

Mk4/DiFX fourfit 3.21 rev 2937

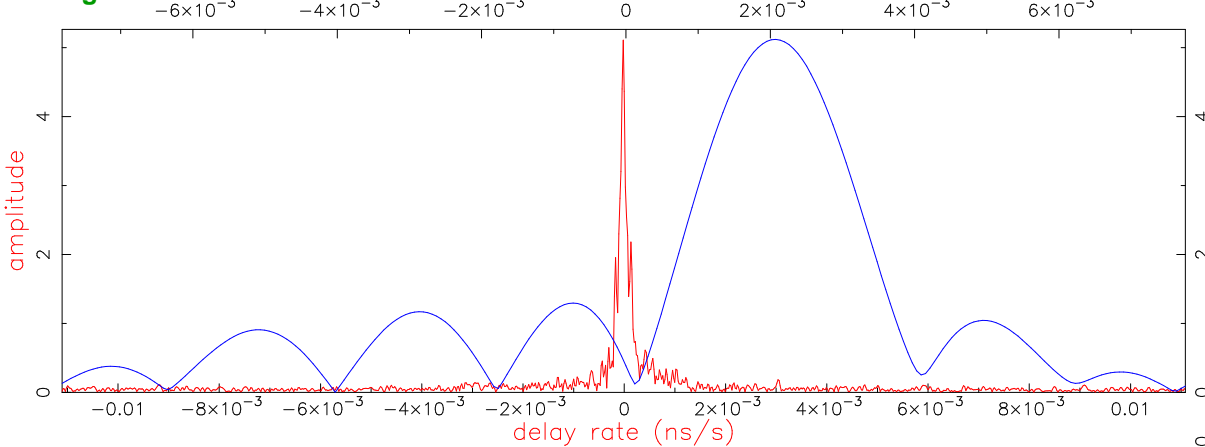
fxmanager

0235+164.1JFKZ, No0038, BP

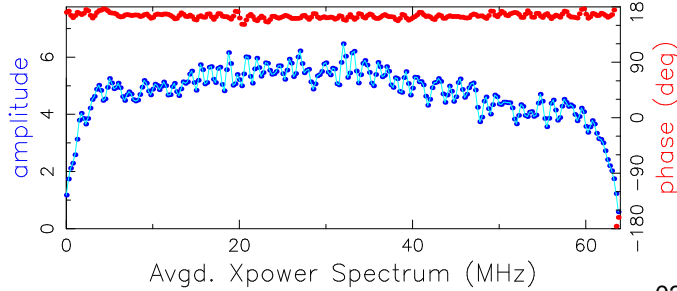
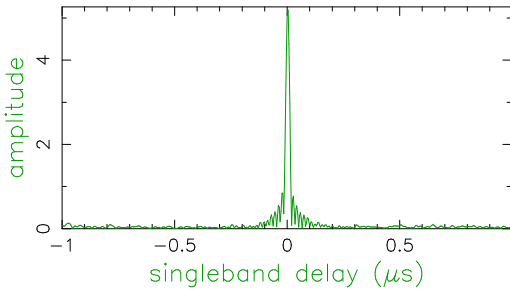
EFLSBERG - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 6

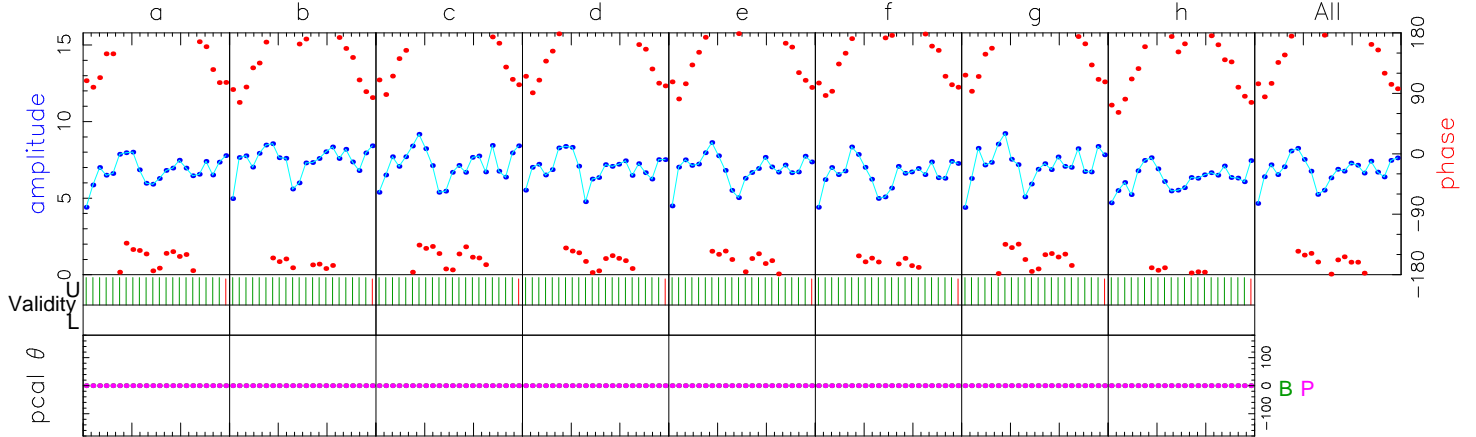


SNR 193.0  
 Int time 179.588  
 Amp 5.266  
 Phase 165.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.002271  
 MB 0.002137  
 Fringe rate (Hz)  
 -0.002696  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060624  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-3.06937579538E+03	Apriori delay (usec)	-3.06937793202E+03	Resid mbdelay (usec)	2.13665E-03	+/-	5.6E-06
Sband delay (usec)	-3.06937566127E+03	Apriori clock (usec)	1.0325738E+01	Resid sbdelay (usec)	2.27075E-03	+/-	4.5E-05
Phase delay (usec)	-3.06937792680E+03	Apriori clockrate (us/s)	2.0000000E-07	Resid phdelay (usec)	5.22763E-06	+/-	1.9E-08
Delay rate (us/s)	6.56685037696E-02	Apriori rate (us/s)	6.56685344273E-02	Resid rate (us/s)	-3.06578E-08	+/-	1.8E-10
Total phase (deg)	42.3	Apriori accel (us/s/s)	2.18594469395E-05	Resid phase (deg)	165.5	+/-	0.6

ph/seg (deg)	42.3	RMS	42.3	Theor.	1.4	Amplitude	5.266 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	33.5		2.4			Search (1024X32)	4.957	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	11.3		0.8			Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	4.8		1.5			Inc. seg. avg.	6.810	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
						Inc. frq. avg.	5.183	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 253.5 el 34.4 pa 39.5 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -391.605 1991.056 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/BP.W.15.1JFKZ

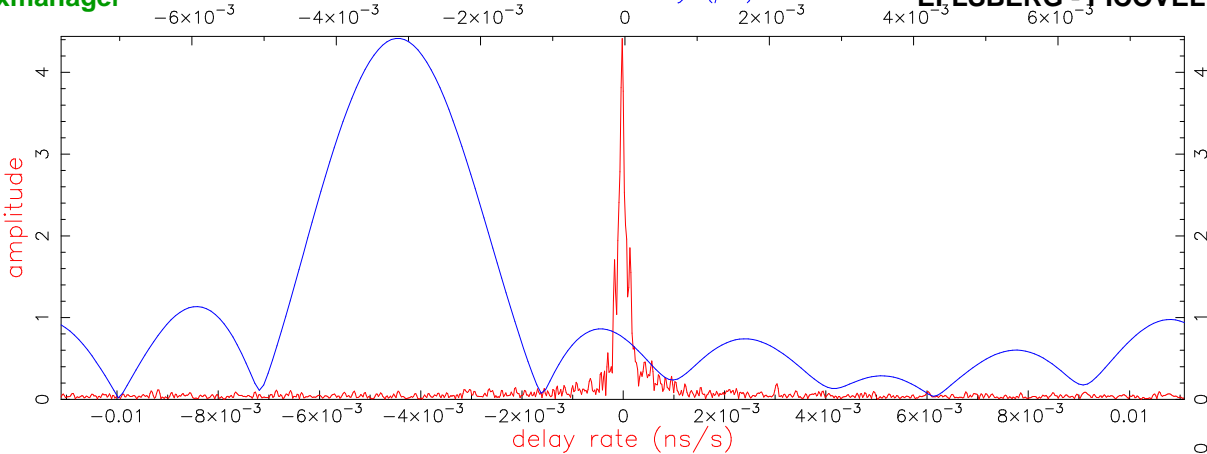
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, BP

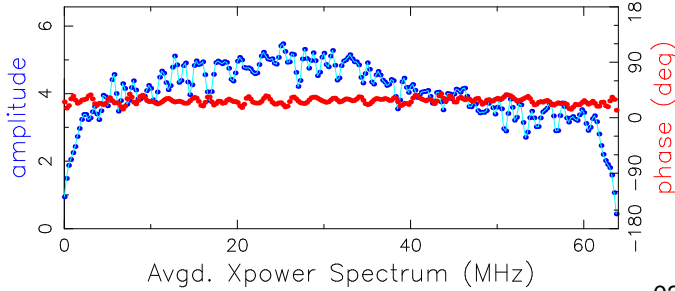
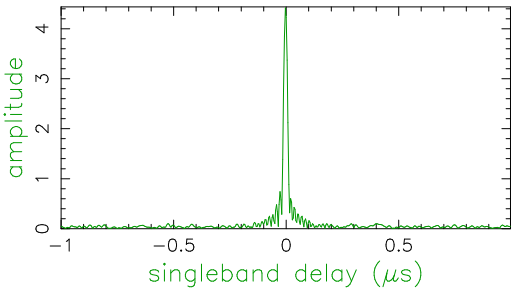
EFLSBERG - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



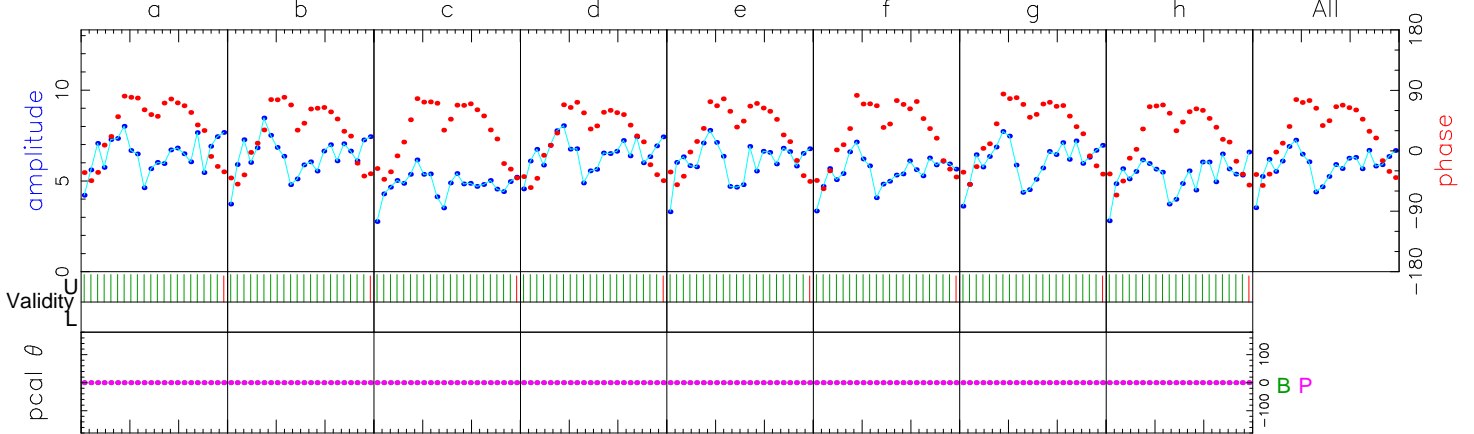
Fringe quality 6

SNR 162.7  
 Int time 179.588  
 Amp 4.440  
 Phase 29.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002904  
 MBD -0.003117  
 Fringe rate (Hz)  
 -0.002718  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Yr:day 16383  
 Start 2020:286  
 Stop 2020:286  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060626  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	36.2	27.0	32.2	22.4	28.0	30.6	35.5	21.3	Ampl.	29.2
B	4.8	4.8	3.6	5.0	4.5	4.1	4.6	4.0	Ampl.	4.4
P	255.9	256.0	256.3	256.1	256.6	256.4	256.4	255.6	Sbd box	256.3
B	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.06938104900E+03		Apriori delay (usec)		-3.06937793202E+03		Resid mbdelay (usec)		-3.11698E-03	+/- 6.7E-06
Sband delay (usec)	-3.06938083602E+03		Apriori clock (usec)		1.0325738E+01		Resid sbdelay (usec)		-2.90400E-03	+/- 5.3E-05
Phase delay (usec)	-3.06937793110E+03		Apriori clockrate (us/s)		2.0000000E-07		Resid phdelay (usec)		9.20826E-07	+/- 2.2E-08
Delay rate (us/s)	6.56685035211E-02		Apriori rate (us/s)		6.56685344273E-02		Resid rate (us/s)		-3.09062E-08	+/- 2.1E-10
Total phase (deg)			Apriori accel (us/s/s)		2.18594469395E-05		Resid phase (deg)		29.2	+/- 0.7

ph/seg (deg) 42.3 1.7 Theor. Amplitude 4.440 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 37.0 2.9 Search (1024X32) 4.205 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 6.0 1.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 10.1 1.7 Inc. seg. avg. 5.851 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 10.1 1.7 Inc. frq. avg. 4.433 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 253.5 el 34.4 pa 39.5 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -391.605 1991.056 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/BP.W.29.1JFJKZ

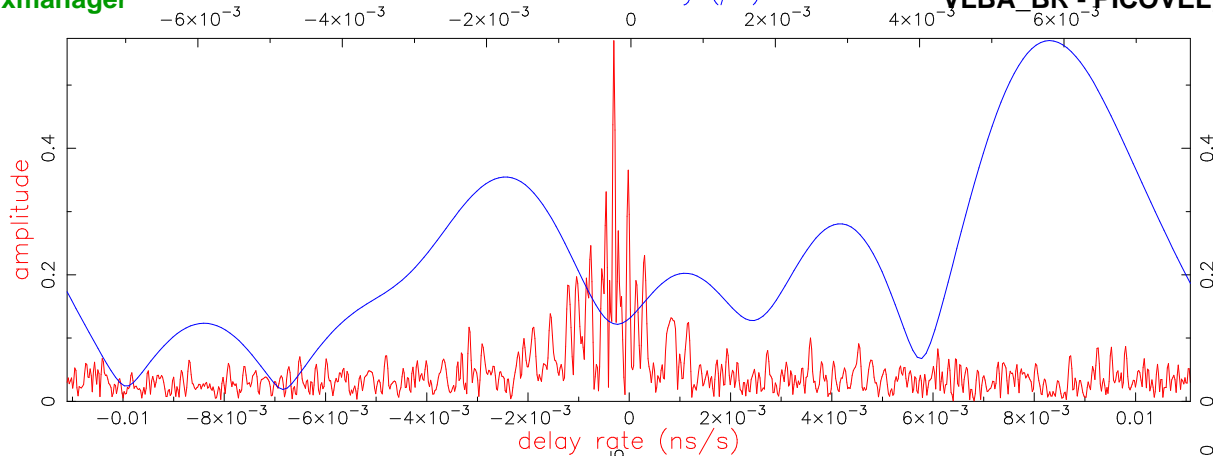
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, bP

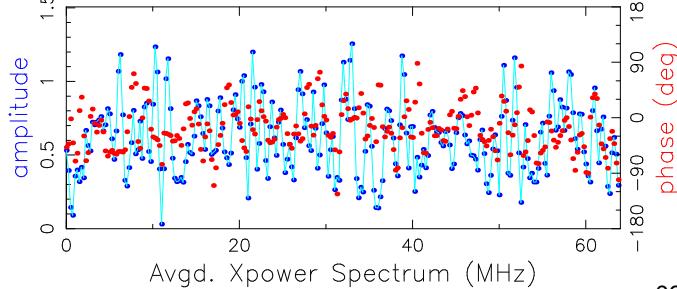
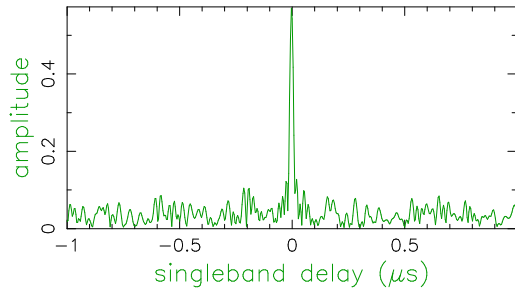
VLBA\_BR - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



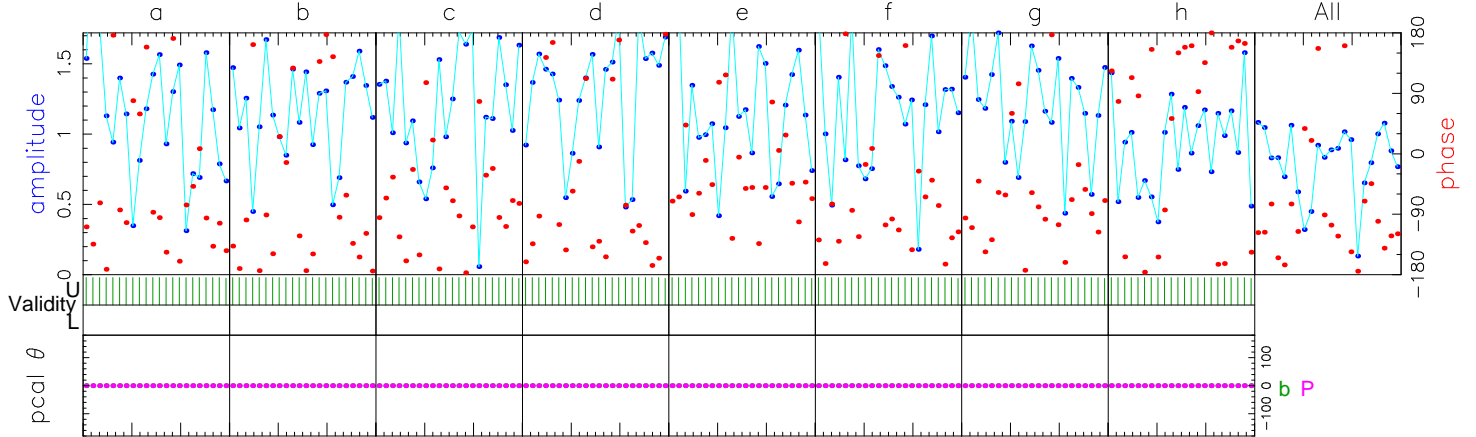
Fringe quality 8

SNR 21.0  
 Int time 179.788  
 Amp 0.574  
 Phase -118.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002939  
 MBD 0.005829  
 Fringe rate (Hz)  
 -0.026599  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060626  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-121.0	-146.7	-90.4	-152.2	-57.9	-115.8	-88.4	154.7	Phase	-118.7
	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.6	Ampl.	0.7
	256.1	255.9	256.0	255.6	256.1	255.5	255.2	254.4	Sbd box	256.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.96518365891E+03		Apriori delay (usec)		-5.96517386332E+03		Resid mbdelay (usec)		5.82941E-03	+/- 5.2E-05
Sband delay (usec)	-5.96517680207E+03		Apriori clock (usec)		-1.4578438E+00		Resid sbdelay (usec)		-2.93875E-03	+/- 4.1E-04
Phase delay (usec)	-5.96517386707E+03		Apriori clockrate (us/s)		3.9999999E-07		Resid phdelay (usec)		-3.74933E-06	+/- 1.7E-07
Delay rate (us/s)	1.78755322753E+00		Apriori rate (us/s)		1.78755353000E+00		Resid rate (us/s)		-3.02469E-07	+/- 1.7E-09
Total phase (deg)			Apriori accel (us/s/s)		3.63098335245E-05		Resid phase (deg)		-118.7	+/- 5.4

	RMS	Theor.	Amplitude	0.574 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	59.6	12.8	Search (1024X32)	0.568	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	59.0	22.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	49.7	7.7	Inc. seg. avg.	0.788	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	31.0	13.5	Inc. frq. avg.	0.737	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

b: az 92.6 el 25.0 pa -44.1 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -10894.155 2108.028 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/bP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/bP.W.30.1JFKZ

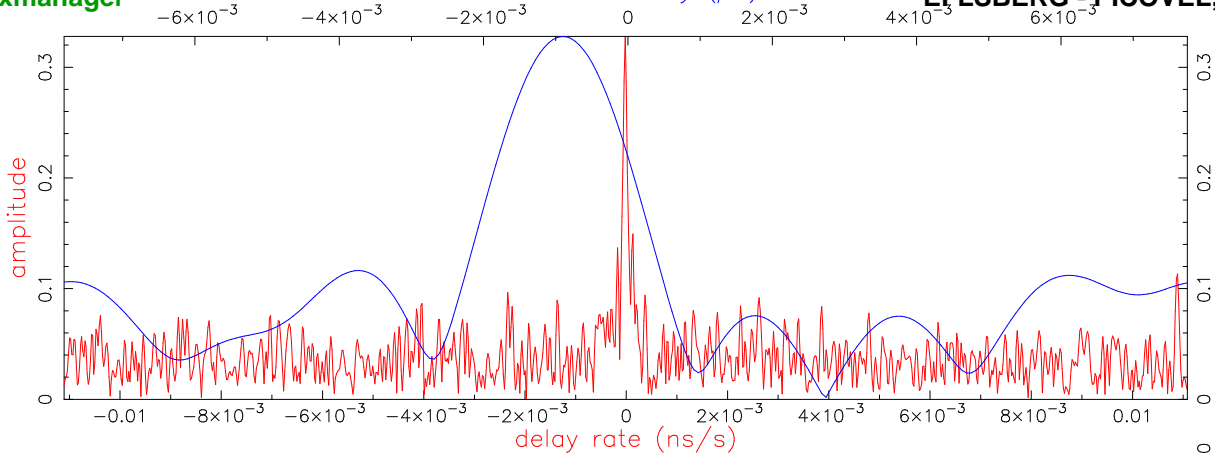
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, BP

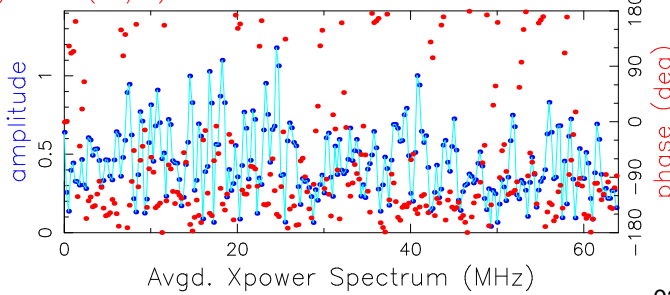
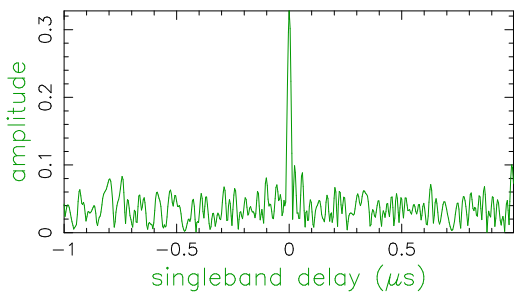
EFLSBERG - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



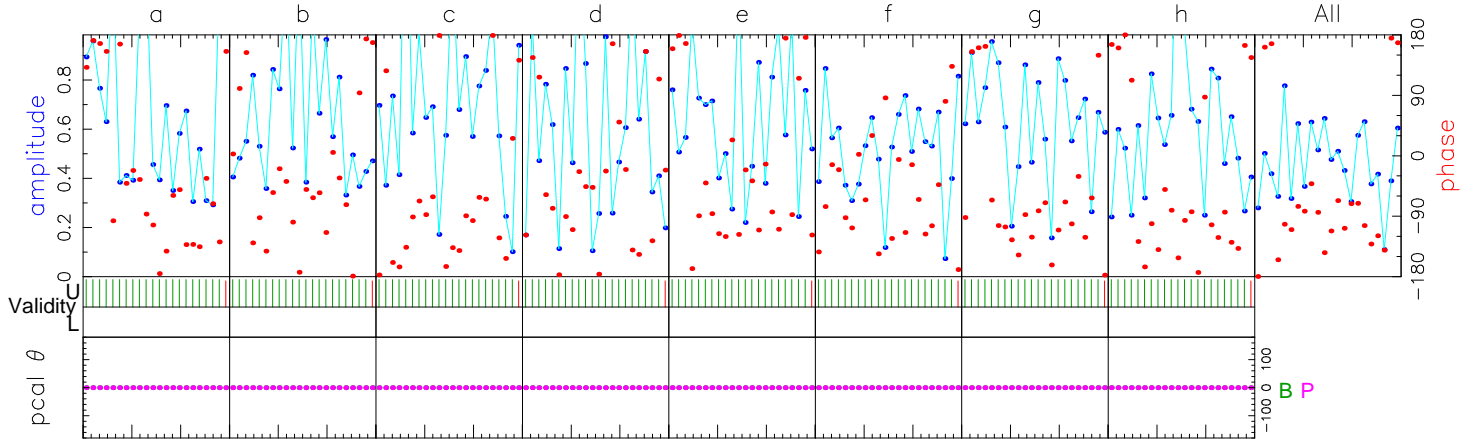
Fringe quality 9

SNR 12.0  
 Int time 179.588  
 Amp 0.328  
 Phase -114.4  
 PFD 7.5e-25  
 Delays (us)  
 SBD 0.000207  
 MBD -0.000897  
 Fringe rate (Hz)  
 -0.002522  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060628  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-133.0	-84.8	-126.7	-92.7	-118.5	-73.6	-114.3	-131.5	Phase	-114.4
	0.4	0.3	0.5	0.2	0.4	0.3	0.4	0.4	Ampl.	0.3
	256.9	259.7	258.1	306.4	257.0	257.3	257.0	256.8	Sbd box	257.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.06937882900E+03		Apriori delay (usec)		-3.06937793202E+03		Resid mbdelay (usec)		-8.96978E-04	+/- 9.0E-05
Sband delay (usec)	-3.06937772552E+03		Apriori clock (usec)		1.0325738E+01		Resid sbdelay (usec)		2.06500E-04	+/- 7.2E-04
Phase delay (usec)	-3.06937793564E+03		Apriori clockrate (us/s)		2.0000000E-07		Resid phdelay (usec)		-3.61380E-06	+/- 3.0E-07
Delay rate (us/s)	6.56685057462E-02		Apriori rate (us/s)		6.56685344273E-02		Resid rate (us/s)		-2.86811E-08	+/- 2.9E-09
Total phase (deg)			Apriori accel (us/s/s)		2.18594469395E-05		Resid phase (deg)		-114.4	+/- 9.5

	RMS	Theor.	Amplitude	0.328 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	46.2	22.4	Search (1024X32)	0.322	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	62.1	39.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	25.2	13.5	Inc. seg. avg.	0.432	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	29.8	23.5	Inc. frq. avg.	0.339	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
						ion window (TEC) 0.00 0.00

B: az 253.5 el 34.4 pa 39.5 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -391.605 1991.056 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/BP.W.48.1JFKZ

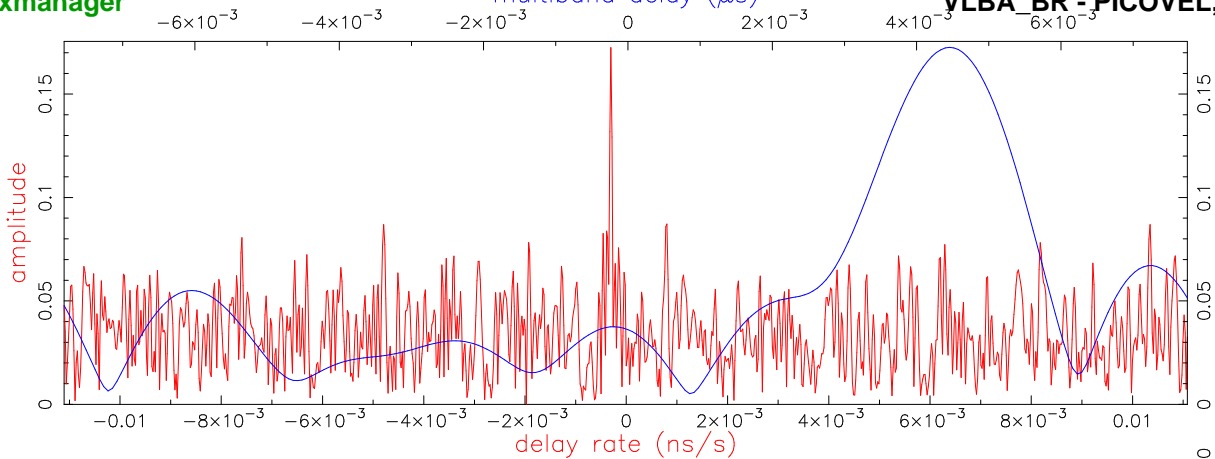
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, bP

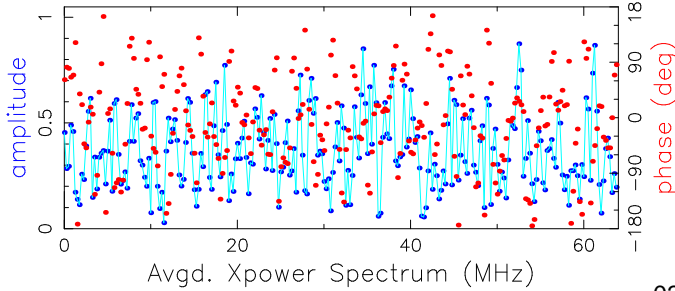
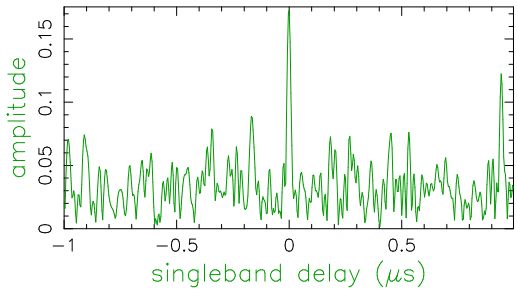
VLBA\_BR - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



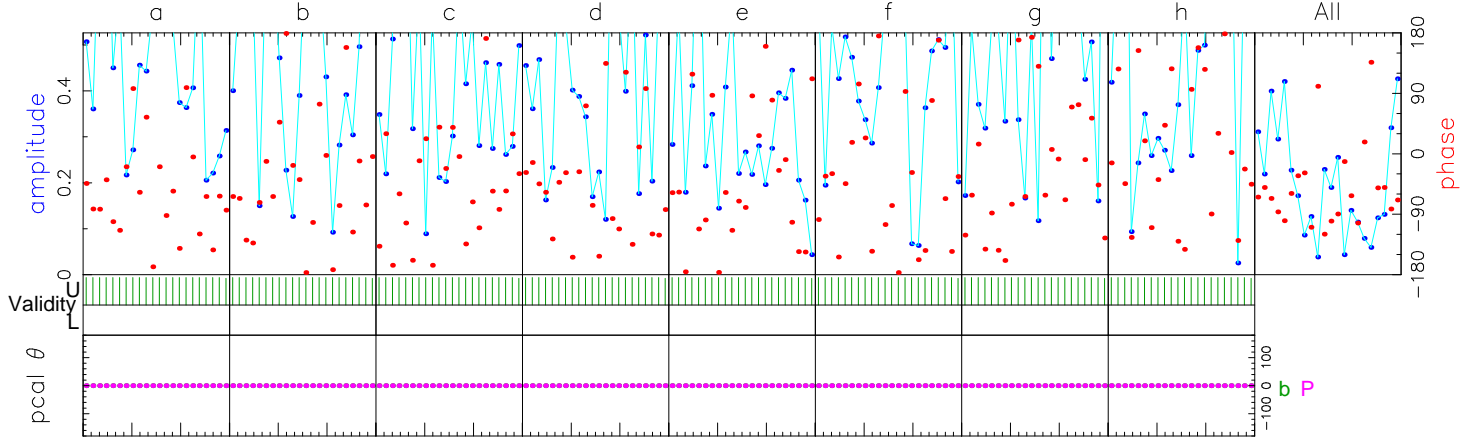
Fringe quality 0

SNR 6.4  
 Int time 179.788  
 Amp 0.175  
 Phase -74.7  
 PFD 1.7e-02  
 Delays (us)  
 SBD -0.001756  
 MBD 0.004428  
 Fringe rate (Hz)  
 -0.026397  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060629  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-72.4	-68.8	-73.8	-82.0	-86.7	-118.5	-64.7	-39.7	Phase	-74.7
	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	Ampl.	0.2
	257.8	257.5	170.8	254.7	429.1	394.6	496.8	392.9	Sbd box	256.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.96516943572E+03		Apriori delay (usec)		-5.96517386332E+03		Resid mbdelay (usec)		4.42759E-03	+/- 1.7E-04
Sband delay (usec)	-5.96517561907E+03		Apriori clock (usec)		-1.4578438E+00		Resid sbdelay (usec)		-1.75575E-03	+/- 1.3E-03
Phase delay (usec)	-5.96517386568E+03		Apriori clockrate (us/s)		3.9999999E-07		Resid phdelay (usec)		-2.35969E-06	+/- 5.6E-07
Delay rate (us/s)	1.78755322982E+00		Apriori rate (us/s)		1.78755353000E+00		Resid rate (us/s)		-3.00173E-07	+/- 5.4E-09
Total phase (deg)			Apriori accel (us/s/s)		3.63098335245E-05		Resid phase (deg)		-74.7	+/- 17.8

	RMS	Theor.	Amplitude	0.175 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	59.4	41.8	Search (1024X32)	0.170	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	68.6	72.9	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	24.1	25.2	Inc. seg. avg.	0.158	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	32.0	44.0	Inc. frq. avg.	0.165					

b: az 92.6 el 25.0 pa -44.1 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -10894.155 2108.028 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/bP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/bP.W.59.1JFKZ



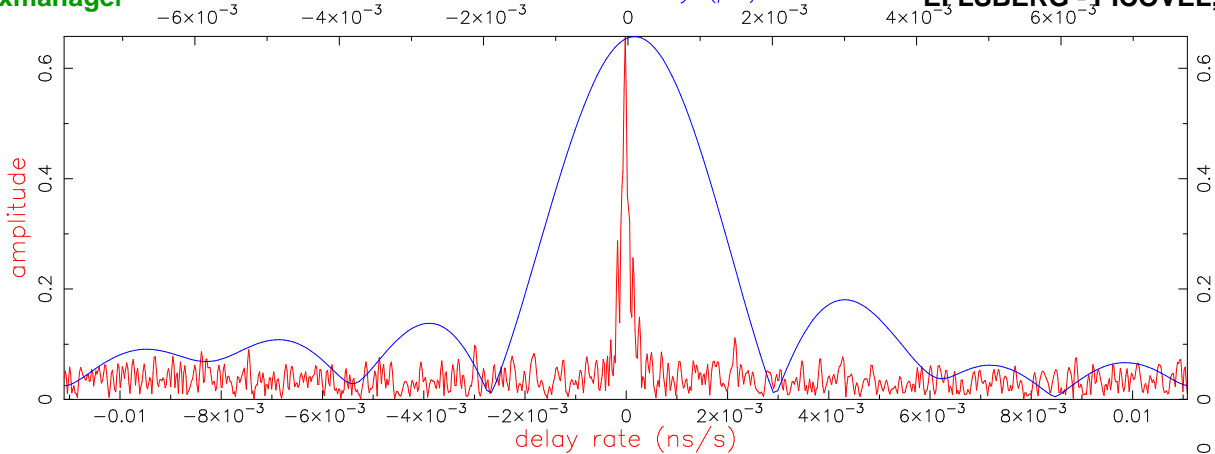
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, BP

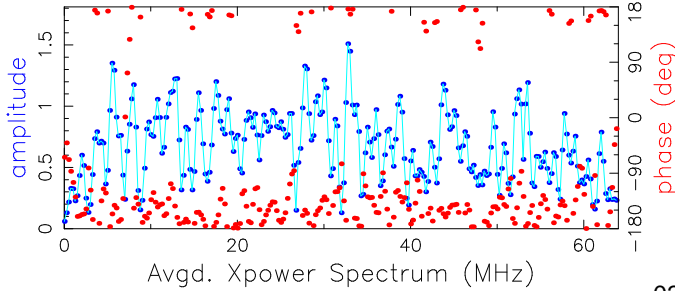
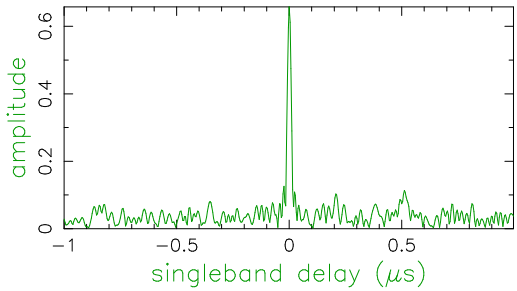
EFLSBERG - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



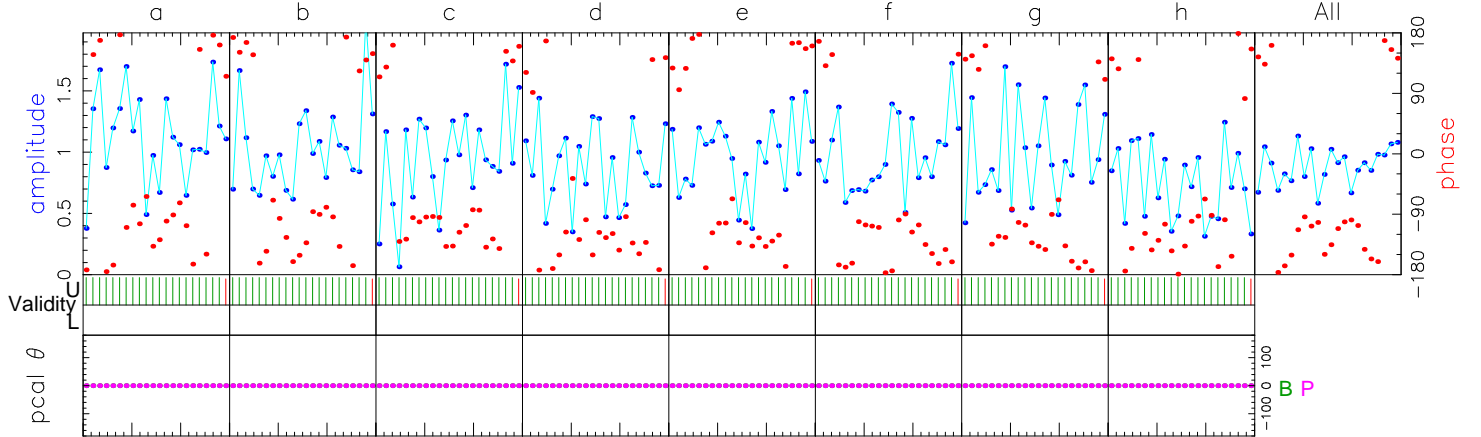
Fringe quality 7

SNR 24.1  
 Int time 179.588  
 Amp 0.658  
 Phase -151.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000301  
 MBD 0.000101  
 Fringe rate (Hz)  
 -0.002828  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060630  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-150.4	-158.0	-137.7	-151.8	-158.2	-151.4	-152.2	-150.0	Phase	-151.4
	0.8	0.7	0.6	0.6	0.7	0.8	0.7	0.5	Ampl.	0.7
	256.1	256.9	257.9	257.1	257.1	257.1	257.7	256.2	Sbd box	257.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.06937783116E+03		Apriori delay (usec)		-3.06937793202E+03		Resid mbdelay (usec)		1.00866E-04	+/- 4.5E-05
Sband delay (usec)	-3.06937763077E+03		Apriori clock (usec)		1.0325738E+01		Resid sbdelay (usec)		3.01250E-04	+/- 3.6E-04
Phase delay (usec)	-3.06937793680E+03		Apriori clockrate (us/s)		2.0000000E-07		Resid phdelay (usec)		-4.78099E-06	+/- 1.5E-07
Delay rate (us/s)	6.56685022676E-02		Apriori rate (us/s)		6.56685344273E-02		Resid rate (us/s)		-3.21597E-08	+/- 1.4E-09
Total phase (deg)			Apriori accel (us/s/s)		2.18594469395E-05		Resid phase (deg)		-151.4	+/- 4.8

