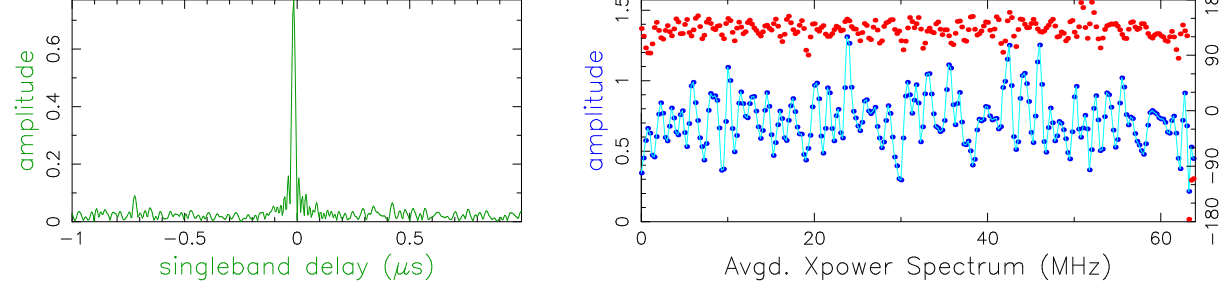


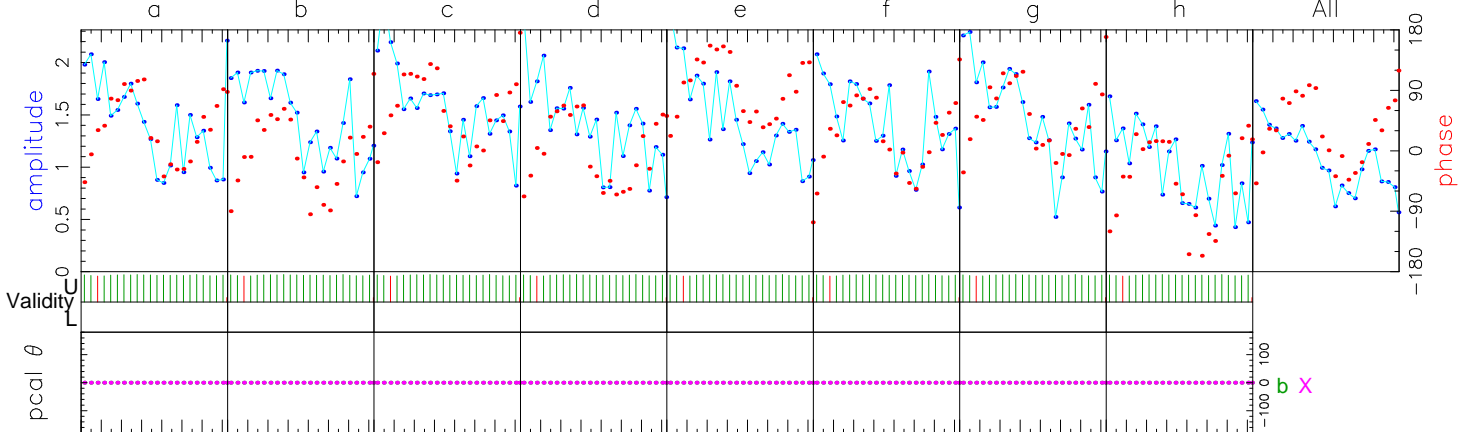
Fringe quality 4

SNR 42.7
 Int time 409.579
 Amp 0.771
 Phase 34.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.016181
 MBD -0.007642
 Fringe rate (Hz)
 -0.000140
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143528
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

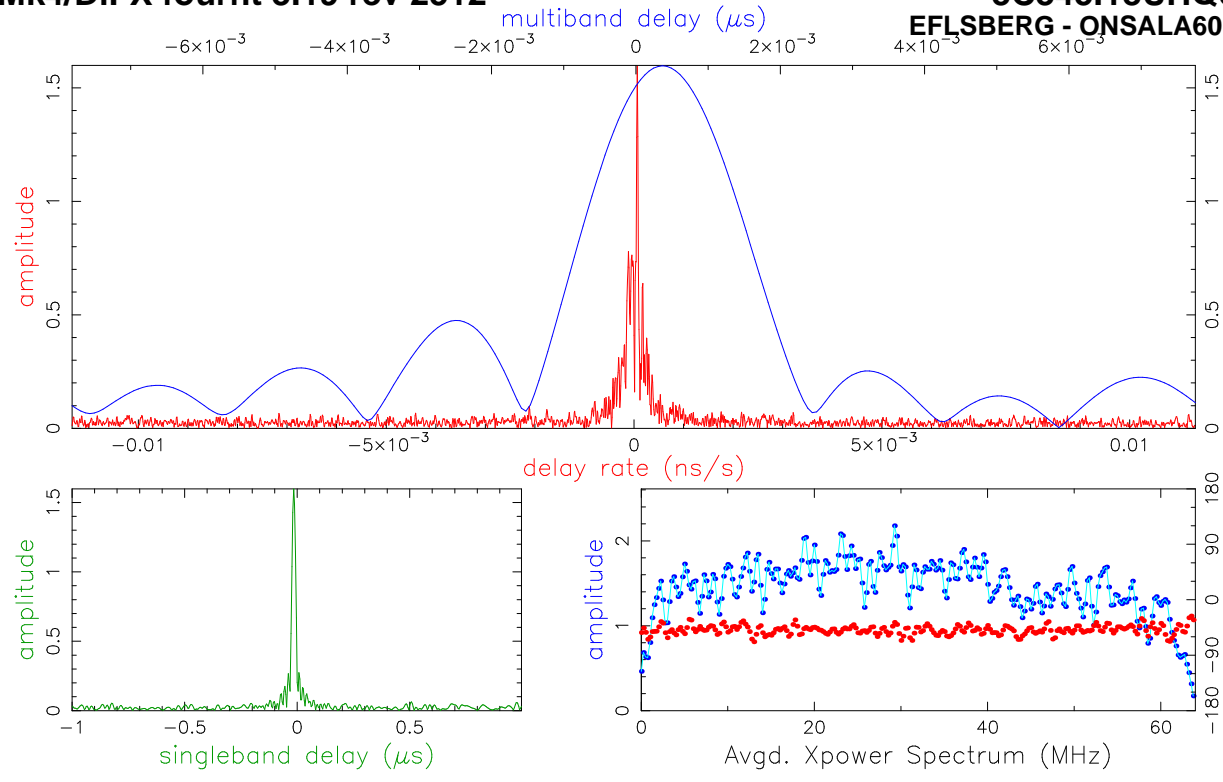


Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 35.5 | -1.5 | 59.2 | -0.5 | 95.9 | 27.9 | 51.2 | -32.4 | Phase | 34.0 |
| | 0.9 | 1.0 | 1.1 | 0.9 | 1.1 | 1.0 | 1.0 | 0.6 | Ampl. | 0.9 |
| | 252.3 | 252.3 | 252.7 | 252.2 | 252.4 | 252.4 | 251.8 | 250.4 | Sbd box | 252.9 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.11391245112E+04 | | Apriori delay (usec) | | 1.11391477785E+04 | | Resid mbdelay (usec) | | -7.64225E-03 | +/- 2.5E-05 |
| Sband delay (usec) | 1.11391315977E+04 | | Apriori clock (usec) | | -4.2173496E+01 | | Resid sbdelay (usec) | | -1.61807E-02 | +/- 2.0E-04 |
| Phase delay (usec) | 1.11391477796E+04 | | Apriori clockrate (us/s) | | -5.6999999E-07 | | Resid phdelay (usec) | | 1.09588E-06 | +/- 8.7E-08 |
| Delay rate (us/s) | 9.48888310431E-01 | | Apriori rate (us/s) | | 9.48888312054E-01 | | Resid rate (us/s) | | -1.62260E-09 | +/- 3.6E-10 |
| Total phase (deg) | 264.0 | | Apriori accel (us/s/s) | | -6.65255597690E-05 | | Resid phase (deg) | | 34.0 | +/- 2.7 |

ph/seg (deg) 47.6 6.4 Search (2048X32) 0.755 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.2 11.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.1 3.8 Inc. seg. avg. 1.095 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 29.8 6.6 Inc. frq. avg. 0.942 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 104.8 el 69.8 pa -57.1 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -7213.523 -4909.126 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/bX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/bX.W.13.18UHQS

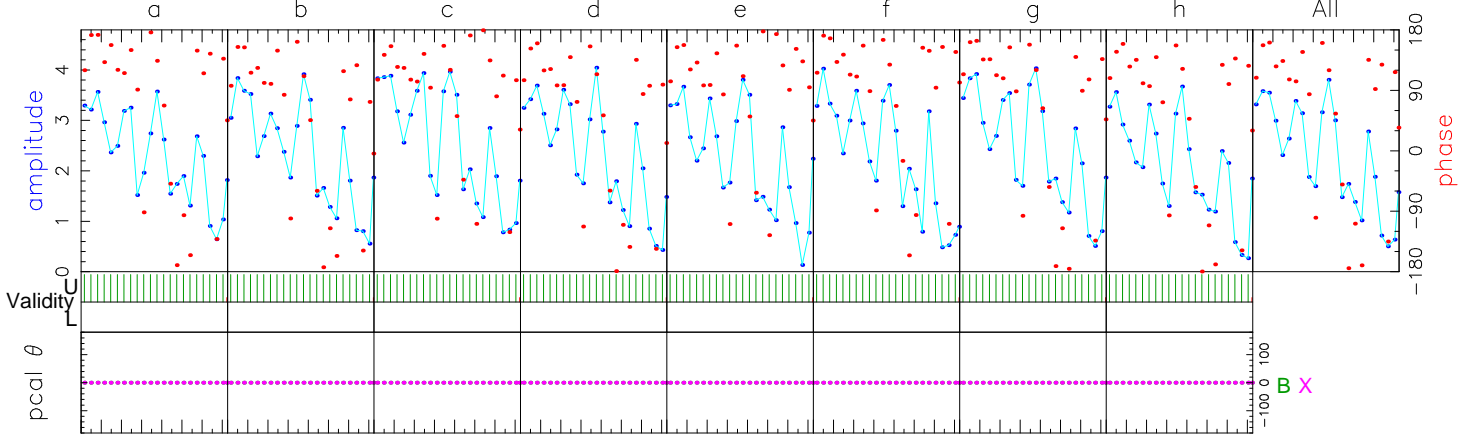


Fringe quality 5

SNR 89.6
Int time 419.781
Amp 1.599
Phase 131.9
PFD 0.0e+00
Delays (us)
SBD -0.015141
MBD 0.000381
Fringe rate (Hz) 0.005836
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143529
2020:014:135814
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



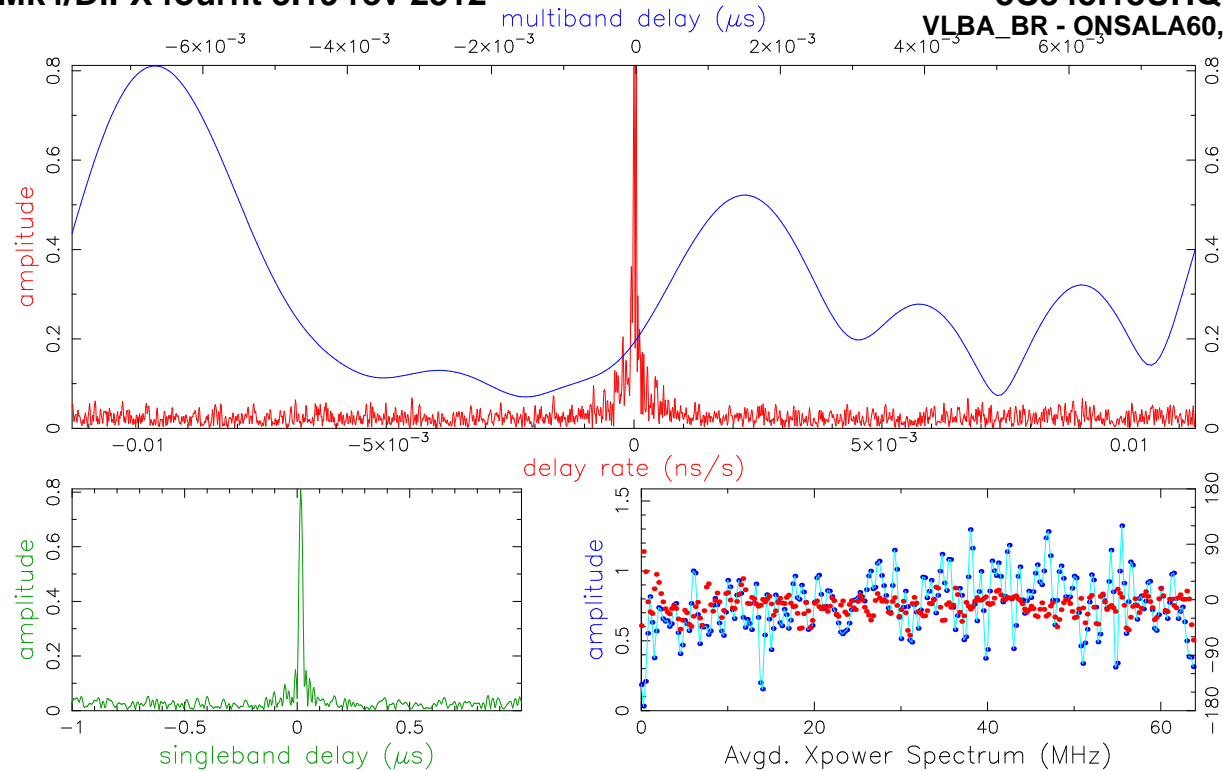
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -5.60920687628E+02 | Apriori delay (usec) | -5.60905444092E+02 | Resid mbdelay (usec) | 3.81464E-04 | +/- | 1.2E-05 |
| Sband delay (usec) | -5.60920584842E+02 | Apriori clock (usec) | -2.7715532E+01 | Resid sbdelay (usec) | -1.51408E-02 | +/- | 9.6E-05 |
| Phase delay (usec) | -5.60905439838E+02 | Apriori clockrate (us/s) | -7.2800002E-07 | Resid phdelay (usec) | 4.25322E-06 | +/- | 4.1E-08 |
| Delay rate (us/s) | -1.27218898220E-01 | Apriori rate (us/s) | -1.27218965974E-01 | Resid rate (us/s) | 6.77537E-08 | +/- | 1.7E-10 |
| Total phase (deg) | -211.6 | Apriori accel (us/s/s) | -2.26412219901E-06 | Resid phase (deg) | 131.9 | +/- | 1.3 |

| | | | | | | | | | | | | |
|--------------|------|------------------|-------|------------------------|-------|-------------------|-----------------------------|----------------------|-------------------|------------------|-------|------|
| ph/seg (deg) | 65.0 | RMS | 3.1 | Theor. | 1.578 | Amplitude | 1.599 +/- 0.018 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 77.4 | Search (2048X32) | 1.578 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | | |
| ph/frq (deg) | 9.2 | Inc. seg. avg. | 2.292 | Inc. frq. avg. | 1.611 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 | |
| amp/frq (%) | 6.5 | Inc. frq. avg. | 1.611 | Sample rate (MSamp/s): | 128 | Data rate (Mb/s): | 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

B: az 304.4 el 23.7 pa 42.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) 941.682 -643.230 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/BX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/BX.W.15.18UHQS

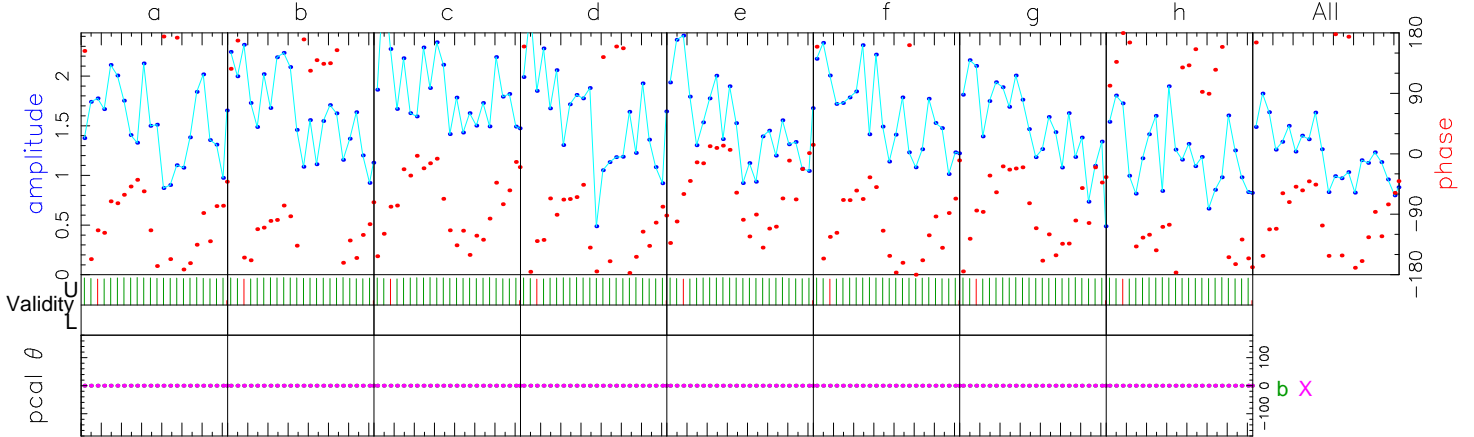


Fringe quality 4

SNR 44.9
 Int time 409.577
 Amp 0.812
 Phase -107.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.016098
 MBD -0.006645
 Fringe rate (Hz)
 -0.000213
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

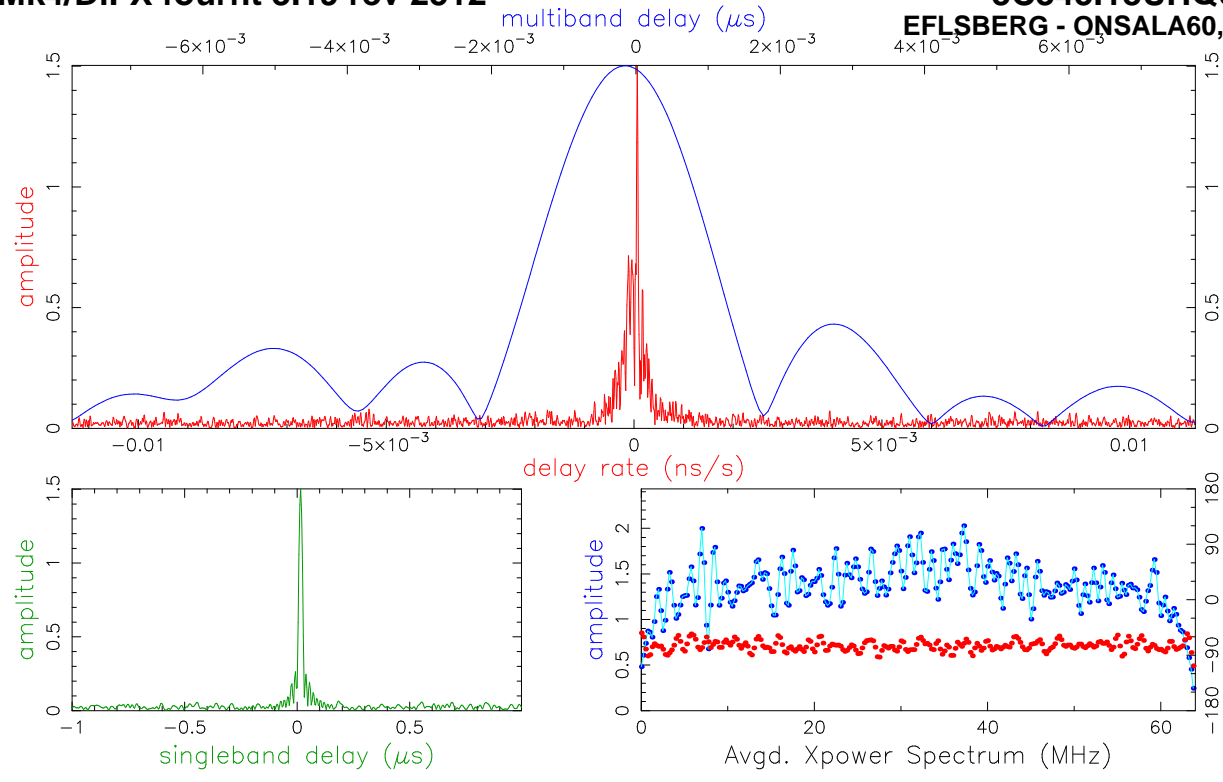
Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143532
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -109.6 | -151.7 | -71.6 | -128.0 | -52.0 | -114.2 | -79.2 | -178.8 | Phase | -107.3 |
| | 1.0 | 1.0 | 1.3 | 1.0 | 1.0 | 1.1 | 1.0 | 0.8 | Ampl. | 1.0 |
| | 260.2 | 261.0 | 261.2 | 260.6 | 260.4 | 260.7 | 260.3 | 259.4 | Sbd box | 261.1 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.11391567584E+04 | | Apriori delay (usec) | | 1.11391477785E+04 | | Resid mbdelay (usec) | | -6.64509E-03 | +/- 2.4E-05 |
| Sband delay (usec) | 1.11391638765E+04 | | Apriori clock (usec) | | -4.2173496E+01 | | Resid sbdelay (usec) | | 1.60980E-02 | +/- 1.9E-04 |
| Phase delay (usec) | 1.11391477750E+04 | | Apriori clockrate (us/s) | | -5.6999999E-07 | | Resid phdelay (usec) | | -3.45955E-06 | +/- 8.2E-08 |
| Delay rate (us/s) | 9.48888309584E-01 | | Apriori rate (us/s) | | 9.48888312054E-01 | | Resid rate (us/s) | | -2.47003E-09 | +/- 3.4E-10 |
| Total phase (deg) | 122.8 | | Apriori accel (us/s/s) | | -6.65255597690E-05 | | Resid phase (deg) | | -107.3 | +/- 2.6 |

ph/seg (deg) 50.0 6.1 Search (2048X32) 0.790 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 61.0 10.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 46.0 3.6 Inc. seg. avg. 1.218 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 29.6 6.3 Inc. frq. avg. 1.020 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 104.8 el 69.8 pa -57.1 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -7213.523 -4909.126 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/bX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/bX.W.30.18UHQS

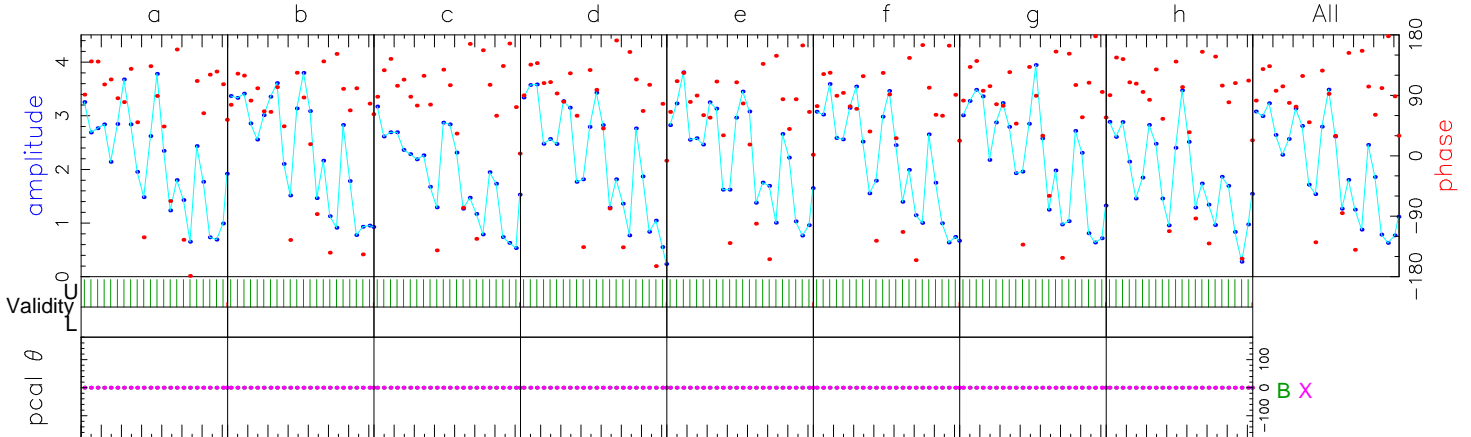


Fringe quality 5

SNR 84.2
Int time 419.781
Amp 1.503
Phase 102.7
PFD 0.0e+00
Delays (us)
SBD 0.015227
MBD -0.000162
Fringe rate (Hz) 0.005884
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143533
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 107.3 | 93.9 | 109.1 | 111.9 | 87.6 | 98.5 | 103.5 | 112.6 | Phase | 102.7 |
| | 1.5 | 1.7 | 1.3 | 1.6 | 1.5 | 1.6 | 1.6 | 1.3 | Ampl. | 1.5 |
| | 260.3 | 260.9 | 261.3 | 260.7 | 260.7 | 261.3 | 261.2 | 260.3 | Sbd box | 260.9 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -5.60889981065E+02 | | Apriori delay (usec) | | -5.60905444092E+02 | | Resid mbdelay (usec) | | -1.61974E-04 | +/- 1.3E-05 |
| Sband delay (usec) | -5.60890217592E+02 | | Apriori clock (usec) | | -2.7715532E+01 | | Resid sbdelay (usec) | | 1.52265E-02 | +/- 1.0E-04 |
| Phase delay (usec) | -5.60905440779E+02 | | Apriori clockrate (us/s) | | -7.2800002E-07 | | Resid phdelay (usec) | | 3.31285E-06 | +/- 4.4E-08 |
| Delay rate (us/s) | -1.27218897661E-01 | | Apriori rate (us/s) | | -1.27218965974E-01 | | Resid rate (us/s) | | 6.83128E-08 | +/- 1.8E-10 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -2.26412219901E-06 | | Resid phase (deg) | | 102.7 | +/- 1.4 |

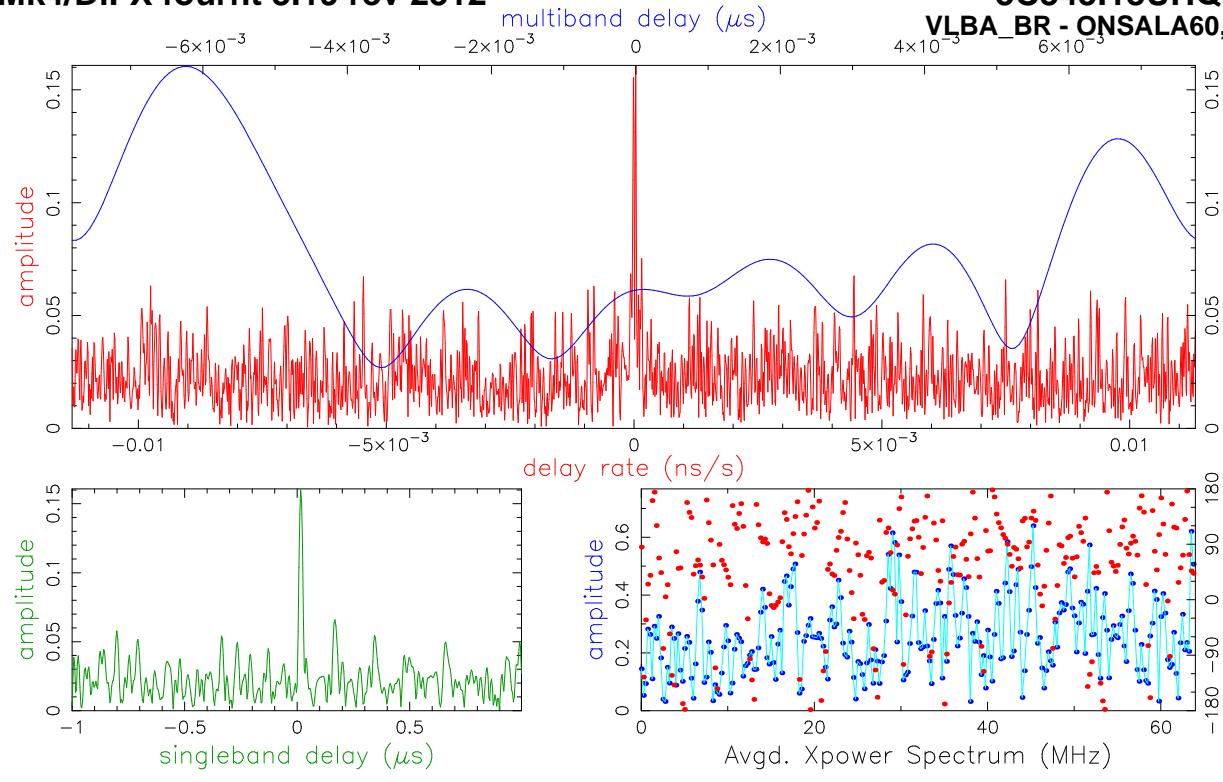
ph/seg (deg) 62.4 3.3
amp/seg (%) 71.3 5.7
ph/frq (deg) 9.8 1.9
amp/frq (%) 7.9 3.4

RMS Theor. Amplitude 1.503 +/- 0.018
62.4 3.3 Search (2048X32) 1.474
71.3 5.7 Interp. 0.000
9.8 1.9 Inc. seg. avg. 2.108
7.9 3.4 Inc. frq. avg. 1.517

pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 128
Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite

sb window (us) -1.000 1.000
mb window (us) -0.008 0.008
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

B: az 304.4 el 23.7 pa 42.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) 941.682 -643.230 simultaneous interpolator

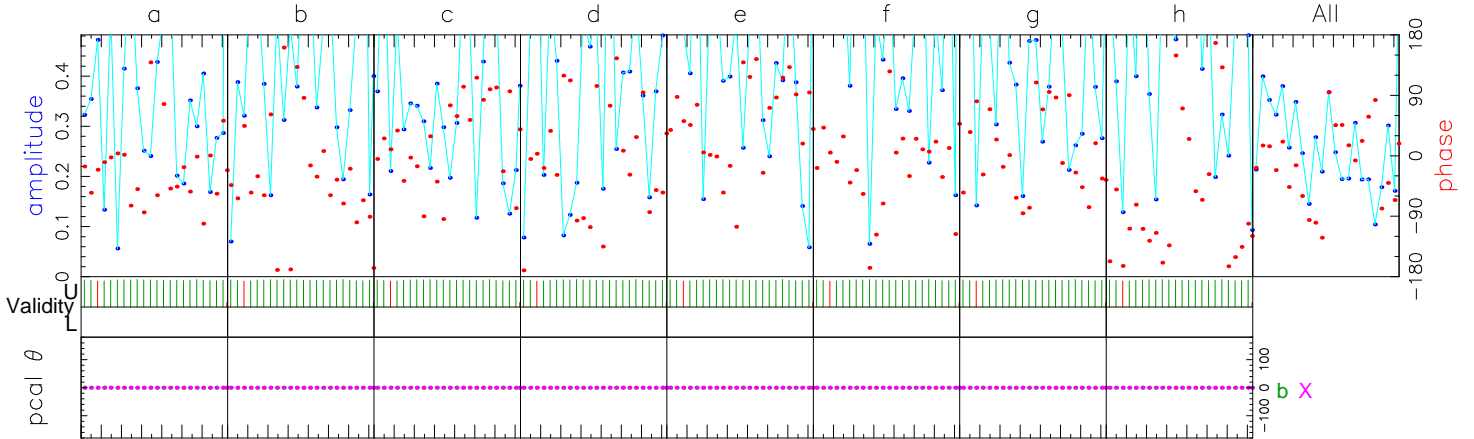


Fringe quality 9

SNR 8.9
 Int time 409.579
 Amp 0.161
 Phase -6.5
 PFD 2.1e-10
 Delays (us)
 SBD 0.016291
 MBD -0.006237
 Fringe rate (Hz) 0.003168
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143536
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

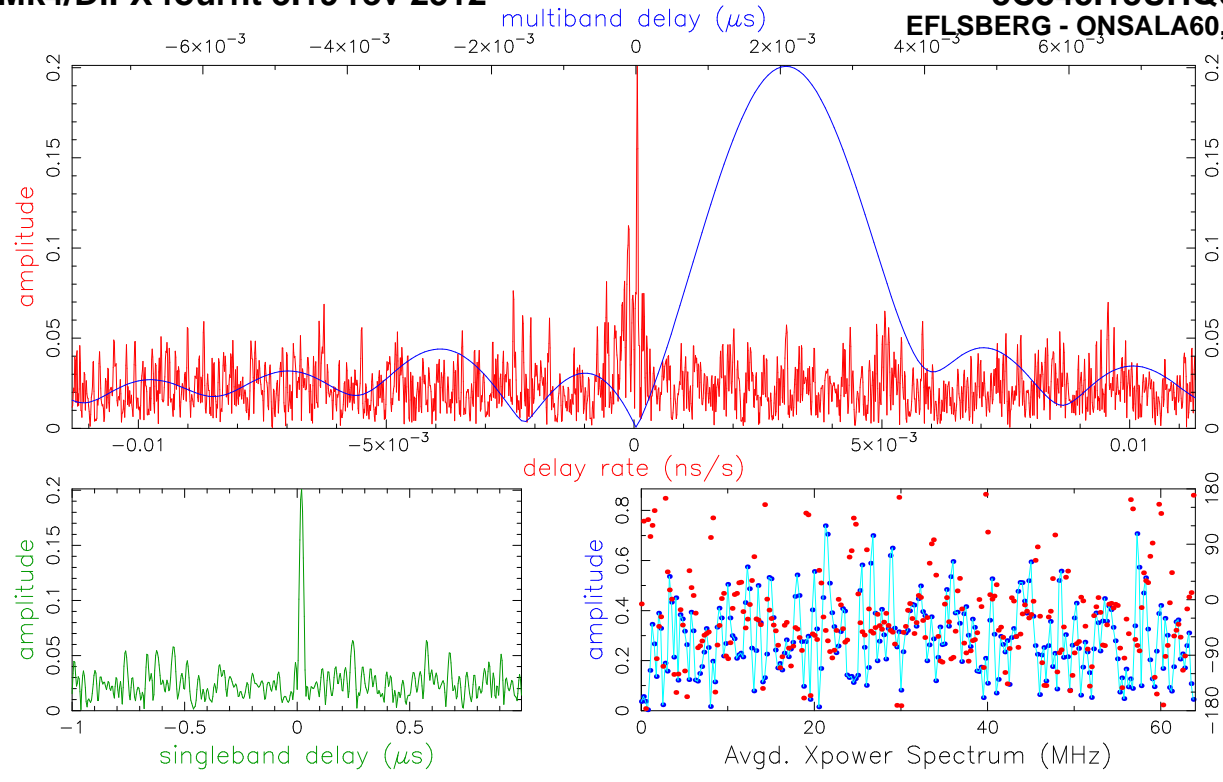
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -32.1 | -50.6 | 38.9 | 3.7 | 63.5 | -3.0 | 2.3 | -115.0 | Phase | -6.5 |
| | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 261.0 | 261.2 | 261.0 | 199.1 | 260.4 | 260.8 | 260.3 | 342.8 | Sbd box | 261.2 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.11391571666E+04 | | Apriori delay (usec) | | 1.11391477785E+04 | | Resid mbdelay (usec) | | -6.23685E-03 | +/- 1.2E-04 |
| Sband delay (usec) | 1.11391640692E+04 | | Apriori clock (usec) | | -4.2173496E+01 | | Resid sbdelay (usec) | | 1.62908E-02 | +/- 9.7E-04 |
| Phase delay (usec) | 1.11391477783E+04 | | Apriori clockrate (us/s) | | -5.6999999E-07 | | Resid phdelay (usec) | | -2.08241E-07 | +/- 4.2E-07 |
| Delay rate (us/s) | 9.48888348830E-01 | | Apriori rate (us/s) | | 9.48888312054E-01 | | Resid rate (us/s) | | 3.67763E-08 | +/- 1.7E-09 |
| Total phase (deg) | 223.6 | | Apriori accel (us/s/s) | | -6.65255597690E-05 | | Resid phase (deg) | | -6.5 | +/- 12.9 |

ph/seg (deg) 58.5 30.9 Amplitude 0.161 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 80.0 53.9 Search (2048X32) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 59.9 18.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 58.5 31.8 Inc. seg. avg. 0.225 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.222 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 104.8 el 69.8 pa -57.1 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -7213.523 -4909.126 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/bX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/bX.W.49.18UHQS

