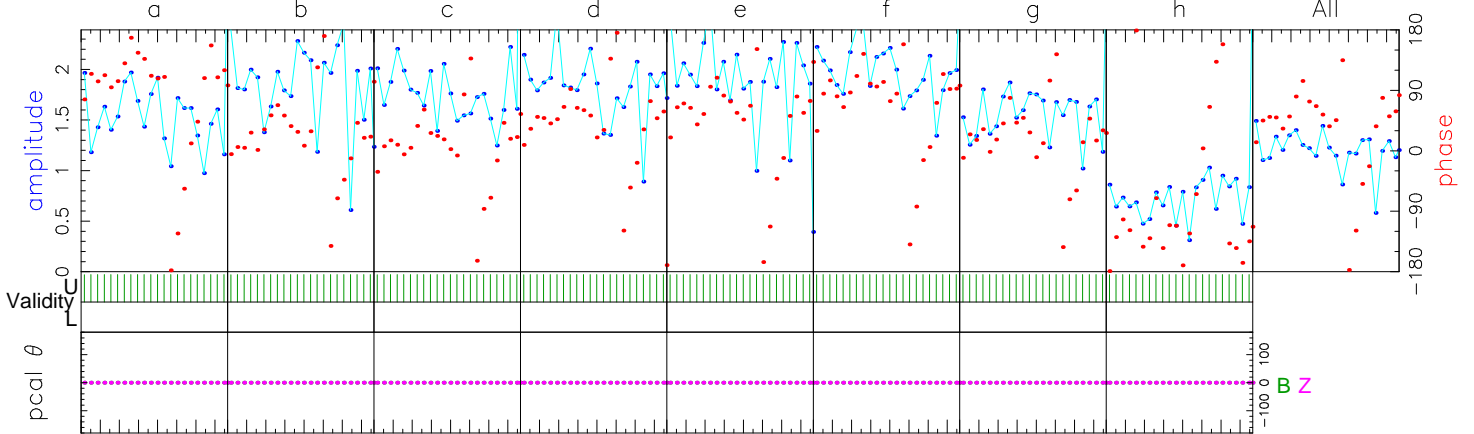


Fringe quality 3

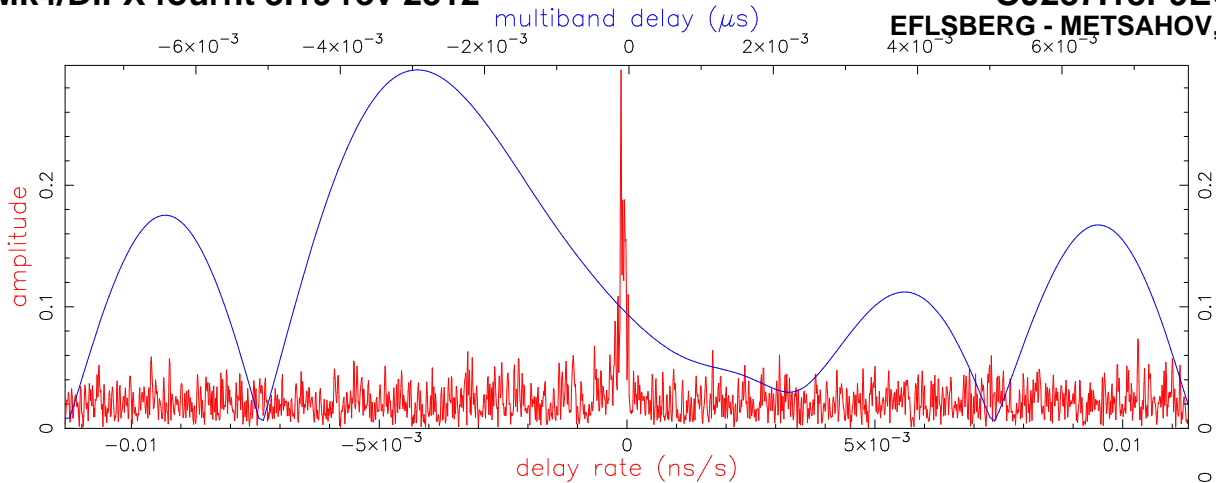
SNR 45.7
Int time 439.192
Amp 0.797
Phase 51.8
PFD 0.0e+00
Delays (us)
SBD -0.000323
MBD -0.000608
Fringe rate (Hz)
-0.010368
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c201a
Exper # 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120817
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



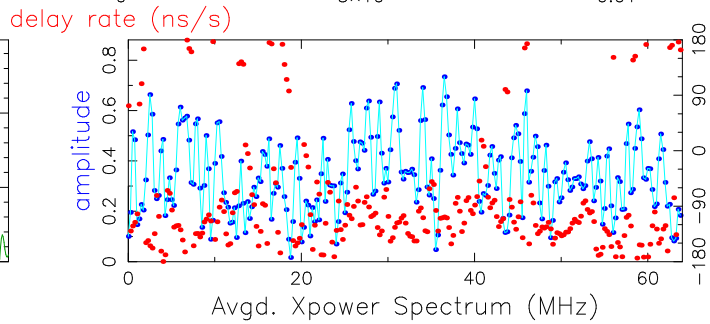
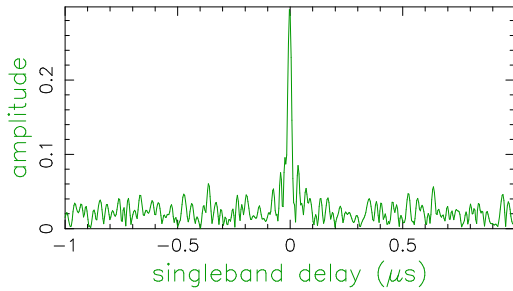
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:Z | 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 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | 3.28863037245E+03 | | Apriori delay (usec) | | 3.28863098031E+03 | | Resid mbdelay (usec) | | -6.07855E-04 | +/- 2.4E-05 |
| Sband delay (usec) | 3.28863065781E+03 | | Apriori clock (usec) | | 1.3177259E+01 | | Resid sbdelay (usec) | | -3.22500E-04 | +/- 1.9E-04 |
| Phase delay (usec) | 3.28863098198E+03 | | Apriori clockrate (us/s) | | -2.1600000E-07 | | Resid phdelay (usec) | | 1.67028E-06 | +/- 8.1E-08 |
| Delay rate (us/s) | -1.39766610951E-01 | | Apriori rate (us/s) | | -1.39766490587E-01 | | Resid rate (us/s) | | -1.20364E-07 | +/- 3.2E-10 |
| Total phase (deg) | 283.5 | | Apriori accel (us/s/s) | | -2.11365797105E-05 | | Resid phase (deg) | | 51.8 | +/- 2.5 |

ph/seg (deg) 58.9 6.0 Search (2048X32) 0.790 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.1 10.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 79.5 3.5 Inc. seg. avg. 1.197 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 49.7 6.2 Inc. frq. avg. 1.081 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 265.9 el 29.7 pa 42.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) 818.018 -1411.282 simultaneous interpolator



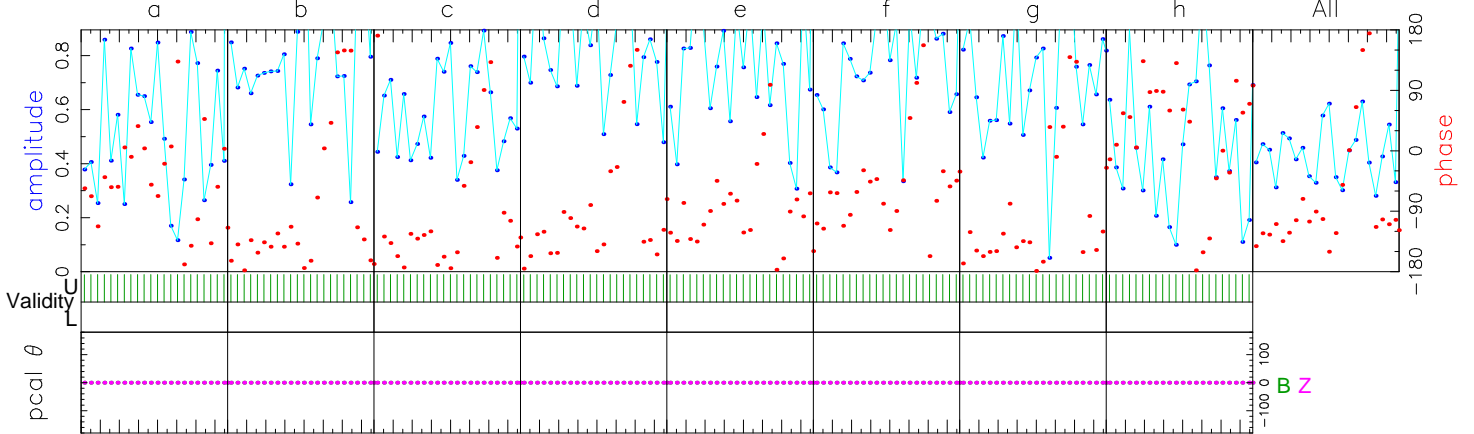
Fringe quality 7

SNR 17.1
Int time 439.192
Amp 0.299
Phase -117.6
PFD 0.0e+00
Delays (us)
SBD -0.002478
MBD -0.002906
Fringe rate (Hz)
-0.010474
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c201a
Exper # 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120821
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



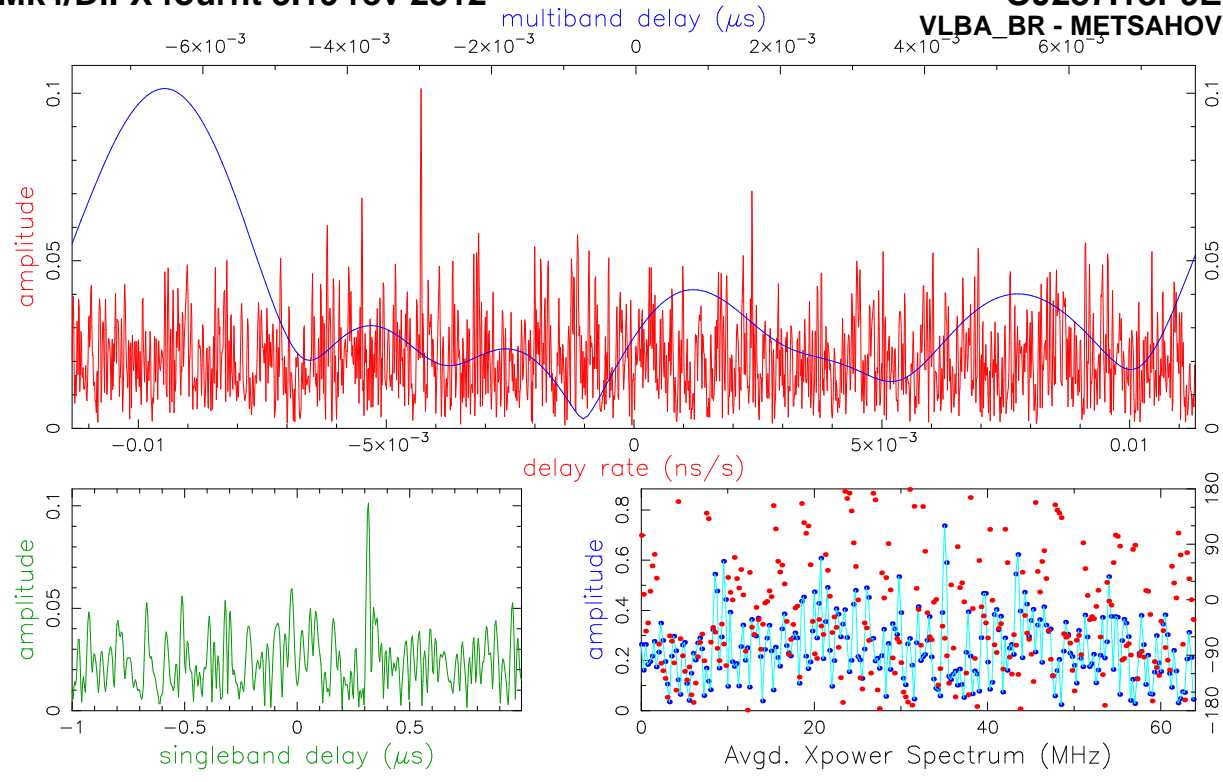
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -49.8 | -148.3 | -148.2 | -129.8 | -98.8 | -76.0 | -148.0 | 56.5 | Phase | -117.6 |
| | 0.3 | 0.5 | 0.3 | 0.5 | 0.5 | 0.4 | 0.4 | 0.1 | Ampl. | 0.4 |
| | 253.0 | 255.3 | 257.3 | 256.5 | 256.6 | 256.7 | 255.0 | 248.0 | Sbd box | 256.4 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 3.28862807405E+03 | | Apriori delay (usec) | | 3.28863098031E+03 | | Resid mbdelay (usec) | | -2.90626E-03 | +/- 6.3E-05 |
| Sband delay (usec) | 3.28862850256E+03 | | Apriori clock (usec) | | 1.3177259E+01 | | Resid sbdelay (usec) | | -2.47775E-03 | +/- 5.0E-04 |
| Phase delay (usec) | 3.28863097651E+03 | | Apriori clockrate (us/s) | | -2.160000E-07 | | Resid phdelay (usec) | | -3.79225E-06 | +/- 2.2E-07 |
| Delay rate (us/s) | -1.39766612184E-01 | | Apriori rate (us/s) | | -1.39766490587E-01 | | Resid rate (us/s) | | -1.21597E-07 | +/- 8.5E-10 |
| Total phase (deg) | 114.1 | | Apriori accel (us/s/s) | | -2.11365797105E-05 | | Resid phase (deg) | | -117.6 | +/- 6.7 |

ph/seg (deg) 56.1 16.1 Search (2048X32) 0.294 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 57.7 28.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 81.6 9.5 Inc. seg. avg. 0.421 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 52.0 16.5 Inc. frq. avg. 0.392 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
B: az 265.9 el 29.7 pa 42.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) 818.018 -1411.282 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/BZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/BZ.W.134.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

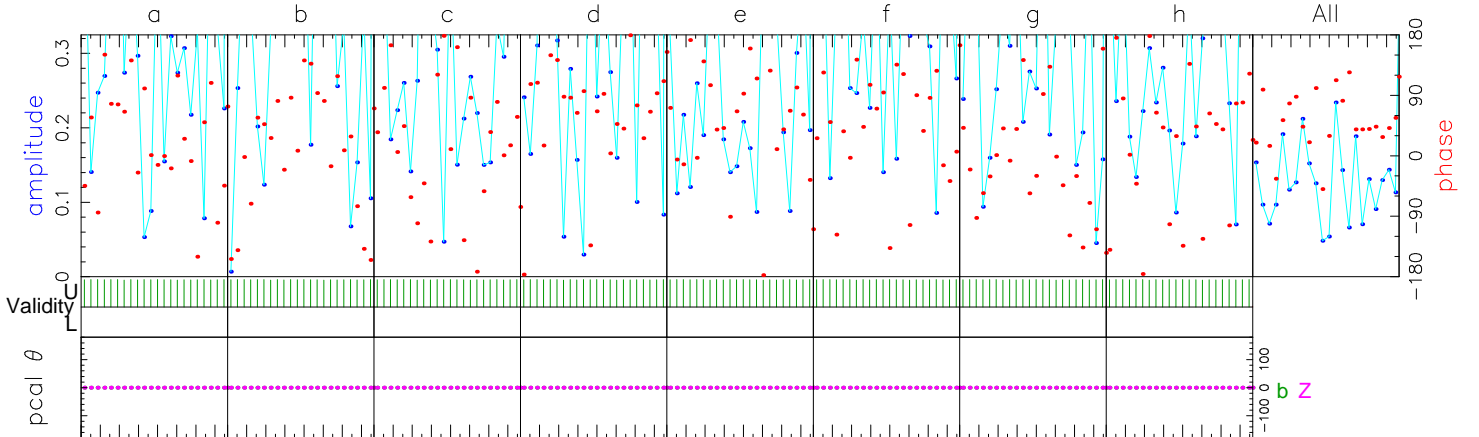
OJ287.18P9EC, No0027, bZ

VLBA_BR - METSAHOV, fgroup W, pol LL



Fringe quality 0
 SNR 5.8
 Int time 436.190
 Amp 0.108
 Phase 53.7
 PFD 7.6e-01
 Delays (us)
 SBD 0.315369
 MBD -0.006584
 Fringe rate (Hz)
 -0.370821
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120755
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

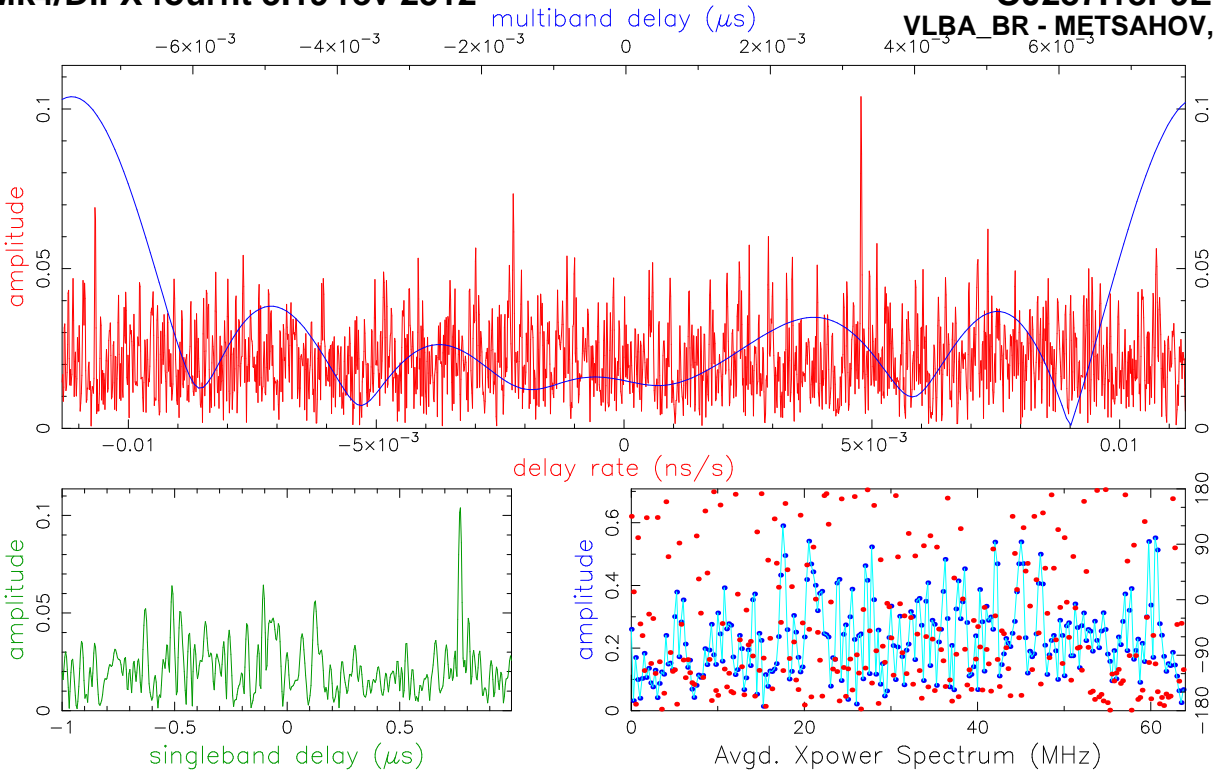


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 39.5 | 48.9 | 31.1 | 87.8 | 73.2 | 54.3 | -16.6 | 93.8 | Phase | 53.7 |
| | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | Ampl. | 0.1 |
| | 231.8 | 18.7 | 125.0 | 337.8 | 303.4 | 128.9 | 438.2 | 344.0 | Sbd box | 337.7 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 5.46990796656E+03 | | Apriori delay (usec) | | 5.46958642562E+03 | | Resid mbdelay (usec) | | -6.58406E-03 | +/- 1.9E-04 |
| Sband delay (usec) | 5.46990179462E+03 | | Apriori clock (usec) | | -1.2830046E+00 | | Resid sbdelay (usec) | | 3.15369E-01 | +/- 1.5E-03 |
| Phase delay (usec) | 5.46958642735E+03 | | Apriori clockrate (us/s) | | -5.8000005E-08 | | Resid phdelay (usec) | | 1.73098E-06 | +/- 6.3E-07 |
| Delay rate (us/s) | 1.55139664096E+00 | | Apriori rate (us/s) | | 1.55140094583E+00 | | Resid rate (us/s) | | -4.30487E-06 | +/- 2.5E-09 |
| Total phase (deg) | 306.8 | | Apriori accel (us/s/s) | | -3.38652194046E-05 | | Resid phase (deg) | | 53.7 | +/- 19.7 |

ph/seg (deg) 42.4 47.2 Search (2048X32) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 54.2 82.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 38.3 27.8 Inc. seg. avg. 0.100 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 26.5 48.6 Inc. frq. avg. 0.114 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 99.1 el 35.1 pa -44.6 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9510.670 -1946.312 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/bZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/bZ.W.26.18P9EC

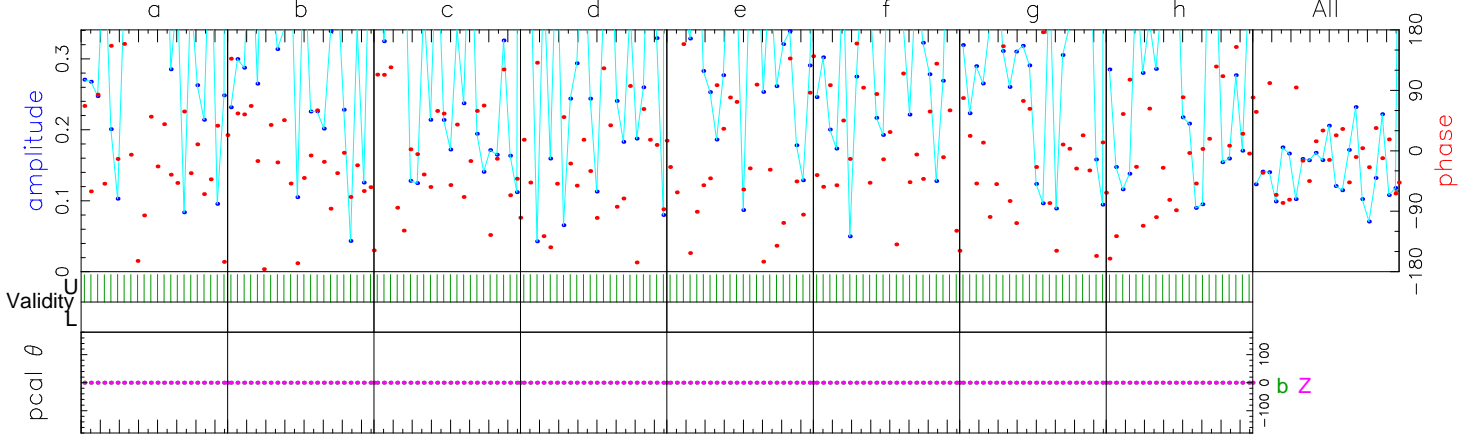
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, bZ
VLBA_BR - METSAHOV, fgroup W, pol RR



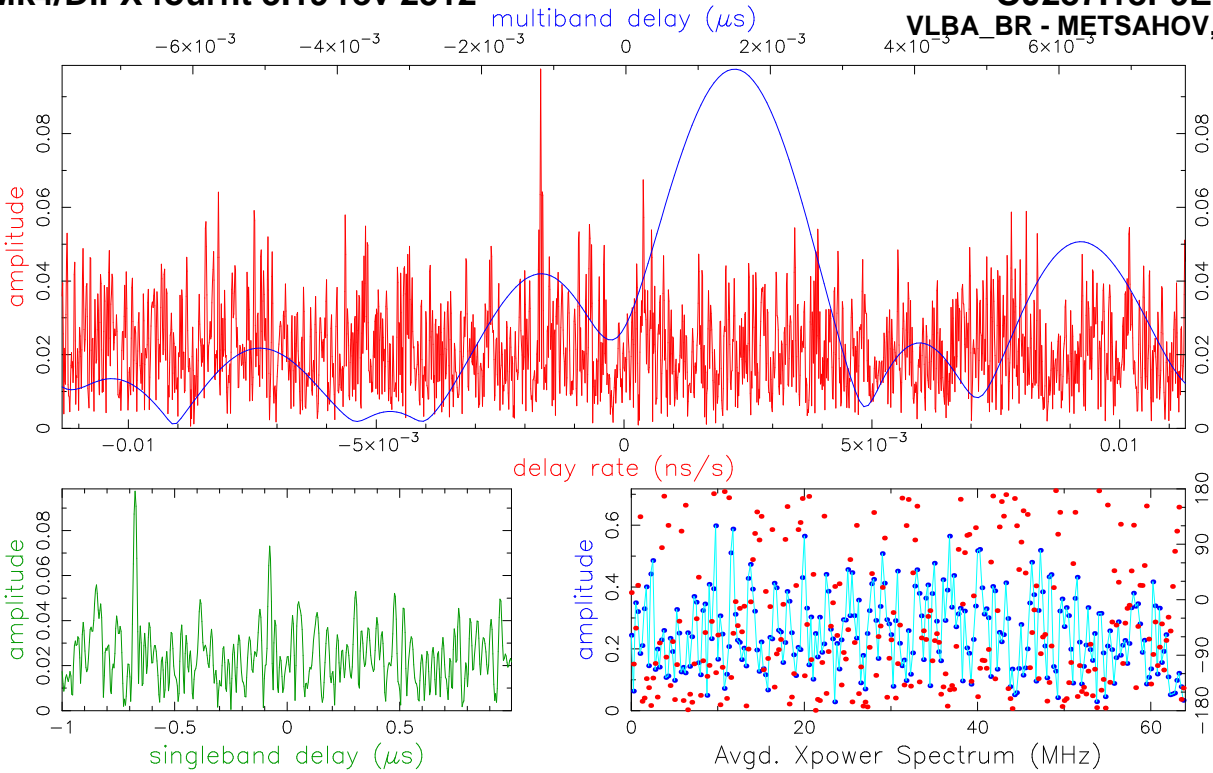
Fringe quality 0
SNR 6.0
Int time 436.189
Amp 0.114
Phase -9.2
PFD 3.6e-01
Delays (us)
SBD 0.767998
MBD 0.007934
Fringe rate (Hz) 0.412892
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c201a
Exper # 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120800
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



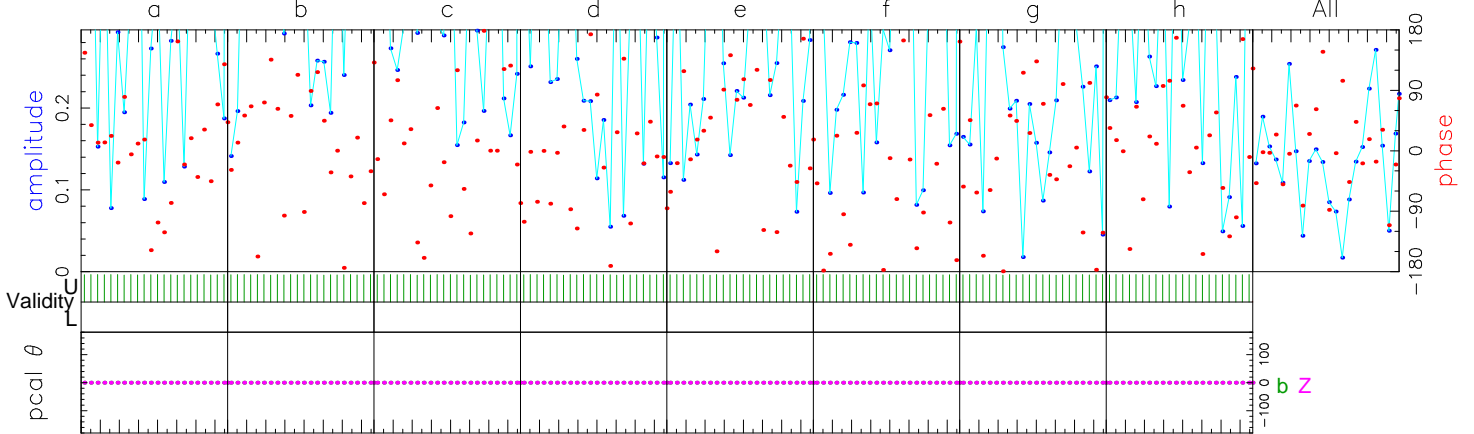
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -19.4 | -8.2 | 8.8 | -7.6 | -30.8 | 15.7 | -18.6 | -14.4 | | -9.2 |
| | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | | 0.1 |
| | 236.0 | 447.2 | 244.2 | 91.5 | 425.2 | 294.3 | 83.1 | 378.6 | Sbd box | 453.6 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 5.47035998428E+03 | | Apriori delay (usec) | | 5.46958642562E+03 | | Resid mbdelay (usec) | | 7.93366E-03 | +/- 1.8E-04 |
| Sband delay (usec) | 5.47035442362E+03 | | Apriori clock (usec) | | -1.2830046E+00 | | Resid sbdelay (usec) | | 7.67998E-01 | +/- 1.4E-03 |
| Phase delay (usec) | 5.46958642533E+03 | | Apriori clockrate (us/s) | | -5.8000005E-08 | | Resid phdelay (usec) | | -2.96584E-07 | +/- 6.1E-07 |
| Delay rate (us/s) | 1.55140573910E+00 | | Apriori rate (us/s) | | 1.55140094583E+00 | | Resid rate (us/s) | | 4.79327E-06 | +/- 2.4E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -3.38652194046E-05 | | Resid phase (deg) | | -9.2 | +/- 19.0 |

ph/seg (deg) 49.2 45.6 Search (2048X32) 0.102 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 56.3 79.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 16.5 26.9 Inc. seg. avg. 0.119 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 37.0 47.0 Inc. frq. avg. 0.103 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
b: az 99.1 el 35.1 pa -44.6 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9510.670 -1946.312 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/bZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/bZ.W.45.18P9EC



Fringe quality 0
SNR 5.6
Int time 436.190
Amp 0.099
Phase 1.8
PFD 1.0e+00
Delays (us)
SBD -0.675318
MBD 0.001518
Fringe rate (Hz)
-0.144847
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c201a
Exper # 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120804
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

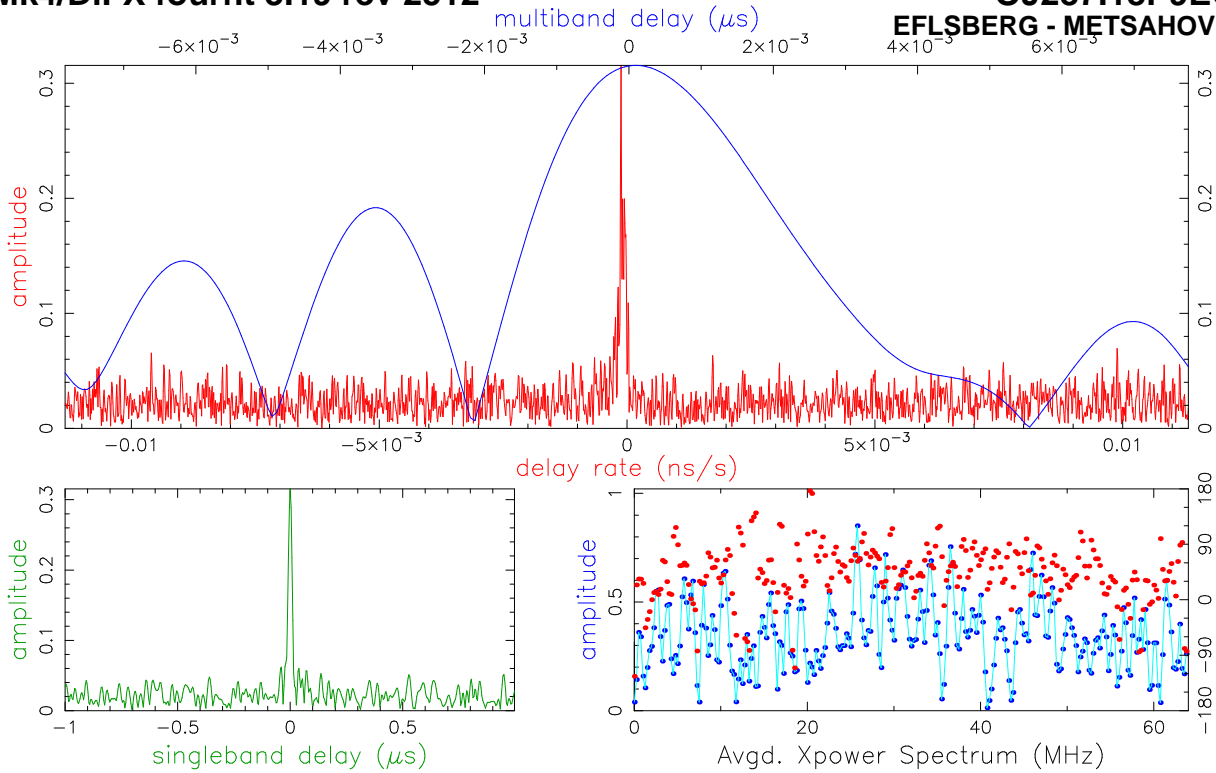
Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|--|----------|-------------------|----------|----------|-------------------|----------|----------|----------|--------------|-------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| b:Z | 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 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | | 5.46891606911E+03 | | | 5.46958642562E+03 | | | | 1.51849E-03 | +/- 1.9E-04 |
| Sband delay (usec) | | 5.46891110762E+03 | | | -1.2830046E+00 | | | | -6.75318E-01 | +/- 1.5E-03 |
| Phase delay (usec) | | 5.46958642568E+03 | | | -5.8000005E-08 | | | | 5.77444E-08 | +/- 6.6E-07 |
| Delay rate (us/s) | | 1.55139926431E+00 | | | 1.55140094583E+00 | | | | -1.68153E-06 | +/- 2.6E-09 |
| Total phase (deg) | | | 254.9 | | | | | | 1.8 | +/- 20.5 |
| 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): 128 | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | |
| nlags: 256 | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | |
| sb window (us) | | | | | | | | | -1.000 | 1.000 |
| mb window (us) | | | | | | | | | -0.008 | 0.008 |
| dr window (ns/s) | | | | | | | | | -0.011 | 0.011 |
| ion window (TEC) | | | | | | | | | 0.00 | 0.00 |

b: az 99.1 el 35.1 pa -44.6 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9510.670 -1946.312 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/bZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/bZ.W.66.18P9EC

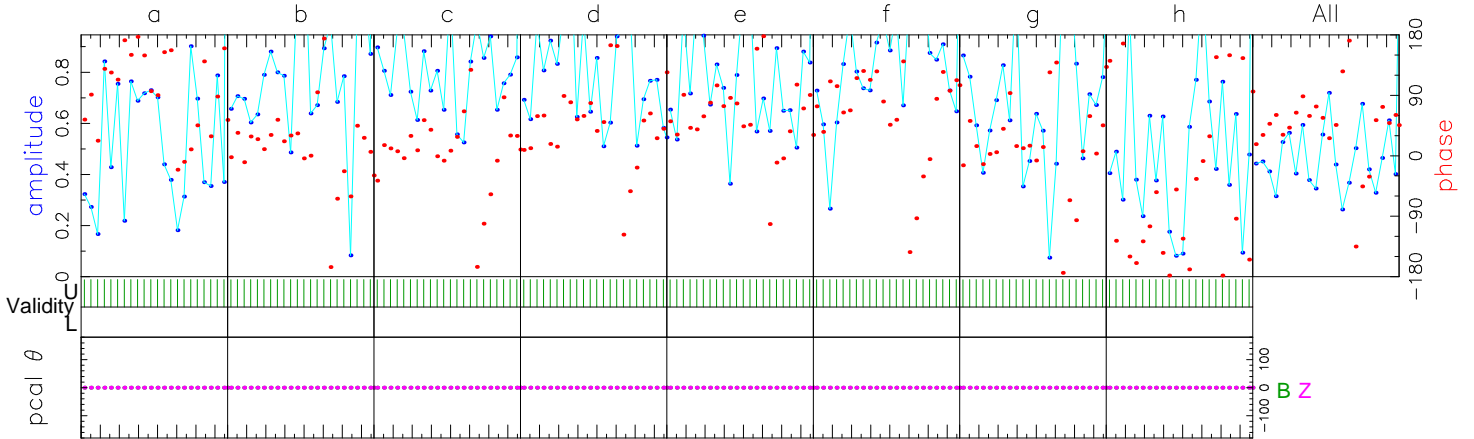


Fringe quality 7

SNR 18.1
Int time 439.192
Amp 0.315
Phase 46.6
PFD 0.0e+00
Delays (us)
SBD 0.000007
MBD 0.000093
Fringe rate (Hz)
-0.010434
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c201a
Exper # 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120807
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:Z | 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 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | | | | |
|-------------------------|--------------------|--------------------------|------------------------|--------------------|----------------------|-------------------|--------------|------|---------|-----|
| Group delay (usec)(sbd) | 3.28863107283E+03 | Apriori delay (usec) | | 3.28863098031E+03 | Resid mbdelay (usec) | | 9.25201E-05 | +/- | 6.0E-05 | |
| Sband delay (usec) | 3.28863098781E+03 | Apriori clock (usec) | | 1.3177259E+01 | Resid sbdelay (usec) | | 7.50000E-06 | +/- | 4.8E-04 | |
| Phase delay (usec) | 3.28863098181E+03 | Apriori clockrate (us/s) | | -2.160000E-07 | Resid phdelay (usec) | | 1.50433E-06 | +/- | 2.0E-07 | |
| Delay rate (us/s) | -1.39766611712E-01 | Apriori rate (us/s) | | -1.39766490587E-01 | Resid rate (us/s) | | -1.21125E-07 | +/- | 8.0E-10 | |
| Total phase (deg) | | 278.4 | Apriori accel (us/s/s) | | -2.11365797105E-05 | Resid phase (deg) | | 46.6 | +/- | 6.3 |

| | | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|--|--|-----------------------|-------------------|------------------|-----------|
| ph/seg (deg) | 58.0 | Theor. | 15.2 | Amplitude | 0.315 +/- 0.017 | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | |
| amp/seg (%) | 60.2 | | 26.5 | Search (2048X32) | 0.314 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 81.9 | | 9.0 | Interp. | 0.000 | Bits/sample: 2x2 | | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| amp/frq (%) | 50.1 | | 15.6 | Inc. seg. avg. | 0.448 | Sample rate(MISamp/s): 128 | | | dr window (ns/s) | -0.011 0.011 | |
| | | | | Inc. frq. avg. | 0.422 | Data rate(Mb/s): 2048 | | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

