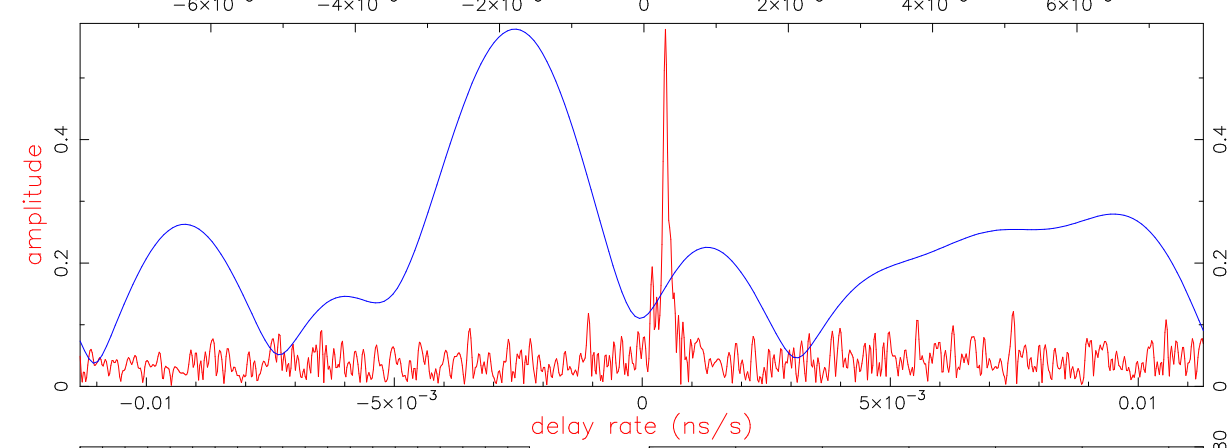


Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, BZ

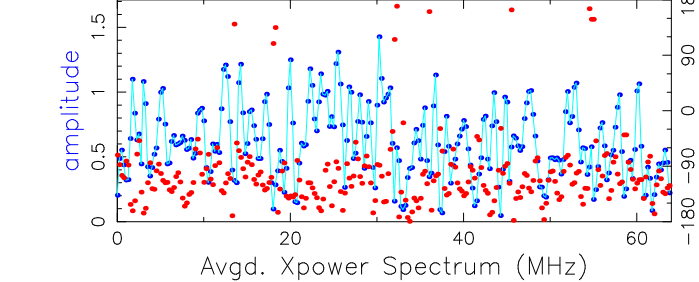
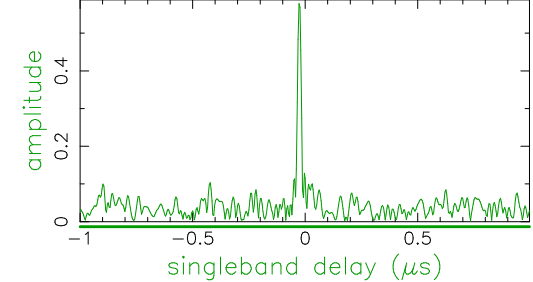
EFLSBERG - METSAHOV, fgroup W, pol RR



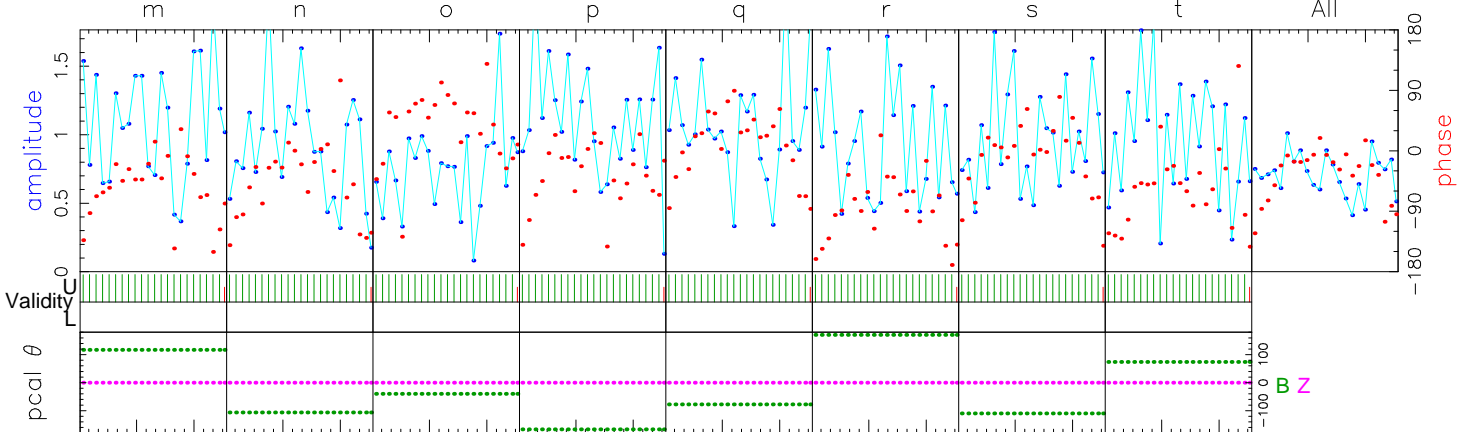
Fringe quality 8

SNR 19.7
 Int time 149.957
 Amp 0.589
 Phase -33.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.025746
 MBD -0.001749
 Fringe rate (Hz) 0.040308
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141424
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|-----------------------------|--------------------|---|---------------------------|--|---|------------------------------|----------|----------|--|--------------|---------------------------|
| | -57.1 | -41.8 | 43.6 | -33.8 | 8.1 | -87.2 | -4.8 | -63.1 | Phase | -33.1 | |
| | 0.8 | 0.7 | 0.5 | 0.8 | 0.8 | 0.7 | 0.8 | 0.8 | Ampl. | 0.7 | |
| | 250.1 | 250.7 | 250.4 | 250.0 | 249.8 | 250.3 | 249.8 | 249.9 | Sbd box | 250.4 | |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | |
| B:Z | 118:0 | -106:0 | -40:0 | -167:0 | -77:0 | 171:0 | -110:0 | 74:0 | 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) | -1.58993059516E+03 | | | | | -1.58989759566E+03 | | | Resid mbdelay (usec) | -1.74949E-03 | +/- 5.5E-05 |
| Sband delay (usec) | -1.58992334141E+03 | | | | | -3.5533386E+01 | | | Resid sbdelay (usec) | -2.57457E-02 | +/- 4.4E-04 |
| Phase delay (usec) | -1.58989759673E+03 | | | | | -7.9939896E-07 | | | Resid phdelay (usec) | -1.06626E-06 | +/- 1.9E-07 |
| Delay rate (us/s) | 2.62678947312E-01 | | | | | 2.62678479373E-01 | | | Resid rate (us/s) | 4.67939E-07 | +/- 2.2E-09 |
| Total phase (deg) | | | -353.5 | | | 1.32027899238E-06 | | | Resid phase (deg) | -33.1 | +/- 5.8 |
| | | | | | | | | | PCal mode: MANUAL, MANUAL | | |
| | | | | | | | | | PCal rate: 0.000E+00, 0.000E+00 (us/s) | | |
| ph/seg (deg) | RMS 37.7 | Theor. 14.0 | Amplitude 0.589 +/- 0.030 | Search (1024X32) 0.571 | PCal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 33.1 | 24.4 | Interp. 0.000 | 0.571 | Bits/sample: 2x2 | SampCntNorm: enabled | | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 46.3 | 8.2 | Inc. seg. avg. 0.695 | 0.695 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | dr window (ns/s) | | | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 27.1 | 14.4 | Inc. frq. avg. 0.715 | 0.715 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | | ion window (TEC) | 0.00 | 0.00 |
| B: az 86.4 el 52.9 pa -55.7 | | Z: az 118.7 el 60.6 pa -34.4 | | u, v (fr/asec) -1957.700 -556.836 | | | | | | | simultaneous interpolator |
| Control file: cf_1234_gmva | | Input file: /Exps/c241a/v2/3mm/1234/No1160/BZ..3MP20R | | Output file: /Exps/c241a/v2/3mm/1234/No1160/BZ.W.12.3MP20R | | | | | | | |

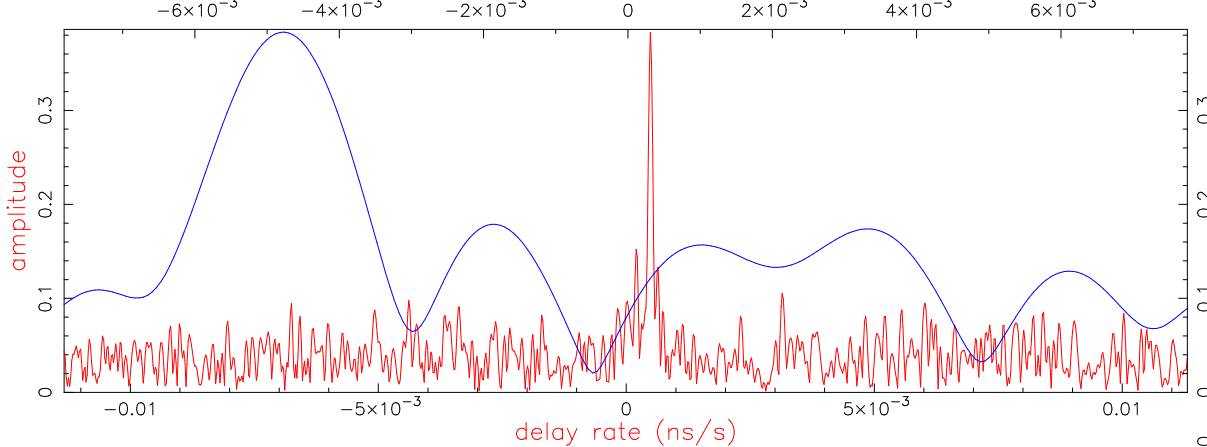
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, BZ

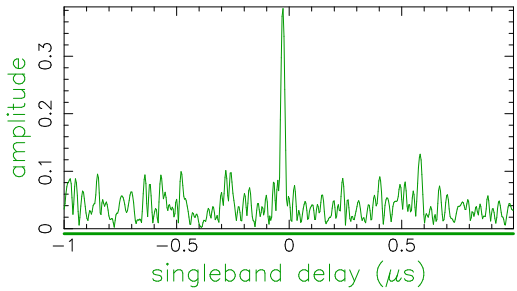
EFLSBERG - METSAHOV, fgroup W, pol LR

multiband delay (μ s)

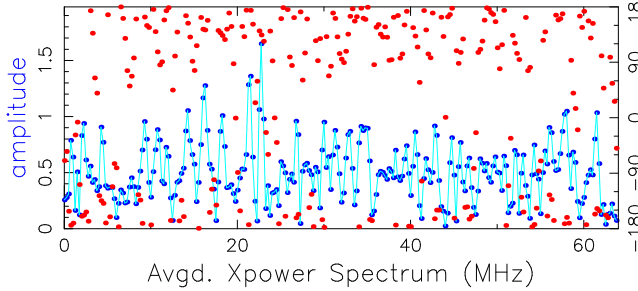


Fringe quality 9

SNR 12.9
 Int time 149.957
 Amp 0.386
 Phase -111.9
 PFD 9.2e-30
 Delays (us)
 SBD -0.028484
 MBD -0.004801
 Fringe rate (Hz)
 0.041132
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

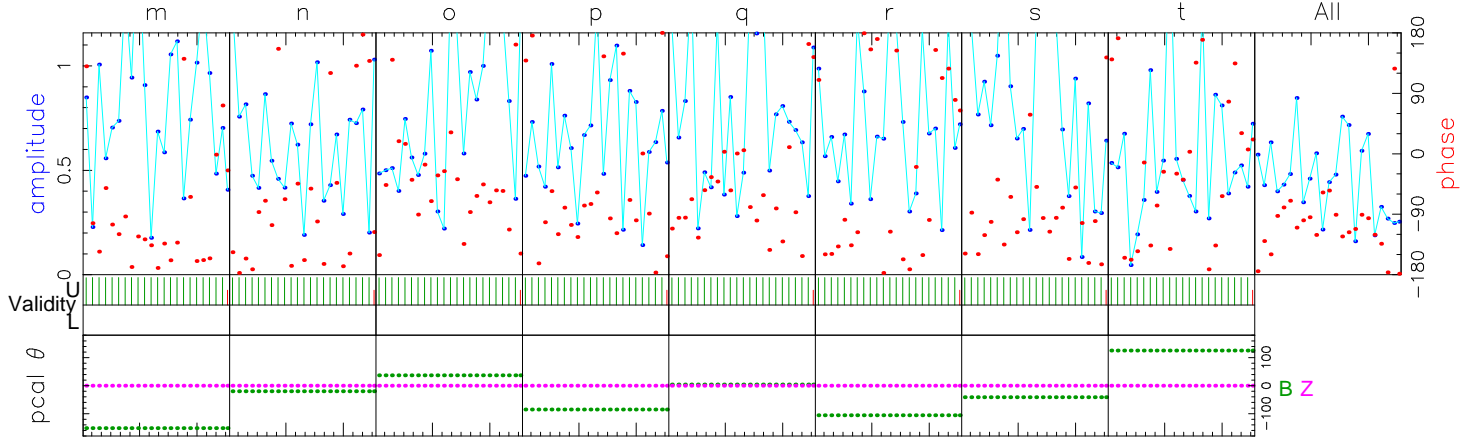


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141425
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -136.9 | -136.0 | -58.1 | -108.0 | -78.9 | -170.0 | -104.0 | -134.5 | Phase | -111.9 |
| | 0.6 | 0.4 | 0.5 | 0.4 | 0.5 | 0.4 | 0.7 | 0.2 | Ampl. | 0.4 |
| | 250.2 | 249.4 | 249.7 | 249.2 | 249.2 | 248.4 | 249.4 | 293.9 | Sbd box | 249.7 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Z | -151:0 | -20:0 | 37:0 | -85:0 | 4:0 | -106:0 | -41:0 | 125:0 | Manl 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 | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -1.58993364694E+03 | Apriori delay (usec) | -1.58989759566E+03 | Resid mbdelay (usec) | -4.80128E-03 | +/- | 8.4E-05 |
| Sband delay (usec) | -1.58992607991E+03 | Apriori clock (usec) | -3.5533386E+01 | Resid sbdelay (usec) | -2.84842E-02 | +/- | 6.7E-04 |
| Phase delay (usec) | -1.58989759927E+03 | Apriori clockrate (us/s) | -7.9939896E-07 | Resid phdelay (usec) | -3.60756E-06 | +/- | 2.9E-07 |
| Delay rate (us/s) | 2.62678956874E-01 | Apriori rate (us/s) | 2.62678479373E-01 | Resid rate (us/s) | 4.77501E-07 | +/- | 3.3E-09 |
| Total phase (deg) | -72.4 | Apriori accel (us/s/s) | 1.32027899238E-06 | Resid phase (deg) | -111.9 | +/- | 8.9 |

| | | | | | | | | | | |
|--------------|------|------------------|-------|----------------------|---------------------------|-------------------|-----------------------------|------------------------------|------------------|--------------|
| ph/seg (deg) | 41.4 | Theor. | 21.3 | Amplitude | 0.386 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 52.3 | Search (1024X32) | 0.374 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 39.1 | Inc. seg. avg. | 0.432 | Inc. frq. avg. | 0.448 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 40.7 | Inc. frq. avg. | 0.448 | Data rate (MSamp/s): | 128 MBpts 32 Amb 0.016 us | Data rate (Mb/s): | 2048 | nlags: 256 t_cohere infinite | dr window (ns/s) | -0.011 0.011 |
| | | | | | | | | | ion window (TEC) | 0.00 0.00 |

B: az 86.4 el 52.9 pa -55.7 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) -1957.700 -556.836 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/BZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/BZ.W.23.3MP20R

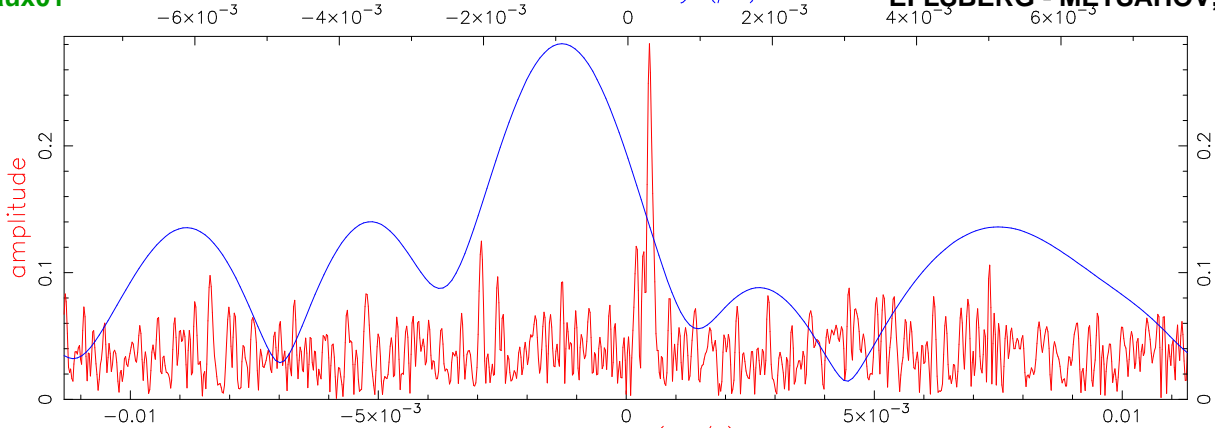
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, BZ

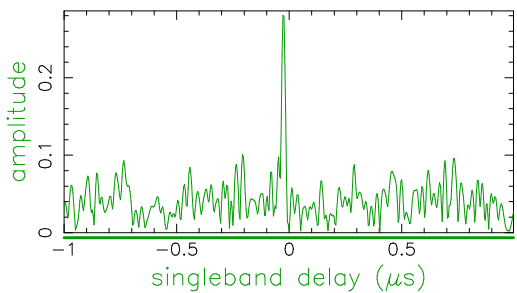
EFLSBERG - METSAHOV, fgroup W, pol RL

multiband delay (μ s)

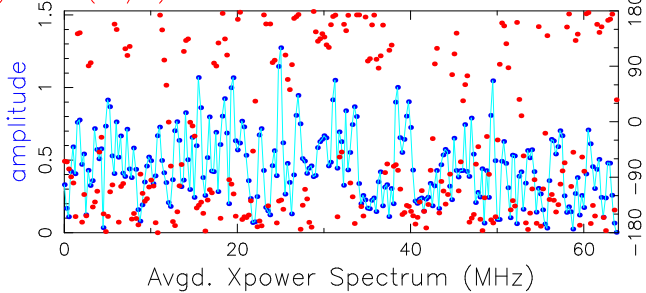


Fringe quality 9

SNR 9.6
 Int time 149.957
 Amp 0.286
 Phase -84.8
 PFD 1.9e-13
 Delays (us)
 SBD -0.025573
 MBD -0.000901
 Fringe rate (Hz)
 0.040061
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

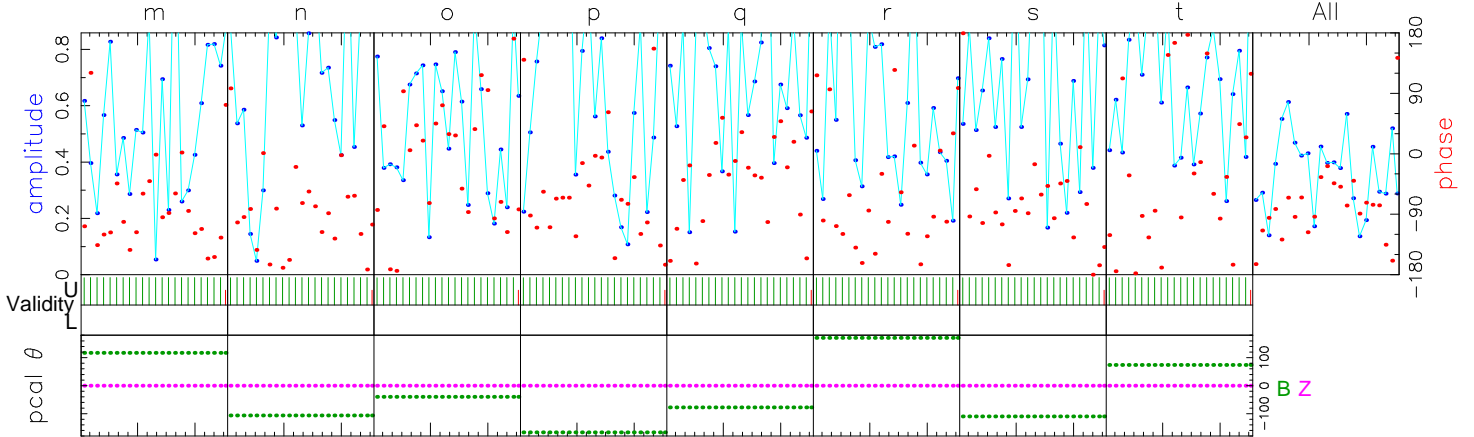


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141428
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -101.5 | -102.4 | 29.0 | -77.4 | -36.7 | -98.4 | -83.3 | -137.0 | Phase | -84.8 |
| | 0.4 | 0.4 | 0.2 | 0.5 | 0.3 | 0.2 | 0.5 | 0.2 | Ampl. | 0.3 |
| | 251.4 | 250.7 | 477.9 | 250.2 | 249.4 | 26.7 | 249.7 | 443.6 | Sbd box | 250.5 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Z | 118:0 | -106:0 | -40:0 | -167:0 | -77:0 | 171:0 | -110:0 | 74:0 | 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) | -1.58992974716E+03 | Apriori delay (usec) | -1.58989759566E+03 | Resid mbdelay (usec) | -9.01495E-04 | +/- | 1.1E-04 |
| Sband delay (usec) | -1.58992316841E+03 | Apriori clock (usec) | -3.5533386E+01 | Resid sbdelay (usec) | -2.55728E-02 | +/- | 9.0E-04 |
| Phase delay (usec) | -1.58989759839E+03 | Apriori clockrate (us/s) | -7.9939896E-07 | Resid phdelay (usec) | -2.73352E-06 | +/- | 3.9E-07 |
| Delay rate (us/s) | 2.62678944446E-01 | Apriori rate (us/s) | 2.62678479373E-01 | Resid rate (us/s) | 4.65073E-07 | +/- | 4.5E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | 1.32027899238E-06 | Resid phase (deg) | -84.8 | +/- | 12.0 |

| | | | | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|---|------------------------------|------------------|--------|-------|
| ph/seg (deg) | RMS 42.5 | Theor. 28.7 | Amplitude Search (1024X32) | 0.286 +/- 0.030 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 54.9 | 50.1 | 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) | 56.0 | 16.9 | Inc. seg. avg. | 0.326 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | nlags: 256 t_cohere infinite | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 44.3 | 29.5 | Inc. frq. avg. | 0.325 | Data rate(Mb/s): 2048 | | ion window (TEC) | 0.00 | 0.00 |

B: az 86.4 el 52.9 pa -55.7 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) -1957.700 -556.836 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/BZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/BZ.W.34.3MP20R

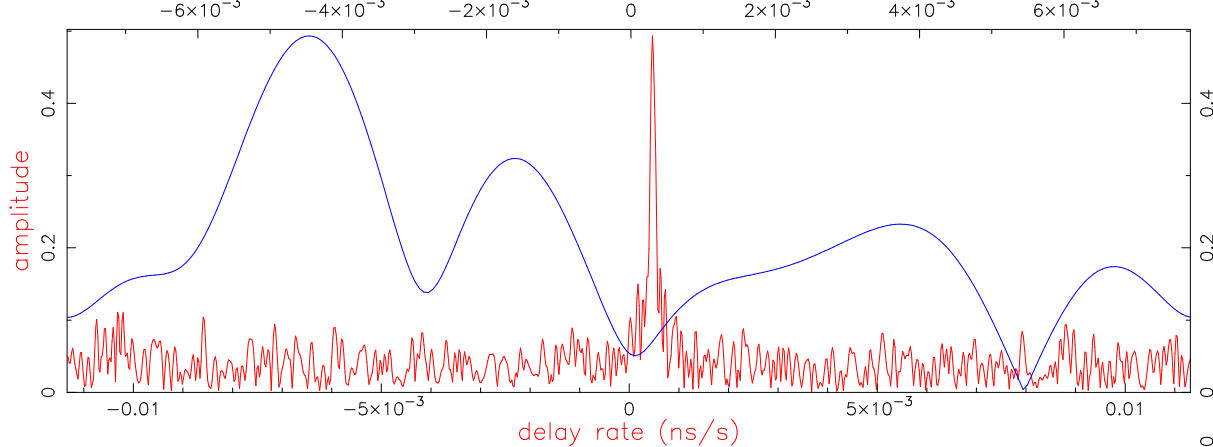
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, BZ

EFLSBERG - METSAHOV, fgroup W, pol LL

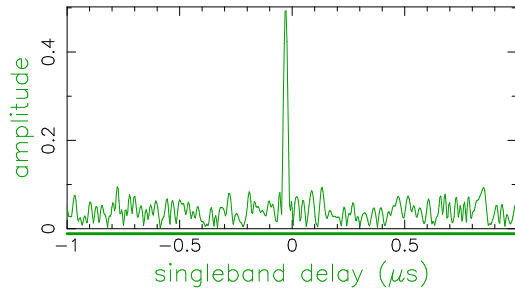
multiband delay (μ s)



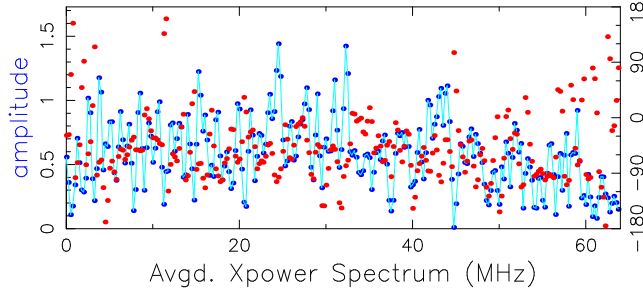
Fringe quality 8

SNR 16.8
 Int time 149.957
 Amp 0.502
 Phase 19.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.029229
 MBD -0.004485
 Fringe rate (Hz)
 0.040810
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

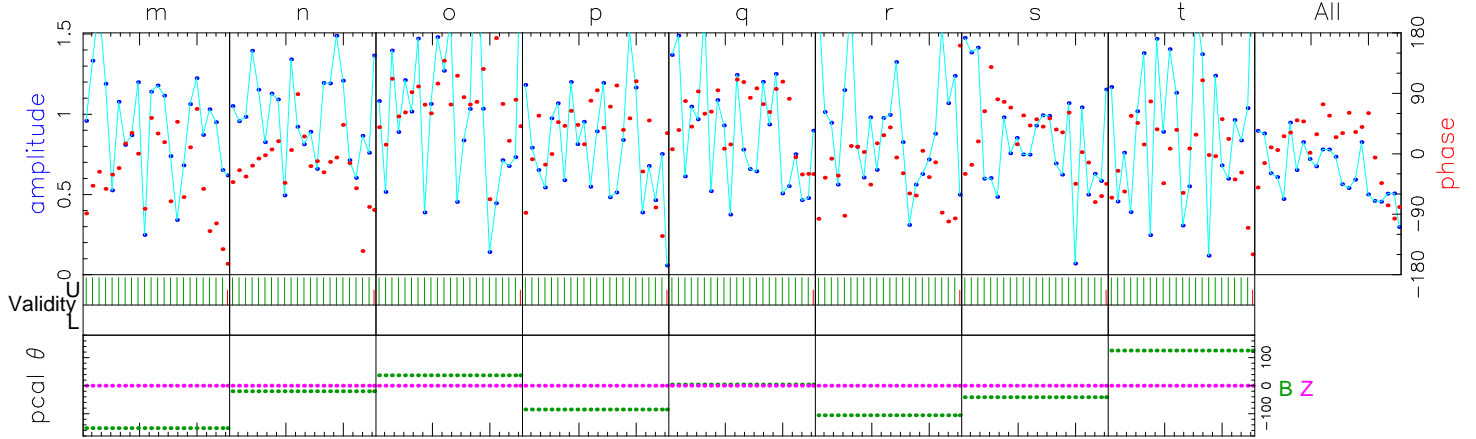
Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141421
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"



delay rate (ns/s)



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -22.9 | -12.7 | 81.5 | 40.2 | 60.0 | -34.8 | 26.1 | 4.4 | Phase | 19.3 |
| | 0.6 | 0.8 | 0.9 | 0.5 | 0.7 | 0.7 | 0.6 | 0.5 | Ampl. | 0.6 |
| | 248.5 | 249.2 | 250.0 | 249.3 | 249.0 | 249.5 | 248.8 | 248.0 | Sbd box | 249.5 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Z | -151:0 | -20:0 | 37:0 | -85:0 | 4:0 | -106:0 | -41:0 | 125:0 | Manl 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 | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -1.5899333109E+03 | Apriori delay (usec) | -1.58989759566E+03 | Resid mbdelay (usec) | -4.48543E-03 | +/- | 6.5E-05 |
| Sband delay (usec) | -1.58992682466E+03 | Apriori clock (usec) | -3.5533386E+01 | Resid sbdelay (usec) | -2.92290E-02 | +/- | 5.1E-04 |
| Phase delay (usec) | -1.58989759504E+03 | Apriori clockrate (us/s) | -7.9939896E-07 | Resid phdelay (usec) | 6.22606E-07 | +/- | 2.2E-07 |
| Delay rate (us/s) | 2.62678953134E-01 | Apriori rate (us/s) | 2.62678479373E-01 | Resid rate (us/s) | 4.73761E-07 | +/- | 2.5E-09 |
| Total phase (deg) | -301.2 | Apriori accel (us/s/s) | 1.32027899238E-06 | Resid phase (deg) | 19.3 | +/- | 6.8 |

| | | | | | | | | | | | |
|--------------|------|---------------------|---------------------------|------------------|-------|--------------|-----------------------------|----------------------|---------------------------|------------------|-------|
| ph/seg (deg) | 46.9 | RMS | 16.3 | Theor. | 16.3 | Amplitude | 0.502 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 43.7 | Search (1024X32) | 0.482 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | |
| ph/frq (deg) | 44.6 | Inc. seg. avg. | 0.628 | Inc. frq. avg. | 0.635 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| amp/frq (%) | 36.3 | Data rate(MSamp/s): | 128 MBpts 32 Amb 0.016 us | Data rate(Mb/s): | 2048 | nlags: | 256 | t_cohere infinite | dr window (ns/s) | -0.011 | 0.011 |
| | | ion window (TEC) | 0.00 | 0.00 | | | | | simultaneous interpolator | | |

B: az 86.4 el 52.9 pa -55.7 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) -1957.700 -556.836

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/BZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/BZ.W.6.3MP20R

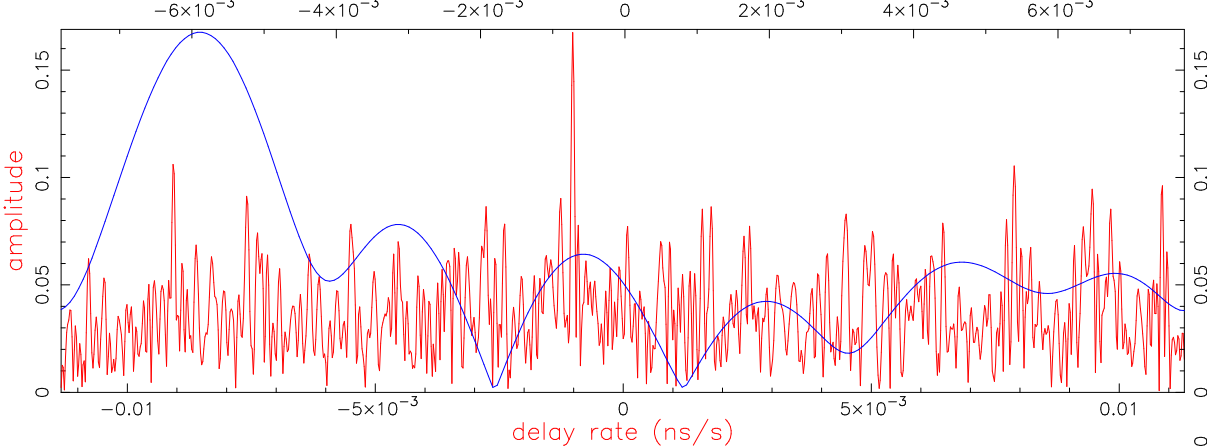
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, gZ

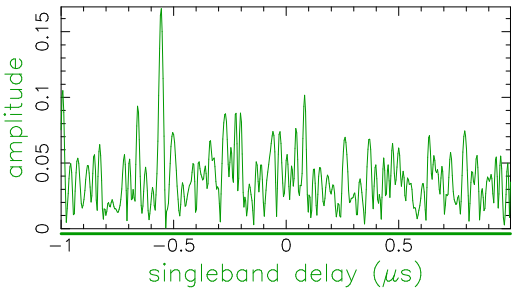
GLT - METSAHOV, fgroup W, pol LL

multiband delay (μ s)

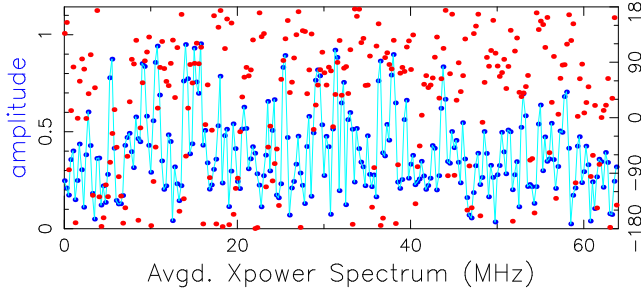


Fringe quality 0

SNR 5.6
 Int time 149.956
 Amp 0.169
 Phase -122.2
 PFD 8.8e-01
 Delays (us)
 SBD -0.555748
 MBD -0.005852
 Fringe rate (Hz)
 -0.087027
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

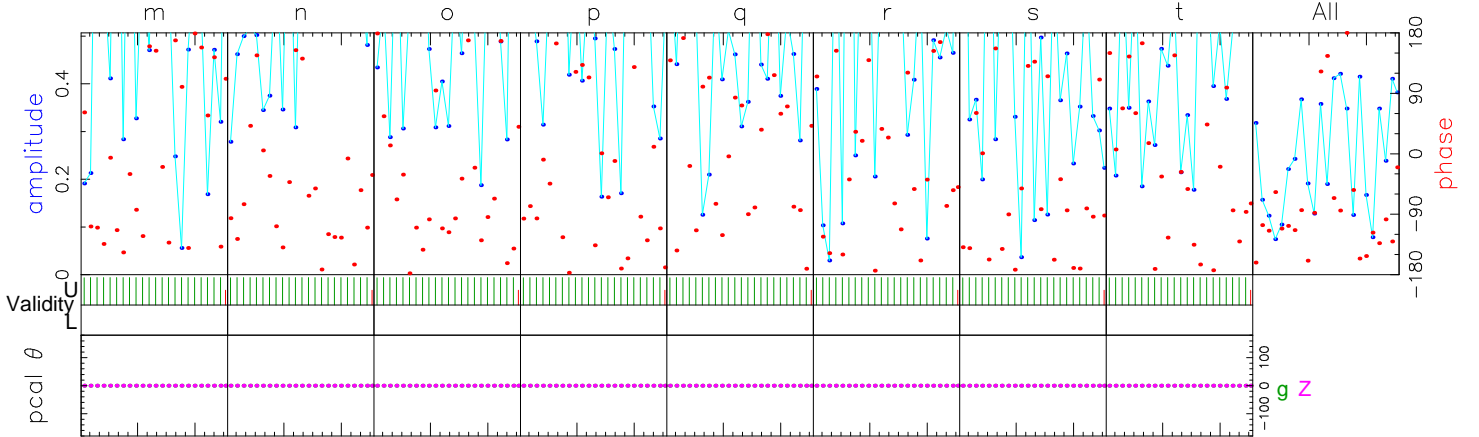


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141429
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|------------------|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -138.3 | -103.7 | -111.4 | -128.5 | -159.3 | -60.3 | -139.6 | -103.1 | Phase | -122.2 |
| | 0.3 | 0.3 | 0.2 | 0.2 | 0.0 | 0.1 | 0.3 | 0.1 | Ampl. | 0.2 |
| | 328.3 | 115.6 | 128.0 | 324.9 | 398.9 | 37.7 | 101.8 | 71.6 | Sbd box | 114.7 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| N _{sig} | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| N _g | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| g | | | | | | | | | Tracks | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| | | | | | | | | | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -7.63737909809E+03 | Apriori delay (usec) | -7.63682637115E+03 | Resid mbdelay (usec) | -5.85194E-03 | +/- | 1.9E-04 |
| Sband delay (usec) | -7.63738211890E+03 | Apriori clock (usec) | 3.3722687E-01 | Resid sbdelay (usec) | -5.55748E-01 | +/- | 1.5E-03 |
| Phase delay (usec) | -7.63682637509E+03 | Apriori clockrate (us/s) | -5.2989904E-07 | Resid phdelay (usec) | -3.93965E-06 | +/- | 6.6E-07 |
| Delay rate (us/s) | -1.06365732539E-01 | Apriori rate (us/s) | -1.06364722242E-01 | Resid rate (us/s) | -1.01030E-06 | +/- | 7.6E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | 4.81924044285E-05 | Resid phase (deg) | -122.2 | +/- | 20.3 |

| | | | | | | | | | | |
|-----------------------------|----------|------------------------------|----------------------------|---------------------------------|-------|--|---|------------------|--------|---------------------------|
| ph/seg (deg) | RMS 48.7 | Theor. 48.7 | Amplitude Search (1024X32) | 0.169 +/- 0.030 | 0.162 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 85.8 | 85.0 | Interp. | 0.000 | 0.159 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 33.2 | 28.7 | Inc. seg. avg. | 0.185 | | Bits/sample: 2x2 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 57.9 | 50.2 | Inc. frq. avg. | 0.159 | | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |
| g: az 45.6 el 30.9 pa -12.6 | | Z: az 118.7 el 60.6 pa -34.4 | | u, v (fr/asec) 830.199 3859.556 | | | | | | simultaneous interpolator |

