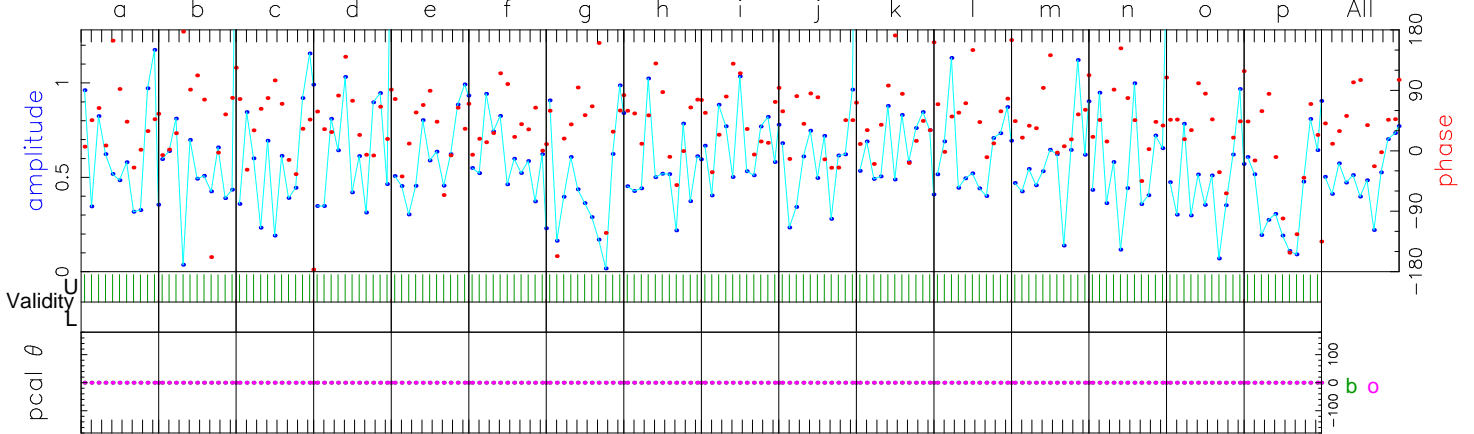


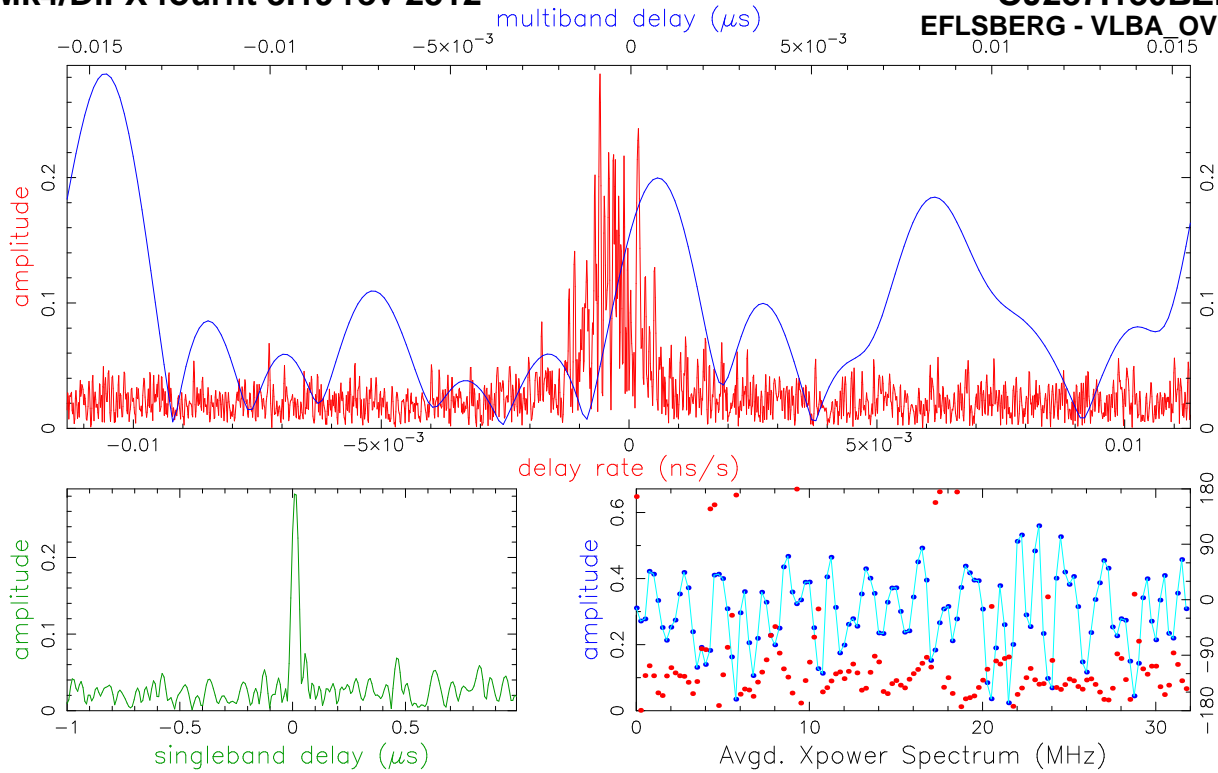
Fringe quality 8
SNR 23.9
Int time 418.404
Amp 0.427
Phase 43.2
PFD 0.0e+00
Delays (us)
SBD 0.000601
MBD 0.000197
Fringe rate (Hz) 0.001301
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083239
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|-------------|------------|-------|
| | 38.2 | 49.0 | 35.9 | 50.1 | 41.0 | 34.2 | 56.1 | 47.5 | 48.3 | 39.8 | 40.3 | 51.1 | 47.9 | 42.8 | 39.8 | 23.2 | Phase | 43.2 |
| | 0.5 | 0.3 | 0.4 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.2 | Ampl. | 0.4 |
| | 129.6 | 129.0 | 129.1 | 128.8 | 128.5 | 129.0 | 128.7 | 129.5 | 130.1 | 128.8 | 128.9 | 128.6 | 129.3 | 129.0 | 129.3 | 238.2 | Sbd box | 129.1 |
| 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 | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b: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 | |
| b: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 | |
| b | 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 | PC amp | |
| b | 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) | -1.09729079423E+03 | | | Apriori delay (usec) | | | -1.09729099161E+03 | | | Resid mbdelay (usec) | | | 1.97385E-04 | | | +/- 4.5E-05 | | |
| Sband delay (usec) | -1.09729039011E+03 | | | Apriori clock (usec) | | | -1.7261686E+01 | | | Resid sbdelay (usec) | | | 6.01500E-04 | | | +/- 7.2E-04 | | |
| Phase delay (usec) | -1.09729099022E+03 | | | Apriori clockrate (us/s) | | | -2.4337607E-07 | | | Resid phdelay (usec) | | | 1.39254E-06 | | | +/- 1.5E-07 | | |
| Delay rate (us/s) | -1.11769295513E-01 | | | Apriori rate (us/s) | | | -1.11769310620E-01 | | | Resid rate (us/s) | | | 1.51072E-08 | | | +/- 6.4E-10 | | |
| Total phase (deg) | 36.9 | | | Apriori accel (us/s/s) | | | 1.11399928351E-05 | | | Resid phase (deg) | | | 43.2 | | | +/- 4.8 | | |

ph/seg (deg) 37.3 8.3 Search (2048X64) 0.404 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 36.7 14.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 8.3 9.6 Inc. seg. avg. 0.500 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 16.4 16.7 Inc. frq. avg. 0.424 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
b: az 111.1 el 43.9 pa -41.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 693.291 1478.707 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/bo..130BZK Output file: /Exps/c192b/v2/1234/No0053/bo.W.19.130BZK

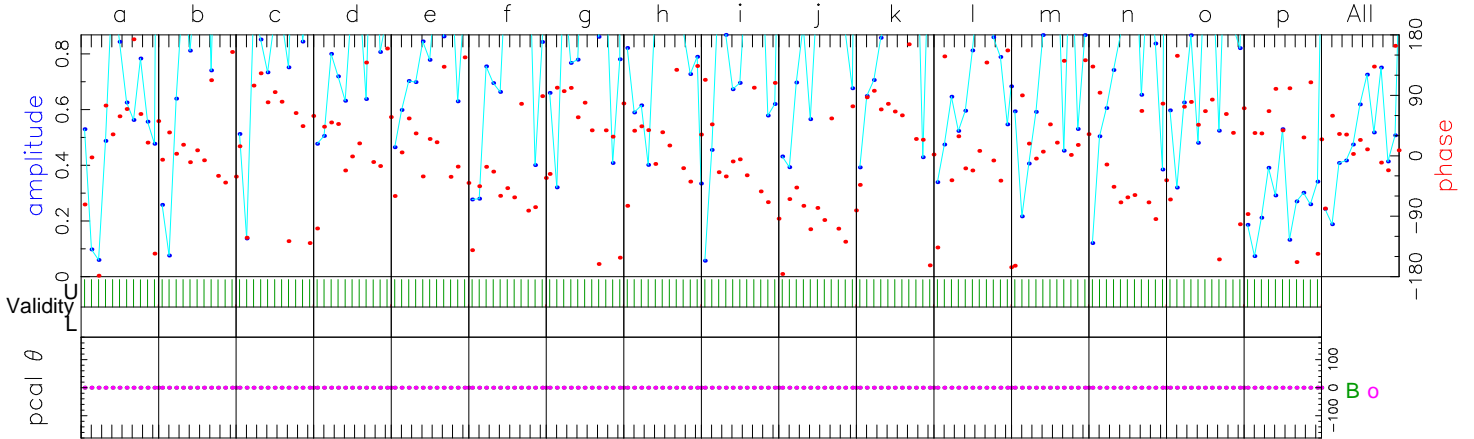


Fringe quality 9

SNR 16.2
Int time 418.595
Amp 0.289
Phase 18.7
PFD 0.0e+00
Delays (us)
SBD 0.011560
MBD -0.014528
Fringe rate (Hz)
-0.050683
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083239
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



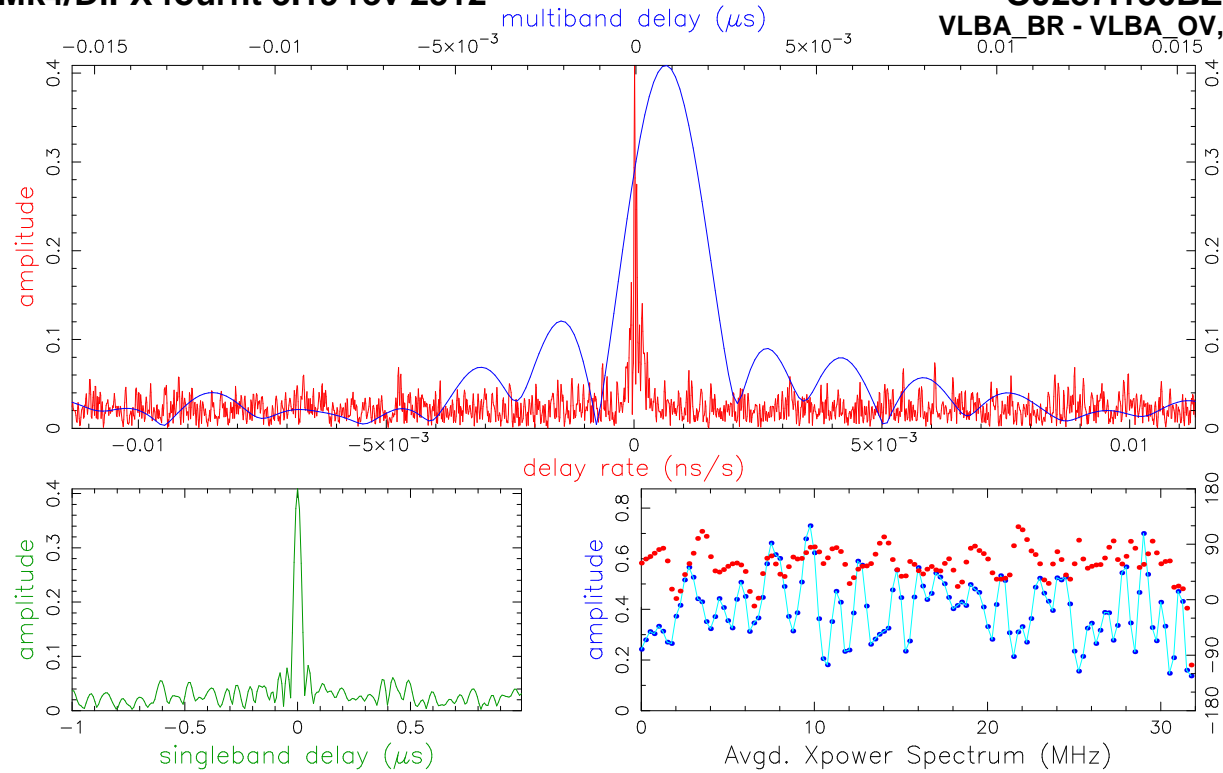
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| 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 | | | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | | | | |
| B:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | Chan ids | | | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | Tracks | | | | | |
| B | 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 | | | | | |
| Group delay (usec)(sbd) | | -8.5205588959E+03 | | | | | | | | | | | | | | | | Apriori delay (usec) | -8.52057261133E+03 | Resid mbdelay (usec) | -1.45283E-02 | +/- | 6.7E-05 |
| Sband delay (usec) | | -8.52056105133E+03 | | | | | | | | | | | | | | | | Apriori clock (usec) | 1.7089844E-01 | Resid sbdelay (usec) | 1.15600E-02 | +/- | 1.1E-03 |
| Phase delay (usec) | | -8.52057261073E+03 | | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.0098100E-07 | Resid phdelay (usec) | 6.03454E-07 | +/- | 2.3E-07 |
| Delay rate (us/s) | | -1.71804784361E+00 | | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.71804725523E+00 | Resid rate (us/s) | -5.88380E-07 | +/- | 9.4E-10 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 5.17601001805E-05 | Resid phase (deg) | 18.7 | +/- | 7.1 |

ph/seg (deg) 66.0 12.3 Theor. Amplitude 0.289 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 89.7 21.4 Search (2048X64) 0.276 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 52.5 14.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 59.5 24.7 Inc. seg. avg. 0.472 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.409 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 276.3 el 21.1 pa 42.3 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 10532.800 2831.778 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Bo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Bo.W.20.130BZK

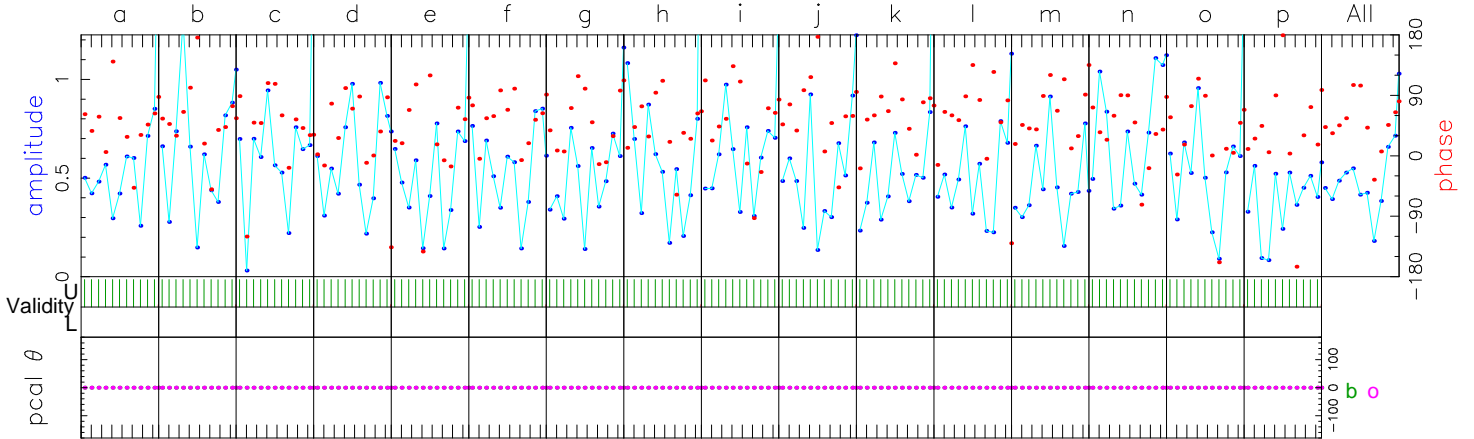
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, bo
VLBA_BR - VLBA_OV, fgroup W, pol RR



Fringe quality 8
SNR 22.9
Int time 418.405
Amp 0.409
Phase 53.9
PFD 0.0e+00
Delays (us)
SBD -0.000116
MBD 0.000822
Fringe rate (Hz) 0.001298
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083244
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

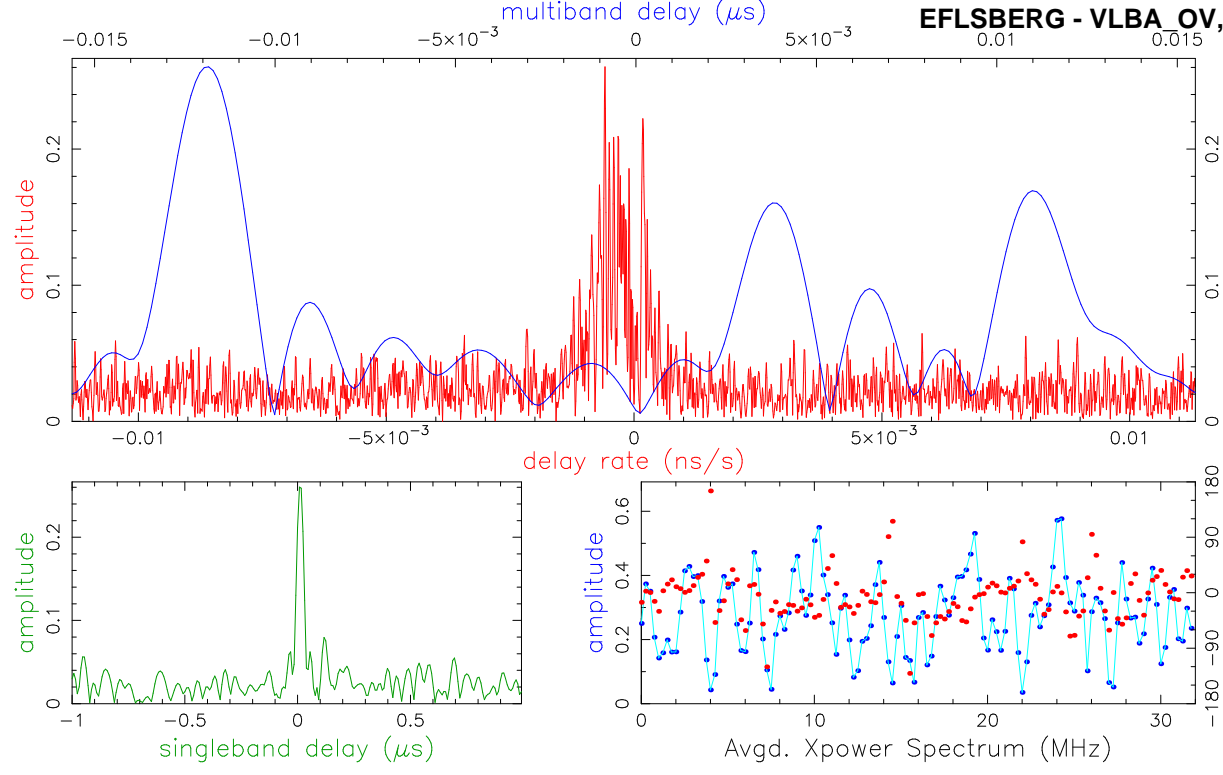
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 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 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| 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 | 0:0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | 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 |
| Group delay (usec)(sbd) | -1.09729016954E+03 | | | Apriori delay (usec) | | | -1.09729099161E+03 | | | Resid mbdelay (usec) | | | 8.22072E-04 | | | +/- | 4.7E-05 | |
| Sband delay (usec) | -1.09729110811E+03 | | | Apriori clock (usec) | | | -1.7261686E+01 | | | Resid sbdelay (usec) | | | -1.16500E-04 | | | +/- | 7.5E-04 | |
| Phase delay (usec) | -1.09729098988E+03 | | | Apriori clockrate (us/s) | | | -2.4337607E-07 | | | Resid phdelay (usec) | | | 1.73760E-06 | | | +/- | 1.6E-07 | |
| Delay rate (us/s) | -1.11769295550E-01 | | | Apriori rate (us/s) | | | -1.11769310620E-01 | | | Resid rate (us/s) | | | 1.50696E-08 | | | +/- | 6.7E-10 | |
| Total phase (deg) | 47.6 | | | Apriori accel (us/s/s) | | | 1.11399928351E-05 | | | Resid phase (deg) | | | 53.9 | | | +/- | 5.0 | |

ph/seg (deg) 38.5 8.7 Search (2048X64) 0.388 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 39.0 15.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 10.4 10.0 Inc. seg. avg. 0.470 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 19.1 17.5 Inc. frq. avg. 0.409 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
b: az 111.1 el 43.9 pa -41.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 693.291 1478.707 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/bo..130BZK Output file: /Exps/c192b/v2/1234/No0053/bo.W.36.130BZK

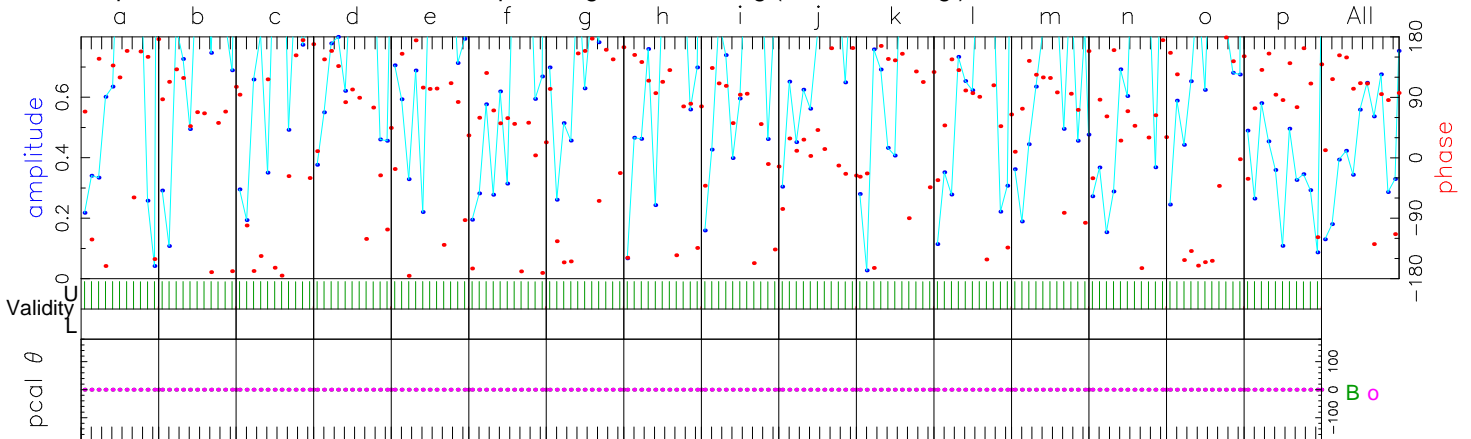


Fringe quality 9

SNR 14.9
Int time 418.596
Amp 0.267
Phase 125.6
PFD 2.1e-41
Delays (us)
SBD 0.011506
MBD -0.011830
Fringe rate (Hz)
-0.050655
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083245
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 | | | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | | | | |
| B:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Chan ids | | | | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | | | | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Chan ids | | | | | |
| Group delay (usec)(sbd) | | -8.52055319122E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -8.52057261133E+03 | Resid mbdelay (usec) | -1.18299E-02 | +/- | 7.2E-05 |
| Sband delay (usec) | | -8.52056110583E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 1.7089844E-01 | Resid sbdelay (usec) | 1.15055E-02 | +/- | 1.2E-03 |
| Phase delay (usec) | | -8.52057260728E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.0098100E-07 | Resid phdelay (usec) | 4.05152E-06 | +/- | 2.5E-07 |
| Delay rate (us/s) | | -1.71804784329E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.71804725523E+00 | Resid rate (us/s) | -5.88055E-07 | +/- | 1.0E-09 |
| Total phase (deg) | | | | | -140.9 | | | | | | | | | | | | Apriori accel (us/s/s) | 5.17601001805E-05 | Resid phase (deg) | 125.6 | +/- | 7.7 |

ph/seg (deg) 62.9 13.3
amp/seg (%) 85.1 23.3
ph/frq (deg) 48.4 15.4
amp/frq (%) 43.6 26.8

RMS Theor. Amplitude 0.267 +/- 0.018
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

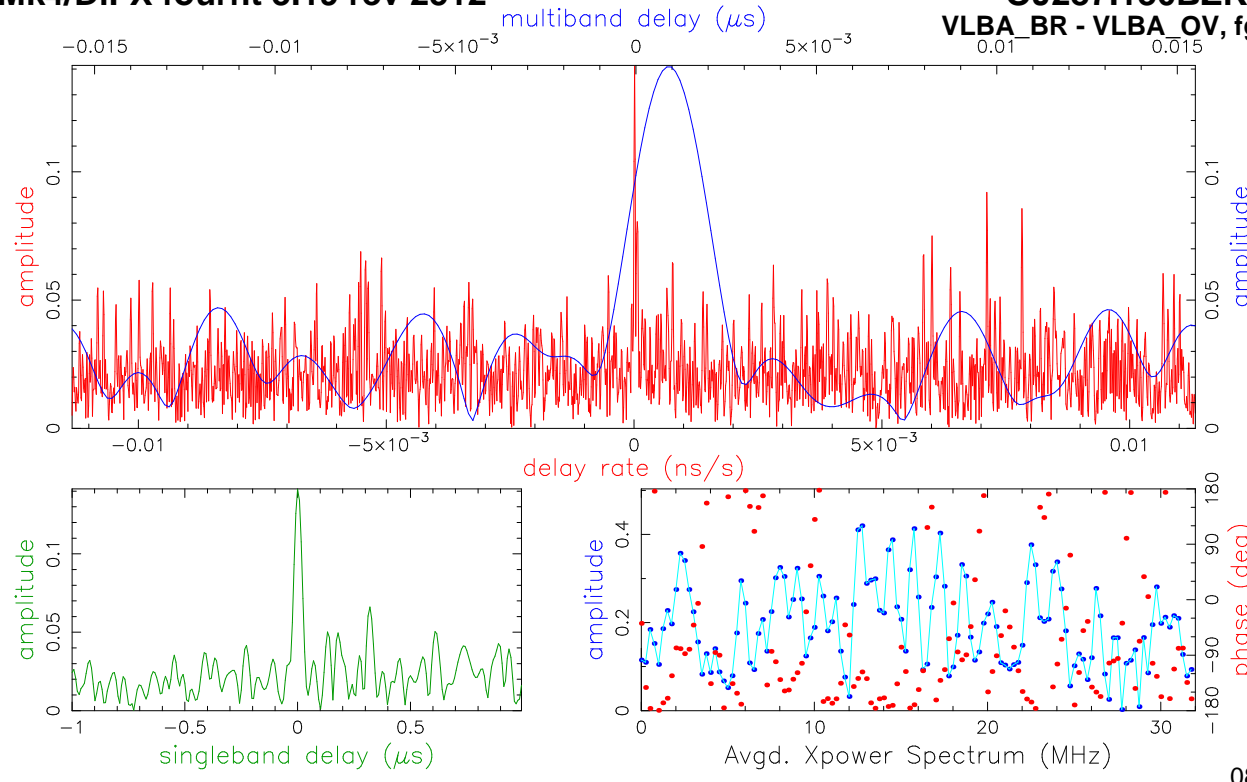
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

B: az 276.3 el 21.1 pa 42.3 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 10532.800 2831.778 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Bo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Bo.W.43.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, bo
VLBA_BR - VLBA_OV, fgroup W, pol LR

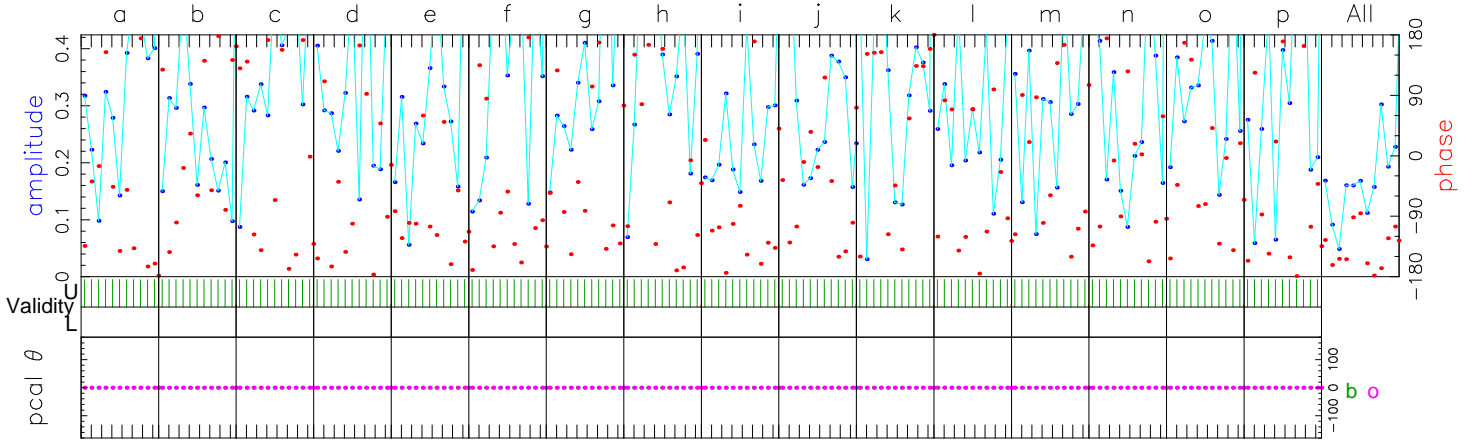


Fringe quality 9

SNR 7.9
Int time 418.405
Amp 0.141
Phase -135.0
PFD 8.5e-07
Delays (us)
SBD 0.001472
MBD 0.000929
Fringe rate (Hz) 0.001003
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

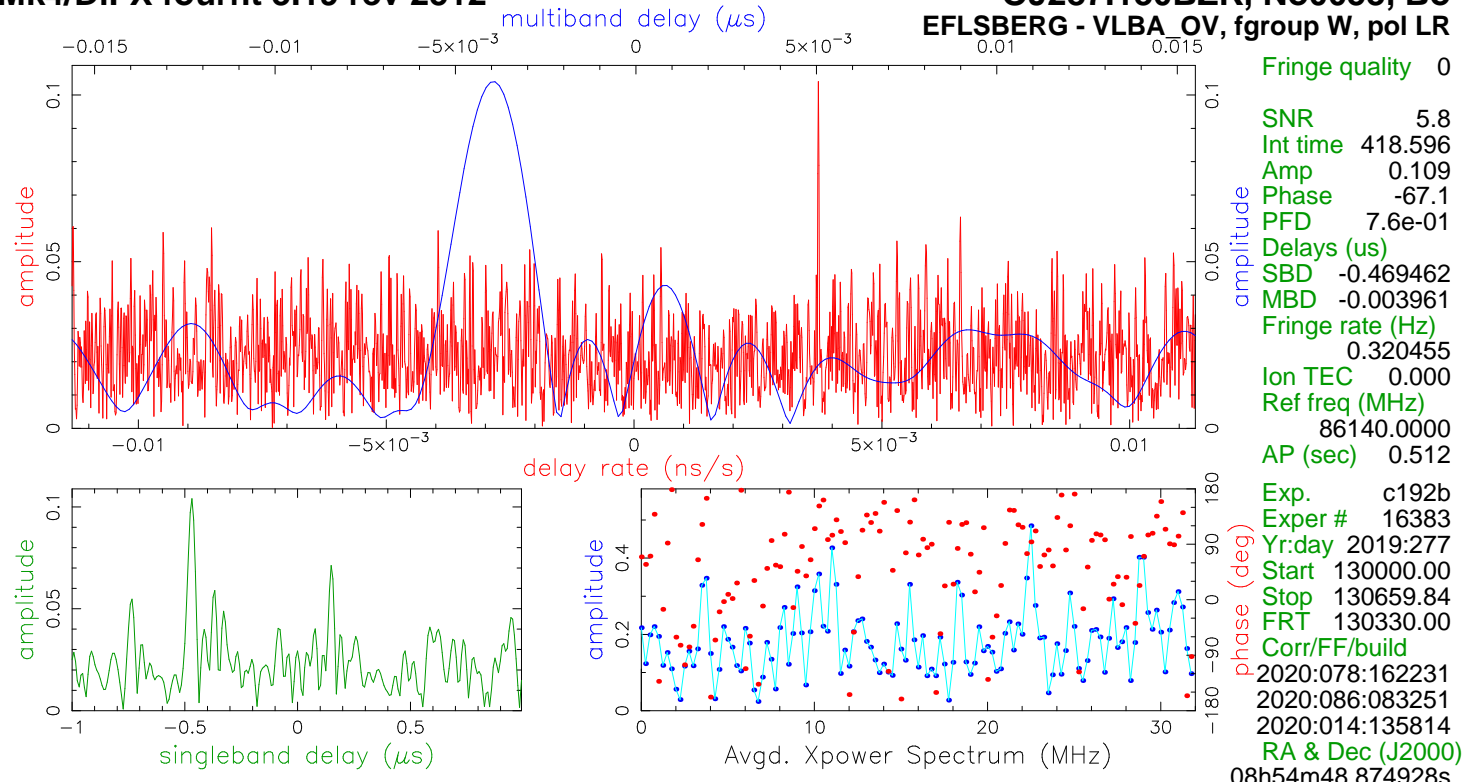
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083250
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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

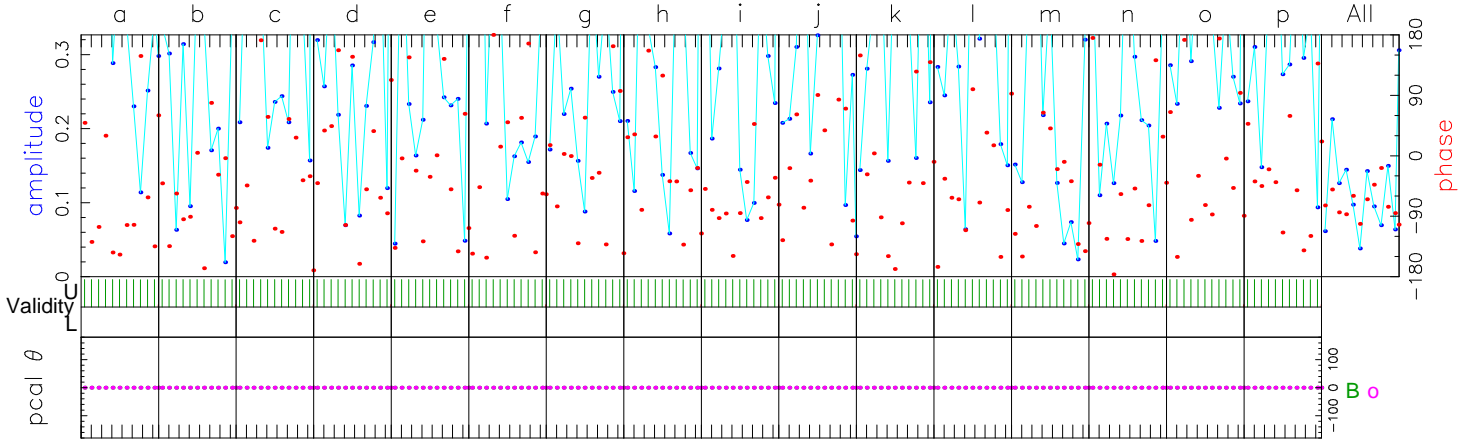


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|--------|
| | -139.8 | -79.4 | -153.6 | -156.2 | -113.6 | -120.9 | -126.5 | -166.3 | -137.2 | -86.7 | 164.1 | -129.3 | -118.3 | -104.0 | -84.4 | -161.6 | Phase | -135.0 |
| | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | Ampl. | 0.1 |
| | 115.3 | 67.3 | 164.5 | 123.3 | 130.0 | 128.7 | 129.5 | 147.6 | 57.9 | 147.4 | 127.9 | 164.0 | 241.0 | 185.7 | 98.6 | 128.9 | Sbd box | 129.2 |
| 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 | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b: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 | |
| b: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 | |
| b | 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 | PC amp | |
| b | 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) | -1.09729006298E+03 | | | Apriori delay (usec) | | | -1.09729099161E+03 | | | Resid mbdelay (usec) | | | 9.28635E-04 | | | +/- 1.4E-04 | | |
| Sband delay (usec) | -1.09728952011E+03 | | | Apriori clock (usec) | | | -1.7261686E+01 | | | Resid sbdelay (usec) | | | 1.47150E-03 | | | +/- 2.2E-03 | | |
| Phase delay (usec) | -1.09729099597E+03 | | | Apriori clockrate (us/s) | | | -2.4337607E-07 | | | Resid phdelay (usec) | | | -4.35235E-06 | | | +/- 4.7E-07 | | |
| Delay rate (us/s) | -1.11769298970E-01 | | | Apriori rate (us/s) | | | -1.11769310620E-01 | | | Resid rate (us/s) | | | 1.16494E-08 | | | +/- 1.9E-09 | | |
| Total phase (deg) | -141.3 | | | Apriori accel (us/s/s) | | | 1.11399928351E-05 | | | Resid phase (deg) | | | -135.0 | | | +/- 14.5 | | |

ph/seg (deg) 30.7 25.1 Search (2048X64) 0.141 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.9 43.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 34.0 29.0 Inc. seg. avg. 0.150 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 42.2 50.6 Inc. frq. avg. 0.144 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 111.1 el 43.9 pa -41.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 693.291 1478.707 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/bo..130BZK Output file: /Exps/c192b/v2/1234/No0053/bo.W.58.130BZK



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

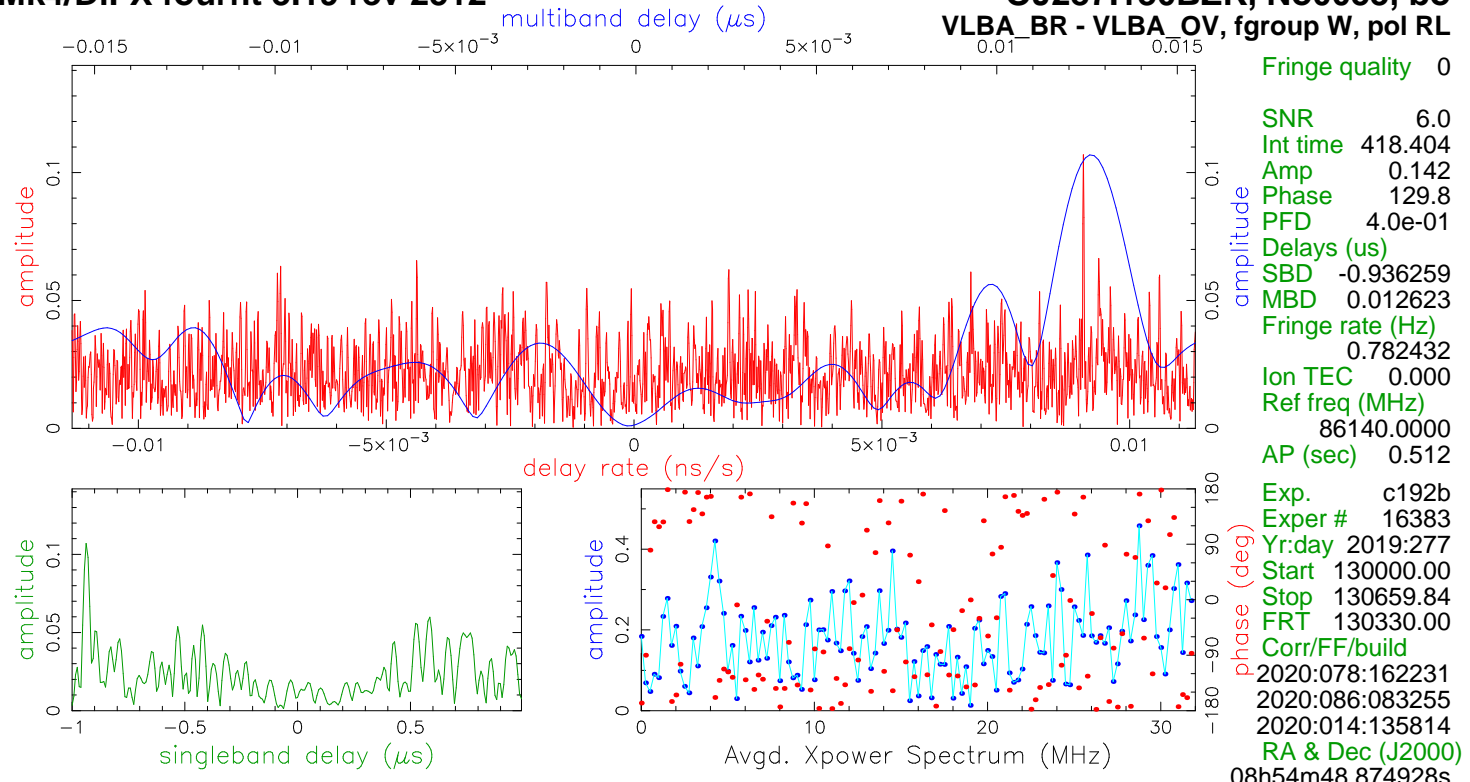


| | | | | | | | | | | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|--|
| 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 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 | |
| -100.8 | -81.4 | -57.8 | -3.9 | -33.8 | -95.7 | -46.5 | -54.9 | -79.4 | -5.6 | -79.7 | -26.9 | -84.6 | -104.1 | -75.7 | -49.5 | Phase | -67.1 | |
| 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | Ampl. | 0.1 | |
| 18.8 | 118.7 | 7.2 | 41.1 | 147.2 | 47.7 | 29.0 | 242.2 | 69.8 | 54.0 | 203.2 | 160.5 | 121.5 | 226.4 | 66.3 | 70.2 | Sbd box | 68.9 | |
| 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 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | |
| B: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 | ManI PC | | |
| B | 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 | | | |
| B | 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 | |

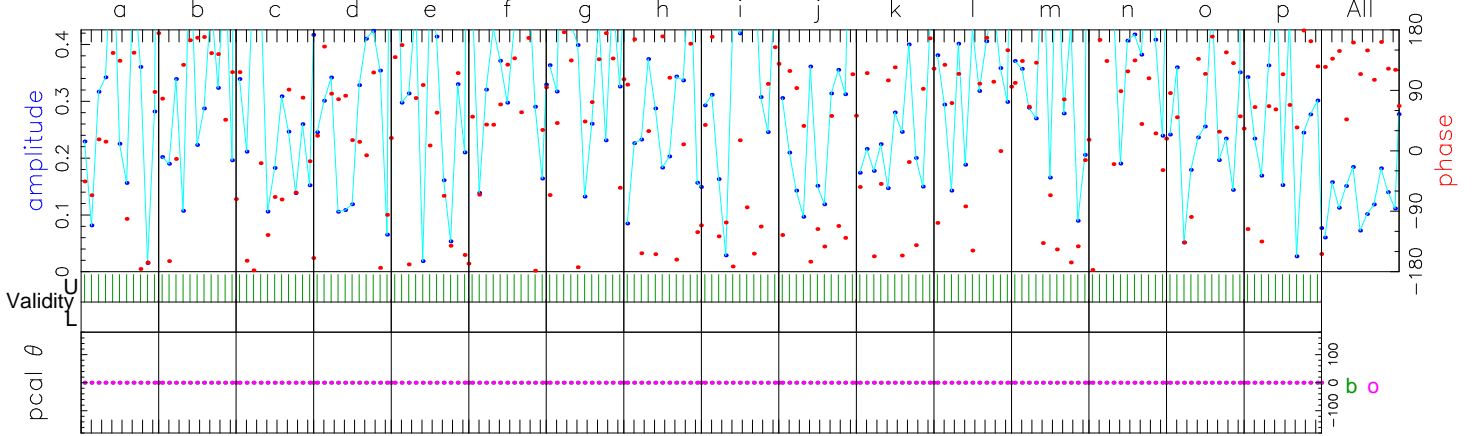
| | | | | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|------------------------|-----------------------------|----------------------|-------------------|------------------|-------|------|
| Group delay (usec)(sbd) | -8.52104532213E+03 | Apriori delay (usec) | -8.52057261133E+03 | Resid mbdelay (usec) | -3.96080E-03 | +/- | 1.9E-04 | | | |
| Sband delay (usec) | -8.52104207283E+03 | Apriori clock (usec) | 1.7089844E-01 | Resid sbdelay (usec) | -4.69462E-01 | +/- | 3.0E-03 | | | |
| Phase delay (usec) | -8.52057261350E+03 | Apriori clockrate (us/s) | -2.0098100E-07 | Resid phdelay (usec) | -2.16294E-06 | +/- | 6.3E-07 | | | |
| Delay rate (us/s) | -1.71804353507E+00 | Apriori rate (us/s) | -1.71804725523E+00 | Resid rate (us/s) | 3.72016E-06 | +/- | 2.6E-09 | | | |
| Total phase (deg) | | Apriori accel (us/s/s) | 5.17601001805E-05 | Resid phase (deg) | -67.1 | +/- | 19.7 | | | |
| RMS | 22.8 | Theor. | 34.1 | Amplitude | 0.109 +/- 0.019 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| ph/seg (deg) | 22.8 | Search (2048X64) | 0.102 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | | |
| amp/seg (%) | 49.9 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.016 | 0.016 | |
| ph/frq (deg) | 33.5 | Inc. seg. avg. | 0.098 | Sample rate(MISamp/s): | 64 | dr window (ns/s) | -0.011 | 0.011 | | |
| amp/frq (%) | 43.2 | Inc. frq. avg. | 0.099 | Data rate(Mb/s): | 2048 | nlags: 128 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, bo
VLBA_BR - VLBA_OV, fgroup W, pol RL



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



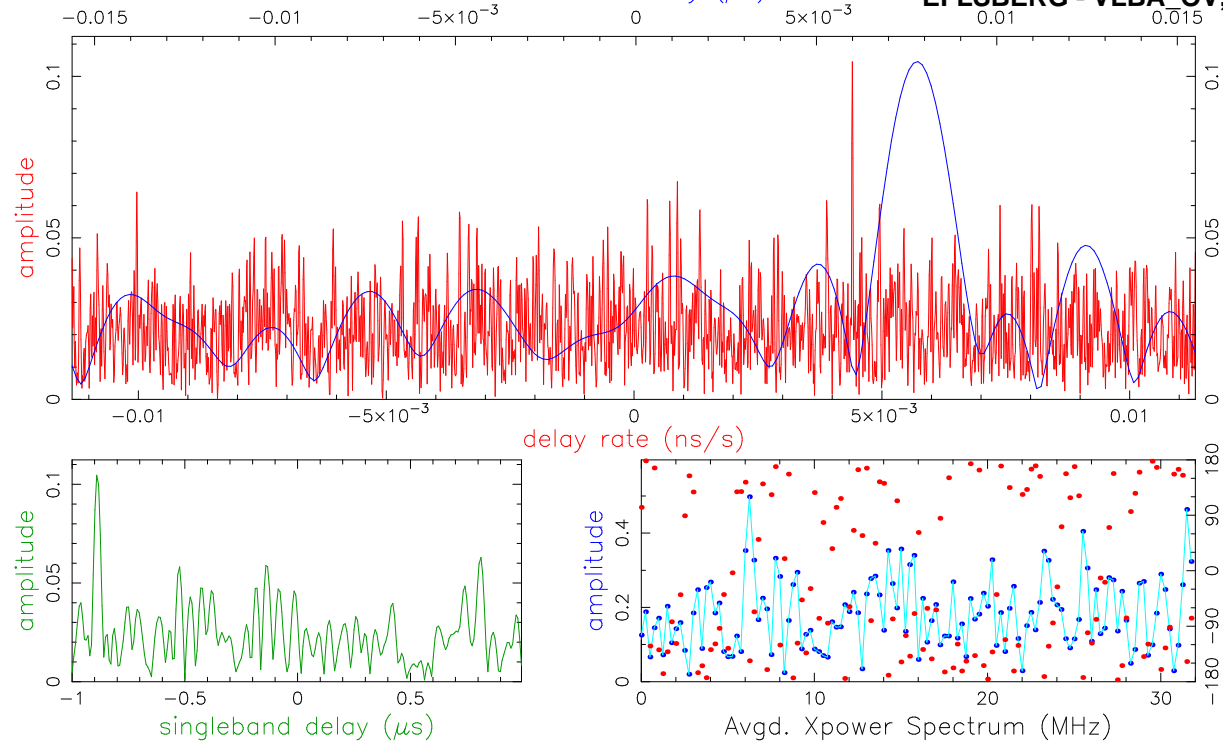
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|----------|
| 131.4 | 133.4 | -121.4 | 70.5 | 118.3 | 85.0 | 150.3 | 165.6 | -163.7 | 163.8 | 169.1 | 139.8 | 168.8 | 105.5 | 100.5 | 101.7 | 129.8 | Phase | |
| 0.1 | 0.2 | 0.0 | 0.1 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | Ampl. | |
| 205.5 | 86.0 | 56.0 | 252.5 | 75.4 | 10.4 | 116.5 | 125.1 | 136.5 | 63.2 | 26.2 | 187.9 | 195.0 | 10.0 | 13.2 | 97.1 | 9.2 | 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 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase |
| b: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 | 0:0 | ManI PC |
| b | 1000 | 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 | 1000 | |
| b | 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) | -1.09821586841E+03 | | | Apriori delay (usec) | | | -1.09729099161E+03 | | | Resid mbdelay (usec) | | | 1.26232E-02 | | | +/- 1.8E-04 | | |
| Sband delay (usec) | -1.09822725061E+03 | | | Apriori clock (usec) | | | -1.7261686E+01 | | | Resid sbdelay (usec) | | | -9.36259E-01 | | | +/- 2.9E-03 | | |
| Phase delay (usec) | -1.09729098743E+03 | | | Apriori clockrate (us/s) | | | -2.4337607E-07 | | | Resid phdelay (usec) | | | 4.18729E-06 | | | +/- 6.2E-07 | | |
| Delay rate (us/s) | -1.11760227360E-01 | | | Apriori rate (us/s) | | | -1.11769310620E-01 | | | Resid rate (us/s) | | | 9.08326E-06 | | | +/- 2.5E-09 | | |
| Total phase (deg) | 123.5 | | | Apriori accel (us/s/s) | | | 1.11399928351E-05 | | | Resid phase (deg) | | | 129.8 | | | +/- 19.1 | | |

| | RMS | Theor. | Amplitude | 0.142 +/- 0.024 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 31.5 | 33.1 | Search (2048X64) | 0.100 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 42.4 | 57.7 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled |
| ph/frq (deg) | 46.4 | 38.2 | Inc. seg. avg. | 0.145 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.016 0.016 |
| amp/frq (%) | 46.8 | 66.6 | Inc. frq. avg. | 0.140 | Data rate(Mb/s): 2048 | nlags: 128 t_cohere infinite |
| | | | | | | ion window (TEC) 0.00 0.00 |

b: az 111.1 el 43.9 pa -41.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 693.291 1478.707 simultaneous interpolator

