

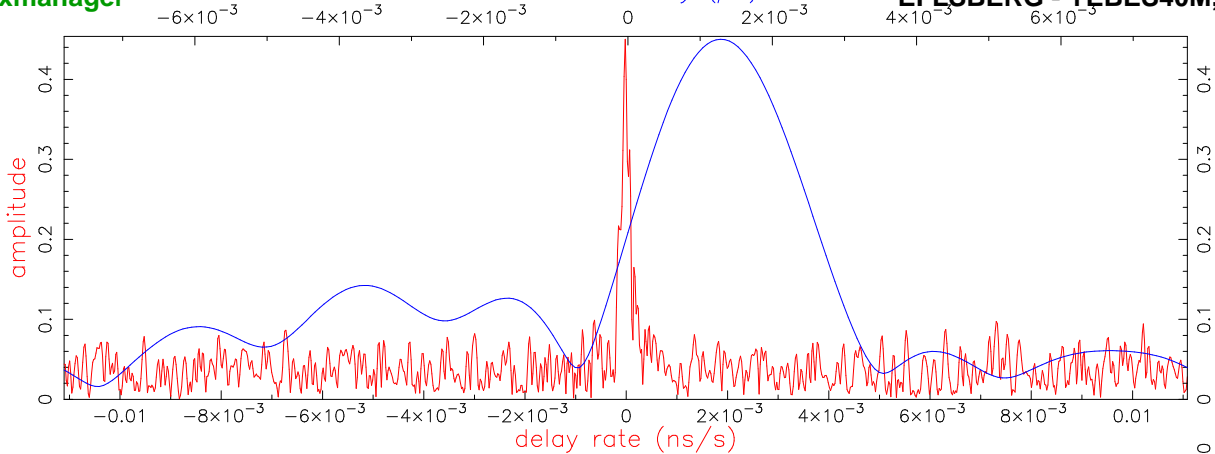
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, BY

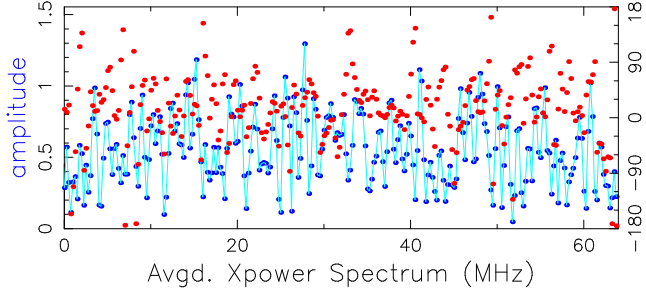
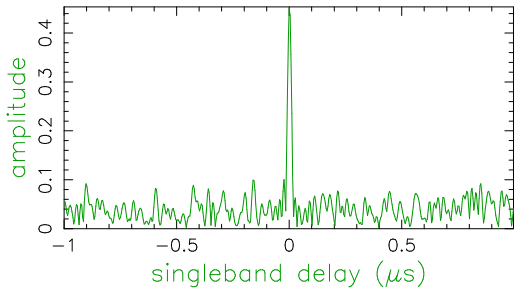
EFLSBERG - YEBS40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



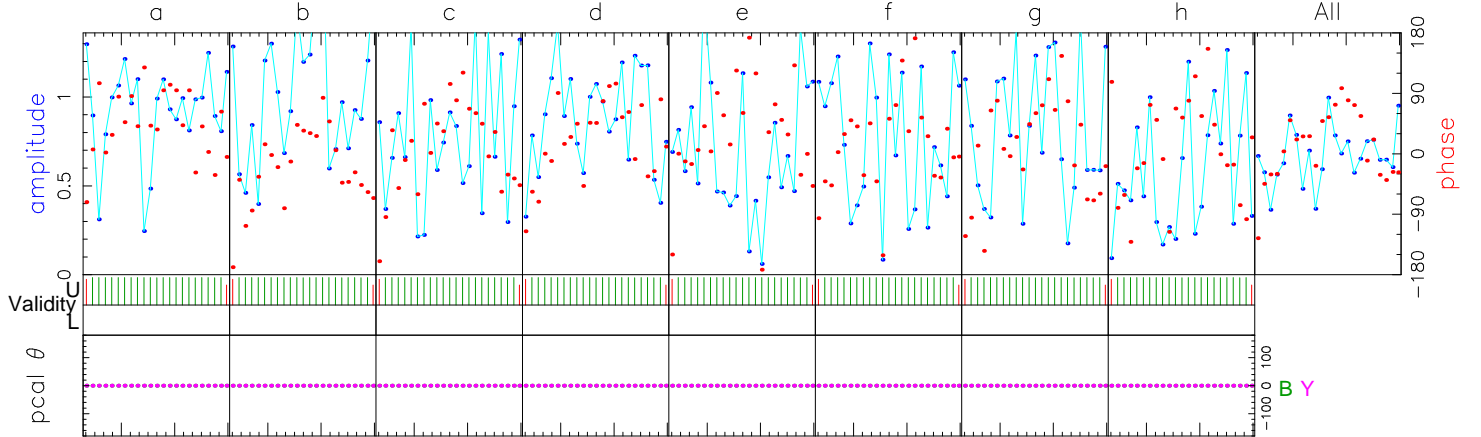
Fringe quality 9

SNR 15.8  
 Int time 162.084  
 Amp 0.454  
 Phase 19.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001229  
 MBD 0.001321  
 Fringe rate (Hz)  
 -0.002561  
 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  
 2021:039:060636  
 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
	40.6	-7.3	13.4	31.3	23.7	7.9	29.9	6.3	Phase	19.2
	0.6	0.6	0.4	0.6	0.4	0.4	0.4	0.2	Ampl.	0.5
	257.0	256.9	258.0	256.6	257.6	257.5	257.9	503.0	Sbd box	257.3
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.76991747646E+03		Apriori delay (usec)		-2.76991879725E+03		Resid mbdelay (usec)		1.32080E-03	+/- 6.9E-05
Sband delay (usec)	-2.76991756800E+03		Apriori clock (usec)		-3.6298447E+00		Resid sbdelay (usec)		1.22925E-03	+/- 5.5E-04
Phase delay (usec)	-2.76991879665E+03		Apriori clockrate (us/s)		-3.1999999E-07		Resid phdelay (usec)		6.05971E-07	+/- 2.3E-07
Delay rate (us/s)	2.94732702745E-02		Apriori rate (us/s)		2.94732993942E-02		Resid rate (us/s)		-2.91198E-08	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		1.86730978132E-05		Resid phase (deg)		19.2	+/- 7.3

	RMS	Theor.	Amplitude	0.454 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	51.8	17.4	Search (1024X32)	0.439	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	57.8	30.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	17.2	10.3	Inc. seg. avg.	0.638	Sample rate(MSamp/s): 128	mb window (us) -0.008 0.008
amp/frq (%)	27.9	17.9	Inc. frq. avg.	0.461	Data rate(Mb/s): 2048	dr window (ns/s) -0.011 0.011
					nlags: 256	t_cohere infinite
						ion window (TEC) 0.00 0.00

B: az 253.5 el 34.4 pa 39.5 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -171.761 1508.267 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/BY.W.111.1JFKZ

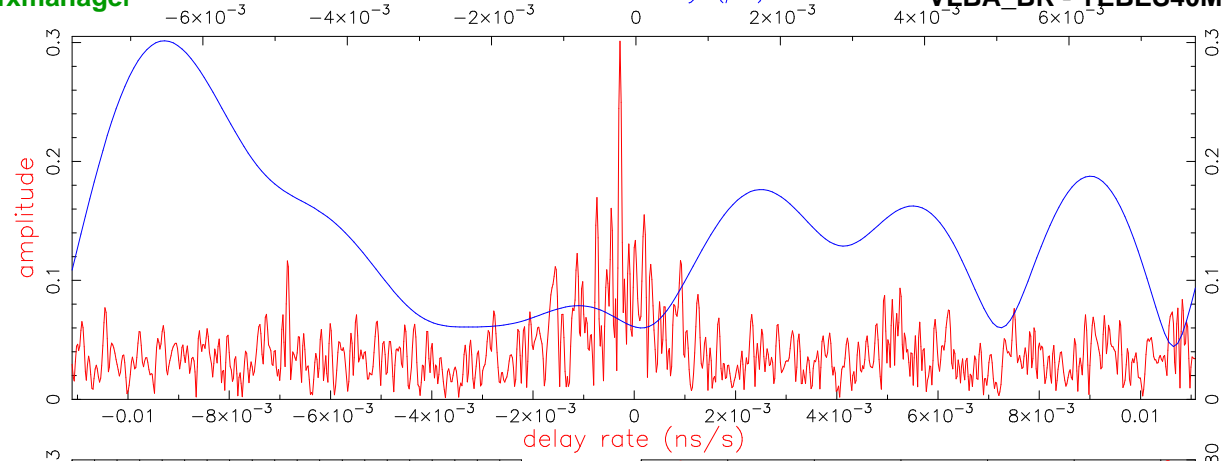
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

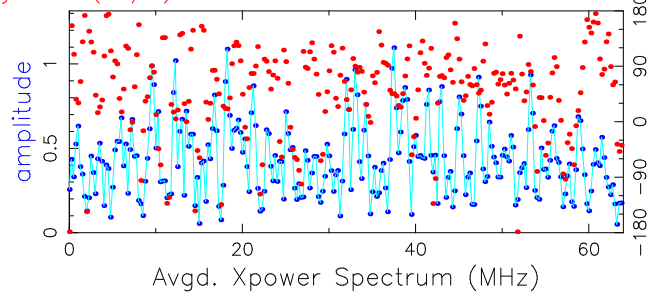
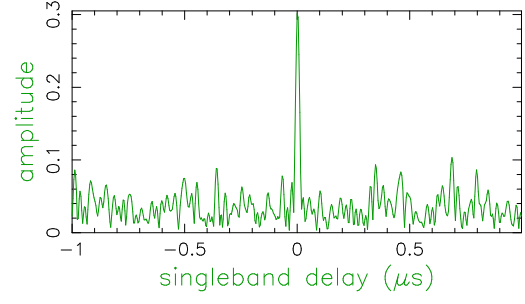
0235+164.1JFKZ, No0038, bY

VLBA\_BR - YEBES40M, fgroup W, pol LL

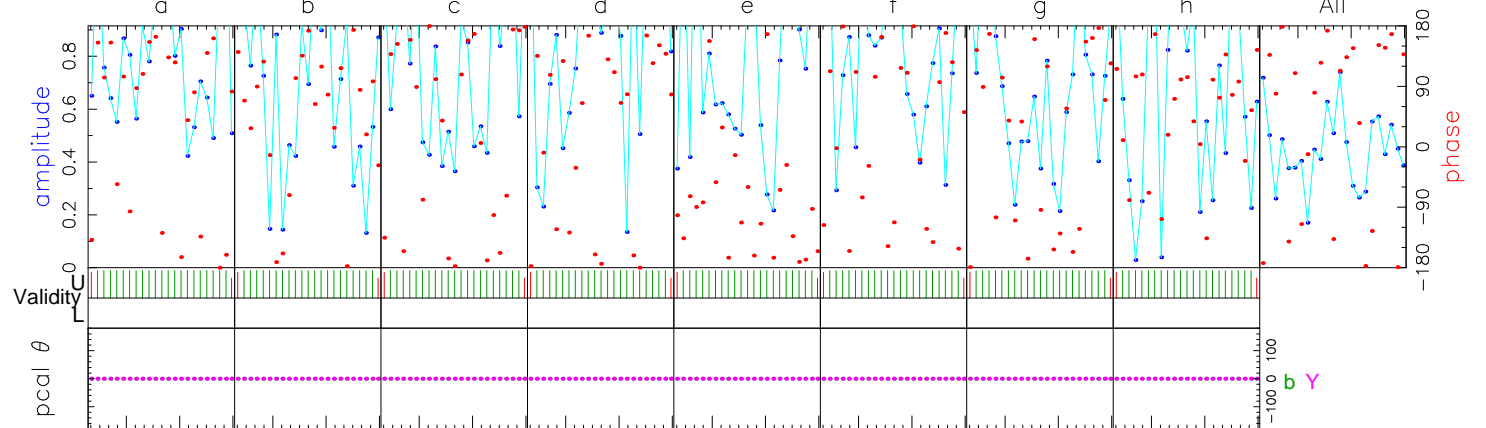
multiband delay ( $\mu$ s)



Fringe quality 9  
 SNR 10.6  
 Int time 162.108  
 Amp 0.305  
 Phase 158.9  
 PFD 5.3e-18  
 Delays (us)  
 SBD 0.001549  
 MBD -0.006483  
 Fringe rate (Hz)  
 -0.025024  
 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  
 2021:039:060625  
 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		
b	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.66570558631E+03	Apriori delay (usec)	-5.66571472855E+03	Resid mbdelay (usec)	-6.48276E-03	+/-	1.0E-04
Sband delay (usec)	-5.66571318005E+03	Apriori clock (usec)	-1.5413426E+01	Resid sbdelay (usec)	1.54850E-03	+/-	8.1E-04
Phase delay (usec)	-5.66571472353E+03	Apriori clockrate (us/s)	-1.2000000E-07	Resid phdelay (usec)	5.01769E-06	+/-	3.4E-07
Delay rate (us/s)	1.75135801041E+00	Apriori rate (us/s)	1.75135829496E+00	Resid rate (us/s)	-2.84554E-07	+/-	3.6E-09
Total phase (deg)	76.6	Apriori accel (us/s/s)	3.31234843982E-05	Resid phase (deg)	158.9	+/-	10.8

ph/seg (deg)	62.1	Theor.	25.9	Search (1024X32)	0.297	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	65.3		45.2	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)	54.1		15.3	Inc. seg. avg.	0.407	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	46.6		26.6	Inc. frq. avg.	0.409	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -10674.310 1625.239 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/bY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/bY.W.22.1JFKZ

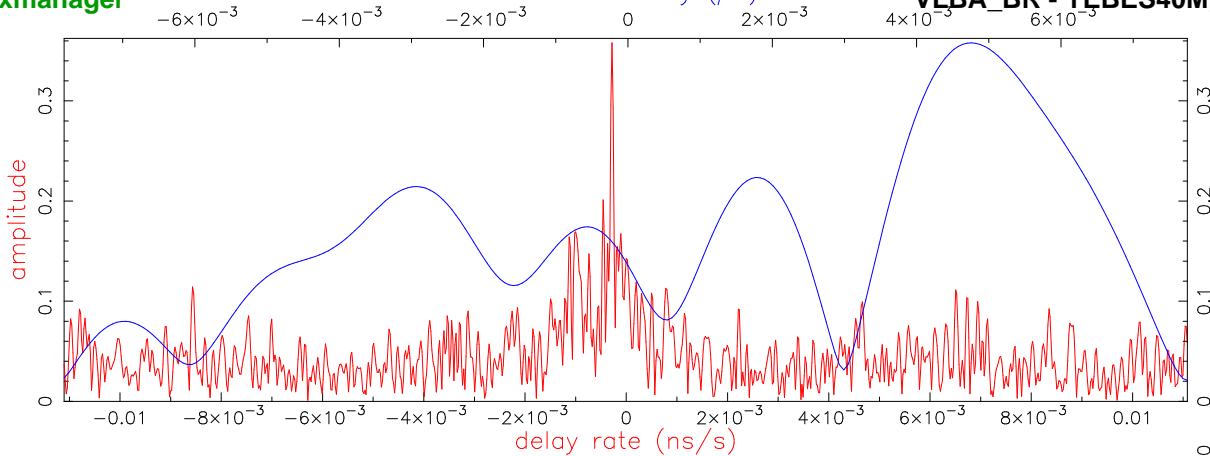
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, bY

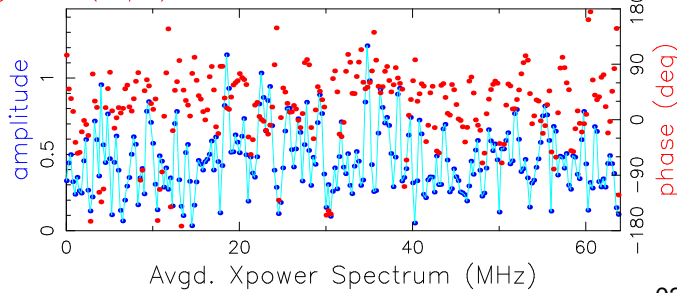
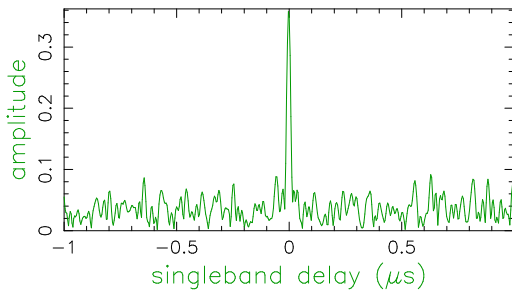
VLBA\_BR - YEYES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



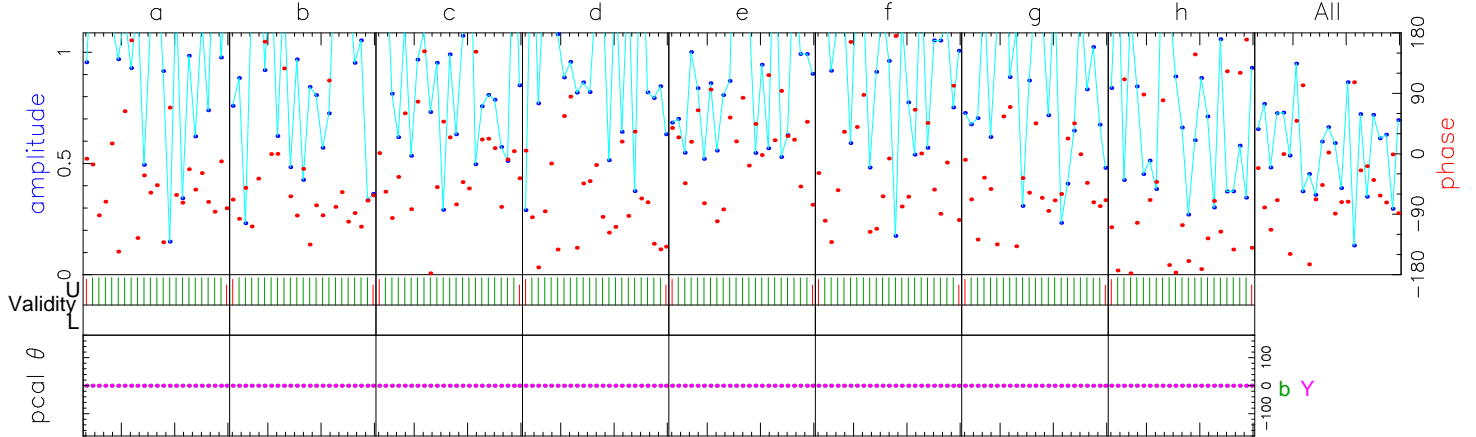
Fringe quality 9

SNR 12.6  
 Int time 162.108  
 Amp 0.362  
 Phase -51.3  
 PFD 4.7e-28  
 Delays (us)  
 SBD -0.002435  
 MBD 0.004767  
 Fringe rate (Hz)  
 -0.024877  
 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  
 2021:039:060627  
 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
	-57.6	-78.4	-19.1	-82.5	20.2	-39.5	-40.1	-163.5	Phase	-51.3
	0.6	0.6	0.5	0.5	0.6	0.4	0.5	0.4	Ampl.	0.5
	256.2	255.9	256.1	255.9	255.8	254.8	255.5	253.7	Sbd box	256.4
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.66570996149E+03		Apriori delay (usec)		-5.66571472855E+03		Resid mbdelay (usec)		4.76705E-03	+/- 8.6E-05
Sband delay (usec)	-5.66571716355E+03		Apriori clock (usec)		-1.5413426E+01		Resid sbdelay (usec)		-2.43500E-03	+/- 6.8E-04
Phase delay (usec)	-5.66571473017E+03		Apriori clockrate (us/s)		-1.2000000E-07		Resid phdelay (usec)		-1.62069E-06	+/- 2.9E-07
Delay rate (us/s)	1.75135801207E+00		Apriori rate (us/s)		1.75135829496E+00		Resid rate (us/s)		-2.82891E-07	+/- 3.0E-09
Total phase (deg)			Apriori accel (us/s/s)		3.31234843982E-05		Resid phase (deg)		-51.3	+/- 9.1

	RMS	Theor.	Amplitude	0.362 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	66.6	21.8	Search (1024X32)	0.356	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	79.7	38.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	58.8	12.8	Inc. seg. avg.	0.538	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	45.3	22.4	Inc. frq. avg.	0.495	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -10674.310 1625.239 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/bY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/bY.W.39.1JFKZ

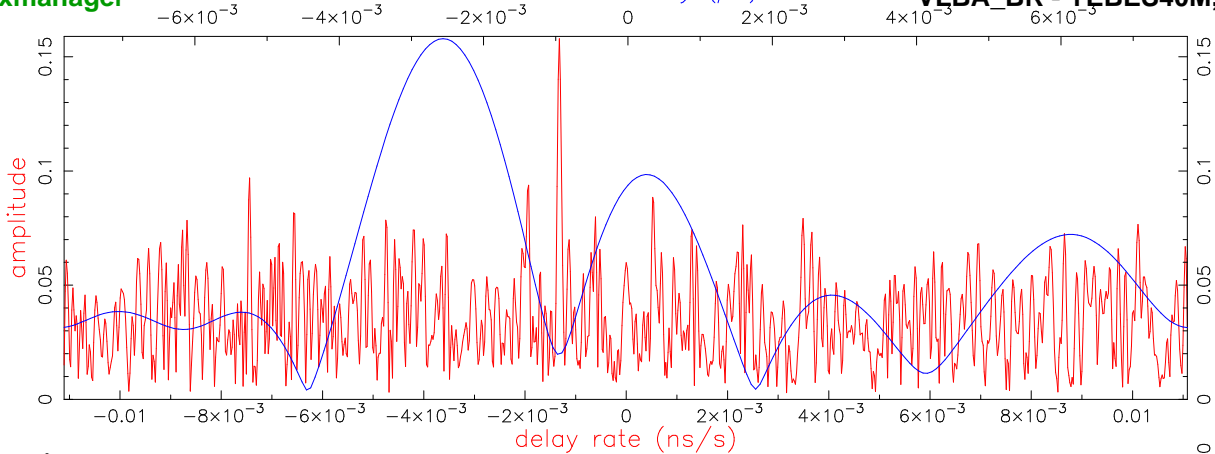
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, bY

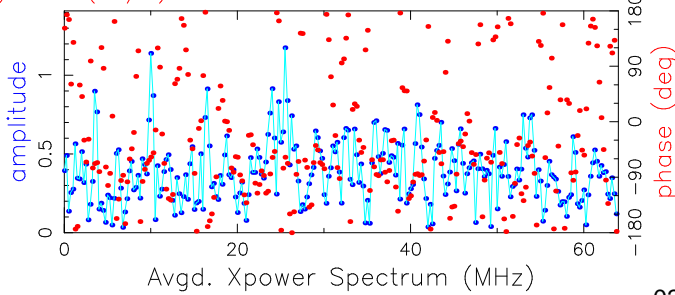
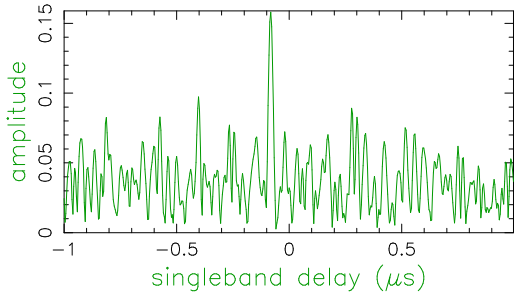
VLBA\_BR - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



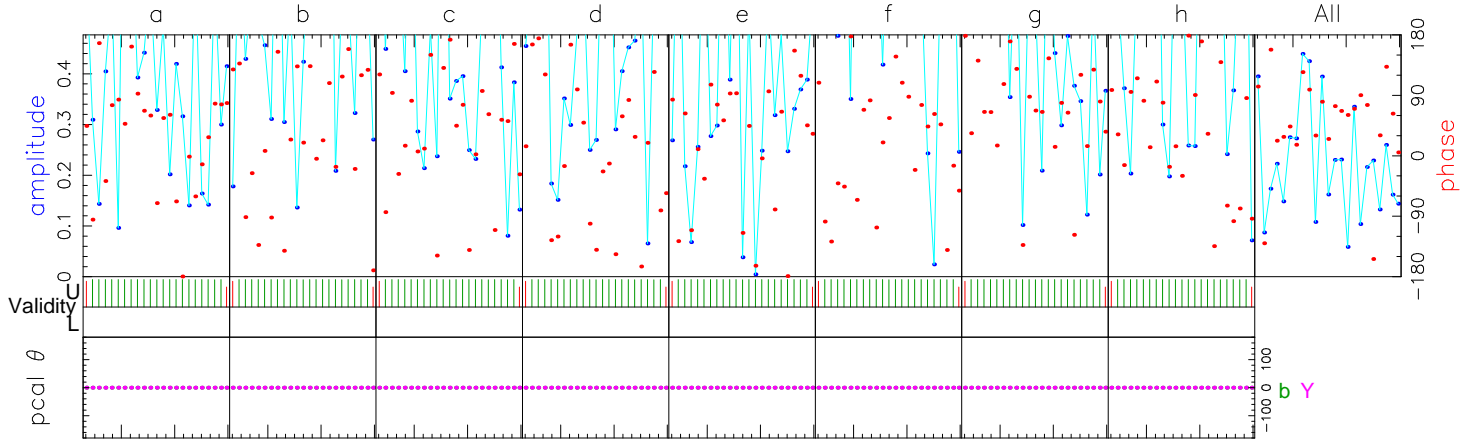
Fringe quality 0

SNR 5.5  
 Int time 162.108  
 Amp 0.159  
 Phase 77.8  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.082468  
 MBD -0.002584  
 Fringe rate (Hz)  
 -0.115674  
 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  
 2021:039:060629  
 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		
b	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:Y	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		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-5.66579543705E+03									
Sband delay (usec)	-5.66579719680E+03									
Phase delay (usec)	-5.66571472609E+03									
Delay rate (us/s)	1.75135697959E+00									
Total phase (deg)			-4.4							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									77.8	+/- 20.8
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										
PC period (AP's) 5, 5										
sb window (us)										-1.000 1.000
SampCntNorm: enabled										-0.008 0.008
mb window (us)										-0.011 0.011
dr window (ns/s)										-0.011 0.011
nlags: 256 t_cohere infinite										0.00 0.00
ion window (TEC)										0.00 0.00

b: az 92.6 el 25.0 pa -44.1 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -10674.310 1625.239 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/bY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/bY.W.62.1JFKZ

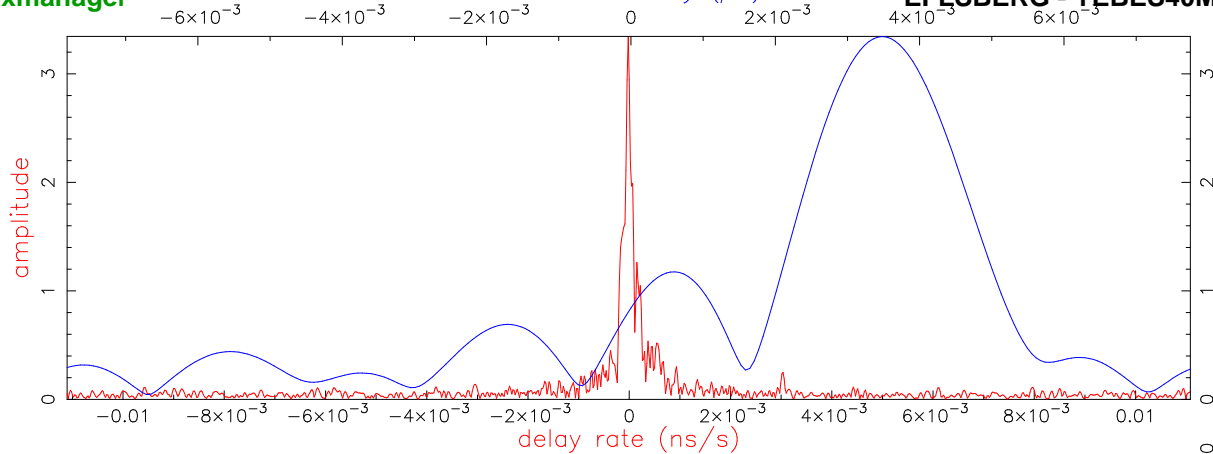
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, BY

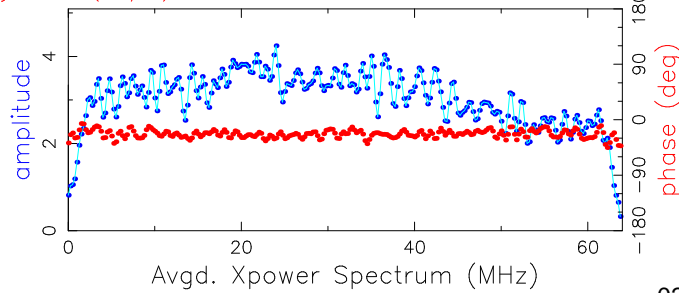
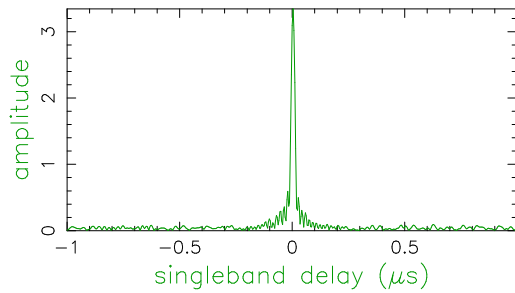
EFLSBERG - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



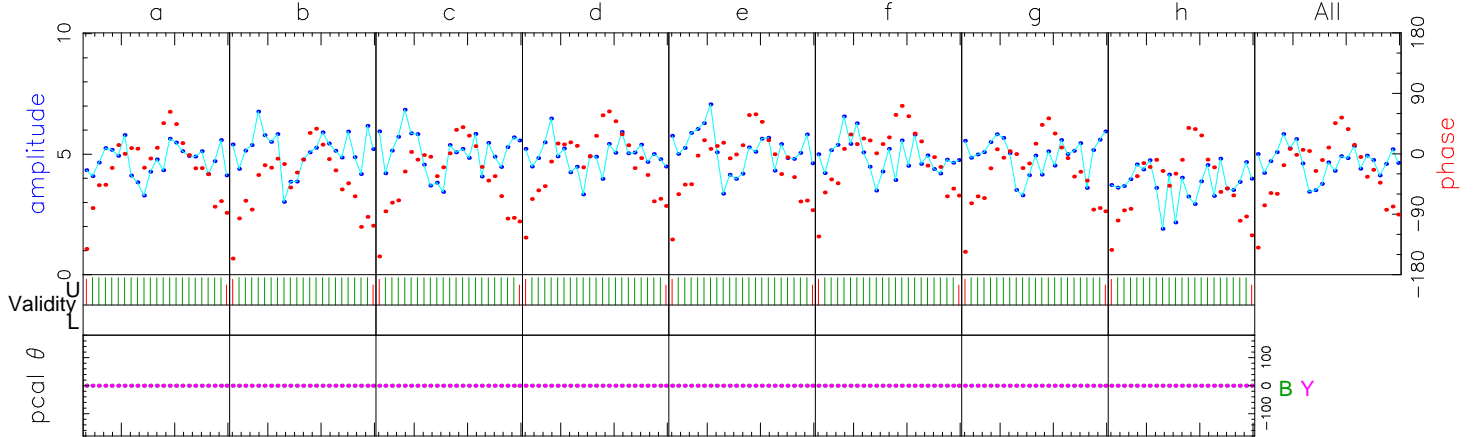
Fringe quality 4

SNR 116.5  
 Int time 162.084  
 Amp 3.345  
 Phase -21.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003641  
 MBD 0.003475  
 Fringe rate (Hz)  
 -0.001972  
 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  
 2021:039:060631  
 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
	-14.8	-39.4	-31.5	-9.6	-11.0	-0.1	-24.0	-43.4	Phase	-21.0
	3.4	3.7	3.5	3.5	3.7	3.6	3.5	2.7	Ampl.	3.4
	258.0	257.7	258.0	258.2	258.0	257.9	257.7	256.2	Sbd box	257.9
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.76991532249E+03	Apriori delay (usec)	-2.76991879725E+03	Resid mbdelay (usec)	3.47476E-03	+/-	9.3E-06
Sband delay (usec)	-2.76991515575E+03	Apriori clock (usec)	-3.6298447E+00	Resid sbdelay (usec)	3.64150E-03	+/-	7.4E-05
Phase delay (usec)	-2.76991879792E+03	Apriori clockrate (us/s)	-3.1999999E-07	Resid phdelay (usec)	-6.62761E-07	+/-	3.1E-08
Delay rate (us/s)	2.94732769749E-02	Apriori rate (us/s)	2.94732993942E-02	Resid rate (us/s)	-2.24193E-08	+/-	3.3E-10
Total phase (deg)	-32.0	Apriori accel (us/s/s)	1.86730978132E-05	Resid phase (deg)	-21.0	+/-	1.0

ph/seg (deg)	46.5	RMS	2.4	Theor.	3.345 +/- 0.029	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	43.9	Search (1024X32)	3.337	Amplitude	3.345 +/- 0.029	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	16.7	Inc. seg. avg.	4.684	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	9.6	Inc. frq. avg.	3.447	Search	3.337	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

B: az 253.5 el 34.4 pa 39.5 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -171.761 1508.267 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/BY.W.76.1JFKZ



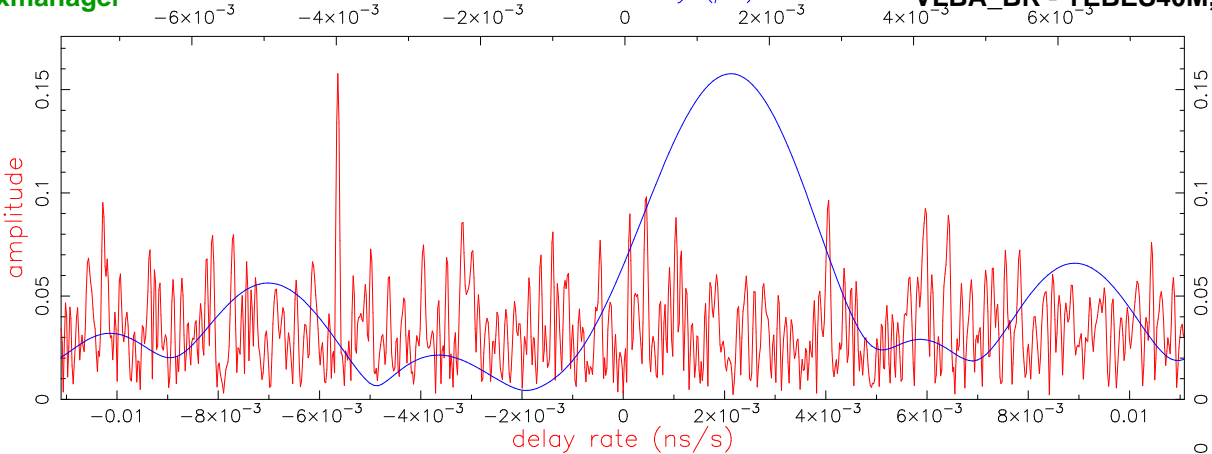
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, bY

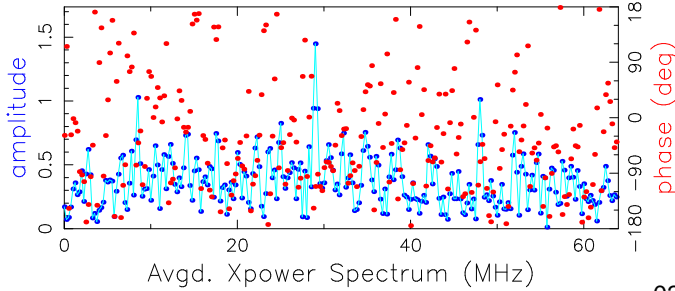
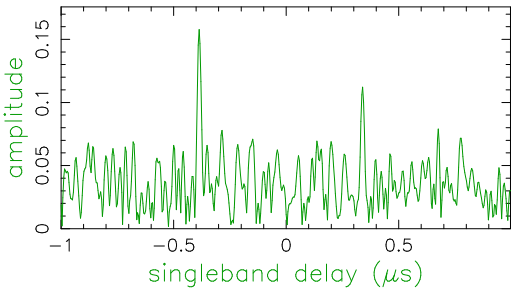
VLBA\_BR - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



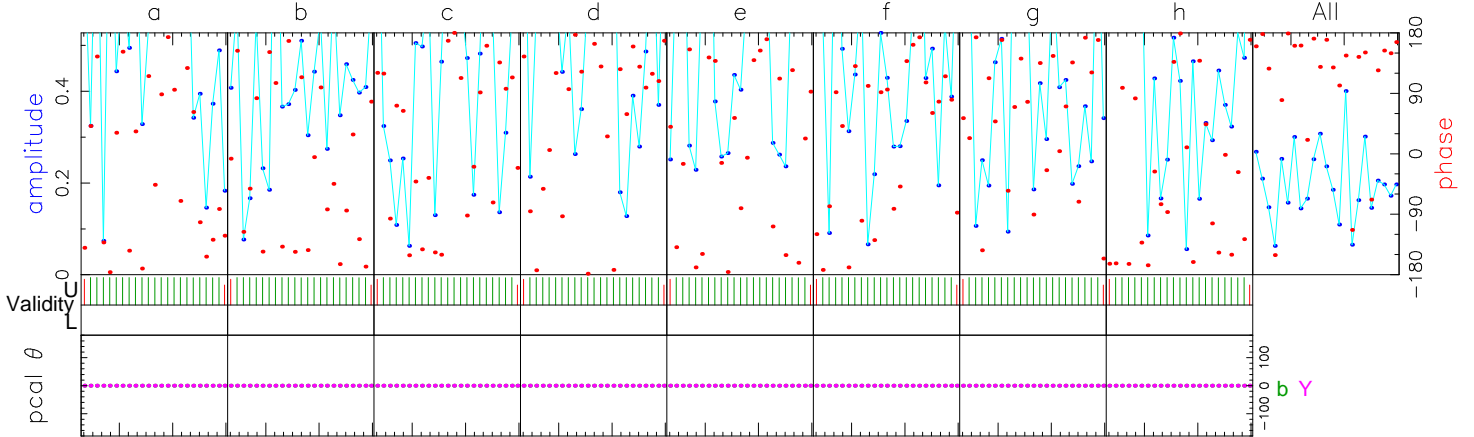
Fringe quality 0

SNR 5.5  
 Int time 162.108  
 Amp 0.176  
 Phase 148.7  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.386651  
 MBD 0.001469  
 Fringe rate (Hz)  
 -0.495679  
 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  
 2021:039:060631  
 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		
b	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:Y	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		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-5.66610388476E+03	Apriori delay (usec)	-5.66571472855E+03	Resid mbdelay (usec)	1.46879E-03	+/-	2.0E-04
Sband delay (usec)	-5.66610138005E+03	Apriori clock (usec)	-1.5413426E+01	Resid sbdelay (usec)	-3.86651E-01	+/-	1.6E-03
Phase delay (usec)	-5.66571472385E+03	Apriori clockrate (us/s)	-1.2000000E-07	Resid phdelay (usec)	4.69691E-06	+/-	6.6E-07
Delay rate (us/s)	1.75135265840E+00	Apriori rate (us/s)	1.75135829496E+00	Resid rate (us/s)	-5.63656E-06	+/-	7.0E-09
Total phase (deg)	66.5	Apriori accel (us/s/s)	3.31234843982E-05	Resid phase (deg)	148.7	+/-	20.9

ph/seg (deg)	52.5	Theor.	50.0	Amplitude	0.176 +/- 0.032	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	57.5		87.3	Search (1024X32)	0.156	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	24.4		29.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	33.7		51.5	Inc. seg. avg.	0.163	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.168	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

b: az 92.6 el 25.0 pa -44.1 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -10674.310 1625.239 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/bY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/bY.W.80.1JFKZ