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/gZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/gZ.W.44.3MP20R

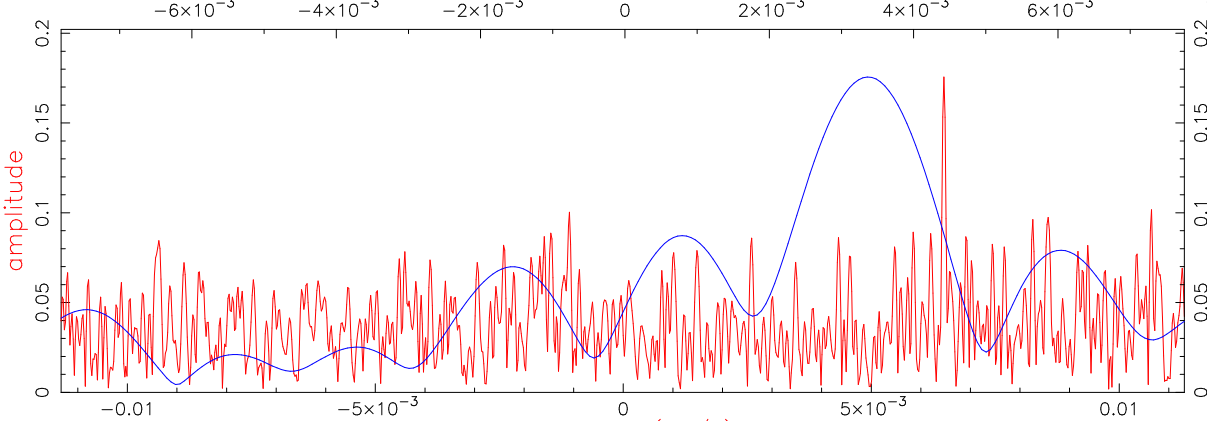
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, gZ

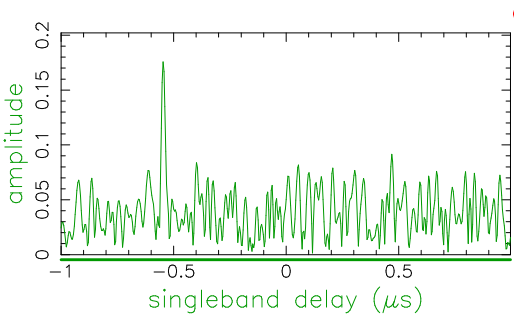
GLT - METSAHOV, fgroup W, pol RR

multiband delay (μ s)

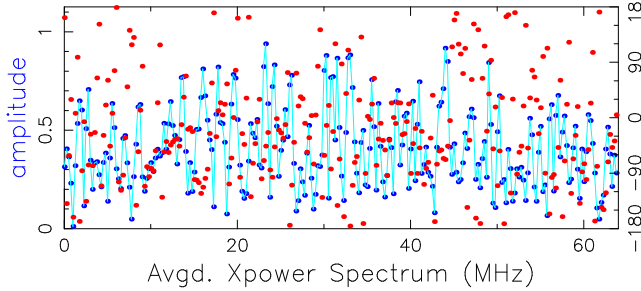


Fringe quality 0

SNR 5.9
 Int time 149.956
 Amp 0.202
 Phase 105.2
 PFD 3.8e-01
 Delays (us)
 SBD -0.546185
 MBD 0.003387
 Fringe rate (Hz)
 0.558094
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

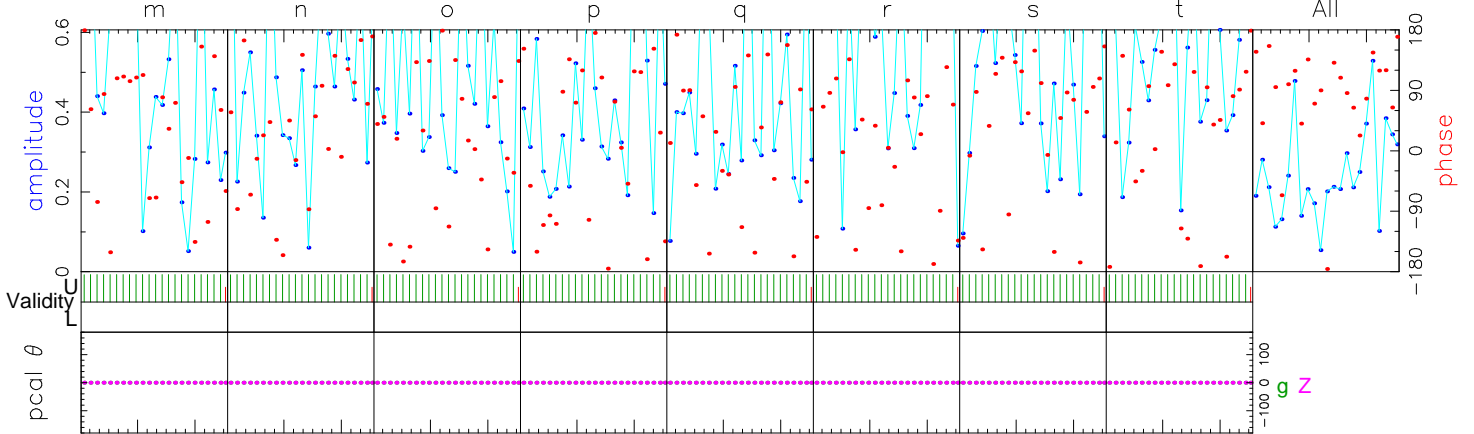


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141432
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| g | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| g | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

Group delay (usec) (SBD) -7.63736985917E+03 Apriori delay (usec) -7.63682637115E+03 Resid mbdelay (usec) 3.38698E-03 +/- 1.8E-04
 Sband delay (usec) -7.63737255665E+03 Apriori clock (usec) 3.3722687E-01 Resid sbdelay (usec) -5.46185E-01 +/- 1.5E-03
 Phase delay (usec) -7.63682636776E+03 Apriori clockrate (us/s) -5.2989904E-07 Resid phdelay (usec) 3.39155E-06 +/- 6.3E-07
 Delay rate (us/s) -1.06358243326E-01 Apriori rate (us/s) -1.06364722242E-01 Resid rate (us/s) 6.47892E-06 +/- 7.2E-09
 Total phase (deg) -114.8 Apriori accel (us/s/s) 4.81924044285E-05 Resid phase (deg) 105.2 +/- 19.4

ph/seg (deg) 54.6 46.6 Amplitude 0.202 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.2 81.3 Search (1024X32) 0.170 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 19.9 27.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 44.2 48.0 Inc. seg. avg. 0.211 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 g: az 45.6 el 30.9 pa -12.6 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 830.199 3859.556 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/gZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/gZ.W.61.3MP20R

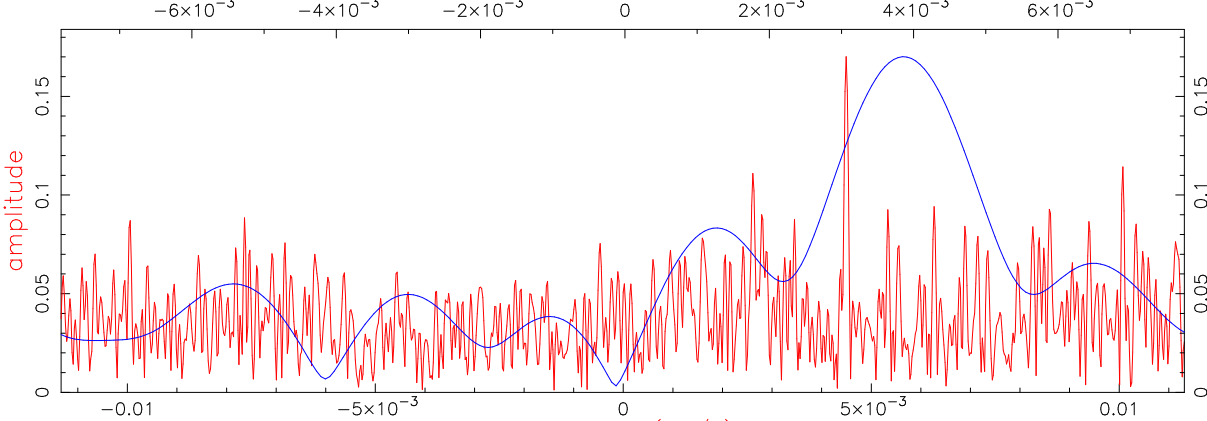
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, gZ

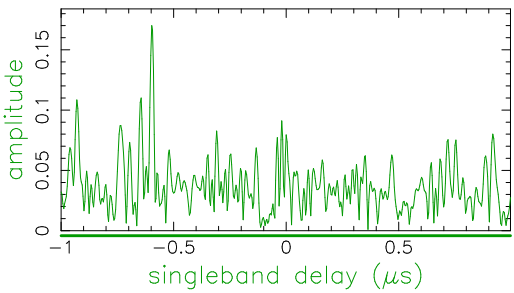
GLT - METSAHOV, fgroup W, pol LR

multiband delay (μs)

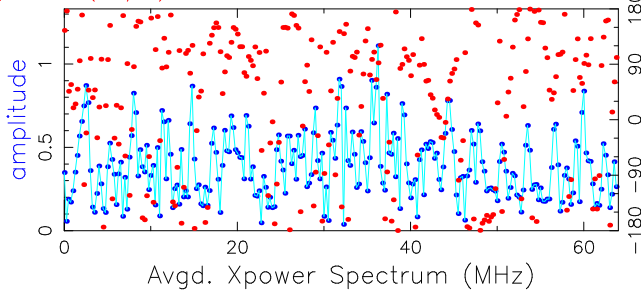


Fringe quality 0

SNR 5.8
 Int time 149.956
 Amp 0.184
 Phase 44.4
 PFD 6.3e-01
 Delays (us)
 SBD -0.596186
 MBD 0.003857
 Fringe rate (Hz)
 0.387350
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

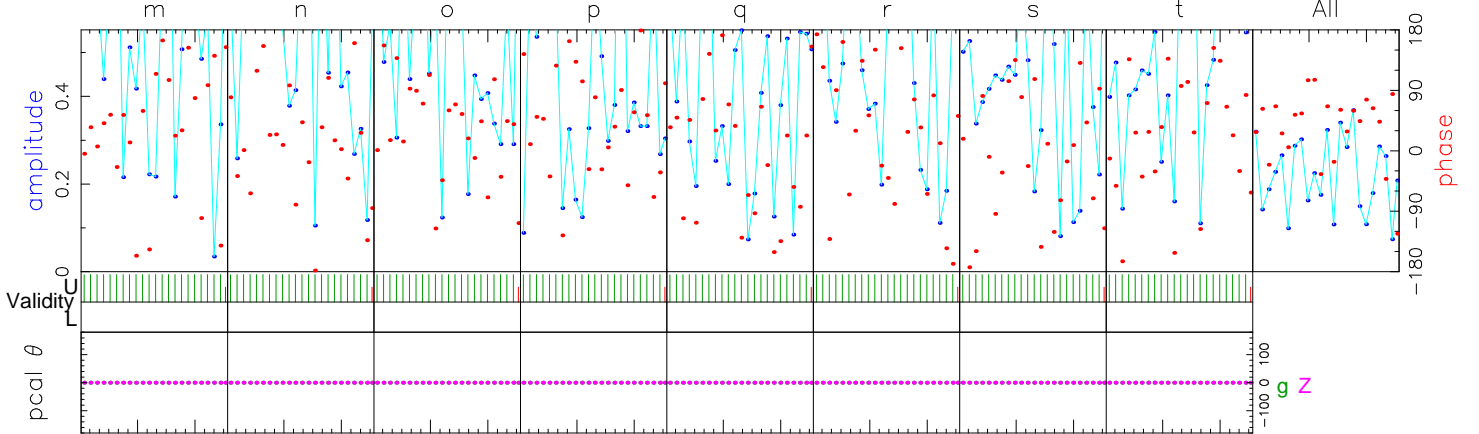


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141435
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| g | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| g | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

Group delay (usec) (SBD) -7.63741626415E+03 Apriori delay (usec) -7.63682637115E+03 Resid mbdelay (usec) 3.85700E-03 +/- 1.9E-04
 Sband delay (usec) -7.63742255715E+03 Apriori clock (usec) 3.3722687E-01 Resid sbdelay (usec) -5.96186E-01 +/- 1.5E-03
 Phase delay (usec) -7.63682636972E+03 Apriori clockrate (us/s) -5.2989904E-07 Resid phdelay (usec) 1.43315E-06 +/- 6.4E-07
 Delay rate (us/s) -1.06360225489E-01 Apriori rate (us/s) -1.06364722242E-01 Resid rate (us/s) 4.49675E-06 +/- 7.4E-09
 Total phase (deg) -175.5 Apriori accel (us/s/s) 4.81924044285E-05 Resid phase (deg) 44.4 +/- 19.9

ph/seg (deg) 47.8 47.6 Search (1024X32) 0.168 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.8 83.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.2 28.1 Inc. seg. avg. 0.176 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 47.1 49.0 Inc. frq. avg. 0.174 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us 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

g: az 45.6 el 30.9 pa -12.6 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 830.199 3859.556 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/gZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/gZ.W.78.3MP20R

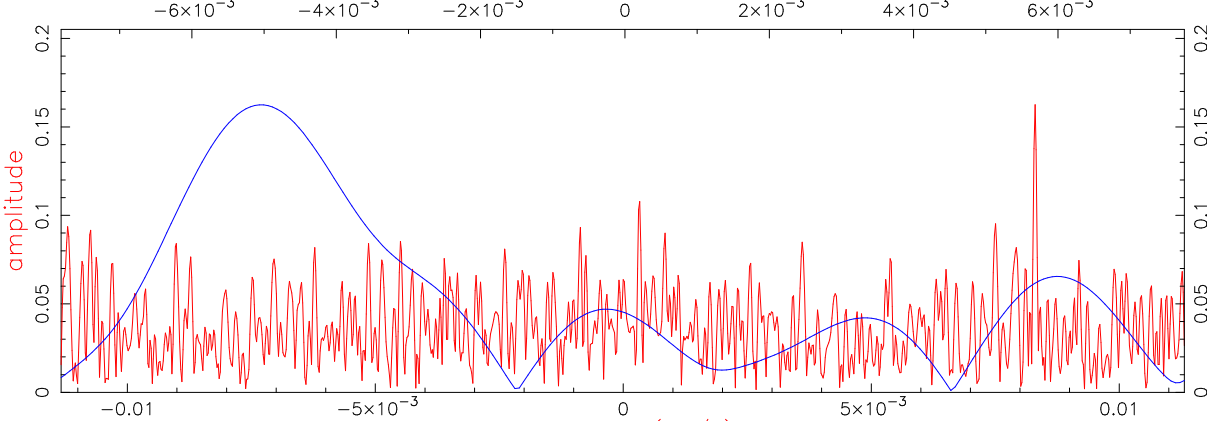
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, gZ

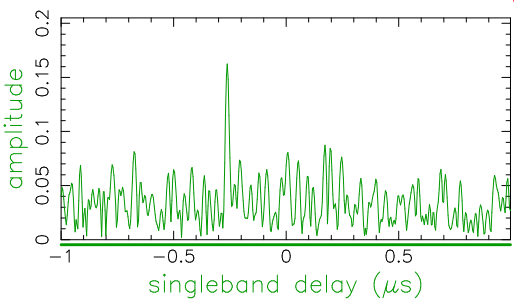
GLT - METSAHOV, fgroup W, pol RL

multiband delay (μ s)

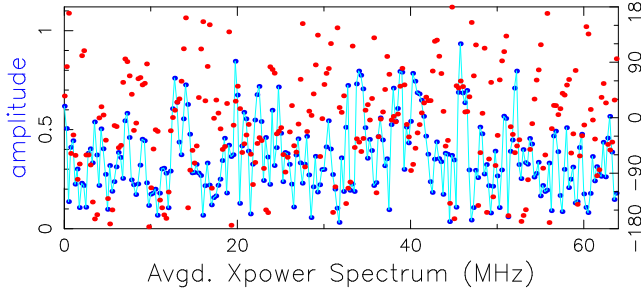


Fringe quality 0

SNR 5.4
Int time 149.956
Amp 0.205
Phase -84.5
PFD 1.0e+00
Delays (us)
SBD -0.262017
MBD -0.005039
Fringe rate (Hz) 0.716790
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

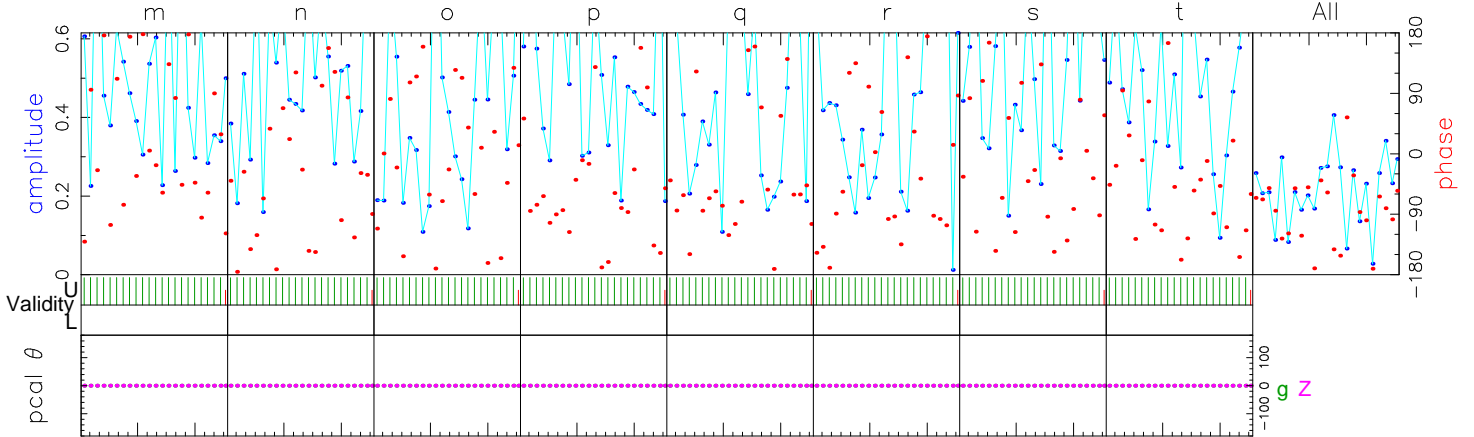


delay rate (ns/s)



Exp. c241a
Exper # 1234
Yr:day 2024:109
Start 230001.00
Stop 230231.02
FRT 230116.00
Corr/FF/build
2025:008:140542
2025:041:141437
2024:113:095956
RA & Dec (J2000)
16h42m58.809971s
+39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -65.5 | -95.4 | 45.7 | -90.7 | -88.9 | -106.9 | -70.7 | -76.4 | Phase | -84.5 |
| | 0.1 | 0.1 | 0.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | Ampl. | 0.2 |
| | 58.4 | 165.7 | 239.9 | 191.9 | 497.1 | 307.6 | 318.6 | 280.3 | Sbd box | 189.9 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| g:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| g | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| g | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

Group delay (usec) (SBD) -7.63708141034E+03 Apriori delay (usec) -7.63682637115E+03 Resid mbdelay (usec) -5.03918E-03 +/- 2.0E-04
 Sband delay (usec) -7.63708838865E+03 Apriori clock (usec) 3.3722687E-01 Resid sbdelay (usec) -2.62017E-01 +/- 1.6E-03
 Phase delay (usec) -7.63682637388E+03 Apriori clockrate (us/s) -5.2989904E-07 Resid phdelay (usec) -2.72509E-06 +/- 6.8E-07
 Delay rate (us/s) -1.06356401022E-01 Apriori rate (us/s) -1.06364722242E-01 Resid rate (us/s) 8.32122E-06 +/- 7.8E-09
 Total phase (deg) -304.5 Apriori accel (us/s/s) 4.81924044285E-05 Resid phase (deg) -84.5 +/- 21.0

RMS Theor. Amplitude 0.205 +/- 0.038 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 50.4 50.5 Search (1024X32) 0.159 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 63.8 88.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 55.2 29.8 Inc. seg. avg. 0.195 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 55.9 52.0 Inc. frq. avg. 0.193 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

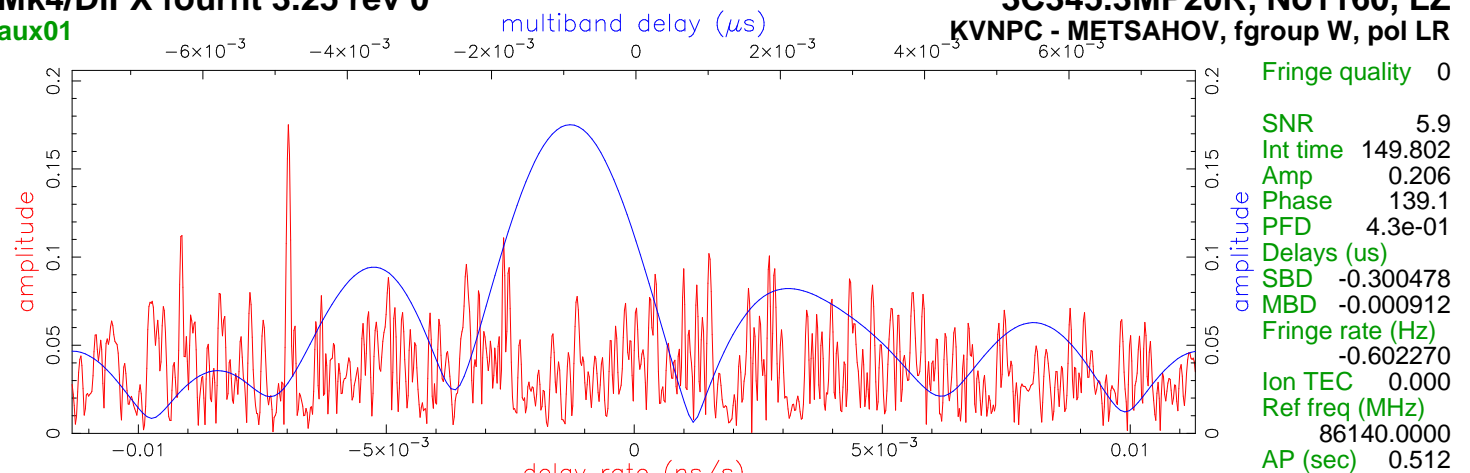
g: az 45.6 el 30.9 pa -12.6 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 830.199 3859.556 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/gZ...3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/gZ.W.96.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, LZ

KVNPC - METSAHOV, fgroup W, pol LR



Fringe quality 0

SNR 5.9

Int time 149.802

Amp 0.206

Phase 139.1

PFD 4.3e-01

Delays (us)

SBD -0.300478

MBD -0.000912

Fringe rate (Hz)

-0.602270

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c241a

Exper # 1234

Yr:day 2024:109

Start 230001.00

Stop 230231.02

FRT 230116.00

Corr/FF/build

2025:008:140542

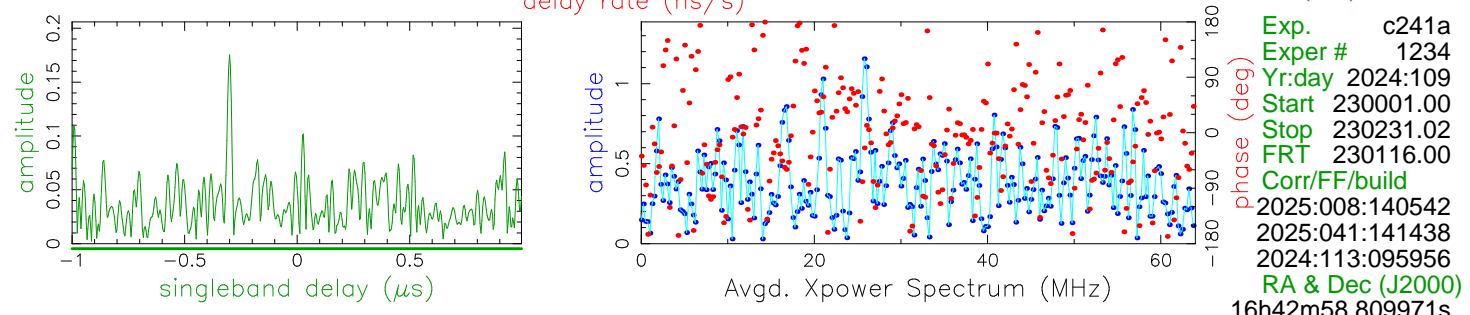
2025:041:141438

2024:113:095956

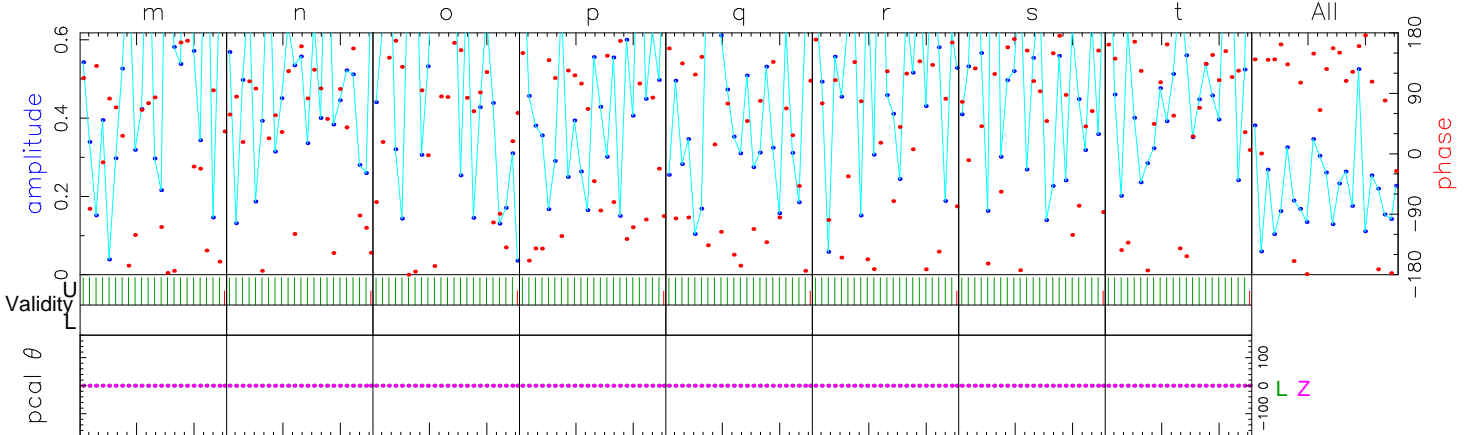
RA & Dec (J2000)

16h42m58.809971s

+39°48'36.993958"



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| L | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| L | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| L | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

Group delay (usec) (SBD) -5.95146258539E+03 Apriori delay (usec) -5.95116479831E+03 Resid mbdelay (usec) -9.12078E-04 +/- 1.9E-04

Sband delay (usec) -5.95146527631E+03 Apriori clock (usec) -2.5670355E+01 Resid sbdelay (usec) -3.00478E-01 +/- 1.5E-03

Phase delay (usec) -5.95116479382E+03 Apriori clockrate (us/s) -8.0513990E-06 Resid phdelay (usec) 4.48659E-06 +/- 6.3E-07

Delay rate (us/s) -1.22141045827E+00 Apriori rate (us/s) -1.22140346651E+00 Resid rate (us/s) -6.99175E-06 +/- 7.3E-09

Total phase (deg) -122.3 Apriori accel (us/s/s) 1.28154314441E-05 Resid phase (deg) 139.1 +/- 19.5

ph/seg (deg) 51.0 46.9 Search (1024X32) 0.173 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 65.7 81.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 37.1 27.6 Inc. seg. avg. 0.197 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 35.1 48.2 Inc. frq. avg. 0.207 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011

L: az 295.7 el 36.7 pa 68.4 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9103.384 -984.901 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/LZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/LZ.W.111.3MP20R simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

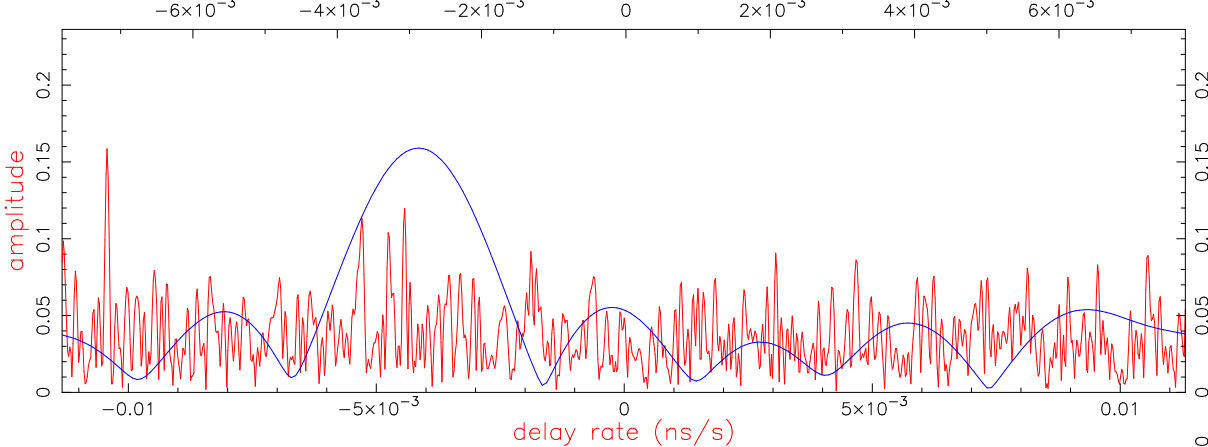
aux01

3C345.3MP20R, No1160, LZ

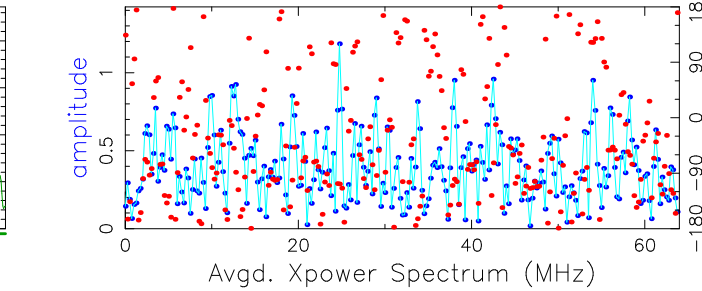
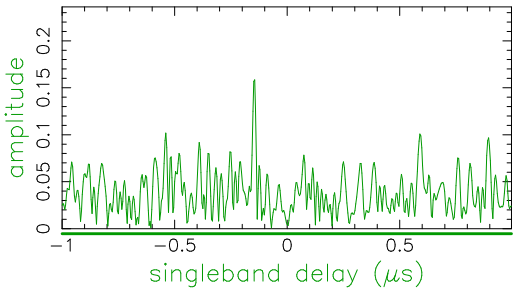
KVNPC - METSAHOV, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

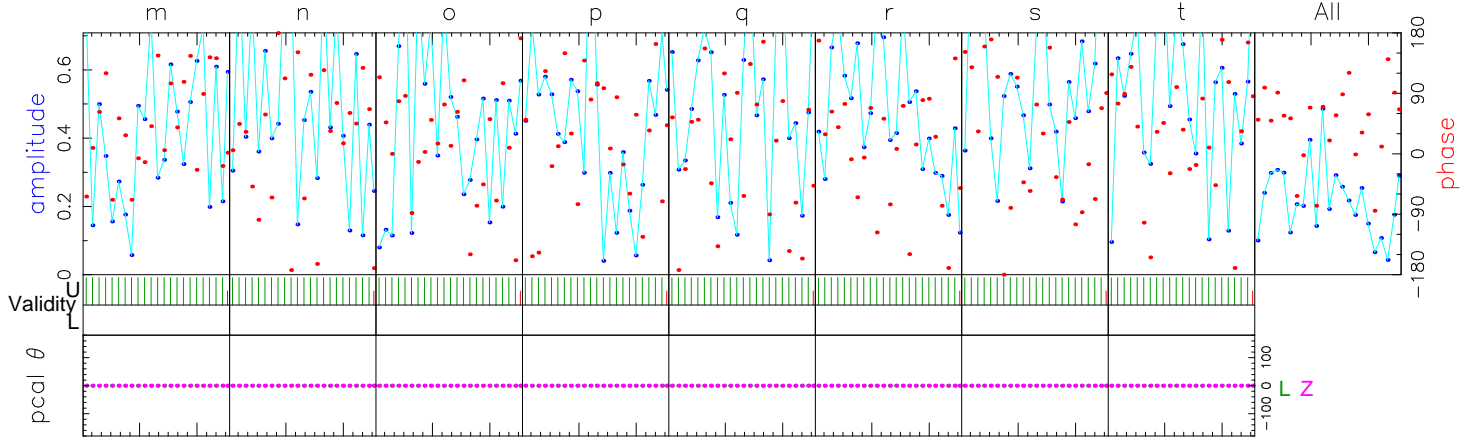


SNR 5.4
 Int time 149.802
 Amp 0.236
 Phase 57.1
 PFD 1.0e+00
 Delays (us)
 SBD -0.146260
 MBD -0.002944
 Fringe rate (Hz)
 -0.900333
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141440
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| L | 0 | 0 | 60000 | 0 | 0 | 0 | 0 | 0 | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| L | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| L | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | Chan ids |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | Tracks |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -5.95130836710E+03 | Apriori delay (usec) | -5.95116479831E+03 | Resid mbdelay (usec) | -2.94379E-03 | +/- | 2.0E-04 |
| Sband delay (usec) | -5.95131105881E+03 | Apriori clock (usec) | -2.5670355E+01 | Resid sbdelay (usec) | -1.46260E-01 | +/- | 1.6E-03 |
| Phase delay (usec) | -5.95116479647E+03 | Apriori clockrate (us/s) | -8.0513990E-06 | Resid phdelay (usec) | 1.84213E-06 | +/- | 6.8E-07 |
| Delay rate (us/s) | -1.22141391848E+00 | Apriori rate (us/s) | -1.22140346651E+00 | Resid rate (us/s) | -1.04520E-05 | +/- | 7.9E-09 |
| Total phase (deg) | -204.4 | Apriori accel (us/s/s) | 1.28154314441E-05 | Resid phase (deg) | 57.1 | +/- | 21.2 |

| | | | | | | | |
|--------------|------|------------------|-------|----------------|-----------------|---|-------------------------------|
| ph/seg (deg) | 59.7 | Theor. | 50.7 | Amplitude | 0.236 +/- 0.044 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 72.1 | Search (1024X32) | 0.157 | Search | 0.157 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 17.0 | Inc. seg. avg. | 0.227 | Inc. seg. avg. | 0.227 | Bits/sample: 2x2 | SampCntNorm: enabled |
| amp/frq (%) | 28.2 | Inc. frq. avg. | 0.211 | Inc. frq. avg. | 0.211 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | 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 |

L: az 295.7 el 36.7 pa 68.4 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9103.384 -984.901 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/LZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/LZ.W.127.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