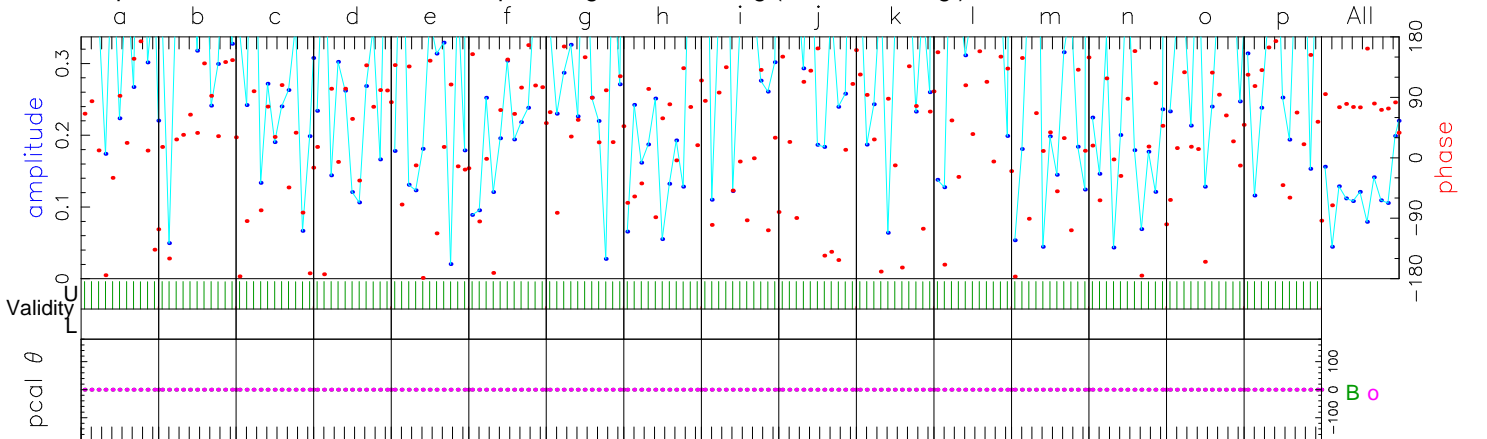
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/bo..130BZK Output file: /Exps/c192b/v2/1234/No0053/bo.W.77.130BZK

multiband delay (μ s)



Fringe quality 0
SNR 5.9
Int time 418.595
Amp 0.112
Phase 81.8
PFD 6.0e-01
Delays (us)
SBD -0.888372
MBD 0.007826
Fringe rate (Hz) 0.380390
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083257
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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

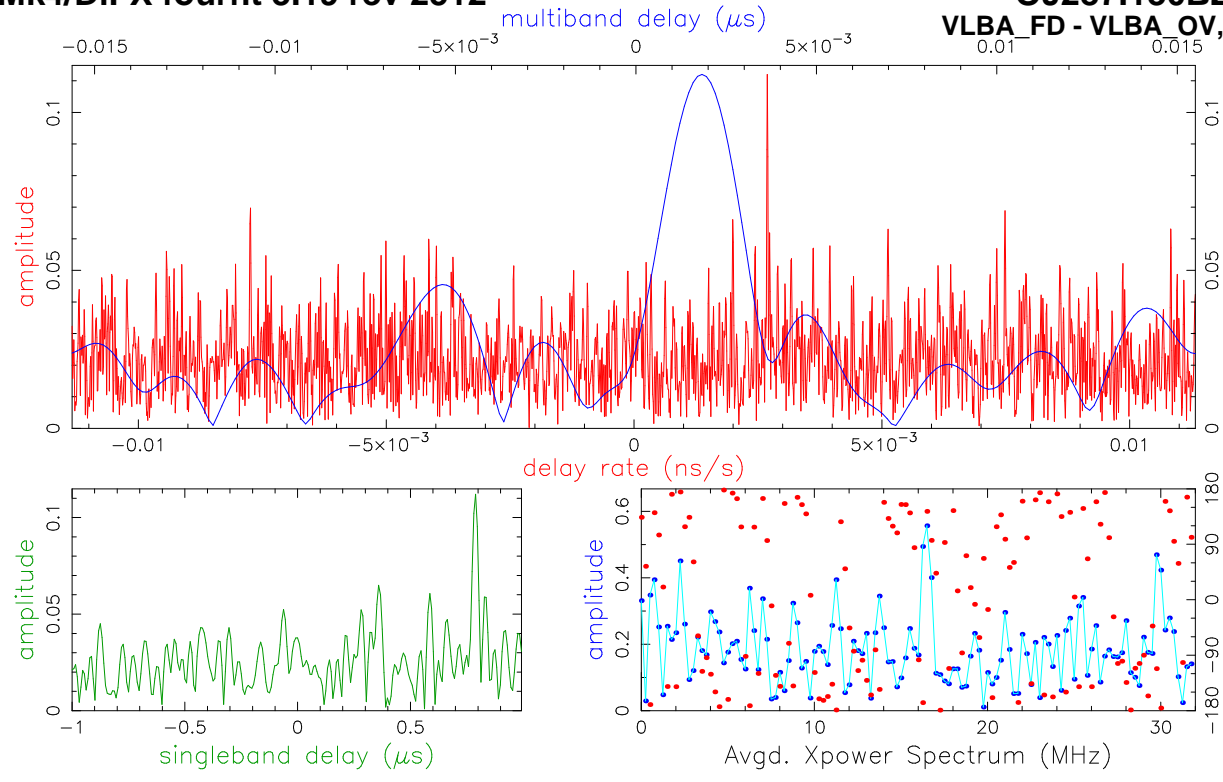


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| 75.6 | 75.9 | 88.7 | 94.8 | -42.9 | 108.2 | 80.5 | 27.3 | 70.0 | 145.6 | 128.1 | 87.6 | 46.0 | 66.6 | 45.6 | 96.1 | Phase | 81.8 | |
| 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | Ampl. | 0.1 | |
| 86.3 | 16.3 | 74.6 | 44.1 | 10.7 | 218.2 | 154.0 | 143.0 | 233.4 | 164.6 | 76.6 | 118.7 | 67.8 | 93.3 | 233.5 | 125.3 | Sbd box | 15.3 | |
| 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 | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| B: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 | |
| B | 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 | | |
| B | 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) -8.52147103493E+03 Apriori delay (usec) -8.52057261133E+03 Resid mbdelay (usec) 7.82640E-03 +/- 1.8E-04
 Sband delay (usec) -8.52146098383E+03 Apriori clock (usec) 1.7089844E-01 Resid sbdelay (usec) -8.88372E-01 +/- 2.9E-03
 Phase delay (usec) -8.52057260870E+03 Apriori clockrate (us/s) -2.0098100E-07 Resid phdelay (usec) 2.63778E-06 +/- 6.3E-07
 Delay rate (us/s) -1.71804283928E+00 Apriori rate (us/s) -1.71804725523E+00 Resid rate (us/s) 4.41595E-06 +/- 2.6E-09
 Total phase (deg) -184.7 Apriori accel (us/s/s) 5.17601001805E-05 Resid phase (deg) 81.8 +/- 19.4

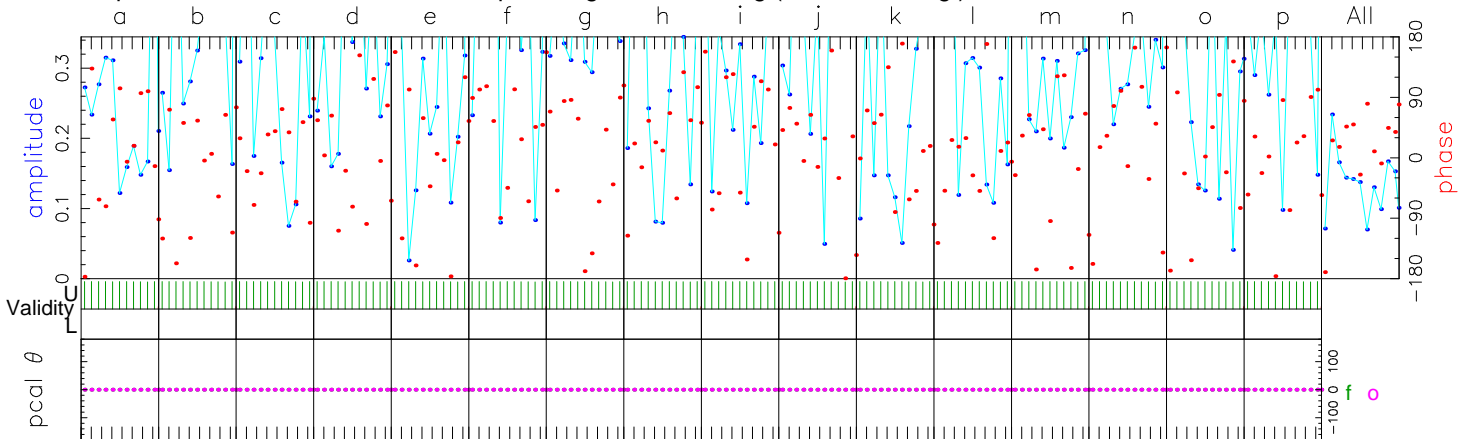
RMS Theor. Amplitude 0.112 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 52.4 33.6 Search (2048X64) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 39.2 58.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 45.5 38.8 Inc. seg. avg. 0.109 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 49.4 67.8 Inc. frq. avg. 0.110 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 276.3 el 21.1 pa 42.3 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 10532.800 2831.778 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Bo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Bo.W.79.130BZK



Fringe quality 0
SNR 6.3
Int time 417.859
Amp 0.115
Phase 28.2
PFD 9.1e-02
Delays (us)
SBD 0.788107
MBD 0.001830
Fringe rate (Hz) 0.231824
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083305
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



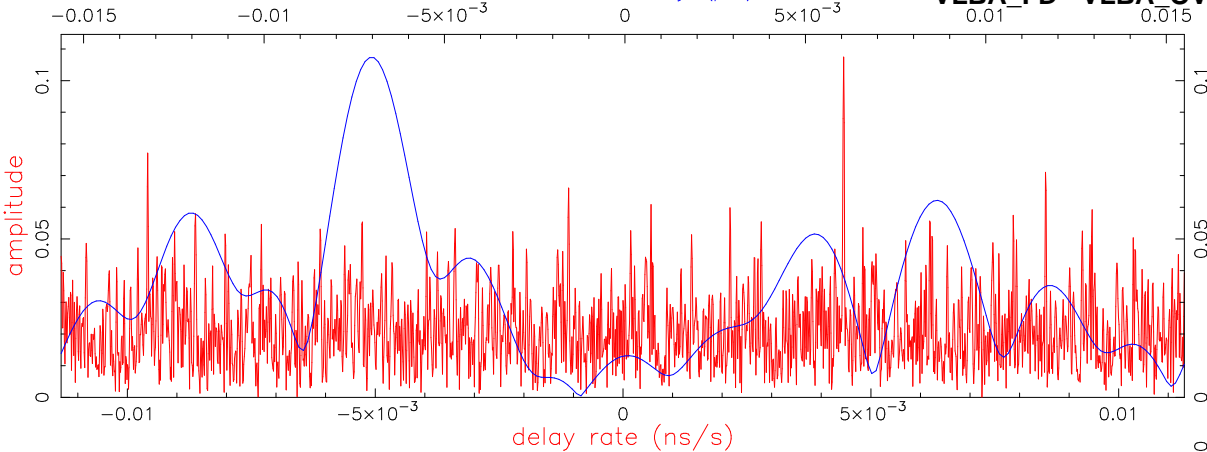
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|--|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| 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 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| fo | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | |
| o | 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 | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | |
| Group delay (usec)(sbd) | | 2.76319636222E+03 | | | | | | | | | | | | | | | | |
| Sband delay (usec) | | 2.76320138916E+03 | | | | | | | | | | | | | | | | |
| Phase delay (usec) | | 2.76241328357E+03 | | | | | | | | | | | | | | | | |
| Delay rate (us/s) | | -1.88276098395E-01 | | | | | | | | | | | | | | | | |
| Total phase (deg) | | | | 88.8 | | | | | | | | | | | | | | |
| 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) | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | | | | | | | | | |
| sb window (us) | | | | | | | | | | | | | | | | | | |
| mb window (us) | | | | | | | | | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | | | | | | | | | |

ph/seg (deg) 56.1 31.6 Search (2048X64) 0.109 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 45.5 55.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 30.0 36.5 Inc. seg. avg. 0.122 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 51.3 63.8 Inc. frq. avg. 0.107 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 104.3 el 61.0 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1125.828 -1326.936 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/fo..130BZK Output file: /Exps/c192b/v2/1234/No0053/fo.W.107.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

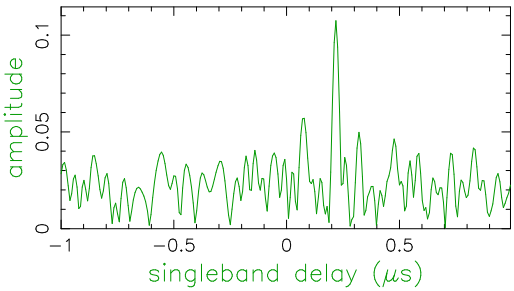
OJ287.130BZK, No0053, fo
VLBA_FD - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

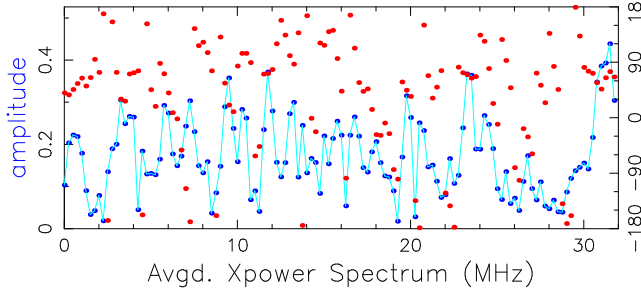


Fringe quality 0

SNR 6.0
Int time 417.859
Amp 0.115
Phase -66.1
PFD 3.9e-01
Delays (us)
SBD 0.218421
MBD -0.007021
Fringe rate (Hz)
0.384166
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

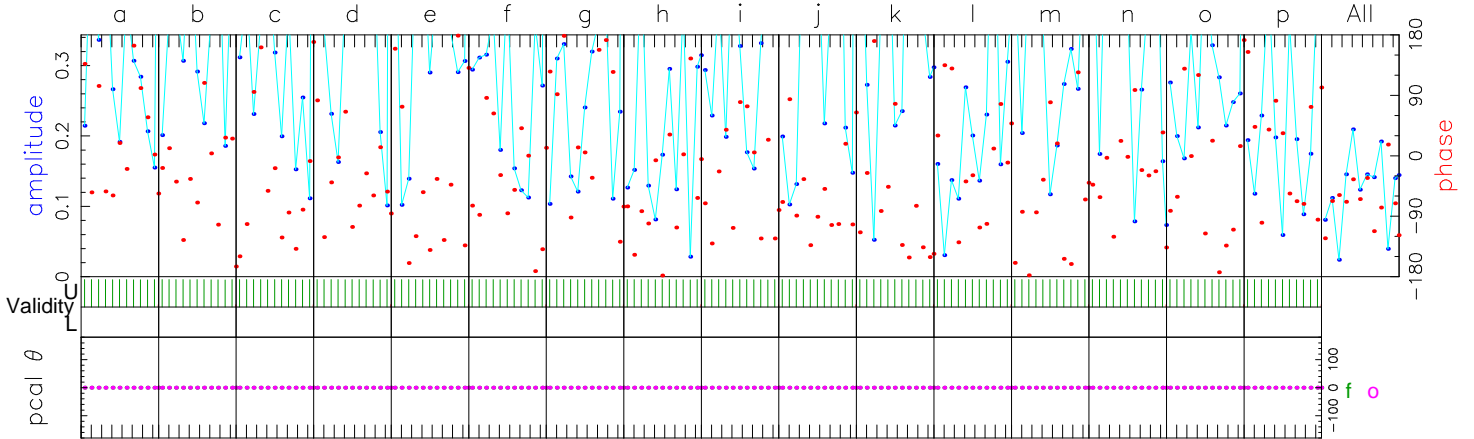


delay rate (ns/s)



Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083310
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 | | |
|-------------------------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|------------|----------------------|---------------|-------------|
| | -9.0 | -30.8 | -97.1 | -39.9 | -119.8 | -67.4 | 168.7 | -59.5 | -52.3 | -81.9 | -105.0 | -11.8 | -119.1 | -20.8 | -88.3 | -30.9 | | Phase | -66.1 | |
| | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | | Ampl. | 0.1 | |
| | 128.3 | 18.5 | 169.3 | 171.9 | 97.9 | 142.0 | 63.4 | 189.5 | 83.7 | 157.4 | 157.7 | 184.9 | 32.8 | 156.6 | 73.9 | 18.2 | | Sbd box | 157.0 | |
| 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 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | |
| fo | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | |
| fo | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | |
| f | 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 | | | | |
| f | 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) | | 2.76262501172E+03 | | | | | | | | 2.76241328266E+03 | | | | | | | | Resid mbdelay (usec) | -7.202094E-03 | +/- 1.8E-04 |
| Sband delay (usec) | | 2.76263170366E+03 | | | | | | | | -1.6184122E+01 | | | | | | | | Resid sbdelay (usec) | 2.18421E-01 | +/- 2.9E-03 |
| Phase delay (usec) | | 2.76241328053E+03 | | | | | | | | -9.1930498E-08 | | | | | | | | Resid phdelay (usec) | -2.13207E-06 | +/- 6.2E-07 |
| Delay rate (us/s) | | -1.88274329851E-01 | | | | | | | | -1.88278789639E-01 | | | | | | | | Resid rate (us/s) | 4.45979E-06 | +/- 2.5E-09 |
| Total phase (deg) | | | | | -5.5 | | | | | -1.84613677378E-05 | | | | | | | | Resid phase (deg) | -66.1 | +/- 19.1 |

ph/seg (deg) 36.4 33.0
amp/seg (%) 52.5 57.7
ph/frq (deg) 50.9 38.2
amp/frq (%) 73.6 66.6

RMS Theor. Amplitude 0.115 +/- 0.019
Search (2048X64) 0.105
Interp. 0.000
Inc. seg. avg. 0.113
Inc. frq. avg. 0.125

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

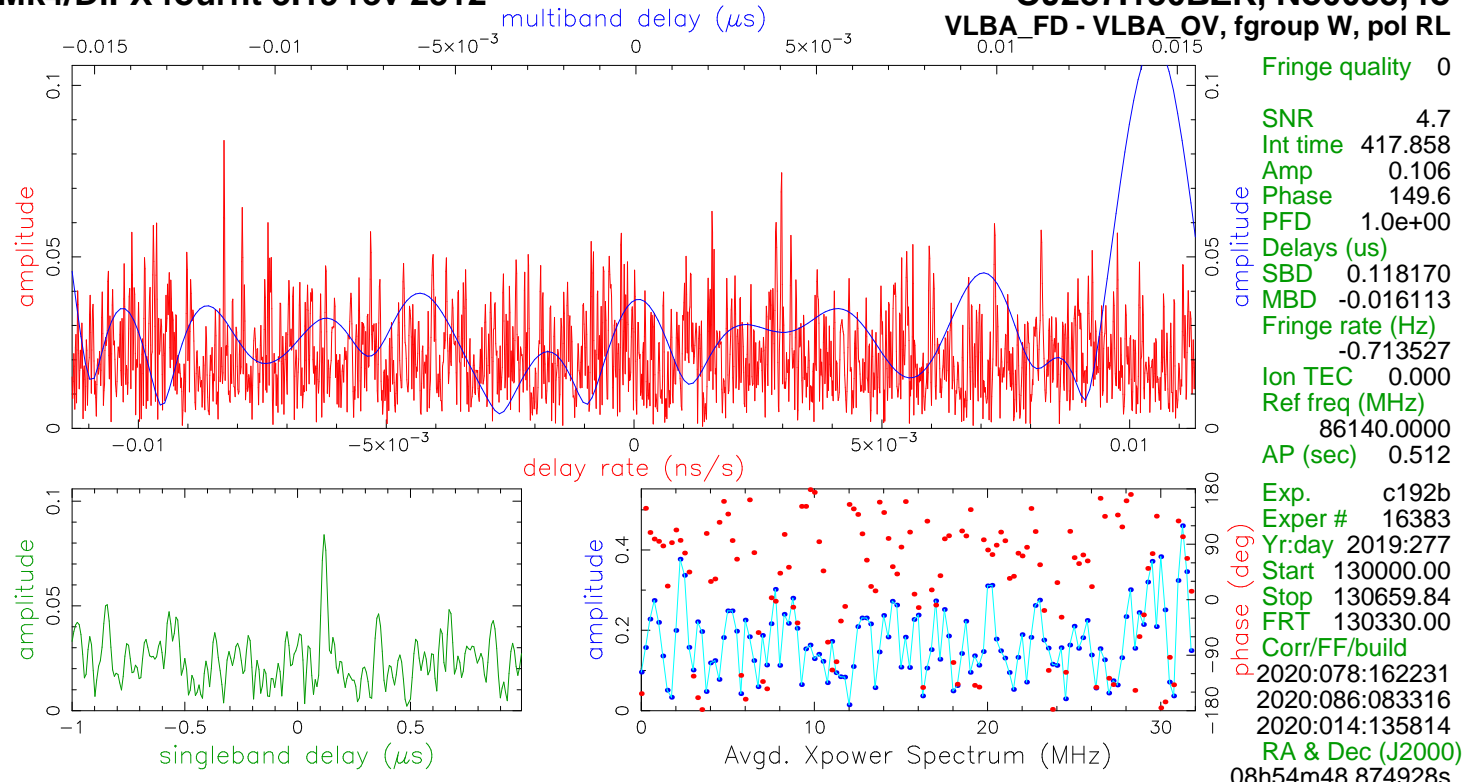
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

f: az 104.3 el 61.0 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1125.828 -1326.936 simultaneous interpolator

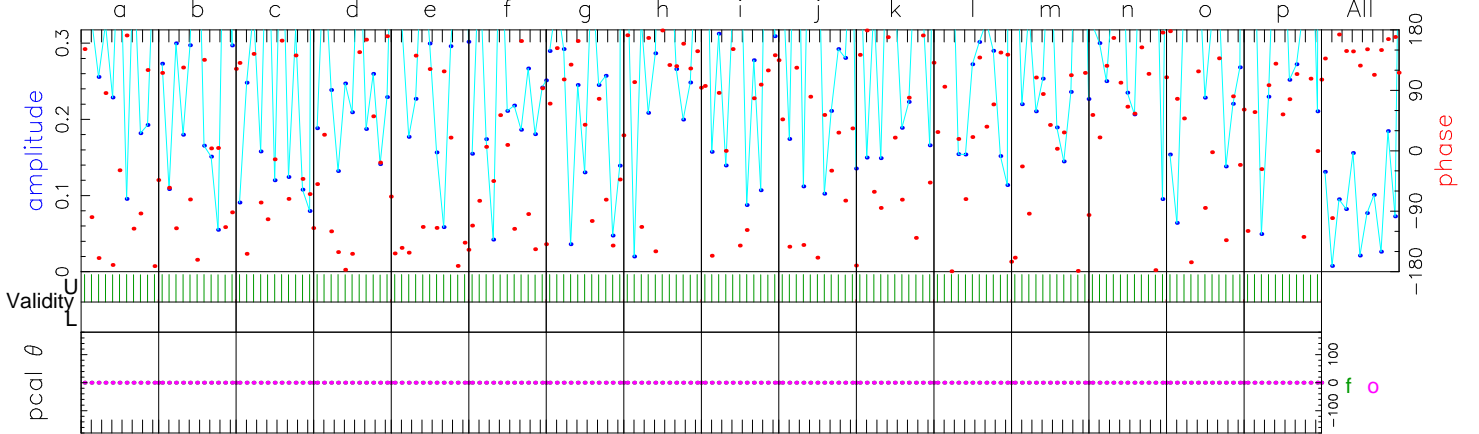
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/fo..130BZK Output file: /Exps/c192b/v2/1234/No0053/fo.W.126.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, fo
VLBA_FD - VLBA_OV, fgroup W, pol RL



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

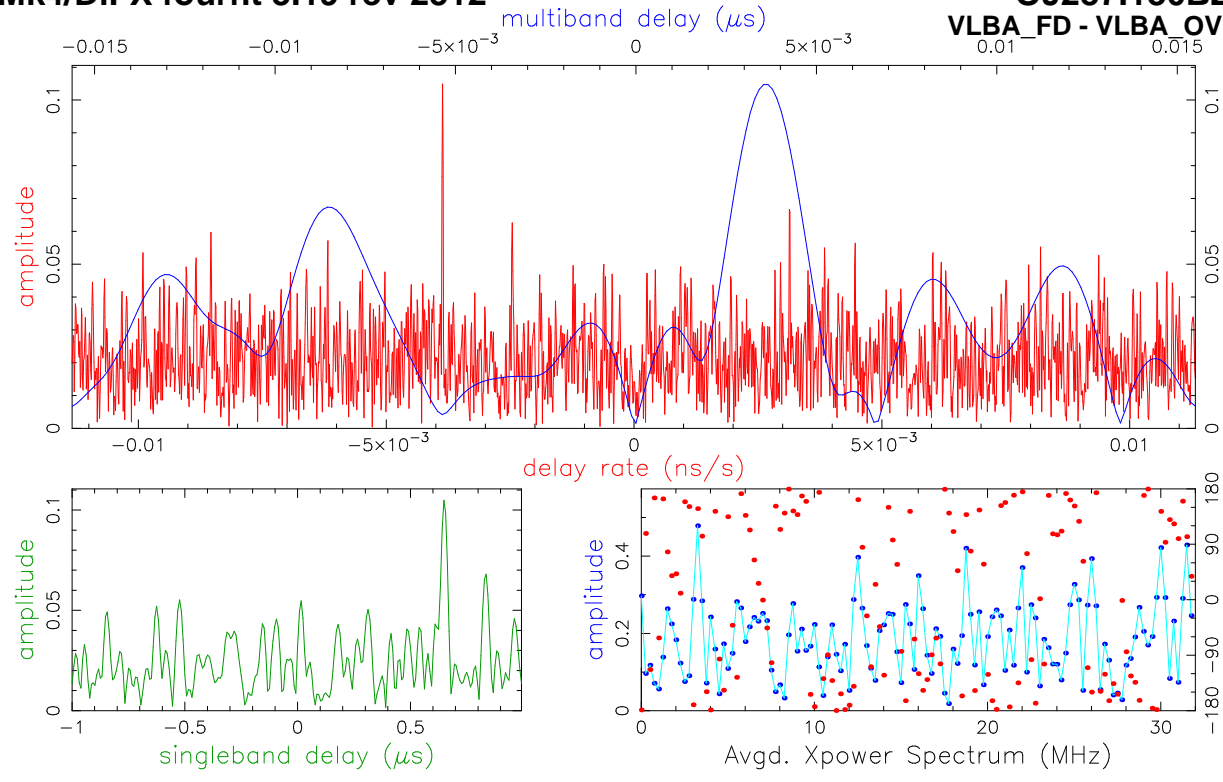


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|----------|------------|----------|--------|--|
| | -148.6 | -133.4 | -154.9 | 169.9 | -153.4 | -54.8 | 121.0 | 160.4 | 127.1 | 76.4 | -161.0 | 89.6 | 123.5 | 118.7 | 99.1 | 96.2 | | Phase | 149.6 | |
| | 0.2 | 0.2 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.2 | | Ampl. | 0.1 | |
| | 202.5 | 56.5 | 149.9 | 241.8 | 145.1 | 31.0 | 89.6 | 191.9 | 238.4 | 120.3 | 156.3 | 19.7 | 241.9 | 144.8 | 166.7 | 219.9 | | Sbd box | 144.1 | |
| 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 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | |
| fo | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | |
| f | 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 | | Chan ids | | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | | |
| | | | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 2.76252216938E+03 | | | Apriori delay (usec) | | | 2.76241328266E+03 | | | Resid mbdelay (usec) | | | -1.61133E-02 | | | +/- | | 2.3E-04 | | |
| Sband delay (usec) | 2.76253145216E+03 | | | Apriori clock (usec) | | | -1.6184122E+01 | | | Resid sbdelay (usec) | | | 1.18170E-01 | | | +/- | | 3.7E-03 | | |
| Phase delay (usec) | 2.76241328749E+03 | | | Apriori clockrate (us/s) | | | -9.1930498E-08 | | | Resid phdelay (usec) | | | 4.82578E-06 | | | +/- | | 7.9E-07 | | |
| Delay rate (us/s) | -1.88287072977E-01 | | | Apriori rate (us/s) | | | -1.88278789639E-01 | | | Resid rate (us/s) | | | -8.28334E-06 | | | +/- | | 3.2E-09 | | |
| Total phase (deg) | 210.3 | | | Apriori accel (us/s/s) | | | -1.84613677378E-05 | | | Resid phase (deg) | | | 149.6 | | | +/- | | 24.4 | | |

ph/seg (deg) 37.4 42.2 Search (2048X64) 0.111 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 73.4 73.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 65.8 48.8 Inc. seg. avg. 0.089 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 96.0 85.1 Inc. frq. avg. 0.119 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 104.3 el 61.0 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1125.828 -1326.936 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/fo..130BZK Output file: /Exps/c192b/v2/1234/No0053/fo.W.148.130BZK

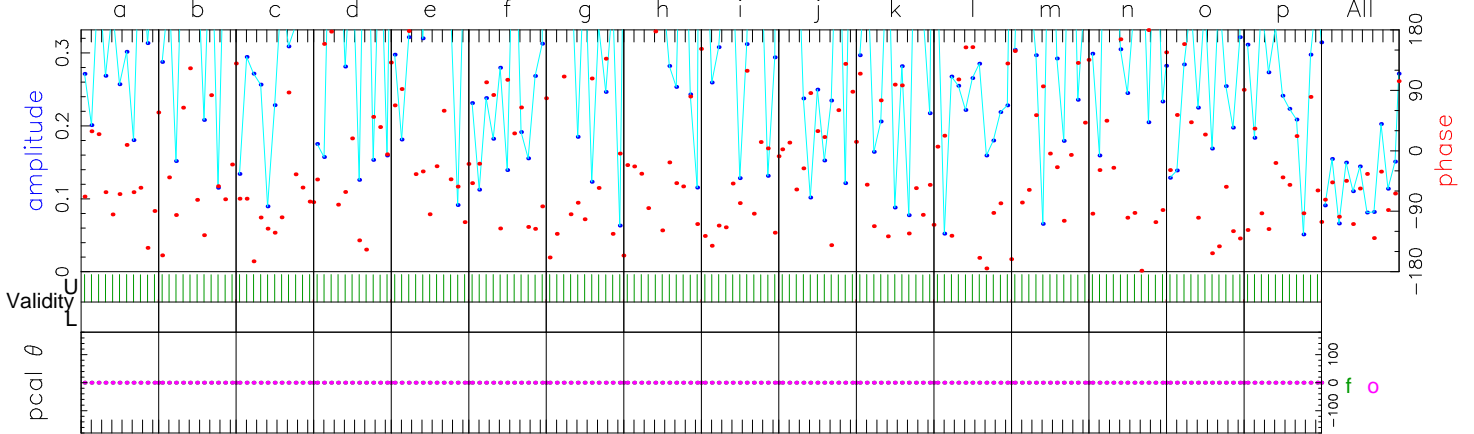
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, fo
VLBA_FD - VLBA_OV, fgroup W, pol LL



Fringe quality 0
SNR 5.9
Int time 417.859
Amp 0.111
Phase -63.0
PFD 6.3e-01
Delays (us)
SBD 0.650061
MBD 0.003615
Fringe rate (Hz)
-0.333045
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083301
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| fo | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | |
| o | 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 | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |

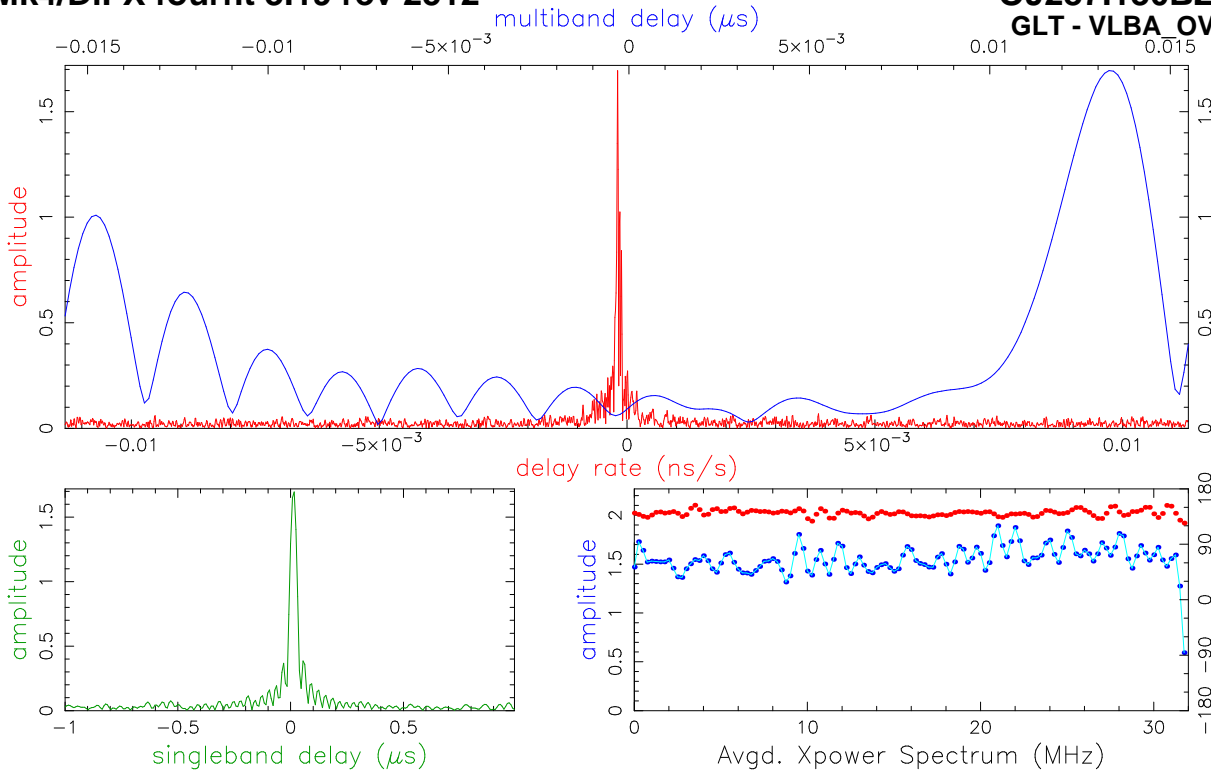
| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 2.76307314758E+03 | Apriori delay (usec) | 2.76241328266E+03 | Resid mbdelay (usec) | 3.61492E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | 2.76306334366E+03 | Apriori clock (usec) | -1.6184122E+01 | Resid sbdelay (usec) | 6.50061E-01 | +/- | 2.9E-03 |
| Phase delay (usec) | 2.76241328063E+03 | Apriori clockrate (us/s) | -9.1930498E-08 | Resid phdelay (usec) | -2.03084E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | -1.88282655957E-01 | Apriori rate (us/s) | -1.88278789639E-01 | Resid rate (us/s) | -3.86632E-06 | +/- | 2.6E-09 |
| Total phase (deg) | -2.4 | Apriori accel (us/s/s) | -1.84613677378E-05 | Resid phase (deg) | -63.0 | +/- | 19.5 |

| | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | RMS 34.7 | Theor. 33.7 | Amplitude Search (2048X64) | 0.111 +/- 0.019 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 43.0 | 58.8 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 51.4 | 38.9 | Inc. seg. avg. | 0.111 | Bits/sample: 2x2 | SampCntNorm: enabled |
| amp/frq (%) | 67.0 | 67.9 | Inc. frq. avg. | 0.121 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| | | | | | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |
| | | | | | nlags: 128 | t_cohere infinite |

f: az 104.3 el 61.0 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1125.828 -1326.936 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/fo...130BZK Output file: /Exps/c192b/v2/1234/No0053/fo.W.91.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, go
GLT - VLBA OV, fgroup W, pol LL

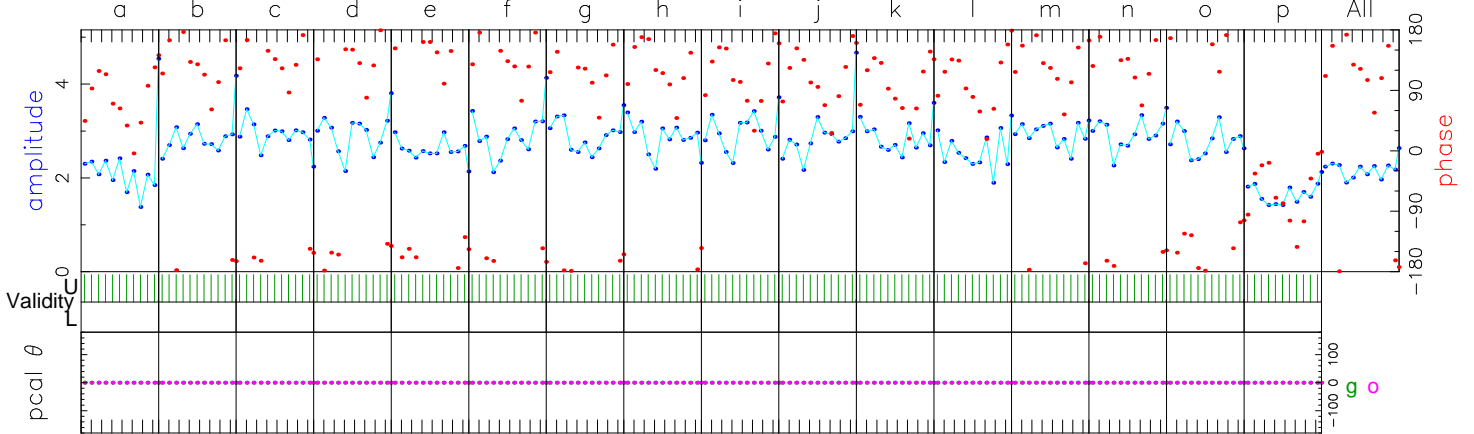


Fringe quality 3

SNR 96.1
Int time 418.316
Amp 1.719
Phase 137.3
PFD 0.0e+00
Delays (us)
SBD 0.012684
MBD 0.013317
Fringe rate (Hz)
-0.015917
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083323
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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

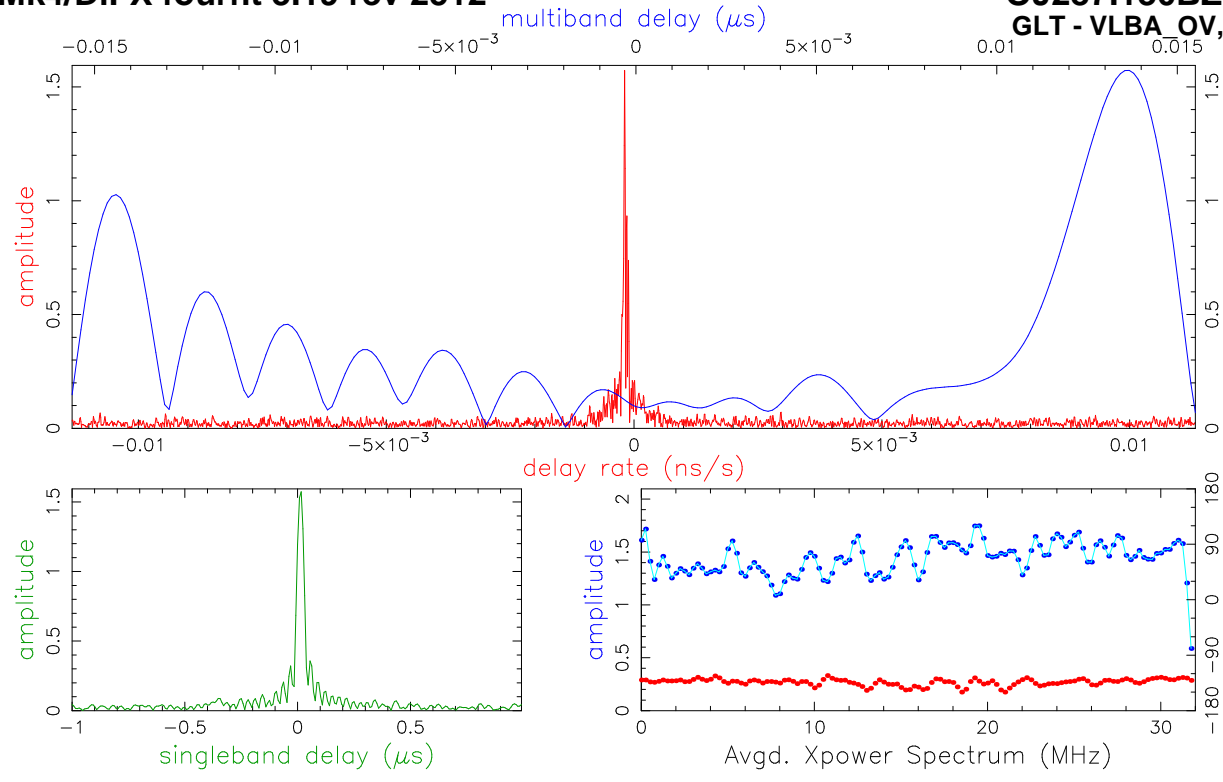


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| 76.3 | 142.8 | 154.0 | 163.3 | 173.0 | 155.4 | 139.5 | 129.3 | 109.7 | 105.4 | 95.5 | 100.0 | 138.3 | 147.8 | -165.6 | -63.0 | | Phase | 137.3 | | | | | |
| 1.6 | 2.2 | 2.4 | 2.2 | 2.1 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 1.9 | 2.3 | 2.2 | 2.2 | 1.2 | | Ampl. | 2.1 | | | | | |
| 132.4 | 130.9 | 130.9 | 130.5 | 130.5 | 130.5 | 130.6 | 130.7 | 130.6 | 130.6 | 130.7 | 130.4 | 130.8 | 130.9 | 131.3 | 132.9 | | Sbd box | 130.6 | | | | | |
| 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 | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| g: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 | | | | | |
| g: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 | | | | | |
| g | 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 | | | | | |
| 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) | | | -4.26627153851E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -4.26628485532E+03 | Resid mbdelay (usec) | 1.33168E-02 | +/- | 1.1E-05 |
| Sband delay (usec) | | | -4.26627217082E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | -1.5357729E+01 | Resid sbdelay (usec) | 1.26845E-02 | +/- | 1.8E-04 |
| Phase delay (usec) | | | -4.26628485089E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 7.4018997E-08 | Resid phdelay (usec) | 4.42679E-06 | +/- | 3.8E-08 |
| Delay rate (us/s) | | | -8.35637196901E-01 | | | | | | | | | | | | | | | Apriori rate (us/s) | -8.35637012118E-01 | Resid rate (us/s) | -1.84783E-07 | +/- | 1.6E-10 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 3.68371573978E-05 | Resid phase (deg) | 137.3 | +/- | 1.2 |

ph/seg (deg) 39.1 2.1 Amplitude 1.719 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 26.9 3.6 Search (2048X64) 1.629 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 53.6 2.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 28.1 4.2 Inc. seg. avg. 2.158 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
g: az 185.9 el 33.4 pa 1.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 5134.024 4100.672 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/go...130BZK Output file: /Exps/c192b/v2/1234/No0053/go.W.168.130BZK simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, go
GLT - VLBA_OV, fgroup W, pol RR

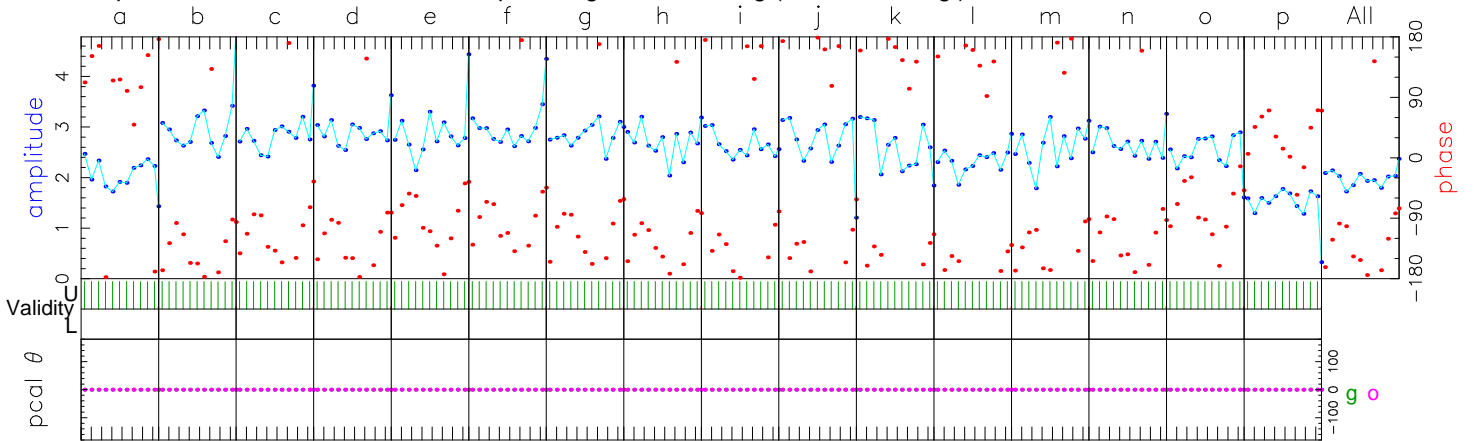


Fringe quality 3

SNR 89.2
Int time 418.329
Amp 1.594
Phase -138.7
PFD 0.0e+00
Delays (us)
SBD 0.012765
MBD 0.013582
Fringe rate (Hz) -0.015908
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

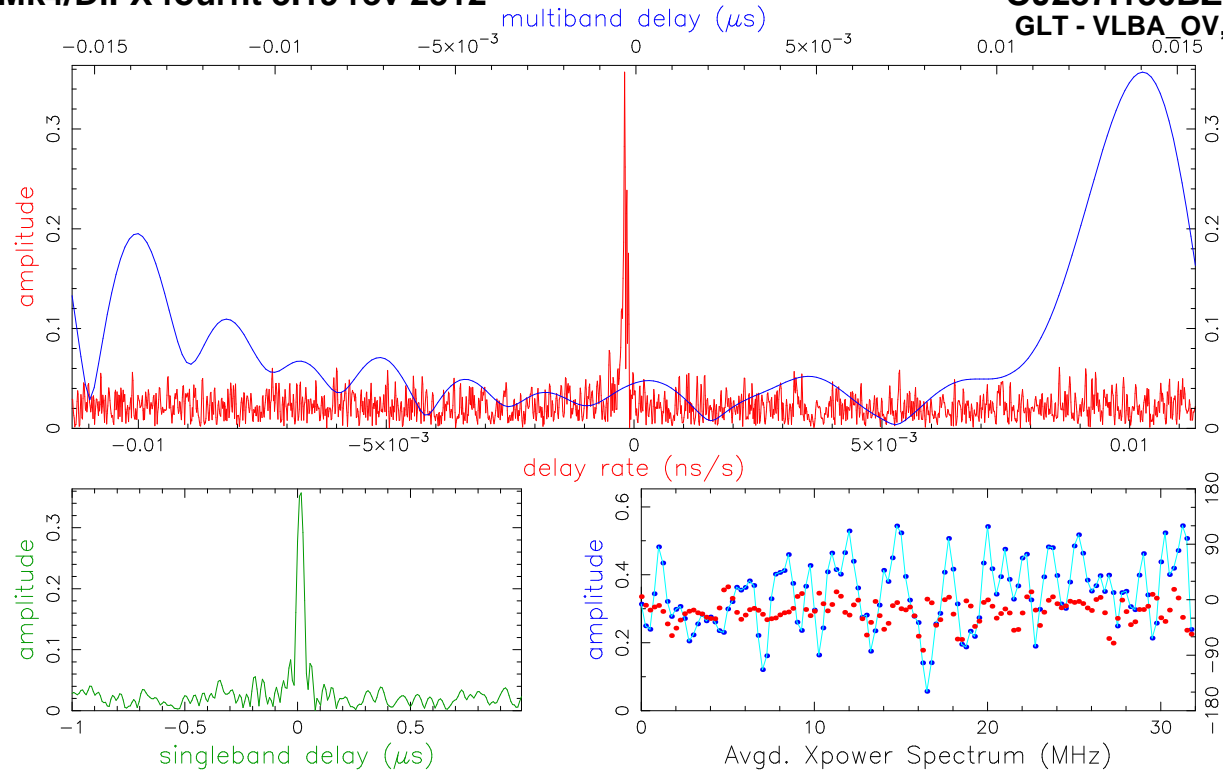
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083330
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | 132.4 | -143.9 | -123.5 | -134.1 | -95.9 | -103.1 | -121.5 | -132.1 | -162.3 | -165.3 | -177.1 | 171.6 | -153.3 | -130.0 | -76.4 | 27.7 | Phase | -138.7 | | | | |
| | 1.6 | 2.3 | 2.3 | 2.3 | 2.2 | 2.3 | 2.2 | 2.2 | 2.0 | 2.3 | 2.1 | 1.9 | 2.0 | 2.1 | 2.0 | 1.3 | Ampl. | 2.1 | | | | |
| | 132.7 | 131.2 | 130.8 | 130.8 | 130.8 | 130.4 | 130.7 | 130.5 | 130.7 | 130.7 | 130.7 | 130.5 | 130.7 | 131.1 | 131.4 | 132.9 | Sbd box | 130.6 | | | | |
| 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 | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| g: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 | | | | | |
| g: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 | | | | | |
| g | 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 | 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) | | | -4.26627127317E+03 | | | | | | | | | | | | | | Apriori delay (usec) | -4.26628485532E+03 | Resid mbdelay (usec) | 1.35821E-02 | +/- | 1.2E-05 |
| Sband delay (usec) | | | -4.26627209032E+03 | | | | | | | | | | | | | | Apriori clock (usec) | -1.5357729E+01 | Resid sbdelay (usec) | 1.27650E-02 | +/- | 1.9E-04 |
| Phase delay (usec) | | | -4.26628485979E+03 | | | | | | | | | | | | | | Apriori clockrate (us/s) | 7.4018997E-08 | Resid phdelay (usec) | -4.47325E-06 | +/- | 4.1E-08 |
| Delay rate (us/s) | | | -8.35637196795E-01 | | | | | | | | | | | | | | Apriori rate (us/s) | -8.35637012118E-01 | Resid rate (us/s) | -1.84677E-07 | +/- | 1.7E-10 |
| Total phase (deg) | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 3.68371573978E-05 | Resid phase (deg) | -138.7 | +/- | 1.3 |

ph/seg (deg) 38.1 2.2 Theor. Amplitude 1.594 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 25.0 3.9 Search (2048X64) 1.526 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 59.0 2.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 34.7 4.5 Inc. seg. avg. 1.970 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 g: az 185.9 el 33.4 pa 1.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 5134.024 4100.672 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/go...130BZK Output file: /Exps/c192b/v2/1234/No0053/go.W.191.130BZK simultaneous interpolator

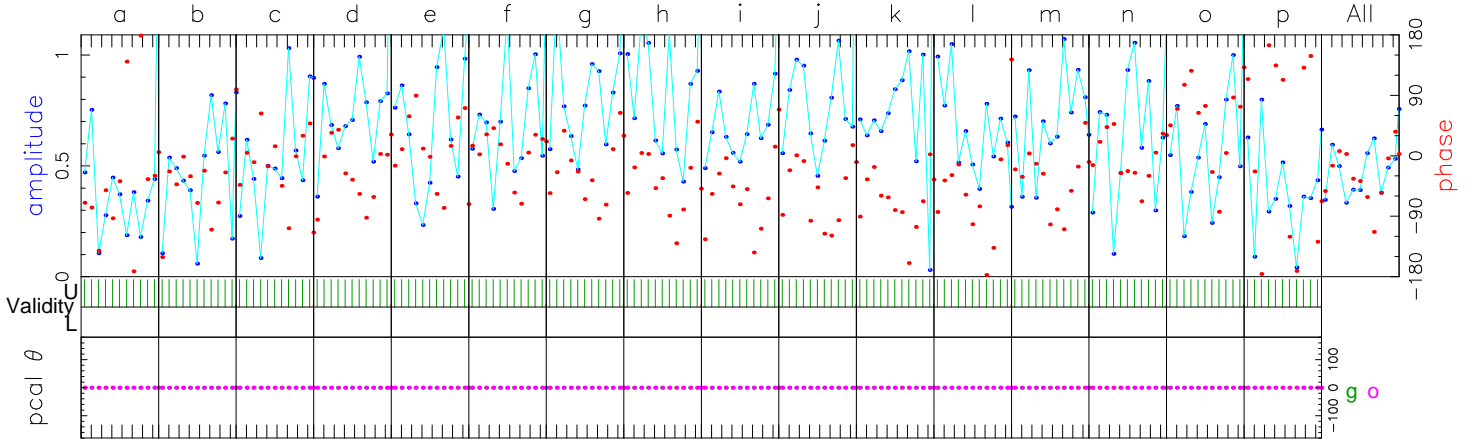


Fringe quality 6

SNR 20.3
Int time 418.316
Amp 0.364
Phase -28.7
PFD 0.0e+00
Delays (us)
SBD 0.012277
MBD 0.014041
Fringe rate (Hz)
-0.015922
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083336
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

