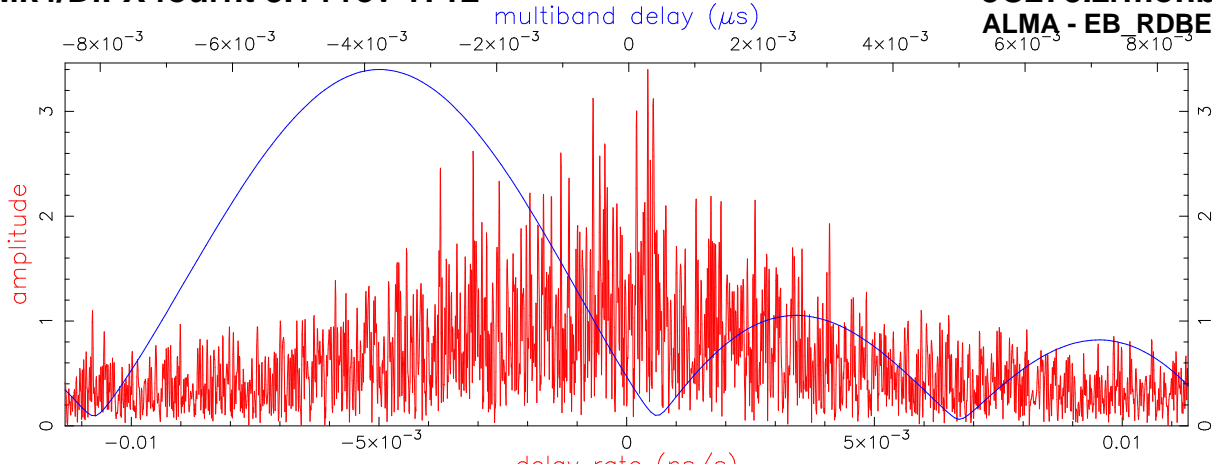
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| | -89.2 | -87.8 | -92.6 | -87.5 | Phase | -89.3 |
| | 3.7 | 3.4 | 3.6 | 3.5 | Ampl. | 3.6 |
| | 235.9 | 235.6 | 235.8 | 236.0 | Sbd box | 235.8 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| A | 0 | 0 | 0 | 0 | PC freqs | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| A:E | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| A:E | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| A | 1000 | 1000 | 1000 | 1000 | PC amp | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| A | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| E | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.53869183202E+03 | Apriori delay (usec) | 2.53868197369E+03 | Resid mbdelay (usec) | -7.20833E-03 | +/- 1.6E-05 |
| Sband delay (usec) | 2.53869412734E+03 | Apriori clock (usec) | -2.1344812E+03 | Resid sbdelay (usec) | 1.21537E-02 | +/- 6.2E-05 |
| Phase delay (usec) | 2.53868197081E+03 | Apriori clockrate (us/s) | 1.7578703E-06 | Resid phdelay (usec) | -2.87985E-06 | +/- 2.4E-08 |
| Delay rate (us/s) | 1.45181659847E+00 | Apriori rate (us/s) | 1.45181617004E+00 | Resid rate (us/s) | 4.28426E-07 | +/- 7.8E-11 |
| Total phase (deg) | | Apriori accel (us/s/s) | -2.93186848506E-05 | Resid phase (deg) | -157.6 | +/- 0.8 |

RMS Theor. Amplitude 3.560 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 72.7 2.4 Search (4096X16) 3.456 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 182.9 4.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 ph/frq (deg) 2.8 0.8 Inc. seg. avg. 8.530 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
 amp/frq (%) 2.7 1.3 Inc. frq. avg. 3.550 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00

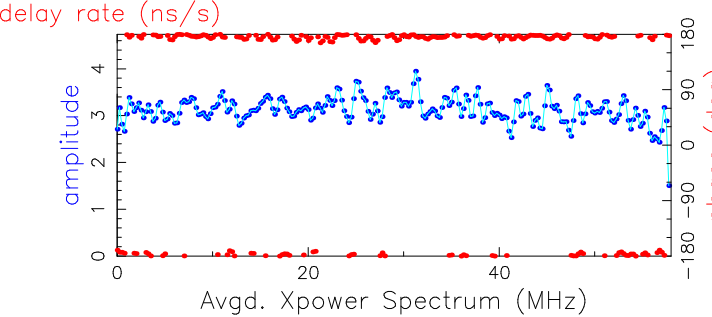
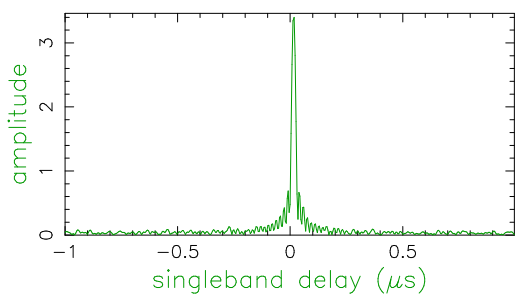
A: az 60.0 el 46.4 pa -127.2 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) -8374.954 -10347.402 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE.W.13.zrmonb



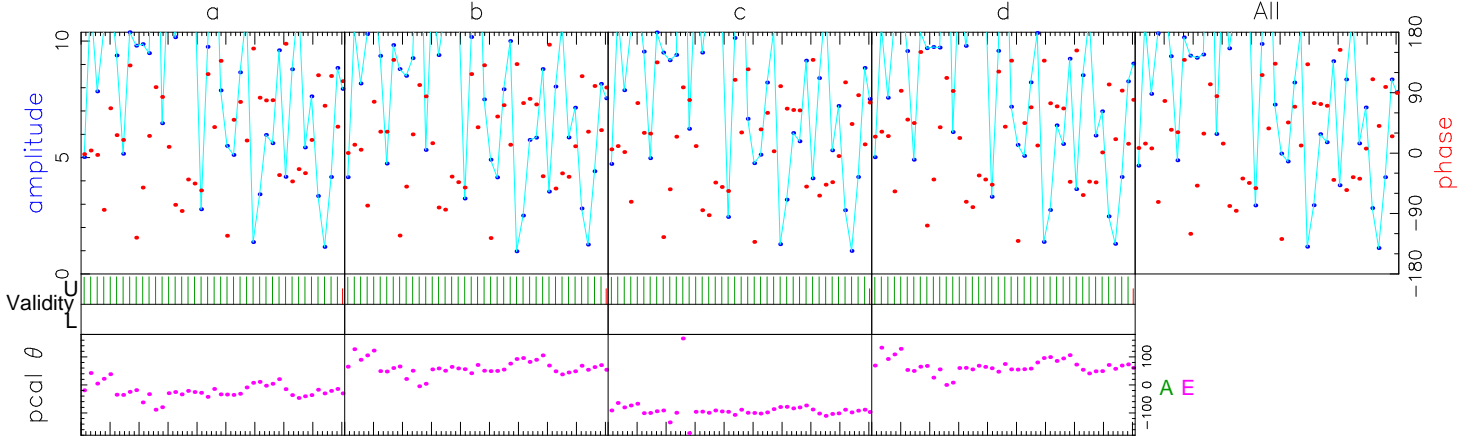
Fringe quality 5

SNR 148.0
Int time 539.724
Amp 3.462
Phase -49.7
PFD 0.0e+00
Delays (us)
SBD 0.015431
MBD -0.003780
Fringe rate (Hz) 0.036879
Ion TEC 0.000
Ref freq (MHz) 86140.000
AP (sec) 0.512

Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:142849
2017:170:130423
RA & Dec (J2000)
12h29m 6.699s
+2°03' 8.598"



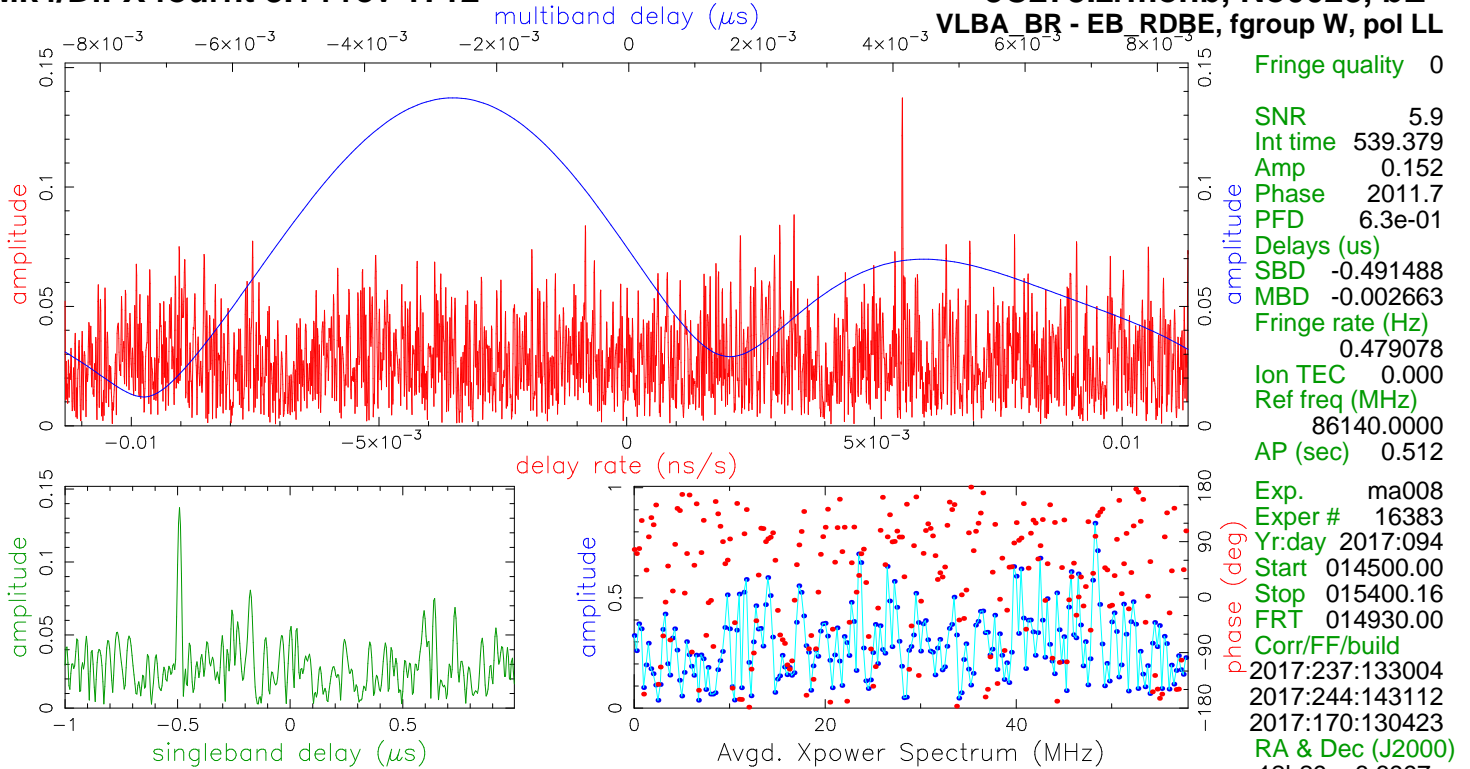
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



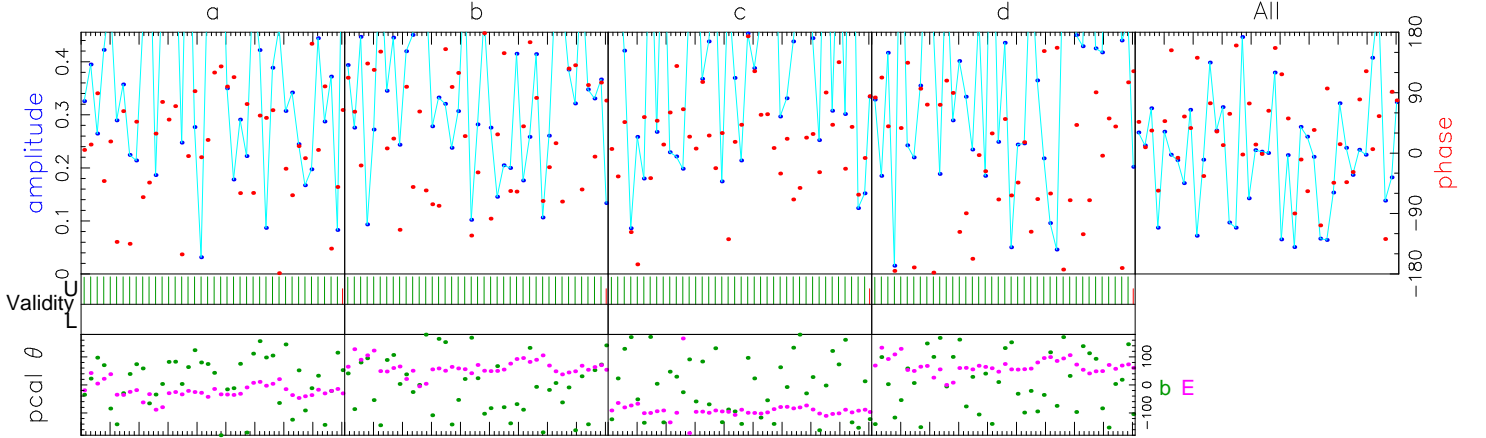
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------------------|
| 19.3 | 20.0 | 12.7 | 22.4 | Phase | 18.5 |
| 3.5 | 3.3 | 3.5 | 3.3 | Ampl. | 3.4 |
| 236.7 | 236.3 | 236.5 | 236.8 | Sbd box | 236.6 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| A 0 | 0 | 0 | 0 | PC freqs | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| A:E 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| A:E 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| A 1000 | 1000 | 1000 | 1000 | PC amp | |
| E 1000 | 1000 | 1000 | 1000 | | |
| A W00UR | W01UR | W02UR | W03UR | Chan ids | |
| E W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |
| Group delay (usec)(sbd) | 2.53869526085E+03 | Apriori delay (usec) | 2.53868197369E+03 | Resid mbdelay (usec) | -3.77950E-03 +/- 1.6E-05 |
| Sband delay (usec) | 2.53869740431E+03 | Apriori clock (usec) | -2.1344812E+03 | Resid sbdelay (usec) | 1.54306E-02 +/- 6.4E-05 |
| Phase delay (usec) | 2.53868197428E+03 | Apriori clockrate (us/s) | 1.7578703E-06 | Resid phdelay (usec) | 5.97091E-07 +/- 2.5E-08 |
| Delay rate (us/s) | 1.45181659817E+00 | Apriori rate (us/s) | 1.45181617004E+00 | Resid rate (us/s) | 4.28132E-07 +/- 8.0E-11 |
| Total phase (deg) | 27.1 | Apriori accel (us/s/s) | -2.93186848506E-05 | Resid phase (deg) | -49.7 +/- 0.8 |

ph/seg (deg) 72.9 2.5 Theor. Amplitude 3.462 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 177.7 4.3 Search (4096X16) 3.294 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 5.1 0.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 2.7 1.4 Inc. seg. avg. 8.151 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
 amp/frq (%) 2.7 1.4 Inc. frq. avg. 3.408 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00

A: az 60.0 el 46.4 pa -127.2 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) -8374.954 -10347.402 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/AE.W.14.zrmonb



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

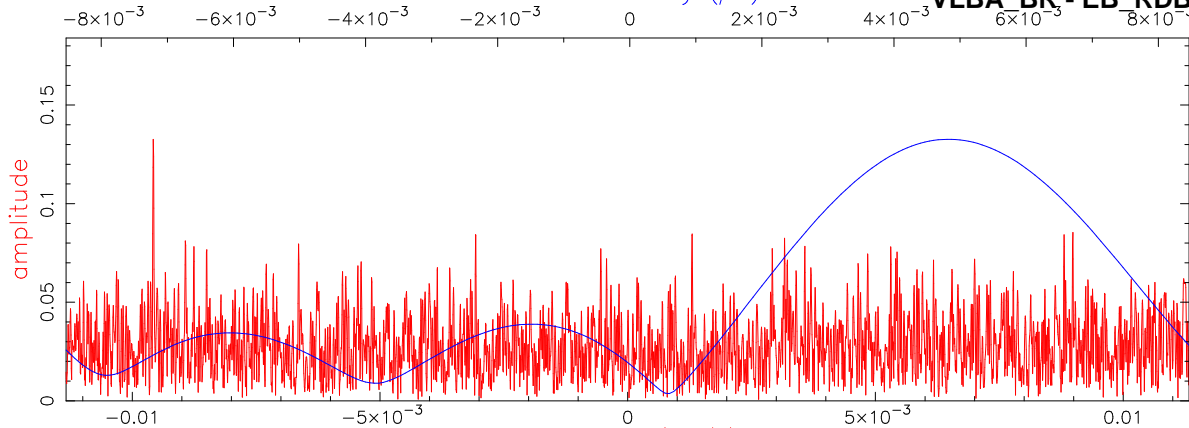


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| UL | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| b | 3890 | 296 | 1703 | 3109 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| b:E | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:E | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| b | 1000 | 1000 | 1000 | 1000 | PC amp | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| E | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -9.84382627811E+03 | Apriori delay (usec) | -9.84332868186E+03 | Resid mbdelay (usec) | -2.66292E-03 | +/- | 4.1E-04 |
| Sband delay (usec) | -9.84382016986E+03 | Apriori clock (usec) | -3.3216877E+01 | Resid sbdelay (usec) | -4.91488E-01 | +/- | 1.6E-03 |
| Phase delay (usec) | -9.84332868082E+03 | Apriori clockrate (us/s) | 8.4971669E-09 | Resid phdelay (usec) | 1.03923E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | 1.66176885160E+00 | Apriori rate (us/s) | 1.66176328999E+00 | Resid rate (us/s) | 5.56162E-06 | +/- | 2.0E-09 |
| Total phase (deg) | 1775.7 | Apriori accel (us/s/s) | 5.19960838309E-05 | Resid phase (deg) | 2011.7 | +/- | 19.5 |

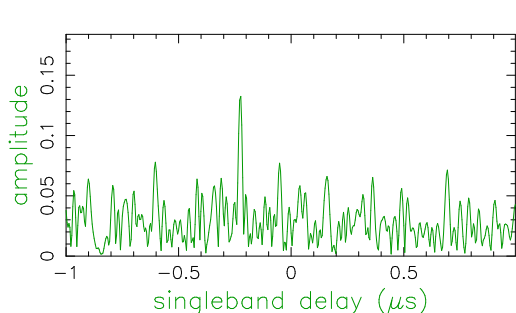
| | | | | | | | | | |
|--------------|-------|------------------|-------|----------------|-----------------|-----------------------|-----------------------------|------------------|--------------|
| ph/seg (deg) | 69.4 | Theor. | 62.5 | Amplitude | 0.152 +/- 0.026 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 102.5 | Search (4096X16) | 0.135 | Search | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 |
| ph/frq (deg) | 12.5 | Interp. | 0.000 | Inc. seg. avg. | 0.158 | Bits/sample: | 2x2 | SampCntNorm: | enabled |
| amp/frq (%) | 49.1 | Inc. frq. avg. | 0.145 | Inc. frq. avg. | 0.145 | Sample rate(MSamp/s): | 116 | mb window (us) | -0.009 0.009 |
| | | | | | | Data rate(Mb/s): | 928 | dr window (ns/s) | -0.011 0.011 |
| | | | | | | nlags: | 232 | ion window (TEC) | 0.00 0.00 |
| | | | | | | t_cohere | infinite | | |

multiband delay (μ s)

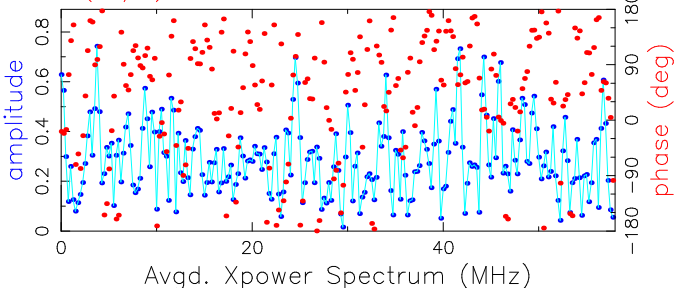


Fringe quality 0

SNR 5.8
Int time 539.387
Amp 0.184
Phase 791.1
PFD 8.6e-01
Delays (us)
SBD -0.225768
MBD 0.004750
Fringe rate (Hz) -0.824858
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512



delay rate (ns/s)



Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143115
2017:170:130423
RA & Dec (J2000)
12h29m 6.997s
+2° 03' 8.598"

Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

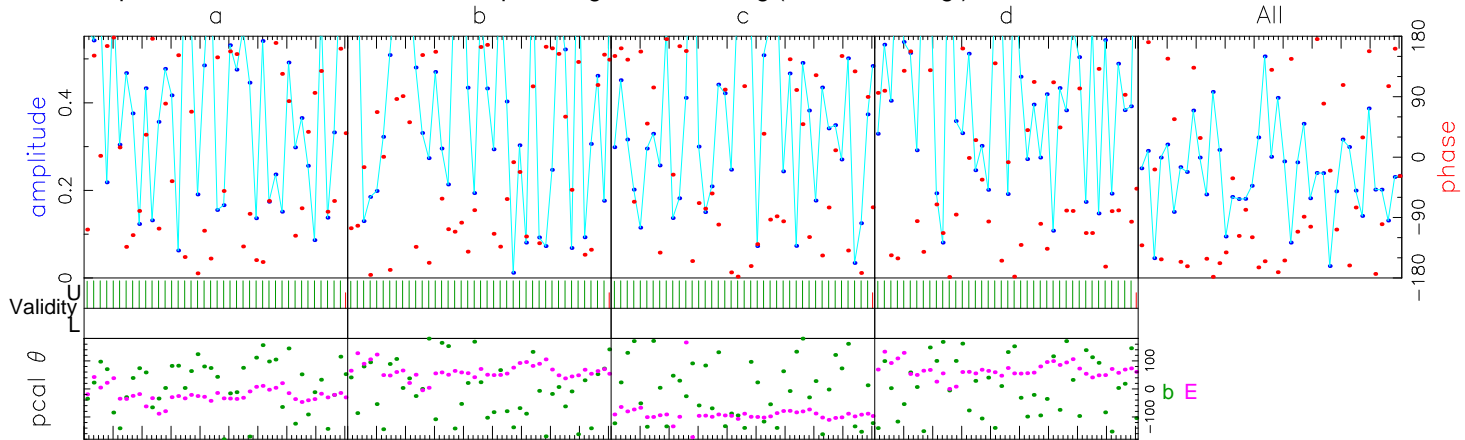


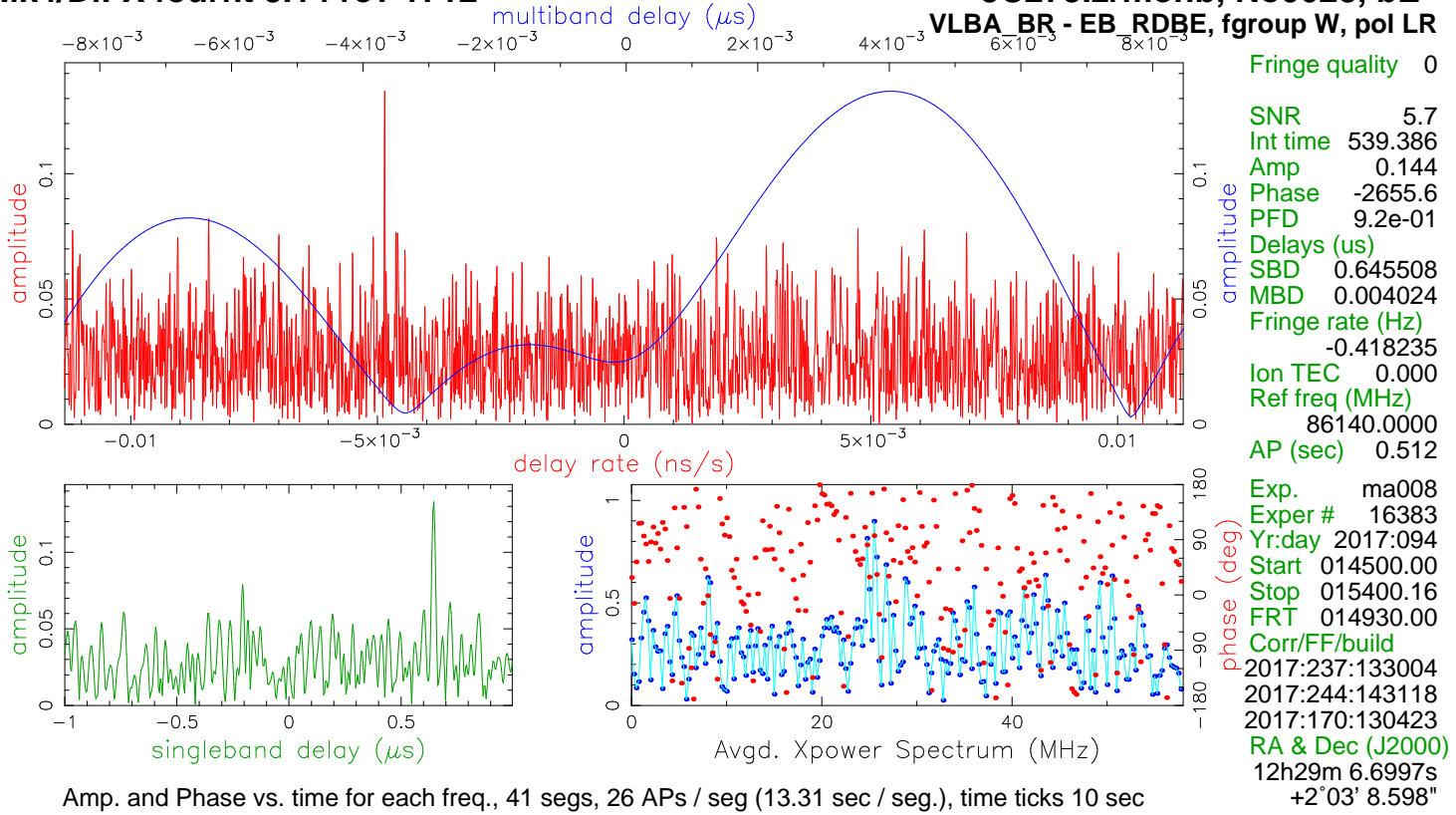
Table with 5 columns: Frequency (MHz), Phase, Amplitude, Sbd box, APs used. Rows correspond to frequencies 86151.11, 86209.70, 86268.30, 86326.89, and All.

Summary statistics table including Group delay, Sband delay, Phase delay, Delay rate, Total phase, Apriori delay, Apriori clock, Apriori clockrate, Apriori rate, Apriori accel, Resid mbdelay, Resid sbdelay, Resid phdelay, Resid rate, Resid phase.

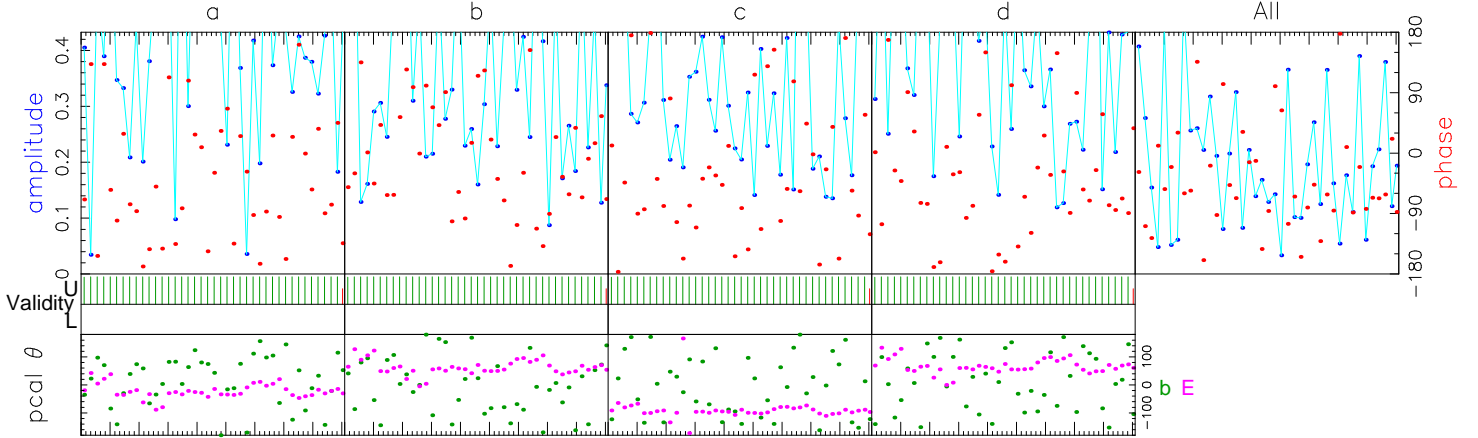
Performance metrics table including RMS, Theor., Amplitude, Search, Interp., Inc. seg. avg., Inc. frq. avg., Pcal mode, Pcal rate, Bits/sample, Sample rate, Data rate, nlags, t_cohere, sb window, mb window, dr window, ion window.

b: az 89.7 el 2.4 pa -41.9 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) -9421.252 -91.739 simultaneous interpolator

Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/bE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/bE.W.64.zrmonb



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

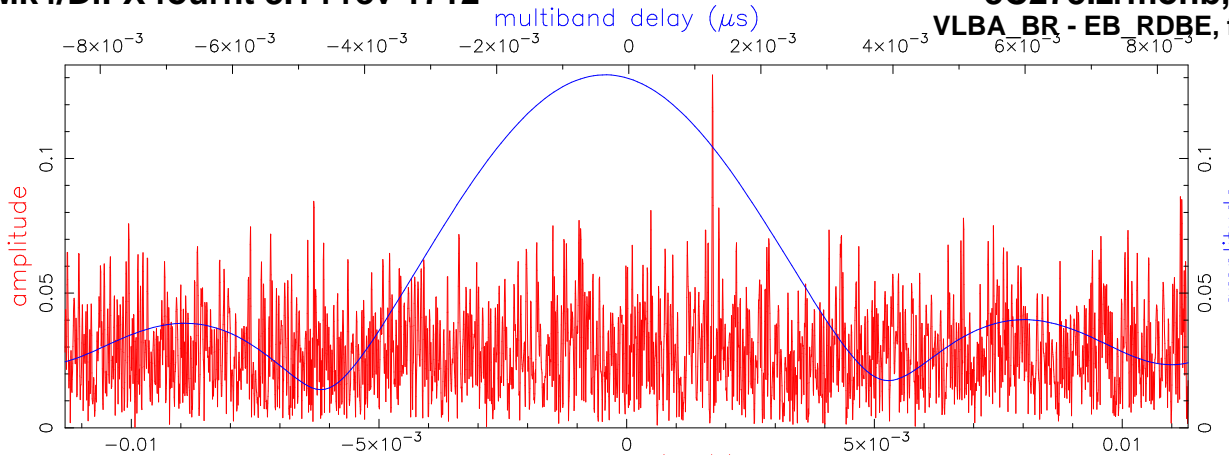


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|------------|----------|----------|----------|----------|------------|-------|
| -77.2 | -23.8 | -80.2 | -61.5 | | Phase | -61.8 |
| 0.2 | 0.1 | 0.1 | 0.2 | | Ampl. | 0.1 |
| 343.3 | 40.6 | 447.4 | 383.1 | | Sbd box | 382.8 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | | APs used | |
| b 3890 | 296 | 1703 | 3109 | | PC freqs | |
| E 3890 | 296 | 1703 | 3109 | | PC freqs | |
| b:E 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | |
| b:E 0:0 | 0:0 | 0:0 | 0:0 | | Manl PC | |
| b 1000 | 1000 | 1000 | 1000 | | PC amp | |
| E 1000 | 1000 | 1000 | 1000 | | | |
| b W00UL | W01UL | W02UL | W03UL | | Chan ids | |
| E W00UR | W01UR | W02UR | W03UR | | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

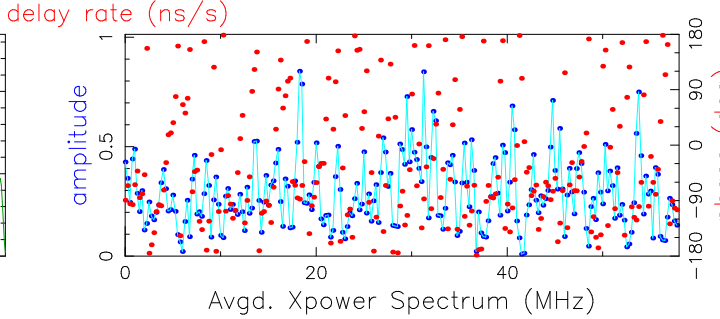
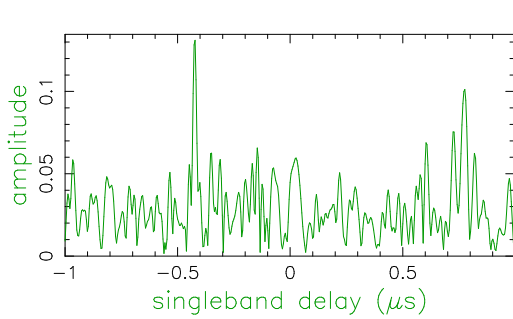
| | | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|-----------------------|-----------------------------|----------------------|----------------|--------------|
| Group delay (usec)(sbd) | -9.84267612452E+03 | Apriori delay (usec) | -9.84332868186E+03 | Resid mbdelay (usec) | 4.02400E-03 | +/- | 4.3E-04 | |
| Sband delay (usec) | -9.84268317372E+03 | Apriori clock (usec) | -3.3216877E+01 | Resid sbdelay (usec) | 6.45508E-01 | +/- | 1.7E-03 | |
| Phase delay (usec) | -9.84332868385E+03 | Apriori clockrate (us/s) | 8.4971669E-09 | Resid phdelay (usec) | -1.99380E-06 | +/- | 6.5E-07 | |
| Delay rate (us/s) | 1.66175843469E+00 | Apriori rate (us/s) | 1.66176328999E+00 | Resid rate (us/s) | -4.85530E-06 | +/- | 2.1E-09 | |
| Total phase (deg) | -2891.5 | Apriori accel (us/s/s) | 5.19960838309E-05 | Resid phase (deg) | -2655.6 | +/- | 20.1 | |
| RMS | Theor. | Amplitude | 0.144 +/- 0.025 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| 69.8 | 64.2 | Search (4096X16) | 0.132 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| amp/seg (%) | 103.0 112.1 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| ph/frq (deg) | 31.8 20.1 | Inc. seg. avg. | 0.135 | Sample rate(MSamp/s): | 116 | dr window (ns/s) | -0.011 0.011 | |
| amp/frq (%) | 17.3 35.0 | Inc. frq. avg. | 0.145 | Data rate(Mb/s): | 928 | ion window (TEC) | 0.00 0.00 | |
| | | | | lags: | 232 | t_cohere | infinite | |

b: az 89.7 el 2.4 pa -41.9 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) -9421.252 -91.739 simultaneous interpolator

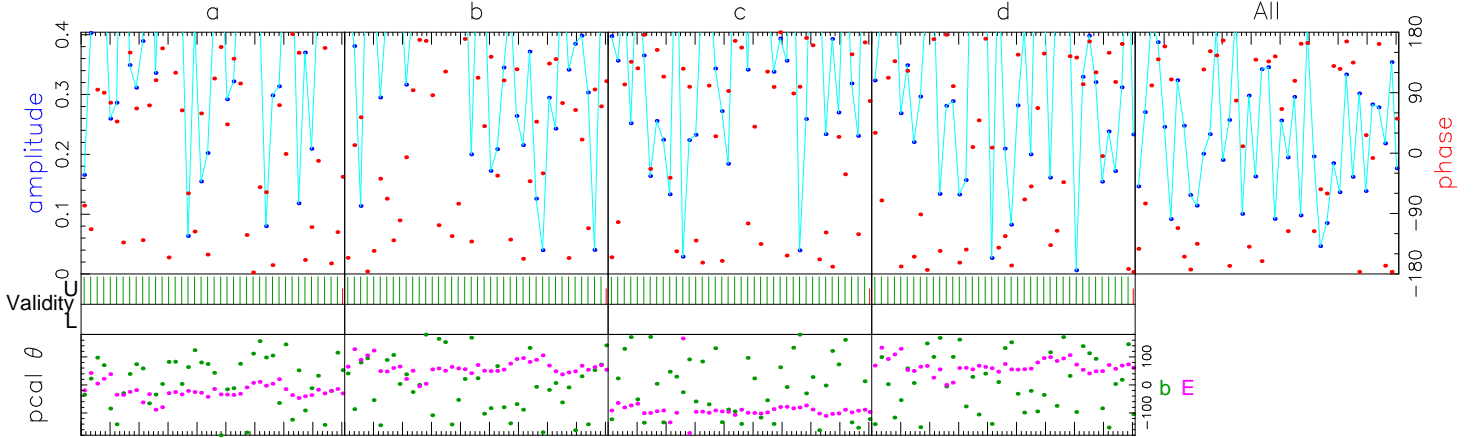
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/bE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/bE.W.65.zrmonb



Fringe quality 0
SNR 5.7
Int time 539.380
Amp 0.135
Phase 1866.9
PFD 9.3e-01
Delays (us)
SBD -0.424169
MBD -0.000407
Fringe rate (Hz) 0.149020
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build 2017:237:133004
2017:244:143120
2017:170:130423
RA & Dec (J2000) 12h29m 6.697s +2°03' 8.598"



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

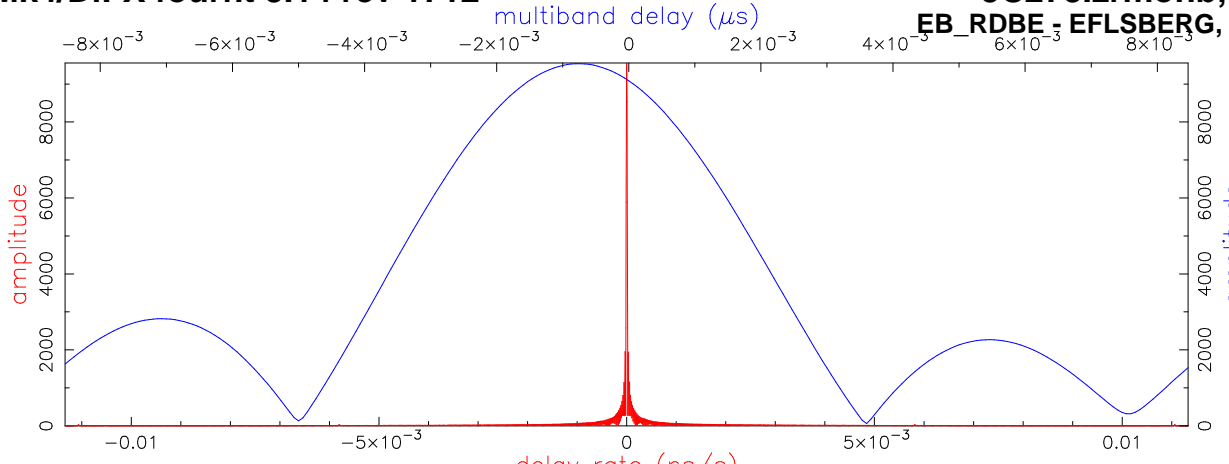


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| b | 3890 | 296 | 1703 | 3109 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| b:E | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b | 1000 | 1000 | 1000 | 1000 | ManI PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| b | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| E | W00UL | W01UL | W02UL | W03UL | Tracks | |

| | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| Group delay (usec)(sbd) | -9.8437557599E+03 | Apriori delay (usec) | -9.84332868186E+03 | Resid mbdelay (usec) | -4.07467E-04 | +/- 4.3E-04 |
| Sband delay (usec) | -9.84375285096E+03 | Apriori clock (usec) | -3.3216877E+01 | Resid sbdelay (usec) | -4.24169E-01 | +/- 1.7E-03 |
| Phase delay (usec) | -9.84332867669E+03 | Apriori clockrate (us/s) | 8.49716699E-09 | Resid phdelay (usec) | 5.17413E-06 | +/- 6.5E-07 |
| Delay rate (us/s) | 1.66176501996E+00 | Apriori rate (us/s) | 1.66176328999E+00 | Resid rate (us/s) | 1.72998E-06 | +/- 2.1E-09 |
| Total phase (deg) | 1630.9 | Apriori accel (us/s/s) | 5.19960838309E-05 | Resid phase (deg) | 1866.9 | +/- 20.1 |

| | | | | | | | | | |
|--------------|-------|------------------|-------|----------------|-----------------|--|----------------------|----------------|--------------|
| ph/seg (deg) | 70.7 | Theor. | 64.3 | Amplitude | 0.135 +/- 0.024 | Pcal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 109.5 | Search (4096X16) | 0.127 | Search | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 2.5 | Interp. | 0.000 | Inc. seg. avg. | 0.146 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| amp/frq (%) | 24.4 | Inc. frq. avg. | 0.125 | Inc. frq. avg. | 0.125 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 0.011 | |
| | | | | | | Data rate(Mb/s): 928 | ion window (TEC) | 0.00 0.00 | |

b: az 89.7 el 2.4 pa -41.9 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) -9421.252 -91.739 simultaneous interpolator
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/bE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/bE.W.66.zrmonb



Fringe quality 9

SNR 408576.8

Int time 539.724

Amp 9553.913

Phase 131.3

PFD 0.0e+00

Delays (us)

SBD -0.017837

MBD -0.000766

Fringe rate (Hz)

-0.000000

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. ma008

Exper # 16383

Yr:day 2017:094

Start 014500.00

Stop 015400.16

FRT 014930.00

Corr/FF/build

2017:237:133004

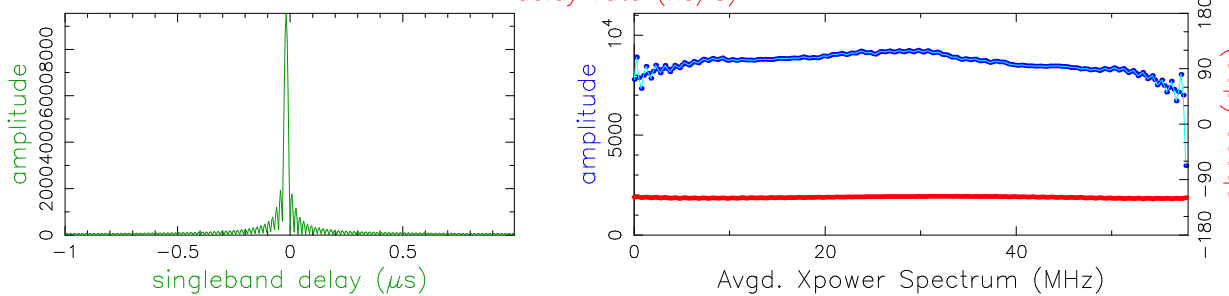
2017:244:143450

2017:170:130423

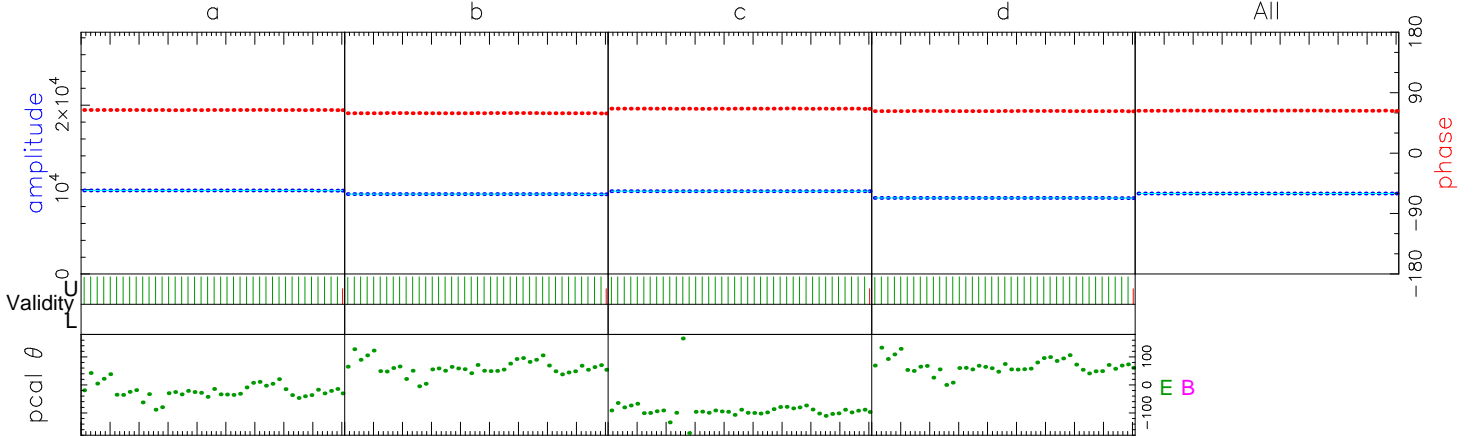
RA & Dec (J2000)

12h29m 6.6997s

+2°03' 8.598"



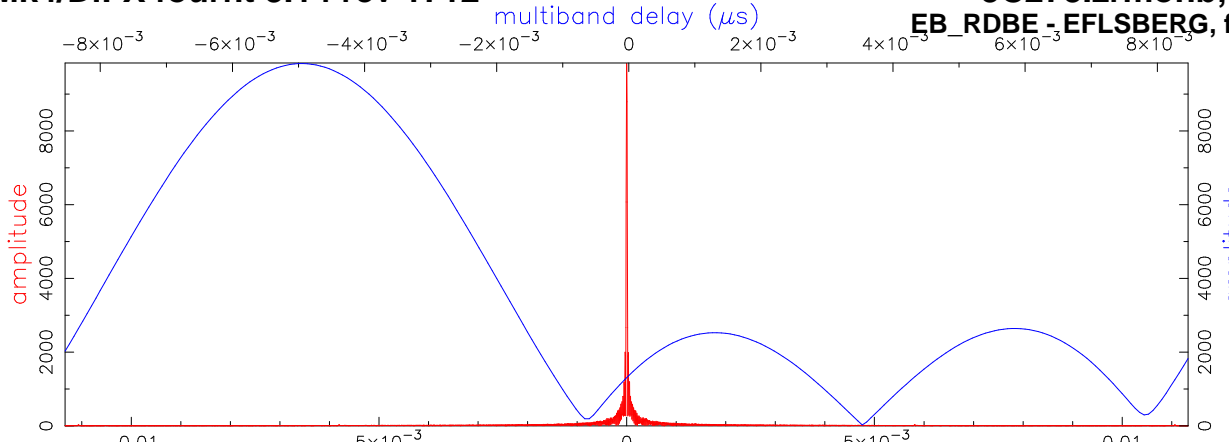
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