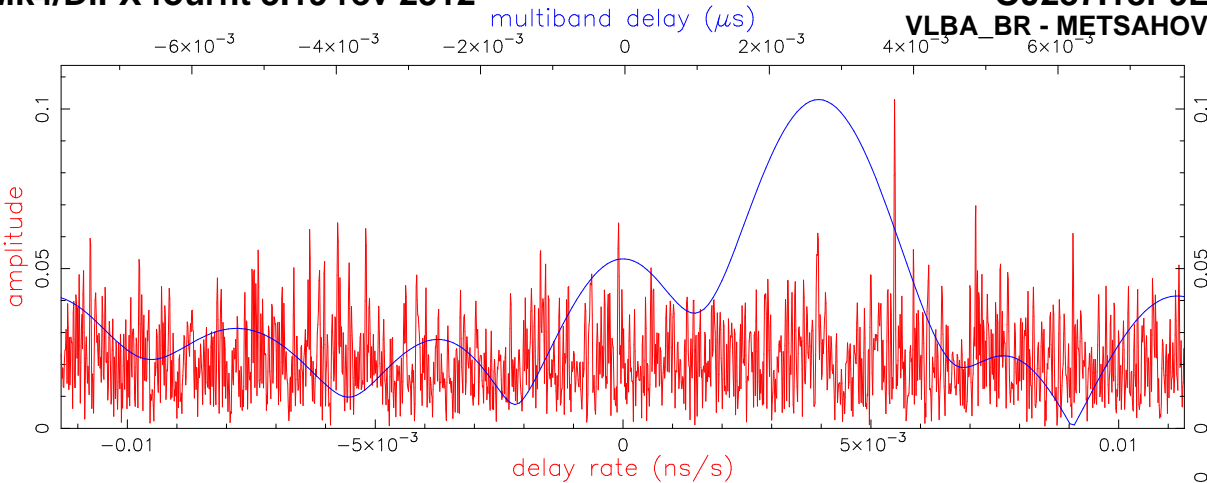
B: az 265.9 el 29.7 pa 42.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) 818.018 -1411.282 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/BZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/BZ.W.78.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

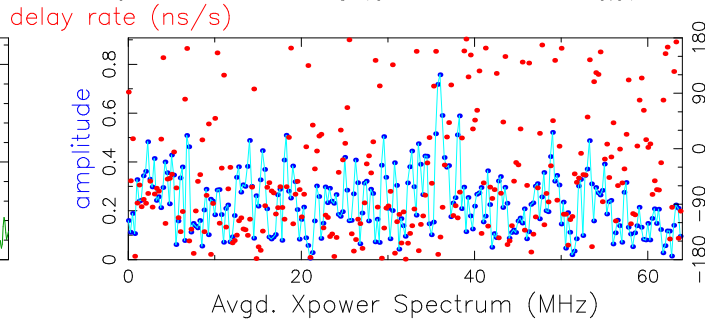
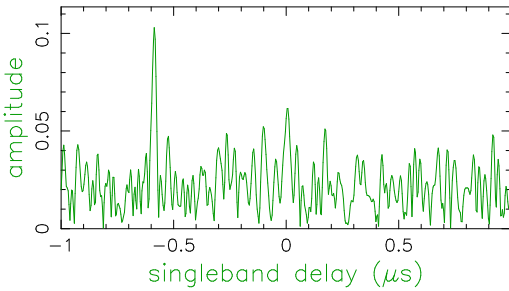
OJ287.18P9EC, No0027, bZ

VLBA_BR - METSAHOV, fgroup W, pol RL



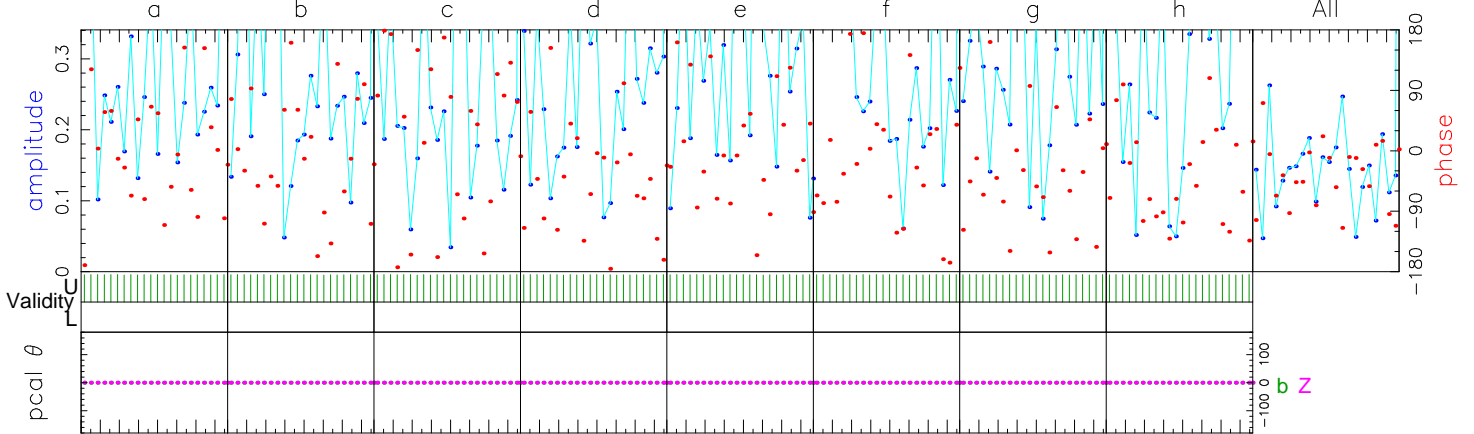
Fringe quality 0

SNR 5.9
Int time 436.189
Amp 0.114
Phase -40.6
PFD 6.4e-01
Delays (us)
SBD -0.585621
MBD 0.002681
Fringe rate (Hz)
0.472887
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c201a
Exper # 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120808
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -45.4 | -38.4 | 174.7 | -56.2 | -10.0 | -23.9 | -40.3 | -53.3 | Phase | -40.6 |
| | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | Ampl. | 0.1 |
| | 370.8 | 104.8 | 7.7 | 268.5 | 375.5 | 483.9 | 107.8 | 105.4 | Sbd box | 107.1 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 5.46899535615E+03 | Apriori delay (usec) | 5.46958642562E+03 | Resid mbdelay (usec) | 2.68053E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | 5.46900080437E+03 | Apriori clock (usec) | -1.2830046E+00 | Resid sbdelay (usec) | -5.85621E-01 | +/- | 1.5E-03 |
| Phase delay (usec) | 5.46958642431E+03 | Apriori clockrate (us/s) | -5.8000005E-08 | Resid phdelay (usec) | -1.30903E-06 | +/- | 6.3E-07 |
| Delay rate (us/s) | 1.55140643558E+00 | Apriori rate (us/s) | 1.55140094583E+00 | Resid rate (us/s) | 5.48975E-06 | +/- | 2.5E-09 |
| Total phase (deg) | 212.5 | Apriori accel (us/s/s) | -3.38652194046E-05 | Resid phase (deg) | -40.6 | +/- | 19.5 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 47.9 | Theor. | 46.7 | Amplitude | 0.114 +/- 0.019 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 77.4 | | 81.5 | Search (2048X32) | 0.101 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 61.4 | | 27.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 46.4 | | 48.1 | Inc. seg. avg. | 0.119 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| | | | | Inc. frq. avg. | 0.113 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

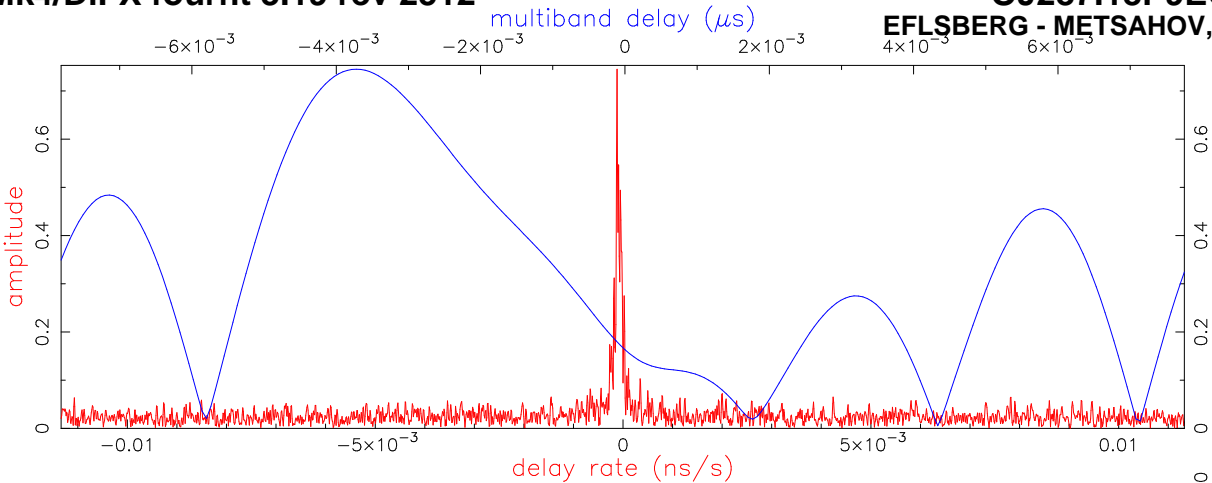
b: az 99.1 el 35.1 pa -44.6

Z: az 275.9 el 19.8 pa 31.7

u,v (fr/asec) -9510.670 -1946.312

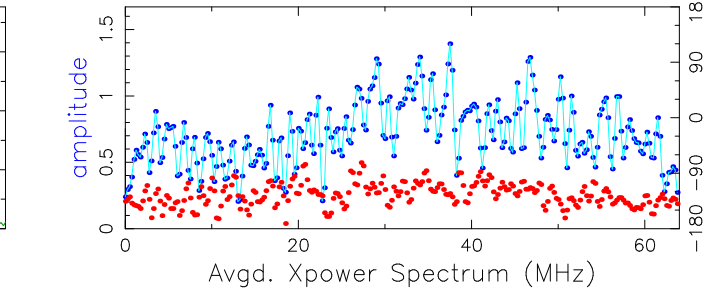
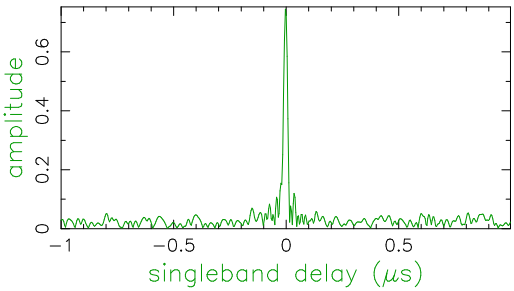
simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/bZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/bZ.W.80.18P9EC



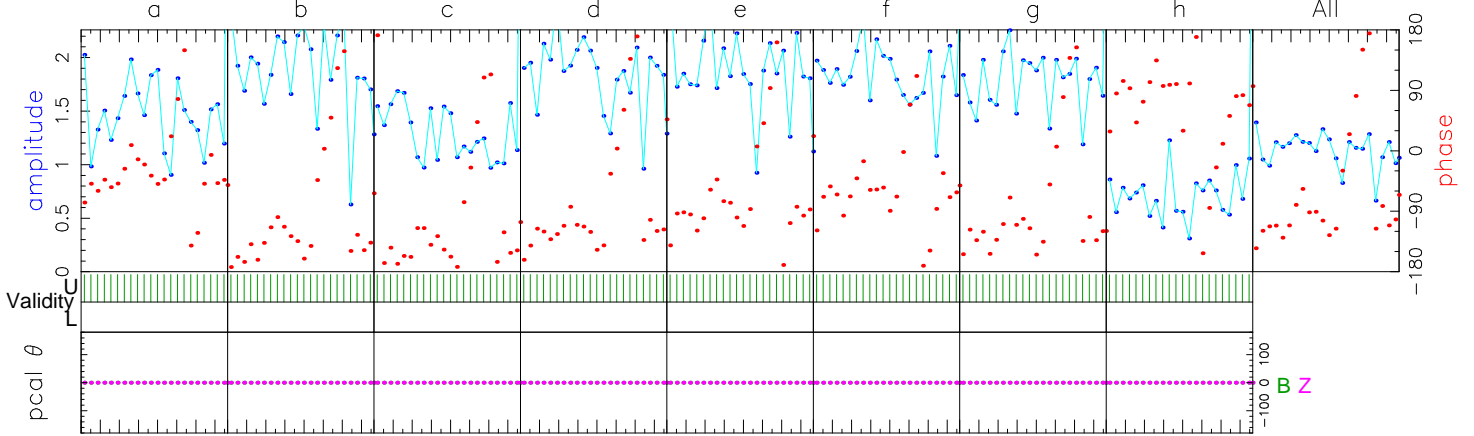
Fringe quality 3

SNR 43.2
Int time 439.192
Amp 0.753
Phase -109.1
PFD 0.0e+00
Delays (us)
SBD -0.002549
MBD -0.003720
Fringe rate (Hz)
-0.010370
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c201a
Exper # 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120812
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -39.2 | -144.5 | -152.7 | -124.3 | -95.8 | -65.4 | -125.7 | 79.6 | Phase | -109.1 |
| | 1.0 | 1.2 | 0.9 | 1.3 | 1.2 | 1.2 | 1.2 | 0.4 | Ampl. | 1.0 |
| | 253.4 | 255.8 | 257.0 | 256.2 | 256.7 | 256.3 | 254.8 | 249.8 | Sbd box | 256.3 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

Group delay (usec)(sbd) 3.28862726042E+03 Apriori delay (usec) 3.28863098031E+03 Resid mbdelay (usec) -3.71989E-03 +/- 2.5E-05
 Sband delay (usec) 3.28862843106E+03 Apriori clock (usec) 1.3177259E+01 Resid sbdelay (usec) -2.54925E-03 +/- 2.0E-04
 Phase delay (usec) 3.28863097679E+03 Apriori clockrate (us/s) -2.1600000E-07 Resid phdelay (usec) -3.51796E-06 +/- 8.6E-08
 Delay rate (us/s) -1.39766610975E-01 Apriori rate (us/s) -1.39766490587E-01 Resid rate (us/s) -1.20388E-07 +/- 3.4E-10
 Total phase (deg) 122.6 Apriori accel (us/s/s) -2.11365797105E-05 Resid phase (deg) -109.1 +/- 2.7

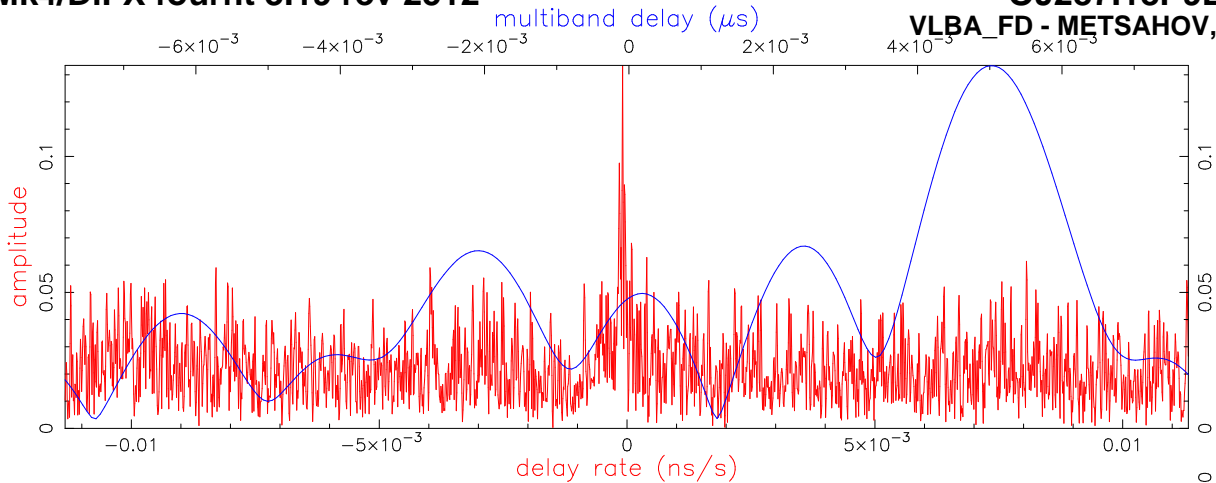
RMS Theor. Amplitude 0.753 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 58.8 6.4 Search (2048X32) 0.732 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 55.4 11.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 81.6 3.8 Inc. seg. avg. 1.131 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 52.8 6.6 Inc. frq. avg. 1.048 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 265.9 el 29.7 pa 42.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) 818.018 -1411.282 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/BZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/BZ.W.91.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

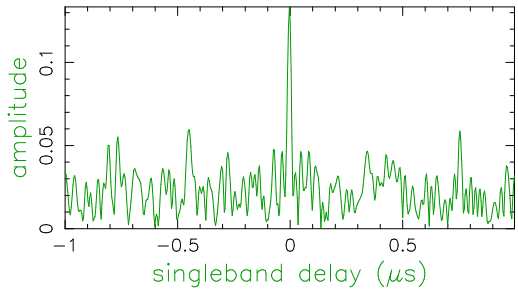
OJ287.18P9EC, No0027, fZ

VLBA_FD - METSAHOV, fgroup W, pol RR

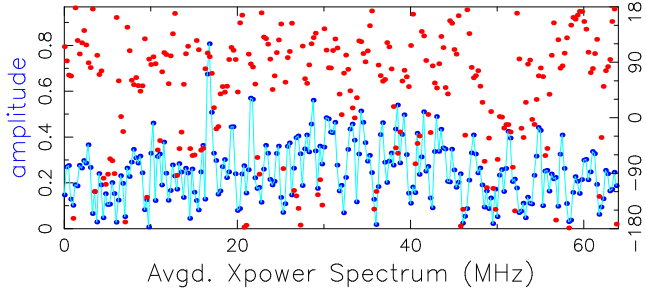


Fringe quality 9

SNR 7.6
 Int time 434.878
 Amp 0.133
 Phase -9.2
 PFD 8.9e-06
 Delays (us)
 SBD -0.003526
 MBD 0.005035
 Fringe rate (Hz)
 -0.007614
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

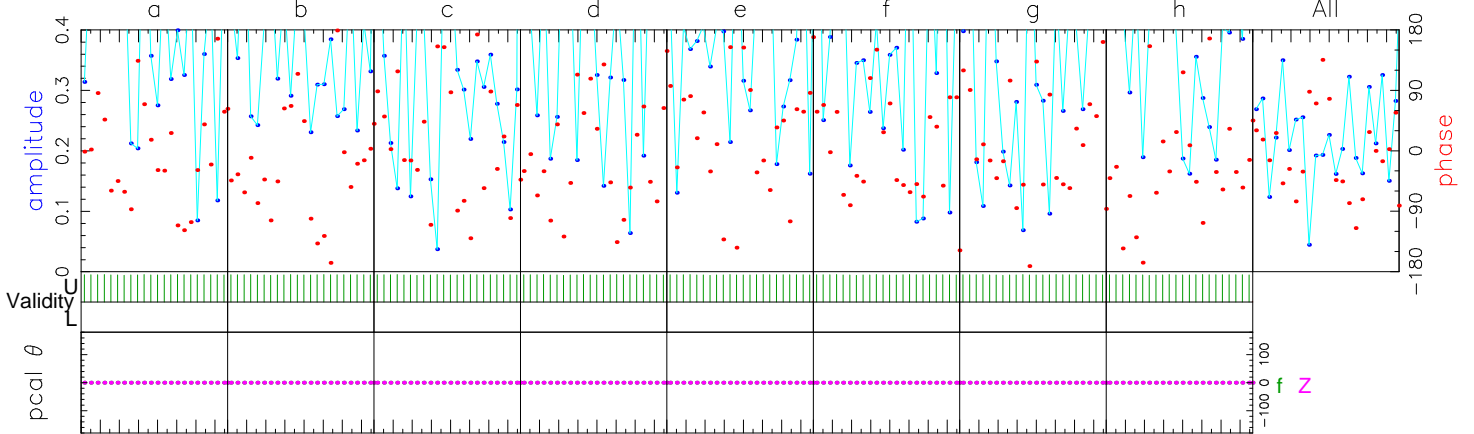


delay rate (ns/s)



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120817
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|---------------|
| | -11.0 | -42.6 | 34.2 | -18.8 | 30.4 | 8.9 | 15.7 | -42.4 | | Phase -9.2 |
| | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | | Ampl. 0.1 |
| | 256.2 | 286.1 | 450.9 | 239.2 | 61.1 | 255.3 | 128.1 | 256.0 | | Sbd box 256.1 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | APs used |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs |
| f:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase |
| f:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | Chan ids |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | Tracks |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 9.42612184979E+03 | Apriori delay (usec) | 9.42613243985E+03 | Resid mbdelay (usec) | 5.03494E-03 | +/- | 1.4E-04 |
| Sband delay (usec) | 9.42612891335E+03 | Apriori clock (usec) | 4.0066109E+00 | Resid sbdelay (usec) | -3.52650E-03 | +/- | 1.1E-03 |
| Phase delay (usec) | 9.42613243955E+03 | Apriori clockrate (us/s) | 9.3000003E-08 | Resid phdelay (usec) | -2.96005E-07 | +/- | 4.9E-07 |
| Delay rate (us/s) | 1.56984954421E+00 | Apriori rate (us/s) | 1.56984963260E+00 | Resid rate (us/s) | -8.83940E-08 | +/- | 1.9E-09 |
| Total phase (deg) | 123.5 | Apriori accel (us/s/s) | -6.39581002360E-05 | Resid phase (deg) | -9.2 | +/- | 15.1 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 61.3 | Theor. | 36.1 | Amplitude | 0.133 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 87.1 | | 63.0 | Search (2048X32) | 0.131 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 33.4 | | 21.3 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 35.7 | | 37.2 | Inc. seg. avg. | 0.187 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| | | | | Inc. frq. avg. | 0.140 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

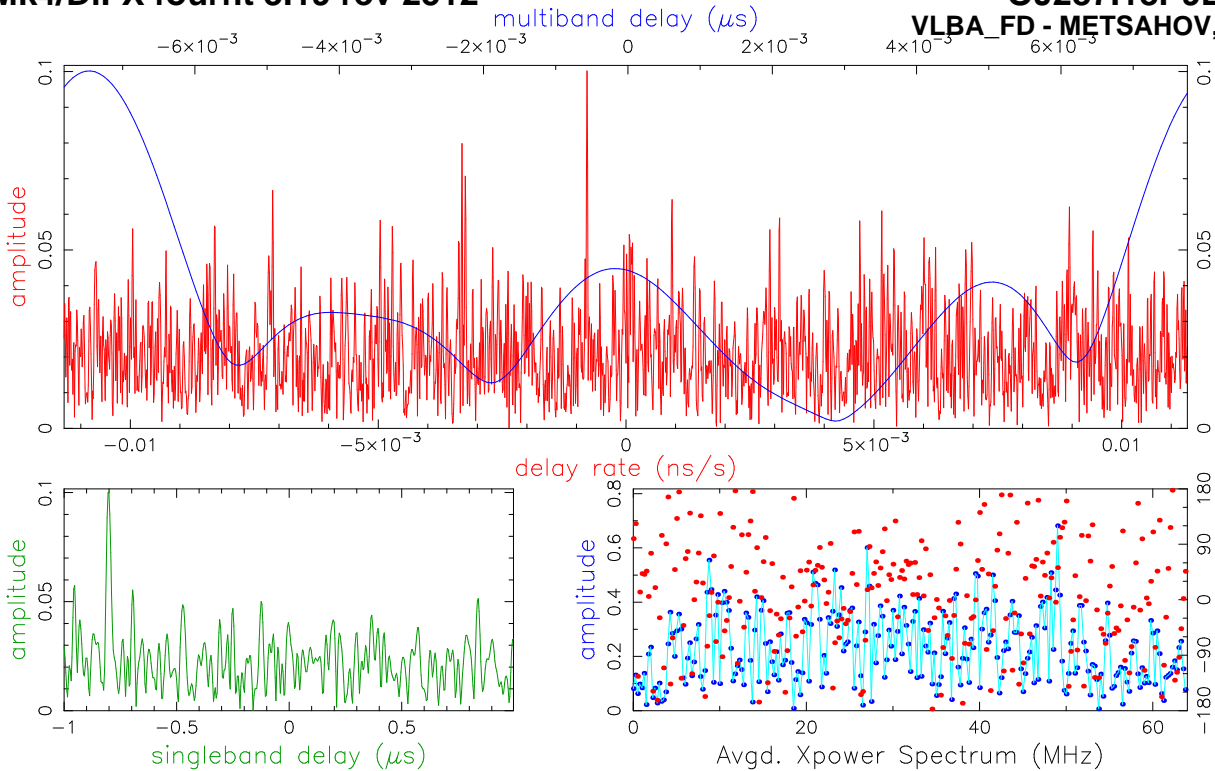
f: az 94.6 el 49.5 pa -66.0 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9670.146 -4764.017 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/fZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/fZ.W.115.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

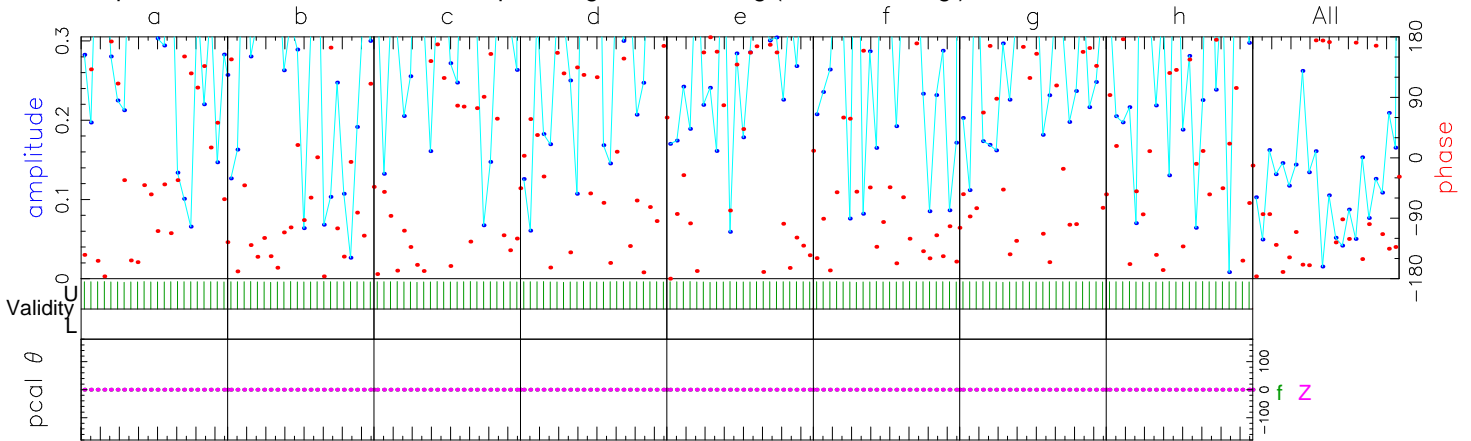
OJ287.18P9EC, No0027, fZ

VLBA_FD - METSAHOV, fgroup W, pol LR



Fringe quality 0
 SNR 5.8
 Int time 434.879
 Amp 0.102
 Phase -143.7
 PFD 8.3e-01
 Delays (us)
 SBD -0.802715
 MBD -0.007437
 Fringe rate (Hz)
 -0.067817
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120822
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



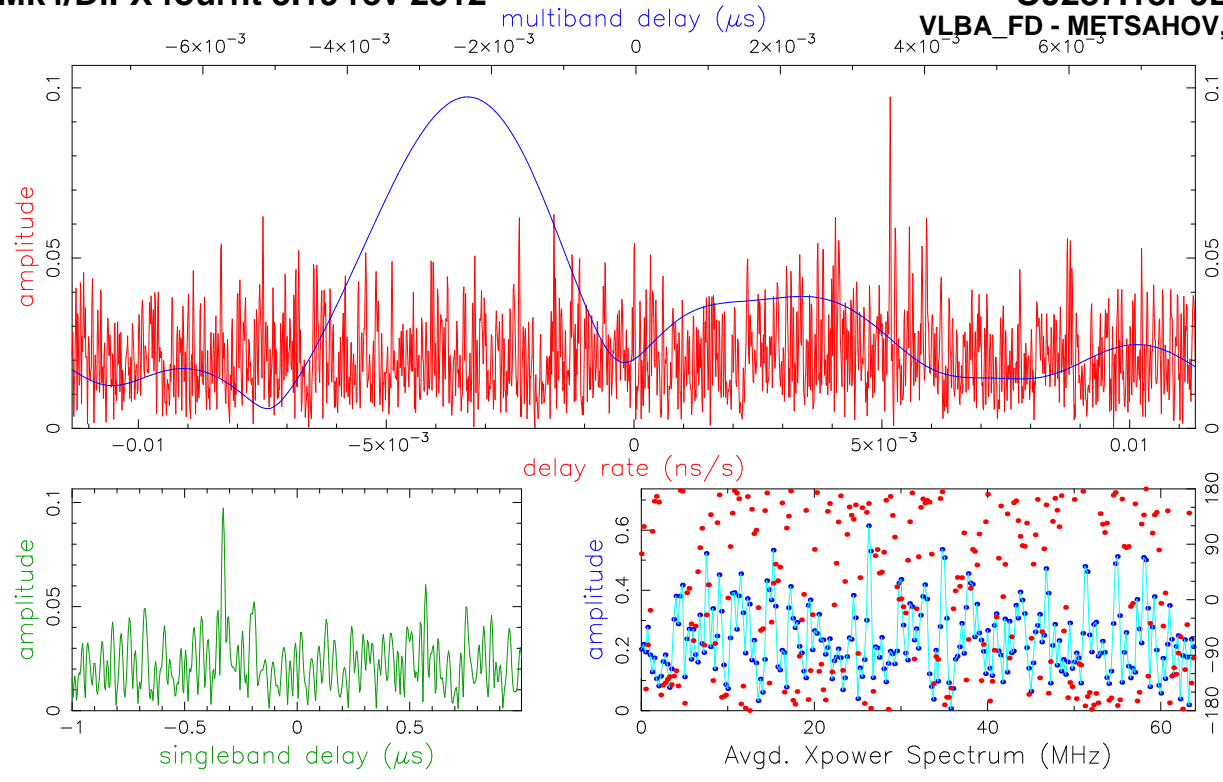
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -134.3 | -113.1 | -169.2 | -178.7 | -173.4 | -102.8 | -159.6 | -133.6 | Phase | -143.7 |
| | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | Ampl. | 0.1 |
| | 93.2 | 53.7 | 310.2 | 180.2 | 51.2 | 53.1 | 463.2 | 86.9 | Sbd box | 51.5 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| f:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| f:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 9.42532812762E+03 | | Apriori delay (usec) | | 9.42613243985E+03 | | Resid mbdelay (usec) | | -7.43723E-03 | +/- 1.9E-04 |
| Sband delay (usec) | 9.42532972485E+03 | | Apriori clock (usec) | | 4.0066109E+00 | | Resid sbdelay (usec) | | -8.02715E-01 | +/- 1.5E-03 |
| Phase delay (usec) | 9.42613243521E+03 | | Apriori clockrate (us/s) | | 9.3000003E-08 | | Resid phdelay (usec) | | -4.63515E-06 | +/- 6.4E-07 |
| Delay rate (us/s) | 1.56984884532E+00 | | Apriori rate (us/s) | | 1.56984963260E+00 | | Resid rate (us/s) | | -7.87283E-07 | +/- 2.5E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -6.39581002360E-05 | | Resid phase (deg) | | -143.7 | +/- 19.8 |

ph/seg (deg) RMS Theor. Amplitude 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.6 82.8 Search (2048X32) 0.099 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.1 28.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 41.3 48.8 Inc. seg. avg. 0.089 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 94.6 el 49.5 pa -66.0 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9670.146 -4764.017 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/fZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/fZ.W.135.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, fZ

VLBA_FD - METSAHOV, fgroup W, pol RL

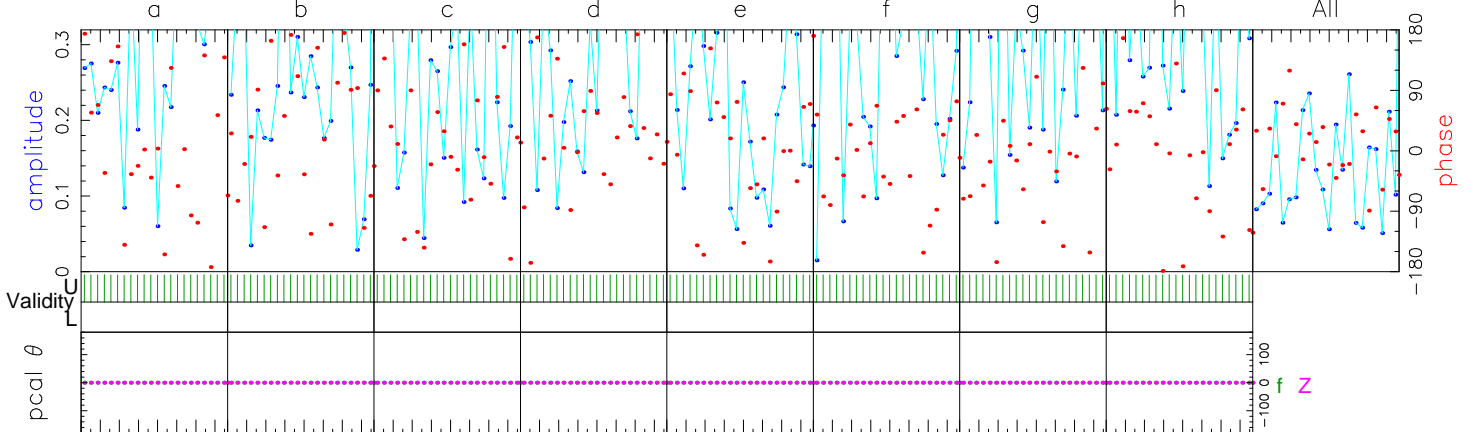


Fringe quality 0

SNR 5.6
 Int time 434.878
 Amp 0.107
 Phase 7.5
 PFD 1.0e+00
 Delays (us)
 SBD -0.328871
 MBD -0.002376
 Fringe rate (Hz)
 0.446228
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

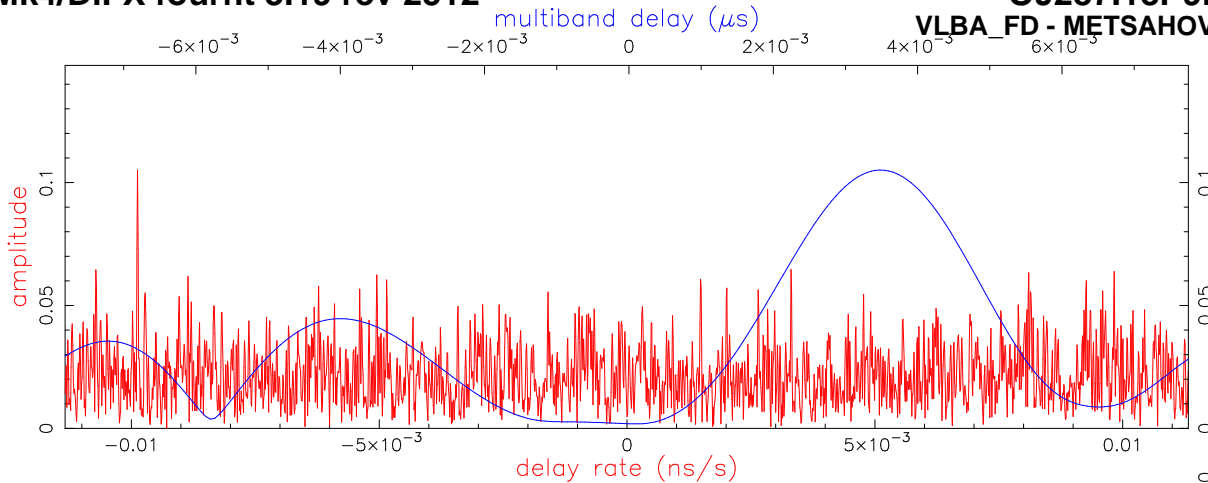
Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120826
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



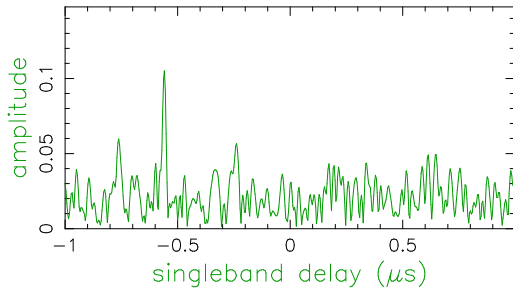
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----------------------------|----------|-----------------------------|------------------|------------------------------------|----------|--------------------|----------|----------|--|-------------------------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| f:Z | 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 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | | 9.42580193876E+03 | | | | 9.42613243985E+03 | | | Resid mbdelay (usec) | -2.37609E-03 +/- 1.9E-04 |
| Sband delay (usec) | | 9.42580356835E+03 | | | | 4.0066109E+00 | | | Resid sbdelay (usec) | -3.28871E-01 +/- 1.5E-03 |
| Phase delay (usec) | | 9.42613244009E+03 | | | | 9.3000003E-08 | | | Resid phdelay (usec) | 2.40254E-07 +/- 6.6E-07 |
| Delay rate (us/s) | | 1.56985481286E+00 | | | | 1.56984963260E+00 | | | Resid rate (us/s) | 5.18026E-06 +/- 2.6E-09 |
| Total phase (deg) | | | 140.2 | | | -6.39581002360E-05 | | | Resid phase (deg) | 7.5 +/- 20.6 |
| ph/seg (deg) | RMS 48.0 | Theor. 49.3 | Amplitude 49.3 | 0.107 +/- 0.019 | 0.096 | 0.096 | | | PCal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 75.9 | 86.1 | Search (2048X32) | 0.000 | 0.000 | 0.000 | | | PCal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 33.4 | 29.1 | Interp. | 0.106 | 0.106 | 0.106 | | | Bits/sample: 2x2 | mb window (us) -0.008 0.008 |
| amp/frq (%) | 56.8 | 50.8 | Inc. seg. avg. | 0.101 | 0.101 | 0.101 | | | Sample rate(MISamp/s): 128 | dr window (ns/s) -0.011 0.011 |
| | | | Inc. frq. avg. | 0.101 | 0.101 | 0.101 | | | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |
| f: az 94.6 el 49.5 pa -66.0 | | Z: az 275.9 el 19.8 pa 31.7 | | u, v (fr/asec) -9670.146 -4764.017 | | | | | | simultaneous interpolator |