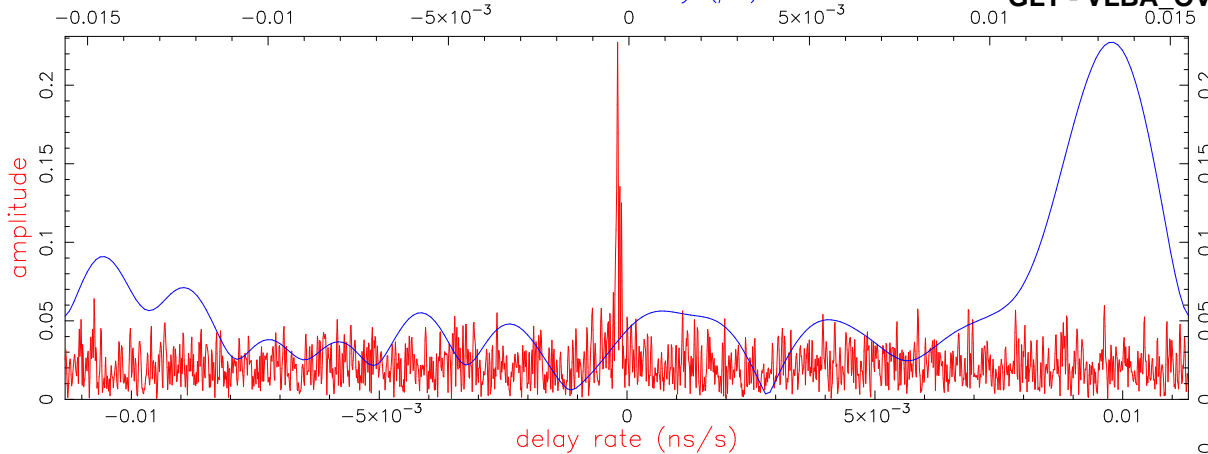
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



| | 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 | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -72.3 | -42.0 | -9.5 | -22.2 | 4.4 | 5.7 | -23.2 | -30.4 | -56.2 | -51.3 | -75.4 | -55.6 | -36.0 | -8.1 | 62.2 | 158.4 | Phase | -28.7 | | | | |
| | 0.2 | 0.3 | 0.3 | 0.5 | 0.4 | 0.6 | 0.6 | 0.4 | 0.5 | 0.6 | 0.4 | 0.5 | 0.4 | 0.5 | 0.4 | 0.3 | Ampl. | 0.4 | | | | |
| | 130.2 | 131.1 | 130.1 | 131.0 | 130.0 | 130.4 | 130.3 | 130.4 | 131.0 | 130.5 | 130.9 | 130.5 | 131.0 | 131.1 | 131.4 | 133.0 | Sbd box | 130.6 | | | | |
| 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 | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| g: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 | | | | | |
| g: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 | | | | | |
| g | 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 | | | | | |
| 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) | | | -4.26627081442E+03 | | | | | | | | | | | | | | Apriori delay (usec) | -4.26628485532E+03 | Resid mbdelay (usec) | 1.40409E-02 | +/- | 5.3E-05 |
| Sband delay (usec) | | | -4.26627257782E+03 | | | | | | | | | | | | | | Apriori clock (usec) | -1.5357729E+01 | Resid sbdelay (usec) | 1.22775E-02 | +/- | 8.5E-04 |
| Phase delay (usec) | | | -4.26628485624E+03 | | | | | | | | | | | | | | Apriori clockrate (us/s) | 7.4018997E-08 | Resid phdelay (usec) | -9.24158E-07 | +/- | 1.8E-07 |
| Delay rate (us/s) | | | -8.35637196960E-01 | | | | | | | | | | | | | | Apriori rate (us/s) | -8.35637012118E-01 | Resid rate (us/s) | -1.84841E-07 | +/- | 7.5E-10 |
| Total phase (deg) | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 3.68371573978E-05 | Resid phase (deg) | -28.7 | +/- | 5.6 |

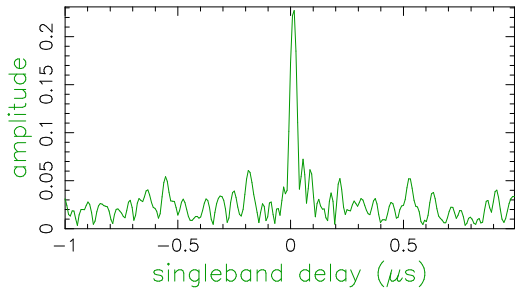
ph/seg (deg) RMS 39.1 Theor. 9.8 Amplitude 0.364 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 40.3 17.0 Search (2048X64) 0.346 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 58.3 11.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 39.5 19.7 Inc. seg. avg. 0.463 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 g: az 185.9 el 33.4 pa 1.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 5134.024 4100.672 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/go...130BZK Output file: /Exps/c192b/v2/1234/No0053/go.W.209.130BZK simultaneous interpolator

multiband delay (μ s)

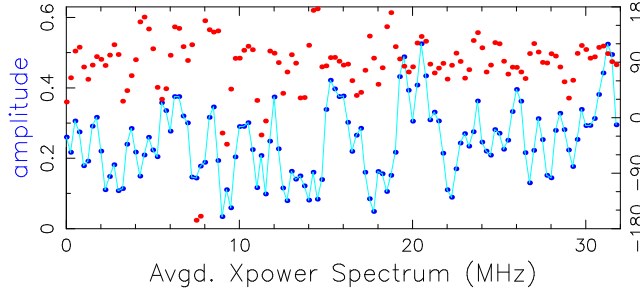


Fringe quality 9

SNR 12.9
Int time 418.328
Amp 0.231
Phase 89.3
PFD 1.8e-29
Delays (us)
SBD 0.012587
MBD 0.013331
Fringe rate (Hz)
-0.016043
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

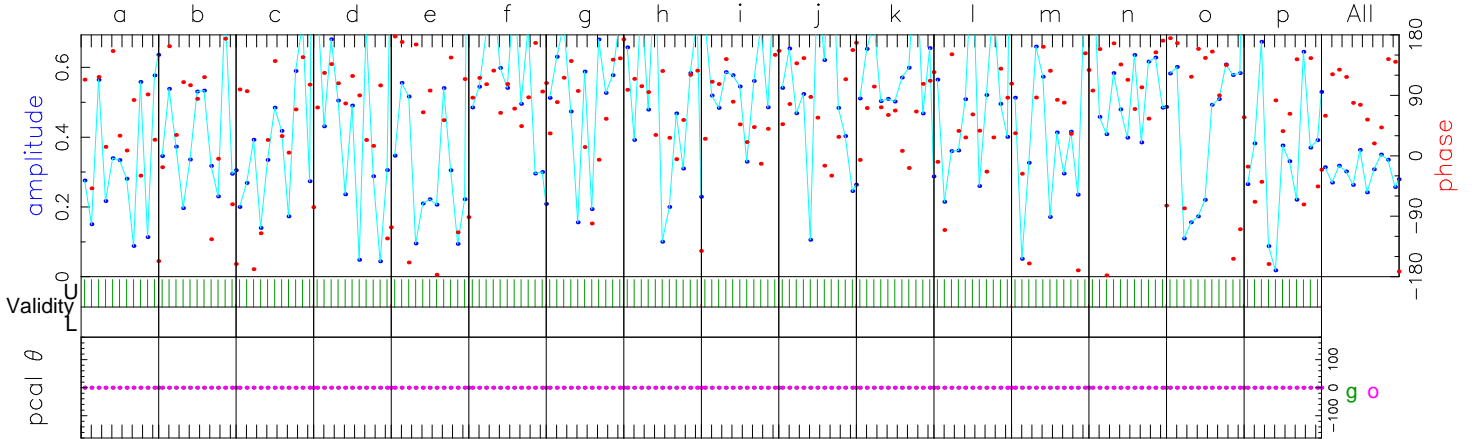


delay rate (ns/s)



Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083341
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



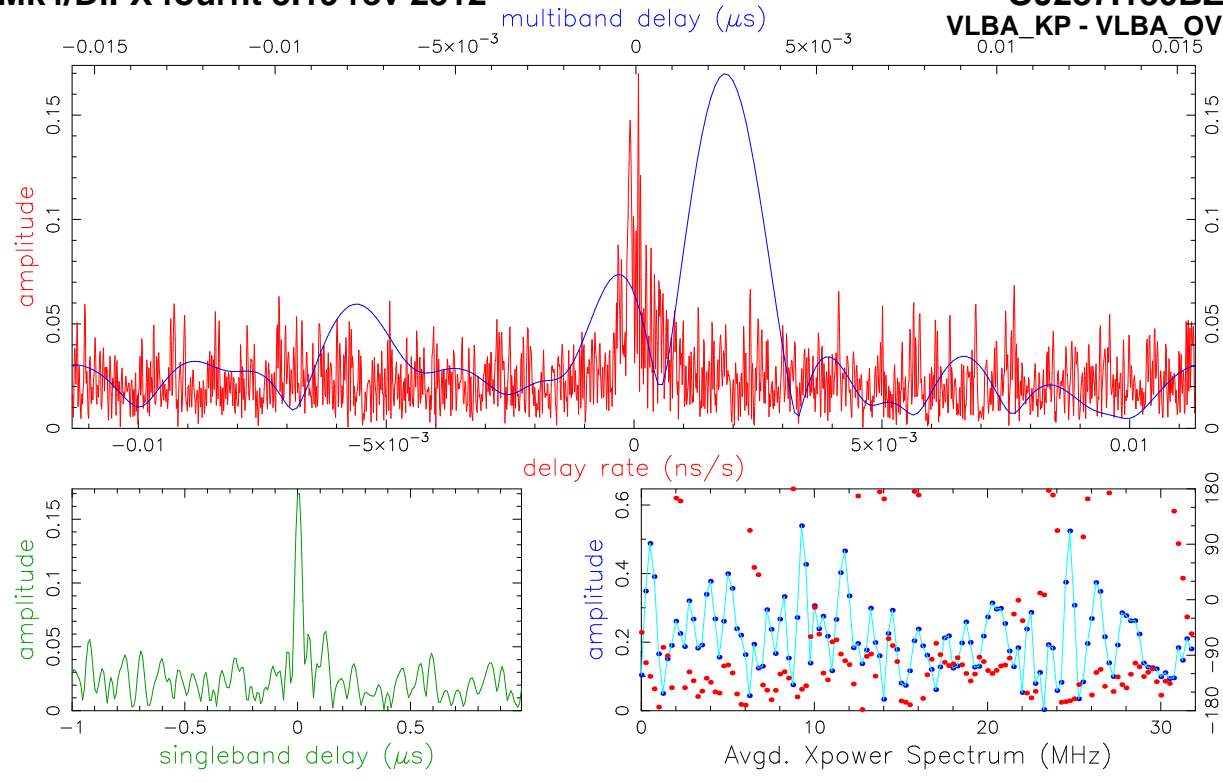
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| 45.0 | 123.9 | 103.4 | 91.7 | 150.6 | 94.5 | 86.7 | 85.7 | 72.3 | 54.6 | 63.0 | 44.3 | 112.2 | 124.5 | 165.1 | -34.5 | | Phase | 89.3 | | | | | |
| 0.1 | 0.1 | 0.2 | 0.3 | 0.2 | 0.5 | 0.3 | 0.4 | 0.4 | 0.3 | 0.5 | 0.3 | 0.2 | 0.4 | 0.3 | 0.1 | | Ampl. | 0.3 | | | | | |
| 11.7 | 3.6 | 129.7 | 175.0 | 191.7 | 130.4 | 130.9 | 130.0 | 130.8 | 1.4 | 131.1 | 131.2 | 131.4 | 130.5 | 131.9 | 133.2 | | Sbd box | 130.6 | | | | | |
| 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 | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| g: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 | | | | | |
| g: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 | | | | | |
| g | 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 | 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 | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -4.26627152451E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -4.26628485532E+03 | Resid mbdelay (usec) | 1.33308E-02 | +/- | 8.3E-05 |
| Sband delay (usec) | | | -4.26627226832E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | -1.5357729E+01 | Resid sbdelay (usec) | 1.25870E-02 | +/- | 1.3E-03 |
| Phase delay (usec) | | | -4.26628485244E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 7.4018997E-08 | Resid phdelay (usec) | 2.88028E-06 | +/- | 2.9E-07 |
| Delay rate (us/s) | | | -8.35637198365E-01 | | | | | | | | | | | | | | | Apriori rate (us/s) | -8.35637012118E-01 | Resid rate (us/s) | -1.86246E-07 | +/- | 1.2E-09 |
| Total phase (deg) | | | | -68.0 | | | | | | | | | | | | | | Apriori accel (us/s/s) | 3.68371573978E-05 | Resid phase (deg) | 89.3 | +/- | 8.9 |

| | RMS | Theor. | Amplitude | 0.231 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 41.7 | 15.4 | Search (2048X64) | 0.222 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 34.7 | 26.8 | Interp. | 0.000 | Bits/sample: 2x2 | mb window (us) -0.016 0.016 |
| ph/frq (deg) | 49.4 | 17.7 | Inc. seg. avg. | 0.291 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 52.5 | 30.9 | Inc. frq. avg. | 0.271 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

g: az 185.9 el 33.4 pa 1.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 5134.024 4100.672 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/go...130BZK Output file: /Exps/c192b/v2/1234/No0053/go.W.228.130BZK

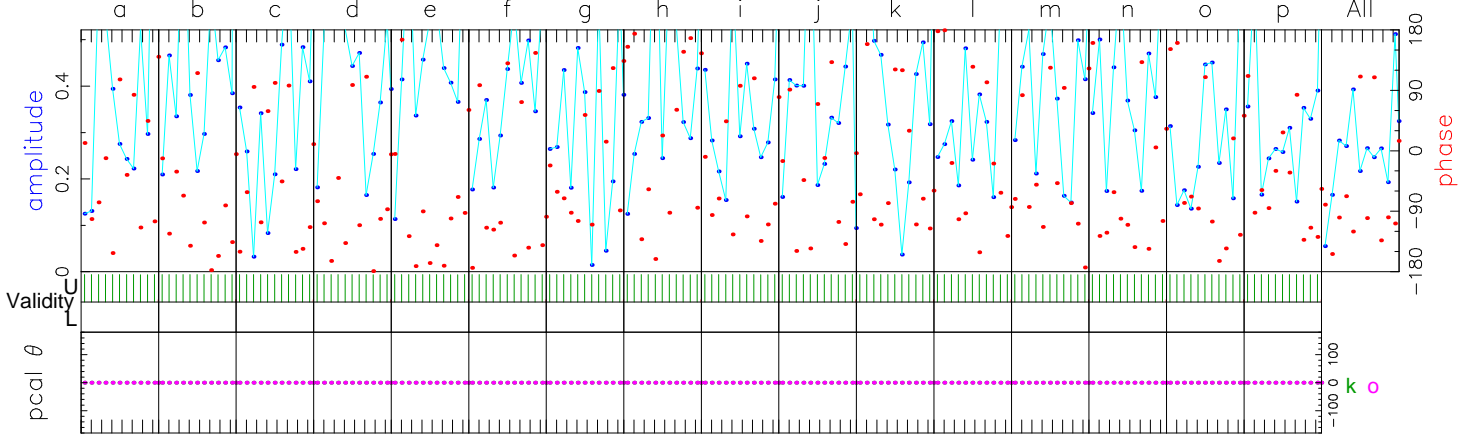
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, ko
VLBA_KP - VLBA_OV, fgroup W, pol LL



Fringe quality 9
SNR 9.7
Int time 418.588
Amp 0.174
Phase -116.2
PFD 9.9e-14
Delays (us)
SBD 0.004008
MBD 0.002462
Fringe rate (Hz) 0.007881
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build 2020:078:162231
2020:086:083329
2020:014:135814
RA & Dec (J2000) 08h54m48.874928s +20°06'30.640850"

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 | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -82.3 | -109.1 | -130.4 | -114.4 | -127.9 | -166.4 | -58.8 | -143.5 | -94.9 | -120.3 | -106.3 | -115.6 | -112.3 | -114.4 | -141.8 | -86.1 | Phase | -116.2 | | | | |
| | 0.2 | 0.3 | 0.1 | 0.2 | 0.4 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.3 | 0.1 | 0.1 | Ampl. | 0.2 | | | | |
| | 87.7 | 129.6 | 146.9 | 129.0 | 129.6 | 128.6 | 195.4 | 160.9 | 207.1 | 75.0 | 130.1 | 28.9 | 178.1 | 129.3 | 10.4 | 190.1 | Sbd box | 129.5 | | | | |
| 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 | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| k: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 | | | | | |
| k: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 | | | | | |
| k | 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 | PC amp | | | | | |
| k | 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) | | | 1.46207079139E+03 | | | | | | | | | | | | | | Apriori delay (usec) | 1.46206832910E+03 | Resid mbdelay (usec) | 2.46230E-03 | +/- | 1.1E-04 |
| Sband delay (usec) | | | 1.46207233760E+03 | | | | | | | | | | | | | | Apriori clock (usec) | -1.7047726E+01 | Resid sbdelay (usec) | 4.00850E-03 | +/- | 1.8E-03 |
| Phase delay (usec) | | | 1.46206832535E+03 | | | | | | | | | | | | | | Apriori clockrate (us/s) | -1.9555999E-07 | Resid phdelay (usec) | -3.74838E-06 | +/- | 3.8E-07 |
| Delay rate (us/s) | | | -5.77748733054E-02 | | | | | | | | | | | | | | Apriori rate (us/s) | -5.77749648015E-02 | Resid rate (us/s) | 9.14960E-08 | +/- | 1.6E-09 |
| Total phase (deg) | | | | 196.4 | | | | | | | | | | | | | Apriori accel (us/s/s) | -1.07896273781E-05 | Resid phase (deg) | -116.2 | +/- | 11.8 |

ph/seg (deg) 62.7 20.4
amp/seg (%) 82.0 35.6
ph/frq (deg) 27.1 23.6
amp/frq (%) 40.2 41.1

RMS Theor. Amplitude 0.174 +/- 0.018
Search (2048X64) 0.166
Interp. 0.000
Inc. seg. avg. 0.246
Inc. frq. avg. 0.170

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

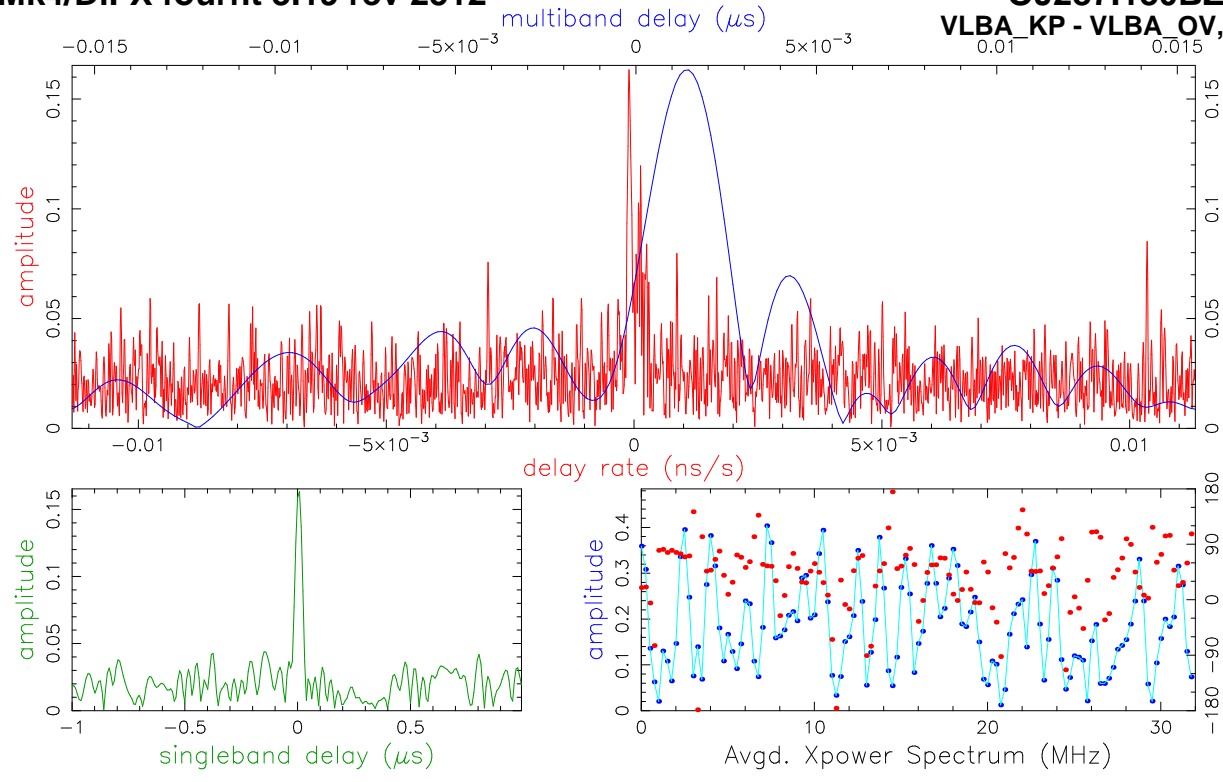
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

k: az 100.2 el 54.3 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 339.692 -940.145 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/ko..130BZK Output file: /Exps/c192b/v2/1234/No0053/ko.W.187.130BZK

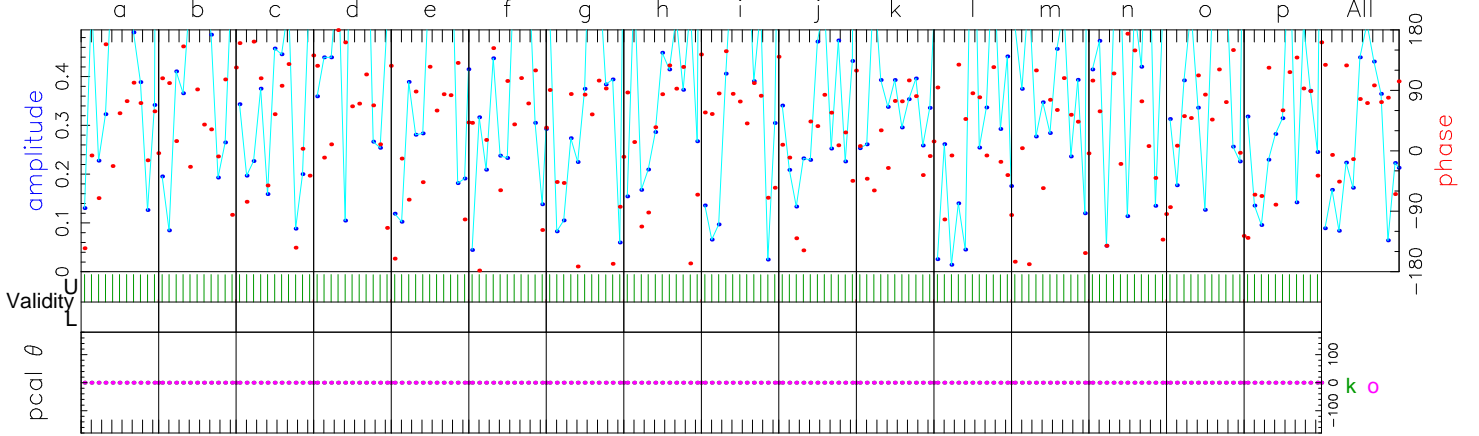
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, ko
VLBA_KP - VLBA_OV, fgroup W, pol RR



Fringe quality 9
SNR 9.2
Int time 418.588
Amp 0.165
Phase 69.6
PFD 8.9e-12
Delays (us)
SBD 0.005050
MBD 0.001374
Fringe rate (Hz)
-0.008617
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083335
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



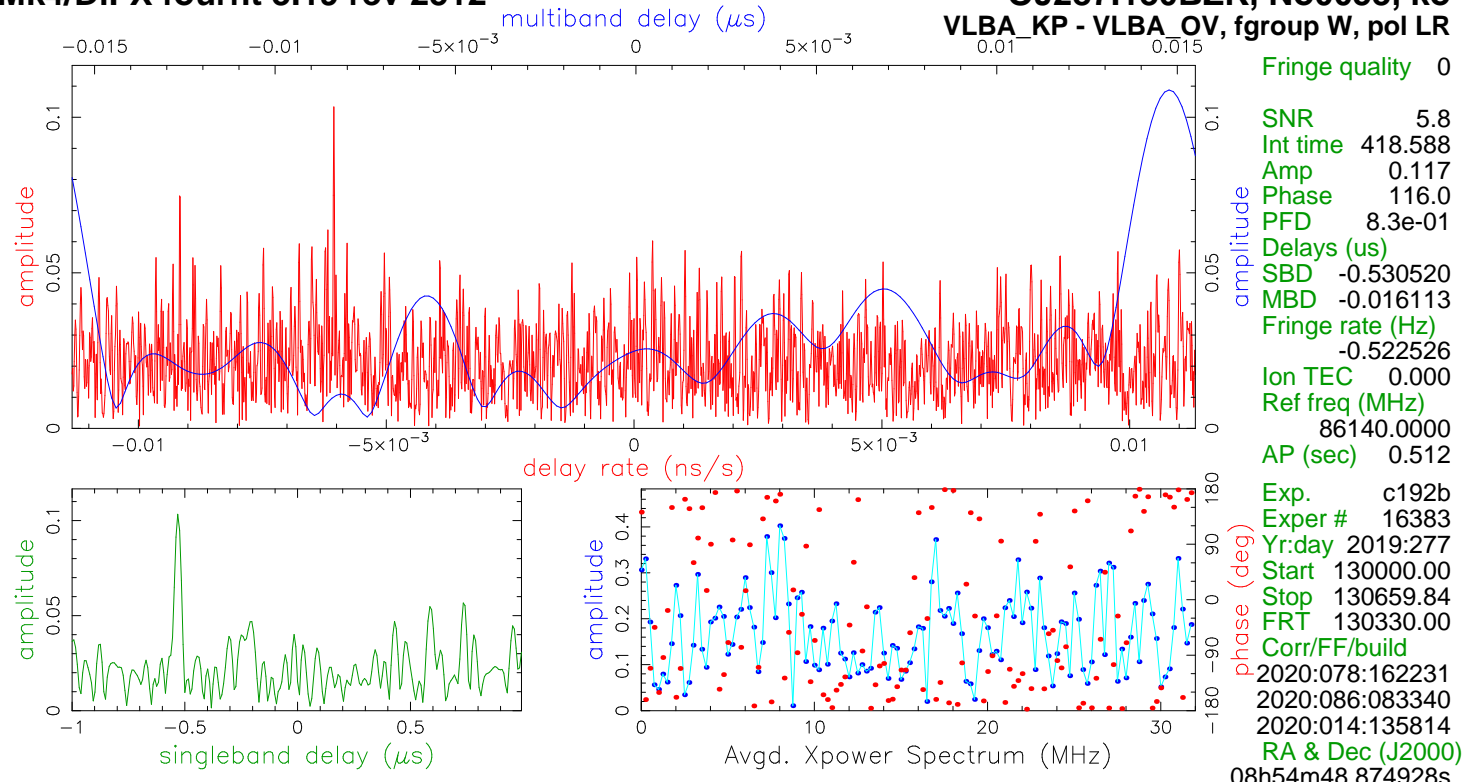
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| U/L | 45.9 | 41.3 | 95.6 | 83.3 | 79.6 | 92.8 | 89.8 | 97.8 | 76.5 | 26.3 | 15.8 | 64.0 | 92.7 | 66.3 | 70.4 | 106.3 | Phase | 69.6 |
| k | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | Ampl. | 0.2 |
| o | 129.1 | 229.3 | 151.4 | 128.4 | 163.3 | 107.6 | 129.1 | 108.9 | 128.9 | 128.0 | 128.8 | 180.9 | 203.8 | 103.5 | 57.2 | 173.1 | Sbd box | 129.6 |
| k: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 | |
| o:0 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| k:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | ManI PC | |
| k | 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 | | |
| k | 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 | |

Group delay (usec)(sbd) 1.46206970263E+03 Apriori delay (usec) 1.46206832910E+03 Resid mbdelay (usec) 1.37354E-03 +/- 1.2E-04
 Sband delay (usec) 1.46207337910E+03 Apriori clock (usec) -1.7047726E+01 Resid sbdelay (usec) 5.05000E-03 +/- 1.9E-03
 Phase delay (usec) 1.46206833134E+03 Apriori clockrate (us/s) -1.9555999E-07 Resid phdelay (usec) 2.24592E-06 +/- 4.0E-07
 Delay rate (us/s) -5.77750648385E-02 Apriori rate (us/s) -5.77749648015E-02 Resid rate (us/s) -1.00037E-07 +/- 1.6E-09
 Total phase (deg) 22.2 Apriori accel (us/s/s) -1.07896273781E-05 Resid phase (deg) 69.6 +/- 12.4

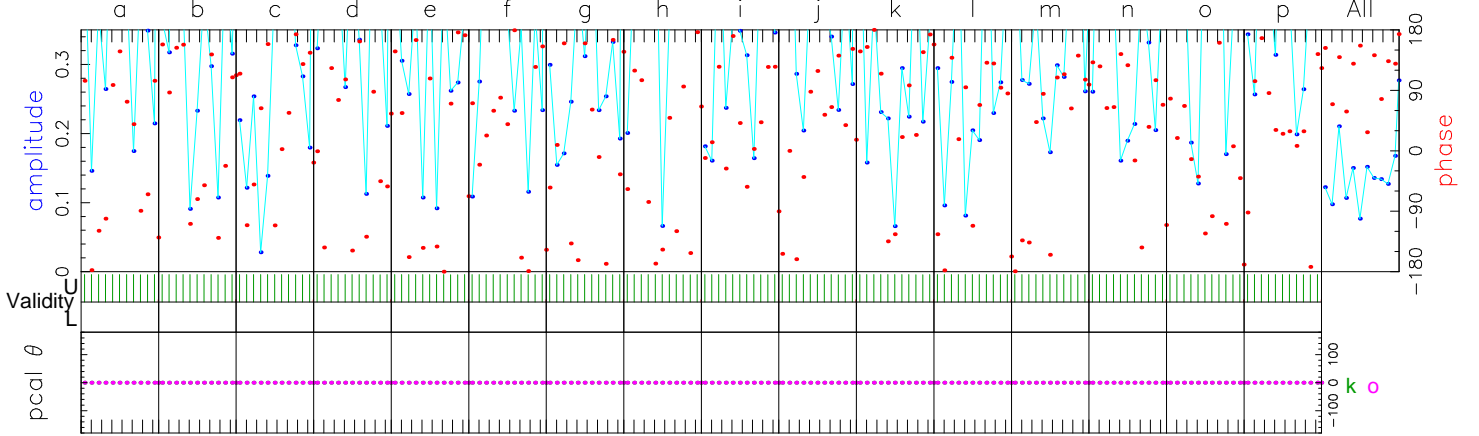
ph/seg (deg) 68.2 21.5 Theor. Amplitude 0.165 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 104.9 37.5 Search (2048X64) 0.163 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.8 24.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 33.7 43.2 Inc. seg. avg. 0.235 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 k: az 100.2 el 54.3 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 339.692 -940.145 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/ko..130BZK Output file: /Exps/c192b/v2/1234/No0053/ko.W.207.130BZK simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, ko
VLBA_KP - VLBA_OV, fgroup W, pol LR



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

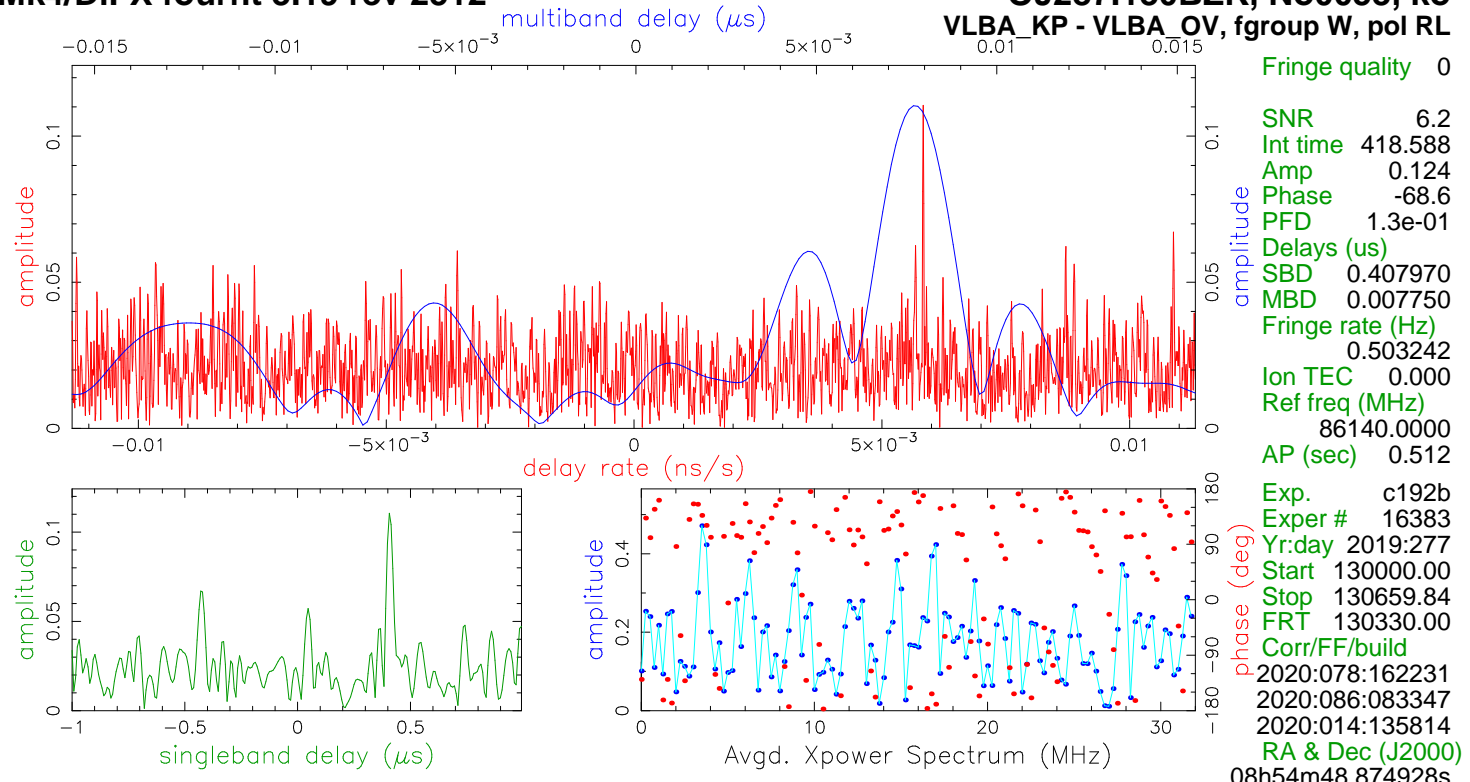


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|--|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| 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 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k: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 | | |
| k: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 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 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 | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | |
| Group delay (usec)(sbd) | | | 1.46155221581E+03 | | | | | | | | | | | | | | | |
| Sband delay (usec) | | | 1.46153780910E+03 | | | | | | | | | | | | | | | |
| Phase delay (usec) | | | 1.46206833284E+03 | | | | | | | | | | | | | | | |
| Delay rate (us/s) | | | -5.77810308086E-02 | | | | | | | | | | | | | | | |
| Total phase (deg) | | | | 68.6 | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | |
| PCal period (AP's) 5, 5 | | | | | | | | | | | | | | | | | | |
| sb window (us) | | | | | | | | | | | | | | | | | | |
| mb window (us) | | | | | | | | | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | | | | | | | | | |

ph/seg (deg) 42.6 34.3 Search (2048X64) 0.107 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 47.1 59.9 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 49.2 39.6 Inc. seg. avg. 0.130 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 55.0 69.1 Inc. frq. avg. 0.120 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 100.2 el 54.3 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 339.692 -940.145 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/ko..130BZK Output file: /Exps/c192b/v2/1234/No0053/ko.W.227.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, ko
VLBA_KP - VLBA_OV, fgroup W, pol RL



Fringe quality 0

SNR 6.2

Int time 418.588

Amp 0.124

Phase -68.6

PFD 1.3e-01

Delays (us)

SBD 0.407970

MBD 0.007750

Fringe rate (Hz)

0.503242

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 130000.00

Stop 130659.84

FRT 130330.00

Corr/FF/build

2020:078:162231

2020:086:083347

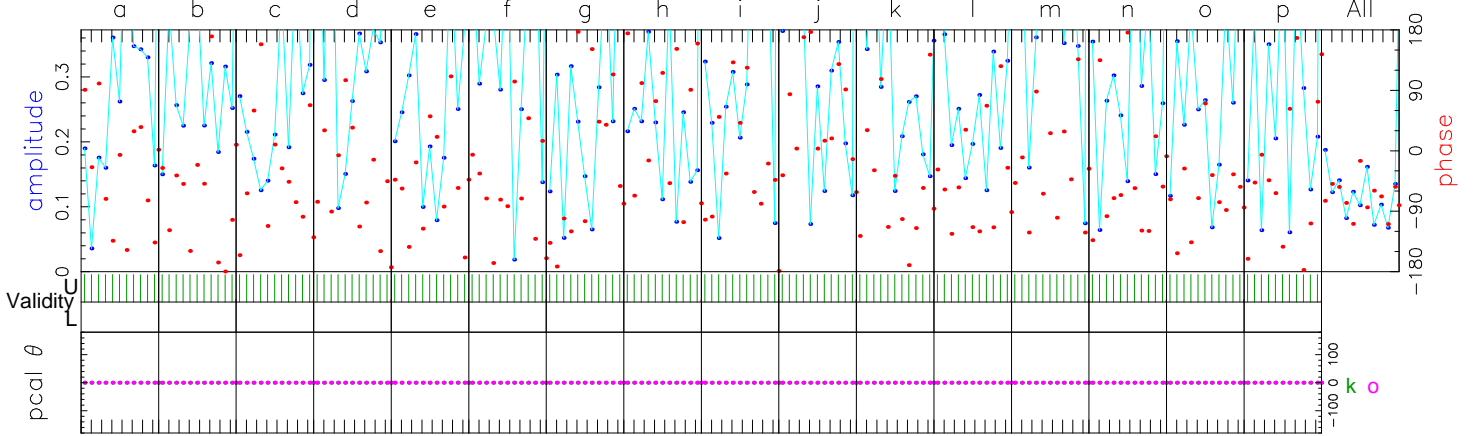
2020:014:135814

RA & Dec (J2000)

08h54m48.874928s

+20°06'30.640850"

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 |
|-------------------------|----------|--------------------|----------|----------|----------|--------------------------|----------|--------------------|----------|----------|----------|----------------------|----------|--------------|----------|----------|------------|---------|
| | -80.3 | -100.4 | -56.9 | -66.0 | -68.5 | -68.2 | -83.4 | -37.6 | -60.8 | 36.4 | -94.2 | -62.1 | -32.6 | -87.3 | -76.3 | -128.8 | Phase | -68.6 |
| | 0.1 | 0.2 | 0.1 | 0.3 | 0.1 | 0.2 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | Ampl. | 0.1 |
| | 61.0 | 182.8 | 255.6 | 206.7 | 170.8 | 16.1 | 129.0 | 26.8 | 10.9 | 100.6 | 205.3 | 242.1 | 182.0 | 242.2 | 8.1 | 116.1 | Sbd box | 181.2 |
| 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 | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| k: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 | |
| k | 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 | | |
| k | 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 | |
| | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | | 1.46248232946E+03 | | | | Apriori delay (usec) | | 1.46206832910E+03 | | | | Resid mbdelay (usec) | | 7.75036E-03 | | | +/- | 1.7E-04 |
| Sband delay (usec) | | 1.46247629910E+03 | | | | Apriori clock (usec) | | -1.7047726E+01 | | | | Resid sbdelay (usec) | | 4.07970E-01 | | | +/- | 2.8E-03 |
| Phase delay (usec) | | 1.46206832688E+03 | | | | Apriori clockrate (us/s) | | -1.9555999E-07 | | | | Resid phdelay (usec) | | -2.21222E-06 | | | +/- | 5.9E-07 |
| Delay rate (us/s) | | -5.77691226610E-02 | | | | Apriori rate (us/s) | | -5.77749648015E-02 | | | | Resid rate (us/s) | | 5.84214E-06 | | | +/- | 2.5E-09 |
| Total phase (deg) | | | | | 244.0 | Apriori accel (us/s/s) | | -1.07896273781E-05 | | | | Resid phase (deg) | | -68.6 | | | +/- | 18.4 |

ph/seg (deg) 25.8 31.9 Amplitude 0.124 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 41.7 55.7 Search (2048X64) 0.104 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

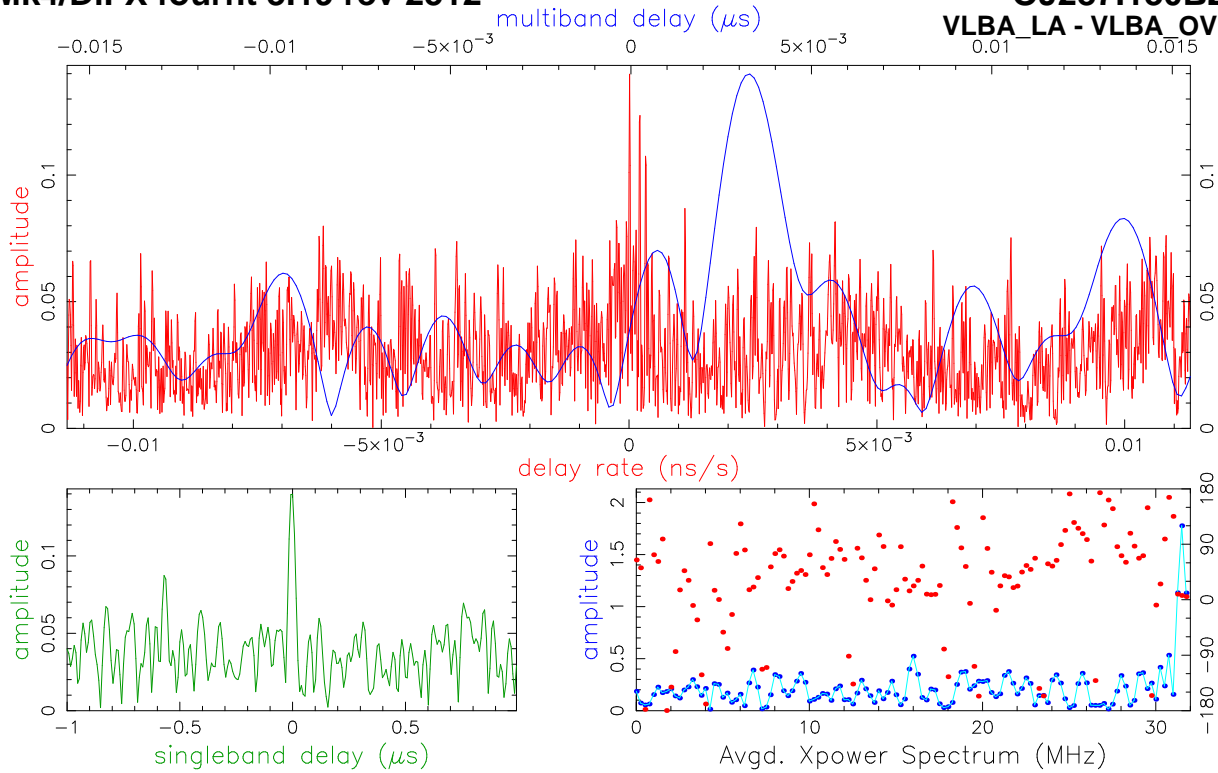
ph/frq (deg) 37.4 36.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 56.3 64.4 Inc. seg. avg. 0.117 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 56.3 64.4 Inc. frq. avg. 0.120 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 100.2 el 54.3 pa -62.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 339.692 -940.145 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/ko..130BZK Output file: /Exps/c192b/v2/1234/No0053/ko.W.243.130BZK

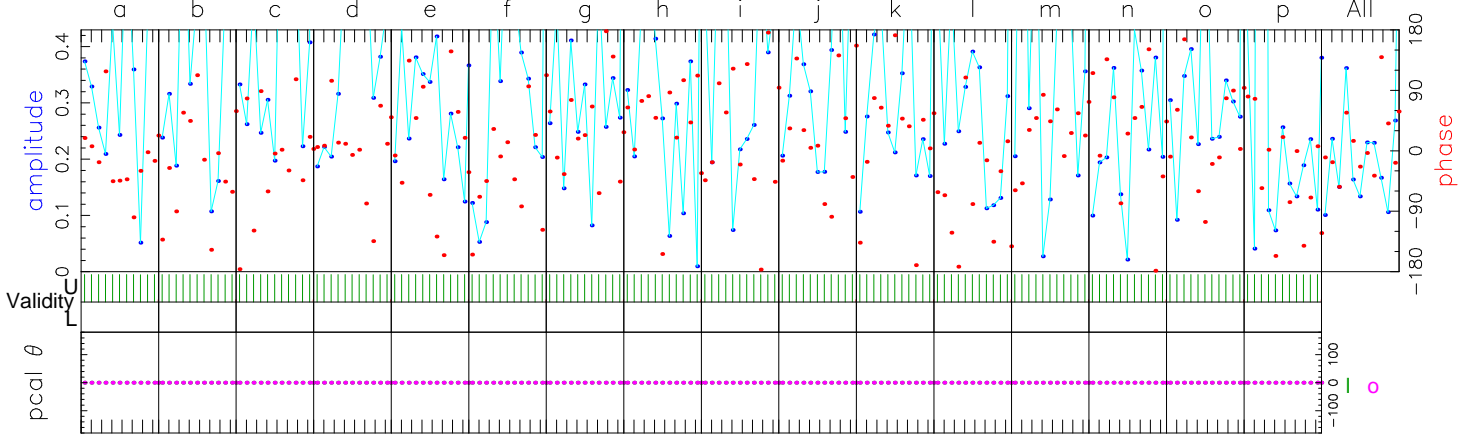


Fringe quality 9

SNR 8.0
Int time 418.607
Amp 0.143
Phase 2.8
PFD 3.7e-07
Delays (us)
SBD -0.003854
MBD 0.003313
Fringe rate (Hz) 0.000655
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

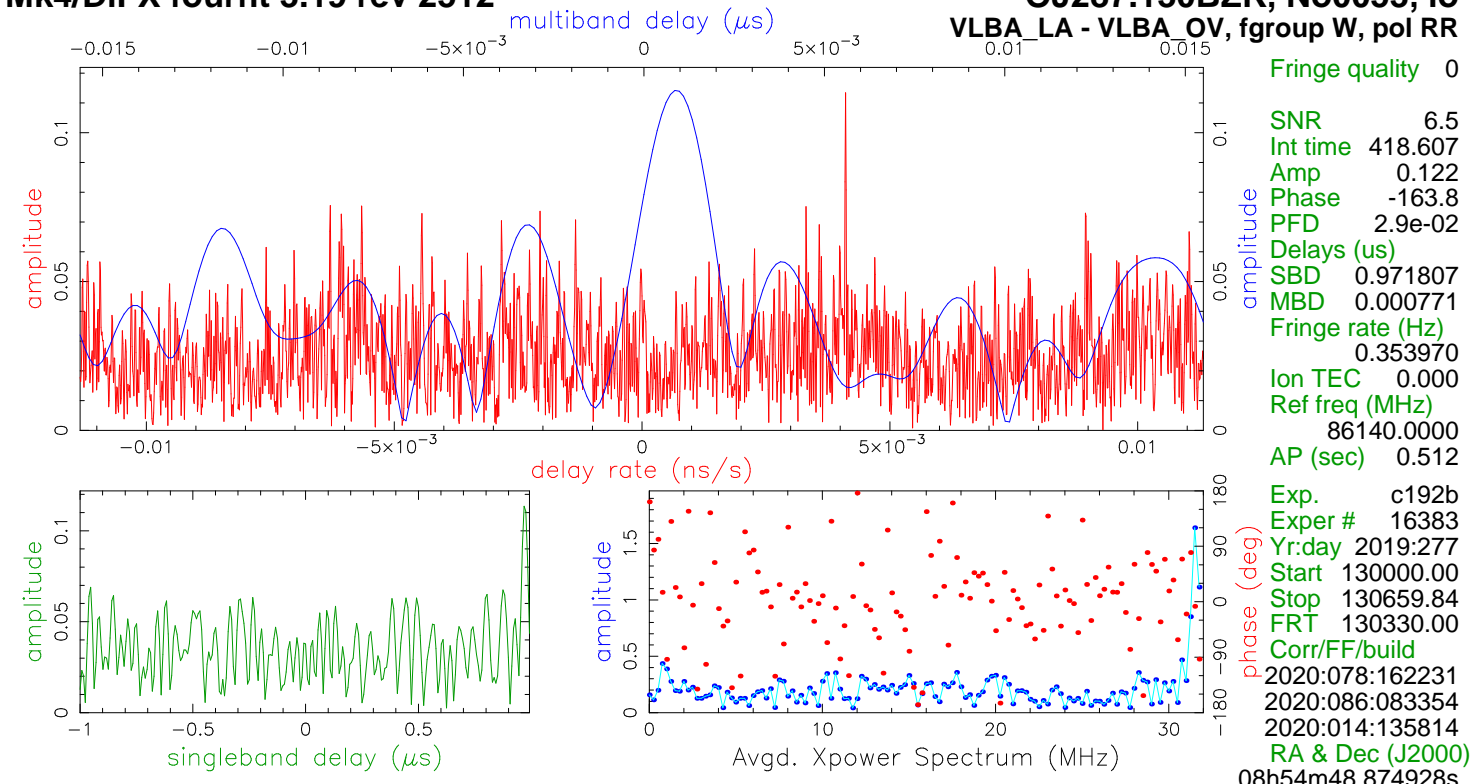
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build 2020:078:162231
2020:086:083347
2020:014:135814
RA & Dec (J2000) 08h54m48.874928s +20°06'30.640850"

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 | | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| lo | 0:0 | 0:0 | 0:0 | 0:0 | 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 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| l | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |
| Group delay (usec)(sbd) | 2.12390872902E+03 | | | Apriori delay (usec) | | | 2.12390541610E+03 | | | Resid mbdelay (usec) | | | 3.31292E-03 | | | +/- | 1.3E-04 | |
| Sband delay (usec) | 2.12390156160E+03 | | | Apriori clock (usec) | | | -1.7396507E+01 | | | Resid sbdelay (usec) | | | -3.85450E-03 | | | +/- | 2.1E-03 | |
| Phase delay (usec) | 2.12390541619E+03 | | | Apriori clockrate (us/s) | | | -3.5245298E-07 | | | Resid phdelay (usec) | | | 8.97885E-08 | | | +/- | 4.6E-07 | |
| Delay rate (us/s) | -1.81890845058E-01 | | | Apriori rate (us/s) | | | -1.81890852660E-01 | | | Resid rate (us/s) | | | 7.60211E-09 | | | +/- | 1.9E-09 | |
| Total phase (deg) | 198.3 | | | Apriori accel (us/s/s) | | | -1.21731567286E-05 | | | Resid phase (deg) | | | 2.8 | | | +/- | 14.3 | |

ph/seg (deg) 51.9 24.8 Search (2048X64) 0.136 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 71.7 43.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 41.5 28.6 Inc. seg. avg. 0.182 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 69.1 49.9 Inc. frq. avg. 0.155 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 l: az 110.4 el 57.6 pa -53.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1093.768 -522.299 simultaneous interpolator



Fringe quality 0

SNR 6.5

Int time 418.607

Amp 0.122

Phase -163.8

PFD 2.9e-02

Delays (us)

SBD 0.971807

MBD 0.000771

Fringe rate (Hz)

