

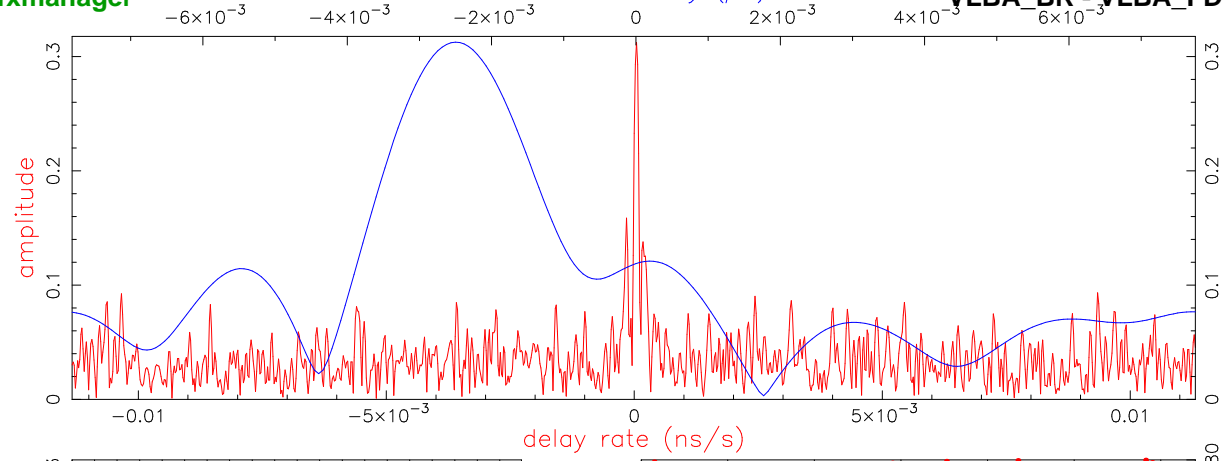
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

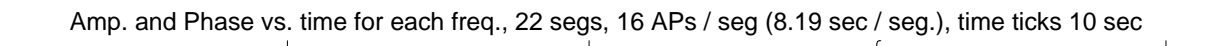
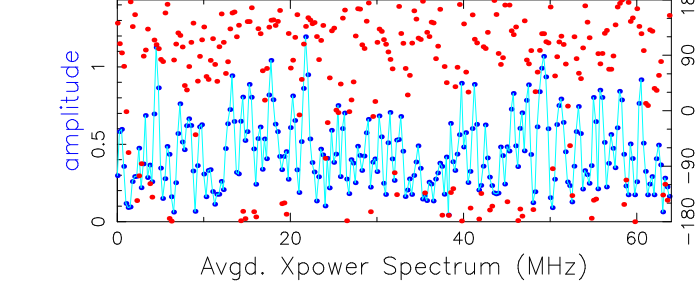
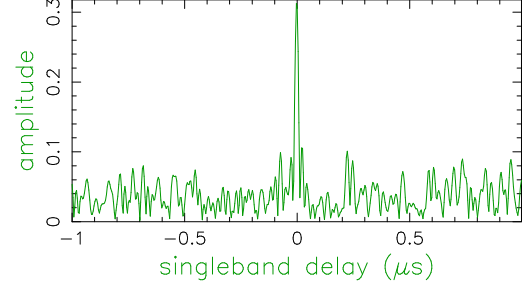
BLLAC.1ILB8W, No0028, bf

VLBA_BR - VLBA_FD, fgroup W, pol LL

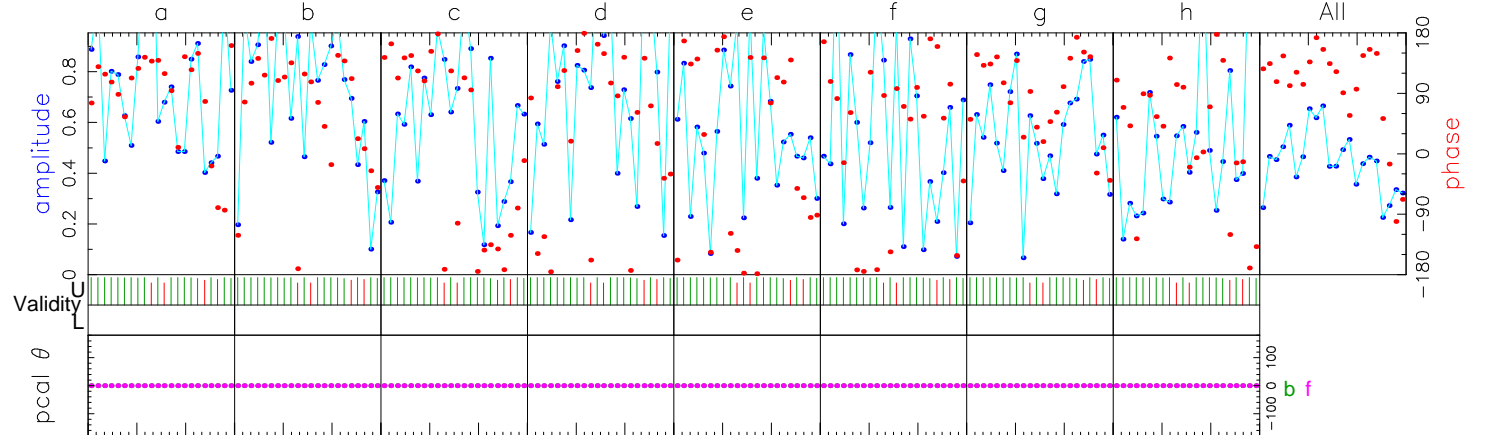
multiband delay (μ s)



Fringe quality 9
 SNR 11.5
 Int time 174.782
 Amp 0.318
 Phase 126.1
 PFD 3.7e-22
 Delays (us)
 SBD -0.002290
 MBD -0.002446
 Fringe rate (Hz) 0.003818
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122815
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-3.18395175963E+02									
Sband delay (usec)	-3.18395019531E+02									
Phase delay (usec)	-3.18392725713E+02									
Delay rate (us/s)	1.84046514269E-01									
Total phase (deg)			-141.5							
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)									126.1	+/- 10.0
Pcal mode:	MANUAL	MANUAL								
Pcal rate:	0.000E+00	0.000E+00								
Bits/sample:	2x2									
Sample rate (MSamp/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 103.0 el 73.9 pa -61.3 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) -1409.729 2944.867 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf.W.1.1ILB8W

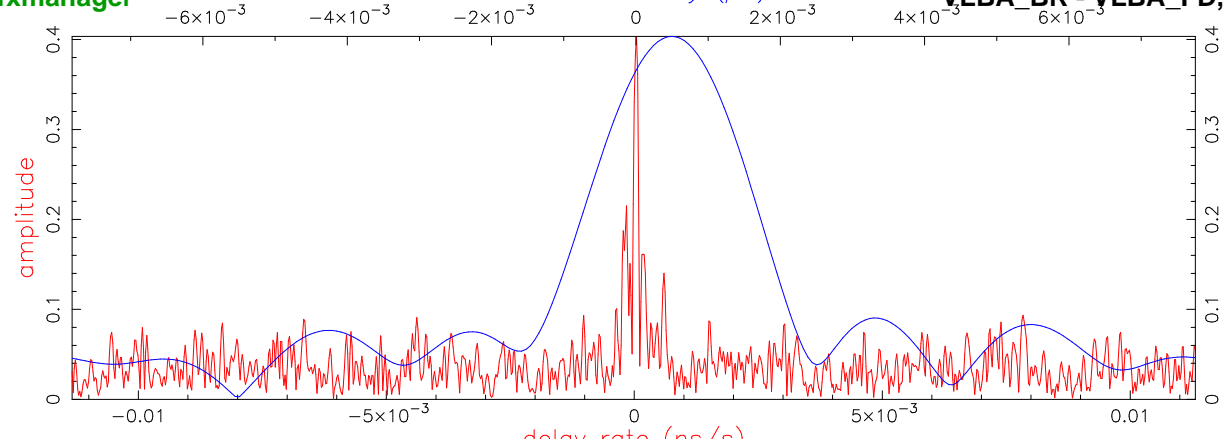
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, bf

VLBA_BR - VLBA_FD, fgroup W, pol RR

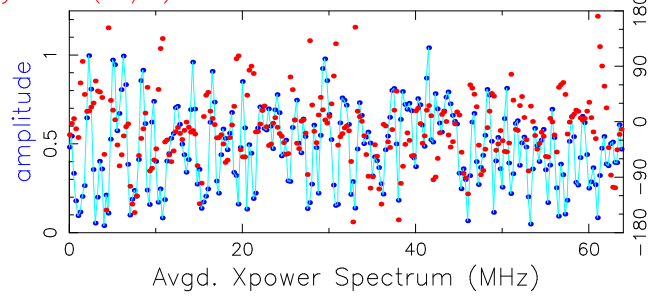
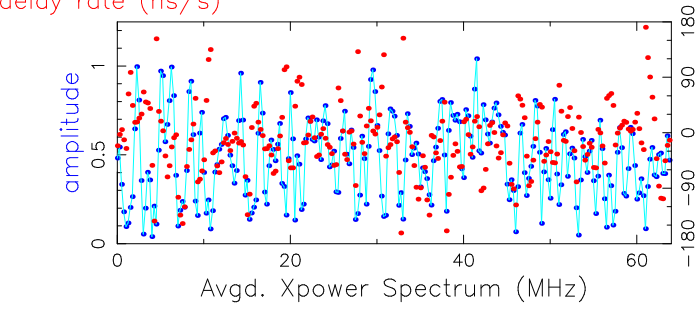
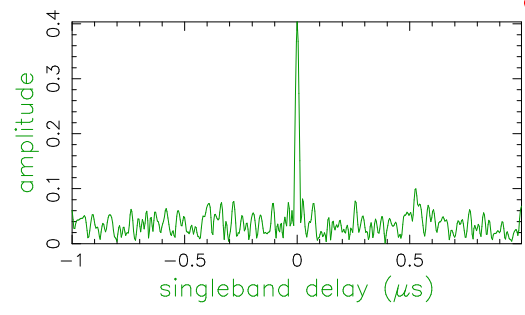
multiband delay (μ s)



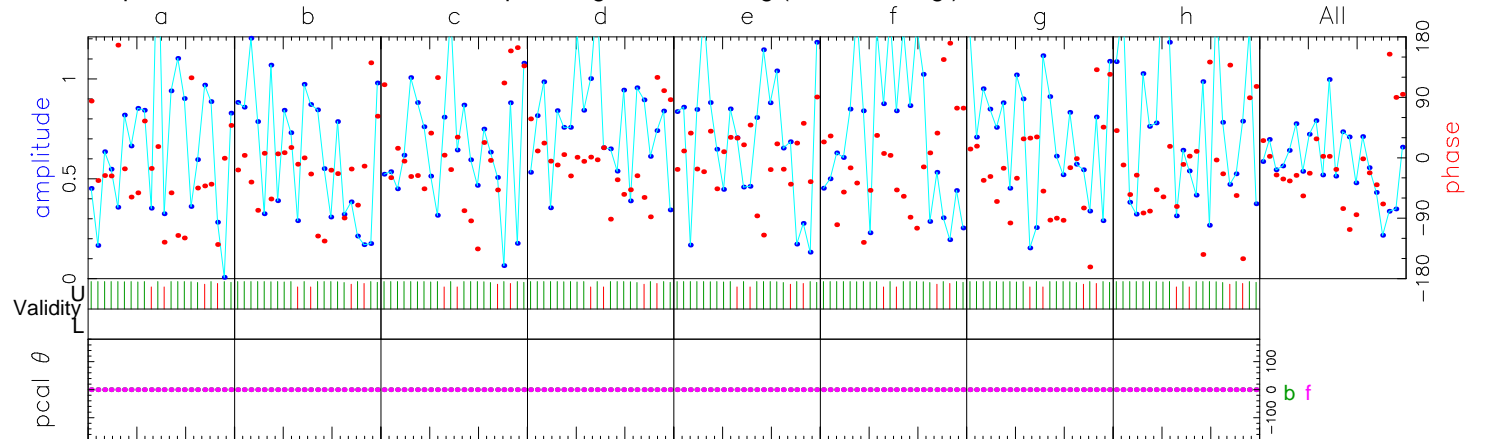
Fringe quality 9

SNR 14.6
 Int time 174.782
 Amp 0.404
 Phase -19.0
 PFD 1.0e-39
 Delays (us)
 SBD 0.000011
 MBD 0.000498
 Fringe rate (Hz) 0.004359
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122816
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	-24.3	-13.3	-7.2	-2.2	-28.8	-26.1	-24.4	Phase	-19.0
	0.4	0.4	0.3	0.5	0.5	0.4	0.4	0.4	Ampl.	0.4
	257.1	257.5	258.0	256.5	257.2	256.8	256.8	256.8	Sbd box	257.0
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	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	PC amp	
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)	-3.18392231994E+02		Apriori delay (usec)		-3.18392729781E+02		Resid mbdelay (usec)		4.97787E-04	+/- 7.4E-05
Sband delay (usec)	-3.18392719031E+02		Apriori clock (usec)		-9.5700359E+00		Resid sbdelay (usec)		1.07500E-05	+/- 5.9E-04
Phase delay (usec)	-3.18392730393E+02		Apriori clockrate (us/s)		-3.9999997E-07		Resid phdelay (usec)		-6.12380E-07	+/- 2.5E-07
Delay rate (us/s)	1.84046520546E-01		Apriori rate (us/s)		1.84046469948E-01		Resid rate (us/s)		5.05981E-08	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		1.95144038976E-05		Resid phase (deg)		-19.0	+/- 7.9

ph/seg (deg) 60.5 18.3 Amplitude 0.404 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 64.2 31.9 Search (1024X32) 0.401 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 11.7 11.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 18.4 19.4 Inc. seg. avg. 0.568 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 103.0 el 73.9 pa -61.3 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) -1409.729 2944.867 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf.W.14.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

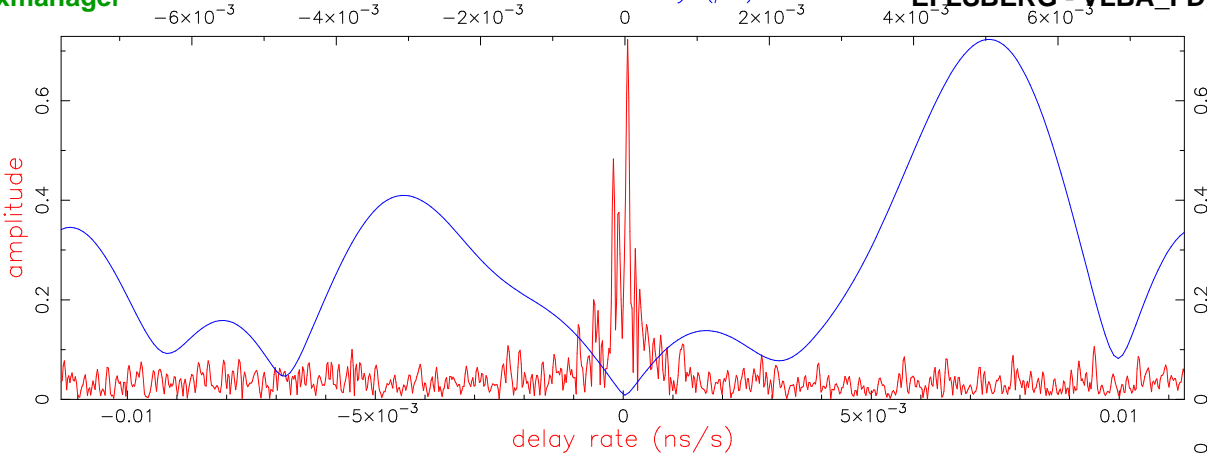
fxmanager

BLLAC.1ILB8W, No0028, Bf

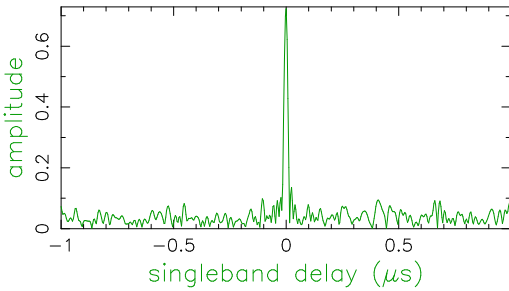
EFLSBERG - VLBA_FD, fgroup W, pol RR

multiband delay (μ s)

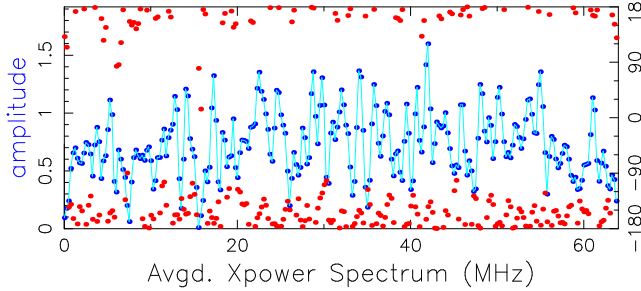
Fringe quality 6



SNR 26.4
 Int time 174.581
 Amp 0.729
 Phase 121.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.001212
 MBD 0.005008
 Fringe rate (Hz)
 0.008508
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

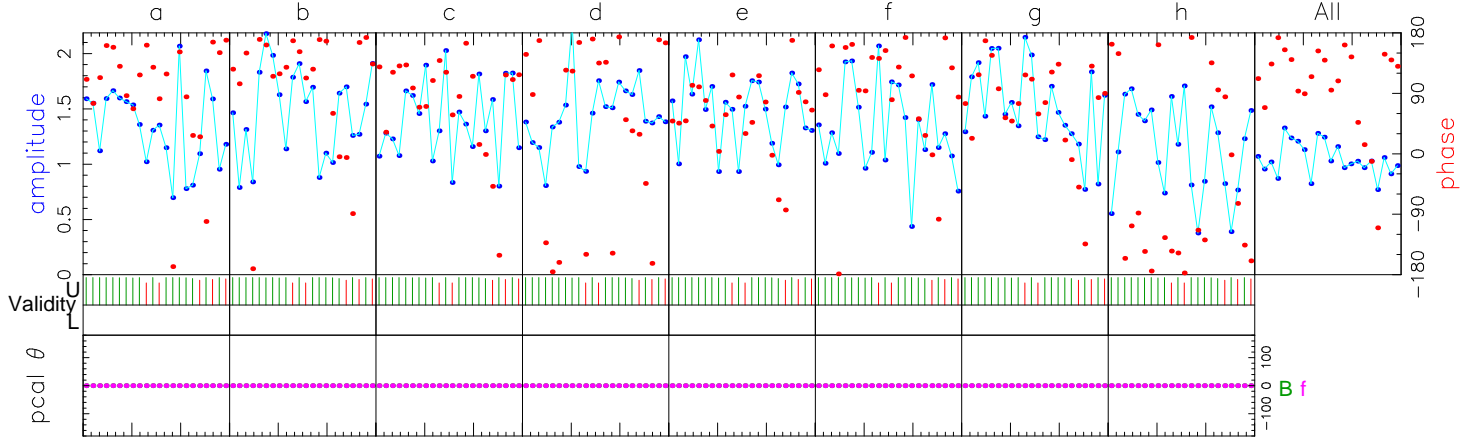


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122817
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	125.7	141.4	99.7	151.7	69.0	128.4	92.7	-159.5	Phase	121.6
B	0.9	1.0	0.9	0.8	1.0	0.8	1.0	0.8	Ampl.	0.9
f	256.4	256.8	257.0	256.5	257.3	257.4	257.2	258.0	Sbd box	256.7
B	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	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	PC amp	
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)	-1.24111931494E+04		Apriori delay (usec)		-1.24111981574E+04		Resid mbdelay (usec)		5.00798E-03	+/- 4.1E-05
Sband delay (usec)	-1.24111993697E+04		Apriori clock (usec)		2.2489460E+00		Resid sbdelay (usec)		-1.21225E-03	+/- 3.3E-04
Phase delay (usec)	-1.24111981535E+04		Apriori clockrate (us/s)		-5.9999998E-07		Resid phdelay (usec)		3.92072E-06	+/- 1.4E-07
Delay rate (us/s)	-7.94045947645E-01		Apriori rate (us/s)		-7.94046046414E-01		Resid rate (us/s)		9.87687E-08	+/- 1.4E-09
Total phase (deg)			Apriori accel (us/s/s)		8.59561932484E-05		Resid phase (deg)		121.6	+/- 4.3

ph/seg (deg) 54.4 10.1 Search (1024X32) 0.689 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 47.9 17.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.1 6.1 Inc. seg. avg. 1.031 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 25.7 10.7 Inc. frq. avg. 0.888 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 309.0 el 23.4 pa 41.9 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) 6225.538 7842.257 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf.W.26.1ILB8W

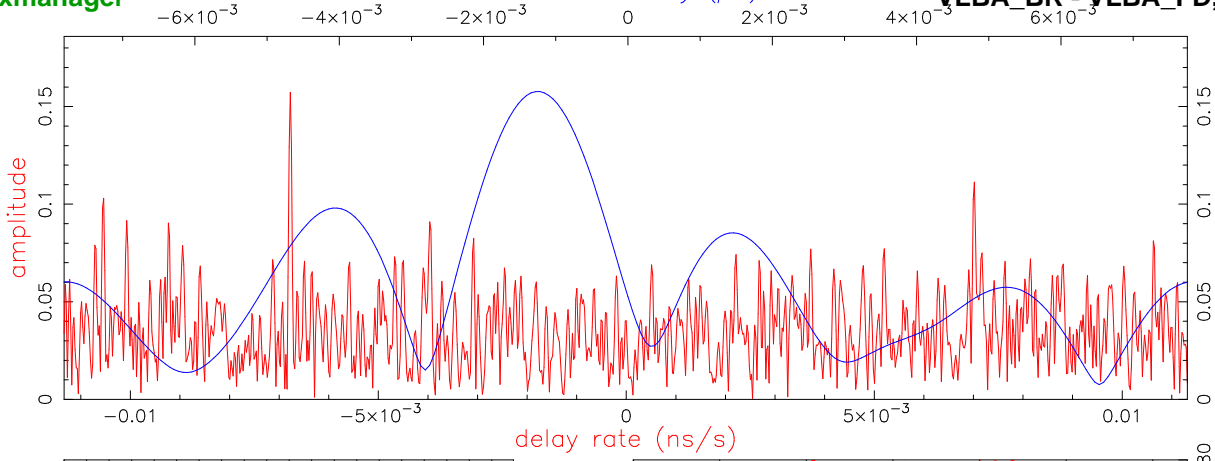
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, bf

VLBA_BR - VLBA_FD, fgroup W, pol LR

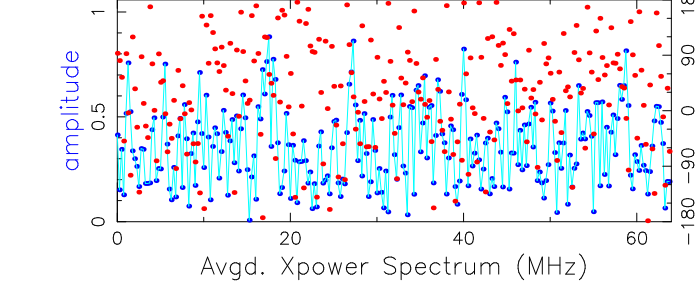
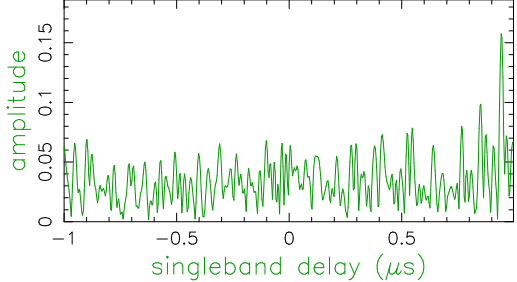
multiband delay (μ s)



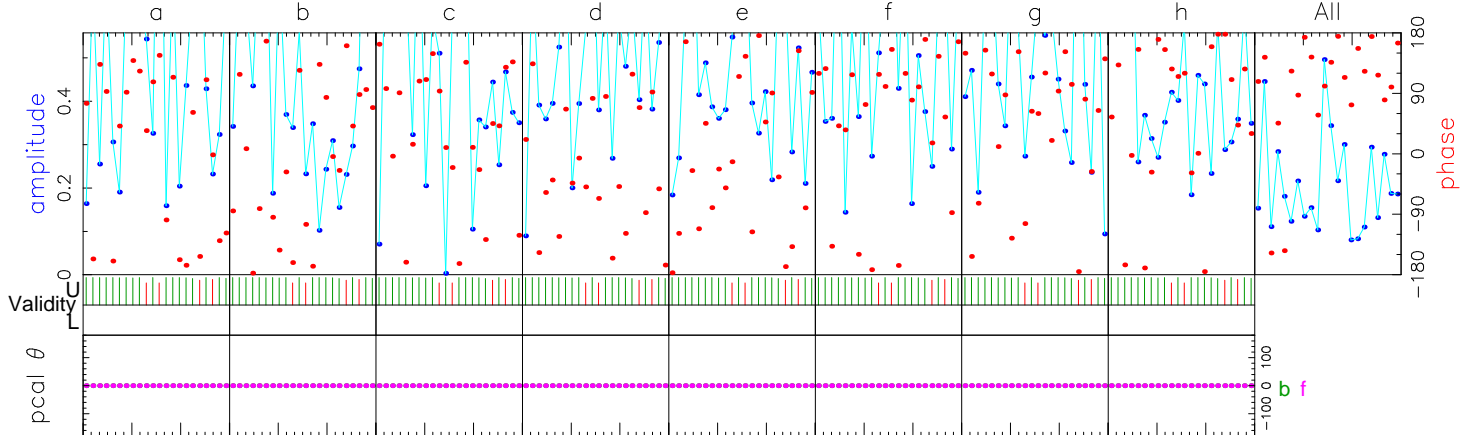
Fringe quality 0

SNR 5.8
 Int time 174.782
 Amp 0.186
 Phase 125.2
 PFD 6.2e-01
 Delays (us)
 SBD 0.942909
 MBD -0.001181
 Fringe rate (Hz)
 -0.585456
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122818
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
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	Manl 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	
Group delay (usec)(sbd)	-3.17456410774E+02									
Sband delay (usec)	-3.17449821281E+02									
Phase delay (usec)	-3.18392725744E+02									
Delay rate (us/s)	1.84039673388E-01									
Total phase (deg)			-142.4							
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)										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										

b: az 103.0 el 73.9 pa -61.3 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) -1409.729 2944.867 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf.W.31.1ILB8W

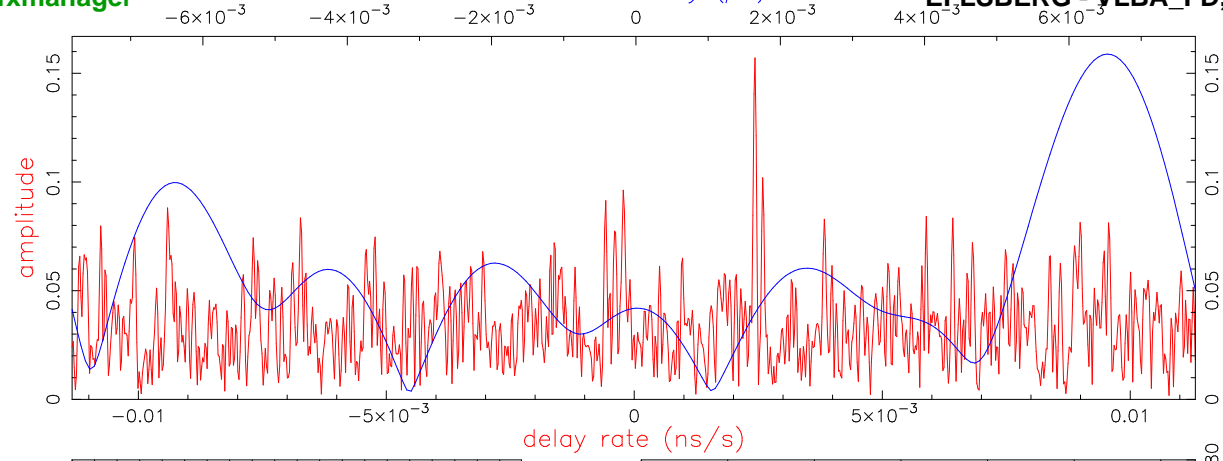
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

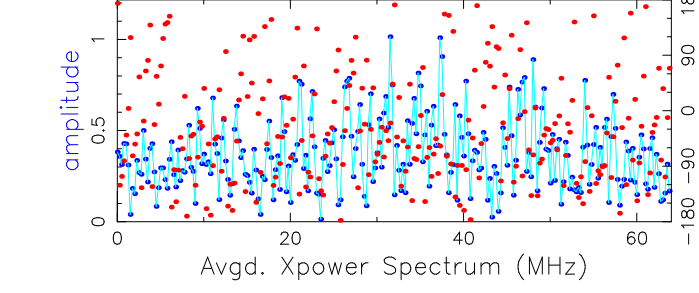
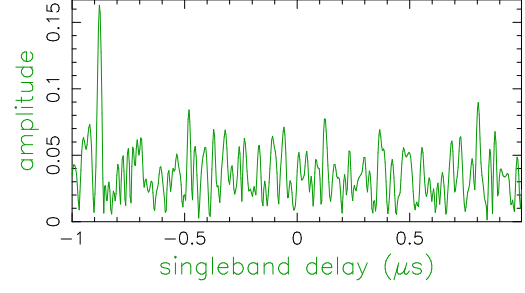
BLLAC.1ILB8W, No0028, Bf

EFLSBERG - VLBA_FD, fgroup W, pol LR

multiband delay (μ s)

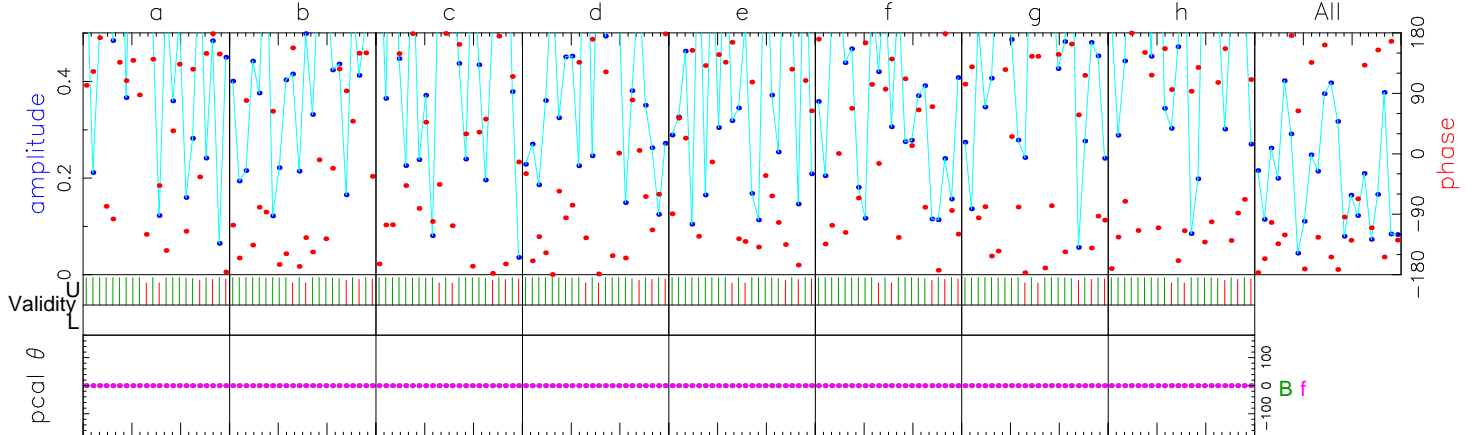


Fringe quality 0
 SNR 5.9
 Int time 174.581
 Amp 0.167
 Phase -159.8
 PFD 3.4e-01
 Delays (us)
 SBD -0.877844
 MBD 0.006388
 Fringe rate (Hz) 0.210575
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122819
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.24120823940E+04									
Sband delay (usec)	-1.24120760017E+04									
Phase delay (usec)	-1.24111981626E+04									
Delay rate (us/s)	-7.94043601843E-01									
Total phase (deg)			-260.1							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
ion window (TEC)										
sb window (us)										
mb window (us)										
dr window (ns/s)										

ph/seg (deg) 51.5 45.1 Search (1024X32) 0.158 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 72.4 78.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.5 27.4 Inc. seg. avg. 0.160 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 52.5 47.8 Inc. frq. avg. 0.156 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 309.0 el 23.4 pa 41.9 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) 6225.538 7842.257 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf.W.41.1ILB8W

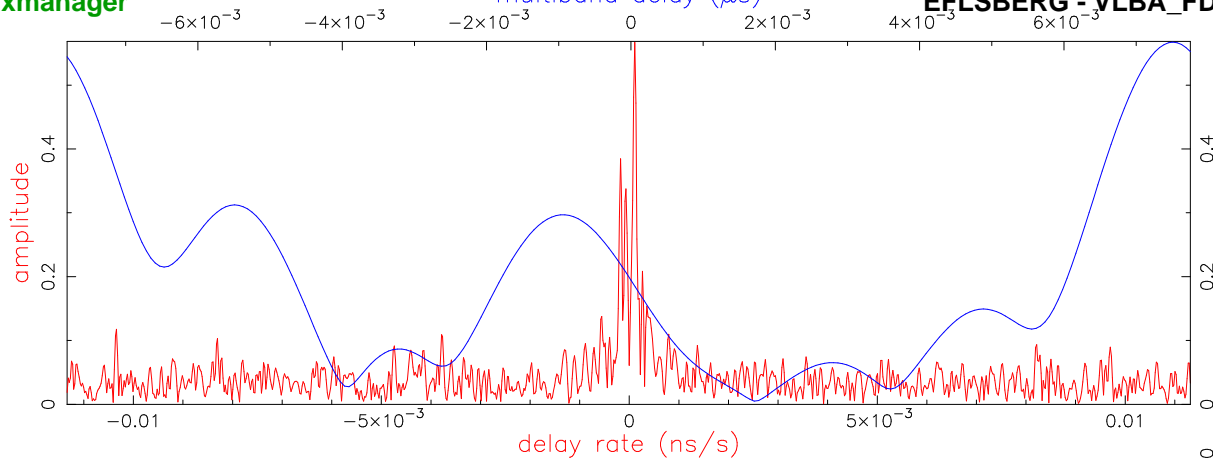
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, Bf

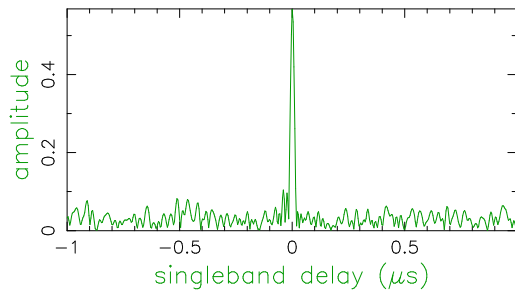
EFLSBERG - VLBA_FD, fgroup W, pol LL

multiband delay (μ s)

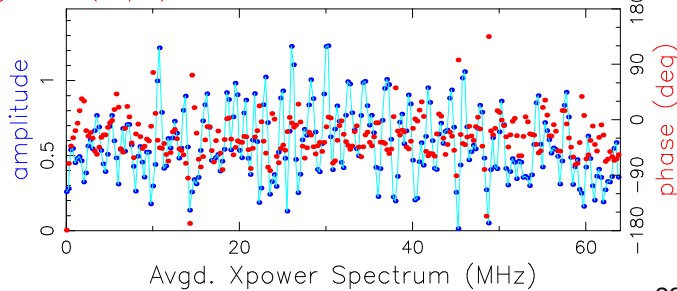


Fringe quality 7

SNR 20.5
 Int time 174.581
 Amp 0.568
 Phase -109.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.000658
 MBD 0.007529
 Fringe rate (Hz)
 0.008597
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

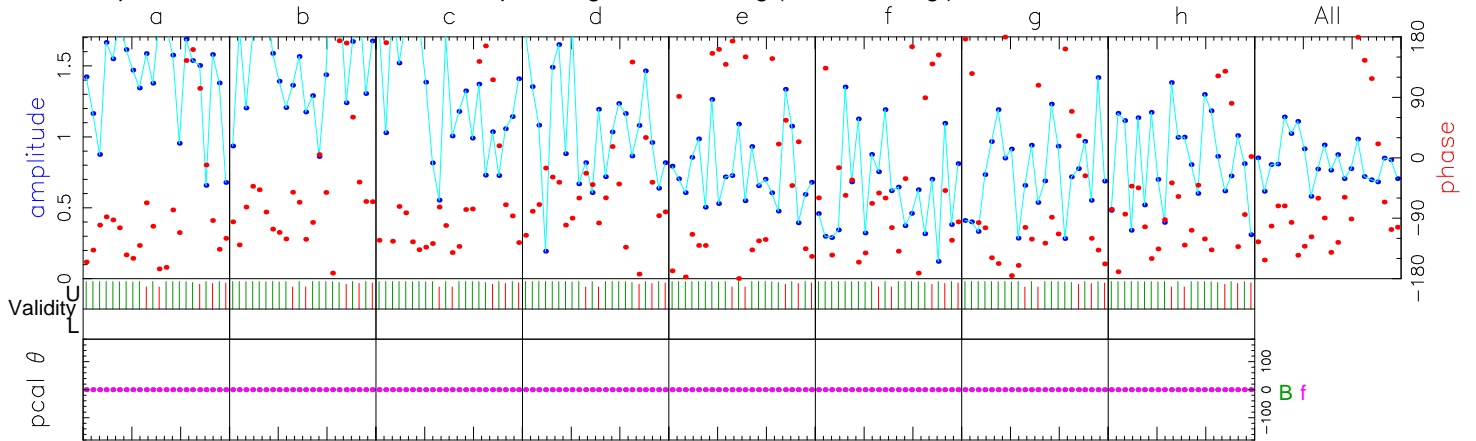


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122815
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-128.8	-87.1	-117.6	-66.0	-168.1	-90.6	-136.8	-106.4	Phase	-109.6
	1.0	0.9	0.9	0.7	0.4	0.3	0.4	0.5	Ampl.	0.6
	257.8	257.5	257.5	257.3	258.1	256.9	256.7	257.2	Sbd box	257.2
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.24111906285E+04				-1.24111981574E+04				Resid mbdelay (usec)	7.52890E-03 +/- 5.3E-05
Sband delay (usec)	-1.24111974992E+04				2.2489460E+00				Resid sbdelay (usec)	6.58250E-04 +/- 4.2E-04
Phase delay (usec)	-1.24111981609E+04				-5.9999998E-07				Resid phdelay (usec)	-3.53452E-06 +/- 1.8E-07
Delay rate (us/s)	-7.94045946606E-01				-7.94046046414E-01				Resid rate (us/s)	9.98074E-08 +/- 1.8E-09
Total phase (deg)		-209.9			8.59561932484E-05				Resid phase (deg)	-109.6 +/- 5.6
	RMS	Theor.	Amplitude	0.568 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			sb window (us)	-1.000 1.000
ph/seg (deg)	54.6	13.0	Search (1024X32)	0.538	Pcal rate: 0.000E+00, 0.000E+00 (us/s)				mb window (us)	-0.008 0.008
amp/seg (%)	52.4	22.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled			dr window (ns/s)	-0.011 0.011
ph/frq (deg)	35.1	7.9	Inc. seg. avg.	0.807	Sample rate(MISamp/s): 128				ion window (TEC)	0.00 0.00
amp/frq (%)	46.2	13.8	Inc. frq. avg.	0.631	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite			

B: az 309.0 el 23.4 pa 41.9 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) 6225.538 7842.257 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf.W.4.1ILB8W

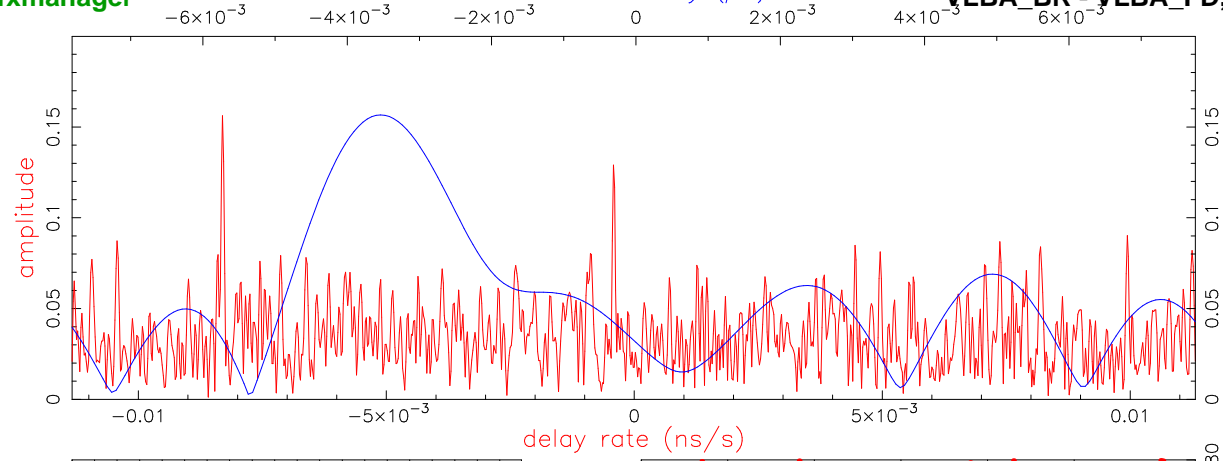
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, bf

VLBA_BR - VLBA_FD, fgroup W, pol RL

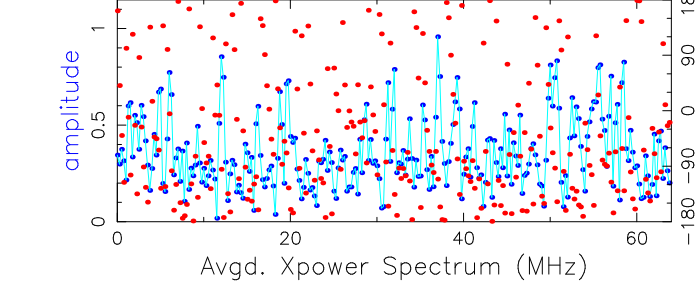
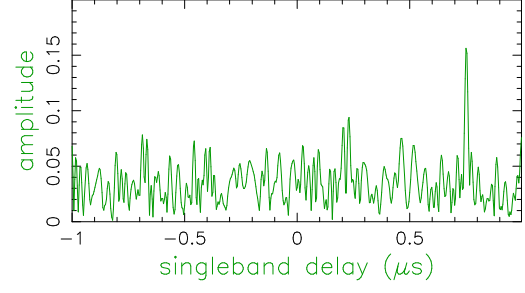
multiband delay (μ s)