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/fZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/fZ.W.153.18P9EC

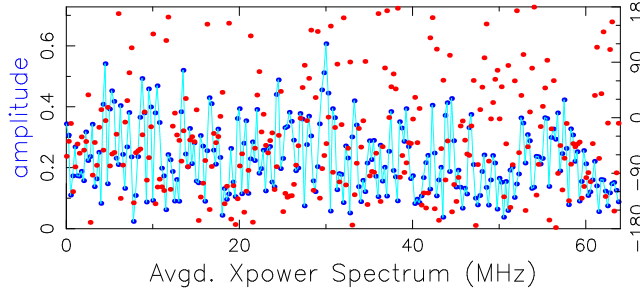


Fringe quality 0

SNR 6.0
 Int time 434.879
 Amp 0.148
 Phase -66.2
 PFD 3.6e-01
 Delays (us)
 SBD -0.559453
 MBD 0.003515
 Fringe rate (Hz)
 -0.852338
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

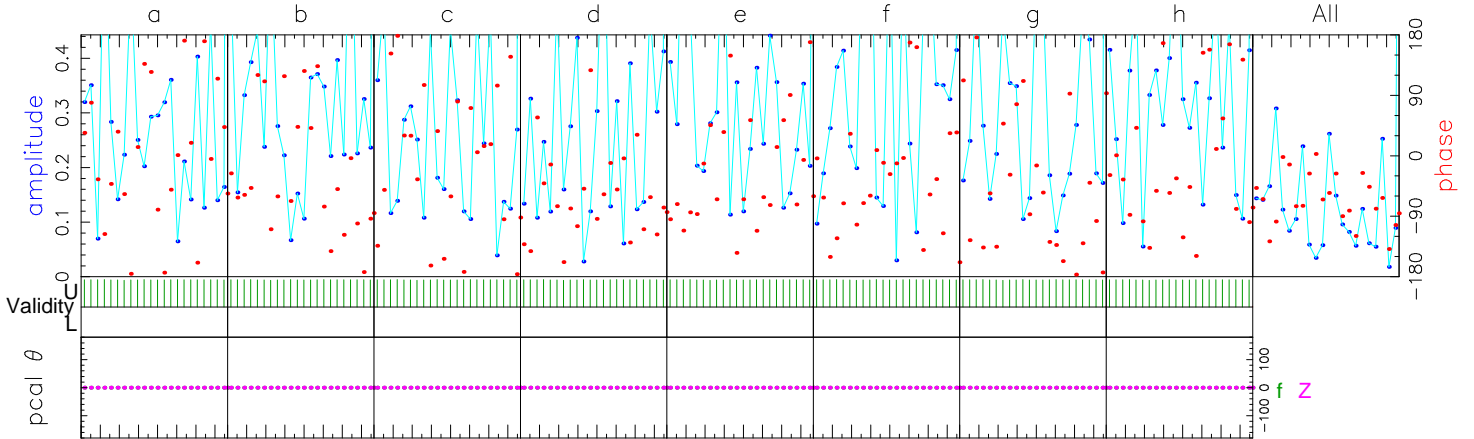


delay rate (ns/s)



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120811
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| f:Z | 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 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 9.42557345483E+03 | Apriori delay (usec) | 9.42613243985E+03 | Resid mbdelay (usec) | 3.51499E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | 9.42557298635E+03 | Apriori clock (usec) | 4.0066109E+00 | Resid sbdelay (usec) | -5.59453E-01 | +/- | 1.4E-03 |
| Phase delay (usec) | 9.42613243772E+03 | Apriori clockrate (us/s) | 9.3000003E-08 | Resid phdelay (usec) | -2.13320E-06 | +/- | 6.1E-07 |
| Delay rate (us/s) | 1.56983973780E+00 | Apriori rate (us/s) | 1.56984963260E+00 | Resid rate (us/s) | -9.89480E-06 | +/- | 2.4E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | -6.39581002360E-05 | Resid phase (deg) | -66.2 | +/- | 19.0 |

| | | | | | | | | | | | |
|--------------|------|------|------|------------------|-----------|-----------------|--|----------------------|-------------------|------------------|-----------|
| ph/seg (deg) | 38.6 | RMS | 45.6 | Theor. | Amplitude | 0.148 +/- 0.025 | Pcal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| amp/seg (%) | 83.1 | 38.6 | 45.6 | Search (2048X32) | 0.100 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 30.7 | 83.1 | 79.7 | Interp. | 0.000 | | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| amp/frq (%) | 58.0 | 30.7 | 26.9 | Inc. seg. avg. | 0.132 | | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 0.011 | | |
| | | 58.0 | 47.0 | Inc. frq. avg. | 0.140 | | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

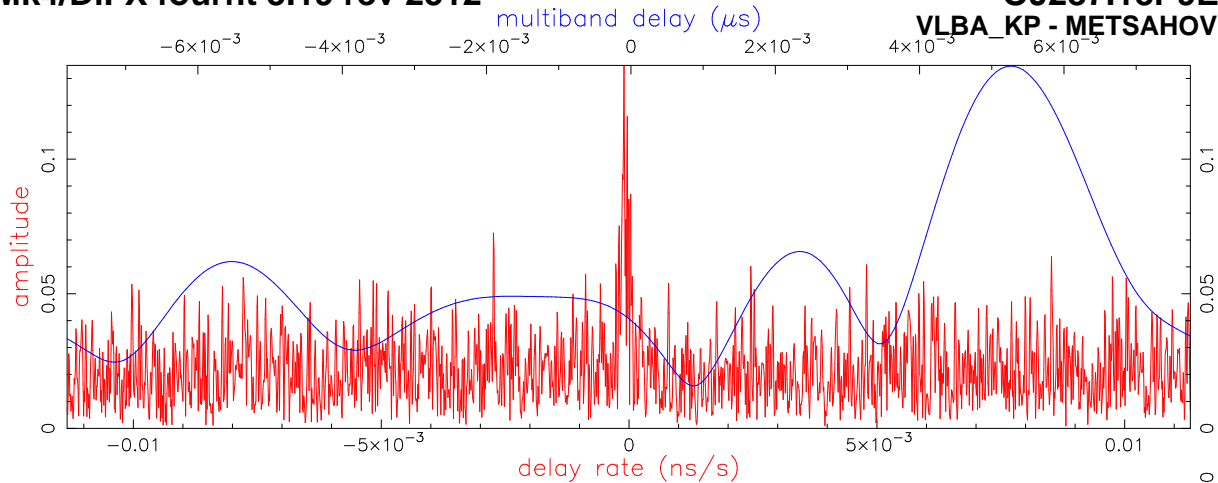
f: az 94.6 el 49.5 pa -66.0 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9670.146 -4764.017 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/fZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/fZ.W.90.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

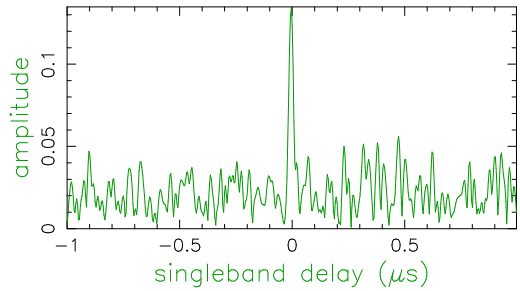
OJ287.18P9EC, No0027, kZ

VLBA_KP - METSAHOV, fgroup W, pol LL

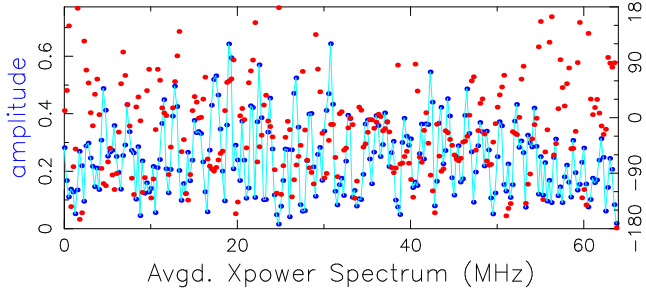


Fringe quality 9

SNR 7.7
 Int time 439.247
 Amp 0.135
 Phase -142.0
 PFD 3.6e-06
 Delays (us)
 SBD -0.004544
 MBD 0.005267
 Fringe rate (Hz)
 -0.008991
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

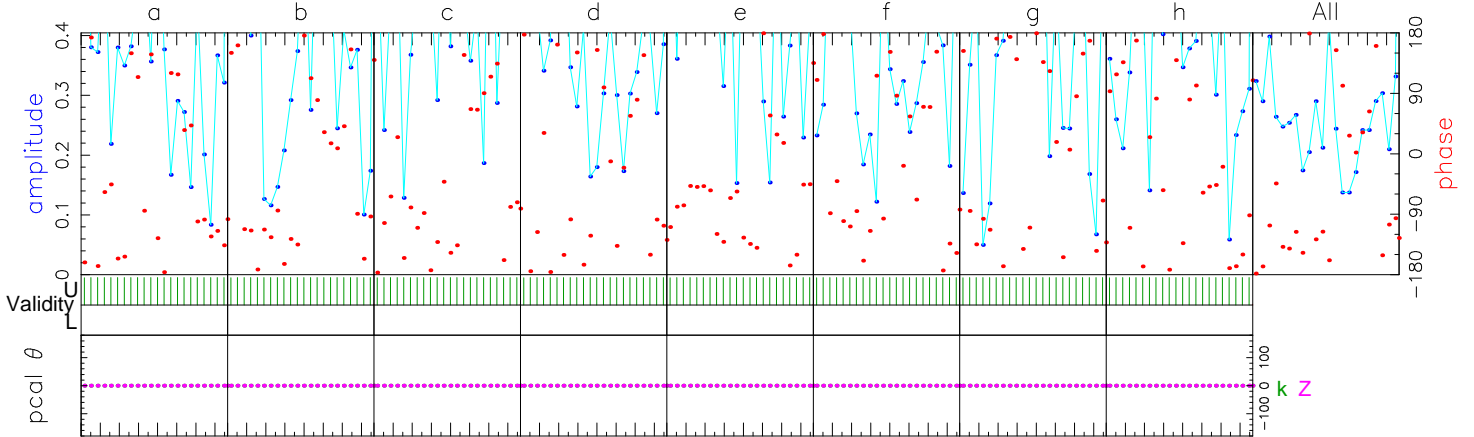


delay rate (ns/s)



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120815
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| k:Z | 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 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | Chan ids |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | Tracks |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 7.75099352478E+03 | Apriori delay (usec) | 7.75100388308E+03 | Resid mbdelay (usec) | 5.26670E-03 | +/- | 1.4E-04 |
| Sband delay (usec) | 7.75099933908E+03 | Apriori clock (usec) | -2.2518367E-01 | Resid sbdelay (usec) | -4.54400E-03 | +/- | 1.1E-03 |
| Phase delay (usec) | 7.75100387850E+03 | Apriori clockrate (us/s) | -1.0600001E-08 | Resid phdelay (usec) | -4.57772E-06 | +/- | 4.8E-07 |
| Delay rate (us/s) | 1.67280596164E+00 | Apriori rate (us/s) | 1.67280606602E+00 | Resid rate (us/s) | -1.04373E-07 | +/- | 1.9E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | -5.43114730096E-05 | Resid phase (deg) | -142.0 | +/- | 14.8 |

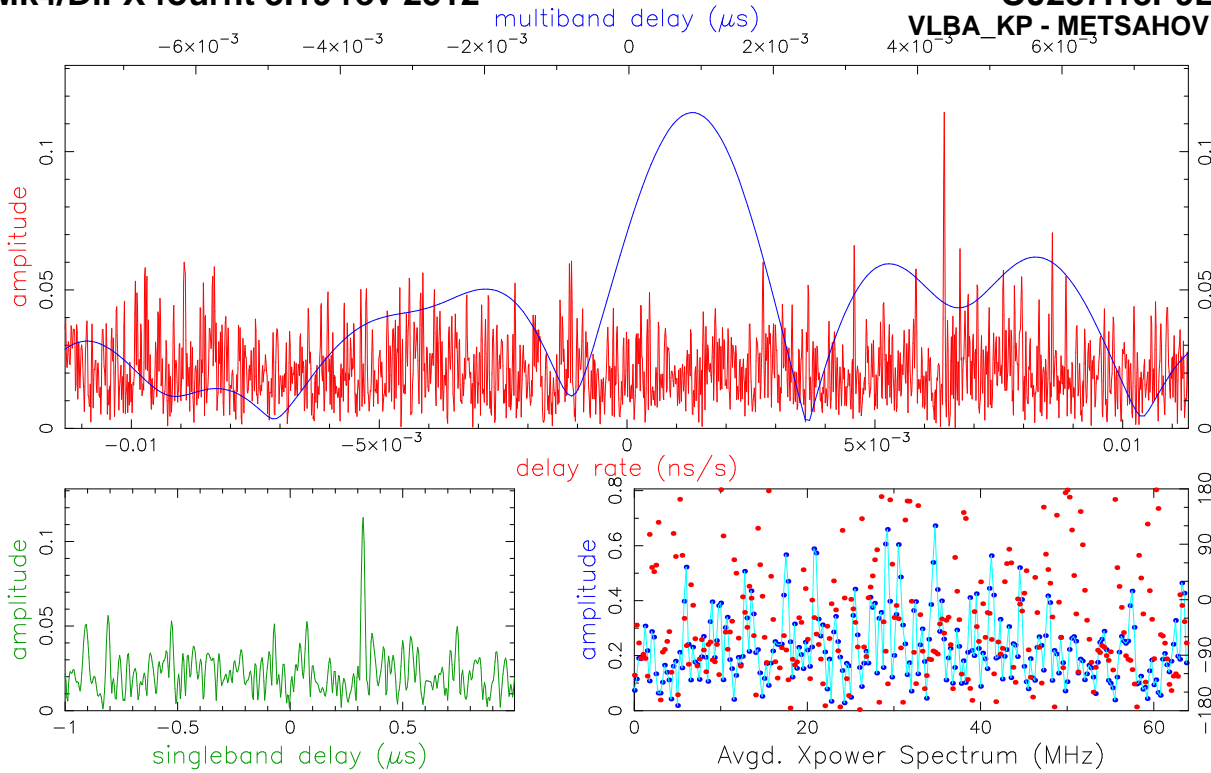
| | | | | | | | | | | | |
|--------------|-------|--------|------|------------------|-----------------|------------------------|-----------------------------|----------------------|-------------------|------------------|-----------|
| ph/seg (deg) | 80.9 | Theor. | 35.6 | Amplitude | 0.135 +/- 0.017 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| amp/seg (%) | 108.6 | | 62.1 | Search (2048X32) | 0.125 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 35.7 | | 21.0 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| amp/frq (%) | 51.3 | | 36.6 | Inc. seg. avg. | 0.217 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | | |
| | | | | Inc. frq. avg. | 0.151 | Data rate (Mb/s): | 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

k: az 91.6 el 42.9 pa -64.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -10281.915 -4320.224 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/kZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/kZ.W.104.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, kZ
VLBA_KP - METSAHOV, fgroup W, pol RR

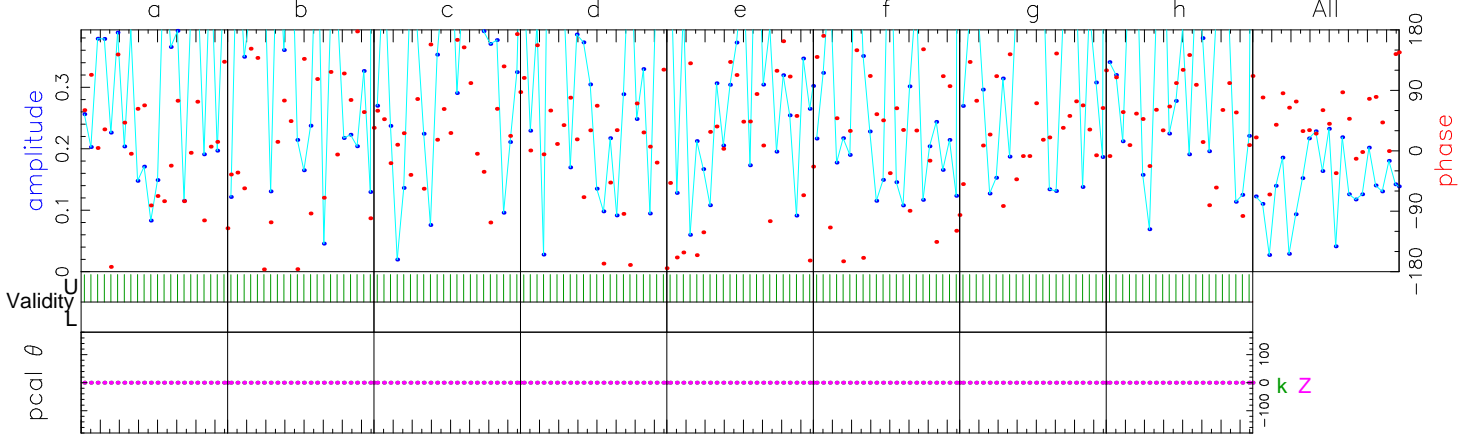


Fringe quality 0

SNR 6.6
Int time 439.247
Amp 0.131
Phase 47.6
PFD 1.5e-02
Delays (us)
SBD 0.323417
MBD 0.000865
Fringe rate (Hz)
0.552262
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c201a
Yr:day 16383
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120820
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



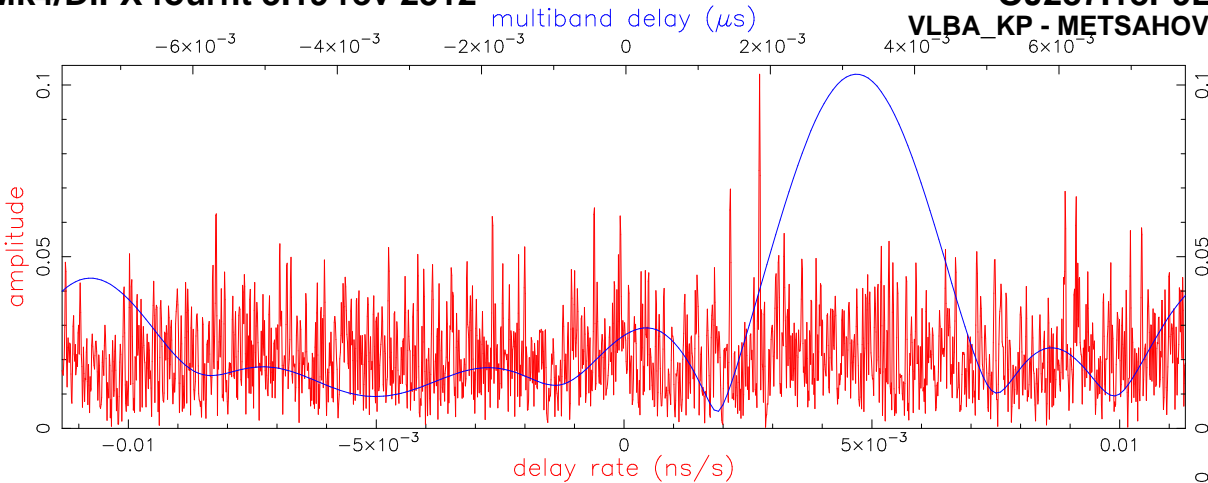
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|-------------|-------------|
| 28.0 | 78.7 | 40.9 | 45.6 | 91.6 | 148.6 | 32.5 | 52.3 | 52.3 | Phase | 47.6 |
| 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 | Ampl. | 0.1 |
| 32.7 | 447.1 | 114.8 | 185.7 | 2.9 | 243.8 | 340.0 | 340.1 | 340.1 | Sbd box | 339.8 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| k:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| k:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| k | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 7.75133287300E+03 | | Apriori delay (usec) | | 7.75100388308E+03 | | Resid mbdelay (usec) | | 8.64923E-04 | +/- 1.7E-04 |
| Sband delay (usec) | 7.75132729983E+03 | | Apriori clock (usec) | | -2.2518367E-01 | | Resid sbdelay (usec) | | 3.23417E-01 | +/- 1.3E-03 |
| Phase delay (usec) | 7.75100388461E+03 | | Apriori clockrate (us/s) | | -1.0600001E-08 | | Resid phdelay (usec) | | 1.53498E-06 | +/- 5.6E-07 |
| Delay rate (us/s) | 1.67281247723E+00 | | Apriori rate (us/s) | | 1.67280606602E+00 | | Resid rate (us/s) | | 6.41121E-06 | +/- 2.2E-09 |
| Total phase (deg) | 223.4 | | Apriori accel (us/s/s) | | -5.43114730096E-05 | | Resid phase (deg) | | 47.6 | +/- 17.5 |

ph/seg (deg) 45.8 41.9 Search (2048X32) 0.112 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.5 73.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.9 24.7 Inc. seg. avg. 0.128 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 57.3 43.1 Inc. frq. avg. 0.129 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 91.6 el 42.9 pa -64.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -10281.915 -4320.224 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/kZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/kZ.W.126.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

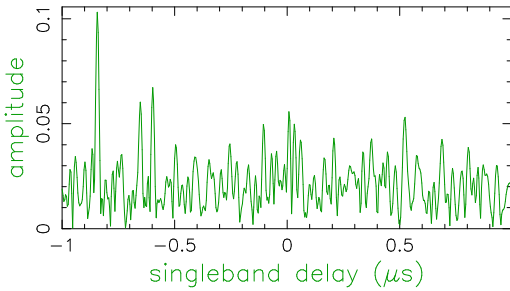
OJ287.18P9EC, No0027, kZ

VLBA_KP - METSAHOV, fgroup W, pol RL

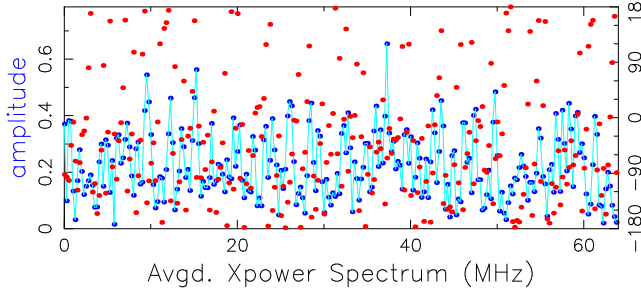


Fringe quality 0

SNR 5.9
 Int time 439.247
 Amp 0.106
 Phase -126.0
 PFD 5.7e-01
 Delays (us)
 SBD -0.843527
 MBD 0.003202
 Fringe rate (Hz)
 0.235705
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

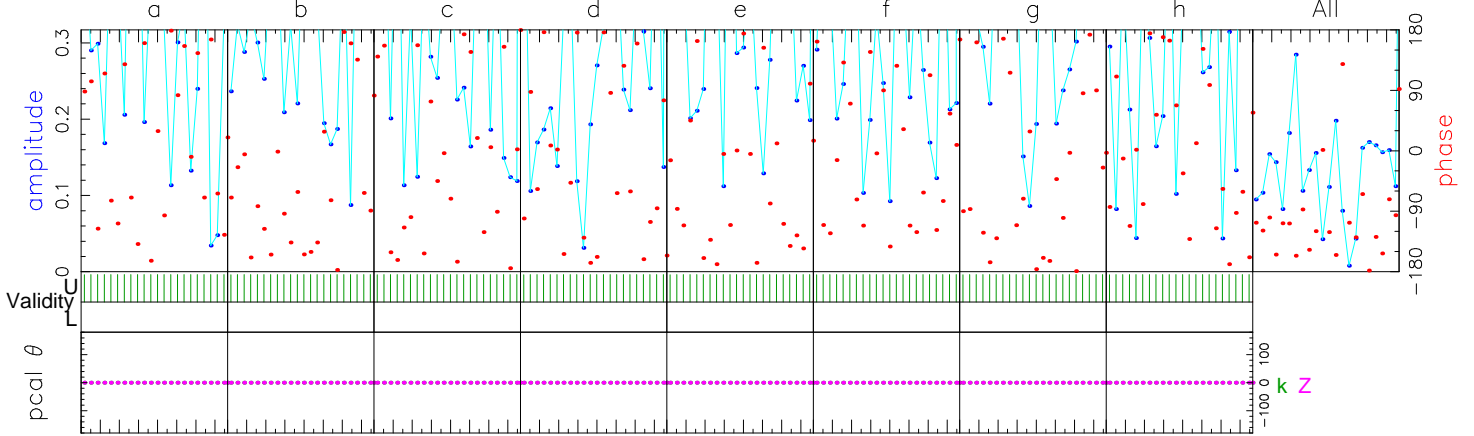


delay rate (ns/s)



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120829
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



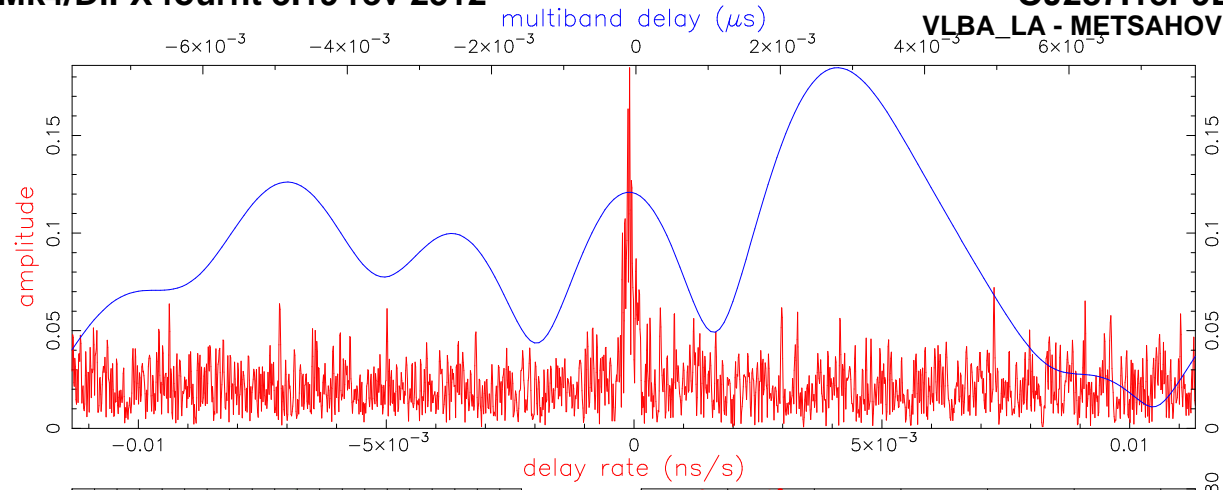
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -127.2 | -118.5 | -145.1 | -129.5 | -111.9 | -97.6 | -151.5 | -115.1 | Phase | -126.0 |
| | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | Ampl. | 0.1 |
| | 238.8 | 66.2 | 390.4 | 89.0 | 27.3 | 35.7 | 365.1 | 423.7 | Sbd box | 41.1 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| k:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| k:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 7.75016333493E+03 | Apriori delay (usec) | 7.75100388308E+03 | Resid mbdelay (usec) | 3.20185E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | 7.75016035583E+03 | Apriori clock (usec) | -2.2518367E-01 | Resid sbdelay (usec) | -8.43527E-01 | +/- | 1.5E-03 |
| Phase delay (usec) | 7.75100387901E+03 | Apriori clockrate (us/s) | -1.0600001E-08 | Resid phdelay (usec) | -4.06453E-06 | +/- | 6.2E-07 |
| Delay rate (us/s) | 1.67280880231E+00 | Apriori rate (us/s) | 1.67280606602E+00 | Resid rate (us/s) | 2.73630E-06 | +/- | 2.5E-09 |
| Total phase (deg) | 49.8 | Apriori accel (us/s/s) | -5.43114730096E-05 | Resid phase (deg) | -126.0 | +/- | 19.4 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 45.4 | Theor. | 46.5 | Amplitude | 0.106 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 63.7 | | 81.1 | Search (2048X32) | 0.100 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 19.2 | | 27.4 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 33.3 | | 47.8 | Inc. seg. avg. | 0.100 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| | | | | Inc. frq. avg. | 0.098 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

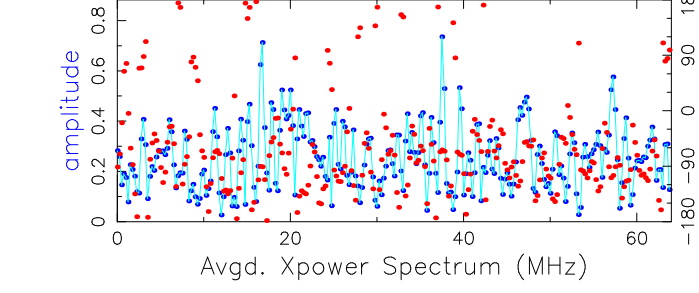
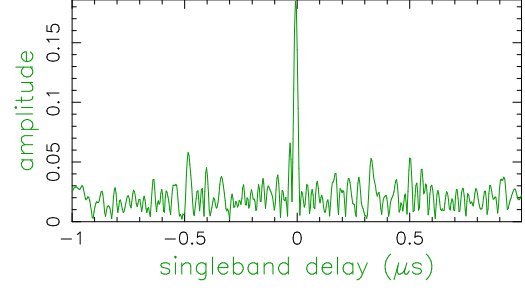
k: az 91.6 el 42.9 pa -64.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -10281.915 -4320.224 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/kZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/kZ.W.161.18P9EC



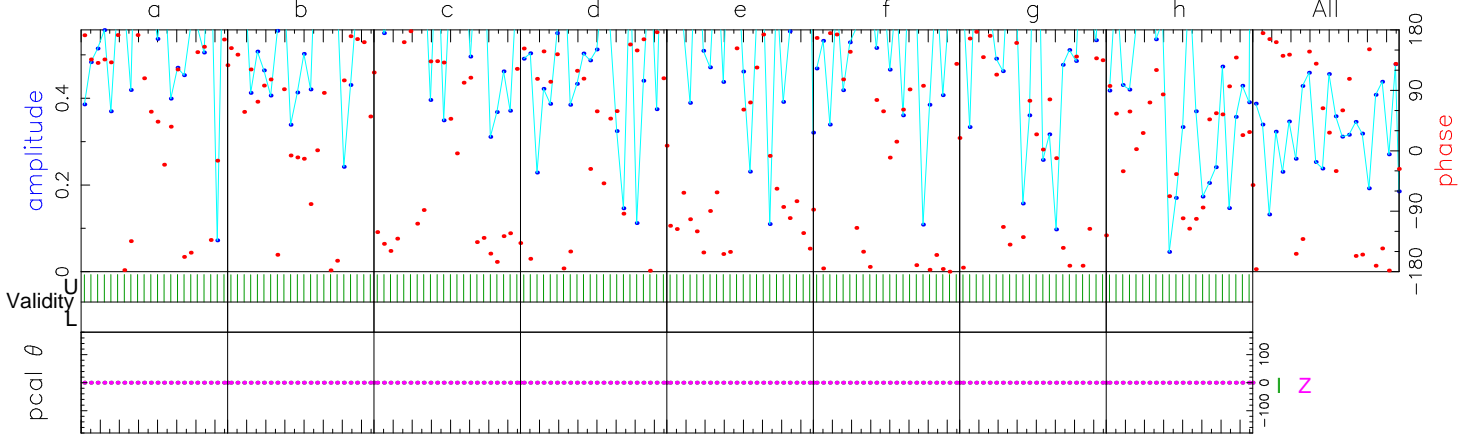
Fringe quality 9

SNR 10.6
 Int time 438.907
 Amp 0.186
 Phase 163.3
 PFD 8.1e-18
 Delays (us)
 SBD -0.006744
 MBD 0.002803
 Fringe rate (Hz)
 -0.007521
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120830
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



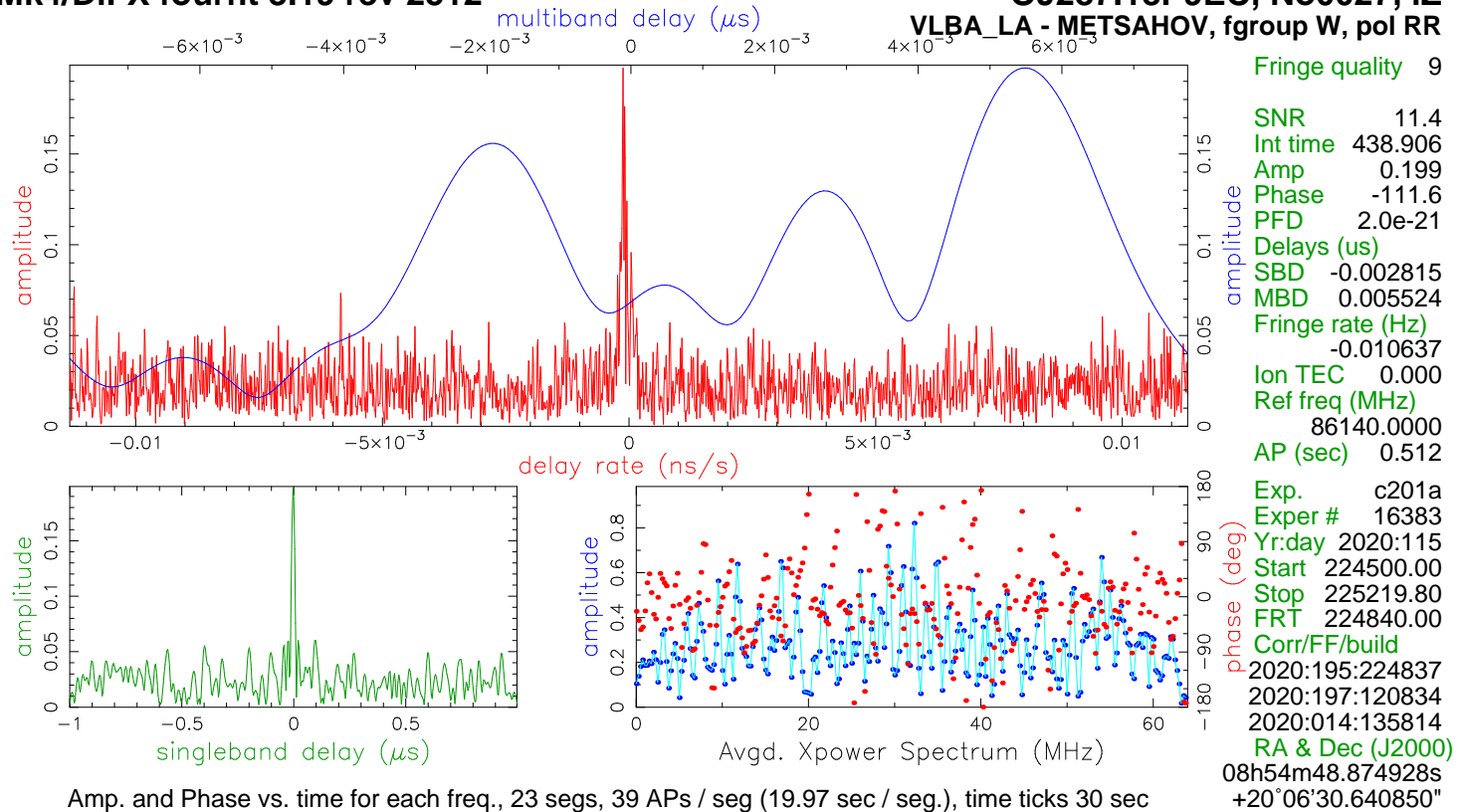
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 8.79252075321E+03 | Apriori delay (usec) | 8.79253357555E+03 | Resid mbdelay (usec) | 2.80266E-03 | +/- | 1.0E-04 |
| Sband delay (usec) | 8.79252683180E+03 | Apriori clock (usec) | -3.5678926E+00 | Resid sbdelay (usec) | -6.74375E-03 | +/- | 8.1E-04 |
| Phase delay (usec) | 8.79253358081E+03 | Apriori clockrate (us/s) | -1.6700000E-07 | Resid phdelay (usec) | 5.26481E-06 | +/- | 3.5E-07 |
| Delay rate (us/s) | 1.55632731345E+00 | Apriori rate (us/s) | 1.55632740076E+00 | Resid rate (us/s) | -8.73071E-08 | +/- | 1.4E-09 |
| Total phase (deg) | 234.4 | Apriori accel (us/s/s) | -5.77301425703E-05 | Resid phase (deg) | 163.3 | +/- | 10.8 |