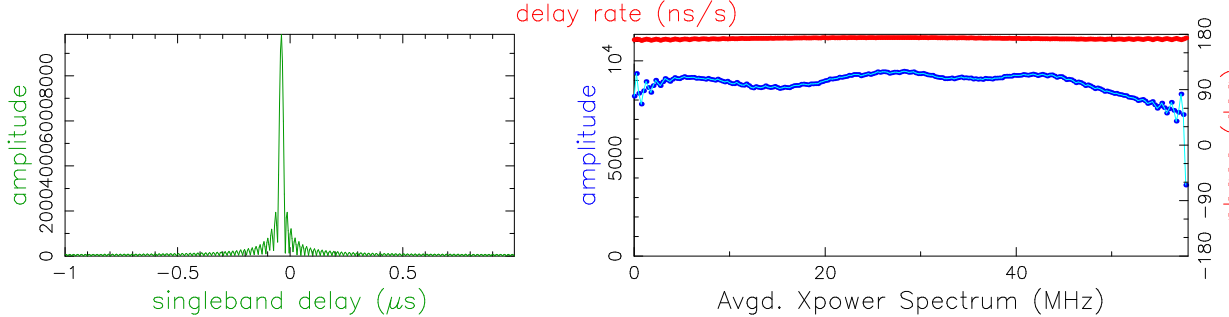
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|------------|--------|
| | 64.1 | 59.4 | 66.1 | 62.5 | 62.5 | Phase | 63.1 |
| | 9895.9 | 9463.8 | 9809.7 | 9010.0 | 9010.0 | Ampl. | 9544.9 |
| | 229.0 | 228.7 | 229.1 | 228.7 | 228.7 | Sbd box | 228.9 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | 3109 | PC freqs | |
| B | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | W03UL | Chan ids | |
| B | W00UL | W01UL | W02UL | W03UL | W03UL | Tracks | |
| | | | | | | Chan ids | |
| | | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -5.17832618667E-01 | Apriori delay (usec) | -5.00000000001E-01 | Resid mbdelay (usec) | -7.65952E-04 | +/- | 5.9E-09 |
| Sband delay (usec) | -5.17836965518E-01 | Apriori clock (usec) | -5.0000000E-01 | Resid sbdelay (usec) | -1.78370E-02 | +/- | 2.3E-08 |
| Phase delay (usec) | -4.99997965957E-01 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 2.03404E-06 | +/- | 9.0E-12 |
| Delay rate (us/s) | -3.89706690771E-12 | Apriori rate (us/s) | 0.00000000000E+00 | Resid rate (us/s) | -3.89707E-12 | +/- | 2.9E-14 |
| Total phase (deg) | 131.3 | Apriori accel (us/s/s) | 0.00000000000E+00 | Resid phase (deg) | 131.3 | +/- | 0.0 |

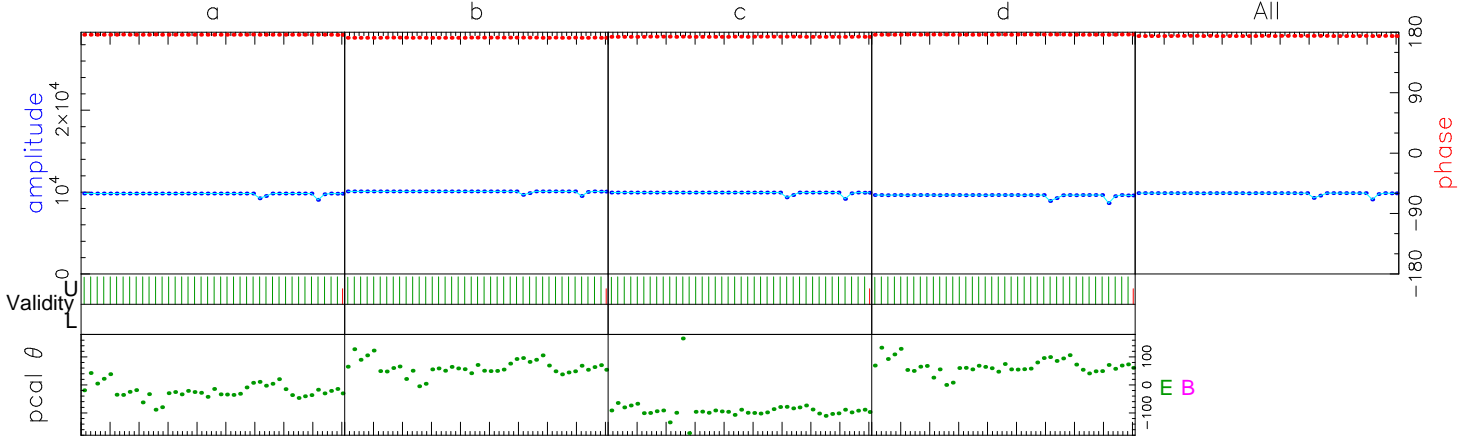
| | | | | | | | | | | |
|--------------|-----|-----|------------------|----------|--|---------------------------|-------------------|------------------|-------|------|
| ph/seg (deg) | 0.1 | 0.0 | Search (4096X16) | 9459.116 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 | |
| amp/seg (%) | 0.2 | 0.0 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.009 | 0.009 | |
| ph/frq (deg) | 3.5 | 0.0 | Inc. seg. avg. | 9536.035 | Bits/sample: 2x2 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 3.6 | 0.0 | Inc. frq. avg. | 9544.854 | Data rate(Mb/s): 928 | nlags: 232 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |



Fringe quality 9
 SNR 421012.4
 Int time 539.731
 Amp 9844.634
 Phase 310.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.039345
 MBD -0.004959
 Fringe rate (Hz)
 -0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143453
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.6997s
 +2°03' 8.598"



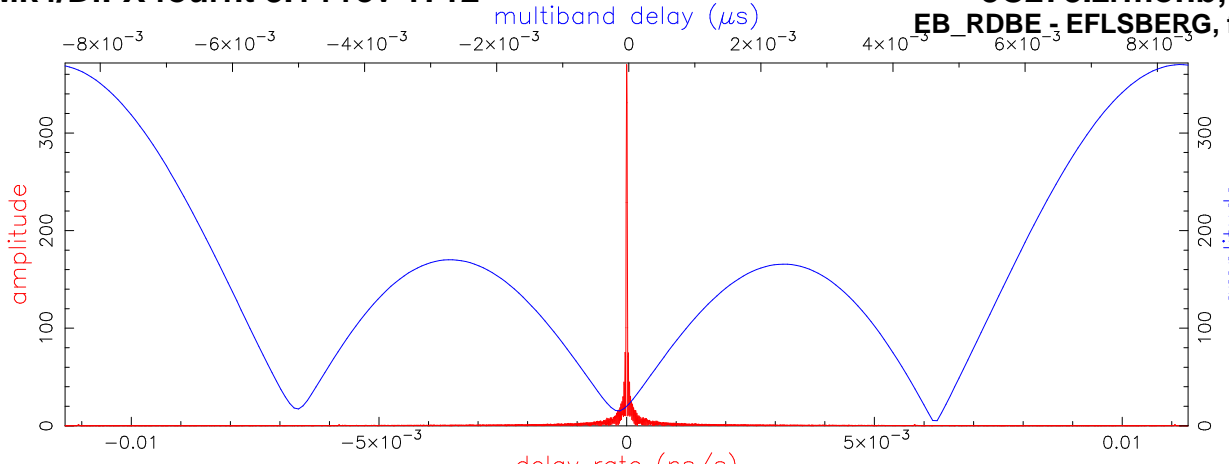
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



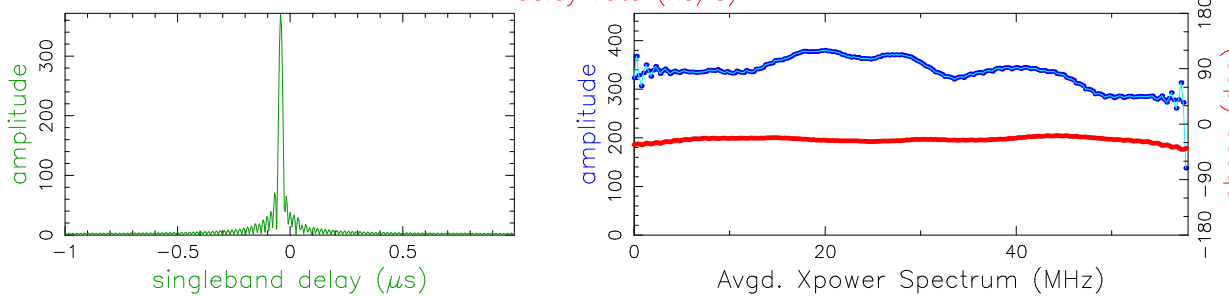
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | APs used | |
| B | 0 | 0 | 0 | 0 | PC freqs | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| B | W00UR | W01UR | W02UR | W03UR | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -5.39092360534E-01 | Apriori delay (usec) | -5.00000000001E-01 | Resid mbdelay (usec) | -4.95903E-03 | +/- | 5.8E-09 |
| Sband delay (usec) | -5.39345379311E-01 | Apriori clock (usec) | -5.00000000E-01 | Resid sbdelay (usec) | -3.93454E-02 | +/- | 2.3E-08 |
| Phase delay (usec) | -4.99994379207E-01 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 5.62079E-06 | +/- | 8.8E-12 |
| Delay rate (us/s) | -6.02273976647E-12 | Apriori rate (us/s) | 0.00000000000E+00 | Resid rate (us/s) | -6.02274E-12 | +/- | 2.8E-14 |
| Total phase (deg) | 310.8 | Apriori accel (us/s/s) | 0.00000000000E+00 | Resid phase (deg) | 310.8 | +/- | 0.0 |

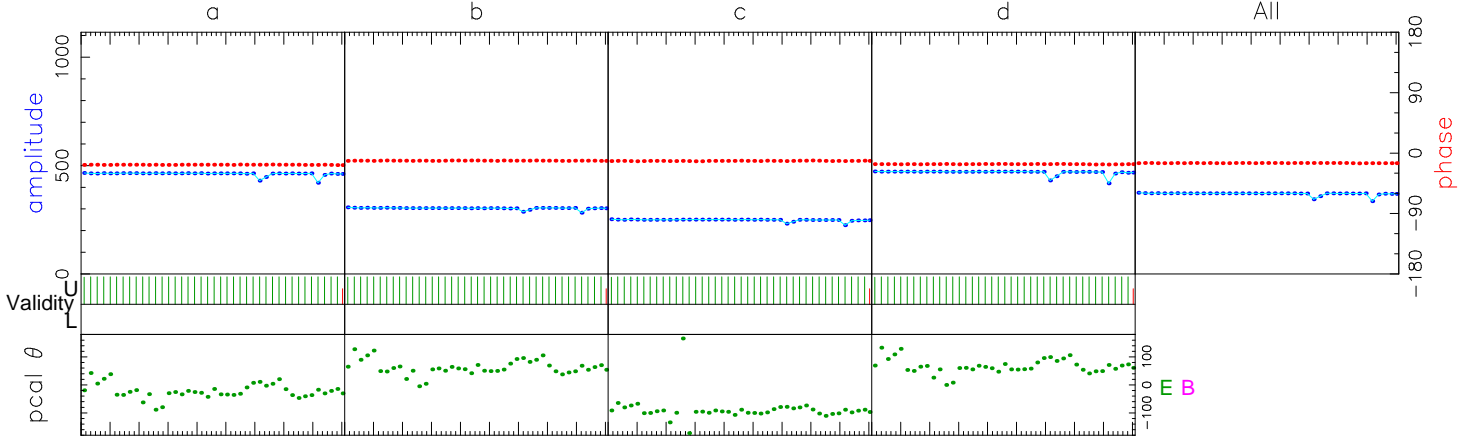
| | | | | | | | | | |
|--------------|-----|-----|------------------|----------|--|-----------------------|------------------|--------|-------|
| ph/seg (deg) | 0.1 | 0.0 | Search (4096X16) | 9708.699 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | |
| amp/seg (%) | 1.6 | 0.0 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | |
| ph/frq (deg) | 2.8 | 0.0 | Inc. seg. avg. | 9828.720 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 | 0.009 |
| amp/frq (%) | 1.8 | 0.0 | Inc. frq. avg. | 9834.479 | Sample rate(MSamp/s): 116 | Data rate(Mb/s): 928 | dr window (ns/s) | -0.011 | 0.011 |
| | | | | | | | ion window (TEC) | 0.00 | 0.00 |



Fringe quality 8
SNR 15896.4
Int time 539.724
Amp 371.711
Phase 121.6
PFD 0.0e+00
Delays (us)
SBD -0.042173
MBD -0.008730
Fringe rate (Hz)
-0.000003
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143455
2017:170:130423
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"



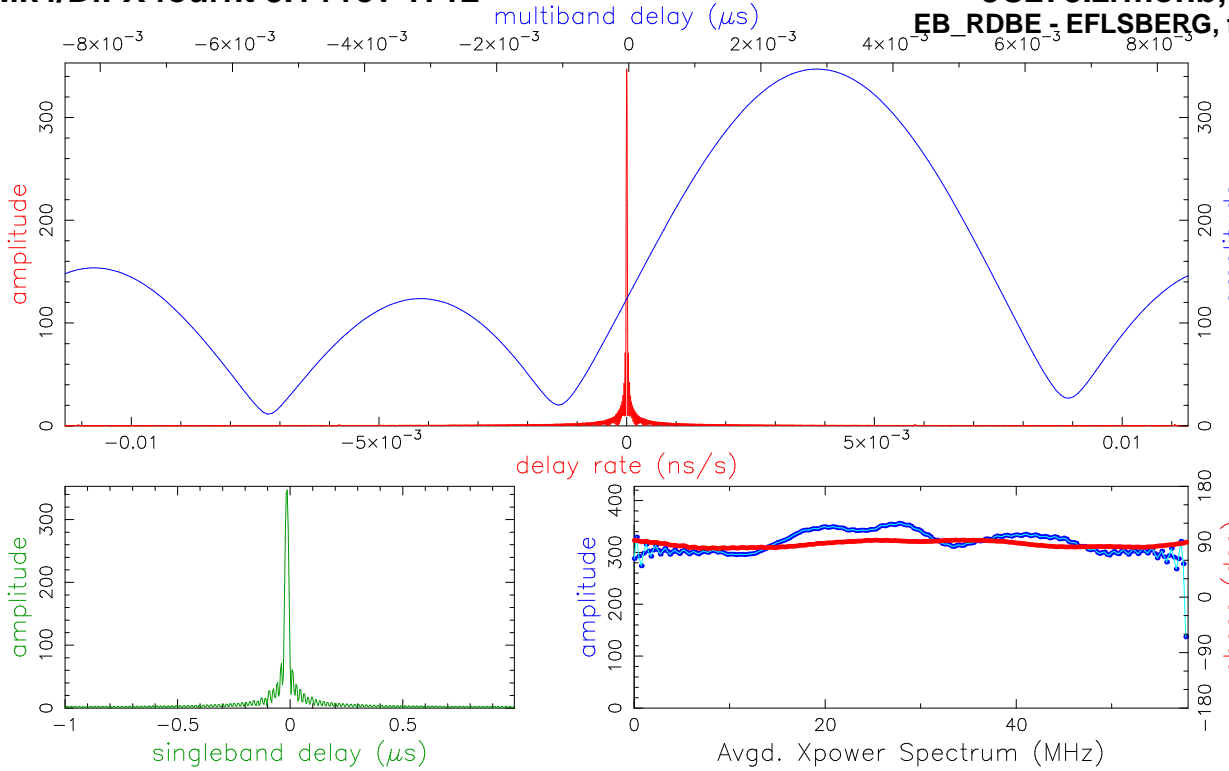
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | -17.4 | -11.3 | -11.6 | -16.4 | Phase | -14.9 |
| | 461.6 | 303.0 | 248.7 | 468.4 | Ampl. | 370.4 |
| | 223.3 | 223.5 | 223.3 | 223.5 | Sbd box | 223.2 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| B | 0 | 0 | 0 | 0 | PC freqs | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| B | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -5.42863138134E-01 | Apriori delay (usec) | -5.00000000001E-01 | Resid mbdelay (usec) | -8.72981E-03 | +/- | 1.5E-07 |
| Sband delay (usec) | -5.42172689656E-01 | Apriori clock (usec) | -5.0000000E-01 | Resid sbdelay (usec) | -4.21727E-02 | +/- | 6.0E-07 |
| Phase delay (usec) | -5.00000479500E-01 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | -4.79500E-07 | +/- | 2.3E-10 |
| Delay rate (us/s) | -3.75535538380E-11 | Apriori rate (us/s) | 0.00000000000E+00 | Resid rate (us/s) | -3.75536E-11 | +/- | 7.5E-13 |
| Total phase (deg) | 121.6 | Apriori accel (us/s/s) | 0.00000000000E+00 | Resid phase (deg) | 121.6 | +/- | 0.0 |

| | | | | | | | | | |
|--------------|------|-----|------------------|---------|--|---------------------------|------------------|--------|-------|
| ph/seg (deg) | 0.2 | 0.0 | Search (4096X16) | 368.745 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 2.0 | 0.0 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.009 | 0.009 |
| ph/frq (deg) | 4.0 | 0.0 | Inc. seg. avg. | 370.038 | Bits/sample: 2x2 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 26.0 | 0.0 | Inc. frq. avg. | 370.438 | Data rate(Mb/s): 928 | nlags: 232 | ion window (TEC) | 0.00 | 0.00 |

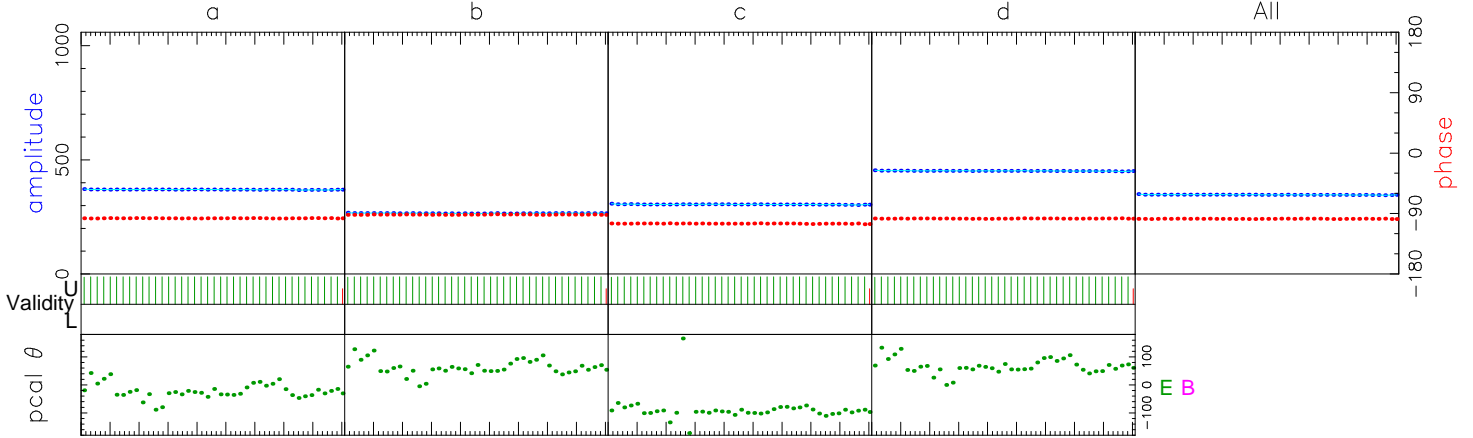


Fringe quality 9

SNR 15097.7
Int time 539.731
Amp 353.033
Phase -29.6
PFD 0.0e+00
Delays (us)
SBD -0.014737
MBD 0.002898
Fringe rate (Hz) 0.000003
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143458
2017:170:130423
RA & Dec (J2000)
12h29m 6.697s
+2°03' 8.598"

Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

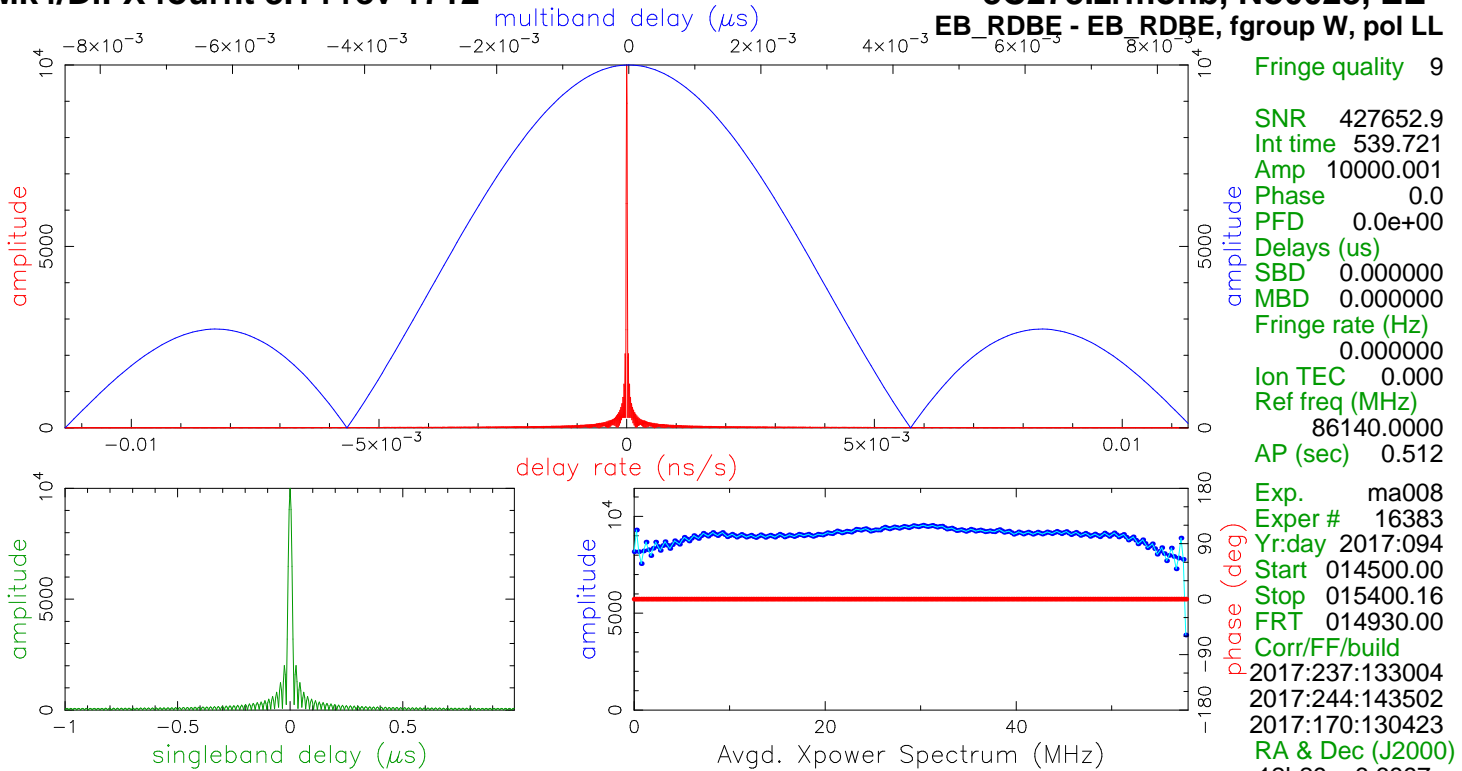


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | -97.0 | -91.6 | -105.0 | -97.4 | Phase | -97.8 |
| | 369.5 | 266.2 | 304.8 | 451.5 | Ampl. | 348.0 |
| | 229.3 | 229.2 | 230.4 | 229.5 | Sbd box | 229.6 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| B | 0 | 0 | 0 | 0 | PC freqs | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:B | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| B | W00UL | W01UL | W02UL | W03UL | Tracks | |

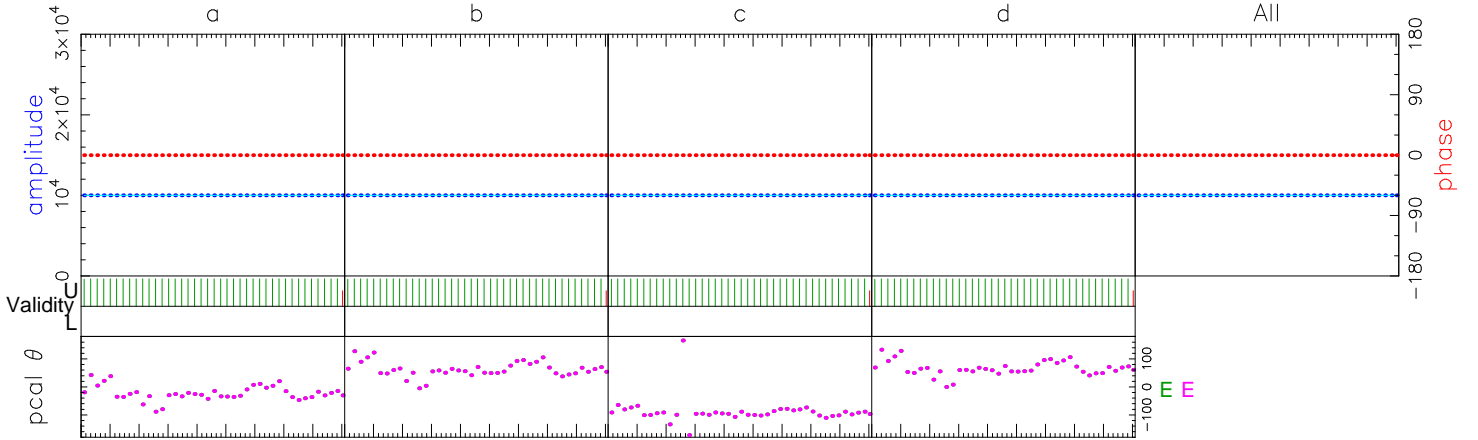
| | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| Group delay (usec)(sbd) | -5.14169088000E-01 | Apriori delay (usec) | -5.00000000000E-01 | Resid mbdelay (usec) | 2.89758E-03 | +/- 1.6E-07 |
| Sband delay (usec) | -5.14737103449E-01 | Apriori clock (usec) | -5.00000000E-01 | Resid sbdelay (usec) | -1.47371E-02 | +/- 6.3E-07 |
| Phase delay (usec) | -5.00003155309E-01 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | -3.15531E-06 | +/- 2.4E-10 |
| Delay rate (us/s) | 2.94051412127E-11 | Apriori rate (us/s) | 0.00000000000E+00 | Resid rate (us/s) | 2.94051E-11 | +/- 7.8E-13 |
| Total phase (deg) | -29.6 | Apriori accel (us/s/s) | 0.00000000000E+00 | Resid phase (deg) | -29.6 | +/- 0.0 |

| | | | | | | | | | |
|--------------|------|-----|------------------|---------|--|---------------------------|------------------|--------|-------|
| ph/seg (deg) | 0.2 | 0.0 | Search (4096X16) | 342.941 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 1.7 | 0.0 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.009 | 0.009 |
| ph/frq (deg) | 6.7 | 0.0 | Inc. seg. avg. | 347.022 | Bits/sample: 2x2 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 19.9 | 0.0 | Inc. frq. avg. | 348.016 | Data rate(Mb/s): 928 | nlags: 232 | ion window (TEC) | 0.00 | 0.00 |

E: az 226.3 el 31.8 pa 27.6 B: az 226.3 el 31.8 pa 28.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EB..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EB.W.142.zrmonb



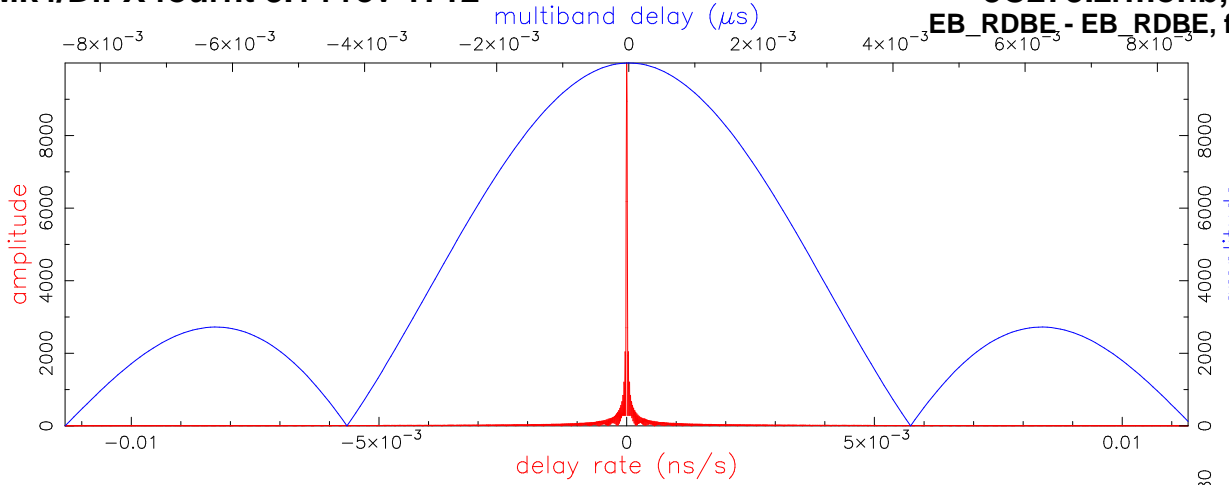
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|---------|
| | 0.0 | 0.0 | 0.0 | 0.0 | Phase | 0.0 |
| | 10000.0 | 10000.0 | 10000.0 | 10000.0 | Ampl. | 10000.0 |
| | 233.0 | 233.0 | 233.0 | 233.0 | Sbd box | 233.0 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| E | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|------------------|--------------------------|------------------|----------------------|-------------|-----|---------|
| Group delay (usec)(sbd) | 0.0000000000E+00 | Apriori delay (usec) | 0.0000000000E+00 | Resid mbdelay (usec) | 0.00000E+00 | +/- | 5.7E-09 |
| Sband delay (usec) | 0.0000000000E+00 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 0.00000E+00 | +/- | 2.2E-08 |
| Phase delay (usec) | 0.0000000000E+00 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 0.00000E+00 | +/- | 8.6E-12 |
| Delay rate (us/s) | 0.0000000000E+00 | Apriori rate (us/s) | 0.0000000000E+00 | Resid rate (us/s) | 0.00000E+00 | +/- | 2.8E-14 |
| Total phase (deg) | 0.0 | Apriori accel (us/s/s) | 0.0000000000E+00 | Resid phase (deg) | 0.0 | +/- | 0.0 |

| | | | | | | | | | | | |
|--------------|-----|------------------|-----------|-------------------|-----------|------------------------|---------------------|------------------|-----------------------------|------------------|--------------|
| ph/seg (deg) | 0.0 | RMS | 0.0 | Theor. | 0.0 | Amplitude | 10000.001 +/- 0.023 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 0.0 | Search (4096X16) | 10000.001 | Interp. | 0.000 | Inc. seg. avg. | 10000.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 |
| ph/frq (deg) | 0.0 | Inc. seg. avg. | 10000.000 | Inc. frq. avg. | 10000.001 | Bits/sample: | 2x2 | SampCntNorm: | enabled | mb window (us) | -0.009 0.009 |
| amp/frq (%) | 0.0 | Inc. frq. avg. | 10000.001 | Data rate (Mb/s): | 928 | Sample rate (MSamp/s): | 116 | nlags: | 232 | dr window (ns/s) | -0.011 0.011 |
| | | | | | | t_cohere: | infinite | ion window (TEC) | 0.00 | 0.00 | 0.00 |



Fringe quality 9

SNR 427656.6

Int time 539.731

Amp 9999.998

Phase 0.0

PFD 0.0e+00

Delays (us)

SBD 0.000000

MBD 0.000000

Fringe rate (Hz)

0.000000

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. ma008

Exper # 16383

Yr:day 2017:094

Start 014500.00

Stop 015400.16

FRT 014930.00

Corr/FF/build

2017:237:133004

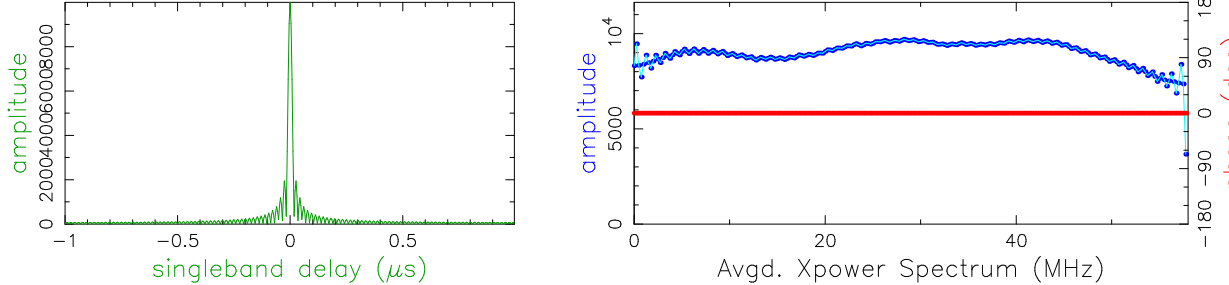
2017:244:143505

2017:170:130423

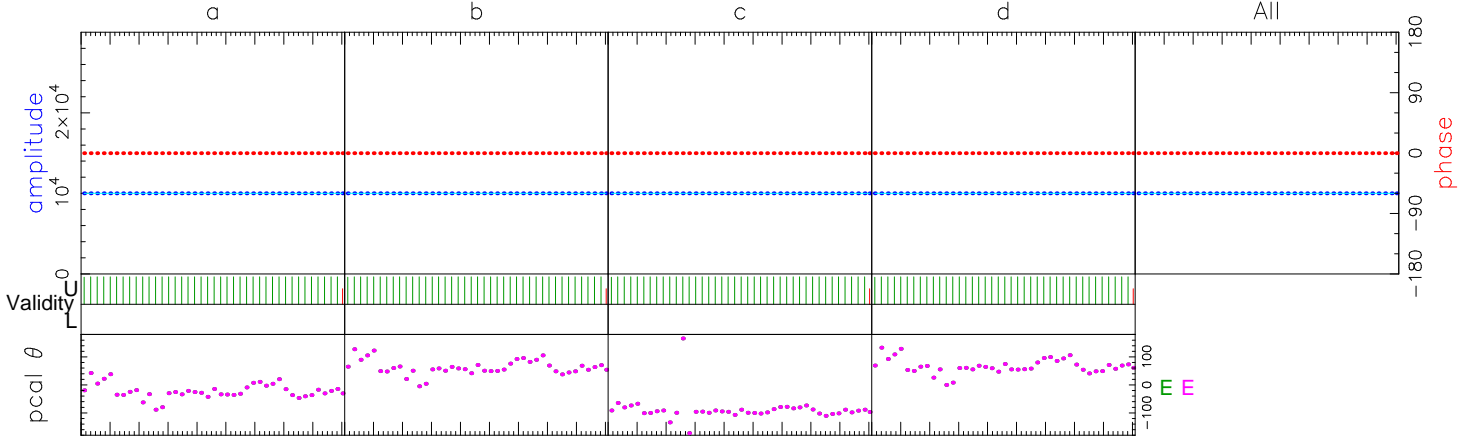
RA & Dec (J2000)

12h29m 6.6997s

+2°03' 8.598"



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|------------------|--------------------------|------------------|----------------------|-------------|-------------|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | Sbd box | 233.0 |
| E | 3890 | 296 | 1703 | 3109 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| E | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 0.0000000000E+00 | Apriori delay (usec) | 0.0000000000E+00 | Resid mbdelay (usec) | 0.00000E+00 | +/- 5.7E-09 |
| Sband delay (usec) | 0.0000000000E+00 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 0.00000E+00 | +/- 2.2E-08 |
| Phase delay (usec) | 0.0000000000E+00 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 0.00000E+00 | +/- 8.6E-12 |
| Delay rate (us/s) | 0.0000000000E+00 | Apriori rate (us/s) | 0.0000000000E+00 | Resid rate (us/s) | 0.00000E+00 | +/- 2.8E-14 |
| Total phase (deg) | 0.0 | Apriori accel (us/s/s) | 0.0000000000E+00 | Resid phase (deg) | 0.0 | +/- 0.0 |

ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 9999.998 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 0.0 0.0 Search (4096X16) 9999.998 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

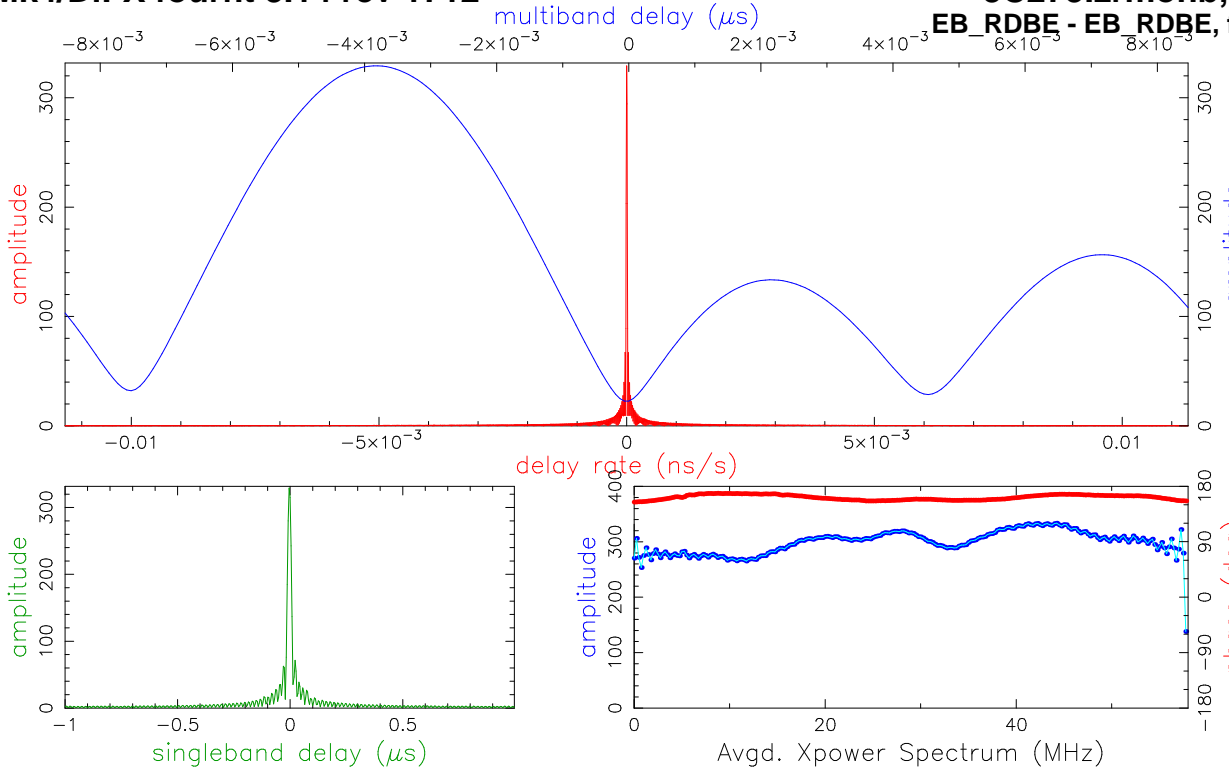
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009

amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011

amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.998 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00

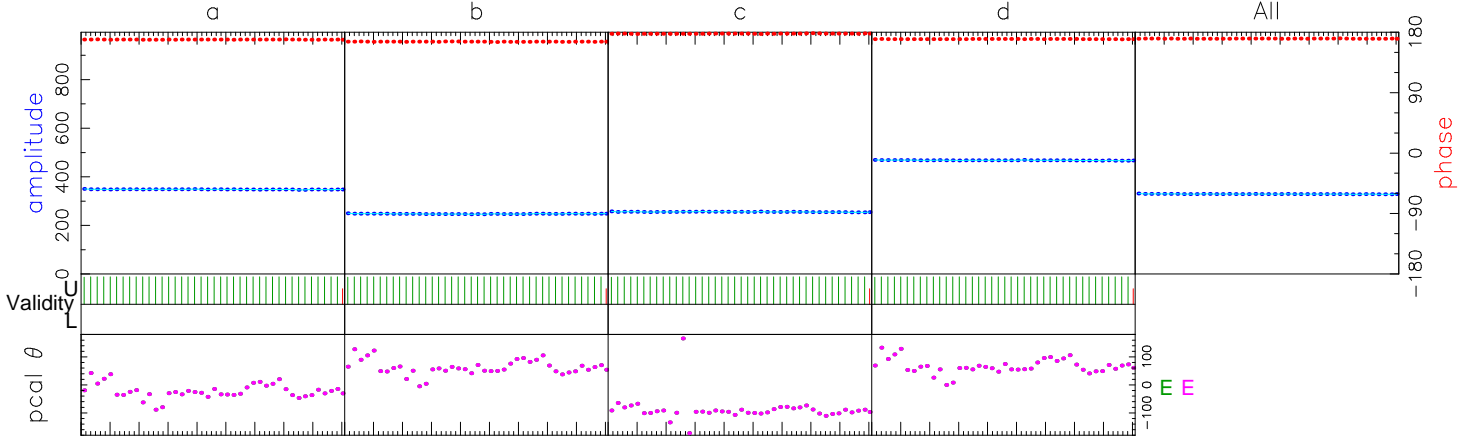
E: az 226.3 el 31.8 pa 27.6 E: az 226.3 el 31.8 pa 27.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EE..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EE.W.144.zrmonb



Fringe quality 8
 SNR 14189.6
 Int time 539.721
 Amp 331.802
 Phase 170.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.003089
 MBD -0.003871
 Fringe rate (Hz)
 -0.000003
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143507
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.6997s
 +2°03' 8.598"

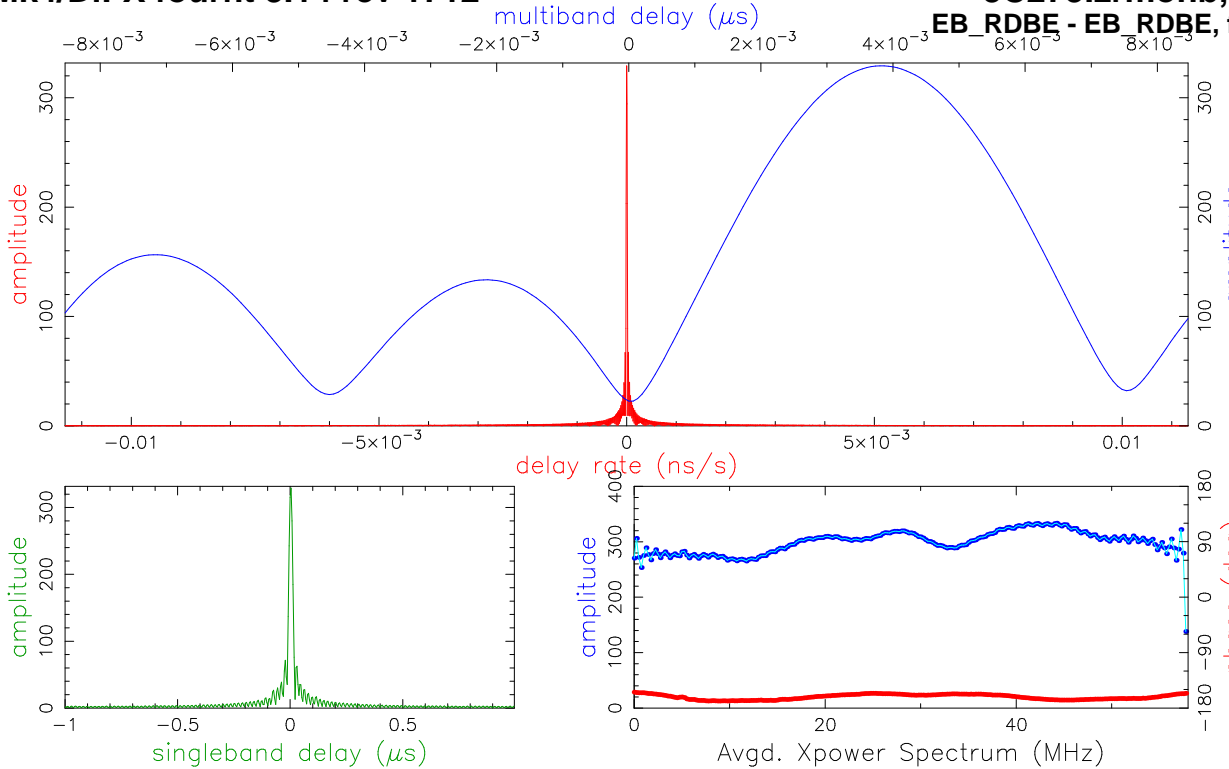
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | 169.0 | 165.8 | 177.8 | 169.7 | Phase | 170.3 |
| | 348.3 | 247.6 | 255.7 | 468.1 | Ampl. | 329.9 |
| | 232.8 | 232.4 | 231.6 | 232.3 | Sbd box | 232.3 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| E | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|-------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -3.87085653333E-03 | Apriori delay (usec) | 0.00000000000E+00 | Resid mbdelay (usec) | -3.87086E-03 | +/- | 1.7E-07 |
| Sband delay (usec) | -3.08855172414E-03 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | -3.08855E-03 | +/- | 6.7E-07 |
| Phase delay (usec) | 5.49271809239E-06 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 5.49272E-06 | +/- | 2.6E-10 |
| Delay rate (us/s) | -3.40107657400E-11 | Apriori rate (us/s) | 0.00000000000E+00 | Resid rate (us/s) | -3.40108E-11 | +/- | 8.4E-13 |
| Total phase (deg) | 170.3 | Apriori accel (us/s/s) | 0.00000000000E+00 | Resid phase (deg) | 170.3 | +/- | 0.0 |

| | | | | | | | | |
|--------------|------|-----|------------------|-------------------|--|------------------------------|------------------|--------------|
| ph/seg (deg) | 0.1 | 0.0 | Amplitude | 331.802 +/- 0.023 | Pcal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 0.8 | 0.0 | Search (4096X16) | 322.917 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 6.2 | 0.0 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| amp/frq (%) | 26.8 | 0.0 | Inc. seg. avg. | 329.161 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 0.011 | |
| | | | Inc. frq. avg. | 329.922 | Data rate(Mb/s): 928 | nlags: 232 t_cohere infinite | ion window (TEC) | 0.00 0.00 |

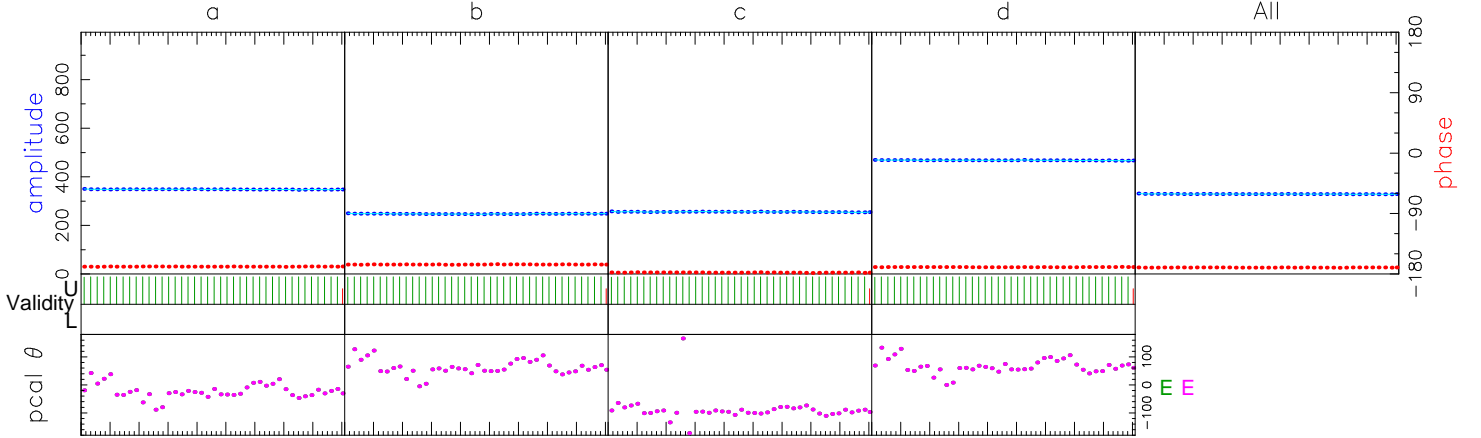


Fringe quality 8

SNR 14189.5
 Int time 539.731
 Amp 331.797
 Phase -170.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.003089
 MBD 0.003871
 Fringe rate (Hz)
 0.000003
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143510
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.6997s
 +2°03' 8.598"