	RMS	Theor.	Amplitude	0.658 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	42.7	11.1	Search (1024X32)	0.630	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	41.6	19.5	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	6.8	6.7	Inc. seg. avg.	0.872	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	12.7	11.7	Inc. frq. avg.	0.657					

B: az 253.5 el 34.4 pa 39.5 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -391.605 1991.056 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/BP.W.71.1JFKZ

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

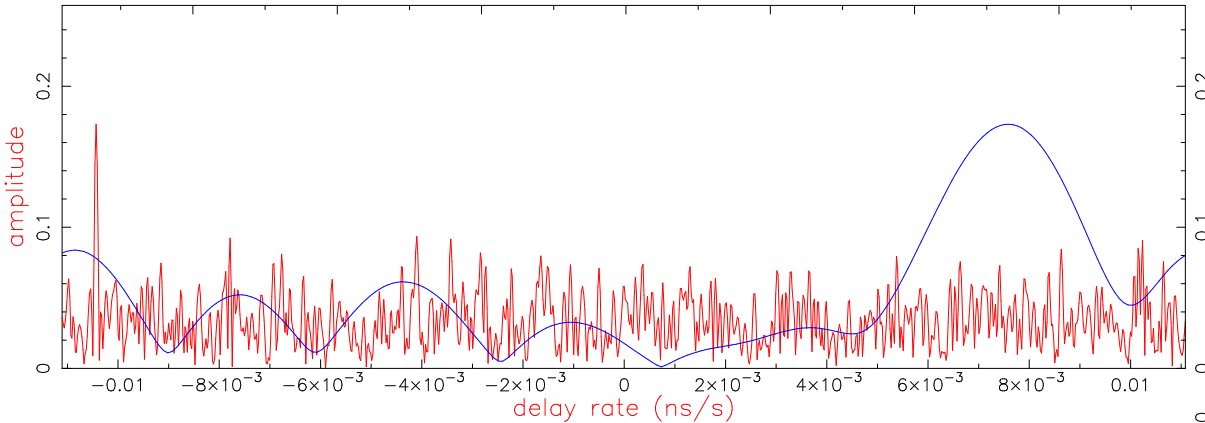
0235+164.1JFKZ, No0038, bP

VLBA\_BR - PICOVEL, fgroup W, pol RL

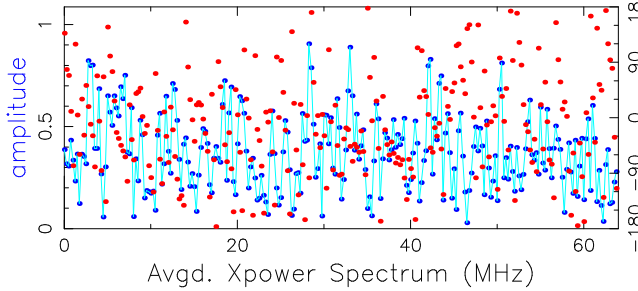
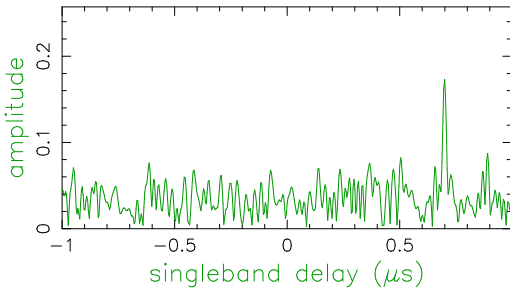
multiband delay ( $\mu$ s)

$-6 \times 10^{-3}$   $-4 \times 10^{-3}$   $-2 \times 10^{-3}$  0  $2 \times 10^{-3}$   $4 \times 10^{-3}$   $6 \times 10^{-3}$

Fringe quality 0

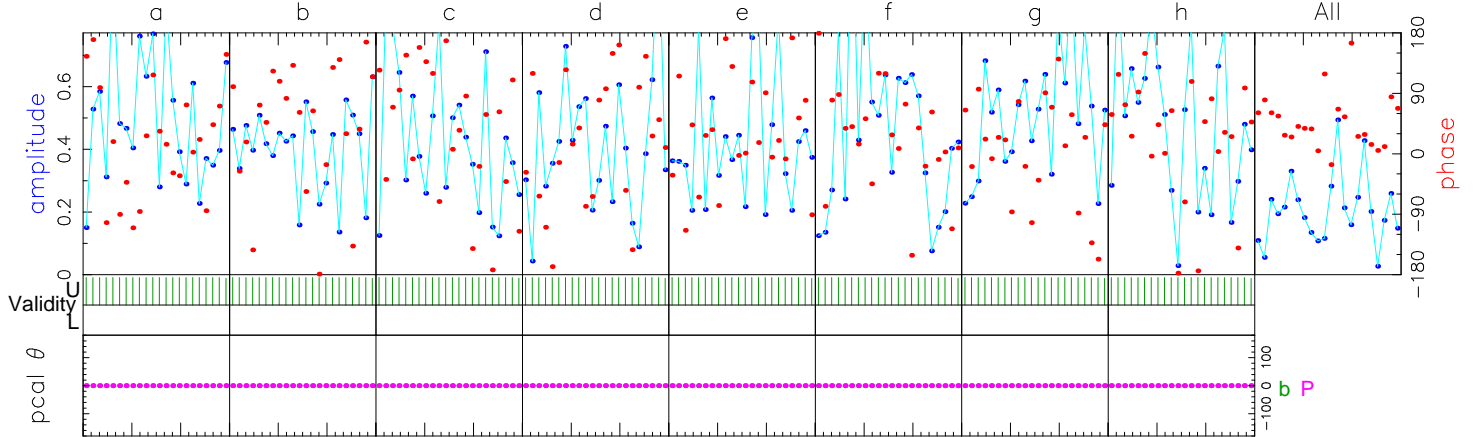


SNR 6.4  
 Int time 179.788  
 Amp 0.257  
 Phase 43.2  
 PFD 2.9e-02  
 Delays (us)  
 SBD 0.698720  
 MBD 0.005277  
 Fringe rate (Hz)  
 -0.919264  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060631  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-5.96448108680E+03		Apriori delay (usec)		-5.96517386332E+03		Resid mbdelay (usec)		5.27652E-03	+/- 1.7E-04
Sband delay (usec)	-5.96447514357E+03		Apriori clock (usec)		-1.4578438E+00		Resid sbdelay (usec)		6.98720E-01	+/- 1.4E-03
Phase delay (usec)	-5.96517386195E+03		Apriori clockrate (us/s)		3.9999999E-07		Resid phdelay (usec)		1.36414E-06	+/- 5.7E-07
Delay rate (us/s)	1.78754307669E+00		Apriori rate (us/s)		1.78755353000E+00		Resid rate (us/s)		-1.04533E-05	+/- 5.5E-09
Total phase (deg)			Apriori accel (us/s/s)		3.63098335245E-05		Resid phase (deg)		43.2	+/- 18.0
ph/seg (deg)	RMS 40.0	Theor. 42.3	Amplitude 0.257 +/- 0.040		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		sb window (us)	-1.000 1.000
amp/seg (%)	65.2	73.8	Search (1024X32) 0.171		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	24.2	25.5	Inc. seg. avg. 0.242		Sample rate(MISamp/s): 128				dr window (ns/s)	-0.011 0.011
amp/frq (%)	34.5	44.5	Inc. frq. avg. 0.249		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00

b: az 92.6 el 25.0 pa -44.1 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -10894.155 2108.028 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/bP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/bP.W.78.1JFKZ

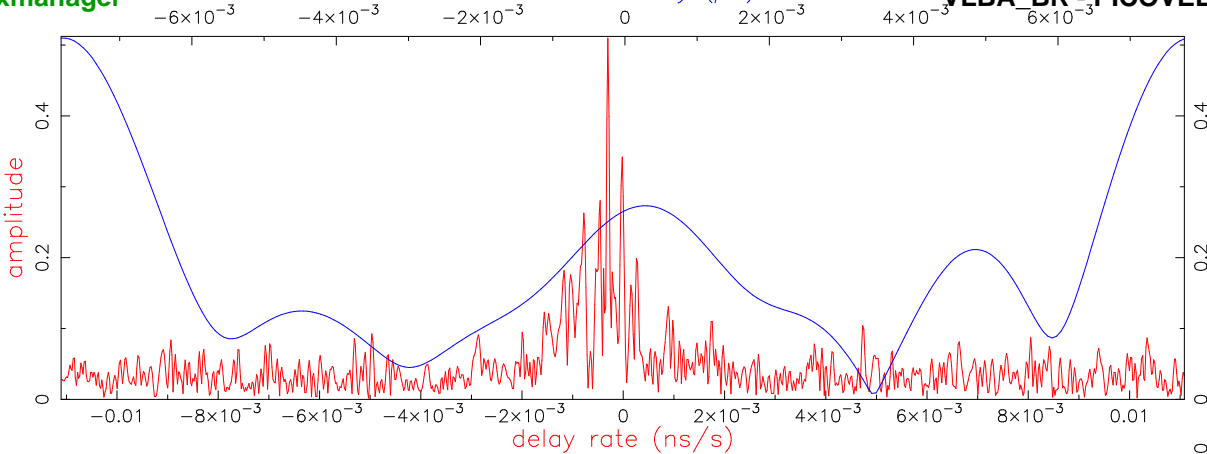
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, bP

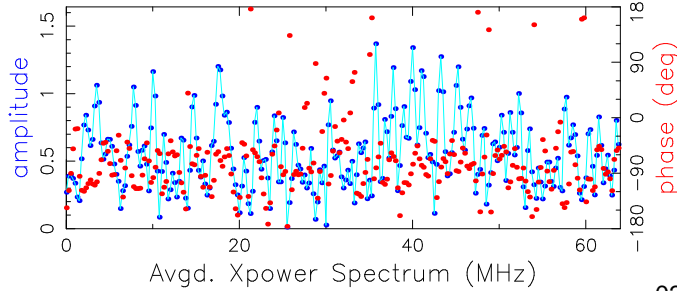
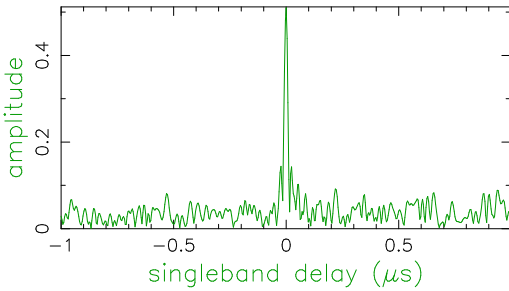
VLBA\_BR - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



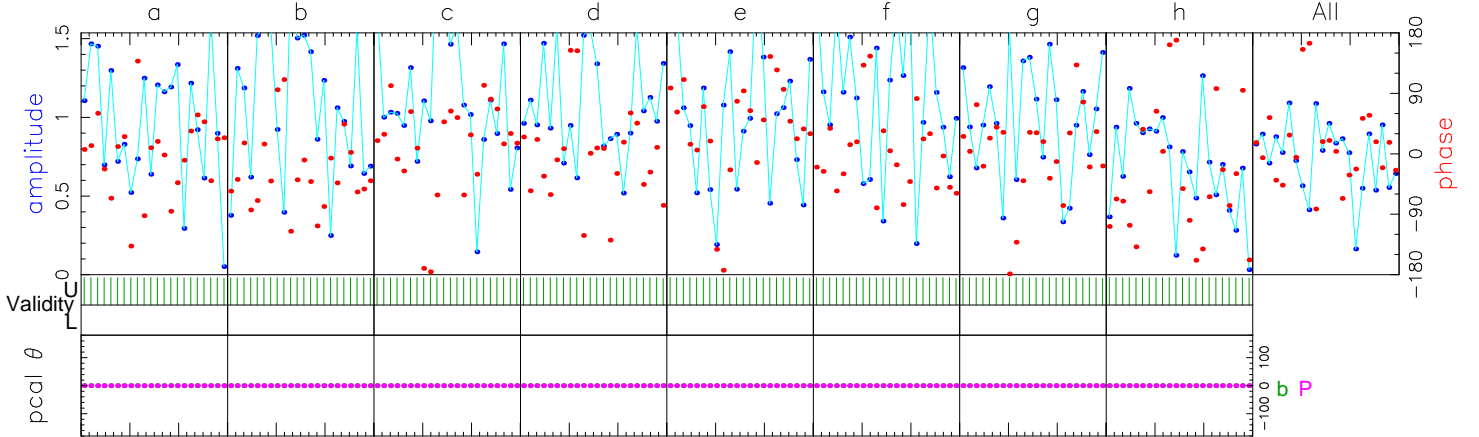
Fringe quality 8

SNR 18.8  
 Int time 179.788  
 Amp 0.512  
 Phase -2.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000806  
 MBD -0.007812  
 Fringe rate (Hz)  
 -0.026158  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060624  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-5.96518167500E+03									
Sband delay (usec)	-5.96517466957E+03									
Phase delay (usec)	-5.96517386338E+03									
Delay rate (us/s)	1.78755323254E+00									
Total phase (deg)			-196.5							
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										
ion window (TEC)										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
PCal period (AP's) 5, 5										
simultaneous interpolator										



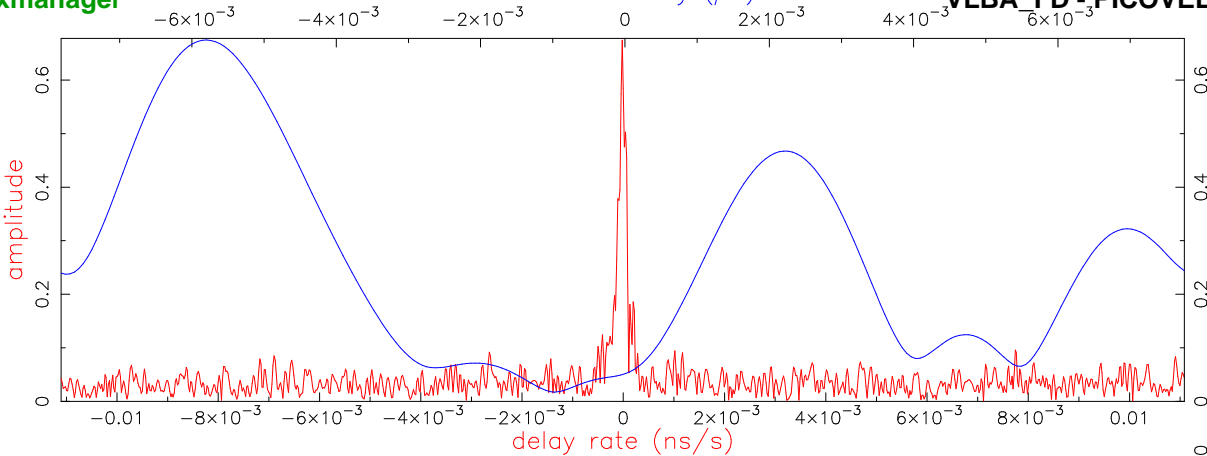
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fP

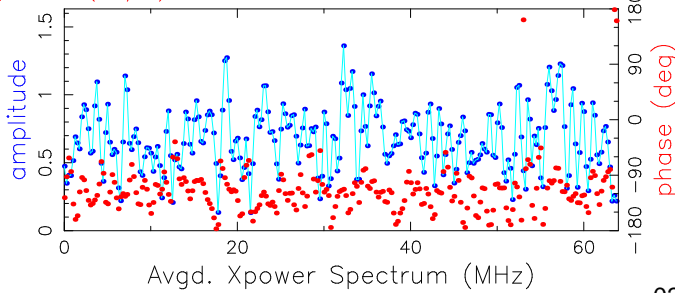
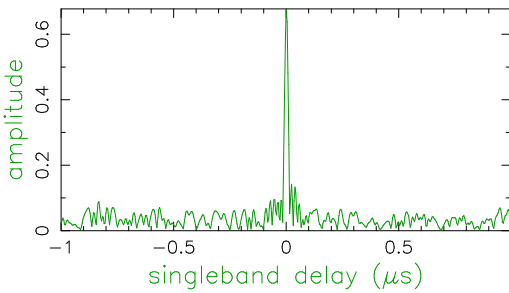
VLBA\_FD - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



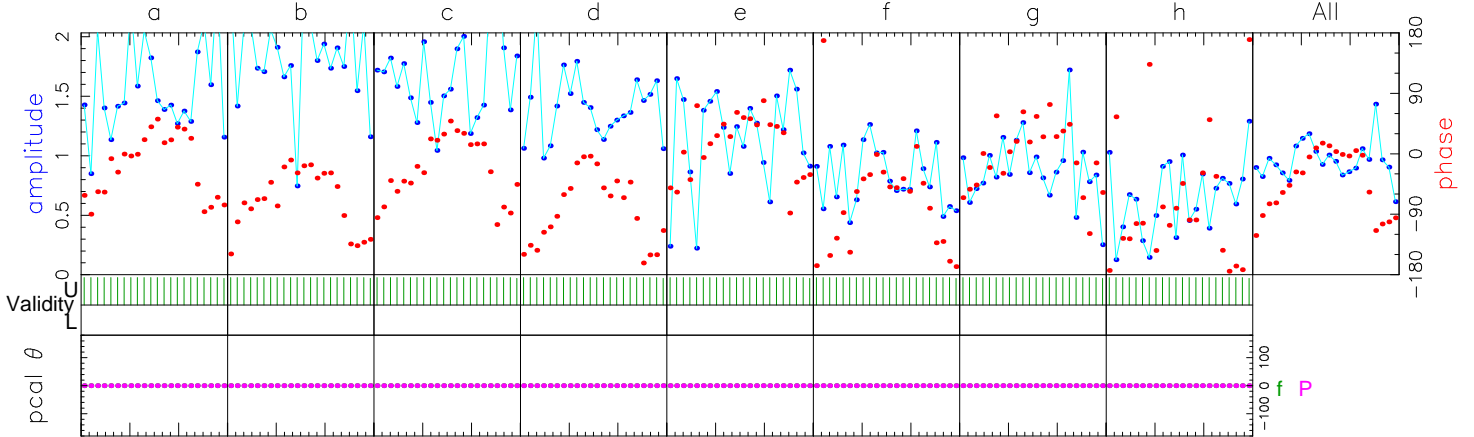
Fringe quality 5

SNR 24.9  
Int time 179.788  
Amp 0.678  
Phase -41.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.000848  
MBD -0.005770  
Fringe rate (Hz)  
-0.001865  
Ion TEC 0.000  
Ref freq (MHz)  
87940.0000  
AP (sec) 0.512



Exp. c202c  
Exper # 16383  
Yr:day 2020:286  
Start 043000.00  
Stop 043300.22  
FRT 043130.00  
Corr/FF/build  
2021:039:055416  
2021:039:060635  
2020:247:085004  
RA & Dec (J2000)  
02h38m38.930107s  
+16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.81093204431E+03	Apriori delay (usec)	-1.81092627449E+03	Resid mbdelay (usec)	-5.76982E-03	+/-	4.4E-05
Sband delay (usec)	-1.81092542599E+03	Apriori clock (usec)	8.1809921E+00	Resid sbdelay (usec)	8.48500E-04	+/-	3.5E-04
Phase delay (usec)	-1.81092627579E+03	Apriori clockrate (us/s)	7.9999999E-07	Resid phdelay (usec)	-1.29870E-06	+/-	1.5E-07
Delay rate (us/s)	1.89667645785E+00	Apriori rate (us/s)	1.89667647906E+00	Resid rate (us/s)	-2.12048E-08	+/-	1.4E-09
Total phase (deg)	-249.5	Apriori accel (us/s/s)	6.64955258927E-06	Resid phase (deg)	-41.1	+/-	4.6

ph/seg (deg)	46.0	Theor.	10.8	Amplitude	0.678 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	48.1		18.9	Search (1024X32)	0.674	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	51.0		6.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	54.2		11.4	Inc. seg. avg.	0.946	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.842	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 92.3 el 38.1 pa -63.8 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11572.703 -641.475 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/fP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/fP.W.104.1JFKZ

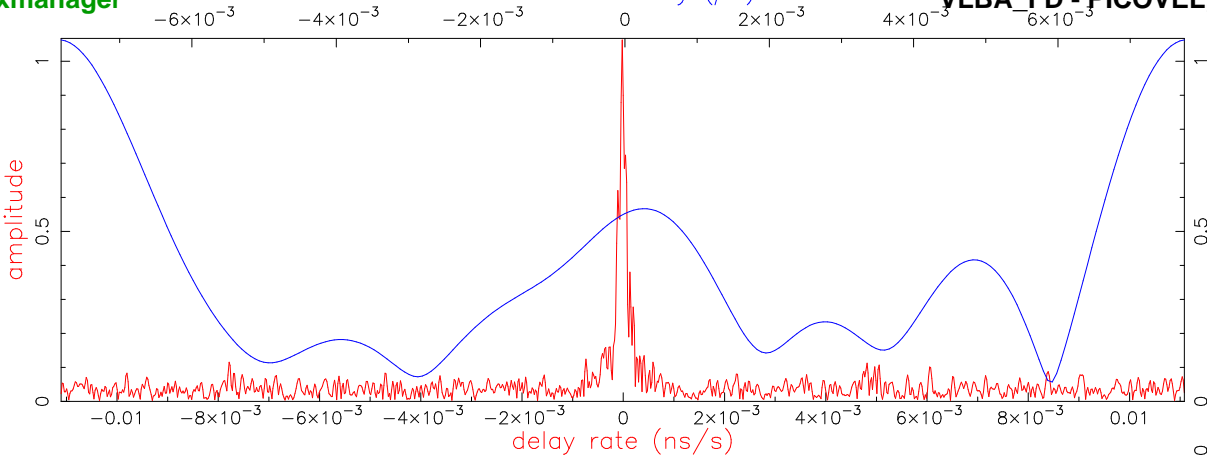
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fP

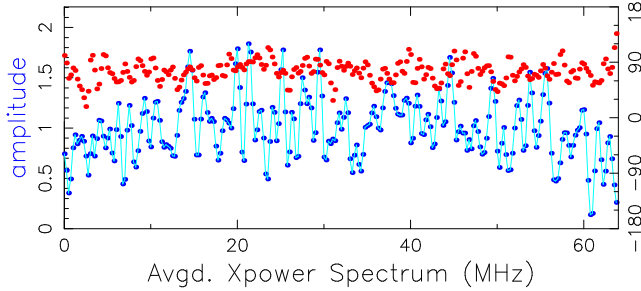
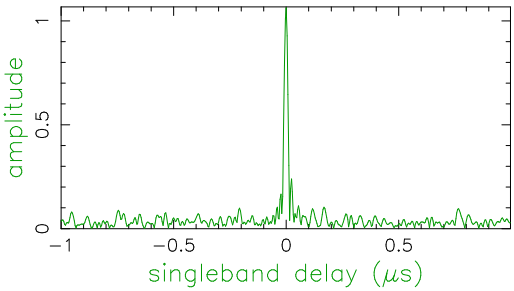
VLBA\_FD - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



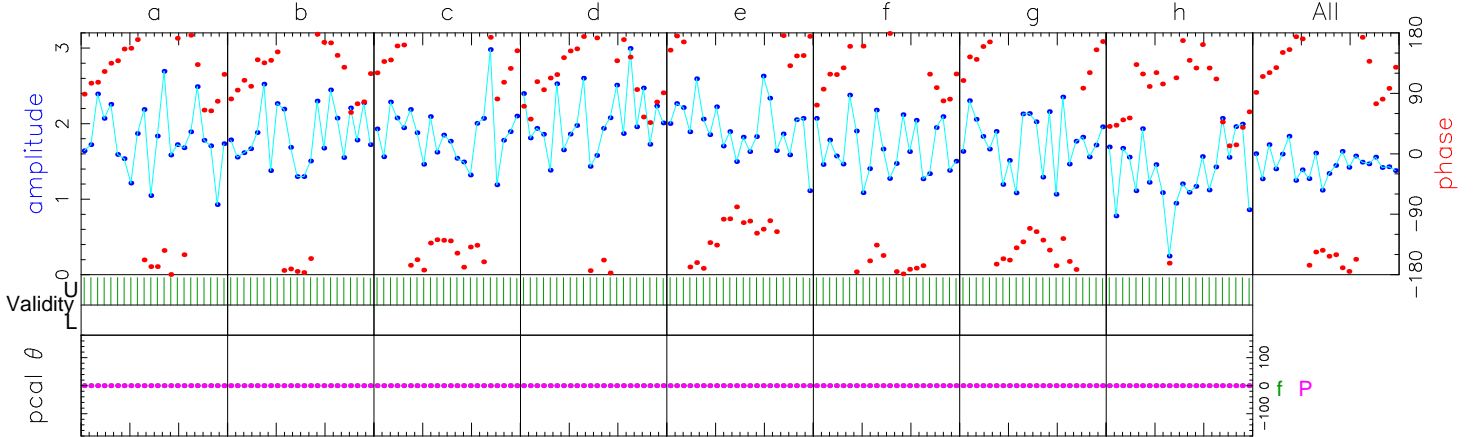
Fringe quality 4

SNR 39.1  
 Int time 179.788  
 Amp 1.067  
 Phase 156.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000852  
 MBD -0.007869  
 Fringe rate (Hz)  
 -0.001665  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060637  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
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	Manl 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		
Group delay (usec)(sbd)	-1.81093414312E+03				-1.81092627449E+03				Resid mbdelay (usec)	-7.86863E-03	+/- 2.8E-05
Sband delay (usec)	-1.81092712699E+03				8.1809921E+00				Resid sbdelay (usec)	-8.52500E-04	+/- 2.2E-04
Phase delay (usec)	-1.81092626957E+03				7.9999999E-07				Resid phdelay (usec)	4.92629E-06	+/- 9.2E-08
Delay rate (us/s)	1.89667646012E+00				1.89667647906E+00				Resid rate (us/s)	-1.89352E-08	+/- 8.9E-10
Total phase (deg)			-52.5		6.64955258927E-06				Resid phase (deg)	156.0	+/- 2.9
ph/seg (deg)	44.6	6.9			1.067 +/- 0.027				PCal mode: MANUAL, MANUAL		
amp/seg (%)	40.3	12.0			Search (1024X32)	1.059			PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
ph/frq (deg)	42.7	4.1			Interp.	0.000			Bits/sample: 2x2	mb window (us)	-0.008 0.008
amp/frq (%)	26.0	7.2			Inc. seg. avg.	1.455			Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011 0.011
					Inc. frq. avg.	1.284			Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00
f: az 92.3 el 38.1 pa -63.8									nlags: 256	t_cohere infinite	
P: az 255.5 el 45.3 pa 53.6											
u,v (fr/asec)					-11572.703	-641.475					simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/fP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/fP.W.127.1JFKZ

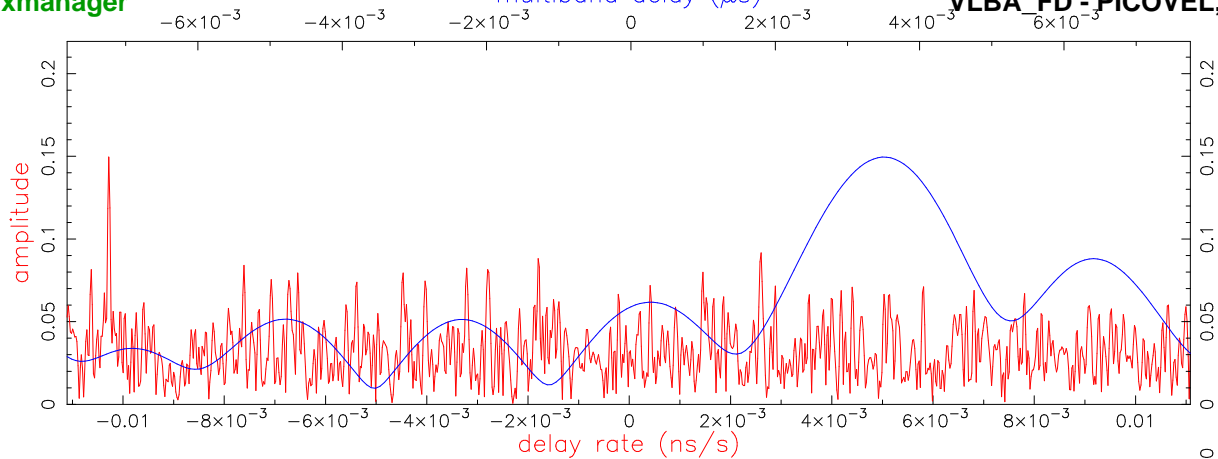
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fP

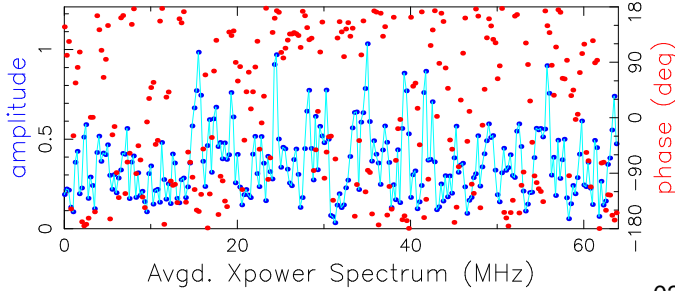
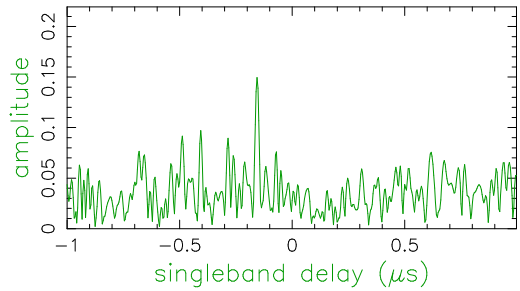
VLBA\_FD - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



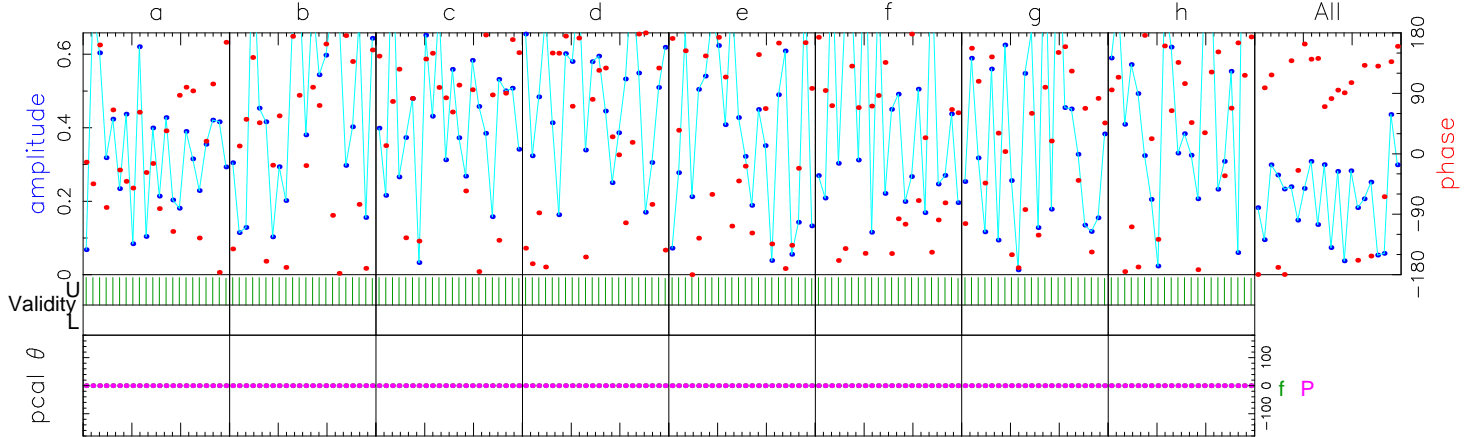
Fringe quality 0

SNR 5.5  
 Int time 179.788  
 Amp 0.219  
 Phase 141.4  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.155920  
 MBD 0.003516  
 Fringe rate (Hz)  
 -0.906047  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060639  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	32.4	148.3	120.3	170.3	-175.8	176.3	116.2	123.3	Phase	141.4
	0.1	0.3	0.4	0.3	0.2	0.2	0.2	0.4	Ampl.	0.2
	473.5	319.7	251.2	51.6	1.9	363.5	240.1	217.8	Sbd box	217.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.81107900829E+03		Apriori delay (usec)		-1.81092627449E+03		Resid mbdelay (usec)		3.51621E-03	+/- 2.0E-04
Sband delay (usec)	-1.81108219399E+03		Apriori clock (usec)		8.1809921E+00		Resid sbdelay (usec)		-1.55920E-01	+/- 1.6E-03
Phase delay (usec)	-1.81092627003E+03		Apriori clockrate (us/s)		7.9999999E-07		Resid phdelay (usec)		4.46668E-06	+/- 6.6E-07
Delay rate (us/s)	1.89666617604E+00		Apriori rate (us/s)		1.89667647906E+00		Resid rate (us/s)		-1.03030E-05	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		6.64955258927E-06		Resid phase (deg)		141.4	+/- 20.9

	RMS	Theor.	Amplitude	0.219 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	61.5	49.0	Search (1024X32)	0.148	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/seg (%)	78.2	85.5	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	53.6	29.5	Inc. seg. avg.	0.225	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00
amp/frq (%)	47.0	51.5	Inc. frq. avg.	0.230				

f: az 92.3 el 38.1 pa -63.8 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11572.703 -641.475 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/fP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/fP.W.143.1JFKZ

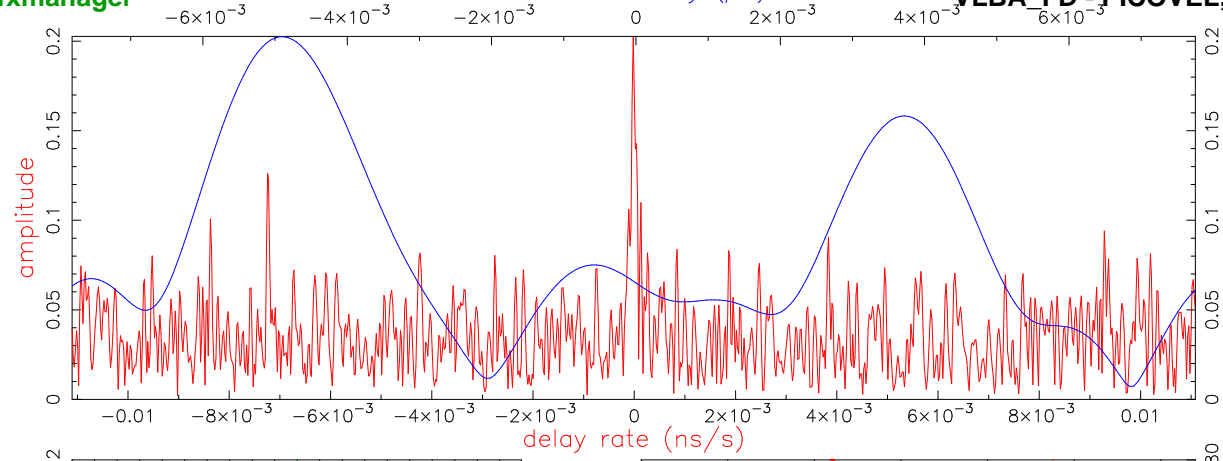
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fP

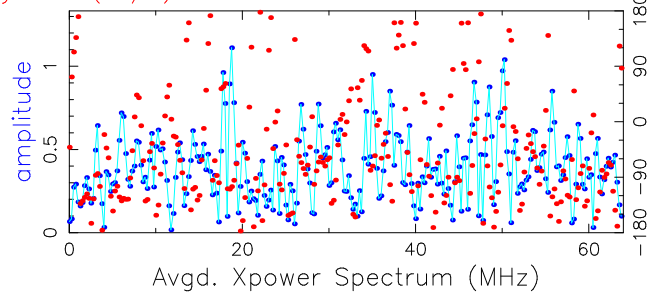
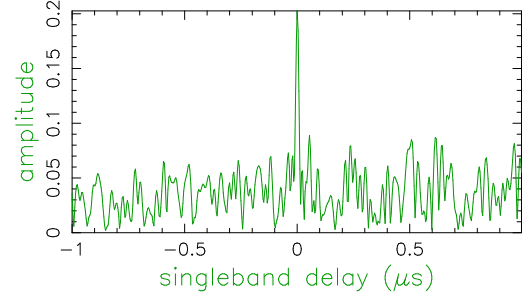
VLBA\_FD - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



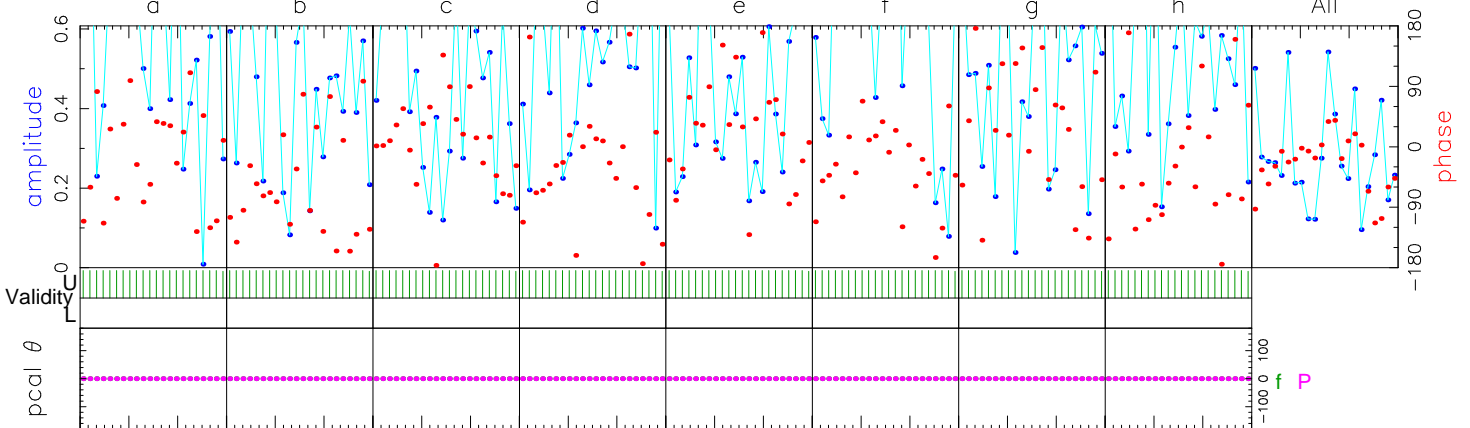
Fringe quality 9

SNR 7.4  
 Int time 179.788  
 Amp 0.203  
 Phase -24.3  
 PFD 1.7e-05  
 Delays (us)  
 SBD 0.000357  
 MBD -0.004881  
 Fringe rate (Hz)  
 -0.000974  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060641  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
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)	-1.81093115515E+03				-1.81092627449E+03					
Sband delay (usec)	-1.81092591799E+03				8.1809921E+00					
Phase delay (usec)	-1.81092627526E+03				7.9999999E-07					
Delay rate (us/s)	1.89667646799E+00				1.89667647906E+00					
Total phase (deg)		-232.7			6.64955258927E-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										
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)										
SampCntNorm: enabled										
mb window (us)										
dr window (ns/s)										
nlags: 256										
t_cohere infinite										
ion window (TEC)										
pcal $\theta$										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

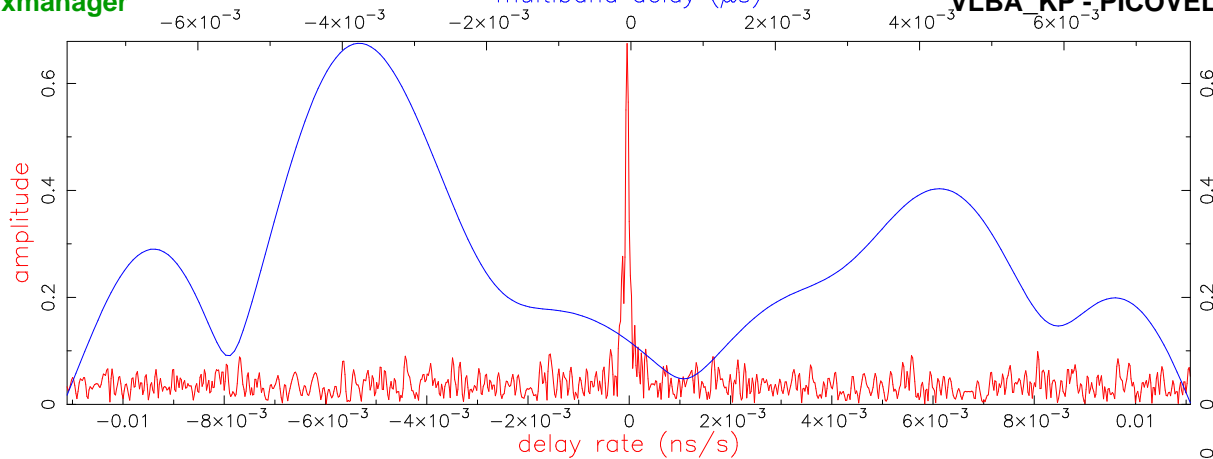
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, kP