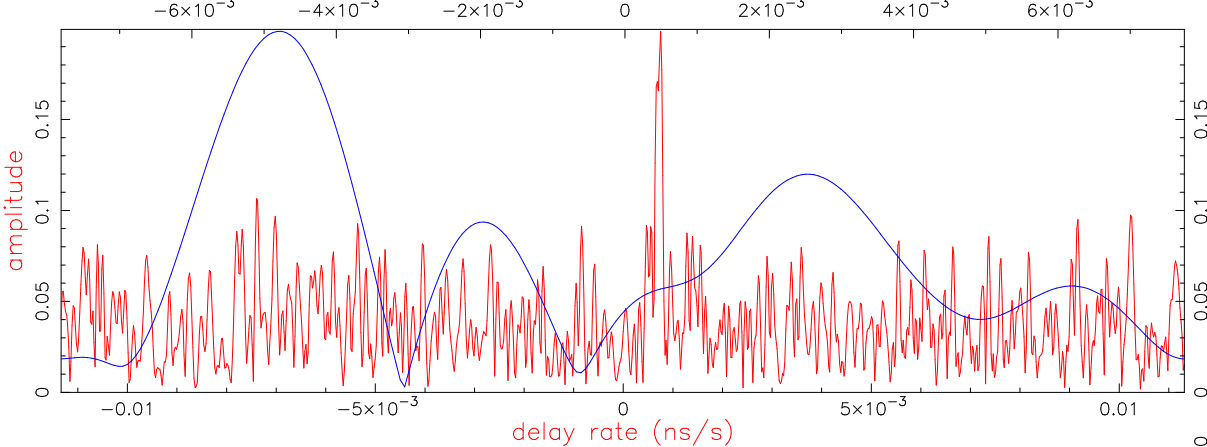
aux01

3C345.3MP20R, No1160, LZ

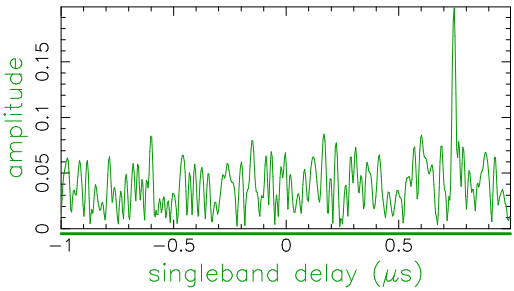
KVNPC - METSAHOV, fgroup W, pol LL

multiband delay (μ s)

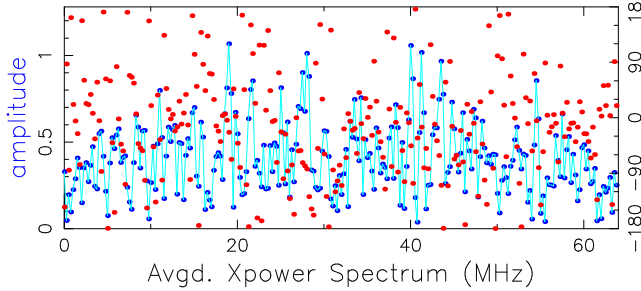
Fringe quality 0



SNR 6.7
 Int time 149.802
 Amp 0.200
 Phase -24.9
 PFD 3.8e-03
 Delays (us)
 SBD 0.745309
 MBD -0.004821
 Fringe rate (Hz)
 0.064024
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

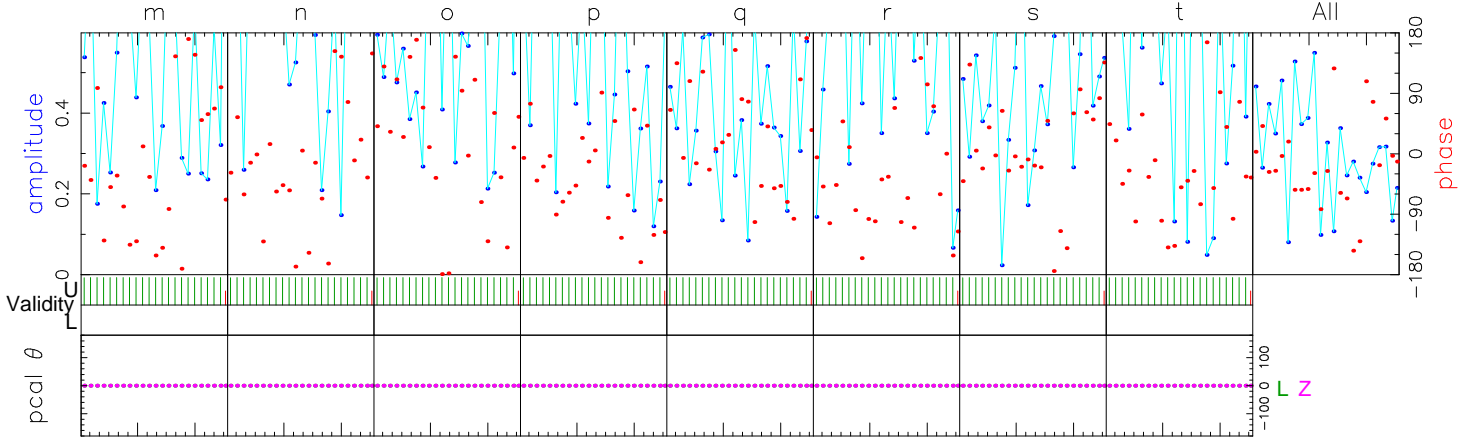


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141433
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -72.9 | -19.0 | 44.5 | -25.8 | 16.0 | -64.2 | 12.3 | -28.2 | Phase | -24.9 |
| | 0.2 | 0.3 | 0.1 | 0.3 | 0.1 | 0.3 | 0.2 | 0.3 | Ampl. | 0.2 |
| | 450.8 | 447.8 | 260.5 | 446.7 | 237.7 | 447.3 | 281.6 | 448.1 | Sbd box | 447.8 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| L | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| L | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| L | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

Group delay (usec) (SBD) -5.95041961923E+03 Apriori delay (usec) -5.95116479831E+03 Resid mbdelay (usec) -4.82092E-03 +/- 1.6E-04
 Sband delay (usec) -5.95041948956E+03 Apriori clock (usec) -2.5670355E+01 Resid sbdelay (usec) 7.45309E-01 +/- 1.3E-03
 Phase delay (usec) -5.95116479911E+03 Apriori clockrate (us/s) -8.0513990E-06 Resid phdelay (usec) -8.03487E-07 +/- 5.5E-07
 Delay rate (us/s) -1.22140272326E+00 Apriori rate (us/s) -1.22140346651E+00 Resid rate (us/s) 7.43256E-07 +/- 6.4E-09
 Total phase (deg) -286.4 Apriori accel (us/s/s) 1.28154314441E-05 Resid phase (deg) -24.9 +/- 17.2

RMS Theor. Amplitude 0.200 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 66.3 41.2 Search (1024X32) 0.194 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 85.1 71.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 44.3 24.3 Inc. seg. avg. 0.245 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 47.2 42.4 Inc. frq. avg. 0.213 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

L: az 295.7 el 36.7 pa 68.4 Z: az 118.7 el 60.6 pa -34.4 u, v (fr/asec) 9103.384 -984.901 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/LZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/LZ.W.67.3MP20R

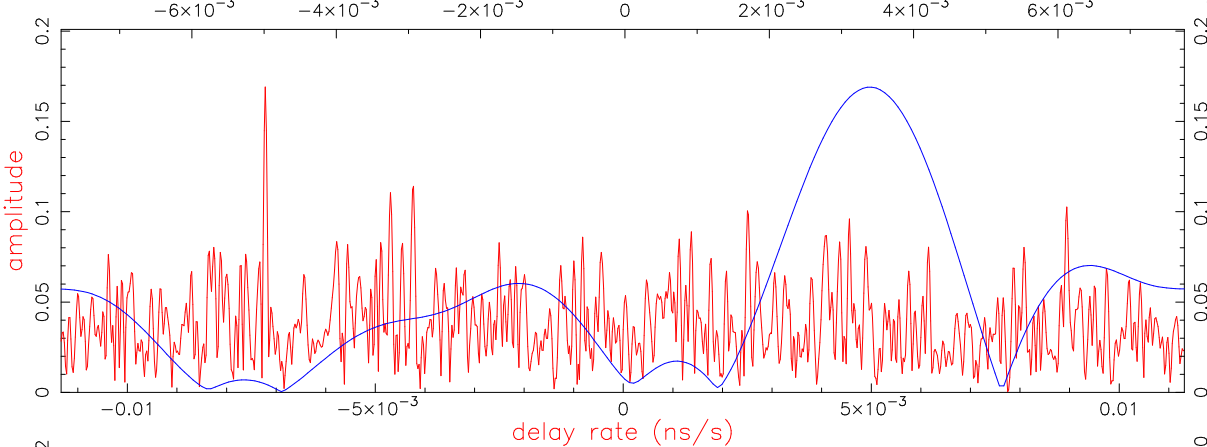
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, LZ

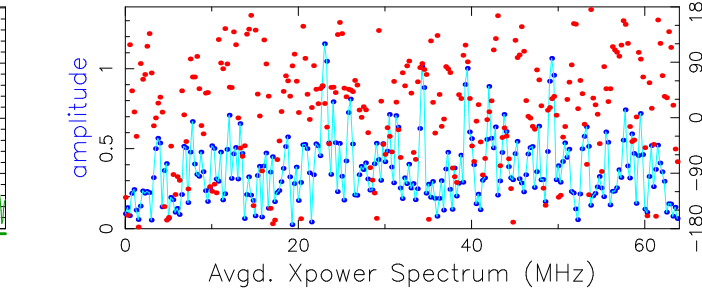
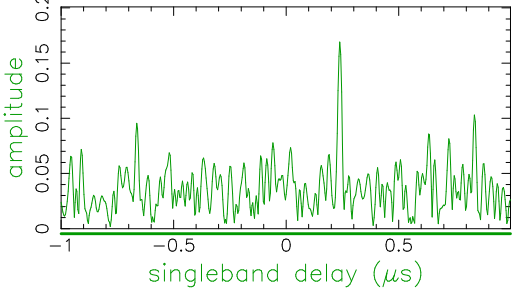
KVNPC - METSAHOV, fgroup W, pol RR

multiband delay (μ s)



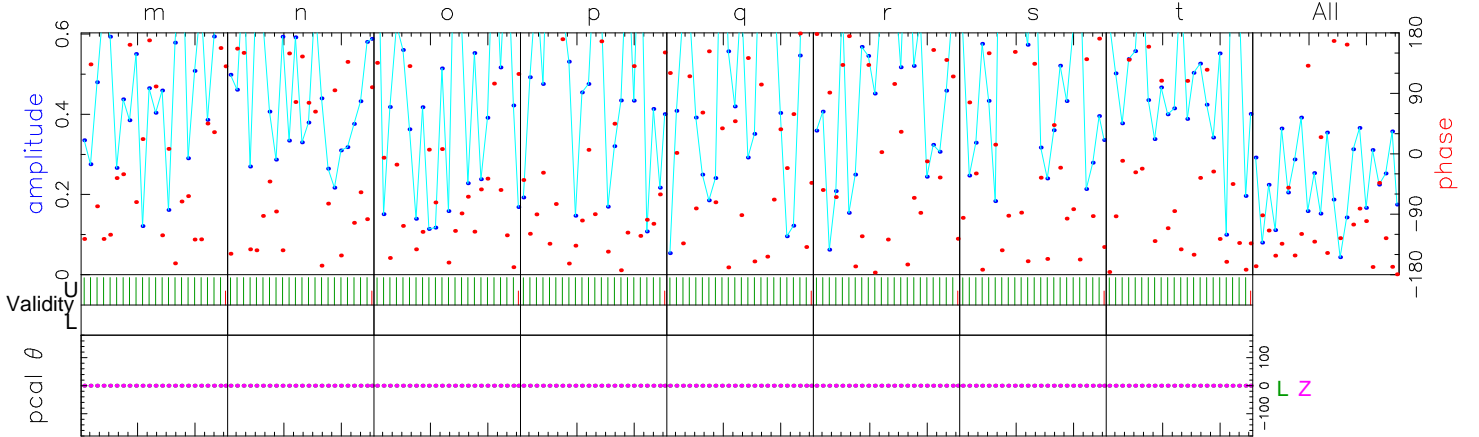
Fringe quality 0

SNR 5.7
 Int time 149.802
 Amp 0.201
 Phase -133.1
 PFD 8.5e-01
 Delays (us)
 SBD 0.238461
 MBD 0.003391
 Fringe rate (Hz)
 -0.622482
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141435
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -125.2 | -163.5 | -113.1 | -119.9 | -152.0 | -167.1 | -138.9 | -113.2 | Phase | -133.1 |
| | 0.2 | 0.2 | 0.2 | 0.4 | 0.1 | 0.2 | 0.3 | 0.2 | Ampl. | 0.2 |
| | 295.2 | 78.5 | 442.5 | 319.1 | 190.7 | 257.4 | 319.6 | 449.2 | Sbd box | 318.0 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| L | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| L:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| L | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| L | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

Group delay (usec) (SBD) -5.95092703269E+03 Apriori delay (usec) -5.95116479831E+03 Resid mbdelay (usec) 3.39062E-03 +/- 1.9E-04
 Sband delay (usec) -5.95092633731E+03 Apriori clock (usec) -2.5670355E+01 Resid sbdelay (usec) 2.38461E-01 +/- 1.5E-03
 Phase delay (usec) -5.95116480260E+03 Apriori clockrate (us/s) -8.0513990E-06 Resid phdelay (usec) -4.29313E-06 +/- 6.5E-07
 Delay rate (us/s) -1.22141069291E+00 Apriori rate (us/s) -1.22140346651E+00 Resid rate (us/s) -7.22640E-06 +/- 7.5E-09
 Total phase (deg) -34.6 Apriori accel (us/s/s) 1.28154314441E-05 Resid phase (deg) -133.1 +/- 20.3

RMS Theor. Amplitude 0.201 +/- 0.036 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 55.4 48.6 Search (1024X32) 0.165 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 70.1 84.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 24.2 28.6 Inc. seg. avg. 0.207 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 38.4 50.0 Inc. frq. avg. 0.189 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

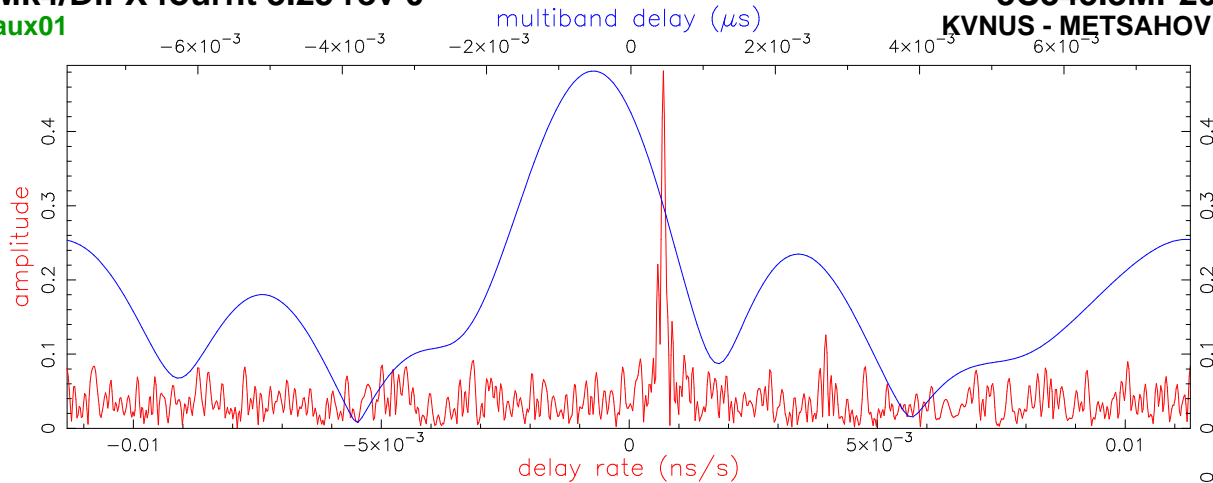
L: az 295.7 el 36.7 pa 68.4 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9103.384 -984.901 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/LZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/LZ.W.83.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

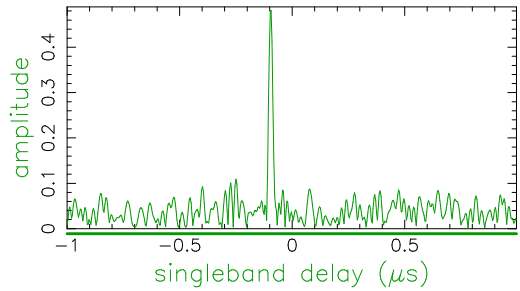
3C345.3MP20R, No1160, uZ

KVNUS - METSAHOV, fgroup W, pol RR

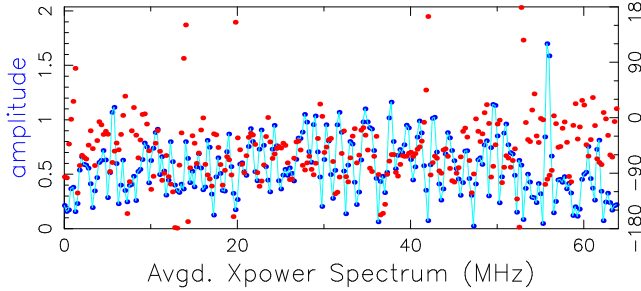


Fringe quality 8

SNR 16.3
 Int time 149.771
 Amp 0.489
 Phase -71.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.095363
 MBD -0.000537
 Fringe rate (Hz)
 0.059639
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

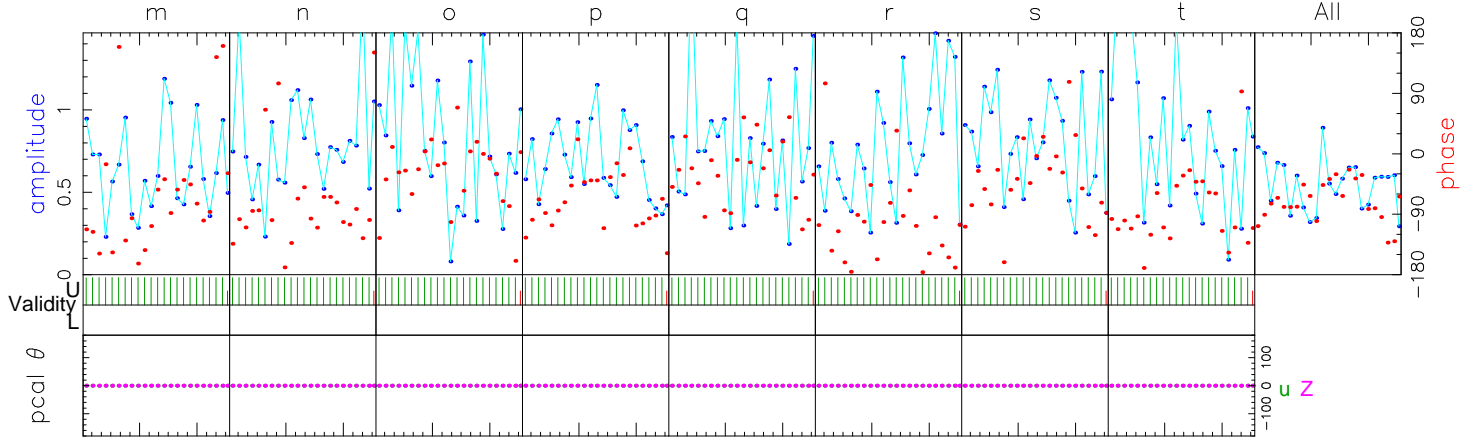


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141438
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -104.3 | -100.8 | -21.0 | -65.2 | -31.0 | -124.3 | -44.6 | -90.5 | Phase | -71.5 |
| | 0.4 | 0.6 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.7 | Ampl. | 0.6 |
| | 234.3 | 232.4 | 232.1 | 232.0 | 231.6 | 232.2 | 232.2 | 232.6 | Sbd box | 232.6 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| u | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| u | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -6.36590784195E+03 | Apriori delay (usec) | -6.36581355460E+03 | Resid mbdelay (usec) | -5.37351E-04 | +/- | 6.6E-05 |
| Sband delay (usec) | -6.36590891810E+03 | Apriori clock (usec) | 1.2131901E+00 | Resid sbdelay (usec) | -9.53635E-02 | +/- | 5.3E-04 |
| Phase delay (usec) | -6.36581355690E+03 | Apriori clockrate (us/s) | -4.4709896E-07 | Resid phdelay (usec) | -2.30698E-06 | +/- | 2.3E-07 |
| Delay rate (us/s) | -1.24894353063E+00 | Apriori rate (us/s) | -1.24894422297E+00 | Resid rate (us/s) | 6.92346E-07 | +/- | 2.6E-09 |
| Total phase (deg) | -285.0 | Apriori accel (us/s/s) | 1.31500790501E-05 | Resid phase (deg) | -71.5 | +/- | 7.0 |

| | | | | | | | | | | | | |
|--------------|------|------------------|-------|---|--------|-----------|-----------------|--|-----------------------|-------------------|-------|------|
| ph/seg (deg) | 29.7 | RMS | 16.8 | Theor. | 16.8 | Amplitude | 0.489 +/- 0.030 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | | | |
| amp/seg (%) | 33.5 | Search (1024X32) | 0.473 | sb window (us) | -1.000 | 1.000 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | mb window (us) | -0.008 | 0.008 | |
| ph/frq (deg) | 40.9 | Interp. | 0.000 | dr window (ns/s) | -0.011 | 0.011 | | Bits/sample: 2x2 | SampCntNorm: enabled | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 27.3 | Inc. seg. avg. | 0.534 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | | | | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

u: az 297.2 el 35.2 pa 70.2 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9308.320 -1154.360 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/uZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/uZ.W.106.3MP20R

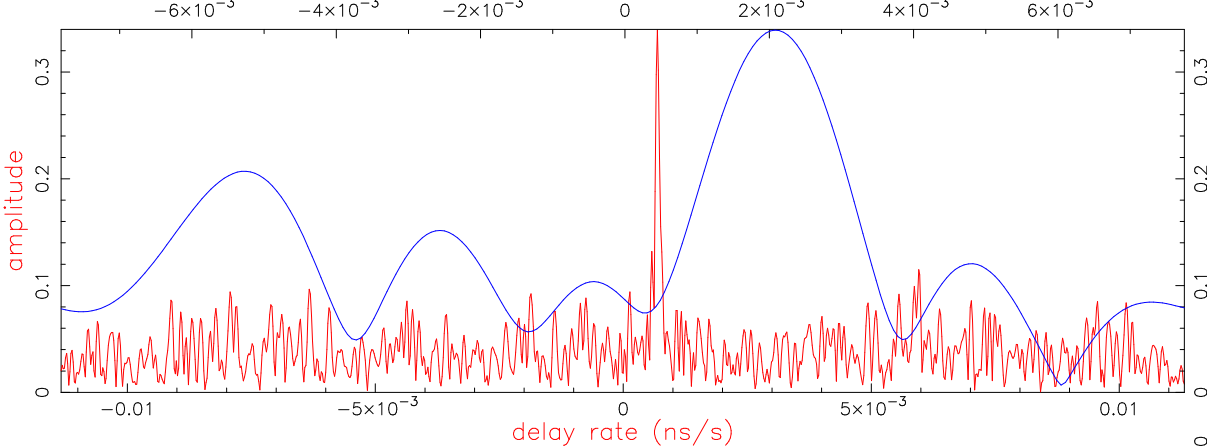
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, uZ

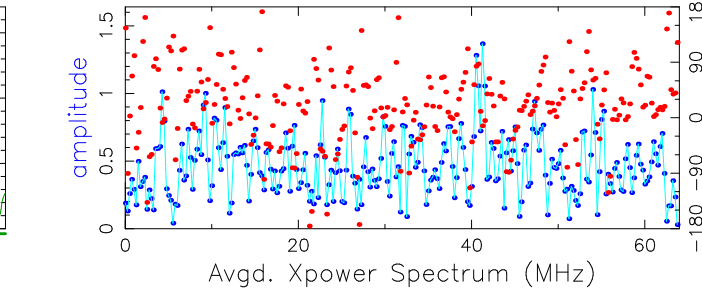
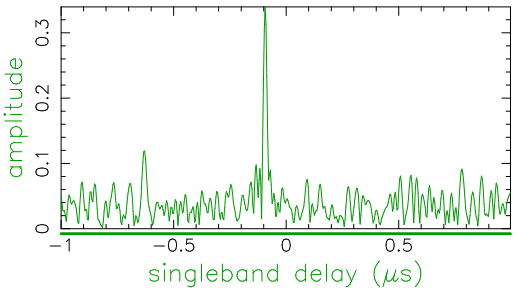
KVNUS - METSAHOV, fgroup W, pol LR

multiband delay (μ s)



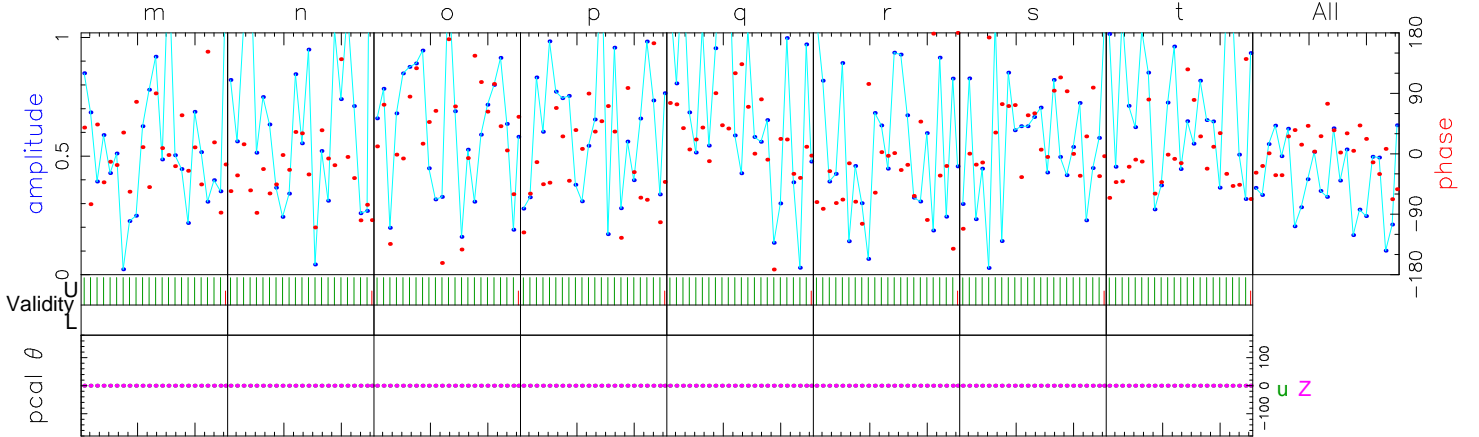
Fringe quality 9

SNR 11.4
 Int time 149.771
 Amp 0.340
 Phase 3.7
 PFD 1.6e-21
 Delays (us)
 SBD -0.093461
 MBD 0.002096
 Fringe rate (Hz)
 0.060148
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141440
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| u | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -6.36590520886E+03 | Apriori delay (usec) | -6.36581355460E+03 | Resid mbdelay (usec) | 2.09574E-03 | +/- | 9.6E-05 |
| Sband delay (usec) | -6.36590701610E+03 | Apriori clock (usec) | 1.2131901E+00 | Resid sbdelay (usec) | -9.34615E-02 | +/- | 7.6E-04 |
| Phase delay (usec) | -6.36581355448E+03 | Apriori clockrate (us/s) | -4.4709896E-07 | Resid phdelay (usec) | 1.18493E-07 | +/- | 3.3E-07 |
| Delay rate (us/s) | -1.24894352471E+00 | Apriori rate (us/s) | -1.24894422297E+00 | Resid rate (us/s) | 6.98258E-07 | +/- | 3.8E-09 |
| Total phase (deg) | -209.8 | Apriori accel (us/s/s) | 1.31500790501E-05 | Resid phase (deg) | 3.7 | +/- | 10.1 |

| | | | | | | | | | | |
|--------------|------|------------------|-------|----------------|-----------------|----------------------|-----------------------------|------------------------------|------------------|--------------|
| ph/seg (deg) | 32.8 | Theor. | 24.2 | Amplitude | 0.340 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 48.6 | Search (1024X32) | 0.328 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 40.9 | Inc. seg. avg. | 0.365 | Inc. frq. avg. | 0.401 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 34.9 | Inc. frq. avg. | 0.401 | | | Data rate (MSamp/s): | 128 MBpts 32 Amb 0.016 us | 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 |

u: az 297.2 el 35.2 pa 70.2 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9308.320 -1154.360 simultaneous interpolator

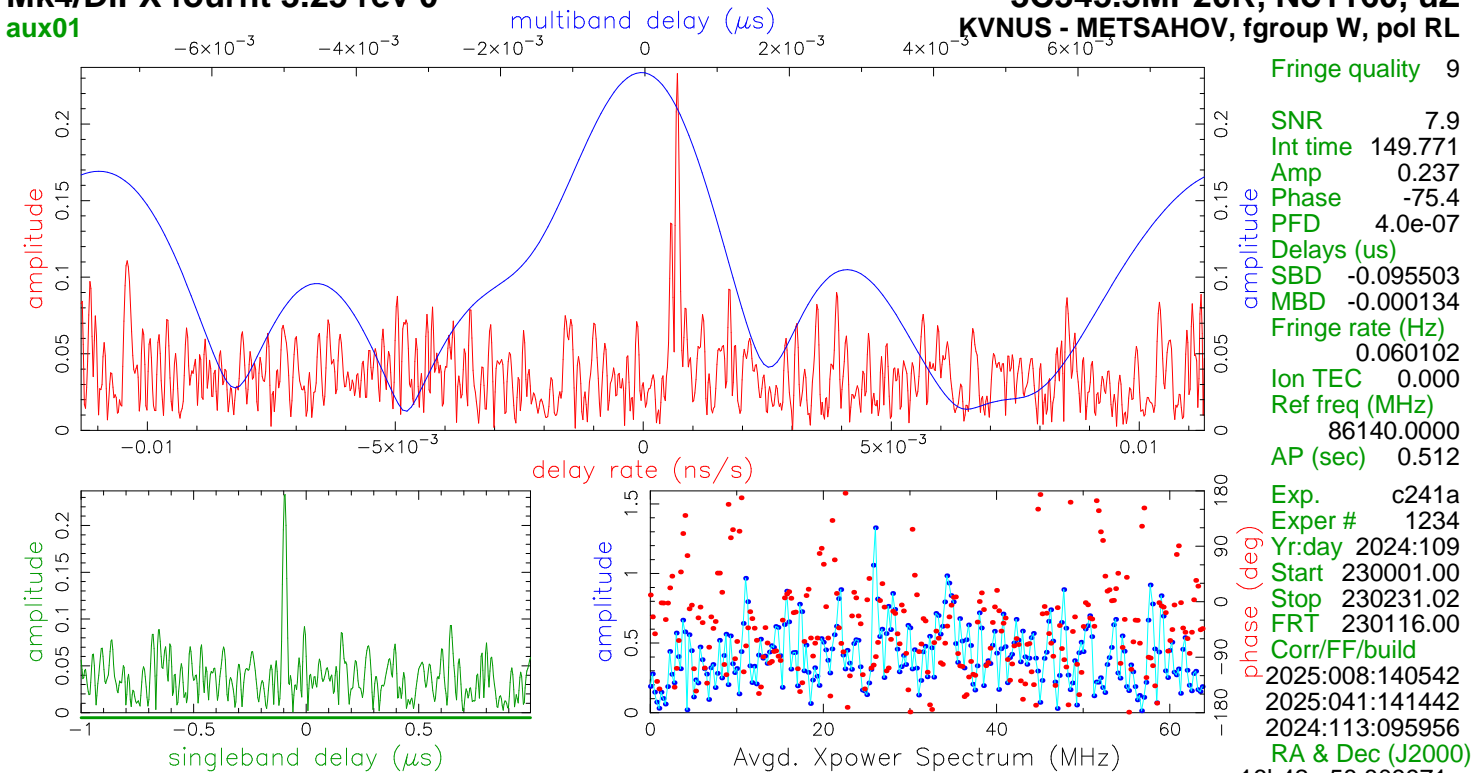
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/uZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/uZ.W.126.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

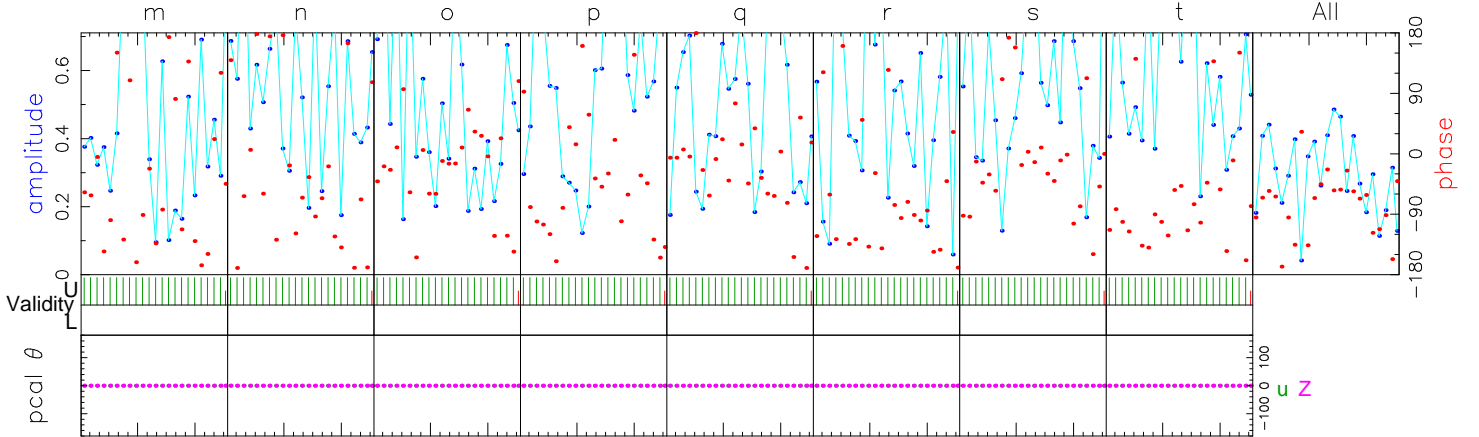
aux01

3C345.3MP20R, No1160, uZ

KVNUS - METSAHOV, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



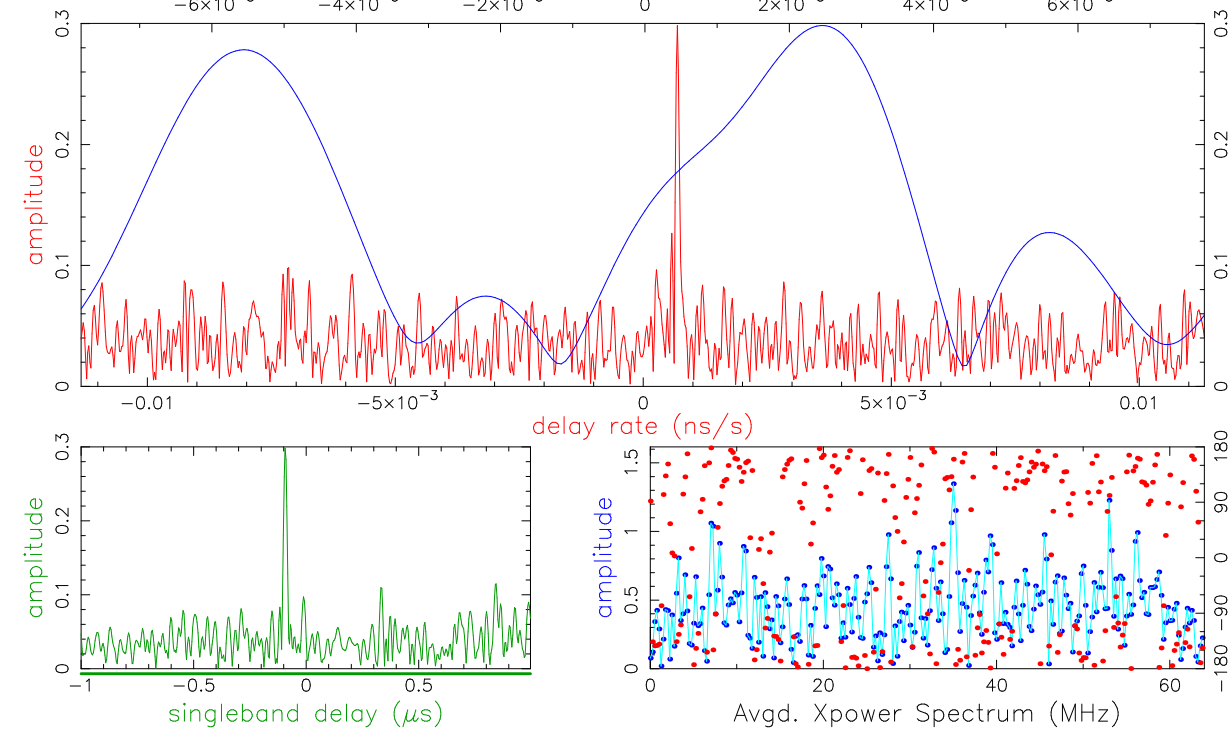
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----------------------------|--------------------|---|--------------------------|---|---|------------------------------|------------------|--------------|------------|-------|
| | -130.8 | -121.5 | -22.1 | -79.3 | -18.0 | -118.0 | -35.2 | -101.8 | Phase | -75.4 |
| | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | Ampl. | 0.3 |
| | 33.9 | 233.3 | 232.0 | 232.4 | 232.6 | 231.5 | 232.0 | 233.0 | Sbd box | 232.6 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| u | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| u | 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) | -6.36590743851E+03 | | Apriori delay (usec) | -6.36581355460E+03 | Resid mbdelay (usec) | -1.33913E-04 | +/- | 1.4E-04 | | |
| Sband delay (usec) | -6.36590905760E+03 | | Apriori clock (usec) | 1.2131901E+00 | Resid sbdelay (usec) | -9.55030E-02 | +/- | 1.1E-03 | | |
| Phase delay (usec) | -6.36581355703E+03 | | Apriori clockrate (us/s) | -4.4709896E-07 | Resid phdelay (usec) | -2.43139E-06 | +/- | 4.7E-07 | | |
| Delay rate (us/s) | -1.24894352525E+00 | | Apriori rate (us/s) | -1.24894422297E+00 | Resid rate (us/s) | 6.97722E-07 | +/- | 5.4E-09 | | |
| Total phase (deg) | | -288.9 | Apriori accel (us/s/s) | 1.31500790501E-05 | Resid phase (deg) | -75.4 | +/- | 14.5 | | |
| | RMS | Theor. | Amplitude | 0.237 +/- 0.030 | PCal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | | | |
| ph/seg (deg) | 45.9 | 34.7 | Search (1024X32) | 0.226 | PCal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | | |
| amp/seg (%) | 55.9 | 60.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | | |
| ph/frq (deg) | 50.8 | 20.5 | Inc. seg. avg. | 0.253 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | dr window (ns/s) | -0.011 0.011 | | | |
| amp/frq (%) | 44.1 | 35.7 | Inc. frq. avg. | 0.297 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 0.00 | | |
| u: az 297.2 el 35.2 pa 70.2 | | Z: az 118.7 el 60.6 pa -34.4 | | u, v (fr/asec) 9308.320 -1154.360 | | simultaneous interpolator | | | | |
| Control file: cf_1234_gmva | | Input file: /Exps/c241a/v2/3mm/1234/No1160/uZ..3MP20R | | Output file: /Exps/c241a/v2/3mm/1234/No1160/uZ.W.140.3MP20R | | | | | | |

