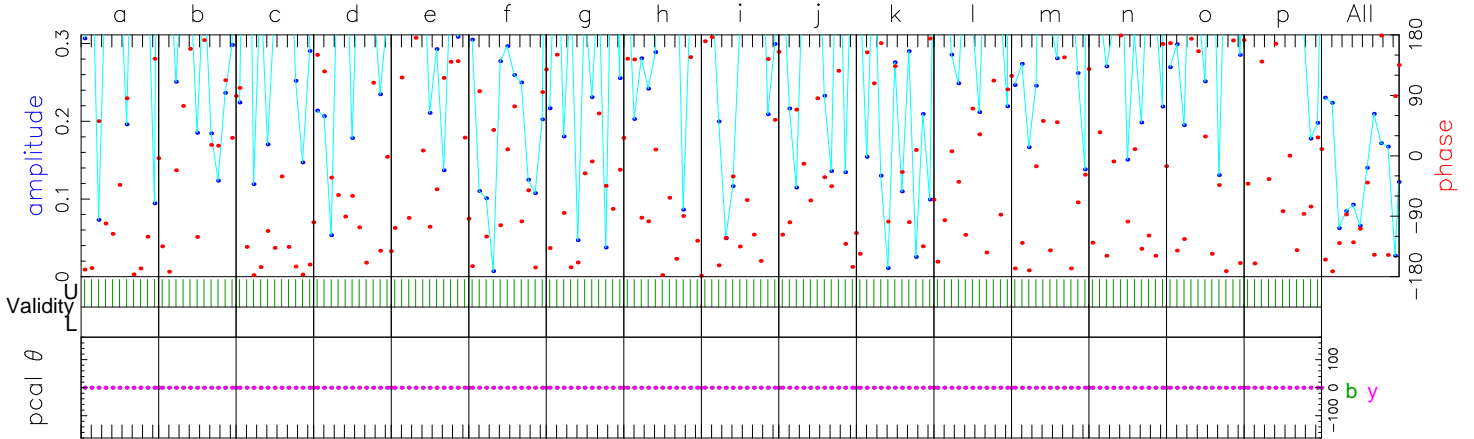


Fringe quality 0
 SNR 5.8
 Int time 419.803
 Amp 0.104
 Phase -145.0
 PFD 8.8e-01
 Delays (us)
 SBD 0.335523
 MBD -0.011287
 Fringe rate (Hz) -0.140938
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192a
 Exper # 16383
 Yr:day 2019:277
 Start 040000.00
 Stop 040659.84
 FRT 040330.00
 Corr/FF/build
 2020:083:122906
 2020:093:061659
 2020:014:135814
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -141.2 | 135.7 | -142.0 | -111.6 | -168.2 | -134.2 | -62.4 | -154.0 | -145.1 | -109.9 | -179.9 | -126.6 | 168.1 | -129.2 | -171.1 | -92.0 | | Phase -145.0 | | | | | |
| | 0.2 | 0.1 | 0.3 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | | Ampl. 0.1 | | | | | |
| | 214.7 | 77.0 | 172.3 | 70.1 | 207.7 | 225.9 | 56.0 | 130.1 | 121.9 | 180.4 | 190.8 | 168.1 | 83.4 | 205.8 | 171.9 | 7.5 | | Sbd box 171.9 | | | | | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | | | | |
| b:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | ManI PC | | | | | |
| b:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC amp | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | Chan ids | | | | | |
| b | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | | | | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -1.45478540361E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -1.45511786622E+03 | Resid mbdelay (usec) | -1.12874E-02 | +/- | 1.9E-04 |
| Sband delay (usec) | | | -1.45478234372E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | -2.9811533E+01 | Resid sbdelay (usec) | 3.35523E-01 | +/- | 3.0E-03 |
| Phase delay (usec) | | | -1.45511787089E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -3.4239506E-07 | Resid phdelay (usec) | -4.67503E-06 | +/- | 6.4E-07 |
| Delay rate (us/s) | | | -1.43986536823E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.43986373208E+00 | Resid rate (us/s) | -1.63615E-06 | +/- | 2.6E-09 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 1.73328039208E-05 | Resid phase (deg) | -145.0 | +/- | 19.9 |

ph/seg (deg) 56.0 34.5
 amp/seg (%) 72.6 60.1
 ph/frq (deg) 41.2 39.8
 amp/frq (%) 72.9 69.4

RMS Theor. Amplitude 0.104 +/- 0.018
 Search (2048X64) 0.099
 Interp. 0.000
 Inc. seg. avg. 0.114
 Inc. frq. avg. 0.097

Group delay (usec)(sbd) -1.45478540361E+03 Apriori delay (usec) -1.45511786622E+03 Resid mbdelay (usec) -1.12874E-02 +/- 1.9E-04
 Sband delay (usec) -1.45478234372E+03 Apriori clock (usec) -2.9811533E+01 Resid sbdelay (usec) 3.35523E-01 +/- 3.0E-03
 Phase delay (usec) -1.45511787089E+03 Apriori clockrate (us/s) -3.4239506E-07 Resid phdelay (usec) -4.67503E-06 +/- 6.4E-07
 Delay rate (us/s) -1.43986536823E+00 Apriori rate (us/s) -1.43986373208E+00 Resid rate (us/s) -1.63615E-06 +/- 2.6E-09
 Total phase (deg) -143.6 Apriori accel (us/s/s) 1.73328039208E-05 Resid phase (deg) -145.0 +/- 19.9

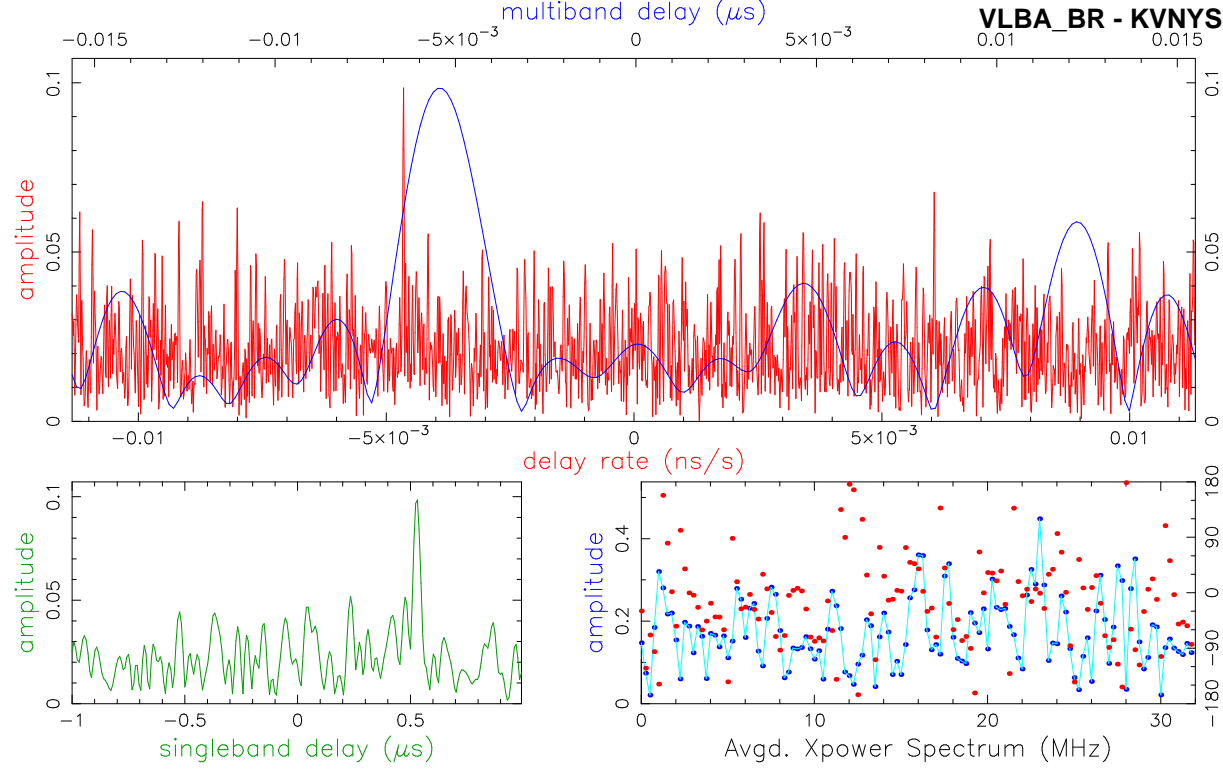
pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 283.1 el 45.8 pa 57.8 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 10760.659 1922.875 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/by..130A7B Output file: /Exps/c192a/v2/1234/No0041/by.W.23.130A7B

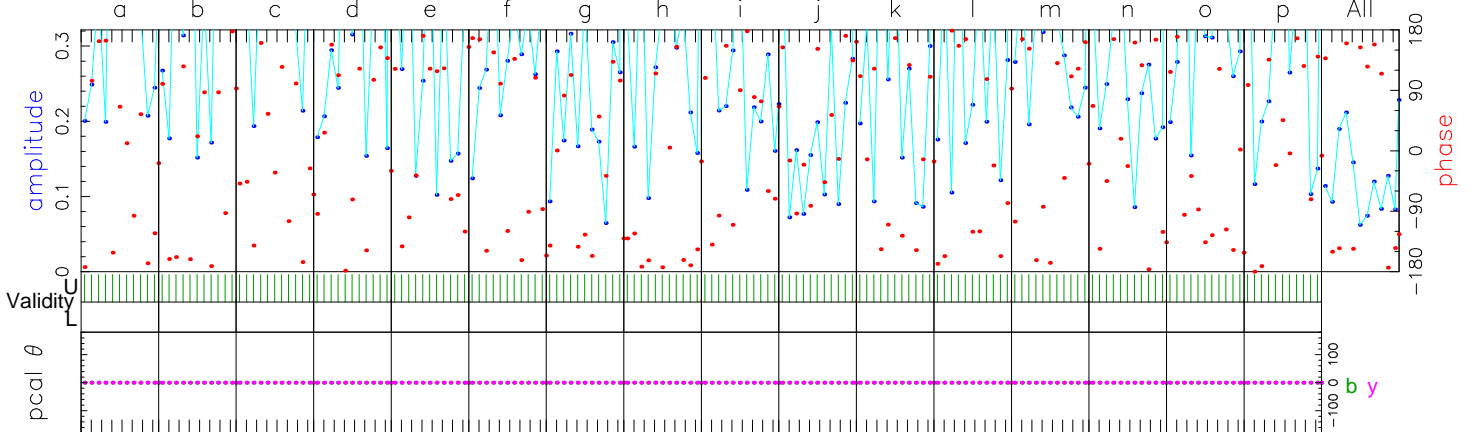
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, by
VLBA_BR - KVNYS, fgroup W, pol LL



Fringe quality 0
SNR 5.6
Int time 419.802
Amp 0.107
Phase 177.6
PFD 9.9e-01
Delays (us)
SBD 0.528078
MBD -0.005440
Fringe rate (Hz)
-0.401435
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061655
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

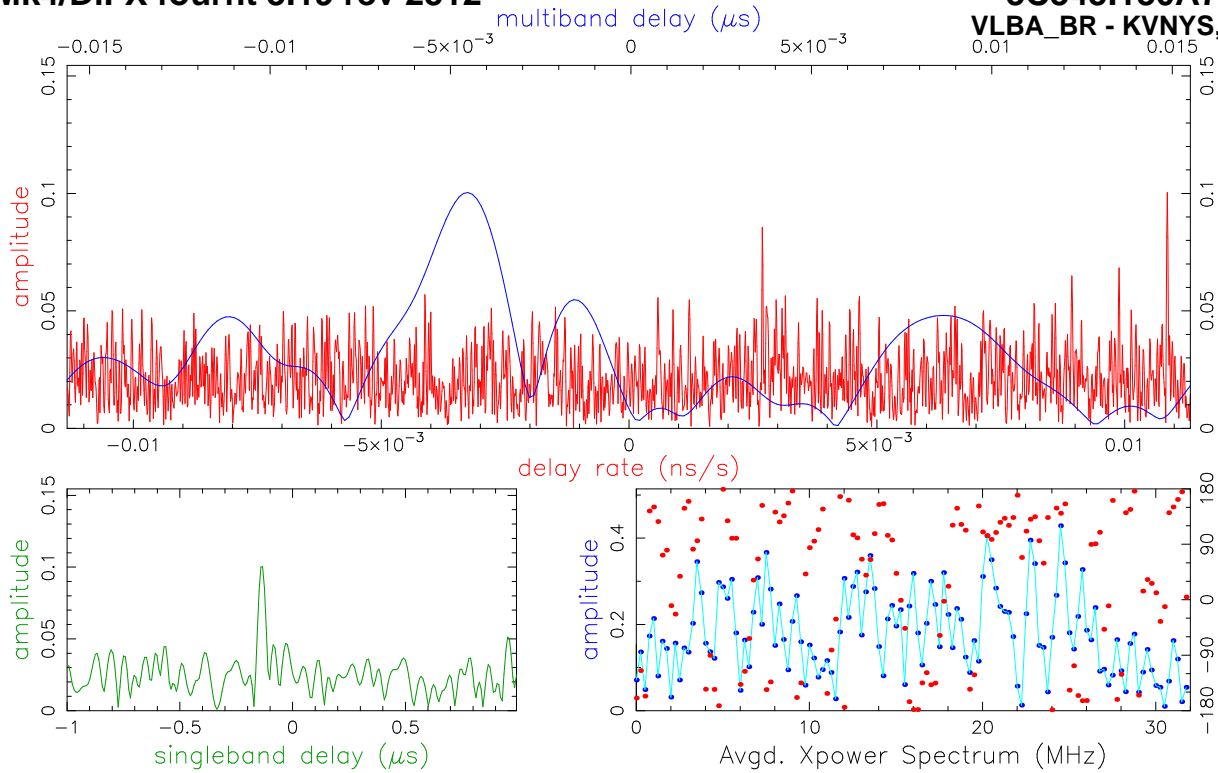


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|------------------|--------------------------|----------|--|--------------------|-----------------------|----------|----------------------|----------|------------------|--------------|----------|----------|-------------|------------|-------|
| | -166.6 | 162.6 | -55.2 | 152.6 | -180.0 | -174.6 | 141.0 | -168.4 | 161.7 | 148.8 | 177.4 | -153.6 | -177.5 | 149.0 | -131.2 | 94.5 | Phase | 177.6 |
| | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.2 | 0.2 | Ampl. | 0.1 |
| | 158.7 | 10.1 | 199.8 | 42.6 | 213.2 | 204.4 | 135.8 | 162.7 | 110.8 | 82.3 | 181.3 | 11.1 | 81.6 | 161.0 | 45.4 | 240.3 | Sbd box | 196.6 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |
| | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | |
| | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |
| Group delay (usec)(sbd) | -1.45459205621E+03 | | | Apriori delay (usec) | | | -1.45511786622E+03 | | | Resid mbdelay (usec) | | | -5.43999E-03 | | | +/- 1.9E-04 | | |
| Sband delay (usec) | -1.45458978772E+03 | | | Apriori clock (usec) | | | -2.9811533E+01 | | | Resid sbdelay (usec) | | | 5.28078E-01 | | | +/- 3.1E-03 | | |
| Phase delay (usec) | -1.45511786049E+03 | | | Apriori clockrate (us/s) | | | -3.4239506E-07 | | | Resid phdelay (usec) | | | 5.72861E-06 | | | +/- 6.6E-07 | | |
| Delay rate (us/s) | -1.43986839234E+00 | | | Apriori rate (us/s) | | | -1.43986373208E+00 | | | Resid rate (us/s) | | | -4.66026E-06 | | | +/- 2.7E-09 | | |
| Total phase (deg) | -181.0 | | | Apriori accel (us/s/s) | | | 1.73328039208E-05 | | | Resid phase (deg) | | | 177.6 | | | +/- 20.5 | | |
| ph/seg (deg) | RMS | Theor. | Amplitude | 0.107 +/- 0.019 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | | | | | | | | |
| amp/seg (%) | 36.9 | 35.5 | Search (2048X64) | 0.098 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | | -1.000 | | 1.000 | | | | | | |
| ph/frq (deg) | 50.3 | 61.9 | Interp. | 0.000 | | Bits/sample: 2x2 | | SampCntNorm: enabled | | mb window (us) | | -0.016 | | 0.016 | | | | |
| amp/frq (%) | 47.2 | 40.9 | Inc. seg. avg. | 0.108 | | Sample rate(MISamp/s): 64 | | dr window (ns/s) | | -0.011 | | 0.011 | | | | | | |
| | 56.1 | 71.5 | Inc. frq. avg. | 0.106 | | Data rate(Mb/s): 2048 | | nlags: 128 | | t_cohere infinite | | ion window (TEC) | | 0.00 | | 0.00 | | |

b: az 283.1 el 45.8 pa 57.8 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 10760.659 1922.875 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/by..130A7B Output file: /Exps/c192a/v2/1234/No0041/by.W.3.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, by
VLBA_BR - KVNYS, fgroup W, pol LR

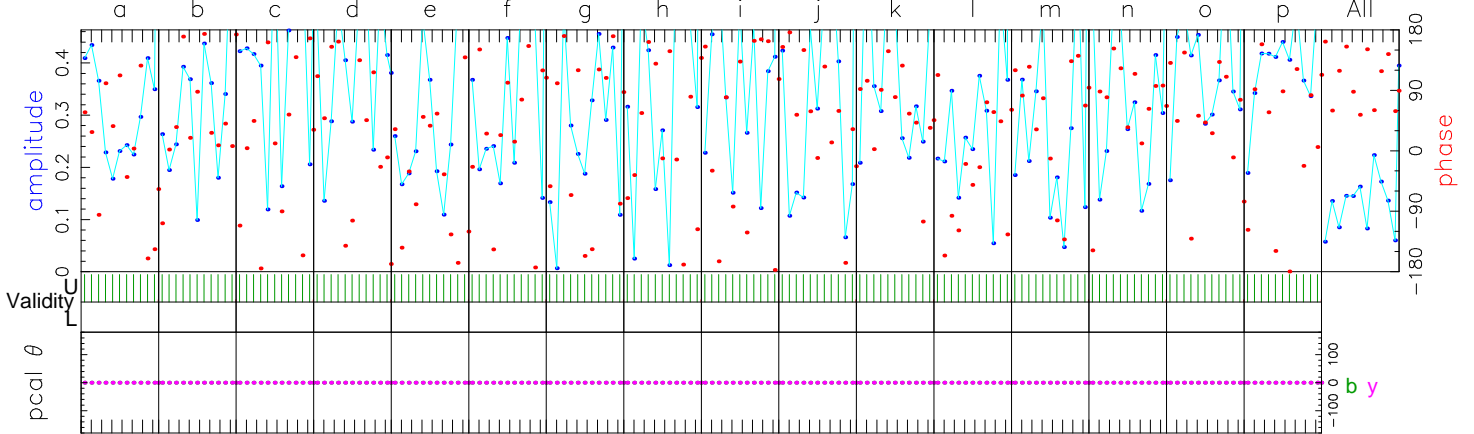


Fringe quality 0

SNR 5.7
Int time 419.802
Amp 0.155
Phase 99.4
PFD 9.1e-01
Delays (us)
SBD -0.136558
MBD -0.004564
Fringe rate (Hz) 0.937197
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061704
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|------------------|--------------------------|-----------------|----------|--|----------|------------------------------|----------------------|--|----------|----------------|----------|--------------|-------------|------------|-------|
| 63.5 | 31.4 | 105.1 | 112.7 | 96.9 | 107.0 | 167.3 | 73.3 | 167.8 | 67.5 | 82.5 | -18.4 | 100.7 | 113.3 | 83.7 | 103.3 | 103.3 | Phase | 99.4 |
| 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.3 | 0.2 | 0.4 | 0.1 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | Ampl. | 0.2 |
| 191.5 | 129.2 | 66.8 | 39.2 | 132.8 | 204.2 | 57.1 | 154.0 | 113.4 | 43.7 | 110.1 | 207.9 | 211.6 | 41.2 | 220.3 | 26.3 | 26.3 | Sbd box | 111.5 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| b:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| b:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC amp | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Chan ids | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.45524743058E+03 | | | Apriori delay (usec) | | | -1.45511786622E+03 | | | Resid mbdelay (usec) | | | -4.56436E-03 | | | +/- 1.9E-04 | | |
| Sband delay (usec) | -1.45525442372E+03 | | | Apriori clock (usec) | | | -2.9811533E+01 | | | Resid sbdelay (usec) | | | -1.36558E-01 | | | +/- 3.0E-03 | | |
| Phase delay (usec) | -1.45511786302E+03 | | | Apriori clockrate (us/s) | | | -3.4239506E-07 | | | Resid phdelay (usec) | | | 3.20394E-06 | | | +/- 6.4E-07 | | |
| Delay rate (us/s) | -1.43985285215E+00 | | | Apriori rate (us/s) | | | -1.43986373208E+00 | | | Resid rate (us/s) | | | 1.08799E-05 | | | +/- 2.7E-09 | | |
| Total phase (deg) | -259.3 | | | Apriori accel (us/s/s) | | | 1.73328039208E-05 | | | Resid phase (deg) | | | 99.4 | | | +/- 20.0 | | |
| ph/seg (deg) | RMS | Theor. | Amplitude | | 0.155 +/- 0.027 | | 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 | | | |
| amp/seg (%) | 41.9 | 34.6 | Search (2048X64) | | 0.098 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | SampCntNorm: enabled | | mb window (us) | | -0.016 0.016 | | | | | |
| ph/frq (deg) | 59.3 | 60.4 | Interp. | | 0.000 | | Bits/sample: 2x2 | | Sample rate(MISamp/s): 64 | | dr window (ns/s) | | -0.011 0.011 | | | | | |
| amp/frq (%) | 47.6 | 40.0 | Inc. seg. avg. | | 0.166 | | Data rate(Mb/s): 2048 | | nlags: 128 t_cohere infinite | | ion window (TEC) | | 0.00 0.00 | | | | | |
| | 70.7 | 69.8 | Inc. frq. avg. | | 0.157 | | | | | | | | | | | | | |

b: az 283.1 el 45.8 pa 57.8 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 10760.659 1922.875 simultaneous interpolator

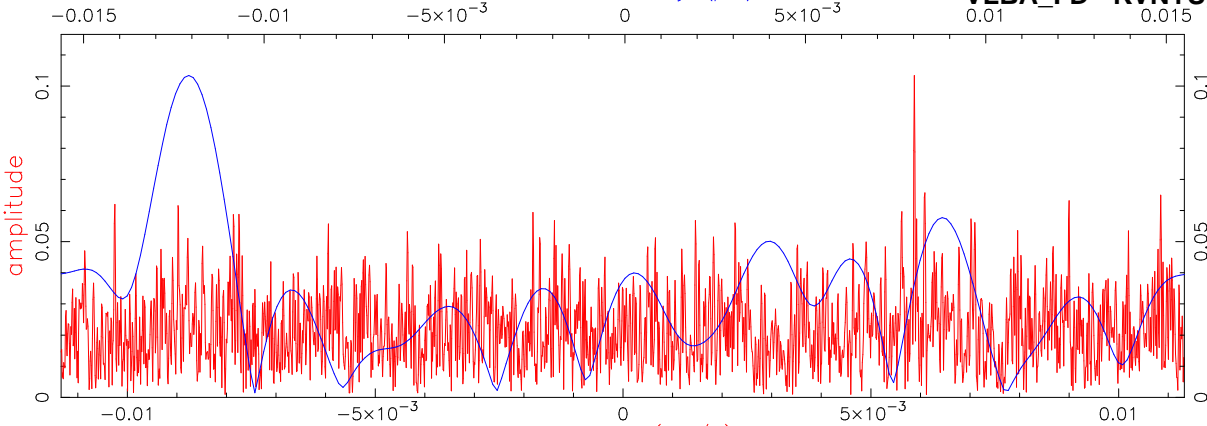
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/by..130A7B Output file: /Exps/c192a/v2/1234/No0041/by.W.43.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

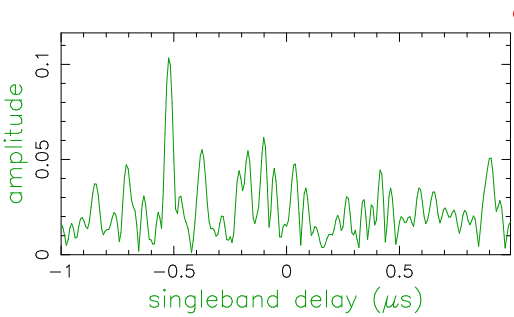
3C345.130A7B, No0041, fy
VLBA_FD - KVNYS, fgroup W, pol RR

multiband delay (μ s)

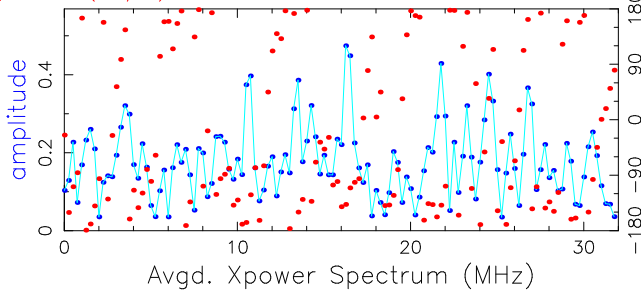
Fringe quality 0



SNR 5.8
Int time 419.830
Amp 0.117
Phase 160.0
PFD 7.5e-01
Delays (us)
SBD -0.521256
MBD -0.012063
Fringe rate (Hz)
0.507387
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

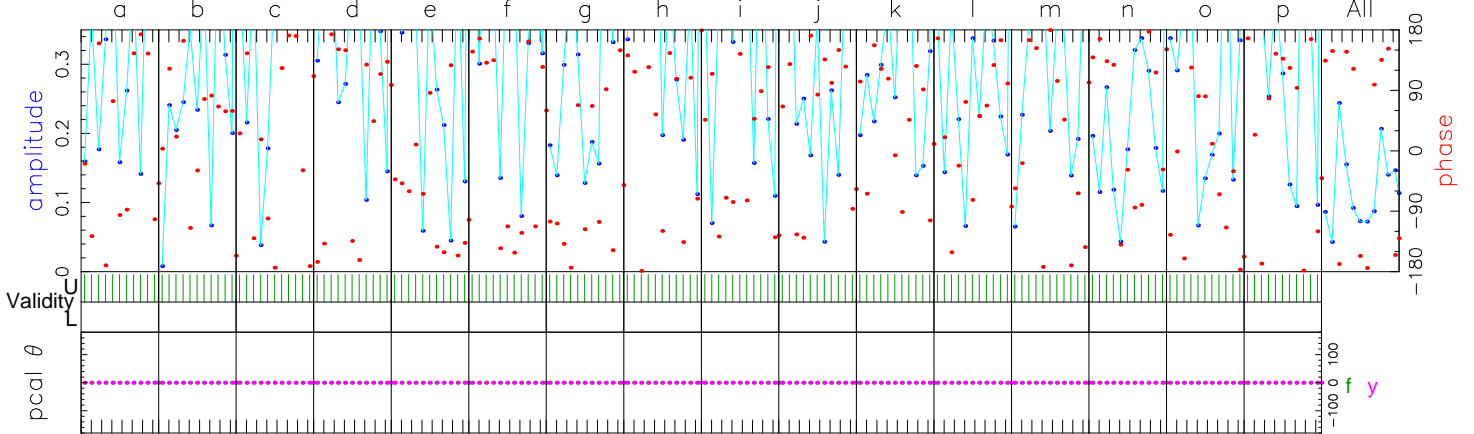


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061724
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -171.7 | 73.4 | 177.4 | 168.2 | -77.4 | 174.8 | 156.3 | 127.1 | -140.2 | 130.4 | 73.5 | 123.8 | 166.7 | -164.7 | -138.5 | 154.5 | Phase | 160.0 |
| | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.3 | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | Ampl. | 0.1 |
| | 217.8 | 209.7 | 141.2 | 63.1 | 43.4 | 60.9 | 76.2 | 118.0 | 88.7 | 40.1 | 112.9 | 242.4 | 25.9 | 71.8 | 131.5 | 63.4 | Sbd box | 62.3 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | |

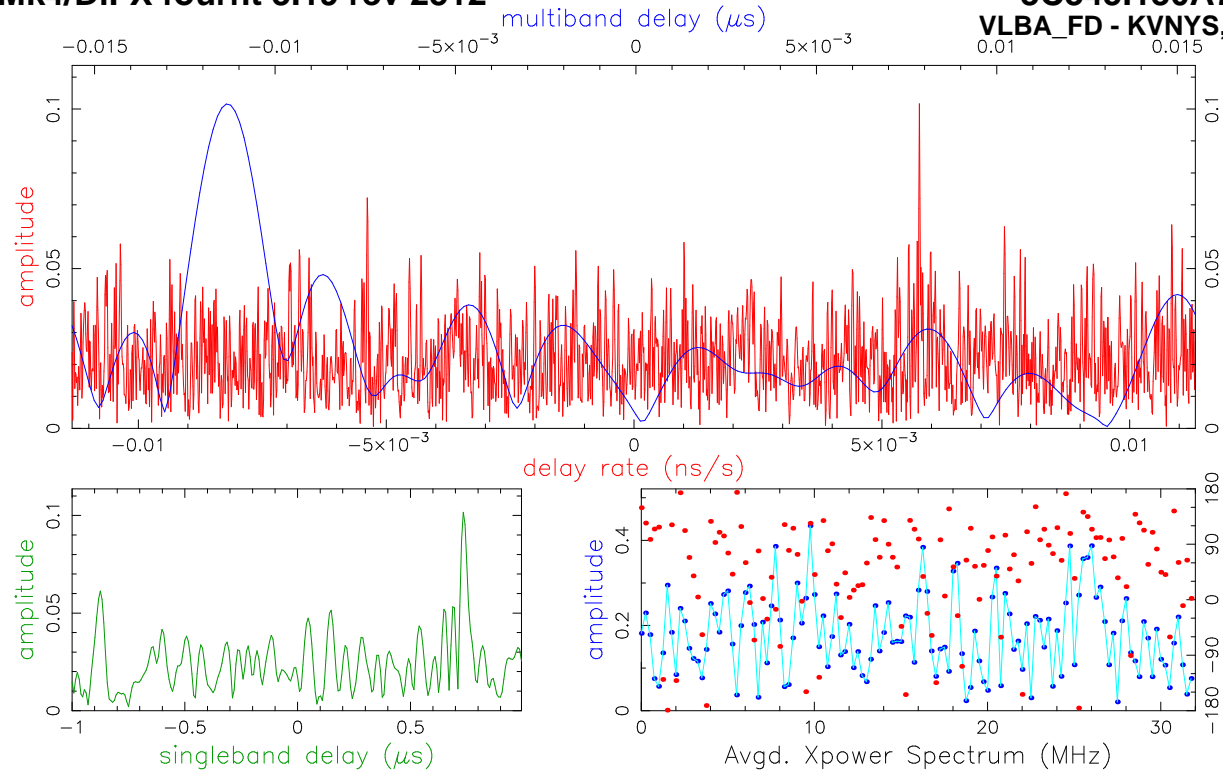
Group delay (usec)(sbd) -6.84730776625E+03 Apriori delay (usec) -6.84679570343E+03 Resid mbdelay (usec) -1.20628E-02 +/- 1.9E-04
 Sband delay (usec) -6.84731695943E+03 Apriori clock (usec) -2.8738874E+01 Resid sbdelay (usec) -5.21256E-01 +/- 3.0E-03
 Phase delay (usec) -6.84679569827E+03 Apriori clockrate (us/s) -1.9094950E-07 Resid phdelay (usec) 5.16060E-06 +/- 6.3E-07
 Delay rate (us/s) -1.73716335817E+00 Apriori rate (us/s) -1.73716924843E+00 Resid rate (us/s) 5.89026E-06 +/- 2.6E-09
 Total phase (deg) -161.7 Apriori accel (us/s/s) 2.90434798734E-05 Resid phase (deg) 160.0 +/- 19.7

RMS Theor. Amplitude 0.117 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 34.1 34.0 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 59.3 59.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 55.6 39.3 Inc. seg. avg. 0.117 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 72.3 68.6 Inc. frq. avg. 0.121 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 301.9 el 27.8 pa 71.6 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 12992.234 1061.320 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/fy..130A7B Output file: /Exps/c192a/v2/1234/No0041/fy.W.110.130A7B

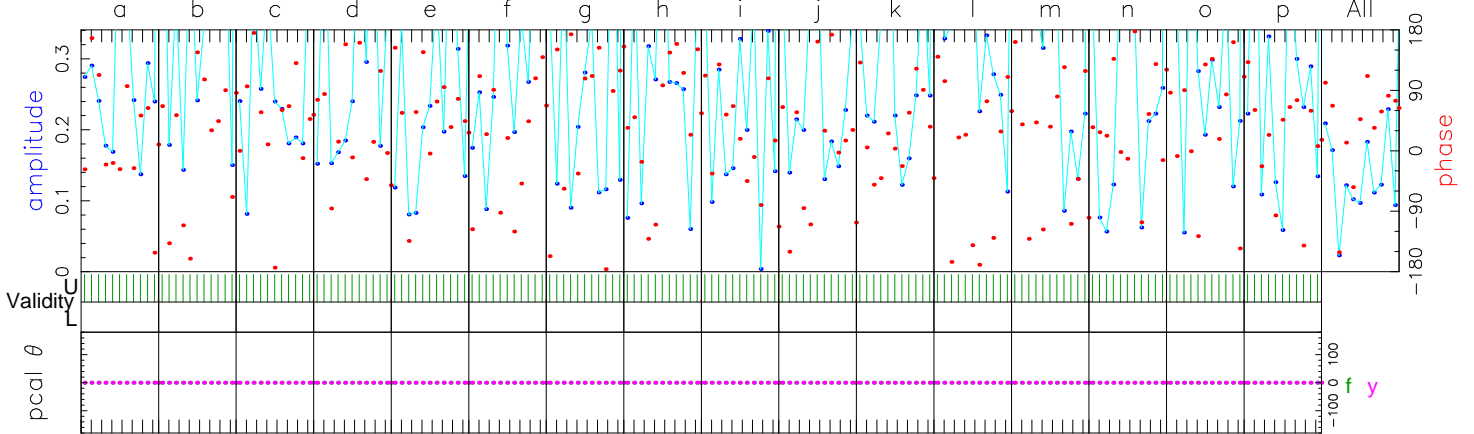
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, fy
VLBA_FD - KVNYS, fgroup W, pol LR



Fringe quality 0
SNR 5.7
Int time 419.830
Amp 0.114
Phase 68.5
PFD 9.4e-01
Delays (us)
SBD 0.735788
MBD -0.011328
Fringe rate (Hz) 0.496772
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061730
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|--|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | |
| Group delay (usec)(sbd) | | | -6.84605703142E+03 | | | | | | | | | | | | | | | |
| Sband delay (usec) | | | -6.84605991543E+03 | | | | | | | | | | | | | | | |
| Phase delay (usec) | | | -6.84679570122E+03 | | | | | | | | | | | | | | | |
| Delay rate (us/s) | | | -1.73716348140E+00 | | | | | | | | | | | | | | | |
| Total phase (deg) | | | | | -253.2 | | | | | | | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | | | | | | | | | |
| Pcal mode: MANUAL, MANUAL | | | | | | | | | | | | | | | | | | |
| Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | | | | | | | | | |
| Sample rate(MISamp/s): 64 | | | | | | | | | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | | | | | | | | | |
| nlags: 128 | | | | | | | | | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | | | | | | | | | |
| sb window (us) | | | | | | | | | | | | | | | | | | |
| mb window (us) | | | | | | | | | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | | | | | | | | | |
| pcal period (AP's) 5, 5 | | | | | | | | | | | | | | | | | | |
| pcal window (us) | | | | | | | | | | | | | | | | | | |
| pcal window (ns/s) | | | | | | | | | | | | | | | | | | |
| pcal window (TEC) | | | | | | | | | | | | | | | | | | |

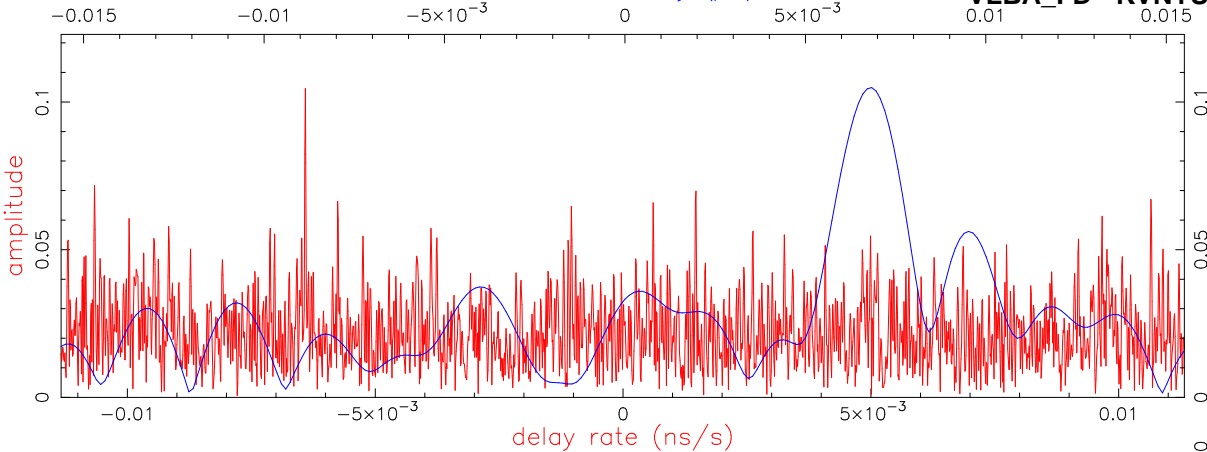
ph/seg (deg) 62.2 34.7 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 67.5 60.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 35.3 40.1 Inc. seg. avg. 0.127 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 47.4 70.0 Inc. frq. avg. 0.106 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 301.9 el 27.8 pa 71.6 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 12992.234 1061.320 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/fy..130A7B Output file: /Exps/c192a/v2/1234/No0041/fy.W.133.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

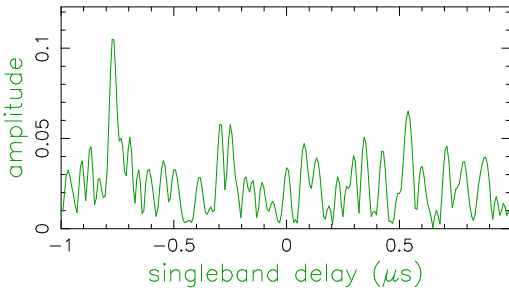
3C345.130A7B, No0041, fy
VLBA_FD - KVNYS, fgroup W, pol RL

multiband delay (μ s)

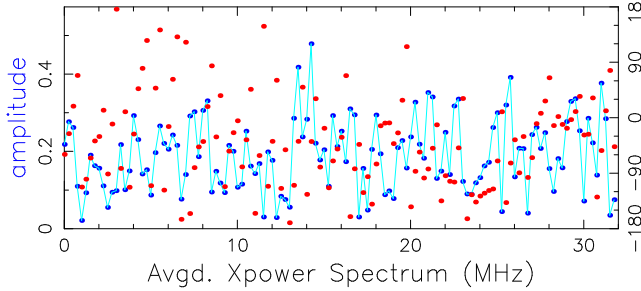
Fringe quality 0



SNR 6.0
Int time 419.830
Amp 0.123
Phase 155.0
PFD 3.8e-01
Delays (us)
SBD -0.769667
MBD 0.006721
Fringe rate (Hz)
-0.553115
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

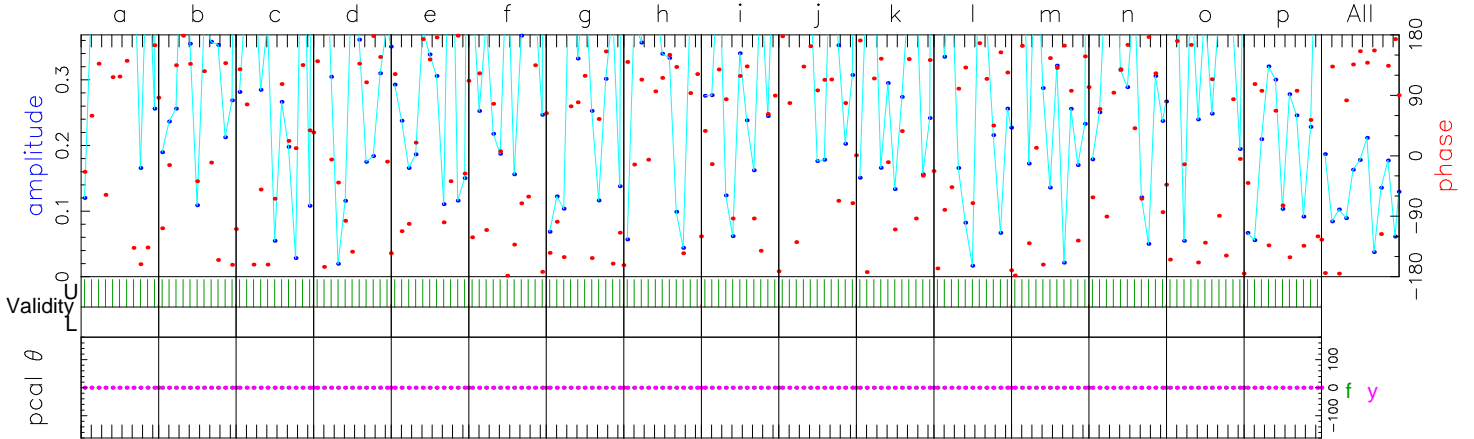


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061736
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -6.84757023273E+03 | Apriori delay (usec) | -6.84679570343E+03 | Resid mbdelay (usec) | 6.72070E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | -6.84756537043E+03 | Apriori clock (usec) | -2.8738874E+01 | Resid sbdelay (usec) | -7.69667E-01 | +/- | 2.9E-03 |
| Phase delay (usec) | -6.84679569843E+03 | Apriori clockrate (us/s) | -1.9094950E-07 | Resid phdelay (usec) | 4.99780E-06 | +/- | 6.1E-07 |
| Delay rate (us/s) | -1.73717566955E+00 | Apriori rate (us/s) | -1.73716924843E+00 | Resid rate (us/s) | -6.42112E-06 | +/- | 2.5E-09 |
| Total phase (deg) | -166.7 | Apriori accel (us/s/s) | 2.90434798734E-05 | Resid phase (deg) | 155.0 | +/- | 19.1 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|------------------------|-----------------------------|----------------------|----------------|--------------|
| ph/seg (deg) | 39.4 | Theor. | 33.0 | Amplitude | 0.123 +/- 0.020 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 55.2 | | 57.6 | Search (2048X64) | 0.103 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 39.3 | | 38.1 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.016 0.016 |
| amp/frq (%) | 46.8 | | 66.5 | Inc. seg. avg. | 0.127 | Sample rate(MISamp/s): | 64 | dr window (ns/s) | -0.011 0.011 | |
| | | | | Inc. frq. avg. | 0.118 | Data rate(Mb/s): | 2048 | ion window (TEC) | 0.00 0.00 | |