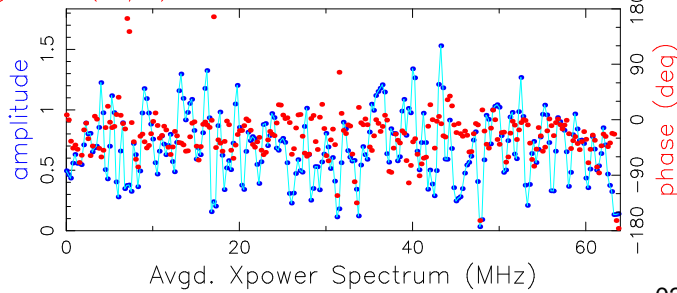
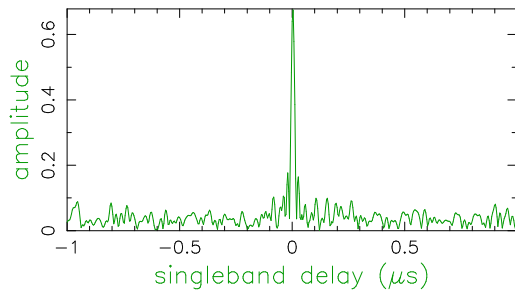
VLBA\_KP - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



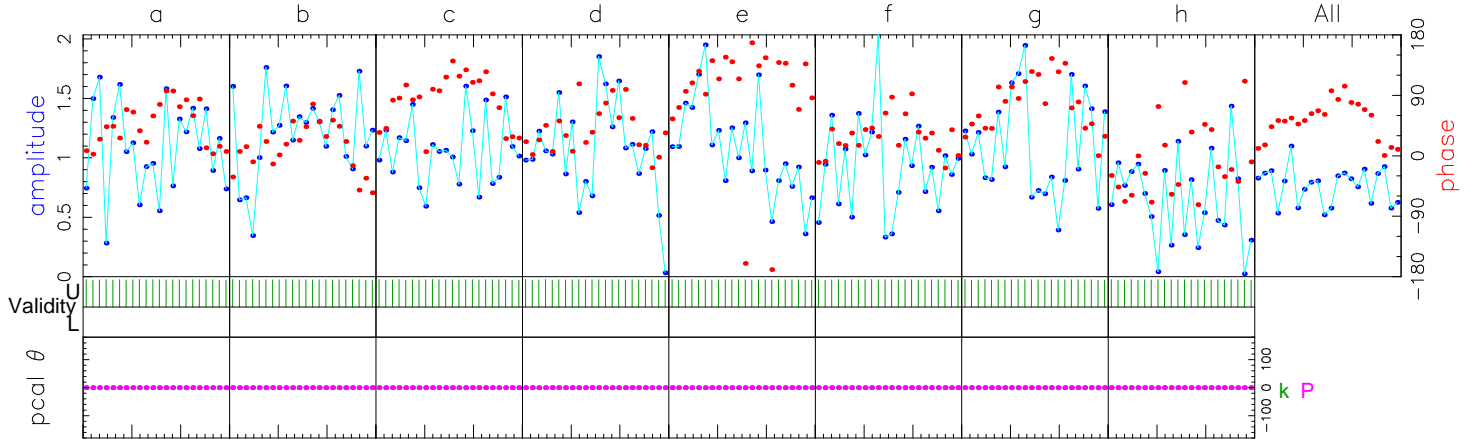
Fringe quality 7

SNR 24.7  
 Int time 177.927  
 Amp 0.678  
 Phase 51.7  
 PFD 0.0e+00  
 Delays ( $\mu$ s)  
 SBD 0.002979  
 MBD -0.003801  
 Fringe rate (Hz)  
 -0.004365  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060635  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-3.81472876176E+03									
Sband delay (usec)	-3.81472198208E+03									
Phase delay (usec)	-3.81472495945E+03									
Delay rate (us/s)	1.97007207537E+00									
Total phase (deg)			23.8							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
PC period (AP's) 5, 5										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
Amplitude										
0.678 +/- 0.027										
RMS										
28.5										
Theor.										
10.9										
ph/seg (deg)										
25.5										
amp/seg (%)										
25.5										
ph/frq (deg)										
47.4										
amp/frq (%)										
32.6										
Group delay (usec)(sbd)										
-3.81472496108E+03										
Resid mbdelay (usec)										
-3.80067E-03										
Resid sbdelay (usec)										
2.97900E-03										
Resid phdelay (usec)										
1.63418E-06										
Resid rate (us/s)										
-4.96360E-08										
Resid phase (deg)										
51.7										
PC period (AP's) 5, 5										
sb window (us)										
-1.000										
mb window (us)										
-0.008										
dr window (ns/s)										
-0.011										
ion window (TEC)										
0.00										
simultaneous interpolator										



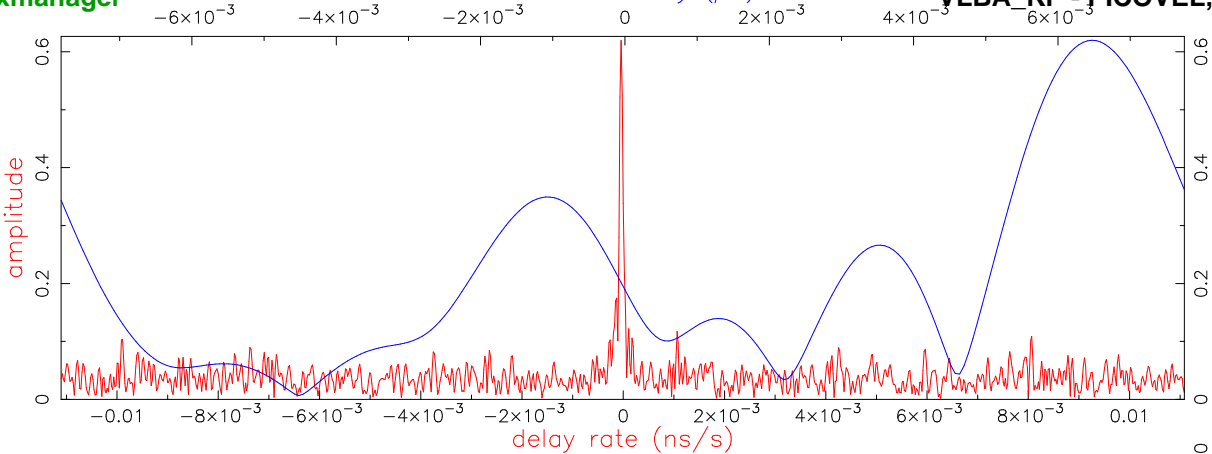
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, kP

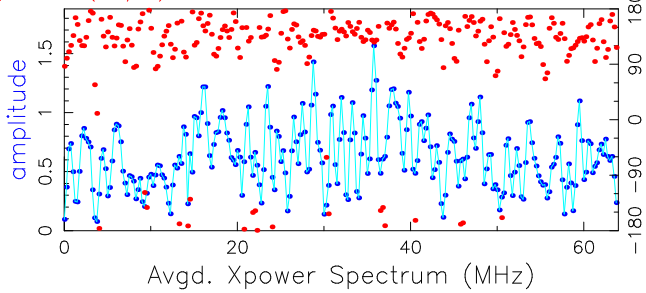
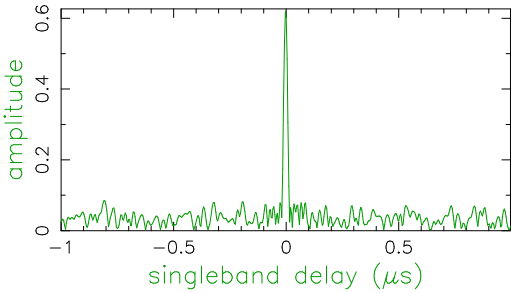
VLBA\_KP - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



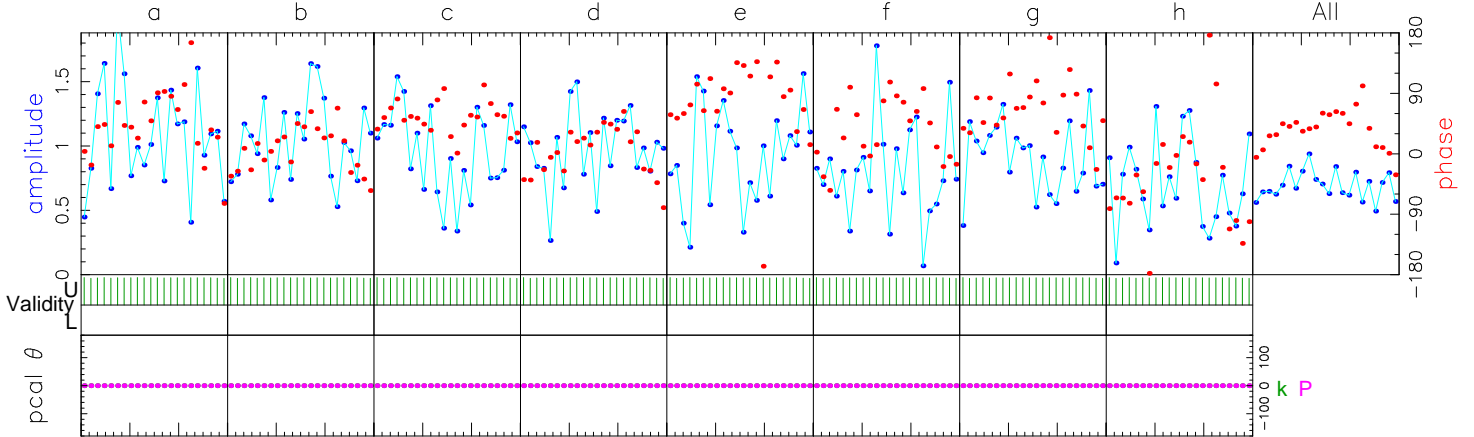
Fringe quality 8

SNR 22.9  
 Int time 177.926  
 Amp 0.627  
 Phase 37.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002543  
 MBD 0.006499  
 Fringe rate (Hz)  
 -0.004356  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Yr:day 16383  
 Start 2021:039:055416  
 Stop 2021:039:060638  
 FRT 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-3.81473408735E+03									
Sband delay (usec)	-3.81472750408E+03									
Phase delay (usec)	-3.81472495991E+03									
Delay rate (us/s)	1.97007207547E+00									
Total phase (deg)			9.0							
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 mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.627 +/- 0.027										
0.607										
0.000										
0.680										
0.733										
0.000E+00, 0.000E+00 (us/s)										
SampCntNorm: enabled										
nlags: 256										
t_cohere infinite										
-1.000 1.000										
-0.008 0.008										
-0.011 0.011										
0.00 0.00										

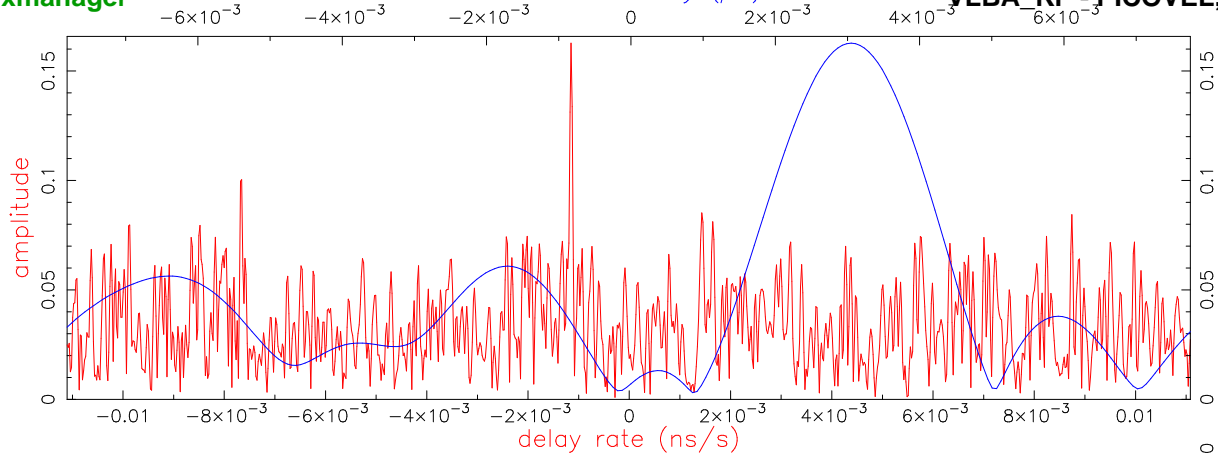
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, kP

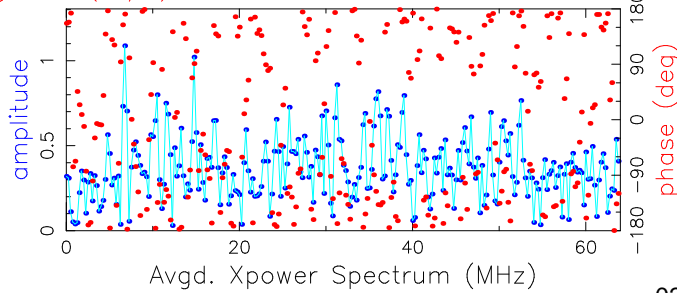
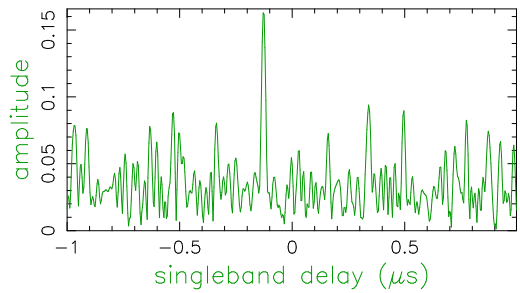
VLBA\_KP - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



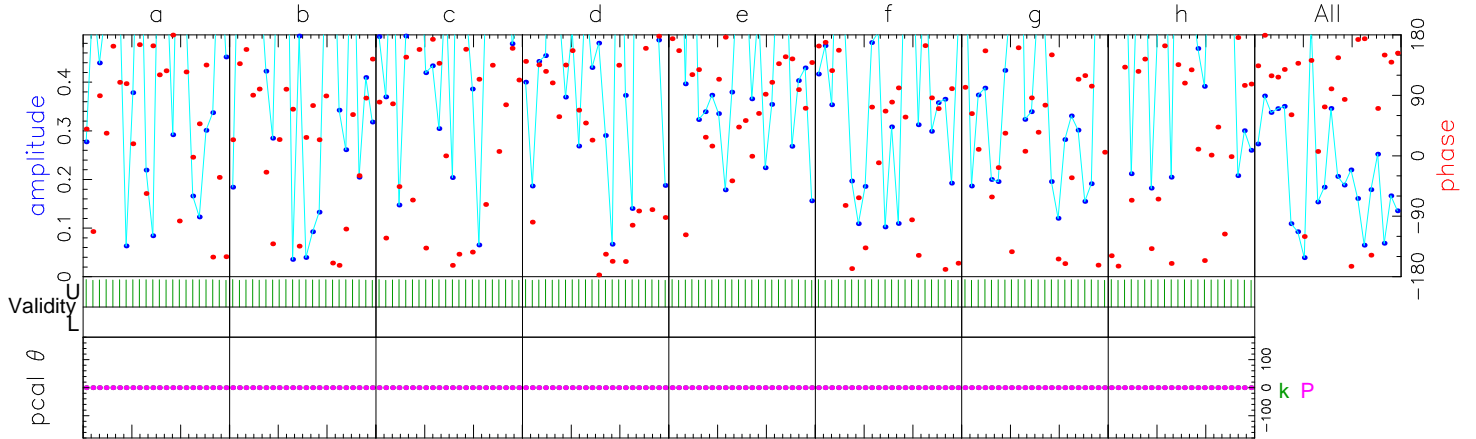
Fringe quality 0

SNR 6.0  
 Int time 177.927  
 Amp 0.166  
 Phase 131.2  
 PFD 2.0e-01  
 Delays (us)  
 SBD -0.127177  
 MBD 0.003049  
 Fringe rate (Hz)  
 -0.101804  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060640  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-3.81484691240E+03									
Sband delay (usec)	-3.81485213808E+03									
Phase delay (usec)	-3.81472495694E+03									
Delay rate (us/s)	1.97007096735E+00									
Total phase (deg)			103.3							
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)									131.2	+/- 19.0
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										

ph/seg (deg) 52.6 44.6 Search (1024X32) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 79.5 77.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 23.7 26.9 Inc. seg. avg. 0.167 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 27.8 47.0 Inc. frq. avg. 0.157 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 k: az 89.2 el 31.5 pa -62.3 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -12015.167 -199.638 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/kP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/kP.W.151.1JFKZ

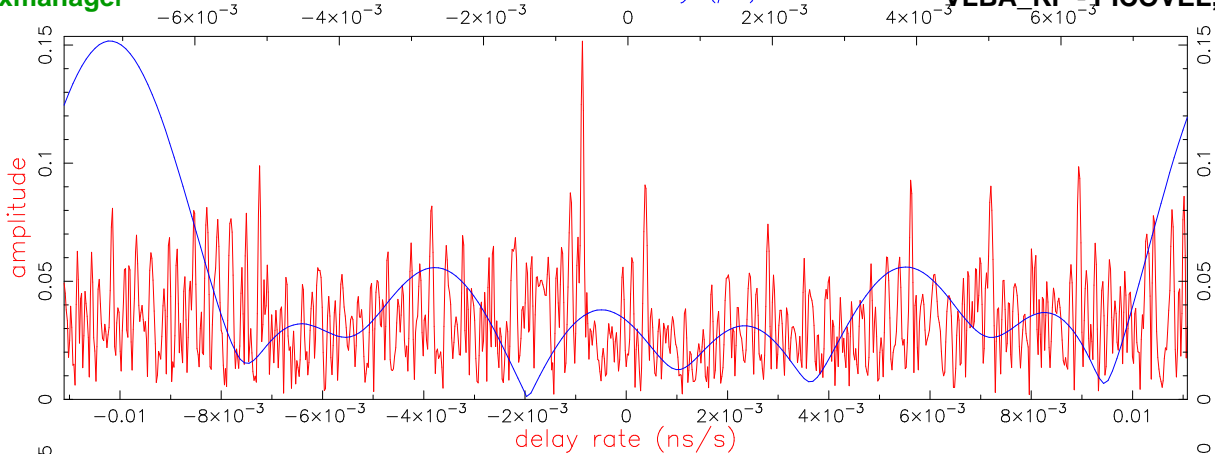
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, kP

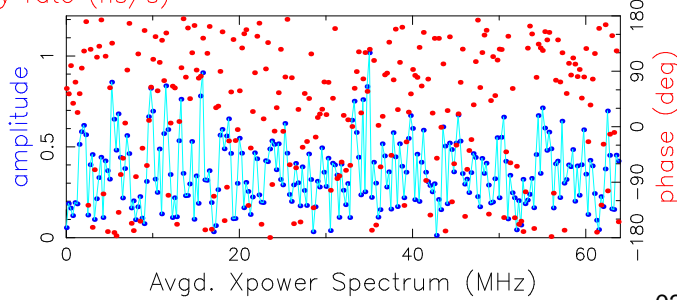
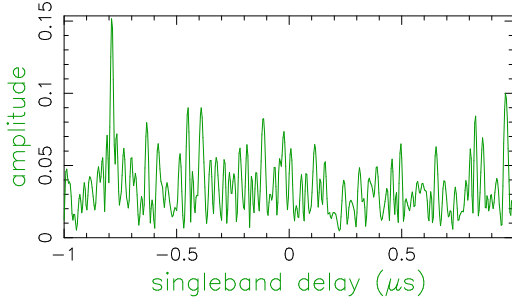
VLBA\_KP - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



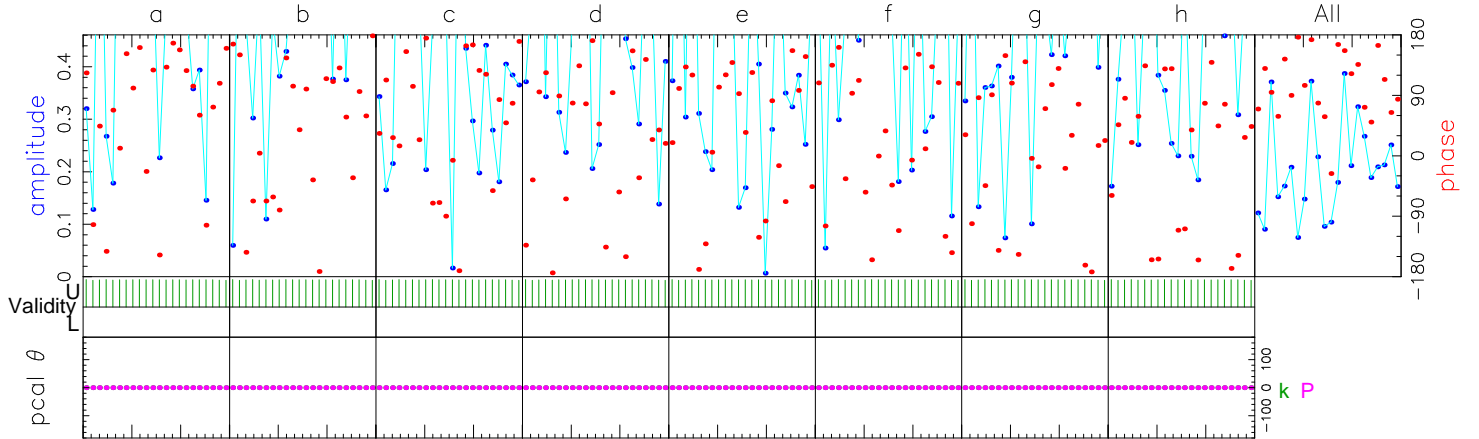
Fringe quality 0

SNR 5.6  
 Int time 177.926  
 Amp 0.154  
 Phase 111.7  
 PFD 9.4e-01  
 Delays (us)  
 SBD -0.787865  
 MBD -0.007143  
 Fringe rate (Hz)  
 -0.076389  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060641  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-3.81551335360E+03									
Sband delay (usec)	-3.81551282583E+03									
Phase delay (usec)	-3.81472495756E+03									
Delay rate (us/s)	1.97007125635E+00									
Total phase (deg)			83.7							
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										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal $\theta$										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
amplitude										
amp/seg (%)										
ph/seg (deg)										
amp/frq (%)										
ph/frq (deg)										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.154 +/- 0.027										
0.146										
0.000										
0.153										
0.135										
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										
k: az 89.2 el 31.5 pa -62.3										
P: az 255.5 el 45.3 pa 53.6										
u,v (fr/asec) -12015.167 -199.638										
simultaneous interpolator										

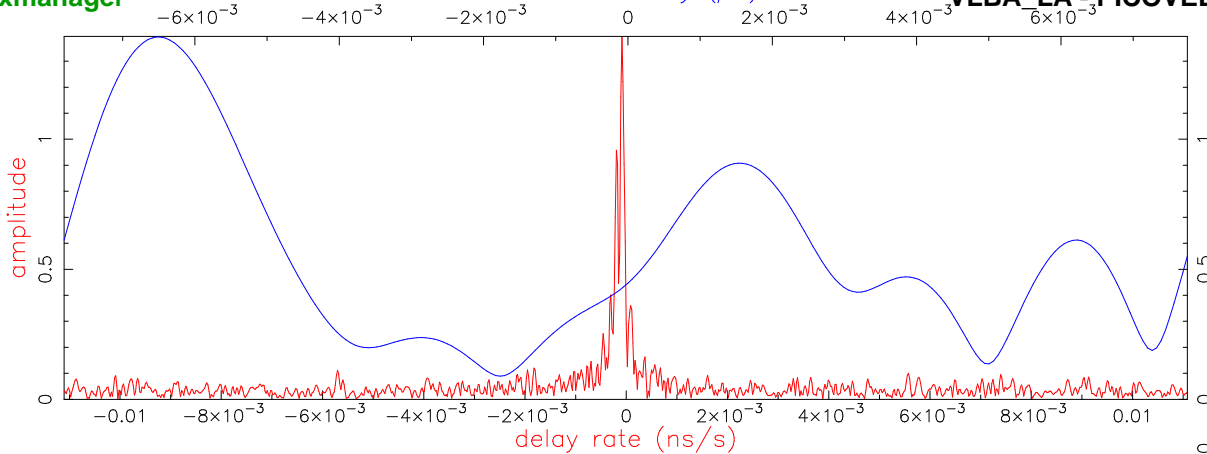
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IP

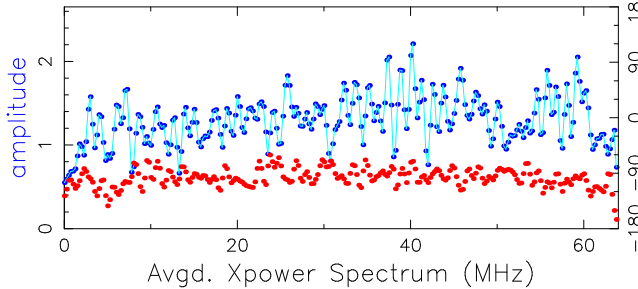
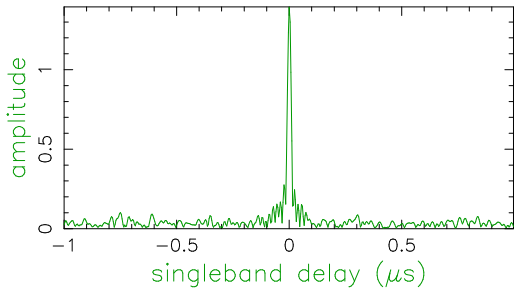
VLBA\_LA - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



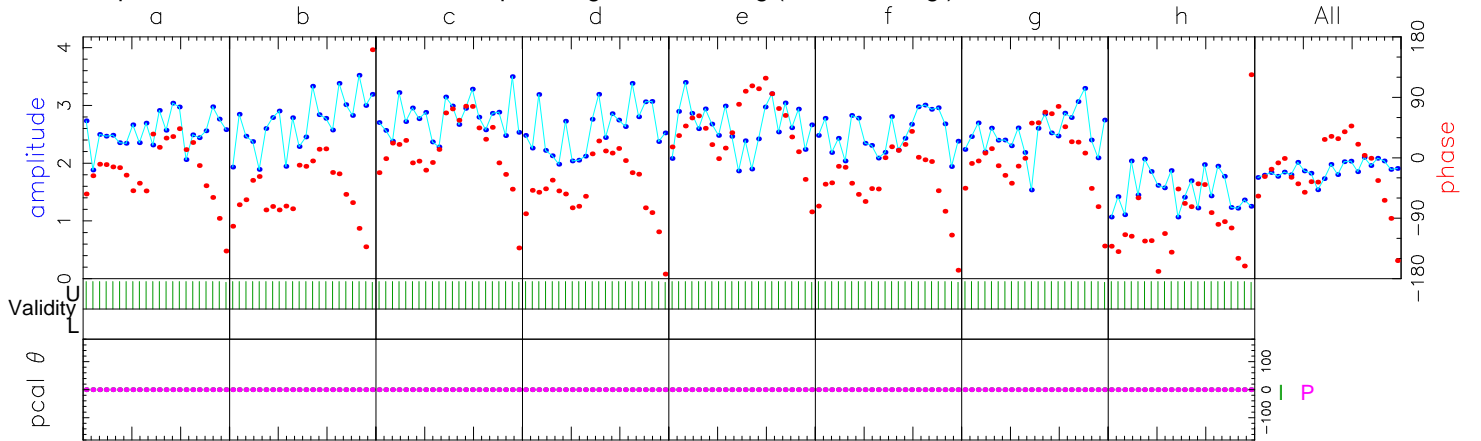
Fringe quality 3

SNR 51.2  
 Int time 179.788  
 Amp 1.395  
 Phase -15.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000532  
 MBD -0.006491  
 Fringe rate (Hz)  
 -0.007773  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060644  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-2.48688466349E+03				-2.48687817264E+03				-6.49085E-03	+/- 2.1E-05
Sband delay (usec)	-2.48687764039E+03				-1.6755295E-01				5.32250E-04	+/- 1.7E-04
Phase delay (usec)	-2.48687817313E+03				2.9999999E-07				-4.89650E-07	+/- 7.1E-08
Delay rate (us/s)	1.86443221902E+00				1.86443230741E+00				-8.83892E-08	+/- 6.8E-10
Total phase (deg)			-196.3		1.26323891215E-05				-15.5	+/- 2.2
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
RMS	45.9	5.3			1.395 +/- 0.027					
ph/seg (deg)	45.9	5.3								
amp/seg (%)	36.3	9.2								
ph/frq (deg)	52.3	3.2								
amp/frq (%)	35.5	5.5								
Search (1024X32)					1.380					
Inc. seg. avg.					1.877					
Inc. frq. avg.					1.813					
PCal mode:					MANUAL, MANUAL					
PCal rate:					0.000E+00, 0.000E+00 (us/s)					
Bits/sample:					2x2					
Sample rate (MSamp/s):					128					
Data rate (Mb/s):					2048					
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

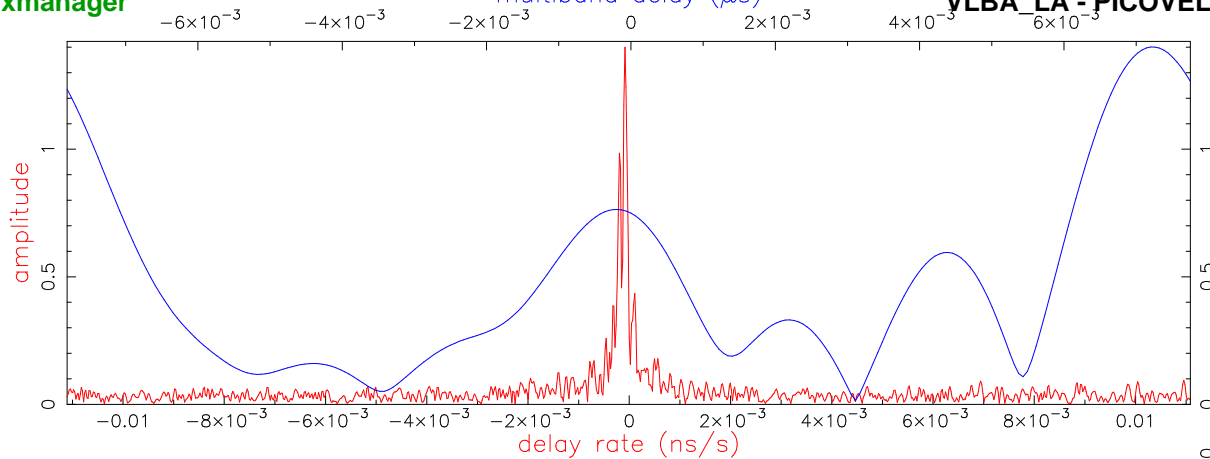
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IP

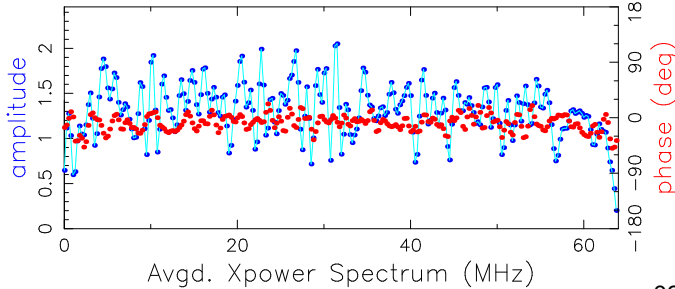
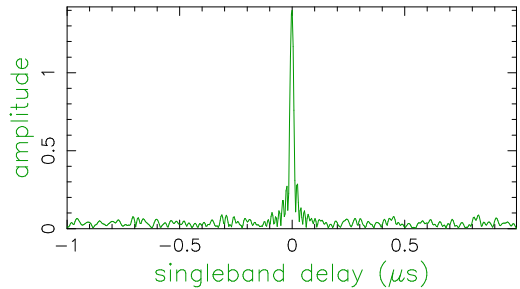
VLBA\_LA - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



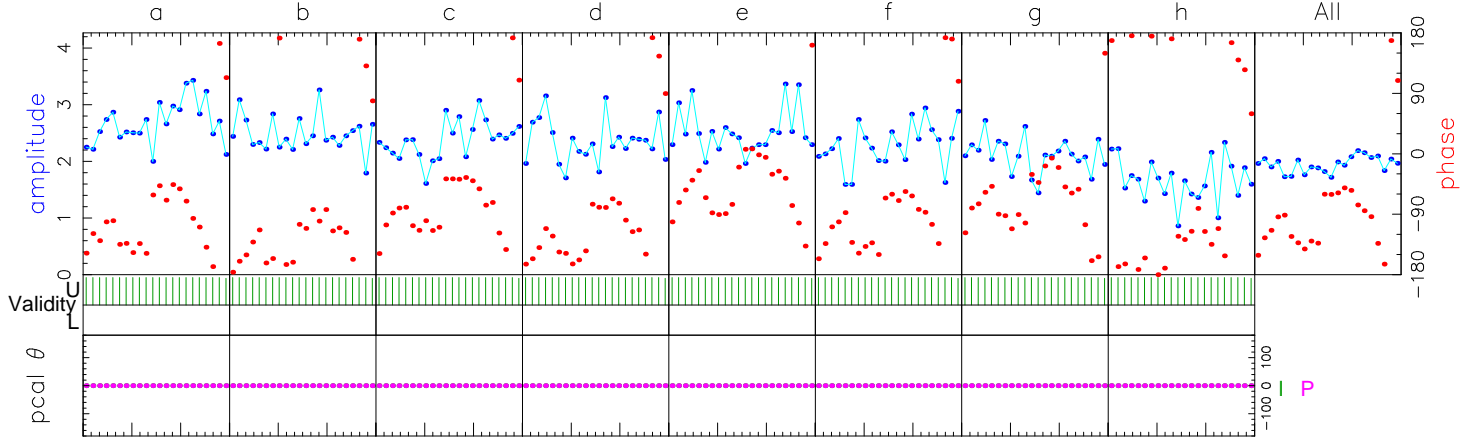
Fringe quality 3

SNR 52.2  
 Int time 179.788  
 Amp 1.423  
 Phase -109.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001615  
 MBD 0.007181  
 Fringe rate (Hz)  
 -0.007584  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060648  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-2.48688661646E+03	-2.48687978789E+03	-2.48687817609E+03	-2.48687817264E+03	-2.48687817264E+03	-2.48687817264E+03	-2.48687817264E+03	-2.48687817264E+03		
Sband delay (usec)	-2.48687978789E+03	-2.48687978789E+03	-2.48687978789E+03	-2.48687978789E+03	-2.48687978789E+03	-2.48687978789E+03	-2.48687978789E+03	-2.48687978789E+03		
Phase delay (usec)	-2.48687817609E+03	-2.48687817609E+03	-2.48687817609E+03	-2.48687817609E+03	-2.48687817609E+03	-2.48687817609E+03	-2.48687817609E+03	-2.48687817609E+03		
Delay rate (us/s)	1.86443222117E+00	1.86443222117E+00	1.86443222117E+00	1.86443222117E+00	1.86443222117E+00	1.86443222117E+00	1.86443222117E+00	1.86443222117E+00		
Total phase (deg)			-289.8							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 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)										
simultaneous interpolator										

I: az 94.8 el 35.9 pa -57.5 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11373.697 152.315 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/IP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/IP.W.219.1JFKZ



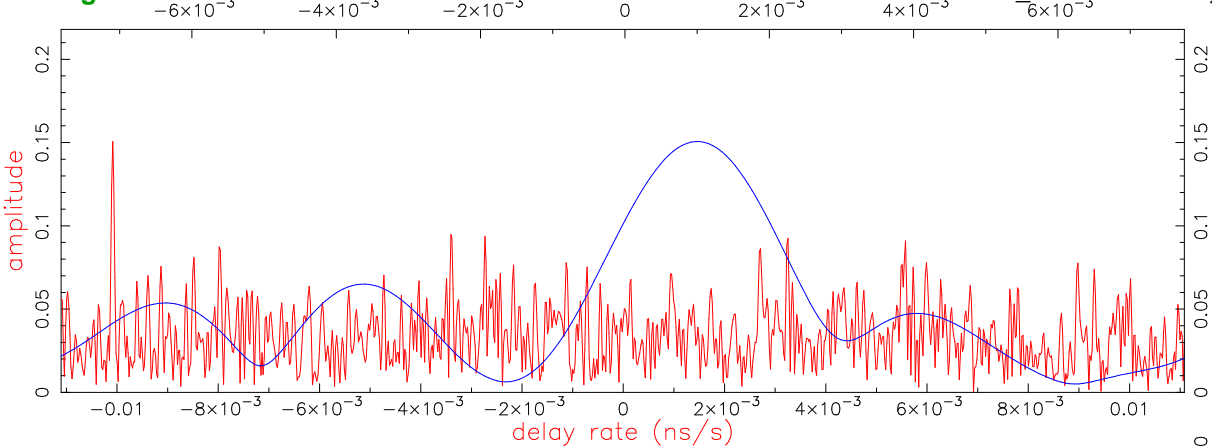
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IP

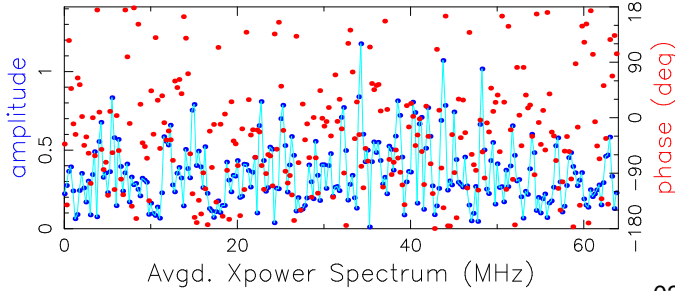
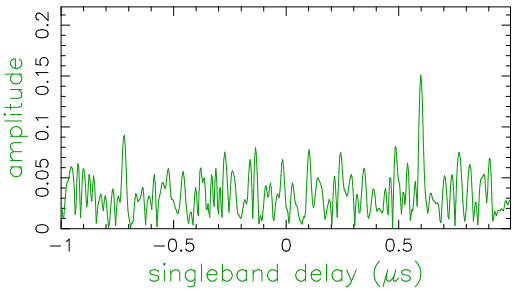
VLBA\_LA - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