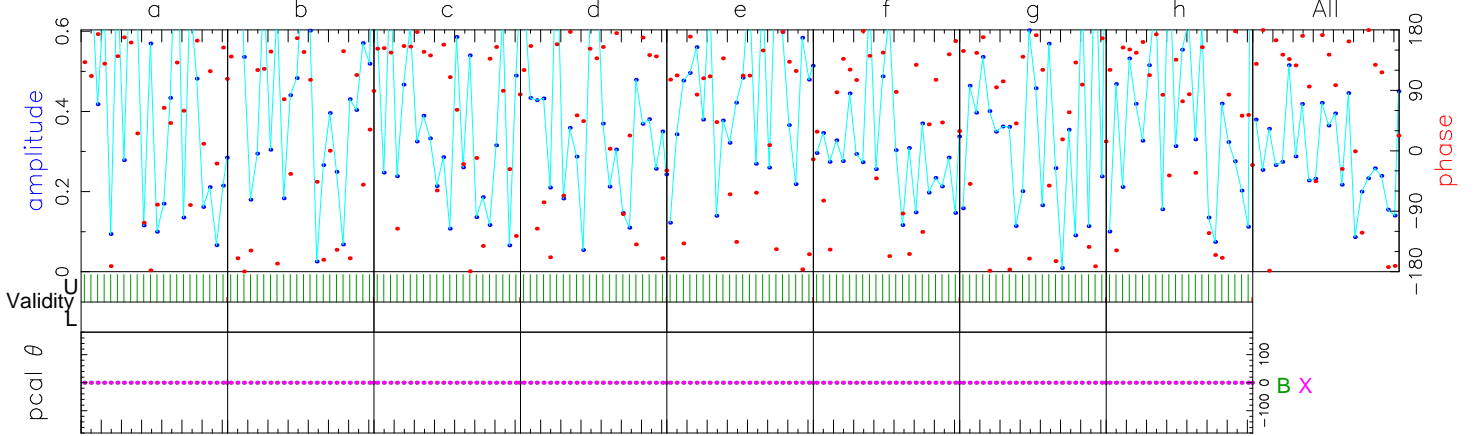


Fringe quality 9

SNR 11.3
Int time 419.781
Amp 0.201
Phase 150.8
PFD 8.2e-21
Delays (us)
SBD 0.018803
MBD 0.002067
Fringe rate (Hz) 0.005860
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143537
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

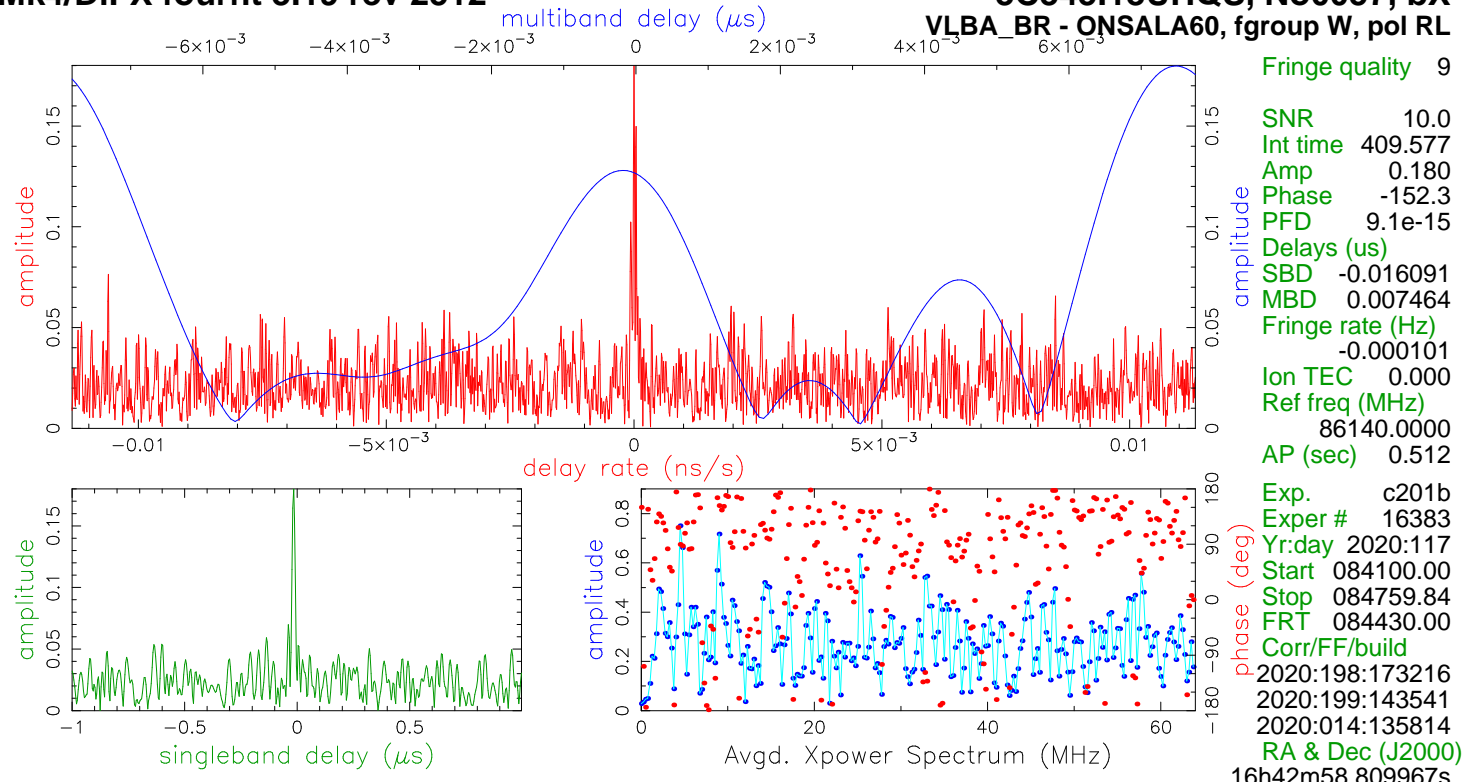


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|-------------|-------------|
| | 136.6 | 156.1 | 150.8 | 165.5 | 151.7 | 146.6 | 158.7 | 137.1 | Phase | 150.8 |
| | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 260.7 | 261.4 | 262.3 | 262.1 | 261.9 | 231.1 | 261.9 | 489.1 | Sbd box | 261.8 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -5.60887752378E+02 | | Apriori delay (usec) | | -5.60905444092E+02 | | Resid mbdelay (usec) | | 2.06671E-03 | +/- 9.6E-05 |
| Sband delay (usec) | -5.60886640592E+02 | | Apriori clock (usec) | | -2.7715532E+01 | | Resid sbdelay (usec) | | 1.88035E-02 | +/- 7.6E-04 |
| Phase delay (usec) | -5.60905439230E+02 | | Apriori clockrate (us/s) | | -7.2800002E-07 | | Resid phdelay (usec) | | 4.86134E-06 | +/- 3.3E-07 |
| Delay rate (us/s) | -1.27218897945E-01 | | Apriori rate (us/s) | | -1.27218965974E-01 | | Resid rate (us/s) | | 6.80293E-08 | +/- 1.4E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -2.26412219901E-06 | | Resid phase (deg) | | 150.8 | +/- 10.2 |

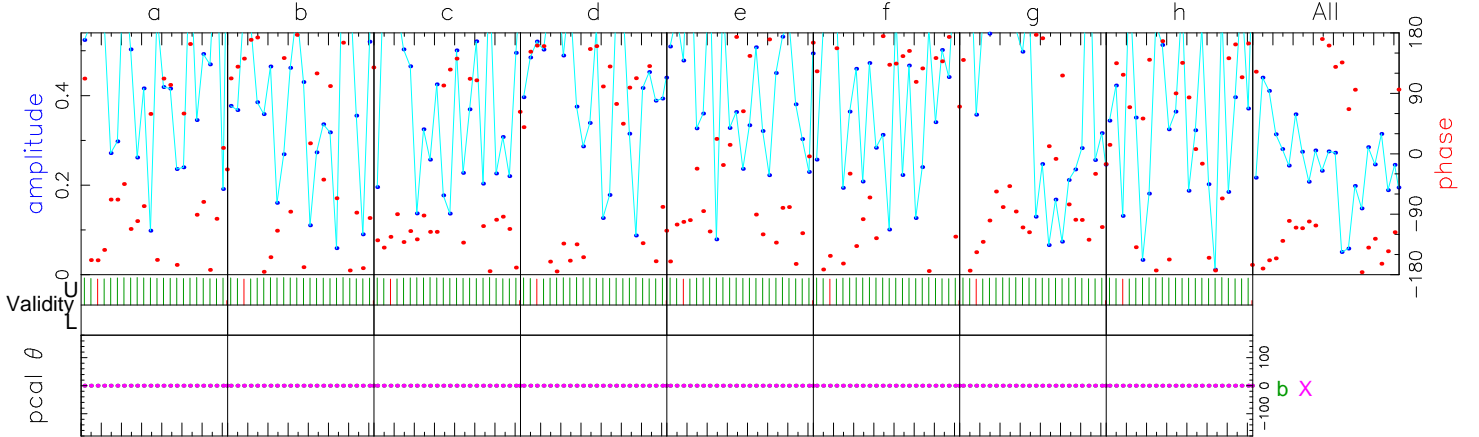
| | RMS | Theor. | Amplitude | 0.201 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------------|
| ph/seg (deg) | 69.6 | 24.4 | Search (2048X32) | 0.198 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 0.008 |
| amp/seg (%) | 69.3 | 42.5 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 0.011 |
| ph/frq (deg) | 10.9 | 14.4 | Inc. seg. avg. | 0.267 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 0.00 |
| amp/frq (%) | 18.5 | 25.1 | Inc. frq. avg. | 0.197 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | |

B: az 304.4 el 23.7 pa 42.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) 941.682 -643.230 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/BX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/BX.W.54.18UHQS



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

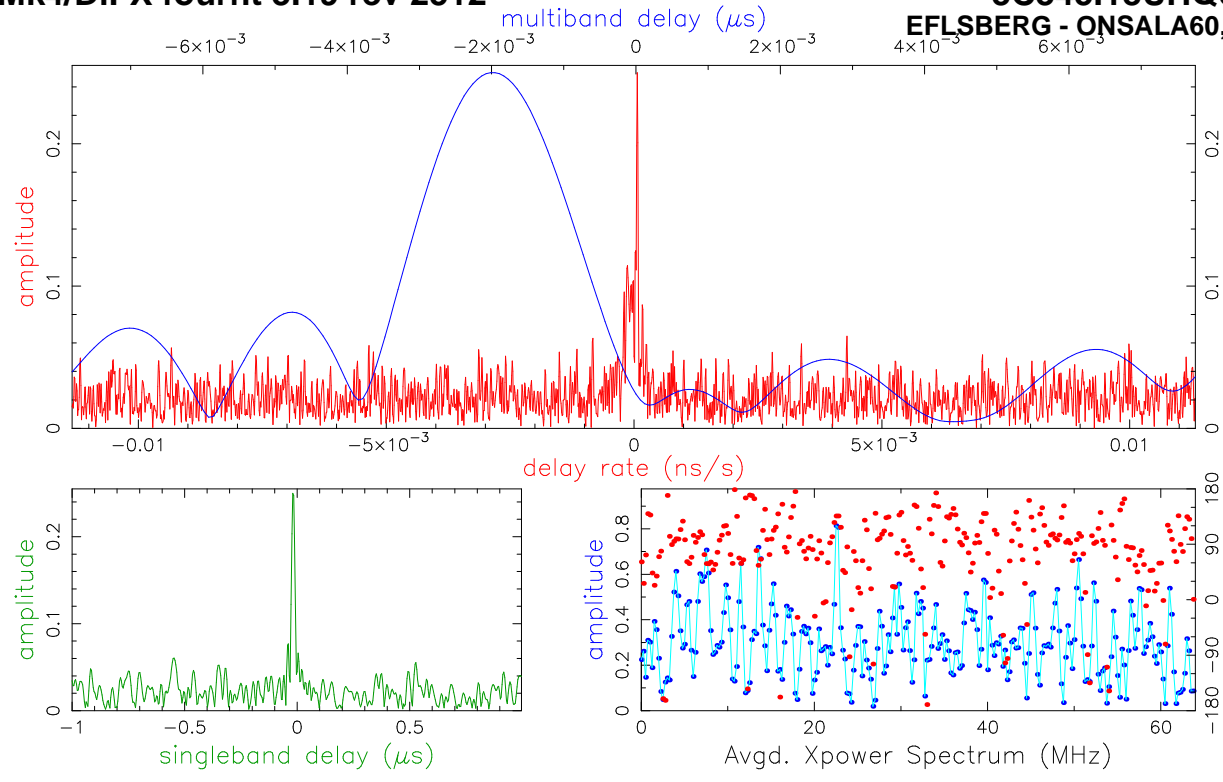


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|----------|-------------------|----------|--------------------------|--------------------|----------|----------------------|--------------|------------|---------|
| | -131.7 | 179.1 | -141.7 | 169.0 | -102.7 | -179.0 | -106.4 | 138.1 | Phase | -152.3 |
| | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.1 | Ampl. | 0.2 |
| | 252.3 | 252.4 | 252.7 | 251.8 | 251.9 | 252.8 | 252.5 | 251.3 | Sbd box | 252.9 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | | 1.11391239922E+04 | | Apriori delay (usec) | 1.11391477785E+04 | | Resid mbdelay (usec) | 7.46375E-03 | +/- | 1.1E-04 |
| Sband delay (usec) | | 1.11391316870E+04 | | Apriori clock (usec) | -4.2173496E+01 | | Resid sbdelay (usec) | -1.60915E-02 | +/- | 8.6E-04 |
| Phase delay (usec) | | 1.11391477736E+04 | | Apriori clockrate (us/s) | -5.6999999E-07 | | Resid phdelay (usec) | -4.91280E-06 | +/- | 3.7E-07 |
| Delay rate (us/s) | | 9.48888310878E-01 | | Apriori rate (us/s) | 9.48888312054E-01 | | Resid rate (us/s) | -1.17621E-09 | +/- | 1.5E-09 |
| Total phase (deg) | | | 77.7 | Apriori accel (us/s/s) | -6.65255597690E-05 | | Resid phase (deg) | -152.3 | +/- | 11.5 |

| | RMS | Theor. | Amplitude | 0.180 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------|-------|
| ph/seg (deg) | 56.9 | 27.6 | Search (2048X32) | 0.178 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 63.9 | 48.1 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 46.5 | 16.3 | Inc. seg. avg. | 0.225 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 36.0 | 28.4 | Inc. frq. avg. | 0.219 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | | |

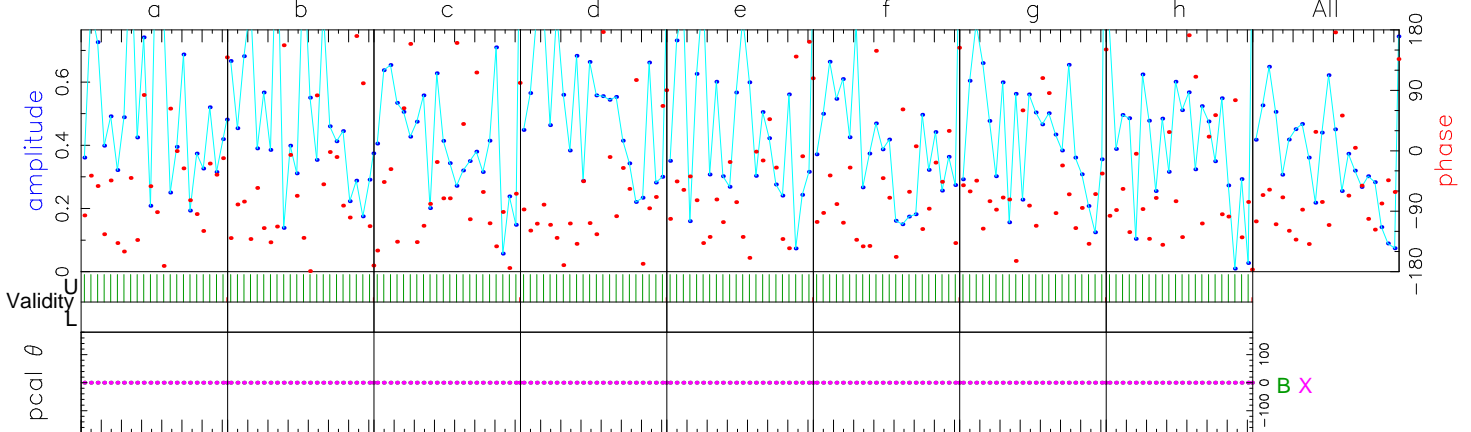
b: az 104.8 el 69.8 pa -57.1 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -7213.523 -4909.126 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/bX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/bX.W.72.18UHQS



Fringe quality 9
SNR 14.3
Int time 419.781
Amp 0.255
Phase -91.0
PFD 1.5e-37
Delays (us)
SBD -0.017785
MBD -0.001937
Fringe rate (Hz) 0.006081
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143542
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

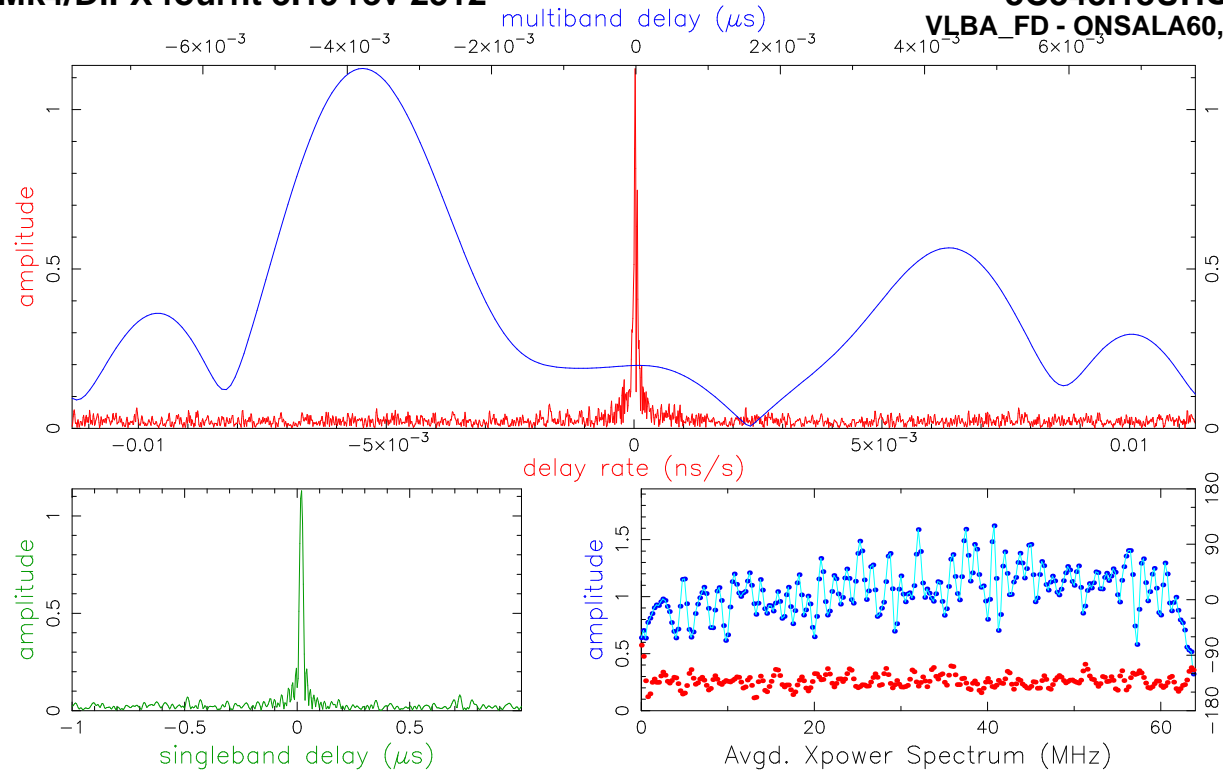


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -65.8 | -101.0 | -98.6 | -106.1 | -86.7 | -86.8 | -79.9 | -100.9 | Phase | -91.0 |
| | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | Ampl. | 0.3 |
| | 252.1 | 251.9 | 93.1 | 251.8 | 251.9 | 253.8 | 252.6 | 253.2 | Sbd box | 252.4 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -5.60923006284E+02 | | Apriori delay (usec) | | -5.60905444092E+02 | | Resid mbdelay (usec) | | -1.93719E-03 | +/- 7.6E-05 |
| Sband delay (usec) | -5.60923229092E+02 | | Apriori clock (usec) | | -2.7715532E+01 | | Resid sbdelay (usec) | | -1.77850E-02 | +/- 6.0E-04 |
| Phase delay (usec) | -5.60905447025E+02 | | Apriori clockrate (us/s) | | -7.2800002E-07 | | Resid phdelay (usec) | | -2.93386E-06 | +/- 2.6E-07 |
| Delay rate (us/s) | -1.27218895380E-01 | | Apriori rate (us/s) | | -1.27218965974E-01 | | Resid rate (us/s) | | 7.05943E-08 | +/- 1.1E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -2.26412219901E-06 | | Resid phase (deg) | | -91.0 | +/- 8.0 |

ph/seg (deg) 56.0 19.2 Search (2048X32) 0.241 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 73.7 33.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 14.6 11.3 Inc. seg. avg. 0.344 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 19.6 19.8 Inc. frq. avg. 0.252 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 304.4 el 23.7 pa 42.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) 941.682 -643.230 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/BX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/BX.W.76.18UHQS

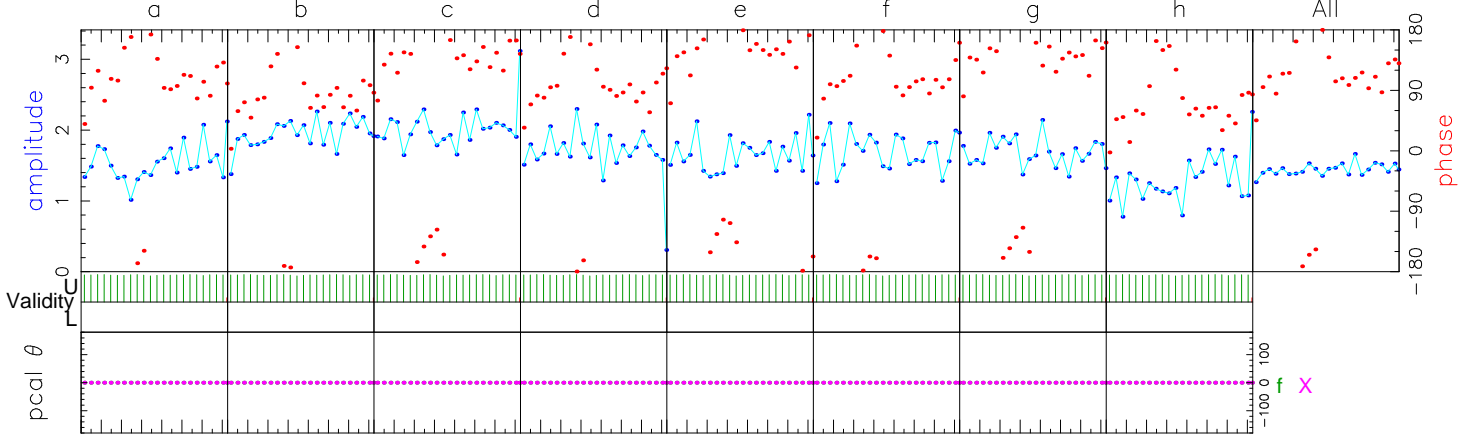
Mk4/DiFX fourfit 3.19 rev 2512

3C345.18UHQS, No0057, fX
VLBA_FD - ONSALA60, fgroup W, pol RR



Fringe quality 3
SNR 63.3
Int time 412.793
Amp 1.139
Phase 122.3
PFD 0.0e+00
Delays (us)
SBD 0.018312
MBD -0.003828
Fringe rate (Hz) 0.001826
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143551
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



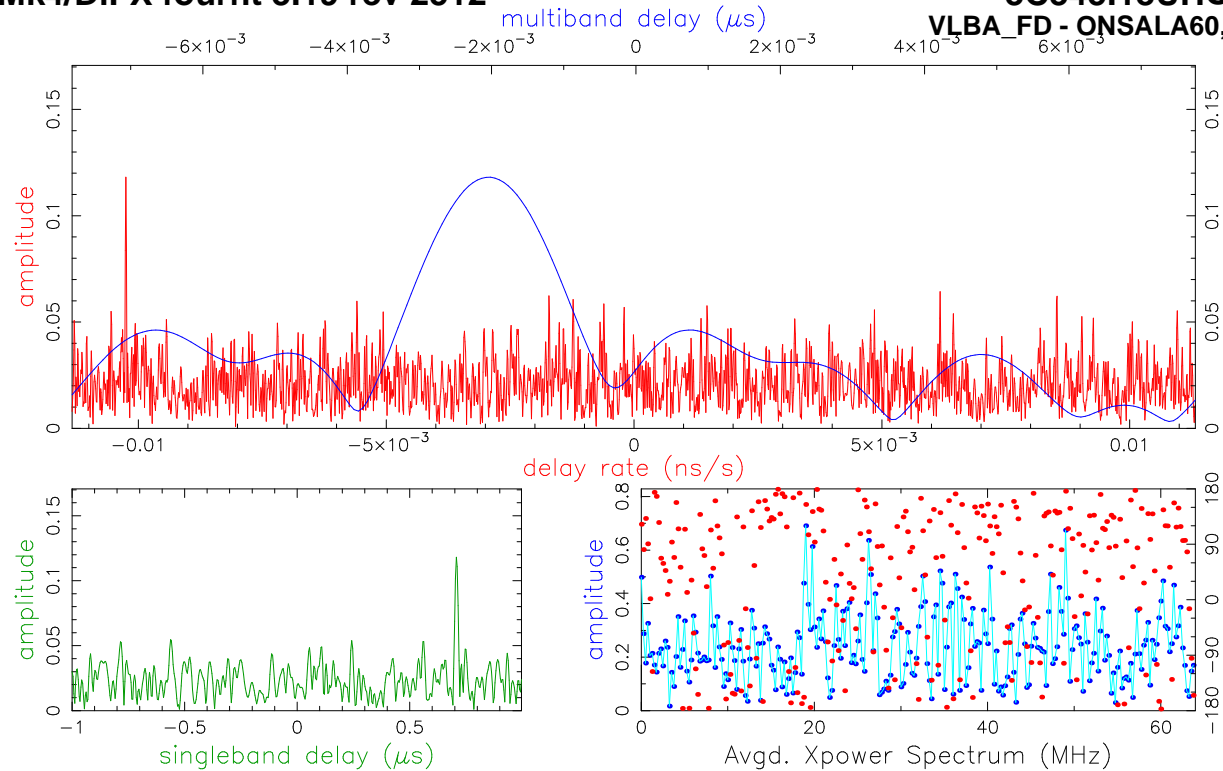
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|-------------------------|----------|-------------------|----------|----------|--------------------|----------|----------|----------|----------------------|--------------|-------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | | |
| Group delay (usec)(sbd) | | 1.19329313383E+04 | | | 1.19329195416E+04 | | | | Resid mbdelay (usec) | -3.82832E-03 | +/- 1.7E-05 |
| Sband delay (usec) | | 1.19329378533E+04 | | | -3.6865437E+01 | | | | Resid sbdelay (usec) | 1.83118E-02 | +/- 1.4E-04 |
| Phase delay (usec) | | 1.19329195455E+04 | | | -4.1900001E-07 | | | | Resid phdelay (usec) | 3.94357E-06 | +/- 5.8E-08 |
| Delay rate (us/s) | | 7.75528055115E-01 | | | 7.75528033917E-01 | | | | Resid rate (us/s) | 2.11979E-08 | +/- 2.4E-10 |
| Total phase (deg) | | 234.5 | | | -8.76798660827E-05 | | | | Resid phase (deg) | 122.3 | +/- 1.8 |

ph/seg (deg) 40.8 4.3 Search (2048X32) 1.120 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 27.8 7.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 37.0 2.6 Inc. seg. avg. 1.440 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 21.1 4.5 Inc. frq. avg. 1.312 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 39.2 el 77.7 pa -133.6 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -5971.443 -7911.275 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/fX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/fX.W.101.18UHQS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.18UHQS, No0057, fX

VLBA_FD - ONSALA60, fgroup W, pol LR

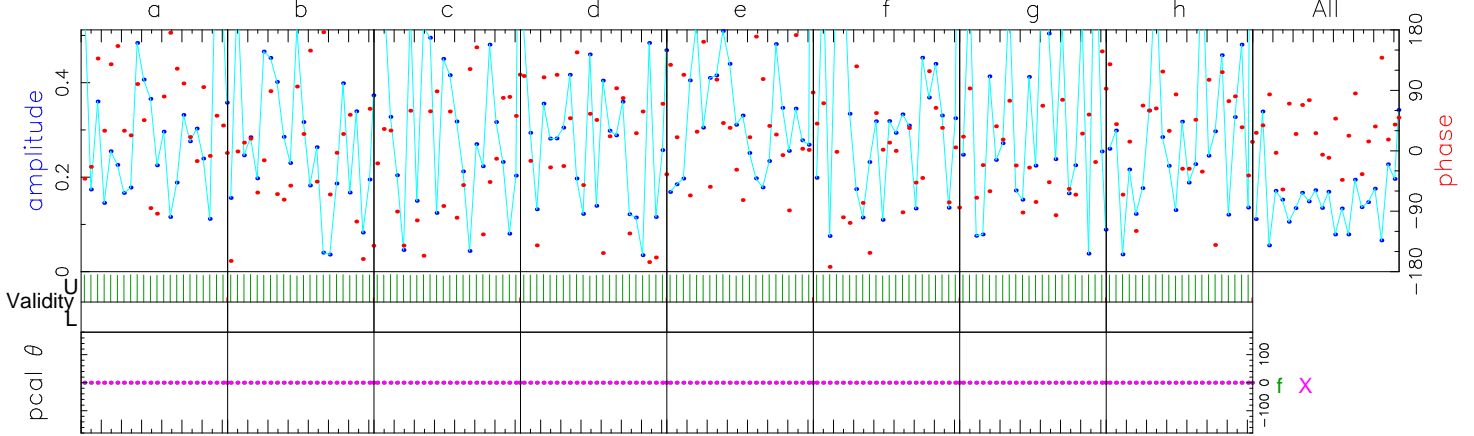


Fringe quality 0

SNR 6.6
 Int time 412.794
 Amp 0.171
 Phase 27.2
 PFD 1.2e-02
 Delays (us)
 SBD 0.707851
 MBD -0.002013
 Fringe rate (Hz)
 -0.884837
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143555
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 1.19336206531E+04 | Apriori delay (usec) | 1.19329195416E+04 | Resid mbdelay (usec) | -2.01346E-03 | +/- | 1.6E-04 |
| Sband delay (usec) | 1.19336273921E+04 | Apriori clock (usec) | -3.6865437E+01 | Resid sbdelay (usec) | 7.07851E-01 | +/- | 1.3E-03 |
| Phase delay (usec) | 1.19329195425E+04 | Apriori clockrate (us/s) | -4.1900001E-07 | Resid phdelay (usec) | 8.76153E-07 | +/- | 5.6E-07 |
| Delay rate (us/s) | 7.75517761835E-01 | Apriori rate (us/s) | 7.75528033917E-01 | Resid rate (us/s) | -1.02721E-05 | +/- | 2.3E-09 |
| Total phase (deg) | 139.4 | Apriori accel (us/s/s) | -8.76798660827E-05 | Resid phase (deg) | 27.2 | +/- | 17.4 |

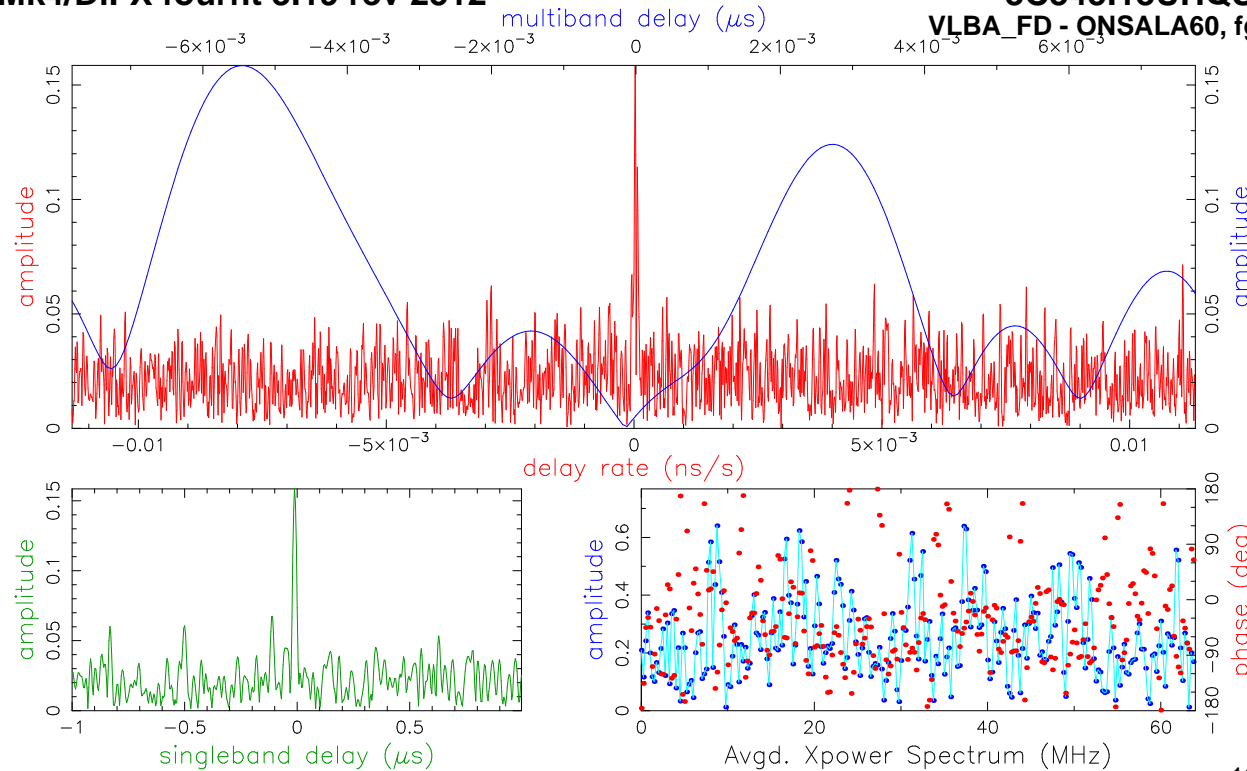
| | | | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|------------------------|-----------------------------|------------------|----------|------------------|--------|-------|
| ph/seg (deg) | 45.4 | Theor. | 41.7 | Amplitude | 0.171 +/- 0.026 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 59.0 | | 72.8 | Search (2048X32) | 0.115 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: | enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 30.3 | | 24.6 | Inc. seg. avg. | 0.172 | Sample rate (MSamp/s): | 128 | nlags: | 256 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 23.0 | | 42.9 | Inc. frq. avg. | 0.171 | Data rate (Mb/s): | 2048 | t_cohere | infinite | ion window (TEC) | 0.00 | 0.00 |

f: az 39.2 el 77.7 pa -133.6 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -5971.443 -7911.275 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/fX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/fX.W.119.18UHQS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.18UHQS, No0057, fX
VLBA_FD - ONSALA60, fgroup W, pol RL