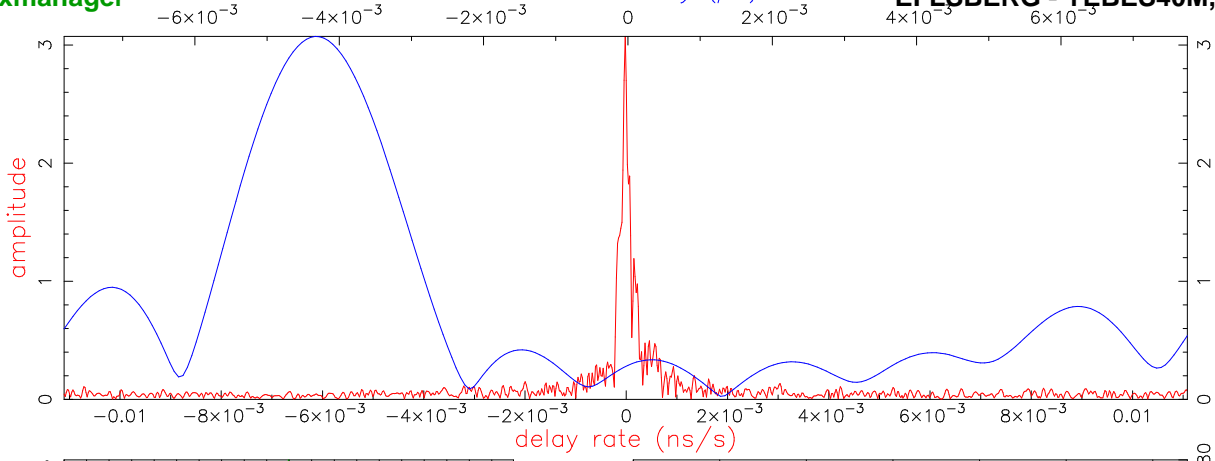
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, BY

EFLSBERG - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



Fringe quality 4

SNR 107.0

Int time 162.084

Amp 3.073

Phase 100.4

PFD 0.0e+00

Delays (us)

SBD -0.004075

MBD -0.004323

Fringe rate (Hz)

-0.002001

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

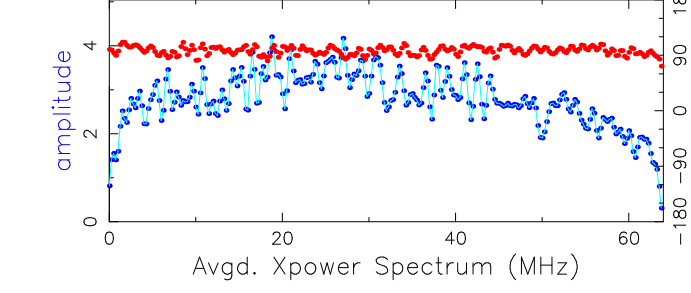
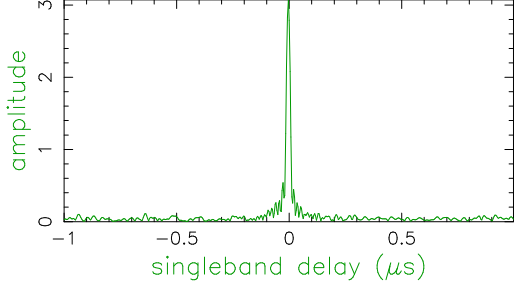
2021:039:060632

2020:247:085004

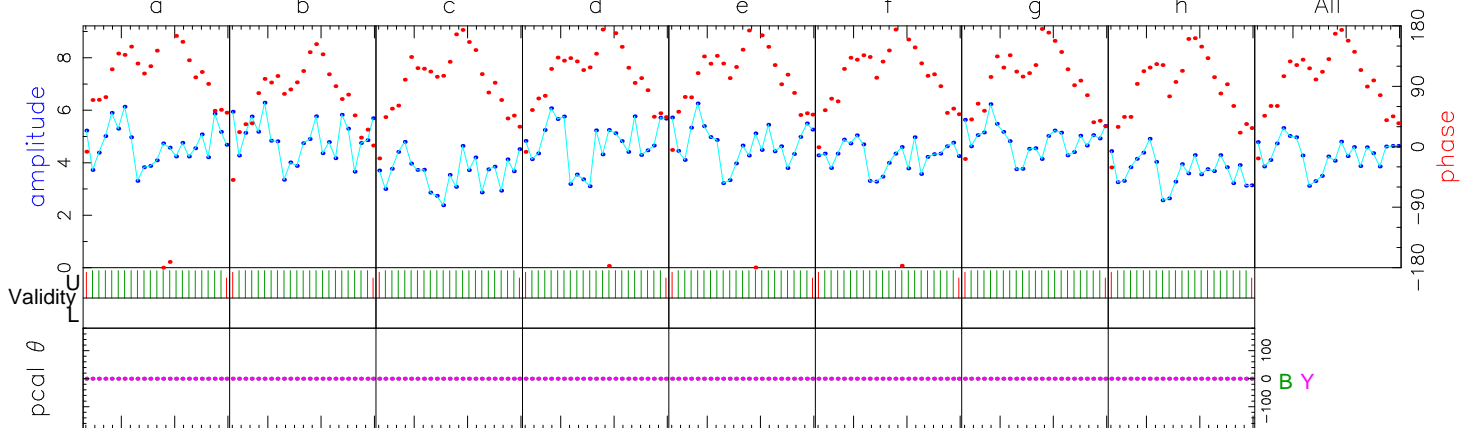
RA & Dec (J2000)

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
	112.7	76.0	97.2	107.7	106.3	110.1	99.0	90.9	Phase	100.4
	3.4	3.4	2.6	3.4	3.4	3.1	3.4	2.6	Ampl.	3.1
	255.7	255.5	256.4	255.8	256.0	256.0	256.1	254.9	Sbd box	256.0
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.76992312040E+03		Apriori delay (usec)		-2.76991879725E+03		Resid mbdelay (usec)		-4.32314E-03	+/- 1.0E-05
Sband delay (usec)	-2.76992287225E+03		Apriori clock (usec)		-3.6298447E+00		Resid sbdelay (usec)		-4.07500E-03	+/- 8.1E-05
Phase delay (usec)	-2.76991879408E+03		Apriori clockrate (us/s)		-3.1999999E-07		Resid phdelay (usec)		3.16986E-06	+/- 3.4E-08
Delay rate (us/s)	2.94732766431E-02		Apriori rate (us/s)		2.94732993942E-02		Resid rate (us/s)		-2.27511E-08	+/- 3.6E-10
Total phase (deg)	89.4		Apriori accel (us/s/s)		1.86730978132E-05		Resid phase (deg)		100.4	+/- 1.1

ph/seg (deg) 46.1 2.6 Search (1024X32) 3.063 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 44.5 4.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 13.1 1.5 Inc. seg. avg. 4.320 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 11.2 2.6 Inc. frq. avg. 3.135 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

B: az 253.5 el 34.4 pa 39.5 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -171.761 1508.267 simultaneous interpolator

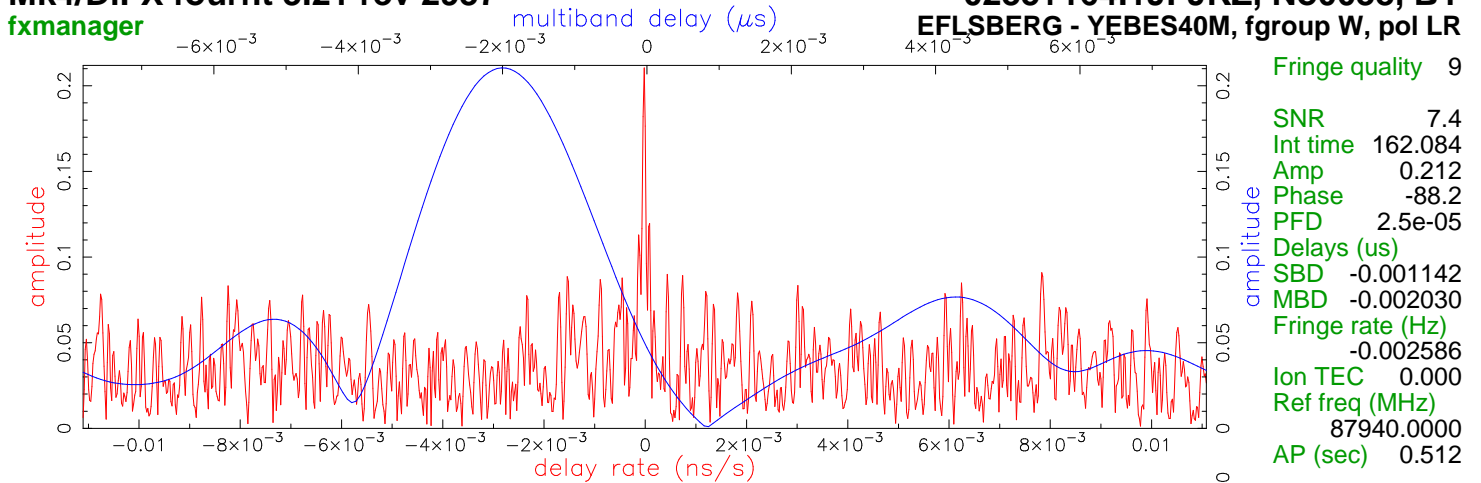
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/BY.W.84.1JFKZ

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, BY

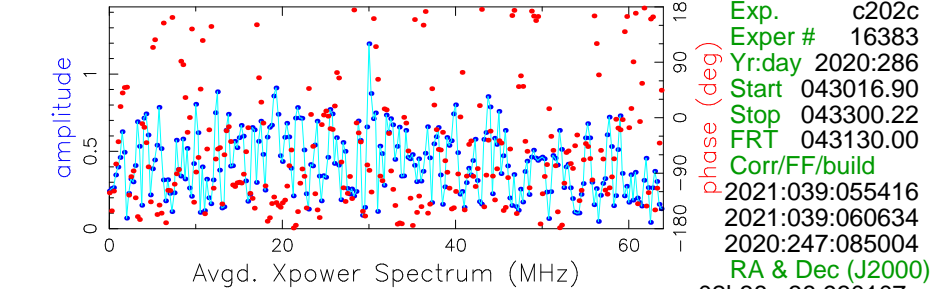
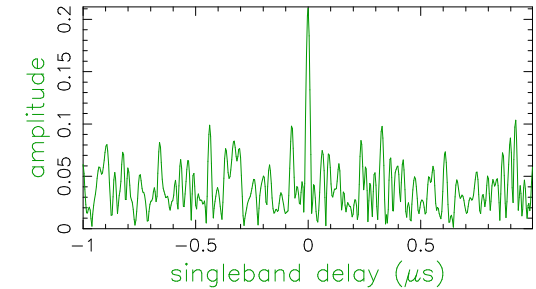
EFLSBERG - YEBES40M, fgroup W, pol LR



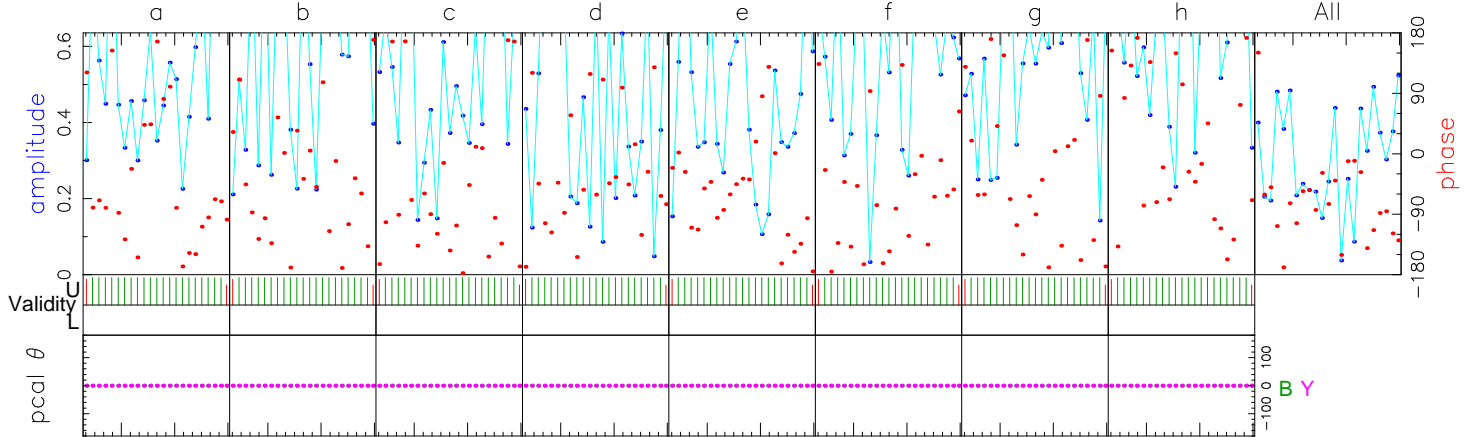
Fringe quality 9

SNR 7.4  
 Int time 162.084  
 Amp 0.212  
 Phase -88.2  
 PFD 2.5e-05  
 Delays (us)  
 SBD -0.001142  
 MBD -0.002030  
 Fringe rate (Hz)  
 -0.002586  
 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  
 2021:039:060634  
 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
	-101.1	-61.8	-128.5	-68.1	-65.7	-89.7	-80.7	-127.1	Phase	-88.2
	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.1	Ampl.	0.2
	258.1	30.2	257.1	100.0	256.8	256.0	323.6	287.1	Sbd box	256.7
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-2.76992082743E+03	Apriori delay (usec)	-2.76991879725E+03	Resid mbdelay (usec)	-2.03017E-03	+/-	1.5E-04
Sband delay (usec)	-2.76991993925E+03	Apriori clock (usec)	-3.6298447E+00	Resid sbdelay (usec)	-1.14200E-03	+/-	1.2E-03
Phase delay (usec)	-2.76991880004E+03	Apriori clockrate (us/s)	-3.1999999E-07	Resid phdelay (usec)	-2.78715E-06	+/-	4.9E-07
Delay rate (us/s)	2.94732699885E-02	Apriori rate (us/s)	2.94732993942E-02	Resid rate (us/s)	-2.94057E-08	+/-	5.2E-09
Total phase (deg)	-99.2	Apriori accel (us/s/s)	1.86730978132E-05	Resid phase (deg)	-88.2	+/-	15.5

ph/seg (deg)	50.1	Theor.	37.2	Amplitude	0.212 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	76.1		65.0	Search (1024X32)	0.206	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	28.8		22.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	33.8		38.3	Inc. seg. avg.	0.252	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.215	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -171.761 1508.267 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/BY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/BY.W.93.1JFKZ



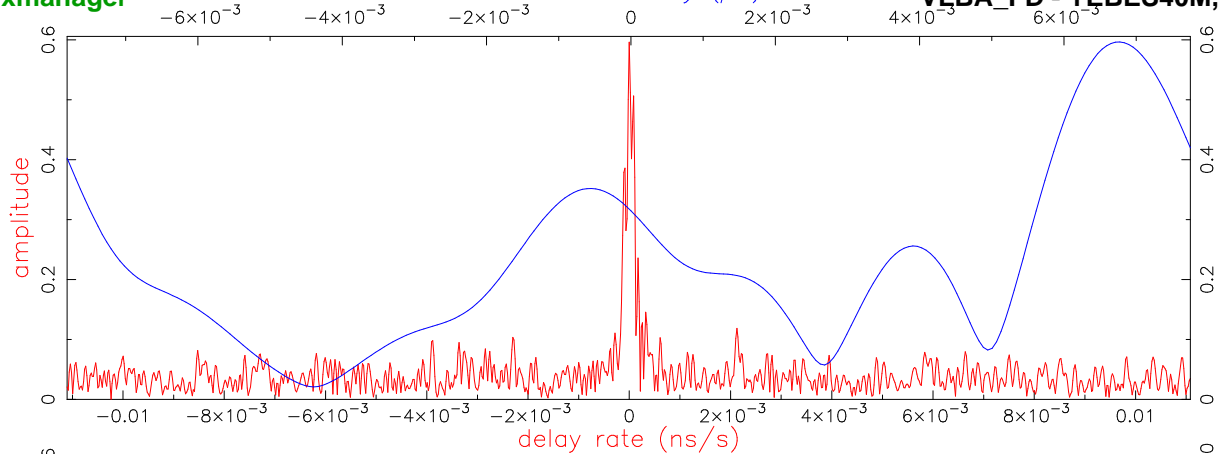
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fY

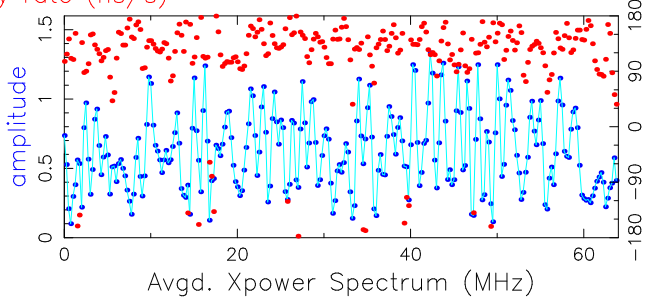
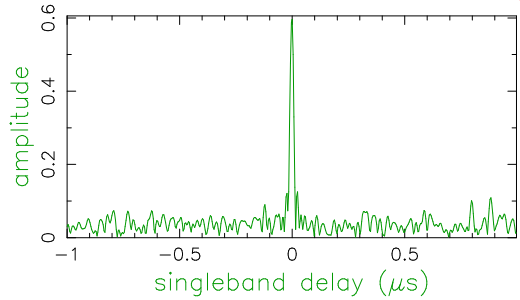
VLBA\_FD - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



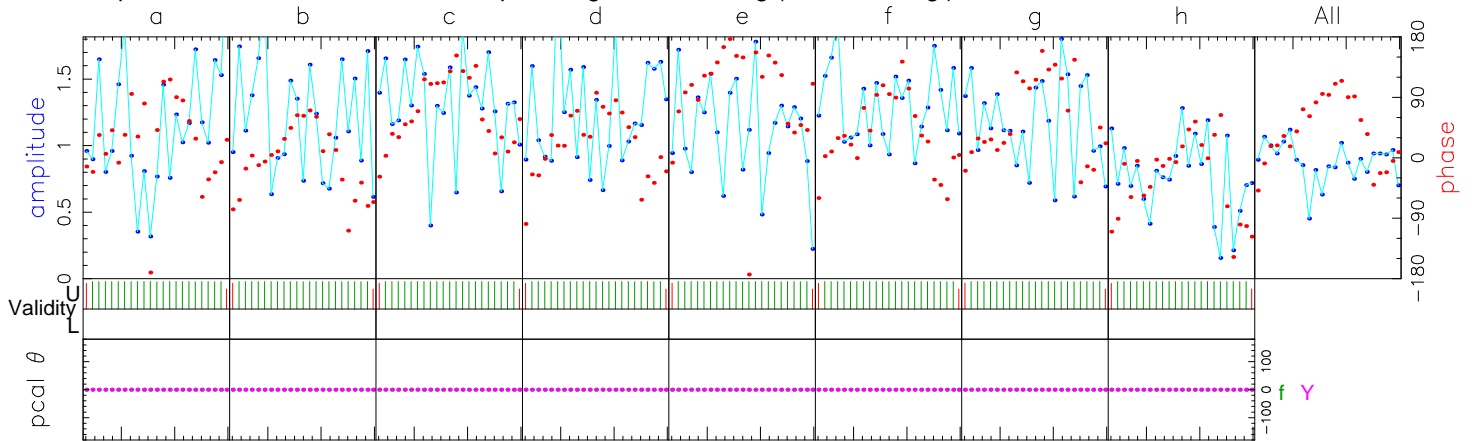
Fringe quality 8

SNR 21.1  
 Int time 162.108  
 Amp 0.606  
 Phase 36.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001628  
 MBD 0.006714  
 Fringe rate (Hz)  
 -0.000894  
 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  
 2021:039:060636  
 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		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-1.51147605041E+03	Apriori delay (usec)	-1.51146713972E+03	Resid mbdelay (usec)	6.71431E-03	+/-	5.1E-05
Sband delay (usec)	-1.51146876772E+03	Apriori clock (usec)	-5.7745905E+00	Resid sbdelay (usec)	-1.62800E-03	+/-	4.1E-04
Phase delay (usec)	-1.51146713858E+03	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	1.14221E-06	+/-	1.7E-07
Delay rate (us/s)	1.86048123385E+00	Apriori rate (us/s)	1.86048124402E+00	Resid rate (us/s)	-1.01679E-08	+/-	1.8E-09
Total phase (deg)	-60.1	Apriori accel (us/s/s)	3.46320346294E-06	Resid phase (deg)	36.2	+/-	5.4

ph/seg (deg)	48.6	RMS	13.0	Theor.	Amplitude	0.606 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	51.3		22.7	Search (1024X32)	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)	46.5		7.7	Inc. seg. avg.	Inc. frq. avg.	0.859	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	31.9		13.4	Inc. frq. avg.		0.746	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11352.858 -1124.265 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/fY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/fY.W.113.1JFKZ

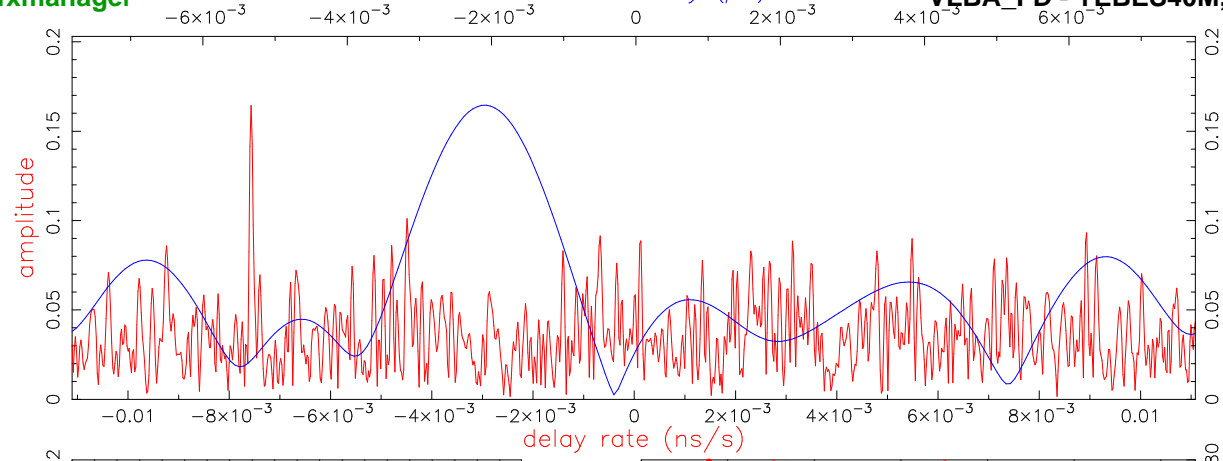
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fY

VLBA\_FD - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



Fringe quality 0

SNR 5.8

Int time 162.108

Amp 0.203

Phase 146.6

PFD 5.9e-01

Delays (us)

SBD -0.022019

MBD -0.002043

Fringe rate (Hz)

-0.667186

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

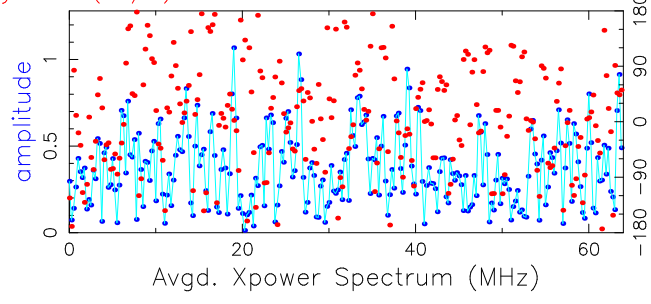
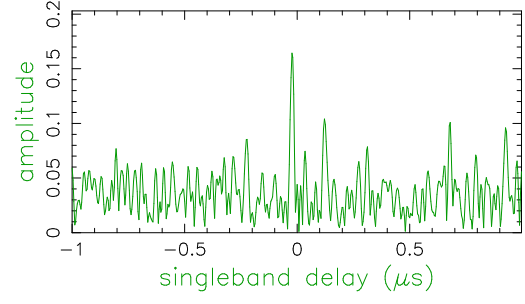
2021:039:060638

2020:247:085004

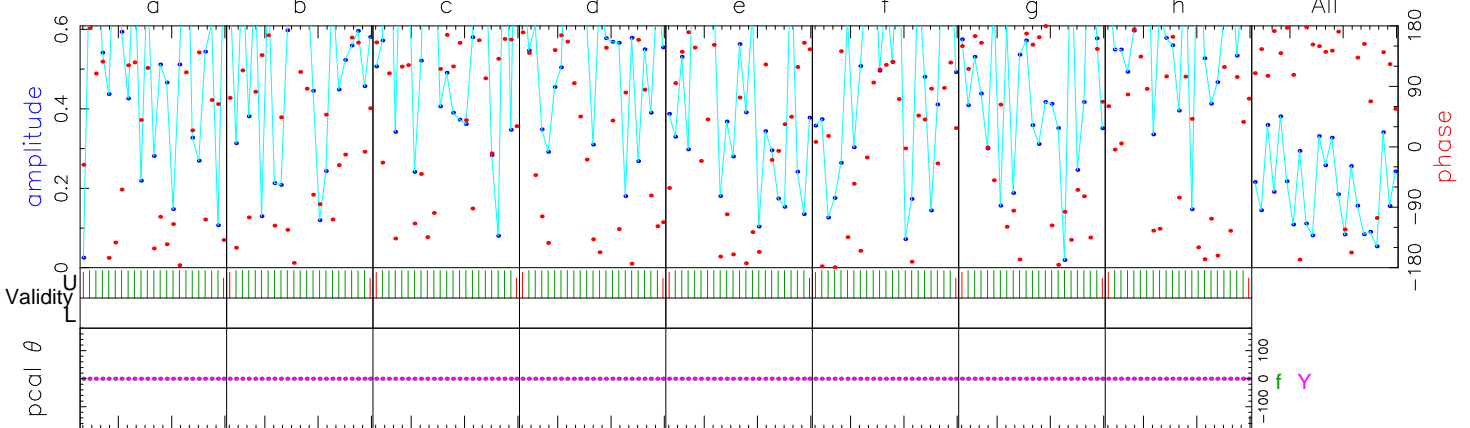
RA & Dec (J2000)

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		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.51148480770E+03									
Sband delay (usec)	-1.51148915847E+03									
Phase delay (usec)	-1.51146713509E+03									
Delay rate (us/s)	1.86047365720E+00									
Total phase (deg)			50.3							
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)										
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 $\theta$										
Tracks										
Chan ids										
Tracks										
Chan ids										
Tracks										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
simultaneous interpolator										

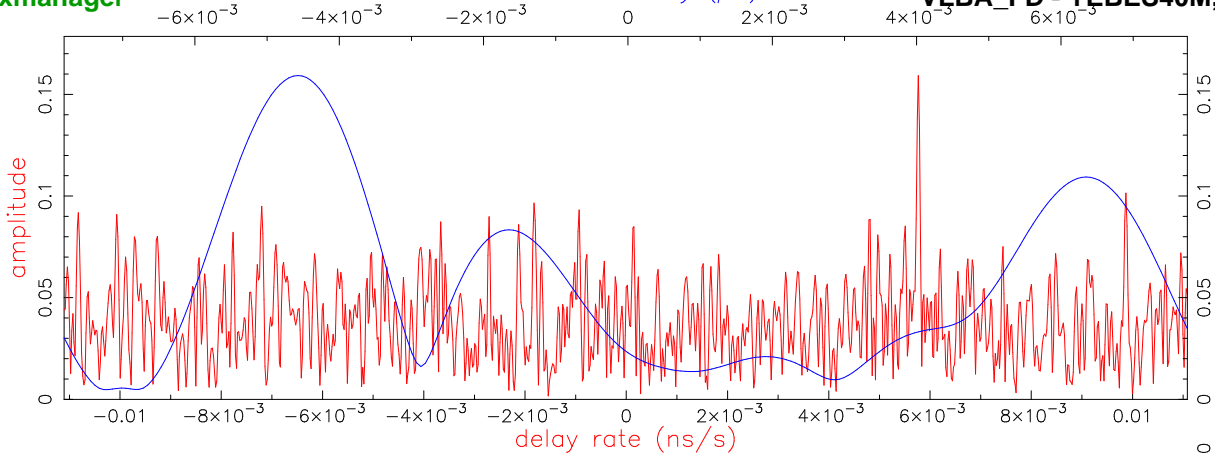
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fY

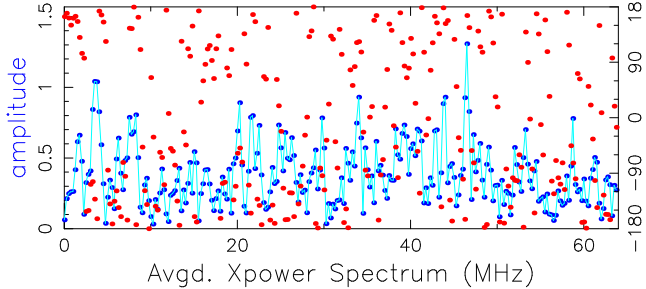
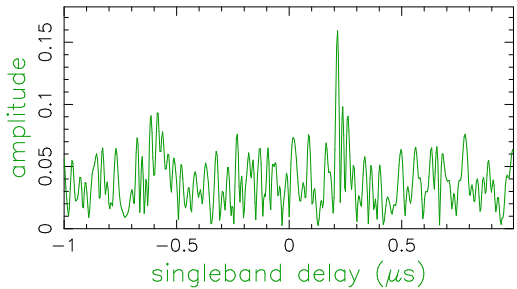
VLBA\_FD - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



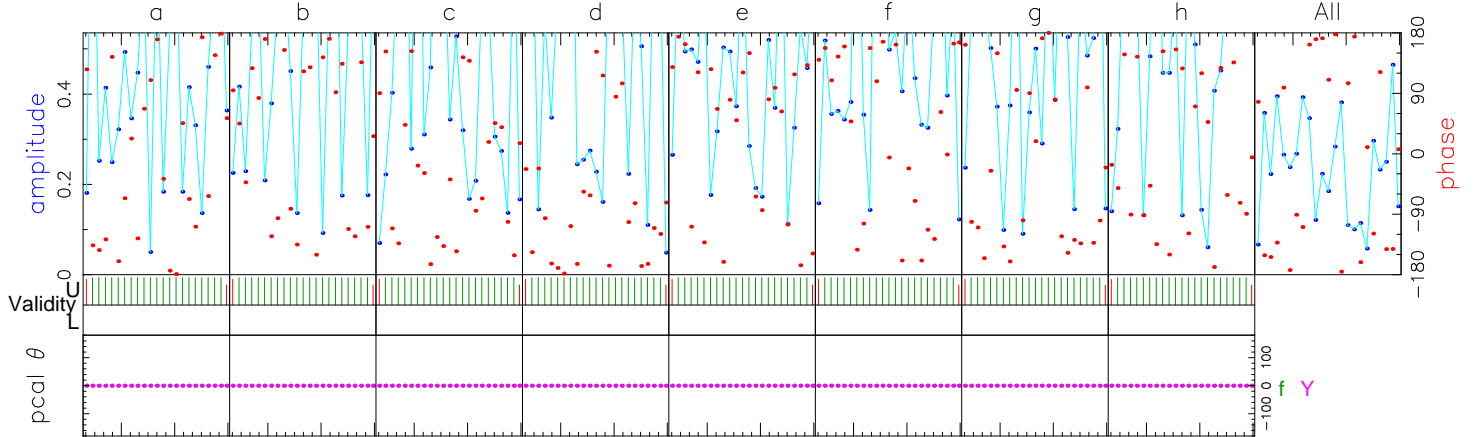
Fringe quality 0

SNR 5.5  
 Int time 162.108  
 Amp 0.179  
 Phase -163.9  
 PFD 9.7e-01  
 Delays (us)  
 SBD 0.214519  
 MBD -0.004589  
 Fringe rate (Hz)  
 0.507156  
 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  
 2021:039:060640  
 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		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.51125297863E+03				-1.51146713972E+03					
Sband delay (usec)	-1.51125262122E+03				-5.7745905E+00					
Phase delay (usec)	-1.51146714490E+03				2.7999998E-07					
Delay rate (us/s)	1.86048701110E+00				1.86048124402E+00					
Total phase (deg)			-260.1		3.46320346294E-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								
Bits/sample:	2x2									
Sample rate (MSamp/s):	128									
Data rate (Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
pcal $\theta$										

ph/seg (deg) 70.1 49.5  
 amp/seg (%) 87.5 86.4  
 ph/frq (deg) 43.4 29.2  
 amp/frq (%) 32.7 51.0

f: az 92.3 el 38.1 pa -63.8 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11352.858 -1124.265

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/fY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/fY.W.150.1JFKZ simultaneous interpolator

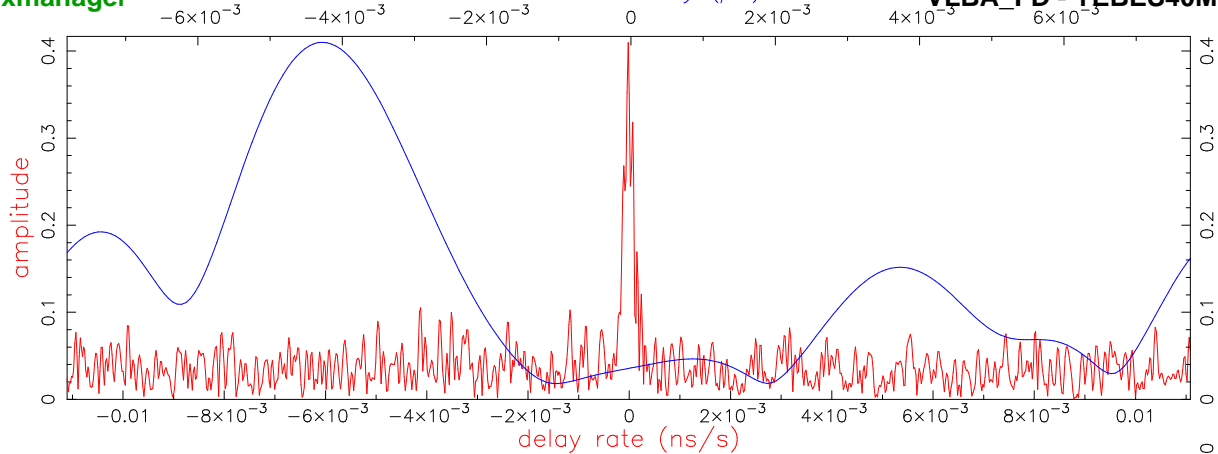
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, fY

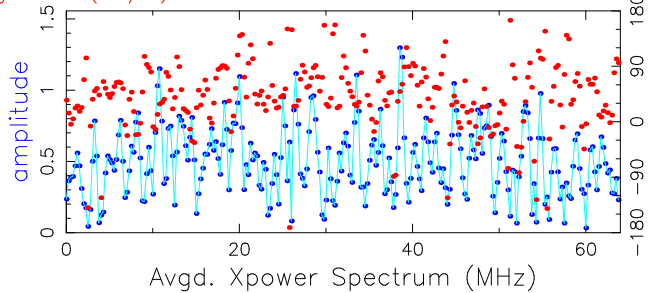
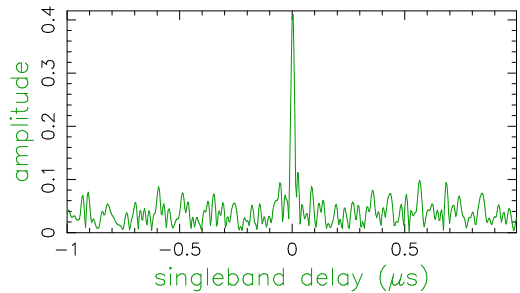
VLBA\_FD - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



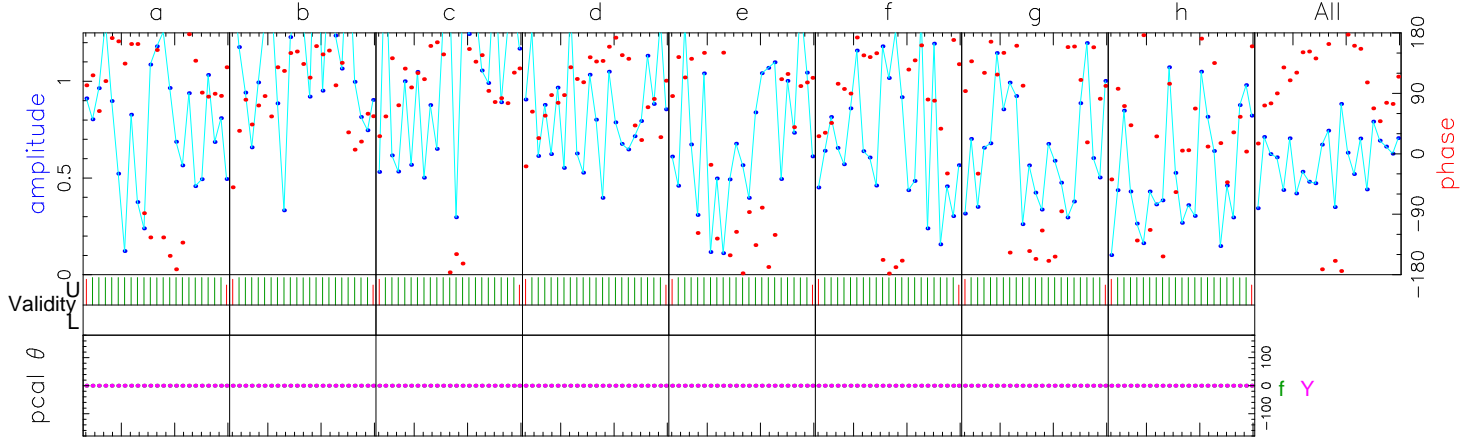
Fringe quality 7

SNR 14.5  
 Int time 162.108  
 Amp 0.417  
 Phase 121.7  
 PFD 3.0e-39  
 Delays (us)  
 SBD 0.002231  
 MBD -0.004333  
 Fringe rate (Hz)  
 -0.001256  
 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  
 2021:039:060634  
 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		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.51147147308E+03	Apriori delay (usec)	-1.51146713972E+03	Resid mbdelay (usec)	-4.33336E-03	+/-	7.5E-05
Sband delay (usec)	-1.51146490872E+03	Apriori clock (usec)	-5.7745905E+00	Resid sbdelay (usec)	2.23100E-03	+/-	5.9E-04
Phase delay (usec)	-1.51146713588E+03	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	3.84414E-06	+/-	2.5E-07
Delay rate (us/s)	1.86048122974E+00	Apriori rate (us/s)	1.86048124402E+00	Resid rate (us/s)	-1.42836E-08	+/-	2.6E-09
Total phase (deg)	25.5	Apriori accel (us/s/s)	3.46320346294E-06	Resid phase (deg)	121.7	+/-	7.9

ph/seg (deg)	48.8	RMS	43.8	Theor.	18.9	Amplitude	0.417 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	55.0	Search (1024X32)	0.401	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	37.3	Inc. seg. avg.	0.567	Inc. frq. avg.	0.451	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	43.8	Inc. frq. avg.	0.451	Sample rate (MSamp/s):	128	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11352.858 -1124.265 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/fY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/fY.W.95.1JFKZ