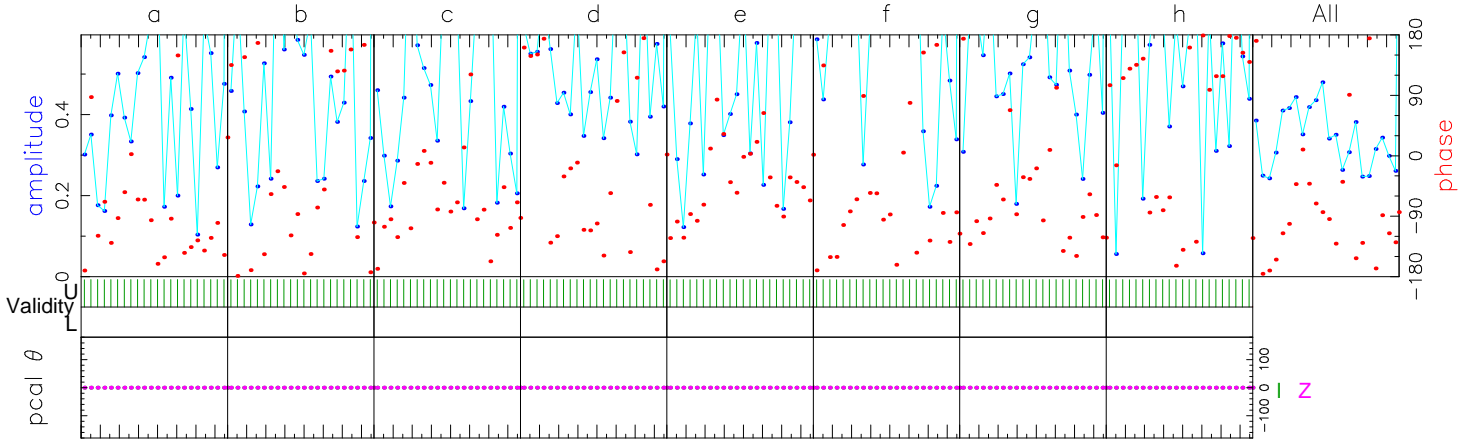
| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 63.3 | Theor. | 25.8 | Amplitude | 0.186 +/- 0.017 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 91.9 | | 45.0 | Search (2048X32) | 0.182 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 62.4 | | 15.2 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 52.4 | | 26.6 | Inc. seg. avg. | 0.301 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| | | | | Inc. frq. avg. | 0.263 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

I: az 98.8 el 47.0 pa -58.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9578.323 -3961.584 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/IZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/IZ.W.166.18P9EC



Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

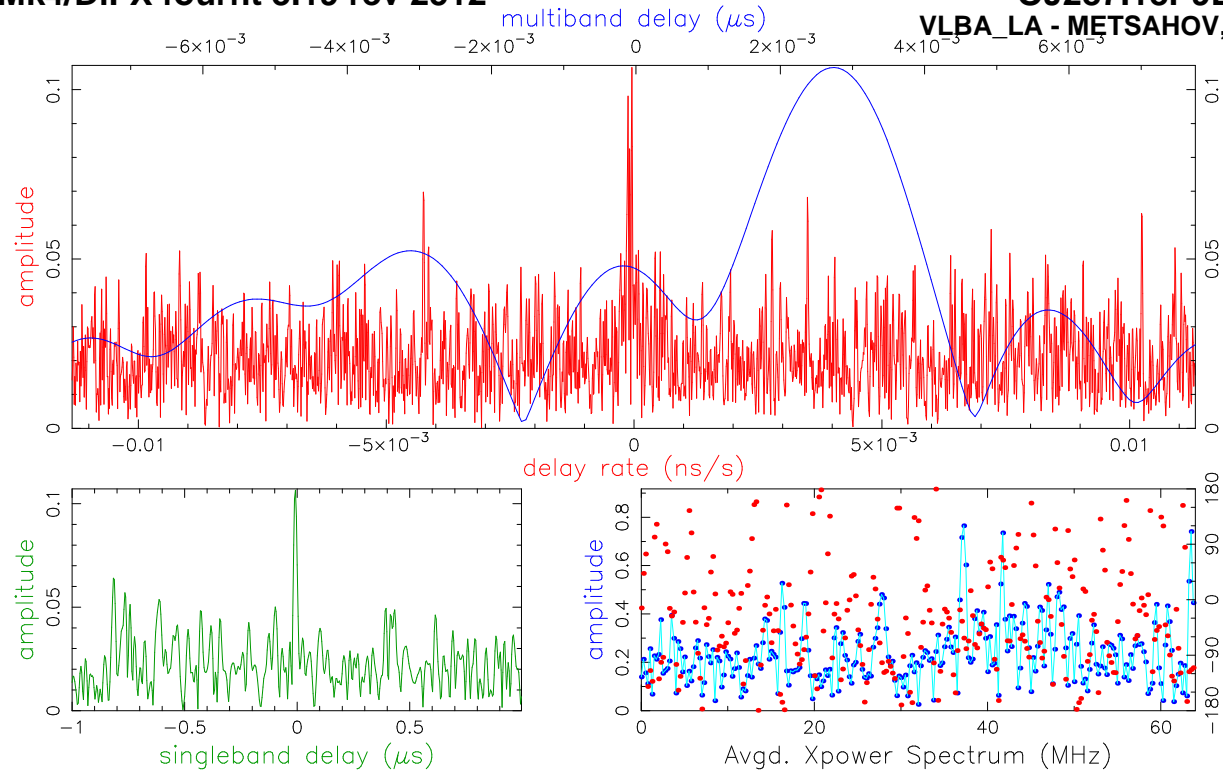


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -116.9 | -157.6 | -79.5 | -159.3 | -38.4 | -112.5 | -88.4 | 166.5 | Phase | -111.6 |
| | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | Ampl. | 0.3 |
| | 255.4 | 255.9 | 255.9 | 254.7 | 255.6 | 256.2 | 255.3 | 253.5 | Sbd box | 256.3 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 8.79252347504E+03 | | Apriori delay (usec) | | 8.79253357555E+03 | | Resid mbdelay (usec) | | 5.52449E-03 | +/- 9.5E-05 |
| Sband delay (usec) | 8.79253076080E+03 | | Apriori clock (usec) | | -3.5678926E+00 | | Resid sbdelay (usec) | | -2.81475E-03 | +/- 7.6E-04 |
| Phase delay (usec) | 8.79253357195E+03 | | Apriori clockrate (us/s) | | -1.6700000E-07 | | Resid phdelay (usec) | | -3.59759E-06 | +/- 3.2E-07 |
| Delay rate (us/s) | 1.55632727728E+00 | | Apriori rate (us/s) | | 1.55632740076E+00 | | Resid rate (us/s) | | -1.23484E-07 | +/- 1.3E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -5.77301425703E-05 | | Resid phase (deg) | | -111.6 | +/- 10.1 |

| | RMS | Theor. | Amplitude | 0.199 +/- 0.017 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------|-------|
| ph/seg (deg) | 62.0 | 24.1 | Search (2048X32) | 0.193 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 81.4 | 42.1 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 54.9 | 14.2 | Inc. seg. avg. | 0.314 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 46.5 | 24.8 | Inc. frq. avg. | 0.272 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | | |

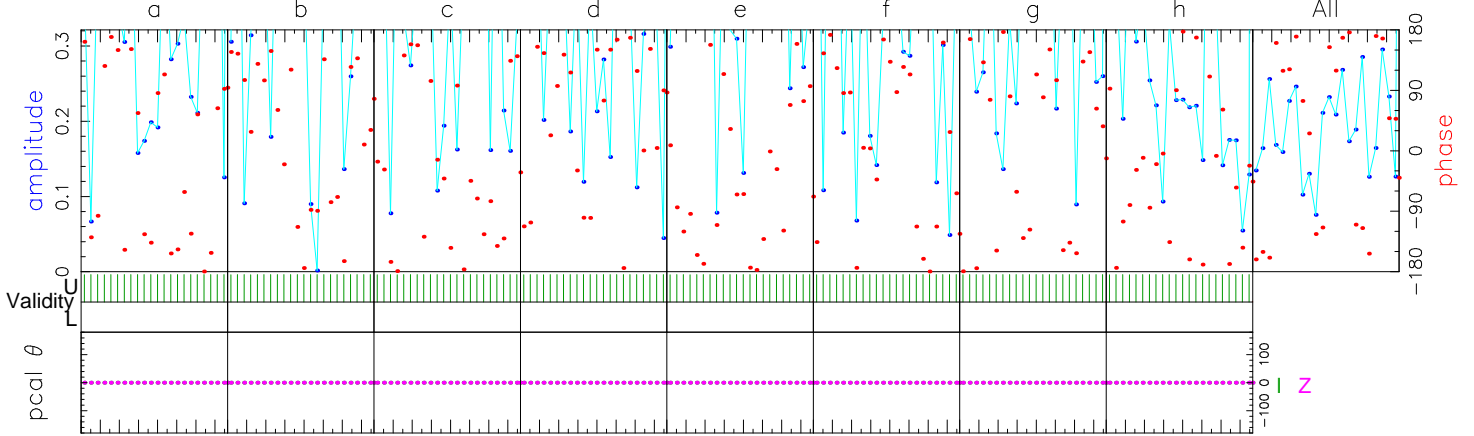
I: az 98.8 el 47.0 pa -58.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9578.323 -3961.584 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/IZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/IZ.W.181.18P9EC



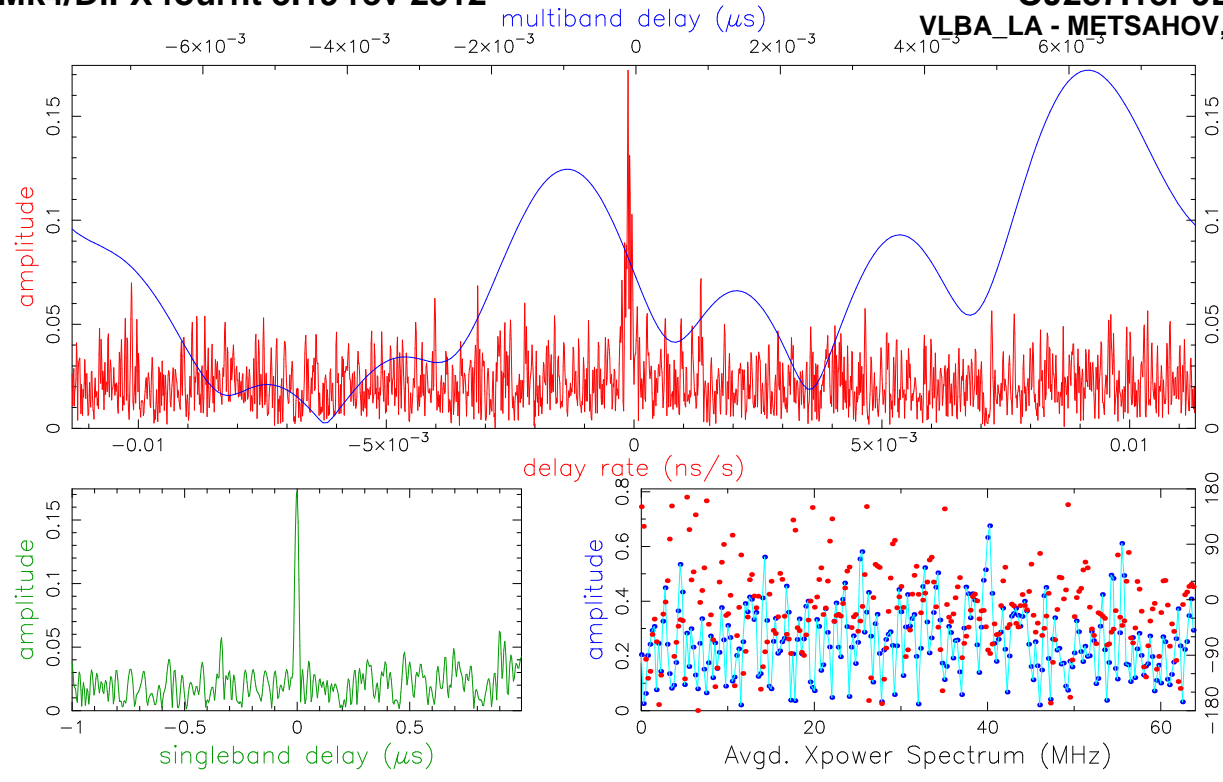
Fringe quality 0
SNR 6.1
Int time 438.907
Amp 0.107
Phase 172.1
PFD 2.0e-01
Delays (us)
SBD -0.008857
MBD 0.002709
Fringe rate (Hz)
-0.003870
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c201a
Yr:day 16383
Start 2020:115
Stop 2020:115
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120839
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | 8.79252065966E+03 | | Apriori delay (usec) | | 8.79253357555E+03 | | Resid mbdelay (usec) | | 2.70911E-03 | +/- 1.8E-04 |
| Sband delay (usec) | 8.79252471880E+03 | | Apriori clock (usec) | | -3.5678926E+00 | | Resid sbdelay (usec) | | -8.85675E-03 | +/- 1.4E-03 |
| Phase delay (usec) | 8.79253358110E+03 | | Apriori clockrate (us/s) | | -1.6700000E-07 | | Resid phdelay (usec) | | 5.55092E-06 | +/- 6.0E-07 |
| Delay rate (us/s) | 1.55632735584E+00 | | Apriori rate (us/s) | | 1.55632740076E+00 | | Resid rate (us/s) | | -4.49240E-08 | +/- 2.4E-09 |
| Total phase (deg) | 243.3 | | Apriori accel (us/s/s) | | -5.77301425703E-05 | | Resid phase (deg) | | 172.1 | +/- 18.7 |

ph/seg (deg) 66.1 44.8 Search (2048X32) 0.105 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 98.0 78.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.6 26.4 Inc. seg. avg. 0.146 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 47.2 46.1 Inc. frq. avg. 0.112 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 I: az 98.8 el 47.0 pa -58.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9578.323 -3961.584 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/IZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/IZ.W.200.18P9EC

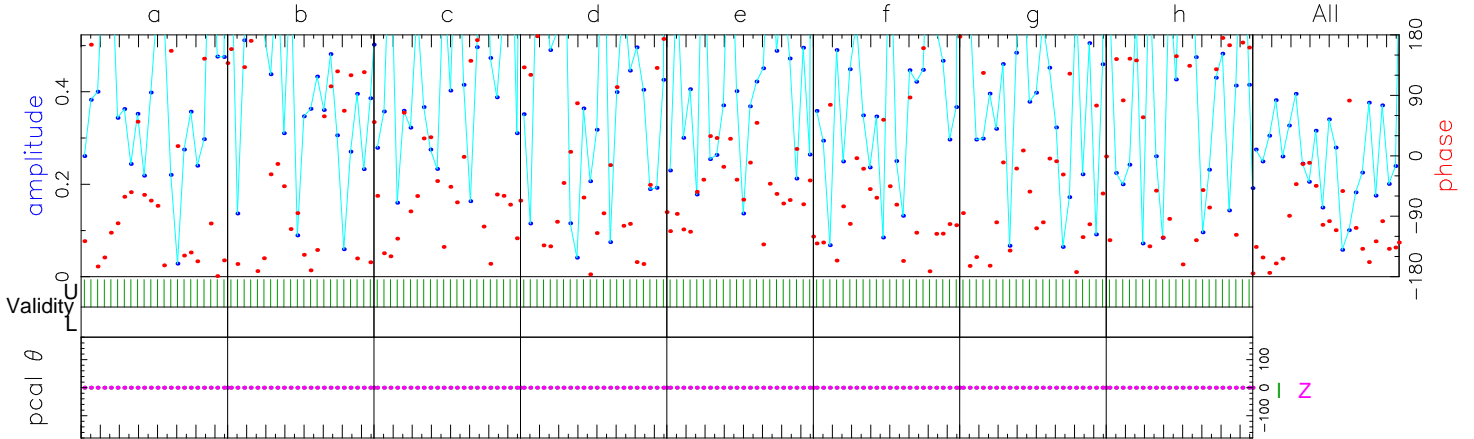


Fringe quality 9

SNR 10.0
 Int time 438.906
 Amp 0.174
 Phase -113.8
 PFD 6.9e-15
 Delays (us)
 SBD -0.001614
 MBD 0.006226
 Fringe rate (Hz)
 -0.010641
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120843
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



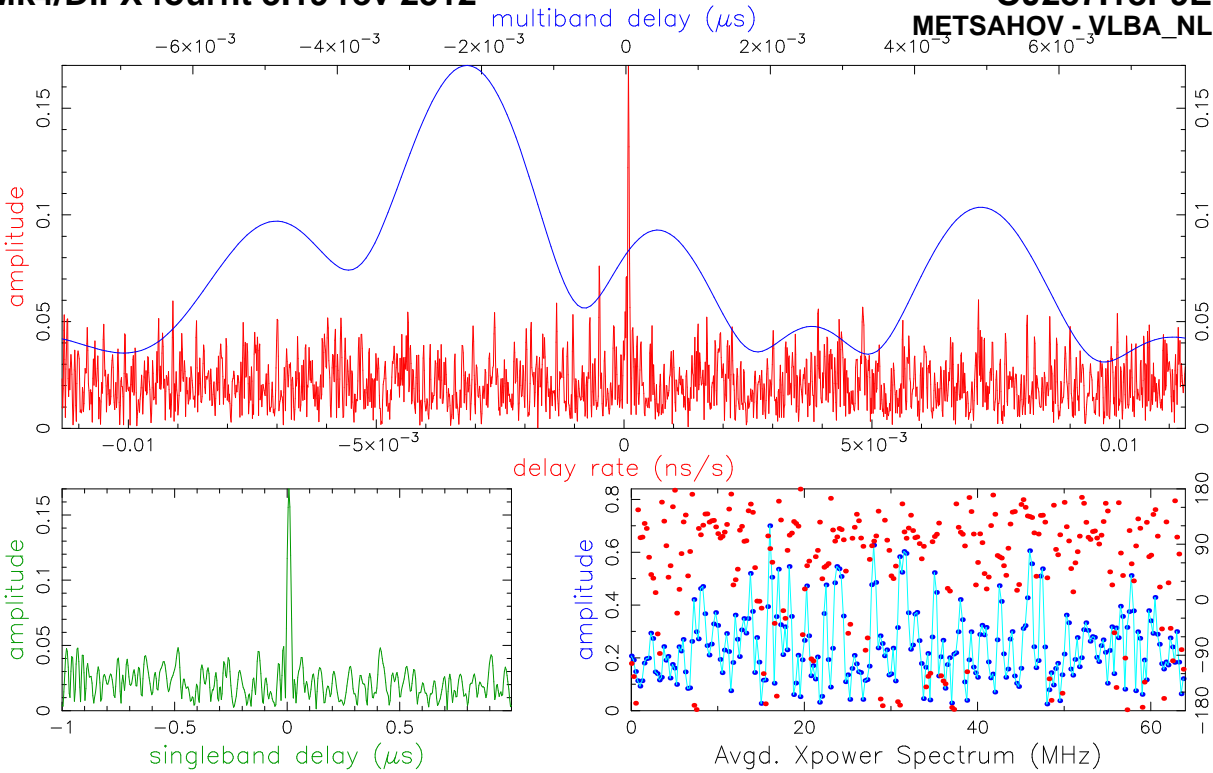
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|-------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -130.7 | -176.6 | -88.6 | -123.0 | -45.8 | -105.1 | -83.6 | -172.7 | Phase | -113.8 |
| | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | Ampl. | 0.2 |
| | 256.4 | 256.9 | 256.9 | 255.5 | 255.7 | 255.2 | 254.3 | 255.3 | Sbd box | 256.6 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| I:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 8.79252417660E+03 | | Apriori delay (usec) | | 8.79253357555E+03 | | Resid mbdelay (usec) | | 6.22605E-03 | +/- 1.1E-04 |
| Sband delay (usec) | 8.79253196180E+03 | | Apriori clock (usec) | | -3.5678926E+00 | | Resid sbdelay (usec) | | -1.61375E-03 | +/- 8.6E-04 |
| Phase delay (usec) | 8.79253357188E+03 | | Apriori clockrate (us/s) | | -1.6700000E-07 | | Resid phdelay (usec) | | -3.67026E-06 | +/- 3.7E-07 |
| Delay rate (us/s) | 1.55632727723E+00 | | Apriori rate (us/s) | | 1.55632740076E+00 | | Resid rate (us/s) | | -1.23533E-07 | +/- 1.5E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -5.77301425703E-05 | | Resid phase (deg) | | -113.8 | +/- 11.5 |

ph/seg (deg) 58.7 27.5 Amplitude 0.174 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 70.4 48.0 Search (2048X32) 0.170 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 48.4 16.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 42.0 28.3 Inc. seg. avg. 0.231 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.223 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

I: az 98.8 el 47.0 pa -58.5 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) -9578.323 -3961.584 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/IZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/IZ.W.218.18P9EC

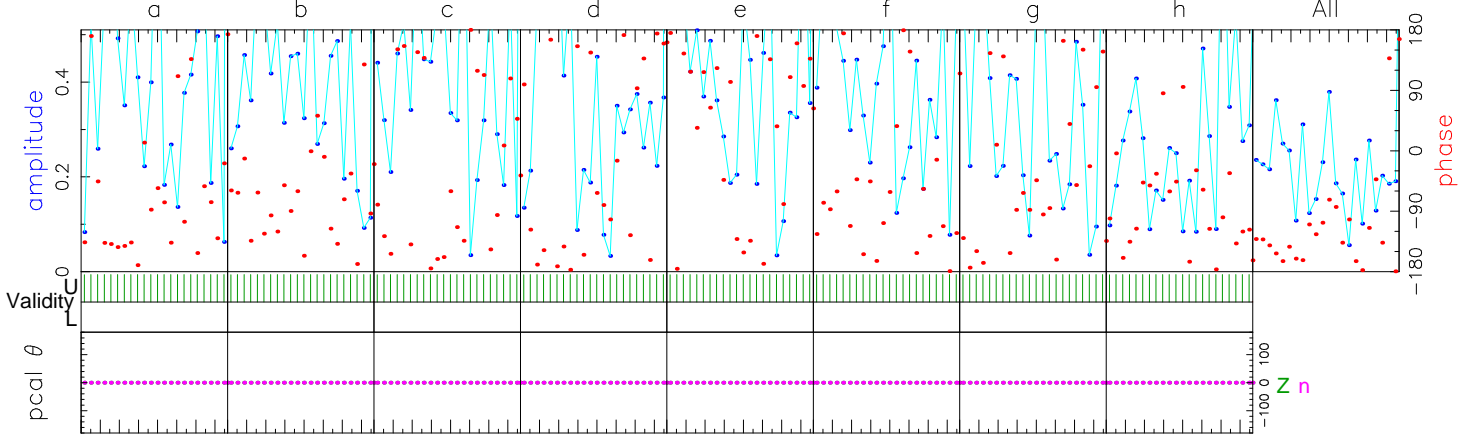
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zn
 METSAHOV - VLBA_NL, fgroup W, pol LL



Fringe quality 9
 SNR 9.7
 Int time 438.725
 Amp 0.170
 Phase -136.0
 PFD 8.5e-14
 Delays (us)
 SBD 0.007823
 MBD -0.002201
 Fringe rate (Hz) 0.007683
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120848
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

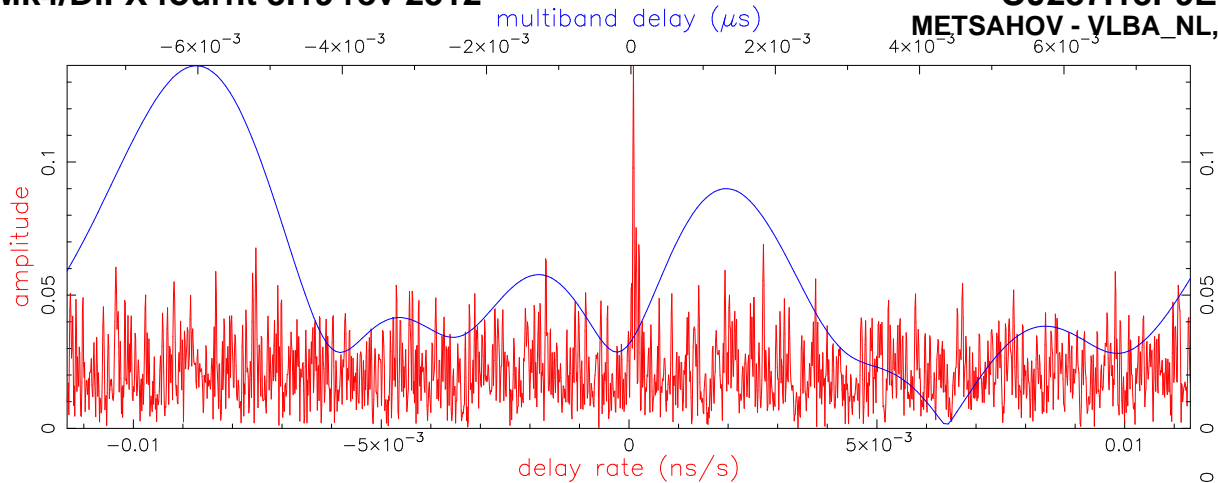


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -123.1 | -77.0 | -168.4 | -169.5 | 143.9 | -105.0 | -139.8 | -96.2 | Phase | -136.0 |
| | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 257.8 | 259.1 | 258.3 | 259.3 | 260.1 | 259.5 | 260.7 | 259.9 | Sbd box | 259.0 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -1.07991167680E+04 | | Apriori delay (usec) | | -1.07991301916E+04 | | Resid mbdelay (usec) | | -2.20138E-03 | +/- 1.1E-04 |
| Sband delay (usec) | -1.07991223686E+04 | | Apriori clock (usec) | | -3.2369507E+01 | | Resid sbdelay (usec) | | 7.82300E-03 | +/- 8.8E-04 |
| Phase delay (usec) | -1.07991301960E+04 | | Apriori clockrate (us/s) | | -3.1799997E-07 | | Resid phdelay (usec) | | -4.38632E-06 | +/- 3.8E-07 |
| Delay rate (us/s) | -1.26806709114E+00 | | Apriori rate (us/s) | | -1.26806718033E+00 | | Resid rate (us/s) | | 8.91932E-08 | +/- 1.5E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 6.50635606293E-05 | | Resid phase (deg) | | -136.0 | +/- 11.8 |

ph/seg (deg) 38.9 28.2 Search (2048X32) 0.166 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 53.5 49.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 49.7 16.6 Inc. seg. avg. 0.187 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 40.8 29.0 Inc. frq. avg. 0.222 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 275.9 el 19.8 pa 31.7 n: az 120.0 el 55.9 pa -43.5 u,v (fr/asec) 7834.514 3503.635 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zn..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zn.W.238.18P9EC

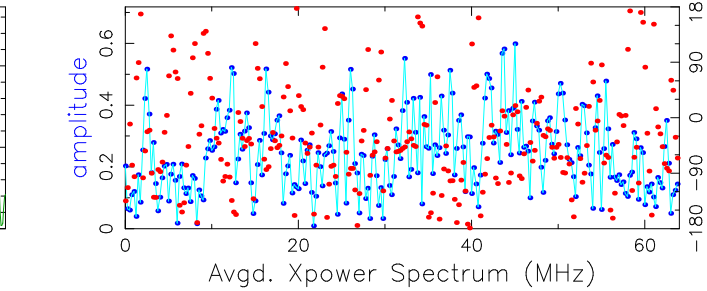
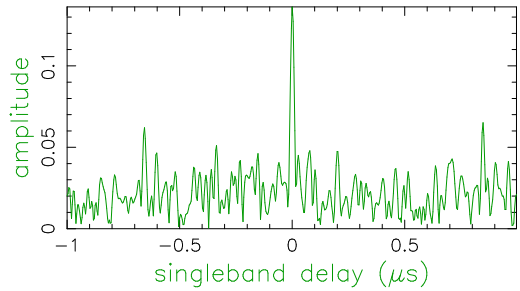
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zn
 METSAHOV - VLBA_NL, fgroup W, pol RR



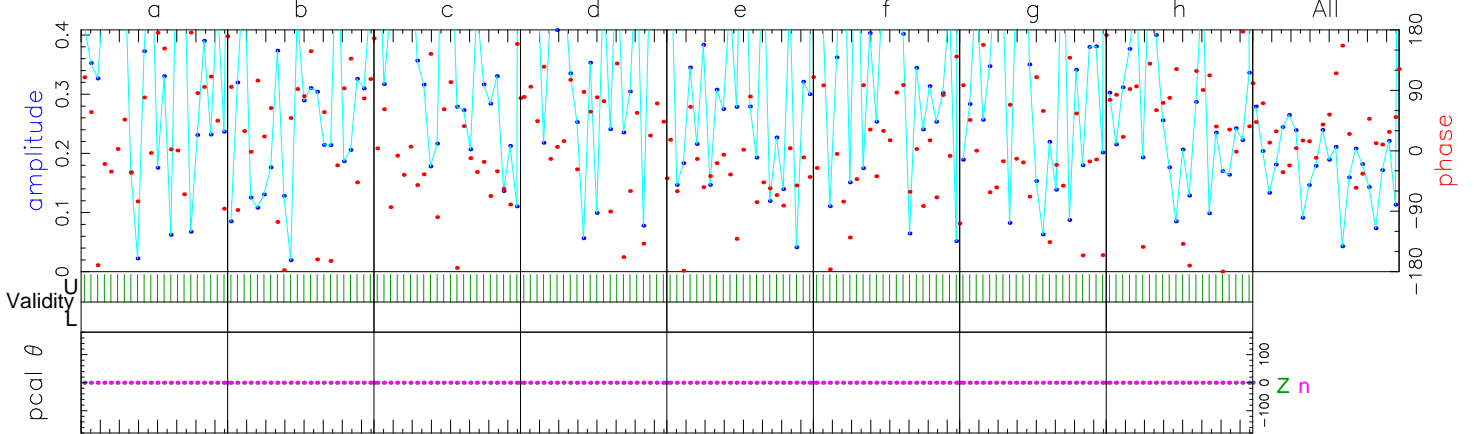
Fringe quality 9

SNR 7.8
 Int time 438.725
 Amp 0.136
 Phase 19.1
 PFD 2.0e-06
 Delays (us)
 SBD 0.000419
 MBD -0.006008
 Fringe rate (Hz)
 0.007474
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120852
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

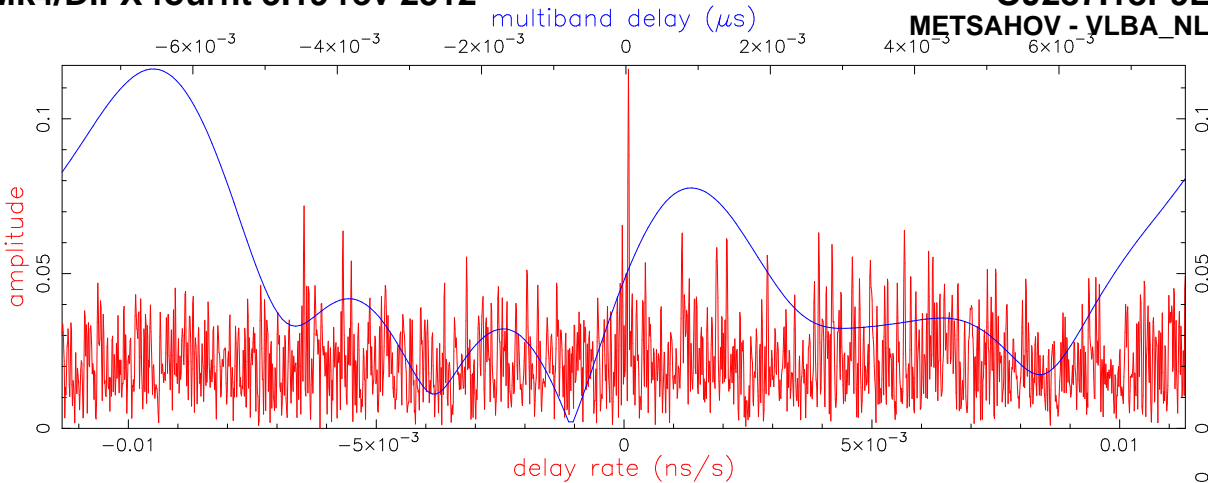


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|------------------|-----------------|--|----------|----------|----------|-----------------------|--------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -1.07991361995E+04 | | | | -1.07991301916E+04 | | | | -6.00791E-03 | +/- 1.4E-04 |
| Sband delay (usec) | -1.07991297723E+04 | | | | -3.2369507E+01 | | | | 4.19250E-04 | +/- 1.1E-03 |
| Phase delay (usec) | -1.07991301910E+04 | | | | -3.1799997E-07 | | | | 6.16355E-07 | +/- 4.7E-07 |
| Delay rate (us/s) | -1.26806709357E+00 | | | | -1.26806718033E+00 | | | | 8.67664E-08 | +/- 1.9E-09 |
| Total phase (deg) | | | -233.8 | | 6.50635606293E-05 | | | | 19.1 | +/- 14.7 |
| | RMS | Theor. | Amplitude | 0.136 +/- 0.017 | Pcal mode: MANUAL, MANUAL | | | | PC period (AP's) 5, 5 | |
| ph/seg (deg) | 47.3 | 35.2 | Search (2048X32) | 0.133 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | | sb window (us) | -1.000 1.000 |
| amp/seg (%) | 59.1 | 61.4 | Interp. | 0.000 | Bits/sample: 2x2 | | | | mb window (us) | -0.008 0.008 |
| ph/frq (deg) | 47.1 | 20.8 | Inc. seg. avg. | 0.151 | Sample rate(MISamp/s): 128 | | | | dr window (ns/s) | -0.011 0.011 |
| amp/frq (%) | 44.8 | 36.2 | Inc. frq. avg. | 0.164 | Data rate(Mb/s): 2048 | | | | ion window (TEC) | 0.00 0.00 |

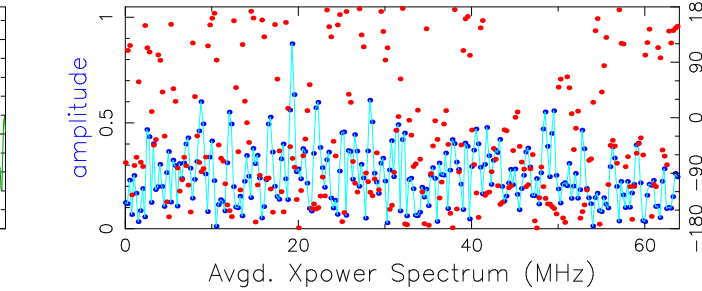
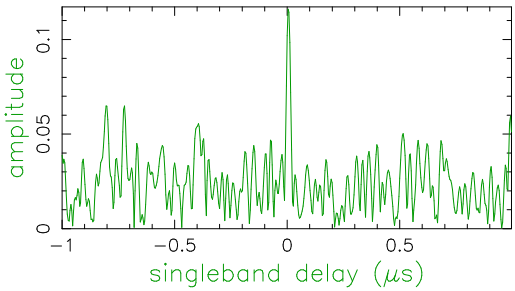
Z: az 275.9 el 19.8 pa 31.7 n: az 120.0 el 55.9 pa -43.5 u,v (fr/asec) 7834.514 3503.635 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zn..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zn.W.248.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zn
 METSAHOV - VLBA_NL, fgroup W, pol LR

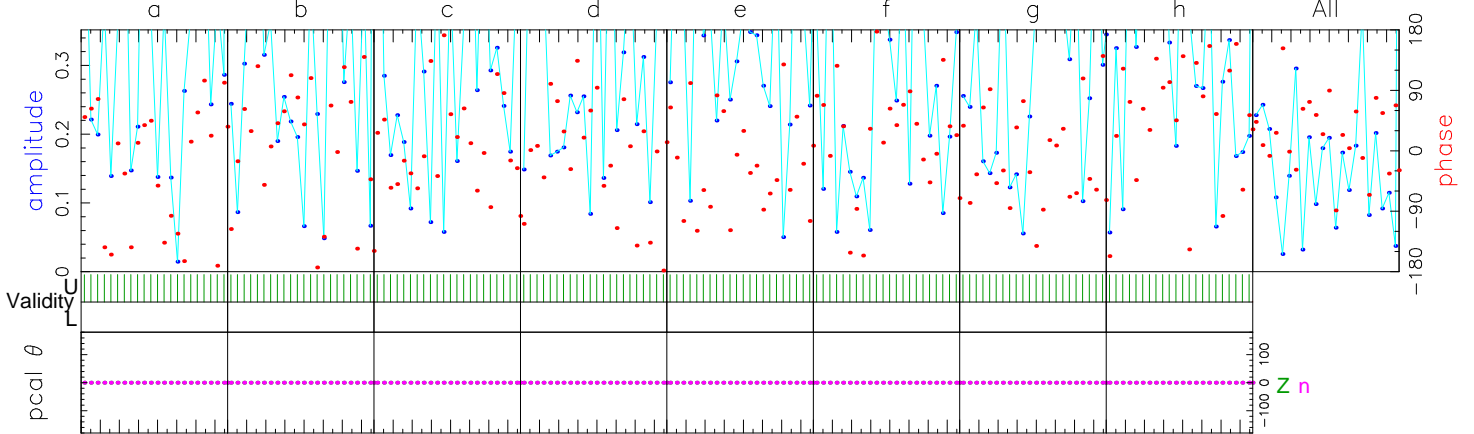


Fringe quality 0
 SNR 6.7
 Int time 438.725
 Amp 0.117
 Phase 20.6
 PFD 5.4e-03
 Delays (us)
 SBD 0.005467
 MBD -0.006487
 Fringe rate (Hz)
 0.007400
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120855
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"