Mk4/DiFX fourfit 3.25 rev 0

aux01

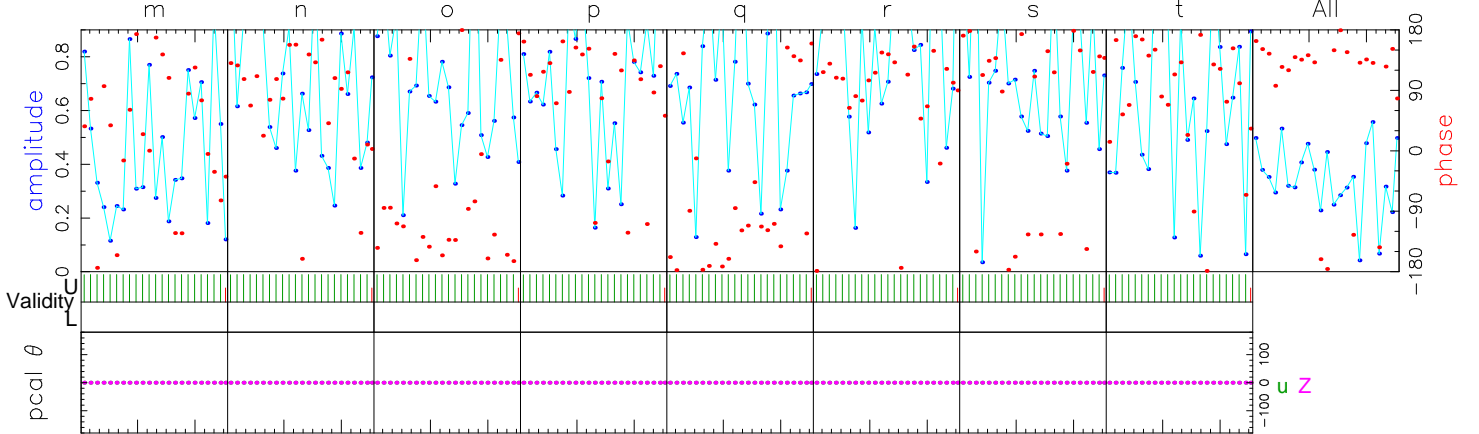
3C345.3MP20R, No1160, uZ

KVNUS - METSAHOV, fgroup W, pol LL



Fringe quality 9
 SNR 10.0
 Int time 149.771
 Amp 0.300
 Phase 144.8
 PFD 2.4e-15
 Delays (us)
 SBD -0.092898
 MBD 0.002487
 Fringe rate (Hz) 0.059546
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141436
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| u:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| u | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| u | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -6.36590481804E+03 | Apriori delay (usec) | -6.36581355460E+03 | Resid mbdelay (usec) | 2.48656E-03 | +/- | 1.1E-04 |
| Sband delay (usec) | -6.36590645260E+03 | Apriori clock (usec) | 1.2131901E+00 | Resid sbdelay (usec) | -9.28980E-02 | +/- | 8.6E-04 |
| Phase delay (usec) | -6.36581354993E+03 | Apriori clockrate (us/s) | -4.4709896E-07 | Resid phdelay (usec) | 4.66891E-06 | +/- | 3.7E-07 |
| Delay rate (us/s) | -1.24894353170E+00 | Apriori rate (us/s) | -1.24894422297E+00 | Resid rate (us/s) | 6.91266E-07 | +/- | 4.3E-09 |
| Total phase (deg) | -68.7 | Apriori accel (us/s/s) | 1.31500790501E-05 | Resid phase (deg) | 144.8 | +/- | 11.4 |

| | | | | | | | | | | |
|--------------|------|------------------|-------|----------------|-----------------|----------------------|-----------------------------|------------------------------|------------------|--------------|
| ph/seg (deg) | 34.1 | Theor. | 27.4 | Amplitude | 0.300 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 46.0 | Search (1024X32) | 0.295 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 63.7 | Inc. seg. avg. | 0.310 | Inc. frq. avg. | 0.437 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 67.4 | Inc. frq. avg. | 0.437 | | | Data rate (MSamp/s): | 128 MBpts 32 Amb 0.016 us | 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 |

u: az 297.2 el 35.2 pa 70.2 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9308.320 -1154.360 simultaneous interpolator

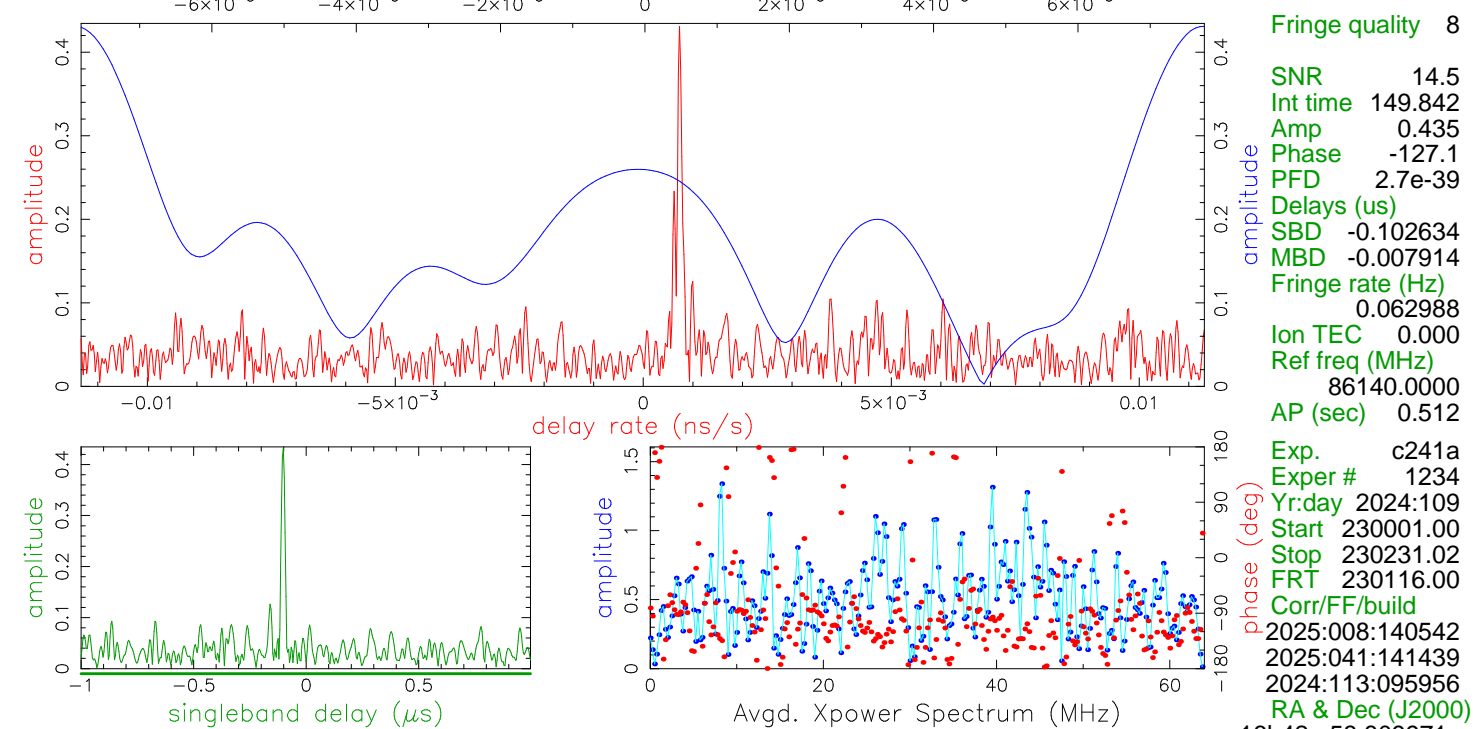
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/uZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/uZ.W.90.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

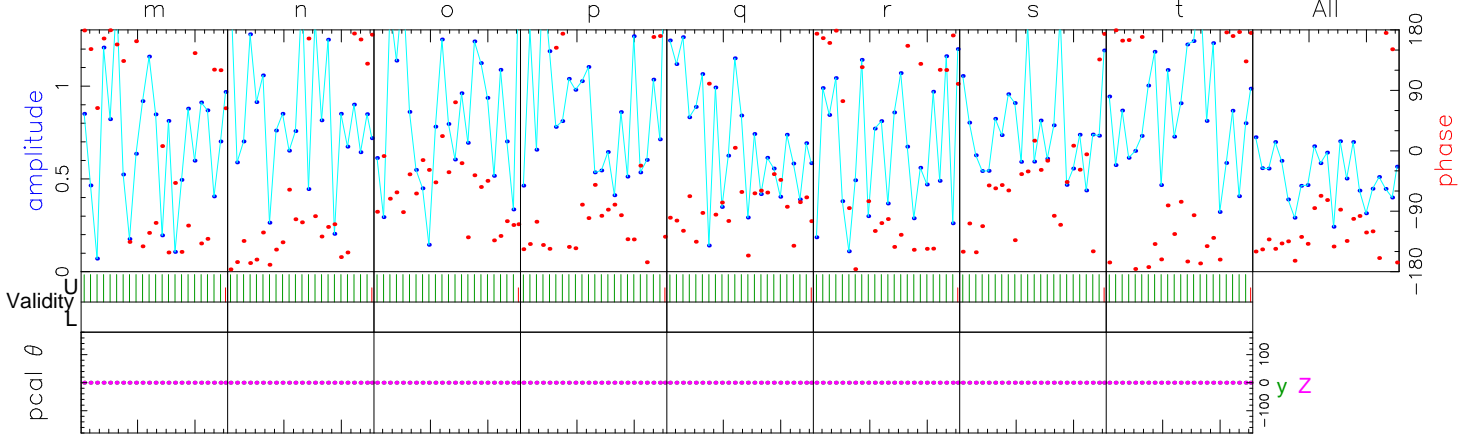
aux01

3C345.3MP20R, No1160, yZ

KVNYS - METSAHOV, fgroup W, pol RR



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | | | | | | | | | |
|-----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
| -170.2 | -144.4 | -60.9 | -132.2 | -85.1 | 179.8 | -75.7 | -157.1 | Phase | -127.1 |
| 0.5 | 0.7 | 0.6 | 0.7 | 0.6 | 0.4 | 0.4 | 0.7 | Ampl. | 0.6 |
| 231.9 | 230.8 | 230.6 | 229.9 | 230.2 | 229.9 | 230.2 | 231.1 | Sbd box | 230.7 |
| U/L 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| y 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| y:Z 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:Z 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| y 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y 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) | -5.59591373102E+03 | Apriori delay (usec) | -5.59581206710E+03 | Resid mbdelay (usec) | -7.91392E-03 | +/- | 7.5E-05 |
| Sband delay (usec) | -5.59591470135E+03 | Apriori clock (usec) | 6.3011150E+00 | Resid sbdelay (usec) | -1.02634E-01 | +/- | 5.9E-04 |
| Phase delay (usec) | -5.59581207120E+03 | Apriori clockrate (us/s) | -6.1029892E-07 | Resid phdelay (usec) | -4.09801E-06 | +/- | 2.5E-07 |
| Delay rate (us/s) | -1.21227538052E+00 | Apriori rate (us/s) | -1.21227611175E+00 | Resid rate (us/s) | 7.31231E-07 | +/- | 2.9E-09 |
| Total phase (deg) | -292.8 | Apriori accel (us/s/s) | 1.11245952407E-05 | Resid phase (deg) | -127.1 | +/- | 7.9 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|---------------------|-----------------------------|------------------------------|------------------|--------------|
| ph/seg (deg) | 34.3 | Theor. | 18.9 | Amplitude | 0.435 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 36.9 | | 33.0 | Search (1024X32) | 0.426 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 49.5 | | 11.2 | Inc. seg. avg. | 0.491 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 39.1 | | 19.5 | Inc. frq. avg. | 0.557 | Data rate(MSamp/s): | 128 MBpts 32 Amb 0.016 us | 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 |

y: az 295.1 el 37.8 pa 69.0 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9034.196 -1092.237 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/yZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/yZ.W.121.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

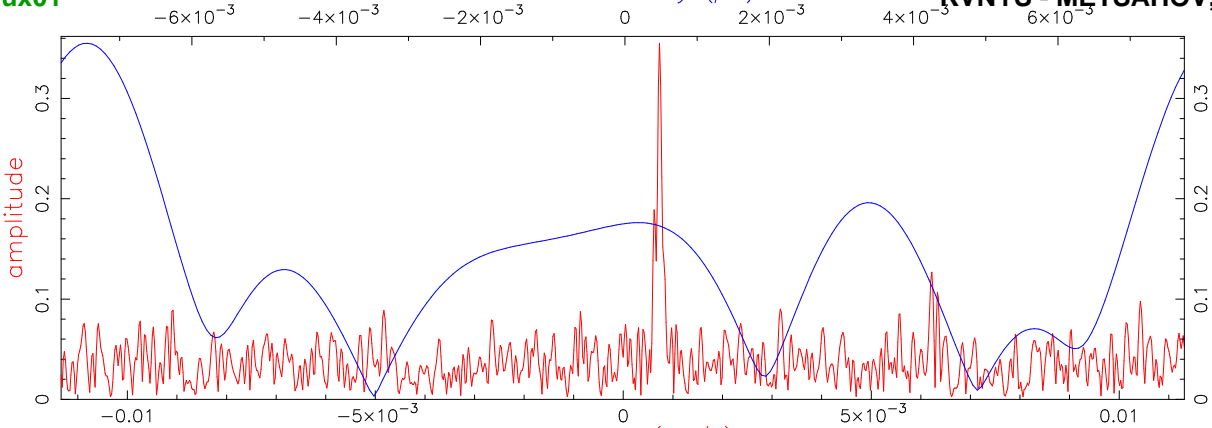
aux01

3C345.3MP20R, No1160, yZ

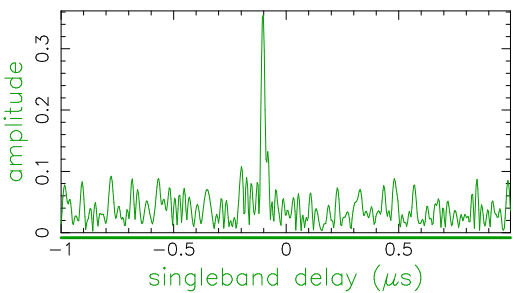
KVNYS - METSAHOV, fgroup W, pol LR

multiband delay (μ s)

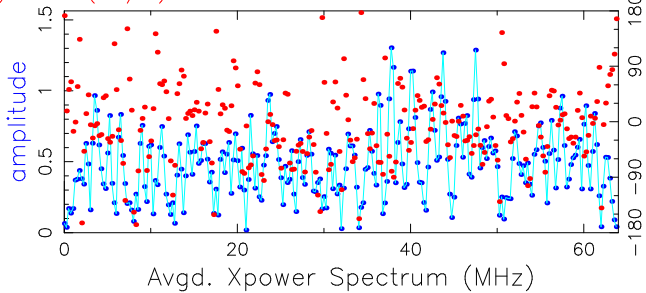
Fringe quality 9



SNR 12.1
 Int time 149.842
 Amp 0.362
 Phase -33.7
 PFD 2.9e-25
 Delays (us)
 SBD -0.103255
 MBD -0.007490
 Fringe rate (Hz)
 0.063089
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

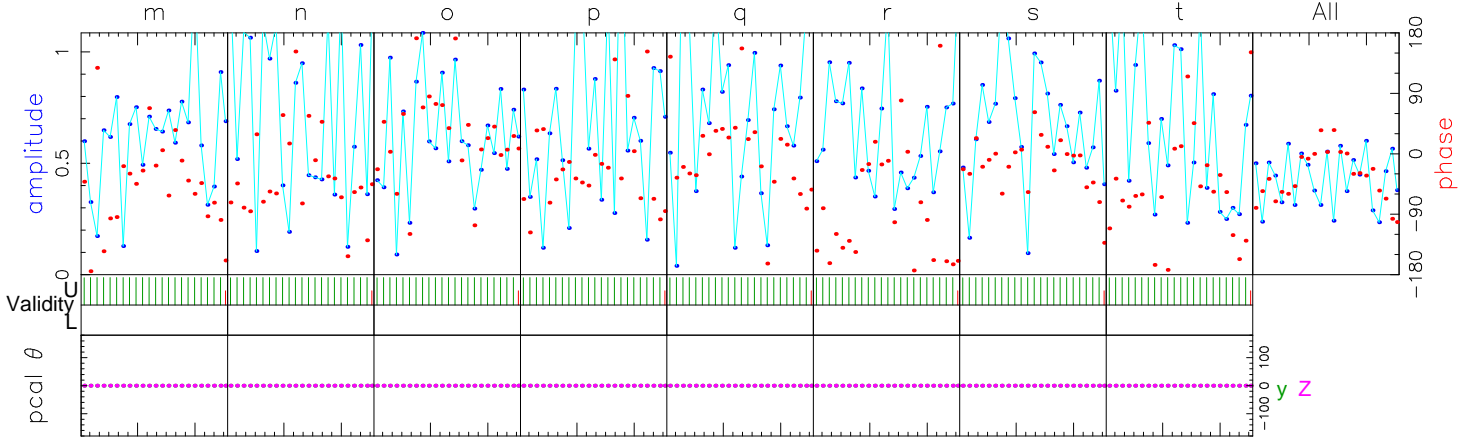


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141442
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -51.5 | -57.8 | 40.4 | -39.3 | -4.2 | -114.0 | -9.8 | -57.1 | | -33.7 |
| | 0.4 | 0.5 | 0.4 | 0.5 | 0.5 | 0.3 | 0.6 | 0.4 | Ampl. | 0.4 |
| | 232.5 | 230.1 | 230.3 | 229.9 | 229.9 | 310.9 | 230.0 | 230.6 | Sbd box | 230.6 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| y | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| y:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -5.59591330727E+03 | Apriori delay (usec) | -5.59581206710E+03 | Resid mbdelay (usec) | -7.49017E-03 | +/- | 9.0E-05 |
| Sband delay (usec) | -5.59591532185E+03 | Apriori clock (usec) | 6.3011150E+00 | Resid sbdelay (usec) | -1.03255E-01 | +/- | 7.1E-04 |
| Phase delay (usec) | -5.59581206819E+03 | Apriori clockrate (us/s) | -6.1029892E-07 | Resid phdelay (usec) | -1.08681E-06 | +/- | 3.1E-07 |
| Delay rate (us/s) | -1.21227537935E+00 | Apriori rate (us/s) | -1.21227611175E+00 | Resid rate (us/s) | 7.32406E-07 | +/- | 3.5E-09 |
| Total phase (deg) | -199.4 | Apriori accel (us/s/s) | 1.11245952407E-05 | Resid phase (deg) | -33.7 | +/- | 9.5 |

| | | | | | | | | | |
|--------------|------|------------------|-------|----------------------|-----------------------------|------------------------------|------------------|------------------|-------|
| ph/seg (deg) | 36.2 | Theor. | 22.7 | Amplitude | 0.362 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 38.3 | Search (1024X32) | 0.347 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | |
| ph/frq (deg) | 49.8 | Inc. seg. avg. | 0.400 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| amp/frq (%) | 34.7 | Inc. frq. avg. | 0.432 | Data rate (MSamp/s): | 128 MBpts 32 Amb 0.016 us | 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 |

y: az 295.1 el 37.8 pa 69.0 Z: az 118.7 el 60.6 pa -34.4 u, v (fr/asec) 9034.196 -1092.237 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/yZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/yZ.W.137.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

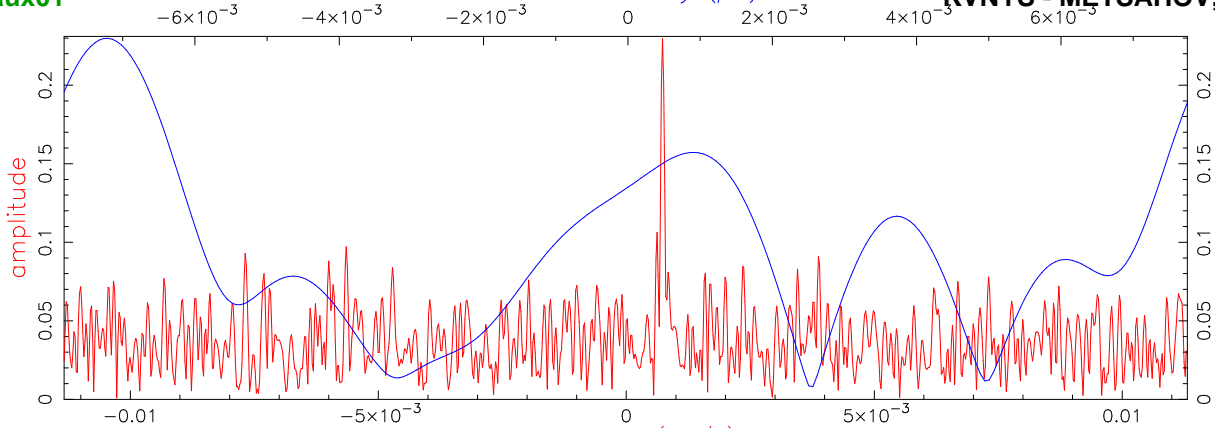
aux01

3C345.3MP20R, No1160, yZ

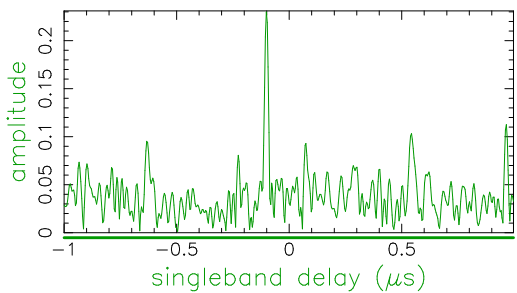
KVNYS - METSAHOV, fgroup W, pol RL

multiband delay (μ s)

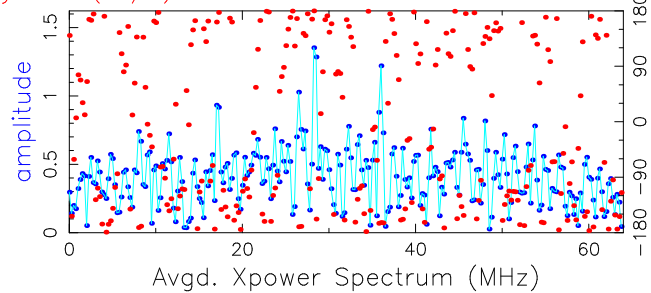
Fringe quality 9



SNR 7.7
 Int time 149.842
 Amp 0.231
 Phase -170.1
 PFD 1.9e-06
 Delays (us)
 SBD -0.100719
 MBD -0.007192
 Fringe rate (Hz)
 0.063528
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

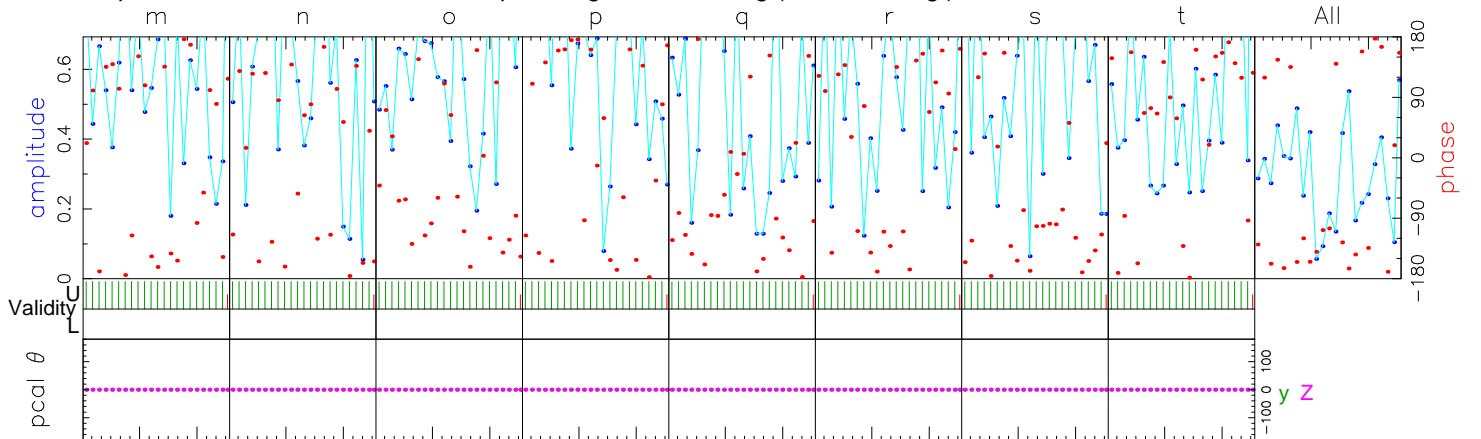


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141445
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | 166.0 | 157.8 | -104.6 | -177.1 | -107.7 | 150.3 | -136.0 | 141.3 | Phase | -170.1 |
| | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.4 | 0.4 | Ampl. | 0.3 |
| | 232.7 | 489.5 | 418.1 | 229.5 | 229.8 | 230.5 | 231.3 | 231.1 | Sbd box | 231.2 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| y | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| y:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -5.59591300933E+03 | Apriori delay (usec) | -5.59581206710E+03 | Resid mbdelay (usec) | -7.19223E-03 | +/- | 1.4E-04 |
| Sband delay (usec) | -5.59591278635E+03 | Apriori clock (usec) | 6.3011150E+00 | Resid sbdelay (usec) | -1.00719E-01 | +/- | 1.1E-03 |
| Phase delay (usec) | -5.59581207259E+03 | Apriori clockrate (us/s) | -6.1029892E-07 | Resid phdelay (usec) | -5.48663E-06 | +/- | 4.8E-07 |
| Delay rate (us/s) | -1.21227537425E+00 | Apriori rate (us/s) | -1.21227611175E+00 | Resid rate (us/s) | 7.37499E-07 | +/- | 5.5E-09 |
| Total phase (deg) | -335.9 | Apriori accel (us/s/s) | 1.11245952407E-05 | Resid phase (deg) | -170.1 | +/- | 14.8 |

| | | | | | | | | | | |
|--------------|------|------------------|-------|----------------|-----------------|---------------------|-----------------------------|------------------------------|------------------|--------------|
| ph/seg (deg) | 52.5 | Theor. | 35.6 | Amplitude | 0.231 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 64.6 | Search (1024X32) | 0.225 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 49.9 | Inc. seg. avg. | 0.246 | Inc. frq. avg. | 0.290 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 39.4 | Inc. frq. avg. | 0.290 | | | Data rate(MSamp/s): | 128 MBpts 32 Amb 0.016 us | 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 |

y: az 295.1 el 37.8 pa 69.0 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9034.196 -1092.237 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/yZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/yZ.W.153.3MP20R

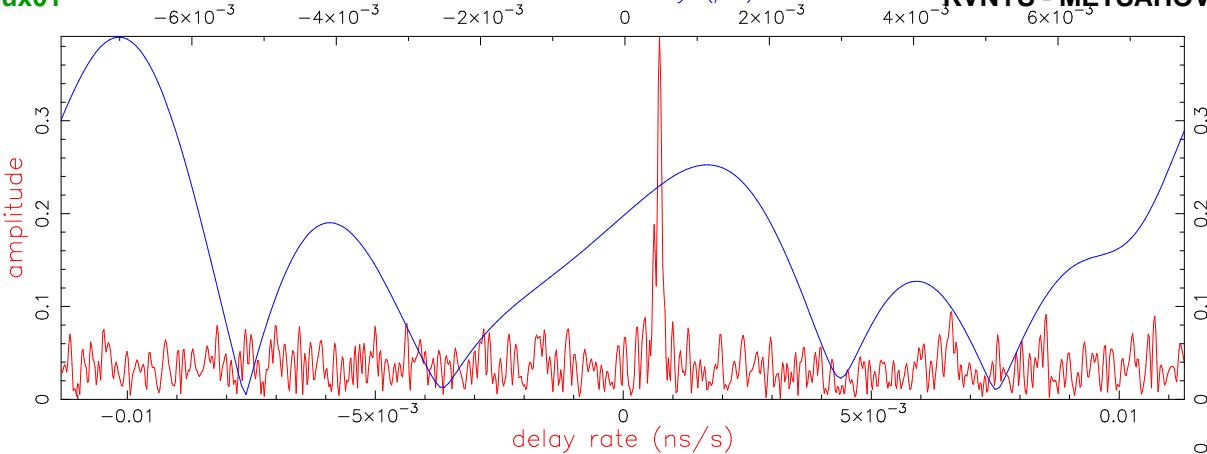
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, yZ

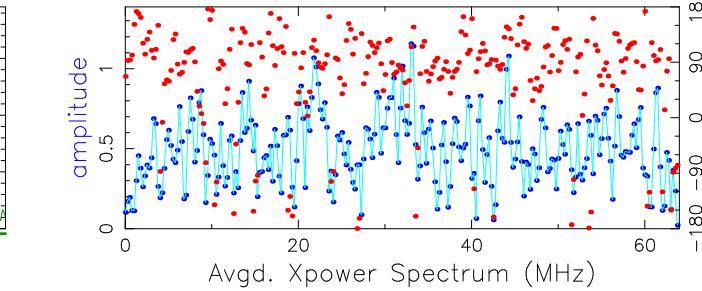
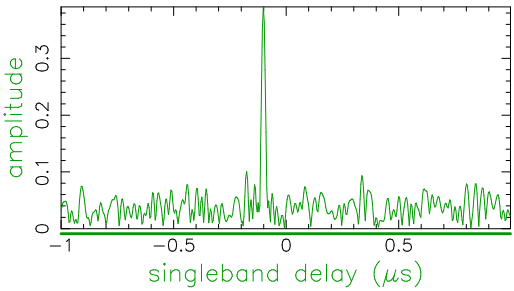
KVNYS - METSAHOV, fgroup W, pol LL

multiband delay (μ s)



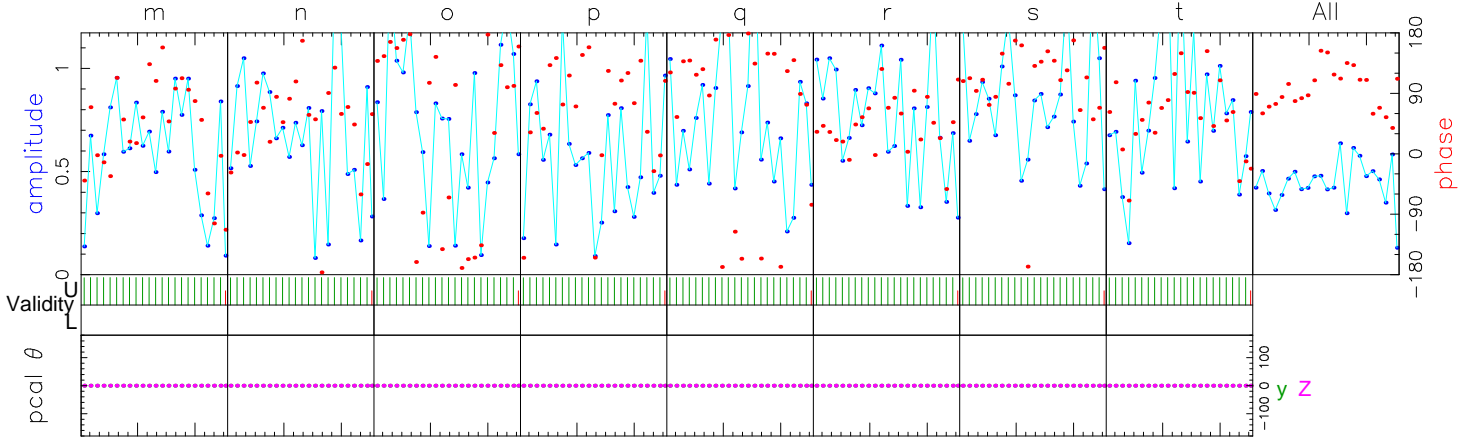
Fringe quality 9

SNR 13.1
 Int time 149.842
 Amp 0.391
 Phase 94.8
 PFD 1.5e-30
 Delays (us)
 SBD -0.101234
 MBD -0.007004
 Fringe rate (Hz)
 0.062568
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141436
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 64.1 | 60.7 | 162.6 | 83.7 | 147.9 | 46.8 | 115.7 | 73.6 | Phase | 94.8 |
| | 0.3 | 0.4 | 0.5 | 0.4 | 0.6 | 0.6 | 0.7 | 0.6 | Ampl. | 0.5 |
| | 233.0 | 231.0 | 230.9 | 229.5 | 230.8 | 231.0 | 230.7 | 231.1 | Sbd box | 231.1 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| y | 0 | 0 | 60000 | 0 | 0 | 0 | 4000 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| y:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| y:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | -5.59591282068E+03 | Apriori delay (usec) | -5.59581206710E+03 | Resid mbdelay (usec) | -7.00357E-03 | +/- | 8.3E-05 |
| Sband delay (usec) | -5.59591330110E+03 | Apriori clock (usec) | 6.3011150E+00 | Resid sbdelay (usec) | -1.01234E-01 | +/- | 6.6E-04 |
| Phase delay (usec) | -5.59581206405E+03 | Apriori clockrate (us/s) | -6.1029892E-07 | Resid phdelay (usec) | 3.05591E-06 | +/- | 2.8E-07 |
| Delay rate (us/s) | -1.21227538540E+00 | Apriori rate (us/s) | -1.21227611175E+00 | Resid rate (us/s) | 7.26351E-07 | +/- | 3.3E-09 |
| Total phase (deg) | -71.0 | Apriori accel (us/s/s) | 1.11245952407E-05 | Resid phase (deg) | 94.8 | +/- | 8.8 |

| | | | | | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|---|------------------------------|-----------------------|----------------|--------|-------|
| ph/seg (deg) | RMS 30.5 | Theor. 21.0 | Amplitude Search (1024X32) | 0.391 +/- 0.030 | 0.378 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 30.0 | 36.7 | Interp. | 0.000 | 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 | |
| ph/frq (deg) | 46.2 | 12.4 | Inc. seg. avg. | 0.424 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | nlags: 256 t_cohere infinite | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 43.0 | 21.7 | Inc. frq. avg. | 0.498 | Data rate(Mb/s): 2048 | | ion window (TEC) | 0.00 | 0.00 | |

y: az 295.1 el 37.8 pa 69.0 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 9034.196 -1092.237 simultaneous interpolator