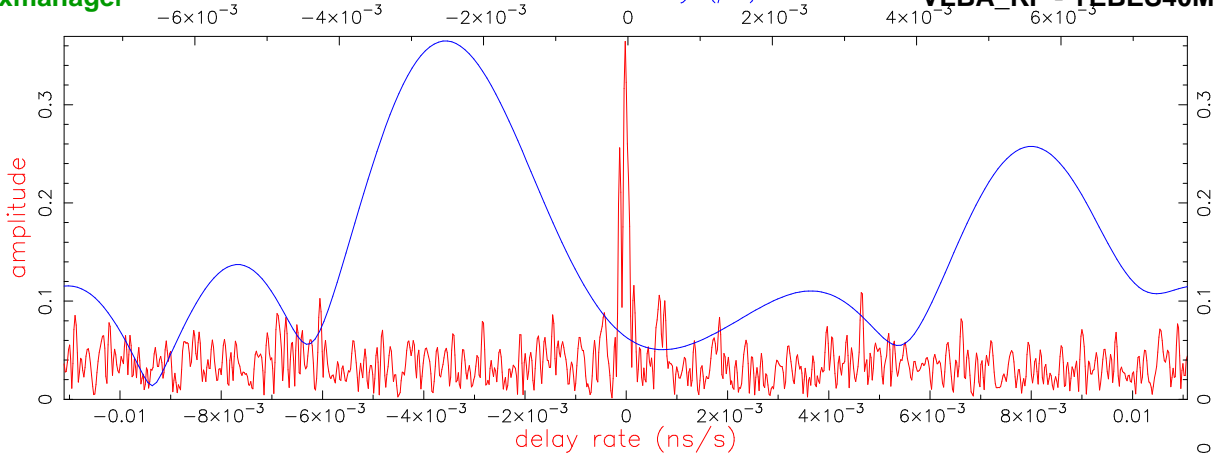
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, kY

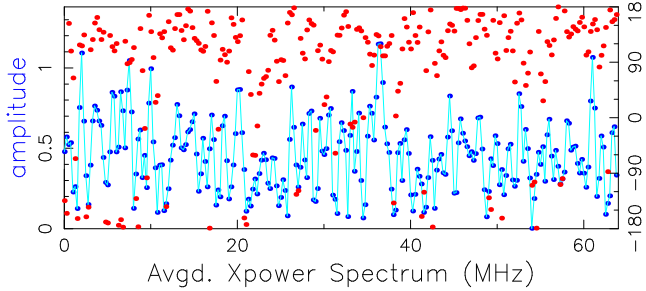
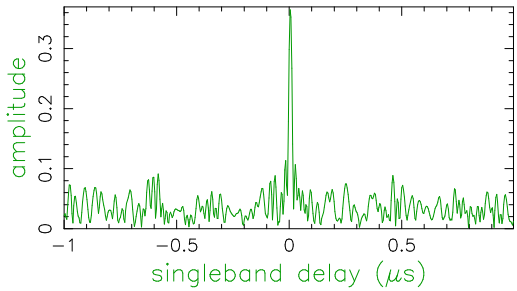
VLBA\_KP - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



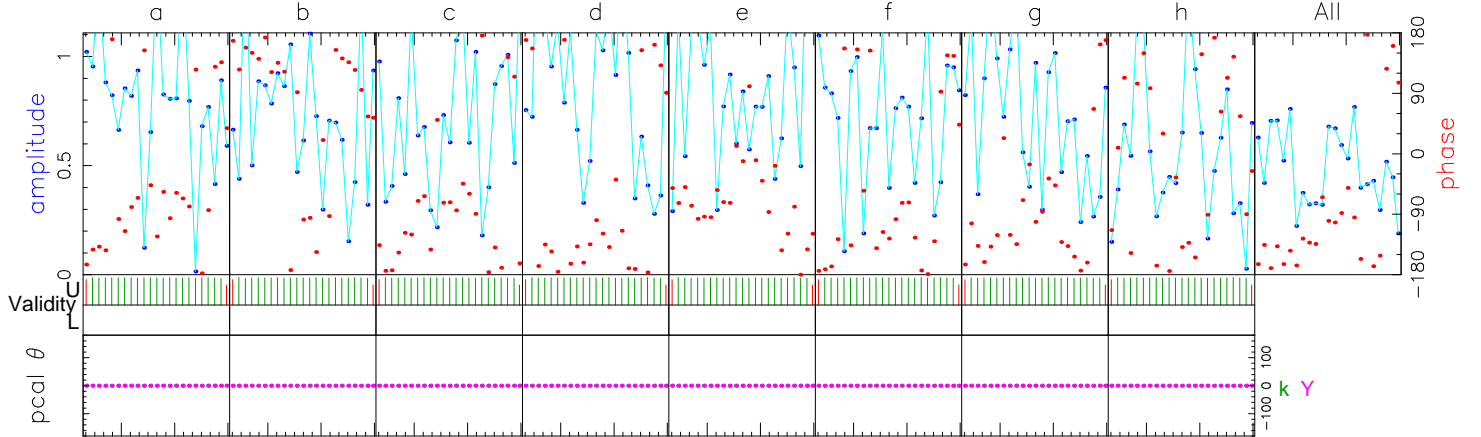
Fringe quality 9

SNR 12.8  
 Int time 160.482  
 Amp 0.370  
 Phase -138.0  
 PFD 4.3e-29  
 Delays (us)  
 SBD 0.005280  
 MBD -0.002470  
 Fringe rate (Hz)  
 -0.002611  
 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  
 2021:039:060639  
 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
	-111.3	149.8	-119.6	-156.0	-83.5	-158.6	-121.3	153.8	Phase	-138.0
	0.5	0.4	0.4	0.6	0.6	0.5	0.5	0.2	Ampl.	0.5
	258.0	258.5	257.9	258.3	257.3	257.6	257.9	254.0	Sbd box	258.4
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
Y	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-3.51526829611E+03		Apriori delay (usec)		-3.51526582631E+03		Resid mbdelay (usec)		-2.46980E-03	+/- 8.5E-05
Sband delay (usec)	-3.51526054681E+03		Apriori clock (usec)		-1.3359718E+01		Resid sbdelay (usec)		5.27950E-03	+/- 6.7E-04
Phase delay (usec)	-3.51526583067E+03		Apriori clockrate (us/s)		-2.0000006E-08		Resid phdelay (usec)		-4.35800E-06	+/- 2.8E-07
Delay rate (us/s)	1.93387686028E+00		Apriori rate (us/s)		1.93387688998E+00		Resid rate (us/s)		-2.96917E-08	+/- 3.0E-09
Total phase (deg)			Apriori accel (us/s/s)		1.47171112347E-05		Resid phase (deg)		-138.0	+/- 9.0

	RMS	Theor.	Amplitude	0.370 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	46.8	21.5	Search (1024X32)	0.356	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	56.2	37.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	49.9	12.7	Inc. seg. avg.	0.460	Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011
amp/frq (%)	41.2	22.1	Inc. frq. avg.	0.459	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite
							ion window (TEC) 0.00 0.00

k: az 89.2 el 31.5 pa -62.3 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11795.322 -682.427 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/kY..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/kY.W.142.1JFJKZ



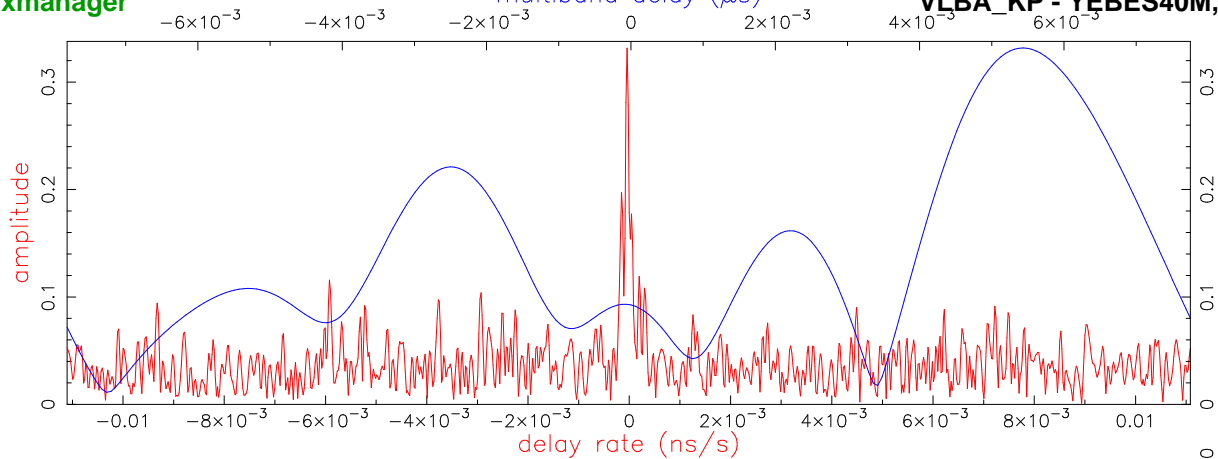
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, kY

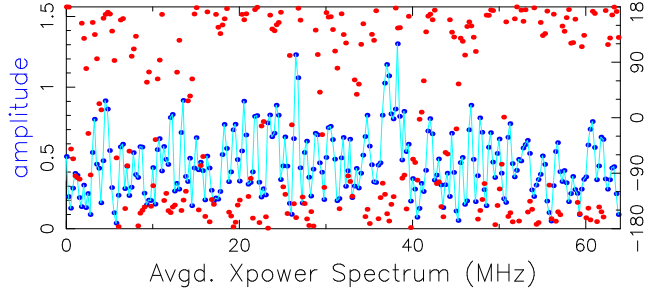
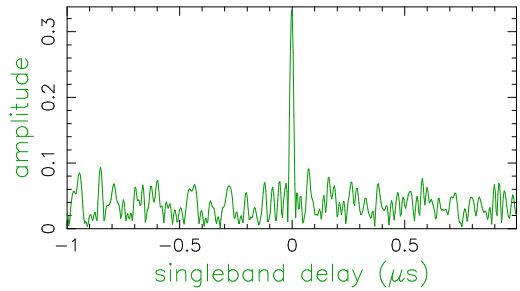
VLBA\_KP - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



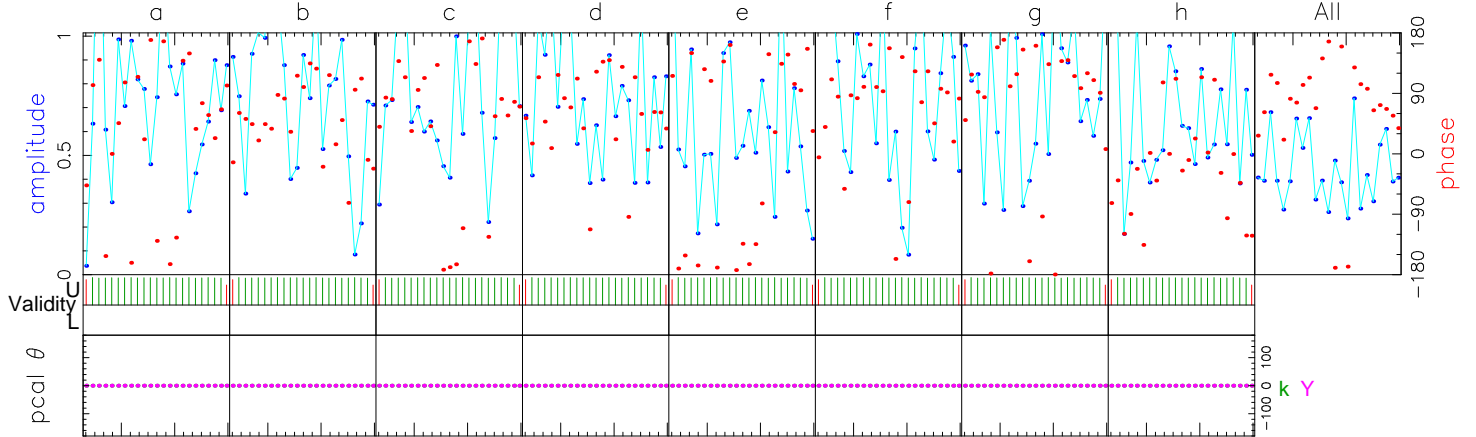
Fringe quality 9

SNR 11.7  
 Int time 160.482  
 Amp 0.338  
 Phase 96.8  
 PFD 2.9e-23  
 Delays (us)  
 SBD -0.002151  
 MBD 0.005409  
 Fringe rate (Hz)  
 -0.003264  
 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  
 2021:039:060640  
 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	125.6	54.4	109.0	72.2	151.8	88.0	126.6	-27.0	Phase	96.8
k	0.3	0.5	0.5	0.5	0.4	0.5	0.5	0.3	Ampl.	0.4
Y	255.8	255.8	256.0	256.3	255.7	256.0	255.7	254.3	Sbd box	256.4
k	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
k	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)	-3.51526041700E+03		Apriori delay (usec)		-3.51526582631E+03		Resid mbdelay (usec)		5.40931E-03	+/- 9.3E-05
Sband delay (usec)	-3.51526797781E+03		Apriori clock (usec)		-1.3359718E+01		Resid sbdelay (usec)		-2.15150E-03	+/- 7.4E-04
Phase delay (usec)	-3.51526582326E+03		Apriori clockrate (us/s)		-2.0000006E-08		Resid phdelay (usec)		3.05823E-06	+/- 3.1E-07
Delay rate (us/s)	1.93387685286E+00		Apriori rate (us/s)		1.93387688998E+00		Resid rate (us/s)		-3.71194E-08	+/- 3.3E-09
Total phase (deg)			Apriori accel (us/s/s)		1.4717112347E-05		Resid phase (deg)		96.8	+/- 9.8

ph/seg (deg) 47.1 23.5      Amplitude 0.338 +/- 0.029      Pcal mode: MANUAL, MANUAL      PC period (AP's) 5, 5  
 amp/seg (%) 52.4 41.0      Search (1024X32) 0.327      Pcal rate: 0.000E+00, 0.000E+00 (us/s)      sb window (us) -1.000 1.000  
 ph/frq (deg) 61.5 13.8      Inc. seg. avg. 0.408      Bits/sample: 2x2      SampCntNorm: enabled      mb window (us) -0.008 0.008  
 amp/frq (%) 41.2 24.2      Inc. frq. avg. 0.436      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      Y: az 252.5 el 44.1 pa 49.2      u,v (fr/asec) -11795.322 -682.427      ion window (TEC) 0.00 0.00

Control file: cf\_1234\_88GHz\_gmva      Input file: /Exps/c202c/v1/1234/No0038/kY..1JFKZ      Output file: /Exps/c202c/v1/1234/No0038/kY.W.156.1JFKZ      simultaneous interpolator

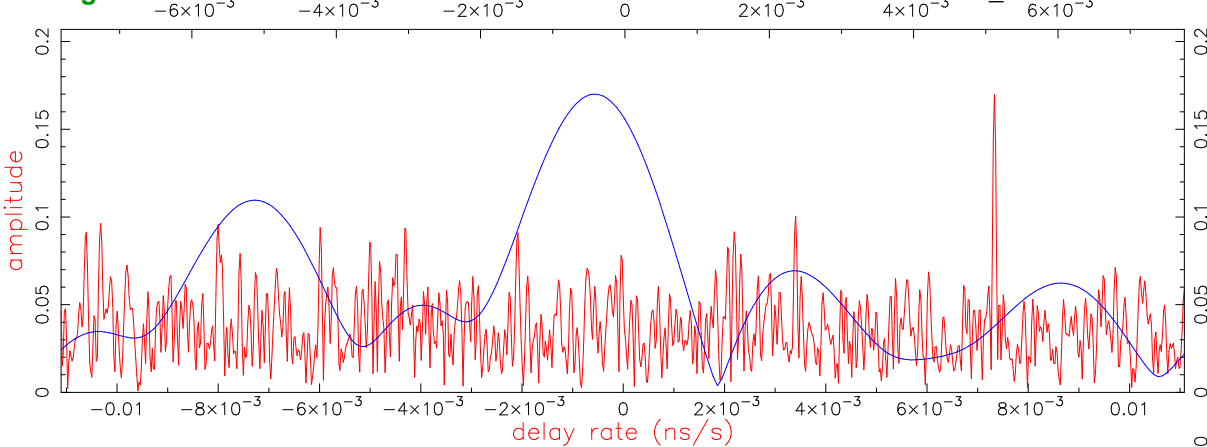
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, kY

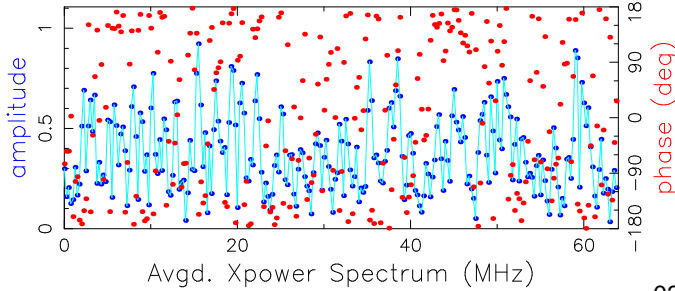
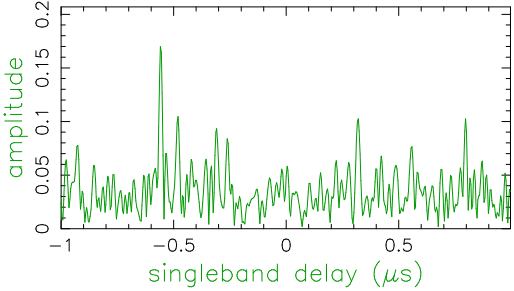
VLBA\_KP - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



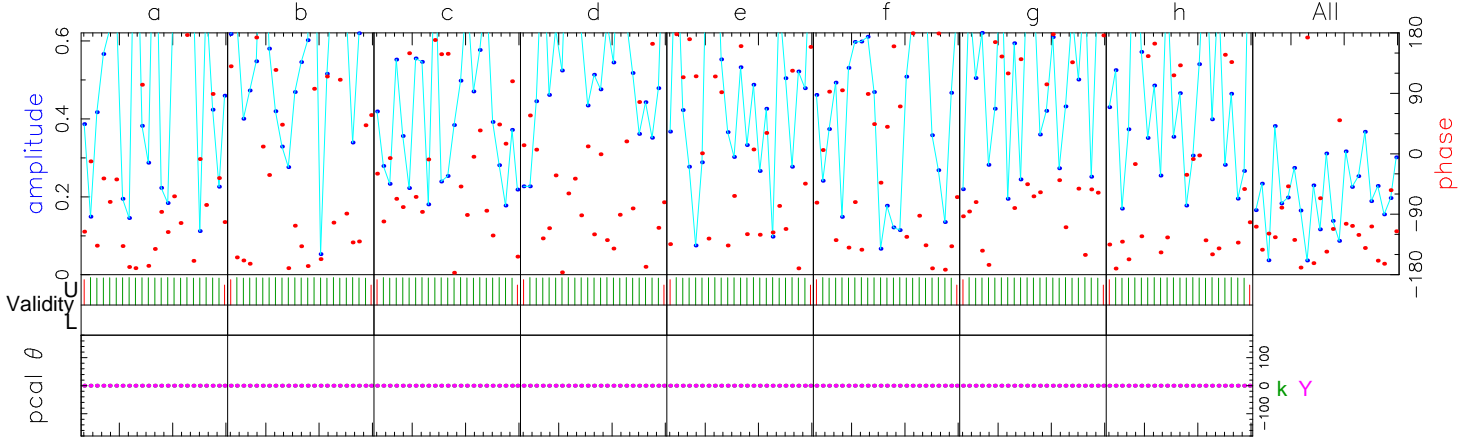
Fringe quality 0

SNR 6.0  
 Int time 160.482  
 Amp 0.207  
 Phase -122.2  
 PFD 2.9e-01  
 Delays (us)  
 SBD -0.557254  
 MBD -0.000355  
 Fringe rate (Hz)  
 0.644908  
 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  
 2021:039:060642  
 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
	-121.2	173.1	-78.4	-80.8	-164.9	-130.6	-117.6	-137.5	Phase	-122.2
	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.3	Ampl.	0.2
	113.8	390.8	38.8	133.7	439.1	147.0	321.1	70.5	Sbd box	114.3
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
k	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)	-3.51582868149E+03		Apriori delay (usec)		-3.51526582631E+03		Resid mbdelay (usec)		-3.55174E-04	+/- 1.8E-04
Sband delay (usec)	-3.51582308056E+03		Apriori clock (usec)		-1.3359718E+01		Resid sbdelay (usec)		-5.57254E-01	+/- 1.4E-03
Phase delay (usec)	-3.51526583017E+03		Apriori clockrate (us/s)		-2.0000006E-08		Resid phdelay (usec)		-3.86108E-06	+/- 6.1E-07
Delay rate (us/s)	1.93388422348E+00		Apriori rate (us/s)		1.93387688998E+00		Resid rate (us/s)		7.33350E-06	+/- 6.5E-09
Total phase (deg)			Apriori accel (us/s/s)		1.47171112347E-05		Resid phase (deg)		-122.2	+/- 19.3

	RMS	Theor.	Amplitude	0.207 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	50.8	46.2	Search (1024X32)	0.169	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	56.6	80.6	Interp.	0.000	Sample rate(MSamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	40.8	27.2	Inc. seg. avg.	0.188	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	34.6	47.5	Inc. frq. avg.	0.216					

k: az 89.2 el 31.5 pa -62.3 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11795.322 -682.427 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/kY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/kY.W.169.1JFKZ

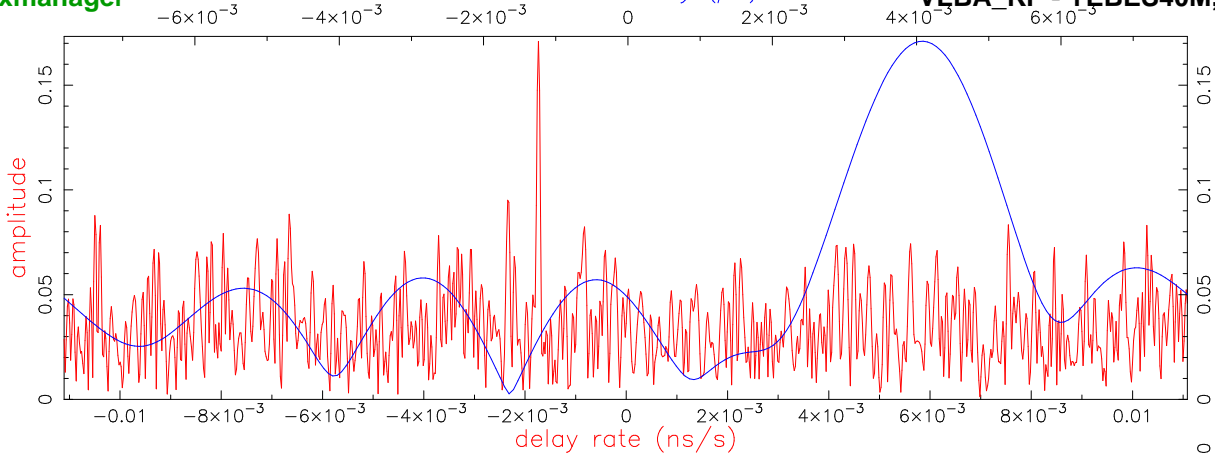
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, kY

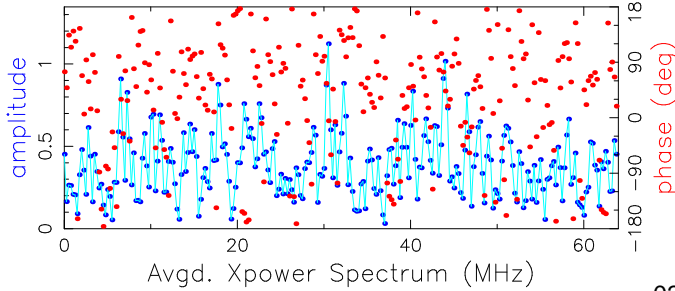
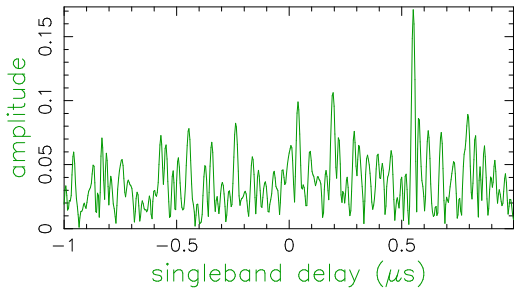
VLBA\_KP - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



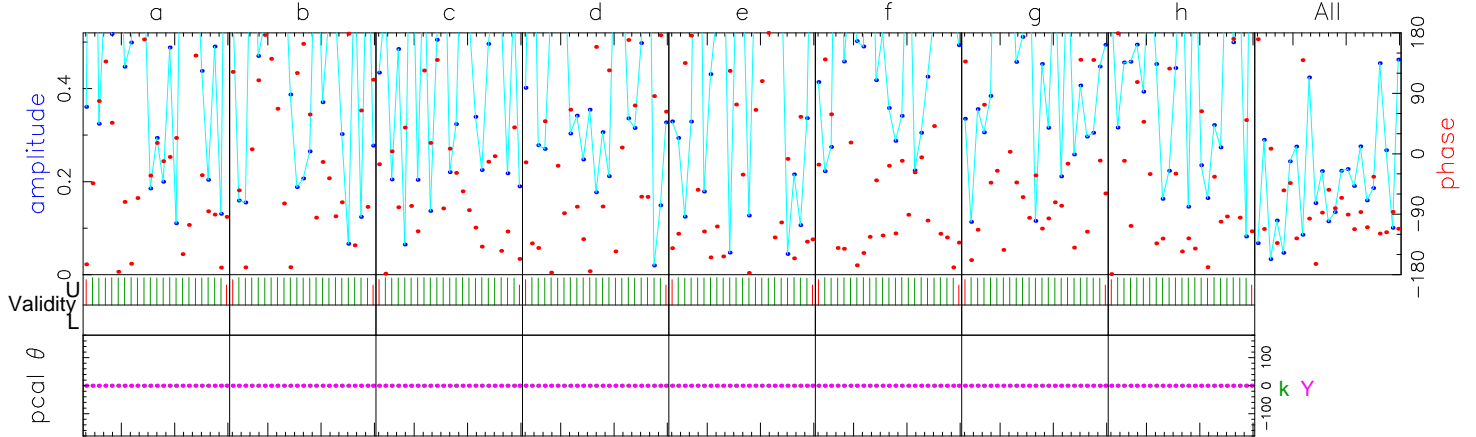
Fringe quality 0

SNR 5.9  
 Int time 160.482  
 Amp 0.173  
 Phase -99.8  
 PFD 3.0e-01  
 Delays ( $\mu$ s)  
 SBD 0.551504  
 MBD 0.004108  
 Fringe rate (Hz)  
 -0.153442  
 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  
 2021:039:060644  
 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
	-104.6	-111.3	-70.5	-92.6	-129.8	-110.9	-64.2	-117.4	Phase	-99.8
	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	Ampl.	0.2
	146.4	178.0	304.8	203.9	509.9	396.5	154.2	478.0	Sbd box	398.2
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.51471484325E+03		Apriori delay (usec)		-3.51526582631E+03		Resid mbdelay (usec)		4.10807E-03	+/- 1.8E-04
Sband delay (usec)	-3.51471432231E+03		Apriori clock (usec)		-1.3359718E+01		Resid sbdelay (usec)		5.51504E-01	+/- 1.4E-03
Phase delay (usec)	-3.51526582947E+03		Apriori clockrate (us/s)		-2.0000006E-08		Resid phdelay (usec)		-3.15381E-06	+/- 6.1E-07
Delay rate (us/s)	1.93387514512E+00		Apriori rate (us/s)		1.93387688998E+00		Resid rate (us/s)		-1.74485E-06	+/- 6.5E-09
Total phase (deg)			Apriori accel (us/s/s)		1.47171112347E-05		Resid phase (deg)		-99.8	+/- 19.3

RMS Theor. Amplitude 0.173 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 49.1 46.2 Search (1024X32) 0.163 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 70.4 80.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 24.7 27.3 Inc. seg. avg. 0.156 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 38.6 47.6 Inc. frq. avg. 0.167 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

k: az 89.2 el 31.5 pa -62.3 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11795.322 -682.427 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/kY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/kY.W.177.1JFKZ

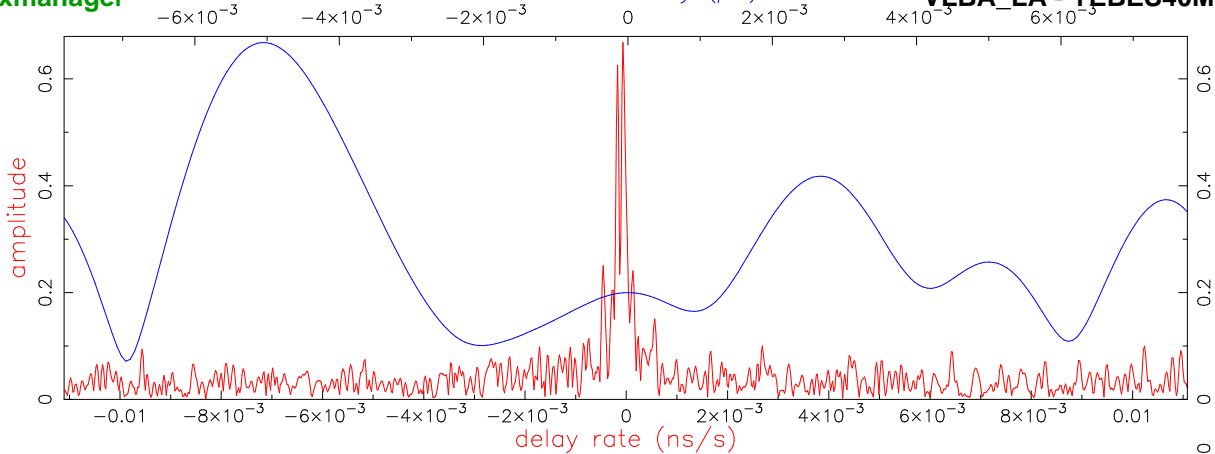
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IY

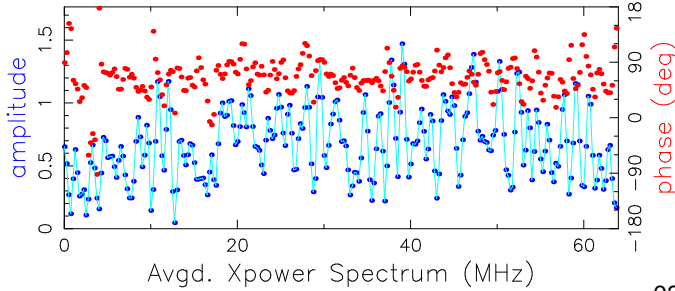
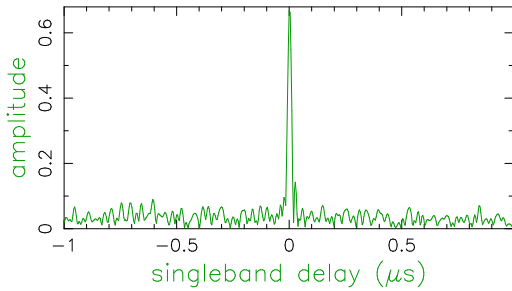
VLBA\_LA - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



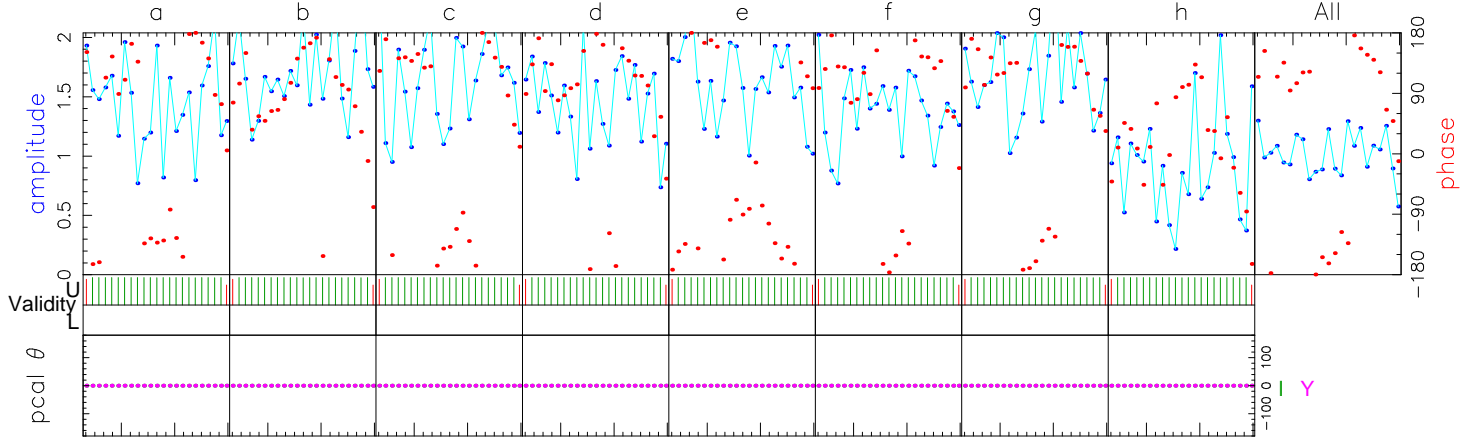
Fringe quality 7

SNR 23.7  
 Int time 162.108  
 Amp 0.680  
 Phase 146.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001764  
 MBD -0.005027  
 Fringe rate (Hz)  
 -0.006254  
 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  
 2021:039:060644  
 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		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Y	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		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-2.18742406536E+03	Apriori delay (usec)	-2.18741903787E+03	Resid mbdelay (usec)	-5.02749E-03	+/-	4.6E-05
Sband delay (usec)	-2.18741727387E+03	Apriori clock (usec)	-1.4123136E+01	Resid sbdelay (usec)	1.76400E-03	+/-	3.6E-04
Phase delay (usec)	-2.18741903324E+03	Apriori clockrate (us/s)	-2.1999999E-07	Resid phdelay (usec)	4.62747E-06	+/-	1.5E-07
Delay rate (us/s)	1.82823700126E+00	Apriori rate (us/s)	1.82823707237E+00	Resid rate (us/s)	-7.11128E-08	+/-	1.6E-09
Total phase (deg)		Apriori accel (us/s/s)	9.44603999518E-06	Resid phase (deg)	146.5	+/-	4.8

ph/seg (deg)	56.5	RMS	11.6	Theor.	11.6	Amplitude	0.680 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	57.0	Search (1024X32)	0.655	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	62.9	Inc. seg. avg.	1.006	Inc. frq. avg.	0.897	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	42.9	Inc. frq. avg.	0.897	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags:	256	t_cohere	infinite
								ion window (TEC)	0.00	0.00	

I: az 94.8 el 35.9 pa -57.5 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11153.853 -330.474 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/IY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/IY.W.174.1JFKZ

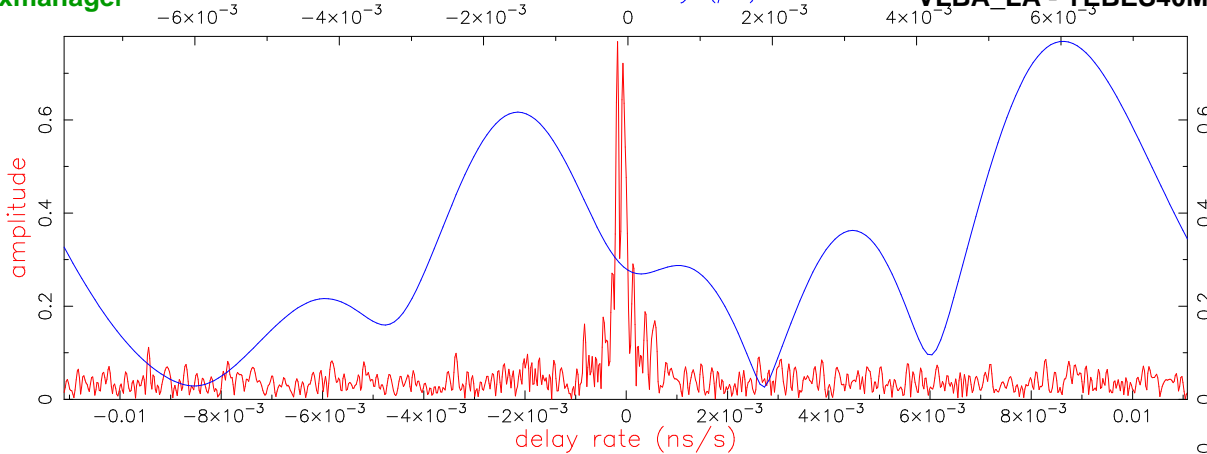
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IY

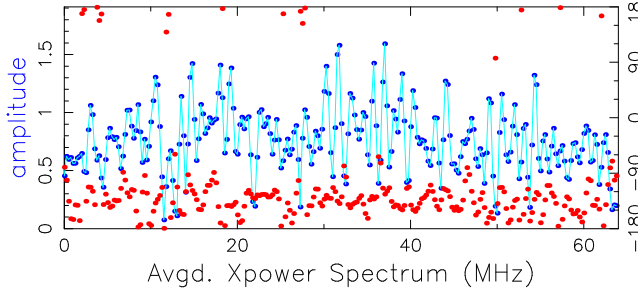
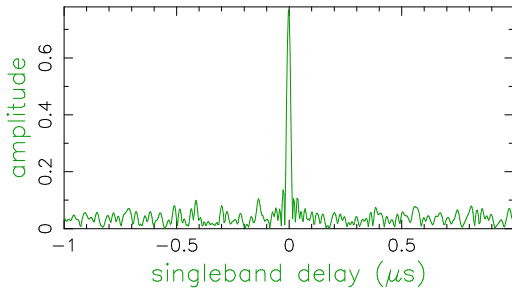
VLBA\_LA - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



