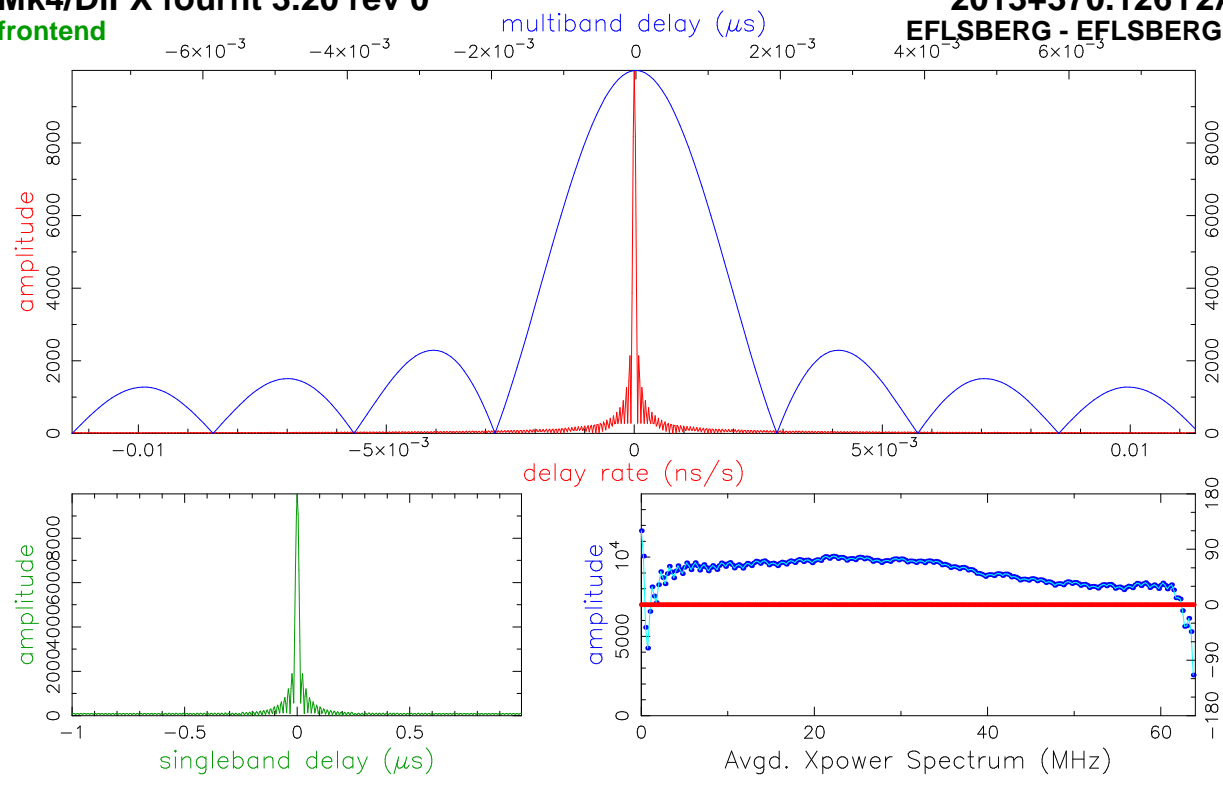


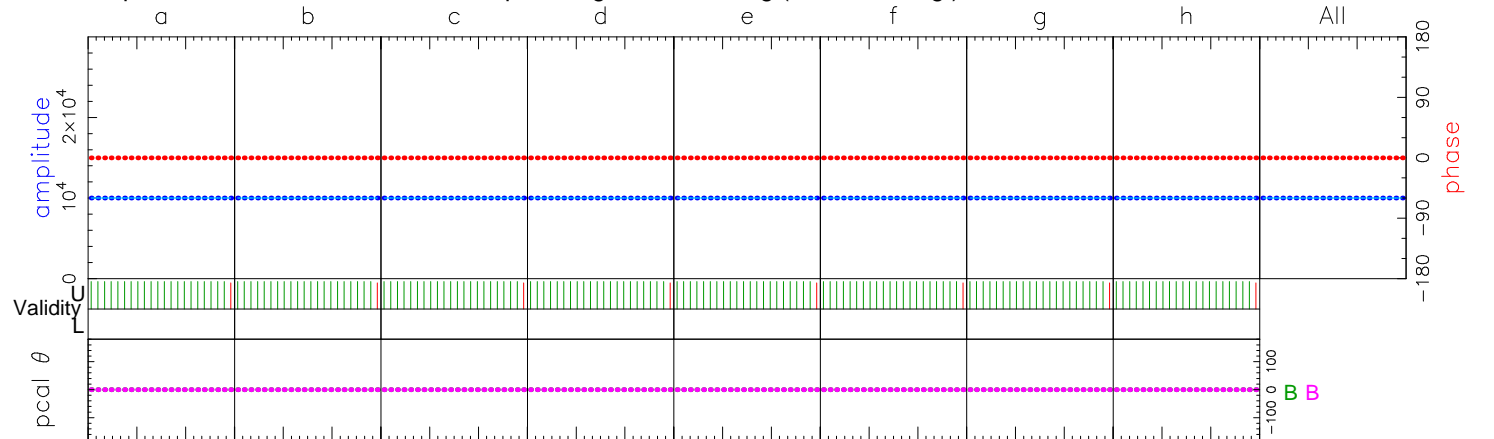
Mk4/DiFX fourfit 3.20 rev 0  
frontend

2013+370.126Y2A, No0048, BB  
EFLSBERG - EFLSBERG, fgroup W, pol LL



Fringe quality 9  
SNR 366662.0  
Int time 179.778  
Amp 9999.999  
Phase -0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Yr:day 16383  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125103  
2019:280:115849  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

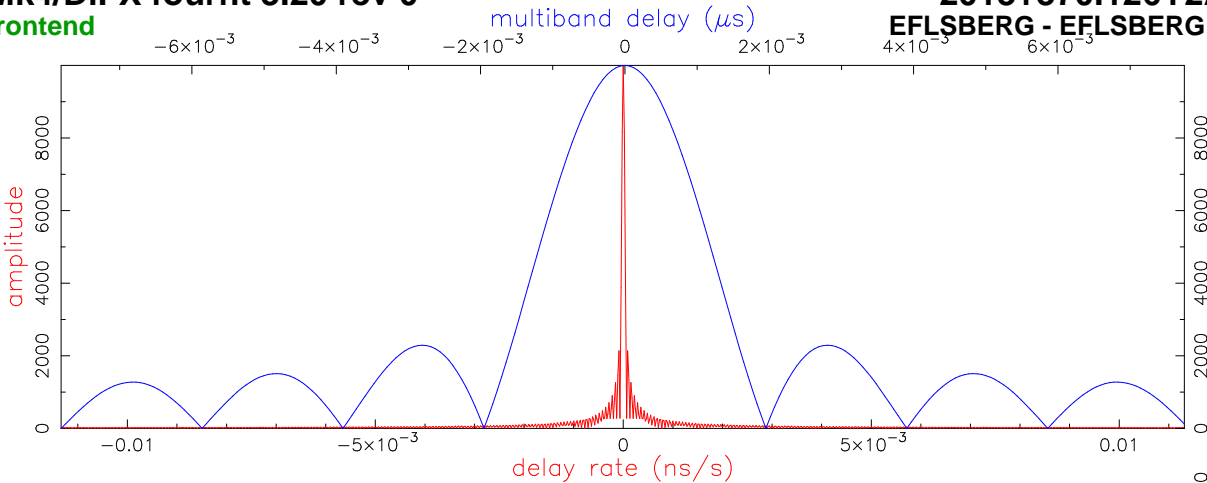
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.0E-09  
Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.3E-08  
Phase delay (usec) -1.31443688401E-19 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -1.31444E-19 +/- 1.0E-11  
Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14  
Total phase (deg) -0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) -0.0 +/- 0.0

RMS Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
ph/seg (deg) 0.0 0.0 Search (1024X32) 9999.999 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. 9999.999 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

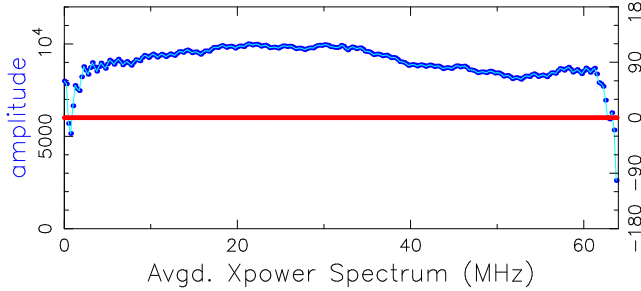
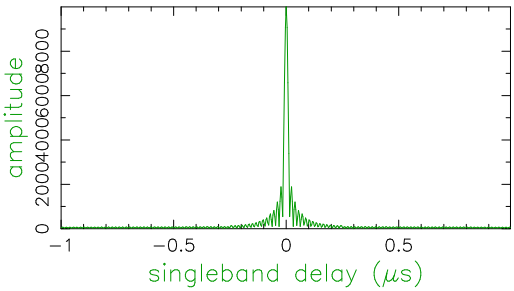
B: az 257.6 el 60.6 pa 51.1 B: az 257.6 el 60.6 pa 51.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BB..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BB.W.1.126Y2A

Mk4/DiFX fourfit 3.20 rev 0  
frontend

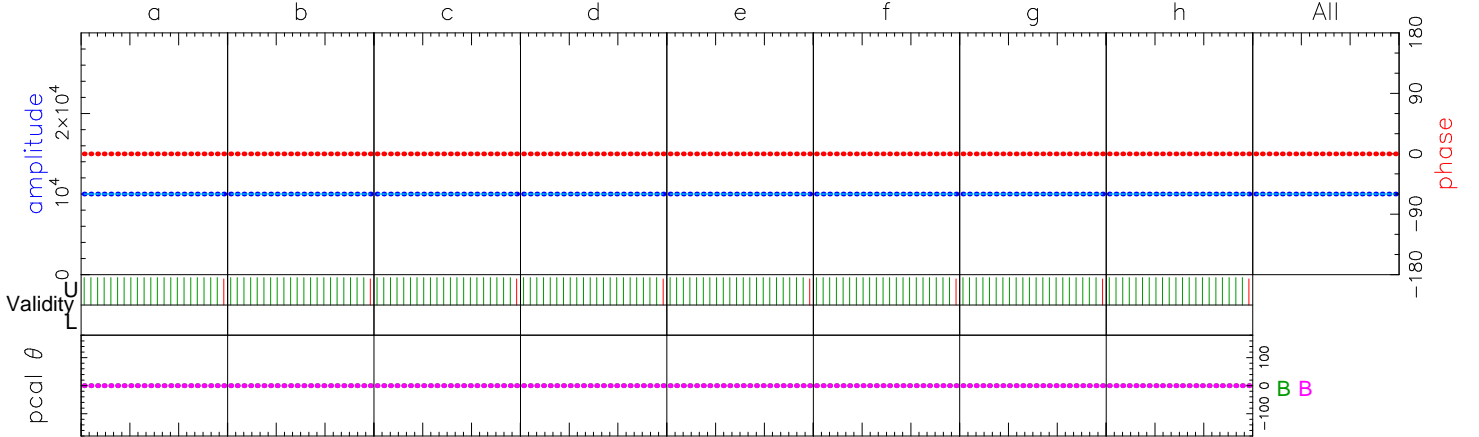
2013+370.126Y2A, No0048, BB  
EFLSBERG - EFLSBERG, fgroup W, pol RR



Fringe quality 9  
SNR 366662.0  
Int time 179.778  
Amp 9999.999  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Yr:day 16383  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125105  
2019:280:115849  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
B	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 +/- 3.0E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.3E-08  
 Phase delay (usec) 6.09179229358E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 6.09179E-20 +/- 1.0E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (1024X32) 9999.999 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. 9999.999 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 257.6 el 60.6 pa 51.1 B: az 257.6 el 60.6 pa 51.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BB..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BB.W.19.126Y2A