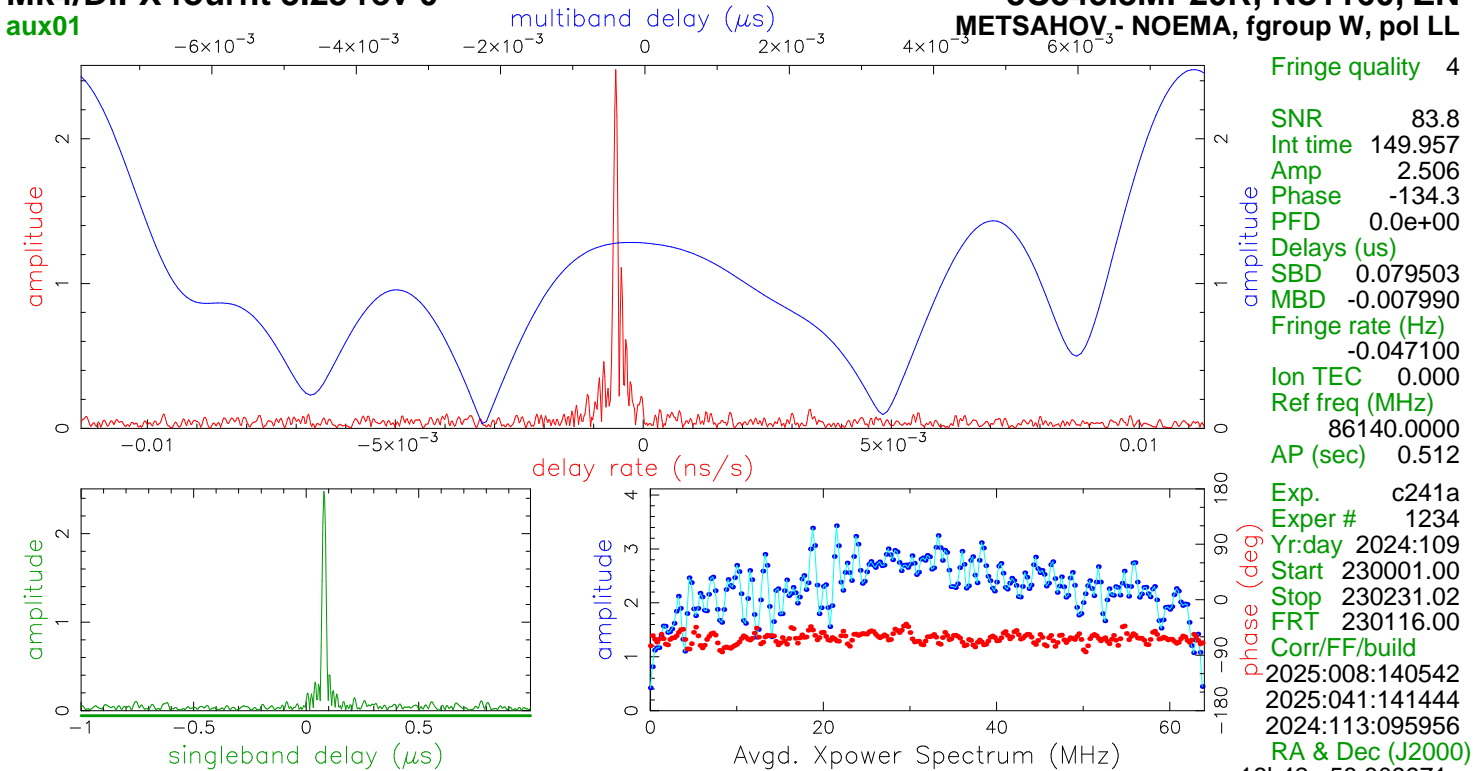
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/yZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/yZ.W.91.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

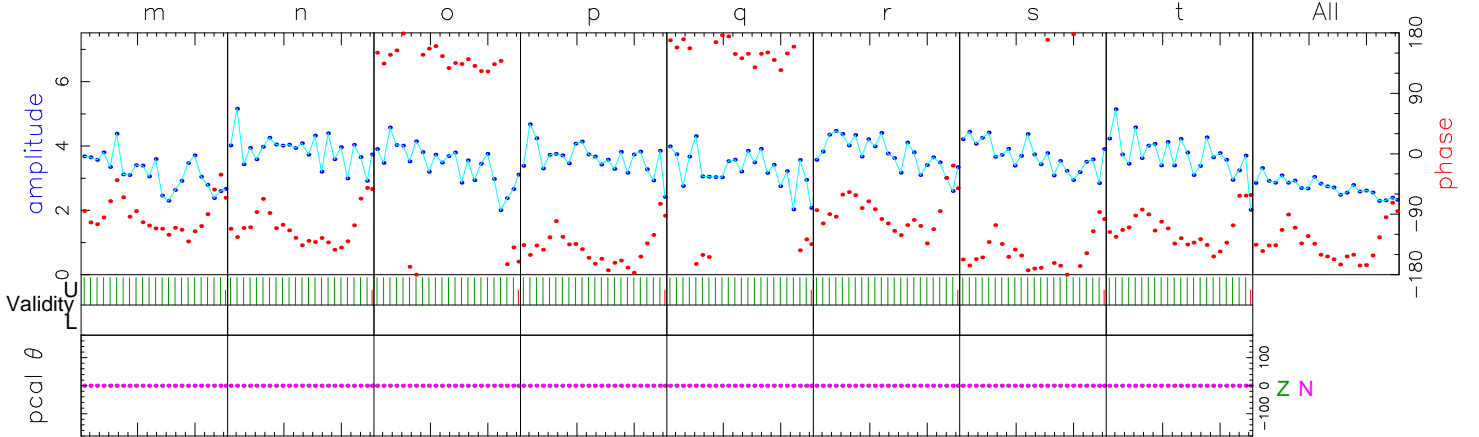
aux01

3C345.3MP20R, No1160, ZN

METSAHOV - NOEMA, fgroup W, pol LL



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|------------------------------|---|----------|---|----------|--------------------|----------|---|----------|------------------------------|------------------|--------------|
| | -92.8 | -111.2 | 151.8 | -141.6 | 166.8 | -87.4 | -152.6 | -113.9 | Phase | -134.3 | |
| | 2.9 | 3.5 | 3.1 | 3.3 | 2.9 | 3.4 | 3.4 | 3.4 | Ampl. | 3.2 | |
| | 275.6 | 277.2 | 277.5 | 278.0 | 278.3 | 277.9 | 277.8 | 277.3 | Sbd box | 277.4 | |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | Manl 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) | 1.88390297553E+03 | | Apriori delay (usec) | | 1.88381721568E+03 | | Resid mbdelay (usec) | | -7.99016E-03 | +/- 1.3E-05 | |
| Sband delay (usec) | 1.88389671868E+03 | | Apriori clock (usec) | | 1.3483782E+01 | | Resid sbdelay (usec) | | 7.95030E-02 | +/- 1.0E-04 | |
| Phase delay (usec) | 1.88381721135E+03 | | Apriori clockrate (us/s) | | 5.9556093E-07 | | Resid phdelay (usec) | | -4.33142E-06 | +/- 4.4E-08 | |
| Delay rate (us/s) | -3.42329342383E-01 | | Apriori rate (us/s) | | -3.42328795597E-01 | | Resid rate (us/s) | | -5.46785E-07 | +/- 5.1E-10 | |
| Total phase (deg) | 210.9 | | Apriori accel (us/s/s) | | 1.99162385602E-06 | | Resid phase (deg) | | -134.3 | +/- 1.4 | |
| RMS | 25.7 | 3.3 | Amplitude | | 2.506 +/- 0.030 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | |
| ph/seg (deg) | 13.3 | 5.7 | Search (1024X32) | | 2.408 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | |
| amp/seg (%) | 48.6 | 1.9 | Interp. | | 0.000 | | Bits/sample: 2x2 | | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| ph/frq (deg) | 31.1 | 3.4 | Inc. seg. avg. | | 2.721 | | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | | dr window (ns/s) | -0.011 0.011 | |
| amp/frq (%) | | | Inc. frq. avg. | | 3.249 | | Data rate(Mb/s): 2048 | | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 0.00 |
| Z: az 118.7 el 60.6 pa -34.4 | N: az 78.3 el 51.5 pa -65.2 | | u, v (fr/asec) | | 2554.843 1240.673 | | | | simultaneous interpolator | | |
| Control file: cf_1234_gmva | Input file: /Exps/c241a/v2/3mm/1234/No1160/ZN..3MP20R | | Output file: /Exps/c241a/v2/3mm/1234/No1160/ZN.W.149.3MP20R | | | | | | | | |

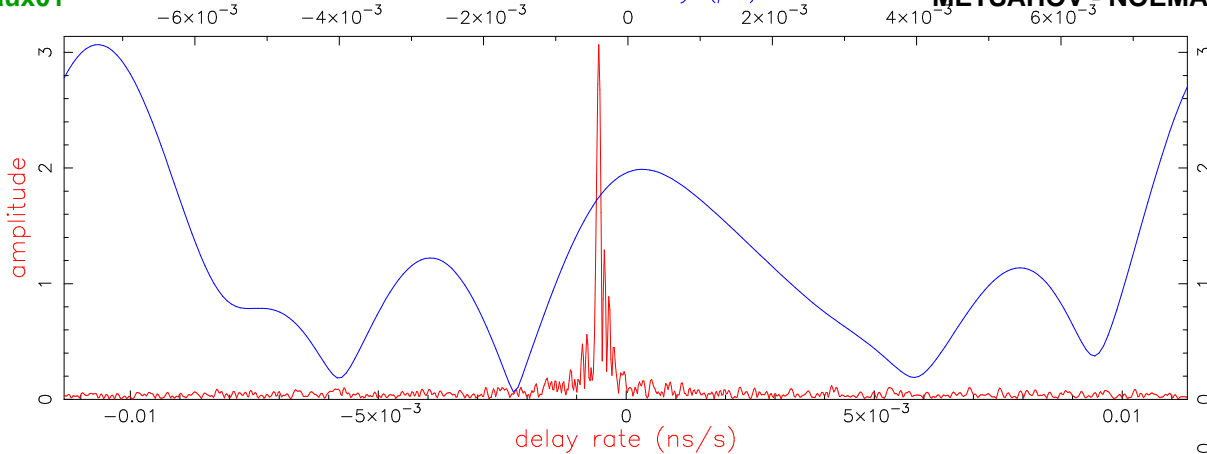
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, ZN

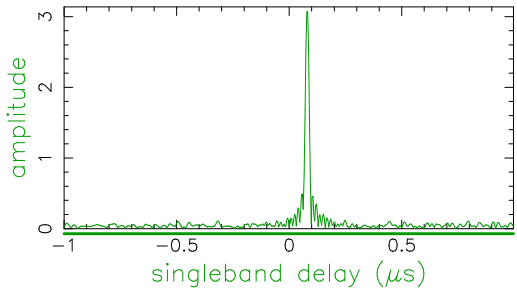
METSAHOV - NOEMA, fgroup W, pol RR

multiband delay (μ s)

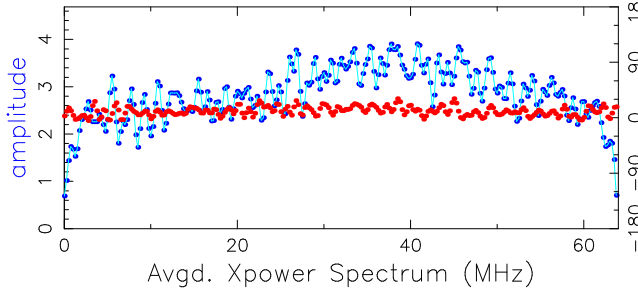


Fringe quality 4

SNR 105.0
 Int time 149.957
 Amp 3.138
 Phase -62.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.080074
 MBD -0.007376
 Fringe rate (Hz)
 -0.047166
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

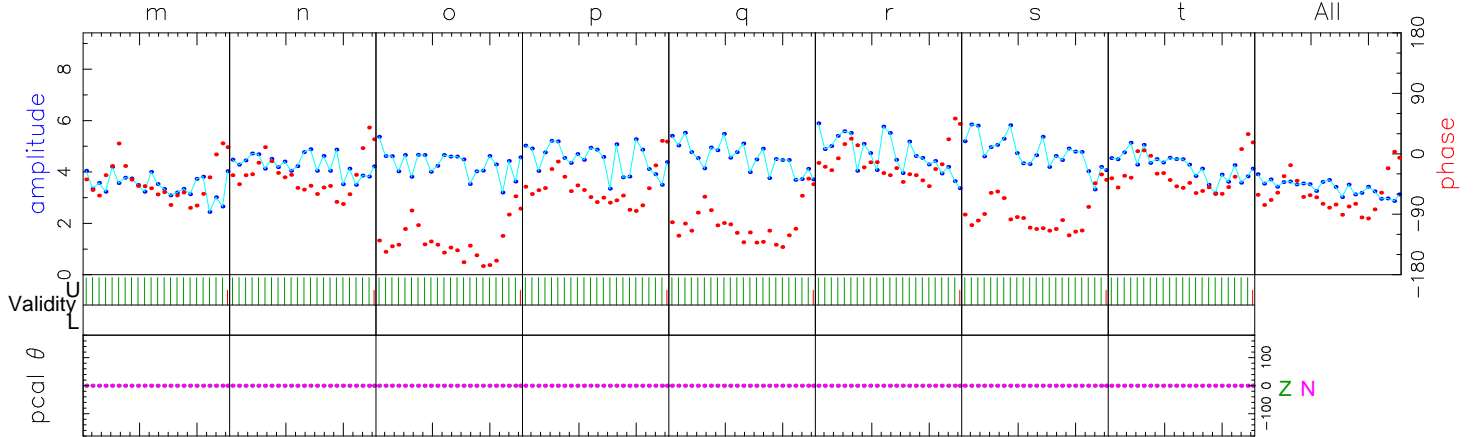


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141446
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -42.6 | -34.1 | -132.0 | -51.6 | -107.0 | -13.7 | -92.3 | -31.9 | Phase | -62.1 |
| | 3.1 | 3.8 | 3.9 | 4.1 | 4.2 | 4.3 | 4.3 | 3.9 | Ampl. | 3.9 |
| | 276.2 | 277.3 | 277.9 | 278.2 | 278.2 | 278.1 | 278.0 | 277.2 | Sbd box | 277.5 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | Manl 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 | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | 1.88390358999E+03 | Apriori delay (usec) | 1.88381721568E+03 | Resid mbdelay (usec) | -7.37569E-03 | +/- | 1.0E-05 |
| Sband delay (usec) | 1.88389729018E+03 | Apriori clock (usec) | 1.3483782E+01 | Resid sbdelay (usec) | 8.00745E-02 | +/- | 8.2E-05 |
| Phase delay (usec) | 1.88381721368E+03 | Apriori clockrate (us/s) | 5.9556093E-07 | Resid phdelay (usec) | -2.00336E-06 | +/- | 3.5E-08 |
| Delay rate (us/s) | -3.42329343149E-01 | Apriori rate (us/s) | -3.42328795597E-01 | Resid rate (us/s) | -5.47552E-07 | +/- | 4.1E-10 |
| Total phase (deg) | 283.1 | Apriori accel (us/s/s) | 1.99162385602E-06 | Resid phase (deg) | -62.1 | +/- | 1.1 |

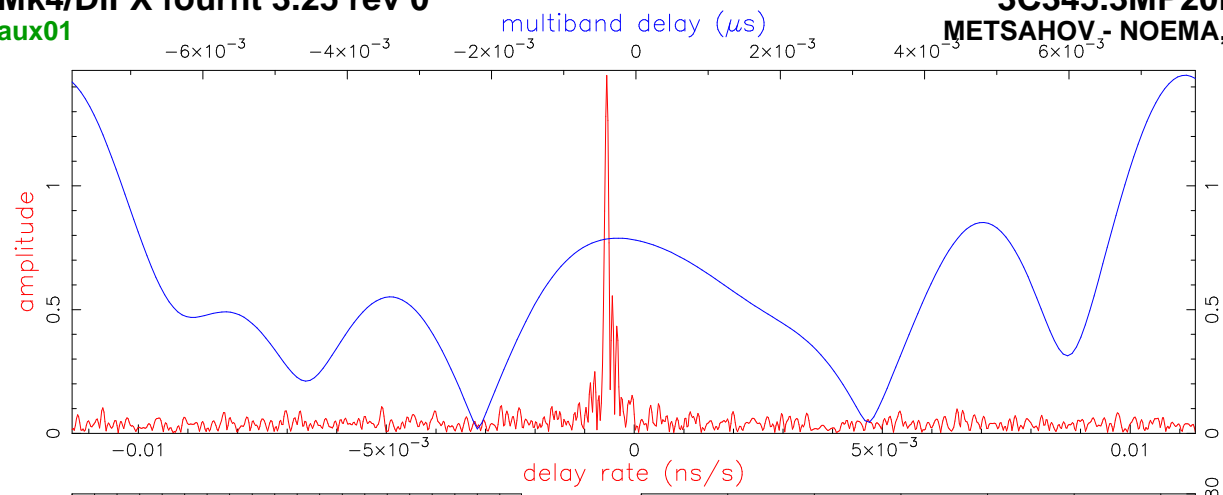
ph/seg (deg) 26.4 2.6 Search (1024X32) 3.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 11.9 4.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.4 1.5 Inc. seg. avg. 3.389 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 28.5 2.7 Inc. frq. avg. 3.946 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 Z: az 118.7 el 60.6 pa -34.4 N: az 78.3 el 51.5 pa -65.2 u,v (fr/asec) 2554.843 1240.673 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZN..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZN.W.167.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, ZN

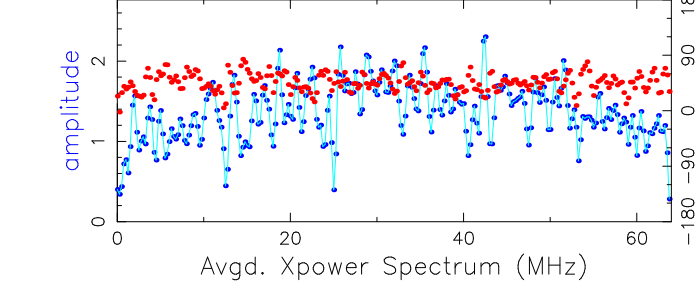
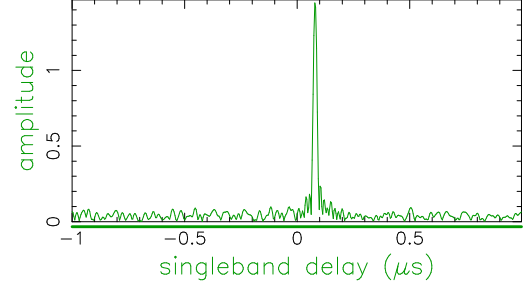
METSAHOV - NOEMA, fgroup W, pol LR



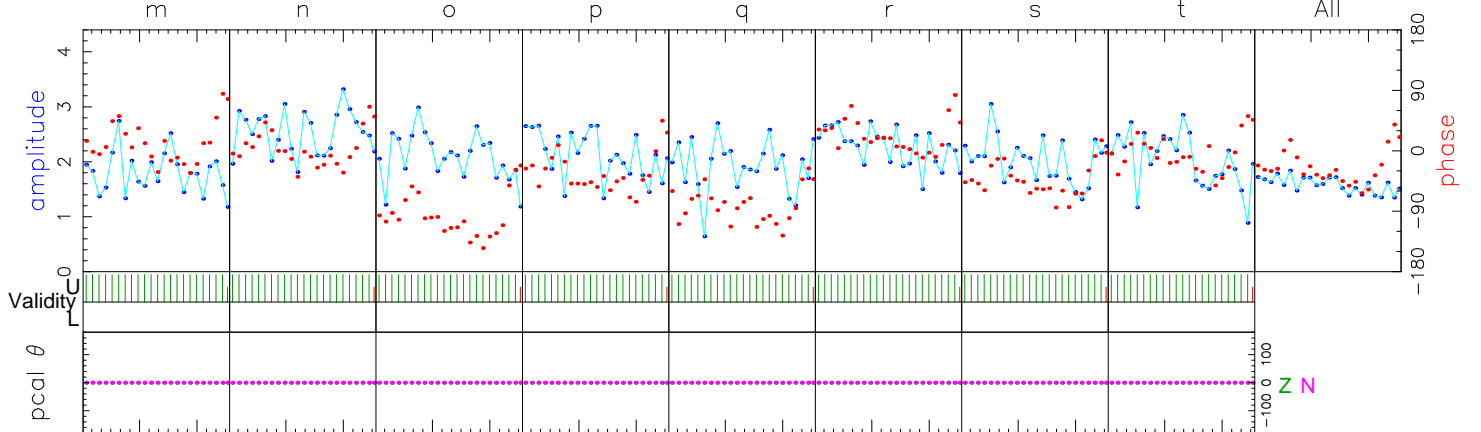
Fringe quality 4

SNR 49.1
 Int time 149.957
 Amp 1.467
 Phase -25.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.079613
 MBD -0.007985
 Fringe rate (Hz)
 -0.047154
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141449
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 10.9 | 2.1 | -99.5 | -35.4 | -83.9 | 22.5 | -42.0 | -6.9 | Phase | -25.2 |
| | 1.6 | 2.3 | 1.8 | 1.9 | 1.7 | 2.1 | 1.9 | 1.9 | Ampl. | 1.9 |
| | 275.5 | 277.1 | 277.7 | 278.1 | 278.2 | 277.9 | 277.9 | 277.3 | Sbd box | 277.4 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | Manl 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 | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | 1.88390298062E+03 | Apriori delay (usec) | 1.88381721568E+03 | Resid mbdelay (usec) | -7.98506E-03 | +/- | 2.2E-05 |
| Sband delay (usec) | 1.88389682818E+03 | Apriori clock (usec) | 1.3483782E+01 | Resid sbdelay (usec) | 7.96125E-02 | +/- | 1.8E-04 |
| Phase delay (usec) | 1.88381721487E+03 | Apriori clockrate (us/s) | 5.9556093E-07 | Resid phdelay (usec) | -8.14119E-07 | +/- | 7.5E-08 |
| Delay rate (us/s) | -3.42329343005E-01 | Apriori rate (us/s) | -3.42328795597E-01 | Resid rate (us/s) | -5.47408E-07 | +/- | 8.7E-10 |
| Total phase (deg) | 319.9 | Apriori accel (us/s/s) | 1.99162385602E-06 | Resid phase (deg) | -25.2 | +/- | 2.3 |

ph/seg (deg) 25.1 5.6 Search (1024X32) 1.410 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 12.6 9.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 48.3 3.3 Inc. seg. avg. 1.579 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 32.8 5.8 Inc. frq. avg. 1.899 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 Z: az 118.7 el 60.6 pa -34.4 N: az 78.3 el 51.5 pa -65.2 u,v (fr/asec) 2554.843 1240.673 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZN..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZN.W.188.3MP20R

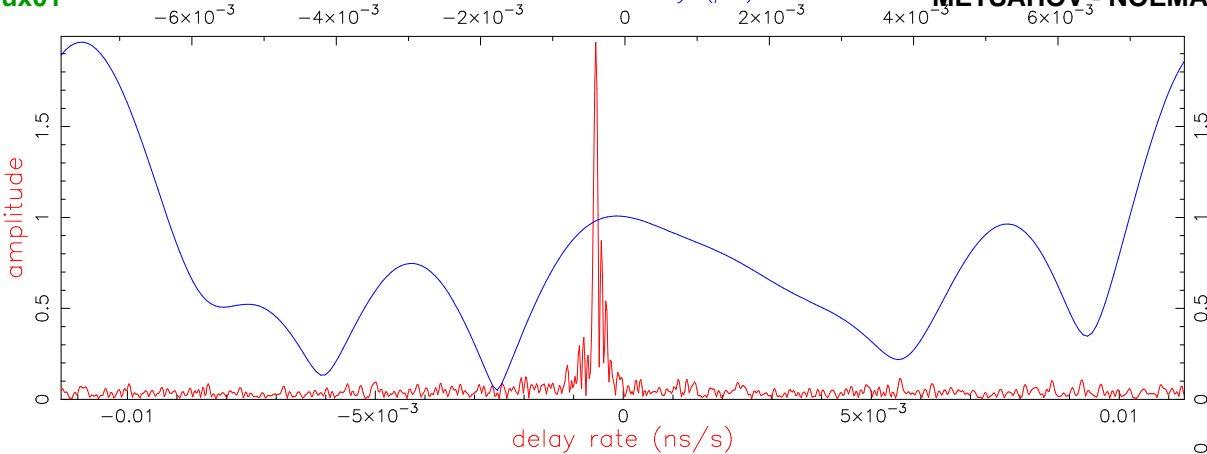
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, ZN

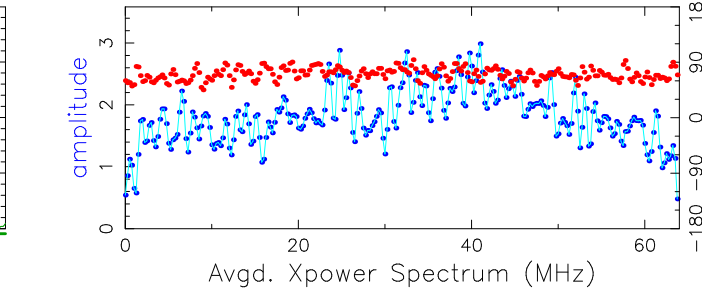
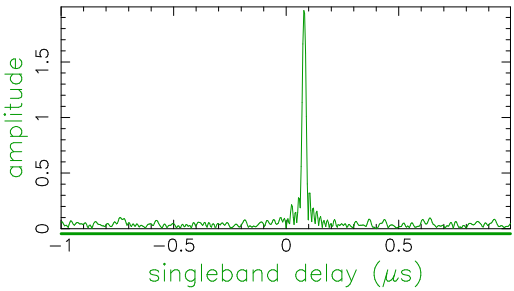
METSAHOV - NOEMA, fgroup W, pol RL

multiband delay (μ s)



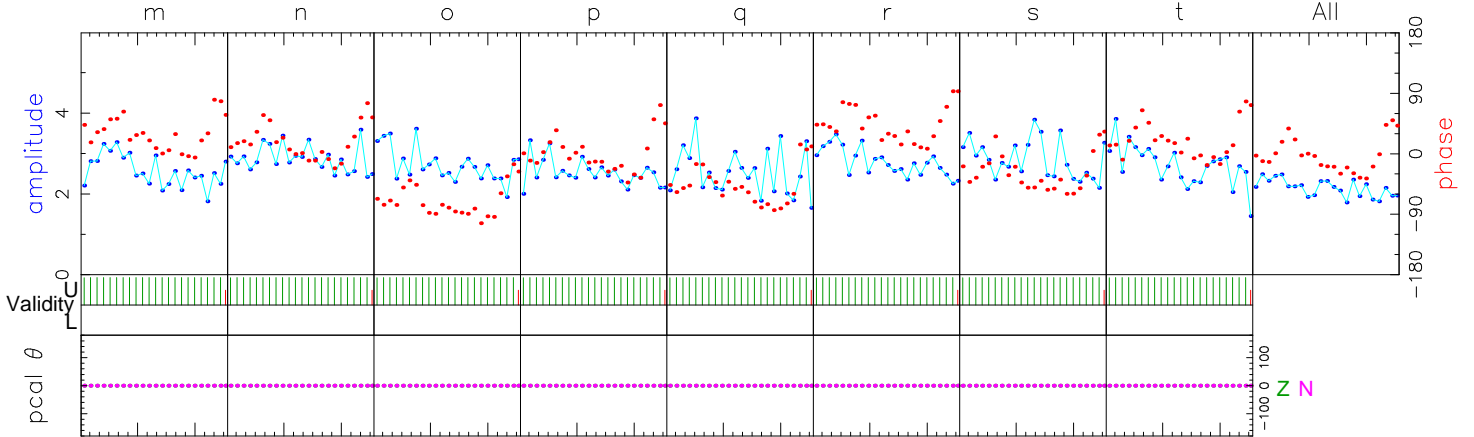
Fringe quality 4

SNR 66.8
 Int time 149.957
 Amp 1.996
 Phase -3.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.079760
 MBD -0.007503
 Fringe rate (Hz)
 -0.047150
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141452
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 30.3 | 16.8 | -70.8 | -1.4 | -47.5 | 42.4 | -30.1 | 18.8 | Phase | -3.5 |
| | 2.4 | 2.6 | 2.5 | 2.3 | 2.3 | 2.6 | 2.6 | 2.5 | Ampl. | 2.5 |
| | 276.0 | 277.2 | 277.7 | 278.2 | 278.3 | 278.1 | 277.9 | 277.2 | Sbd box | 277.4 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | Manl 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) 1.88390346287E+03 Apriori delay (usec) 1.88381721568E+03 Resid mbdelay (usec) -7.50281E-03 +/- 1.6E-05
 Sband delay (usec) 1.88389697593E+03 Apriori clock (usec) 1.3483782E+01 Resid sbdelay (usec) 7.97603E-02 +/- 1.3E-04
 Phase delay (usec) 1.88381721557E+03 Apriori clockrate (us/s) 5.9556093E-07 Resid phdelay (usec) -1.12887E-07 +/- 5.5E-08
 Delay rate (us/s) -3.42329342957E-01 Apriori rate (us/s) -3.42328795597E-01 Resid rate (us/s) -5.47359E-07 +/- 6.4E-10
 Total phase (deg) 341.7 Apriori accel (us/s/s) 1.99162385602E-06 Resid phase (deg) -3.5 +/- 1.7

RMS Theor. Amplitude 1.996 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 24.7 4.1 Search (1024X32) 1.913 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 13.0 7.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 43.5 2.4 Inc. seg. avg. 2.147 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 24.4 4.2 Inc. frq. avg. 2.462 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Z: az 118.7 el 60.6 pa -34.4 N: az 78.3 el 51.5 pa -65.2 u,v (fr/asec) 2554.843 1240.673 simultaneous interpolator

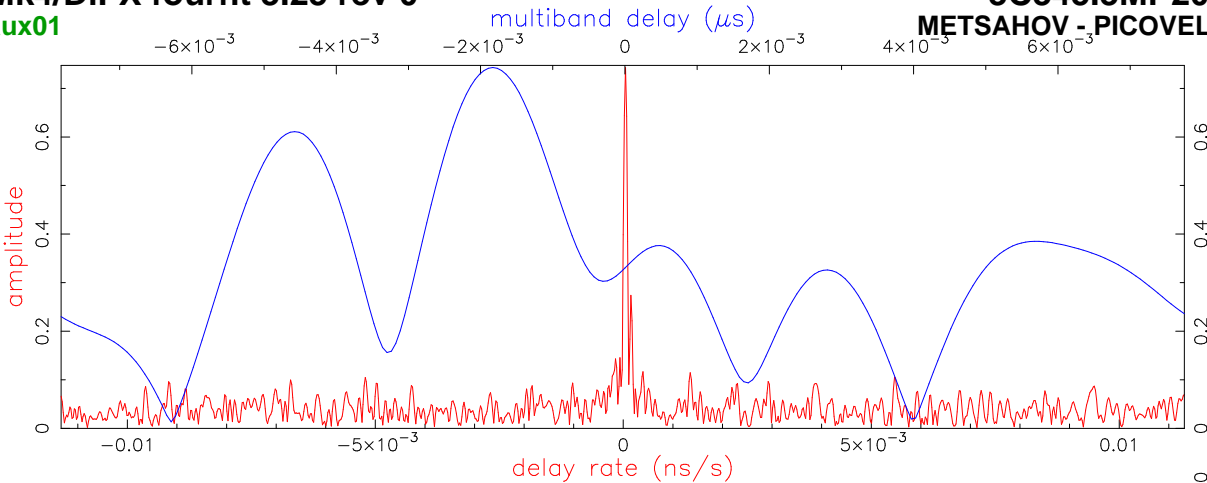
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZN..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZN.W.208.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

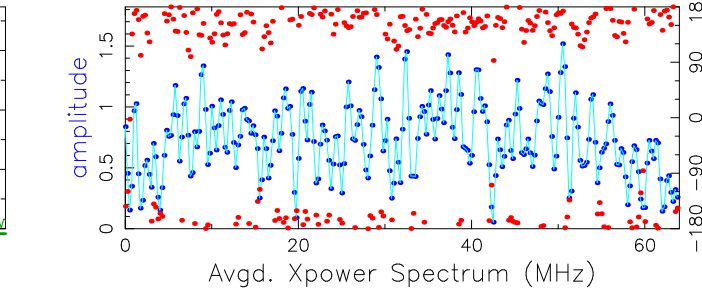
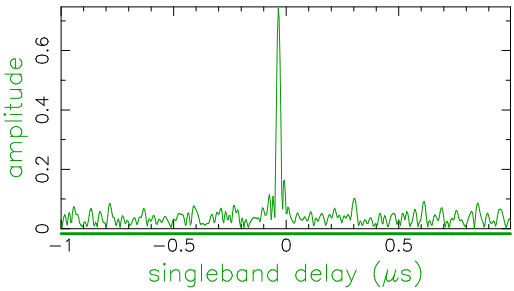
3C345.3MP20R, No1160, ZP

METSAHOV - PICOVEL, fgroup W, pol LL



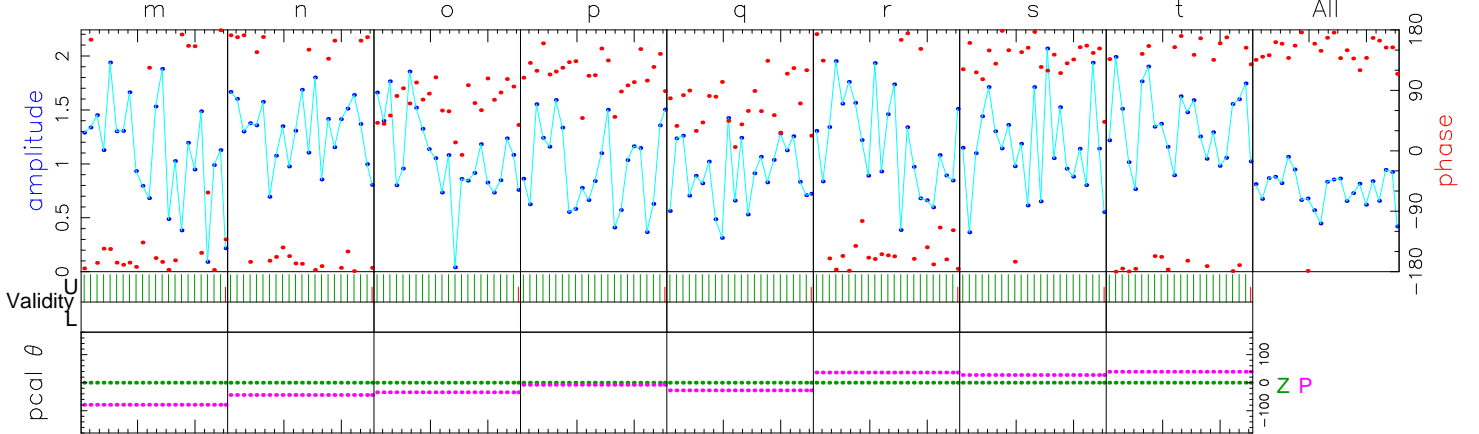
Fringe quality 7

SNR 25.0
 Int time 149.957
 Amp 0.747
 Phase 152.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.034103
 MBD -0.001809
 Fringe rate (Hz)
 0.002938
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141443
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec

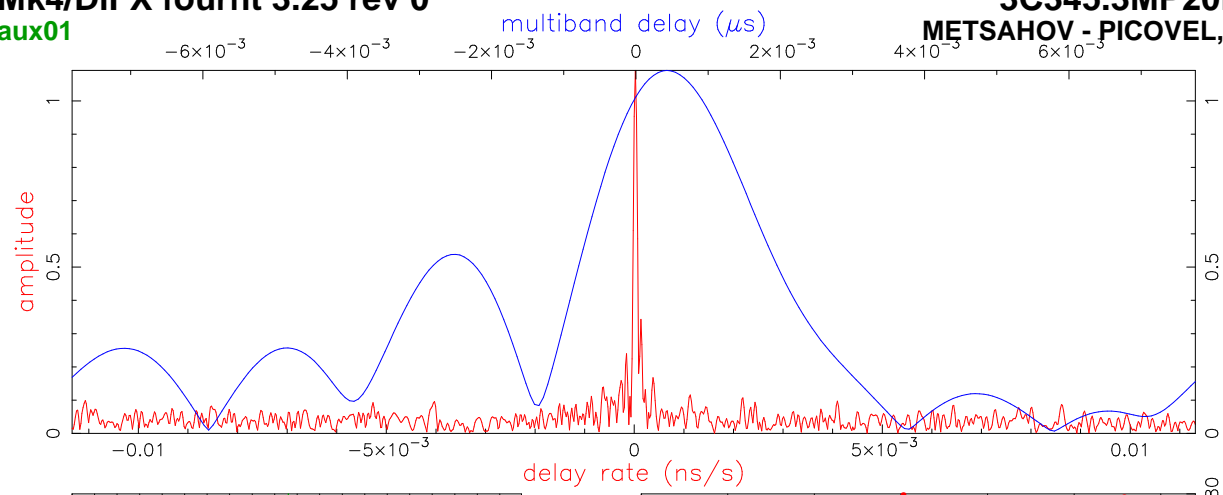


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -169.8 | 179.5 | 73.3 | 120.3 | 67.3 | -161.7 | 141.3 | 169.9 | Phase | 152.2 |
| | 1.0 | 1.2 | 1.0 | 0.9 | 0.8 | 1.1 | 1.1 | 1.3 | Ampl. | 1.0 |
| | 247.0 | 248.4 | 248.6 | 249.3 | 249.4 | 249.0 | 249.6 | 248.4 | Sbd box | 248.3 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:P | 0:-79 | 0:-44 | 0:-34 | 0:-8 | 0:-28 | 0:36 | 0:27 | 0:39 | Manl PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| P | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | 4.13656655314E+03 | Apriori delay (usec) | 4.13659961205E+03 | Resid mbdelay (usec) | -1.80891E-03 | +/- | 4.3E-05 |
| Sband delay (usec) | 4.13656550930E+03 | Apriori clock (usec) | 1.1232929E+00 | Resid sbdelay (usec) | -3.41027E-02 | +/- | 3.4E-04 |
| Phase delay (usec) | 4.13659961696E+03 | Apriori clockrate (us/s) | 1.1622864E-08 | Resid phdelay (usec) | 4.90849E-06 | +/- | 1.5E-07 |
| Delay rate (us/s) | -5.08090104014E-01 | Apriori rate (us/s) | -5.08090138122E-01 | Resid rate (us/s) | 3.41071E-08 | +/- | 1.7E-09 |
| Total phase (deg) | 1.7 | Apriori accel (us/s/s) | -2.84550424266E-06 | Resid phase (deg) | 152.2 | +/- | 4.6 |

| | | | | | | | | | |
|--------------|------|------------------|-------|---------------------|-----------------------------|------------------------------|------------------|------------------|-------|
| ph/seg (deg) | 16.4 | Theor. | 11.0 | Amplitude | 0.747 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 20.4 | Search (1024X32) | 0.716 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | |
| ph/frq (deg) | 56.6 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| amp/frq (%) | 44.6 | Inc. seg. avg. | 0.758 | Data rate(MSamp/s): | 128 MBpts 32 Amb 0.016 us | dr window (ns/s) | -0.011 | 0.011 | |
| | | Inc. frq. avg. | 1.033 | Data rate(Mb/s): | 2048 | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