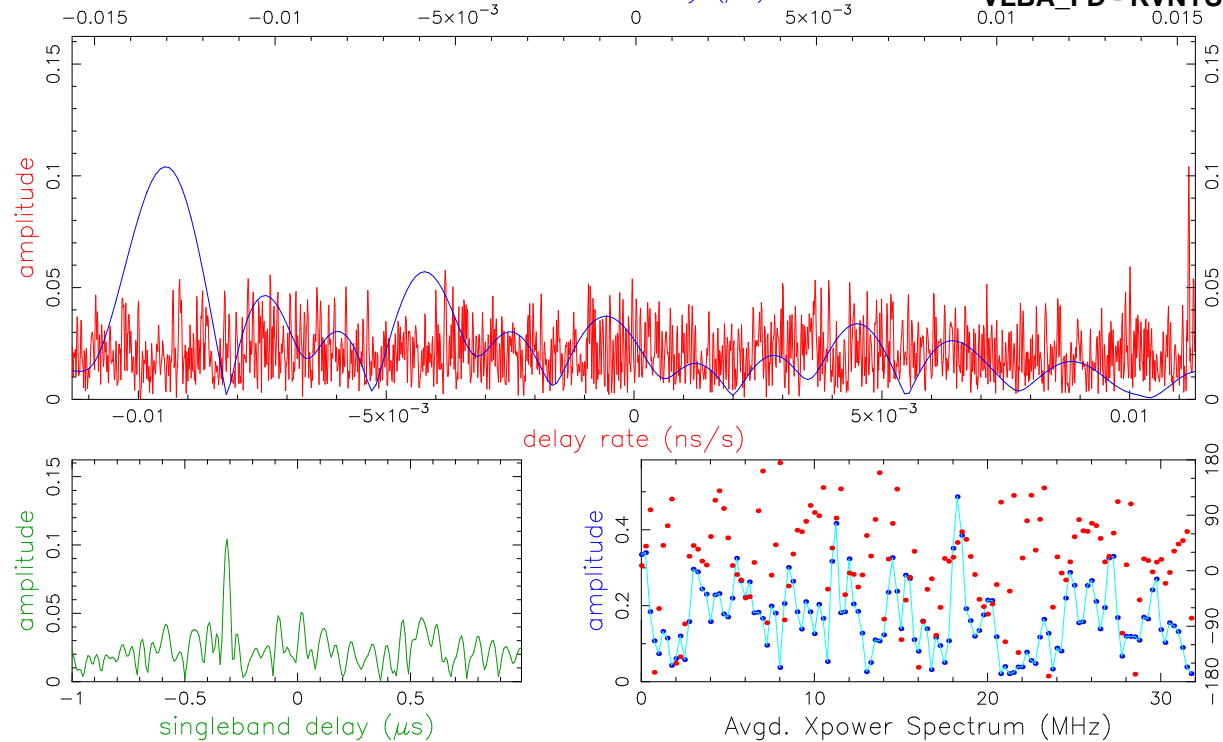
f: az 301.9 el 27.8 pa 71.6 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 12992.234 1061.320 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/fy..130A7B Output file: /Exps/c192a/v2/1234/No0041/fy.W.154.130A7B

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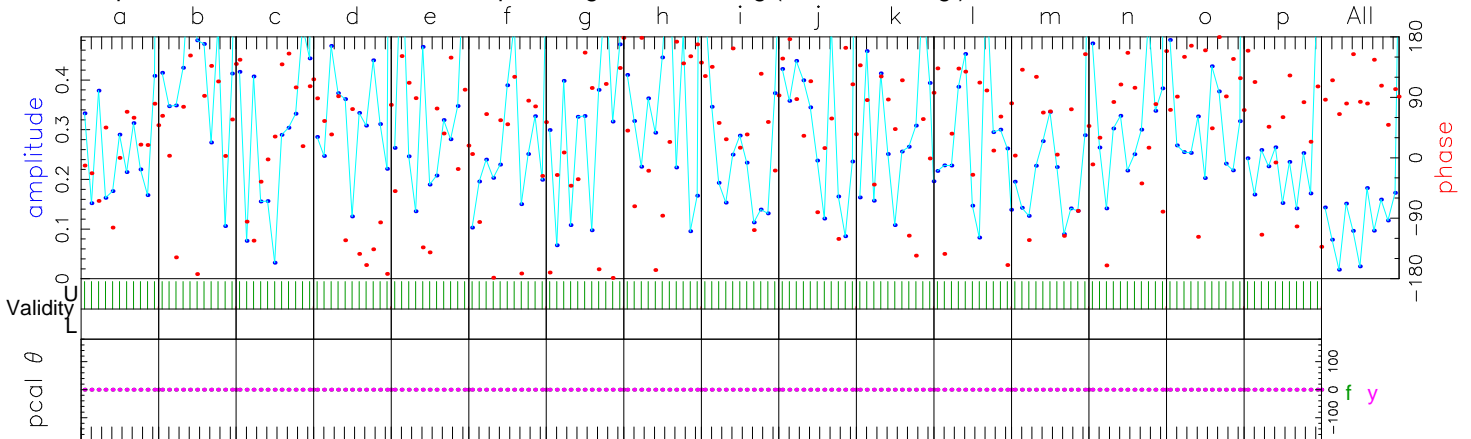
3C345.130A7B, No0041, fy
VLBA_FD - KVNYS, fgroup W, pol LL

multiband delay (μ s)



Fringe quality 0
SNR 5.9
Int time 419.830
Amp 0.162
Phase 96.7
PFD 7.0e-01
Delays (us)
SBD -0.313890
MBD -0.013033
Fringe rate (Hz) 0.965973
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061718
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

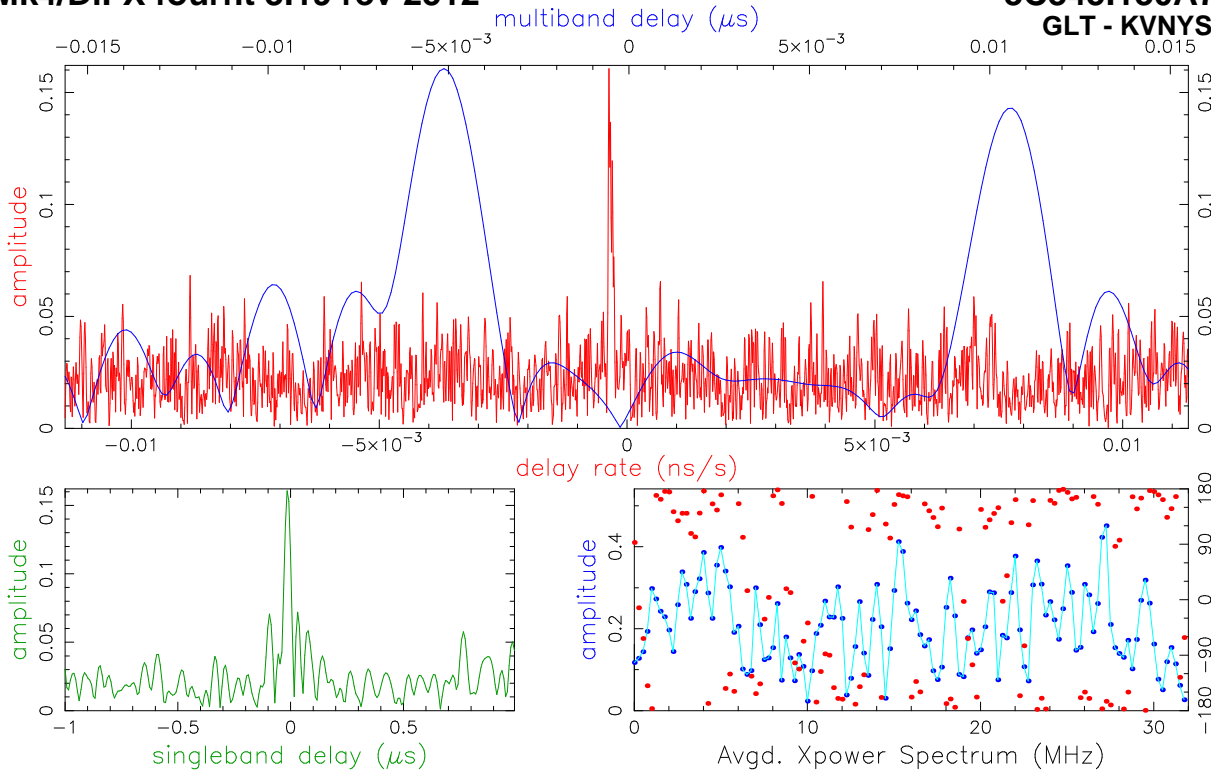
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-----------------------------|---|----------|------------------|--|-----------------|----------|--|----------|-----------------------|----------------------|-------------------|----------|------------------|----------|----------|---------------------------|------------|----------|------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | Phase | 96.7 |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Ampl. | 0.2 |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Sbd box | 88.8 |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | APs used | |
| f:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | ManI PC | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | |
| | | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -6.84712123594E+03 | | | Apriori delay (usec) | | | -6.84679570343E+03 | | | Resid mbdelay (usec) | | | -1.30325E-02 | | | +/- 1.8E-04 | | | |
| Sband delay (usec) | -6.84710959343E+03 | | | Apriori clock (usec) | | | -2.8738874E+01 | | | Resid sbdelay (usec) | | | -3.13890E-01 | | | +/- 2.9E-03 | | | |
| Phase delay (usec) | -6.84679570031E+03 | | | Apriori clockrate (us/s) | | | -1.9094950E-07 | | | Resid phdelay (usec) | | | 3.11898E-06 | | | +/- 6.3E-07 | | | |
| Delay rate (us/s) | -1.73715803445E+00 | | | Apriori rate (us/s) | | | -1.73716924843E+00 | | | Resid rate (us/s) | | | 1.12140E-05 | | | +/- 2.6E-09 | | | |
| Total phase (deg) | -225.0 | | | Apriori accel (us/s/s) | | | 2.90434798734E-05 | | | Resid phase (deg) | | | 96.7 | | | +/- 19.6 | | | |
| | RMS | Theor. | Amplitude | | 0.162 +/- 0.028 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | | | | | | | | |
| ph/seg (deg) | 30.5 | 33.9 | Search (2048X64) | | 0.100 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | | -1.000 | | 1.000 | | | | | | |
| amp/seg (%) | 68.9 | 59.2 | Interp. | | 0.000 | | Bits/sample: 2x2 | | SampCntNorm: enabled | | mb window (us) | | -0.016 | | 0.016 | | | | |
| ph/frq (deg) | 38.4 | 39.2 | Inc. seg. avg. | | 0.155 | | Sample rate(MISamp/s): 64 | | dr window (ns/s) | | -0.011 | | 0.011 | | | | | | |
| amp/frq (%) | 49.5 | 68.3 | Inc. frq. avg. | | 0.157 | | Data rate(Mb/s): 2048 | | nlags: 128 | | t_cohere infinite | | ion window (TEC) | | 0.00 | | 0.00 | | |
| f: az 301.9 el 27.8 pa 71.6 | y: az 70.3 el 50.4 pa -76.7 | | | u,v (fr/asec) 12992.234 1061.320 | | | | | | | | | | | | simultaneous interpolator | | | |
| Control file: cf_1234_gmva | Input file: /Exps/c192a/v2/1234/No0041/fy..130A7B | | | Output file: /Exps/c192a/v2/1234/No0041/fy.W.89.130A7B | | | | | | | | | | | | | | | |

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, gy
GLT - KVNYS, fgroup W, pol LR

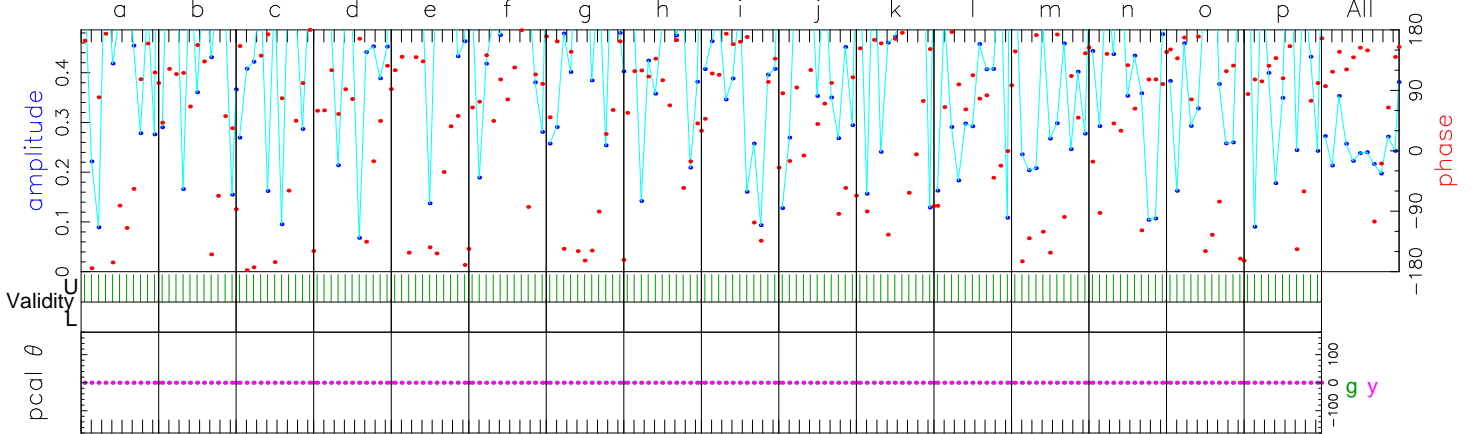


Fringe quality 9

SNR 9.1
Int time 419.605
Amp 0.162
Phase 128.7
PFD 4.4e-11
Delays (us)
SBD -0.013398
MBD -0.005116
Fringe rate (Hz)
-0.031774
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

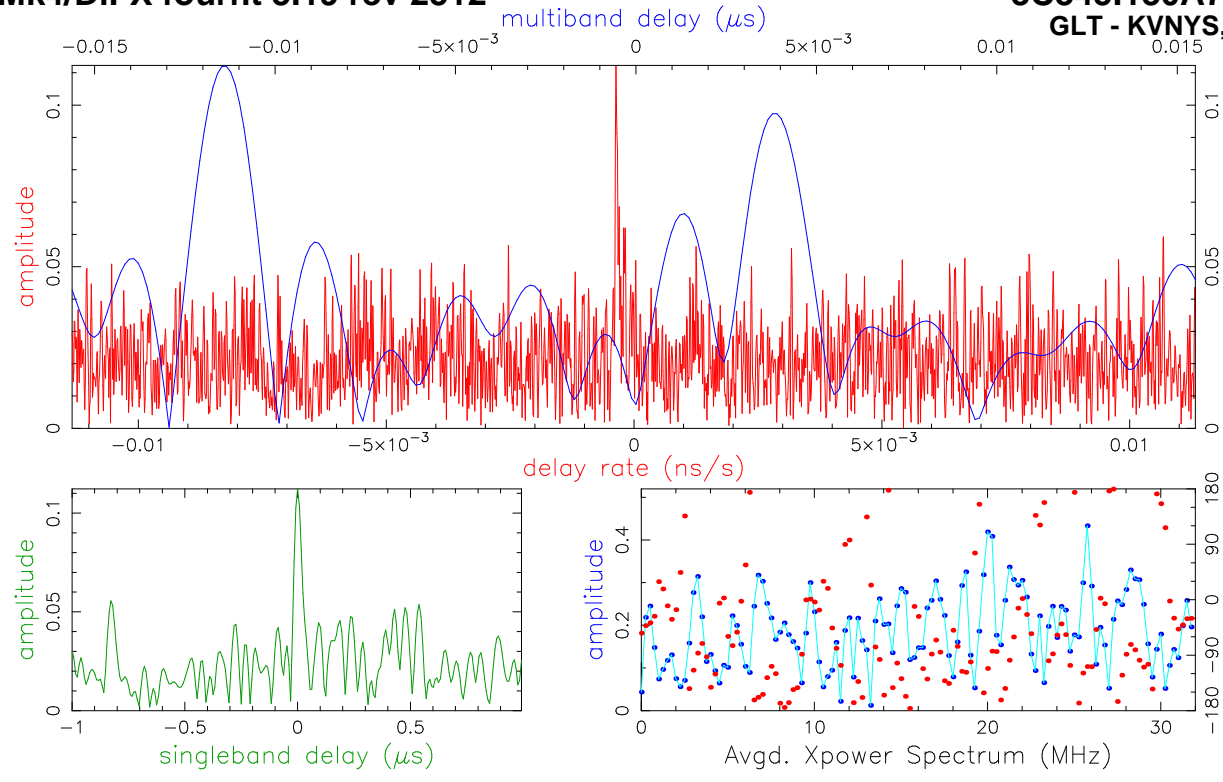
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061730
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



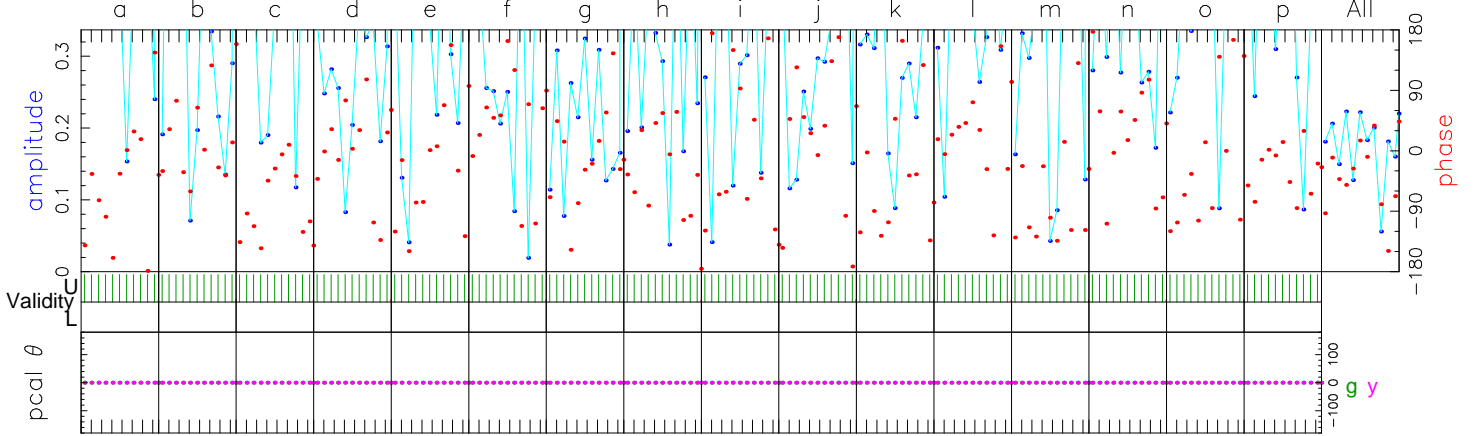
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|----------|------------|----------|
| | -169.1 | 106.5 | 167.6 | 76.1 | 145.9 | 103.7 | -172.6 | 86.0 | 136.4 | 62.3 | 167.9 | 53.4 | -176.9 | 78.9 | -171.5 | 114.7 | 128.7 | Phase |
| | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | Ampl. |
| | 127.8 | 127.7 | 127.9 | 127.4 | 127.0 | 127.7 | 37.9 | 126.9 | 50.2 | 187.9 | 60.4 | 138.7 | 65.1 | 86.3 | 127.2 | 127.9 | 127.3 | Sbd box |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used |
| g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs |
| g:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase |
| g:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| g | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks |
| | | | | | | | | | | | | | | | | | | Chan ids |
| | | | | | | | | | | | | | | | | | | Tracks |
| Group delay (usec)(sbd) | -4.88314761069E+03 | | | Apriori delay (usec) | | | -4.88314249472E+03 | | | Resid mbdelay (usec) | | | -5.11597E-03 | | | +/- | 1.2E-04 | |
| Sband delay (usec) | -4.88315589272E+03 | | | Apriori clock (usec) | | | -2.7891859E+01 | | | Resid sbdelay (usec) | | | -1.33980E-02 | | | +/- | 1.9E-03 | |
| Phase delay (usec) | -4.88314249057E+03 | | | Apriori clockrate (us/s) | | | -2.4999994E-08 | | | Resid phdelay (usec) | | | 4.14964E-06 | | | +/- | 4.1E-07 | |
| Delay rate (us/s) | -9.85192109986E-01 | | | Apriori rate (us/s) | | | -9.85191741121E-01 | | | Resid rate (us/s) | | | -3.68865E-07 | | | +/- | 1.7E-09 | |
| Total phase (deg) | -49.5 | | | Apriori accel (us/s/s) | | | 5.20749378207E-05 | | | Resid phase (deg) | | | 128.7 | | | +/- | 12.6 | |

ph/seg (deg) 63.6 21.9 Search (2048X64) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 59.5 38.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 50.5 25.3 Inc. seg. avg. 0.232 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 48.8 44.1 Inc. frq. avg. 0.208 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 301.9 el 33.5 pa 14.8 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 7435.956 5792.324 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/gy..130A7B Output file: /Exps/c192a/v2/1234/No0041/gy.W.132.130A7B



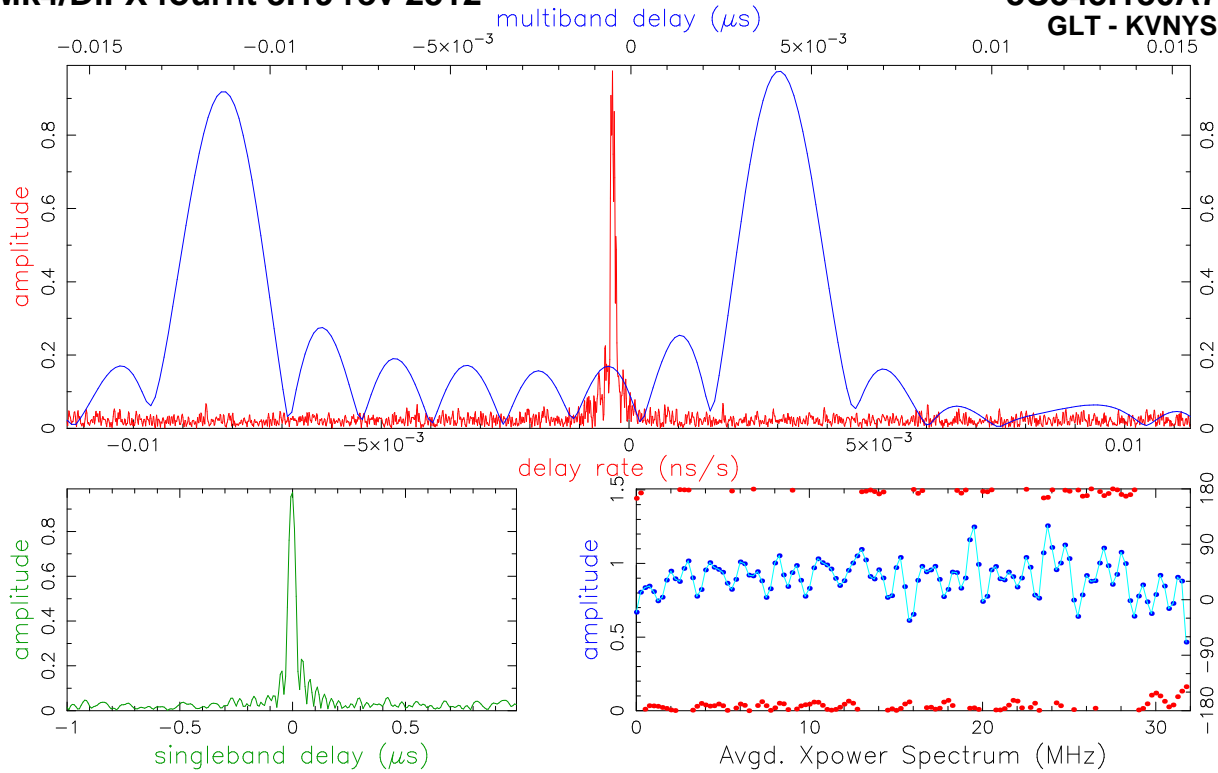
Fringe quality 0
SNR 6.3
Int time 419.610
Amp 0.112
Phase -33.0
PFD 8.4e-02
Delays (us)
SBD -0.000082
MBD -0.011404
Fringe rate (Hz)
-0.031571
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061735
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -69.7 | 16.7 | -75.7 | 8.4 | -66.6 | 30.6 | -13.5 | -24.3 | -92.2 | 147.3 | -106.9 | 24.5 | -73.0 | 21.9 | -79.0 | -28.6 | | Phase -33.0 | | | | | |
| | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.4 | | Ampl. 0.1 | | | | | |
| | 147.5 | 128.7 | 25.0 | 249.8 | 245.2 | 67.0 | 184.3 | 78.0 | 173.8 | 152.7 | 66.6 | 128.8 | 82.7 | 162.9 | 144.0 | 128.5 | | Sbd box 129.0 | | | | | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | | | | | |
| g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | PC freqs | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| g:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | | | | | |
| g:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | | | | | |
| g | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -4.88315389822E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -4.88314249472E+03 | Resid mbdelay (usec) | -1.14035E-02 | +/- | 1.7E-04 |
| Sband delay (usec) | | | -4.88314257622E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | -2.7891859E+01 | Resid sbdelay (usec) | -8.15000E-05 | +/- | 2.7E-03 |
| Phase delay (usec) | | | -4.88314249578E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.4999994E-08 | Resid phdelay (usec) | -1.06497E-06 | +/- | 5.9E-07 |
| Delay rate (us/s) | | | -9.85192107628E-01 | | | | | | | | | | | | | | | Apriori rate (us/s) | -9.85191741121E-01 | Resid rate (us/s) | -3.66506E-07 | +/- | 2.4E-09 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 5.20749378207E-05 | Resid phase (deg) | -33.0 | +/- | 18.2 |

ph/seg (deg) 51.8 31.6 Amplitude 0.112 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 67.5 55.1 Search (2048X64) 0.110 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 67.8 36.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 78.5 63.6 Inc. seg. avg. 0.150 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 g: az 301.9 el 33.5 pa 14.8 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 7435.956 5792.324 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/gy..130A7B Output file: /Exps/c192a/v2/1234/No0041/gy.W.145.130A7B simultaneous interpolator

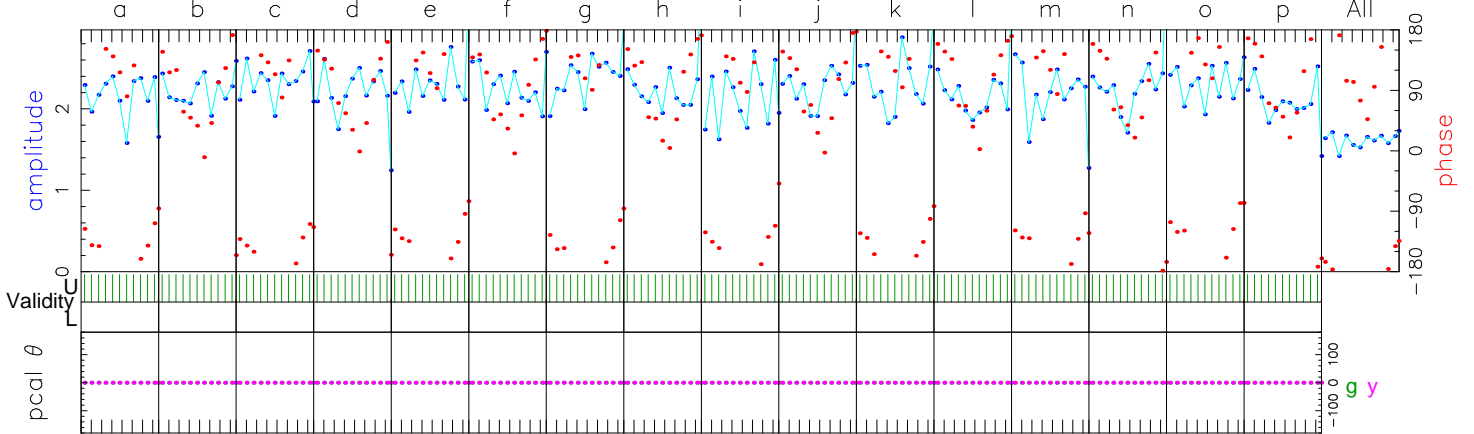


Fringe quality 2

SNR 55.5
Int time 419.605
Amp 0.990
Phase 142.4
PFD 0.0e+00
Delays (us)
SBD -0.003087
MBD 0.004106
Fringe rate (Hz)
-0.029125
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061719
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

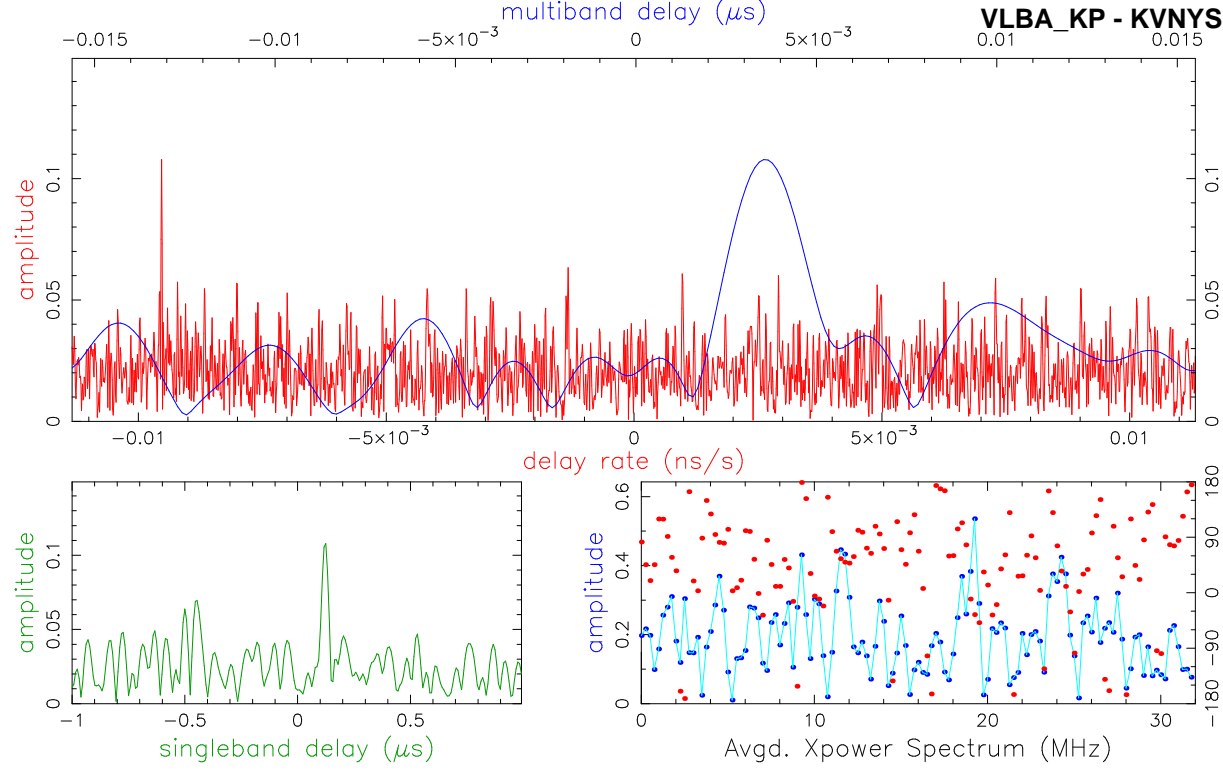


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -175.2 | 89.9 | -178.5 | 95.4 | -174.5 | 91.5 | 176.5 | 96.1 | 178.7 | 97.1 | -174.4 | 107.2 | -171.2 | 106.3 | -160.3 | 115.8 | | Phase | 142.4 | | | | | |
| | 1.3 | 1.4 | 1.4 | 1.4 | 1.3 | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 1.4 | 1.4 | 1.2 | 1.4 | 1.3 | 1.2 | | Ampl. | 1.3 | | | | | |
| | 128.5 | 128.7 | 128.9 | 128.7 | 128.5 | 128.4 | 128.5 | 128.3 | 128.4 | 128.5 | 128.6 | 128.6 | 128.8 | 128.6 | 128.5 | 128.7 | | Sbd box | 128.6 | | | | | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | | | | | | |
| g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | PC freqs | | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | | |
| g:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | | | | | | |
| g:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC | | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | | | | | | |
| g | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | | |
| g | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | | | | | | |
| | | | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -4.88313838905E+03 | | | | | | | | | | | | | | | | Apriori delay (usec) | -4.88314249472E+03 | Resid mbdelay (usec) | 4.10567E-03 | +/- | 1.9E-05 |
| Sband delay (usec) | | | -4.88314558122E+03 | | | | | | | | | | | | | | | | Apriori clock (usec) | -2.7891859E+01 | Resid sbdelay (usec) | -3.08650E-03 | +/- | 3.1E-04 |
| Phase delay (usec) | | | -4.88314249013E+03 | | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.4999994E-08 | Resid phdelay (usec) | 4.59211E-06 | +/- | 6.7E-08 |
| Delay rate (us/s) | | | -9.85192079238E-01 | | | | | | | | | | | | | | | | Apriori rate (us/s) | -9.85191741121E-01 | Resid rate (us/s) | -3.38117E-07 | +/- | 2.7E-10 |
| Total phase (deg) | | | | | -35.8 | | | | | | | | | | | | | | Apriori accel (us/s/s) | 5.20749378207E-05 | Resid phase (deg) | 142.4 | +/- | 2.1 |

ph/seg (deg) 54.1 3.6 Search (2048X64) 0.904 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 63.3 6.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 46.3 4.1 Inc. seg. avg. 1.609 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 35.7 7.2 Inc. frq. avg. 1.334 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
g: az 301.9 el 33.5 pa 14.8 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 7435.956 5792.324 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/gy..130A7B Output file: /Exps/c192a/v2/1234/No0041/gy.W.93.130A7B

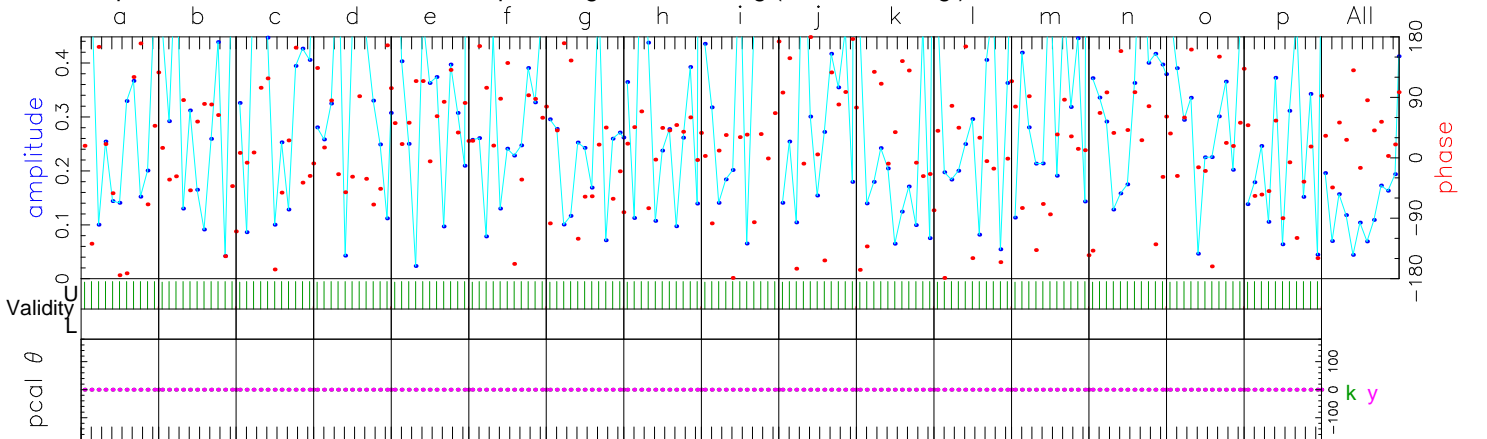
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ky
VLBA_KP - KVNYS, fgroup W, pol LL



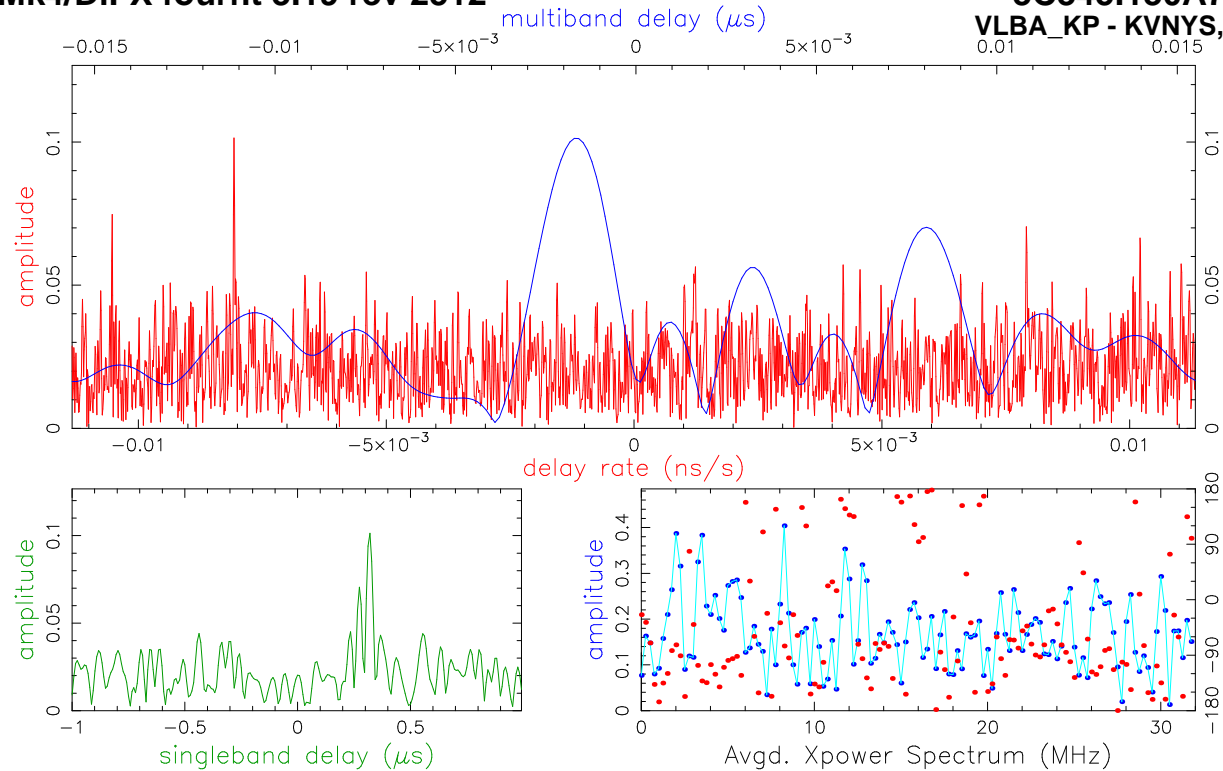
Fringe quality 0
SNR 6.1
Int time 418.958
Amp 0.149
Phase 31.6
PFD 2.0e-01
Delays (us)
SBD 0.121938
MBD 0.003607
Fringe rate (Hz) -0.822243
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061739
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | | | | |
| k:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | ManI PC | | | | | |
| k:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC amp | | | | | |
| k | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -4.82645794236E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -4.82658654947E+03 | Resid mbdelay (usec) | 3.60711E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | | | -4.82646461147E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | -2.9599121E+01 | Resid sbdelay (usec) | 1.21938E-01 | +/- | 2.8E-03 |
| Phase delay (usec) | | | -4.82658654845E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.9457898E-07 | Resid phdelay (usec) | 1.01910E-06 | +/- | 6.0E-07 |
| Delay rate (us/s) | | | -1.68765643954E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.68764689411E+00 | Resid rate (us/s) | -9.54543E-06 | +/- | 2.5E-09 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 1.97193452085E-05 | Resid phase (deg) | 31.6 | +/- | 18.7 |

ph/seg (deg) 45.5 32.4 Search (2048X64) 0.104 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 53.8 56.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 55.3 37.4 Inc. seg. avg. 0.152 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 61.6 65.2 Inc. frq. avg. 0.152 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 299.2 el 34.1 pa 74.3 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 12607.581 590.376 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ky..130A7B Output file: /Exps/c192a/v2/1234/No0041/ky.W.162.130A7B