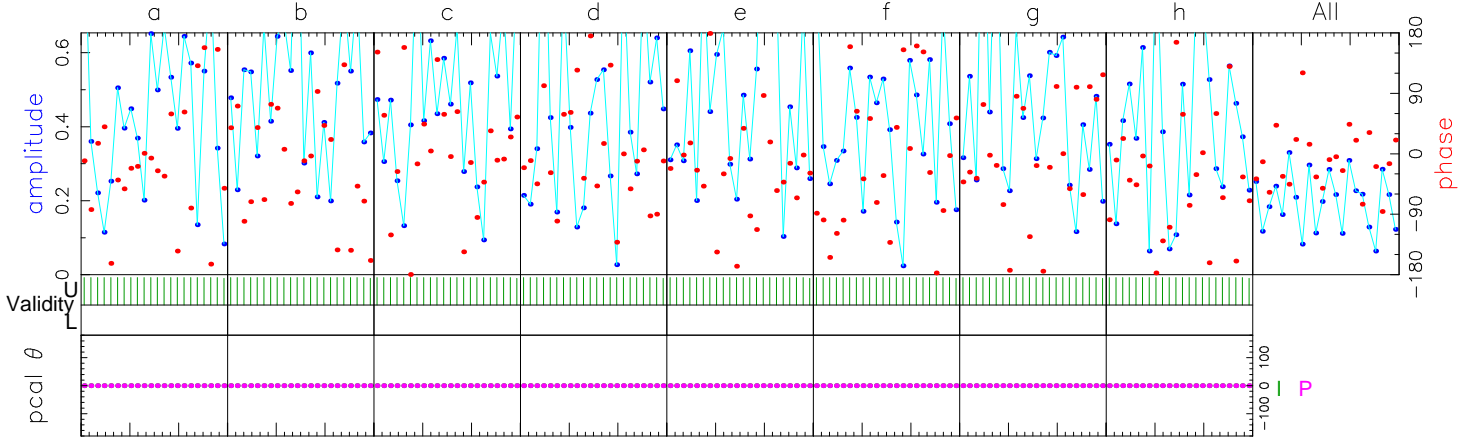
Fringe quality 0

SNR 5.5  
 Int time 179.788  
 Amp 0.218  
 Phase -13.5  
 PFD 9.8e-01  
 Delays (us)  
 SBD 0.598365  
 MBD 0.001029  
 Fringe rate (Hz)  
 -0.888394  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060650  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-28.2	-32.8	21.4	-0.9	-18.4	-71.0	18.2	-46.2		-13.5
	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.1		0.2
	488.1	481.8	412.0	163.9	214.7	283.0	253.5	222.8		410.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
P	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
I	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Chan ids
										Tracks
Group delay (usec)(sbd)	-2.48628339414E+03		Apriori delay (usec)		-2.48687817264E+03		Resid mbdelay (usec)		1.02850E-03	+/- 2.0E-04
Sband delay (usec)	-2.48627980714E+03		Apriori clock (usec)		-1.6755295E-01		Resid sbdelay (usec)		5.98365E-01	+/- 1.6E-03
Phase delay (usec)	-2.48687817307E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		-4.25194E-07	+/- 6.5E-07
Delay rate (us/s)	1.86442220513E+00		Apriori rate (us/s)		1.86443230741E+00		Resid rate (us/s)		-1.01023E-05	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		1.26323891215E-05		Resid phase (deg)		-13.5	+/- 20.7

	RMS	Theor.	Amplitude	0.218 +/- 0.039	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	45.6	48.5	Search (1024X32)	0.148	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	59.2	84.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	35.1	29.3	Inc. seg. avg.	0.211	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	30.6	51.1	Inc. frq. avg.	0.218	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

I: az 94.8 el 35.9 pa -57.5 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11373.697 152.315 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/IP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/IP.W.235.1JFKZ

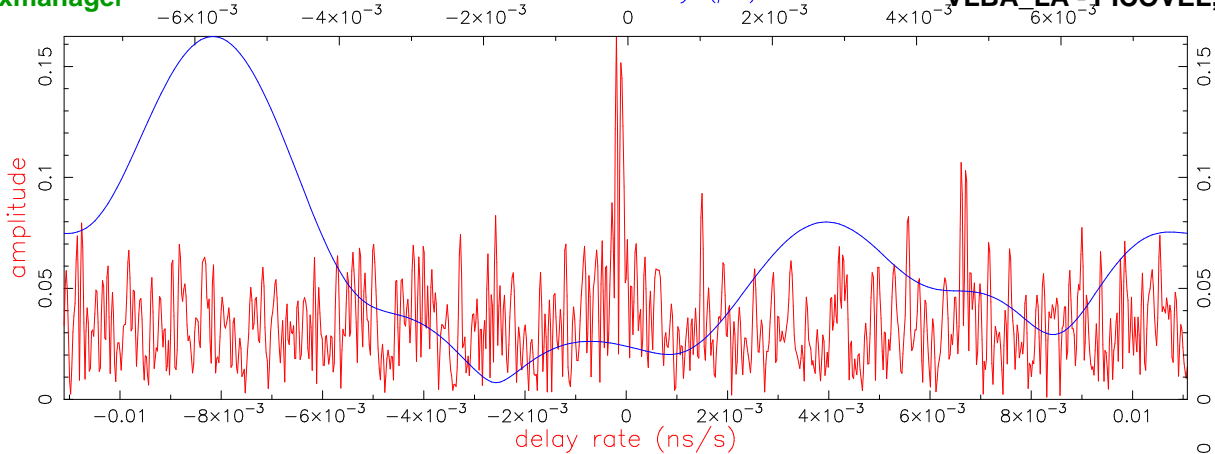
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IP

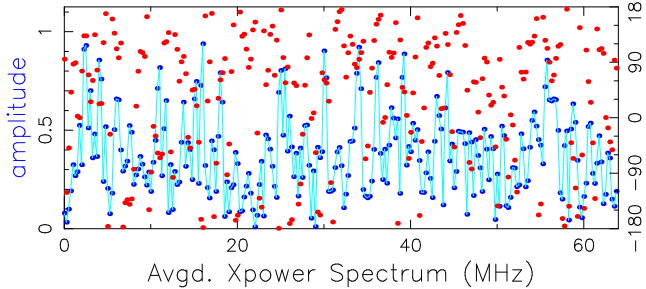
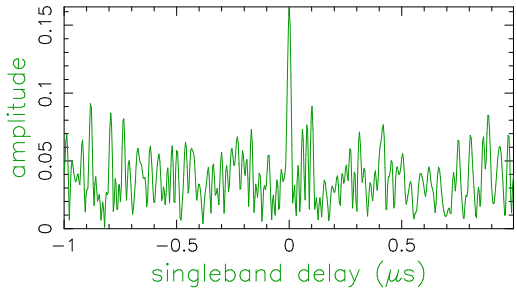
VLBA\_LA - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



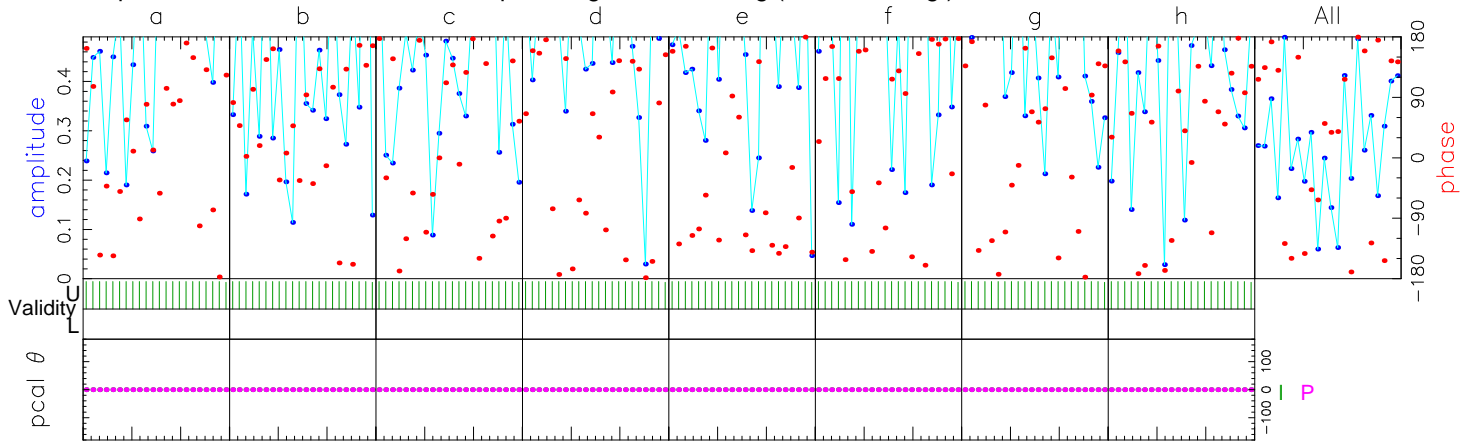
Fringe quality 0

SNR 6.0  
 Int time 179.788  
 Amp 0.164  
 Phase 169.0  
 PFD 2.3e-01  
 Delays (us)  
 SBD 0.000139  
 MBD -0.005750  
 Fringe rate (Hz)  
 -0.016890  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060652  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
Group delay (usec)(sbd)	147.7	111.3	-159.8	164.1	-131.3	179.6	167.4	123.6	Phase	169.0
Sband delay (usec)	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.2	Ampl.	0.2
Phase delay (usec)	18.3	339.4	344.4	1.7	401.7	256.6	481.7	137.9	Sbd box	257.0
Delay rate (us/s)	U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Total phase (deg)	I 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
	P 1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
	I:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
	I:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
	I 1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
	P 1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
	I W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
	P W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Apriori delay (usec)									Resid mbdelay (usec)	-5.74958E-03 +/- 1.8E-04
Apriori clock (usec)									Resid sbdelay (usec)	1.38500E-04 +/- 1.4E-03
Apriori clockrate (us/s)									Resid phdelay (usec)	5.33741E-06 +/- 6.0E-07
Apriori rate (us/s)									Resid rate (us/s)	-1.92063E-07 +/- 5.8E-09
Apriori accel (us/s/s)									Resid phase (deg)	169.0 +/- 19.1

	RMS	Theor.	Amplitude	0.164 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	70.5	44.8	Search (1024X32)	0.162	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/seg (%)	99.1	78.2	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	41.9	27.0	Inc. seg. avg.	0.211	Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00	
amp/frq (%)	45.0	47.2	Inc. frq. avg.	0.178				

I: az 94.8 el 35.9 pa -57.5 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11373.697 152.315 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/IP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/IP.W.249.1JFKZ

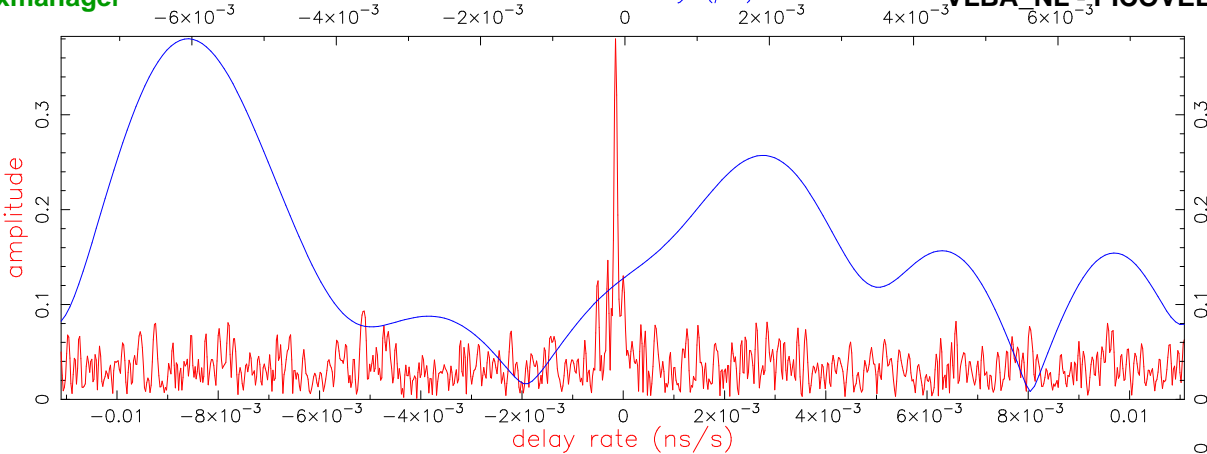
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, nP

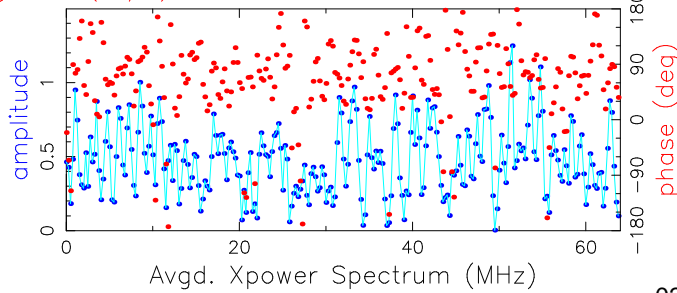
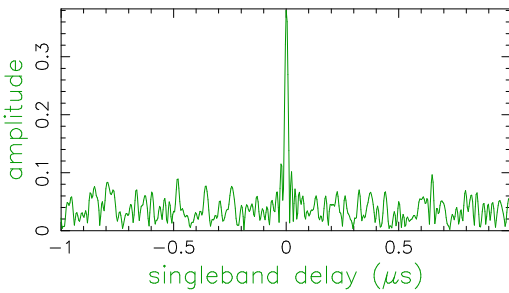
VLBA\_NL - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



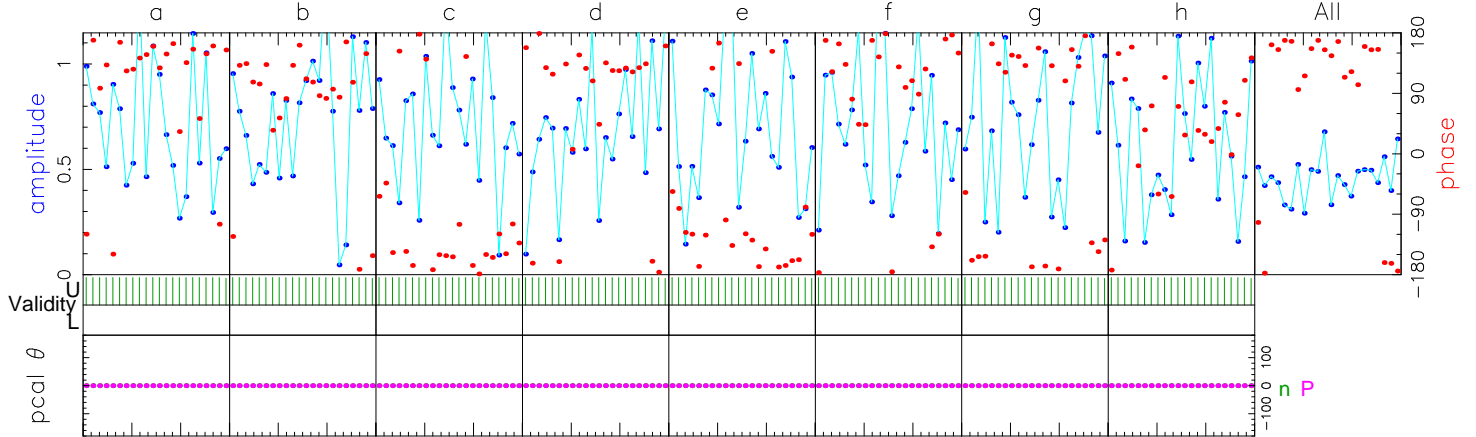
Fringe quality 9

SNR 14.0  
 Int time 179.788  
 Amp 0.383  
 Phase 158.9  
 PFD 3.0e-36  
 Delays (us)  
 SBD 0.000988  
 MBD -0.006023  
 Fringe rate (Hz)  
 -0.012631  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060645  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
n	1000	1000	1000	1000	1000	1000	1000	1000	APs used	1000	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	1000	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	0:0	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	0:0	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	1000	
P	1000	1000	1000	1000	1000	1000	1000	1000		1000	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks		
Group delay (usec)(sbd)	2.52420085205E+02				2.52426108580E+02				Resid mbdelay (usec)	-6.02338E-03	+/- 7.7E-05
Sband delay (usec)	2.52427096330E+02				4.8170090E-01				Resid sbdelay (usec)	9.87750E-04	+/- 6.1E-04
Phase delay (usec)	2.52426113599E+02				9.0000002E-07				Resid phdelay (usec)	5.01884E-06	+/- 2.6E-07
Delay rate (us/s)	1.59959695093E+00				1.59959709456E+00				Resid rate (us/s)	-1.43629E-07	+/- 2.5E-09
Total phase (deg)		154.8			7.09410365636E-07				Resid phase (deg)	158.9	+/- 8.2

	RMS	Theor.	Amplitude	0.383 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	35.1	19.2	Search (1024X32)	0.365	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	31.9	33.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	54.4	11.6	Inc. seg. avg.	0.434	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	38.8	20.2	Inc. frq. avg.	0.496	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	

n: az 111.3 el 45.7 pa -46.4 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -9764.216 569.661 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/nP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/nP.W.183.1JFJKZ

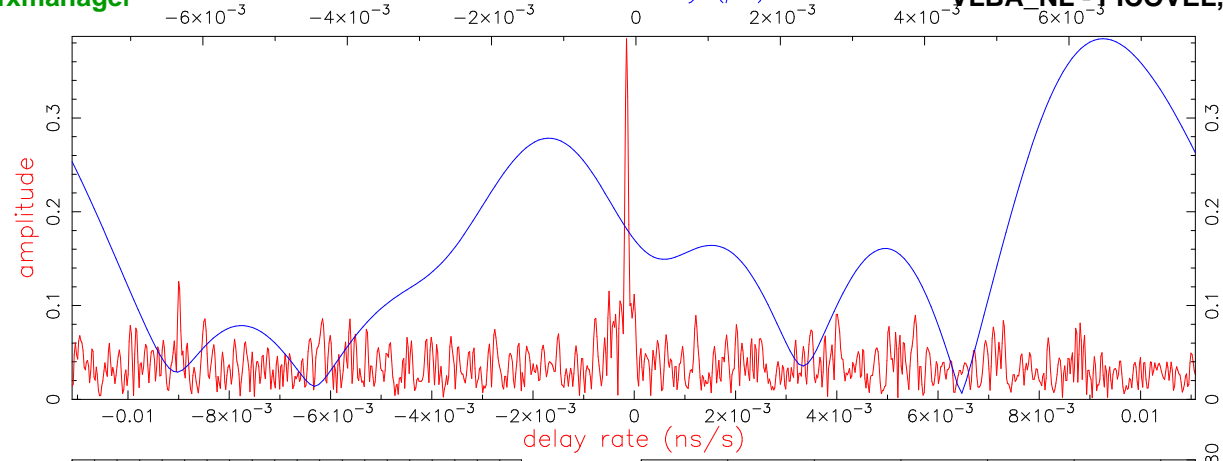
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, nP

VLBA\_NL - PICOVEL, fgroup W, pol RR

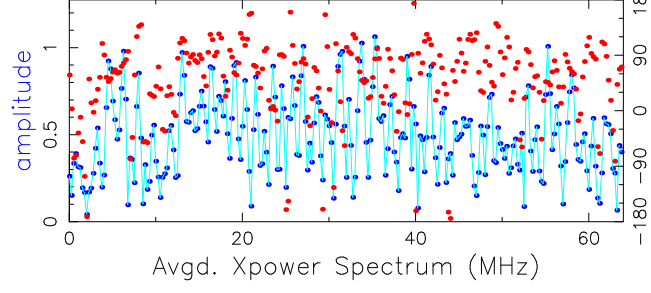
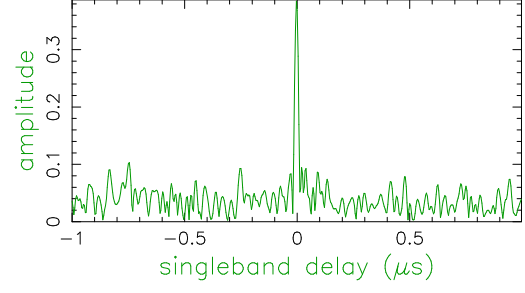
multiband delay ( $\mu$ s)



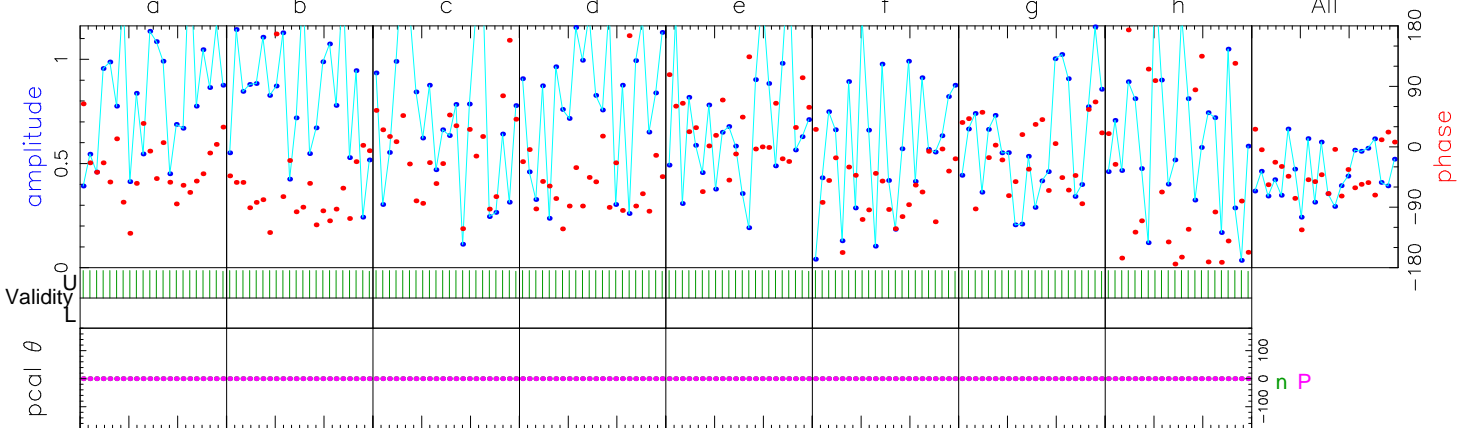
Fringe quality 7

SNR 14.2  
 Int time 179.788  
 Amp 0.387  
 Phase -40.0  
 PFD 3.2e-37  
 Delays (us)  
 SBD -0.002865  
 MBD 0.006498  
 Fringe rate (Hz)  
 -0.012812  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512

Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060647  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"



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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-32.9	-79.0	6.1	-61.7	17.6	-60.4	-7.2	-156.1	Phase	-40.0
	0.7	0.7	0.5	0.7	0.5	0.5	0.4	0.3	Ampl.	0.5
	255.6	255.9	255.7	255.9	256.0	255.5	255.7	254.2	Sbd box	256.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.52416981330E+02		Apriori delay (usec)		2.52426108580E+02		Resid mbdelay (usec)		6.49775E-03	+/- 7.6E-05
Sband delay (usec)	2.52423244080E+02		Apriori clock (usec)		4.8170090E-01		Resid sbdelay (usec)		-2.86450E-03	+/- 6.1E-04
Phase delay (usec)	2.52426107316E+02		Apriori clockrate (us/s)		9.0000002E-07		Resid phdelay (usec)		-1.26416E-06	+/- 2.6E-07
Delay rate (us/s)	1.59959694886E+00		Apriori rate (us/s)		1.59959709456E+00		Resid rate (us/s)		-1.45696E-07	+/- 2.5E-09
Total phase (deg)	315.9		Apriori accel (us/s/s)		7.09410365636E-07		Resid phase (deg)		-40.0	+/- 8.1

ph/seg (deg) 36.1 18.9      Amplitude 0.387 +/- 0.027      Pcal mode: MANUAL, MANUAL      PC period (AP's) 5, 5  
 amp/seg (%) 35.0 33.1      Search (1024X32) 0.377      Pcal rate: 0.000E+00, 0.000E+00 (us/s)      sb window (us) -1.000 1.000  
 ph/frq (deg) 61.2 11.4      Interp. 0.000      Bits/sample: 2x2      SampCntNorm: enabled      mb window (us) -0.008 0.008  
 amp/frq (%) 48.3 19.9      Inc. seg. avg. 0.430      Sample rate(MISamp/s): 128      dr window (ns/s) -0.011 0.011  
 n: az 111.3 el 45.7 pa -46.4      P: az 255.5 el 45.3 pa 53.6      u,v (fr/asec) -9764.216 569.661      nlags: 256      t\_cohere infinite      ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_88GHz\_gmva      Input file: /Exps/c202c/v1/1234/No0038/nP..1JFKZ      Output file: /Exps/c202c/v1/1234/No0038/nP.W.205.1JFKZ      simultaneous interpolator

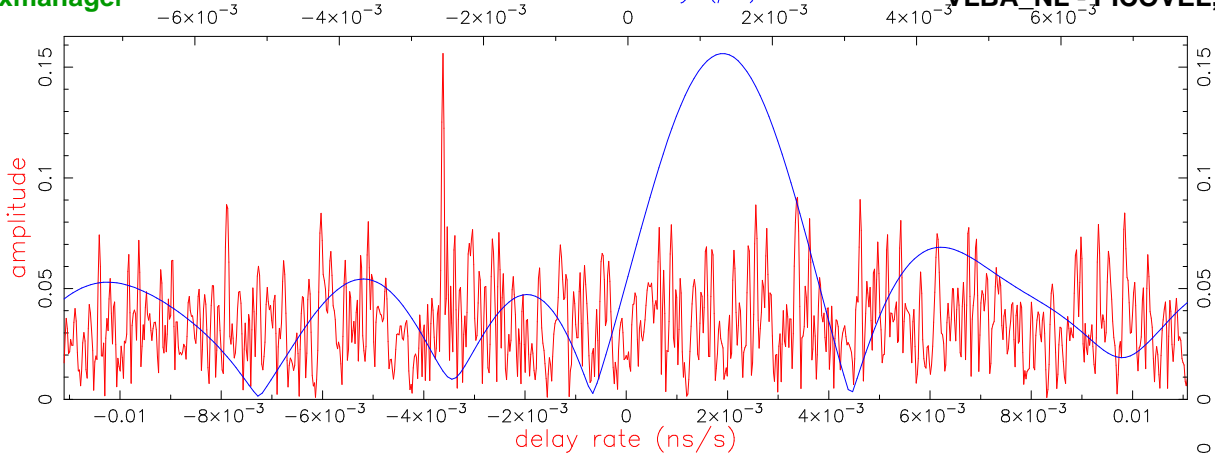
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, nP

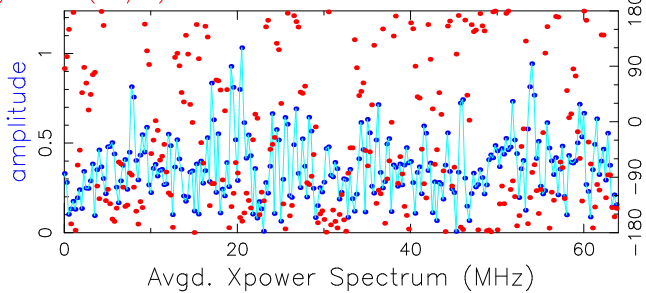
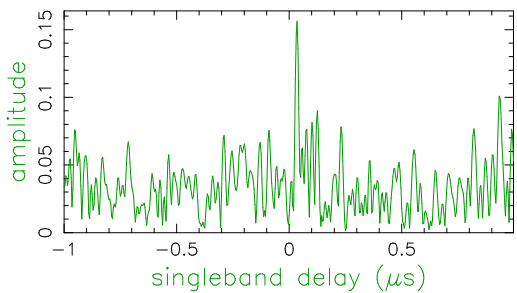
VLBA\_NL - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



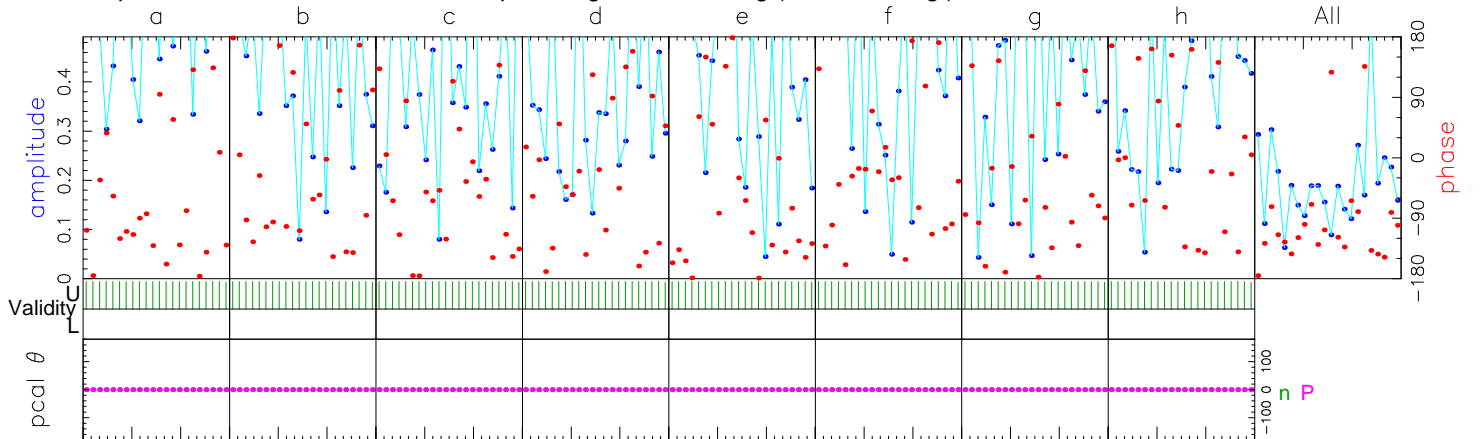
Fringe quality 0

SNR 5.7  
 Int time 179.788  
 Amp 0.164  
 Phase -120.9  
 PFD 6.8e-01  
 Delays (us)  
 SBD 0.034376  
 MBD 0.001302  
 Fringe rate (Hz)  
 -0.319800  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060649  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-124.6	-126.3	-97.1	-100.8	-150.7	-92.8	-115.6	-131.0	Phase	-120.9
	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.1	Ampl.	0.2
	266.1	90.0	317.7	237.1	498.5	510.4	98.1	489.5	Sbd box	265.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	2.52458660322E+02	Apriori delay (usec)	2.52426108580E+02	Resid mbdelay (usec)	1.30174E-03	+/-	1.9E-04
Sband delay (usec)	2.52460484580E+02	Apriori clock (usec)	4.8170090E-01	Resid sbdelay (usec)	3.43760E-02	+/-	1.5E-03
Phase delay (usec)	2.52426104762E+02	Apriori clockrate (us/s)	9.0000002E-07	Resid phdelay (usec)	-3.81843E-06	+/-	6.3E-07
Delay rate (us/s)	1.59959345799E+00	Apriori rate (us/s)	1.59959709456E+00	Resid rate (us/s)	-3.63657E-06	+/-	6.1E-09
Total phase (deg)	235.0	Apriori accel (us/s/s)	7.09410365636E-07	Resid phase (deg)	-120.9	+/-	19.9

ph/seg (deg)	43.2	Theor.	46.8	Amplitude	0.164 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	67.1	Search (1024X32)	0.149	Search	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	21.7	Inc. seg. avg.	0.155	Inc. seg. avg.	0.155	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	42.1	Inc. frq. avg.	0.154	Inc. frq. avg.	0.154	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

n: az 111.3 el 45.7 pa -46.4 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -9764.216 569.661 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/nP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/nP.W.226.1JFKZ



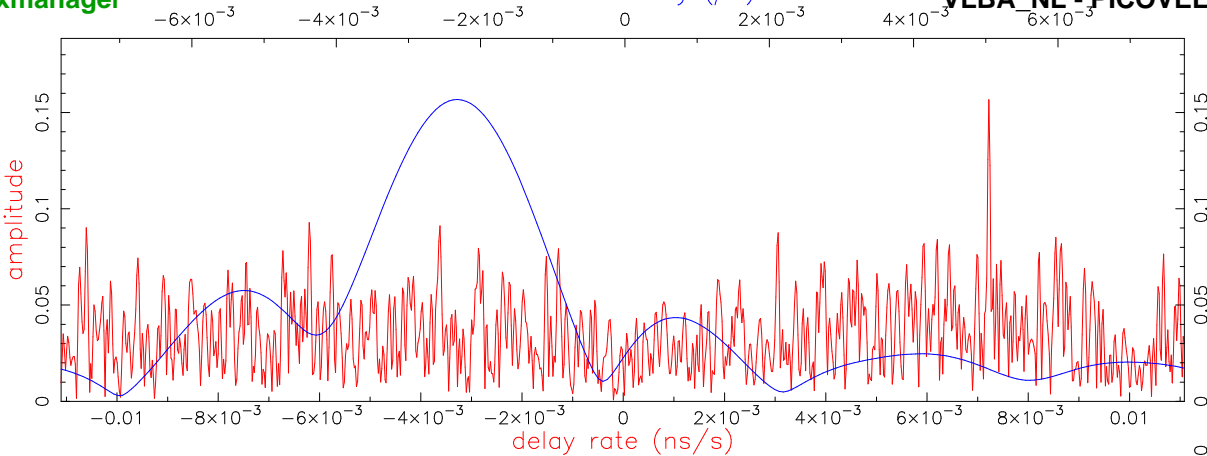
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, nP

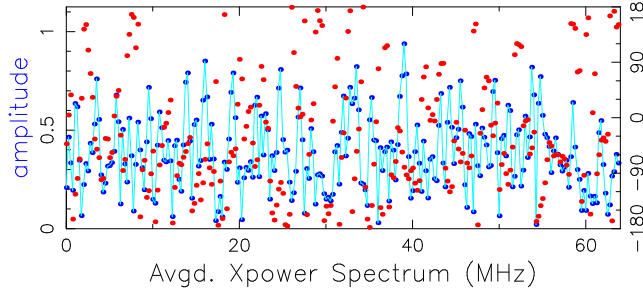
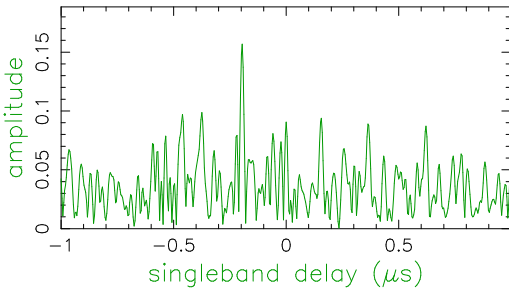
VLBA\_NL - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



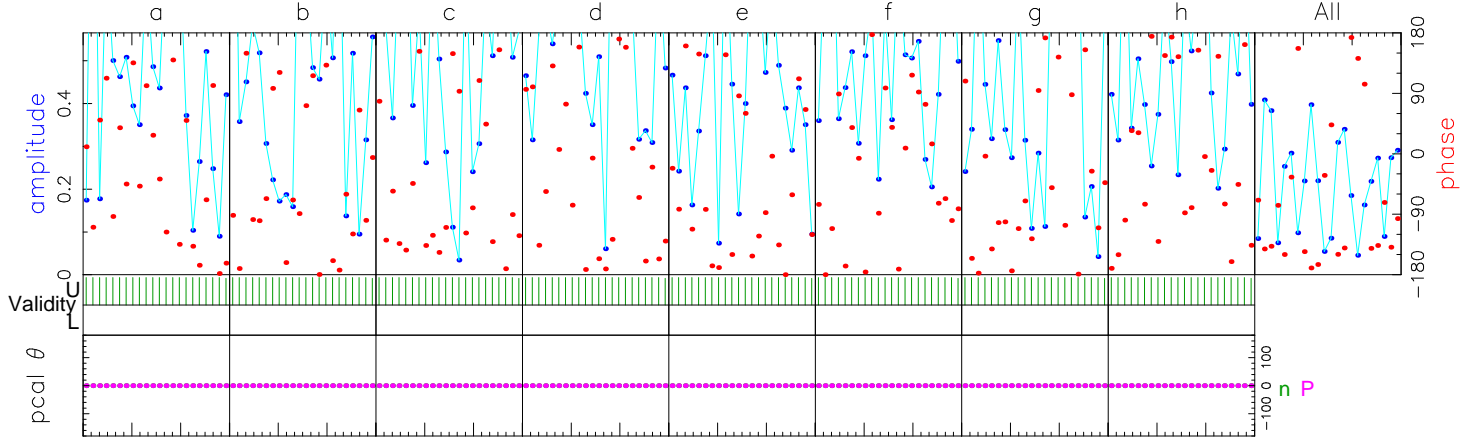
Fringe quality 0

SNR 5.8  
 Int time 179.788  
 Amp 0.188  
 Phase -140.9  
 PFD 6.3e-01  
 Delays (us)  
 SBD -0.196138  
 MBD -0.002354  
 Fringe rate (Hz)  
 0.635299  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060651  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-133.6	-137.1	-141.4	-154.7	-150.5	-139.4	-136.2	-131.4	Phase	-140.9
	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.2	Ampl.	0.2
	324.6	170.5	207.3	454.2	131.4	111.0	214.1	113.1	Sbd box	206.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.52236254913E+02		Apriori delay (usec)		2.52426108580E+02		Resid mbdelay (usec)		-2.35367E-03	+/- 1.9E-04
Sband delay (usec)	2.52229970580E+02		Apriori clock (usec)		4.8170090E-01		Resid sbdelay (usec)		-1.96138E-01	+/- 1.5E-03
Phase delay (usec)	2.52426104131E+02		Apriori clockrate (us/s)		9.0000002E-07		Resid phdelay (usec)		-4.44927E-06	+/- 6.3E-07
Delay rate (us/s)	1.59960431879E+00		Apriori rate (us/s)		1.59959709456E+00		Resid rate (us/s)		7.22424E-06	+/- 6.0E-09
Total phase (deg)	215.0		Apriori accel (us/s/s)		7.09410365636E-07		Resid phase (deg)		-140.9	+/- 19.9

	RMS	Theor.	Amplitude	0.188 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	66.4	46.6	Search (1024X32)	0.156	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	81.2	81.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	
ph/frq (deg)	8.8	28.1	Inc. seg. avg.	0.194	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011	
amp/frq (%)	37.4	49.0	Inc. frq. avg.	0.169	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	
n: az 111.3 el 45.7 pa -46.4	P: az 255.5 el 45.3 pa 53.6		u, v (fr/asec) -9764.216 569.661		ion window (TEC) 0.00 0.00		
Control file: cf_1234_88GHz_gmva							simultaneous interpolator
Input file: /Exps/c202c/v1/1234/No0038/nP..1JFJKZ							Output file: /Exps/c202c/v1/1234/No0038/nP.W.246.1JFJKZ

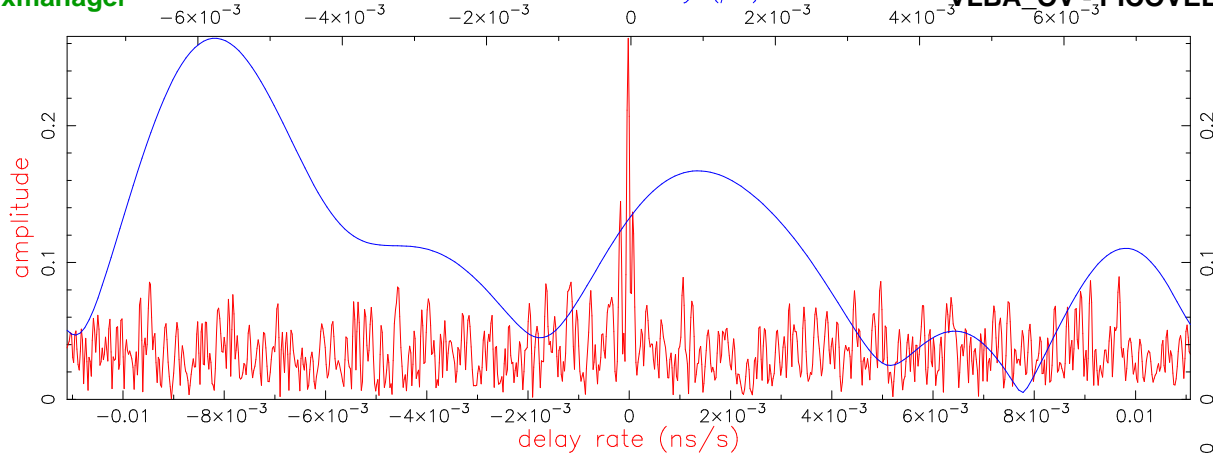
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oP

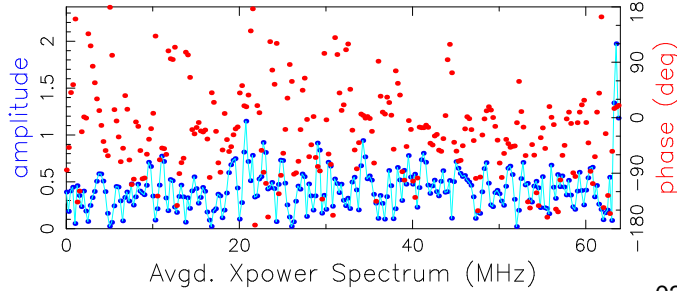
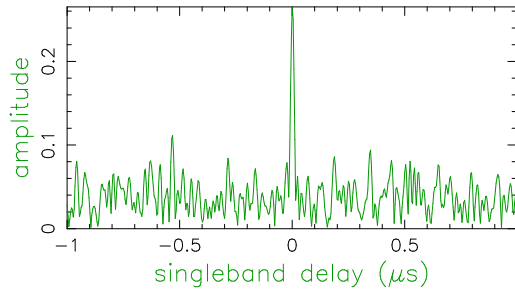
VLBA\_OV - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