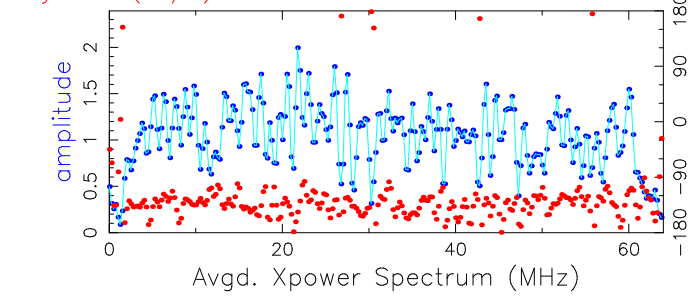
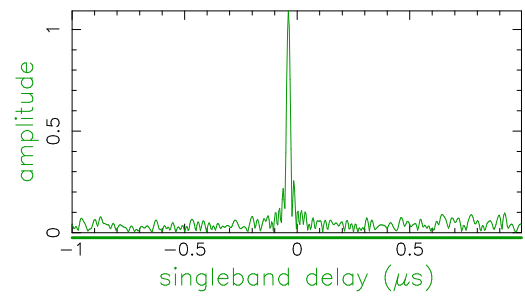
Z: az 118.7 el 60.6 pa -34.4 P: az 66.7 el 42.5 pa -72.7 u,v (fr/asec) 3788.001 1597.096 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZP..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZP.W.146.3MP20R



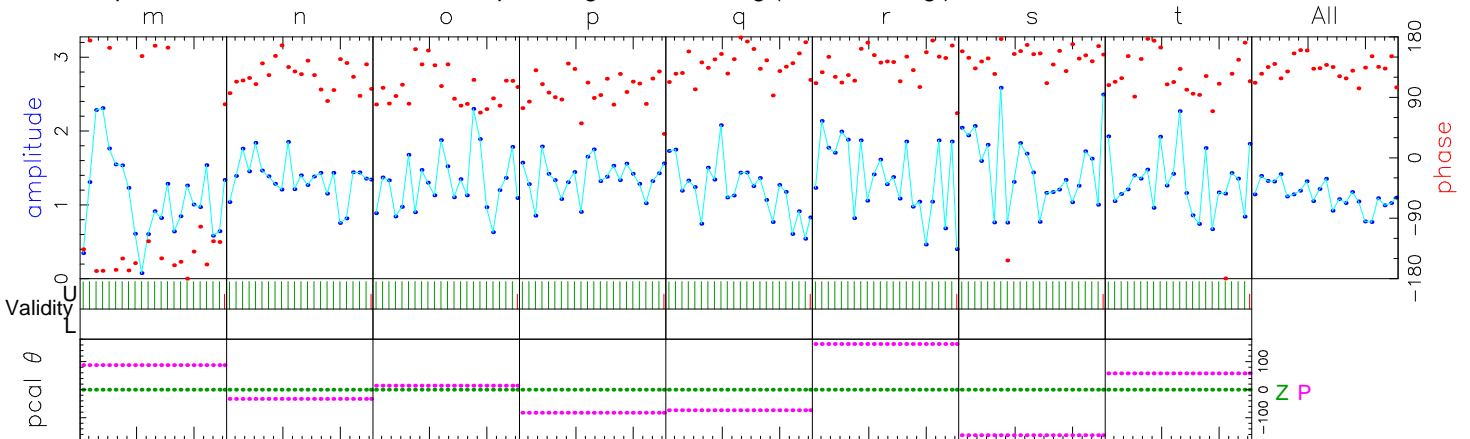
Fringe quality 7

SNR 36.6
Int time 149.957
Amp 1.092
Phase 133.3
PFD 0.0e+00
Delays (us)
SBD -0.038860
MBD 0.000436
Fringe rate (Hz)
0.002765
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c241a
Exper # 1234
Yr:day 2024:109
Start 230001.00
Stop 230231.02
FRT 230116.00
Corr/FF/build
2025:008:140542
2025:041:141446
2024:113:095956
RA & Dec (J2000)
16h42m58.809971s
+39°48'36.993958"



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



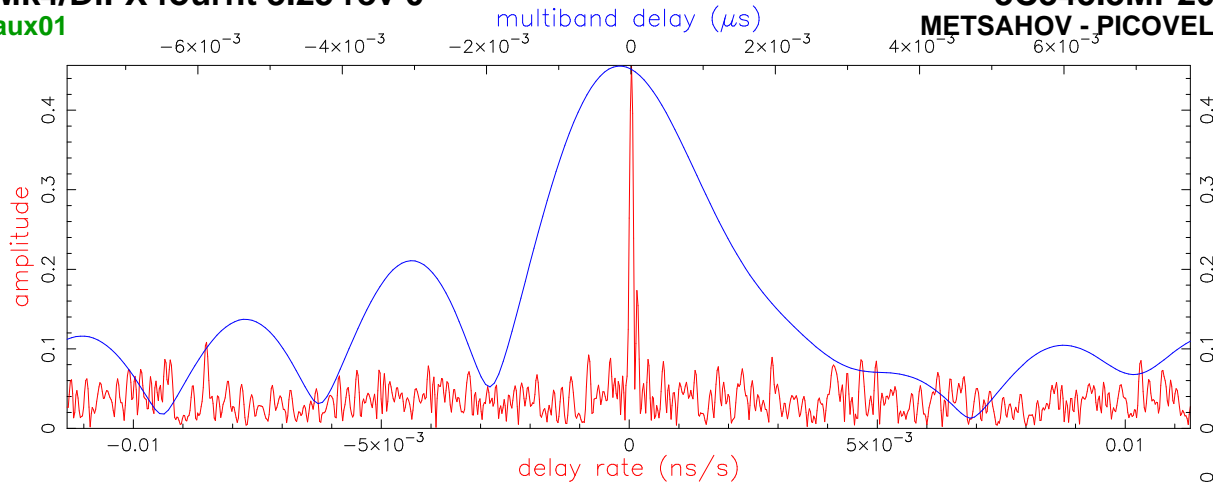
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|------------------------------|---|----------|---|-----------------|--------------------|---|----------------------|------------------------------|---------------------------|------------------|--------------|
| | -165.4 | 122.0 | 104.0 | 101.7 | 140.1 | 139.0 | 152.2 | 128.7 | Phase | 133.3 | |
| | 1.0 | 1.3 | 1.2 | 1.3 | 1.1 | 1.3 | 1.4 | 1.2 | Ampl. | 1.2 | |
| | 244.9 | 246.0 | 246.8 | 247.0 | 247.8 | 246.5 | 247.3 | 246.0 | Sbd box | 247.1 | |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| Z:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | |
| Z:P | 0:88 | 0:33 | 0:15 | 0:82 | 0:74 | 0:163 | 0:163 | 0:58 | Manl PC | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | | |
| P | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | | |
| | | | | | | | | | Tracks | | |
| Group delay (usec) (SBD) | 4.13655317311E+03 | | Apriori delay (usec) | | 4.13659961205E+03 | | Resid mbdelay (usec) | | 4.36061E-04 | +/- 3.0E-05 | |
| Sband delay (usec) | 4.13656075155E+03 | | Apriori clock (usec) | | 1.1232929E+00 | | Resid sbdelay (usec) | | -3.88605E-02 | +/- 2.4E-04 | |
| Phase delay (usec) | 4.13659961635E+03 | | Apriori clockrate (us/s) | | 1.1622864E-08 | | Resid phdelay (usec) | | 4.29831E-06 | +/- 1.0E-07 | |
| Delay rate (us/s) | -5.08090106018E-01 | | Apriori rate (us/s) | | -5.08090138122E-01 | | Resid rate (us/s) | | 3.21033E-08 | +/- 1.2E-09 | |
| Total phase (deg) | 342.8 | | Apriori accel (us/s/s) | | -2.84550424266E-06 | | Resid phase (deg) | | 133.3 | +/- 3.1 | |
| | RMS | Theor. | Amplitude | 1.092 +/- 0.030 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | |
| ph/seg (deg) | 15.1 | 7.5 | Search (1024X32) | 1.061 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | | -1.000 1.000 | |
| amp/seg (%) | 16.3 | 13.1 | Interp. | 0.000 | | Bits/sample: 2x2 | | SampCntNorm: enabled | | mb window (us) | -0.008 0.008 |
| ph/frq (deg) | 32.2 | 4.4 | Inc. seg. avg. | 1.121 | | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | | dr window (ns/s) | | -0.011 0.011 | |
| amp/frq (%) | 15.9 | 7.7 | Inc. frq. avg. | 1.208 | | Data rate(Mb/s): 2048 | | nlags: 256 t_cohere infinite | | ion window (TEC) | 0.00 0.00 |
| Z: az 118.7 el 60.6 pa -34.4 | P: az 66.7 el 42.5 pa -72.7 | | u, v (fr/asec) 3788.001 1597.096 | | | | | | simultaneous interpolator | | |
| Control file: cf_1234_gmva | Input file: /Exps/c241a/v2/3mm/1234/No1160/ZP..3MP20R | | Output file: /Exps/c241a/v2/3mm/1234/No1160/ZP.W.163.3MP20R | | | | | | | | |

Mk4/DiFX fourfit 3.25 rev 0

aux01

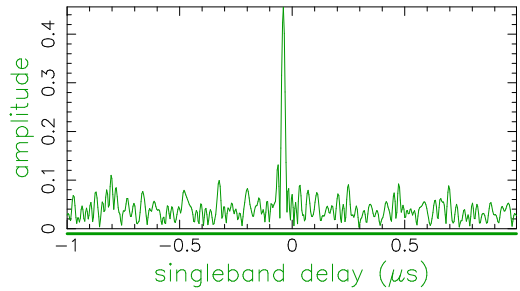
3C345.3MP20R, No1160, ZP

METSAHOV - PICOVEL, fgroup W, pol LR

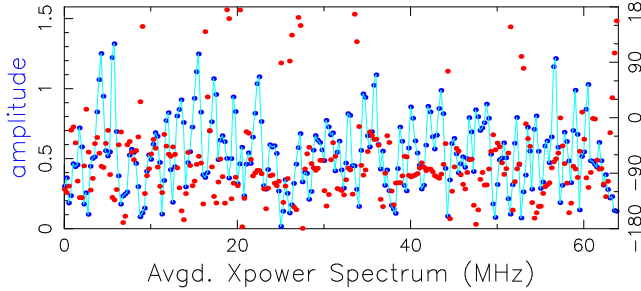


Fringe quality 8

SNR 15.3
 Int time 149.957
 Amp 0.456
 Phase 176.5
 PFD 3.2e-44
 Delays (us)
 SBD -0.039591
 MBD -0.000166
 Fringe rate (Hz)
 0.003064
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

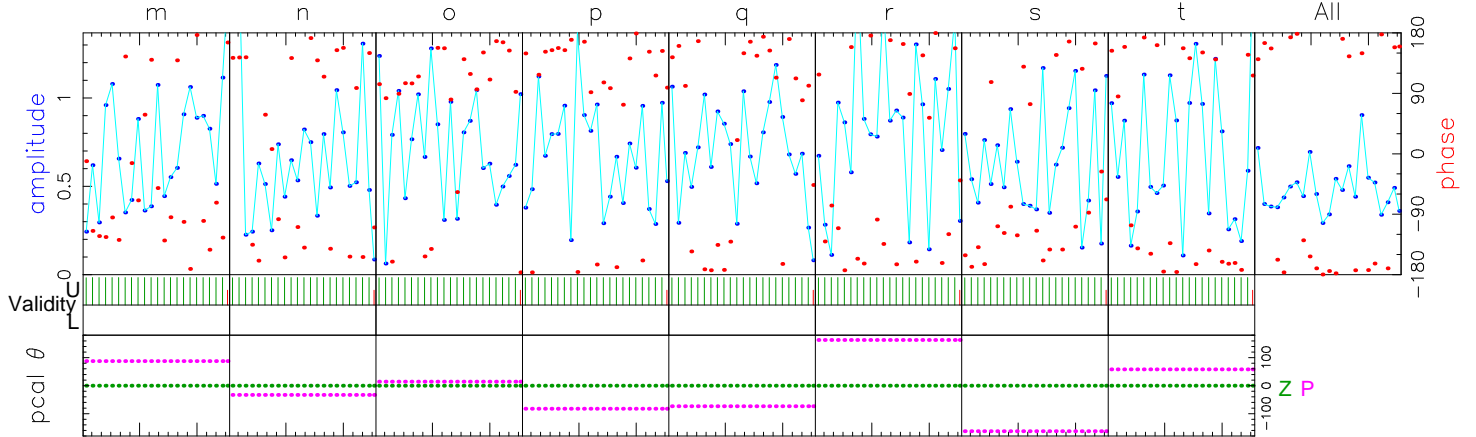


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141448
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



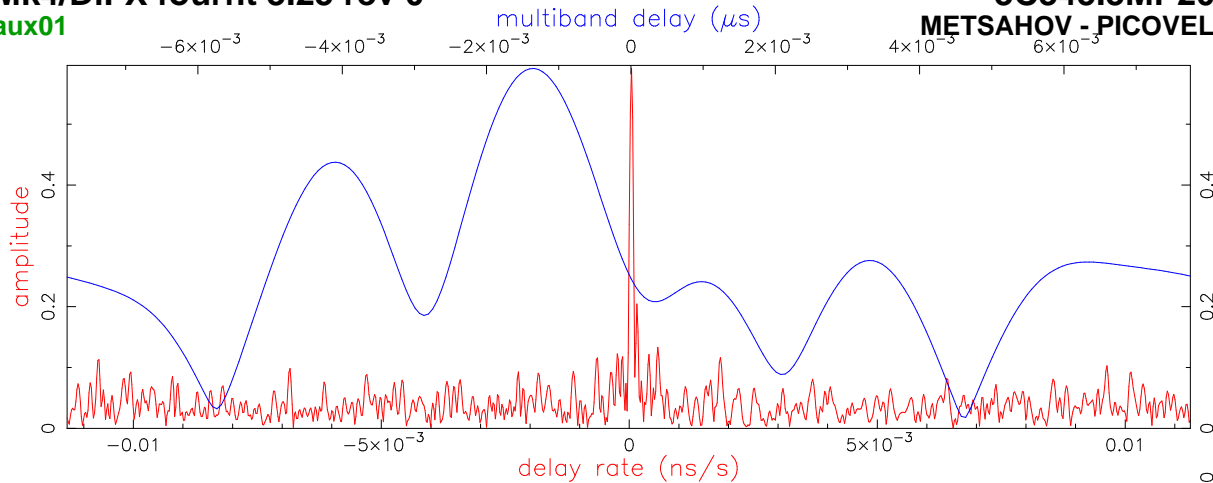
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|------------------------------|---|----------|---|-----------------|--------------------|---|----------------------|------------------------------|---------------------------|------------------|--------------|
| | -122.0 | 168.7 | 133.3 | 154.9 | 162.1 | -166.9 | -147.2 | 171.0 | Phase | 176.5 | |
| | 0.4 | 0.5 | 0.5 | 0.6 | 0.5 | 0.7 | 0.4 | 0.6 | Ampl. | 0.5 | |
| | 244.9 | 246.2 | 245.7 | 246.6 | 247.0 | 247.1 | 247.9 | 246.1 | Sbd box | 246.9 | |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| Z:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | |
| Z:P | 0:88 | 0:33 | 0:15 | 0:82 | 0:74 | 0:163 | 0:163 | 0:58 | Manl PC | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | |
| P | 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 | | |
| | | | | | | | | | Tracks | | |
| Group delay (usec) (SBD) | 4.13655257120E+03 | | Apriori delay (usec) | | 4.13659961205E+03 | | Resid mbdelay (usec) | | -1.65846E-04 | +/- 7.1E-05 | |
| Sband delay (usec) | 4.13656002105E+03 | | Apriori clock (usec) | | 1.1232929E+00 | | Resid sbdelay (usec) | | -3.95910E-02 | +/- 5.6E-04 | |
| Phase delay (usec) | 4.13659961774E+03 | | Apriori clockrate (us/s) | | 1.1622864E-08 | | Resid phdelay (usec) | | 5.69226E-06 | +/- 2.4E-07 | |
| Delay rate (us/s) | -5.08090102555E-01 | | Apriori rate (us/s) | | -5.08090138122E-01 | | Resid rate (us/s) | | 3.55668E-08 | +/- 2.8E-09 | |
| Total phase (deg) | 26.1 | | Apriori accel (us/s/s) | | -2.84550424266E-06 | | Resid phase (deg) | | 176.5 | +/- 7.5 | |
| | RMS | Theor. | Amplitude | 0.456 +/- 0.030 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | |
| ph/seg (deg) | 20.9 | 18.0 | Search (1024X32) | 0.443 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | | -1.000 1.000 | |
| amp/seg (%) | 31.1 | 31.4 | Interp. | 0.000 | | Bits/sample: 2x2 | | SampCntNorm: enabled | | mb window (us) | -0.008 0.008 |
| ph/frq (deg) | 36.5 | 10.6 | Inc. seg. avg. | 0.468 | | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | | dr window (ns/s) | | -0.011 0.011 | |
| amp/frq (%) | 22.5 | 18.5 | Inc. frq. avg. | 0.514 | | Data rate(Mb/s): 2048 | | nlags: 256 t_cohere infinite | | ion window (TEC) | 0.00 0.00 |
| Z: az 118.7 el 60.6 pa -34.4 | P: az 66.7 el 42.5 pa -72.7 | | u,v (fr/asec) 3788.001 1597.096 | | | | | | simultaneous interpolator | | |
| Control file: cf_1234_gmva | Input file: /Exps/c241a/v2/3mm/1234/No1160/ZP..3MP20R | | Output file: /Exps/c241a/v2/3mm/1234/No1160/ZP.W.177.3MP20R | | | | | | | | |

Mk4/DiFX fourfit 3.25 rev 0

aux01

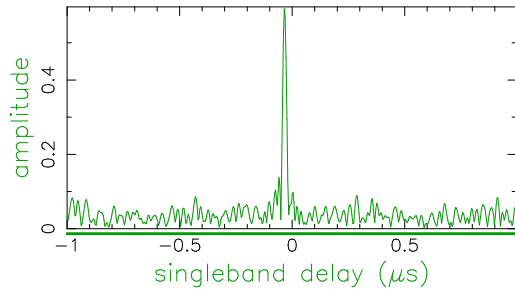
3C345.3MP20R, No1160, ZP

METSAHOV - PICOVEL, fgroup W, pol RL

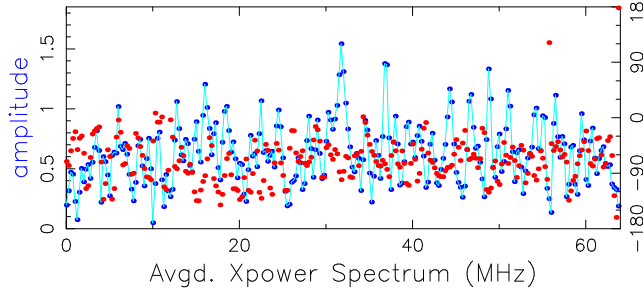


Fringe quality 8

SNR 20.0
 Int time 149.957
 Amp 0.597
 Phase -87.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.033954
 MBD -0.001343
 Fringe rate (Hz)
 0.002958
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

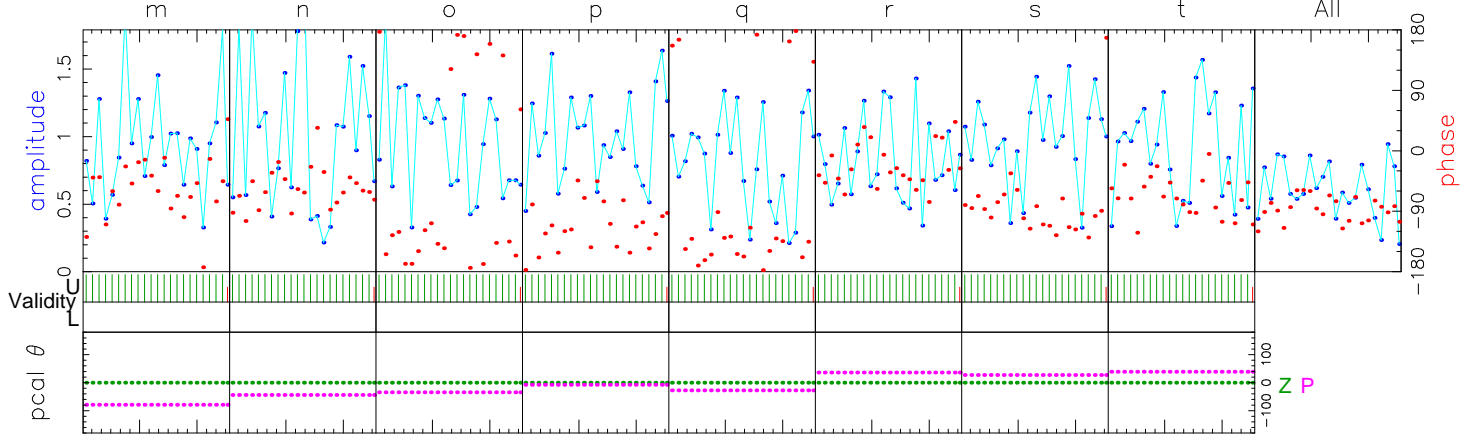


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141451
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec

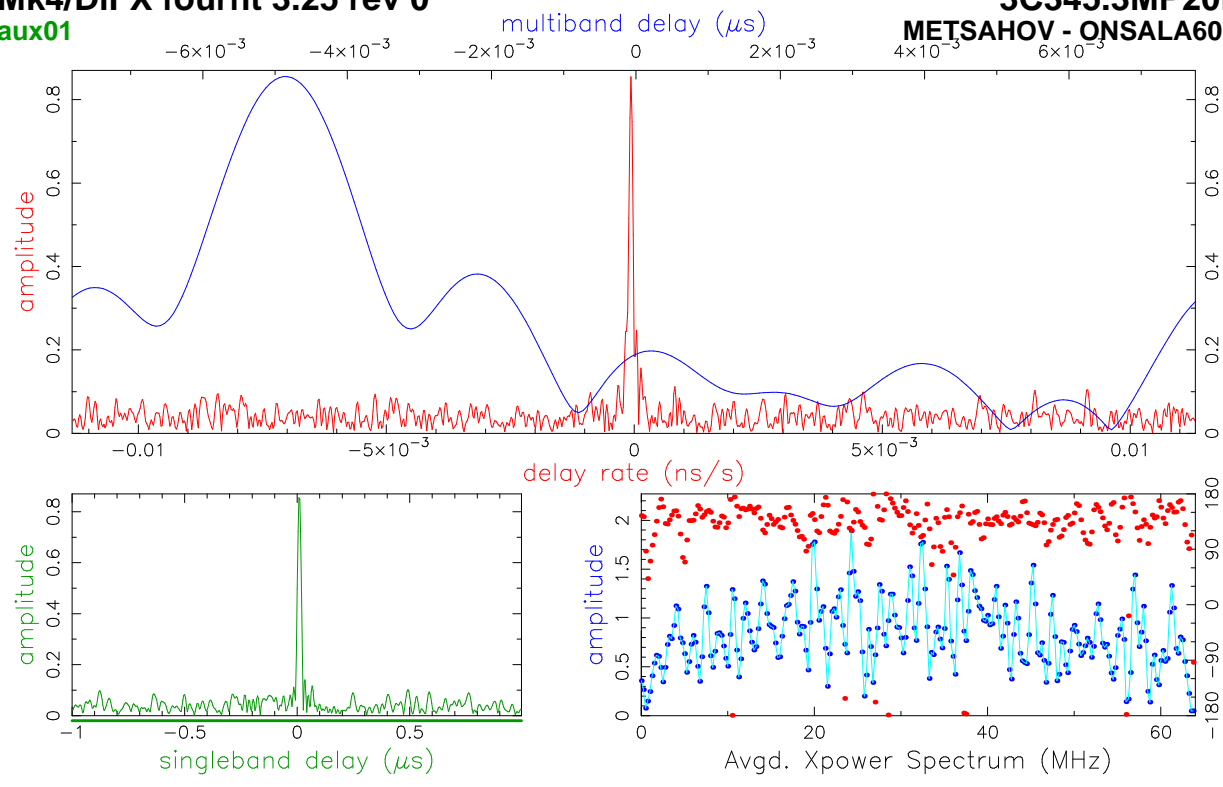


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -50.7 | -58.0 | -158.4 | -110.9 | -154.4 | -24.3 | -95.0 | -64.5 | Phase | -87.1 |
| | 0.8 | 1.0 | 0.8 | 0.9 | 0.7 | 0.7 | 0.9 | 0.8 | Ampl. | 0.8 |
| | 247.1 | 248.5 | 249.1 | 249.1 | 249.6 | 249.1 | 249.8 | 248.7 | Sbd box | 248.3 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| Z:P | 0:-79 | 0:-44 | 0:-34 | 0:-8 | 0:-28 | 0:36 | 0:27 | 0:39 | Mani PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| P | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

Group delay (usec) (SBD) 4.13656701942E+03 Apriori delay (usec) 4.13659961205E+03 Resid mbdelay (usec) -1.34263E-03 +/- 5.4E-05
 Sband delay (usec) 4.1365665830E+03 Apriori clock (usec) 1.1232929E+00 Resid sbdelay (usec) -3.39537E-02 +/- 4.3E-04
 Phase delay (usec) 4.13659960924E+03 Apriori clockrate (us/s) 1.1622864E-08 Resid phdelay (usec) -2.80901E-06 +/- 1.8E-07
 Delay rate (us/s) -5.08090103776E-01 Apriori rate (us/s) -5.08090138122E-01 Resid rate (us/s) 3.43452E-08 +/- 2.1E-09
 Total phase (deg) 122.4 Apriori accel (us/s/s) -2.84550424266E-06 Resid phase (deg) -87.1 +/- 5.7

RMS Theor. Amplitude 0.597 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 18.2 13.7 Search (1024X32) 0.571 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 32.5 24.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 53.0 8.1 Inc. seg. avg. 0.605 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 38.9 14.2 Inc. frq. avg. 0.805 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 118.7 el 60.6 pa -34.4 P: az 66.7 el 42.5 pa -72.7 u,v (fr/asec) 3788.001 1597.096 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZP..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZP.W.199.3MP20R

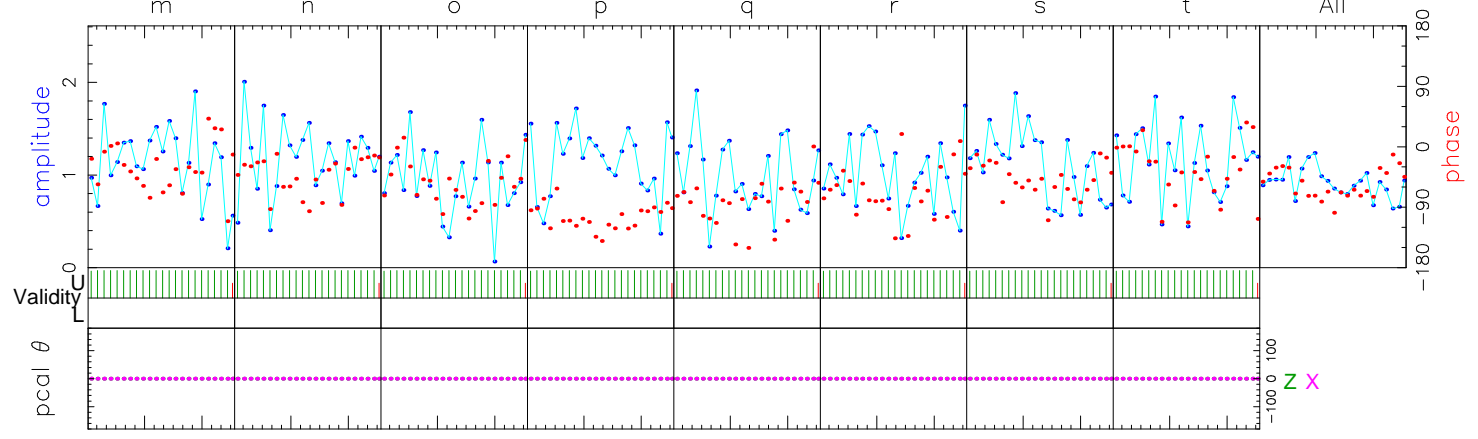


Fringe quality 7

SNR 29.1
Int time 149.845
Amp 0.870
Phase -55.8
PFD 0.0e+00
Delays (us)
SBD 0.009577
MBD -0.004823
Fringe rate (Hz)
-0.005086
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c241a
Exper # 1234
Yr:day 2024:109
Start 230001.00
Stop 230231.02
FRT 230116.00
Corr/FF/build
2025:008:140542
2025:041:141445
2024:113:095956
RA & Dec (J2000)
16h42m58.809971s
+39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | |
|------------------------------|---|----------|---|-----------------|---|----------|------------------------------|----------|---------------------------|-------------|-------|
| | -28.4 | -40.3 | -50.8 | -105.9 | -80.2 | -69.6 | -48.0 | -26.8 | Phase | -55.8 | |
| | 1.0 | 1.1 | 0.8 | 1.1 | 0.9 | 0.8 | 1.0 | 0.9 | Ampl. | 0.9 | |
| | 259.5 | 259.3 | 259.6 | 259.4 | 260.0 | 259.6 | 259.8 | 260.2 | Sbd box | 259.5 | |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | | |
| X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 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) | 8.92510337629E+02 | | Apriori delay (usec) | | 8.92499535438E+02 | | Resid mbdelay (usec) | | -4.82281E-03 | +/- 3.7E-05 | |
| Sband delay (usec) | 8.92509112438E+02 | | Apriori clock (usec) | | -1.1256310E+02 | | Resid sbdelay (usec) | | 9.57700E-03 | +/- 3.0E-04 | |
| Phase delay (usec) | 8.92499533638E+02 | | Apriori clockrate (us/s) | | -6.0676312E-07 | | Resid phdelay (usec) | | -1.79989E-06 | +/- 1.3E-07 | |
| Delay rate (us/s) | -1.35157006919E-01 | | Apriori rate (us/s) | | -1.35156947873E-01 | | Resid rate (us/s) | | -5.90455E-08 | +/- 1.5E-09 | |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -3.49747274328E-06 | | Resid phase (deg) | | -55.8 | +/- 3.9 | |
| | RMS | Theor. | Amplitude | 0.870 +/- 0.030 | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | | |
| ph/seg (deg) | 21.8 | 9.4 | Search (1024X32) | 0.844 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | | -1.000 | 1.000 | |
| amp/seg (%) | 19.2 | 16.5 | Interp. | 0.000 | Bits/sample: 2x2 | | SampCntNorm: enabled | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 29.5 | 5.6 | Inc. seg. avg. | 0.904 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | | dr window (ns/s) | | -0.011 | 0.011 | |
| amp/frq (%) | 14.8 | 9.7 | Inc. frq. avg. | 0.947 | Data rate(Mb/s): 2048 | | nlags: 256 t_cohere infinite | | ion window (TEC) | 0.00 | 0.00 |
| Z: az 118.7 el 60.6 pa -34.4 | X: az 100.3 el 55.5 pa -43.6 | | u,v (fr/asec) 1004.742 -60.596 | | | | | | simultaneous interpolator | | |
| Control file: cf_1234_gmva | Input file: /Exps/c241a/v2/3mm/1234/No1160/ZX..3MP20R | | Output file: /Exps/c241a/v2/3mm/1234/No1160/ZX.W.157.3MP20R | | | | | | | | |

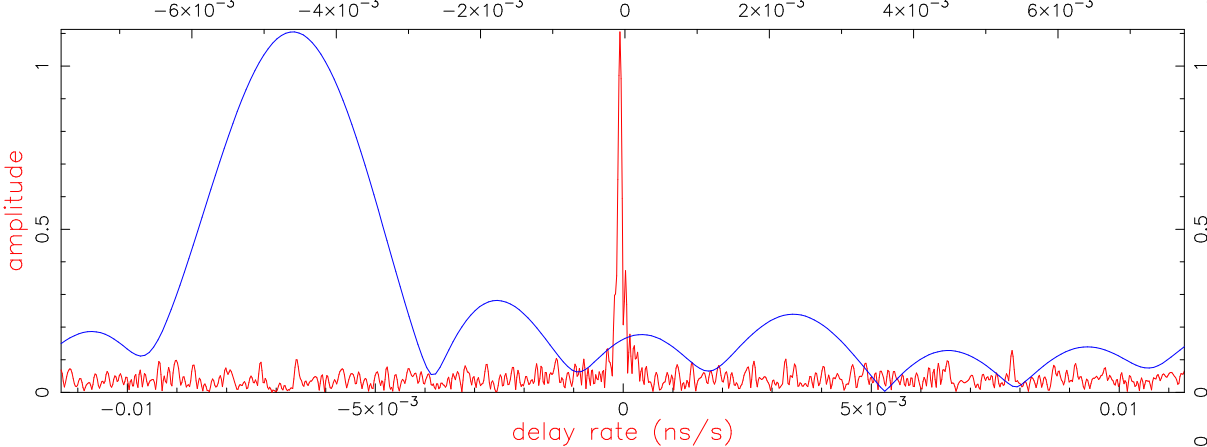
Mk4/DiFX fourfit 3.25 rev 0

aux01

3C345.3MP20R, No1160, ZX

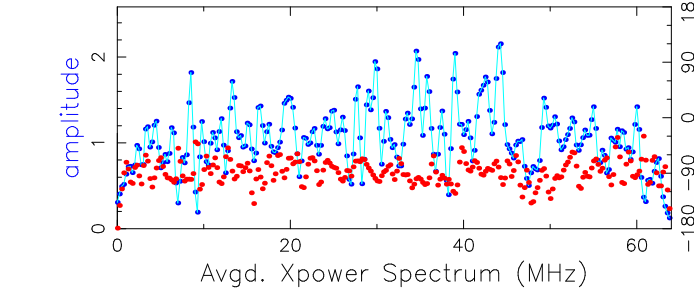
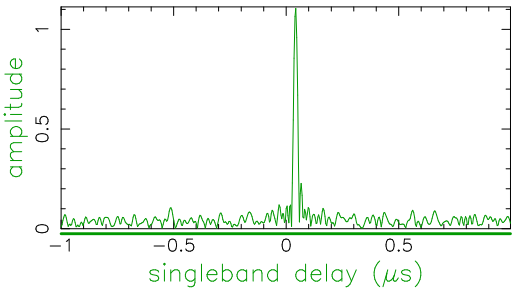
METSAHOV - ONSALA60, fgroup W, pol RR

multiband delay (μ s)