0.353970

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 130000.00

Stop 130659.84

FRT 130330.00

Corr/FF/build

2020:078:162231

2020:086:083354

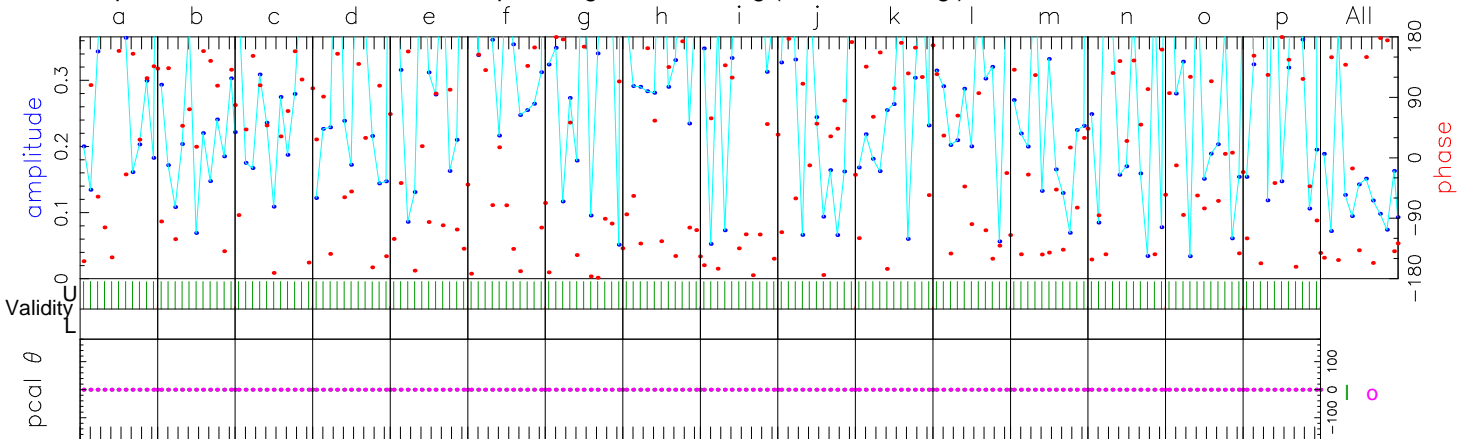
2020:014:135814

RA & Dec (J2000)

08h54m48.874928s

+20°06'30.640850"

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 |
| -154.3 | 127.0 | 119.0 | 141.2 | -103.5 | -164.2 | -155.6 | -135.1 | -152.5 | -169.9 | 151.9 | -73.9 | -165.9 | 177.2 | -21.2 | -159.1 | Phase | -163.8 |
| 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.1 | 0.5 | Ampl. | 0.1 |
| 153.1 | 77.1 | 63.1 | 184.2 | 194.1 | 223.6 | 121.8 | 125.7 | 2.6 | 29.3 | 150.7 | 150.9 | 136.9 | 173.5 | 131.8 | 225.8 | Sbd box | 253.4 |
| 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 | |
| l 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| lo 0:0 | 0:0 | 0:0 | 0:0 | 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 | |
| l 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Mani PC | |
| o 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| l 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 | |

Group delay (usec)(sbd) 2.12487493711E+03 Apriori delay (usec) 2.12390541610E+03 Resid mbdelay (usec) 7.71007E-04 +/- 1.7E-04

Sband delay (usec) 2.12487722260E+03 Apriori clock (usec) -1.7396507E+01 Resid sbdelay (usec) 9.71807E-01 +/- 2.7E-03

Phase delay (usec) 2.12390541082E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) -5.28281E-06 +/- 5.7E-07

Delay rate (us/s) -1.81886743416E-01 Apriori rate (us/s) -1.81890852660E-01 Resid rate (us/s) 4.10924E-06 +/- 2.4E-09

Total phase (deg) 31.7 Apriori accel (us/s/s) -1.21731567286E-05 Resid phase (deg) -163.8 +/- 17.7

RMS Theor. Amplitude 0.122 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 53.9 30.7 Search (2048X64) 0.112 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

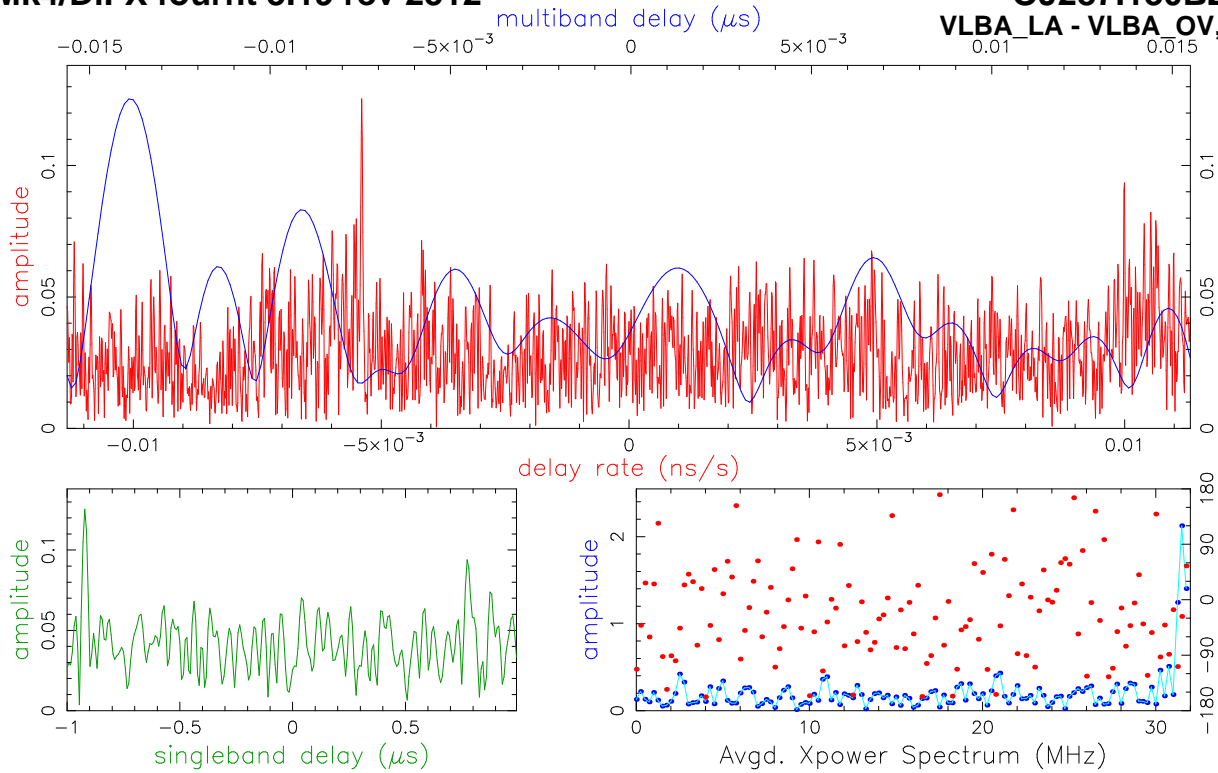
amp/seg (%) 75.2 53.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 59.3 35.5 Inc. seg. avg. 0.135 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 97.3 61.9 Inc. frq. avg. 0.130 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 110.4 el 57.6 pa -53.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1093.768 -522.299 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/lo..130BZK Output file: /Exps/c192b/v2/1234/No0053/lo.W.266.130BZK

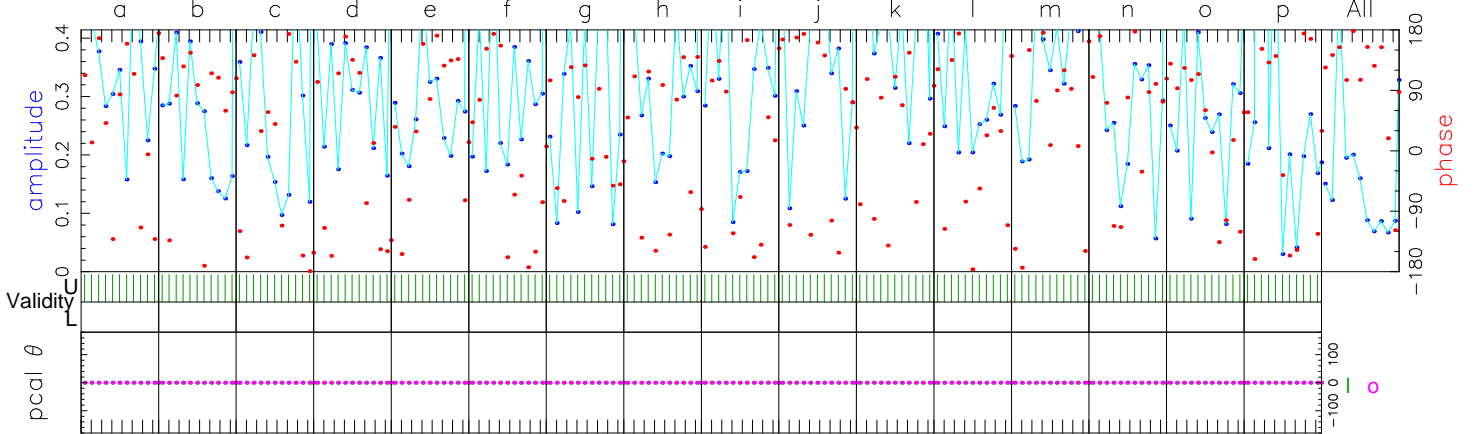


Fringe quality 0

SNR 7.0
Int time 418.607
Amp 0.138
Phase 141.6
PFD 6.4e-04
Delays (us)
SBD -0.921102
MBD -0.013896
Fringe rate (Hz)
-0.465058
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Yr:day 16383
2020:078:162231
2020:086:083359
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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

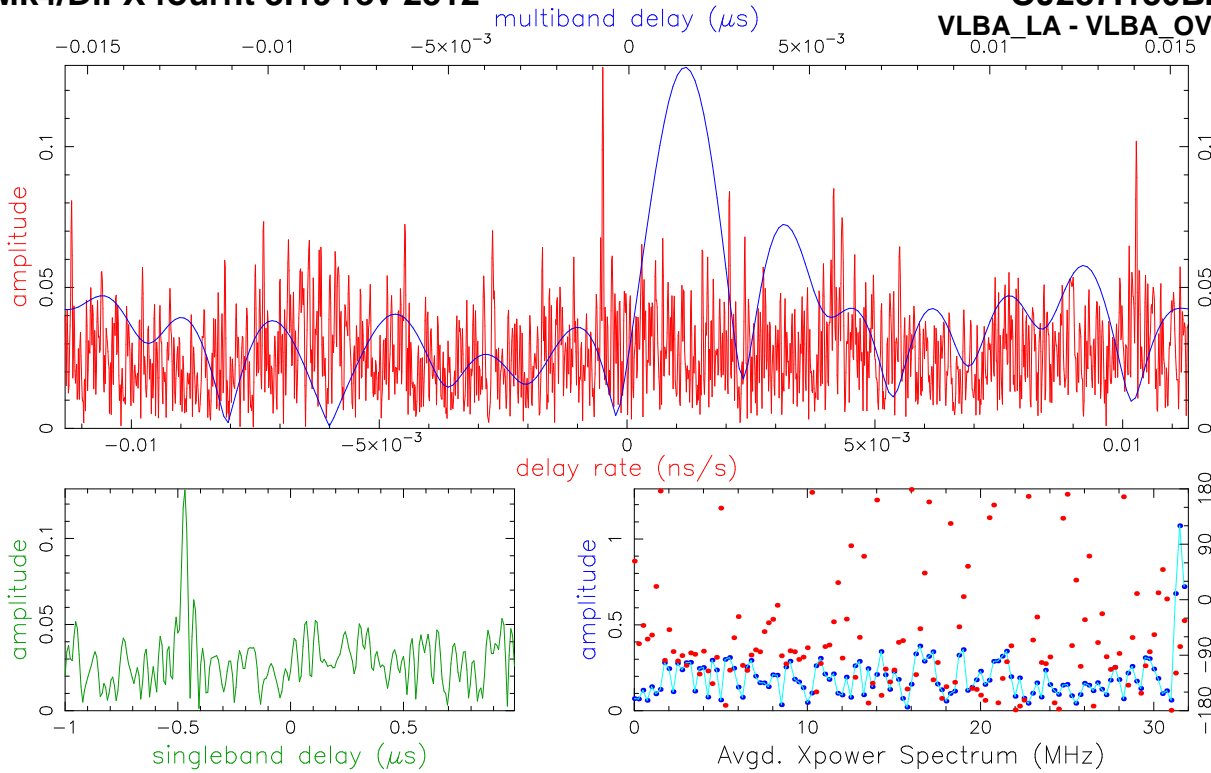


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| 129.3 | 125.1 | 157.1 | 175.5 | 126.0 | -165.7 | 53.6 | 118.9 | 133.5 | 174.6 | 53.8 | -169.1 | 124.5 | 117.0 | 104.7 | 154.4 | 154.4 | Phase | 141.6 |
| 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.7 | Ampl. | 0.1 |
| 178.8 | 164.0 | 80.5 | 52.3 | 133.0 | 185.0 | 98.3 | 106.1 | 46.9 | 175.0 | 25.4 | 140.1 | 168.6 | 152.3 | 158.1 | 18.4 | 18.4 | Sbd box | 11.1 |
| 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 | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| l: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 | |
| l: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 | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| l | 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) 2.12298527013E+03 Apriori delay (usec) 2.12390541610E+03 Resid mbdelay (usec) -1.38960E-02 +/- 1.5E-04
 Sband delay (usec) 2.12298431410E+03 Apriori clock (usec) -1.7396507E+01 Resid sbdelay (usec) -9.21102E-01 +/- 2.5E-03
 Phase delay (usec) 2.12390542067E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) 4.56496E-06 +/- 5.3E-07
 Delay rate (us/s) -1.81896251527E-01 Apriori rate (us/s) -1.81890852660E-01 Resid rate (us/s) -5.39887E-06 +/- 2.2E-09
 Total phase (deg) 337.0 Apriori accel (us/s/s) -1.21731567286E-05 Resid phase (deg) 141.6 +/- 16.3

RMS Theor. Amplitude 0.138 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 52.3 28.2 Search (2048X64) 0.123 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 94.4 49.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 43.7 32.6 Inc. seg. avg. 0.154 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 100.3 56.9 Inc. frq. avg. 0.138 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 110.4 el 57.6 pa -53.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1093.768 -522.299 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/lo..130BZK Output file: /Exps/c192b/v2/1234/No0053/lo.W.285.130BZK

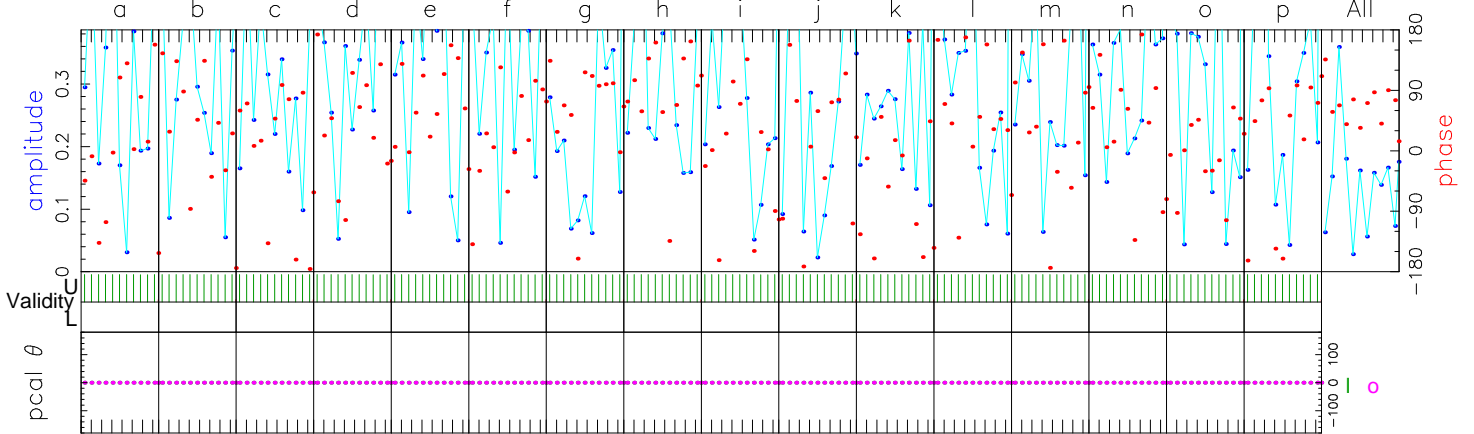


Fringe quality 0

SNR 7.2
Int time 418.607
Amp 0.129
Phase 64.3
PFD 1.8e-04
Delays (us)
SBD -0.470196
MBD 0.001565
Fringe rate (Hz)
-0.041670
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083405
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------|
| | -8.5 | 71.9 | 78.7 | 76.2 | 68.1 | 25.1 | 92.1 | 99.7 | 52.2 | 98.5 | -94.7 | 64.2 | 45.6 | 69.5 | -0.2 | 77.6 | | Phase 64.3 |
| | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.5 | | Ampl. 0.1 |
| | 54.2 | 113.5 | 219.3 | 98.4 | 67.8 | 45.0 | 172.5 | 151.3 | 191.0 | 88.1 | 141.5 | 202.3 | 255.5 | 225.7 | 91.7 | 190.1 | | Sbd box 68.8 |
| 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 |
| l | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs |
| lo | 0:0 | 0:0 | 0:0 | 0:0 | 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 |
| lo | 0:0 | 0:0 | 0:0 | 0:0 | 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 |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp |
| l | 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 |

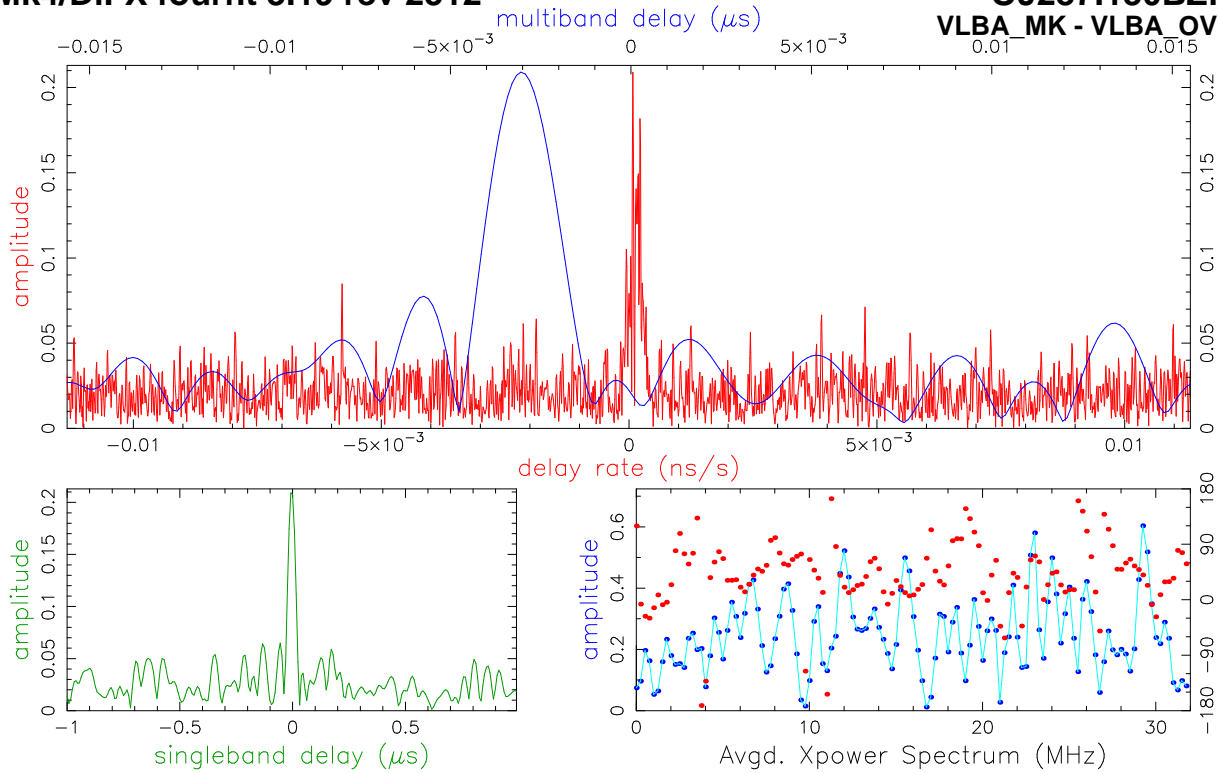
Group delay (usec)(sbd) 2.12343823071E+03 Apriori delay (usec) 2.12390541610E+03 Resid mbdelay (usec) 1.56461E-03 +/- 1.5E-04
 Sband delay (usec) 2.12343521960E+03 Apriori clock (usec) -1.7396507E+01 Resid sbdelay (usec) -4.70196E-01 +/- 2.4E-03
 Phase delay (usec) 2.12390541817E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) 2.07195E-06 +/- 5.1E-07
 Delay rate (us/s) -1.81891336404E-01 Apriori rate (us/s) -1.81890852660E-01 Resid rate (us/s) -4.83744E-07 +/- 2.1E-09
 Total phase (deg) 259.7 Apriori accel (us/s/s) -1.21731567286E-05 Resid phase (deg) 64.3 +/- 15.9

RMS Theor. Amplitude 0.129 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 28.4 27.6 Search (2048X64) 0.123 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 67.2 48.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 53.8 31.8 Inc. seg. avg. 0.126 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 74.5 55.5 Inc. frq. avg. 0.133 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 110.4 el 57.6 pa -53.7 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 1093.768 -522.299 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/lo..130BZK Output file: /Exps/c192b/v2/1234/No0053/lo.W.306.130BZK

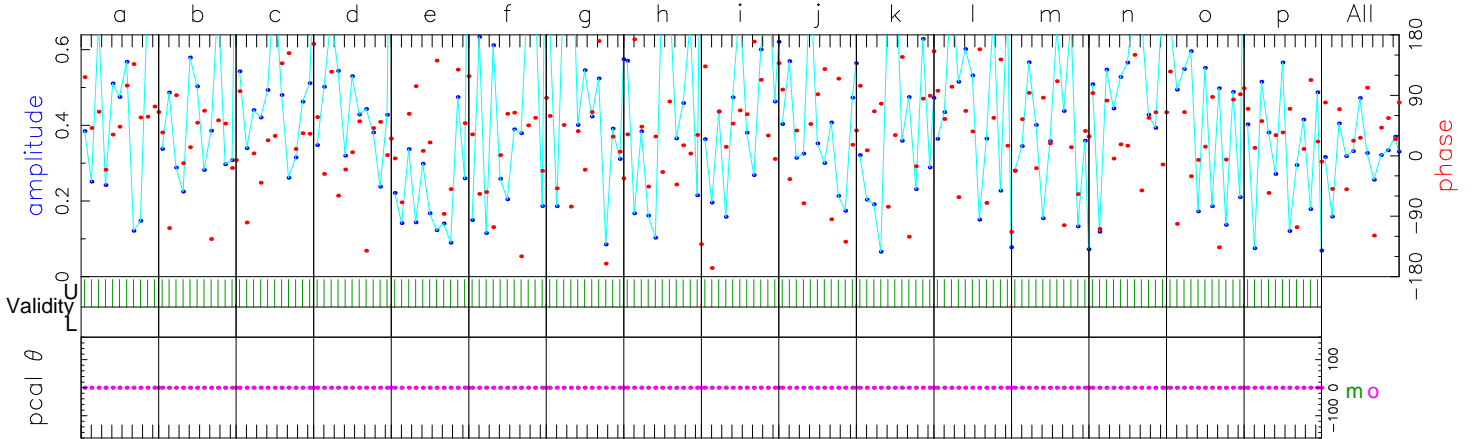
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, mo
VLBA_MK - VLBA_OV, fgroup W, pol LL



Fringe quality 9
SNR 11.9
Int time 418.493
Amp 0.213
Phase 38.2
PFD 4.9e-24
Delays (us)
SBD -0.004188
MBD -0.003013
Fringe rate (Hz) 0.006515
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083351
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 | | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| m: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 | | |
| m: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 | | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | |

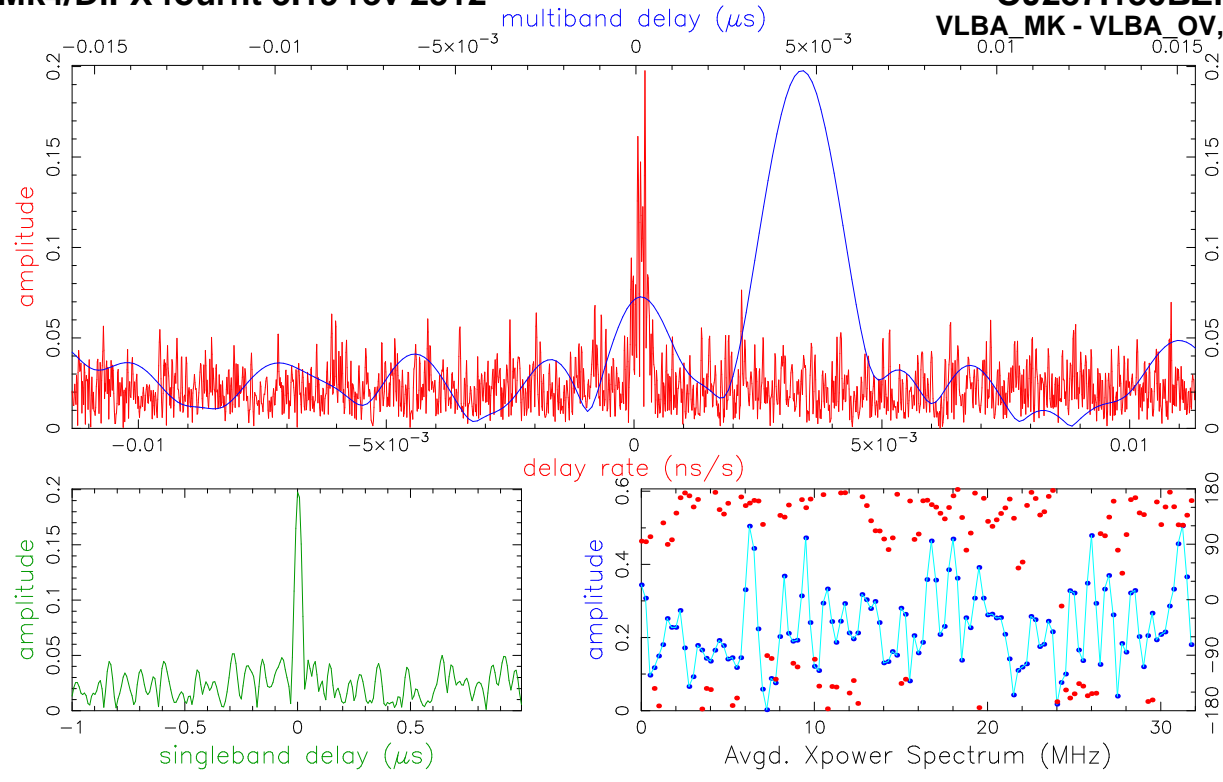
Group delay (usec)(sbd) -1.04499457370E+04 Apriori delay (usec) -1.04499427244E+04 Resid mbdelay (usec) -3.01256E-03 +/- 9.1E-05
Sband delay (usec) -1.04499469119E+04 Apriori clock (usec) -1.4069386E+01 Resid sbdelay (usec) -4.18750E-03 +/- 1.4E-03
Phase delay (usec) -1.04499427232E+04 Apriori clockrate (us/s) -9.6732924E-09 Resid phdelay (usec) 1.23279E-06 +/- 3.1E-07
Delay rate (us/s) 5.55158480639E-01 Apriori rate (us/s) 5.55158405002E-01 Resid rate (us/s) 7.56371E-08 +/- 1.3E-09
Total phase (deg) -64.0 Apriori accel (us/s/s) 4.52194720540E-05 Resid phase (deg) 38.2 +/- 9.6

RMS Theor. Amplitude 0.213 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 65.6 16.7 Search (2048X64) 0.206 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 64.6 29.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 18.3 19.2 Inc. seg. avg. 0.315 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 36.8 33.6 Inc. frq. avg. 0.208 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 73.5 el 14.3 pa -73.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) -3324.482 -903.983 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/mo..130BZK Output file: /Exps/c192b/v2/1234/No0053/mo.W.258.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, mo
VLBA_MK - VLBA_OV, fgroup W, pol RR

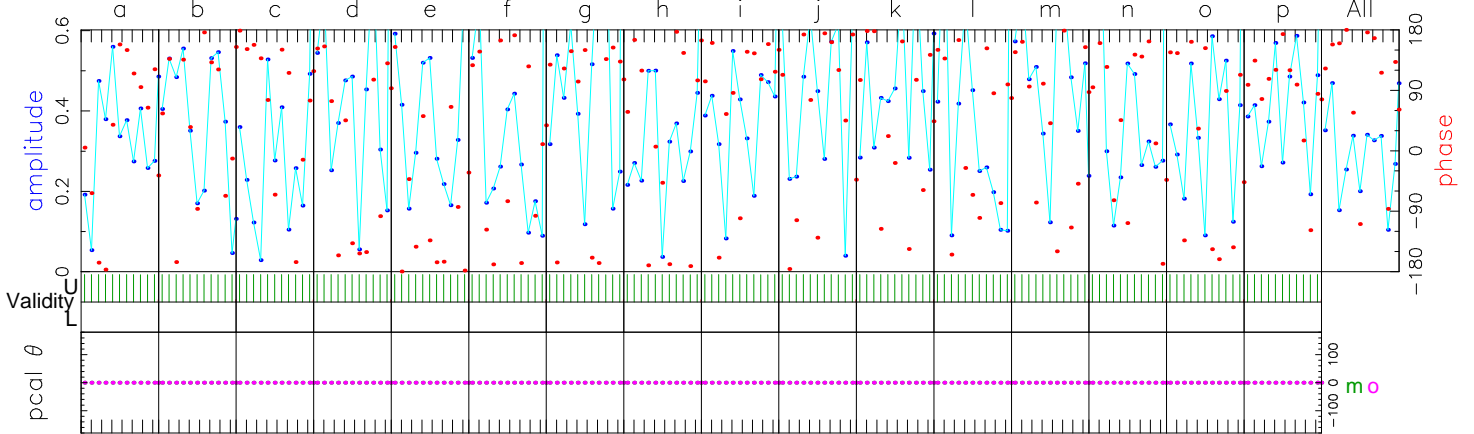


Fringe quality 9

SNR 11.2
Int time 418.495
Amp 0.201
Phase 148.6
PFD 1.5e-20
Delays (us)
SBD 0.002984
MBD 0.004626
Fringe rate (Hz) 0.018968
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083357
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



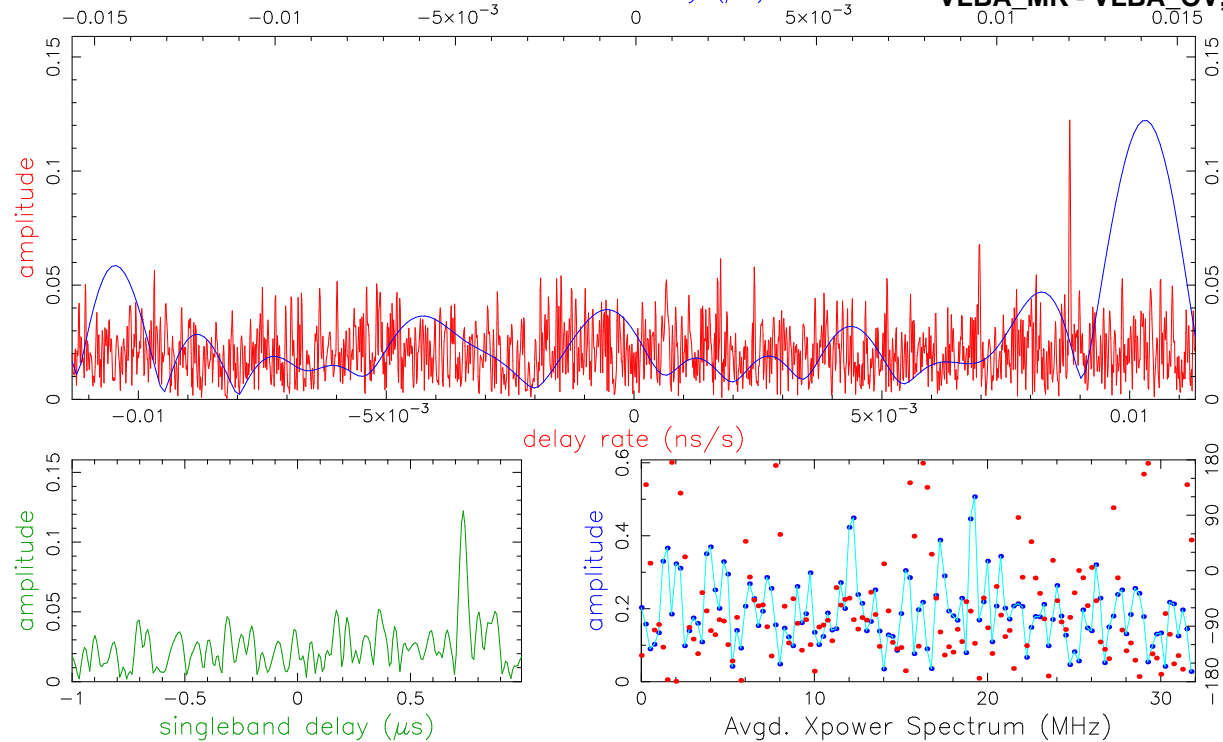
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-------------------------|--------------------|----------|----------|----------|--------------------------|----------|----------|----------|--------------------|----------|----------|----------|----------------------|----------|----------|----------|-------------|-------|---------|
| U/L | 121.6 | 132.0 | 125.5 | 153.3 | -169.9 | 170.7 | 153.7 | 150.7 | 136.6 | 152.8 | 158.1 | 158.2 | 176.9 | 146.0 | 156.3 | 105.2 | Phase | 148.6 | |
| m | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | Ampl. | 0.2 | |
| o | 118.7 | 106.4 | 57.9 | 129.7 | 130.2 | 143.0 | 128.7 | 21.9 | 128.7 | 129.3 | 42.9 | 218.1 | 129.7 | 180.6 | 236.3 | 129.3 | Sbd box | 129.4 | |
| m | 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 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| 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 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | ManI PC | | |
| m | 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 | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | Tracks | | |
| o | 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 | | |
| Group delay (usec)(sbd) | -1.04499380982E+04 | | | | Apriori delay (usec) | | | | -1.04499427244E+04 | | | | Resid mbdelay (usec) | | | | 4.62629E-03 | +/- | 9.6E-05 |
| Sband delay (usec) | -1.04499397404E+04 | | | | Apriori clock (usec) | | | | -1.4069386E+01 | | | | Resid sbdelay (usec) | | | | 2.98400E-03 | +/- | 1.5E-03 |
| Phase delay (usec) | -1.04499427197E+04 | | | | Apriori clockrate (us/s) | | | | -9.6732924E-09 | | | | Resid phdelay (usec) | | | | 4.79225E-06 | +/- | 3.3E-07 |
| Delay rate (us/s) | 5.55158625205E-01 | | | | Apriori rate (us/s) | | | | 5.55158405002E-01 | | | | Resid rate (us/s) | | | | 2.20203E-07 | +/- | 1.4E-09 |
| Total phase (deg) | 46.4 | | | | Apriori accel (us/s/s) | | | | 4.52194720540E-05 | | | | Resid phase (deg) | | | | 148.6 | +/- | 10.2 |

ph/seg (deg) 59.6 17.7 Search (2048X64) 0.194 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 65.9 30.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 22.2 20.4 Inc. seg. avg. 0.274 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 37.6 35.6 Inc. frq. avg. 0.199 Data rate (Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 73.5 el 14.3 pa -73.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) -3324.482 -903.983 ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/mo..130BZK Output file: /Exps/c192b/v2/1234/No0053/mo.W.280.130BZK simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

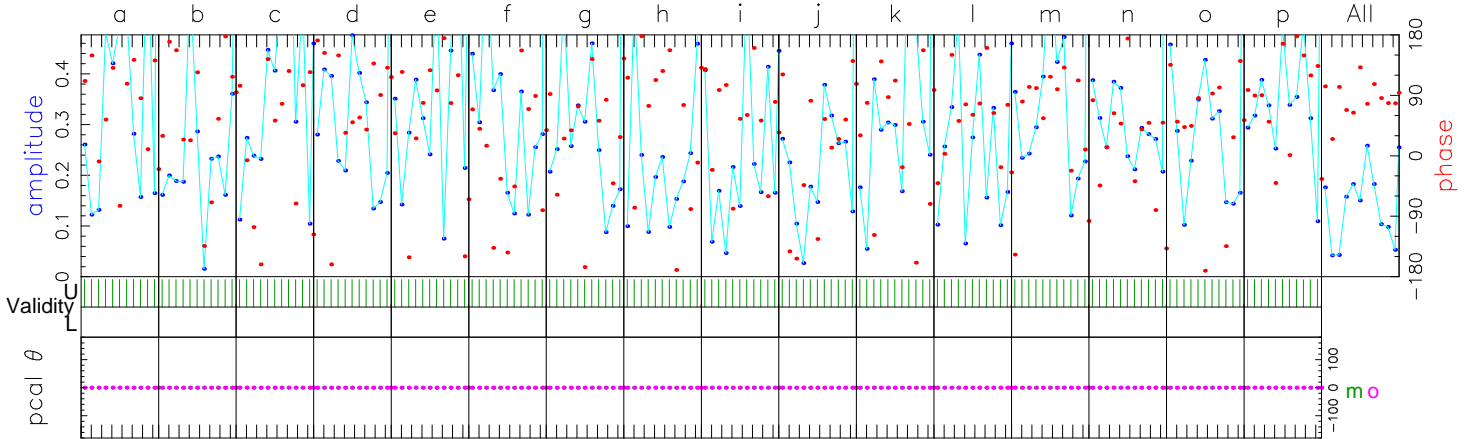
OJ287.130BZK, No0053, mo
VLBA_MK - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)



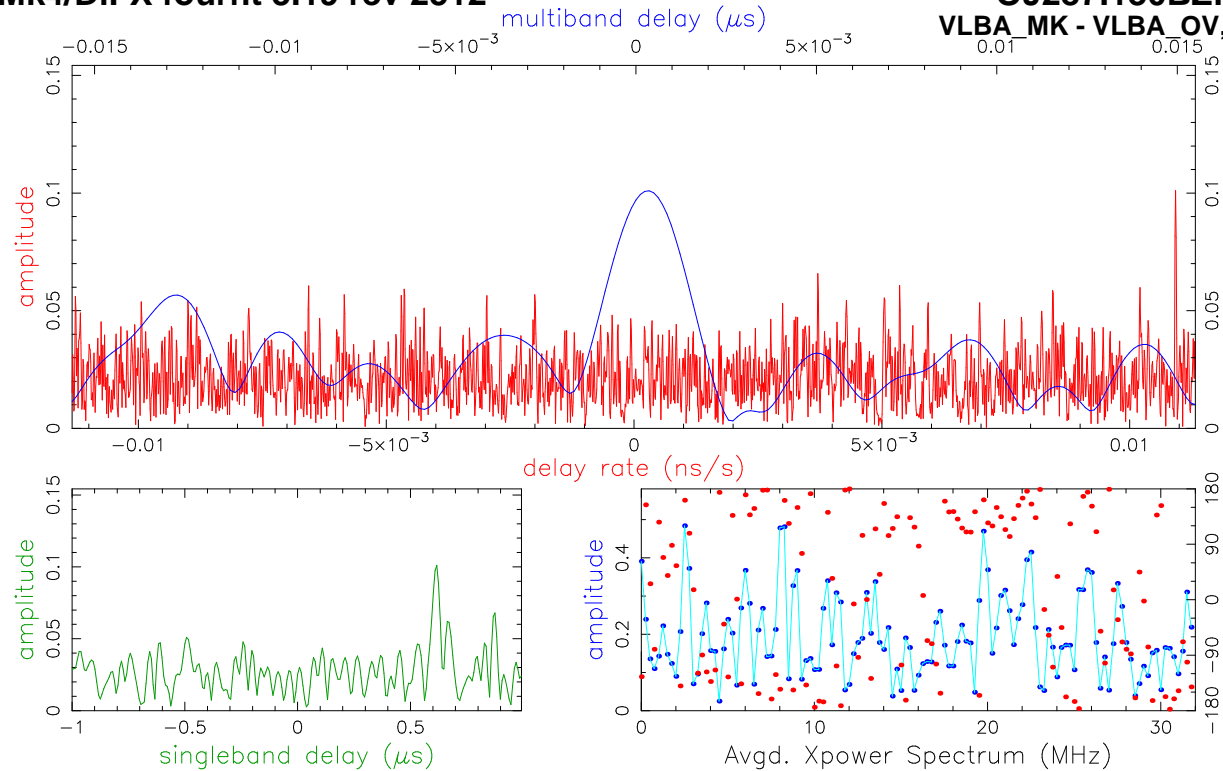
Fringe quality 0
SNR 6.8
Int time 418.494
Amp 0.159
Phase 87.1
PFD 2.2e-03
Delays (us)
SBD 0.733674
MBD 0.014102
Fringe rate (Hz) 0.758477
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build 2020:078:162231
2020:086:083403
2020:014:135814
RA & Dec (J2000) 08h54m48.874928s +20°06'30.640850"

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 |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|-------------|------------|-------|
| 77.2 | 80.2 | 108.9 | 106.9 | 98.5 | 25.1 | 66.3 | -167.2 | 70.5 | 70.9 | 112.2 | 65.7 | 104.1 | 34.3 | 103.5 | 112.1 | 112.1 | Phase | 87.1 |
| 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.1 | 0.2 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | Ampl. | 0.2 |
| 105.3 | 121.0 | 2.5 | 169.0 | 43.4 | 149.1 | 96.6 | 80.9 | 8.2 | 168.3 | 241.0 | 100.8 | 13.5 | 9.4 | 64.7 | 179.0 | 179.0 | Sbd box | 222.9 |
| 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 | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| m: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 | |
| m | 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 | | |
| m | 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 | |
| Group delay (usec)(sbd) | -1.04492098721E+04 | | | Apriori delay (usec) | | | -1.04499427244E+04 | | | Resid mbdelay (usec) | | | 1.41024E-02 | | | +/- 1.6E-04 | | |
| Sband delay (usec) | -1.04492090504E+04 | | | Apriori clock (usec) | | | -1.4069386E+01 | | | Resid sbdelay (usec) | | | 7.33674E-01 | | | +/- 2.5E-03 | | |
| Phase delay (usec) | -1.04499427216E+04 | | | Apriori clockrate (us/s) | | | -9.6732924E-09 | | | Resid phdelay (usec) | | | 2.80998E-06 | | | +/- 5.4E-07 | | |
| Delay rate (us/s) | 5.55167210172E-01 | | | Apriori rate (us/s) | | | 5.55158405002E-01 | | | Resid rate (us/s) | | | 8.80517E-06 | | | +/- 2.2E-09 | | |
| Total phase (deg) | -15.1 | | | Apriori accel (us/s/s) | | | 4.52194720540E-05 | | | Resid phase (deg) | | | 87.1 | | | +/- 16.7 | | |

ph/seg (deg) 26.7 29.0 Search (2048X64) 0.118 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 55.2 50.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 39.8 33.5 Inc. seg. avg. 0.153 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 44.4 58.4 Inc. frq. avg. 0.151 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 73.5 el 14.3 pa -73.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) -3324.482 -903.983 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/mo..130BZK Output file: /Exps/c192b/v2/1234/No0053/mo.W.300.130BZK

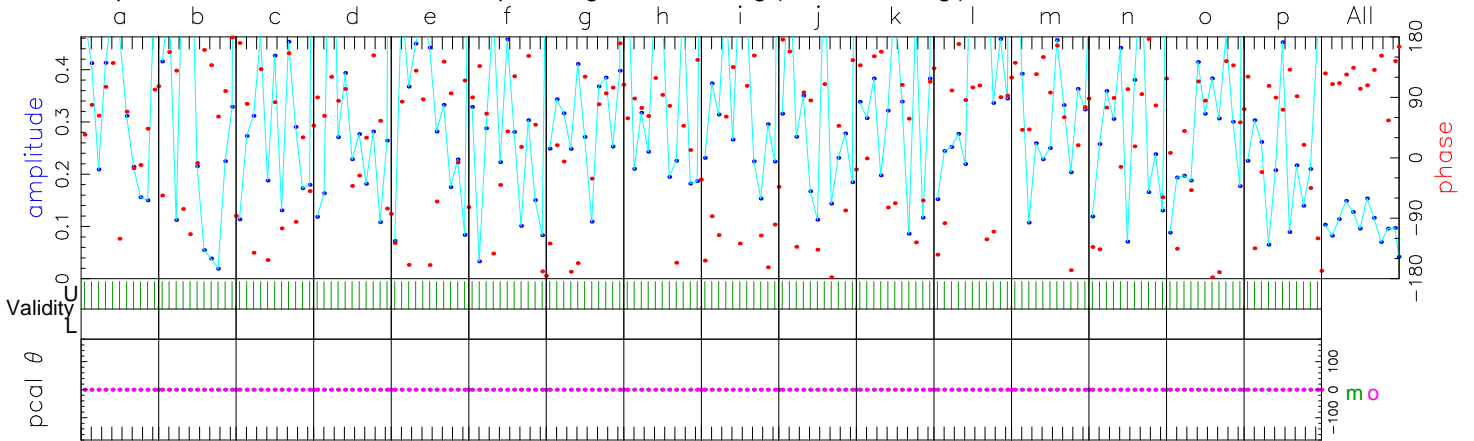


Fringe quality 0

SNR 5.7
Int time 418.495
Amp 0.154
Phase 118.5
PFD 9.6e-01
Delays (us)
SBD 0.615127
MBD 0.000306
Fringe rate (Hz)
0.942689
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083408
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



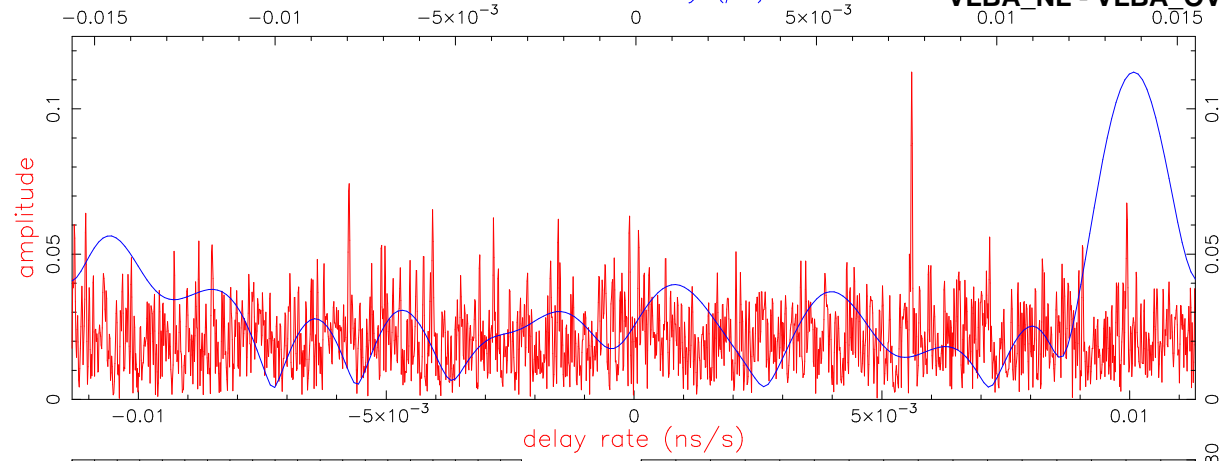
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-------------------------|--------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|-------------|------------|-------|----------|
| 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 | 118.5 | Phase |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 118.5 | Ampl. |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 207.7 | Sbd box |
| m: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 | 0:0 | 0.0 | APs used |
| m: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 | 0:0 | 0.0 | PC freqs |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 0.0 | PC phase |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 0.0 | ManI PC |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | 0.0 | PC amp |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | | Chan ids |
| | | | | | | | | | | | | | | | | | | | Tracks |
| | | | | | | | | | | | | | | | | | | | Tracks |
| Group delay (usec)(sbd) | -1.04493174182E+04 | | | Apriori delay (usec) | | | -1.04499427244E+04 | | | Resid mbdelay (usec) | | | 3.06224E-04 | | | +/- 1.9E-04 | | | |
| Sband delay (usec) | -1.04493275974E+04 | | | Apriori clock (usec) | | | -1.4069386E+01 | | | Resid sbdelay (usec) | | | 6.15127E-01 | | | +/- 3.0E-03 | | | |
| Phase delay (usec) | -1.04499427206E+04 | | | Apriori clockrate (us/s) | | | -9.6732924E-09 | | | Resid phdelay (usec) | | | 3.82241E-06 | | | +/- 6.5E-07 | | | |
| Delay rate (us/s) | 5.55169348681E-01 | | | Apriori rate (us/s) | | | 5.55158405002E-01 | | | Resid rate (us/s) | | | 1.09437E-05 | | | +/- 2.7E-09 | | | |
| Total phase (deg) | 16.3 | | | Apriori accel (us/s/s) | | | 4.52194720540E-05 | | | Resid phase (deg) | | | 118.5 | | | +/- 20.2 | | | |

ph/seg (deg) 24.8 34.9 Search (2048X64) 0.096 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 26.0 60.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 49.4 40.3 Inc. seg. avg. 0.140 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 63.5 70.4 Inc. frq. avg. 0.164 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 m: az 73.5 el 14.3 pa -73.8 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) -3324.482 -903.983 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/mo..130BZK Output file: /Exps/c192b/v2/1234/No0053/mo.W.317.130BZK

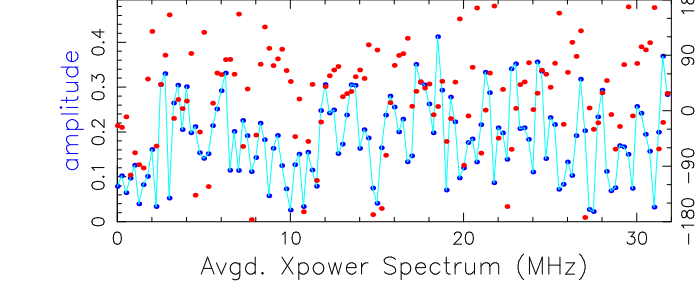
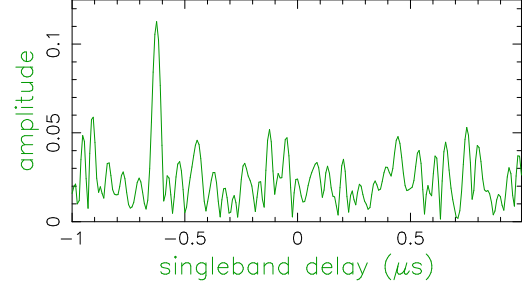
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, no
VLBA_NL - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

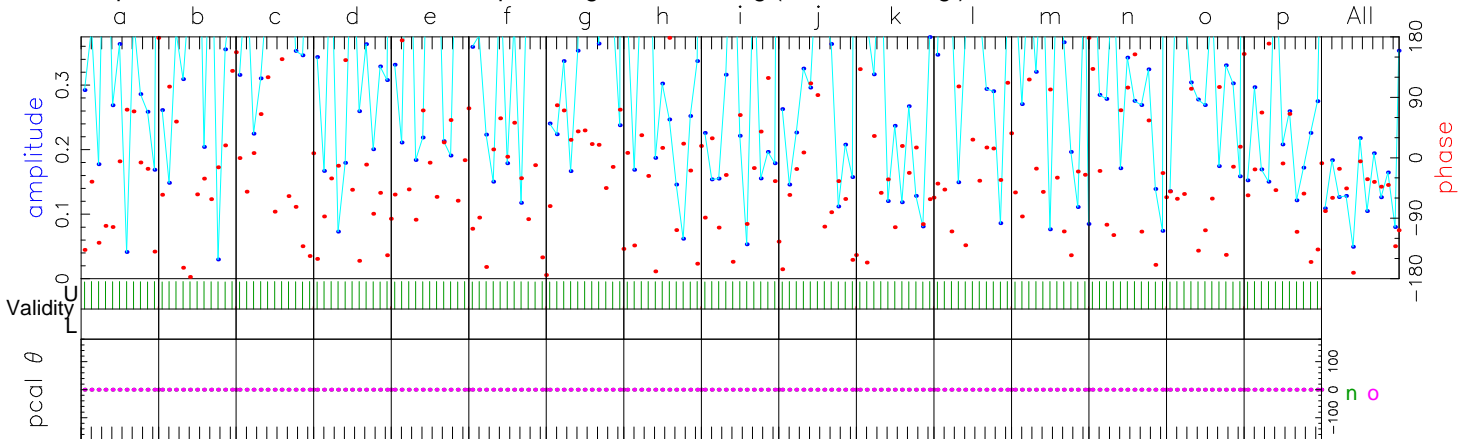


Fringe quality 0
SNR 6.3
Int time 417.278
Amp 0.125
Phase -44.2
PFD 7.9e-02
Delays (us)
SBD -0.625690
MBD 0.013783
Fringe rate (Hz) 0.483399
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build 2020:078:162231
2020:086:083406
2020:014:135814
RA & Dec (J2000) 08h54m48.874928s
+20°06'30.640850"