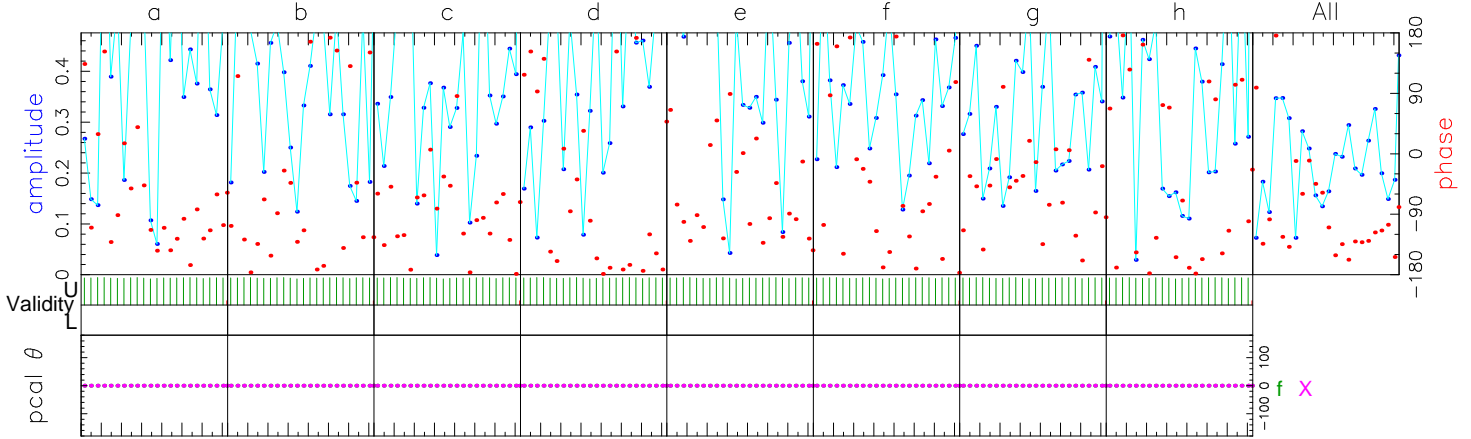


Fringe quality 9

SNR 8.8
Int time 412.793
Amp 0.159
Phase -121.6
PFD 4.7e-10
Delays (us)
SBD -0.011405
MBD -0.005452
Fringe rate (Hz) 0.001764
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143559
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -111.4 | -150.4 | -100.0 | -164.2 | -74.2 | -126.7 | -56.6 | 170.8 | Phase | -121.6 |
| | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 253.5 | 253.4 | 254.2 | 253.2 | 252.9 | 251.2 | 253.3 | 449.3 | Sbd box | 254.1 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.19329140899E+04 | | Apriori delay (usec) | | 1.19329195416E+04 | | Resid mbdelay (usec) | | -5.45164E-03 | +/- 1.2E-04 |
| Sband delay (usec) | 1.19329081361E+04 | | Apriori clock (usec) | | -3.6865437E+01 | | Resid sbdelay (usec) | | -1.14055E-02 | +/- 9.8E-04 |
| Phase delay (usec) | 1.19329195377E+04 | | Apriori clockrate (us/s) | | -4.1900001E-07 | | Resid phdelay (usec) | | -3.92146E-06 | +/- 4.2E-07 |
| Delay rate (us/s) | 7.75528054395E-01 | | Apriori rate (us/s) | | 7.75528033917E-01 | | Resid rate (us/s) | | 2.04780E-08 | +/- 1.7E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -8.76798660827E-05 | | Resid phase (deg) | | -121.6 | +/- 13.0 |

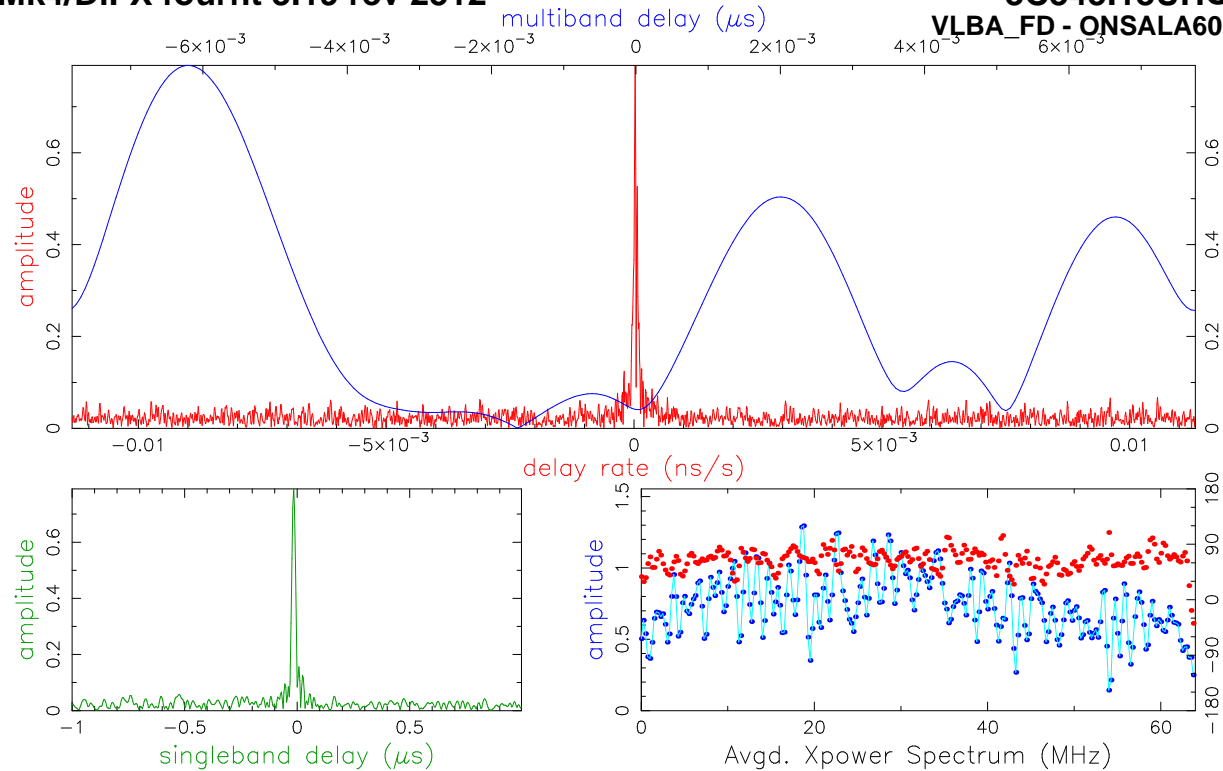
| | RMS | Theor. | Amplitude | 0.159 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 55.2 | 31.2 | Search (2048X32) | 0.157 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 63.0 | 54.4 | Interp. | 0.000 | Bits/sample: 2x2 | mb window (us) -0.008 0.008 |
| ph/frq (deg) | 48.8 | 18.4 | Inc. seg. avg. | 0.189 | Sample rate(MISamp/s): 128 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 42.5 | 32.1 | Inc. frq. avg. | 0.199 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

f: az 39.2 el 77.7 pa -133.6 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -5971.443 -7911.275 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/fX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/fX.W.135.18UHQS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.18UHQS, No0057, fX
VLBA_FD - ONSALA60, fgroup W, pol LL

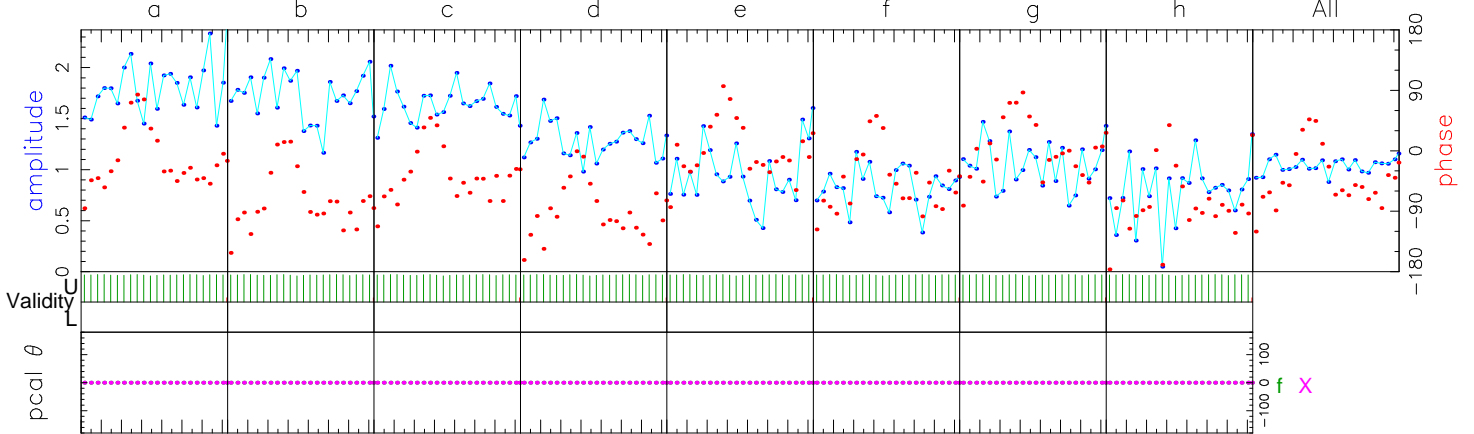


Fringe quality 4

SNR 43.9
Int time 412.794
Amp 0.790
Phase -44.9
PFD 0.0e+00
Delays (us)
SBD -0.015677
MBD -0.006205
Fringe rate (Hz) 0.001839
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

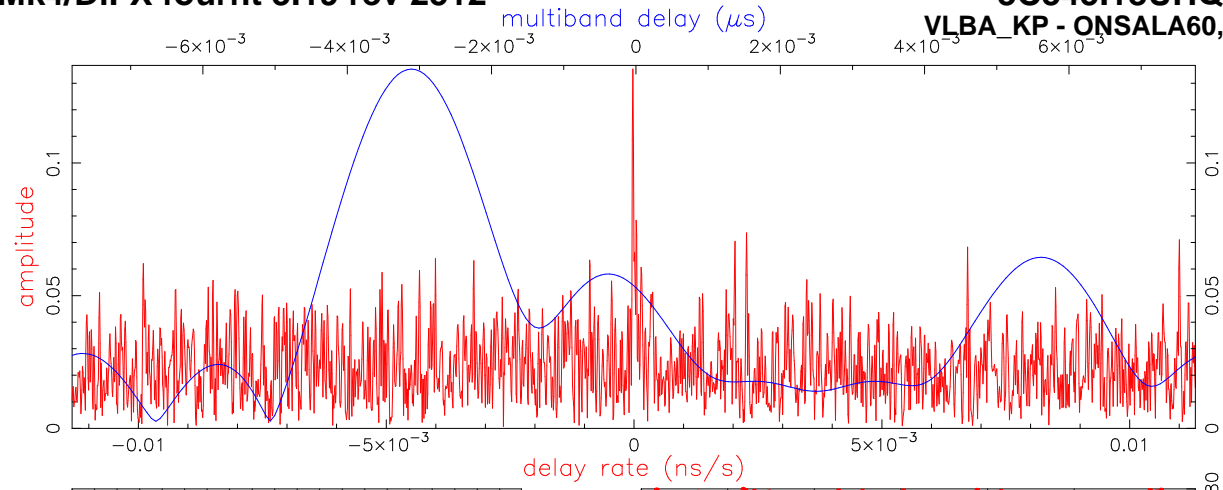
Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143546
2020:014:135814
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -17.0 | -75.8 | -39.9 | -95.6 | 3.0 | -49.1 | 0.6 | -82.1 | Phase | -44.9 |
| | 1.3 | 1.3 | 1.3 | 1.0 | 0.7 | 0.6 | 0.8 | 0.6 | Ampl. | 1.0 |
| | 252.6 | 252.1 | 253.2 | 252.5 | 252.7 | 253.1 | 252.6 | 251.6 | Sbd box | 253.0 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| f:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.19328977113E+04 | | Apriori delay (usec) | | 1.19329195416E+04 | | Resid mbdelay (usec) | | -6.20526E-03 | +/- 2.5E-05 |
| Sband delay (usec) | 1.19329038643E+04 | | Apriori clock (usec) | | -3.6865437E+01 | | Resid sbdelay (usec) | | -1.56773E-02 | +/- 2.0E-04 |
| Phase delay (usec) | 1.19329195401E+04 | | Apriori clockrate (us/s) | | -4.1900001E-07 | | Resid phdelay (usec) | | -1.44778E-06 | +/- 8.4E-08 |
| Delay rate (us/s) | 7.75528055262E-01 | | Apriori rate (us/s) | | 7.75528033917E-01 | | Resid rate (us/s) | | 2.13453E-08 | +/- 3.5E-10 |
| Total phase (deg) | 67.3 | | Apriori accel (us/s/s) | | -8.76798660827E-05 | | Resid phase (deg) | | -44.9 | +/- 2.6 |

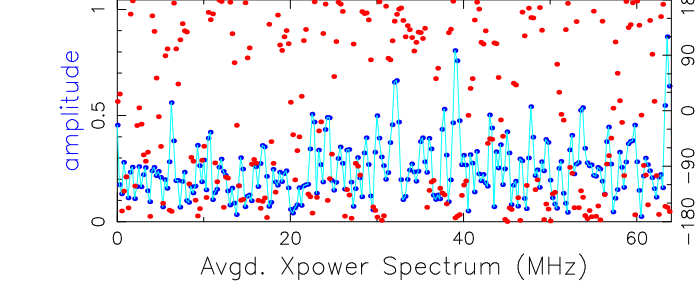
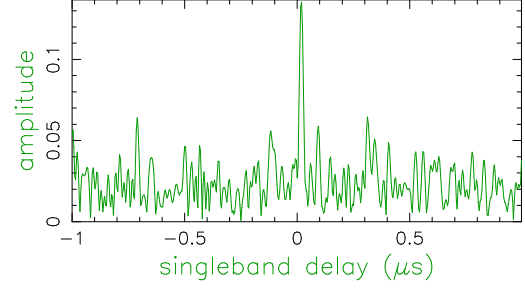
ph/seg (deg) 42.4 6.3 Search (2048X32) 0.782 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 32.2 10.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 41.0 3.7 Inc. seg. avg. 1.029 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 43.0 6.4 Inc. frq. avg. 0.951 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 39.2 el 77.7 pa -133.6 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -5971.443 -7911.275 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/fX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/fX.W.85.18UHQS



Fringe quality 9

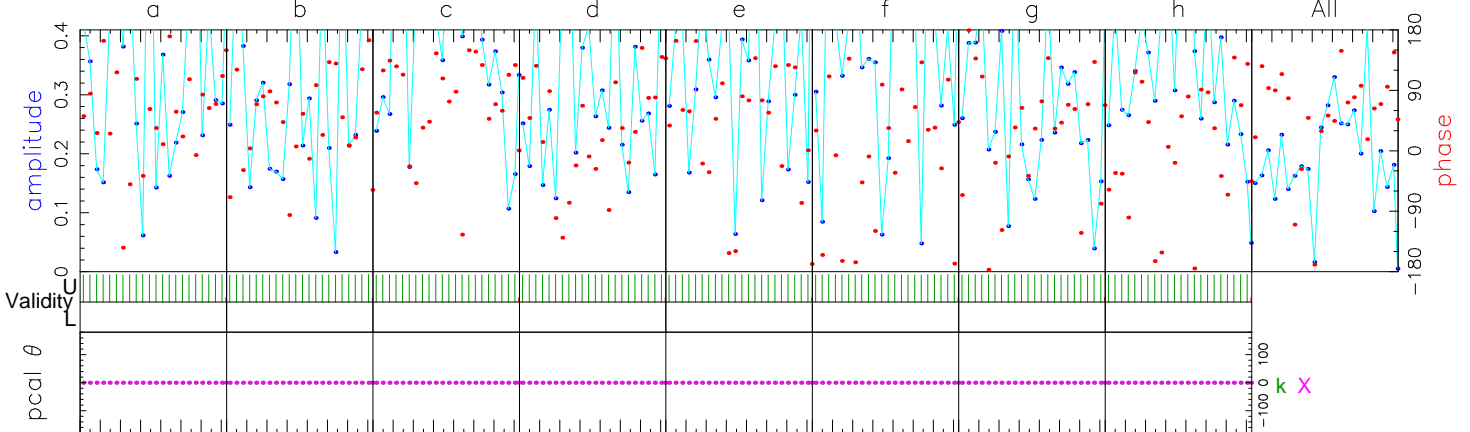
SNR 7.6
 Int time 417.281
 Amp 0.137
 Phase 69.9
 PFD 7.2e-06
 Delays (us)
 SBD 0.018130
 MBD -0.003102
 Fringe rate (Hz)
 -0.002375
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143554
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

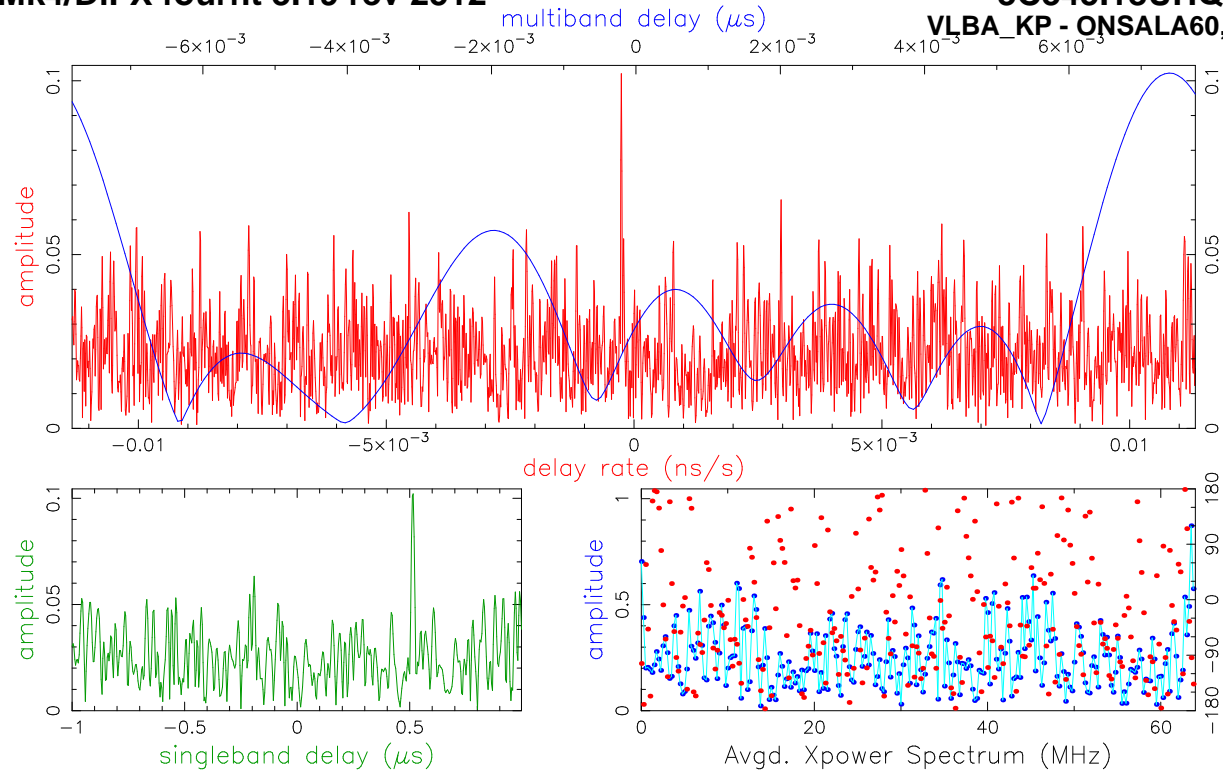


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|----------|-------------------|----------|----------|----------|--------------------|----------|----------|----------------------|--------------------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | | 1.15936806885E+04 | | | | 1.15936681652E+04 | | | Resid mbdelay (usec) | -3.10172E-03 +/- 1.4E-04 |
| Sband delay (usec) | | 1.15936862957E+04 | | | | -4.1109886E+01 | | | Resid sbdelay (usec) | 1.81305E-02 +/- 1.1E-03 |
| Phase delay (usec) | | 1.15936681675E+04 | | | | -5.2260003E-07 | | | Resid phdelay (usec) | 2.25284E-06 +/- 4.8E-07 |
| Delay rate (us/s) | | 9.05439633425E-01 | | | | 9.05439660995E-01 | | | Resid rate (us/s) | -2.75700E-08 +/- 2.0E-09 |
| Total phase (deg) | | | 341.2 | | | -8.44760103570E-05 | | | Resid phase (deg) | 69.9 +/- 15.0 |

| | RMS | Theor. | Amplitude | 0.137 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 61.7 | 36.0 | Search (2048X32) | 0.128 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 76.2 | 62.8 | Interp. | 0.000 | Bits/sample: 2x2 | mb window (us) -0.008 0.008 |
| ph/frq (deg) | 20.9 | 21.2 | Inc. seg. avg. | 0.167 | Sample rate(MISamp/s): 128 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 40.3 | 37.0 | Inc. frq. avg. | 0.135 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

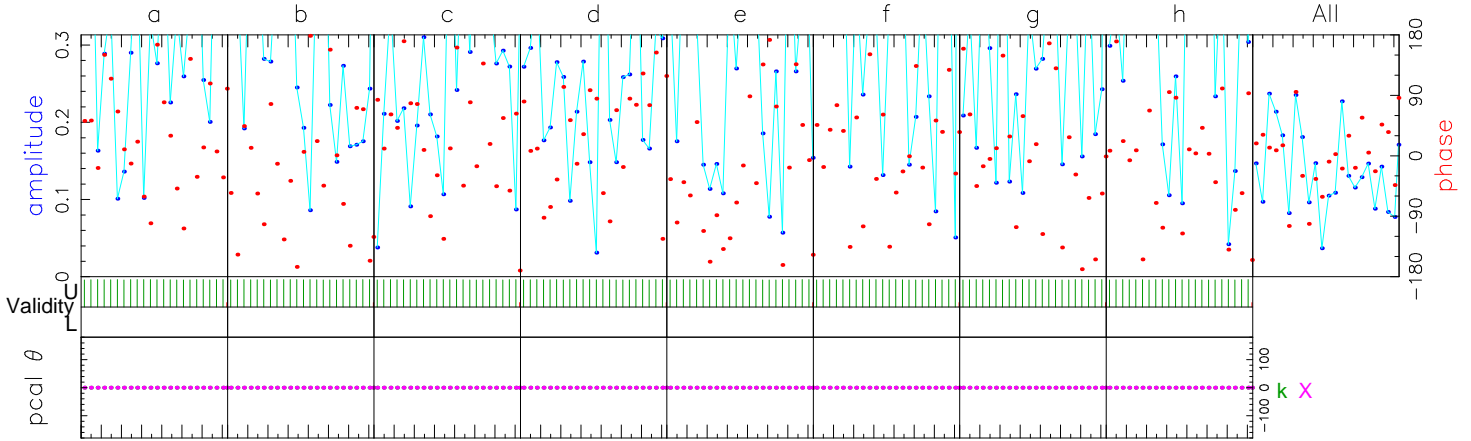
k: az 56.4 el 73.7 pa -114.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6931.970 -7553.244 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/kX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/kX.W.116.18UHQS



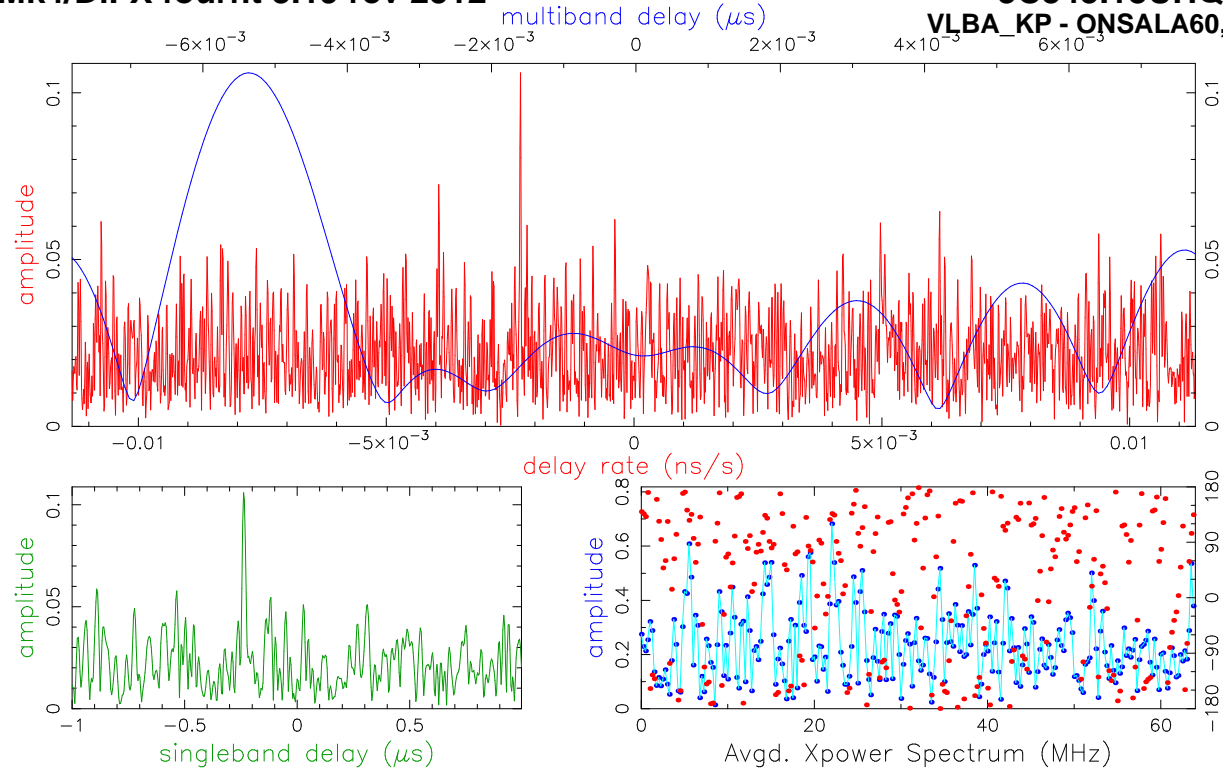
Fringe quality 0
 SNR 5.8
 Int time 417.281
 Amp 0.104
 Phase 5.8
 PFD 7.5e-01
 Delays (us)
 SBD 0.513849
 MBD 0.007334
 Fringe rate (Hz)
 -0.021717
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143600
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



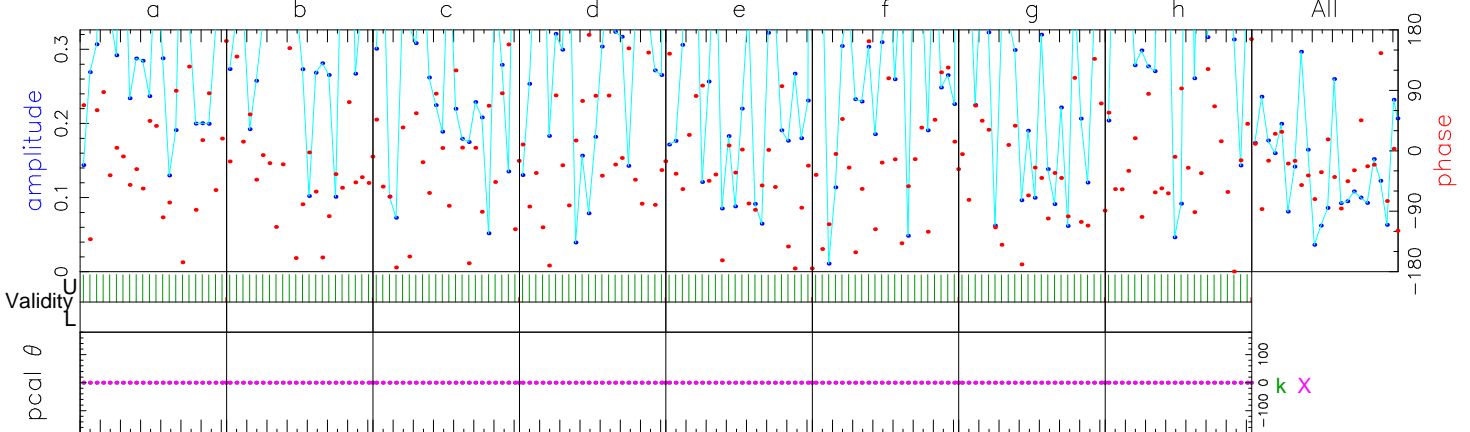
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|----------|-------------------|------------------|-----------------|--------------------|----------|----------|----------|--------------|-------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | | 1.15941754992E+04 | | | 1.15936681652E+04 | | | | 7.33393E-03 | +/- 1.9E-04 |
| Sband delay (usec) | | 1.15941820147E+04 | | | -4.1109886E+01 | | | | 5.13849E-01 | +/- 1.5E-03 |
| Phase delay (usec) | | 1.15936681654E+04 | | | -5.2260003E-07 | | | | 1.88205E-07 | +/- 6.3E-07 |
| Delay rate (us/s) | | 9.05439408886E-01 | | | 9.05439660995E-01 | | | | -2.52108E-07 | +/- 2.6E-09 |
| Total phase (deg) | | | 277.2 | | -8.44760103570E-05 | | | | 5.8 | +/- 19.6 |
| | RMS | Theor. | Amplitude | 0.104 +/- 0.018 | | | | | | |
| ph/seg (deg) | 48.2 | 47.1 | Search (2048X32) | 0.100 | | | | | | |
| amp/seg (%) | 60.8 | 82.2 | Interp. | 0.000 | | | | | | |
| ph/frq (deg) | 29.9 | 27.8 | Inc. seg. avg. | 0.102 | | | | | | |
| amp/frq (%) | 34.2 | 48.5 | Inc. frq. avg. | 0.101 | | | | | | |

k: az 56.4 el 73.7 pa -114.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6931.970 -7553.244 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/kX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/kX.W.141.18UHQS



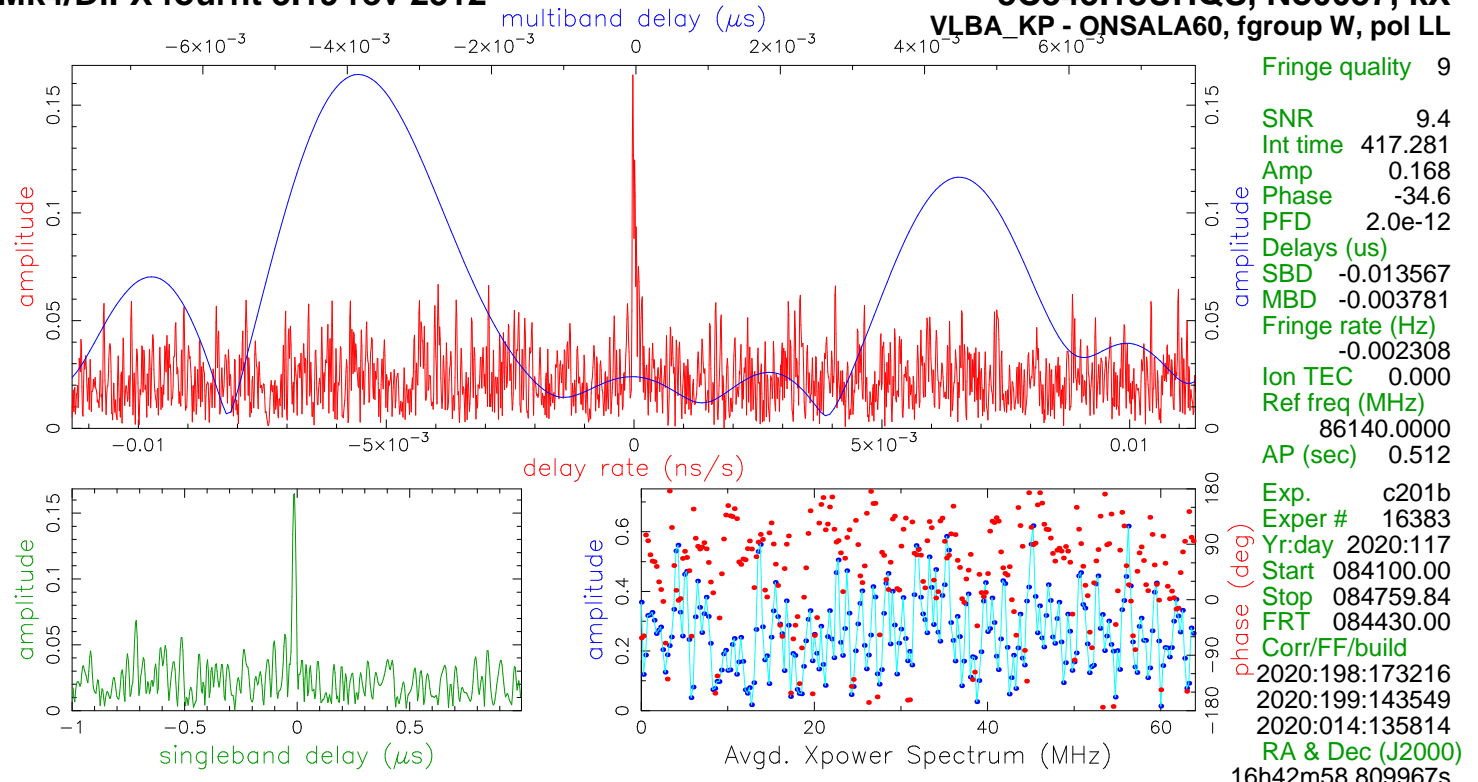
Fringe quality 0
 SNR 6.0
 Int time 417.281
 Amp 0.109
 Phase -23.3
 PFD 4.5e-01
 Delays (us)
 SBD -0.237043
 MBD -0.005350
 Fringe rate (Hz)
 -0.197416
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143604
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|----------|-------------------|----------|-----------------|----------|--------------------|----------|----------|--|-------------------------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | | 1.15934284402E+04 | | | | 1.15936681652E+04 | | | Resid mbdelay (usec) | -5.35002E-03 +/- 1.8E-04 |
| Sband delay (usec) | | 1.15934311217E+04 | | | | -4.1109886E+01 | | | Resid sbdelay (usec) | -2.37043E-01 +/- 1.4E-03 |
| Phase delay (usec) | | 1.15936681645E+04 | | | | -5.2260003E-07 | | | Resid phdelay (usec) | -7.50188E-07 +/- 6.2E-07 |
| Delay rate (us/s) | | 9.05437369192E-01 | | | | 9.05439660995E-01 | | | Resid rate (us/s) | -2.29180E-06 +/- 2.6E-09 |
| Total phase (deg) | | | 248.1 | | | -8.44760103570E-05 | | | Resid phase (deg) | -23.3 +/- 19.2 |
| ph/seg (deg) | 51.0 | 46.0 | | 0.109 +/- 0.018 | | | | | PCal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 72.1 | 80.3 | | 0.105 | | | | | PCal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 21.5 | 27.1 | | 0.000 | | | | | Bits/sample: 2x2 | mb window (us) -0.008 0.008 |
| amp/frq (%) | 38.5 | 47.3 | | 0.110 | | | | | Sample rate(MISamp/s): 128 | dr window (ns/s) -0.011 0.011 |
| | | | | 0.102 | | | | | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |
| | | | | | | | | | nlags: 256 | t_cohere infinite |

k: az 56.4 el 73.7 pa -114.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6931.970 -7553.244 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/kX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/kX.W.157.18UHQS