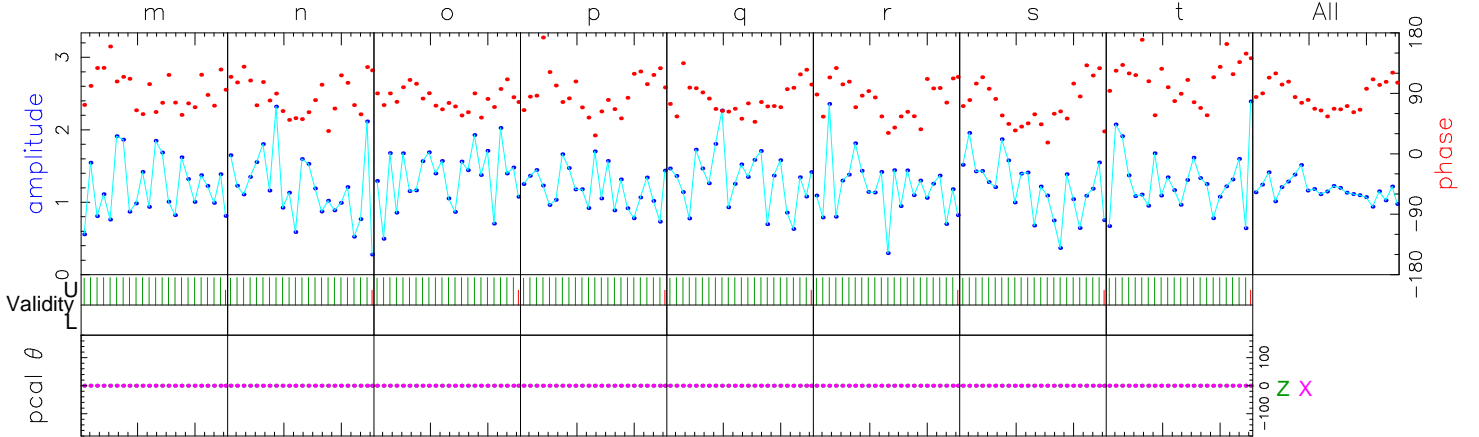
Fringe quality 8

SNR 37.2
 Int time 149.845
 Amp 1.113
 Phase 87.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.041847
 MBD -0.004630
 Fringe rate (Hz)
 -0.004921
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141447
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

Group delay (usec) (SBD) 8.92541780285E+02 Apriori delay (usec) 8.92499535438E+02 Resid mbdelay (usec) -4.63015E-03 +/- 2.9E-05
 Sband delay (usec) 8.92541382438E+02 Apriori clock (usec) -1.1256310E+02 Resid sbdelay (usec) 4.18470E-02 +/- 2.3E-04
 Phase delay (usec) 8.92499538248E+02 Apriori clockrate (us/s) -6.0676312E-07 Resid phdelay (usec) 2.81070E-06 +/- 9.9E-08
 Delay rate (us/s) -1.35157005001E-01 Apriori rate (us/s) -1.35156947873E-01 Resid rate (us/s) -5.71282E-08 +/- 1.1E-09
 Total phase (deg) 80.9 Apriori accel (us/s/s) -3.49747274328E-06 Resid phase (deg) 87.2 +/- 3.1

RMS Theor. Amplitude 1.113 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 20.3 7.4 Search (1024X32) 1.059 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 13.2 12.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 12.3 4.4 Inc. seg. avg. 1.166 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 8.3 7.6 Inc. frq. avg. 1.120 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

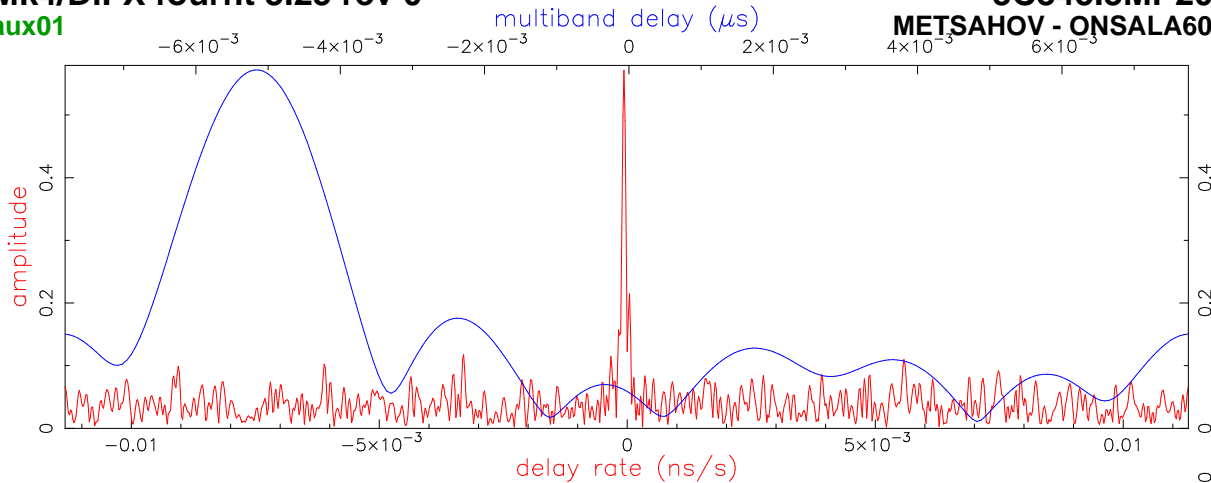
Z: az 118.7 el 60.6 pa -34.4 X: az 100.3 el 55.5 pa -43.6 u,v (fr/asec) 1004.742 -60.596 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZX..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZX.W.172.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

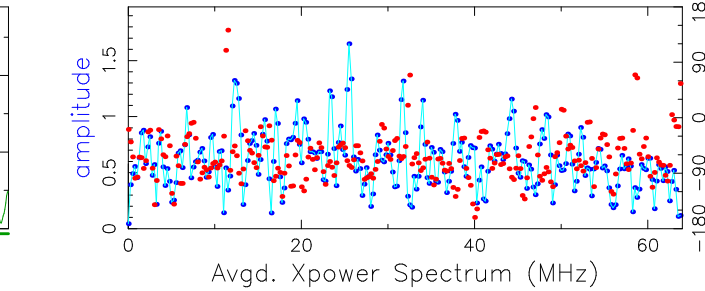
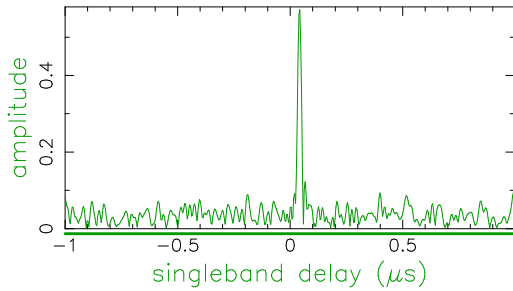
3C345.3MP20R, No1160, ZX

METSAHOV - ONSALA60, fgroup W, pol LR



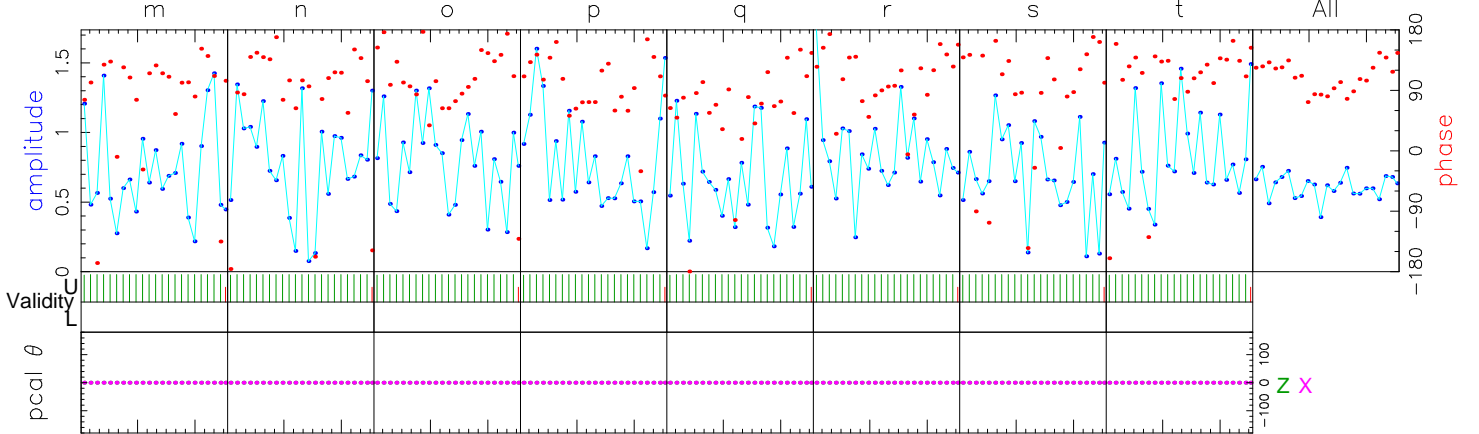
Fringe quality 9

SNR 19.4
 Int time 149.845
 Amp 0.579
 Phase 110.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.041451
 MBD -0.005206
 Fringe rate (Hz)
 -0.004933
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141449
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 113.3 | 117.8 | 112.4 | 100.7 | 78.7 | 107.8 | 120.6 | 127.7 | Phase | 110.5 |
| | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.7 | 0.4 | 0.7 | Ampl. | 0.6 |
| | 267.9 | 267.8 | 267.1 | 267.7 | 267.1 | 267.7 | 268.1 | 268.0 | Sbd box | 267.6 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | 8.92541204348E+02 | Apriori delay (usec) | 8.92499535438E+02 | Resid mbdelay (usec) | -5.20609E-03 | +/- | 5.6E-05 |
| Sband delay (usec) | 8.92540986188E+02 | Apriori clock (usec) | -1.1256310E+02 | Resid sbdelay (usec) | 4.14508E-02 | +/- | 4.4E-04 |
| Phase delay (usec) | 8.92499539001E+02 | Apriori clockrate (us/s) | -6.0676312E-07 | Resid phdelay (usec) | 3.56298E-06 | +/- | 1.9E-07 |
| Delay rate (us/s) | -1.35157005137E-01 | Apriori rate (us/s) | -1.35156947873E-01 | Resid rate (us/s) | -5.72642E-08 | +/- | 2.2E-09 |
| Total phase (deg) | 104.2 | Apriori accel (us/s/s) | -3.49747274328E-06 | Resid phase (deg) | 110.5 | +/- | 5.9 |

| | | | | | | | | |
|--------------|------|------------------|-------|---|-----------------|------------------------------|-----------------------|--------------|
| ph/seg (deg) | 21.5 | Theor. | 14.2 | Amplitude | 0.579 +/- 0.030 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | |
| amp/seg (%) | 15.8 | Search (1024X32) | 0.547 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 16.2 | Interp. | 0.000 | Bits/sample: 2x2 | | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 16.0 | Inc. seg. avg. | 0.596 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | | dr window (ns/s) | -0.011 0.011 | |
| | | Inc. frq. avg. | 0.582 | Data rate(Mb/s): 2048 | | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 0.00 |

Z: az 118.7 el 60.6 pa -34.4 X: az 100.3 el 55.5 pa -43.6 u,v (fr/asec) 1004.742 -60.596 simultaneous interpolator

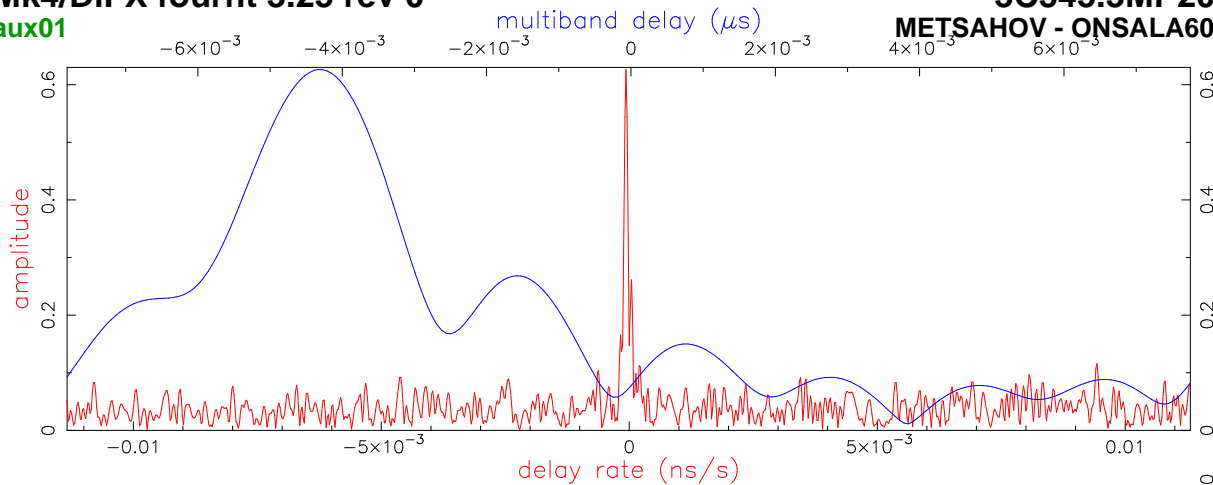
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZX..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZX.W.185.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

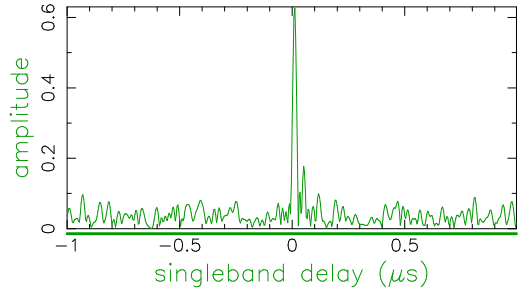
3C345.3MP20R, No1160, ZX

METSAHOV - ONSALA60, fgroup W, pol RL

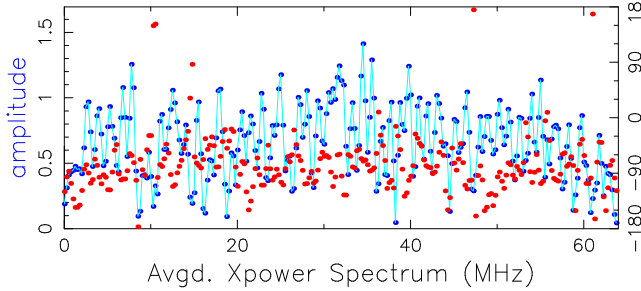


Fringe quality 8

SNR 21.1
 Int time 149.845
 Amp 0.630
 Phase 90.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.010712
 MBD -0.004326
 Fringe rate (Hz)
 -0.004781
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

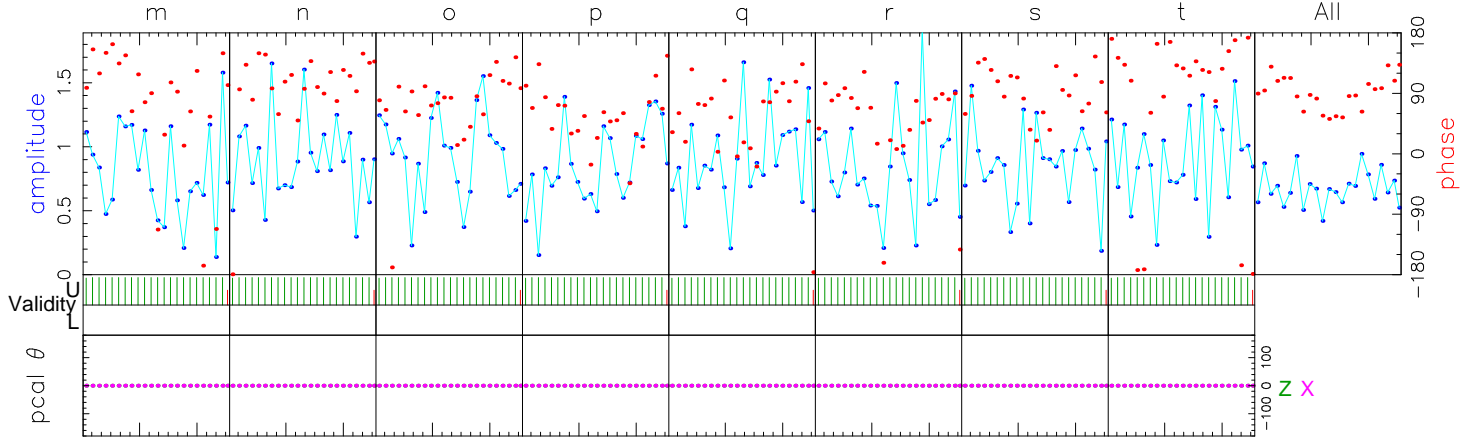


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141451
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | | | | |
|--------------------------|--------------------|--------------------------|------------------------|--------------------|----------------------|-------------------|--------------|------|---------|-----|
| Group delay (usec) (SBD) | 8.92510834848E+02 | Apriori delay (usec) | | 8.92499535438E+02 | Resid mbdelay (usec) | | -4.32559E-03 | +/- | 5.1E-05 | |
| Sband delay (usec) | 8.92510247438E+02 | Apriori clock (usec) | | -1.1256310E+02 | Resid sbdelay (usec) | | 1.07120E-02 | +/- | 4.1E-04 | |
| Phase delay (usec) | 8.92499538347E+02 | Apriori clockrate (us/s) | | -6.0676312E-07 | Resid phdelay (usec) | | 2.90979E-06 | +/- | 1.8E-07 | |
| Delay rate (us/s) | -1.35157003371E-01 | Apriori rate (us/s) | | -1.35156947873E-01 | Resid rate (us/s) | | -5.54985E-08 | +/- | 2.0E-09 | |
| Total phase (deg) | | 84.0 | Apriori accel (us/s/s) | | -3.49747274328E-06 | Resid phase (deg) | | 90.2 | +/- | 5.4 |

| | | | | | | | | | |
|--------------|------|-------------|------------------|-----------------|---|--|------------------------------|------------------|--------------|
| ph/seg (deg) | 24.0 | Theor. 13.0 | Amplitude | 0.630 +/- 0.030 | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | |
| amp/seg (%) | 22.3 | 22.7 | Search (1024X32) | 0.603 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 31.6 | 7.7 | Interp. | 0.000 | Bits/sample: 2x2 | | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 15.0 | 13.4 | Inc. seg. avg. | 0.662 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | | dr window (ns/s) | -0.011 0.011 | |
| | | | Inc. frq. avg. | 0.697 | Data rate(Mb/s): 2048 | | nlags: 256 t_cohere infinite | ion window (TEC) | 0.00 0.00 |

Z: az 118.7 el 60.6 pa -34.4 X: az 100.3 el 55.5 pa -43.6 u,v (fr/asec) 1004.742 -60.596 simultaneous interpolator

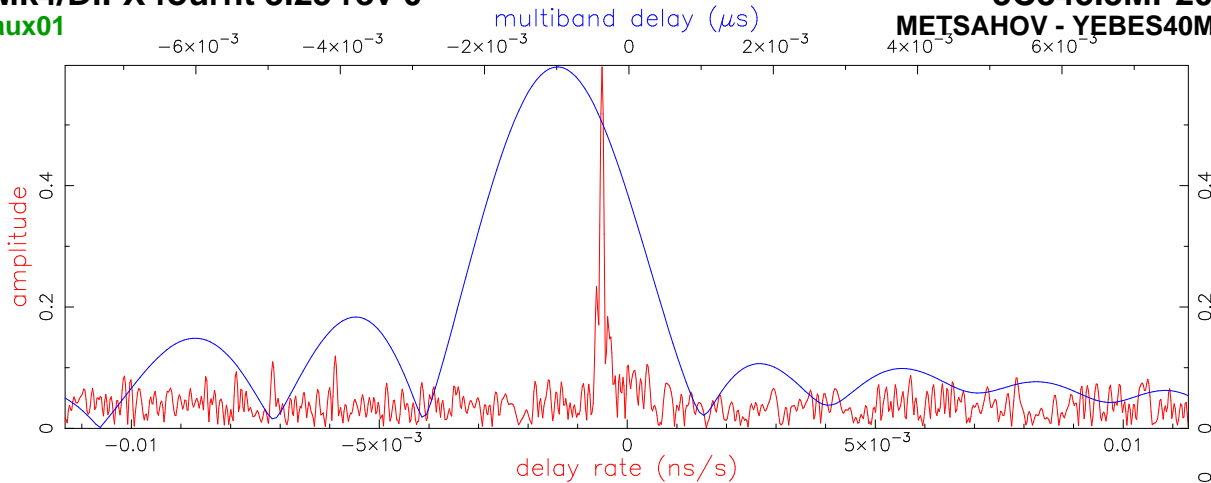
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZX..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZX.W.205.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

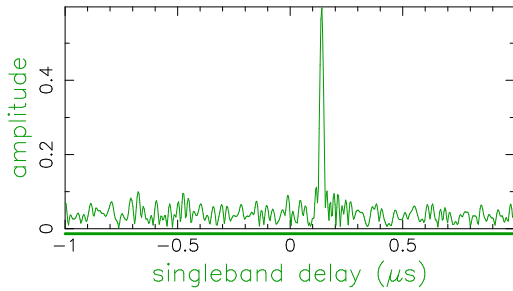
3C345.3MP20R, No1160, ZY

METSAHOV - YEBES40M, fgroup W, pol LL

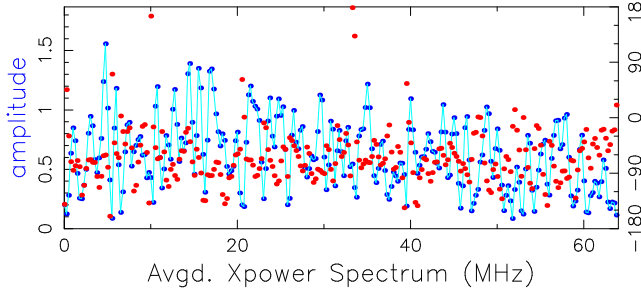


Fringe quality 9

SNR 20.0
 Int time 149.823
 Amp 0.598
 Phase 111.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.139859
 MBD -0.001008
 Fringe rate (Hz)
 -0.044212
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

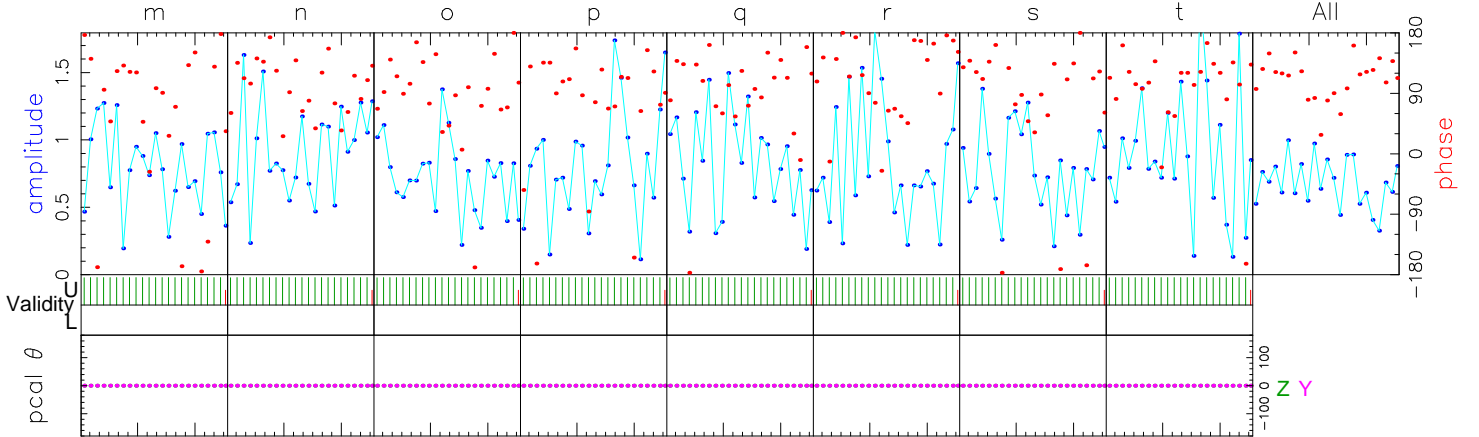


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141445
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Y | 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: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 | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | 3.84847161233E+03 | Apriori delay (usec) | 3.84833199562E+03 | Resid mbdelay (usec) | -1.00828E-03 | +/- | 5.4E-05 |
| Sband delay (usec) | 3.84847185437E+03 | Apriori clock (usec) | 1.1070210E+02 | Resid sbdelay (usec) | 1.39859E-01 | +/- | 4.3E-04 |
| Phase delay (usec) | 3.84833199921E+03 | Apriori clockrate (us/s) | 1.8235290E-06 | Resid phdelay (usec) | 3.59426E-06 | +/- | 1.8E-07 |
| Delay rate (us/s) | -4.65987814668E-01 | Apriori rate (us/s) | -4.65987301413E-01 | Resid rate (us/s) | -5.13255E-07 | +/- | 2.1E-09 |
| Total phase (deg) | 148.3 | Apriori accel (us/s/s) | -4.11135971007E-06 | Resid phase (deg) | 111.5 | +/- | 5.7 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|---------------------|-----------------------------|------------------------------|------------------|--------------|
| ph/seg (deg) | 30.8 | Theor. | 13.7 | Amplitude | 0.598 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 32.7 | | 24.0 | Search (1024X32) | 0.591 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 10.3 | | 8.1 | Inc. seg. avg. | 0.664 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 14.7 | | 14.1 | Inc. frq. avg. | 0.597 | Data rate(MSamp/s): | 128 MBpts 32 Amb 0.016 us | 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 |

Z: az 118.7 el 60.6 pa -34.4 Y: az 69.9 el 44.0 pa -68.4 u,v (fr/asec) 3472.528 1197.205 simultaneous interpolator

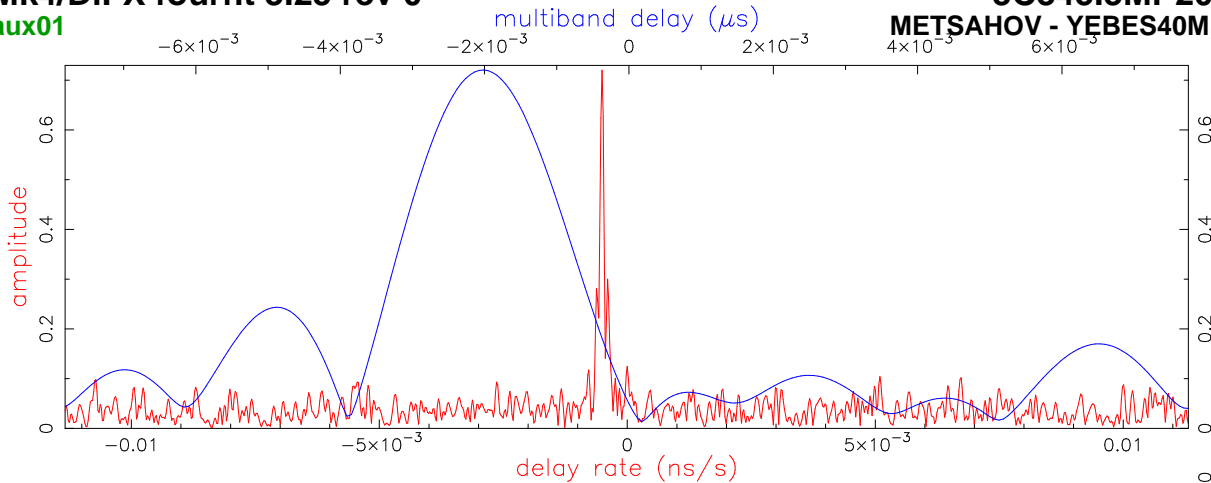
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZY..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZY.W.156.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

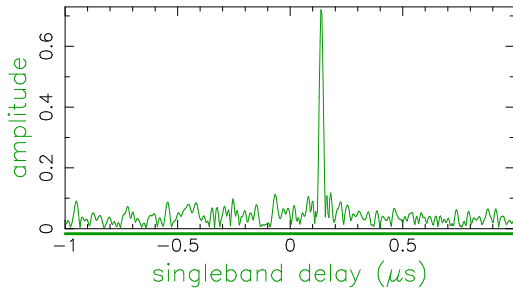
3C345.3MP20R, No1160, ZY

METSAHOV - YEBES40M, fgroup W, pol RR

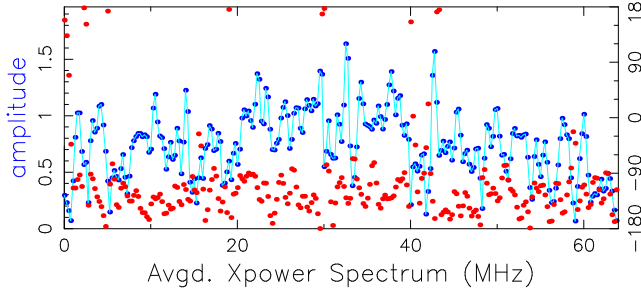


Fringe quality 8

SNR 24.4
 Int time 149.823
 Amp 0.730
 Phase 48.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.138231
 MBD -0.001980
 Fringe rate (Hz)
 -0.044031
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

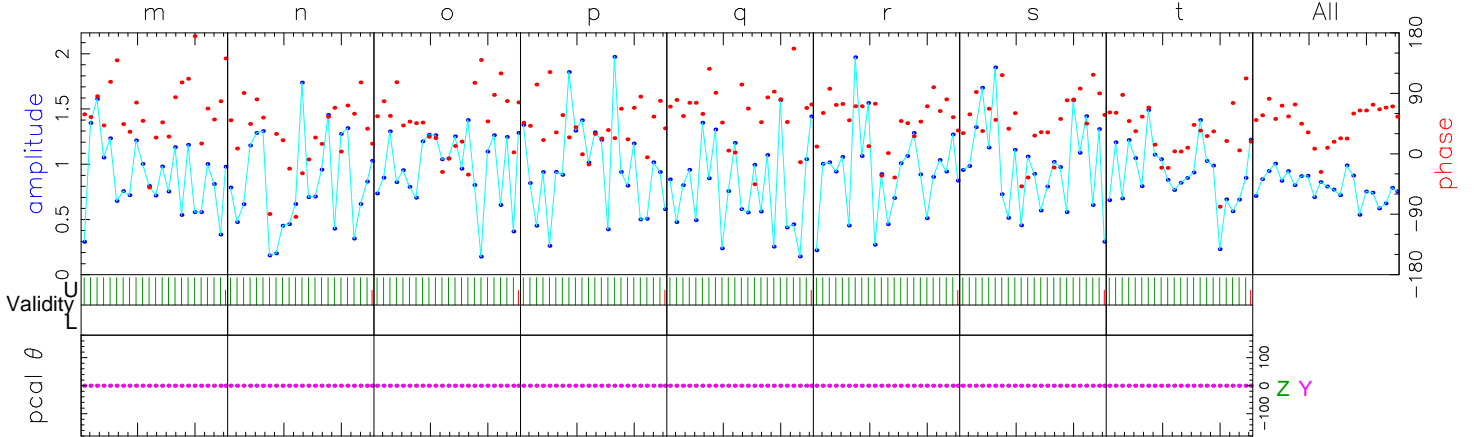


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141447
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 68.0 | 34.2 | 43.7 | 36.4 | 66.1 | 52.4 | 54.3 | 34.3 | Phase | 48.1 |
| | 0.7 | 0.6 | 0.7 | 0.9 | 0.6 | 0.8 | 0.8 | 0.8 | Ampl. | 0.7 |
| | 291.9 | 291.7 | 292.4 | 292.5 | 292.7 | 292.2 | 292.4 | 291.7 | Sbd box | 292.4 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | Manl PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | | | |
|--------------------------|--------------------|--------------------------|--|--------------------|----------------------|--|--------------|-----|---------|
| Group delay (usec) (SBD) | 3.84847064096E+03 | Apriori delay (usec) | | 3.84833199562E+03 | Resid mbdelay (usec) | | -1.97966E-03 | +/- | 4.4E-05 |
| Sband delay (usec) | 3.84847022687E+03 | Apriori clock (usec) | | 1.1070210E+02 | Resid sbdelay (usec) | | 1.38231E-01 | +/- | 3.5E-04 |
| Phase delay (usec) | 3.84833199717E+03 | Apriori clockrate (us/s) | | 1.8235290E-06 | Resid phdelay (usec) | | 1.55084E-06 | +/- | 1.5E-07 |
| Delay rate (us/s) | -4.65987812575E-01 | Apriori rate (us/s) | | -4.65987301413E-01 | Resid rate (us/s) | | -5.11162E-07 | +/- | 1.7E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | | -4.11135971007E-06 | Resid phase (deg) | | 48.1 | +/- | 4.7 |

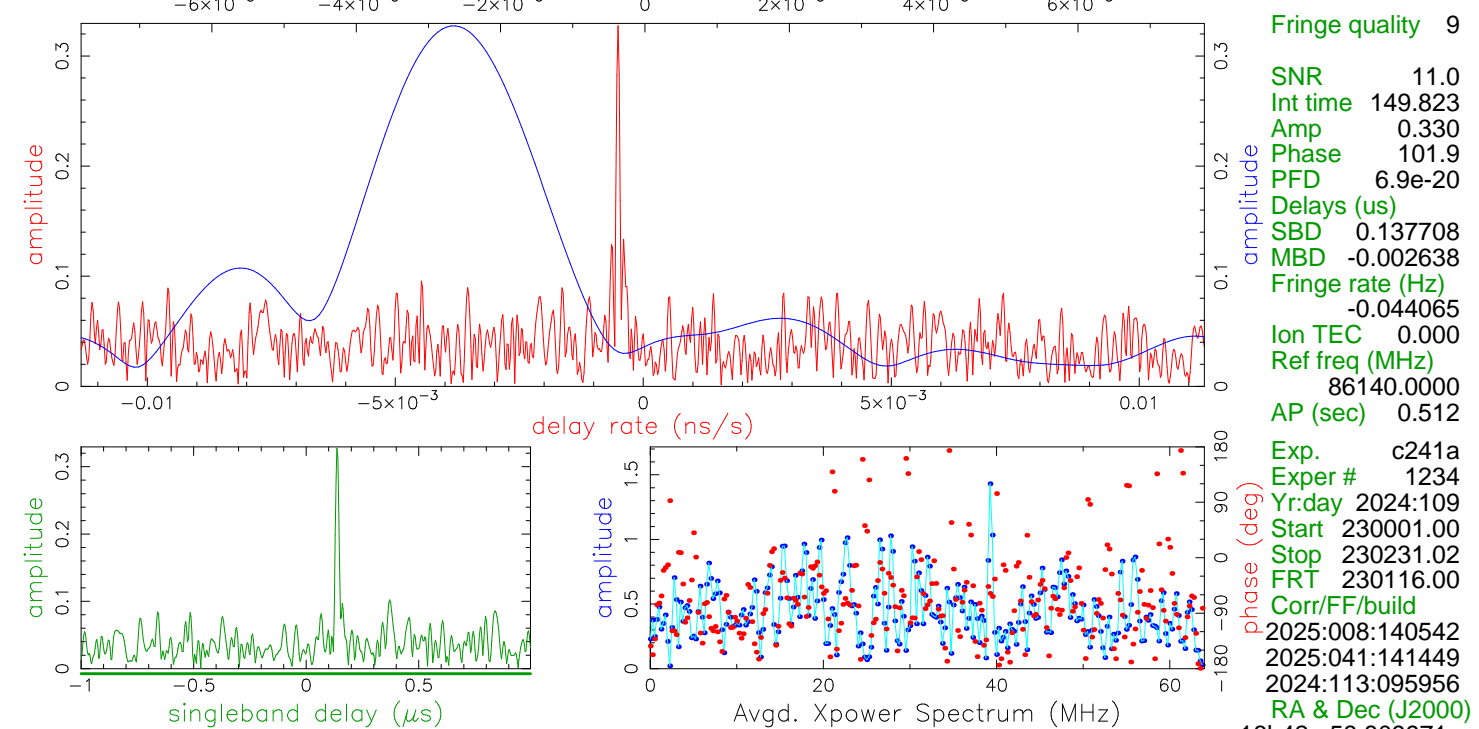
ph/seg (deg) RMS Theor. Amplitude 0.730 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 26.9 11.3 Search (1024X32) 0.717 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 19.1 19.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 14.8 6.6 Inc. seg. avg. 0.789 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 Z: az 118.7 el 60.6 pa -34.4 Y: az 69.9 el 44.0 pa -68.4 u,v (fr/asec) 3472.528 1197.205 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZY..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZY.W.173.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