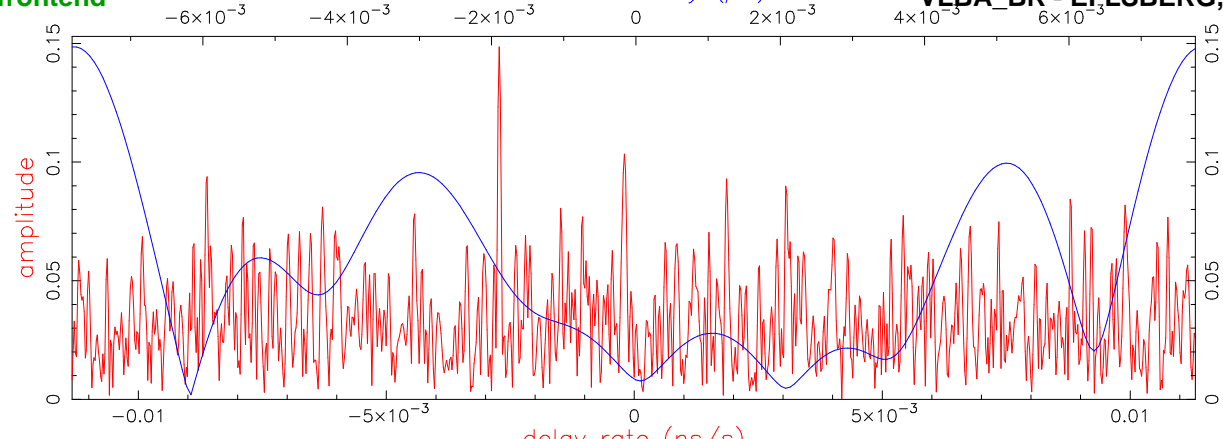
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126Y2A, No0048, bB

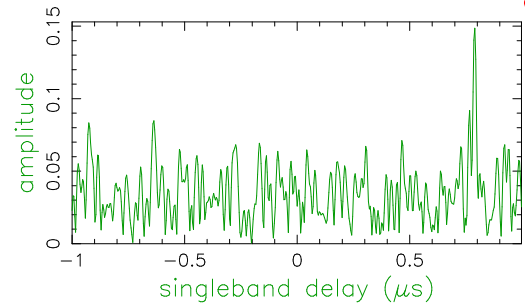
VLBA\_BR - EFLSBERG, fgroup W, pol RR

multiband delay ( $\mu$ s)

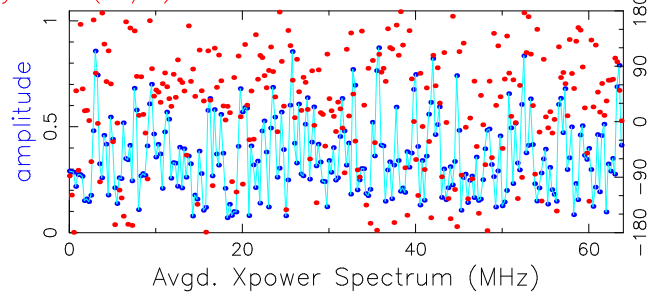


Fringe quality 0

SNR 5.5  
 Int time 179.432  
 Amp 0.153  
 Phase -121.9  
 PFD 9.9e-01  
 Delays (us)  
 SBD 0.788162  
 MBD -0.007795  
 Fringe rate (Hz)  
 -0.234570  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

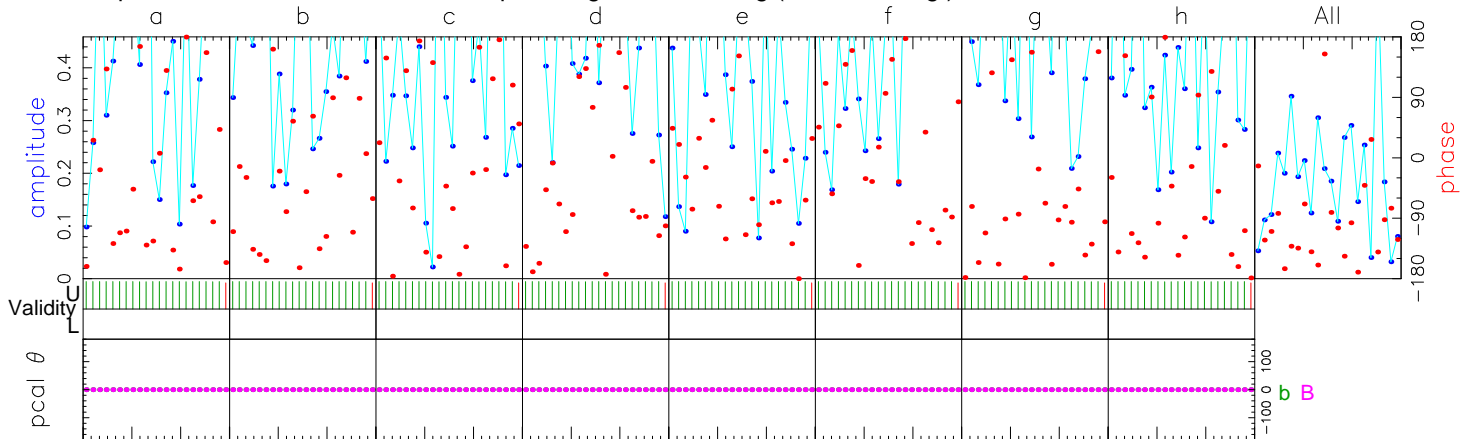


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125106  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-124.1	-100.3	-169.6	-124.3	-27.3	-123.2	-128.7	-126.2	Phase	-121.9
	0.2	0.1	0.2	0.2	0.2	0.1	0.3	0.2	Ampl.	0.2
	77.9	352.1	111.6	486.5	239.0	298.2	458.8	453.2	Sbd box	458.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-8.75371222462E+03		Apriori delay (usec)		-8.75450130474E+03		Resid mbdelay (usec)		-7.79489E-03	+/- 2.0E-04
Sband delay (usec)	-8.75371314249E+03		Apriori clock (usec)		-1.7421515E+01		Resid sbdelay (usec)		7.88162E-01	+/- 1.6E-03
Phase delay (usec)	-8.75450130867E+03		Apriori clockrate (us/s)		-4.2395080E-08		Resid phdelay (usec)		-3.93196E-06	+/- 6.8E-07
Delay rate (us/s)	1.30422703788E+00		Apriori rate (us/s)		1.30422976100E+00		Resid rate (us/s)		-2.72313E-06	+/- 6.5E-09
Total phase (deg)			Apriori accel (us/s/s)		4.45952962950E-05		Resid phase (deg)		-121.9	+/- 20.9

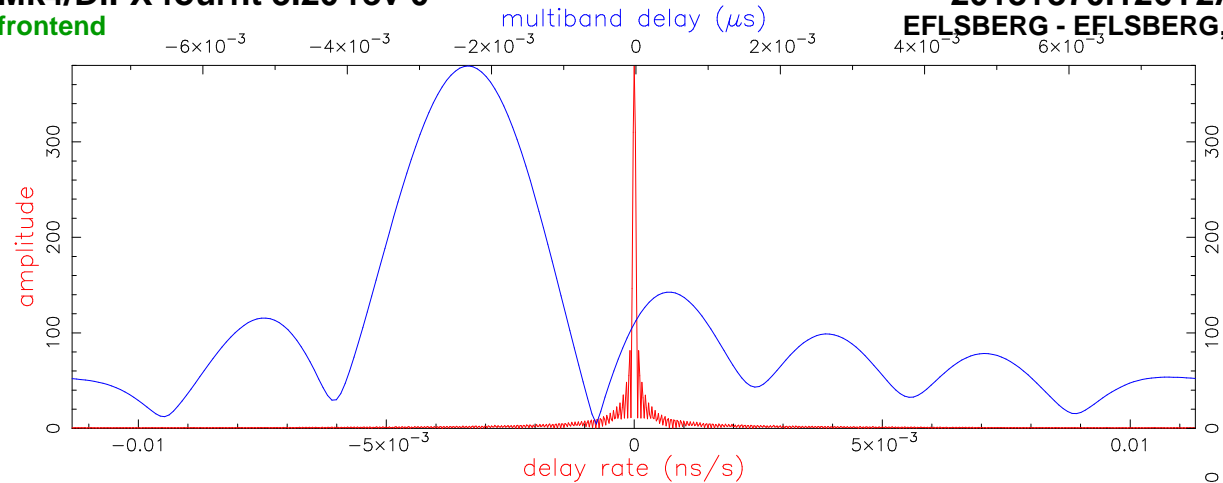
ph/seg (deg) 54.5 49.1 Search (1024X32) 0.144 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 86.5 85.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.3 29.6 Inc. seg. avg. 0.147 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.9 51.7 Inc. frq. avg. 0.160 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 63.4 el 27.1 pa -48.6 B: az 257.6 el 60.6 pa 51.1 u,v (fr/asec) -9350.103 2526.237 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/bB..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/bB.W.25.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

frontend

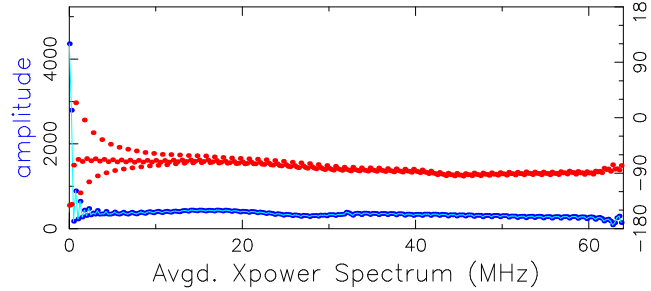
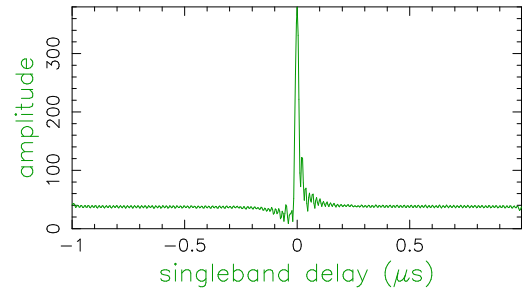
2013+370.126Y2A, No0048, BB

EFLSBERG - EFLSBERG, fgroup W, pol LR



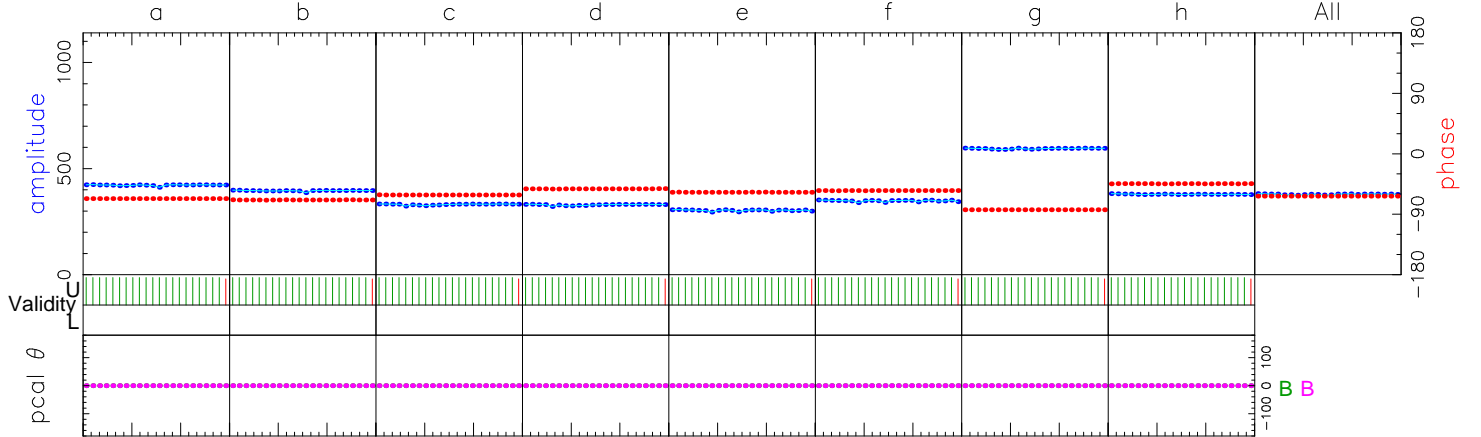
Fringe quality 7

SNR 13935.9  
 Int time 179.778  
 Amp 380.074  
 Phase -63.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000532  
 MBD -0.002347  
 Fringe rate (Hz)  
 0.000001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125108  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