Fringe quality 0

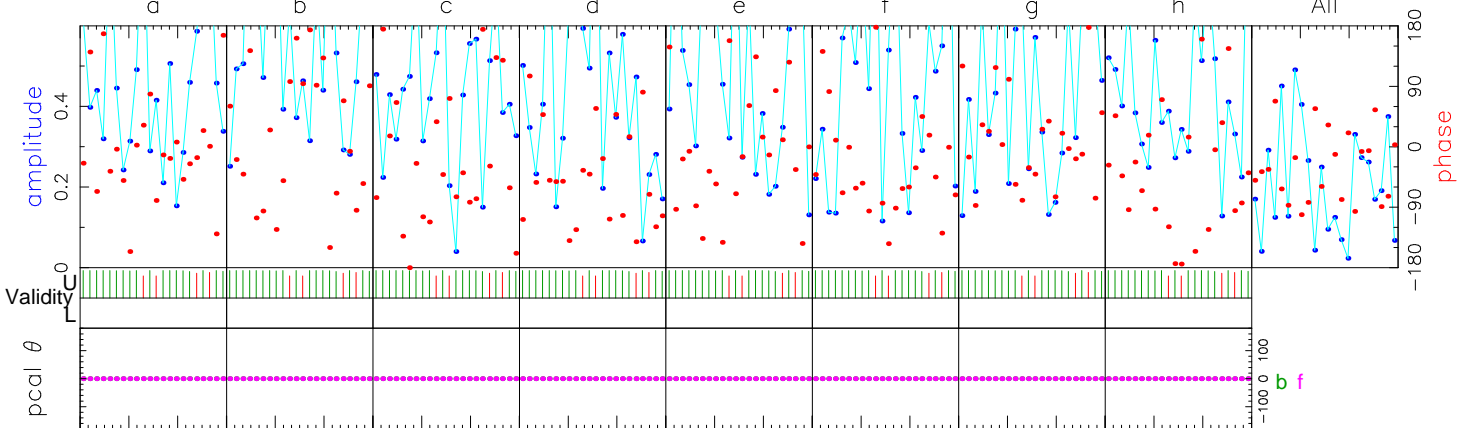
SNR 5.7
 Int time 174.782
 Amp 0.200
 Phase -49.2
 PFD 7.2e-01
 Delays (us)
 SBD 0.751429
 MBD -0.003449
 Fringe rate (Hz)
 -0.716945
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122820
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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
	-16.2	-128.8	-67.4	-66.9	-61.8	-57.0	-10.2	-74.4	Phase	-49.2
	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.2	Ampl.	0.2
	416.1	147.9	452.0	86.0	360.9	1.5	391.5	391.2	Sbd box	449.4
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	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	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.17646178981E+02		Apriori delay (usec)		-3.18392729781E+02		Resid mbdelay (usec)		-3.44920E-03	+/- 1.9E-04
Sband delay (usec)	-3.17641300281E+02		Apriori clock (usec)		-9.5700359E+00		Resid sbdelay (usec)		7.51429E-01	+/- 1.5E-03
Phase delay (usec)	-3.18392731368E+02		Apriori clockrate (us/s)		-3.9999997E-07		Resid phdelay (usec)		-1.58717E-06	+/- 6.5E-07
Delay rate (us/s)	1.84038146929E-01		Apriori rate (us/s)		1.84046469948E-01		Resid rate (us/s)		-8.32302E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		1.95144038976E-05		Resid phase (deg)		-49.2	+/- 20.0

	RMS	Theor.	Amplitude	0.200 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	54.5	46.6	Search (1024X32)	0.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	92.4	81.3	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	41.7	28.3	Inc. seg. avg.	0.202	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	41.0	49.4	Inc. frq. avg.	0.199	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 103.0 el 73.9 pa -61.3 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) -1409.729 2944.867 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/bf.W.50.1ILB8W

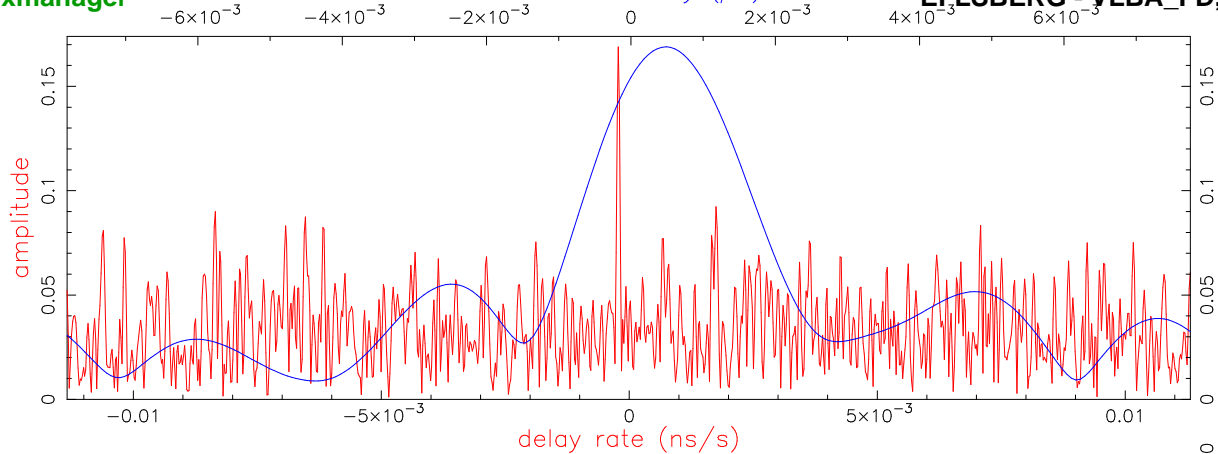
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, Bf

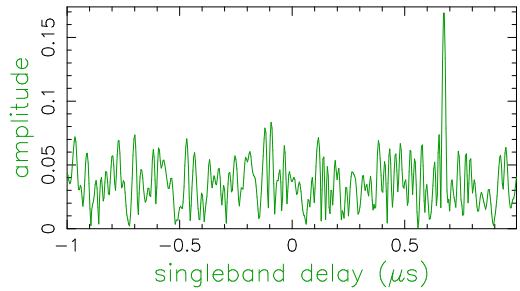
EFLSBERG - VLBA_FD, fgroup W, pol RL

multiband delay (μ s)

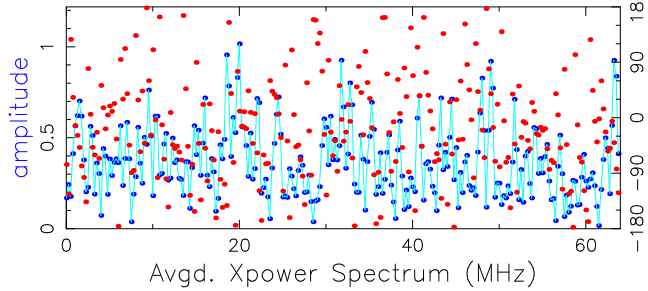


Fringe quality 0

SNR 6.3
Int time 174.581
Amp 0.174
Phase 172.9
PFD 4.4e-02
Delays (us)
SBD 0.673826
MBD 0.000504
Fringe rate (Hz)
-0.019048
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

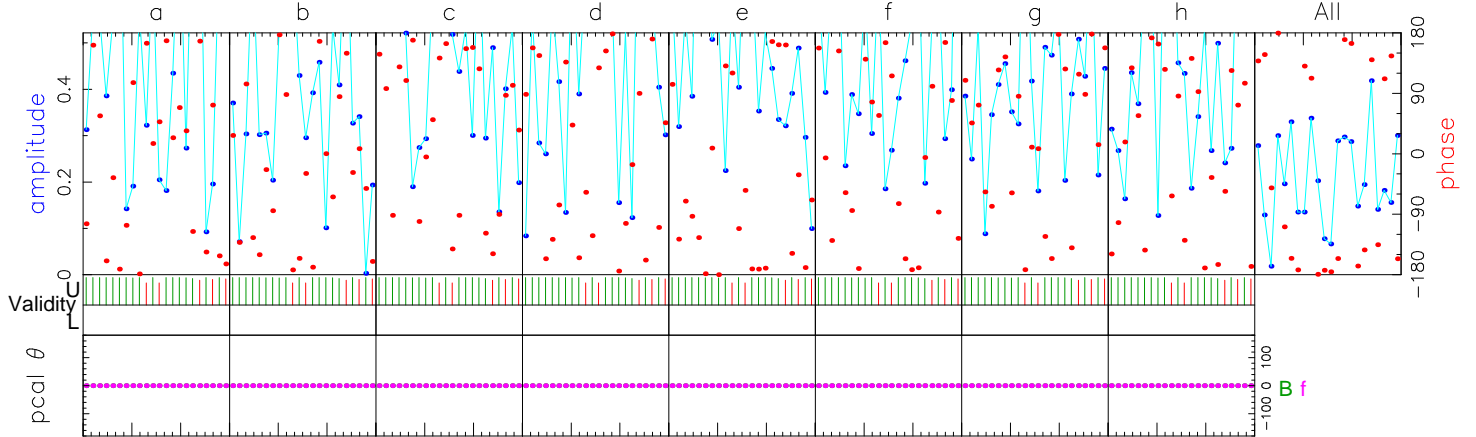


delay rate (ns/s)



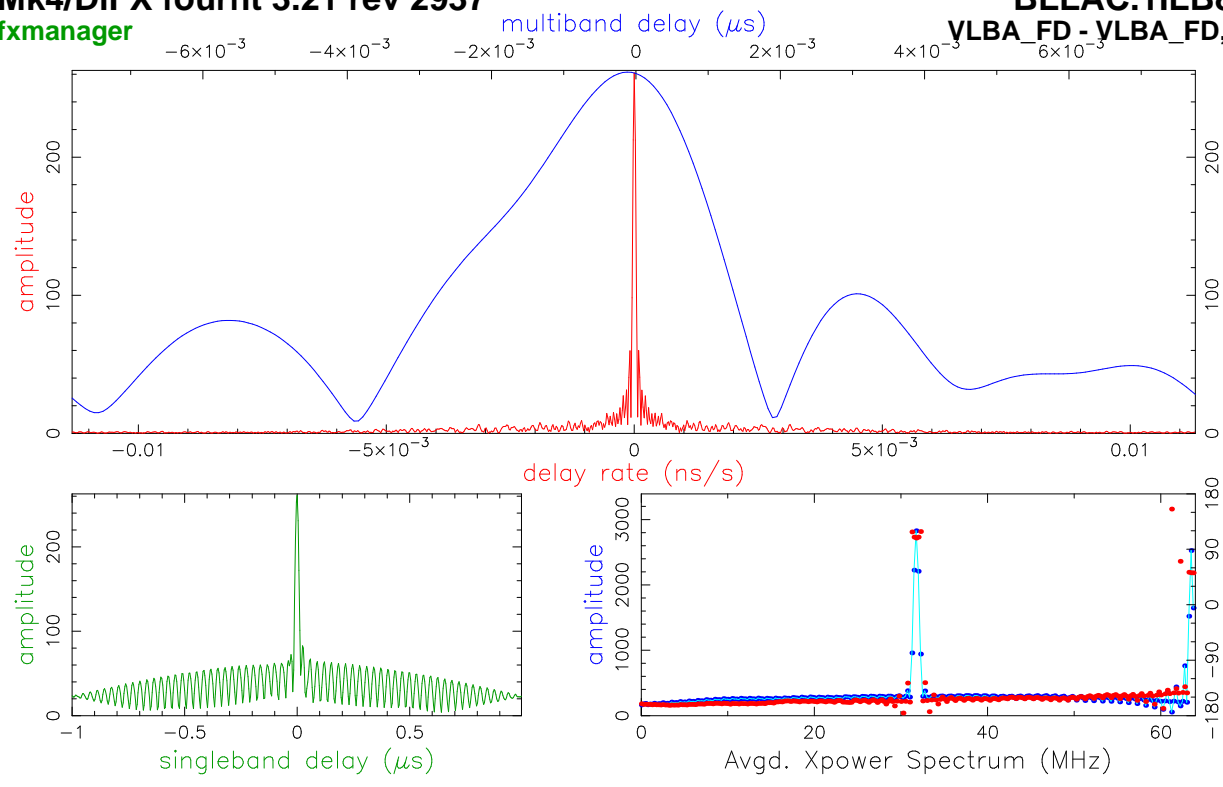
Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122822
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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



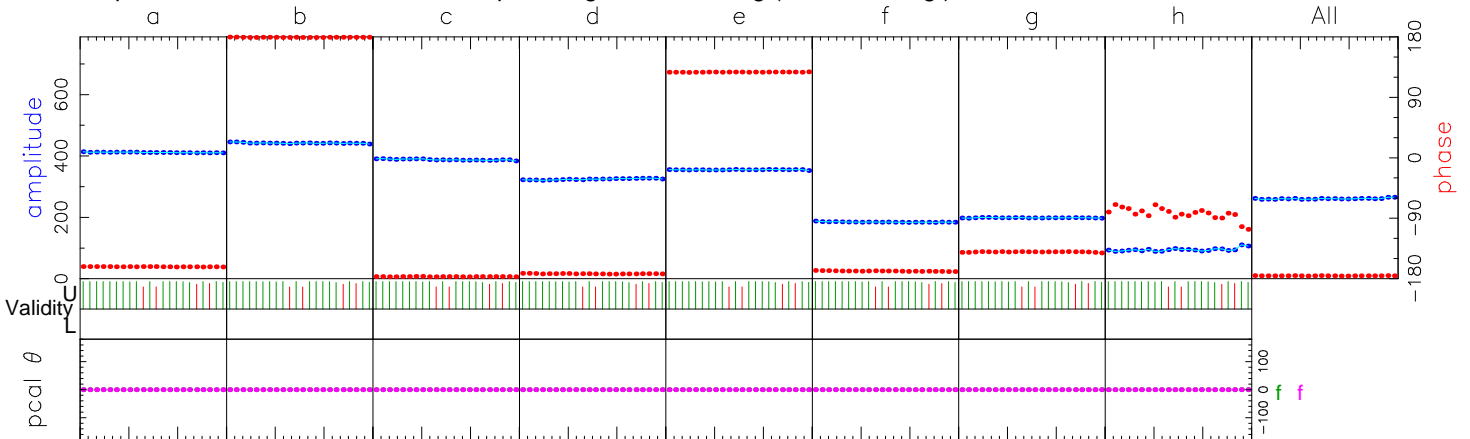
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	173.2	-177.6	145.1	179.3	-154.9	-170.6	151.1	157.2	Phase	172.9		
B	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	Ampl.	0.2		
f	390.7	240.2	428.6	316.3	83.3	233.1	431.1	49.8	Sbd box	429.5		
B	1000	1000	1000	1000	1000	1000	1000	1000	APs used			
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
Group delay (usec)(sbd)	-1.24105257783E+04		Apriori delay (usec)		-1.24111981574E+04		Resid mbdelay (usec)		5.04129E-04	+/- 1.7E-04		
Sband delay (usec)	-1.24105243312E+04		Apriori clock (usec)		2.2489460E+00		Resid sbdelay (usec)		6.73826E-01	+/- 1.4E-03		
Phase delay (usec)	-1.24111981518E+04		Apriori clockrate (us/s)		-5.9999998E-07		Resid phdelay (usec)		5.57688E-06	+/- 5.9E-07		
Delay rate (us/s)	-7.94046267543E-01		Apriori rate (us/s)		-7.94046046414E-01		Resid rate (us/s)		-2.21129E-07	+/- 5.7E-09		
Total phase (deg)			Apriori accel (us/s/s)		8.59561932484E-05		Resid phase (deg)		172.9	+/- 18.2		
RMS	46.3	42.5	Amplitude		0.174 +/- 0.028		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	61.0	74.1	Search (1024X32)		0.168		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	22.1	25.8	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	26.9	45.0	Inc. seg. avg.		0.165		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
			Inc. frq. avg.		0.164		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 309.0 el 23.4 pa 41.9 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) 6225.538 7842.257 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/Bf.W.63.1ILB8W



Fringe quality 5
SNR 9501.7
Int time 174.782
Amp 262.817
Phase -175.6
PFD 0.0e+00
Delays (us)
SBD -0.001192
MBD -0.000204
Fringe rate (Hz)
-0.000002
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122830
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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
	-162.1	179.2	-176.8	-172.5	127.4	-168.6	-140.1	-83.5	Phase	-175.6
	411.6	442.2	388.1	324.4	355.1	184.8	198.7	93.6	Ampl.	299.8
	256.9	256.7	257.0	256.8	257.2	257.1	256.9	259.2	Sbd box	256.7
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	-2.03718750000E-04		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-2.03719E-04	+/- 1.1E-07
Sband delay (usec)	-1.19250000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-1.19250E-03	+/- 9.1E-07
Phase delay (usec)	-5.66279269036E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-5.66279E-06	+/- 3.9E-10
Delay rate (us/s)	-1.84224981092E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-1.84225E-11	+/- 3.8E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-175.6	+/- 0.0

ph/seg (deg) 0.2 0.0 Amplitude 262.817 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 1.0 0.0 Search (1024X32) 260.612 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 47.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 46.8 0.0 Inc. seg. avg. 260.985 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
f: az 19.5 el 77.4 pa -156.4 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) 0.000 0.000 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/ff.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/ff.W.122.1ILB8W simultaneous interpolator

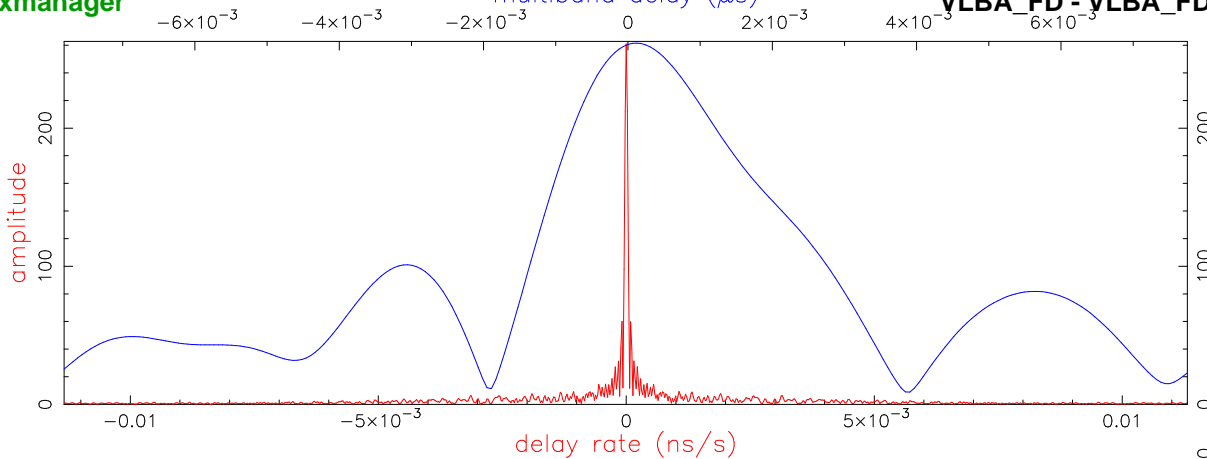
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, ff

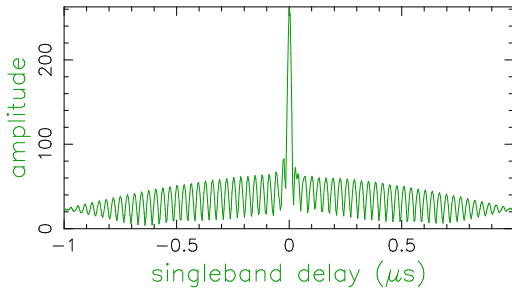
VLBA_FD - VLBA_FD, fgroup W, pol RL

multiband delay (μ s)

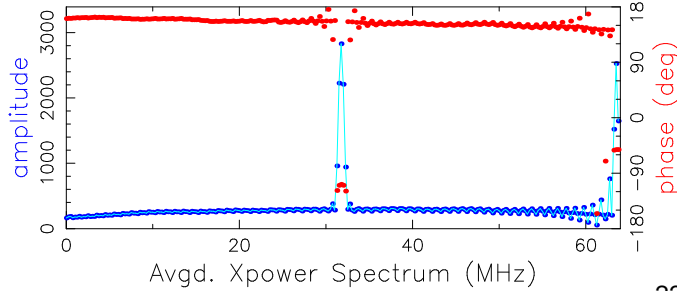


Fringe quality 5

SNR 9501.7
 Int time 174.782
 Amp 262.817
 Phase 175.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.001192
 MBD 0.000204
 Fringe rate (Hz)
 0.000002
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

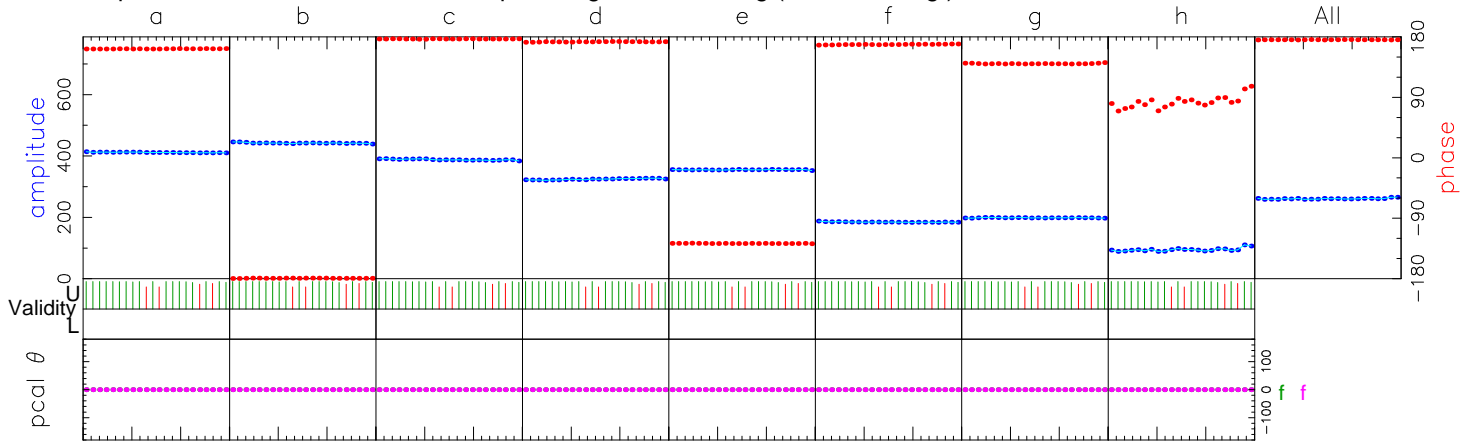


delay rate (ns/s)



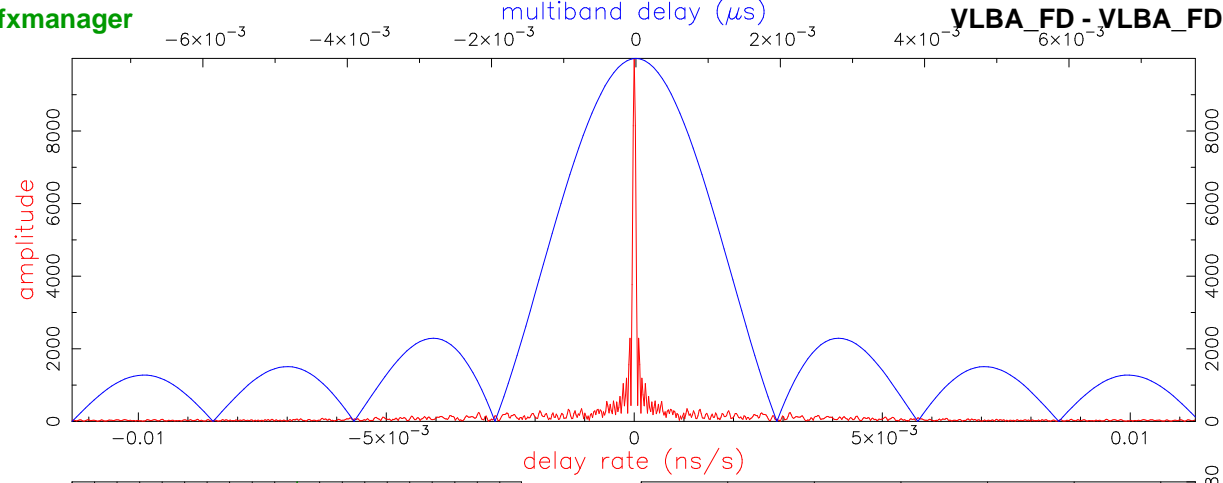
Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122832
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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

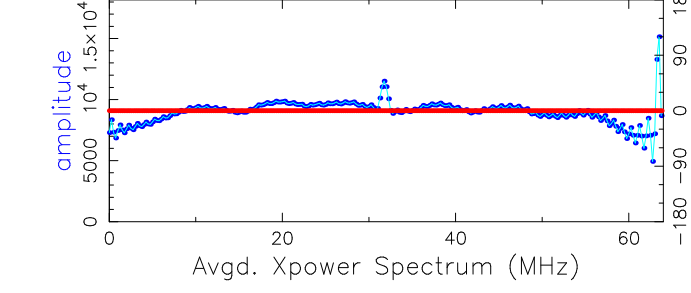
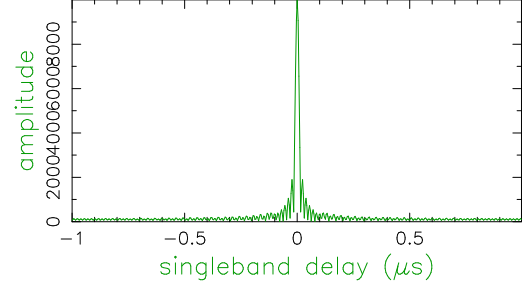


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	2.03718750000E-04		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		2.03719E-04	+/- 1.1E-07
Sband delay (usec)	1.19250000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		1.19250E-03	+/- 9.1E-07
Phase delay (usec)	5.66279268900E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		5.66279E-06	+/- 3.9E-10
Delay rate (us/s)	1.84224981092E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		1.84225E-11	+/- 3.8E-12
Total phase (deg)			175.6		Apriori accel (us/s/s)		0.00000000000E+00		175.6	+/- 0.0

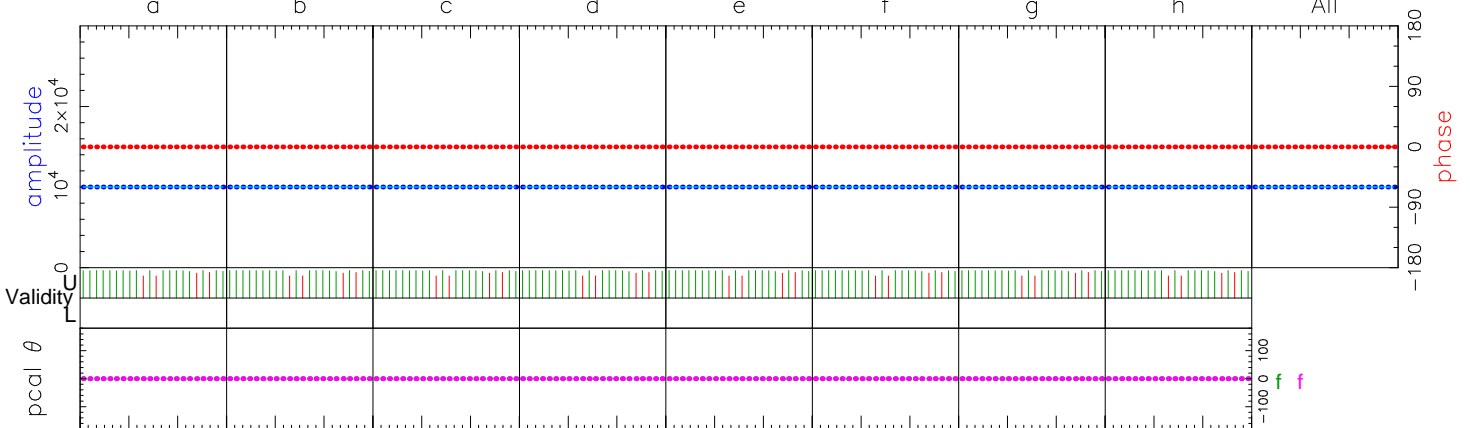
ph/seg (deg) 0.2 0.0 RMS Theor. Amplitude 262.817 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 1.0 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.0 0.0 Inc. seg. avg. 260.985 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.8 0.0 Inc. frq. avg. 299.827 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/ff.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/ff.W.146.1ILB8W



Fringe quality 9
SNR 361531.3
Int time 174.782
Amp 9999.997
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. c202b
Yr:day 16383
Start 2020:284
Stop 2020:284
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122825
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"



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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

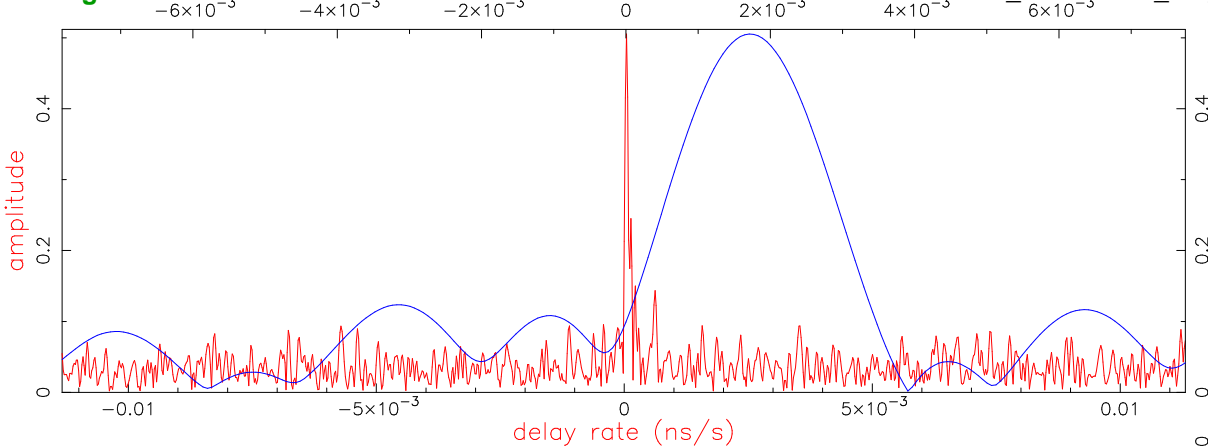
Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	3.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	2.4E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (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	+/-	1.0E-13
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	9999.997 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (1024X32)	9999.997	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	9999.997	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

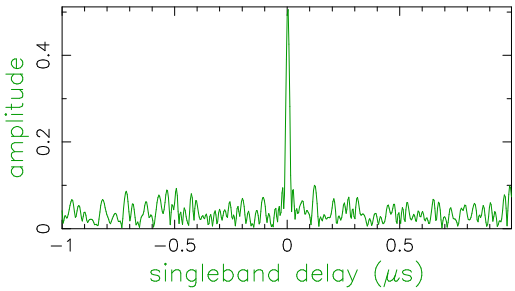
f: az 19.5 el 77.4 pa -156.4 f: az 19.5 el 77.4 pa -156.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/ff.1.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/ff.W.81.1ILB8W

multiband delay (μ s)

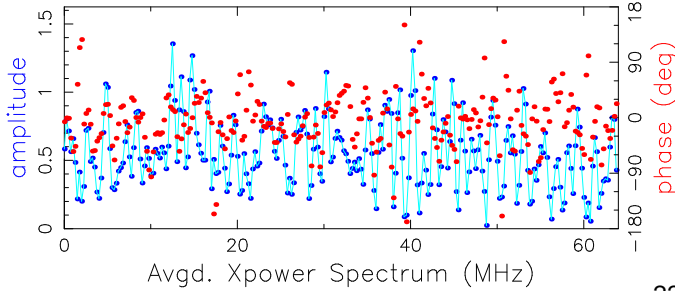
Fringe quality 9



SNR 18.4
Int time 173.620
Amp 0.512
Phase 3.6
PFD 0.0e+00
Delays (us)
SBD 0.002471
MBD 0.001702
Fringe rate (Hz) 0.004211
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

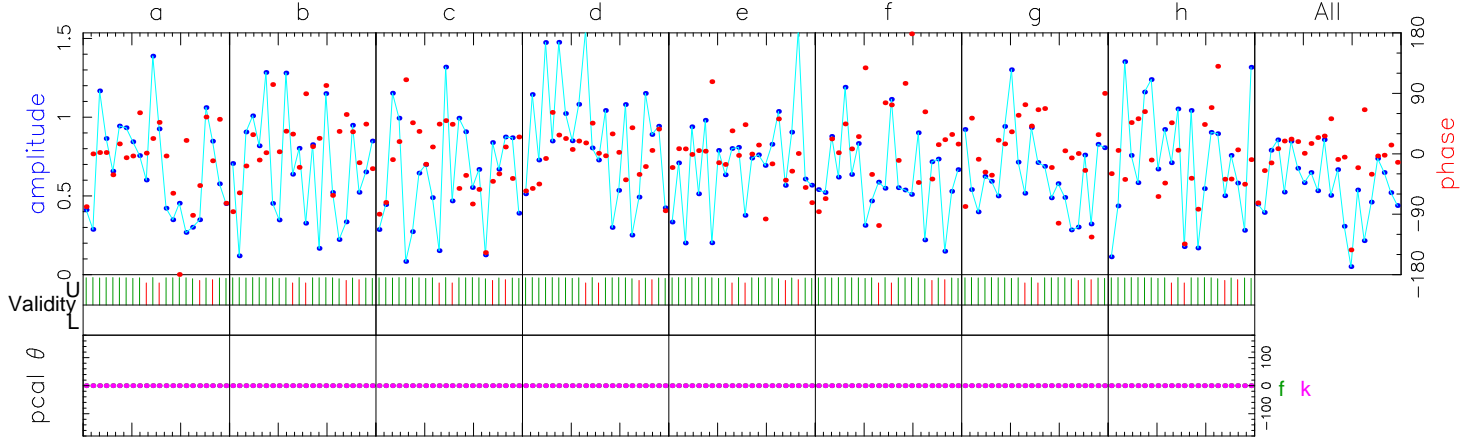


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122828
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		257.6
f	1000	1000	1000	1000	1000	1000	1000	1000		1000
k	1000	1000	1000	1000	1000	1000	1000	1000		1000
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		0:0
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		0:0
f	1000	1000	1000	1000	1000	1000	1000	1000		1000
k	1000	1000	1000	1000	1000	1000	1000	1000		1000
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec)(sbd)	1.94359201156E+02	Apriori delay (usec)		1.94357498900E+02	Resid mbdelay (usec)		1.70226E-03	+/-	5.9E-05	
Sband delay (usec)	1.94359969650E+02	Apriori clock (usec)		7.5250263E+00	Resid sbdelay (usec)		2.47075E-03	+/-	4.7E-04	
Phase delay (usec)	1.94357499017E+02	Apriori clockrate (us/s)		2.9999999E-07	Resid phdelay (usec)		1.16662E-07	+/-	2.0E-07	
Delay rate (us/s)	-1.27290307796E-01	Apriori rate (us/s)		-1.27290356685E-01	Resid rate (us/s)		4.88891E-08	+/-	2.0E-09	
Total phase (deg)	347.5		Apriori accel (us/s/s)		-2.49230493659E-06	Resid phase (deg)		3.6	+/-	6.2

ph/seg (deg)	42.3	14.5	Search (1024X32)	0.490	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5						
amp/seg (%)	41.0	25.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000					
ph/frq (deg)	10.9	8.8	Inc. seg. avg.	0.541	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008				
amp/frq (%)	20.6	15.3	Inc. frq. avg.	0.506	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011					
f: az 19.5 el 77.4 pa -156.4				k: az 41.6 el 75.2 pa -131.0				Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
u,v (fr/asec) 984.775 -313.234				simultaneous interpolator									

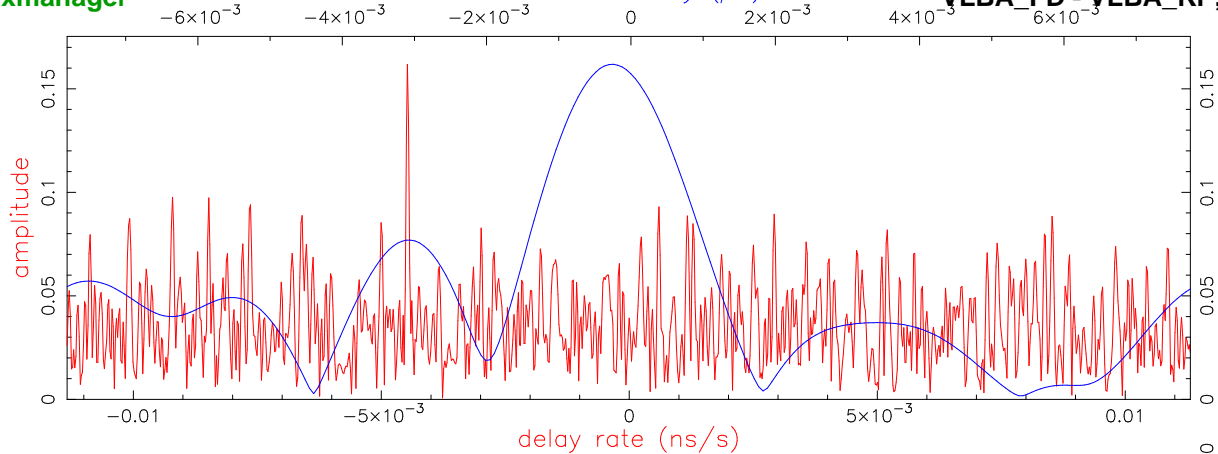
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fk

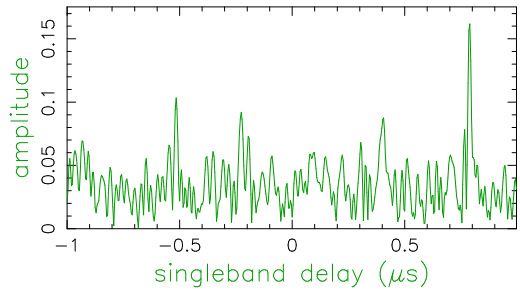
VLBA_FD - VLBA_KP, fgroup W, pol LR

multiband delay (μ s)

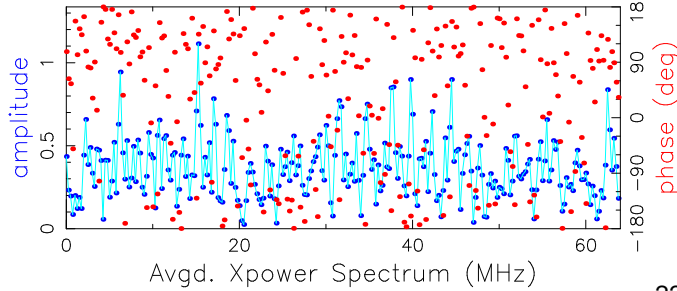


Fringe quality 0

SNR 5.9
 Int time 173.620
 Amp 0.175
 Phase -147.9
 PFD 3.4e-01
 Delays (us)
 SBD 0.787641
 MBD -0.000274
 Fringe rate (Hz)
 -0.385468
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

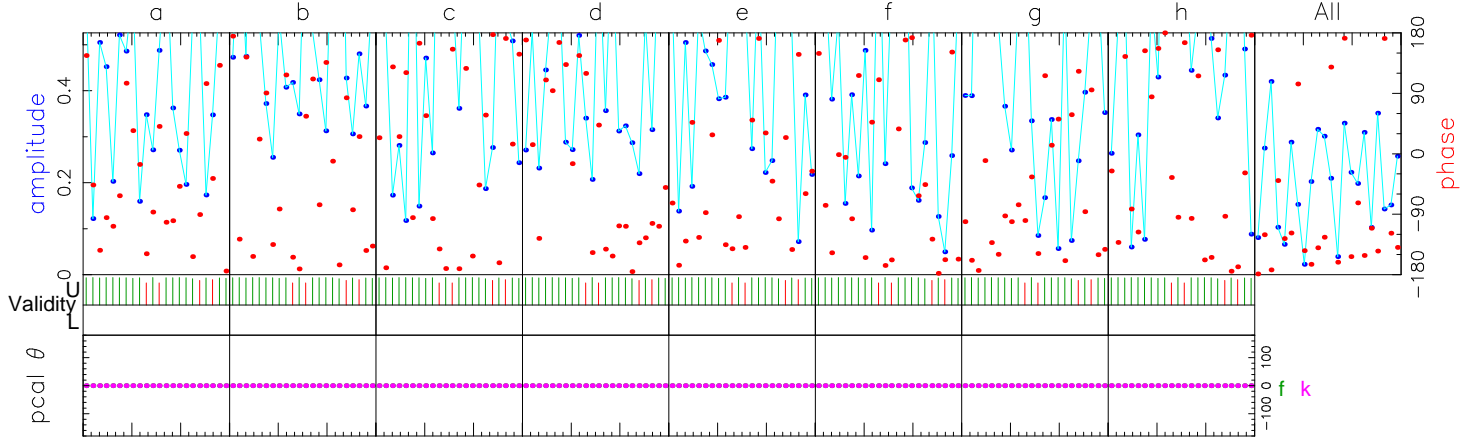


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122830
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-118.2	-167.2	-170.6	-159.5	-108.0	-164.1	-124.9	-162.5	Phase	-147.9
	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.3	Ampl.	0.2
	168.1	22.7	452.8	78.8	181.5	268.7	422.8	107.8	Sbd box	458.6
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.95138475340E+02	Apriori delay (usec)	1.94357498900E+02	Resid mbdelay (usec)	-2.73561E-04	+/-	1.8E-04
Sband delay (usec)	1.95145139650E+02	Apriori clock (usec)	7.5250263E+00	Resid sbdelay (usec)	7.87641E-01	+/-	1.5E-03
Phase delay (usec)	1.94357494131E+02	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-4.76964E-06	+/-	6.2E-07
Delay rate (us/s)	-1.27294831581E-01	Apriori rate (us/s)	-1.27290356685E-01	Resid rate (us/s)	-4.47490E-06	+/-	6.1E-09
Total phase (deg)	196.0	Apriori accel (us/s/s)	-2.49230493659E-06	Resid phase (deg)	-147.9	+/-	19.4

ph/seg (deg)	45.8	Theor.	45.1	Search (1024X32)	0.159	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	70.7		78.7	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)	27.4		27.4	Inc. seg. avg.	0.167	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	27.9		47.8	Inc. frq. avg.	0.169	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 19.5 el 77.4 pa -156.4 k: az 41.6 el 75.2 pa -131.0 u,v (fr/asec) 984.775 -313.234 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fk..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fk.W.130.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