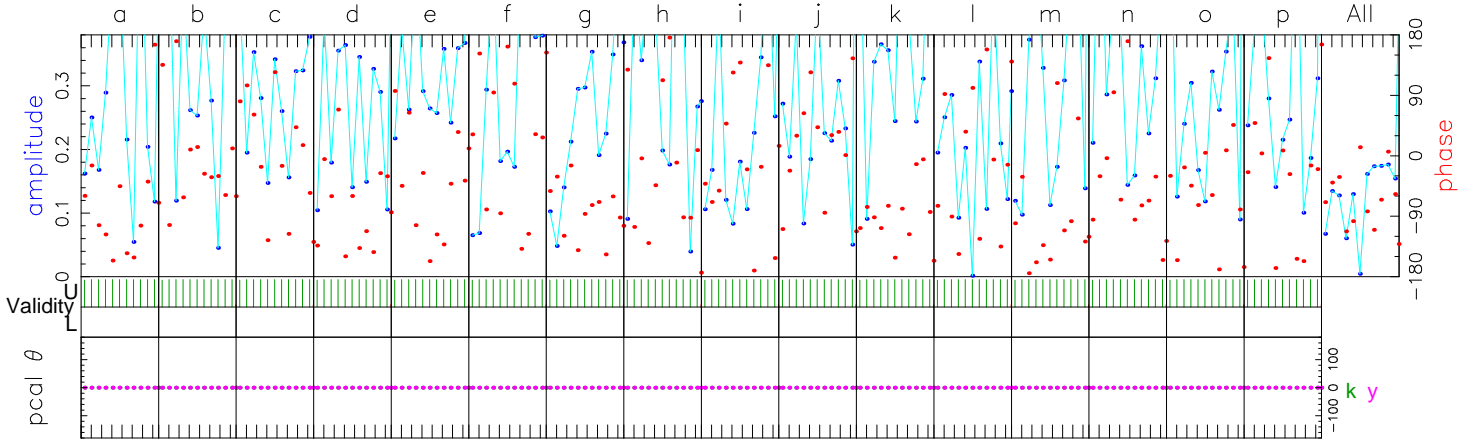


Fringe quality 0

SNR 5.7
Int time 418.958
Amp 0.127
Phase -65.2
PFD 9.5e-01
Delays (us)
SBD 0.318753
MBD -0.001656
Fringe rate (Hz)
-0.696254
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061744
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -96.8 | -35.7 | 34.3 | -84.5 | -57.9 | -150.1 | -85.9 | -59.7 | -102.7 | 18.1 | -88.7 | -66.6 | -138.8 | -64.5 | -29.4 | -15.3 | | Phase -65.2 | | | | | |
| | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.0 | 0.3 | 0.2 | 0.0 | 0.2 | 0.4 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | | Ampl. 0.1 | | | | | |
| | 178.1 | 212.7 | 100.6 | 159.4 | 29.3 | 90.8 | 45.2 | 216.9 | 174.4 | 96.6 | 169.9 | 203.0 | 32.1 | 103.5 | 40.1 | 101.1 | | Sbd box 169.8 | | | | | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | | | | |
| k:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | |
| k | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids | | | | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | | | | | |
| | | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -4.82627570499E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -4.82658654947E+03 | Resid mbdelay (usec) | -1.65552E-03 | +/- | 1.9E-04 |
| Sband delay (usec) | | | -4.82626779647E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | -2.9599121E+01 | Resid sbdelay (usec) | 3.18753E-01 | +/- | 3.0E-03 |
| Phase delay (usec) | | | -4.82658655157E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.9457898E-07 | Resid phdelay (usec) | -2.10162E-06 | +/- | 6.5E-07 |
| Delay rate (us/s) | | | -1.68765497693E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.68764689411E+00 | Resid rate (us/s) | -8.08282E-06 | +/- | 2.7E-09 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 1.97193452085E-05 | Resid phase (deg) | -65.2 | +/- | 20.1 |

ph/seg (deg) 41.4 34.8
amp/seg (%) 63.8 60.8
ph/frq (deg) 52.1 40.2
amp/frq (%) 78.4 70.2

RMS Theor. Amplitude 0.127 +/- 0.022
Search (2048X64) 0.100
Interp. 0.000
Inc. seg. avg. 0.133
Inc. frq. avg. 0.134

Group delay (usec)(sbd) -4.82627570499E+03
Sband delay (usec) -4.82626779647E+03
Phase delay (usec) -4.82658655157E+03
Delay rate (us/s) -1.68765497693E+00
Total phase (deg) -198.9

Apriori delay (usec) -4.82658654947E+03
Apriori clock (usec) -2.9599121E+01
Apriori clockrate (us/s) -2.9457898E-07
Apriori rate (us/s) -1.68764689411E+00
Apriori accel (us/s/s) 1.97193452085E-05

Resid mbdelay (usec) -1.65552E-03
Resid sbdelay (usec) 3.18753E-01
Resid phdelay (usec) -2.10162E-06
Resid rate (us/s) -8.08282E-06
Resid phase (deg) -65.2

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): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

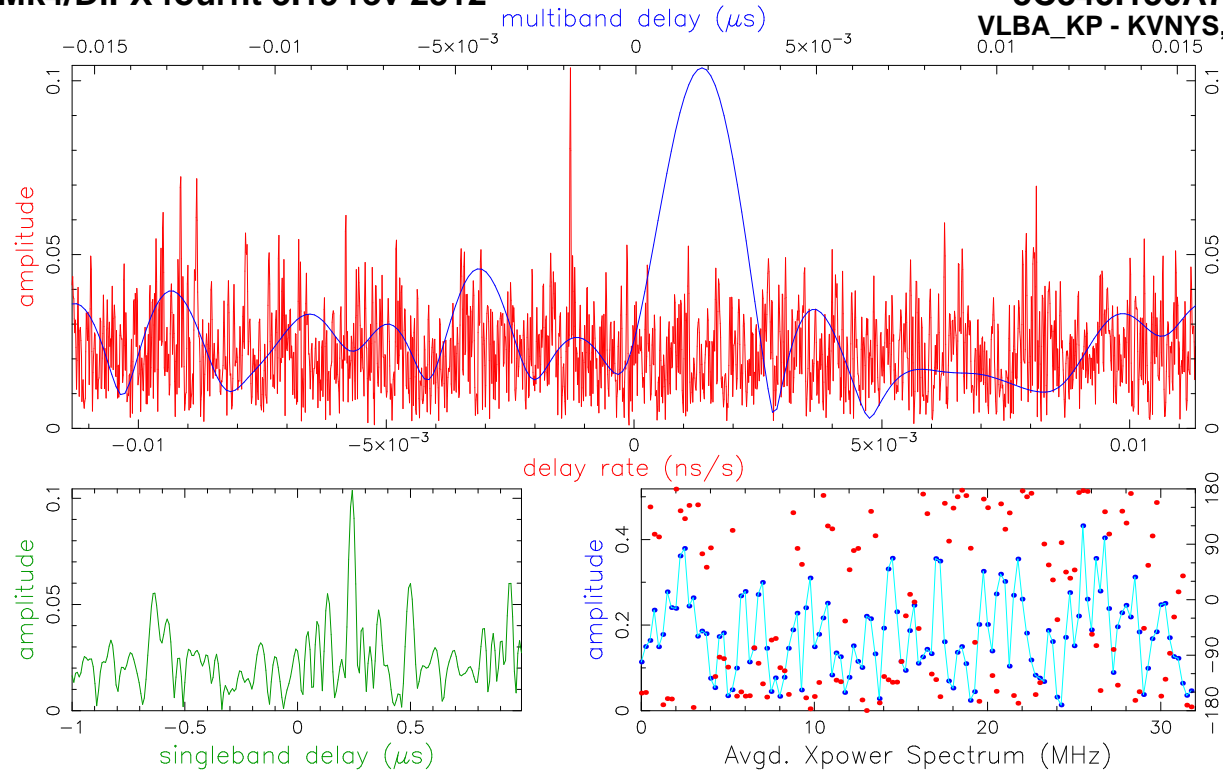
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

k: az 299.2 el 34.1 pa 74.3 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 12607.581 590.376 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ky..130A7B Output file: /Exps/c192a/v2/1234/No0041/ky.W.178.130A7B

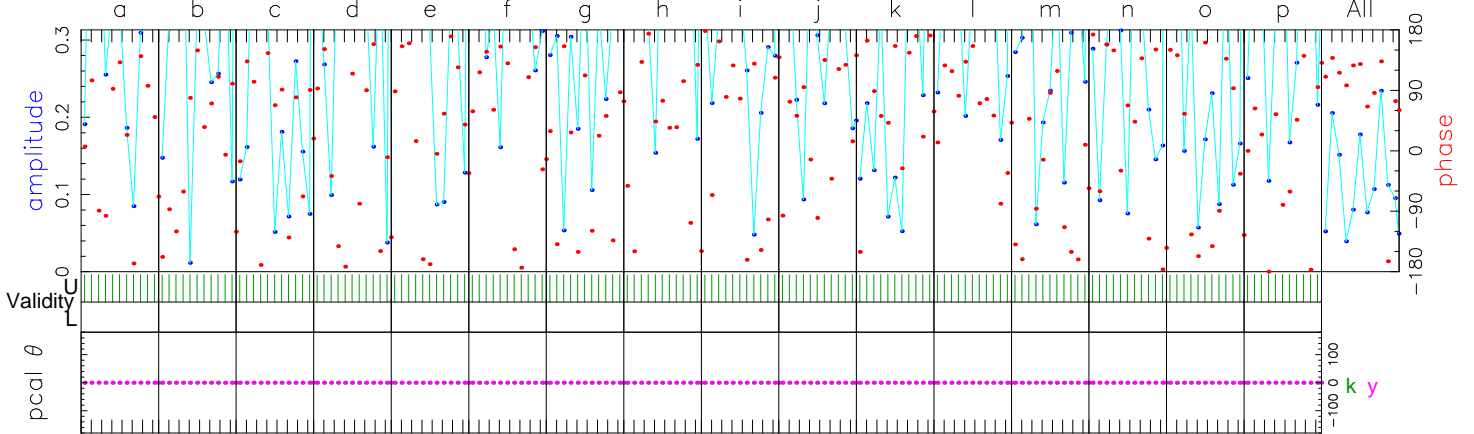
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ky
VLBA_KP - KVNYS, fgroup W, pol LR



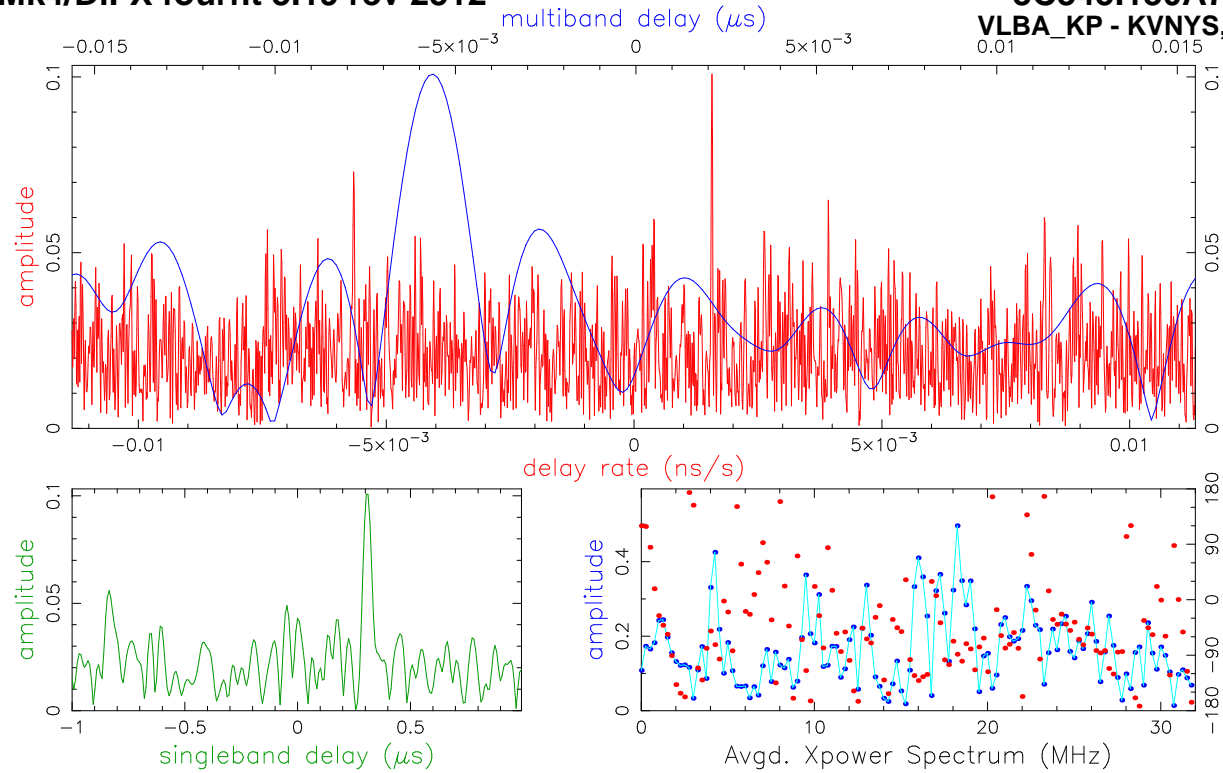
Fringe quality 0
SNR 5.8
Int time 418.958
Amp 0.104
Phase 121.8
PFD 7.8e-01
Delays (us)
SBD 0.241231
MBD 0.001830
Fringe rate (Hz)
-0.110578
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061750
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-----------------------------|----------|--------------------|----------|---|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------|-------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 121.8 | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 0.1 | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 159.9 | |
| k:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| ky | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | |
| | | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | | -4.82633471931E+03 | | | | | | | | | | | | | | | | 1.83017E-03 | +/- 1.9E-04 |
| Sband delay (usec) | | -4.82634531897E+03 | | | | | | | | | | | | | | | | 2.41231E-01 | +/- 3.0E-03 |
| Phase delay (usec) | | -4.82658654554E+03 | | | | | | | | | | | | | | | | 3.92659E-06 | +/- 6.4E-07 |
| Delay rate (us/s) | | -1.68764817781E+00 | | | | | | | | | | | | | | | | -1.28370E-06 | +/- 2.6E-09 |
| Total phase (deg) | | | | | -11.9 | | | | | | | | | | | | | 121.8 | +/- 19.7 |
| | | RMS | Theor. | Amplitude | 0.104 +/- 0.018 | | | | | | | | | | | | | | |
| ph/seg (deg) | | 35.2 | 34.1 | Search (2048X64) | 0.102 | | | | | | | | | | | | | | |
| amp/seg (%) | | 60.3 | 59.6 | Interp. | 0.000 | | | | | | | | | | | | | | |
| ph/frq (deg) | | 55.9 | 39.4 | Inc. seg. avg. | 0.103 | | | | | | | | | | | | | | |
| amp/frq (%) | | 57.3 | 68.8 | Inc. frq. avg. | 0.104 | | | | | | | | | | | | | | |
| k: az 299.2 el 34.1 pa 74.3 | | | | y: az 70.3 el 50.4 pa -76.7 | | | | | | | | | | | | | | | |
| Control file: cf_1234_gmva | | | | Input file: /Exps/c192a/v2/1234/No0041/ky..130A7B | | | | | | | | | | | | | | | |
| | | | | Output file: /Exps/c192a/v2/1234/No0041/ky.W.199.130A7B | | | | | | | | | | | | | | | |

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(MSamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00
simultaneous interpolator

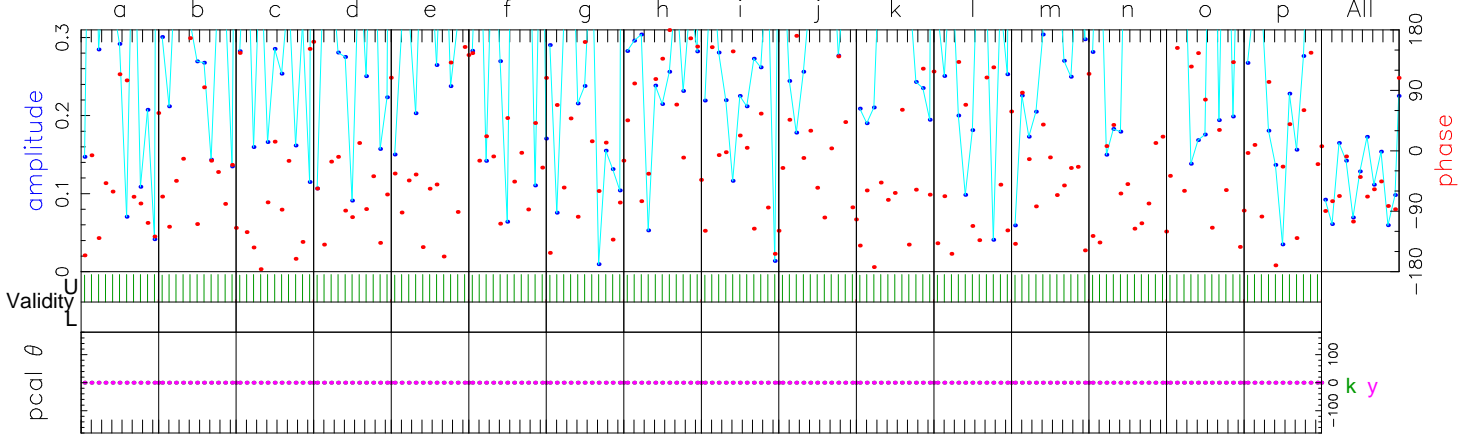


Fringe quality 0

SNR 5.7
Int time 418.958
Amp 0.103
Phase -60.9
PFD 9.1e-01
Delays (us)
SBD 0.308493
MBD -0.005645
Fringe rate (Hz) 0.135488
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061756
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

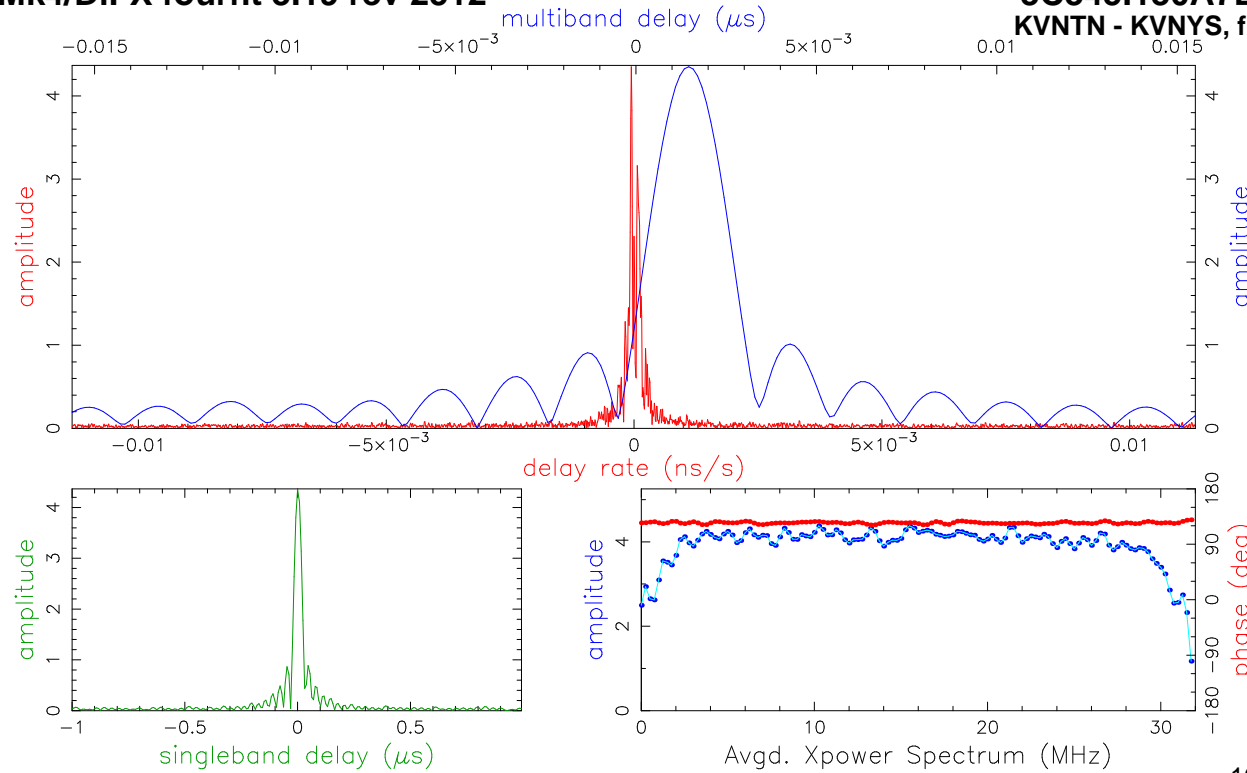


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -53.1 | -57.7 | -132.5 | -52.8 | -107.5 | -30.3 | -14.1 | 111.8 | -42.9 | -21.5 | -78.2 | -136.1 | -28.5 | -71.3 | -101.0 | 23.8 | | Phase -60.9 | | | | | |
| | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.1 | 0.1 | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | | Ampl. 0.1 | | | | | |
| | 62.9 | 45.1 | 199.8 | 101.3 | 30.3 | 167.8 | 179.6 | 96.8 | 1.8 | 71.0 | 174.7 | 159.4 | 26.0 | 166.7 | 178.2 | 234.3 | | Sbd box 168.5 | | | | | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | | | | |
| ky | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | |
| k | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | | | | | |
| | | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -4.82627969423E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -4.82658654947E+03 | Resid mbdelay (usec) | -5.64476E-03 | +/- | 1.9E-04 |
| Sband delay (usec) | | | -4.82627805697E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | -2.9599121E+01 | Resid sbdelay (usec) | 3.08493E-01 | +/- | 3.0E-03 |
| Phase delay (usec) | | | -4.82658655143E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.9457898E-07 | Resid phdelay (usec) | -1.96431E-06 | +/- | 6.4E-07 |
| Delay rate (us/s) | | | -1.68764532123E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.68764689411E+00 | Resid rate (us/s) | 1.57289E-06 | +/- | 2.7E-09 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 1.97193452085E-05 | Resid phase (deg) | -60.9 | +/- | 20.0 |

ph/seg (deg) 30.1 34.6 Search (2048X64) 0.103 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 41.3 60.4 Interp. 0.099 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 64.5 40.0 Inc. seg. avg. 0.098 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 67.4 69.7 Inc. frq. avg. 0.115 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 299.2 el 34.1 pa 74.3 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 12607.581 590.376 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ky..130A7B Output file: /Exps/c192a/v2/1234/No0041/ky.W.219.130A7B

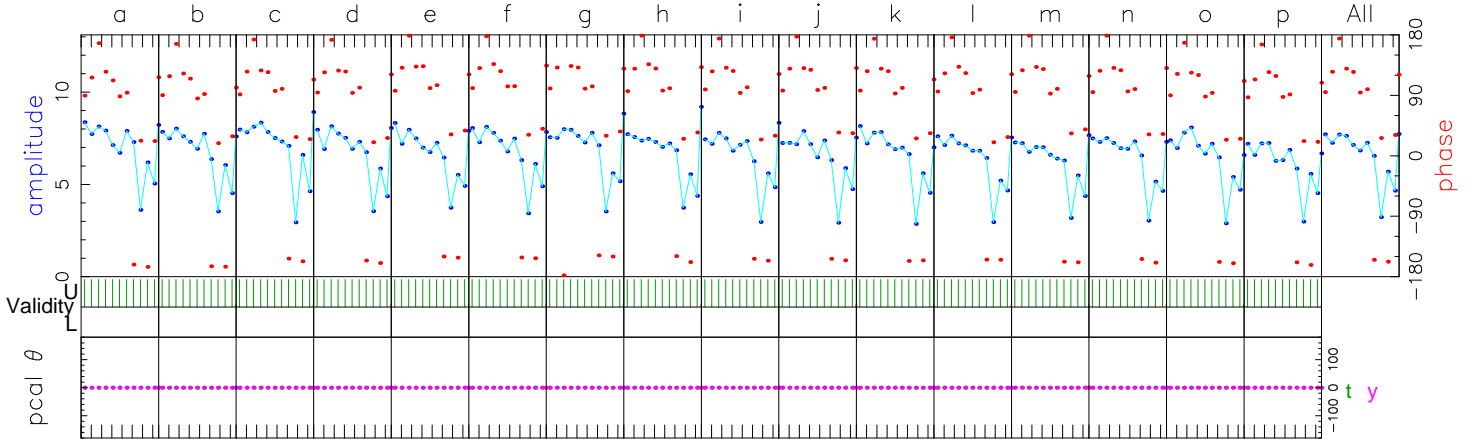
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ty
KVNTN - KVNYs, fgroup W, pol LL



Fringe quality 5
SNR 244.8
Int time 419.840
Amp 4.368
Phase 124.9
PFD 0.0e+00
Delays (us)
SBD 0.001523
MBD 0.001465
Fringe rate (Hz)
-0.004880
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061803
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

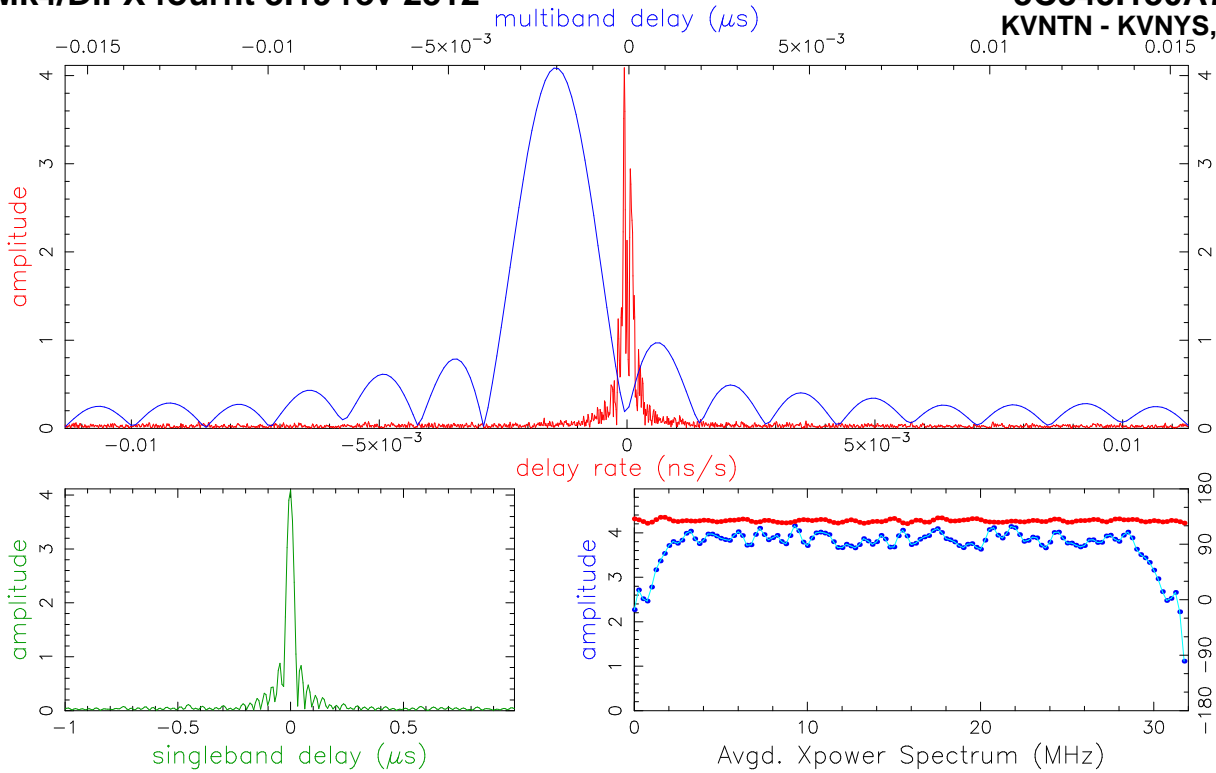


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | Phase | 124.9 | | | | |
| t | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Ampl. | 4.4 | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Sbd box | 129.2 | | | | |
| ty | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | APs used | | | | | |
| ty | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC freqs | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | | | | |
| t | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Mani PC | | | | | |
| t | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | | | | |
| t | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | | | | | |
| | | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -4.66575256834E+02 | | | | | | | | | | | | | | | Apriori delay (usec) | -4.66576721442E+02 | Resid mbdelay (usec) | 1.46461E-03 | +/- | 4.4E-06 |
| Sband delay (usec) | | | -4.66575198442E+02 | | | | | | | | | | | | | | | Apriori clock (usec) | -1.4825573E+00 | Resid sbdelay (usec) | 1.52300E-03 | +/- | 7.0E-05 |
| Phase delay (usec) | | | -4.66576717413E+02 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 1.0000001E-07 | Resid phdelay (usec) | 4.02913E-06 | +/- | 1.5E-08 |
| Delay rate (us/s) | | | 4.50166011164E-02 | | | | | | | | | | | | | | | Apriori rate (us/s) | 4.50166577692E-02 | Resid rate (us/s) | -5.66527E-08 | +/- | 6.2E-11 |
| Total phase (deg) | | | -157.7 | | | | | | | | | | | | | | | Apriori accel (us/s/s) | -1.91137878213E-06 | Resid phase (deg) | 124.9 | +/- | 0.5 |

ph/seg (deg) 57.0 0.8 Theor. Amplitude 4.368 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 58.4 1.4 Search (2048X64) 4.340 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 4.5 0.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 3.8 1.6 Inc. seg. avg. 6.523 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 t: az 65.6 el 48.4 pa -81.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) -339.680 -534.480 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ty..130A7B Output file: /Exps/c192a/v2/1234/No0041/ty.W.242.130A7B simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ty
KVNTN - KVNYs, fgroup W, pol RR

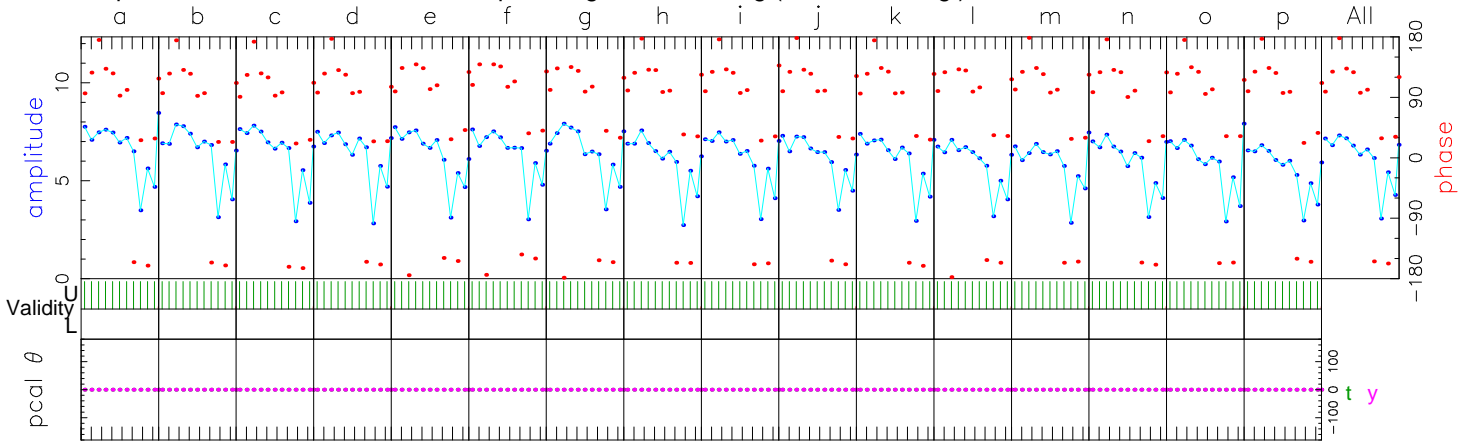


Fringe quality 5

SNR 230.6
Int time 419.840
Amp 4.115
Phase 128.3
PFD 0.0e+00
Delays (us)
SBD -0.002040
MBD -0.002029
Fringe rate (Hz)
-0.004857
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

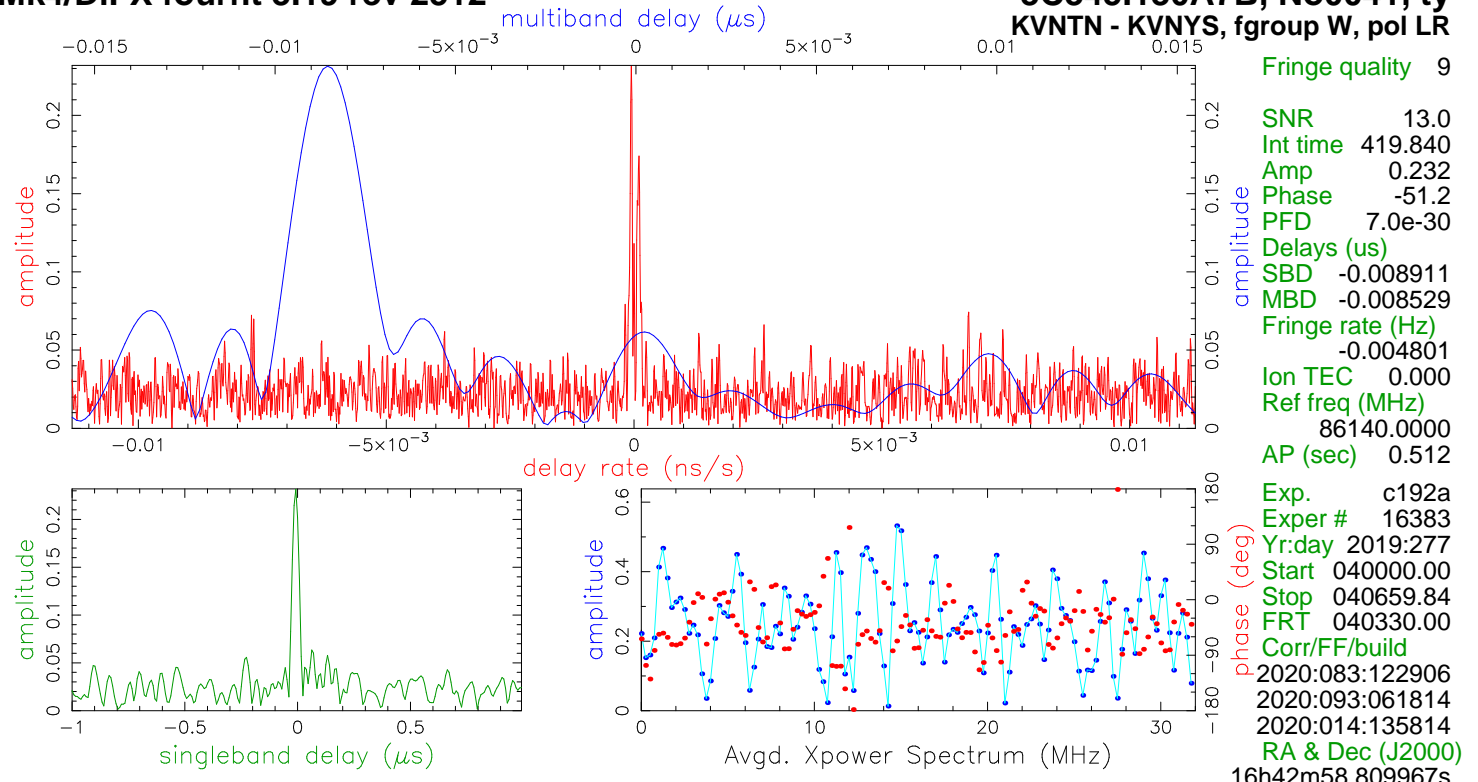
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061809
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|-------|----------|----------------------|--------------------------|----------------------|----------------------|--------------|---------|---------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 128.3 | Phase | | | | | | | | |
| t | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 128.3 | Ampl. | | | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 128.7 | Sbd box | | | | | | | |
| ty | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | APs used | | | | | | | |
| t:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC freqs | | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | | | | | |
| t | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Mani PC | | | | | | |
| t | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | | | | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | | | Chan ids | | | | | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | | | Tracks | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | Chan ids | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | Tracks | | | | | | |
| Group delay (usec)(sbd) | | | -4.66578750084E+02 | | | | | | | | | | | | | | | | | | Apriori delay (usec) | -4.66576721442E+02 | Resid mbdelay (usec) | -2.02864E-03 | +/- | 4.7E-06 | |
| Sband delay (usec) | | | -4.66578761442E+02 | | | | | | | | | | | | | | | | | | | Apriori clock (usec) | -1.4825573E+00 | Resid sbdelay (usec) | -2.04000E-03 | +/- | 7.5E-05 |
| Phase delay (usec) | | | -4.66576717305E+02 | | | | | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 1.0000001E-07 | Resid phdelay (usec) | 4.13783E-06 | +/- | 1.6E-08 |
| Delay rate (us/s) | | | 4.50166013857E-02 | | | | | | | | | | | | | | | | | | | Apriori rate (us/s) | 4.50166577692E-02 | Resid rate (us/s) | -5.63835E-08 | +/- | 6.6E-11 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | -1.91137878213E-06 | Resid phase (deg) | 128.3 | +/- | 0.5 |

ph/seg (deg) 56.9 0.9 Theor. Amplitude 4.115 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 57.5 1.5 Search (2048X64) 4.072 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 3.4 1.0 Inc. seg. avg. 6.109 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 4.6 1.7 Inc. frq. avg. 4.095 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 t: az 65.6 el 48.4 pa -81.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) -339.680 -534.480 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ty..130A7B Output file: /Exps/c192a/v2/1234/No0041/ty.W.261.130A7B



Fringe quality 9

SNR 13.0

Int time 419.840

Amp 0.232

Phase -51.2

PFD 7.0e-30

Delays (us)

SBD -0.008911

MBD -0.008529

Fringe rate (Hz)

-0.004801

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Yr:day 16383

Start 2019:277

Stop 2019:277

FRT 040330.00

Corr/FF/build

2020:083:122906

2020:093:061814

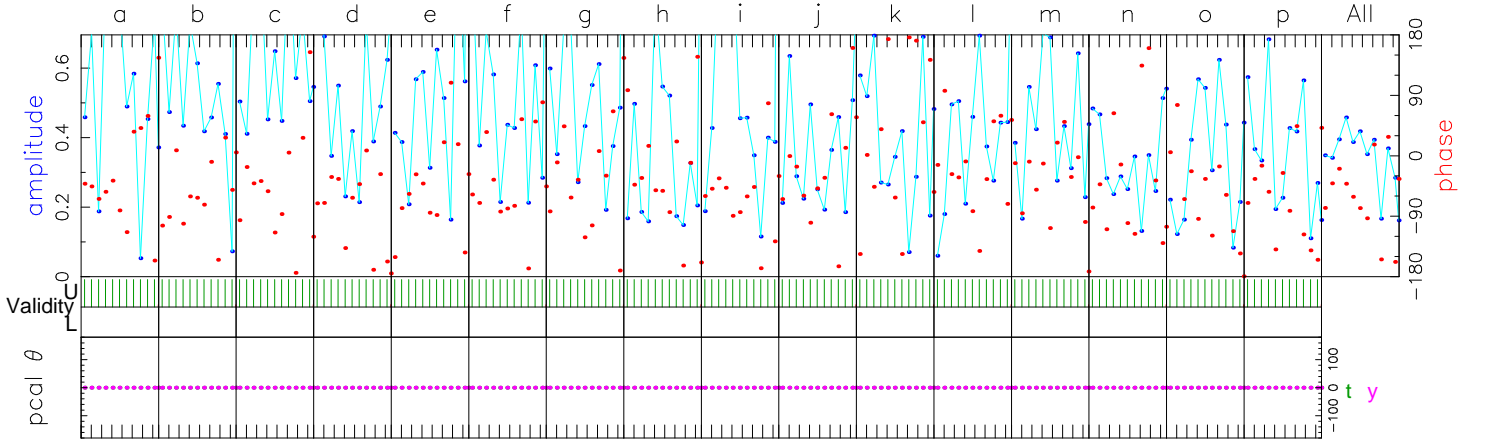
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