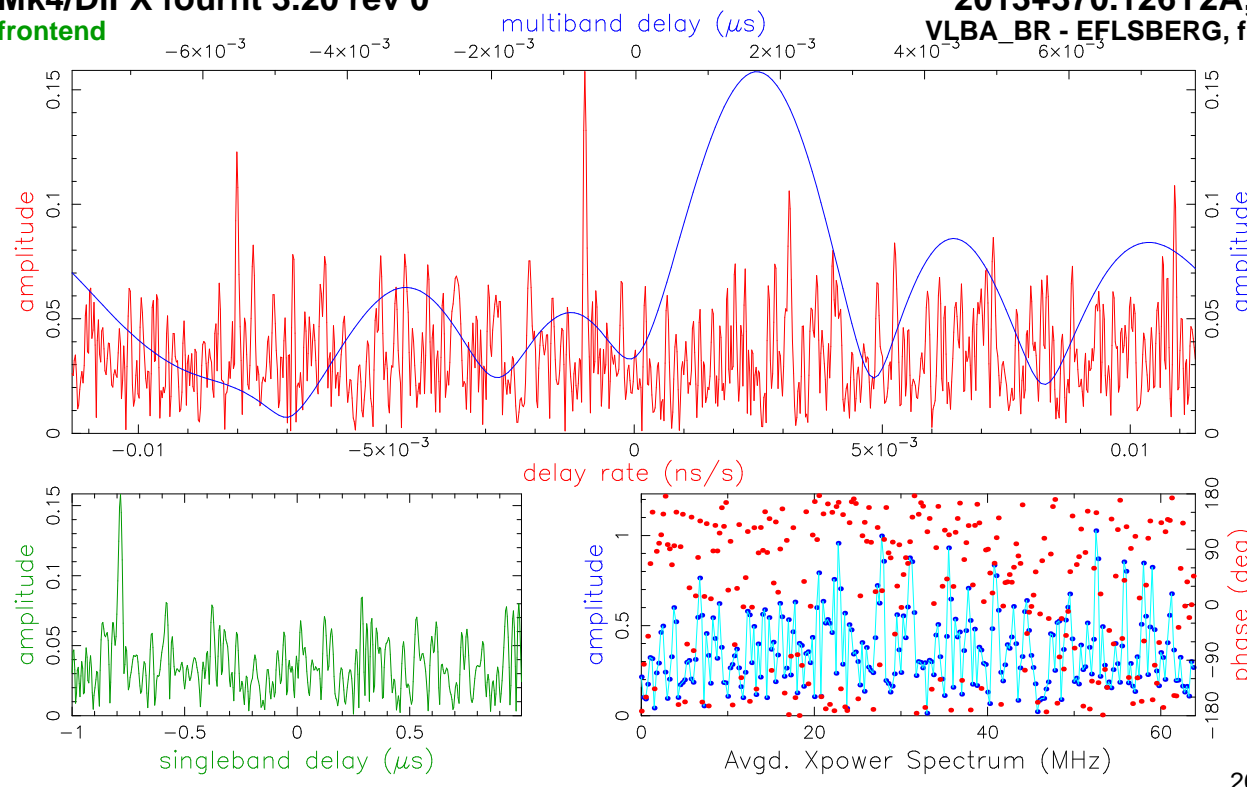
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-66.7	-68.7	-61.3	-52.1	-57.3	-54.8	-83.3	-44.6	Phase	-63.0
	422.3	396.1	331.3	329.5	303.4	348.5	594.6	379.3	Ampl.	388.1
	256.7	256.2	256.0	257.2	256.0	256.5	257.5	252.8	Sbd box	256.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.34737500000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-2.34738E-03	+/- 7.8E-08
Sband delay (usec)	-5.32000000000E-04		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-5.32000E-04	+/- 6.2E-07
Phase delay (usec)	-2.03186397856E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-2.03186E-06	+/- 2.7E-10
Delay rate (us/s)	7.08557619584E-12		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		7.08558E-12	+/- 2.5E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-63.0	+/- 0.0

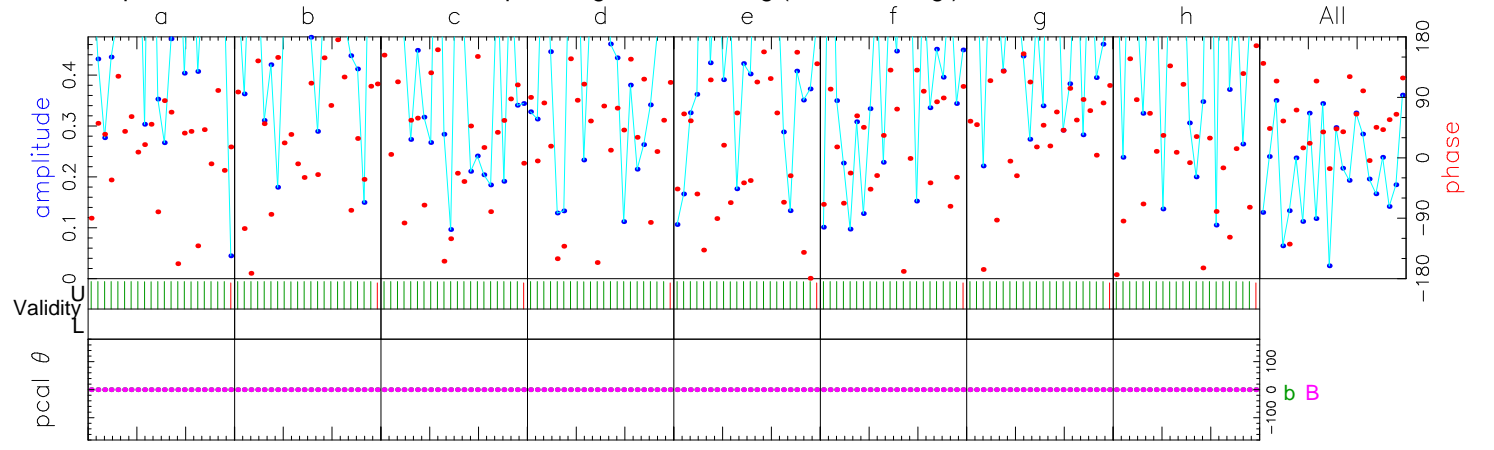
RMS Theor. Amplitude 380.074 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (1024X32) 377.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 13.0 0.0 Inc. seg. avg. 379.357 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 22.8 0.0 Inc. frq. avg. 388.147 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 257.6 el 60.6 pa 51.1 B: az 257.6 el 60.6 pa 51.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BB..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BB.W.38.126Y2A



Fringe quality 0  
SNR 5.8  
Int time 179.432  
Amp 0.158  
Phase 64.7  
PFD 5.9e-01  
Delays (us)  
SBD -0.785425  
MBD 0.001674  
Fringe rate (Hz)  
-0.085454  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125104  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



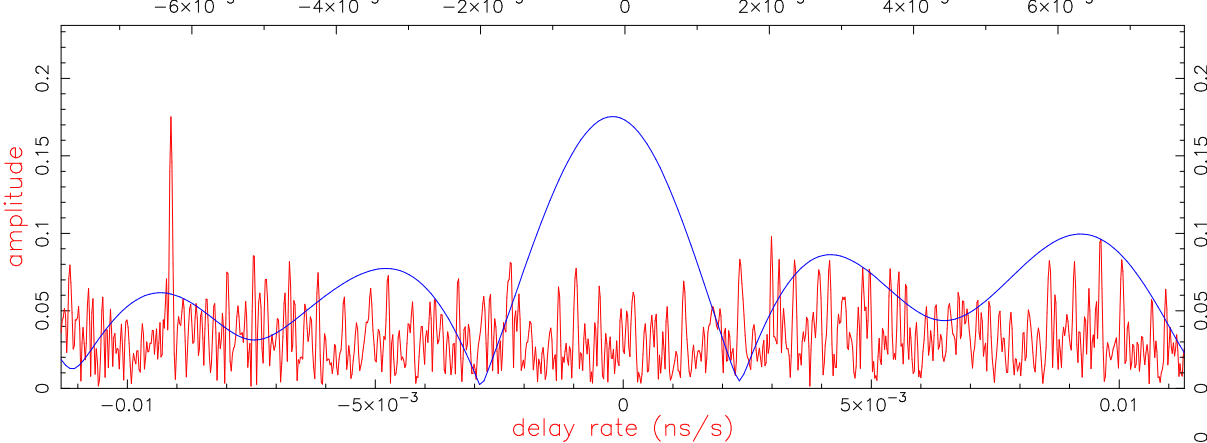
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	0.2
B	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	55.9
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
B	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	
									Tracks	
Group delay (usec)(sbd)	-8.75528088066E+03		Apriori delay (usec)		-8.75450130474E+03		Resid mbdelay (usec)		1.67408E-03	+/- 1.9E-04
Sband delay (usec)	-8.75528672949E+03		Apriori clock (usec)		-1.7421515E+01		Resid sbdelay (usec)		-7.85425E-01	+/- 1.5E-03
Phase delay (usec)	-8.75450130265E+03		Apriori clockrate (us/s)		-4.2395080E-08		Resid phdelay (usec)		2.08735E-06	+/- 6.4E-07
Delay rate (us/s)	1.30422876897E+00		Apriori rate (us/s)		1.30422976100E+00		Resid rate (us/s)		-9.92032E-07	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		4.45952962950E-05		Resid phase (deg)		64.7	+/- 19.8

ph/seg (deg) 54.3 46.4 Search (1024X32) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 69.0 81.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 46.6 28.0 Inc. seg. avg. 0.161 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 54.1 48.9 Inc. frq. avg. 0.157 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
b: az 63.4 el 27.1 pa -48.6 B: az 257.6 el 60.6 pa 51.1 u,v (fr/asec) -9350.103 2526.237 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/bB..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/bB.W.4.126Y2A

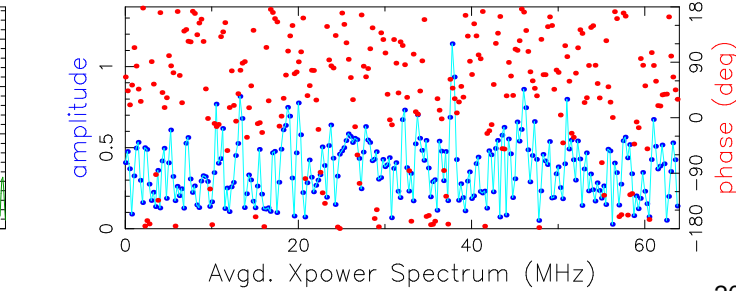
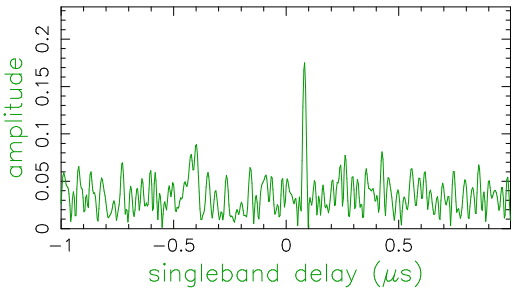


multiband delay ( $\mu\text{s}$ )

Fringe quality 0

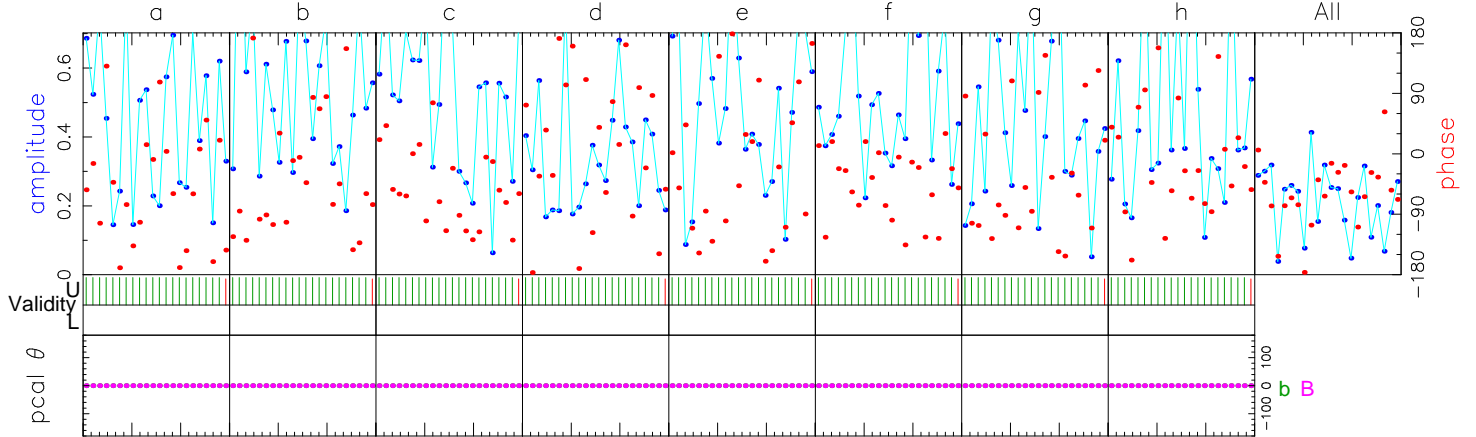


SNR 6.5  
 Int time 179.432  
 Amp 0.234  
 Phase -57.8  
 PFD 1.4e-02  
 Delays (us)  
 SBD 0.080952  
 MBD -0.000222  
 Fringe rate (Hz)  
 -0.786998  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125109  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-49.6	-85.9	-51.6	63.4	-96.5	-41.7	-99.1	-28.3		-57.8
	0.3	0.3	0.4	0.1	0.1	0.5	0.3	0.2		0.2
	77.7	355.9	277.5	413.5	350.1	277.2	145.8	1.4		277.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
B	1000	1000	1000	1000	1000	1000	1000	1000		
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
B	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-8.75442340196E+03		Apriori delay (usec)		-8.75450130474E+03		Resid mbdelay (usec)		-2.22224E-04	+/- 1.7E-04
Sband delay (usec)	-8.75442035274E+03		Apriori clock (usec)		-1.7421515E+01		Resid sbdelay (usec)		8.09520E-02	+/- 1.3E-03
Phase delay (usec)	-8.75450130660E+03		Apriori clockrate (us/s)		-4.2395080E-08		Resid phdelay (usec)		-1.86292E-06	+/- 5.7E-07
Delay rate (us/s)	1.30422062474E+00		Apriori rate (us/s)		1.30422976100E+00		Resid rate (us/s)		-9.13627E-06	+/- 5.5E-09
Total phase (deg)			Apriori accel (us/s/s)		4.45952962950E-05		Resid phase (deg)		-57.8	+/- 17.7