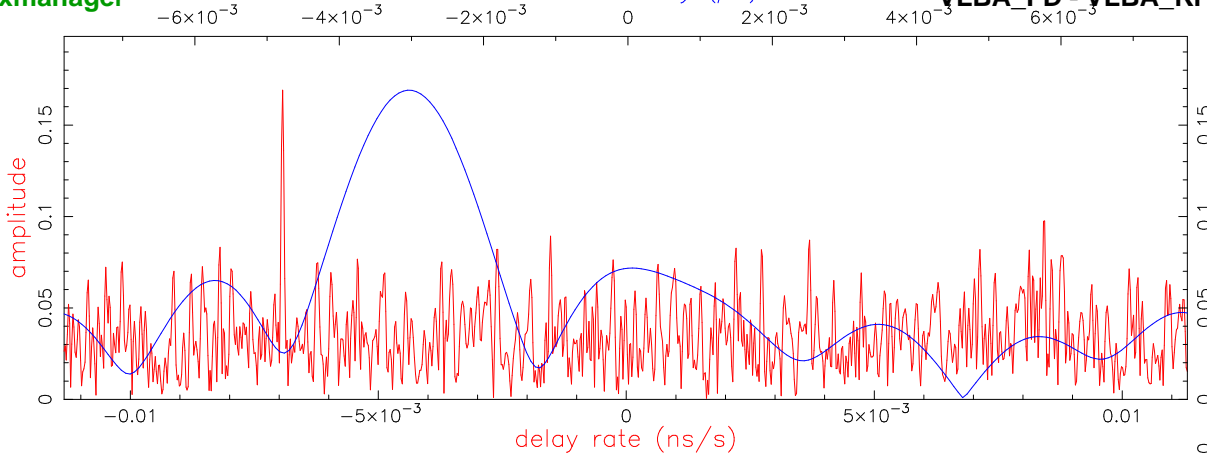
fxmanager

BLLAC.1ILB8W, No0028, fk

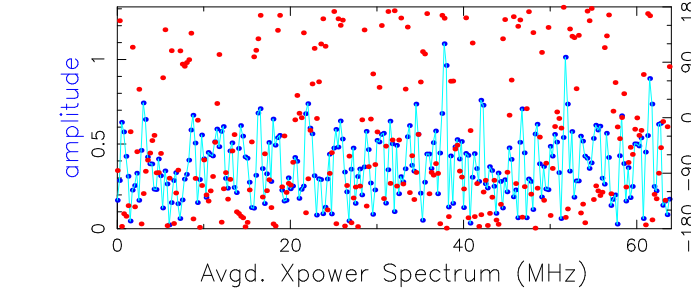
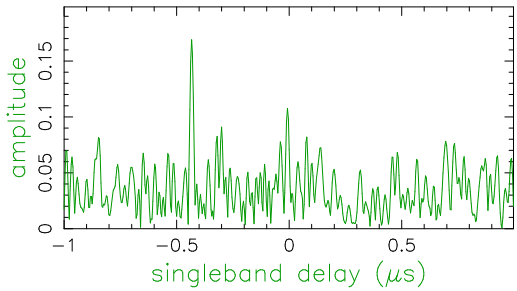
VLBA_FD - VLBA_KP, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

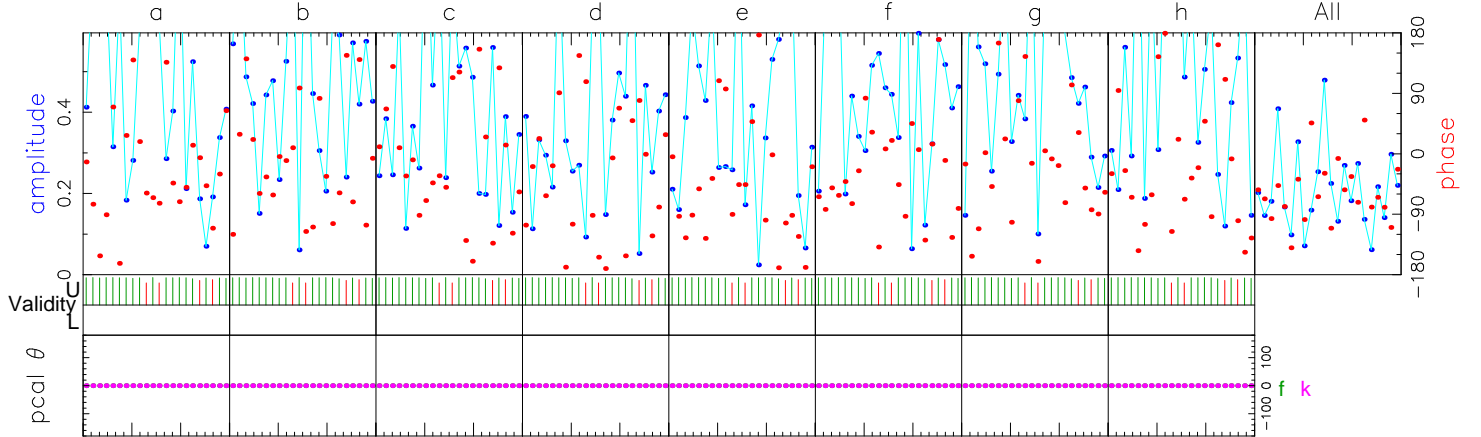


SNR 6.1
Int time 173.621
Amp 0.198
Phase -55.6
PFD 1.3e-01
Delays (us)
SBD -0.433112
MBD -0.003007
Fringe rate (Hz)
-0.597753
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122832
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		1.93916991766E+02			1.94357498900E+02				Resid mbdelay (usec)	-3.00713E-03 +/- 1.8E-04
Sband delay (usec)		1.93924386650E+02			7.5250263E+00				Resid sbdelay (usec)	-4.33112E-01 +/- 1.4E-03
Phase delay (usec)		1.94357497107E+02			2.9999999E-07				Resid phdelay (usec)	-1.79363E-06 +/- 6.1E-07
Delay rate (us/s)		-1.27297296001E-01			Apriori rate (us/s)				Resid rate (us/s)	-6.93932E-06 +/- 5.9E-09
Total phase (deg)			288.3		Apriori accel (us/s/s)				Resid phase (deg)	-55.6 +/- 18.8

	RMS	Theor.	Amplitude	0.198 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	45.4	43.7	Search (1024X32)	0.162	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	65.1	76.3	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	25.2	26.6	Inc. seg. avg.	0.192	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	39.8	46.4	Inc. frq. avg.	0.188	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

f: az 19.5 el 77.4 pa -156.4 k: az 41.6 el 75.2 pa -131.0 u,v (fr/asec) 984.775 -313.234 simultaneous interpolator

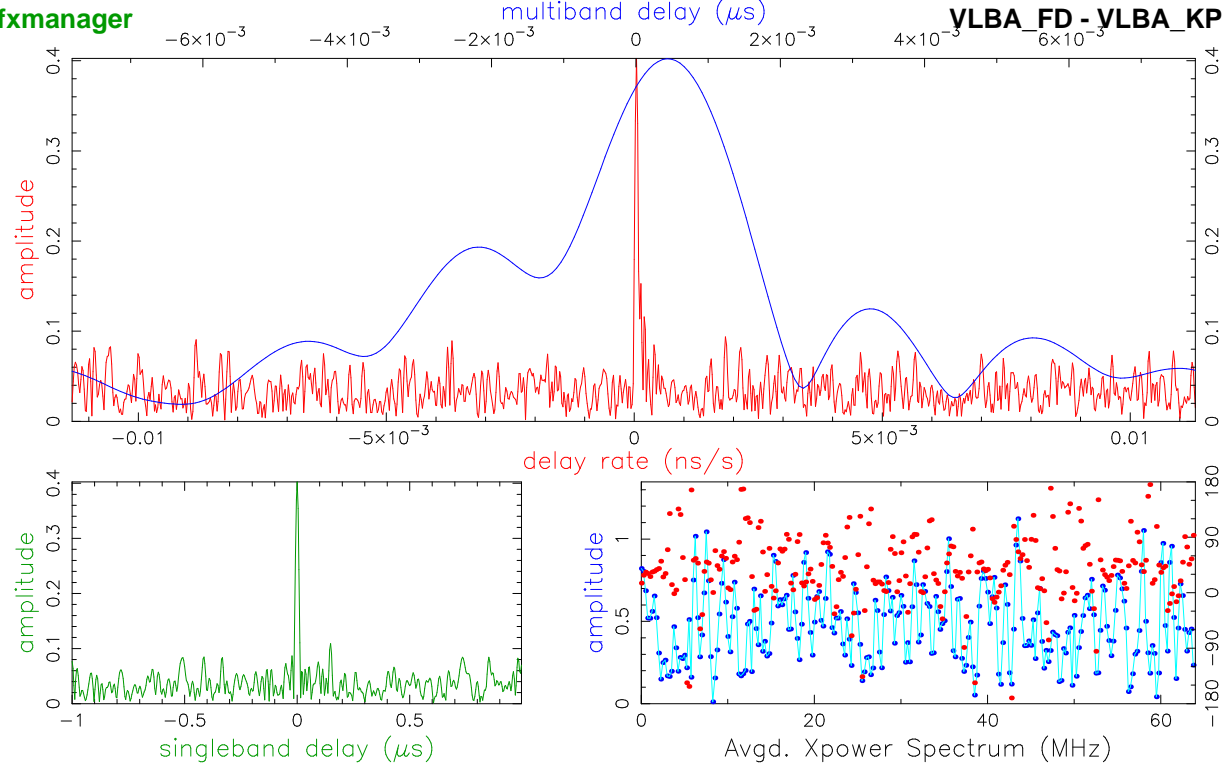
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fk..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fk.W.145.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fk

VLBA_FD - VLBA_KP, fgroup W, pol LL

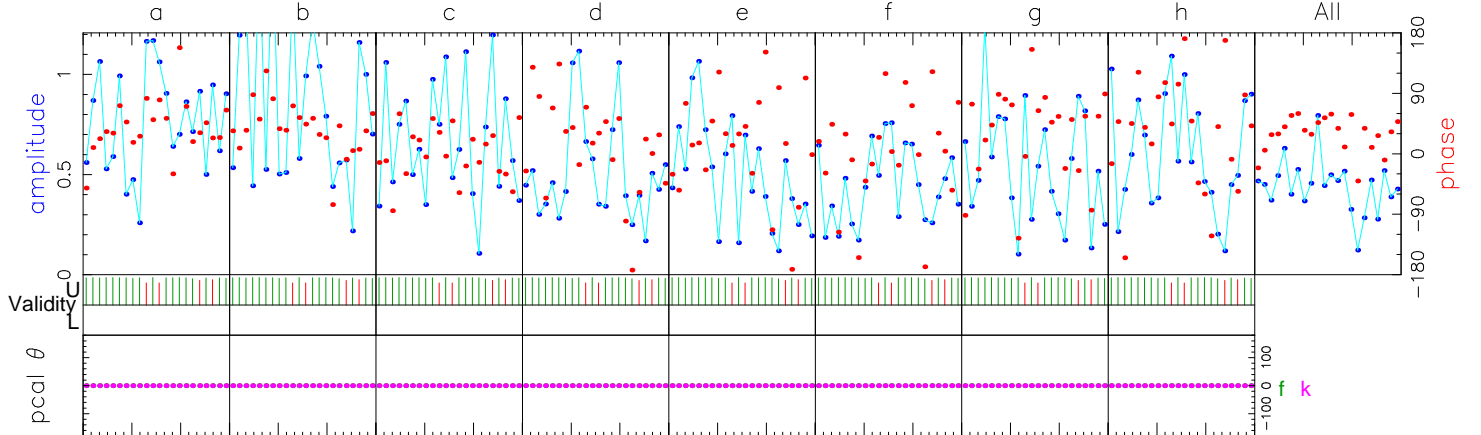


Fringe quality 8

SNR 14.5
 Int time 173.621
 Amp 0.403
 Phase 31.4
 PFD 3.3e-39
 Delays (us)
 SBD -0.000395
 MBD 0.000433
 Fringe rate (Hz)
 0.004506
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122826
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.94357932250E+02				1.94357498900E+02				Resid mbdelay (usec)	4.33349E-04 +/- 7.5E-05
Sband delay (usec)	1.94357103650E+02				7.5250263E+00				Resid sbdelay (usec)	-3.95250E-04 +/- 5.9E-04
Phase delay (usec)	1.94357499913E+02				2.9999999E-07				Resid phdelay (usec)	1.01300E-06 +/- 2.5E-07
Delay rate (us/s)	-1.27290304374E-01				-1.27290356685E-01				Resid rate (us/s)	5.23114E-08 +/- 2.5E-09
Total phase (deg)		15.3			-2.49230493659E-06				Resid phase (deg)	31.4 +/- 7.9

ph/seg (deg) 26.5 18.4
 amp/seg (%) 32.7 32.1
 ph/frq (deg) 18.0 11.2
 amp/frq (%) 44.0 19.5

RMS Theor. Amplitude 0.403 +/- 0.028
 Search (1024X32) 0.392
 Interp. 0.000
 Inc. seg. avg. 0.416
 Inc. frq. avg. 0.411

Group delay (usec)(sbd) 1.94357932250E+02
 Apriori delay (usec) 1.94357498900E+02
 Apriori clock (usec) 7.5250263E+00
 Apriori clockrate (us/s) 2.9999999E-07
 Apriori rate (us/s) -1.27290356685E-01
 Apriori accel (us/s/s) -2.49230493659E-06

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

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

f: az 19.5 el 77.4 pa -156.4 k: az 41.6 el 75.2 pa -131.0 u,v (fr/asec) 984.775 -313.234 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fk..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fk.W.85.1ILB8W

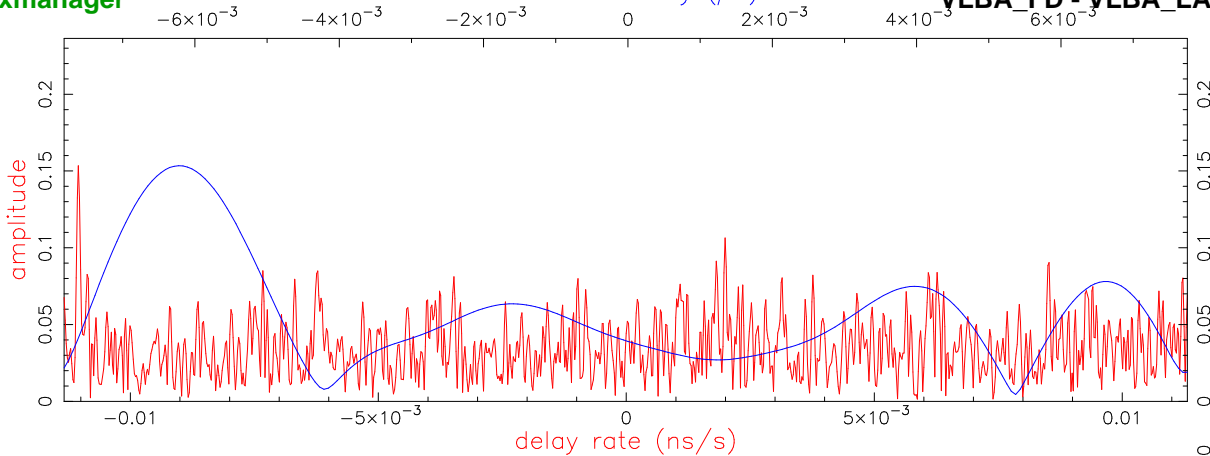
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fl

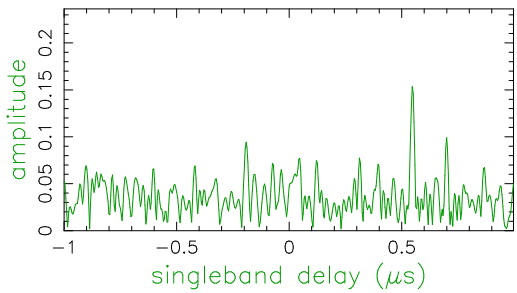
VLBA_FD - VLBA_LA, fgroup W, pol LR

multiband delay (μ s)

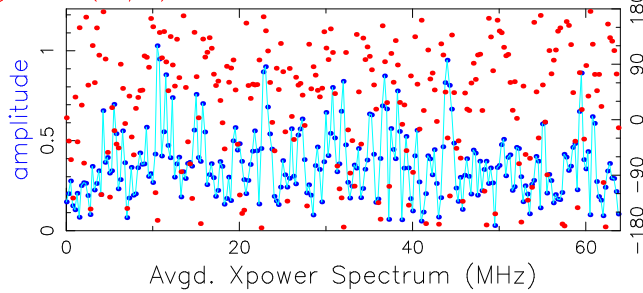


Fringe quality 0

SNR 5.6
 Int time 174.782
 Amp 0.236
 Phase -14.1
 PFD 9.6e-01
 Delays (us)
 SBD 0.547713
 MBD -0.006199
 Fringe rate (Hz)
 -0.953460
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

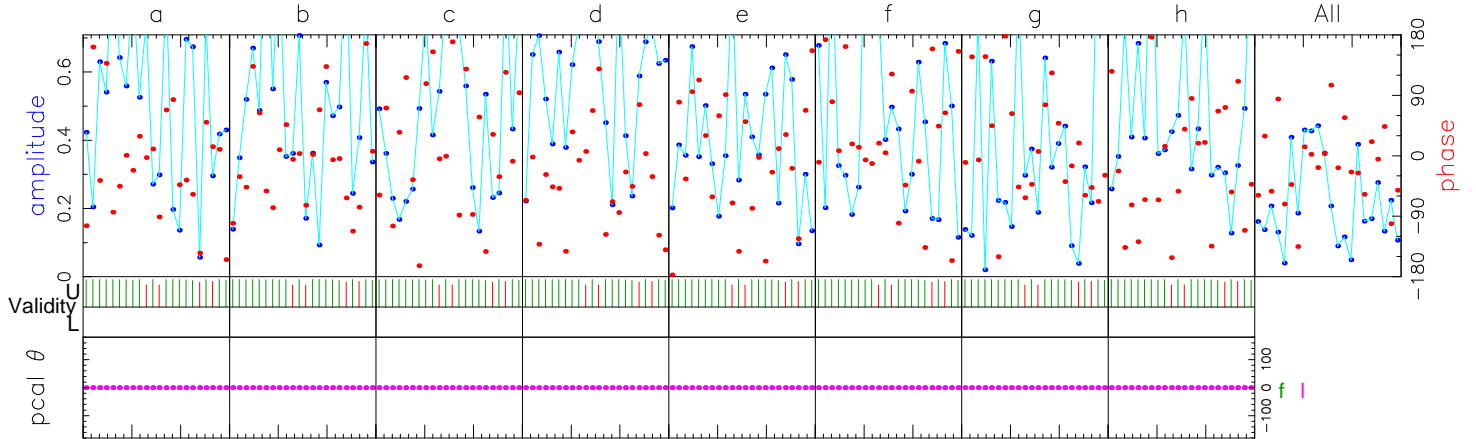


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122829
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-17.5	-21.4	104.9	-34.8	13.9	16.1	-20.6	-60.0	Phase	-14.1
	0.4	0.3	0.1	0.4	0.2	0.3	0.3	0.2	Ampl.	0.2
	397.6	462.1	148.7	364.5	250.7	216.9	206.8	268.4	Sbd box	397.2
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.41471800500E+02		Apriori delay (usec)		-2.42012476019E+02		Resid mbdelay (usec)		-6.19948E-03	+/- 1.9E-04
Sband delay (usec)	-2.41464763269E+02		Apriori clock (usec)		8.2590446E+00		Resid sbdelay (usec)		5.47713E-01	+/- 1.5E-03
Phase delay (usec)	-2.42012476474E+02		Apriori clockrate (us/s)		5.0000000E-07		Resid phdelay (usec)		-4.55524E-07	+/- 6.6E-07
Delay rate (us/s)	-3.20133343965E-02		Apriori rate (us/s)		-3.20022656764E-02		Resid rate (us/s)		-1.10687E-05	+/- 6.5E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.37408023152E-06		Resid phase (deg)		-14.1	+/- 20.6

	RMS	Theor.	Amplitude	0.236 +/- 0.042	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	56.0	47.9	Search (1024X32)	0.150	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	93.0	83.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	55.5	29.1	Inc. seg. avg.	0.249	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	44.7	50.8	Inc. frq. avg.	0.241	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

f: az 19.5 el 77.4 pa -156.4 l: az 40.6 el 81.0 pa -135.2 u,v (fr/asec) 244.080 -805.886 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.W.117.1ILB8W

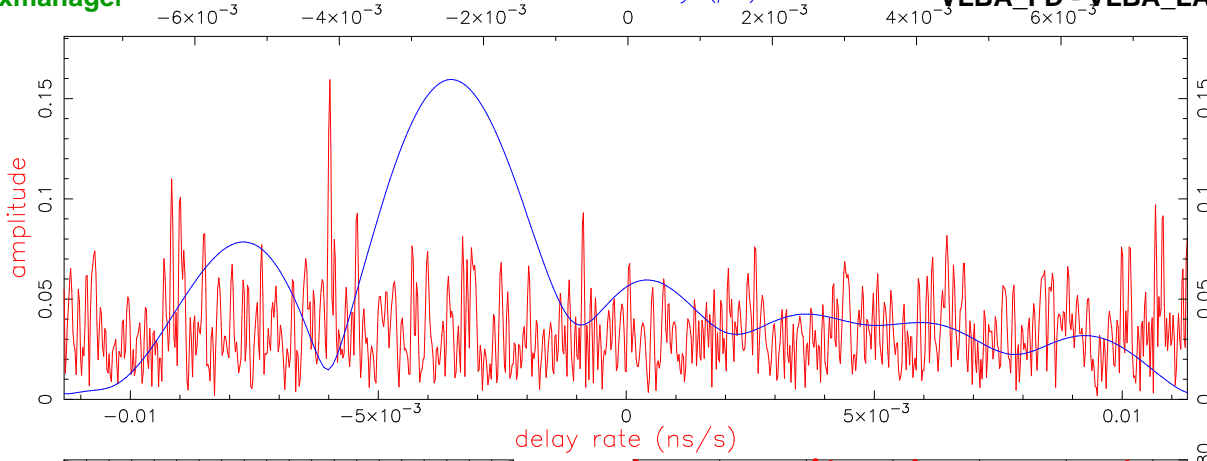
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fl

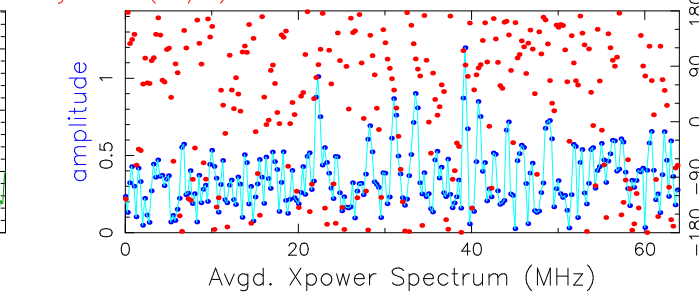
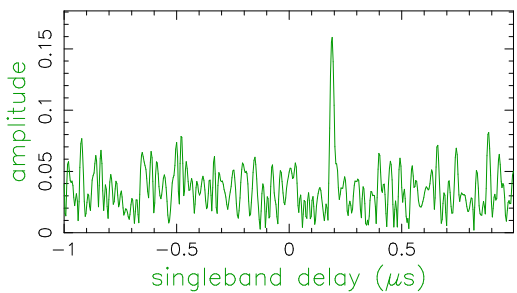
VLBA_FD - VLBA_LA, fgroup W, pol RL

multiband delay (μ s)



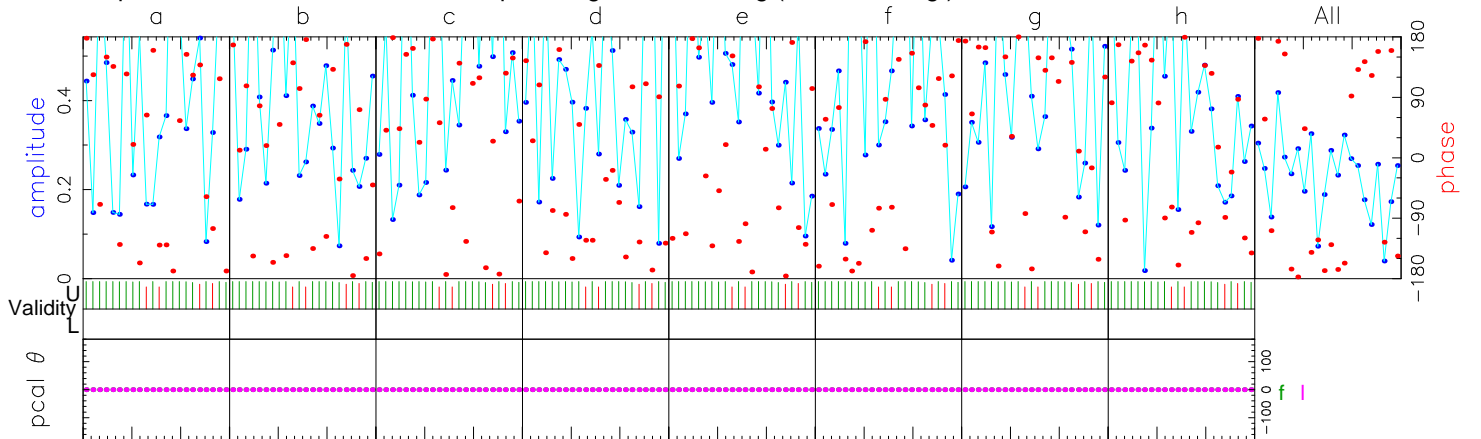
Fringe quality 0

SNR 5.8
 Int time 174.782
 Amp 0.181
 Phase 174.9
 PFD 5.3e-01
 Delays (us)
 SBD 0.190060
 MBD -0.002490
 Fringe rate (Hz)
 -0.516330
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122831
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		-2.41827466161E+02		Apriori delay (usec)	-2.42012476019E+02		Resid mbdelay (usec)	-2.49014E-03		+/- 1.9E-04
Sband delay (usec)		-2.41822416019E+02		Apriori clock (usec)	8.2590446E+00		Resid sbdelay (usec)	1.90060E-01		+/- 1.5E-03
Phase delay (usec)		-2.42012470380E+02		Apriori clockrate (us/s)	5.0000000E-07		Resid phdelay (usec)	5.63862E-06		+/- 6.4E-07
Delay rate (us/s)		-3.20082597578E-02		Apriori rate (us/s)	-3.20022656764E-02		Resid rate (us/s)	-5.99408E-06		+/- 6.2E-09
Total phase (deg)			-71.5	Apriori accel (us/s/s)	-4.37408023152E-06		Resid phase (deg)	174.9		+/- 19.7

	RMS	Theor.	Amplitude	0.181 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	54.8	45.9	Search (1024X32)	0.156	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	69.0	80.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	31.9	27.9	Inc. seg. avg.	0.198	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	26.6	48.6	Inc. frq. avg.	0.177	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

f: az 19.5 el 77.4 pa -156.4 l: az 40.6 el 81.0 pa -135.2 u,v (fr/asec) 244.080 -805.886 simultaneous interpolator

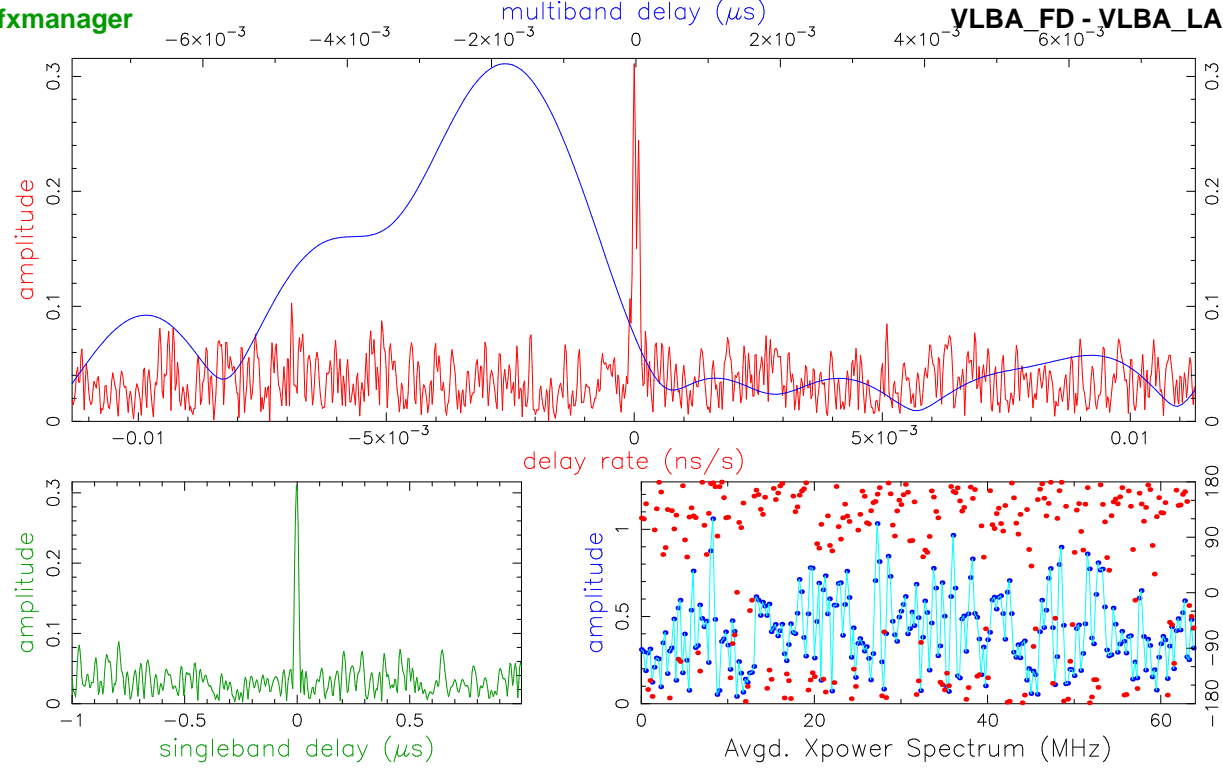
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.W.136.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fl

VLBA_FD - VLBA_LA, fgroup W, pol LL

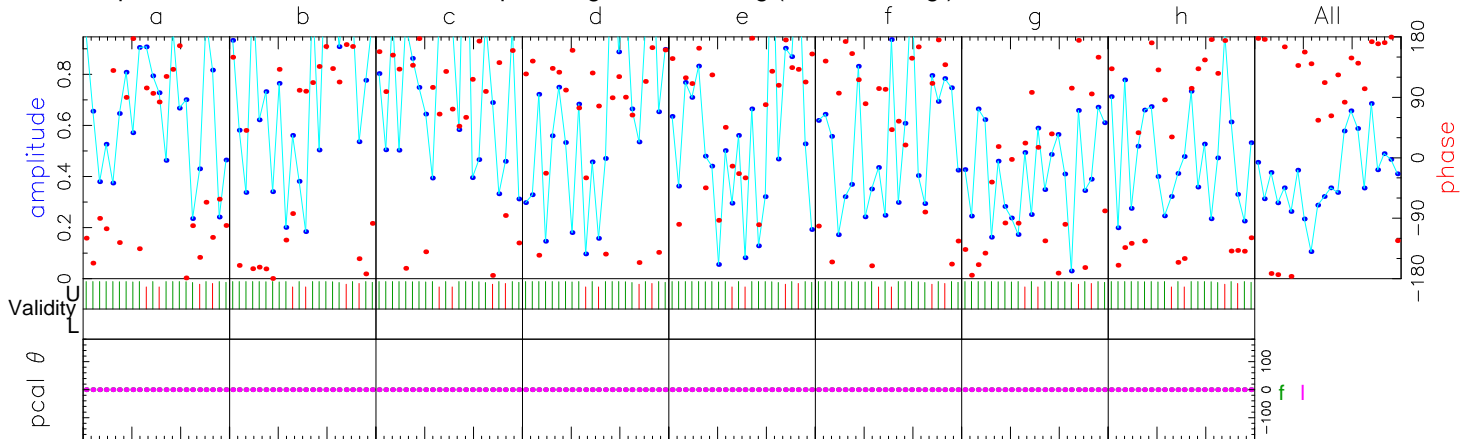


Fringe quality 9

SNR 11.4
 Int time 174.782
 Amp 0.316
 Phase 153.0
 PFD 8.9e-22
 Delays (us)
 SBD -0.002255
 MBD -0.001800
 Fringe rate (Hz)
 -0.000577
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122825
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-2.42014276394E+02				-2.42012476019E+02					
Sband delay (usec)	-2.42014731019E+02				8.2590446E+00					
Phase delay (usec)	-2.42012471085E+02				5.0000000E-07					
Delay rate (us/s)	-3.20022723751E-02				-3.20022656764E-02					
Total phase (deg)			-93.3		-4.37408023152E-06					
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			MANUAL					
Pcal rate:	0.000E+00	0.000E+00			0.000E+00					
Bits/sample:	2x2									
Sample rate (MSamp/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								

f: az 19.5 el 77.4 pa -156.4 l: az 40.6 el 81.0 pa -135.2 u,v (fr/asec) 244.080 -805.886 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.W.84.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

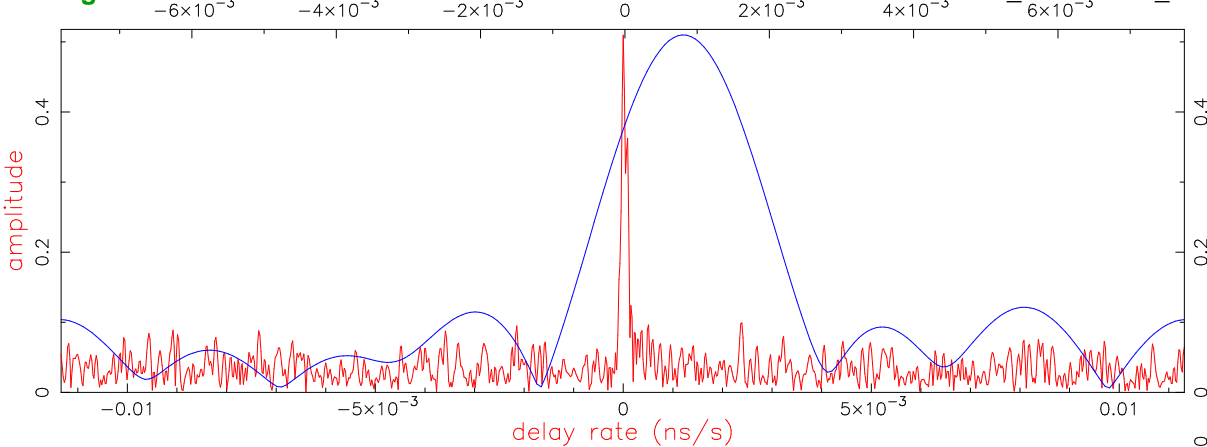
fxmanager

BLLAC.11LB8W, No0028, fl

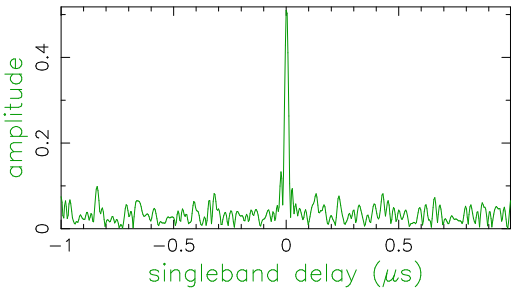
VLBA_FD - VLBA_LA, fgroup W, pol RR

multiband delay (μ s)

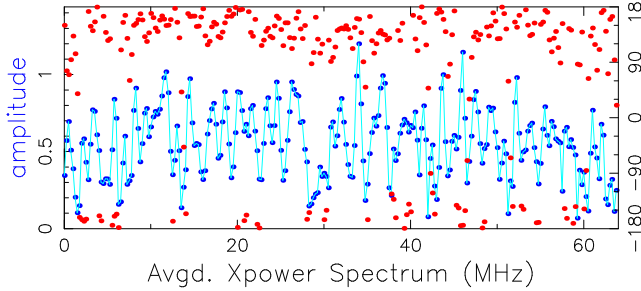
Fringe quality 9



SNR 18.7
 Int time 174.782
 Amp 0.518
 Phase 161.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.001657
 MBD 0.000854
 Fringe rate (Hz) -0.000678
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

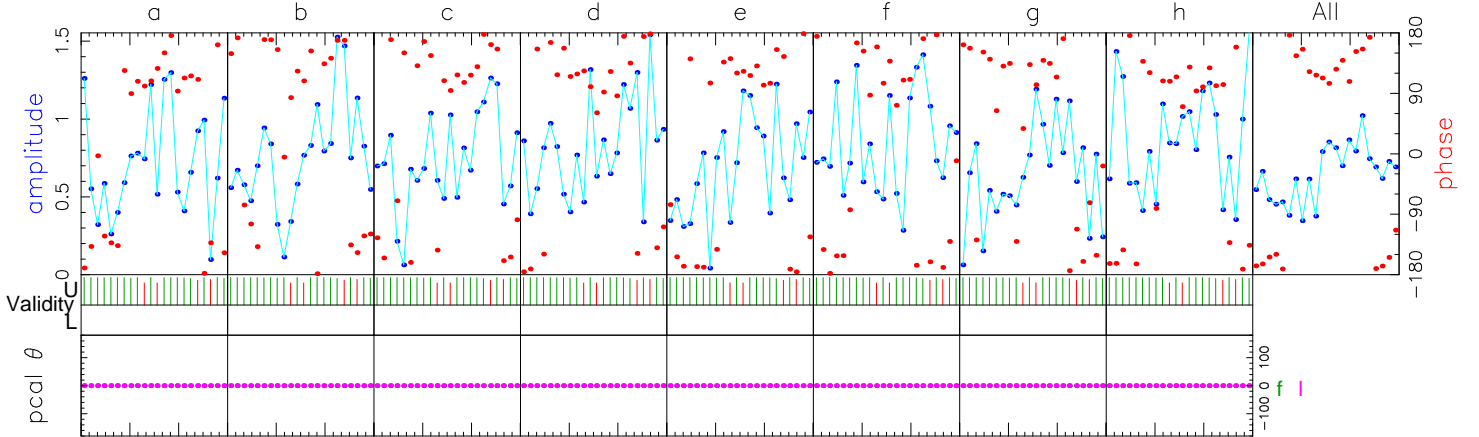


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122827
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-2.42011622144E+02	Apriori delay (usec)	-2.42012476019E+02	Resid mbdelay (usec)	8.53875E-04	+/-	5.8E-05
Sband delay (usec)	-2.42010819019E+02	Apriori clock (usec)	8.2590446E+00	Resid sbdelay (usec)	1.65700E-03	+/-	4.6E-04
Phase delay (usec)	-2.42012470817E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	5.20227E-06	+/-	2.0E-07
Delay rate (us/s)	-3.20022735527E-02	Apriori rate (us/s)	-3.20022656764E-02	Resid rate (us/s)	-7.87633E-09	+/-	1.9E-09
Total phase (deg)	-85.0	Apriori accel (us/s/s)	-4.37408023152E-06	Resid phase (deg)	161.3	+/-	6.1

ph/seg (deg)	38.5	RMS	14.2	Theor.	Amplitude	0.518 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	41.8	Search (1024X32)	0.495	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	Interp.	0.000	Sb window (us)	-1.000 1.000	
ph/frq (deg)	10.9	Inc. seg. avg.	0.629	Bits/sample: 2x2	Inc. frq. avg.	0.511	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	10.0	Inc. frq. avg.	0.511	Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
				Data rate(Mb/s): 2048			ion window (TEC)	0.00 0.00	

f: az 19.5 el 77.4 pa -156.4 l: az 40.6 el 81.0 pa -135.2 u,v (fr/asec) 244.080 -805.886 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.11LB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fl.W.98.11LB8W

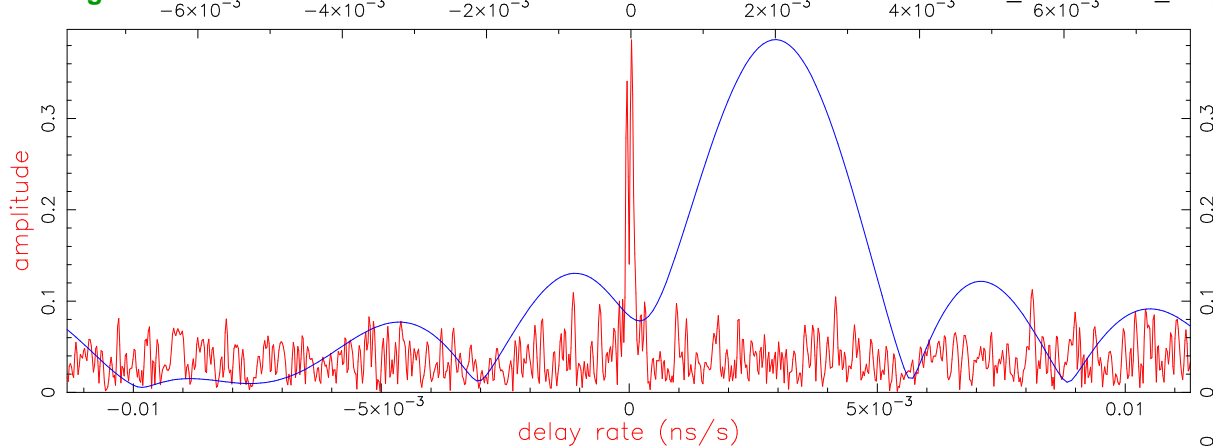
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fm

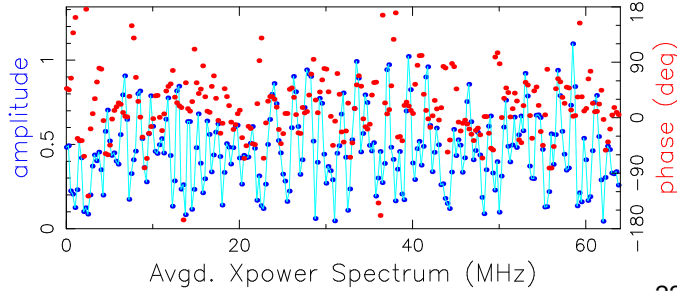
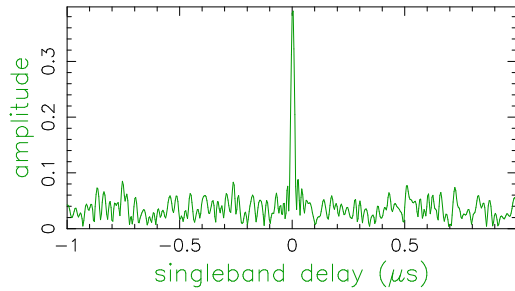
VLBA_FD - VLBA_MK, fgroup W, pol RR

multiband delay (μ s)