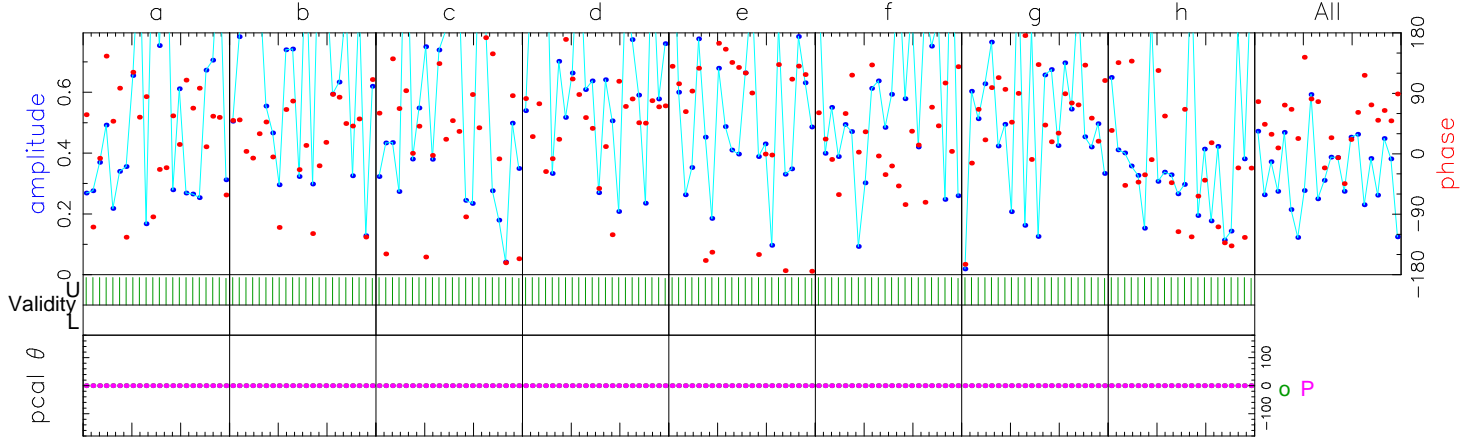
Fringe quality 9

SNR 9.7  
 Int time 179.788  
 Amp 0.265  
 Phase 51.2  
 PFD 4.9e-14  
 Delays (us)  
 SBD 0.000905  
 MBD -0.005775  
 Fringe rate (Hz)  
 -0.001049  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060645  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	29.3	32.3	76.5	56.0	131.4	13.6	62.2	-38.5	Phase	51.2
	0.2	0.5	0.2	0.5	0.4	0.3	0.4	0.2	Ampl.	0.3
	148.7	257.1	257.2	256.3	255.6	256.9	256.5	254.1	Sbd box	257.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.54649910188E+03	Apriori delay (usec)	-5.54649332696E+03	Resid mbdelay (usec)	-5.77492E-03	+/-	1.1E-04
Sband delay (usec)	-5.54649242171E+03	Apriori clock (usec)	2.1638447E+01	Resid sbdelay (usec)	9.05250E-04	+/-	8.9E-04
Phase delay (usec)	-5.54649332534E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	1.61687E-06	+/-	3.7E-07
Delay rate (us/s)	1.95775446855E+00	Apriori rate (us/s)	1.95775448048E+00	Resid rate (us/s)	-1.19336E-08	+/-	3.6E-09
Total phase (deg)	-11.0	Apriori accel (us/s/s)	2.96777110511E-05	Resid phase (deg)	51.2	+/-	11.8

ph/seg (deg)	42.9	Theor.	27.6	Search (1024X32)	0.253	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	51.6		48.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	54.0		16.7	Inc. seg. avg.	0.302	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	51.9		29.1	Inc. frq. avg.	0.332	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

o: az 88.3 el 26.2 pa -56.2 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11934.825 739.223 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oP.W.188.1JFKZ

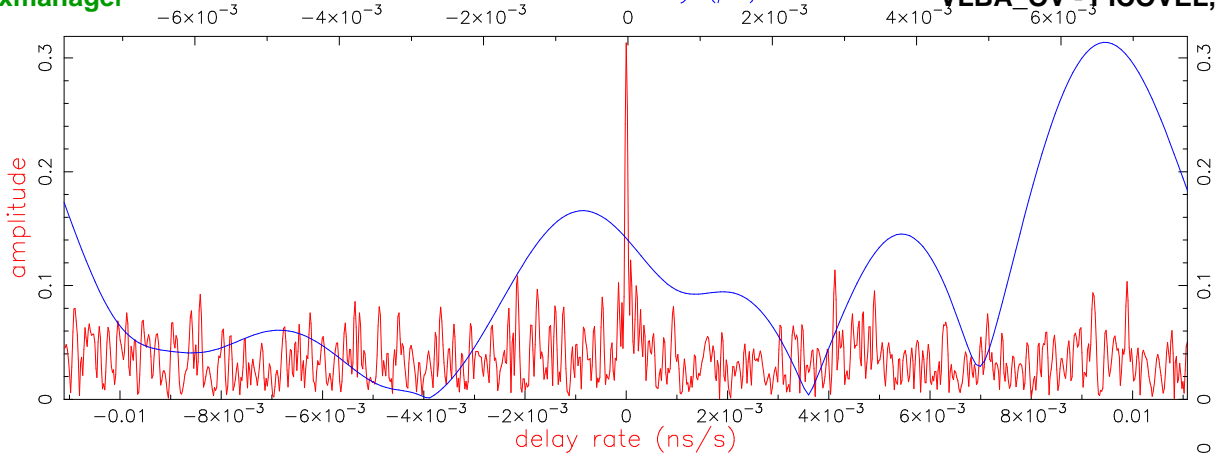
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oP

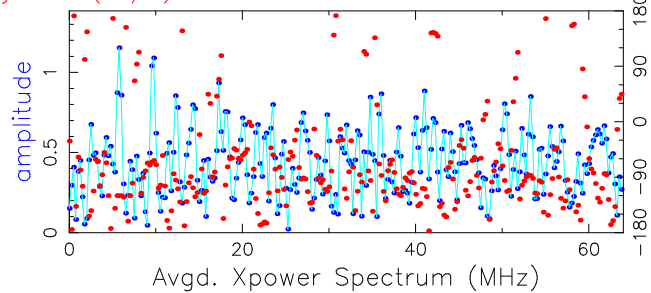
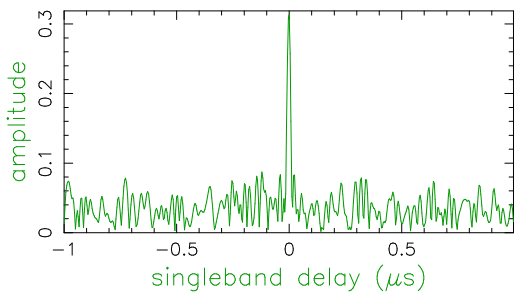
VLBA\_OV - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



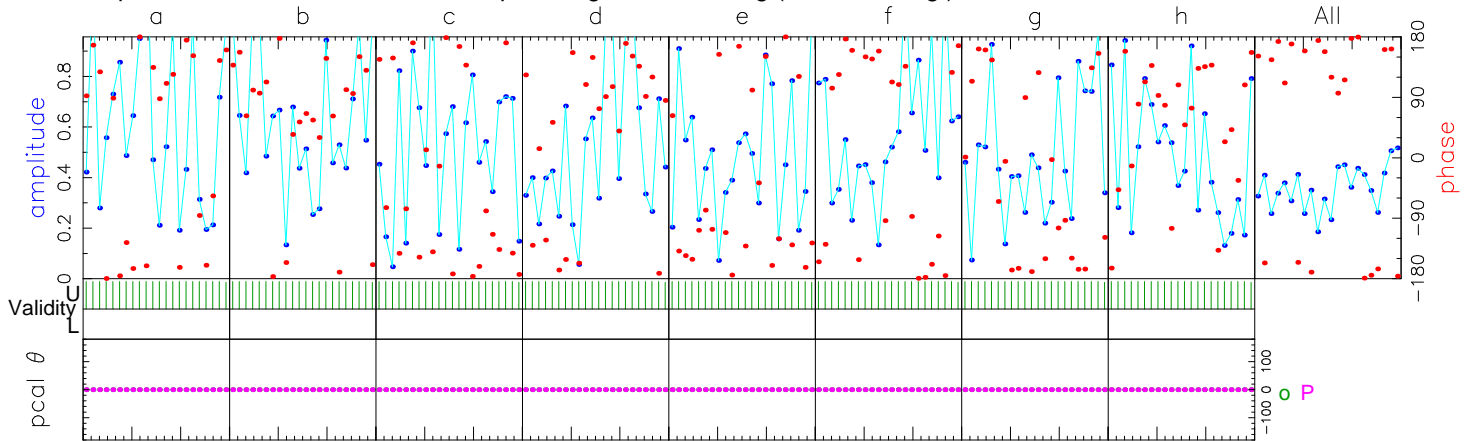
Fringe quality 9

SNR 11.7  
 Int time 179.788  
 Amp 0.319  
 Phase 164.8  
 PFD 3.4e-23  
 Delays (us)  
 SBD -0.001670  
 MBD 0.006547  
 Fringe rate (Hz)  
 -0.000405  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060647  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	163.3	122.9	-159.1	134.8	-150.1	176.7	-176.8	121.5	Phase	164.8
	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.3	Ampl.	0.4
	256.6	256.5	255.9	256.6	256.2	256.4	255.0	254.7	Sbd box	256.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-5.54650240452E+03		Apriori delay (usec)		-5.54649332696E+03		Resid mbdelay (usec)		6.54744E-03	+/- 9.3E-05
Sband delay (usec)	-5.54649499671E+03		Apriori clock (usec)		2.1638447E+01		Resid sbdelay (usec)		-1.66975E-03	+/- 7.4E-04
Phase delay (usec)	-5.54649332176E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		5.20450E-06	+/- 3.1E-07
Delay rate (us/s)	1.95775447588E+00		Apriori rate (us/s)		1.95775448048E+00		Resid rate (us/s)		-4.60158E-09	+/- 3.0E-09
Total phase (deg)	102.5		Apriori accel (us/s/s)		2.96777110511E-05		Resid phase (deg)		164.8	+/- 9.8

	RMS	Theor.	Amplitude	0.319 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	29.3	23.0	Search (1024X32)	0.305	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	29.9	40.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	37.3	13.9	Inc. seg. avg.	0.333	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	27.0	24.2	Inc. frq. avg.	0.356	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

o: az 88.3 el 26.2 pa -56.2 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11934.825 739.223 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oP.W.209.1JFKZ

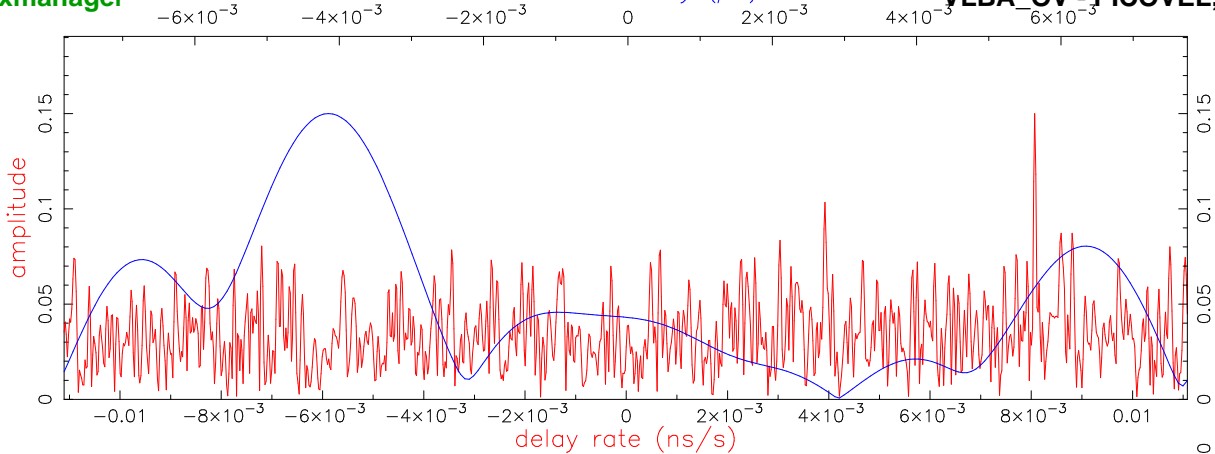
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oP

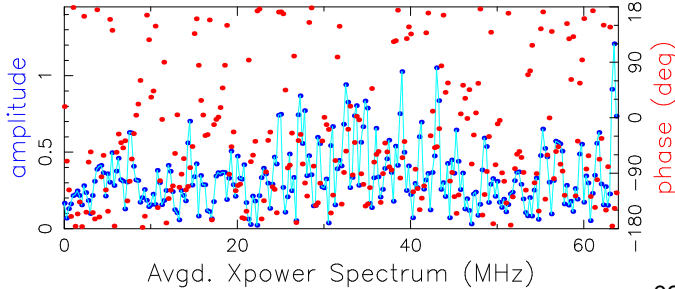
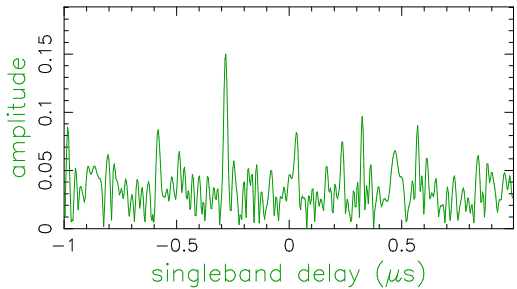
VLBA\_OV - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



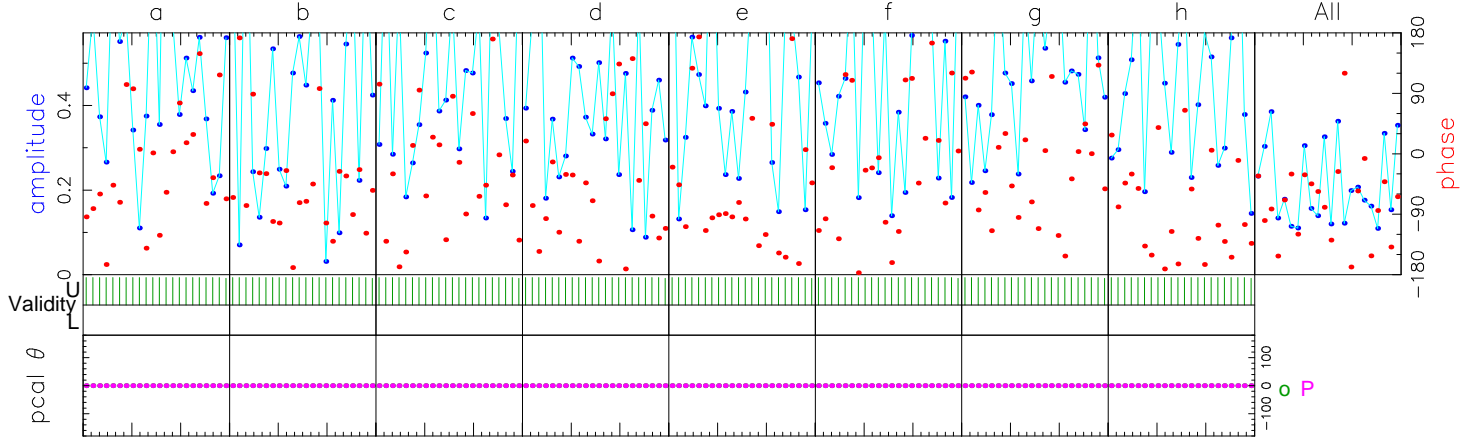
Fringe quality 0

SNR 5.6  
 Int time 179.788  
 Amp 0.191  
 Phase -69.8  
 PFD 9.6e-01  
 Delays (us)  
 SBD -0.282617  
 MBD -0.004128  
 Fringe rate (Hz)  
 0.710881  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060649  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-42.5	-76.0	-66.1	-91.2	-108.5	-36.4	-28.2	-82.4	Phase	-69.8
	0.2	0.4	0.1	0.2	0.3	0.1	0.2	0.2	Ampl.	0.2
	409.7	184.7	374.6	312.2	158.8	225.1	40.2	133.6	Sbd box	184.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.54677870467E+03		Apriori delay (usec)		-5.54649332696E+03		Resid mbdelay (usec)		-4.12771E-03	+/- 2.0E-04
Sband delay (usec)	-5.54677594396E+03		Apriori clock (usec)		2.1638447E+01		Resid sbdelay (usec)		-2.82617E-01	+/- 1.5E-03
Phase delay (usec)	-5.54649332916E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		-2.20459E-06	+/- 6.5E-07
Delay rate (us/s)	1.95776256419E+00		Apriori rate (us/s)		1.95775448048E+00		Resid rate (us/s)		8.08370E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		2.96777110511E-05		Resid phase (deg)		-69.8	+/- 20.6

ph/seg (deg) 59.0 48.3 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 73.0 84.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 31.0 29.1 Inc. seg. avg. 0.197 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 40.8 50.9 Inc. frq. avg. 0.187 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 o: az 88.3 el 26.2 pa -56.2 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11934.825 739.223 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oP.W.228.1JFKZ

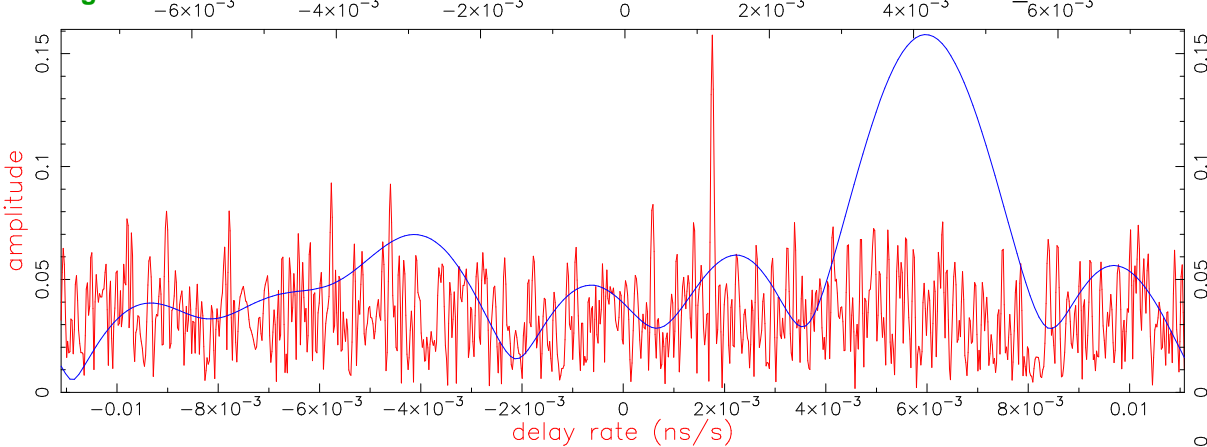
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oP

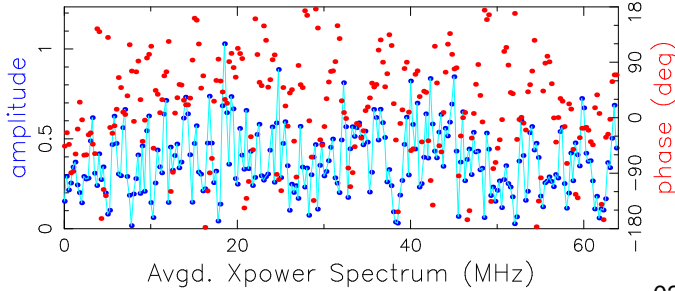
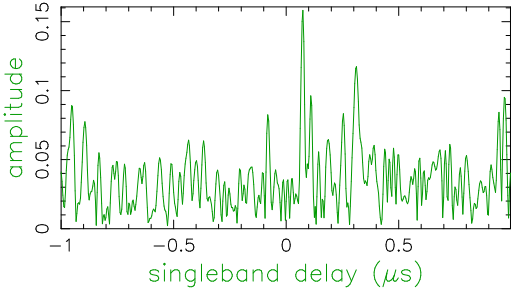
VLBA\_OV - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



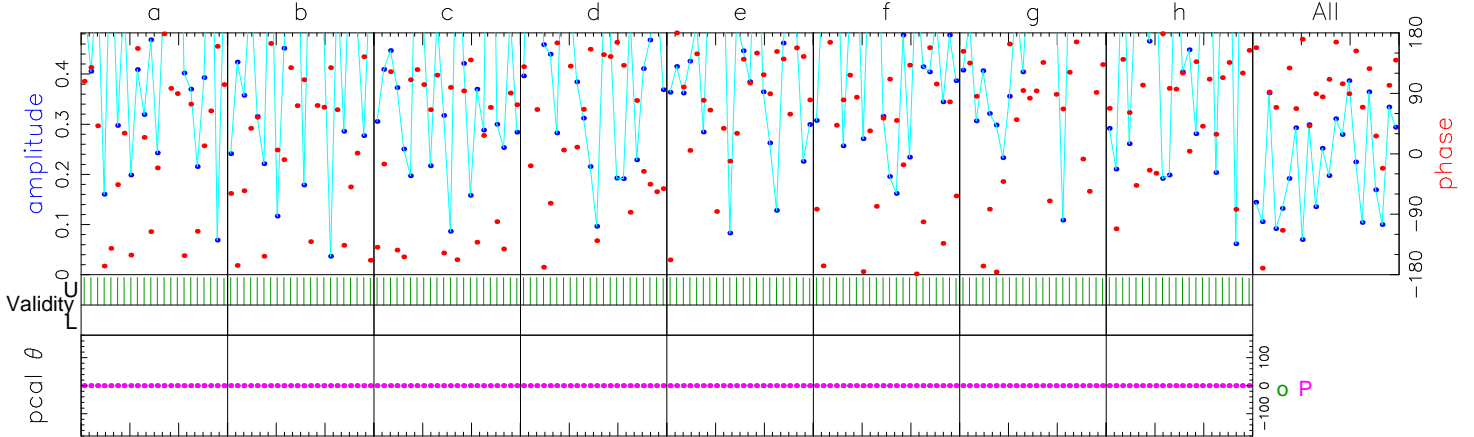
Fringe quality 0

SNR 5.8  
 Int time 179.788  
 Amp 0.161  
 Phase 105.9  
 PFD 5.0e-01  
 Delays (us)  
 SBD 0.073295  
 MBD 0.004107  
 Fringe rate (Hz)  
 0.154845  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060651  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	99.3	88.8	124.3	30.9	107.3	112.4	118.3	102.3	Phase	105.9
	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.3	Ampl.	0.2
	274.0	287.3	267.0	284.2	494.7	358.7	275.6	276.8	Sbd box	275.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-5.54642672001E+03		Apriori delay (usec)		-5.54649332696E+03		Resid mbdelay (usec)		4.10695E-03	+/- 1.9E-04
Sband delay (usec)	-5.54642003196E+03		Apriori clock (usec)		2.1638447E+01		Resid sbdelay (usec)		7.32950E-02	+/- 1.5E-03
Phase delay (usec)	-5.54649332362E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		3.34499E-06	+/- 6.2E-07
Delay rate (us/s)	1.95775624128E+00		Apriori rate (us/s)		1.95775448048E+00		Resid rate (us/s)		1.76080E-06	+/- 6.0E-09
Total phase (deg)			Apriori accel (us/s/s)		2.96777110511E-05		Resid phase (deg)		105.9	+/- 19.6

	RMS	Theor.	Amplitude	0.161 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	57.9	46.1	Search (1024X32)	0.155	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	73.2	80.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	32.9	27.8	Inc. seg. avg.	0.168	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	46.7	48.5	Inc. frq. avg.	0.151	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

o: az 88.3 el 26.2 pa -56.2 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11934.825 739.223 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oP.W.247.1JFKZ



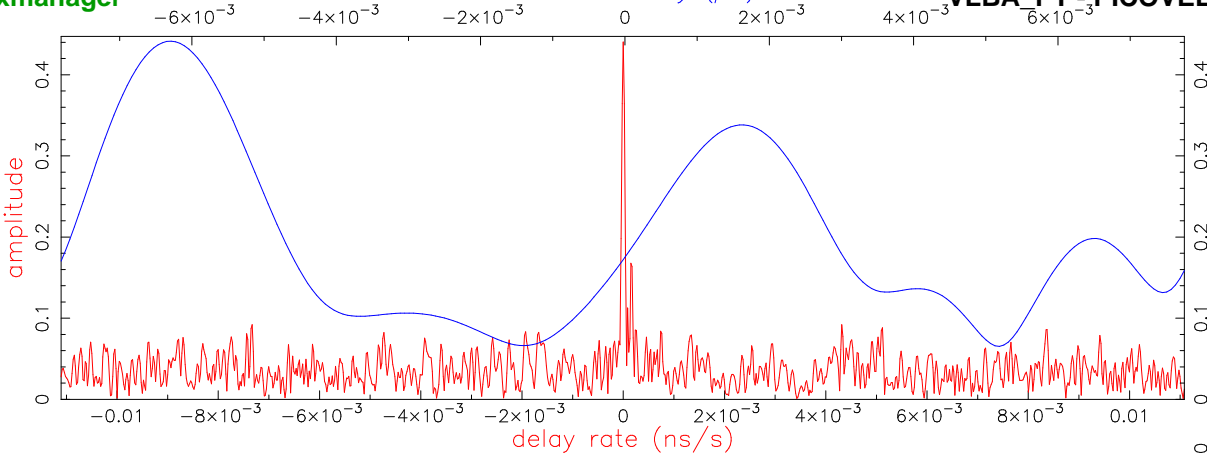
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pP

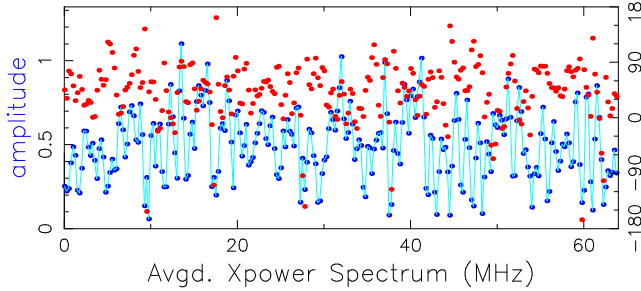
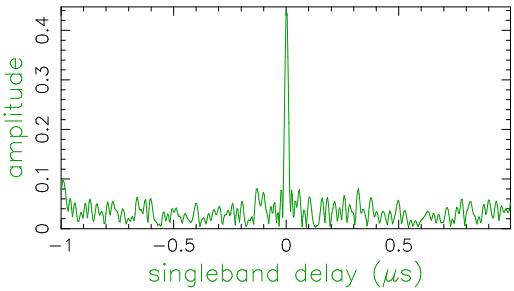
VLBA\_PT - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



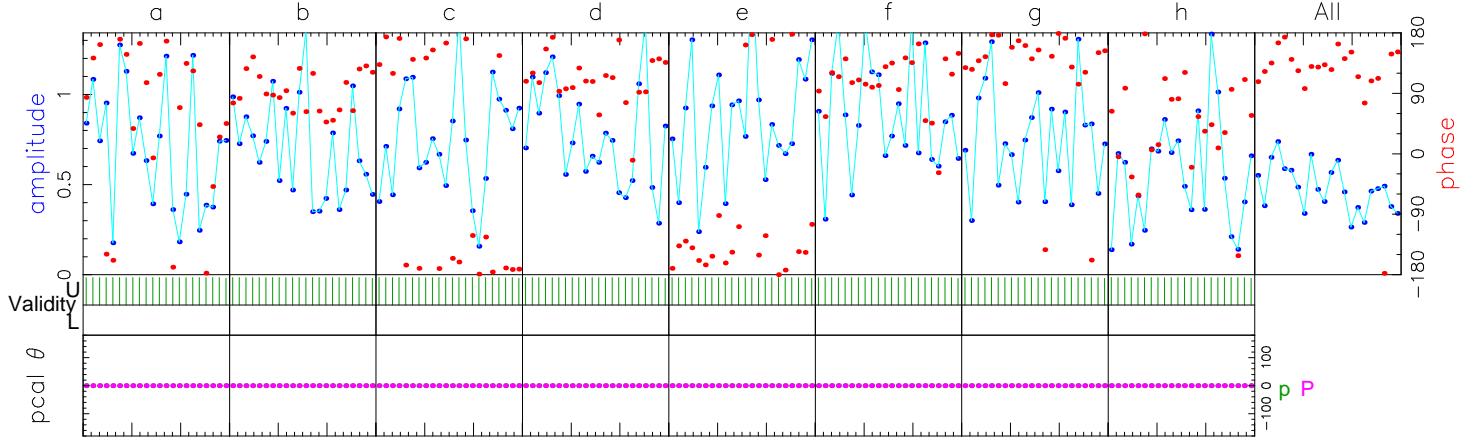
Fringe quality 7

SNR 16.4  
 Int time 179.788  
 Amp 0.447  
 Phase 135.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001568  
 MBD -0.006221  
 Fringe rate (Hz)  
 -0.000950  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060647  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	135.4	92.0	177.8	113.8	-150.2	111.5	150.2	49.4	Phase	135.7
p	0.4	0.6	0.7	0.7	0.8	0.7	0.7	0.4	Ampl.	0.6
P	257.3	257.1	257.1	256.9	256.3	256.3	257.2	254.6	Sbd box	257.4
p:P	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p:P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	

Group delay (usec)(sbd)	-2.91871892388E+03	Apriori delay (usec)	-2.91871270278E+03	Resid mbdelay (usec)	-6.22109E-03	+/-	6.6E-05
Sband delay (usec)	-2.91871113428E+03	Apriori clock (usec)	3.9099216E-01	Resid sbdelay (usec)	1.56850E-03	+/-	5.3E-04
Phase delay (usec)	-2.91871269850E+03	Apriori clockrate (us/s)	7.9999999E-07	Resid phdelay (usec)	4.28694E-06	+/-	2.2E-07
Delay rate (us/s)	1.90414381804E+00	Apriori rate (us/s)	1.90414382885E+00	Resid rate (us/s)	-1.08050E-08	+/-	2.1E-09
Total phase (deg)	105.9	Apriori accel (us/s/s)	1.42498653676E-05	Resid phase (deg)	135.7	+/-	7.0

ph/seg (deg)	25.3	RMS	16.4	Theor.	Amplitude	0.447 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	29.3	25.3	16.4	Search (1024X32)	0.424	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	54.6	29.3	28.6	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	47.9	54.6	9.9	Inc. seg. avg.	0.463	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
		47.9	17.2	Inc. frq. avg.	0.605						

p: az 92.6 el 34.4 pa -59.4 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11615.016 9.252 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/pP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/pP.W.207.1JFKZ

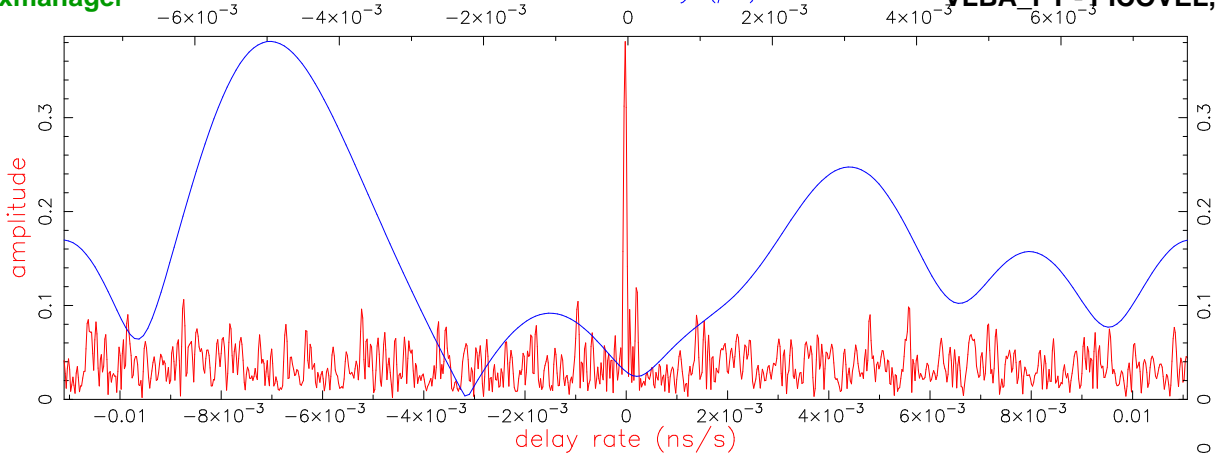
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pP

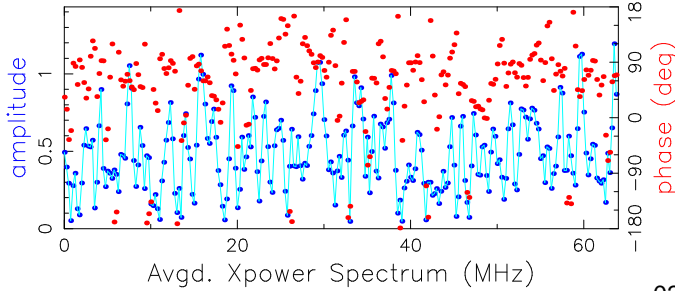
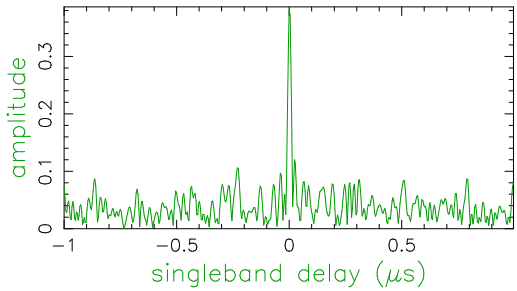
VLBA\_PT - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



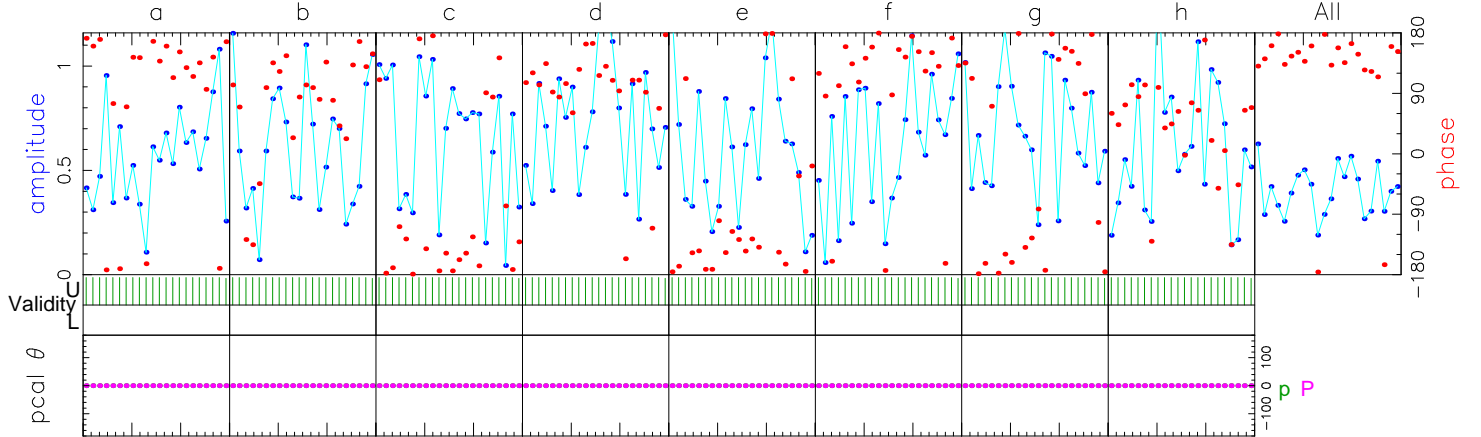
Fringe quality 8

SNR 14.2  
 Int time 179.788  
 Amp 0.386  
 Phase 148.5  
 PFD 4.2e-37  
 Delays (us)  
 SBD 0.001483  
 MBD -0.004913  
 Fringe rate (Hz)  
 -0.000958  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060649  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	149.7	112.0	-173.4	115.8	-158.0	150.9	177.1	56.6	Phase	148.5
	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.4	Ampl.	0.5
	257.5	257.6	256.8	257.6	257.2	256.8	256.1	255.6	Sbd box	257.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.91871761547E+03		Apriori delay (usec)		-2.91871270278E+03		Resid mbdelay (usec)		-4.91269E-03	+/- 7.7E-05
Sband delay (usec)	-2.91871122003E+03		Apriori clock (usec)		3.9099216E-01		Resid sbdelay (usec)		1.48275E-03	+/- 6.1E-04
Phase delay (usec)	-2.91871269809E+03		Apriori clockrate (us/s)		7.9999999E-07		Resid phdelay (usec)		4.69193E-06	+/- 2.6E-07
Delay rate (us/s)	1.90414381795E+00		Apriori rate (us/s)		1.90414382885E+00		Resid rate (us/s)		-1.08925E-08	+/- 2.5E-09
Total phase (deg)	118.7		Apriori accel (us/s/s)		1.42498653676E-05		Resid phase (deg)		148.5	+/- 8.1

	RMS	Theor.	Amplitude	0.386 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	20.8	19.0	Search (1024X32)	0.363	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	29.7	33.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	51.6	11.4	Inc. seg. avg.	0.382	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	33.2	20.0	Inc. frq. avg.	0.492	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

p: az 92.6 el 34.4 pa -59.4 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11615.016 9.252 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/pP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/pP.W.222.1JFKZ

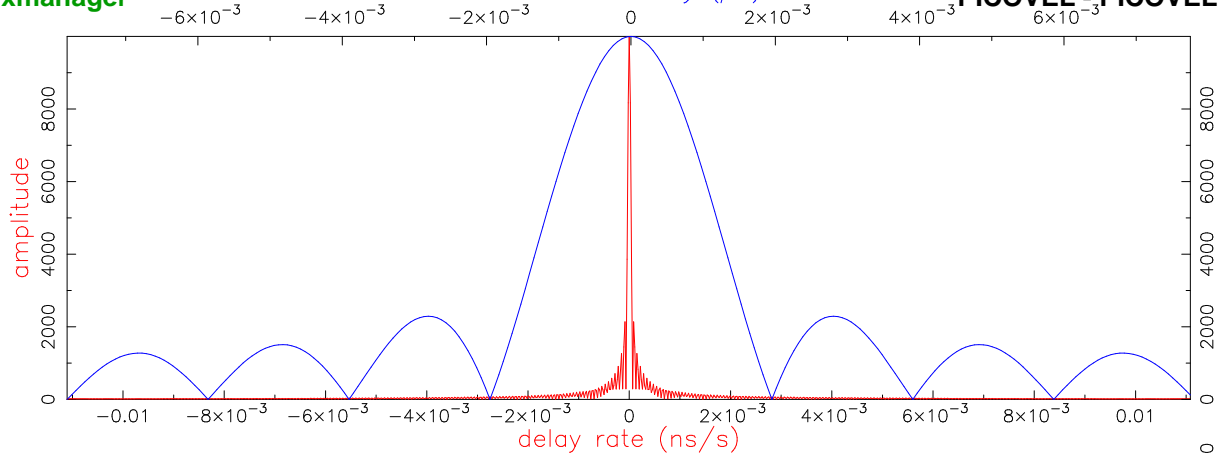
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, PP

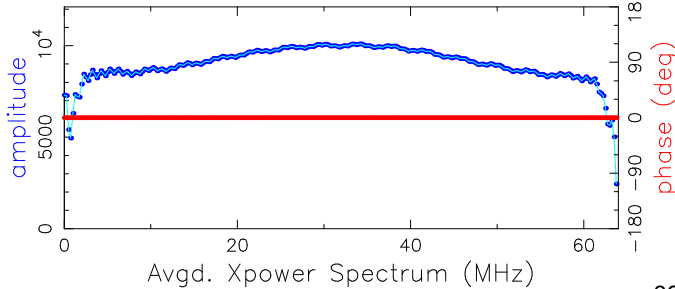
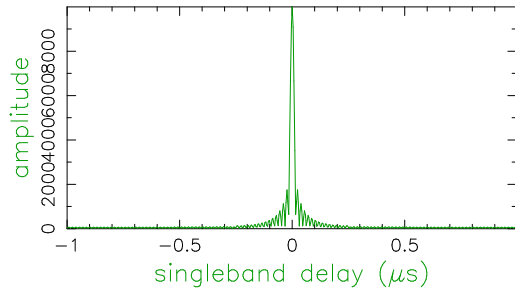
PICOVEL - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