Fringe quality 9

SNR 9.4

Int time 417.281

Amp 0.168

Phase -34.6

PFD 2.0e-12

Delays (us)

SBD -0.013567

MBD -0.003781

Fringe rate (Hz)

-0.002308

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c201b

Exper # 16383

Yr:day 2020:117

Start 084100.00

Stop 084759.84

FRT 084430.00

Corr/FF/build

2020:198:173216

2020:199:143549

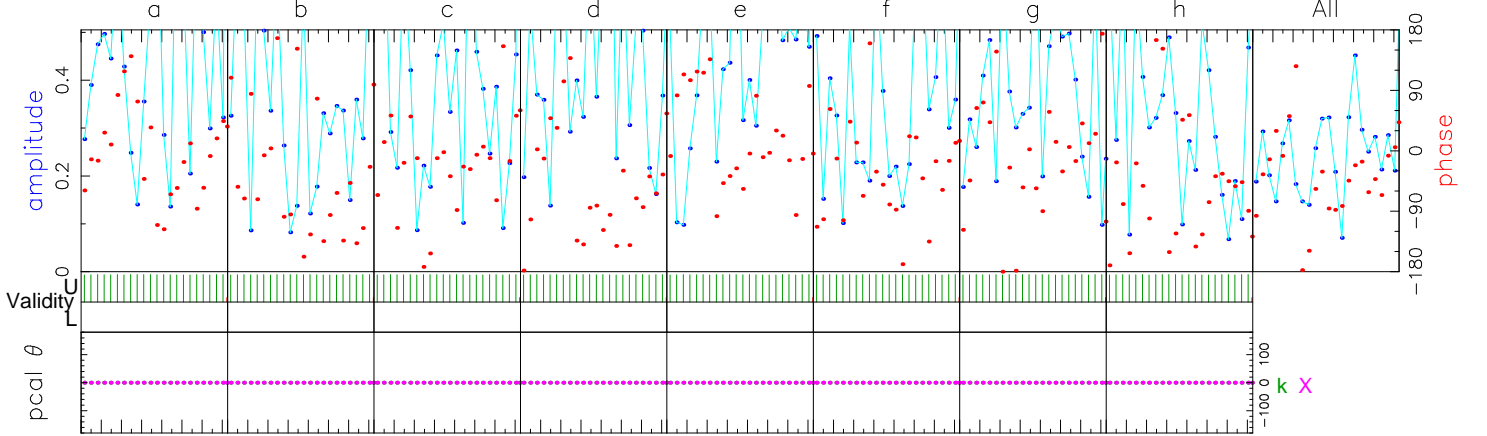
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|----------|---------|
| | -15.0 | -87.3 | -16.2 | -80.2 | 6.3 | -29.2 | 0.9 | -95.2 | | Phase | -34.6 |
| | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | | Ampl. | 0.2 |
| | 252.6 | 193.3 | 253.3 | 253.4 | 252.9 | 253.9 | 251.0 | 295.5 | | Sbd box | 253.5 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | |
| k:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| k | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | Tracks | |
| | | | | | | | | | | Chan ids | |
| | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.15936487590E+04 | | Apriori delay (usec) | | 1.15936681652E+04 | | Resid mbdelay (usec) | | -3.78124E-03 | +/- | 1.2E-04 |
| Sband delay (usec) | 1.15936545985E+04 | | Apriori clock (usec) | | -4.1109886E+01 | | Resid sbdelay (usec) | | -1.35668E-02 | +/- | 9.2E-04 |
| Phase delay (usec) | 1.15936681641E+04 | | Apriori clockrate (us/s) | | -5.2260003E-07 | | Resid phdelay (usec) | | -1.11498E-06 | +/- | 3.9E-07 |
| Delay rate (us/s) | 9.05439634198E-01 | | Apriori rate (us/s) | | 9.05439660995E-01 | | Resid rate (us/s) | | -2.67962E-08 | +/- | 1.6E-09 |
| Total phase (deg) | 236.8 | | Apriori accel (us/s/s) | | -8.44760103570E-05 | | Resid phase (deg) | | -34.6 | +/- | 12.2 |

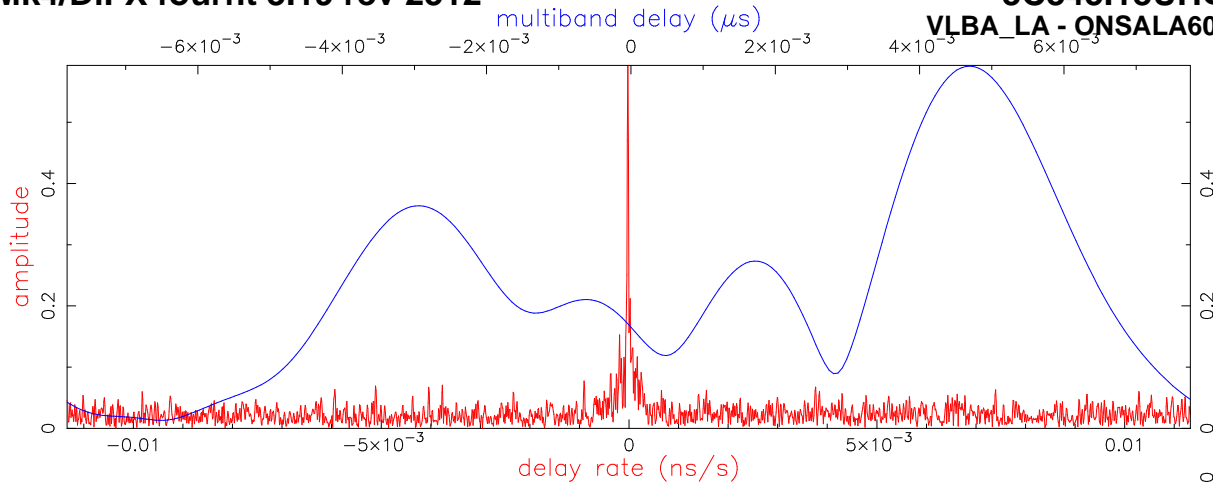
ph/seg (deg) 63.6 29.2 Search (2048X32) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 68.2 51.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 45.1 17.2 Inc. seg. avg. 0.218 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

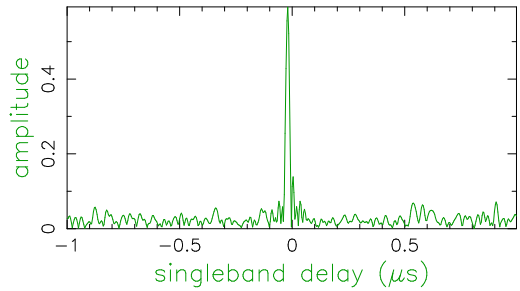
amp/frq (%) 29.9 30.1 Inc. frq. avg. 0.196 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

k: az 56.4 el 73.7 pa -114.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6931.970 -7553.244 simultaneous interpolator

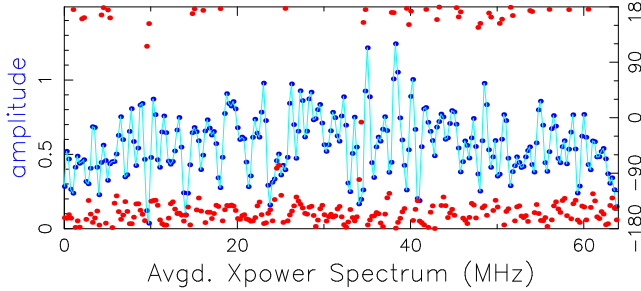


Fringe quality 5

SNR 33.1
Int time 415.965
Amp 0.593
Phase -85.7
PFD 0.0e+00
Delays (us)
SBD -0.020149
MBD 0.004681
Fringe rate (Hz)
-0.002238
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

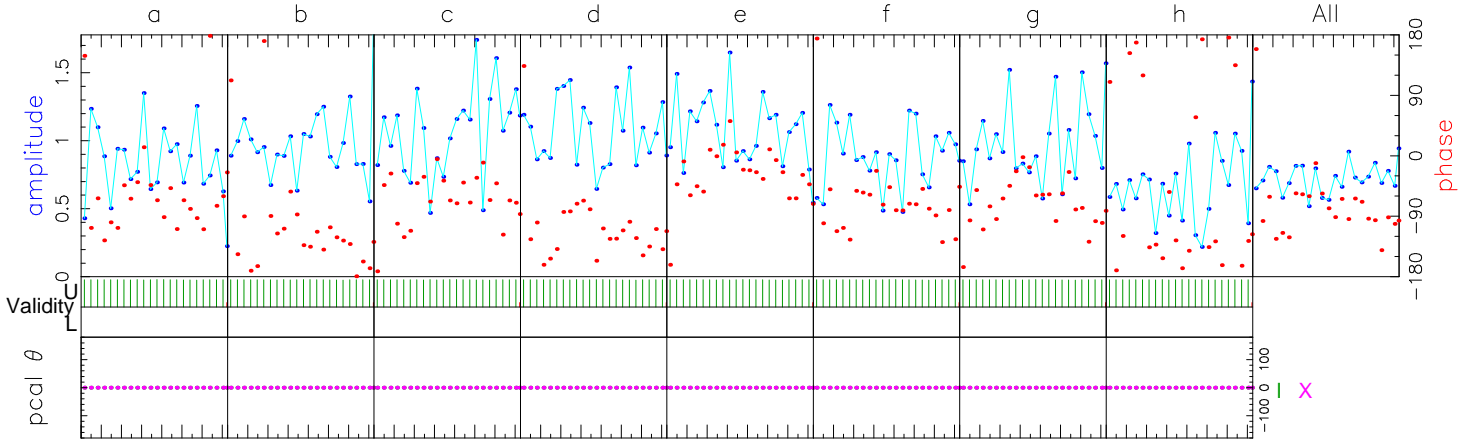


delay rate (ns/s)



Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143552
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

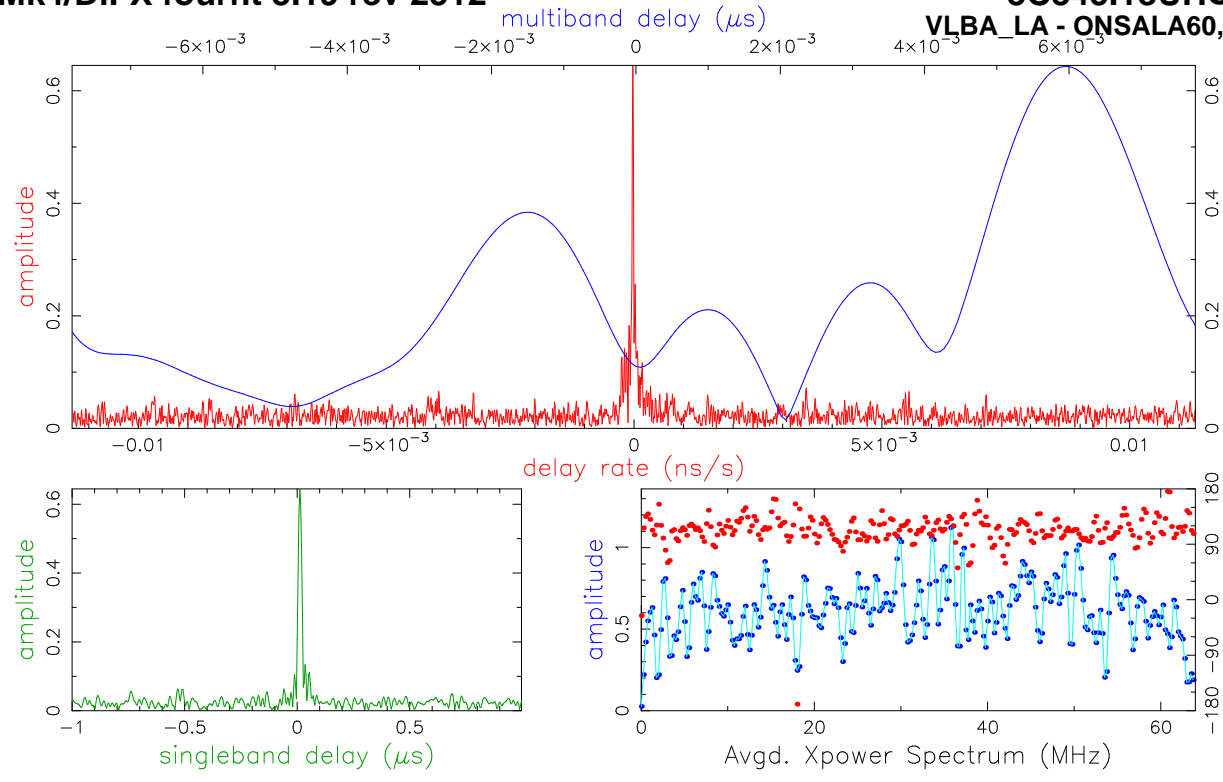
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -78.7 | -132.6 | -59.8 | -117.2 | -23.7 | -81.1 | -72.6 | -164.4 | Phase | -85.7 |
| | 0.7 | 0.8 | 0.9 | 0.9 | 0.9 | 0.7 | 0.8 | 0.5 | Ampl. | 0.8 |
| | 251.3 | 251.3 | 251.9 | 251.6 | 251.5 | 251.2 | 251.0 | 250.0 | Sbd box | 251.8 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.20601870772E+04 | | Apriori delay (usec) | | 1.20602136466E+04 | | Resid mbdelay (usec) | | 4.68051E-03 | +/- 3.3E-05 |
| Sband delay (usec) | 1.20601934971E+04 | | Apriori clock (usec) | | -4.4471699E+01 | | Resid sbdelay (usec) | | -2.01495E-02 | +/- 2.6E-04 |
| Phase delay (usec) | 1.20602136439E+04 | | Apriori clockrate (us/s) | | -6.7900004E-07 | | Resid phdelay (usec) | | -2.76336E-06 | +/- 1.1E-07 |
| Delay rate (us/s) | 8.04779893111E-01 | | Apriori rate (us/s) | | 8.04779919098E-01 | | Resid rate (us/s) | | -2.59864E-08 | +/- 4.6E-10 |
| Total phase (deg) | 102.3 | | Apriori accel (us/s/s) | | -8.29830030606E-05 | | Resid phase (deg) | | -85.7 | +/- 3.5 |

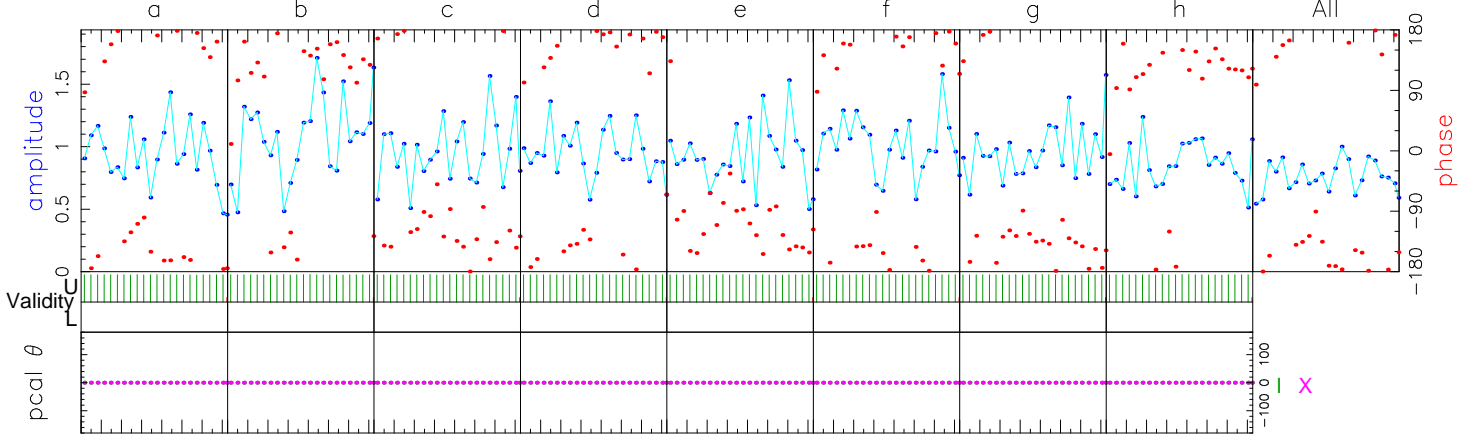
| | RMS | Theor. | Amplitude | 0.593 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------------|
| ph/seg (deg) | 37.6 | 8.3 | Search (2048X32) | 0.567 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 0.008 |
| amp/seg (%) | 26.9 | 14.5 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 0.011 |
| ph/frq (deg) | 48.5 | 4.9 | Inc. seg. avg. | 0.710 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 0.00 |
| amp/frq (%) | 35.9 | 8.6 | Inc. frq. avg. | 0.754 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | |

I: az 64.0 el 79.5 pa -110.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6178.037 -7090.215 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/IX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/IX.W.107.18UHQS



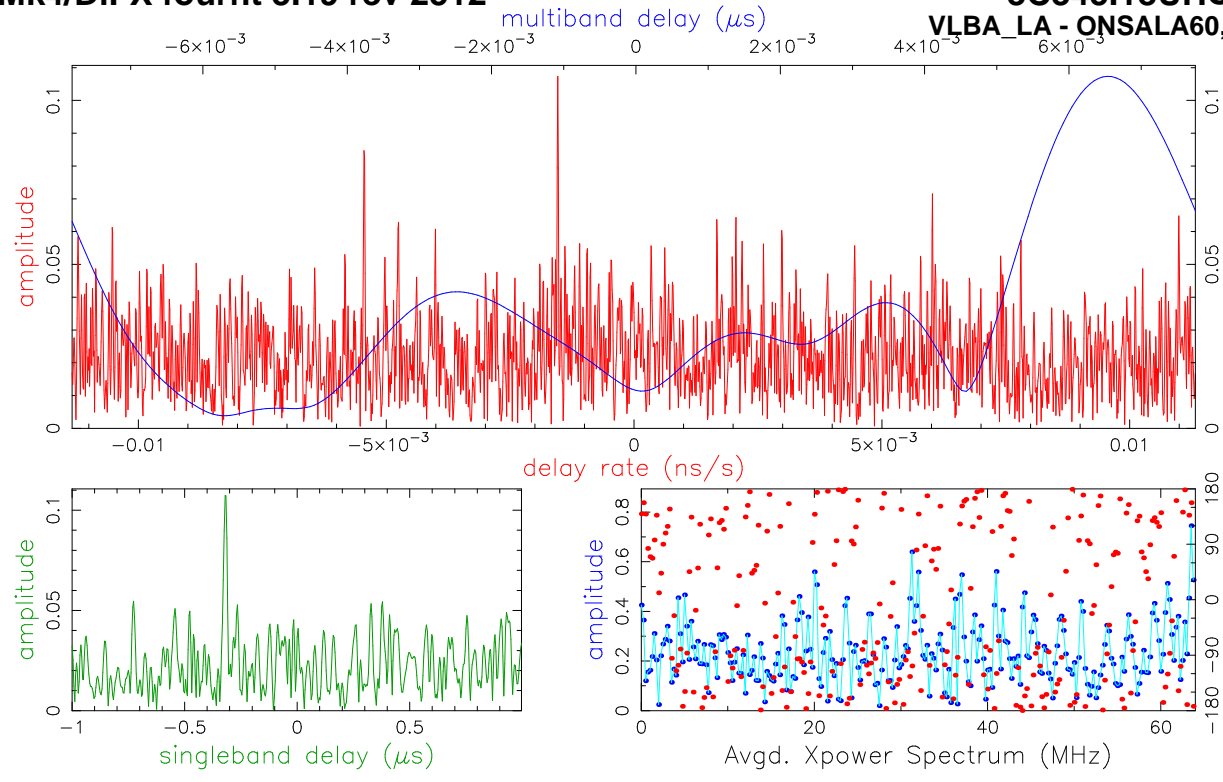
Fringe quality 5
 SNR 36.0
 Int time 415.965
 Amp 0.645
 Phase -172.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.012371
 MBD 0.005983
 Fringe rate (Hz)
 -0.002193
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143557
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



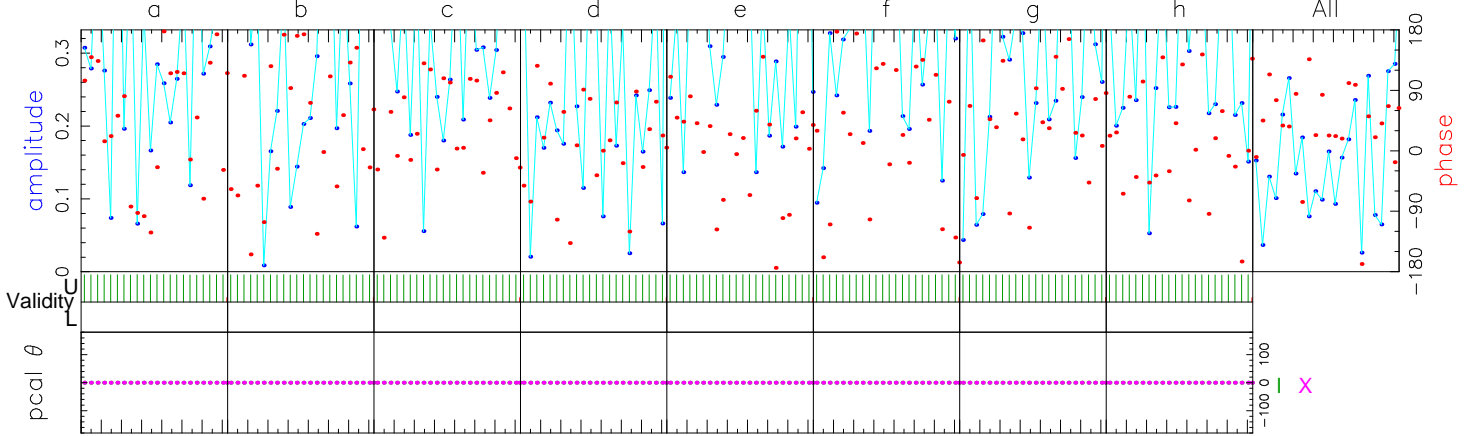
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -172.3 | 143.8 | -134.8 | 177.8 | -118.2 | 174.6 | -146.2 | 131.4 | Phase | -172.4 |
| | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.8 | 0.8 | 0.7 | Ampl. | 0.8 |
| | 259.5 | 260.1 | 260.3 | 259.3 | 259.6 | 259.8 | 259.8 | 258.7 | Sbd box | 260.2 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.20602196292E+04 | | Apriori delay (usec) | | 1.20602136466E+04 | | Resid mbdelay (usec) | | 5.98257E-03 | +/- 3.0E-05 |
| Sband delay (usec) | 1.20602260174E+04 | | Apriori clock (usec) | | -4.4471699E+01 | | Resid sbdelay (usec) | | 1.23708E-02 | +/- 2.4E-04 |
| Phase delay (usec) | 1.20602136411E+04 | | Apriori clockrate (us/s) | | -6.7900004E-07 | | Resid phdelay (usec) | | -5.56037E-06 | +/- 1.0E-07 |
| Delay rate (us/s) | 8.04779893636E-01 | | Apriori rate (us/s) | | 8.04779919098E-01 | | Resid rate (us/s) | | -2.54613E-08 | +/- 4.2E-10 |
| Total phase (deg) | 15.6 | | Apriori accel (us/s/s) | | -8.29830030606E-05 | | Resid phase (deg) | | -172.4 | +/- 3.2 |

ph/seg (deg) 36.0 7.6 Search (2048X32) 0.626 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 26.6 13.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 41.6 4.5 Inc. seg. avg. 0.761 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 23.1 7.9 Inc. frq. avg. 0.782 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 I: az 64.0 el 79.5 pa -110.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6178.037 -7090.215 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/IX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/IX.W.129.18UHQS



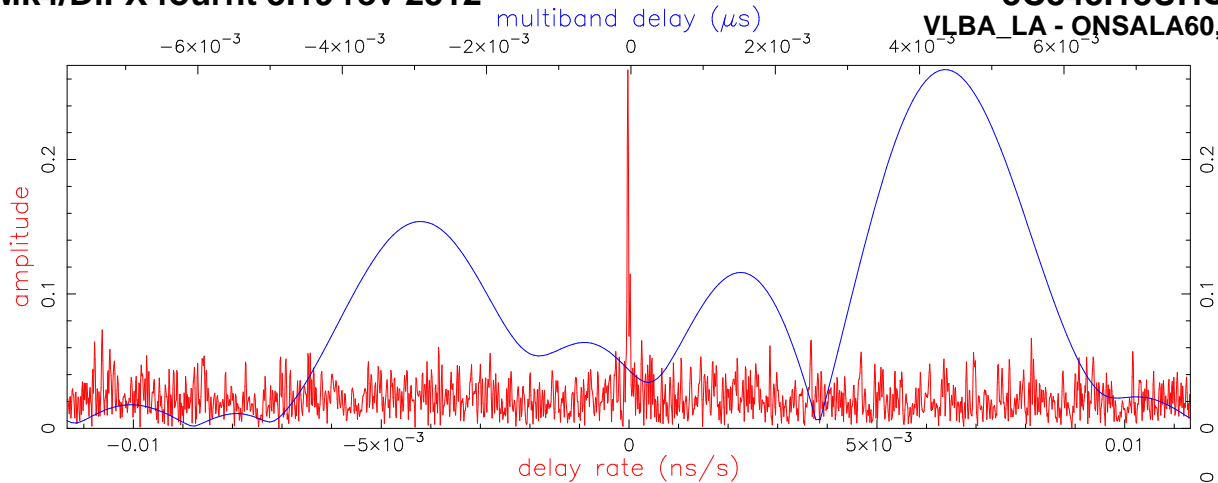
Fringe quality 0
 SNR 6.1
 Int time 415.965
 Amp 0.111
 Phase 46.1
 PFD 2.1e-01
 Delays (us)
 SBD -0.318371
 MBD 0.006562
 Fringe rate (Hz)
 -0.133126
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143602
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



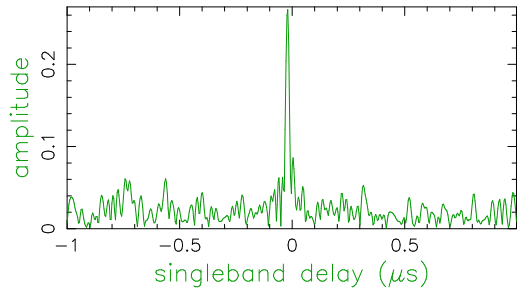
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 89.7 | 24.9 | 46.0 | 24.4 | 23.7 | 96.7 | 56.1 | 36.8 | Phase | 46.1 |
| | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | Ampl. | 0.1 |
| | 2.7 | 487.3 | 176.2 | 426.8 | 175.1 | 301.5 | 16.3 | 411.4 | Sbd box | 175.5 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.20598920833E+04 | | Apriori delay (usec) | | 1.20602136466E+04 | | Resid mbdelay (usec) | | 6.56162E-03 | +/- 1.8E-04 |
| Sband delay (usec) | 1.20598952759E+04 | | Apriori clock (usec) | | -4.4471699E+01 | | Resid sbdelay (usec) | | -3.18371E-01 | +/- 1.4E-03 |
| Phase delay (usec) | 1.20602136481E+04 | | Apriori clockrate (us/s) | | -6.7900004E-07 | | Resid phdelay (usec) | | 1.48730E-06 | +/- 6.0E-07 |
| Delay rate (us/s) | 8.04778373641E-01 | | Apriori rate (us/s) | | 8.04779919098E-01 | | Resid rate (us/s) | | -1.54546E-06 | +/- 2.5E-09 |
| Total phase (deg) | 234.1 | | Apriori accel (us/s/s) | | -8.29830030606E-05 | | Resid phase (deg) | | 46.1 | +/- 18.7 |

ph/seg (deg) 55.7 44.9 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 82.7 78.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.8 26.5 Inc. seg. avg. 0.118 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 40.8 46.2 Inc. frq. avg. 0.107 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 I: az 64.0 el 79.5 pa -110.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6178.037 -7090.215 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/IX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/IX.W.148.18UHQS

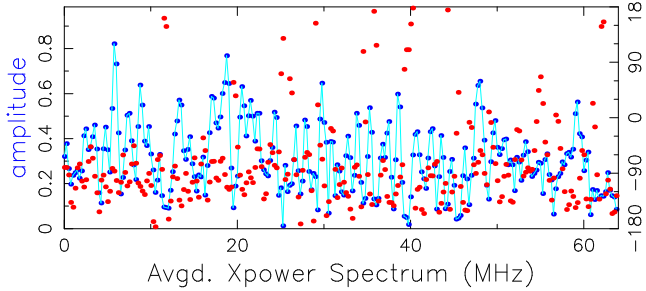


Fringe quality 8

SNR 15.1
Int time 415.965
Amp 0.270
Phase -26.0
PFD 1.8e-42
Delays (us)
SBD -0.020933
MBD 0.004303
Fringe rate (Hz)
-0.002241
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

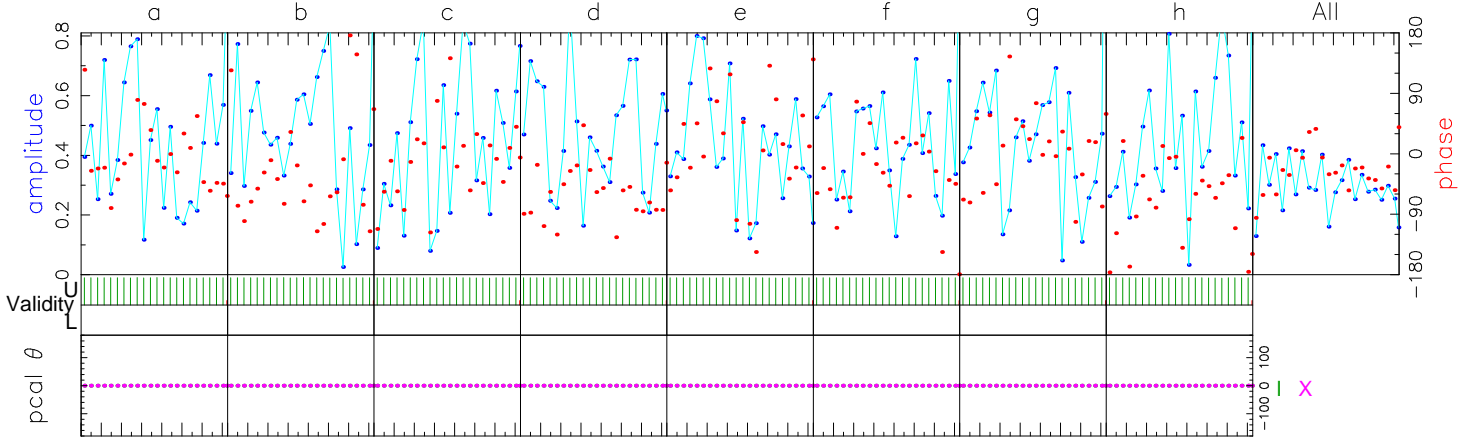


delay rate (ns/s)



Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143605
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

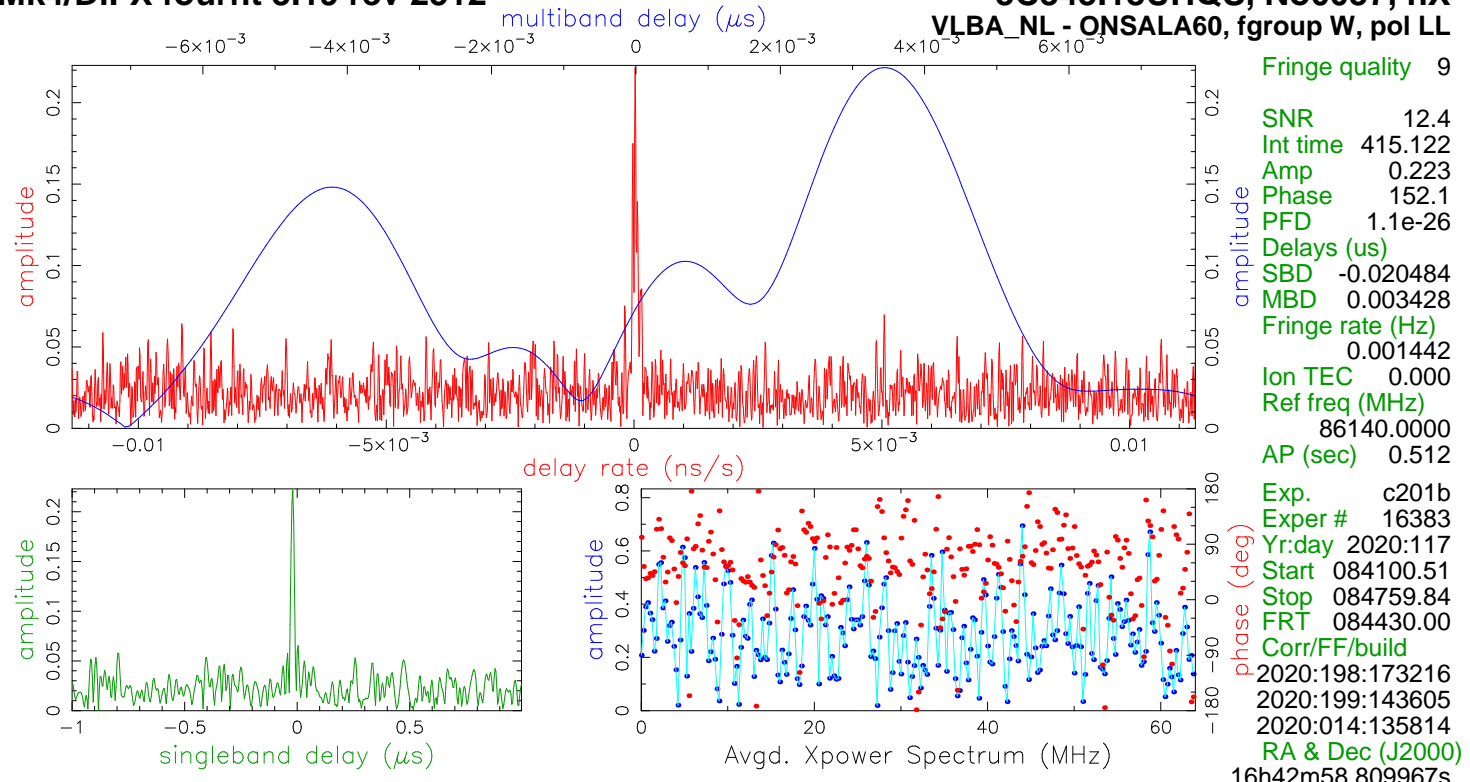


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -11.8 | -66.7 | -7.0 | -60.8 | 28.6 | -19.2 | 3.3 | -51.9 | Phase | -26.0 |
| | 0.3 | 0.3 | 0.3 | 0.4 | 0.2 | 0.3 | 0.3 | 0.3 | Ampl. | 0.3 |
| | 251.5 | 251.3 | 251.9 | 251.5 | 251.2 | 250.9 | 251.9 | 250.6 | Sbd box | 251.6 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| I:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