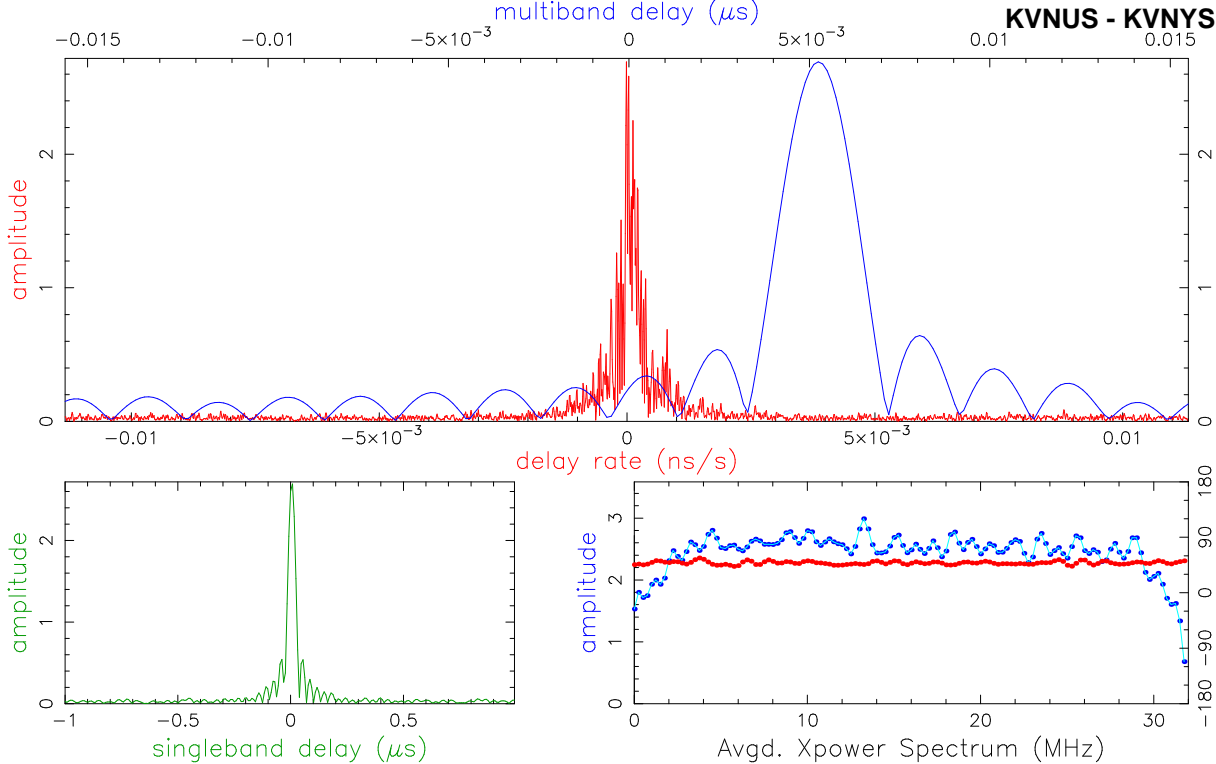
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | |
|--|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|-------|--|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | |
| t | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| ty | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | |
| t:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| t | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| t | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | | |
| Group delay (usec)(sbd) | | | -4.66585250647E+02 | | | | | | | | | | | | | | | | | |
| Sband delay (usec) | | | -4.66585631942E+02 | | | | | | | | | | | | | | | | | |
| Phase delay (usec) | | | -4.66576723094E+02 | | | | | | | | | | | | | | | | | |
| Delay rate (us/s) | | | 4.50166020298E-02 | | | | | | | | | | | | | | | | | |
| Total phase (deg) | | | | | -333.8 | | | | | | | | | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | | | | | | | | | | | |
| RMS | 58.0 | 15.3 | | | | | | | | | | | | | | | | | | |
| Theor. | | | | | | | | | | | | | | | | | | | | |
| Amplitude | | | | | | | | | | | | | | | | | | | | |
| Search (2048X64) | | | | | | | | | | | | | | | | | | | | |
| Interp. | | | | | | | | | | | | | | | | | | | | |
| Inc. seg. avg. | | | | | | | | | | | | | | | | | | | | |
| Inc. frq. avg. | | | | | | | | | | | | | | | | | | | | |
| PCal mode: MANUAL, MANUAL | | | | | | | | | | | | | | | | | | | | |
| PCal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | | | | | | | | | | | |
| Sample rate(MISamp/s): 64 | | | | | | | | | | | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | | | | | | | | | | | |
| nlags: 128 | | | | | | | | | | | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | | | | | | | | | | | |
| sb window (us) | | | | | | | | | | | | | | | | | | | | |
| mb window (us) | | | | | | | | | | | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | | | | | | | | | | | |

t: az 65.6 el 48.4 pa -81.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) -339.680 -534.480 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ty..130A7B Output file: /Exps/c192a/v2/1234/No0041/ty.W.281.130A7B

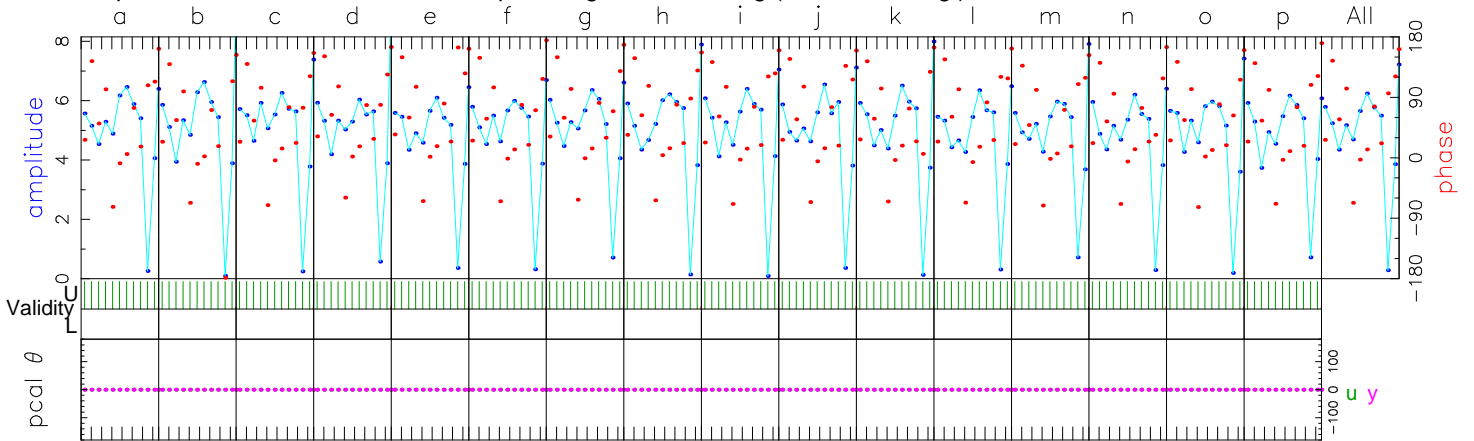
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, uy
KVNU5 - KVNY5, fgroup W, pol LL



Fringe quality 5
SNR 152.3
Int time 419.840
Amp 2.718
Phase 49.0
PFD 0.0e+00
Delays (us)
SBD 0.005296
MBD 0.005250
Fringe rate (Hz)
-0.000872
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061806
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

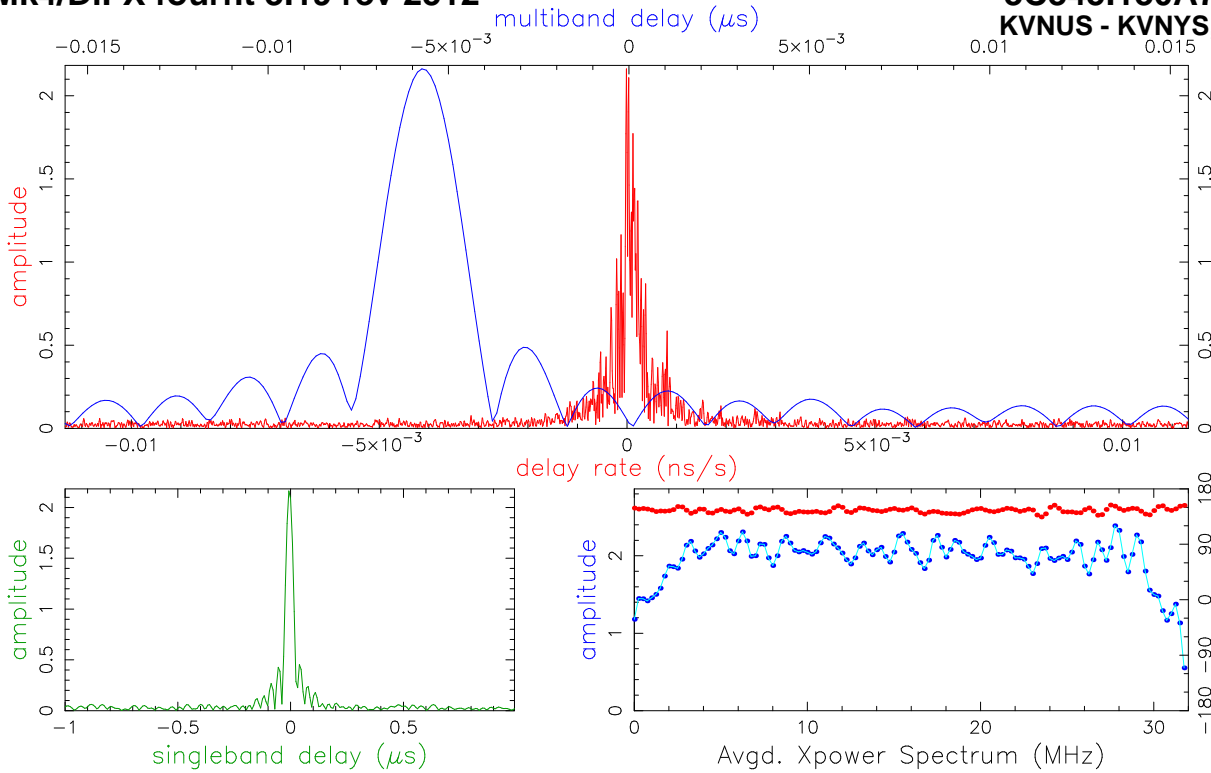


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|--------------|-------------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| u | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |
| Group delay (usec)(sbd) | | 2.19948272392E+02 | | | | | | | | 2.19943022526E+02 | | | | | | | 5.24987E-03 | +/- 7.1E-06 |
| Sband delay (usec) | | 2.19948318026E+02 | | | | | | | | -2.0764675E+01 | | | | | | | 5.29550E-03 | +/- 1.1E-04 |
| Phase delay (usec) | | 2.19943024107E+02 | | | | | | | | 2.9999999E-07 | | | | | | | 1.58083E-06 | +/- 2.4E-08 |
| Delay rate (us/s) | | -6.21482848978E-03 | | | | | | | | -6.21481837228E-03 | | | | | | | -1.01175E-08 | +/- 1.0E-10 |
| Total phase (deg) | | | | | 34.8 | | | | | -3.32270786403E-06 | | | | | | | 49.0 | +/- 0.8 |

ph/seg (deg) 60.1 1.3 Search (2048X64) 2.670 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 95.9 2.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 3.5 1.5 Inc. seg. avg. 4.795 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 2.1 2.6 Inc. frq. avg. 2.695 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
u: az 68.6 el 51.4 pa -80.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 40.165 -410.500 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/uy..130A7B Output file: /Exps/c192a/v2/1234/No0041/uy.W.251.130A7B

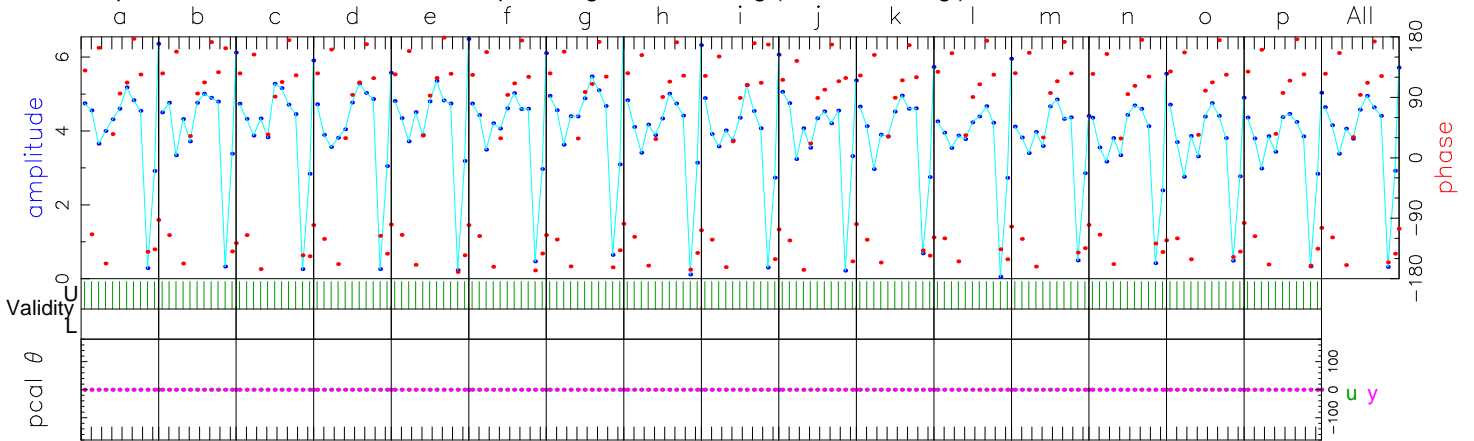
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, uy
KVNUS - KVNYS, fgroup W, pol RR



Fringe quality 5
SNR 122.3
Int time 419.840
Amp 2.183
Phase 146.6
PFD 0.0e+00
Delays (us)
SBD -0.005333
MBD -0.005707
Fringe rate (Hz)
-0.000871
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061811
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

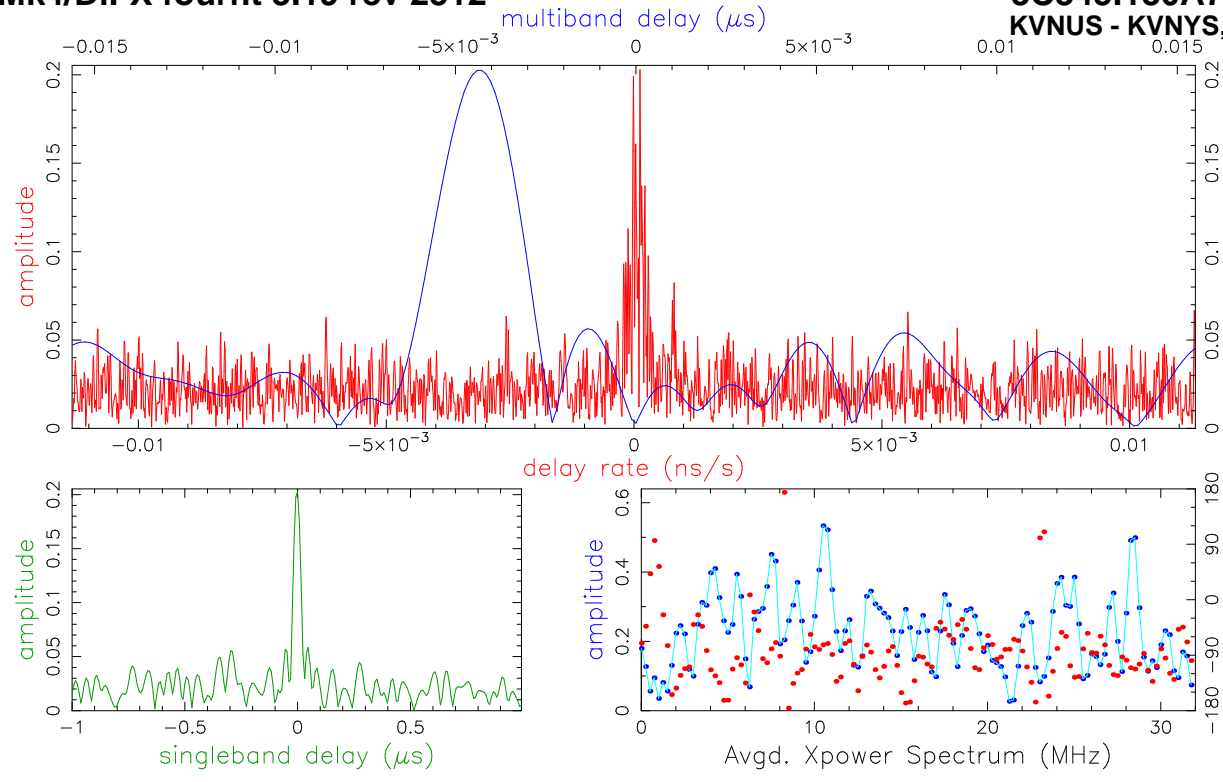


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-------------------------|----------|--------------------|----------|----------|----------|--------------------------|----------|--------------------|----------|----------|----------------------|----------|--------------|----------|----------|----------|------------|----------|-------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | Phase | 146.6 |
| u | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | Ampl. | 2.2 |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Sbd box | 128.3 |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | APs used | |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC freqs | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Mani PC | |
| u | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | PC amp | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids | |
| | | | | | | | | | | | | | | | | | | Tracks | |
| | | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | | 2.19937315548E+02 | | | | Apriori delay (usec) | | 2.19943022526E+02 | | | Resid mbdelay (usec) | | -5.70698E-03 | | +/- | 8.8E-06 | | | |
| Sband delay (usec) | | 2.19937690026E+02 | | | | Apriori clock (usec) | | -2.0764675E+01 | | | Resid sbdelay (usec) | | -5.33250E-03 | | +/- | 1.4E-04 | | | |
| Phase delay (usec) | | 2.19943027255E+02 | | | | Apriori clockrate (us/s) | | 2.9999999E-07 | | | Resid phdelay (usec) | | 4.72848E-06 | | +/- | 3.0E-08 | | | |
| Delay rate (us/s) | | -6.21482848057E-03 | | | | Apriori rate (us/s) | | -6.21481837228E-03 | | | Resid rate (us/s) | | -1.01083E-08 | | +/- | 1.2E-10 | | | |
| Total phase (deg) | | | 132.4 | | | Apriori accel (us/s/s) | | -3.32270786403E-06 | | | Resid phase (deg) | | 146.6 | | +/- | 0.9 | | | |

ph/seg (deg) 60.5 1.6 Search (2048X64) 2.137 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 94.3 2.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 3.2 1.9 Inc. seg. avg. 3.818 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 5.1 3.3 Inc. frq. avg. 2.165 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
u: az 68.6 el 51.4 pa -80.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 40.165 -410.500 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/uy..130A7B Output file: /Exps/c192a/v2/1234/No0041/uy.W.269.130A7B

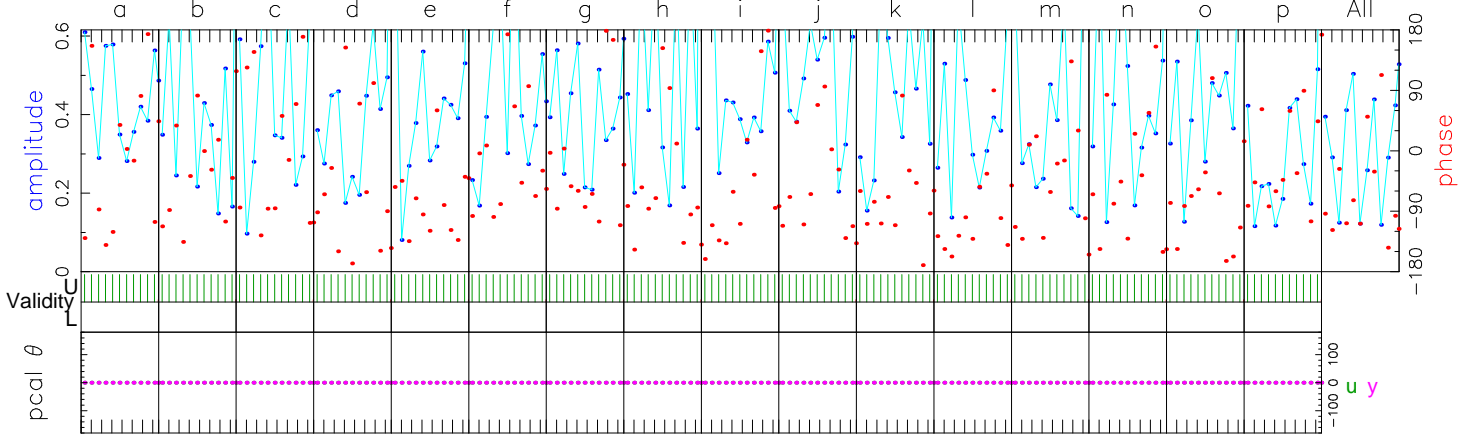
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, uy
KVNUS - KVNYS, fgroup W, pol LR



Fringe quality 9
SNR 11.5
Int time 419.840
Amp 0.205
Phase -87.0
PFD 5.9e-22
Delays (us)
SBD -0.002862
MBD -0.004330
Fringe rate (Hz) 0.010383
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061815
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

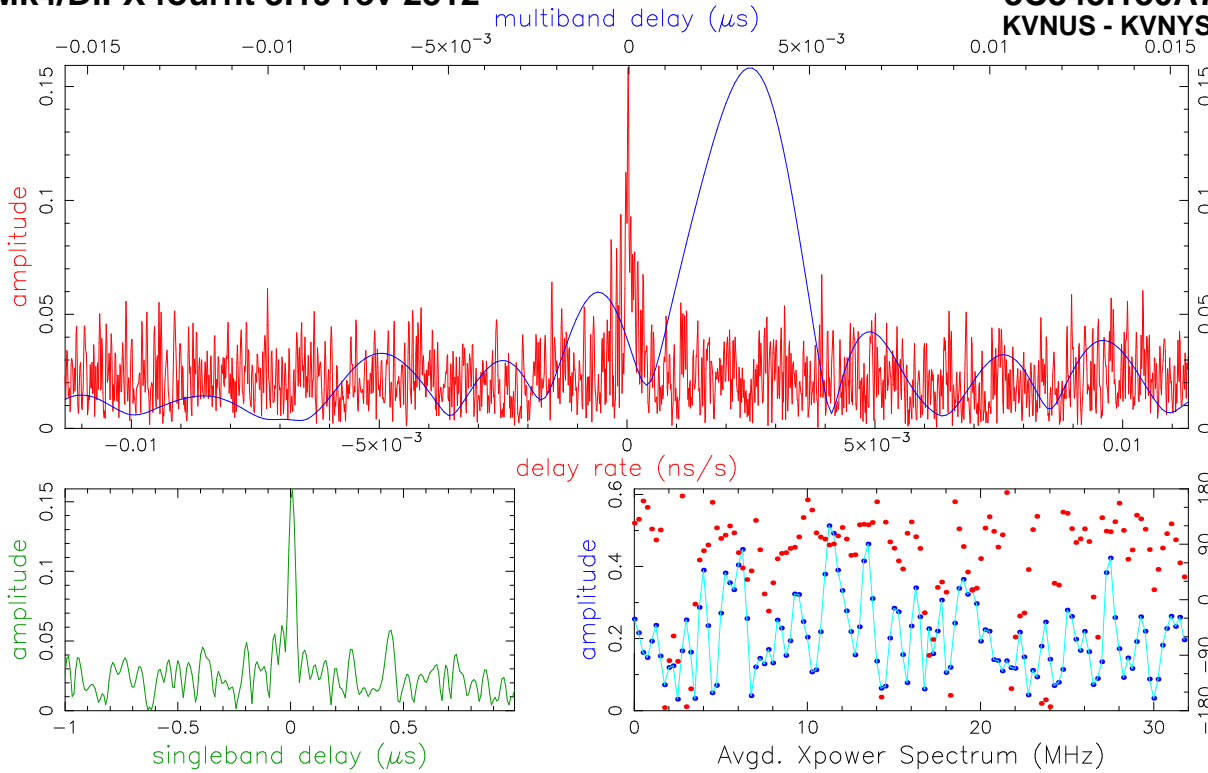


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-----------------------------|-----------------------------|----------|------------------|--------------------------------|----------|-----------------|--------------------|----------|--|----------------------|----------|------------------------------|--------------|----------|------------------|---------------------------|------------|-------|
| | -128.7 | -66.4 | -90.1 | -112.0 | -79.6 | -40.6 | -80.8 | -76.0 | -119.1 | -63.6 | -84.3 | -119.6 | -70.5 | -102.2 | -103.2 | -7.5 | Phase | -87.0 |
| | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.1 | Ampl. | 0.2 |
| | 48.0 | 212.9 | 84.4 | 7.2 | 129.6 | 74.3 | 129.7 | 129.4 | 129.3 | 70.9 | 128.0 | 129.7 | 45.1 | 127.6 | 128.8 | 113.2 | Sbd box | 128.6 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| u | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| u | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.19938692101E+02 | | | Apriori delay (usec) | | | 2.19943022526E+02 | | | Resid mbdelay (usec) | | | -4.33043E-03 | | | +/- | 9.4E-05 | |
| Sband delay (usec) | 2.19940160526E+02 | | | Apriori clock (usec) | | | -2.0764675E+01 | | | Resid sbdelay (usec) | | | -2.86200E-03 | | | +/- | 1.5E-03 | |
| Phase delay (usec) | 2.19943019721E+02 | | | Apriori clockrate (us/s) | | | 2.9999999E-07 | | | Resid phdelay (usec) | | | -2.80531E-06 | | | +/- | 3.2E-07 | |
| Delay rate (us/s) | -6.21469783388E-03 | | | Apriori rate (us/s) | | | -6.21481837228E-03 | | | Resid rate (us/s) | | | 1.20538E-07 | | | +/- | 1.3E-09 | |
| Total phase (deg) | 258.8 | | | Apriori accel (us/s/s) | | | -3.32270786403E-06 | | | Resid phase (deg) | | | -87.0 | | | +/- | 10.0 | |
| ph/seg (deg) | RMS | Theor. | Amplitude | | | 0.205 +/- 0.018 | | | Pcal mode: MANUAL, MANUAL | | | PC period (AP's) 5, 5 | | | | | | |
| amp/seg (%) | 71.6 | 17.2 | Search (2048X64) | | | 0.201 | | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | sb window (us) | | | -1.000 | 1.000 | | |
| ph/frq (deg) | 82.3 | 30.1 | Interp. | | | 0.000 | | | Bits/sample: 2x2 | | | SampCntNorm: enabled | | | mb window (us) | -0.016 | 0.016 | |
| amp/frq (%) | 32.6 | 19.9 | Inc. seg. avg. | | | 0.296 | | | Sample rate(MISamp/s): 64 | | | dr window (ns/s) | | | -0.011 | 0.011 | | |
| | 31.0 | 34.8 | Inc. frq. avg. | | | 0.212 | | | Data rate(Mb/s): 2048 | | | nlags: 128 t_cohere infinite | | | ion window (TEC) | 0.00 | 0.00 | |
| u: az 68.6 el 51.4 pa -80.7 | y: az 70.3 el 50.4 pa -76.7 | | | u, v (fr/asec) 40.165 -410.500 | | | | | | | | | | | | simultaneous interpolator | | |

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/uy..130A7B Output file: /Exps/c192a/v2/1234/No0041/uy.W.288.130A7B

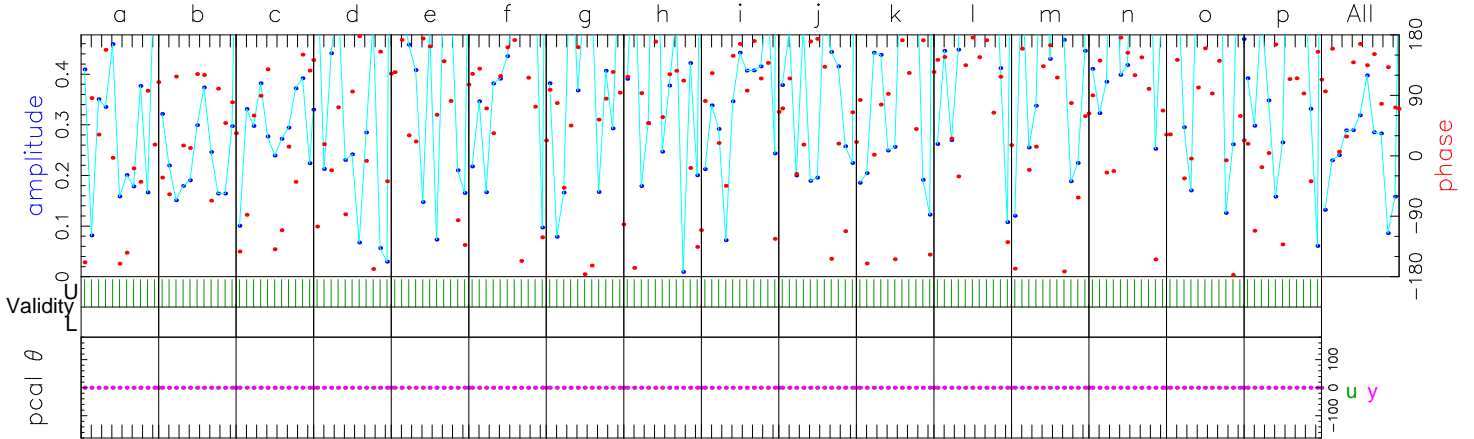
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, uy
KVNUS - KVNYS, fgroup W, pol RL



Fringe quality 9
SNR 8.9
Int time 419.840
Amp 0.159
Phase 114.4
PFD 1.7e-10
Delays (us)
SBD 0.005799
MBD 0.003355
Fringe rate (Hz) 0.002349
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061819
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

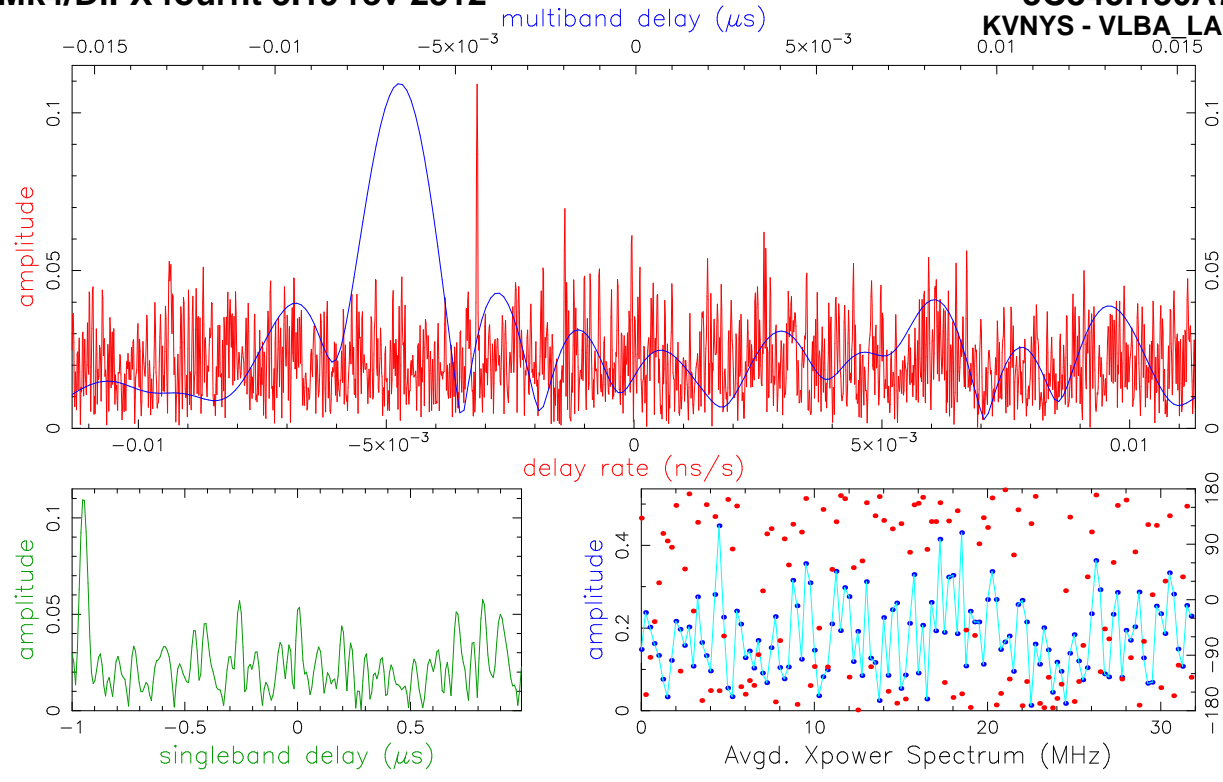


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|----------|------------|-----|
| 11.4 | 53.2 | 135.6 | -38.1 | 122.7 | 128.3 | 115.0 | 142.0 | 129.2 | 93.9 | 112.3 | 131.4 | 126.6 | 107.0 | 103.3 | 75.5 | Phase | 114.4 | |
| 0.1 | 0.1 | 0.0 | 0.0 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.1 | Ampl. | 0.2 | |
| 233.4 | 158.4 | 234.0 | 243.0 | 75.8 | 131.3 | 128.8 | 129.6 | 129.1 | 234.9 | 236.8 | 129.1 | 122.8 | 129.6 | 129.4 | 215.7 | Sbd box | 129.7 | |
| UL | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| u | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| u:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| u | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.19946377827E+02 | | | Apriori delay (usec) | | | 2.19943022526E+02 | | | Resid mbdelay (usec) | | | 3.35530E-03 | | | +/- | 1.2E-04 | |
| Sband delay (usec) | 2.19948821026E+02 | | | Apriori clock (usec) | | | -2.0764675E+01 | | | Resid sbdelay (usec) | | | 5.79850E-03 | | | +/- | 1.9E-03 | |
| Phase delay (usec) | 2.19943026216E+02 | | | Apriori clockrate (us/s) | | | 2.9999999E-07 | | | Resid phdelay (usec) | | | 3.68938E-06 | | | +/- | 4.1E-07 | |
| Delay rate (us/s) | -6.21479110699E-03 | | | Apriori rate (us/s) | | | -6.21481837228E-03 | | | Resid rate (us/s) | | | 2.72653E-08 | | | +/- | 1.7E-09 | |
| Total phase (deg) | 100.2 | | | Apriori accel (us/s/s) | | | -3.32270786403E-06 | | | Resid phase (deg) | | | 114.4 | | | +/- | 12.8 | |

ph/seg (deg) 52.2 22.2 Search (2048X64) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 80.0 38.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 54.7 25.7 Inc. seg. avg. 0.231 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 55.5 44.8 Inc. frq. avg. 0.160 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
u: az 68.6 el 51.4 pa -80.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 40.165 -410.500 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/uy..130A7B Output file: /Exps/c192a/v2/1234/No0041/uy.W.302.130A7B

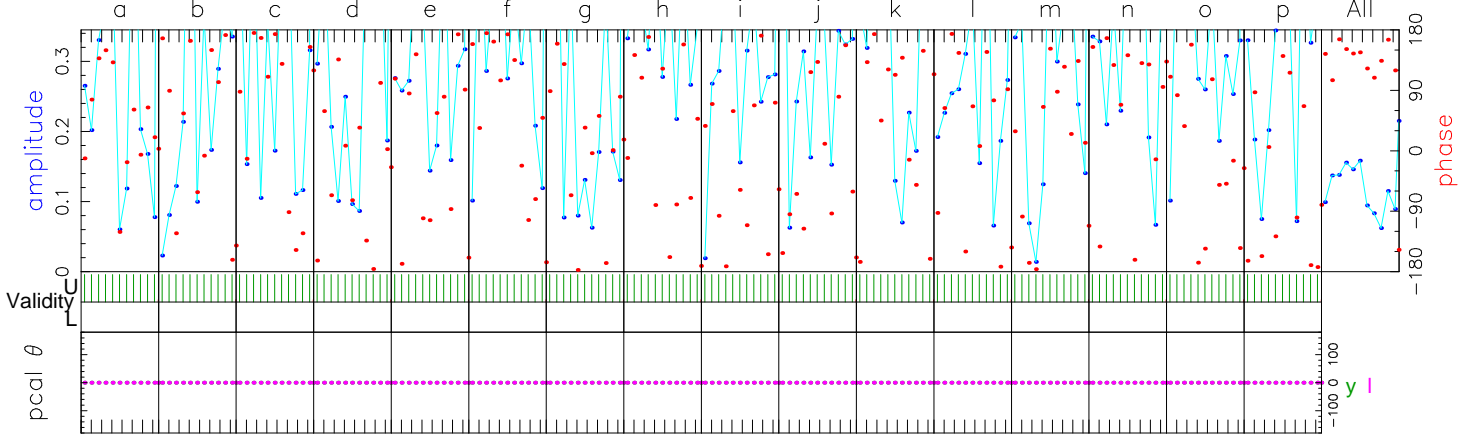
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yl
KVNS - VLBA LA, fgroup W, pol LL



Fringe quality 0
SNR 6.2
Int time 419.829
Amp 0.115
Phase 140.2
PFD 1.1e-01
Delays (us)
SBD -0.949353
MBD -0.006623
Fringe rate (Hz)
-0.272698
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061806
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| 80.1 | 157.3 | 152.0 | 144.8 | 133.6 | 138.6 | 114.5 | 171.6 | 136.2 | -152.8 | 147.3 | 136.6 | 96.8 | 144.3 | 119.3 | 148.9 | 140.2 | Phase | 140.2 |
| 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.3 | 0.1 | 0.3 | 0.1 | 0.2 | Ampl. | 0.1 |
| 92.3 | 208.2 | 213.1 | 243.9 | 77.8 | 173.3 | 92.8 | 245.5 | 136.6 | 38.6 | 197.6 | 168.3 | 75.8 | 7.7 | 15.7 | 177.1 | 7.5 | Sbd box | 7.5 |
| UL | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | 1000 |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | 1000 |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | 1000 |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | 0:0 |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC amp | 0:0 |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Chan ids | 1000 |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | 1000 |
| l | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | 1000 |
| | | | | | | | | | | | | | | | | | Tracks | 1000 |

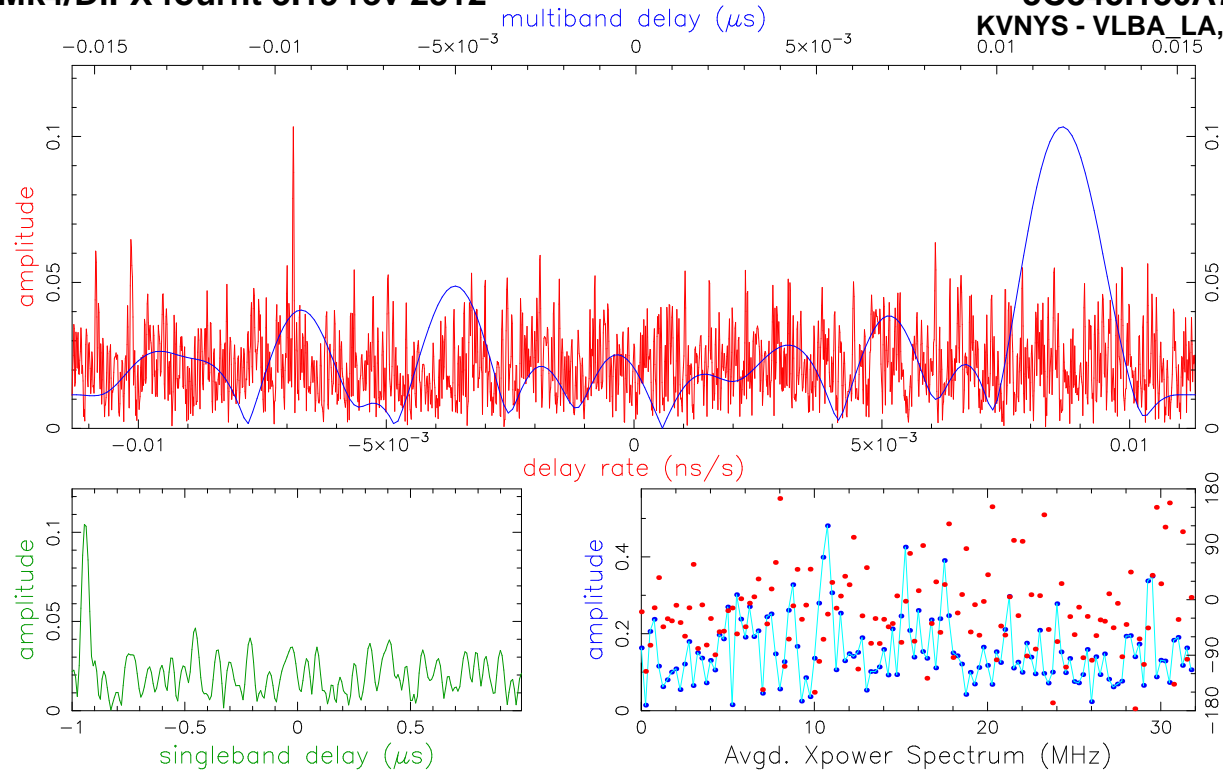
Group delay (usec)(sbd) 5.46623969843E+03 Apriori delay (usec) 5.46718382100E+03 Resid mbdelay (usec) -6.62256E-03 +/- 1.7E-04
 Sband delay (usec) 5.46623446800E+03 Apriori clock (usec) 2.9942820E+01 Resid sbdelay (usec) -9.49353E-01 +/- 2.8E-03
 Phase delay (usec) 5.46718382552E+03 Apriori clockrate (us/s) 4.5147198E-07 Resid phdelay (usec) 4.52258E-06 +/- 5.9E-07
 Delay rate (us/s) 1.67155581896E+00 Apriori rate (us/s) 1.67155898471E+00 Resid rate (us/s) -3.16575E-06 +/- 2.4E-09
 Total phase (deg) 262.9 Apriori accel (us/s/s) -2.71164275610E-05 Resid phase (deg) 140.2 +/- 18.4

RMS Theor. Amplitude 0.115 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 21.1 31.8 Search (2048X64) 0.108 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 29.3 55.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 30.2 36.7 Inc. seg. avg. 0.105 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 54.3 64.1 Inc. frq. avg. 0.104 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

y: az 70.3 el 50.4 pa -76.7 l: az 298.6 el 32.1 pa 68.3 u,v (fr/asec) -12501.262 -1452.083 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yl..130A7B Output file: /Exps/c192a/v2/1234/No0041/yl.W.250.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yl
KVNYS - VLBA LA, fgroup W, pol RR