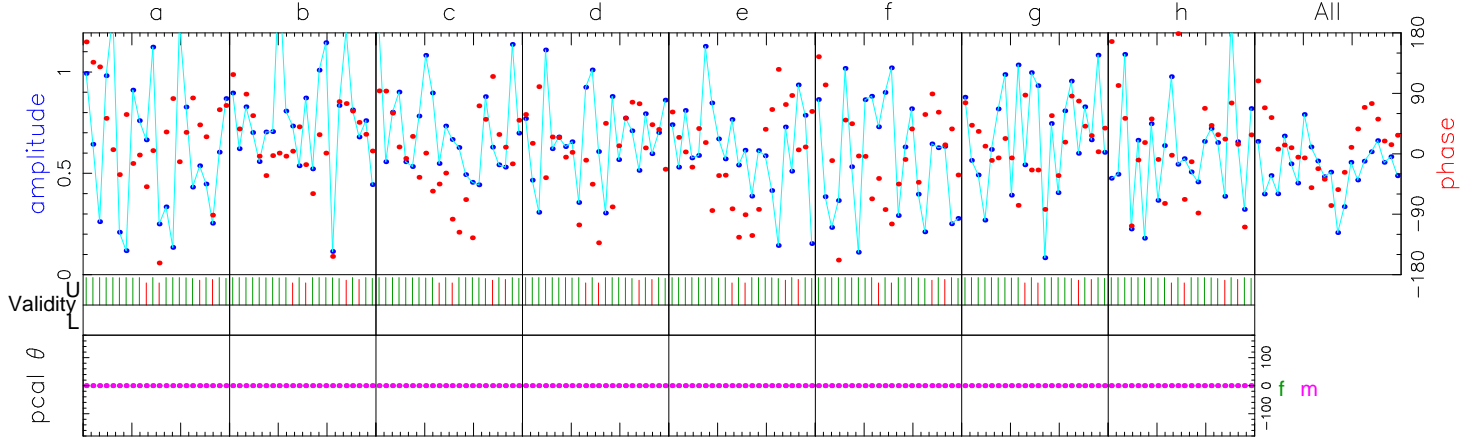
Fringe quality 9

SNR 14.4
 Int time 174.782
 Amp 0.398
 Phase 16.4
 PFD 2.1e-38
 Delays (us)
 SBD 0.002159
 MBD 0.002046
 Fringe rate (Hz)
 0.003231
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122828
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	7.80319302964E+03					7.80319098376E+03			2.04588E-03	+/- 7.5E-05
Sband delay (usec)	7.80319314251E+03					-5.5049729E+00			2.15875E-03	+/- 6.0E-04
Phase delay (usec)	7.80319098429E+03					2.9999999E-07			5.28841E-07	+/- 2.6E-07
Delay rate (us/s)	-8.12216048175E-01					-8.12216085686E-01			3.75110E-08	+/- 2.5E-09
Total phase (deg)			139.2						16.4	+/- 8.0
	RMS	Theor.	Amplitude	0.398 +/- 0.028						
ph/seg (deg)	45.2	18.6	Search (1024X32)	0.380						
amp/seg (%)	45.4	32.4	Interp.	0.000						
ph/frq (deg)	13.2	11.3	Inc. seg. avg.	0.501						
amp/frq (%)	26.1	19.7	Inc. frq. avg.	0.386						

f: az 19.5 el 77.4 pa -156.4 m: az 51.2 el 37.2 pa -96.6 u,v (fr/asec) 6276.208 -968.077 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm.W.111.1ILB8W

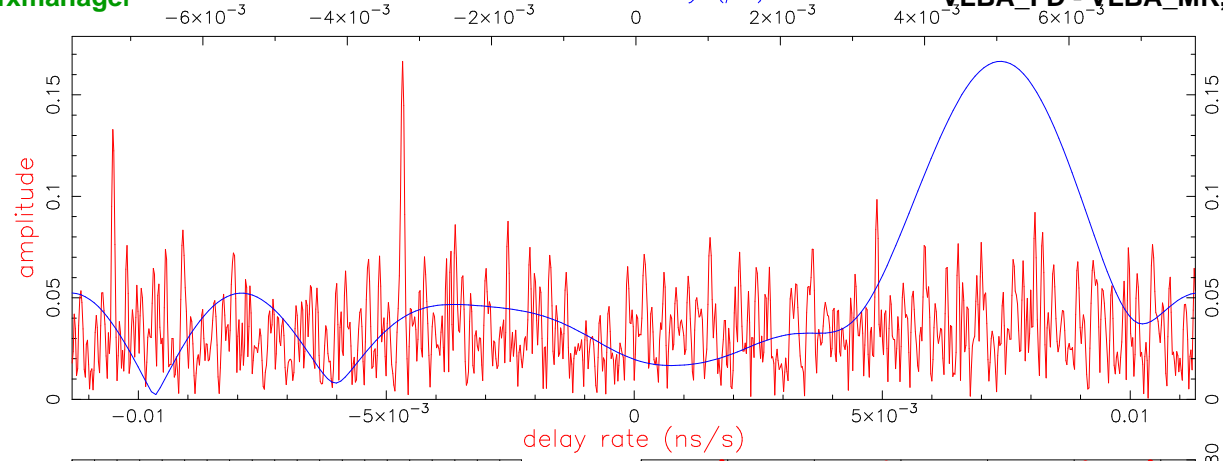
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fm

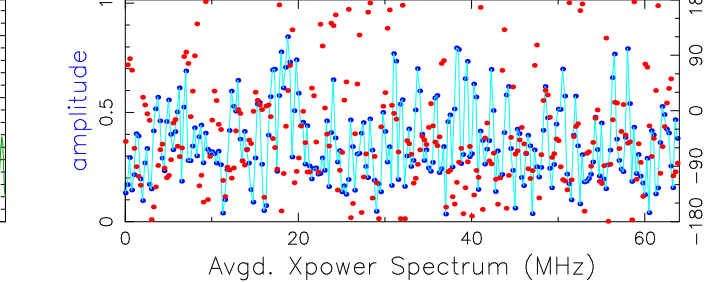
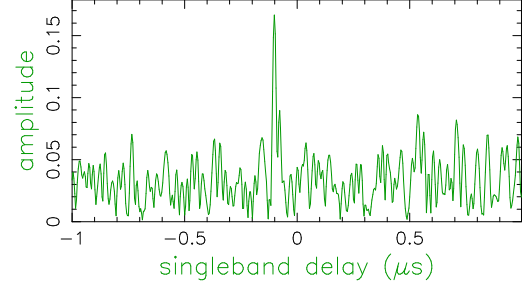
VLBA_FD - VLBA_MK, fgroup W, pol LR

multiband delay (μ s)



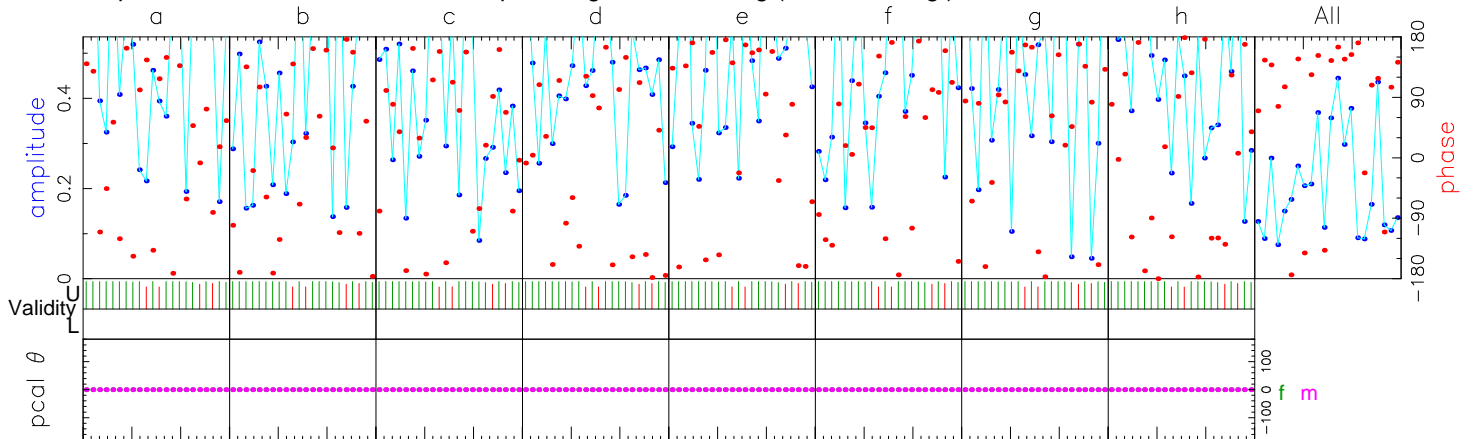
Fringe quality 0

SNR 6.0
 Int time 174.782
 Amp 0.179
 Phase 145.8
 PFD 2.0e-01
 Delays (us)
 SBD -0.101359
 MBD 0.005056
 Fringe rate (Hz)
 -0.403140
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122830
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
128.2	-169.2	134.3	146.7	154.3	126.8	136.9	168.7	145.8	Phase	145.8
0.2	0.1	0.2	0.1	0.3	0.2	0.3	0.1	0.2	Ampl.	0.2
308.5	396.0	387.5	420.2	259.3	237.6	363.7	152.9	231.1	Sbd box	231.1
U/L 347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000		
f W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids	
m W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	7.80308666447E+03		Apriori delay (usec)	7.80319098376E+03	Resid mbdelay (usec)	5.05571E-03	+/-	1.8E-04		
Sband delay (usec)	7.80308962526E+03		Apriori clock (usec)	-5.5049729E+00	Resid sbdelay (usec)	-1.01359E-01	+/-	1.4E-03		
Phase delay (usec)	7.80319098846E+03		Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	4.70276E-06	+/-	6.1E-07		
Delay rate (us/s)	-8.12220765736E-01		Apriori rate (us/s)	-8.12216085686E-01	Resid rate (us/s)	-4.68005E-06	+/-	6.0E-09		
Total phase (deg)		268.7	Apriori accel (us/s/s)	-2.85662973747E-05	Resid phase (deg)	145.8	+/-	19.0		

ph/seg (deg) 56.2 44.3 Search (1024X32) 0.162 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.8 77.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.2 26.9 Inc. seg. avg. 0.173 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 41.5 47.0 Inc. frq. avg. 0.170 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 m: az 51.2 el 37.2 pa -96.6 u,v (fr/asec) 6276.208 -968.077 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm.W.131.1ILB8W

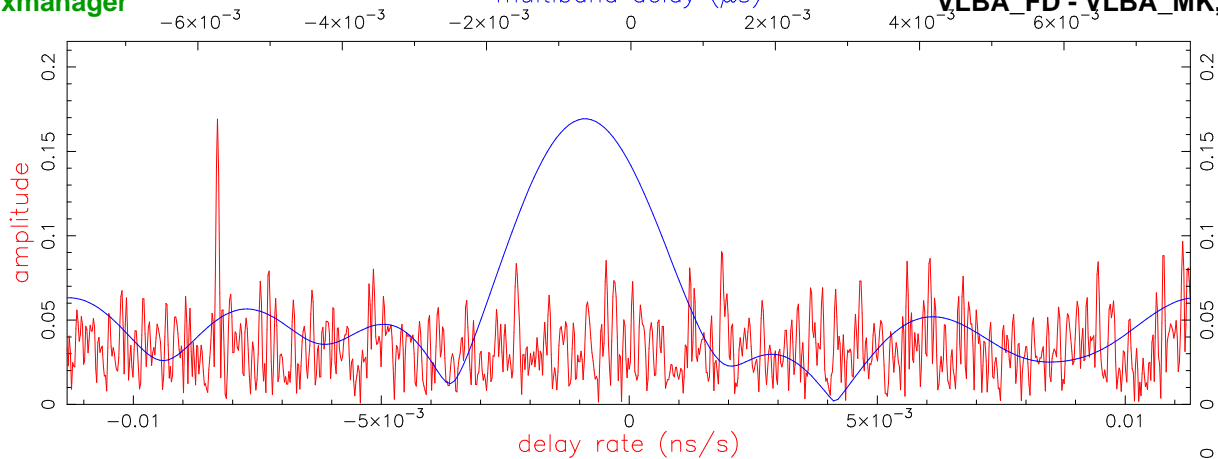
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fm

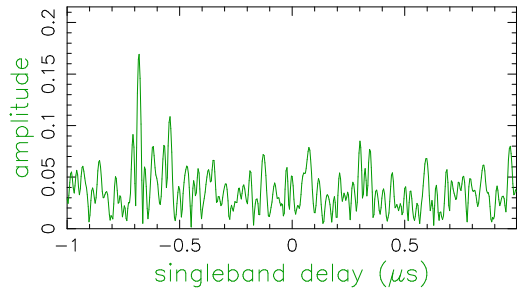
VLBA_FD - VLBA_MK, fgroup W, pol RL

multiband delay (μ s)

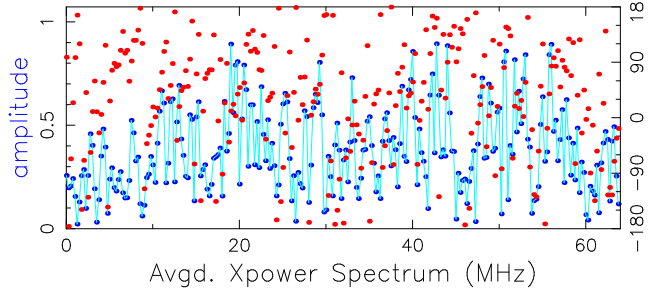


Fringe quality 0

SNR 6.2
 Int time 174.782
 Amp 0.215
 Phase 142.9
 PFD 8.6e-02
 Delays (us)
 SBD -0.680994
 MBD -0.000694
 Fringe rate (Hz)
 -0.715622
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

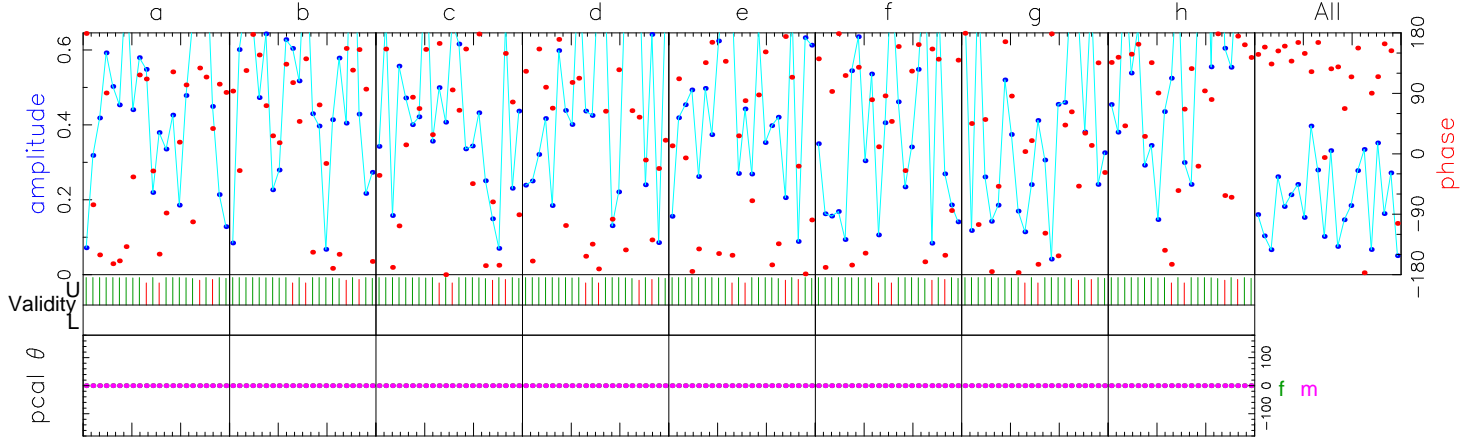


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122832
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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

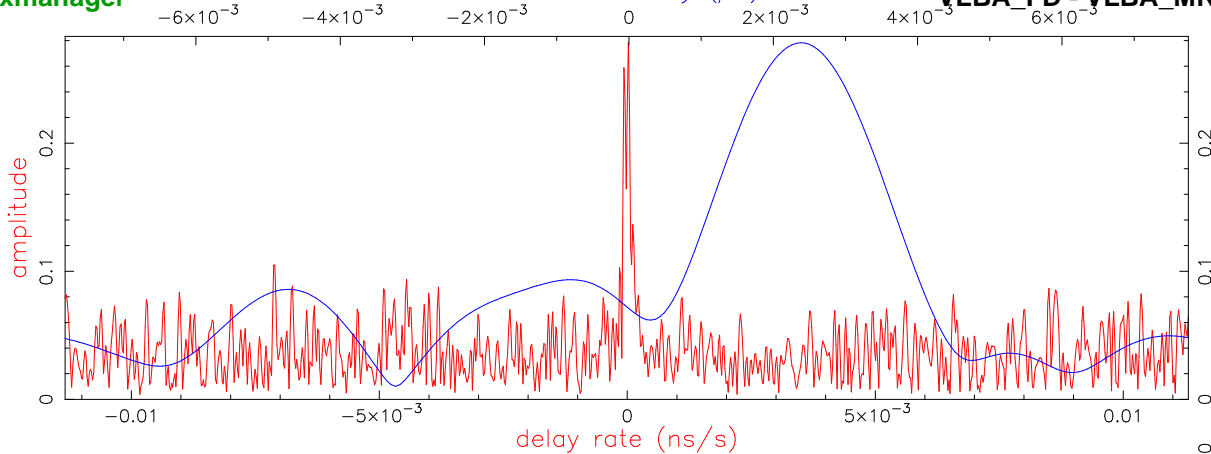


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	149.7	130.1	138.9	132.1	164.0	146.0	41.1	145.7	Phase	142.9
	0.2	0.3	0.2	0.2	0.3	0.3	0.0	0.3	Ampl.	0.2
	475.2	88.2	63.6	312.2	140.0	249.2	2.7	82.1	Sbd box	82.7
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.80250278955E+03			Apriori delay (usec)	7.80319098376E+03			Resid mbdelay (usec)	-6.94212E-04	+/- 1.8E-04
Sband delay (usec)	7.80250999001E+03			Apriori clock (usec)	-5.5049729E+00			Resid sbdelay (usec)	-6.80994E-01	+/- 1.4E-03
Phase delay (usec)	7.80319098837E+03			Apriori clockrate (us/s)	2.9999999E-07			Resid phdelay (usec)	4.60873E-06	+/- 6.0E-07
Delay rate (us/s)	-8.12224393350E-01			Apriori rate (us/s)	-8.12216085686E-01			Resid rate (us/s)	-8.30766E-06	+/- 5.8E-09
Total phase (deg)		265.7		Apriori accel (us/s/s)	-2.85662973747E-05			Resid phase (deg)	142.9	+/- 18.6

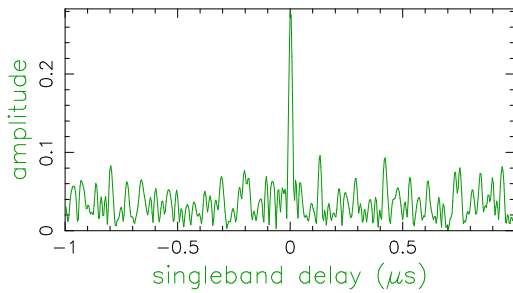
ph/seg (deg) 48.1 43.2 43.2 Search (1024X32) 0.166 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 60.9 75.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 43.2 26.3 Inc. seg. avg. 0.195 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 43.2 45.8 Inc. frq. avg. 0.199 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 m: az 51.2 el 37.2 pa -96.6 u,v (fr/asec) 6276.208 -968.077 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm.W.148.1ILB8W

multiband delay (μ s)

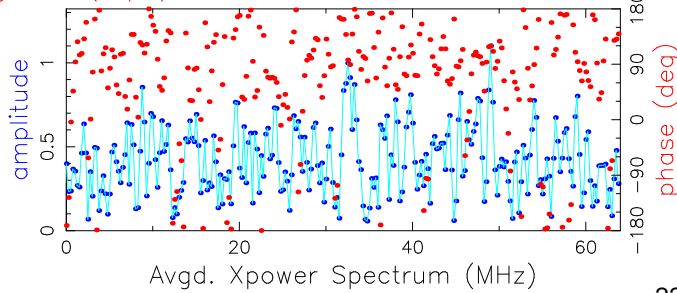
Fringe quality 9



SNR 10.2
Int time 174.782
Amp 0.283
Phase 100.2
PFD 2.8e-16
Delays (us)
SBD 0.001696
MBD 0.002371
Fringe rate (Hz)
0.002554
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

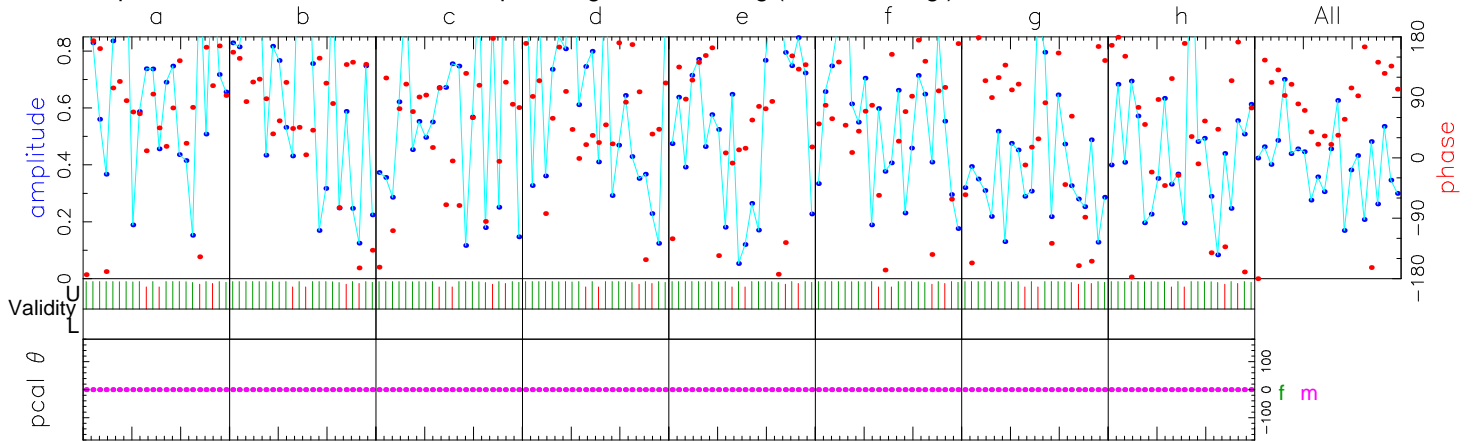


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122826
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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
	113.7	89.6	91.2	83.8	134.9	84.1	115.0	104.4	Phase	100.2
	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.1	Ampl.	0.3
	258.1	257.1	258.1	498.9	257.5	256.7	394.7	387.5	Sbd box	257.4
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	7.80319335487E+03	Apriori delay (usec)	7.80319098376E+03	Resid mbdelay (usec)	2.37111E-03	+/-	1.1E-04
Sband delay (usec)	7.80319267951E+03	Apriori clock (usec)	-5.5049729E+00	Resid sbdelay (usec)	1.69575E-03	+/-	8.4E-04
Phase delay (usec)	7.80319098699E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	3.23147E-06	+/-	3.6E-07
Delay rate (us/s)	-8.12216056041E-01	Apriori rate (us/s)	-8.12216085686E-01	Resid rate (us/s)	2.96446E-08	+/-	3.5E-09
Total phase (deg)	223.0	Apriori accel (us/s/s)	-2.85662973747E-05	Resid phase (deg)	100.2	+/-	11.2

ph/seg (deg)	49.4	26.1	Search (1024X32)	0.271	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	62.0	45.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	19.8	15.8	Inc. seg. avg.	0.368	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	41.2	27.6	Inc. frq. avg.	0.281	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

f: az 19.5 el 77.4 pa -156.4 m: az 51.2 el 37.2 pa -96.6 u,v (fr/asec) 6276.208 -968.077 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fm.W.90.1ILB8W

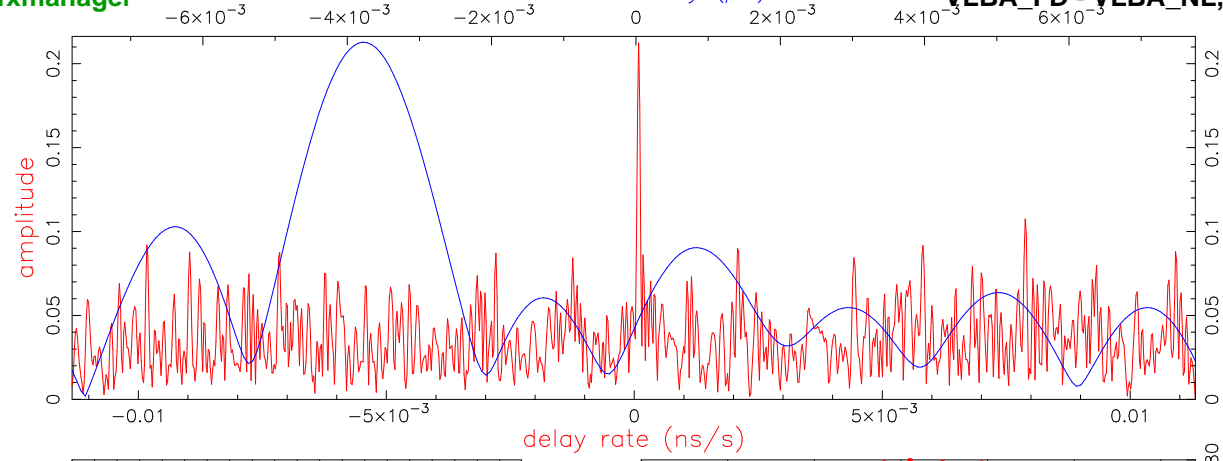
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

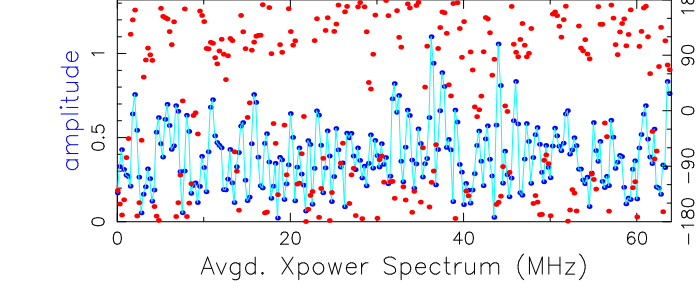
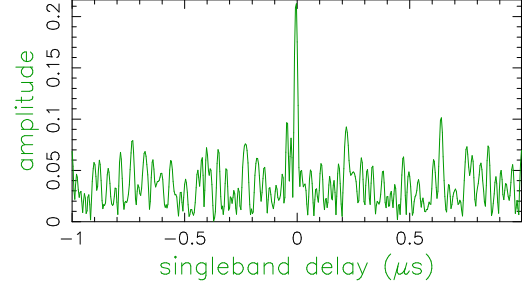
BLLAC.1ILB8W, No0028, fn

VLBA_FD - VLBA_NL, fgroup W, pol RR

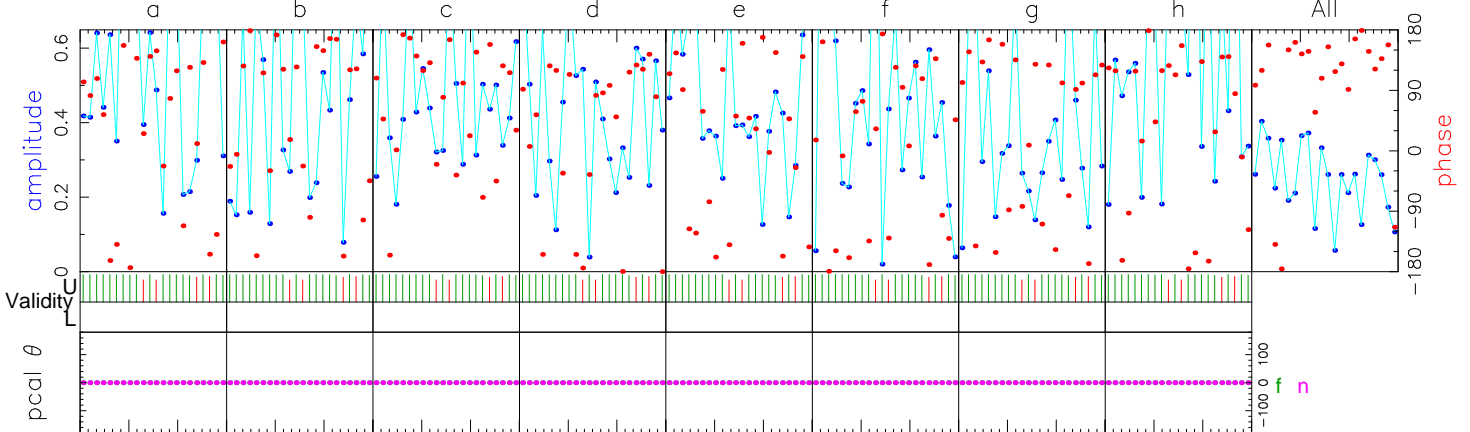
multiband delay (μ s)



Fringe quality 9
 SNR 7.8
 Int time 174.782
 Amp 0.216
 Phase 143.5
 PFD 8.8e-07
 Delays (us)
 SBD -0.005538
 MBD -0.003832
 Fringe rate (Hz) 0.008445
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122827
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	146.7	155.7	103.4	118.3	163.9	144.2	161.5	147.9	Phase	143.5
f	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.3	Ampl.	0.2
n	255.7	412.5	303.3	197.6	510.7	319.0	474.0	254.7	Sbd box	255.6
f	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.97891099423E+02		Apriori delay (usec)		-3.97887267340E+02		Resid mbdelay (usec)		-3.83208E-03	+/- 1.4E-04
Sband delay (usec)	-3.97892805840E+02		Apriori clock (usec)		7.7029915E+00		Resid sbdelay (usec)		-5.53850E-03	+/- 1.1E-03
Phase delay (usec)	-3.97887262713E+02		Apriori clockrate (us/s)		-1.0000003E-07		Resid phdelay (usec)		4.62717E-06	+/- 4.7E-07
Delay rate (us/s)	1.96487993724E-01		Apriori rate (us/s)		1.96487895681E-01		Resid rate (us/s)		9.80431E-08	+/- 4.6E-09
Total phase (deg)	68.4		Apriori accel (us/s/s)		-9.73796831045E-06		Resid phase (deg)		143.5	+/- 14.7

ph/seg (deg) 40.3 34.1 Search (1024X32) 0.203 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 46.3 59.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 23.0 20.7 Inc. seg. avg. 0.214 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 34.2 36.2 Inc. frq. avg. 0.209 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 n: az 279.2 el 85.0 pa 94.0 u,v (fr/asec) -1532.272 -1712.976 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn.W.103.1ILB8W

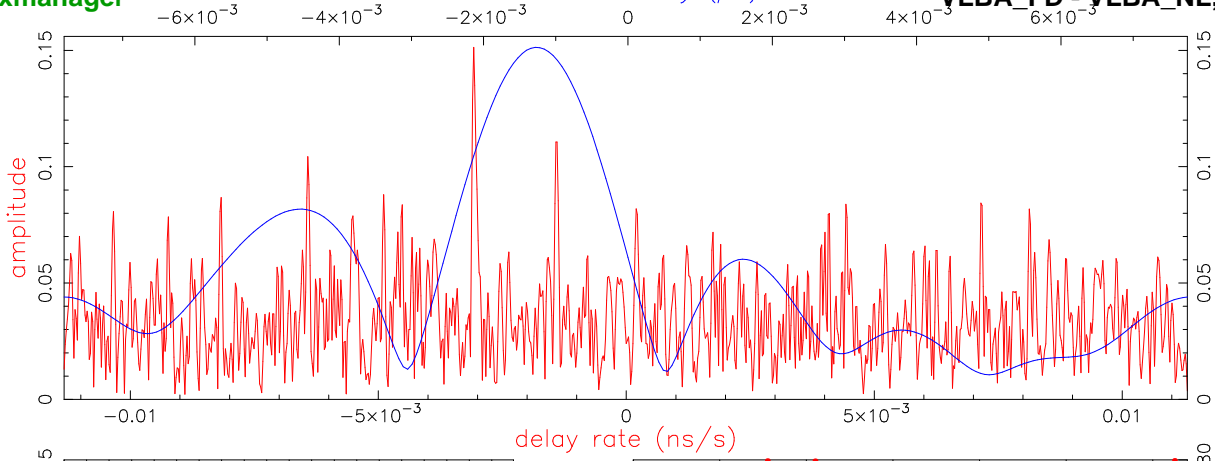
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

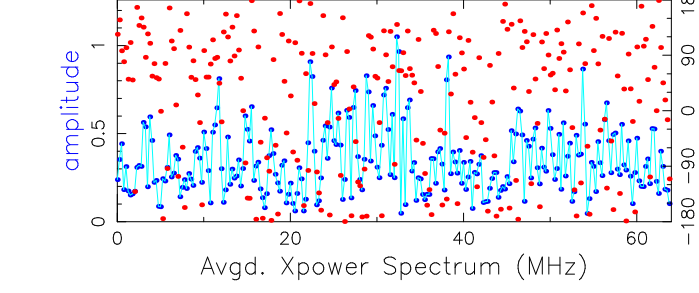
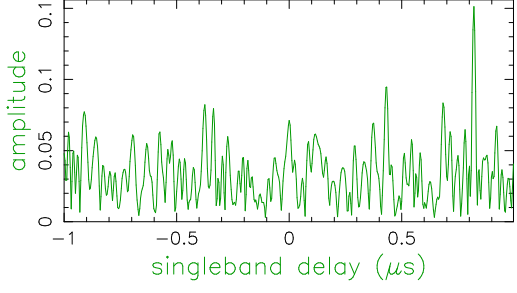
BLLAC.1ILB8W, No0028, fn

VLBA_FD - VLBA_NL, fgroup W, pol LR

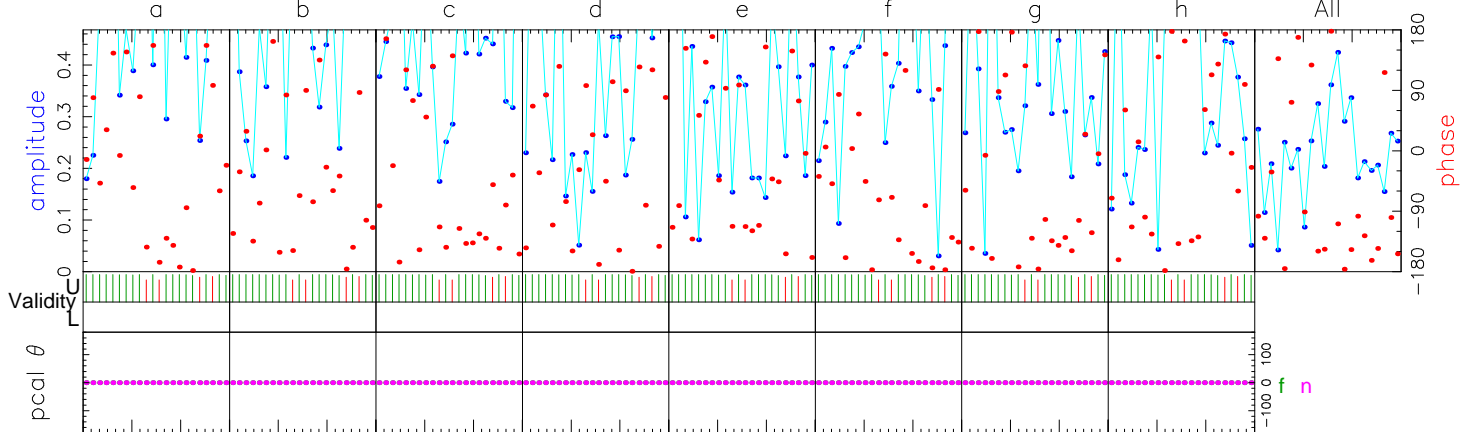
multiband delay (μ s)



Fringe quality 0
 SNR 5.5
 Int time 174.782
 Amp 0.156
 Phase -148.1
 PFD 1.0e+00
 Delays (us)
 SBD 0.820280
 MBD -0.001267
 Fringe rate (Hz)
 -0.265787
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122830
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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
	-177.4	-118.1	-142.3	132.2	-138.5	-130.8	-146.2	-157.7	Phase	-148.1
	0.1	0.2	0.3	0.1	0.1	0.2	0.3	0.2	Ampl.	0.2
	262.4	152.2	467.0	21.0	193.1	493.5	466.5	269.1	Sbd box	467.0
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	-3.97060409460E+02		Apriori delay (usec)		-3.97887267340E+02		Resid mbdelay (usec)		-1.26712E-03	+/- 2.0E-04
Sband delay (usec)	-3.97066987340E+02		Apriori clock (usec)		7.7029915E+00		Resid sbdelay (usec)		8.20280E-01	+/- 1.6E-03
Phase delay (usec)	-3.97887272115E+02		Apriori clockrate (us/s)		-1.0000003E-07		Resid phdelay (usec)		-4.77481E-06	+/- 6.8E-07
Delay rate (us/s)	1.96484810153E-01		Apriori rate (us/s)		1.96487895681E-01		Resid rate (us/s)		-3.08553E-06	+/- 6.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-9.73796831045E-06		Resid phase (deg)		-148.1	+/- 20.9

ph/seg (deg) 58.0 48.8 Amplitude 0.156 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 77.1 85.1 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 37.9 29.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.8 51.7 Inc. seg. avg. 0.173 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 n: az 279.2 el 85.0 pa 94.0 u,v (fr/asec) -1532.272 -1712.976 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn.W.124.1ILB8W simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

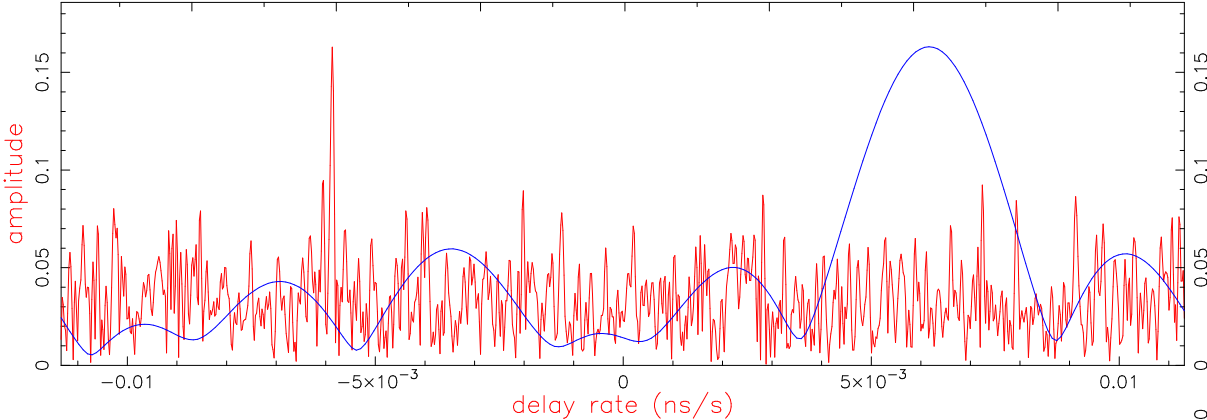
BLLAC.1ILB8W, No0028, fn

VLBA_FD - VLBA_NL, fgroup W, pol RL

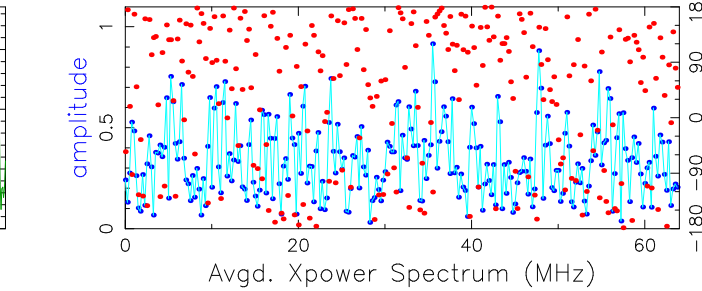
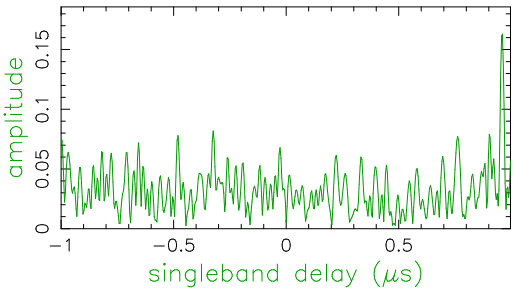
multiband delay (μ s)

-6×10^{-3} -4×10^{-3} -2×10^{-3} 0 2×10^{-3} 4×10^{-3} 6×10^{-3}

Fringe quality 0

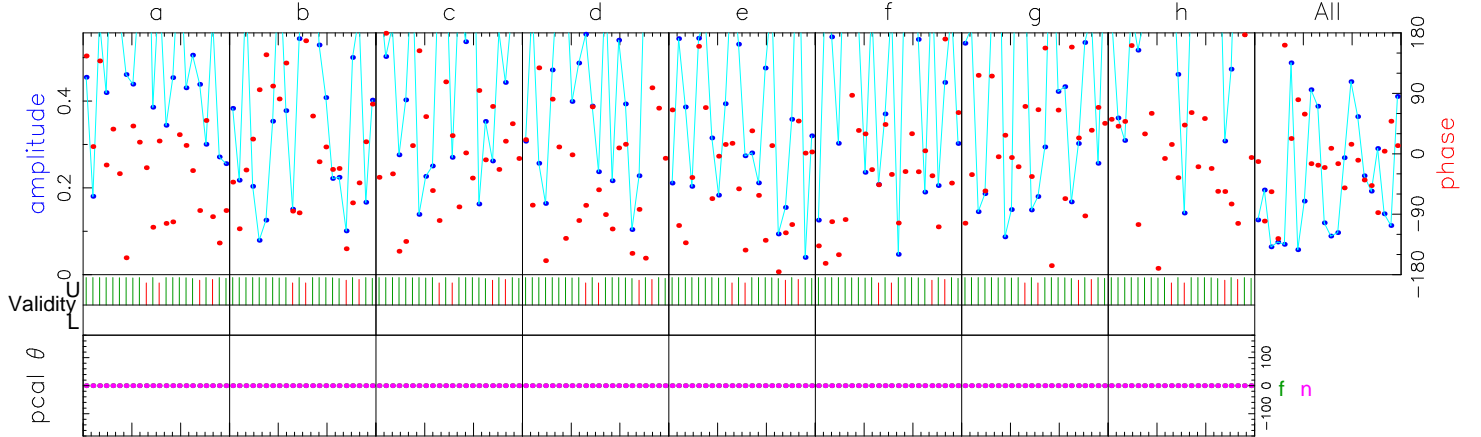


SNR 6.0
Int time 174.782
Amp 0.186
Phase -12.0
PFD 2.2e-01
Delays (us)
SBD 0.959186
MBD 0.004167
Fringe rate (Hz)
-0.505754
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122832
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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
	-15.6	6.2	-15.8	-29.6	-17.3	-26.7	7.5	-3.7		-12.0
	0.2	0.1	0.3	0.1	0.1	0.2	0.2	0.2		0.2
	131.9	271.6	501.4	188.4	177.9	16.3	274.3	48.0		502.6
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
n	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
f	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks
										Tracks
Group delay (usec)(sbd)	-3.96929975778E+02		Apriori delay (usec)		-3.97887267340E+02		Resid mbdelay (usec)		4.16656E-03	+/- 1.8E-04
Sband delay (usec)	-3.96928081340E+02		Apriori clock (usec)		7.7029915E+00		Resid sbdelay (usec)		9.59186E-01	+/- 1.4E-03
Phase delay (usec)	-3.97887267726E+02		Apriori clockrate (us/s)		-1.0000003E-07		Resid phdelay (usec)		-3.86337E-07	+/- 6.2E-07
Delay rate (us/s)	1.96482024373E-01		Apriori rate (us/s)		1.96487895681E-01		Resid rate (us/s)		-5.87131E-06	+/- 6.0E-09
Total phase (deg)			Apriori accel (us/s/s)		-9.73796831045E-06		Resid phase (deg)		-12.0	+/- 19.1