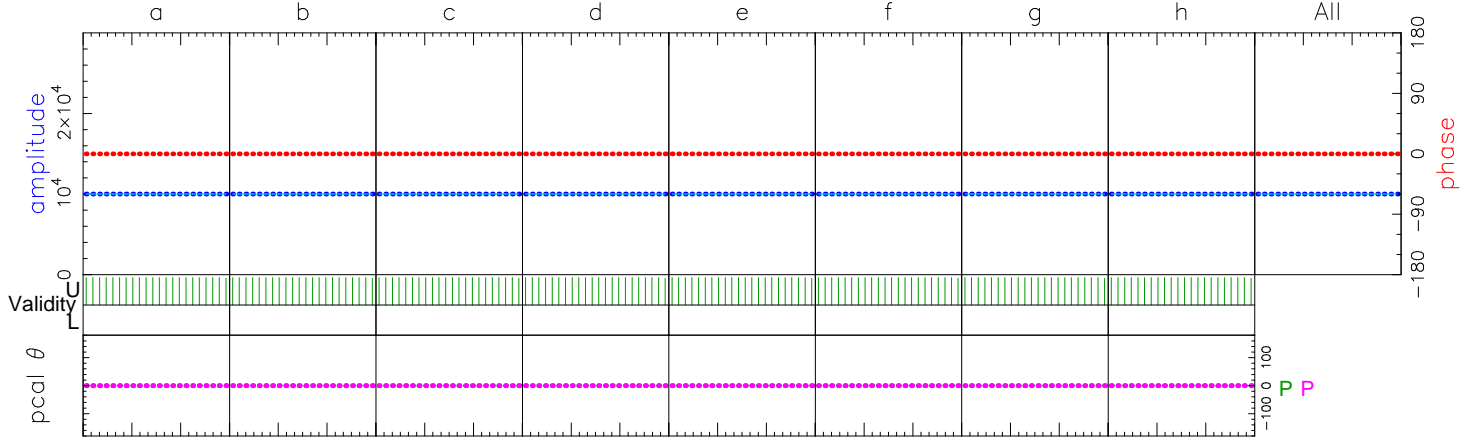
Fringe quality 9

SNR 366670.7  
 Int time 179.788  
 Amp 9999.960  
 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)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060649  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	Ampl.	10000.0
P	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
P	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	3.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	2.3E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	9.9E-12
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	9.5E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	RMS	Theor.	Amplitude	9999.960 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (1024X32)	9999.960	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.	9999.960	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

P: az 255.5 el 45.3 pa 53.6 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/PP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PP.W.227.1JFKZ

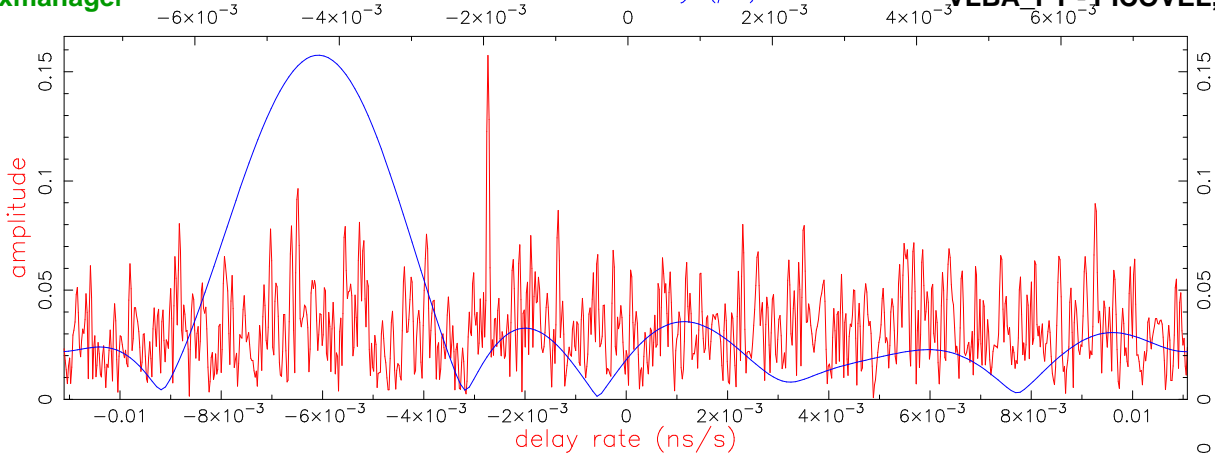
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pP

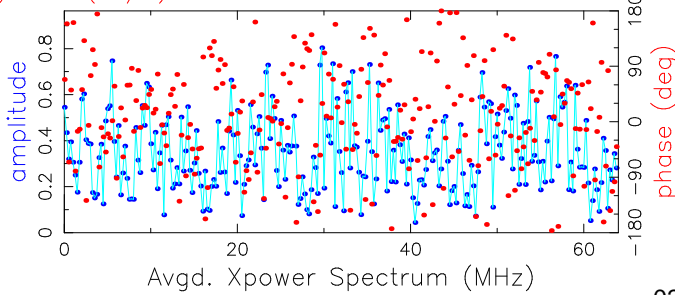
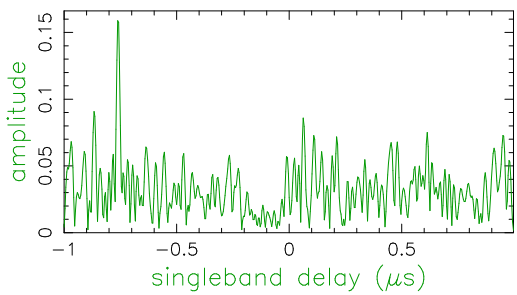
VLBA\_PT - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



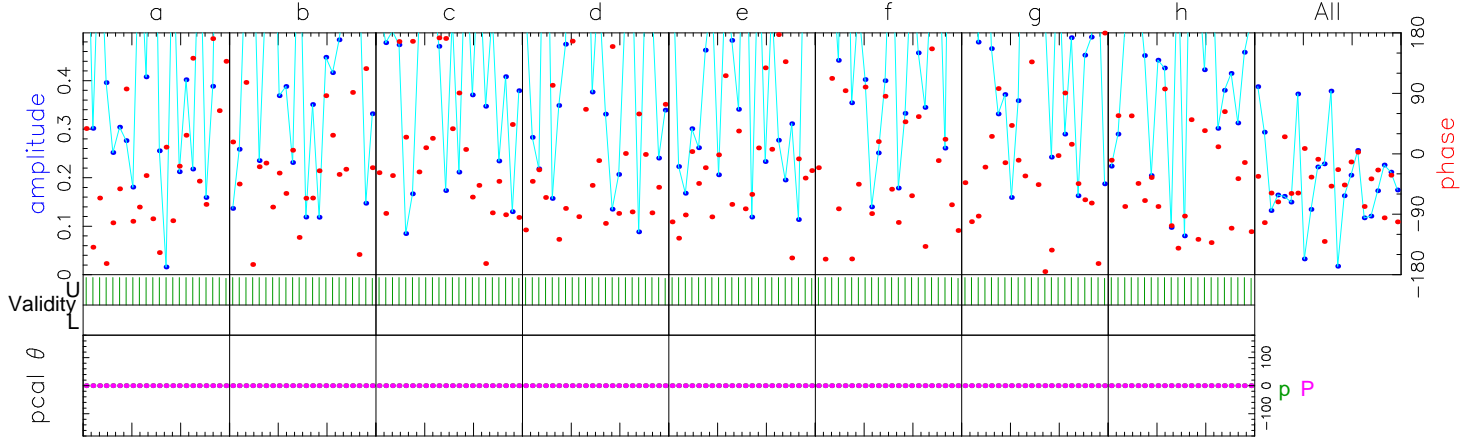
Fringe quality 0

SNR 5.9  
 Int time 179.788  
 Amp 0.166  
 Phase -49.4  
 PFD 3.0e-01  
 Delays (us)  
 SBD -0.759935  
 MBD -0.004333  
 Fringe rate (Hz)  
 -0.240339  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060650  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-65.6	-41.5	-37.6	-61.2	-47.3	-46.8	-47.4	-47.2	Phase	-49.4
	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	Ampl.	0.1
	130.4	273.5	348.9	283.9	483.2	32.8	208.1	451.7	Sbd box	62.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.91946703613E+03		Apriori delay (usec)		-2.91871270278E+03		Resid mbdelay (usec)		-4.33335E-03	+/- 1.8E-04
Sband delay (usec)	-2.91947263828E+03		Apriori clock (usec)		3.9099216E-01		Resid sbdelay (usec)		-7.59935E-01	+/- 1.4E-03
Phase delay (usec)	-2.91871270434E+03		Apriori clockrate (us/s)		7.9999999E-07		Resid phdelay (usec)		-1.55905E-06	+/- 6.1E-07
Delay rate (us/s)	1.90414109585E+00		Apriori rate (us/s)		1.90414382885E+00		Resid rate (us/s)		-2.73299E-06	+/- 5.9E-09
Total phase (deg)			Apriori accel (us/s/s)		1.42498653676E-05		Resid phase (deg)		-49.4	+/- 19.3

	RMS	Theor.	Amplitude	0.166 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	38.5	45.2	Search (1024X32)	0.155	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	62.8	78.9	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	10.2	27.3	Inc. seg. avg.	0.154	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	21.7	47.6	Inc. frq. avg.	0.147					

p: az 92.6 el 34.4 pa -59.4 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11615.016 9.252 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/pP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/pP.W.238.1JFKZ

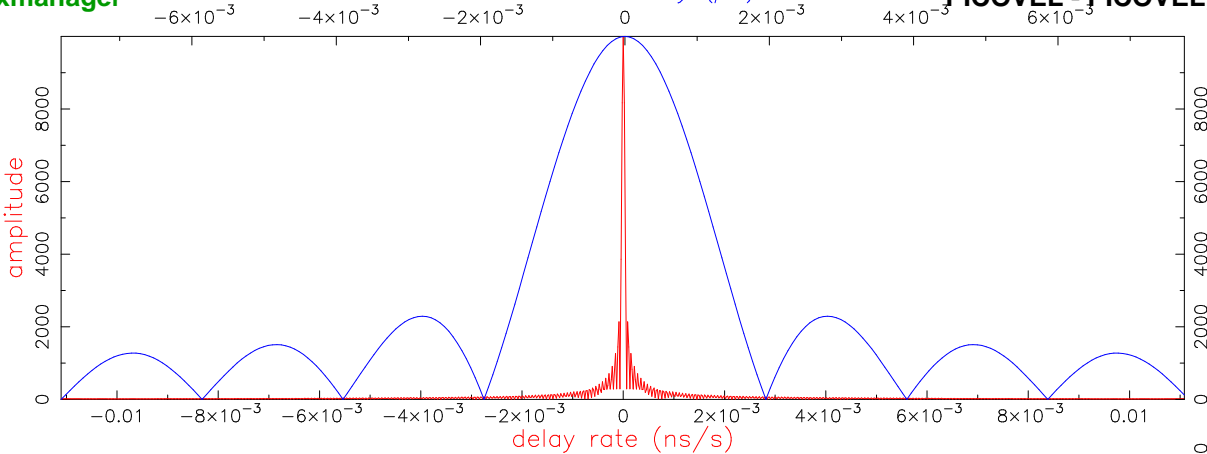
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, PP

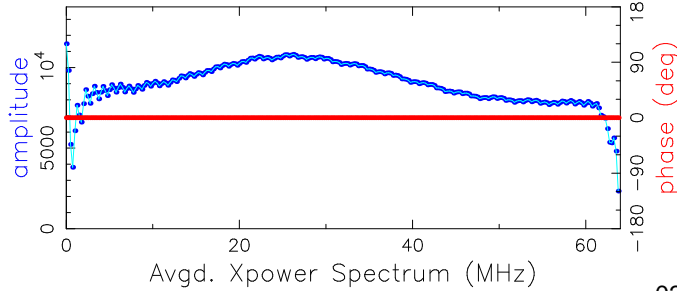
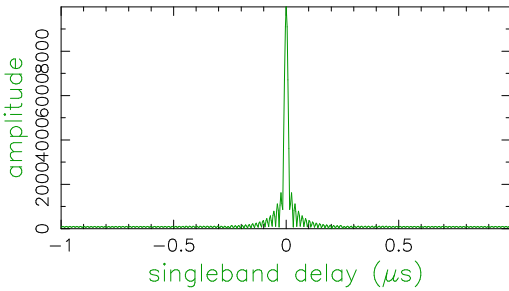
PICOVEL - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



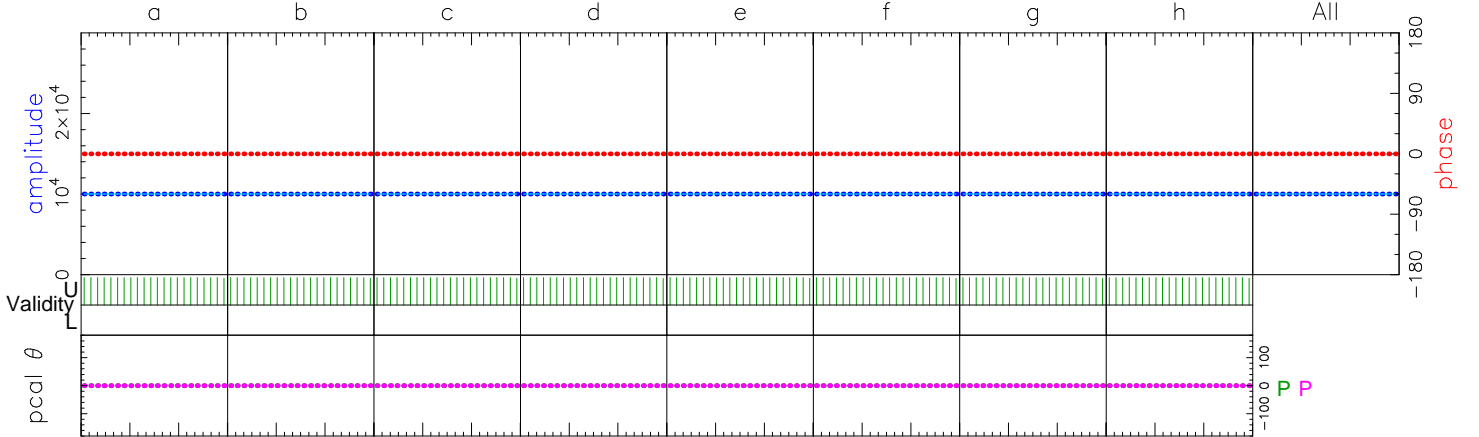
Fringe quality 9

SNR 366670.7  
 Int time 179.788  
 Amp 9999.960  
 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)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060651  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	10000.0	10000.0
P	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	10000.0	10000.0
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	10000.0	10000.0
P	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
P	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	10000.0	10000.0
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	10000.0	10000.0

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	3.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	2.3E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	9.9E-12
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	9.5E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	RMS	Theor.	Amplitude	9999.960 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (1024X32)	9999.960	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.	9999.960	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

P: az 255.5 el 45.3 pa 53.6 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/PP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PP.W.242.1JFKZ

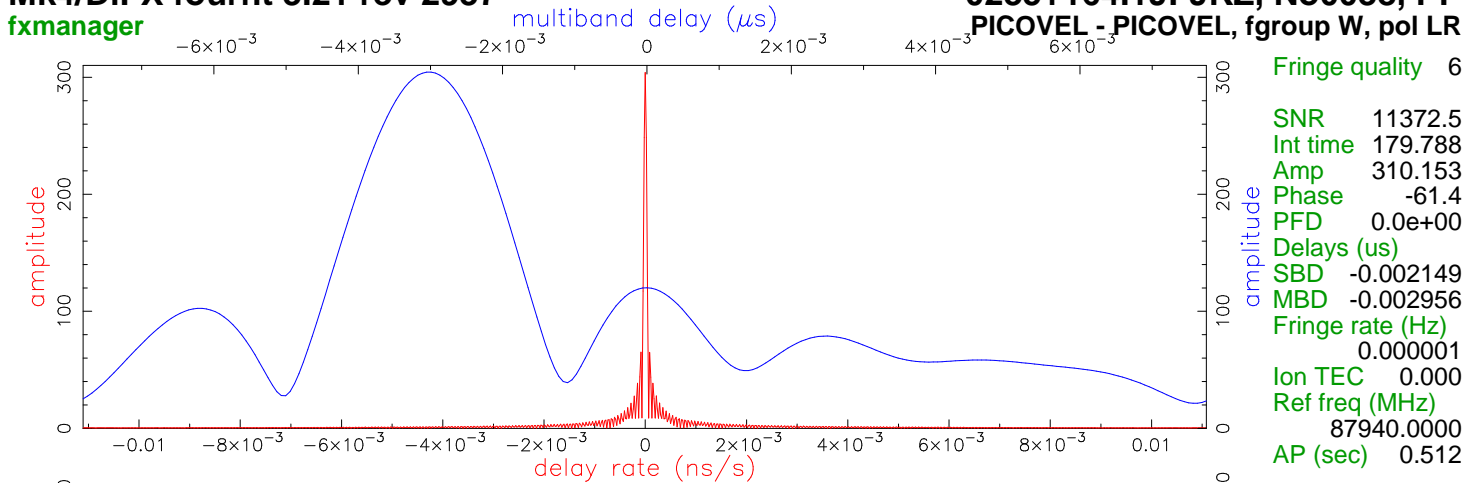


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, PP

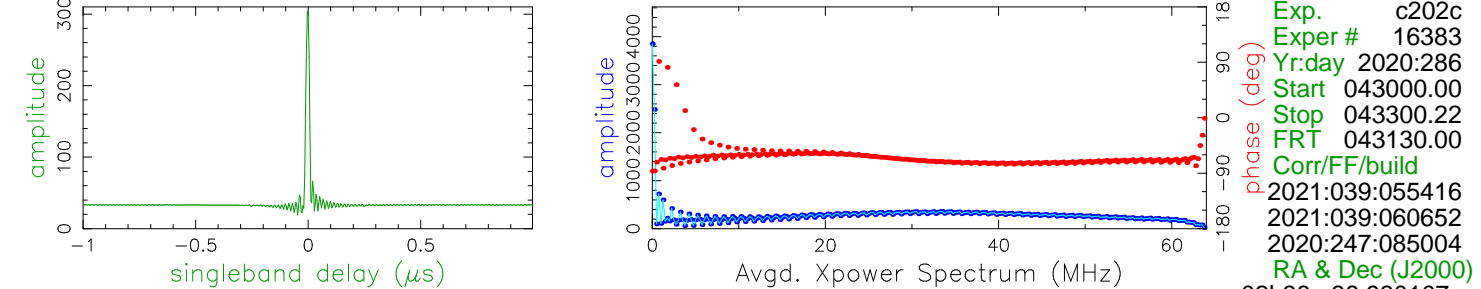
PICOVEL - PICOVEL, fgroup W, pol LR



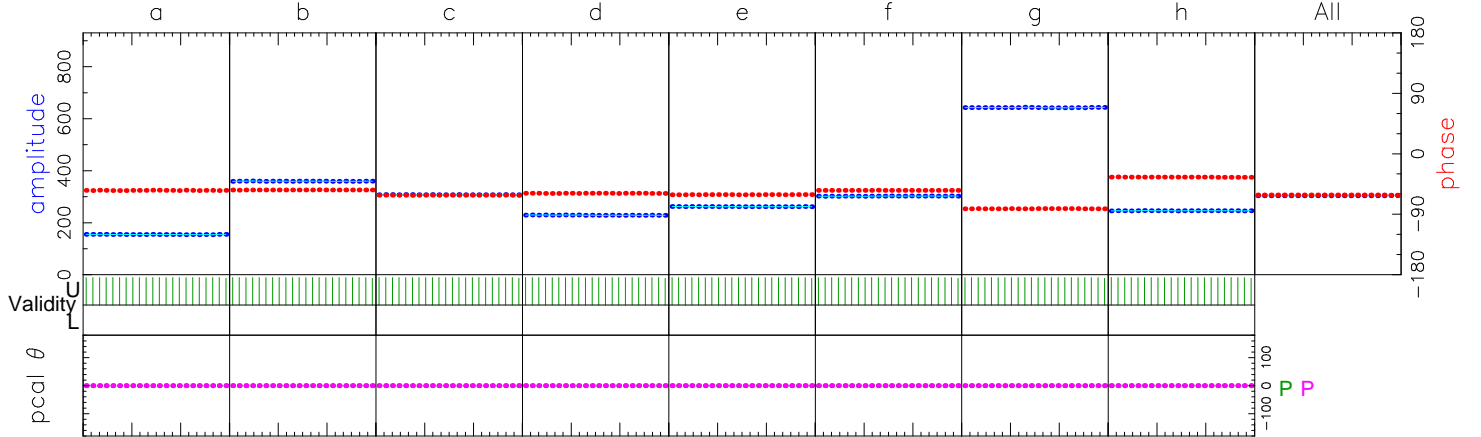
Fringe quality 6

SNR 11372.5  
 Int time 179.788  
 Amp 310.153  
 Phase -61.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002149  
 MBD -0.002956  
 Fringe rate (Hz) 0.000001  
 Ion TEC 0.000  
 Ref freq (MHz) 87940.0000  
 AP (sec) 0.512

Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060652  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"



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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		-2.95571875000E-03				0.00000000000E+00			Resid mbdelay (usec)	-2.95572E-03 +/- 9.5E-08
Sband delay (usec)		-2.14900000000E-03				0.0000000E+00			Resid sbdelay (usec)	-2.14900E-03 +/- 7.6E-07
Phase delay (usec)		-1.93869801368E-06				0.0000000E+00			Resid phdelay (usec)	-1.93870E-06 +/- 3.2E-10
Delay rate (us/s)		1.24929811271E-11				0.00000000000E+00			Resid rate (us/s)	1.24930E-11 +/- 3.1E-12
Total phase (deg)			-61.4			0.00000000000E+00			Resid phase (deg)	-61.4 +/- 0.0
ph/seg (deg)	0.0	0.0							PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	2.0	0.0							PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	14.6	0.0							Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%)	44.2	0.0							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
P: az 255.5 el 45.3 pa 53.6										
Control file: cf_1234_88GHz_gmva										

u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Input file: /Exps/c202c/v1/1234/No0038/PP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PP.W.254.1JFKZ

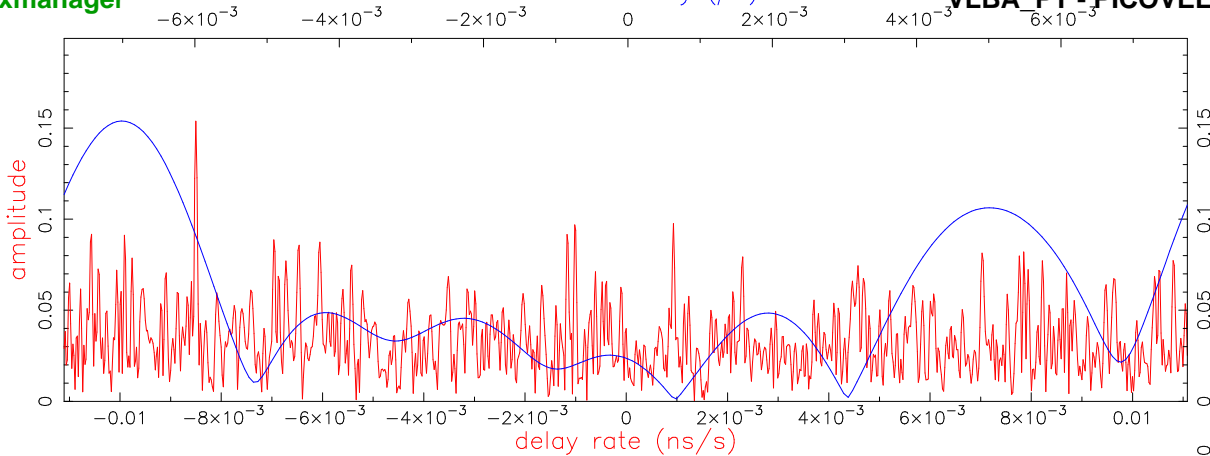
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pP

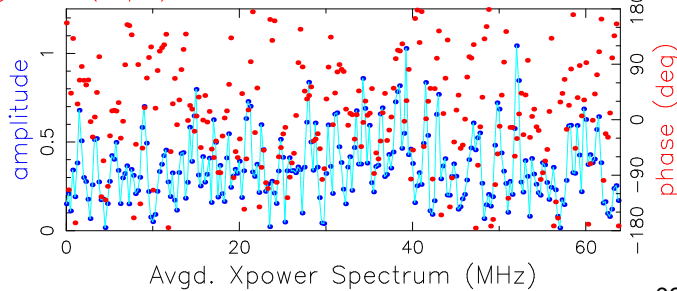
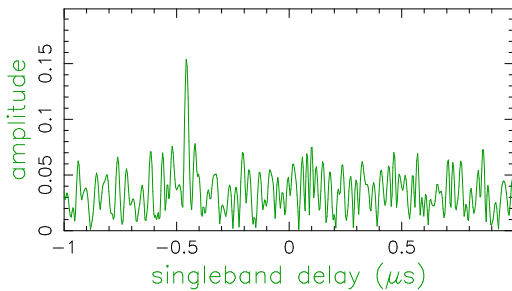
VLBA\_PT - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



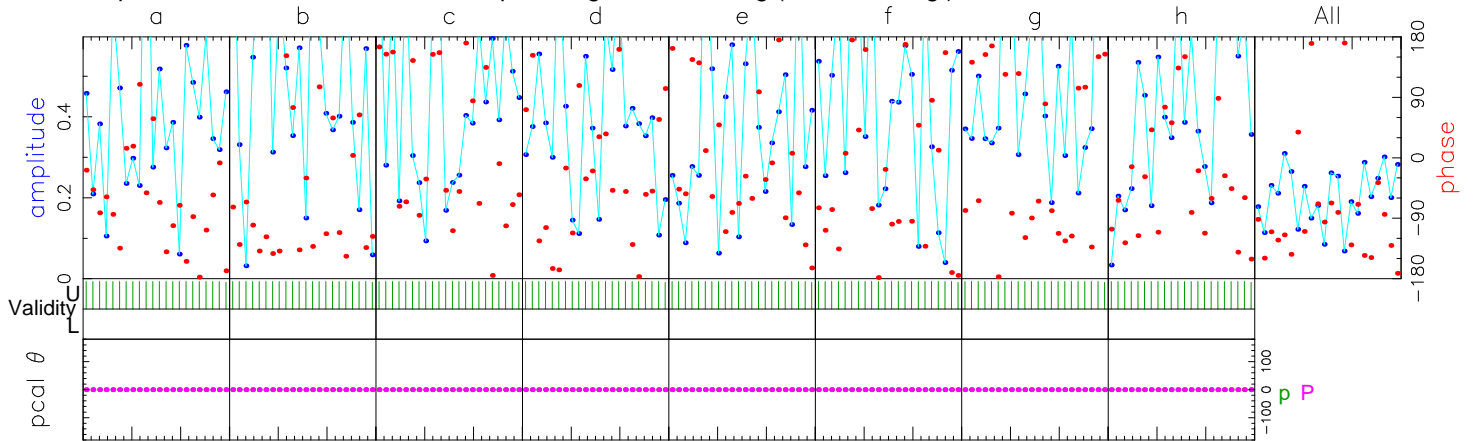
Fringe quality 0

SNR 5.7  
 Int time 179.788  
 Amp 0.199  
 Phase -112.3  
 PFD 8.3e-01  
 Delays (us)  
 SBD -0.456106  
 MBD -0.006981  
 Fringe rate (Hz)  
 -0.748020  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060653  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-82.2	-129.1	-149.9	-97.2	-62.0	-125.3	-154.9	-66.7	Phase	-112.3
	0.3	0.4	0.2	0.1	0.2	0.3	0.2	0.2	Ampl.	0.2
	173.2	139.9	250.9	58.6	362.6	11.2	243.7	399.2	Sbd box	140.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.91917280905E+03	Apriori delay (usec)	-2.91871270278E+03	Resid mbdelay (usec)	-6.98127E-03	+/-	1.9E-04
Sband delay (usec)	-2.91916880878E+03	Apriori clock (usec)	3.9099216E-01	Resid sbdelay (usec)	-4.56106E-01	+/-	1.5E-03
Phase delay (usec)	-2.91871270633E+03	Apriori clockrate (us/s)	7.9999999E-07	Resid phdelay (usec)	-3.54699E-06	+/-	6.4E-07
Delay rate (us/s)	1.90413532282E+00	Apriori rate (us/s)	1.90414382885E+00	Resid rate (us/s)	-8.50602E-06	+/-	6.1E-09
Total phase (deg)	-142.1	Apriori accel (us/s/s)	1.42498653676E-05	Resid phase (deg)	-112.3	+/-	20.2

ph/seg (deg)	51.1	Theor.	47.4	Amplitude	0.199 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	54.8	Search (1024X32)	0.151	Search	0.151	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	39.6	Inc. seg. avg.	0.198	Inc. seg. avg.	0.198	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	43.3	Inc. frq. avg.	0.210	Inc. frq. avg.	0.210	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

p: az 92.6 el 34.4 pa -59.4 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -11615.016 9.252 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/pP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/pP.W.264.1JFKZ

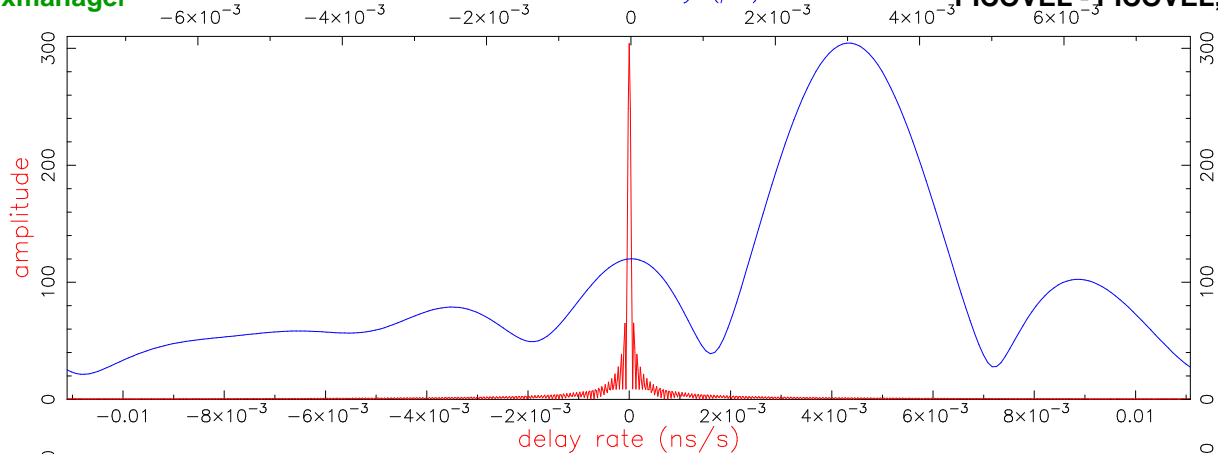
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, PP

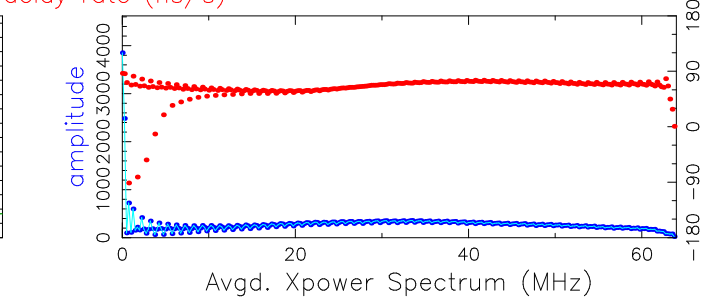
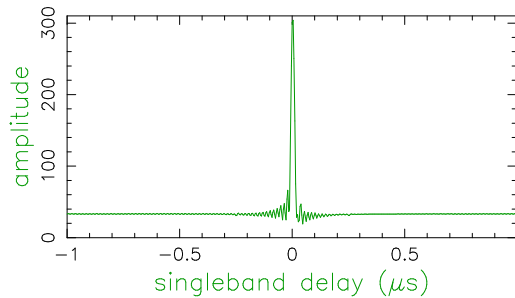
PICOVEL - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



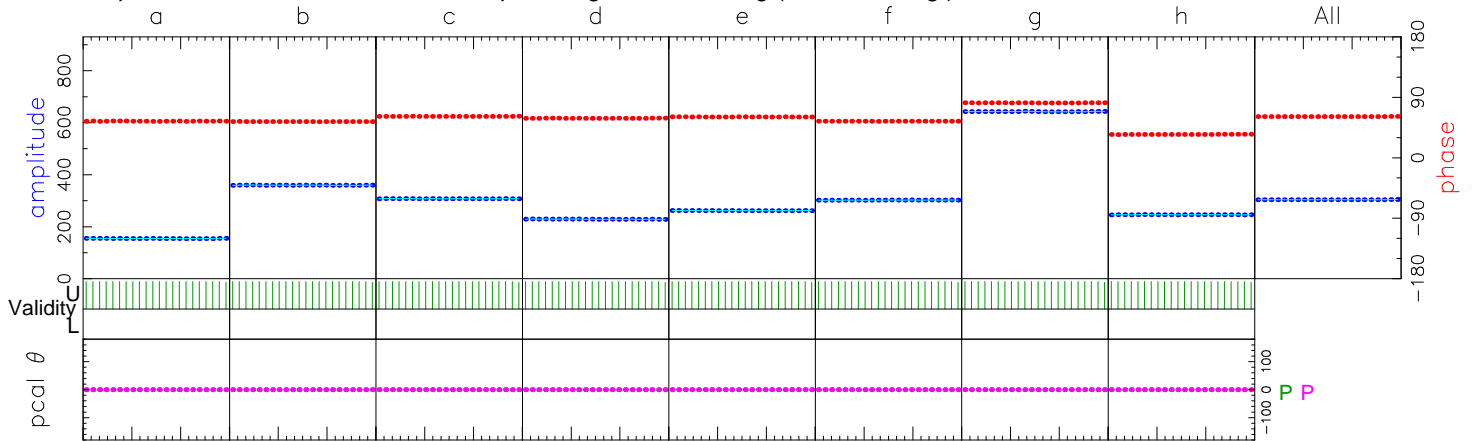
Fringe quality 6

SNR 11372.5  
 Int time 179.788  
 Amp 310.153  
 Phase 61.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.002149  
 MBD 0.002956  
 Fringe rate (Hz)  
 -0.000001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060654  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



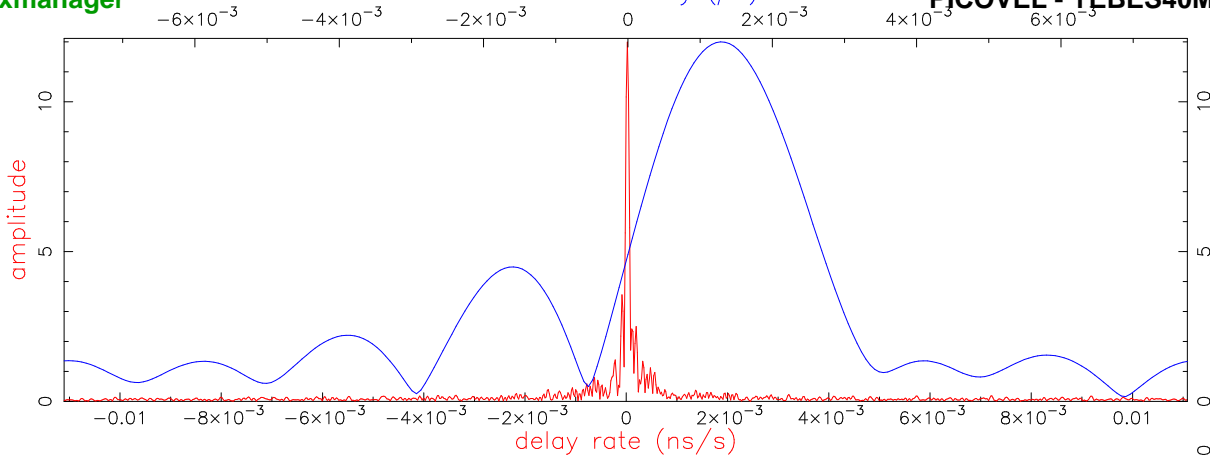
	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	2.95571875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	2.95572E-03	+/-	9.5E-08
Sband delay (usec)	2.14900000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	2.14900E-03	+/-	7.6E-07
Phase delay (usec)	1.93869801378E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.93870E-06	+/-	3.2E-10
Delay rate (us/s)	-1.24929811271E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.24930E-11	+/-	3.1E-12
Total phase (deg)	61.4	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	61.4	+/-	0.0

ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	310.153 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	2.0	Search (1024X32)	303.545	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	14.6	Inc. seg. avg.	304.023	Inc. frq. avg.	313.130	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	44.2	Inc. frq. avg.	313.130	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags:	256	t_cohere	infinite
P:	az 255.5 el 45.3 pa 53.6	P:	az 255.5 el 45.3 pa 53.6	u,v (fr/asec)	0.000 0.000	ion window (TEC)	0.00	0.00	0.00	0.00	

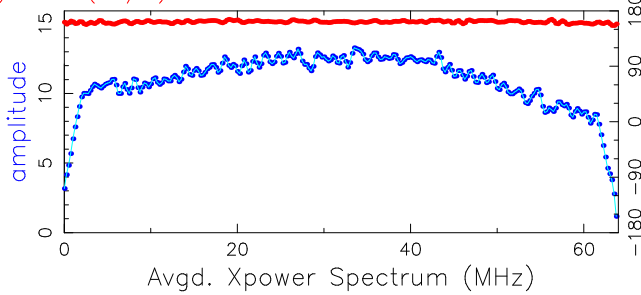
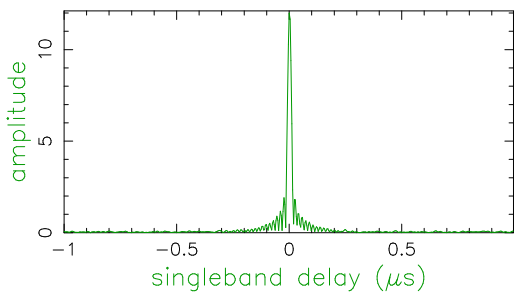
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/PP..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PP.W.269.1JFKZ simultaneous interpolator

multiband delay ( $\mu$ s)



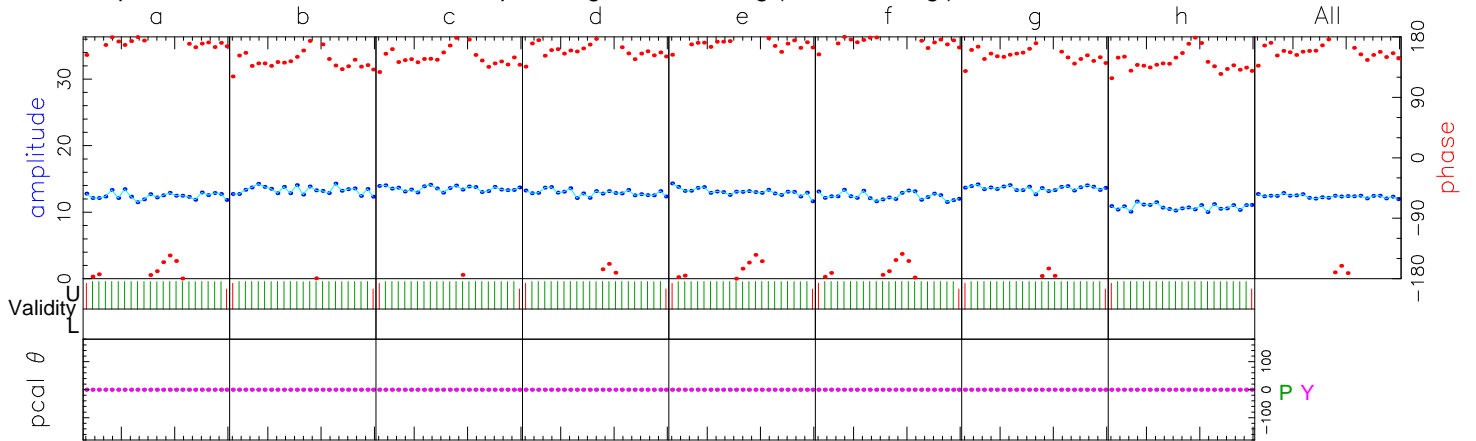
Fringe quality 7

SNR 421.7  
Int time 161.936  
Amp 12.119  
Phase 161.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.001332  
MBD 0.001332  
Fringe rate (Hz)  
0.001560  
Ion TEC 0.000  
Ref freq (MHz)  
87940.0000  
AP (sec) 0.512