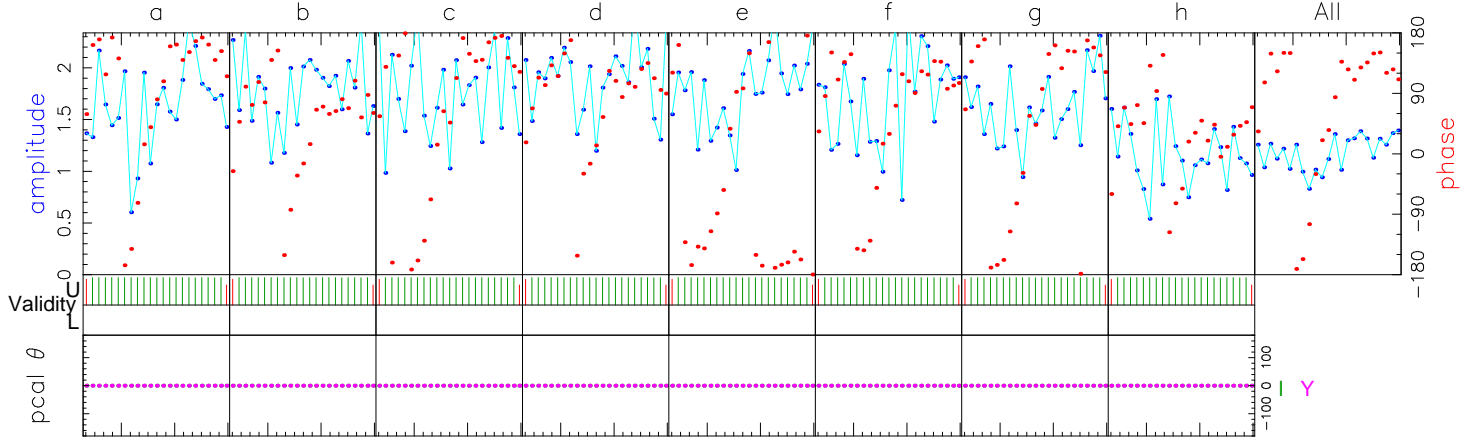
Fringe quality 5

SNR 27.1  
 Int time 162.108  
 Amp 0.779  
 Phase 125.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002361  
 MBD 0.006074  
 Fringe rate (Hz)  
 -0.015713  
 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  
 2021:039:060647  
 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
	145.4	63.9	150.7	102.9	-169.6	111.0	152.3	33.4	Phase	125.7
	1.1	1.1	1.1	1.3	1.2	1.1	1.0	0.7	Ampl.	1.1
	256.1	255.8	256.5	255.5	255.8	255.7	255.7	254.1	Sbd box	256.4
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	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)	-2.18742858886E+03		Apriori delay (usec)		-2.18741903787E+03		Resid mbdelay (usec)		6.07402E-03	+/- 4.0E-05
Sband delay (usec)	-2.18742139887E+03		Apriori clock (usec)		-1.4123136E+01		Resid sbdelay (usec)		-2.36100E-03	+/- 3.2E-04
Phase delay (usec)	-2.18741903390E+03		Apriori clockrate (us/s)		-2.1999999E-07		Resid phdelay (usec)		3.97066E-06	+/- 1.3E-07
Delay rate (us/s)	1.82823689369E+00		Apriori rate (us/s)		1.82823707237E+00		Resid rate (us/s)		-1.78682E-07	+/- 1.4E-09
Total phase (deg)	57.1		Apriori accel (us/s/s)		9.44603999518E-06		Resid phase (deg)		125.7	+/- 4.2

RMS Theor. Amplitude 0.779 +/- 0.029  
 ph/seg (deg) 60.9 10.1 Search (1024X32) 0.751  
 amp/seg (%) 55.5 17.7 Interp. 0.000  
 ph/frq (deg) 56.3 6.0 Inc. seg. avg. 1.164  
 amp/frq (%) 42.6 10.4 Inc. frq. avg. 1.059

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 94.8 el 35.9 pa -57.5 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11153.853 -330.474 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/IY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/IY.W.200.1JFKZ



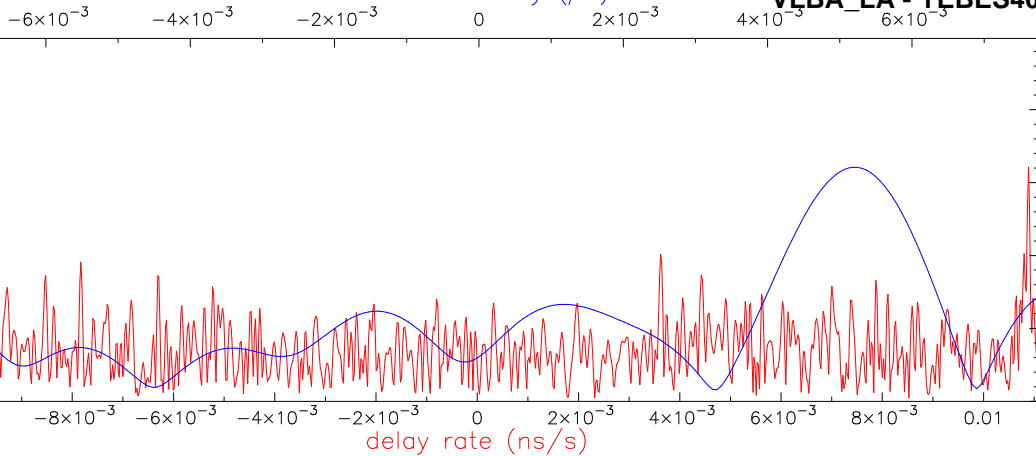
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IY

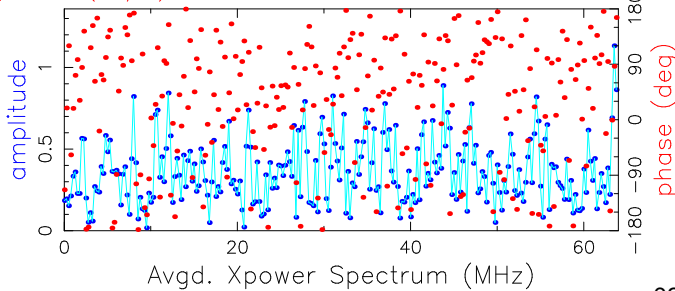
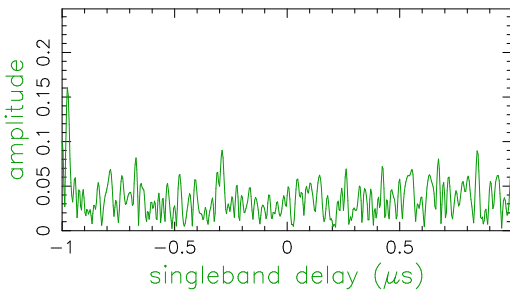
VLBA\_LA - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



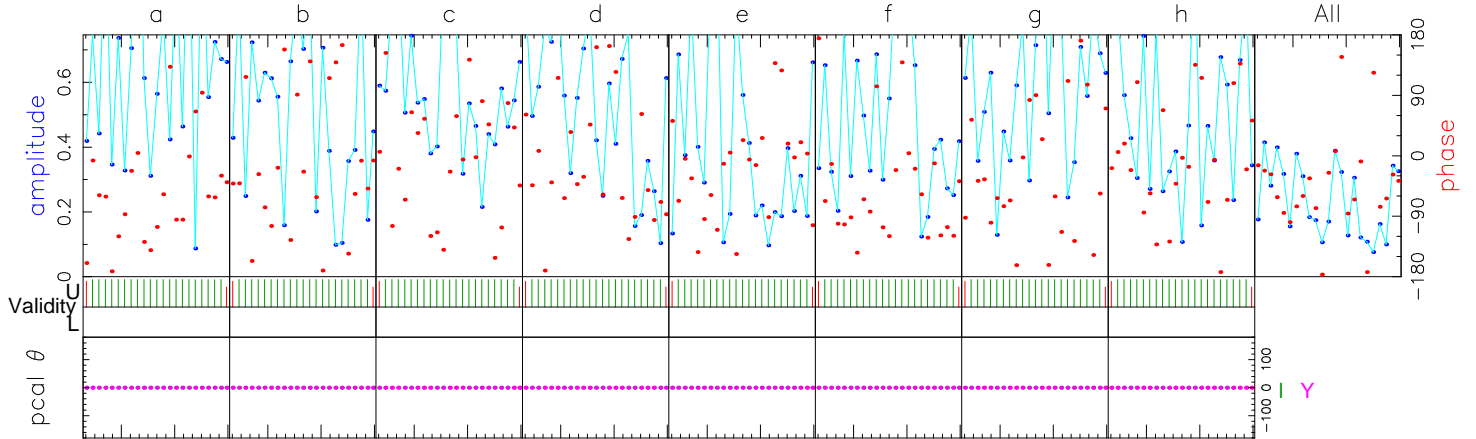
Fringe quality 0

SNR 5.6  
 Int time 162.108  
 Amp 0.249  
 Phase -51.2  
 PFD 9.1e-01  
 Delays (us)  
 SBD -0.975721  
 MBD 0.005222  
 Fringe rate (Hz) 0.958894  
 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  
 2021:039:060649  
 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
	-54.1	-70.1	-4.7	-39.7	-52.9	-75.6	-65.1	-29.3	Phase	-51.2
	0.5	0.2	0.2	0.2	0.3	0.3	0.2	0.2	Ampl.	0.2
	6.4	382.7	421.4	319.4	461.0	8.8	1.5	323.9	Sbd box	7.2
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.18839819097E+03		Apriori delay (usec)		-2.18741903787E+03		Resid mbdelay (usec)		5.22190E-03	+/- 1.9E-04
Sband delay (usec)	-2.18839475937E+03		Apriori clock (usec)		-1.4123136E+01		Resid sbdelay (usec)		-9.75721E-01	+/- 1.5E-03
Phase delay (usec)	-2.18741903949E+03		Apriori clockrate (us/s)		-2.1999999E-07		Resid phdelay (usec)		-1.61865E-06	+/- 6.4E-07
Delay rate (us/s)	1.82824797632E+00		Apriori rate (us/s)		1.82823707237E+00		Resid rate (us/s)		1.09040E-05	+/- 6.8E-09
Total phase (deg)			Apriori accel (us/s/s)		9.44603999518E-06		Resid phase (deg)		-51.2	+/- 20.4

ph/seg (deg) 67.7 48.9 Search (1024X32) 0.158 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 82.5 85.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 25.6 28.9 Inc. seg. avg. 0.267 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 46.4 50.4 Inc. frq. avg. 0.234 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 I: az 94.8 el 35.9 pa -57.5 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11153.853 -330.474 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/IY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/IY.W.220.1JFKZ

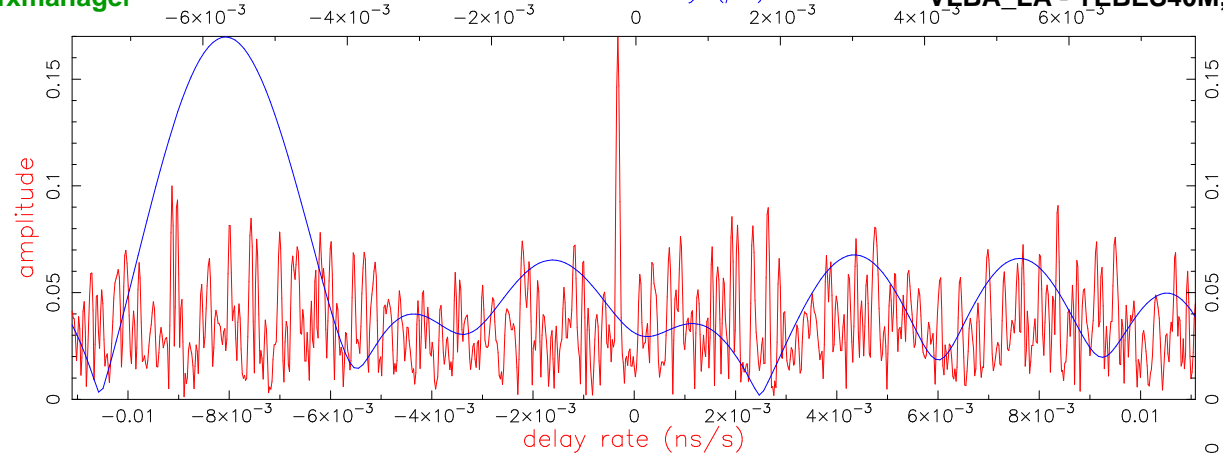
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, IY

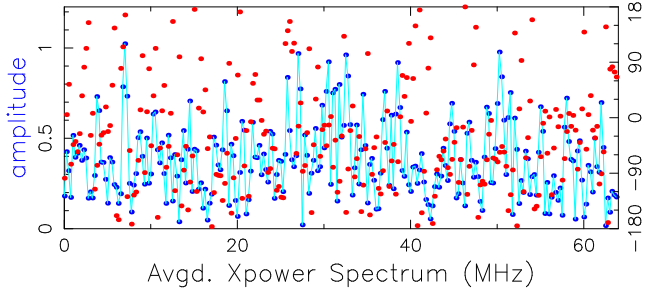
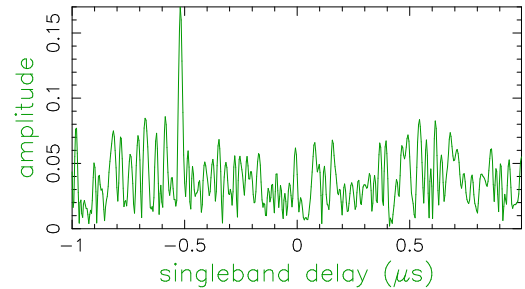
VLBA\_LA - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



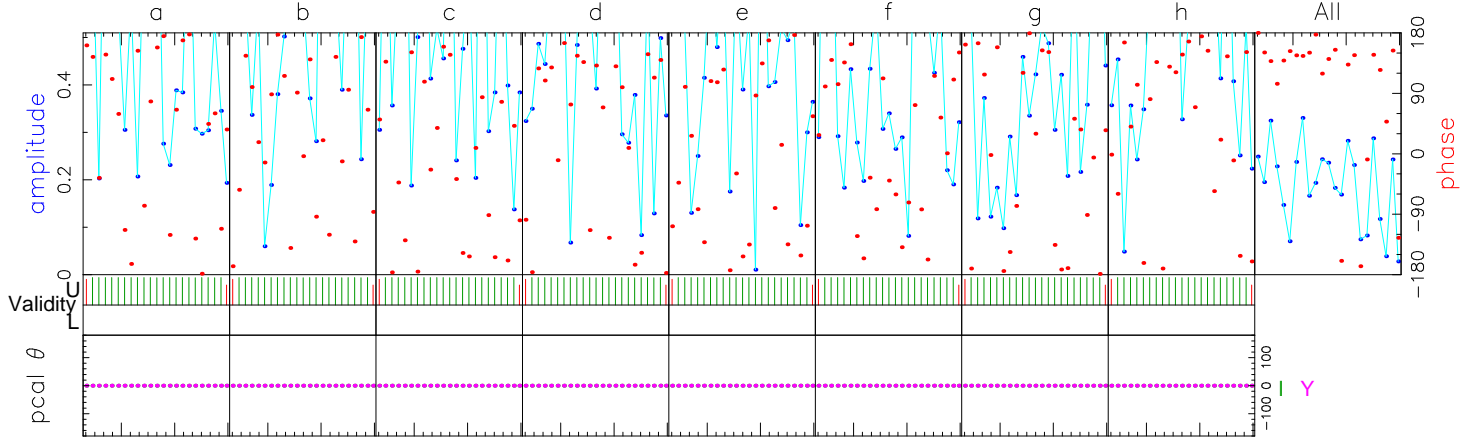
Fringe quality 0

SNR 5.9  
 Int time 162.108  
 Amp 0.170  
 Phase 146.4  
 PFD 3.4e-01  
 Delays (us)  
 SBD -0.518991  
 MBD -0.005661  
 Fringe rate (Hz)  
 -0.028972  
 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  
 2021:039:060650  
 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		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Y	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		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-2.18794032410E+03				-2.18741903787E+03				-5.66123E-03	+/- 1.8E-04
Sband delay (usec)	-2.18793802937E+03				-1.4123136E+01				-5.18991E-01	+/- 1.5E-03
Phase delay (usec)	-2.18741903325E+03				-2.1999999E-07				4.62302E-06	+/- 6.1E-07
Delay rate (us/s)	1.82823674292E+00				1.82823707237E+00				-3.29450E-07	+/- 6.5E-09
Total phase (deg)			77.8		9.44603999518E-06				146.4	+/- 19.4
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PCal period (AP's) 5, 5										
sb window (us)									-1.000	1.000
SampCntNorm: enabled									-0.008	0.008
mb window (us)									-0.011	0.011
nr window (ns/s)									0.00	0.00
ion window (TEC)									0.00	0.00

I: az 94.8 el 35.9 pa -57.5 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11153.853 -330.474 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/IY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/IY.W.237.1JFKZ

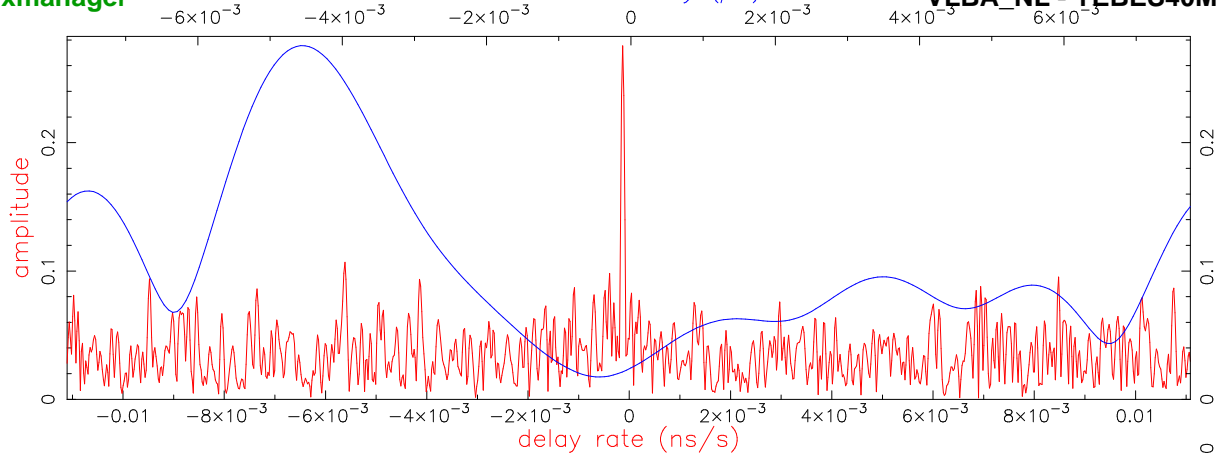
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, nY

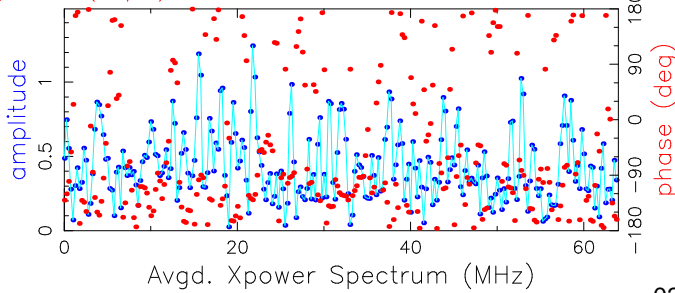
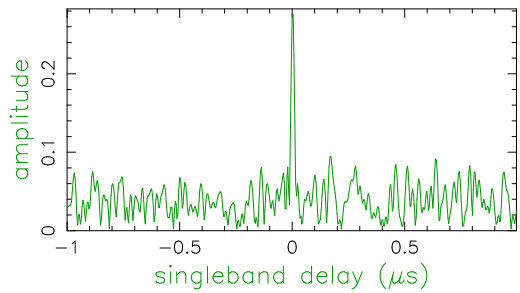
VLBA\_NL - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



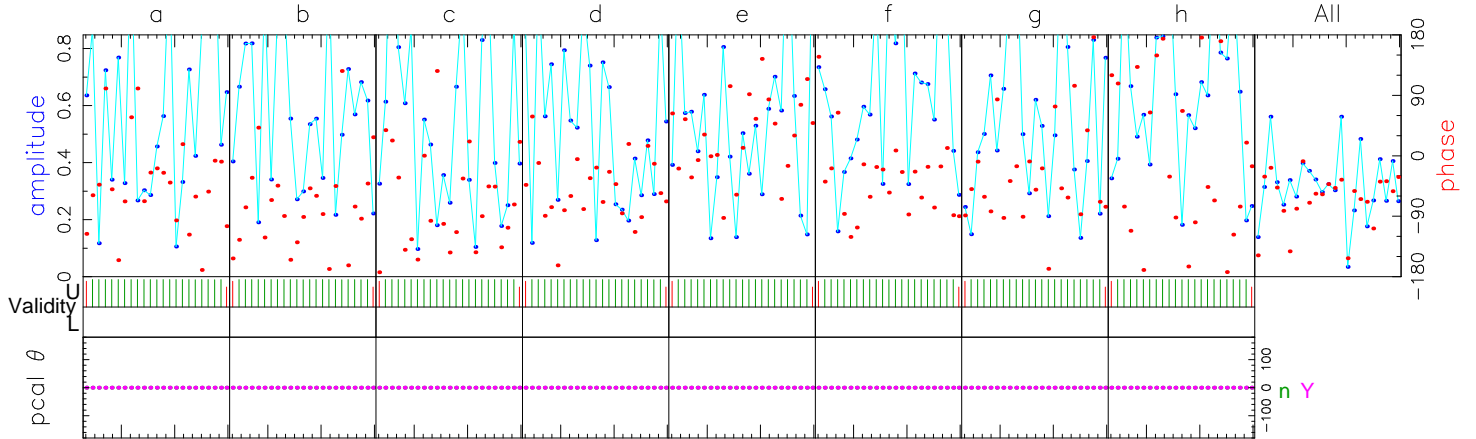
Fringe quality 9

SNR 9.8  
 Int time 162.108  
 Amp 0.283  
 Phase -53.0  
 PFD 1.5e-14  
 Delays (us)  
 SBD 0.001922  
 MBD -0.004592  
 Fringe rate (Hz)  
 -0.010815  
 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  
 2021:039:060645  
 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
	-47.9	-94.4	-58.1	-52.4	19.5	-35.7	-47.9	-125.9	Phase	-53.0
	0.3	0.4	0.3	0.4	0.3	0.5	0.3	0.3	Ampl.	0.3
	234.5	257.9	146.0	257.2	256.7	257.3	256.3	255.5	Sbd box	257.5
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.51880651589E+02	Apriori delay (usec)	5.51885243350E+02	Resid mbdelay (usec)	-4.59176E-03	+/-	1.1E-04
Sband delay (usec)	5.51887165600E+02	Apriori clock (usec)	-1.3473882E+01	Resid sbdelay (usec)	1.92225E-03	+/-	8.7E-04
Phase delay (usec)	5.51885241676E+02	Apriori clockrate (us/s)	3.8000001E-07	Resid phdelay (usec)	-1.67371E-06	+/-	3.7E-07
Delay rate (us/s)	1.56340173655E+00	Apriori rate (us/s)	1.56340185952E+00	Resid rate (us/s)	-1.22977E-07	+/-	3.9E-09
Total phase (deg)	55.1	Apriori accel (us/s/s)	-2.47693876070E-06	Resid phase (deg)	-53.0	+/-	11.6

ph/seg (deg)	40.2	Theor.	27.9	Amplitude	0.283 +/- 0.029	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	44.4		48.7	Search (1024X32)	0.269	PCal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	45.9		16.5	Inc. seg. avg.	0.287	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	33.6		28.7	Inc. frq. avg.	0.328	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

n: az 111.3 el 45.7 pa -46.4 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -9544.372 86.871 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/nY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/nY.W.181.1JFKZ

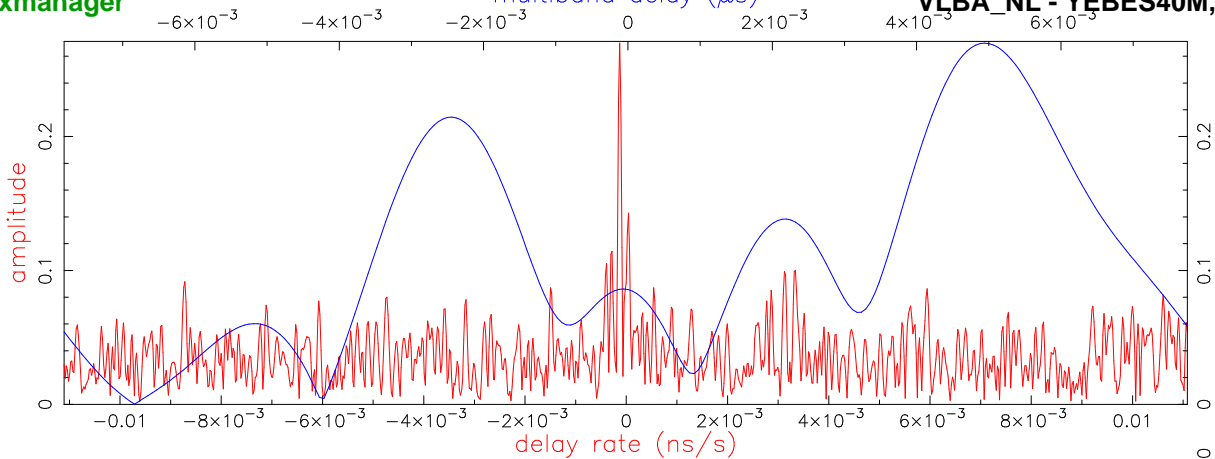
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, nY

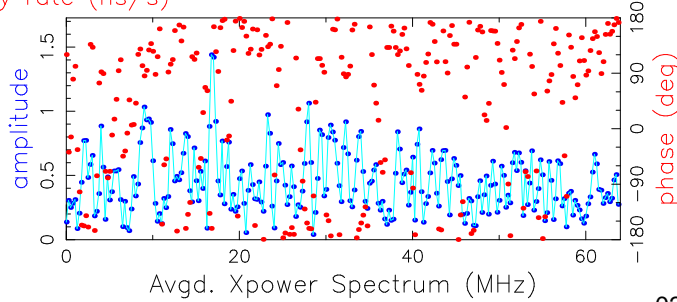
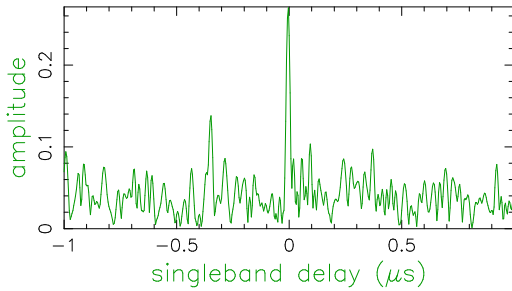
VLBA\_NL - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



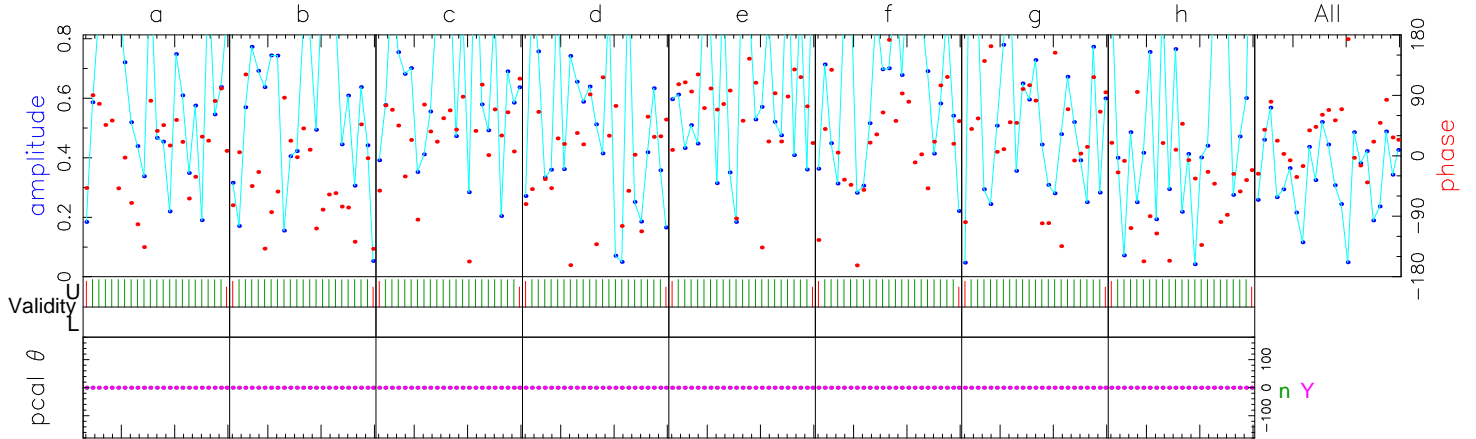
Fringe quality 9

SNR 9.4  
 Int time 162.108  
 Amp 0.271  
 Phase 30.7  
 PFD 7.7e-13  
 Delays (us)  
 SBD -0.004819  
 MBD 0.004930  
 Fringe rate (Hz)  
 -0.010986  
 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  
 2021:039:060646  
 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
	32.3	-44.3	49.1	12.4	83.4	33.1	59.5	-43.5	Phase	30.7
	0.4	0.3	0.5	0.2	0.5	0.3	0.3	0.3	Ampl.	0.3
	254.9	254.9	255.7	443.6	256.1	254.5	254.8	254.5	Sbd box	255.8
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.51874548526E+02		Apriori delay (usec)		5.51885243350E+02		Resid mbdelay (usec)		4.93018E-03	+/- 1.2E-04
Sband delay (usec)	5.51880423850E+02		Apriori clock (usec)		-1.3473882E+01		Resid sbdelay (usec)		-4.81950E-03	+/- 9.1E-04
Phase delay (usec)	5.51885244321E+02		Apriori clockrate (us/s)		3.8000001E-07		Resid phdelay (usec)		9.70940E-07	+/- 3.8E-07
Delay rate (us/s)	1.56340173460E+00		Apriori rate (us/s)		1.56340185952E+00		Resid rate (us/s)		-1.24921E-07	+/- 4.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.47693876070E-06		Resid phase (deg)		30.7	+/- 12.1

ph/seg (deg) 47.0 29.1 Amplitude 0.271 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 54.5 50.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.7 17.2 Inc. seg. avg. 0.301 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.1 30.0 Inc. frq. avg. 0.348 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 n: az 111.3 el 45.7 pa -46.4 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -9544.372 86.871 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/nY..1JFJKZ Output file: /Exps/c202c/v1/1234/No0038/nY.W.199.1JFJKZ

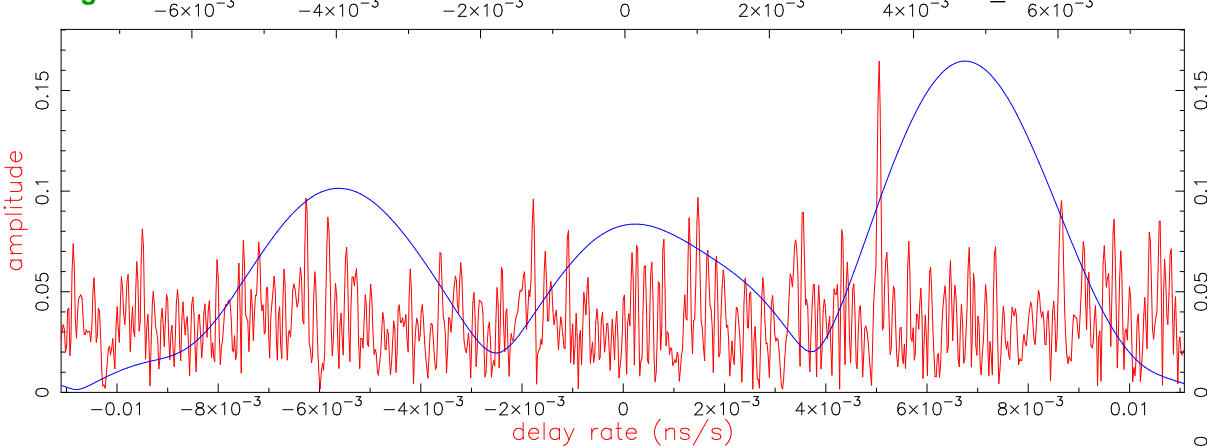
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, nY

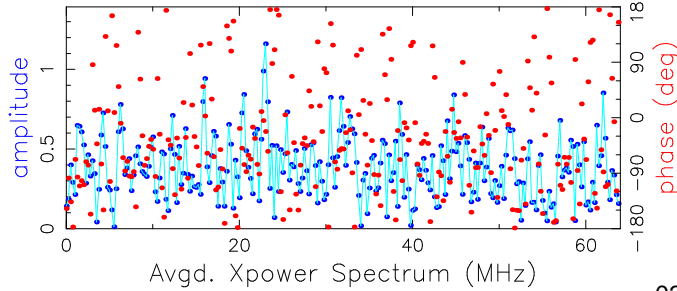
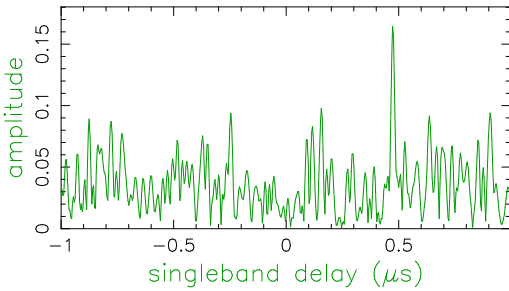
VLBA\_NL - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



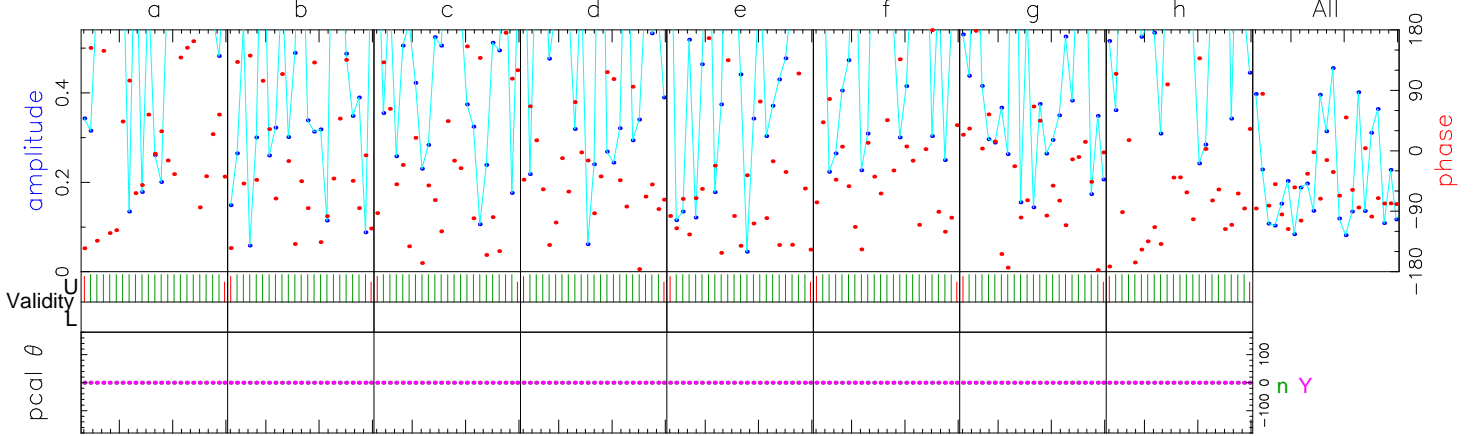
Fringe quality 0

SNR 5.8  
 Int time 162.108  
 Amp 0.180  
 Phase -63.6  
 PFD 6.6e-01  
 Delays (us)  
 SBD 0.473600  
 MBD 0.004775  
 Fringe rate (Hz) 0.444984  
 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  
 2021:039:060648  
 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
	-64.8	-47.3	-84.7	-46.9	-127.9	-40.0	-23.9	-87.1	Phase	-63.6
	0.1	0.1	0.1	0.4	0.2	0.3	0.2	0.3	Ampl.	0.2
	211.7	271.0	389.4	378.6	248.3	378.7	436.8	377.9	Sbd box	378.2
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.52358768181E+02		Apriori delay (usec)		5.51885243350E+02		Resid mbdelay (usec)		4.77483E-03	+/- 1.9E-04
Sband delay (usec)	5.52358843350E+02		Apriori clock (usec)		-1.3473882E+01		Resid sbdelay (usec)		4.73600E-01	+/- 1.5E-03
Phase delay (usec)	5.51885241342E+02		Apriori clockrate (us/s)		3.8000001E-07		Resid phdelay (usec)		-2.00770E-06	+/- 6.3E-07
Delay rate (us/s)	1.56340691961E+00		Apriori rate (us/s)		1.56340185952E+00		Resid rate (us/s)		5.06008E-06	+/- 6.7E-09
Total phase (deg)	44.5		Apriori accel (us/s/s)		-2.47693876070E-06		Resid phase (deg)		-63.6	+/- 19.9

	RMS	Theor.	Amplitude	0.180 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	49.8	47.7	Search (1024X32)	0.162	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	77.0	83.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	36.1	28.2	Inc. seg. avg.	0.175	Sample rate(MSamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	64.6	49.1	Inc. frq. avg.	0.188	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

n: az 111.3 el 45.7 pa -46.4 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -9544.372 86.871 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/nY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/nY.W.218.1JFKZ



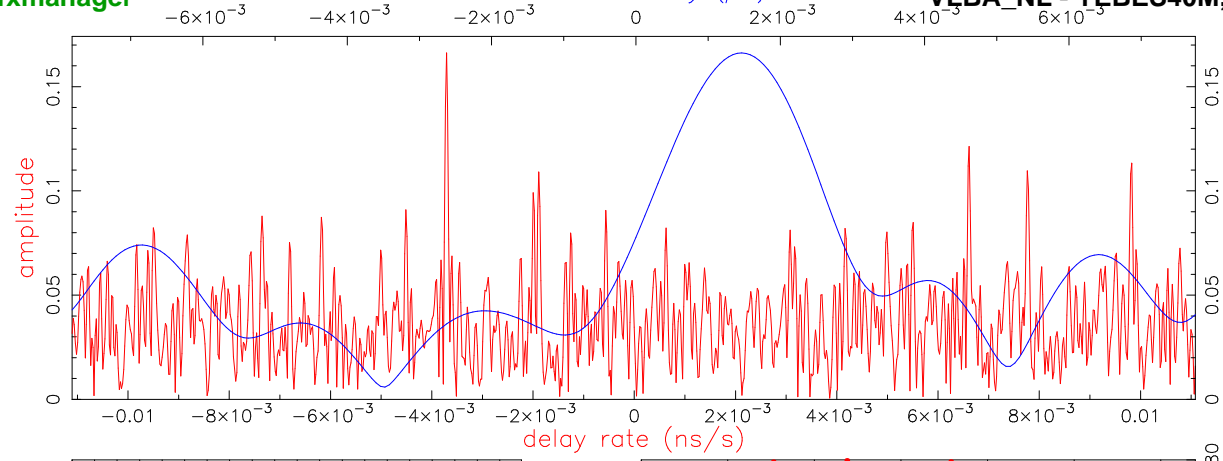
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

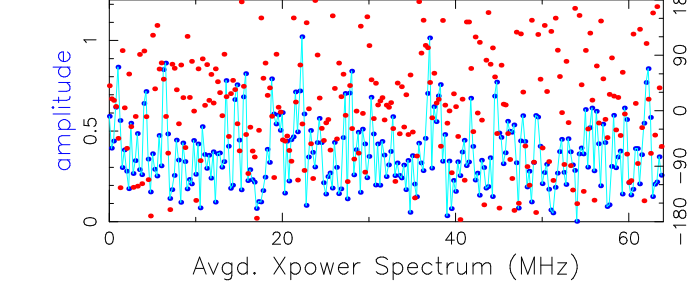
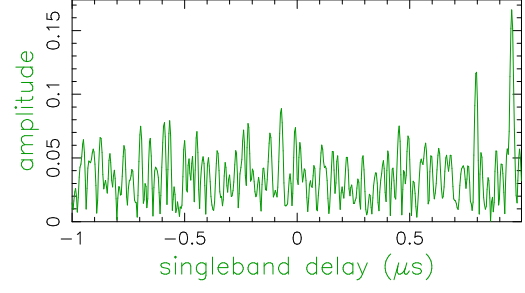
0235+164.1JFKZ, No0038, nY