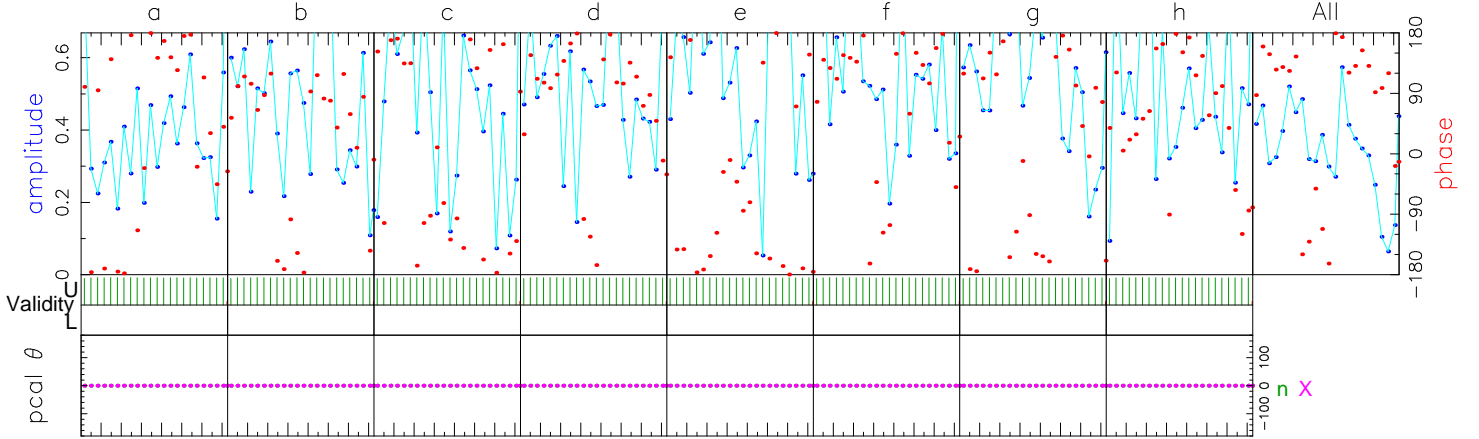
| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 1.20601866996E+04 | Apriori delay (usec) | 1.20602136466E+04 | Resid mbdelay (usec) | 4.30292E-03 | +/- | 7.2E-05 |
| Sband delay (usec) | 1.20601927136E+04 | Apriori clock (usec) | -4.4471699E+01 | Resid sbdelay (usec) | -2.09330E-02 | +/- | 5.7E-04 |
| Phase delay (usec) | 1.20602136458E+04 | Apriori clockrate (us/s) | -6.7900004E-07 | Resid phdelay (usec) | -8.38360E-07 | +/- | 2.5E-07 |
| Delay rate (us/s) | 8.04779893082E-01 | Apriori rate (us/s) | 8.04779919098E-01 | Resid rate (us/s) | -2.60161E-08 | +/- | 1.0E-09 |
| Total phase (deg) | 162.0 | Apriori accel (us/s/s) | -8.29830030606E-05 | Resid phase (deg) | -26.0 | +/- | 7.6 |

| | | | | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|--|----------------------------|------------------|--------|-------|
| ph/seg (deg) | RMS 30.3 | Theor. 18.2 | Amplitude Search (2048X32) | 0.270 +/- 0.018 | PCal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 32.1 | 31.8 | Interp. | 0.000 | PCal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 36.5 | 10.8 | Inc. seg. avg. | 0.287 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 22.0 | 18.8 | Inc. frq. avg. | 0.304 | Data rate(Mb/s): 2048 | nlags: 256 | ion window (TEC) | 0.00 | 0.00 |

I: az 64.0 el 79.5 pa -110.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -6178.037 -7090.215 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/IX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/IX.W.161.18UHQS



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

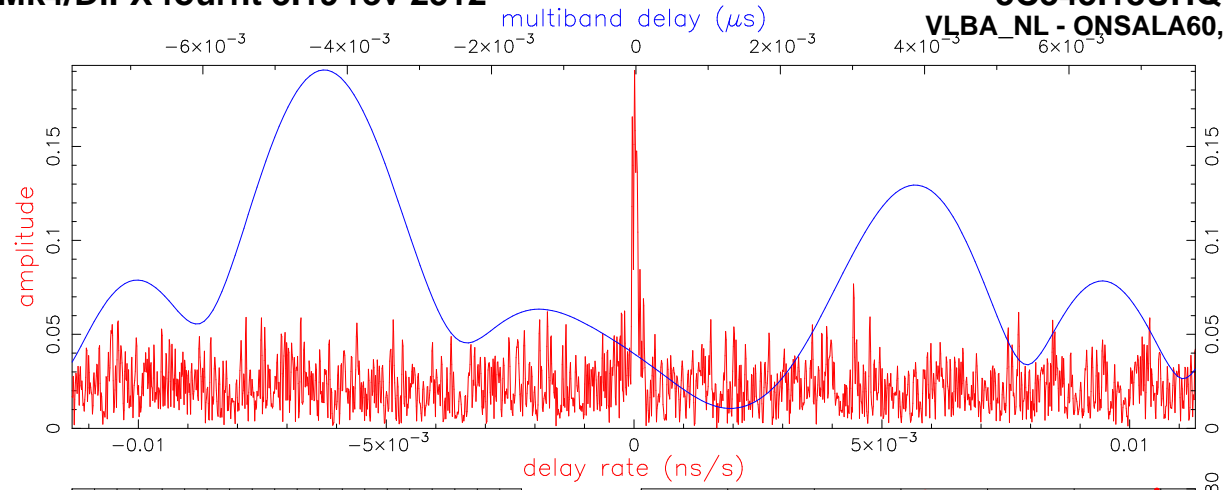


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|--------------------|----------------------|--------------|----------|----------|------------|-------|
| 150.1 | 102.2 | -166.7 | 123.8 | -153.4 | 142.6 | 170.5 | 89.0 | 89.0 | Phase | 152.1 |
| 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | Ampl. | 0.3 |
| 163.8 | 250.8 | 251.4 | 251.3 | 251.1 | 250.9 | 251.1 | 249.5 | 249.5 | Sbd box | 251.8 |
| U/L 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | APs used | |
| n 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| n:X 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| n:X 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| n 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| Group delay (usec)(sbd) | 1.23613358334E+04 | | Apriori delay (usec) | 1.23613636556E+04 | Resid mbdelay (usec) | 3.42782E-03 | +/- | 8.7E-05 | | |
| Sband delay (usec) | 1.23613431716E+04 | | Apriori clock (usec) | -8.4750519E+00 | Resid sbdelay (usec) | -2.04840E-02 | +/- | 6.9E-04 | | |
| Phase delay (usec) | 1.23613636605E+04 | | Apriori clockrate (us/s) | -1.9400004E-07 | Resid phdelay (usec) | 4.90581E-06 | +/- | 3.0E-07 | | |
| Delay rate (us/s) | 5.62634056172E-01 | | Apriori rate (us/s) | 5.62634039435E-01 | Resid rate (us/s) | 1.67375E-08 | +/- | 1.2E-09 | | |
| Total phase (deg) | | 258.0 | Apriori accel (us/s/s) | -7.85183511430E-05 | Resid phase (deg) | 152.1 | +/- | 9.2 | | |

| | RMS | Theor. | Amplitude | 0.223 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | | |
|--------------|------|--------|------------------|-----------------|--|-----------------------|-------------------|------------------|-------|------|
| ph/seg (deg) | 65.4 | 22.1 | Search (2048X32) | 0.212 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | | |
| amp/seg (%) | 78.1 | 38.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 | |
| ph/frq (deg) | 45.4 | 13.0 | Inc. seg. avg. | 0.320 | Sample rate(MISamp/s): 128 | | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 39.3 | 22.8 | Inc. frq. avg. | 0.276 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

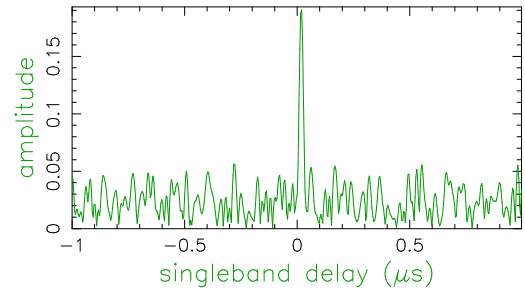
n: az 222.0 el 87.3 pa 44.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -4363.312 -6271.064 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/nX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/nX.W.160.18UHQS

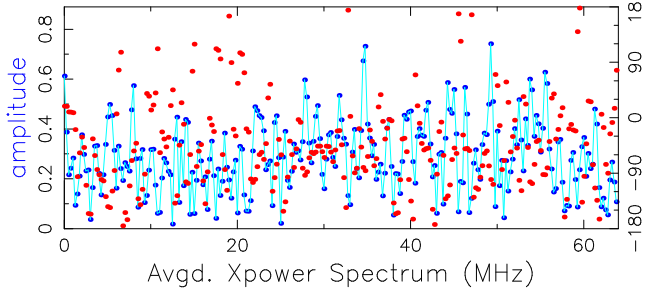


Fringe quality 9

SNR 10.8
 Int time 415.122
 Amp 0.193
 Phase -166.4
 PFD 2.4e-18
 Delays (us)
 SBD 0.017924
 MBD -0.004372
 Fringe rate (Hz) 0.001301
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

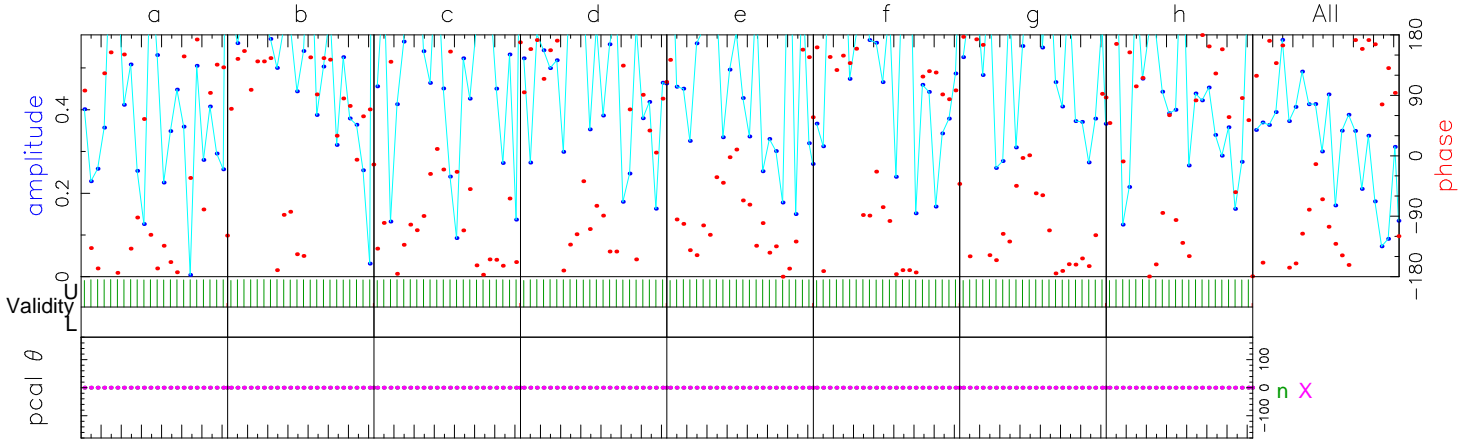


delay rate (ns/s)



Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.51
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143609
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

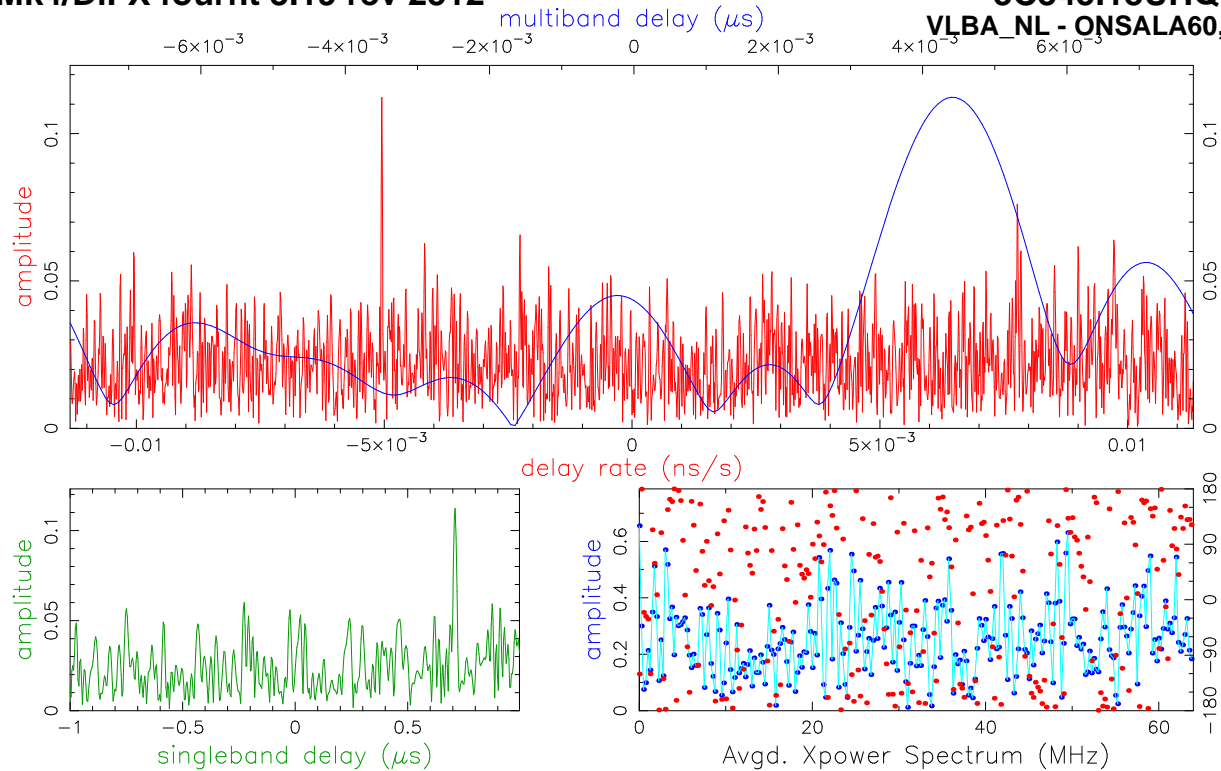
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -179.5 | 136.1 | -115.0 | -163.8 | -124.9 | 169.4 | -136.3 | 143.8 | Phase | -166.4 |
| | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | Ampl. | 0.2 |
| | 260.5 | 261.8 | 262.3 | 260.8 | 260.1 | 262.3 | 260.7 | 259.4 | Sbd box | 261.6 |
| U/L | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | APs used | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| n:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| n:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.23613749083E+04 | | Apriori delay (usec) | | 1.23613636556E+04 | | Resid mbdelay (usec) | | -4.37228E-03 | +/- 1.0E-04 |
| Sband delay (usec) | 1.23613815791E+04 | | Apriori clock (usec) | | -8.4750519E+00 | | Resid sbdelay (usec) | | 1.79235E-02 | +/- 8.0E-04 |
| Phase delay (usec) | 1.23613636502E+04 | | Apriori clockrate (us/s) | | -1.9400004E-07 | | Resid phdelay (usec) | | -5.36457E-06 | +/- 3.4E-07 |
| Delay rate (us/s) | 5.62634054537E-01 | | Apriori rate (us/s) | | 5.62634039435E-01 | | Resid rate (us/s) | | 1.51022E-08 | +/- 1.4E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -7.85183511430E-05 | | Resid phase (deg) | | -166.4 | +/- 10.6 |

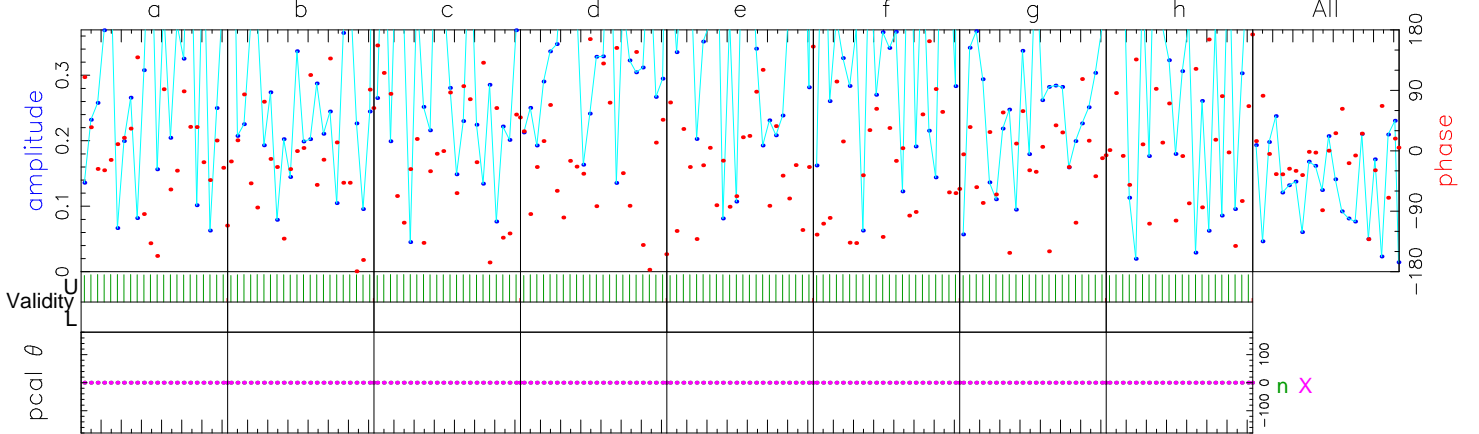
| | RMS | Theor. | Amplitude | 0.193 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------|-------|
| ph/seg (deg) | 63.8 | 25.5 | Search (2048X32) | 0.186 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 95.3 | 44.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 44.4 | 15.1 | Inc. seg. avg. | 0.303 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 34.4 | 26.3 | Inc. frq. avg. | 0.236 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | | |

n: az 222.0 el 87.3 pa 44.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -4363.312 -6271.064 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/nX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/nX.W.170.18UHQS



Fringe quality 0
 SNR 6.3
 Int time 415.122
 Amp 0.123
 Phase -10.5
 PFD 7.2e-02
 Delays (us)
 SBD 0.709724
 MBD 0.004374
 Fringe rate (Hz)
 -0.435754
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.51
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143613
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

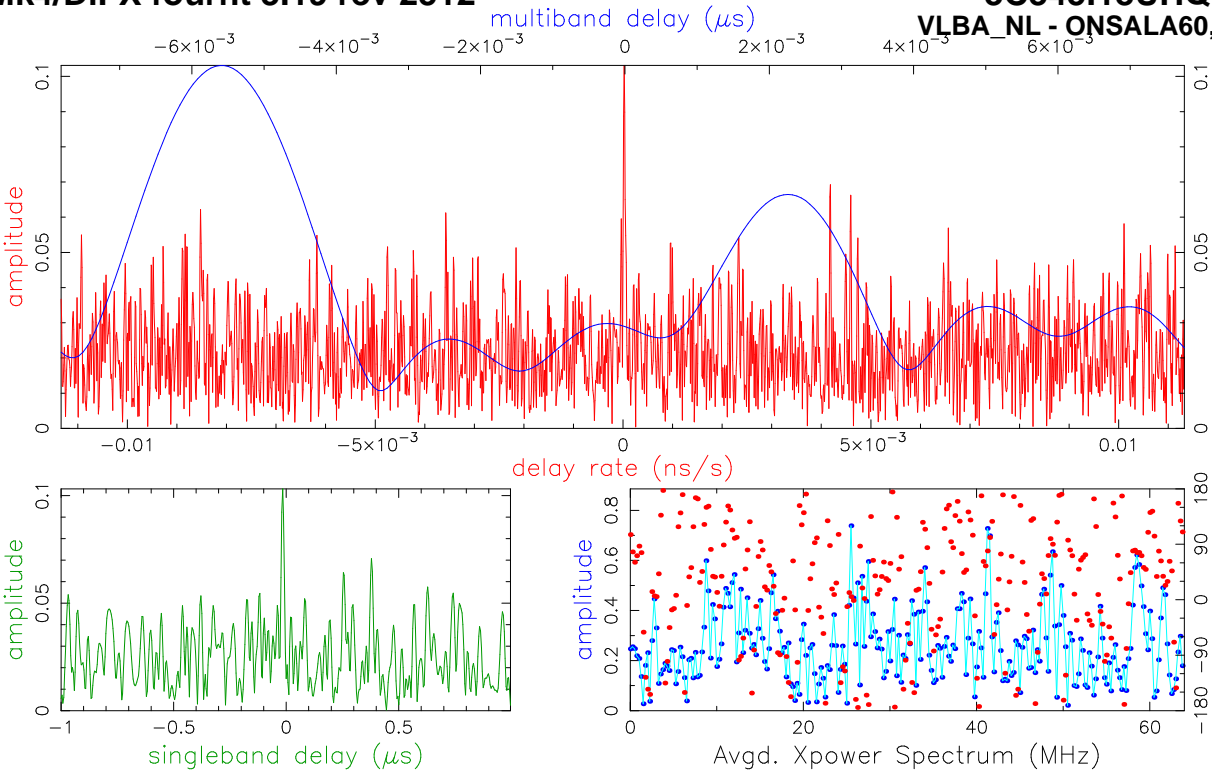
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|----------|-------------------|----------|--------------------------|--------------------|----------|----------------------|--------------|------------|---------|
| | -5.0 | -18.4 | 32.8 | -31.2 | -25.2 | -42.6 | -8.7 | 14.8 | Phase | -10.5 |
| | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | Ampl. | 0.1 |
| | 334.5 | 437.5 | 320.2 | 97.8 | 108.8 | 380.7 | 313.5 | 268.3 | Sbd box | 438.7 |
| U/L | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | APs used | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| n:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| n:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | | 1.23620711546E+04 | | Apriori delay (usec) | 1.23613636556E+04 | | Resid mbdelay (usec) | 4.37404E-03 | +/- | 1.7E-04 |
| Sband delay (usec) | | 1.23620733796E+04 | | Apriori clock (usec) | -8.4750519E+00 | | Resid sbdelay (usec) | 7.09724E-01 | +/- | 1.4E-03 |
| Phase delay (usec) | | 1.23613636553E+04 | | Apriori clockrate (us/s) | -1.9400004E-07 | | Resid phdelay (usec) | -3.39173E-07 | +/- | 5.9E-07 |
| Delay rate (us/s) | | 5.62628980763E-01 | | Apriori rate (us/s) | 5.62634039435E-01 | | Resid rate (us/s) | -5.05867E-06 | +/- | 2.4E-09 |
| Total phase (deg) | | | 95.3 | Apriori accel (us/s/s) | -7.85183511430E-05 | | Resid phase (deg) | -10.5 | +/- | 18.2 |

| | RMS | Theor. | Amplitude | 0.123 +/- 0.020 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------|-------|
| ph/seg (deg) | 48.1 | 43.5 | Search (2048X32) | 0.110 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 60.6 | 76.0 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 26.7 | 25.7 | Inc. seg. avg. | 0.117 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 34.3 | 44.8 | Inc. frq. avg. | 0.118 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | | |

n: az 222.0 el 87.3 pa 44.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -4363.312 -6271.064 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/nX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/nX.W.185.18UHQS

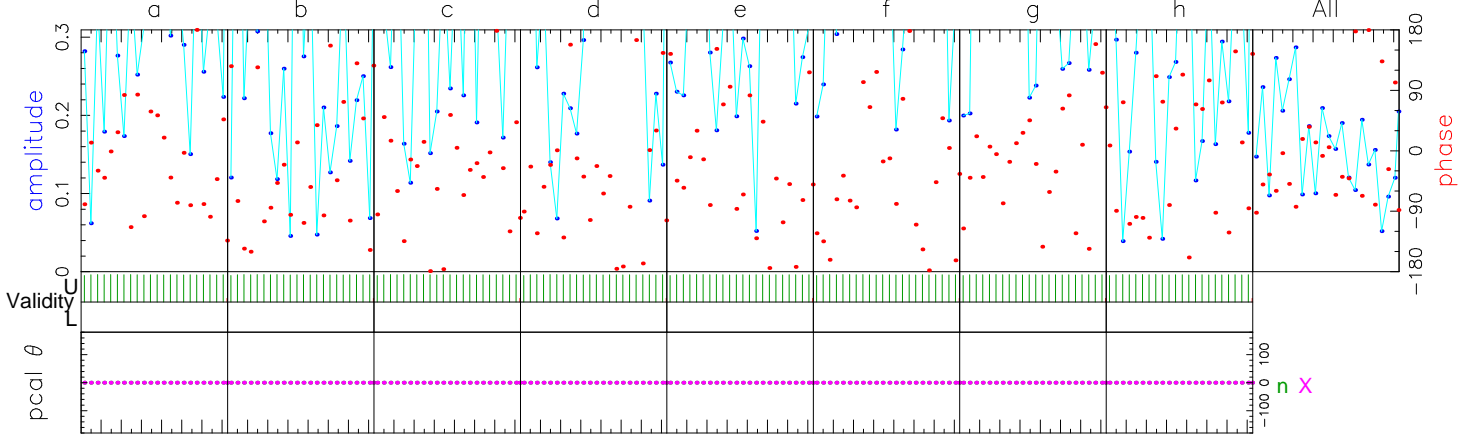


Fringe quality 0

SNR 5.7
 Int time 415.122
 Amp 0.103
 Phase -42.4
 PFD 9.0e-01
 Delays (us)
 SBD -0.015775
 MBD -0.005593
 Fringe rate (Hz)
 0.002020
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.51
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143617
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

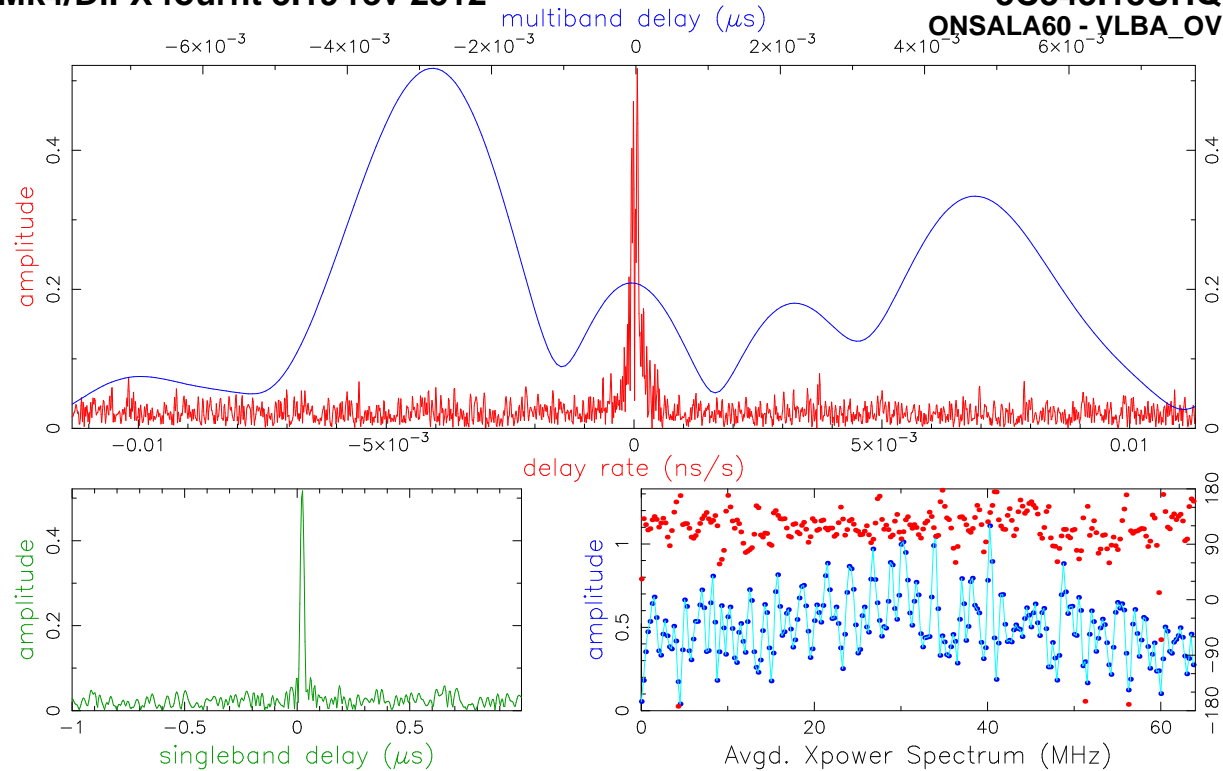


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -25.6 | -66.3 | -24.2 | -84.6 | -18.3 | -76.3 | -16.3 | -154.1 | Phase | -42.4 |
| | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.0 | Ampl. | 0.1 |
| | 85.5 | 406.8 | 252.7 | 173.9 | 296.8 | 478.7 | 252.7 | 387.8 | Sbd box | 253.0 |
| U/L | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | 819/0 | APs used | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| n:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| n:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.23613424374E+04 | | Apriori delay (usec) | | 1.23613636556E+04 | | Resid mbdelay (usec) | | -5.59318E-03 | +/- 1.9E-04 |
| Sband delay (usec) | 1.23613478804E+04 | | Apriori clock (usec) | | -8.4750519E+00 | | Resid sbdelay (usec) | | -1.57753E-02 | +/- 1.5E-03 |
| Phase delay (usec) | 1.23613636542E+04 | | Apriori clockrate (us/s) | | -1.9400004E-07 | | Resid phdelay (usec) | | -1.36842E-06 | +/- 6.4E-07 |
| Delay rate (us/s) | 5.62634062882E-01 | | Apriori rate (us/s) | | 5.62634039435E-01 | | Resid rate (us/s) | | 2.34476E-08 | +/- 2.7E-09 |
| Total phase (deg) | 63.4 | | Apriori accel (us/s/s) | | -7.85183511430E-05 | | Resid phase (deg) | | -42.4 | +/- 19.9 |

| | RMS | Theor. | Amplitude | 0.103 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|----------------------------|------------------|--------|-------|
| ph/seg (deg) | 72.2 | 47.8 | Search (2048X32) | 0.101 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 83.6 | 83.5 | Interp. | 0.000 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 54.5 | 28.2 | Inc. seg. avg. | 0.121 | Data rate(Mb/s): 2048 | nlags: 256 | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 57.6 | 49.2 | Inc. frq. avg. | 0.108 | | | | | |

n: az 222.0 el 87.3 pa 44.3 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -4363.312 -6271.064 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/nX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/nX.W.202.18UHQS

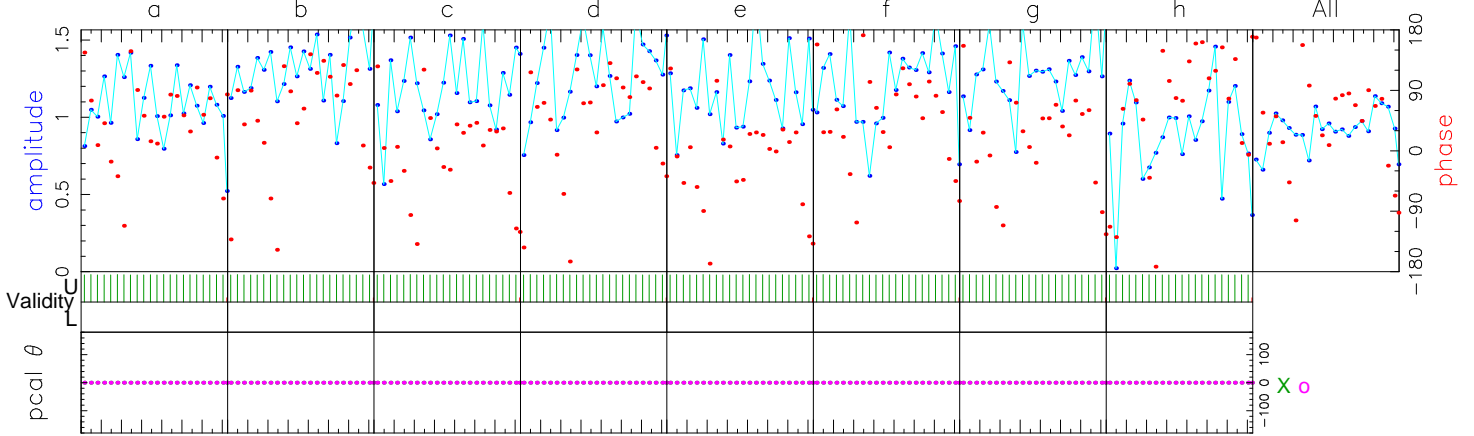


Fringe quality 4

SNR 29.1
Int time 415.025
Amp 0.522
Phase 48.6
PFD 0.0e+00
Delays (us)
SBD 0.022224
MBD -0.002856
Fringe rate (Hz) 0.005870
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

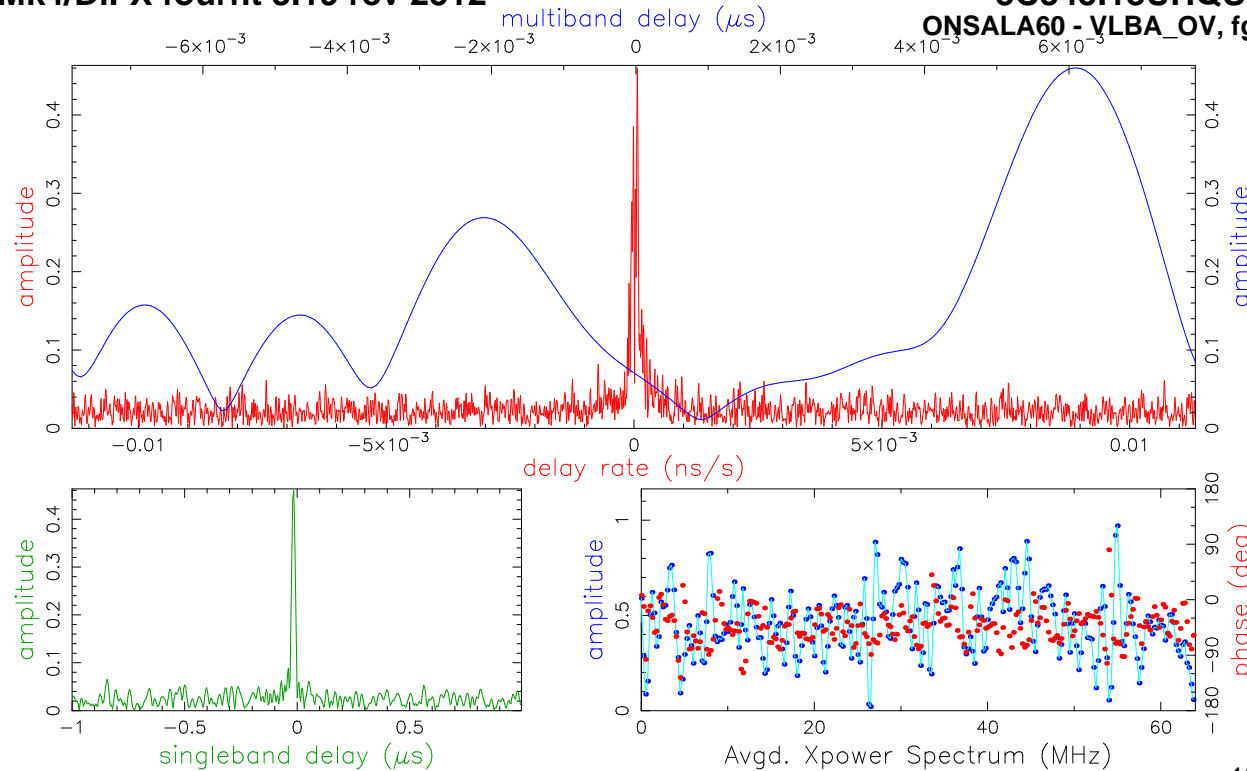
Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143609
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 44.7 | 85.5 | -1.2 | 79.3 | -4.6 | 53.4 | 23.0 | 106.0 | Phase | 48.6 |
| | 0.6 | 0.7 | 0.6 | 0.8 | 0.6 | 0.7 | 0.7 | 0.5 | Ampl. | 0.6 |
| | 262.7 | 262.8 | 262.4 | 263.2 | 263.0 | 263.4 | 263.1 | 263.9 | Sbd box | 262.7 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.13067269411E+04 | | Apriori delay (usec) | | -1.13067553354E+04 | | Resid mbdelay (usec) | | -2.85572E-03 | +/- 3.7E-05 |
| Sband delay (usec) | -1.13067331116E+04 | | Apriori clock (usec) | | 2.0675604E+01 | | Resid sbdelay (usec) | | 2.22238E-02 | +/- 3.0E-04 |
| Phase delay (usec) | -1.13067553338E+04 | | Apriori clockrate (us/s) | | 3.2700001E-07 | | Resid phdelay (usec) | | 1.56763E-06 | +/- 1.3E-07 |
| Delay rate (us/s) | -9.91578258078E-01 | | Apriori rate (us/s) | | -9.91578326227E-01 | | Resid rate (us/s) | | 6.81491E-08 | +/- 5.2E-10 |
| Total phase (deg) | -163.4 | | Apriori accel (us/s/s) | | 7.73806406745E-05 | | Resid phase (deg) | | 48.6 | +/- 3.9 |

ph/seg (deg) 65.1 9.4 Search (2048X32) 0.512 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 80.5 16.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.0 5.6 Inc. seg. avg. 0.914 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 26.9 9.7 Inc. frq. avg. 0.642 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 X: az 305.2 el 25.2 pa 32.9 o: az 74.9 el 70.8 pa -89.6 u,v (fr/asec) 7557.143 6564.701 simultaneous interpolator