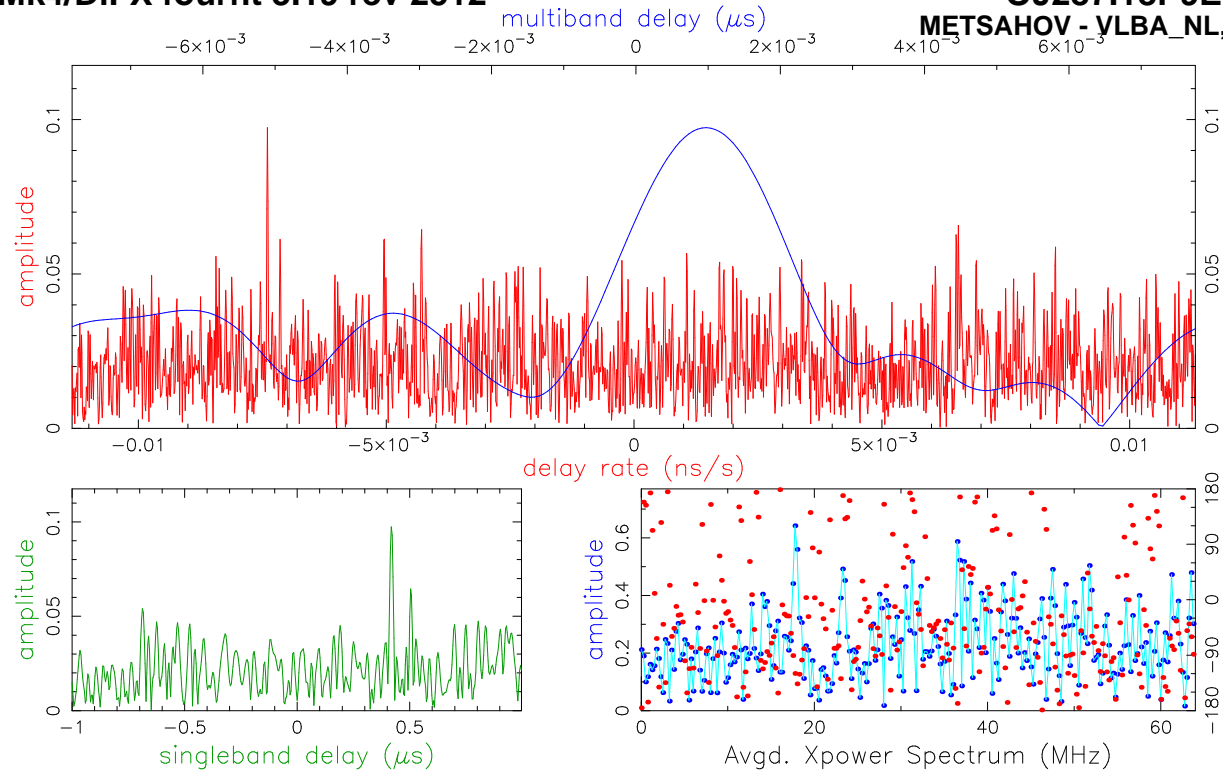
Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



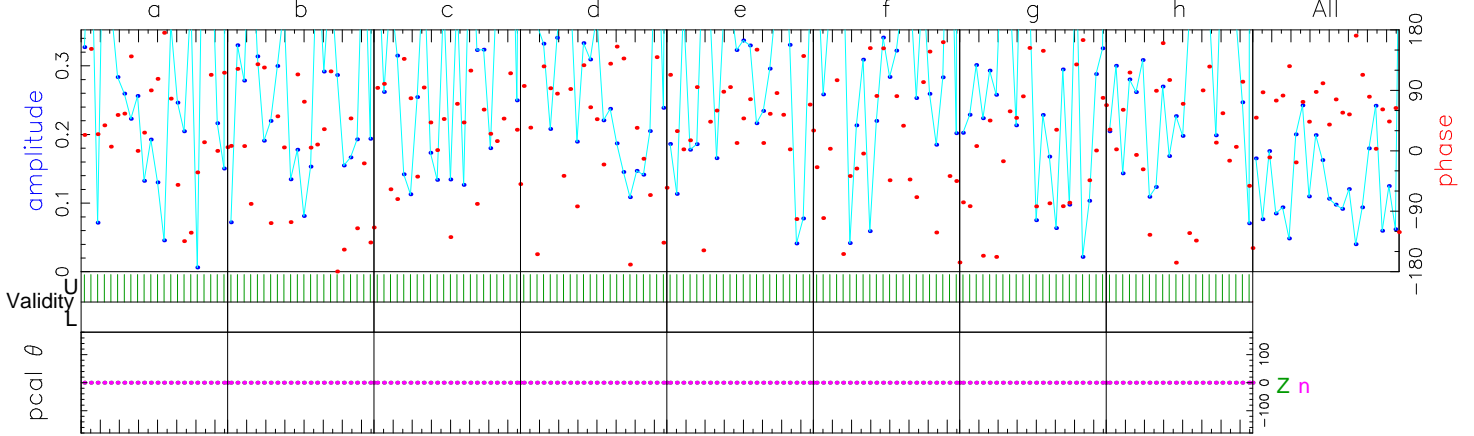
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|------------------|-----------------|--|-----------------------|-------------------|------------------|--------------|-------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -1.07991210533E+04 | | | | -1.07991301916E+04 | | | | -6.48676E-03 | +/- 1.6E-04 |
| Sband delay (usec) | -1.07991247243E+04 | | | | -3.2369507E+01 | | | | 5.46725E-03 | +/- 1.3E-03 |
| Phase delay (usec) | -1.07991301909E+04 | | | | -3.1799997E-07 | | | | 6.65207E-07 | +/- 5.5E-07 |
| Delay rate (us/s) | -1.26806709443E+00 | | | | -1.26806718033E+00 | | | | 8.59020E-08 | +/- 2.2E-09 |
| Total phase (deg) | | -232.3 | | | 6.50635606293E-05 | | | | 20.6 | +/- 17.1 |
| | RMS | Theor. | Amplitude | 0.117 +/- 0.017 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | | |
| ph/seg (deg) | 53.9 | 40.9 | Search (2048X32) | 0.113 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | | |
| amp/seg (%) | 84.7 | 71.4 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 | |
| ph/frq (deg) | 50.5 | 24.1 | Inc. seg. avg. | 0.124 | Sample rate(MISamp/s): 128 | | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 41.6 | 42.1 | Inc. frq. avg. | 0.145 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

Z: az 275.9 el 19.8 pa 31.7 n: az 120.0 el 55.9 pa -43.5 u,v (fr/asec) 7834.514 3503.635 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zn..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zn.W.254.18P9EC



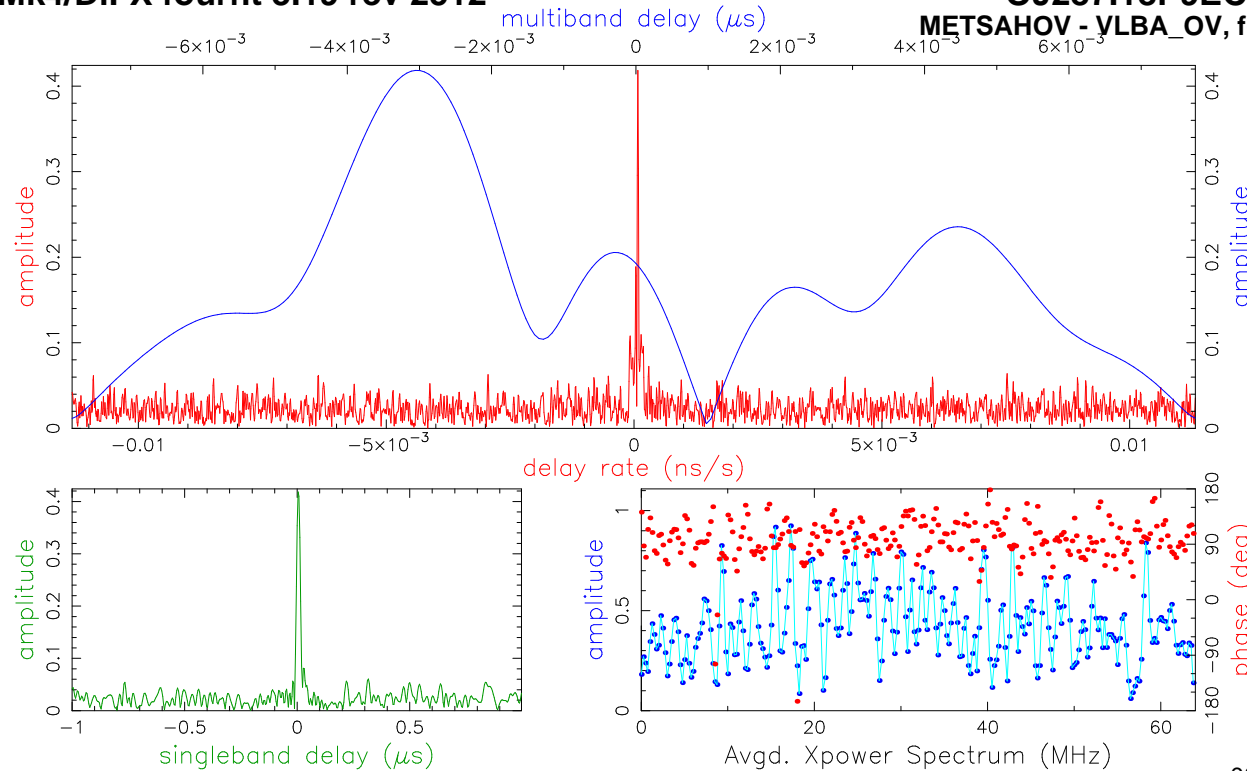
Fringe quality 0
 SNR 5.6
 Int time 438.725
 Amp 0.118
 Phase 56.8
 PFD 9.9e-01
 Delays (us)
 SBD 0.418959
 MBD 0.000992
 Fringe rate (Hz)
 -0.638090
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120859
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|----------|--------------------------|--------------------|----------|----------|----------|--|-------------------------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| Group delay (usec)(sbd) | -1.07987073246E+04 | | | | | | | | 9.91935E-04 | +/- 1.9E-04 |
| Sband delay (usec) | -1.07987112326E+04 | | | | | | | | 4.18959E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -1.07991301897E+04 | | | | | | | | 1.83097E-06 | +/- 6.6E-07 |
| Delay rate (us/s) | -1.26807458793E+00 | | | | | | | | -7.40760E-06 | +/- 2.6E-09 |
| Total phase (deg) | | | -196.2 | | | | | | 56.8 | +/- 20.4 |
| | | | | Apriori delay (usec) | -1.07991301916E+04 | | | | Resid mbdelay (usec) | |
| | | | | Apriori clock (usec) | -3.2369507E+01 | | | | Resid sbdelay (usec) | |
| | | | | Apriori clockrate (us/s) | -3.1799997E-07 | | | | Resid phdelay (usec) | |
| | | | | Apriori rate (us/s) | -1.26806718033E+00 | | | | Resid rate (us/s) | |
| | | | | Apriori accel (us/s/s) | 6.50635606293E-05 | | | | Resid phase (deg) | |
| | | | | | | | | | | |
| ph/seg (deg) | 43.4 | 49.0 | | Search (2048X32) | 0.096 | | | | PCal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 68.4 | 85.5 | | Interp. | 0.000 | | | | PCal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 31.1 | 28.9 | | Inc. seg. avg. | 0.111 | | | | Bits/sample: 2x2 | SampCntNorm: enabled |
| amp/frq (%) | 49.6 | 50.4 | | Inc. frq. avg. | 0.112 | | | | Sample rate(MISamp/s): 128 | mb window (us) -0.008 0.008 |
| | | | | | | | | | Data rate(Mb/s): 2048 | dr window (ns/s) -0.011 0.011 |
| | | | | | | | | | nlags: 256 | t_cohere infinite |
| | | | | | | | | | | ion window (TEC) 0.00 0.00 |

Z: az 275.9 el 19.8 pa 31.7 n: az 120.0 el 55.9 pa -43.5 u,v (fr/asec) 7834.514 3503.635 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zn..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zn.W.260.18P9EC

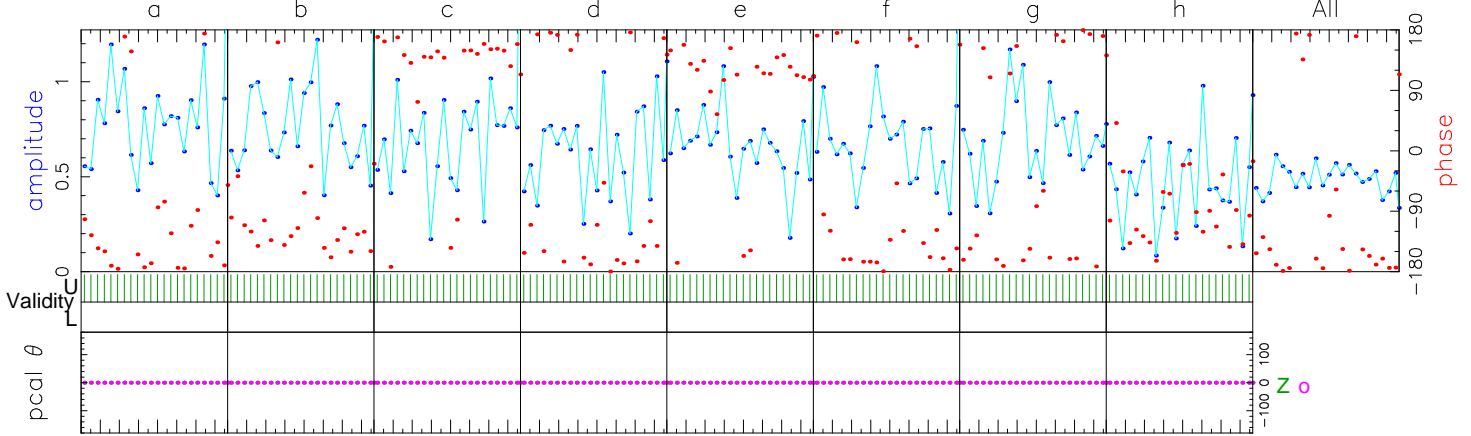


Fringe quality 7

SNR 24.3
 Int time 439.226
 Amp 0.424
 Phase -163.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.005441
 MBD -0.003001
 Fringe rate (Hz)
 0.007081
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120848
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



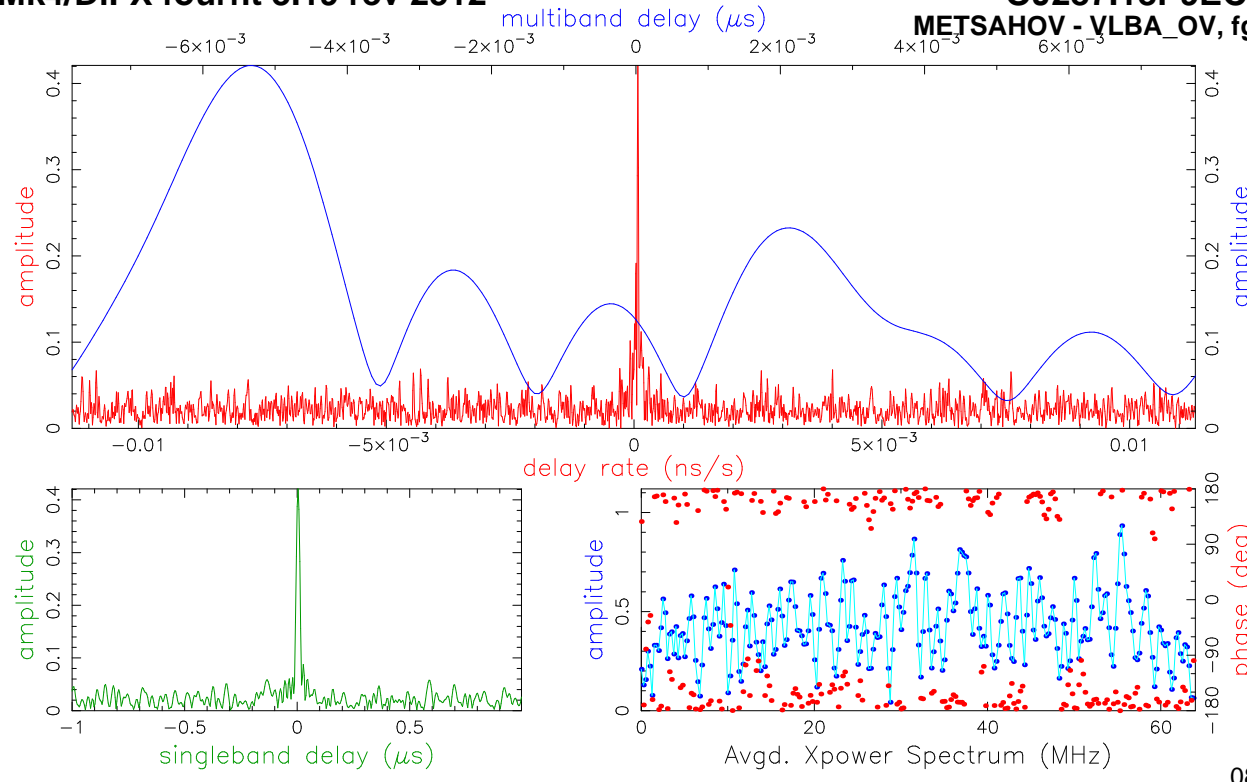
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -6.16470566359E+03 | Apriori delay (usec) | -6.16471828777E+03 | Resid mbdelay (usec) | -3.00081E-03 | +/- | 4.5E-05 |
| Sband delay (usec) | -6.16471284627E+03 | Apriori clock (usec) | -2.0185204E+01 | Resid sbdelay (usec) | 5.44150E-03 | +/- | 3.5E-04 |
| Phase delay (usec) | -6.16471829304E+03 | Apriori clockrate (us/s) | -1.8500001E-07 | Resid phdelay (usec) | -5.26657E-06 | +/- | 1.5E-07 |
| Delay rate (us/s) | -1.69517575281E+00 | Apriori rate (us/s) | -1.69517583501E+00 | Resid rate (us/s) | 8.22069E-08 | +/- | 6.0E-10 |
| Total phase (deg) | -274.5 | Apriori accel (us/s/s) | 4.28437932318E-05 | Resid phase (deg) | -163.3 | +/- | 4.7 |

| | | | | | | | | | | | |
|-----------------------------|------|-----------------------------|-------|----------------|--------------------|------------------------|-----------------------------|----------------------|-------------------|------------------|-----------|
| ph/seg (deg) | 33.4 | Theor. | 11.3 | Amplitude | 0.424 +/- 0.017 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| amp/seg (%) | 22.5 | Search (2048X32) | 0.392 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 48.0 | Inc. seg. avg. | 0.484 | Inc. frq. avg. | 0.531 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| amp/frq (%) | 33.3 | Inc. frq. avg. | 0.484 | Inc. frq. avg. | 0.531 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | | |
| Z: az 275.9 el 19.8 pa 31.7 | | o: az 92.1 el 37.2 pa -57.9 | | u,v (fr/asec) | 10400.166 3361.131 | Data rate (Mb/s): | 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zo
METSALHOV - VLBA_OV, fgroup W, pol RR

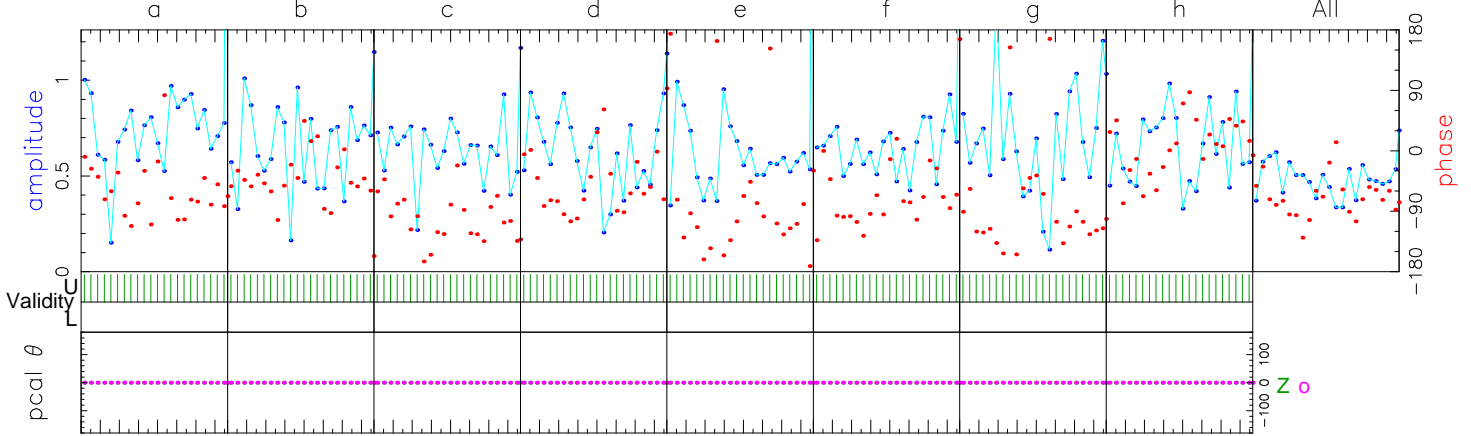


Fringe quality 7

SNR 24.1
Int time 439.226
Amp 0.421
Phase -71.5
PFD 0.0e+00
Delays (us)
SBD 0.003761
MBD -0.005336
Fringe rate (Hz) 0.007076
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c201a
Yr:day 2020:115
Start 224500.00
Stop 225219.80
FRT 224840.00
Corr/FF/build
2020:195:224837
2020:197:120851
2020:014:135814
RA & Dec (J2000)
08h54m48.874928s
+20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



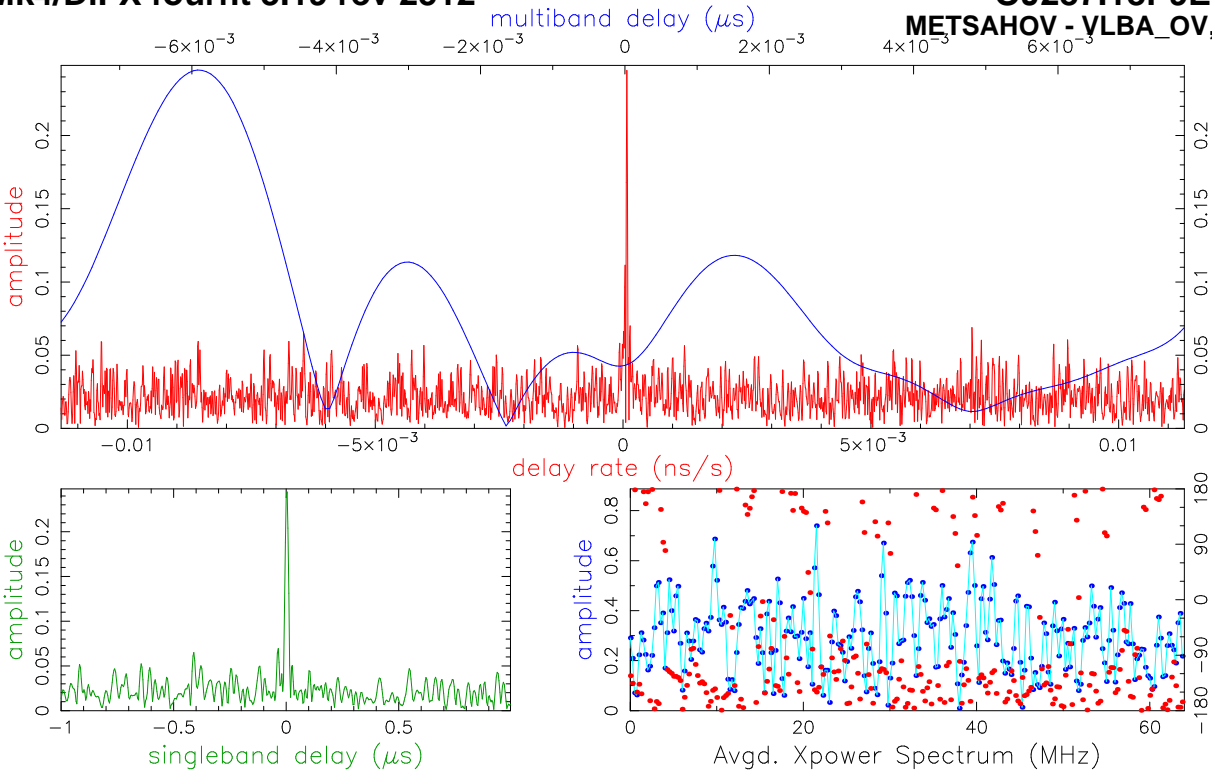
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -6.16470799881E+03 | Apriori delay (usec) | -6.16471828777E+03 | Resid mbdelay (usec) | -5.33603E-03 | +/- | 4.5E-05 |
| Sband delay (usec) | -6.16471452702E+03 | Apriori clock (usec) | -2.0185204E+01 | Resid sbdelay (usec) | 3.76075E-03 | +/- | 3.6E-04 |
| Phase delay (usec) | -6.16471829008E+03 | Apriori clockrate (us/s) | -1.8500001E-07 | Resid phdelay (usec) | -2.30608E-06 | +/- | 1.5E-07 |
| Delay rate (us/s) | -1.69517575287E+00 | Apriori rate (us/s) | -1.69517583501E+00 | Resid rate (us/s) | 8.21424E-08 | +/- | 6.0E-10 |
| Total phase (deg) | -182.7 | Apriori accel (us/s/s) | 4.28437932318E-05 | Resid phase (deg) | -71.5 | +/- | 4.7 |

| | | | | | | | | | | |
|-----------------------------|------|---|-------|----------------|--------------------|------------------------|-----------------------------|---------------------------|----------------|--------------|
| ph/seg (deg) | 30.9 | Theor. | 11.4 | Amplitude | 0.421 +/- 0.017 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 23.9 | Search (2048X32) | 0.396 | Search | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 43.6 | Inc. seg. avg. | 0.470 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 25.5 | Inc. frq. avg. | 0.518 | Inc. seg. avg. | 0.470 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | |
| Z: az 275.9 el 19.8 pa 31.7 | | o: az 92.1 el 37.2 pa -57.9 | | Inc. frq. avg. | 0.518 | Data rate (Mb/s): | 2048 | ion window (TEC) | 0.00 0.00 | |
| Control file: cf_1234_gmva | | Input file: /Exps/c201a/v1/1234/No0027/Zo..18P9EC | | u,v (fr/asec) | 10400.166 3361.131 | | | simultaneous interpolator | | |
| | | Output file: /Exps/c201a/v1/1234/No0027/Zo.W.247.18P9EC | | | | | | | | |

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zo
 METSAHOV - VLBA_OV, fgroup W, pol LR

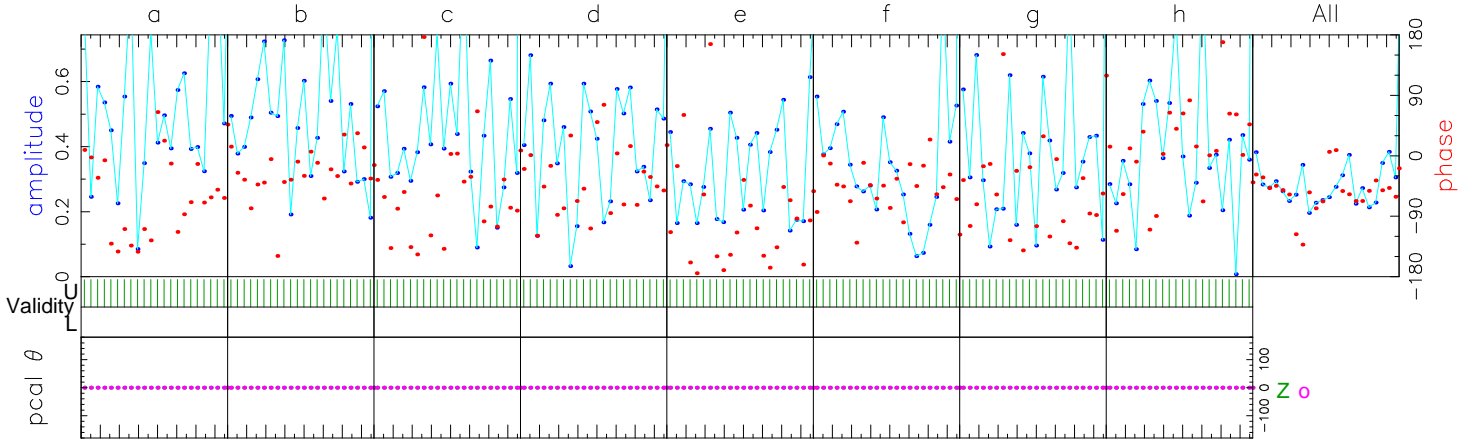


Fringe quality 8

SNR 14.2
 Int time 439.226
 Amp 0.248
 Phase -53.2
 PFD 4.8e-37
 Delays (us)
 SBD 0.002443
 MBD -0.005954
 Fringe rate (Hz) 0.007019
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120855
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

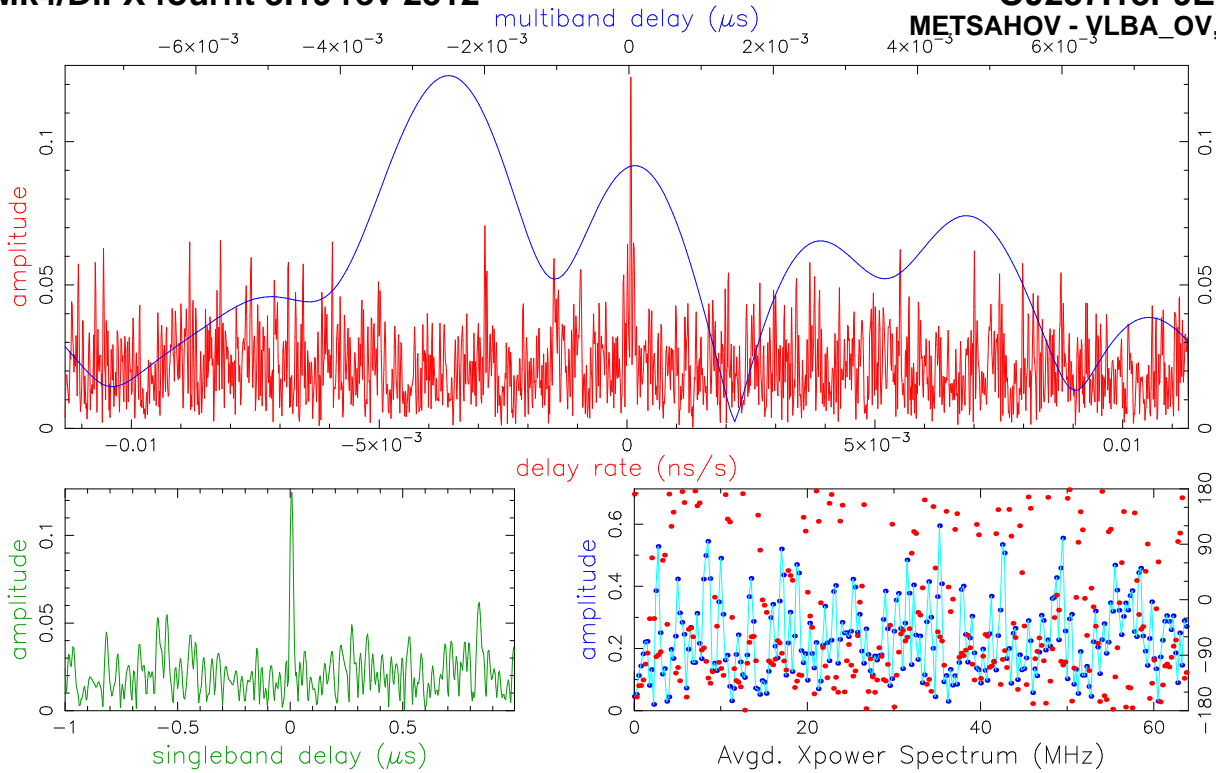


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -65.1 | -29.4 | -70.3 | -36.9 | -116.8 | -48.7 | -80.2 | 2.9 | Phase | -53.2 |
| | 0.3 | 0.4 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | Ampl. | 0.3 |
| | 257.9 | 257.2 | 257.8 | 257.7 | 258.0 | 258.0 | 258.9 | 259.9 | Sbd box | 257.6 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 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 | PC phase | |
| Z:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -6.16470861681E+03 | | Apriori delay (usec) | | -6.16471828777E+03 | | Resid mbdelay (usec) | | -5.95403E-03 | +/- 7.6E-05 |
| Sband delay (usec) | -6.16471584502E+03 | | Apriori clock (usec) | | -2.0185204E+01 | | Resid sbdelay (usec) | | 2.44275E-03 | +/- 6.1E-04 |
| Phase delay (usec) | -6.16471828949E+03 | | Apriori clockrate (us/s) | | -1.8500001E-07 | | Resid phdelay (usec) | | -1.71648E-06 | +/- 2.6E-07 |
| Delay rate (us/s) | -1.69517575353E+00 | | Apriori rate (us/s) | | -1.69517583501E+00 | | Resid rate (us/s) | | 8.14862E-08 | +/- 1.0E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.28437932318E-05 | | Resid phase (deg) | | -53.2 | +/- 8.1 |

ph/seg (deg) 30.4 19.3 Search (2048X32) 0.233 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 27.0 33.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.2 11.4 Inc. seg. avg. 0.266 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 28.9 19.9 Inc. frq. avg. 0.276 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 275.9 el 19.8 pa 31.7 o: az 92.1 el 37.2 pa -57.9 u,v (fr/asec) 10400.166 3361.131 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zo..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zo.W.253.18P9EC

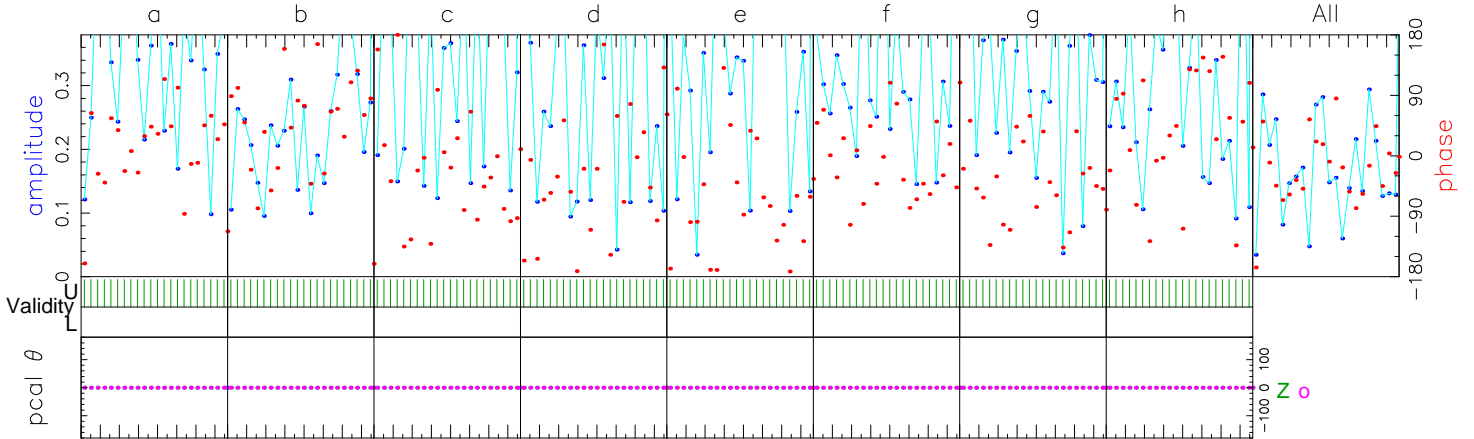
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zo
 METSAHOV - VLBA_OV, fgroup W, pol RL



Fringe quality 0
 SNR 7.3
 Int time 439.226
 Amp 0.127
 Phase -12.4
 PFD 1.2e-04
 Delays (us)
 SBD 0.006192
 MBD -0.002399
 Fringe rate (Hz)
 0.006909
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120858
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

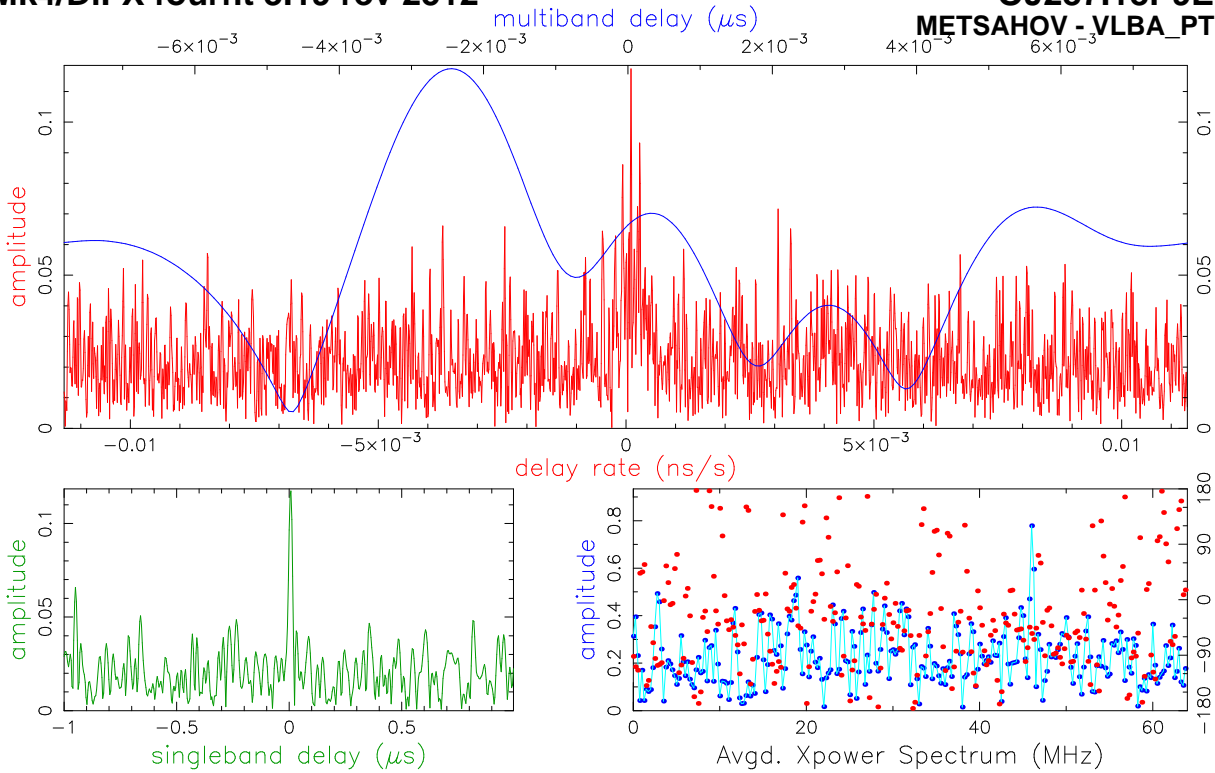


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 12.3 | 63.3 | -52.1 | -36.4 | -91.4 | -15.8 | -25.5 | 50.7 | Phase | -12.4 |
| | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | Ampl. | 0.2 |
| | 257.4 | 259.4 | 258.6 | 114.1 | 237.8 | 258.9 | 259.9 | 261.5 | Sbd box | 258.6 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 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 | PC phase | |
| Z:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -6.16470506134E+03 | | Apriori delay (usec) | | -6.16471828777E+03 | | Resid mbdelay (usec) | | -2.39856E-03 | +/- 1.5E-04 |
| Sband delay (usec) | -6.16471209602E+03 | | Apriori clock (usec) | | -2.0185204E+01 | | Resid sbdelay (usec) | | 6.19175E-03 | +/- 1.2E-03 |
| Phase delay (usec) | -6.16471828818E+03 | | Apriori clockrate (us/s) | | -1.8500001E-07 | | Resid phdelay (usec) | | -4.01344E-07 | +/- 5.1E-07 |
| Delay rate (us/s) | -1.69517575480E+00 | | Apriori rate (us/s) | | -1.69517583501E+00 | | Resid rate (us/s) | | 8.02108E-08 | +/- 2.0E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.28437932318E-05 | | Resid phase (deg) | | -12.4 | +/- 15.8 |

ph/seg (deg) 53.9 37.9 Search (2048X32) 0.121 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.2 66.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 56.1 22.3 Inc. seg. avg. 0.138 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 48.1 39.0 Inc. frq. avg. 0.157 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 275.9 el 19.8 pa 31.7 o: az 92.1 el 37.2 pa -57.9 u,v (fr/asec) 10400.166 3361.131 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zo..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zo.W.259.18P9EC