VLBA\_NL - YEBES40M, fgroup W, pol RL

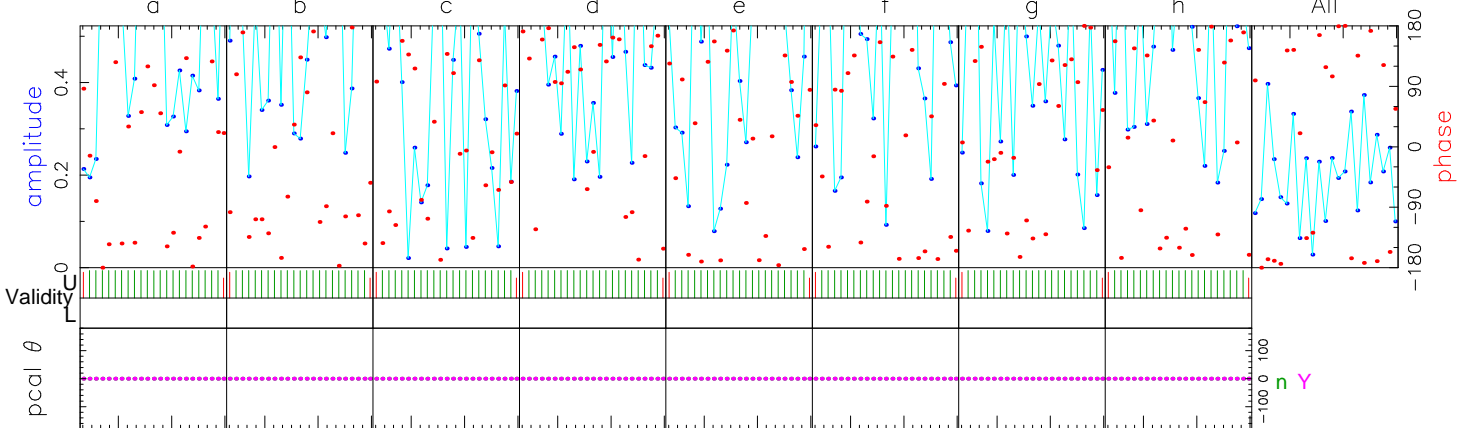
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 5.8  
 Int time 162.108  
 Amp 0.174  
 Phase 172.0  
 PFD 5.9e-01  
 Delays (us)  
 SBD 0.953081  
 MBD 0.001463  
 Fringe rate (Hz) -0.327268  
 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  
 2021:039:060650  
 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
138.9	-125.1	-178.0	161.7	149.5	160.7	160.0	-164.2	160.0	Phase	172.0
0.1	0.2	0.1	0.3	0.2	0.3	0.1	0.2	0.2	Ampl.	0.2
247.4	397.8	471.6	500.7	431.6	500.0	130.4	502.3	501.0	Sbd box	501.0
U/L 319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
n 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:Y 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:Y 0:0	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	1000	PC amp	
Y 1000	1000	1000	1000	1000	1000	1000	1000	1000		
n 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)	5.52839831494E+02		Apriori delay (usec)	5.51885243350E+02		Resid mbdelay (usec)	1.46314E-03	+/-	1.9E-04	
Sband delay (usec)	5.52838324100E+02		Apriori clock (usec)	-1.3473882E+01		Resid sbdelay (usec)	9.53081E-01	+/-	1.5E-03	
Phase delay (usec)	5.51885248784E+02		Apriori clockrate (us/s)	3.8000001E-07		Resid phdelay (usec)	5.43425E-06	+/-	6.3E-07	
Delay rate (us/s)	1.56339813804E+00		Apriori rate (us/s)	1.56340185952E+00		Resid rate (us/s)	-3.72149E-06	+/-	6.6E-09	
Total phase (deg)		280.1	Apriori accel (us/s/s)	-2.47693876070E-06		Resid phase (deg)	172.0	+/-	19.8	

ph/seg (deg) 51.6 47.5 Search (1024X32) 0.160 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 62.1 82.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.2 28.0 Inc. seg. avg. 0.160 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.3 48.9 Inc. frq. avg. 0.176 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 n: az 111.3 el 45.7 pa -46.4 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -9544.372 86.871 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/nY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/nY.W.236.1JFKZ

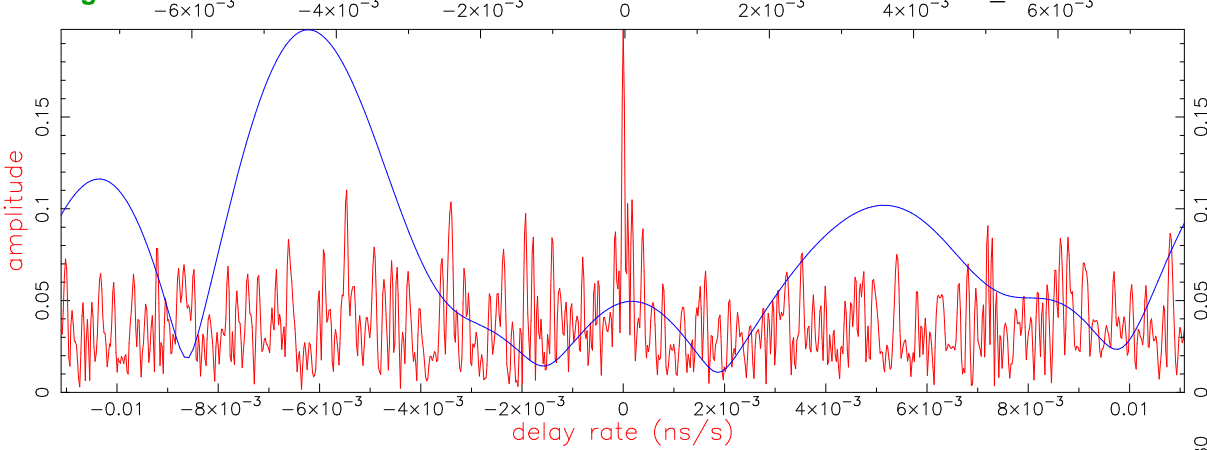
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oY

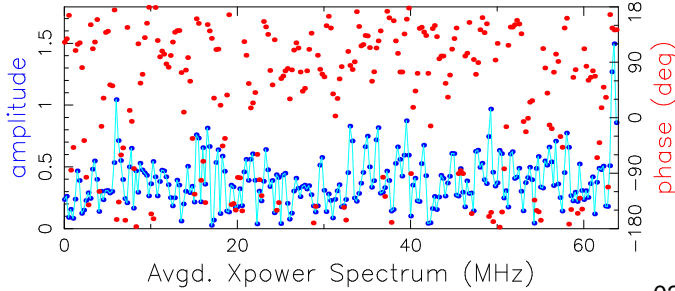
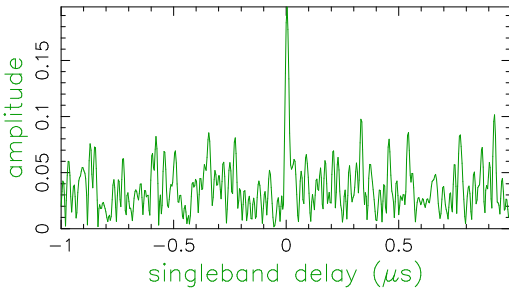
VLBA\_OV - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



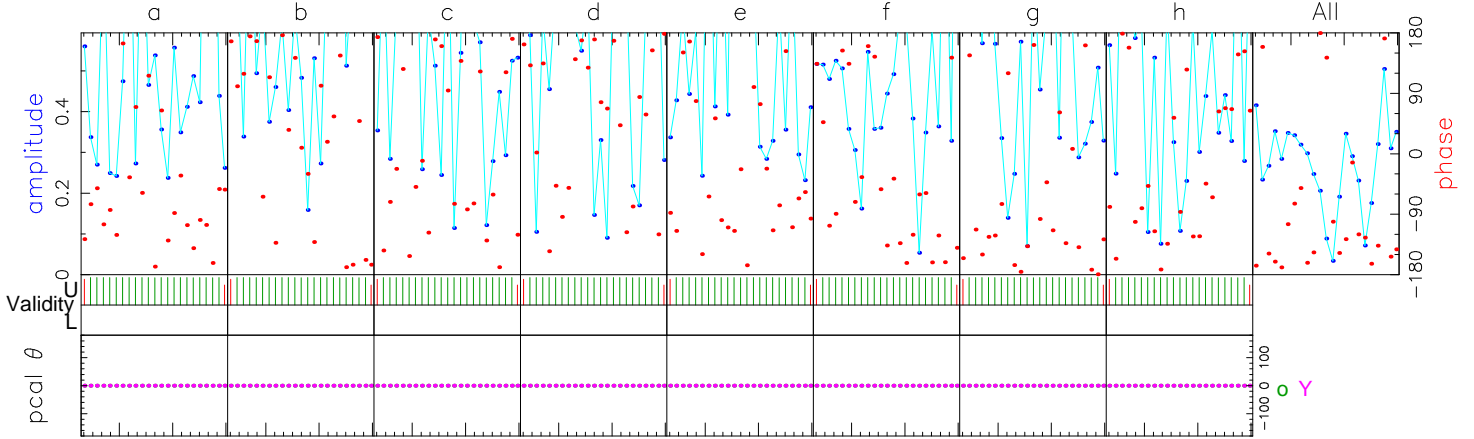
Fringe quality 0

SNR 6.9  
 Int time 162.108  
 Amp 0.198  
 Phase -143.9  
 PFD 8.6e-04  
 Delays (us)  
 SBD 0.003531  
 MBD -0.004389  
 Fringe rate (Hz)  
 0.000917  
 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  
 2021:039:060645  
 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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-5.24702295585E+03	Apriori delay (usec)	-5.24703419219E+03	Resid mbdelay (usec)	-4.38866E-03	+/-	1.6E-04
Sband delay (usec)	-5.24703066144E+03	Apriori clock (usec)	7.6828642E+00	Resid sbdelay (usec)	3.53075E-03	+/-	1.3E-03
Phase delay (usec)	-5.24703419674E+03	Apriori clockrate (us/s)	-2.1999999E-07	Resid phdelay (usec)	-4.54682E-06	+/-	5.3E-07
Delay rate (us/s)	1.92155925587E+00	Apriori rate (us/s)	1.92155924545E+00	Resid rate (us/s)	1.04247E-08	+/-	5.6E-09
Total phase (deg)	-94.0	Apriori accel (us/s/s)	2.64913619247E-05	Resid phase (deg)	-143.9	+/-	16.6

ph/seg (deg)	46.8	Theor.	39.9	Amplitude	0.198 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	65.3	Search (1024X32)	0.189	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	38.8	Interp.	0.000	Bits/sample: 2x2		mb window (us)	-0.008 0.008
amp/frq (%)	39.8	Inc. seg. avg.	0.217	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011
		Inc. frq. avg.	0.219	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00

o: az 88.3 el 26.2 pa -56.2 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11714.980 256.434 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oY.W.187.1JFKZ

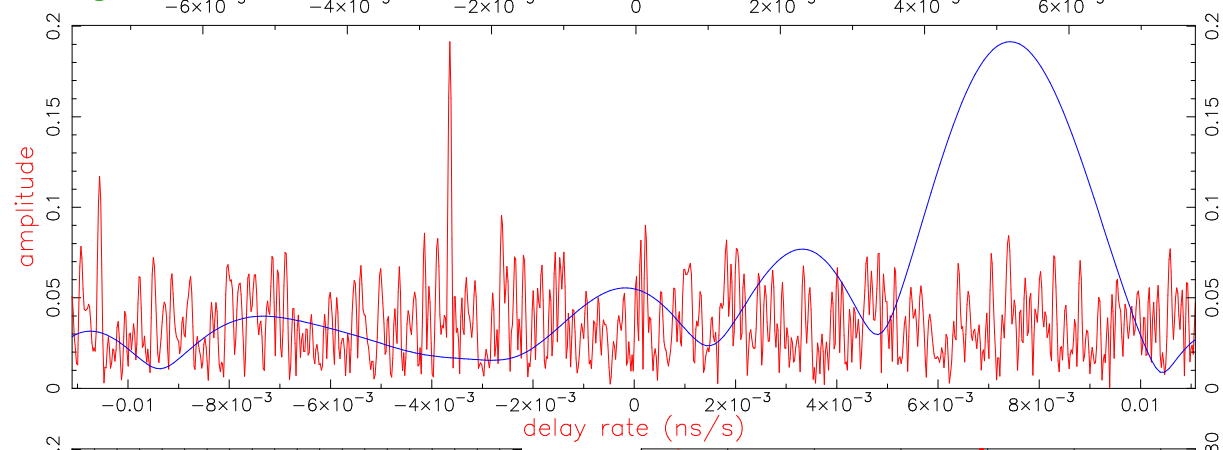
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oY

VLBA\_OV - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



Fringe quality 0

SNR 6.7

Int time 162.108

Amp 0.200

Phase 142.3

PFD 3.6e-03

Delays (us)

SBD 0.871533

MBD 0.005203

Fringe rate (Hz) -0.321030

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

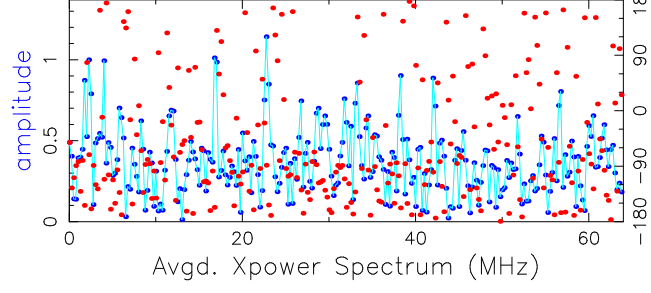
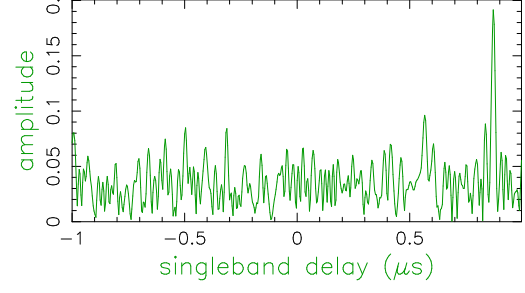
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2020:247:085004

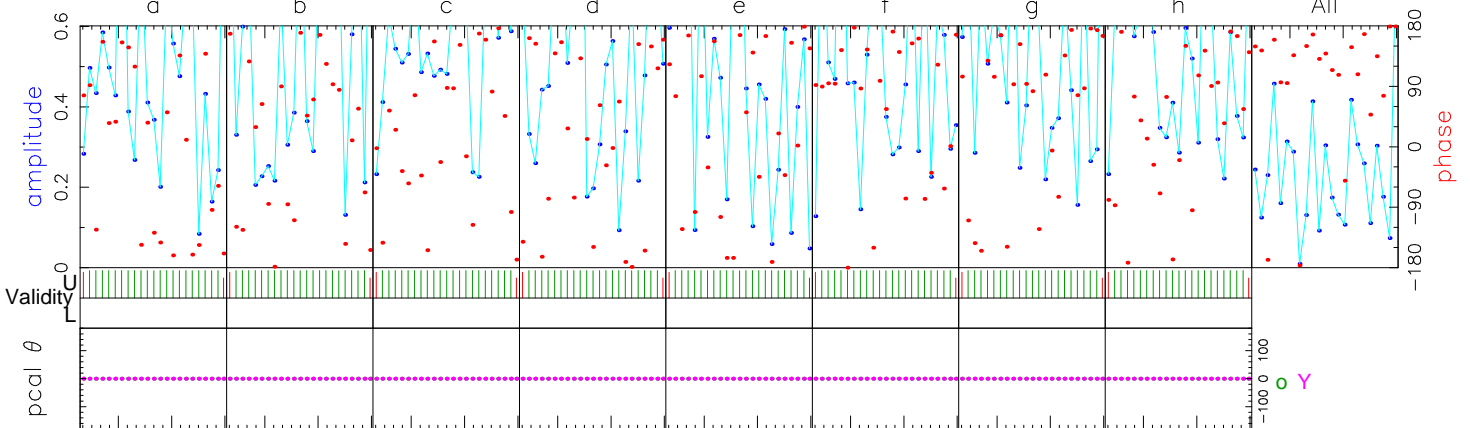
RA & Dec (J2000)

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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-5.24616961435E+03	Apriori delay (usec)	-5.24703419219E+03	Resid mbdelay (usec)	5.20284E-03	+/-	1.6E-04
Sband delay (usec)	-5.24616265919E+03	Apriori clock (usec)	7.6828642E+00	Resid sbdelay (usec)	8.71533E-01	+/-	1.3E-03
Phase delay (usec)	-5.24703418770E+03	Apriori clockrate (us/s)	-2.1999999E-07	Resid phdelay (usec)	4.49345E-06	+/-	5.4E-07
Delay rate (us/s)	1.92155559489E+00	Apriori rate (us/s)	1.92155924545E+00	Resid rate (us/s)	-3.65056E-06	+/-	5.8E-09
Total phase (deg)	-167.8	Apriori accel (us/s/s)	2.64913619247E-05	Resid phase (deg)	142.3	+/-	17.2

ph/seg (deg)	50.3	Theor.	41.2	Amplitude	0.200 +/- 0.030	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	78.0	Search (1024X32)	0.187	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	23.6	Inc. seg. avg.	0.195	Inc. frq. avg.	0.191	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	29.6	Inc. frq. avg.	0.191			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

o: az 88.3 el 26.2 pa -56.2 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11714.980 256.434 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oY.W.201.1JFKZ

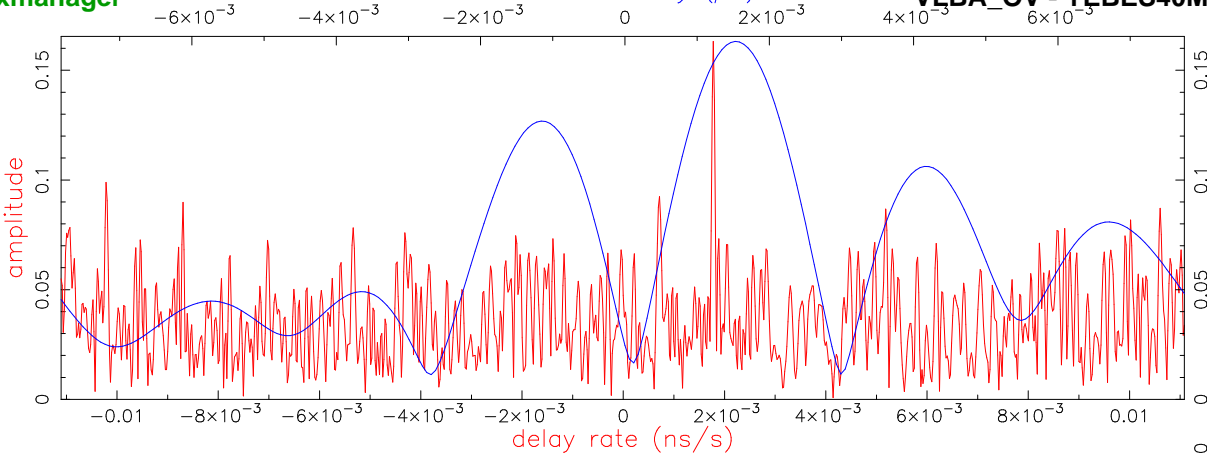
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oY

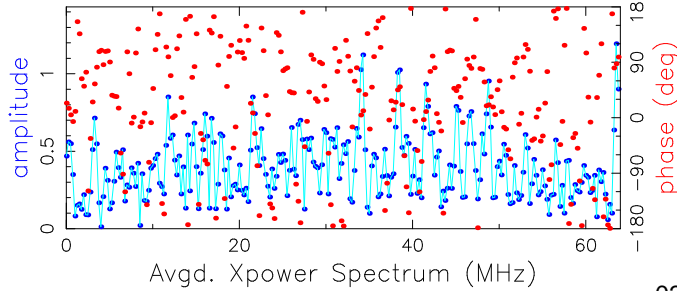
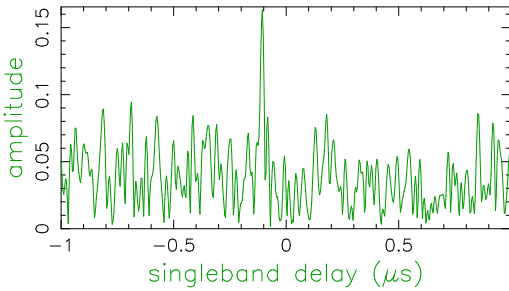
VLBA\_OV - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



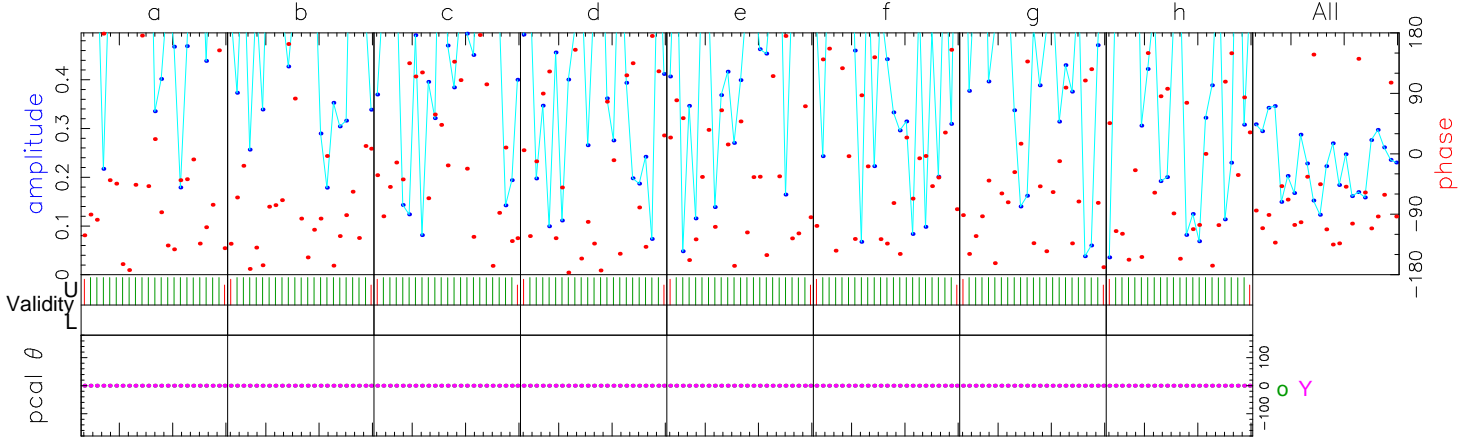
Fringe quality 0

SNR 5.7  
 Int time 162.108  
 Amp 0.165  
 Phase -97.6  
 PFD 7.7e-01  
 Delays (us)  
 SBD -0.106227  
 MBD 0.001516  
 Fringe rate (Hz)  
 0.157286  
 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  
 2021:039:060649  
 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
	-99.5	-94.4	-46.1	-171.6	-16.0	-88.7	-92.7	-103.8	Phase	-97.6
	0.4	0.3	0.1	0.2	0.1	0.1	0.3	0.2	Ampl.	0.2
	228.2	229.7	392.3	499.6	308.3	263.1	229.8	286.3	Sbd box	229.8
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-5.24714205129E+03		Apriori delay (usec)		-5.24703419219E+03		Resid mbdelay (usec)		1.51591E-03	+/- 1.9E-04
Sband delay (usec)	-5.24714041894E+03		Apriori clock (usec)		7.6828642E+00		Resid sbdelay (usec)		-1.06227E-01	+/- 1.5E-03
Phase delay (usec)	-5.24703419527E+03		Apriori clockrate (us/s)		-2.1999999E-07		Resid phdelay (usec)		-3.08257E-06	+/- 6.4E-07
Delay rate (us/s)	1.92156103400E+00		Apriori rate (us/s)		1.92155924545E+00		Resid rate (us/s)		1.78855E-06	+/- 6.7E-09
Total phase (deg)			Apriori accel (us/s/s)		2.64913619247E-05		Resid phase (deg)		-97.6	+/- 20.1

ph/seg (deg) 56.6 48.2 Search (1024X32) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 56.8 84.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 49.9 28.4 Inc. seg. avg. 0.172 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 66.4 49.6 Inc. frq. avg. 0.171 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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11714.980 256.434 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oY.W.224.1JFKZ

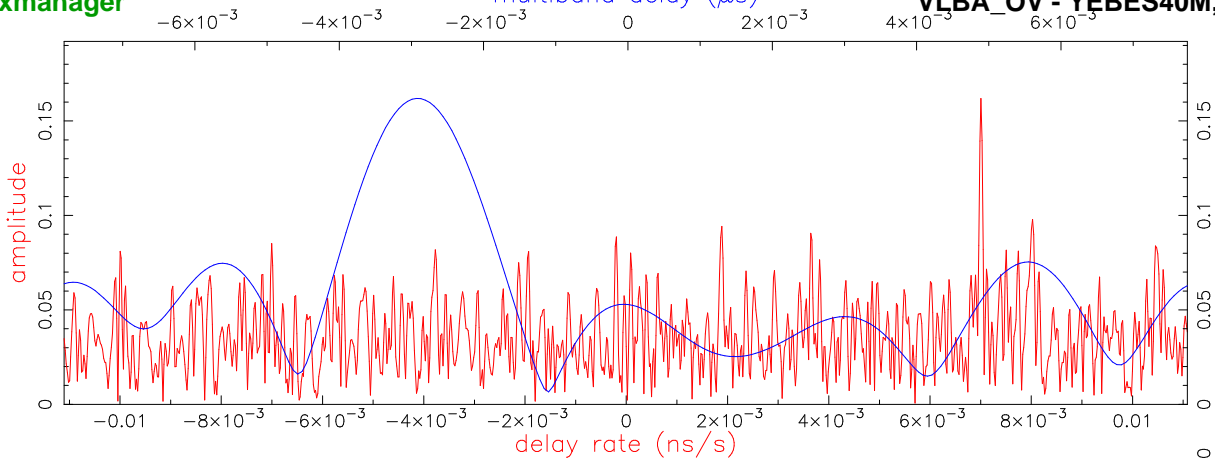
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, oY

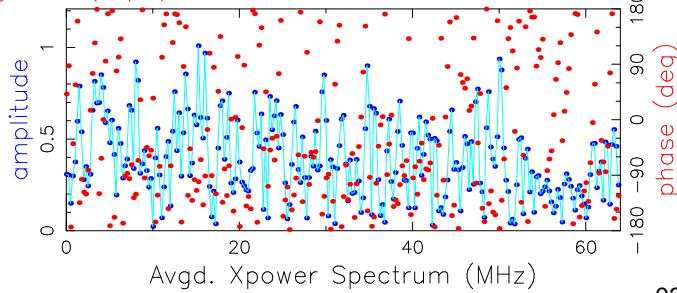
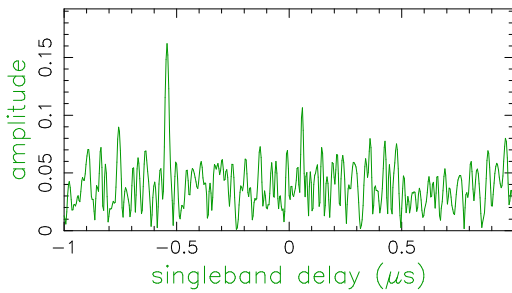
VLBA\_OV - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



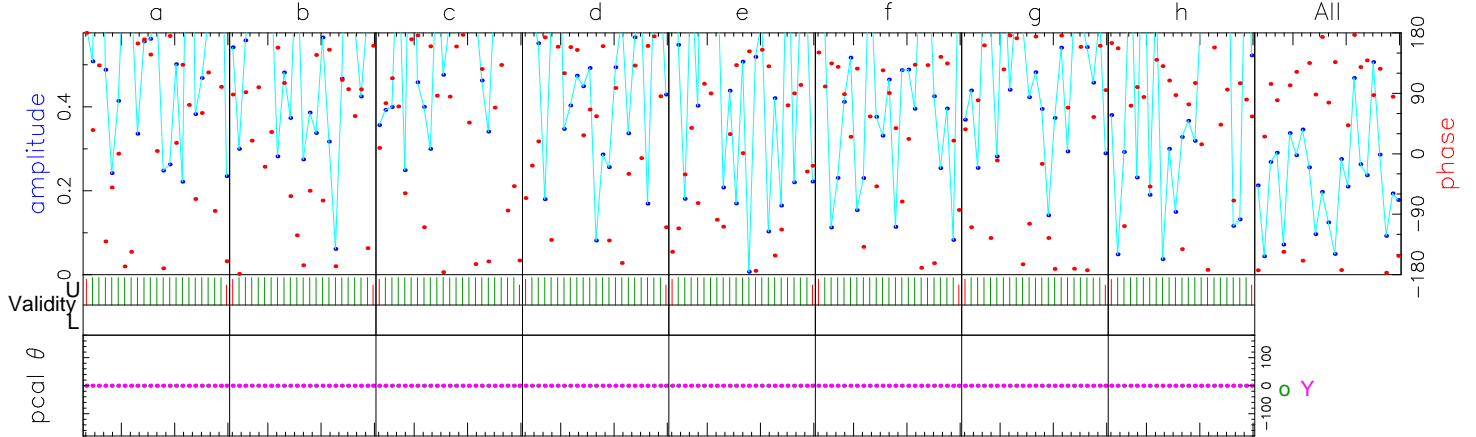
Fringe quality 0

SNR 5.6  
 Int time 162.108  
 Amp 0.192  
 Phase 131.3  
 PFD 8.7e-01  
 Delays (us)  
 SBD -0.542662  
 MBD -0.002904  
 Fringe rate (Hz)  
 0.617894  
 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  
 2021:039:060651  
 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	137.1	100.8	143.7	140.5	121.2	119.5	171.9	103.1	Phase	131.3
o	0.2	0.2	0.3	0.1	0.1	0.2	0.3	0.3	Ampl.	0.2
Y	272.3	415.9	116.5	152.5	389.1	62.1	118.5	275.9	Sbd box	118.1
o	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.24758397164E+03	Apriori delay (usec)	-5.24703419219E+03	Resid mbdelay (usec)	-2.90445E-03	+/-	1.9E-04
Sband delay (usec)	-5.24757685419E+03	Apriori clock (usec)	7.6828642E+00	Resid sbdelay (usec)	-5.42662E-01	+/-	1.5E-03
Phase delay (usec)	-5.24703418804E+03	Apriori clockrate (us/s)	-2.1999999E-07	Resid phdelay (usec)	4.14786E-06	+/-	6.4E-07
Delay rate (us/s)	1.92156627177E+00	Apriori rate (us/s)	1.92155924545E+00	Resid rate (us/s)	7.02632E-06	+/-	6.8E-09
Total phase (deg)	-178.7	Apriori accel (us/s/s)	2.64913619247E-05	Resid phase (deg)	131.3	+/-	20.3

ph/seg (deg)	51.9	Theor.	48.7	Search (1024X32)	0.161	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	84.6		85.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	25.5		28.7	Inc. seg. avg.	0.201	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	42.5		50.1	Inc. frq. avg.	0.187	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11714.980 256.434 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/oY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/oY.W.240.1JFKZ



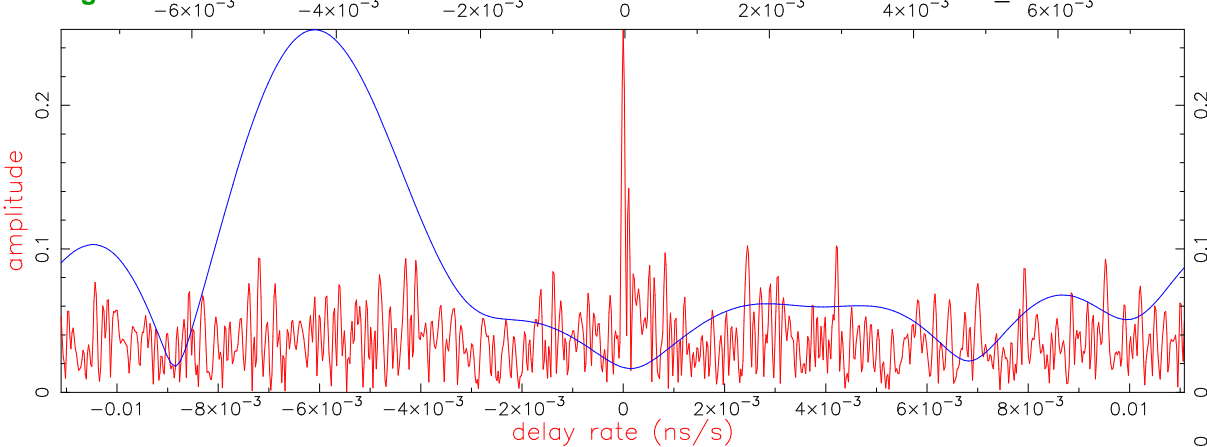
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pY

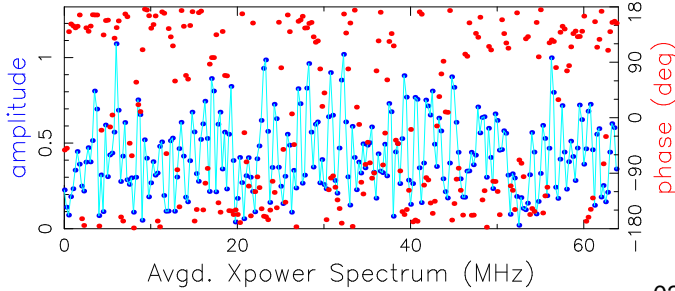
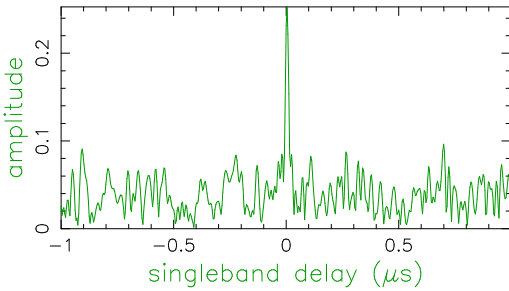
VLBA\_PT - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



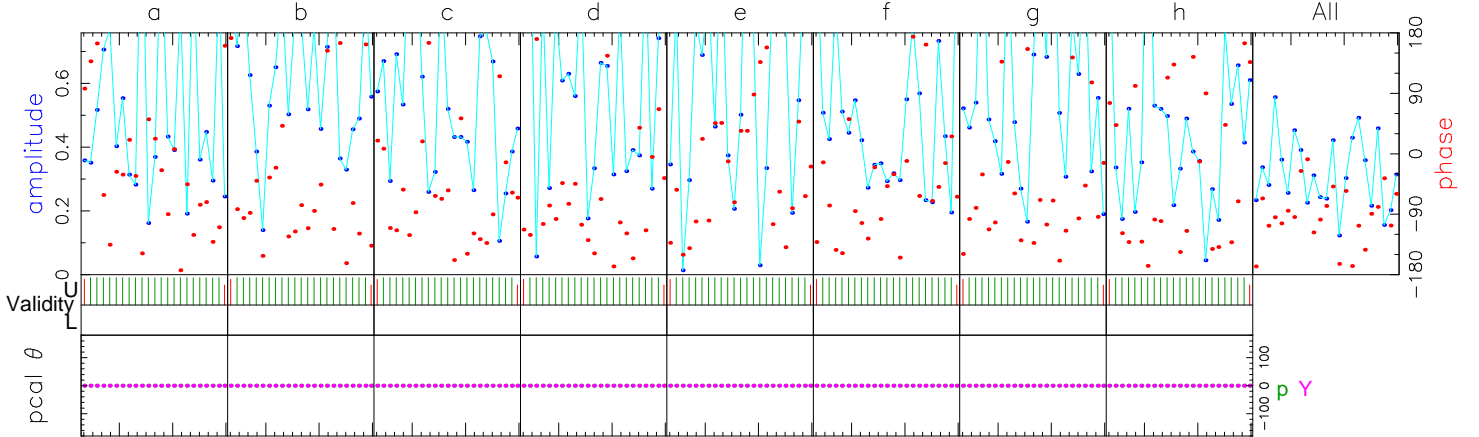
Fringe quality 9

SNR 8.8  
 Int time 162.108  
 Amp 0.253  
 Phase -90.8  
 PFD 2.4e-10  
 Delays (us)  
 SBD 0.003516  
 MBD -0.004303  
 Fringe rate (Hz) 0.000881  
 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  
 2021:039:060651  
 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
	-96.3	-105.9	-84.0	-97.9	-33.6	-83.4	-85.1	-163.2	Phase	-90.8
	0.2	0.3	0.3	0.4	0.2	0.3	0.4	0.1	Ampl.	0.3
	419.4	257.2	258.6	257.8	435.5	470.2	256.9	254.2	Sbd box	257.9
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	Mani 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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

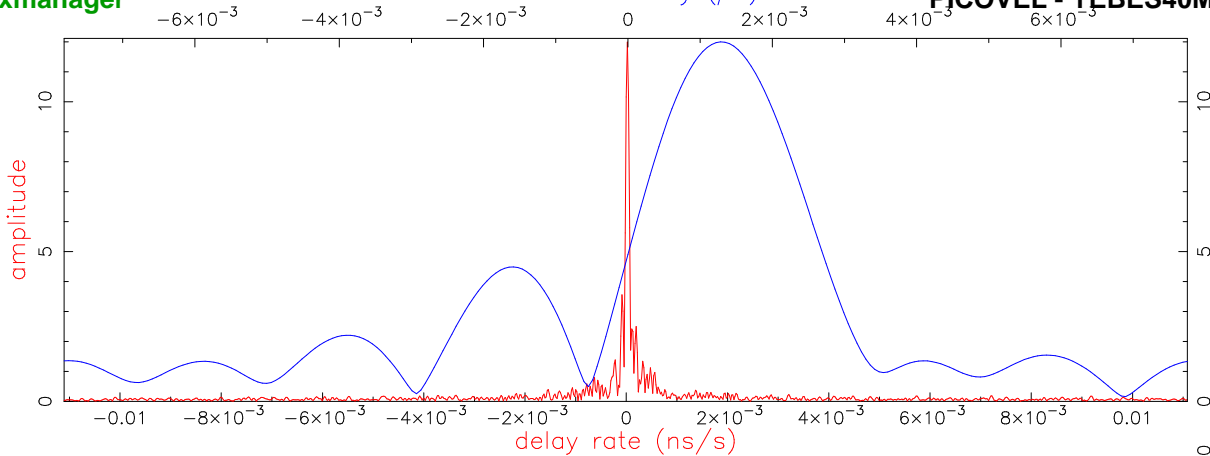
Group delay (usec)(sbd)	-2.61924224573E+03	Apriori delay (usec)	-2.61925356802E+03	Resid mbdelay (usec)	-4.30272E-03	+/-	1.2E-04
Sband delay (usec)	-2.61925005227E+03	Apriori clock (usec)	-1.3564590E+01	Resid sbdelay (usec)	3.51575E-03	+/-	9.8E-04
Phase delay (usec)	-2.61925357088E+03	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	-2.86944E-06	+/-	4.1E-07
Delay rate (us/s)	1.86794860383E+00	Apriori rate (us/s)	1.86794859381E+00	Resid rate (us/s)	1.00180E-08	+/-	4.4E-09
Total phase (deg)	-8.5	Apriori accel (us/s/s)	1.10635162413E-05	Resid phase (deg)	-90.8	+/-	13.0

ph/seg (deg)	41.9	Theor.	31.2	Amplitude	0.253 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	51.4		54.5	Search (1024X32)	0.244	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	38.6		18.4	Inc. seg. avg.	0.279	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	31.8		32.1	Inc. frq. avg.	0.267	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

p: az 92.6 el 34.4 pa -59.4 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11395.172 -473.537 simultaneous interpolator