Exp. c202c  
Exper # 16383  
Yr:day 2020:286  
Start 043016.90  
Stop 043300.22  
FRT 043130.00  
Corr/FF/build  
2021:039:055416  
2021:039:060652  
2020:247:085004  
RA & Dec (J2000)  
02h38m38.930107s  
+16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	178.3	145.7	150.9	163.6	176.7	-179.8	156.6	142.1	Phase	161.8
P	12.1	13.0	13.1	12.5	12.6	12.0	13.2	10.4	Ampl.	12.4
Y	257.4	257.4	257.4	257.6	257.3	257.2	257.1	256.8	Sbd box	257.3
P:Y	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
P	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.99460466600E+02	Apriori delay (usec)	2.99459134770E+02	Resid mbdelay (usec)	1.33183E-03	+/-	2.6E-06
Sband delay (usec)	2.99460466770E+02	Apriori clock (usec)	-1.3955583E+01	Resid sbdelay (usec)	1.33200E-03	+/-	2.0E-05
Phase delay (usec)	2.99459139881E+02	Apriori clockrate (us/s)	-5.2000000E-07	Resid phdelay (usec)	5.11157E-06	+/-	8.6E-09
Delay rate (us/s)	-3.61952172903E-02	Apriori rate (us/s)	-3.61952350331E-02	Resid rate (us/s)	1.77428E-08	+/-	9.1E-11
Total phase (deg)	274.0	Apriori accel (us/s/s)	-3.18634912634E-06	Resid phase (deg)	161.8	+/-	0.3

ph/seg (deg)	RMS 14.5	Theor. 0.7	Amplitude Search (1024X32)	12.119 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	2.9	1.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	16.5	0.4	Inc. seg. avg.	12.386	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
amp/frq (%)	7.2	0.7	Inc. frq. avg.	12.364	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

P: az 255.5 el 45.3 pa 53.6 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) 219.844 -482.789 simultaneous interpolator  
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/PY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PY.W.248.1JFKZ

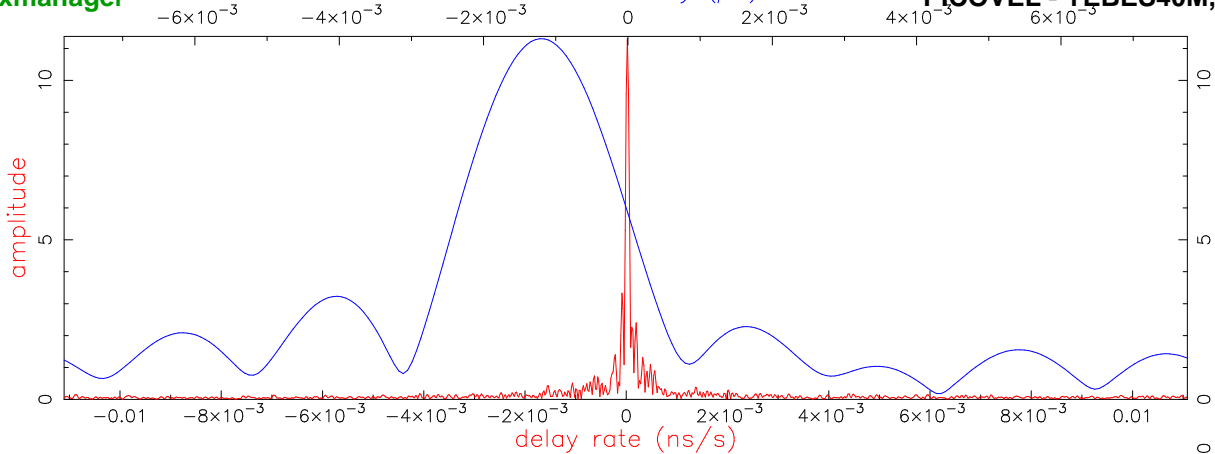
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

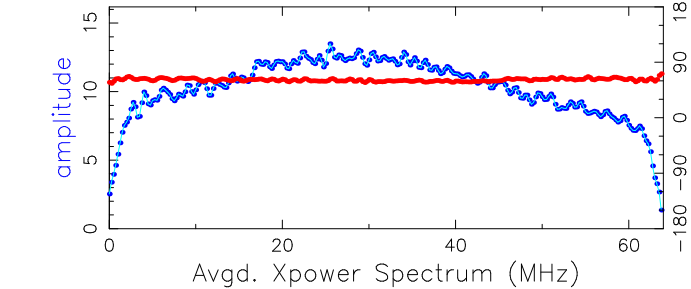
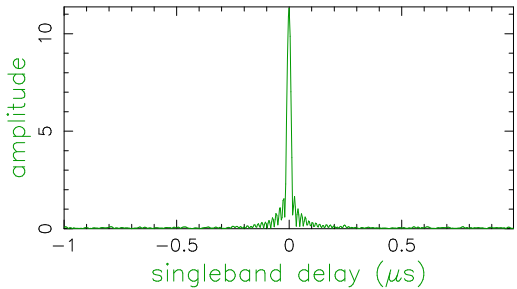
0235+164.1JFKZ, No0038, PY

PICOVEL - YEBES40M, fgroup W, pol RR

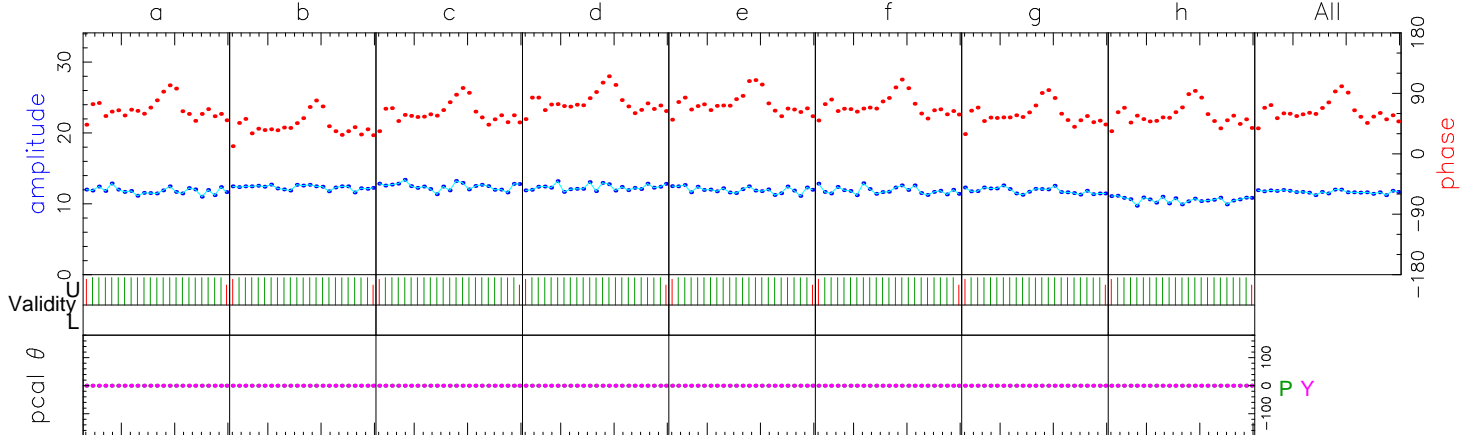
multiband delay ( $\mu$ s)



Fringe quality 7  
 SNR 396.0  
 Int time 161.936  
 Amp 11.380  
 Phase 63.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001077  
 MBD -0.001228  
 Fringe rate (Hz)  
 0.001554  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512  
 Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043016.90  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060653  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"



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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
P	1000	1000	1000	1000	1000	1000	1000	1000	APs used	1000
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	1000
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	0:0
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	0:0
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	1000
Y	1000	1000	1000	1000	1000	1000	1000	1000		1000
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.99457906381E+02			Apriori delay (usec)	2.99459134770E+02			Resid mbdelay (usec)	-1.22839E-03	+/- 2.7E-06
Sband delay (usec)	2.99458057520E+02			Apriori clock (usec)	-1.3955583E+01			Resid sbdelay (usec)	-1.07725E-03	+/- 2.2E-05
Phase delay (usec)	2.99459136772E+02			Apriori clockrate (us/s)	-5.2000000E-07			Resid phdelay (usec)	2.00221E-06	+/- 9.1E-09
Delay rate (us/s)	-3.61952173569E-02			Apriori rate (us/s)	-3.61952350331E-02			Resid rate (us/s)	1.76762E-08	+/- 9.7E-11
Total phase (deg)		175.6		Apriori accel (us/s/s)	-3.18634912634E-06			Resid phase (deg)	63.4	+/- 0.3

ph/seg (deg) 14.8 0.7  
 amp/seg (%) 3.3 1.2  
 ph/frq (deg) 12.5 0.4  
 amp/frq (%) 4.9 0.7

RMS Theor. Amplitude 11.380 +/- 0.029  
 Search (1024X32) 11.013  
 Interp. 0.000  
 Inc. seg. avg. 11.691  
 Inc. frq. avg. 11.514

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

P: az 255.5 el 45.3 pa 53.6 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) 219.844 -482.789 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/PY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PY.W.265.1JFKZ



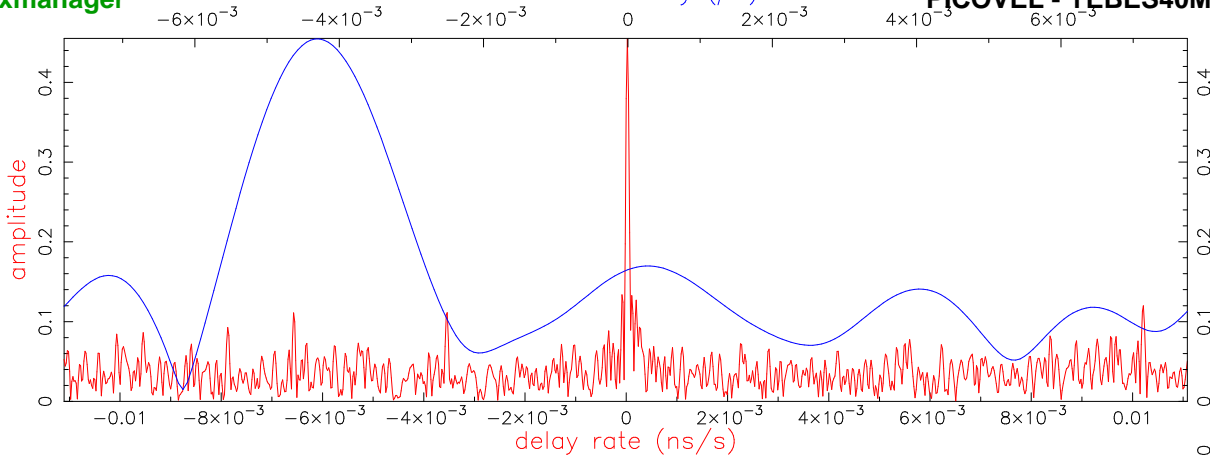
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, PY

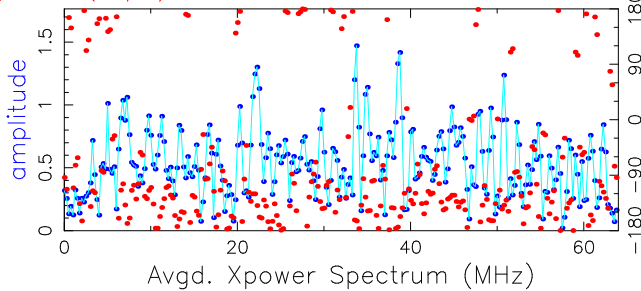
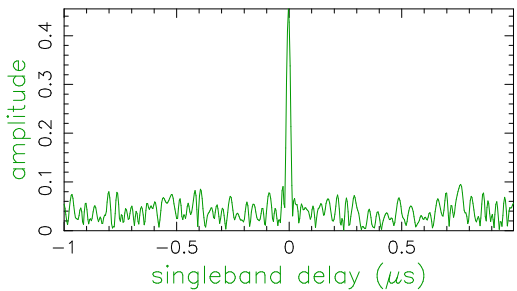
PICOVEL - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



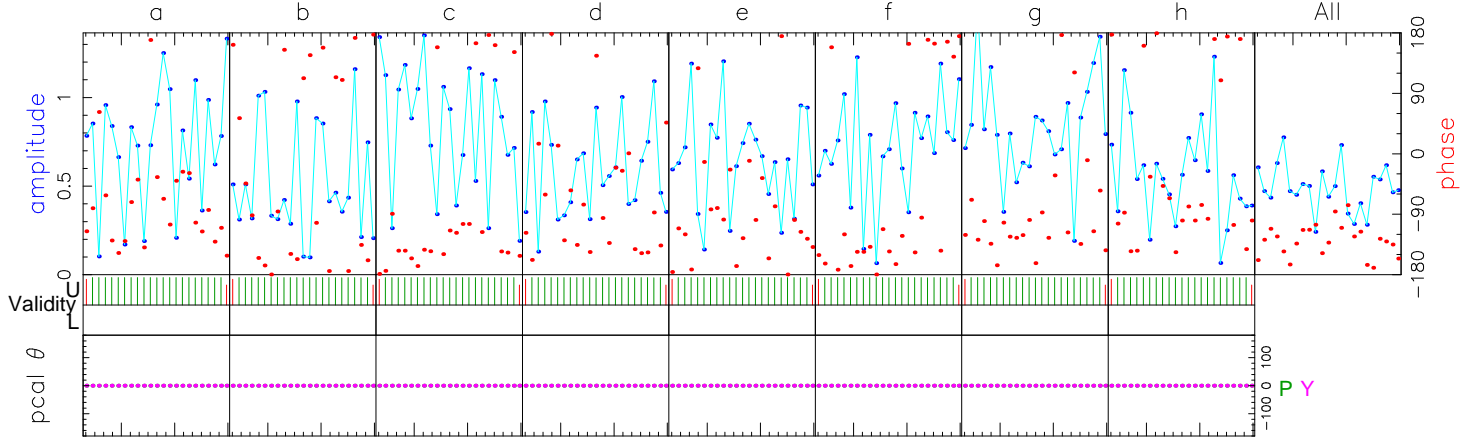
Fringe quality 8

SNR 15.8  
 Int time 161.936  
 Amp 0.455  
 Phase -130.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003395  
 MBD -0.004295  
 Fringe rate (Hz) 0.001381  
 Ion TEC 0.000  
 Ref freq (MHz) 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043016.90  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060655  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-91.7	-168.8	-150.7	-109.4	-115.5	-158.3	-113.3	-124.1	Phase	-130.1
	0.5	0.4	0.7	0.3	0.4	0.6	0.6	0.4	Ampl.	0.5
	256.0	252.1	254.1	254.4	256.5	255.4	254.7	256.5	Sbd box	256.1
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.99454839412E+02		Apriori delay (usec)		2.99459134770E+02		Resid mbdelay (usec)		-4.29536E-03	+/- 6.9E-05
Sband delay (usec)	2.99455739270E+02		Apriori clock (usec)		-1.3955583E+01		Resid sbdelay (usec)		-3.39550E-03	+/- 5.4E-04
Phase delay (usec)	2.99459130660E+02		Apriori clockrate (us/s)		-5.2000000E-07		Resid phdelay (usec)		-4.10935E-06	+/- 2.3E-07
Delay rate (us/s)	-3.61952193308E-02		Apriori rate (us/s)		-3.61952350331E-02		Resid rate (us/s)		1.57023E-08	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-3.18634912634E-06		Resid phase (deg)		-130.1	+/- 7.2

	RMS	Theor.	Amplitude	0.455 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	23.8	17.3	Search (1024X32)	0.447	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	29.8	30.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	29.3	10.2	Inc. seg. avg.	0.471	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	32.3	17.9	Inc. frq. avg.	0.494	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

P: az 255.5 el 45.3 pa 53.6 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) 219.844 -482.789 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/PY..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/PY.W.280.1JFJKZ

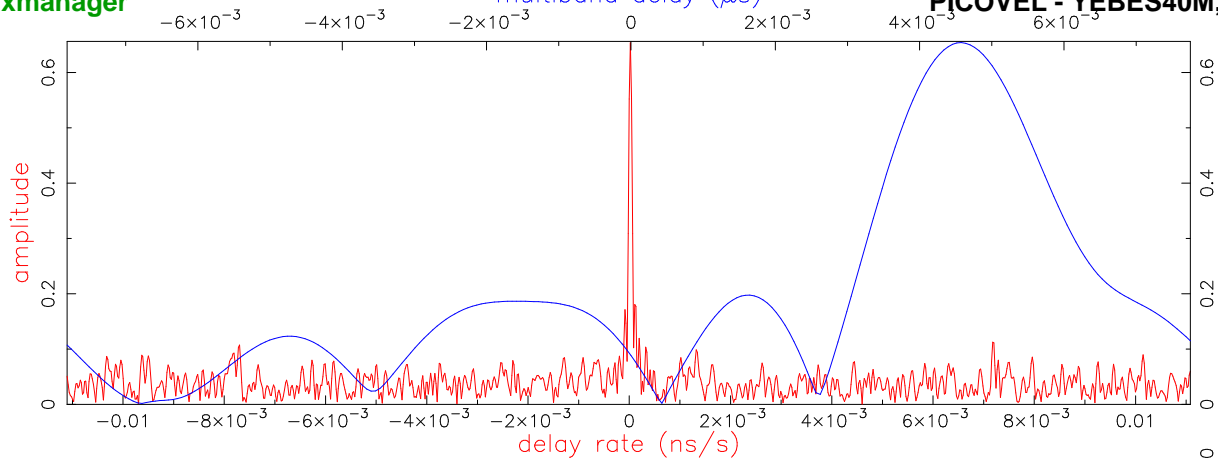
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, PY

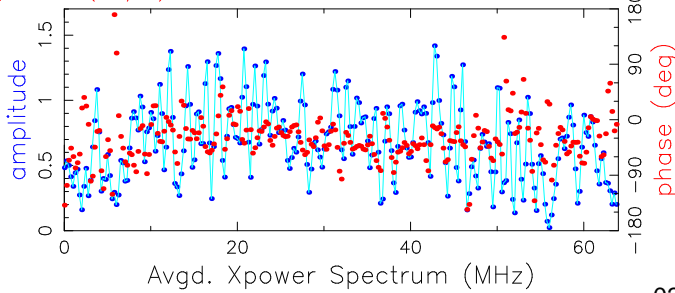
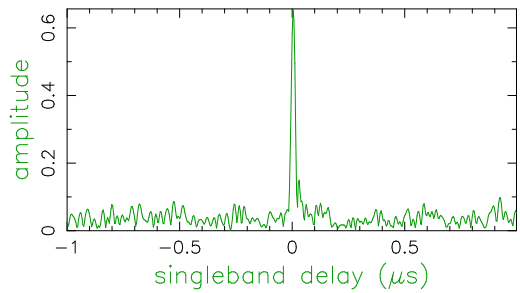
PICOVEL - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



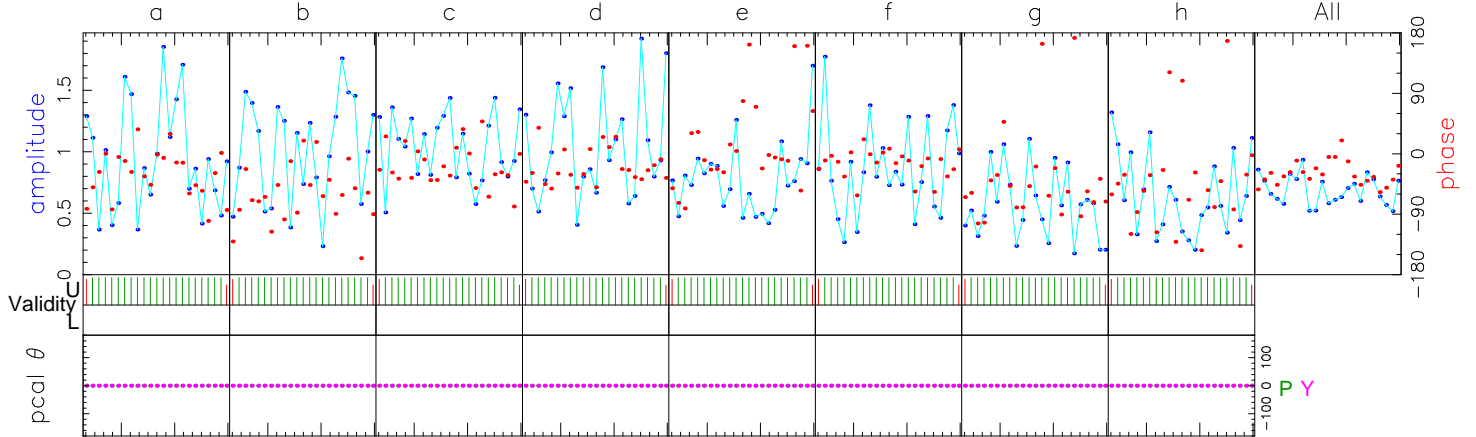
Fringe quality 8

SNR 22.8  
 Int time 161.936  
 Amp 0.656  
 Phase -29.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004728  
 MBD 0.004592  
 Fringe rate (Hz)  
 0.001353  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043016.90  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060657  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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

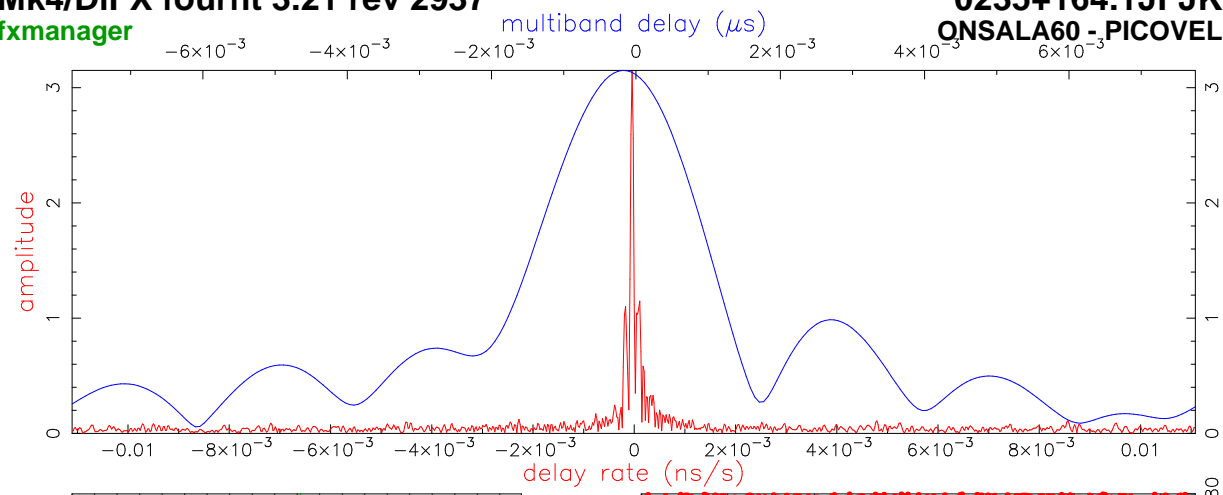


	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-26.9	-58.8	-20.2	-19.6	-1.9	-11.5	-52.6	-65.6	Phase	-29.7
	0.8	0.8	0.9	0.9	0.4	0.8	0.4	0.4	Ampl.	0.7
	257.7	257.9	258.2	258.5	258.9	257.1	258.7	258.8	Sbd box	258.2
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.99463726693E+02		Apriori delay (usec)		2.99459134770E+02		Resid mbdelay (usec)		4.59192E-03	+/- 4.8E-05
Sband delay (usec)	2.99463863020E+02		Apriori clock (usec)		-1.395583E+01		Resid sbdelay (usec)		4.72825E-03	+/- 3.8E-04
Phase delay (usec)	2.99459133833E+02		Apriori clockrate (us/s)		-5.200000E-07		Resid phdelay (usec)		-9.36876E-07	+/- 1.6E-07
Delay rate (us/s)	-3.61952196501E-02		Apriori rate (us/s)		-3.61952350331E-02		Resid rate (us/s)		1.53830E-08	+/- 1.7E-09
Total phase (deg)			Apriori accel (us/s/s)		-3.18634912634E-06		Resid phase (deg)		-29.7	+/- 5.0

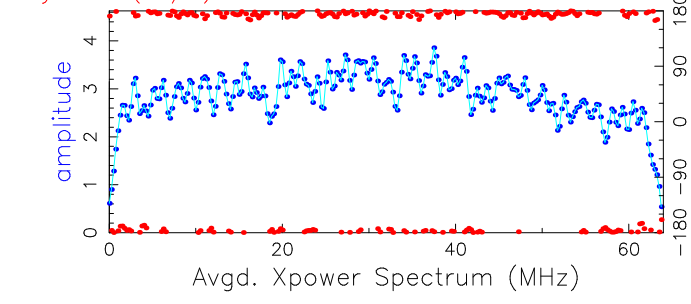
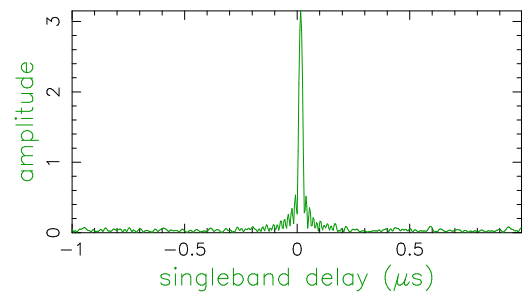
	RMS	Theor.	Amplitude	0.656 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	17.8	12.0	Search (1024X32)	0.638	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/seg (%)	18.2	21.0	Interp.	0.000	Sample rate(MSamp/s): 128	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	25.7	7.1	Inc. seg. avg.	0.670	Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00	
amp/frq (%)	34.4	12.4	Inc. frq. avg.	0.690				

P: az 255.5 el 45.3 pa 53.6 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) 219.844 -482.789 simultaneous interpolator

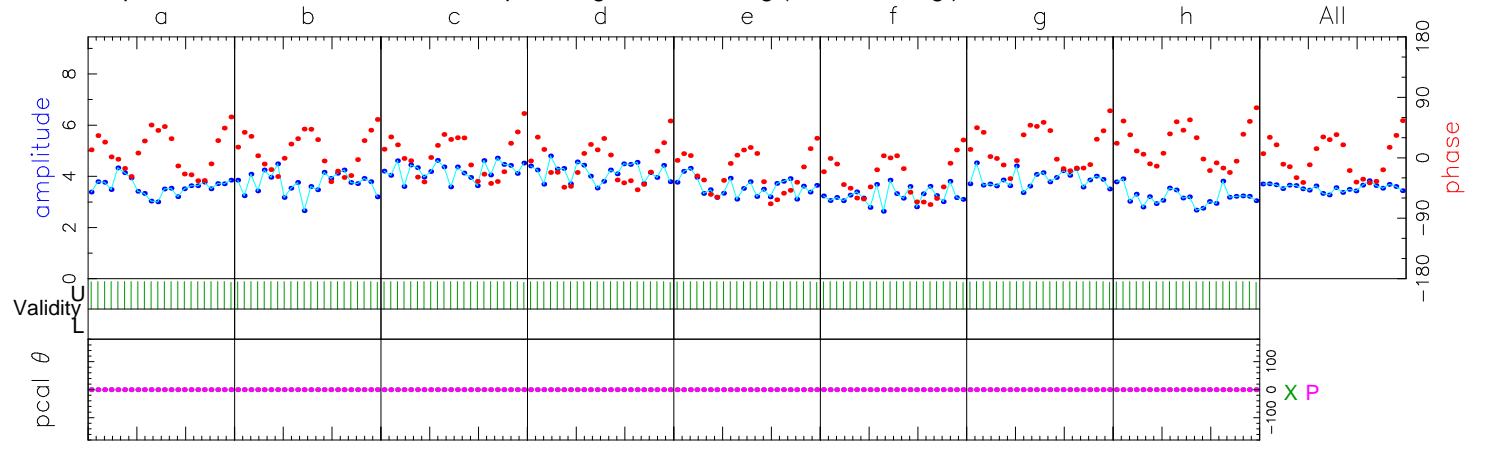
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/PY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PY.W.293.1JFKZ



Fringe quality 6  
SNR 115.5  
Int time 179.768  
Amp 3.151  
Phase -0.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.015658  
MBD -0.000169  
Fringe rate (Hz)  
-0.002990  
Ion TEC 0.000  
Ref freq (MHz)  
87940.0000  
AP (sec) 0.512  
Exp. c202c  
Exper # 16383  
Yr:day 2020:286  
Start 043000.00  
Stop 043300.22  
FRT 043130.00  
Corr/FF/build  
2021:039:055416  
2021:039:060652  
2020:247:085004  
RA & Dec (J2000)  
02h38m38.930107s  
+16°36'59.274536"



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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
X	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-4.53014638588E+03				-4.53016184218E+03				Resid mbdelay (usec)	-1.68705E-04 +/- 9.4E-06
Sband delay (usec)	-4.53014618393E+03				4.8674809E+01				Resid sbdelay (usec)	1.56583E-02 +/- 7.5E-05
Phase delay (usec)	-4.53016184218E+03				9.2799997E-07				Resid phdelay (usec)	-3.35731E-09 +/- 3.1E-08
Delay rate (us/s)	1.48257845802E-01				1.48257879798E-01				Resid rate (us/s)	-3.39962E-08 +/- 3.0E-10
Total phase (deg)		-144.5			3.21224002682E-05				Resid phase (deg)	-0.1 +/- 1.0
ph/seg (deg)	28.1	2.3			3.005				PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	13.7	4.1			0.000				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	18.5	1.4			3.560				Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	10.6	2.4			3.267				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

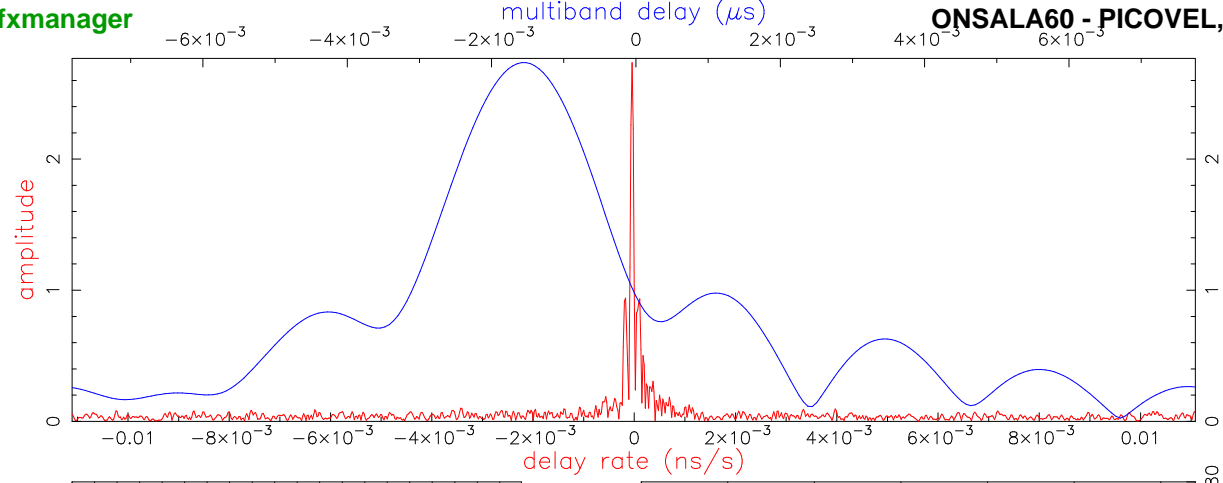
X: az 254.0 el 29.7 pa 32.7 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -891.286 2850.420 simultaneous interpolator  
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/XP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/XP.W.251.1JFJKZ

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, XP

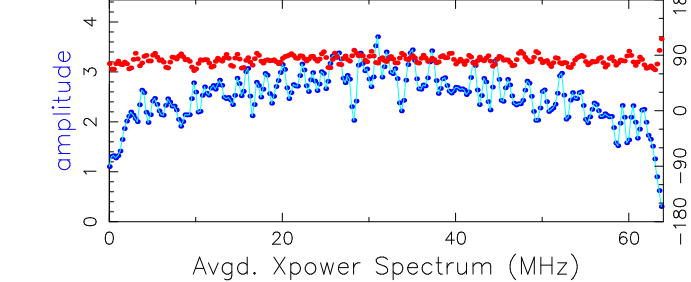
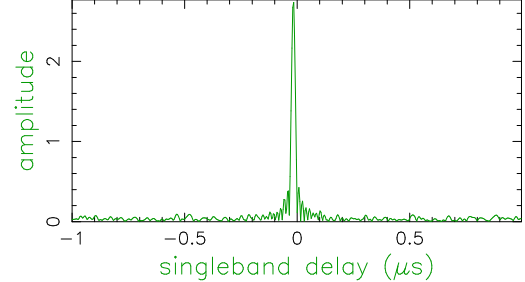
ONSALA60 - PICOVEL, fgroup W, pol RR



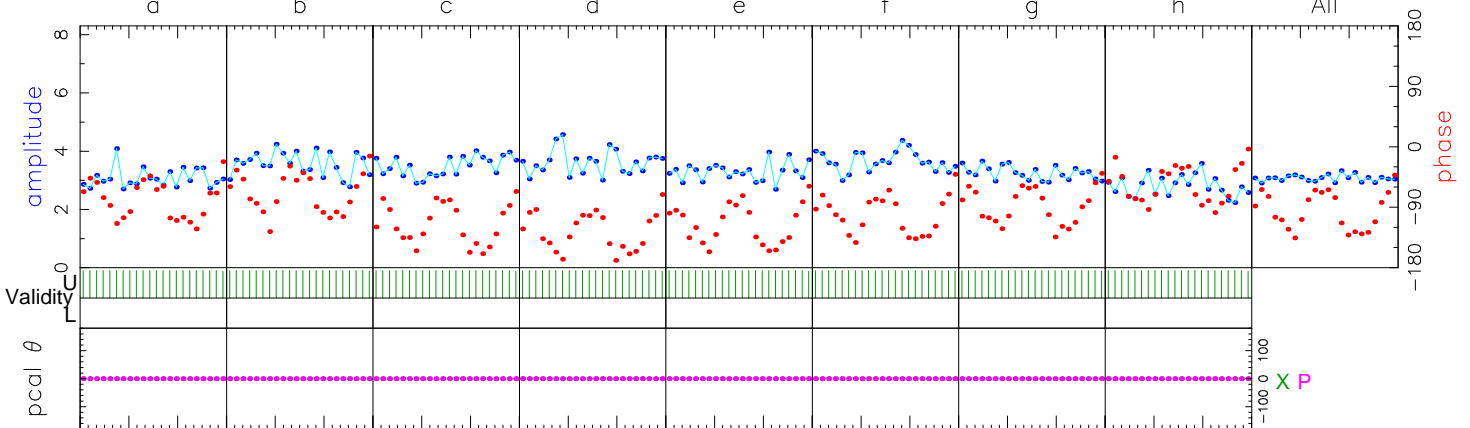
Fringe quality 5

SNR 101.5  
Int time 179.768  
Amp 2.768  
Phase -95.4  
PFD 0.0e+00  
Delays (us)  
SBD -0.017056  
MBD -0.001592  
Fringe rate (Hz)  
-0.002987  
Ion TEC 0.000  
Ref freq (MHz)  
87940.0000  
AP (sec) 0.512

Exp. c202c  
Exper # 16383  
Yr:day 2020:286  
Start 043000.00  
Stop 043300.22  
FRT 043130.00  
Corr/FF/build  
2021:039:055416  
2021:039:060654  
2020:247:085004  
RA & Dec (J2000)  
02h38m38.930107s  
+16°36'59.274536"



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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-80.1	-68.4	-115.0	-127.3	-115.3	-101.6	-88.4	-56.7	Phase	-95.4
	2.7	3.1	3.1	3.2	2.9	3.3	2.9	2.5	Ampl.	3.0
	252.7	252.3	252.2	252.5	253.1	252.5	252.9	253.1	Sbd box	252.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-4.53017905920E+03		Apriori delay (usec)		-4.53016184218E+03		Resid mbdelay (usec)		-1.59202E-03	+/- 1.1E-05
Sband delay (usec)	-4.53017889768E+03		Apriori clock (usec)		4.8674809E+01		Resid sbdelay (usec)		-1.70555E-02	+/- 8.5E-05
Phase delay (usec)	-4.53016184519E+03		Apriori clockrate (us/s)		9.2799997E-07		Resid phdelay (usec)		-3.01299E-06	+/- 3.6E-08
Delay rate (us/s)	1.48257845827E-01		Apriori rate (us/s)		1.48257879798E-01		Resid rate (us/s)		-3.39712E-08	+/- 3.4E-10
Total phase (deg)			Apriori accel (us/s/s)		3.21224002682E-05		Resid phase (deg)		-95.4	+/- 1.1

ph/seg (deg) 27.3 2.6 Search (1024X32) 2.632 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 11.8 4.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 26.9 1.6 Inc. seg. avg. 3.072 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 11.2 2.8 Inc. frq. avg. 2.967 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
X: az 254.0 el 29.7 pa 32.7 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -891.286 2850.420 simultaneous interpolator  
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/XP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/XP.W.267.1JFJKZ

Mk4/DiFX fourfit 3.21 rev 2937

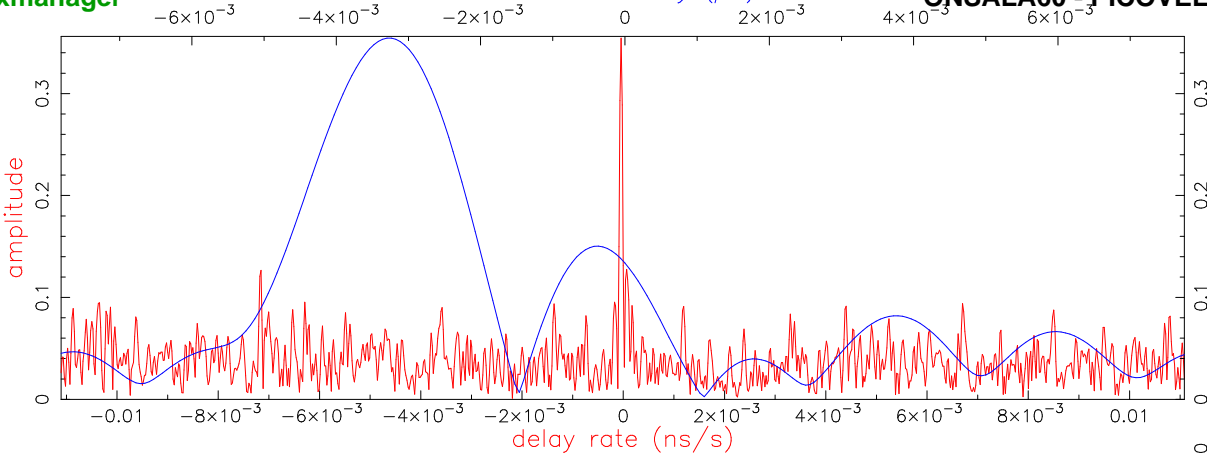
fxmanager

0235+164.1JFKZ, No0038, XP

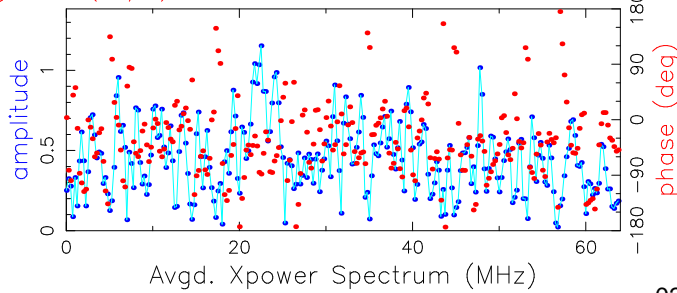
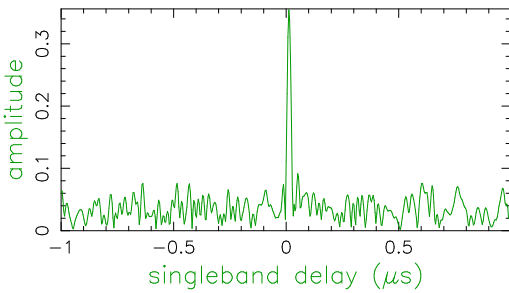
ONSALA60 - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 9