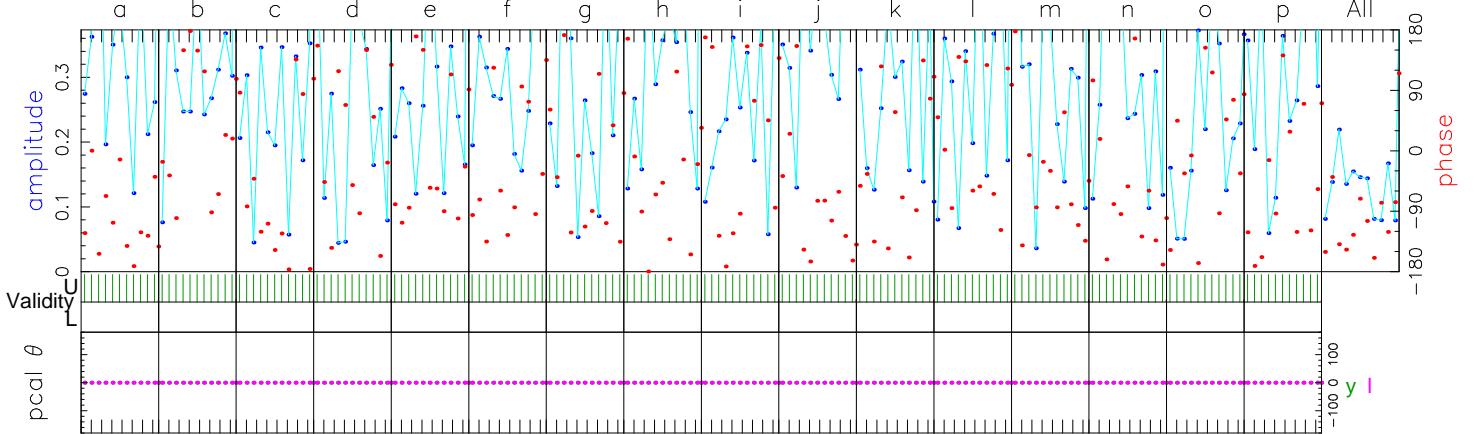


Fringe quality 0

SNR 6.0
Int time 419.829
Amp 0.124
Phase -113.6
PFD 4.8e-01
Delays (us)
SBD -0.941882
MBD 0.011829
Fringe rate (Hz)
-0.593449
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061810
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

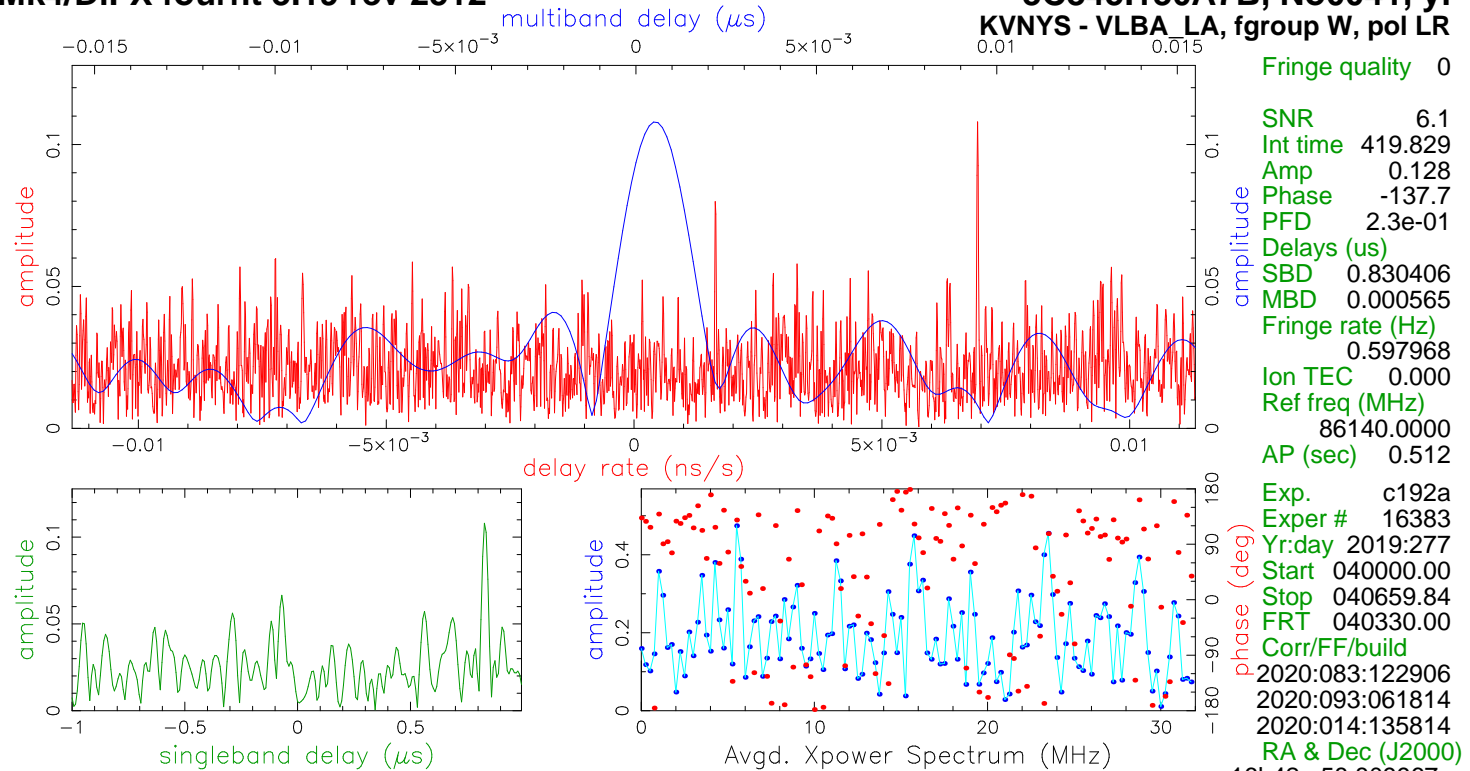


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|----------|-------------|----------|----------|----------|----------|----------|------------|--------------|----------|
| | -105.7 | -58.8 | -153.2 | -147.2 | -85.7 | -89.3 | -131.0 | -89.6 | -161.7 | -109.7 | -101.6 | -72.2 | -82.9 | -113.8 | 155.5 | -137.2 | | Phase -113.6 | |
| | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | | Ampl. 0.1 | |
| | 9.9 | 202.3 | 82.6 | 101.6 | 135.5 | 90.5 | 49.2 | 240.0 | 202.6 | 7.7 | 198.9 | 112.2 | 125.0 | 94.1 | 60.0 | 71.8 | | Sbd box 8.4 | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | | PC freqs | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | ManI PC | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | Chan ids | |
| l | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | Tracks |
| | | | | | | | | | | | | | | | | | | | Chan ids |
| | | | | | | | | | | | | | | | | | | | Tracks |
| Group delay (usec)(sbd) | 5.46622689989E+03 | | Apriori delay (usec) | | 5.46718382100E+03 | | Resid mbdelay (usec) | | 1.18289E-02 | | +/- 1.8E-04 | | | | | | | | |
| Sband delay (usec) | 5.46624193850E+03 | | Apriori clock (usec) | | 2.9942820E+01 | | Resid sbdelay (usec) | | -9.41882E-01 | | +/- 2.9E-03 | | | | | | | | |
| Phase delay (usec) | 5.46718381733E+03 | | Apriori clockrate (us/s) | | 4.5147198E-07 | | Resid phdelay (usec) | | -3.66471E-06 | | +/- 6.2E-07 | | | | | | | | |
| Delay rate (us/s) | 1.67155209536E+00 | | Apriori rate (us/s) | | 1.67155898471E+00 | | Resid rate (us/s) | | -6.88935E-06 | | +/- 2.6E-09 | | | | | | | | |
| Total phase (deg) | 9.0 | | Apriori accel (us/s/s) | | -2.71164275610E-05 | | Resid phase (deg) | | -113.6 | | +/- 19.2 | | | | | | | | |

ph/seg (deg) RMS Theor. Amplitude 0.124 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.7 58.1 Interp. 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.6 38.5 Inc. seg. avg. 0.132 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 53.4 67.1 Inc. frq. avg. 0.112 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 y: az 70.3 el 50.4 pa -76.7 l: az 298.6 el 32.1 pa 68.3 u, v (fr/asec) -12501.262 -1452.083 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yl..130A7B Output file: /Exps/c192a/v2/1234/No0041/yl.W.265.130A7B simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yl
KVNYS - VLBA LA, fgroup W, pol LR



Fringe quality 0

SNR 6.1

Int time 419.829

Amplitude 0.128

Phase -137.7

PFD 2.3e-01

Delays (us)

SBD 0.830406

MBD 0.000565

Fringe rate (Hz)

0.597968

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Exper # 16383

Yr:day 2019:277

Start 040000.00

Stop 040659.84

FRT 040330.00

Corr/FF/build

2020:083:122906

2020:093:061814

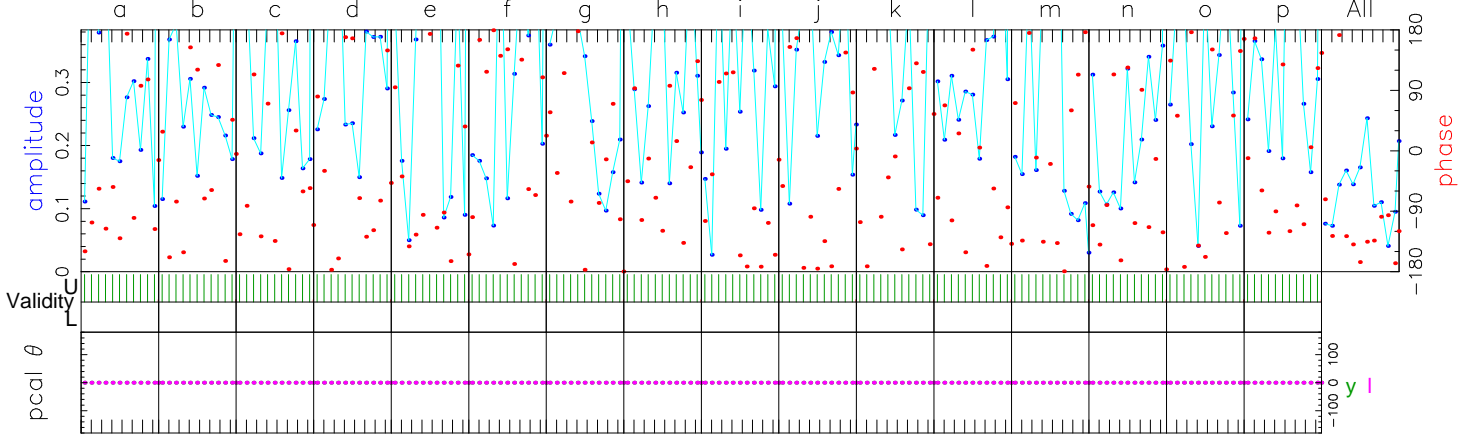
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|--------|
| | -112.9 | -140.3 | -119.7 | -145.9 | -142.8 | 174.7 | -99.9 | -51.4 | -179.1 | -153.8 | -150.1 | -111.2 | -140.2 | -136.5 | -177.0 | -110.8 | Phase | -137.7 |
| | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | Ampl. | 0.1 |
| | 237.1 | 130.3 | 100.3 | 232.9 | 47.4 | 196.0 | 40.3 | 18.5 | 104.8 | 236.1 | 76.2 | 226.2 | 104.5 | 171.0 | 187.8 | 201.5 | Sbd box | 235.3 |
| UL | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | |
| W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 5.46802813647E+03 | | | Apriori delay (usec) | | | 5.46718382100E+03 | | | Resid mbdelay (usec) | | | 5.65470E-04 | | | +/- 1.8E-04 | | |
| Sband delay (usec) | 5.46801422750E+03 | | | Apriori clock (usec) | | | 2.9942820E+01 | | | Resid sbdelay (usec) | | | 8.30406E-01 | | | +/- 2.8E-03 | | |
| Phase delay (usec) | 5.46718381655E+03 | | | Apriori clockrate (us/s) | | | 4.5147198E-07 | | | Resid phdelay (usec) | | | -4.44110E-06 | | | +/- 6.0E-07 | | |
| Delay rate (us/s) | 1.67156592653E+00 | | | Apriori rate (us/s) | | | 1.67155898471E+00 | | | Resid rate (us/s) | | | 6.94181E-06 | | | +/- 2.5E-09 | | |
| Total phase (deg) | -15.1 | | | Apriori accel (us/s/s) | | | -2.71164275610E-05 | | | Resid phase (deg) | | | -137.7 | | | +/- 18.8 | | |

ph/seg (deg) 33.0 32.5 Search (2048X64) 0.107 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

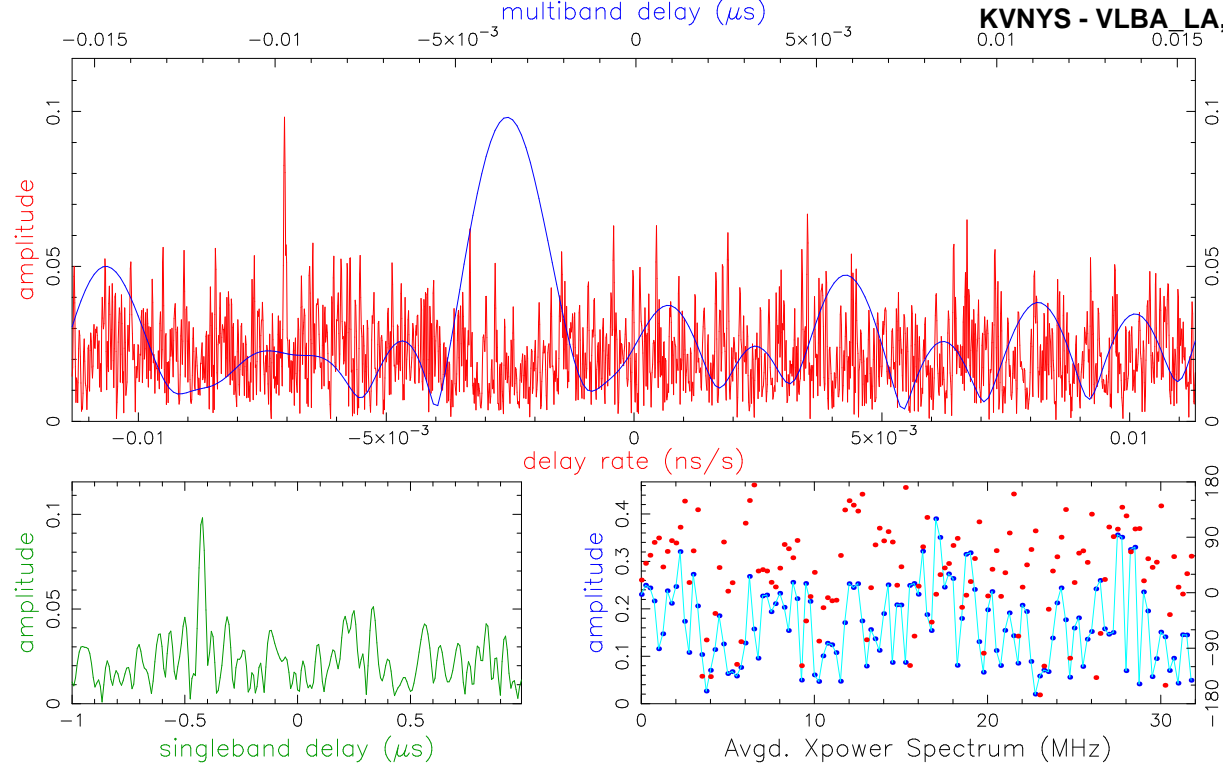
amp/seg (%) 50.5 56.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 35.1 37.5 Inc. seg. avg. 0.124 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 41.2 65.5 Inc. frq. avg. 0.121 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

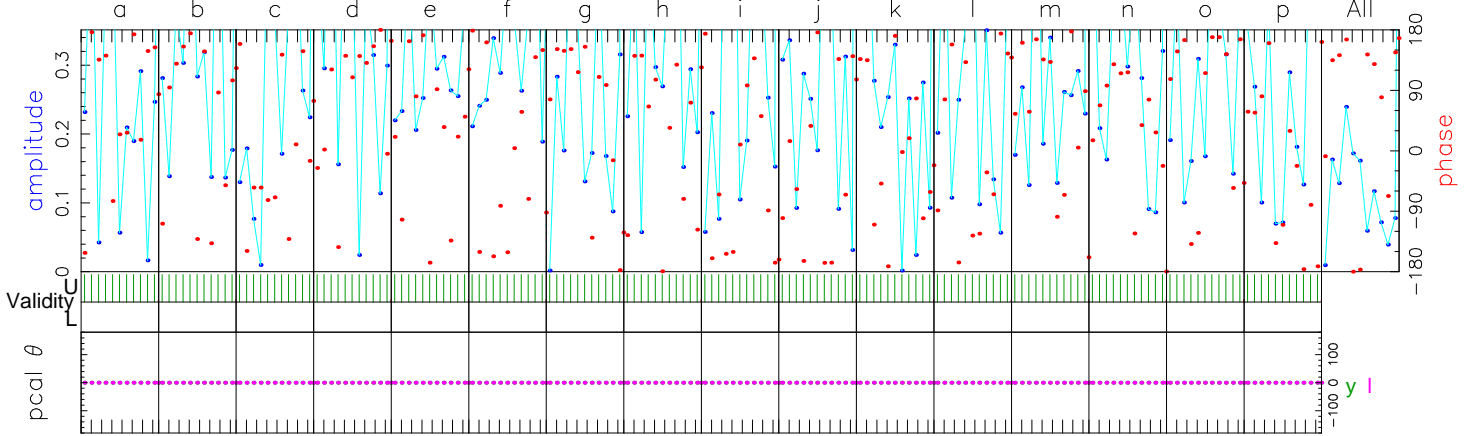
y: az 70.3 el 50.4 pa -76.7 l: az 298.6 el 32.1 pa 68.3 u, v (fr/asec) -12501.262 -1452.083 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yl..130A7B Output file: /Exps/c192a/v2/1234/No0041/yl.W.283.130A7B



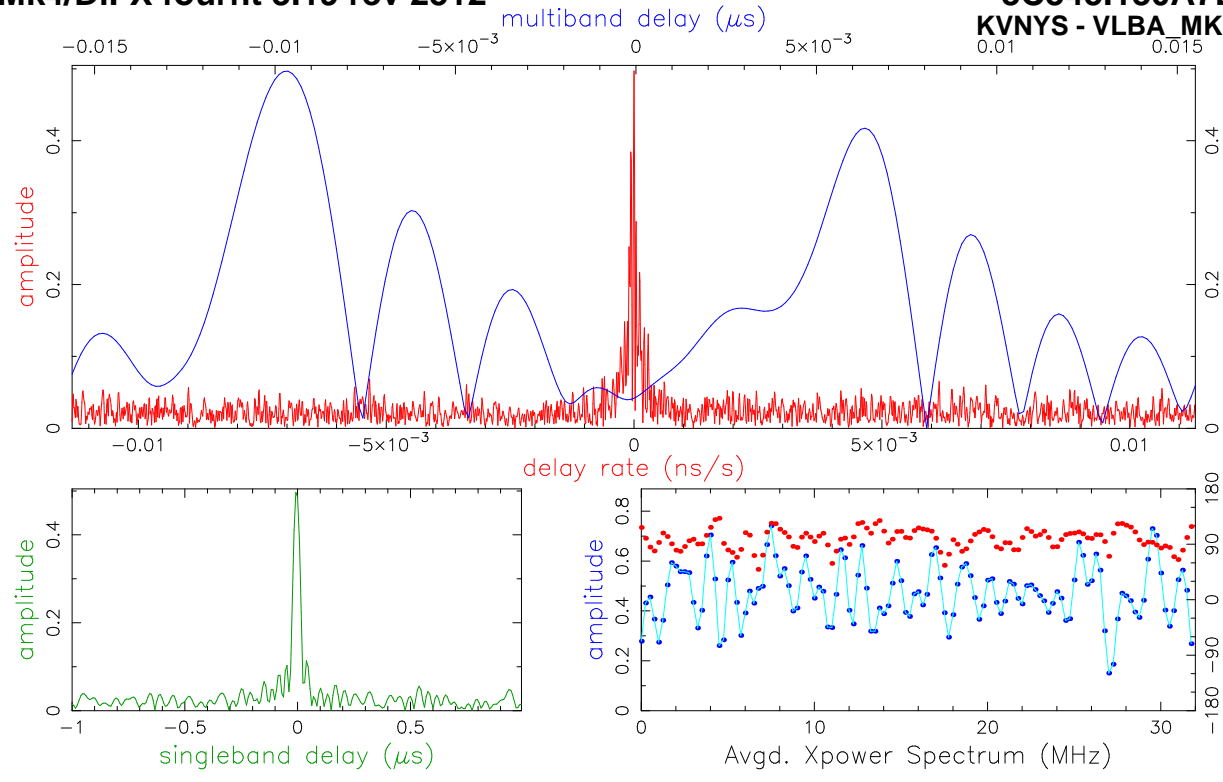
Fringe quality 0
SNR 5.6
Int time 419.829
Amp 0.117
Phase 155.0
PFD 1.0e+00
Delays (us)
SBD -0.424408
MBD -0.003580
Fringe rate (Hz)
-0.608456
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061818
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|--|----------|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| y:l | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | |
| l | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |
| Group delay (usec)(sbd) | | 5.46677399064E+03 | | | | | | | | | | | | | | | | |
| Sband delay (usec) | | 5.46675941300E+03 | | | | | | | | | | | | | | | | |
| Phase delay (usec) | | 5.46718382599E+03 | | | | | | | | | | | | | | | | |
| Delay rate (us/s) | | 1.67155192114E+00 | | | | | | | | | | | | | | | | |
| Total phase (deg) | | | | 277.6 | | | | | | | | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | | | | | | | | | |
| PCal mode: MANUAL, MANUAL | | | | | | | | | | | | | | | | | | |
| PCal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | | | | | | | | | |
| Sample rate(MISamp/s): 64 | | | | | | | | | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | | | | | | | | | |
| nlags: 128 | | | | | | | | | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | | | | | | | | | |
| sb window (us) | | | | | | | | | | | | | | | | | | |
| mb window (us) | | | | | | | | | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | | | | | | | | | |

ph/seg (deg) 70.0 35.7 Search (2048X64) 0.117 +/- 0.021 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 85.0 62.3 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 49.1 41.2 Inc. seg. avg. 0.116 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 57.7 71.9 Inc. frq. avg. 0.118 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
y: az 70.3 el 50.4 pa -76.7 l: az 298.6 el 32.1 pa 68.3 u,v (fr/asec) -12501.262 -1452.083 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/y1..130A7B Output file: /Exps/c192a/v2/1234/No0041/y1.W.297.130A7B

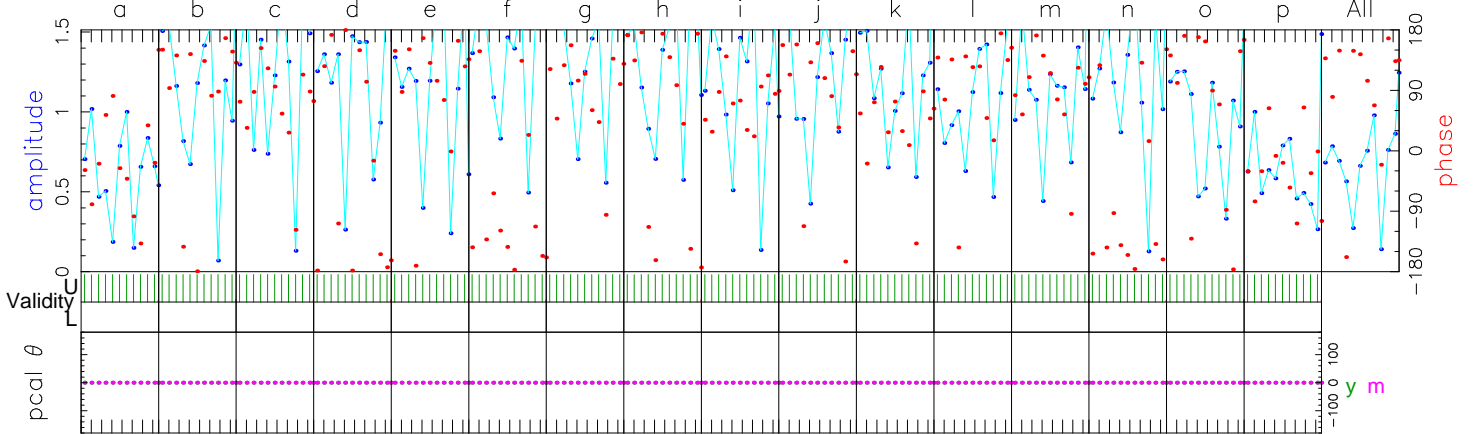


Fringe quality 5

SNR 28.3
Int time 419.111
Amp 0.505
Phase 127.5
PFD 0.0e+00
Delays (us)
SBD -0.004735
MBD -0.009715
Fringe rate (Hz) 0.000429
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

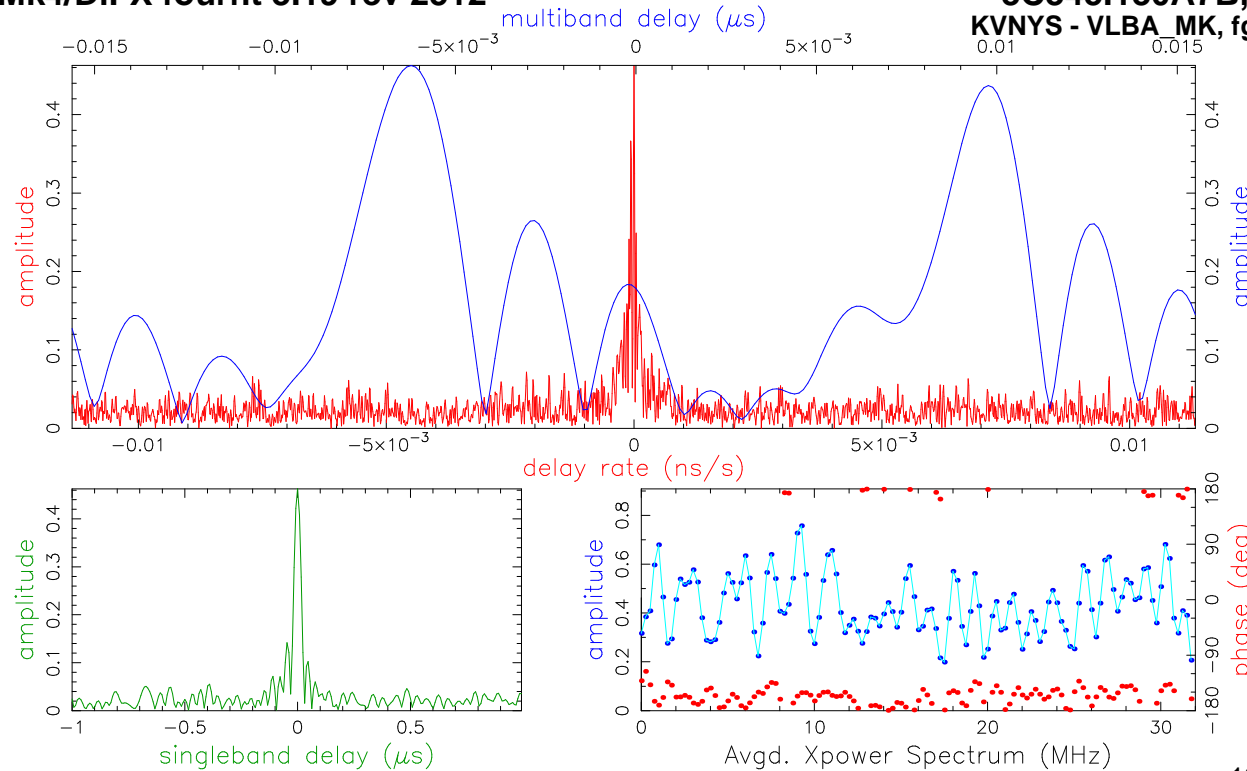
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061806
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| UL | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | | | | |
| y:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | | | | | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | | | | | |
| m | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | | | | | |
| Group delay (usec)(sbd) | | -1.76619045902E+03 | | | | | | | | | | | | | | | | Apriori delay (usec) | -1.76618074452E+03 | Resid mbdelay (usec) | -9.71450E-03 | +/- | 3.8E-05 |
| Sband delay (usec) | | -1.76618547952E+03 | | | | | | | | | | | | | | | | Apriori clock (usec) | 2.6626804E+01 | Resid sbdelay (usec) | -4.73500E-03 | +/- | 6.1E-04 |
| Phase delay (usec) | | -1.76618074041E+03 | | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 1.0869228E-07 | Resid phdelay (usec) | 4.10998E-06 | +/- | 1.3E-07 |
| Delay rate (us/s) | | 1.24154367623E+00 | | | | | | | | | | | | | | | | Apriori rate (us/s) | 1.24154367125E+00 | Resid rate (us/s) | 4.98258E-09 | +/- | 5.4E-10 |
| Total phase (deg) | | | | | 7.6 | | | | | | | | | | | | | Apriori accel (us/s/s) | 2.90430656271E-05 | Resid phase (deg) | 127.5 | +/- | 4.1 |

ph/seg (deg) 57.6 7.0 Theor. Amplitude 0.505 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.1 12.3 Search (2048X64) 0.463 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 75.0 8.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 71.8 14.2 Inc. seg. avg. 0.651 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 y: az 70.3 el 50.4 pa -76.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9196.985 3851.719 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ym..130A7B Output file: /Exps/c192a/v2/1234/No0041/ym.W.252.130A7B simultaneous interpolator

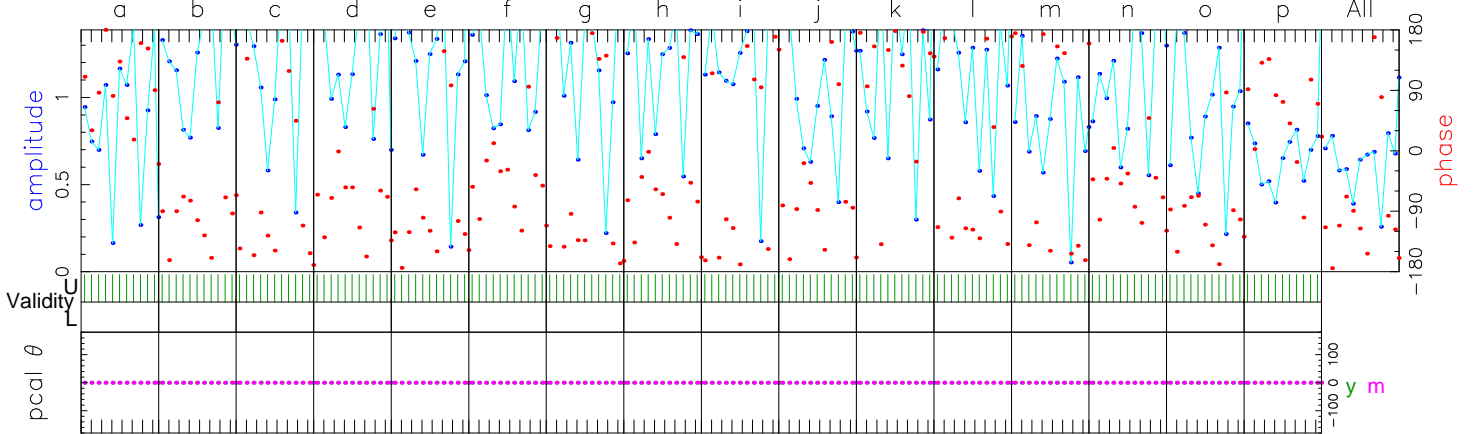


Fringe quality 5

SNR 25.9
Int time 419.112
Amp 0.463
Phase -126.4
PFD 0.0e+00
Delays (us)
SBD -0.000628
MBD -0.006228
Fringe rate (Hz) 0.000444
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061810
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

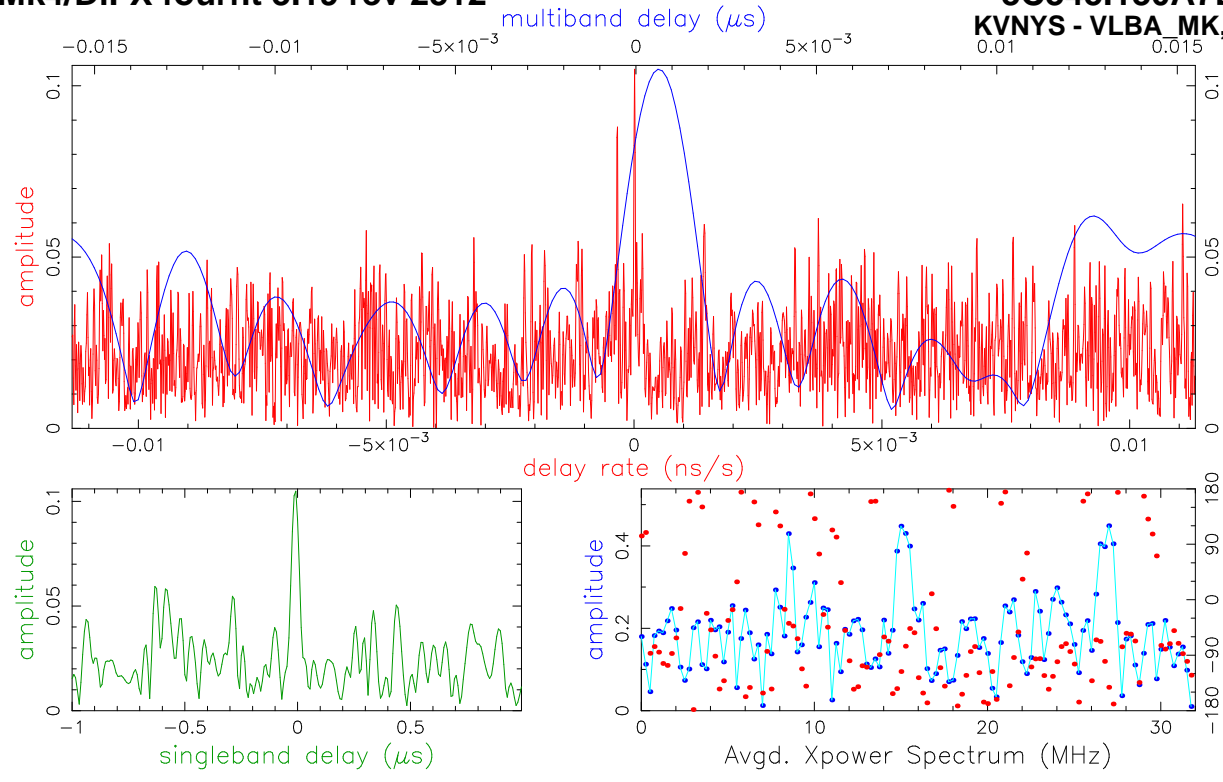


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|----------|------------|--------|
| 94.4 | -103.9 | -163.8 | -79.8 | -133.5 | -54.3 | -158.1 | -81.3 | 179.8 | -101.3 | 154.3 | -129.1 | -177.7 | -57.4 | -113.5 | 66.0 | | Phase | -126.4 |
| 0.6 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 | 1.0 | 0.8 | 0.8 | 0.7 | 0.8 | 0.8 | 0.7 | 0.9 | 0.7 | 0.4 | | Ampl. | 0.8 |
| 131.3 | 129.9 | 129.2 | 129.0 | 129.1 | 129.1 | 128.9 | 129.3 | 129.0 | 129.6 | 129.0 | 128.9 | 129.3 | 129.3 | 129.9 | 131.7 | | Sbd box | 128.9 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | | PC freqs | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| y:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | |
| y:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| m | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.76618697208E+03 | | | Apriori delay (usec) | | | -1.76618074452E+03 | | | Resid mbdelay (usec) | | | -6.22756E-03 | | | +/- | 4.2E-05 | |
| Sband delay (usec) | -1.76618137202E+03 | | | Apriori clock (usec) | | | 2.6626804E+01 | | | Resid sbdelay (usec) | | | -6.27500E-04 | | | +/- | 6.7E-04 | |
| Phase delay (usec) | -1.76618074860E+03 | | | Apriori clockrate (us/s) | | | 1.0869228E-07 | | | Resid phdelay (usec) | | | -4.07750E-06 | | | +/- | 1.4E-07 | |
| Delay rate (us/s) | 1.24154367640E+00 | | | Apriori rate (us/s) | | | 1.24154367125E+00 | | | Resid rate (us/s) | | | 5.15121E-09 | | | +/- | 5.9E-10 | |
| Total phase (deg) | -246.3 | | | Apriori accel (us/s/s) | | | 2.90430656271E-05 | | | Resid phase (deg) | | | -126.4 | | | +/- | 4.4 | |

ph/seg (deg) RMS Theor. Amplitude 0.463 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 57.9 7.7 Search (2048X64) 0.431 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 48.4 13.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 74.3 8.8 Inc. seg. avg. 0.615 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 75.5 15.4 Inc. frq. avg. 0.771 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

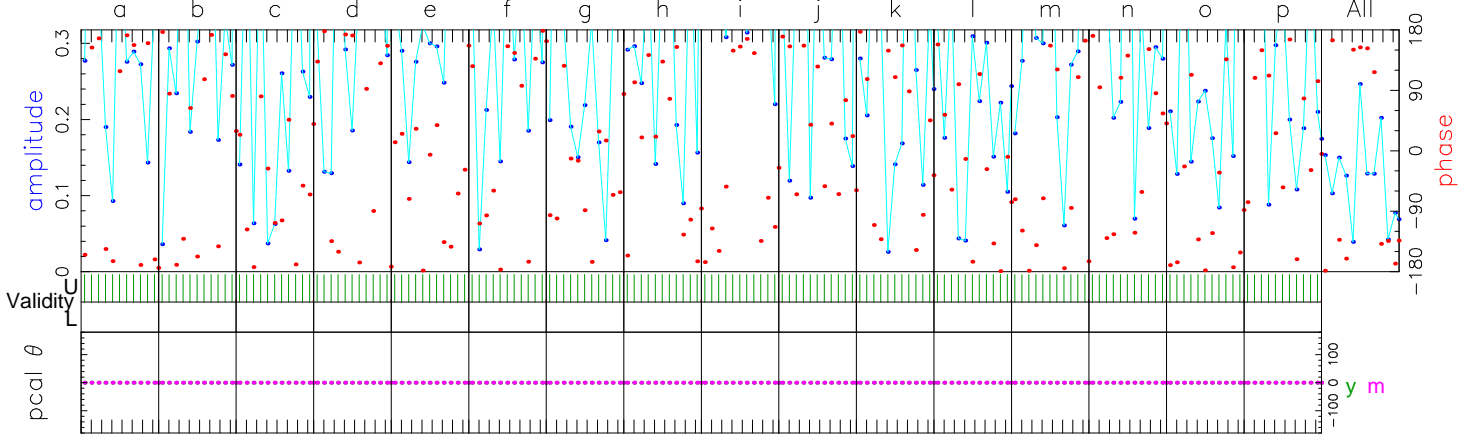
y: az 70.3 el 50.4 pa -76.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9196.985 3851.719 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ym..130A7B Output file: /Exps/c192a/v2/1234/No0041/ym.W.268.130A7B



Fringe quality 0
SNR 5.9
Int time 419.112
Amp 0.106
Phase -179.4
PFD 5.4e-01
Delays (us)
SBD -0.010650
MBD 0.000623
Fringe rate (Hz) 0.000938
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061815
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