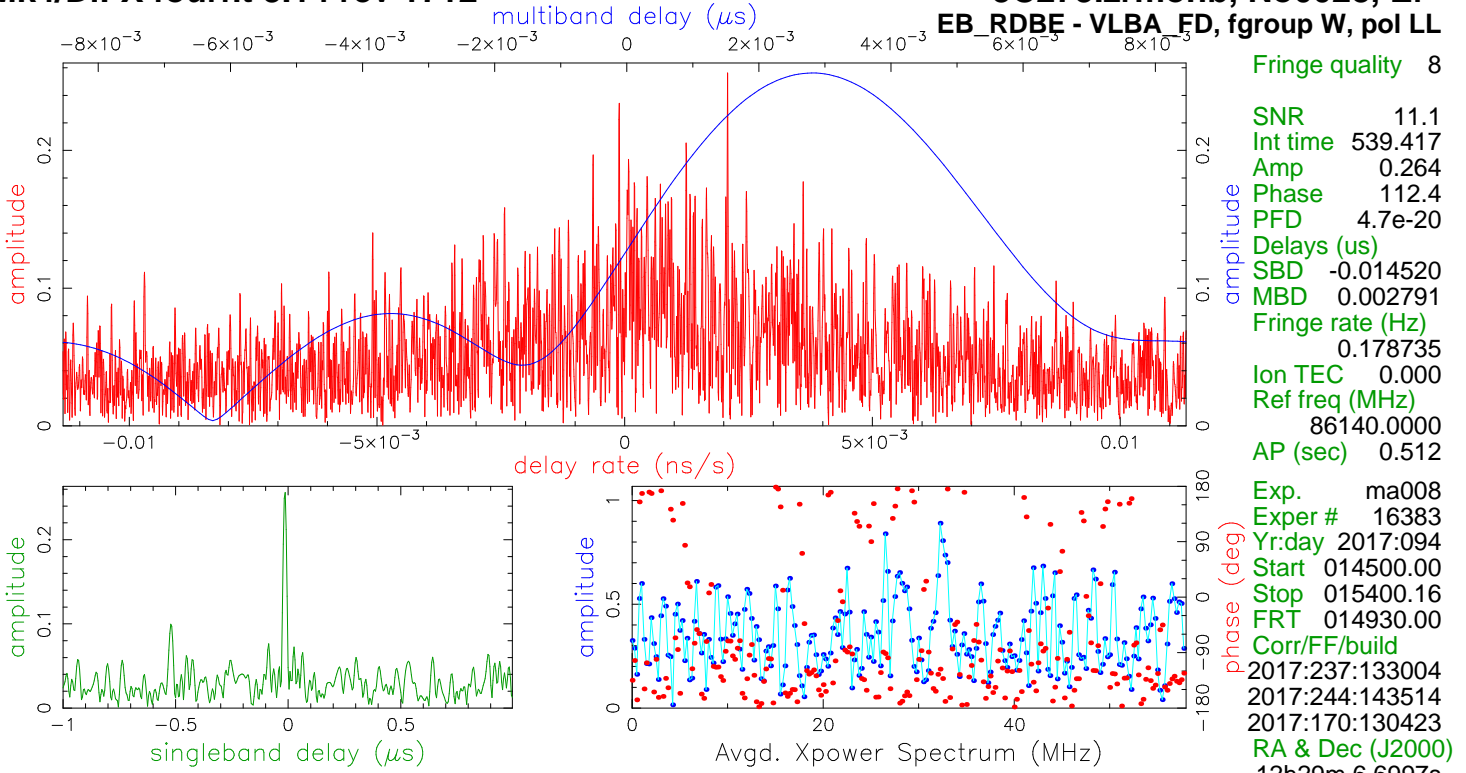
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



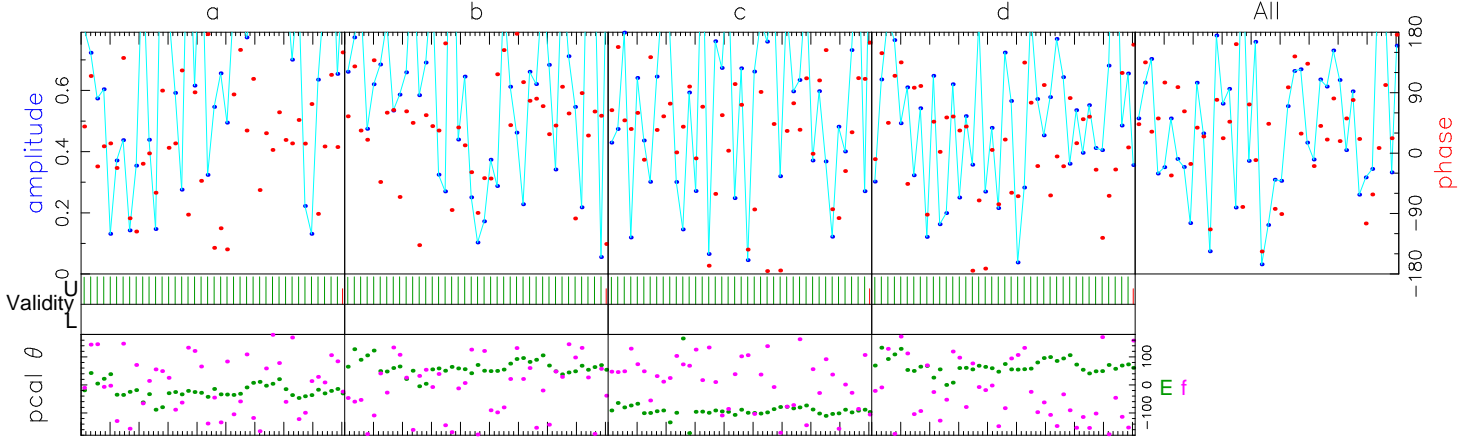
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|--------|
| | -169.0 | -165.8 | -177.8 | -169.7 | Phase | -170.3 |
| | 348.3 | 247.6 | 255.7 | 468.1 | Ampl. | 329.9 |
| | 233.2 | 233.6 | 234.4 | 233.7 | Sbd box | 233.7 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:E | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| E | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|-------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 3.87085653333E-03 | Apriori delay (usec) | 0.00000000000E+00 | Resid mbdelay (usec) | 3.87086E-03 | +/- | 1.7E-07 |
| Sband delay (usec) | 3.08855172414E-03 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 3.08855E-03 | +/- | 6.7E-07 |
| Phase delay (usec) | -5.49271809238E-06 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | -5.49272E-06 | +/- | 2.6E-10 |
| Delay rate (us/s) | 3.40107657400E-11 | Apriori rate (us/s) | 0.00000000000E+00 | Resid rate (us/s) | 3.40108E-11 | +/- | 8.4E-13 |
| Total phase (deg) | -170.3 | Apriori accel (us/s/s) | 0.00000000000E+00 | Resid phase (deg) | -170.3 | +/- | 0.0 |

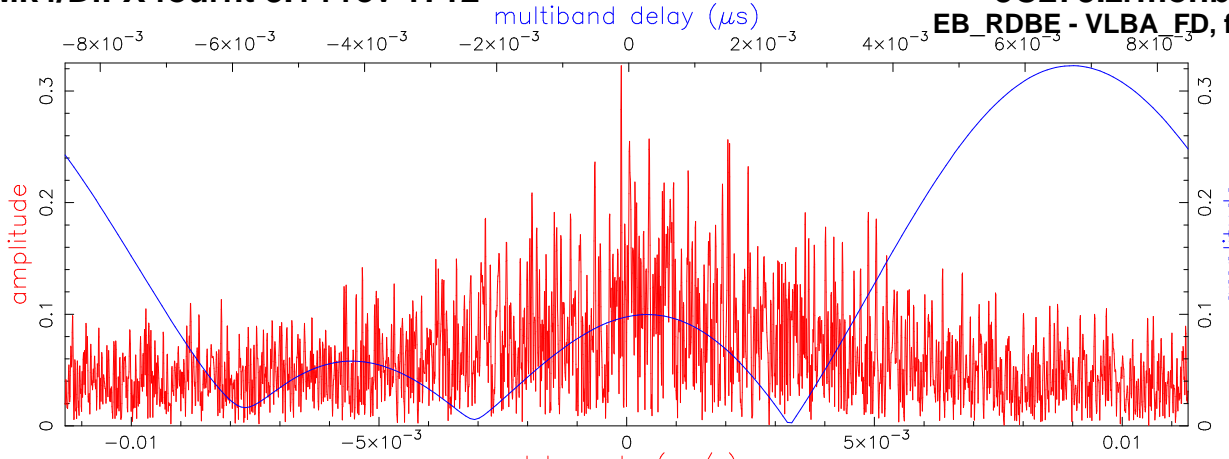
| | | | | | | | | | |
|--------------|------|-----|------------------|---------|--|----------------------|-------------------|------------------|-----------|
| ph/seg (deg) | 0.1 | 0.0 | Search (4096X16) | 322.911 | Pcal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| amp/seg (%) | 0.8 | 0.0 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 6.2 | 0.0 | Inc. seg. avg. | 329.156 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 | |
| amp/frq (%) | 26.8 | 0.0 | Inc. frq. avg. | 329.916 | Sample rate(MSamp/s): 116 | | dr window (ns/s) | -0.011 0.011 | |
| | | | | | Data rate(Mb/s): 928 | nlags: 232 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |



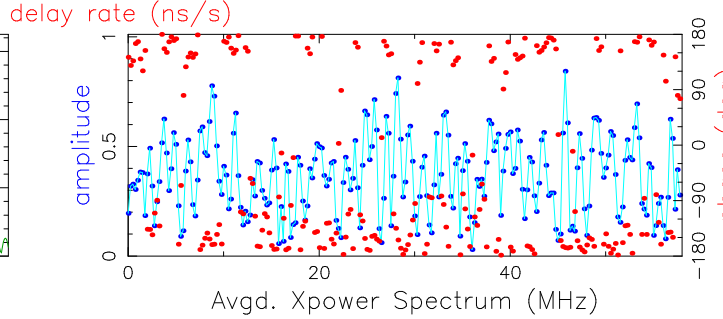
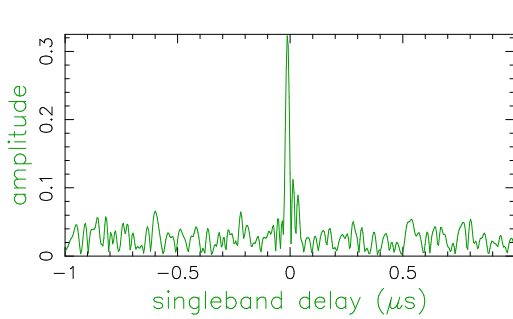
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



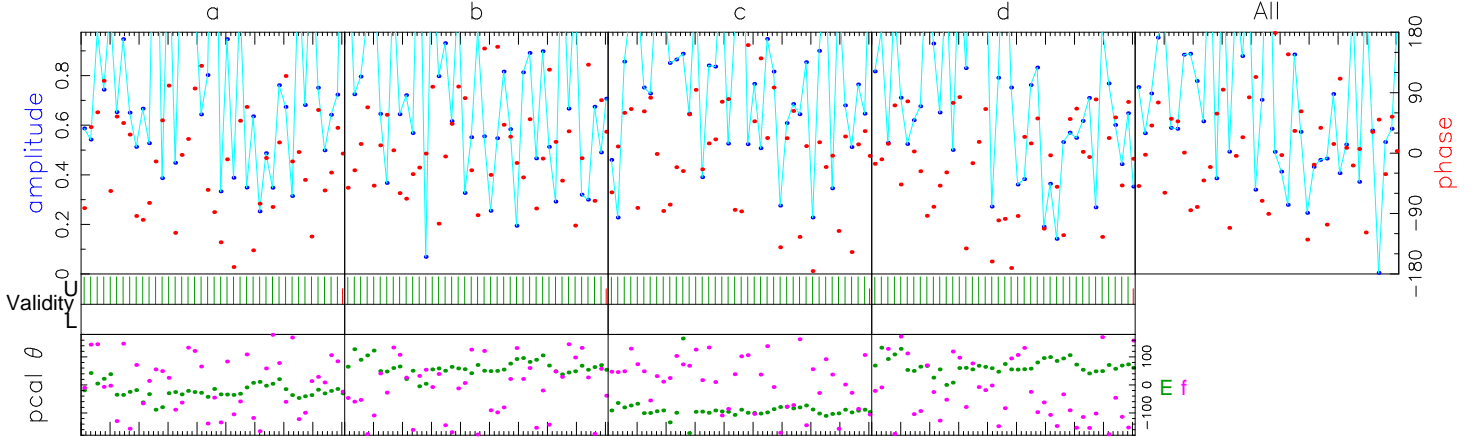
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | Freq (MHz) | All |
|-----------------------------|---|---|--------------------|--|----------------------|-------------------|------------------|------------|---------------------------|
| 29.5 | 52.1 | 64.2 | 21.5 | 21.5 | 21.5 | 21.5 | 21.5 | Phase | 44.2 |
| 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | Ampl. | 0.3 |
| 230.2 | 229.8 | 229.6 | 229.2 | 229.2 | 229.2 | 229.2 | 229.2 | Sbd box | 229.6 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E 3890 | 296 | 1703 | 3109 | 3109 | 3109 | 3109 | 3109 | PC freqs | |
| f 3890 | 296 | 1703 | 3109 | 3109 | 3109 | 3109 | 3109 | PC freqs | |
| E:f 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:f 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| f 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| E W00UL | W01UL | W02UL | W03UL | W03UL | W03UL | W03UL | W03UL | Chan ids | |
| f W00UL | W01UL | W02UL | W03UL | W03UL | W03UL | W03UL | W03UL | Tracks | |
| | | | | | | | | Chan ids | |
| | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 4.88283085339E+03 | Apriori delay (usec) | 4.88284512943E+03 | Resid mbdelay (usec) | 2.79063E-03 | +/- | 2.2E-04 | | |
| Sband delay (usec) | 4.88283060943E+03 | Apriori clock (usec) | 2.9588215E+01 | Resid sbdelay (usec) | -1.45200E-02 | +/- | 8.6E-04 | | |
| Phase delay (usec) | 4.88284513085E+03 | Apriori clockrate (us/s) | 4.2493721E-07 | Resid phdelay (usec) | 1.42378E-06 | +/- | 3.3E-07 | | |
| Delay rate (us/s) | -1.89262949825E+00 | Apriori rate (us/s) | -1.89263157318E+00 | Resid rate (us/s) | 2.07493E-06 | +/- | 1.1E-09 | | |
| Total phase (deg) | 274.0 | Apriori accel (us/s/s) | -2.47954608371E-05 | Resid phase (deg) | 112.4 | +/- | 10.3 | | |
| RMS | Theor. | Amplitude | 0.264 +/- 0.024 | Pcal mode: MANUAL | MANUAL | PC period (AP's) | 5, 5 | | |
| 74.7 | 33.0 | Search (4096X16) | 0.253 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | | |
| 128.5 | 57.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 | | |
| 24.4 | 10.3 | Inc. seg. avg. | 0.431 | Sample rate (MSamp/s): 116 | | dr window (ns/s) | -0.011 0.011 | | |
| 14.7 | 18.0 | Inc. frq. avg. | 0.267 | Data rate (Mb/s): 928 | nlags: 232 | t_cohere infinite | ion window (TEC) | 0.00 0.00 | |
| E: az 226.3 el 31.8 pa 27.6 | f: az 97.2 el 15.7 pa -58.7 | u,v (fr/asec) | 10796.147 2244.698 | | | | | | simultaneous interpolator |
| Control file: cf_1234 | Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ef..zrmonb | Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ef.W.147.zrmonb | | | | | | | |



Fringe quality 9
 SNR 13.9
 Int time 539.424
 Amp 0.325
 Phase 65.6
 PFD 3.4e-35
 Delays (us)
 SBD -0.011748
 MBD 0.006706
 Fringe rate (Hz)
 -0.009391
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143517
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.697s
 +2°03' 8.598"



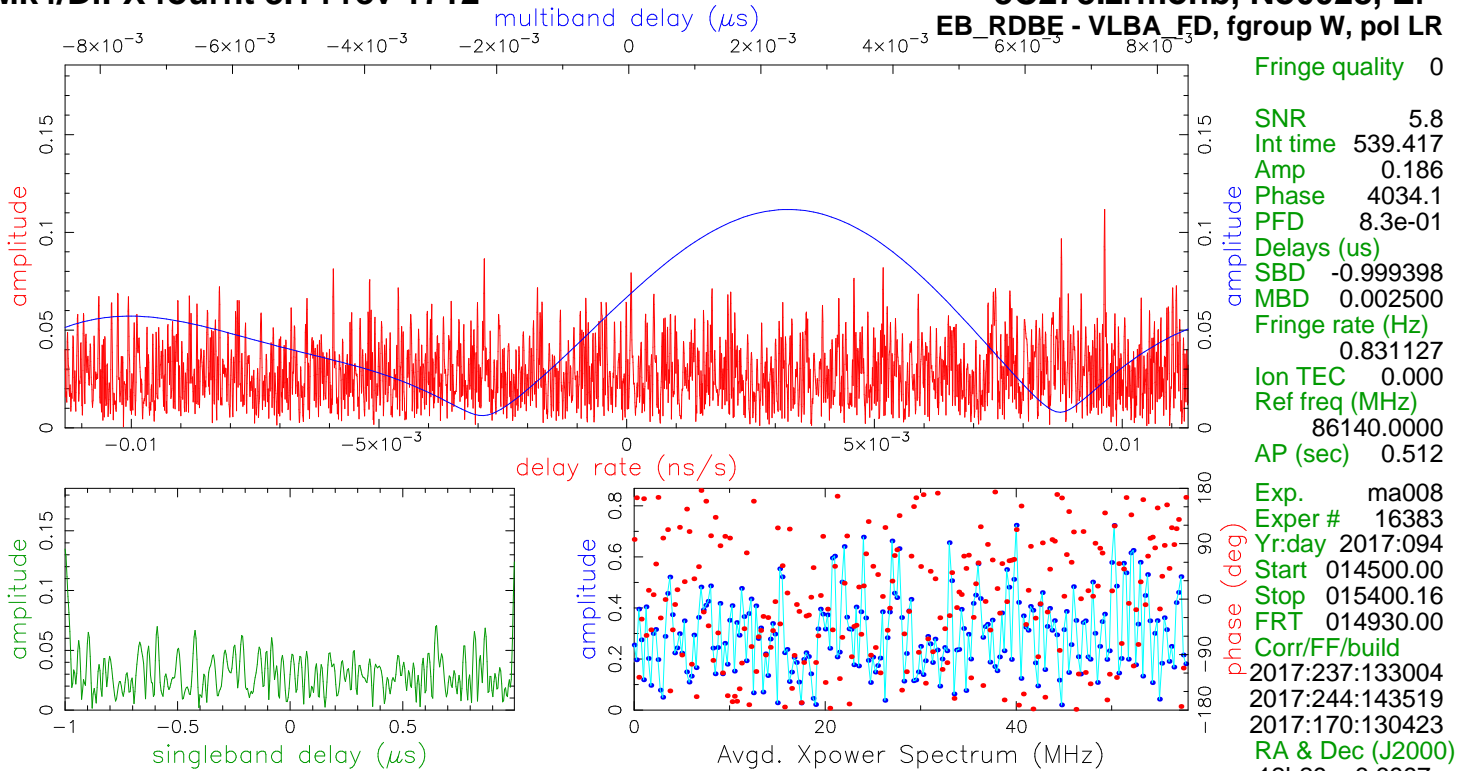
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | | | | | |
|------------|----------|----------|----------|------------|-------|
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
| -2.4 | -7.7 | 6.8 | -7.5 | Phase | -2.7 |
| 0.3 | 0.4 | 0.3 | 0.3 | Ampl. | 0.3 |
| 230.5 | 230.1 | 230.6 | 230.0 | Sbd box | 230.3 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| f 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:f 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:f 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E 1000 | 1000 | 1000 | 1000 | PC amp | |
| f 1000 | 1000 | 1000 | 1000 | | |
| E W00UR | W01UR | W02UR | W03UR | Chan ids | |
| f W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |

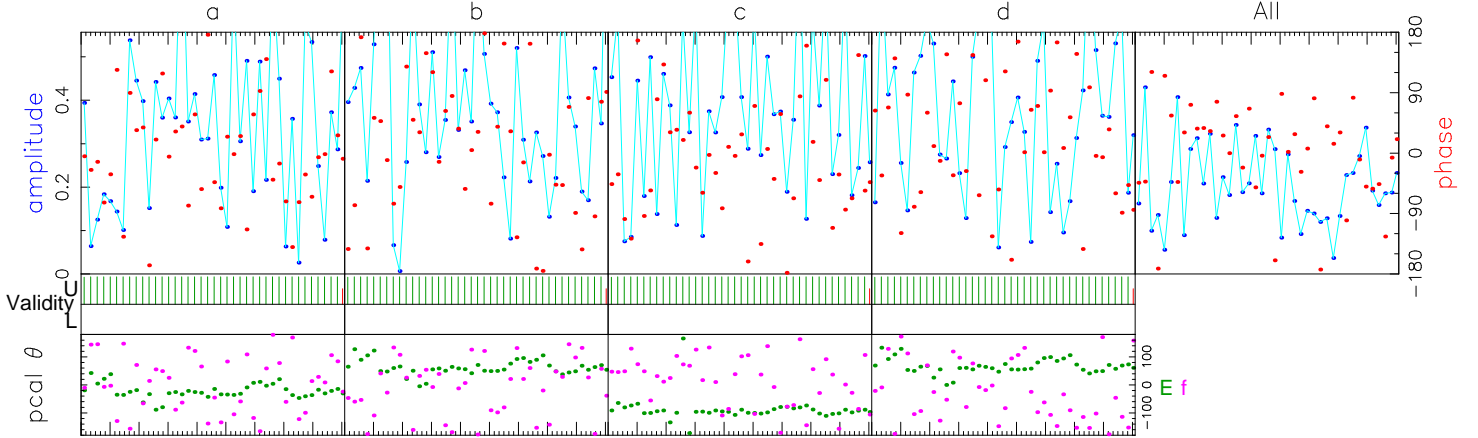
| | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| Group delay (usec)(sbd) | 4.88283476836E+03 | Apriori delay (usec) | 4.88284512943E+03 | Resid mbdelay (usec) | 6.70560E-03 | +/- 1.7E-04 |
| Sband delay (usec) | 4.88283338129E+03 | Apriori clock (usec) | 2.9588215E+01 | Resid sbdelay (usec) | -1.17481E-02 | +/- 6.8E-04 |
| Phase delay (usec) | 4.88284512934E+03 | Apriori clockrate (us/s) | 4.2493721E-07 | Resid phdelay (usec) | -8.69677E-08 | +/- 2.7E-07 |
| Delay rate (us/s) | -1.89263168219E+00 | Apriori rate (us/s) | -1.89263157318E+00 | Resid rate (us/s) | -1.09014E-07 | +/- 8.5E-10 |
| Total phase (deg) | 227.1 | Apriori accel (us/s/s) | -2.47954608371E-05 | Resid phase (deg) | 65.6 | +/- 8.2 |

ph/seg (deg) 72.9 26.4 Search (4096X16) 0.316 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 157.9 46.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 8.3 8.2 Inc. seg. avg. 0.639 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 5.9 14.4 Inc. frq. avg. 0.321 Sample rate(MSamp/s): 116 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite dr window (ns/s) -0.011 0.011
 E: az 226.3 el 31.8 pa 27.6 f: az 97.2 el 15.7 pa -58.7 u,v (fr/asec) 10796.147 2244.698 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ef..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ef.W.148.zrmonb

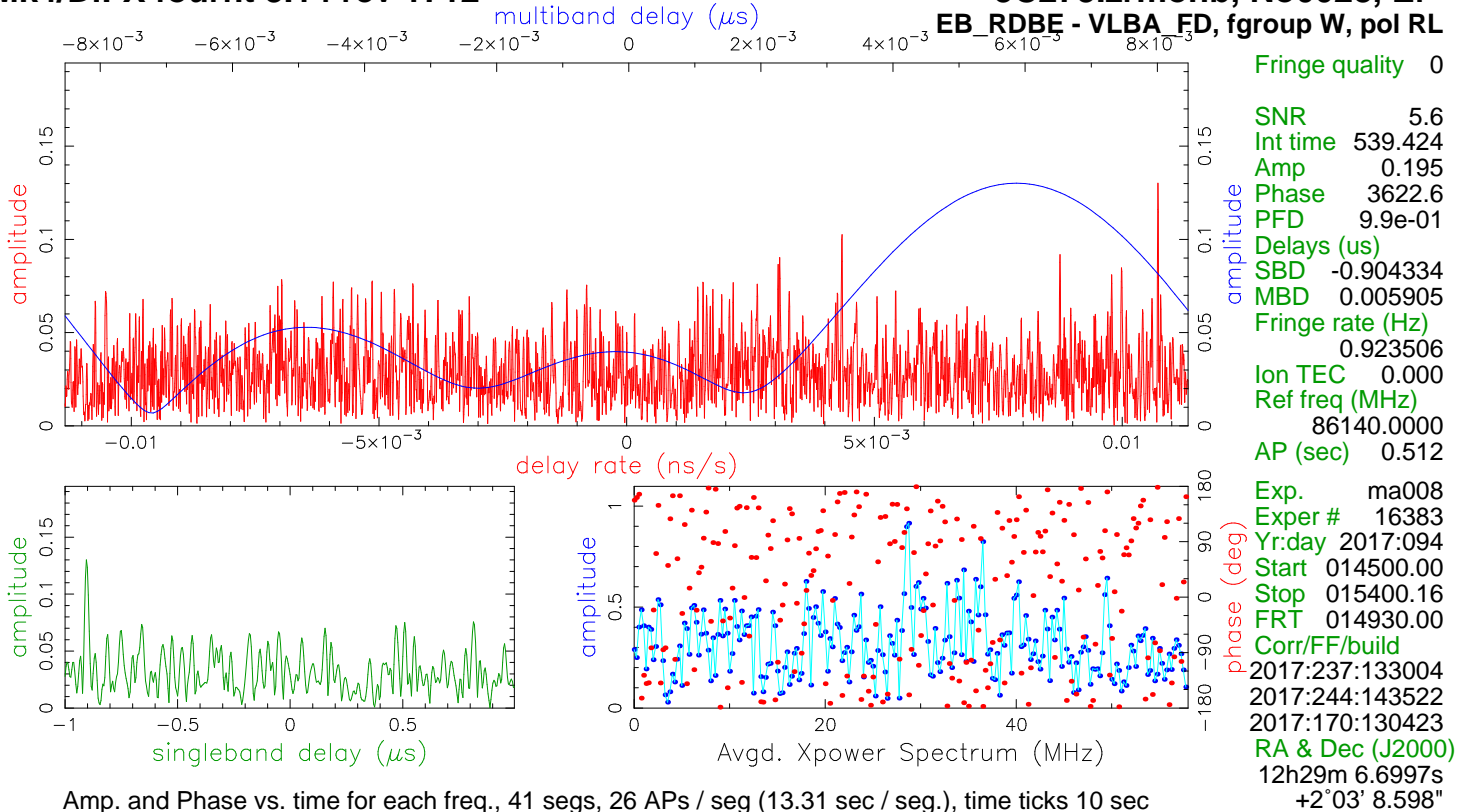


Fringe quality 0
 SNR 5.8
 Int time 539.417
 Amp 0.186
 Phase 4034.1
 PFD 8.3e-01
 Delays (us)
 SBD -0.999398
 MBD 0.002500
 Fringe rate (Hz) 0.831127
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build 2017:237:133004
 2017:244:143519
 2017:170:130423
 RA & Dec (J2000) 12h29m 6.6997s +2°03' 8.598"

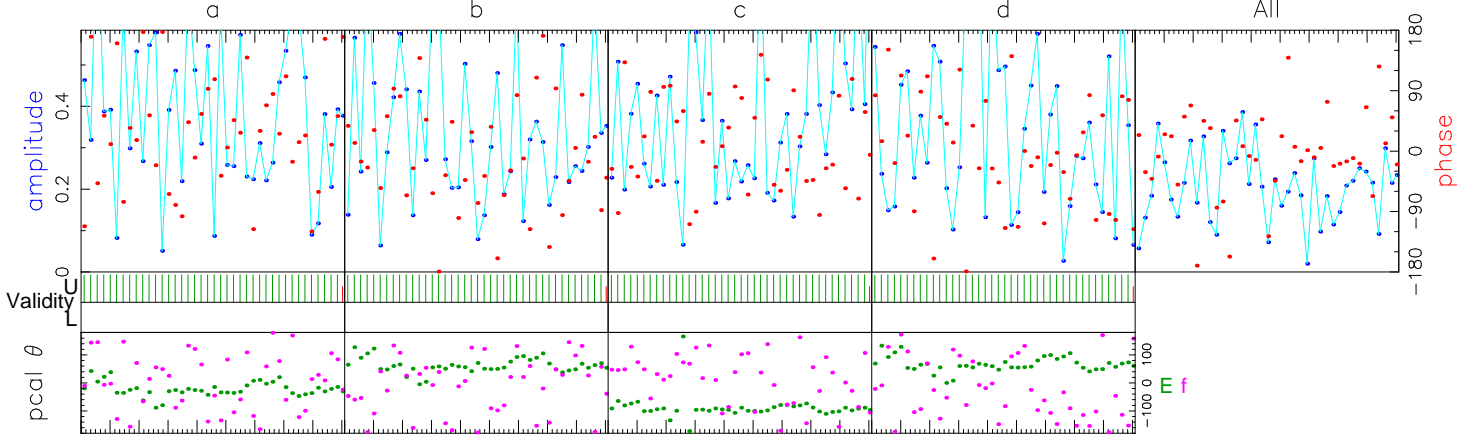
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----------------------------|-----------------------------|--------------------------|--------------------|-----------------------|-----------------------------|
| 2.8 | 37.5 | -7.1 | 11.3 | Phase | 7.0 |
| 0.2 | 0.1 | 0.2 | 0.1 | Ampl. | 0.2 |
| 290.9 | 463.6 | 173.6 | 95.3 | Sbd box | 1.1 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| f 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:f 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:f 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E 1000 | 1000 | 1000 | 1000 | PC amp | |
| f 1000 | 1000 | 1000 | 1000 | | |
| E W00UL | W01UL | W02UL | W03UL | Chan ids | |
| f W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |
| Group delay (usec)(sbd) | 4.88184069599E+03 | Apriori delay (usec) | 4.88284512943E+03 | Resid mbdelay (usec) | 2.49990E-03 +/- 4.2E-04 |
| Sband delay (usec) | 4.88184573108E+03 | Apriori clock (usec) | 2.9588215E+01 | Resid sbdelay (usec) | -9.99398E-01 +/- 1.6E-03 |
| Phase delay (usec) | 4.88284512965E+03 | Apriori clockrate (us/s) | 4.2493721E-07 | Resid phdelay (usec) | 2.26930E-07 +/- 6.4E-07 |
| Delay rate (us/s) | -1.89262192462E+00 | Apriori rate (us/s) | -1.89263157318E+00 | Resid rate (us/s) | 9.64856E-06 +/- 2.1E-09 |
| Total phase (deg) | 4195.7 | Apriori accel (us/s/s) | -2.47954608371E-05 | Resid phase (deg) | 4034.1 +/- 19.8 |
| RMS | Theor. | Amplitude | 0.186 +/- 0.032 | Pcal mode: | MANUAL, MANUAL |
| 71.9 | 63.5 | Search (4096X16) | 0.134 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) |
| 87.0 | 110.9 | Interp. | 0.000 | Bits/sample: | 2x2 |
| 24.1 | 19.8 | Inc. seg. avg. | 0.176 | Sample rate(MSamp/s): | 116 |
| 33.2 | 34.6 | Inc. frq. avg. | 0.150 | Data rate(Mb/s): | 928 |
| | | | | lags: | 232 |
| | | | | t_cohere: | infinite |
| E: az 226.3 el 31.8 pa 27.6 | f: az 97.2 el 15.7 pa -58.7 | u,v (fr/asec) | 10796.147 2244.698 | | simultaneous interpolator |



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

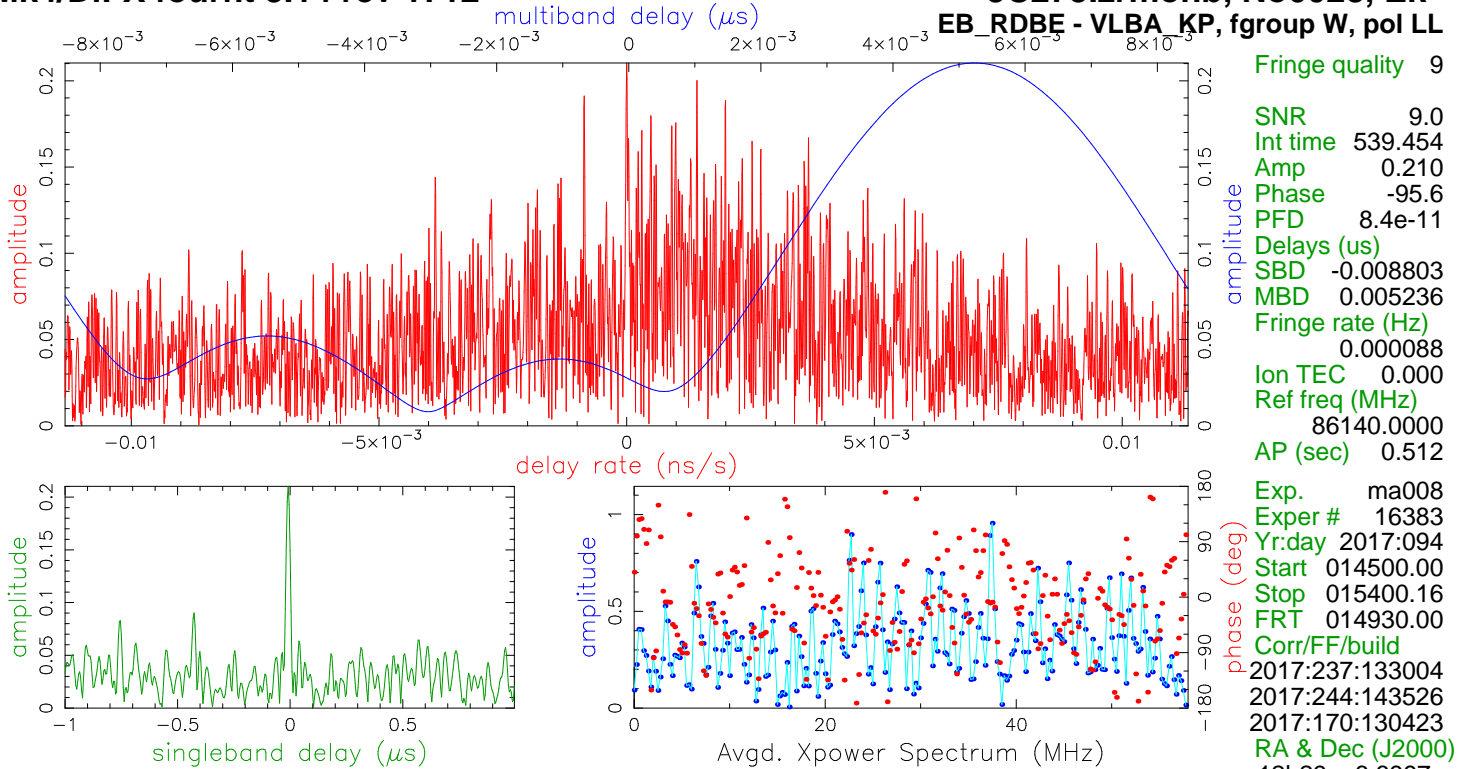


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| | 11.6 | -1.2 | -6.3 | 14.3 | Phase | 5.0 |
| | 0.3 | 0.2 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 22.7 | 288.5 | 374.1 | 112.8 | Sbd box | 23.2 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| f | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:f | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:f | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| f | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| f | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 4.88194650082E+03 | Apriori delay (usec) | 4.88284512943E+03 | Resid mbdelay (usec) | 5.90472E-03 | +/- 4.4E-04 |
| Sband delay (usec) | 4.88194079536E+03 | Apriori clock (usec) | 2.9588215E+01 | Resid sbdelay (usec) | -9.04334E-01 | +/- 1.7E-03 |
| Phase delay (usec) | 4.88284512959E+03 | Apriori clockrate (us/s) | 4.2493721E-07 | Resid phdelay (usec) | 1.61280E-07 | +/- 6.6E-07 |
| Delay rate (us/s) | -1.89262085219E+00 | Apriori rate (us/s) | -1.89263157318E+00 | Resid rate (us/s) | 1.07210E-05 | +/- 2.1E-09 |
| Total phase (deg) | 3784.1 | Apriori accel (us/s/s) | -2.47954608371E-05 | Resid phase (deg) | 3622.6 | +/- 20.5 |

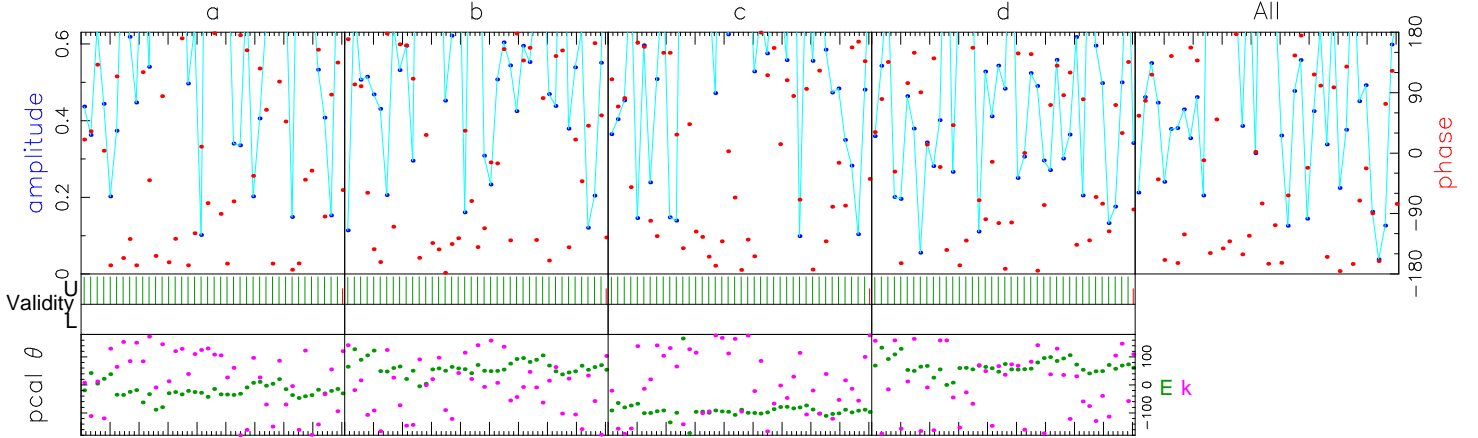
| | RMS | Theor. | Amplitude | 0.195 +/- 0.035 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|--|
| ph/seg (deg) | 63.5 | 65.7 | Search (4096X16) | 0.128 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 88.0 | 114.7 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled mb window (us) -0.009 0.009 |
| ph/frq (deg) | 12.1 | 20.5 | Inc. seg. avg. | 0.186 | Sample rate(MSamp/s): 116 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 19.6 | 35.8 | Inc. frq. avg. | 0.184 | Data rate(Mb/s): 928 | ion window (TEC) 0.00 0.00 |
| | | | | | nlags: 232 | t_cohere infinite |

E: az 226.3 el 31.8 pa 27.6 f: az 97.2 el 15.7 pa -58.7 u,v (fr/asec) 10796.147 2244.698 simultaneous interpolator

Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ef..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ef.W.150.zrmonb



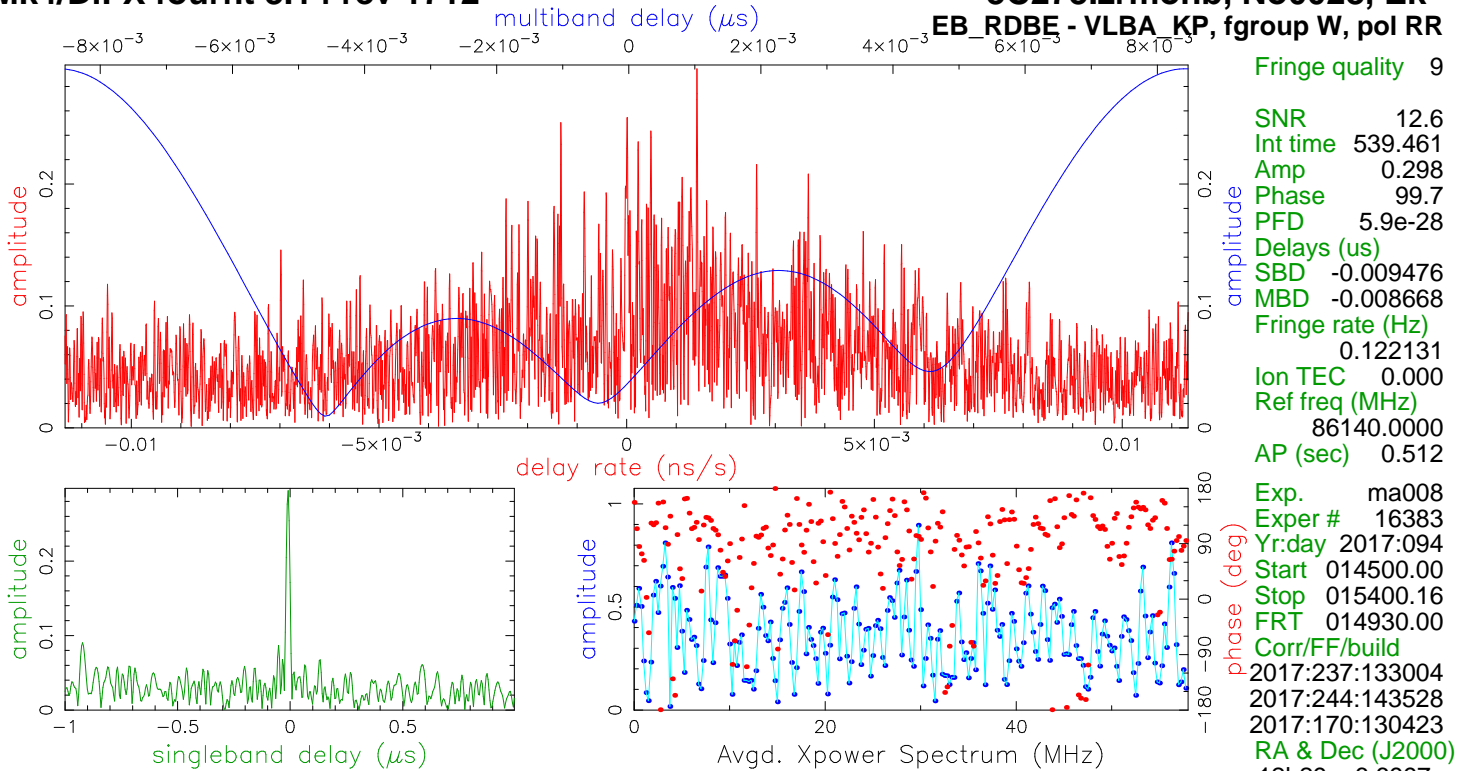
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



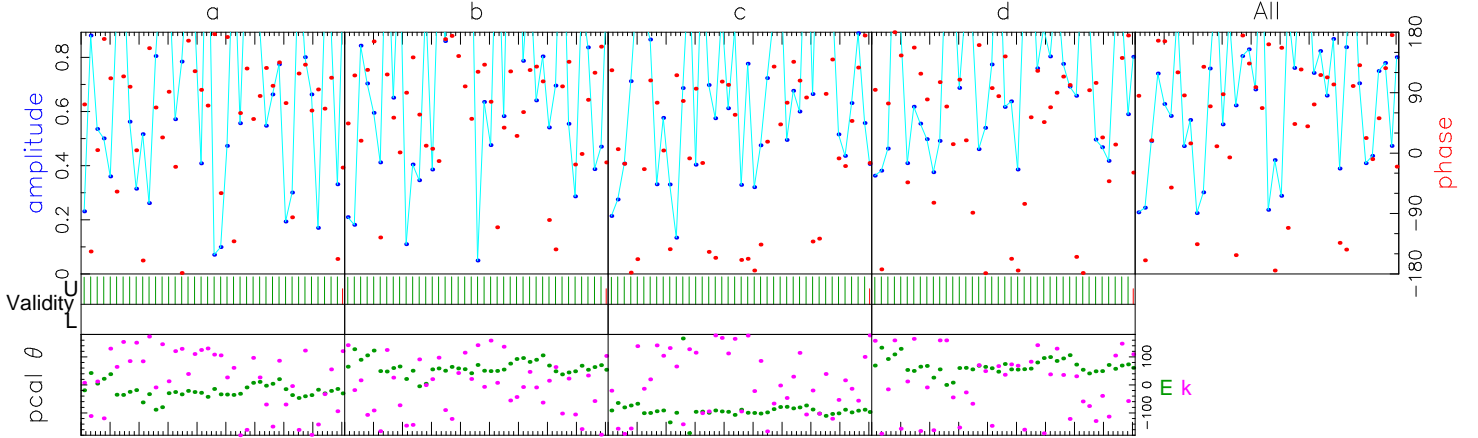
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| k | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| k | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| k | W00UL | W01UL | W02UL | W03UL | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 7.28770608765E+03 | Apriori delay (usec) | 7.28771791792E+03 | Resid mbdelay (usec) | 5.23639E-03 | +/- | 2.7E-04 |
| Sband delay (usec) | 7.28770911461E+03 | Apriori clock (usec) | 3.1776382E+01 | Resid sbdelay (usec) | -8.80331E-03 | +/- | 1.1E-03 |
| Phase delay (usec) | 7.28771791264E+03 | Apriori clockrate (us/s) | 6.1488019E-09 | Resid phdelay (usec) | -5.28318E-06 | +/- | 4.1E-07 |
| Delay rate (us/s) | -1.91976460038E+00 | Apriori rate (us/s) | -1.91976460140E+00 | Resid rate (us/s) | 1.02174E-09 | +/- | 1.3E-09 |
| Total phase (deg) | 66.4 | Apriori accel (us/s/s) | -3.76423847730E-05 | Resid phase (deg) | -95.6 | +/- | 12.7 |

| | | | | | | | | | |
|--------------|-------|------------------|-------|----------------|-----------------|------------------------|-----------------------------|------------------|--------------|
| ph/seg (deg) | 82.3 | Theor. | 40.8 | Amplitude | 0.210 +/- 0.023 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 205.4 | Search (4096X16) | 0.210 | Search | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 |
| ph/frq (deg) | 3.4 | Interp. | 0.000 | Inc. seg. avg. | 0.413 | Bits/sample: | 2x2 | SampCntNorm: | enabled |
| amp/frq (%) | 19.9 | Inc. frq. avg. | 0.205 | Inc. frq. avg. | 0.205 | Sample rate (MSamp/s): | 116 | mb window (us) | -0.009 0.009 |
| | | | | | | Data rate (Mb/s): | 928 | dr window (ns/s) | -0.011 0.011 |
| | | | | | | nlags: | 232 | ion window (TEC) | 0.00 0.00 |