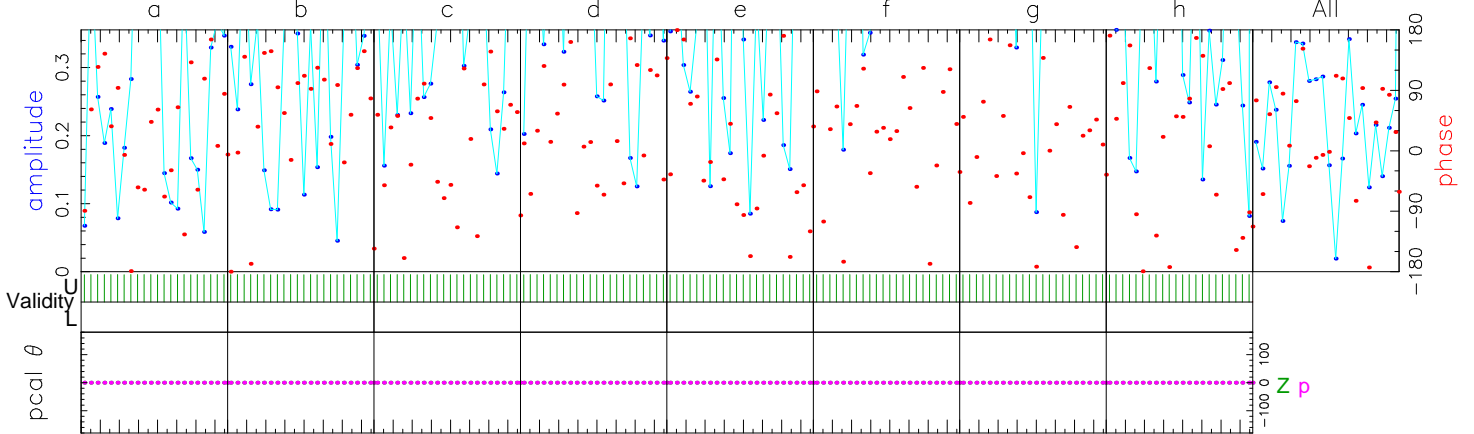
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zp
 METSAHOV - VLBA_PT, fgroup W, pol LL



Fringe quality 0
 SNR 6.8
 Int time 438.223
 Amp 0.119
 Phase 49.0
 PFD 3.4e-03
 Delays (us)
 SBD 0.006444
 MBD -0.002488
 Fringe rate (Hz)
 0.009064
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120849
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



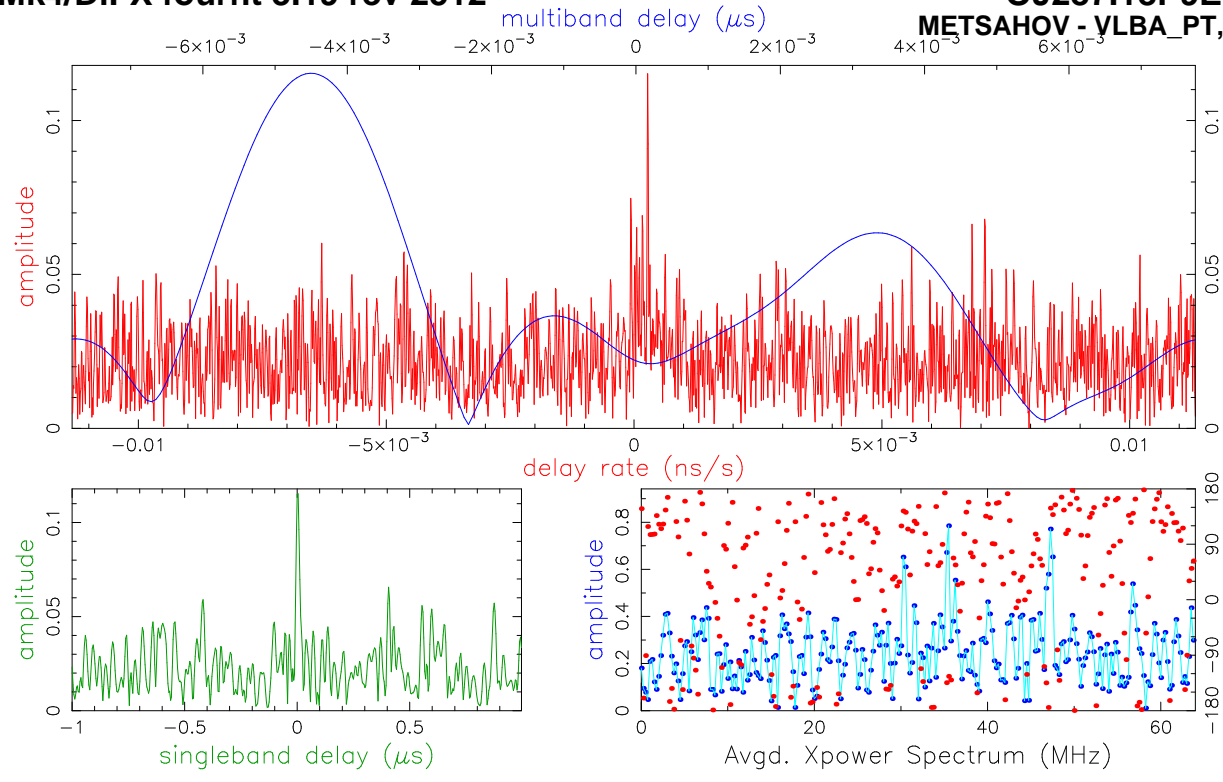
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----------------------------|--------------------|----------|---------------------------------|-----------------|--------------------|----------|----------|----------|--------------|-------------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | -8.48457459277E+03 | | | | -8.48458773023E+03 | | | | -2.48755E-03 | +/- 1.6E-04 |
| Sband delay (usec) | -8.48458128673E+03 | | | | -1.7377253E+01 | | | | 6.44350E-03 | +/- 1.3E-03 |
| Phase delay (usec) | -8.48458772864E+03 | | | | -1.8788659E-07 | | | | 1.58050E-06 | +/- 5.4E-07 |
| Delay rate (us/s) | -1.59905690575E+00 | | | | -1.59905701097E+00 | | | | 1.05220E-07 | +/- 2.1E-09 |
| Total phase (deg) | | | 19.6 | | 5.67936607520E-05 | | | | 49.0 | +/- 16.9 |
| | RMS | Theor. | Amplitude | 0.119 +/- 0.017 | | | | | | |
| ph/seg (deg) | 64.5 | 40.5 | Search (2048X32) | 0.108 | | | | | | |
| amp/seg (%) | 109.0 | 70.7 | Interp. | 0.000 | | | | | | |
| ph/frq (deg) | 59.4 | 23.9 | Inc. seg. avg. | 0.171 | | | | | | |
| amp/frq (%) | 70.2 | 41.7 | Inc. frq. avg. | 0.144 | | | | | | |
| Z: az 275.9 el 19.8 pa 31.7 | | | p: az 96.0 el 45.7 pa -60.9 | | | | | | | |
| | | | u,v (fr/asec) 9836.948 4108.342 | | | | | | | |

Group delay (usec)(sbd) -8.48457459277E+03 Apriori delay (usec) -8.48458773023E+03 Resid mbdelay (usec) -2.48755E-03 +/- 1.6E-04
 Sband delay (usec) -8.48458128673E+03 Apriori clock (usec) -1.7377253E+01 Resid sbdelay (usec) 6.44350E-03 +/- 1.3E-03
 Phase delay (usec) -8.48458772864E+03 Apriori clockrate (us/s) -1.8788659E-07 Resid phdelay (usec) 1.58050E-06 +/- 5.4E-07
 Delay rate (us/s) -1.59905690575E+00 Apriori rate (us/s) -1.59905701097E+00 Resid rate (us/s) 1.05220E-07 +/- 2.1E-09
 Total phase (deg) 19.6 Apriori accel (us/s/s) 5.67936607520E-05 Resid phase (deg) 49.0 +/- 16.9
 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zp..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zp.W.240.18P9EC

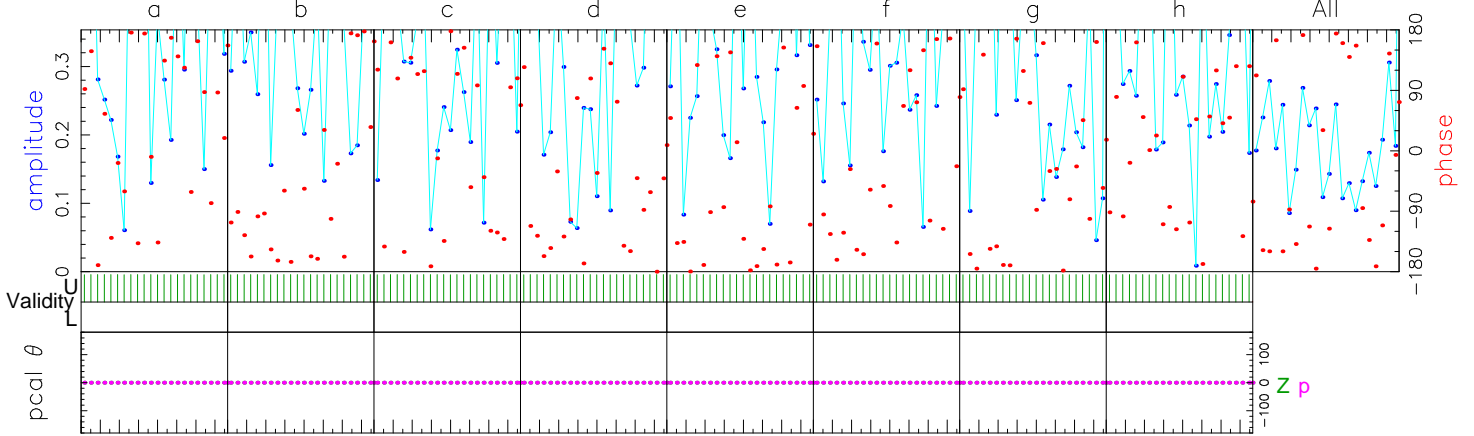
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zp
 METSAHOV - VLBA_PT, fgroup W, pol RR



Fringe quality 0
 SNR 6.7
 Int time 438.224
 Amp 0.118
 Phase -163.6
 PFD 4.4e-03
 Delays (us)
 SBD 0.001977
 MBD -0.004562
 Fringe rate (Hz)
 0.024136
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120852
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

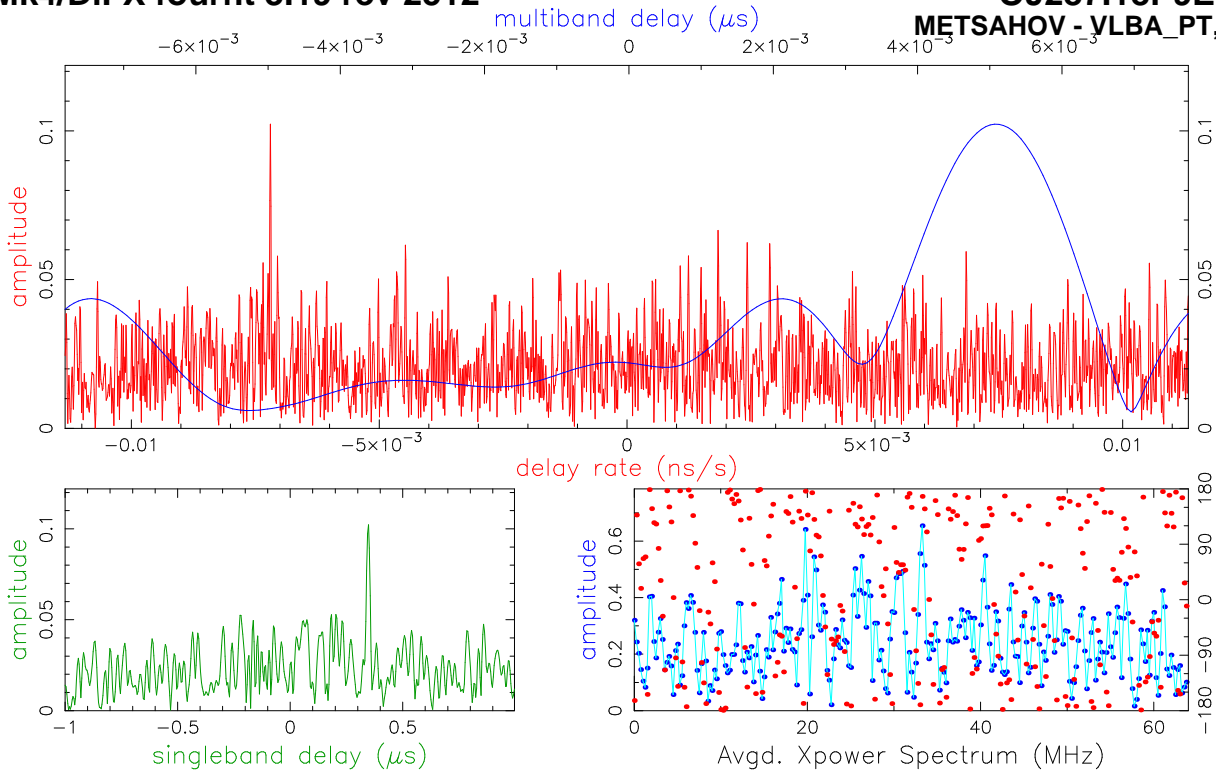


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|--|--------------------|----------|----------|----------|--------------------|----------|----------|----------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| p | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -8.48459229194E+03 | | | | -8.48458773023E+03 | | | | | |
| Sband delay (usec) | -8.48458575323E+03 | | | | -1.7377253E+01 | | | | | |
| Phase delay (usec) | -8.48458773550E+03 | | | | -1.8788659E-07 | | | | | |
| Delay rate (us/s) | -1.59905673077E+00 | | | | -1.59905701097E+00 | | | | | |
| Total phase (deg) | | | -193.0 | | 5.67936607520E-05 | | | | | |
| 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): 128 | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | |
| nlags: 256 | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| pcal θ | | | | | | | | | | |
| pcal mode | | | | | | | | | | |
| PC period (AP's) | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| simultaneous interpolator | | | | | | | | | | |

Z: az 275.9 el 19.8 pa 31.7 p: az 96.0 el 45.7 pa -60.9 u,v (fr/asec) 9836.948 4108.342
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zp..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zp.W.249.18P9EC

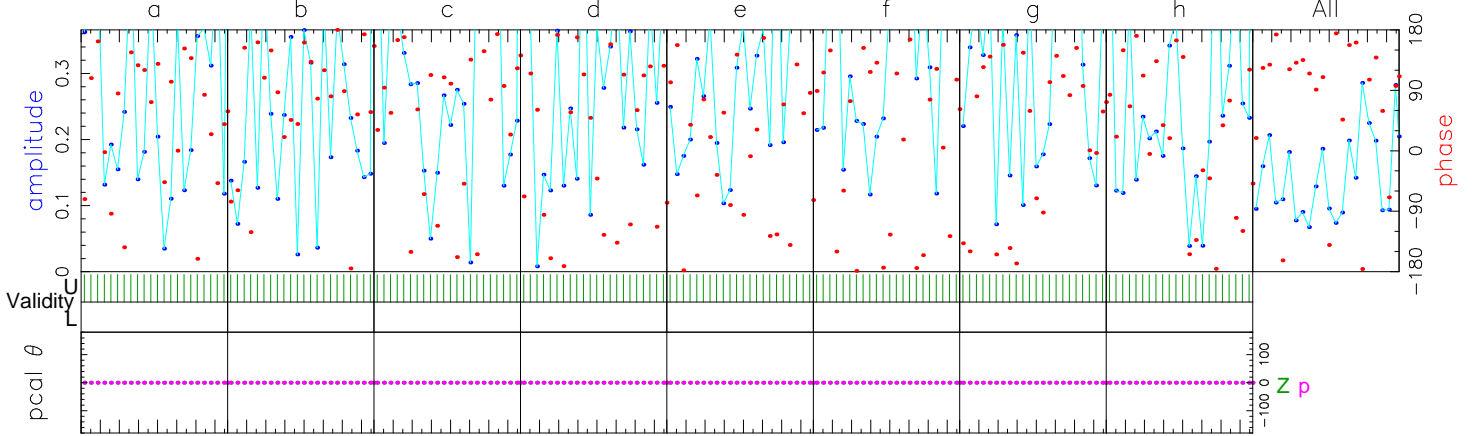
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zp
 METSAHOV - VLBA_PT, fgroup W, pol LR



Fringe quality 0
 SNR 5.9
 Int time 438.224
 Amp 0.122
 Phase 131.4
 PFD 6.5e-01
 Delays (us)
 SBD 0.346774
 MBD 0.005079
 Fringe rate (Hz)
 -0.620734
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120855
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

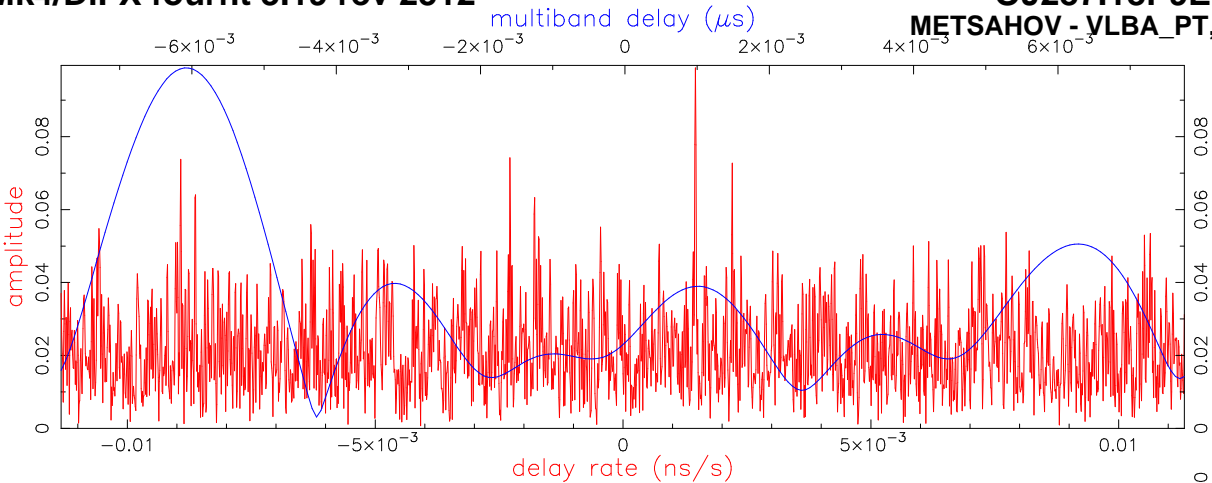
Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----------------------------|--------------------|----------|---|--------------------|----------|---|-----------------------|-------------------|------------------|---------------------------|
| 110.3 | 127.0 | 131.1 | 165.2 | 106.6 | 148.0 | 125.2 | 111.4 | 111.4 | Phase | 131.4 |
| 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | Ampl. | 0.1 |
| 445.1 | 325.0 | 357.8 | 406.1 | 390.3 | 101.9 | 346.3 | 223.8 | 223.8 | Sbd box | 345.8 |
| U/L 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| p 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:p 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:p 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| p | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -8.48423890125E+03 | | Apriori delay (usec) | -8.48458773023E+03 | | Resid mbdelay (usec) | 5.07898E-03 | +/- | 1.8E-04 | |
| Sband delay (usec) | -8.48424095573E+03 | | Apriori clock (usec) | -1.7377253E+01 | | Resid sbdelay (usec) | 3.46774E-01 | +/- | 1.5E-03 | |
| Phase delay (usec) | -8.48458772599E+03 | | Apriori clockrate (us/s) | -1.8788659E-07 | | Resid phdelay (usec) | 4.23667E-06 | +/- | 6.3E-07 | |
| Delay rate (us/s) | -1.59906421708E+00 | | Apriori rate (us/s) | -1.59905701097E+00 | | Resid rate (us/s) | -7.20611E-06 | +/- | 2.5E-09 | |
| Total phase (deg) | | 102.0 | Apriori accel (us/s/s) | 5.67936607520E-05 | | Resid phase (deg) | 131.4 | +/- | 19.5 | |
| | RMS | Theor. | Amplitude | 0.122 +/- 0.021 | | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | |
| ph/seg (deg) | 58.3 | 46.7 | Search (2048X32) | 0.100 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | |
| amp/seg (%) | 75.4 | 81.6 | Interp. | 0.000 | | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 22.1 | 27.6 | Inc. seg. avg. | 0.129 | | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 43.9 | 48.1 | Inc. frq. avg. | 0.114 | | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 |
| Z: az 275.9 el 19.8 pa 31.7 | | | p: az 96.0 el 45.7 pa -60.9 | | | u,v (fr/asec) 9836.948 4108.342 | | | | simultaneous interpolator |
| Control file: cf_1234_gmva | | | Input file: /Exps/c201a/v1/1234/No0027/Zp..18P9EC | | | Output file: /Exps/c201a/v1/1234/No0027/Zp.W.255.18P9EC | | | | |

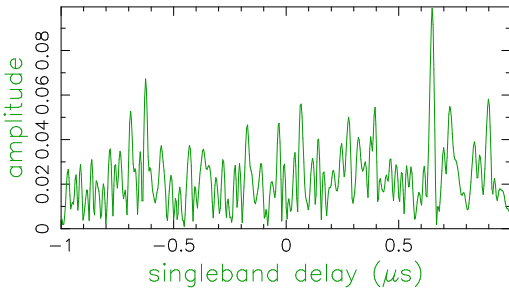
Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, Zp
 METSAHOV - VLBA_PT, fgroup W, pol RL

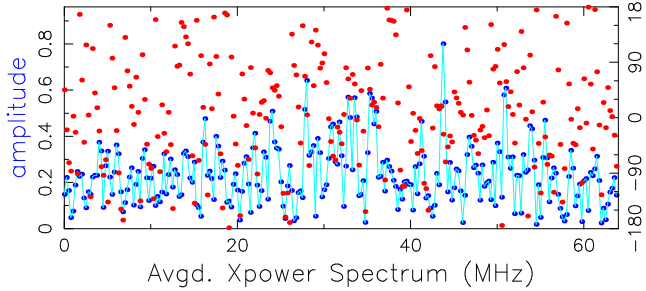


Fringe quality 0

SNR 5.7
 Int time 438.223
 Amp 0.100
 Phase -4.5
 PFD 9.8e-01
 Delays (us)
 SBD 0.648476
 MBD -0.006077
 Fringe rate (Hz)
 0.125834
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

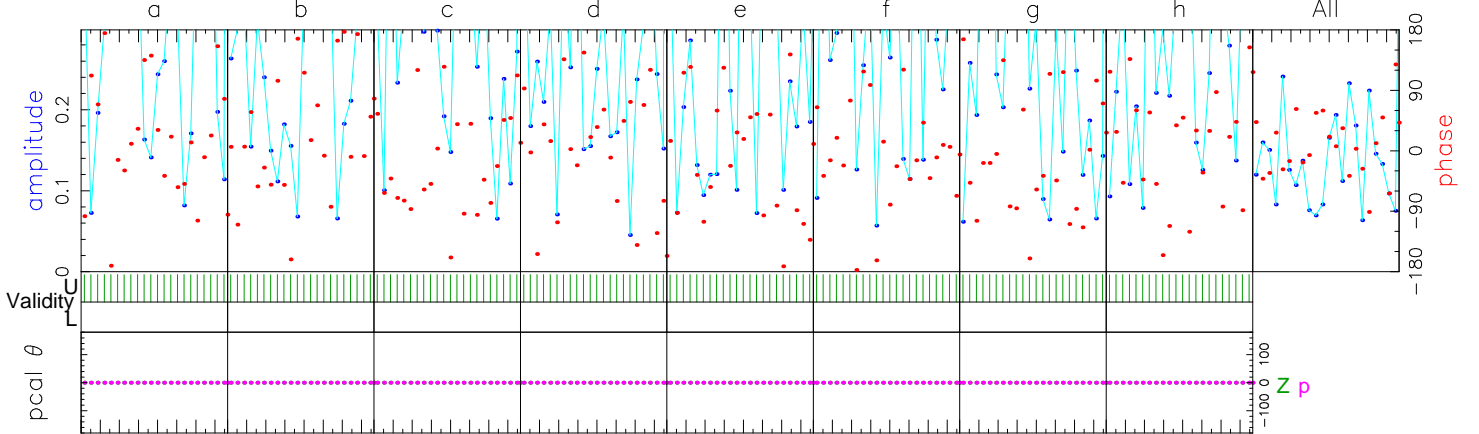


delay rate (ns/s)



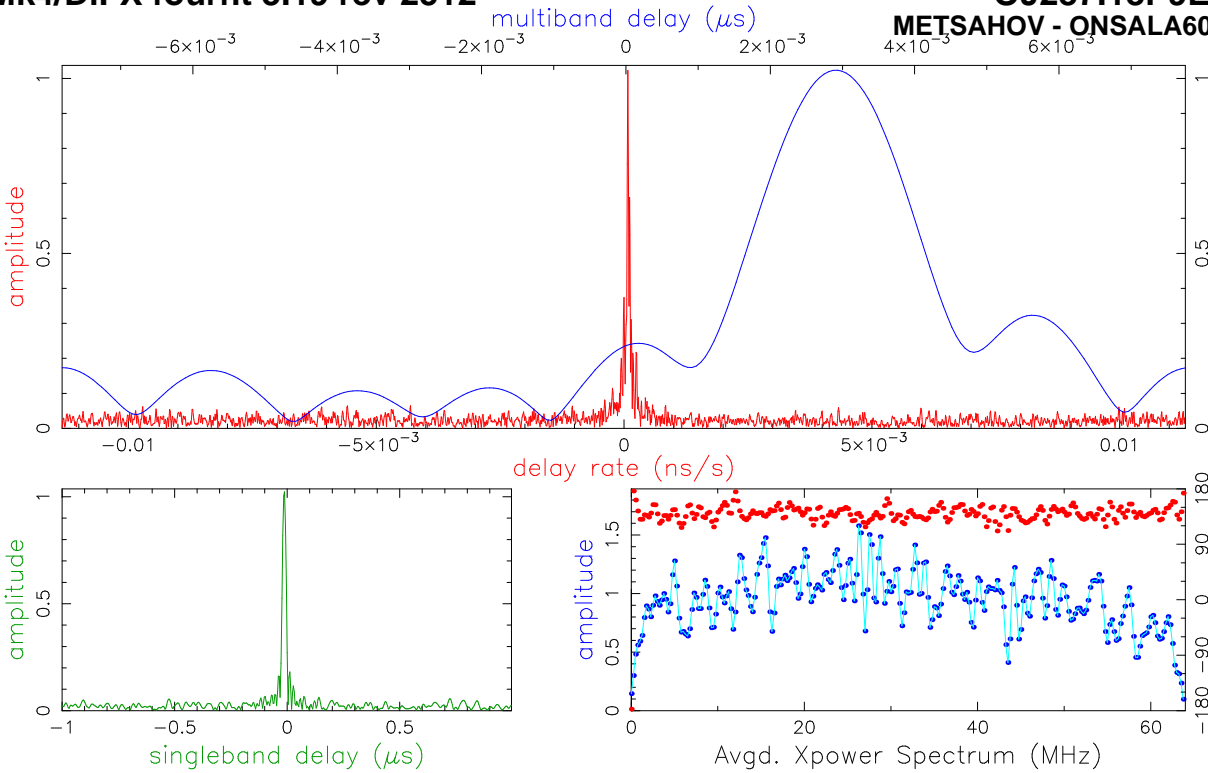
Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120859
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | -8.48393755700E+03 | -8.48393925398E+03 | -8.48458773037E+03 | -8.48458773037E+03 | -8.48458773023E+03 | -8.48458773023E+03 | -8.48458773023E+03 | -8.48458773023E+03 | | |
| Sband delay (usec) | -8.48393925398E+03 | -8.48393925398E+03 | -8.48458773037E+03 | -8.48458773037E+03 | -8.48458773023E+03 | -8.48458773023E+03 | -8.48458773023E+03 | -8.48458773023E+03 | | |
| Phase delay (usec) | -8.48458773037E+03 | -8.48458773037E+03 | -8.48458773037E+03 | -8.48458773037E+03 | -8.48458773023E+03 | -8.48458773023E+03 | -8.48458773023E+03 | -8.48458773023E+03 | | |
| Delay rate (us/s) | -1.59905555016E+00 | -1.59905555016E+00 | -1.59905555016E+00 | -1.59905555016E+00 | -1.59905701097E+00 | -1.59905701097E+00 | -1.59905701097E+00 | -1.59905701097E+00 | | |
| Total phase (deg) | | | -33.9 | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | |
| Pcal mode: MANUAL, MANUAL | | | | | | | | | | |
| Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | |
| Sample rate(MISamp/s): 128 | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | |
| PC period (AP's) 5, 5 | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| sb window (us) | -1.000 | 1.000 | | | | | | | | |
| mb window (us) | -0.008 | 0.008 | | | | | | | | |
| dr window (ns/s) | -0.011 | 0.011 | | | | | | | | |
| ion window (TEC) | 0.00 | 0.00 | | | | | | | | |

Z: az 275.9 el 19.8 pa 31.7 p: az 96.0 el 45.7 pa -60.9 u,v (fr/asec) 9836.948 4108.342 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/Zp..18P9EC Output file: /Exps/c201a/v1/1234/No0027/Zp.W.261.18P9EC

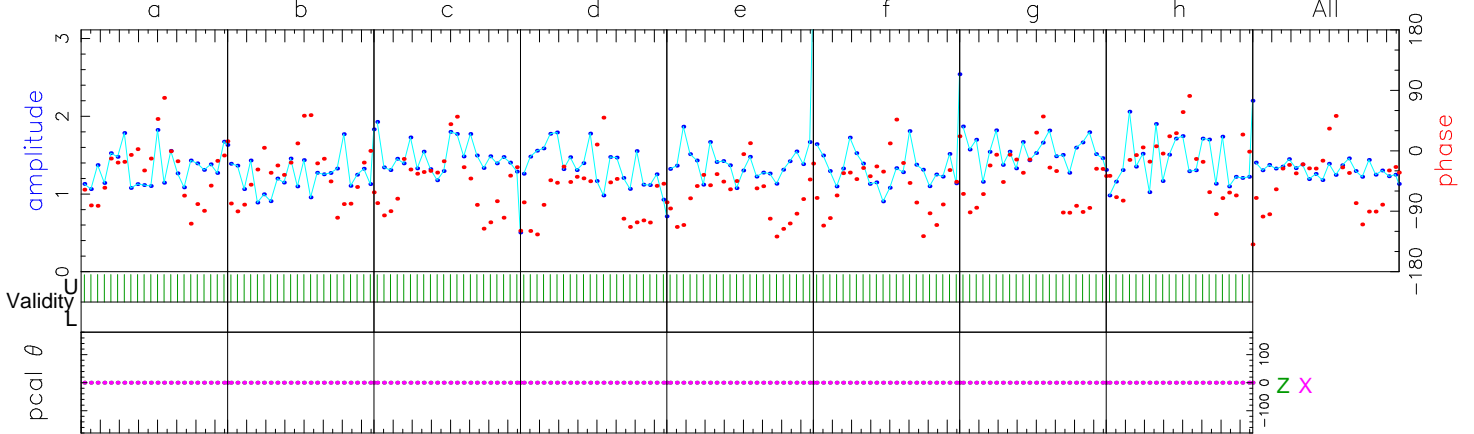


Fringe quality 5

SNR 59.4
 Int time 439.128
 Amp 1.037
 Phase -45.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.013245
 MBD 0.002881
 Fringe rate (Hz)
 0.006308
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120849
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -30.3 | -36.4 | -47.5 | -63.4 | -67.0 | -52.8 | -42.9 | -15.7 | Phase | -45.1 |
| | 1.0 | 0.9 | 1.1 | 1.1 | 1.1 | 1.0 | 1.2 | 1.0 | Ampl. | 1.1 |
| | 253.6 | 253.3 | 253.7 | 253.3 | 253.8 | 253.6 | 254.0 | 254.0 | Sbd box | 253.6 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -2.22082677579E+03 | | Apriori delay (usec) | | -2.22081403163E+03 | | Resid mbdelay (usec) | | 2.88084E-03 | +/- 1.8E-05 |
| Sband delay (usec) | -2.22082727638E+03 | | Apriori clock (usec) | | -4.0825867E+01 | | Resid sbdelay (usec) | | -1.32447E-02 | +/- 1.4E-04 |
| Phase delay (usec) | -2.22081403309E+03 | | Apriori clockrate (us/s) | | -5.1200000E-07 | | Resid phdelay (usec) | | -1.45332E-06 | +/- 6.2E-08 |
| Delay rate (us/s) | 3.08802355374E-02 | | Apriori rate (us/s) | | 3.08801623065E-02 | | Resid rate (us/s) | | 7.32308E-08 | +/- 2.4E-10 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 1.25810312604E-05 | | Resid phase (deg) | | -45.1 | +/- 1.9 |

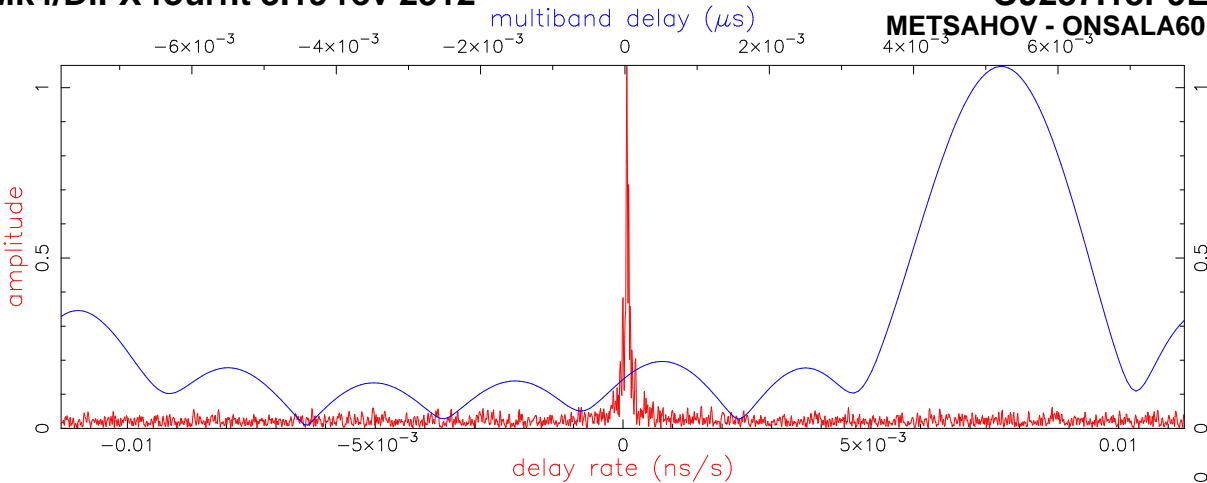
ph/seg (deg) 40.8 4.6
 amp/seg (%) 28.2 8.1
 ph/frq (deg) 18.5 2.7
 amp/frq (%) 8.1 4.8

RMS Theor. Amplitude 1.037 +/- 0.017
 Search (2048X32) 0.974
 Interp. 0.000
 Inc. seg. avg. 1.313
 Inc. frq. avg. 1.063

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

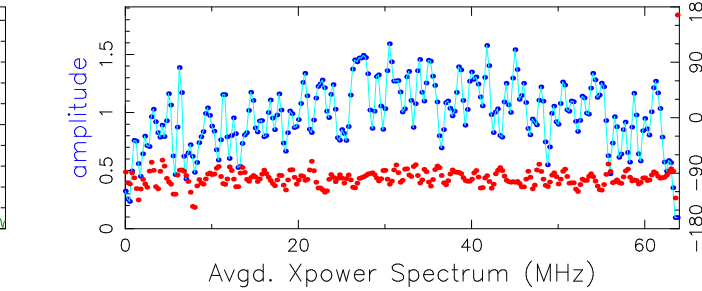
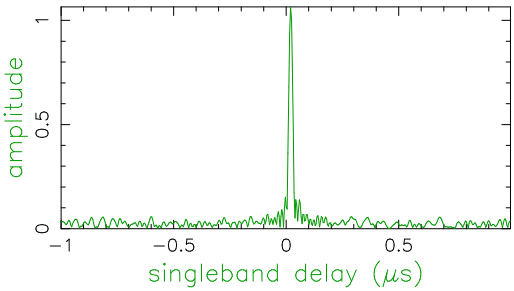
sb window (us) -1.000 1.000
 mb window (us) -0.008 0.008
 dr window (ns/s) -0.011 0.011
 ion window (TEC) 0.00 0.00