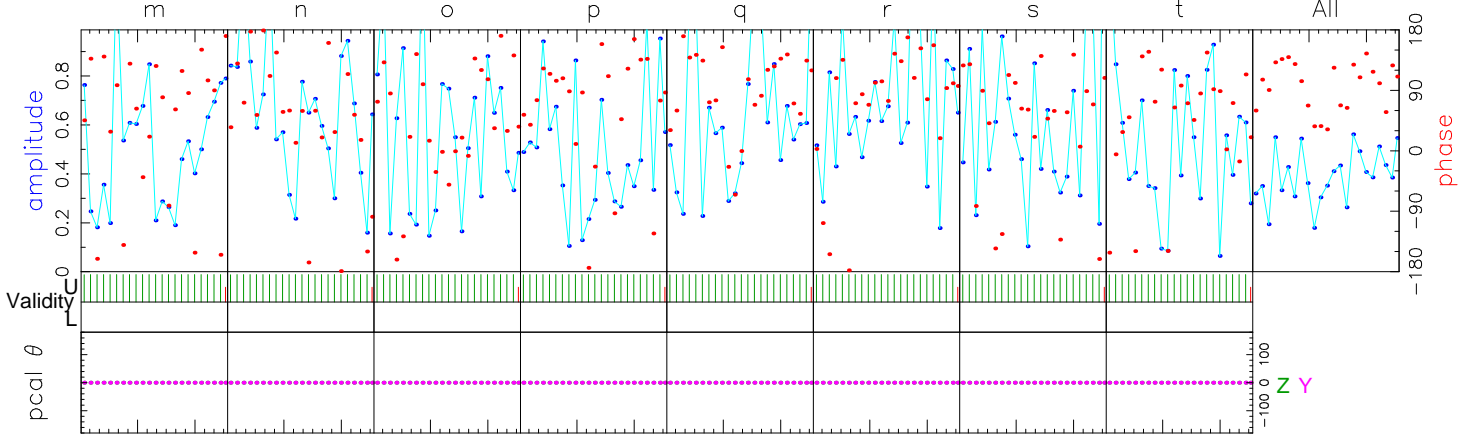
aux01

3C345.3MP20R, No1160, ZY

METSAHOV - YEBES40M, fgroup W, pol LR



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



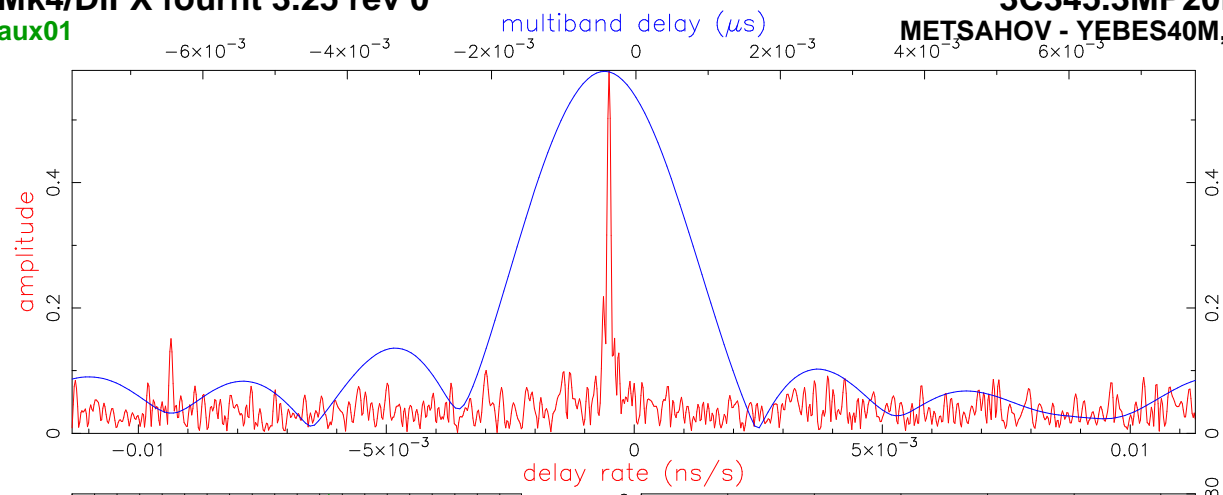
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 106.0 | 97.9 | 88.5 | 102.4 | 103.0 | 119.4 | 96.7 | 82.5 | Phase | 101.9 |
| | 0.2 | 0.4 | 0.2 | 0.3 | 0.5 | 0.5 | 0.3 | 0.2 | Ampl. | 0.3 |
| | 246.1 | 292.1 | 445.4 | 293.1 | 292.2 | 292.6 | 291.4 | 374.1 | Sbd box | 292.3 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | Manl 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 | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | 3.84846998230E+03 | Apriori delay (usec) | 3.84833199562E+03 | Resid mbdelay (usec) | -2.63832E-03 | +/- | 9.8E-05 |
| Sband delay (usec) | 3.84846970337E+03 | Apriori clock (usec) | 1.1070210E+02 | Resid sbdelay (usec) | 1.37708E-01 | +/- | 7.8E-04 |
| Phase delay (usec) | 3.84833199890E+03 | Apriori clockrate (us/s) | 1.8235290E-06 | Resid phdelay (usec) | 3.28658E-06 | +/- | 3.4E-07 |
| Delay rate (us/s) | -4.65987812961E-01 | Apriori rate (us/s) | -4.65987301413E-01 | Resid rate (us/s) | -5.11547E-07 | +/- | 3.9E-09 |
| Total phase (deg) | 138.8 | Apriori accel (us/s/s) | -4.11135971007E-06 | Resid phase (deg) | 101.9 | +/- | 10.4 |

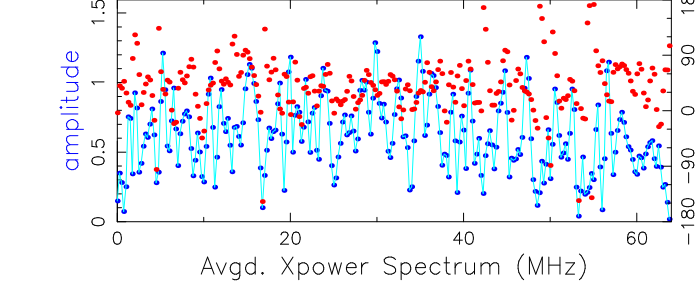
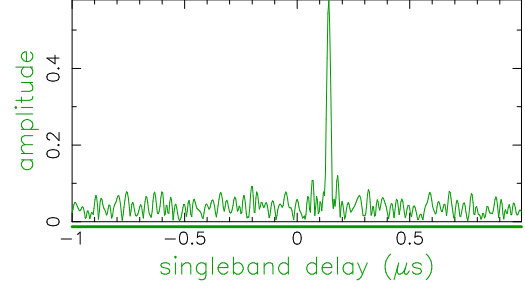
| | | | | | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|-------|---|-----------------------|------------------|--------|-------|
| ph/seg (deg) | RMS 36.1 | Theor. 24.9 | Amplitude Search (1024X32) | 0.330 +/- 0.030 | 0.321 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 36.9 | 43.5 | Interp. | 0.000 | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 12.4 | 14.7 | Inc. seg. avg. | 0.357 | 0.357 | Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us | nlags: 256 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 31.9 | 25.7 | Inc. frq. avg. | 0.323 | 0.323 | Data rate(Mb/s): 2048 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

Z: az 118.7 el 60.6 pa -34.4 Y: az 69.9 el 44.0 pa -68.4 u,v (fr/asec) 3472.528 1197.205 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZY..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZY.W.189.3MP20R

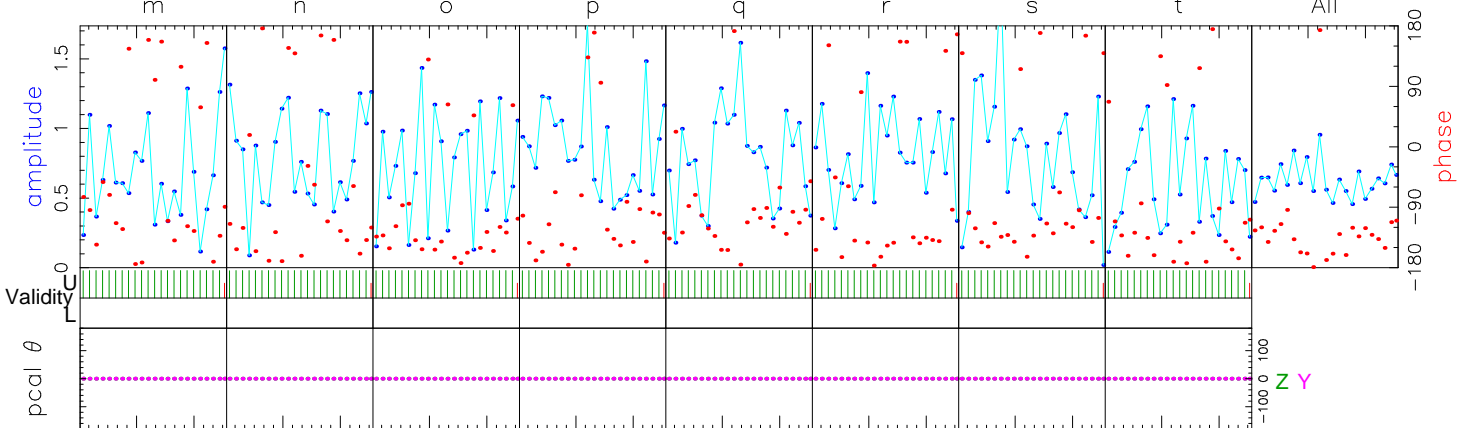


Fringe quality 9
SNR 19.4
Int time 149.823
Amp 0.579
Phase -139.1
PFD 0.0e+00
Delays (us)
SBD 0.140051
MBD -0.000449
Fringe rate (Hz)
-0.044087
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c241a
Exper # 1234
Yr:day 2024:109
Start 230001.00
Stop 230231.02
FRT 230116.00
Corr/FF/build
2025:008:140542
2025:041:141451
2024:113:095956
RA & Dec (J2000)
16h42m58.809971s
+39°48'36.993958"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -138.1 | -146.5 | -142.3 | -139.2 | -123.2 | -148.8 | -130.8 | -147.7 | Phase | -139.1 |
| | 0.4 | 0.6 | 0.6 | 0.6 | 0.7 | 0.6 | 0.7 | 0.5 | Ampl. | 0.6 |
| | 293.0 | 292.9 | 292.6 | 292.7 | 293.6 | 292.5 | 292.5 | 291.9 | Sbd box | 292.9 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | Manl PC | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|--------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec) (SBD) | 3.84847217161E+03 | Apriori delay (usec) | 3.84833199562E+03 | Resid mbdelay (usec) | -4.49003E-04 | +/- | 5.6E-05 |
| Sband delay (usec) | 3.84847204612E+03 | Apriori clock (usec) | 1.1070210E+02 | Resid sbdelay (usec) | 1.40051E-01 | +/- | 4.4E-04 |
| Phase delay (usec) | 3.84833199113E+03 | Apriori clockrate (us/s) | 1.8235290E-06 | Resid phdelay (usec) | -4.48636E-06 | +/- | 1.9E-07 |
| Delay rate (us/s) | -4.65987813215E-01 | Apriori rate (us/s) | -4.65987301413E-01 | Resid rate (us/s) | -5.11801E-07 | +/- | 2.2E-09 |
| Total phase (deg) | -102.2 | Apriori accel (us/s/s) | -4.11135971007E-06 | Resid phase (deg) | -139.1 | +/- | 5.9 |

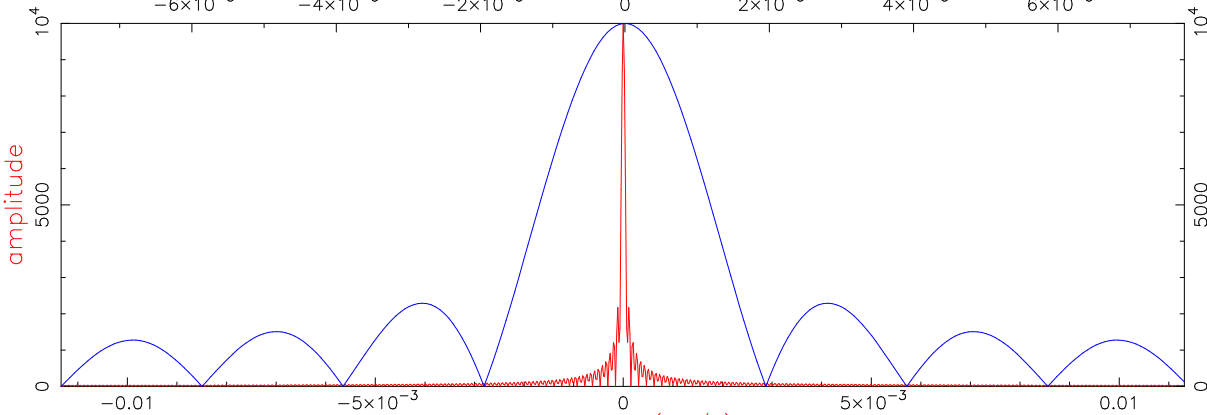
ph/seg (deg) 22.9 14.2 Search (1024X32) 0.572 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 22.9 24.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 9.6 8.4 Inc. seg. avg. 0.611 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 12.9 14.6 Inc. frq. avg. 0.578 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us 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
Z: az 118.7 el 60.6 pa -34.4 Y: az 69.9 el 44.0 pa -68.4 u,v (fr/asec) 3472.528 1197.205 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZY..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZY.W.204.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

aux01

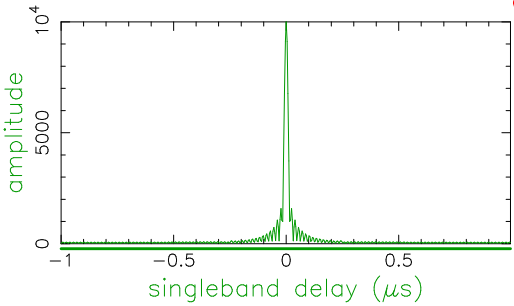
3C345.3MP20R, No1160, ZZ

METSAHOV - METSAHOV, fgroup W, pol LL

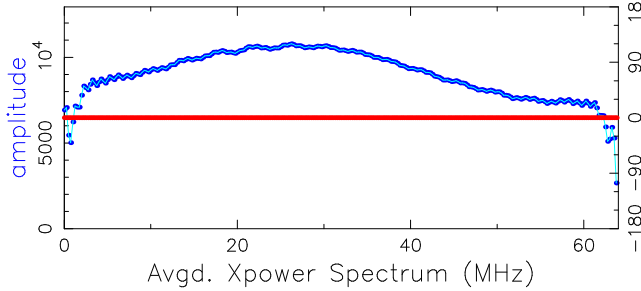


Fringe quality 9

SNR 334873.3
 Int time 149.957
 Amp 10000.002
 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

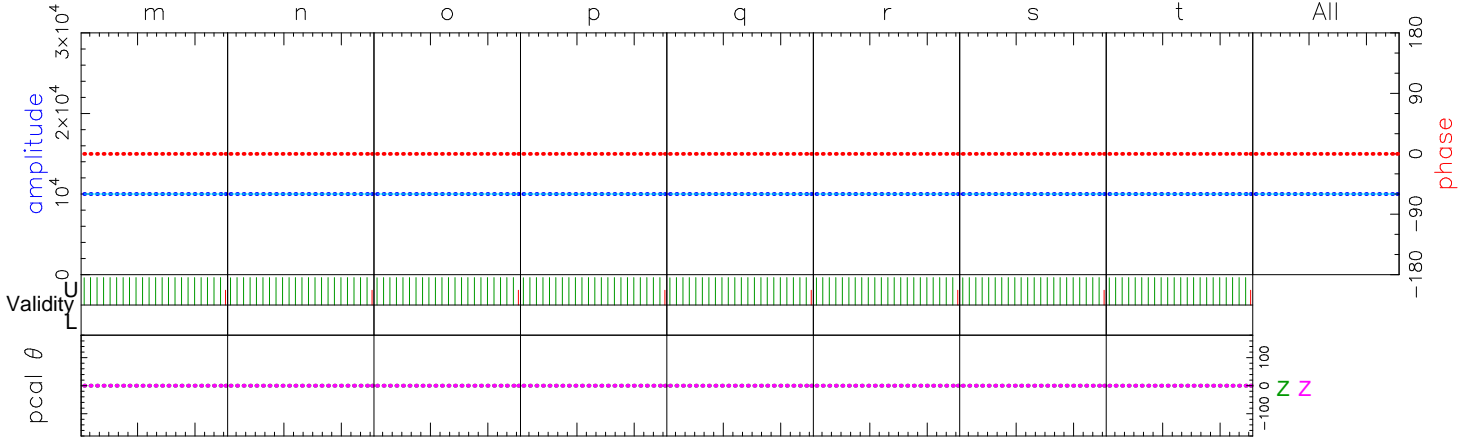


delay rate (ns/s)



Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141443
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | | |
| Z | 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: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 | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

Group delay (usec) (SBD) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.2E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.6E-08
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.1E-11
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 1.3E-13
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

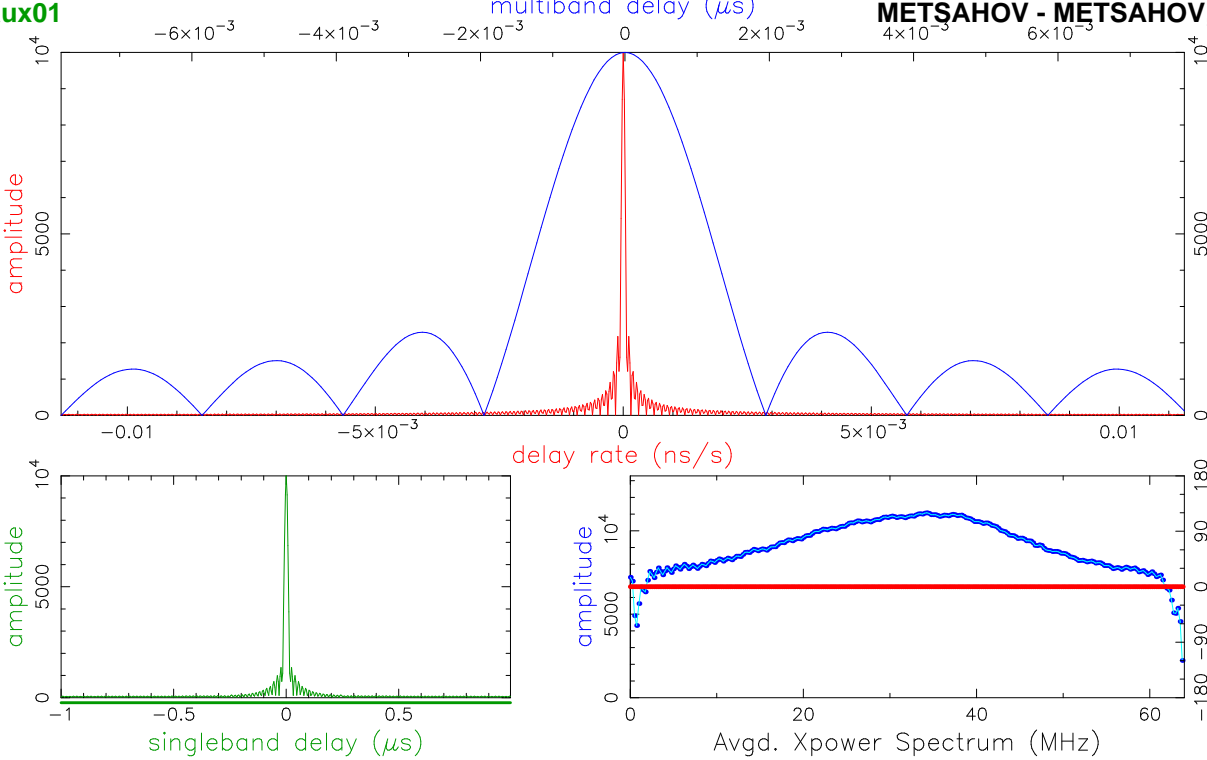
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.002 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (1024X32) 10000.002 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 Z: az 118.7 el 60.6 pa -34.4 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZZ.W.144.3MP20R simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

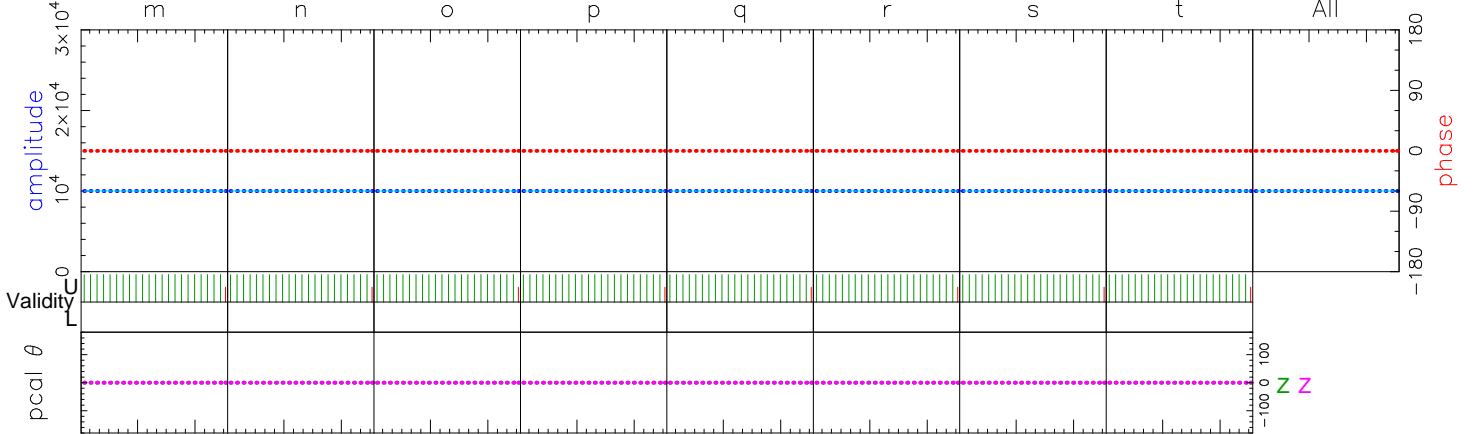
3C345.3MP20R, No1160, ZZ

METSAHOV - METSAHOV, fgroup W, pol RR



Fringe quality 9
 SNR 334873.3
 Int time 149.957
 Amp 10000.002
 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. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141445
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"

Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



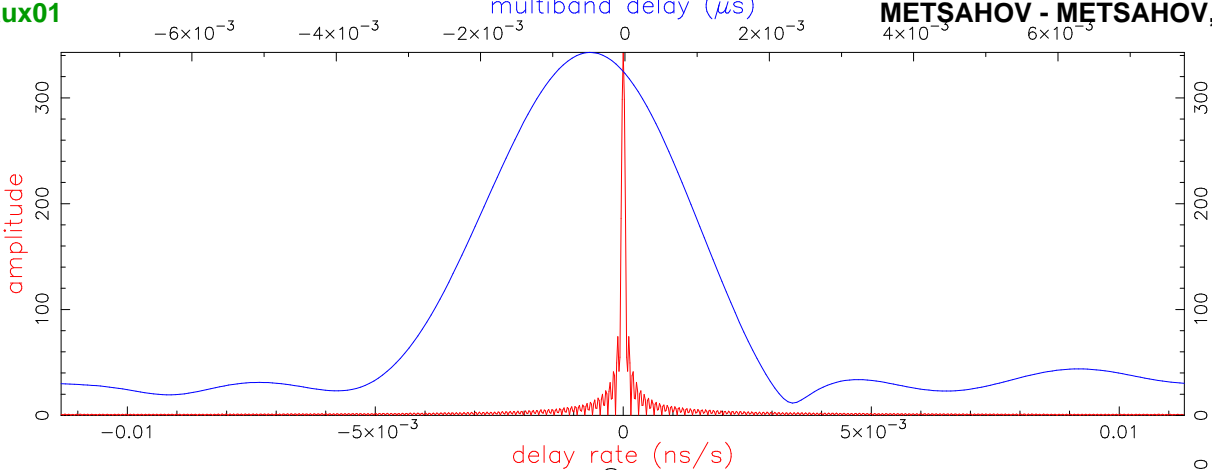
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|------------------------------|---|--------------------|---|--------------------|---------------------------|--------------------|--------------------|--------------------|--------------|-------------|
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 10000.0 | 10000.0 |
| Z | 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 | 10000.0 | 10000.0 |
| Z:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 257.0 | 257.0 |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 0.0 | 0.0 |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 0.0 | 0.0 |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | 0.0 | 0.0 |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | 0.0 | 0.0 |
| Group delay (usec) (SBD) | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000E+00 | +/- 3.2E-09 |
| Sband delay (usec) | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000E+00 | +/- 2.6E-08 |
| Phase delay (usec) | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000E+00 | +/- 1.1E-11 |
| Delay rate (us/s) | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000000000E+00 | 0.000000E+00 | +/- 1.3E-13 |
| Total phase (deg) | | | 0.0 | | | | | | 0.0 | +/- 0.0 |
| ph/seg (deg) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| amp/seg (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| ph/frq (deg) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| amp/frq (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Z: az 118.7 el 60.6 pa -34.4 | Z: az 118.7 el 60.6 pa -34.4 | | u, v (fr/asec) 0.000 0.000 | | simultaneous interpolator | | | | | |
| Control file: cf_1234_gmva | Input file: /Exps/c241a/v2/3mm/1234/No1160/ZZ..3MP20R | | Output file: /Exps/c241a/v2/3mm/1234/No1160/ZZ.W.155.3MP20R | | | | | | | |

Mk4/DiFX fourfit 3.25 rev 0

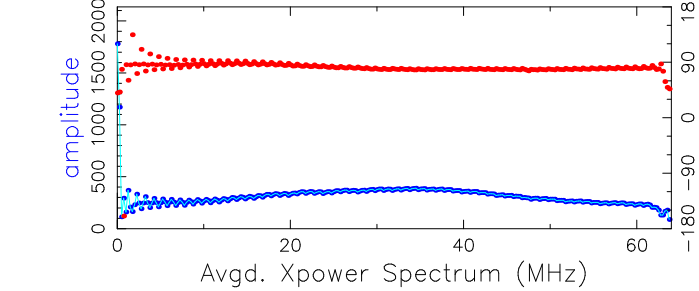
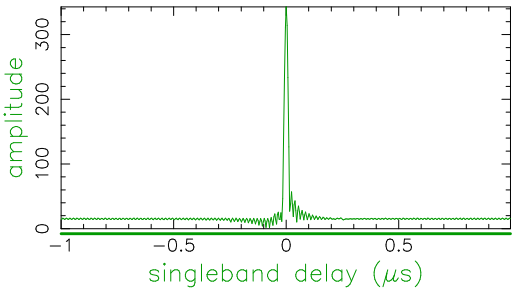
aux01

3C345.3MP20R, No1160, ZZ

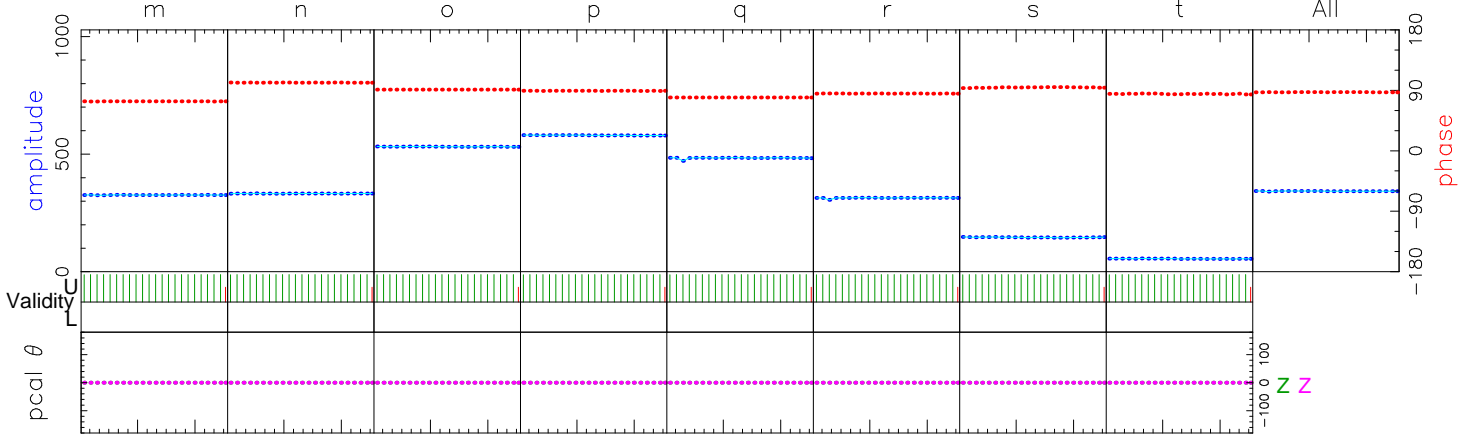
METSAHOV - METSAHOV, fgroup W, pol LR



Fringe quality 7
 Error code G
 SNR 11483.7
 Int time 149.957
 Amp 342.928
 Phase 87.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.000140
 MBD -0.000477
 Fringe rate (Hz)
 0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141447
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 73.5 | 101.4 | 91.1 | 89.2 | 79.3 | 85.2 | 94.2 | 84.6 | Phase | 87.2 |
| | 326.3 | 332.5 | 531.8 | 580.3 | 483.6 | 313.8 | 146.5 | 55.3 | Ampl. | 346.3 |
| | 256.8 | 257.2 | 256.8 | 256.9 | 256.9 | 257.4 | 258.1 | 257.0 | Sbd box | 257.0 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | |

Group delay (usec) (SBD) -4.770000000000E-04 Apriori delay (usec) 0.000000000000E+00 Resid mbdelay (usec) -4.77000E-04 +/- 9.5E-08
 Sband delay (usec) 1.405000000000E-04 Apriori clock (usec) 0.000000000000E+00 Resid sbdelay (usec) 1.40500E-04 +/- 7.5E-07
 Phase delay (usec) 2.81041181835E-06 Apriori clockrate (us/s) 0.000000000000E+00 Resid phdelay (usec) 2.81041E-06 +/- 3.2E-10
 Delay rate (us/s) 1.70053828700E-11 Apriori rate (us/s) 0.000000000000E+00 Resid rate (us/s) 1.70054E-11 +/- 3.7E-12
 Total phase (deg) 87.2 Apriori accel (us/s/s) 0.000000000000E+00 Resid phase (deg) 87.2 +/- 0.0

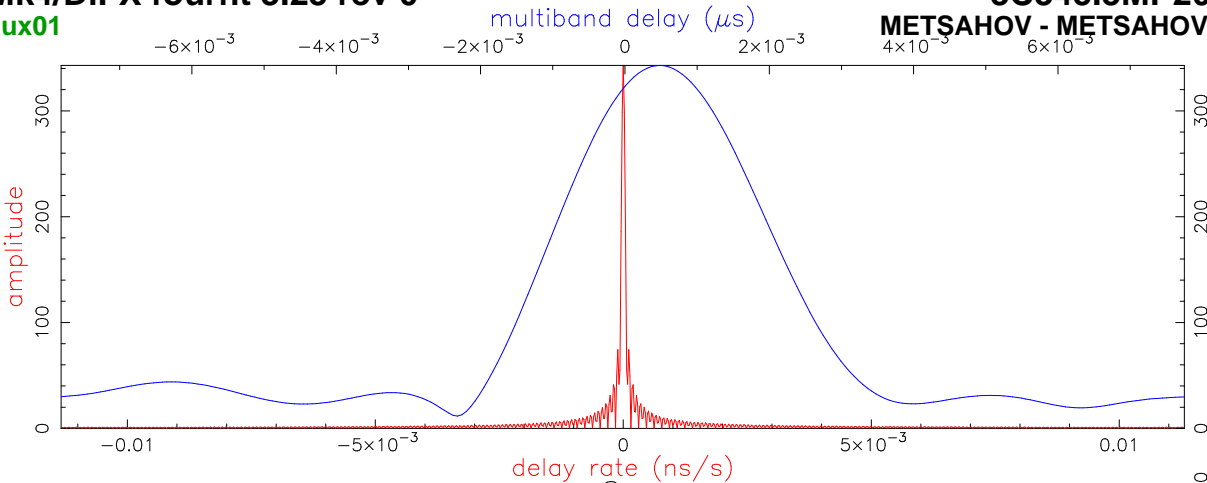
RMS Theor. Amplitude 342.928 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 342.885 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.2 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 9.4 0.0 Inc. seg. avg. 342.888 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 49.9 0.0 Inc. frq. avg. 346.252 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Z: az 118.7 el 60.6 pa -34.4 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZZ.W.171.3MP20R

Mk4/DiFX fourfit 3.25 rev 0

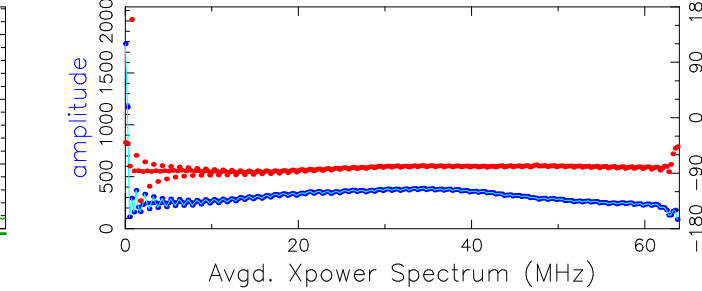
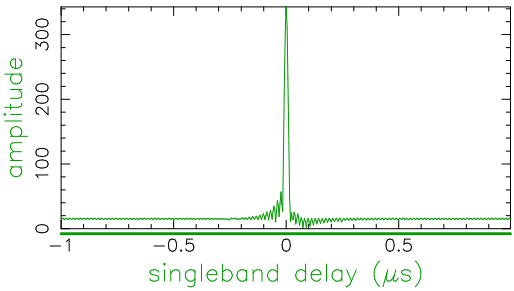
aux01

3C345.3MP20R, No1160, ZZ

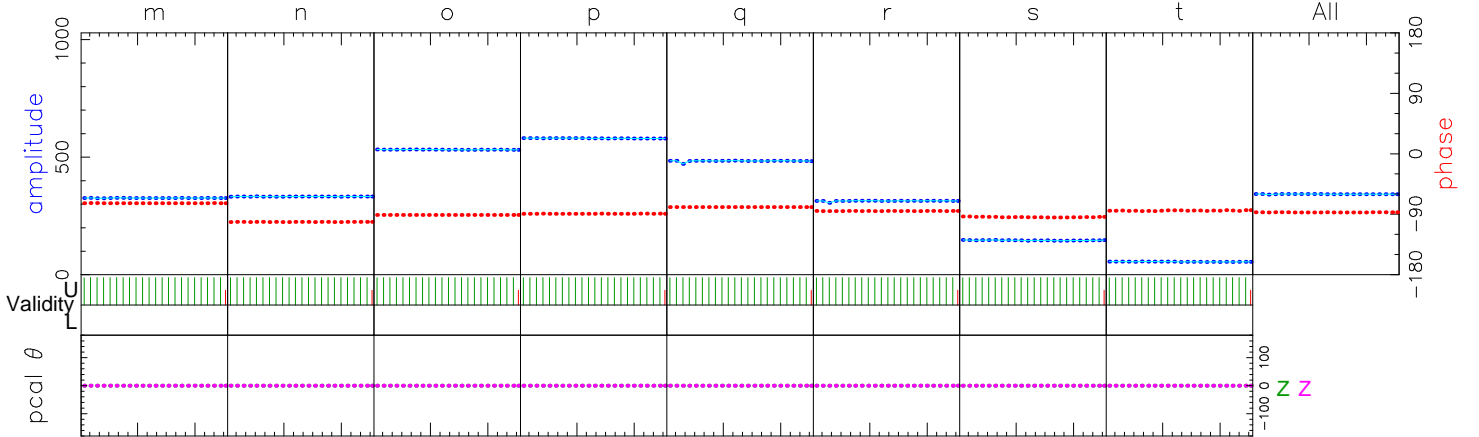
METSAHOV - METSAHOV, fgroup W, pol RL



Fringe quality 7
 Error code G
 SNR 11483.7
 Int time 149.957
 Amp 342.928
 Phase -87.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.000140
 MBD 0.000477
 Fringe rate (Hz)
 -0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c241a
 Exper # 1234
 Yr:day 2024:109
 Start 230001.00
 Stop 230231.02
 FRT 230116.00
 Corr/FF/build
 2025:008:140542
 2025:041:141450
 2024:113:095956
 RA & Dec (J2000)
 16h42m58.809971s
 +39°48'36.993958"



Amp. and Phase vs. time for each freq., 23 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -73.5 | -101.4 | -91.1 | -89.2 | -79.3 | -85.2 | -94.2 | -84.6 | Phase | -87.2 |
| | 326.3 | 332.5 | 531.8 | 580.3 | 483.6 | 313.8 | 146.5 | 55.3 | Ampl. | 346.3 |
| | 257.2 | 256.8 | 257.2 | 257.1 | 257.1 | 256.6 | 255.9 | 257.0 | Sbd box | 257.0 |
| U/L | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | 293/0 | APs used | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PC freqs | |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 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) 4.770000000000E-04 Apriori delay (usec) 0.000000000000E+00 Resid mbdelay (usec) 4.77000E-04 +/- 9.5E-08
 Sband delay (usec) -1.405000000000E-04 Apriori clock (usec) 0.000000000000E+00 Resid sbdelay (usec) -1.40500E-04 +/- 7.5E-07
 Phase delay (usec) -2.81041181835E-06 Apriori clockrate (us/s) 0.000000000000E+00 Resid phdelay (usec) -2.81041E-06 +/- 3.2E-10
 Delay rate (us/s) -1.70053828700E-11 Apriori rate (us/s) 0.000000000000E+00 Resid rate (us/s) -1.70054E-11 +/- 3.7E-12
 Total phase (deg) -87.2 Apriori accel (us/s/s) 0.000000000000E+00 Resid phase (deg) -87.2 +/- 0.0

RMS Theor. Amplitude 342.928 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 342.885 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.2 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 9.4 0.0 Inc. seg. avg. 342.888 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011
 amp/frq (%) 49.9 0.0 Inc. frq. avg. 346.252 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Z: az 118.7 el 60.6 pa -34.4 Z: az 118.7 el 60.6 pa -34.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241a/v2/3mm/1234/No1160/ZZ..3MP20R Output file: /Exps/c241a/v2/3mm/1234/No1160/ZZ.W.191.3MP20R