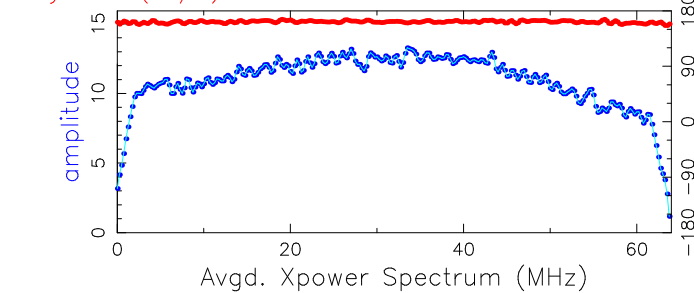
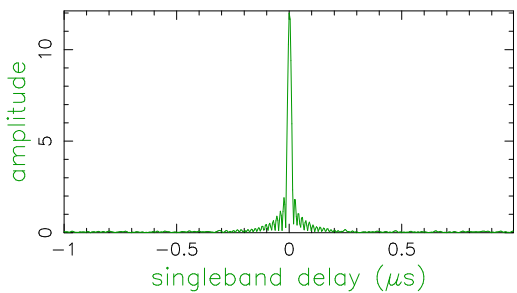
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/pY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/pY.W.244.1JFKZ

multiband delay ( $\mu$ s)



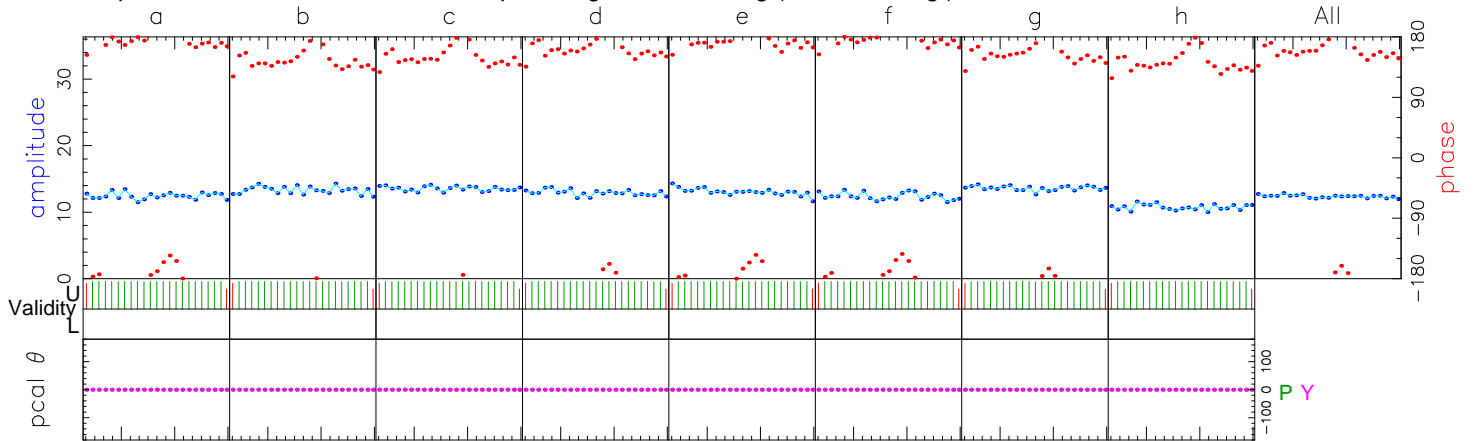
Fringe quality 7

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

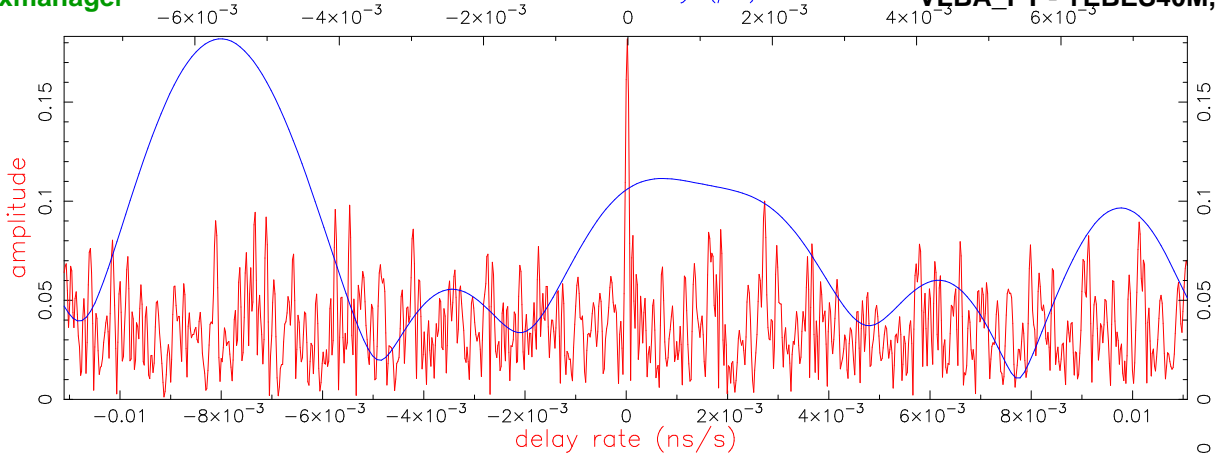
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pY

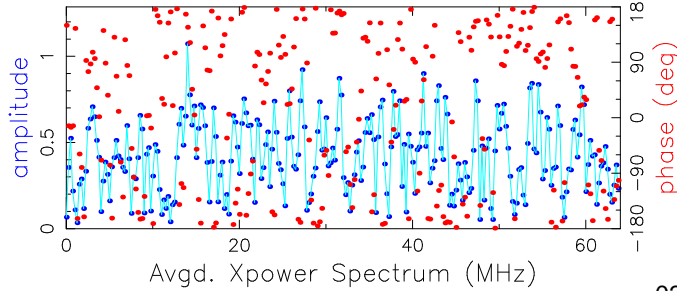
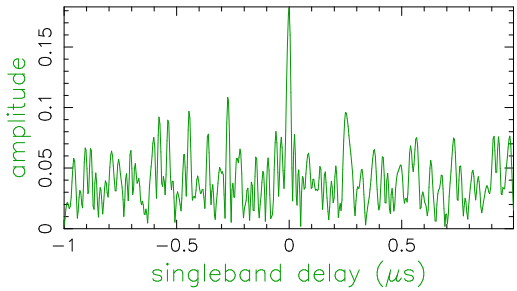
VLBA\_PT - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



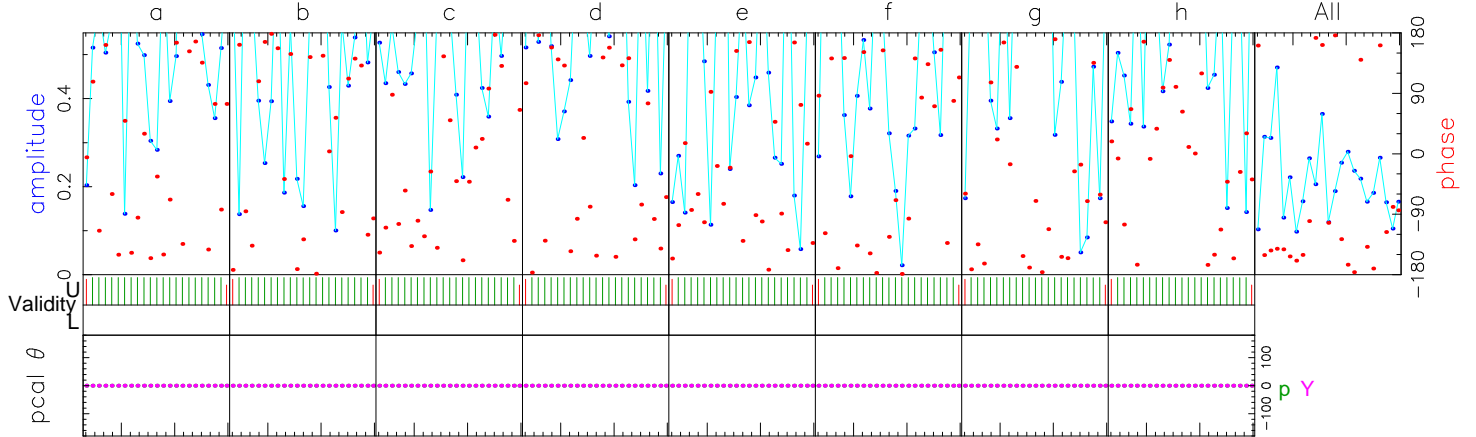
Fringe quality 0

SNR 6.4  
 Int time 162.108  
 Amp 0.183  
 Phase -155.7  
 PFD 2.4e-02  
 Delays ( $\mu$ s)  
 SBD -0.001180  
 MBD -0.005642  
 Fringe rate (Hz) 0.001507  
 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
	-154.9	177.3	-106.7	-161.6	-98.2	164.3	-155.3	32.7	Phase	-155.7
	0.2	0.3	0.1	0.3	0.3	0.3	0.3	0.1	Ampl.	0.2
	325.6	256.2	225.9	257.0	255.6	142.0	256.8	495.6	Sbd box	256.7
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	Mani 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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.61925920962E+03		Apriori delay (usec)		-2.61925356802E+03		Resid mbdelay (usec)		-5.64161E-03	+/- 1.7E-04
Sband delay (usec)	-2.61925474827E+03		Apriori clock (usec)		-1.3564590E+01		Resid sbdelay (usec)		-1.18025E-03	+/- 1.4E-03
Phase delay (usec)	-2.61925357293E+03		Apriori clockrate (us/s)		2.7999998E-07		Resid phdelay (usec)		-4.91820E-06	+/- 5.7E-07
Delay rate (us/s)	1.86794861095E+00		Apriori rate (us/s)		1.86794859381E+00		Resid rate (us/s)		1.71404E-08	+/- 6.0E-09
Total phase (deg)			Apriori accel (us/s/s)		1.10635162413E-05		Resid phase (deg)		-155.7	+/- 18.0

ph/seg (deg) 36.9 43.1 Amplitude 0.183 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 52.6 75.2 Interp. 0.177 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 79.1 25.4 Inc. seg. avg. 0.170 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 53.5 44.4 Inc. frq. avg. 0.221 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 p: az 92.6 el 34.4 pa -59.4 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11395.172 -473.537 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.258.1JFKZ

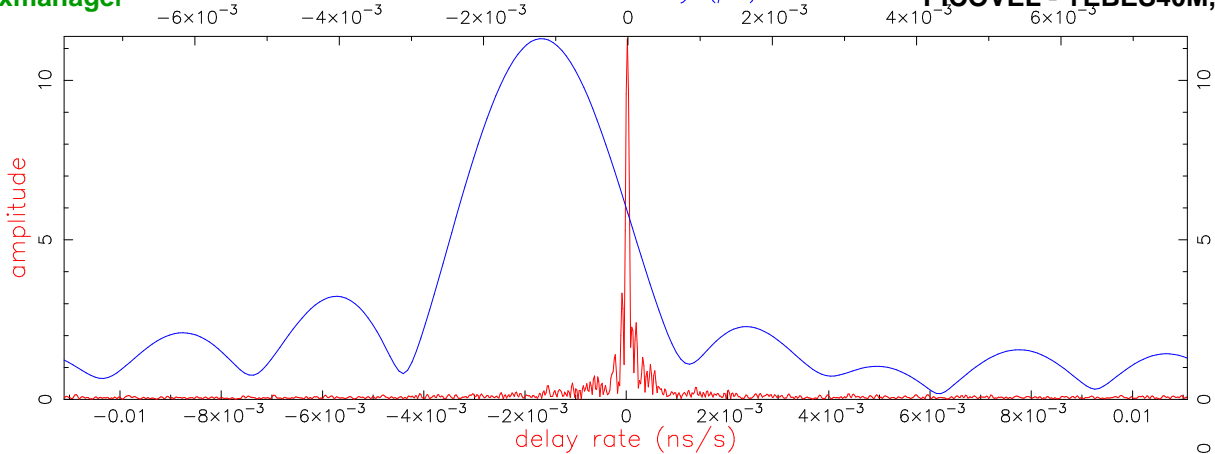
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, PY

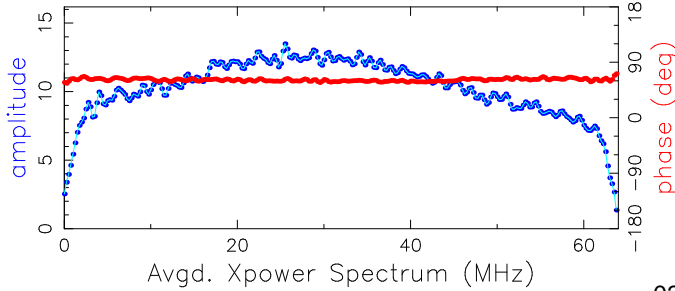
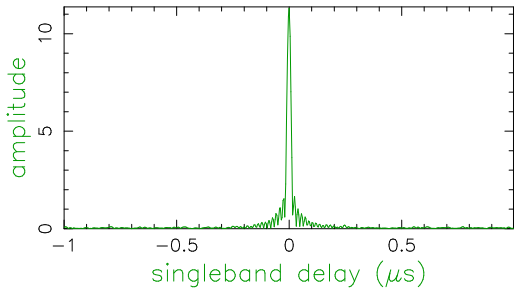
PICOVEL - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



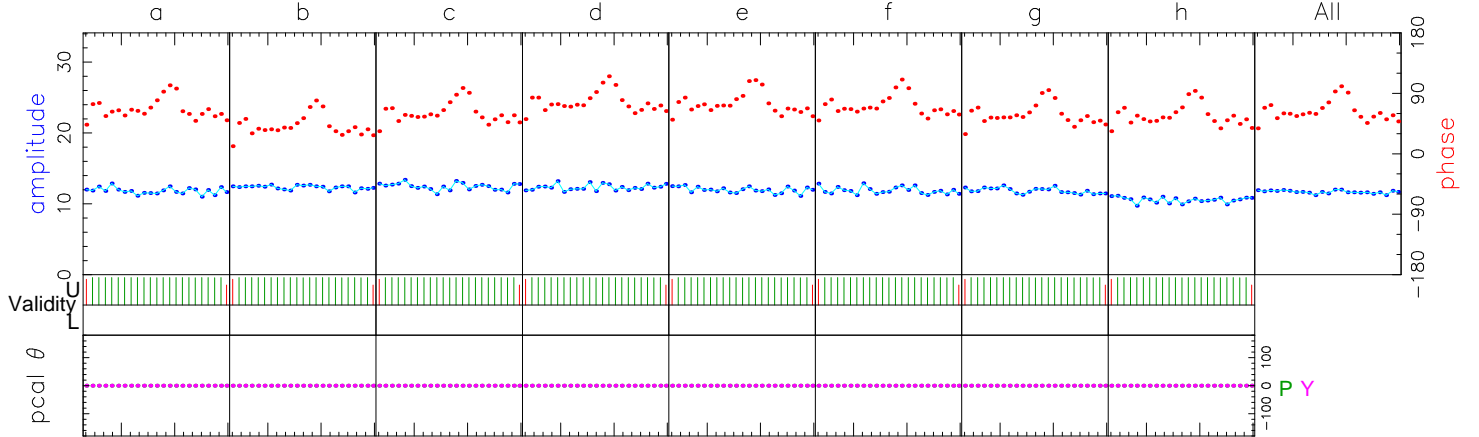
Fringe quality 7

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

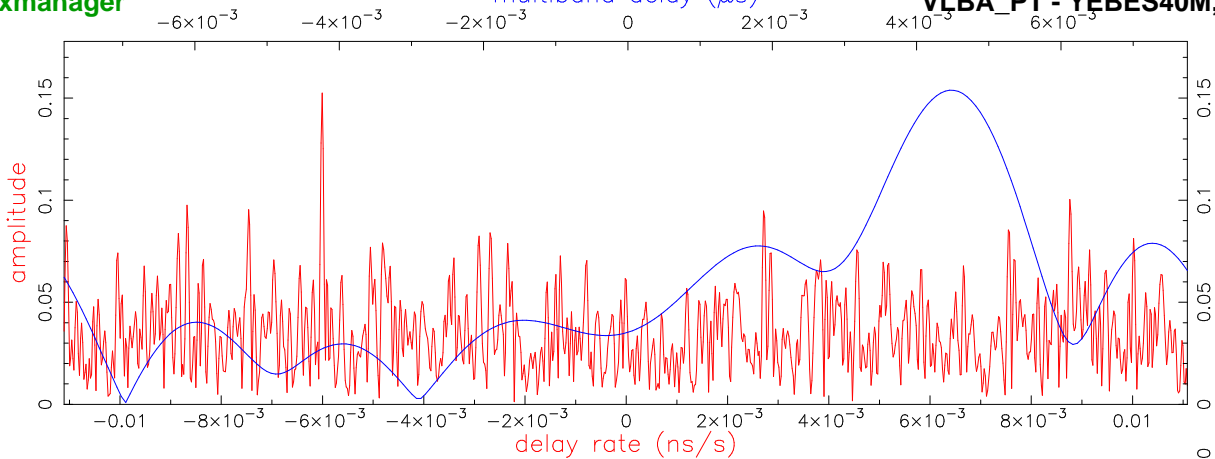
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pY

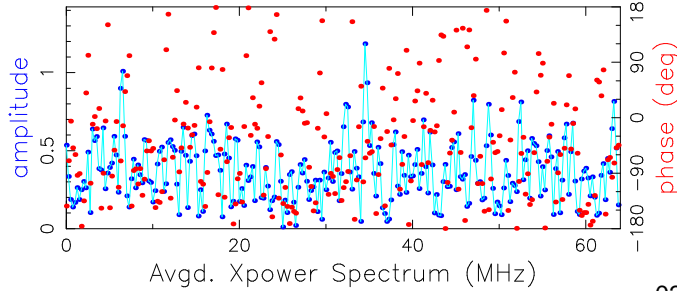
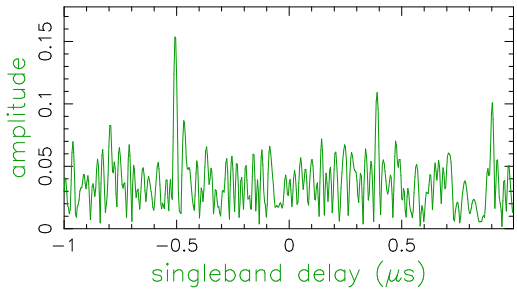
VLBA\_PT - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



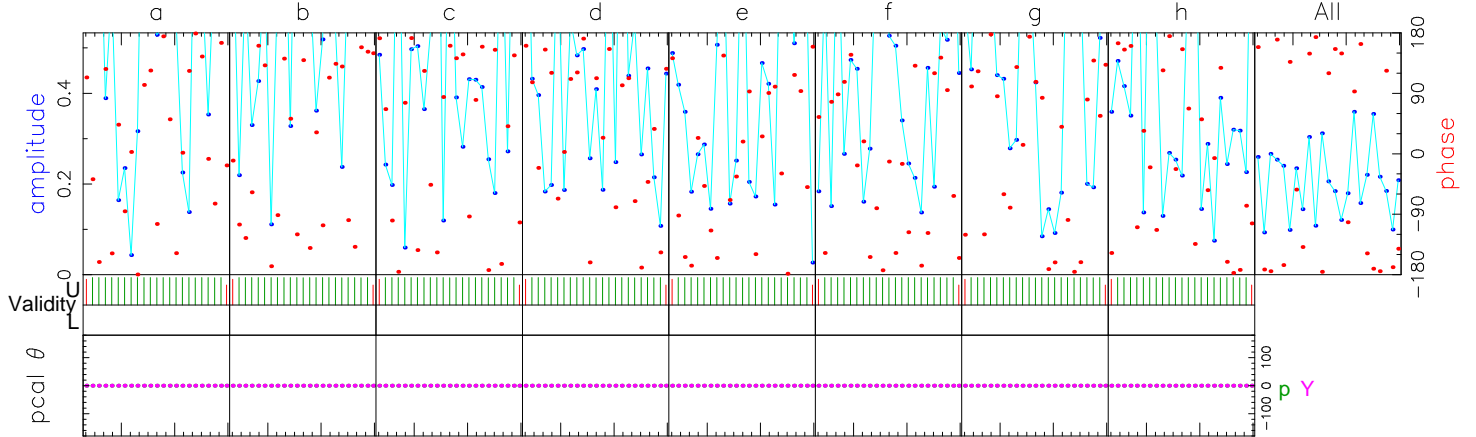
Fringe quality 0

SNR 5.5  
 Int time 162.108  
 Amp 0.178  
 Phase 174.1  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.506006  
 MBD 0.004332  
 Fringe rate (Hz)  
 -0.528549  
 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  
 2021:039:060654  
 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
	158.0	-175.5	-179.1	135.1	102.9	-162.0	161.4	-139.8	Phase	174.1
	0.2	0.3	0.3	0.2	0.0	0.1	0.2	0.2	Ampl.	0.2
	183.8	30.0	128.0	494.2	337.3	338.5	441.1	374.3	Sbd box	127.5
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	Mani 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	
									Tracks	
Group delay (usec)(sbd)	-2.61976486080E+03		Apriori delay (usec)		-2.61925356802E+03		Resid mbdelay (usec)		4.33221E-03	+/- 2.0E-04
Sband delay (usec)	-2.61975957452E+03		Apriori clock (usec)		-1.3564590E+01		Resid sbdelay (usec)		-5.06006E-01	+/- 1.6E-03
Phase delay (usec)	-2.61925356252E+03		Apriori clockrate (us/s)		2.7999998E-07		Resid phdelay (usec)		5.49850E-06	+/- 6.6E-07
Delay rate (us/s)	1.86794258347E+00		Apriori rate (us/s)		1.86794859381E+00		Resid rate (us/s)		-6.01034E-06	+/- 7.0E-09
Total phase (deg)			Apriori accel (us/s/s)		1.10635162413E-05		Resid phase (deg)		174.1	+/- 20.9

pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

p: az 92.6 el 34.4 pa -59.4 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11395.172 -473.537 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.271.1JFKZ



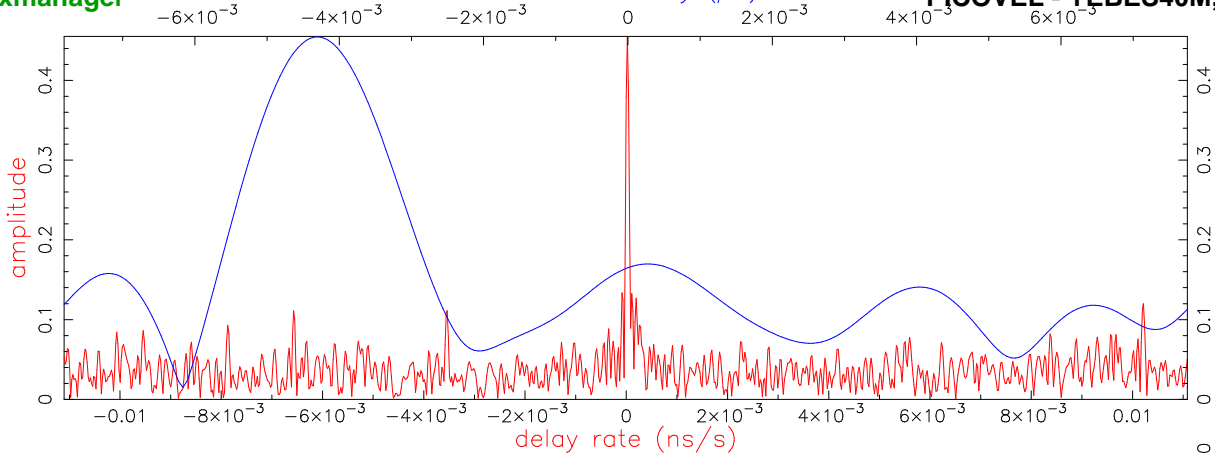
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFJKZ, No0038, PY

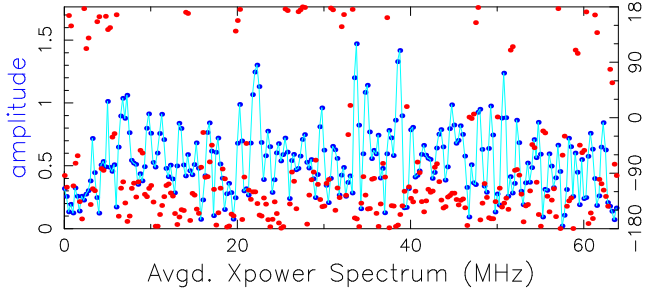
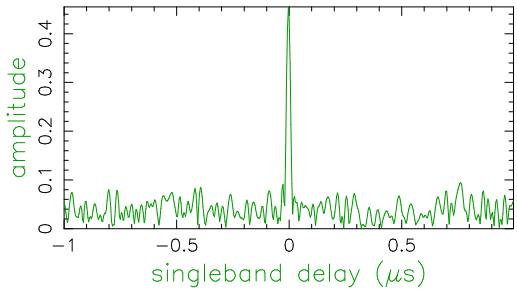
PICOVEL - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



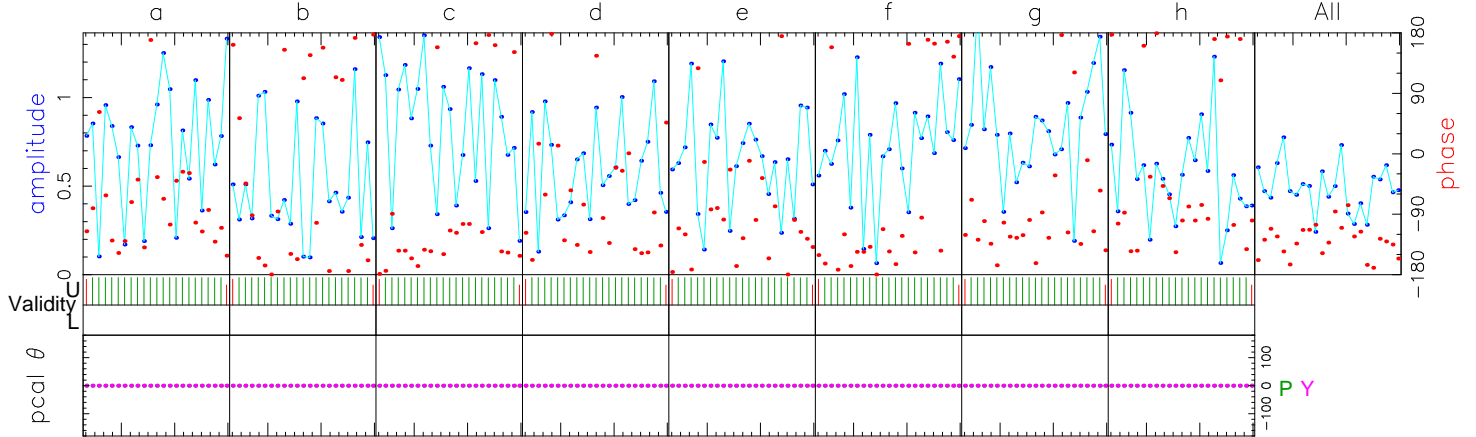
Fringe quality 8

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

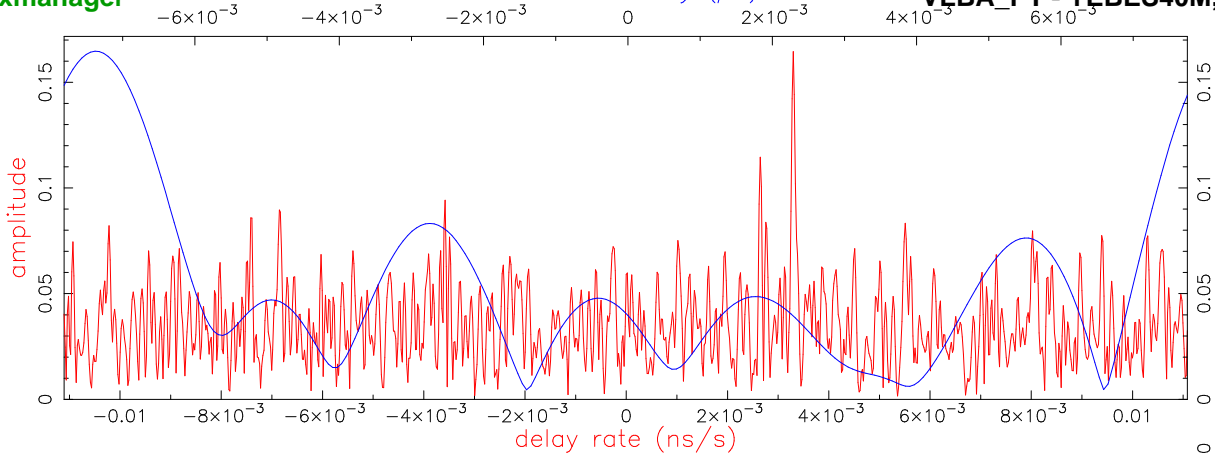
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, pY

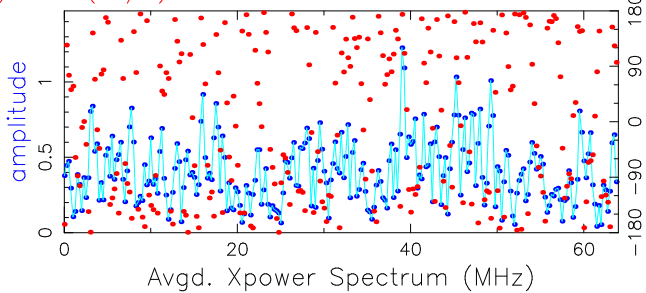
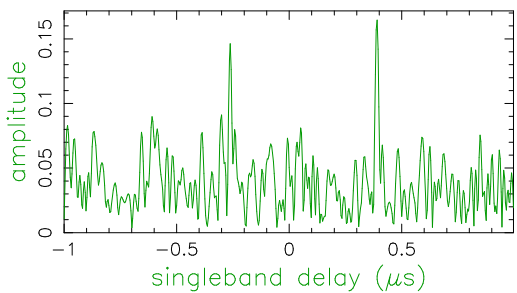
VLBA\_PT - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



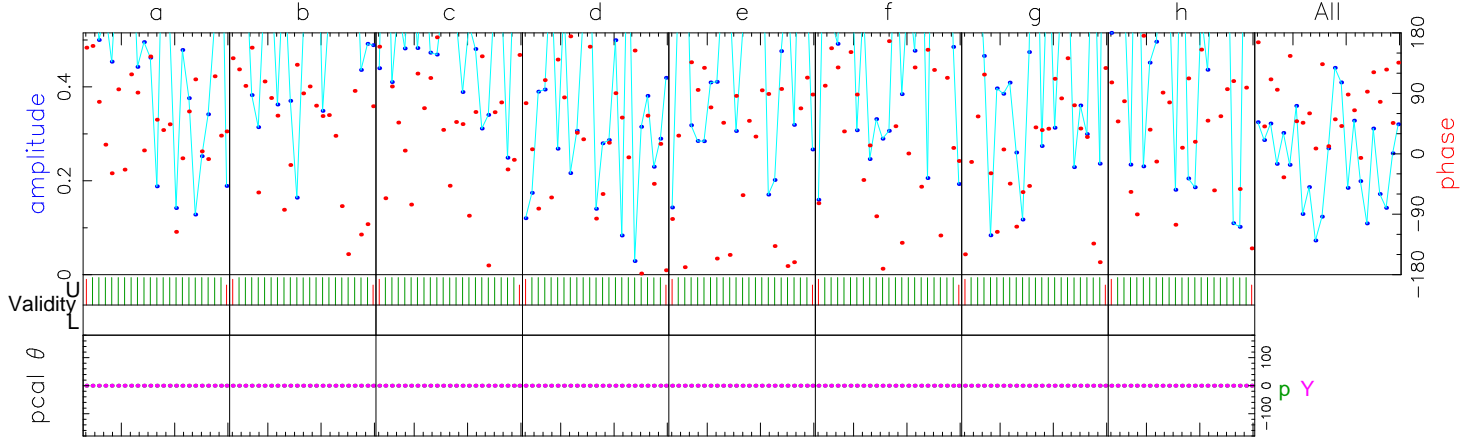
Fringe quality 0

SNR 5.8  
Int time 162.108  
Amp 0.172  
Phase 70.5  
PFD 6.4e-01  
Delays (us)  
SBD 0.389643  
MBD -0.007415  
Fringe rate (Hz)  
0.290460  
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  
2021:039:060656  
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		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
p:Y	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		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-2.61887035795E+03	Apriori delay (usec)	-2.61925356802E+03	Resid mbdelay (usec)	-7.41493E-03	+/-	1.9E-04
Sband delay (usec)	-2.61886392502E+03	Apriori clock (usec)	-1.3564590E+01	Resid sbdelay (usec)	3.89643E-01	+/-	1.5E-03
Phase delay (usec)	-2.61925356579E+03	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	2.22821E-06	+/-	6.3E-07
Delay rate (us/s)	1.86795189675E+00	Apriori rate (us/s)	1.86794859381E+00	Resid rate (us/s)	3.30294E-06	+/-	6.7E-09
Total phase (deg)	-207.1	Apriori accel (us/s/s)	1.10635162413E-05	Resid phase (deg)	70.5	+/-	19.9

ph/seg (deg)	50.7	Theor.	47.7	Amplitude	0.172 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	76.8	Search (1024X32)	0.158	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	26.6	Inc. seg. avg.	0.191	Inc. seg. avg.	0.191	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	35.3	Inc. frq. avg.	0.165	Inc. frq. avg.	0.165	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -11395.172 -473.537 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.285.1JFKZ

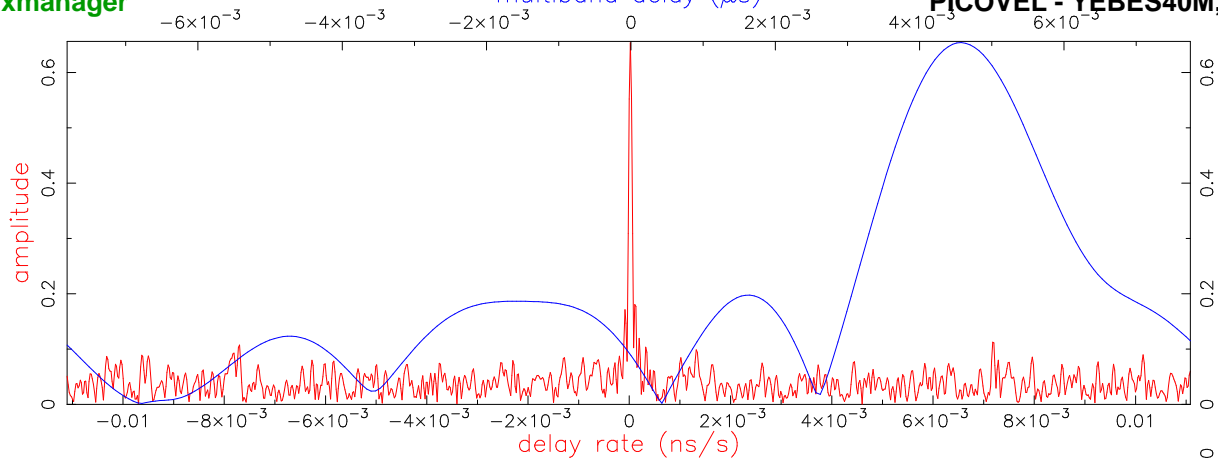
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, PY

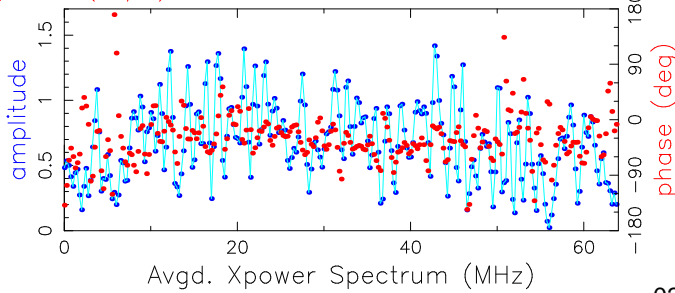
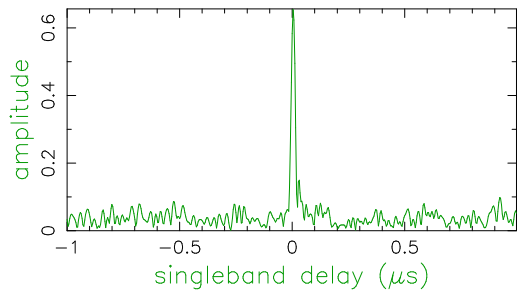
PICOVEL - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



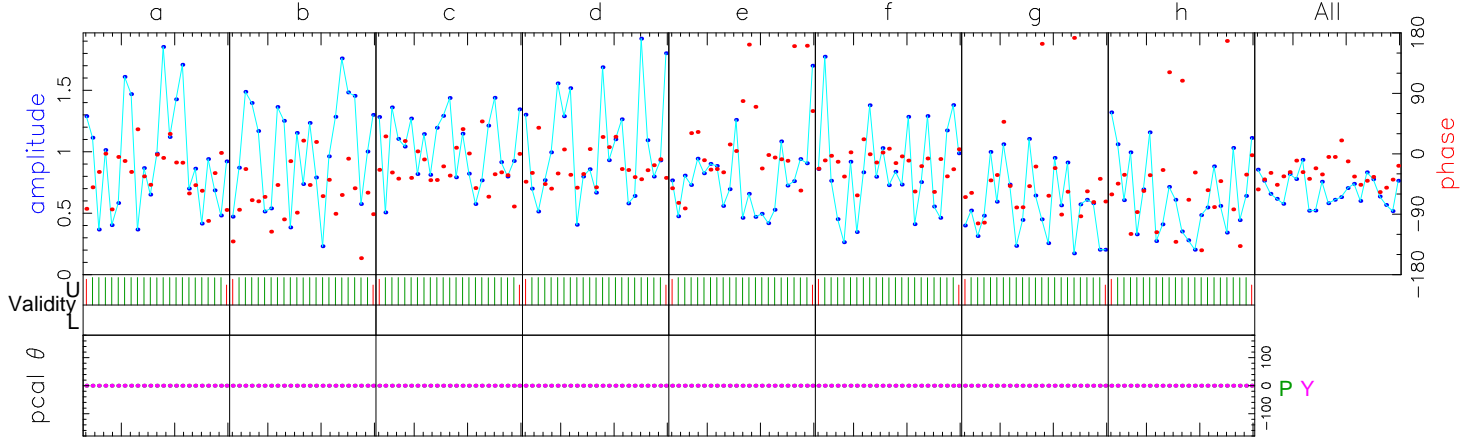
Fringe quality 8

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	Mani 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)		mb window (us)	-0.008 0.008
amp/seg (%)	18.2	21.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	25.7	7.1	Inc. seg. avg.	0.670	Sample rate(MSamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	34.4	12.4	Inc. frq. avg.	0.690	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..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/PY.W.293.1JFKZ