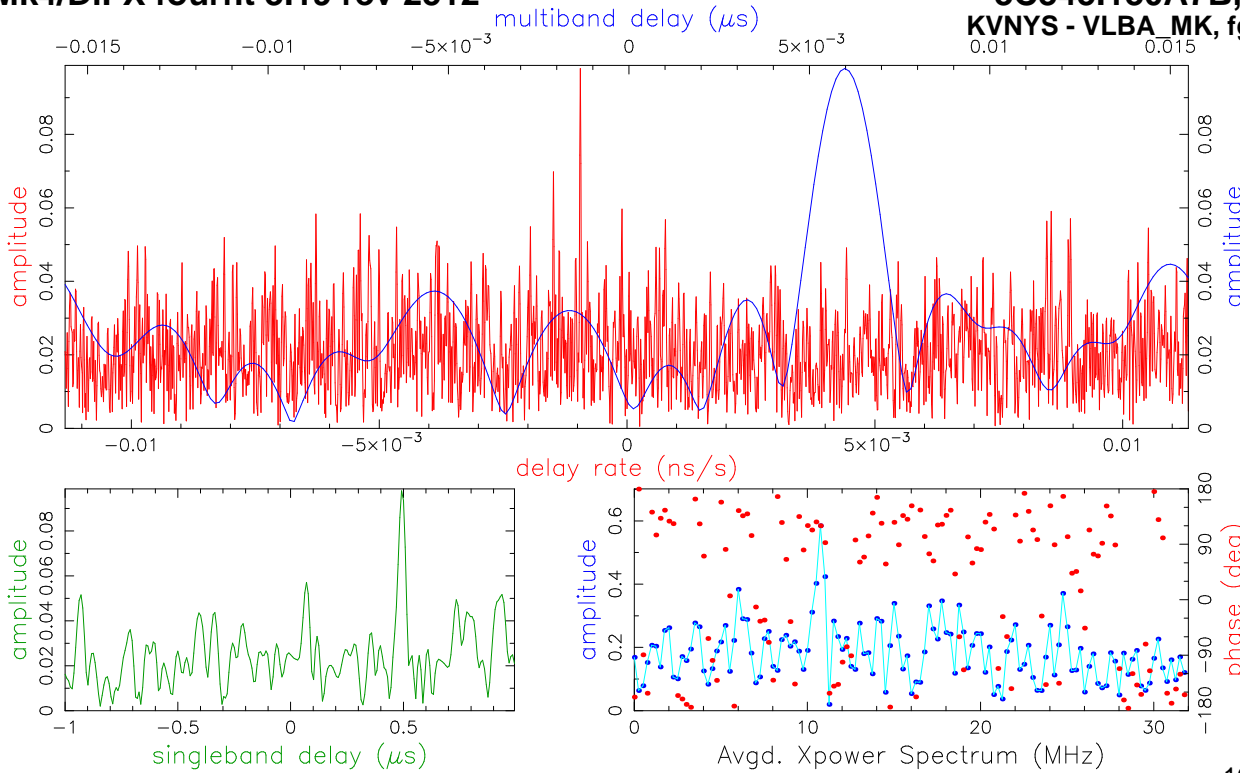


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | | | | | | |
|---|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|--|--------------|-----|---------|-----------------------|----------------|--------|-------|--|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | Phase | -179.4 | | | | | | | | | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | Ampl. | 0.1 | | | | | | | | | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Sbd box | 127.6 | | | | | | | | | |
| y:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | APs used | | | | | | | | | | |
| y:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC freqs | | | | | | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | | | | | | | | | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Mani PC | | | | | | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | PC amp | | | | | | | | | | |
| m | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | Chan ids | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | | | | | | |
| Group delay (usec)(sbd) | | | -1.76618012120E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -1.76618074452E+03 | Resid mbdelay (usec) | 6.23322E-04 | +/- | 1.8E-04 | | | | | |
| Sband delay (usec) | | | -1.76619139502E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 2.6626804E+01 | Resid sbdelay (usec) | -1.06505E-02 | +/- | 2.9E-03 | | | | | |
| Phase delay (usec) | | | -1.76618075031E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 1.0869228E-07 | Resid phdelay (usec) | -5.78615E-06 | +/- | 6.2E-07 | | | | | |
| Delay rate (us/s) | | | 1.24154368214E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | 1.24154367125E+00 | Resid rate (us/s) | 1.08941E-08 | +/- | 2.6E-09 | | | | | |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 2.90430656271E-05 | Resid phase (deg) | -179.4 | +/- | 19.3 | | | | | |
| ph/seg (deg) | | RMS | Theor. | | | | | | | | | | | | | | | Amplitude | 0.106 +/- 0.018 | PCal mode: MANUAL, MANUAL | | | | PC period (AP's) 5, 5 | | | | |
| amp/seg (%) | | 34.7 | 33.5 | | | | | | | | | | | | | | | Search (2048X64) | 0.104 | PCal rate: 0.000E+00, 0.000E+00 (us/s) | | | | sb window (us) | -1.000 | 1.000 | | |
| ph/frq (deg) | | 59.6 | 58.4 | | | | | | | | | | | | | | | Interp. | 0.000 | Bits/sample: 2x2 | | | | SampCntNorm: enabled | mb window (us) | -0.016 | 0.016 | |
| amp/frq (%) | | 60.0 | 38.6 | | | | | | | | | | | | | | | Inc. seg. avg. | 0.108 | Sample rate(MISamp/s): 64 | | | | dr window (ns/s) | -0.011 | 0.011 | | |
| | | 79.7 | 67.4 | | | | | | | | | | | | | | | Inc. frq. avg. | 0.116 | Data rate(Mb/s): 2048 | | | | ion window (TEC) | 0.00 | 0.00 | | |
| y: az 70.3 el 50.4 pa -76.7 | | | | | | | | | | | | | | | | | | | | nlags: 128 | | | | t_cohere infinite | | | | |
| m: az 317.4 el 59.9 pa 123.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| u,v (fr/asec) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control file: cf_1234_gmva | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Input file: /Exps/c192a/v2/1234/No0041/ym..130A7B | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Output file: /Exps/c192a/v2/1234/No0041/ym.W.289.130A7B | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

simultaneous interpolator

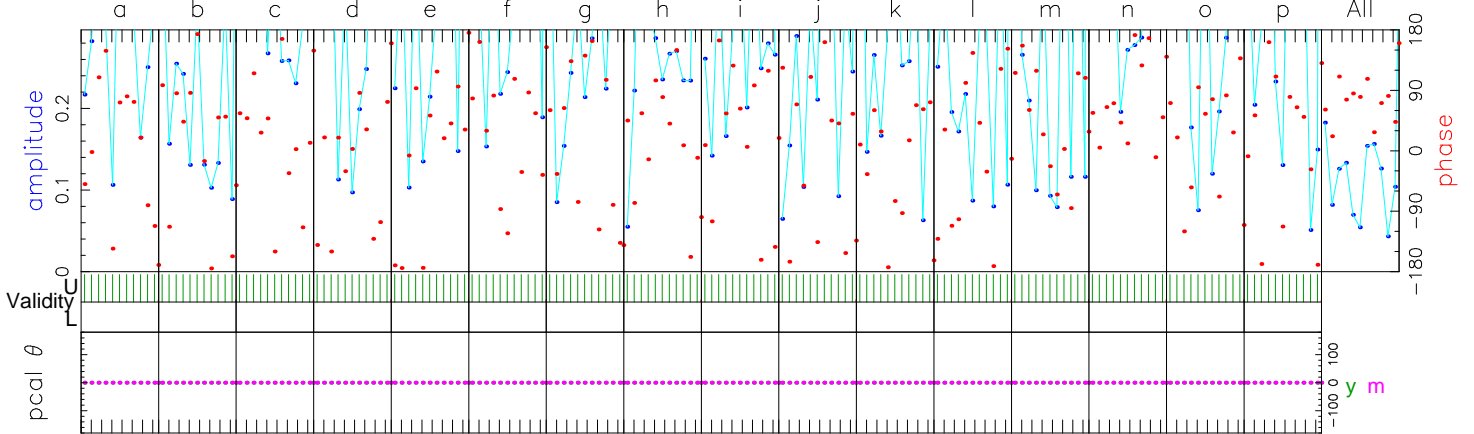
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ym
KVNYS - VLBA_MK, fgroup W, pol RL



Fringe quality 0
SNR 5.5
Int time 419.111
Amp 0.099
Phase 70.9
PFD 1.0e+00
Delays (us)
SBD 0.494229
MBD 0.005993
Fringe rate (Hz)
-0.080886
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061819
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



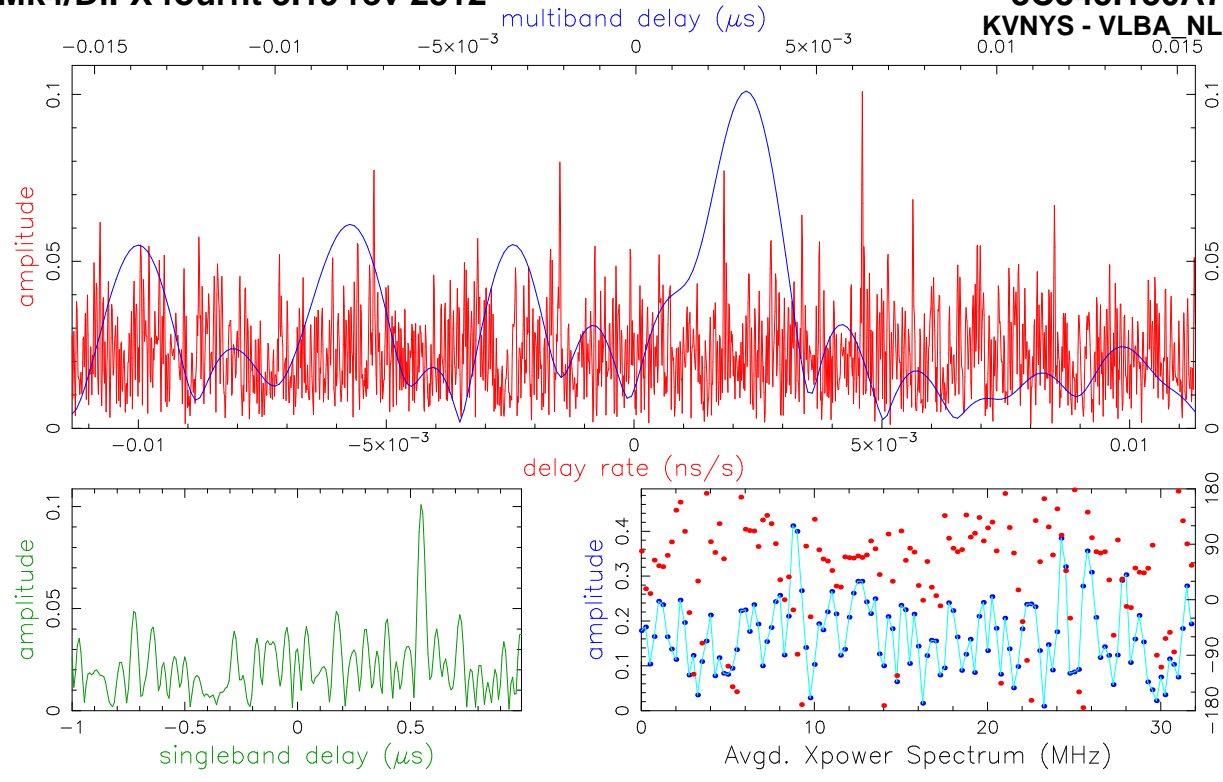
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| 78.4 | 88.9 | 54.0 | -65.5 | 67.7 | 73.0 | -158.0 | 34.5 | 105.9 | 128.3 | 16.0 | 69.2 | 75.8 | 65.8 | 47.6 | 93.5 | Phase | 70.9 | |
| 0.1 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | Ampl. | 0.1 | |
| 195.2 | 151.9 | 100.7 | 93.5 | 248.6 | 198.6 | 26.9 | 92.9 | 244.6 | 87.6 | 82.8 | 217.2 | 10.2 | 87.8 | 1.4 | 76.8 | Sbd box | 192.3 | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| m | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |

Group delay (usec)(sbd) -1.76567475184E+03 Apriori delay (usec) -1.76618074452E+03 Resid mbdelay (usec) 5.99268E-03 +/- 2.0E-04
 Sband delay (usec) -1.76568651602E+03 Apriori clock (usec) 2.6626804E+01 Resid sbdelay (usec) 4.94229E-01 +/- 3.1E-03
 Phase delay (usec) -1.76618074223E+03 Apriori clockrate (us/s) 1.0869228E-07 Resid phdelay (usec) 2.28588E-06 +/- 6.7E-07
 Delay rate (us/s) 1.24154273224E+00 Apriori rate (us/s) 1.24154367125E+00 Resid rate (us/s) -9.39002E-07 +/- 2.8E-09
 Total phase (deg) -49.0 Apriori accel (us/s/s) 2.90430656271E-05 Resid phase (deg) 70.9 +/- 20.8

ph/seg (deg) 28.7 36.0 Search (2048X64) 0.095 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 51.5 62.8 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 57.6 41.6 Inc. seg. avg. 0.095 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 52.0 72.6 Inc. frq. avg. 0.096 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 y: az 70.3 el 50.4 pa -76.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9196.985 3851.719 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ym..130A7B Output file: /Exps/c192a/v2/1234/No0041/ym.W.303.130A7B

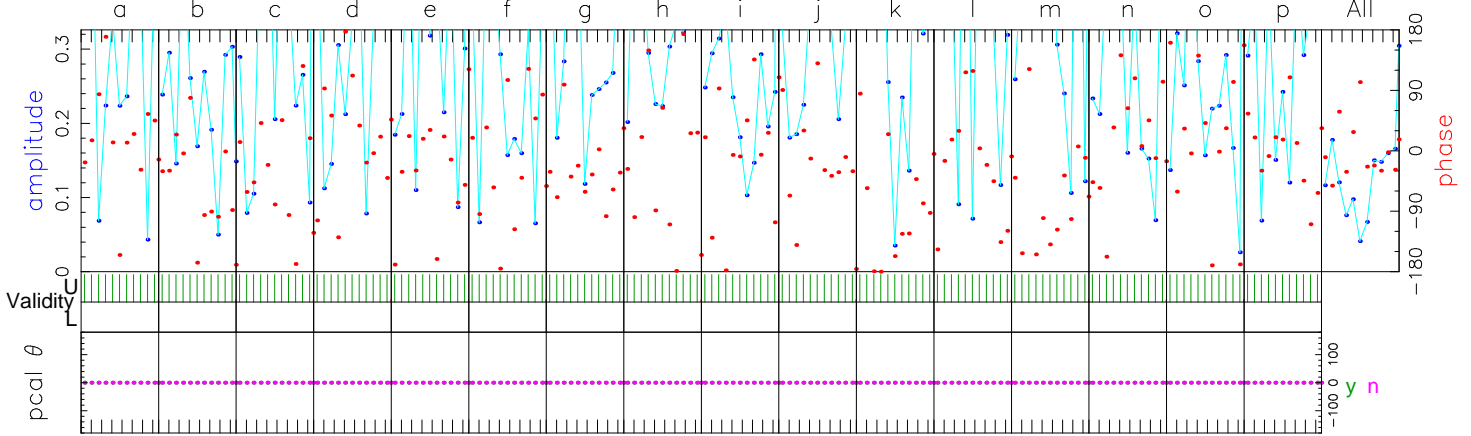
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yn
KVNS - VLBA_NL, fgroup W, pol LL



Fringe quality 0
SNR 5.7
Int time 419.831
Amp 0.109
Phase -12.6
PFD 9.6e-01
Delays (us)
SBD 0.548931
MBD 0.003110
Fringe rate (Hz)
0.397391
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061806
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

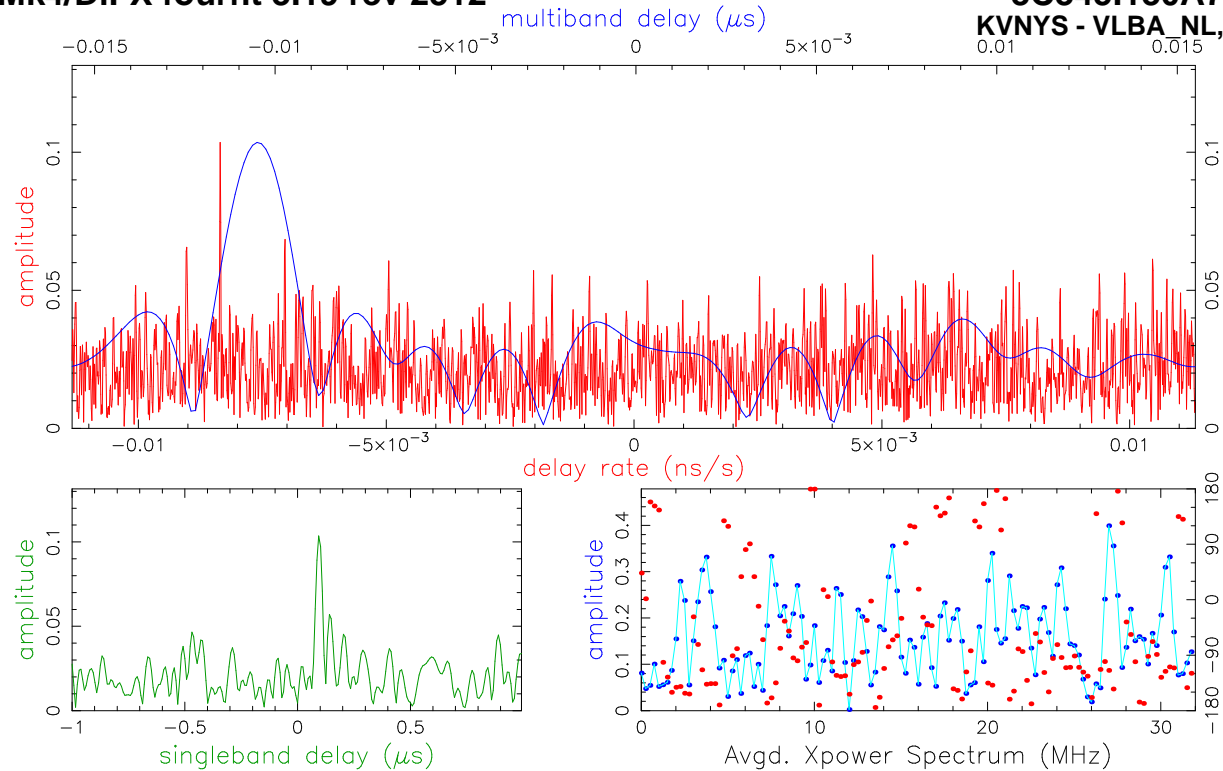
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-----------------------------|-------------------|---|------------------|---|-----------------|----------------------|---------------------------|----------|------------------------------|----------------------|--|----------|----------------|---------------------------|--------------|-------------|------------|----------|-------|
| | 13.5 | -34.7 | -2.5 | -2.8 | -2.1 | 30.6 | -33.5 | -40.4 | 25.9 | -15.7 | -99.8 | -1.4 | -103.6 | 82.6 | 26.9 | -6.0 | | Phase | -12.6 |
| | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.3 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | | Ampl. | 0.1 |
| | 138.1 | 126.7 | 139.7 | 121.0 | 197.0 | 22.6 | 198.2 | 68.9 | 247.6 | 180.7 | 10.4 | 209.9 | 124.5 | 132.2 | 116.3 | 34.7 | | Sbd box | 199.3 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | |
| y:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | Chan ids | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | |
| Group delay (usec)(sbd) | 7.68902901779E+03 | | | Apriori delay (usec) | | | 7.68849465809E+03 | | | Resid mbdelay (usec) | | | 3.10970E-03 | | | +/- 1.9E-04 | | | |
| Sband delay (usec) | 7.68904358959E+03 | | | Apriori clock (usec) | | | 2.7106171E+00 | | | Resid sbdelay (usec) | | | 5.48931E-01 | | | +/- 3.0E-03 | | | |
| Phase delay (usec) | 7.68849465769E+03 | | | Apriori clockrate (us/s) | | | -3.4223519E-08 | | | Resid phdelay (usec) | | | -4.04792E-07 | | | +/- 6.5E-07 | | | |
| Delay rate (us/s) | 1.62090372690E+00 | | | Apriori rate (us/s) | | | 1.62089911358E+00 | | | Resid rate (us/s) | | | 4.61332E-06 | | | +/- 2.7E-09 | | | |
| Total phase (deg) | 292.7 | | | Apriori accel (us/s/s) | | | -4.49485777618E-05 | | | Resid phase (deg) | | | -12.6 | | | +/- 20.2 | | | |
| ph/seg (deg) | RMS | Theor. | Amplitude | | 0.109 +/- 0.019 | | 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 | | | | |
| amp/seg (%) | 45.2 | 34.9 | Search (2048X64) | | 0.096 | | Bits/sample: 2x2 | | SampCntNorm: enabled | | mb window (us) | | -0.016 0.016 | | | | | | |
| ph/frq (deg) | 48.3 | 40.3 | Interp. | | 0.000 | | Sample rate(MISamp/s): 64 | | | | dr window (ns/s) | | -0.011 0.011 | | | | | | |
| amp/frq (%) | 65.4 | 70.4 | Inc. seg. avg. | | 0.110 | | Data rate(Mb/s): 2048 | | nlags: 128 t_cohere infinite | | ion window (TEC) | | 0.00 0.00 | | | | | | |
| y: az 70.3 el 50.4 pa -76.7 | | n: az 301.9 el 25.2 pa 55.5 | | u,v (fr/asec) | | -12155.628 -3176.834 | | | | | | | | simultaneous interpolator | | | | | |
| Control file: cf_1234_gmva | | Input file: /Exps/c192a/v2/1234/No0041/yn..130A7B | | Output file: /Exps/c192a/v2/1234/No0041/yn.W.253.130A7B | | | | | | | | | | | | | | | |

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yn
KVNYS - VLBA_NL, fgroup W, pol RR

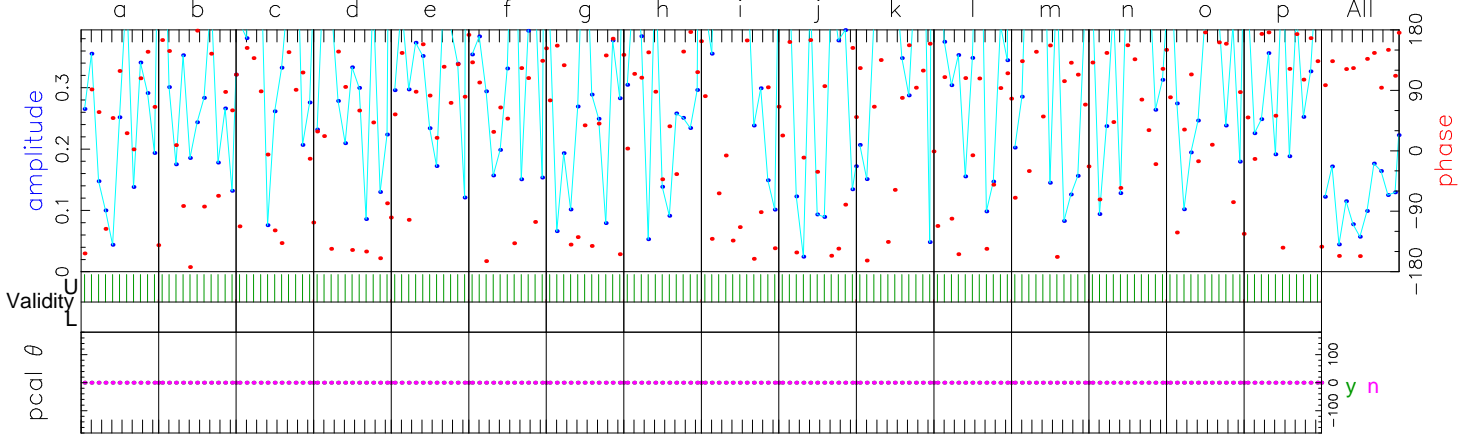


Fringe quality 0

SNR 5.8
Int time 419.831
Amp 0.131
Phase 129.6
PFD 7.6e-01
Delays (us)
SBD 0.095348
MBD -0.010457
Fringe rate (Hz)
-0.719848
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061810
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

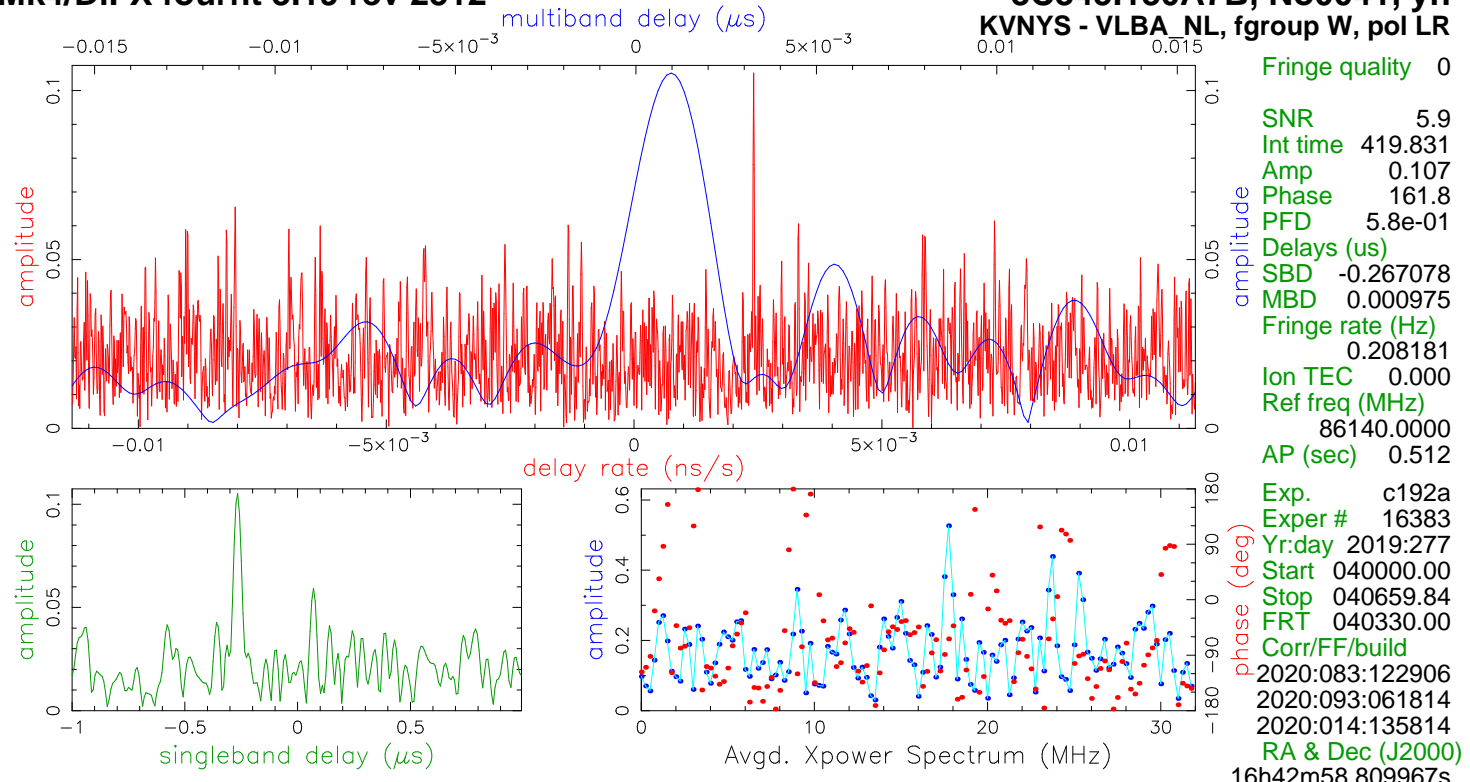


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|--------------------------|----------|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 129.6 |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 0.1 |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 141.2 |
| y:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | |
| y:n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | |
| Group delay (usec)(sbd) | | 7.68857795092E+03 | | | | | | | | | | | | | | | | |
| Sband delay (usec) | | 7.68859000559E+03 | | | | | | | | | | | | | | | | |
| Phase delay (usec) | | 7.68849466227E+03 | | | | | | | | | | | | | | | | |
| Delay rate (us/s) | | 1.62089075687E+00 | | | | | | | | | | | | | | | | |
| Total phase (deg) | | | 74.9 | | | | | | | | | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | | | | | | | | | |

ph/seg (deg) 36.2 34.1 Search (2048X64) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 43.4 59.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.7 39.3 Inc. seg. avg. 0.126 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 52.6 68.6 Inc. frq. avg. 0.135 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 y: az 70.3 el 50.4 pa -76.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12155.628 -3176.834 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yn..130A7B Output file: /Exps/c192a/v2/1234/No0041/yn.W.266.130A7B simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yn
KVNYS - VLBA_NL, fgroup W, pol LR



Fringe quality 0

SNR 5.9

Int time 419.831

Amp 0.107

Phase 161.8

PFD 5.8e-01

Delays (us)

SBD -0.267078

MBD 0.000975

Fringe rate (Hz)

0.208181

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Exper # 16383

Yr:day 2019:277

Start 040000.00

Stop 040659.84

FRT 040330.00

Corr/FF/build

2020:083:122906

2020:093:061814

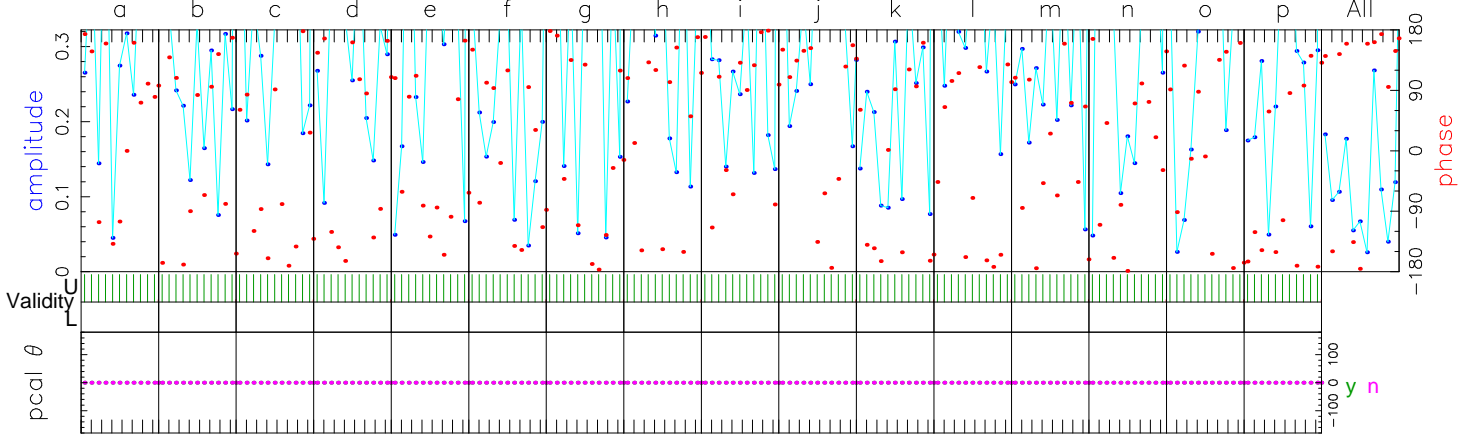
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | 121.0 | 160.3 | -151.8 | -177.7 | -129.9 | 160.6 | 169.1 | 162.5 | 162.6 | 174.8 | 148.0 | 148.1 | -1.9 | 41.0 | 134.7 | 178.2 | 178.2 | Phase | 161.8 | | | | |
| | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | Ampl. | 0.1 | | | | |
| | 96.8 | 198.6 | 242.8 | 149.1 | 1.5 | 130.3 | 147.6 | 104.1 | 13.8 | 93.3 | 114.7 | 101.6 | 128.2 | 113.5 | 52.2 | 18.8 | 18.8 | Sbd box | 94.8 | | | | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | | | | | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | | | | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| y:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | | | | |
| y:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | | | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | | | | | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | | | | | |
| | | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | 7.68821438306E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | 7.68849465809E+03 | Resid mbdelay (usec) | 9.74972E-04 | +/- | 1.8E-04 |
| Sband delay (usec) | | | 7.68822758059E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 2.7106171E+08 | Resid sbdelay (usec) | -2.67078E-01 | +/- | 2.9E-03 |
| Phase delay (usec) | | | 7.68849466331E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -3.4223519E-08 | Resid phdelay (usec) | 5.21735E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | | | 1.62090153036E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | 1.62089911358E+00 | Resid rate (us/s) | 2.41677E-06 | +/- | 2.6E-09 |
| Total phase (deg) | | | | 107.1 | | | | | | | | | | | | | | Apriori accel (us/s/s) | -4.49485777618E-05 | Resid phase (deg) | 161.8 | +/- | 19.4 |

ph/seg (deg) 33.4 33.6 Search (2048X64) 0.107 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 69.5 58.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 60.9 38.8 Inc. seg. avg. 0.100 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

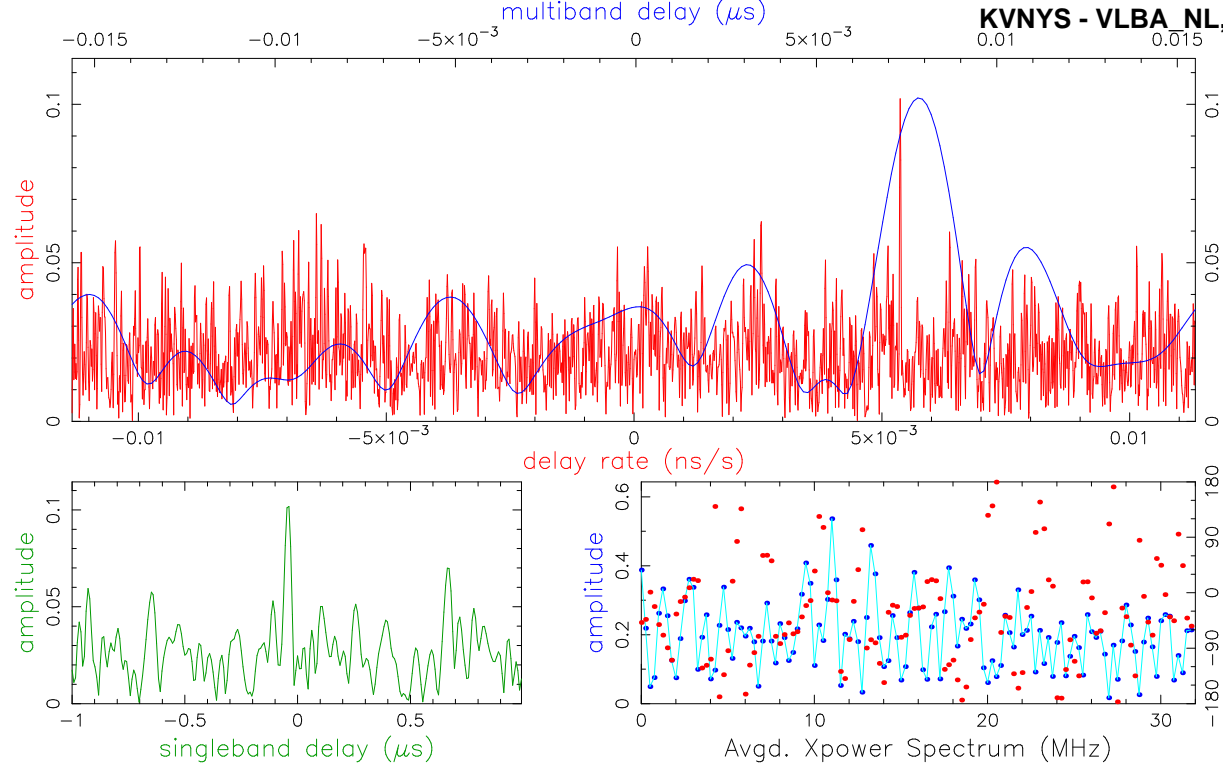
amp/frq (%) 57.8 67.7 Inc. frq. avg. 0.097 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

y: az 70.3 el 50.4 pa -76.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12155.628 -3176.834 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yn..130A7B Output file: /Exps/c192a/v2/1234/No0041/yn.W.282.130A7B

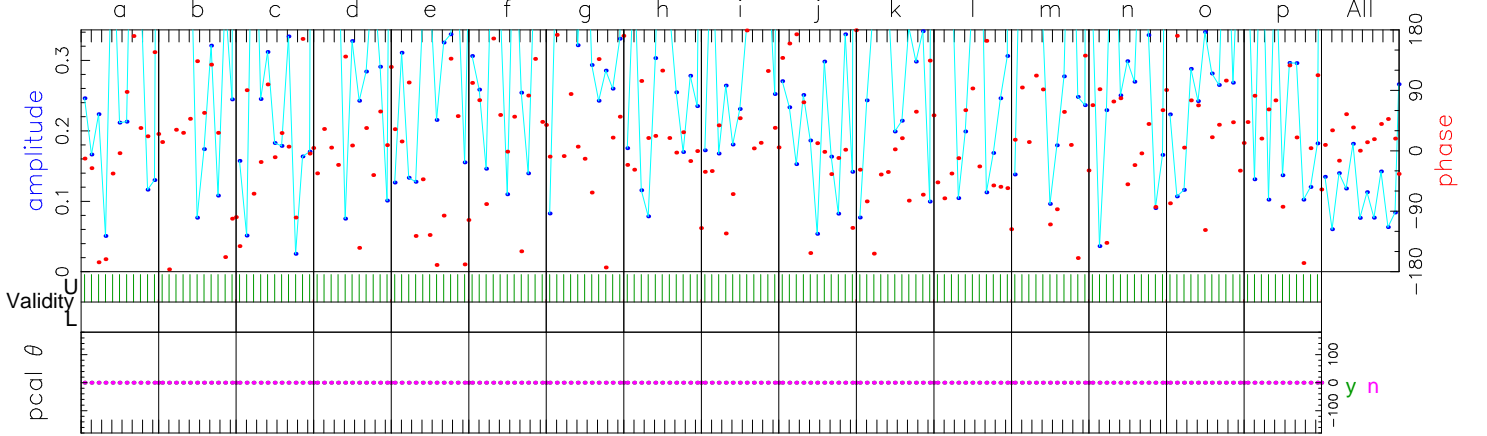
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yn
KVNYS - VLBA_NL, fgroup W, pol RL



Fringe quality 0
SNR 5.8
Int time 419.831
Amp 0.114
Phase 21.5
PFD 7.4e-01
Delays (us)
SBD -0.042693
MBD 0.007767
Fringe rate (Hz) 0.463625
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build 2020:083:122906
2020:093:061818
2020:014:135814
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| 24.3 | 47.5 | -15.0 | 3.8 | -101.3 | 88.2 | 28.3 | 19.1 | 8.8 | 84.5 | -38.4 | -37.7 | 63.9 | 33.9 | 36.0 | 51.0 | Phase | 21.5 | |
| 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.2 | 0.1 | 0.2 | 0.1 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | Ampl. | 0.1 | |
| 9.0 | 56.9 | 10.5 | 13.5 | 41.0 | 150.6 | 156.1 | 13.8 | 155.6 | 137.5 | 115.2 | 122.8 | 149.8 | 79.3 | 179.3 | 121.9 | Sbd box | 123.5 | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |

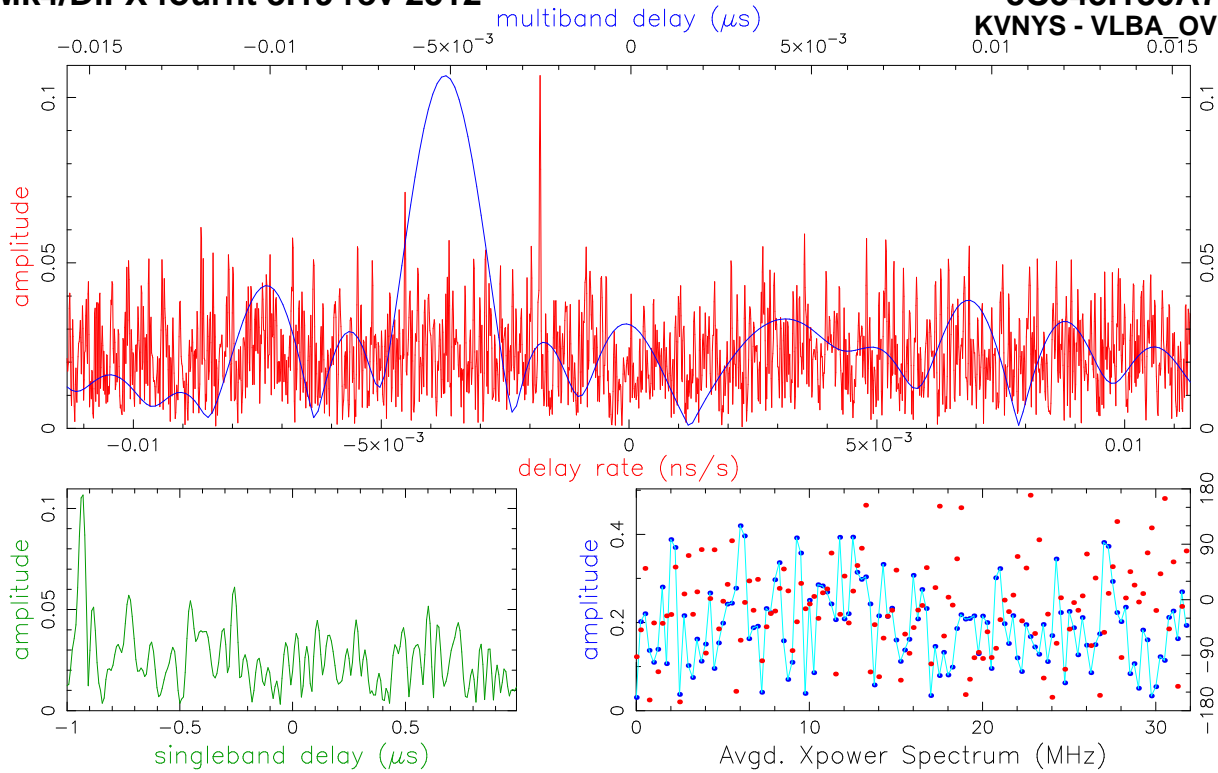
Group delay (usec)(sbd) 7.68843992555E+03 Apriori delay (usec) 7.68849465809E+03 Resid mbdelay (usec) 7.76746E-03 +/- 1.8E-04
 Sband delay (usec) 7.68845196509E+03 Apriori clock (usec) 2.7106171E+00 Resid sbdelay (usec) -4.26930E-02 +/- 3.0E-03
 Phase delay (usec) 7.68849465879E+03 Apriori clockrate (us/s) -3.4223519E-08 Resid phdelay (usec) 6.94256E-07 +/- 6.3E-07
 Delay rate (us/s) 1.62090449581E+00 Apriori rate (us/s) 1.62089911358E+00 Resid rate (us/s) 5.38223E-06 +/- 2.6E-09
 Total phase (deg) 326.8 Apriori accel (us/s/s) -4.49485777618E-05 Resid phase (deg) 21.5 +/- 19.6

RMS Theor. Amplitude 0.114 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 20.4 34.0 Search (2048X64) 0.099 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 38.3 59.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 50.8 39.3 Inc. seg. avg. 0.102 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 60.1 68.5 Inc. frq. avg. 0.115 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

y: az 70.3 el 50.4 pa -76.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12155.628 -3176.834 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yn..130A7B Output file: /Exps/c192a/v2/1234/No0041/yn.W.295.130A7B