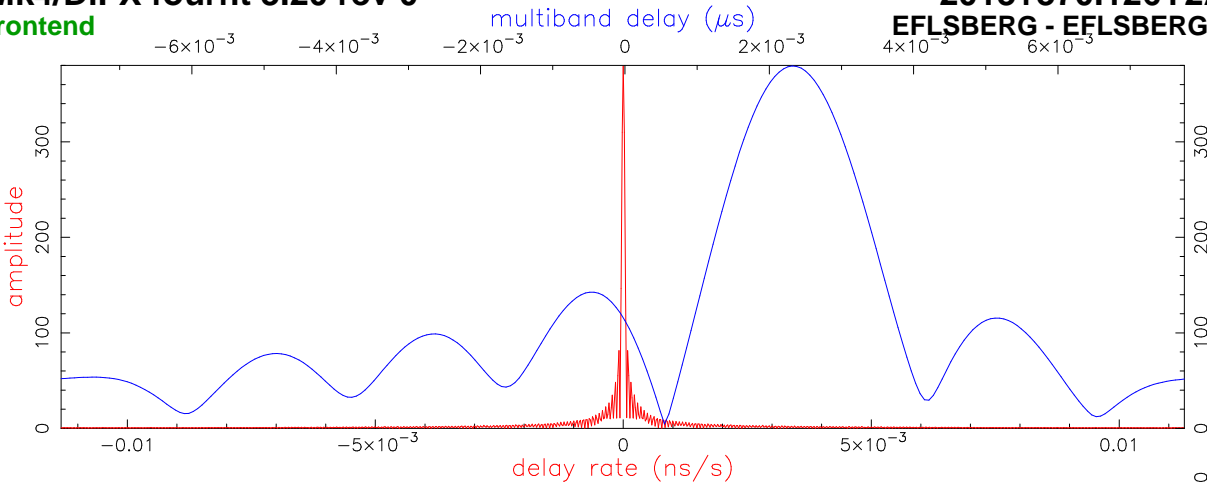
ph/seg (deg) 49.7 41.6 Search (1024X32) 0.166 Pcdl mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 59.9 72.6 Interp. 0.000 Pcdl rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 57.6 25.1 Inc. seg. avg. 0.226 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 55.0 43.8 Inc. frq. avg. 0.248 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 63.4 el 27.1 pa -48.6 B: az 257.6 el 60.6 pa 51.1 u,v (fr/asec) -9350.103 2526.237 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/bB..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/bB.W.48.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

frontend

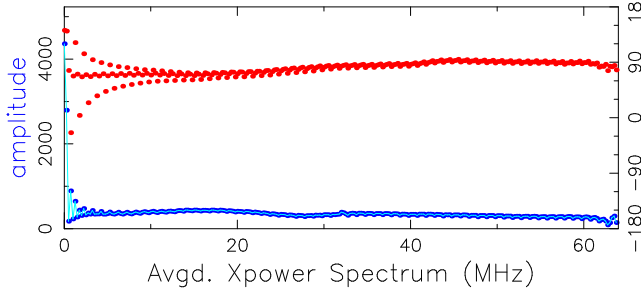
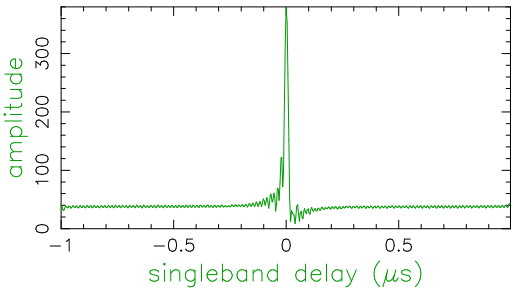
2013+370.126Y2A, No0048, BB

EFLSBERG - EFLSBERG, fgroup W, pol RL



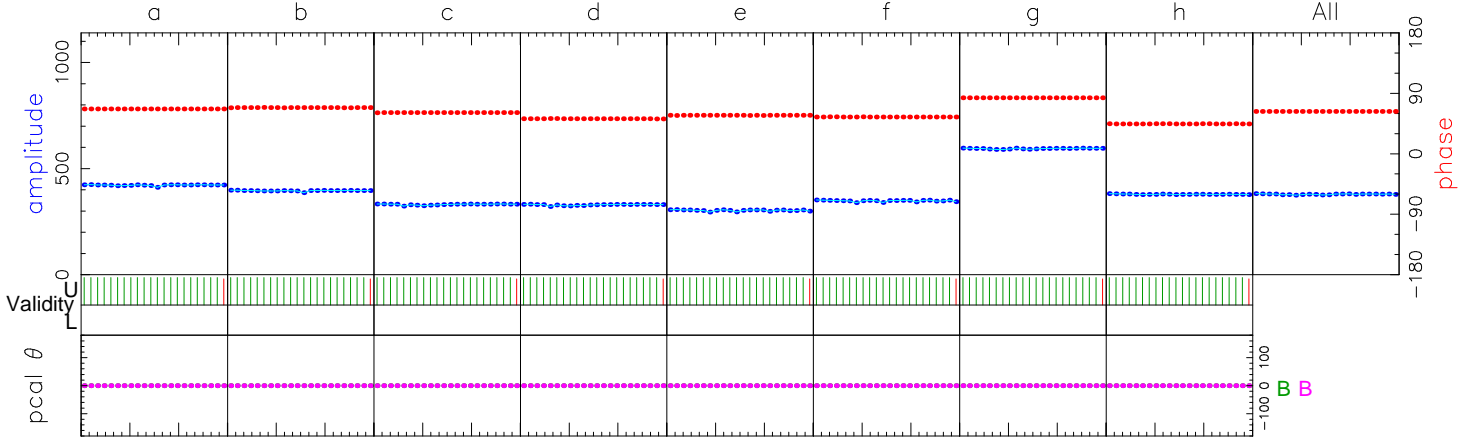
Fringe quality 7

SNR 13935.9  
 Int time 179.778  
 Amp 380.074  
 Phase 63.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000532  
 MBD 0.002347  
 Fringe rate (Hz)  
 -0.000001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125110  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	66.7	68.7	61.3	52.1	57.3	54.8	83.3	44.6	Phase	63.0
	422.3	396.1	331.3	329.5	303.4	348.5	594.6	379.3	Ampl.	388.1
	257.3	257.8	258.0	256.8	258.0	257.5	256.5	261.2	Sbd box	257.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

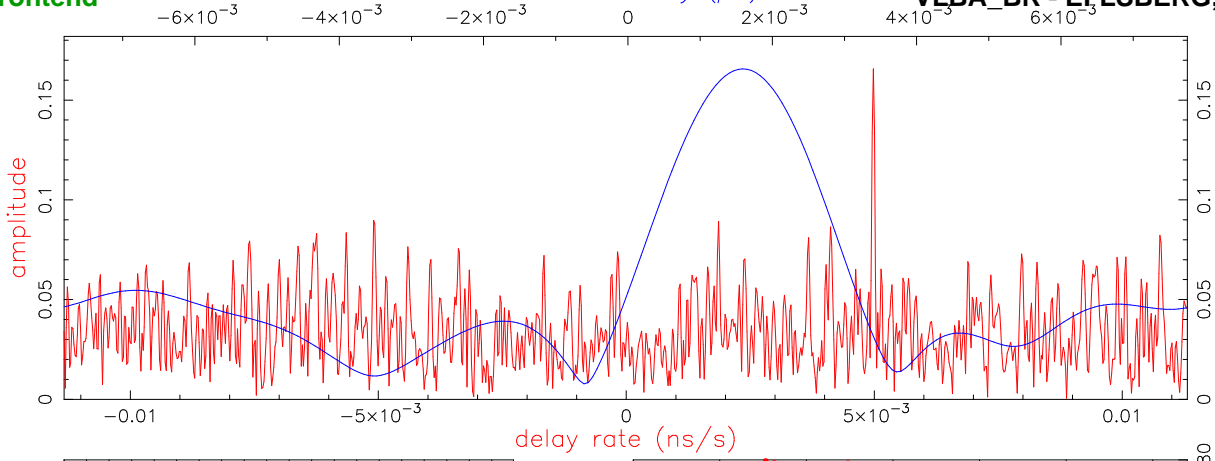
Group delay (usec)(sbd) 2.34737500000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 2.34738E-03 +/- 7.8E-08  
 Sband delay (usec) 5.32000000000E-04 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 5.32000E-04 +/- 6.2E-07  
 Phase delay (usec) 2.03186397865E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 2.03186E-06 +/- 2.7E-10  
 Delay rate (us/s) -7.08557619584E-12 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -7.08558E-12 +/- 2.5E-12  
 Total phase (deg) 63.0 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 63.0 +/- 0.0

RMS Theor. Amplitude 380.074 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (1024X32) 377.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 13.0 0.0 Inc. seg. avg. 379.357 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 22.8 0.0 Inc. frq. avg. 388.147 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

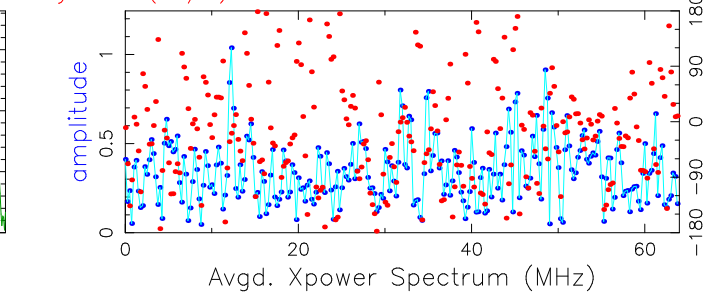
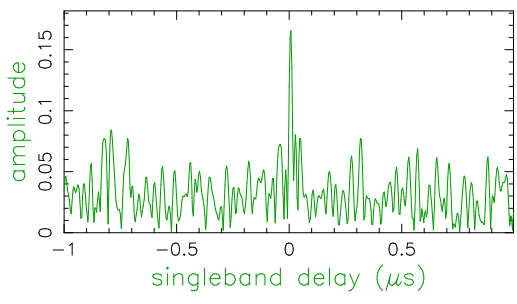
B: az 257.6 el 60.6 pa 51.1 B: az 257.6 el 60.6 pa 51.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BB..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BB.W.56.126Y2A

multiband delay ( $\mu\text{s}$ )