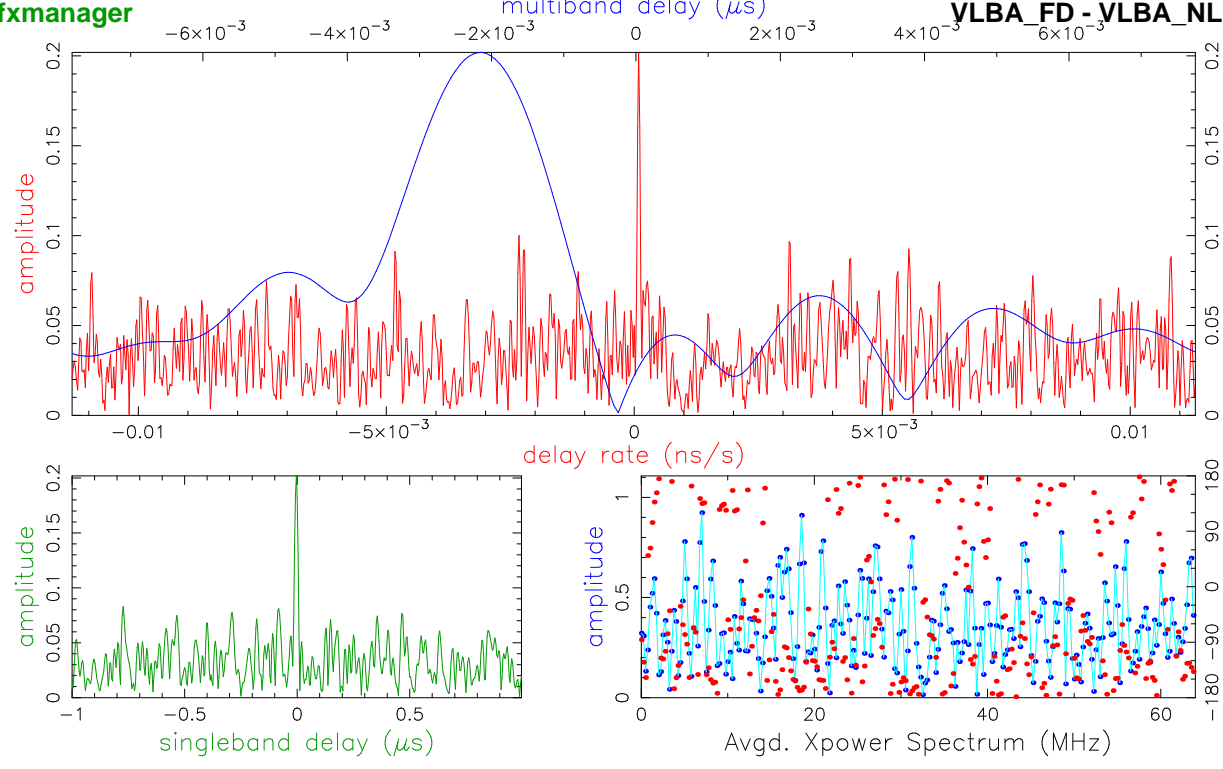
ph/seg (deg) 62.1 44.5 Search (1024X32) 0.160 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 89.7 77.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 15.1 27.0 Inc. seg. avg. 0.188 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 28.0 47.1 Inc. frq. avg. 0.168 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 n: az 279.2 el 85.0 pa 94.0 u,v (fr/asec) -1532.272 -1712.976 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn.W.141.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

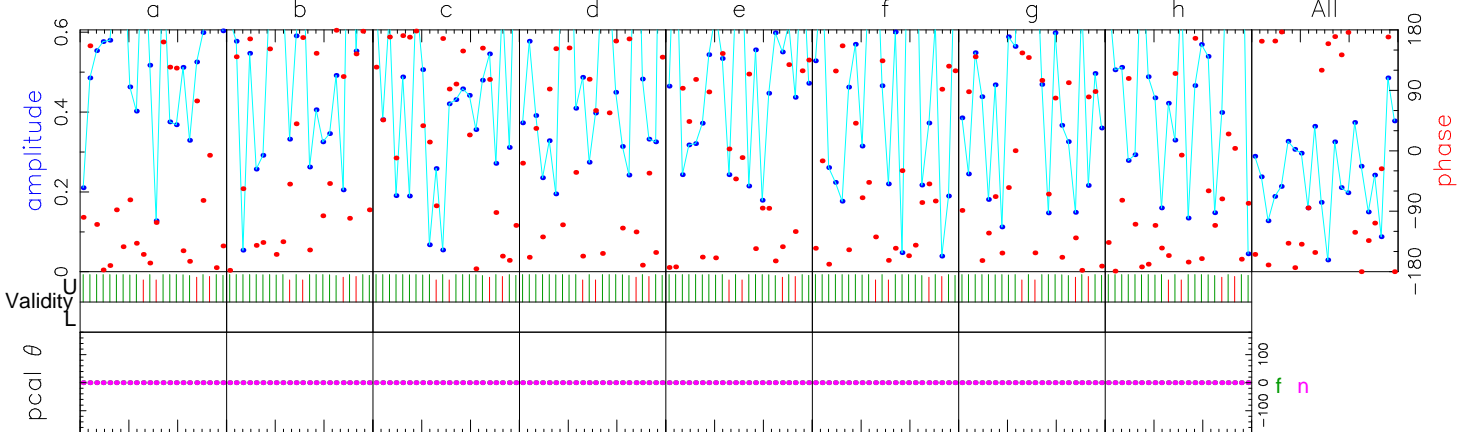
BLLAC.1ILB8W, No0028, fn

VLBA_FD - VLBA_NL, fgroup W, pol LL



Fringe quality 9
 SNR 7.3
 Int time 174.782
 Amp 0.202
 Phase -166.7
 PFD 4.4e-05
 Delays (us)
 SBD -0.004018
 MBD -0.002158
 Fringe rate (Hz)
 0.008118
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122826
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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



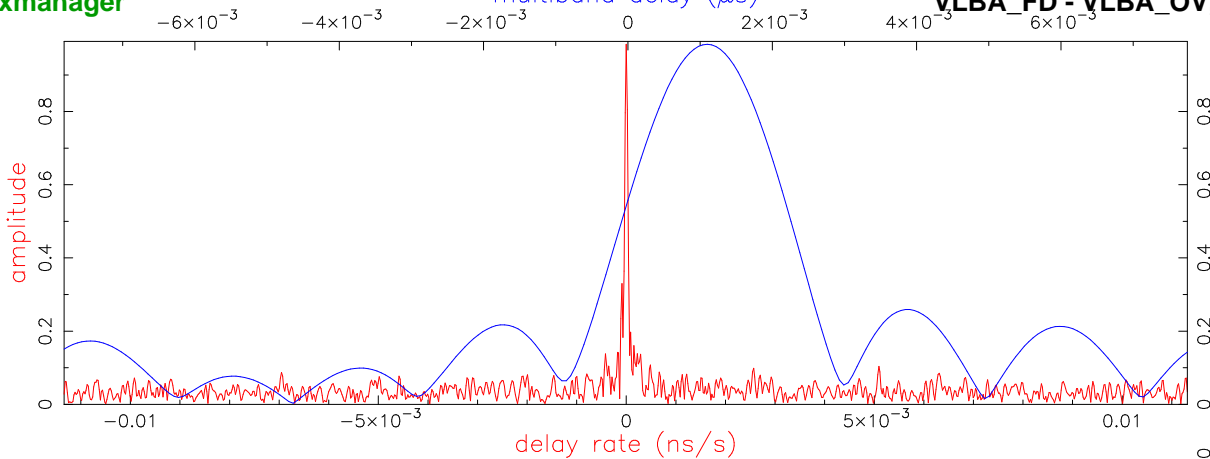
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd) -3.97889424891E+02 Apriori delay (usec) -3.97887267340E+02 Resid mbdelay (usec) -2.15755E-03 +/- 1.5E-04
 Sband delay (usec) -3.97891285840E+02 Apriori clock (usec) 7.7029915E+00 Resid sbdelay (usec) -4.01850E-03 +/- 1.2E-03
 Phase delay (usec) -3.97887272716E+02 Apriori clockrate (us/s) -1.0000003E-07 Resid phdelay (usec) -5.37593E-06 +/- 5.1E-07
 Delay rate (us/s) 1.96487989920E-01 Apriori rate (us/s) 1.96487895681E-01 Resid rate (us/s) 9.42396E-08 +/- 4.9E-09
 Total phase (deg) -241.8 Apriori accel (us/s/s) -9.73796831045E-06 Resid phase (deg) -166.7 +/- 15.7

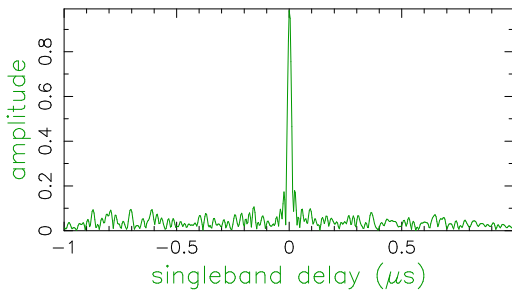
ph/seg (deg) 46.5 36.5 Search (1024X32) 0.195 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 55.9 63.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.4 22.2 Inc. seg. avg. 0.206 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 30.3 38.7 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
 f: az 19.5 el 77.4 pa -156.4 n: az 279.2 el 85.0 pa 94.0 u,v (fr/asec) -1532.272 -1712.976 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fn.W.86.1ILB8W

multiband delay (μ s)

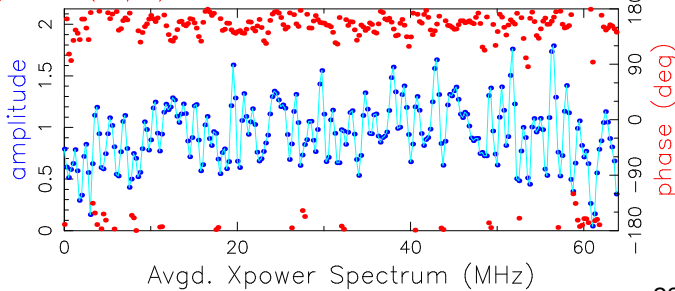
Fringe quality 9



SNR 35.8
Int time 173.973
Amp 0.992
Phase 159.5
PFD 0.0e+00
Delays (us)
SBD 0.001179
MBD 0.001120
Fringe rate (Hz) 0.000413
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

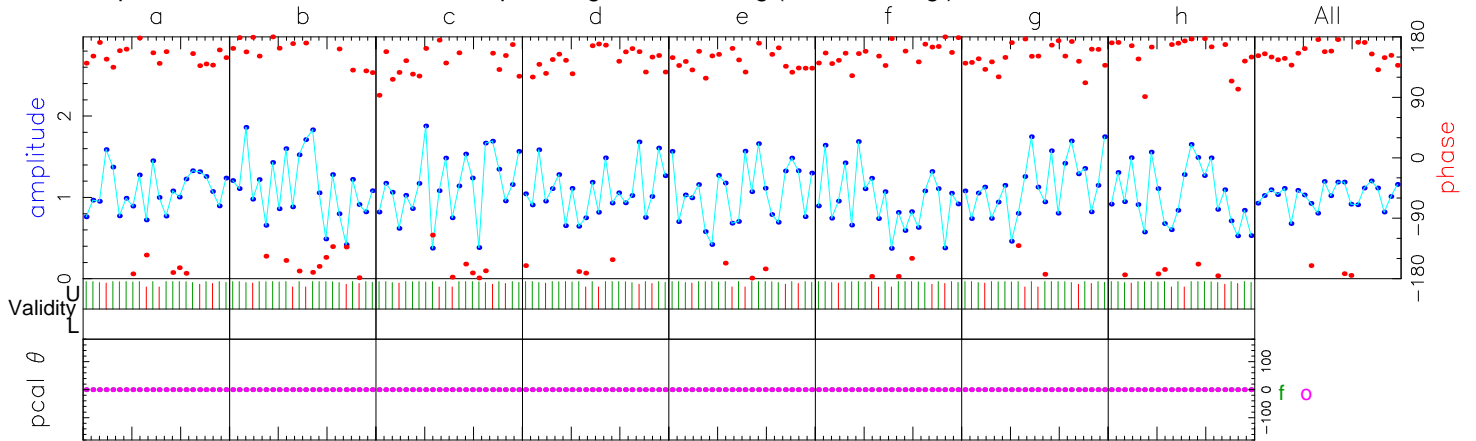


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122828
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	2.98542571428E+02	Apriori delay (usec)		2.98541451928E+02	Resid mbdelay (usec)		1.11950E-03	+/-	3.0E-05
Sband delay (usec)	2.98542631178E+02	Apriori clock (usec)		-1.3541956E+01	Resid sbdelay (usec)		1.17925E-03	+/-	2.4E-04
Phase delay (usec)	2.98541457072E+02	Apriori clockrate (us/s)		5.0000000E-07	Resid phdelay (usec)		5.14452E-06	+/-	1.0E-07
Delay rate (us/s)	-2.15868097319E-01	Apriori rate (us/s)		-2.15868102118E-01	Resid rate (us/s)		4.79835E-09	+/-	1.0E-09
Total phase (deg)	40.4	Apriori accel (us/s/s)		-8.91254535431E-06	Resid phase (deg)		159.5	+/-	3.2

ph/seg (deg)	17.1	Theor.	7.5	Amplitude	0.992 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	14.3		13.0	Search (1024X32)	0.968	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	9.4		4.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	3.7		7.9	Inc. seg. avg.	1.019	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.991	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	
f: az 19.5 el 77.4 pa -156.4	o: az 65.2 el 73.9 pa -101.4		u,v (fr/asec)		1665.879 -1272.510	simultaneous interpolator				

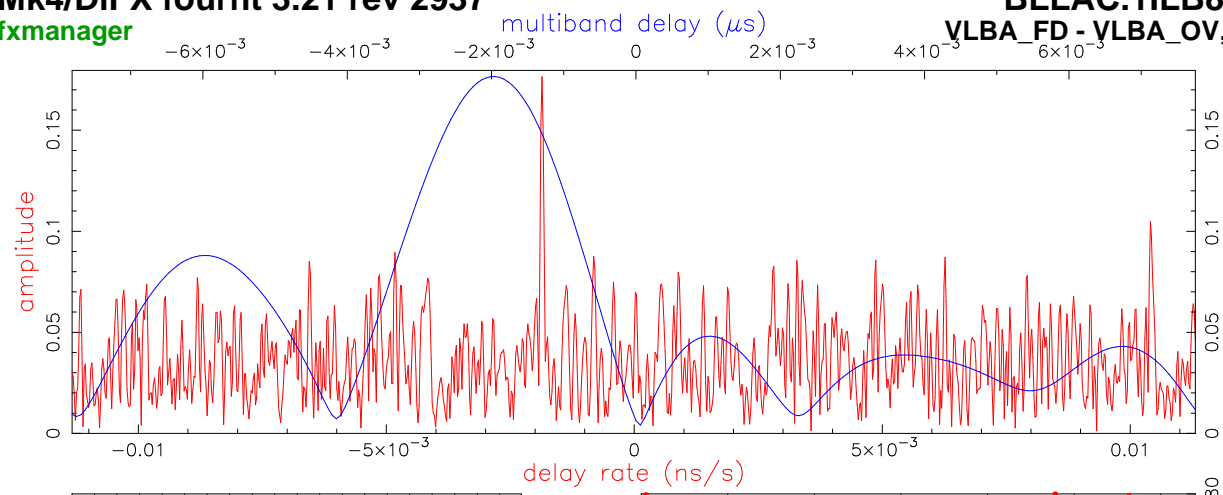
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo.W.104.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fo

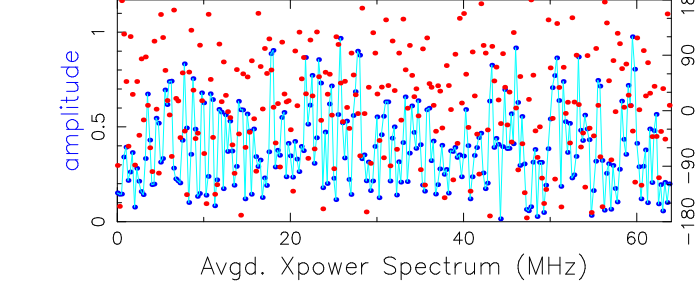
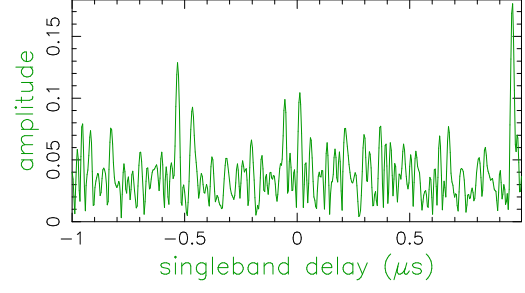
VLBA_FD - VLBA_OV, fgroup W, pol LR



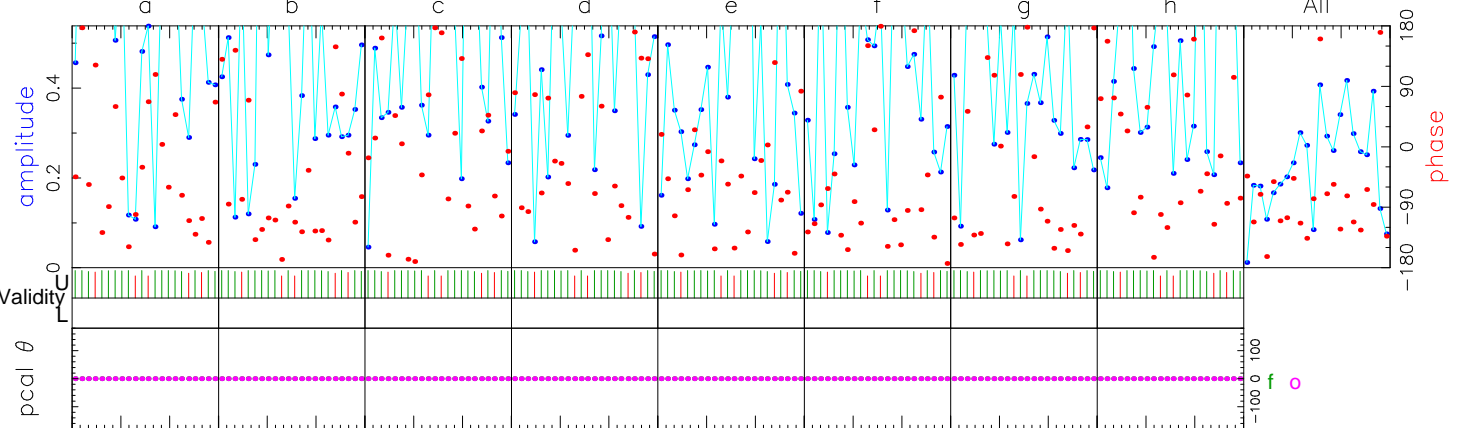
Fringe quality 0

SNR 6.4
 Int time 173.973
 Amp 0.180
 Phase -99.5
 PFD 2.0e-02
 Delays (us)
 SBD 0.956012
 MBD -0.002013
 Fringe rate (Hz)
 -0.159839
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122830
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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
	-77.1	-113.3	-106.3	-110.3	-73.4	-120.1	-126.1	-43.3	Phase	-99.5
	0.2	0.3	0.1	0.1	0.3	0.3	0.2	0.1	Ampl.	0.2
	136.3	501.1	291.3	351.8	13.8	374.0	123.3	261.5	Sbd box	501.7
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.99492563820E+02		Apriori delay (usec)		2.98541451928E+02		Resid mbdelay (usec)		-2.01311E-03	+/- 1.7E-04
Sband delay (usec)	2.99497463678E+02		Apriori clock (usec)		-1.3541956E+01		Resid sbdelay (usec)		9.56012E-01	+/- 1.3E-03
Phase delay (usec)	2.98541448719E+02		Apriori clockrate (us/s)		5.0000000E-07		Resid phdelay (usec)		-3.20880E-06	+/- 5.8E-07
Delay rate (us/s)	-2.15869957693E-01		Apriori rate (us/s)		-2.15868102118E-01		Resid rate (us/s)		-1.85557E-06	+/- 5.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-8.91254535431E-06		Resid phase (deg)		-99.5	+/- 17.9

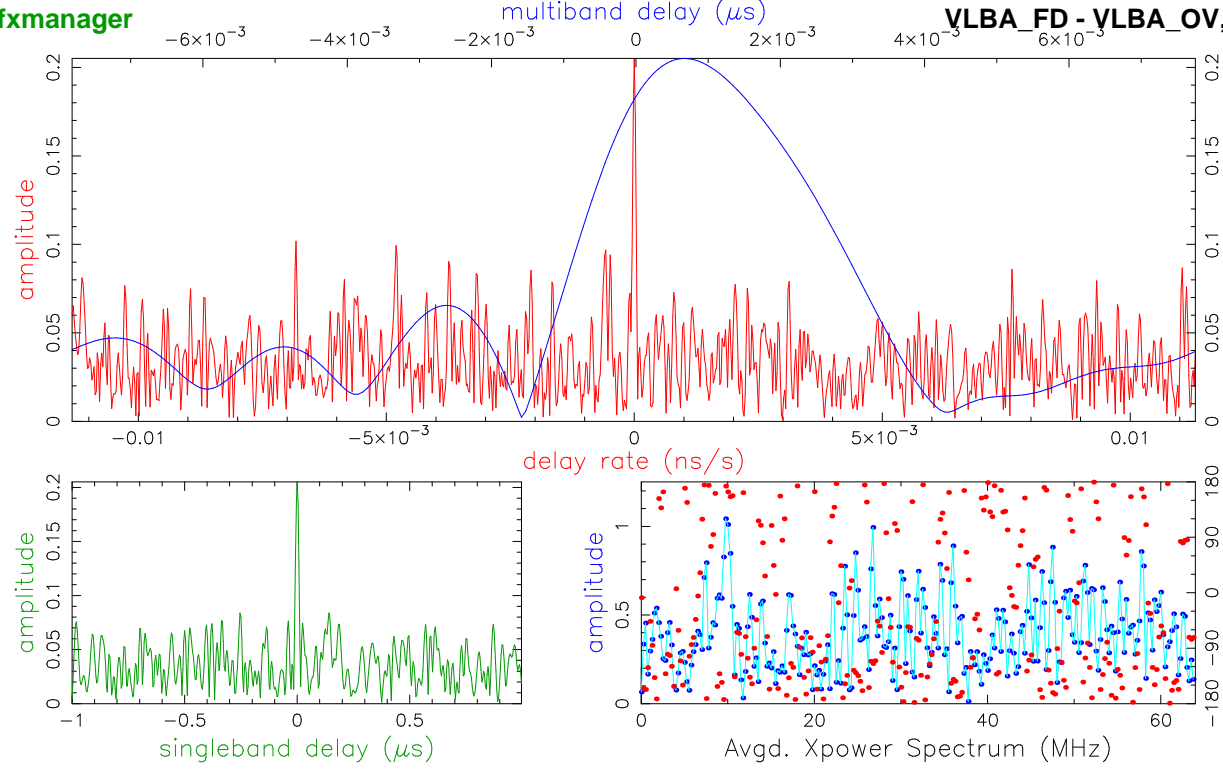
ph/seg (deg) 42.4 41.6 Search (1024X32) 0.173 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.3 72.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.2 25.3 Inc. seg. avg. 0.182 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.5 44.1 Inc. frq. avg. 0.179 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 o: az 65.2 el 73.9 pa -101.4 u,v (fr/asec) 1665.879 -1272.510 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo.W.123.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fo

VLBA_FD - VLBA_OV, fgroup W, pol RL

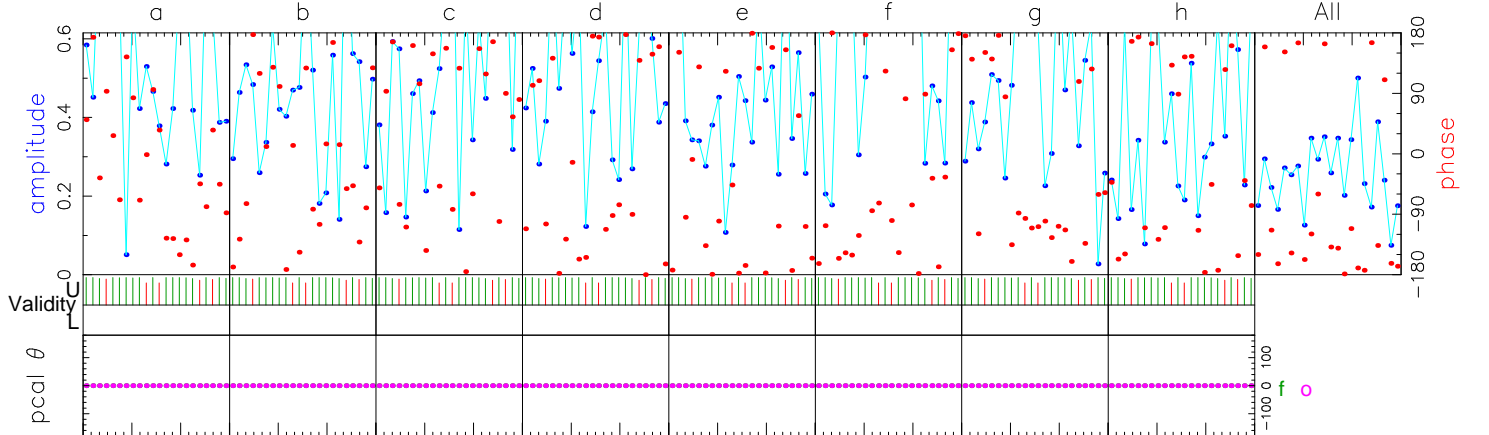


Fringe quality 9

SNR 7.4
 Int time 173.973
 Amp 0.205
 Phase -160.0
 PFD 2.2e-05
 Delays (us)
 SBD -0.000119
 MBD 0.000663
 Fringe rate (Hz)
 0.000302
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122831
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	2.98542115115E+02	Apriori delay (usec)		2.98541451928E+02	Resid mbdelay (usec)		6.63187E-04	+/-	1.5E-04	
Sband delay (usec)	2.98541332928E+02	Apriori clock (usec)		-1.3541956E+01	Resid sbdelay (usec)		-1.19000E-04	+/-	1.2E-03	
Phase delay (usec)	2.98541446767E+02	Apriori clockrate (us/s)		5.0000000E-07	Resid phdelay (usec)		-5.16034E-06	+/-	5.0E-07	
Delay rate (us/s)	-2.15868098609E-01	Apriori rate (us/s)		-2.15868102118E-01	Resid rate (us/s)		3.50878E-09	+/-	4.9E-09	
Total phase (deg)		80.8	Apriori accel (us/s/s)		-8.91254535431E-06	Resid phase (deg)		-160.0	+/-	15.5

ph/seg (deg)	38.5	Theor.	36.1	Amplitude	0.205 +/- 0.028	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	53.9		62.9	Search (1024X32)	0.203	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	51.0		21.9	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	47.0		38.2	Inc. seg. avg.	0.217	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.219	Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 19.5 el 77.4 pa -156.4 o: az 65.2 el 73.9 pa -101.4 u,v (fr/asec) 1665.879 -1272.510 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo.W.137.1ILB8W

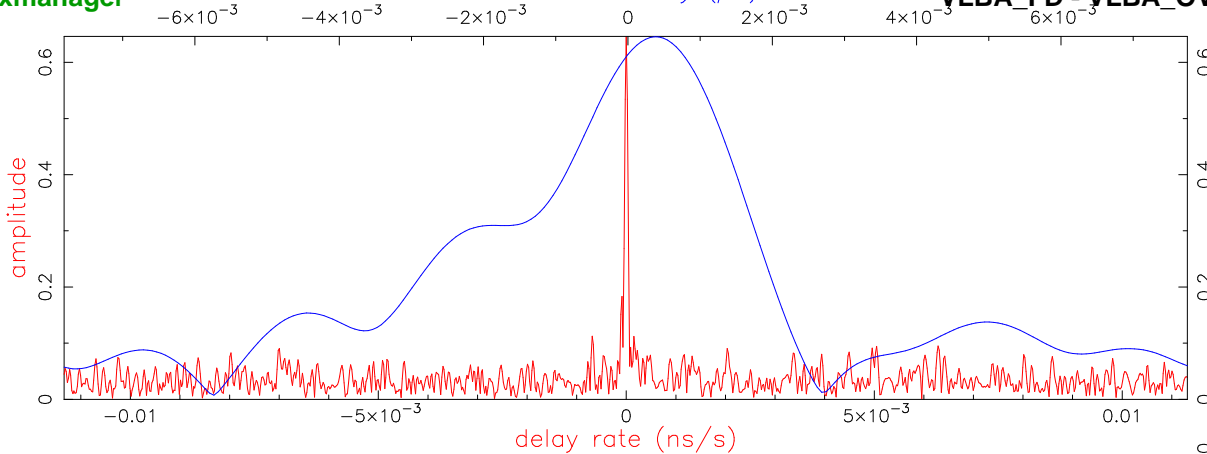
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fo

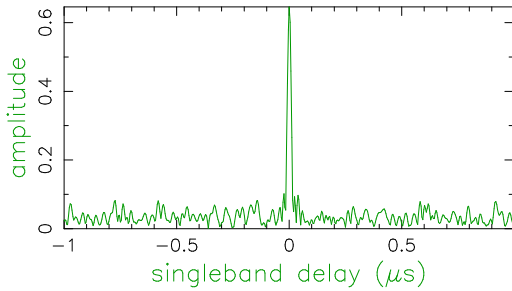
VLBA_FD - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

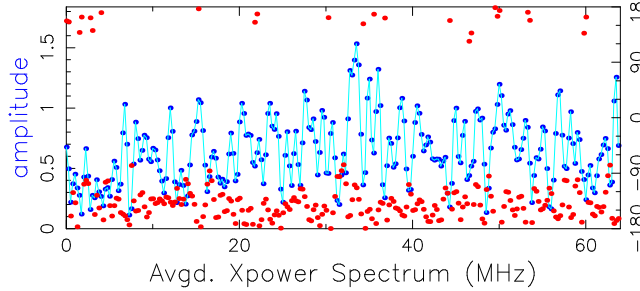


Fringe quality 7

SNR 23.3
 Int time 173.973
 Amp 0.646
 Phase -146.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.000401
 MBD 0.000391
 Fringe rate (Hz)
 0.000307
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

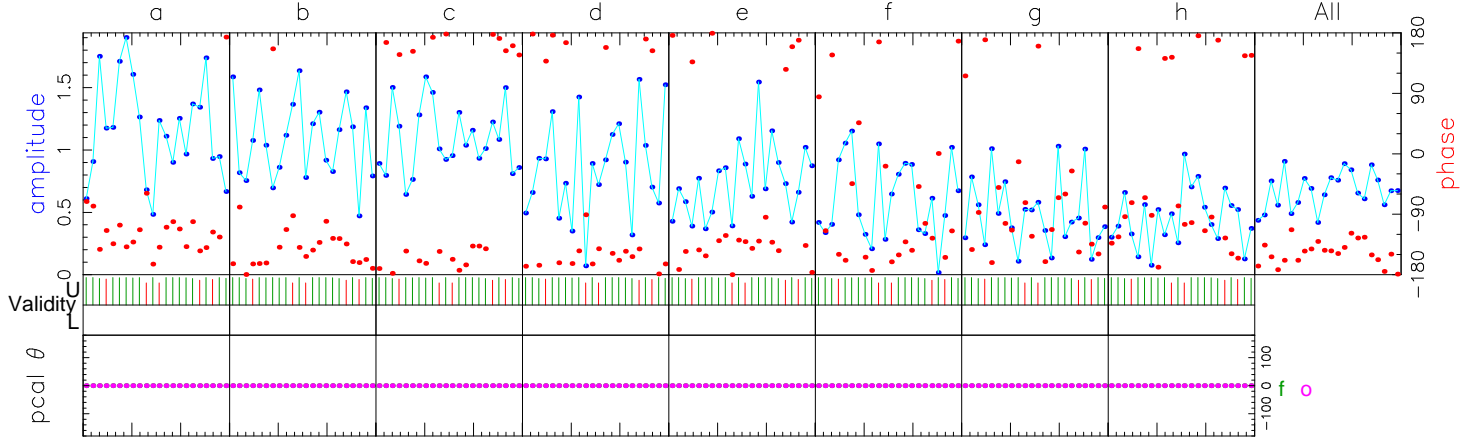


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122826
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-122.8	-143.4	-175.2	-168.5	-148.6	-142.0	-112.1	-133.7	Phase	-146.8
	1.1	1.0	1.0	0.8	0.6	0.4	0.3	0.3	Ampl.	0.7
	256.9	256.9	256.9	257.3	257.7	257.5	256.4	256.9	Sbd box	257.1
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.98541842897E+02	Apriori delay (usec)	2.98541451928E+02	Resid mbdelay (usec)	3.90969E-04	+/-	4.7E-05
Sband delay (usec)	2.98541852928E+02	Apriori clock (usec)	-1.3541956E+01	Resid sbdelay (usec)	4.01000E-04	+/-	3.7E-04
Phase delay (usec)	2.98541447193E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-4.73461E-06	+/-	1.6E-07
Delay rate (us/s)	-2.15868098549E-01	Apriori rate (us/s)	-2.15868102118E-01	Resid rate (us/s)	3.56830E-09	+/-	1.5E-09
Total phase (deg)	94.0	Apriori accel (us/s/s)	-8.91254535431E-06	Resid phase (deg)	-146.8	+/-	4.9

ph/seg (deg)	17.6	Theor.	11.4	Amplitude	0.646 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	22.3		20.0	Search (1024X32)	0.641	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	23.3		7.0	Inc. seg. avg.	0.661	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	46.5		12.1	Inc. frq. avg.	0.683	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	
						nlags:	256	t_cohere	infinite	

f: az 19.5 el 77.4 pa -156.4 o: az 65.2 el 73.9 pa -101.4 u,v (fr/asec) 1665.879 -1272.510 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fo.W.88.1ILB8W

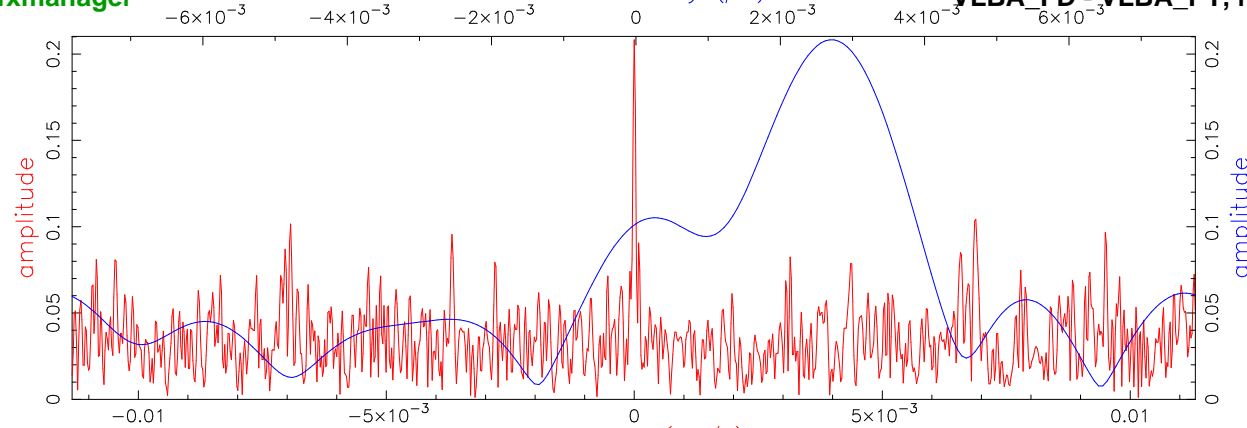
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

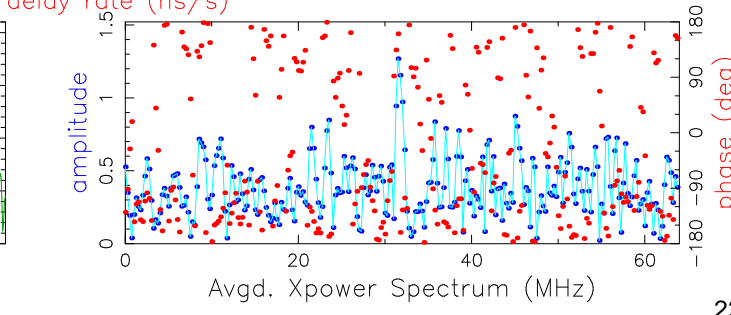
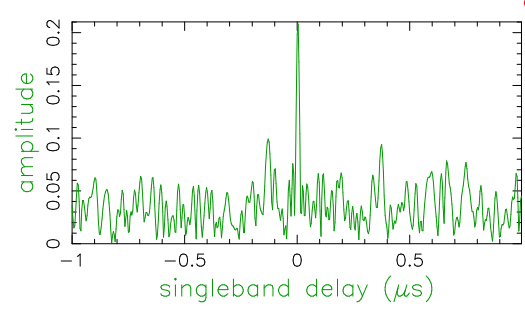
BLLAC.1ILB8W, No0028, fp

VLBA_FD - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)

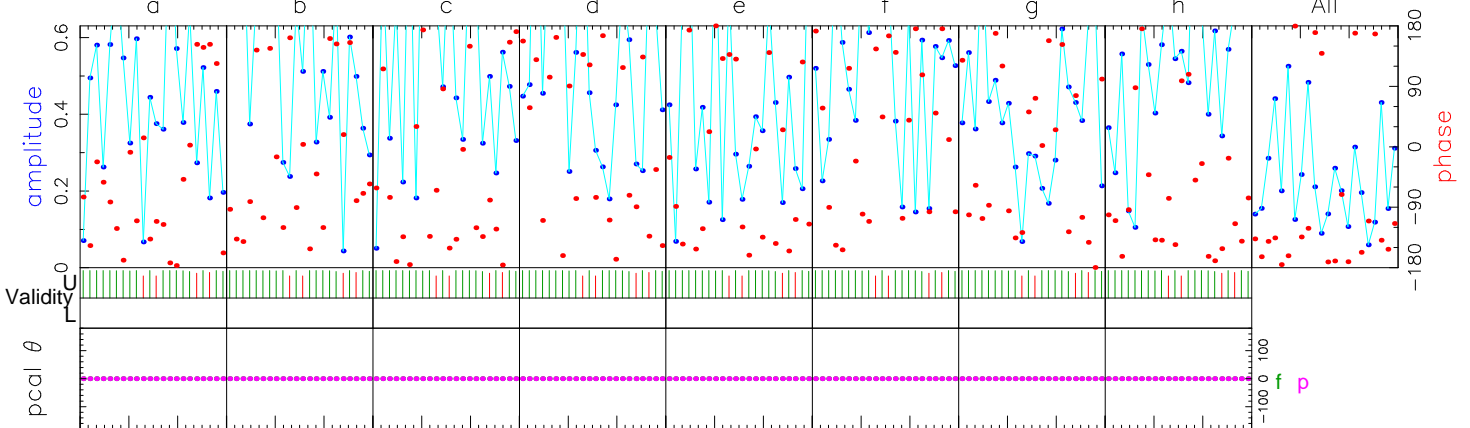


Fringe quality 9
 SNR 7.6
 Int time 174.782
 Amp 0.210
 Phase -150.0
 PFD 4.8e-06
 Delays (us)
 SBD 0.002769
 MBD 0.002675
 Fringe rate (Hz) -0.000292
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122827
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.09128415562E+02									
Sband delay (usec)	-1.09128321687E+02									
Phase delay (usec)	-1.09131095275E+02									
Delay rate (us/s)	-6.48936173905E-02									
Total phase (deg)			-196.9							
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										
Chan ids										
Tracks										
Chan ids										
Tracks										
Amplitude										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.210 +/- 0.028										
0.203										
0.000										
0.199										
0.215										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
-1.000 1.000										
-0.008 0.008										
-0.011 0.011										
0.00 0.00										
f: az 19.5 el 77.4 pa -156.4										
p: az 40.7 el 78.9 pa -133.9										
u,v (fr/asec) 499.952 -605.996										
simultaneous interpolator										