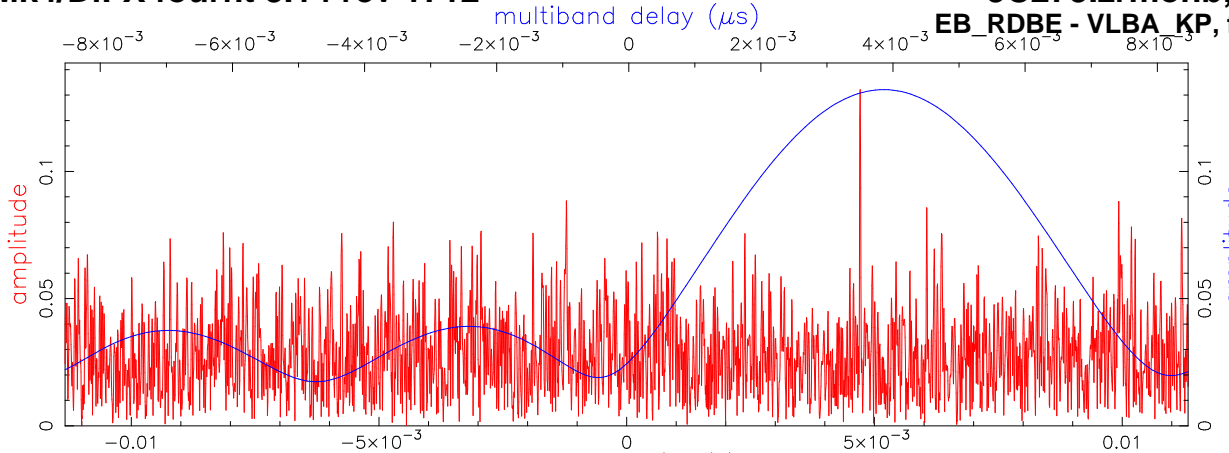


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

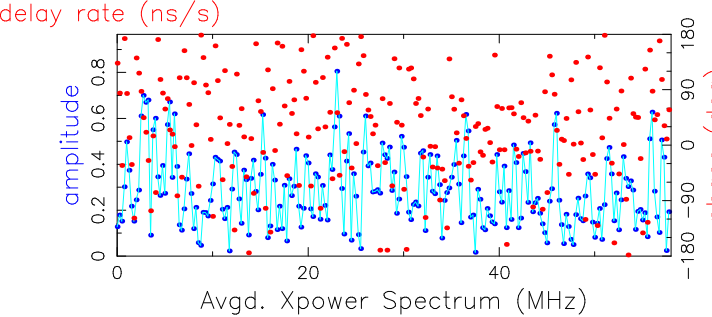
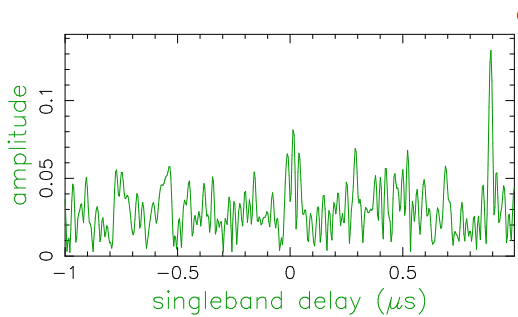


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | | |
| k | 3890 | 296 | 1703 | 3109 | | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| k | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | | |
| k | W00UR | W01UR | W02UR | W03UR | | |
| Group delay (usec)(sbd) | 7.28770924993E+03 | Apriori delay (usec) | 7.28771791792E+03 | Resid mbdelay (usec) | -8.66799E-03 | +/- 1.9E-04 |
| Sband delay (usec) | 7.28770844178E+03 | Apriori clock (usec) | 3.1776382E+01 | Resid sbdelay (usec) | -9.47614E-03 | +/- 7.5E-04 |
| Phase delay (usec) | 7.28771792114E+03 | Apriori clockrate (us/s) | 6.1488019E-09 | Resid phdelay (usec) | 3.21601E-06 | +/- 2.9E-07 |
| Delay rate (us/s) | -1.91976318358E+00 | Apriori rate (us/s) | -1.91976460140E+00 | Resid rate (us/s) | 1.41782E-06 | +/- 9.4E-10 |
| Total phase (deg) | 261.7 | Apriori accel (us/s/s) | -3.76423847730E-05 | Resid phase (deg) | 99.7 | +/- 9.1 |

ph/seg (deg) 74.2 29.0 Search (4096X16) 0.286 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 161.6 50.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 9.1 9.1 Inc. seg. avg. 0.607 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 20.3 15.8 Inc. frq. avg. 0.295 Sample rate(MSamp/s): 116 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite dr window (ns/s) -0.011 0.011
 E: az 226.3 el 31.8 pa 27.6 k: az 93.4 el 9.1 pa -57.9 u,v (fr/asec) 10927.243 2035.485 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ek..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ek.W.152.zrmonb

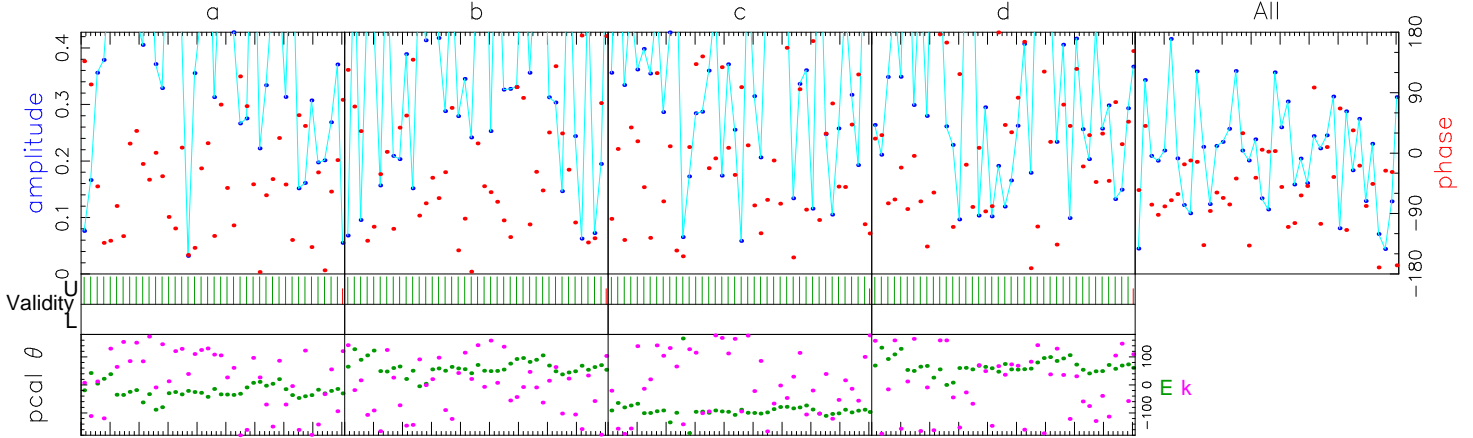


Fringe quality 0
 SNR 5.7
 Int time 539.454
 Amp 0.143
 Phase -3599.0
 PFD 9.5e-01
 Delays (us)
 SBD 0.891367
 MBD 0.003858
 Fringe rate (Hz)
 0.405527
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143531
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.6997s
 +2°03' 8.598"

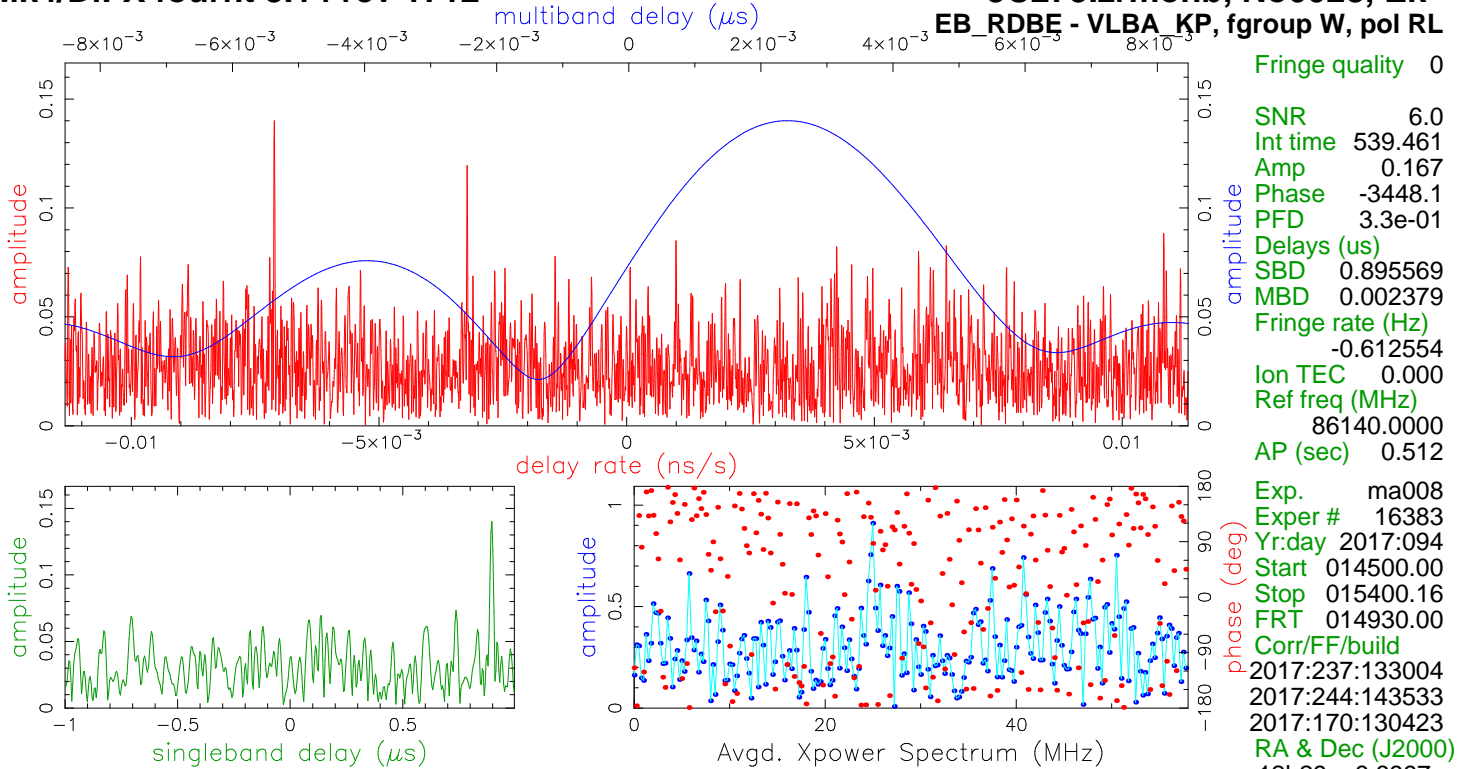
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



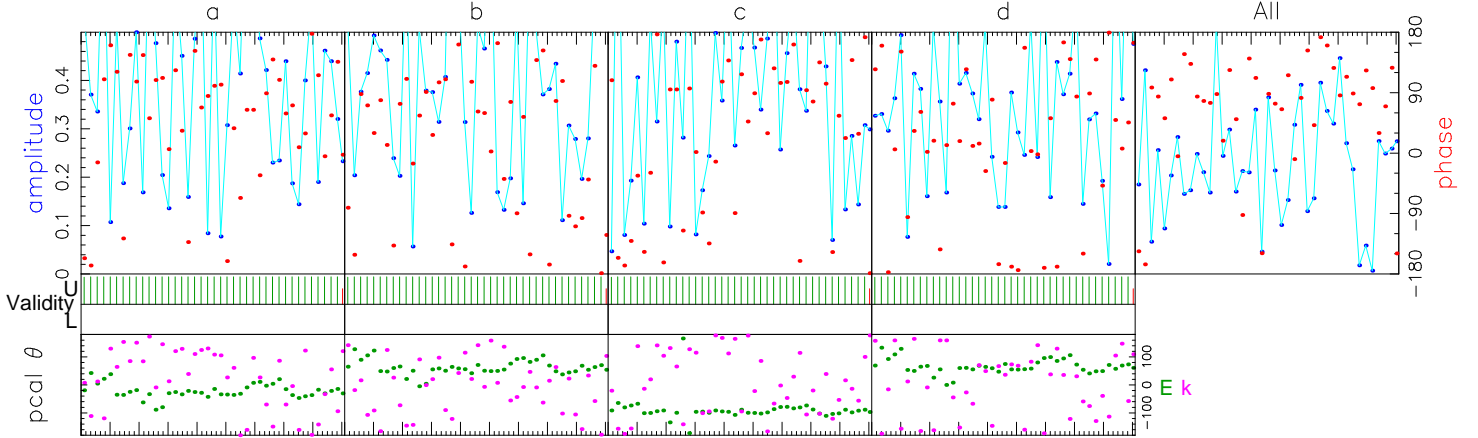
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | -49.7 | -50.0 | -48.7 | -50.5 | Phase | -49.7 |
| | 0.2 | 0.1 | 0.1 | 0.1 | Ampl. | 0.1 |
| | 440.1 | 98.6 | 34.2 | 220.1 | Sbd box | 439.8 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| k | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| k | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| k | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 7.28860924302E+03 | Apriori delay (usec) | 7.28771791792E+03 | Resid mbdelay (usec) | 3.85844E-03 | +/- | 4.3E-04 |
| Sband delay (usec) | 7.28860928537E+03 | Apriori clock (usec) | 3.1776382E+01 | Resid sbdelay (usec) | 8.91367E-01 | +/- | 1.7E-03 |
| Phase delay (usec) | 7.28771791632E+03 | Apriori clockrate (us/s) | 6.1488019E-09 | Resid phdelay (usec) | -1.60285E-06 | +/- | 6.5E-07 |
| Delay rate (us/s) | -1.91975989364E+00 | Apriori rate (us/s) | -1.91976460140E+00 | Resid rate (us/s) | 4.70776E-06 | +/- | 2.1E-09 |
| Total phase (deg) | -3437.1 | Apriori accel (us/s/s) | -3.76423847730E-05 | Resid phase (deg) | -3599.0 | +/- | 20.2 |

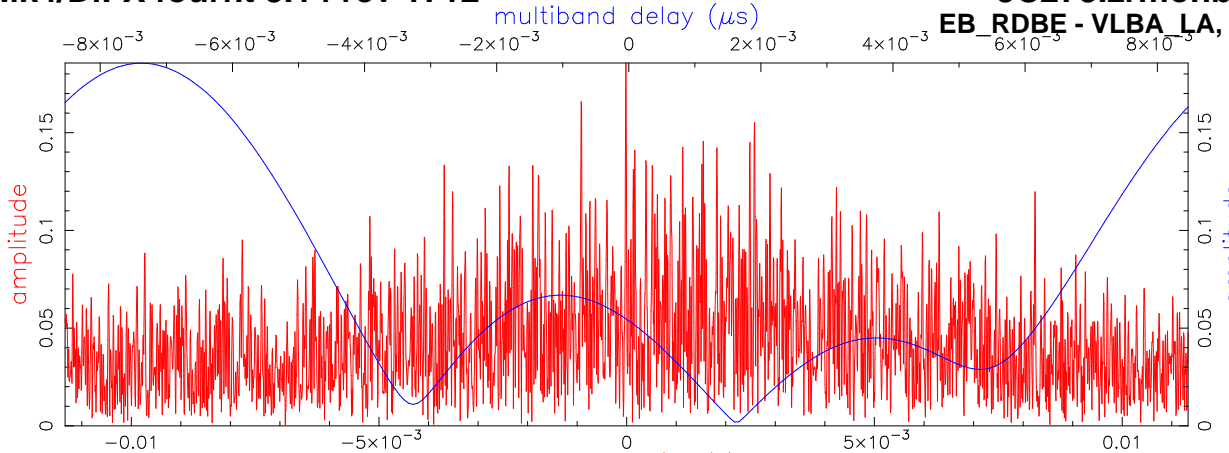
| | | | | | | | | | |
|--------------|------|------------------|-------|----------------|-----------------|------------------------|-----------------------------|------------------|--------------|
| ph/seg (deg) | 57.4 | Theor. | 64.6 | Amplitude | 0.143 +/- 0.025 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 90.3 | Search (4096X16) | 0.128 | Search | 0.128 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 |
| ph/frq (deg) | 1.0 | Interp. | 0.000 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: | enabled |
| amp/frq (%) | 24.5 | Inc. seg. avg. | 0.140 | Inc. seg. avg. | 0.140 | Sample rate (MSamp/s): | 116 | mb window (us) | -0.009 0.009 |
| | | Inc. frq. avg. | 0.134 | Inc. frq. avg. | 0.134 | Data rate (Mb/s): | 928 | dr window (ns/s) | -0.011 0.011 |
| | | | | | | nlags: | 232 | ion window (TEC) | 0.00 0.00 |



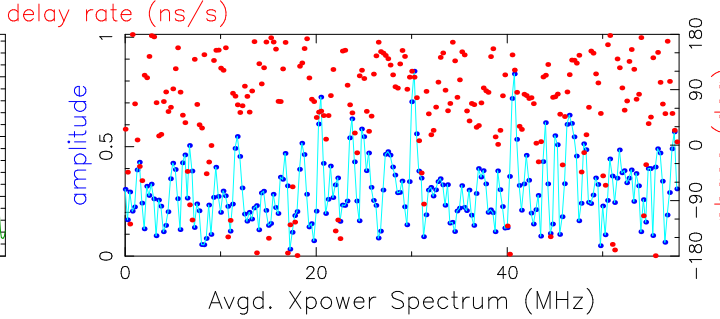
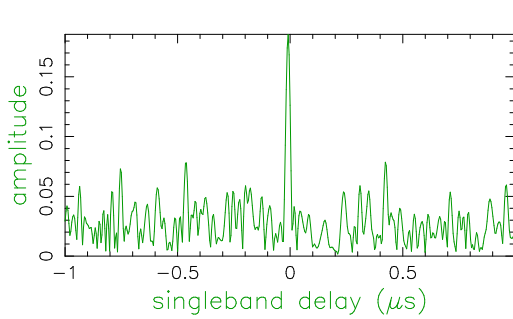
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



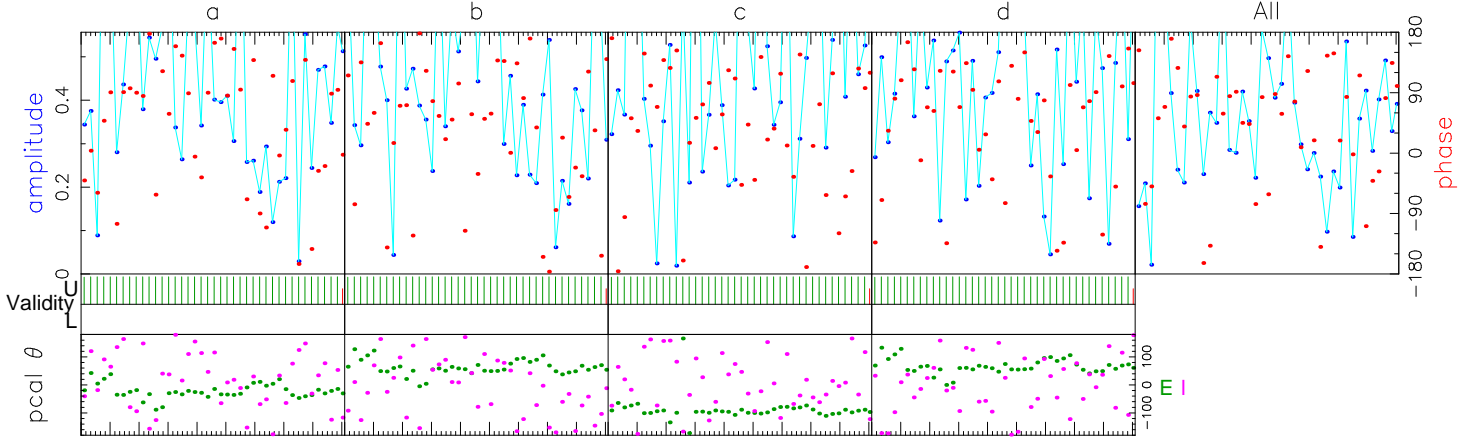
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|--------------------|-----------------------|-----------------------------|---|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | APs used | |
| k | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:k | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| k | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| k | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 7.28860776356E+03 | Apriori delay (usec) | 7.28771791792E+03 | Resid mbdelay (usec) | 2.37897E-03 | +/- 4.0E-04 |
| Sband delay (usec) | 7.28861348647E+03 | Apriori clock (usec) | 3.1776382E+01 | Resid sbdelay (usec) | 8.95569E-01 | +/- 1.6E-03 |
| Phase delay (usec) | 7.28771792119E+03 | Apriori clockrate (us/s) | 6.1488019E-09 | Resid phdelay (usec) | 3.26455E-06 | +/- 6.1E-07 |
| Delay rate (us/s) | -1.91977171254E+00 | Apriori rate (us/s) | -1.91976460140E+00 | Resid rate (us/s) | -7.11114E-06 | +/- 2.0E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | -3.76423847730E-05 | Resid phase (deg) | -3448.1 | +/- 19.0 |
| RMS | 58.2 | Theor. | 60.9 | Amplitude | 0.167 +/- 0.028 | |
| ph/seg (deg) | 58.2 | Search (4096X16) | 0.138 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 103.9 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 26.3 | Inc. seg. avg. | 0.174 | Bits/sample: | 2x2 | SampCntNorm: enabled mb window (us) -0.009 0.009 |
| amp/frq (%) | 30.6 | Inc. frq. avg. | 0.165 | Sample rate(MSamp/s): | 116 | dr window (ns/s) -0.011 0.011 |
| | | | | Data rate(Mb/s): | 928 | nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00 |



Fringe quality 9
SNR 7.9
Int time 539.436
Amp 0.186
Phase 79.8
PFD 6.4e-07
Delays (us)
SBD -0.009024
MBD -0.007392
Fringe rate (Hz)
-0.001644
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143537
2017:170:130423
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"

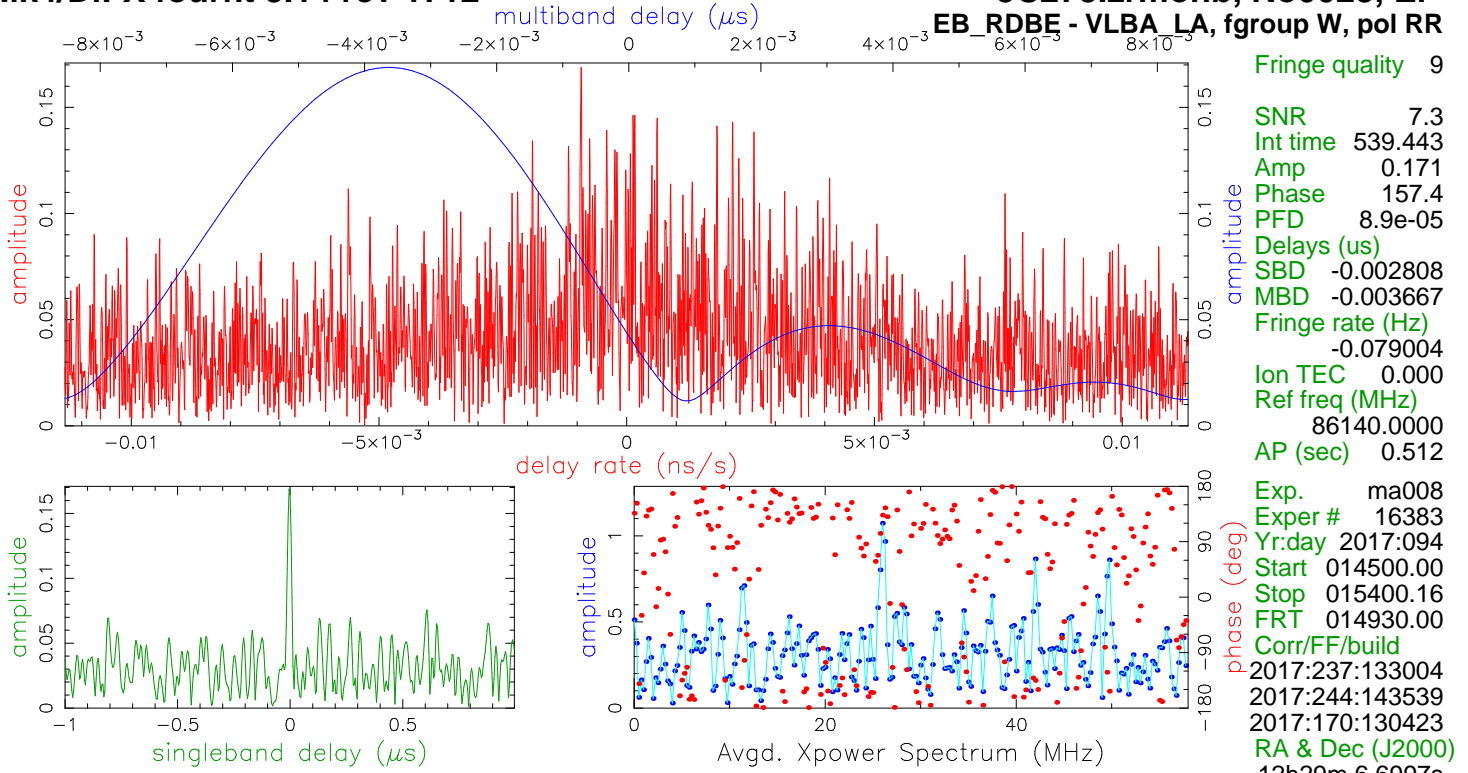


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

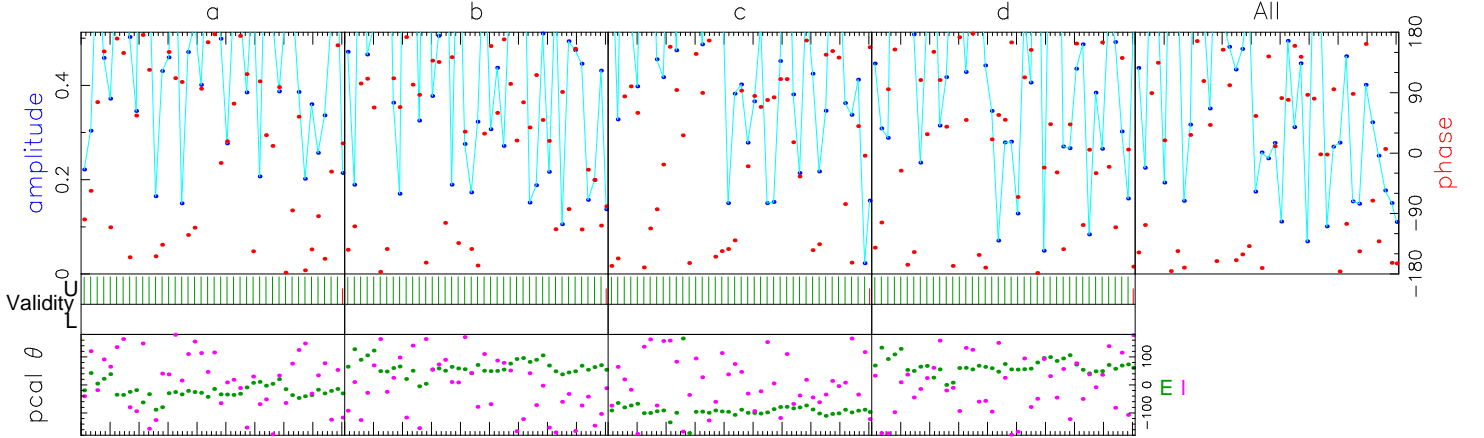


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| I | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| I | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| I | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|---------------------------|--|---------------------------|------------------|--------------|
| Group delay (usec)(sbd) | 5.82411412259E+03 | Apriori delay (usec) | 5.82412151447E+03 | Resid mbdelay (usec) | -7.39189E-03 | +/- | 3.1E-04 |
| Sband delay (usec) | 5.82411249047E+03 | Apriori clock (usec) | 3.3065380E+01 | Resid sbdelay (usec) | -9.02400E-03 | +/- | 1.2E-03 |
| Phase delay (usec) | 5.82412151705E+03 | Apriori clockrate (us/s) | 1.0474273E-07 | Resid phdelay (usec) | 2.57276E-06 | +/- | 4.7E-07 |
| Delay rate (us/s) | -1.83582519857E+00 | Apriori rate (us/s) | -1.83582517948E+00 | Resid rate (us/s) | -1.90889E-08 | +/- | 1.5E-09 |
| Total phase (deg) | 172.2 | Apriori accel (us/s/s) | -3.00703836178E-05 | Resid phase (deg) | 79.8 | +/- | 14.4 |
| ph/seg (deg) | RMS 79.4 | Theor. 46.2 | Amplitude 0.186 +/- 0.023 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 1.000 |
| amp/seg (%) | 142.3 | 80.7 | Search (4096X16) 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| ph/frq (deg) | 15.2 | 14.4 | Inc. seg. avg. 0.278 | Bits/sample: 2x2 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 0.011 |
| amp/frq (%) | 6.8 | 25.2 | Inc. frq. avg. 0.183 | Data rate(Mb/s): 928 | nlags: 232 | ion window (TEC) | 0.00 0.00 |

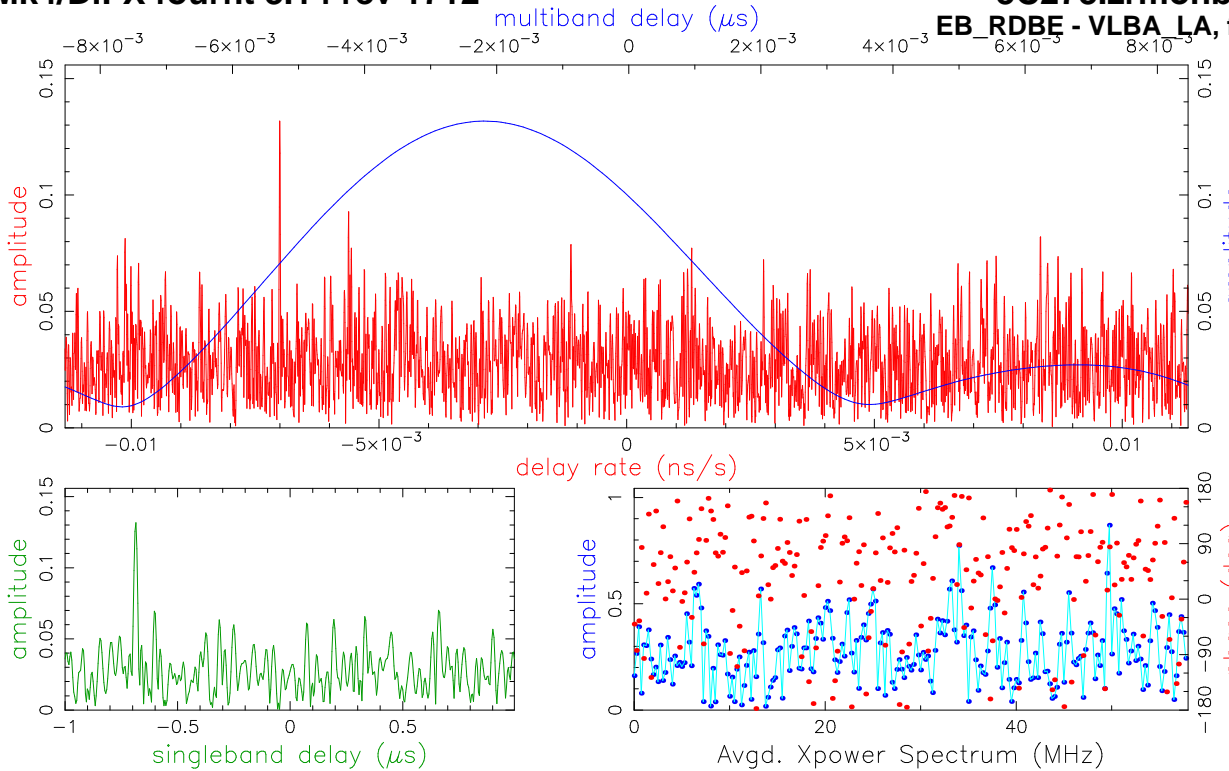


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



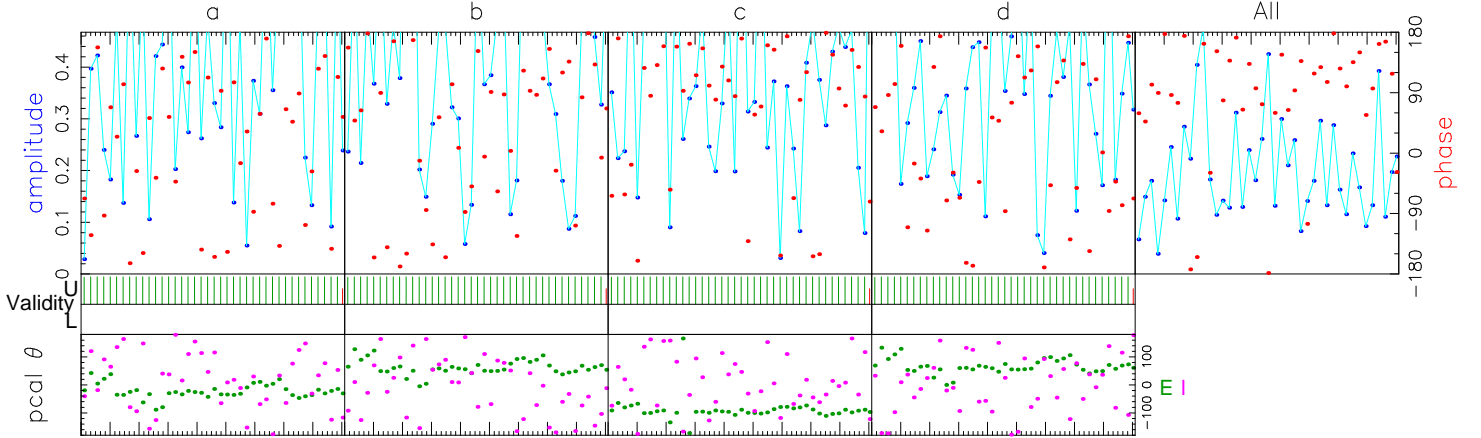
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| | 160.5 | 157.1 | 148.1 | 170.0 | Phase | 157.4 |
| | 0.2 | 0.2 | 0.2 | 0.1 | Ampl. | 0.2 |
| | 232.3 | 233.0 | 231.5 | 375.6 | Sbd box | 232.3 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| I | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| I | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| I | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 5.82411784747E+03 | Apriori delay (usec) | 5.82412151447E+03 | Resid mbdelay (usec) | -3.66701E-03 | +/- 3.3E-04 |
| Sband delay (usec) | 5.82411870675E+03 | Apriori clock (usec) | 3.3065380E+01 | Resid sbdelay (usec) | -2.80772E-03 | +/- 1.3E-03 |
| Phase delay (usec) | 5.82412151955E+03 | Apriori clockrate (us/s) | 1.0474273E-07 | Resid phdelay (usec) | 5.07630E-06 | +/- 5.1E-07 |
| Delay rate (us/s) | -1.83582609663E+00 | Apriori rate (us/s) | -1.83582517948E+00 | Resid rate (us/s) | -9.17156E-07 | +/- 1.6E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | -3.00703836178E-05 | Resid phase (deg) | 157.4 | +/- 15.7 |

ph/seg (deg) 80.8 50.3 Search (4096X16) 0.167 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 189.2 87.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 11.3 15.7 Inc. seg. avg. 0.285 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 19.4 27.4 Inc. frq. avg. 0.165 Sample rate(MSamp/s): 116 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite dr window (ns/s) -0.011 0.011
 E: az 226.3 el 31.8 pa 27.6 I: az 97.2 el 13.1 pa -53.5 u,v (fr/asec) 10460.587 1566.564 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EI.zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EI.W.156.zrmonb



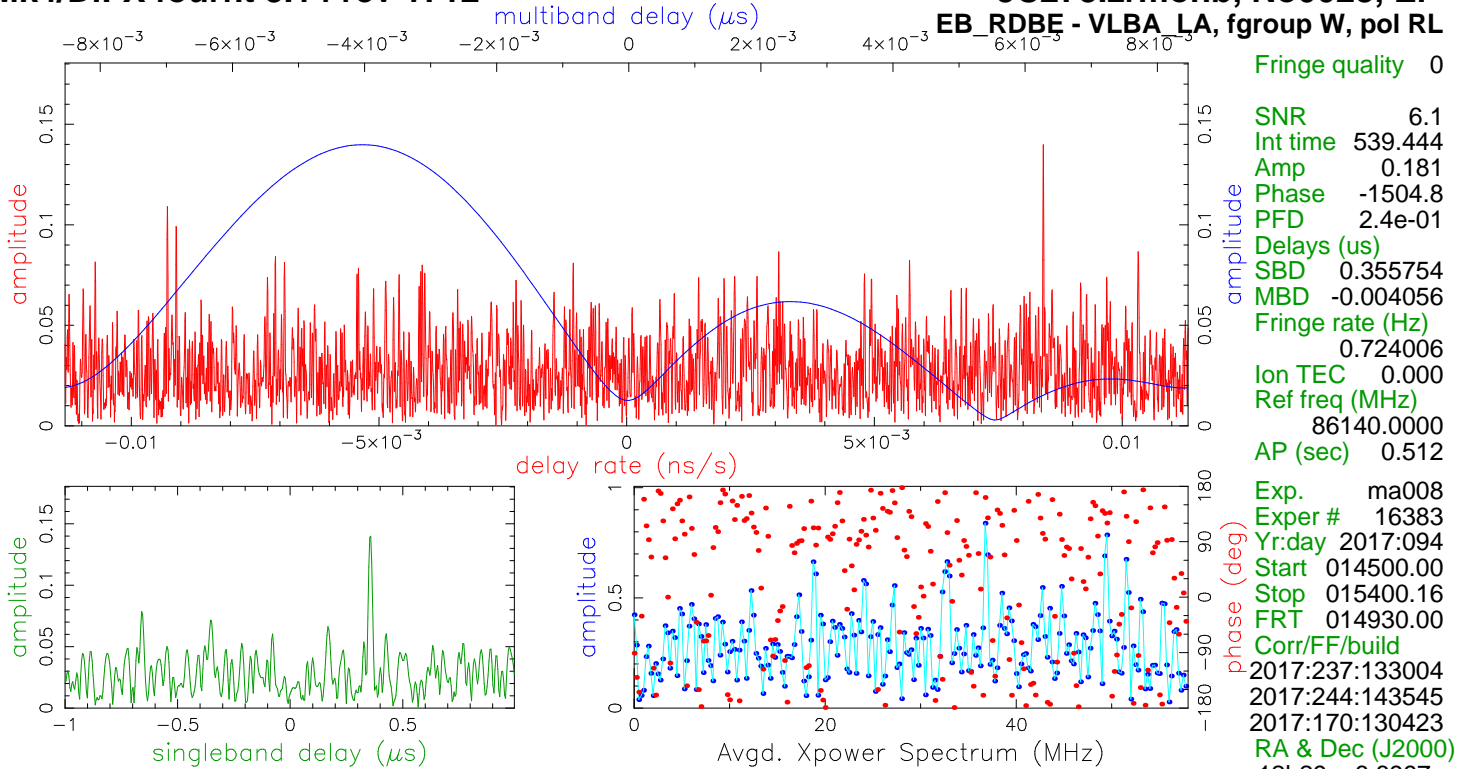
Fringe quality 0
 SNR 5.7
 Int time 539.436
 Amp 0.156
 Phase 2865.0
 PFD 9.6e-01
 Delays (us)
 SBD -0.686425
 MBD -0.002150
 Fringe rate (Hz)
 -0.603302
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143542
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.697s
 +2°03' 8.598"

Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

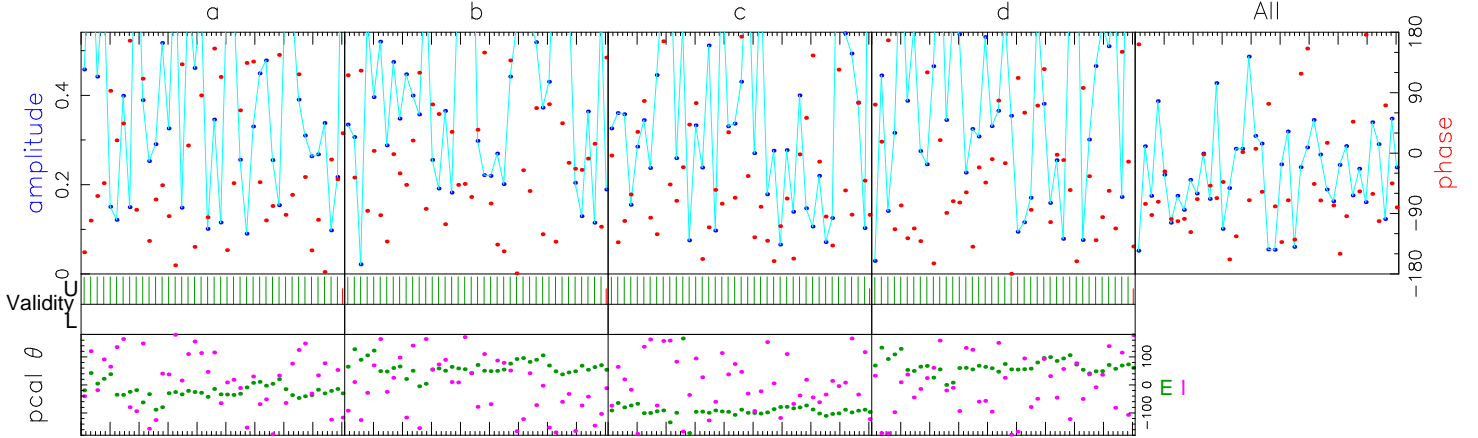


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| I | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | Main PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| I | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| I | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|--|-----------------------------|------------------|--------------|
| Group delay (usec)(sbd) | 5.82343669807E+03 | Apriori delay (usec) | 5.82412151447E+03 | Resid mbdelay (usec) | -2.14974E-03 | +/- | 4.3E-04 |
| Sband delay (usec) | 5.82343508965E+03 | Apriori clock (usec) | 3.3065380E+01 | Resid sbdelay (usec) | -6.86425E-01 | +/- | 1.7E-03 |
| Phase delay (usec) | 5.82412151882E+03 | Apriori clockrate (us/s) | 1.0474273E-07 | Resid phdelay (usec) | 4.34664E-06 | +/- | 6.5E-07 |
| Delay rate (us/s) | -1.83583218321E+00 | Apriori rate (us/s) | -1.83582517948E+00 | Resid rate (us/s) | -7.00374E-06 | +/- | 2.1E-09 |
| Total phase (deg) | 2957.5 | Apriori accel (us/s/s) | -3.00703836178E-05 | Resid phase (deg) | 2865.0 | +/- | 20.2 |
| RMS | 57.6 | Search (4096X16) | 0.130 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 1.000 |
| ph/seg (deg) | 91.9 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| amp/seg (%) | 57.6 | Inc. seg. avg. | 0.145 | Bits/sample: 2x2 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 0.011 |
| ph/frq (deg) | 42.9 | Inc. frq. avg. | 0.146 | Data rate(Mb/s): 928 | lags: 232 t_cohere infinite | ion window (TEC) | 0.00 0.00 |
| amp/frq (%) | | | | | | | |



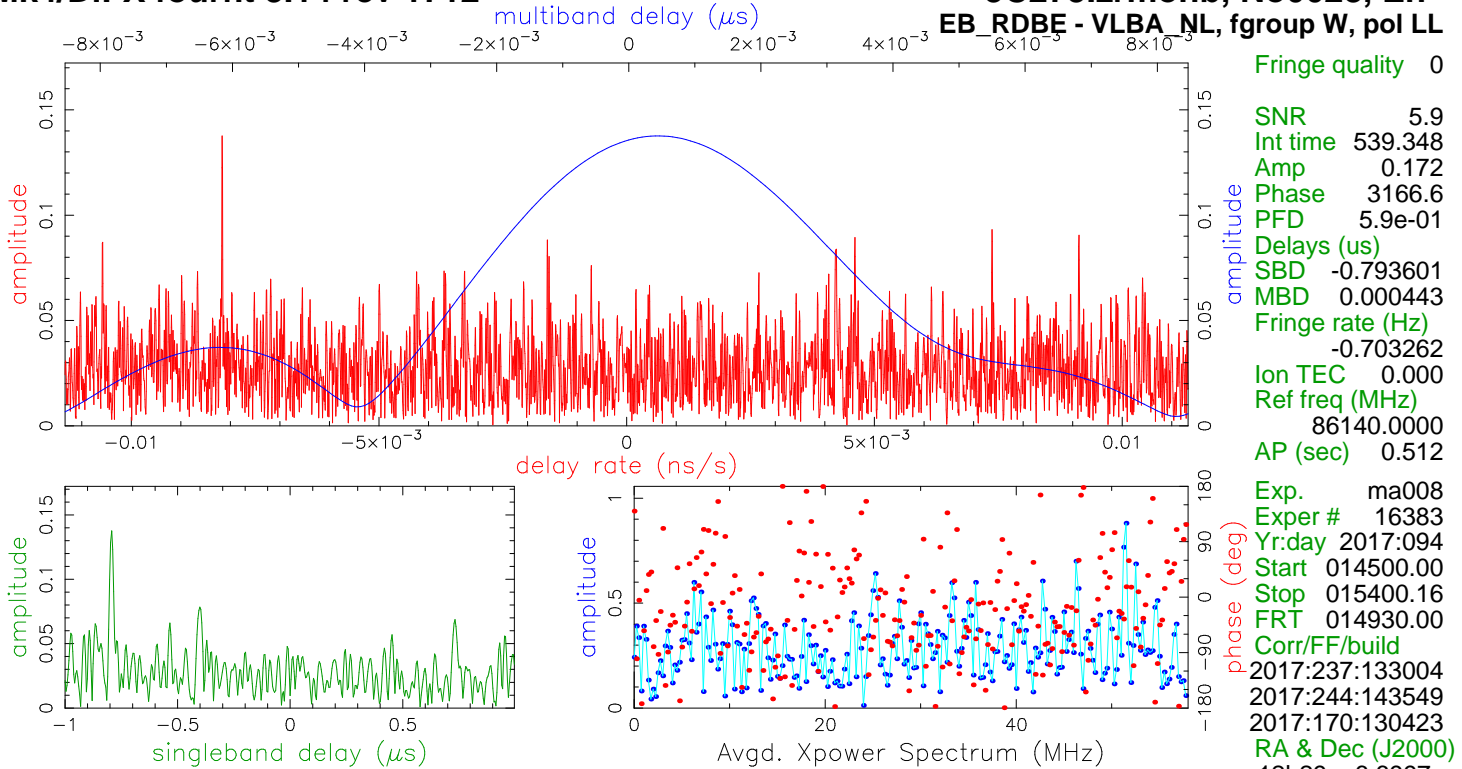
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