Avgd. Xpower Spectrum (MHz)

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

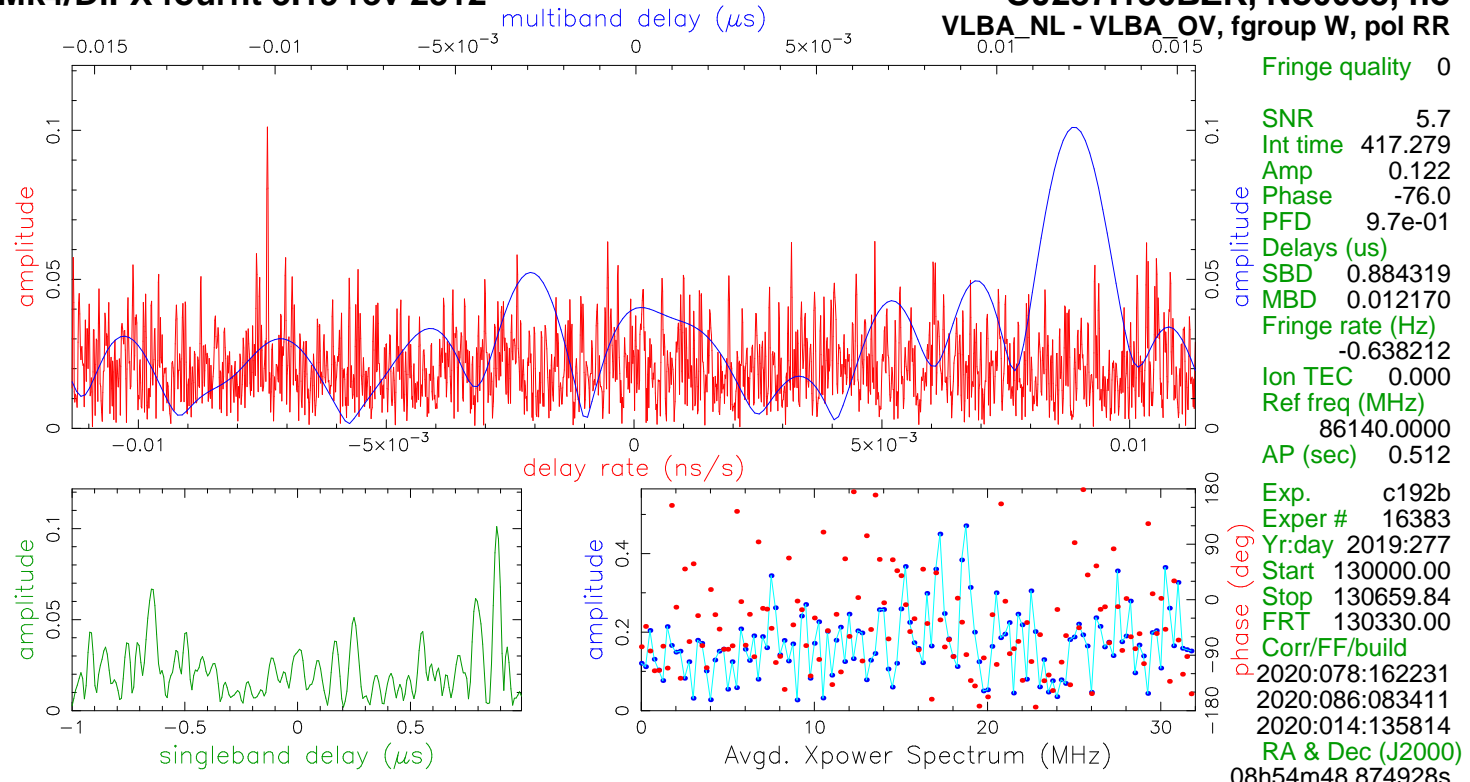


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------------------|--------------|-------------|
| | -64.7 | -52.9 | -81.8 | -73.0 | -33.1 | -57.2 | 19.9 | -15.9 | -48.5 | -75.4 | -53.0 | -28.0 | -48.2 | 178.0 | -71.7 | -49.2 | Phase | -44.2 | |
| | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | Ampl. | 0.1 | |
| | 46.7 | 248.9 | 218.9 | 118.4 | 48.1 | 8.2 | 49.4 | 197.0 | 2.3 | 116.5 | 70.5 | 1.5 | 230.3 | 82.4 | 103.7 | 77.4 | Sbd box | 48.9 | |
| 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 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | |
| n: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 | | |
| n | 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 | | | |
| n | 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 | | |
| | | | | | | | | | | | | | | | | | Tracks | | |
| Group delay (usec)(sbd) | | | 3.17971667739E+03 | | | | | | | 3.18032789470E+03 | | | | | | | Resid mbdelay (usec) | 1.37827E-02 | +/- 1.7E-04 |
| Sband delay (usec) | | | 3.17970220470E+03 | | | | | | | 9.8514309E+00 | | | | | | | Resid sbdelay (usec) | -6.25690E-01 | +/- 2.7E-03 |
| Phase delay (usec) | | | 3.18032789327E+03 | | | | | | | 1.3324251E-07 | | | | | | | Resid phdelay (usec) | -1.42608E-06 | +/- 5.9E-07 |
| Delay rate (us/s) | | | -4.85507831917E-01 | | | | | | | -4.85513443696E-01 | | | | | | | Resid rate (us/s) | 5.61178E-06 | +/- 2.4E-09 |
| Total phase (deg) | | | | 261.6 | | | | | | -1.44999169211E-05 | | | | | | | Resid phase (deg) | -44.2 | +/- 18.2 |

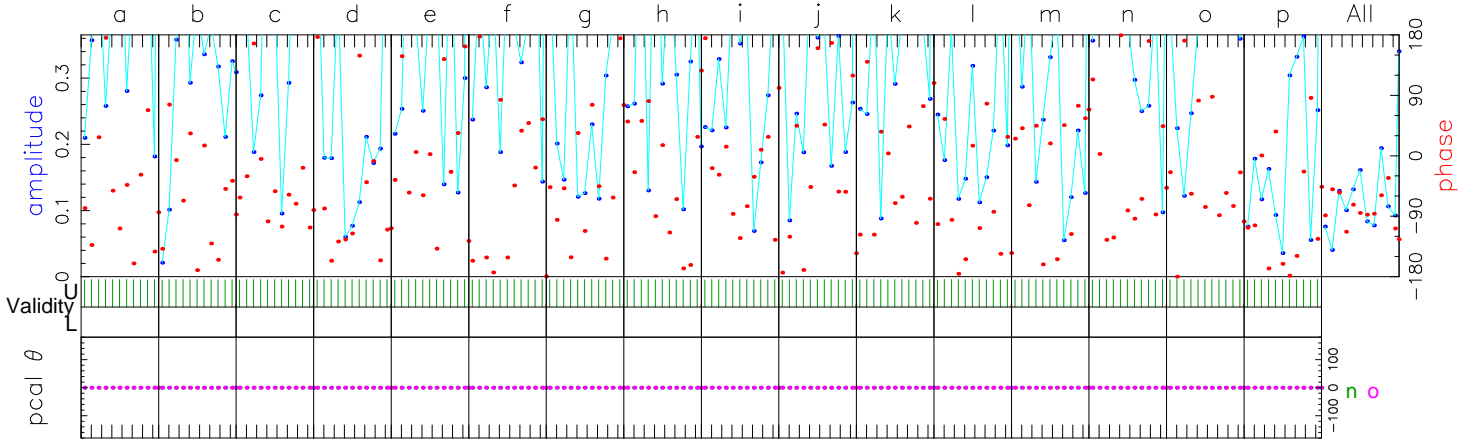
ph/seg (deg) 50.3 31.5 Amplitude 0.125 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.6 55.0 Search (2048X64) 0.111 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.6 36.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 64.3 63.5 Inc. seg. avg. 0.132 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 n: az 140.2 el 63.6 pa -29.9 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 2940.405 81.493 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/no..130BZK Output file: /Exps/c192b/v2/1234/No0053/no.W.310.130BZK simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, no VLBA_NL - VLBA_OV, fgroup W, pol RR



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 | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------------------|--------------|-------------|
| | -74.4 | -60.9 | -65.9 | -127.0 | -44.6 | -158.3 | -116.5 | -24.3 | -67.4 | -151.9 | -56.1 | -100.3 | 15.5 | -106.7 | -52.7 | -116.8 | Phase | -76.0 | |
| | 0.2 | 0.1 | 0.4 | 0.2 | 0.2 | 0.0 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | Ampl. | 0.1 | |
| | 202.6 | 217.8 | 11.9 | 36.9 | 226.4 | 231.8 | 2.9 | 160.3 | 121.9 | 45.8 | 80.4 | 52.0 | 12.3 | 218.1 | 66.0 | 61.0 | Sbd box | 242.2 | |
| 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 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| n: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 | | |
| n: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 | | |
| n | 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 | PC amp | | |
| n | 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) | | | 3.18121506511E+03 | | | | | | | | 3.18032789470E+03 | | | | | | Resid mbdelay (usec) | 1.21704E-02 | +/- 1.9E-04 |
| Sband delay (usec) | | | 3.18121221370E+03 | | | | | | | | 9.8514309E+00 | | | | | | Resid sbdelay (usec) | 8.84319E-01 | +/- 3.0E-03 |
| Phase delay (usec) | | | 3.18032789225E+03 | | | | | | | | 1.3324251E-07 | | | | | | Resid phdelay (usec) | -2.45239E-06 | +/- 6.5E-07 |
| Delay rate (us/s) | | | -4.85520852709E-01 | | | | | | | | -4.85513443696E-01 | | | | | | Resid rate (us/s) | -7.40901E-06 | +/- 2.7E-09 |
| Total phase (deg) | | | | 229.8 | | | | | | | -1.44999169211E-05 | | | | | | Resid phase (deg) | -76.0 | +/- 20.2 |

| | RMS | Theor. | Amplitude | 0.122 +/- 0.021 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 24.0 | 35.0 | Search (2048X64) | 0.100 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 45.8 | 61.1 | Interp. | 0.000 | Bits/sample: 2x2 | mb window (us) -0.016 0.016 |
| ph/frq (deg) | 48.8 | 40.4 | Inc. seg. avg. | 0.111 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 69.3 | 70.5 | Inc. frq. avg. | 0.119 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

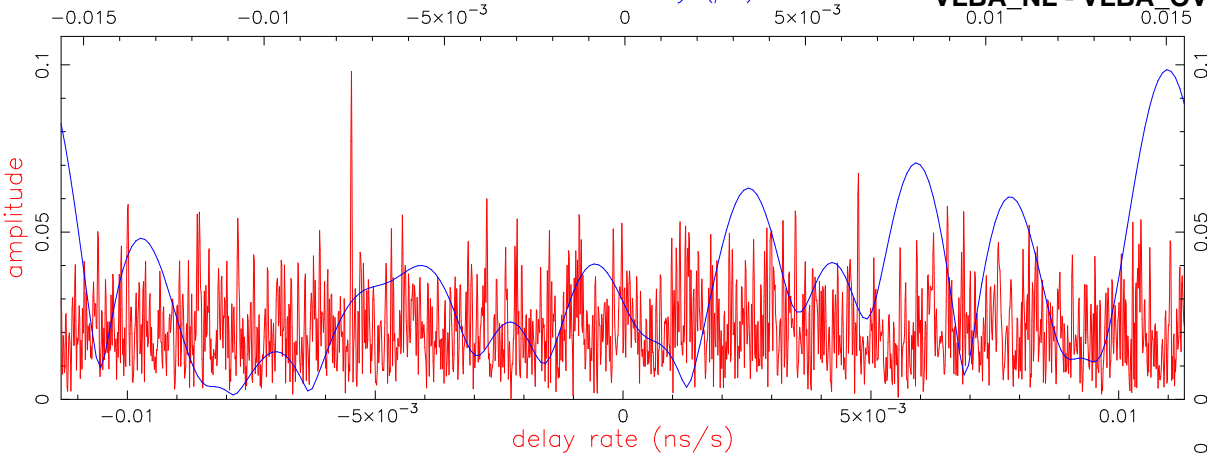
n: az 140.2 el 63.6 pa -29.9 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 2940.405 81.493 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/no..130BZK Output file: /Exps/c192b/v2/1234/No0053/no.W.325.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

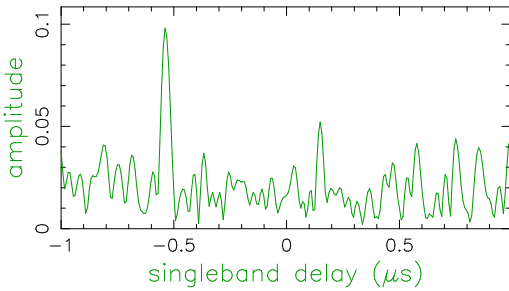
OJ287.130BZK, No0053, no
VLBA_NL - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

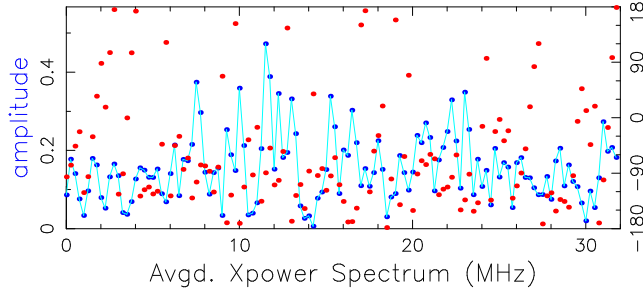


Fringe quality 0

SNR 5.5
Int time 417.279
Amp 0.109
Phase 131.8
PFD 1.0e+00
Delays (us)
SBD -0.537493
MBD -0.016113
Fringe rate (Hz)
-0.472842
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

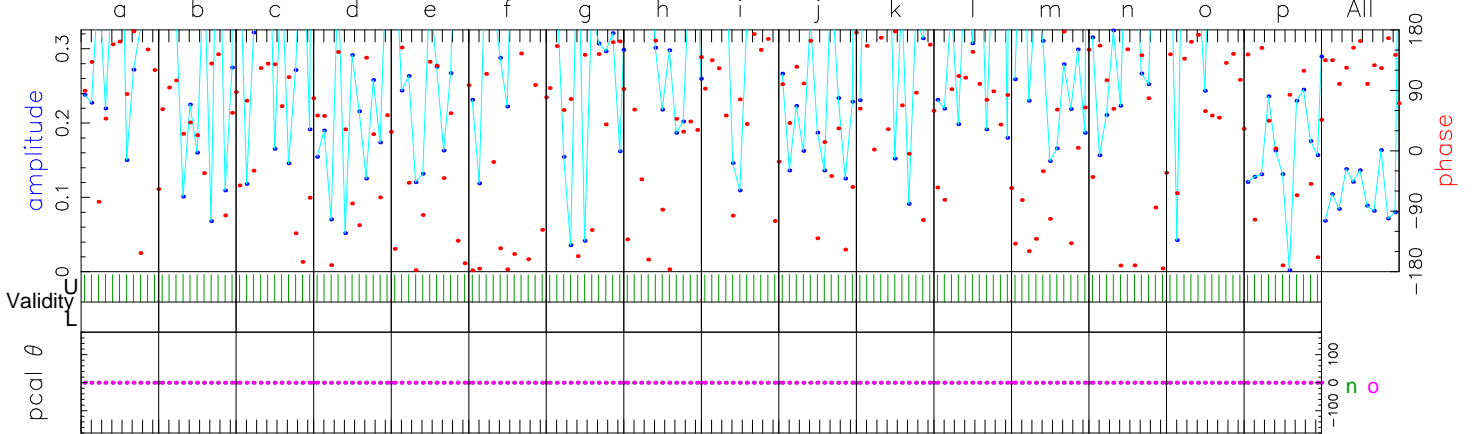


delay rate (ns/s)



Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083417
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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

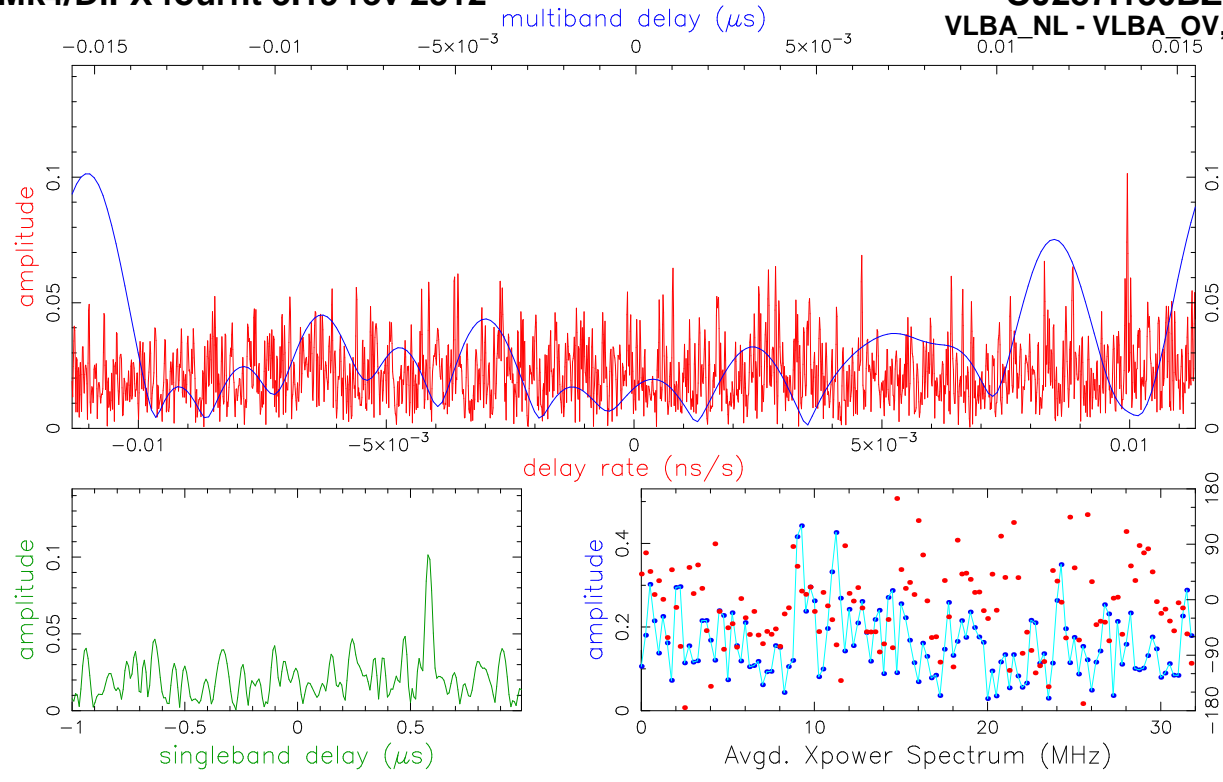


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|------------------|--------------------------|-----------------|----------|--|----------|---------------------------|----------------------|--|----------|------------------|----------|--------------|-------------|------------|-----|
| 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 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n: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 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 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 | |
| Group delay (usec)(sbd) | 3.17978053142E+03 | | | Apriori delay (usec) | | | 3.18032789470E+03 | | | Resid mbdelay (usec) | | | -1.61133E-02 | | | +/- 2.0E-04 | | |
| Sband delay (usec) | 3.17979040170E+03 | | | Apriori clock (usec) | | | 9.8514309E+00 | | | Resid sbdelay (usec) | | | -5.37493E-01 | | | +/- 3.1E-03 | | |
| Phase delay (usec) | 3.18032789895E+03 | | | Apriori clockrate (us/s) | | | 1.3324251E-07 | | | Resid phdelay (usec) | | | 4.24904E-06 | | | +/- 6.7E-07 | | |
| Delay rate (us/s) | -4.85518932922E-01 | | | Apriori rate (us/s) | | | -4.85513443696E-01 | | | Resid rate (us/s) | | | -5.48923E-06 | | | +/- 2.8E-09 | | |
| Total phase (deg) | 77.6 | | | Apriori accel (us/s/s) | | | -1.44999169211E-05 | | | Resid phase (deg) | | | 131.8 | | | +/- 20.9 | | |
| ph/seg (deg) | RMS | Theor. | Amplitude | | 0.109 +/- 0.020 | | 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 (%) | 22.1 | 36.1 | Search (2048X64) | | 0.097 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | SampCntNorm: enabled | | mb window (us) | | -0.016 0.016 | | | | | |
| ph/frq (deg) | 48.1 | 63.1 | Interp. | | 0.000 | | Bits/sample: 2x2 | | Sample rate(MISamp/s): 64 | | dr window (ns/s) | | -0.011 0.011 | | | | | |
| amp/frq (%) | 54.6 | 41.7 | Inc. seg. avg. | | 0.098 | | Data rate(Mb/s): 2048 | | nlags: 128 | | t_cohere infinite | | ion window (TEC) | | 0.00 0.00 | | | |
| | 89.8 | 72.8 | Inc. frq. avg. | | 0.117 | | | | | | | | | | | | | |

n: az 140.2 el 63.6 pa -29.9 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 2940.405 81.493 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/no..130BZK Output file: /Exps/c192b/v2/1234/No0053/no.W.344.130BZK

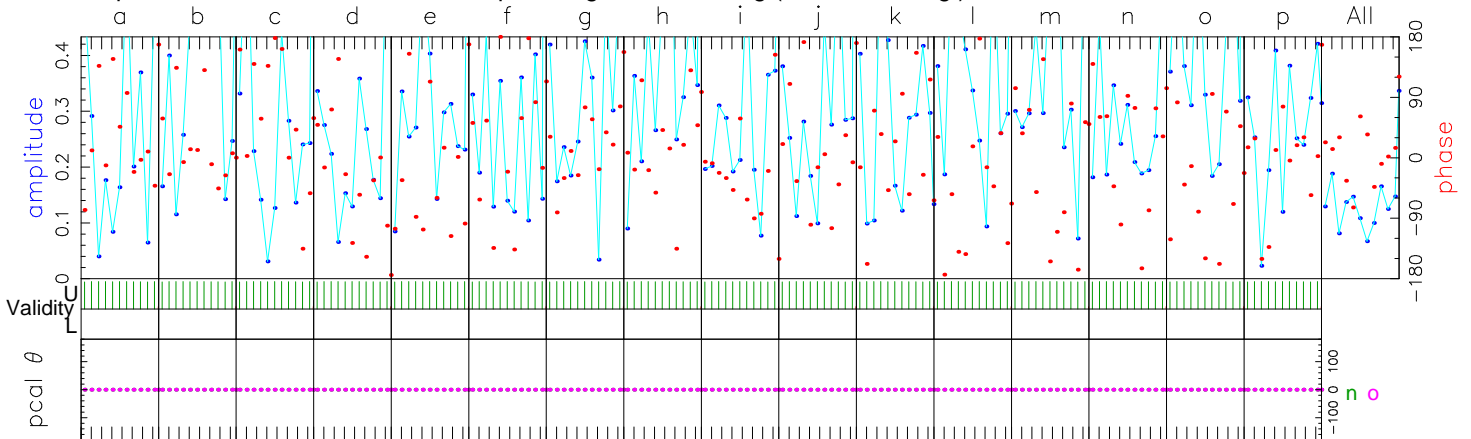
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, no
VLBA_NL - VLBA_OV, fgroup W, pol RL



Fringe quality 0
SNR 5.7
Int time 417.279
Amp 0.144
Phase 1.0
PFD 9.1e-01
Delays (us)
SBD 0.580879
MBD 0.016050
Fringe rate (Hz)
0.858390
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083422
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



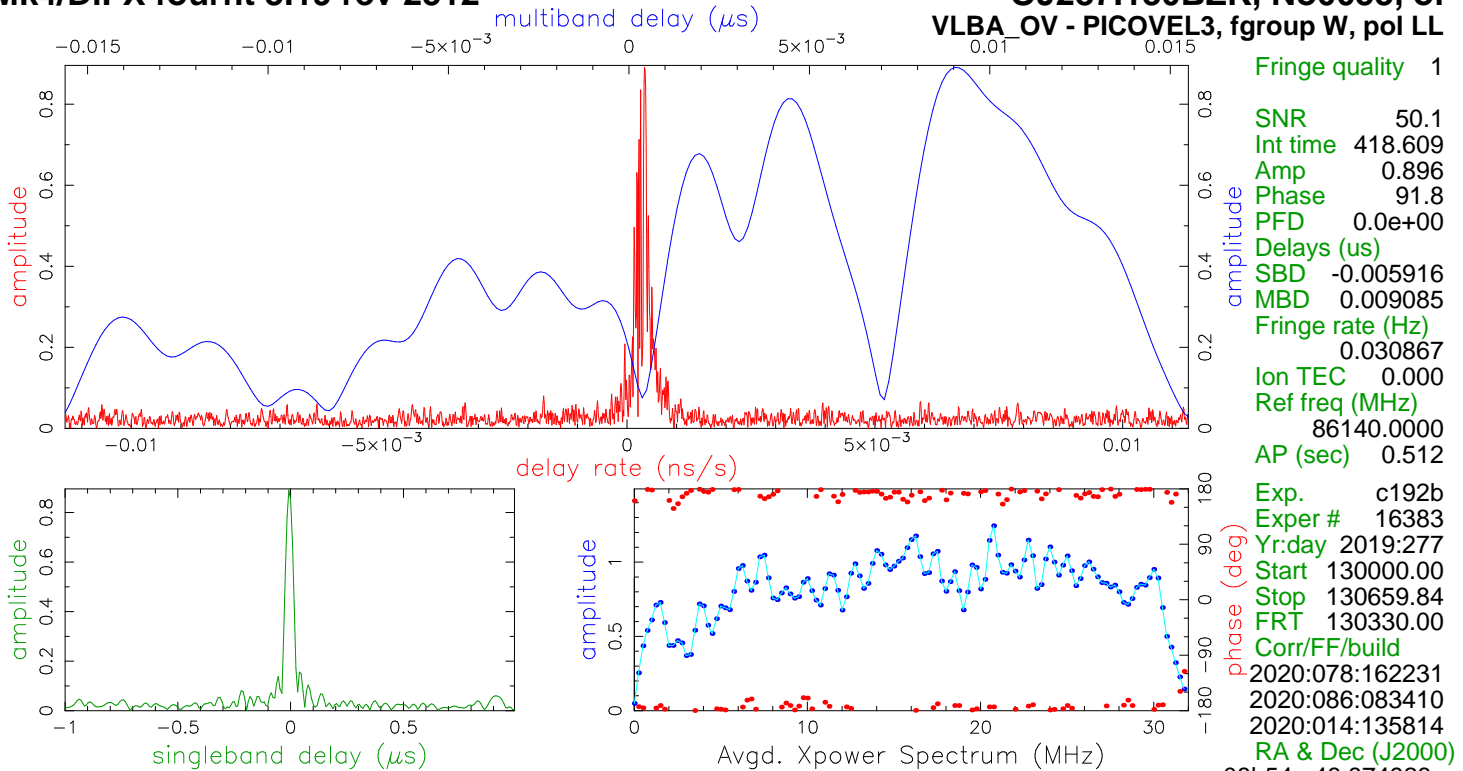
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|-------------|-----|---------|
| | -4.5 | 4.9 | 73.0 | -54.8 | -86.4 | 71.0 | 36.6 | 22.6 | -35.9 | -13.3 | 6.7 | -71.2 | 86.8 | 53.6 | -38.7 | 4.8 | | Phase | 1.0 | | | | |
| | 0.2 | 0.3 | 0.0 | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.2 | 0.1 | 0.3 | | Ampl. | 0.2 | | | | |
| | 177.7 | 243.1 | 145.0 | 132.8 | 231.4 | 123.9 | 202.6 | 204.9 | 93.4 | 32.0 | 19.9 | 49.0 | 111.1 | 228.3 | 90.4 | 202.8 | | Sbd box | 203.4 | | | | |
| 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 | | | | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC phase | | | | | |
| n: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 | | | | | |
| n | 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 | | | | | | | |
| n | 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) | | | 3.18090644467E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | 3.18032789470E+03 | Resid mbdelay (usec) | 1.60500E-02 | +/- | 1.9E-04 |
| Sband delay (usec) | | | 3.18090877370E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 9.8514309E+00 | Resid sbdelay (usec) | 5.80879E-01 | +/- | 3.0E-03 |
| Phase delay (usec) | | | 3.18032789473E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 1.3324251E-07 | Resid phdelay (usec) | 3.25884E-08 | +/- | 6.4E-07 |
| Delay rate (us/s) | | | -4.85503478636E-01 | | | | | | | | | | | | | | | Apriori rate (us/s) | -4.85513443696E-01 | Resid rate (us/s) | 9.96506E-06 | +/- | 2.7E-09 |
| Total phase (deg) | | | | | 306.8 | | | | | | | | | | | | | Apriori accel (us/s/s) | -1.44999169211E-05 | Resid phase (deg) | 1.0 | +/- | 20.0 |

ph/seg (deg) 38.7 34.6 Search (2048X64) 0.099 Pcd mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 45.2 60.4 Interp. 0.000 Pcd rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 54.2 39.9 Inc. seg. avg. 0.153 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 64.4 69.7 Inc. frq. avg. 0.151 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
n: az 140.2 el 63.6 pa -29.9 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 2940.405 81.493 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/no..130BZK Output file: /Exps/c192b/v2/1234/No0053/no.W.363.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, oi
VLBA_OV - PICOVEL3, fgroup W, pol LL



Fringe quality 1

SNR 50.1

Int time 418.609

Amp 0.896

Phase 91.8

PFD 0.0e+00

Delays (us)

SBD -0.005916

MBD 0.009085

Fringe rate (Hz)

0.030867

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 130000.00

Stop 130659.84

FRT 130330.00

Corr/FF/build

2020:078:162231

2020:086:083410

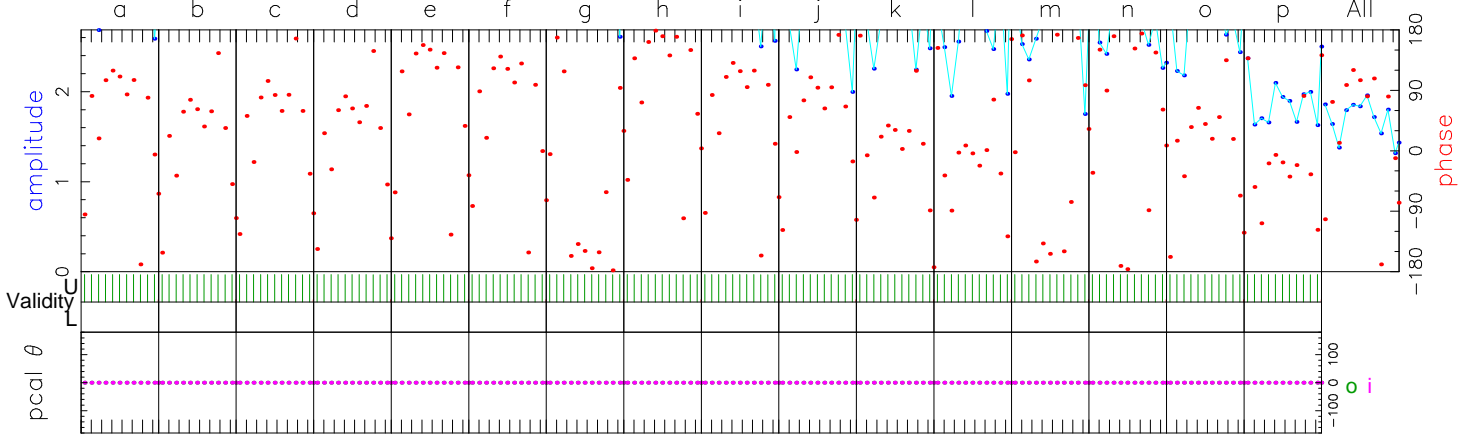
2020:014:135814

RA & Dec (J2000)

08h54m48.874928s

+20°06'30.640850"

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 |
| | 95.5 | 46.8 | 71.1 | 52.1 | 134.7 | 110.7 | -164.0 | 157.2 | 103.3 | 76.5 | 14.9 | -14.3 | -169.3 | 163.0 | 31.5 | -31.2 | Phase | 91.8 |
| | 2.0 | 2.1 | 2.1 | 2.2 | 1.9 | 1.8 | 2.0 | 2.1 | 1.7 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 | 0.9 | Ampl. | 1.7 |
| | 127.1 | 128.0 | 128.0 | 127.8 | 127.9 | 127.9 | 127.6 | 127.7 | 127.9 | 127.7 | 127.9 | 127.7 | 127.7 | 127.8 | 127.7 | 125.8 | Sbd box | 128.2 |
| 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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| i | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 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 | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| i | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Chan ids | |
| i | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |

Group delay (usec)(sbd) 6.51607709664E+03 Apriori delay (usec) 6.51606801173E+03 Resid mbdelay (usec) 9.08491E-03 +/- 2.2E-05

Sband delay (usec) 6.51606209573E+03 Apriori clock (usec) 1.7163322E+01 Resid sbdelay (usec) -5.91600E-03 +/- 3.4E-04

Phase delay (usec) 6.51606801469E+03 Apriori clockrate (us/s) 3.5398100E-07 Resid phdelay (usec) 2.96078E-06 +/- 7.4E-08

Delay rate (us/s) 1.90356659359E+00 Apriori rate (us/s) 1.90356623525E+00 Resid rate (us/s) 3.58336E-07 +/- 3.0E-10

Total phase (deg) 282.8 Apriori accel (us/s/s) -3.44746511162E-05 Resid phase (deg) 91.8 +/- 2.3

RMS Theor. Amplitude 0.896 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 72.8 4.0 Search (2048X64) 0.874 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

amp/seg (%) 92.3 6.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 72.0 4.6 Inc. seg. avg. 1.694 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

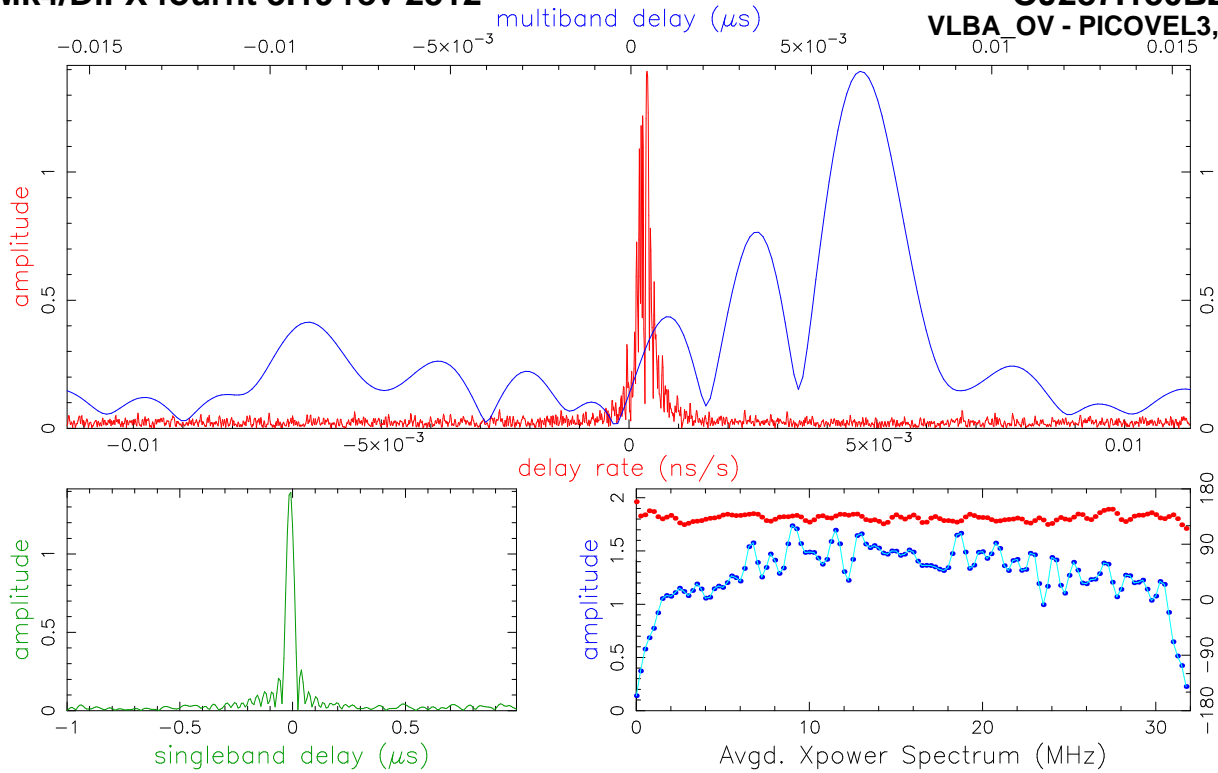
amp/frq (%) 101.1 8.0 Inc. frq. avg. 1.723 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 101.5 el 47.9 pa -56.2 i: az 275.5 el 27.1 pa 57.8 u,v (fr/asec) -11644.143 -925.152 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oi..130BZK Output file: /Exps/c192b/v2/1234/No0053/oi.W.323.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, oi
VLBA_OV - PICOVEL3, fgroup W, pol RR

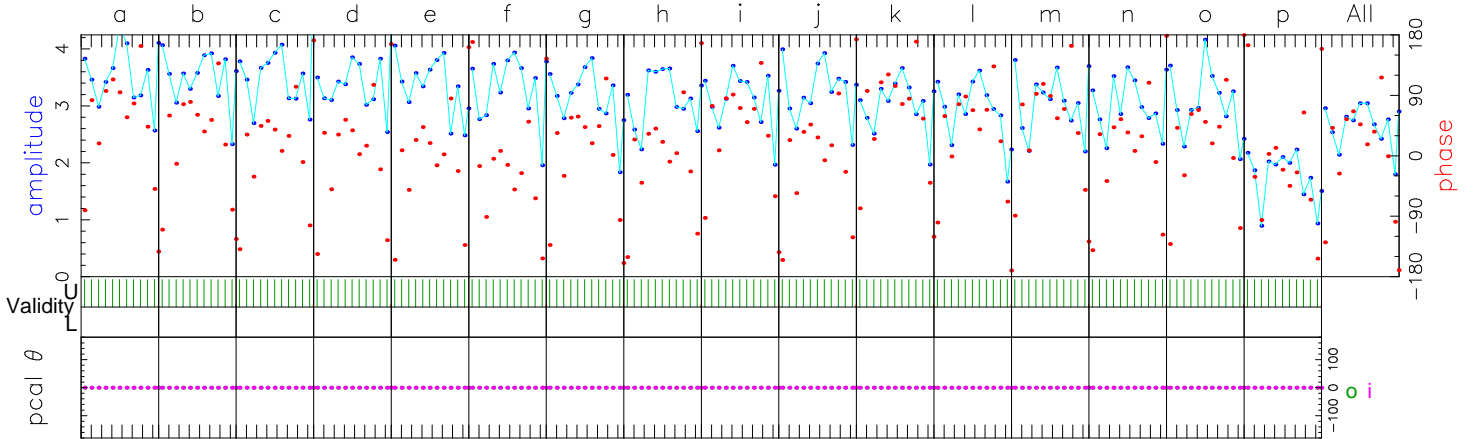


Fringe quality 2

SNR 79.2
Int time 418.609
Amp 1.416
Phase 32.2
PFD 0.0e+00
Delays (us)
SBD -0.011172
MBD 0.006348
Fringe rate (Hz)
0.031327
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083415
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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

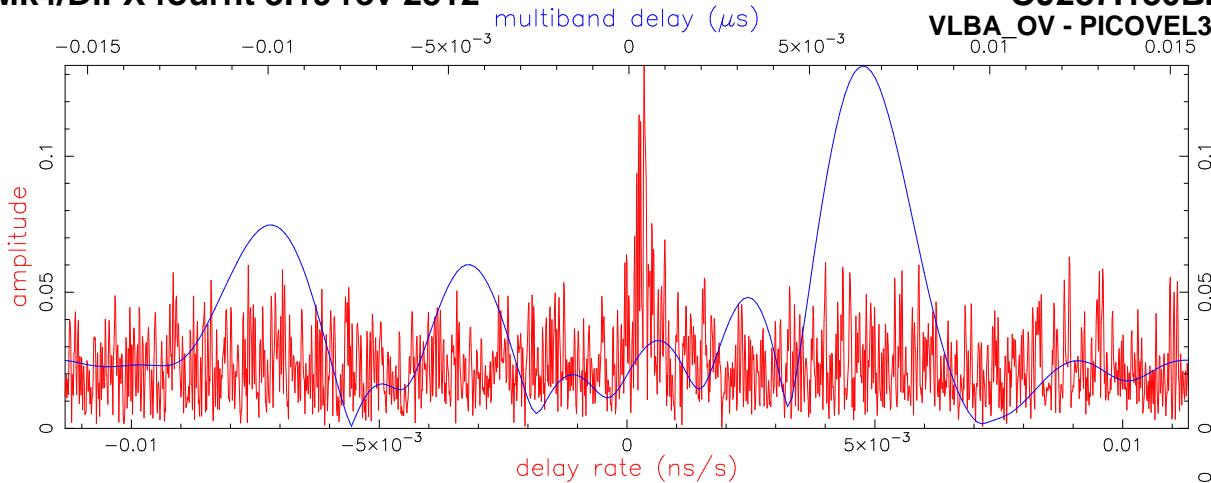


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|----------|------------|----------|
| 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 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| i | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| i | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Chan ids |
| i | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks |
| | | | | | | | | | | | | | | | | | | Chan ids |
| | | | | | | | | | | | | | | | | | | Tracks |
| Group delay (usec)(sbd) | 6.51604310933E+03 | | | Apriori delay (usec) | | | 6.51606801173E+03 | | | Resid mbdelay (usec) | | | 6.34760E-03 | | | +/- | 1.4E-05 | |
| Sband delay (usec) | 6.51605684023E+03 | | | Apriori clock (usec) | | | 1.7163322E+01 | | | Resid sbdelay (usec) | | | -1.11715E-02 | | | +/- | 2.2E-04 | |
| Phase delay (usec) | 6.51606801277E+03 | | | Apriori clockrate (us/s) | | | 3.5398100E-07 | | | Resid phdelay (usec) | | | 1.03819E-06 | | | +/- | 4.7E-08 | |
| Delay rate (us/s) | 1.90356659893E+00 | | | Apriori rate (us/s) | | | 1.90356623525E+00 | | | Resid rate (us/s) | | | 3.63678E-07 | | | +/- | 1.9E-10 | |
| Total phase (deg) | 223.1 | | | Apriori accel (us/s/s) | | | -3.44746511162E-05 | | | Resid phase (deg) | | | 32.2 | | | +/- | 1.4 | |

ph/seg (deg) 72.8 2.5 Search (2048X64) 1.381 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 89.9 4.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 35.4 2.9 Inc. seg. avg. 2.633 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 21.8 5.1 Inc. frq. avg. 1.636 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
o: az 101.5 el 47.9 pa -56.2 i: az 275.5 el 27.1 pa 57.8 u,v (fr/asec) -11644.143 -925.152 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oi..130BZK Output file: /Exps/c192b/v2/1234/No0053/oi.W.338.130BZK

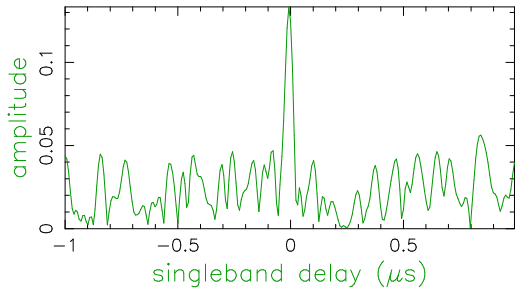
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, oi
VLBA_OV - PICOVEL3, fgroup W, pol LR

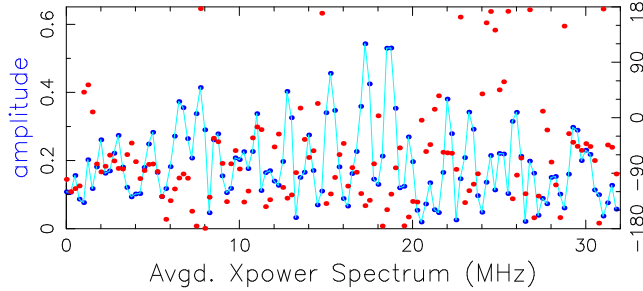


Fringe quality 9

SNR 7.5
Int time 418.609
Amp 0.133
Phase -176.1
PFD 2.8e-05
Delays (us)
SBD -0.006896
MBD 0.006497
Fringe rate (Hz)
0.029806
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

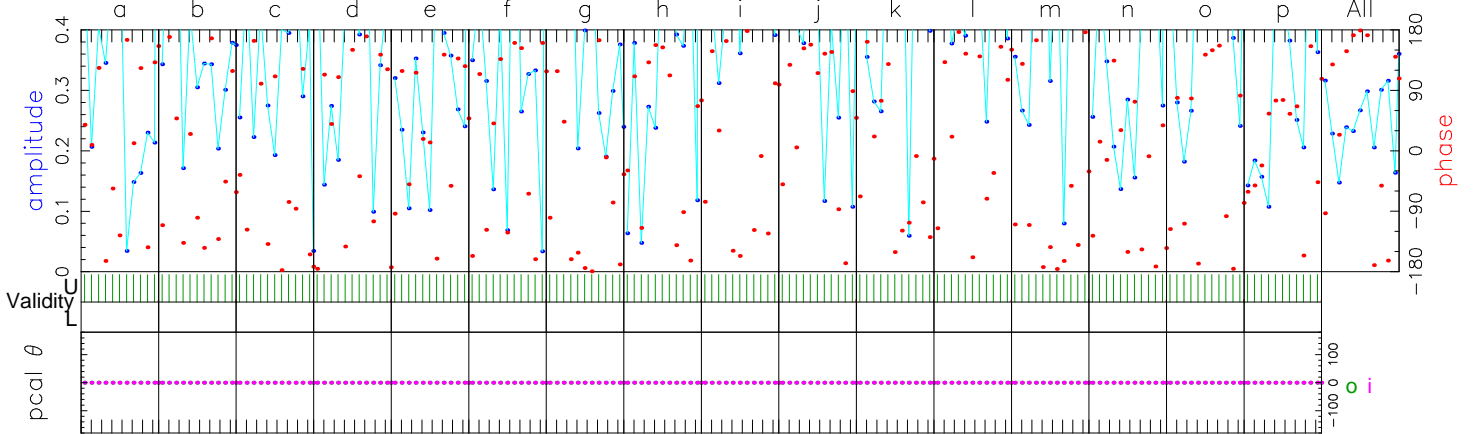


delay rate (ns/s)



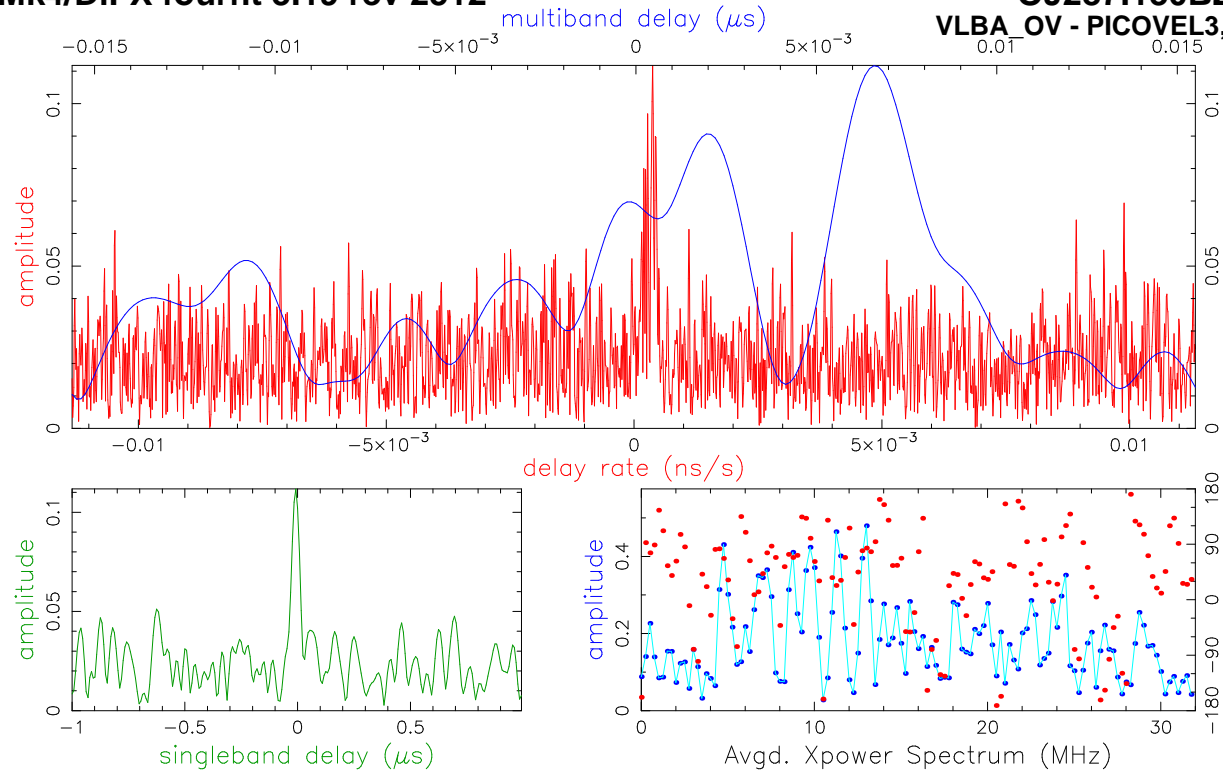
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083421
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