Mk4/DiFX fourfit 3.21 rev 2937

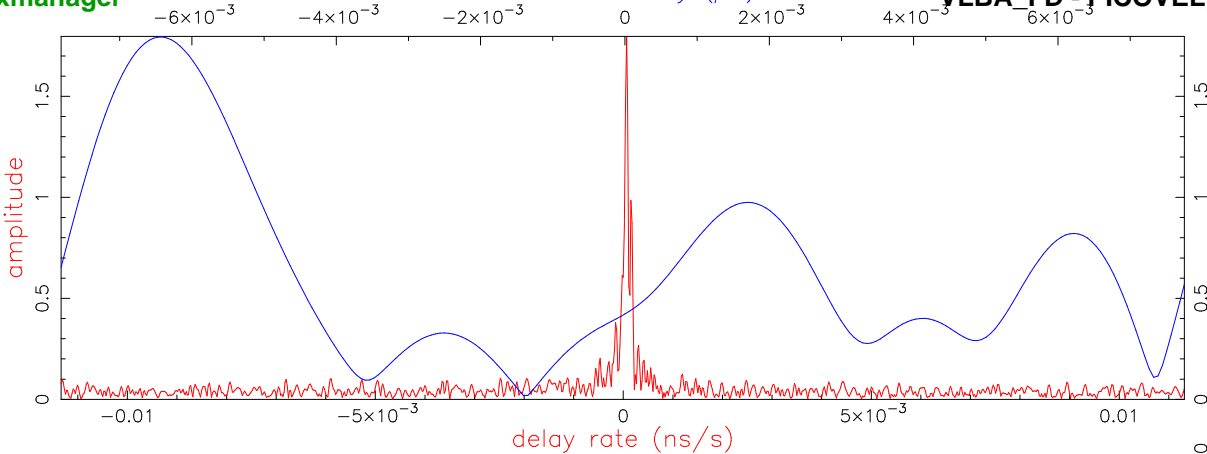
fxmanager

BLLAC.1ILB8W, No0028, fP

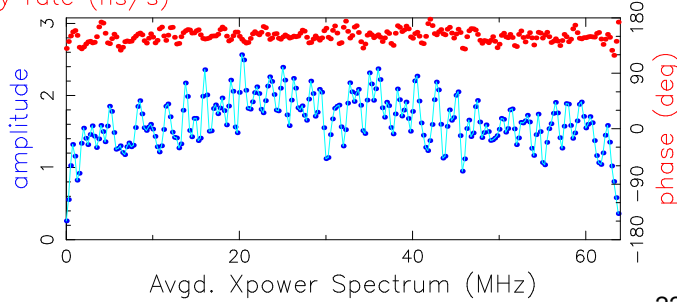
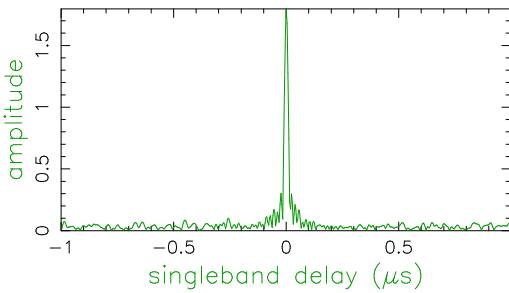
VLBA_FD - PICOVEL, fgroup W, pol RR

multiband delay (μ s)

Fringe quality 4

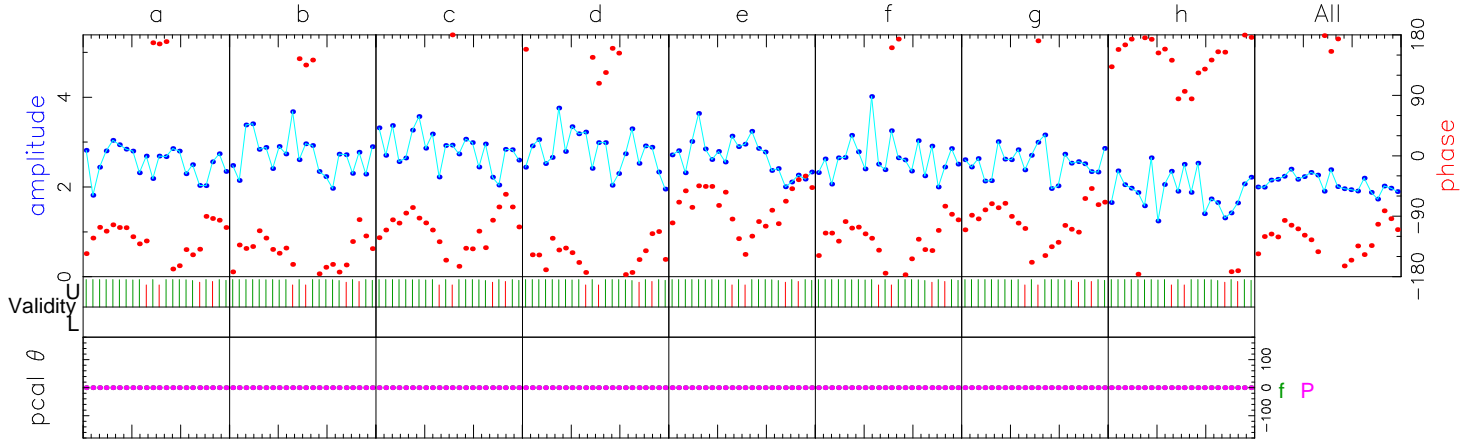


SNR 64.9
 Int time 174.597
 Amp 1.797
 Phase -129.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.000525
 MBD -0.006421
 Fringe rate (Hz)
 0.006336
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122829
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-130.3	-151.3	-110.8	-163.9	-75.9	-128.6	-99.9	151.9	Phase	-129.6
	2.2	2.3	2.5	2.3	2.3	2.3	2.2	1.6	Ampl.	2.2
	257.3	256.6	256.7	256.6	256.7	256.8	256.5	255.2	Sbd box	257.1
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	1.33103733843E+04		Apriori delay (usec)		1.33103798055E+04		Resid mbdelay (usec)		-6.42119E-03	+/- 1.7E-05
Sband delay (usec)	1.33103803305E+04		Apriori clock (usec)		8.0583916E+00		Resid sbdelay (usec)		5.25000E-04	+/- 1.3E-04
Phase delay (usec)	1.33103798014E+04		Apriori clockrate (us/s)		7.9999999E-07		Resid phdelay (usec)		-4.17987E-06	+/- 5.7E-08
Delay rate (us/s)	1.00280676448E+00		Apriori rate (us/s)		1.00280669093E+00		Resid rate (us/s)		7.35525E-08	+/- 5.5E-10
Total phase (deg)	32.1		Apriori accel (us/s/s)		-7.78249698179E-05		Resid phase (deg)		-129.6	+/- 1.8

ph/seg (deg) 30.8 4.1 Search (1024X32) 1.751 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 18.4 7.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.6 2.5 Inc. seg. avg. 2.072 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 25.6 4.4 Inc. frq. avg. 2.196 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 P: az 308.0 el 20.8 pa 58.8 u,v (fr/asec) -7836.307 -6143.728 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP.W.114.1ILB8W

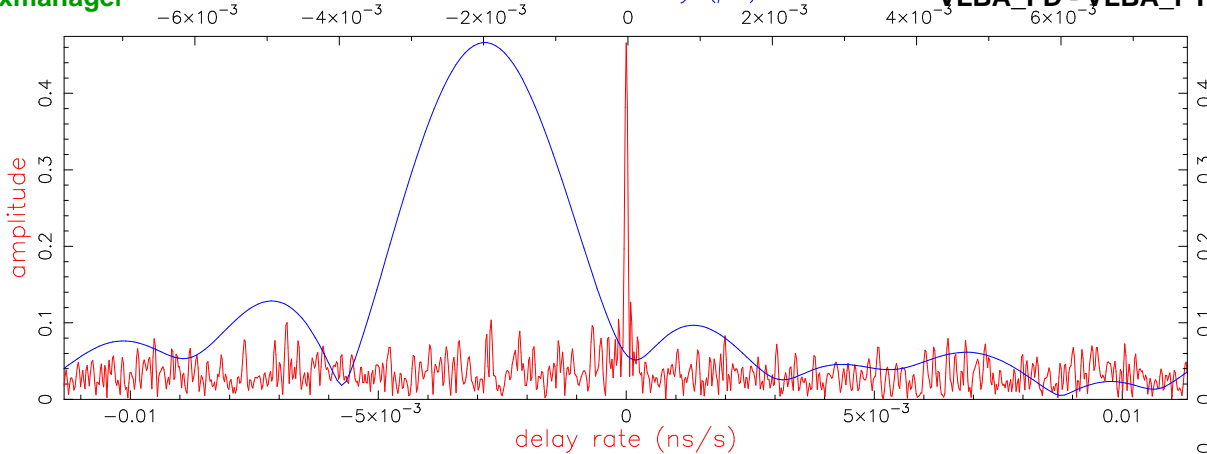
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fp

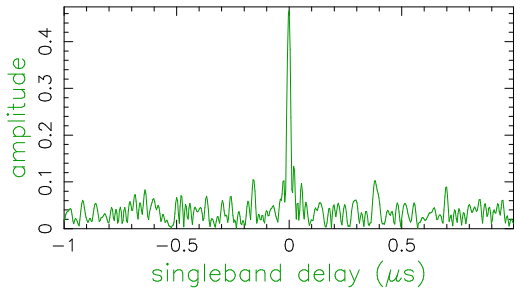
VLBA_FD - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)

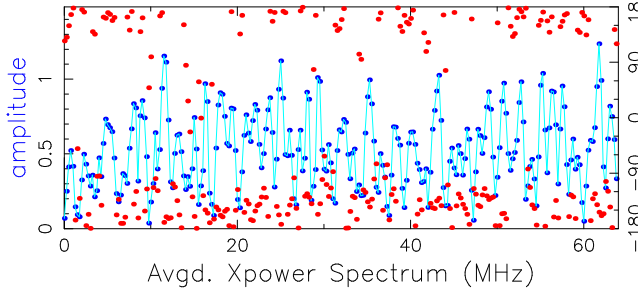


Fringe quality 9

SNR 17.2
 Int time 174.782
 Amp 0.474
 Phase -158.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.001660
 MBD -0.002039
 Fringe rate (Hz)
 -0.000066
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

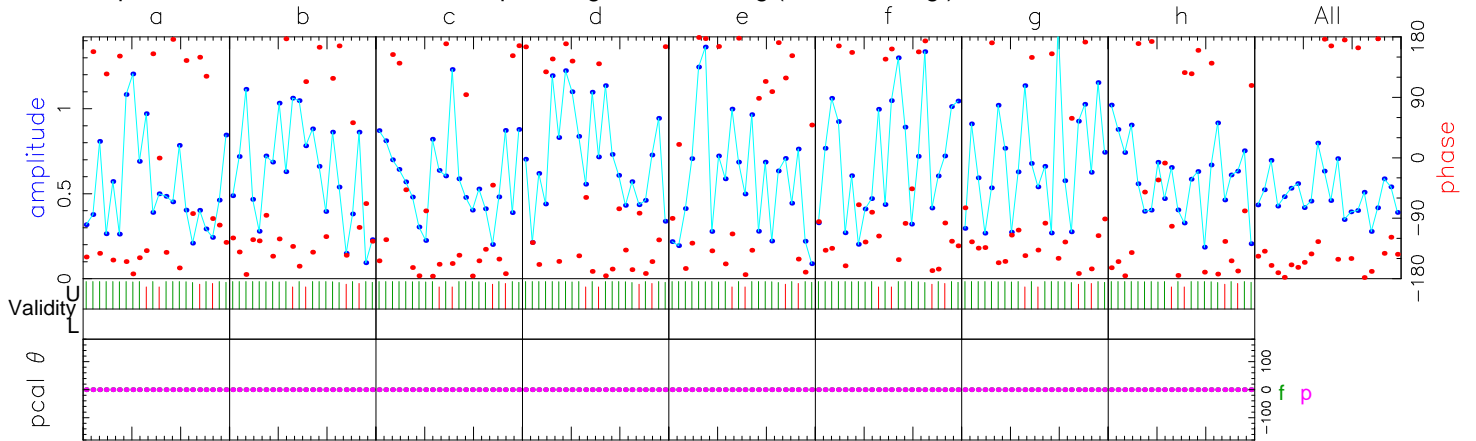


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122829
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-159.3	-150.8	-167.1	-169.7	-175.6	-147.7	-144.5	-161.0	Phase	-158.9
	0.4	0.4	0.5	0.6	0.4	0.5	0.6	0.4	Ampl.	0.5
	256.8	255.9	255.7	256.5	256.5	256.8	256.2	258.4	Sbd box	256.6
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	-1.09133129280E+02		Apriori delay (usec)		-1.09131090437E+02		Resid mbdelay (usec)		-2.03884E-03	+/- 6.3E-05
Sband delay (usec)	-1.09132750437E+02		Apriori clock (usec)		7.7890005E+00		Resid sbdelay (usec)		-1.66000E-03	+/- 5.0E-04
Phase delay (usec)	-1.09131095560E+02		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-5.12377E-06	+/- 2.2E-07
Delay rate (us/s)	-6.48936147702E-02		Apriori rate (us/s)		-6.48936139993E-02		Resid rate (us/s)		-7.70911E-10	+/- 2.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-3.48451354641E-06		Resid phase (deg)		-158.9	+/- 6.7

	RMS	Theor.	Amplitude	0.474 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	20.8	15.6	Search (1024X32)	0.466	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	25.9	27.2	Inc. seg. avg.	0.480	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	12.0	9.4	Inc. frq. avg.	0.468	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	15.1	16.5							

f: az 19.5 el 77.4 pa -156.4 p: az 40.7 el 78.9 pa -133.9 u,v (fr/asec) 499.952 -605.996 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fp..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fp.W.120.1ILB8W

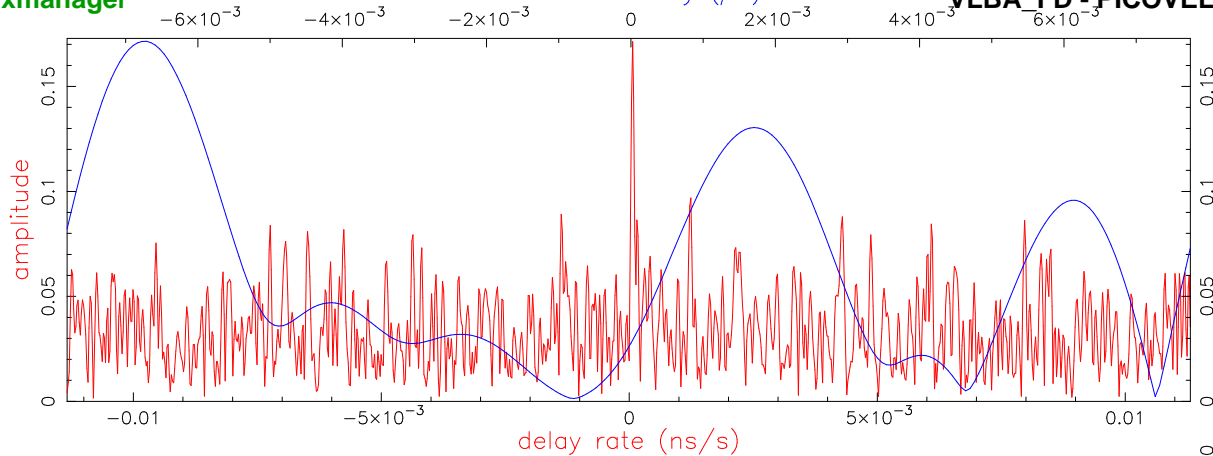
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fP

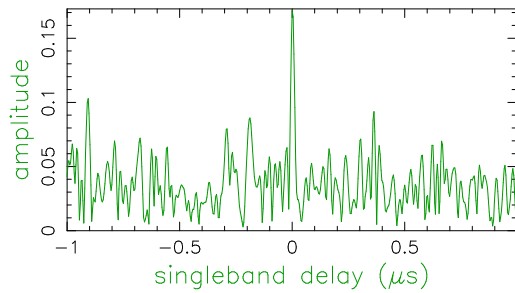
VLBA_FD - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

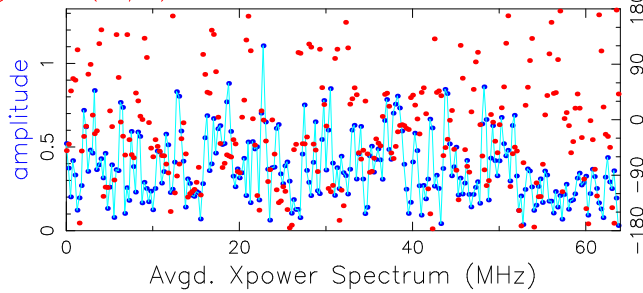


Fringe quality 0

SNR 6.2
 Int time 174.597
 Amp 0.173
 Phase 57.0
 PFD 5.5e-02
 Delays (us)
 SBD 0.001265
 MBD -0.006696
 Fringe rate (Hz)
 0.006390
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

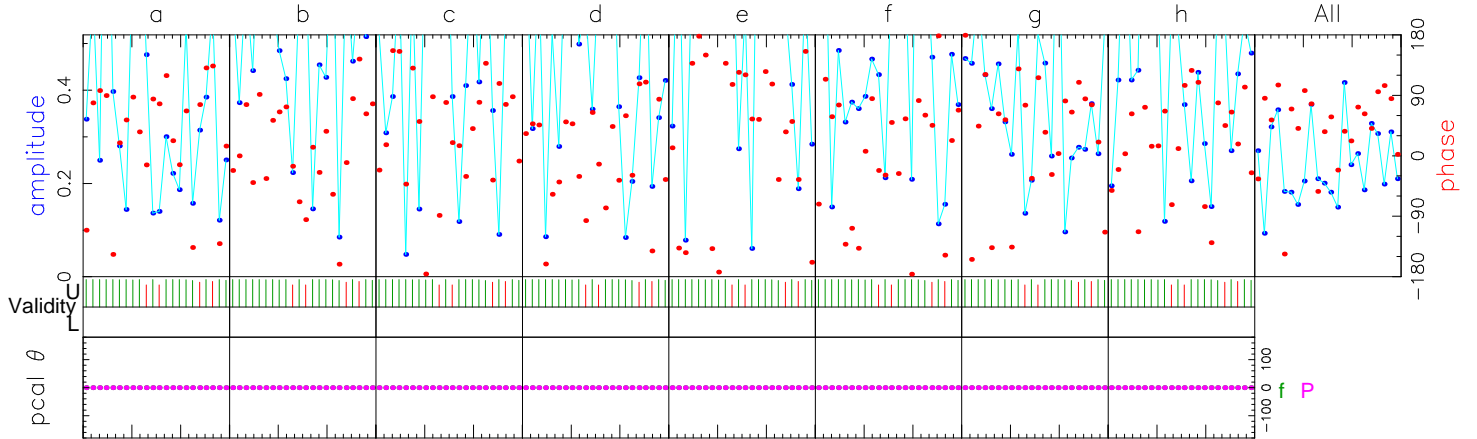


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122830
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	1.33103887343E+04	Apriori delay (usec)	1.33103798055E+04	Resid mbdelay (usec)	-6.69619E-03	+/-	1.7E-04
Sband delay (usec)	1.33103810703E+04	Apriori clock (usec)	8.0583916E+00	Resid sbdelay (usec)	1.26475E-03	+/-	1.4E-03
Phase delay (usec)	1.33103798074E+04	Apriori clockrate (us/s)	7.9999999E-07	Resid phdelay (usec)	1.83668E-06	+/-	5.9E-07
Delay rate (us/s)	1.00280676511E+00	Apriori rate (us/s)	1.00280669093E+00	Resid rate (us/s)	7.41860E-08	+/-	5.8E-09
Total phase (deg)	218.7	Apriori accel (us/s/s)	-7.78249698179E-05	Resid phase (deg)	57.0	+/-	18.3

ph/seg (deg)	54.9	Theor.	42.7	Amplitude	0.173 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	62.3		74.5	Search (1024X32)	0.166	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	43.4		25.9	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	34.2		45.3	Inc. seg. avg.	0.190	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.196	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 19.5 el 77.4 pa -156.4 P: az 308.0 el 20.8 pa 58.8 u,v (fr/asec) -7836.307 -6143.728 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP.W.128.1ILB8W

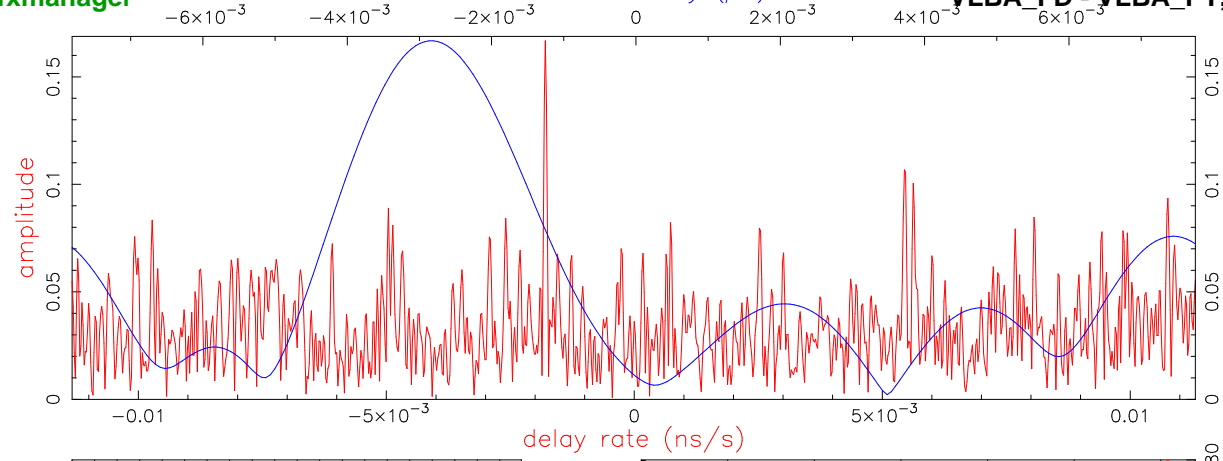
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

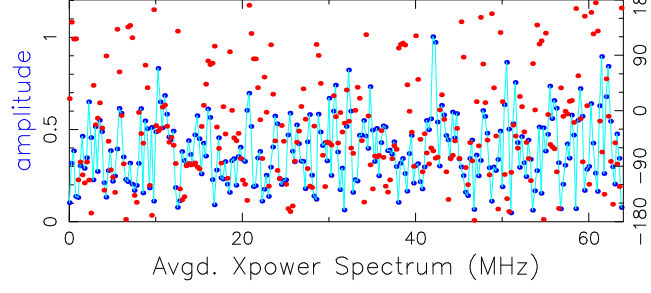
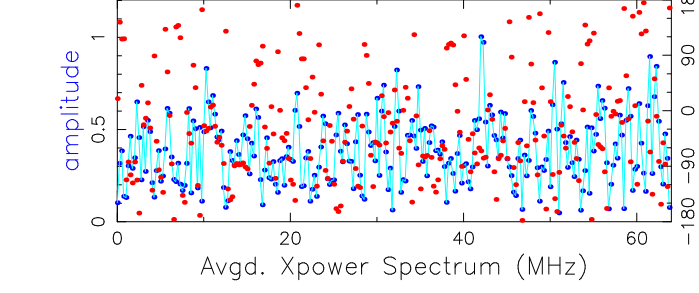
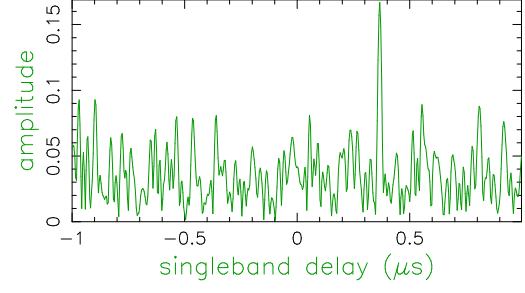
BLLAC.1ILB8W, No0028, fp

VLBA_FD - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

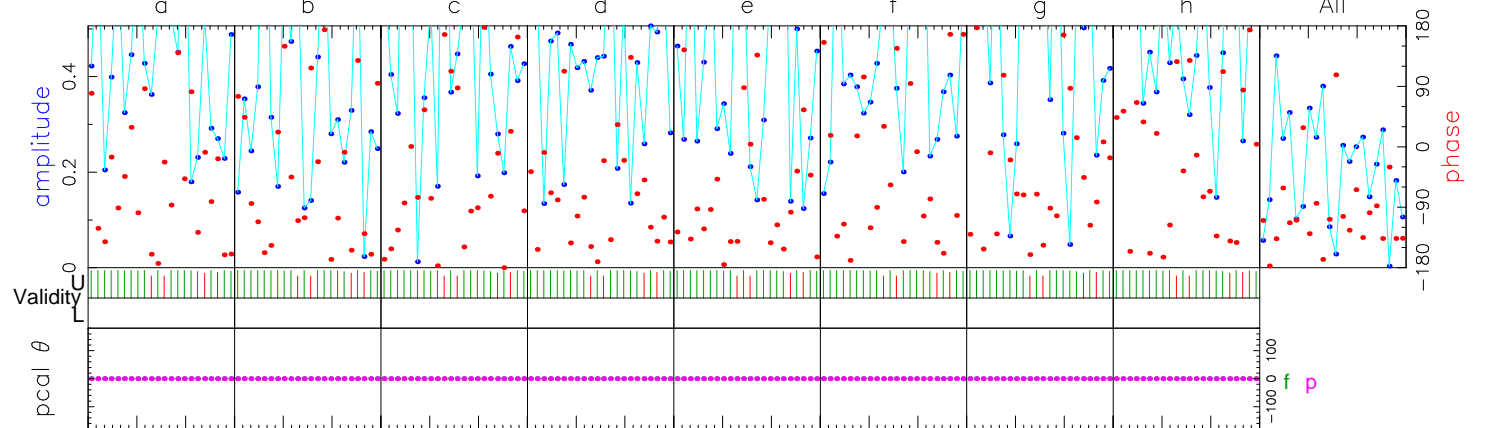


Fringe quality 0
 SNR 6.0
 Int time 174.782
 Amp 0.169
 Phase -116.8
 PFD 1.8e-01
 Delays (us)
 SBD 0.366623
 MBD -0.002837
 Fringe rate (Hz)
 -0.155224
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122831
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.08758927677E+02									
Sband delay (usec)	-1.08764467437E+02									
Phase delay (usec)	-1.09131094203E+02									
Delay rate (us/s)	-6.48954159917E-02									
Total phase (deg)			-163.7							
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										
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)										
ph/seg (deg)	52.6	44.2								
amp/seg (%)	71.4	77.1								
ph/frq (deg)	33.4	26.8								
amp/frq (%)	48.0	46.8								
Amplitude					0.169 +/- 0.028					
Search (1024X32)					0.159					
Interp.					0.000					
Inc. seg. avg.					0.160					
Inc. frq. avg.					0.165					
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
SampCntNorm: enabled										
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)										
f: az 19.5 el 77.4 pa -156.4										
p: az 40.7 el 78.9 pa -133.9										
u, v (fr/asec) 499.952 -605.996										
Control file: cf_1234_gmva										
Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fp..1ILB8W										
Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fp.W.138.1ILB8W										

simultaneous interpolator

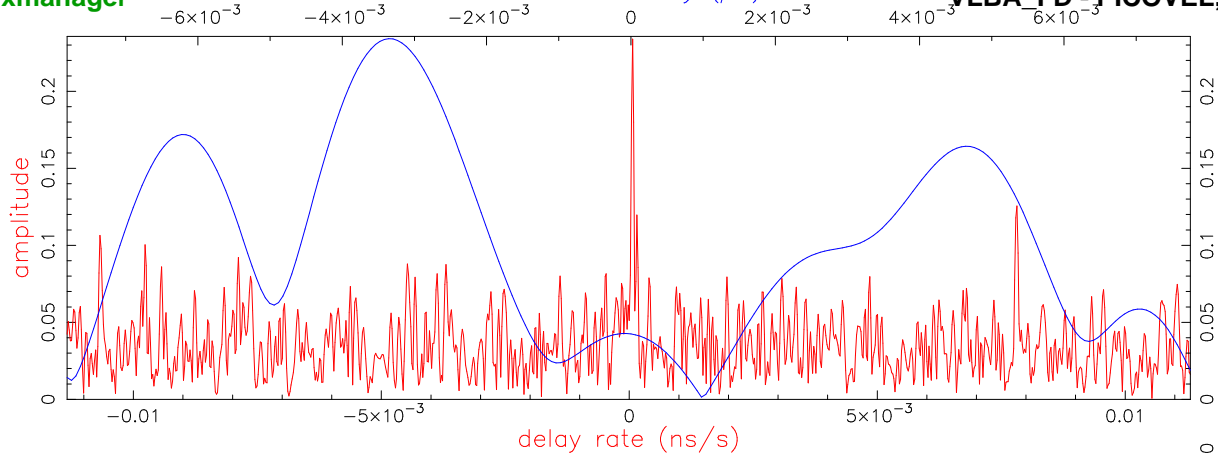
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fP

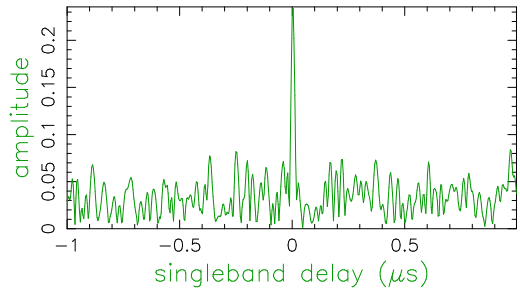
VLBA_FD - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

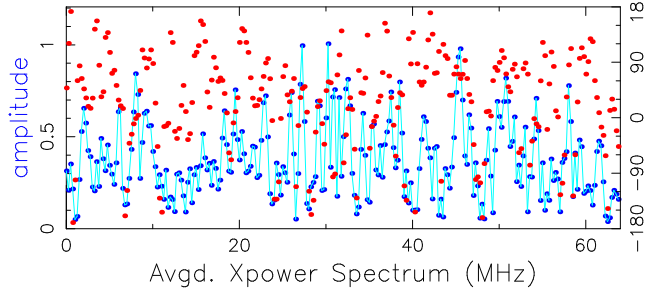


Fringe quality 9

SNR 8.5
 Int time 174.597
 Amp 0.236
 Phase 120.9
 PFD 3.0e-09
 Delays (us)
 SBD 0.002787
 MBD -0.003398
 Fringe rate (Hz) 0.006506
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

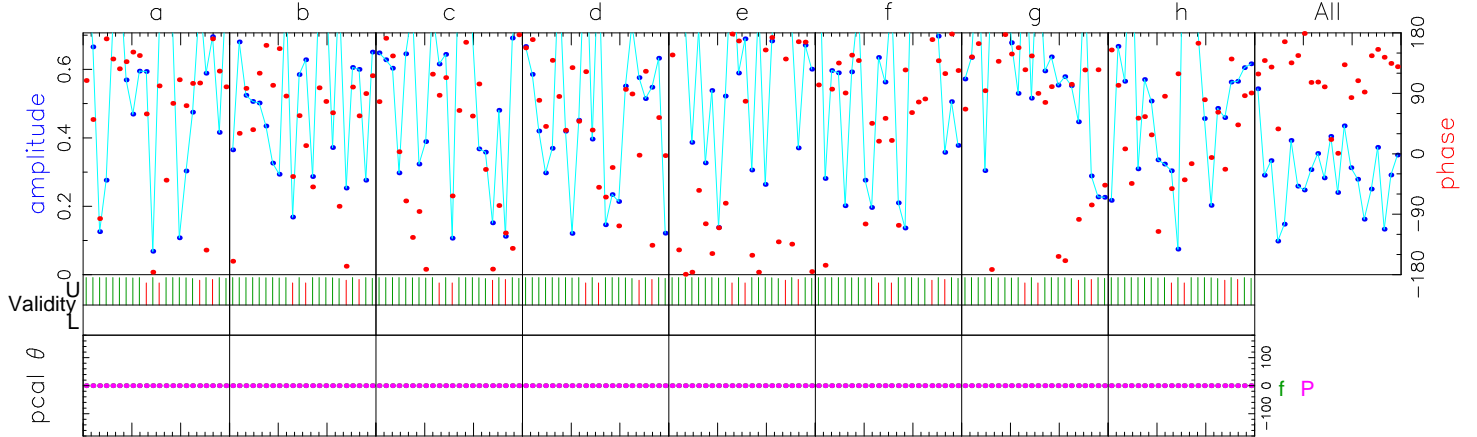


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122832
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.33103764071E+04	Apriori delay (usec)	1.33103798055E+04	Resid mbdelay (usec)	-3.39841E-03	+/-	1.3E-04
Sband delay (usec)	1.33103825923E+04	Apriori clock (usec)	8.0583916E+00	Resid sbdelay (usec)	2.78675E-03	+/-	1.0E-03
Phase delay (usec)	1.33103798094E+04	Apriori clockrate (us/s)	7.9999999E-07	Resid phdelay (usec)	3.89848E-06	+/-	4.3E-07
Delay rate (us/s)	1.00280676646E+00	Apriori rate (us/s)	1.00280669093E+00	Resid rate (us/s)	7.55294E-08	+/-	4.2E-09
Total phase (deg)	282.6	Apriori accel (us/s/s)	-7.78249698179E-05	Resid phase (deg)	120.9	+/-	13.5

ph/seg (deg)	44.3	RMS	44.3	Theor.	31.3	Amplitude	0.236 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	50.1	Search (1024X32)	0.225	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	51.3	Inc. seg. avg.	0.255	Inc. frq. avg.	0.298	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	52.9	Inc. frq. avg.	0.298	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 19.5 el 77.4 pa -156.4 P: az 308.0 el 20.8 pa 58.8 u,v (fr/asec) -7836.307 -6143.728 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP.W.149.1ILB8W

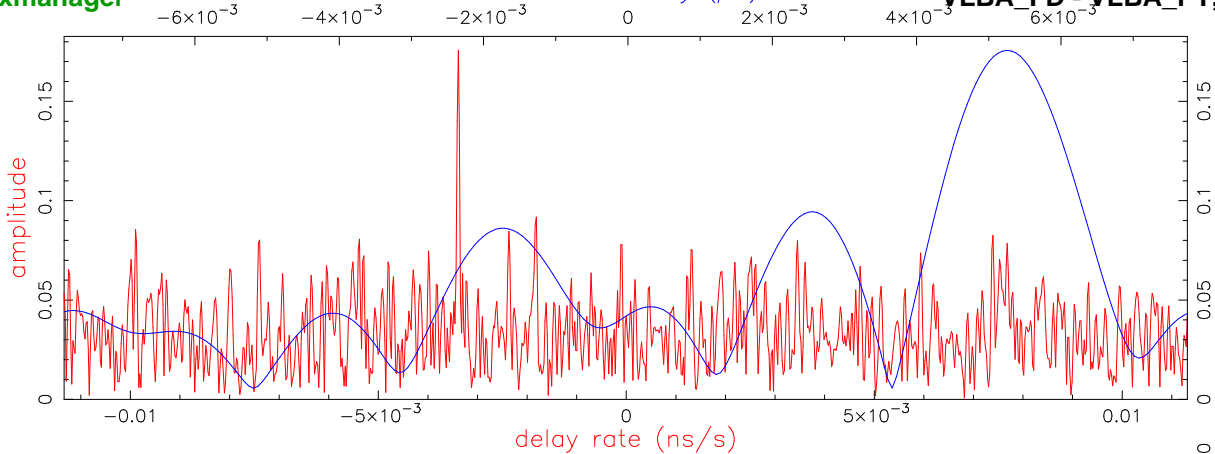
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fp

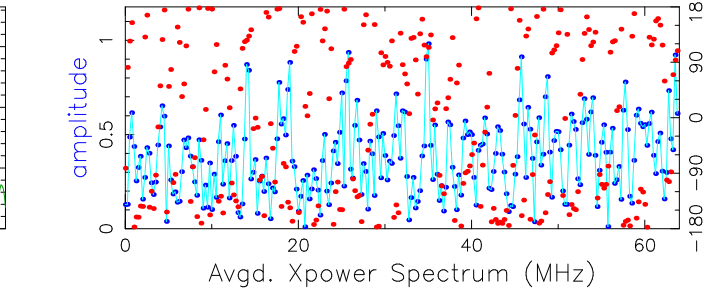
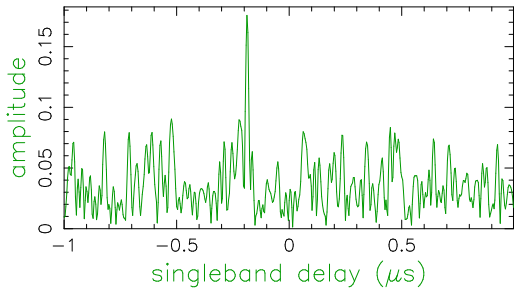
VLBA_FD - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)



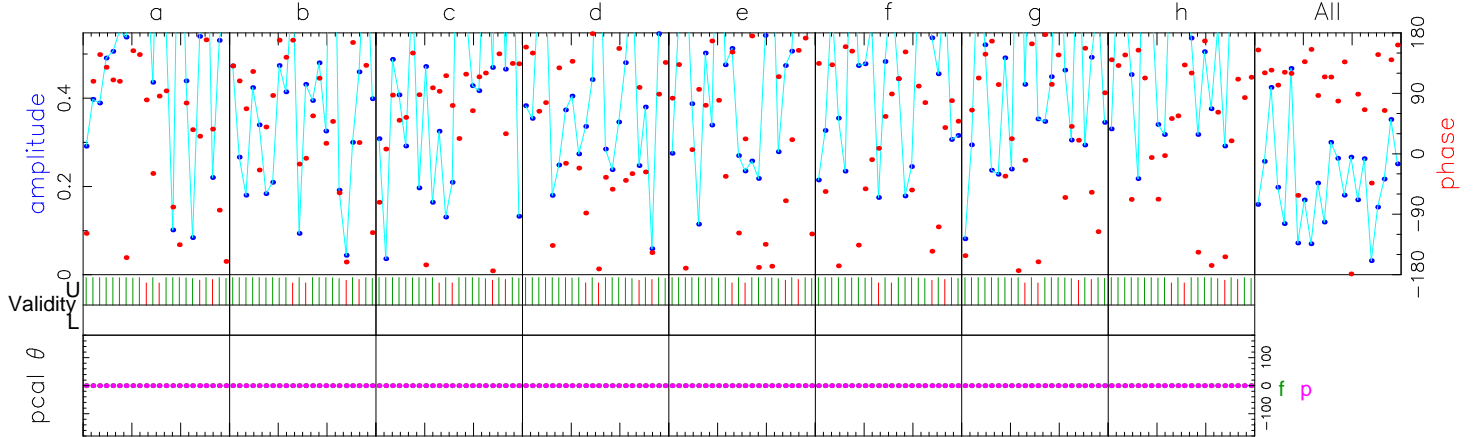
Fringe quality 0

SNR 6.4
 Int time 174.782
 Amp 0.183
 Phase 120.3
 PFD 2.7e-02
 Delays (us)
 SBD -0.186962
 MBD 0.005274
 Fringe rate (Hz)
 -0.293088
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122833
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.09313316239E+02									
Sband delay (usec)	-1.09318051937E+02									
Phase delay (usec)	-1.09131086556E+02									
Delay rate (us/s)	-6.48970164646E-02									
Total phase (deg)			73.5							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
Tracks										
Chan ids										
Tracks										
Chan ids										
Tracks										
RMS	59.3	41.9								
Theor.										
Amplitude										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
ph/seg (deg)										
amp/seg (%)										
ph/frq (deg)										
amp/frq (%)										
f: az 19.5 el 77.4 pa -156.4										
p: az 40.7 el 78.9 pa -133.9										
u, v (fr/asec) 499.952 -605.996										
simultaneous interpolator										

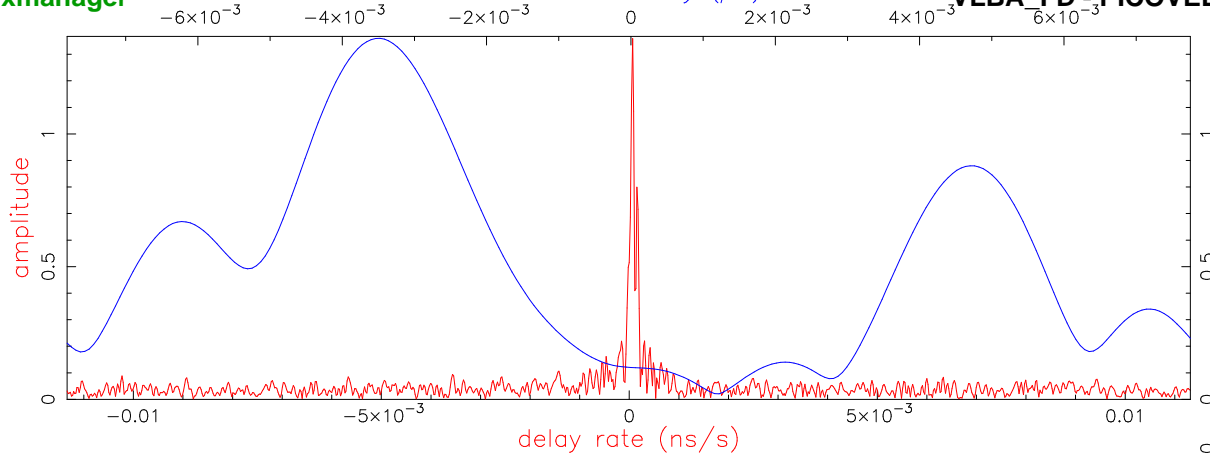
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fP

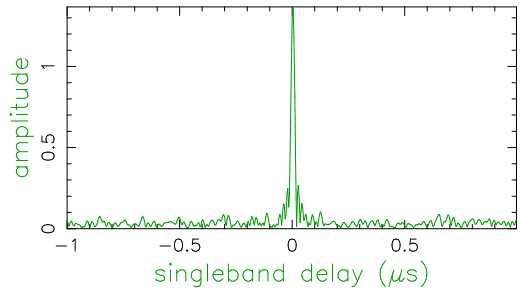
VLBA_FD - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

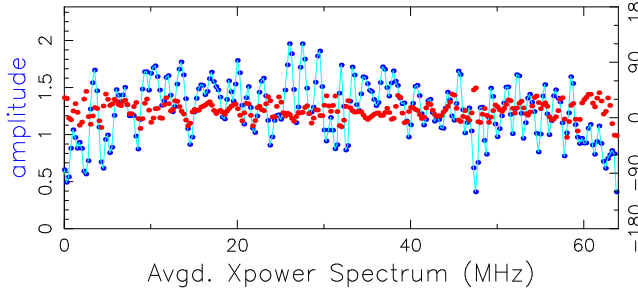


Fringe quality 2

SNR 49.4
 Int time 174.597
 Amp 1.368
 Phase 86.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.002908
 MBD -0.003539
 Fringe rate (Hz)
 0.006251
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