Z: az 275.9 el 19.8 pa 31.7 X: az 266.5 el 26.2 pa 35.0 u,v (fr/asec) -167.665 574.422 simultaneous interpolator



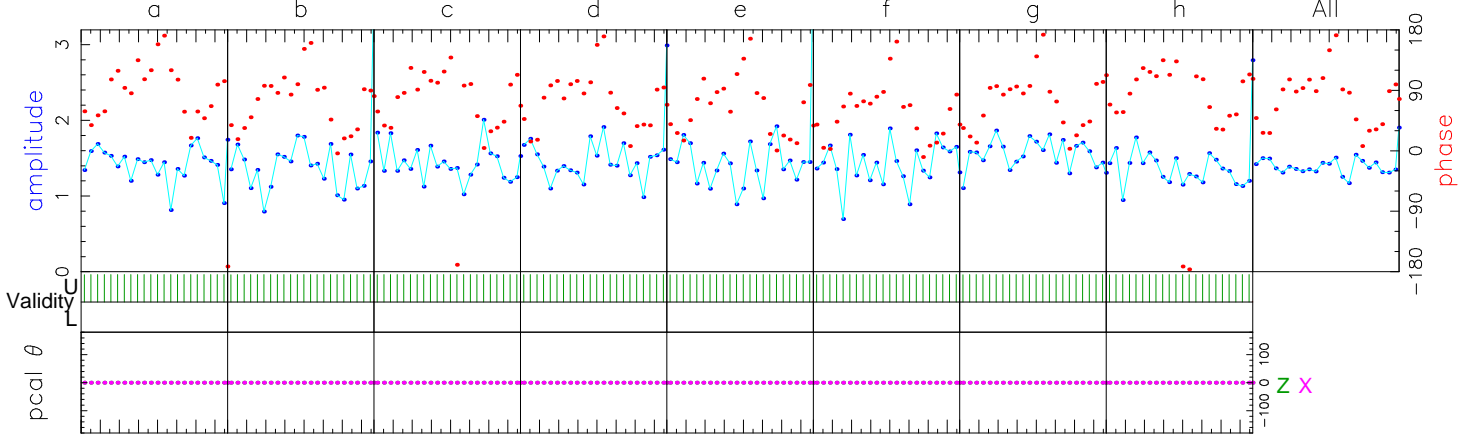
Fringe quality 5

SNR 61.0
 Int time 439.128
 Amp 1.065
 Phase 74.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.020234
 MBD 0.005235
 Fringe rate (Hz)
 0.006305
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120852
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

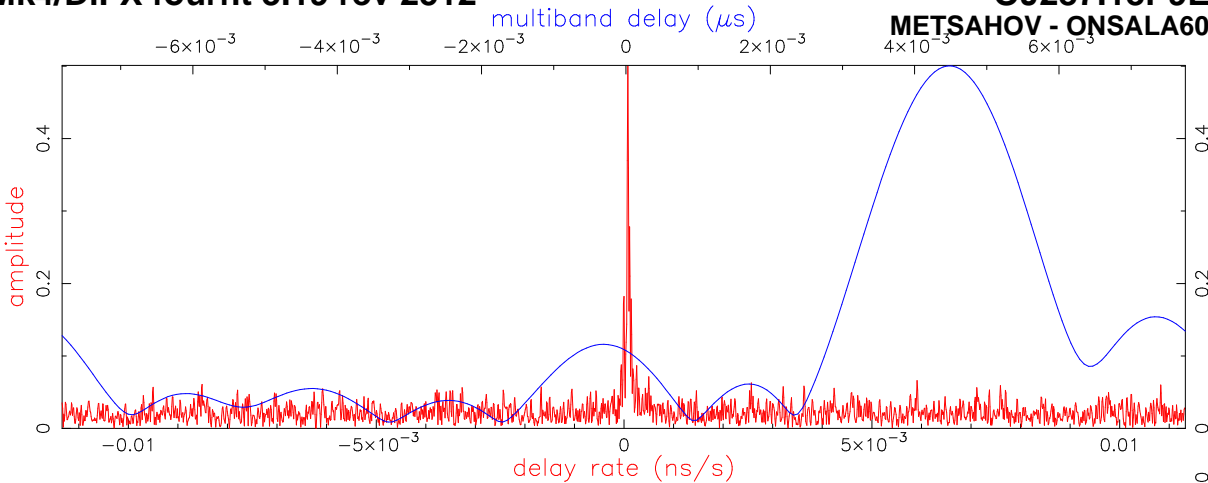
Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|-------------|-------------|
| | 86.8 | 73.0 | 79.6 | 75.1 | 60.3 | 55.4 | 72.3 | 95.7 | Phase | 74.8 |
| | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 | 1.1 | 1.2 | 1.0 | Ampl. | 1.1 |
| | 261.5 | 261.9 | 262.4 | 262.3 | 261.9 | 262.6 | 262.6 | 262.5 | Sbd box | 262.2 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| Group delay (usec)(sbd) | -2.22079317179E+03 | | Apriori delay (usec) | | -2.22081403163E+03 | | Resid mbdelay (usec) | | 5.23484E-03 | +/- 1.8E-05 |
| Sband delay (usec) | -2.22079379763E+03 | | Apriori clock (usec) | | -4.0825867E+01 | | Resid sbdelay (usec) | | 2.02340E-02 | +/- 1.4E-04 |
| Phase delay (usec) | -2.22081402922E+03 | | Apriori clockrate (us/s) | | -5.1200000E-07 | | Resid phdelay (usec) | | 2.41146E-06 | +/- 6.1E-08 |
| Delay rate (us/s) | 3.08802355034E-02 | | Apriori rate (us/s) | | 3.08801623065E-02 | | Resid rate (us/s) | | 7.31968E-08 | +/- 2.4E-10 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 1.25810312604E-05 | | Resid phase (deg) | | 74.8 | +/- 1.9 |

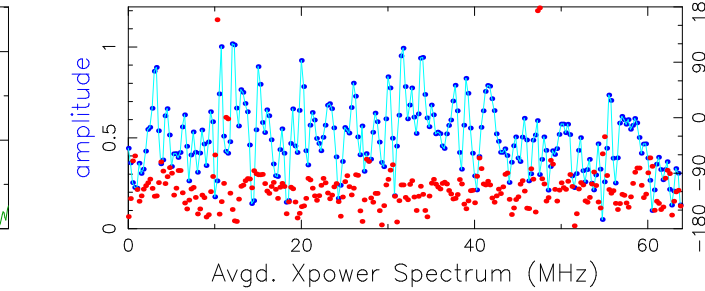
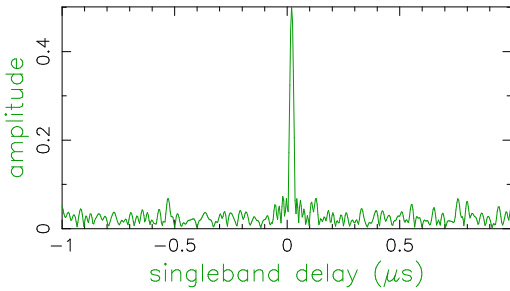
| | RMS | Theor. | Amplitude | 1.065 +/- 0.017 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 40.5 | 4.5 | Search (2048X32) | 0.996 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 31.1 | 7.9 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled |
| ph/frq (deg) | 14.1 | 2.7 | Inc. seg. avg. | 1.380 | Sample rate(MISamp/s): 128 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 5.3 | 4.6 | Inc. frq. avg. | 1.085 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

Z: az 275.9 el 19.8 pa 31.7 X: az 266.5 el 26.2 pa 35.0 u,v (fr/asec) -167.665 574.422 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZX..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZX.W.250.18P9EC



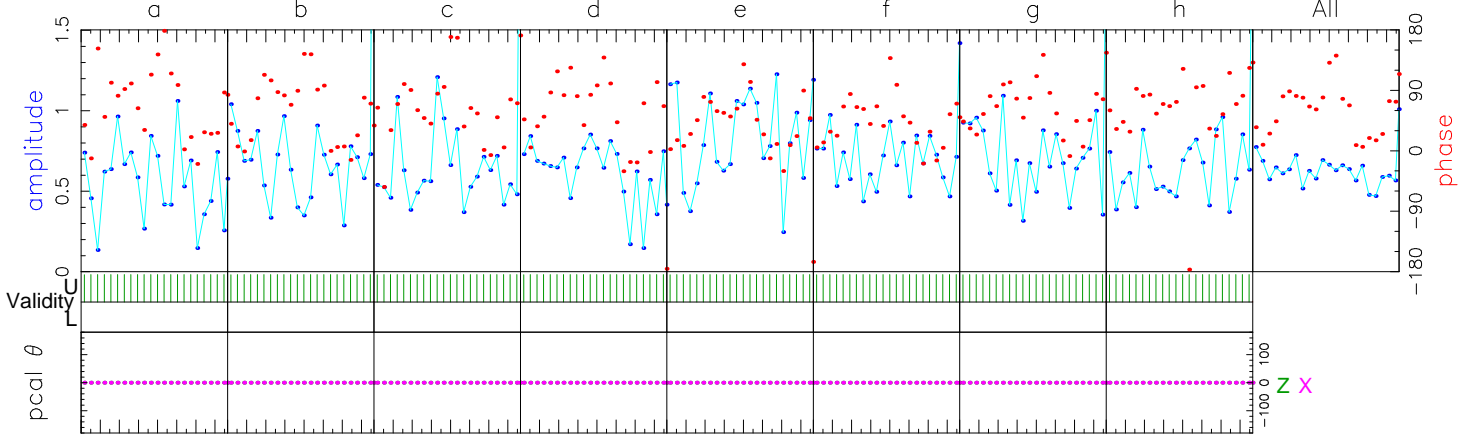
Fringe quality 7

SNR 28.7
 Int time 439.128
 Amp 0.501
 Phase 58.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.019955
 MBD 0.004494
 Fringe rate (Hz)
 0.006350
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120856
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

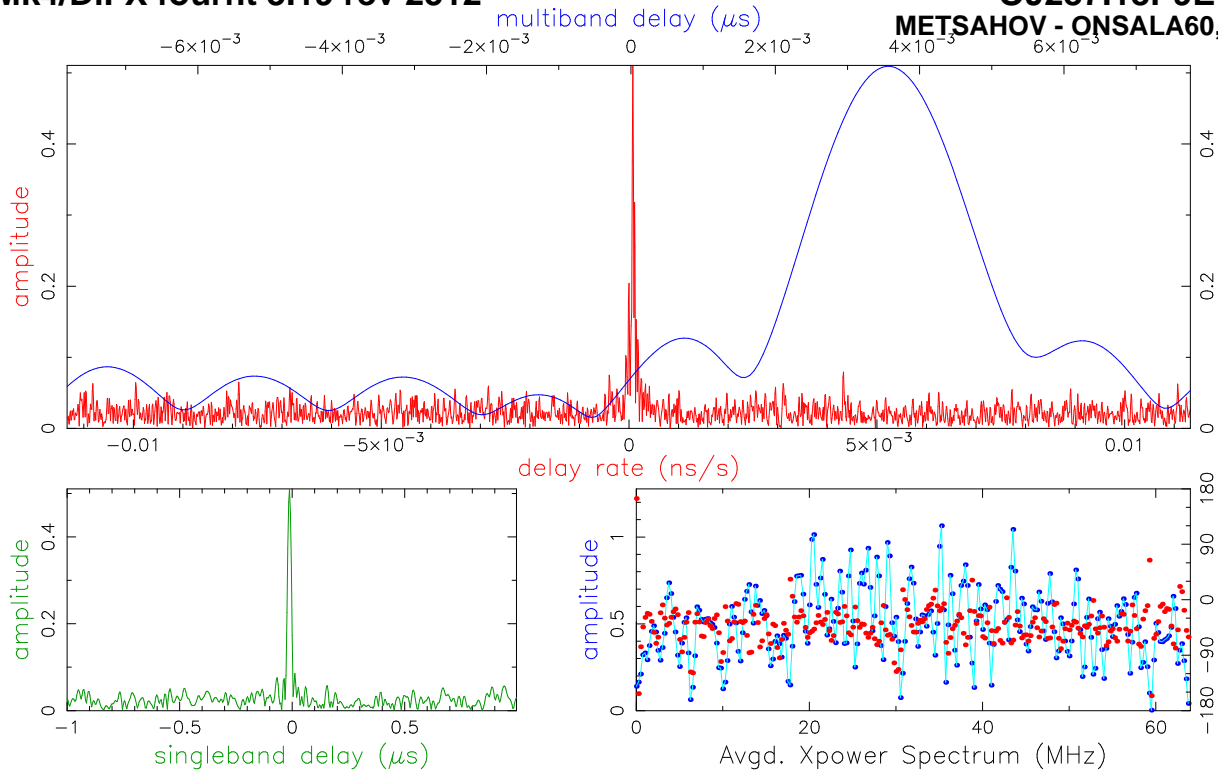


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 72.1 | 56.3 | 65.0 | 63.2 | 43.7 | 41.7 | 62.5 | 75.3 | Phase | 58.8 |
| | 0.4 | 0.5 | 0.4 | 0.5 | 0.7 | 0.6 | 0.6 | 0.5 | Ampl. | 0.5 |
| | 262.3 | 262.0 | 261.9 | 261.7 | 262.0 | 262.3 | 262.5 | 262.8 | Sbd box | 262.1 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

Group delay (usec)(sbd) -2.22079391289E+03 Apriori delay (usec) -2.22081403163E+03 Resid mbdelay (usec) 4.49375E-03 +/- 3.8E-05
 Sband delay (usec) -2.22079407638E+03 Apriori clock (usec) -4.0825867E+01 Resid sbdelay (usec) 1.99552E-02 +/- 3.0E-04
 Phase delay (usec) -2.22081402974E+03 Apriori clockrate (us/s) -5.1200000E-07 Resid phdelay (usec) 1.89620E-06 +/- 1.3E-07
 Delay rate (us/s) 3.08802360234E-02 Apriori rate (us/s) 3.08801623065E-02 Resid rate (us/s) 7.37169E-08 +/- 5.1E-10
 Total phase (deg) -187.8 Apriori accel (us/s/s) 1.25810312604E-05 Resid phase (deg) 58.8 +/- 4.0

RMS Theor. Amplitude 0.501 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 36.9 9.6 Search (2048X32) 0.481 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 27.7 16.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 13.2 5.6 Inc. seg. avg. 0.610 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 16.1 9.8 Inc. frq. avg. 0.509 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 275.9 el 19.8 pa 31.7 X: az 266.5 el 26.2 pa 35.0 u,v (fr/asec) -167.665 574.422 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZX..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZX.W.256.18P9EC

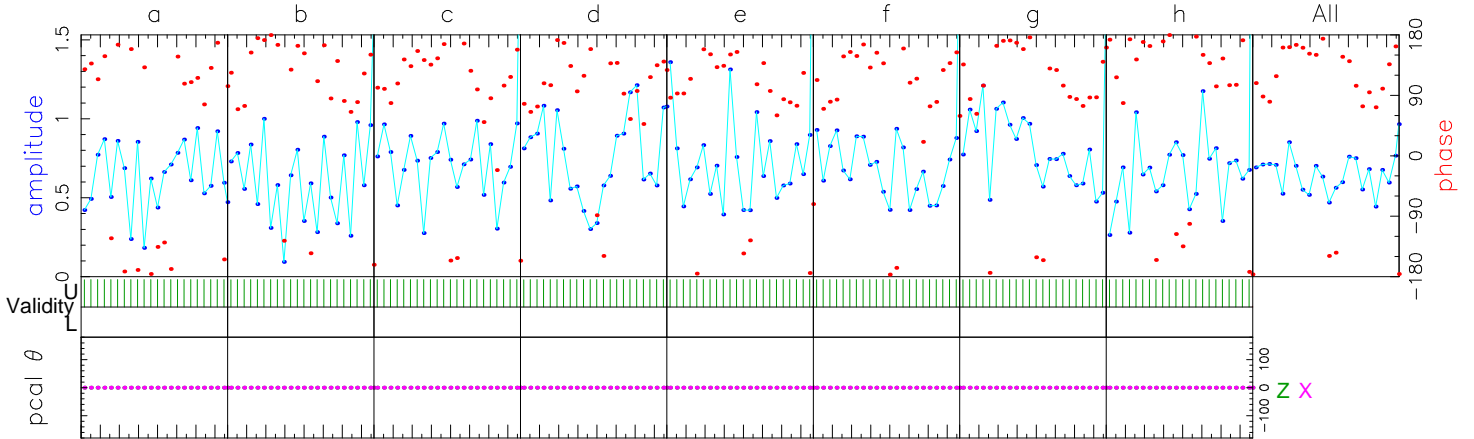


Fringe quality 7

SNR 29.3
 Int time 439.128
 Amp 0.511
 Phase 134.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.012328
 MBD 0.003556
 Fringe rate (Hz)
 0.006404
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120859
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

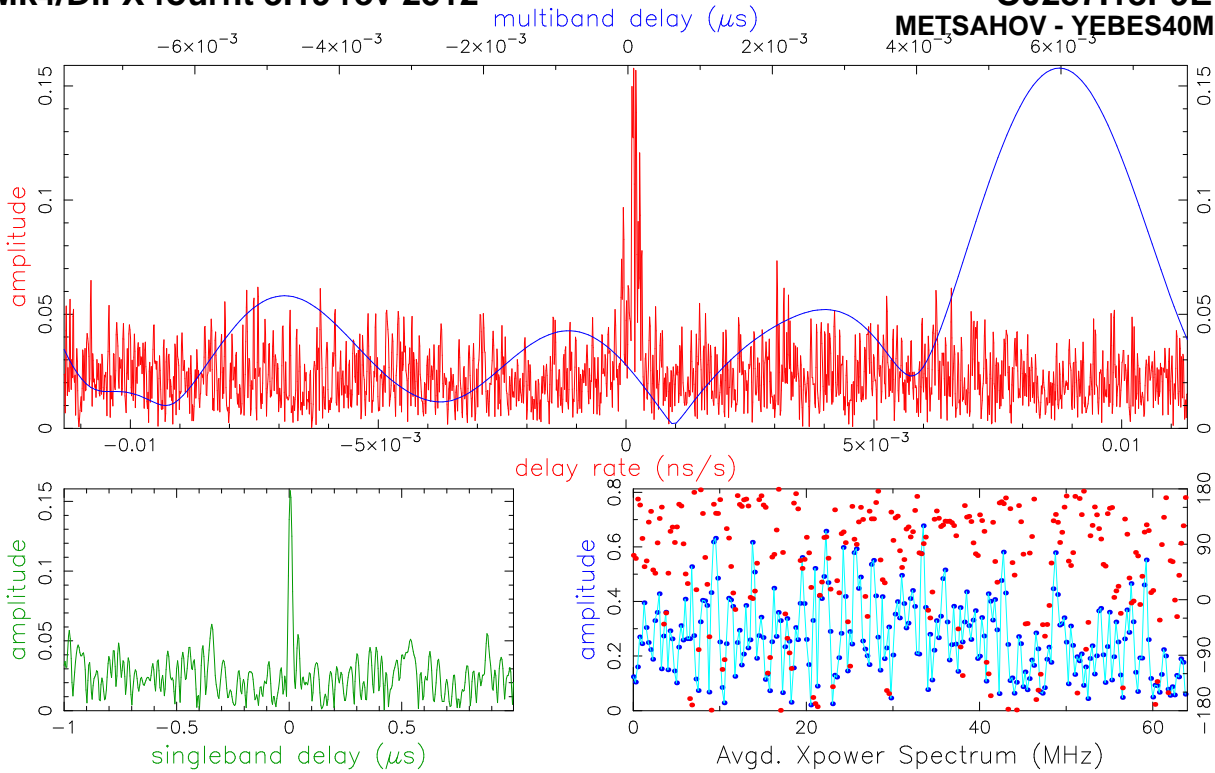


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 157.3 | 134.4 | 129.0 | 112.4 | 124.3 | 129.2 | 133.6 | 159.2 | Phase | 134.1 |
| | 0.5 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | Ampl. | 0.5 |
| | 253.6 | 253.2 | 254.0 | 253.8 | 253.9 | 253.8 | 254.2 | 253.9 | Sbd box | 253.8 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -2.22082610054E+03 | | Apriori delay (usec) | | -2.22081403163E+03 | | Resid mbdelay (usec) | | 3.55609E-03 | +/- 3.7E-05 |
| Sband delay (usec) | -2.22082636013E+03 | | Apriori clock (usec) | | -4.0825867E+01 | | Resid sbdelay (usec) | | -1.23285E-02 | +/- 2.9E-04 |
| Phase delay (usec) | -2.22081402731E+03 | | Apriori clockrate (us/s) | | -5.1200000E-07 | | Resid phdelay (usec) | | 4.32434E-06 | +/- 1.3E-07 |
| Delay rate (us/s) | 3.08802366484E-02 | | Apriori rate (us/s) | | 3.08801623065E-02 | | Resid rate (us/s) | | 7.43419E-08 | +/- 5.0E-10 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 1.25810312604E-05 | | Resid phase (deg) | | 134.1 | +/- 3.9 |

ph/seg (deg) 40.5 9.4 Search (2048X32) 0.491 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 33.2 16.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 17.3 5.5 Inc. seg. avg. 0.636 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 9.0 9.7 Inc. frq. avg. 0.524 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 275.9 el 19.8 pa 31.7 X: az 266.5 el 26.2 pa 35.0 u,v (fr/asec) -167.665 574.422 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZX..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZX.W.263.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, ZY
 METSAHOV - YEBES40M, fgroup W, pol LL

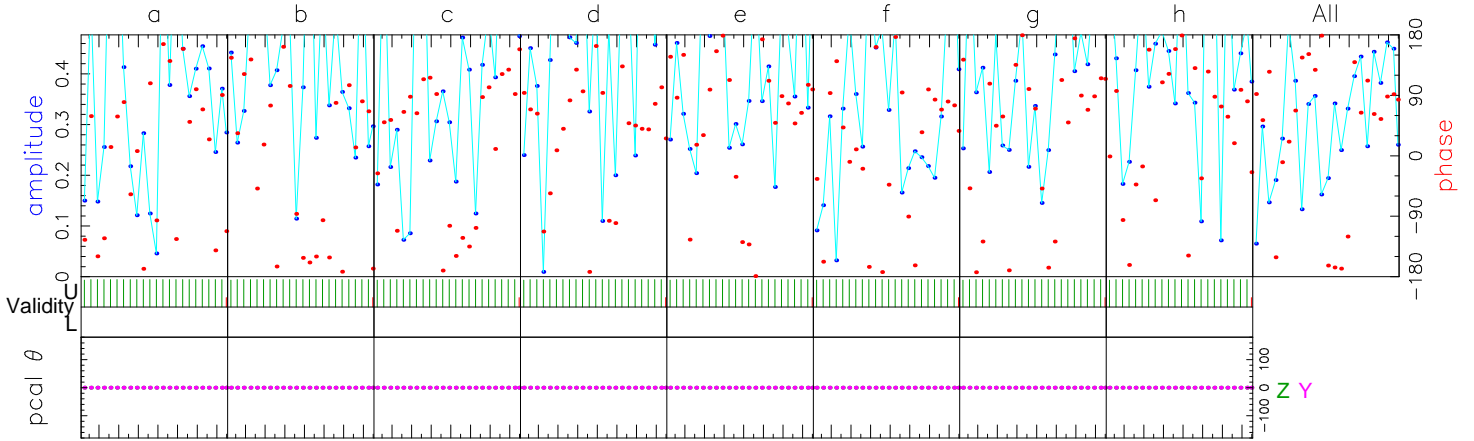


Fringe quality 9

SNR 9.1
 Int time 433.800
 Amp 0.159
 Phase 101.0
 PFD 5.2e-11
 Delays (us)
 SBD 0.005089
 MBD 0.006002
 Fringe rate (Hz)
 0.013398
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224505.12
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120850
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 38 APs / seg (19.46 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 95.9 | 141.6 | 106.9 | 66.7 | 111.5 | 93.8 | 115.2 | 97.4 | Phase | 101.0 |
| | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 385.8 | 119.6 | 260.9 | 258.2 | 258.2 | 239.9 | 259.0 | 459.9 | Sbd box | 258.3 |
| U/L | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|-------------|-----|---------|
| Group delay (usec)(sbd) | -5.67728802606E+03 | Apriori delay (usec) | -5.67729402823E+03 | Resid mbdelay (usec) | 6.00217E-03 | +/- | 1.2E-04 |
| Sband delay (usec) | -5.67728893948E+03 | Apriori clock (usec) | -1.2075533E+01 | Resid sbdelay (usec) | 5.08875E-03 | +/- | 9.5E-04 |
| Phase delay (usec) | -5.67729402497E+03 | Apriori clockrate (us/s) | -2.0400000E-07 | Resid phdelay (usec) | 3.25716E-06 | +/- | 4.1E-07 |
| Delay rate (us/s) | 2.22182831660E-01 | Apriori rate (us/s) | 2.22182676125E-01 | Resid rate (us/s) | 1.55535E-07 | +/- | 1.6E-09 |
| Total phase (deg) | -112.0 | Apriori accel (us/s/s) | 3.85670018884E-05 | Resid phase (deg) | 101.0 | +/- | 12.7 |

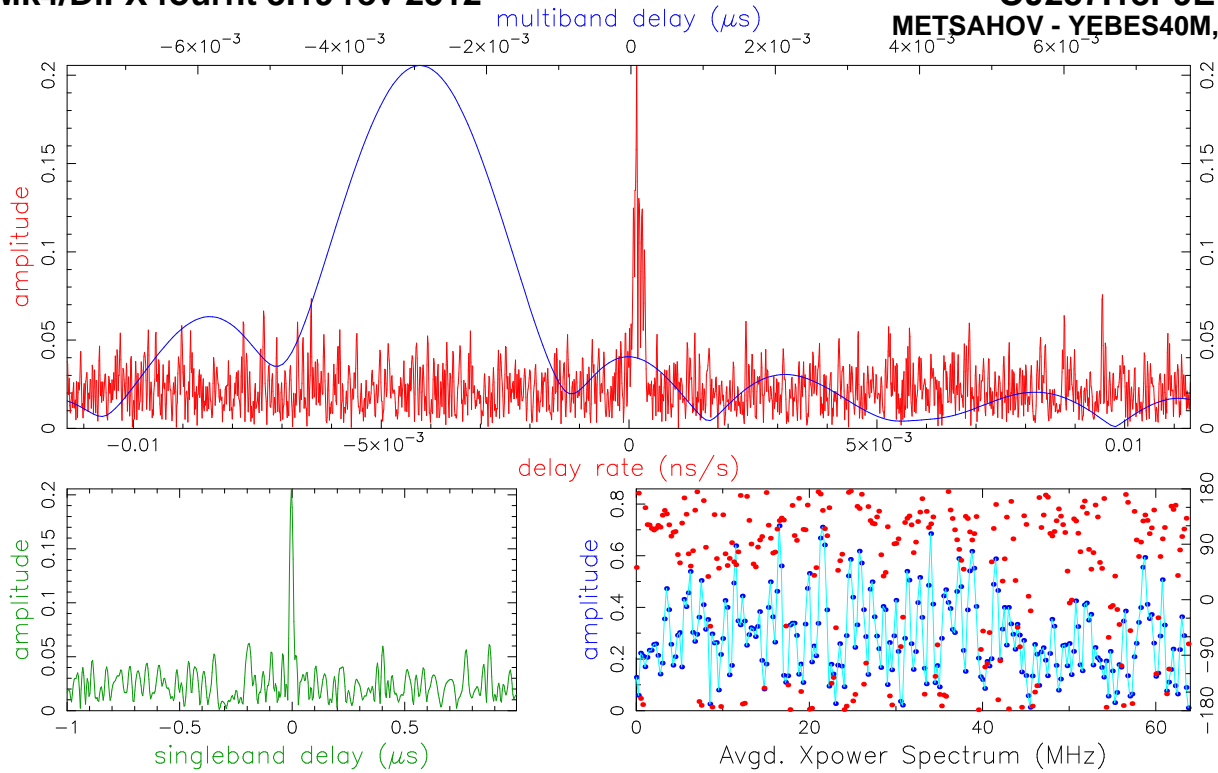
| | | | | | | | | | | | | | |
|--------------|-------|------------------|-------|----------------|-------|----------------|-----------------|------------------------|-----------------------------|----------------------|-------------------|------------------|--------------|
| ph/seg (deg) | 66.3 | RMS | 30.3 | Theor. | 31.2 | Amplitude | 0.159 +/- 0.018 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| amp/seg (%) | 119.7 | Search (2048X32) | 0.156 | Search | 0.000 | Search | 0.156 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 23.3 | Interp. | 0.270 | Inc. seg. avg. | 0.162 | Inc. frq. avg. | 0.162 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| amp/frq (%) | 35.6 | Inc. frq. avg. | 0.162 | Inc. frq. avg. | 0.162 | Inc. frq. avg. | 0.162 | Sample rate (MSamp/s): | 128 | nlags: 256 | t_cohere infinite | dr window (ns/s) | -0.011 0.011 |
| | | | | | | | | Data rate (Mb/s): | 2048 | ion window (TEC) | 0.00 0.00 | | |

Z: az 275.9 el 19.8 pa 31.7 Y: az 265.0 el 37.4 pa 53.7 u,v (fr/asec) -1292.950 2930.643 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZY..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZY.W.244.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, ZY
 METSAHOV - YEBES40M, fgroup W, pol RR

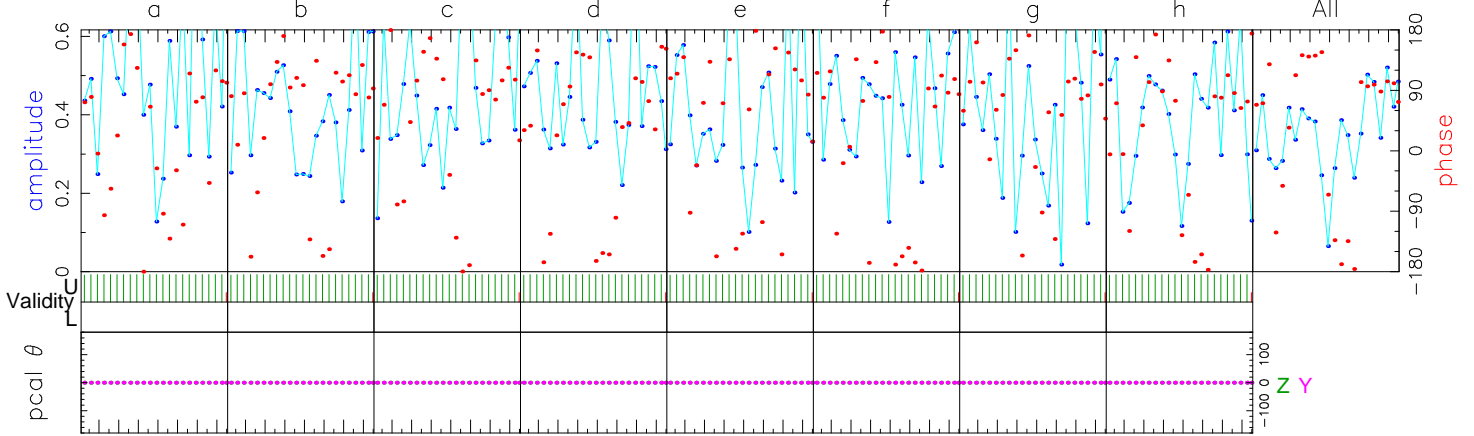


Fringe quality 9

SNR 11.7
 Int time 433.800
 Amp 0.206
 Phase 117.9
 PFD 5.7e-23
 Delays (us)
 SBD -0.003705
 MBD -0.002923
 Fringe rate (Hz) 0.013135
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224505.12
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120853
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 38 APs / seg (19.46 sec / seg.), time ticks 30 sec



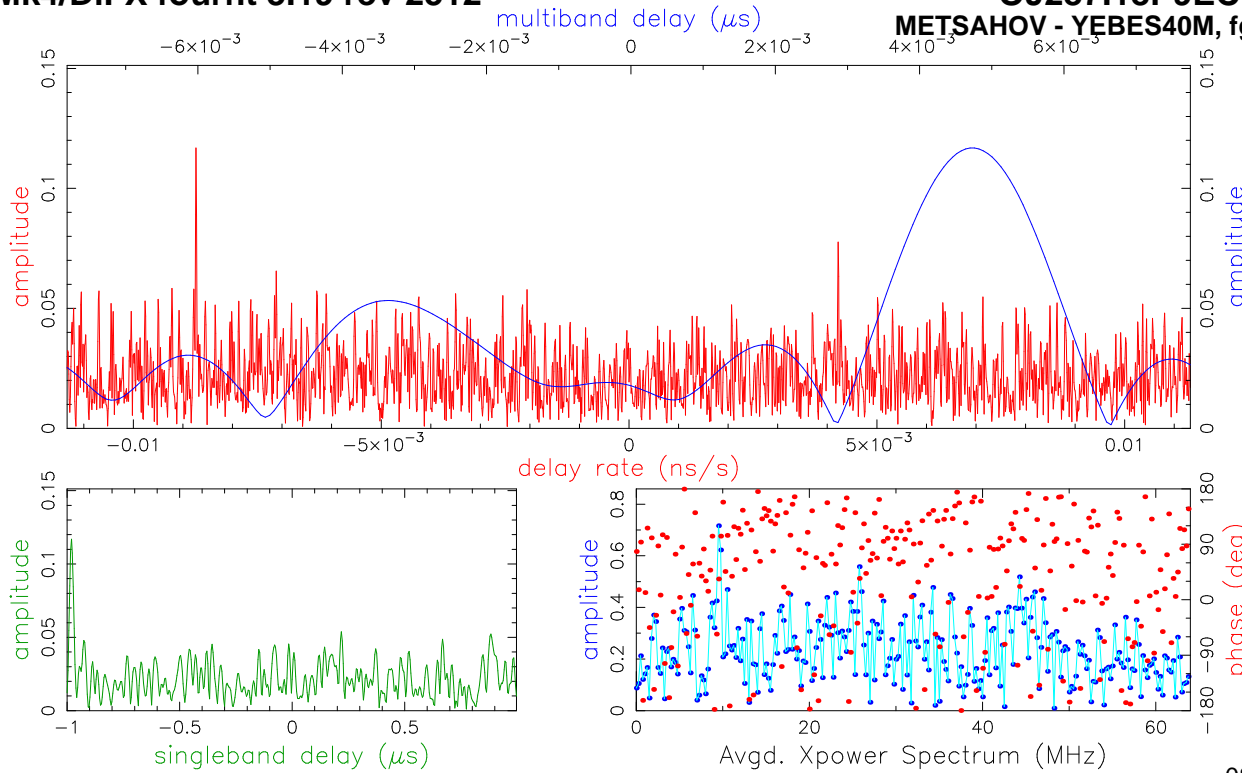
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|------|
| U/L | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -5.67729695106E+03 | Apriori delay (usec) | -5.67729402823E+03 | Resid mbdelay (usec) | -2.92283E-03 | +/- | 9.3E-05 |
| Sband delay (usec) | -5.67729773348E+03 | Apriori clock (usec) | -1.2075533E+01 | Resid sbdelay (usec) | -3.70525E-03 | +/- | 7.4E-04 |
| Phase delay (usec) | -5.67729402443E+03 | Apriori clockrate (us/s) | -2.0400000E-07 | Resid phdelay (usec) | 3.80261E-06 | +/- | 3.2E-07 |
| Delay rate (us/s) | 2.22182828610E-01 | Apriori rate (us/s) | 2.22182676125E-01 | Resid rate (us/s) | 1.52485E-07 | +/- | 1.3E-09 |
| Total phase (deg) | -95.1 | Apriori accel (us/s/s) | 3.85670018884E-05 | Resid phase (deg) | 117.9 | +/- | 9.8 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-------|--|------------------------------|------------------|--------|-------|
| ph/seg (deg) | 75.0 | Theor. | 23.5 | Search (2048X32) | 0.201 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 87.1 | | 41.0 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 13.8 | | 13.8 | Inc. seg. avg. | 0.325 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 16.7 | | 24.2 | Inc. frq. avg. | 0.204 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

Z: az 275.9 el 19.8 pa 31.7 Y: az 265.0 el 37.4 pa 53.7 u,v (fr/asec) -1292.950 2930.643 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZY..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZY.W.252.18P9EC

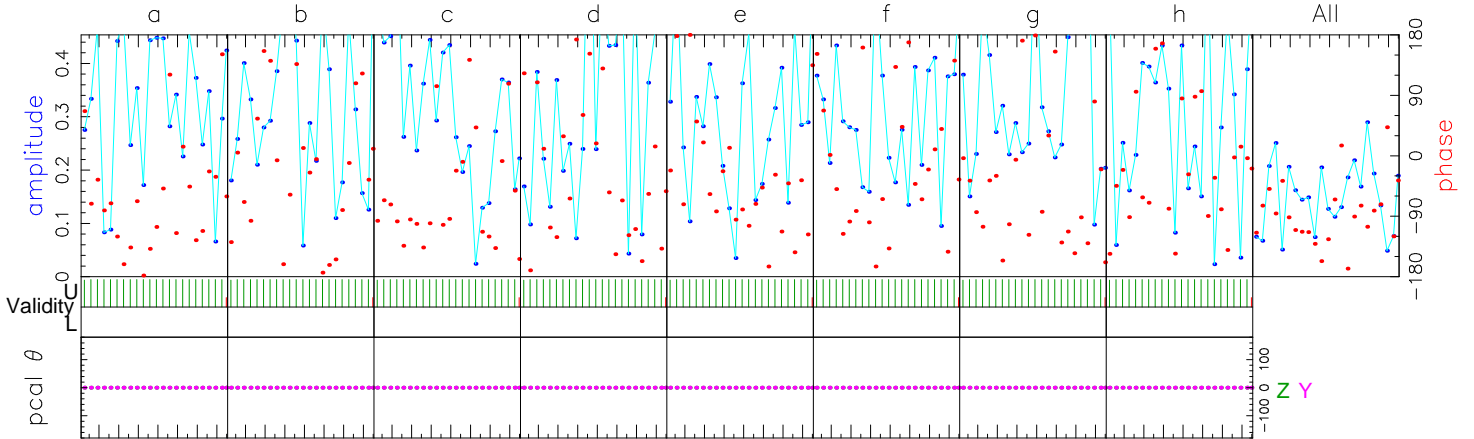


Fringe quality 0

SNR 6.7
 Int time 433.800
 Amp 0.151
 Phase -95.0
 PFD 8.0e-03
 Delays (us)
 SBD -0.980601
 MBD 0.004728
 Fringe rate (Hz)
 -0.753326
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224505.12
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120857
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 38 APs / seg (19.46 sec / seg.), time ticks 30 sec