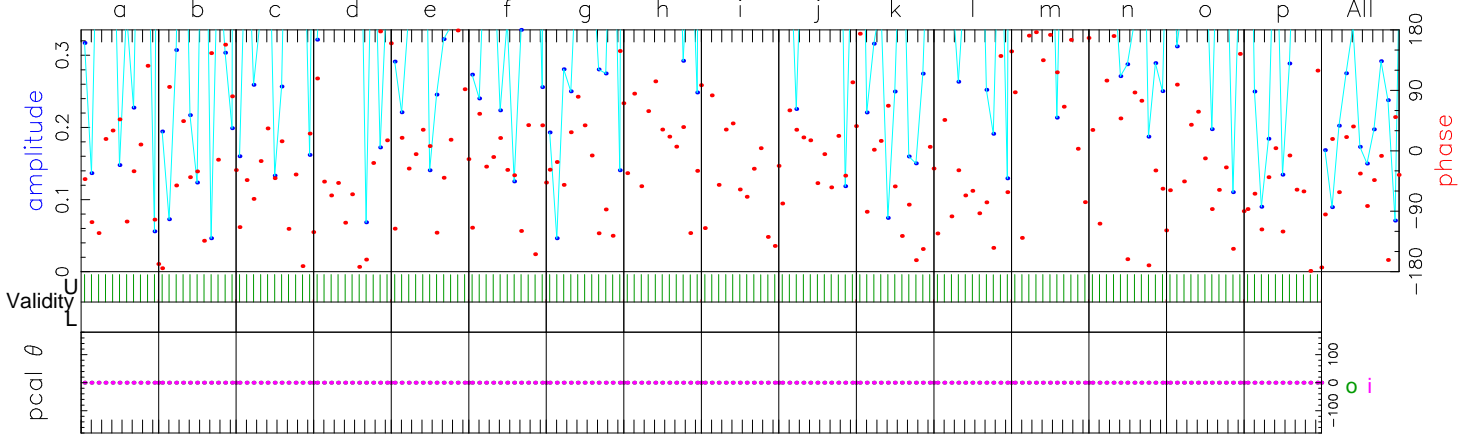
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|----------|--------|
| | -170.8 | -172.9 | -145.0 | 160.1 | 153.2 | 169.3 | -166.8 | 155.0 | -139.2 | 150.9 | -96.1 | 169.2 | -158.1 | -32.6 | 179.7 | 76.1 | | Phase | -176.1 |
| | 0.0 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.0 | 0.2 | 0.1 | | Ampl. | 0.1 |
| | 240.1 | 186.6 | 231.5 | 128.2 | 94.8 | 180.2 | 238.1 | 129.9 | 22.6 | 133.6 | 60.0 | 126.6 | 128.2 | 241.2 | 128.0 | 217.1 | | Sbd box | 128.1 |
| 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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| i | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 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 | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| i | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | | Chan ids | |
| i | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | Tracks | |
| | | | | | | | | | | | | | | | | | | Chan ids | |
| | | | | | | | | | | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 6.51607450884E+03 | | | Apriori delay (usec) | | | 6.51606801173E+03 | | | Resid mbdelay (usec) | | | 6.49711E-03 | | | +/- 1.4E-04 | | | |
| Sband delay (usec) | 6.51606111573E+03 | | | Apriori clock (usec) | | | 1.7163322E+01 | | | Resid sbdelay (usec) | | | -6.89600E-03 | | | +/- 2.3E-03 | | | |
| Phase delay (usec) | 6.51606800605E+03 | | | Apriori clockrate (us/s) | | | 3.5398100E-07 | | | Resid phdelay (usec) | | | -5.68024E-06 | | | +/- 5.0E-07 | | | |
| Delay rate (us/s) | 1.90356658127E+00 | | | Apriori rate (us/s) | | | 1.90356623525E+00 | | | Resid rate (us/s) | | | 3.46016E-07 | | | +/- 2.0E-09 | | | |
| Total phase (deg) | 14.8 | | | Apriori accel (us/s/s) | | | -3.44746511162E-05 | | | Resid phase (deg) | | | -176.1 | | | +/- 15.4 | | | |

ph/seg (deg) RMS Theor. Amplitude 0.133 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 95.7 46.4 Search (2048X64) 0.130 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 56.9 30.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 63.6 53.6 Inc. seg. avg. 0.224 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 101.5 el 47.9 pa -56.2 i: az 275.5 el 27.1 pa 57.8 u,v (fr/asec) -11644.143 -925.152 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oi..130BZK Output file: /Exps/c192b/v2/1234/No0053/oi.W.357.130BZK



Fringe quality 0
SNR 6.3
Int time 418.609
Amp 0.112
Phase -22.7
PFD 1.0e-01
Delays (us)
SBD -0.008540
MBD 0.006593
Fringe rate (Hz)
0.032919
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083427
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 |
|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -13.7 | -31.1 | -51.9 | -67.6 | 3.9 | -25.8 | -18.6 | 23.0 | -31.6 | 6.1 | -86.7 | -90.5 | 148.7 | 83.7 | -4.1 | -63.7 | Phase | -22.7 |
| | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.3 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | Ampl. | 0.1 |
| | 163.6 | 4.3 | 182.3 | 16.1 | 126.4 | 122.6 | 42.7 | 128.5 | 127.5 | 128.1 | 219.1 | 127.8 | 138.2 | 97.8 | 129.0 | 125.9 | Sbd box | 127.9 |
| 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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| i | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 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 | |
| oi | 0:0 | 0:0 | 0:0 | 0:0 | 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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| i | 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 | |
| i | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Tracks | |

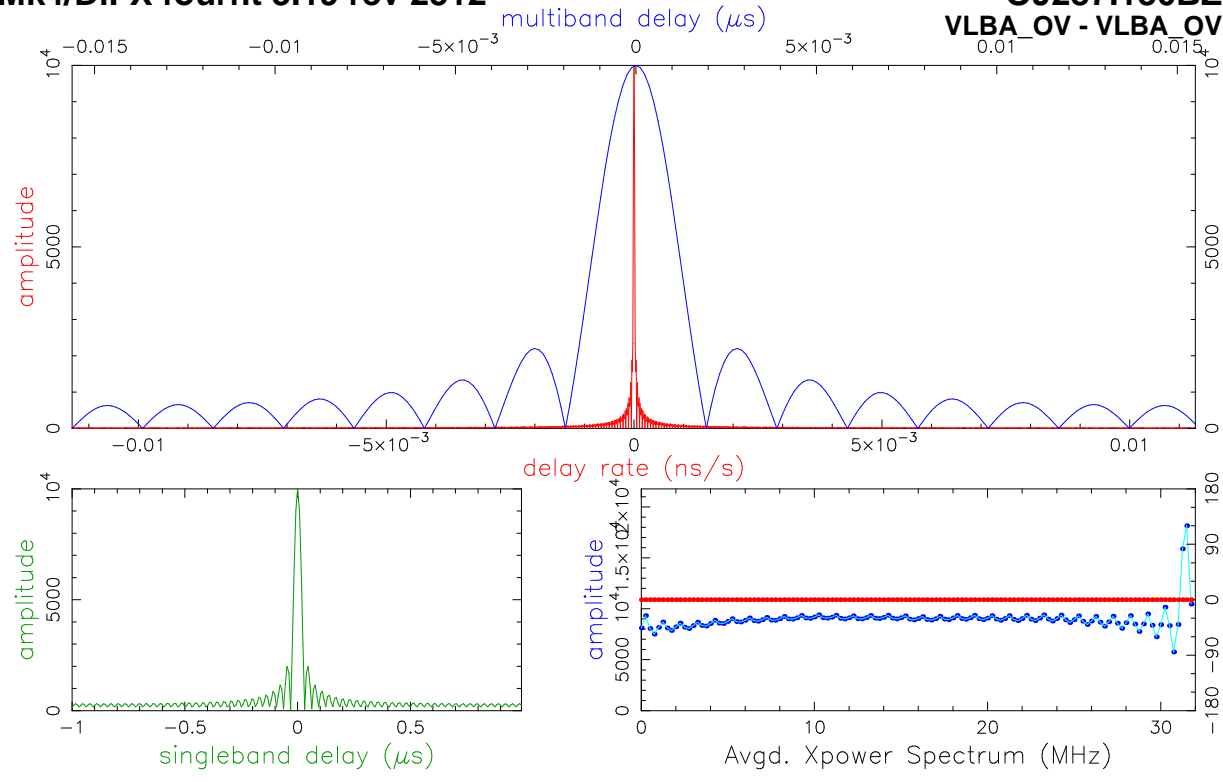
Group delay (usec)(sbd) 6.51607460463E+03 Apriori delay (usec) 6.51606801173E+03 Resid mbdelay (usec) 6.59290E-03 +/- 1.7E-04
 Sband delay (usec) 6.51605947123E+03 Apriori clock (usec) 1.7163322E+01 Resid sbdelay (usec) -8.54050E-03 +/- 2.8E-03
 Phase delay (usec) 6.51606801100E+03 Apriori clockrate (us/s) 3.5398100E-07 Resid phdelay (usec) -7.31921E-07 +/- 5.9E-07
 Delay rate (us/s) 1.90356661741E+00 Apriori rate (us/s) 1.90356623525E+00 Resid rate (us/s) 3.82162E-07 +/- 2.4E-09
 Total phase (deg) 168.2 Apriori accel (us/s/s) -3.44746511162E-05 Resid phase (deg) -22.7 +/- 18.3

RMS Theor. Amplitude 0.112 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 62.1 31.7 Search (2048X64) 0.107 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 107.0 55.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 64.5 36.7 Inc. seg. avg. 0.174 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 87.8 64.0 Inc. frq. avg. 0.147 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 101.5 el 47.9 pa -56.2 i: az 275.5 el 27.1 pa 57.8 u,v (fr/asec) -11644.143 -925.152 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oi..130BZK Output file: /Exps/c192b/v2/1234/No0053/oi.W.381.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, oo
VLBA_OV - VLBA_OV, fgroup W, pol LL

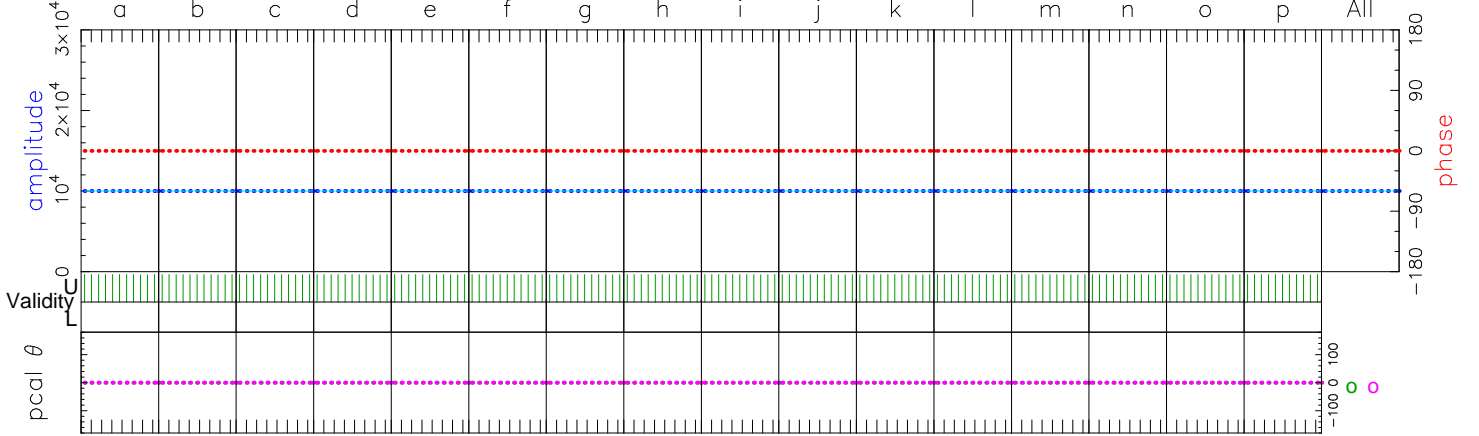


Fringe quality 9

SNR 559502.4
Int time 418.609
Amp 10000.004
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

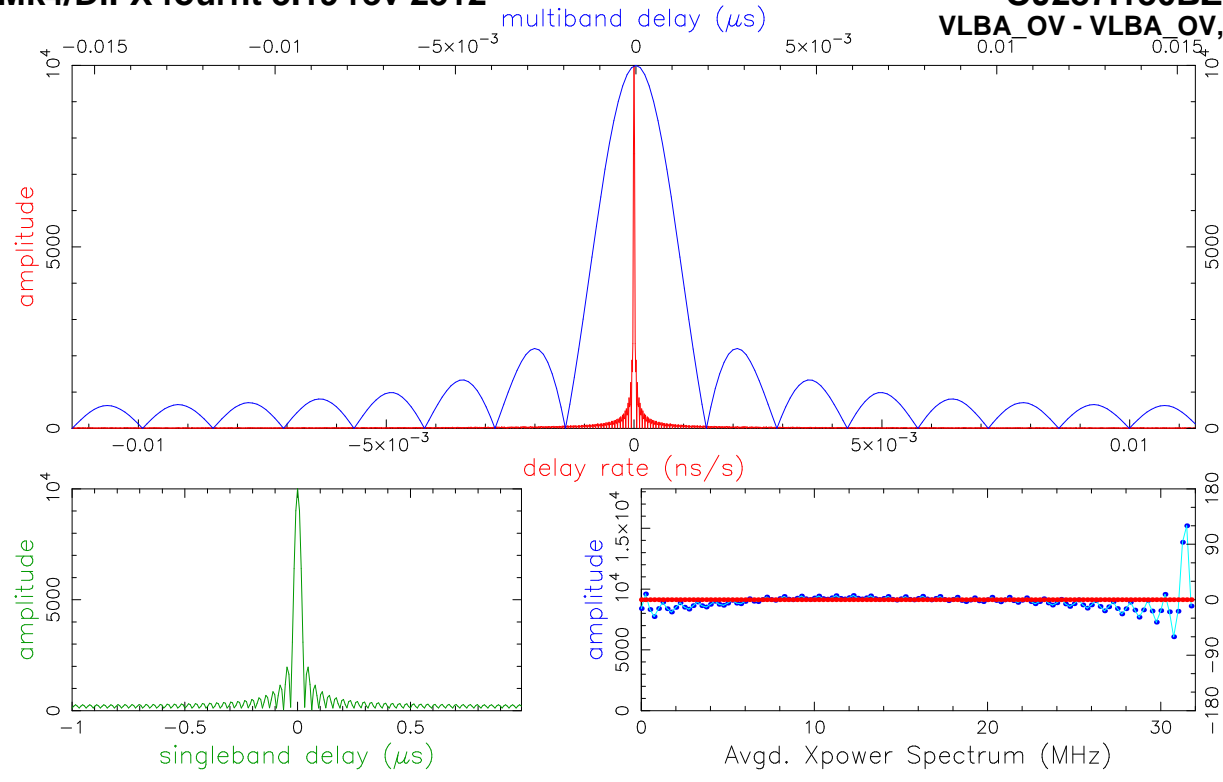
Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083411
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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



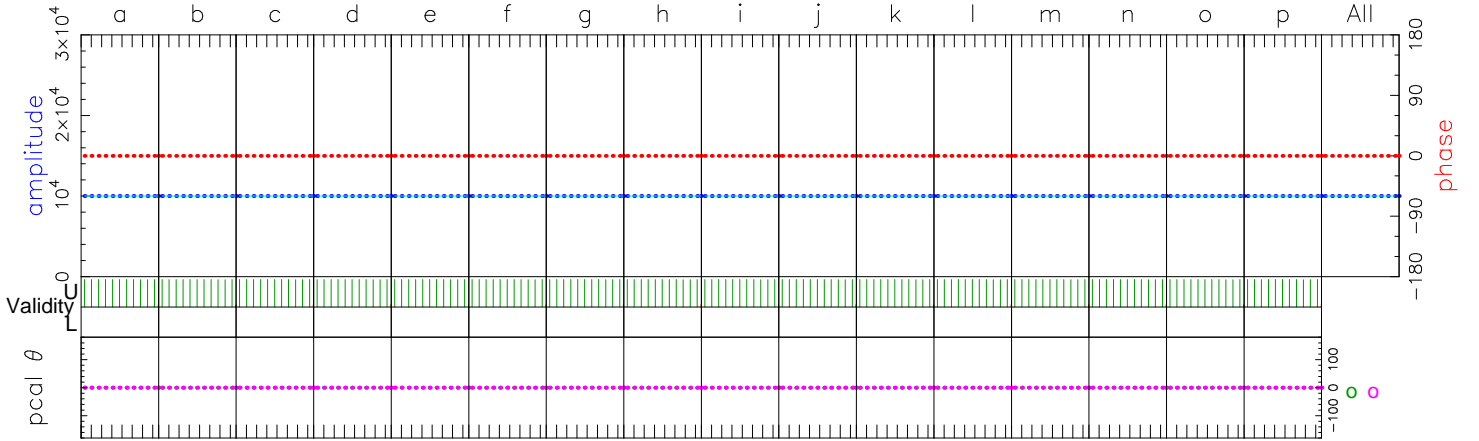
| 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|------------------|----------|----------------------|----------|--------------|----------|-------------|----------|----------|----------|----------|------------|---------|
| -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 | |
| o 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 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 | |
| o 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 | | |
| o 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 | |
| o 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 | |
| Group delay (usec)(sbd) | 0.0000000000E+00 | | Apriori delay (usec) | | 0.0000000000E+00 | | Resid mbdelay (usec) | | 0.000000E+00 | | +/- 1.9E-09 | | | | | | |
| Sband delay (usec) | 0.0000000000E+00 | | Apriori clock (usec) | | 0.0000000E+00 | | Resid sbdelay (usec) | | 0.000000E+00 | | +/- 3.1E-08 | | | | | | |
| Phase delay (usec) | 5.58130131328E-20 | | Apriori clockrate (us/s) | | 0.0000000E+00 | | Resid phdelay (usec) | | 5.58130E-20 | | +/- 6.6E-12 | | | | | | |
| Delay rate (us/s) | 0.0000000000E+00 | | Apriori rate (us/s) | | 0.0000000000E+00 | | Resid rate (us/s) | | 0.000000E+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 10000.004 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (2048X64) 10000.004 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
 o: az 101.5 el 47.9 pa -56.2 o: az 101.5 el 47.9 pa -56.2 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/c192b/v2/1234/No0053/oo..130BZK Output file: /Exps/c192b/v2/1234/No0053/oo.W.324.130BZK simultaneous interpolator



Fringe quality 9
SNR 559502.7
Int time 418.609
Amp 10000.001
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. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083415
2020:014:135814
RA & Dec (J2000) 08h54m48.874928s +20°06'30.640850"

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

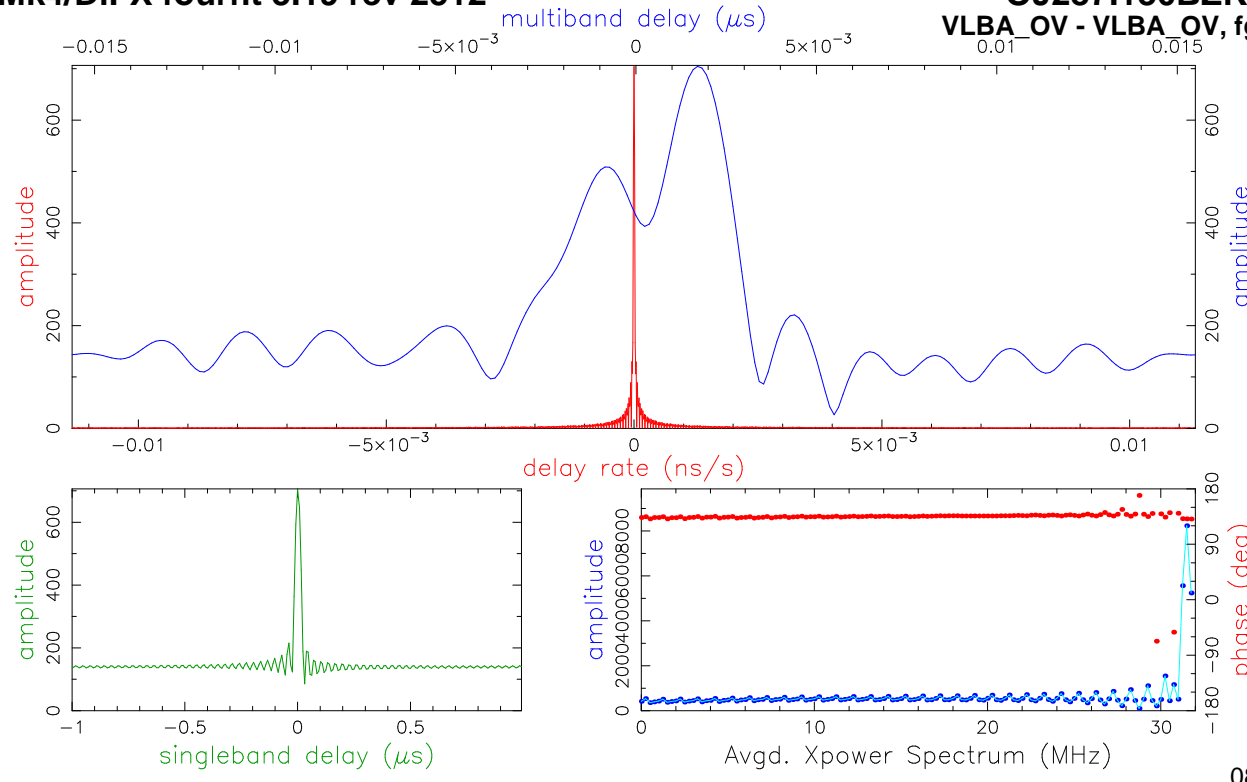


| 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|---------|
| -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 |
| 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 | |
| o 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 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 | |
| o 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 | | |
| o 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 | |

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) 1.05219970687E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 1.05220E-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 10000.001 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (2048X64) 10000.001 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. 10000.001 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 101.5 el 47.9 pa -56.2 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oo..130BZK Output file: /Exps/c192b/v2/1234/No0053/oo.W.336.130BZK

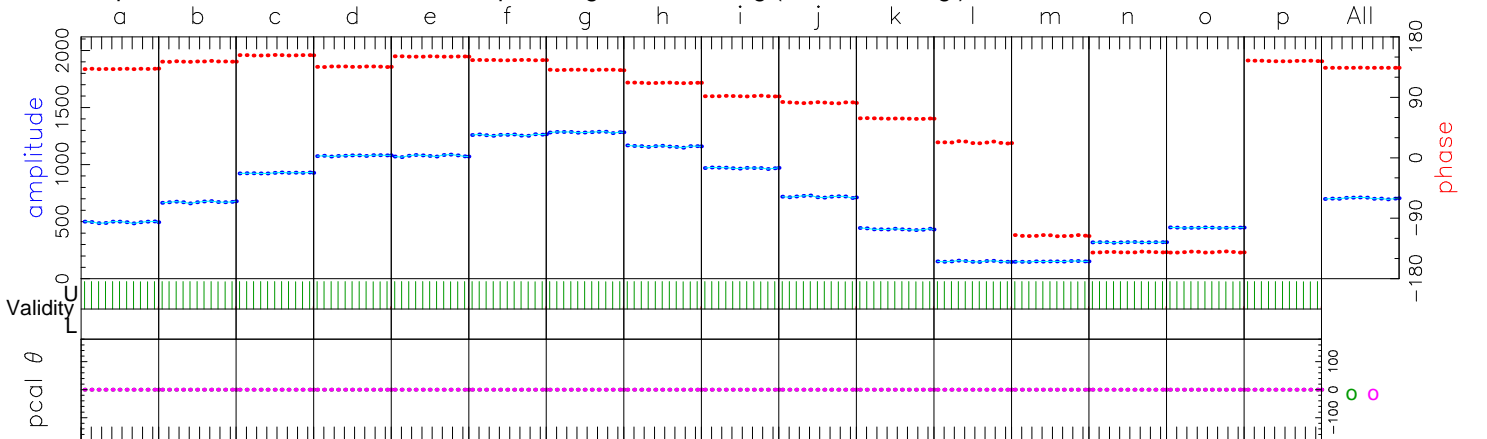


Fringe quality 5

SNR 39530.3
Int time 418.609
Amp 706.526
Phase 134.0
PFD 0.0e+00
Delays (us)
SBD 0.001283
MBD 0.001691
Fringe rate (Hz) 0.000003
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083420
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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

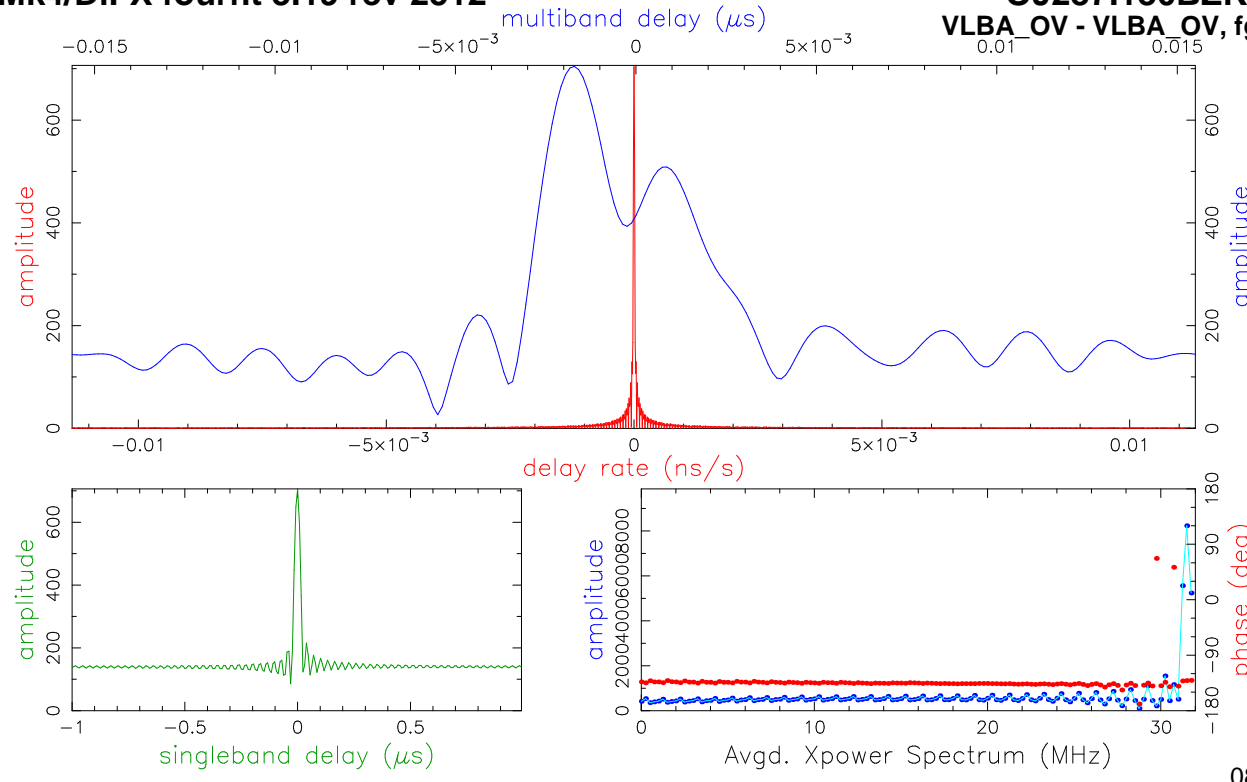


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|-------------------|----------|----------|----------------------|----------|----------|-------------|----------|----------|-------------|------------|-------|
| | 132.2 | 143.2 | 152.5 | 135.5 | 150.7 | 145.3 | 130.8 | 111.5 | 91.7 | 82.1 | 58.4 | 22.9 | -115.8 | -140.4 | -140.4 | 144.1 | Phase | 134.0 |
| | 495.8 | 671.6 | 926.7 | 1078.0 | 1077.6 | 1259.6 | 1283.7 | 1160.0 | 969.1 | 718.6 | 434.5 | 152.3 | 151.3 | 319.6 | 447.6 | 2348.6 | Ampl. | 843.4 |
| | 129.3 | 129.5 | 129.0 | 129.3 | 129.3 | 129.1 | 129.1 | 129.0 | 129.0 | 129.1 | 128.9 | 128.7 | 128.4 | 129.3 | 129.0 | 128.0 | Sbd box | 129.2 |
| 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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| 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 | 0:0 | 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 | 0:0 | Mani PC | |
| o | 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 | PC amp | |
| o | 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) | 1.69087500000E-03 | | | Apriori delay (usec) | | | 0.00000000000E+00 | | | Resid mbdelay (usec) | | | 1.69088E-03 | | | +/- 2.7E-08 | | |
| Sband delay (usec) | 1.28300000000E-03 | | | Apriori clock (usec) | | | 0.0000000E+00 | | | Resid sbdelay (usec) | | | 1.28300E-03 | | | +/- 4.4E-07 | | |
| Phase delay (usec) | 4.31956268135E-06 | | | Apriori clockrate (us/s) | | | 0.0000000E+00 | | | Resid phdelay (usec) | | | 4.31956E-06 | | | +/- 9.3E-11 | | |
| Delay rate (us/s) | 3.82621114575E-11 | | | Apriori rate (us/s) | | | 0.00000000000E+00 | | | Resid rate (us/s) | | | 3.82621E-11 | | | +/- 3.9E-13 | | |
| Total phase (deg) | 134.0 | | | Apriori accel (us/s/s) | | | 0.00000000000E+00 | | | Resid phase (deg) | | | 134.0 | | | +/- 0.0 | | |

ph/seg (deg) 0.1 0.0 Theor. Amplitude 706.526 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.8 0.0 Search (2048X64) 688.184 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 60.2 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 78.2 0.0 Inc. seg. avg. 704.196 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 o: az 101.5 el 47.9 pa -56.2 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oo..130BZK Output file: /Exps/c192b/v2/1234/No0053/oo.W.351.130BZK simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, oo
VLBA_OV - VLBA_OV, fgroup W, pol RL

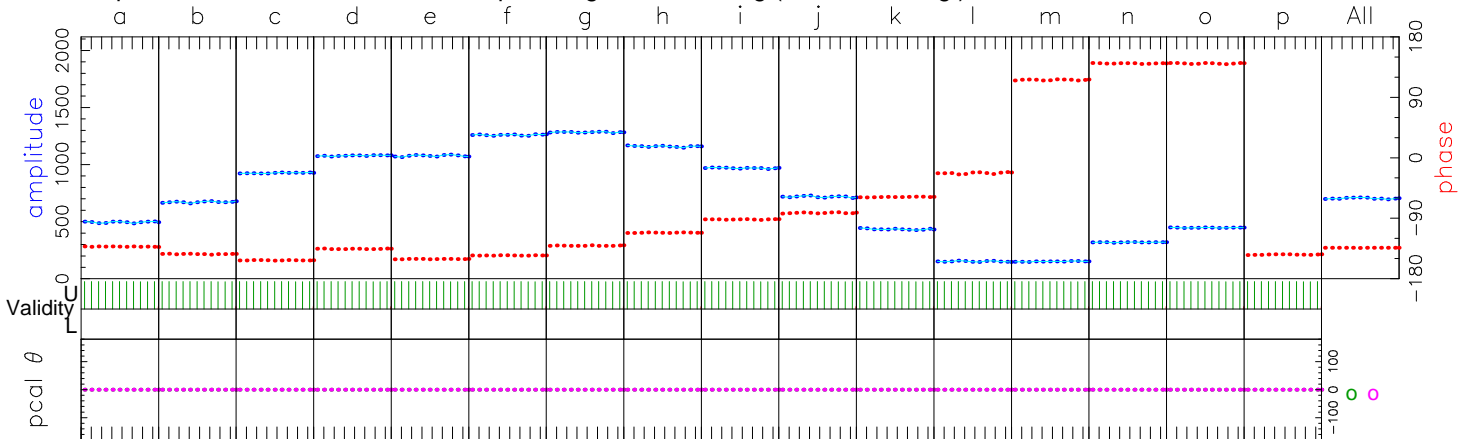


Fringe quality 5

SNR 39530.3
Int time 418.609
Amp 706.525
Phase -134.0
PFD 0.0e+00
Delays (us)
SBD -0.001283
MBD -0.001691
Fringe rate (Hz)
-0.000003
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build
2020:078:162231
2020:086:083424
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|---------------|
| | -132.2 | -143.2 | -152.5 | -135.5 | -150.7 | -145.3 | -130.8 | -111.5 | -91.7 | -82.1 | -58.4 | -22.9 | 115.8 | 140.4 | 140.4 | -144.1 | | Phase -134.0 |
| | 495.8 | 671.6 | 926.7 | 1078.0 | 1077.6 | 1259.6 | 1283.7 | 1160.0 | 969.1 | 718.6 | 434.5 | 152.3 | 151.3 | 319.6 | 447.6 | 2348.6 | | Ampl. 843.4 |
| | 128.7 | 128.5 | 129.0 | 128.7 | 128.7 | 128.9 | 128.9 | 129.0 | 129.0 | 128.9 | 129.1 | 129.3 | 129.6 | 128.7 | 129.0 | 130.0 | | Sbd box 128.8 |
| 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 |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | 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 | 0:0 | | ManI PC |
| o:0 | 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 | | |
| 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 |

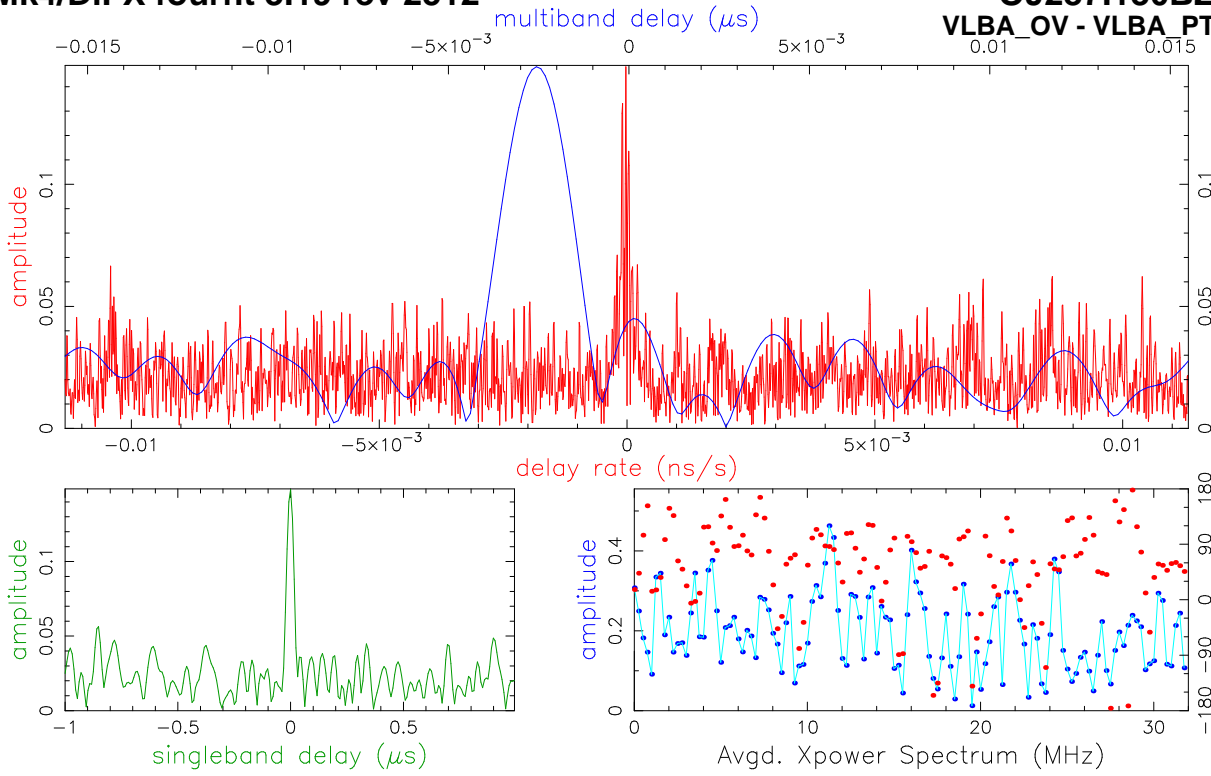
Group delay (usec)(sbd) -1.69087500000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -1.69088E-03 +/- 2.7E-08
 Sband delay (usec) -1.28300000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) -1.28300E-03 +/- 4.4E-07
 Phase delay (usec) -4.31956268154E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -4.31956E-06 +/- 9.3E-11
 Delay rate (us/s) -3.8262114575E-11 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -3.82621E-11 +/- 3.9E-13
 Total phase (deg) -134.0 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) -134.0 +/- 0.0

RMS Theor. Amplitude 706.525 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.1 0.0 Search (2048X64) 688.183 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.8 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 60.2 0.0 Inc. seg. avg. 704.195 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 78.2 0.0 Inc. frq. avg. 843.406 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 101.5 el 47.9 pa -56.2 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oo..130BZK Output file: /Exps/c192b/v2/1234/No0053/oo.W.369.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, op VLBA_OV - VLBA_PT, fgroup W, pol LL

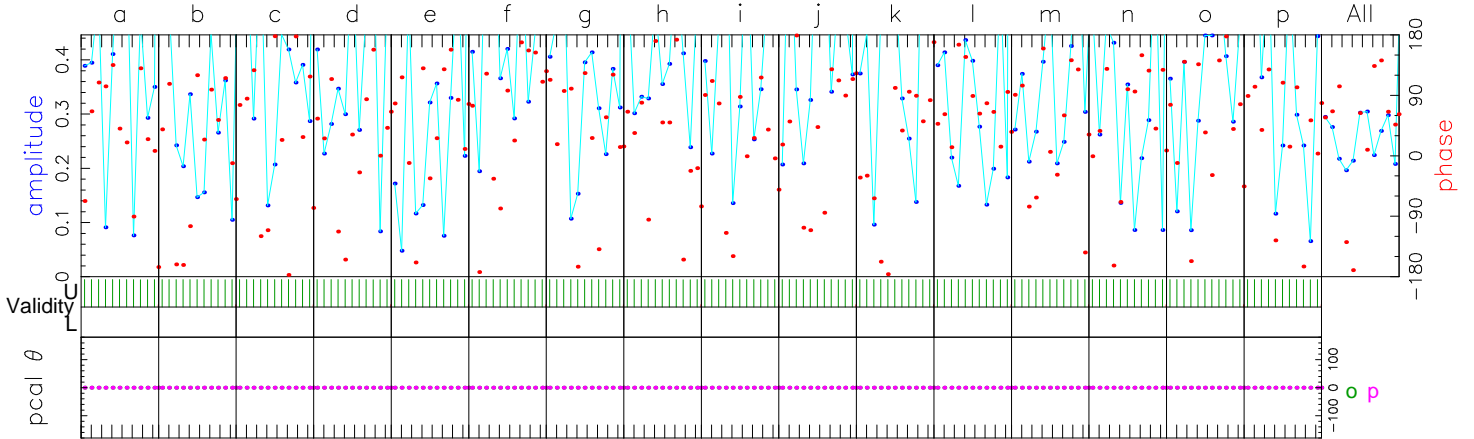


Fringe quality 9

SNR 8.3
 Int time 418.607
 Amp 0.149
 Phase 81.4
 PFD 3.1e-08
 Delays (us)
 SBD -0.001576
 MBD -0.002575
 Fringe rate (Hz)
 -0.001553
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083412
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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 | Phase | 81.4 | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Ampl. | 0.1 | | | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Sbd box | 128.8 | | | | | |
| o: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 | APs used | | | | | | |
| o: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 freqs | | | | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | | | | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | Mani PC | | | | | | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | PC amp | | | | | | |
| Group delay (usec)(sbd) | | | -1.94649777782E+03 | | | | | | | | | | | | | | Apriori delay (usec) | -1.94649520271E+03 | Resid mbdelay (usec) | -2.57511E-03 | +/- | 1.3E-04 | |
| Sband delay (usec) | | | -1.94649677821E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 4.7133617E+00 | Resid sbdelay (usec) | -1.57550E-03 | +/- | 2.1E-03 |
| Phase delay (usec) | | | -1.94649520008E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.0290559E-07 | Resid phdelay (usec) | 2.62649E-06 | +/- | 4.4E-07 |
| Delay rate (us/s) | | | 1.37356484501E-01 | | | | | | | | | | | | | | | Apriori rate (us/s) | 1.37356502528E-01 | Resid rate (us/s) | -1.80271E-08 | +/- | 1.8E-09 |
| Total phase (deg) | | | | | -192.7 | | | | | | | | | | | | | Apriori accel (us/s/s) | 1.19748157644E-05 | Resid phase (deg) | 81.4 | +/- | 13.8 |

RMS Theor. Amplitude 0.149 +/- 0.018
 ph/seg (deg) 66.5 23.8 Search (2048X64) 0.140
 amp/seg (%) 78.3 41.6 Interp. 0.000
 ph/frq (deg) 23.6 27.5 Inc. seg. avg. 0.236
 amp/frq (%) 29.2 48.1 Inc. frq. avg. 0.143

Group delay (usec)(sbd) -1.94649777782E+03 Apriori delay (usec) -1.94649520271E+03 Resid mbdelay (usec) -2.57511E-03 +/- 1.3E-04
 Sband delay (usec) -1.94649677821E+03 Apriori clock (usec) 4.7133617E+00 Resid sbdelay (usec) -1.57550E-03 +/- 2.1E-03
 Phase delay (usec) -1.94649520008E+03 Apriori clockrate (us/s) -2.0290559E-07 Resid phdelay (usec) 2.62649E-06 +/- 4.4E-07
 Delay rate (us/s) 1.37356484501E-01 Apriori rate (us/s) 1.37356502528E-01 Resid rate (us/s) -1.80271E-08 +/- 1.8E-09
 Total phase (deg) -192.7 Apriori accel (us/s/s) 1.19748157644E-05 Resid phase (deg) 81.4 +/- 13.8

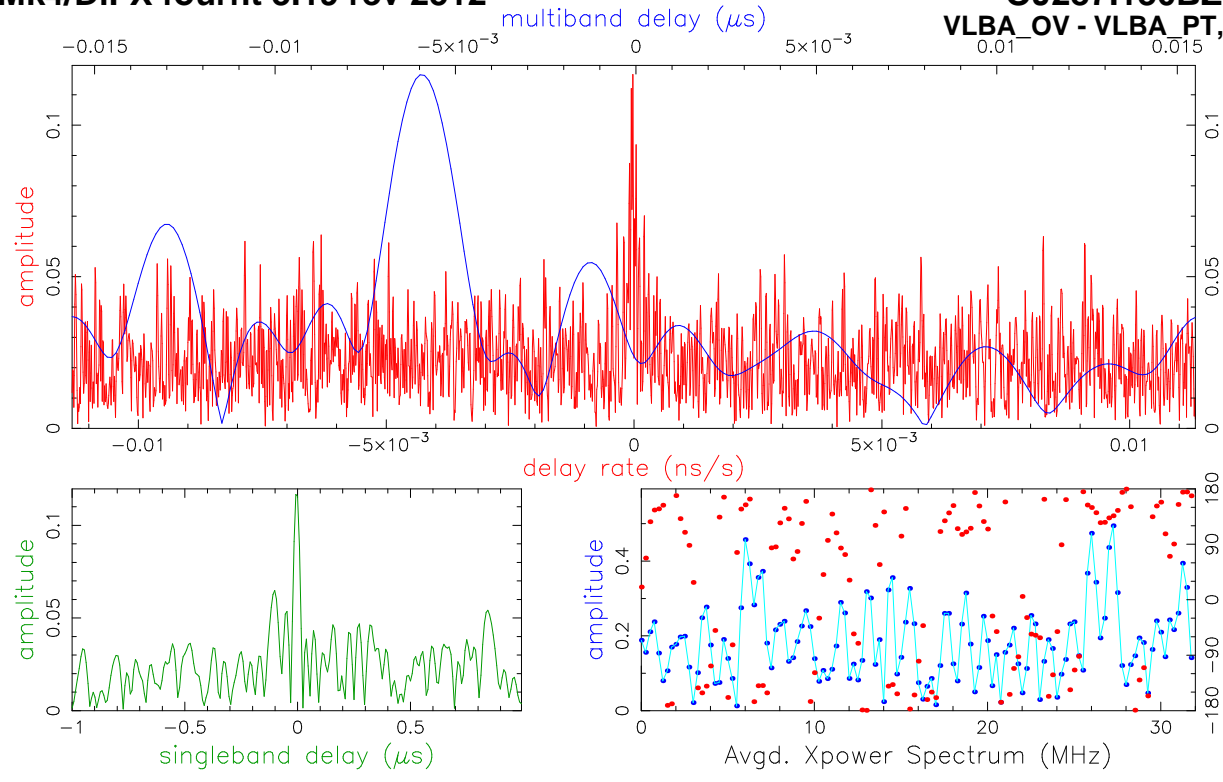
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window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

o: az 101.5 el 47.9 pa -56.2 p: az 106.4 el 56.6 pa -57.8 u,v (fr/asec) -822.845 690.556 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/op..130BZK Output file: /Exps/c192b/v2/1234/No0053/op.W.327.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, op
VLBA_OV - VLBA_PT, fgroup W, pol RR



Fringe quality 0

SNR 6.7

Int time 418.607

Amp 0.120

Phase 171.0

PFD 6.1e-03

Delays (us)

SBD -0.004213

MBD -0.005947

Fringe rate (Hz)

-0.001837

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Yr:day 16383

Start 2019:277

Stop 2019:277

FRT 130330.00

Corr/FF/build

2020:078:162231

2020:086:083418

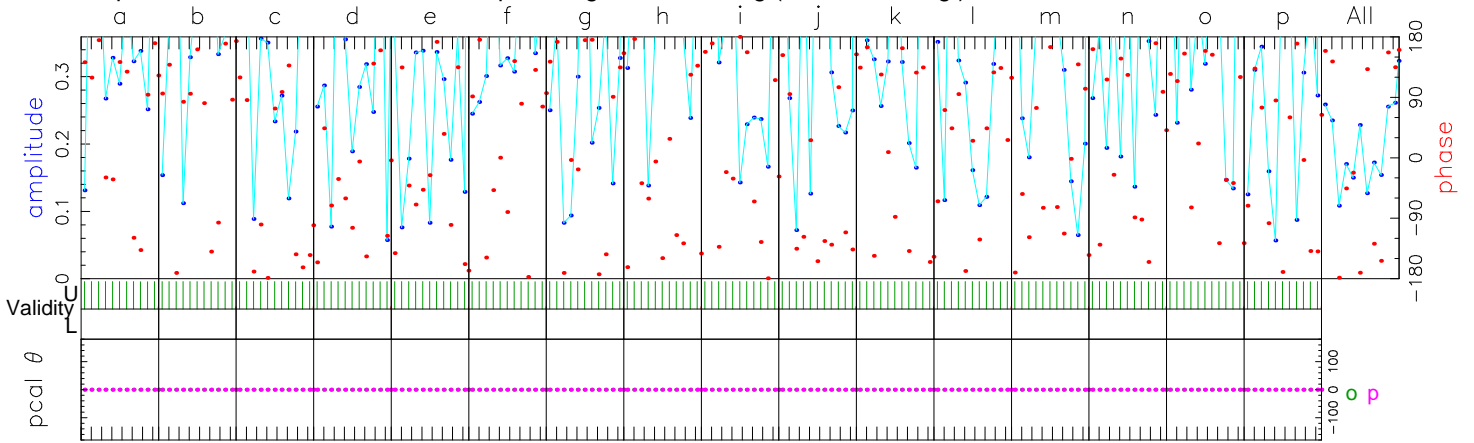
2020:014:135814

RA & Dec (J2000)

08h54m48.874928s

+20°06'30.640850"

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 | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| o: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 | | | |
| o: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 | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| o | 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 | |
| Group delay (usec)(sbd) | | | -1.94650114995E+03 | | | | | | | | | | | | | | | | |
| Sband delay (usec) | | | -1.94649941571E+03 | | | | | | | | | | | | | | | | |
| Phase delay (usec) | | | -1.94649519720E+03 | | | | | | | | | | | | | | | | |
| Delay rate (us/s) | | | 1.37356481206E-01 | | | | | | | | | | | | | | | | |
| Total phase (deg) | | | | | -103.1 | | | | | | | | | | | | | | |
| 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) | | | | | | | | | | | | | | | | | | -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 |

ph/seg (deg) 72.2 29.6 Search (2048X64) 0.116 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 76.9 51.7 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 47.8 34.2 Inc. seg. avg. 0.171 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

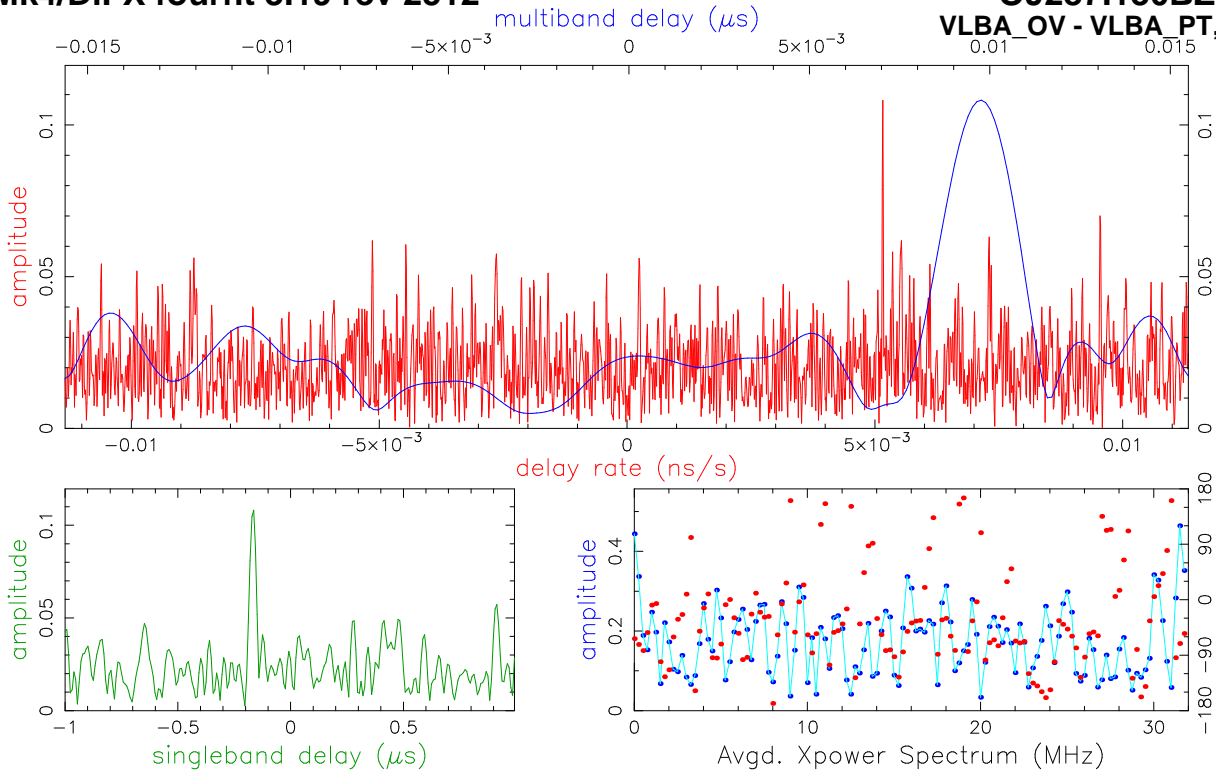
amp/frq (%) 54.4 59.7 Inc. frq. avg. 0.124 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

o: az 101.5 el 47.9 pa -56.2 p: az 106.4 el 56.6 pa -57.8 u,v (fr/asec) -822.845 690.556 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/op..130BZK Output file: /Exps/c192b/v2/1234/No0053/op.W.347.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, op
VLBA_OV - VLBA_PT, fgroup W, pol LR

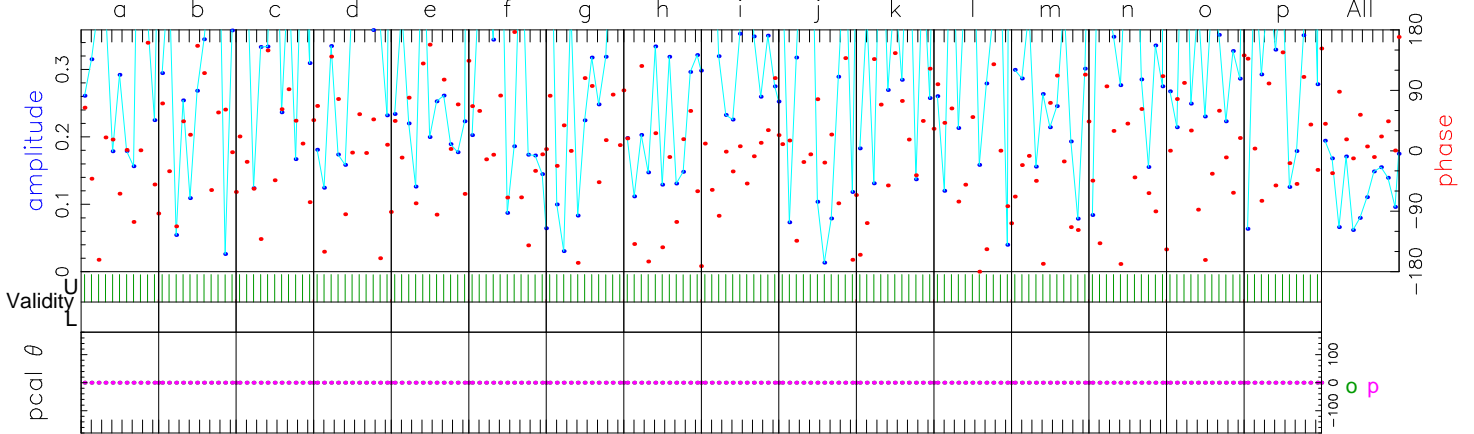


Fringe quality 0

SNR 6.1
Int time 418.607
Amp 0.120
Phase 16.8
PFD 2.0e-01
Delays (us)
SBD -0.166822
MBD 0.009715
Fringe rate (Hz) 0.445436
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192b
Exper # 16383
Yr:day 2019:277
Start 130000.00
Stop 130659.84
FRT 130330.00
Corr/FF/build 2020:078:162231
2020:086:083423
2020:014:135814
RA & Dec (J2000) 08h54m48.874928s +20°06'30.640850"