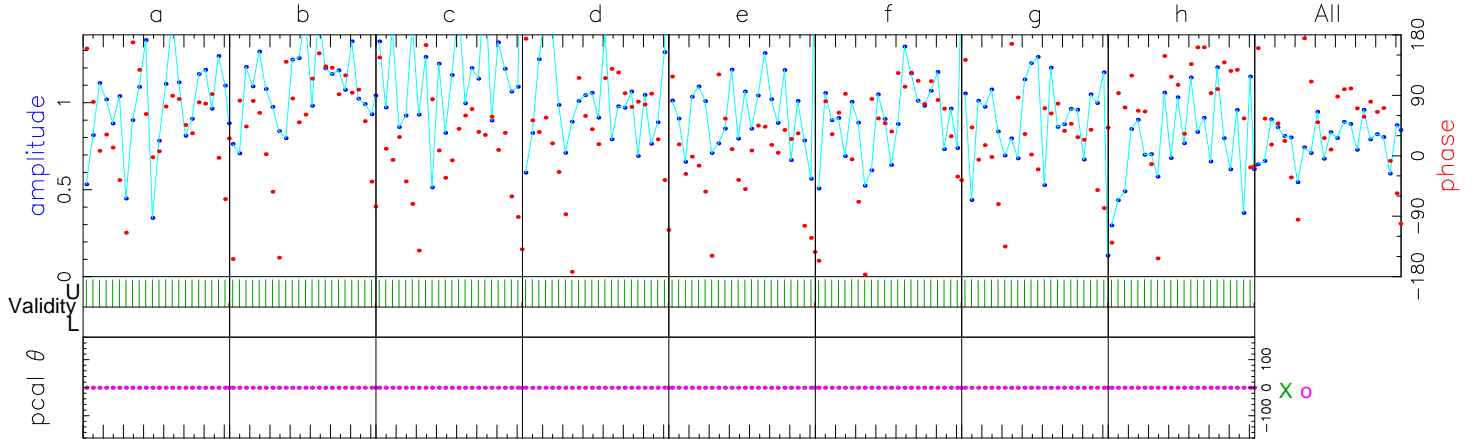


Fringe quality 6

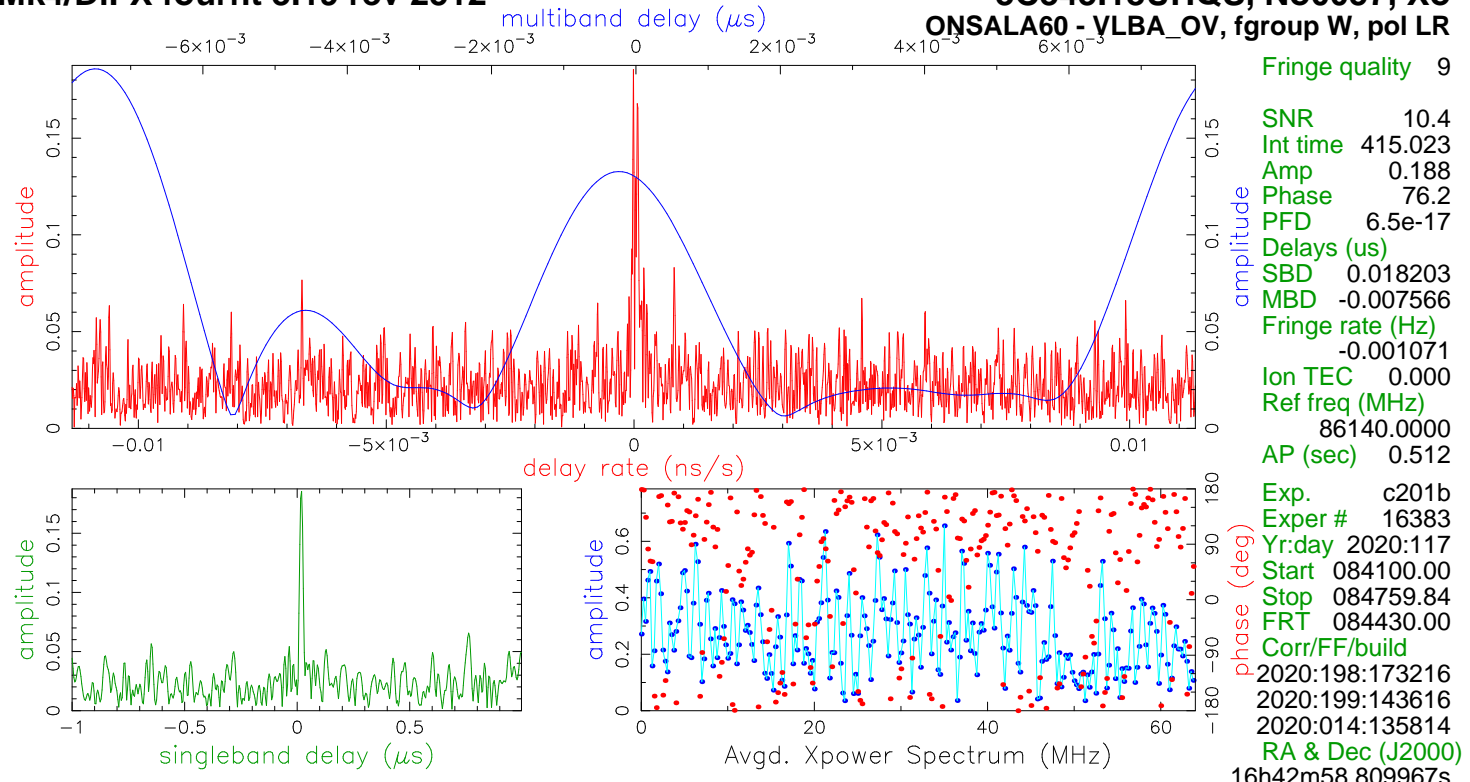
SNR 25.8
Int time 415.023
Amp 0.463
Phase 54.5
PFD 0.0e+00
Delays (us)
SBD -0.016753
MBD 0.006043
Fringe rate (Hz) 0.005864
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084100.00
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143612
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

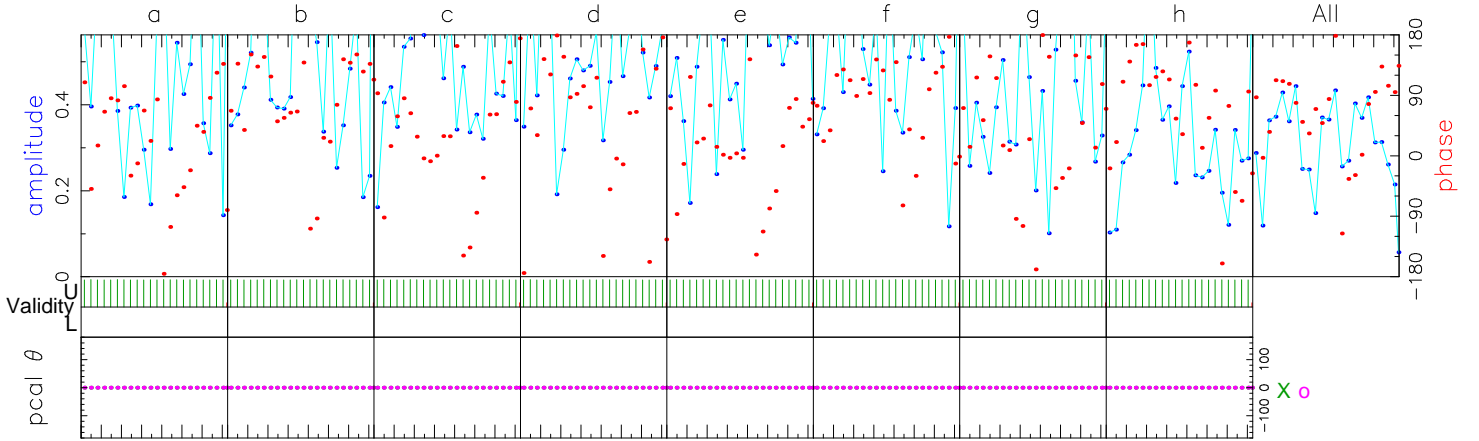
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|------------------|-----------------|--|------------------------------|----------|------------------|--------------|-------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -1.13067649171E+04 | | | | -1.13067553354E+04 | | | | 6.04325E-03 | +/- 4.2E-05 |
| Sband delay (usec) | -1.13067720884E+04 | | | | 2.0675604E+01 | | | | -1.67530E-02 | +/- 3.3E-04 |
| Phase delay (usec) | -1.13067553336E+04 | | | | 3.2700001E-07 | | | | 1.75875E-06 | +/- 1.4E-07 |
| Delay rate (us/s) | -9.91578258157E-01 | | | | -9.91578326227E-01 | | | | 6.80704E-08 | +/- 5.9E-10 |
| Total phase (deg) | | | -157.5 | | 7.73806406745E-05 | | | | 54.5 | +/- 4.4 |
| | RMS | Theor. | Amplitude | 0.463 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | | |
| ph/seg (deg) | 63.9 | 10.6 | Search (2048X32) | 0.448 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | | -1.000 | 1.000 | |
| amp/seg (%) | 73.3 | 18.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 39.6 | 6.3 | Inc. seg. avg. | 0.772 | Sample rate(MISamp/s): 128 | dr window (ns/s) | | -0.011 | 0.011 | |
| amp/frq (%) | 21.3 | 11.0 | Inc. frq. avg. | 0.547 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | ion window (TEC) | 0.00 | 0.00 |

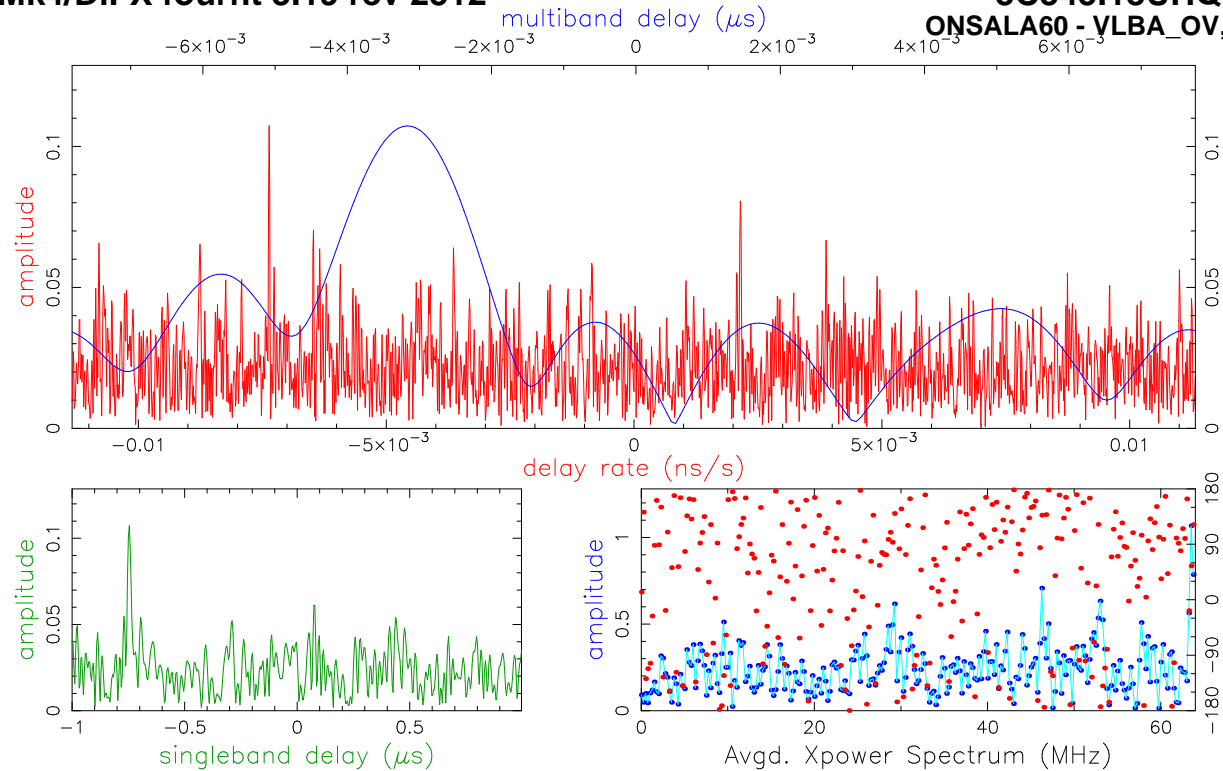


Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|--------------------|----------------------|--------------|----------|----------|------------|-------|
| 51.4 | 109.4 | 40.5 | 106.1 | 24.1 | 89.9 | 33.5 | 108.7 | 108.7 | Phase | 76.2 |
| 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | Ampl. | 0.2 |
| 262.9 | 261.7 | 261.0 | 261.7 | 262.2 | 262.2 | 236.1 | 376.8 | 376.8 | Sbd box | 261.7 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.13067316517E+04 | | Apriori delay (usec) | -1.13067553354E+04 | Resid mbdelay (usec) | -7.56632E-03 | +/- | 1.0E-04 | | |
| Sband delay (usec) | -1.13067371321E+04 | | Apriori clock (usec) | 2.0675604E+01 | Resid sbdelay (usec) | 1.82032E-02 | +/- | 8.2E-04 | | |
| Phase delay (usec) | -1.13067553329E+04 | | Apriori clockrate (us/s) | 3.2700001E-07 | Resid phdelay (usec) | 2.45853E-06 | +/- | 3.5E-07 | | |
| Delay rate (us/s) | -9.91578338656E-01 | | Apriori rate (us/s) | -9.91578326227E-01 | Resid rate (us/s) | -1.24281E-08 | +/- | 1.5E-09 | | |
| Total phase (deg) | | -135.8 | Apriori accel (us/s/s) | 7.73806406745E-05 | Resid phase (deg) | 76.2 | +/- | 11.0 | | |

| | RMS | Theor. | Amplitude | 0.188 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 63.0 | 26.3 | Search (2048X32) | 0.183 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 84.3 | 45.9 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 40.2 | 15.5 | Inc. seg. avg. | 0.287 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 38.6 | 27.1 | Inc. frq. avg. | 0.213 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

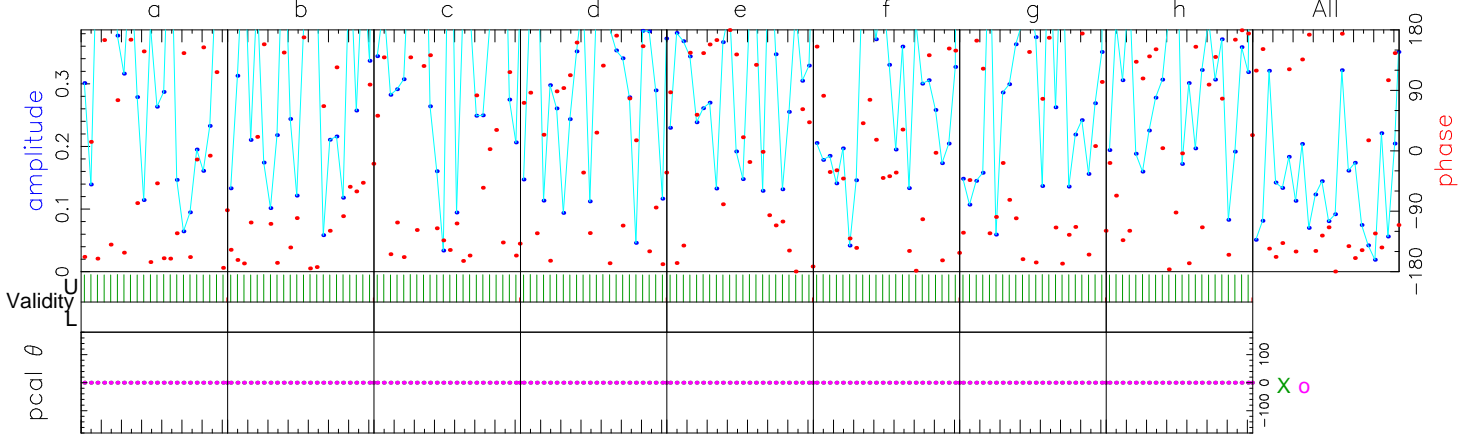


Fringe quality 0

SNR 6.0
Int time 415.025
Amp 0.129
Phase -169.6
PFD 4.2e-01
Delays (us)
SBD -0.746701
MBD -0.003185
Fringe rate (Hz)
-0.634844
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c201b
Yr:day 16383
Start 2020:117
Stop 2020:117
FRT 084100.00
084759.84
084430.00
Corr/FF/build
2020:198:173216
2020:199:143620
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -168.9 | -154.5 | -175.7 | 164.5 | -179.0 | 17.0 | -153.2 | -170.7 | Phase | -169.6 |
| | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.2 | 0.1 | Ampl. | 0.1 |
| | 65.3 | 143.0 | 511.5 | 381.4 | 20.6 | 35.5 | 473.2 | 223.2 | Sbd box | 65.8 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.13075085201E+04 | | Apriori delay (usec) | | -1.13067553354E+04 | | Resid mbdelay (usec) | | -3.18475E-03 | +/- 1.8E-04 |
| Sband delay (usec) | -1.13075020359E+04 | | Apriori clock (usec) | | 2.0675604E+01 | | Resid sbdelay (usec) | | -7.46701E-01 | +/- 1.4E-03 |
| Phase delay (usec) | -1.13067553408E+04 | | Apriori clockrate (us/s) | | 3.2700001E-07 | | Resid phdelay (usec) | | -5.47066E-06 | +/- 6.2E-07 |
| Delay rate (us/s) | -9.91585696132E-01 | | Apriori rate (us/s) | | -9.91578326227E-01 | | Resid rate (us/s) | | -7.36990E-06 | +/- 2.5E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 7.73806406745E-05 | | Resid phase (deg) | | -169.6 | +/- 19.1 |

ph/seg (deg) 55.1 45.9
amp/seg (%) 81.7 80.1
ph/frq (deg) 72.3 27.1
amp/frq (%) 45.1 47.2

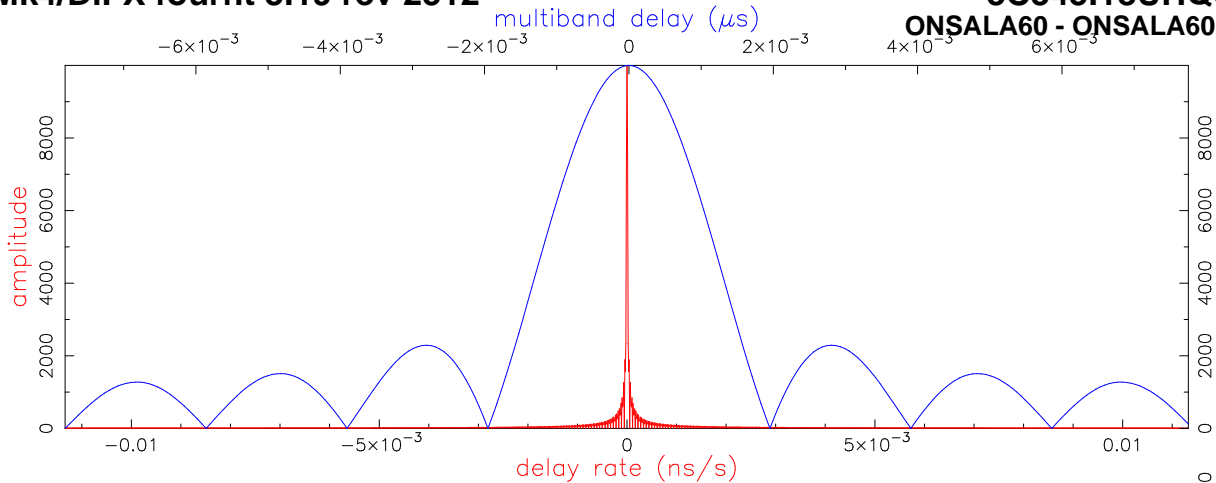
RMS Theor. Amplitude 0.129 +/- 0.021
Search (2048X32) 0.104
Interp. 0.000
Inc. seg. avg. 0.126
Inc. frq. avg. 0.127

pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 128
Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite

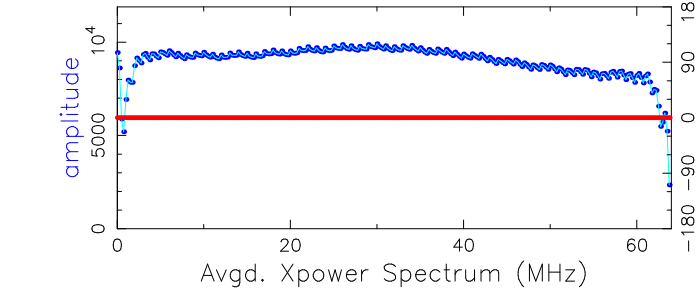
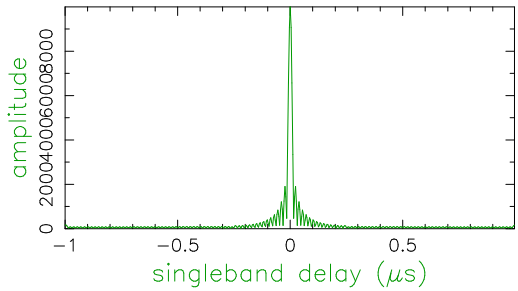
sb window (us) -1.000 1.000
mb window (us) -0.008 0.008
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

X: az 305.2 el 25.2 pa 32.9 o: az 74.9 el 70.8 pa -89.6 u,v (fr/asec) 7557.143 6564.701 simultaneous interpolator

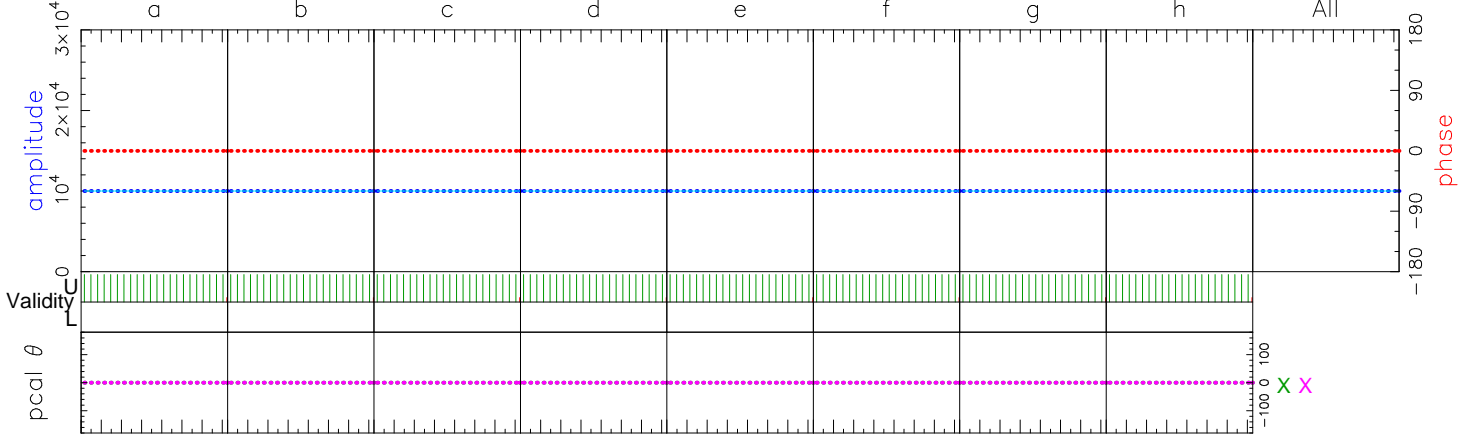
Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/Xo..18UHQS Output file: /Exps/c201b/v1/1234/No0057/Xo.W.211.18UHQS



Fringe quality 9
 SNR 560289.3
 Int time 419.787
 Amp 9999.999
 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. c201b
 Yr:day 16383
 Start 2020:117
 Stop 2020:117
 FRT 084100.00
 084759.84
 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143609
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



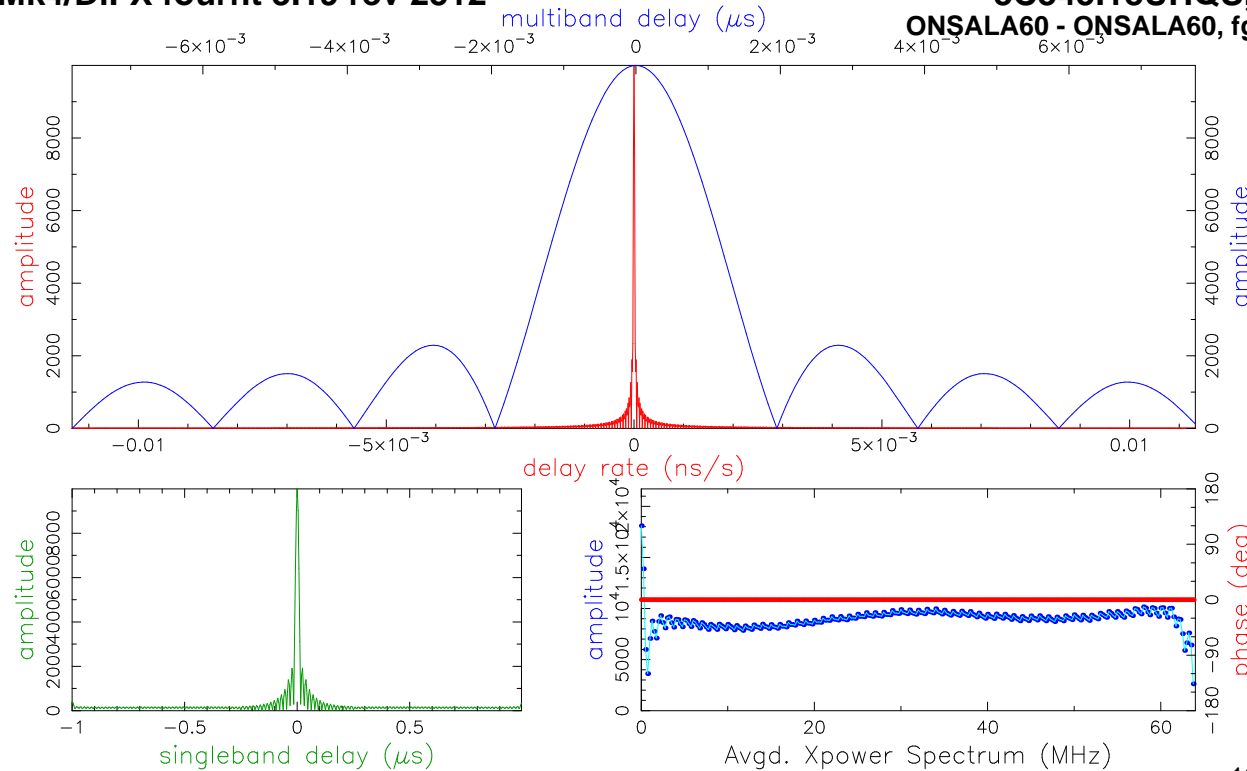
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|---------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820.0 | 10000.0 |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 10000.0 | 10000.0 |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0.0 | 0.0 |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0.0 | 0.0 |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

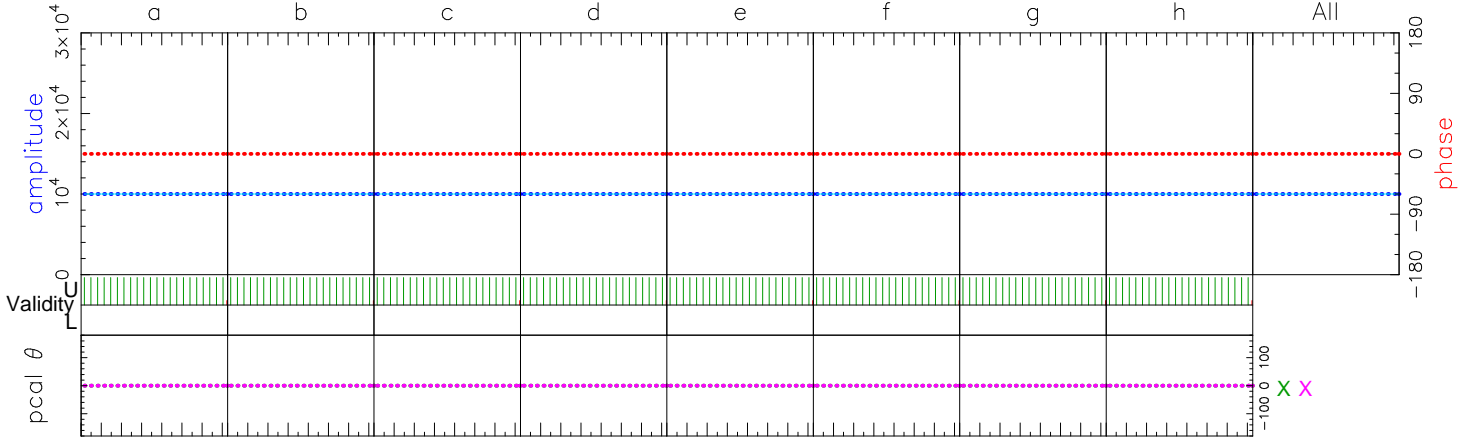
| | | | | | | | |
|-------------------------|-------------------|--------------------------|------------------|----------------------|-------------|-----|---------|
| Group delay (usec)(sbd) | 0.0000000000E+00 | Apriori delay (usec) | 0.0000000000E+00 | Resid mbdelay (usec) | 0.00000E+00 | +/- | 1.9E-09 |
| Sband delay (usec) | 0.0000000000E+00 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 0.00000E+00 | +/- | 1.5E-08 |
| Phase delay (usec) | 1.03722181739E-20 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 1.03722E-20 | +/- | 6.6E-12 |
| Delay rate (us/s) | 0.0000000000E+00 | Apriori rate (us/s) | 0.0000000000E+00 | Resid rate (us/s) | 0.00000E+00 | +/- | 2.7E-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 | Theor. | Amplitude | 9999.999 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 0.0 | 0.0 | Search (2048X32) | 10000.000 | 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) | -0.008 0.008 |
| amp/frq (%) | 0.0 | 0.0 | Inc. seg. avg. | 10000.000 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 0.011 | |
| | | | Inc. frq. avg. | 10000.000 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 0.00 |



Fringe quality 9
 SNR 560289.3
 Int time 419.787
 Amp 9999.999
 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. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143612
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

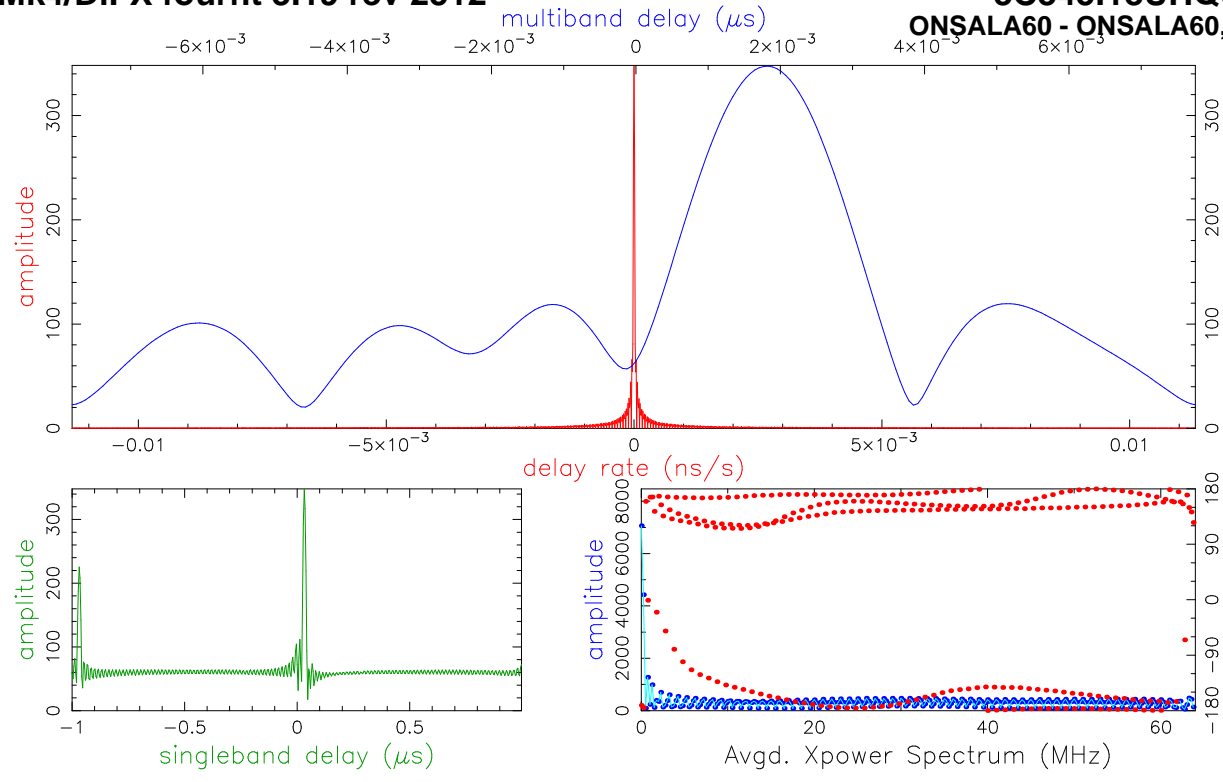
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|---------|
| | -0.0 | -0.0 | 0.0 | 0.0 | -0.0 | 0.0 | -0.0 | 0.0 | Phase | 0.0 |
| | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | Ampl. | 10000.0 |
| | 257.0 | 257.0 | 257.0 | 257.0 | 257.0 | 257.0 | 257.0 | 257.0 | Sbd box | 257.0 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 0.000000000000E+00 | Apriori delay (usec) | 0.000000000000E+00 | Resid mbdelay (usec) | 0.000000E+00 | +/- | 1.9E-09 |
| Sband delay (usec) | 0.000000000000E+00 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 0.000000E+00 | +/- | 1.5E-08 |
| Phase delay (usec) | 4.42379730566E-20 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 4.42380E-20 | +/- | 6.6E-12 |
| Delay rate (us/s) | 0.000000000000E+00 | Apriori rate (us/s) | 0.000000000000E+00 | Resid rate (us/s) | 0.000000E+00 | +/- | 2.7E-14 |
| Total phase (deg) | 0.0 | Apriori accel (us/s/s) | 0.000000000000E+00 | Resid phase (deg) | 0.0 | +/- | 0.0 |

| | | | | | | | | | | | | |
|--------------|-----|-----|--------|------------------|--------------------|------------------------|-----------------------------|----------------------|----------------|-------------------|------------------|-----------|
| ph/seg (deg) | 0.0 | RMS | Theor. | Amplitude | 9999.999 +/- 0.018 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | | |
| amp/seg (%) | 0.0 | 0.0 | 0.0 | Search (2048X32) | 10000.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | | |
| ph/frq (deg) | 0.0 | 0.0 | 0.0 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | | |
| amp/frq (%) | 0.0 | 0.0 | 0.0 | Inc. seg. avg. | 10000.000 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | | | |
| | | | | Inc. frq. avg. | 10000.000 | Data rate (Mb/s): | 2048 | nlags: | 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