Fringe quality 0

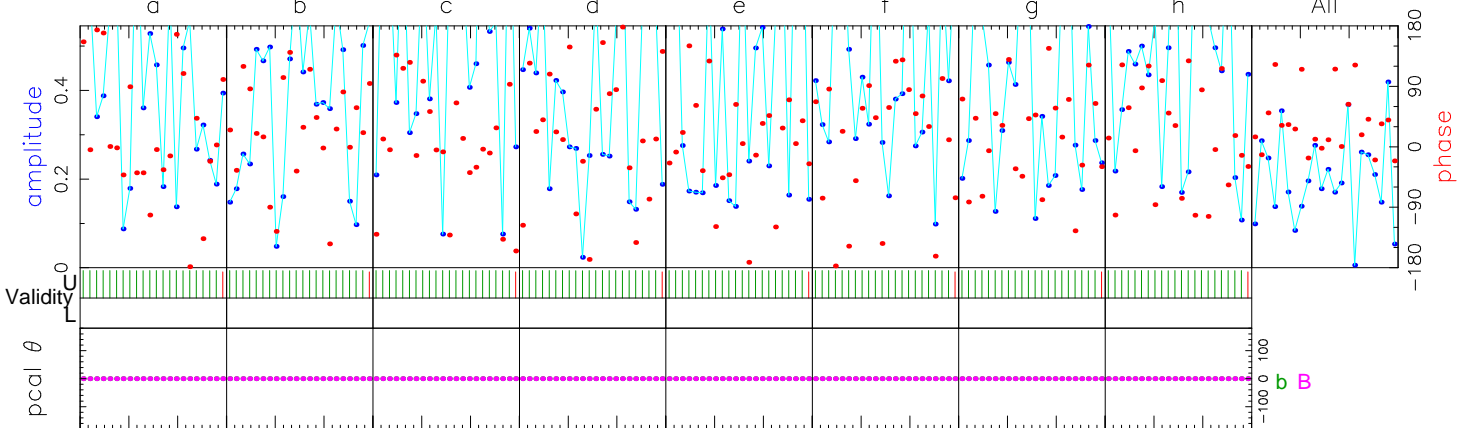


SNR 6.1  
 Int time 179.432  
 Amp 0.182  
 Phase 28.8  
 PFD 9.9e-02  
 Delays (us)  
 SBD 0.006501  
 MBD 0.001571  
 Fringe rate (Hz)  
 0.429281  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125111  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



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

Group delay (usec)(sbd) -8.75449973391E+03 Apriori delay (usec) -8.75450130474E+03 Resid mbdelay (usec) 1.57083E-03 +/- 1.8E-04  
 Sband delay (usec) -8.75449480374E+03 Apriori clock (usec) -1.7421515E+01 Resid sbdelay (usec) 6.50100E-03 +/- 1.4E-03  
 Phase delay (usec) -8.75450130381E+03 Apriori clockrate (us/s) -4.2395080E-08 Resid phdelay (usec) 9.28193E-07 +/- 6.0E-07  
 Delay rate (us/s) 1.30423474453E+00 Apriori rate (us/s) 1.30422976100E+00 Resid rate (us/s) 4.98353E-06 +/- 5.8E-09  
 Total phase (deg) -111.6 Apriori accel (us/s/s) 4.45952962950E-05 Resid phase (deg) 28.8 +/- 18.6

ph/seg (deg) 45.5 43.7 Amplitude 0.182 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 63.0 76.3 Search (1024X32) 0.163 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 28.1 26.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 35.2 46.0 Inc. seg. avg. 0.171 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.175 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00



# Mk4/DiFX fourfit 3.20 rev 0

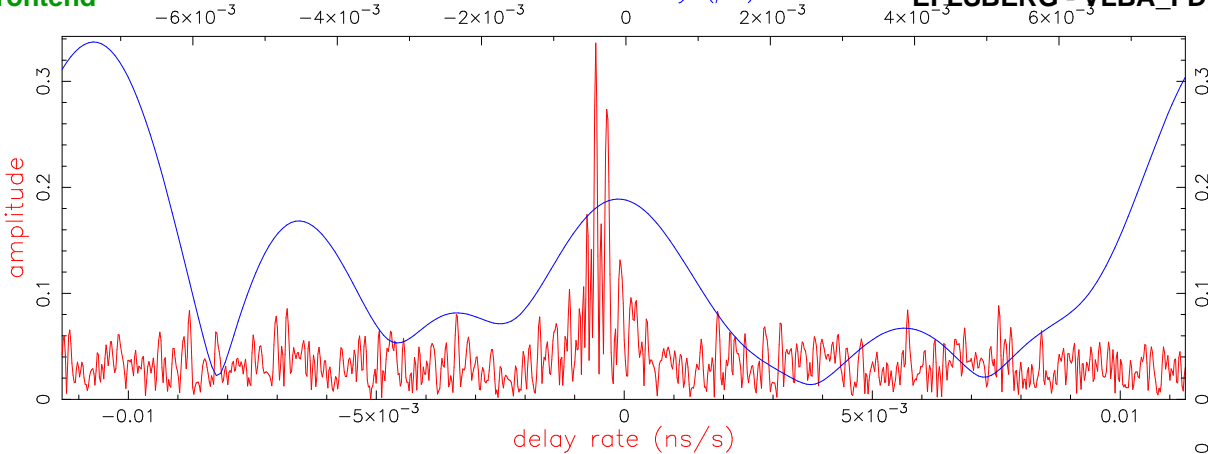
frontend

# 2013+370.126Y2A, No0048, Bf

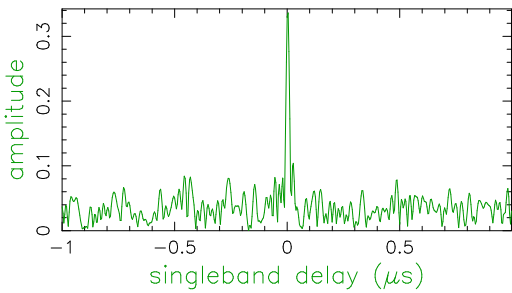
EFLSBERG - VLBA\_FD, fgroup W, pol RR

multiband delay ( $\mu$ s)

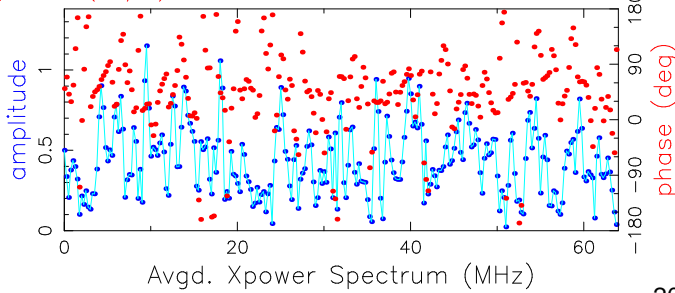
Fringe quality 9



SNR 12.5  
 Int time 179.084  
 Amp 0.342  
 Phase 167.1  
 PFD 1.6e-27  
 Delays (us)  
 SBD 0.002290  
 MBD -0.007458  
 Fringe rate (Hz)  
 -0.048961  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

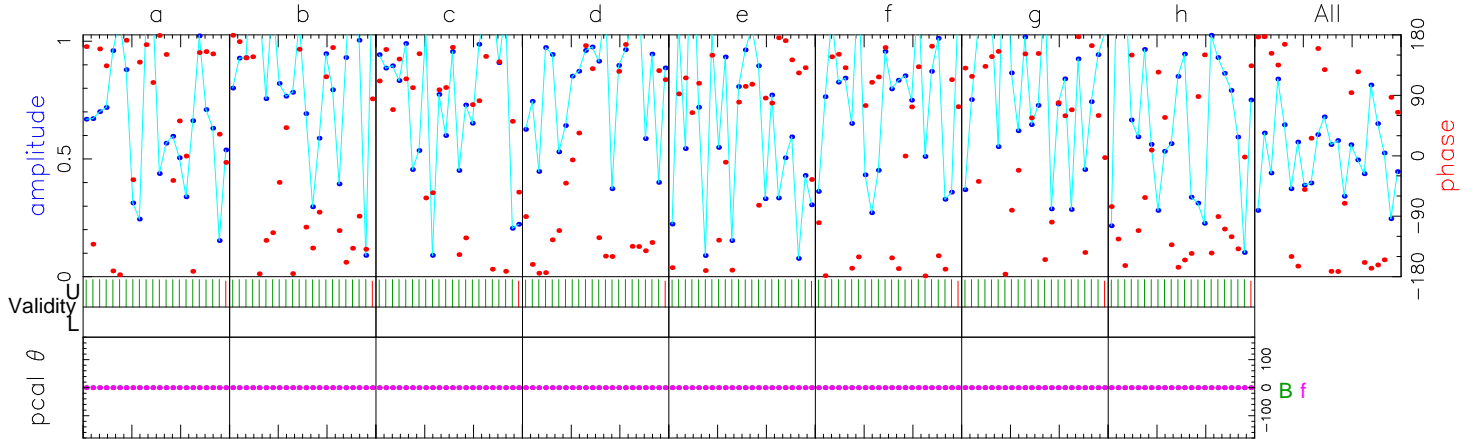


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125106  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0				
B	1000	1000	1000	1000	1000	1000	1000	1000				
f	1000	1000	1000	1000	1000	1000	1000	1000				
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
B	1000	1000	1000	1000	1000	1000	1000	1000				
f	1000	1000	1000	1000	1000	1000	1000	1000				
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
Group delay (usec)(sbd)		7.77252467833E+03				7.77251651096E+03			Resid mbdelay (usec)	-7.45763E-03 +/- 8.7E-05		
Sband delay (usec)		7.77251880121E+03				1.6327339E+01			Resid sbdelay (usec)	2.29025E-03 +/- 6.9E-04		
Phase delay (usec)		7.77251651635E+03				-1.0905050E-07			Resid phdelay (usec)	5.38996E-06 +/- 3.0E-07		
Delay rate (us/s)		-1.49778881082E+00				-1.49778824244E+00			Resid rate (us/s)	-5.68384E-07 +/- 2.8E-09		
Total phase (deg)			258.8			-2.33308831724E-05			Resid phase (deg)	167.1 +/- 9.2		
RMS	63.9	21.5							PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	63.9	21.5	Amplitude	0.342 +/- 0.027					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
amp/seg (%)	69.0	37.5	Search (1024X32)	0.329					Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
ph/frq (deg)	41.1	12.9	Inc. seg. avg.	0.489					Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011	
amp/frq (%)	24.8	22.6	Inc. frq. avg.	0.395					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

B: az 257.6 el 60.6 pa 51.1 f: az 61.9 el 30.0 pa -72.5 u,v (fr/asec) 10761.998 393.086 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bf..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bf.W.24.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

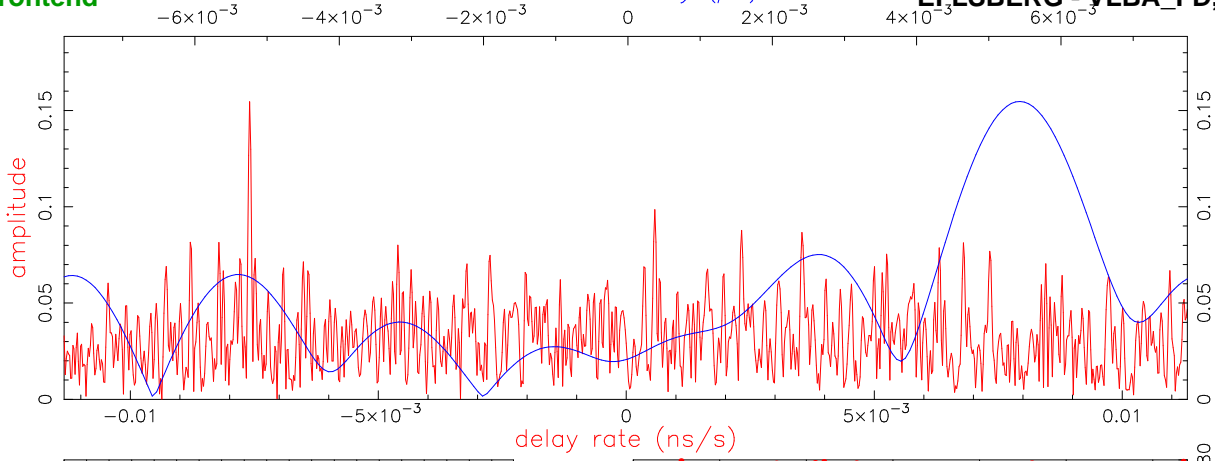
frontend

2013+370.126Y2A, No0048, Bf

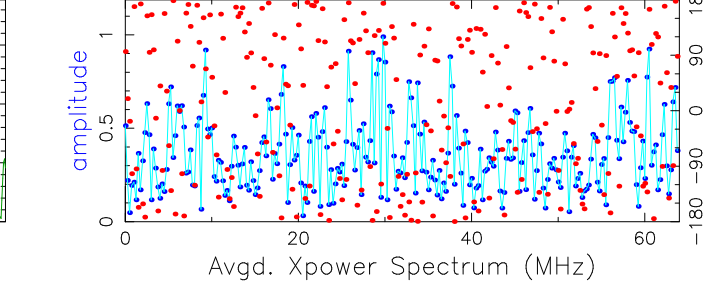
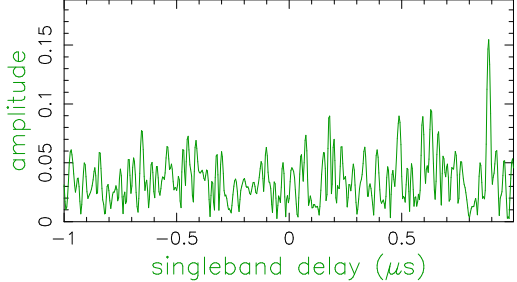
EFLSBERG - VLBA\_FD, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