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

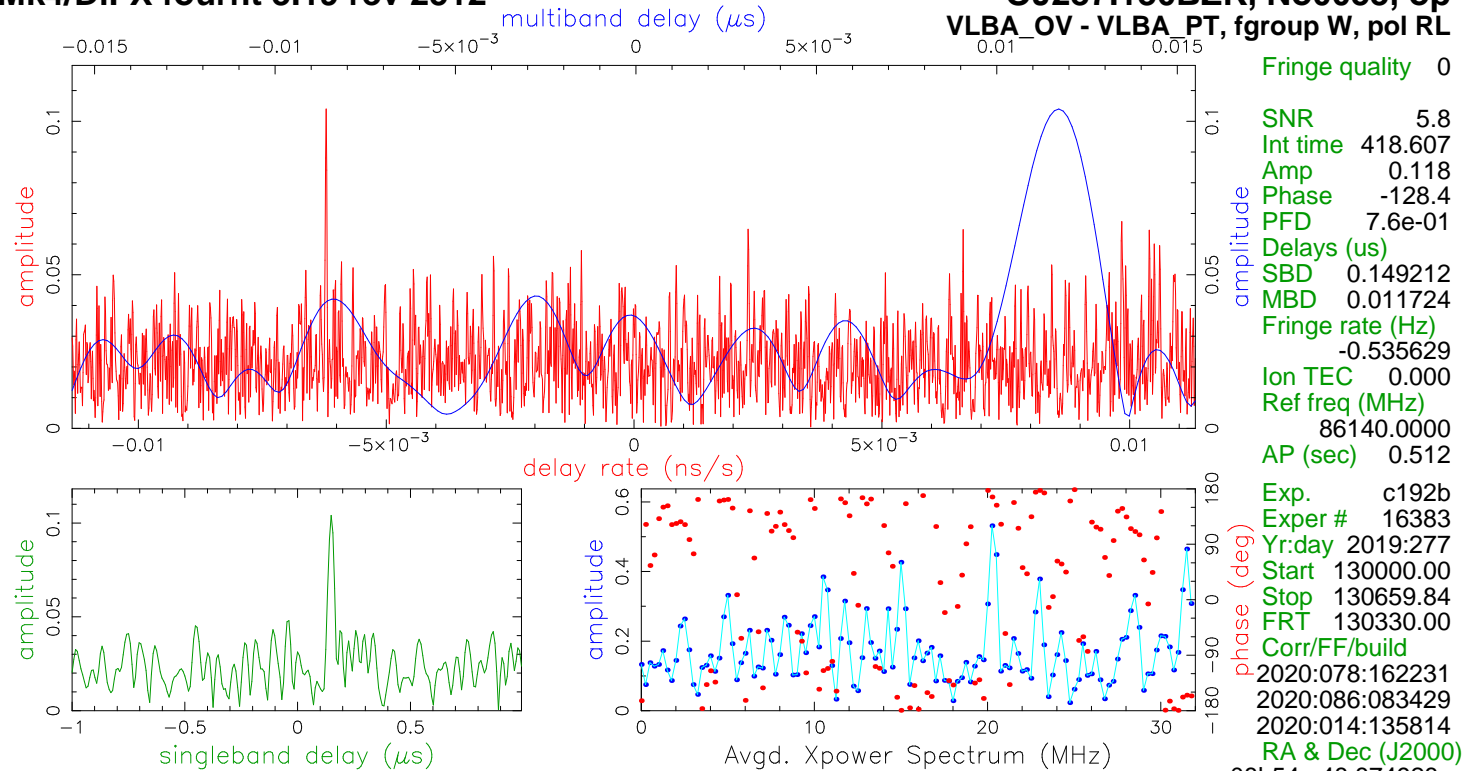


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -16.1 | 28.5 | 3.1 | 40.5 | 69.2 | 11.6 | 53.3 | 1.6 | -17.9 | -11.5 | 61.5 | 42.1 | -15.5 | -13.6 | 17.5 | 35.4 | Phase | 16.8 | | | | |
| | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | Ampl. | 0.1 | | | | |
| | 206.5 | 254.2 | 64.4 | 62.0 | 228.4 | 144.4 | 42.9 | 54.8 | 225.2 | 29.3 | 100.2 | 167.2 | 93.6 | 112.8 | 23.4 | 198.6 | Sbd box | 107.6 | | | | |
| 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 | | | | | |
| o | 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 | | | | | |
| o: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 | | | | | |
| o: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 amp | | | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | W08UL | W09UL | W10UL | W11UL | W12UL | W13UL | W14UL | W15UL | 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) | | | -1.94667298741E+03 | | | | | | | | | | | | | | Apriori delay (usec) | -1.94649520271E+03 | Resid mbdelay (usec) | 9.71531E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | | | -1.94666202471E+03 | | | | | | | | | | | | | | Apriori clock (usec) | 4.7133617E+00 | Resid sbdelay (usec) | -1.66822E-01 | +/- | 2.8E-03 |
| Phase delay (usec) | | | -1.94649520217E+03 | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.0290559E-07 | Resid phdelay (usec) | 5.41783E-07 | +/- | 6.0E-07 |
| Delay rate (us/s) | | | 1.37361673595E-01 | | | | | | | | | | | | | | Apriori rate (us/s) | 1.37356502528E-01 | Resid rate (us/s) | 5.17107E-06 | +/- | 2.5E-09 |
| Total phase (deg) | | | | | -257.4 | | | | | | | | | | | | Apriori accel (us/s/s) | 1.19748157644E-05 | Resid phase (deg) | 16.8 | +/- | 18.7 |

| | RMS | Theor. | Amplitude | 0.120 +/- 0.019 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 35.5 | 32.4 | Search (2048X64) | 0.106 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 42.9 | 56.5 | Interp. | 0.000 | Bits/sample: 2x2 | mb window (us) -0.016 0.016 |
| ph/frq (deg) | 30.8 | 37.4 | Inc. seg. avg. | 0.119 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 49.5 | 65.2 | Inc. frq. avg. | 0.110 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |
| | | | | | nlags: 128 | t_cohere infinite |

o: az 101.5 el 47.9 pa -56.2 p: az 106.4 el 56.6 pa -57.8 u,v (fr/asec) -822.845 690.556 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/op..130BZK Output file: /Exps/c192b/v2/1234/No0053/op.W.364.130BZK



Fringe quality 0

SNR 5.8

Int time 418.607

Amp 0.118

Phase -128.4

PFD 7.6e-01

Delays (us)

SBD 0.149212

MBD 0.011724

Fringe rate (Hz)

-0.535629

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 130000.00

Stop 130659.84

FRT 130330.00

Corr/FF/build

2020:078:162231

2020:086:083429

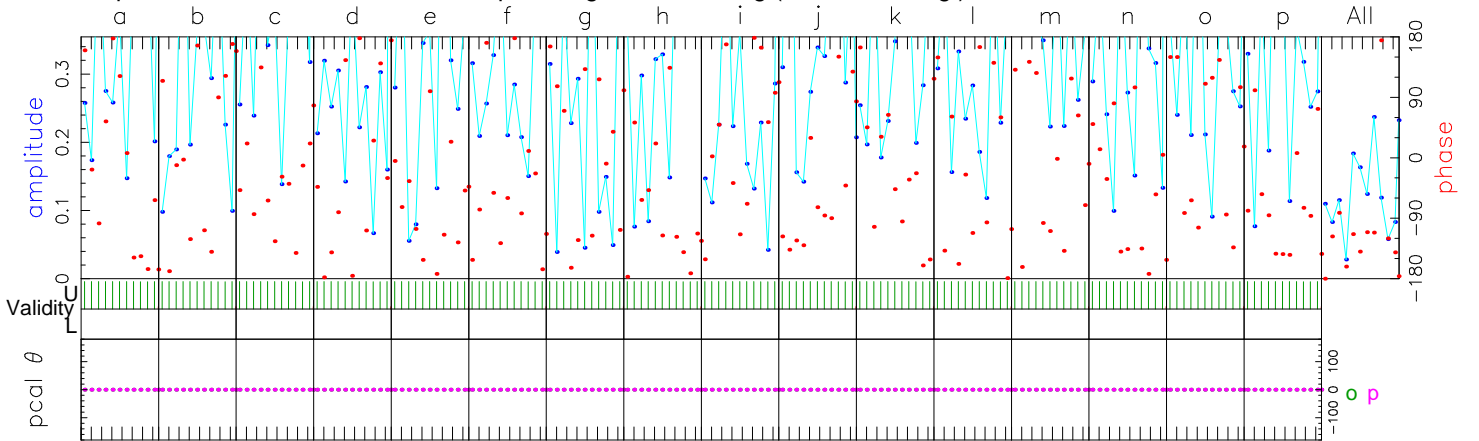
2020:014:135814

RA & Dec (J2000)

08h54m48.874928s

+20°06'30.640850"

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

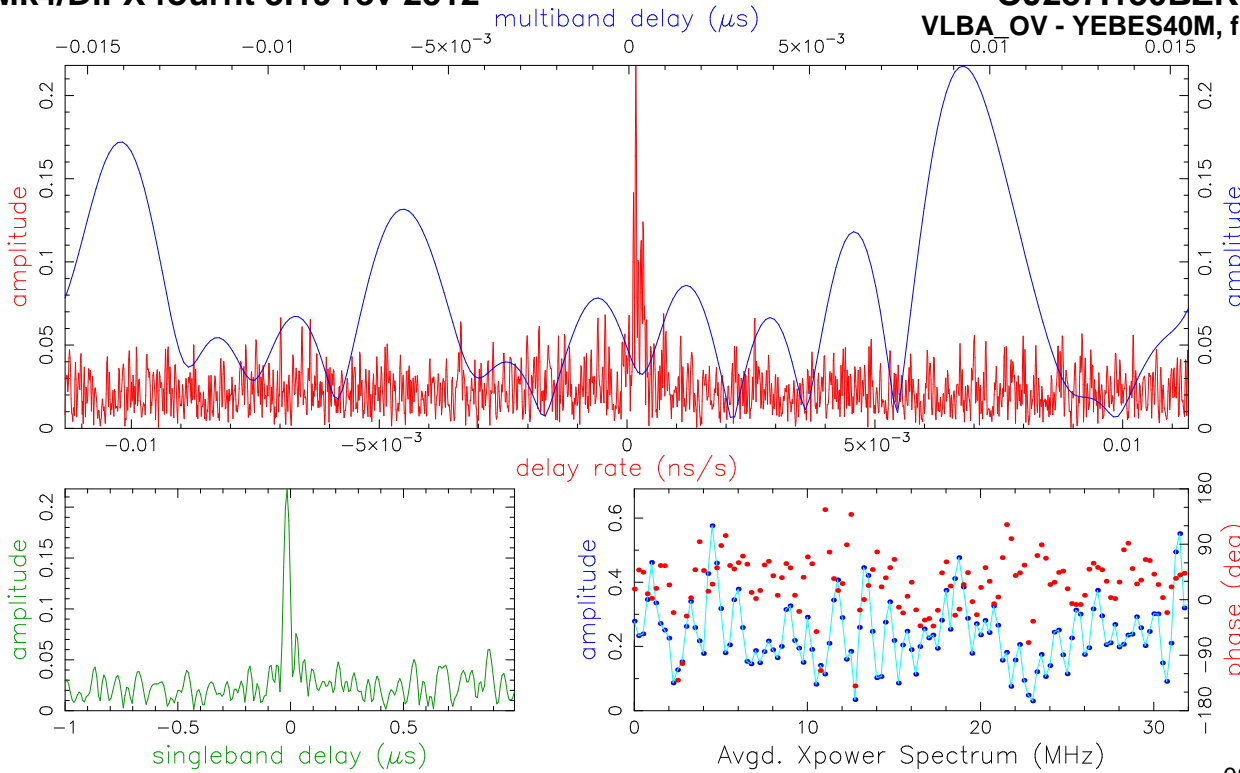


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -154.3 | 165.3 | -41.6 | -152.9 | -87.7 | -111.9 | -146.5 | -132.8 | 177.6 | -128.8 | -88.6 | -174.9 | 162.0 | -113.7 | -143.9 | -96.3 | | Phase -128.4 | | | | | |
| | 0.2 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | | Ampl. 0.1 | | | | | |
| | 193.7 | 129.9 | 158.2 | 120.0 | 121.0 | 184.0 | 66.1 | 133.8 | 124.5 | 207.2 | 215.6 | 31.3 | 69.6 | 186.4 | 193.8 | 90.5 | | Sbd box 148.1 | | | | | |
| 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 | | | | | |
| o | 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 | | | | | |
| o: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 | | | | | |
| o: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 amp | | | | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | |
| o | 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 | | | | | |
| | | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -1.94635847890E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -1.94649520271E+03 | Resid mbdelay (usec) | 1.17238E-02 | +/- | 1.9E-04 |
| Sband delay (usec) | | | -1.94634599021E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 4.7133617E+00 | Resid sbdelay (usec) | 1.49212E-01 | +/- | 3.0E-03 |
| Phase delay (usec) | | | -1.94649520685E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | -2.0290559E-07 | Resid phdelay (usec) | -4.14190E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | | | 1.37350284408E-01 | | | | | | | | | | | | | | | Apriori rate (us/s) | 1.37356502528E-01 | Resid rate (us/s) | -6.21812E-06 | +/- | 2.6E-09 |
| Total phase (deg) | | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 1.19748157644E-05 | Resid phase (deg) | -128.4 | +/- | 19.7 |

| | RMS | Theor. | Amplitude | 0.118 +/- 0.020 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 31.0 | 34.1 | Search (2048X64) | 0.099 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 56.5 | 59.5 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled |
| ph/frq (deg) | 45.1 | 39.3 | Inc. seg. avg. | 0.115 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 48.4 | 68.7 | Inc. frq. avg. | 0.119 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

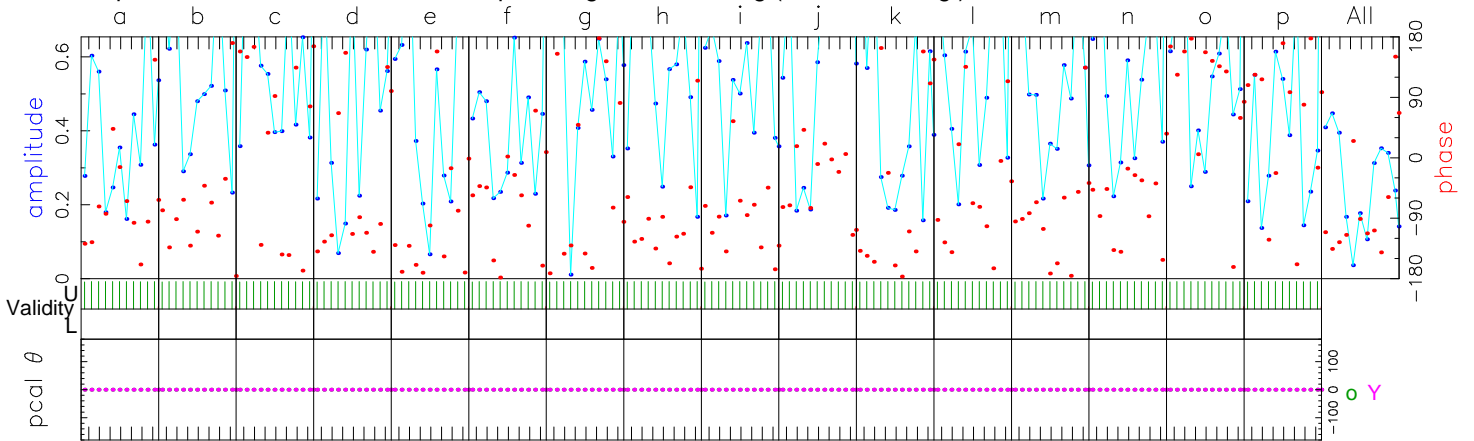
o: az 101.5 el 47.9 pa -56.2 p: az 106.4 el 56.6 pa -57.8 u,v (fr/asec) -822.845 690.556 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/op..130BZK Output file: /Exps/c192b/v2/1234/No0053/op.W.387.130BZK



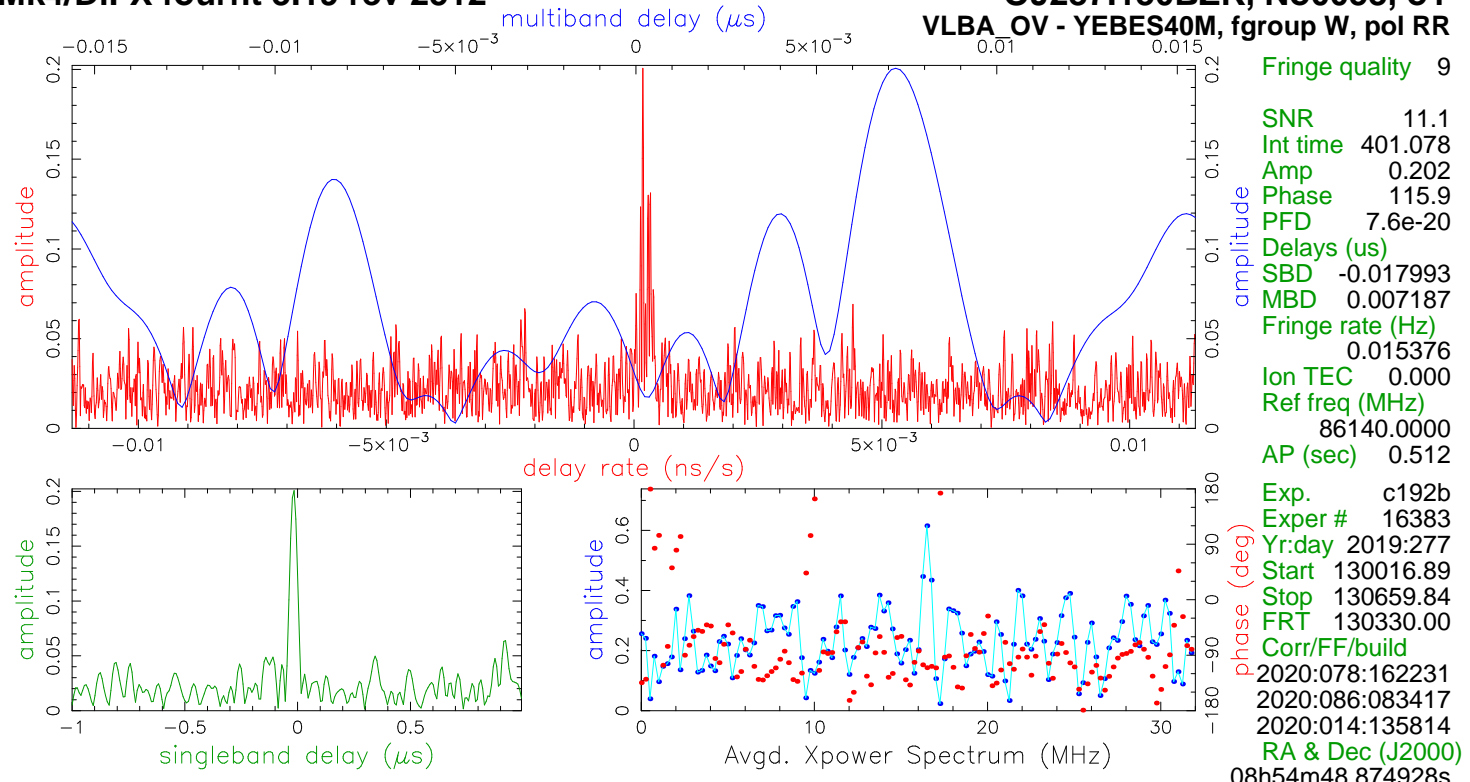
Fringe quality 9
 SNR 11.9
 Int time 401.077
 Amp 0.218
 Phase -119.0
 PFD 3.6e-24
 Delays (us)
 SBD -0.016637
 MBD 0.009255
 Fringe rate (Hz) 0.015426
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130016.89
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083412
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec

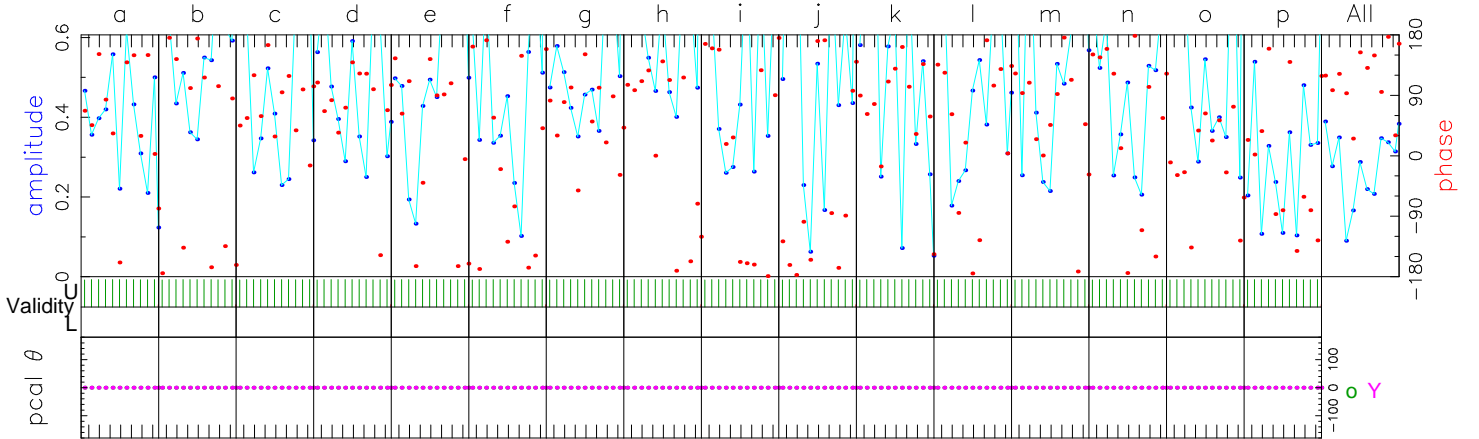


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|----------|------------|---------------|
| | -98.9 | -92.5 | 165.6 | -129.8 | -143.4 | -59.1 | 175.1 | -112.9 | -86.2 | -33.7 | -156.3 | -105.4 | -98.6 | -62.3 | 139.1 | 151.2 | | Phase -119.0 |
| | 0.2 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.3 | 0.5 | 0.4 | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 | 0.4 | 0.1 | | Ampl. 0.3 |
| | 126.5 | 126.8 | 127.2 | 127.2 | 126.8 | 126.3 | 126.3 | 127.1 | 126.9 | 127.2 | 126.1 | 126.2 | 126.9 | 126.9 | 126.1 | 123.8 | | Sbd box 126.9 |
| UL | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | | APs used |
| o | 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 |
| o: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: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 |
| o | 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 |
| o | 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) | 6.48386131662E+03 | | | Apriori delay (usec) | | | 6.48388331165E+03 | | | Resid mbdelay (usec) | | | 9.25497E-03 | | | +/- | 9.0E-05 | |
| Sband delay (usec) | 6.48386667465E+03 | | | Apriori clock (usec) | | | 6.9962130E+00 | | | Resid sbdelay (usec) | | | -1.66370E-02 | | | +/- | 1.4E-03 | |
| Phase delay (usec) | 6.48388330781E+03 | | | Apriori clockrate (us/s) | | | -2.1901900E-07 | | | Resid phdelay (usec) | | | -3.83869E-06 | | | +/- | 3.1E-07 | |
| Delay rate (us/s) | 1.85299147704E+00 | | | Apriori rate (us/s) | | | 1.85299129796E+00 | | | Resid rate (us/s) | | | 1.79083E-07 | | | +/- | 1.3E-09 | |
| Total phase (deg) | 48.6 | | | Apriori accel (us/s/s) | | | -3.61687127378E-05 | | | Resid phase (deg) | | | -119.0 | | | +/- | 9.6 | |

ph/seg (deg) RMS Theor. Amplitude 0.218 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 57.8 16.6 Search (2048X64) 0.215 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 63.6 29.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 58.2 19.2 Inc. seg. avg. 0.259 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 71.4 33.5 Inc. frq. avg. 0.328 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 o: az 101.5 el 47.9 pa -56.2 Y: az 273.9 el 27.2 pa 53.9 u,v (fr/asec) -11337.444 -1364.901 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oY..130BZK Output file: /Exps/c192b/v2/1234/No0053/oY.W.329.130BZK



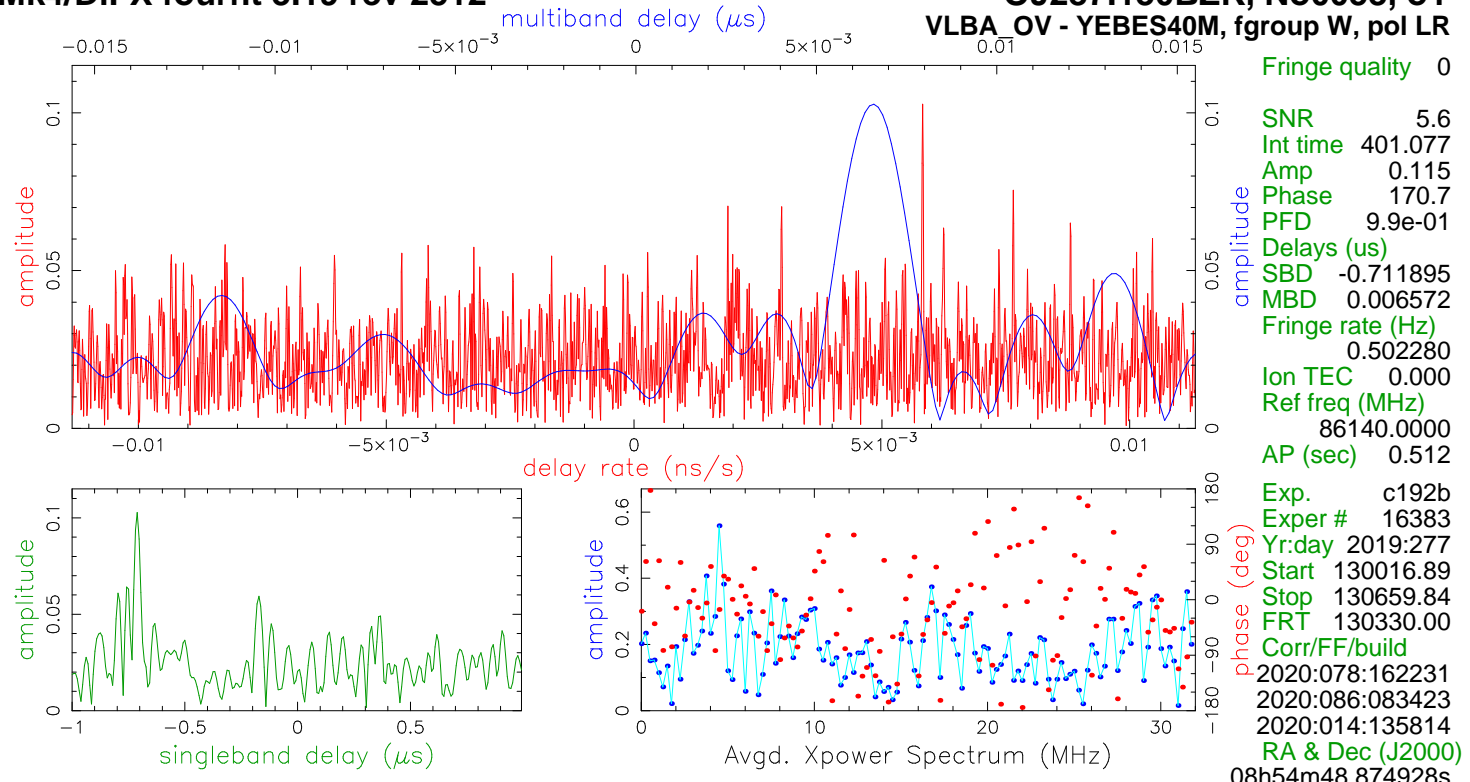
Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec



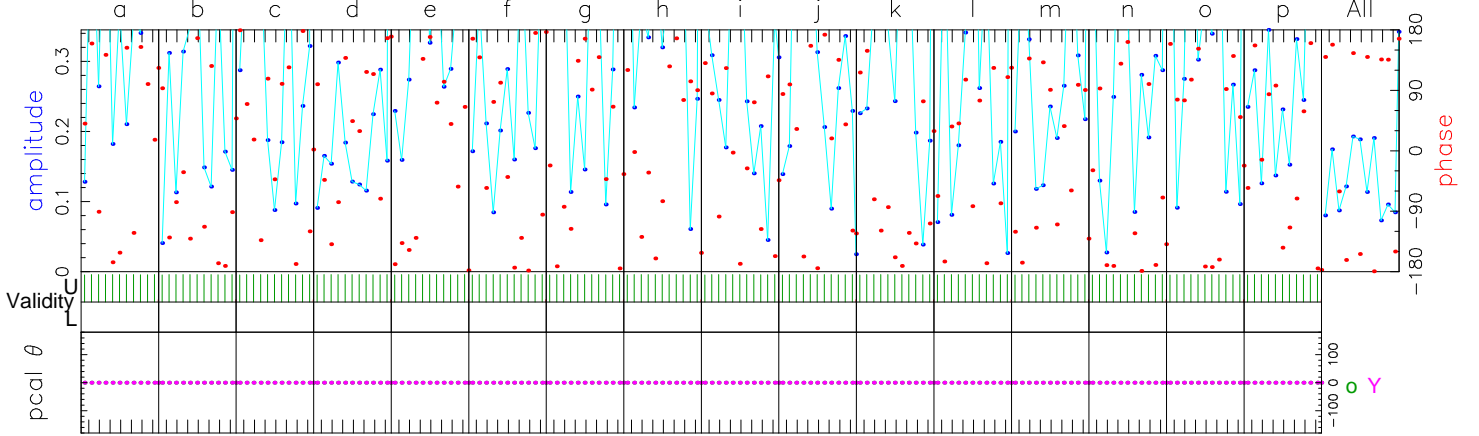
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|-------|
| U/L | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 867/0 | 115.9 |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 0.3 |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 126.7 |
| o: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 | 0.1 |
| o: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 | 0.3 |
| o | 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 | 0.1 |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | 0.3 |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | W08UR | W09UR | W10UR | W11UR | W12UR | W13UR | W14UR | W15UR | | 0.3 |
| Group delay (usec)(sbd) | 6.48385924856E+03 | | | Apriori delay (usec) | | | 6.48388331165E+03 | | | Resid mbdelay (usec) | | | 7.18691E-03 | | | +/- 9.7E-05 | | |
| Sband delay (usec) | 6.48386531865E+03 | | | Apriori clock (usec) | | | 6.9962130E+00 | | | Resid sbdelay (usec) | | | -1.79930E-02 | | | +/- 1.6E-03 | | |
| Phase delay (usec) | 6.48388331539E+03 | | | Apriori clockrate (us/s) | | | -2.1901900E-07 | | | Resid phdelay (usec) | | | 3.73654E-06 | | | +/- 3.3E-07 | | |
| Delay rate (us/s) | 1.85299147646E+00 | | | Apriori rate (us/s) | | | 1.85299129796E+00 | | | Resid rate (us/s) | | | 1.78504E-07 | | | +/- 1.4E-09 | | |
| Total phase (deg) | 283.5 | | | Apriori accel (us/s/s) | | | -3.61687127378E-05 | | | Resid phase (deg) | | | 115.9 | | | +/- 10.3 | | |

| | RMS | Theor. | Amplitude | 0.202 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 46.1 | 17.9 | Search (2048X64) | 0.198 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 55.2 | 31.3 | Interp. | 0.000 | Bits/sample: 2x2 | mb window (us) -0.016 0.016 |
| ph/frq (deg) | 69.3 | 20.7 | Inc. seg. avg. | 0.260 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 70.6 | 36.1 | Inc. frq. avg. | 0.295 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

o: az 101.5 el 47.9 pa -56.2 Y: az 273.9 el 27.2 pa 53.9 u,v (fr/asec) -11337.444 -1364.901 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oY..130BZK Output file: /Exps/c192b/v2/1234/No0053/oY.W.346.130BZK



Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec

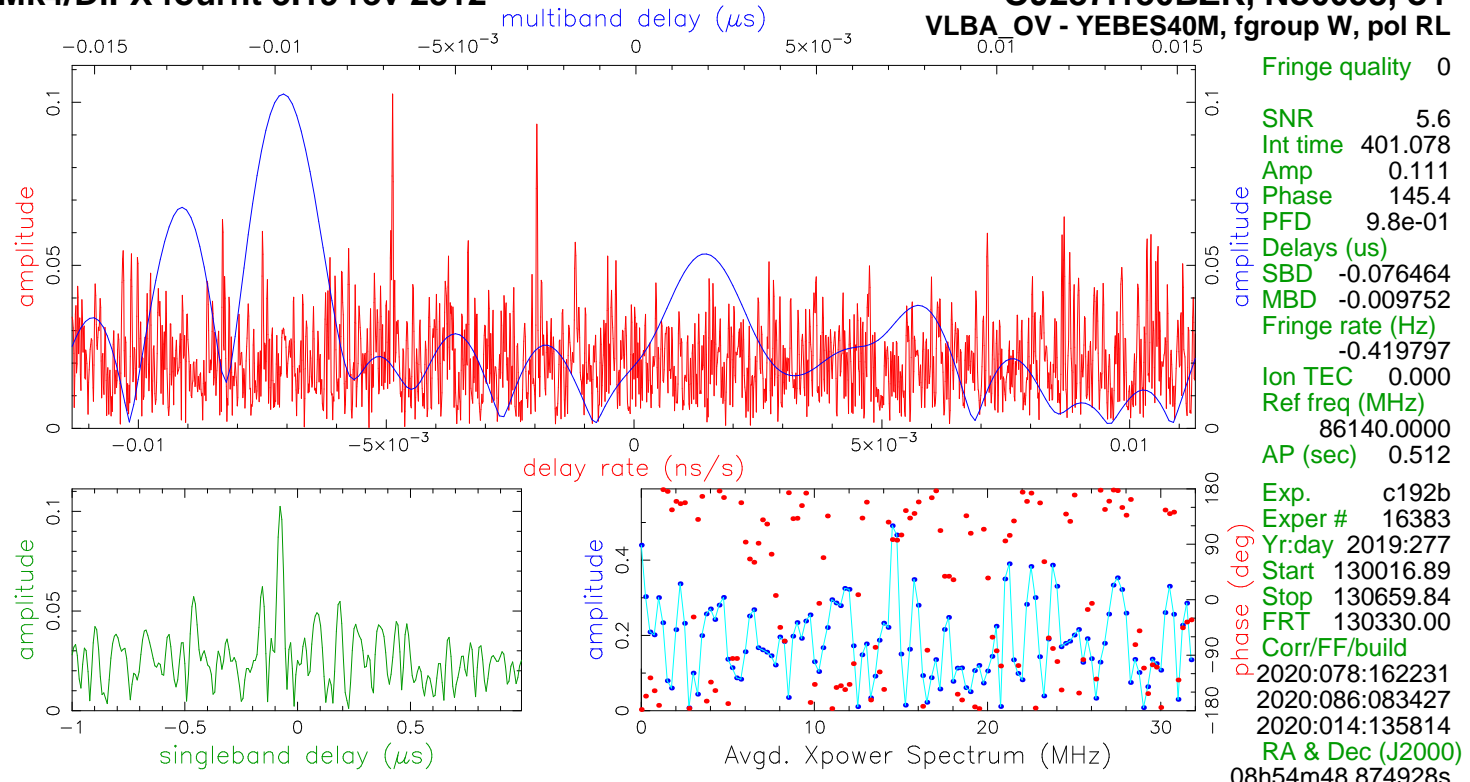


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|----------|------------|-------|
| | 146.5 | -145.1 | 138.8 | -171.6 | 147.5 | -149.4 | 168.9 | 145.9 | 170.2 | 137.7 | -132.3 | -155.7 | 167.9 | 171.4 | 147.3 | 173.2 | Phase | 170.7 |
| | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | Ampl. | 0.1 |
| | 108.4 | 108.1 | 175.8 | 141.6 | 125.7 | 160.7 | 105.3 | 180.7 | 105.3 | 119.2 | 147.2 | 169.8 | 20.3 | 146.4 | 255.3 | 78.1 | Sbd box | 37.9 |
| UL | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | APs used | |
| o | 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 | |
| o: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: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 | |
| o | 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 | | |
| o | 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) | 6.48317113398E+03 | | | Apriori delay (usec) | | | 6.48388331165E+03 | | | Resid mbdelay (usec) | | | 6.57233E-03 | | | +/- | 1.9E-04 | |
| Sband delay (usec) | 6.48317141665E+03 | | | Apriori clock (usec) | | | 6.9962130E+00 | | | Resid sbdelay (usec) | | | -7.11895E-01 | | | +/- | 3.1E-03 | |
| Phase delay (usec) | 6.48388331716E+03 | | | Apriori clockrate (us/s) | | | -2.1901900E-07 | | | Resid phdelay (usec) | | | 5.50472E-06 | | | +/- | 6.6E-07 | |
| Delay rate (us/s) | 1.85299712893E+00 | | | Apriori rate (us/s) | | | 1.85299129796E+00 | | | Resid rate (us/s) | | | 5.83097E-06 | | | +/- | 2.8E-09 | |
| Total phase (deg) | 338.3 | | | Apriori accel (us/s/s) | | | -3.61687127378E-05 | | | Resid phase (deg) | | | 170.7 | | | +/- | 20.3 | |

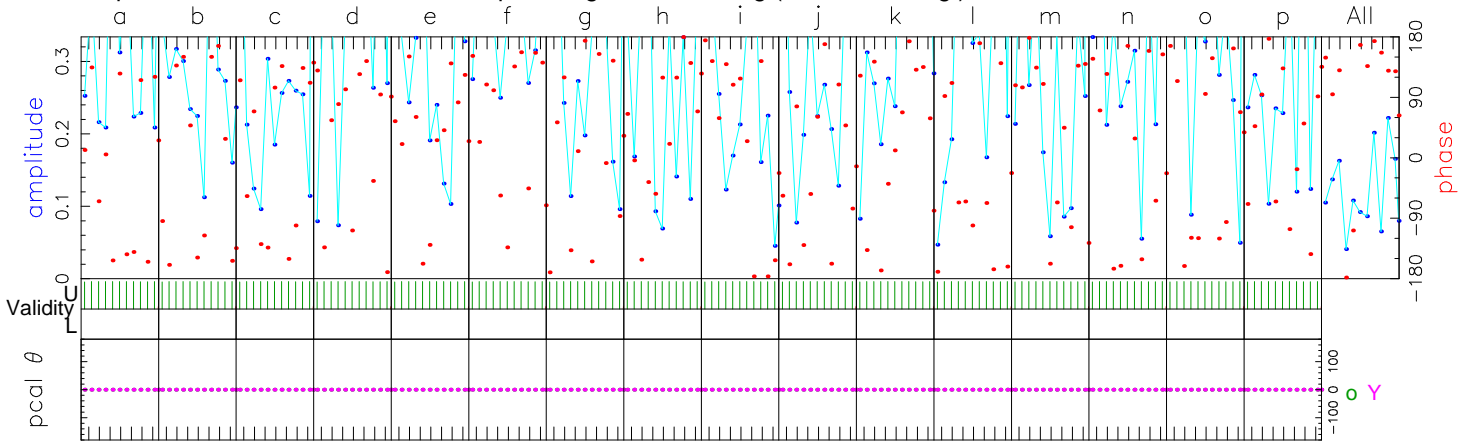
| | RMS | Theor. | Amplitude | 0.115 +/- 0.020 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 47.9 | 35.2 | Search (2048X64) | 0.100 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 55.0 | 61.4 | Interp. | 0.000 | Bits/sample: 2x2 | mb window (us) -0.016 0.016 |
| ph/frq (deg) | 30.1 | 40.7 | Inc. seg. avg. | 0.122 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 56.2 | 71.0 | Inc. frq. avg. | 0.107 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |
| | | | | | nlags: 128 | t_cohere infinite |

o: az 101.5 el 47.9 pa -56.2 Y: az 273.9 el 27.2 pa 53.9 u,v (fr/asec) -11337.444 -1364.901 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oY..130BZK Output file: /Exps/c192b/v2/1234/No0053/oY.W.365.130BZK



Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec

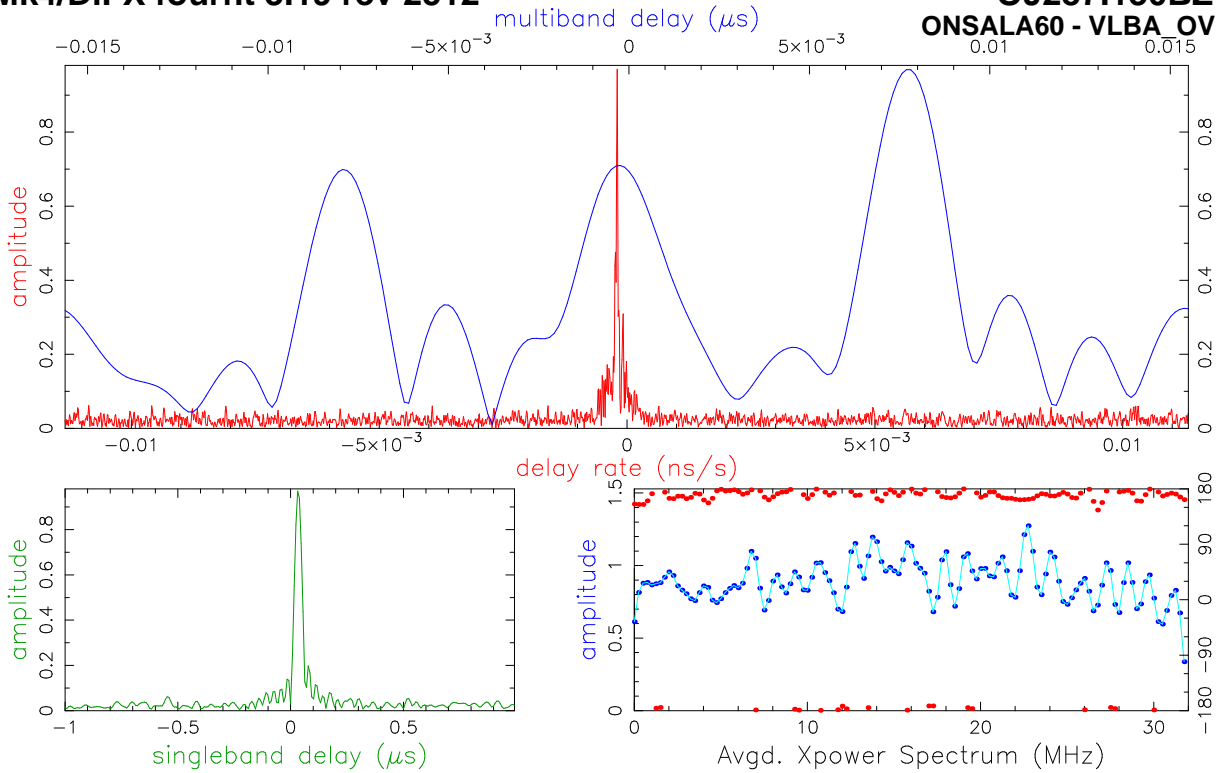


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|----------|--------------------------|----------|----------|--------------------|----------|----------|----------------------|----------|----------|--------------|----------|----------|-------------|------------|-------|
| | -175.6 | 170.2 | 156.1 | 127.3 | 84.9 | 133.7 | 140.6 | 60.2 | 145.3 | -69.7 | 119.1 | -151.7 | 139.7 | 144.9 | 177.3 | 67.0 | Phase | 145.4 |
| | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | Ampl. | 0.1 |
| | 83.9 | 5.5 | 41.7 | 134.1 | 58.2 | 115.6 | 131.7 | 54.4 | 142.0 | 184.7 | 233.0 | 8.1 | 212.1 | 107.8 | 67.9 | 184.8 | Sbd box | 119.2 |
| UL | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | 787/0 | APs used | |
| o | 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 | |
| o: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 | |
| o: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 | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Chan ids | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Tracks | |
| o | 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) | 6.48381105922E+03 | | | Apriori delay (usec) | | | 6.48388331165E+03 | | | Resid mbdelay (usec) | | | -9.75243E-03 | | | +/- 1.9E-04 | | |
| Sband delay (usec) | 6.48380684715E+03 | | | Apriori clock (usec) | | | 6.9962130E+00 | | | Resid sbdelay (usec) | | | -7.64645E-02 | | | +/- 3.1E-03 | | |
| Phase delay (usec) | 6.48388331634E+03 | | | Apriori clockrate (us/s) | | | -2.1901900E-07 | | | Resid phdelay (usec) | | | 4.68970E-06 | | | +/- 6.5E-07 | | |
| Delay rate (us/s) | 1.85298642453E+00 | | | Apriori rate (us/s) | | | 1.85299129796E+00 | | | Resid rate (us/s) | | | -4.87343E-06 | | | +/- 2.8E-09 | | |
| Total phase (deg) | 313.0 | | | Apriori accel (us/s/s) | | | -3.61687127378E-05 | | | Resid phase (deg) | | | 145.4 | | | +/- 20.3 | | |

| | RMS | Theor. | Amplitude | 0.111 +/- 0.020 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 40.4 | 35.2 | Search (2048X64) | 0.100 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 57.0 | 61.4 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled |
| ph/frq (deg) | 57.6 | 40.6 | Inc. seg. avg. | 0.114 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 48.9 | 70.9 | Inc. frq. avg. | 0.116 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

o: az 101.5 el 47.9 pa -56.2 Y: az 273.9 el 27.2 pa 53.9 u,v (fr/asec) -11337.444 -1364.901 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/oY..130BZK Output file: /Exps/c192b/v2/1234/No0053/oY.W.382.130BZK

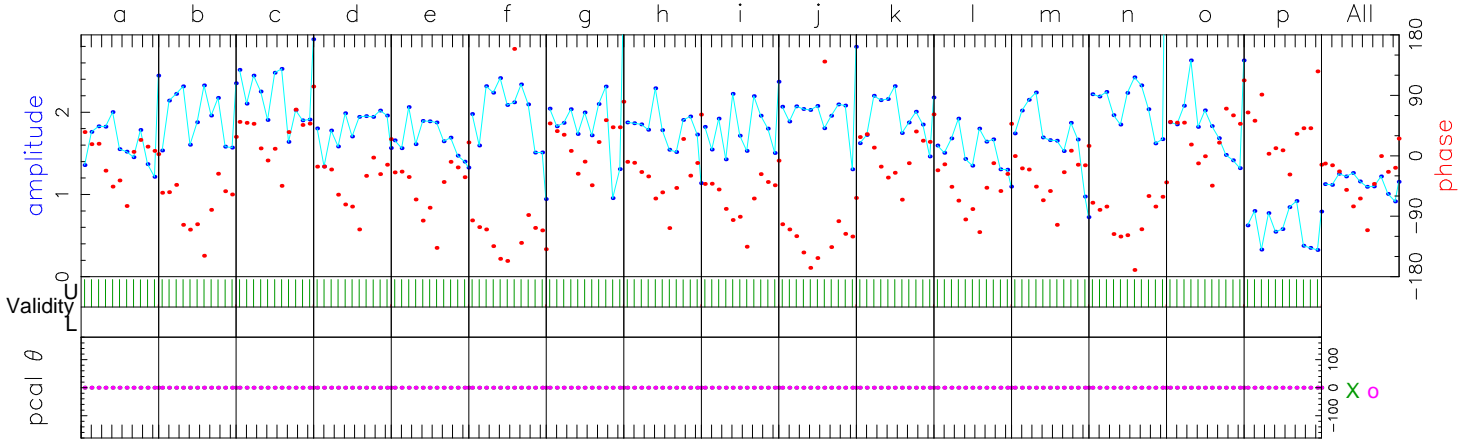


Fringe quality 3

SNR 54.8
 Int time 418.596
 Amp 0.980
 Phase -38.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.033873
 MBD 0.007774
 Fringe rate (Hz)
 -0.017021
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083414
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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 | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -4.9 | -74.8 | 29.7 | -38.4 | -49.0 | -127.1 | 20.0 | -30.9 | -62.0 | -131.4 | 0.0 | -51.5 | -30.5 | -95.2 | 27.7 | 29.4 | Phase | -38.0 | | | | |
| | 1.4 | 1.6 | 1.8 | 1.5 | 1.4 | 1.7 | 1.6 | 1.5 | 1.6 | 1.6 | 1.7 | 1.3 | 1.5 | 1.8 | 1.5 | 0.5 | Ampl. | 1.5 | | | | |
| | 133.7 | 133.1 | 133.1 | 133.6 | 133.1 | 133.6 | 133.8 | 133.4 | 133.4 | 133.5 | 133.4 | 133.4 | 133.3 | 133.2 | 133.5 | 135.4 | Sbd box | 133.3 | | | | |
| 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 | | | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | | | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | | | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 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 | | | | | | |
| X | 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) | | | -9.21585665821E+03 | | | | | | | | | | | | | | Apriori delay (usec) | -9.21589568216E+03 | Resid mbdelay (usec) | 7.77395E-03 | +/- | 2.0E-05 |
| Sband delay (usec) | | | -9.21586180916E+03 | | | | | | | | | | | | | | Apriori clock (usec) | 1.5696571E+01 | Resid sbdelay (usec) | 3.38730E-02 | +/- | 3.1E-04 |
| Phase delay (usec) | | | -9.21589568339E+03 | | | | | | | | | | | | | | Apriori clockrate (us/s) | 5.2701902E-07 | Resid phdelay (usec) | -1.22441E-06 | +/- | 6.7E-08 |
| Delay rate (us/s) | | | -1.58519640276E+00 | | | | | | | | | | | | | | Apriori rate (us/s) | -1.58519620516E+00 | Resid rate (us/s) | -1.97603E-07 | +/- | 2.8E-10 |
| Total phase (deg) | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 5.82707462296E-05 | Resid phase (deg) | -38.0 | +/- | 2.1 |

ph/seg (deg) 32.0 3.6
 amp/seg (%) 18.7 6.3
 ph/frq (deg) 54.5 4.2
 amp/frq (%) 60.7 7.3

RMS Theor. Amplitude 0.980 +/- 0.018
 Search (2048X64) 0.959
 Interp. 0.000
 Inc. seg. avg. 1.132
 Inc. frq. avg. 1.492

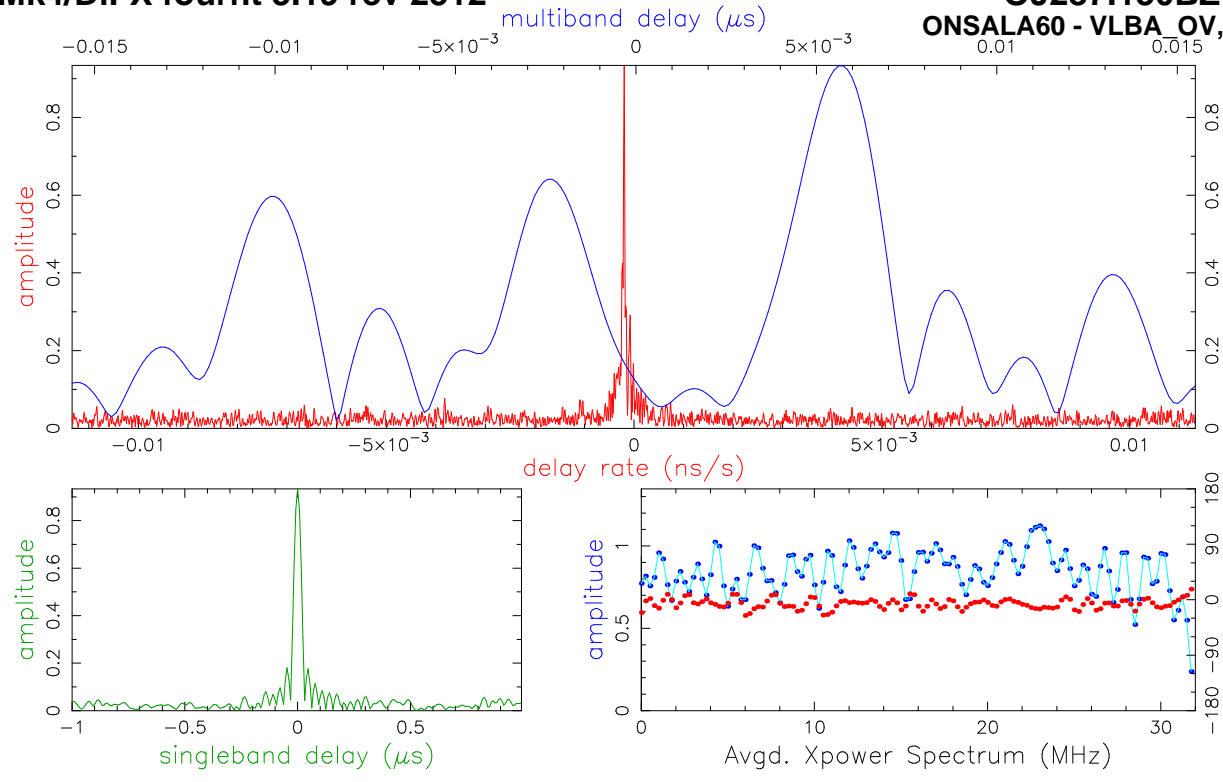
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 PCal rate: 0.000E+00, 0.000E+00 (us/s)
 Bits/sample: 2x2 SampCntNorm: enabled
 Sample rate(MISamp/s): 64
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