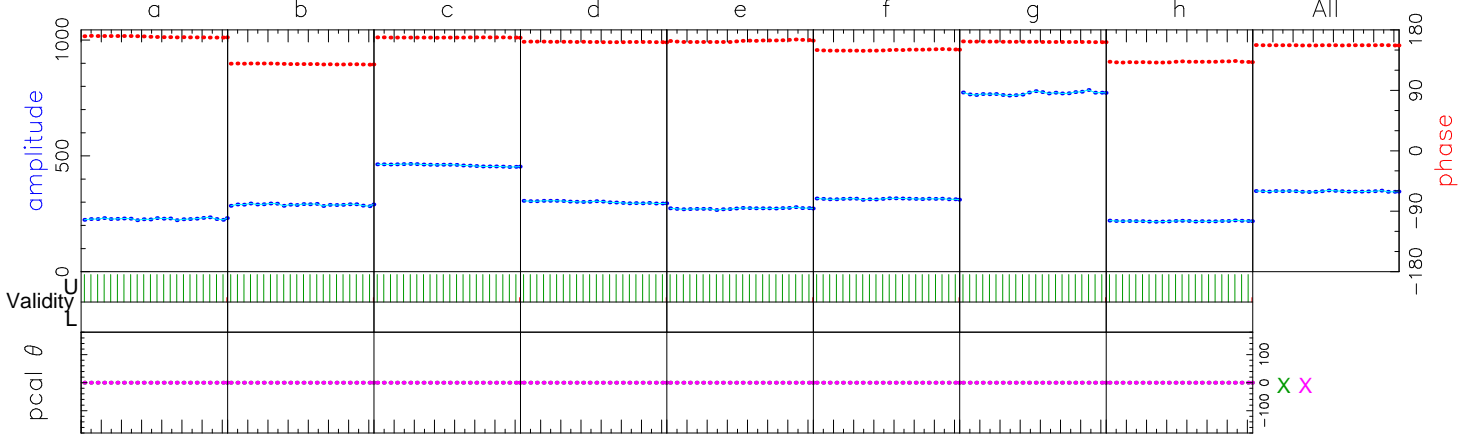


Fringe quality 6

SNR 19501.9
 Int time 419.787
 Amp 348.069
 Phase 157.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.031814
 MBD 0.001851
 Fringe rate (Hz)
 0.000008
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143616
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



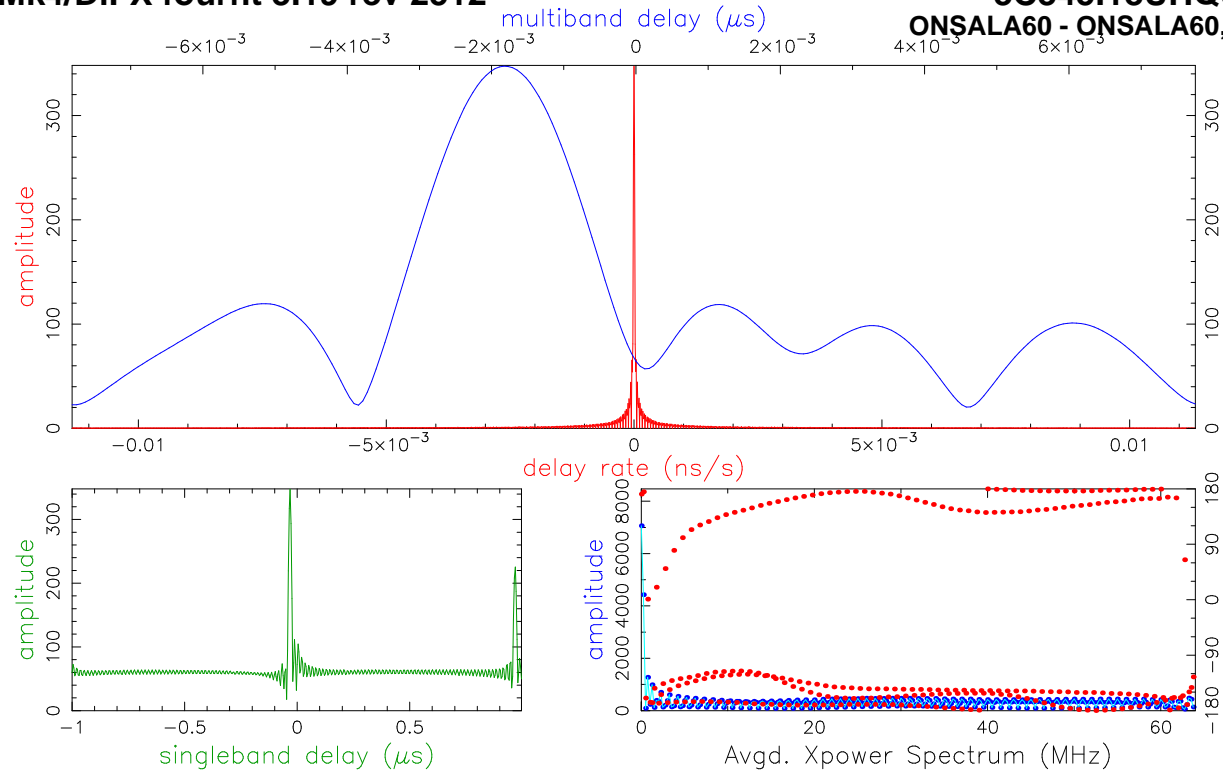
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 169.6 | 129.1 | 168.5 | 161.9 | 163.3 | 149.9 | 162.1 | 132.2 | Phase | 157.0 |
| | 227.9 | 289.4 | 459.8 | 301.0 | 272.8 | 314.2 | 770.4 | 218.5 | Ampl. | 356.8 |
| | 263.7 | 266.4 | 265.2 | 265.3 | 265.9 | 265.1 | 264.9 | 264.8 | Sbd box | 265.1 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|-------------------|----------------------|-------------|-----|---------|
| Group delay (usec)(sbd) | 3.31007187500E-02 | Apriori delay (usec) | 0.00000000000E+00 | Resid mbdelay (usec) | 1.85072E-03 | +/- | 5.6E-08 |
| Sband delay (usec) | 3.18140000000E-02 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 3.18140E-02 | +/- | 4.4E-07 |
| Phase delay (usec) | 5.06280126583E-06 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 5.06280E-06 | +/- | 1.9E-10 |
| Delay rate (us/s) | 8.78611448284E-11 | Apriori rate (us/s) | 0.00000000000E+00 | Resid rate (us/s) | 8.78611E-11 | +/- | 7.8E-13 |
| Total phase (deg) | 157.0 | Apriori accel (us/s/s) | 0.00000000000E+00 | Resid phase (deg) | 157.0 | +/- | 0.0 |

| | | | | | | | | | |
|--------------|------|-----|------------------|---------|--|----------------------------|------------------|--------|-------|
| ph/seg (deg) | 0.2 | 0.0 | Search (2048X32) | 344.857 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 0.5 | 0.0 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 17.4 | 0.0 | Inc. seg. avg. | 347.170 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 49.2 | 0.0 | Inc. frq. avg. | 356.768 | Data rate(Mb/s): 2048 | nlags: 256 | ion window (TEC) | 0.00 | 0.00 |

X: az 305.2 el 25.2 pa 32.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/XX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/XX.W.197.18UHQS

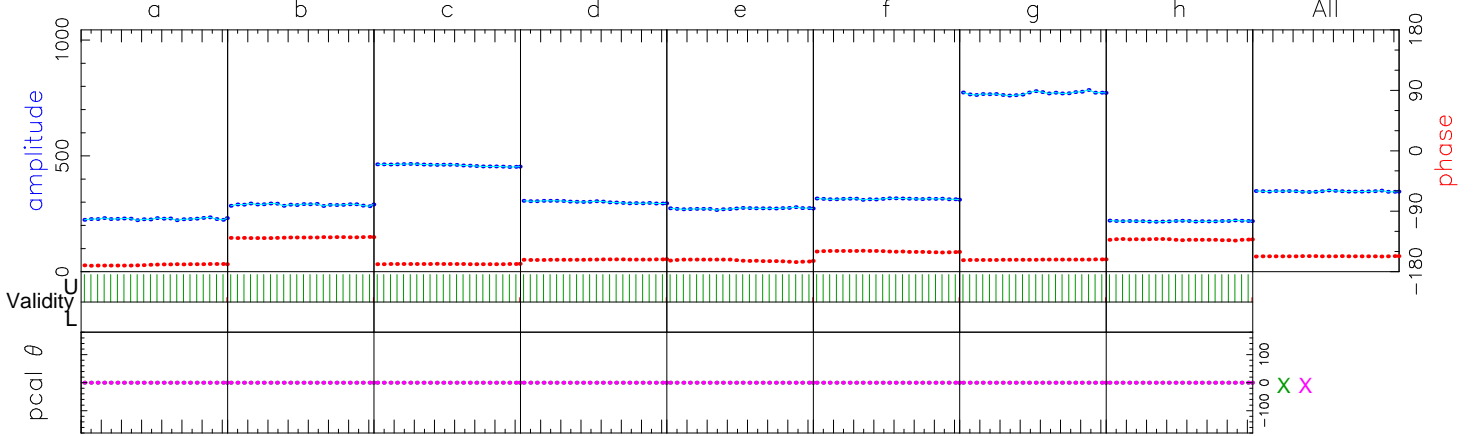


Fringe quality 6

SNR 19501.9
 Int time 419.787
 Amp 348.069
 Phase -157.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.031814
 MBD -0.001851
 Fringe rate (Hz)
 -0.000008
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

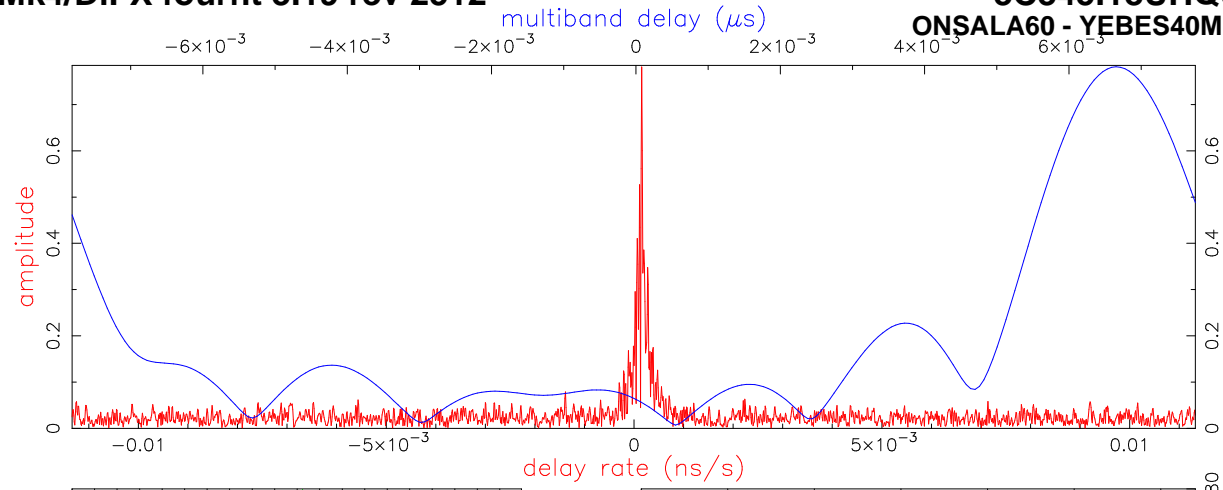
Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143619
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

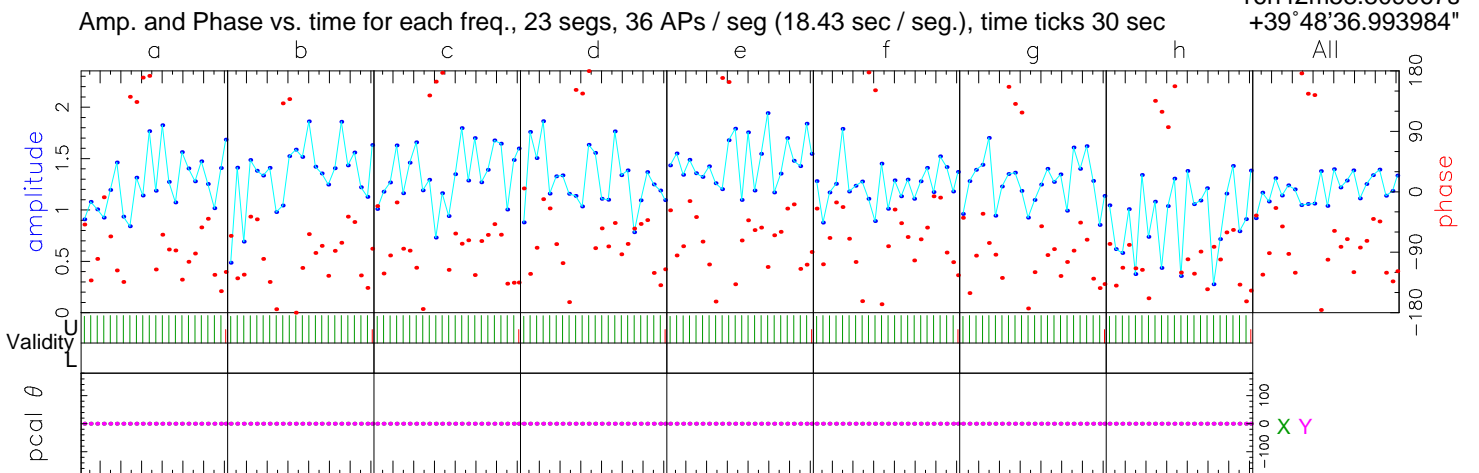
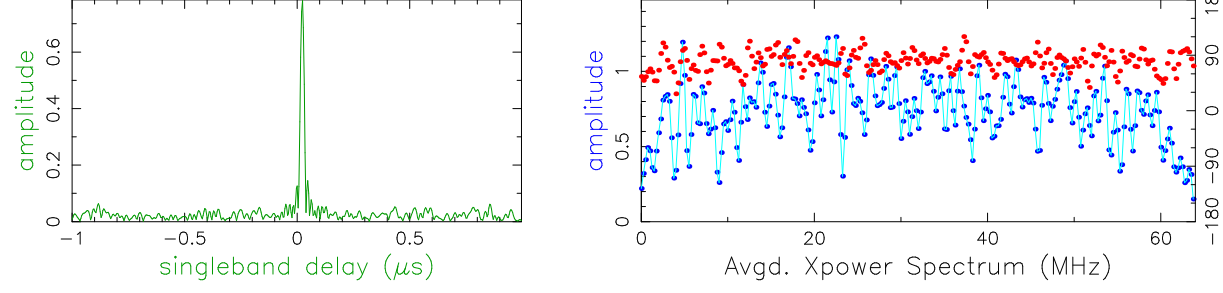


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|------------------|----------|----------------------|----------|--------------|-------------|
| | -169.6 | -129.1 | -168.5 | -161.9 | -163.3 | -149.9 | -162.1 | -132.2 | Phase | -157.0 |
| | 227.9 | 289.4 | 459.8 | 301.0 | 272.8 | 314.2 | 770.4 | 218.5 | Ampl. | 356.8 |
| | 250.3 | 247.6 | 248.8 | 248.7 | 248.1 | 248.9 | 249.1 | 249.2 | Sbd box | 248.9 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -3.31007187500E-02 | | Apriori delay (usec) | | 0.0000000000E+00 | | Resid mbdelay (usec) | | -1.85072E-03 | +/- 5.6E-08 |
| Sband delay (usec) | -3.1814000000E-02 | | Apriori clock (usec) | | 0.0000000E+00 | | Resid sbdelay (usec) | | -3.18140E-02 | +/- 4.4E-07 |
| Phase delay (usec) | -5.06280126587E-06 | | Apriori clockrate (us/s) | | 0.0000000E+00 | | Resid phdelay (usec) | | -5.06280E-06 | +/- 1.9E-10 |
| Delay rate (us/s) | -8.78611448284E-11 | | Apriori rate (us/s) | | 0.0000000000E+00 | | Resid rate (us/s) | | -8.78611E-11 | +/- 7.8E-13 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 0.0000000000E+00 | | Resid phase (deg) | | -157.0 | +/- 0.0 |

ph/seg (deg) 0.2 0.0 Theor. Amplitude 348.069 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.5 0.0 Search (2048X32) 344.857 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 17.4 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 49.2 0.0 Inc. seg. avg. 347.170 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 X: az 305.2 el 25.2 pa 32.9 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/XX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/XX.W.210.18UHQS simultaneous interpolator

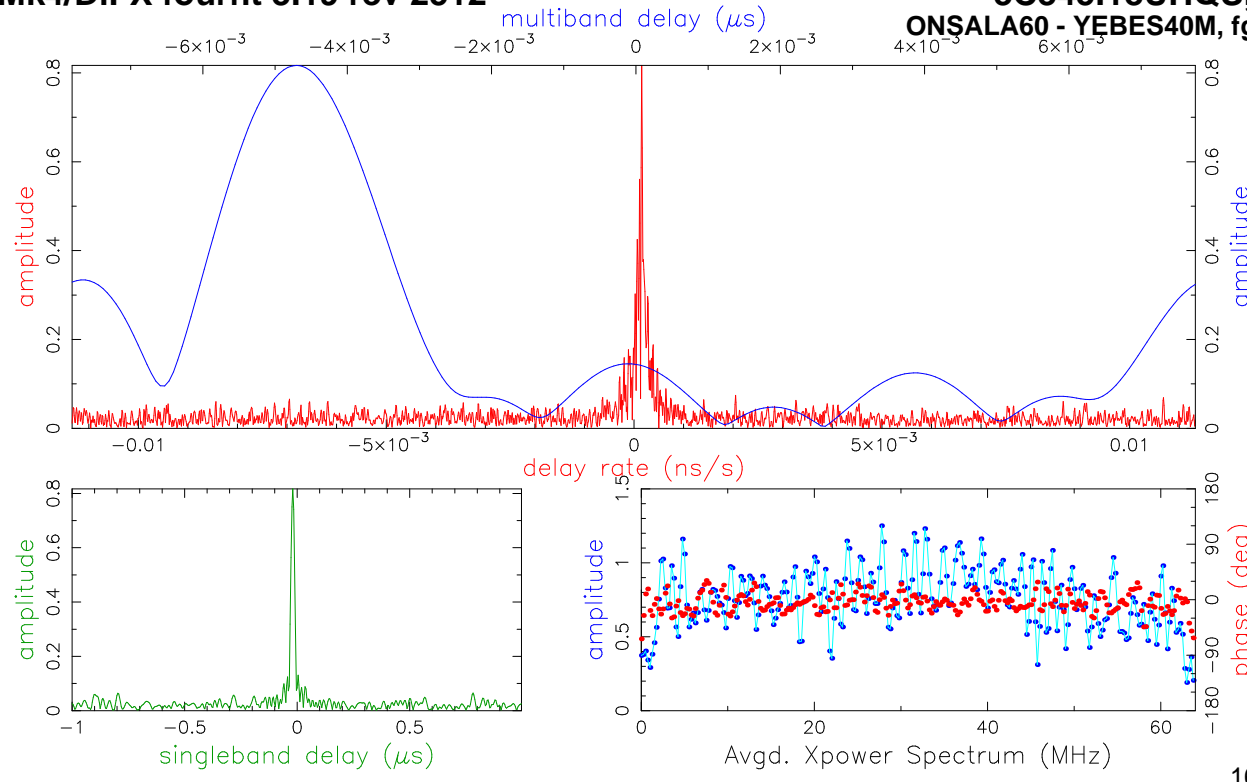


Fringe quality 6
SNR 43.6
Int time 413.639
Amp 0.785
Phase -95.2
PFD 0.0e+00
Delays (us)
SBD 0.022609
MBD 0.006640
Fringe rate (Hz) 0.013072
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084105.12
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143609
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|-------------------|----------|----------------------|----------|--------------|-------------|
| | -109.4 | -100.3 | -96.4 | -86.4 | -79.9 | -72.1 | -104.6 | -122.1 | Phase | -95.2 |
| | 0.8 | 0.9 | 0.9 | 0.8 | 1.0 | 0.8 | 0.8 | 0.6 | Ampl. | 0.8 |
| | 262.7 | 263.1 | 262.4 | 263.1 | 262.9 | 262.5 | 262.6 | 261.8 | Sbd box | 262.8 |
| U/L | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 4.91789739119E+02 | | Apriori delay (usec) | | 4.91767474590E+02 | | Resid mbdelay (usec) | | 6.63953E-03 | +/- 2.5E-05 |
| Sband delay (usec) | 4.91790083340E+02 | | Apriori clock (usec) | | 2.8792953E+01 | | Resid sbdelay (usec) | | 2.26087E-02 | +/- 2.0E-04 |
| Phase delay (usec) | 4.91767471522E+02 | | Apriori clockrate (us/s) | | 3.0800002E-07 | | Resid phdelay (usec) | | -3.06833E-06 | +/- 8.5E-08 |
| Delay rate (us/s) | 2.91205335038E-01 | | Apriori rate (us/s) | | 2.91205183282E-01 | | Resid rate (us/s) | | 1.51756E-07 | +/- 3.5E-10 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 1.14579664980E-05 | | Resid phase (deg) | | -95.2 | +/- 2.6 |

ph/seg (deg) 54.4 6.3 Search (2048X32) 0.747 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 55.7 11.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 17.7 3.7 Inc. seg. avg. 1.194 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 14.7 6.5 Inc. frq. avg. 0.806 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
X: az 305.2 el 25.2 pa 32.9 Y: az 302.7 el 24.0 pa 56.8 u,v (fr/asec) -2141.507 2094.518 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/XY..18UHQS Output file: /Exps/c201b/v1/1234/No0057/XY.W.172.18UHQS



Fringe quality 6

SNR 45.4

Int time 413.639

Amp 0.817

Phase -177.2

PFD 0.0e+00

Delays (us)

SBD -0.019658

MBD -0.004709

Fringe rate (Hz)

0.013117

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c201b

Exper # 16383

Yr:day 2020:117

Start 084105.12

Stop 084759.84

FRT 084430.00

Corr/FF/build

2020:198:173216

2020:199:143614

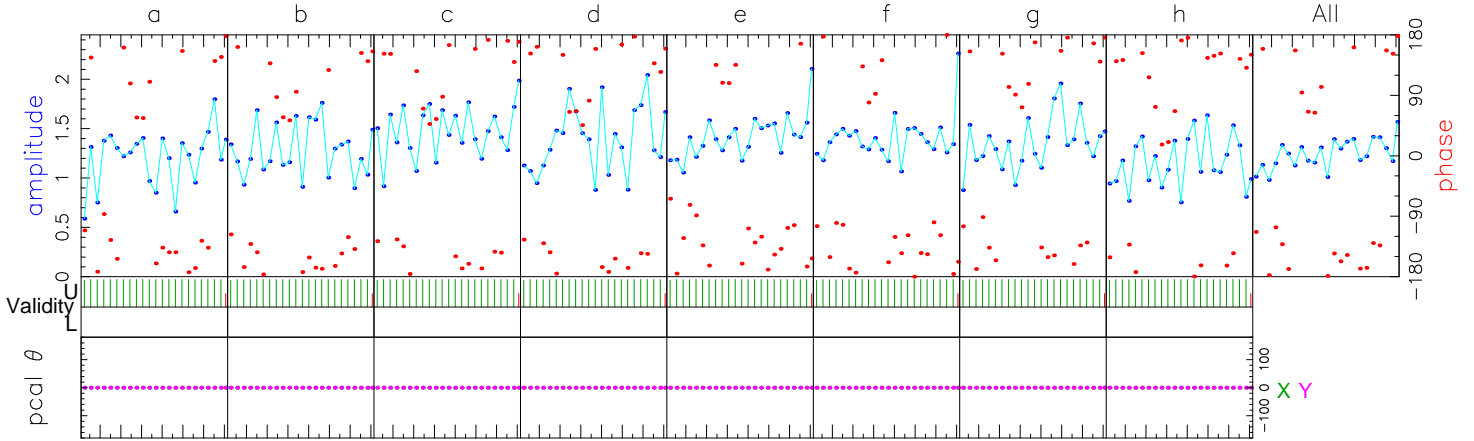
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|----------|-------------------|----------|----------|----------|----------------------|--------------------------|
| | -177.8 | 177.9 | 172.4 | 168.4 | -148.1 | -155.0 | -178.5 | 155.8 | Phase | -177.2 |
| | 0.7 | 0.8 | 0.9 | 0.8 | 0.9 | 1.0 | 0.9 | 0.8 | Ampl. | 0.9 |
| | 251.7 | 251.5 | 251.8 | 252.1 | 252.1 | 251.7 | 251.8 | 251.3 | Sbd box | 252.0 |
| U/L | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 4.91747140369E+02 | | | | 4.91767474590E+02 | | | | Resid mbdelay (usec) | -4.70922E-03 +/- 2.4E-05 |
| Sband delay (usec) | 4.91747817090E+02 | | | | 2.8792953E+01 | | | | Resid sbdelay (usec) | -1.96575E-02 +/- 1.9E-04 |
| Phase delay (usec) | 4.91767468877E+02 | | | | 3.0800002E-07 | | | | Resid phdelay (usec) | -5.71337E-06 +/- 8.1E-08 |
| Delay rate (us/s) | 2.91205335561E-01 | | | | 2.91205183282E-01 | | | | Resid rate (us/s) | 1.52279E-07 +/- 3.4E-10 |
| Total phase (deg) | | | -83.1 | | 1.14579664980E-05 | | | | Resid phase (deg) | -177.2 +/- 2.5 |

RMS Theor. Amplitude 0.817 +/- 0.018

ph/seg (deg) 53.1 6.0 Search (2048X32) 0.791

amp/seg (%) 54.5 10.6 Interp. 0.000

ph/frq (deg) 20.0 3.6 Inc. seg. avg. 1.233

amp/frq (%) 11.6 6.2 Inc. frq. avg. 0.855

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

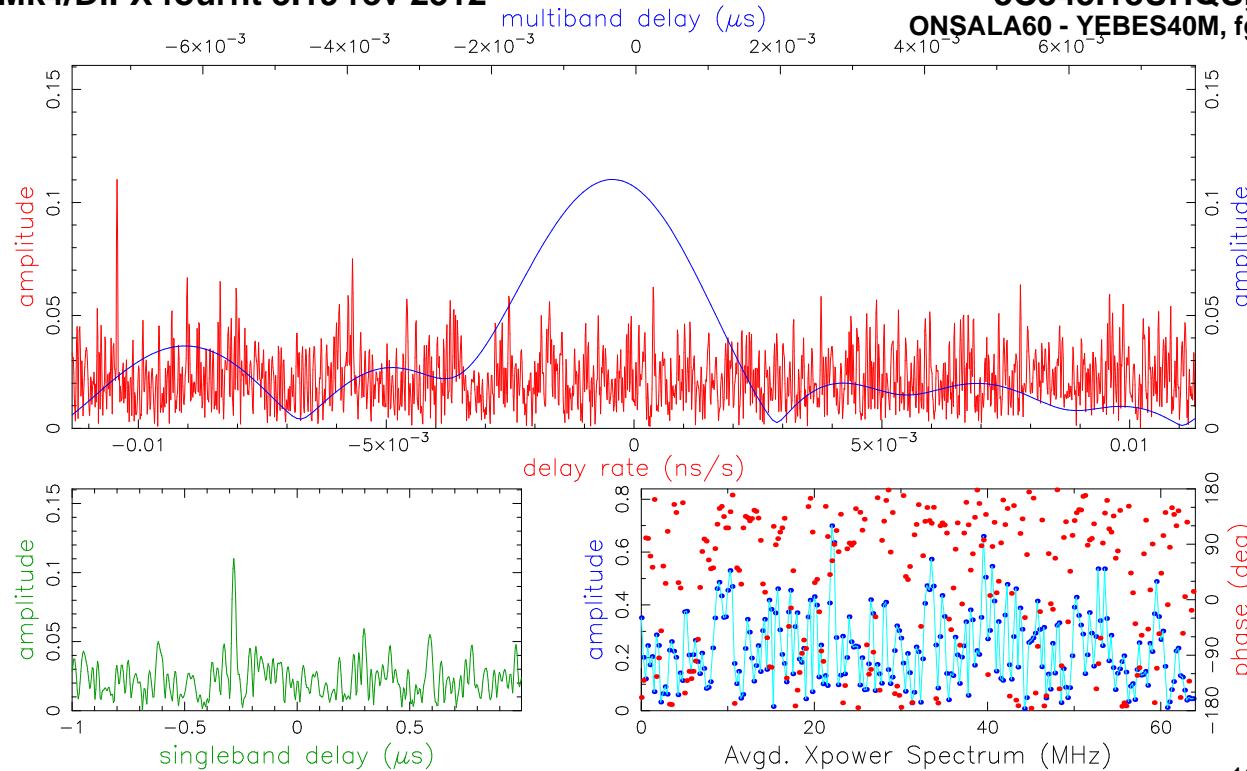
Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011

Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

X: az 305.2 el 25.2 pa 32.9 Y: az 302.7 el 24.0 pa 56.8 u,v (fr/asec) -2141.507 2094.518 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/XY..18UHQS Output file: /Exps/c201b/v1/1234/No0057/XY.W.190.18UHQS

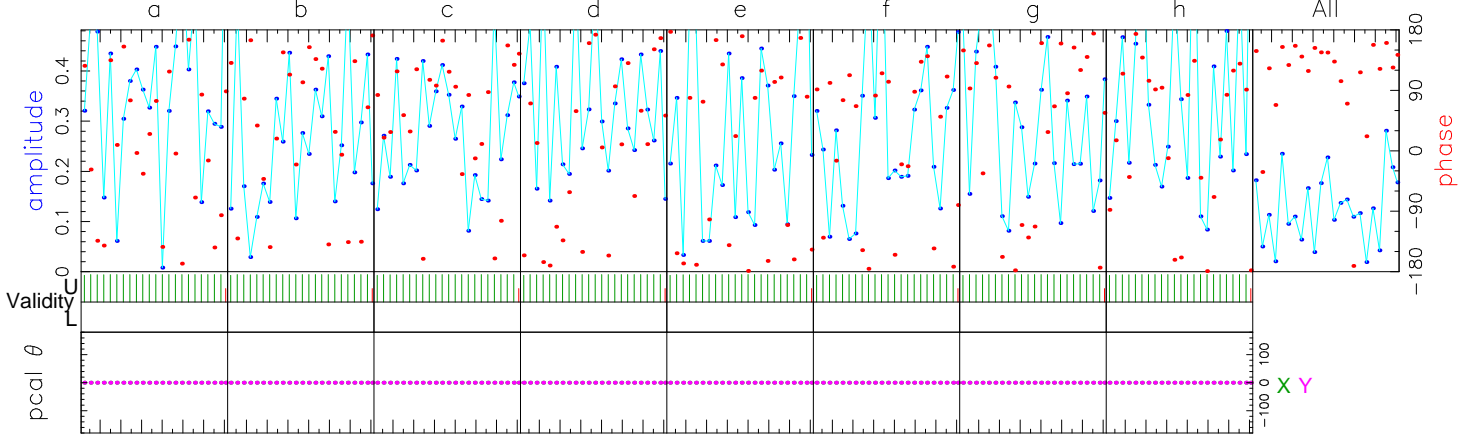


Fringe quality 0

SNR 6.1
Int time 413.639
Amp 0.161
Phase 137.4
PFD 2.1e-01
Delays (us)
SBD -0.281533
MBD -0.000351
Fringe rate (Hz)
-0.899279
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c201b
Exper # 16383
Yr:day 2020:117
Start 084105.12
Stop 084759.84
FRT 084430.00
Corr/FF/build
2020:198:173216
2020:199:143618
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

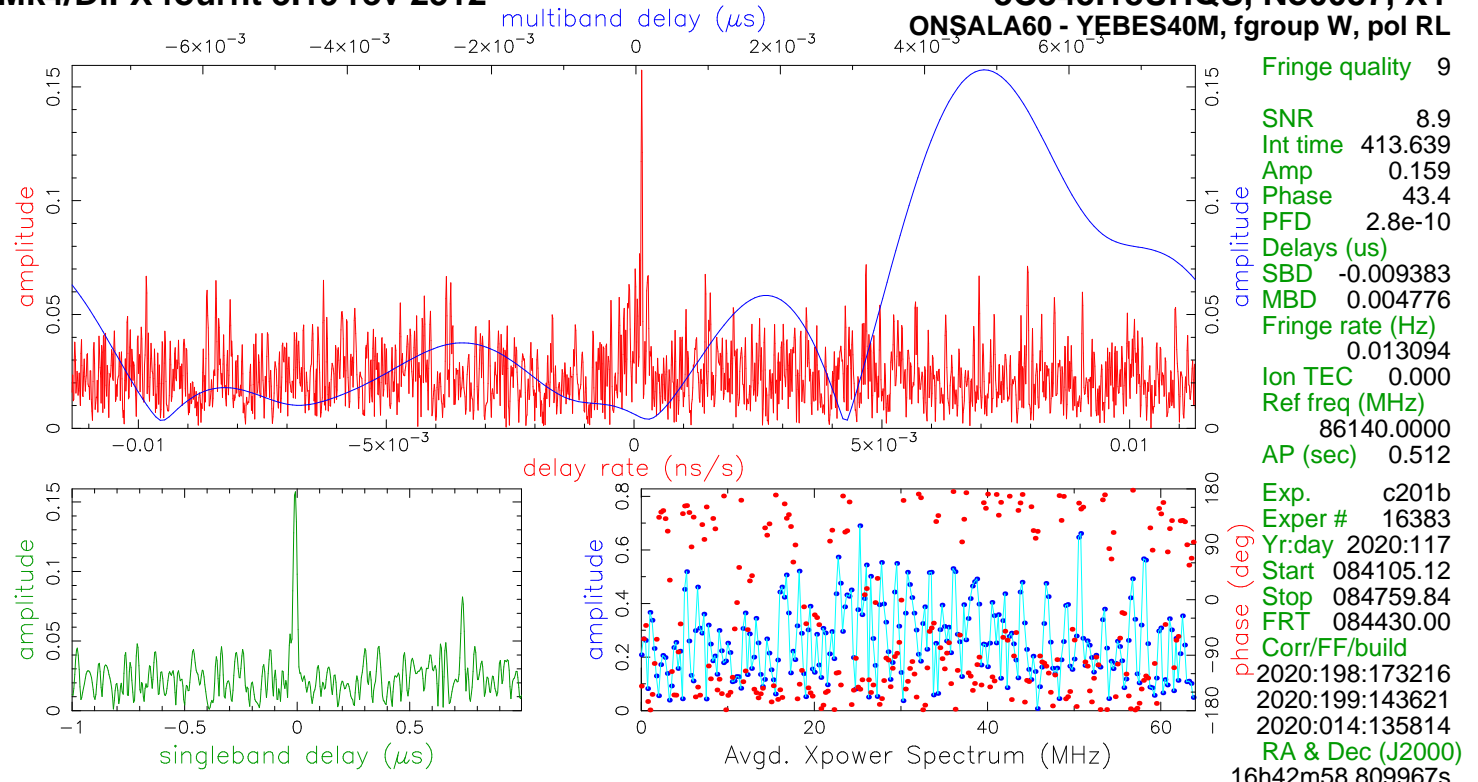
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