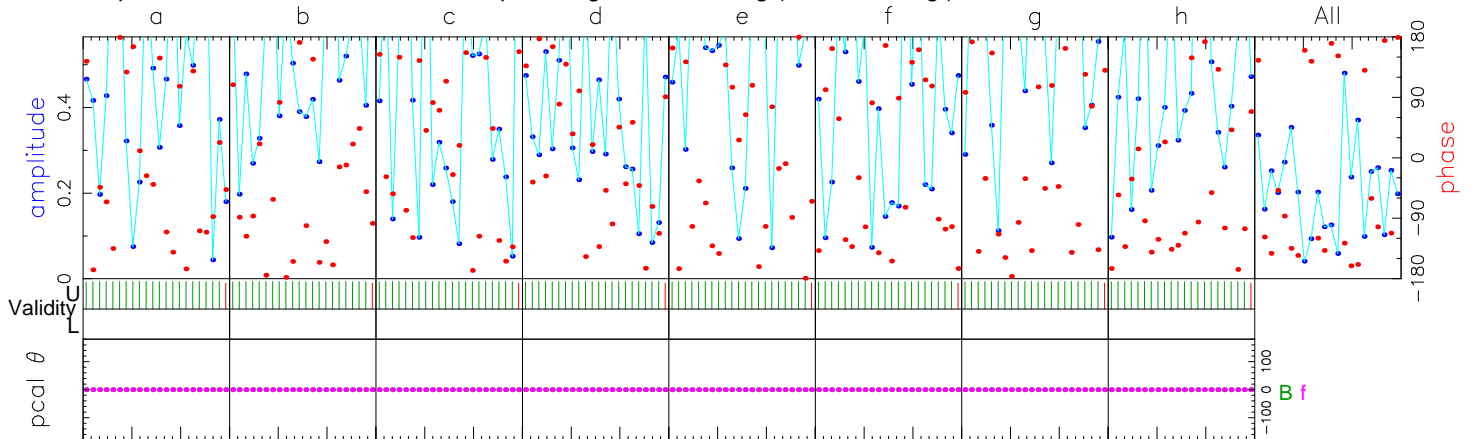


SNR 5.7  
 Int time 179.084  
 Amp 0.188  
 Phase -138.4  
 PFD 8.0e-01  
 Delays (us)  
 SBD 0.885807  
 MBD 0.005387  
 Fringe rate (Hz)  
 -0.655985  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



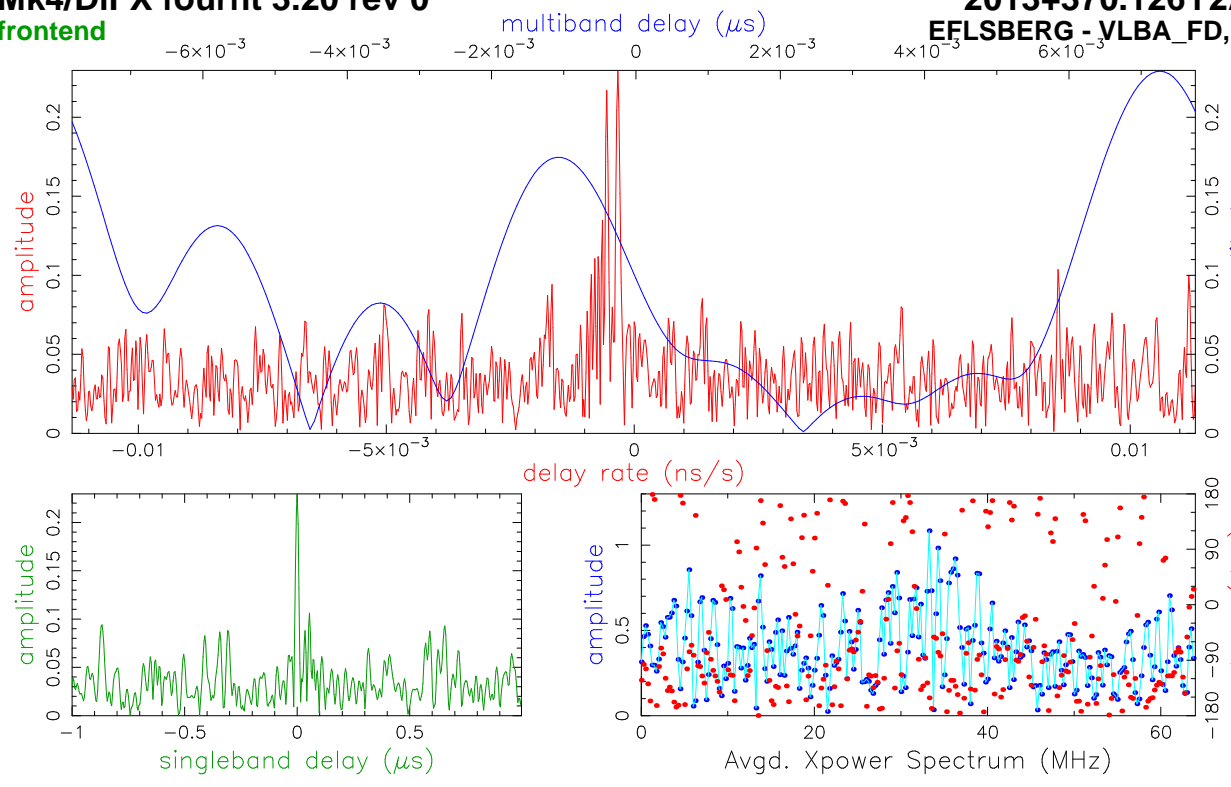
Exp. c192c  
 Yr:day 16383  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125109  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



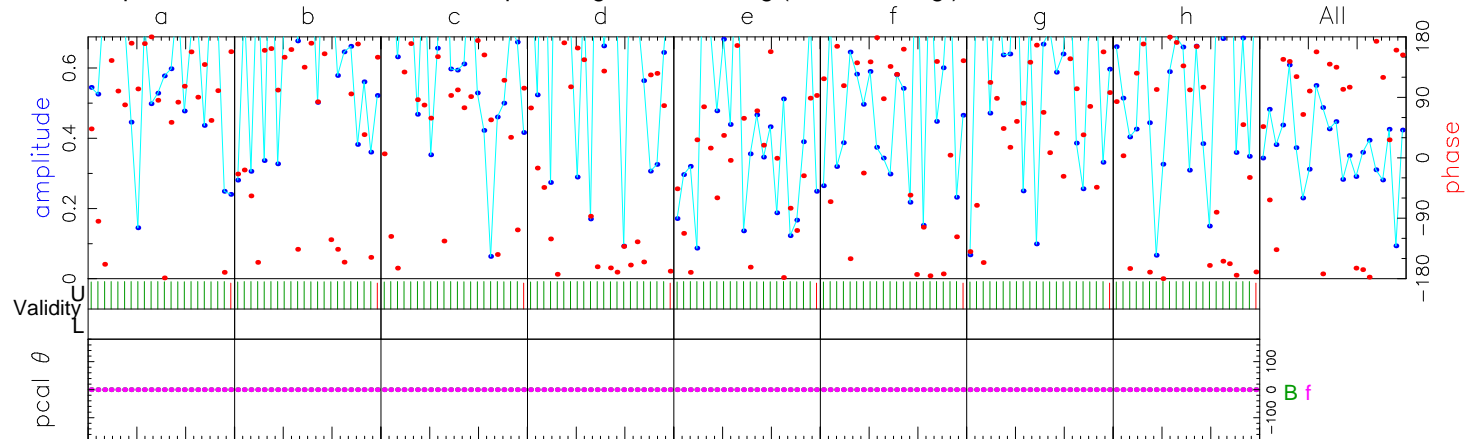
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-133.7	-125.5	172.3	165.9	-117.7	-136.2	-157.7	-119.2	Phase	-138.4
	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	Ampl.	0.2
	410.5	424.7	214.6	294.7	209.6	358.6	56.9	445.8	Sbd box	483.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	7.77339689798E+03		Apriori delay (usec)		7.77251651096E+03		Resid mbdelay (usec)		5.38701E-03	+/- 1.9E-04
Sband delay (usec)	7.77340231821E+03		Apriori clock (usec)		1.6327339E+01		Resid sbdelay (usec)		8.85807E-01	+/- 1.5E-03
Phase delay (usec)	7.77251650650E+03		Apriori clockrate (us/s)		-1.0905050E-07		Resid phdelay (usec)		-4.46432E-06	+/- 6.5E-07
Delay rate (us/s)	-1.49779585777E+00		Apriori rate (us/s)		-1.49778824244E+00		Resid rate (us/s)		-7.61534E-06	+/- 6.2E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.33308831724E-05		Resid phase (deg)		-138.4	+/- 20.2

ph/seg (deg) 50.6 47.3 Search (1024X32) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 78.4 82.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.9 28.5 Inc. seg. avg. 0.192 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 38.8 49.7 Inc. frq. avg. 0.180 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 257.6 el 60.6 pa 51.1 f: az 61.9 el 30.0 pa -72.5 u,v (fr/asec) 10761.998 393.086 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bf..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bf.W.49.126Y2A



Fringe quality 9  
 SNR 8.4  
 Int time 179.084  
 Amp 0.230  
 Phase 145.4  
 PFD 7.9e-09  
 Delays (us)  
 SBD -0.000552  
 MBD 0.007232  
 Fringe rate (Hz)  
 -0.029548  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125104  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	7.77252374319E+03		Apriori delay (usec)		7.77251651096E+03		Resid mbdelay (usec)		7.23222E-03	+/- 1.3E-04
Sband delay (usec)	7.77251595871E+03		Apriori clock (usec)		1.6327339E+01		Resid sbdelay (usec)		-5.52250E-04	+/- 1.0E-03
Phase delay (usec)	7.77251651565E+03		Apriori clockrate (us/s)		-1.0905050E-07		Resid phdelay (usec)		4.68751E-06	+/- 4.4E-07
Delay rate (us/s)	-1.49778858547E+00		Apriori rate (us/s)		-1.49778824244E+00		Resid rate (us/s)		-3.43028E-07	+/- 4.2E-09
Total phase (deg)	237.0		Apriori accel (us/s/s)		-2.33308831724E-05		Resid phase (deg)		145.4	+/- 13.6

ph/seg (deg) 58.8 32.0 Search (1024X32) 0.223 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 79.9 55.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.6 19.3 Inc. seg. avg. 0.326 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.0 33.7 Inc. frq. avg. 0.270 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 257.6 el 60.6 pa 51.1 f: az 61.9 el 30.0 pa -72.5 u,v (fr/asec) 10761.998 393.086 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bf..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bf.W.6.126Y2A