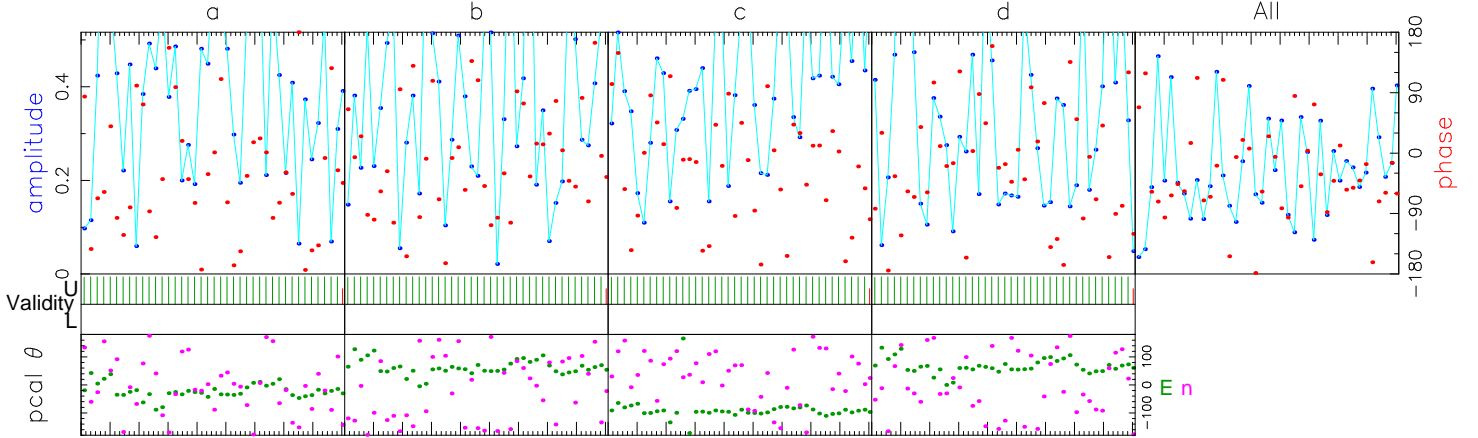
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | -88.6 | -49.5 | -77.2 | -74.9 | Phase | -71.5 |
| | 0.2 | 0.2 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 195.8 | 314.3 | 411.1 | 316.5 | Sbd box | 315.5 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| I | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:I | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| I | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| I | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 5.82447585842E+03 | Apriori delay (usec) | 5.82412151447E+03 | Resid mbdelay (usec) | -4.05605E-03 | +/- | 4.0E-04 |
| Sband delay (usec) | 5.82447726813E+03 | Apriori clock (usec) | 3.3065380E+01 | Resid sbdelay (usec) | 3.55754E-01 | +/- | 1.6E-03 |
| Phase delay (usec) | 5.82412151217E+03 | Apriori clockrate (us/s) | 1.0474273E-07 | Resid phdelay (usec) | -2.30416E-06 | +/- | 6.1E-07 |
| Delay rate (us/s) | -1.83581677448E+00 | Apriori rate (us/s) | -1.83582517948E+00 | Resid rate (us/s) | 8.40499E-06 | +/- | 1.9E-09 |
| Total phase (deg) | -1412.4 | Apriori accel (us/s/s) | -3.00703836178E-05 | Resid phase (deg) | -1504.8 | +/- | 18.8 |

| | | | | | | | | | |
|--------------|------|------------------|-------|----------------|-----------------|-----------------------|-----------------------------|------------------|--------------|
| ph/seg (deg) | 68.3 | Theor. | 60.3 | Amplitude | 0.181 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 93.3 | Search (4096X16) | 0.137 | Search | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 |
| ph/frq (deg) | 20.2 | Interp. | 0.000 | Inc. seg. avg. | 0.188 | Bits/sample: | 2x2 | SampCntNorm: | enabled |
| amp/frq (%) | 10.2 | Inc. frq. avg. | 0.174 | Inc. frq. avg. | 0.174 | Sample rate(MSamp/s): | 116 | mb window (us) | -0.009 0.009 |
| | | | | | | Data rate(Mb/s): | 928 | dr window (ns/s) | -0.011 0.011 |
| | | | | | | lags: | 232 | ion window (TEC) | 0.00 0.00 |



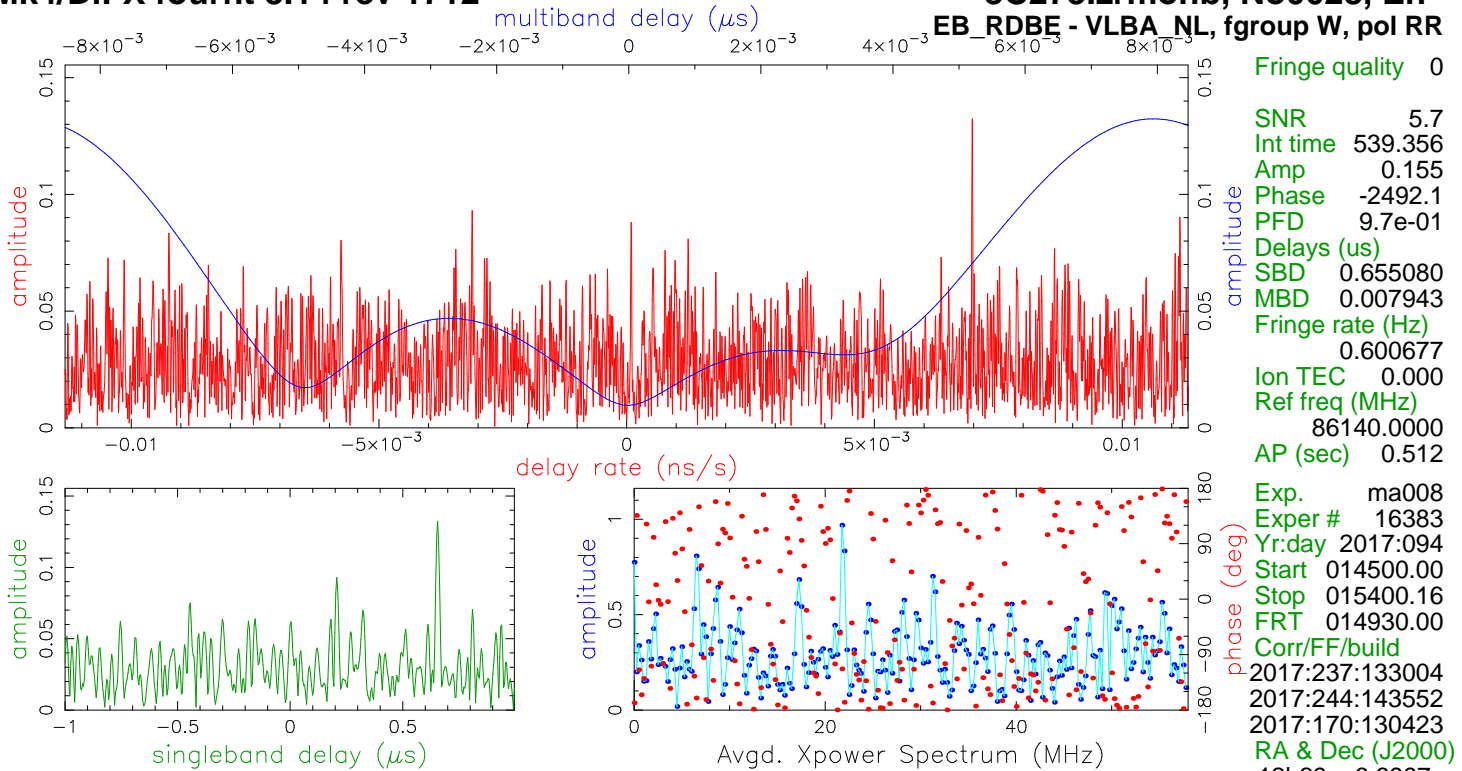
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



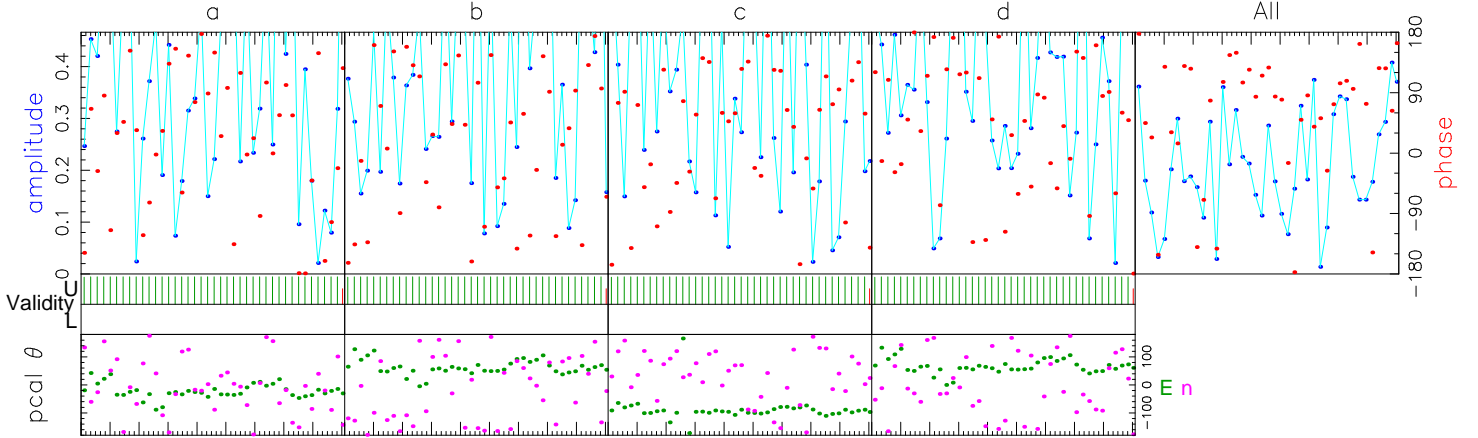
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|------------|----------|----------|----------|----------|------------|-------|
| -50.6 | -36.4 | -26.0 | -62.6 | | Phase | -41.5 |
| 0.2 | 0.2 | 0.2 | 0.1 | | Ampl. | 0.2 |
| 387.9 | 49.1 | 47.8 | 21.3 | | Sbd box | 48.9 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | | APs used | |
| E 3890 | 296 | 1703 | 3109 | | PC freqs | |
| n 3890 | 296 | 1703 | 3109 | | PC freqs | |
| E:n 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | |
| E:n 0:0 | 0:0 | 0:0 | 0:0 | | Manl PC | |
| E 1000 | 1000 | 1000 | 1000 | | PC amp | |
| n 1000 | 1000 | 1000 | 1000 | | | |
| E W00UL | W01UL | W02UL | W03UL | | Chan ids | |
| n W00UL | W01UL | W02UL | W03UL | | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 2.42538714678E+03 | Apriori delay (usec) | 2.42618883718E+03 | Resid mbdelay (usec) | 4.42937E-04 | +/- | 4.1E-04 |
| Sband delay (usec) | 2.42539523663E+03 | Apriori clock (usec) | 2.3286325E+01 | Resid sbdelay (usec) | -7.93601E-01 | +/- | 1.6E-03 |
| Phase delay (usec) | 2.42618883584E+03 | Apriori clockrate (us/s) | -2.9281688E-07 | Resid phdelay (usec) | -1.33692E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | -1.62010345466E+00 | Apriori rate (us/s) | -1.62009529049E+00 | Resid rate (us/s) | -8.16417E-06 | +/- | 2.0E-09 |
| Total phase (deg) | 3323.0 | Apriori accel (us/s/s) | -1.23694030360E-05 | Resid phase (deg) | 3166.6 | +/- | 19.5 |

| | | | | | | | | | |
|--------------|----------|-------------|------------------|-----------------|--|-----------------------|----------------|--------|-------|
| ph/seg (deg) | RMS 69.6 | Theor. 62.3 | Amplitude 69.6 | 0.172 +/- 0.029 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | |
| amp/seg (%) | 99.8 | 108.7 | Search (4096X16) | 0.134 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | |
| ph/frq (deg) | 19.9 | 19.5 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 | 0.009 |
| amp/frq (%) | 21.6 | 34.0 | Inc. seg. avg. | 0.177 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 | 0.011 | |
| | | | Inc. frq. avg. | 0.167 | Data rate(Mb/s): 928 | ion window (TEC) | 0.00 | 0.00 | |
| | | | | | lags: 232 | t_cohere infinite | | | |



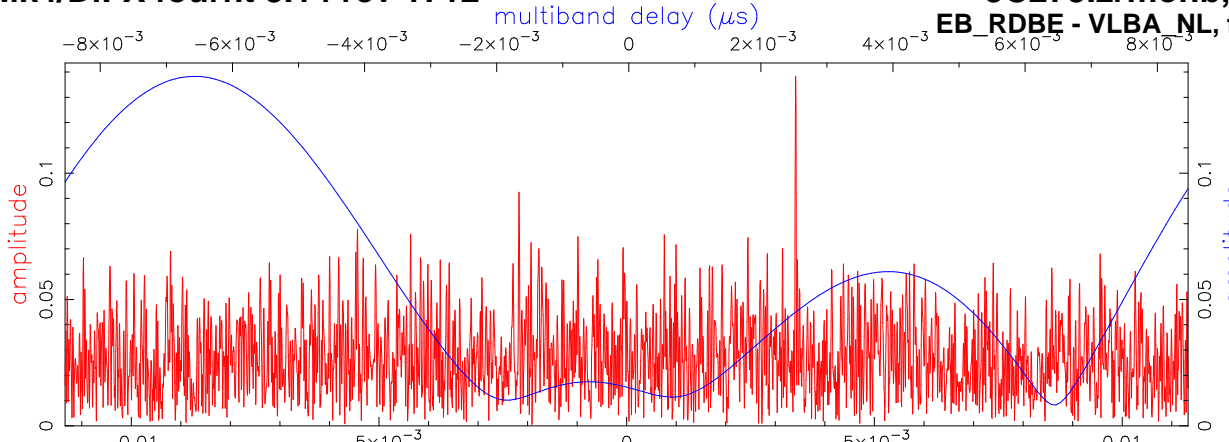
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



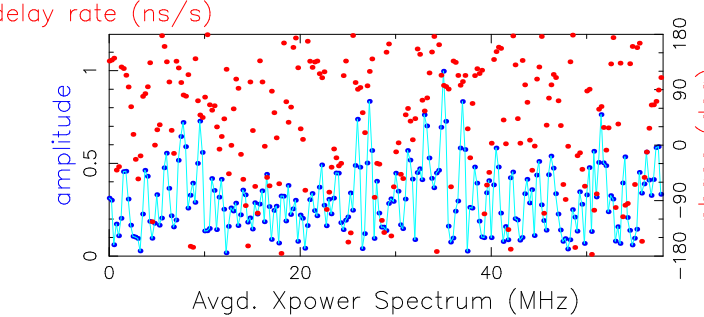
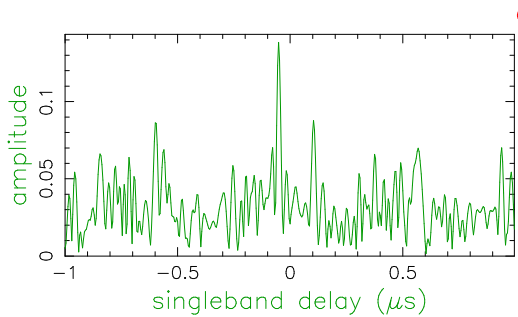
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 |
| E | 3890 | 296 | 1703 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| n | 3890 | 296 | 1703 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| E:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 |
| E:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 |
| E | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| E | W00UR | W01UR | W02UR | W03UR | W03UR | W03UR | W03UR | W03UR | W03UR | W03UR |
| n | W00UR | W01UR | W02UR | W03UR | W03UR | W03UR | W03UR | W03UR | W03UR | W03UR |

| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | All |
|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Group delay (usec)(sbd) | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 | 2.42684531354E+03 |
| Sband delay (usec) | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 | 2.42684391745E+03 |
| Phase delay (usec) | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 | 2.42618884046E+03 |
| Delay rate (us/s) | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 | -1.62008831722E+00 |
| Total phase (deg) | -2335.7 | -2335.7 | -2335.7 | -2335.7 | -2335.7 | -2335.7 | -2335.7 | -2335.7 | -2335.7 | -2335.7 |
| Apriori delay (usec) | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 | 2.42618883718E+03 |
| Apriori clock (usec) | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 | 2.3286325E+01 |
| Apriori clockrate (us/s) | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 | -2.9281688E-07 |
| Apriori rate (us/s) | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 | -1.62009529049E+00 |
| Apriori accel (us/s/s) | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 | -1.23694030360E-05 |
| Resid mbdelay (usec) | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 | 7.94303E-03 |
| Resid sbdelay (usec) | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 | 6.55080E-01 |
| Resid phdelay (usec) | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 | 3.27849E-06 |
| Resid rate (us/s) | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 | 6.97327E-06 |
| Resid phase (deg) | -2492.1 | -2492.1 | -2492.1 | -2492.1 | -2492.1 | -2492.1 | -2492.1 | -2492.1 | -2492.1 | -2492.1 |

| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | All |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| ph/seg (deg) | 65.5 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 |
| amp/seg (%) | 97.3 | 113.2 | 113.2 | 113.2 | 113.2 | 113.2 | 113.2 | 113.2 | 113.2 | 113.2 |
| ph/frq (deg) | 22.1 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 |
| amp/frq (%) | 15.1 | 35.3 | 35.3 | 35.3 | 35.3 | 35.3 | 35.3 | 35.3 | 35.3 | 35.3 |
| RMS | 65.5 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 |
| Theor. | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 | 64.8 |
| Amplitude | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 | 0.155 +/- 0.027 |
| Search (4096X16) | 0.129 | 0.129 | 0.129 | 0.129 | 0.129 | 0.129 | 0.129 | 0.129 | 0.129 | 0.129 |
| Interp. | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Inc. seg. avg. | 0.149 | 0.149 | 0.149 | 0.149 | 0.149 | 0.149 | 0.149 | 0.149 | 0.149 | 0.149 |
| Inc. frq. avg. | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 |
| PCal mode: | MANUAL | MANUAL | MANUAL | MANUAL | MANUAL | MANUAL | MANUAL | MANUAL | MANUAL | MANUAL |
| PCal rate: | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 |
| PC period (AP's) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| sb window (us) | -1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| mb window (us) | -0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 |
| dr window (ns/s) | -0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 |
| ion window (TEC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| lags: | 232 | 232 | 232 | 232 | 232 | 232 | 232 | 232 | 232 | 232 |
| t_cohere | infinite | infinite | infinite | infinite | infinite | infinite | infinite | infinite | infinite | infinite |

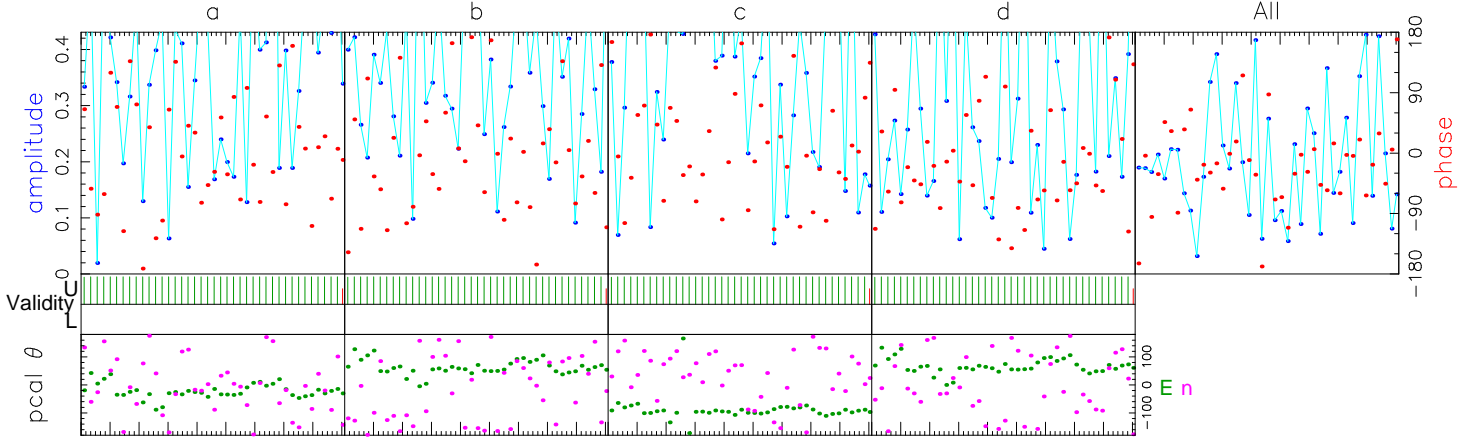


Fringe quality 0
 SNR 5.9
 Int time 539.349
 Amp 0.144
 Phase 188.5
 PFD 5.4e-01
 Delays (us)
 SBD -0.051510
 MBD -0.006540
 Fringe rate (Hz)
 0.293624
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014500.00
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143555
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.6997s
 +2°03' 8.598"

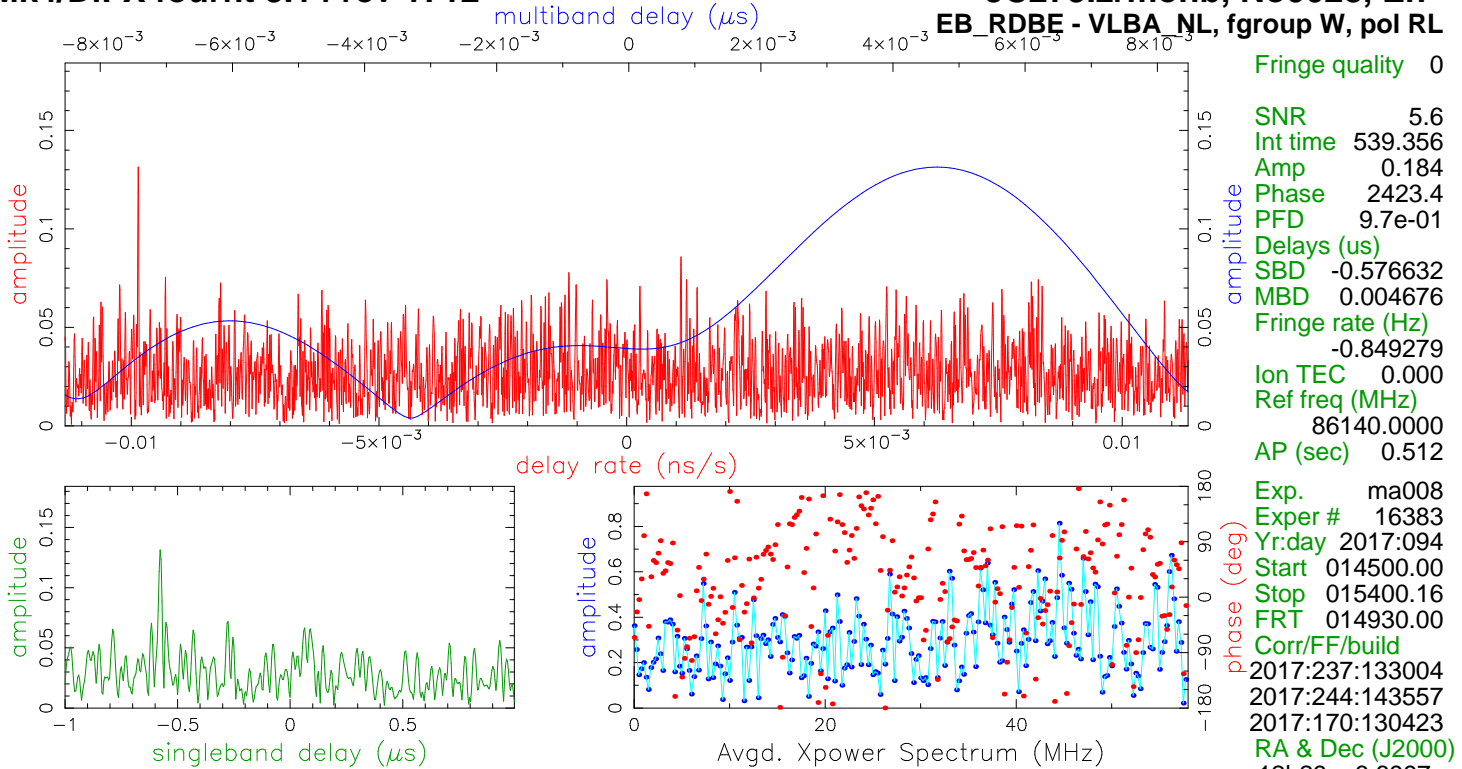
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



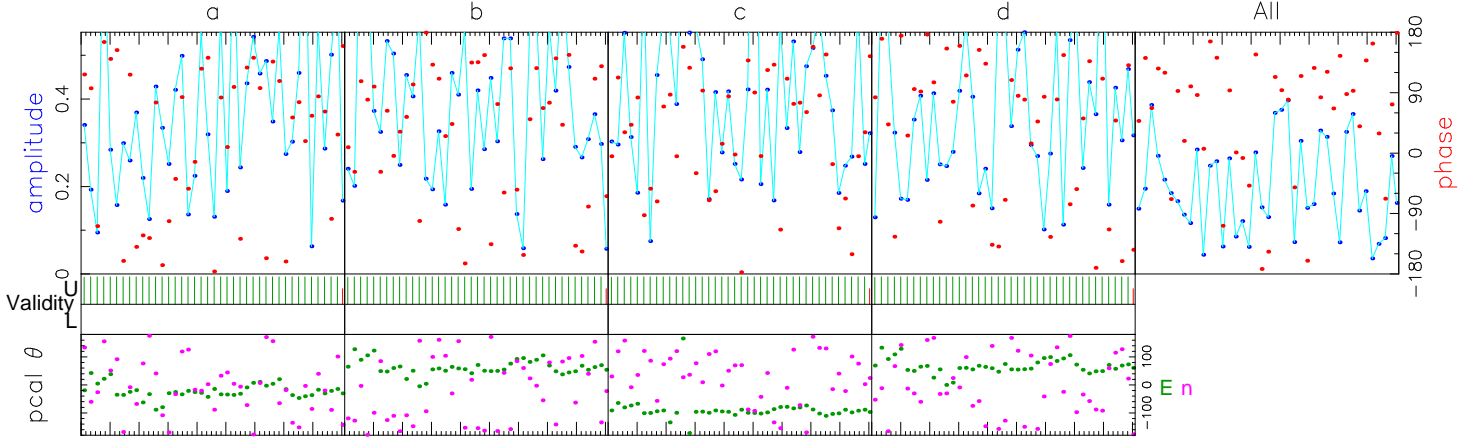
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | -16.2 | -26.7 | 2.0 | -31.2 | Phase | -16.3 |
| | 0.2 | 0.1 | 0.2 | 0.1 | Ampl. | 0.1 |
| | 347.0 | 450.8 | 221.0 | 156.1 | Sbd box | 221.0 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| n | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:n | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:n | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| n | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| n | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 2.42613109715E+03 | Apriori delay (usec) | 2.42618883718E+03 | Resid mbdelay (usec) | -6.54003E-03 | +/- | 4.1E-04 |
| Sband delay (usec) | 2.42613732738E+03 | Apriori clock (usec) | 2.3286325E+01 | Resid sbdelay (usec) | -5.15098E-02 | +/- | 1.6E-03 |
| Phase delay (usec) | 2.42618883665E+03 | Apriori clockrate (us/s) | -2.9281688E-07 | Resid phdelay (usec) | -5.24684E-07 | +/- | 6.2E-07 |
| Delay rate (us/s) | -1.62009188180E+00 | Apriori rate (us/s) | -1.62009529049E+00 | Resid rate (us/s) | 3.40869E-06 | +/- | 2.0E-09 |
| Total phase (deg) | 344.9 | Apriori accel (us/s/s) | -1.23694030360E-05 | Resid phase (deg) | 188.5 | +/- | 19.4 |

| | | | | | | | | |
|--------------|----------|-------------|---------------------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | RMS 60.6 | Theor. 62.0 | Amplitude 0.144 +/- 0.024 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 92.4 | 108.3 | Search (4096X16) 0.137 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.009 | 0.009 |
| ph/frq (deg) | 18.2 | 19.4 | Interp. 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 15.6 | 33.8 | Inc. seg. avg. 0.135 | Sample rate(MSamp/s): 116 | | ion window (TEC) | 0.00 | 0.00 |
| | | | Inc. frq. avg. 0.139 | Data rate(Mb/s): 928 | nlags: 232 | t_cohere infinite | | |



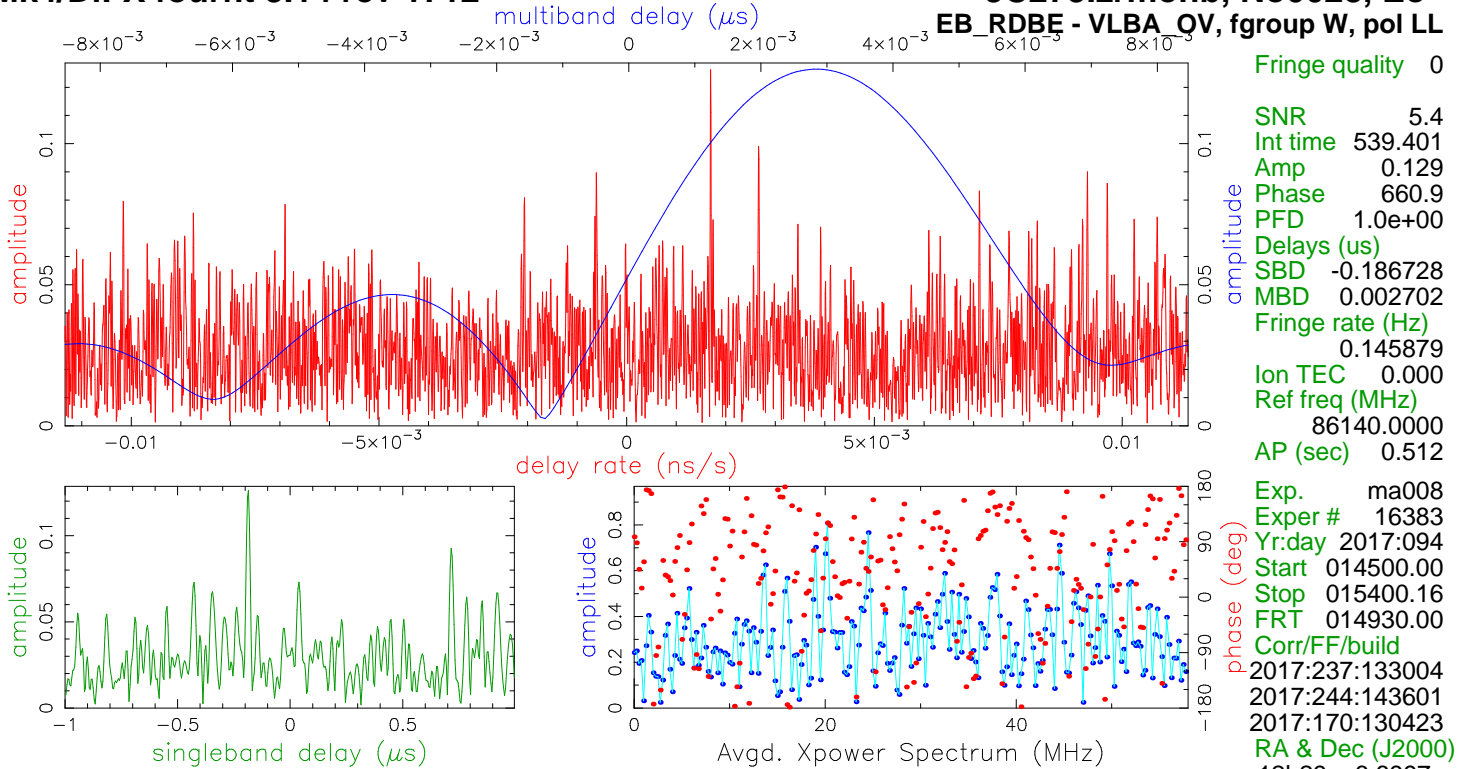
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



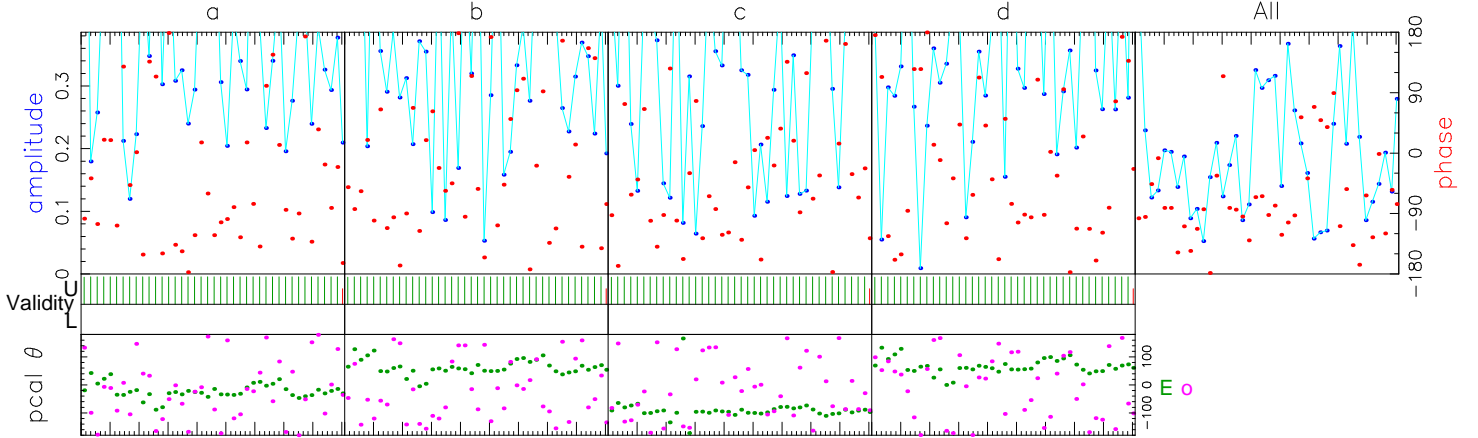
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | APs used | |
| n | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:n | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:n | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| n | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| n | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| Group delay (usec)(sbd) | 2.42561324618E+03 | Apriori delay (usec) | 2.42618883718E+03 | Resid mbdelay (usec) | 4.67567E-03 | +/- 4.3E-04 |
| Sband delay (usec) | 2.42561220518E+03 | Apriori clock (usec) | 2.3286325E+01 | Resid sbdelay (usec) | -5.76632E-01 | +/- 1.7E-03 |
| Phase delay (usec) | 2.42618884049E+03 | Apriori clockrate (us/s) | -2.9281688E-07 | Resid phdelay (usec) | 3.31148E-06 | +/- 6.5E-07 |
| Delay rate (us/s) | -1.62010514977E+00 | Apriori rate (us/s) | -1.62009529049E+00 | Resid rate (us/s) | -9.85929E-06 | +/- 2.1E-09 |
| Total phase (deg) | 2579.8 | Apriori accel (us/s/s) | -1.23694030360E-05 | Resid phase (deg) | 2423.4 | +/- 20.3 |

| | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | RMS 75.9 | Theor. 65.0 | Amplitude Search (4096X16) | 0.184 +/- 0.033 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 95.0 | 113.4 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 26.7 | 20.3 | Inc. seg. avg. | 0.170 | Bits/sample: 2x2 | SampCntNorm: enabled |
| amp/frq (%) | 11.4 | 35.4 | Inc. frq. avg. | 0.182 | Sample rate(MSamp/s): 116 | mb window (us) -0.009 0.009 |
| | | | | | Data rate(Mb/s): 928 | dr window (ns/s) -0.011 0.011 |
| | | | | | nlags: 232 | ion window (TEC) 0.00 0.00 |
| | | | | | t_cohere infinite | |

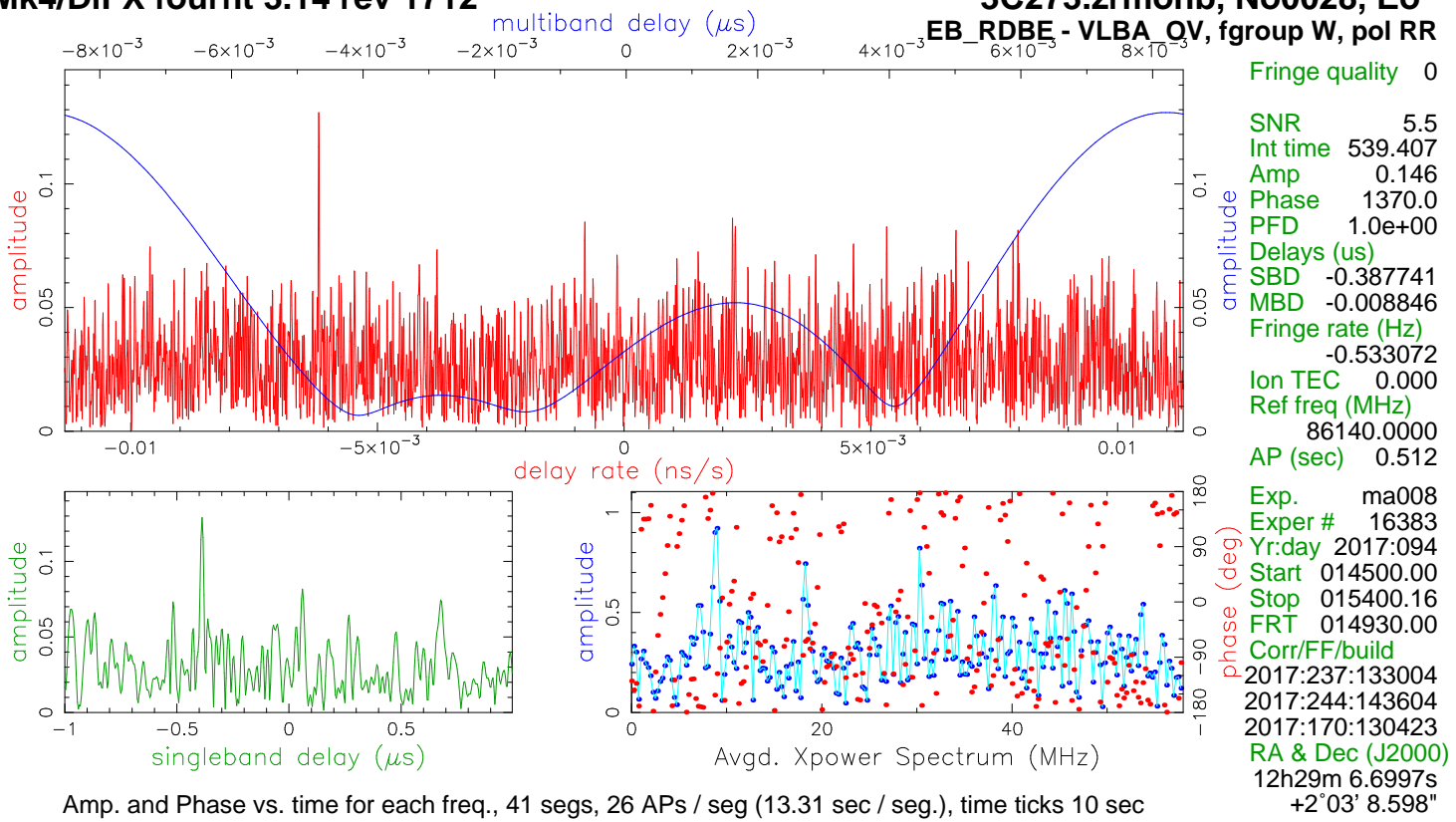


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

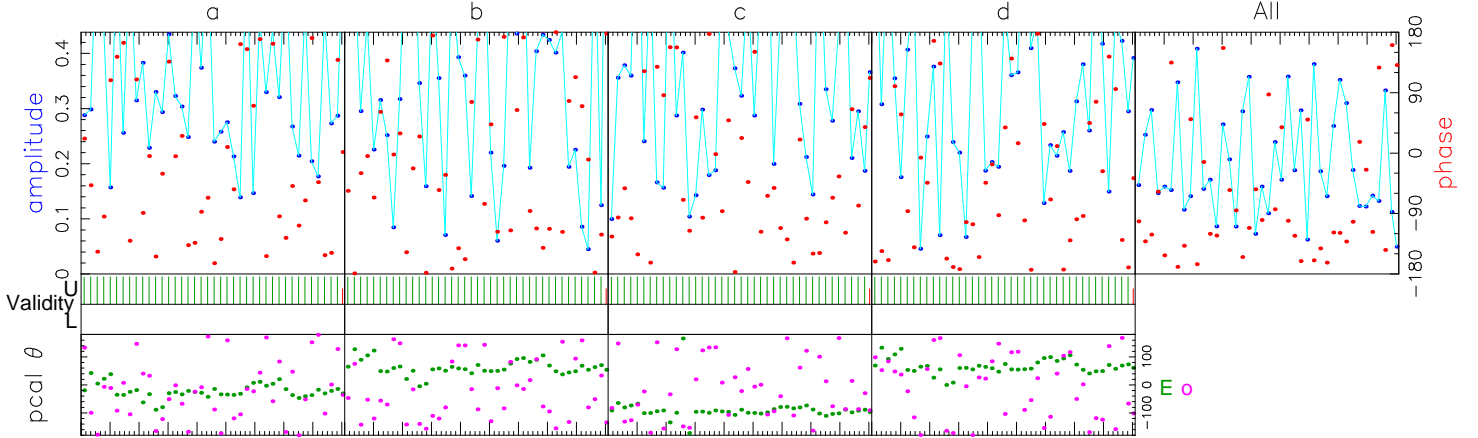


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | APs used | |
| o | 3890 | 296 | 1703 | 3109 | PC freqs | 189.7 |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| o | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 9.39011797638E+03 | Apriori delay (usec) | 9.39030300764E+03 | Resid mbdelay (usec) | 2.70207E-03 | +/- 4.5E-04 |
| Sband delay (usec) | 9.39011627936E+03 | Apriori clock (usec) | 2.6486408E+01 | Resid sbdelay (usec) | -1.86728E-01 | +/- 1.7E-03 |
| Phase delay (usec) | 9.39030300474E+03 | Apriori clockrate (us/s) | -2.5571426E-07 | Resid phdelay (usec) | -2.90071E-06 | +/- 6.8E-07 |
| Delay rate (us/s) | -1.85911064752E+00 | Apriori rate (us/s) | -1.85911234103E+00 | Resid rate (us/s) | 1.69351E-06 | +/- 2.2E-09 |
| Total phase (deg) | 689.0 | Apriori accel (us/s/s) | -4.91034648790E-05 | Resid phase (deg) | 660.9 | +/- 21.0 |

RMS Theor. Amplitude 0.129 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 69.2 67.3 Search (4096X16) 0.125 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 94.4 117.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 ph/frq (deg) 14.7 21.0 Inc. seg. avg. 0.115 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
 amp/frq (%) 14.2 36.7 Inc. frq. avg. 0.121 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00
 E: az 226.3 el 31.8 pa 27.6 o: az 90.1 el 3.4 pa -52.8 u,v (fr/asec) 10557.720 1334.915 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Eo..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Eo.W.163.zrmonb

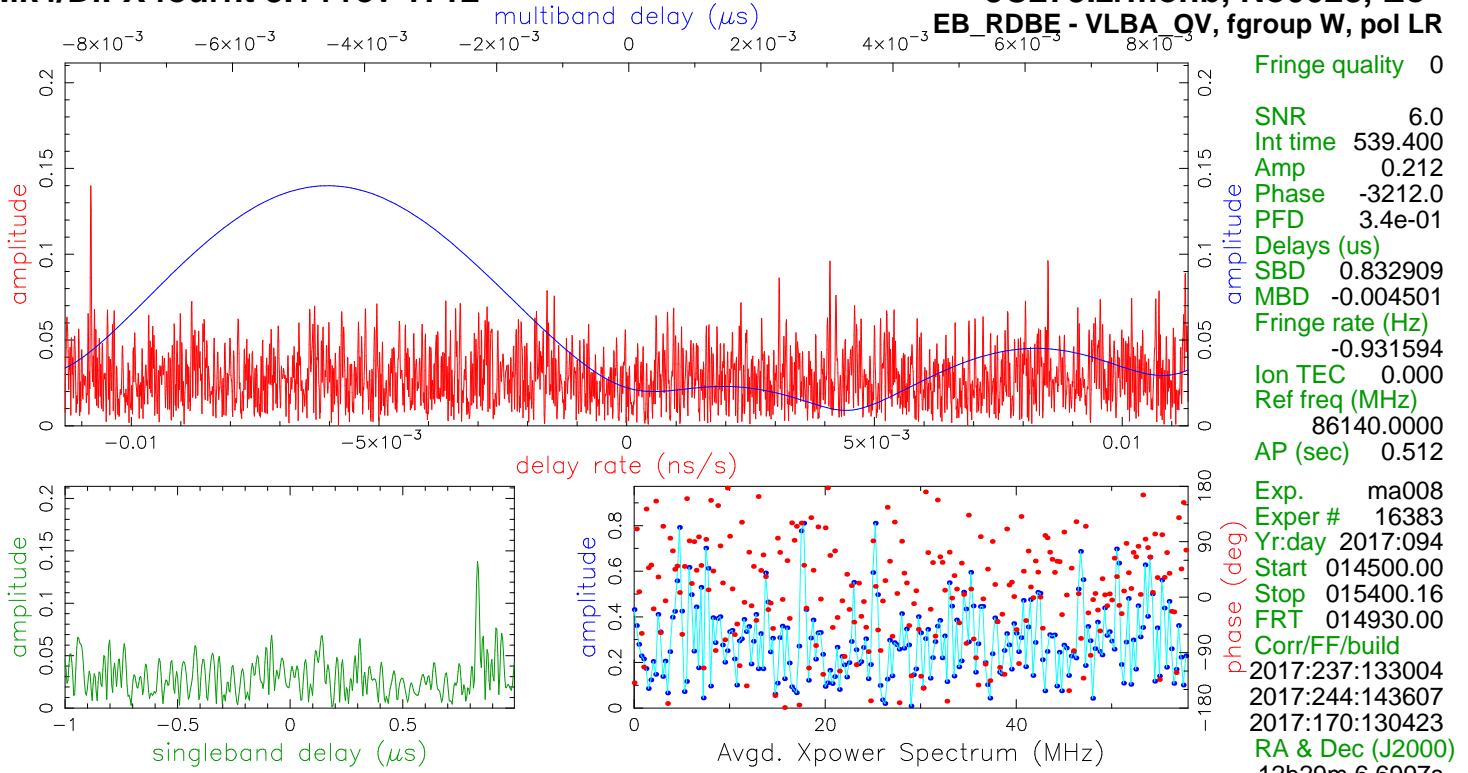


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | All |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------------------|
| Validity | | | | | |
| pcal θ | | | | | |
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) |
| | -132.2 | -141.3 | -114.8 | -144.0 | Phase |
| | 0.2 | 0.1 | 0.2 | 0.1 | Ampl. |
| | 68.6 | 352.6 | 142.2 | 283.3 | Sbd box |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used |
| E | 3890 | 296 | 1703 | 3109 | PC freqs |
| o | 3890 | 296 | 1703 | 3109 | PC freqs |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | PC phase |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC |
| E | 1000 | 1000 | 1000 | 1000 | PC amp |
| o | 1000 | 1000 | 1000 | 1000 | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids |
| o | W00UR | W01UR | W02UR | W03UR | Tracks |
| | | | | | Chan ids |
| | | | | | Tracks |
| Group delay (usec)(sbd) | 9.38991869450E+03 | Apriori delay (usec) | 9.39030300764E+03 | Resid mbdelay (usec) | -8.84647E-03 +/- 4.4E-04 |
| Sband delay (usec) | 9.38991526640E+03 | Apriori clock (usec) | 2.6486408E+01 | Resid sbdelay (usec) | -3.87741E-01 +/- 1.7E-03 |
| Phase delay (usec) | 9.39030300340E+03 | Apriori clockrate (us/s) | -2.5571426E-07 | Resid phdelay (usec) | -4.24410E-06 +/- 6.7E-07 |
| Delay rate (us/s) | -1.85911852947E+00 | Apriori rate (us/s) | -1.85911234103E+00 | Resid rate (us/s) | -6.18844E-06 +/- 2.1E-09 |
| Total phase (deg) | 1398.1 | Apriori accel (us/s/s) | -4.91034648790E-05 | Resid phase (deg) | 1370.0 +/- 20.8 |

ph/seg (deg) 74.9 66.6 Search (4096X16) 0.127 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 95.1 116.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 16.3 20.8 Inc. seg. avg. 0.138 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 13.5 36.3 Inc. frq. avg. 0.140 Sample rate(MSamp/s): 116 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite dr window (ns/s) -0.011 0.011
 E: az 226.3 el 31.8 pa 27.6 o: az 90.1 el 3.4 pa -52.8 u,v (fr/asec) 10557.720 1334.915 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Eo..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Eo.W.164.zrmonb