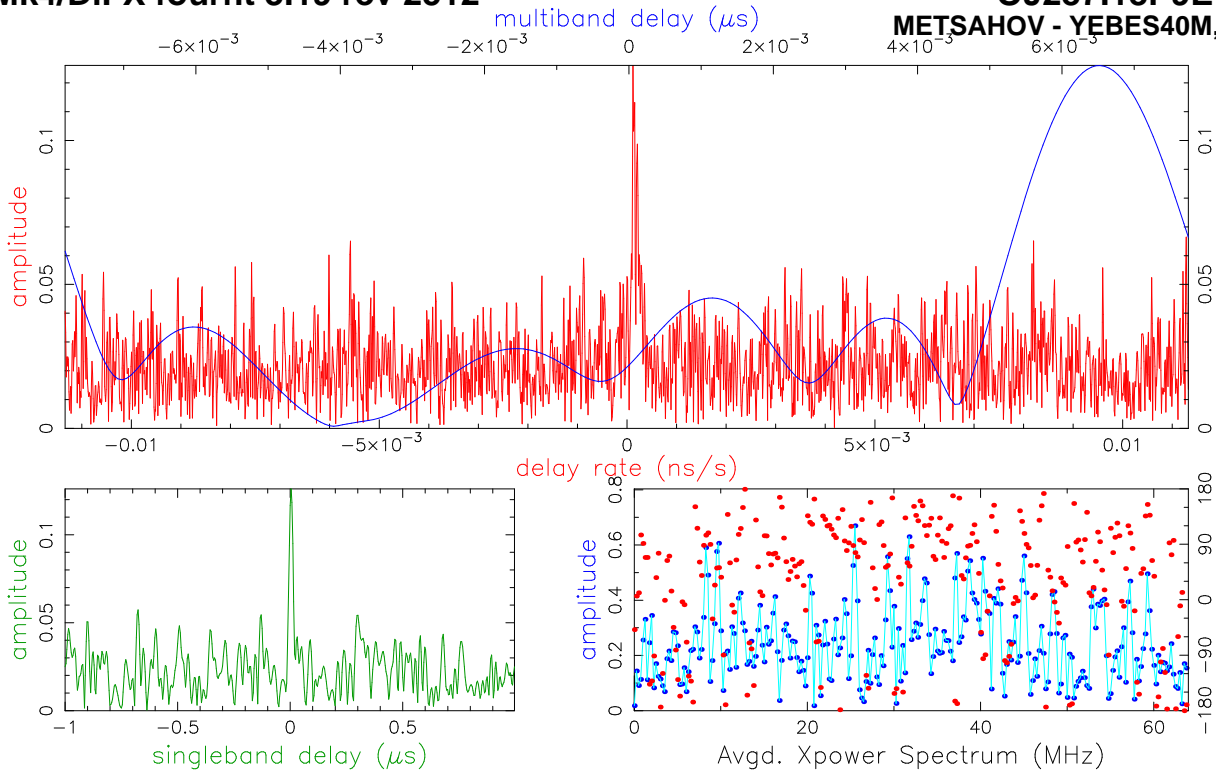


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -94.4 | -93.5 | -95.2 | -117.3 | -82.2 | -84.4 | -106.1 | -84.1 | Phase | -95.0 |
| | 0.2 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | Ampl. | 0.1 |
| | 6.7 | 330.1 | 6.7 | 145.3 | 40.1 | 353.4 | 4.4 | 131.6 | Sbd box | 6.0 |
| U/L | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -5.67827367507E+03 | | Apriori delay (usec) | | -5.67729402823E+03 | | Resid mbdelay (usec) | | 4.72816E-03 | +/- 1.6E-04 |
| Sband delay (usec) | -5.67827462923E+03 | | Apriori clock (usec) | | -1.2075533E+01 | | Resid sbdelay (usec) | | -9.80601E-01 | +/- 1.3E-03 |
| Phase delay (usec) | -5.67729403129E+03 | | Apriori clockrate (us/s) | | -2.0400000E-07 | | Resid phdelay (usec) | | -3.06416E-06 | +/- 5.6E-07 |
| Delay rate (us/s) | 2.22173930754E-01 | | Apriori rate (us/s) | | 2.22182676125E-01 | | Resid rate (us/s) | | -8.74537E-06 | +/- 2.2E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 3.85670018884E-05 | | Resid phase (deg) | | -95.0 | +/- 17.2 |

ph/seg (deg) 48.9 41.3 Search (2048X32) 0.113 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 62.3 72.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 13.0 24.3 Inc. seg. avg. 0.154 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 47.2 42.5 Inc. frq. avg. 0.141 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 275.9 el 19.8 pa 31.7 Y: az 265.0 el 37.4 pa 53.7 u,v (fr/asec) -1292.950 2930.643 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZY..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZY.W.258.18P9EC

Mk4/DiFX fourfit 3.19 rev 2512

OJ287.18P9EC, No0027, ZY
 METSAHOV - YEBES40M, fgroup W, pol RL

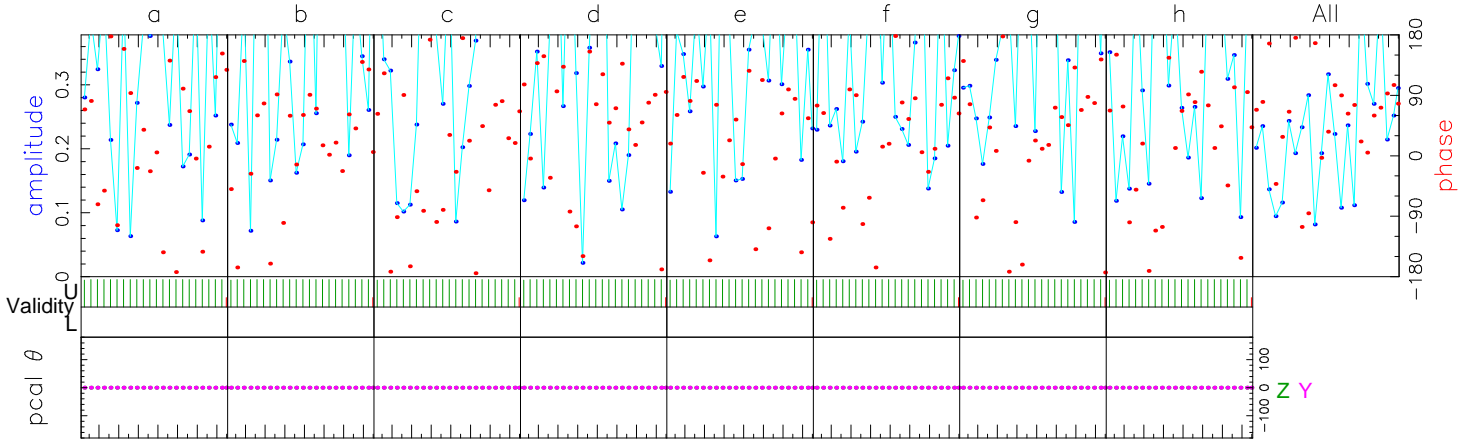


Fringe quality 0

SNR 7.2
 Int time 433.800
 Amp 0.126
 Phase 59.4
 PFD 2.1e-04
 Delays (us)
 SBD 0.004160
 MBD 0.006519
 Fringe rate (Hz) 0.010541
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224505.12
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120900
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 38 APs / seg (19.46 sec / seg.), time ticks 30 sec



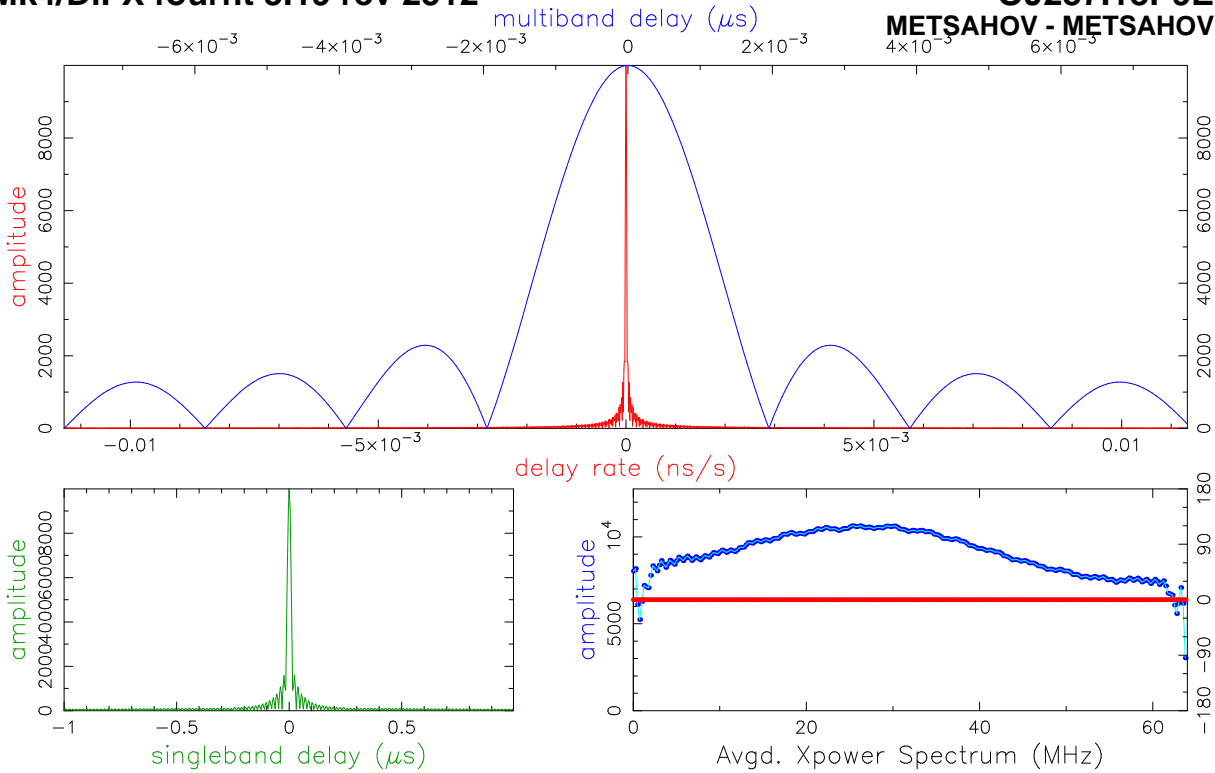
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | 849/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|-------------|-----|---------|
| Group delay (usec)(sbd) | -5.67728750906E+03 | Apriori delay (usec) | -5.67729402823E+03 | Resid mbdelay (usec) | 6.51917E-03 | +/- | 1.5E-04 |
| Sband delay (usec) | -5.67728986798E+03 | Apriori clock (usec) | -1.2075533E+01 | Resid sbdelay (usec) | 4.16025E-03 | +/- | 1.2E-03 |
| Phase delay (usec) | -5.67729402631E+03 | Apriori clockrate (us/s) | -2.0400000E-07 | Resid phdelay (usec) | 1.91681E-06 | +/- | 5.1E-07 |
| Delay rate (us/s) | 2.22182798492E-01 | Apriori rate (us/s) | 2.22182676125E-01 | Resid rate (us/s) | 1.22367E-07 | +/- | 2.1E-09 |
| Total phase (deg) | -153.6 | Apriori accel (us/s/s) | 3.85670018884E-05 | Resid phase (deg) | 59.4 | +/- | 16.0 |

| | | | | | | | | | | |
|--------------|-------|--------|------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 71.0 | Theor. | 38.3 | Amplitude | 0.126 +/- 0.018 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 112.7 | | 66.8 | Search (2048X32) | 0.124 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 18.3 | | 22.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 37.6 | | 39.4 | Inc. seg. avg. | 0.186 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| | | | | Inc. frq. avg. | 0.122 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

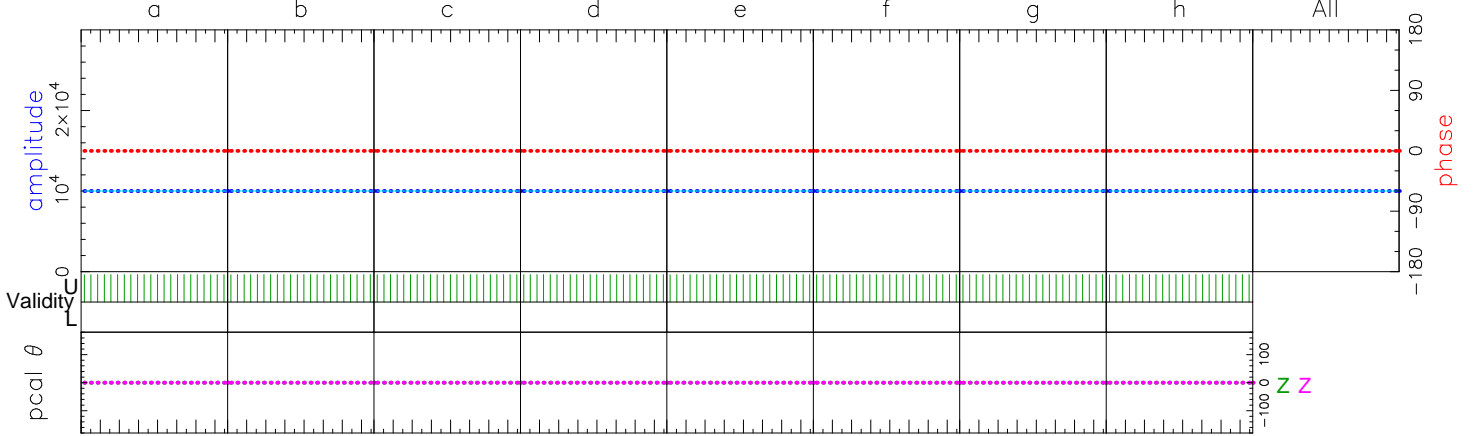
Z: az 275.9 el 19.8 pa 31.7 Y: az 265.0 el 37.4 pa 53.7 u,v (fr/asec) -1292.950 2930.643 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZY..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZY.W.264.18P9EC



Fringe quality 9
 SNR 573128.1
 Int time 439.247
 Amp 9999.998
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Yr:day # 16383
 Start 2020:115
 Stop 2020:115
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120849
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

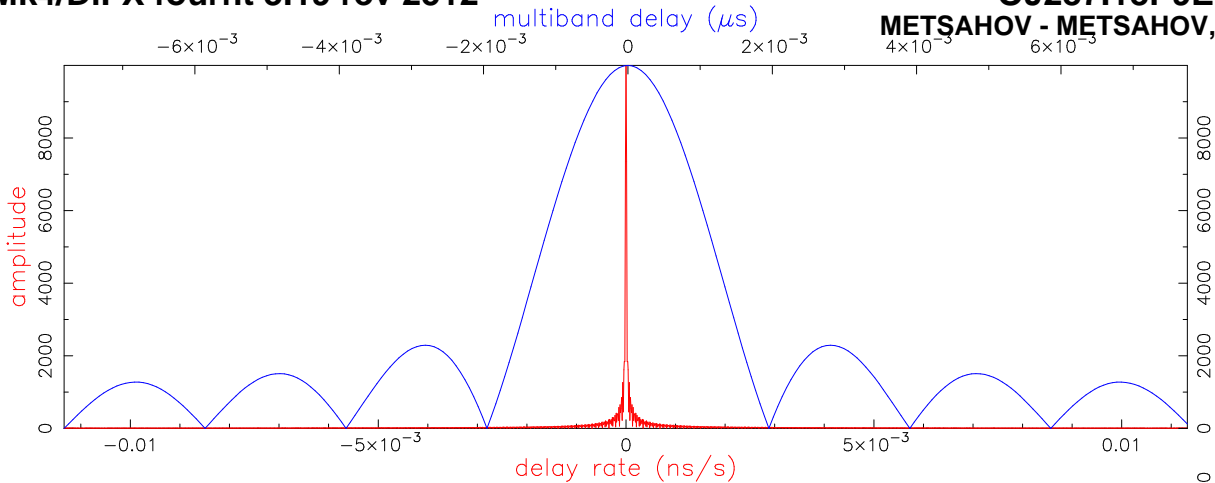
Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|---------|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | Ampl. | 10000.0 |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Sbd box | 257.0 |
| Z:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | APs used | |
| Z:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC phase | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Mani PC | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | PC amp | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| | | | | | | | | | Tracks | |
| | | | | | | | | | Tracks | |

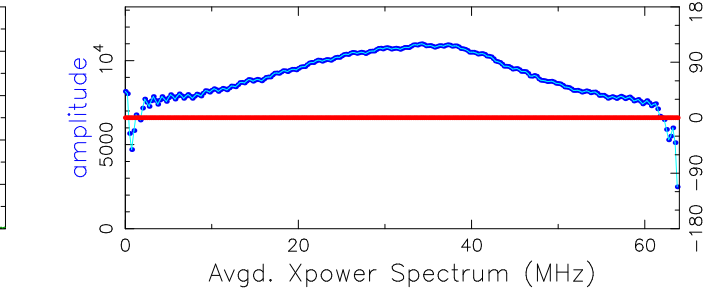
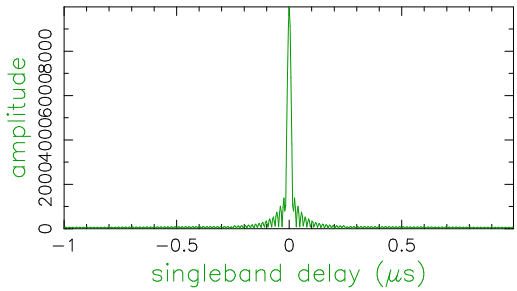
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 1.9E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 1.5E-08
 Phase delay (usec) 2.68461972474E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 2.68462E-20 +/- 6.4E-12
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.5E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 9999.998 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (2048X32) 9999.998 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) -0.008 0.008
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.998 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Z: az 275.9 el 19.8 pa 31.7 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator



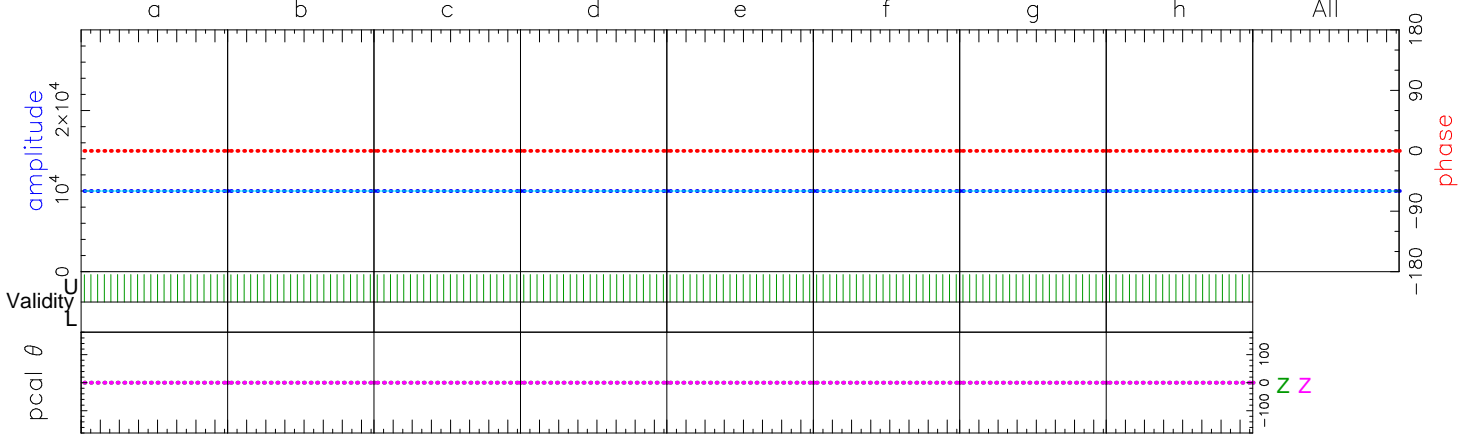
Fringe quality 9

SNR 573128.1
 Int time 439.247
 Amp 9999.998
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c201a
 Yr:day 16383
 Start 2020:115
 Stop 2020:195:224837
 FRT 2020:197:120853
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 0.000000000000E+00 | Apriori delay (usec) | 0.000000000000E+00 | Resid mbdelay (usec) | 0.000000E+00 | +/- | 1.9E-09 |
| Sband delay (usec) | 0.000000000000E+00 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 0.000000E+00 | +/- | 1.5E-08 |
| Phase delay (usec) | 1.35229805286E-20 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 1.35230E-20 | +/- | 6.4E-12 |
| Delay rate (us/s) | 0.000000000000E+00 | Apriori rate (us/s) | 0.000000000000E+00 | Resid rate (us/s) | 0.000000E+00 | +/- | 2.5E-14 |
| Total phase (deg) | 0.0 | Apriori accel (us/s/s) | 0.000000000000E+00 | Resid phase (deg) | 0.0 | +/- | 0.0 |

ph/seg (deg) 0.0 0.0
 amp/seg (%) 0.0 0.0
 ph/frq (deg) 0.0 0.0
 amp/frq (%) 0.0 0.0

Group delay (usec)(sbd) 0.000000000000E+00
 Sband delay (usec) 0.000000000000E+00
 Phase delay (usec) 1.35229805286E-20
 Delay rate (us/s) 0.000000000000E+00
 Total phase (deg) 0.0

Apriori delay (usec) 0.000000000000E+00
 Apriori clock (usec) 0.0000000E+00
 Apriori clockrate (us/s) 0.0000000E+00
 Apriori rate (us/s) 0.000000000000E+00
 Apriori accel (us/s/s) 0.000000000000E+00

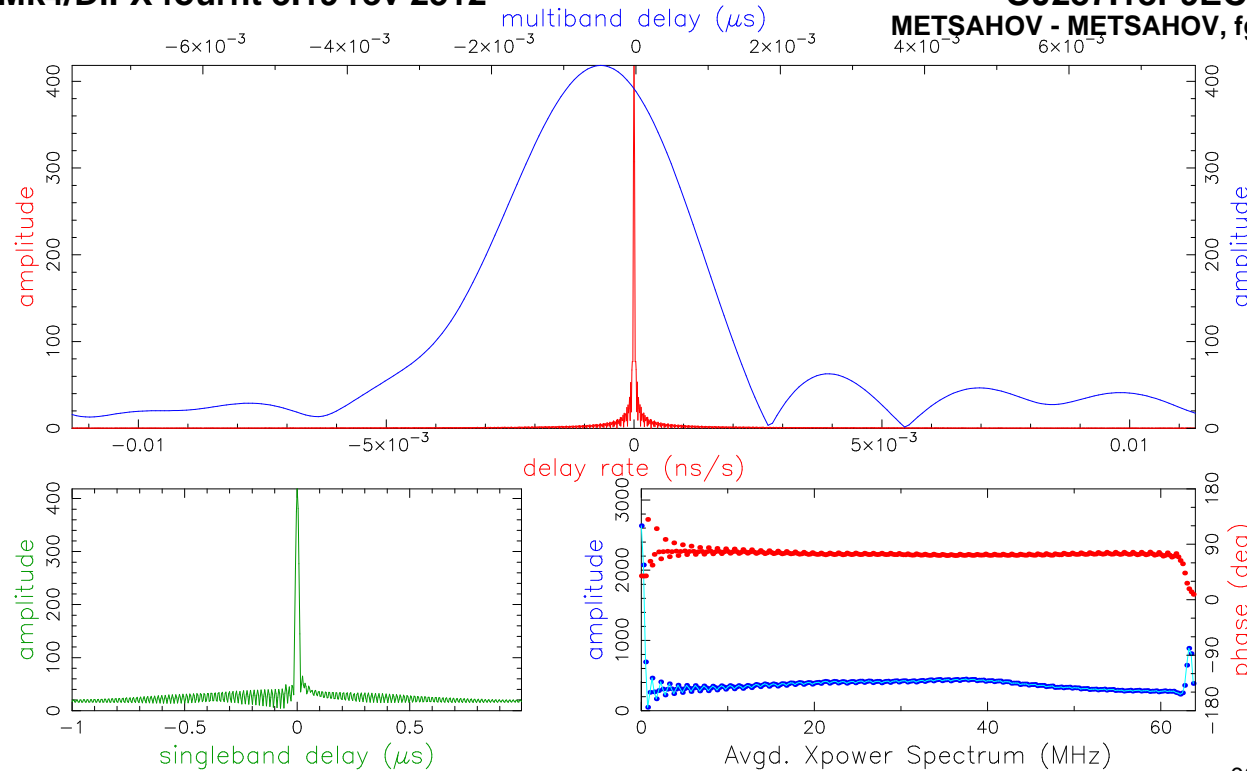
Resid mbdelay (usec) 0.000000E+00
 Resid sbdelay (usec) 0.000000E+00
 Resid phdelay (usec) 1.35230E-20
 Resid rate (us/s) 0.000000E+00
 Resid phase (deg) 0.0

PCal mode: MANUAL, MANUAL
 PCal rate: 0.000E+00, 0.000E+00 (us/s)
 Bits/sample: 2x2
 Sample rate(MISamp/s): 128
 Data rate(Mb/s): 2048

PC period (AP's) 5, 5
 SampCntNorm: enabled
 nlags: 256
 t_cohere infinite

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

simultaneous interpolator

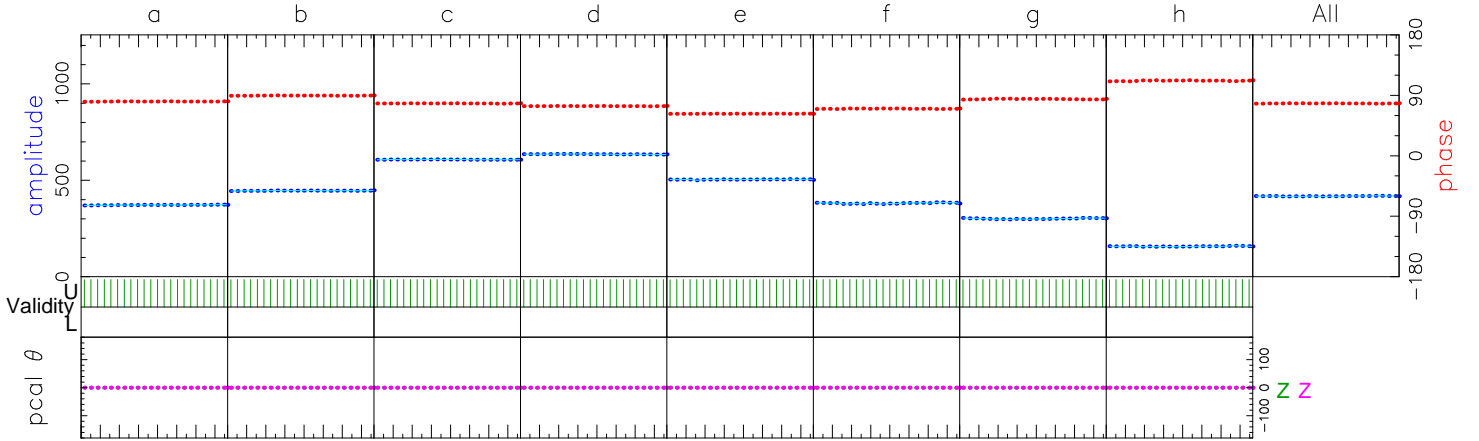


Fringe quality 7

SNR 23974.5
 Int time 439.247
 Amp 418.309
 Phase 77.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.000142
 MBD -0.000483
 Fringe rate (Hz)
 0.000002
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c201a
 Yr:day 16383
 Start 2020:115
 Stop 2020:115
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120856
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

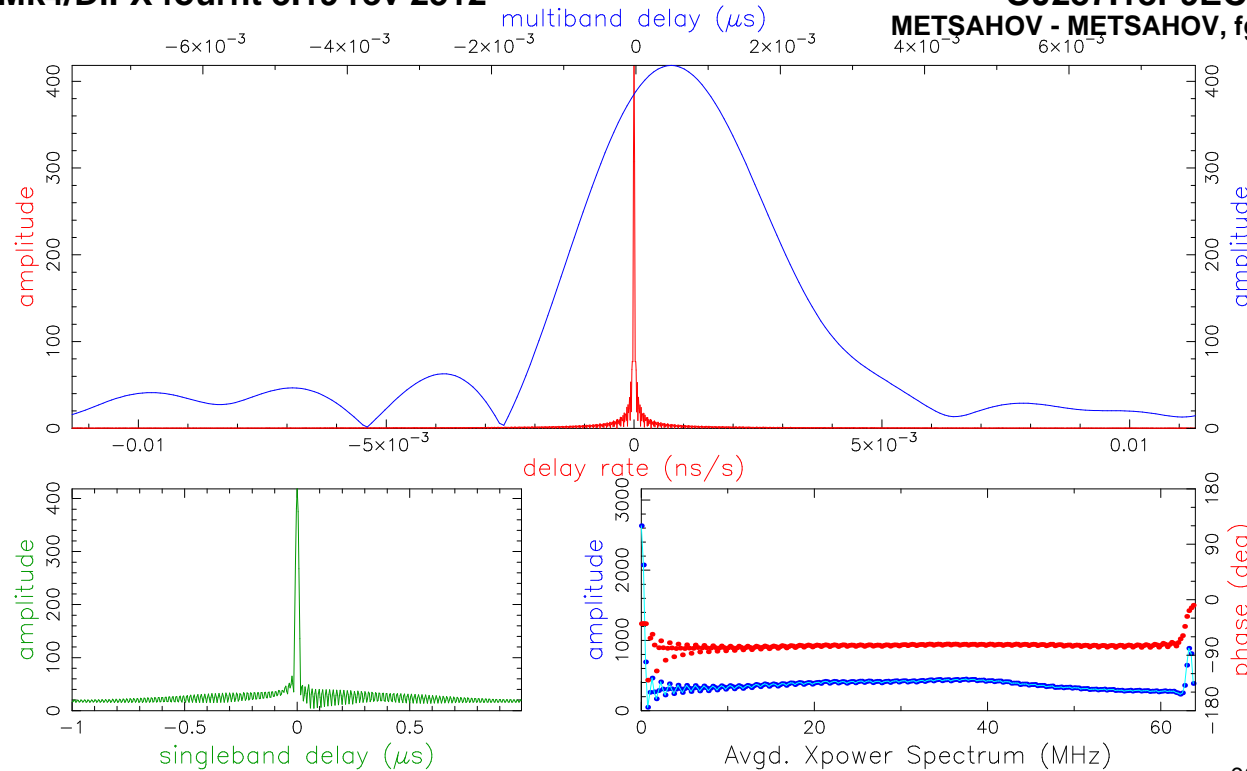


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|-------------------|----------|----------------------|--------------|----------|------------|-----|
| 80.8 | 89.5 | 77.9 | 73.9 | 62.5 | 70.0 | 84.3 | 111.6 | Phase | 77.9 | |
| 372.1 | 446.4 | 607.7 | 635.8 | 504.4 | 381.6 | 301.4 | 157.9 | Ampl. | 425.9 | |
| 257.0 | 257.0 | 256.7 | 257.0 | 256.9 | 257.4 | 257.5 | 257.6 | Sbd box | 257.0 | |
| U/L 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | | |
| Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | |
| Z:Z 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | |
| Z:Z 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | | |
| Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | |
| Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| Z W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | | |
| Z W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | | |
| | | | | | | | | Chan ids | | |
| | | | | | | | | Tracks | | |
| Group delay (usec)(sbd) | -4.83218750000E-04 | | Apriori delay (usec) | 0.00000000000E+00 | | Resid mbdelay (usec) | -4.83219E-04 | +/- | 4.5E-08 | |
| Sband delay (usec) | 1.41750000000E-04 | | Apriori clock (usec) | 0.0000000E+00 | | Resid sbdelay (usec) | 1.41750E-04 | +/- | 3.6E-07 | |
| Phase delay (usec) | 2.51172167441E-06 | | Apriori clockrate (us/s) | 0.0000000E+00 | | Resid phdelay (usec) | 2.51172E-06 | +/- | 1.5E-10 | |
| Delay rate (us/s) | 2.69251895442E-11 | | Apriori rate (us/s) | 0.00000000000E+00 | | Resid rate (us/s) | 2.69252E-11 | +/- | 6.1E-13 | |
| Total phase (deg) | | 77.9 | Apriori accel (us/s/s) | 0.00000000000E+00 | | Resid phase (deg) | 77.9 | +/- | 0.0 | |

ph/seg (deg) 0.1 0.0 Theor. Amplitude 418.309 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.2 0.0 Search (2048X32) 418.256 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 16.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.5 0.0 Inc. seg. avg. 418.256 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 425.918 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

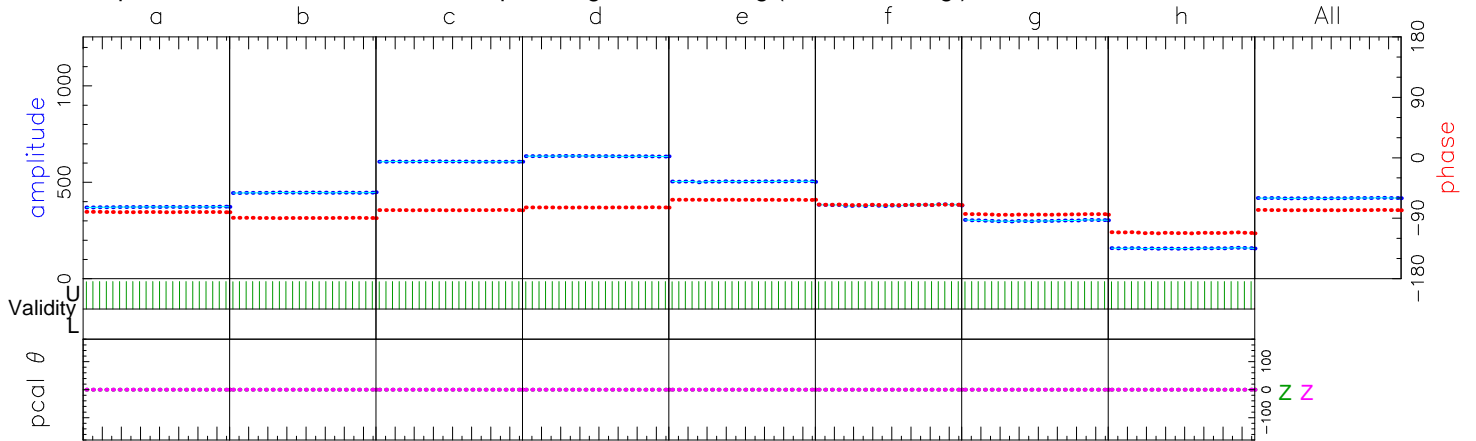
Z: az 275.9 el 19.8 pa 31.7 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZZ.W.257.18P9EC



Fringe quality 7
 SNR 23974.5
 Int time 439.247
 Amp 418.309
 Phase -77.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.000142
 MBD 0.000483
 Fringe rate (Hz)
 -0.000002
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c201a
 Exper # 16383
 Yr:day 2020:115
 Start 224500.00
 Stop 225219.80
 FRT 224840.00
 Corr/FF/build
 2020:195:224837
 2020:197:120859
 2020:014:135814
 RA & Dec (J2000)
 08h54m48.874928s
 +20°06'30.640850"

Amp. and Phase vs. time for each freq., 23 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|-------------------|----------|----------------------|----------|--------------|-------------|
| | -80.8 | -89.5 | -77.9 | -73.9 | -62.5 | -70.0 | -84.3 | -111.6 | Phase | -77.9 |
| | 372.1 | 446.4 | 607.7 | 635.8 | 504.4 | 381.6 | 301.4 | 157.9 | Ampl. | 425.9 |
| | 257.0 | 257.0 | 257.3 | 257.0 | 257.1 | 256.6 | 256.5 | 256.4 | Sbd box | 257.0 |
| U/L | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | 859/0 | APs used | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 4.83218750000E-04 | | Apriori delay (usec) | | 0.00000000000E+00 | | Resid mbdelay (usec) | | 4.83219E-04 | +/- 4.5E-08 |
| Sband delay (usec) | -1.41750000000E-04 | | Apriori clock (usec) | | 0.0000000E+00 | | Resid sbdelay (usec) | | -1.41750E-04 | +/- 3.6E-07 |
| Phase delay (usec) | -2.51172167437E-06 | | Apriori clockrate (us/s) | | 0.0000000E+00 | | Resid phdelay (usec) | | -2.51172E-06 | +/- 1.5E-10 |
| Delay rate (us/s) | -2.69251895442E-11 | | Apriori rate (us/s) | | 0.00000000000E+00 | | Resid rate (us/s) | | -2.69252E-11 | +/- 6.1E-13 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 0.00000000000E+00 | | Resid phase (deg) | | -77.9 | +/- 0.0 |

ph/seg (deg) 0.1 0.0 Theor. Amplitude 418.309 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.2 0.0 Search (2048X32) 418.256 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 16.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.5 0.0 Inc. seg. avg. 418.256 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 425.918 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Z: az 275.9 el 19.8 pa 31.7 Z: az 275.9 el 19.8 pa 31.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c201a/v1/1234/No0027/ZZ..18P9EC Output file: /Exps/c201a/v1/1234/No0027/ZZ.W.262.18P9EC