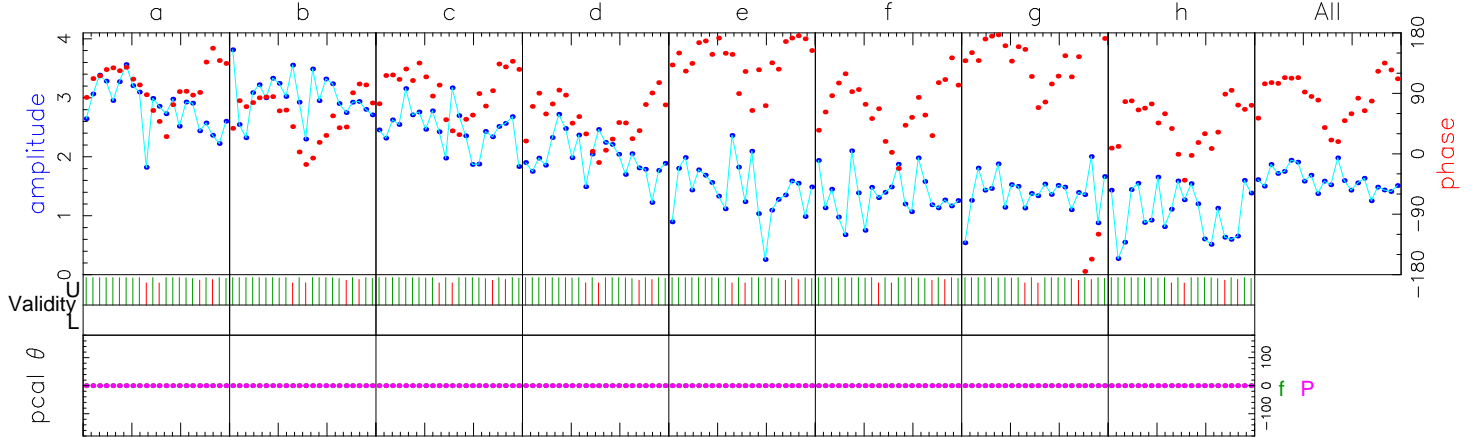


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122827
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.33103762668E+04	Apriori delay (usec)	1.33103798055E+04	Resid mbdelay (usec)	-3.53876E-03	+/-	2.2E-05
Sband delay (usec)	1.33103827140E+04	Apriori clock (usec)	8.0583916E+00	Resid sbdelay (usec)	2.90850E-03	+/-	1.7E-04
Phase delay (usec)	1.33103798083E+04	Apriori clockrate (us/s)	7.9999999E-07	Resid phdelay (usec)	2.78880E-06	+/-	7.5E-08
Delay rate (us/s)	1.00280676350E+00	Apriori rate (us/s)	1.00280669093E+00	Resid rate (us/s)	7.25733E-08	+/-	7.3E-10
Total phase (deg)	248.2	Apriori accel (us/s/s)	-7.78249698179E-05	Resid phase (deg)	86.5	+/-	2.3

ph/seg (deg)	32.8	Theor.	5.4	Search (1024X32)	1.336	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	22.6		9.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	44.2		3.3	Inc. seg. avg.	1.606	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	49.4		5.7	Inc. frq. avg.	1.637	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

f: az 19.5 el 77.4 pa -156.4 P: az 308.0 el 20.8 pa 58.8 u,v (fr/asec) -7836.307 -6143.728 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fP.W.95.1ILB8W

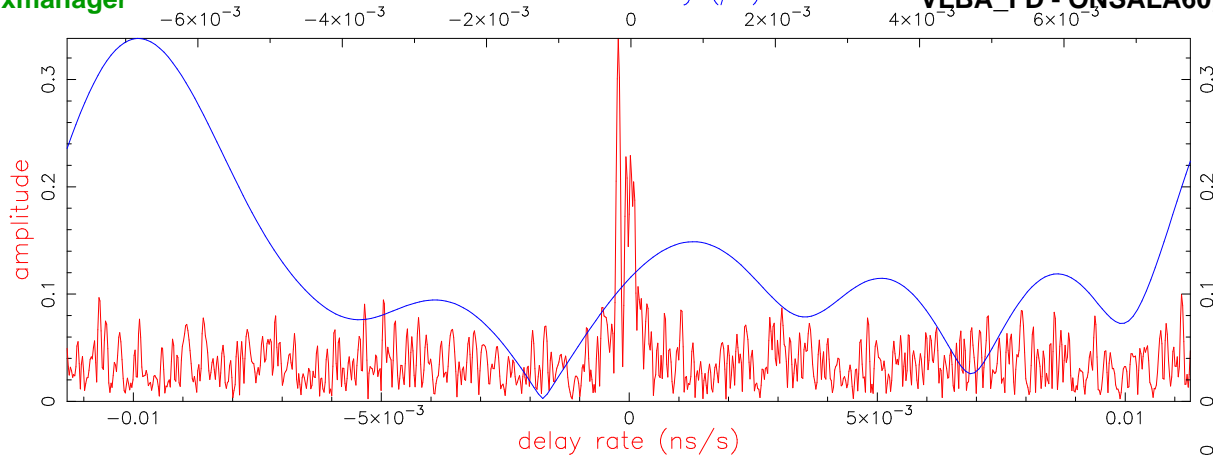
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fX

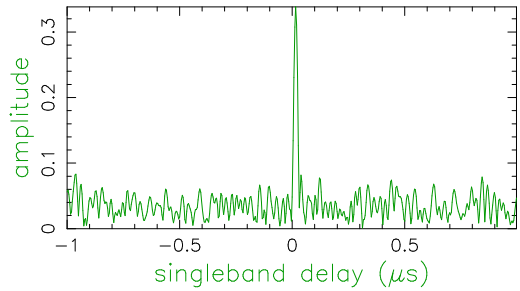
VLBA_FD - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

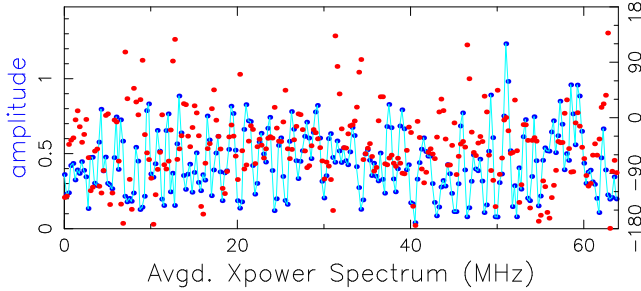


Fringe quality 9

SNR 12.2
 Int time 174.776
 Amp 0.338
 Phase -148.2
 PFD 5.5e-26
 Delays (us)
 SBD 0.015761
 MBD -0.006821
 Fringe rate (Hz)
 -0.018576
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

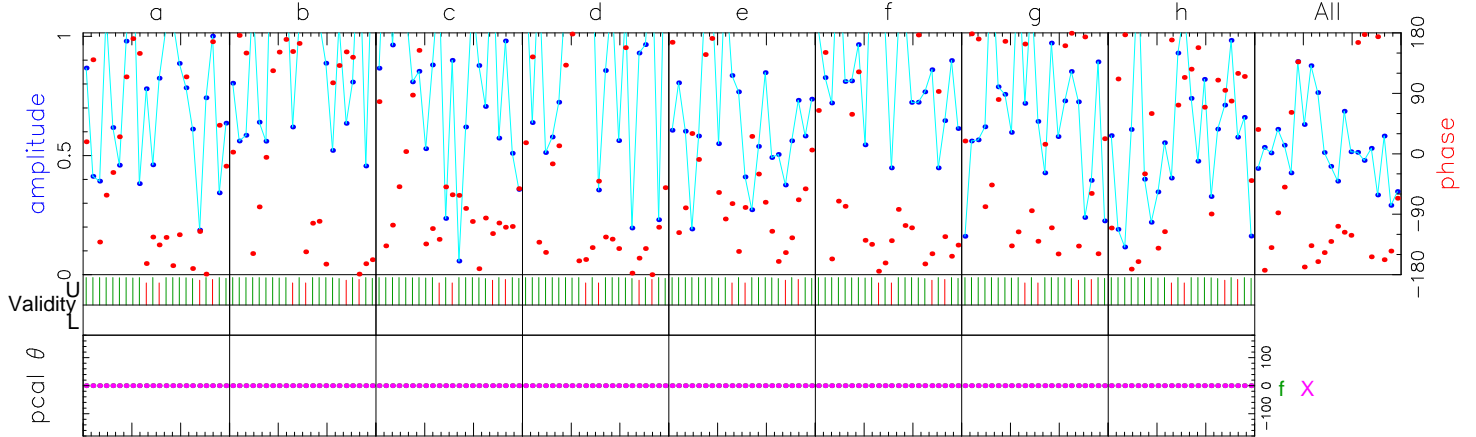


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122829
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-162.7	-179.7	-105.4	-149.2	-102.8	-144.9	-134.3	129.5		-148.2
	0.3	0.6	0.5	0.5	0.3	0.5	0.4	0.3		0.4
	200.8	261.4	260.4	260.6	302.1	259.9	260.1	258.2		261.0
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
X	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
f	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Tracks
Group delay (usec)(sbd)	1.16639968653E+04		Apriori delay (usec)		1.16639880612E+04		Resid mbdelay (usec)		-6.82090E-03	+/- 8.9E-05
Sband delay (usec)	1.16640038222E+04		Apriori clock (usec)		-4.0467163E+01		Resid sbdelay (usec)		1.57610E-02	+/- 7.0E-04
Phase delay (usec)	1.16639880564E+04		Apriori clockrate (us/s)		-1.2800004E-07		Resid phdelay (usec)		-4.77923E-06	+/- 3.0E-07
Delay rate (us/s)	6.70127501048E-01		Apriori rate (us/s)		6.70127716692E-01		Resid rate (us/s)		-2.15644E-07	+/- 2.9E-09
Total phase (deg)	65.1		Apriori accel (us/s/s)		-8.75592323633E-05		Resid phase (deg)		-148.2	+/- 9.4

ph/seg (deg) 64.4 21.8 Amplitude 0.338 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.9 38.1 Search (1024X32) 0.335 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.9 13.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 39.2 23.1 Inc. seg. avg. 0.502 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 X: az 309.8 el 25.5 pa 34.1 u,v (fr/asec) -5266.644 -8425.023 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fX..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fX.W.121.1ILB8W

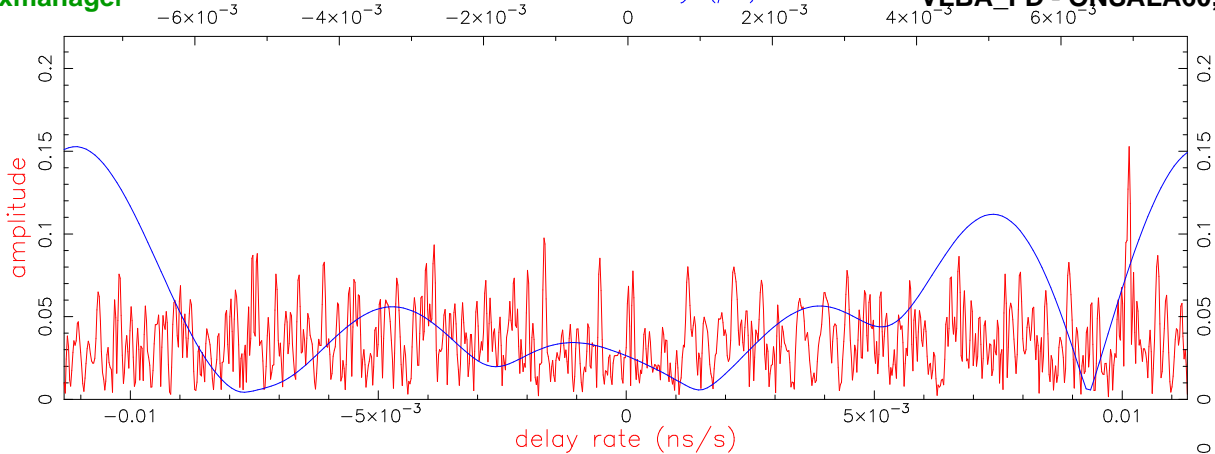
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fX

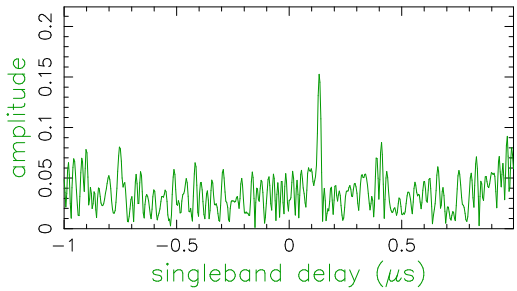
VLBA_FD - ONSALA60, fgroup W, pol LR

multiband delay (μs)

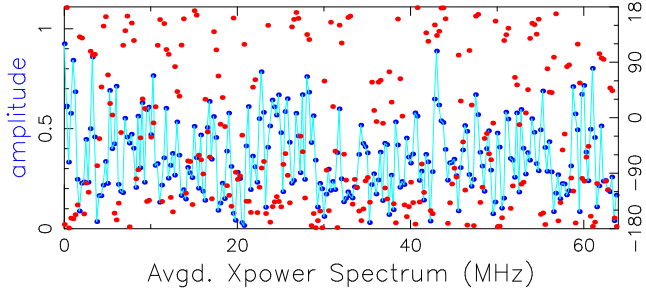


Fringe quality 0

SNR 5.6
Int time 174.776
Amp 0.219
Phase -152.8
PFD 9.6e-01
Delays (us)
SBD 0.133794
MBD 0.007990
Fringe rate (Hz)
0.875743
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

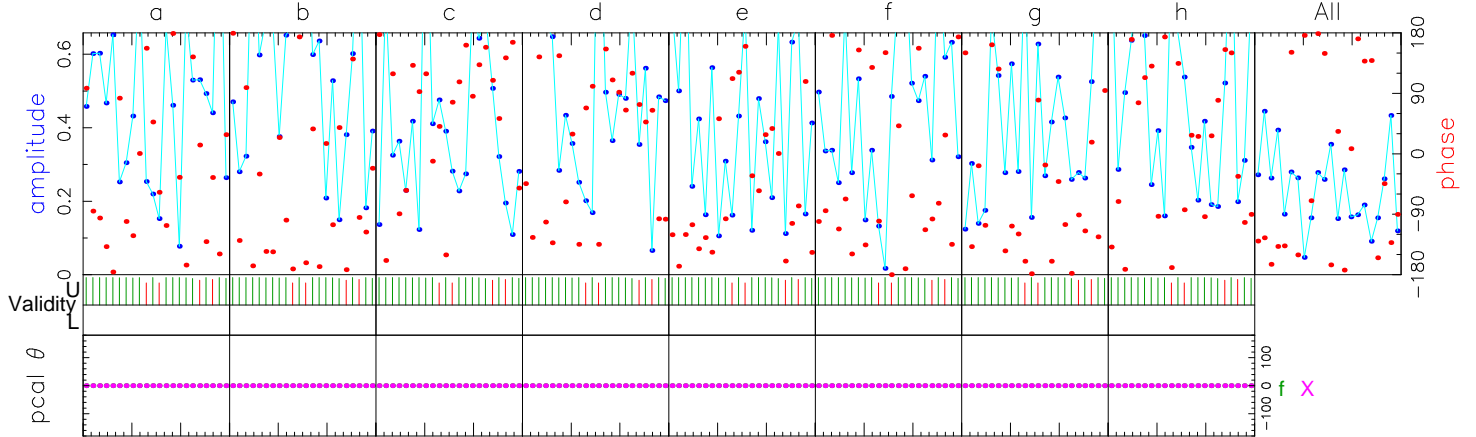


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122832
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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
	-130.2	-147.6	127.6	-159.8	-120.2	-126.6	-147.3	-179.9	Phase	-152.8
	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.3	Ampl.	0.2
	469.5	292.2	246.7	464.0	485.9	405.1	201.0	60.9	Sbd box	291.3
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)		1.16641210512E+04		Apriori delay (usec)	1.16639880612E+04		Resid mbdelay (usec)	7.98998E-03	+/-	2.0E-04
Sband delay (usec)		1.16641218547E+04		Apriori clock (usec)	-4.0467163E+01		Resid sbdelay (usec)	1.33794E-01	+/-	1.5E-03
Phase delay (usec)		1.16639880563E+04		Apriori clockrate (us/s)	-1.2800004E-07		Resid phdelay (usec)	-4.92618E-06	+/-	6.6E-07
Delay rate (us/s)		6.70137883204E-01		Apriori rate (us/s)	6.70127716692E-01		Resid rate (us/s)	1.01665E-05	+/-	6.5E-09
Total phase (deg)			60.6	Apriori accel (us/s/s)	-8.75592323633E-05		Resid phase (deg)	-152.8	+/-	20.6

ph/seg (deg) 68.0 48.0 Amplitude 0.219 +/- 0.039 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 86.3 83.8 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 39.7 29.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 33.3 50.9 Inc. seg. avg. 0.247 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
f: az 19.5 el 77.4 pa -156.4 X: az 309.8 el 25.5 pa 34.1 u,v (fr/asec) -5266.644 -8425.023 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fX..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fX.W.143.1ILB8W simultaneous interpolator

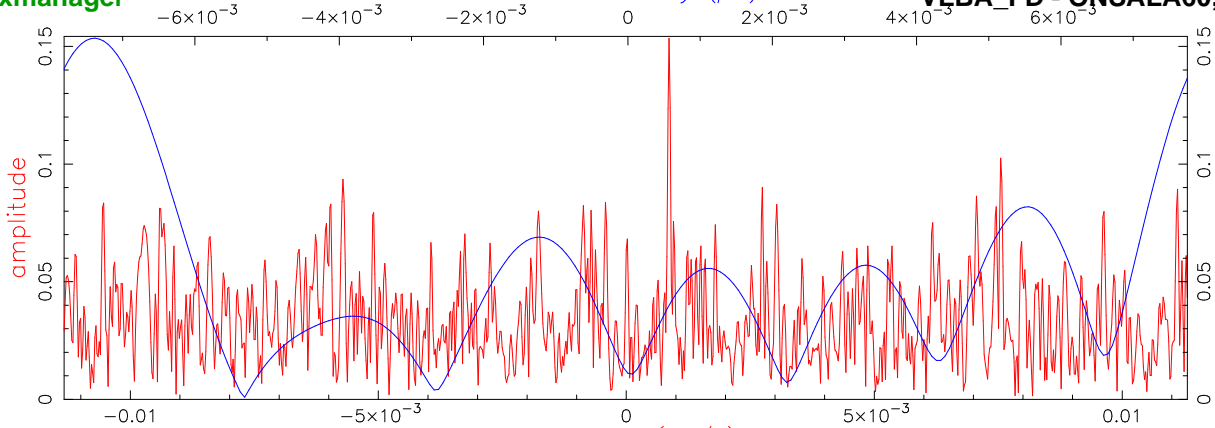
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

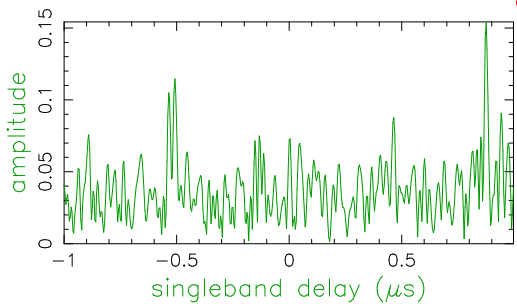
BLLAC.1ILB8W, No0028, fX

VLBA_FD - ONSALA60, fgroup W, pol RL

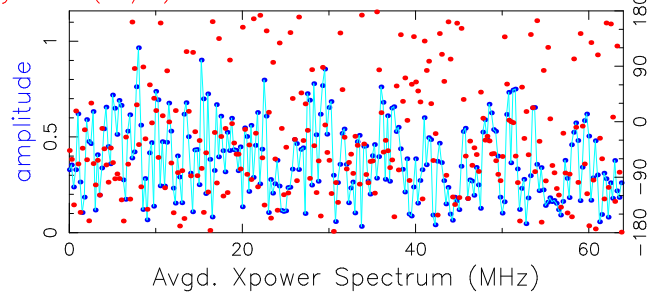
multiband delay (μ s)



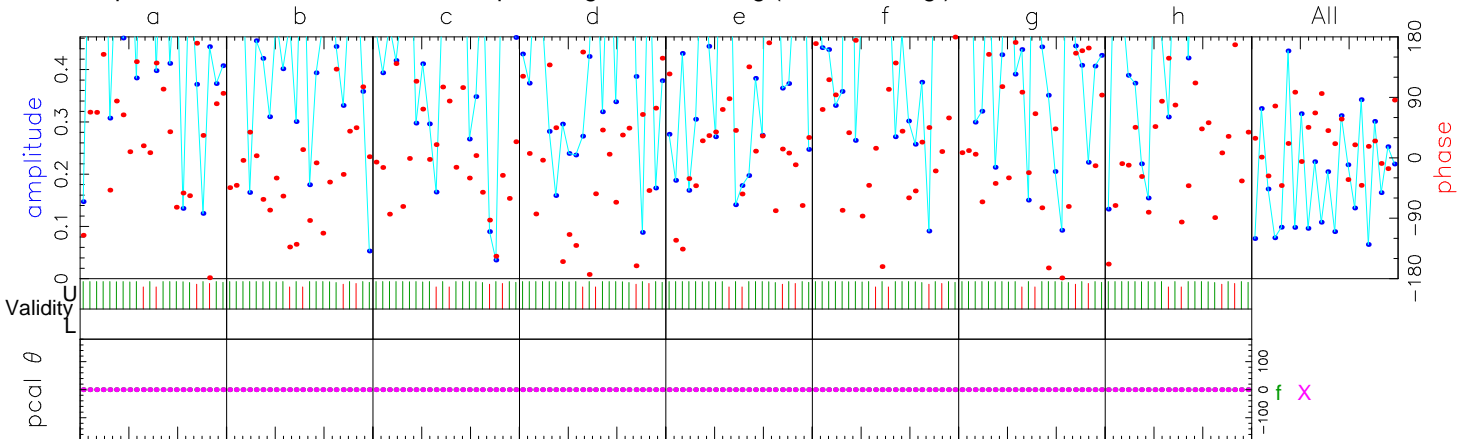
Fringe quality 0
 SNR 5.6
 Int time 174.776
 Amp 0.154
 Phase 16.3
 PFD 9.6e-01
 Delays (us)
 SBD 0.874299
 MBD -0.007424
 Fringe rate (Hz)
 0.074172
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122834
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



delay rate (ns/s)



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
	63.9	-24.4	4.0	4.1	14.9	38.5	22.0	19.4	Phase	16.3
	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	Ampl.	0.2
	41.8	479.6	126.9	175.1	173.2	407.4	337.6	508.3	Sbd box	480.8
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.16648556373E+04		Apriori delay (usec)		1.16639880612E+04		Resid mbdelay (usec)		-7.42388E-03	+/- 2.0E-04
Sband delay (usec)	1.16648623597E+04		Apriori clock (usec)		-4.0467163E+01		Resid sbdelay (usec)		8.74299E-01	+/- 1.5E-03
Phase delay (usec)	1.16639880617E+04		Apriori clockrate (us/s)		-1.2800004E-07		Resid phdelay (usec)		5.25465E-07	+/- 6.6E-07
Delay rate (us/s)	6.70128577751E-01		Apriori rate (us/s)		6.70127716692E-01		Resid rate (us/s)		8.61059E-07	+/- 6.5E-09
Total phase (deg)	229.6		Apriori accel (us/s/s)		-8.75592323633E-05		Resid phase (deg)		16.3	+/- 20.6

ph/seg (deg) 43.1 48.0 Search (1024X32) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 73.7 83.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 28.2 29.1 Inc. seg. avg. 0.146 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.6 50.8 Inc. frq. avg. 0.152 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 X: az 309.8 el 25.5 pa 34.1 u,v (fr/asec) -5266.644 -8425.023 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fX..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fX.W.157.1ILB8W

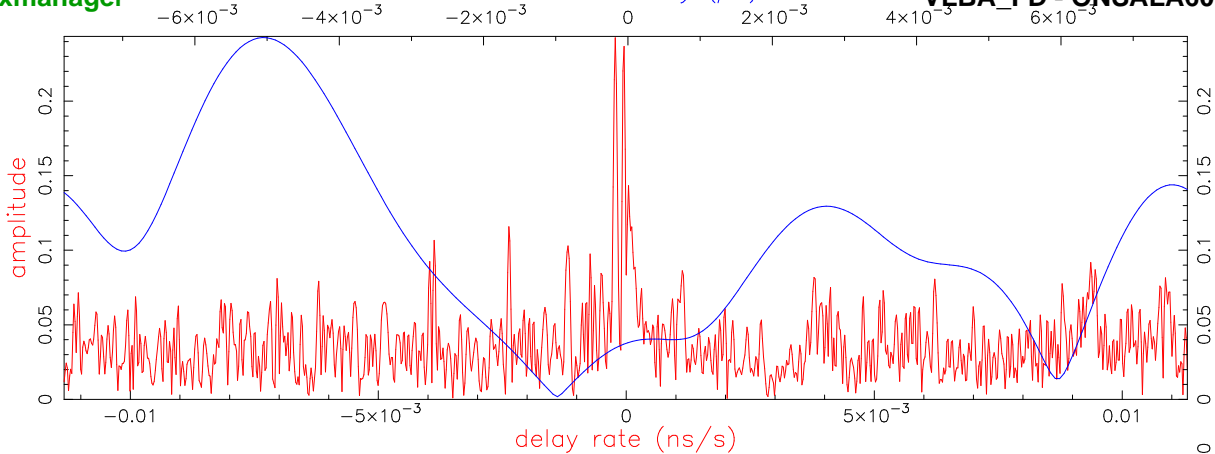
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fX

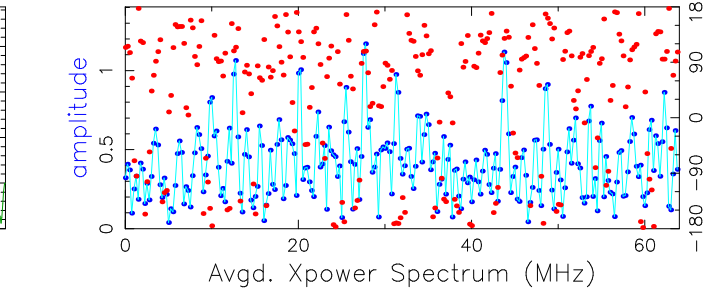
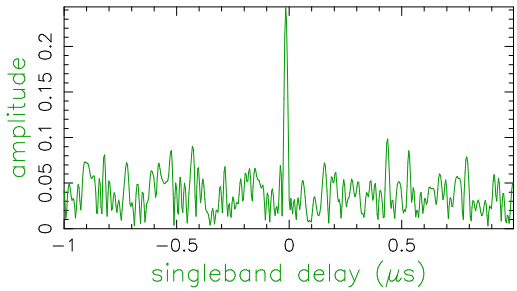
VLBA_FD - ONSALA60, fgroup W, pol LL

multiband delay (μ s)



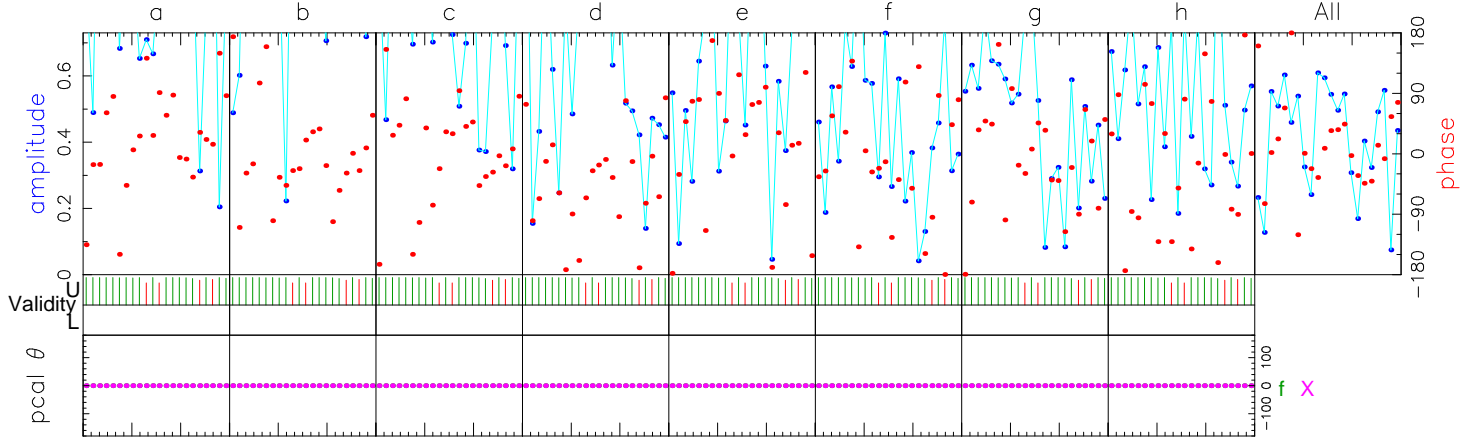
Fringe quality 9

SNR 8.8
 Int time 174.776
 Amp 0.243
 Phase 9.4
 PFD 2.6e-10
 Delays (us)
 SBD -0.014901
 MBD -0.005022
 Fringe rate (Hz)
 -0.019136
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122827
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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



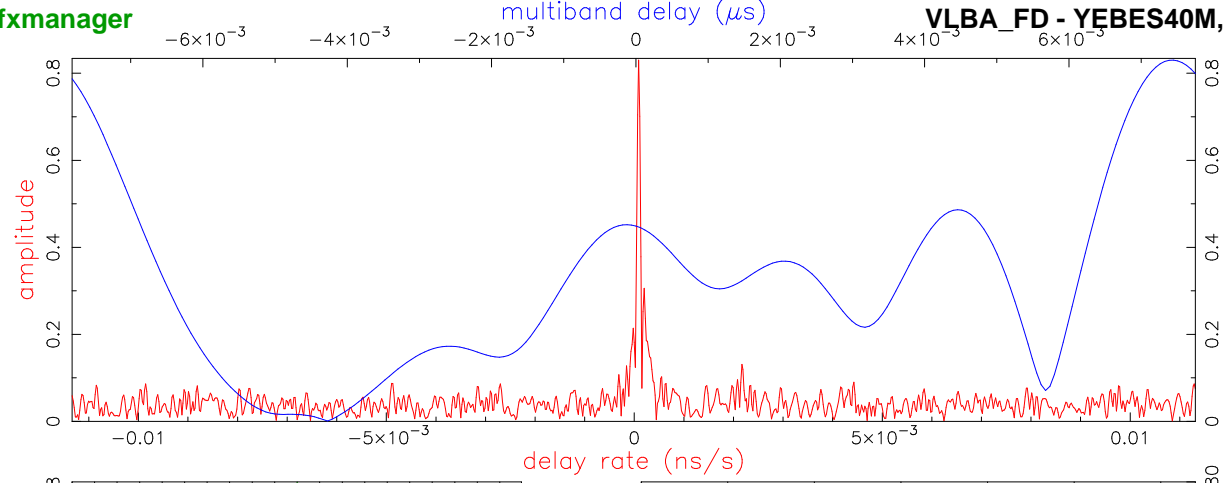
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0			
f	1000	1000	1000	1000	1000	1000	1000	1000			
X	1000	1000	1000	1000	1000	1000	1000	1000			
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
f	1000	1000	1000	1000	1000	1000	1000	1000			
X	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
Group delay (usec)(sbd)		1.16639674146E+04			1.16639880612E+04				Resid mbdelay (usec)	-5.02165E-03	+/- 1.2E-04
Sband delay (usec)		1.16639731602E+04			-4.0467163E+01				Resid sbdelay (usec)	-1.49010E-02	+/- 9.8E-04
Phase delay (usec)		1.16639880615E+04			-1.2800004E-07				Resid phdelay (usec)	3.02540E-07	+/- 4.2E-07
Delay rate (us/s)		6.70127494541E-01			6.70127716692E-01				Resid rate (us/s)	-2.22151E-07	+/- 4.1E-09
Total phase (deg)			222.7		-8.75592323633E-05				Resid phase (deg)	9.4	+/- 13.0
ph/seg (deg)	RMS 67.7	Theor. 30.3		Amplitude 0.243 +/- 0.028					Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5
amp/seg (%)	96.1	52.9		Search (1024X32) 0.241					Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us) -1.000 1.000
ph/frq (deg)	63.2	18.4		Interp. 0.000					Bits/sample: 2x2		mb window (us) -0.008 0.008
amp/frq (%)	71.7	32.1		Inc. seg. avg. 0.362					Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011
				Inc. frq. avg. 0.282					Data rate(Mb/s): 2048		ion window (TEC) 0.00 0.00
f: az 19.5 el 77.4 pa -156.4				X: az 309.8 el 25.5 pa 34.1					u,v (fr/asec) -5266.644 -8425.023		simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fY

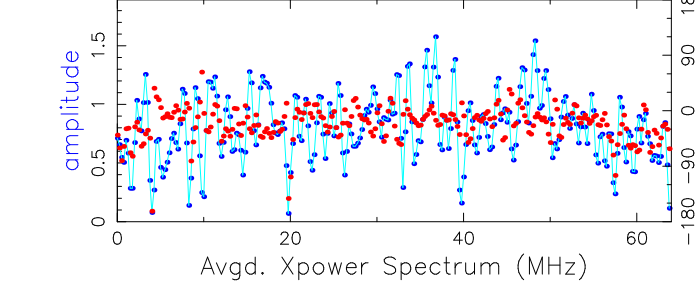
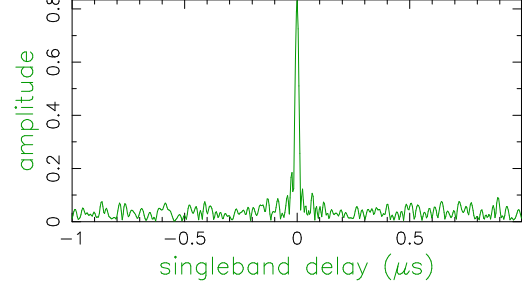
VLBA_FD - YEYES40M, fgroup W, pol RR



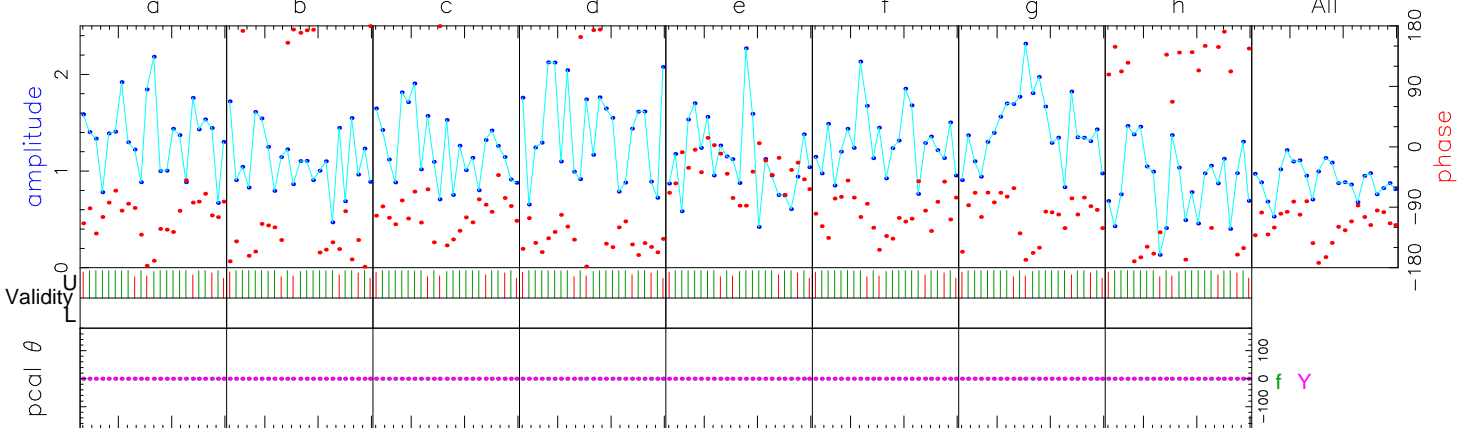
Fringe quality 5

SNR 28.6
 Int time 156.960
 Amp 0.834
 Phase -114.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.000883
 MBD 0.007416
 Fringe rate (Hz) 0.006793
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032016.90
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122828
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"



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	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.26349686920E+04			1.26349769010E+04					
Sband delay (usec)		1.26349760177E+04			-5.8251505E+00					
Phase delay (usec)		1.26349768973E+04			2.7999998E-07					
Delay rate (us/s)		9.5905142222E-01			9.59051343365E-01					
Total phase (deg)			-24.9		-7.78711231206E-05					
Apriori delay (usec)									7.41605E-03	+/- 3.8E-05
Apriori clock (usec)									-8.83250E-04	+/- 3.0E-04
Apriori clockrate (us/s)									-3.69363E-06	+/- 1.3E-07
Apriori rate (us/s)									7.88568E-08	+/- 1.4E-09
Apriori accel (us/s/s)									-114.5	+/- 4.0
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 (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

ph/seg (deg) 23.3 9.5 Amplitude 0.834 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 21.9 16.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 51.6 5.7 Inc. seg. avg. 0.895 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.5 9.9 Inc. frq. avg. 1.062 Sample rate (MSamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 Y: az 307.1 el 22.8 pa 55.0 u, v (fr/asec) -7497.499 -6455.672 Data rate (Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY.W.110.1ILB8W simultaneous interpolator

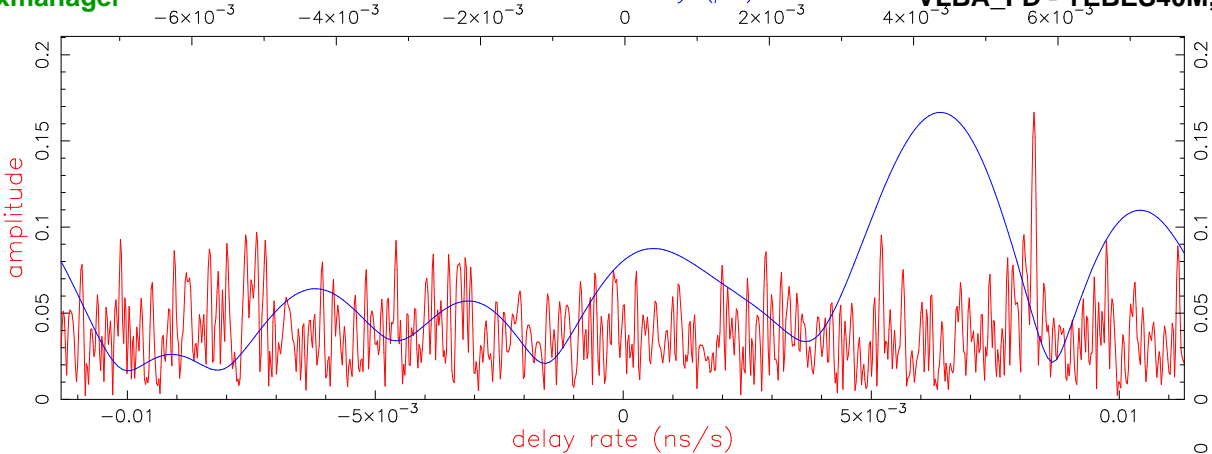
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fY

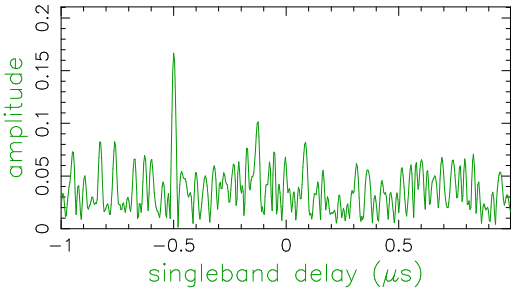
VLBA_FD - YEYES40M, fgroup W, pol LR

multiband delay (μ s)

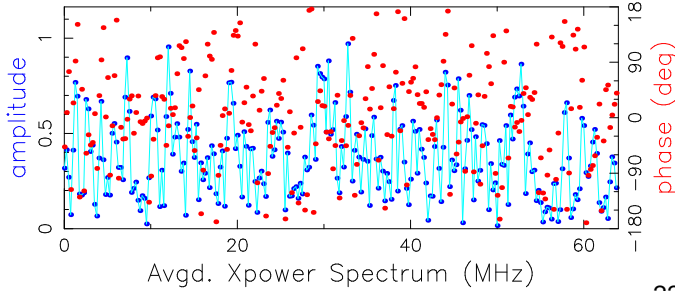


Fringe quality 0

SNR 5.7
 Int time 156.960
 Amp 0.211
 Phase -29.4
 PFD 7.2e-01
 Delays (us)
 SBD -0.499184
 MBD 0.004393
 Fringe rate (Hz) 0.715298
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

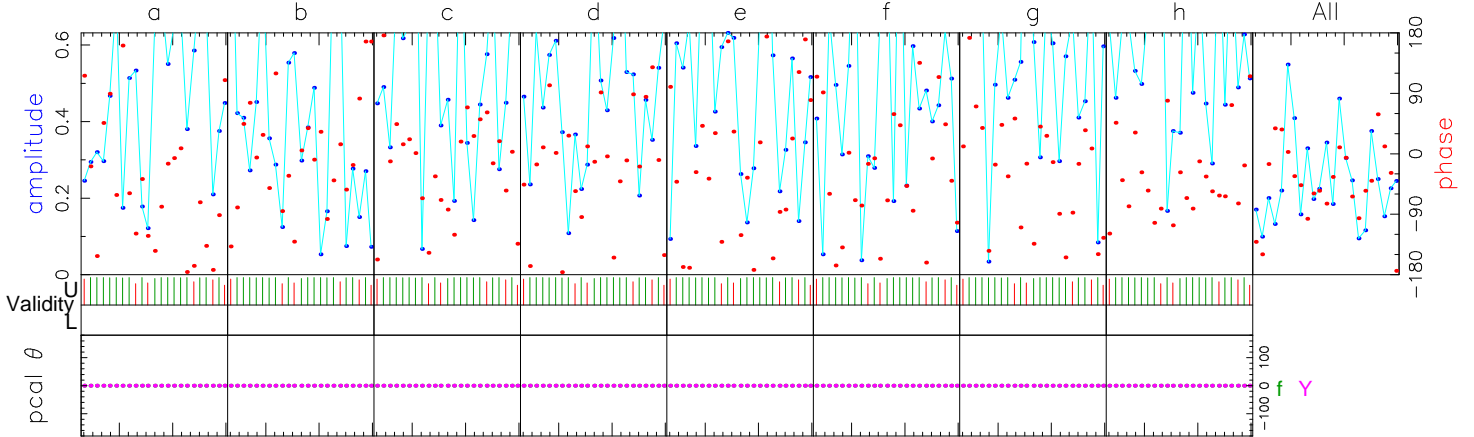


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032016.90
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122830
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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
	-82.2	-19.9	-4.7	-4.5	-133.4	-41.3	-2.5	-49.1	Phase	-29.4
	0.2	0.2	0.3	0.2	0.0	0.2	0.3	0.5	Ampl.	0.2
	60.7	340.7	86.2	350.2	465.7	410.3	153.1	130.2	Sbd box	129.2
U/L	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.26344812942E+04	Apriori delay (usec)	1.26349769010E+04	Resid mbdelay (usec)	4.39326E-03	+/-	1.9E-04
Sband delay (usec)	1.26344777172E+04	Apriori clock (usec)	-5.8251505E+00	Resid sbdelay (usec)	-4.99184E-01	+/-	1.5E-03
Phase delay (usec)	1.26349769000E+04	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	-9.47842E-07	+/-	6.5E-07
Delay rate (us/s)	9.59059647268E-01	Apriori rate (us/s)	9.59051343365E-01	Resid rate (us/s)	8.30390E-06	+/-	7.0E-09
Total phase (deg)	60.3	Apriori accel (us/s/s)	-7.78711231206E-05	Resid phase (deg)	-29.4	+/-	20.0

ph/seg (deg)	58.1	Theor.	47.6	Amplitude	0.211 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	85.2		83.1	Search (1024X32)	0.164	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	51.9		28.3	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	58.7		49.4	Inc. seg. avg.	0.232	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.213	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 19.5 el 77.4 pa -156.4 Y: az 307.1 el 22.8 pa 55.0 u,v (fr/asec) -7497.499 -6455.672 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY.W.126.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