Fringe quality 0

SNR 6.0

Int time 539.400

Amp 0.212

Phase -3212.0

PFD 3.4e-01

Delays (us)

SBD 0.832909

MBD -0.004501

Fringe rate (Hz)

-0.931594

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. ma008

Exper # 16383

Yr:day 2017:094

Start 014500.00

Stop 015400.16

FRT 014930.00

Corr/FF/build

2017:237:133004

2017:244:143607

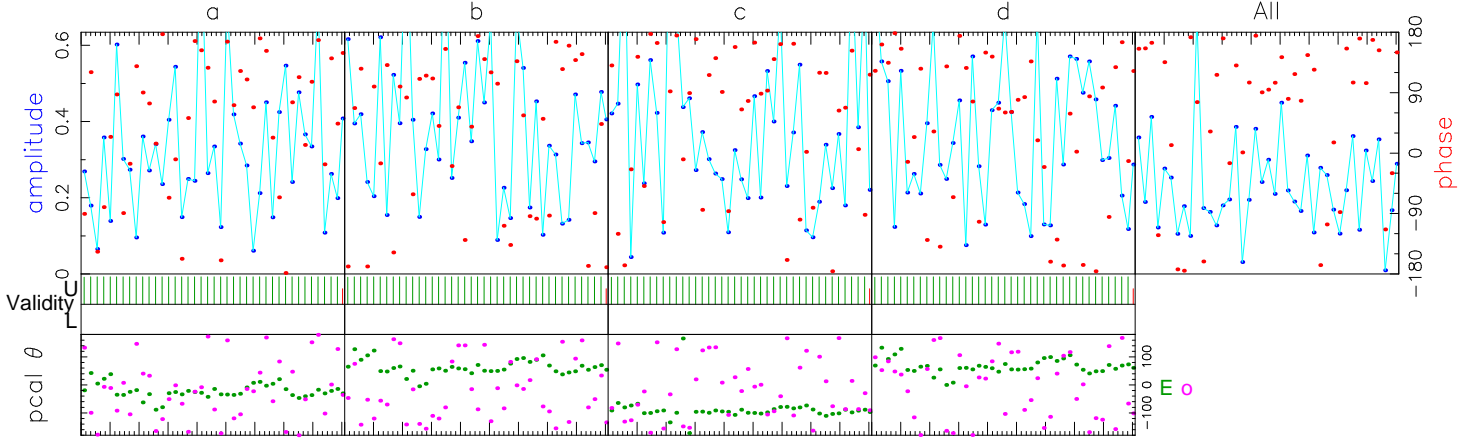
2017:170:130423

RA & Dec (J2000)

12h29m 6.6997s

+2°03' 8.598"

Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



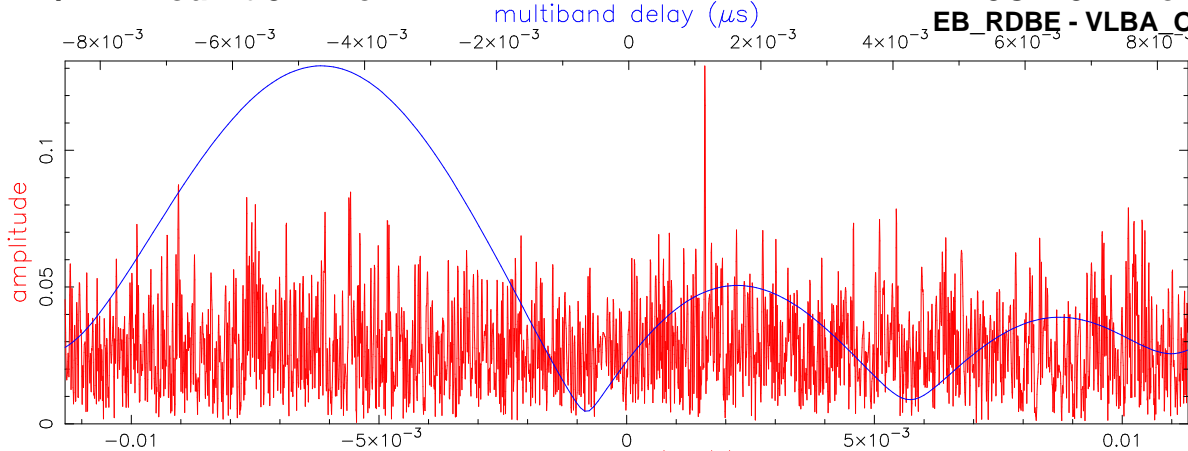
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | 122.3 | 135.6 | 151.1 | 113.1 | Phase | 132.5 |
| | 0.2 | 0.2 | 0.3 | 0.2 | Ampl. | 0.2 |
| | 84.0 | 160.4 | 426.8 | 208.9 | Sbd box | 426.2 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| o | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| o | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 9.39113477322E+03 | Apriori delay (usec) | 9.39030300764E+03 | Resid mbdelay (usec) | -4.50108E-03 | +/- | 4.0E-04 |
| Sband delay (usec) | 9.39113591633E+03 | Apriori clock (usec) | 2.6486408E+01 | Resid sbdelay (usec) | 8.32909E-01 | +/- | 1.6E-03 |
| Phase delay (usec) | 9.39030301191E+03 | Apriori clockrate (us/s) | -2.5571426E-07 | Resid phdelay (usec) | 4.27382E-06 | +/- | 6.1E-07 |
| Delay rate (us/s) | -1.85912315591E+00 | Apriori rate (us/s) | -1.85911234103E+00 | Resid rate (us/s) | -1.08149E-05 | +/- | 2.0E-09 |
| Total phase (deg) | -3183.9 | Apriori accel (us/s/s) | -4.91034648790E-05 | Resid phase (deg) | -3212.0 | +/- | 19.0 |

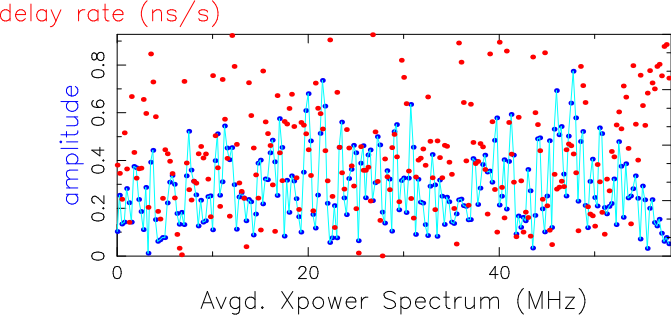
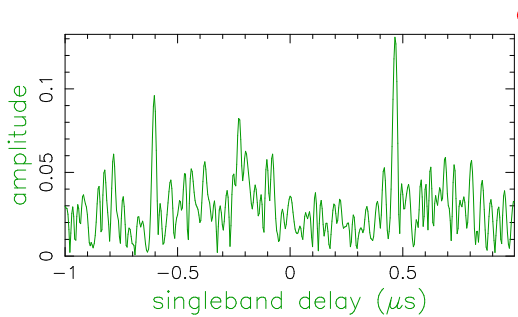
| | | | | | | | | |
|--------------|----------|-------------|---------------------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | RMS 70.7 | Theor. 61.0 | Amplitude 0.212 +/- 0.035 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 109.4 | 106.4 | Search (4096X16) 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.009 | 0.009 |
| ph/frq (deg) | 20.5 | 19.0 | Interp. 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 16.8 | 33.2 | Inc. seg. avg. 0.224 | Sample rate(MSamp/s): 116 | | ion window (TEC) | 0.00 | 0.00 |
| | | | Inc. frq. avg. 0.206 | Data rate(Mb/s): 928 | nlags: 232 | t_cohere infinite | | |

E: az 226.3 el 31.8 pa 27.6 o: az 90.1 el 3.4 pa -52.8 u,v (fr/asec) 10557.720 1334.915 simultaneous interpolator

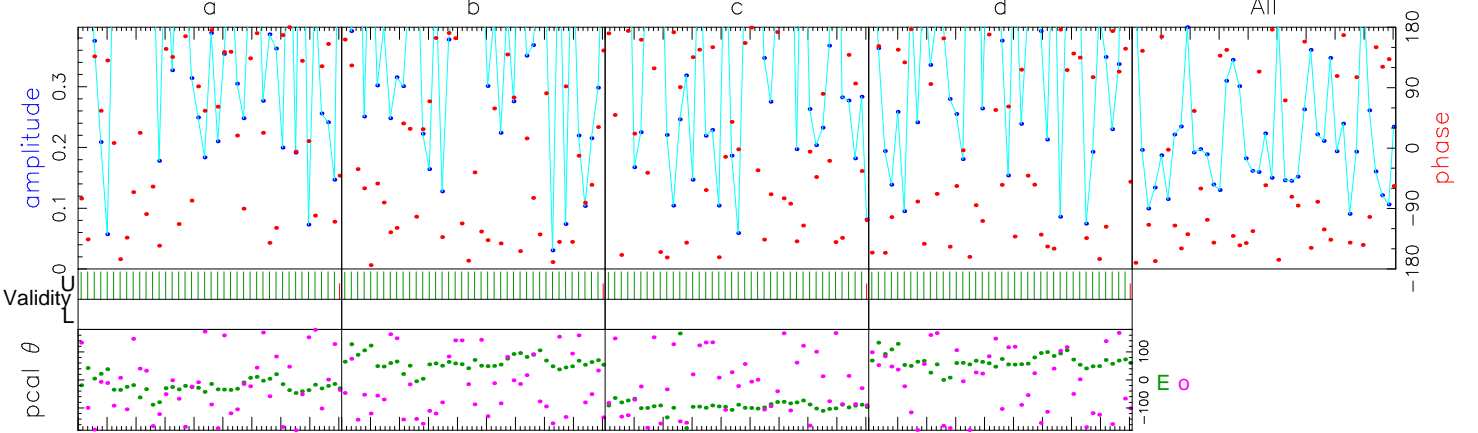
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Eo..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Eo.W.165.zrmonb



Fringe quality 0
SNR 5.6
Int time 539.408
Amp 0.133
Phase -2064.2
PFD 9.8e-01
Delays (us)
SBD 0.466763
MBD -0.004621
Fringe rate (Hz)
0.136011
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143609
2017:170:130423
RA & Dec (J2000)
12h29m 6.697s
+2°03' 8.598"



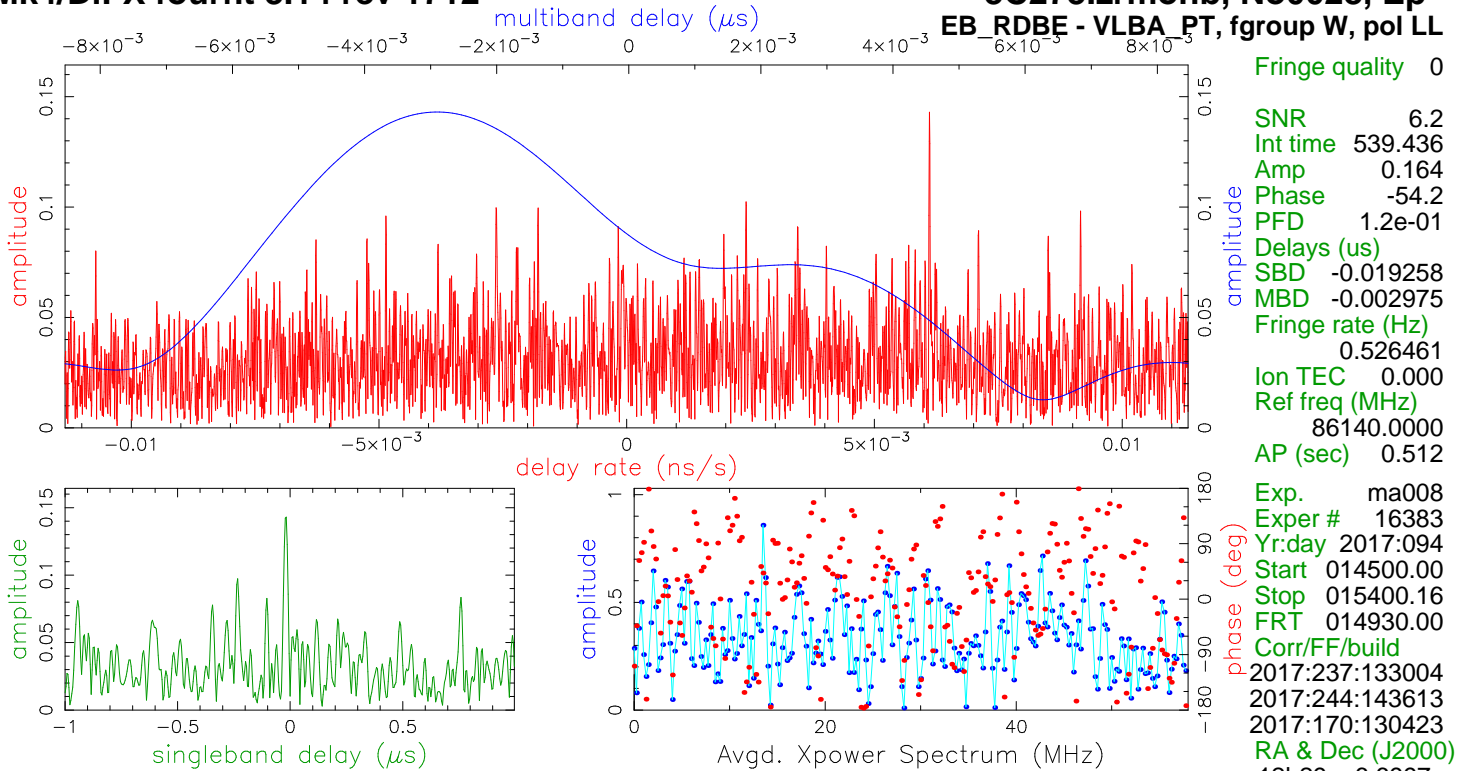
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



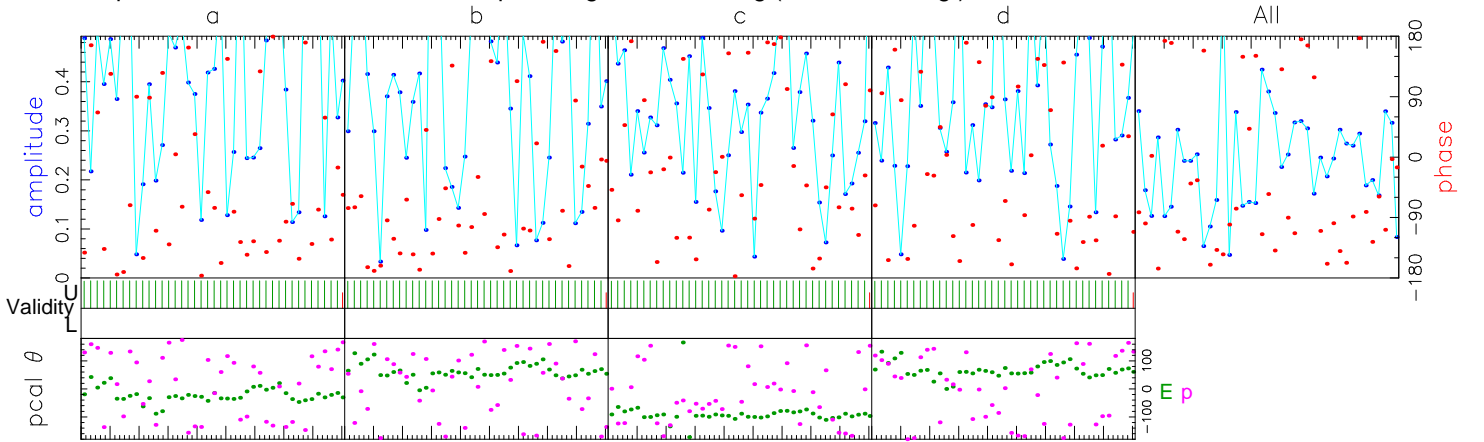
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|--------|
| | -164.7 | -136.9 | -148.0 | -160.5 | Phase | -153.0 |
| | 0.1 | 0.1 | 0.1 | 0.2 | Ampl. | 0.1 |
| | 388.3 | 209.3 | 93.7 | 341.2 | Sbd box | 341.3 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| o | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:o | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| o | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| Group delay (usec)(sbd) | 9.39077625284E+03 | Apriori delay (usec) | 9.39030300764E+03 | Resid mbdelay (usec) | -4.62146E-03 | +/- 4.3E-04 |
| Sband delay (usec) | 9.39076977095E+03 | Apriori clock (usec) | 2.6486408E+01 | Resid sbdelay (usec) | 4.66763E-01 | +/- 1.7E-03 |
| Phase delay (usec) | 9.39030300271E+03 | Apriori clockrate (us/s) | -2.5571426E-07 | Resid phdelay (usec) | -4.93340E-06 | +/- 6.6E-07 |
| Delay rate (us/s) | -1.85911076208E+00 | Apriori rate (us/s) | -1.85911234103E+00 | Resid rate (us/s) | 1.57895E-06 | +/- 2.1E-09 |
| Total phase (deg) | -2036.0 | Apriori accel (us/s/s) | -4.91034648790E-05 | Resid phase (deg) | -2064.2 | +/- 20.4 |

| | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | RMS 66.7 | Theor. 65.2 | Amplitude Search (4096X16) | 0.133 +/- 0.024 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 101.3 | 113.8 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 15.4 | 20.4 | Inc. seg. avg. | 0.135 | Bits/sample: 2x2 | SampCntNorm: enabled |
| amp/frq (%) | 14.6 | 35.6 | Inc. frq. avg. | 0.126 | Sample rate(MSamp/s): 116 | mb window (us) -0.009 0.009 |
| | | | | | Data rate(Mb/s): 928 | dr window (ns/s) -0.011 0.011 |
| | | | | | nlags: 232 | t_cohere infinite |
| | | | | | | ion window (TEC) 0.00 0.00 |

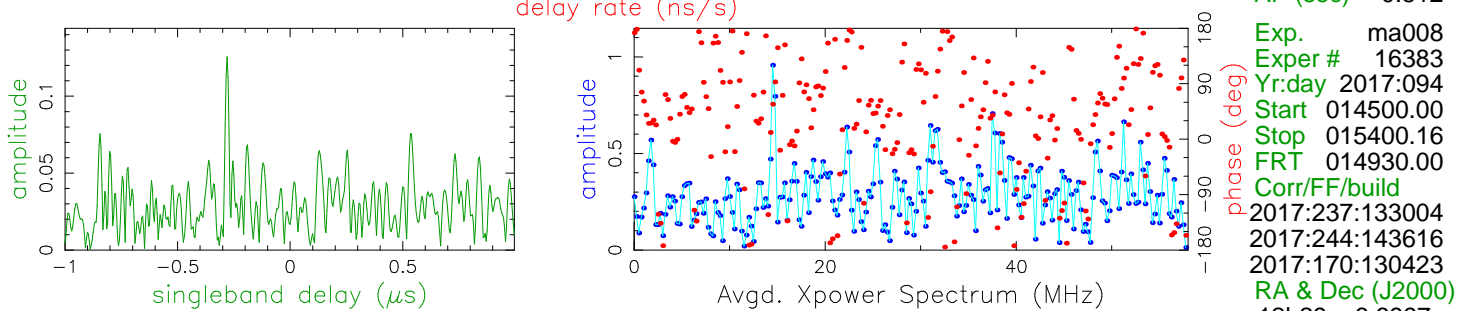
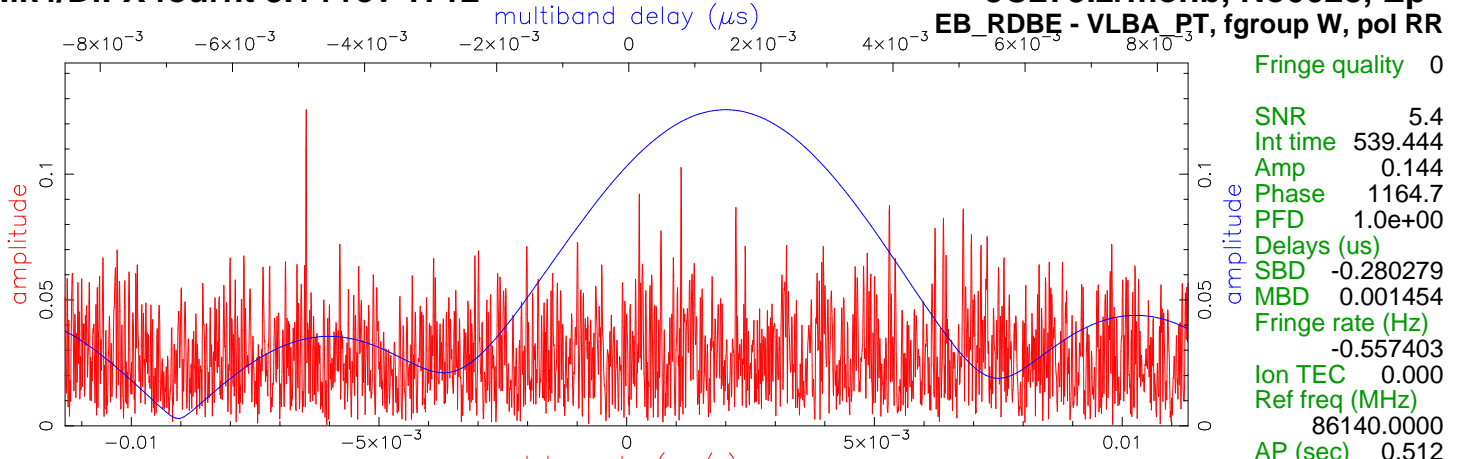


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

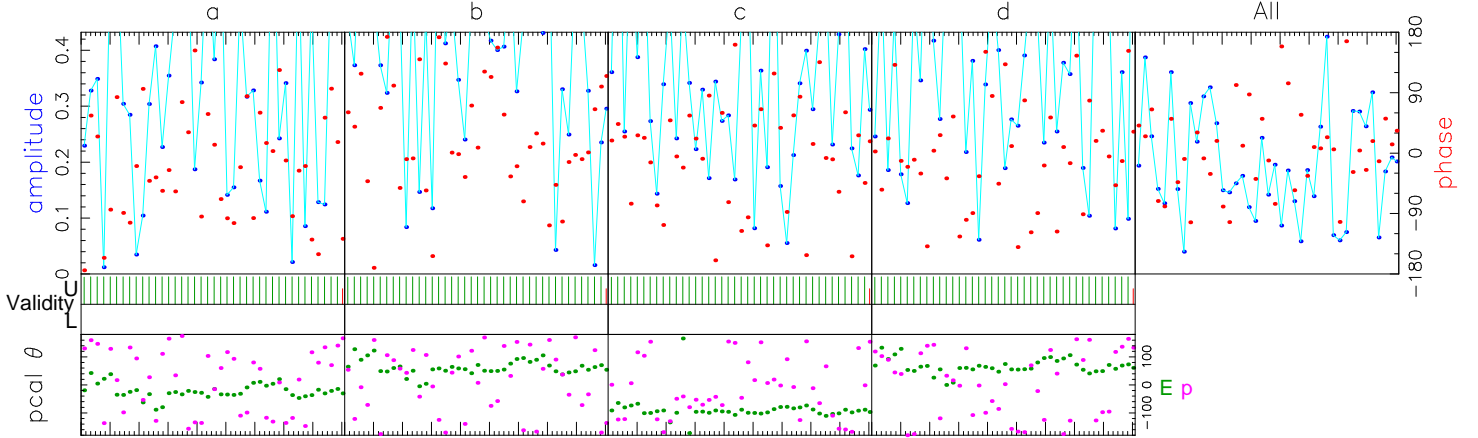


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|------------------------|----------------------|-------------------|----------------|
| | -134.7 | -111.0 | -109.7 | -135.4 | Phase | -122.4 |
| | 0.2 | 0.3 | 0.1 | 0.1 | Ampl. | 0.2 |
| | 229.1 | 229.0 | 178.6 | 409.3 | Sbd box | 228.5 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| p | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:p | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:p | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| F | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| p | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 6.29974839864E+03 | Apriori delay (usec) | 6.29976844052E+03 | Resid mbdelay (usec) | -2.97521E-03 | +/- 3.9E-04 |
| Sband delay (usec) | 6.29974918287E+03 | Apriori clock (usec) | 2.6302065E+01 | Resid sbdelay (usec) | -1.92577E-02 | +/- 1.5E-03 |
| Phase delay (usec) | 6.29976843657E+03 | Apriori clockrate (us/s) | -2.6240506E-07 | Resid phdelay (usec) | -3.94821E-06 | +/- 5.9E-07 |
| Delay rate (us/s) | -1.86886745884E+00 | Apriori rate (us/s) | -1.86887357053E+00 | Resid rate (us/s) | 6.11169E-06 | +/- 1.9E-09 |
| Total phase (deg) | | 113.8 | Apriori accel (us/s/s) | -3.25538701123E-05 | Resid phase (deg) | -54.2 +/- 18.4 |

RMS Theor. Amplitude 0.164 +/- 0.026 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 65.1 59.0 Search (4096X16) 0.141 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 98.7 103.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 ph/frq (deg) 17.5 18.4 Inc. seg. avg. 0.179 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
 amp/frq (%) 52.0 32.2 Inc. frq. avg. 0.157 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00
 E: az 226.3 el 31.8 pa 27.6 p: az 95.7 el 11.8 pa -55.2 u,v (fr/asec) 10645.262 1745.848 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ep..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ep.W.167.zrmonb



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

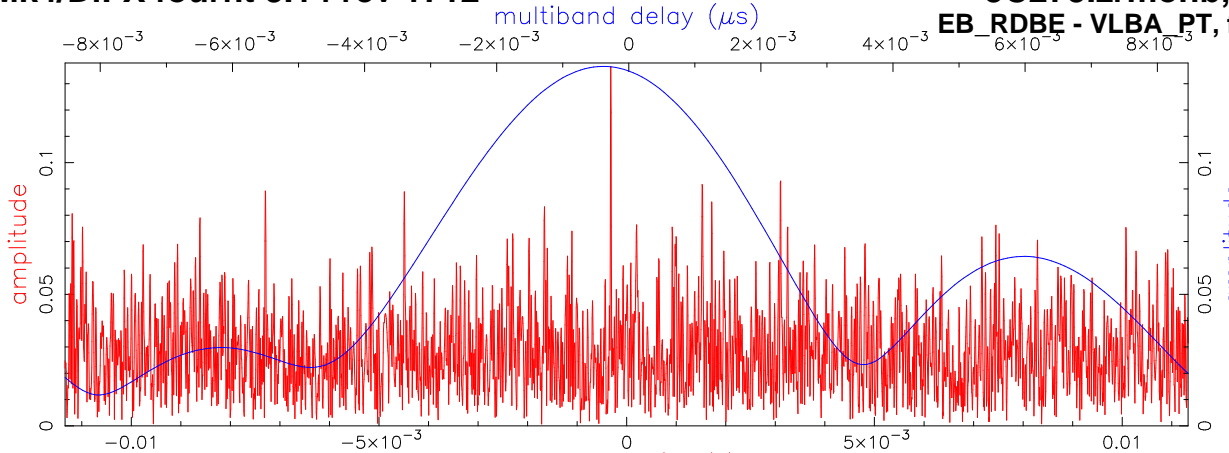


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | -10.4 | 21.6 | 12.6 | -6.4 | Phase | 4.4 |
| | 0.1 | 0.1 | 0.1 | 0.1 | Ampl. | 0.1 |
| | 404.1 | 111.9 | 357.6 | 35.2 | Sbd box | 168.0 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| p | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:p | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Ep | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| F | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| p | W00UR | W01UR | W02UR | W03UR | Tracks | |

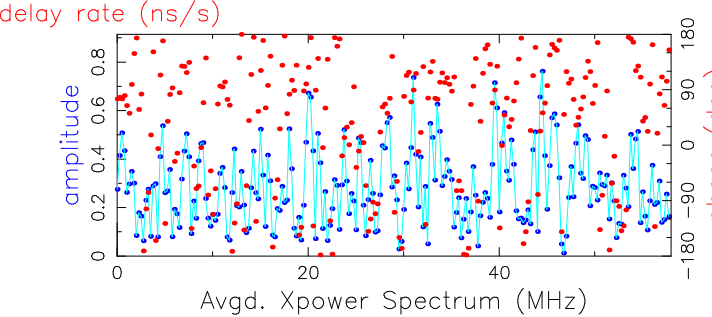
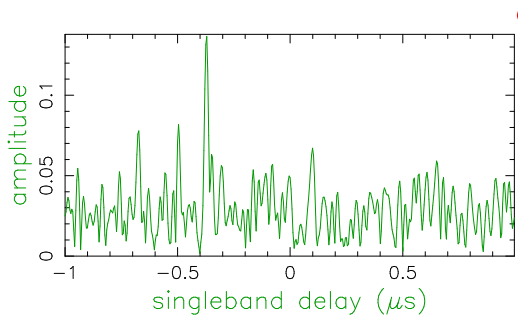
| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 6.29947976082E+03 | Apriori delay (usec) | 6.29976844052E+03 | Resid mbdelay (usec) | 1.45363E-03 | +/- | 4.5E-04 |
| Sband delay (usec) | 6.29948816162E+03 | Apriori clock (usec) | 2.6302065E+01 | Resid sbdelay (usec) | -2.80279E-01 | +/- | 1.8E-03 |
| Phase delay (usec) | 6.29976844066E+03 | Apriori clockrate (us/s) | -2.6240506E-07 | Resid phdelay (usec) | 1.40715E-07 | +/- | 6.9E-07 |
| Delay rate (us/s) | -1.86888004143E+00 | Apriori rate (us/s) | -1.86887357053E+00 | Resid rate (us/s) | -6.47090E-06 | +/- | 2.2E-09 |
| Total phase (deg) | 1332.7 | Apriori accel (us/s/s) | -3.25538701123E-05 | Resid phase (deg) | 1164.7 | +/- | 21.3 |

| | | | | | | | |
|--------------|------|------------------|-------|------------|----------------------|------------------|--------------|
| ph/seg (deg) | 64.1 | Theor. | 68.3 | Amplitude | 0.144 | +/- | 0.027 |
| amp/seg (%) | 95.6 | Search (4096X16) | 0.125 | Search | 0.000 | | |
| ph/frq (deg) | 18.7 | Inc. seg. avg. | 0.132 | PCal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/frq (%) | 2.8 | Inc. frq. avg. | 0.138 | PCal rate: | 0.000E+00, 0.000E+00 | (us/s) | -1.000 1.000 |

E: az 226.3 el 31.8 pa 27.6 p: az 95.7 el 11.8 pa -55.2 u,v (fr/asec) 10645.262 1745.848 simultaneous interpolator
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ep..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ep.W.168.zrmonb

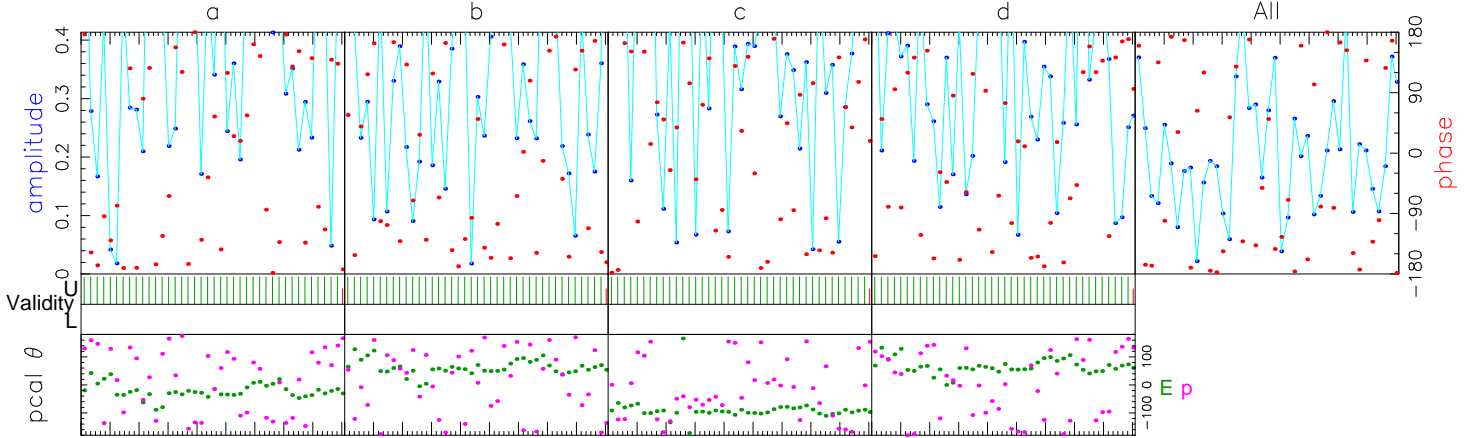


Fringe quality 0
SNR 5.9
Int time 539.437
Amp 0.138
Phase 1326.3
PFD 5.8e-01
Delays (us)
SBD -0.372021
MBD -0.000456
Fringe rate (Hz)
-0.027861
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143618
2017:170:130423
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"



Avgd. Xpower Spectrum (MHz)

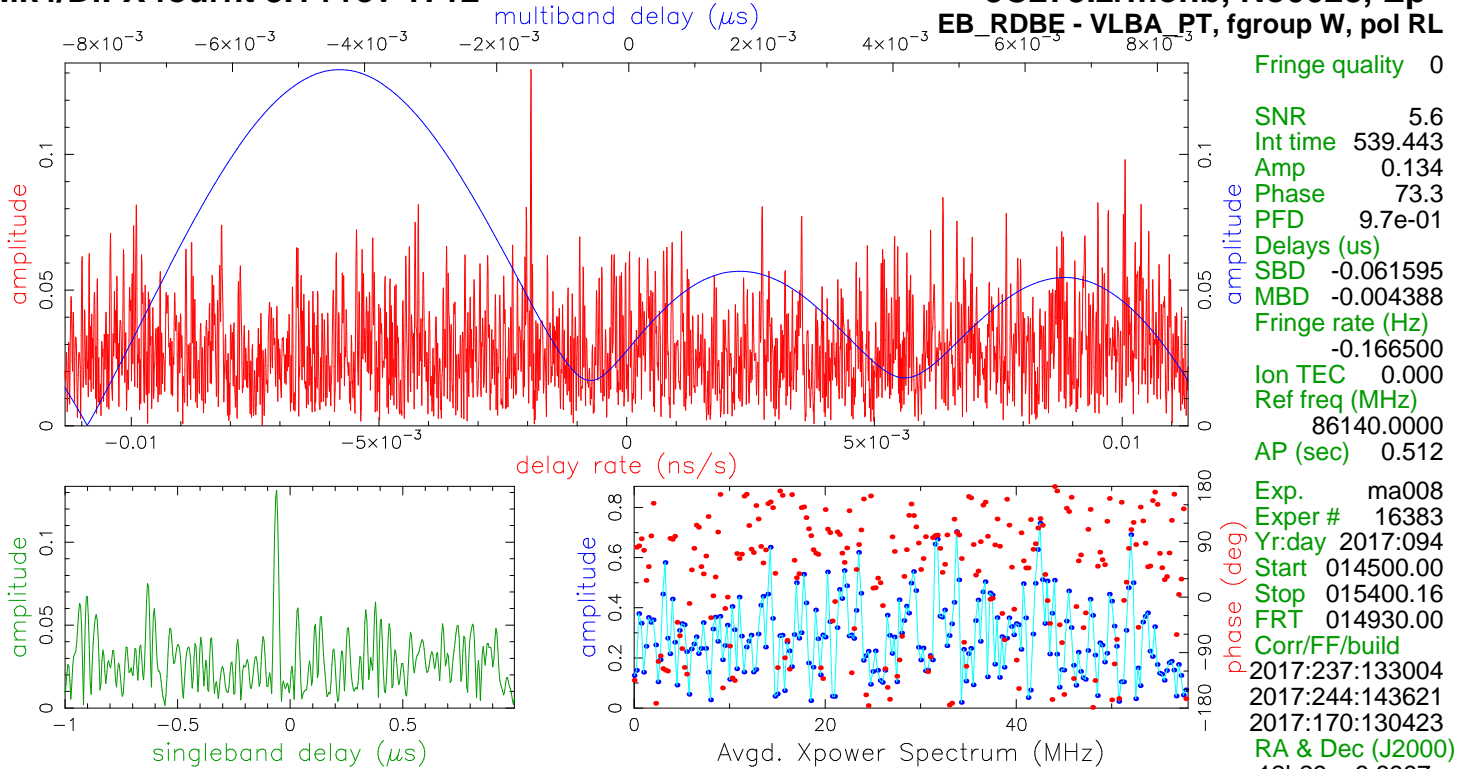
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



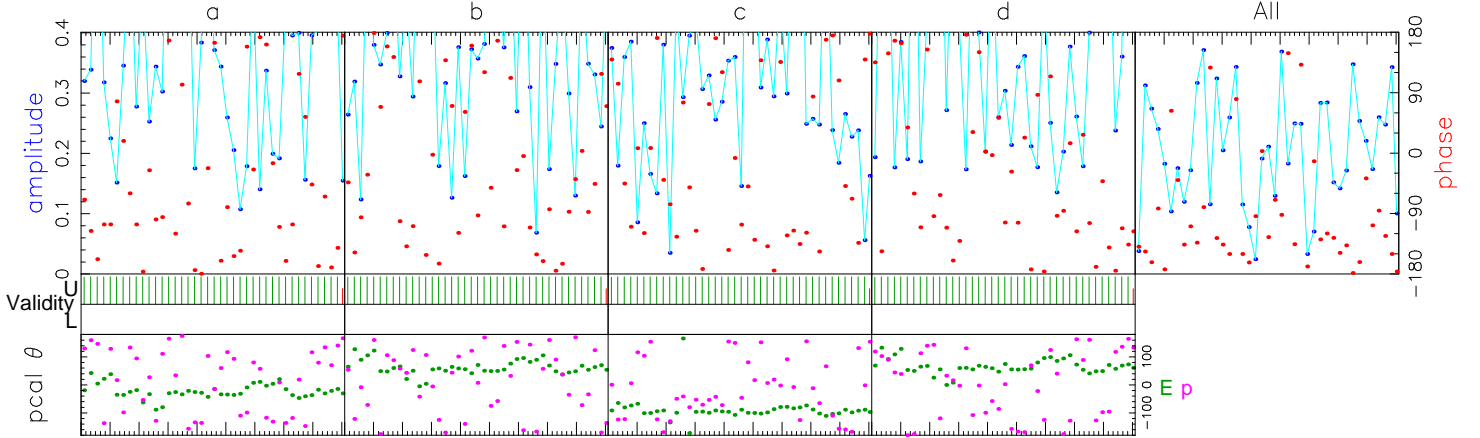
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | APs used | |
| p | 3890 | 296 | 1703 | 3109 | PC freqs | |
| E:p | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:p | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| F | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| p | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

| | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| Group delay (usec)(sbd) | 6.29939251786E+03 | Apriori delay (usec) | 6.29976844052E+03 | Resid mbdelay (usec) | -4.55996E-04 | +/- 4.1E-04 |
| Sband delay (usec) | 6.29939641928E+03 | Apriori clock (usec) | 2.6302065E+01 | Resid sbdelay (usec) | -3.72021E-01 | +/- 1.6E-03 |
| Phase delay (usec) | 6.29976843487E+03 | Apriori clockrate (us/s) | -2.6240506E-07 | Resid phdelay (usec) | -5.65379E-06 | +/- 6.3E-07 |
| Delay rate (us/s) | -1.86887389397E+00 | Apriori rate (us/s) | -1.86887357053E+00 | Resid rate (us/s) | -3.23433E-07 | +/- 2.0E-09 |
| Total phase (deg) | 1494.2 | Apriori accel (us/s/s) | -3.25538701123E-05 | Resid phase (deg) | 1326.3 | +/- 19.4 |

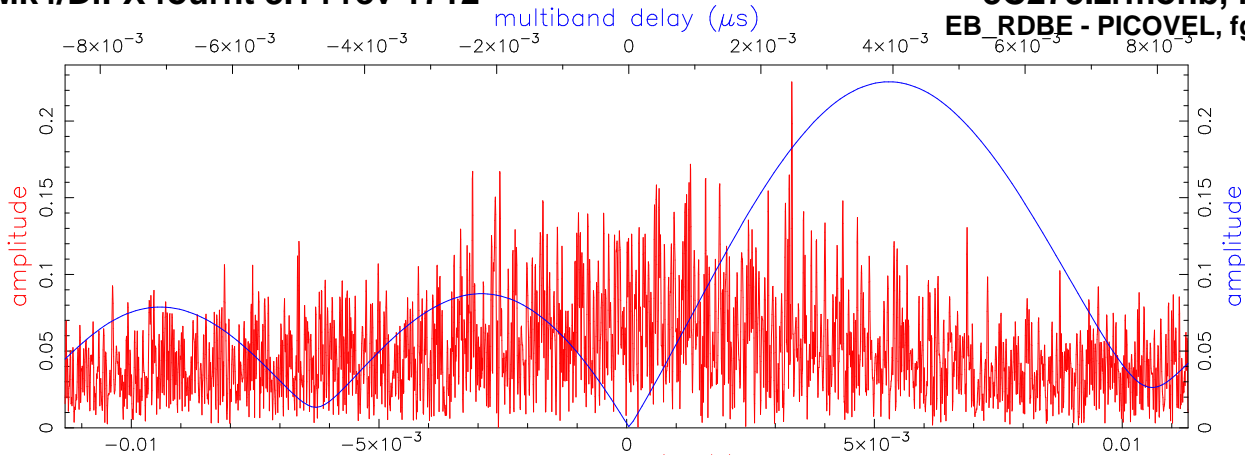
| | | | | | | | | | |
|--------------|------|------------------|-------|----------------|-----------------|--|----------------------|----------------|--------------|
| ph/seg (deg) | 64.0 | Theor. | 62.2 | Amplitude | 0.138 +/- 0.023 | Pcal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 91.9 | Search (4096X16) | 0.132 | Search | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 17.7 | Inc. seg. avg. | 0.131 | Inc. seg. avg. | 0.131 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| amp/frq (%) | 25.5 | Inc. frq. avg. | 0.132 | Inc. frq. avg. | 0.132 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 0.011 | |
| | | | | | | Data rate(Mb/s): 928 | ion window (TEC) | 0.00 0.00 | |
| | | | | | | nlags: 232 | t_cohere infinite | | |



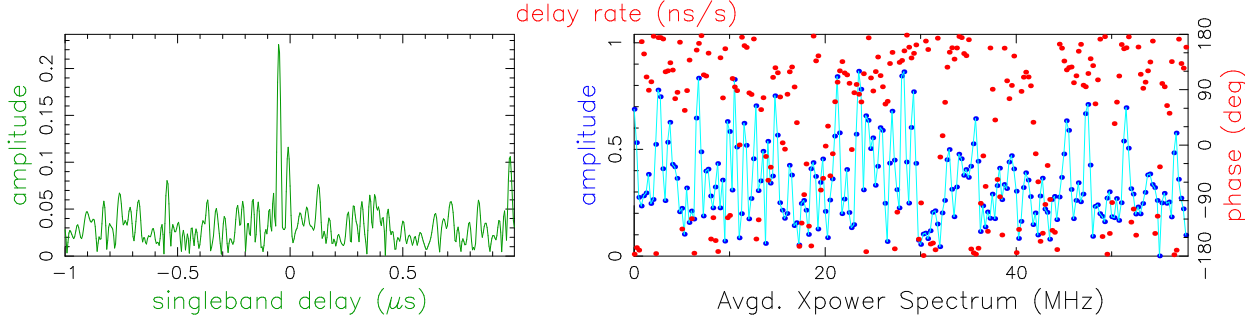
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