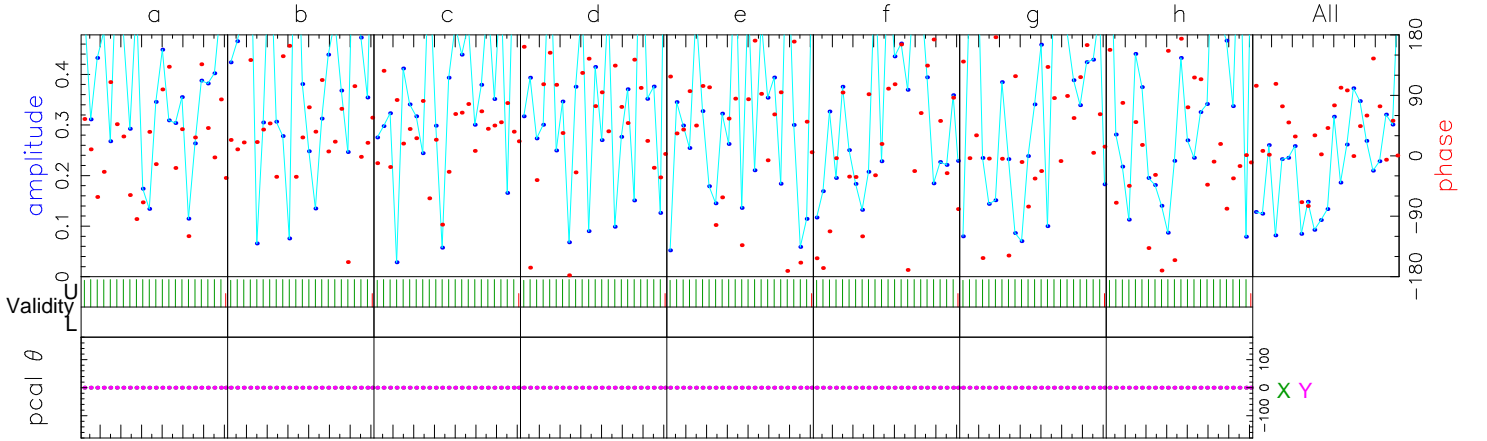
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 82.5 | 150.0 | 117.6 | 142.2 | 154.5 | 135.7 | 138.3 | 131.3 | Phase | 137.4 |
| | 0.0 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | Ampl. | 0.1 |
| | 140.5 | 474.8 | 190.1 | 53.9 | 187.1 | 246.8 | 283.4 | 258.6 | Sbd box | 184.9 |
| U/L | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | APs used | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|-------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 4.91485873128E+02 | Apriori delay (usec) | 4.91767474590E+02 | Resid mbdelay (usec) | -3.51462E-04 | +/- | 1.8E-04 |
| Sband delay (usec) | 4.91485941340E+02 | Apriori clock (usec) | 2.8792953E+01 | Resid sbdelay (usec) | -2.81533E-01 | +/- | 1.4E-03 |
| Phase delay (usec) | 4.91767479020E+02 | Apriori clockrate (us/s) | 3.0800002E-07 | Resid phdelay (usec) | 4.43018E-06 | +/- | 6.0E-07 |
| Delay rate (us/s) | 2.91194743546E-01 | Apriori rate (us/s) | 2.91205183282E-01 | Resid rate (us/s) | -1.04397E-05 | +/- | 2.5E-09 |
| Total phase (deg) | 231.4 | Apriori accel (us/s/s) | 1.14579664980E-05 | Resid phase (deg) | 137.4 | +/- | 18.7 |

| | | | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|------------------------|-----------------------------|------------------|----------|------------------|--------|-------|
| ph/seg (deg) | 51.1 | Theor. | 44.8 | Amplitude | 0.161 +/- 0.026 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 65.5 | | 78.2 | Search (2048X32) | 0.108 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: | enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 25.5 | | 26.4 | Inc. seg. avg. | 0.142 | Sample rate (MSamp/s): | 128 | nlags: | 256 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 43.6 | | 46.1 | Inc. frq. avg. | 0.149 | Data rate (Mb/s): | 2048 | t_cohere | infinite | ion window (TEC) | 0.00 | 0.00 |



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|-------------------------|-------------------|----------|--------------------------|----------|------------------------|----------|----------------------|----------|-------------------|-------------|----------|
| | 19.8 | 40.3 | 34.9 | 79.0 | 80.4 | 72.7 | 31.5 | 0.8 | Phase | 43.4 | |
| | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | Ampl. | 0.2 | |
| | 254.0 | 254.5 | 254.1 | 474.1 | 255.7 | 243.2 | 253.3 | 258.0 | Sbd box | 254.6 | |
| U/L | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | 810/0 | APs used | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | |
| X:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | | |
| | | | | | | | | | Tracks | | |
| Group delay (usec)(sbd) | 4.91756625806E+02 | | Apriori delay (usec) | | 4.91767474590E+02 | | Resid mbdelay (usec) | | 4.77622E-03 | +/- 1.2E-04 | |
| Sband delay (usec) | 4.91758091090E+02 | | Apriori clock (usec) | | 2.8792953E+01 | | Resid sbdelay (usec) | | -9.38350E-03 | +/- 9.7E-04 | |
| Phase delay (usec) | 4.91767475990E+02 | | Apriori clockrate (us/s) | | 3.0800002E-07 | | Resid phdelay (usec) | | 1.40014E-06 | +/- 4.2E-07 | |
| Delay rate (us/s) | 2.91205335292E-01 | | Apriori rate (us/s) | | 2.91205183282E-01 | | Resid rate (us/s) | | 1.52010E-07 | +/- 1.7E-09 | |
| Total phase (deg) | | | 137.4 | | Apriori accel (us/s/s) | | 1.14579664980E-05 | | Resid phase (deg) | 43.4 | +/- 12.9 |

ph/seg (deg) 53.5 31.0 Search (2048X32) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

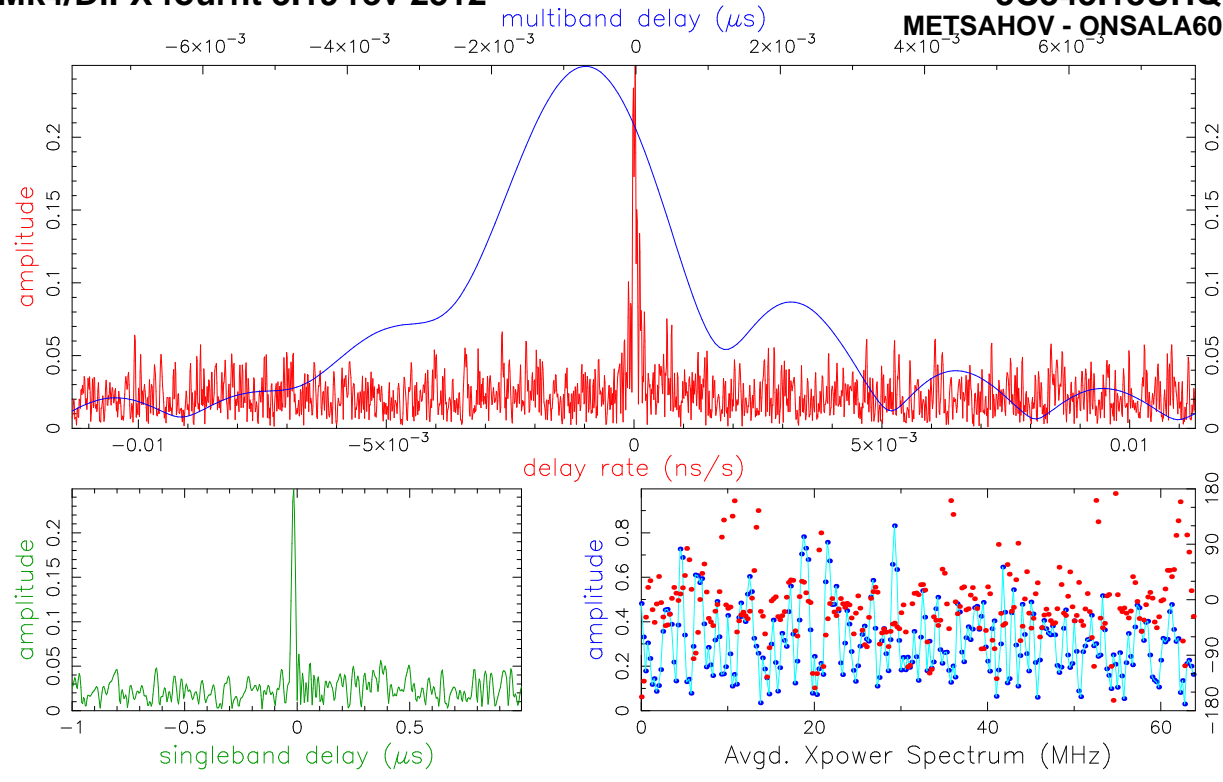
amp/seg (%) 72.9 54.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 31.8 18.3 Inc. seg. avg. 0.193 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 41.8 31.9 Inc. frq. avg. 0.164 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

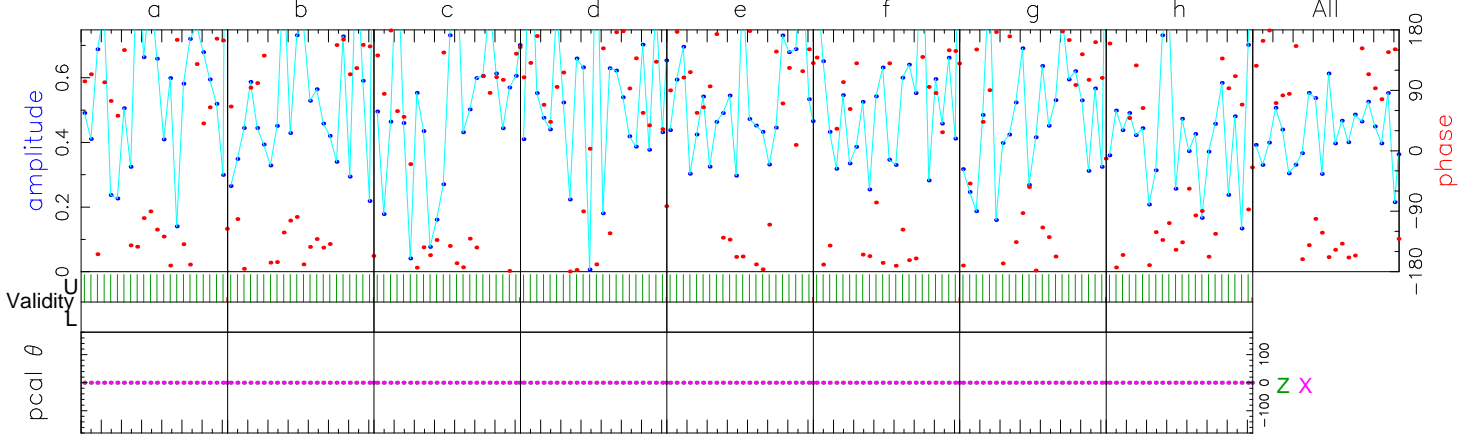
X: az 305.2 el 25.2 pa 32.9 Y: az 302.7 el 24.0 pa 56.8 u,v (fr/asec) -2141.507 2094.518 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/XY..18UHQS Output file: /Exps/c201b/v1/1234/No0057/XY.W.215.18UHQS



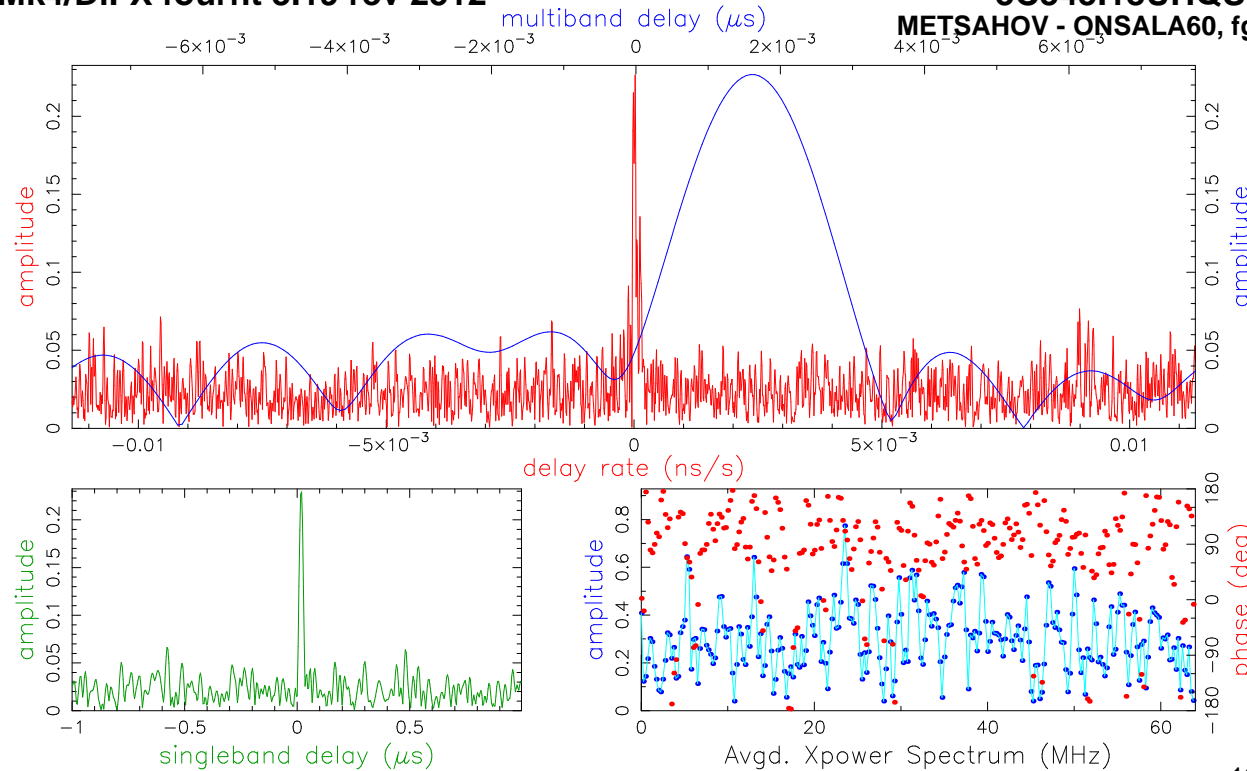
Fringe quality 9
 SNR 14.0
 Int time 419.432
 Amp 0.249
 Phase 166.3
 PFD 1.4e-35
 Delays (us)
 SBD -0.016300
 MBD -0.000705
 Fringe rate (Hz) 0.001937
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143612
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------|
| Group delay (usec)(sbd) | -176.2 | -173.7 | 154.6 | 137.3 | 143.5 | 159.4 | 173.5 | -148.5 | | 166.3 |
| Sband delay (usec) | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | | 0.3 |
| Phase delay (usec) | 252.4 | 252.2 | 253.4 | 252.8 | 252.8 | 253.4 | 253.5 | 406.1 | | 252.8 |
| Delay rate (us/s) | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | 0:0 |
| Total phase (deg) | | | 4.7 | | | | | | | 166.3 |
| Apriori delay (usec) | | | | | | | | | | +/- 7.8E-05 |
| Apriori clock (usec) | | | | | | | | | | +/- 6.2E-04 |
| Apriori clockrate (us/s) | | | | | | | | | | +/- 2.6E-07 |
| Apriori rate (us/s) | | | | | | | | | | +/- 1.1E-09 |
| Apriori accel (us/s/s) | | | | | | | | | | +/- 8.2 |
| Resid mbdelay (usec) | | | | | | | | | | -7.05168E-04 |
| Resid sbdelay (usec) | | | | | | | | | | -1.62998E-02 |
| Resid phdelay (usec) | | | | | | | | | | 5.36232E-06 |
| Resid rate (us/s) | | | | | | | | | | 2.24875E-08 |
| Resid phase (deg) | | | | | | | | | | 166.3 |

ph/seg (deg) 55.8 19.7 Search (2048X32) 0.244 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 81.4 34.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.9 11.6 Inc. seg. avg. 0.404 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 18.7 20.2 Inc. frq. avg. 0.263 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 313.1 el 22.0 pa 29.0 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -719.481 680.387 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/ZX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/ZX.W.181.18UHQS

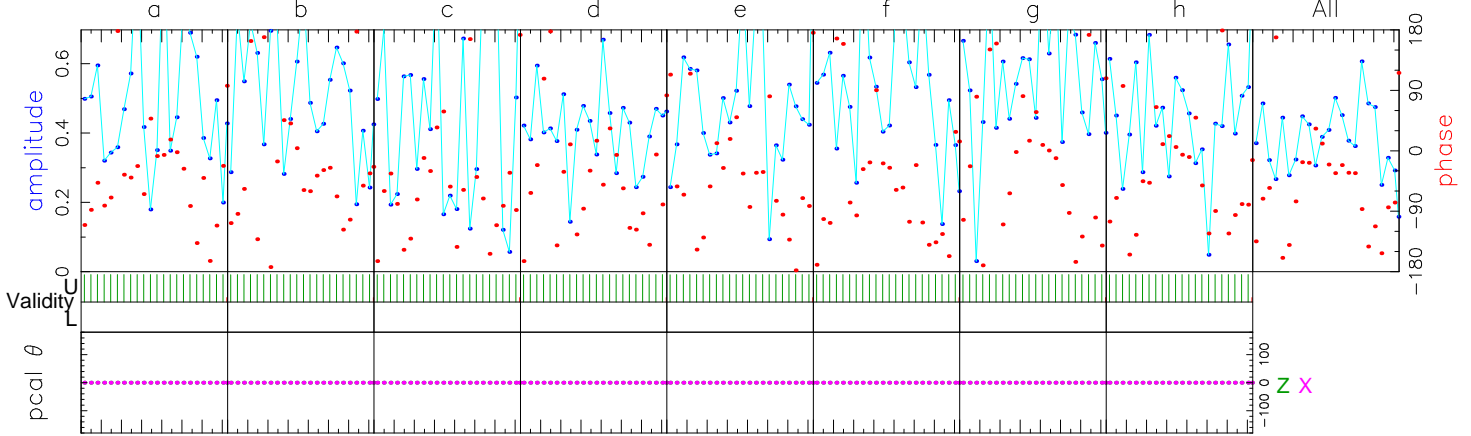


Fringe quality 9

SNR 13.0
 Int time 419.432
 Amp 0.233
 Phase -67.5
 PFD 4.9e-30
 Delays (us)
 SBD 0.017875
 MBD 0.001665
 Fringe rate (Hz) 0.001892
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

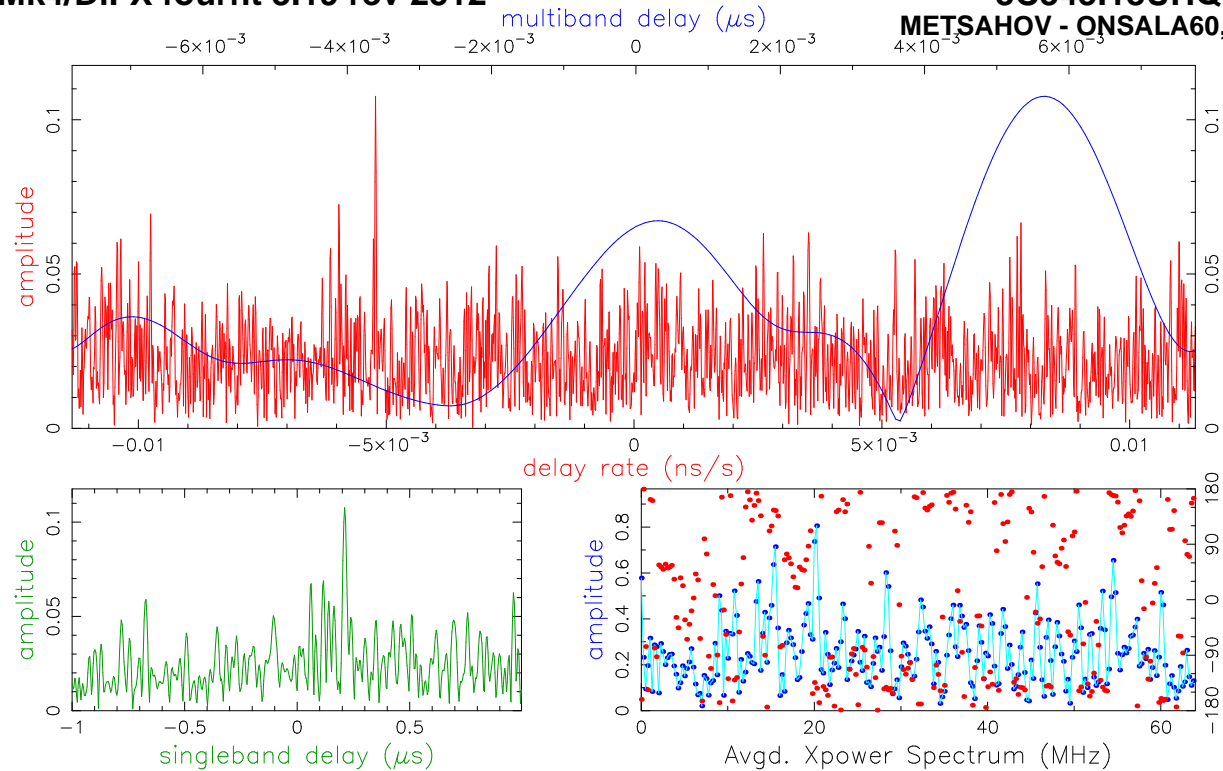
Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143615
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



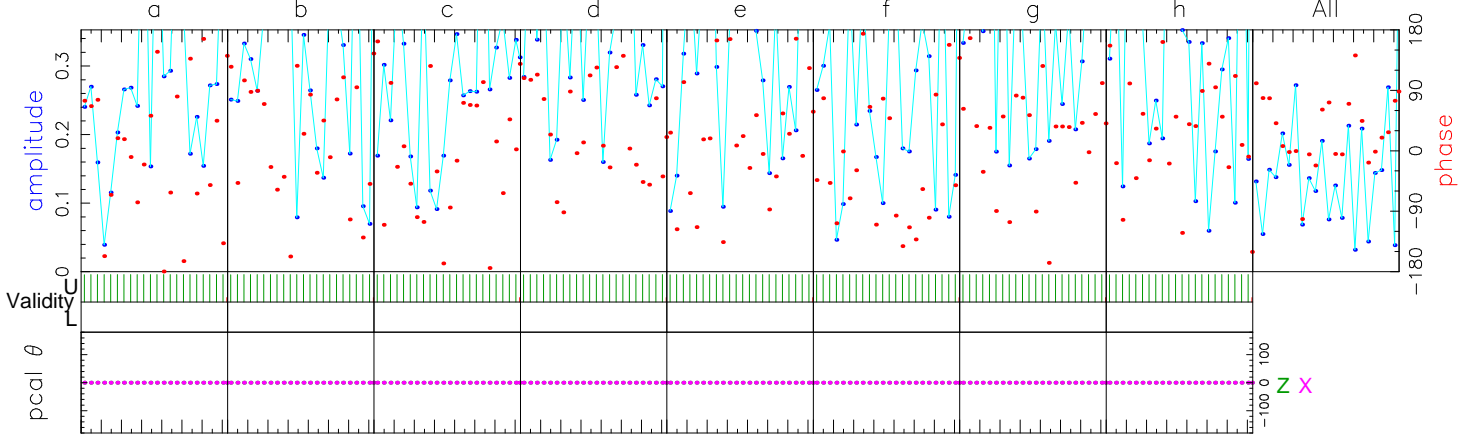
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -51.4 | -70.7 | -82.8 | -64.2 | -59.4 | -82.9 | -70.1 | -61.5 | Phase | -67.5 |
| | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 261.0 | 261.6 | 261.4 | 262.5 | 261.1 | 261.4 | 301.1 | 261.9 | Sbd box | 261.6 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.11818547767E+03 | | Apriori delay (usec) | | -1.11820276815E+03 | | Resid mbdelay (usec) | | 1.66549E-03 | +/- 8.3E-05 |
| Sband delay (usec) | -1.11818489315E+03 | | Apriori clock (usec) | | -4.0883408E+01 | | Resid sbdelay (usec) | | 1.78750E-02 | +/- 6.6E-04 |
| Phase delay (usec) | -1.11820277033E+03 | | Apriori clockrate (us/s) | | -5.1200000E-07 | | Resid phdelay (usec) | | -2.17755E-06 | +/- 2.8E-07 |
| Delay rate (us/s) | 9.88308763150E-02 | | Apriori rate (us/s) | | 9.88308543490E-02 | | Resid rate (us/s) | | 2.19660E-08 | +/- 1.2E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 7.57600067794E-06 | | Resid phase (deg) | | -67.5 | +/- 8.8 |

ph/seg (deg) 61.4 21.1 Search (2048X32) 0.225 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 77.9 36.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 12.0 12.4 Inc. seg. avg. 0.365 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 23.1 21.7 Inc. frq. avg. 0.226 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 313.1 el 22.0 pa 29.0 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -719.481 680.387 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/ZX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/ZX.W.195.18UHQS simultaneous interpolator



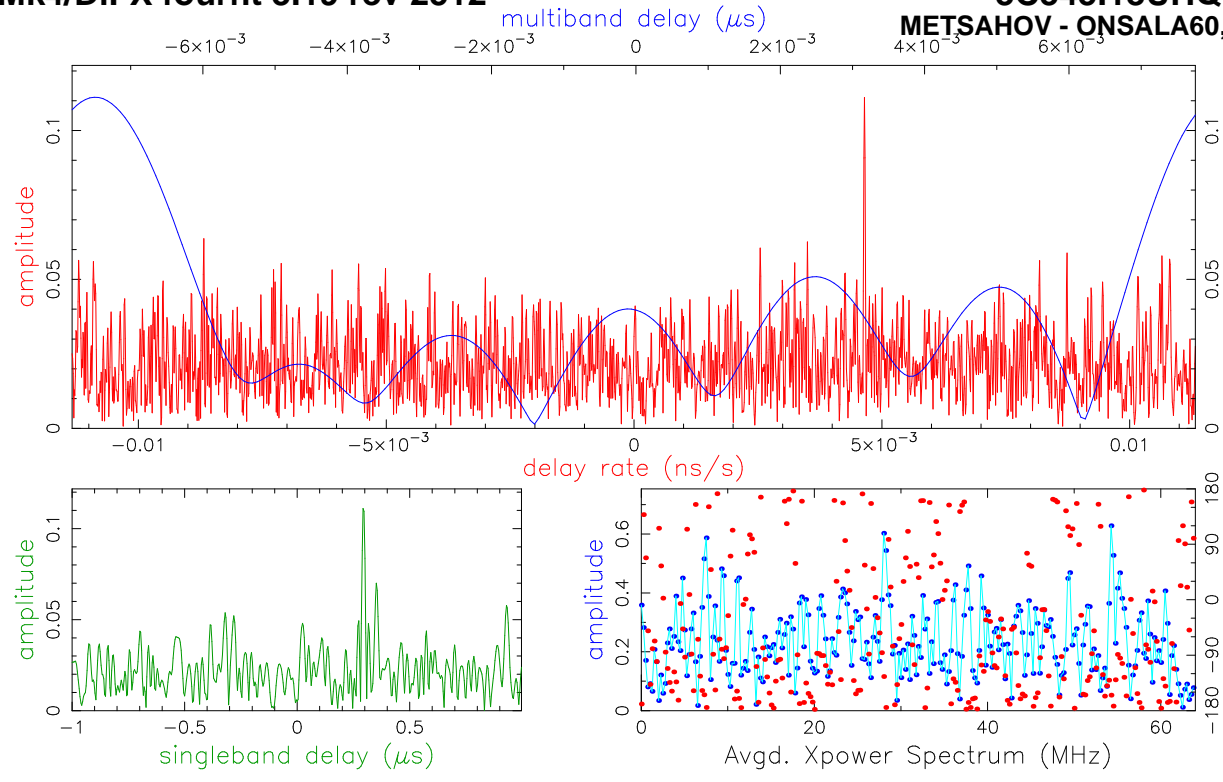
Fringe quality 0
 SNR 6.0
 Int time 419.432
 Amp 0.118
 Phase 29.5
 PFD 3.5e-01
 Delays (us)
 SBD 0.211041
 MBD 0.005658
 Fringe rate (Hz)
 -0.450128
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143619
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



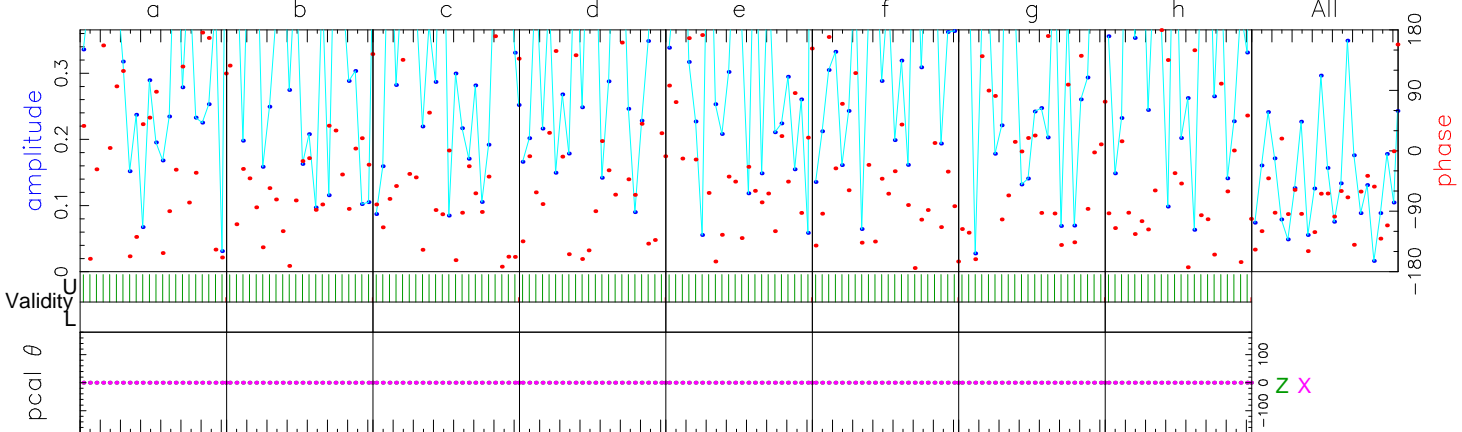
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|------------------|-----------------|----------|--|----------|----------|------------------------------|-----------------------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -1.11799398482E+03 | | | | | -1.11820276815E+03 | | | 5.65833E-03 | +/- 1.8E-04 |
| Sband delay (usec) | -1.11799172690E+03 | | | | | -4.0883408E+01 | | | 2.11041E-01 | +/- 1.4E-03 |
| Phase delay (usec) | -1.11820276720E+03 | | | | | -5.1200000E-07 | | | 9.51186E-07 | +/- 6.1E-07 |
| Delay rate (us/s) | 9.88256288074E-02 | | | | | 9.88308543490E-02 | | | -5.22554E-06 | +/- 2.5E-09 |
| Total phase (deg) | | | -132.1 | | | 7.57600067794E-06 | | | 29.5 | +/- 19.0 |
| | RMS | Theor. | Amplitude | 0.118 +/- 0.020 | | Pcal mode: MANUAL, MANUAL | | | PC period (AP's) 5, 5 | |
| ph/seg (deg) | 51.5 | 45.6 | Search (2048X32) | 0.106 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | sb window (us) | -1.000 1.000 |
| amp/seg (%) | 74.6 | 79.6 | Interp. | 0.000 | | Bits/sample: 2x2 | | | SampCntNorm: enabled | mb window (us) -0.008 0.008 |
| ph/frq (deg) | 39.8 | 26.9 | Inc. seg. avg. | 0.115 | | Sample rate(MISamp/s): 128 | | | dr window (ns/s) | -0.011 0.011 |
| amp/frq (%) | 58.9 | 46.9 | Inc. frq. avg. | 0.119 | | Data rate(Mb/s): 2048 | | | nlags: 256 t_cohere infinite | ion window (TEC) 0.00 0.00 |

Z: az 313.1 el 22.0 pa 29.0 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -719.481 680.387 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/ZX..18UHQ Output file: /Exps/c201b/v1/1234/No0057/ZX.W.208.18UHQ



Fringe quality 0
 SNR 6.4
 Int time 419.432
 Amp 0.122
 Phase -80.8
 PFD 5.4e-02
 Delays (us)
 SBD 0.294669
 MBD 0.008175
 Fringe rate (Hz) 0.401360
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c201b
 Exper # 16383
 Yr:day 2020:117
 Start 084100.00
 Stop 084759.84
 FRT 084430.00
 Corr/FF/build
 2020:198:173216
 2020:199:143622
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -179.9 | -62.2 | -105.7 | -92.8 | -54.3 | -76.6 | -56.6 | -98.5 | Phase | -80.8 |
| | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | Ampl. | 0.1 |
| | 495.7 | 331.1 | 248.6 | 327.9 | 359.7 | 375.0 | 110.2 | 222.5 | Sbd box | 332.4 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.11791334269E+03 | | Apriori delay (usec) | | -1.11820276815E+03 | | Resid mbdelay (usec) | | 8.17547E-03 | +/- 1.7E-04 |
| Sband delay (usec) | -1.11790809915E+03 | | Apriori clock (usec) | | -4.0883408E+01 | | Resid sbdelay (usec) | | 2.94669E-01 | +/- 1.4E-03 |
| Phase delay (usec) | -1.11820277076E+03 | | Apriori clockrate (us/s) | | -5.1200000E-07 | | Resid phdelay (usec) | | -2.60492E-06 | +/- 5.8E-07 |
| Delay rate (us/s) | 9.88355137361E-02 | | Apriori rate (us/s) | | 9.88308543490E-02 | | Resid rate (us/s) | | 4.65939E-06 | +/- 2.4E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 7.57600067794E-06 | | Resid phase (deg) | | -80.8 | +/- 18.0 |

ph/seg (deg) 44.9 43.2 Search (2048X32) 0.109 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.8 75.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.8 25.5 Inc. seg. avg. 0.119 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 47.6 44.5 Inc. frq. avg. 0.118 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 313.1 el 22.0 pa 29.0 X: az 305.2 el 25.2 pa 32.9 u,v (fr/asec) -719.481 680.387 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201b/v1/1234/No0057/ZX..18UHQS Output file: /Exps/c201b/v1/1234/No0057/ZX.W.218.18UHQS