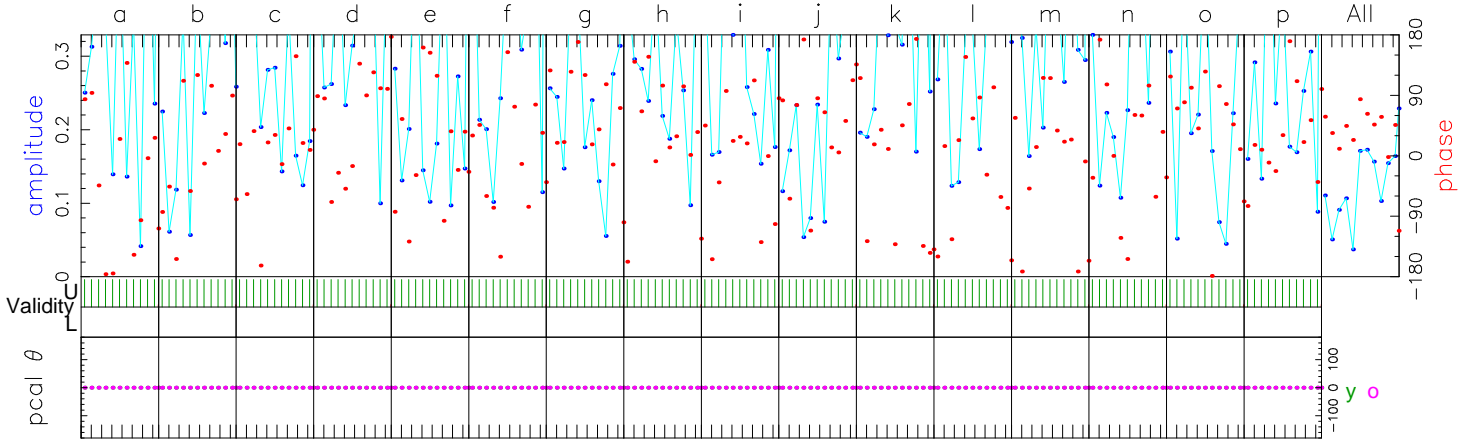
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yo
KVNS - VLBA OV, fgroup W, pol LL



Fringe quality 0
SNR 6.1
Int time 419.826
Amp 0.110
Phase 45.8
PFD 2.6e-01
Delays (us)
SBD -0.933026
MBD -0.005155
Fringe rate (Hz)
-0.154342
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061807
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

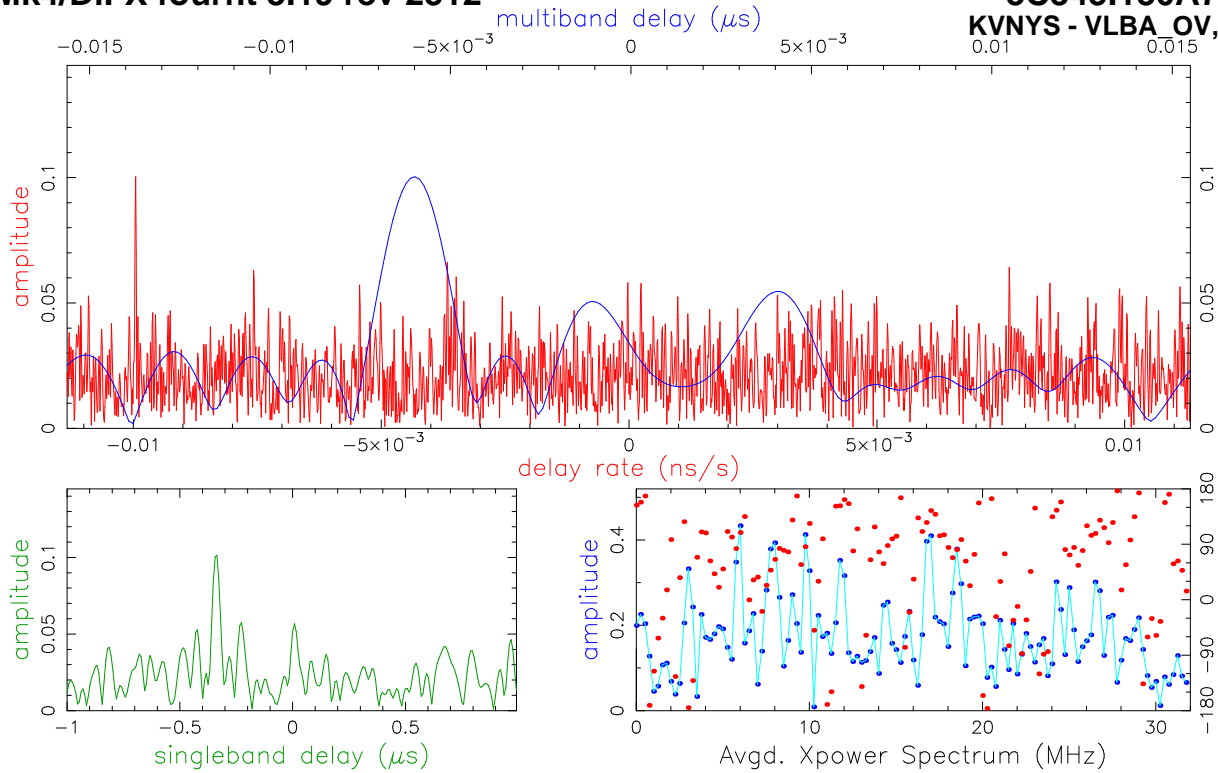


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|----------|----------|----------|----------|----------|----------|----------|------------|------|
| U/L | 27.0 | 65.2 | 14.9 | 78.4 | -55.1 | 39.4 | 82.0 | 66.3 | 38.7 | 61.3 | 89.6 | -2.5 | 53.9 | 28.2 | 83.4 | 15.4 | Phase | 45.8 |
| y | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | Ampl. | 0.1 |
| o | 105.0 | 201.1 | 231.4 | 78.6 | 113.8 | 201.0 | 84.9 | 165.0 | 62.2 | 171.5 | 31.2 | 135.2 | 144.1 | 142.5 | 218.1 | 75.8 | Sbd box | 9.6 |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | APs used | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.65926938960E+03 | | Apriori delay (usec) | | 2.66021204497E+03 | | Resid mbdelay (usec) | | -5.15537E-03 | | +/- | | 1.8E-04 | | | | | |
| Sband delay (usec) | 2.65927901897E+03 | | Apriori clock (usec) | | 1.2560732E+01 | | Resid sbdelay (usec) | | -9.33026E-01 | | +/- | | 2.8E-03 | | | | | |
| Phase delay (usec) | 2.66021204645E+03 | | Apriori clockrate (us/s) | | 9.9018992E-08 | | Resid phdelay (usec) | | 1.47732E-06 | | +/- | | 6.1E-07 | | | | | |
| Delay rate (us/s) | 1.58671193543E+00 | | Apriori rate (us/s) | | 1.58671372719E+00 | | Resid rate (us/s) | | -1.79176E-06 | | +/- | | 2.5E-09 | | | | | |
| Total phase (deg) | 245.1 | | Apriori accel (us/s/s) | | -1.37524509743E-05 | | Resid phase (deg) | | 45.8 | | +/- | | 18.8 | | | | | |

ph/seg (deg) 27.2 32.6 Amplitude 0.110 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 44.2 56.9 Search (2048X64) 0.105 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 39.6 37.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 41.1 65.7 Inc. seg. avg. 0.105 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
y: az 70.3 el 50.4 pa -76.7 o: az 293.7 el 41.4 pa 71.3 u,v (fr/asec) -11846.502 -724.631 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yo..130A7B Output file: /Exps/c192a/v2/1234/No0041/yo.W.256.130A7B simultaneous interpolator

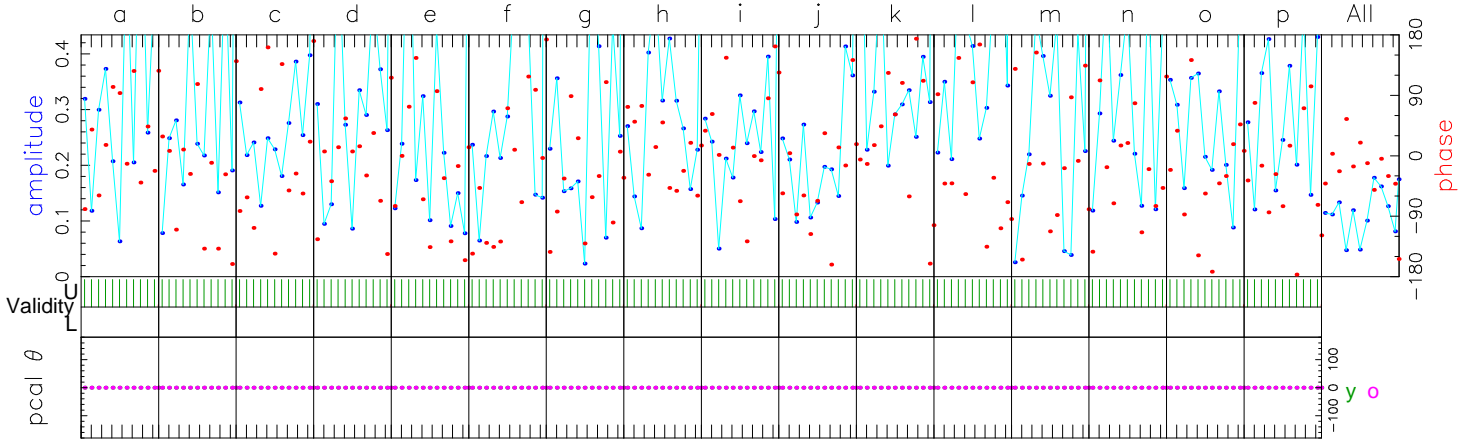
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yo
KVNYS - VLBA_OV, fgrouP W, pol RR



Fringe quality 0
SNR 5.8
Int time 419.826
Amp 0.145
Phase -20.7
PFD 8.7e-01
Delays (us)
SBD -0.339410
MBD -0.005978
Fringe rate (Hz)
-0.858949
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061812
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

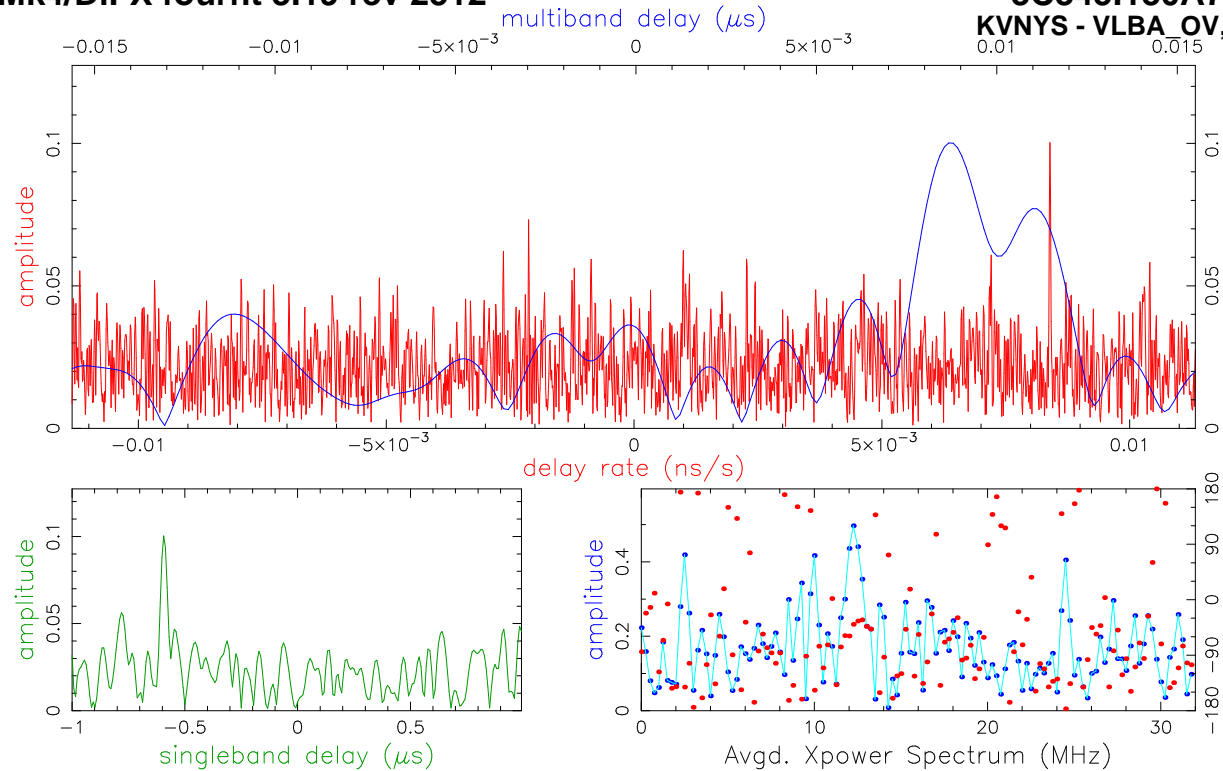


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -13.1 | -32.0 | -64.4 | -4.7 | 41.4 | -122.5 | -56.3 | -4.3 | 33.1 | -33.3 | 37.4 | -93.2 | -68.9 | -10.7 | -12.7 | -28.6 | Phase | -20.7 |
| | 0.3 | 0.2 | 0.1 | 0.2 | 0.1 | 0.0 | 0.2 | 0.3 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.3 | 0.1 | 0.2 | Ampl. | 0.1 |
| | 84.9 | 141.8 | 39.0 | 5.1 | 79.4 | 150.0 | 86.5 | 102.7 | 7.7 | 102.5 | 7.6 | 253.3 | 97.9 | 8.4 | 3.2 | 167.4 | Sbd box | 85.6 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.65986231721E+03 | | Apriori delay (usec) | | 2.66021204497E+03 | | Resid mbdelay (usec) | | -5.97776E-03 | | +/- | | 1.9E-04 | | | | | |
| Sband delay (usec) | 2.65987263547E+03 | | Apriori clock (usec) | | 1.2560732E+01 | | Resid sbdelay (usec) | | -3.39410E-01 | | +/- | | 3.0E-03 | | | | | |
| Phase delay (usec) | 2.66021204430E+03 | | Apriori clockrate (us/s) | | 9.9018992E-08 | | Resid phdelay (usec) | | -6.67136E-07 | | +/- | | 6.4E-07 | | | | | |
| Delay rate (us/s) | 1.58670375565E+00 | | Apriori rate (us/s) | | 1.58671372719E+00 | | Resid rate (us/s) | | -9.97155E-06 | | +/- | | 2.6E-09 | | | | | |
| Total phase (deg) | 178.6 | | Apriori accel (us/s/s) | | -1.37524509743E-05 | | Resid phase (deg) | | -20.7 | | +/- | | 19.9 | | | | | |

ph/seg (deg) 32.2 34.4 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 39.1 60.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 48.1 39.7 Inc. seg. avg. 0.133 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 54.3 69.4 Inc. frq. avg. 0.140 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
y: az 70.3 el 50.4 pa -76.7 o: az 293.7 el 41.4 pa 71.3 u,v (fr/asec) -11846.502 -724.631 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yo..130A7B Output file: /Exps/c192a/v2/1234/No0041/yo.W.274.130A7B

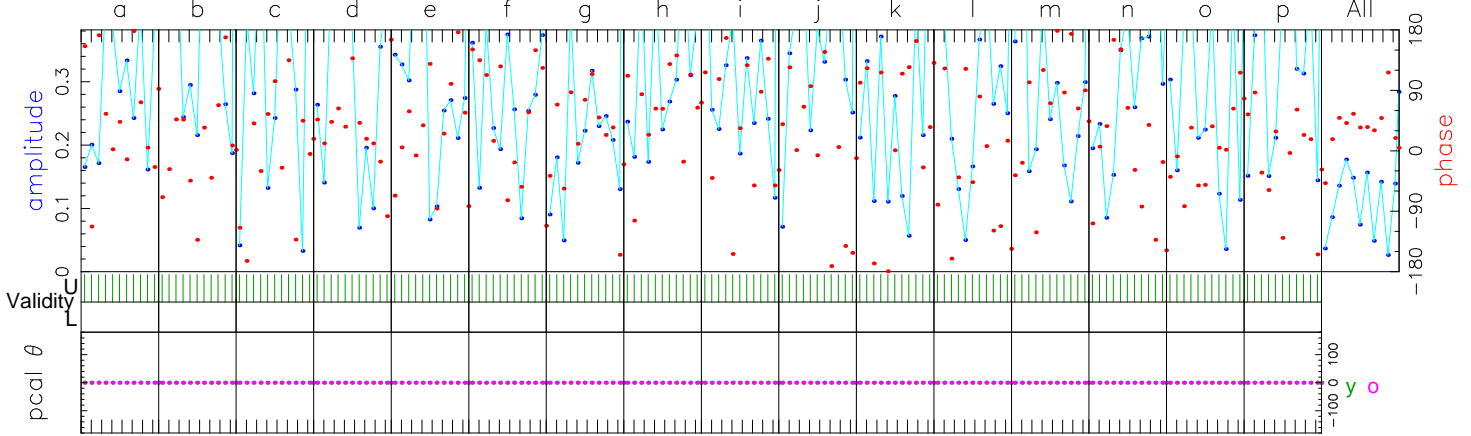
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yo
KVNYS - VLBA OV, fgroup W, pol LR



Fringe quality 0
SNR 5.6
Int time 419.826
Amp 0.127
Phase 37.4
PFD 9.9e-01
Delays (us)
SBD -0.592596
MBD 0.008734
Fringe rate (Hz) 0.723804
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061816
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|------|
| 32.5 | -0.7 | -3.9 | 37.1 | 25.7 | 111.5 | 58.6 | 75.1 | 124.0 | 71.2 | 93.0 | -56.1 | 55.2 | -46.7 | 3.6 | 6.3 | 37.4 | Phase | 37.4 |
| 0.2 | 0.3 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | Ampl. | 0.1 |
| 241.2 | 209.3 | 219.6 | 160.6 | 54.4 | 65.5 | 211.3 | 53.8 | 152.6 | 78.6 | 222.7 | 57.8 | 90.3 | 101.8 | 155.8 | 54.3 | 53.1 | Sbd box | 53.1 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.65962702874E+03 | | | Apriori delay (usec) | | | 2.66021204497E+03 | | | Resid mbdelay (usec) | | | 8.73377E-03 | | | +/- 1.9E-04 | | |
| Sband delay (usec) | 2.65961944947E+03 | | | Apriori clock (usec) | | | 1.2560732E+01 | | | Resid sbdelay (usec) | | | -5.92596E-01 | | | +/- 3.1E-03 | | |
| Phase delay (usec) | 2.66021204618E+03 | | | Apriori clockrate (us/s) | | | 9.9018992E-08 | | | Resid phdelay (usec) | | | 1.20685E-06 | | | +/- 6.6E-07 | | |
| Delay rate (us/s) | 1.58672212984E+00 | | | Apriori rate (us/s) | | | 1.58671372719E+00 | | | Resid rate (us/s) | | | 8.40265E-06 | | | +/- 2.7E-09 | | |
| Total phase (deg) | 236.7 | | | Apriori accel (us/s/s) | | | -1.37524509743E-05 | | | Resid phase (deg) | | | 37.4 | | | +/- 20.4 | | |

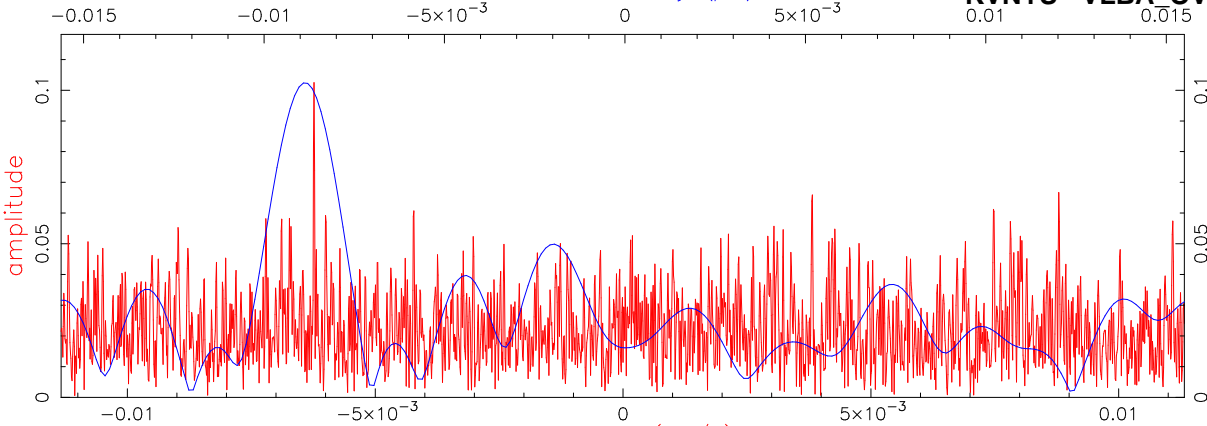
ph/seg (deg) 36.9 35.3 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 53.2 61.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 53.9 40.7 Inc. seg. avg. 0.115 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 62.5 71.1 Inc. frq. avg. 0.135 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
y: az 70.3 el 50.4 pa -76.7 o: az 293.7 el 41.4 pa 71.3 u,v (fr/asec) -11846.502 -724.631 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yo..130A7B Output file: /Exps/c192a/v2/1234/No0041/yo.W.290.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

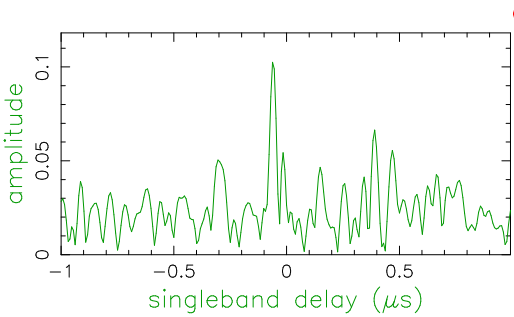
3C345.130A7B, No0041, yo
KVNYS - VLBA OV, fgroup W, pol RL

multiband delay (μ s)

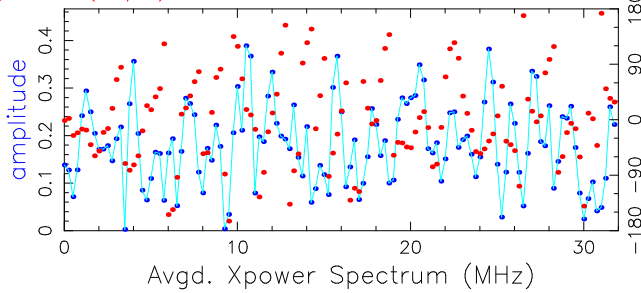
Fringe quality 0



SNR 5.8
Int time 419.826
Amp 0.118
Phase 63.5
PFD 7.6e-01
Delays (us)
SBD -0.059730
MBD -0.008844
Fringe rate (Hz)
-0.537986
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

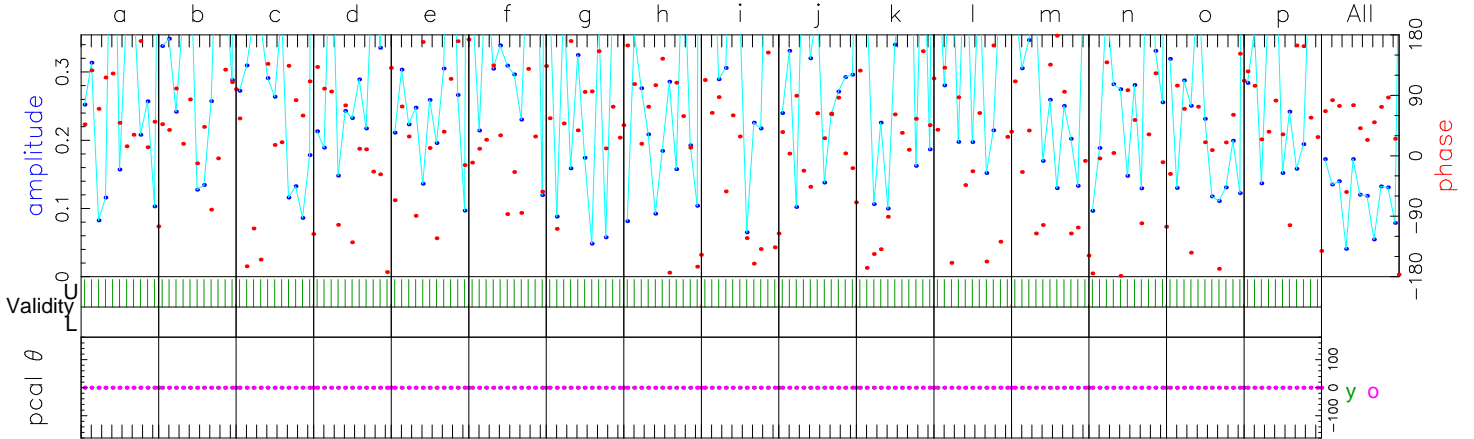


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061820
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

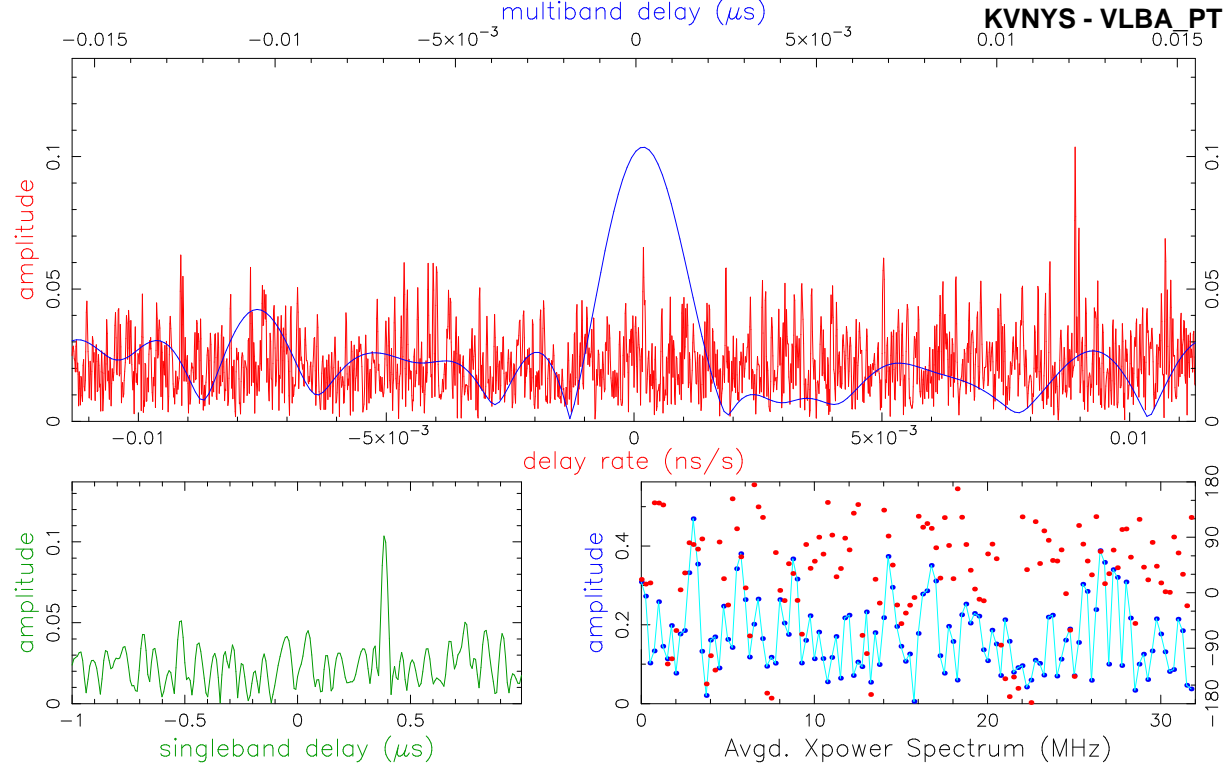


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | | |
|-------------------------|----------|-------------------|----------|----------|----------|----------|----------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|------------|-------|----------|----------------------|----------------------|--------------|---------|---------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | | | | | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | | | |
| y:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | | | | |
| y:1 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | | Chan ids | | | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | | | Tracks | | | | |
| Group delay (usec)(sbd) | | 2.66014070082E+03 | | | | | | | | 2.66021204497E+03 | | | | | | | | | | Resid mbdelay (usec) | -8.84414E-03 | +/- | 1.9E-04 | |
| Sband delay (usec) | | 2.66015231497E+03 | | | | | | | | 1.2560732E+01 | | | | | | | | | | | Resid sbdelay (usec) | -5.97300E-02 | +/- | 3.0E-03 |
| Phase delay (usec) | | 2.66021204702E+03 | | | | | | | | 9.9018992E-08 | | | | | | | | | | | Resid phdelay (usec) | 2.04921E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | | 1.58670748171E+00 | | | | | | | | 1.58671372719E+00 | | | | | | | | | | | Resid rate (us/s) | -6.24549E-06 | +/- | 2.6E-09 |
| Total phase (deg) | | | | 262.8 | | | | | | -1.37524509743E-05 | | | | | | | | | | Resid phase (deg) | 63.5 | +/- | 19.7 | |

ph/seg (deg) 42.4 34.1 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 51.9 59.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 38.4 39.3 Inc. seg. avg. 0.116 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 58.9 68.7 Inc. frq. avg. 0.108 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
y: az 70.3 el 50.4 pa -76.7 o: az 293.7 el 41.4 pa 71.3 u,v (fr/asec) -11846.502 -724.631 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yo..130A7B Output file: /Exps/c192a/v2/1234/No0041/yo.W.304.130A7B

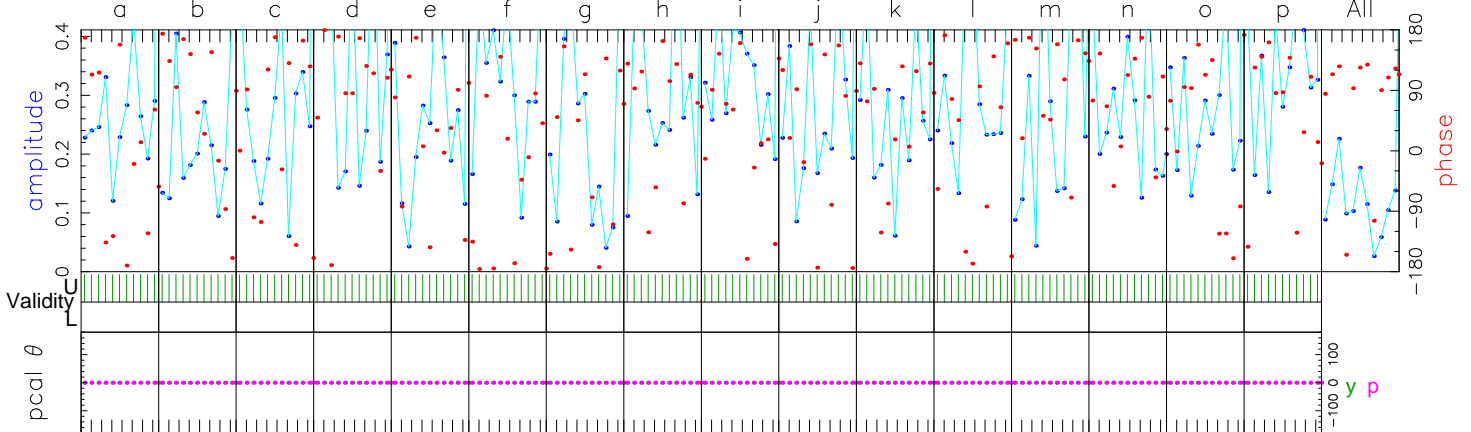
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yp
KVNS - VLBA PT, fgroup W, pol LL



Fringe quality 0
SNR 5.9
Int time 419.829
Amp 0.137
Phase 120.3
PFD 6.6e-01
Delays (us)
SBD 0.385411
MBD 0.000211
Fringe rate (Hz) 0.767657
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061808
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

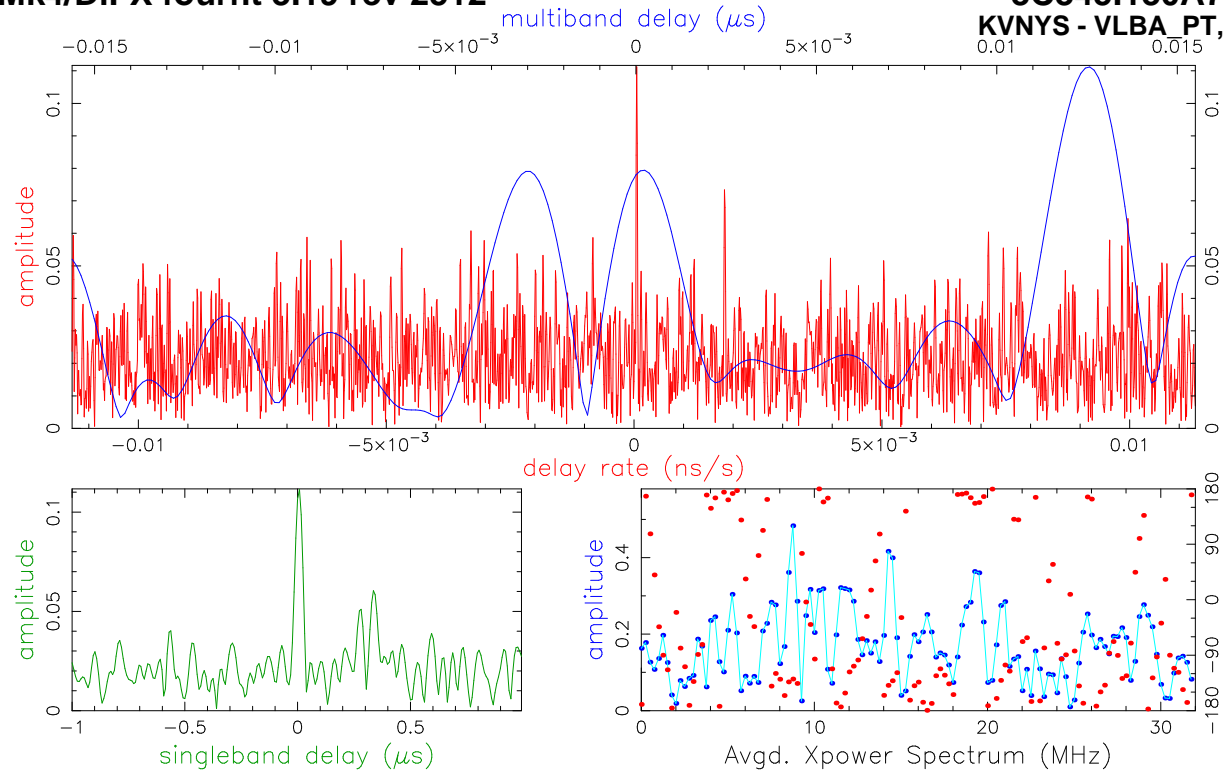


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|-------------|------------|-------|
| 163.9 | 126.4 | 164.7 | 121.3 | 46.0 | 107.2 | 147.3 | 123.8 | 86.0 | 133.1 | 98.0 | 169.5 | 118.5 | 84.7 | 155.6 | 117.1 | 117.1 | Phase | 120.3 |
| 0.1 | 0.1 | 0.0 | 0.3 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | Ampl. | 0.1 |
| 5.0 | 21.8 | 75.5 | 25.4 | 124.2 | 41.1 | 134.8 | 179.8 | 224.1 | 60.9 | 190.2 | 29.1 | 192.2 | 62.7 | 56.4 | 25.9 | 25.9 | Sbd box | 178.3 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| y:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| y:p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |
| Group delay (usec)(sbd) | 5.25508333831E+03 | | | Apriori delay (usec) | | | 5.25470812754E+03 | | | Resid mbdelay (usec) | | | 2.10776E-04 | | | +/- 1.8E-04 | | |
| Sband delay (usec) | 5.25509353854E+03 | | | Apriori clock (usec) | | | 1.7277668E+01 | | | Resid sbdelay (usec) | | | 3.85411E-01 | | | +/- 2.9E-03 | | |
| Phase delay (usec) | 5.25470813142E+03 | | | Apriori clockrate (us/s) | | | -1.0388660E-07 | | | Resid phdelay (usec) | | | 3.88089E-06 | | | +/- 6.3E-07 | | |
| Delay rate (us/s) | 1.68052532704E+00 | | | Apriori rate (us/s) | | | 1.68051641531E+00 | | | Resid rate (us/s) | | | 8.91174E-06 | | | +/- 2.6E-09 | | |
| Total phase (deg) | 158.6 | | | Apriori accel (us/s/s) | | | -2.45364448965E-05 | | | Resid phase (deg) | | | 120.3 | | | +/- 19.5 | | |

ph/seg (deg) 50.9 33.8 Search (2048X64) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 59.2 59.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 35.0 39.0 Inc. seg. avg. 0.133 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 46.1 68.1 Inc. frq. avg. 0.127 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
y: az 70.3 el 50.4 pa -76.7 p: az 298.8 el 32.7 pa 70.0 u,v (fr/asec) -12563.254 -1139.442 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yp..130A7B Output file: /Exps/c192a/v2/1234/No0041/yp.W.258.130A7B

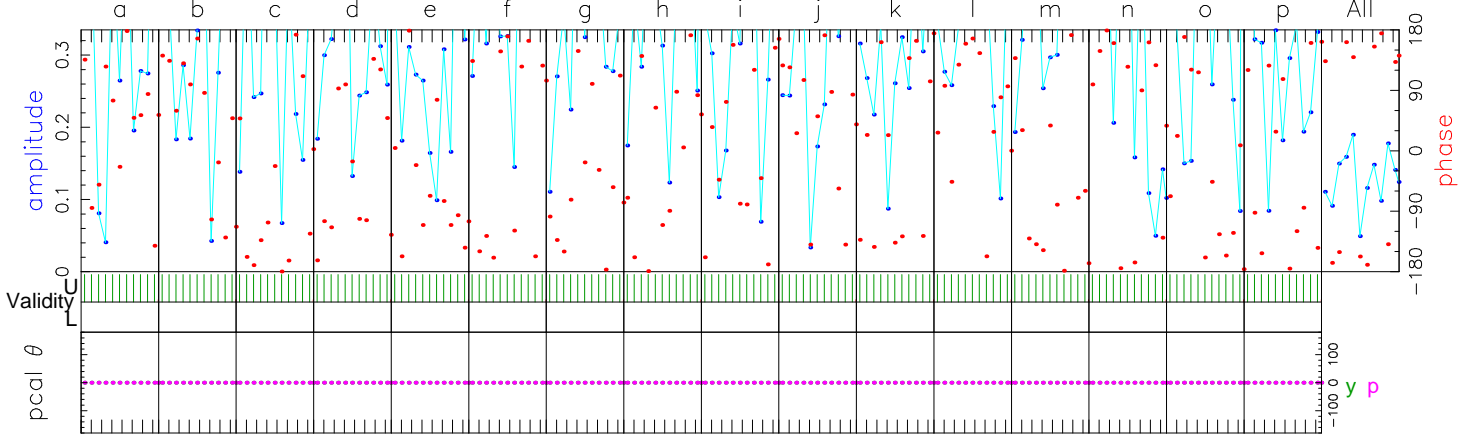
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yp
KVNYS - VLBA_PT, fgroup W, pol RR



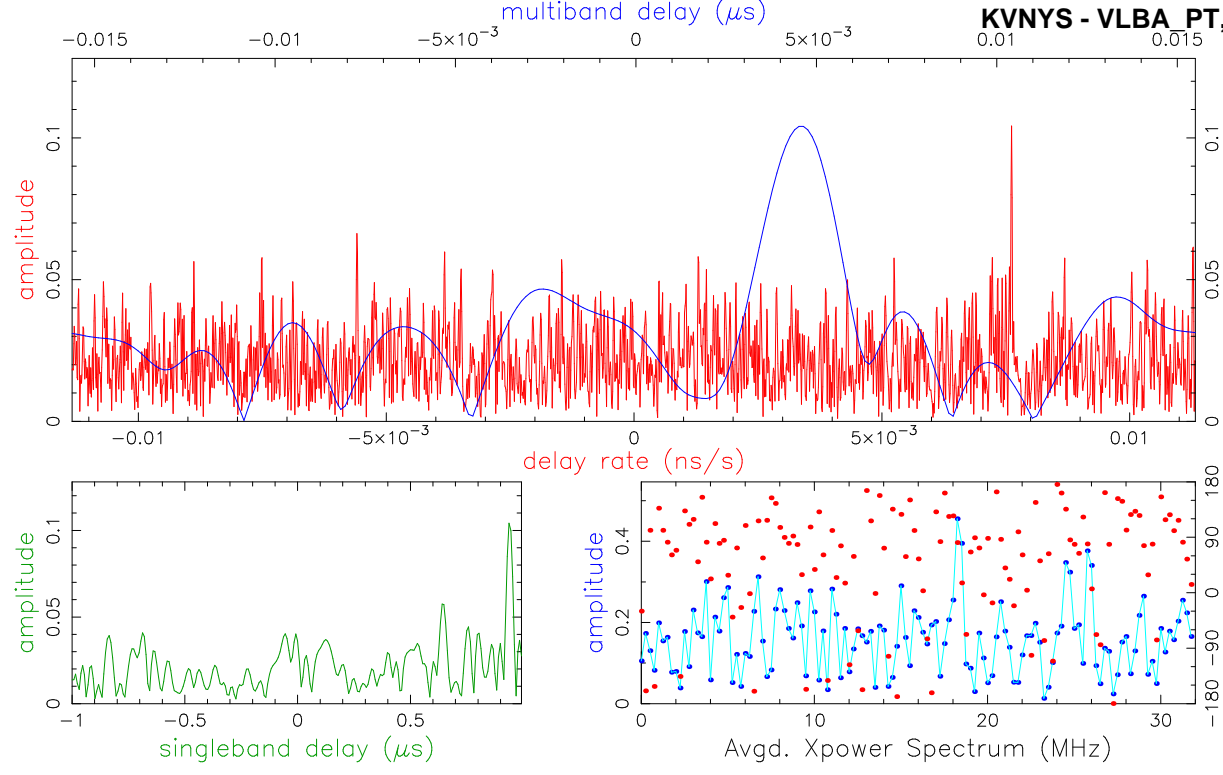
Fringe quality 0
SNR 6.3
Int time 419.829
Amp 0.112
Phase 171.3
PFD 1.0e-01
Delays (us)
SBD 0.006057
MBD 0.012532
Fringe rate (Hz) 0.004512
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061812
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