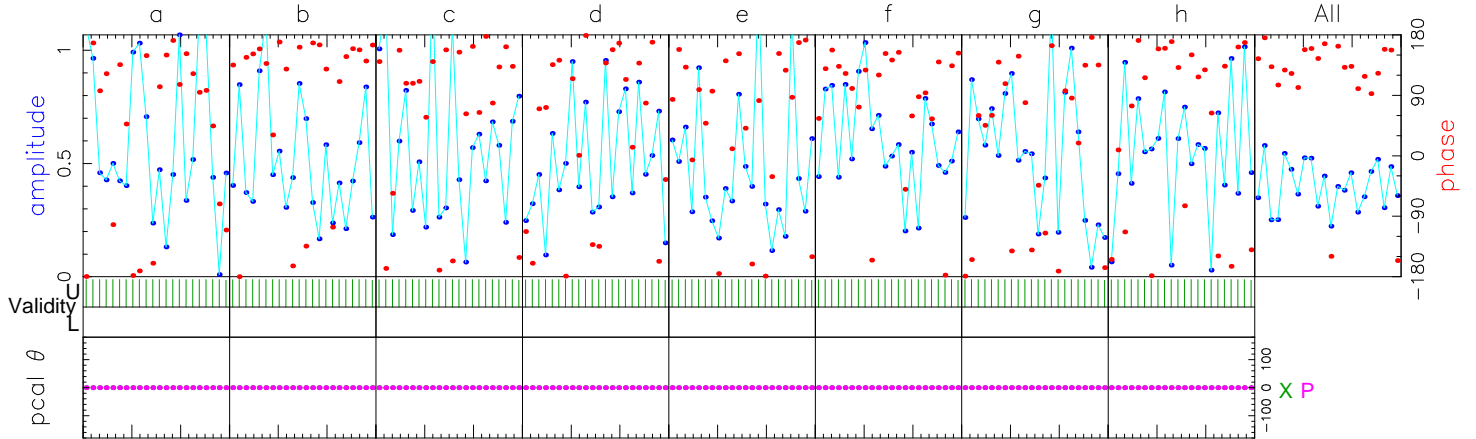


SNR 13.1  
 Int time 179.768  
 Amp 0.356  
 Phase 141.9  
 PFD 1.6e-30  
 Delays (us)  
 SBD 0.012637  
 MBD -0.003231  
 Fringe rate (Hz)  
 -0.002871  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060655  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	141.3	156.3	148.4	147.5	116.0	123.2	127.4	170.0	Phase	141.9
	0.4	0.4	0.4	0.3	0.3	0.5	0.3	0.4	Ampl.	0.4
	259.9	260.5	260.8	260.2	260.9	260.5	233.1	260.8	Sbd box	260.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-4.53014944831E+03		Apriori delay (usec)		-4.53016184218E+03		Resid mbdelay (usec)		-3.23113E-03	+/- 8.3E-05
Sband delay (usec)	-4.53014920468E+03		Apriori clock (usec)		4.8674809E+01		Resid sbdelay (usec)		1.26375E-02	+/- 6.6E-04
Phase delay (usec)	-4.53016183770E+03		Apriori clockrate (us/s)		9.2799997E-07		Resid phdelay (usec)		4.48311E-06	+/- 2.8E-07
Delay rate (us/s)	1.48257847149E-01		Apriori rate (us/s)		1.48257879798E-01		Resid rate (us/s)		-3.26483E-08	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		3.21224002682E-05		Resid phase (deg)		141.9	+/- 8.8

	RMS	Theor.	Amplitude	0.356 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	30.7	20.6	Search (1024X32)	0.336	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	31.8	35.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	
ph/frq (deg)	19.6	12.4	Inc. seg. avg.	0.378	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011	
amp/frq (%)	19.5	21.7	Inc. frq. avg.	0.361	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	
X: az 254.0 el 29.7 pa 32.7	P: az 255.5 el 45.3 pa 53.6		u,v (fr/asec) -891.286 2850.420		ion window (TEC) 0.00 0.00		
Control file: cf_1234_88GHz_gmva							simultaneous interpolator
Input file: /Exps/c202c/v1/1234/No0038/XP..1JFKZ							Output file: /Exps/c202c/v1/1234/No0038/XP.W.281.1JFKZ



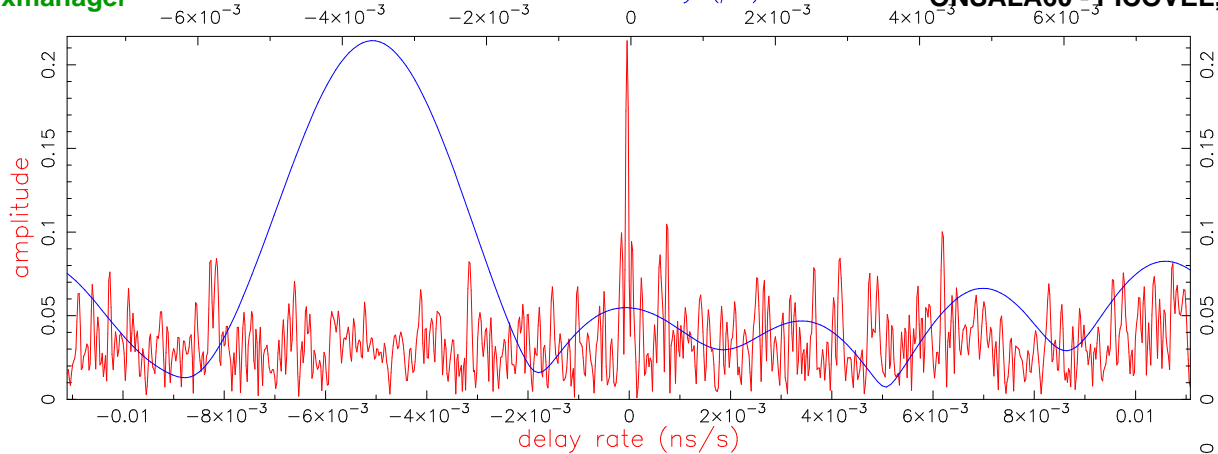
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, XP

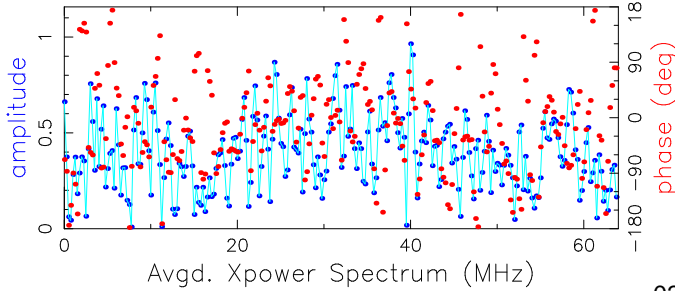
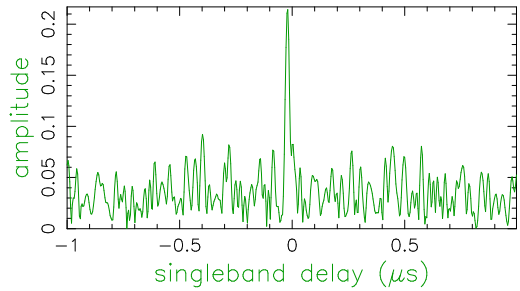
ONSALA60 - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)



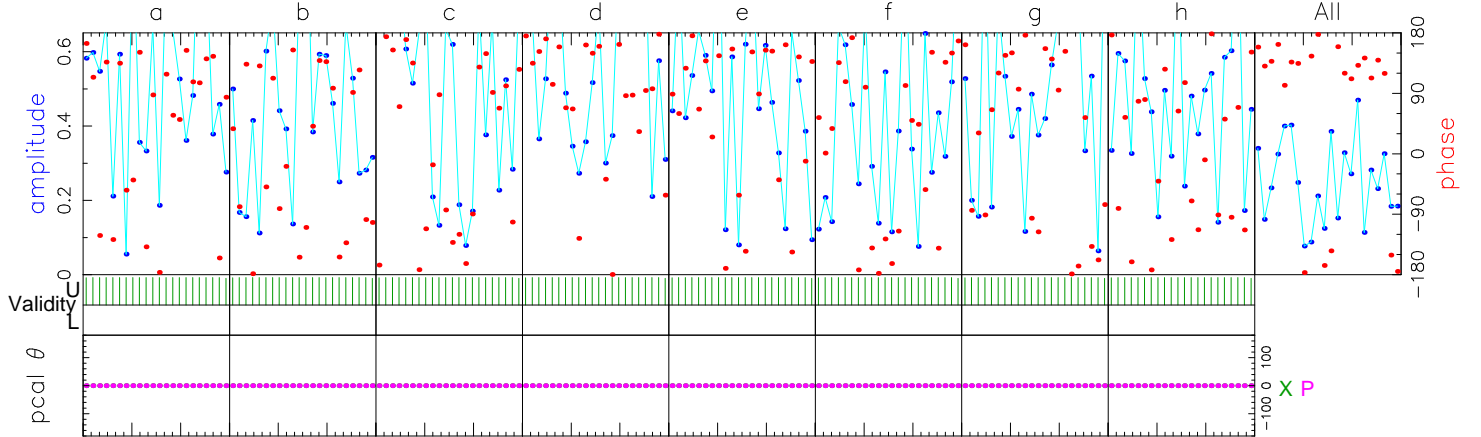
Fringe quality 9

SNR 8.0  
 Int time 179.768  
 Amp 0.217  
 Phase 144.4  
 PFD 3.1e-07  
 Delays (us)  
 SBD -0.021060  
 MBD -0.003608  
 Fringe rate (Hz)  
 -0.002891  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043300.22  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060657  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

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



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	127.6	-172.7	163.1	128.4	135.7	149.4	175.1	95.7	Phase	144.4
X	0.3	0.1	0.3	0.4	0.3	0.2	0.2	0.1	Ampl.	0.2
P	252.2	387.1	252.0	251.5	85.9	103.5	11.5	511.6	Sbd box	251.6
X:P	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
X:P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-4.53018107538E+03	Apriori delay (usec)	-4.53016184218E+03	Resid mbdelay (usec)	-3.60820E-03	+/-	1.4E-04
Sband delay (usec)	-4.53018290243E+03	Apriori clock (usec)	4.8674809E+01	Resid sbdelay (usec)	-2.10603E-02	+/-	1.1E-03
Phase delay (usec)	-4.53016183762E+03	Apriori clockrate (us/s)	9.2799997E-07	Resid phdelay (usec)	4.56260E-06	+/-	4.6E-07
Delay rate (us/s)	1.48257846923E-01	Apriori rate (us/s)	1.48257879798E-01	Resid rate (us/s)	-3.28746E-08	+/-	4.4E-09
Total phase (deg)	0.0	Apriori accel (us/s/s)	3.21224002682E-05	Resid phase (deg)	144.4	+/-	14.4

	RMS	Theor.	Amplitude	0.217 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	31.9	33.8	Search (1024X32)	0.202	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	52.6	59.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	32.0	20.4	Inc. seg. avg.	0.214	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	40.8	35.6	Inc. frq. avg.	0.218	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

X: az 254.0 el 29.7 pa 32.7 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -891.286 2850.420 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/XP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/XP.W.294.1JFJKZ

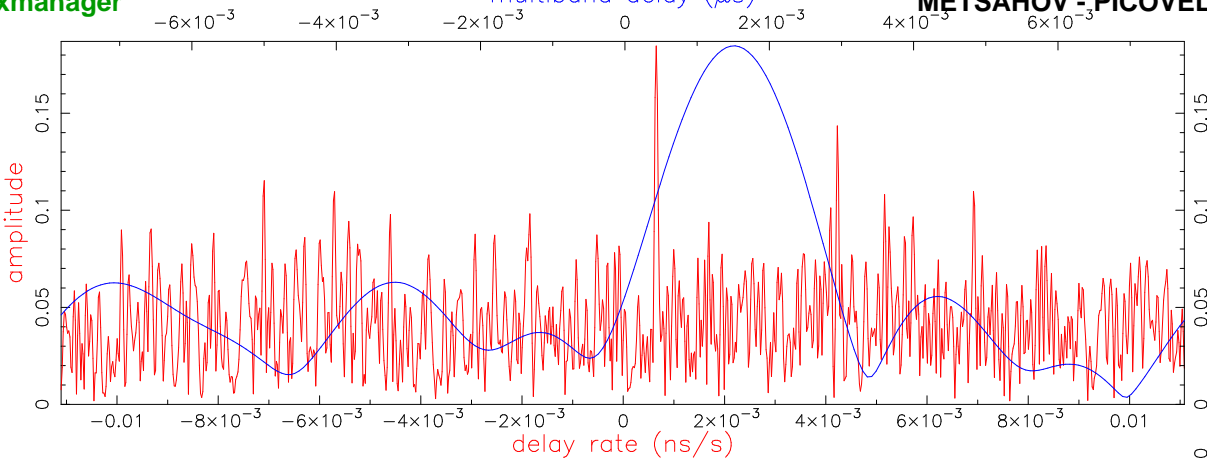
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, ZP

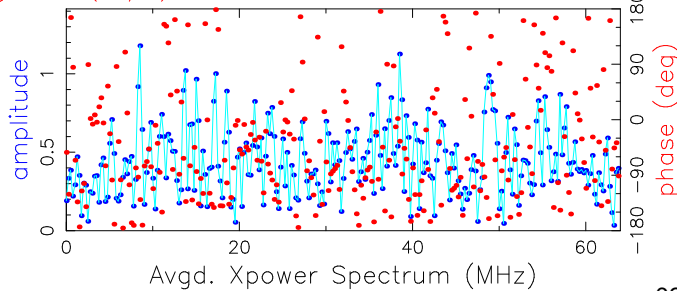
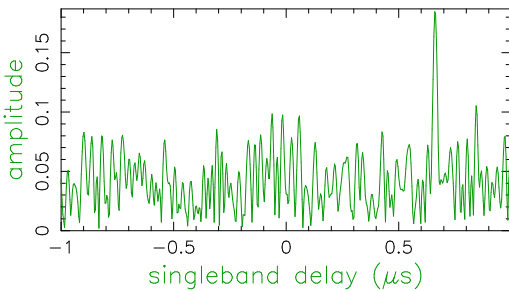
MEṬSAHOV - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



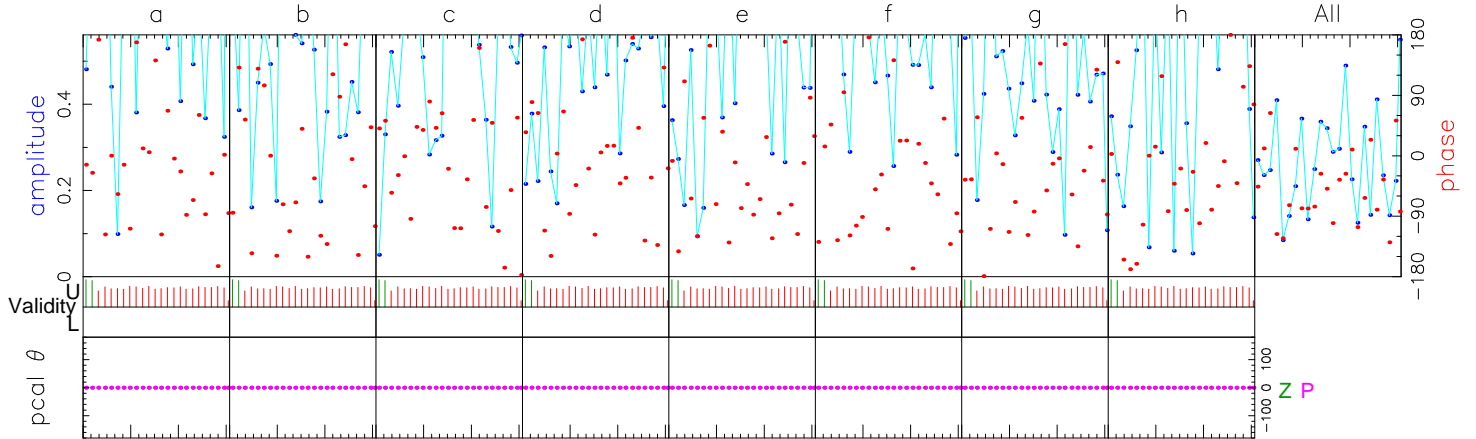
Fringe quality 0

SNR 5.8  
 Int time 128.839  
 Amp 0.187  
 Phase -49.9  
 PFD 5.7e-01  
 Delays (us)  
 SBD 0.661802  
 MBD 0.001549  
 Fringe rate (Hz)  
 0.057250  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043259.20  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060653  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

Amp. and Phase vs. time for each freq., 24 segs, 15 APs / seg (7.68 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-48.6	-77.0	-27.0	-25.2	-67.1	-46.7	-54.6	-49.8	Phase	-49.9
	0.3	0.1	0.2	0.1	0.3	0.2	0.2	0.1	Ampl.	0.2
	255.1	421.6	456.9	223.2	406.6	152.6	263.4	388.2	Sbd box	426.4
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) -6.87008961220E+03 Apriori delay (usec) -6.87074741162E+03 Resid mbdelay (usec) 1.54943E-03 +/- 1.9E-04  
 Sband delay (usec) -6.87008560962E+03 Apriori clock (usec) 0.183 Pcal rate: 0.000E+00, 0.000E+00 (us/s) 6.61802E-01 +/- 1.5E-03  
 Phase delay (usec) -6.87074741320E+03 Apriori clockrate (us/s) 4.1600000E-07 Resid sbdelay (usec) 6.61802E-01 +/- 1.5E-03  
 Delay rate (us/s) 1.41054551060E-01 Apriori rate (us/s) 1.41053900045E-01 Resid phdelay (usec) -1.57731E-06 +/- 6.2E-07  
 Total phase (deg) -186.1 Apriori accel (us/s/s) 4.51416769038E-05 Resid rate (us/s) 6.51015E-07 +/- 6.1E-09  
 Resid phase (deg) -49.9 +/- 19.8

RMS Theor. Amplitude 0.187 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 52.8 48.2 Search (1024X32) 0.183 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 71.2 84.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 19.1 28.0 Inc. seg. avg. 0.195 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 35.0 48.8 Inc. frq. avg. 0.171 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

Z: az 263.9 el 22.8 pa 31.0 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -840.945 3385.478 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/ZP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/ZP.W.259.1JFJKZ

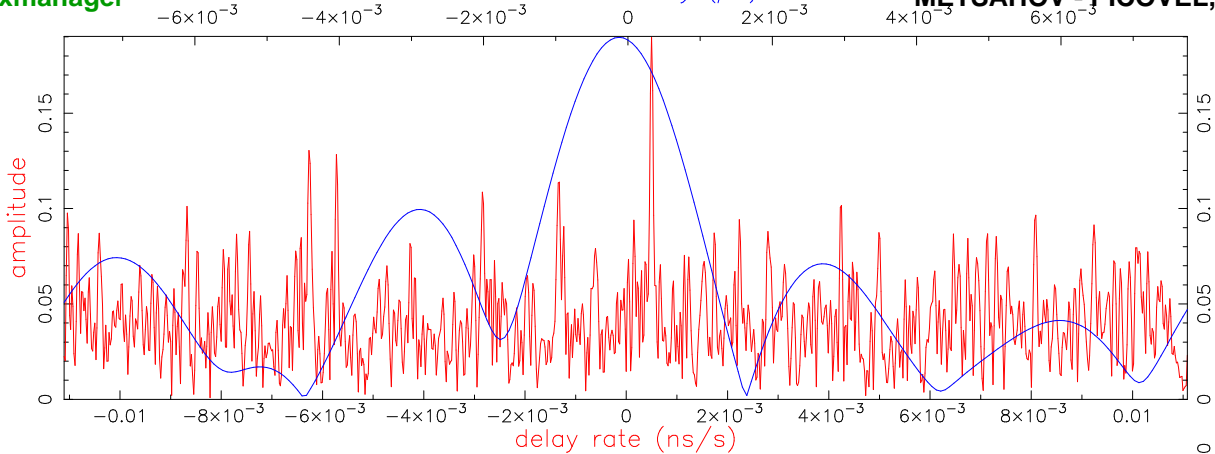
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, ZP

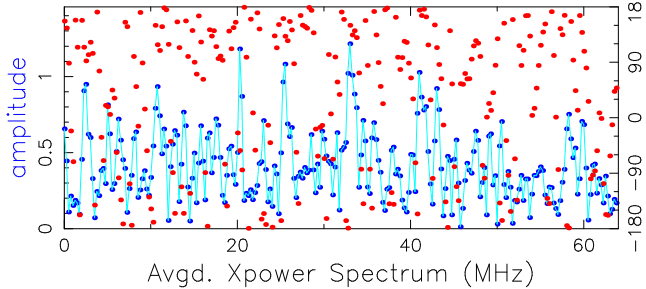
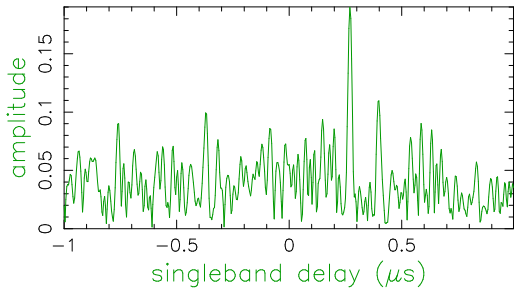
MEṬSAHOV - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)



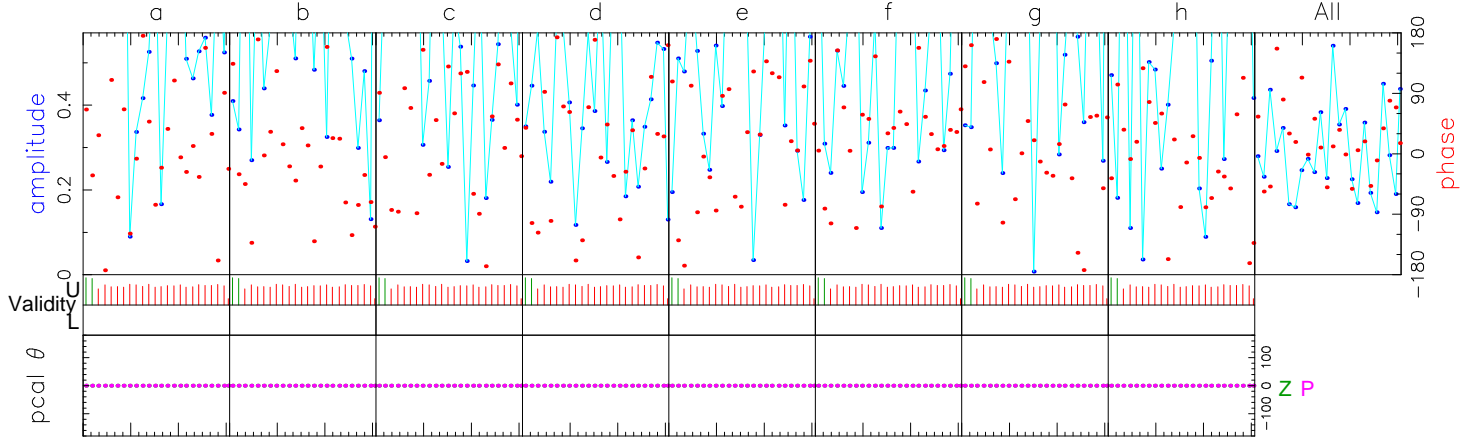
Fringe quality 0

SNR 5.9  
 Int time 128.839  
 Amp 0.190  
 Phase 19.7  
 PFD 3.7e-01  
 Delays (us)  
 SBD 0.270173  
 MBD -0.000097  
 Fringe rate (Hz)  
 0.043465  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043259.20  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060654  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

Amp. and Phase vs. time for each freq., 24 segs, 15 APs / seg (7.68 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-6.87048188326E+03	Apriori delay (usec)	-6.87074741162E+03	Resid mbdelay (usec)	-9.66373E-05	+/-	1.8E-04
Sband delay (usec)	-6.87047723862E+03	Apriori clock (usec)	3.9485836E-01	Resid sbdelay (usec)	2.70173E-01	+/-	1.5E-03
Phase delay (usec)	-6.87074741100E+03	Apriori clockrate (us/s)	4.1600000E-07	Resid phdelay (usec)	6.22149E-07	+/-	6.1E-07
Delay rate (us/s)	1.41054394305E-01	Apriori rate (us/s)	1.41053900045E-01	Resid rate (us/s)	4.94260E-07	+/-	6.0E-09
Total phase (deg)		Apriori accel (us/s/s)	4.51416769038E-05	Resid phase (deg)	19.7	+/-	19.4

ph/seg (deg)	54.4	Theor.	47.4	Amplitude	0.190 +/- 0.032	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	73.5	Search (1024X32)	0.185	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	27.0	Inc. seg. avg.	0.213	Inc. frq. avg.	0.180	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	38.4	Inc. frq. avg.	0.180	Sample rate(MSamp/s): 128		Data rate(Mb/s): 2048	mb window (us) -0.008 0.008
				Drift rate (ns/s)		nlags: 256	dr window (ns/s) -0.011 0.011
						t_cohere infinite	ion window (TEC) 0.00 0.00

Z: az 263.9 el 22.8 pa 31.0 P: az 255.5 el 45.3 pa 53.6 u,v (fr/asec) -840.945 3385.478 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/ZP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/ZP.W.272.1JFJKZ

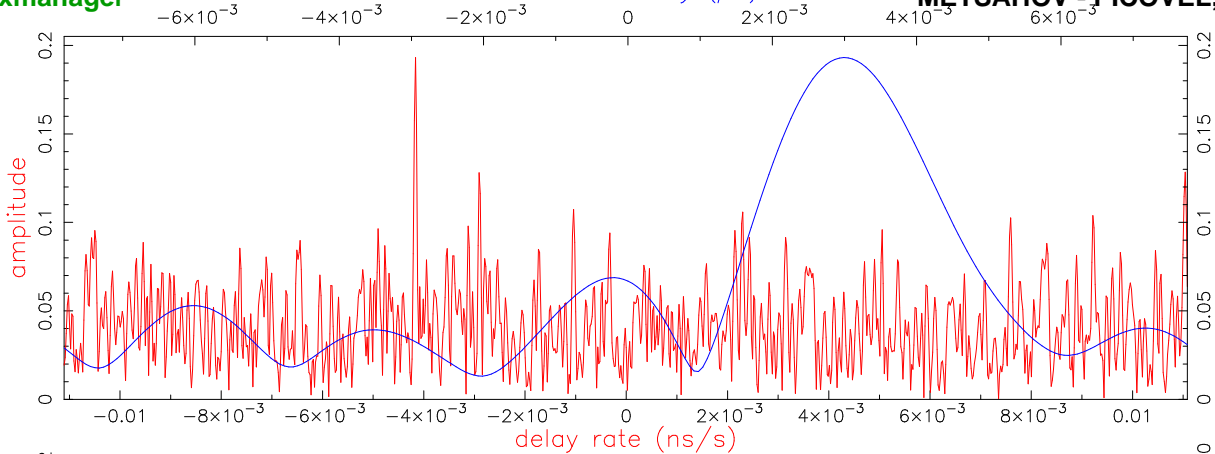
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, ZP

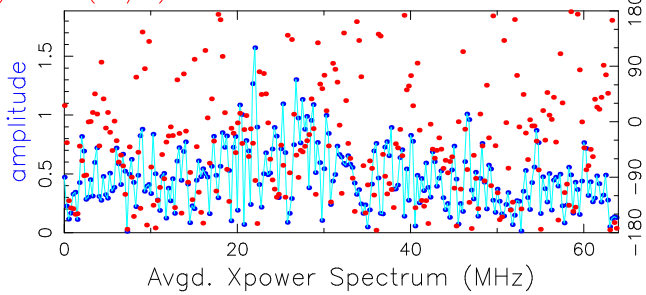
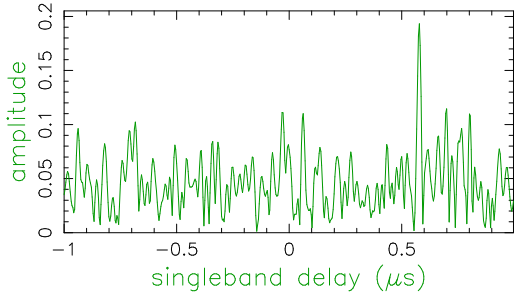
MEṬSAHOV - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)



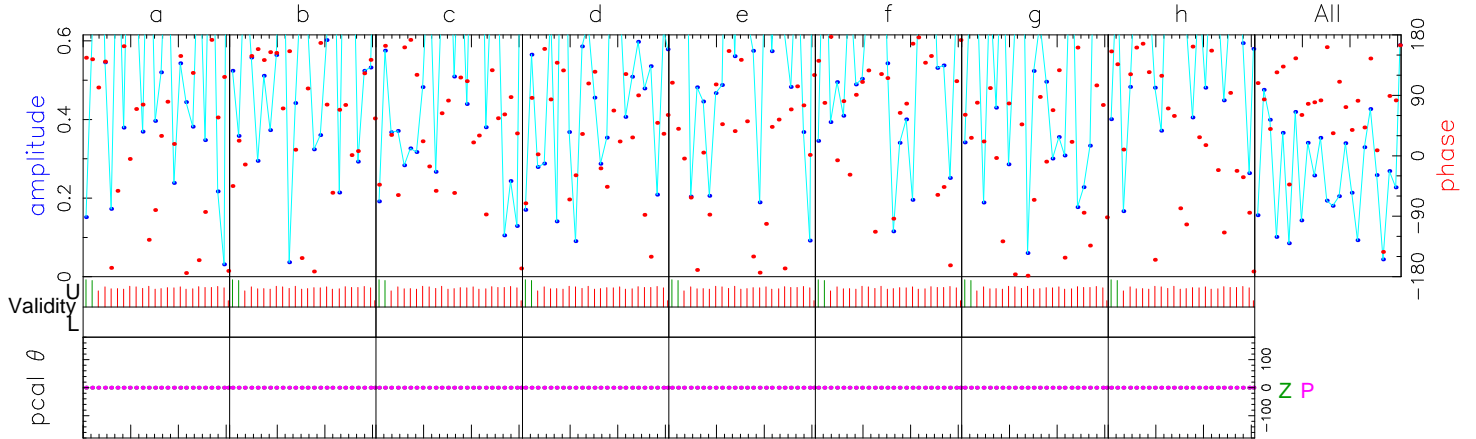
Fringe quality 0

SNR 6.0  
 Int time 128.839  
 Amp 0.205  
 Phase 89.0  
 PFD 2.2e-01  
 Delays (us)  
 SBD 0.577613  
 MBD 0.002995  
 Fringe rate (Hz)  
 -0.366882  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043259.20  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060656  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

Amp. and Phase vs. time for each freq., 24 segs, 15 APs / seg (7.68 sec / seg.), time ticks 10 sec

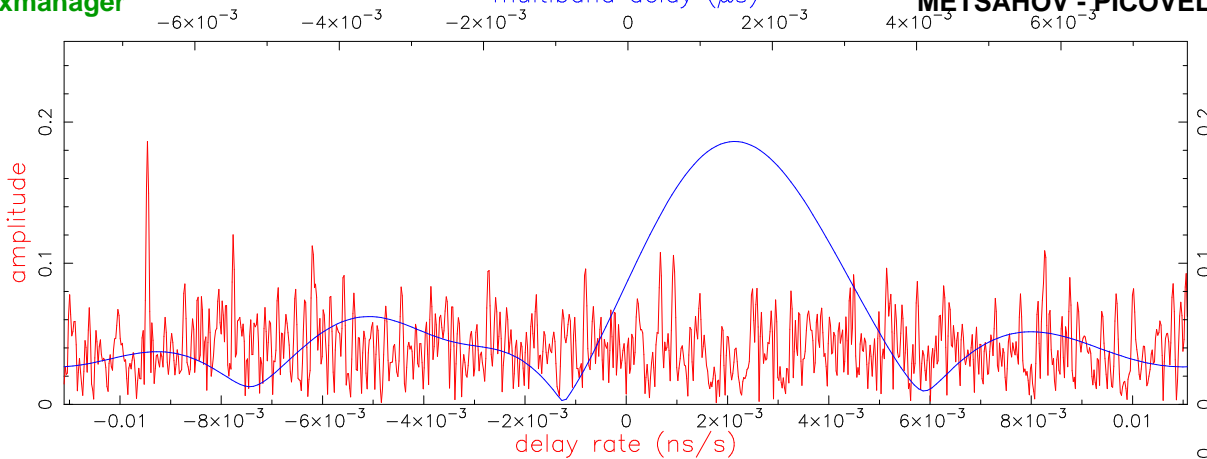


	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-6.87016629132E+03					-6.87074741162E+03			2.99531E-03	+/- 1.8E-04
Sband delay (usec)	-6.87016979887E+03					3.9485836E-01			5.77613E-01	+/- 1.4E-03
Phase delay (usec)	-6.87074740881E+03					4.160000E-07			2.81054E-06	+/- 6.0E-07
Delay rate (us/s)	1.41049728083E-01					1.41053900045E-01			-4.17196E-06	+/- 5.9E-09
Total phase (deg)			-47.2			4.51416769038E-05			89.0	+/- 19.1
	RMS	Theor.	Amplitude	0.205 +/- 0.034						
ph/seg (deg)	53.3	46.5	Search (1024X32)	0.188						
amp/seg (%)	74.0	81.2	Interp.	0.000						
ph/frq (deg)	32.3	27.0	Inc. seg. avg.	0.208						
amp/frq (%)	26.4	47.1	Inc. frq. avg.	0.206						
Z: az 263.9 el 22.8 pa 31.0		P: az 255.5 el 45.3 pa 53.6		u,v (fr/asec) -840.945 3385.478						simultaneous interpolator

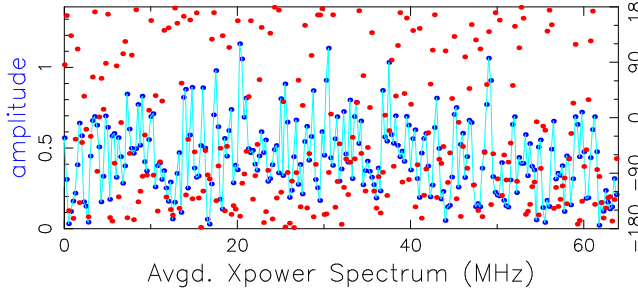
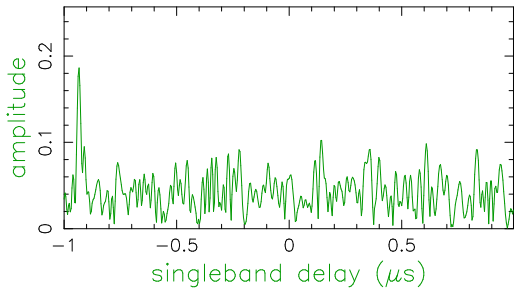
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/ZP..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/ZP.W.288.1JFJKZ

multiband delay ( $\mu$ s)

Fringe quality 0

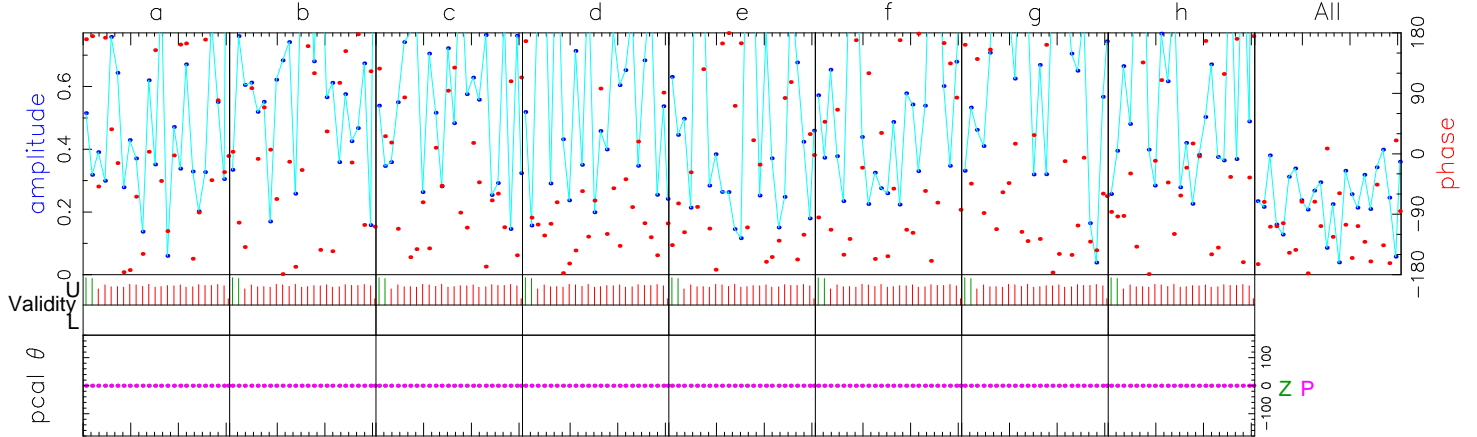


SNR 5.8  
 Int time 128.839  
 Amp 0.257  
 Phase -118.2  
 PFD 5.7e-01  
 Delays (us)  
 SBD -0.934319  
 MBD 0.001492  
 Fringe rate (Hz)  
 -0.833025  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



Exp. c202c  
 Exper # 16383  
 Yr:day 2020:286  
 Start 043000.00  
 Stop 043259.20  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060658  
 2020:247:085004  
 RA & Dec (J2000)  
 02h38m38.930107s  
 +16°36'59.274536"

Amp. and Phase vs. time for each freq., 24 segs, 15 APs / seg (7.68 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-44.5	-141.9	-123.0	-110.6	-135.3	-132.4	-100.2	-127.3	Phase	-118.2
	0.1	0.2	0.2	0.5	0.2	0.3	0.4	0.3	Ampl.	0.2
	413.2	122.9	131.1	17.8	417.7	237.4	17.5	44.8	Sbd box	17.8
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.87168341958E+03	Apriori delay (usec)	-6.87074741162E+03	Resid mbdelay (usec)	1.49205E-03	+/-	1.9E-04
Sband delay (usec)	-6.87168173062E+03	Apriori clock (usec)	3.9485836E-01	Resid sbdelay (usec)	-9.34319E-01	+/-	1.5E-03
Phase delay (usec)	-6.87074741536E+03	Apriori clockrate (us/s)	4.160000E-07	Resid phdelay (usec)	-3.73265E-06	+/-	6.2E-07
Delay rate (us/s)	1.41044427398E-01	Apriori rate (us/s)	1.41053900045E-01	Resid rate (us/s)	-9.47265E-06	+/-	6.1E-09
Total phase (deg)	-254.3	Apriori accel (us/s/s)	4.51416769038E-05	Resid phase (deg)	-118.2	+/-	19.8

ph/seg (deg)	52.2	Theor.	48.2	Amplitude	0.257 +/- 0.044	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	57.4	Search (1024X32)	0.182	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	34.1	Inc. seg. avg.	0.243	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	51.8	Inc. frq. avg.	0.242	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011	0.011		
Z: az 263.9 el 22.8 pa 31.0		P: az 255.5 el 45.3 pa 53.6		Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
Control file: cf_1234_88GHz_gmva		Input file: /Exps/c202c/v1/1234/No0038/ZP..1JFKZ		u,v (fr/asec)	-840.945 3385.478			simultaneous interpolator		
				Output file: /Exps/c202c/v1/1234/No0038/ZP.W.302.1JFKZ						