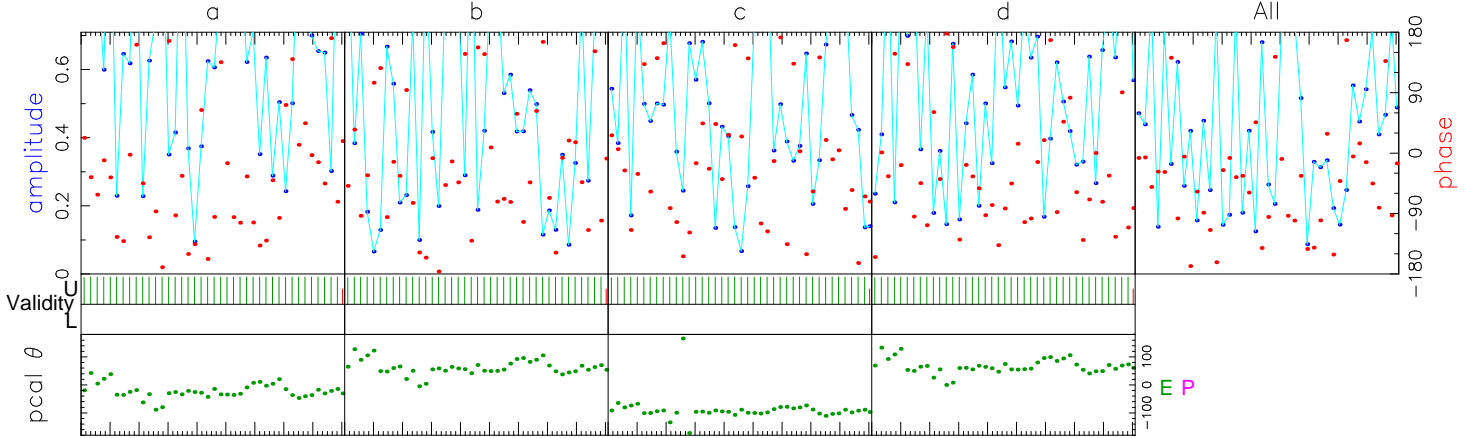
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | 86326.89 | All |
|-----------------------------|--|---|--------------------|----------------------|--------------|----------|----------|---------------------------|
| -126.8 | -143.4 | -135.7 | -126.5 | -126.5 | -126.5 | -126.5 | -126.5 | Phase -131.4 |
| 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | Ampl. 0.1 |
| 15.7 | 421.6 | 217.7 | 218.7 | 218.7 | 218.7 | 218.7 | 218.7 | Sbd box 218.7 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used |
| E 3890 | 296 | 1703 | 3109 | 3109 | 3109 | 3109 | 3109 | PC freqs |
| p 3890 | 296 | 1703 | 3109 | 3109 | 3109 | 3109 | 3109 | PC freqs |
| E:p 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase |
| E:p 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC |
| F 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp |
| p 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| E W00UR | W01UR | W02UR | W03UR | W03UR | W03UR | W03UR | W03UR | Chan ids |
| p W00UL | W01UL | W02UL | W03UL | W03UL | W03UL | W03UL | W03UL | Tracks |
| | | | | | | | | Chan ids |
| | | | | | | | | Tracks |
| Group delay (usec)(sbd) | 6.29971285243E+03 | Apriori delay (usec) | 6.29976844052E+03 | Resid mbdelay (usec) | -4.38809E-03 | +/- | 4.3E-04 | |
| Sband delay (usec) | 6.29970684576E+03 | Apriori clock (usec) | 2.6302065E+01 | Resid sbdelay (usec) | -6.15948E-02 | +/- | 1.7E-03 | |
| Phase delay (usec) | 6.29976843628E+03 | Apriori clockrate (us/s) | -2.6240506E-07 | Resid phdelay (usec) | -4.23878E-06 | +/- | 6.5E-07 | |
| Delay rate (us/s) | -1.86887550343E+00 | Apriori rate (us/s) | -1.86887357053E+00 | Resid rate (us/s) | -1.93290E-06 | +/- | 2.1E-09 | |
| Total phase (deg) | 241.3 | Apriori accel (us/s/s) | -3.25538701123E-05 | Resid phase (deg) | 73.3 | +/- | 20.3 | |
| | | | | | | | | |
| ph/seg (deg) | 61.1 | Theor. | 65.0 | Amplitude | 0.134 | +/- | 0.024 | Pcal mode: MANUAL, MANUAL |
| amp/seg (%) | 91.6 | Search (4096X16) | 0.129 | Interp. | 0.000 | | | PC period (AP's) 5, 5 |
| ph/frq (deg) | 10.2 | Inc. seg. avg. | 0.128 | Inc. frq. avg. | 0.126 | | | sb window (us) |
| amp/frq (%) | 24.9 | Inc. frq. avg. | 0.126 | | | | | -1.000 1.000 |
| | | | | | | | | mb window (us) |
| | | | | | | | | -0.009 0.009 |
| | | | | | | | | dr window (ns/s) |
| | | | | | | | | -0.011 0.011 |
| | | | | | | | | ion window (TEC) |
| | | | | | | | | 0.00 0.00 |
| E: az 226.3 el 31.8 pa 27.6 | p: az 95.7 el 11.8 pa -55.2 | u,v (fr/asec) | 10645.262 1745.848 | | | | | |
| | | | | | | | | simultaneous interpolator |
| Control file: cf_1234 | Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ep.zrmonb | Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/Ep.W.170.zrmonb | | | | | | |



Fringe quality 9
SNR 9.7
Int time 533.987
Amp 0.237
Phase 141.7
PFD 1.0e-13
Delays (us)
SBD -0.050318
MBD 0.003981
Fringe rate (Hz) 0.286983
Ion TEC 0.000
Ref freq (MHz) 86140.000
AP (sec) 0.512
Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build 2017:237:133004
2017:244:143625
2017:170:130423
RA & Dec (J2000) 12h29m 6.6997s +2°03' 8.598"



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

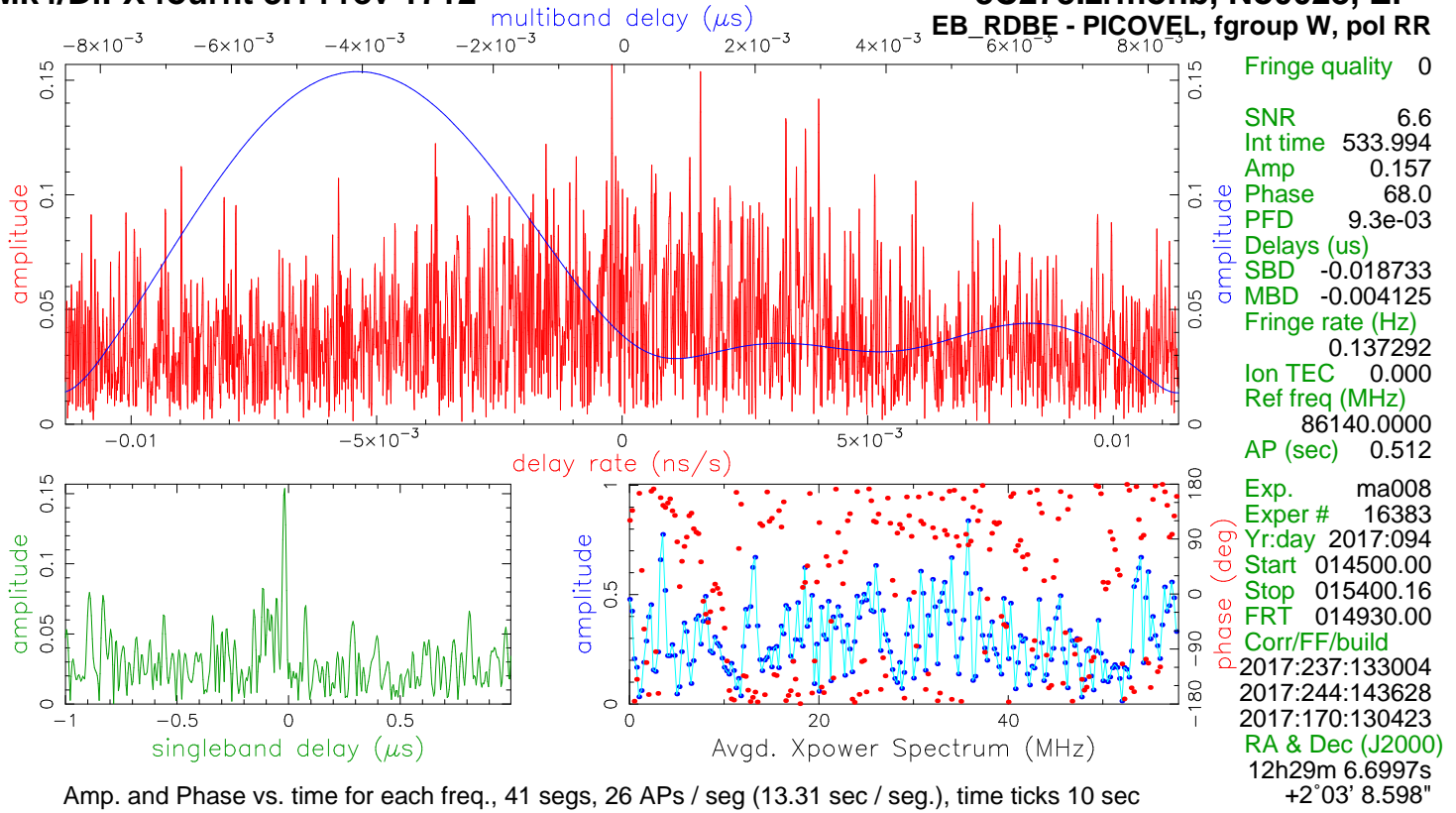


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | -65.2 | -61.1 | -52.1 | -70.3 | Phase | -63.1 |
| | 0.3 | 0.2 | 0.2 | 0.3 | Ampl. | 0.2 |
| | 221.2 | 230.3 | 231.1 | 221.7 | Sbd box | 221.3 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| P | 0 | 0 | 0 | 0 | PC freqs | |
| E:P | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:P | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| P | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| P | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

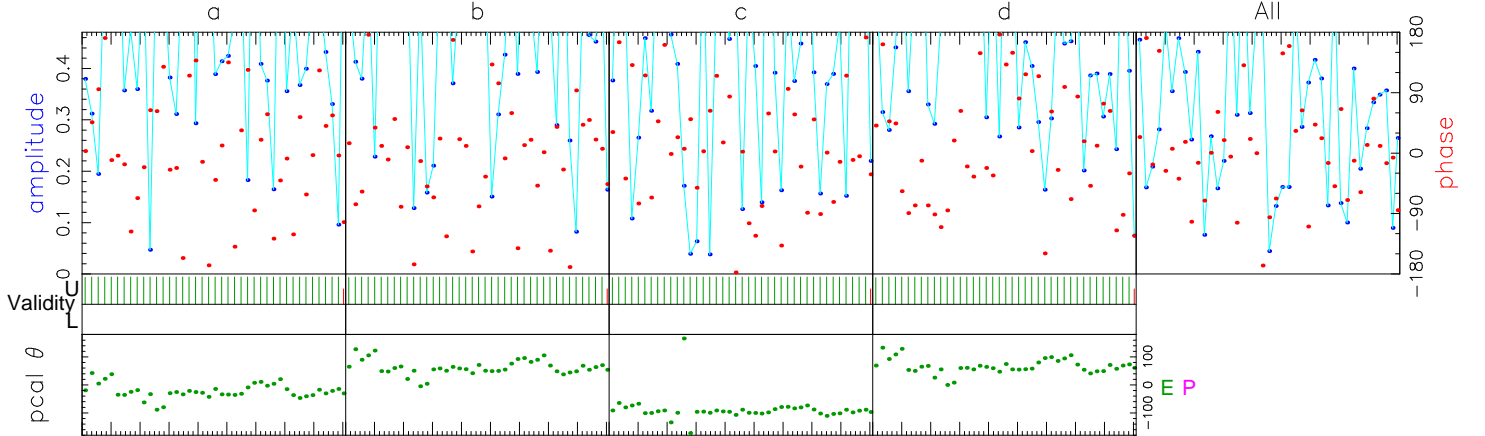
Group delay (usec)(sbd) -4.22847082290E+03 Apriori delay (usec) -4.22842360356E+03 Resid mbdelay (usec) 3.98067E-03 +/- 2.5E-04
 Sband delay (usec) -4.22847392108E+03 Apriori clock (usec) 2.7831022E+01 Resid sbdelay (usec) -5.03175E-02 +/- 9.8E-04
 Phase delay (usec) -4.22842360560E+03 Apriori clockrate (us/s) -5.1787036E-07 Resid phdelay (usec) -2.03461E-06 +/- 3.8E-07
 Delay rate (us/s) -2.41656716467E-02 Apriori rate (us/s) -2.41690032300E-02 Resid rate (us/s) 3.33158E-06 +/- 1.2E-09
 Total phase (deg) 65.7 Apriori accel (us/s/s) 2.32836383559E-05 Resid phase (deg) 141.7 +/- 11.8

RMS Theor. Amplitude 0.237 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 70.9 37.8 Search (4096X16) 0.223 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 132.1 66.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 ph/frq (deg) 9.5 11.8 Inc. seg. avg. 0.365 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
 amp/frq (%) 15.0 20.6 Inc. frq. avg. 0.230 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00

E: az 226.3 el 31.8 pa 27.6 P: az 222.5 el 46.6 pa 32.6 u,v (fr/asec) 182.772 1559.601 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EP..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EP.W.171.zrmonb



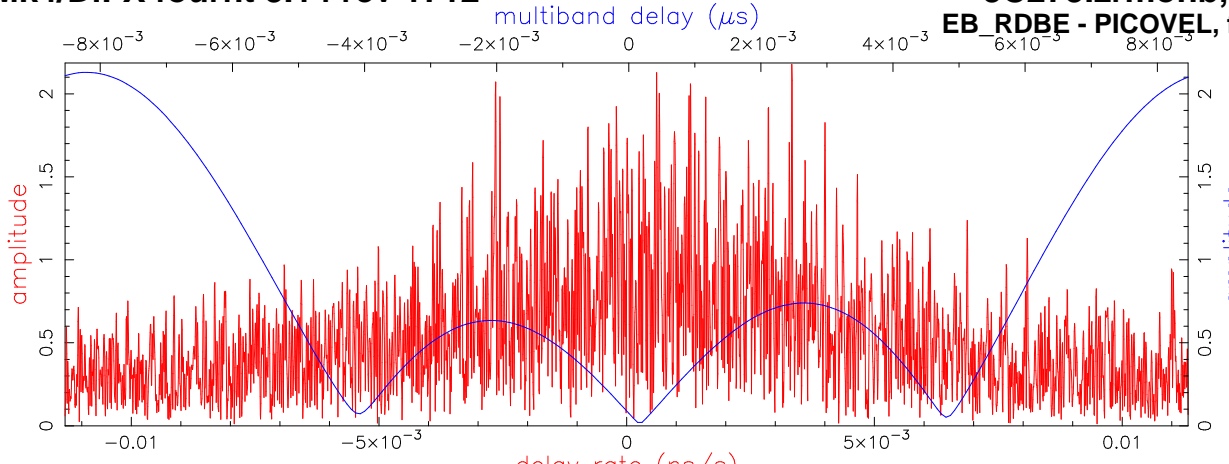
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| 86151.11 | 86209.70 | 86268.30 | 86326.89 | 86326.89 | 86326.89 | Freq (MHz) | All |
|------------|----------|----------|----------|----------|----------|------------|-------|
| -2.5 | -4.0 | 14.8 | -5.5 | -5.5 | -5.5 | Phase | -0.2 |
| 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | Ampl. | 0.1 |
| 324.2 | 229.2 | 227.4 | 164.1 | 164.1 | 164.1 | Sbd box | 228.7 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E 3890 | 296 | 1703 | 3109 | 3109 | 3109 | PC freqs | |
| P 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| E:P 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:P 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Main PC | |
| E 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| P 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| E W00UR | W01UR | W02UR | W03UR | W03UR | W03UR | Chan ids | |
| P W00UR | W01UR | W02UR | W03UR | W03UR | W03UR | Tracks | |
| | | | | | | Chan ids | |
| | | | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -4.22844479515E+03 | Apriori delay (usec) | -4.22842360356E+03 | Resid mbdelay (usec) | -4.12492E-03 | +/- | 3.7E-04 |
| Sband delay (usec) | -4.22844233681E+03 | Apriori clock (usec) | 2.7831022E+01 | Resid sbdelay (usec) | -1.87332E-02 | +/- | 1.4E-03 |
| Phase delay (usec) | -4.22842360357E+03 | Apriori clockrate (us/s) | -5.1787036E-07 | Resid phdelay (usec) | -7.96382E-09 | +/- | 5.6E-07 |
| Delay rate (us/s) | -2.41674094076E-02 | Apriori rate (us/s) | -2.41690032300E-02 | Resid rate (us/s) | 1.59382E-06 | +/- | 1.8E-09 |
| Total phase (deg) | -8.0 | Apriori accel (us/s/s) | 2.32836383559E-05 | Resid phase (deg) | 68.0 | +/- | 17.3 |

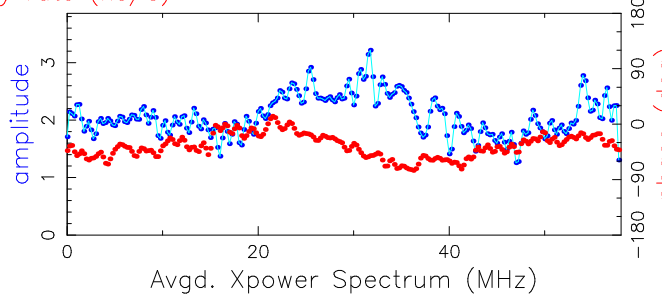
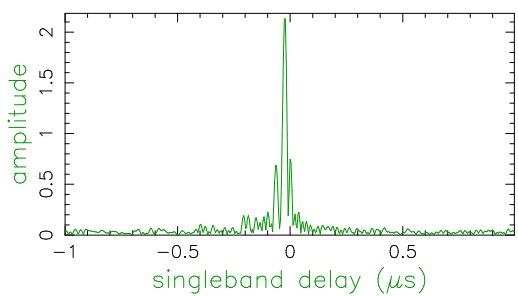
| | RMS | Theor. | Amplitude | 0.157 +/- 0.024 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | |
|--------------|-------|--------|------------------|-----------------|--|------------------------------|------------------|--------------|
| ph/seg (deg) | 76.8 | 55.4 | Search (4096X16) | 0.153 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| amp/seg (%) | 145.8 | 96.7 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| ph/frq (deg) | 11.7 | 17.3 | Inc. seg. avg. | 0.218 | Sample rate(MSamp/s): 116 | | dr window (ns/s) | -0.011 0.011 |
| amp/frq (%) | 29.7 | 30.2 | Inc. frq. avg. | 0.150 | Data rate(Mb/s): 928 | nlags: 232 t_cohere infinite | ion window (TEC) | 0.00 0.00 |



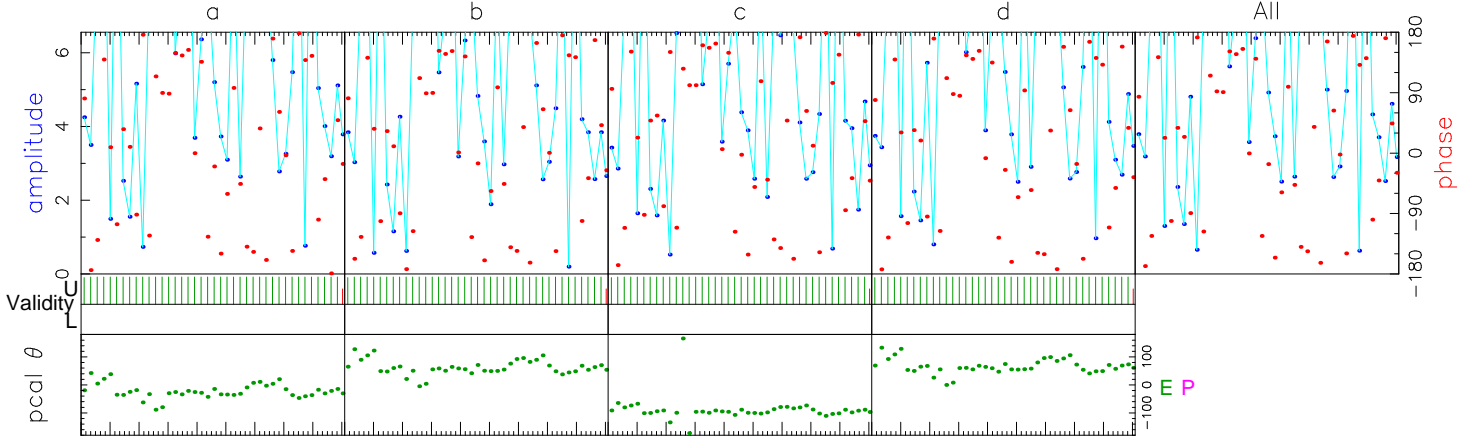
Fringe quality 5

SNR 92.9
Int time 533.987
Amp 2.186
Phase 230.5
PFD 0.0e+00
Delays (us)
SBD -0.023671
MBD -0.008124
Fringe rate (Hz) 0.051912
Ion TEC 0.000
Ref freq (MHz) 86140.000
AP (sec) 0.512

Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143631
2017:170:130423
RA & Dec (J2000)
12h29m 6.697s
+2°03' 8.598"



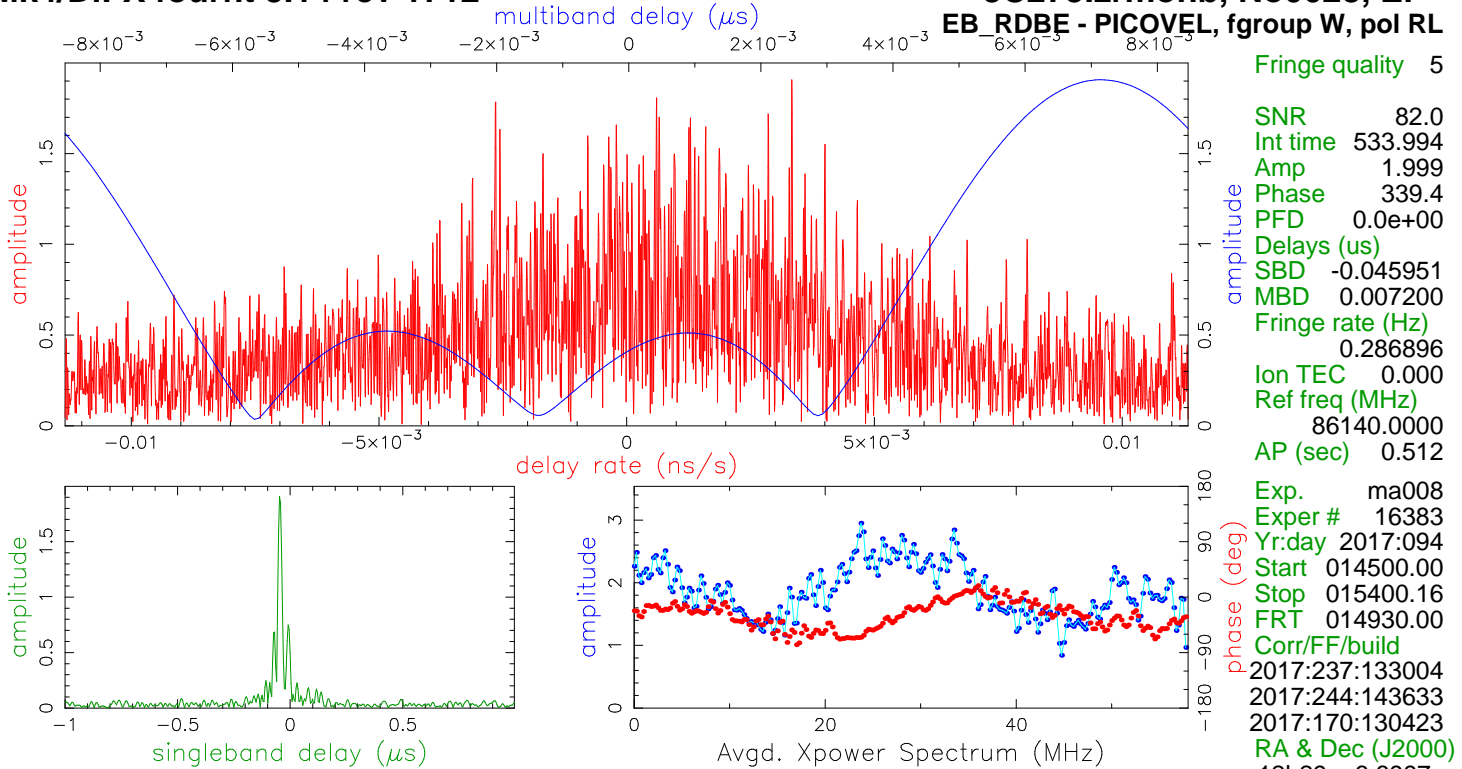
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



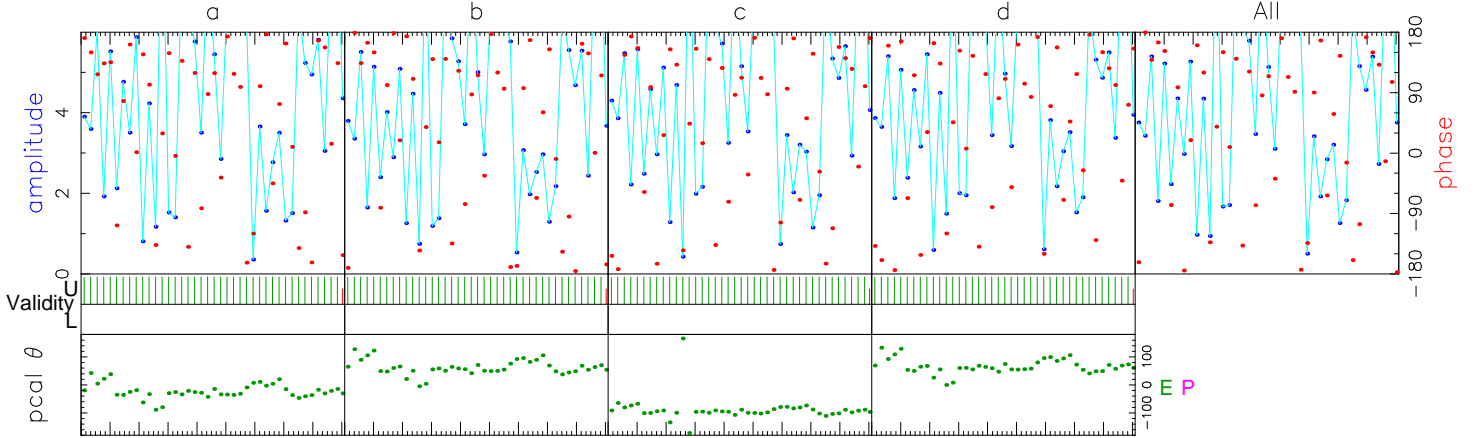
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | | |
| P | 0 | 0 | 0 | 0 | | |
| E:P | 0:0 | 0:0 | 0:0 | 0:0 | | |
| E:P | 0:0 | 0:0 | 0:0 | 0:0 | | |
| E | 1000 | 1000 | 1000 | 1000 | | |
| P | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | | |
| P | W00UR | W01UR | W02UR | W03UR | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -4.22844879375E+03 | Apriori delay (usec) | -4.22842360356E+03 | Resid mbdelay (usec) | -8.12352E-03 | +/- | 2.6E-05 |
| Sband delay (usec) | -4.22844727419E+03 | Apriori clock (usec) | 2.7831022E+01 | Resid sbdelay (usec) | -2.36706E-02 | +/- | 1.0E-04 |
| Phase delay (usec) | -4.22842359833E+03 | Apriori clockrate (us/s) | -5.1787036E-07 | Resid phdelay (usec) | 5.23224E-06 | +/- | 4.0E-08 |
| Delay rate (us/s) | -2.41684005865E-02 | Apriori rate (us/s) | -2.41690032300E-02 | Resid rate (us/s) | 6.02643E-07 | +/- | 1.3E-10 |
| Total phase (deg) | 154.5 | Apriori accel (us/s/s) | 2.32836383559E-05 | Resid phase (deg) | 230.5 | +/- | 1.2 |

| | | | | | | | | | |
|--------------|-------|------------------|-------|----------------|-----------------|------------------------|-----------------------------|------------------|--------------|
| ph/seg (deg) | 92.5 | Theor. | 4.0 | Amplitude | 2.186 +/- 0.024 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 238.7 | Search (4096X16) | 2.115 | Search | 2.115 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 |
| ph/frq (deg) | 5.5 | Interp. | 0.000 | Inc. seg. avg. | 5.982 | Bits/sample: | 2x2 | SampCntNorm: | enabled |
| amp/frq (%) | 7.3 | Inc. frq. avg. | 2.135 | Inc. frq. avg. | 2.135 | Sample rate (MSamp/s): | 116 | mb window (us) | -0.009 0.009 |
| | | | | | | Data rate (Mb/s): | 928 | dr window (ns/s) | -0.011 0.011 |
| | | | | | | nlags: | 232 | ion window (TEC) | 0.00 0.00 |

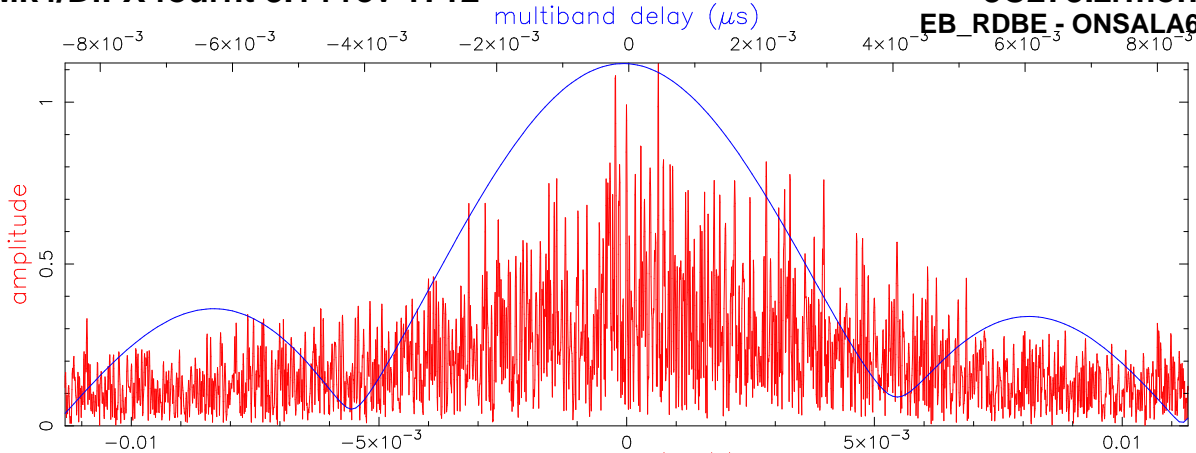


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-----|
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | | |
| E | 3890 | 296 | 1703 | 3109 | APs used | |
| P | 0 | 0 | 0 | 0 | PC freqs | |
| E:P | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:P | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| P | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| P | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

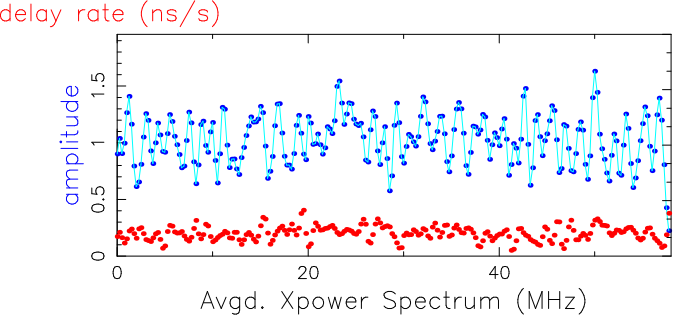
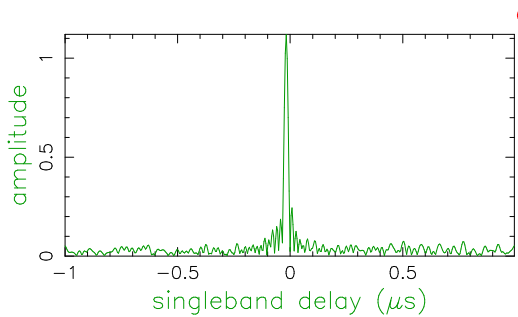
| | | | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|-----------------------|-----------------------------|----------------------|-------------------|------------------|-----------|
| Group delay (usec)(sbd) | -4.22846760317E+03 | Apriori delay (usec) | -4.22842360356E+03 | Resid mbdelay (usec) | 7.20040E-03 | +/- | 3.0E-05 | | |
| Sband delay (usec) | -4.22846955501E+03 | Apriori clock (usec) | 2.7831022E+01 | Resid sbdelay (usec) | -4.59514E-02 | +/- | 1.2E-04 | | |
| Phase delay (usec) | -4.22842359922E+03 | Apriori clockrate (us/s) | -5.1787036E-07 | Resid phdelay (usec) | 4.34024E-06 | +/- | 4.5E-08 | | |
| Delay rate (us/s) | -2.41656726468E-02 | Apriori rate (us/s) | -2.41690032300E-02 | Resid rate (us/s) | 3.33058E-06 | +/- | 1.4E-10 | | |
| Total phase (deg) | | Apriori accel (us/s/s) | 2.32836383559E-05 | Resid phase (deg) | 339.4 | +/- | 1.4 | | |
| RMS | Theor. | Amplitude | 1.999 +/- 0.024 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| ph/seg (deg) | 80.0 | Search (4096X16) | 1.872 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| amp/seg (%) | 173.4 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 | |
| ph/frq (deg) | 3.3 | Inc. seg. avg. | 4.514 | Sample rate(MSamp/s): | 116 | dr window (ns/s) | -0.011 0.011 | | |
| amp/frq (%) | 3.2 | Inc. frq. avg. | 1.977 | Data rate(Mb/s): | 928 | nlags: 232 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |



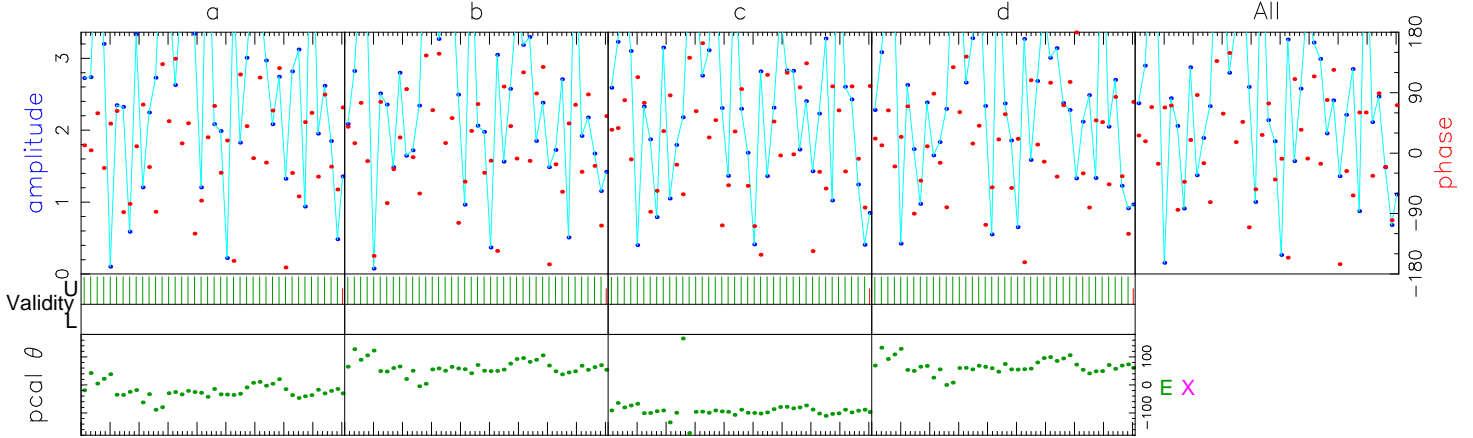
Fringe quality 7

SNR 47.9
Int time 539.724
Amp 1.121
Phase 103.2
PFD 0.0e+00
Delays (us)
SBD -0.017525
MBD -0.000089
Fringe rate (Hz) 0.054956
Ion TEC 0.000
Ref freq (MHz) 86140.000
AP (sec) 0.512

Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143637
2017:170:130423
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | 30.3 | 38.6 | 42.2 | 29.6 | Phase | 34.9 |
| | 1.2 | 1.1 | 1.0 | 1.2 | Ampl. | 1.1 |
| | 229.1 | 229.1 | 228.9 | 228.6 | Sbd box | 228.9 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| X | 0 | 0 | 0 | 0 | PC freqs | |
| E:X | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:X | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

Group delay (usec)(sbd) 2.24254048676E+03 Apriori delay (usec) 2.24255764242E+03 Resid mbdelay (usec) -8.89928E-05 +/- 5.1E-05

Sband delay (usec) 2.24254011773E+03 Apriori clock (usec) 2.5302490E+01 Resid sbdelay (usec) -1.75247E-02 +/- 2.0E-04

Phase delay (usec) 2.24255764354E+03 Apriori clockrate (us/s) -3.1275907E-07 Resid phdelay (usec) 1.12544E-06 +/- 7.7E-08

Delay rate (us/s) -4.03855169872E-02 Apriori rate (us/s) -4.03861549724E-02 Resid rate (us/s) 6.37985E-07 +/- 2.5E-10

Total phase (deg) 217.6 Apriori accel (us/s/s) -1.20622505283E-05 Resid phase (deg) 103.2 +/- 2.4

RMS Theor. Amplitude 1.121 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 75.5 7.7 Search (4096X16) 1.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

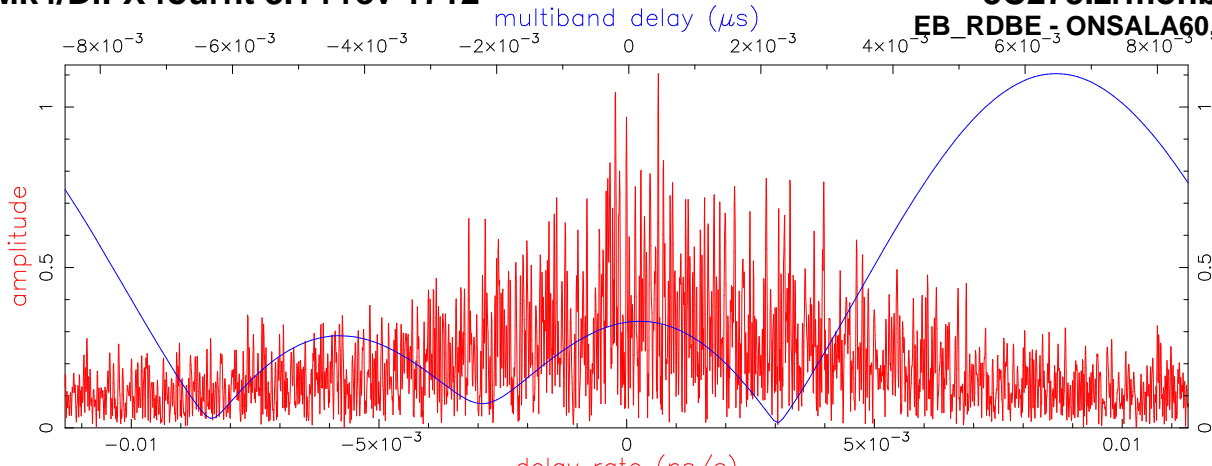
amp/seg (%) 165.5 13.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009

ph/frq (deg) 7.6 2.4 Inc. seg. avg. 2.478 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011

amp/frq (%) 5.3 4.2 Inc. frq. avg. 1.125 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00

E: az 226.3 el 31.8 pa 27.6 X: az 228.8 el 25.0 pa 24.1 u,v (fr/asec) 208.439 -658.304 simultaneous interpolator

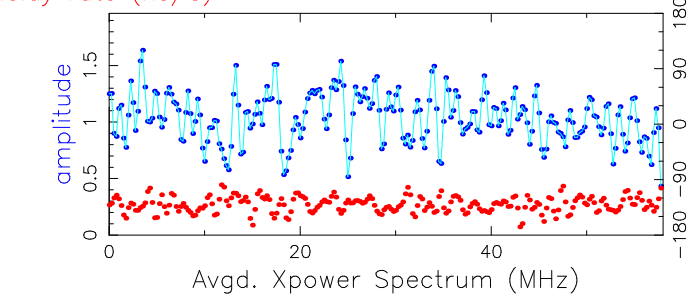
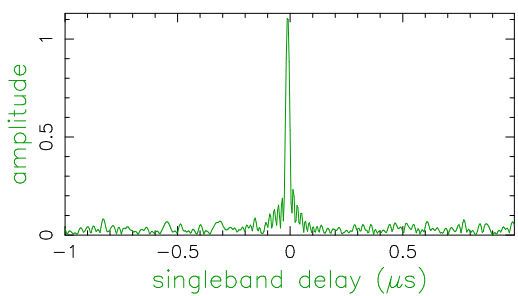
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EX..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EX.W.175.zrmonb



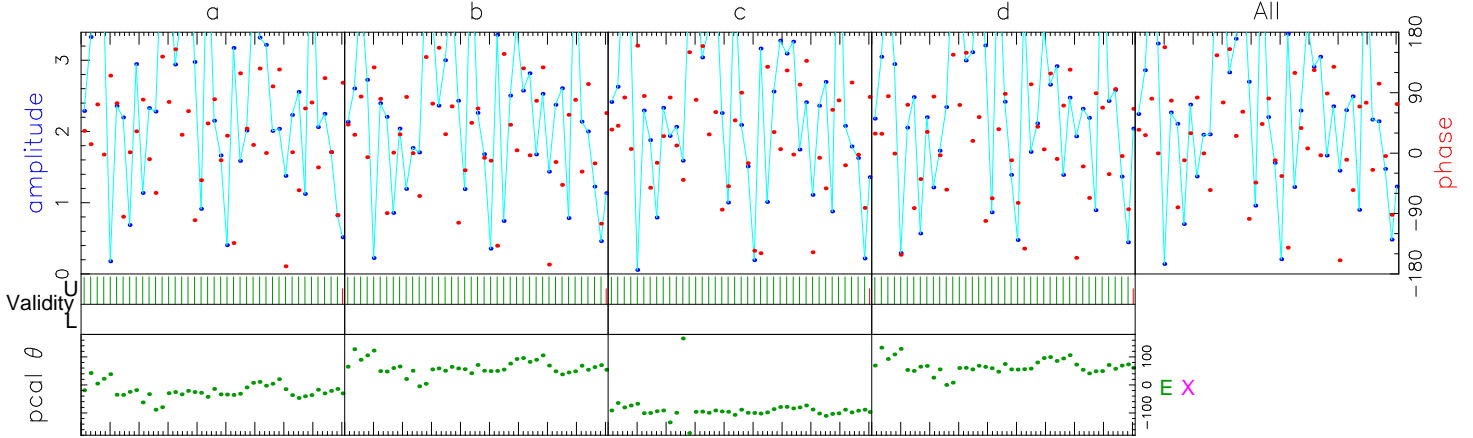
Fringe quality 7

SNR 48.3
Int time 539.731
Amp 1.131
Phase 116.1
PFD 0.0e+00
Delays (us)
SBD -0.010870
MBD 0.006467
Fringe rate (Hz) 0.054975
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014500.00
Stop 015400.16
FRT 014930.00
Corr/FF/build 2017:237:133004
2017:244:143640
2017:170:130423
RA & Dec (J2000) 12h29m 6.699s +2°03' 8.598"



Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

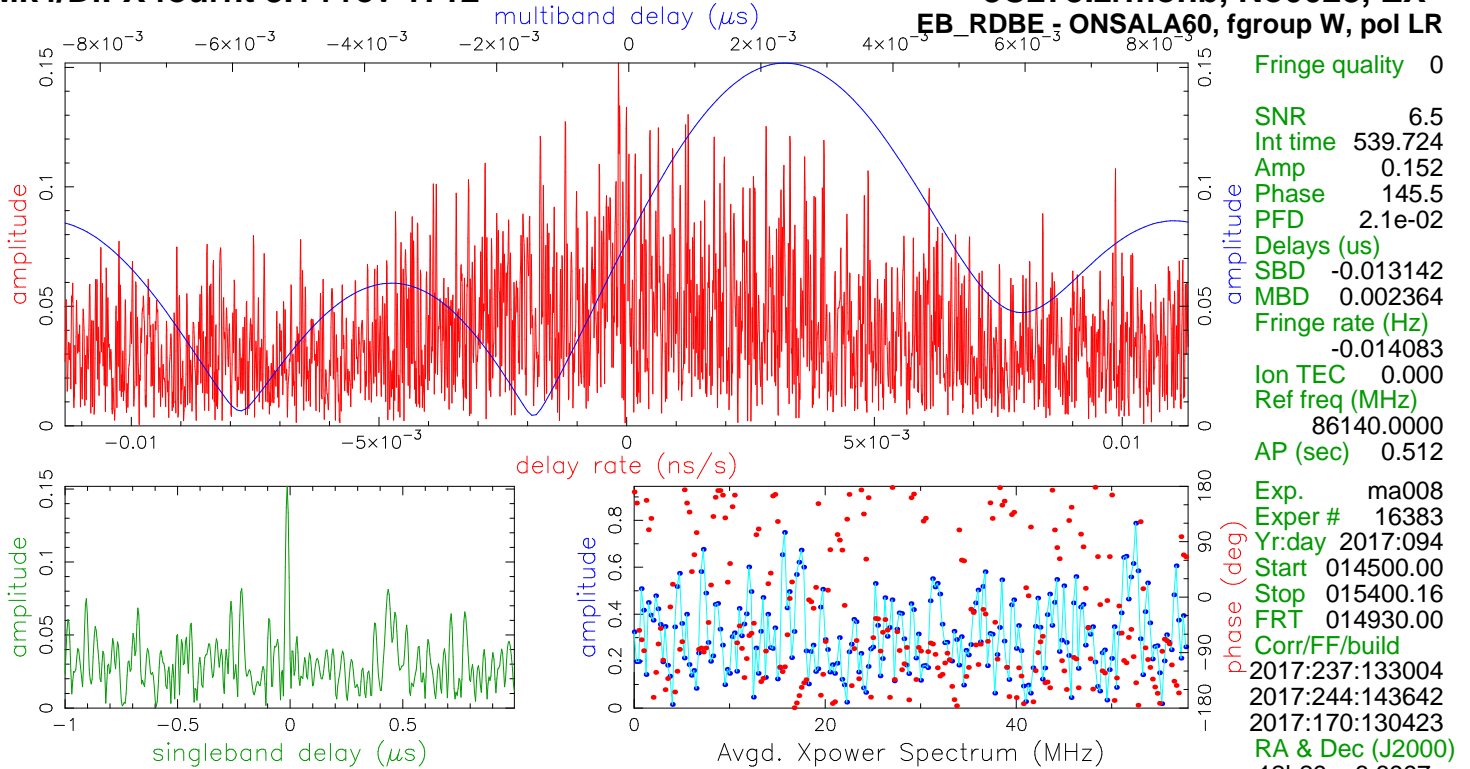


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|------------|-------|
| | 46.9 | 47.5 | 51.4 | 45.4 | Phase | 47.9 |
| | 1.2 | 1.0 | 1.2 | 1.0 | Ampl. | 1.1 |
| | 230.5 | 230.7 | 230.3 | 230.3 | Sbd box | 230.5 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| X | 0 | 0 | 0 | 0 | PC freqs | |
| E:X | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:X | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |