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

X: az 277.8 el 19.0 pa 34.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 9730.324 3609.401 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Xo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Xo.W.333.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, Xo
 ONSALA60 - VLBA_OV, fgroup W, pol RR

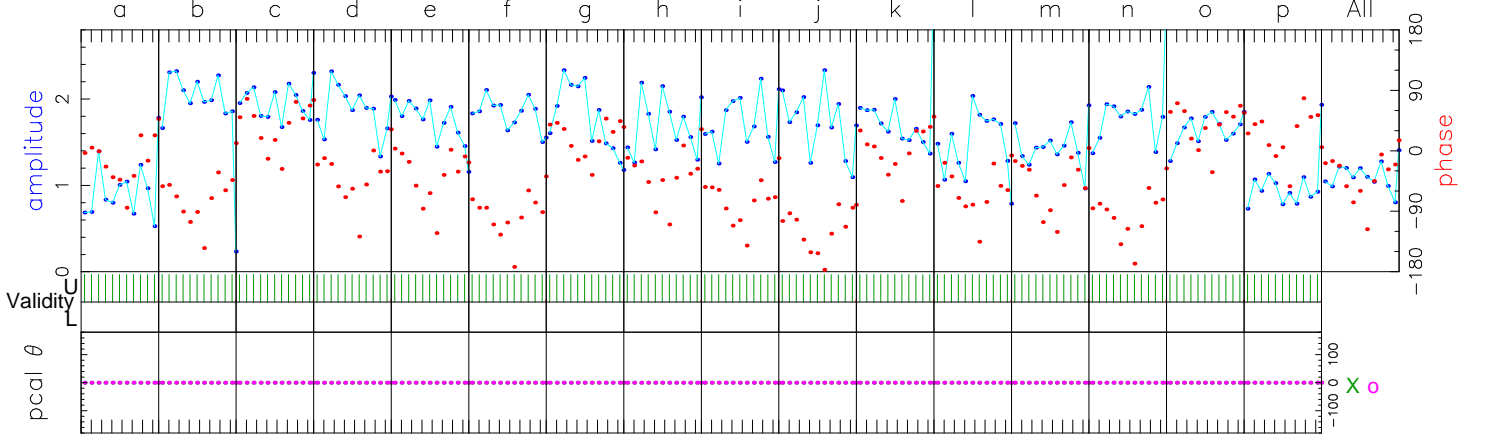


Fringe quality 2

SNR 52.2
 Int time 418.597
 Amp 0.934
 Phase -40.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.000098
 MBD 0.005684
 Fringe rate (Hz)
 -0.016992
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083419
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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 | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -16.5 | -71.9 | 39.8 | -41.2 | -33.6 | -95.6 | 16.8 | -37.3 | -77.7 | -120.1 | 1.7 | -62.4 | -50.7 | -97.6 | 38.9 | 27.2 | | Phase | -40.1 | | | | |
| | 0.8 | 1.8 | 1.7 | 1.6 | 1.4 | 1.6 | 1.4 | 1.4 | 1.5 | 1.5 | 1.3 | 1.1 | 1.1 | 1.5 | 1.4 | 0.8 | | Ampl. | 1.4 | | | | |
| | 130.4 | 129.0 | 129.0 | 129.2 | 129.1 | 129.0 | 129.0 | 129.0 | 129.3 | 129.3 | 129.2 | 129.1 | 129.2 | 129.2 | 129.3 | 130.3 | | 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 | | | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase | | | | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC | | | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 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 | | PC amp | | | | | |
| X | 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) | | | -9.2158899830E+03 | | | | | | | | | | | | | | | Apriori delay (usec) | -9.21589568216E+03 | Resid mbdelay (usec) | 5.68386E-03 | +/- | 2.1E-05 |
| Sband delay (usec) | | | -9.21589578016E+03 | | | | | | | | | | | | | | | Apriori clock (usec) | 1.5696571E+01 | Resid sbdelay (usec) | -9.80000E-05 | +/- | 3.3E-04 |
| Phase delay (usec) | | | -9.21589568346E+03 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 5.2701902E-07 | Resid phdelay (usec) | -1.29343E-06 | +/- | 7.1E-08 |
| Delay rate (us/s) | | | -1.58519640242E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.58519620516E+00 | Resid rate (us/s) | -1.97264E-07 | +/- | 2.9E-10 |
| Total phase (deg) | | | | | -62.2 | | | | | | | | | | | | | Apriori accel (us/s/s) | 5.82707462296E-05 | Resid phase (deg) | -40.1 | +/- | 2.2 |

ph/seg (deg) 31.7 3.8
 amp/seg (%) 21.8 6.6
 ph/frq (deg) 52.5 4.4
 amp/frq (%) 58.3 7.7

RMS Theor. Amplitude 0.934 +/- 0.018
 Search (2048X64) 0.915
 Interp. 0.000
 Inc. seg. avg. 1.088
 Inc. frq. avg. 1.400

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

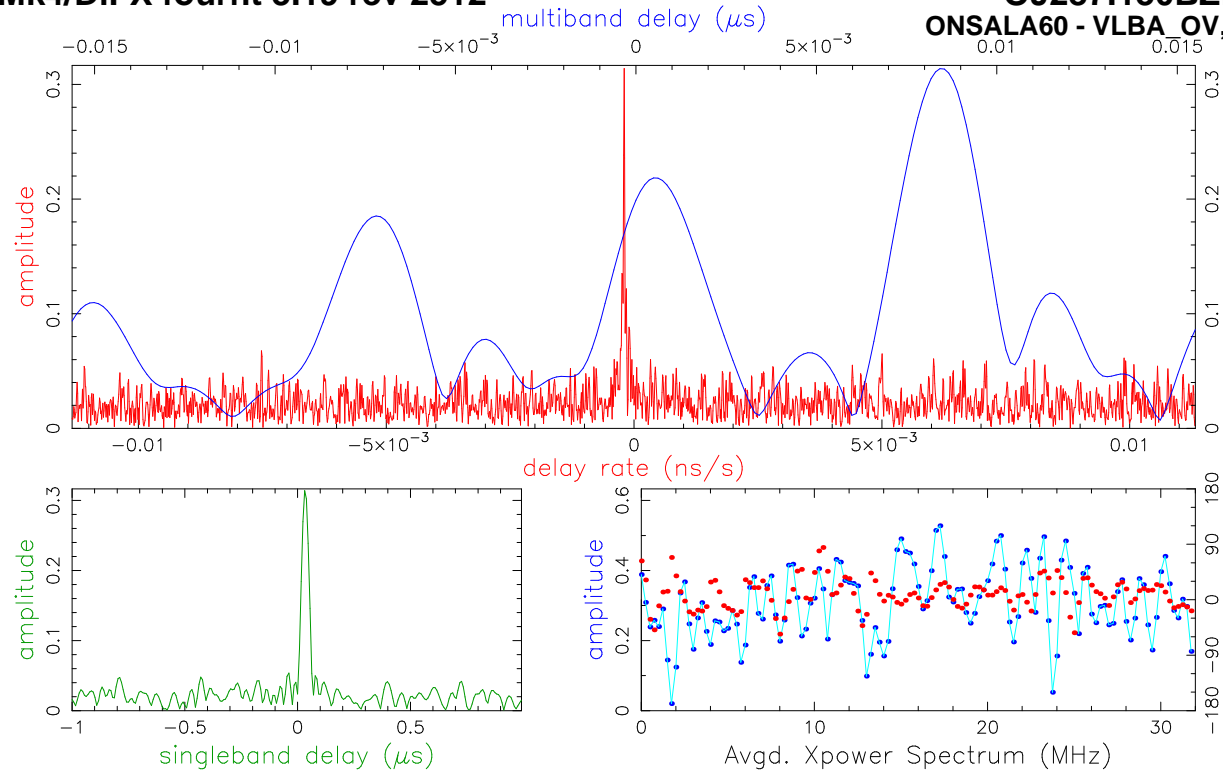
sb window (us) -1.000 1.000
 mb window (us) -0.016 0.016
 dr window (ns/s) -0.011 0.011
 ion window (TEC) 0.00 0.00

X: az 277.8 el 19.0 pa 34.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 9730.324 3609.401 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Xo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Xo.W.350.130BZK

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.130BZK, No0053, Xo
 ONSALA60 - VLBA OV, fgroup W, pol LR

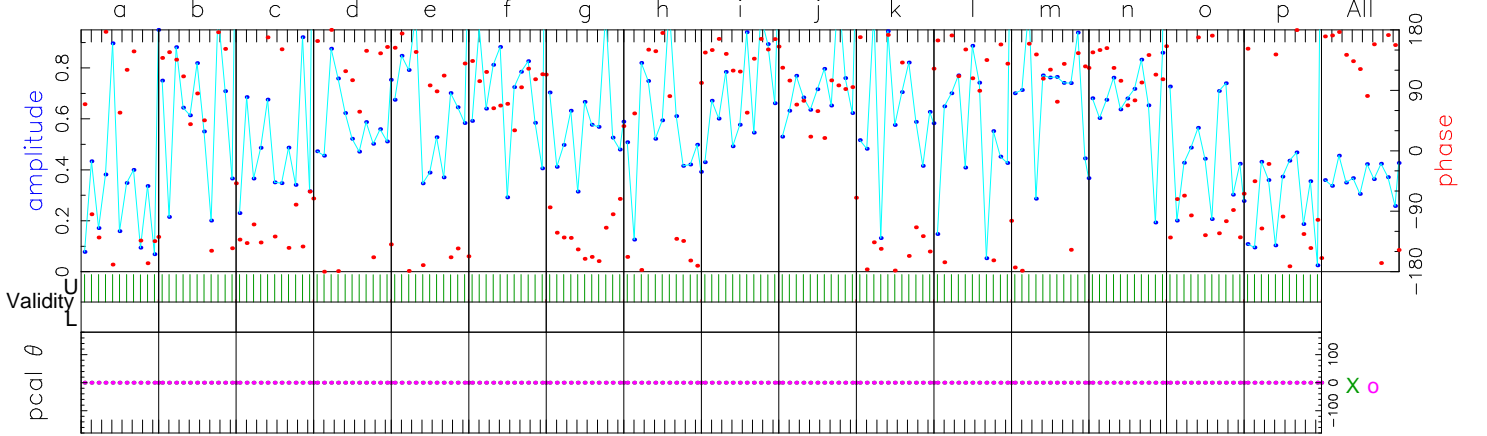


Fringe quality 8

SNR 17.7
 Int time 418.597
 Amp 0.317
 Phase 155.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.033567
 MBD 0.008491
 Fringe rate (Hz)
 -0.017015
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

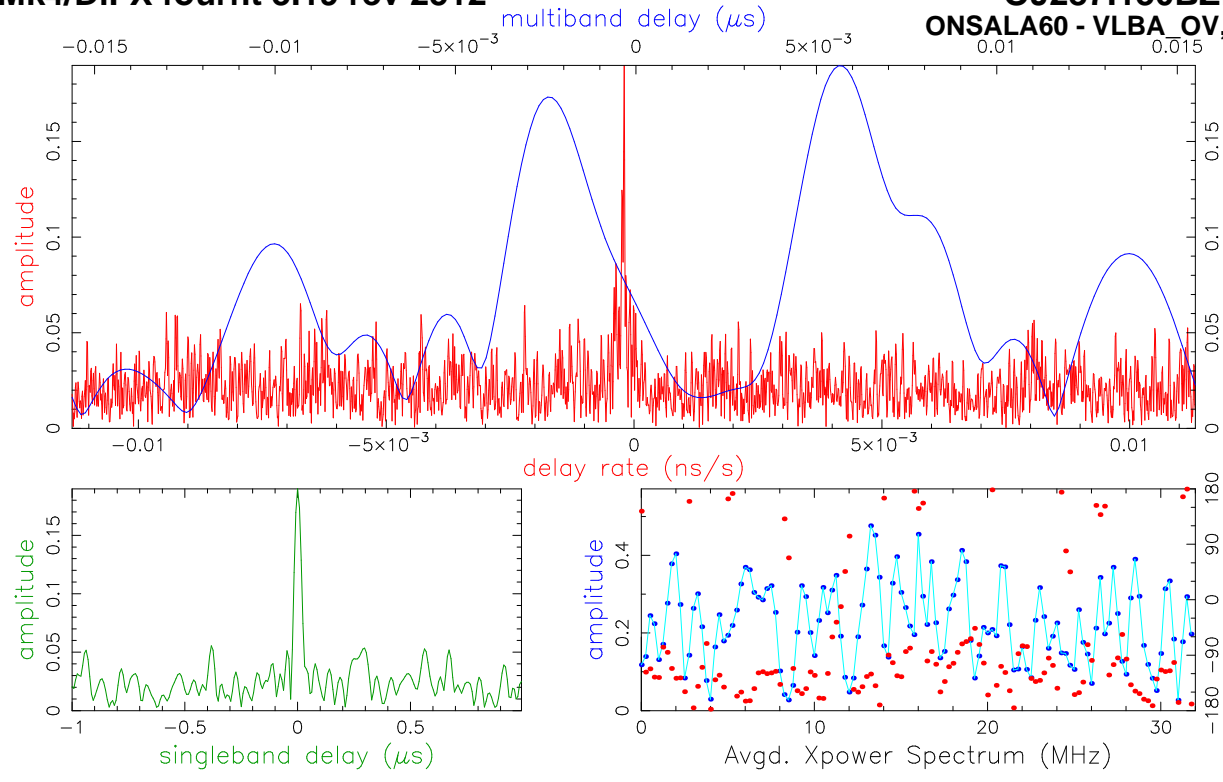
Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083426
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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



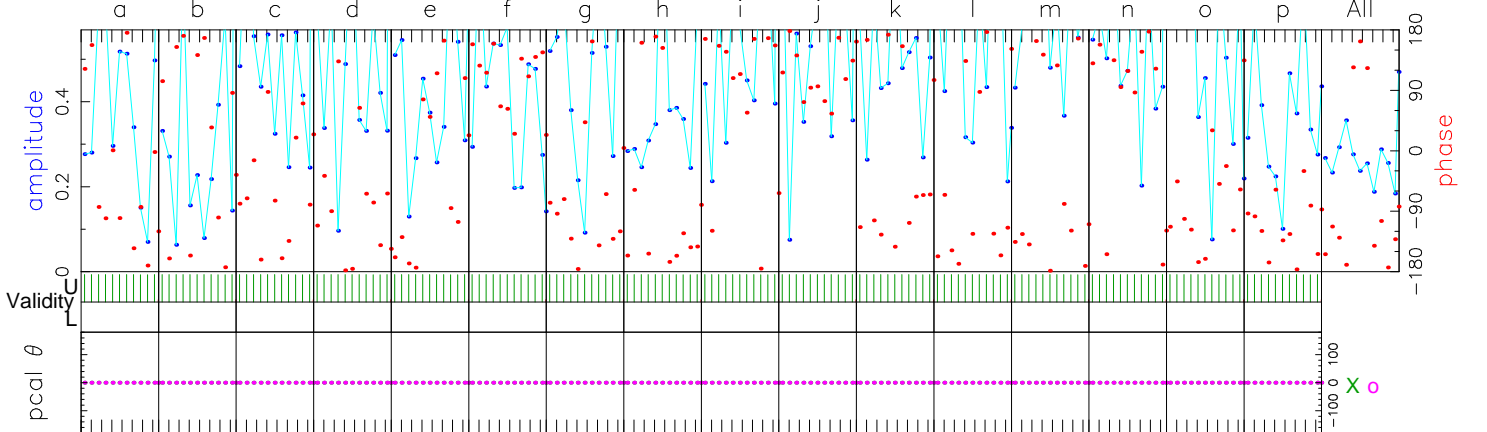
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -174.0 | 128.1 | -137.8 | 154.7 | 160.0 | 93.2 | -124.2 | 171.2 | 140.5 | 78.1 | -164.6 | 143.1 | 144.6 | 116.9 | -119.0 | -137.3 | Phase | 155.1 | | | | |
| | 0.2 | 0.4 | 0.4 | 0.5 | 0.6 | 0.5 | 0.6 | 0.4 | 0.6 | 0.6 | 0.5 | 0.4 | 0.6 | 0.6 | 0.4 | 0.2 | Ampl. | 0.4 | | | | |
| | 135.2 | 133.1 | 132.2 | 133.0 | 133.1 | 133.6 | 133.3 | 133.3 | 133.2 | 133.5 | 133.5 | 132.9 | 133.3 | 133.4 | 133.5 | 136.0 | Sbd box | 133.3 | | | | |
| 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 | | | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | | | | | |
| X: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 | | | | | |
| X | 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 | | | | | | |
| X | 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) | | | -9.21585594090E+03 | | | | | | | | | | | | | | Apriori delay (usec) | -9.21589568216E+03 | Resid mbdelay (usec) | 8.49126E-03 | +/- | 6.1E-05 |
| Sband delay (usec) | | | -9.21586211466E+03 | | | | | | | | | | | | | | Apriori clock (usec) | 1.5696571E+01 | Resid sbdelay (usec) | 3.35675E-02 | +/- | 9.7E-04 |
| Phase delay (usec) | | | -9.21589567716E+03 | | | | | | | | | | | | | | Apriori clockrate (us/s) | 5.2701902E-07 | Resid phdelay (usec) | 5.00141E-06 | +/- | 2.1E-07 |
| Delay rate (us/s) | | | -1.58519640268E+00 | | | | | | | | | | | | | | Apriori rate (us/s) | -1.58519620516E+00 | Resid rate (us/s) | -1.97523E-07 | +/- | 8.6E-10 |
| Total phase (deg) | | | | 133.0 | | | | | | | | | | | | | Apriori accel (us/s/s) | 5.82707462296E-05 | Resid phase (deg) | 155.1 | +/- | 6.5 |

ph/seg (deg) 30.3 11.2 Search (2048X64) 0.317 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 22.8 19.6 Interp. 0.305 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 52.3 12.9 Inc. seg. avg. 0.359 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 59.9 22.6 Inc. frq. avg. 0.446 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 X: az 277.8 el 19.0 pa 34.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 9730.324 3609.401 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Xo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Xo.W.375.130BZK



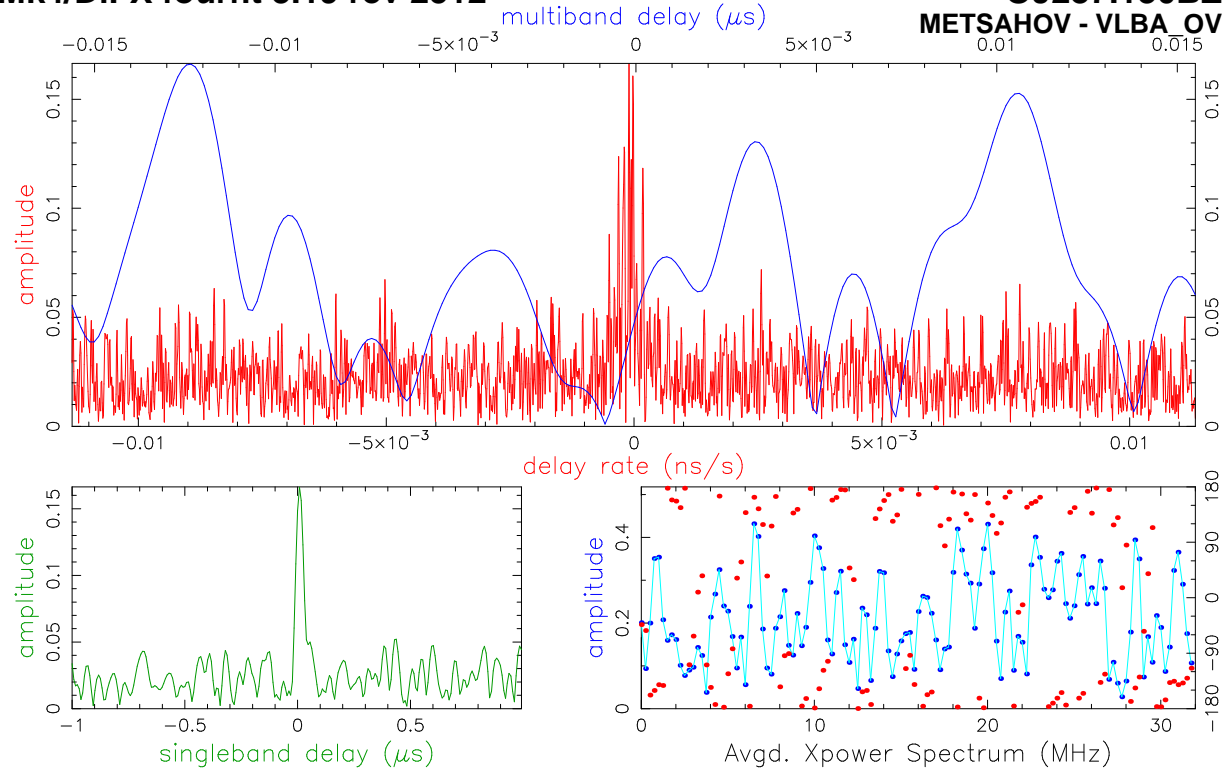
Fringe quality 9
 SNR 10.6
 Int time 418.596
 Amp 0.190
 Phase -160.2
 PFD 1.1e-17
 Delays (us)
 SBD 0.000377
 MBD 0.005666
 Fringe rate (Hz)
 -0.017136
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083431
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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



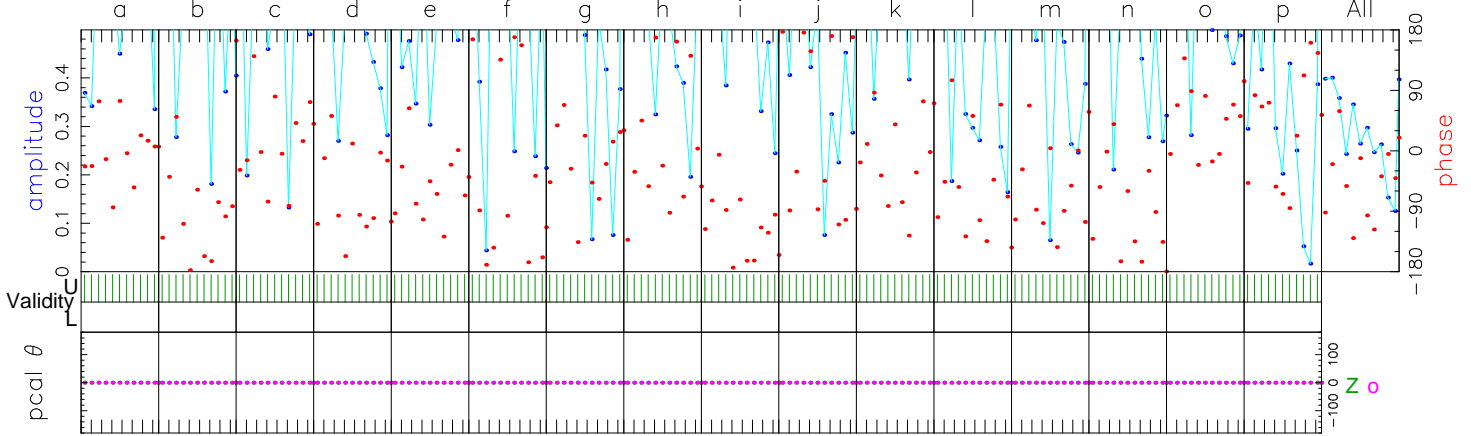
| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -109.3 | 174.2 | -58.5 | -115.0 | -156.6 | 115.8 | -111.6 | -160.2 | 150.2 | 109.8 | -122.2 | -155.2 | -168.4 | 143.6 | -89.4 | -104.1 | Phase | -160.2 | | | | |
| | 0.2 | 0.2 | 0.1 | 0.3 | 0.1 | 0.3 | 0.4 | 0.3 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | Ampl. | 0.3 | | | | |
| | 130.5 | 100.4 | 27.9 | 129.3 | 174.7 | 129.0 | 129.6 | 129.3 | 129.1 | 129.1 | 128.5 | 129.1 | 129.0 | 129.0 | 129.6 | 130.2 | 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 | | | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | | | | |
| X:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | | | | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 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 | PC amp | | | | | |
| X | 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 | | | | | |
| | | | | | | | | | | | | | | | | | Chan ids | | | | | |
| | | | | | | | | | | | | | | | | | Tracks | | | | | |
| Group delay (usec)(sbd) | | | -9.21589001652E+03 | | | | | | | | | | | | | | Apriori delay (usec) | -9.21589568216E+03 | Resid mbdelay (usec) | 5.66564E-03 | +/- | 1.0E-04 |
| Sband delay (usec) | | | -9.21589530466E+03 | | | | | | | | | | | | | | Apriori clock (usec) | 1.5696571E+01 | Resid sbdelay (usec) | 3.77500E-04 | +/- | 1.6E-03 |
| Phase delay (usec) | | | -9.21589568733E+03 | | | | | | | | | | | | | | Apriori clockrate (us/s) | 5.2701902E-07 | Resid phdelay (usec) | -5.16588E-06 | +/- | 3.5E-07 |
| Delay rate (us/s) | | | -1.58519640409E+00 | | | | | | | | | | | | | | Apriori rate (us/s) | -1.58519620516E+00 | Resid rate (us/s) | -1.98934E-07 | +/- | 1.4E-09 |
| Total phase (deg) | | | | | | | | | | | | | | | | | Apriori accel (us/s/s) | 5.82707462296E-05 | Resid phase (deg) | -160.2 | +/- | 10.8 |

ph/seg (deg) 43.8 18.7 Search (2048X64) 0.187 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 45.0 32.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 58.8 21.6 Inc. seg. avg. 0.246 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 85.9 37.7 Inc. frq. avg. 0.293 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 X: az 277.8 el 19.0 pa 34.5 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 9730.324 3609.401 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Xo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Xo.W.394.130BZK



Fringe quality 9
 SNR 9.3
 Int time 418.228
 Amp 0.166
 Phase -54.3
 PFD 5.1e-12
 Delays (us)
 SBD 0.008894
 MBD -0.012358
 Fringe rate (Hz)
 -0.008438
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083421
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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

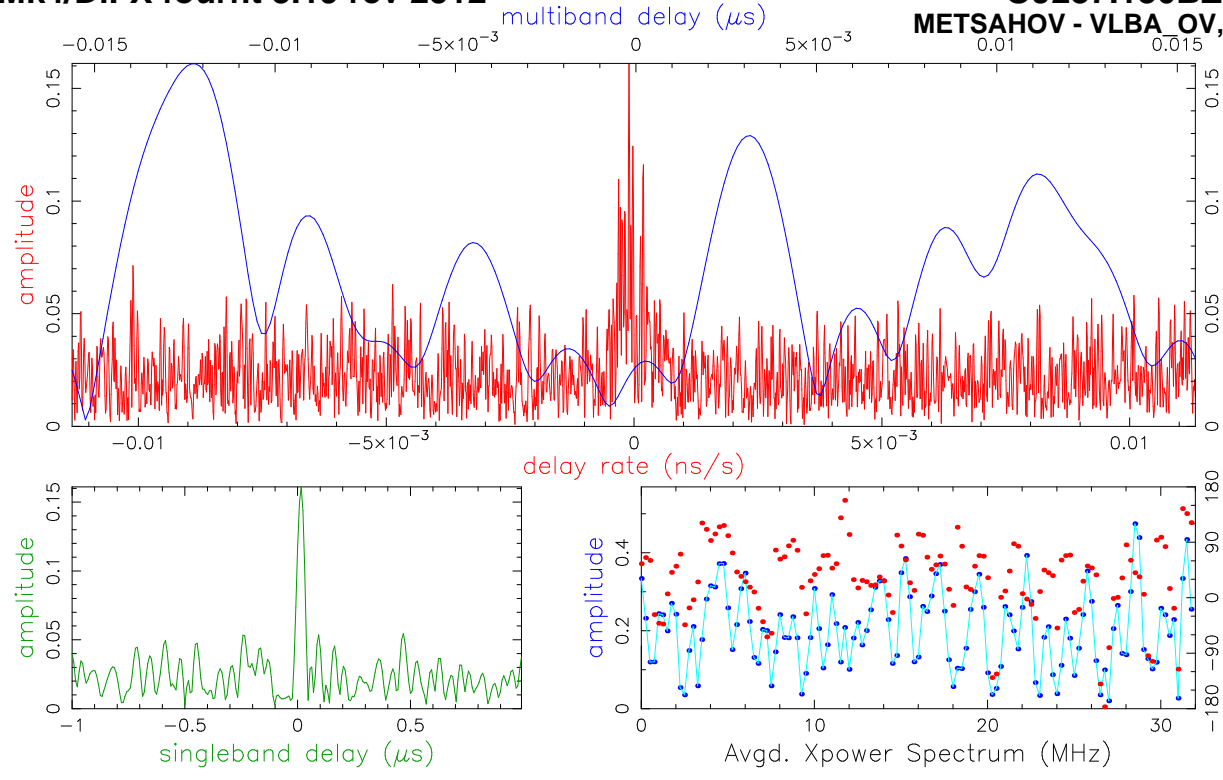


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All | | |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|----------|----------|
| 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 | 820/0 | 820/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs |
| Z:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 |
| Z:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 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 |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| Z | 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 |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -1.12682136204E+04 | Apriori delay (usec) | -1.12682325128E+04 | Resid mbdelay (usec) | -1.23576E-02 | +/- | 1.2E-04 |
| Sband delay (usec) | -1.12682236188E+04 | Apriori clock (usec) | -1.6472549E+01 | Resid sbdelay (usec) | 8.89400E-03 | +/- | 1.9E-03 |
| Phase delay (usec) | -1.12682325145E+04 | Apriori clockrate (us/s) | 1.5311808E-08 | Resid phdelay (usec) | -1.74949E-06 | +/- | 4.0E-07 |
| Delay rate (us/s) | -1.51564279225E+00 | Apriori rate (us/s) | -1.51564269430E+00 | Resid rate (us/s) | -9.79524E-08 | +/- | 1.6E-09 |
| Total phase (deg) | -288.5 | Apriori accel (us/s/s) | 7.00014994247E-05 | Resid phase (deg) | -54.3 | +/- | 12.3 |

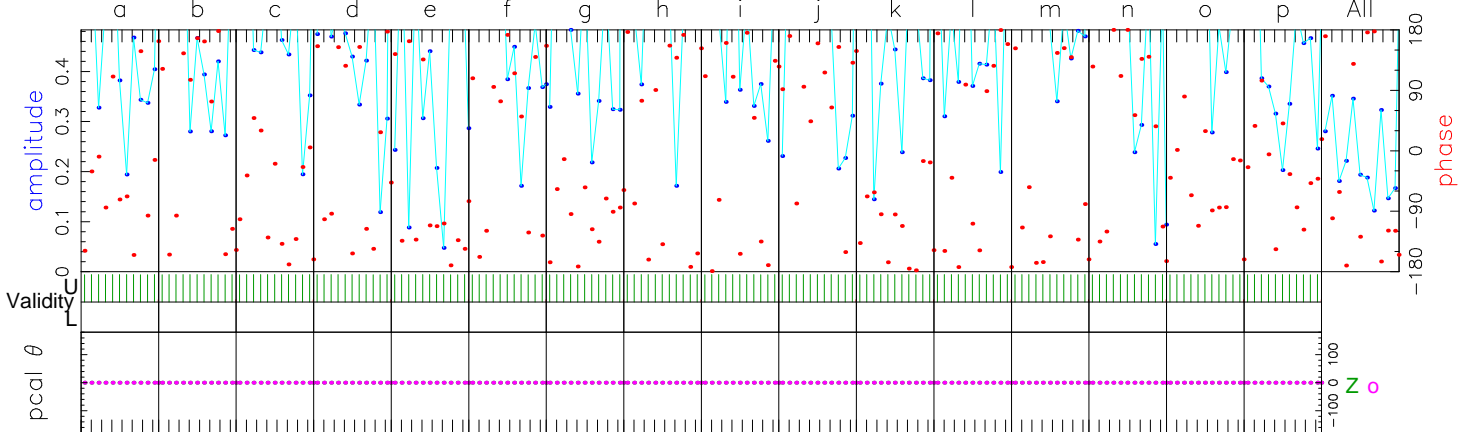
| | | | | | | | |
|-----------------------------|---|---|----------------------------|-------|-----------------|--|-------------------------------|
| ph/seg (deg) | RMS 53.8 | Theor. 21.3 | Amplitude Search (2048X64) | 0.163 | 0.166 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 86.9 | 37.2 | Interp. | 0.000 | 0.163 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 64.9 | 24.6 | Inc. seg. avg. | 0.264 | 0.264 | Bits/sample: 2x2 | SampCntNorm: enabled |
| amp/frq (%) | 100.6 | 43.0 | Inc. frq. avg. | 0.285 | 0.285 | Sample rate(MISamp/s): 64 | dr window (ns/s) -0.011 0.011 |
| Z: az 287.2 el 13.3 pa 30.3 | o: az 101.5 el 47.9 pa -56.2 | u,v (fr/asec) 9320.584 4160.031 | | | | Data rate(Mb/s): 2048 | nlags: 128 t_cohere infinite |
| Control file: cf_1234_gmva | Input file: /Exps/c192b/v2/1234/No0053/Zo..130BZK | Output file: /Exps/c192b/v2/1234/No0053/Zo.W.360.130BZK | | | | | ion window (TEC) 0.00 0.00 |

simultaneous interpolator



Fringe quality 9
 SNR 9.0
 Int time 418.229
 Amp 0.161
 Phase -155.4
 PFD 8.0e-11
 Delays (us)
 SBD 0.014910
 MBD -0.012263
 Fringe rate (Hz)
 -0.008376
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083426
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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

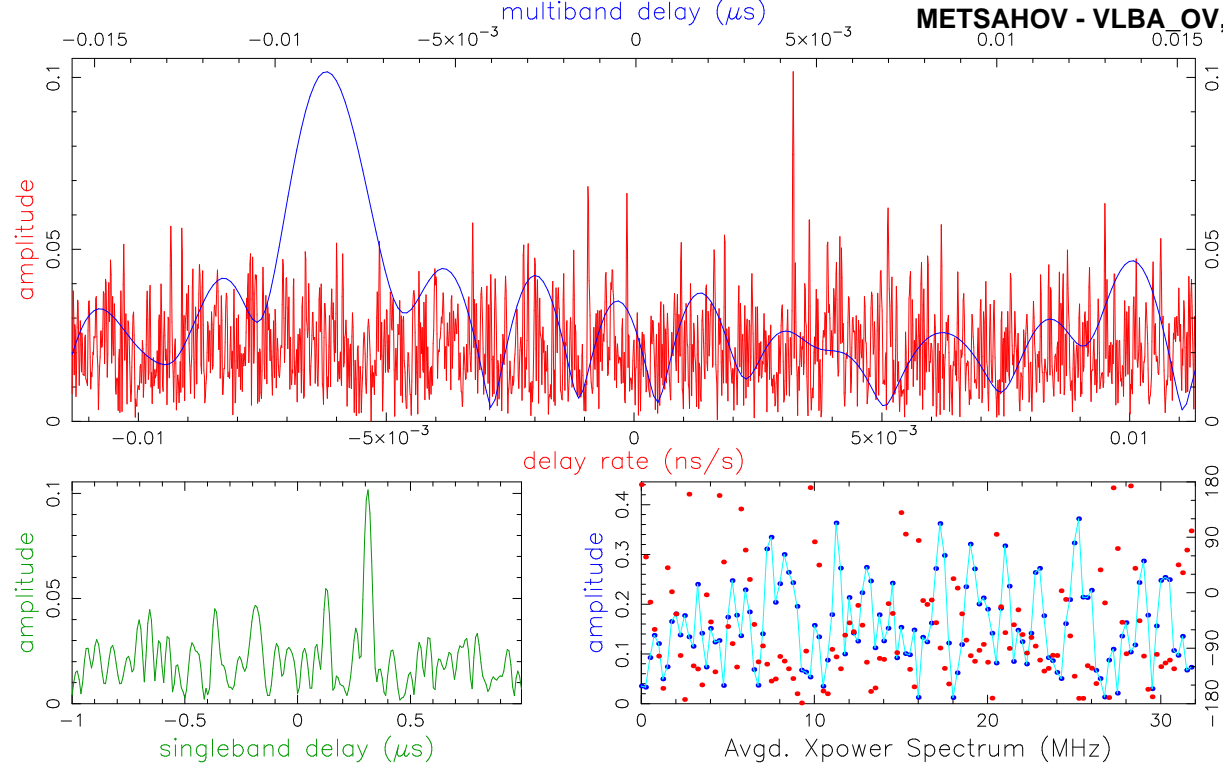


| | 86012.00 | 86044.00 | 86076.00 | 86108.00 | 86140.00 | 86172.00 | 86204.00 | 86236.00 | 86268.00 | 86300.00 | 86332.00 | 86364.00 | 86396.00 | 86428.00 | 86460.00 | 86492.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -97.5 | -178.4 | -71.0 | -156.9 | -145.7 | 150.8 | -79.8 | -177.8 | 155.2 | 126.1 | -112.9 | 161.0 | -159.2 | 166.4 | -34.3 | -25.0 | Phase | -155.4 |
| | 0.1 | 0.4 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.2 | Ampl. | 0.3 |
| | 220.3 | 130.4 | 129.8 | 130.9 | 129.9 | 130.2 | 131.2 | 131.5 | 131.2 | 131.1 | 130.2 | 130.3 | 130.6 | 130.8 | 131.4 | 36.3 | Sbd box | 130.9 |
| 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 | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z: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 | |
| Z: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 | |
| Z | 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 | PC amp | |
| Z | 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 | |

Group delay (usec)(sbd) -1.12682135262E+04 Apriori delay (usec) -1.12682325128E+04 Resid mbdelay (usec) -1.22635E-02 +/- 1.2E-04
 Sband delay (usec) -1.12682176023E+04 Apriori clock (usec) -1.6472549E+01 Resid sbdelay (usec) 1.49105E-02 +/- 1.9E-03
 Phase delay (usec) -1.12682325178E+04 Apriori clockrate (us/s) 1.5311808E-08 Resid phdelay (usec) -5.01099E-06 +/- 4.1E-07
 Delay rate (us/s) -1.51564279154E+00 Apriori rate (us/s) -1.51564269430E+00 Resid rate (us/s) -9.72410E-08 +/- 1.7E-09
 Total phase (deg) -29.6 Apriori accel (us/s/s) 7.00014994247E-05 Resid phase (deg) -155.4 +/- 12.7

RMS Theor. Amplitude 0.161 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 46.6 22.0 Search (2048X64) 0.158 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 67.4 38.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 68.5 25.4 Inc. seg. avg. 0.216 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 91.6 44.4 Inc. frq. avg. 0.270 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 287.2 el 13.3 pa 30.3 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 9320.584 4160.031 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Zo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Zo.W.376.130BZK

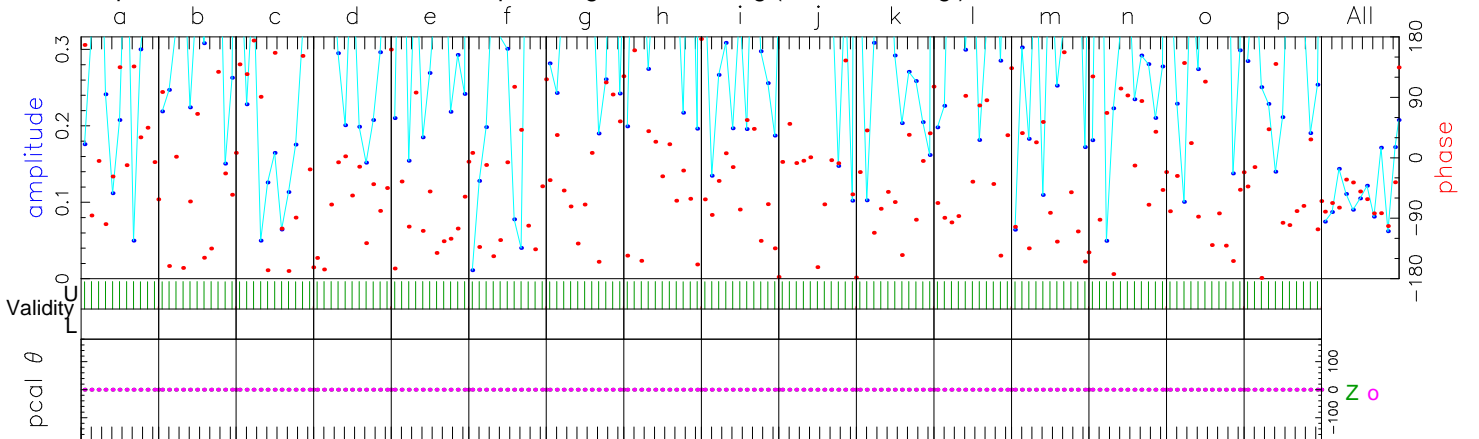


Fringe quality 0

SNR 5.7
 Int time 418.229
 Amp 0.106
 Phase -62.2
 PFD 9.4e-01
 Delays (us)
 SBD 0.310751
 MBD -0.008598
 Fringe rate (Hz)
 0.277278
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083431
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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 | | | | | |
|-------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| | -7.5 | -170.1 | 162.3 | -68.2 | -94.1 | -99.1 | -25.0 | -47.8 | -40.7 | -11.4 | -50.1 | -47.2 | -87.0 | 2.4 | -93.4 | -70.1 | | Phase -62.2 | | | | | |
| | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.2 | 0.2 | | Ampl. 0.1 | | | | | |
| | 134.2 | 132.3 | 123.9 | 82.4 | 164.5 | 7.0 | 184.1 | 221.0 | 151.7 | 167.8 | 109.2 | 127.4 | 71.0 | 11.1 | 162.9 | 170.8 | | Sbd box 168.8 | | | | | |
| 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 | | | | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs | | | | | |
| Z: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 | | | | | |
| Z: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 | | | | | |
| Z | 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 | | PC amp | | | | | |
| Z | 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) | | | -1.12679286106E+04 | | | | | | | | | | | | | | | Apriori delay (usec) | -1.12682325128E+04 | Resid mbdelay (usec) | -8.59786E-03 | +/- | 1.9E-04 |
| Sband delay (usec) | | | -1.12679217623E+04 | | | | | | | | | | | | | | | Apriori clock (usec) | -1.6472549E+01 | Resid sbdelay (usec) | 3.10751E-01 | +/- | 3.0E-03 |
| Phase delay (usec) | | | -1.12682325148E+04 | | | | | | | | | | | | | | | Apriori clockrate (us/s) | 1.5311808E-08 | Resid phdelay (usec) | -2.00626E-06 | +/- | 6.5E-07 |
| Delay rate (us/s) | | | -1.51563947538E+00 | | | | | | | | | | | | | | | Apriori rate (us/s) | -1.51564269430E+00 | Resid rate (us/s) | 3.21892E-06 | +/- | 2.7E-09 |
| Total phase (deg) | | | | | -296.5 | | | | | | | | | | | | | Apriori accel (us/s/s) | 7.00014994247E-05 | Resid phase (deg) | -62.2 | +/- | 20.1 |

ph/seg (deg) 25.8 34.8
 amp/seg (%) 37.2 60.7
 ph/frq (deg) 57.5 40.2
 amp/frq (%) 58.5 70.1

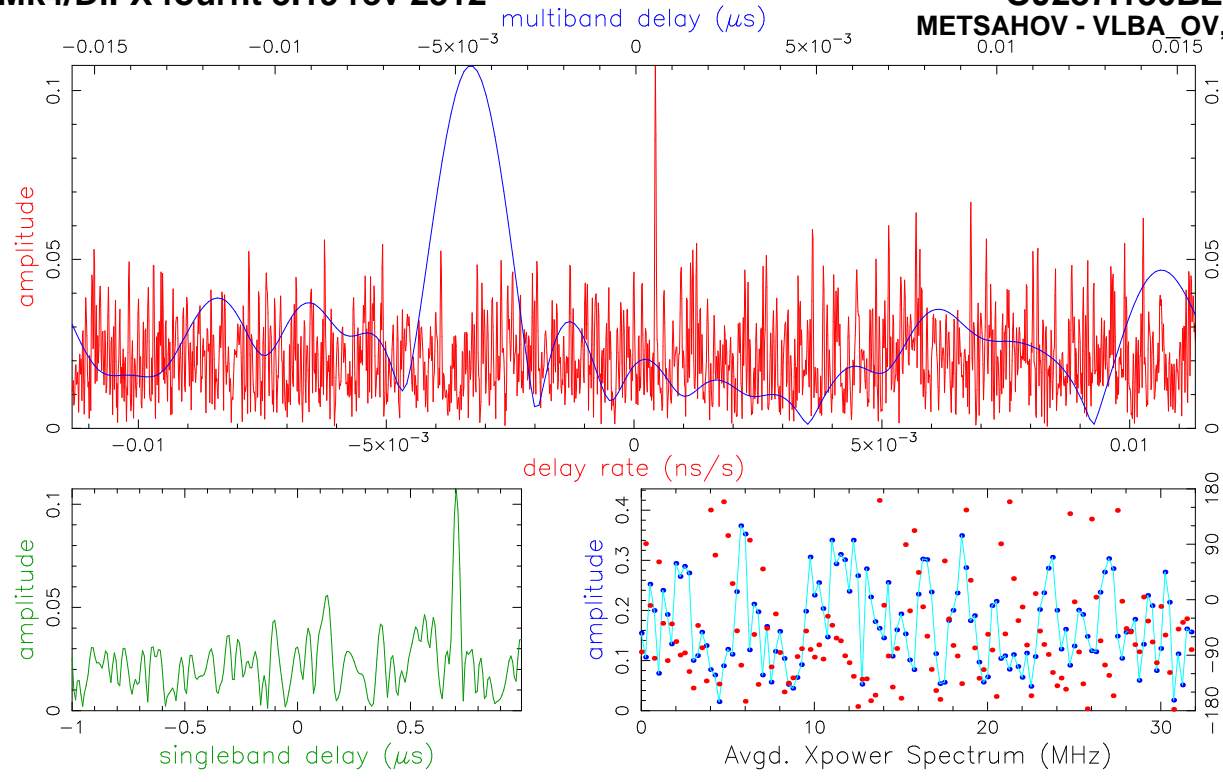
RMS Theor. Amplitude 0.106 +/- 0.018
 Search (2048X64) 0.099
 Interp. 0.000
 Inc. seg. avg. 0.098
 Inc. frq. avg. 0.115

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

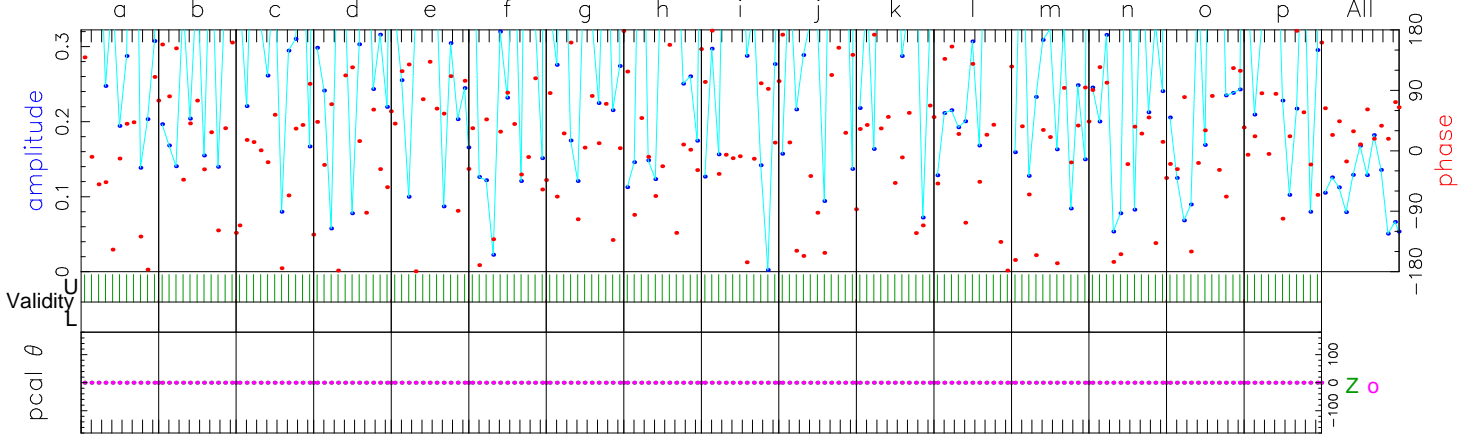
Z: az 287.2 el 13.3 pa 30.3 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 9320.584 4160.031 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192b/v2/1234/No0053/Zo..130BZK Output file: /Exps/c192b/v2/1234/No0053/Zo.W.392.130BZK



Fringe quality 0
 SNR 6.0
 Int time 418.228
 Amp 0.107
 Phase 31.7
 PFD 3.9e-01
 Delays (us)
 SBD 0.703600
 MBD -0.004563
 Fringe rate (Hz)
 0.037048
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192b
 Exper # 16383
 Yr:day 2019:277
 Start 130000.00
 Stop 130659.84
 FRT 130330.00
 Corr/FF/build
 2020:078:162231
 2020:086:083434
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

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 |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| 20.8 | 51.4 | 11.2 | 0.1 | 102.5 | 24.2 | 38.8 | -8.2 | -2.7 | 131.0 | 21.7 | 110.2 | 49.1 | 34.3 | 23.0 | 31.0 | 31.0 | Phase | 31.7 |
| 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | Ampl. | 0.1 |
| 57.4 | 167.5 | 161.1 | 75.0 | 217.7 | 134.5 | 78.5 | 30.6 | 69.2 | 10.3 | 106.6 | 24.6 | 75.9 | 86.0 | 123.7 | 16.6 | 16.6 | Sbd box | 219.1 |
| 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 | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z: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 | |
| Z: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 | |
| Z | 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 | | |
| Z | 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) -1.12675183262E+04 Apriori delay (usec) -1.12682325128E+04 Resid mbdelay (usec) -4.56347E-03 +/- 1.8E-04
 Sband delay (usec) -1.12675289128E+04 Apriori clock (usec) -1.6472549E+01 Resid sbdelay (usec) 7.03600E-01 +/- 2.9E-03
 Phase delay (usec) -1.12682325118E+04 Apriori clockrate (us/s) 1.5311808E-08 Resid phdelay (usec) 1.02216E-06 +/- 6.2E-07
 Delay rate (us/s) -1.51564226421E+00 Apriori rate (us/s) -1.51564269430E+00 Resid rate (us/s) 4.30093E-07 +/- 2.5E-09
 Total phase (deg) -202.5 Apriori accel (us/s/s) 7.00014994247E-05 Resid phase (deg) 31.7 +/- 19.1

RMS Theor. Amplitude 0.107 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 25.2 33.0 Search (2048X64) 0.103 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 36.7 57.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 43.4 38.2 Inc. seg. avg. 0.100 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 53.1 66.6 Inc. frq. avg. 0.103 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 287.2 el 13.3 pa 30.3 o: az 101.5 el 47.9 pa -56.2 u,v (fr/asec) 9320.584 4160.031 simultaneous interpolator