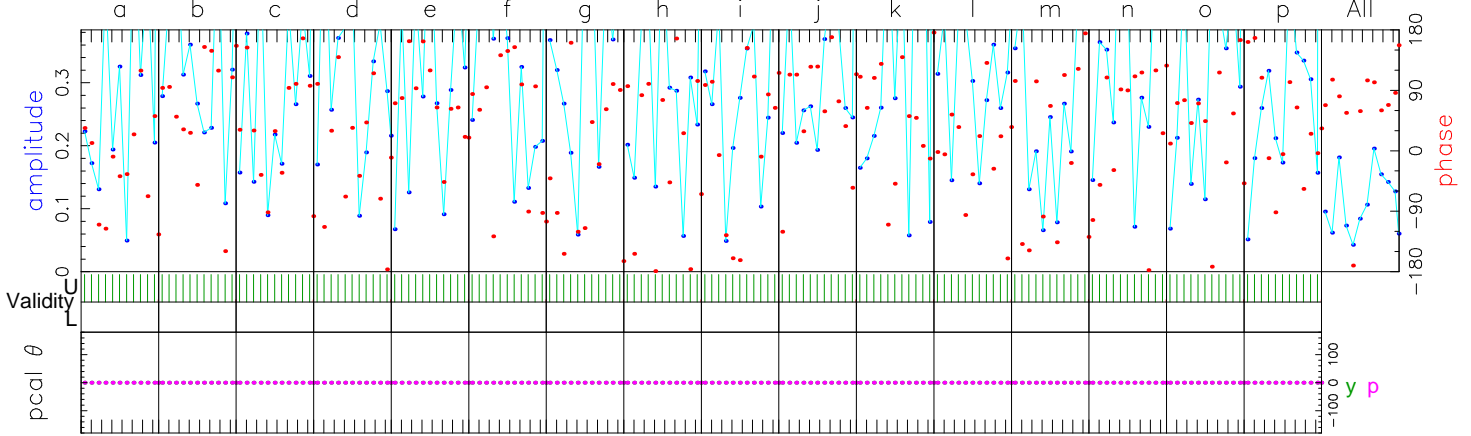
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|-------------|------------|-------|
| U/L | 133.8 | 114.6 | -135.7 | 140.8 | -95.0 | 170.2 | -169.7 | 146.9 | -178.3 | 95.8 | 179.8 | 126.3 | -126.4 | 145.0 | -144.4 | -178.5 | Phase | 171.3 |
| y | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 | 0.1 | Ampl. | 0.1 |
| p | 176.5 | 184.3 | 220.8 | 172.6 | 205.8 | 129.4 | 87.4 | 212.5 | 212.8 | 245.6 | 72.3 | 112.6 | 232.5 | 130.2 | 237.9 | 128.3 | Sbd box | 129.8 |
| y | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| p | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| y:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| p | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 5.25472065999E+03 | | | Apriori delay (usec) | | | 5.25470812754E+03 | | | Resid mbdelay (usec) | | | 1.25325E-02 | | | +/- 1.7E-04 | | |
| Sband delay (usec) | 5.25471418454E+03 | | | Apriori clock (usec) | | | 1.7277668E+01 | | | Resid sbdelay (usec) | | | 6.05700E-03 | | | +/- 2.8E-03 | | |
| Phase delay (usec) | 5.25470813306E+03 | | | Apriori clockrate (us/s) | | | -1.0388660E-07 | | | Resid phdelay (usec) | | | 5.52363E-06 | | | +/- 5.9E-07 | | |
| Delay rate (us/s) | 1.68051646769E+00 | | | Apriori rate (us/s) | | | 1.68051641531E+00 | | | Resid rate (us/s) | | | 5.23830E-08 | | | +/- 2.4E-09 | | |
| Total phase (deg) | 209.5 | | | Apriori accel (us/s/s) | | | -2.45364448965E-05 | | | Resid phase (deg) | | | 171.3 | | | +/- 18.3 | | |

ph/seg (deg) RMS 30.3 Theor. 31.7 Amplitude 0.112 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 38.9 55.4 Search (2048X64) 0.108 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 48.3 36.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 74.4 63.9 Inc. seg. avg. 0.113 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
y: az 70.3 el 50.4 pa -76.7 p: az 298.8 el 32.7 pa 70.0 u,v (fr/asec) -12563.254 -1139.442 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yp..130A7B Output file: /Exps/c192a/v2/1234/No0041/yp.W.275.130A7B simultaneous interpolator



Fringe quality 0
SNR 5.9
Int time 419.829
Amp 0.128
Phase 82.3
PFD 5.8e-01
Delays (us)
SBD 0.940020
MBD 0.004580
Fringe rate (Hz) 0.657164
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build 2020:083:122906
2020:093:061816
2020:014:135814
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

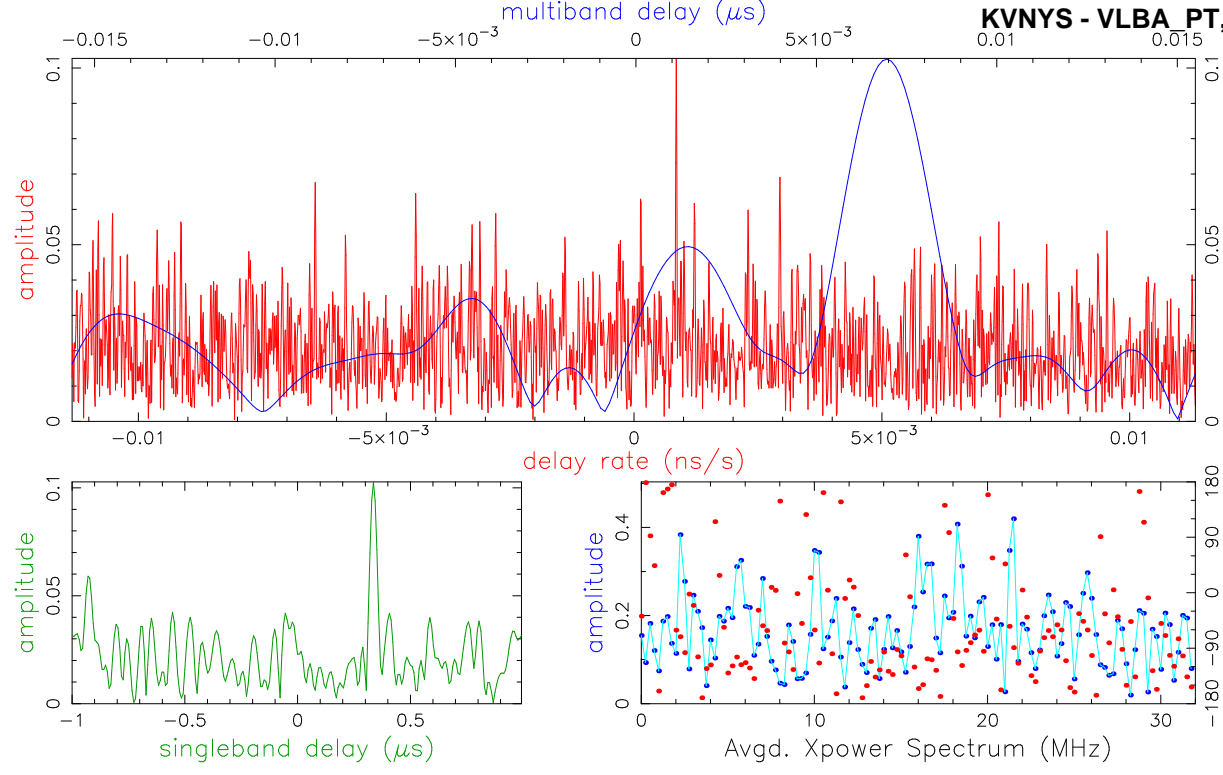


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|-------------|-----|---------|
| | -21.8 | 86.6 | 81.2 | -53.0 | 84.3 | 120.1 | 58.3 | 109.8 | 98.1 | 97.8 | 60.3 | -6.1 | 146.5 | 84.0 | 83.5 | 36.3 | | Phase 82.3 | | | | | |
| | 0.1 | 0.2 | 0.1 | 0.0 | 0.3 | 0.2 | 0.0 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | | Ampl. 0.1 | | | | | |
| | 39.4 | 247.5 | 184.0 | 90.5 | 201.0 | 133.6 | 159.4 | 79.9 | 202.5 | 250.8 | 53.1 | 170.5 | 129.2 | 250.4 | 133.1 | 8.9 | | Sbd box 249.3 | | | | | |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | | | | | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | | PC freqs | | | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| y:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | | | | | |
| y:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC | | | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | | | | | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | | | | | |
| | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | | | | | |
| | | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | 5.25565020717E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | 5.25470812754E+03 | Resid mbdelay (usec) | 4.57963E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | | | 5.25564814754E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 1.7277668E+01 | Resid sbdelay (usec) | 9.40020E-01 | +/- | 2.9E-03 |
| Phase delay (usec) | | | 5.25470813019E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -1.0388660E-07 | Resid phdelay (usec) | 2.65235E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | | | 1.68052404433E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | 1.68051641531E+00 | Resid rate (us/s) | 7.62902E-06 | +/- | 2.6E-09 |
| Total phase (deg) | | | | 120.5 | | | | | | | | | | | | | | Apriori accel (us/s/s) | -2.45364448965E-05 | Resid phase (deg) | 82.3 | +/- | 19.4 |

ph/seg (deg) RMS Theor. Amplitude 0.128 +/- 0.022 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 37.3 33.6 Search (2048X64) 0.103 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.7 58.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 57.9 38.8 Inc. seg. avg. 0.119 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 58.7 67.7 Inc. frq. avg. 0.134 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 y: az 70.3 el 50.4 pa -76.7 p: az 298.8 el 32.7 pa 70.0 u,v (fr/asec) -12563.254 -1139.442 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yp..130A7B Output file: /Exps/c192a/v2/1234/No0041/yp.W.291.130A7B

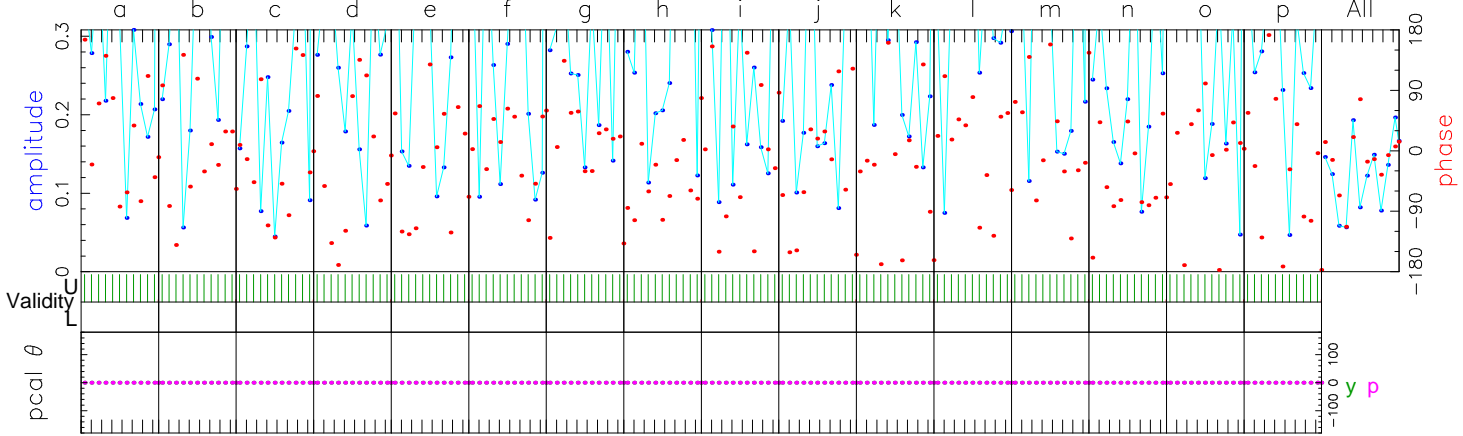
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yp
KVNS - VLBA_PT, fgroup W, pol RL



Fringe quality 0
SNR 5.7
Int time 419.829
Amp 0.103
Phase -2.8
PFD 9.0e-01
Delays (us)
SBD 0.335892
MBD 0.006947
Fringe rate (Hz) 0.073525
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061820
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| 47.6 | 1.6 | -67.3 | -49.2 | 11.4 | 8.7 | 25.0 | -36.1 | -48.6 | -15.2 | -41.6 | 34.2 | -10.9 | -29.9 | 34.0 | 34.0 | 34.0 | Phase | -2.8 |
| 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.3 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | Ampl. | 0.1 |
| 32.2 | 161.1 | 121.9 | 225.9 | 159.8 | 151.8 | 120.5 | 172.5 | 148.9 | 60.2 | 184.1 | 228.9 | 233.7 | 136.4 | 5.1 | 223.6 | 223.6 | Sbd box | 172.0 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |

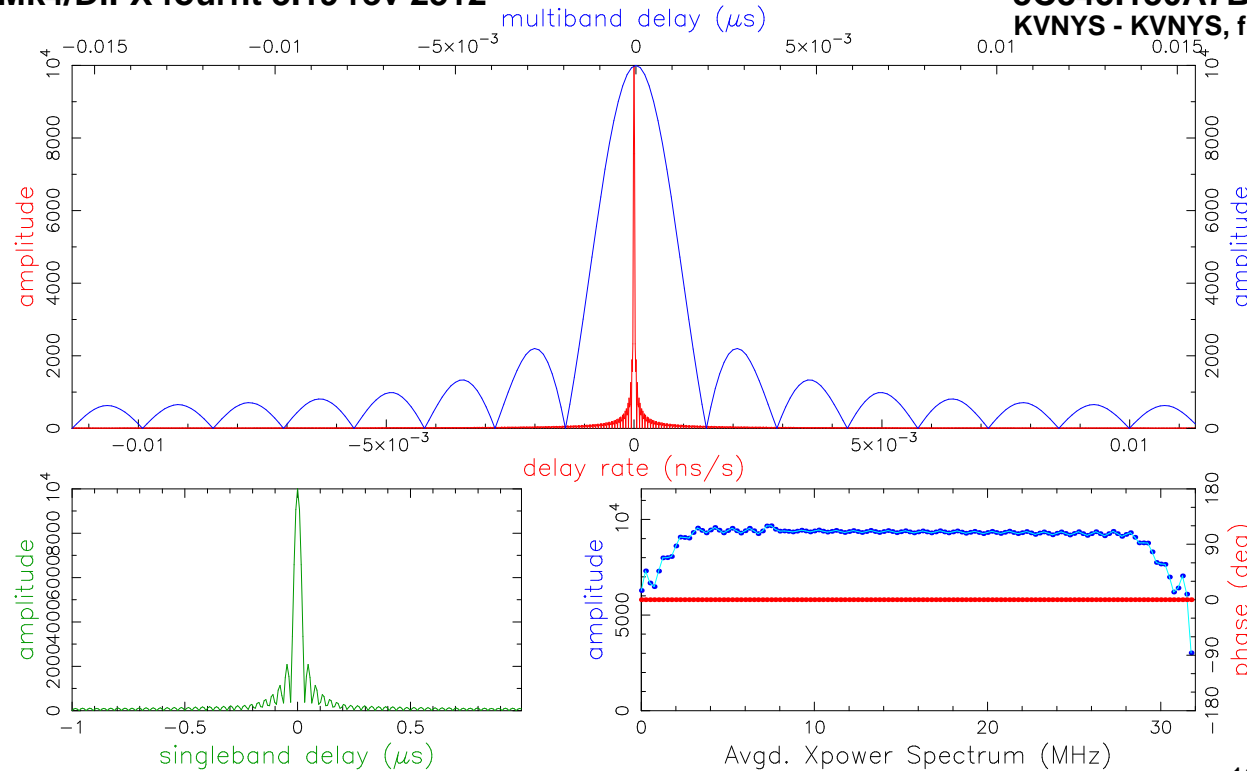
Group delay (usec)(sbd) 5.25505882484E+03 Apriori delay (usec) 5.25470812754E+03 Resid mbdelay (usec) 6.94730E-03 +/- 1.9E-04
 Sband delay (usec) 5.25504401954E+03 Apriori clock (usec) 1.7277668E+01 Resid sbdelay (usec) 3.35892E-01 +/- 3.0E-03
 Phase delay (usec) 5.25470812745E+03 Apriori clockrate (us/s) -1.0388660E-07 Resid phdelay (usec) -9.09654E-08 +/- 6.4E-07
 Delay rate (us/s) 1.68051726886E+00 Apriori rate (us/s) 1.68051641531E+00 Resid rate (us/s) 8.53553E-07 +/- 2.7E-09
 Total phase (deg) 35.4 Apriori accel (us/s/s) -2.45364448965E-05 Resid phase (deg) -2.8 +/- 20.0

RMS Theor. Amplitude 0.103 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 47.4 34.6 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 49.5 60.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 37.5 39.9 Inc. seg. avg. 0.104 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 62.9 69.6 Inc. frq. avg. 0.097 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

y: az 70.3 el 50.4 pa -76.7 p: az 298.8 el 32.7 pa 70.0 u,v (fr/asec) -12563.254 -1139.442 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yp..130A7B Output file: /Exps/c192a/v2/1234/No0041/yp.W.306.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yy
KVNYS - KVNYS, fgroup W, pol LL

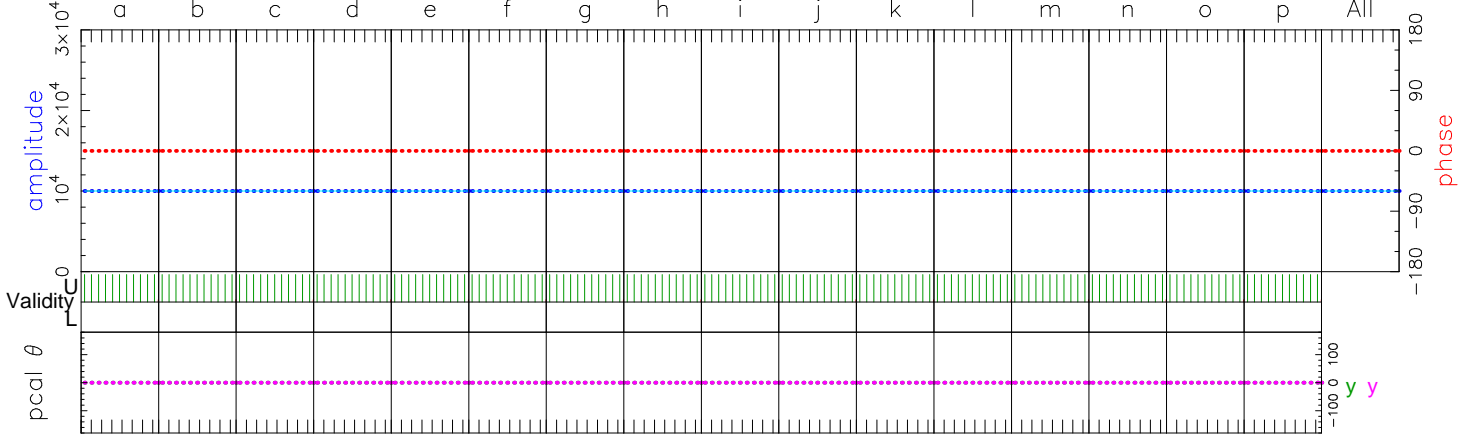


Fringe quality 9

SNR 560324.4
Int time 419.840
Amp 10000.000
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. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061808
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

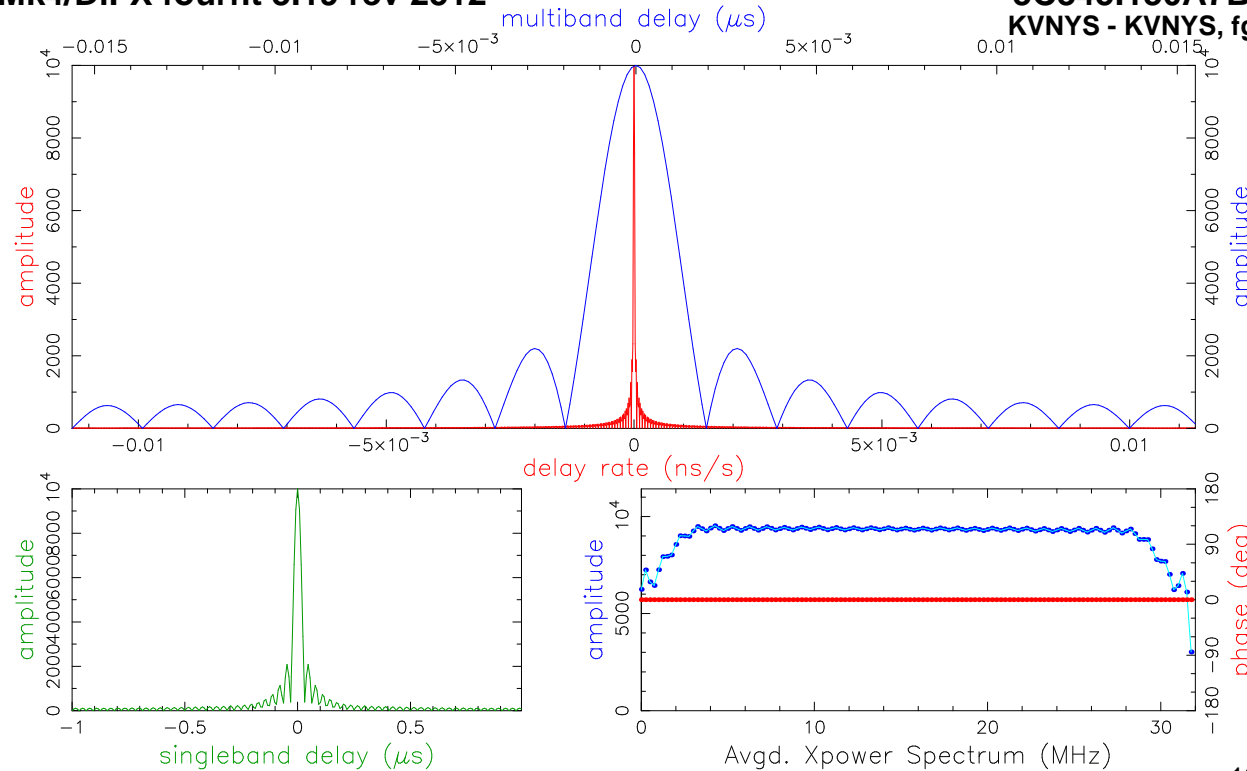


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|---------|
| | -0.0 | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | 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 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | 10000.0 | | Ampl. | 10000.0 |
| | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | 129.0 | | Sbd box | 129.0 |
| UL | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | |
| y:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Tracks | |

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 +/- 3.1E-08
 Phase delay (usec) 4.46105904778E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 4.46106E-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

RMS Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (2048X64) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

y: az 70.3 el 50.4 pa -76.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yy..130A7B Output file: /Exps/c192a/v2/1234/No0041/yy.W.259.130A7B

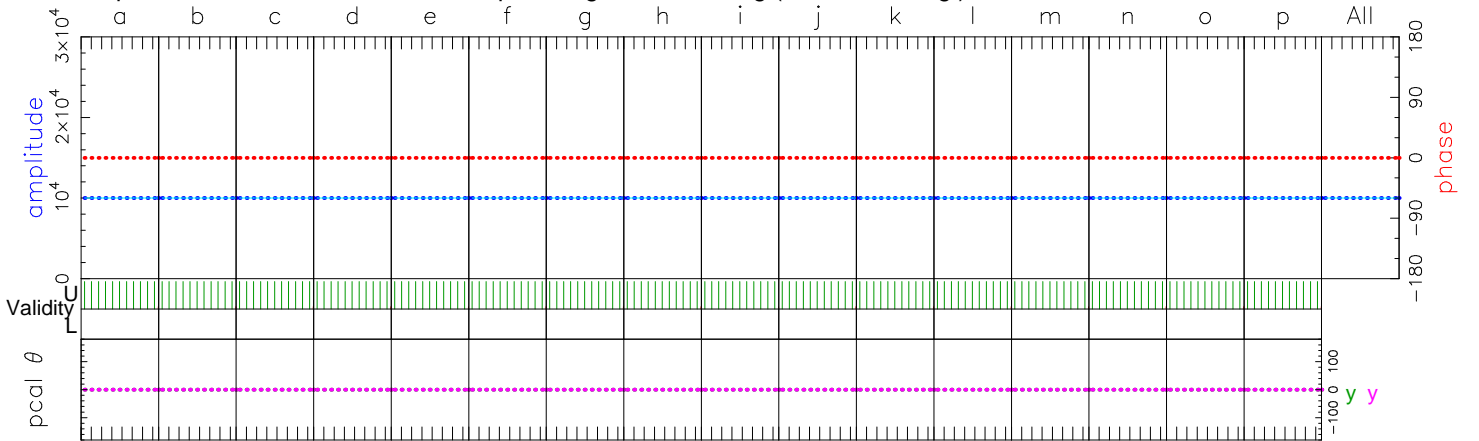


Fringe quality 9

SNR 560324.4
Int time 419.840
Amp 10000.000
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. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061812
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|-------------|------------|-------|----------|----------|--------|
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | | Chan ids | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | | | | Tracks |
| | | | | | | | | | | | | | | | | | | | | | Tracks |
| 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 | | | +/- 3.1E-08 | | | | | |
| Phase delay (usec) | 4.78934985156E-20 | | | Apriori clockrate (us/s) | | | 0.0000000E+00 | | | Resid phdelay (usec) | | | 4.78935E-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 | | | | | |

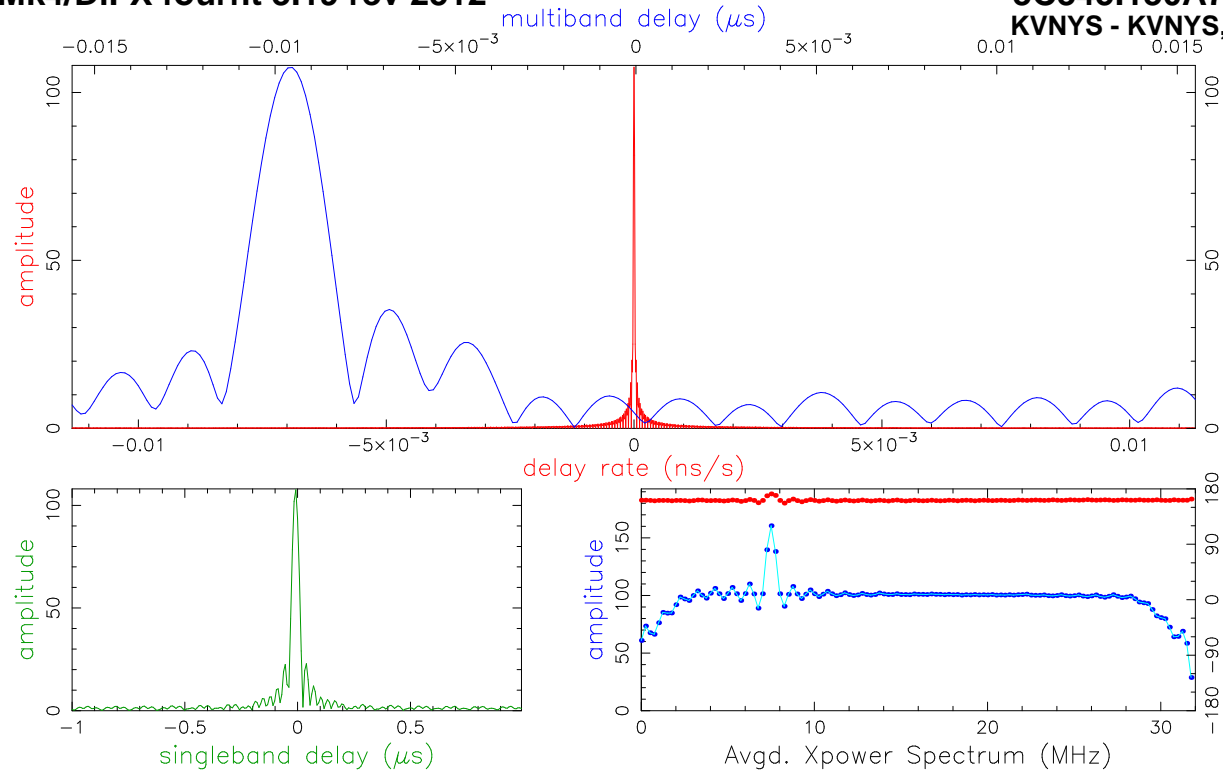
ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (2048X64) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

y: az 70.3 el 50.4 pa -76.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yy..130A7B Output file: /Exps/c192a/v2/1234/No0041/yy.W.276.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yy
KVNYS - KVNYS, fgroup W, pol LR

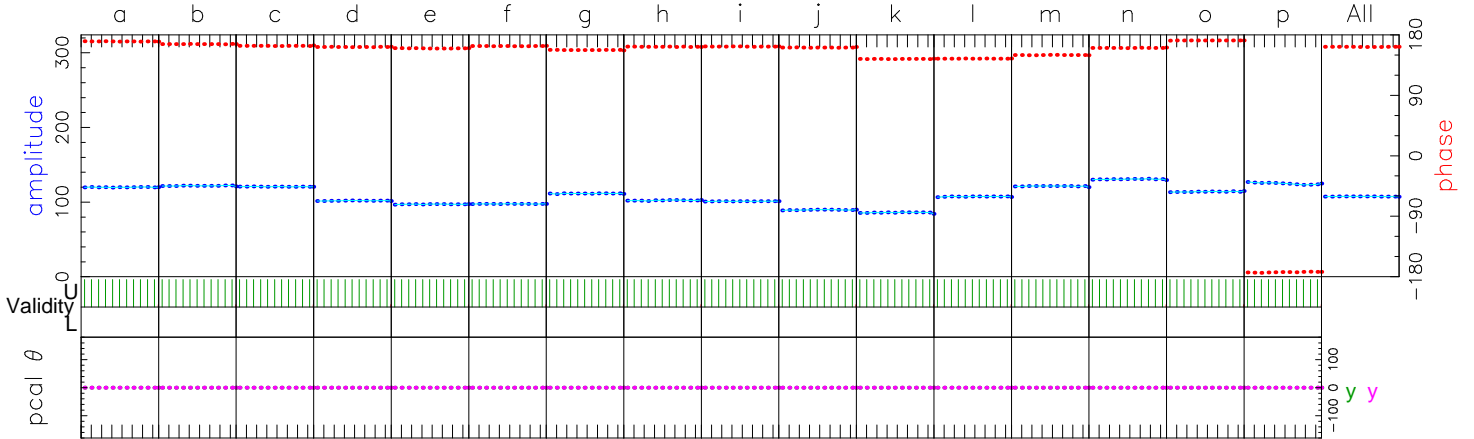


Fringe quality 9

SNR 6054.6
Int time 419.840
Amp 108.056
Phase 162.0
PFD 0.0e+00
Delays (us)
SBD -0.009531
MBD -0.009577
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061816
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

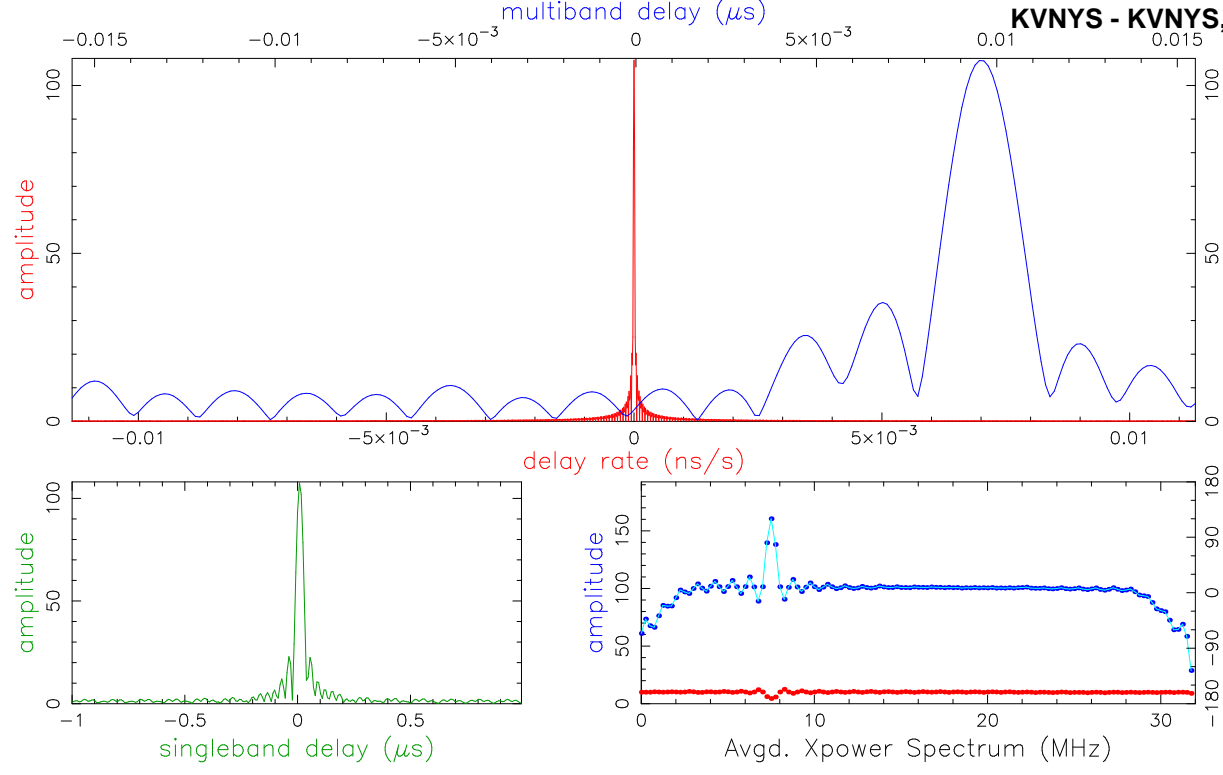


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|-------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|----------|
| 170.1 | 166.2 | 163.5 | 161.8 | 159.8 | 163.2 | 157.4 | 162.2 | 162.6 | 161.0 | 144.1 | 144.5 | 149.9 | 160.4 | 171.6 | -173.3 | | Phase | 162.0 |
| 120.0 | 121.9 | 120.7 | 101.9 | 97.2 | 97.6 | 111.5 | 102.3 | 101.2 | 89.5 | 86.1 | 107.4 | 121.4 | 130.7 | 113.9 | 125.0 | | Ampl. | 109.2 |
| 127.7 | 127.8 | 127.7 | 127.8 | 127.9 | 127.7 | 127.8 | 127.8 | 127.9 | 127.6 | 127.7 | 127.9 | 127.8 | 127.9 | 127.9 | 128.0 | | Sbd box | 127.8 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| y:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | |
| y:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | ManI PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks |
| | | | | | | | | | | | | | | | | | | Chan ids |
| | | | | | | | | | | | | | | | | | | Tracks |
| Group delay (usec)(sbd) | -9.57681250000E-03 | | | Apriori delay (usec) | | | 0.00000000000E+00 | | | Resid mbdelay (usec) | | | -9.57681E-03 | | | +/- 1.8E-07 | | |
| Sband delay (usec) | -9.53100000000E-03 | | | Apriori clock (usec) | | | 0.0000000E+00 | | | Resid sbdelay (usec) | | | -9.53100E-03 | | | +/- 2.8E-06 | | |
| Phase delay (usec) | 5.22522514124E-06 | | | Apriori clockrate (us/s) | | | 0.0000000E+00 | | | Resid phdelay (usec) | | | 5.22523E-06 | | | +/- 6.1E-10 | | |
| Delay rate (us/s) | 1.41711523917E-12 | | | Apriori rate (us/s) | | | 0.00000000000E+00 | | | Resid rate (us/s) | | | 1.41712E-12 | | | +/- 2.5E-12 | | |
| Total phase (deg) | 162.0 | | | Apriori accel (us/s/s) | | | 0.00000000000E+00 | | | Resid phase (deg) | | | 162.0 | | | +/- 0.0 | | |

ph/seg (deg) 0.0 0.0 Theor. Amplitude 108.056 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.5 0.1 Search (2048X64) 105.771 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 10.7 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 12.0 0.1 Inc. seg. avg. 107.561 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 y: az 70.3 el 50.4 pa -76.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yy..130A7B Output file: /Exps/c192a/v2/1234/No0041/yy.W.292.130A7B simultaneous interpolator

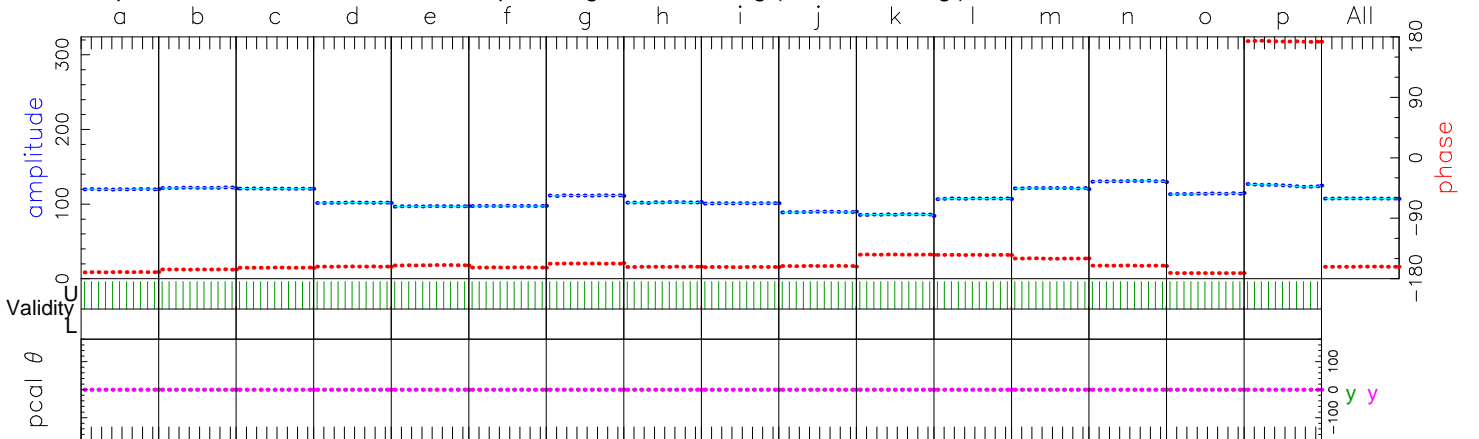
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, yy
KVNYS - KVNYS, fgroup W, pol RL



Fringe quality 9
SNR 6054.6
Int time 419.840
Amp 108.056
Phase -162.0
PFD 0.0e+00
Delays (us)
SBD 0.009531
MBD 0.009577
Fringe rate (Hz)
-0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061820
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -170.1 | -166.2 | -163.5 | -161.8 | -159.8 | -163.2 | -157.4 | -162.2 | -162.6 | -161.0 | -144.1 | -144.5 | -149.9 | -160.4 | -171.6 | 173.3 | Phase | -162.0 |
| | 120.0 | 121.9 | 120.7 | 101.9 | 97.2 | 97.6 | 111.5 | 102.3 | 101.2 | 89.5 | 86.1 | 107.4 | 121.4 | 130.7 | 113.9 | 125.0 | Ampl. | 109.2 |
| | 130.3 | 130.2 | 130.3 | 130.2 | 130.1 | 130.3 | 130.2 | 130.2 | 130.1 | 130.4 | 130.3 | 130.1 | 130.2 | 130.1 | 130.1 | 130.0 | Sbd box | 130.2 |
| U/L | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | 820/0 | APs used | |
| y | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | 31000 | PC freqs | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| y:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |

Group delay (usec)(sbd) 9.57681250000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 9.57681E-03 +/- 1.8E-07
 Sband delay (usec) 9.53100000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 9.53100E-03 +/- 2.8E-06
 Phase delay (usec) -5.22522514125E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -5.22523E-06 +/- 6.1E-10
 Delay rate (us/s) -1.41711523917E-12 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -1.41712E-12 +/- 2.5E-12
 Total phase (deg) -162.0 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) -162.0 +/- 0.0

RMS Theor. Amplitude 108.056 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (2048X64) 105.771 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.5 0.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 10.7 0.0 Inc. seg. avg. 107.561 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 12.0 0.1 Inc. frq. avg. 109.249 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

y: az 70.3 el 50.4 pa -76.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/yy..130A7B Output file: /Exps/c192a/v2/1234/No0041/yy.W.305.130A7B