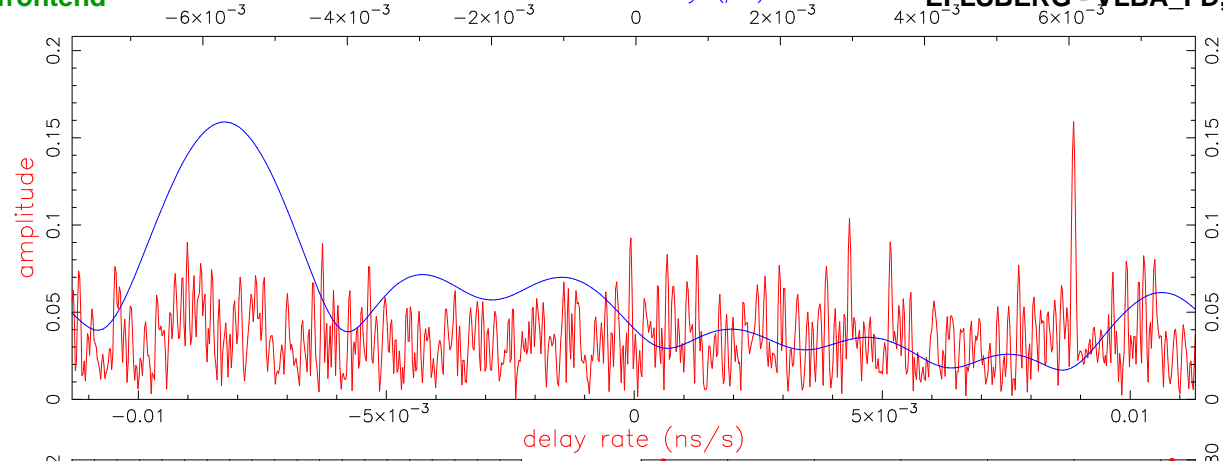
# Mk4/DiFX fourfit 3.20 rev 0

frontend

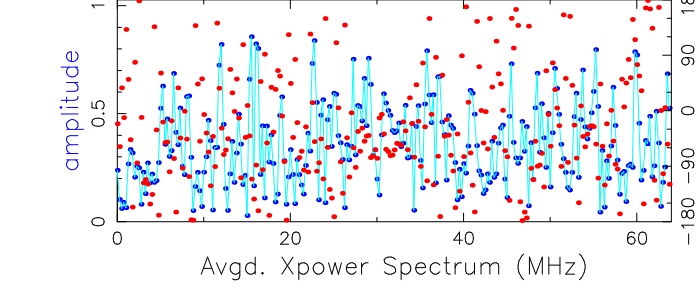
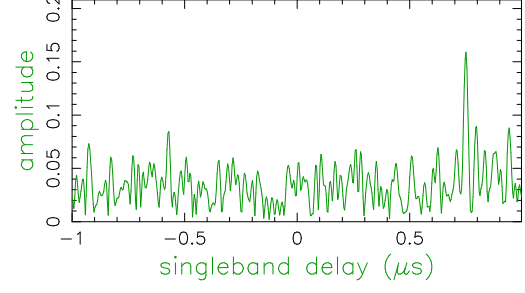
# 2013+370.126Y2A, No0048, Bf

EFLSBERG - VLBA\_FD, fgroup W, pol RL

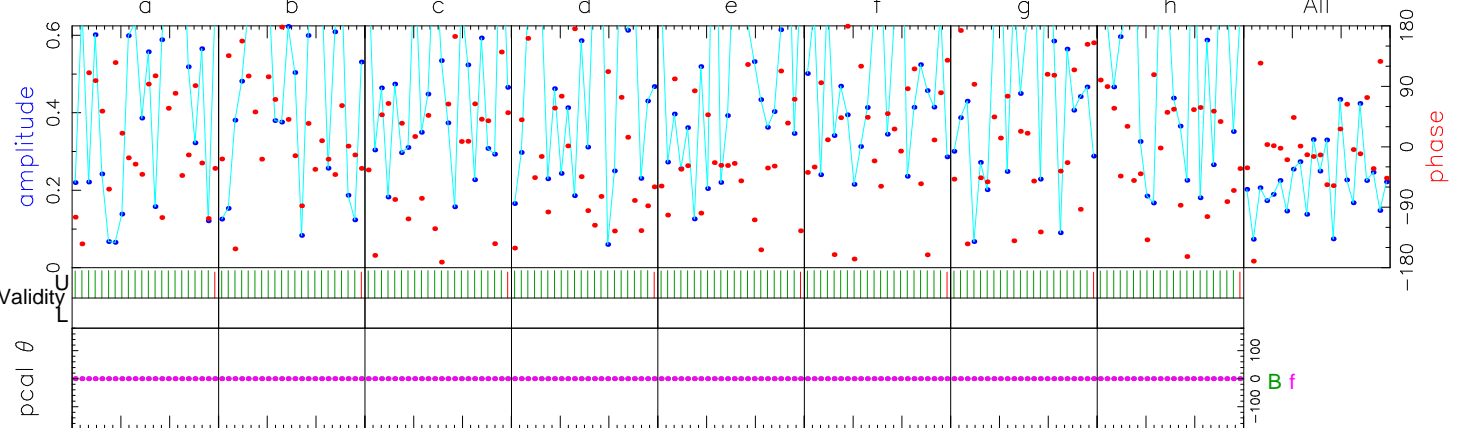
multiband delay ( $\mu\text{s}$ )



Fringe quality 0  
 SNR 5.8  
 Int time 179.084  
 Amp 0.208  
 Phase 0.8  
 PFD 4.8e-01  
 Delays (us)  
 SBD 0.749185  
 MBD -0.005701  
 Fringe rate (Hz) 0.764165  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125111  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"



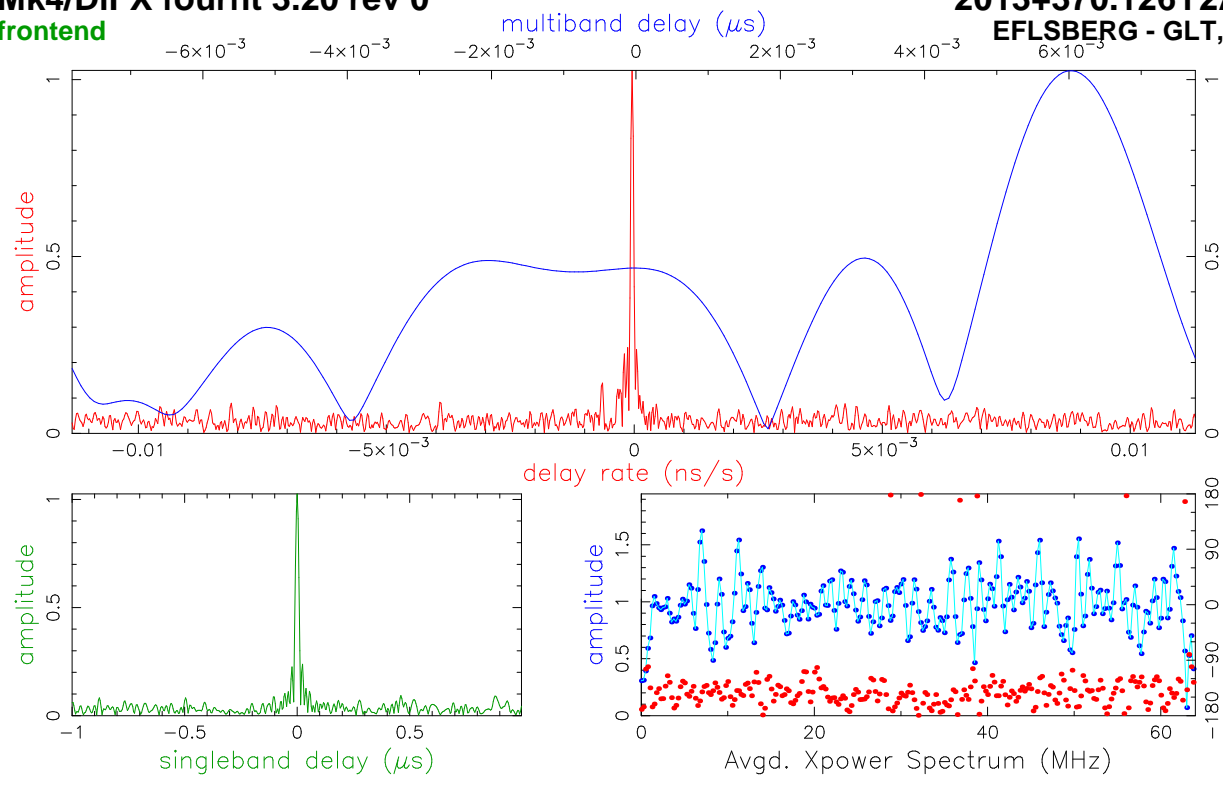
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		7.77326080947E+03				7.77251651096E+03			Resid mbdelay (usec)	-5.70150E-03 +/- 1.9E-04
Sband delay (usec)		7.77326569596E+03				1.6327339E+01			Resid sbdelay (usec)	7.49185E-01 +/- 1.5E-03
Phase delay (usec)		7.77251651099E+03				-1.0905050E-07			Resid phdelay (usec)	2.56315E-08 +/- 6.3E-07
Delay rate (us/s)		-1.49777937124E+00				-1.49778824244E+00			Resid rate (us/s)	8.87120E-06 +/- 6.1E-09
Total phase (deg)			92.4			-2.33308831724E-05			Resid phase (deg)	0.8 +/- 19.6
	RMS	Theor.	Amplitude	0.208 +/- 0.036					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	62.0	46.0	Search (1024X32)	0.155					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	70.7	80.3	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	32.1	27.8	Inc. seg. avg.	0.222					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	38.2	48.4	Inc. frq. avg.	0.209					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
									nlags: 256	t_cohere infinite

Mk4/DiFX fourfit 3.20 rev 0  
frontend

2013+370.126Y2A, No0048, Bg  
EFLSBERG - GLT, fgroup W, pol RR

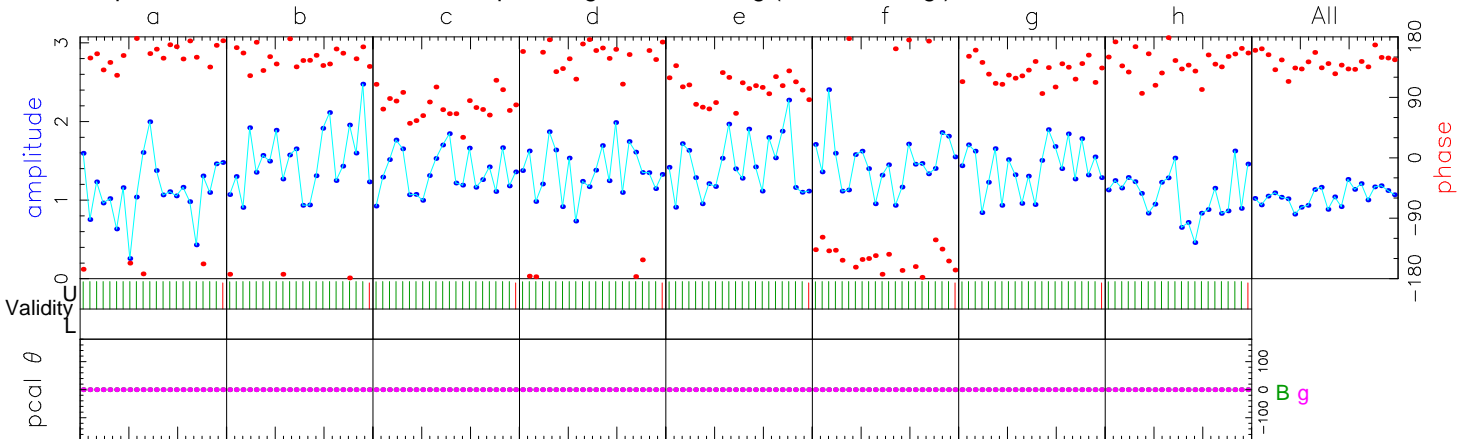


Fringe quality 6

SNR 37.6  
Int time 179.720  
Amp 1.026  
Phase 142.1  
PFD 0.0e+00  
Delays (us)  
SBD -0.000345  
MBD 0.006013  
Fringe rate (Hz)  
-0.003920  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Yr:day 16383  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125106  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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