Mk4/DiFX fourfit 3.21 rev 2937

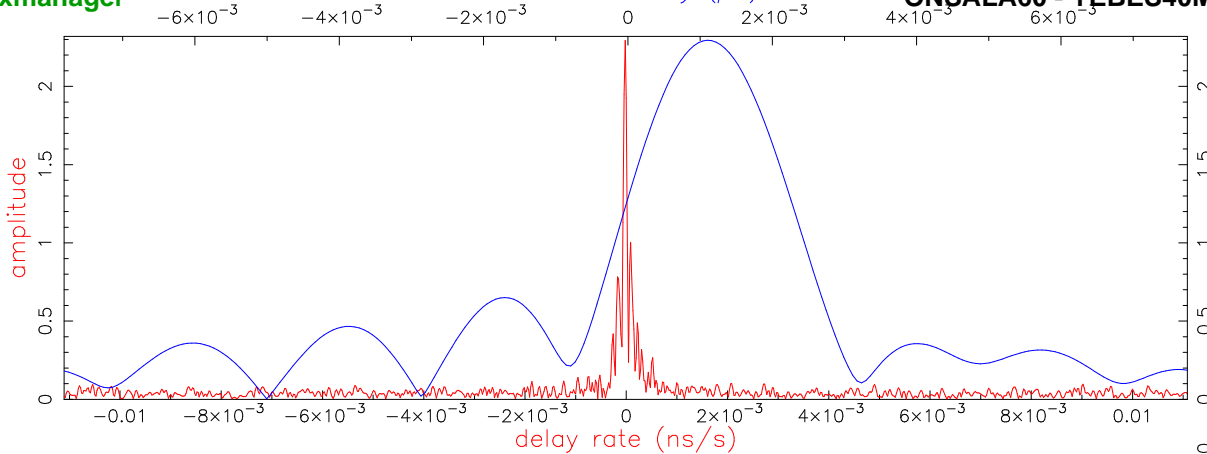
fxmanager

0235+164.1JFKZ, No0038, XY

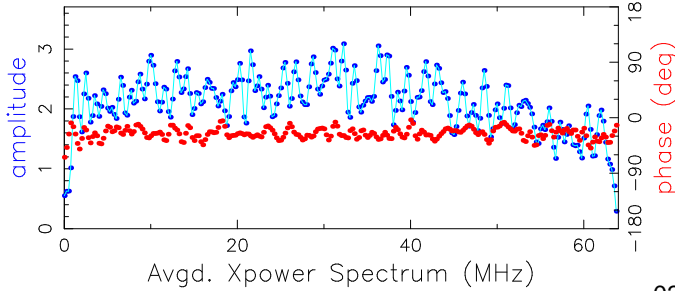
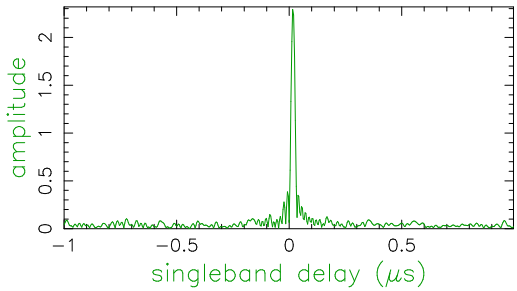
ONŞALA60 - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 6

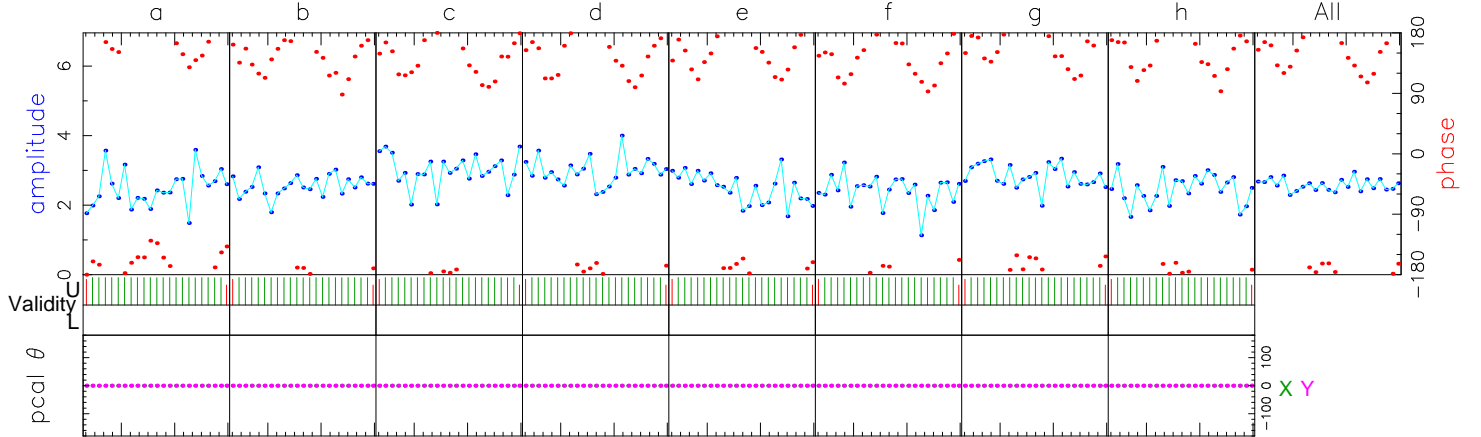


SNR 80.8  
 Int time 162.108  
 Amp 2.320  
 Phase 156.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.017015  
 MBD 0.001146  
 Fringe rate (Hz)  
 -0.001194  
 Ion TEC 0.000  
 Ref freq (MHz)  
 87940.0000  
 AP (sec) 0.512



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
	-178.5	147.9	148.2	152.9	155.9	147.0	165.9	155.2	Phase	156.6
	2.2	2.3	2.7	2.6	2.2	2.1	2.5	2.2	Ampl.	2.3
	261.1	261.6	261.2	261.5	261.1	261.6	261.4	261.0	Sbd box	261.4
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-4.23068593661E+03	Apriori delay (usec)	-4.23070270741E+03	Resid mbdelay (usec)	1.14579E-03	+/-	1.3E-05
Sband delay (usec)	-4.23068569241E+03	Apriori clock (usec)	3.4719227E+01	Resid sbdelay (usec)	1.70150E-02	+/-	1.1E-04
Phase delay (usec)	-4.23070270246E+03	Apriori clockrate (us/s)	4.0800002E-07	Resid phdelay (usec)	4.94671E-06	+/-	4.5E-08
Delay rate (us/s)	1.12062631190E-01	Apriori rate (us/s)	1.12062644765E-01	Resid rate (us/s)	-1.35743E-08	+/-	4.8E-10
Total phase (deg)	124.4	Apriori accel (us/s/s)	2.89360511418E-05	Resid phase (deg)	156.6	+/-	1.4

ph/seg (deg)	27.8	3.4	Search (1024X32)	2.229	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	13.6	5.9	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)	12.7	2.0	Inc. seg. avg.	2.581	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	8.8	3.5	Inc. frq. avg.	2.333	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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -671.441 2367.631 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/XY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/XY.W.253.1JFKZ

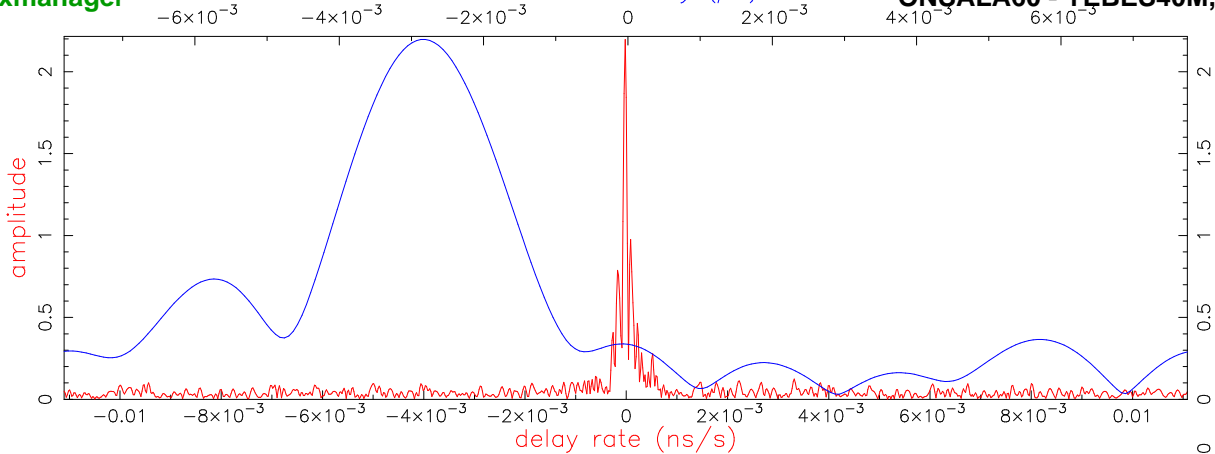
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, XY

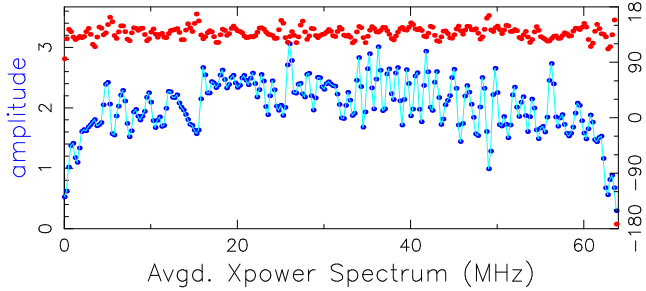
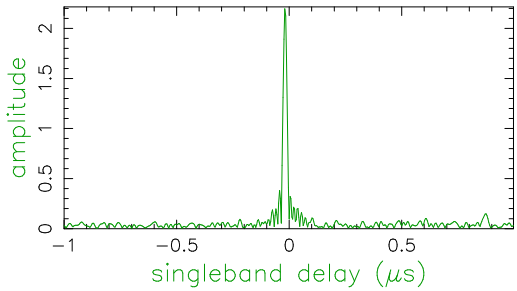
ONŞALA60 - YEŞES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



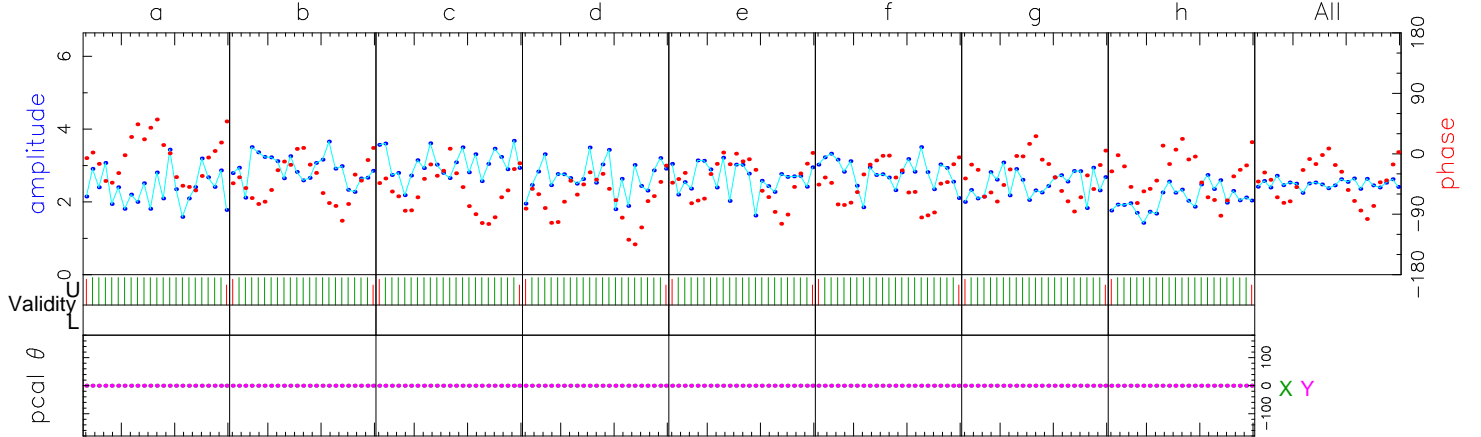
Fringe quality 6

SNR 77.1  
 Int time 162.108  
 Amp 2.215  
 Phase -41.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.018303  
 MBD -0.002800  
 Fringe rate (Hz)  
 -0.001094  
 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  
 2021:039:060654  
 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
	-5.3	-42.5	-53.5	-66.2	-39.3	-46.1	-34.2	-30.8	Phase	-41.0
	2.1	2.5	2.7	2.3	2.3	2.5	2.2	1.8	Ampl.	2.3
	252.5	251.7	252.2	252.1	252.6	252.0	252.6	252.4	Sbd box	252.3
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-4.23072113193E+03		Apriori delay (usec)		-4.23070270741E+03		Resid mbdelay (usec)		-2.79952E-03	+/- 1.4E-05
Sband delay (usec)	-4.23072101066E+03		Apriori clock (usec)		3.4719227E+01		Resid sbdelay (usec)		-1.83033E-02	+/- 1.1E-04
Phase delay (usec)	-4.23070270871E+03		Apriori clockrate (us/s)		4.0800002E-07		Resid phdelay (usec)		-1.29605E-06	+/- 4.7E-08
Delay rate (us/s)	1.12062632320E-01		Apriori rate (us/s)		1.12062644765E-01		Resid rate (us/s)		-1.24444E-08	+/- 5.0E-10
Total phase (deg)			Apriori accel (us/s/s)		2.89360511418E-05		Resid phase (deg)		-41.0	+/- 1.5

	RMS	Theor.	Amplitude	2.215 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	28.9	3.6	Search (1024X32)	2.125	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	13.8	6.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	19.4	2.1	Inc. seg. avg.	2.495	Sample rate(MSamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	12.3	3.7	Inc. frq. avg.	2.286	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
X: az 254.0 el 29.7 pa 32.7	Y: az 252.5 el 44.1 pa 49.2		u,v (fr/asec) -671.441 2367.631		ion window (TEC) 0.00 0.00	

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/XY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/XY.W.268.1JFKZ simultaneous interpolator



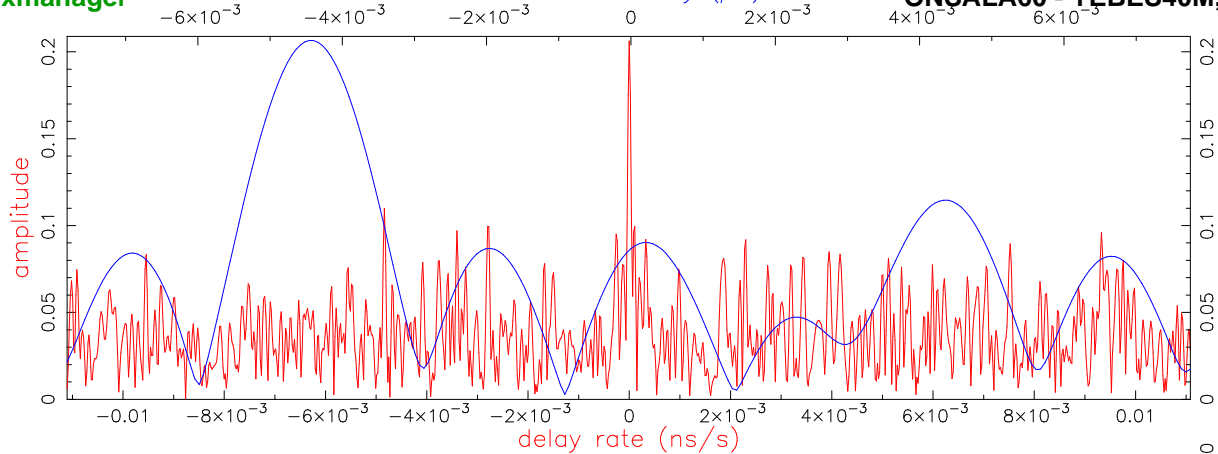
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, XY

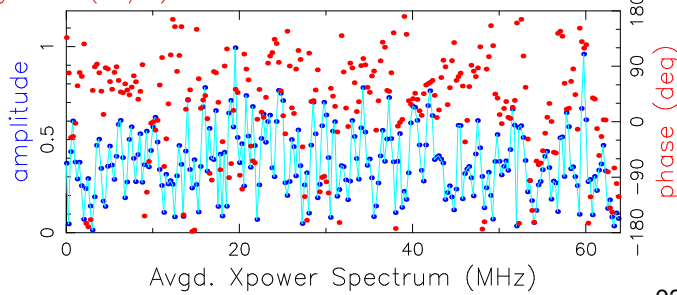
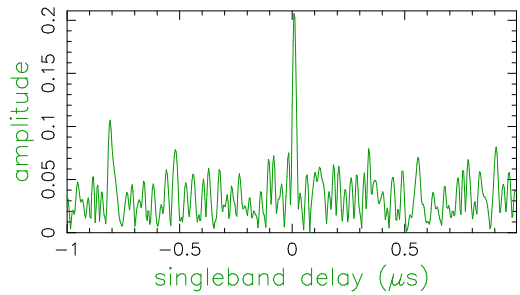
ONŞALA60 - YEŞES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



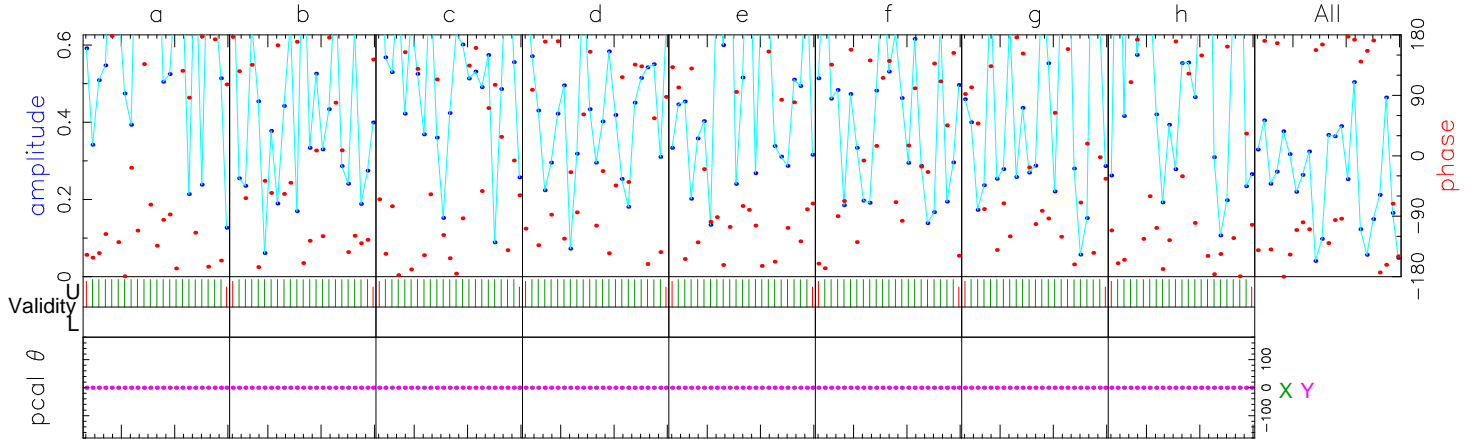
Fringe quality 9

SNR 7.3  
 Int time 162.108  
 Amp 0.209  
 Phase -150.3  
 PFD 5.5e-05  
 Delays (us)  
 SBD 0.009332  
 MBD -0.004377  
 Fringe rate (Hz)  
 -0.000639  
 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
	-147.4	-151.7	-140.6	-174.4	-125.2	162.7	-142.1	-157.4	Phase	-150.3
	0.4	0.1	0.2	0.1	0.2	0.1	0.2	0.3	Ampl.	0.2
	258.4	274.0	253.1	472.4	260.9	154.6	28.9	258.4	Sbd box	259.4
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	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)	-4.23069145938E+03		Apriori delay (usec)		-4.23070270741E+03		Resid mbdelay (usec)		-4.37697E-03	+/- 1.5E-04
Sband delay (usec)	-4.23069337566E+03		Apriori clock (usec)		3.4719227E+01		Resid sbdelay (usec)		9.33175E-03	+/- 1.2E-03
Phase delay (usec)	-4.23070271216E+03		Apriori clockrate (us/s)		4.0800002E-07		Resid phdelay (usec)		-4.74857E-06	+/- 5.0E-07
Delay rate (us/s)	1.12062637499E-01		Apriori rate (us/s)		1.12062644765E-01		Resid rate (us/s)		-7.26536E-09	+/- 5.3E-09
Total phase (deg)			Apriori accel (us/s/s)		2.89360511418E-05		Resid phase (deg)		-150.3	+/- 15.8

	RMS	Theor.	Amplitude	0.209 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	42.0	37.8	Search (1024X32)	0.203	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	67.1	65.9	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	24.6	22.3	Inc. seg. avg.	0.216	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	53.1	38.9	Inc. frq. avg.	0.201					

X: az 254.0 el 29.7 pa 32.7 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -671.441 2367.631 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/XY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/XY.W.283.1JFKZ

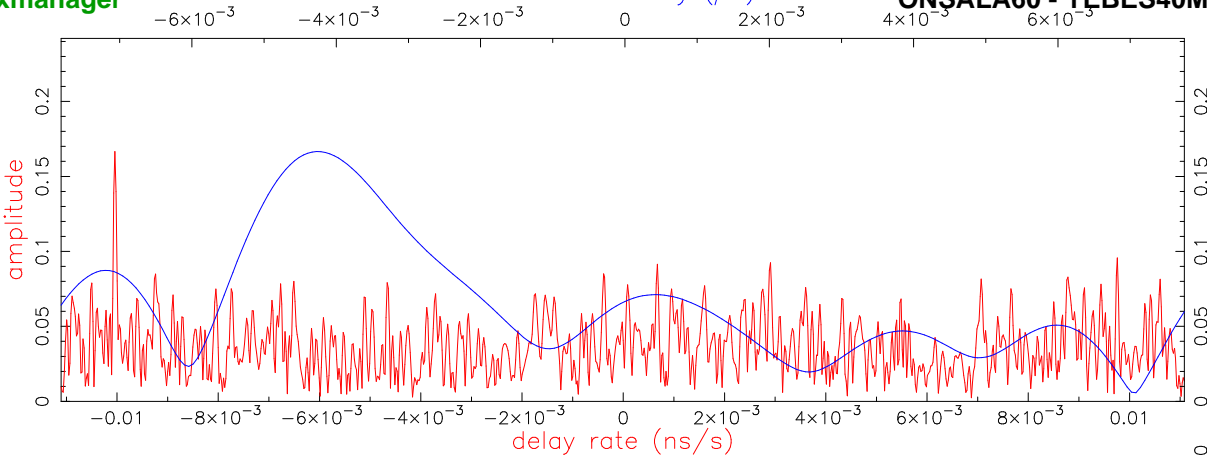
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, XY

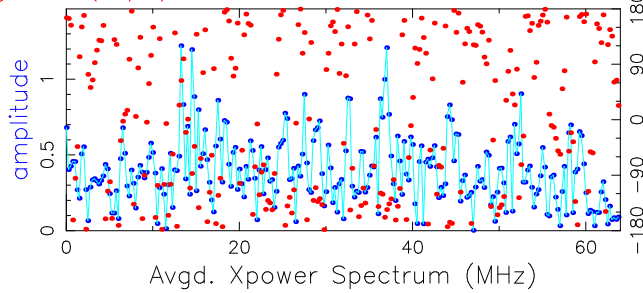
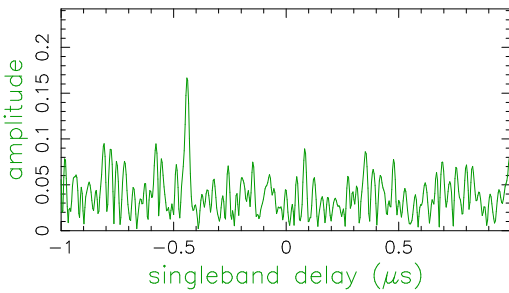
ONŞALA60 - YEŞES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



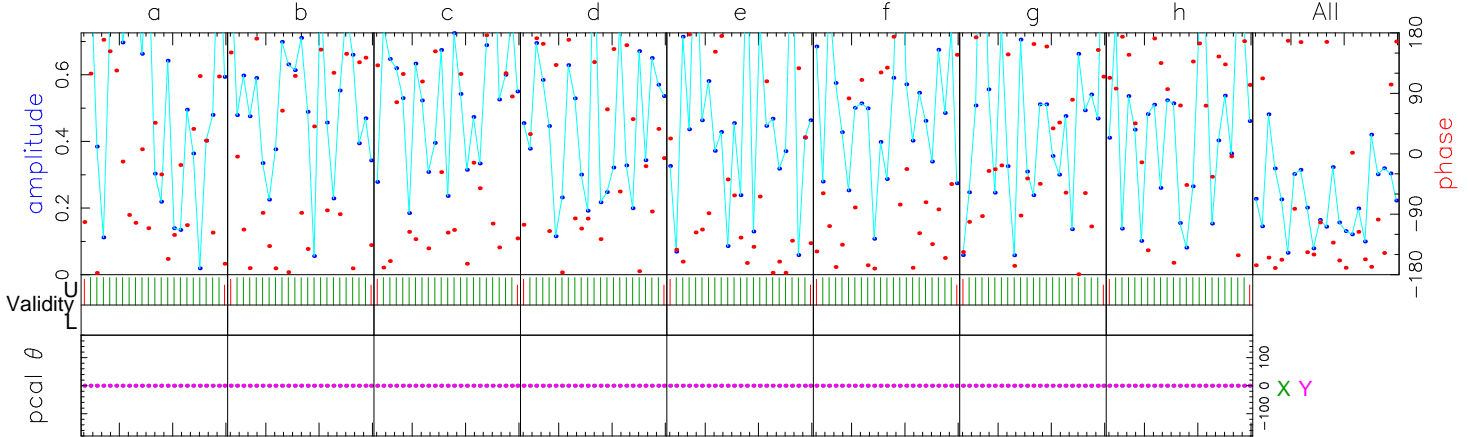
Fringe quality 0

SNR 5.9  
 Int time 162.108  
 Amp 0.242  
 Phase -156.4  
 PFD 4.4e-01  
 Delays (us)  
 SBD -0.439895  
 MBD -0.004236  
 Fringe rate (Hz)  
 -0.883853  
 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

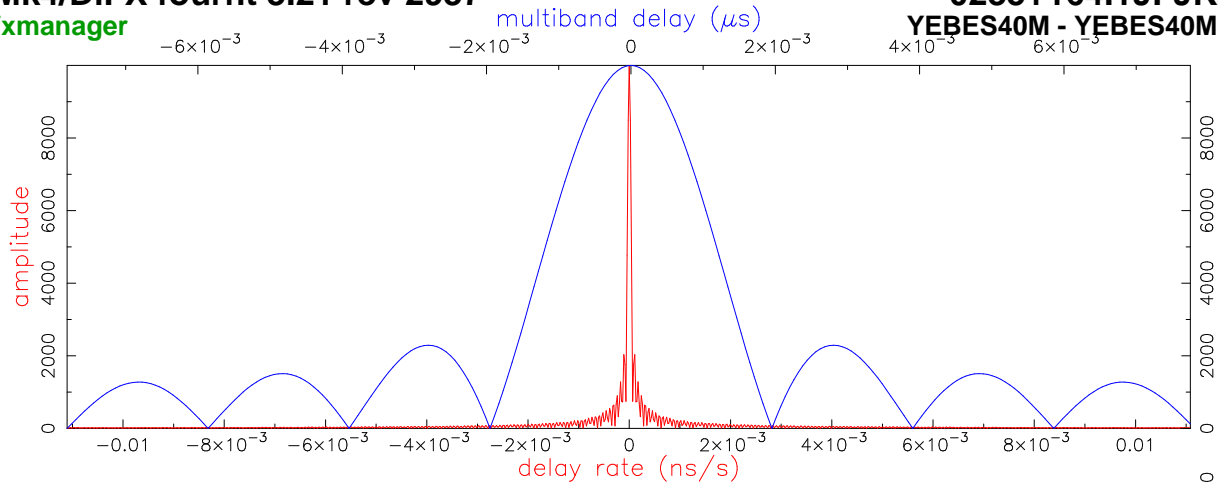


	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-146.7	-177.3	-167.5	-156.1	-138.2	-121.1	-95.2	139.0	Phase	-156.4
	0.2	0.4	0.3	0.2	0.4	0.4	0.2	0.4	Ampl.	0.3
	467.4	451.9	173.1	31.0	143.0	143.3	330.4	332.8	Sbd box	144.4
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
X	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)	-4.23114444308E+03		Apriori delay (usec)		-4.23070270741E+03		Resid mbdelay (usec)		-4.23567E-03	+/- 1.9E-04
Sband delay (usec)	-4.23114260266E+03		Apriori clock (usec)		3.4719227E+01		Resid sbdelay (usec)		-4.39895E-01	+/- 1.5E-03
Phase delay (usec)	-4.23070271235E+03		Apriori clockrate (us/s)		4.0800002E-07		Resid phdelay (usec)		-4.93940E-06	+/- 6.2E-07
Delay rate (us/s)	1.12052594122E-01		Apriori rate (us/s)		1.12062644765E-01		Resid rate (us/s)		-1.00506E-05	+/- 6.5E-09
Total phase (deg)			Apriori accel (us/s/s)		2.89360511418E-05		Resid phase (deg)		-156.4	+/- 19.5

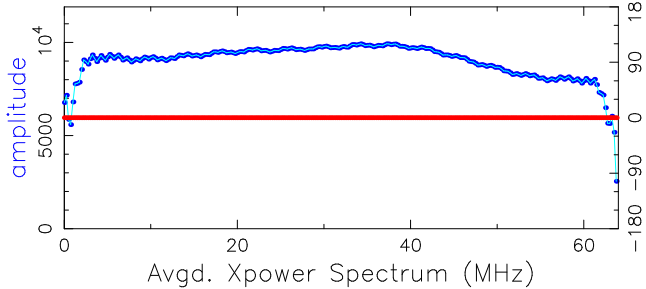
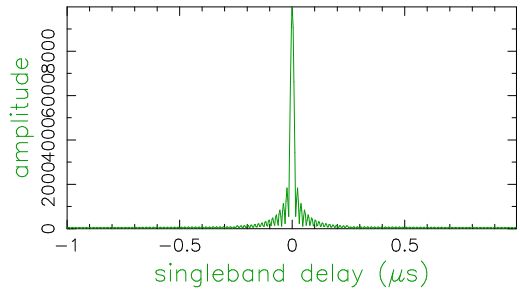
	RMS	Theor.	Amplitude	0.242 +/- 0.041	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	52.9	46.9	Search (1024X32)	0.160	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	73.3	81.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	41.1	27.6	Inc. seg. avg.	0.247	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	44.7	48.3	Inc. frq. avg.	0.262	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00

X: az 254.0 el 29.7 pa 32.7 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -671.441 2367.631 simultaneous interpolator

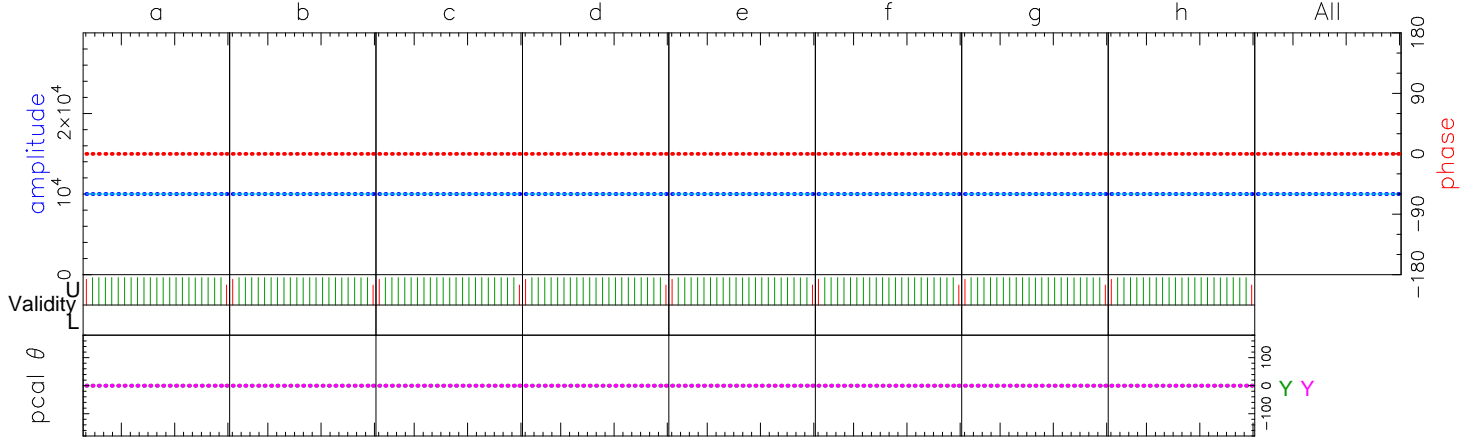
Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/XY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/XY.W.296.1JFKZ



Fringe quality 9  
SNR 348176.6  
Int time 162.108  
Amp 9999.996  
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 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"



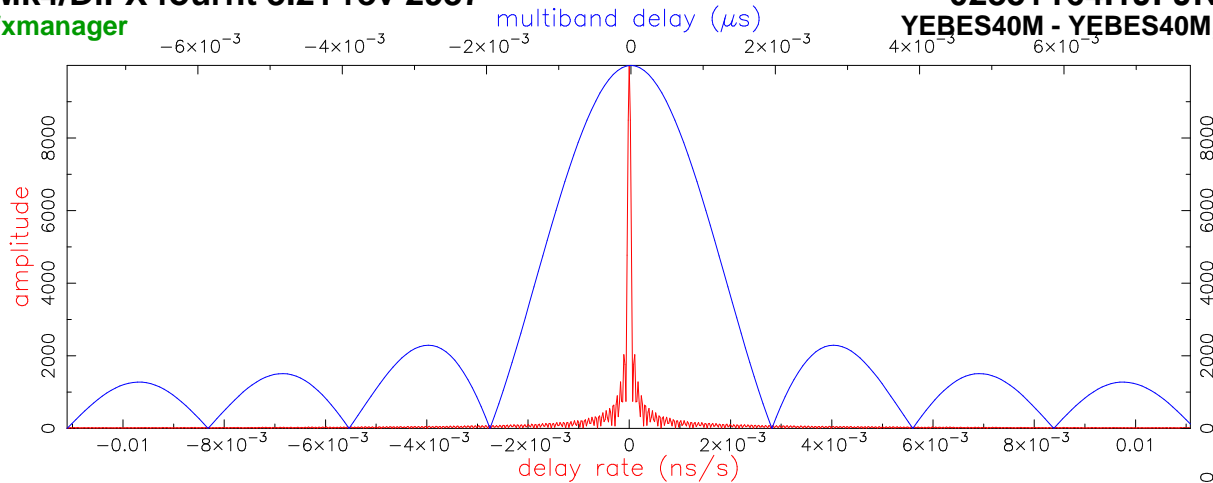
Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



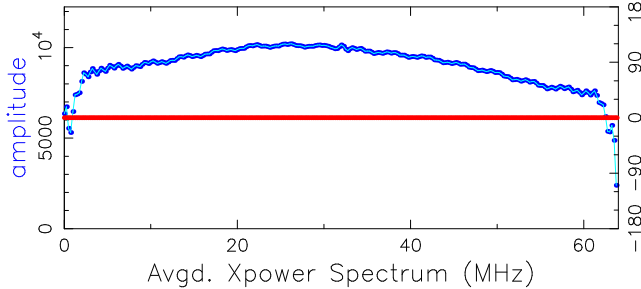
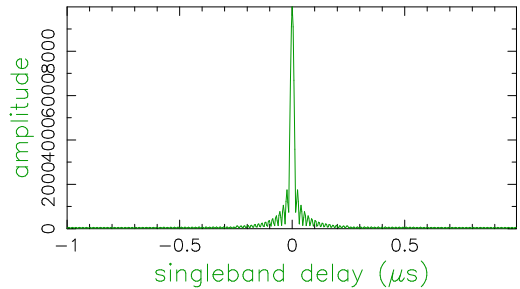
	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	3.1E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	2.5E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.0E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.1E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

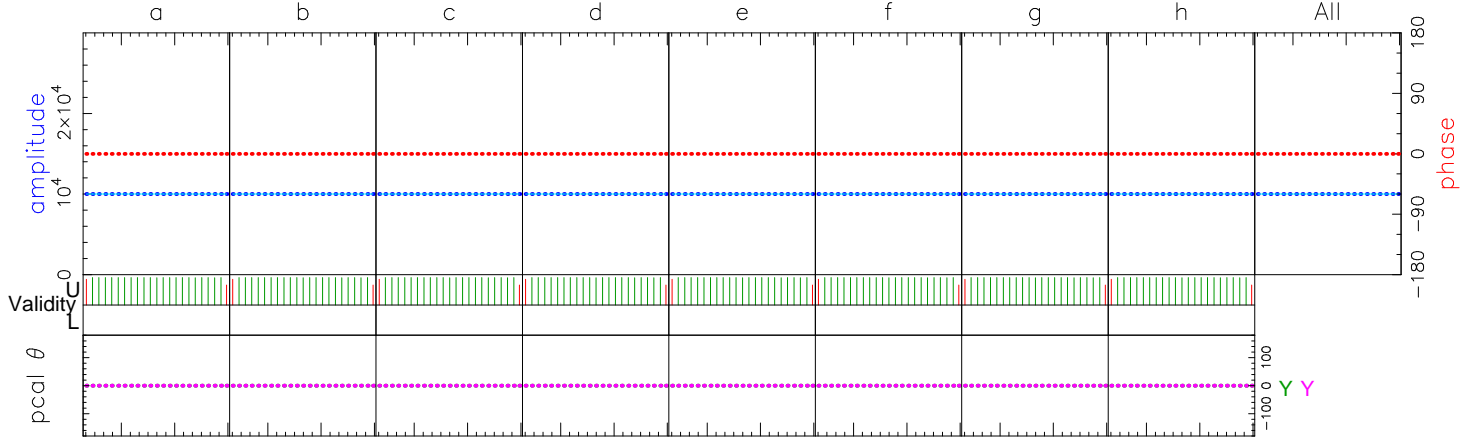
ph/seg (deg)	0.0	RMS	Theor.	Amplitude	9999.996 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	0.0	0.0	0.0	Search (1024X32)	9999.996	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	0.0	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 128	mb window (us) -0.008 0.008
				Inc. frq. avg.	9999.996	Data rate(Mb/s): 2048	dr window (ns/s) -0.011 0.011
						nlags: 256	t_cohere infinite
							ion window (TEC) 0.00 0.00



Fringe quality 9  
SNR 348176.6  
Int time 162.108  
Amp 9999.996  
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 16383  
Start 2020:286  
Stop 2020:286  
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
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	3.1E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	2.5E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	1.0E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	1.1E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/-	0.0

	RMS	Theor.	Amplitude	9999.996 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	0.0	0.0	Search (1024X32)	9999.996	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	0.0	0.0	Inc. frq. avg.	9999.996	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

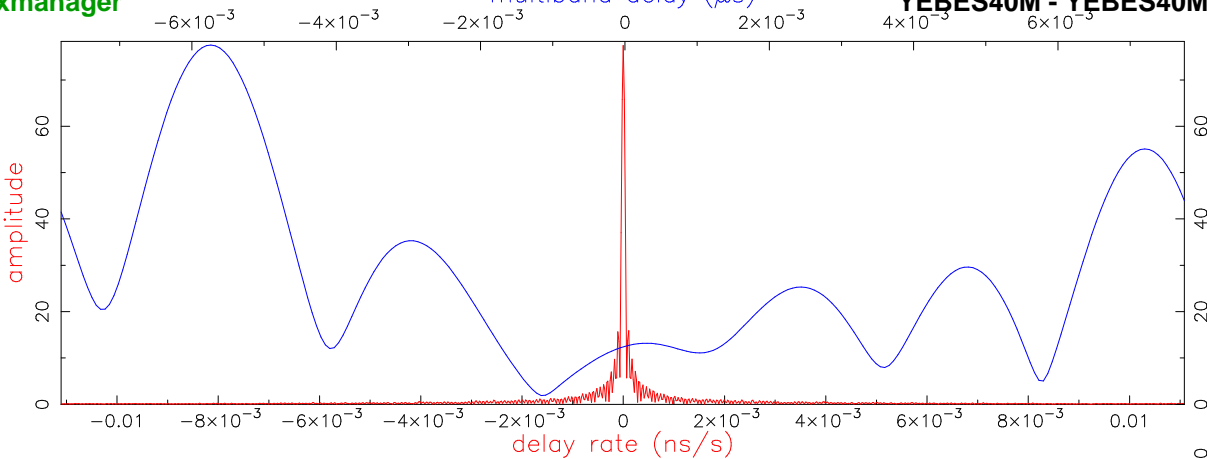
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, YY