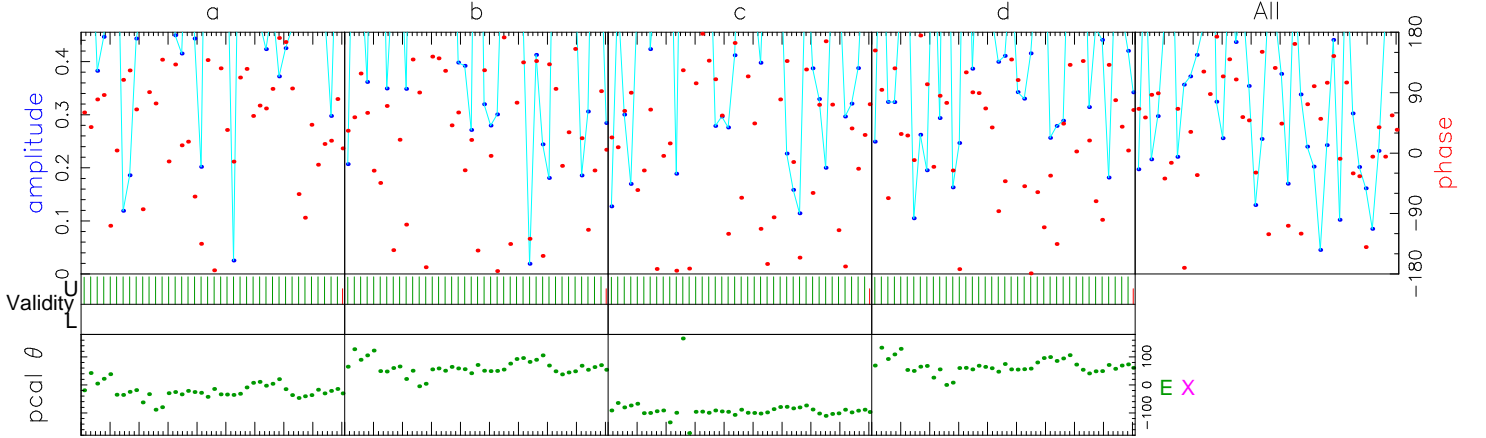
Group delay (usec)(sbd) 2.24254704254E+03 Apriori delay (usec) 2.24255764242E+03 Resid mbdelay (usec) 6.46679E-03 +/- 5.0E-05
 Sband delay (usec) 2.24254677235E+03 Apriori clock (usec) 2.5302490E+01 Resid sbdelay (usec) -1.08701E-02 +/- 2.0E-04
 Phase delay (usec) 2.24255764396E+03 Apriori clockrate (us/s) -3.1275907E-07 Resid phdelay (usec) 1.54381E-06 +/- 7.6E-08
 Delay rate (us/s) -4.03855167636E-02 Apriori rate (us/s) -4.03861549724E-02 Resid rate (us/s) 6.38209E-07 +/- 2.5E-10
 Total phase (deg) 230.6 Apriori accel (us/s/s) -1.20622505283E-05 Resid phase (deg) 116.1 +/- 2.4

RMS Theor. Amplitude 1.131 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 76.4 7.6 Search (4096X16) 1.089 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 155.5 13.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 ph/frq (deg) 3.1 2.4 Inc. seg. avg. 2.368 Sample rate(MSamp/s): 116 dr window (ns/s) -0.011 0.011
 amp/frq (%) 7.2 4.1 Inc. frq. avg. 1.106 Data rate(Mb/s): 928 nlags: 232 t_cohere infinite ion window (TEC) 0.00 0.00

E: az 226.3 el 31.8 pa 27.6 X: az 228.8 el 25.0 pa 24.1 u,v (fr/asec) 208.439 -658.304 simultaneous interpolator
 Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EX..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EX.W.176.zrmonb



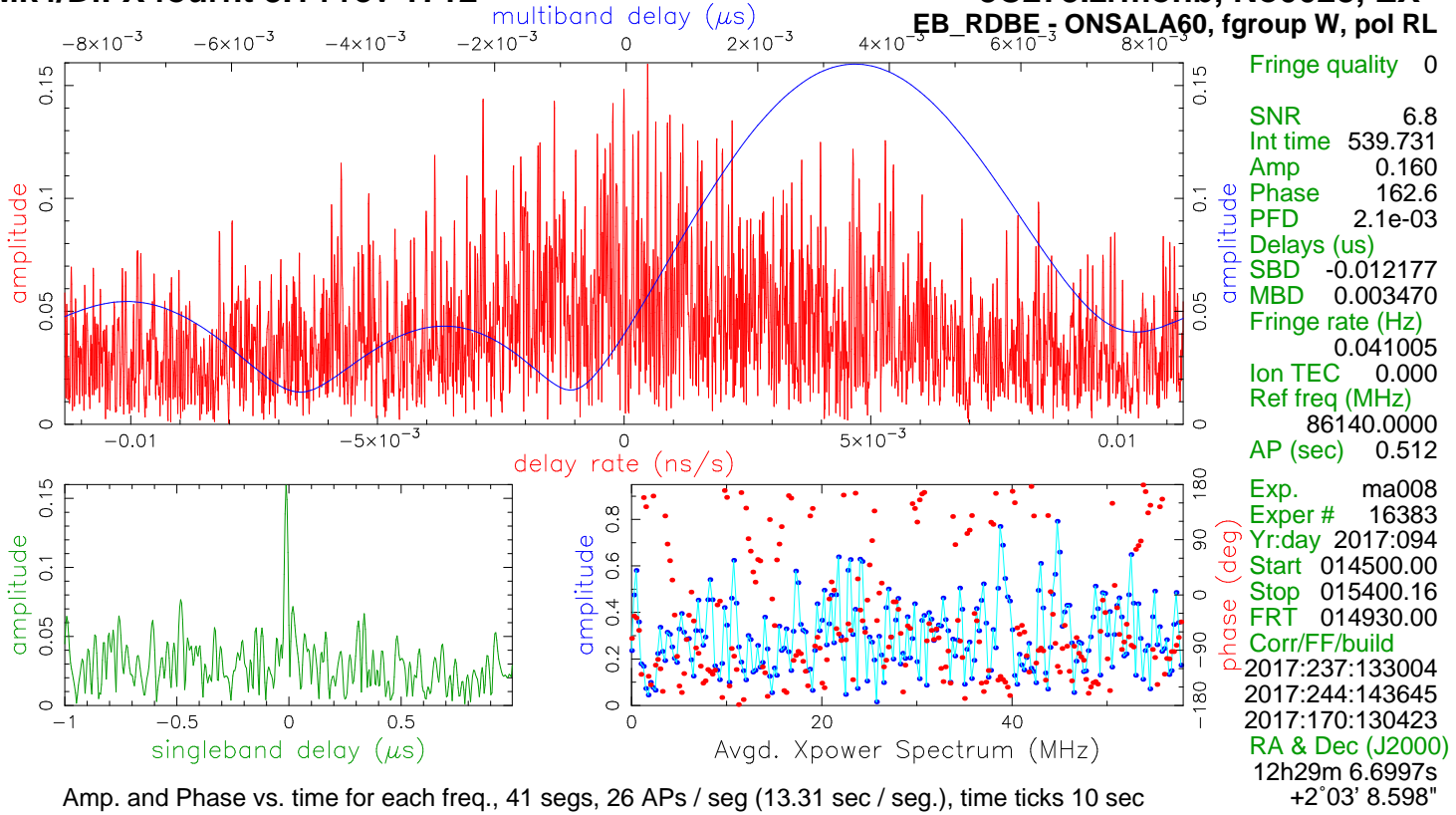
Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



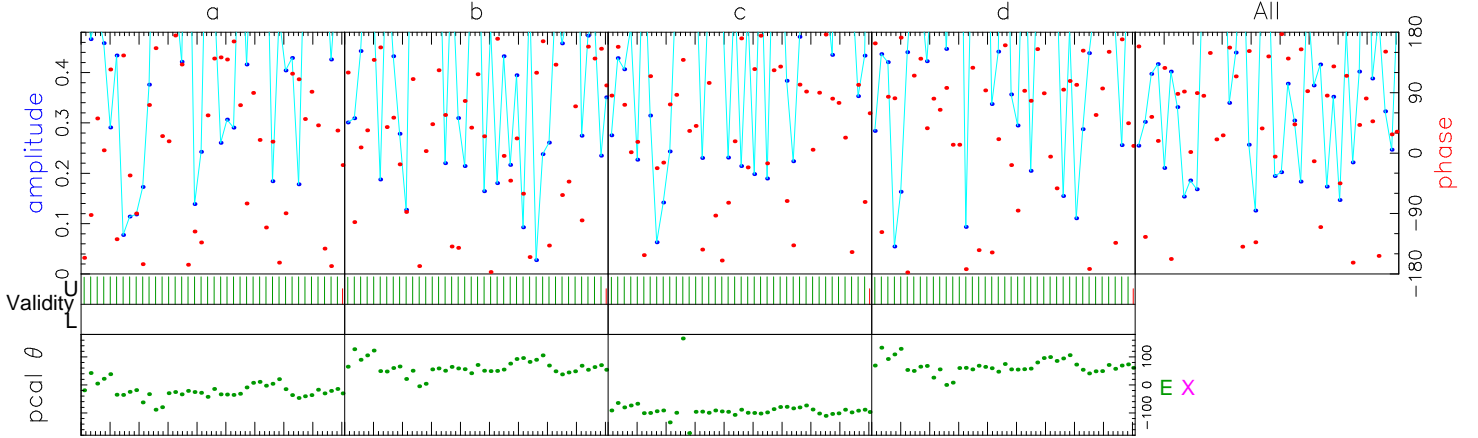
| | | | | | |
|------------|----------|----------|----------|------------|-------|
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
| 66.9 | 98.1 | 86.8 | 67.0 | Phase | 77.3 |
| 0.2 | 0.2 | 0.1 | 0.2 | Ampl. | 0.1 |
| 230.3 | 31.8 | 373.5 | 183.0 | Sbd box | 230.0 |
| U/L 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| X 0 | 0 | 0 | 0 | PC freqs | |
| E:X 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:X 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E 1000 | 1000 | 1000 | 1000 | PC amp | |
| X 1000 | 1000 | 1000 | 1000 | | |
| E W00UL | W01UL | W02UL | W03UL | Chan ids | |
| X W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 2.24254293974E+03 | Apriori delay (usec) | 2.24255764242E+03 | Resid mbdelay (usec) | 2.36399E-03 | +/- | 3.7E-04 |
| Sband delay (usec) | 2.24254450090E+03 | Apriori clock (usec) | 2.5302490E+01 | Resid sbdelay (usec) | -1.31415E-02 | +/- | 1.5E-03 |
| Phase delay (usec) | 2.24255764491E+03 | Apriori clockrate (us/s) | -3.1275907E-07 | Resid phdelay (usec) | 2.49175E-06 | +/- | 5.7E-07 |
| Delay rate (us/s) | -4.03863184629E-02 | Apriori rate (us/s) | -4.03861549724E-02 | Resid rate (us/s) | -1.63490E-07 | +/- | 1.8E-09 |
| Total phase (deg) | 260.0 | Apriori accel (us/s/s) | -1.20622505283E-05 | Resid phase (deg) | 145.5 | +/- | 17.7 |

| | | | | | | | | |
|--------------|----------|-------------|---------------------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | RMS 79.3 | Theor. 56.5 | Amplitude 0.152 +/- 0.023 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 202.1 | 98.6 | Search (4096X16) 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.009 | 0.009 |
| ph/frq (deg) | 19.2 | 17.7 | Interp. 0.251 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 34.4 | 30.8 | Inc. seg. avg. 0.149 | Sample rate(MSamp/s): 116 | | ion window (TEC) | 0.00 | 0.00 |
| | | | Inc. frq. avg. 0.149 | Data rate(Mb/s): 928 | nlags: 232 | t_cohere infinite | | |

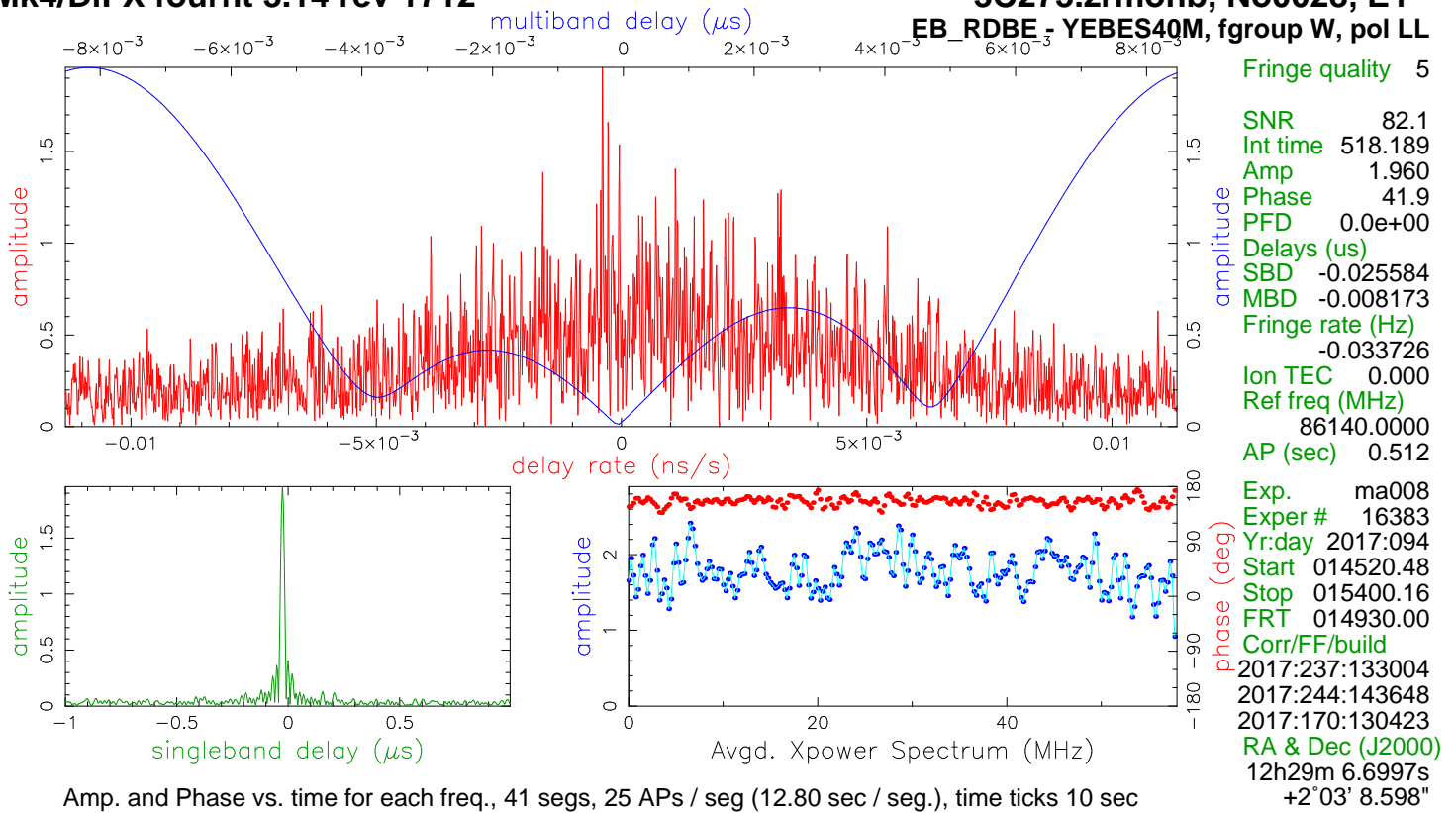


Amp. and Phase vs. time for each freq., 41 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

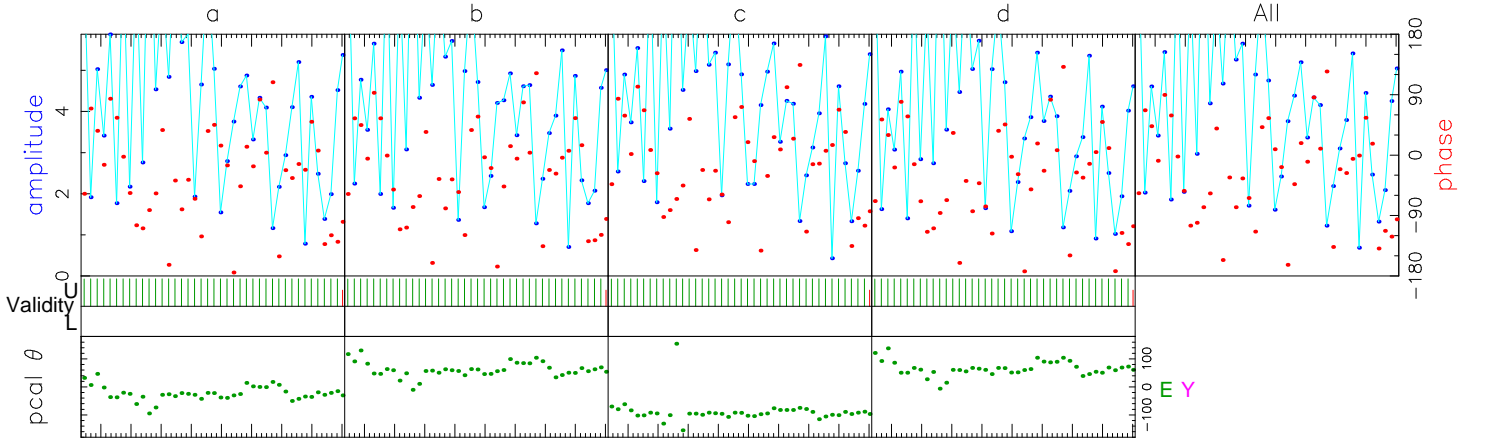


| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| | 101.6 | 90.1 | 86.0 | 100.0 | Phase | 94.3 |
| | 0.1 | 0.1 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 312.8 | 134.3 | 230.3 | 229.8 | Sbd box | 230.2 |
| U/L | 1055/0 | 1055/0 | 1055/0 | 1055/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| X | 0 | 0 | 0 | 0 | PC freqs | |
| E:X | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:X | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UR | W01UR | W02UR | W03UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.24254404541E+03 | Apriori delay (usec) | 2.24255764242E+03 | Resid mbdelay (usec) | 3.46966E-03 | +/- 3.6E-04 |
| Sband delay (usec) | 2.24254546531E+03 | Apriori clock (usec) | 2.5302490E+01 | Resid sbdelay (usec) | -1.21771E-02 | +/- 1.4E-03 |
| Phase delay (usec) | 2.24255764546E+03 | Apriori clockrate (us/s) | -3.1275907E-07 | Resid phdelay (usec) | 3.04245E-06 | +/- 5.4E-07 |
| Delay rate (us/s) | -4.03856789425E-02 | Apriori rate (us/s) | -4.03861549724E-02 | Resid rate (us/s) | 4.76030E-07 | +/- 1.7E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | -1.20622505283E-05 | Resid phase (deg) | 162.6 | +/- 16.8 |

| | RMS | Theor. | Amplitude | 0.160 +/- 0.023 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|-------|--------|------------------|-----------------|--|--|
| ph/seg (deg) | 75.8 | 53.6 | Search (4096X16) | 0.158 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 196.7 | 93.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled mb window (us) -0.009 0.009 |
| ph/frq (deg) | 9.3 | 16.8 | Inc. seg. avg. | 0.275 | Sample rate(MSamp/s): 116 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 26.3 | 29.2 | Inc. frq. avg. | 0.154 | Data rate(Mb/s): 928 | lags: 232 t_cohere infinite ion window (TEC) 0.00 0.00 |



Amp. and Phase vs. time for each freq., 41 segs, 25 APs / seg (12.80 sec / seg.), time ticks 10 sec



| | | | | | |
|------------|----------|----------|----------|------------|-------|
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
| -29.4 | -27.5 | -14.6 | -34.7 | Phase | -26.4 |
| 2.0 | 2.0 | 2.0 | 1.9 | Ampl. | 2.0 |
| 227.2 | 227.2 | 227.3 | 226.5 | Sbd box | 227.1 |
| U/L 1015/0 | 1015/0 | 1015/0 | 1015/0 | APs used | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| Y 0 | 0 | 0 | 0 | PC freqs | |
| E:Y 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:Y 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y 1000 | 1000 | 1000 | 1000 | | |
| E W00UL | W01UL | W02UL | W03UL | Chan ids | |
| Y W00UL | W01UL | W02UL | W03UL | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |

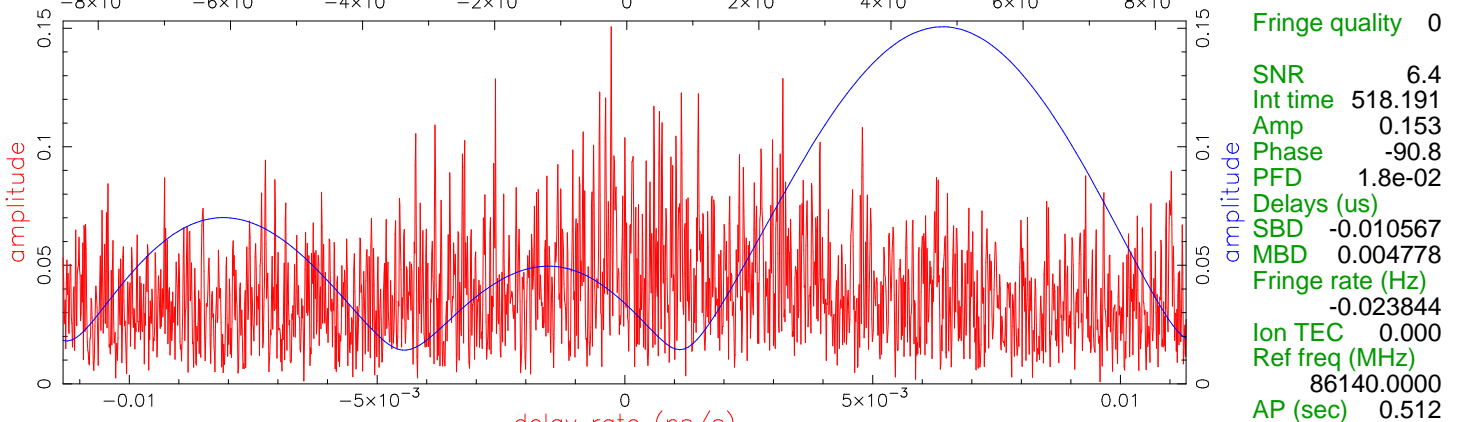
| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -3.51826548517E+03 | Apriori delay (usec) | -3.51824024561E+03 | Resid mbdelay (usec) | -8.17289E-03 | +/- | 3.0E-05 |
| Sband delay (usec) | -3.51826582934E+03 | Apriori clock (usec) | 2.4318893E+01 | Resid sbdelay (usec) | -2.55837E-02 | +/- | 1.2E-04 |
| Phase delay (usec) | -3.51824024647E+03 | Apriori clockrate (us/s) | -4.5787034E-07 | Resid phdelay (usec) | -8.50174E-07 | +/- | 4.5E-08 |
| Delay rate (us/s) | -4.72561964375E-02 | Apriori rate (us/s) | -4.72558049063E-02 | Resid rate (us/s) | -3.91531E-07 | +/- | 1.5E-10 |
| Total phase (deg) | -230.7 | Apriori accel (us/s/s) | 1.93080823769E-05 | Resid phase (deg) | 41.9 | +/- | 1.4 |

| | | | | | | | | |
|--------------|----------|------------|---------------------------|-----------------------|-----------------------------|----------------------|----------------|--------------|
| ph/seg (deg) | RMS 71.8 | Theor. 4.5 | Amplitude 1.960 +/- 0.024 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 160.0 | 7.8 | Search (2048X16) 1.832 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 10.4 | 1.4 | Interp. 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| amp/frq (%) | 3.3 | 2.4 | Inc. seg. avg. 4.227 | Sample rate(MSamp/s): | 116 | dr window (ns/s) | -0.011 0.011 | |
| | | | Inc. frq. avg. 1.976 | Data rate(Mb/s): | 928 | ion window (TEC) | 0.00 0.00 | |
| | | | | nlags: | 232 | t_cohere | infinite | |

E: az 226.3 el 31.8 pa 27.6 Y: az 220.6 el 43.9 pa 30.6 u,v (fr/asec) 307.425 1133.800 simultaneous interpolator

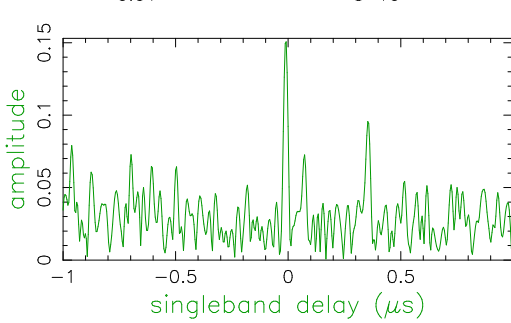
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EY..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EY.W.179.zrmonb

multiband delay (μ s)

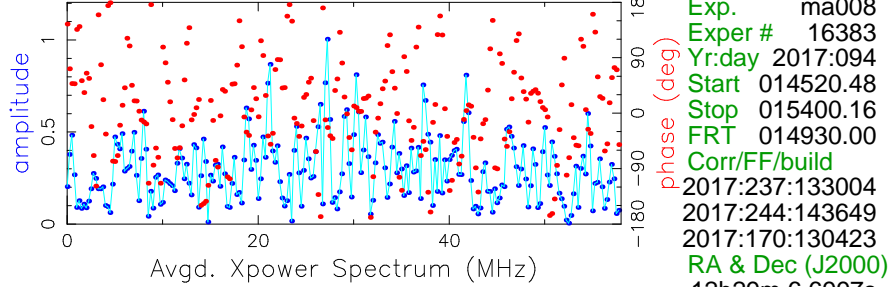


Fringe quality 0

SNR 6.4
 Int time 518.191
 Amp 0.153
 Phase -90.8
 PFD 1.8e-02
 Delays (us)
 SBD -0.010567
 MBD 0.004778
 Fringe rate (Hz)
 -0.023844
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

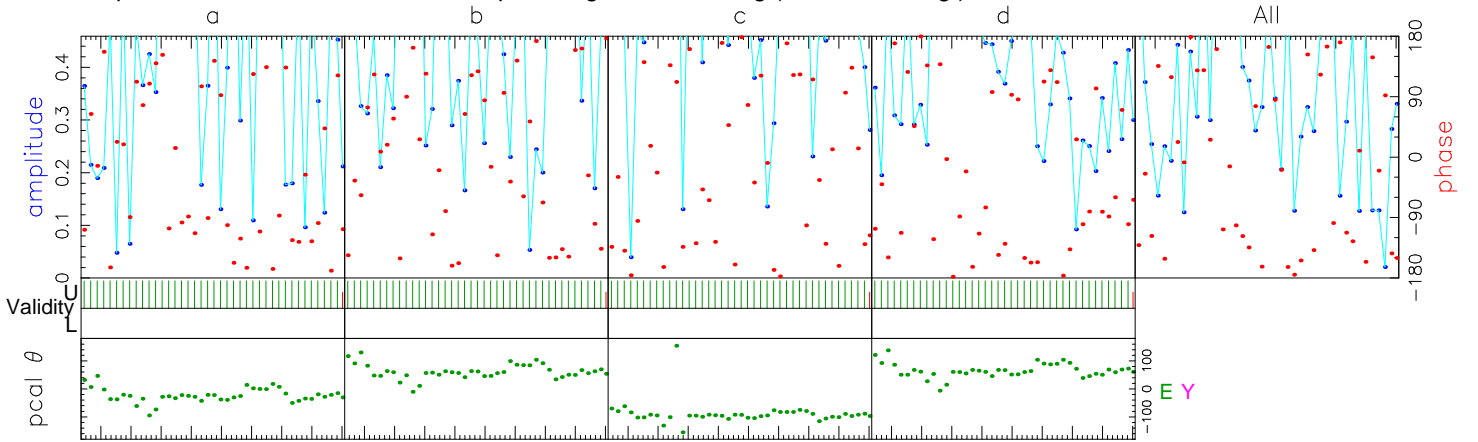


delay rate (ns/s)



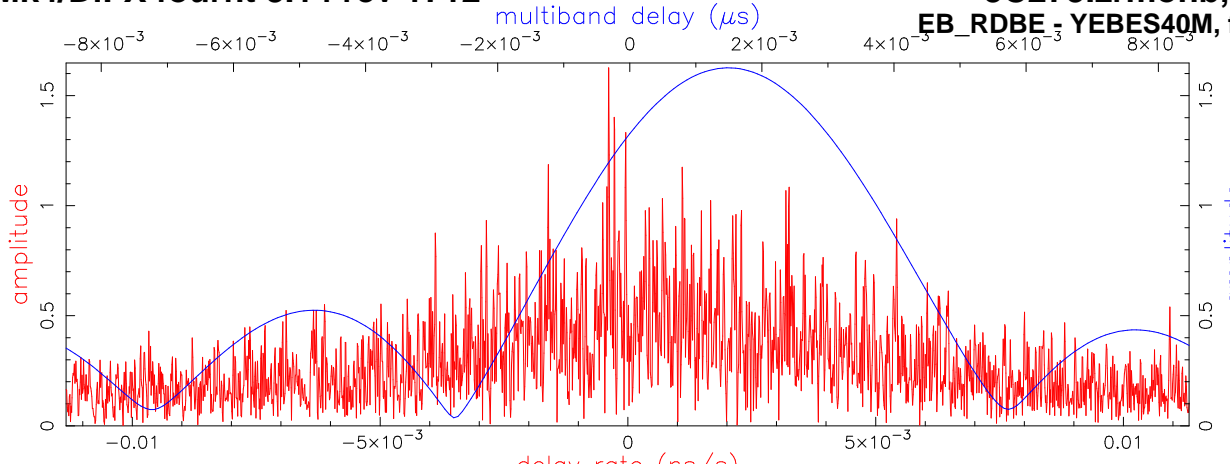
Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014520.48
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143649
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.697s
 +2°03' 8.598"

Amp. and Phase vs. time for each freq., 41 segs, 25 APs / seg (12.80 sec / seg.), time ticks 10 sec



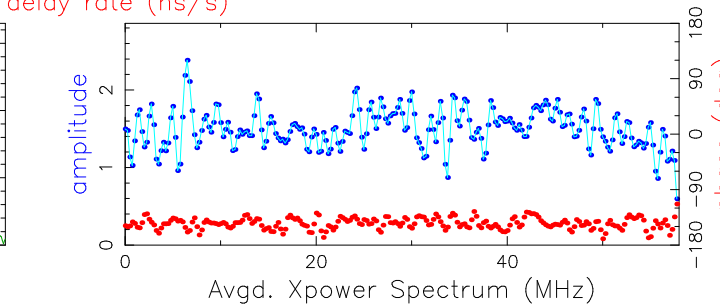
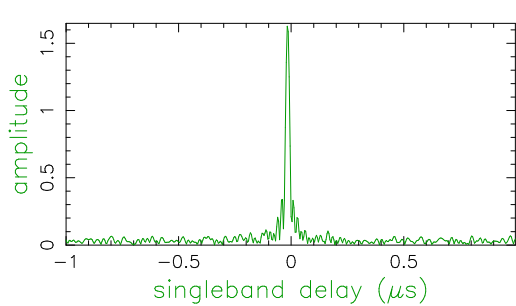
| | | | | | |
|------------|----------|----------|----------|------------|--------|
| 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
| -152.9 | -164.6 | -174.0 | -148.2 | Phase | -159.1 |
| 0.2 | 0.1 | 0.2 | 0.2 | Ampl. | 0.1 |
| 231.4 | 352.2 | 229.9 | 230.4 | Sbd box | 230.5 |
| U/L 1015/0 | 1015/0 | 1015/0 | 1015/0 | APs used | |
| E 3890 | 296 | 1703 | 3109 | PC freqs | |
| Y 0 | 0 | 0 | 0 | PC freqs | |
| E:Y 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:Y 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| E 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y 1000 | 1000 | 1000 | 1000 | | |
| E W00UR | W01UR | W02UR | W03UR | Chan ids | |
| Y W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | Chan ids | |
| | | | | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|---------------------------|--|-----------------------|-------------------|------------------|
| Group delay (usec)(sbd) | -3.51825253468E+03 | Apriori delay (usec) | -3.51824024561E+03 | Resid mbdelay (usec) | 4.77760E-03 | +/- | 3.8E-04 |
| Sband delay (usec) | -3.51825081251E+03 | Apriori clock (usec) | 2.4318893E+01 | Resid sbdelay (usec) | -1.05669E-02 | +/- | 1.5E-03 |
| Phase delay (usec) | -3.51824025074E+03 | Apriori clockrate (us/s) | -4.5787034E-07 | Resid phdelay (usec) | -5.12913E-06 | +/- | 5.8E-07 |
| Delay rate (us/s) | -4.72560817135E-02 | Apriori rate (us/s) | -4.72558049063E-02 | Resid rate (us/s) | -2.76807E-07 | +/- | 1.9E-09 |
| Total phase (deg) | -3.4 | Apriori accel (us/s/s) | 1.93080823769E-05 | Resid phase (deg) | -90.8 | +/- | 17.9 |
| | RMS 84.5 | Theor. 57.2 | Amplitude 0.153 +/- 0.024 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | |
| | ph/seg (deg) | Search (2048X16) | 0.146 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 |
| | amp/seg (%) | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 |
| | ph/frq (deg) | Inc. seg. avg. | 0.243 | Sample rate(MSamp/s): 116 | dr window (ns/s) | -0.011 | 0.011 |
| | amp/frq (%) | Inc. frq. avg. | 0.146 | Data rate(Mb/s): 928 | nlags: 232 | t_cohere infinite | ion window (TEC) |
| | | | | | | | 0.00 |



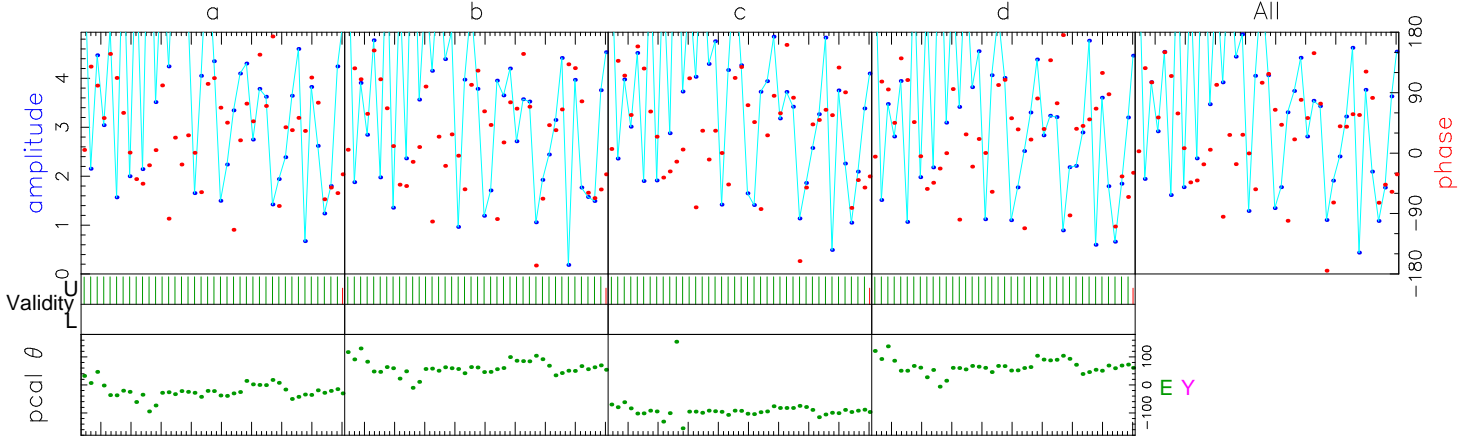
Fringe quality 5

SNR 69.0
Int time 518.189
Amp 1.648
Phase 104.0
PFD 0.0e+00
Delays (us)
SBD -0.015644
MBD 0.001519
Fringe rate (Hz)
-0.033747
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. ma008
Exper # 16383
Yr:day 2017:094
Start 014520.48
Stop 015400.16
FRT 014930.00
Corr/FF/build
2017:237:133004
2017:244:143650
2017:170:130423
RA & Dec (J2000)
12h29m 6.697s
+2°03' 8.598"

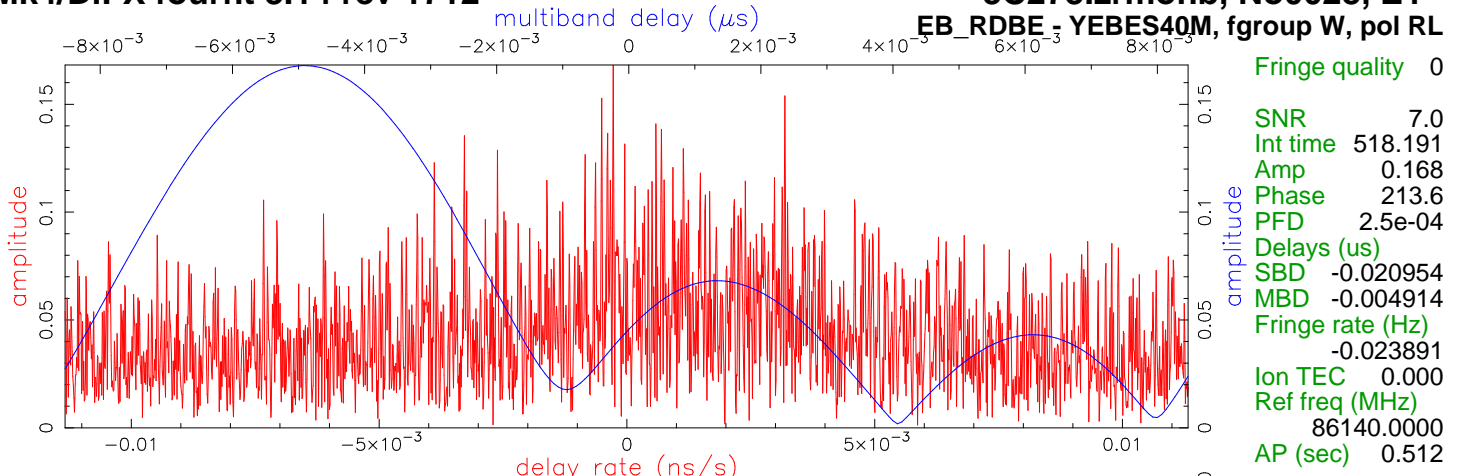
Amp. and Phase vs. time for each freq., 41 segs, 25 APs / seg (12.80 sec / seg.), time ticks 10 sec



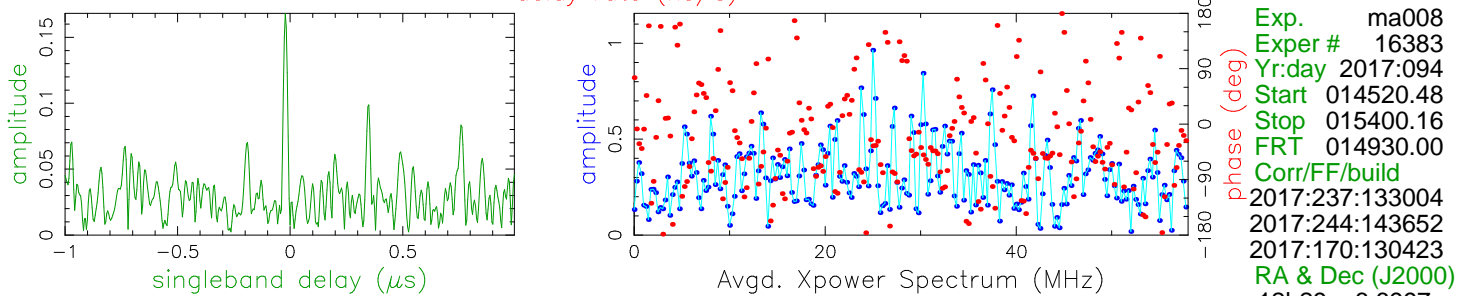
| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | Freq (MHz) | All |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-------------|
| | 34.8 | 36.0 | 41.1 | 30.9 | Phase | 35.7 |
| | 1.8 | 1.5 | 1.6 | 1.6 | Ampl. | 1.6 |
| | 229.7 | 229.5 | 229.4 | 228.9 | Sbd box | 229.4 |
| U/L | 1015/0 | 1015/0 | 1015/0 | 1015/0 | APs used | |
| E | 3890 | 296 | 1703 | 3109 | PC freqs | |
| Y | 0 | 0 | 0 | 0 | PC freqs | |
| E:Y | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| E:Y | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| E | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | | |
| E | W00UL | W01UL | W02UL | W03UL | Chan ids | |
| Y | W00UR | W01UR | W02UR | W03UR | Tracks | |
| | | | | | Chan ids | |
| | | | | | Tracks | |
| Group delay (usec)(sbd) | -3.51825579334E+03 | Apriori delay (usec) | -3.51824024561E+03 | Resid mbdelay (usec) | 1.51894E-03 | +/- 3.5E-05 |
| Sband delay (usec) | -3.51825588975E+03 | Apriori clock (usec) | 2.4318893E+01 | Resid sbdelay (usec) | -1.56441E-02 | +/- 1.4E-04 |
| Phase delay (usec) | -3.51824024446E+03 | Apriori clockrate (us/s) | -4.5787034E-07 | Resid phdelay (usec) | 1.15213E-06 | +/- 5.4E-08 |
| Delay rate (us/s) | -4.72561966756E-02 | Apriori rate (us/s) | -4.72558049063E-02 | Resid rate (us/s) | -3.91769E-07 | +/- 1.8E-10 |
| Total phase (deg) | | Apriori accel (us/s/s) | 1.93080823769E-05 | Resid phase (deg) | 104.0 | +/- 1.7 |

| | RMS | Theor. | Amplitude | 1.648 +/- 0.024 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|-------|--------|------------------|-----------------|--|--|
| ph/seg (deg) | 71.4 | 5.3 | Search (2048X16) | 1.502 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 160.5 | 9.3 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled mb window (us) -0.009 0.009 |
| ph/frq (deg) | 5.1 | 1.7 | Inc. seg. avg. | 3.554 | Sample rate(MSamp/s): 116 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 5.9 | 2.9 | Inc. frq. avg. | 1.629 | Data rate(Mb/s): 928 | ion window (TEC) 0.00 0.00 |
| | | | | | lags: 232 | t_cohere infinite |

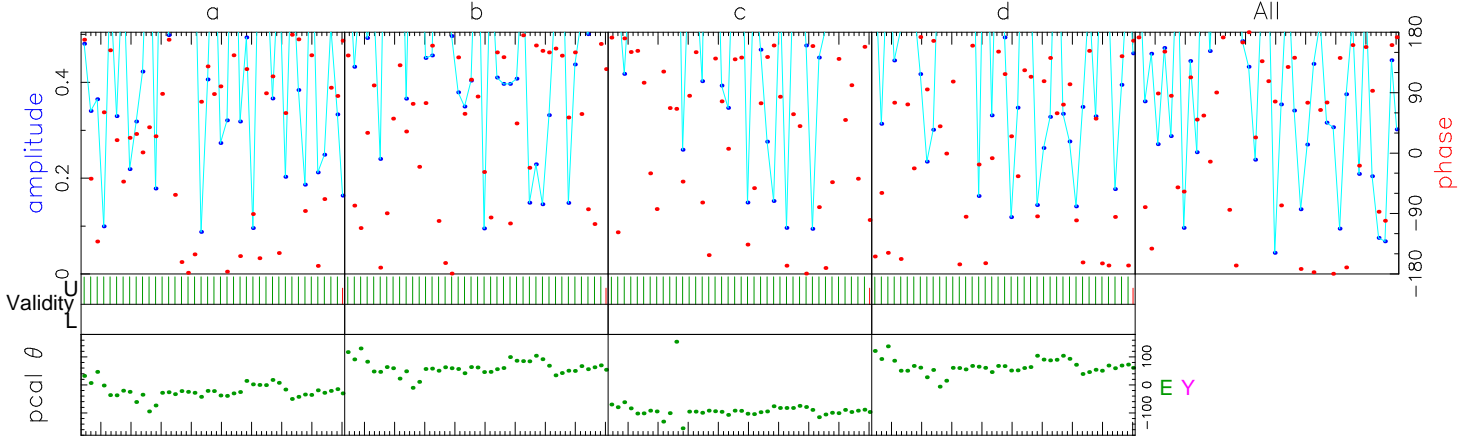
E: az 226.3 el 31.8 pa 27.6 Y: az 220.6 el 43.9 pa 30.6 u,v (fr/asec) 307.425 1133.800 simultaneous interpolator
Control file: cf_1234 Input file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EY..zrmonb Output file: /Exps/ma008/gmva_58_merged_pc1/1234/No0028/EY.W.181.zrmonb



Fringe quality 0
 SNR 7.0
 Int time 518.191
 Amp 0.168
 Phase 213.6
 PFD 2.5e-04
 Delays (us)
 SBD -0.020954
 MBD -0.004914
 Fringe rate (Hz)
 -0.023891
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. ma008
 Exper # 16383
 Yr:day 2017:094
 Start 014520.48
 Stop 015400.16
 FRT 014930.00
 Corr/FF/build
 2017:237:133004
 2017:244:143652
 2017:170:130423
 RA & Dec (J2000)
 12h29m 6.6997s
 +2°03' 8.598"



Amp. and Phase vs. time for each freq., 41 segs, 25 APs / seg (12.80 sec / seg.), time ticks 10 sec



| | 86151.11 | 86209.70 | 86268.30 | 86326.89 | All |
|------------|------------|----------|----------|----------|-------|
| 86151.11 | 147.9 | 148.5 | 131.6 | 152.9 | 145.3 |
| 147.9 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 |
| 0.2 | 229.0 | 358.2 | 226.9 | 228.3 | 228.1 |
| 229.0 | U/L 1015/0 | 1015/0 | 1015/0 | 1015/0 | |
| U/L 1015/0 | E 3890 | 296 | 1703 | 3109 | |
| E 3890 | Y 0 | 0 | 0 | 0 | |
| Y 0 | E:Y 0:0 | 0:0 | 0:0 | 0:0 | |
| E:Y 0:0 | E:Y 0:0 | 0:0 | 0:0 | 0:0 | |
| E:Y 0:0 | E 1000 | 1000 | 1000 | 1000 | |
| E 1000 | Y 1000 | 1000 | 1000 | 1000 | |
| Y 1000 | E W00UR | W01UR | W02UR | W03UR | |
| E W00UR | Y W00UL | W01UL | W02UL | W03UL | |
| Y W00UL | | | | | |

| Group delay (usec)(sbd) | -3.51826222677E+03 | Apriori delay (usec) | -3.51824024561E+03 | Resid mbdelay (usec) | -4.91449E-03 | +/- | 3.4E-04 |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Sband delay (usec) | -3.51826119982E+03 | Apriori clock (usec) | 2.4318893E+01 | Resid sbdelay (usec) | -2.09542E-02 | +/- | 1.3E-03 |
| Phase delay (usec) | -3.51824024093E+03 | Apriori clockrate (us/s) | -4.5787034E-07 | Resid phdelay (usec) | 4.68706E-06 | +/- | 5.2E-07 |
| Delay rate (us/s) | -4.72560822534E-02 | Apriori rate (us/s) | -4.72558049063E-02 | Resid rate (us/s) | -2.77347E-07 | +/- | 1.7E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | 1.93080823769E-05 | Resid phase (deg) | 213.6 | +/- | 16.3 |

| ph/seg (deg) | 82.0 | Theor. | 52.1 | Amplitude | 0.168 +/- 0.024 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
|--------------|-------|--------|----------------|-----------|-----------------------|----------------------|----------------------|------------------|--------------|
| amp/seg (%) | 196.9 | 90.9 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 | (us/s) | sb window (us) | -1.000 1.000 |
| ph/frq (deg) | 11.5 | 16.3 | Inc. seg. avg. | 0.295 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.009 0.009 |
| amp/frq (%) | 9.6 | 28.4 | Inc. frq. avg. | 0.163 | Sample rate(MSamp/s): | 116 | nlags: 232 | dr window (ns/s) | -0.011 0.011 |
| | | | | | Data rate(Mb/s): | 928 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |