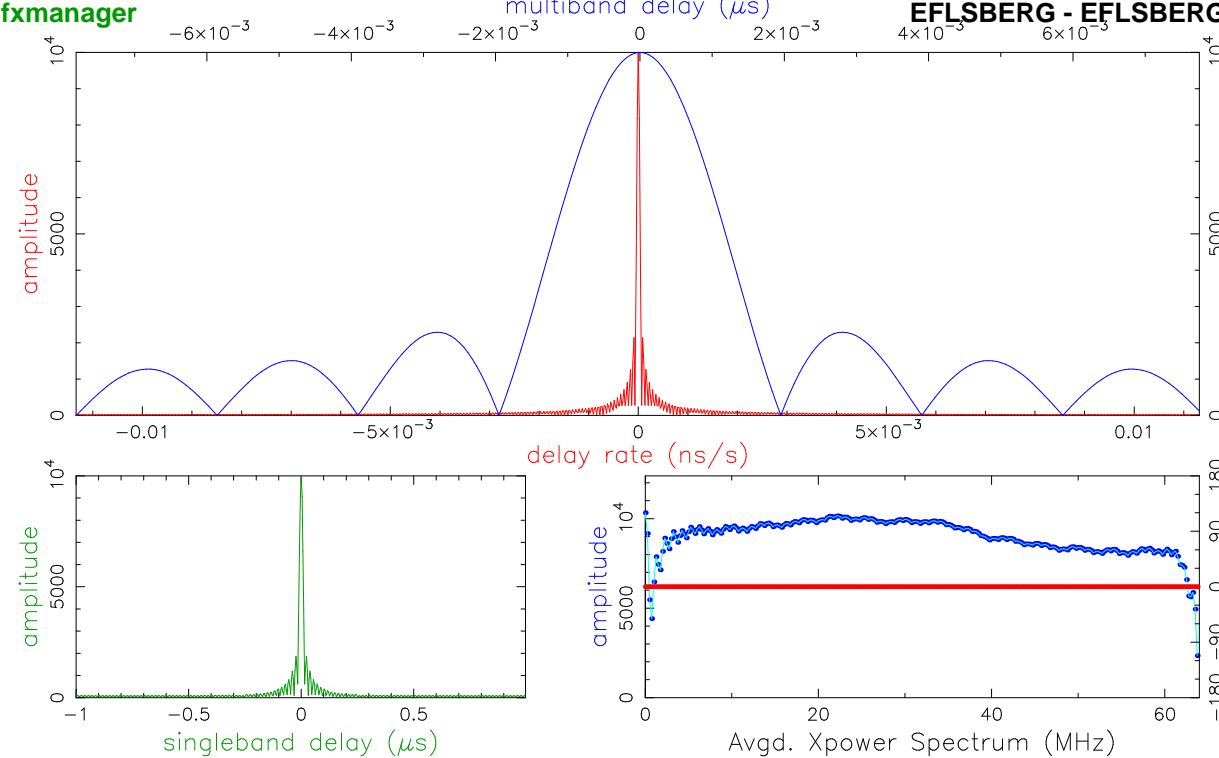


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BB

EFLSBERG - EFLSBERG, fgroup W, pol LL

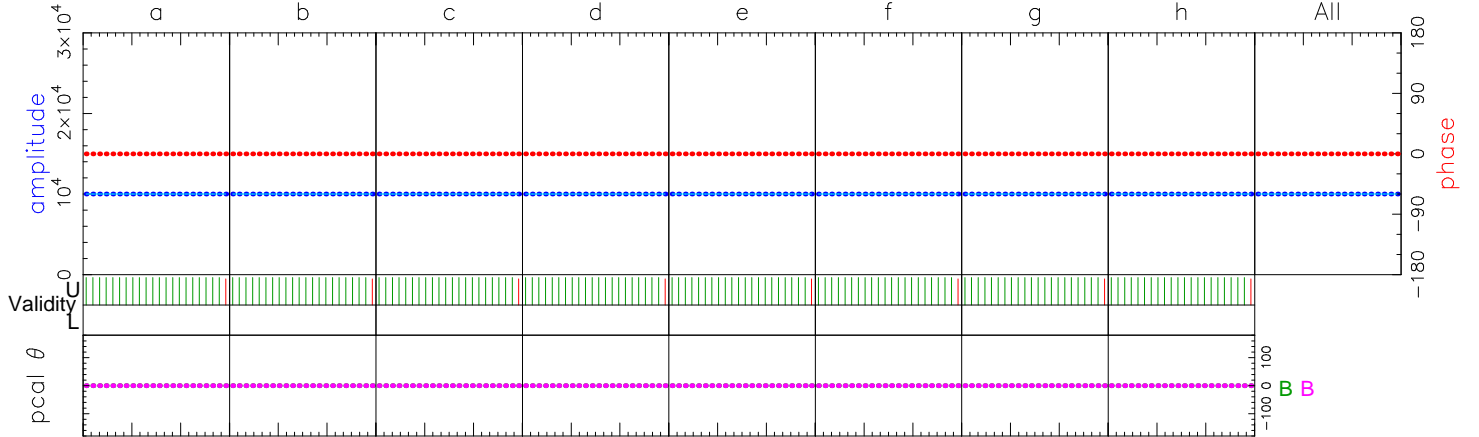


Fringe quality 9

SNR 366661.9
 Int time 179.778
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Yr:day 16383
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153020
 2020:247:085004
 RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 10000.0 | 10000.0 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 10000.0 | 10000.0 |
| B:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 257.0 | 257.0 |
| B:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0.0 | 0.0 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 10000.0 | 10000.0 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 10000.0 | 10000.0 |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| B | 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 +/- 3.0E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.3E-08
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.0E-11
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 10000.001 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 10000.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.001 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 288.7 el 38.4 pa 51.7 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB.W.1.1HXFS7

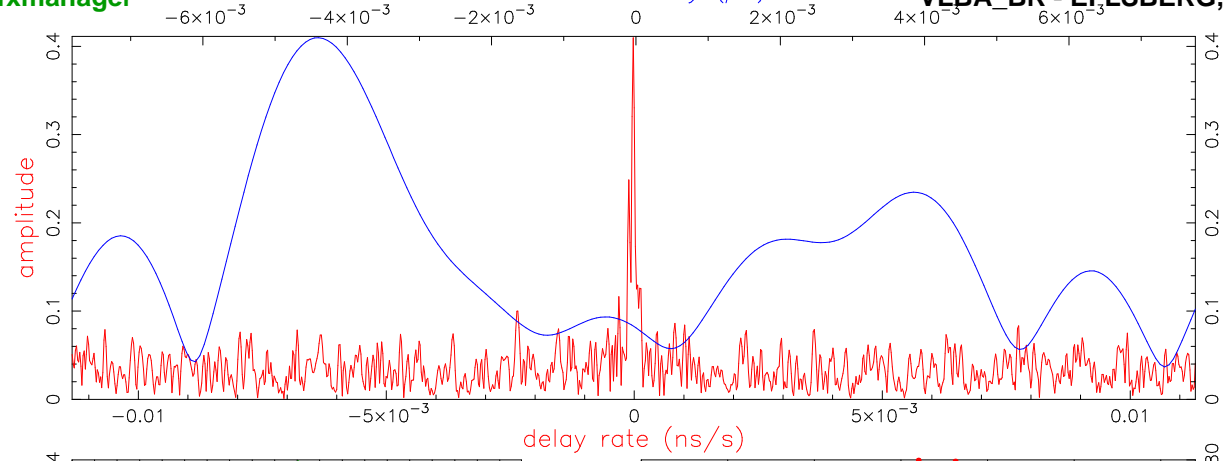
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, bB

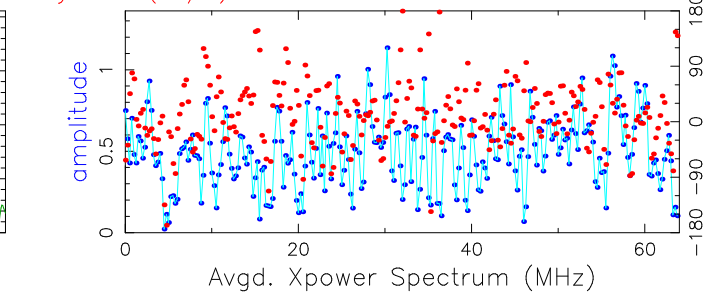
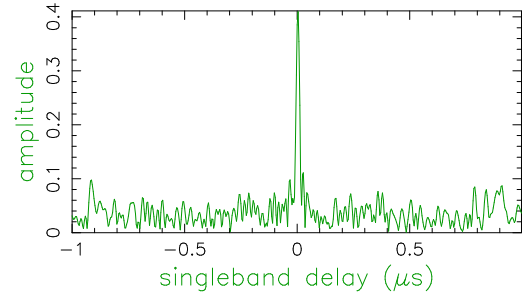
VLBA_BR - EFLSBERG, fgroup W, pol RR

multiband delay (μ s)



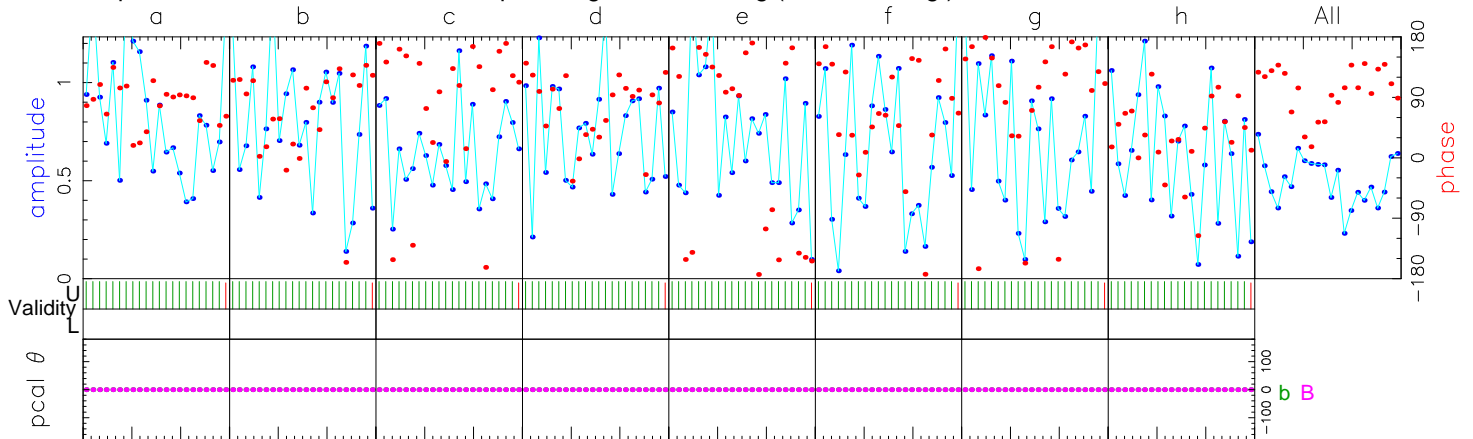
Fringe quality 8

SNR 15.1
 Int time 179.778
 Amp 0.411
 Phase 98.3
 PFD 7.0e-43
 Delays (us)
 SBD 0.003149
 MBD -0.004431
 Fringe rate (Hz)
 -0.001054
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153022
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| Group delay (usec)(sbd) | 3.79511596915E+03 | | Apriori delay (usec) | | 3.79512040027E+03 | | Resid mbdelay (usec) | | -4.43111E-03 | +/- 7.2E-05 |
| Sband delay (usec) | 3.79512354902E+03 | | Apriori clock (usec) | | -1.1824262E+01 | | Resid sbdelay (usec) | | 3.14875E-03 | +/- 5.7E-04 |
| Phase delay (usec) | 3.79512040344E+03 | | Apriori clockrate (us/s) | | 2.0000000E-07 | | Resid phdelay (usec) | | 3.17117E-06 | +/- 2.5E-07 |
| Delay rate (us/s) | 1.35700330568E+00 | | Apriori rate (us/s) | | 1.35700331792E+00 | | Resid rate (us/s) | | -1.22410E-08 | +/- 2.4E-09 |
| Total phase (deg) | 198.8 | | Apriori accel (us/s/s) | | -2.22134794385E-05 | | Resid phase (deg) | | 98.3 | +/- 7.6 |

ph/seg (deg) 35.4 17.8 Search (1024X32) 0.391 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 36.7 31.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 46.5 10.7 Inc. seg. avg. 0.479 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 33.8 18.8 Inc. frq. avg. 0.514 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 83.2 el 52.6 pa -59.6 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) -10130.829 -1570.704 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB.W.15.1HXFS7

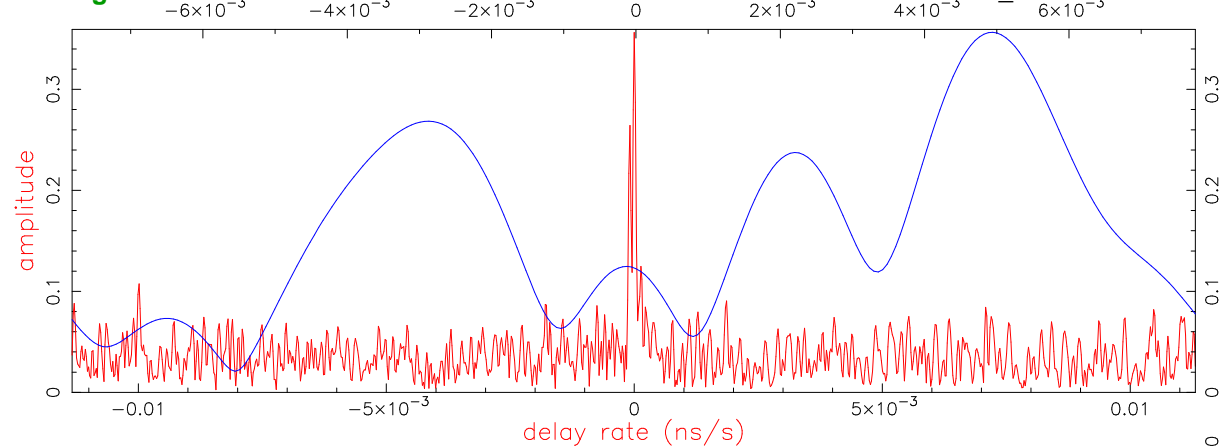
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, bB

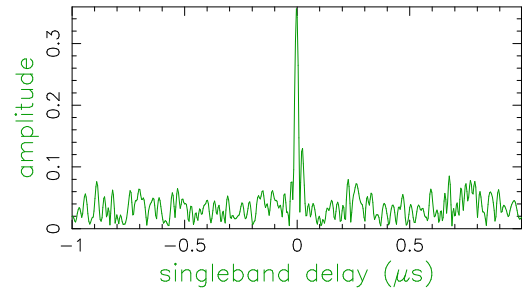
VLBA_BR - EFLSBERG, fgroup W, pol LL

multiband delay (μ s)

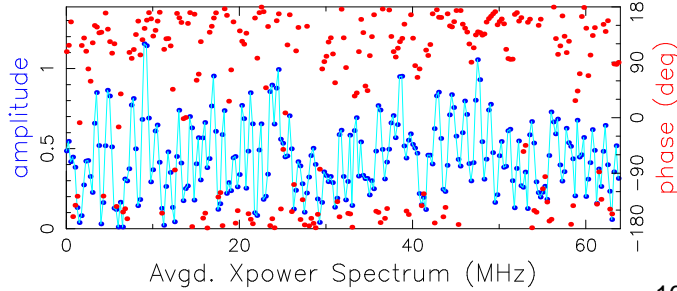


Fringe quality 9

SNR 13.2
 Int time 179.778
 Amp 0.359
 Phase 62.9
 PFD 3.3e-31
 Delays (us)
 SBD -0.002733
 MBD 0.004973
 Fringe rate (Hz)
 -0.000938
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

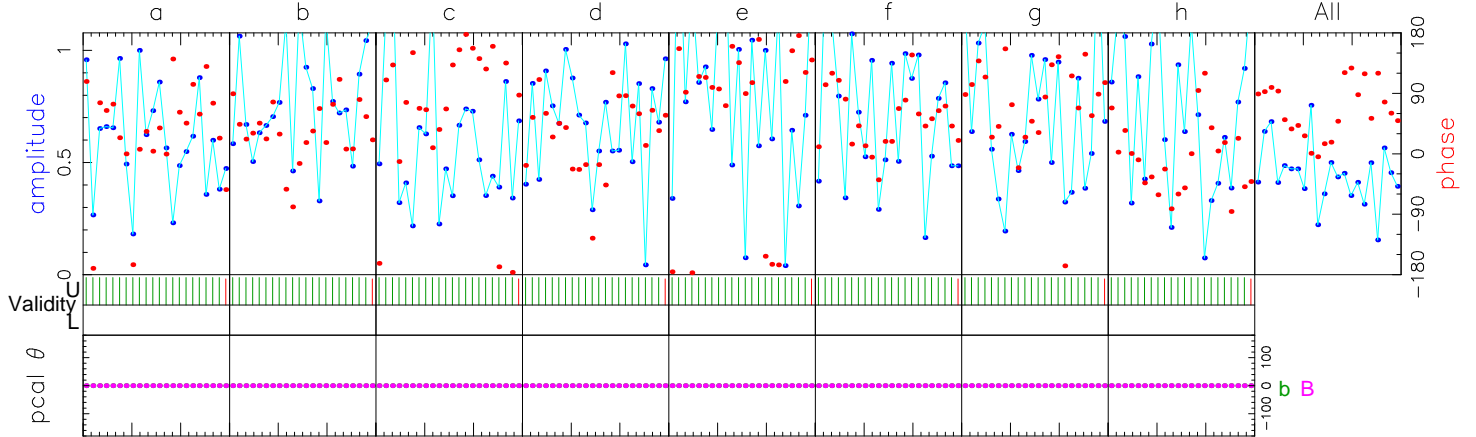


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153020
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 3.79512537355E+03 | Apriori delay (usec) | 3.79512040027E+03 | Resid mbdelay (usec) | 4.97328E-03 | +/- | 8.2E-05 |
| Sband delay (usec) | 3.79511766677E+03 | Apriori clock (usec) | -1.1824262E+01 | Resid sbdelay (usec) | -2.73350E-03 | +/- | 6.5E-04 |
| Phase delay (usec) | 3.79512040230E+03 | Apriori clockrate (us/s) | 2.0000000E-07 | Resid phdelay (usec) | 2.02822E-06 | +/- | 2.8E-07 |
| Delay rate (us/s) | 1.35700330702E+00 | Apriori rate (us/s) | 1.35700331792E+00 | Resid rate (us/s) | -1.08919E-08 | +/- | 2.7E-09 |
| Total phase (deg) | 163.3 | Apriori accel (us/s/s) | -2.22134794385E-05 | Resid phase (deg) | 62.9 | +/- | 8.7 |

| | | | | | | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|-------|--|----------------------------|-------------------|------------------|-------|------|
| ph/seg (deg) | RMS 39.6 | Theor. 20.4 | Amplitude Search (1024X32) | 0.359 +/- 0.027 | 0.338 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 | |
| amp/seg (%) | 44.4 | 35.6 | 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) | 53.6 | 12.3 | Inc. seg. avg. | 0.421 | 0.421 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 48.5 | 21.5 | Inc. frq. avg. | 0.501 | 0.501 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

b: az 83.2 el 52.6 pa -59.6 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) -10130.829 -1570.704 simultaneous interpolator

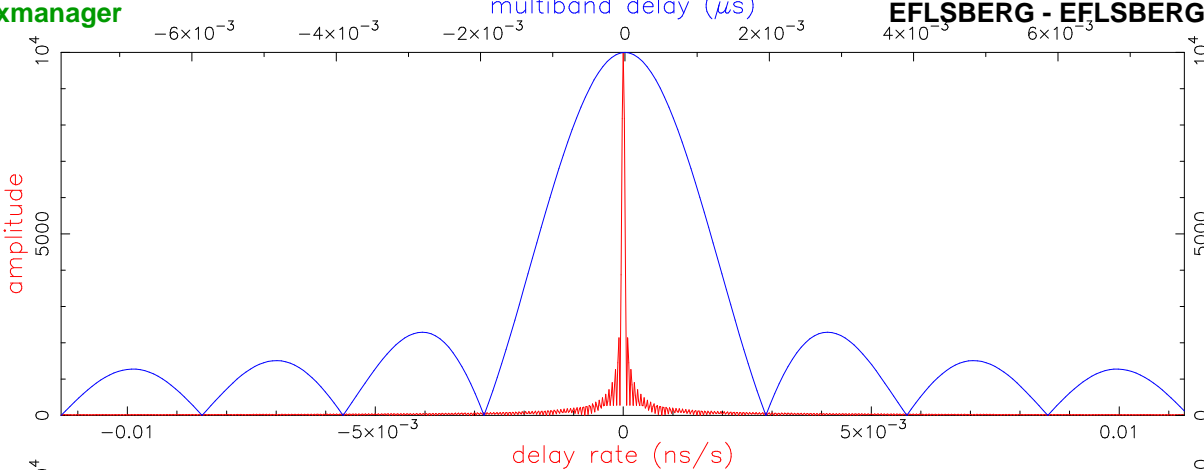
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB.W.2.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

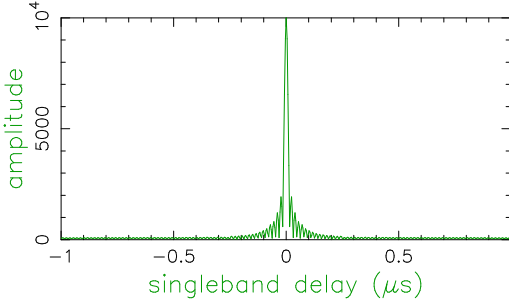
3C345.1HXFS7, No0189, BB

EFLSBERG - EFLSBERG, fgroup W, pol RR

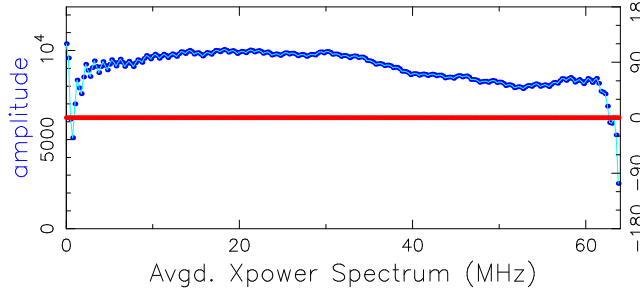


Fringe quality 9

SNR 366661.9
 Int time 179.778
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

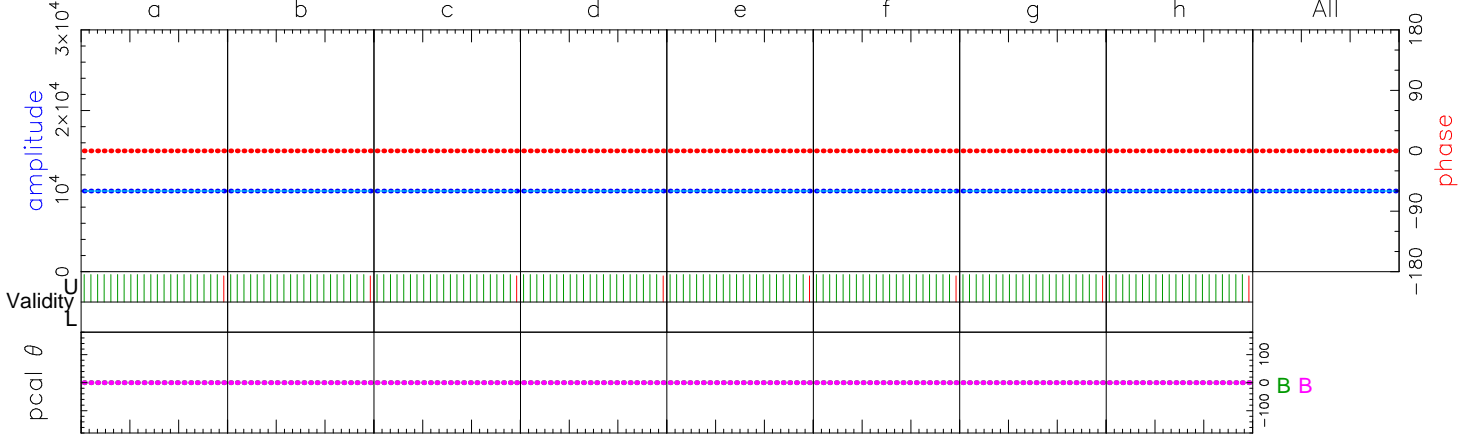


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153023
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 257.0 | 257.0 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 10000.0 | 10000.0 |
| B:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0.0 | 0.0 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 10000.0 | 10000.0 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 10000.0 | 10000.0 |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | 0.0 | 0.0 |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | 0.0 | 0.0 |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 0.000000000000E+00 | Apriori delay (usec) | 0.000000000000E+00 | Resid mbdelay (usec) | 0.000000E+00 | +/- | 3.0E-09 |
| Sband delay (usec) | 0.000000000000E+00 | Apriori clock (usec) | 0.0000000E+00 | Resid sbdelay (usec) | 0.000000E+00 | +/- | 2.3E-08 |
| Phase delay (usec) | 0.000000000000E+00 | Apriori clockrate (us/s) | 0.0000000E+00 | Resid phdelay (usec) | 0.000000E+00 | +/- | 1.0E-11 |
| Delay rate (us/s) | 0.000000000000E+00 | Apriori rate (us/s) | 0.000000000000E+00 | Resid rate (us/s) | 0.000000E+00 | +/- | 9.7E-14 |
| Total phase (deg) | 0.0 | Apriori accel (us/s/s) | 0.000000000000E+00 | Resid phase (deg) | 0.0 | +/- | 0.0 |

| | | | | | | | | | | | |
|--------------|-----|-----|--------|------------------|---------------------|--|----------------------------|-------------------|------------------|-------|------|
| ph/seg (deg) | 0.0 | RMS | Theor. | Amplitude | 10000.001 +/- 0.027 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 | |
| amp/seg (%) | 0.0 | 0.0 | 0.0 | Search (1024X32) | 10000.001 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 | |
| ph/frq (deg) | 0.0 | 0.0 | 0.0 | Interp. | 0.000 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 0.0 | 0.0 | 0.0 | Inc. seg. avg. | 10000.000 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |
| | | | | Inc. frq. avg. | 10000.001 | | | | | | |

B: az 288.7 el 38.4 pa 51.7 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

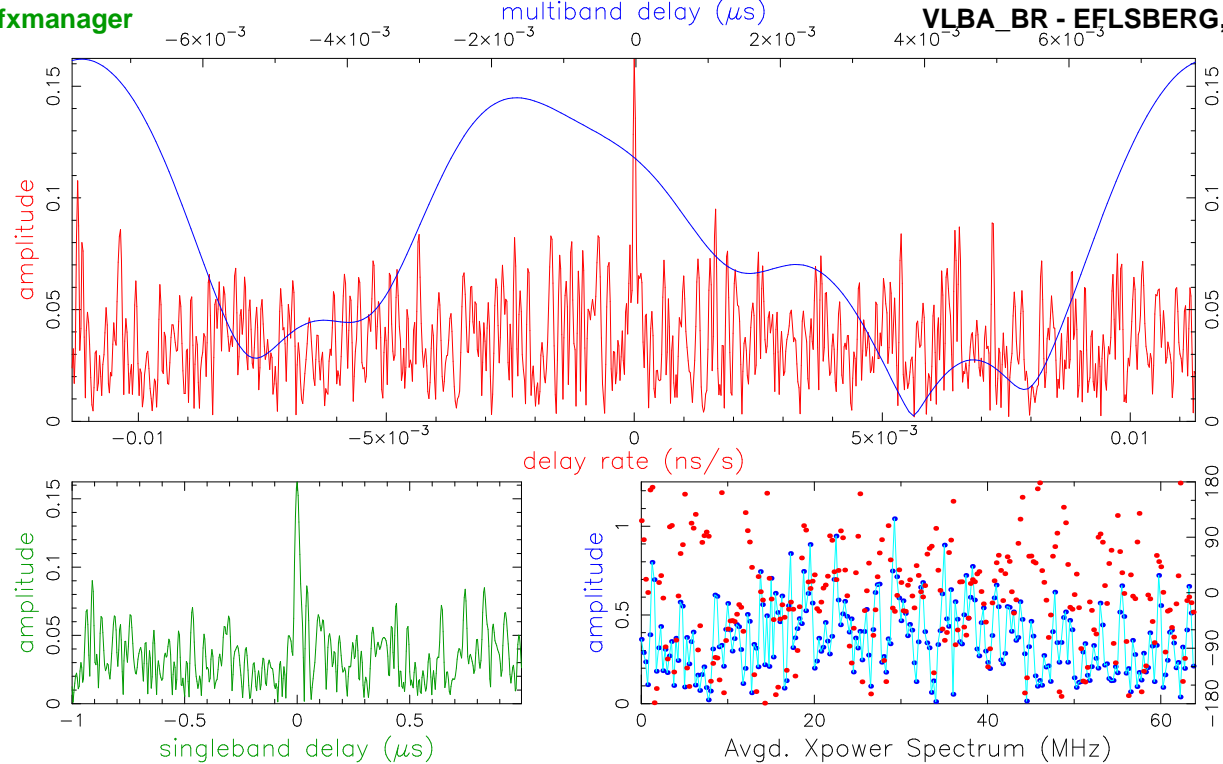
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB.W.27.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

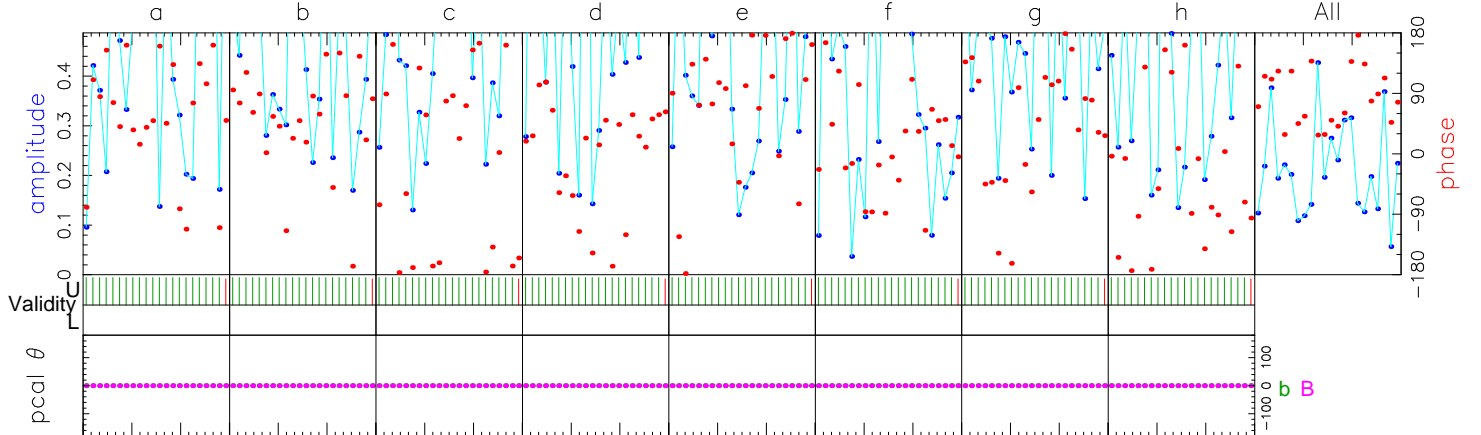
3C345.1HXFS7, No0189, bB

VLBA_BR - EFLSBERG, fgroup W, pol LR



Fringe quality 0
 SNR 6.0
 Int time 179.778
 Amp 0.162
 Phase 83.4
 PFD 2.8e-01
 Delays (us)
 SBD -0.000890
 MBD -0.007666
 Fringe rate (Hz)
 -0.000824
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153024
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | | 3.79511273436E+03 | | | | 3.79512040027E+03 | | | Resid mbdelay (usec) | -7.66591E-03 +/- 1.8E-04 |
| Sband delay (usec) | | 3.79511951077E+03 | | | | -1.1824262E+01 | | | Resid sbdelay (usec) | -8.89500E-04 +/- 1.4E-03 |
| Phase delay (usec) | | 3.79512040296E+03 | | | | 2.0000000E-07 | | | Resid phdelay (usec) | 2.68843E-06 +/- 6.2E-07 |
| Delay rate (us/s) | | 1.35700330835E+00 | | | | 1.35700331792E+00 | | | Resid rate (us/s) | -9.56128E-09 +/- 6.0E-09 |
| Total phase (deg) | | | 183.8 | | | -2.22134794385E-05 | | | Resid phase (deg) | 83.4 +/- 19.2 |

ph/seg (deg) 42.3 45.1 Amplitude 0.162 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.7 78.8 Search (1024X32) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 87.4 27.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 83.3 47.5 Inc. seg. avg. 0.164 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 b: az 83.2 el 52.6 pa -59.6 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) -10130.829 -1570.704 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB.W.34.1HXFS7 simultaneous interpolator

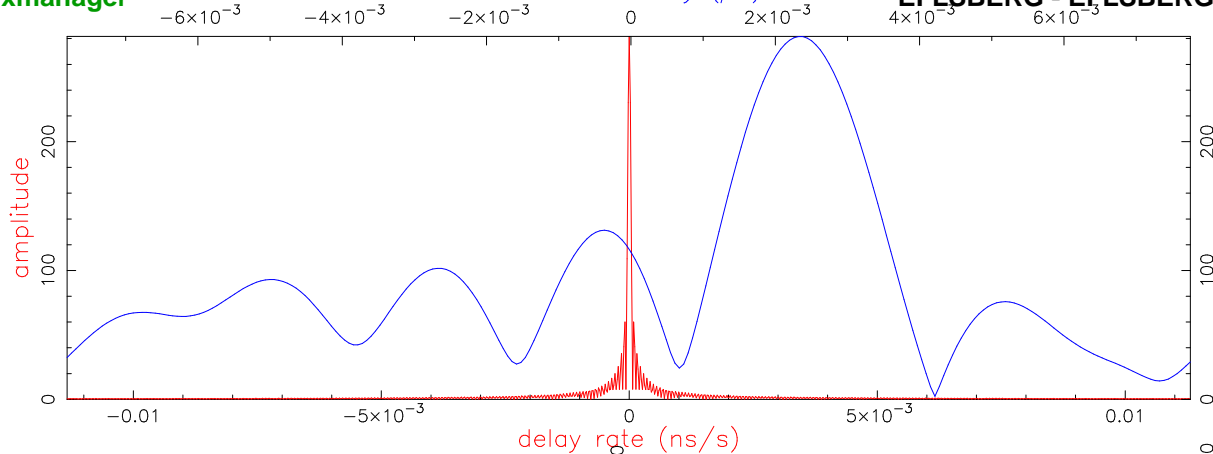
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BB

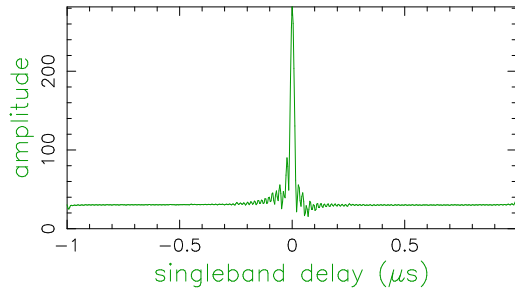
EFLSBERG - EFLSBERG, fgroup W, pol LR

multiband delay (μ s)

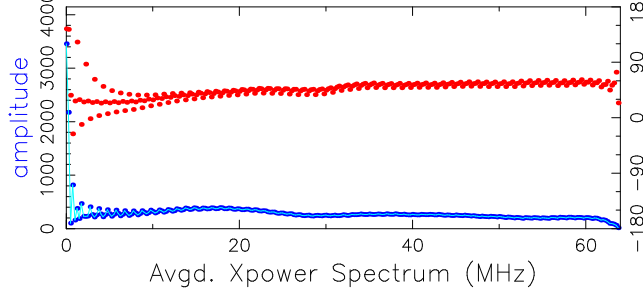


Fringe quality 7

SNR 10328.7
 Int time 179.778
 Amp 281.697
 Phase 25.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.000178
 MBD 0.002350
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

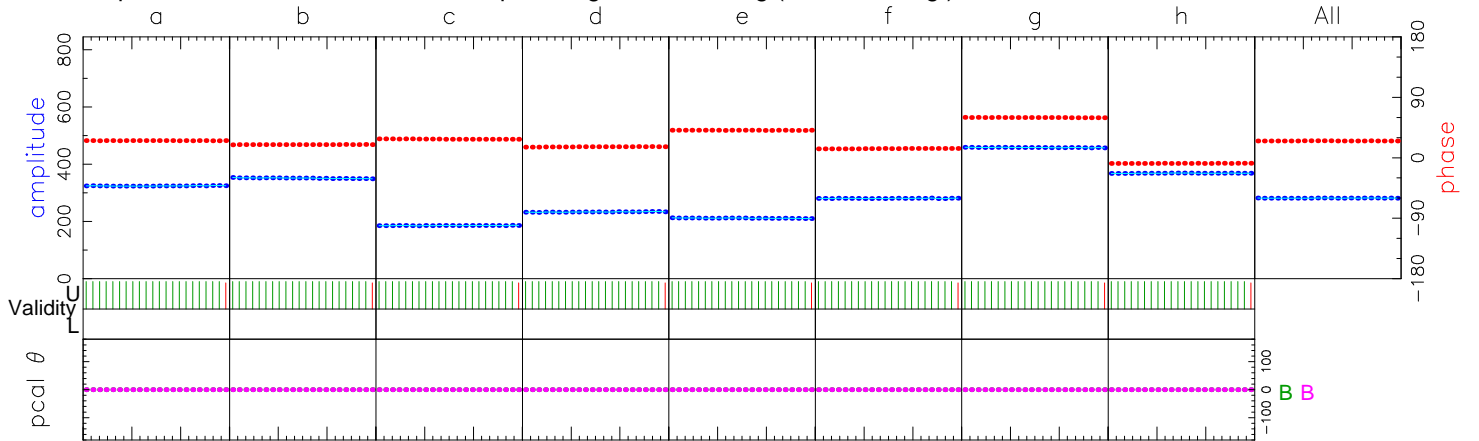


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153025
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |

Group delay (usec)(sbd) 2.34978125000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 2.34978E-03 +/- 1.1E-07
 Sband delay (usec) 1.77750000000E-04 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 1.77750E-04 +/- 8.3E-07
 Phase delay (usec) 8.10489978507E-07 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 8.10490E-07 +/- 3.6E-10
 Delay rate (us/s) 0.00000000000E+00 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 3.4E-12
 Total phase (deg) 25.1 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 25.1 +/- 0.0

RMS Theor. Amplitude 281.697 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 280.368 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.1 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 21.7 0.0 Inc. seg. avg. 281.648 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 31.2 0.0 Inc. frq. avg. 301.751 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 288.7 el 38.4 pa 51.7 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB.1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB.W.44.1HXFS7

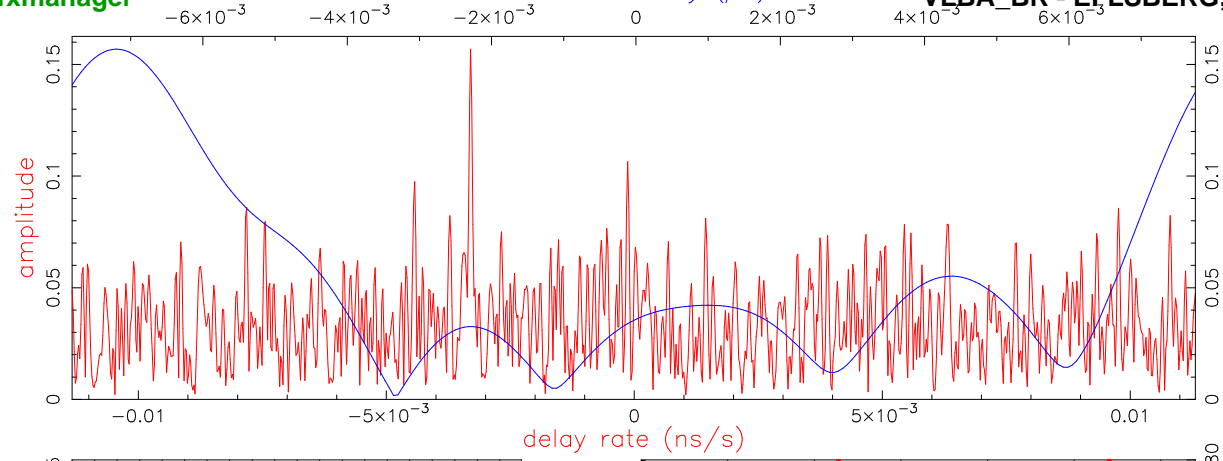
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

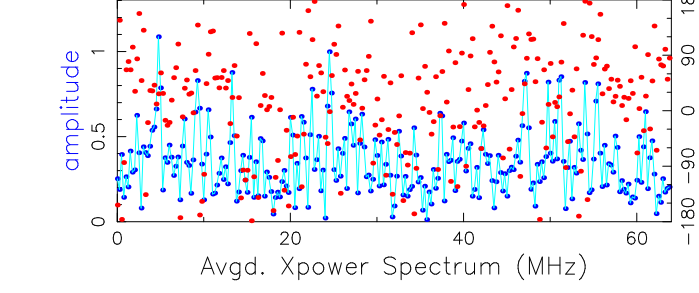
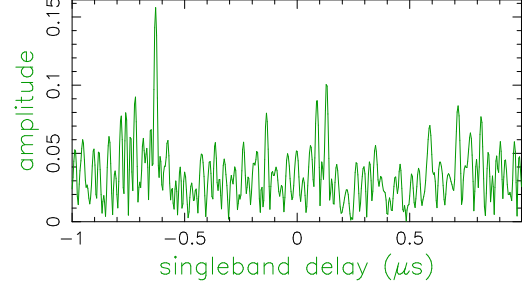
3C345.1HXFS7, No0189, bB

VLBA_BR - EFLSBERG, fgroup W, pol RL

multiband delay (μ s)

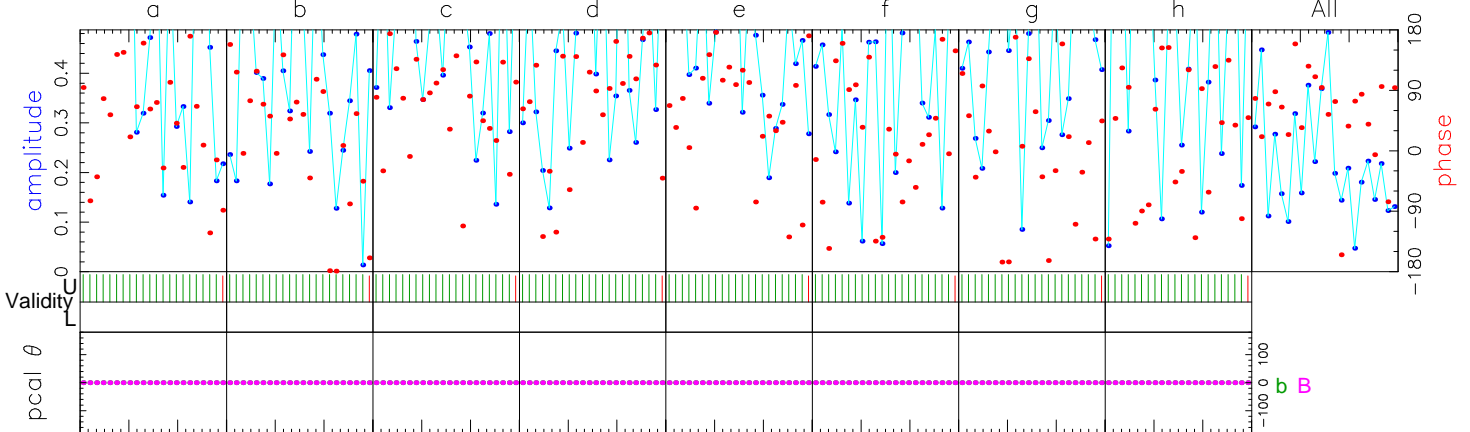


Fringe quality 0
 SNR 5.8
 Int time 179.778
 Amp 0.163
 Phase 74.5
 PFD 6.6e-01
 Delays (us)
 SBD -0.629249
 MBD -0.007212
 Fringe rate (Hz)
 -0.283852
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153025
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| b:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| b | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| b | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | 3.79448818834E+03 | | Apriori delay (usec) | | 3.79512040027E+03 | | Resid mbdelay (usec) | | -7.21193E-03 | +/- 1.9E-04 |
| Sband delay (usec) | 3.79449115127E+03 | | Apriori clock (usec) | | -1.1824262E+01 | | Resid sbdelay (usec) | | -6.29249E-01 | +/- 1.5E-03 |
| Phase delay (usec) | 3.79512040267E+03 | | Apriori clockrate (us/s) | | 2.0000000E-07 | | Resid phdelay (usec) | | 2.40085E-06 | +/- 6.4E-07 |
| Delay rate (us/s) | 1.35700002268E+00 | | Apriori rate (us/s) | | 1.35700331792E+00 | | Resid rate (us/s) | | -3.29524E-06 | +/- 6.2E-09 |
| Total phase (deg) | | | 174.9 | | Apriori accel (us/s/s) | | -2.22134794385E-05 | | 74.5 | +/- 19.9 |

ph/seg (deg) 56.0 46.7 Search (1024X32) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 83.7 81.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.2 28.2 Inc. seg. avg. 0.175 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 57.9 49.1 Inc. frq. avg. 0.159 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 83.2 el 52.6 pa -59.6 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) -10130.829 -1570.704 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/bB.W.49.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

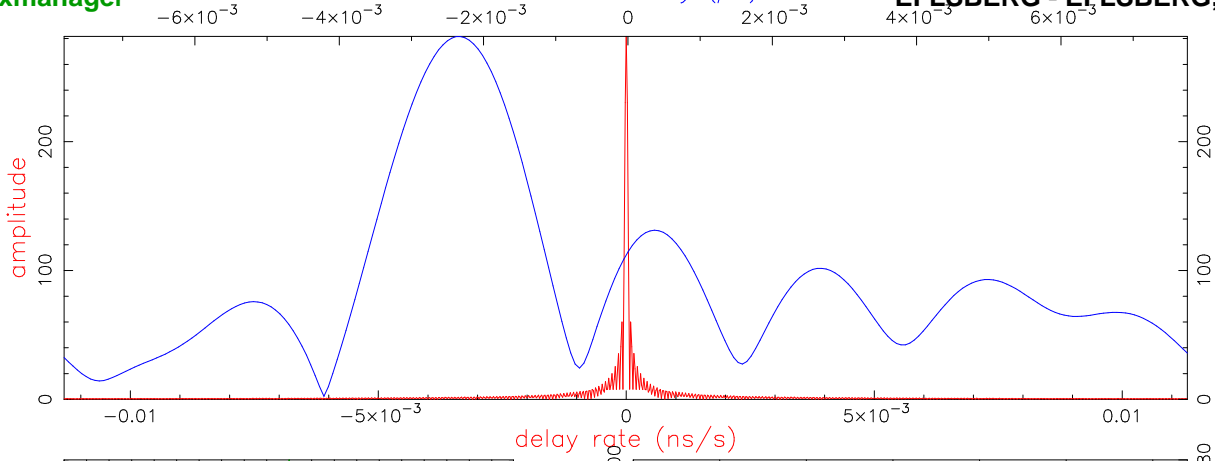
fxmanager

3C345.1HXFS7, No0189, BB

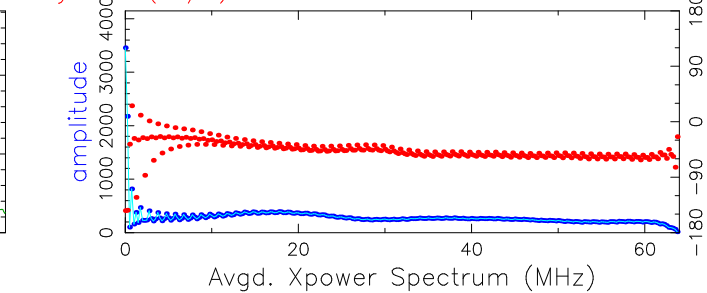
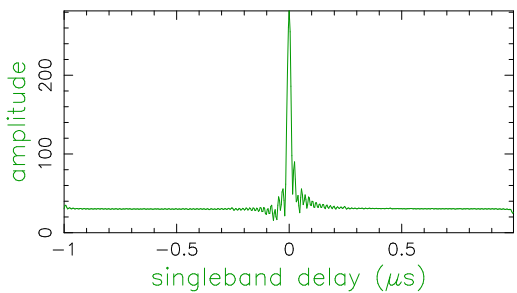
EFLSBERG - EFLSBERG, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 7

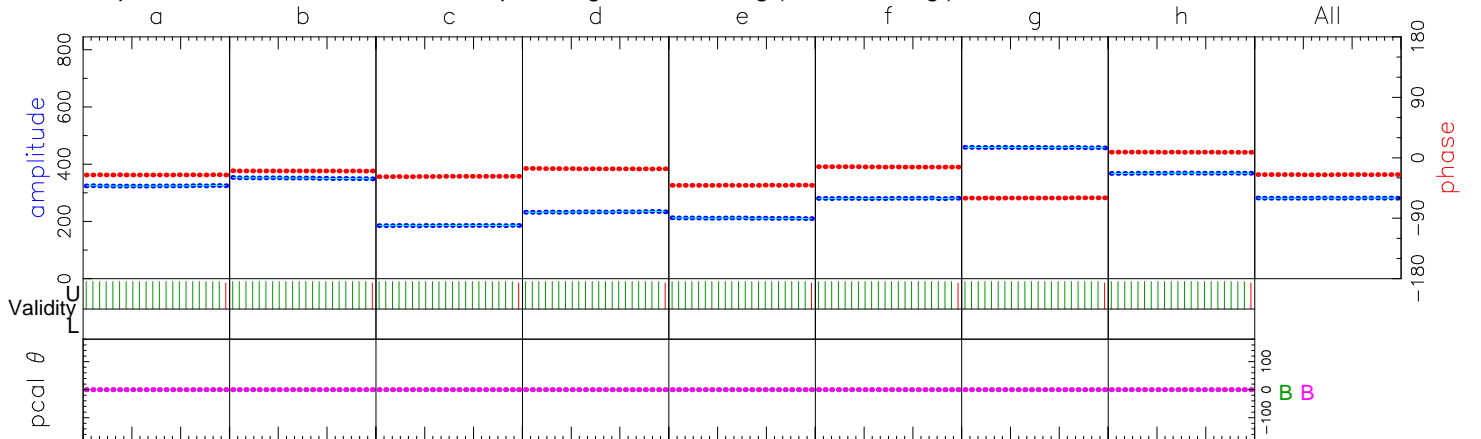


SNR 10328.7
 Int time 179.778
 Amp 281.697
 Phase -25.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.000178
 MBD -0.002350
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build 2021:010:004733
 2021:010:153027
 2020:247:085004
 RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -25.5 | -19.6 | -27.8 | -16.3 | -41.0 | -13.6 | -59.8 | 8.3 | Phase | -25.1 |
| | 324.4 | 351.4 | 185.8 | 233.3 | 211.6 | 280.7 | 458.2 | 368.6 | Ampl. | 301.8 |
| | 256.4 | 256.6 | 256.2 | 256.2 | 256.9 | 256.8 | 258.0 | 257.8 | Sbd box | 257.0 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:B | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

Group delay (usec)(sbd) -2.34978125000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -2.34978E-03 +/- 1.1E-07
 Sband delay (usec) -1.77750000000E-04 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) -1.77750E-04 +/- 8.3E-07
 Phase delay (usec) -8.10489978578E-07 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -8.10490E-07 +/- 3.6E-10
 Delay rate (us/s) 0.00000000000E+00 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 3.4E-12
 Total phase (deg) -25.1 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) -25.1 +/- 0.0

RMS Theor. Amplitude 281.697 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 280.368 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.1 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 21.7 0.0 Inc. seg. avg. 281.648 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 31.2 0.0 Inc. frq. avg. 301.751 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 288.7 el 38.4 pa 51.7 B: az 288.7 el 38.4 pa 51.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB.1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BB.W.68.1HXFS7

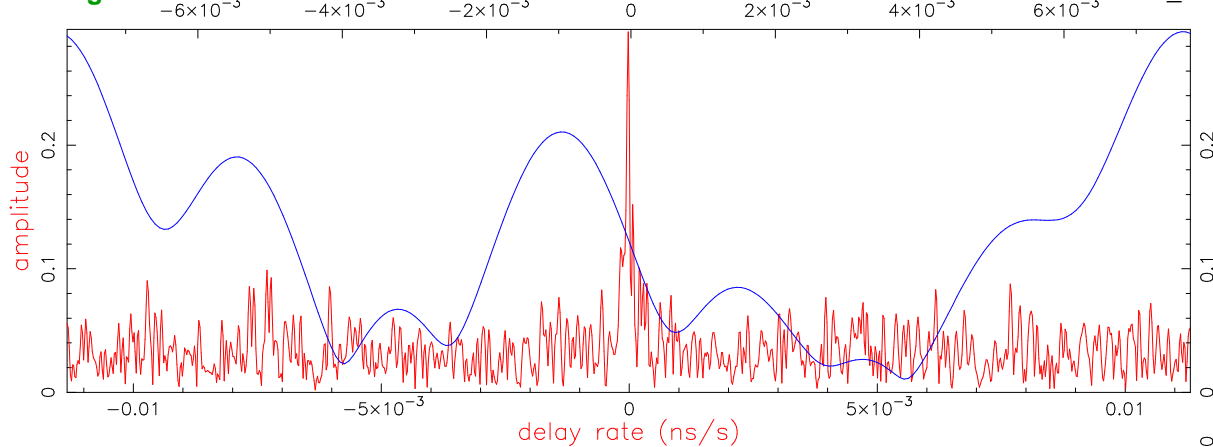
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bf

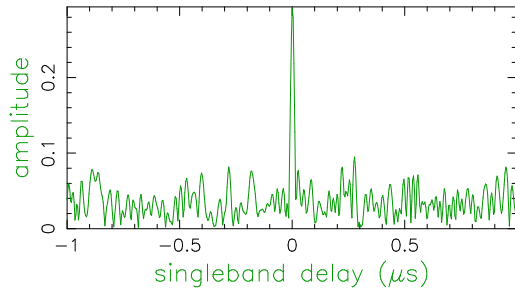
EFLSBERG - VLBA_FD, fgroup W, pol LL

multiband delay (μ s)

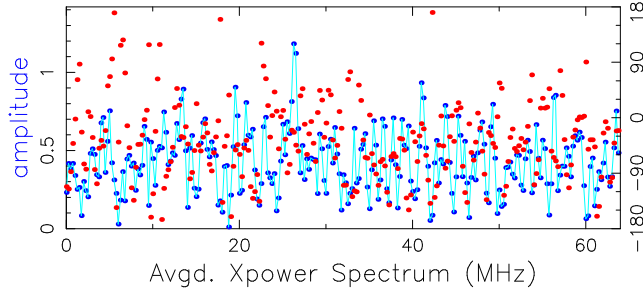


Fringe quality 9

SNR 10.8
 Int time 179.745
 Amp 0.294
 Phase 61.9
 PFD 1.1e-18
 Delays (us)
 SBD 0.001052
 MBD -0.007950
 Fringe rate (Hz)
 -0.002148
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

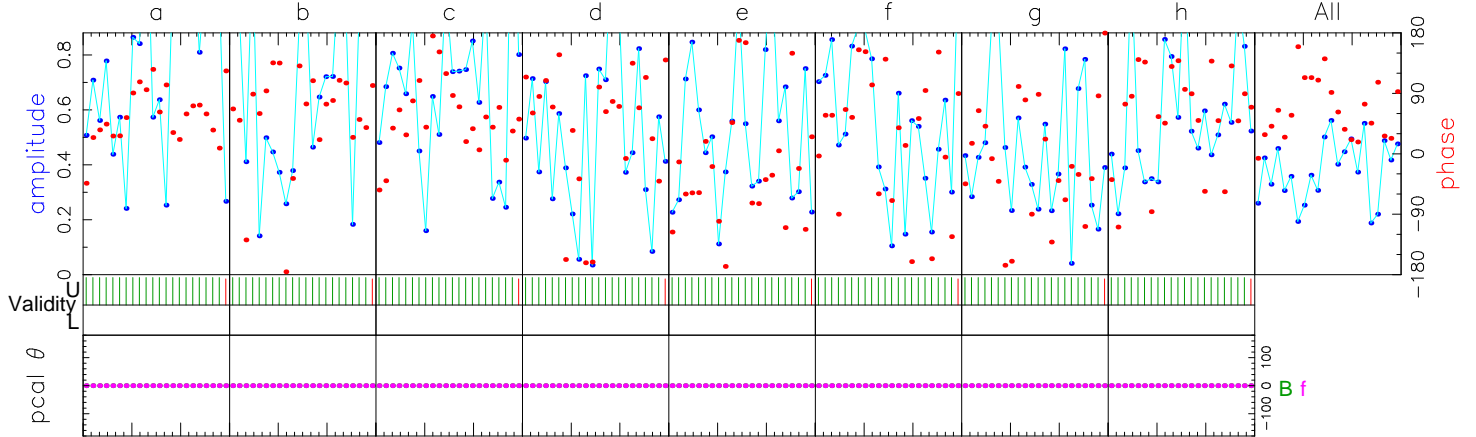


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153021
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:f | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:f | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | -5.23607540773E+03 | | | | | | | | | |
| Sband delay (usec) | -5.23608203076E+03 | | | | | | | | | |
| Phase delay (usec) | -5.23608308102E+03 | | | | | | | | | |
| Delay rate (us/s) | -1.33225777759E+00 | | | | | | | | | |
| Total phase (deg) | | | -215.6 | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | 61.9 | +/- 10.6 |
| Pcal mode: | MANUAL | MANUAL | | | | | | | | |
| Pcal rate: | 0.000E+00 | 0.000E+00 | | | | | | | | |
| Bits/sample: | 2x2 | | | | | | | | | |
| Sample rate(MISamp/s): | 128 | | | | | | | | | |
| Data rate(Mb/s): | 2048 | | | | | | | | | |
| nlags: | 256 | | | | | | | | | |
| t_cohere | infinite | | | | | | | | | |
| sb window (us) | -1.000 | 1.000 | | | | | | | | |
| mb window (us) | -0.008 | 0.008 | | | | | | | | |
| dr window (ns/s) | -0.011 | 0.011 | | | | | | | | |
| ion window (TEC) | 0.00 | 0.00 | | | | | | | | |

B: az 288.7 el 38.4 pa 51.7 f: az 62.6 el 59.5 pa -96.0 u,v (fr/asec) 9970.711 4779.115 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.W.11.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

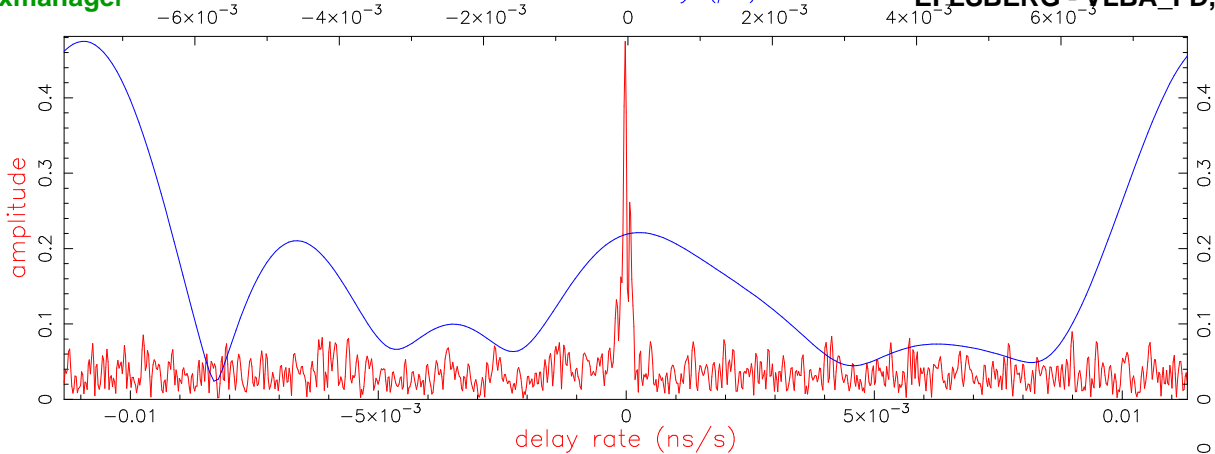
fxmanager

3C345.1HXFS7, No0189, Bf

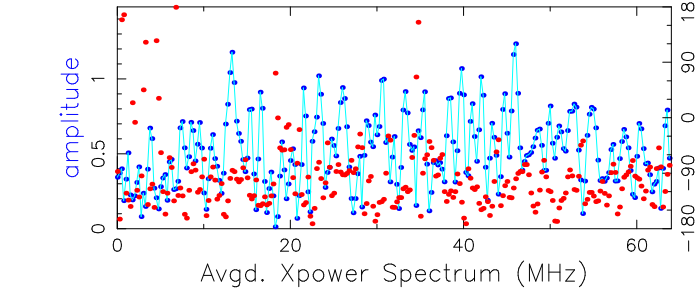
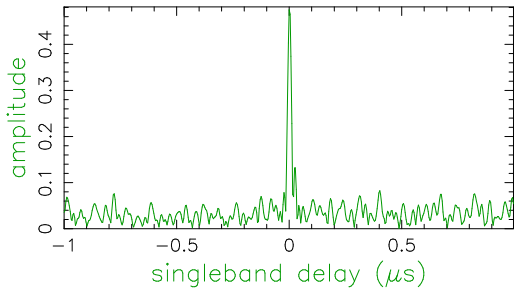
EFLSBERG - VLBA_FD, fgroup W, pol RR

multiband delay (μ s)

Fringe quality 8

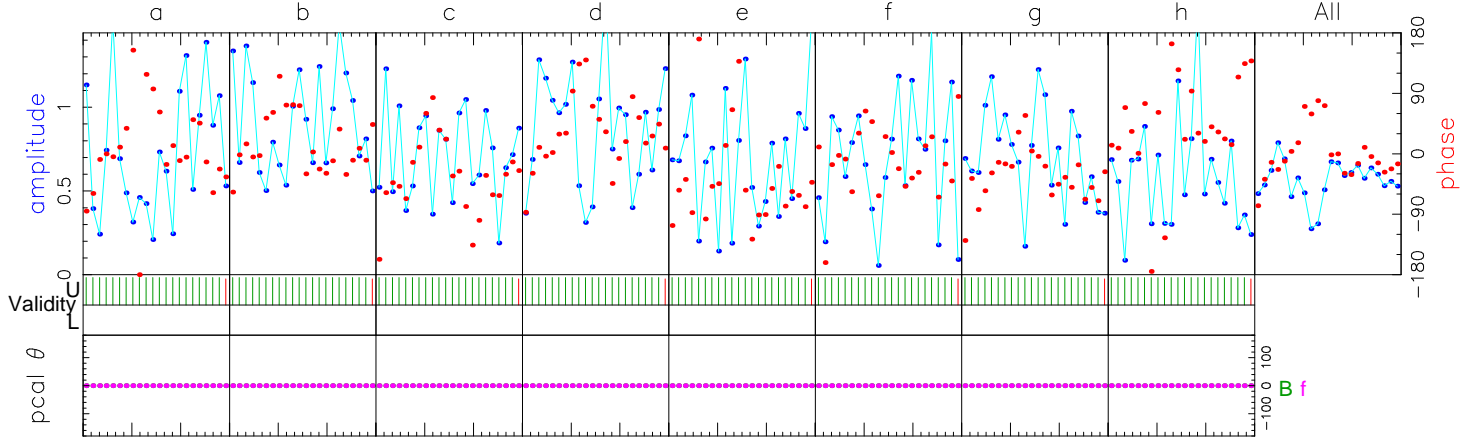


SNR 17.7
 Int time 179.745
 Amp 0.481
 Phase -6.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.001523
 MBD -0.007530
 Fringe rate (Hz)
 -0.002155
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153024
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|--------------------|----------------------|--------------|----------|----------|------------|-------|
| -5.0 | 9.1 | -31.6 | 25.3 | -62.5 | -7.2 | -31.6 | 50.2 | 50.2 | Phase | -6.5 |
| 0.5 | 0.7 | 0.5 | 0.7 | 0.5 | 0.6 | 0.6 | 0.4 | 0.4 | Ampl. | 0.5 |
| 256.9 | 257.3 | 258.2 | 257.9 | 258.0 | 258.2 | 258.2 | 258.2 | 256.9 | Sbd box | 257.4 |
| U/L 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| f 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:f 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:f 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| f 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -5.23607498791E+03 | | Apriori delay (usec) | -5.23608308301E+03 | Resid mbdelay (usec) | -7.52989E-03 | +/- | 6.1E-05 | | |
| Sband delay (usec) | -5.23608155951E+03 | | Apriori clock (usec) | 2.2627861E+00 | Resid sbdelay (usec) | 1.52350E-03 | +/- | 4.9E-04 | | |
| Phase delay (usec) | -5.23608308322E+03 | | Apriori clockrate (us/s) | -5.9999998E-07 | Resid phdelay (usec) | -2.09907E-07 | +/- | 2.1E-07 | | |
| Delay rate (us/s) | -1.33225777767E+00 | | Apriori rate (us/s) | -1.33225775266E+00 | Resid rate (us/s) | -2.50149E-08 | +/- | 2.0E-09 | | |
| Total phase (deg) | | -284.0 | Apriori accel (us/s/s) | 4.67888622720E-05 | Resid phase (deg) | -6.5 | +/- | 6.5 | | |

| | RMS | Theor. | Amplitude | 0.481 +/- 0.027 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------|-------|
| ph/seg (deg) | 38.8 | 15.2 | Search (1024X32) | 0.465 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 29.2 | 26.6 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 38.4 | 9.2 | Inc. seg. avg. | 0.543 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 25.3 | 16.0 | Inc. frq. avg. | 0.547 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | | |

B: az 288.7 el 38.4 pa 51.7 f: az 62.6 el 59.5 pa -96.0 u,v (fr/asec) 9970.711 4779.115 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.W.35.1HXFS7

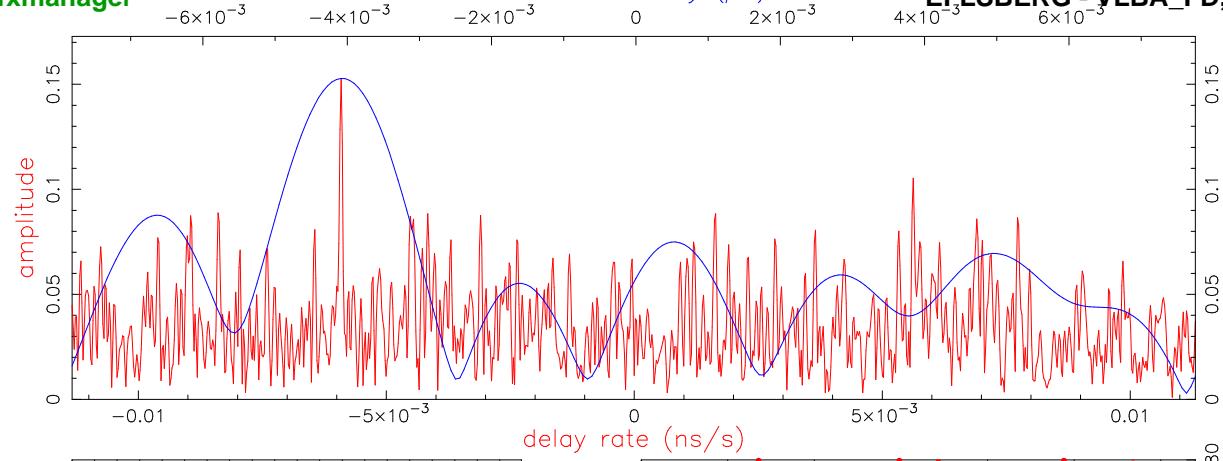
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bf

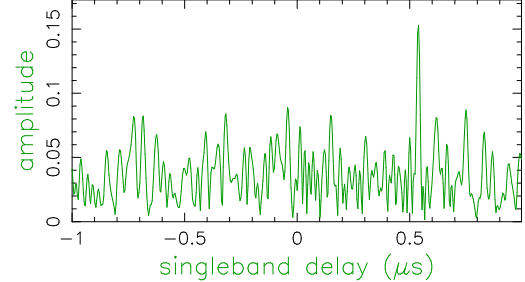
EFLSBERG - VLBA_FD, fgroup W, pol LR

multiband delay (μ s)

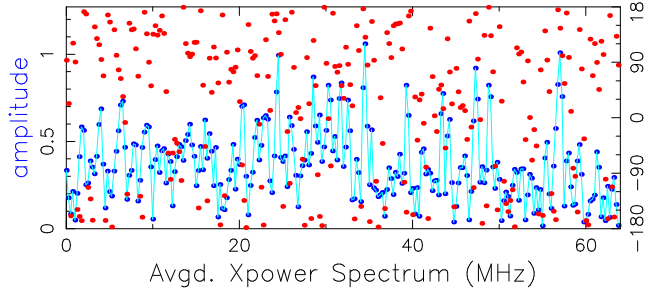


Fringe quality 0

SNR 5.6
 Int time 179.745
 Amp 0.173
 Phase -106.1
 PFD 8.6e-01
 Delays (us)
 SBD 0.537972
 MBD -0.004097
 Fringe rate (Hz)
 -0.510870
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

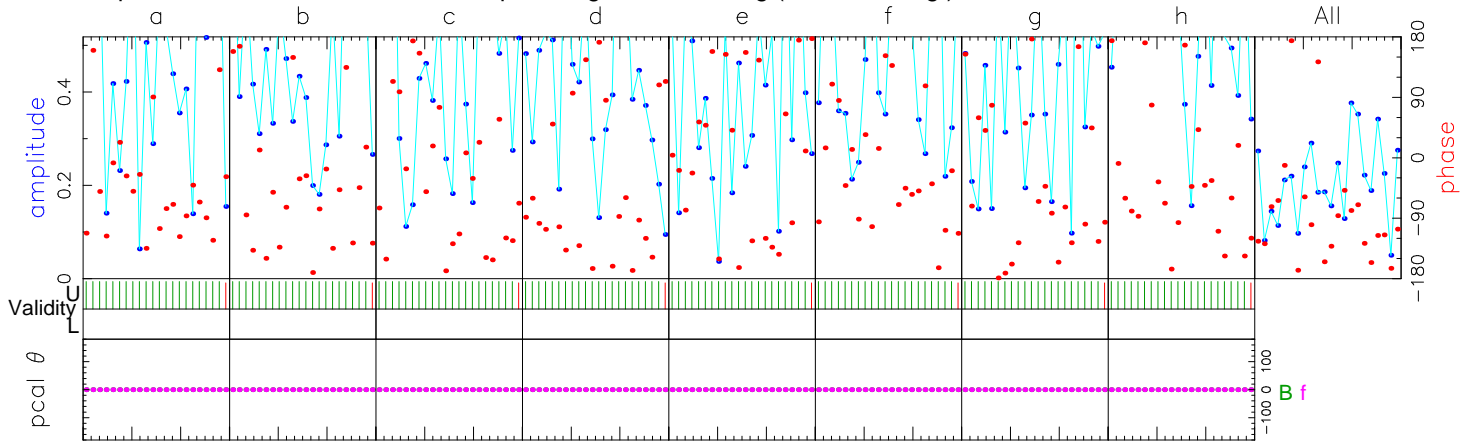


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153027
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -90.9 | -111.1 | -134.4 | -124.2 | 177.6 | -57.1 | -139.1 | -87.3 | Phase | -106.1 |
| | 0.3 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | Ampl. | 0.2 |
| | 395.8 | 234.1 | 312.4 | 503.0 | 87.2 | 26.9 | 265.0 | 395.1 | Sbd box | 394.7 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:f | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:f | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| f | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -5.23554030541E+03 | | Apriori delay (usec) | | -5.23608308301E+03 | | Resid mbdelay (usec) | | -4.09740E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -5.23554511076E+03 | | Apriori clock (usec) | | 2.2627861E+00 | | Resid sbdelay (usec) | | 5.37972E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -5.23608308643E+03 | | Apriori clockrate (us/s) | | -5.9999998E-07 | | Resid phdelay (usec) | | -3.42013E-06 | +/- 6.5E-07 |
| Delay rate (us/s) | -1.33226368335E+00 | | Apriori rate (us/s) | | -1.33225775266E+00 | | Resid rate (us/s) | | -5.93070E-06 | +/- 6.3E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.67888622720E-05 | | Resid phase (deg) | | -106.1 | +/- 20.3 |

ph/seg (deg) 49.1 47.6 Search (1024X32) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.4 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) 42.9 28.7 Inc. seg. avg. 0.175 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 48.7 50.1 Inc. frq. avg. 0.173 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 288.7 el 38.4 pa 51.7 f: az 62.6 el 59.5 pa -96.0 u,v (fr/asec) 9970.711 4779.115 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.W.59.1HXFS7

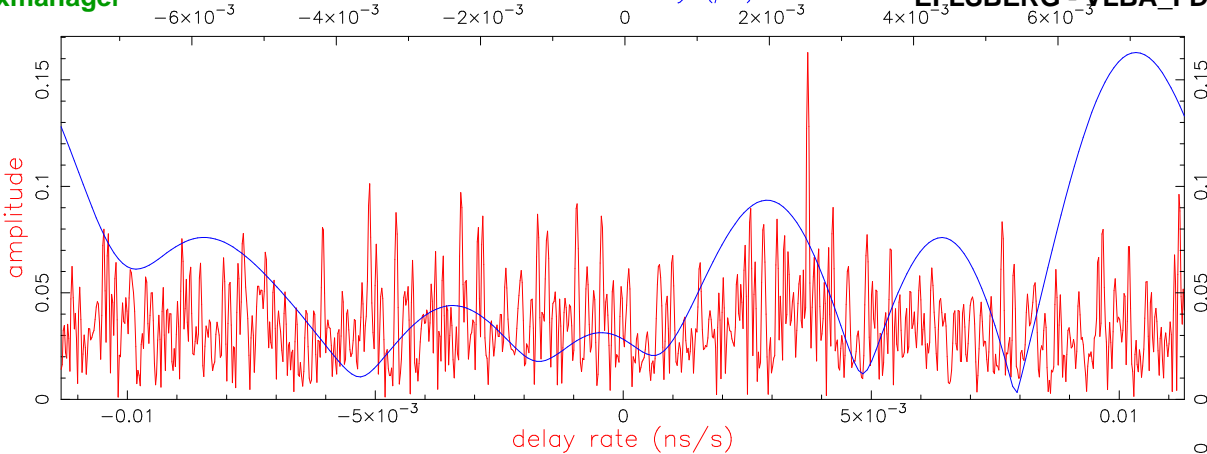
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bf

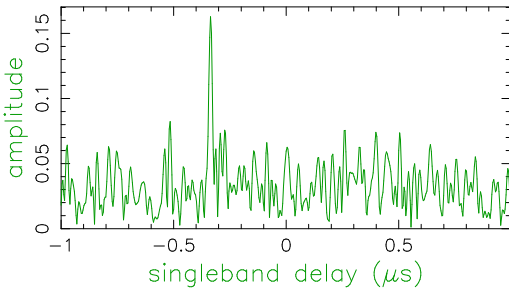
EFLSBERG - VLBA_FD, fgroup W, pol RL

multiband delay (μ s)

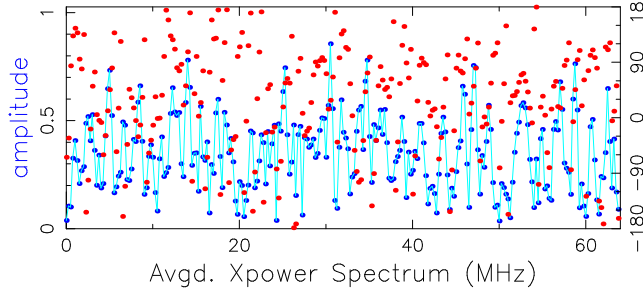


Fringe quality 0

SNR 6.0
 Int time 179.745
 Amp 0.170
 Phase 71.8
 PFD 2.6e-01
 Delays (us)
 SBD -0.335662
 MBD 0.007084
 Fringe rate (Hz)
 0.321016
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

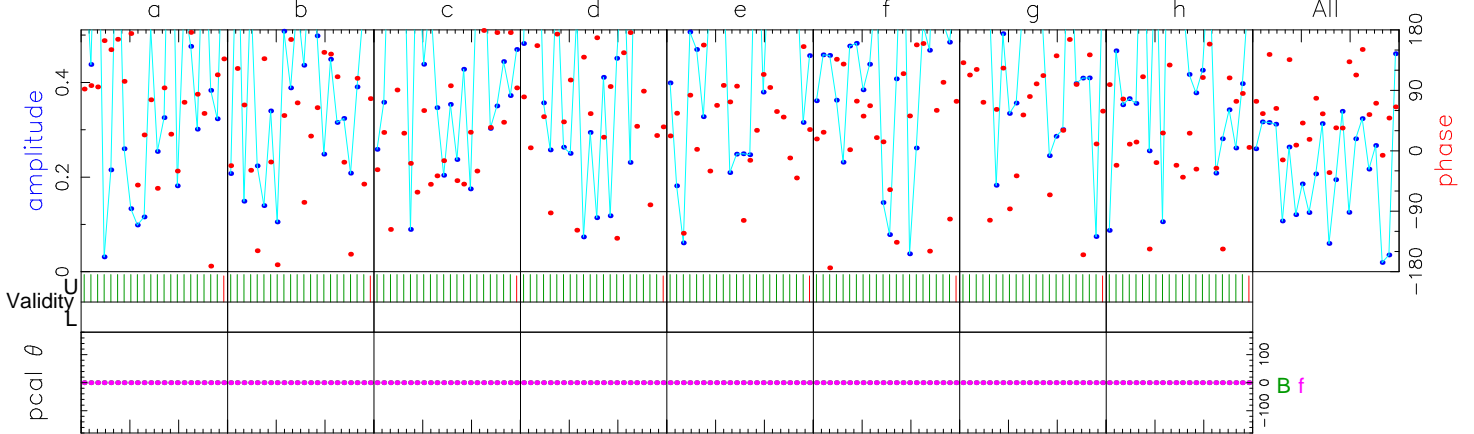


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153029
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:f | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:f | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| f | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| f | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | | -5.23641974880E+03 | | | -5.23608308301E+03 | | | | 7.08422E-03 | +/- 1.8E-04 |
| Sband delay (usec) | | -5.23641874451E+03 | | | 2.2627861E+00 | | | | -3.35662E-01 | +/- 1.4E-03 |
| Phase delay (usec) | | -5.23608308070E+03 | | | -5.9999998E-07 | | | | 2.31376E-06 | +/- 6.2E-07 |
| Delay rate (us/s) | | -1.33225402597E+00 | | | -1.33225775266E+00 | | | | 3.72668E-06 | +/- 5.9E-09 |
| Total phase (deg) | | | -205.8 | | 4.67888622720E-05 | | | | 71.8 | +/- 19.2 |
| | RMS | Theor. | Amplitude | 0.170 +/- 0.029 | | | | | | |
| ph/seg (deg) | 51.1 | 45.0 | Search (1024X32) | 0.158 | | | | | | |
| amp/seg (%) | 76.2 | 78.5 | Interp. | 0.000 | | | | | | |
| ph/frq (deg) | 38.8 | 27.1 | Inc. seg. avg. | 0.176 | | | | | | |
| amp/frq (%) | 45.6 | 47.3 | Inc. frq. avg. | 0.178 | | | | | | |
| Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00 | | | | | | | | | | |

B: az 288.7 el 38.4 pa 51.7 f: az 62.6 el 59.5 pa -96.0 u,v (fr/asec) 9970.711 4779.115 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bf.W.77.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

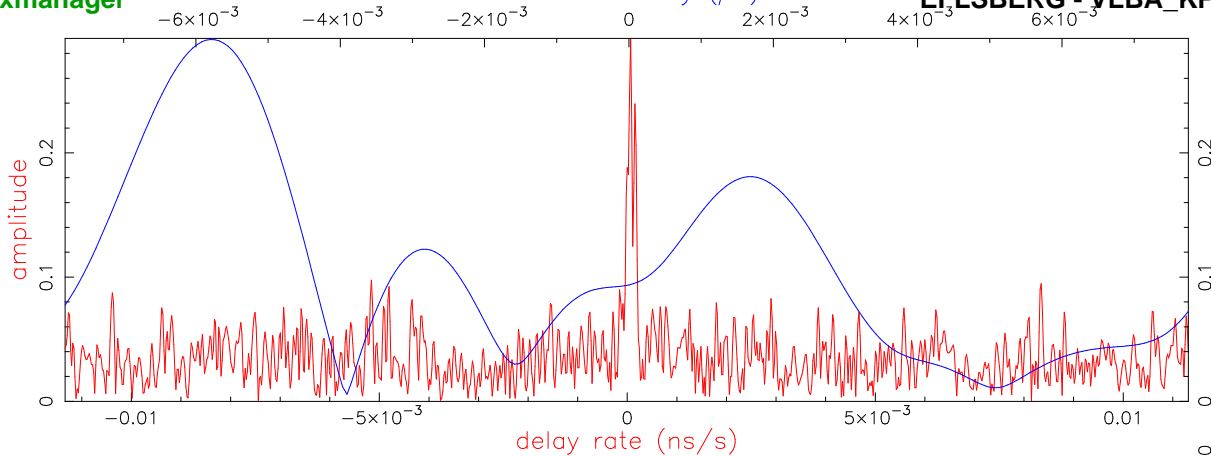
fxmanager

3C345.1HXFS7, No0189, Bk

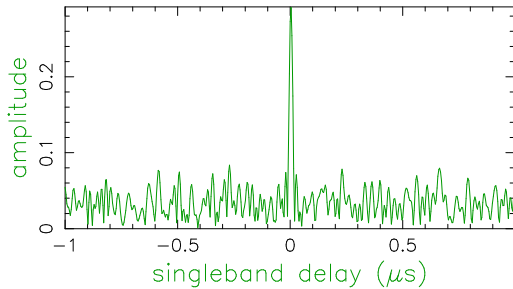
EFLSBERG - VLBA_KP, fgroup W, pol LL

multiband delay (μ s)

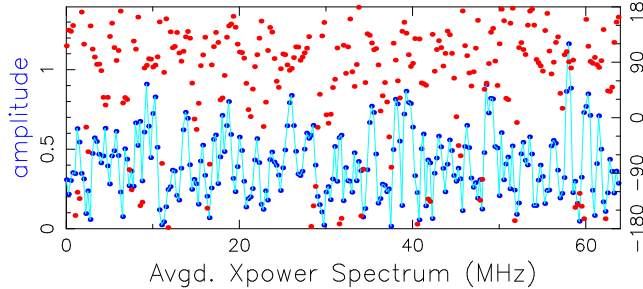
Fringe quality 9



SNR 10.7
 Int time 179.722
 Amp 0.292
 Phase -149.1
 PFD 2.1e-18
 Delays (us)
 SBD 0.003234
 MBD -0.005793
 Fringe rate (Hz) 0.006084
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

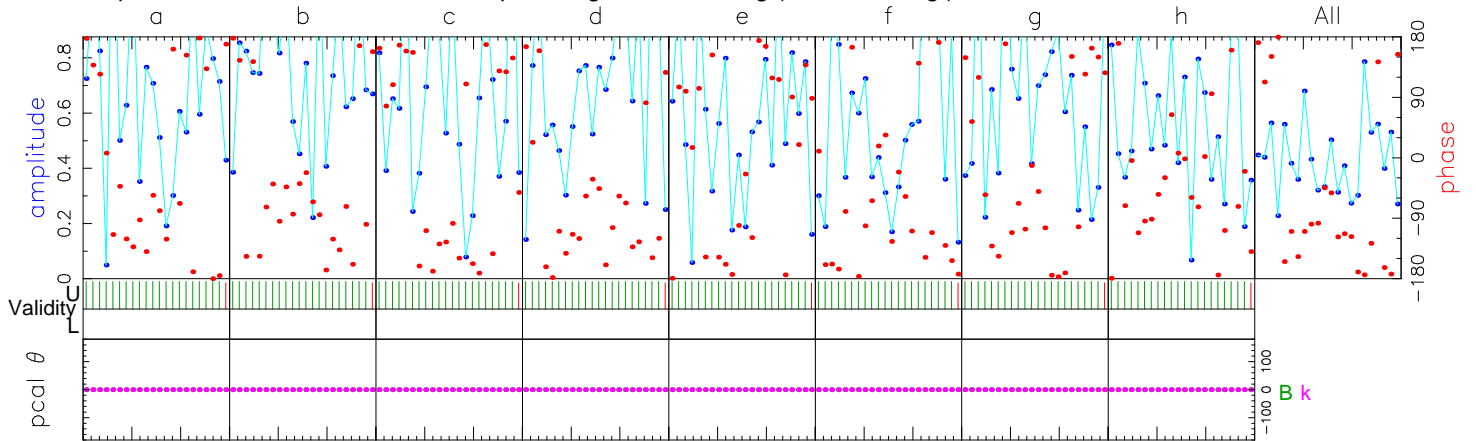


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153021
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:k | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:k | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| k | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -4.15833250771E+03 | Apriori delay (usec) | -4.15834233936E+03 | Resid mbdelay (usec) | -5.79335E-03 | +/- | 1.0E-04 |
| Sband delay (usec) | -4.15833910561E+03 | Apriori clock (usec) | 9.7818928E+00 | Resid sbdelay (usec) | 3.23375E-03 | +/- | 8.0E-04 |
| Phase delay (usec) | -4.15834234417E+03 | Apriori clockrate (us/s) | -2.9999999E-07 | Resid phdelay (usec) | -4.80806E-06 | +/- | 3.5E-07 |
| Delay rate (us/s) | -1.42863028692E+00 | Apriori rate (us/s) | -1.42863035755E+00 | Resid rate (us/s) | 7.06304E-08 | +/- | 3.3E-09 |
| Total phase (deg) | -189.6 | Apriori accel (us/s/s) | 3.96752931849E-05 | Resid phase (deg) | -149.1 | +/- | 10.7 |

| | | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|------------------------|-----------------------------|----------------------|-------------------|------------------|-----------|
| ph/seg (deg) | 51.3 | Theor. | 25.1 | Amplitude | 0.292 +/- 0.027 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| amp/seg (%) | 69.0 | | 43.8 | Search (1024X32) | 0.289 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 46.8 | | 15.1 | Inc. seg. avg. | 0.401 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| amp/frq (%) | 36.3 | | 26.4 | Inc. frq. avg. | 0.347 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | | |
| | | | | | | Data rate (Mb/s): | 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

B: az 288.7 el 38.4 pa 51.7 k: az 64.9 el 54.2 pa -89.0 u,v (fr/asec) 10682.644 4174.995 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bk..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bk.W.4.1HXFS7

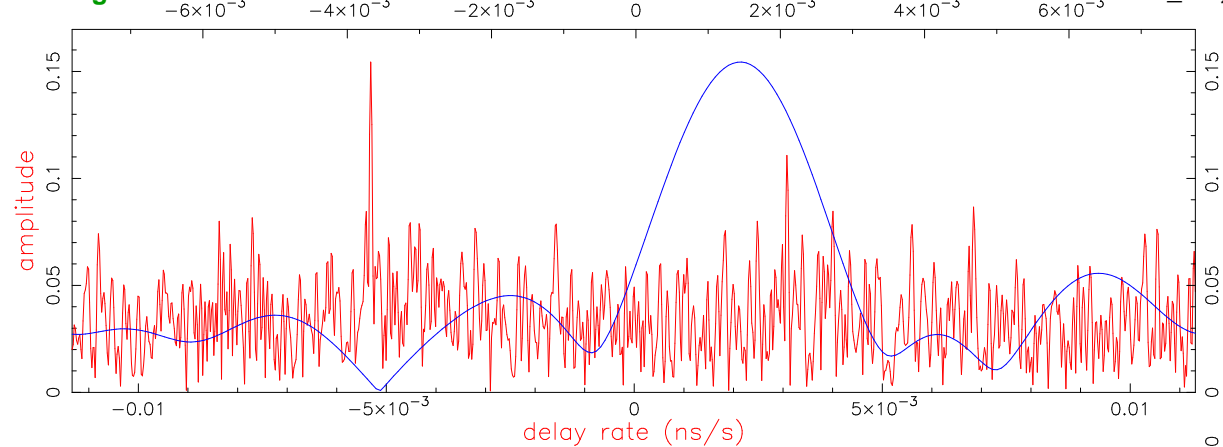
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bk

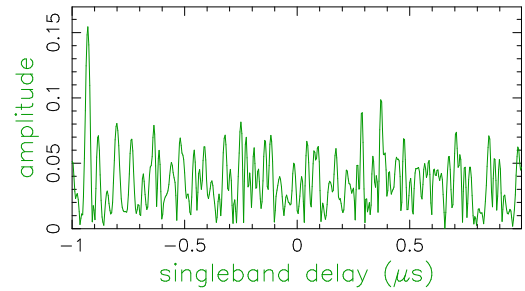
EFLSBERG - VLBA_KP, fgroup W, pol LR

multiband delay (μ s)

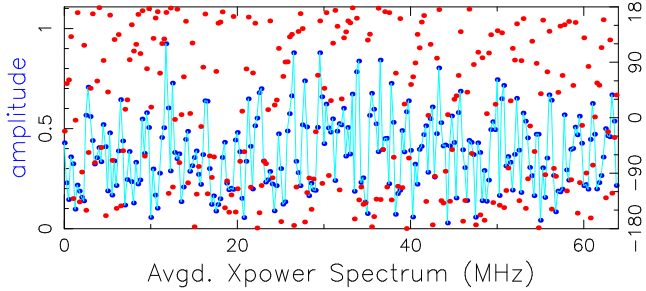


Fringe quality 0

SNR 5.7
 Int time 179.722
 Amp 0.170
 Phase -111.3
 PFD 8.2e-01
 Delays (us)
 SBD -0.930430
 MBD 0.001428
 Fringe rate (Hz)
 -0.457543
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

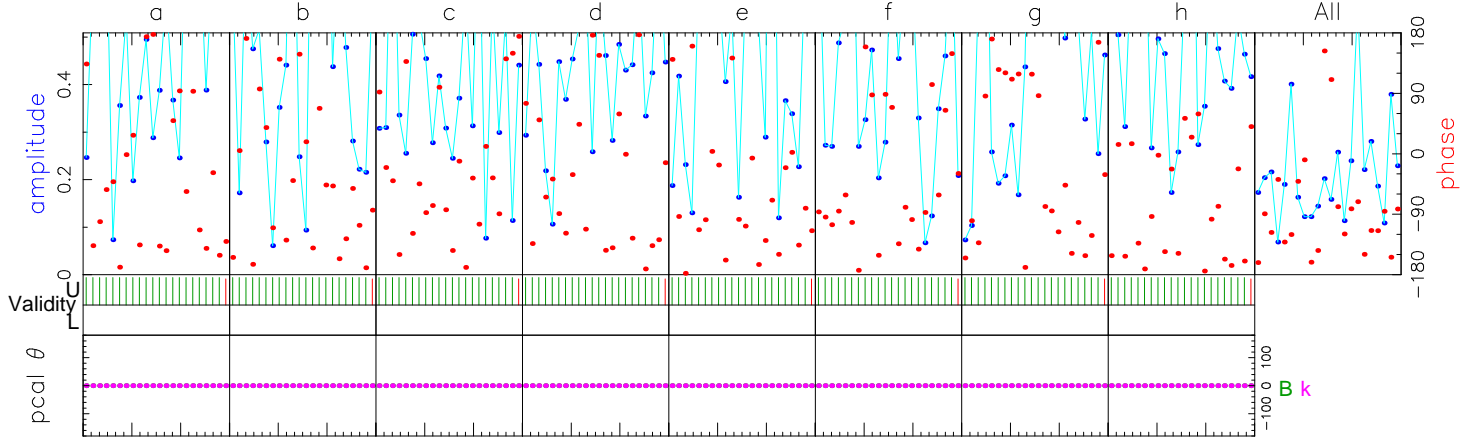


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153025
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -120.1 | -120.6 | -91.0 | -127.7 | -89.2 | -109.0 | -148.7 | -93.6 | Phase | -111.3 |
| | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.1 | Ampl. | 0.2 |
| | 353.3 | 346.7 | 343.7 | 95.9 | 18.7 | 71.6 | 225.3 | 109.3 | Sbd box | 18.8 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:k | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:k | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| k | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -4.15927841134E+03 | Apriori delay (usec) | -4.15834233936E+03 | Resid mbdelay (usec) | 1.42802E-03 | +/- | 1.9E-04 |
| Sband delay (usec) | -4.15927276911E+03 | Apriori clock (usec) | 9.7818928E+00 | Resid sbdelay (usec) | -9.30430E-01 | +/- | 1.5E-03 |
| Phase delay (usec) | -4.15834234295E+03 | Apriori clockrate (us/s) | -2.9999999E-07 | Resid phdelay (usec) | -3.58859E-06 | +/- | 6.5E-07 |
| Delay rate (us/s) | -1.42863566917E+00 | Apriori rate (us/s) | -1.42863035755E+00 | Resid rate (us/s) | -5.31162E-06 | +/- | 6.3E-09 |
| Total phase (deg) | -151.8 | Apriori accel (us/s/s) | 3.96752931849E-05 | Resid phase (deg) | -111.3 | +/- | 20.2 |

| | | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|------------------------|-----------------------------|----------------------|-------------------|------------------|-----------|
| ph/seg (deg) | 54.2 | Theor. | 47.4 | Amplitude | 0.170 +/- 0.030 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | |
| amp/seg (%) | 82.3 | | 82.7 | Search (1024X32) | 0.152 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | |
| ph/frq (deg) | 22.6 | | 28.6 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| amp/frq (%) | 32.0 | | 49.9 | Inc. seg. avg. | 0.177 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | | |
| | | | | Inc. frq. avg. | 0.160 | Data rate (Mb/s): | 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

B: az 288.7 el 38.4 pa 51.7 k: az 64.9 el 54.2 pa -89.0 u,v (fr/asec) 10682.644 4174.995 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bk..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bk.W.42.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

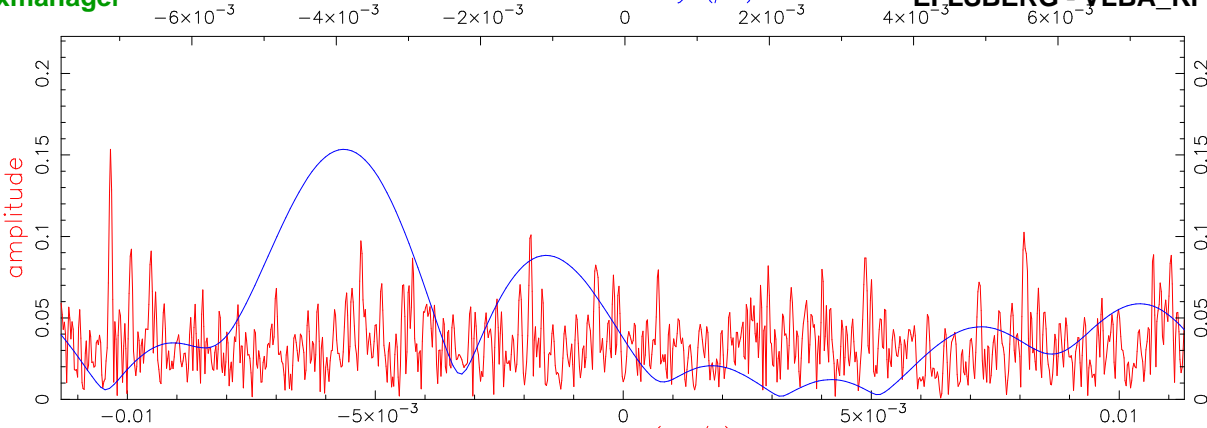
fxmanager

3C345.1HXFS7, No0189, Bk

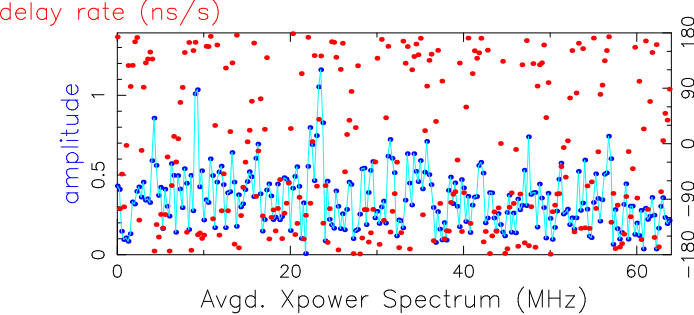
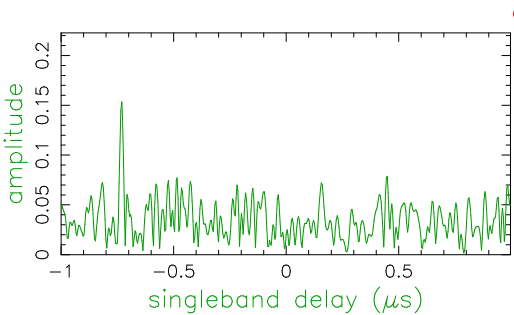
EFLSBERG - VLBA_KP, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

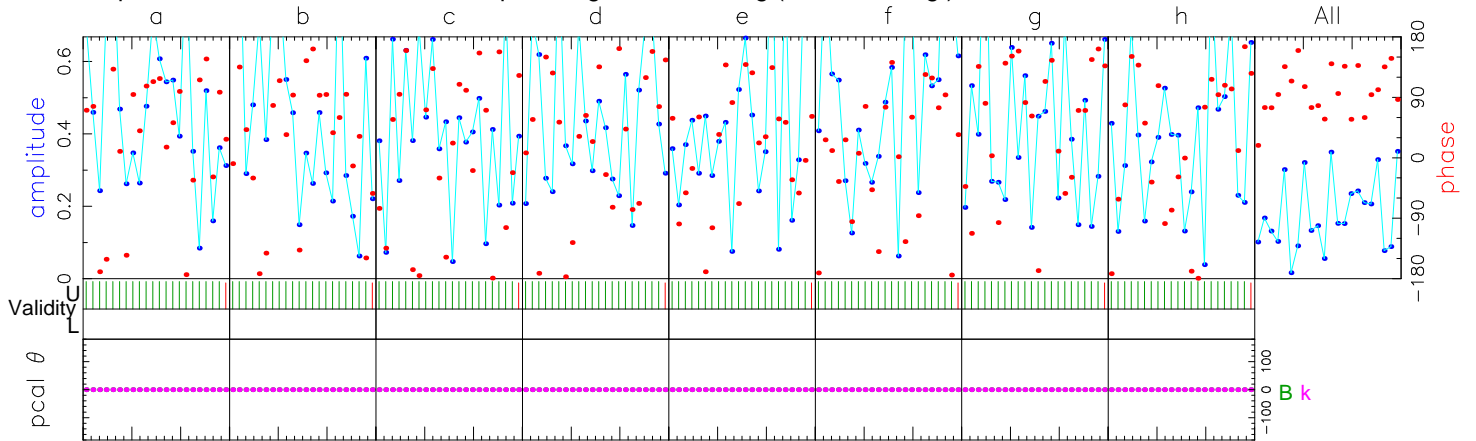


SNR 5.6
Int time 179.722
Amp 0.223
Phase 101.3
PFD 8.8e-01
Delays (us)
SBD -0.731094
MBD -0.003917
Fringe rate (Hz)
-0.892417
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 200000.00
Stop 200300.23
FRT 200130.00
Corr/FF/build
2021:010:004733
2021:010:153026
2020:247:085004
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 105.6 | 94.6 | 150.5 | 89.4 | 53.7 | 76.2 | 119.0 | 127.0 | Phase | 101.3 |
| B | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | Ampl. | 0.2 |
| k | 133.0 | 385.3 | 88.5 | 439.6 | 247.5 | 422.4 | 343.5 | 233.2 | Sbd box | 69.8 |
| B | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B:k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:k | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:k | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| k | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| k | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| Group delay (usec)(sbd) | -4.15908063100E+03 | | Apriori delay (usec) | | -4.15834233936E+03 | | Resid mbdelay (usec) | | -3.91664E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -4.15907343336E+03 | | Apriori clock (usec) | | 9.7818928E+00 | | Resid sbdelay (usec) | | -7.31094E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -4.15834233610E+03 | | Apriori clockrate (us/s) | | -2.9999999E-07 | | Resid phdelay (usec) | | 3.26526E-06 | +/- 6.6E-07 |
| Delay rate (us/s) | -1.42864071762E+00 | | Apriori rate (us/s) | | -1.42863035755E+00 | | Resid rate (us/s) | | -1.03601E-05 | +/- 6.3E-09 |
| Total phase (deg) | 60.7 | | Apriori accel (us/s/s) | | 3.96752931849E-05 | | Resid phase (deg) | | 101.3 | +/- 20.3 |

ph/seg (deg) 35.4 47.7 Search (1024X32) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 65.9 83.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 32.9 28.7 Inc. seg. avg. 0.194 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 21.8 50.2 Inc. frq. avg. 0.221 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 288.7 el 38.4 pa 51.7 k: az 64.9 el 54.2 pa -89.0 u,v (fr/asec) 10682.644 4174.995 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bk..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bk.W.58.1HXFS7

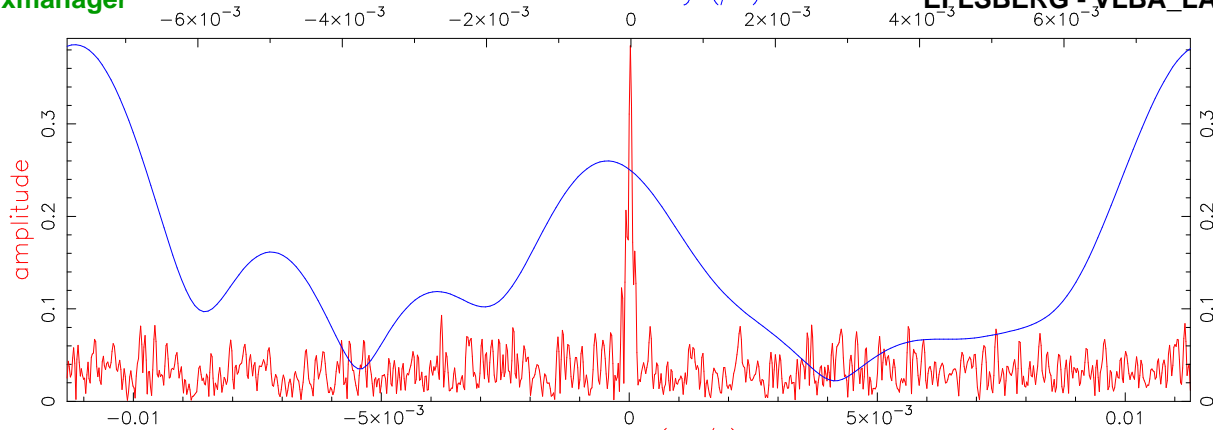
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BI

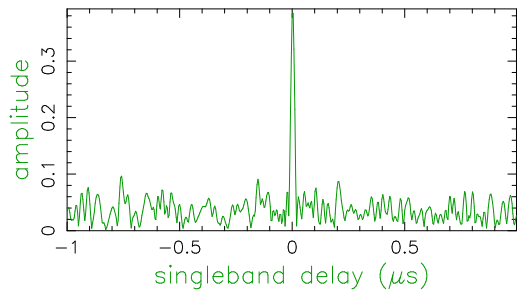
EFLSBERG - VLBA_LA, fgroup W, pol LL

multiband delay (μ s)

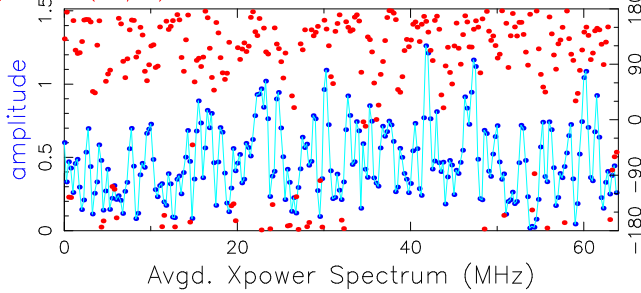


Fringe quality 8

SNR 14.4
Int time 179.778
Amp 0.392
Phase -112.5
PFD 1.8e-38
Delays (us)
SBD 0.002044
MBD -0.007789
Fringe rate (Hz)
0.001683
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

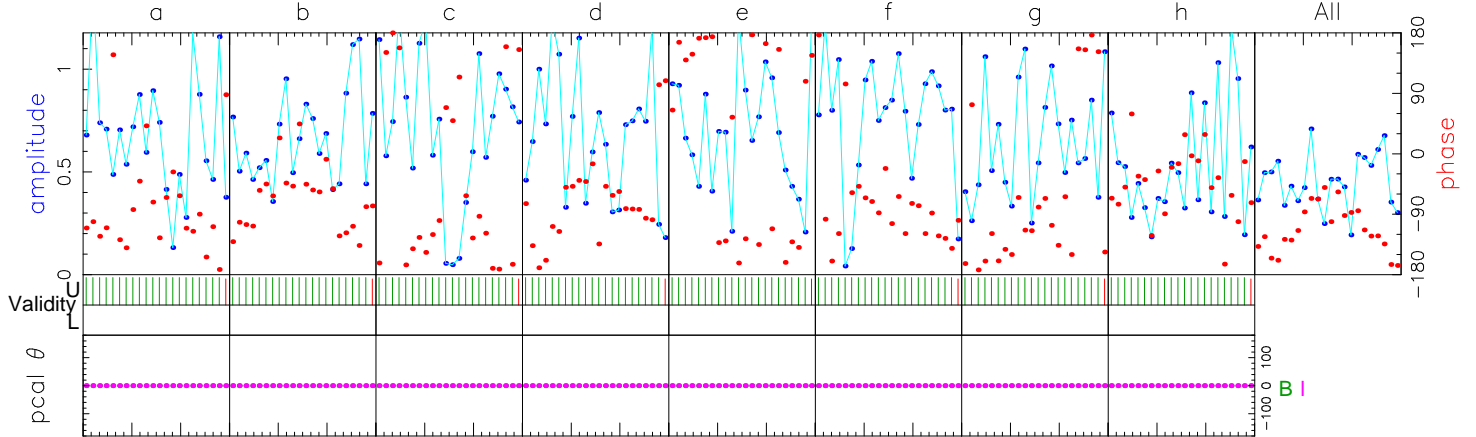


delay rate (ns/s)



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 200000.00
Stop 200300.23
FRT 200130.00
Corr/FF/build
2021:010:004733
2021:010:153022
2020:247:085004
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -108.1 | -73.8 | -156.0 | -91.4 | -176.6 | -98.9 | -136.2 | -41.9 | Phase | -112.5 |
| | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | 0.4 | Ampl. | 0.5 |
| | 257.5 | 256.4 | 257.9 | 257.9 | 258.2 | 258.1 | 258.3 | 258.4 | Sbd box | 257.5 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:I | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:I | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| I | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

Group delay (usec)(sbd) -5.27687153949E+03 Apriori delay (usec) -5.27687937526E+03 Resid mbdelay (usec) -7.78923E-03 +/- 7.5E-05
 Sband delay (usec) -5.27687733176E+03 Apriori clock (usec) 1.0505631E+01 Resid sbdelay (usec) 2.04350E-03 +/- 6.0E-04
 Phase delay (usec) -5.27687937888E+03 Apriori clockrate (us/s) -9.9999998E-08 Resid phdelay (usec) -3.62724E-06 +/- 2.6E-07
 Delay rate (us/s) -1.32949571861E+00 Apriori rate (us/s) -1.32949573815E+00 Resid rate (us/s) 1.95406E-08 +/- 2.5E-09
 Total phase (deg) -250.9 Apriori accel (us/s/s) 4.16346764097E-05 Resid phase (deg) -112.5 +/- 8.0

RMS Theor. Amplitude 0.392 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 33.8 18.7 Search (1024X32) 0.383 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 36.7 32.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 47.8 11.3 Inc. seg. avg. 0.431 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 30.9 19.7 Inc. frq. avg. 0.488 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 288.7 el 38.4 pa 51.7 I: az 70.7 el 59.7 pa -85.6 u,v (fr/asec) 9944.606 3931.415 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI.W.13.1HXFS7

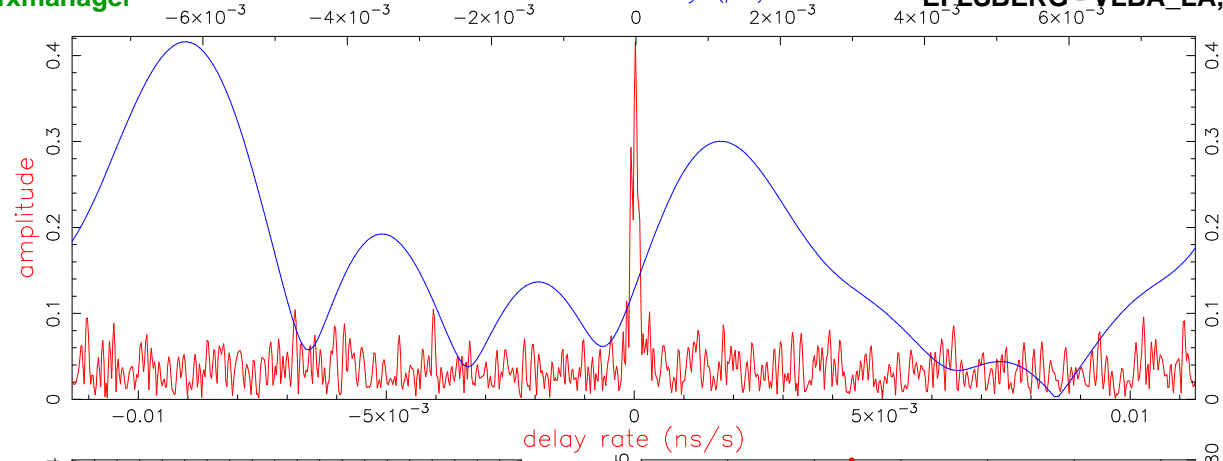
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BI

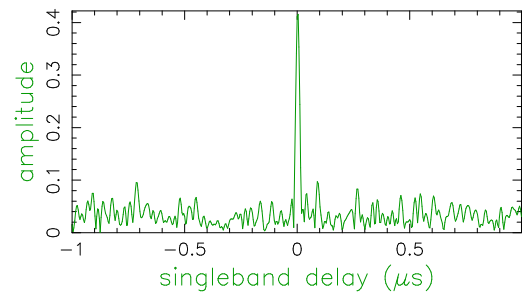
EFLSBERG - VLBA_LA, fgroup W, pol RR

multiband delay (μ s)

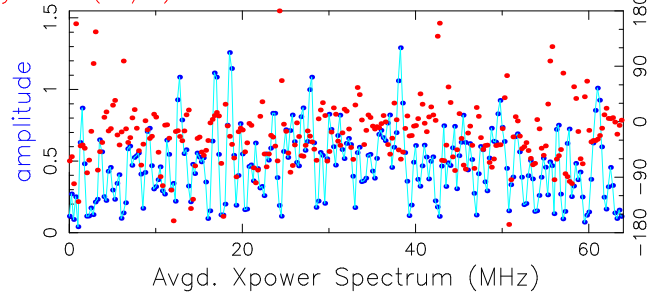


Fringe quality 8

SNR 15.5
 Int time 179.778
 Amp 0.422
 Phase 73.0
 PFD 1.4e-45
 Delays (us)
 SBD 0.002221
 MBD -0.006289
 Fringe rate (Hz) 0.002152
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

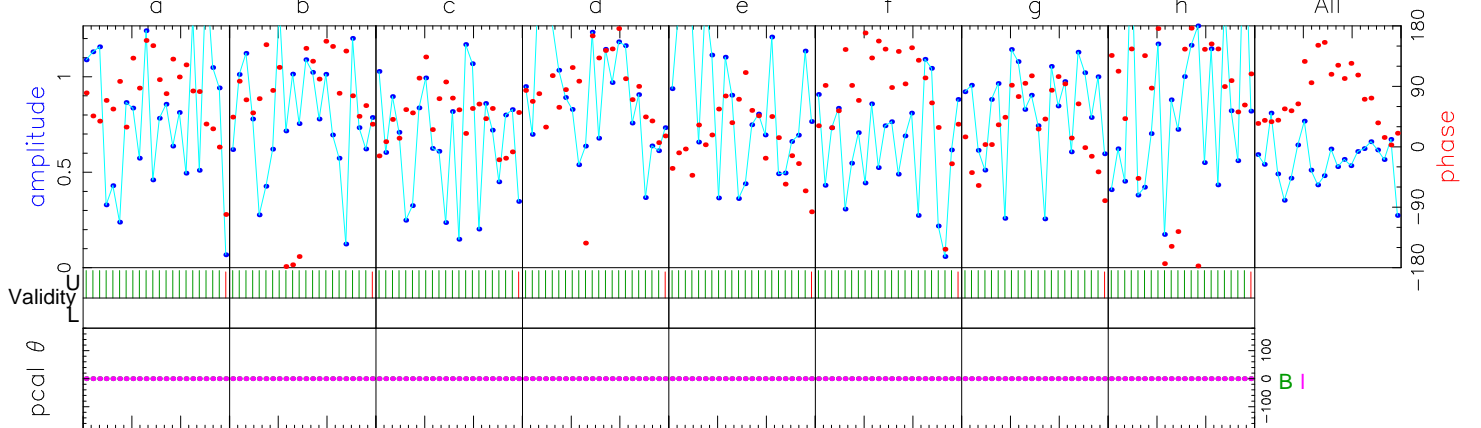


delay rate (ns/s)



Exp. c202a
 Yr:day 16383
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153024
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:I | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:I | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| I | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -5.27687003886E+03 | | | | | | | | | |
| Sband delay (usec) | -5.27687715476E+03 | | | | | | | | | |
| Phase delay (usec) | -5.27687937290E+03 | | | | | | | | | |
| Delay rate (us/s) | -1.32949571317E+00 | | | | | | | | | |
| Total phase (deg) | | | -65.5 | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | 73.0 | +/- 7.4 |
| Pcal mode: | MANUAL | MANUAL | | | | | | | | |
| Pcal rate: | 0.000E+00 | 0.000E+00 | | | | | | | | |
| Bits/sample: | 2x2 | | | | | | | | | |
| Sample rate(MISamp/s): | 128 | | | | | | | | | |
| Data rate(Mb/s): | 2048 | | | | | | | | | |
| nlags: | 256 | | | | | | | | | |
| t_cohere | infinite | | | | | | | | | |
| sb window (us) | -1.000 | 1.000 | | | | | | | | |
| mb window (us) | -0.008 | 0.008 | | | | | | | | |
| dr window (ns/s) | -0.011 | 0.011 | | | | | | | | |
| ion window (TEC) | 0.00 | 0.00 | | | | | | | | |

B: az 288.7 el 38.4 pa 51.7 I: az 70.7 el 59.7 pa -85.6 u,v (fr/asec) 9944.606 3931.415 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI.W.36.1HXFS7

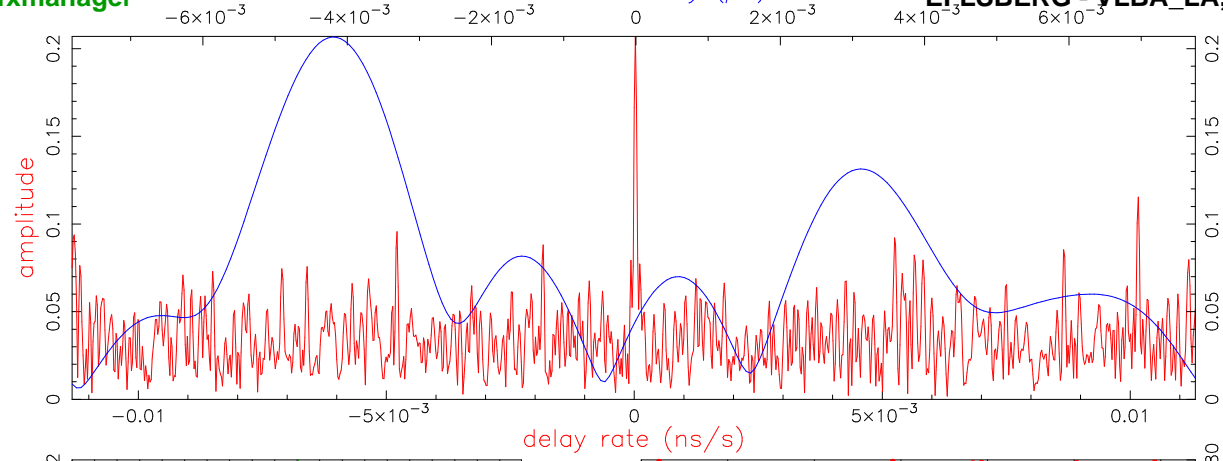
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BI

EFLSBERG - VLBA_LA, fgroup W, pol LR

multiband delay (μ s)



Fringe quality 9

SNR 7.6

Int time 179.778

Amp 0.207

Phase -156.2

PFD 5.2e-06

Delays (us)

SBD 0.004418

MBD -0.004176

Fringe rate (Hz)

0.002478

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c202a

Exper # 16383

Yr:day 2020:283

Start 200000.00

Stop 200300.23

FRT 200130.00

Corr/FF/build

2021:010:004733

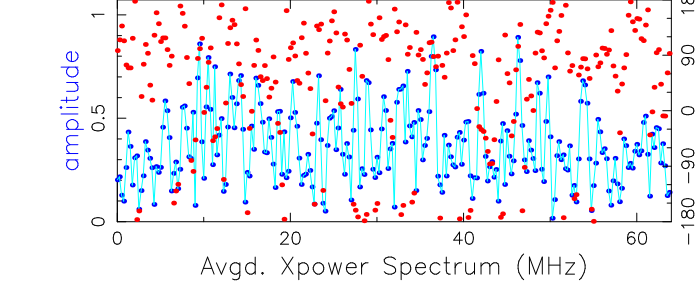
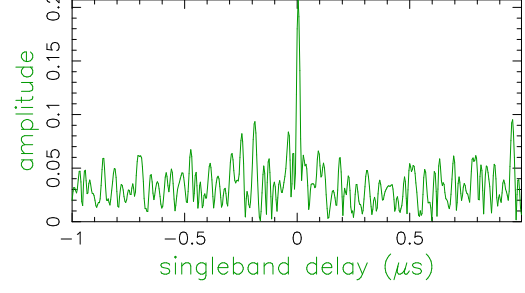
2021:010:153026

2020:247:085004

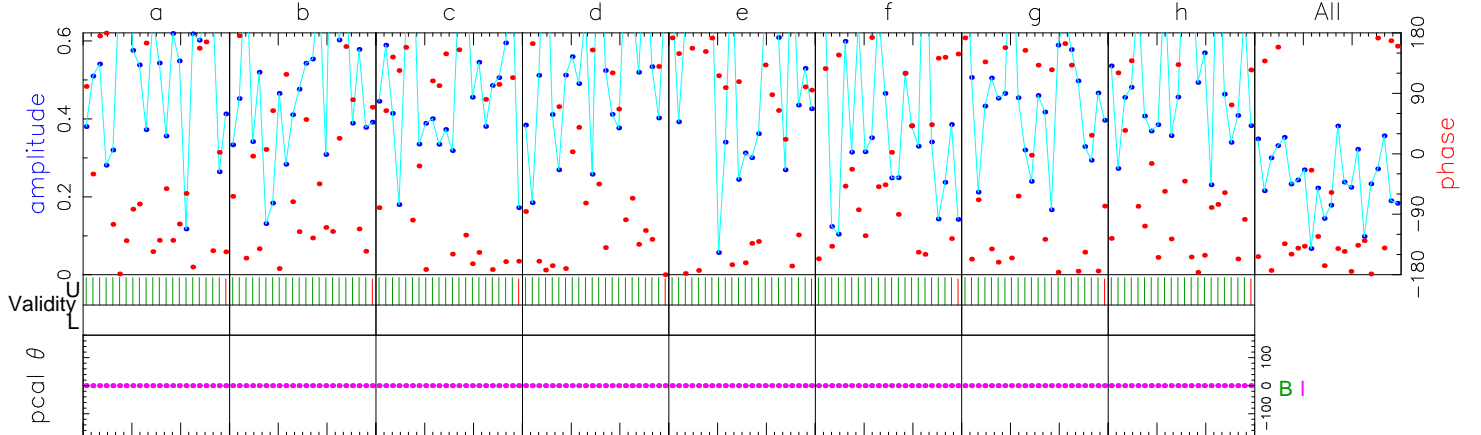
RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -141.5 | -126.8 | 170.7 | -128.9 | 157.7 | -126.5 | -174.0 | -109.7 | Phase | -156.2 |
| | 0.3 | 0.2 | 0.2 | 0.2 | 0.4 | 0.1 | 0.3 | 0.2 | Ampl. | 0.2 |
| | 257.1 | 402.5 | 259.5 | 382.5 | 258.0 | 492.7 | 258.7 | 457.2 | Sbd box | 258.1 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:I | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:I | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | ManI PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| I | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -5.27686792621E+03 | | Apriori delay (usec) | | -5.27687937526E+03 | | Resid mbdelay (usec) | | -4.17595E-03 | +/- 1.4E-04 |
| Sband delay (usec) | -5.27687495751E+03 | | Apriori clock (usec) | | 1.0505631E+01 | | Resid sbdelay (usec) | | 4.41775E-03 | +/- 1.1E-03 |
| Phase delay (usec) | -5.27687938029E+03 | | Apriori clockrate (us/s) | | -9.9999998E-08 | | Resid phdelay (usec) | | -5.03830E-06 | +/- 4.9E-07 |
| Delay rate (us/s) | -1.32949570938E+00 | | Apriori rate (us/s) | | -1.32949573815E+00 | | Resid rate (us/s) | | 2.87674E-08 | +/- 4.7E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.16346764097E-05 | | Resid phase (deg) | | -156.2 | +/- 15.1 |

ph/seg (deg) 44.1 35.4 Search (1024X32) 0.207 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 43.8 61.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 37.4 21.4 Inc. seg. avg. 0.206 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 41.3 37.3 Inc. frq. avg. 0.229 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

B: az 288.7 el 38.4 pa 51.7 I: az 70.7 el 59.7 pa -85.6 u,v (fr/asec) 9944.606 3931.415 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI.W.55.1HXFS7

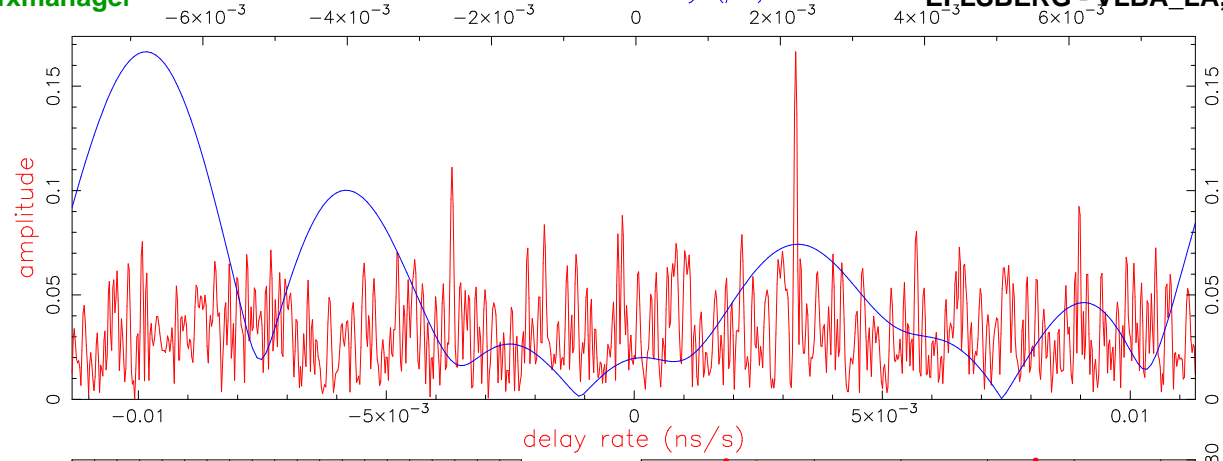
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BI

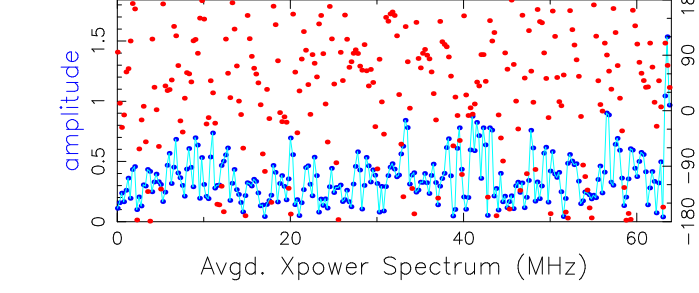
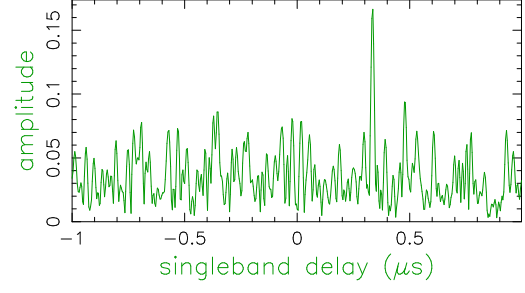
EFLSBERG - VLBA_LA, fgroup W, pol RL

multiband delay (μ s)



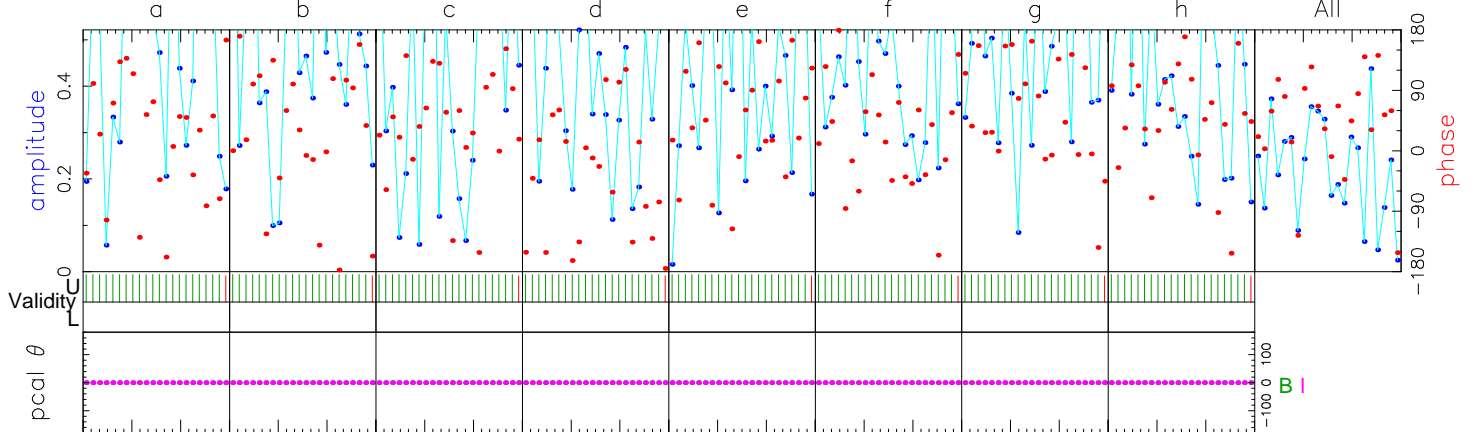
Fringe quality 0

SNR 6.2
Int time 179.778
Amp 0.174
Phase 56.4
PFD 9.1e-02
Delays (us)
SBD 0.334796
MBD -0.006773
Fringe rate (Hz) 0.280644
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 200000.00
Stop 200300.23
FRT 200130.00
Corr/FF/build
2021:010:004733
2021:010:153028
2020:247:085004
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

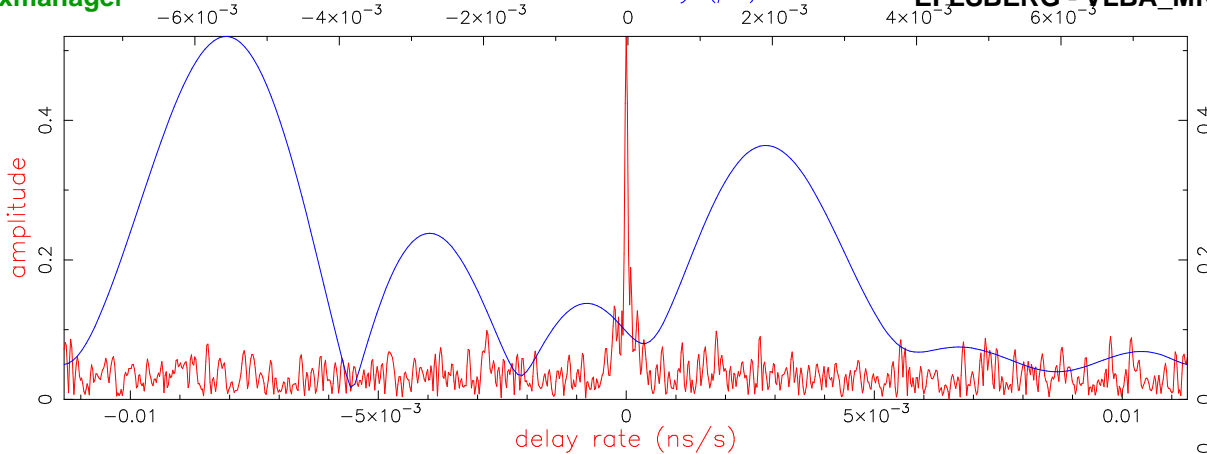


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All | | |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|--|----------|-----------------------|-------------------|------------------|-----------|
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | |
| B:I | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | |
| I | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | | | |
| I | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | | | |
| Group delay (usec)(sbd) | -5.27654239808E+03 | | Apriori delay (usec) | | -5.27687937526E+03 | | Resid mbdelay (usec) | | -6.77283E-03 | +/- 1.8E-04 | | |
| Sband delay (usec) | -5.27654457926E+03 | | Apriori clock (usec) | | 1.0505631E+01 | | Resid sbdelay (usec) | | 3.34796E-01 | +/- 1.4E-03 | | |
| Phase delay (usec) | -5.27687937344E+03 | | Apriori clockrate (us/s) | | -9.9999998E-08 | | Resid phdelay (usec) | | 1.81785E-06 | +/- 6.0E-07 | | |
| Delay rate (us/s) | -1.32949248015E+00 | | Apriori rate (us/s) | | -1.32949573815E+00 | | Resid rate (us/s) | | 3.25800E-06 | +/- 5.8E-09 | | |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.16346764097E-05 | | Resid phase (deg) | | 56.4 | +/- 18.6 | | |
| RMS | 67.3 | 43.6 | Amplitude | | 0.174 +/- 0.028 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | |
| ph/seg (deg) | 67.3 | 43.6 | Search (1024X32) | | 0.160 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | | |
| amp/seg (%) | 73.3 | 76.1 | Interp. | | 0.000 | | Bits/sample: 2x2 | | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| ph/frq (deg) | 44.7 | 26.3 | Inc. seg. avg. | | 0.180 | | Sample rate(MISamp/s): 128 | | | dr window (ns/s) | -0.011 0.011 | |
| amp/frq (%) | 32.5 | 45.9 | Inc. frq. avg. | | 0.172 | | Data rate(Mb/s): 2048 | | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

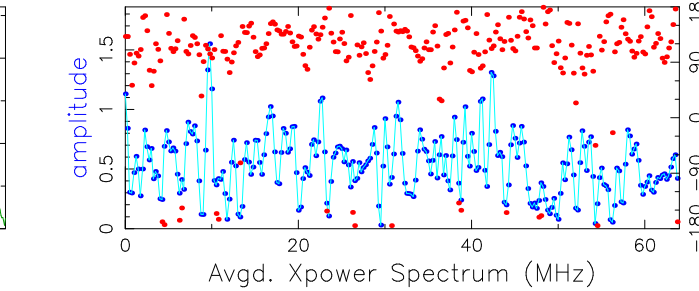
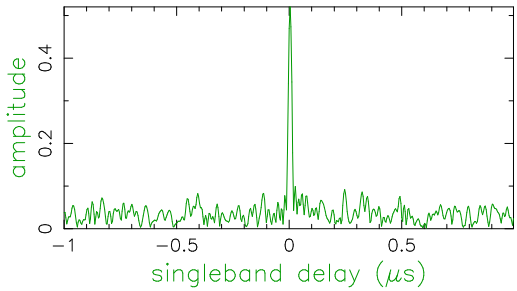
B: az 288.7 el 38.4 pa 51.7 I: az 70.7 el 59.7 pa -85.6 u,v (fr/asec) 9944.606 3931.415 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BI.W.74.1HXFS7

multiband delay (μ s)

Fringe quality 8

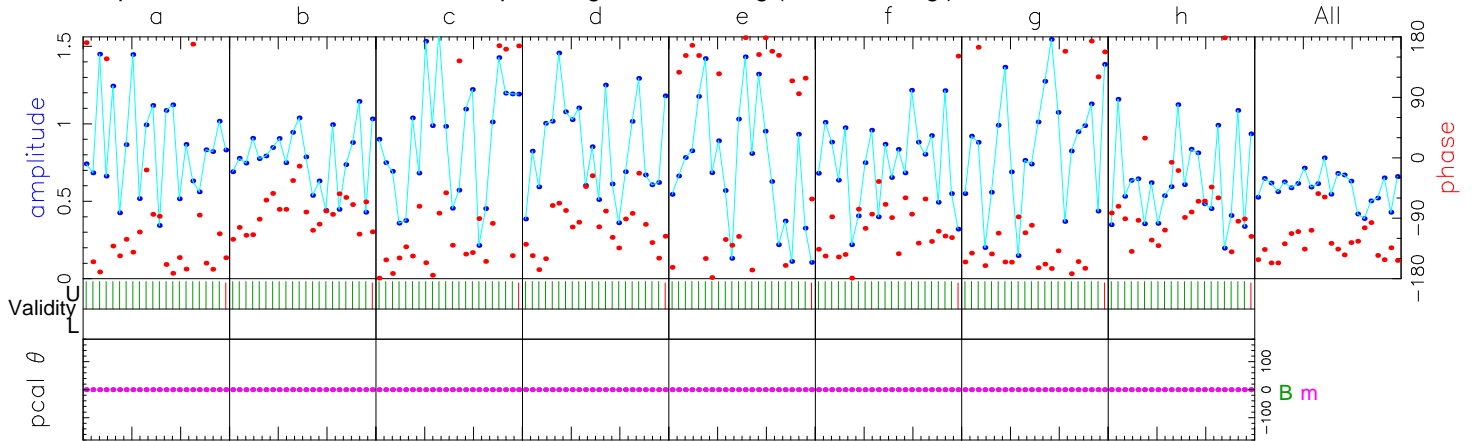


SNR 19.1
 Int time 179.778
 Amp 0.520
 Phase -126.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.003994
 MBD -0.005565
 Fringe rate (Hz)
 -0.000031
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153023
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -144.1 | -81.7 | -148.6 | -93.9 | 171.5 | -108.3 | -159.1 | -81.4 | Phase | -126.1 |
| | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.7 | 0.5 | Ampl. | 0.6 |
| | 258.1 | 258.1 | 258.3 | 258.8 | 259.0 | 258.1 | 258.1 | 259.1 | Sbd box | 258.0 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| m | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 7.74600893068E+03 | Apriori delay (usec) | 7.74599887068E+03 | Resid mbdelay (usec) | -5.56500E-03 | +/- | 5.7E-05 |
| Sband delay (usec) | 7.74600286418E+03 | Apriori clock (usec) | -3.2481070E+00 | Resid sbdelay (usec) | 3.99350E-03 | +/- | 4.5E-04 |
| Phase delay (usec) | 7.74599886661E+03 | Apriori clockrate (us/s) | -2.9999999E-07 | Resid phdelay (usec) | -4.06611E-06 | +/- | 1.9E-07 |
| Delay rate (us/s) | -1.85598970849E+00 | Apriori rate (us/s) | -1.85598970813E+00 | Resid rate (us/s) | -3.55696E-10 | +/- | 1.9E-09 |
| Total phase (deg) | 133.2 | Apriori accel (us/s/s) | -9.97315331674E-06 | Resid phase (deg) | -126.1 | +/- | 6.0 |

| | | | | | | | | | | | |
|--------------|----------|-------------|----------------------------|-----------------|-------|--|----------------------------|-------------------|------------------|-------|------|
| ph/seg (deg) | RMS 27.7 | Theor. 14.1 | Amplitude Search (1024X32) | 0.520 +/- 0.027 | 0.512 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 | |
| amp/seg (%) | 22.6 | 24.6 | 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) | 43.1 | 8.5 | Inc. seg. avg. | 0.572 | 0.572 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 27.5 | 14.8 | Inc. frq. avg. | 0.637 | 0.637 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

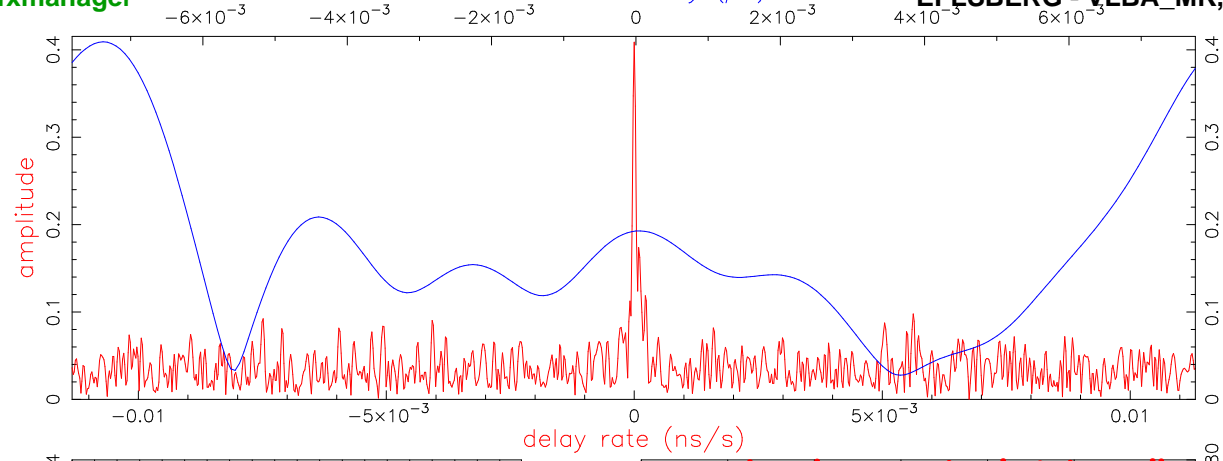
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bm

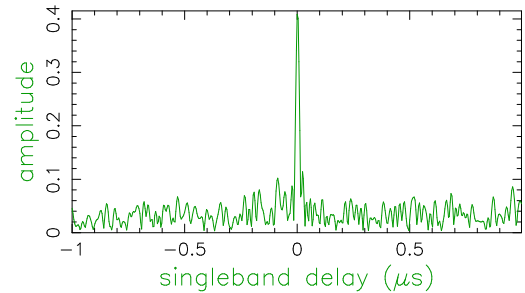
EFLSBERG - VLBA_MK, fgroup W, pol RR

multiband delay (μ s)

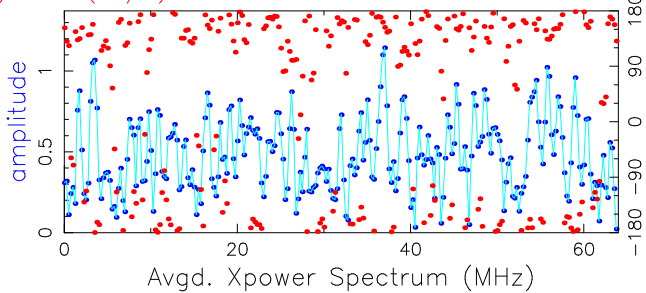


Fringe quality 8

SNR 15.2
 Int time 179.778
 Amp 0.415
 Phase -92.8
 PFD 7.6e-44
 Delays (us)
 SBD 0.001586
 MBD -0.007335
 Fringe rate (Hz)
 0.000308
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

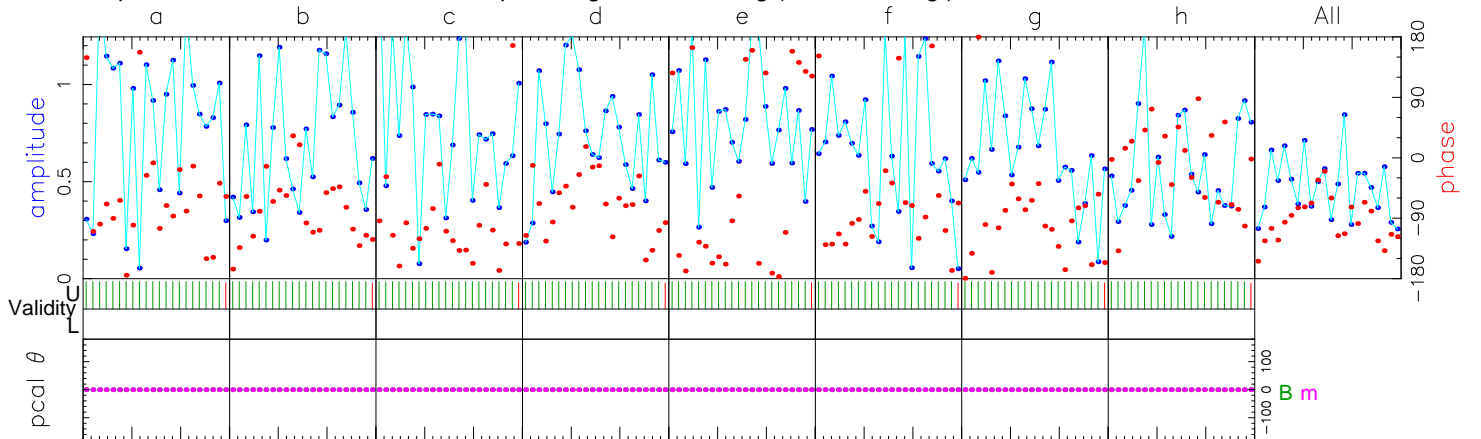


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153025
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -73.4 | -76.5 | -112.8 | -67.1 | -174.5 | -98.4 | -105.1 | -7.3 | Phase | -92.8 |
| | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | Ampl. | 0.5 |
| | 257.4 | 257.0 | 257.8 | 257.7 | 258.0 | 258.2 | 258.4 | 259.0 | Sbd box | 257.4 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| m | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

Group delay (usec)(sbd) 7.74600716096E+03 Apriori delay (usec) 7.74599887068E+03 Resid mbdelay (usec) -7.33472E-03 +/- 7.1E-05
 Sband delay (usec) 7.74600045668E+03 Apriori clock (usec) -3.2481070E+00 Resid sbdelay (usec) 1.58600E-03 +/- 5.7E-04
 Phase delay (usec) 7.74599886769E+03 Apriori clockrate (us/s) -2.9999999E-07 Resid phdelay (usec) -2.99323E-06 +/- 2.4E-07
 Delay rate (us/s) -1.85598970455E+00 Apriori rate (us/s) -1.85598970813E+00 Resid rate (us/s) 3.57822E-09 +/- 2.3E-09
 Total phase (deg) 166.5 Apriori accel (us/s/s) -9.97315331674E-06 Resid phase (deg) -92.8 +/- 7.5

RMS Theor. Amplitude 0.415 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 32.6 17.6 Search (1024X32) 0.408 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 40.6 30.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 51.5 10.6 Inc. seg. avg. 0.456 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 35.3 18.6 Inc. frq. avg. 0.525 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

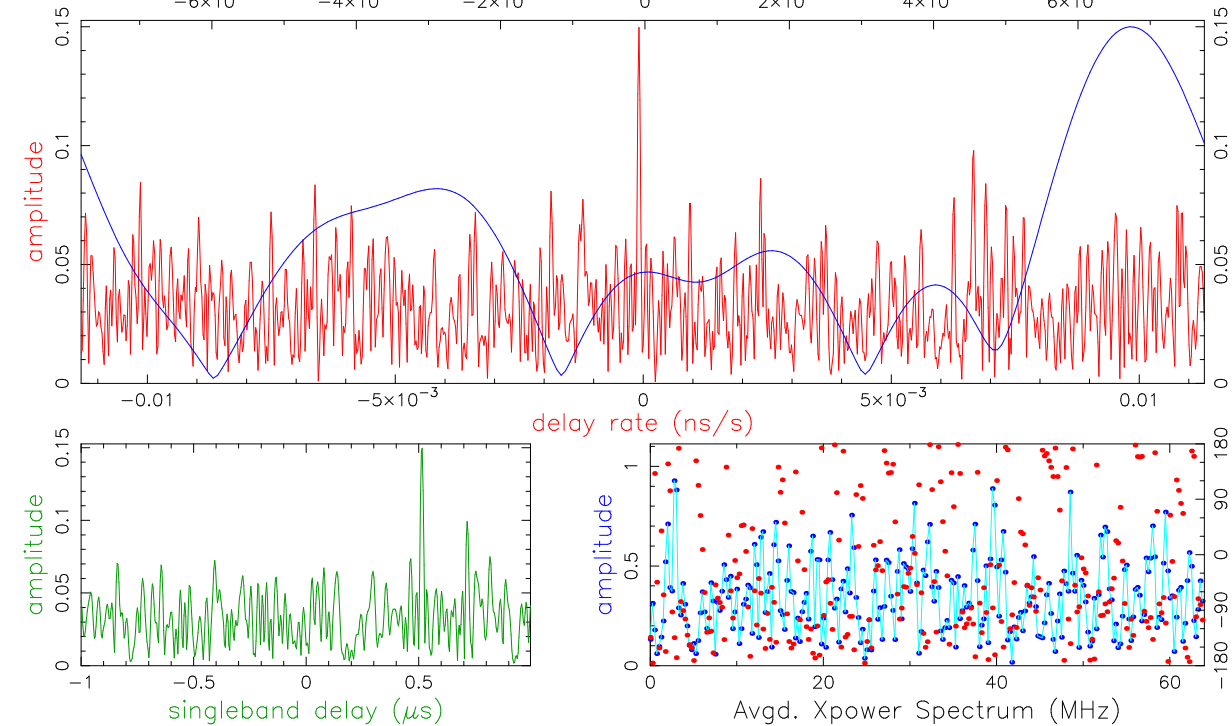
B: az 288.7 el 38.4 pa 51.7 m: az 52.4 el 14.4 pa -76.0 u,v (fr/asec) 13829.369 2201.812 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bm..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bm.W.43.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

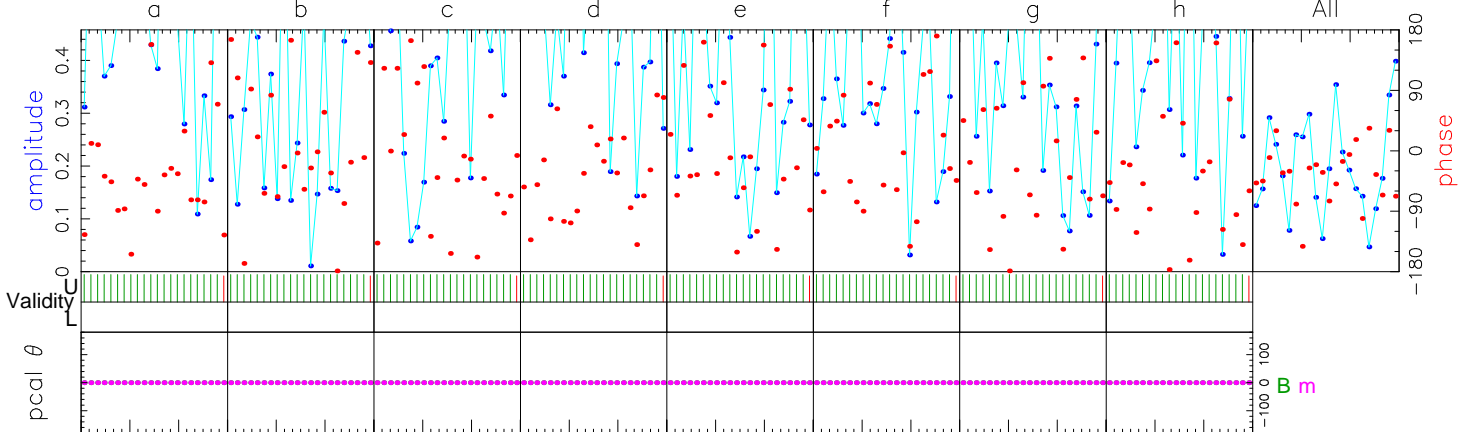
3C345.1HXFS7, No0189, Bm

EFLSBERG - VLBA_MK, fgroup W, pol LR



Fringe quality 0
 SNR 5.6
 Int time 179.778
 Amp 0.153
 Phase -35.6
 PFD 9.3e-01
 Delays (us)
 SBD 0.513970
 MBD 0.006658
 Fringe rate (Hz) -0.007168
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153027
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -55.8 | 15.2 | -54.0 | -38.1 | 23.6 | -23.8 | -26.2 | -77.8 | Phase | -35.6 |
| | 0.3 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | Ampl. | 0.2 |
| | 157.2 | 411.9 | 213.2 | 387.0 | 218.0 | 144.6 | 441.1 | 157.5 | Sbd box | 388.6 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| m | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

Group delay (usec)(sbd) 7.74650552870E+03 Apriori delay (usec) 7.74599887068E+03 Resid mbdelay (usec) 6.65802E-03 +/- 1.9E-04
 Sband delay (usec) 7.74651284043E+03 Apriori clock (usec) -3.2481070E+00 Resid sbdelay (usec) 5.13970E-01 +/- 1.5E-03
 Phase delay (usec) 7.74599886953E+03 Apriori clockrate (us/s) -2.9999999E-07 Resid phdelay (usec) -1.14943E-06 +/- 6.6E-07
 Delay rate (us/s) -1.85598979135E+00 Apriori rate (us/s) -1.85598970813E+00 Resid rate (us/s) -8.32158E-08 +/- 6.3E-09
 Total phase (deg) 223.7 Apriori accel (us/s/s) -9.97315331674E-06 Resid phase (deg) -35.6 +/- 20.5

RMS Theor. Amplitude 0.153 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 42.6 48.0 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 68.3 83.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 38.4 29.0 Inc. seg. avg. 0.149 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 55.9 50.5 Inc. frq. avg. 0.151 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 288.7 el 38.4 pa 51.7 m: az 52.4 el 14.4 pa -76.0 u,v (fr/asec) 13829.369 2201.812 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bm..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bm.W.65.1HXFS7

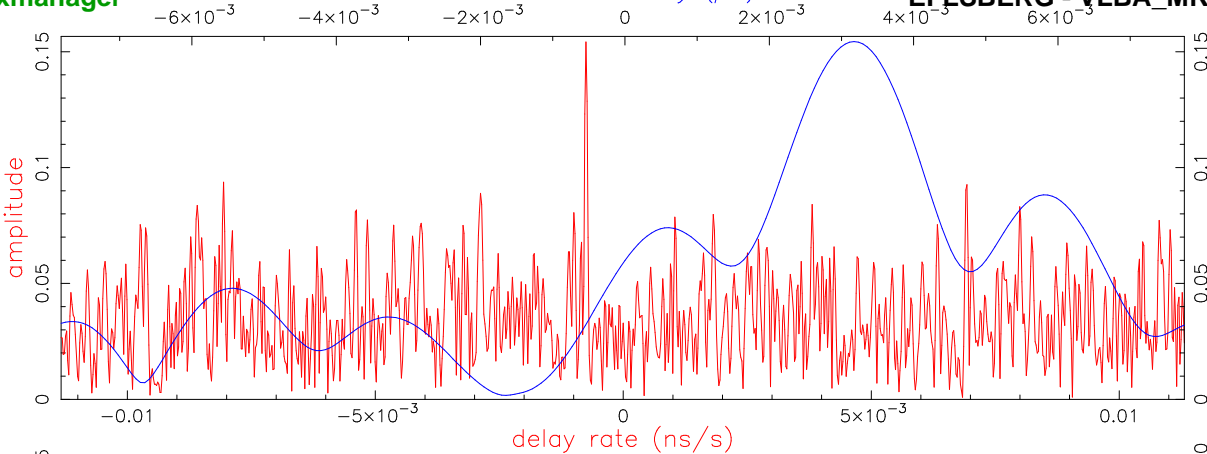
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bm

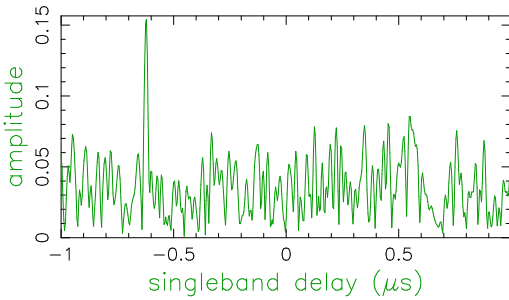
EFLSBERG - VLBA_MK, fgroup W, pol RL

multiband delay (μ s)

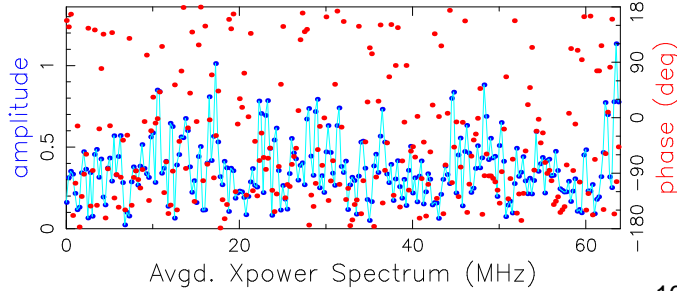


Fringe quality 0

SNR 5.7
 Int time 179.778
 Amp 0.157
 Phase -111.3
 PFD 7.1e-01
 Delays (us)
 SBD -0.622580
 MBD 0.003125
 Fringe rate (Hz)
 -0.065674
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

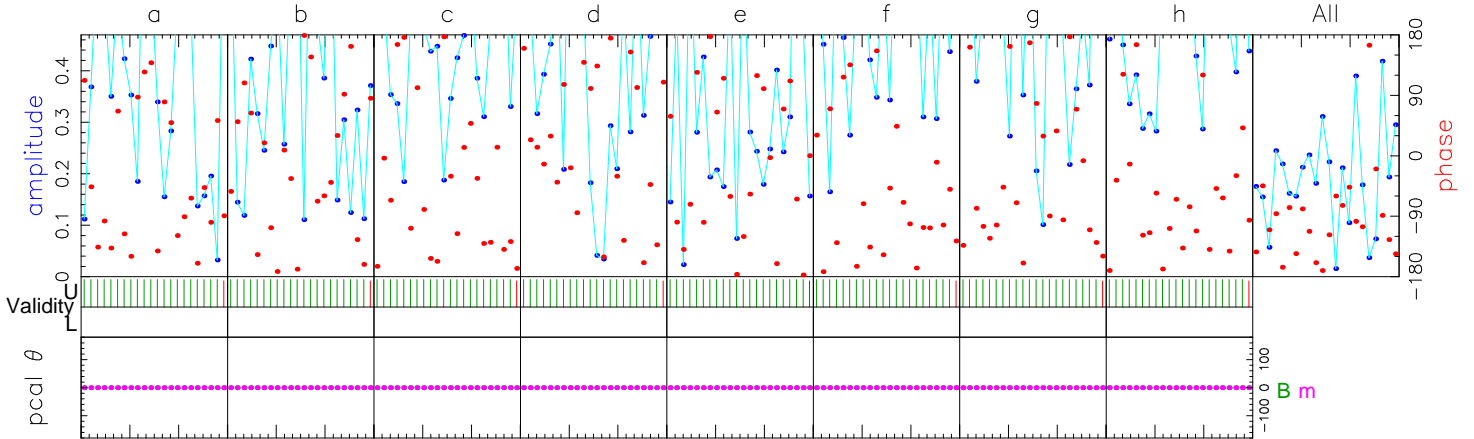


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153029
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -123.5 | -95.3 | -119.1 | 12.3 | -99.4 | -115.7 | -120.6 | -98.2 | Phase | -111.3 |
| | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.3 | 0.3 | Ampl. | 0.1 |
| | 59.3 | 368.1 | 217.0 | 219.5 | 476.4 | 313.9 | 98.5 | 177.8 | Sbd box | 97.6 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:m | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| m | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

Group delay (usec)(sbd) 7.74537699584E+03 Apriori delay (usec) 7.74599887068E+03 Resid mbdelay (usec) 3.12516E-03 +/- 1.9E-04
 Sband delay (usec) 7.74537629068E+03 Apriori clock (usec) -3.2481070E+00 Resid sbdelay (usec) -6.22580E-01 +/- 1.5E-03
 Phase delay (usec) 7.74599886709E+03 Apriori clockrate (us/s) -2.9999999E-07 Resid phdelay (usec) -3.58838E-06 +/- 6.4E-07
 Delay rate (us/s) -1.85599047055E+00 Apriori rate (us/s) -1.85598970813E+00 Resid rate (us/s) -7.62414E-07 +/- 6.2E-09
 Total phase (deg) 148.0 Apriori accel (us/s/s) -9.97315331674E-06 Resid phase (deg) -111.3 +/- 20.0

RMS Theor. Amplitude 0.157 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 44.8 46.9 Search (1024X32) 0.147 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 68.4 81.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 51.9 28.3 Inc. seg. avg. 0.145 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 60.2 49.4 Inc. frq. avg. 0.145 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 288.7 el 38.4 pa 51.7 m: az 52.4 el 14.4 pa -76.0 u,v (fr/asec) 13829.369 2201.812 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bm..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bm.W.79.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

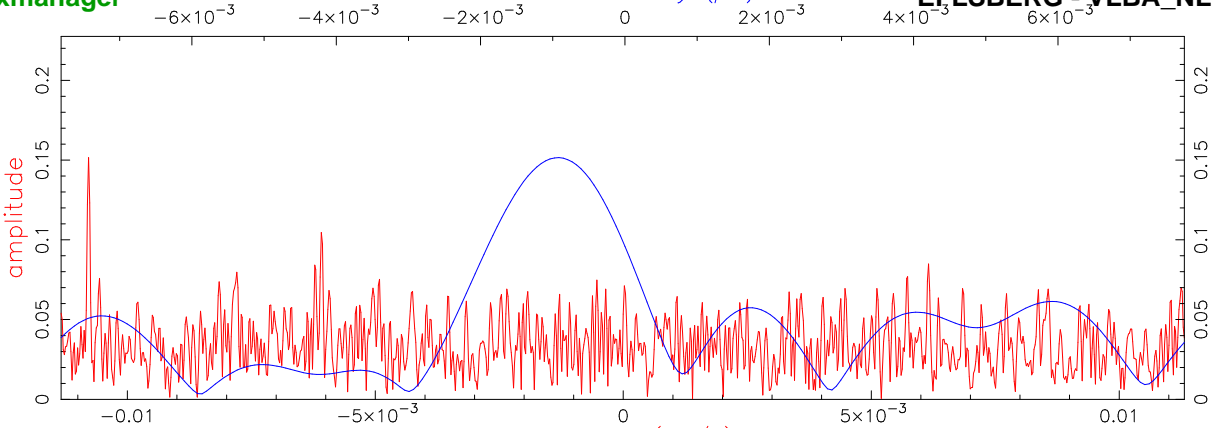
fxmanager

3C345.1HXFS7, No0189, Bn

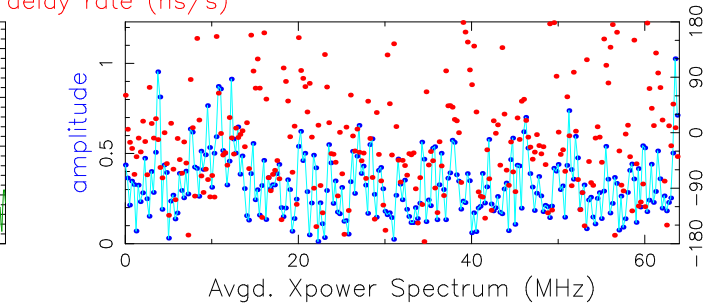
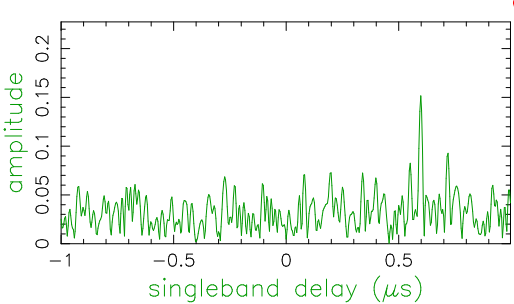
EFLSBERG - VLBA_NL, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 0

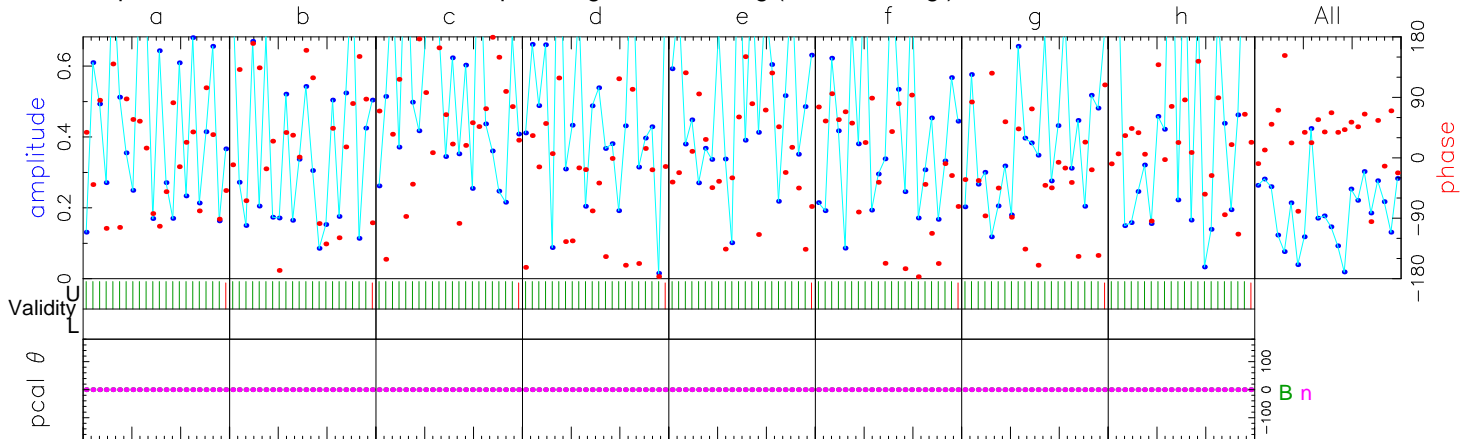


SNR 5.6
 Int time 179.777
 Amp 0.228
 Phase 31.8
 PFD 9.6e-01
 Delays (us)
 SBD 0.597776
 MBD -0.000925
 Fringe rate (Hz)
 -0.930866
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153021
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | -7.12144620816E+03 | | | | | | | | | |
| Sband delay (usec) | -7.12144125790E+03 | | | | | | | | | |
| Phase delay (usec) | -7.12203903262E+03 | | | | | | | | | |
| Delay rate (us/s) | -1.08565762507E+00 | | | | | | | | | |
| Total phase (deg) | | | -97.2 | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | 31.8 | +/- 20.6 |
| Pcal mode: | MANUAL | MANUAL | | | | | | | | |
| Pcal rate: | 0.000E+00 | 0.000E+00 | | | | | | | | |
| Bits/sample: | 2x2 | | | | | | | | | |
| Sample rate(MISamp/s): | 128 | | | | | | | | | |
| Data rate(Mb/s): | 2048 | | | | | | | | | |
| nlags: | 256 | | | | | | | | | |
| t_cohere | infinite | | | | | | | | | |
| sb window (us) | -1.000 | 1.000 | | | | | | | | |
| mb window (us) | -0.008 | 0.008 | | | | | | | | |
| dr window (ns/s) | -0.011 | 0.011 | | | | | | | | |
| ion window (TEC) | 0.00 | 0.00 | | | | | | | | |

B: az 288.7 el 38.4 pa 51.7 n: az 88.5 el 72.1 pa -76.1 u,v (fr/asec) 8129.380 3646.467 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bn..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bn.W.12.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

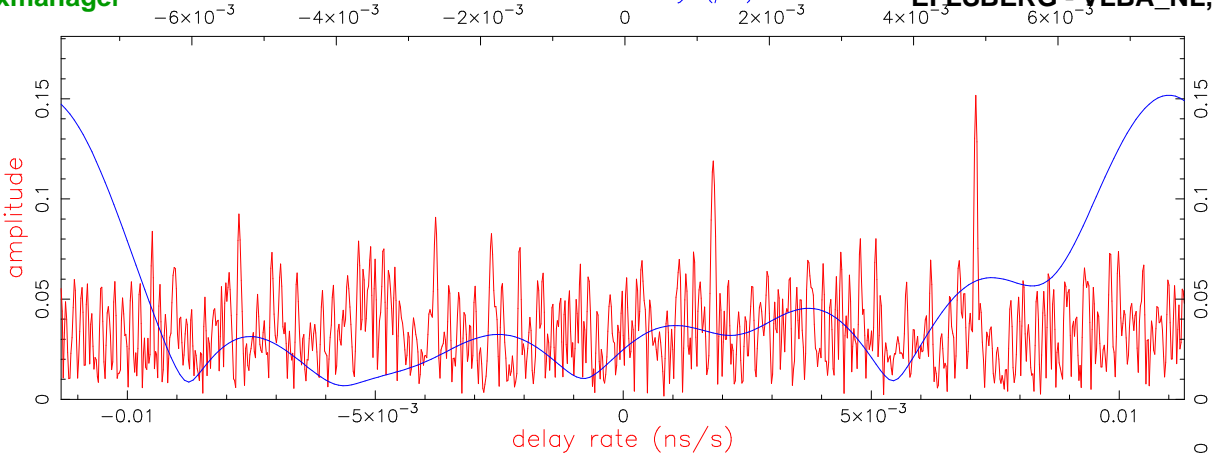
fxmanager

3C345.1HXFS7, No0189, Bn

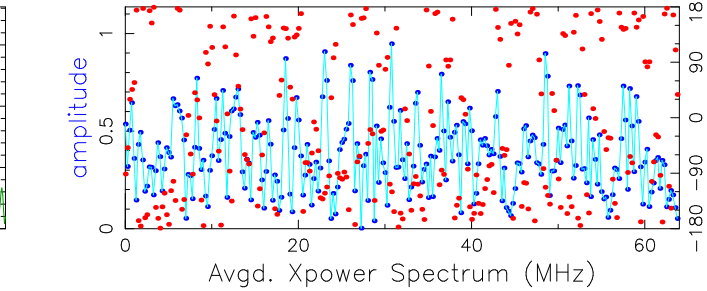
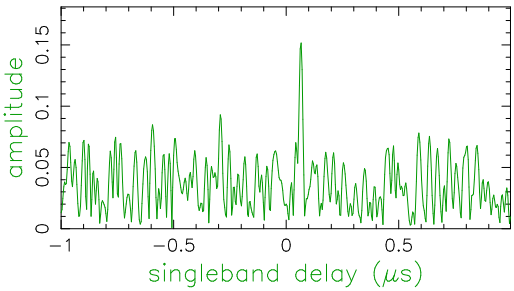
EFLSBERG - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)

Fringe quality 0

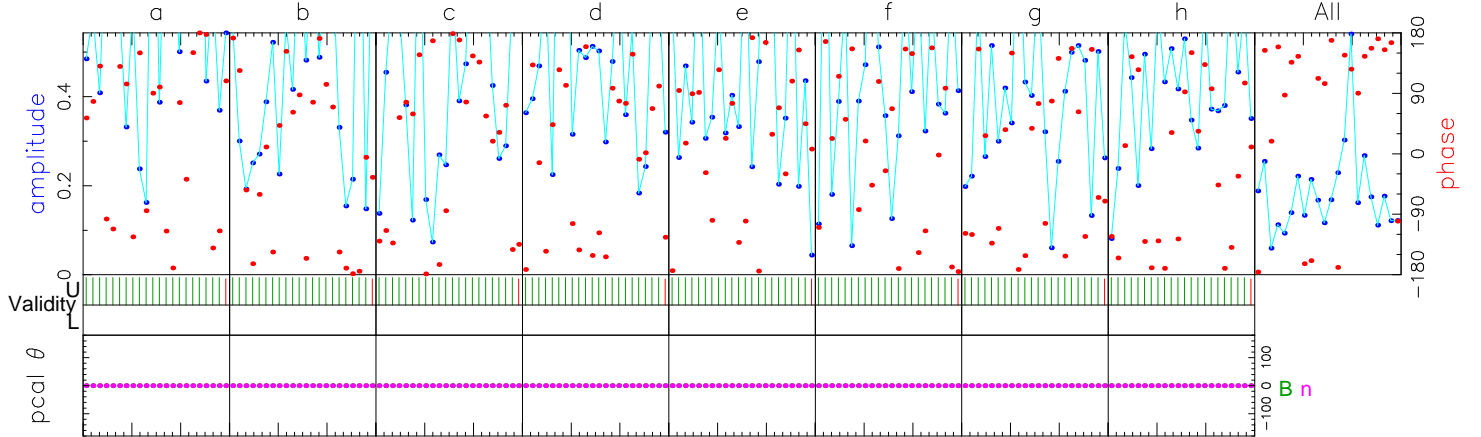


SNR 5.6
 Int time 179.777
 Amp 0.181
 Phase 151.0
 PFD 9.1e-01
 Delays (us)
 SBD 0.065157
 MBD 0.007492
 Fringe rate (Hz) 0.613756
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153023
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -7.12196904132E+03 | | | | | | | | 7.49233E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -7.12197387665E+03 | | | | | | | | 6.51570E-02 | +/- 1.5E-03 |
| Phase delay (usec) | -7.12203902878E+03 | | | | | | | | 4.86798E-06 | +/- 6.6E-07 |
| Delay rate (us/s) | -1.08563969354E+00 | | | | | | | | 7.2510E-06 | +/- 6.3E-09 |
| Total phase (deg) | | | 21.9 | | | | | | 151.0 | +/- 20.4 |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | |
| Pcal mode: MANUAL, MANUAL | | | | | | | | | | |
| Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | |
| Sample rate(MISamp/s): 128 | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | |
| PC period (AP's) 5, 5 | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| nlags: 256 | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | |
| simultaneous interpolator | | | | | | | | | | |

B: az 288.7 el 38.4 pa 51.7 n: az 88.5 el 72.1 pa -76.1 u,v (fr/asec) 8129.380 3646.467
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bn..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bn.W.28.1HXFS7

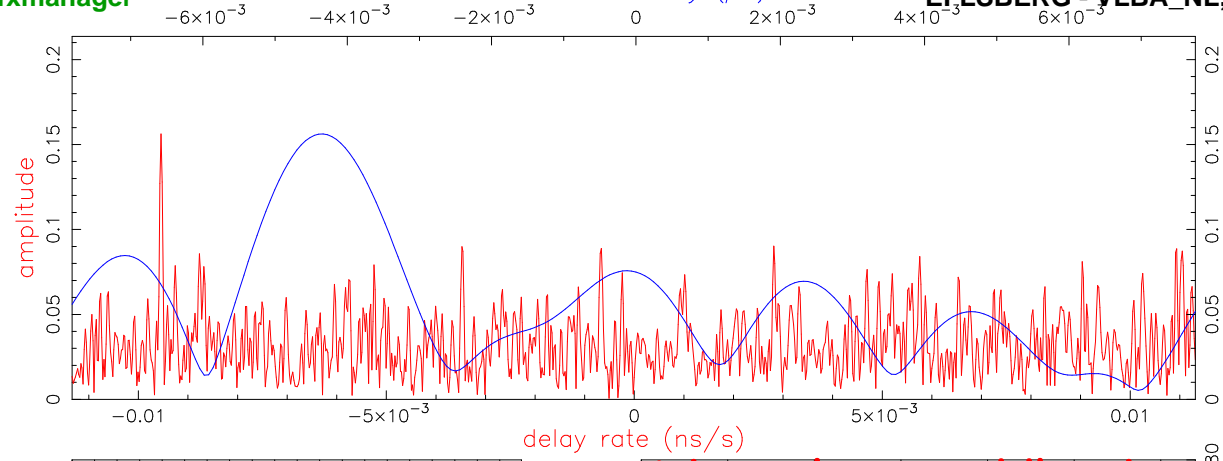
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

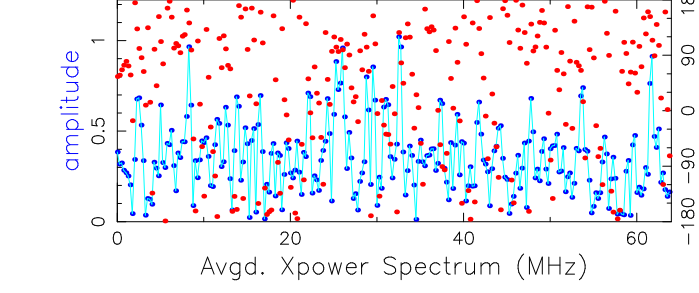
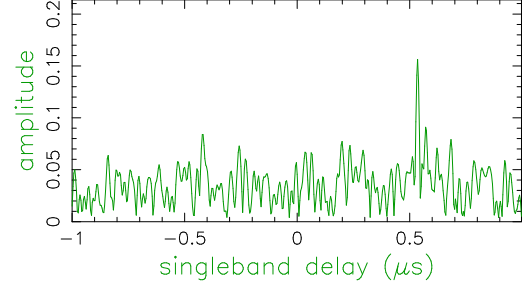
3C345.1HXFS7, No0189, Bn

EFLSBERG - VLBA_NL, fgroup W, pol LR

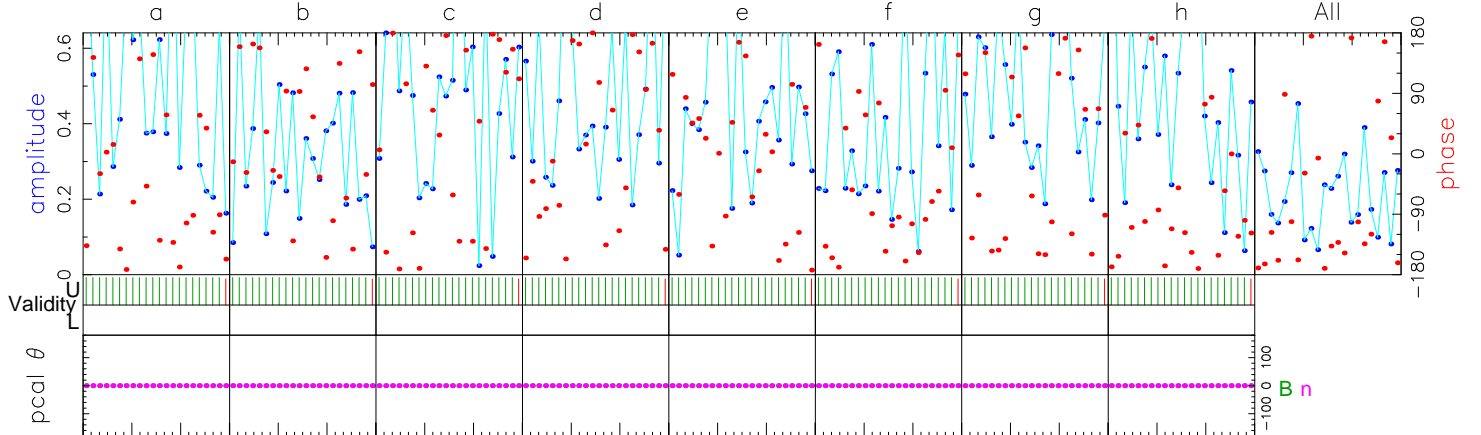
multiband delay (μ s)



Fringe quality 0
 SNR 5.7
 Int time 179.777
 Amp 0.214
 Phase -151.6
 PFD 7.0e-01
 Delays (us)
 SBD 0.534796
 MBD -0.004370
 Fringe rate (Hz)
 -0.823887
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153025
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -123.3 | -178.7 | -177.4 | -155.1 | -50.2 | -131.7 | -171.7 | -137.8 | Phase | -151.6 |
| | 0.3 | 0.1 | 0.3 | 0.2 | 0.0 | 0.2 | 0.3 | 0.4 | Ampl. | 0.2 |
| | 254.7 | 251.9 | 363.3 | 152.8 | 55.7 | 188.6 | 26.3 | 392.6 | Sbd box | 393.9 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| n | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -7.12149652875E+03 | | Apriori delay (usec) | | -7.12203903365E+03 | | Resid mbdelay (usec) | | -4.37010E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -7.12150423715E+03 | | Apriori clock (usec) | | 9.9634171E+00 | | Resid sbdelay (usec) | | 5.34796E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -7.12203903854E+03 | | Apriori clockrate (us/s) | | -7.0000001E-07 | | Resid phdelay (usec) | | -4.88967E-06 | +/- 6.4E-07 |
| Delay rate (us/s) | -1.08565638315E+00 | | Apriori rate (us/s) | | -1.08564681864E+00 | | Resid rate (us/s) | | -9.56451E-06 | +/- 6.2E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.55681394222E-05 | | Resid phase (deg) | | -151.6 | +/- 20.0 |

ph/seg (deg) 71.3 46.9 Search (1024X32) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.7 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) 47.4 28.3 Inc. seg. avg. 0.220 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 52.6 49.3 Inc. frq. avg. 0.205 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 288.7 el 38.4 pa 51.7 n: az 88.5 el 72.1 pa -76.1 u,v (fr/asec) 8129.380 3646.467 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bn..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bn.W.46.1HXFS7

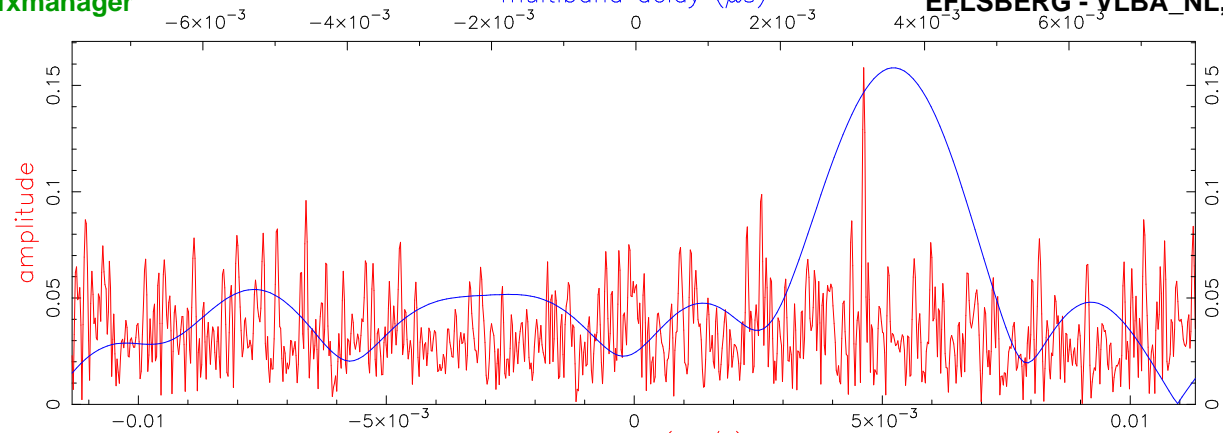
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bn

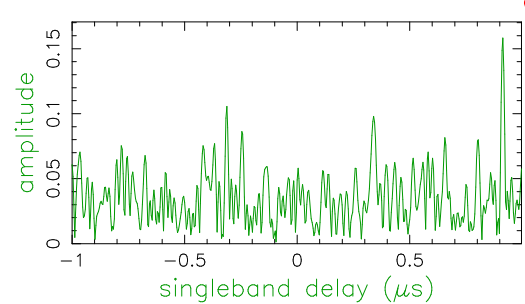
EFLSBERG - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)

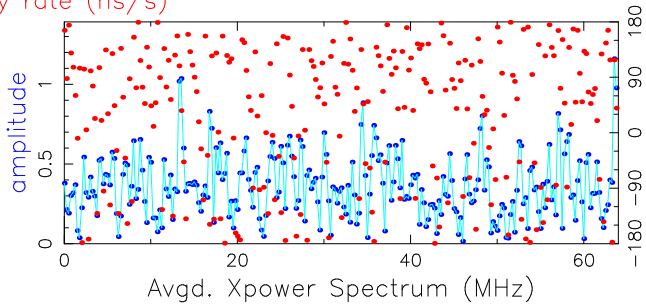


Fringe quality 0

SNR 5.8
 Int time 179.777
 Amp 0.171
 Phase 153.9
 PFD 4.9e-01
 Delays (us)
 SBD 0.913172
 MBD 0.003574
 Fringe rate (Hz)
 0.398965
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

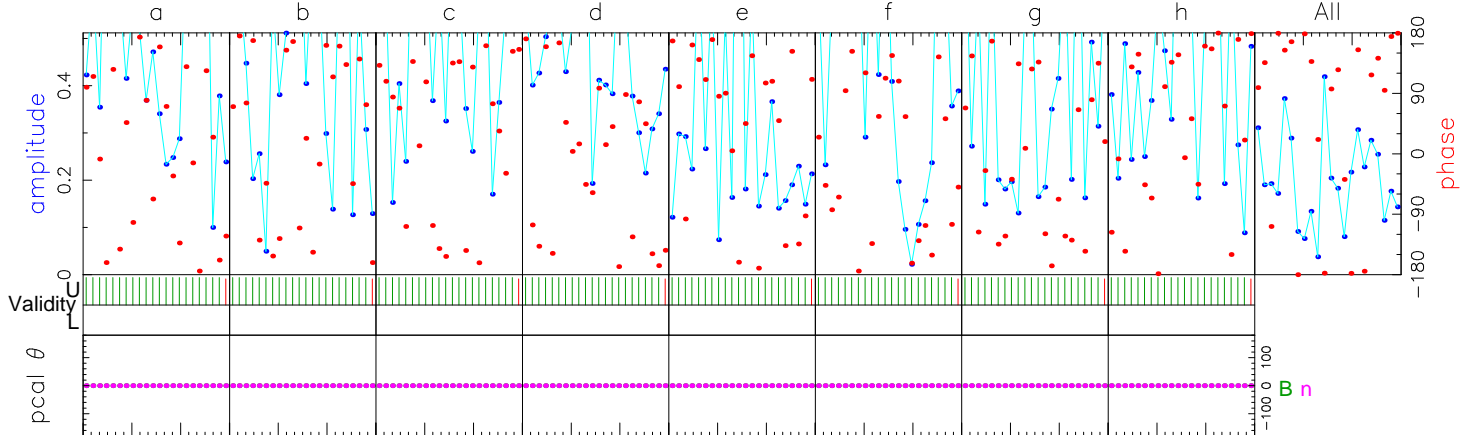


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153027
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:n | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| n | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| n | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | -7.12112920993E+03 | | | | | | | | | |
| Sband delay (usec) | -7.12112586190E+03 | | | | | | | | | |
| Phase delay (usec) | -7.12203902868E+03 | | | | | | | | | |
| Delay rate (us/s) | -1.08564218704E+00 | | | | | | | | | |
| Total phase (deg) | | | 24.9 | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | |
| PCal mode: MANUAL, MANUAL | | | | | | | | | | |
| PCal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | |
| Sample rate(MISamp/s): 128 | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | |
| nlags: 256 | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| pcal θ | | | | | | | | | | |
| pcal mode: MANUAL, MANUAL | | | | | | | | | | |
| PC period (AP's) 5, 5 | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| Chan ids | | | | | | | | | | |
| Tracks | | | | | | | | | | |
| Chan ids | | | | | | | | | | |
| Tracks | | | | | | | | | | |
| Amplitude | | | | | | | | | | |
| Search (1024X32) | | | | | | | | | | |
| Interp. | | | | | | | | | | |
| Inc. seg. avg. | | | | | | | | | | |
| Inc. frq. avg. | | | | | | | | | | |
| RMS | | | | | | | | | | |
| Theor. | | | | | | | | | | |
| ph/seg (deg) | | | | | | | | | | |
| amp/seg (%) | | | | | | | | | | |
| ph/frq (deg) | | | | | | | | | | |
| amp/frq (%) | | | | | | | | | | |
| 0.171 +/- 0.029 | | | | | | | | | | |
| 0.153 | | | | | | | | | | |
| 0.000 | | | | | | | | | | |
| 0.165 | | | | | | | | | | |
| 0.154 | | | | | | | | | | |
| 3.57372E-03 | | | | | | | | | | |
| +/- 1.9E-04 | | | | | | | | | | |
| 9.13172E-01 | | | | | | | | | | |
| +/- 1.5E-03 | | | | | | | | | | |
| 4.96427E-06 | | | | | | | | | | |
| +/- 6.3E-07 | | | | | | | | | | |
| 4.63159E-06 | | | | | | | | | | |
| +/- 6.1E-09 | | | | | | | | | | |
| 153.9 | | | | | | | | | | |
| +/- 19.6 | | | | | | | | | | |
| pcal θ | | | | | | | | | | |
| pcal mode: MANUAL, MANUAL | | | | | | | | | | |
| PC period (AP's) 5, 5 | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| Chan ids | | | | | | | | | | |
| Tracks | | | | | | | | | | |
| Chan ids | | | | | | | | | | |
| Tracks | | | | | | | | | | |
| simultaneous interpolator | | | | | | | | | | |

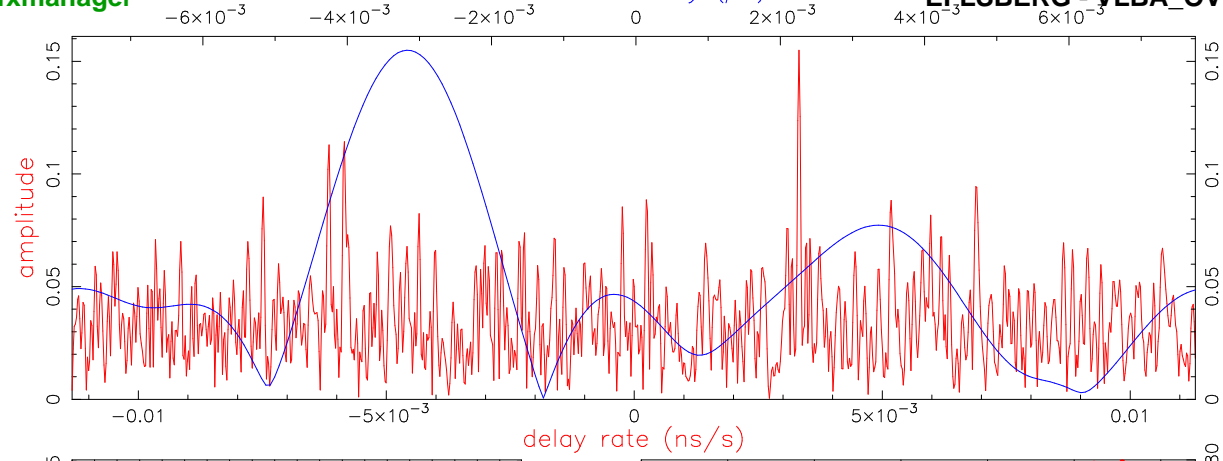
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

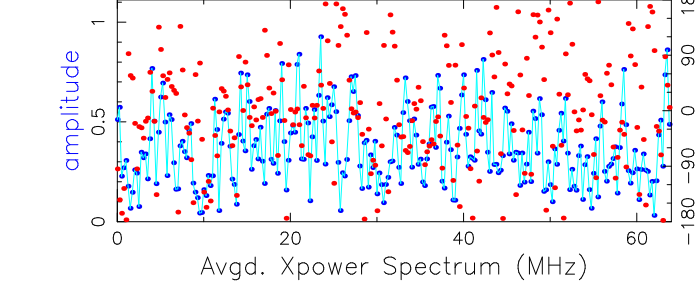
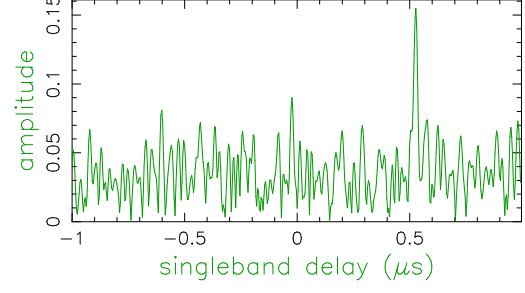
3C345.1HXFS7, No0189, Bo

EFLSBERG - VLBA_OV, fgroup W, pol LL

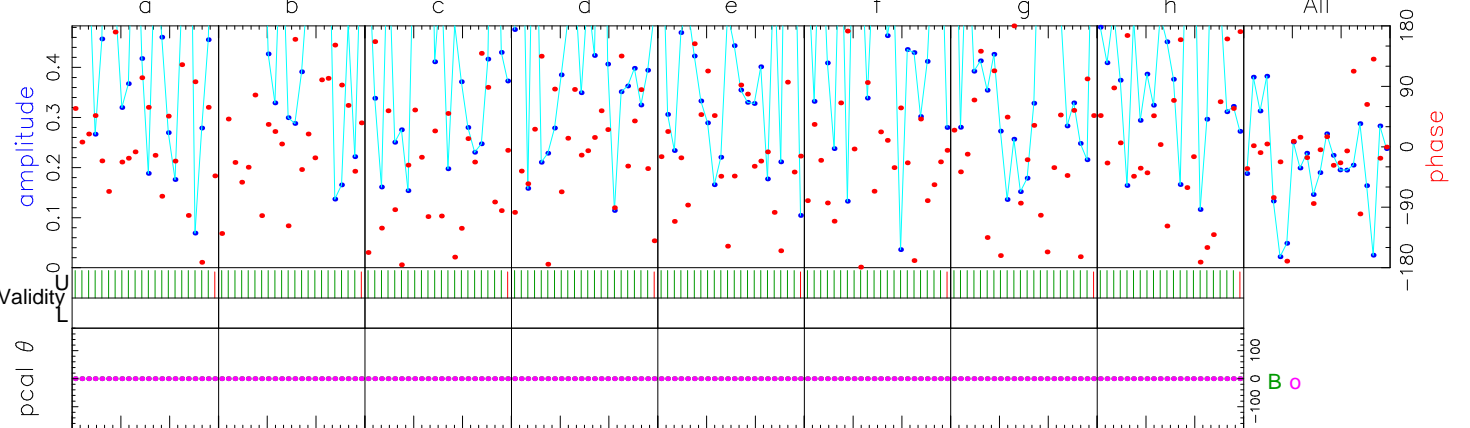
multiband delay (μ s)



Fringe quality 0
 SNR 5.7
 Int time 179.778
 Amp 0.161
 Phase -9.2
 PFD 7.8e-01
 Delays (us)
 SBD 0.526560
 MBD -0.003176
 Fringe rate (Hz) 0.286598
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153023
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -12.7 | 9.5 | -78.4 | 13.2 | -13.1 | -24.1 | 17.4 | -9.0 | | -9.2 |
| | 0.3 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | | 0.2 |
| | 394.1 | 374.1 | 277.3 | 258.1 | 508.8 | 509.9 | 286.4 | 64.8 | | 391.8 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | -3.48364565624E+03 | | Apriori delay (usec) | | -3.48417372975E+03 | | Resid mbdelay (usec) | | -3.17649E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -3.48364716950E+03 | | Apriori clock (usec) | | -1.1287369E+01 | | Resid sbdelay (usec) | | 5.26560E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -3.48417373004E+03 | | Apriori clockrate (us/s) | | -9.9999998E-08 | | Resid phdelay (usec) | | -2.97919E-07 | +/- 6.5E-07 |
| Delay rate (us/s) | -1.46193974383E+00 | | Apriori rate (us/s) | | -1.46194307095E+00 | | Resid rate (us/s) | | 3.32712E-06 | +/- 6.2E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 3.05165999548E-05 | | Resid phase (deg) | | -9.2 | +/- 20.1 |

ph/seg (deg) 62.9 47.2 Search (1024X32) 0.151 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 69.5 82.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 33.1 28.4 Inc. seg. avg. 0.161 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.9 49.6 Inc. frq. avg. 0.157 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 288.7 el 38.4 pa 51.7 o: az 70.2 el 51.1 pa -77.2 u,v (fr/asec) 10922.035 3059.251 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo.W.24.1HXFS7

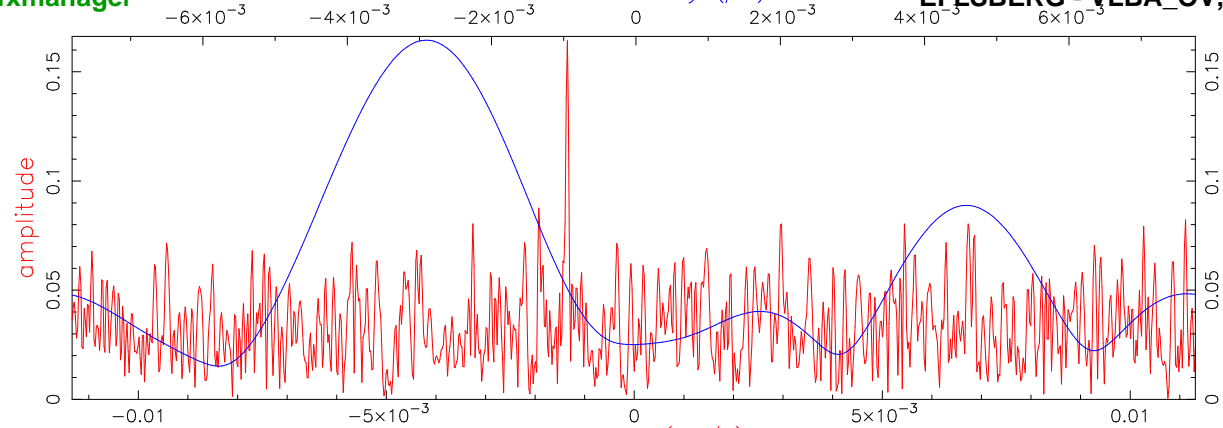
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bo

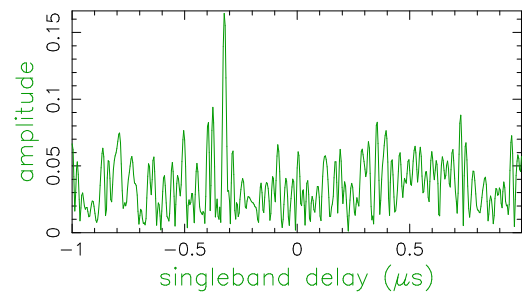
EFLSBERG - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

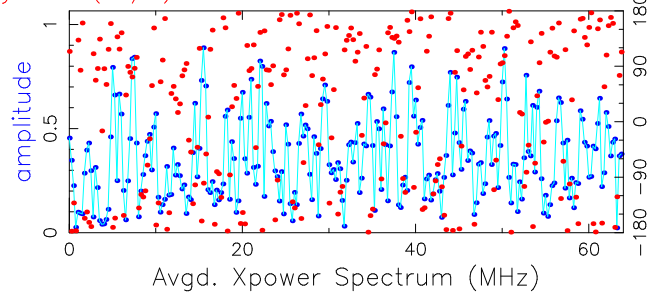


Fringe quality 0

SNR 6.1
 Int time 179.778
 Amp 0.166
 Phase 53.1
 PFD 1.6e-01
 Delays (us)
 SBD -0.323303
 MBD -0.002834
 Fringe rate (Hz)
 -0.116083
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

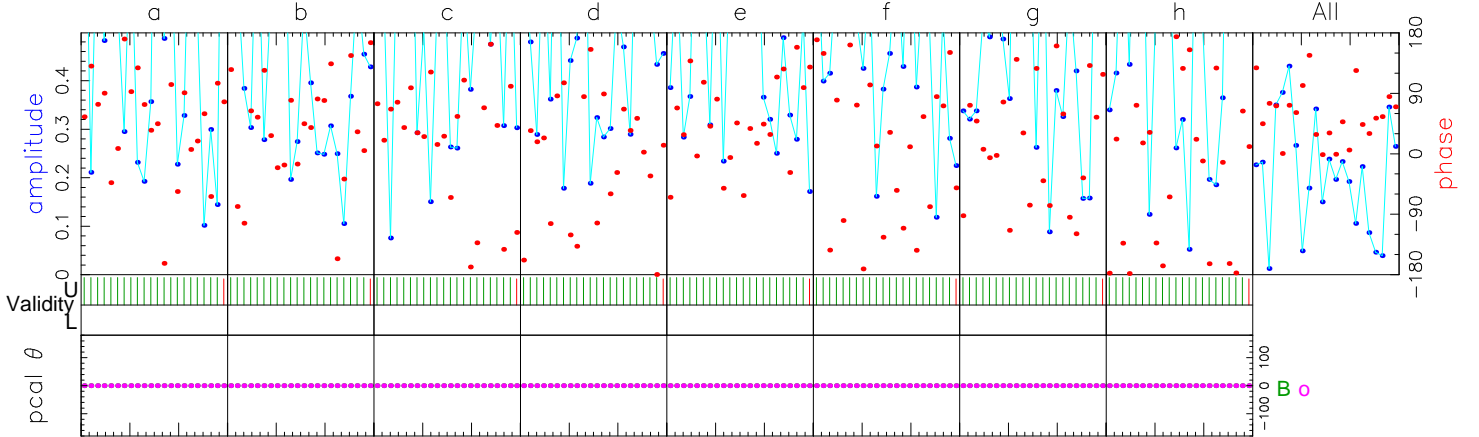


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153025
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Group delay (usec)(sbd) | -3.48450468877E+03 | | | | | | | | | |
| Sband delay (usec) | -3.48449703225E+03 | | | | | | | | | |
| Phase delay (usec) | -3.48417372803E+03 | | | | | | | | | |
| Delay rate (us/s) | -1.46194441856E+00 | | | | | | | | | |
| Total phase (deg) | | | 24.2 | | | | | | | |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | |
| Pcal mode: MANUAL, MANUAL | | | | | | | | | | |
| Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | |
| Sample rate(MISamp/s): 128 | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | |
| PC period (AP's) 5, 5 | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| pcal θ | | | | | | | | | | |
| RMS | 41.0 | 44.4 | | | | | | | | |
| Theor. | | | | | | | | | | |
| Amplitude | | | | | | | | | | |
| Search (1024X32) | | | | | | | | | | |
| Interp. | | | | | | | | | | |
| Inc. seg. avg. | | | | | | | | | | |
| Inc. frq. avg. | | | | | | | | | | |
| ph/seg (deg) | 41.0 | 44.4 | | | | | | | | |
| amp/seg (%) | 74.4 | 77.4 | | | | | | | | |
| ph/frq (deg) | 50.0 | 26.7 | | | | | | | | |
| amp/frq (%) | 67.8 | 46.7 | | | | | | | | |
| B: az 288.7 el 38.4 pa 51.7 | | | | | | | | | | |
| o: az 70.2 el 51.1 pa -77.2 | | | | | | | | | | |
| u,v (fr/asec) 10922.035 3059.251 | | | | | | | | | | |
| Control file: cf_1234_gmva | | | | | | | | | | |
| Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo..1HXFS7 | | | | | | | | | | |
| Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo.W.41.1HXFS7 | | | | | | | | | | |

simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

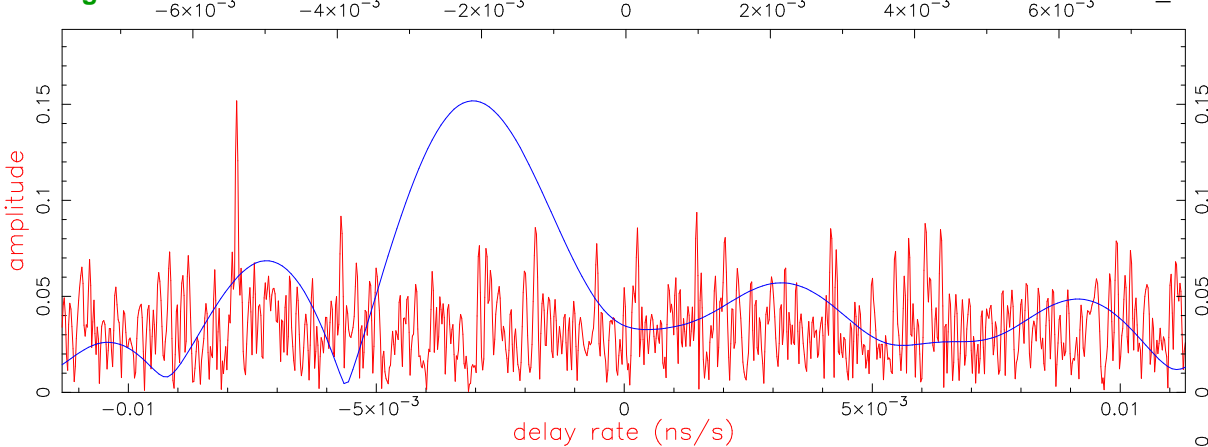
fxmanager

3C345.1HXFS7, No0189, Bo

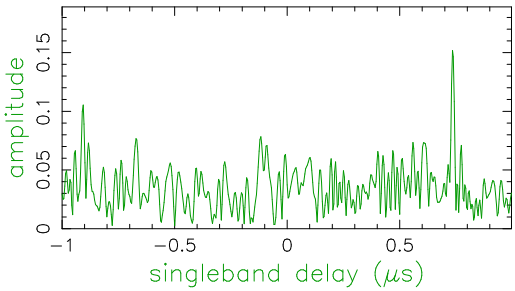
EFLSBERG - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

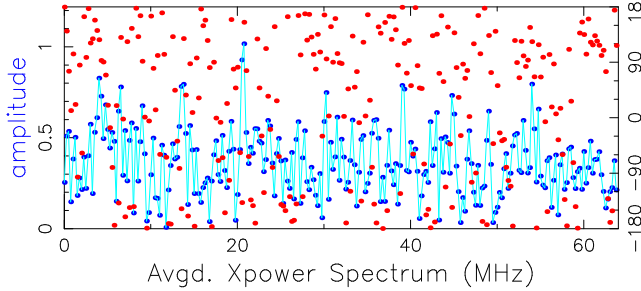
Fringe quality 0



SNR 5.6
 Int time 179.778
 Amp 0.189
 Phase -1.2
 PFD 8.6e-01
 Delays (us)
 SBD 0.735752
 MBD -0.002093
 Fringe rate (Hz)
 -0.674927
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

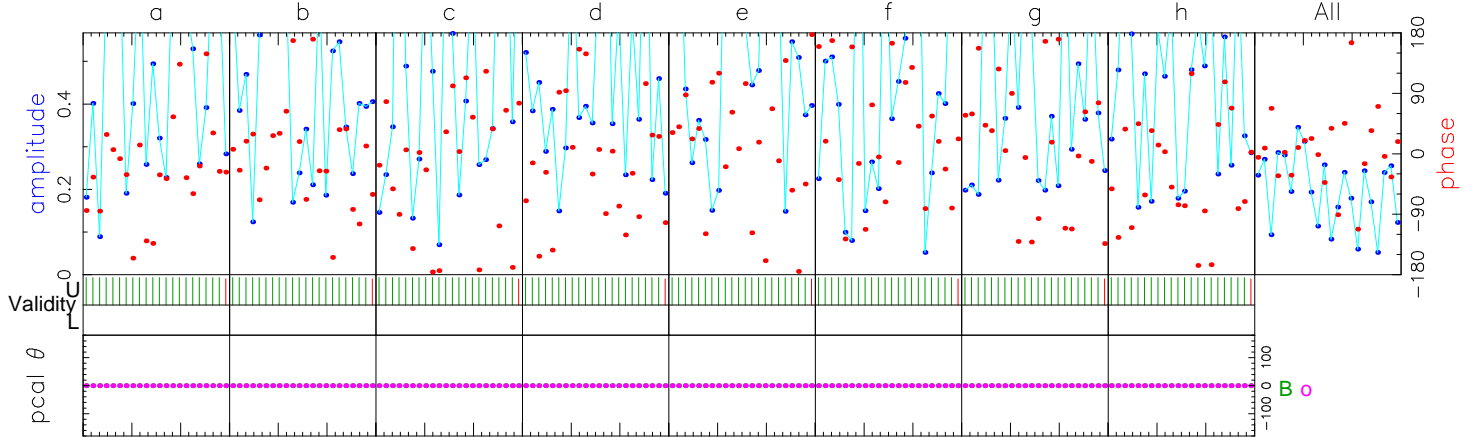


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153027
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -7.8 | -5.3 | 30.0 | -34.9 | 31.7 | 6.4 | 15.9 | -52.9 | | -1.2 |
| | 0.3 | 0.3 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | Ampl. | 0.2 |
| | 103.3 | 445.1 | 383.6 | 401.4 | 9.2 | 142.6 | 60.1 | 88.3 | Sbd box | 445.4 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:o | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| o | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -3.48344144817E+03 | | Apriori delay (usec) | | -3.48417372975E+03 | | Resid mbdelay (usec) | | -2.09342E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -3.48343797750E+03 | | Apriori clock (usec) | | -1.1287369E+01 | | Resid sbdelay (usec) | | 7.35752E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -3.48417372978E+03 | | Apriori clockrate (us/s) | | -9.9999998E-08 | | Resid phdelay (usec) | | -3.94161E-08 | +/- 6.5E-07 |
| Delay rate (us/s) | -1.46195090618E+00 | | Apriori rate (us/s) | | -1.46194307095E+00 | | Resid rate (us/s) | | -7.83523E-06 | +/- 6.3E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 3.05165999548E-05 | | Resid phase (deg) | | -1.2 | +/- 20.3 |

| | RMS | Theor. | Amplitude | 0.189 +/- 0.033 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
|--------------|------|--------|------------------|-----------------|--|------------------------------|------------------|--------|-------|
| ph/seg (deg) | 56.2 | 47.6 | Search (1024X32) | 0.151 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| amp/seg (%) | 61.0 | 83.1 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| ph/frq (deg) | 32.3 | 28.7 | Inc. seg. avg. | 0.182 | Sample rate(MISamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| amp/frq (%) | 35.8 | 50.1 | Inc. frq. avg. | 0.182 | Data rate(Mb/s): 2048 | nlags: 256 t_cohere infinite | | | |

B: az 288.7 el 38.4 pa 51.7 o: az 70.2 el 51.1 pa -77.2 u,v (fr/asec) 10922.035 3059.251 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo.W.64.1HXFS7

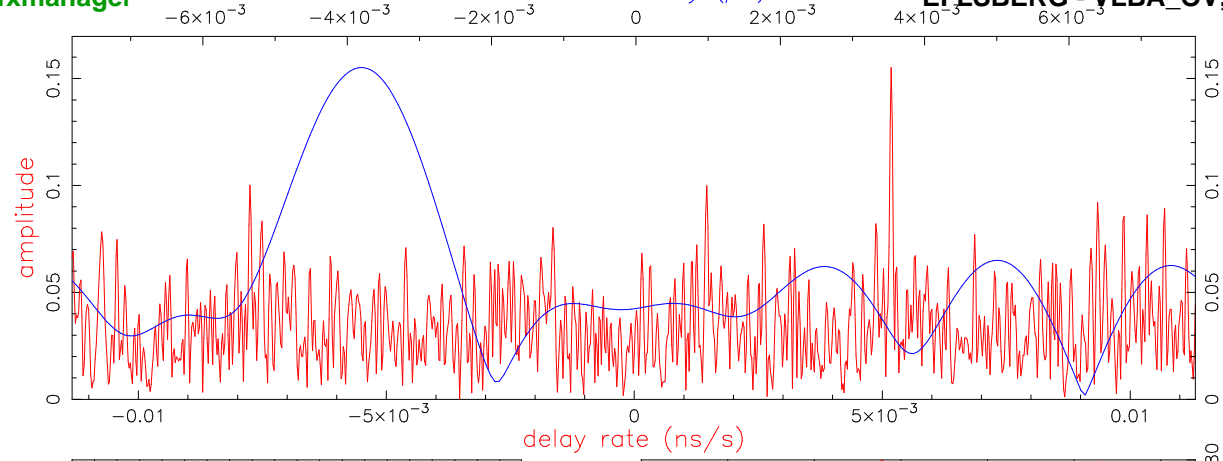
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bo

EFLSBERG - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)



Fringe quality 0

SNR 5.7

Int time 179.778

Amp 0.170

Phase 12.5

PFD 7.7e-01

Delays (us)

SBD 0.729854

MBD -0.003832

Fringe rate (Hz)

0.446159

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c202a

Exper # 16383

Yr:day 2020:283

Start 200000.00

Stop 200300.23

FRT 200130.00

Corr/FF/build

2021:010:004733

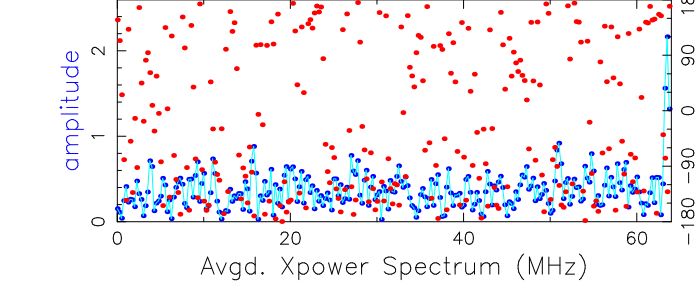
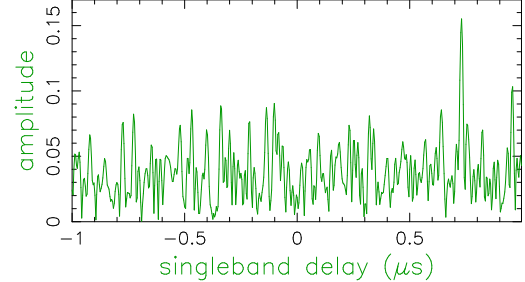
2021:010:153029

2020:247:085004

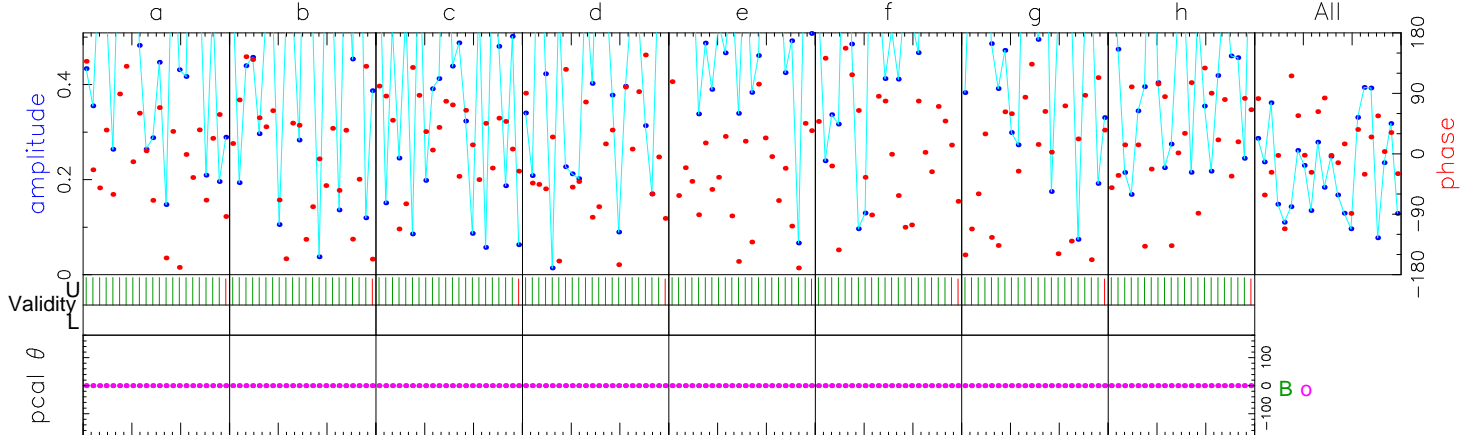
RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 15.5 | 2.2 | 37.2 | -16.3 | -16.8 | 14.4 | 89.1 | 16.8 | Phase | 12.5 |
| B | 0.3 | 0.1 | 0.3 | 0.1 | 0.3 | 0.1 | 0.1 | 0.2 | Ampl. | 0.2 |
| o | 295.2 | 371.9 | 124.0 | 289.4 | 443.4 | 230.2 | 447.1 | 180.3 | Sbd box | 443.8 |
| B | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| o | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| o | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -3.48344318644E+03 | | Apriori delay (usec) | | -3.48417372975E+03 | | Resid mbdelay (usec) | | -3.83169E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -3.48344387600E+03 | | Apriori clock (usec) | | -1.1287369E+01 | | Resid sbdelay (usec) | | 7.29854E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -3.48417372934E+03 | | Apriori clockrate (us/s) | | -9.9999998E-08 | | Resid phdelay (usec) | | 4.03342E-07 | +/- 6.5E-07 |
| Delay rate (us/s) | -1.46193789148E+00 | | Apriori rate (us/s) | | -1.46194307095E+00 | | Resid rate (us/s) | | 5.17947E-06 | +/- 6.2E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 3.05165999548E-05 | | Resid phase (deg) | | 12.5 | +/- 20.1 |

ph/seg (deg) 55.3 47.1 Search (1024X32) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 75.1 82.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 37.2 28.4 Inc. seg. avg. 0.182 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 43.7 49.6 Inc. frq. avg. 0.167 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

B: az 288.7 el 38.4 pa 51.7 o: az 70.2 el 51.1 pa -77.2 u,v (fr/asec) 10922.035 3059.251 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bo.W.78.1HXFS7

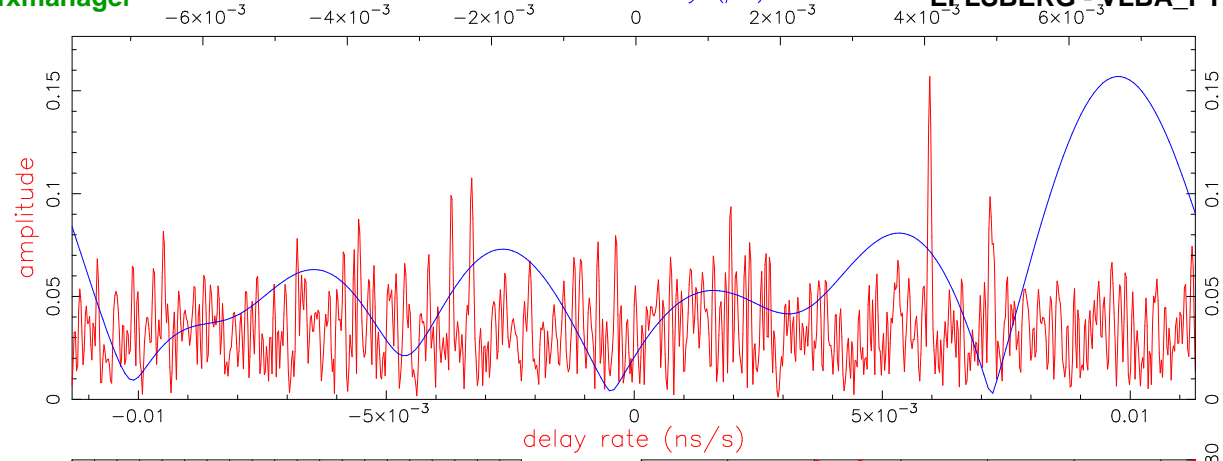
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bp

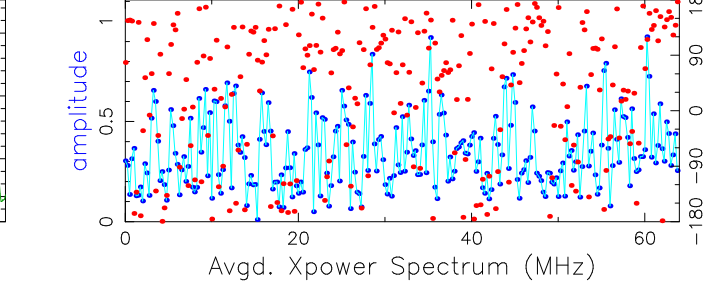
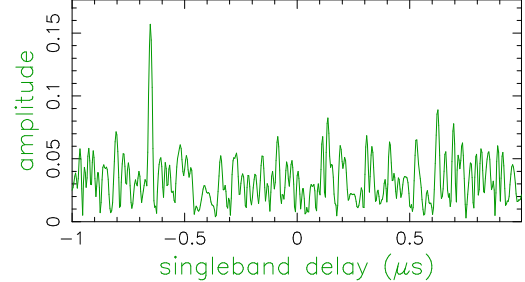
EFLSBERG - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)



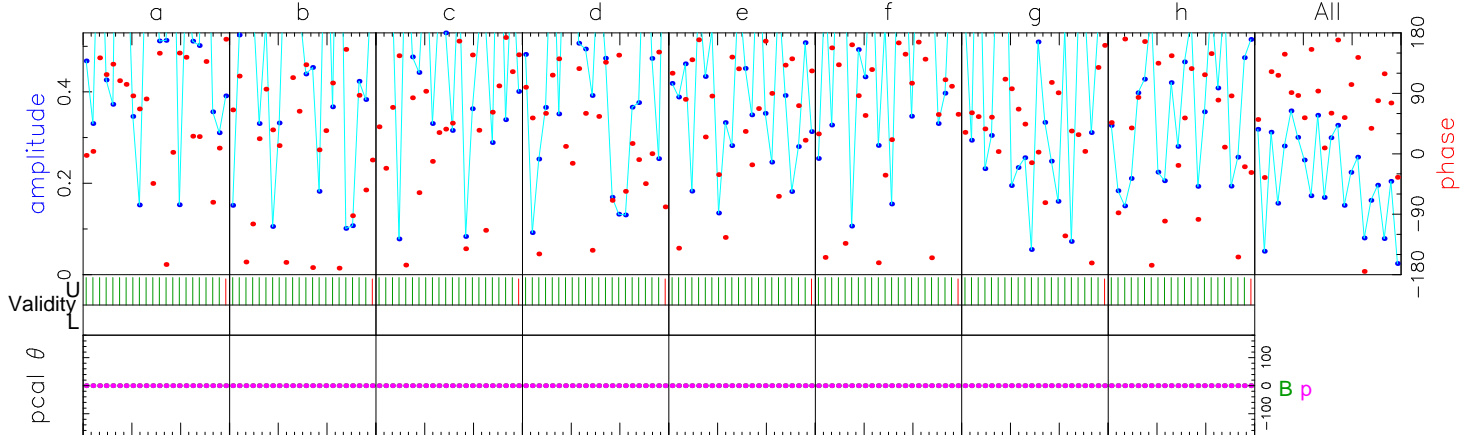
Fringe quality 0

SNR 5.8
 Int time 179.778
 Amp 0.176
 Phase 95.1
 PFD 6.5e-01
 Delays (us)
 SBD -0.652021
 MBD 0.006703
 Fringe rate (Hz)
 0.513778
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Yr:day 16383
 Start 2020:283
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153023
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

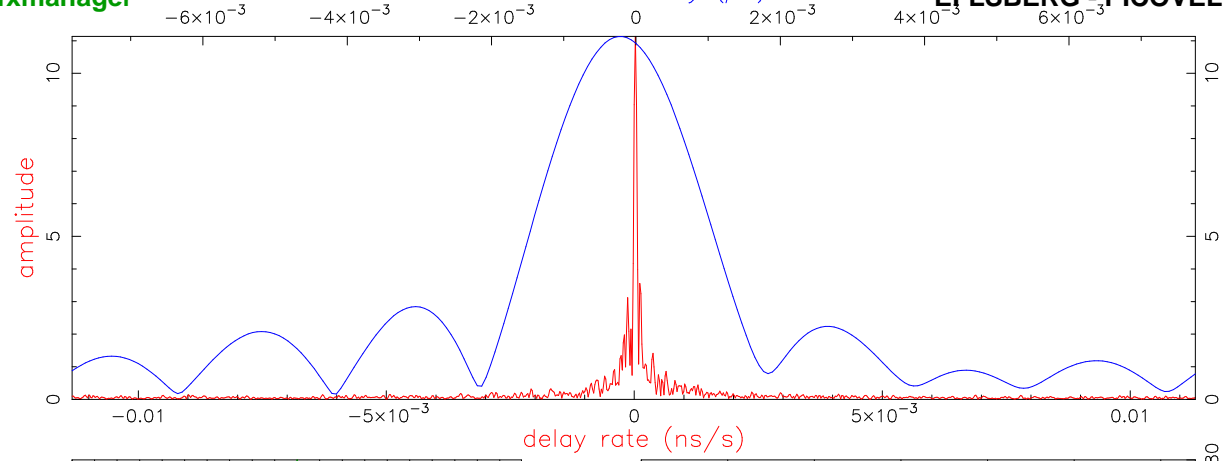
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|--|--------------------|----------|----------|----------|----------|----------|----------|----------|--------------|-------------|
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |
| Group delay (usec)(sbd) | -4.90597428890E+03 | | | | | | | | 6.70339E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -4.90597676279E+03 | | | | | | | | -6.52021E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -4.90532473922E+03 | | | | | | | | 3.06792E-06 | +/- 6.4E-07 |
| Delay rate (us/s) | -1.36543760175E+00 | | | | | | | | 5.96445E-06 | +/- 6.2E-09 |
| Total phase (deg) | | | -13.2 | | | | | | 95.1 | +/- 19.9 |
| Apriori delay (usec) | | | | | | | | | | |
| Apriori clock (usec) | | | | | | | | | | |
| Apriori clockrate (us/s) | | | | | | | | | | |
| Apriori rate (us/s) | | | | | | | | | | |
| Apriori accel (us/s/s) | | | | | | | | | | |
| Resid mbdelay (usec) | | | | | | | | | | |
| Resid sbdelay (usec) | | | | | | | | | | |
| Resid phdelay (usec) | | | | | | | | | | |
| Resid rate (us/s) | | | | | | | | | | |
| Resid phase (deg) | | | | | | | | | | |
| Pcal mode: MANUAL, MANUAL | | | | | | | | | | |
| Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | | | | | | | | | |
| Bits/sample: 2x2 | | | | | | | | | | |
| Sample rate(MISamp/s): 128 | | | | | | | | | | |
| Data rate(Mb/s): 2048 | | | | | | | | | | |
| PC period (AP's) 5, 5 | | | | | | | | | | |
| sb window (us) | | | | | | | | | | |
| mb window (us) | | | | | | | | | | |
| dr window (ns/s) | | | | | | | | | | |
| ion window (TEC) | | | | | | | | | | |
| nlags: 256 | | | | | | | | | | |
| t_cohere infinite | | | | | | | | | | |

ph/seg (deg) 58.6 46.7 Search (1024X32) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 71.9 81.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 36.3 28.1 Inc. seg. avg. 0.182 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 42.1 49.1 Inc. frq. avg. 0.184 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 288.7 el 38.4 pa 51.7 p: az 68.3 el 57.8 pa -87.2 u,v (fr/asec) 10212.450 4042.650 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp.W.25.1HXFS7

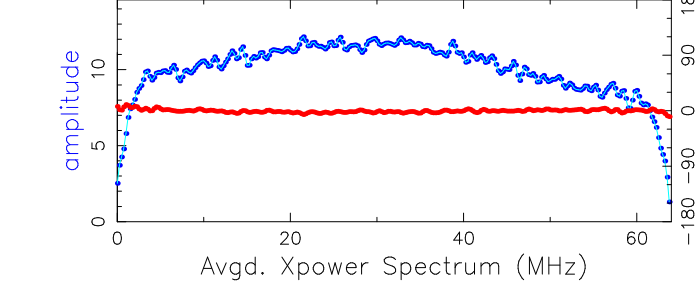
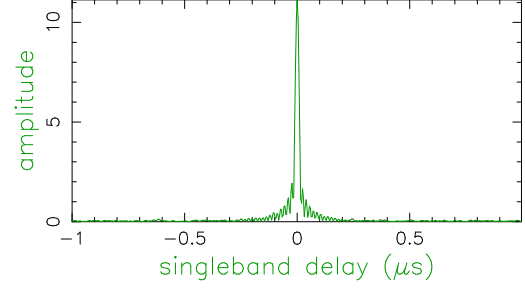
multiband delay (μ s)



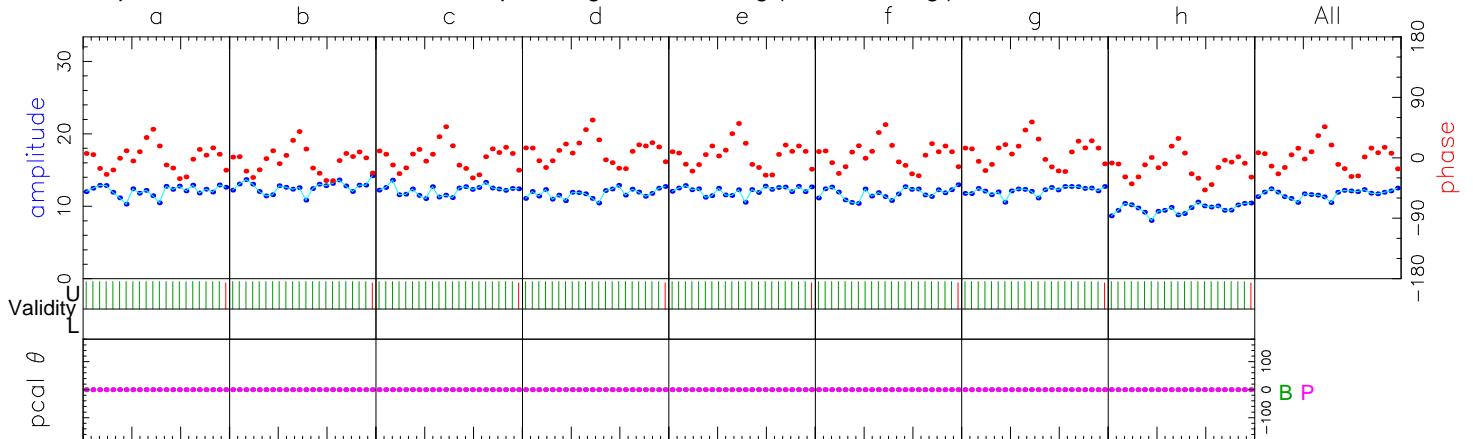
Fringe quality 8

SNR 408.0
Int time 179.587
Amp 11.133
Phase 1.1
PFD 0.0e+00
Delays (us)
SBD -0.000085
MBD -0.000219
Fringe rate (Hz) 0.002075
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c202a
Yr:day 2020:283
Start 200000.00
Stop 200300.23
FRT 200130.00
Corr/FF/build
2021:010:004733
2021:010:153023
2020:247:085004
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -1.2 | -5.0 | 0.7 | 9.8 | 3.6 | 3.8 | 8.6 | -14.1 | | Phase |
| | 11.5 | 12.0 | 11.6 | 11.2 | 11.5 | 11.2 | 11.5 | 9.2 | | Ampl. |
| | 256.9 | 256.8 | 257.1 | 257.0 | 257.0 | 257.1 | 257.0 | 255.8 | | Sbd box |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | APs used |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC freqs |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | PC phase |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | Mani PC |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | PC amp |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | Chan ids |
| P | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | Tracks |
| | | | | | | | | | | Tracks |
| Group delay (usec)(sbd) | -5.71535387090E+02 | | Apriori delay (usec) | | -5.71535167983E+02 | | Resid mbdelay (usec) | | -2.19107E-04 | +/- 2.7E-06 |
| Sband delay (usec) | -5.71535252733E+02 | | Apriori clock (usec) | | 1.0308058E+01 | | Resid sbdelay (usec) | | -8.47500E-05 | +/- 2.1E-05 |
| Phase delay (usec) | -5.71535167948E+02 | | Apriori clockrate (us/s) | | 2.0000000E-07 | | Resid phdelay (usec) | | 3.52914E-08 | +/- 9.1E-09 |
| Delay rate (us/s) | 1.28930588995E-01 | | Apriori rate (us/s) | | 1.28930564910E-01 | | Resid rate (us/s) | | 2.40853E-08 | +/- 8.7E-11 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 1.52981119926E-05 | | Resid phase (deg) | | 1.1 | +/- 0.3 |

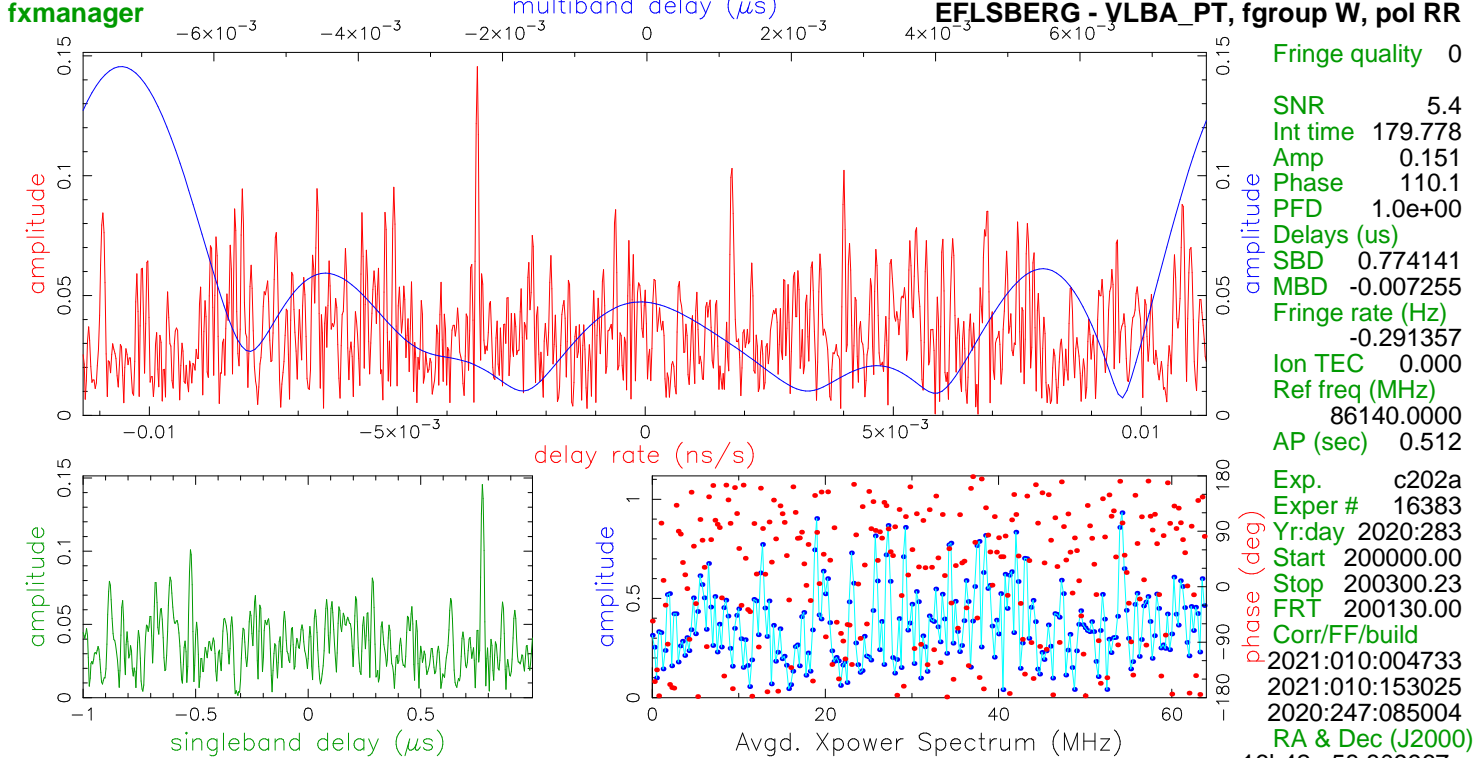
ph/seg (deg) 18.5 0.7 Search (1024X32) 10.897 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 7.1 1.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 8.4 0.4 Inc. seg. avg. 11.728 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 7.3 0.7 Inc. frq. avg. 11.214 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
B: az 288.7 el 38.4 pa 51.7 P: az 294.2 el 40.5 pa 71.5 u,v (fr/asec) -945.255 2157.983 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP.W.29.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

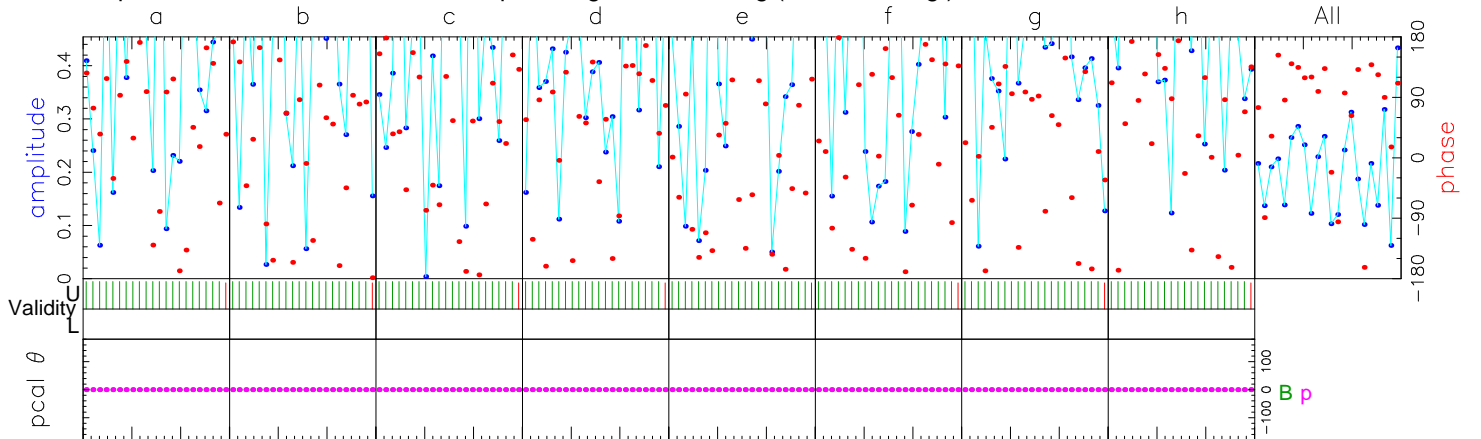
fxmanager

3C345.1HXFS7, No0189, Bp

EFLSBERG - VLBA_PT, fgroup W, pol RR



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|--------------------|----------------------|--------------|----------|----------|------------|-------|
| 111.1 | 111.8 | 92.6 | 127.1 | 170.5 | 124.0 | 98.4 | 102.7 | 102.7 | Phase | 110.1 |
| 0.1 | 0.2 | 0.2 | 0.2 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | Ampl. | 0.1 |
| 218.6 | 290.0 | 461.1 | 382.6 | 90.8 | 209.2 | 224.0 | 193.9 | 193.9 | Sbd box | 455.2 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| p | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -4.90455074751E+03 | | Apriori delay (usec) | -4.90532474229E+03 | Resid mbdelay (usec) | -7.25522E-03 | +/- | 2.0E-04 | | |
| Sband delay (usec) | -4.90455060079E+03 | | Apriori clock (usec) | 1.0051786E+01 | Resid sbdelay (usec) | 7.74141E-01 | +/- | 1.6E-03 | | |
| Phase delay (usec) | -4.90532473874E+03 | | Apriori clockrate (us/s) | -5.9999998E-07 | Resid phdelay (usec) | 3.55177E-06 | +/- | 6.9E-07 | | |
| Delay rate (us/s) | -1.36544694856E+00 | | Apriori rate (us/s) | -1.36544356619E+00 | Resid rate (us/s) | -3.38237E-06 | +/- | 6.6E-09 | | |
| Total phase (deg) | | 1.8 | Apriori accel (us/s/s) | 4.11739203988E-05 | Resid phase (deg) | 110.1 | +/- | 21.4 | | |

ph/seg (deg) 67.4 50.2 Search (1024X32) 0.141 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 72.5 87.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 27.8 30.3 Inc. seg. avg. 0.156 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 43.2 52.9 Inc. frq. avg. 0.136 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

B: az 288.7 el 38.4 pa 51.7 p: az 68.3 el 57.8 pa -87.2 u,v (fr/asec) 10212.450 4042.650 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp.W.45.1HXFS7

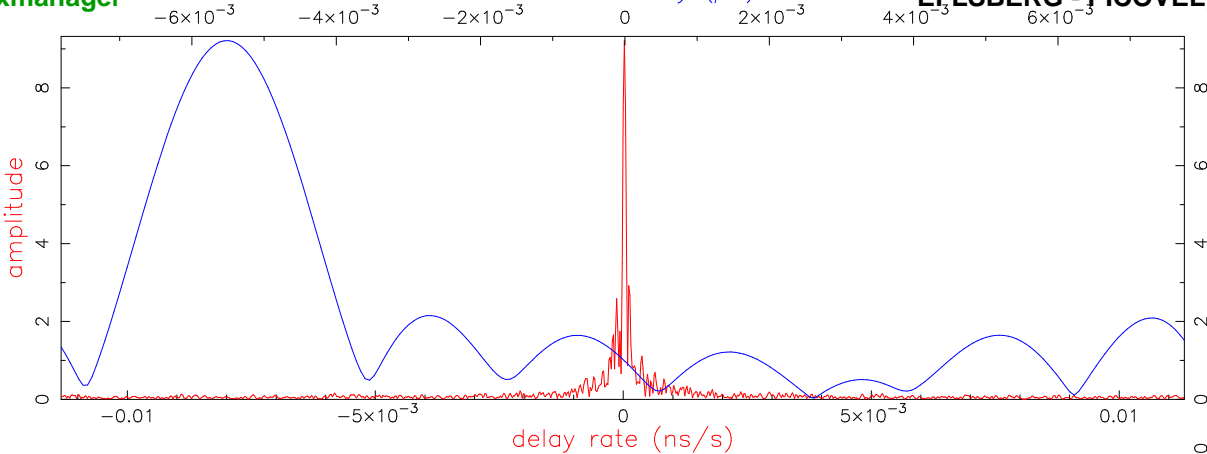
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BP

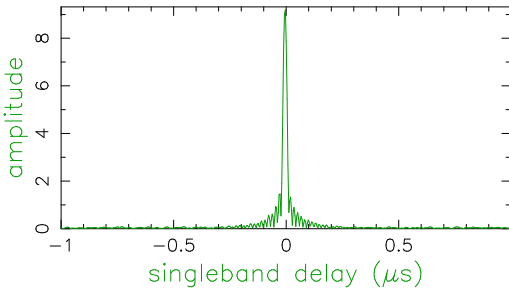
EFLSBERG - PICOVEL, fgroup W, pol RR

multiband delay (μ s)

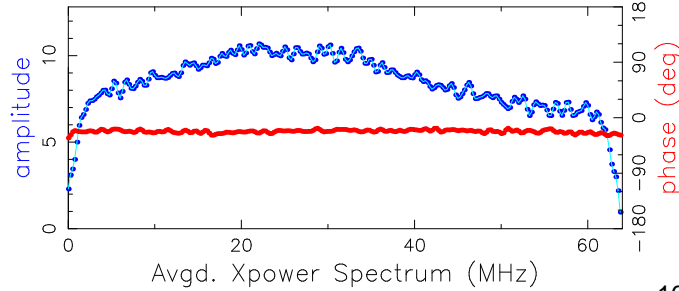


Fringe quality 8

SNR 341.6
 Int time 179.587
 Amp 9.321
 Phase -19.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.005358
 MBD -0.005553
 Fringe rate (Hz)
 0.002091
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

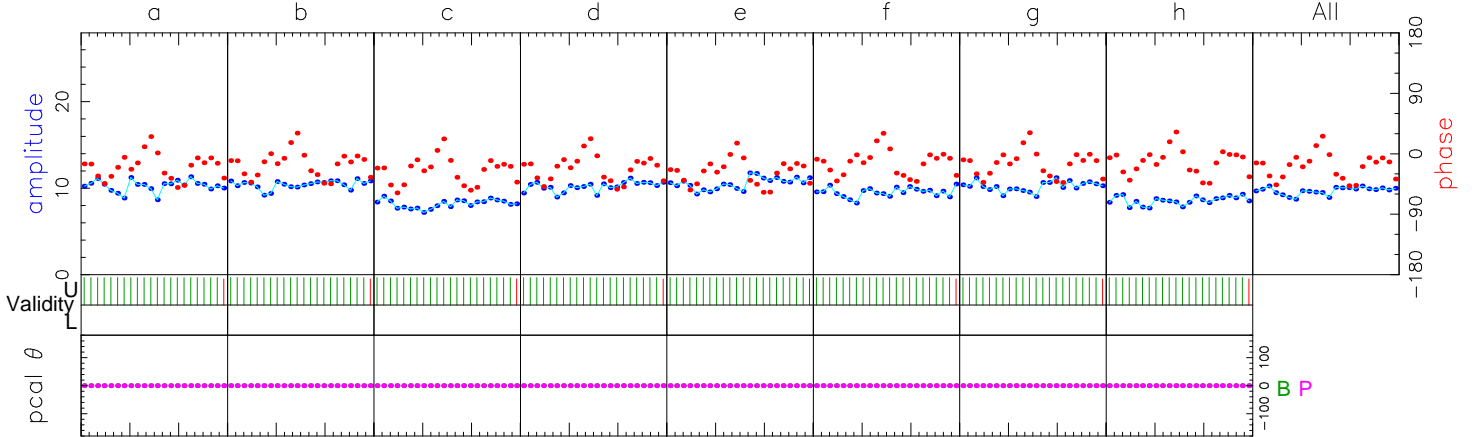


delay rate (ns/s)



Exp. c202a
 Yr:day 16383
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153026
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -19.6 | -15.6 | -25.6 | -21.6 | -28.0 | -13.8 | -15.4 | -12.0 | Phase | -19.0 |
| | 9.8 | 9.9 | 7.7 | 9.7 | 10.1 | 9.0 | 9.7 | 8.1 | Ampl. | 9.2 |
| | 255.3 | 255.4 | 255.7 | 255.5 | 255.9 | 255.9 | 255.8 | 254.8 | Sbd box | 255.6 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | 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) | -5.71540720590E+02 | | Apriori delay (usec) | | -5.71535167983E+02 | | Resid mbdelay (usec) | | -5.55261E-03 | +/- 3.2E-06 |
| Sband delay (usec) | -5.71540525733E+02 | | Apriori clock (usec) | | 1.0308058E+01 | | Resid sbdelay (usec) | | -5.35775E-03 | +/- 2.5E-05 |
| Phase delay (usec) | -5.71535168596E+02 | | Apriori clockrate (us/s) | | 2.0000000E-07 | | Resid phdelay (usec) | | -6.12470E-07 | +/- 1.1E-08 |
| Delay rate (us/s) | 1.28930589183E-01 | | Apriori rate (us/s) | | 1.28930564910E-01 | | Resid rate (us/s) | | 2.42723E-08 | +/- 1.0E-10 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 1.52981119926E-05 | | Resid phase (deg) | | -19.0 | +/- 0.3 |

| | RMS | Theor. | Amplitude | 9.321 +/- 0.027 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
|--------------|------|--------|------------------|-----------------|--|-------------------------------|
| ph/seg (deg) | 18.6 | 0.8 | Search (1024X32) | 9.114 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| amp/seg (%) | 6.1 | 1.4 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled |
| ph/frq (deg) | 6.2 | 0.5 | Inc. seg. avg. | 9.706 | Sample rate(MISamp/s): 128 | dr window (ns/s) -0.011 0.011 |
| amp/frq (%) | 8.8 | 0.8 | Inc. frq. avg. | 9.249 | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |

B: az 288.7 el 38.4 pa 51.7 P: az 294.2 el 40.5 pa 71.5 u,v (fr/asec) -945.255 2157.983 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP.W.53.1HXFS7

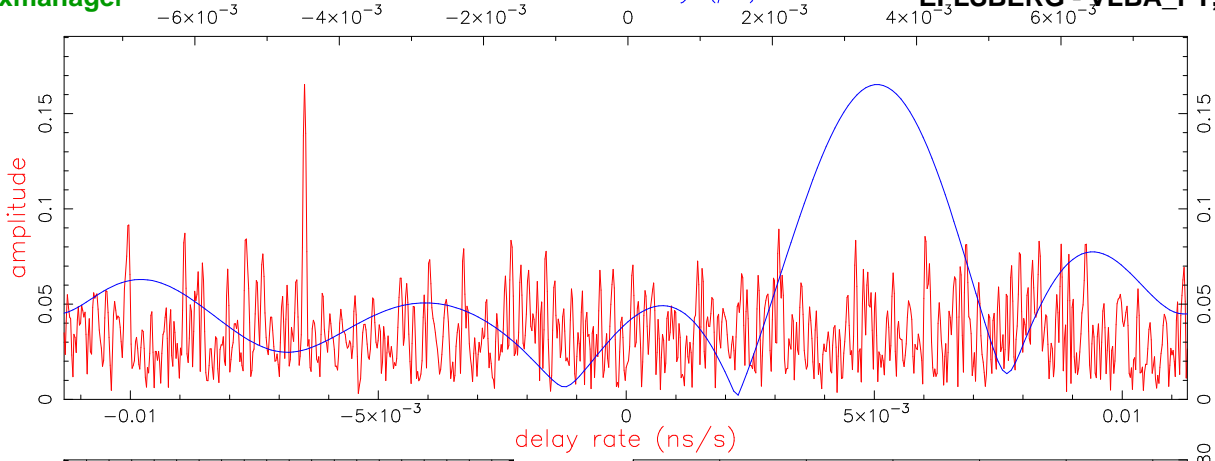
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, Bp

EFLSBERG - VLBA_PT, fgroup W, pol LR

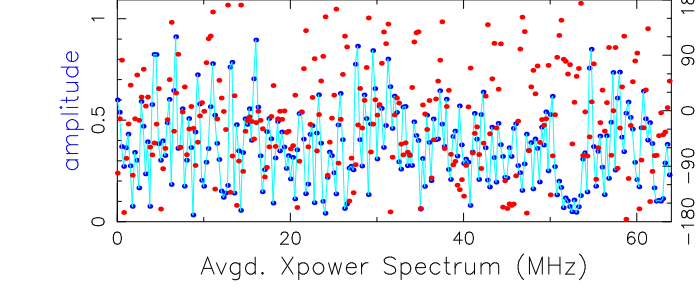
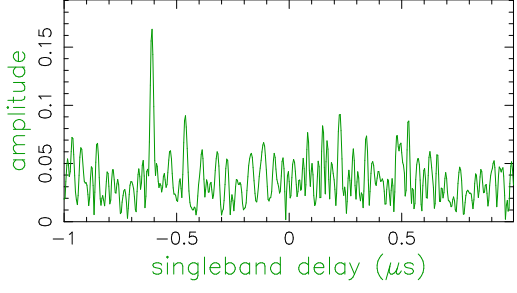
multiband delay (μ s)



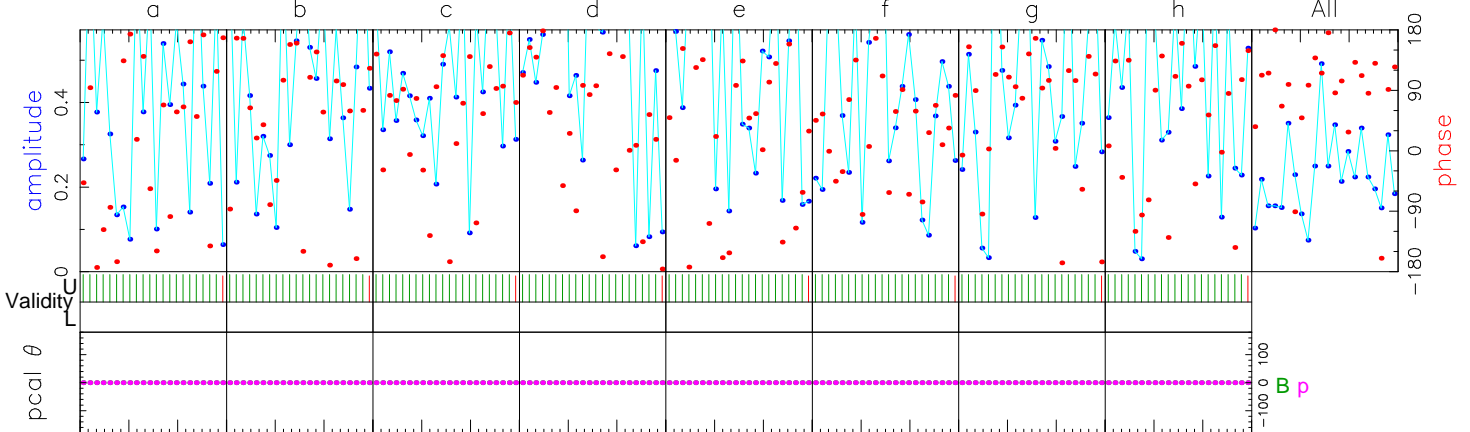
Fringe quality 0

SNR 6.1
 Int time 179.778
 Amp 0.191
 Phase 109.3
 PFD 1.4e-01
 Delays (us)
 SBD -0.610114
 MBD 0.003443
 Fringe rate (Hz)
 -0.558918
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153027
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | 91.1 | 125.2 | 103.1 | 103.7 | 139.3 | 42.3 | 118.1 | 118.4 | Phase | 109.3 |
| | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.2 | Ampl. | 0.2 |
| | 435.8 | 443.3 | 122.6 | 22.8 | 484.4 | 379.3 | 102.3 | 489.8 | Sbd box | 100.8 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| p | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -4.90593067418E+03 | | Apriori delay (usec) | | -4.90532474229E+03 | | Resid mbdelay (usec) | | 3.44311E-03 | +/- 1.8E-04 |
| Sband delay (usec) | -4.90593485604E+03 | | Apriori clock (usec) | | 1.0051786E+01 | | Resid sbdelay (usec) | | -6.10114E-01 | +/- 1.4E-03 |
| Phase delay (usec) | -4.90532473877E+03 | | Apriori clockrate (us/s) | | -5.9999998E-07 | | Resid phdelay (usec) | | 3.52377E-06 | +/- 6.1E-07 |
| Delay rate (us/s) | -1.36545005467E+00 | | Apriori rate (us/s) | | -1.36544356619E+00 | | Resid rate (us/s) | | -6.48848E-06 | +/- 5.8E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.11739203988E-05 | | Resid phase (deg) | | 109.3 | +/- 18.8 |

ph/seg (deg) 54.2 44.2 Search (1024X32) 0.163 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.9 77.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 32.2 26.6 Inc. seg. avg. 0.204 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.7 46.5 Inc. frq. avg. 0.190 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 288.7 el 38.4 pa 51.7 p: az 68.3 el 57.8 pa -87.2 u,v (fr/asec) 10212.450 4042.650 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp.W.61.1HXFS7

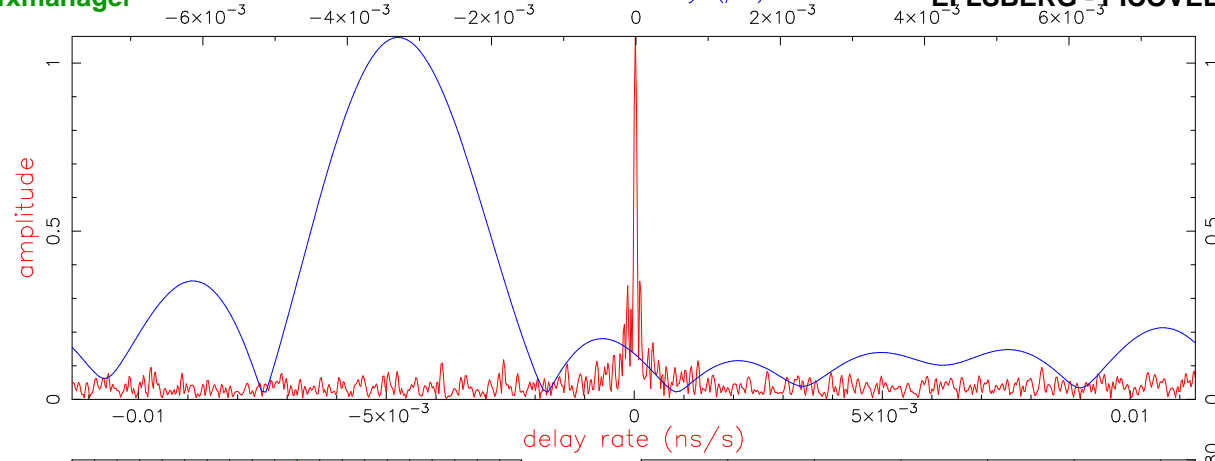
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BP

EFLSBERG - PICOVEL, fgroup W, pol LR

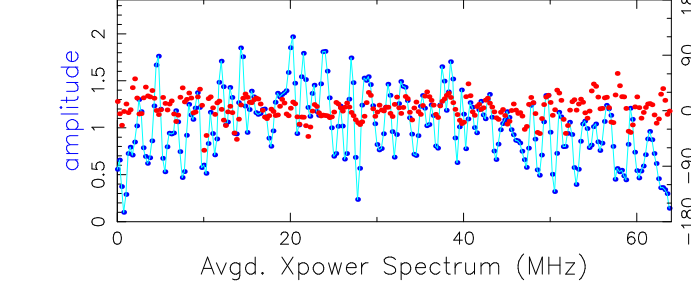
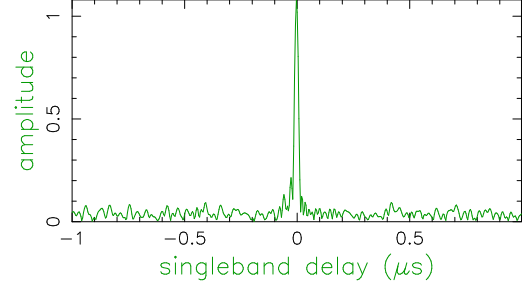
multiband delay (μ s)



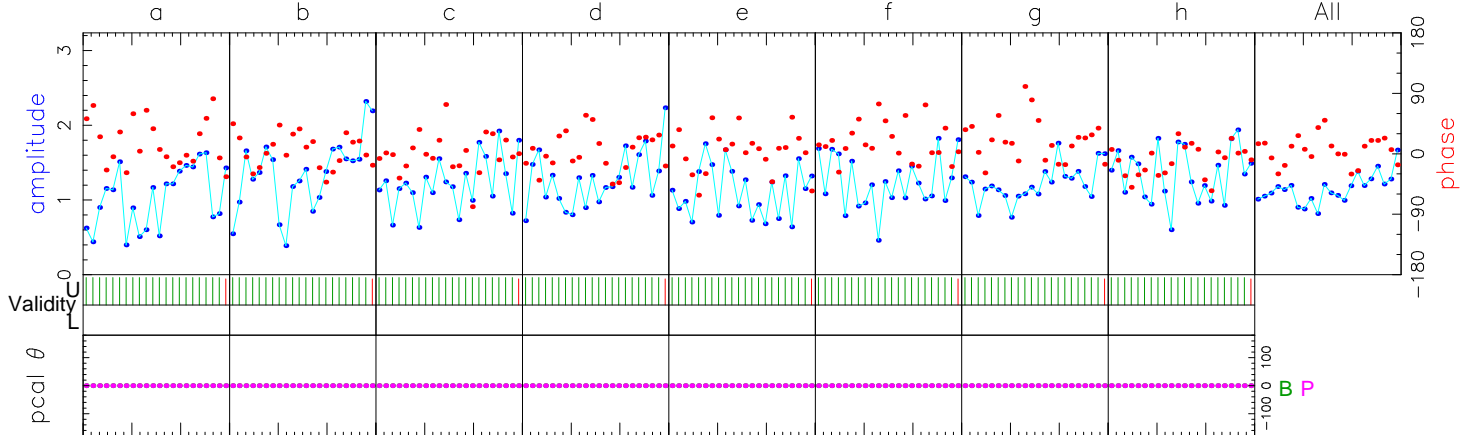
Fringe quality 9

SNR 39.6
 Int time 179.587
 Amp 1.079
 Phase 4.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.003196
 MBD -0.003280
 Fringe rate (Hz) 0.001975
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153028
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | 256.2 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| P | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| Group delay (usec)(sbd) | -5.71538447496E+02 | | | | -5.71535167983E+02 | | | | Resid mbdelay (usec) | -3.27951E-03 +/- 2.7E-05 |
| Sband delay (usec) | -5.71538363733E+02 | | | | 1.0308058E+01 | | | | Resid sbdelay (usec) | -3.19575E-03 +/- 2.2E-04 |
| Phase delay (usec) | -5.71535167829E+02 | | | | 2.0000000E-07 | | | | Resid phdelay (usec) | 1.54659E-07 +/- 9.3E-08 |
| Delay rate (us/s) | 1.28930587833E-01 | | | | 1.28930564910E-01 | | | | Resid rate (us/s) | 2.29233E-08 +/- 9.0E-10 |
| Total phase (deg) | | | -128.4 | | 1.52981119926E-05 | | | | Resid phase (deg) | 4.8 +/- 2.9 |
| ph/seg (deg) | 20.6 | 6.8 | | | 1.079 +/- 0.027 | | | | PCal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 |
| amp/seg (%) | 18.6 | 11.9 | | | 1.069 | | | | PCal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) -1.000 1.000 |
| ph/frq (deg) | 9.7 | 4.1 | | | 0.000 | | | | Bits/sample: 2x2 | mb window (us) -0.008 0.008 |
| amp/frq (%) | 11.0 | 7.2 | | | 1.142 | | | | Sample rate(MISamp/s): 128 | dr window (ns/s) -0.011 0.011 |
| | | | | | 1.085 | | | | Data rate(Mb/s): 2048 | ion window (TEC) 0.00 0.00 |
| B: az 288.7 el 38.4 pa 51.7 | | P: az 294.2 el 40.5 pa 71.5 | | | u,v (fr/asec) -945.255 2157.983 | | | | | simultaneous interpolator |

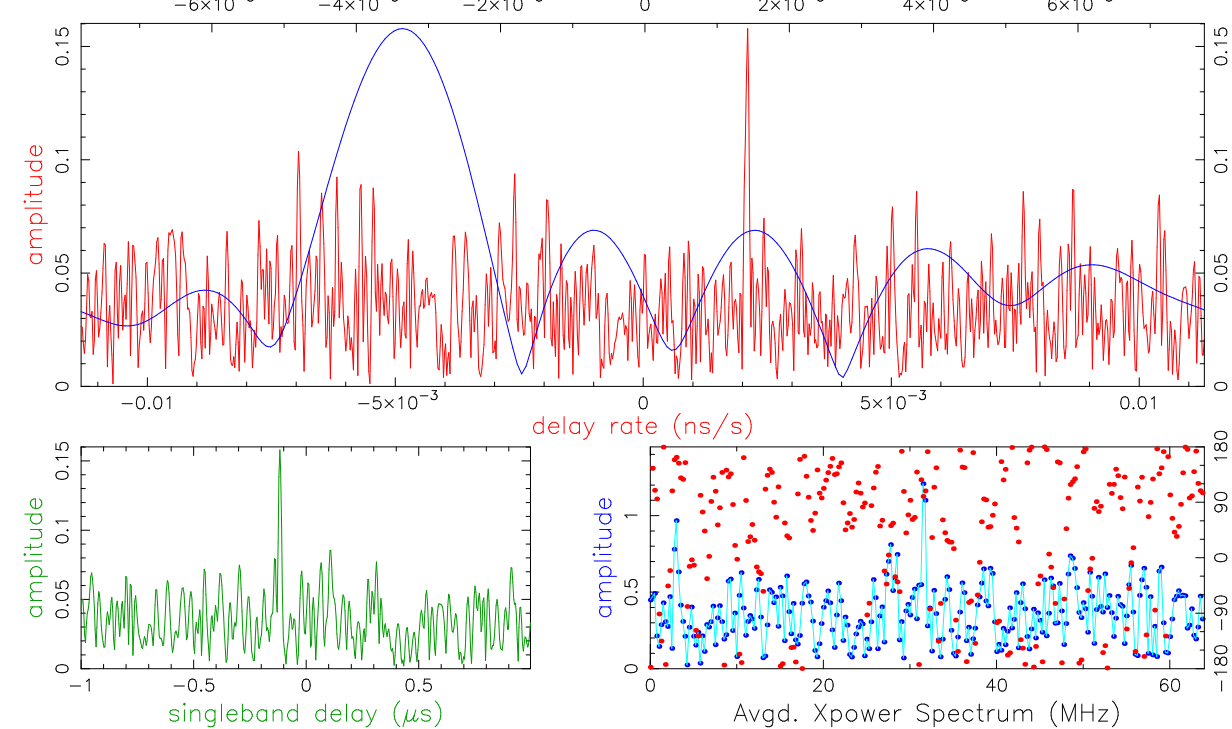
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP.W.72.1HXFS7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

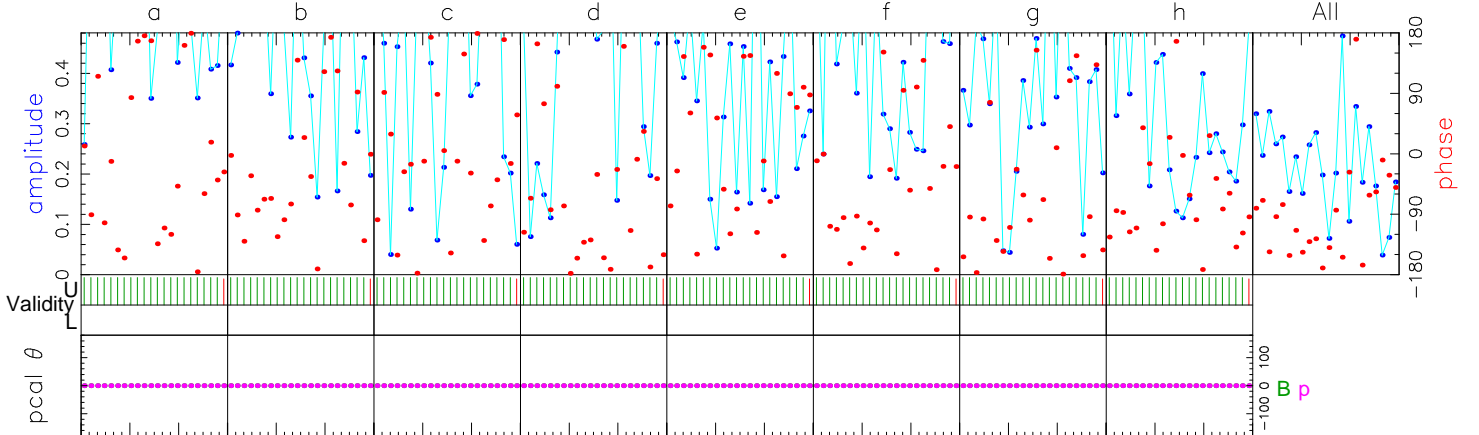
3C345.1HXFS7, No0189, Bp

EFLSBERG - VLBA_PT, fgroup W, pol RL



Fringe quality 0
 SNR 5.8
 Int time 179.778
 Amp 0.160
 Phase -114.1
 PFD 5.8e-01
 Delays (us)
 SBD -0.116991
 MBD -0.003354
 Fringe rate (Hz) 0.181008
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153028
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



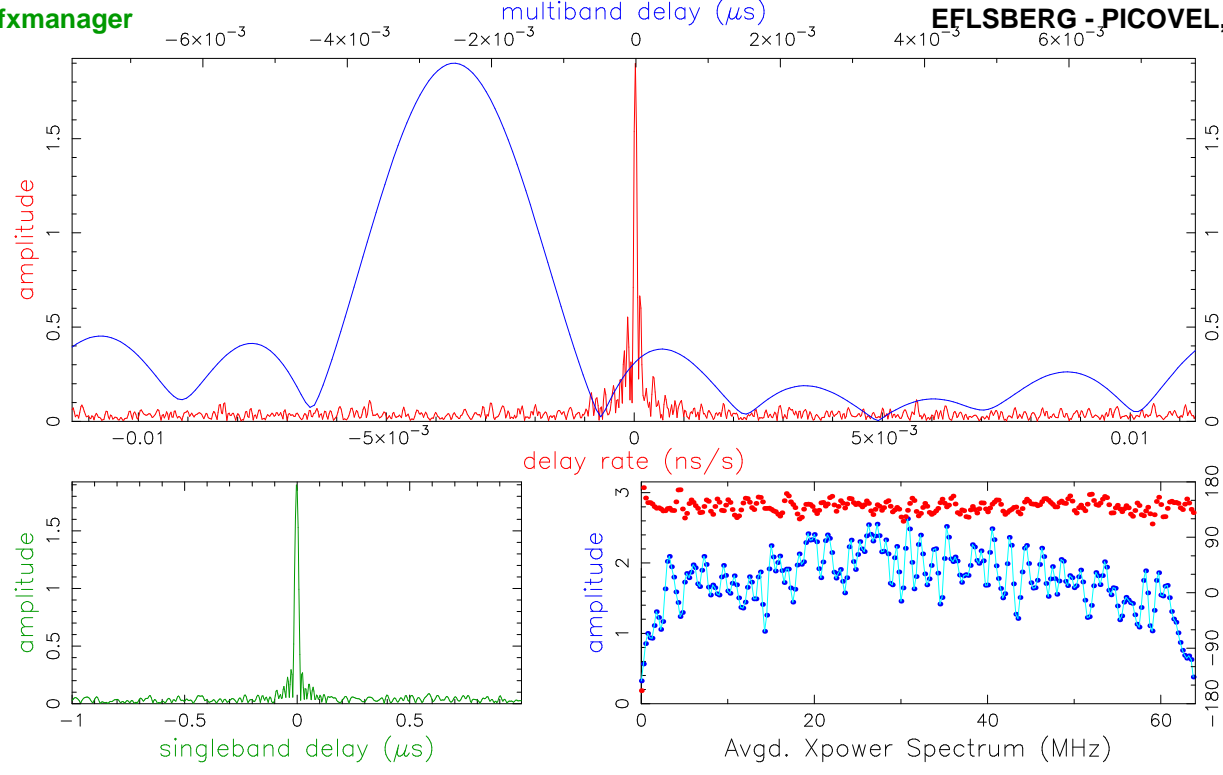
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|---|-----------------------------|----------|--------------------------|-----------------|--------------------|--|----------------------|-----------------------|---------------------------|------------------|
| | -129.3 | -86.3 | -92.4 | -132.0 | -168.5 | -87.6 | -150.9 | -96.0 | Phase | -114.1 |
| | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | Ampl. | 0.2 |
| | 171.2 | 9.2 | 182.4 | 3.0 | 243.1 | 41.8 | 171.5 | 264.5 | Sbd box | 227.1 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:p | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| p | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| p | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | -4.90543747167E+03 | | Apriori delay (usec) | | -4.90532474229E+03 | | Resid mbdelay (usec) | | -3.35438E-03 | +/- 1.9E-04 |
| Sband delay (usec) | -4.90544173329E+03 | | Apriori clock (usec) | | 1.0051786E+01 | | Resid sbdelay (usec) | | -1.16991E-01 | +/- 1.5E-03 |
| Phase delay (usec) | -4.90532474597E+03 | | Apriori clockrate (us/s) | | -5.9999998E-07 | | Resid phdelay (usec) | | -3.67829E-06 | +/- 6.4E-07 |
| Delay rate (us/s) | -1.36544146487E+00 | | Apriori rate (us/s) | | -1.36544356619E+00 | | Resid rate (us/s) | | 2.10132E-06 | +/- 6.1E-09 |
| Total phase (deg) | | | Apriori accel (us/s/s) | | 4.11739203988E-05 | | Resid phase (deg) | | -114.1 | +/- 19.8 |
| | RMS | Theor. | Amplitude | 0.160 +/- 0.028 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | |
| ph/seg (deg) | 51.7 | 46.4 | Search (1024X32) | 0.156 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 74.2 | 81.0 | Interp. | 0.000 | | SampCntNorm: enabled | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 34.5 | 28.0 | Inc. seg. avg. | 0.169 | | Sample rate(MISamp/s): 128 | | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 33.4 | 48.8 | Inc. frq. avg. | 0.159 | | Data rate(Mb/s): 2048 | | nlags: 256 | t_cohere infinite | ion window (TEC) |
| B: az 288.7 el 38.4 pa 51.7 | p: az 68.3 el 57.8 pa -87.2 | | u,v (fr/asec) | | 10212.450 4042.650 | | | | simultaneous interpolator | |
| Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/Bp.W.76.1HXFS7 | | | | | | | | | | |

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BP

EFLSBERG - PICOVEL, fgroup W, pol RL

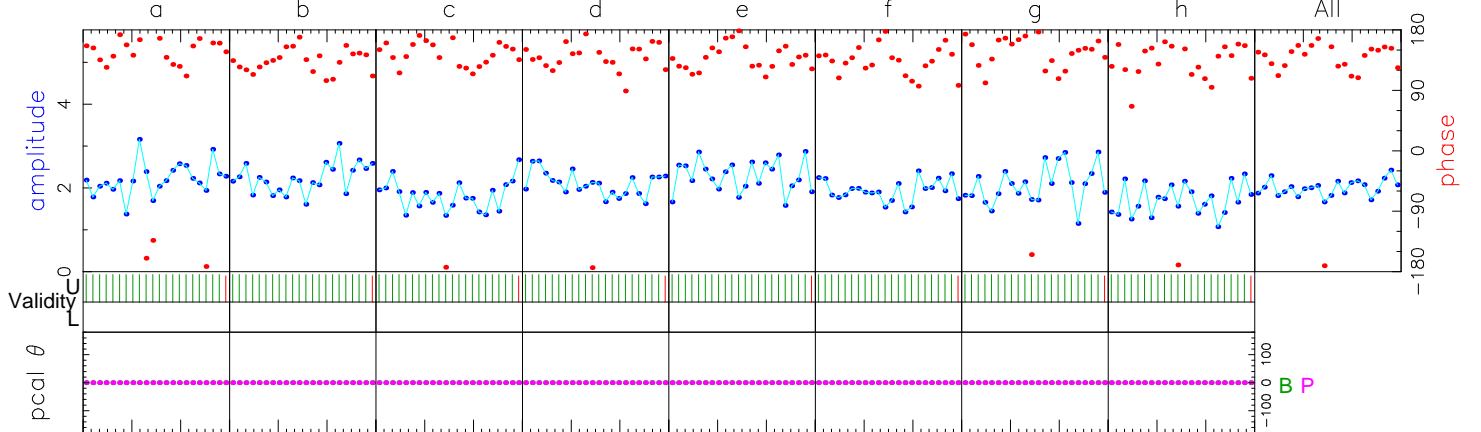


Fringe quality 8

SNR 70.6
 Int time 179.587
 Amp 1.926
 Phase 141.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.002334
 MBD -0.002479
 Fringe rate (Hz) 0.002066
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153030
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:P | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| P | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| P | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

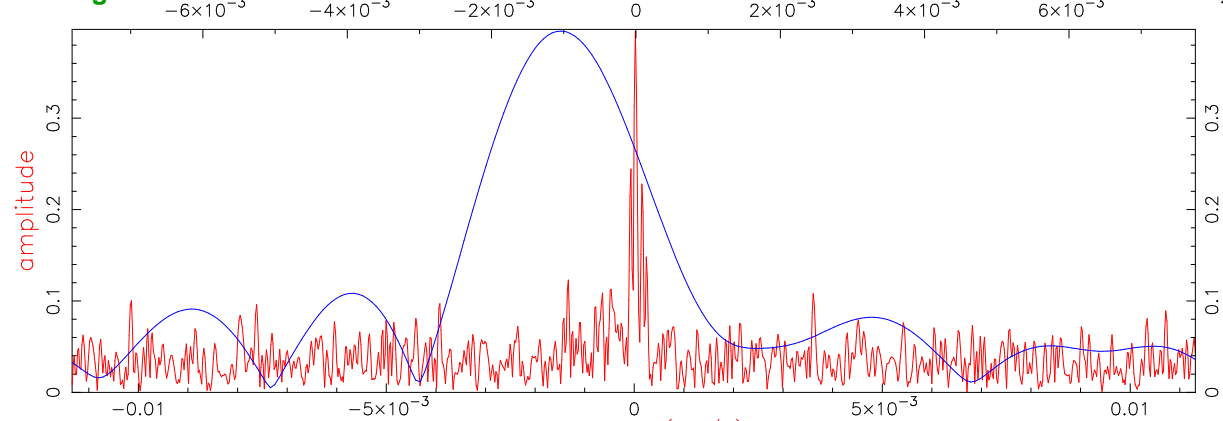
| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -5.71537646996E+02 | Apriori delay (usec) | -5.71535167983E+02 | Resid mbdelay (usec) | -2.47901E-03 | +/- | 1.5E-05 |
| Sband delay (usec) | -5.71537501983E+02 | Apriori clock (usec) | 1.0308058E+01 | Resid sbdelay (usec) | -2.33400E-03 | +/- | 1.2E-04 |
| Phase delay (usec) | -5.71535163426E+02 | Apriori clockrate (us/s) | 2.0000000E-07 | Resid phdelay (usec) | 4.55711E-06 | +/- | 5.2E-08 |
| Delay rate (us/s) | 1.28930588899E-01 | Apriori rate (us/s) | 1.28930564910E-01 | Resid rate (us/s) | 2.39889E-08 | +/- | 5.0E-10 |
| Total phase (deg) | 8.1 | Apriori accel (us/s/s) | 1.52981119926E-05 | Resid phase (deg) | 141.3 | +/- | 1.6 |

| | | | | | | | | |
|--------------|------|------------------|-------|--|-----------------|---------------------------|-----------------------|--------------|
| ph/seg (deg) | 19.1 | Theor. | 3.8 | Amplitude | 1.926 +/- 0.027 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | |
| amp/seg (%) | 10.5 | Search (1024X32) | 1.892 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 8.0 | Interp. | 0.000 | Bits/sample: 2x2 | | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 10.1 | Inc. seg. avg. | 1.999 | Sample rate(MISamp/s): 128 | | dr window (ns/s) | -0.011 0.011 | |
| | | Inc. frq. avg. | 1.911 | Data rate(Mb/s): 2048 | | ion window (TEC) | 0.00 0.00 | |

B: az 288.7 el 38.4 pa 51.7 P: az 294.2 el 40.5 pa 71.5 u,v (fr/asec) -945.255 2157.983 simultaneous interpolator

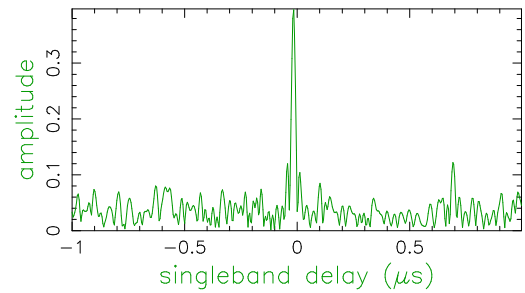
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BP.W.81.1HXFS7

multiband delay (μs)

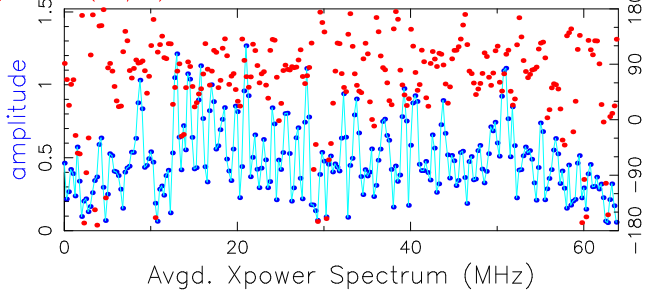


Fringe quality 9

SNR 14.6
 Int time 179.762
 Amp 0.397
 Phase -97.8
 PFD 1.5e-39
 Delays (us)
 SBD -0.016600
 MBD -0.001067
 Fringe rate (Hz)
 0.001095
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

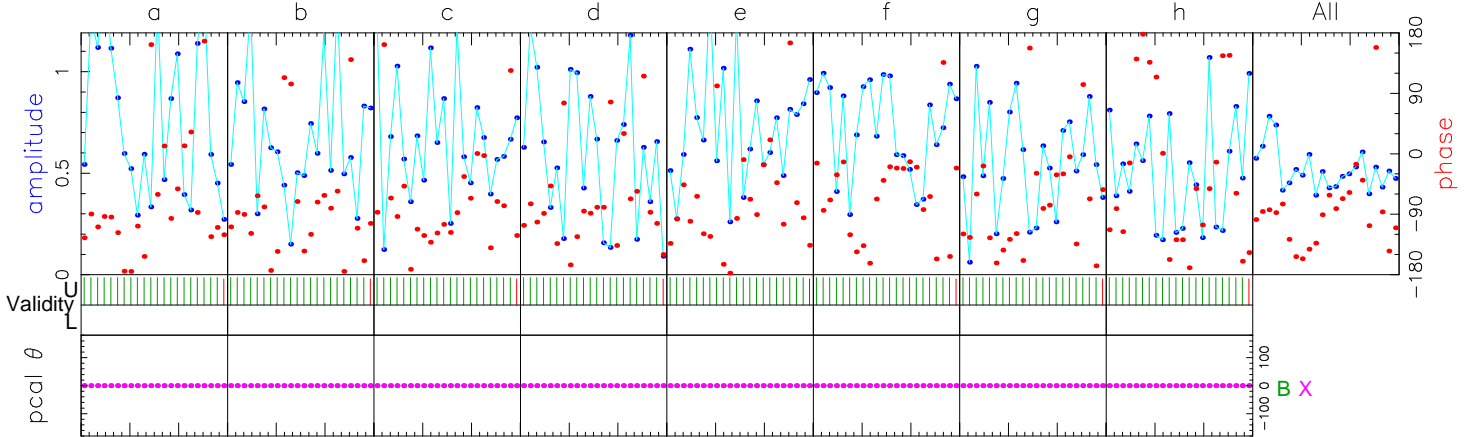


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153033
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



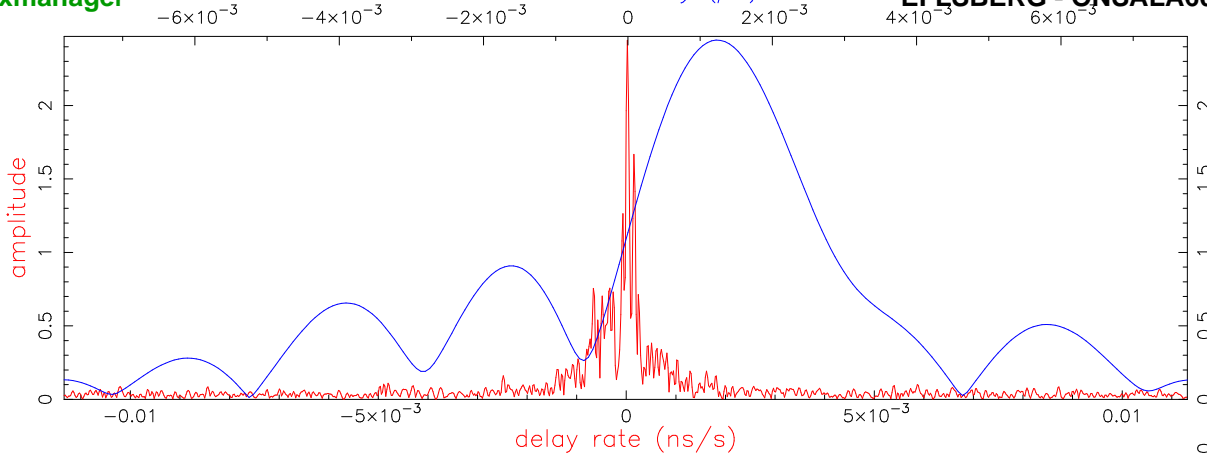
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -104.3 | -105.6 | -91.3 | -97.7 | -98.8 | -67.1 | -94.2 | -134.2 | Phase | -97.8 |
| | 0.5 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.3 | 0.2 | Ampl. | 0.4 |
| | 252.4 | 253.4 | 252.9 | 253.1 | 253.3 | 252.3 | 252.0 | 503.0 | Sbd box | 252.8 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 1.65953566197E+02 | Apriori delay (usec) | 1.65970258679E+02 | Resid mbdelay (usec) | -1.06748E-03 | +/- | 7.5E-05 |
| Sband delay (usec) | 1.65953658679E+02 | Apriori clock (usec) | -3.8197998E+01 | Resid sbdelay (usec) | -1.66000E-02 | +/- | 5.9E-04 |
| Phase delay (usec) | 1.65970255526E+02 | Apriori clockrate (us/s) | -7.2800002E-07 | Resid phdelay (usec) | -3.15295E-06 | +/- | 2.5E-07 |
| Delay rate (us/s) | -9.97496685847E-02 | Apriori rate (us/s) | -9.97496813019E-02 | Resid rate (us/s) | 1.27172E-08 | +/- | 2.4E-09 |
| Total phase (deg) | -68.0 | Apriori accel (us/s/s) | -6.18560646869E-06 | Resid phase (deg) | -97.8 | +/- | 7.9 |

| | | | | | | | | | | | |
|--------------|------|------------------|-------|------------------------|-----------------|--|----------------------|----------------|-------------------|------------------|--------------|
| ph/seg (deg) | 42.3 | RMS | 18.5 | Theor. | 0.397 +/- 0.027 | Pcal mode: MANUAL, MANUAL | PC period (AP's) | 5, 5 | | | |
| amp/seg (%) | 39.7 | Search (1024X32) | 0.380 | Interp. | 0.000 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | | |
| ph/frq (deg) | 20.1 | Inc. seg. avg. | 0.494 | Inc. frq. avg. | 0.402 | Bits/sample: 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | | |
| amp/frq (%) | 22.8 | Inc. frq. avg. | 0.402 | Sample rate (MSamp/s): | 128 | 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 | |

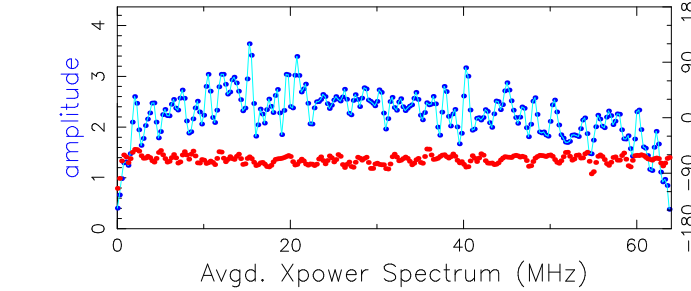
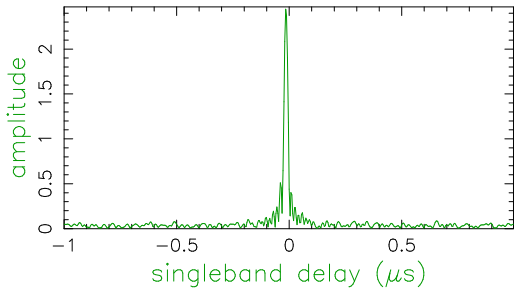
B: az 288.7 el 38.4 pa 51.7 X: az 287.0 el 37.7 pa 42.2 u,v (fr/asec) 736.996 -890.519 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX.W.112.1HXFS7

multiband delay (μ s)



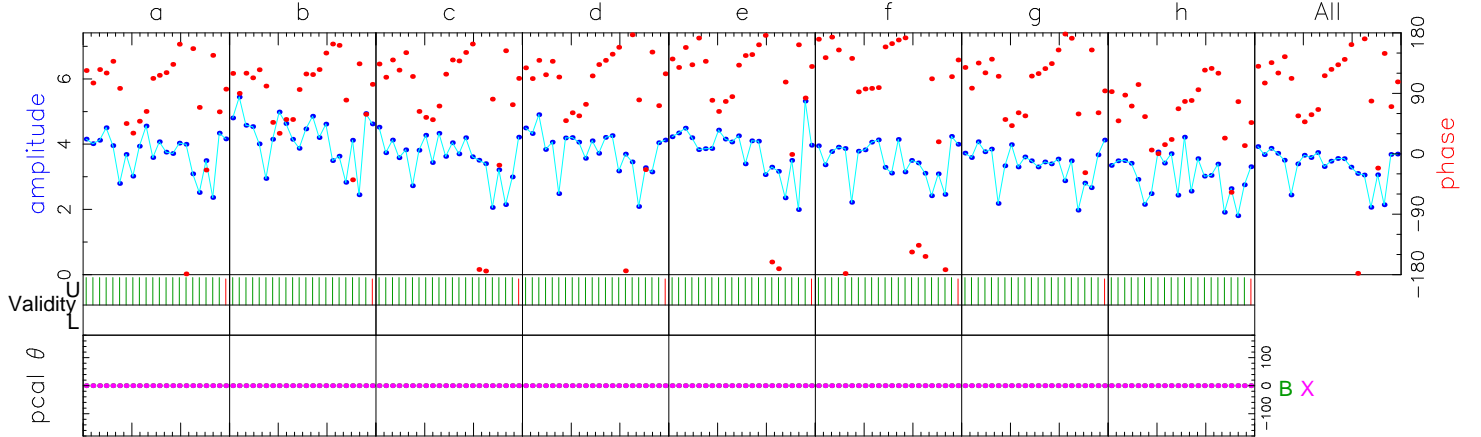
Fringe quality 3

SNR 90.6
 Int time 179.762
 Amp 2.471
 Phase 112.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.014284
 MBD 0.001271
 Fringe rate (Hz)
 0.001202
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153028
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 105.9 | 99.4 | 118.8 | 116.3 | 129.1 | 149.1 | 109.0 | 62.8 | Phase | 112.3 |
| | 2.7 | 3.1 | 2.6 | 2.8 | 2.8 | 2.5 | 2.4 | 2.2 | Ampl. | 2.6 |
| | 253.9 | 253.1 | 253.5 | 253.4 | 253.6 | 253.1 | 253.0 | 252.2 | Sbd box | 253.3 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 1.65955904885E+02 | Apriori delay (usec) | 1.65970258679E+02 | Resid mbdelay (usec) | 1.27121E-03 | +/- | 1.2E-05 |
| Sband delay (usec) | 1.65955974429E+02 | Apriori clock (usec) | -3.8197998E+01 | Resid sbdelay (usec) | -1.42843E-02 | +/- | 9.5E-05 |
| Phase delay (usec) | 1.65970262301E+02 | Apriori clockrate (us/s) | -7.2800002E-07 | Resid phdelay (usec) | 3.62167E-06 | +/- | 4.1E-08 |
| Delay rate (us/s) | -9.97496673504E-02 | Apriori rate (us/s) | -9.97496813019E-02 | Resid rate (us/s) | 1.39515E-08 | +/- | 3.9E-10 |
| Total phase (deg) | 142.0 | Apriori accel (us/s/s) | -6.18560646869E-06 | Resid phase (deg) | 112.3 | +/- | 1.3 |

| | | | | | | | | |
|--------------|------|------------------|-----------------|------------------------|-----------------------------|----------------------|----------------|--------------|
| ph/seg (deg) | 47.2 | RMS | 2.471 +/- 0.027 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 40.9 | Theor. | 3.0 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 27.0 | Search (1024X32) | 2.334 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 12.1 | Inc. seg. avg. | 3.338 | Sample rate(MISamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | |
| | | Inc. frq. avg. | 2.633 | Data rate(Mb/s): | 2048 | ion window (TEC) | 0.00 0.00 | |

B: az 288.7 el 38.4 pa 51.7 X: az 287.0 el 37.7 pa 42.2 u,v (fr/asec) 736.996 -890.519 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX.W.73.1HXFS7

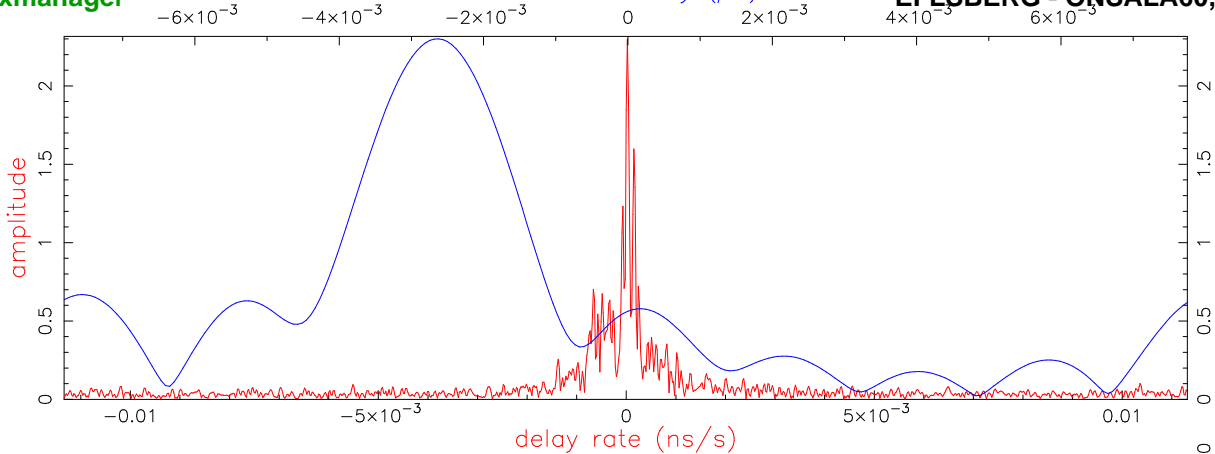
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BX

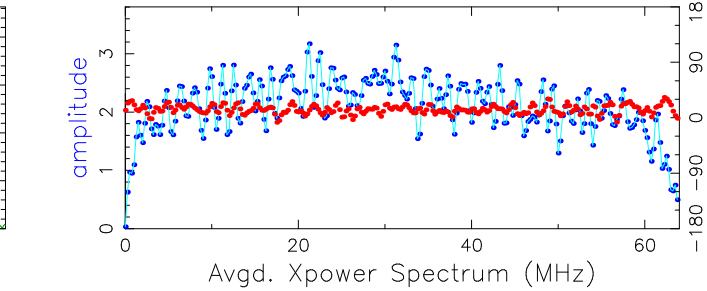
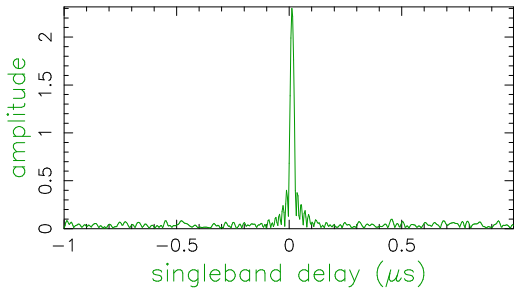
EFLSBERG - ONSALA60, fgroup W, pol RR

multiband delay (μ s)



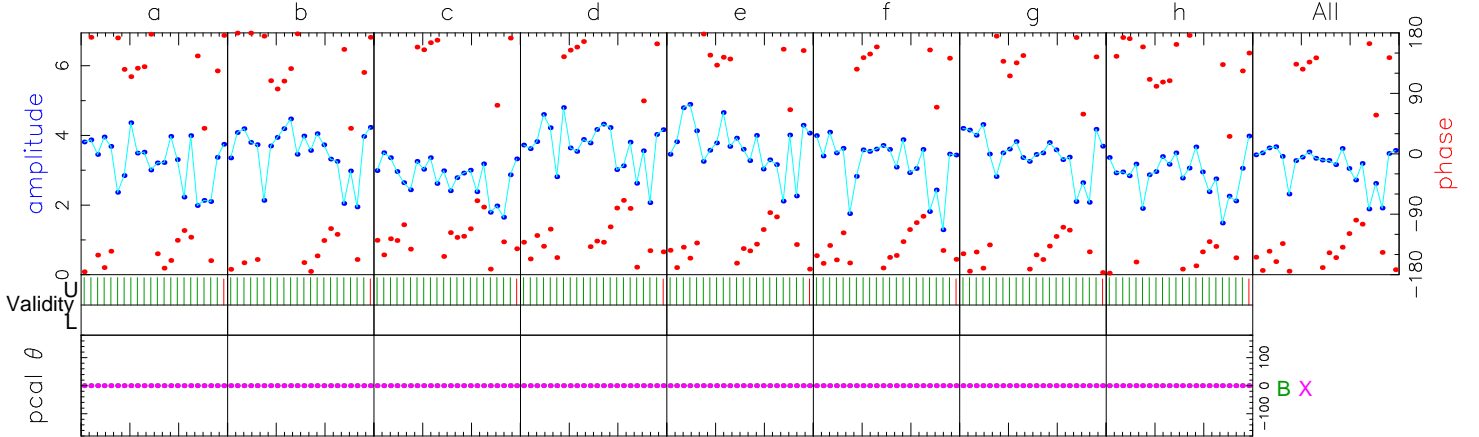
Fringe quality 4

SNR 84.9
 Int time 179.762
 Amp 2.316
 Phase -169.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.012853
 MBD -0.002600
 Fringe rate (Hz)
 0.001244
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153030
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | Chan ids |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | Tracks |

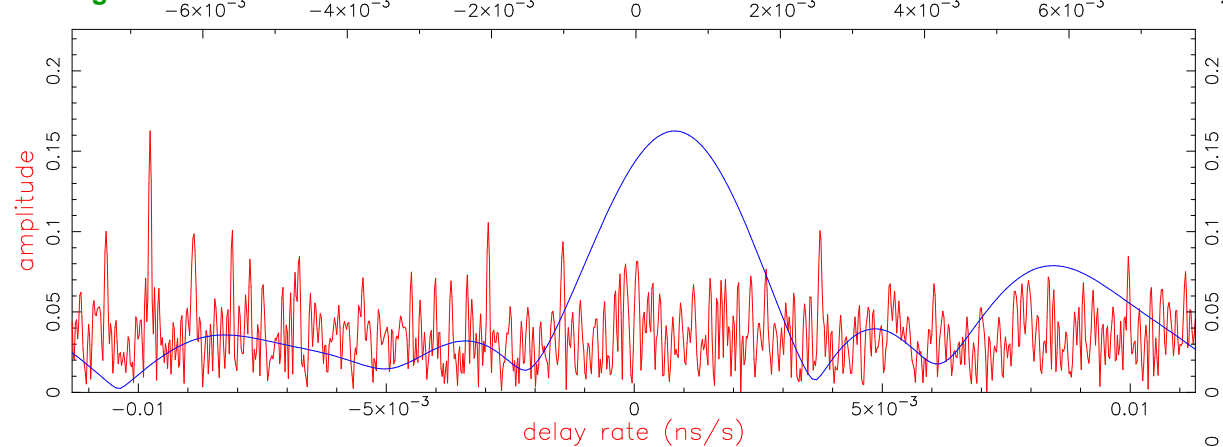
| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 1.65983283697E+02 | Apriori delay (usec) | 1.65970258679E+02 | Resid mbdelay (usec) | -2.59998E-03 | +/- | 1.3E-05 |
| Sband delay (usec) | 1.65983111929E+02 | Apriori clock (usec) | -3.8197998E+01 | Resid sbdelay (usec) | 1.28532E-02 | +/- | 1.0E-04 |
| Phase delay (usec) | 1.65970253227E+02 | Apriori clockrate (us/s) | -7.2800002E-07 | Resid phdelay (usec) | -5.45150E-06 | +/- | 4.4E-08 |
| Delay rate (us/s) | -9.97496668572E-02 | Apriori rate (us/s) | -9.97496813019E-02 | Resid rate (us/s) | 1.44447E-08 | +/- | 4.2E-10 |
| Total phase (deg) | -139.3 | Apriori accel (us/s/s) | -6.18560646869E-06 | Resid phase (deg) | -169.1 | +/- | 1.3 |

| | | | | | | | | |
|--------------|------|------------------|-----------------|------------------------|-----------------------------|----------------------|----------------|--------------|
| ph/seg (deg) | 47.5 | RMS | 2.316 +/- 0.027 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | |
| amp/seg (%) | 42.4 | Theor. | 2.208 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | |
| ph/frq (deg) | 20.1 | Search (1024X32) | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 |
| amp/frq (%) | 9.2 | Inc. seg. avg. | 3.145 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | |
| | | Inc. frq. avg. | 2.401 | Data rate (Mb/s): | 2048 | ion window (TEC) | 0.00 0.00 | |

B: az 288.7 el 38.4 pa 51.7 X: az 287.0 el 37.7 pa 42.2 u,v (fr/asec) 736.996 -890.519 simultaneous interpolator

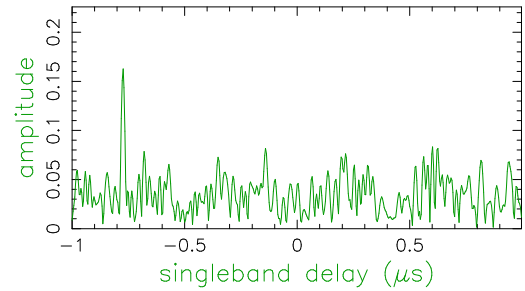
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX.W.82.1HXFS7

multiband delay (μ s)

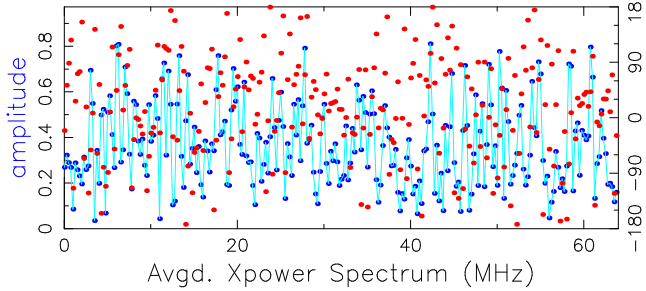


Fringe quality 0

SNR 6.0
 Int time 179.762
 Amp 0.226
 Phase 111.2
 PFD 2.6e-01
 Delays (us)
 SBD -0.773892
 MBD 0.000529
 Fringe rate (Hz)
 -0.841781
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

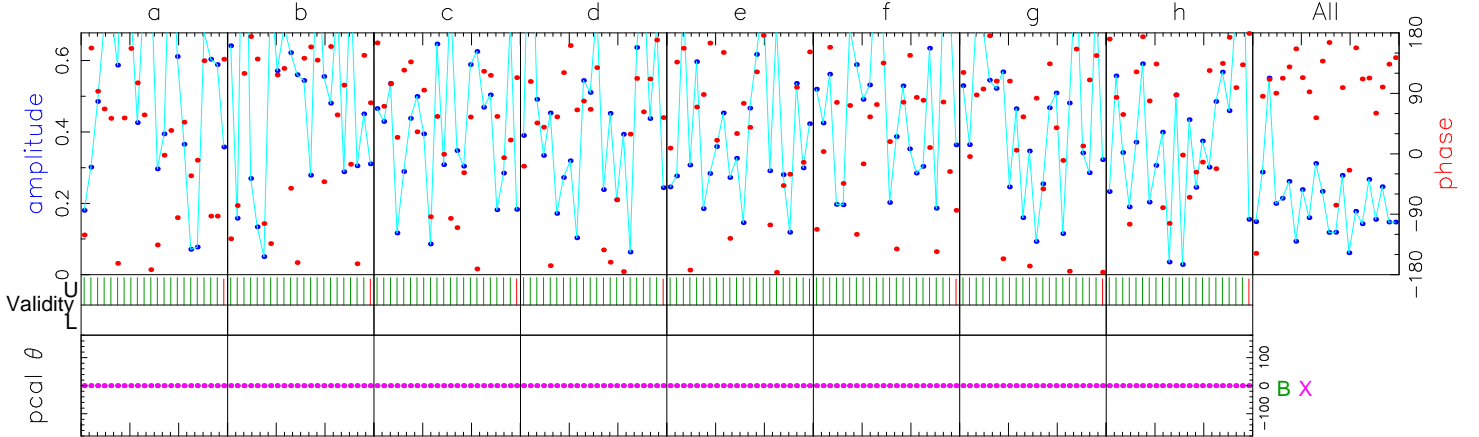


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153031
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



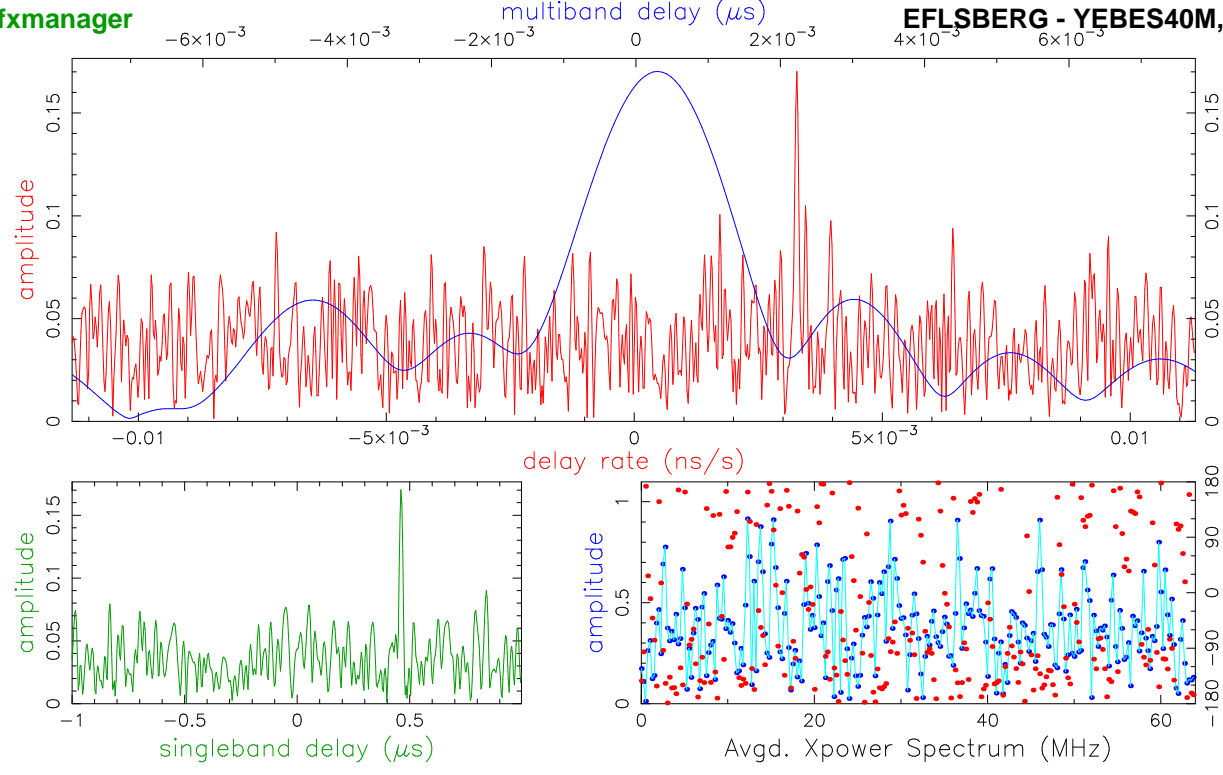
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | 94.7 | 146.4 | 80.6 | 108.3 | 131.1 | 60.7 | 123.5 | 118.8 | Phase | 111.2 |
| | 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | Ampl. | 0.2 |
| | 305.9 | 469.8 | 76.7 | 396.8 | 312.4 | 183.0 | 506.0 | 159.3 | Sbd box | 58.9 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:X | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| X | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| X | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 1.65189538002E+02 | Apriori delay (usec) | 1.65970258679E+02 | Resid mbdelay (usec) | 5.29323E-04 | +/- | 1.8E-04 |
| Sband delay (usec) | 1.65196366429E+02 | Apriori clock (usec) | -3.8197998E+01 | Resid sbdelay (usec) | -7.73892E-01 | +/- | 1.4E-03 |
| Phase delay (usec) | 1.65970262264E+02 | Apriori clockrate (us/s) | -7.2800002E-07 | Resid phdelay (usec) | 3.58463E-06 | +/- | 6.2E-07 |
| Delay rate (us/s) | -9.97594535415E-02 | Apriori rate (us/s) | -9.97496813019E-02 | Resid rate (us/s) | -9.77224E-06 | +/- | 5.9E-09 |
| Total phase (deg) | 140.9 | Apriori accel (us/s/s) | -6.18560646869E-06 | Resid phase (deg) | 111.2 | +/- | 19.2 |

| | | | | | | | | | | | |
|--------------|------|------------------|-------|------------------------|-------|-------------------|-----------------------------|----------------------|----------------|------------------|----------|
| ph/seg (deg) | 58.7 | RMS | 45.0 | Theor. | 45.0 | Amplitude | 0.226 +/- 0.038 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 |
| amp/seg (%) | 67.4 | Search (1024X32) | 0.157 | Interp. | 0.000 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 | 1.000 | |
| ph/frq (deg) | 30.6 | Inc. seg. avg. | 0.220 | Inc. frq. avg. | 0.223 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| amp/frq (%) | 25.8 | Inc. frq. avg. | 0.223 | Sample rate (MSamp/s): | 128 | Data rate (Mb/s): | 2048 | nlags: | 256 | t_cohere | infinite |
| | | | | | | | | ion window (TEC) | 0.00 | 0.00 | |

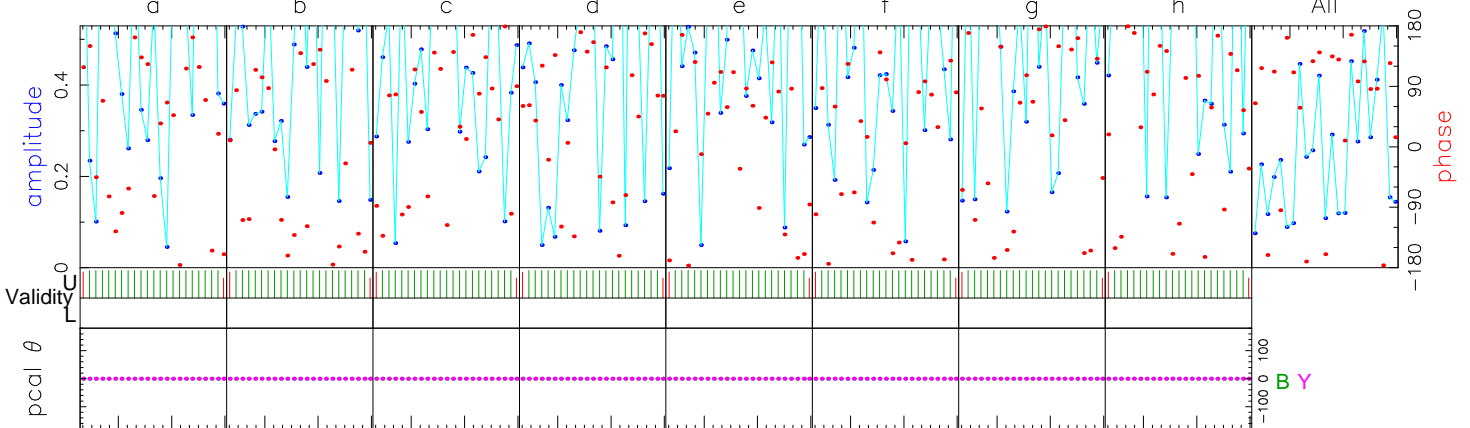
B: az 288.7 el 38.4 pa 51.7 X: az 287.0 el 37.7 pa 42.2 u,v (fr/asec) 736.996 -890.519 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BX.W.93.1HXFS7



Fringe quality 0
SNR 5.9
Int time 162.038
Amp 0.177
Phase 129.1
PFD 3.1e-01
Delays (us)
SBD 0.461510
MBD 0.000318
Fringe rate (Hz)
0.283070
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 200016.90
Stop 200300.23
FRT 200130.00
Corr/FF/build
2021:010:004733
2021:010:153033
2020:247:085004
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec

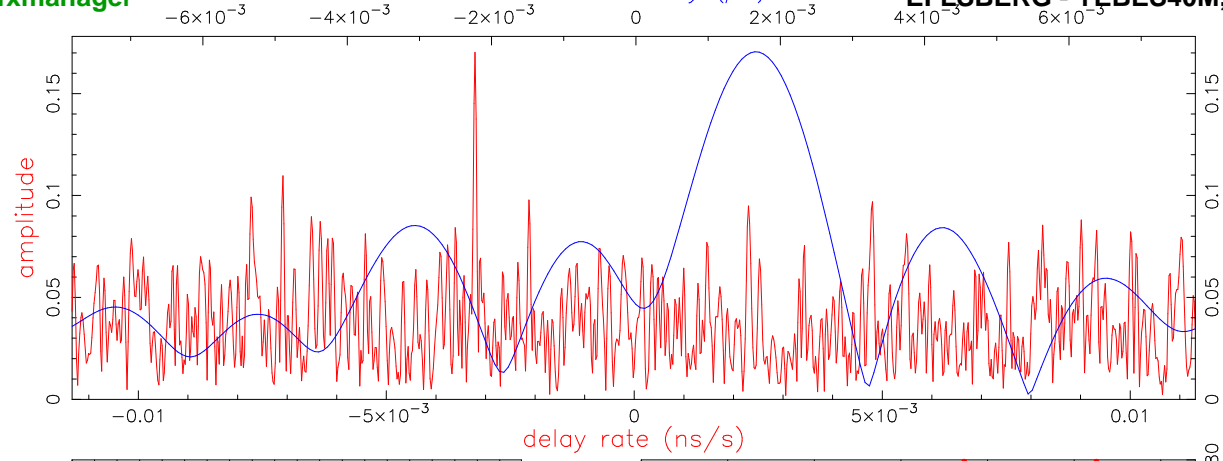


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| U/L | 137.4 | 148.9 | 123.9 | 126.7 | 95.2 | 111.1 | 149.0 | 140.9 | Phase | 129.1 |
| B | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | Ampl. | 0.2 |
| Y | 297.6 | 423.5 | 271.3 | 95.3 | 376.0 | 129.3 | 382.9 | 155.0 | Sbd box | 375.1 |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | APs used | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|-------------|-----|---------|
| Group delay (usec)(sbd) | -8.96139311795E+02 | Apriori delay (usec) | -8.96608379837E+02 | Resid mbdelay (usec) | 3.18041E-04 | +/- | 1.8E-04 |
| Sband delay (usec) | -8.96146869587E+02 | Apriori clock (usec) | -1.5677567E+00 | Resid sbdelay (usec) | 4.61510E-01 | +/- | 1.5E-03 |
| Phase delay (usec) | -8.96608375674E+02 | Apriori clockrate (us/s) | -3.1999999E-07 | Resid phdelay (usec) | 4.16252E-06 | +/- | 6.2E-07 |
| Delay rate (us/s) | 8.99678876158E-02 | Apriori rate (us/s) | 8.99646014545E-02 | Resid rate (us/s) | 3.28616E-06 | +/- | 6.6E-09 |
| Total phase (deg) | -173.0 | Apriori accel (us/s/s) | 1.35809259894E-05 | Resid phase (deg) | 129.1 | +/- | 19.3 |

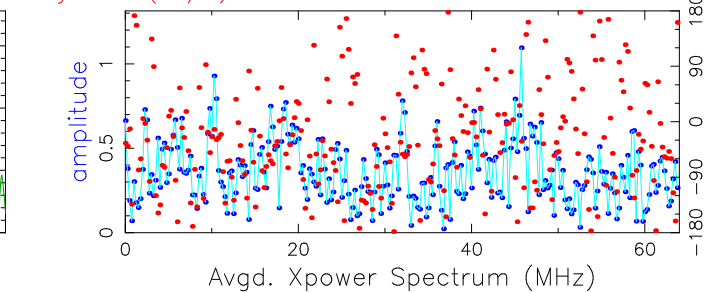
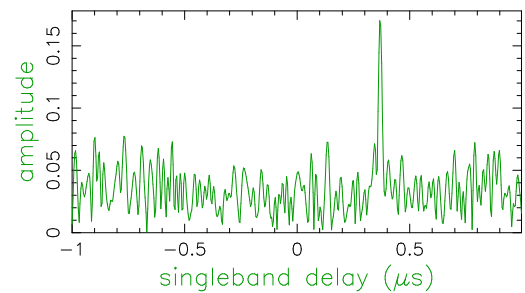
| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 58.0 | Theor. | 46.3 | Amplitude | 0.177 +/- 0.030 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 98.9 | | 80.8 | Search (1024X32) | 0.166 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 20.4 | | 27.3 | Inc. seg. avg. | 0.200 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 21.9 | | 47.6 | Inc. frq. avg. | 0.167 | Sample rate(MSamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| | | | | | | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

multiband delay (μs)



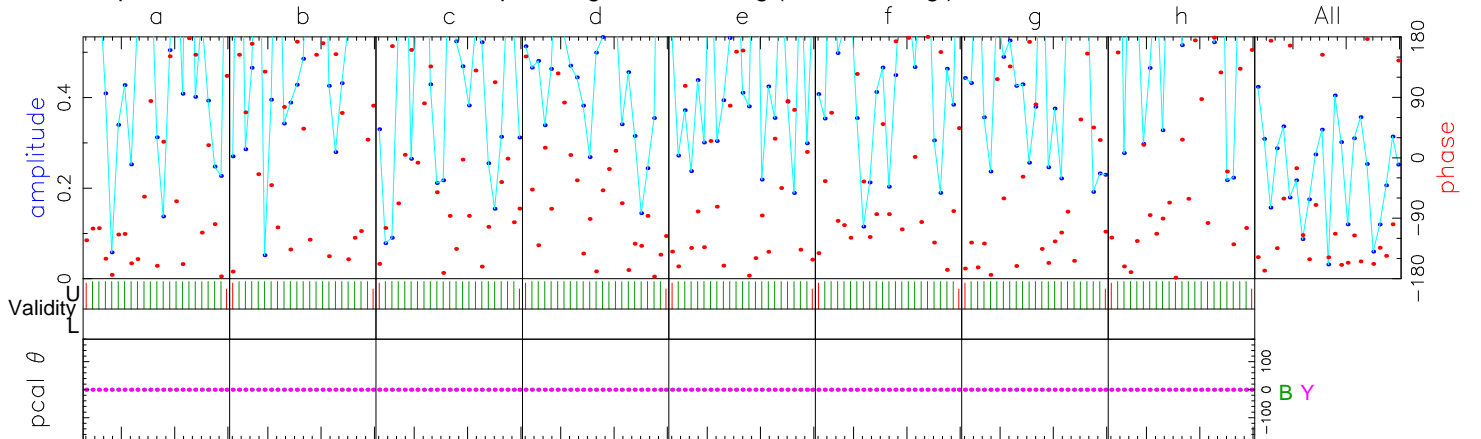
Fringe quality 0

SNR 6.0
 Int time 162.038
 Amp 0.178
 Phase -140.6
 PFD 2.3e-01
 Delays (us)
 SBD 0.368600
 MBD 0.001722
 Fringe rate (Hz)
 -0.277211
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200016.90
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153035
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|--------|
| | -141.9 | -163.4 | -61.1 | -106.8 | -153.3 | -122.5 | -157.6 | -148.9 | Phase | -140.6 |
| | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | Ampl. | 0.2 |
| | 154.1 | 488.2 | 154.2 | 468.1 | 489.5 | 218.0 | 480.4 | 348.0 | Sbd box | 351.4 |
| U/L | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Manl PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Y | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -8.96247283226E+02 | Apriori delay (usec) | -8.96608379837E+02 | Resid mbdelay (usec) | 1.72161E-03 | +/- | 1.8E-04 |
| Sband delay (usec) | -8.96239779587E+02 | Apriori clock (usec) | -1.5677567E+00 | Resid sbdelay (usec) | 3.68600E-01 | +/- | 1.4E-03 |
| Phase delay (usec) | -8.96608384372E+02 | Apriori clockrate (us/s) | -3.1999999E-07 | Resid phdelay (usec) | -4.53521E-06 | +/- | 6.2E-07 |
| Delay rate (us/s) | 8.99613833076E-02 | Apriori rate (us/s) | 8.99646014545E-02 | Resid rate (us/s) | -3.21815E-06 | +/- | 6.5E-09 |
| Total phase (deg) | -82.7 | Apriori accel (us/s/s) | 1.35809259894E-05 | Resid phase (deg) | -140.6 | +/- | 19.1 |

| | | | | | | | | | |
|--------------|----------|-------------|------------------|-----------------|--|-----------------------|------------------|--------|-------|
| ph/seg (deg) | RMS 46.0 | Theor. 45.8 | Amplitude | 0.178 +/- 0.030 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 72.9 | 80.0 | Search (1024X32) | 0.164 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | SampCntNorm: enabled | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 38.4 | 27.0 | Inc. seg. avg. | 0.187 | Sample rate(MSamp/s): 128 | nlags: 256 | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 41.4 | 47.2 | Inc. frq. avg. | 0.174 | Data rate(Mb/s): 2048 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

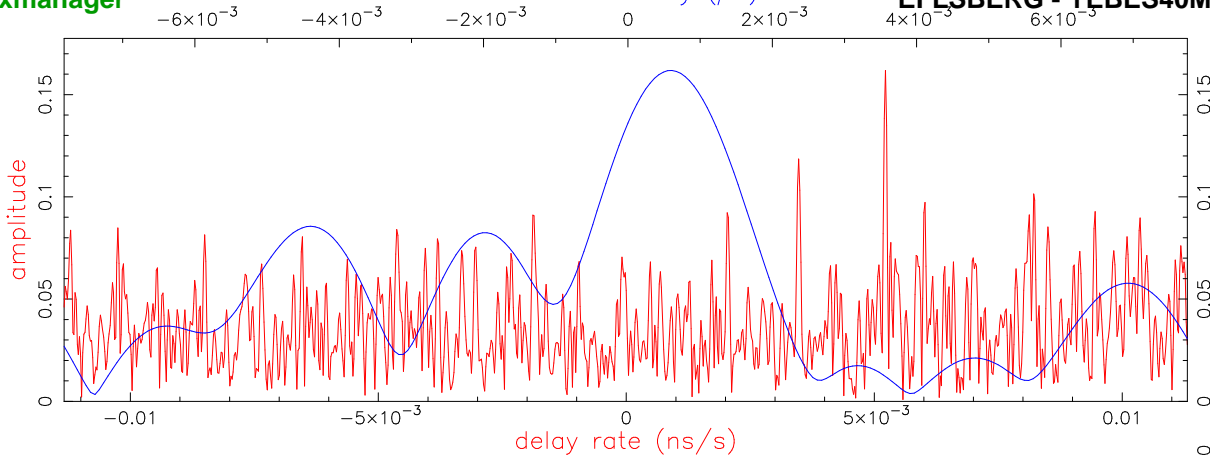
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BY

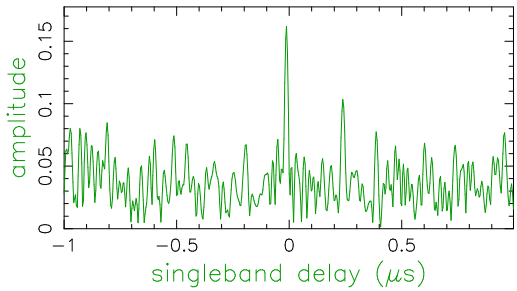
EFLSBERG - YEBES40M, fgroup W, pol RL

multiband delay (μ s)

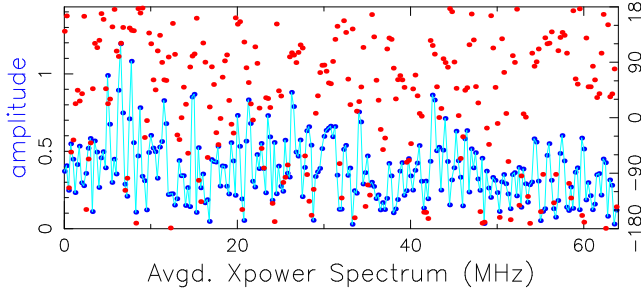


Fringe quality 0

SNR 5.6
 Int time 162.038
 Amp 0.177
 Phase -58.2
 PFD 8.6e-01
 Delays (us)
 SBD -0.012403
 MBD 0.000579
 Fringe rate (Hz)
 0.451752
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

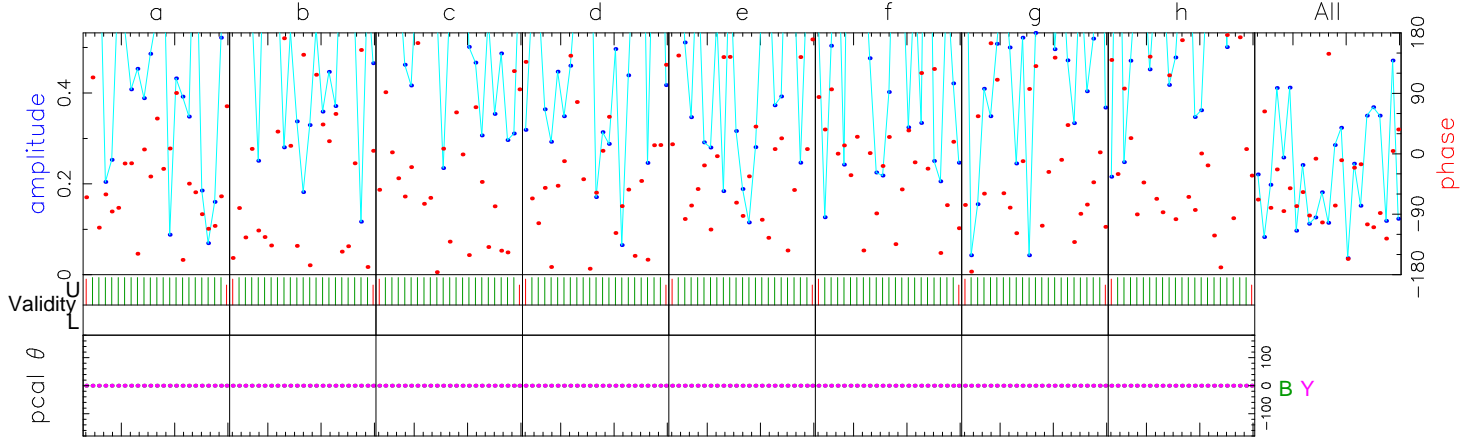


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200016.90
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153037
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -47.2 | -125.0 | -44.8 | -50.6 | -77.9 | -19.6 | -52.9 | -80.4 | Phase | -58.2 |
| | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 0.3 | Ampl. | 0.2 |
| | 142.1 | 402.7 | 30.1 | 315.9 | 67.5 | 377.0 | 252.7 | 481.6 | Sbd box | 253.8 |
| U/L | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -8.96623425986E+02 | Apriori delay (usec) | -8.96608379837E+02 | Resid mbdelay (usec) | 5.78851E-04 | +/- | 1.9E-04 |
| Sband delay (usec) | -8.96620782587E+02 | Apriori clock (usec) | -1.5677567E+00 | Resid sbdelay (usec) | -1.24027E-02 | +/- | 1.5E-03 |
| Phase delay (usec) | -8.96608381712E+02 | Apriori clockrate (us/s) | -3.1999999E-07 | Resid phdelay (usec) | -1.87574E-06 | +/- | 6.5E-07 |
| Delay rate (us/s) | 8.99698458423E-02 | Apriori rate (us/s) | 8.99646014545E-02 | Resid rate (us/s) | 5.24439E-06 | +/- | 6.9E-09 |
| Total phase (deg) | -0.3 | Apriori accel (us/s/s) | 1.35809259894E-05 | Resid phase (deg) | -58.2 | +/- | 20.3 |

| | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|--|-----------------------|-------------------|--------|-------|
| ph/seg (deg) | 60.5 | Theor. | 48.6 | Amplitude | 0.177 +/- 0.031 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 |
| amp/seg (%) | 85.5 | | 84.9 | Search (1024X32) | 0.157 | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | mb window (us) | -0.008 | 0.008 |
| ph/frq (deg) | 34.7 | | 28.7 | Interp. | 0.000 | Bits/sample: 2x2 | SampCntNorm: enabled | dr window (ns/s) | -0.011 | 0.011 |
| amp/frq (%) | 35.7 | | 50.1 | Inc. seg. avg. | 0.185 | Sample rate(MSamp/s): 128 | | ion window (TEC) | 0.00 | 0.00 |
| | | | | Inc. frq. avg. | 0.178 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | | |

B: az 288.7 el 38.4 pa 51.7 Y: az 291.5 el 41.6 pa 66.9 u,v (fr/asec) -657.106 1724.655 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BY..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BY.W.147.1HXFS7

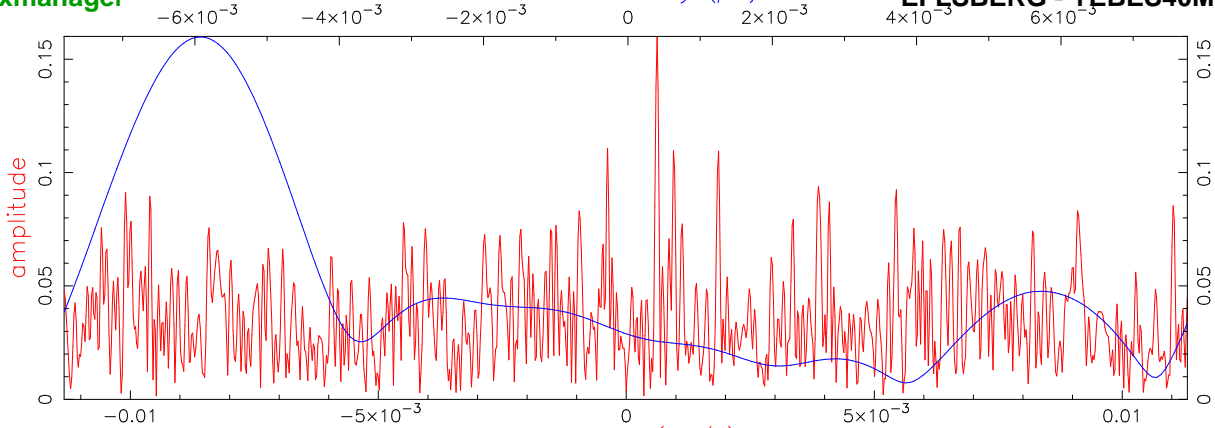
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

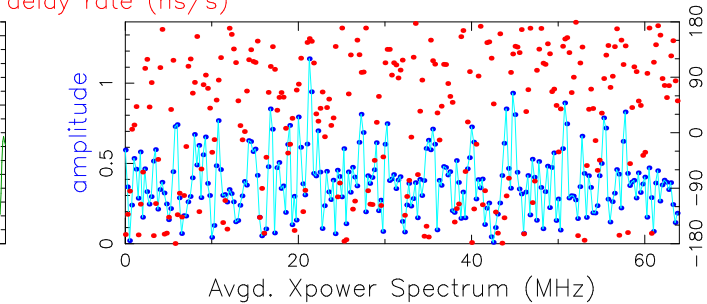
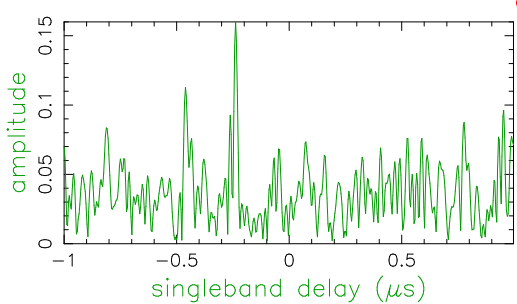
3C345.1HXFS7, No0189, BY

EFLSBERG - YEBES40M, fgroup W, pol LL

multiband delay (μs)

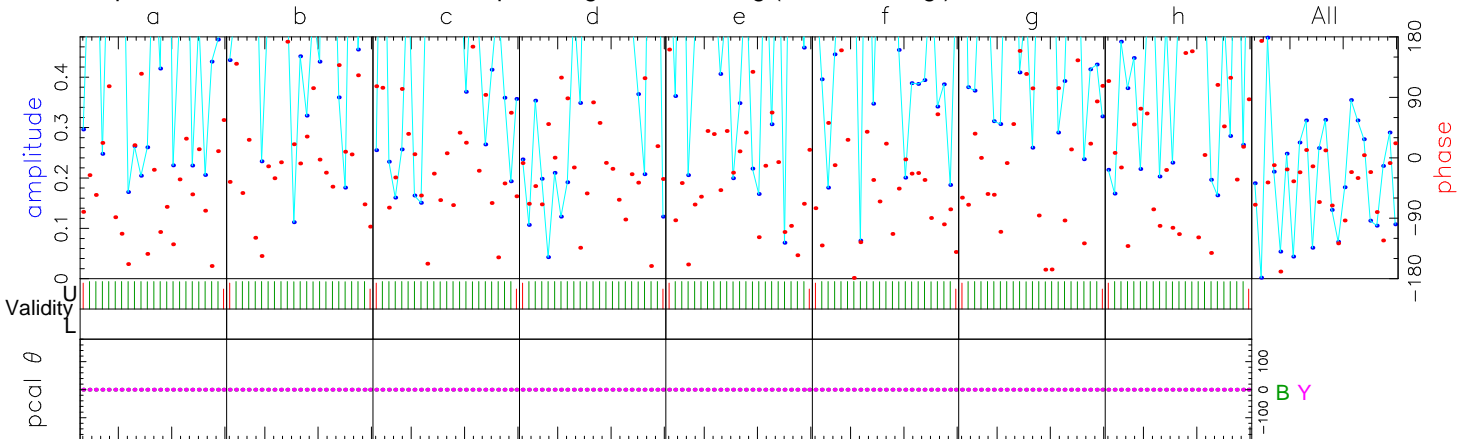


Fringe quality 0
 SNR 5.6
 Int time 162.038
 Amp 0.160
 Phase -30.0
 PFD 9.6e-01
 Delays (us)
 SBD -0.238081
 MBD -0.005922
 Fringe rate (Hz) 0.053065
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200016.90
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153030
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------|
| | -42.8 | -27.8 | -2.2 | -23.5 | -26.6 | -46.7 | -39.6 | -17.7 | Phase | -30.0 |
| | 0.2 | 0.3 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | Ampl. | 0.1 |
| | 197.4 | 197.3 | 12.8 | 41.5 | 326.5 | 190.4 | 137.7 | 1.8 | Sbd box | 196.1 |
| U/L | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | 319/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Y | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Y | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| Y | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | -8.96848676547E+02 | Apriori delay (usec) | -8.96608379837E+02 | Resid mbdelay (usec) | -5.92171E-03 | +/- | 2.0E-04 |
| Sband delay (usec) | -8.96846461087E+02 | Apriori clock (usec) | -1.5677567E+00 | Resid sbdelay (usec) | -2.38081E-01 | +/- | 1.5E-03 |
| Phase delay (usec) | -8.96608380805E+02 | Apriori clockrate (us/s) | -3.1999999E-07 | Resid phdelay (usec) | -9.67908E-07 | +/- | 6.6E-07 |
| Delay rate (us/s) | 8.99652174844E-02 | Apriori rate (us/s) | 8.99646014545E-02 | Resid rate (us/s) | 6.16030E-07 | +/- | 7.0E-09 |
| Total phase (deg) | -332.1 | Apriori accel (us/s/s) | 1.35809259894E-05 | Resid phase (deg) | -30.0 | +/- | 20.6 |

| | | | | | | | | | | | |
|--------------|------|--------|------|------------------|-------|--|----------------------------|-------------------|------------------|-------|------|
| ph/seg (deg) | 59.8 | Theor. | 49.4 | Search (1024X32) | 0.158 | Pcal mode: MANUAL, MANUAL | PC period (AP's) 5, 5 | sb window (us) | -1.000 | 1.000 | |
| amp/seg (%) | 78.2 | | 86.2 | 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) | 15.9 | | 29.1 | Inc. seg. avg. | 0.148 | Bits/sample: 2x2 | Sample rate(MISamp/s): 128 | dr window (ns/s) | -0.011 | 0.011 | |
| amp/frq (%) | 49.4 | | 50.8 | Inc. frq. avg. | 0.145 | Data rate(Mb/s): 2048 | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 | 0.00 |

B: az 288.7 el 38.4 pa 51.7 Y: az 291.5 el 41.6 pa 66.9 u,v (fr/asec) -657.106 1724.655 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BY..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BY.W.83.1HXFS7

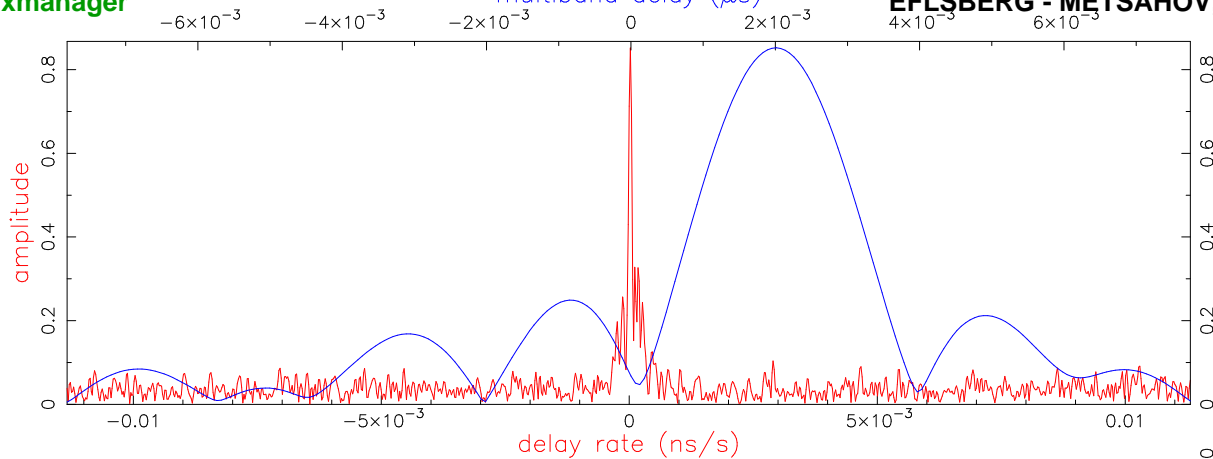
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BZ

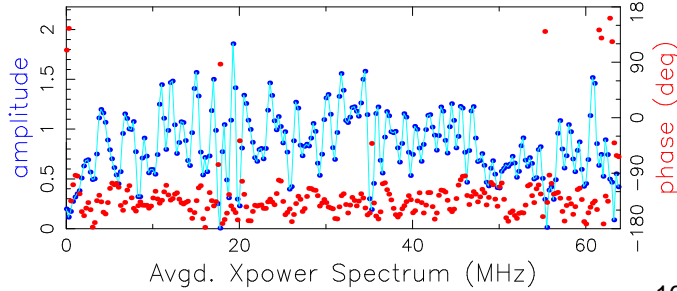
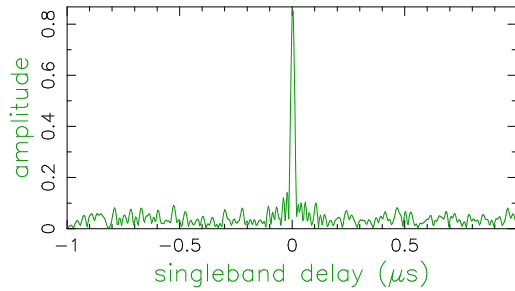
EFLSBERG - METSAHOV, fgroup W, pol RR

multiband delay (μ s)



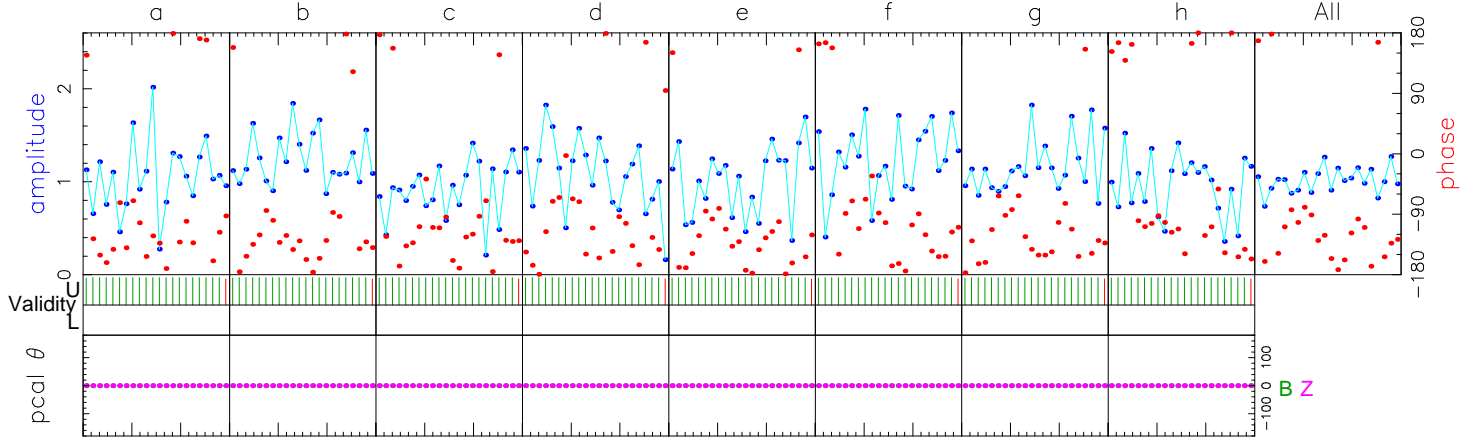
Fringe quality 8

SNR 31.8
 Int time 179.557
 Amp 0.868
 Phase -134.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.002091
 MBD 0.001972
 Fringe rate (Hz) 0.001446
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153032
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

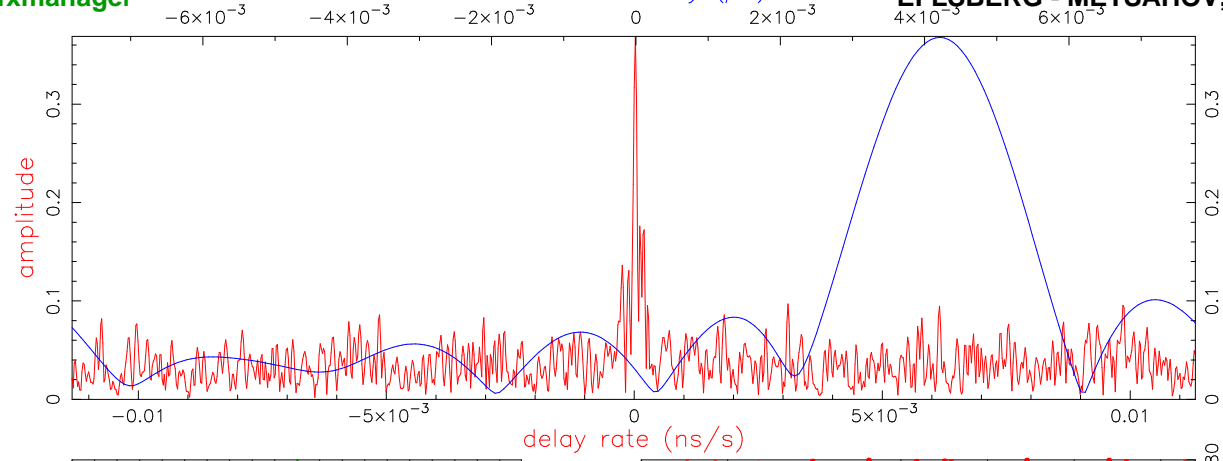


| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-------------------------|--------------------|----------|--------------------------|----------|--------------------|----------|----------------------|----------|--------------|-------------|
| | -140.5 | -141.8 | -133.4 | -126.2 | -139.7 | -124.8 | -129.6 | -144.6 | Phase | -134.9 |
| | 0.8 | 1.0 | 0.7 | 0.8 | 0.8 | 0.9 | 1.0 | 0.7 | Ampl. | 0.9 |
| | 257.0 | 257.9 | 257.8 | 257.0 | 257.6 | 257.7 | 257.7 | 256.6 | Sbd box | 257.5 |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Chan ids | |
| Z | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.74791991436E+03 | | Apriori delay (usec) | | 1.74791794216E+03 | | Resid mbdelay (usec) | | 1.97221E-03 | +/- 3.4E-05 |
| Sband delay (usec) | 1.74792003291E+03 | | Apriori clock (usec) | | 9.9668140E+00 | | Resid sbdelay (usec) | | 2.09075E-03 | +/- 2.7E-04 |
| Phase delay (usec) | 1.74791793781E+03 | | Apriori clockrate (us/s) | | -2.1600000E-07 | | Resid phdelay (usec) | | -4.34913E-06 | +/- 1.2E-07 |
| Delay rate (us/s) | -1.41446871280E-01 | | Apriori rate (us/s) | | -1.41446888066E-01 | | Resid rate (us/s) | | 1.67857E-08 | +/- 1.1E-09 |
| Total phase (deg) | 58.7 | | Apriori accel (us/s/s) | | -1.61890895986E-05 | | Resid phase (deg) | | -134.9 | +/- 3.6 |

ph/seg (deg) 34.1 8.5 Amplitude 0.868 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 22.9 14.8 Search (1024X32) 0.842 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 8.2 5.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 12.5 8.9 Inc. seg. avg. 1.006 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.855 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 288.7 el 38.4 pa 51.7 Z: az 294.2 el 32.6 pa 36.2 u,v (fr/asec) 1039.018 -1720.955 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ.W.100.1HXFS7

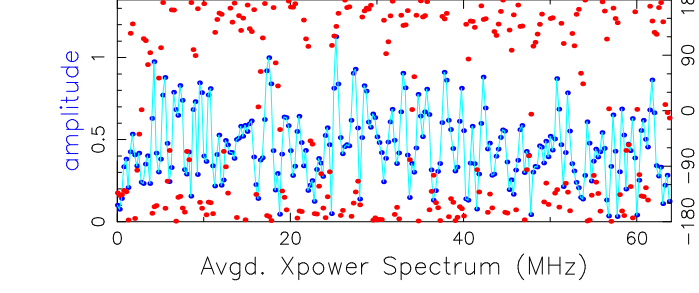
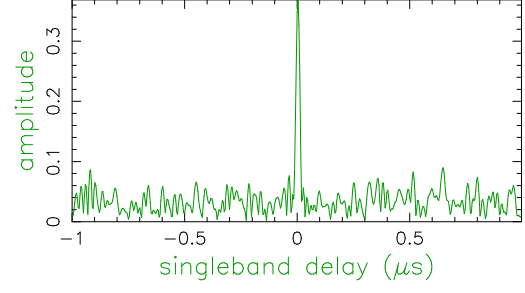
multiband delay (μ s)



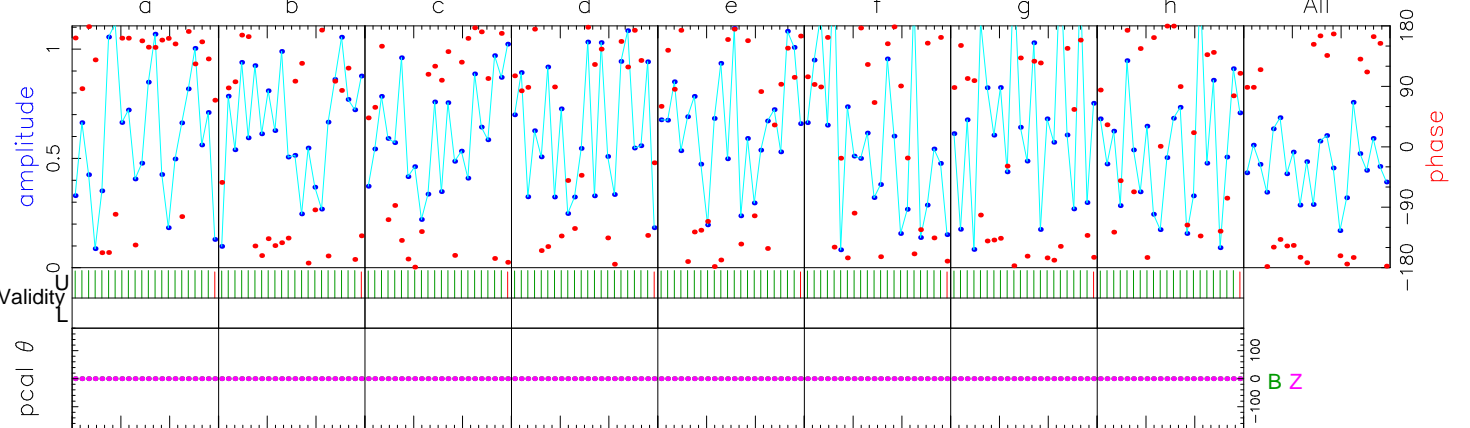
Fringe quality 9

SNR 13.5
 Int time 179.557
 Amp 0.369
 Phase 168.3
 PFD 3.6e-33
 Delays (us)
 SBD 0.003207
 MBD 0.004194
 Fringe rate (Hz) 0.001180
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153034
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 |
|-------------------------|--------------------|----------|--------------------------|--------------------|----------|----------------------|-------------|----------|------------|-------|
| Group delay (usec)(sbd) | 166.7 | 173.0 | 168.3 | 166.9 | 157.1 | 164.5 | -176.7 | 160.3 | Phase | 168.3 |
| Sband delay (usec) | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | Ampl. | 0.4 |
| Phase delay (usec) | 258.7 | 258.7 | 258.1 | 257.1 | 257.6 | 257.5 | 258.1 | 469.8 | Sbd box | 257.8 |
| Delay rate (us/s) | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | |
| Total phase (deg) | B 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | |
| | B:Z 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC freqs | |
| | B:Z 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | |
| | B 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | Mani PC | |
| | Z 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | |
| | B W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | |
| | Z W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | Tracks | |
| | | | | | | | | | Chan ids | |
| | | | | | | | | | Tracks | |
| Group delay (usec)(sbd) | 1.74792213661E+03 | | Apriori delay (usec) | 1.74791794216E+03 | | Resid mbdelay (usec) | 4.19446E-03 | +/- | 8.0E-05 | |
| Sband delay (usec) | 1.74792114891E+03 | | Apriori clock (usec) | 9.9668140E+00 | | Resid sbdelay (usec) | 3.20675E-03 | +/- | 6.4E-04 | |
| Phase delay (usec) | 1.74791794759E+03 | | Apriori clockrate (us/s) | -2.1600000E-07 | | Resid phdelay (usec) | 5.42638E-06 | +/- | 2.7E-07 | |
| Delay rate (us/s) | -1.41446874365E-01 | | Apriori rate (us/s) | -1.41446888066E-01 | | Resid rate (us/s) | 1.37007E-08 | +/- | 2.6E-09 | |
| Total phase (deg) | | 1.8 | Apriori accel (us/s/s) | -1.61890895986E-05 | | Resid phase (deg) | 168.3 | +/- | 8.5 | |

ph/seg (deg) 39.2 19.9 Search (1024X32) 0.354 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 47.3 34.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 8.7 12.0 Inc. seg. avg. 0.449 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 19.3 20.9 Inc. frq. avg. 0.363 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 288.7 el 38.4 pa 51.7 Z: az 294.2 el 32.6 pa 36.2 u,v (fr/asec) 1039.018 -1720.955 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ.W.121.1HXFS7

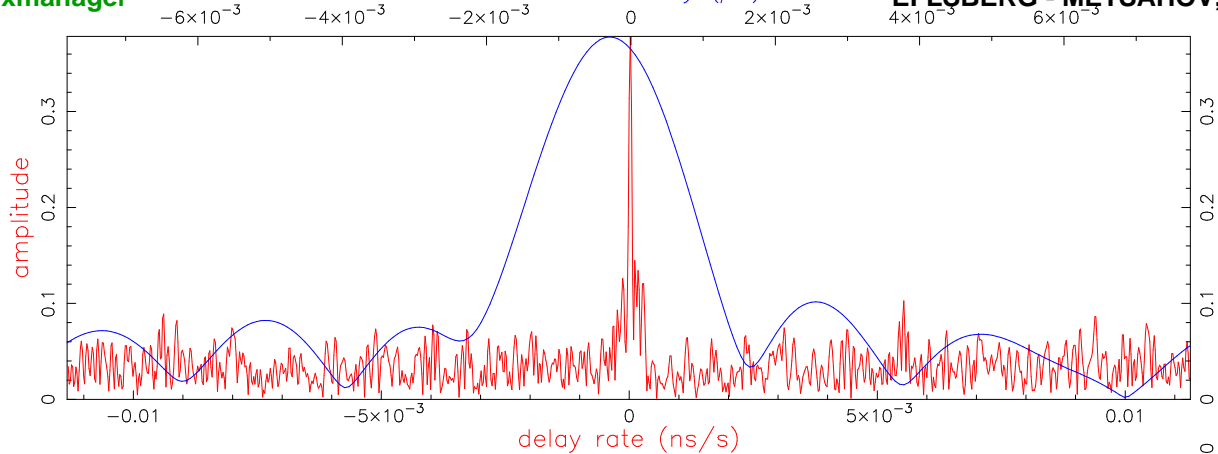
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1HXFS7, No0189, BZ

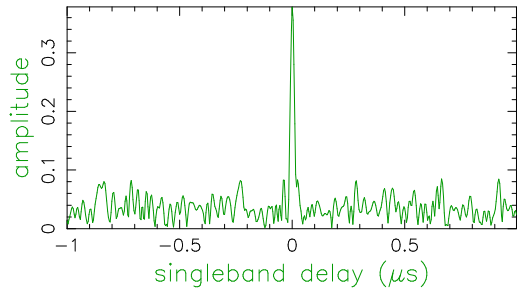
EFLSBERG - METSAHOV, fgroup W, pol RL

multiband delay (μ s)

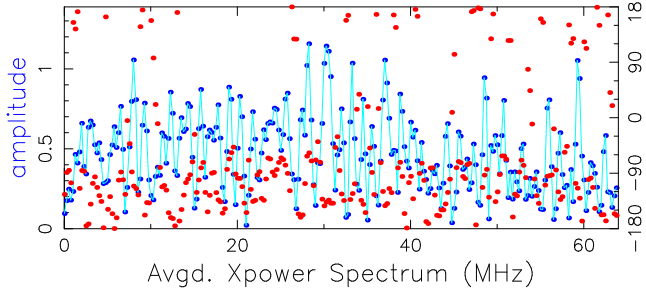


Fringe quality 9

SNR 13.9
 Int time 179.557
 Amp 0.378
 Phase -107.8
 PFD 3.0e-35
 Delays (us)
 SBD 0.000559
 MBD -0.000280
 Fringe rate (Hz) 0.001714
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

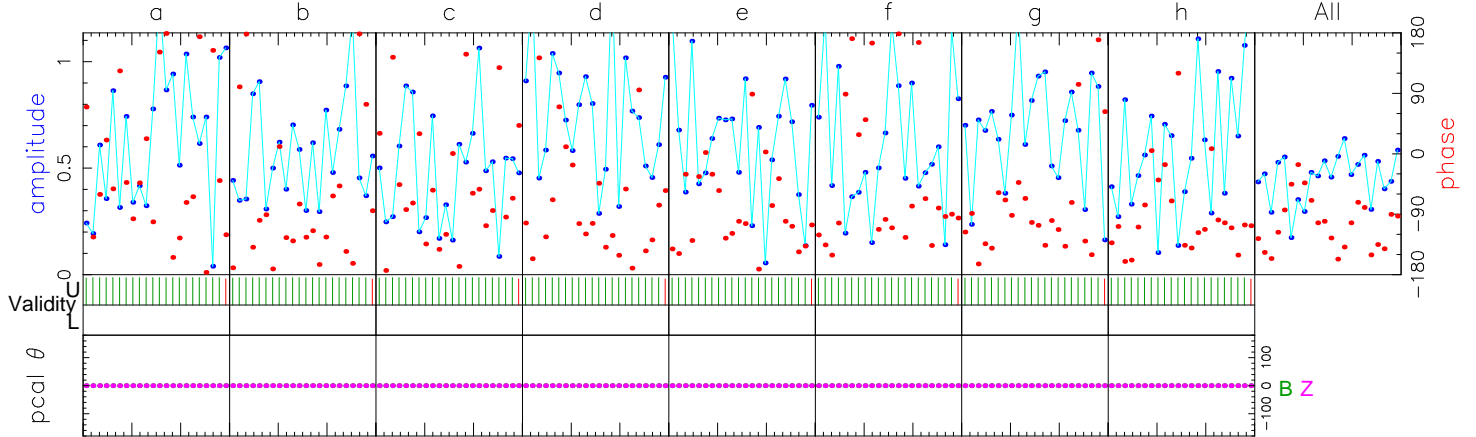


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 200000.00
 Stop 200300.23
 FRT 200130.00
 Corr/FF/build
 2021:010:004733
 2021:010:153036
 2020:247:085004
 RA & Dec (J2000)
 16h42m58.809967s
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



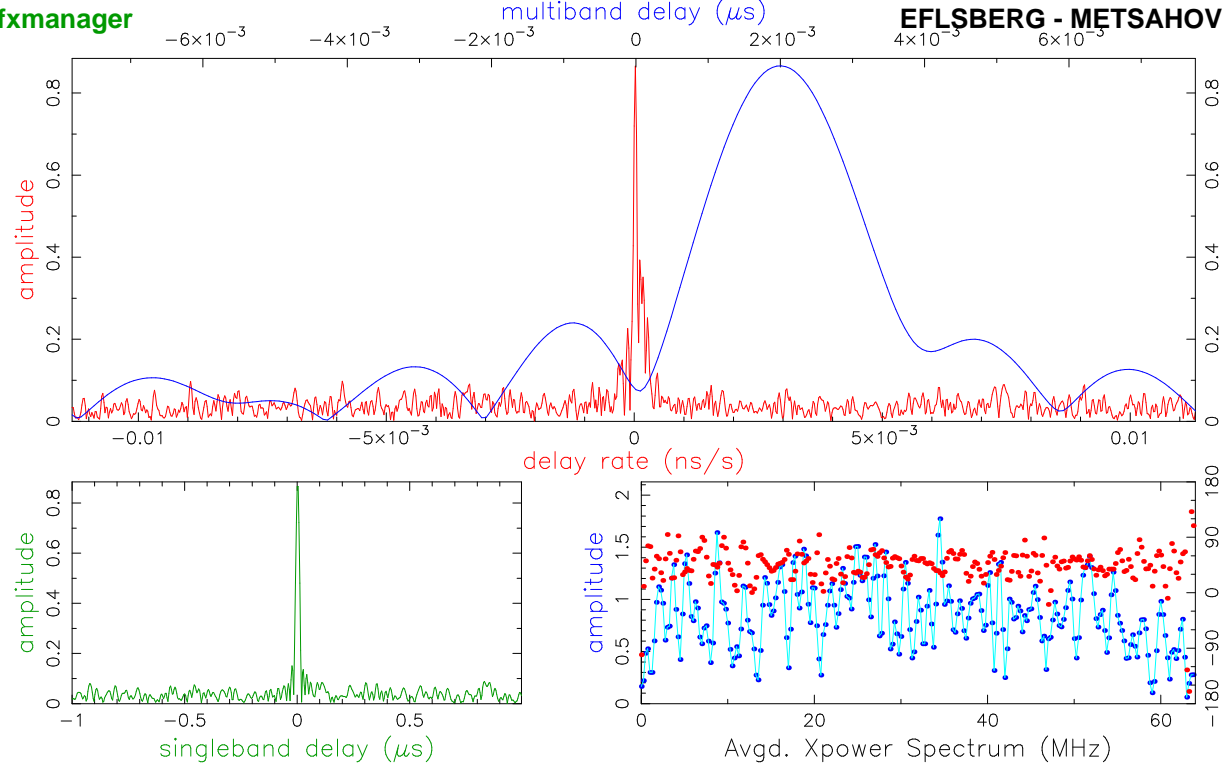
| | 86012.00 | 86076.00 | 86140.00 | 86204.00 | 86268.00 | 86332.00 | 86396.00 | 86460.00 | Freq (MHz) | All |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| B | W00UR | W01UR | W02UR | W03UR | W04UR | W05UR | W06UR | W07UR | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | | |

| | | | | | | | |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------|-----|---------|
| Group delay (usec)(sbd) | 1.74791766202E+03 | Apriori delay (usec) | 1.74791794216E+03 | Resid mbdelay (usec) | -2.80138E-04 | +/- | 7.8E-05 |
| Sband delay (usec) | 1.74791850066E+03 | Apriori clock (usec) | 9.9668140E+00 | Resid sbdelay (usec) | 5.58500E-04 | +/- | 6.2E-04 |
| Phase delay (usec) | 1.74791793868E+03 | Apriori clockrate (us/s) | -2.1600000E-07 | Resid phdelay (usec) | -3.47528E-06 | +/- | 2.7E-07 |
| Delay rate (us/s) | -1.41446868162E-01 | Apriori rate (us/s) | -1.41446888066E-01 | Resid rate (us/s) | 1.99034E-08 | +/- | 2.6E-09 |
| Total phase (deg) | | Apriori accel (us/s/s) | -1.61890895986E-05 | Resid phase (deg) | -107.8 | +/- | 8.3 |

| | | | | | | | | | | | | |
|--------------|------|--------|------|------------------|-----------------|------------------------|-----------------------------|----------------------|----------------|-------------------|------------------|-----------|
| ph/seg (deg) | 38.7 | Theor. | 19.4 | Amplitude | 0.378 +/- 0.027 | Pcal mode: | MANUAL, MANUAL | PC period (AP's) | 5, 5 | | | |
| amp/seg (%) | 35.8 | | 33.8 | Search (1024X32) | 0.371 | Pcal rate: | 0.000E+00, 0.000E+00 (us/s) | sb window (us) | -1.000 1.000 | | | |
| ph/frq (deg) | 15.3 | | 11.7 | Interp. | 0.000 | Bits/sample: | 2x2 | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | | |
| amp/frq (%) | 19.2 | | 20.4 | Inc. seg. avg. | 0.432 | Sample rate (MSamp/s): | 128 | dr window (ns/s) | -0.011 0.011 | | | |
| | | | | Inc. frq. avg. | 0.378 | Data rate (Mb/s): | 2048 | nlags: | 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |

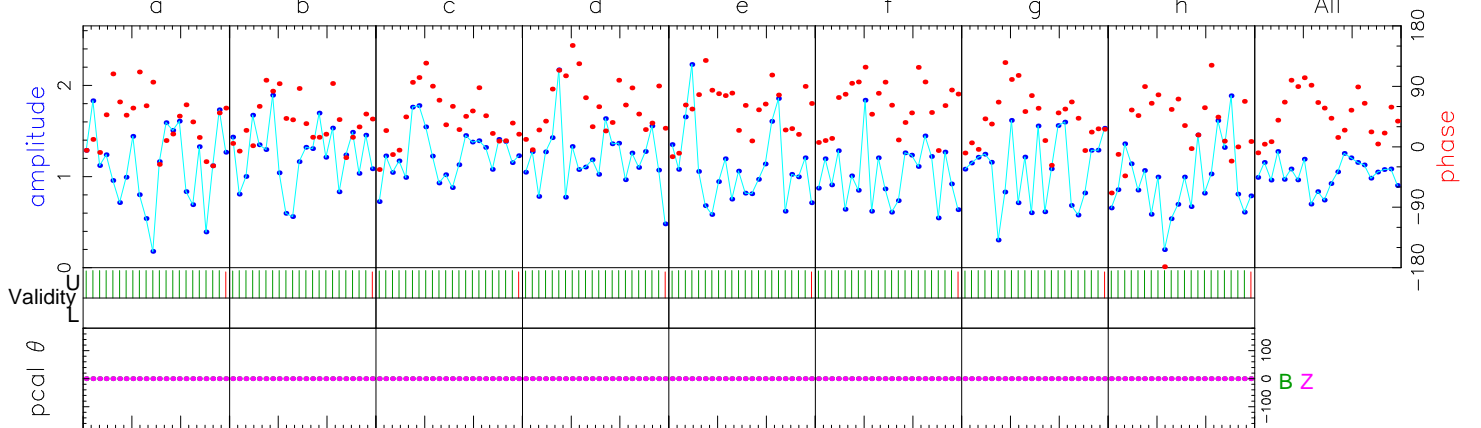
B: az 288.7 el 38.4 pa 51.7 Z: az 294.2 el 32.6 pa 36.2 u,v (fr/asec) 1039.018 -1720.955 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ..1HXFS7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ.W.134.1HXFS7



Fringe quality 7
SNR 32.4
Int time 179.557
Amp 0.884
Phase 46.9
PFD 0.0e+00
Delays (us)
SBD 0.001971
MBD 0.001957
Fringe rate (Hz) 0.001419
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 200000.00
Stop 200300.23
FRT 200130.00
Corr/FF/build
2021:010:004733
2021:010:153031
2020:247:085004
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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 | | |
|-----------------------------|--------------------|--|--------------------------|---|--------------------|--------------------|--|---------------------------|-----------------------|-------------------|------------------|-----------|
| | 31.7 | 39.0 | 47.0 | 61.9 | 57.9 | 66.6 | 39.5 | 29.5 | Phase | 46.9 | | |
| | 0.9 | 1.0 | 1.0 | 0.9 | 0.9 | 0.8 | 0.9 | 0.7 | Ampl. | 0.9 | | |
| | 257.2 | 257.5 | 257.8 | 257.7 | 257.3 | 257.3 | 257.3 | 256.2 | Sbd box | 257.5 | | |
| U/L | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | 352/0 | APs used | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC freqs | | | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | PC phase | | | |
| B:Z | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | 0:0 | Mani PC | | | |
| B | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | PC amp | | | |
| Z | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | |
| B | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Chan ids | | | |
| Z | W00UL | W01UL | W02UL | W03UL | W04UL | W05UL | W06UL | W07UL | Tracks | | | |
| | | | | | | | | | Chan ids | | | |
| | | | | | | | | | Tracks | | | |
| Group delay (usec)(sbd) | 1.74791989946E+03 | | Apriori delay (usec) | | 1.74791794216E+03 | | Resid mbdelay (usec) | | 1.95730E-03 | +/- 3.3E-05 | | |
| Sband delay (usec) | 1.74791991341E+03 | | Apriori clock (usec) | | 9.9668140E+00 | | Resid sbdelay (usec) | | 1.97125E-03 | +/- 2.7E-04 | | |
| Phase delay (usec) | 1.74791794367E+03 | | Apriori clockrate (us/s) | | -2.1600000E-07 | | Resid phdelay (usec) | | 1.51308E-06 | +/- 1.1E-07 | | |
| Delay rate (us/s) | -1.41446871589E-01 | | Apriori rate (us/s) | | -1.41446888066E-01 | | Resid rate (us/s) | | 1.64768E-08 | +/- 1.1E-09 | | |
| Total phase (deg) | | | Apriori accel (us/s/s) | | -1.61890895986E-05 | | Resid phase (deg) | | 46.9 | +/- 3.5 | | |
| RMS | 33.2 | 8.3 | Amplitude | | 0.884 +/- 0.027 | | Pcal mode: MANUAL, MANUAL | | PC period (AP's) 5, 5 | | | |
| ph/seg (deg) | 33.2 | 8.3 | Search (1024X32) | | 0.854 | | Pcal rate: 0.000E+00, 0.000E+00 (us/s) | | sb window (us) | -1.000 1.000 | | |
| amp/seg (%) | 23.7 | 14.5 | Interp. | | 0.000 | | Bits/sample: 2x2 | | SampCntNorm: enabled | mb window (us) | -0.008 0.008 | |
| ph/frq (deg) | 15.2 | 5.0 | Inc. seg. avg. | | 1.020 | | Sample rate(MISamp/s): 128 | | | dr window (ns/s) | -0.011 0.011 | |
| amp/frq (%) | 10.8 | 8.7 | Inc. frq. avg. | | 0.885 | | Data rate(Mb/s): 2048 | | nlags: 256 | t_cohere infinite | ion window (TEC) | 0.00 0.00 |
| B: az 288.7 el 38.4 pa 51.7 | | Z: az 294.2 el 32.6 pa 36.2 | | u,v (fr/asec) | | 1039.018 -1720.955 | | simultaneous interpolator | | | | |
| Control file: cf_1234_gmva | | Input file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ..1HXFS7 | | Output file: /Exps/c202a/v1/v1_3mm/1234/No0189/BZ.W.86.1HXFS7 | | | | | | | | |