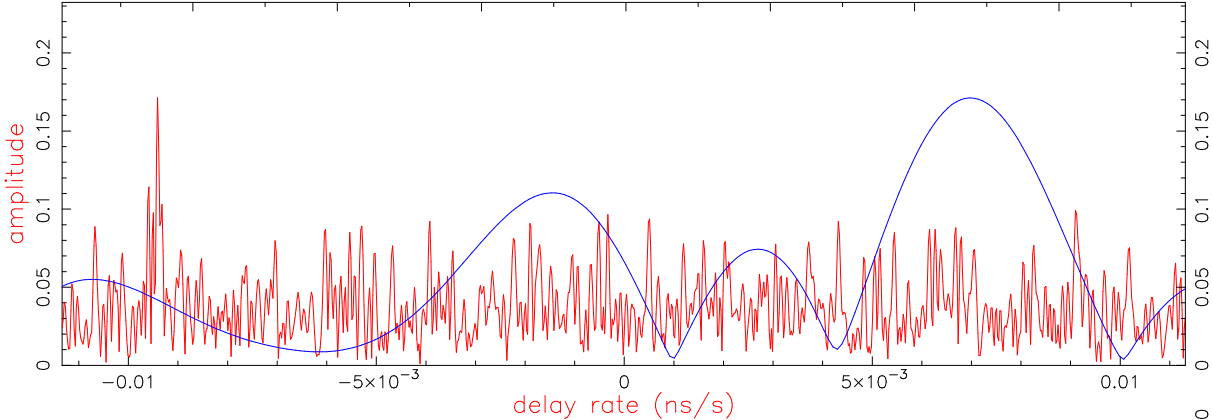
BLLAC.1ILB8W, No0028, fY

VLBA_FD - YEYES40M, fgroup W, pol RL

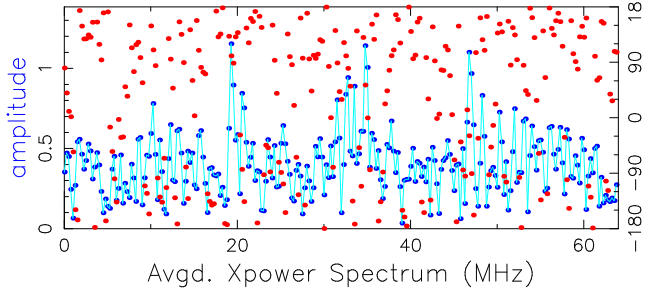
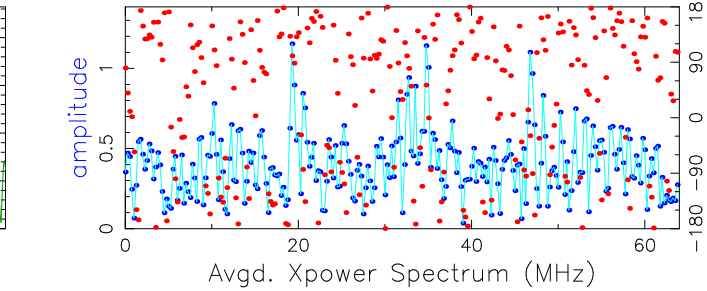
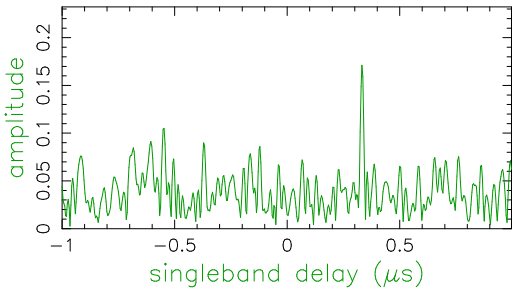
multiband delay (μ s)

-6×10^{-3} -4×10^{-3} -2×10^{-3} 0 2×10^{-3} 4×10^{-3} 6×10^{-3}

Fringe quality 0

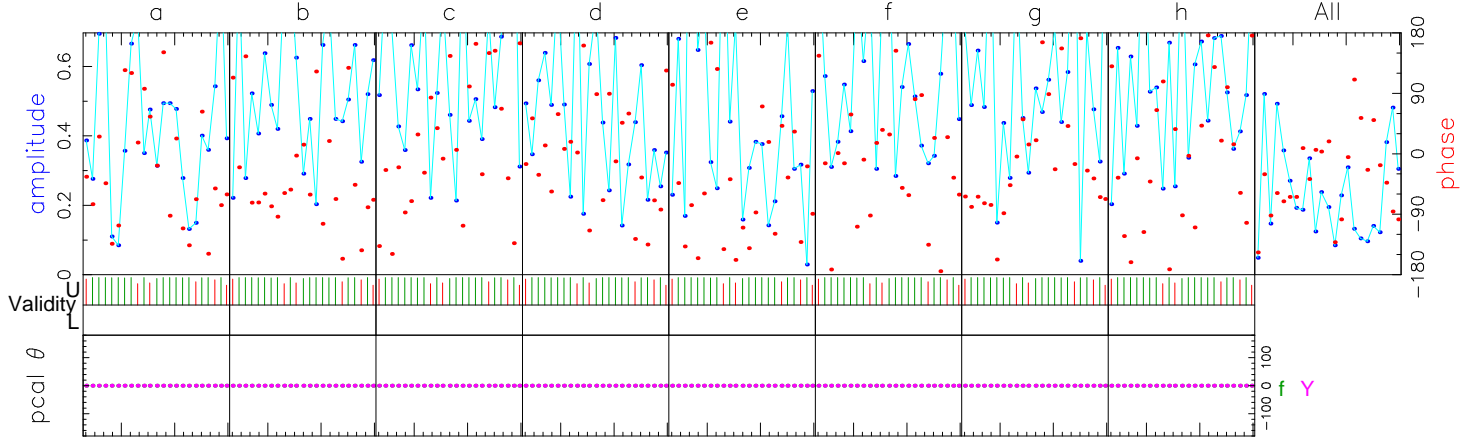


SNR 5.9
Int time 156.960
Amp 0.232
Phase -45.1
PFD 4.1e-01
Delays (us)
SBD 0.332661
MBD 0.004777
Fringe rate (Hz)
-0.812203
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032016.90
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122832
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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
	-26.4	-58.8	-65.7	-3.0	-89.1	-8.8	-37.4	-100.8	Phase	-45.1
	0.2	0.4	0.2	0.3	0.3	0.3	0.4	0.1	Ampl.	0.2
	57.3	341.7	127.6	7.7	473.7	255.6	342.1	76.1	Sbd box	342.2
U/L	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.26353098030E+04	Apriori delay (usec)	1.26349769010E+04	Resid mbdelay (usec)	4.77707E-03	+/-	1.8E-04
Sband delay (usec)	1.26353095617E+04	Apriori clock (usec)	-5.8251505E+00	Resid sbdelay (usec)	3.32661E-01	+/-	1.5E-03
Phase delay (usec)	1.26349768995E+04	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	-1.45503E-06	+/-	6.3E-07
Delay rate (us/s)	9.59041914491E-01	Apriori rate (us/s)	9.59051343365E-01	Resid rate (us/s)	-9.42887E-06	+/-	6.8E-09
Total phase (deg)	44.5	Apriori accel (us/s/s)	-7.78711231206E-05	Resid phase (deg)	-45.1	+/-	19.5

ph/seg (deg)	62.0	Theor.	46.4	Amplitude	0.232 +/- 0.040	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	88.4	Search (1024X32)	0.169	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	39.0	Inc. seg. avg.	0.242	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	49.6	Inc. frq. avg.	0.241	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

f: az 19.5 el 77.4 pa -156.4 Y: az 307.1 el 22.8 pa 55.0 u,v (fr/asec) -7497.499 -6455.672 simultaneous interpolator

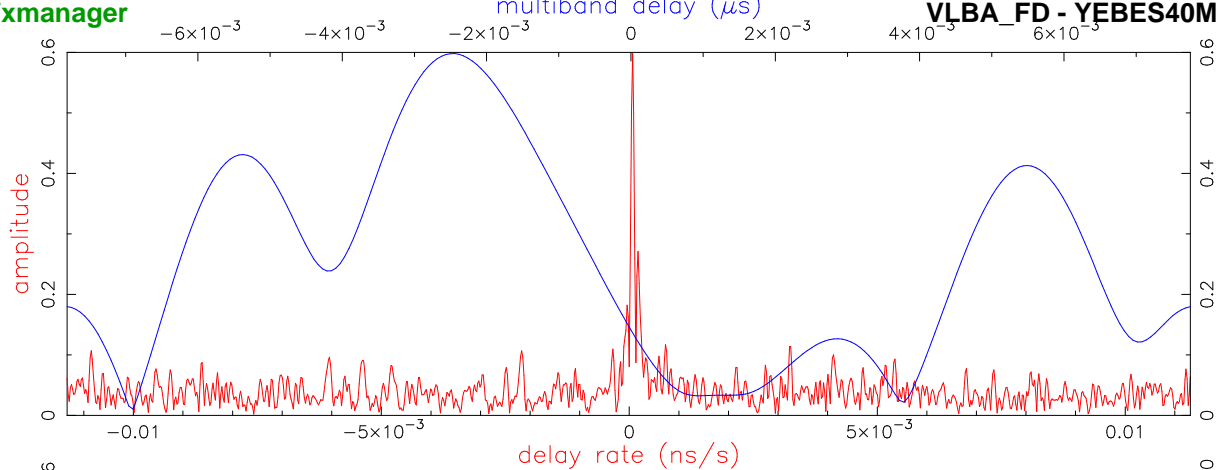
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY.W.144.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

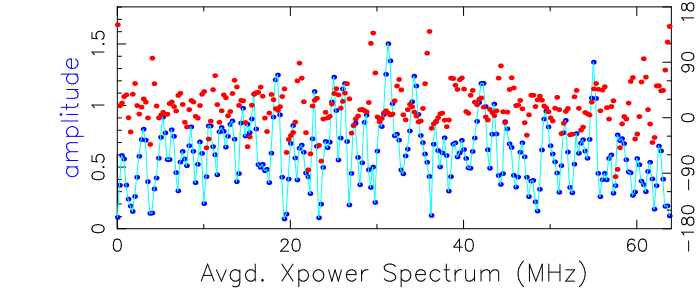
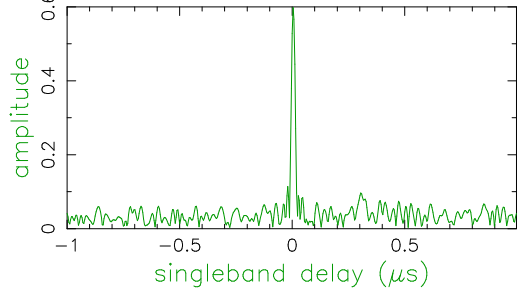
BLLAC.1ILB8W, No0028, fY

VLBA_FD - YEBES40M, fgroup W, pol LL



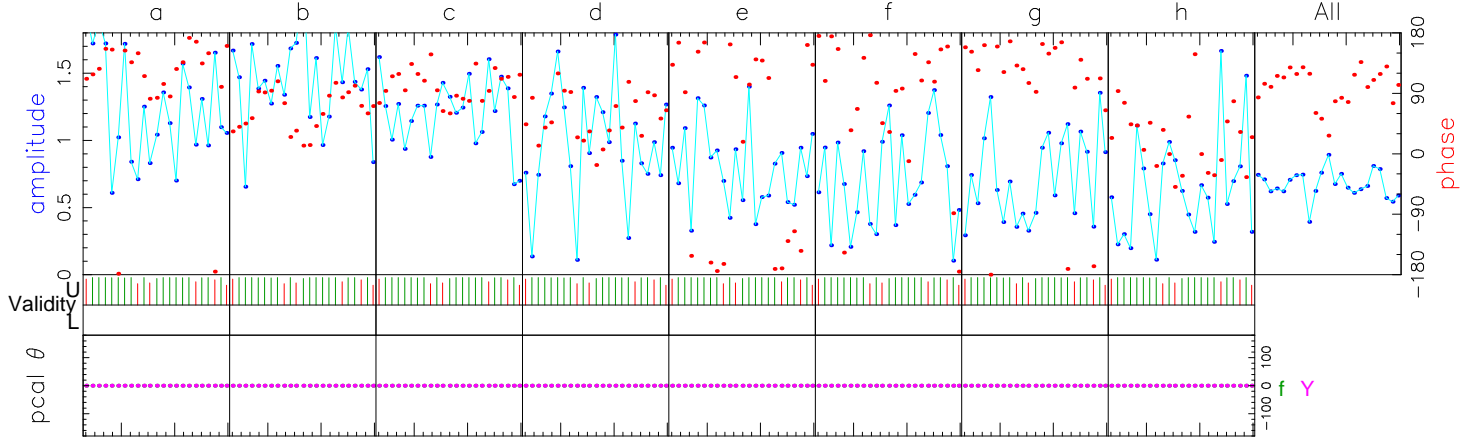
Fringe quality 7

SNR 20.6
 Int time 156.960
 Amp 0.600
 Phase 99.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.004672
 MBD -0.002444
 Fringe rate (Hz)
 0.006412
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032016.90
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122826
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.26349744565E+04	Apriori delay (usec)	1.26349769010E+04	Resid mbdelay (usec)	-2.44444E-03	+/-	5.3E-05
Sband delay (usec)	1.26349815732E+04	Apriori clock (usec)	-5.8251505E+00	Resid sbdelay (usec)	4.67225E-03	+/-	4.2E-04
Phase delay (usec)	1.26349769042E+04	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	3.19809E-06	+/-	1.8E-07
Delay rate (us/s)	9.59051417806E-01	Apriori rate (us/s)	9.59051343365E-01	Resid rate (us/s)	7.44411E-08	+/-	1.9E-09
Total phase (deg)	188.8	Apriori accel (us/s/s)	-7.78711231206E-05	Resid phase (deg)	99.2	+/-	5.6

ph/seg (deg)	27.2	RMS	27.2	Theor.	13.3	Amplitude	0.600 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	20.7	Search (1024X32)	0.585	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	55.2	Inc. seg. avg.	0.658	Inc. frq. avg.	0.796	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	59.4	Inc. frq. avg.	0.796	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags:	256	t_cohere	infinite

f: az 19.5 el 77.4 pa -156.4 Y: az 307.1 el 22.8 pa 55.0 u,v (fr/asec) -7497.499 -6455.672 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fY.W.89.1ILB8W

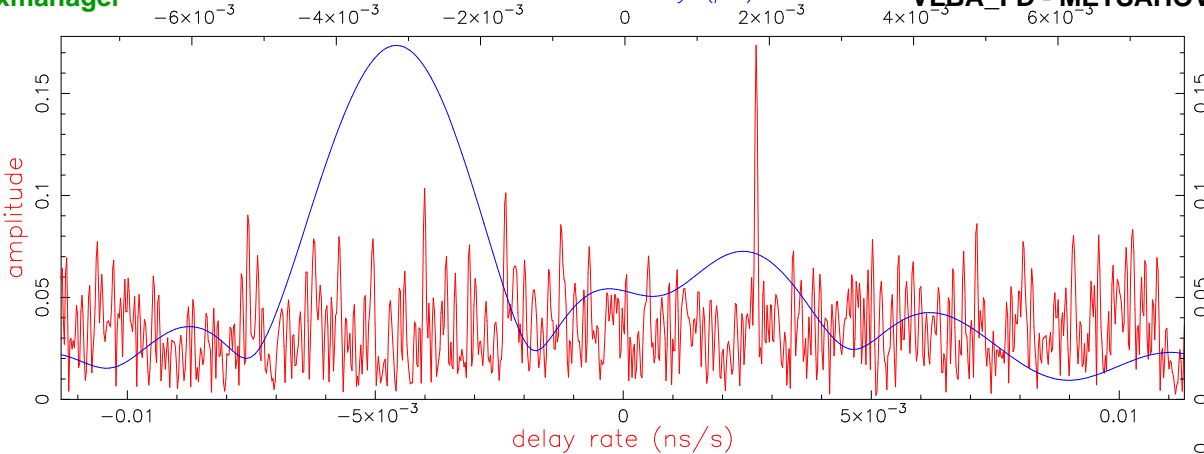
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fZ

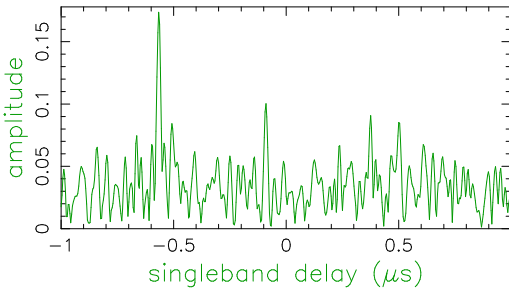
VLBA_FD - METSAHOV, fgroup W, pol LL

multiband delay (μ s)

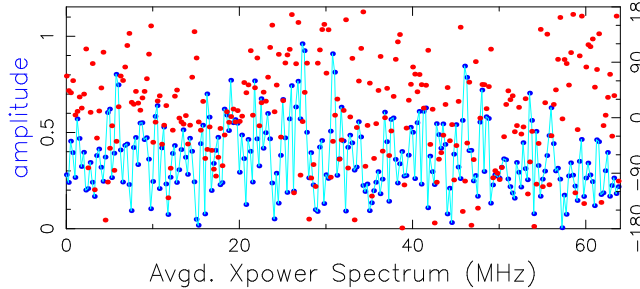


Fringe quality 0

SNR 6.3
Int time 174.490
Amp 0.178
Phase 12.2
PFD 4.4e-02
Delays (us)
SBD -0.565835
MBD -0.003177
Fringe rate (Hz)
0.232038
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

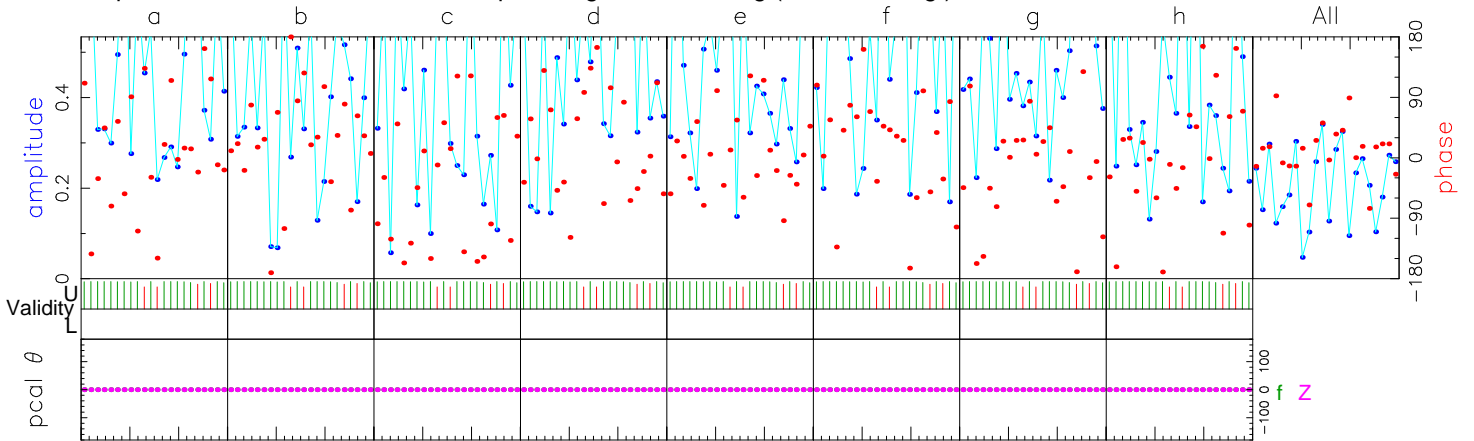


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122828
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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
	-3.9	26.6	25.8	4.3	-0.9	34.3	-7.0	19.3	Phase	12.2
	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.2	Ampl.	0.2
	273.7	64.5	62.2	463.2	111.9	506.3	125.8	256.9	Sbd box	112.1
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.26289494371E+04	Apriori delay (usec)	1.26295151139E+04	Resid mbdelay (usec)	-3.17682E-03	+/-	1.7E-04
Sband delay (usec)	1.26289492784E+04	Apriori clock (usec)	7.7161655E+00	Resid sbdelay (usec)	-5.65835E-01	+/-	1.4E-03
Phase delay (usec)	1.26295151143E+04	Apriori clockrate (us/s)	3.8399996E-07	Resid phdelay (usec)	3.94839E-07	+/-	5.9E-07
Delay rate (us/s)	5.68975275664E-01	Apriori rate (us/s)	5.68972581932E-01	Resid rate (us/s)	2.69373E-06	+/-	5.7E-09
Total phase (deg)	341.2	Apriori accel (us/s/s)	-9.43837552787E-05	Resid phase (deg)	12.2	+/-	18.2

ph/seg (deg)	RMS 39.4	Theor. 42.5	Amplitude Search (1024X32)	0.178 +/- 0.028	0.168	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	51.6	74.1	Interp.	0.000	0.168	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	17.3	25.8	Inc. seg. avg.	0.166	0.166	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	41.2	45.0	Inc. frq. avg.	0.167	0.167	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 19.5 el 77.4 pa -156.4 Z: az 317.6 el 22.8 pa 27.6 u,v (fr/asec) -4487.926 -9086.115 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fZ..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fZ.W.106.1ILB8W

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

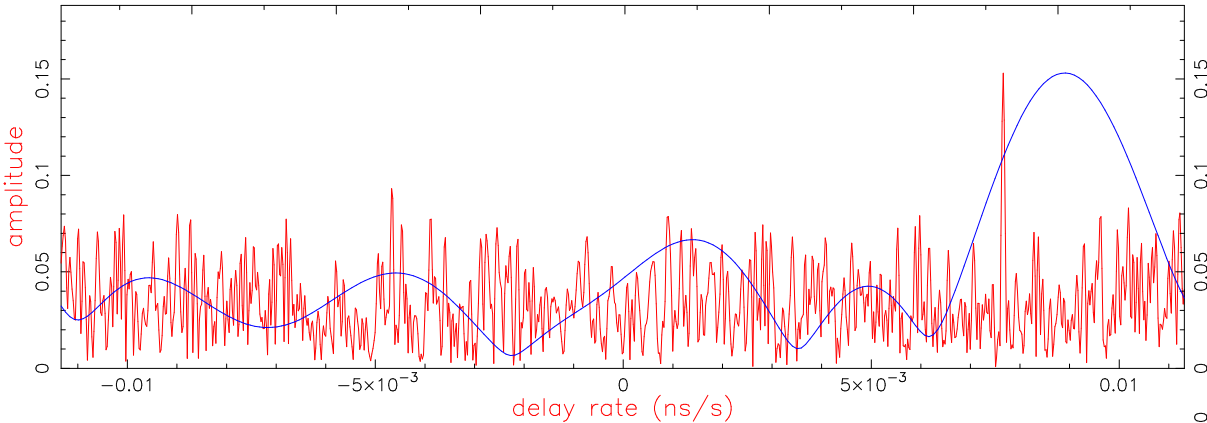
BLLAC.1ILB8W, No0028, fZ

VLBA_FD - METSAHOV, fgroup W, pol RR

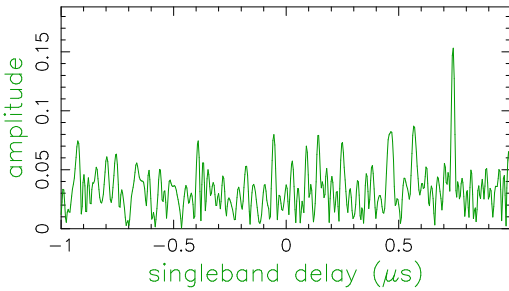
multiband delay (μ s)

-6×10^{-3} -4×10^{-3} -2×10^{-3} 0 2×10^{-3} 4×10^{-3} 6×10^{-3}

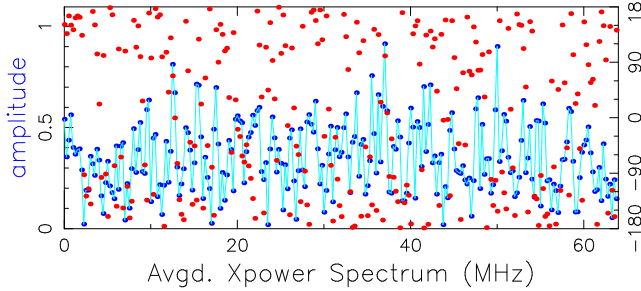
Fringe quality 0



SNR 5.6
Int time 174.490
Amp 0.188
Phase -4.4
PFD 9.4e-01
Delays (us)
SBD 0.740974
MBD 0.006059
Fringe rate (Hz)
0.660886
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

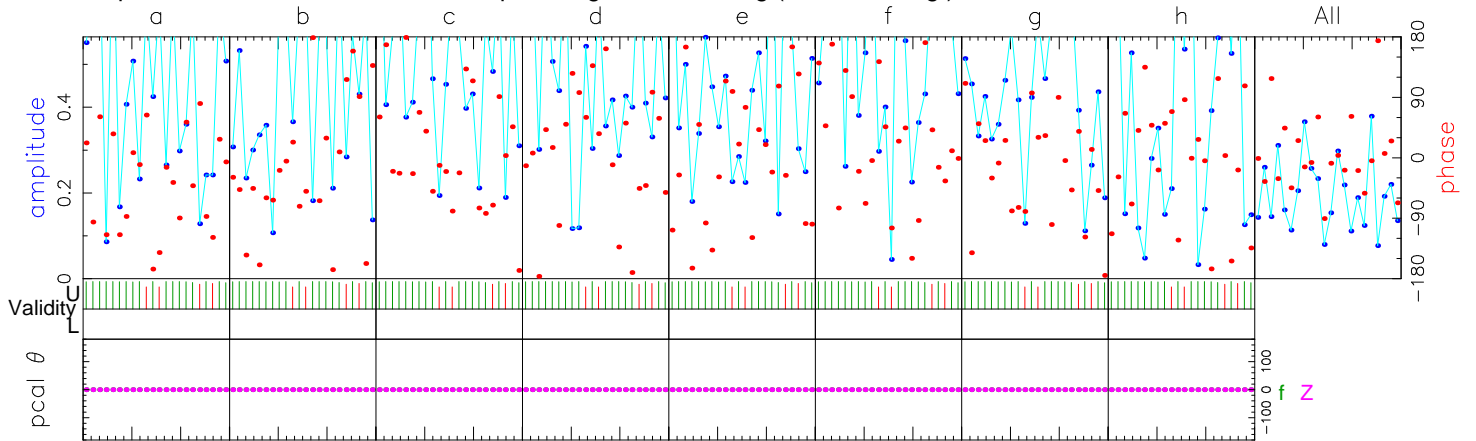


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 032000.00
Stop 032300.22
FRT 032130.00
Corr/FF/build
2021:022:221158
2021:023:122830
2020:247:085004
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979885"

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
	-11.1	-41.4	12.3	21.5	-63.3	16.9	-3.1	-28.0	Phase	-4.4
	0.2	0.2	0.2	0.3	0.1	0.3	0.2	0.1	Ampl.	0.2
	222.9	263.3	167.8	448.2	351.2	120.2	85.6	500.3	Sbd box	446.7
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.26302555477E+04		Apriori delay (usec)		1.26295151139E+04		Resid mbdelay (usec)		6.05873E-03	+/- 1.9E-04
Sband delay (usec)	1.26302560879E+04		Apriori clock (usec)		7.7161655E+00		Resid sbdelay (usec)		7.40974E-01	+/- 1.5E-03
Phase delay (usec)	1.26295151138E+04		Apriori clockrate (us/s)		3.8399996E-07		Resid phdelay (usec)		-1.40853E-07	+/- 6.6E-07
Delay rate (us/s)	5.68980254163E-01		Apriori rate (us/s)		5.68972581932E-01		Resid rate (us/s)		7.67223E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-9.43837552787E-05		Resid phase (deg)		-4.4	+/- 20.5

ph/seg (deg) 59.7 47.8 Amplitude 0.188 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 61.3 83.4 Interp. 0.146 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 33.8 29.0 Search (1024X32) 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 30.3 50.6 Inc. seg. avg. 0.178 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 19.5 el 77.4 pa -156.4 Z: az 317.6 el 22.8 pa 27.6 u,v (fr/asec) -4487.926 -9086.115 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fZ..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fZ.W.129.1ILB8W

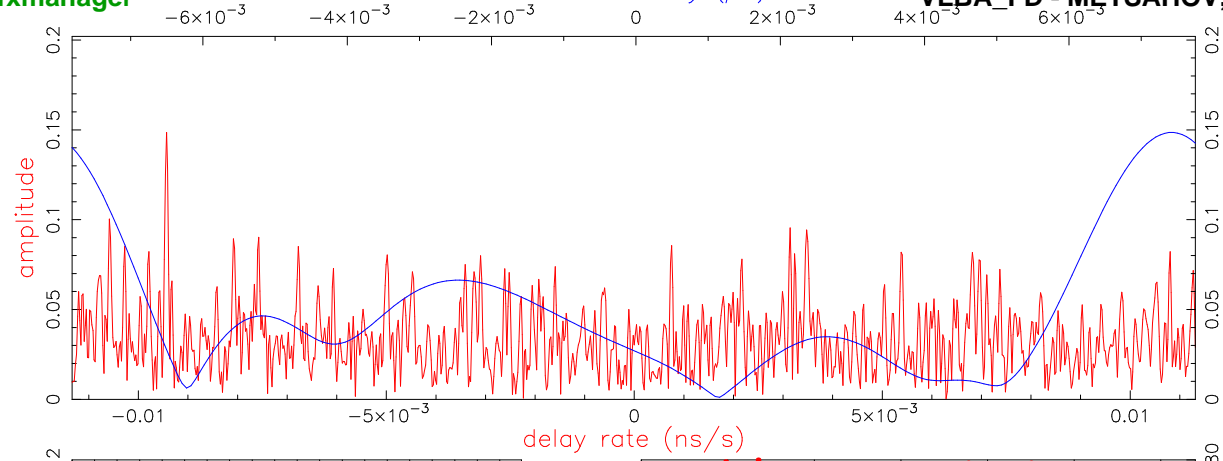
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

BLLAC.1ILB8W, No0028, fZ

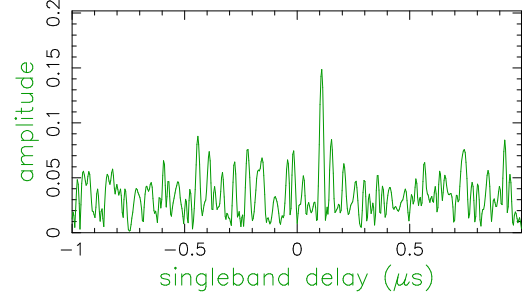
VLBA_FD - METSAHOV, fgroup W, pol LR

multiband delay (μ s)

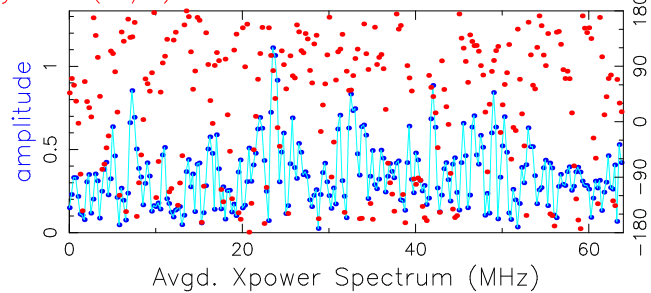


Fringe quality 0

SNR 5.4
 Int time 174.490
 Amp 0.202
 Phase 11.9
 PFD 1.0e+00
 Delays (us)
 SBD 0.108524
 MBD -0.008198
 Fringe rate (Hz)
 -0.813243
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

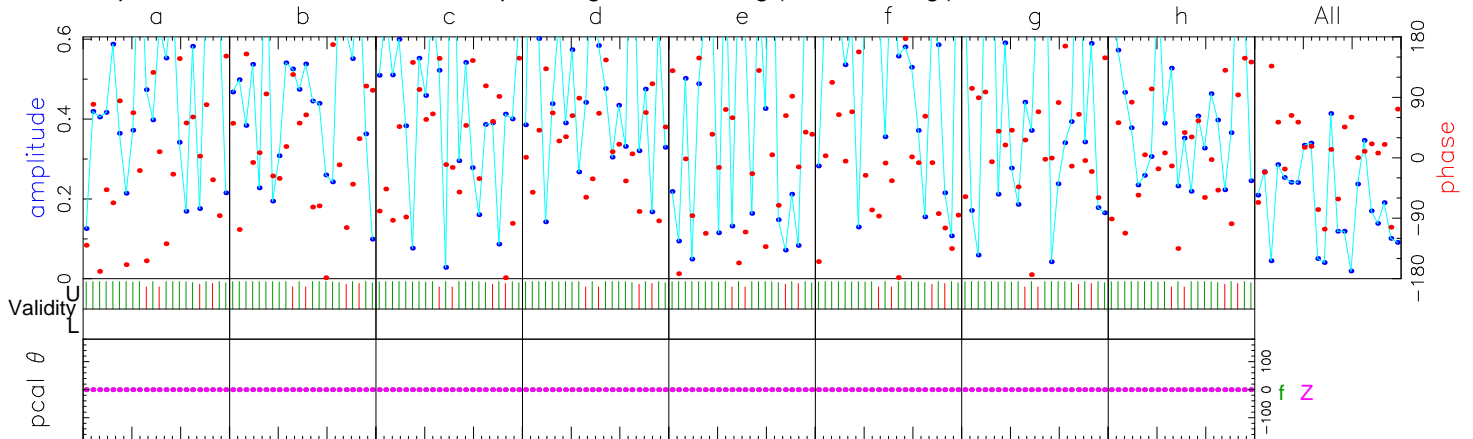


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122832
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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



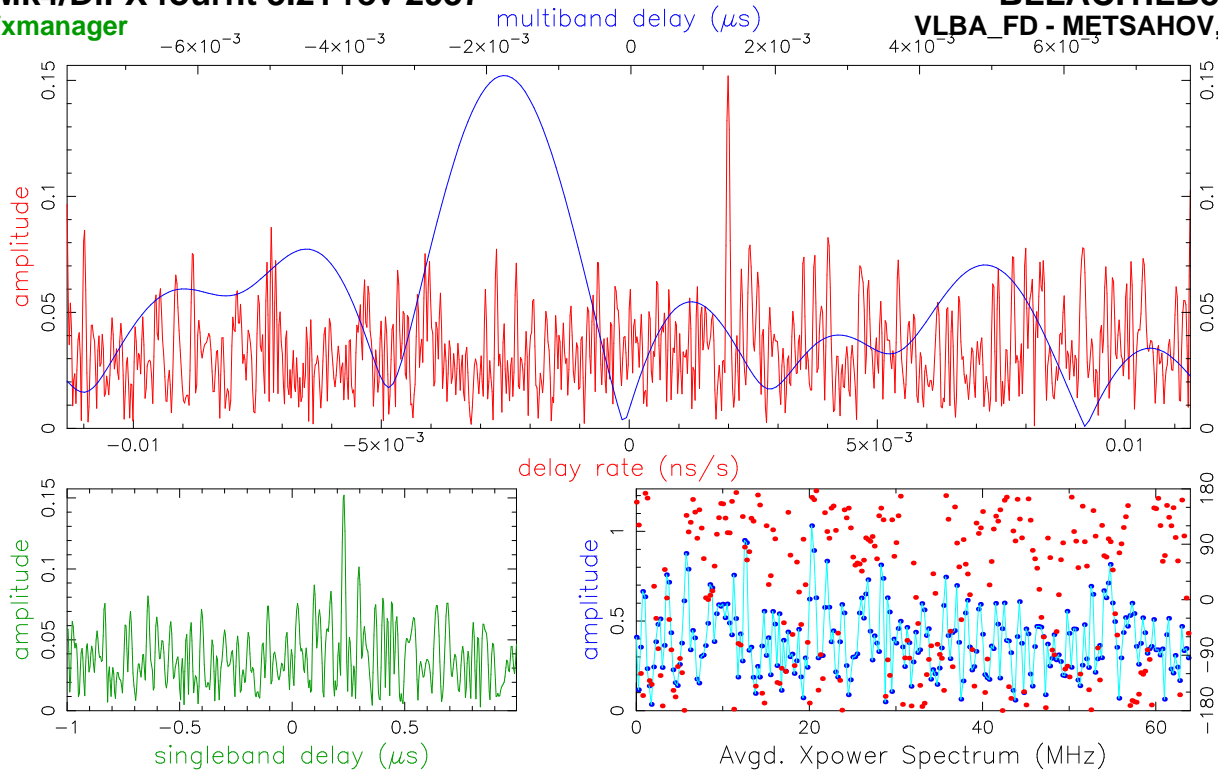
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-6.7	17.1	34.9	11.9	42.9	-32.0	22.5	12.1	Phase	11.9		
	0.1	0.2	0.1	0.4	0.2	0.2	0.2	0.2	Ampl.	0.2		
	86.9	338.8	15.5	296.6	509.3	63.2	81.9	392.7	Sbd box	284.8		
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
Z	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)		1.26296162912E+04		Apriori delay (usec)	1.26295151139E+04		Resid mbdelay (usec)	-8.19775E-03	+/-	2.0E-04		
Sband delay (usec)		1.26296236377E+04		Apriori clock (usec)	7.7161655E+00		Resid sbdelay (usec)	1.08524E-01	+/-	1.6E-03		
Phase delay (usec)		1.26295151143E+04		Apriori clockrate (us/s)	3.8399996E-07		Resid phdelay (usec)	3.84690E-07	+/-	6.9E-07		
Delay rate (us/s)		5.68963140993E-01		Apriori rate (us/s)	5.68972581932E-01		Resid rate (us/s)	-9.44094E-06	+/-	6.7E-09		
Total phase (deg)			340.9	Apriori accel (us/s/s)	-9.43837552787E-05		Resid phase (deg)	11.9	+/-	21.3		
RMS	59.6	49.5		Amplitude	0.202 +/- 0.037		PCal mode: MANUAL, MANUAL		PC period (AP's)	5, 5		
amp/seg (%)	78.6	86.4		Search (1024X32)	0.146		PCal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	25.5	30.1		Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	45.8	52.5		Inc. seg. avg.	0.189		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.189		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 19.5 el 77.4 pa -156.4		Z: az 317.6 el 22.8 pa 27.6		u, v (fr/asec)	-4487.926 -9086.115						simultaneous interpolator	

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

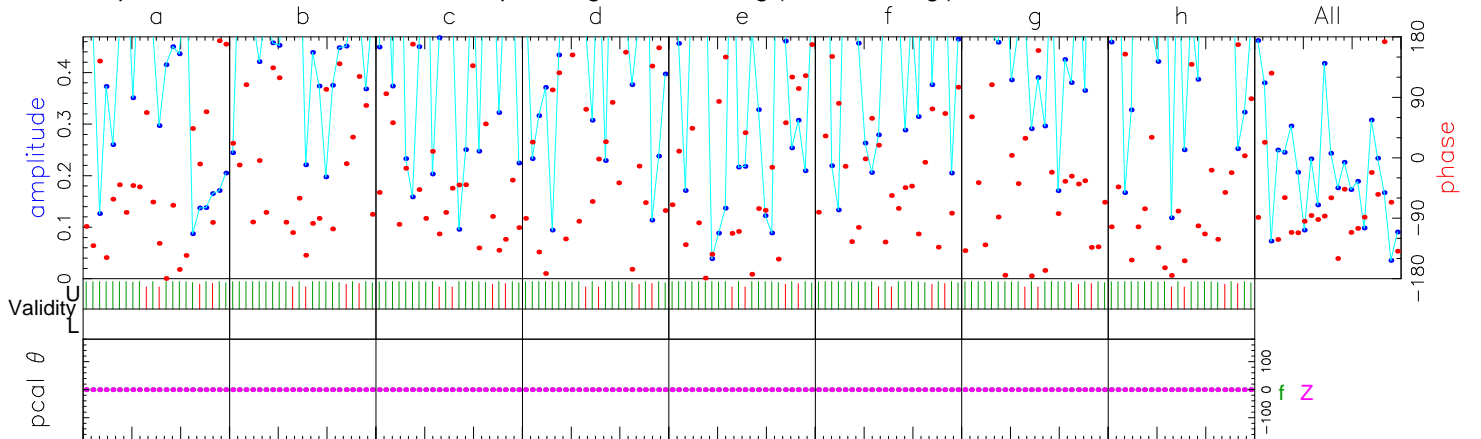
BLLAC.1ILB8W, No0028, fZ

VLBA_FD - METSAHOV, fgroup W, pol RL



Fringe quality 0
 SNR 5.6
 Int time 174.490
 Amp 0.156
 Phase -84.0
 PFD 9.5e-01
 Delays (us)
 SBD 0.228836
 MBD -0.001808
 Fringe rate (Hz) 0.172322
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 032000.00
 Stop 032300.22
 FRT 032130.00
 Corr/FF/build
 2021:022:221158
 2021:023:122834
 2020:247:085004
 RA & Dec (J2000)
 22h02m43.291370s
 +42°16'39.979885"

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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.26297476809E+04	Apriori delay (usec)	1.26295151139E+04	Resid mbdelay (usec)	-1.80803E-03	+/-	1.9E-04
Sband delay (usec)	1.26297439499E+04	Apriori clock (usec)	7.7161655E+00	Resid sbdelay (usec)	2.28836E-01	+/-	1.5E-03
Phase delay (usec)	1.26295151112E+04	Apriori clockrate (us/s)	3.8399996E-07	Resid phdelay (usec)	-2.70755E-06	+/-	6.6E-07
Delay rate (us/s)	5.68974582417E-01	Apriori rate (us/s)	5.68972581932E-01	Resid rate (us/s)	2.00048E-06	+/-	6.5E-09
Total phase (deg)	245.0	Apriori accel (us/s/s)	-9.43837552787E-05	Resid phase (deg)	-84.0	+/-	20.5

ph/seg (deg)	54.2	Theor.	47.8	Amplitude	0.156 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	80.9	Search (1024X32)	0.150	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	32.4	Inc. seg. avg.	0.162	Inc. frq. avg.	0.151	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	41.8	Inc. frq. avg.	0.151			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	

f: az 19.5 el 77.4 pa -156.4 Z: az 317.6 el 22.8 pa 27.6 u,v (fr/asec) -4487.926 -9086.115 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0028/fZ..1ILB8W Output file: /Exps/c202b/v1/v1_3mm/1234/No0028/fZ.W.158.1ILB8W