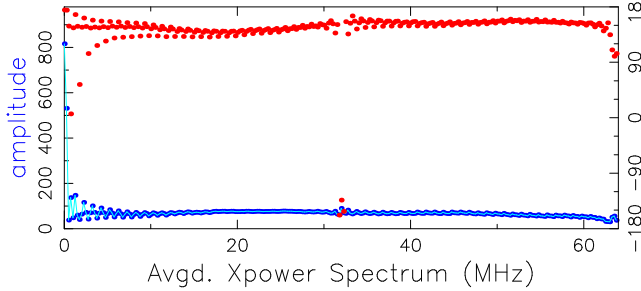
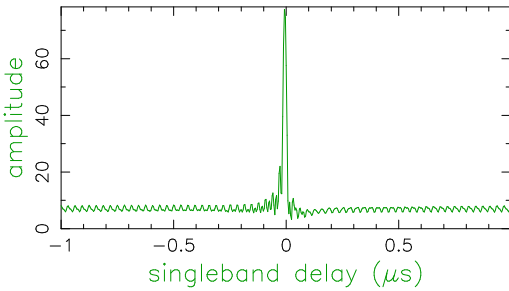
YEBES40M - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



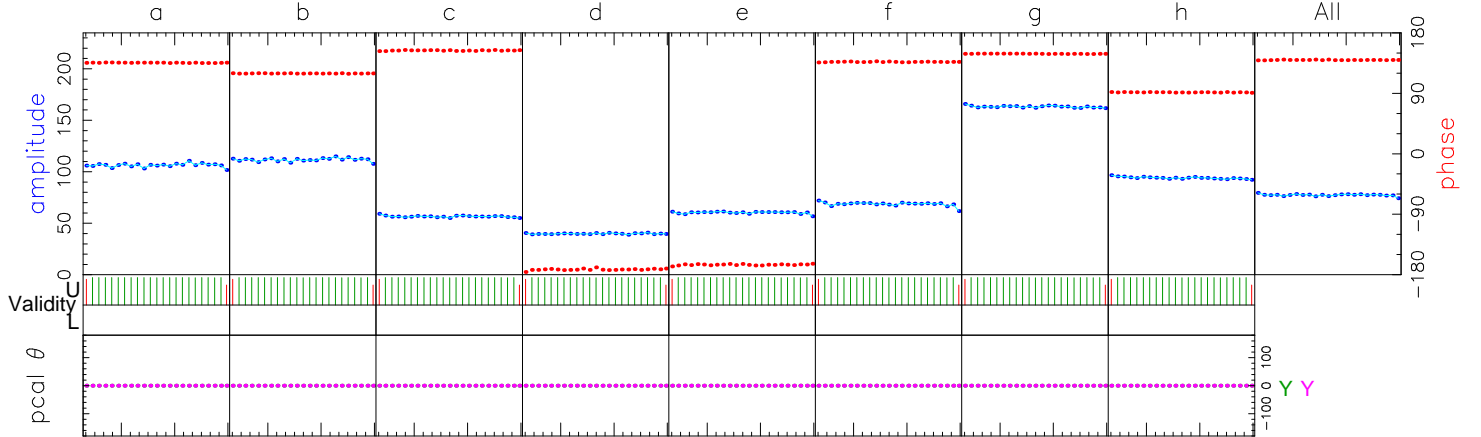
Fringe quality 5

SNR 2726.6  
 Int time 162.108  
 Amp 78.310  
 Phase 139.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.006545  
 MBD -0.005695  
 Fringe rate (Hz)  
 0.000012  
 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  
 2021:039:060656  
 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
	135.4	119.5	153.7	-172.2	-165.1	136.7	148.8	91.4	Phase	139.5
	106.5	111.8	56.6	39.9	60.4	68.7	163.2	94.1	Ampl.	87.6
	255.1	255.2	256.0	256.0	254.9	255.3	255.4	254.3	Sbd box	255.3
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-5.69503125000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-5.69503E-03	+/-	4.0E-07
Sband delay (usec)	-6.54525000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-6.54525E-03	+/-	3.2E-06
Phase delay (usec)	4.40757016198E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.40757E-06	+/-	1.3E-09
Delay rate (us/s)	1.40199010426E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.40199E-10	+/-	1.4E-11
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	139.5	+/-	0.0

ph/seg (deg)	0.3	Theor.	Amplitude	78.310 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	1.6	0.1	Search (1024X32)	76.935	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	37.5	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	48.9	0.1	Inc. seg. avg.	77.437	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
			Inc. frq. avg.	87.638	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

Y: az 252.5 el 44.1 pa 49.2 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/YY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/YY.W.290.1JFKZ



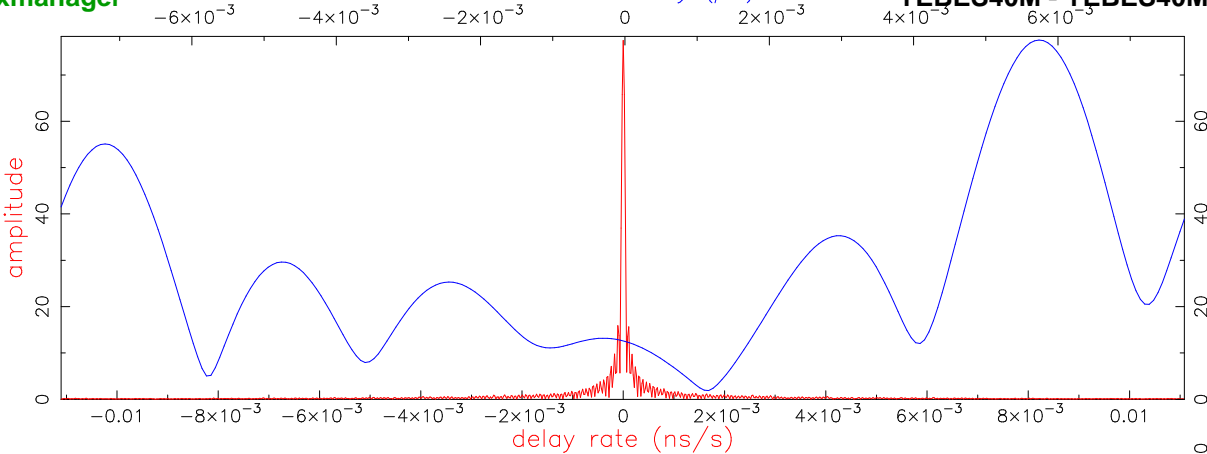
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, YY

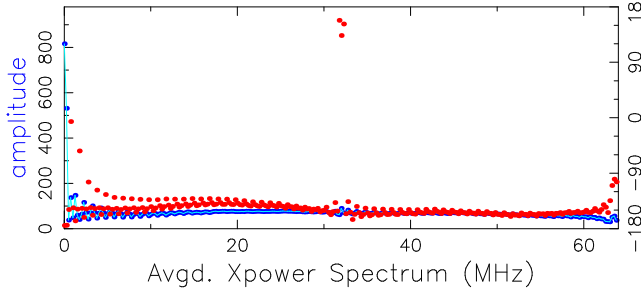
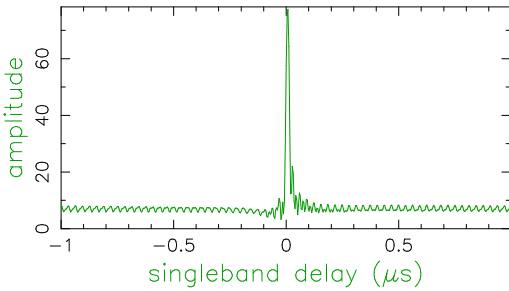
YEBES40M - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



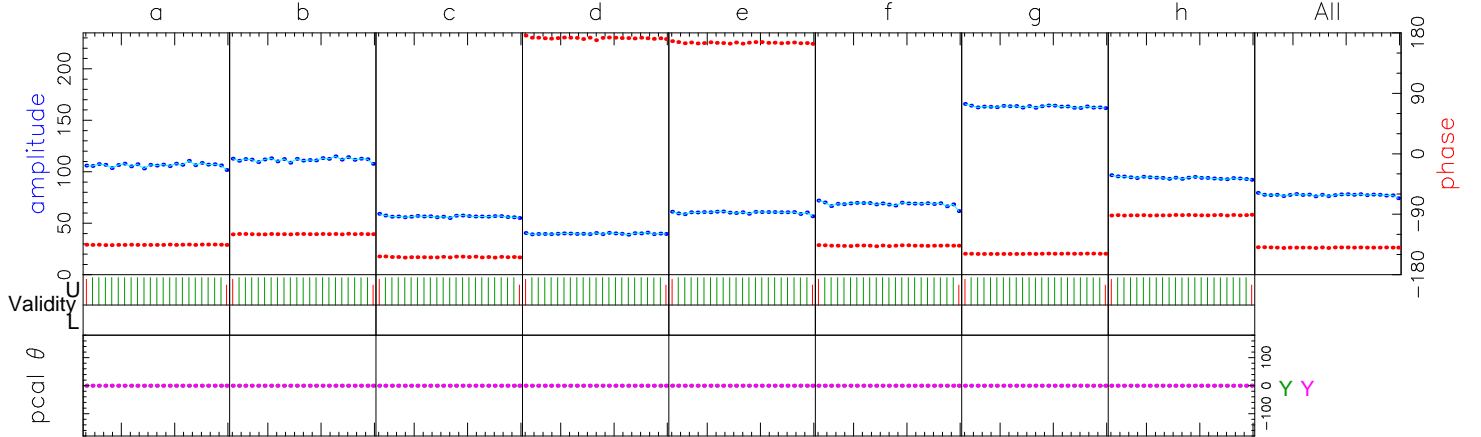
Fringe quality 5

SNR 2726.6  
 Int time 162.108  
 Amp 78.310  
 Phase -139.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006545  
 MBD 0.005695  
 Fringe rate (Hz)  
 -0.000012  
 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  
 2021:039:060658  
 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
	-135.4	-119.5	-153.7	172.2	165.1	-136.7	-148.8	-91.4	Phase	-139.5
	106.5	111.8	56.6	39.9	60.4	68.7	163.2	94.1	Ampl.	87.6
	258.9	258.8	258.0	258.0	259.1	258.7	258.6	259.7	Sbd box	258.7
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Y									Chan ids	
Y									Tracks	

Group delay (usec)(sbd)	5.69503125000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	5.69503E-03	+/-	4.0E-07
Sband delay (usec)	6.54525000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	6.54525E-03	+/-	3.2E-06
Phase delay (usec)	-4.40757016186E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.40757E-06	+/-	1.3E-09
Delay rate (us/s)	-1.40199010426E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.40199E-10	+/-	1.4E-11
Total phase (deg)	-139.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-139.5	+/-	0.0

ph/seg (deg)	0.3	Theor.	0.1	Amplitude	78.310 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	1.6		0.2	Search (1024X32)	76.935	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	37.5		0.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	48.9		0.1	Inc. seg. avg.	77.437	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	87.638	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

Y: az 252.5 el 44.1 pa 49.2      Y: az 252.5 el 44.1 pa 49.2      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva      Input file: /Exps/c202c/v1/1234/No0038/YY..1JFKZ      Output file: /Exps/c202c/v1/1234/No0038/YY.W.304.1JFKZ

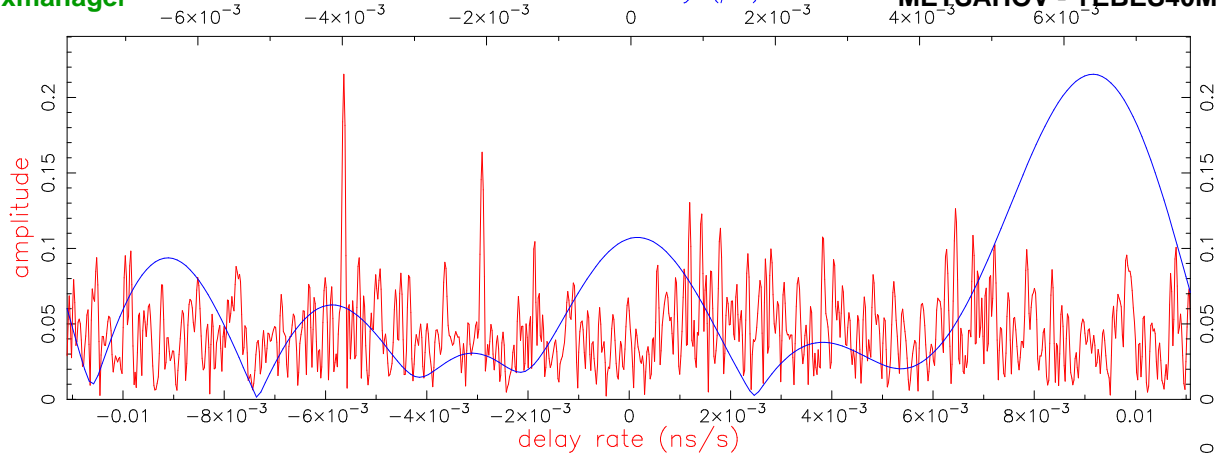
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, ZY

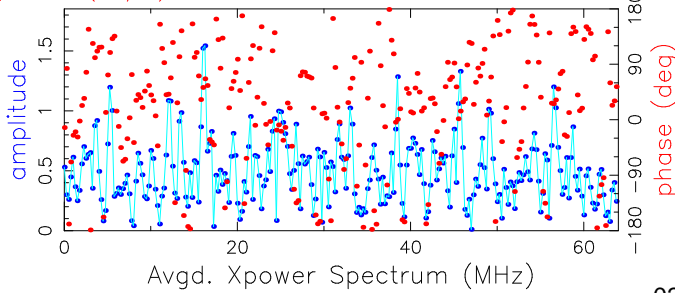
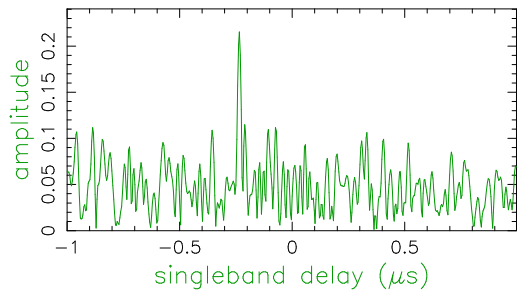
METSAHOV - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



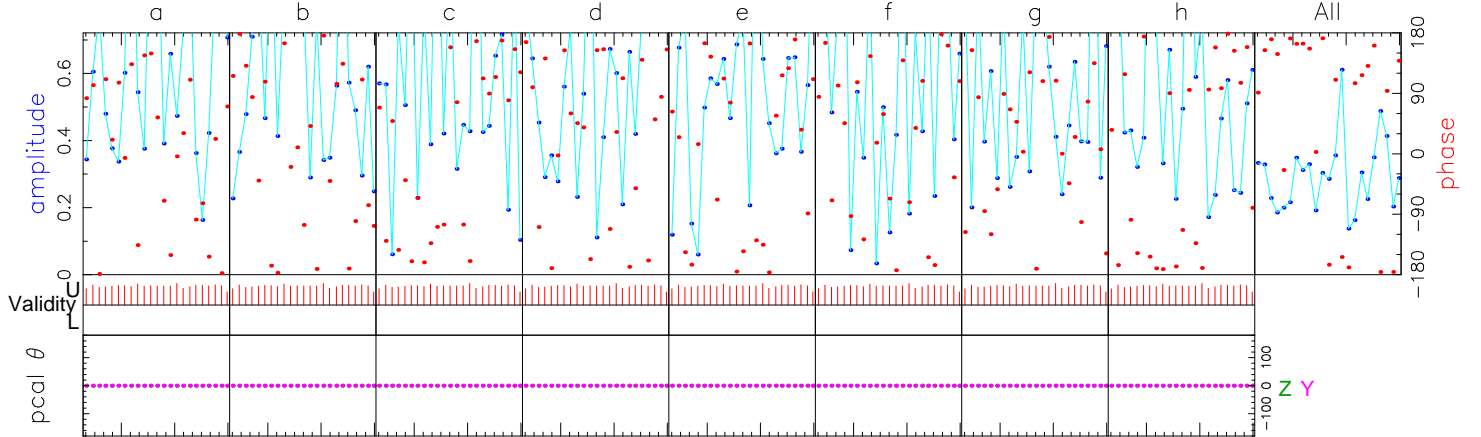
Fringe quality 0

SNR 6.3  
 Int time 112.485  
 Amp 0.240  
 Phase 154.9  
 PFD 5.2e-02  
 Delays (us)  
 SBD -0.234926  
 MBD 0.006385  
 Fringe rate (Hz)  
 -0.495886  
 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 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., 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
	116.6	173.3	-172.7	143.8	172.8	130.2	118.6	170.6	Phase	154.9
	0.2	0.2	0.4	0.2	0.3	0.3	0.2	0.4	Ampl.	0.2
	239.6	328.0	196.3	285.1	369.0	89.2	209.9	295.0	Sbd box	196.9
U/L	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.57151626675E+03	Apriori delay (usec)	-6.57128827685E+03	Resid mbdelay (usec)	6.38510E-03	+/-	1.7E-04
Sband delay (usec)	-6.57152320310E+03	Apriori clock (usec)	-1.3560724E+01	Resid sbdelay (usec)	-2.34926E-01	+/-	1.4E-03
Phase delay (usec)	-6.57128827196E+03	Apriori clockrate (us/s)	-1.0399999E-07	Resid phdelay (usec)	4.89404E-06	+/-	5.8E-07
Delay rate (us/s)	1.04853026102E-01	Apriori rate (us/s)	1.04858665012E-01	Resid rate (us/s)	-5.63891E-06	+/-	6.2E-09
Total phase (deg)	131.0	Apriori accel (us/s/s)	4.19553277775E-05	Resid phase (deg)	154.9	+/-	18.3

ph/seg (deg)	58.2	Theor.	43.7	Amplitude	0.240 +/- 0.038	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	62.5	Search (1024X32)	0.214	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	30.2	Inc. seg. avg.	0.255	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	33.0	Inc. frq. avg.	0.242	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

Z: az 263.9 el 22.8 pa 31.0 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -621.101 2902.689 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/ZY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/ZY.W.284.1JFKZ

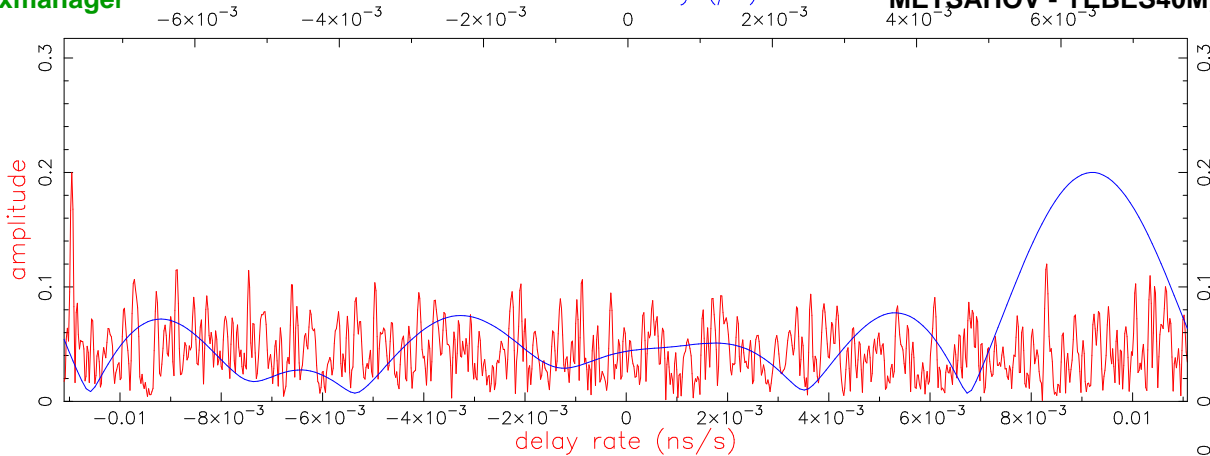
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, ZY

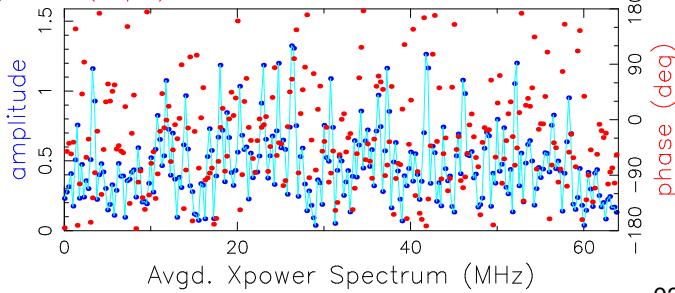
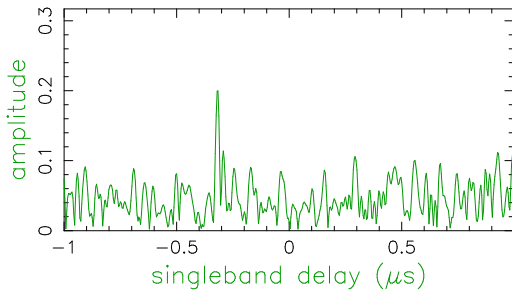
METSAHOV - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



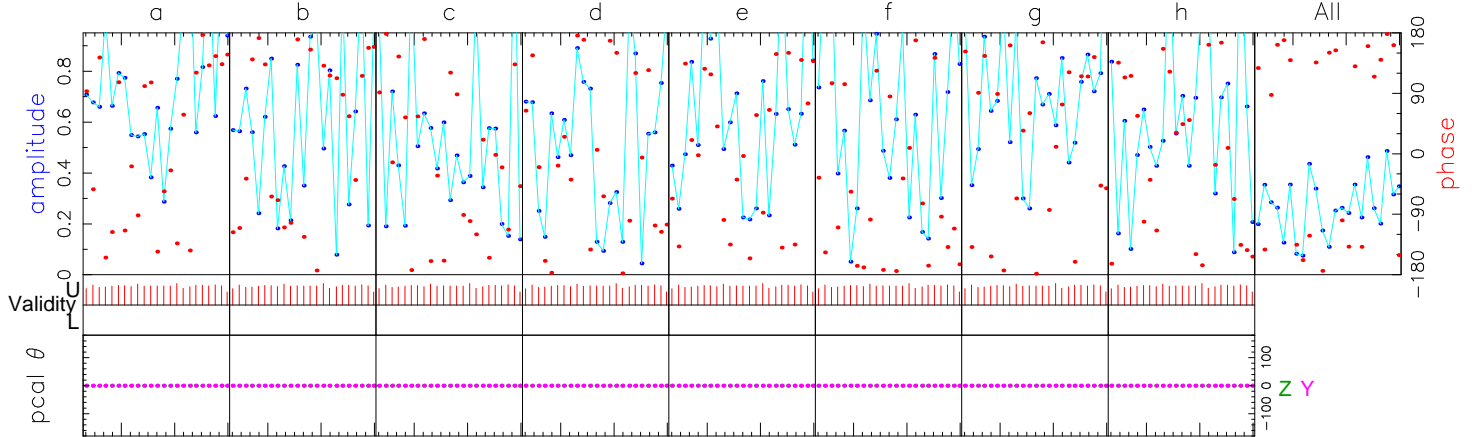
Fringe quality 0

SNR 5.9  
 Int time 112.485  
 Amp 0.317  
 Phase 172.4  
 PFD 3.4e-01  
 Delays (us)  
 SBD -0.318281  
 MBD 0.006379  
 Fringe rate (Hz)  
 -0.965412  
 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 043259.20  
 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
	167.8	162.2	170.7	-162.5	131.5	-161.9	156.7	177.0	Phase	172.4
	0.5	0.4	0.2	0.3	0.2	0.4	0.3	0.3	Ampl.	0.3
	172.5	65.7	511.5	102.8	412.8	63.8	316.2	284.0	Sbd box	175.5
U/L	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.57161002297E+03		Apriori delay (usec)		-6.57128827685E+03		Resid mbdelay (usec)		6.37889E-03	+/- 1.8E-04
Sband delay (usec)	-6.57160655785E+03		Apriori clock (usec)		-1.3560724E+01		Resid sbdelay (usec)		-3.18281E-01	+/- 1.5E-03
Phase delay (usec)	-6.57128827141E+03		Apriori clockrate (us/s)		-1.0399999E-07		Resid phdelay (usec)		5.44672E-06	+/- 6.1E-07
Delay rate (us/s)	1.04847686931E-01		Apriori rate (us/s)		1.04858665012E-01		Resid rate (us/s)		-1.09781E-05	+/- 6.6E-09
Total phase (deg)	148.5		Apriori accel (us/s/s)		4.19553277775E-05		Resid phase (deg)		172.4	+/- 19.4

	RMS	Theor.	Amplitude	0.317 +/- 0.054	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	43.4	46.2	Search (1024X32)	0.198	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	64.3	80.6	Interp.	0.000	Sample rate(MSamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	23.7	27.4	Inc. seg. avg.	0.317	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	26.3	47.8	Inc. frq. avg.	0.294					

Z: az 263.9 el 22.8 pa 31.0 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -621.101 2902.689 simultaneous interpolator

Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/ZY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/ZY.W.297.1JFKZ

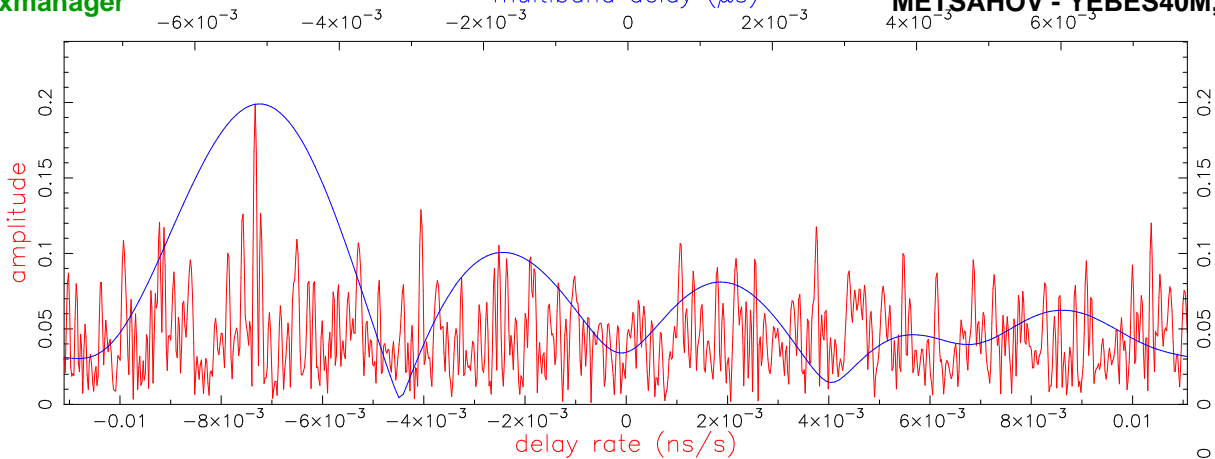
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, ZY

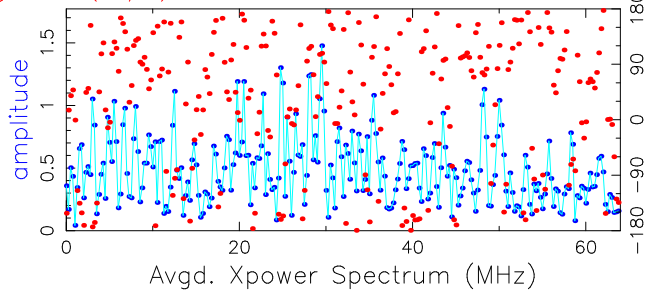
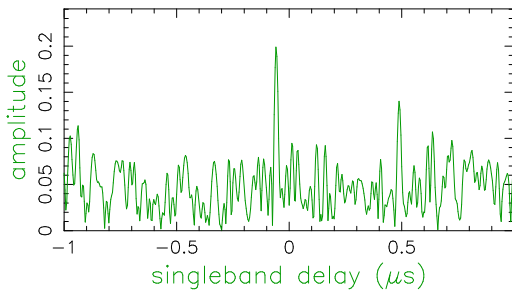
METSAHOV - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)



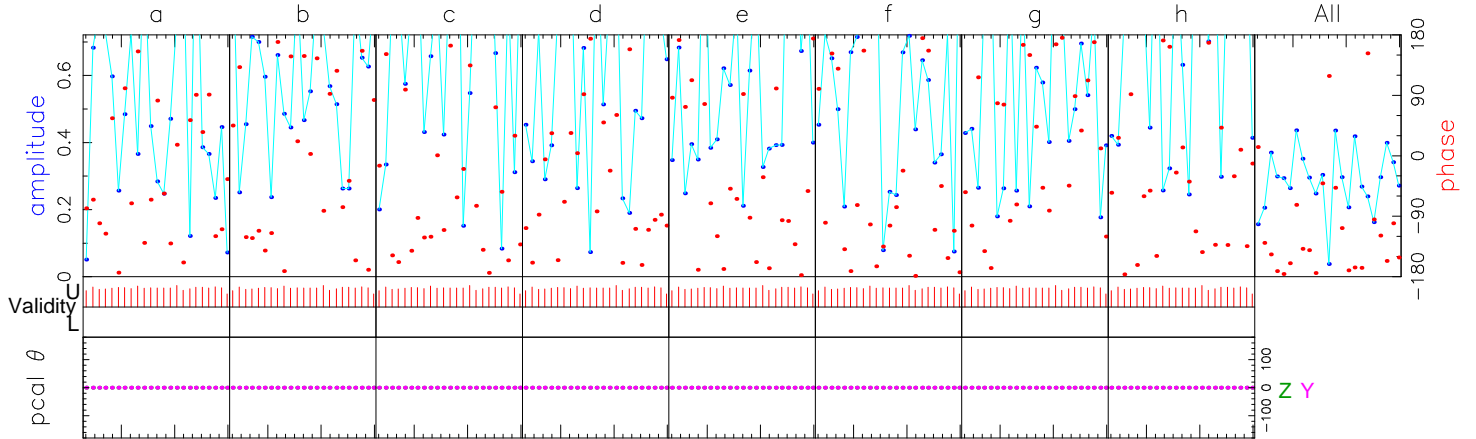
Fringe quality 0

SNR 5.8  
 Int time 112.485  
 Amp 0.240  
 Phase -134.3  
 PFD 5.9e-01  
 Delays (us)  
 SBD -0.057902  
 MBD -0.005096  
 Fringe rate (Hz)  
 -0.645260  
 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 043259.20  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060659  
 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
	-110.5	179.8	-134.1	-75.2	-129.5	-153.9	-172.8	-116.5	Phase	-134.3
	0.1	0.2	0.4	0.3	0.3	0.4	0.2	0.3	Ampl.	0.2
	9.2	319.2	60.2	74.7	386.7	243.3	168.9	442.8	Sbd box	242.2
U/L	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.57134024737E+03		Apriori delay (usec)		-6.57128827685E+03		Resid mbdelay (usec)		-5.09551E-03	+/- 1.9E-04
Sband delay (usec)	-6.57134617885E+03		Apriori clock (usec)		-1.3560724E+01		Resid sbdelay (usec)		-5.79020E-02	+/- 1.5E-03
Phase delay (usec)	-6.57128828110E+03		Apriori clockrate (us/s)		-1.0399999E-07		Resid phdelay (usec)		-4.24358E-06	+/- 6.3E-07
Delay rate (us/s)	1.04851327511E-01		Apriori rate (us/s)		1.04858665012E-01		Resid rate (us/s)		-7.33750E-06	+/- 6.7E-09
Total phase (deg)			Apriori accel (us/s/s)		4.19553277775E-05		Resid phase (deg)		-134.3	+/- 19.8

RMS Theor. Amplitude 0.240 +/- 0.042 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 55.2 47.3 Search (1024X32) 0.193 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 64.1 82.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 37.4 28.0 Inc. seg. avg. 0.257 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 41.9 48.9 Inc. frq. avg. 0.248 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 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -621.101 2902.689 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/ZY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/ZY.W.308.1JFKZ

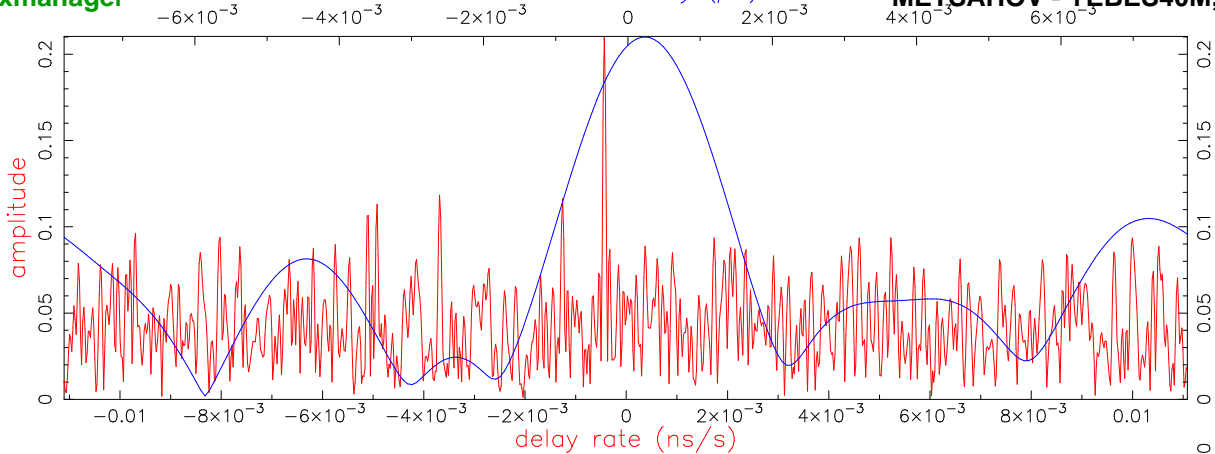
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0235+164.1JFKZ, No0038, ZY

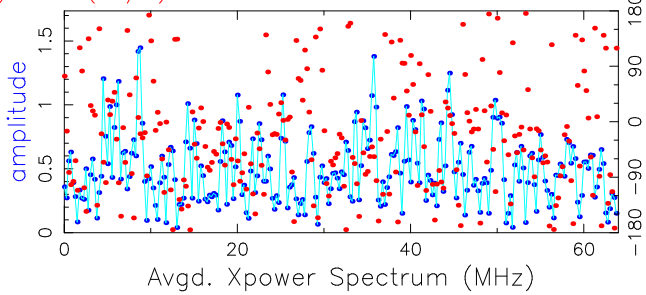
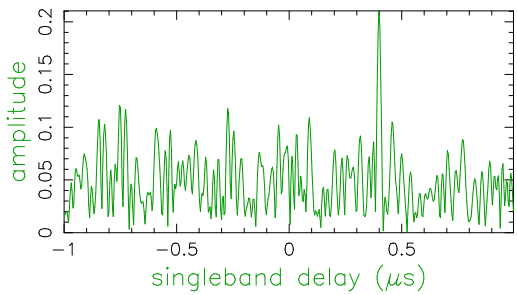
METSAHOV - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)



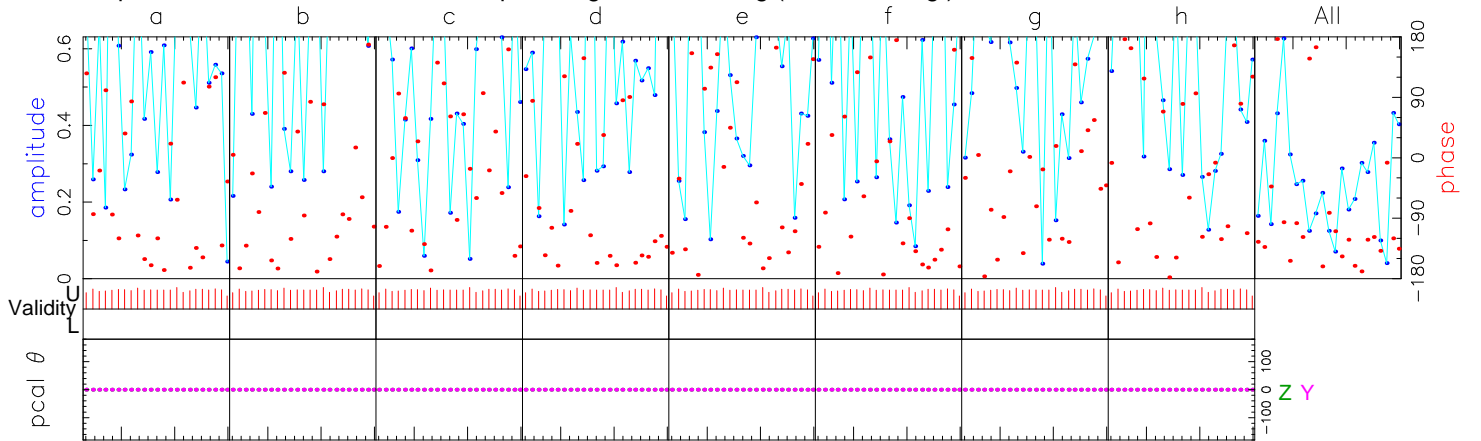
Fringe quality 0

SNR 6.1  
 Int time 112.485  
 Amp 0.210  
 Phase -132.8  
 PFD 1.3e-01  
 Delays (us)  
 SBD 0.398868  
 MBD 0.000239  
 Fringe rate (Hz)  
 -0.038327  
 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 043259.20  
 FRT 043130.00  
 Corr/FF/build  
 2021:039:055416  
 2021:039:060700  
 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
	-137.4	-119.2	-139.9	-133.1	-157.1	-141.8	-65.4	-145.0	Phase	-132.8
	0.2	0.3	0.0	0.4	0.2	0.3	0.2	0.2	Ampl.	0.2
	279.7	359.8	435.6	358.0	192.0	361.0	171.2	64.6	Sbd box	359.1
U/L	314/0	314/0	314/0	314/0	314/0	314/0	314/0	314/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.57088178777E+03	Apriori delay (usec)	-6.57128827685E+03	Resid mbdelay (usec)	2.39087E-04	+/-	1.8E-04
Sband delay (usec)	-6.57088940910E+03	Apriori clock (usec)	-1.3560724E+01	Resid sbdelay (usec)	3.98868E-01	+/-	1.4E-03
Phase delay (usec)	-6.57128828105E+03	Apriori clockrate (us/s)	-1.0399999E-07	Resid phdelay (usec)	-4.19321E-06	+/-	5.9E-07
Delay rate (us/s)	1.04858229176E-01	Apriori rate (us/s)	1.04858665012E-01	Resid rate (us/s)	-4.35836E-07	+/-	6.4E-09
Total phase (deg)	-156.7	Apriori accel (us/s/s)	4.19553277775E-05	Resid phase (deg)	-132.8	+/-	18.8

ph/seg (deg)	45.9	Theor.	44.8	Amplitude	0.210 +/- 0.035	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	67.7	Search (1024X32)	0.205	Search	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	30.6	Inc. seg. avg.	0.193	Inc. seg. avg.	0.193	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	48.3	Inc. frq. avg.	0.205	Inc. frq. avg.	0.205	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

Z: az 263.9 el 22.8 pa 31.0 Y: az 252.5 el 44.1 pa 49.2 u,v (fr/asec) -621.101 2902.689 simultaneous interpolator  
 Control file: cf\_1234\_88GHz\_gmva Input file: /Exps/c202c/v1/1234/No0038/ZY..1JFKZ Output file: /Exps/c202c/v1/1234/No0038/ZY.W.311.1JFKZ