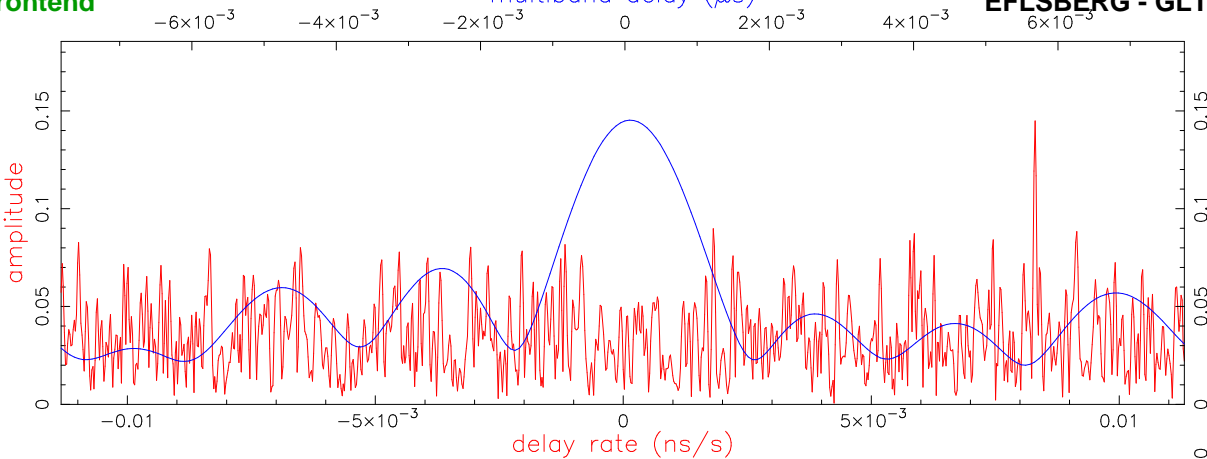


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	163.1	153.0	78.3	160.6	105.0	-155.0	128.0	143.5	Phase	142.1
B	1.1	1.4	1.3	1.3	1.4	1.4	1.3	1.0	Ampl.	1.3
B:g	255.6	256.9	257.8	257.8	257.7	257.6	257.3	255.6	Sbd box	256.9
B:g	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:g	0	0	0	0	0	0	0	0	PC freqs	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B:g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	2.88089723578E+03		Apriori delay (usec)		2.88089122244E+03		Resid mbdelay (usec)		6.01334E-03	+/- 2.9E-05
Sband delay (usec)	2.88089087769E+03		Apriori clock (usec)		1.5498650E+01		Resid sbdelay (usec)		-3.44750E-04	+/- 2.3E-04
Phase delay (usec)	2.88089122703E+03		Apriori clockrate (us/s)		-2.7499999E-07		Resid phdelay (usec)		4.58131E-06	+/- 9.8E-08
Delay rate (us/s)	-6.56552091579E-01		Apriori rate (us/s)		-6.56552046069E-01		Resid rate (us/s)		-4.55107E-08	+/- 9.4E-10
Total phase (deg)	106.6		Apriori accel (us/s/s)		-2.89846979494E-05		Resid phase (deg)		142.1	+/- 3.0

ph/seg (deg) 12.8 7.1 Search (1024X32) 1.011 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 11.4 12.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 41.9 4.3 Inc. seg. avg. 1.043 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 27.8 7.5 Inc. frq. avg. 1.266 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 257.6 el 60.6 pa 51.1 g: az 133.2 el 47.2 pa -12.3 u,v (fr/asec) 4698.979 -3178.893 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bg..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bg.W.27.126Y2A

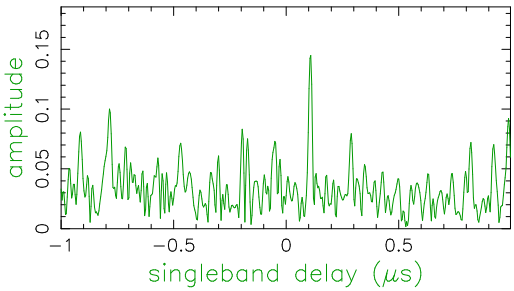


multiband delay ( $\mu\text{s}$ )

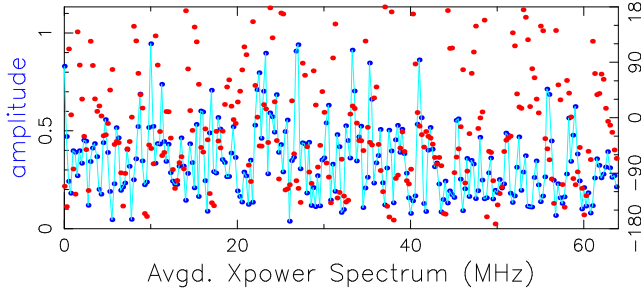


Fringe quality 0

SNR 5.4  
Int time 179.720  
Amp 0.186  
Phase 122.3  
PFD 1.0e+00  
Delays (us)  
SBD 0.107803  
MBD 0.000002  
Fringe rate (Hz) 0.716759  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

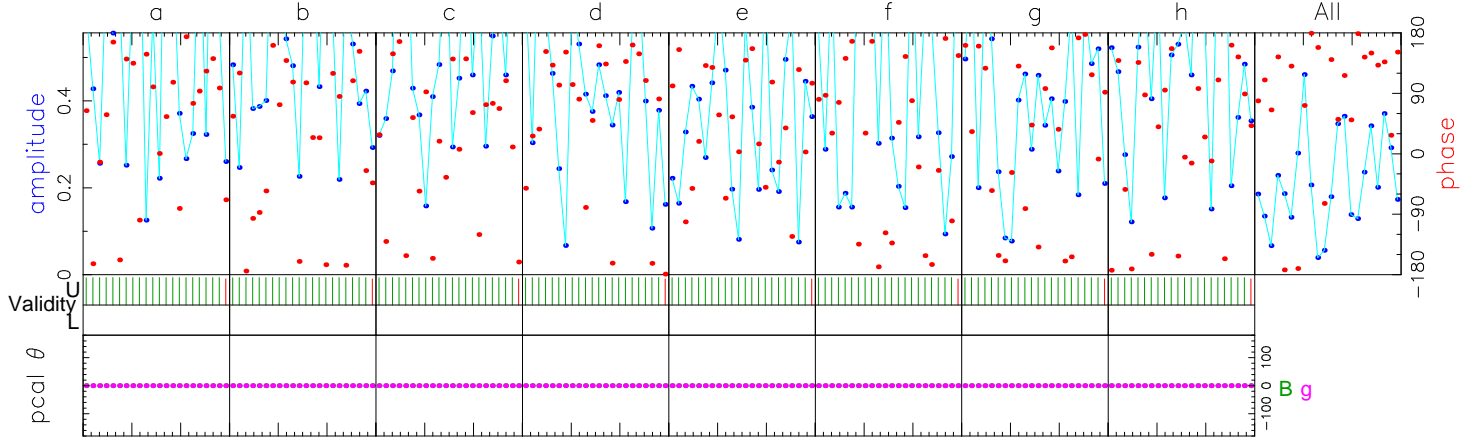


delay rate (ns/s)



Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125109  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	114.2	129.8	119.8	115.0	45.8	157.5	154.7	113.9	Phase	122.3
B	0.3	0.2	0.1	0.3	0.1	0.2	0.1	0.2	Ampl.	0.2
B:g	510.9	21.4	22.0	234.7	150.5	29.7	55.0	245.4	Sbd box	284.6
B:g	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B:g	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:g	0	0	0	0	0	0	0	0	PC freqs	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B:g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B:g	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
B									Tracks	
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
g									Tracks	
Group delay (usec)(sbd)	2.88100059974E+03		Apriori delay (usec)		2.88089122244E+03		Resid mbdelay (usec)		2.29334E-06	+/- 2.0E-04
Sband delay (usec)	2.88099902519E+03		Apriori clock (usec)		1.5498650E+01		Resid sbdelay (usec)		1.07803E-01	+/- 1.6E-03
Phase delay (usec)	2.88089122639E+03		Apriori clockrate (us/s)		-2.7499999E-07		Resid phdelay (usec)		3.94386E-06	+/- 6.9E-07
Delay rate (us/s)	-6.56543725207E-01		Apriori rate (us/s)		-6.56552046069E-01		Resid rate (us/s)		8.32086E-06	+/- 6.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.89846979494E-05		Resid phase (deg)		122.3	+/- 21.3

	RMS	Theor.	Amplitude	0.186 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.9	49.8	Search (1024X32)	0.141	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	87.8	87.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	37.4	30.1	Inc. seg. avg.	0.198	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	41.4	52.5	Inc. frq. avg.	0.174	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
B: az 257.6 el 60.6 pa 51.1	g: az 133.2 el 47.2 pa -12.3		u,v (fr/asec) 4698.979 -3178.893		ion window (TEC) 0.00 0.00	

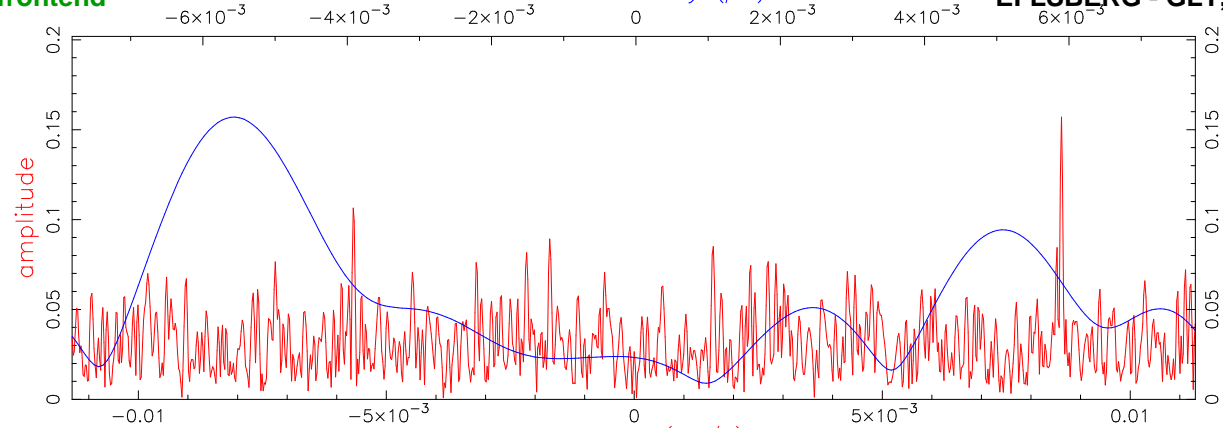
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126Y2A, No0048, Bg

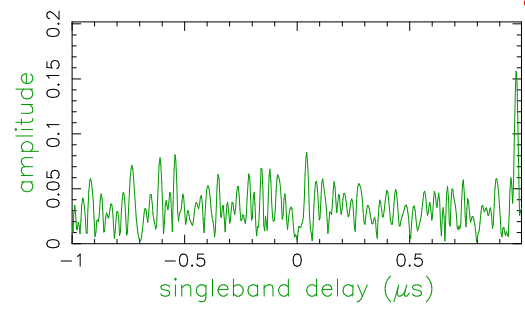
EFLSBERG - GLT, fgroup W, pol RL

multiband delay ( $\mu\text{s}$ )

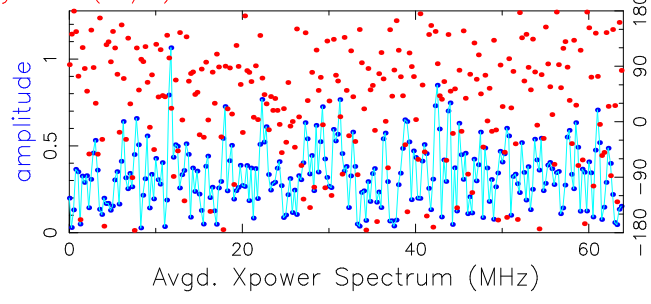


Fringe quality 0

SNR 5.8  
 Int time 179.736  
 Amp 0.202  
 Phase -174.8  
 PFD 6.4e-01  
 Delays (us)  
 SBD 0.973160  
 MBD -0.005556  
 Fringe rate (Hz)  
 0.742314  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

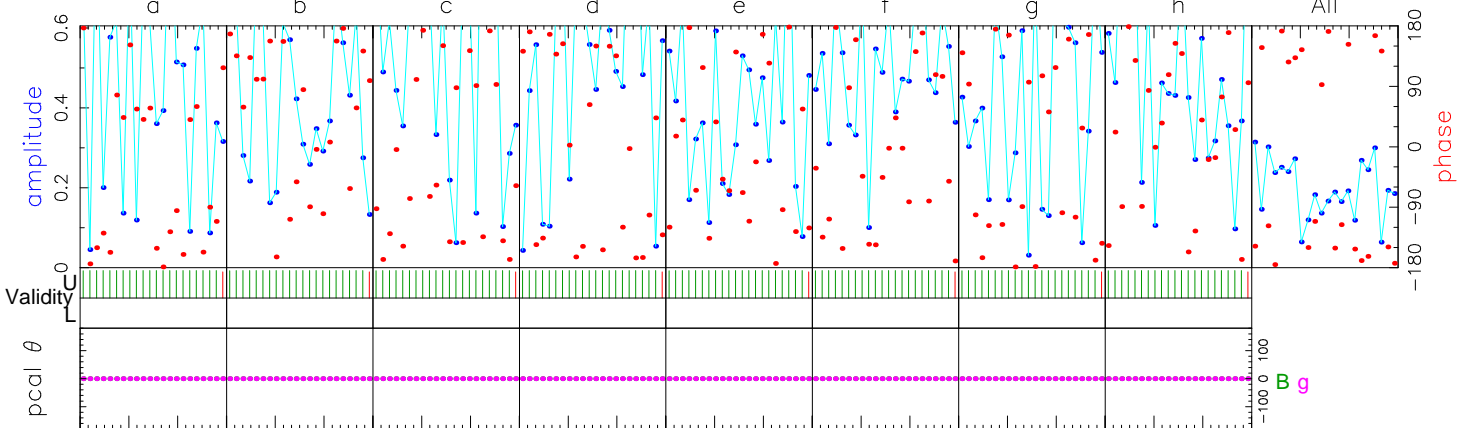


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125111  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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

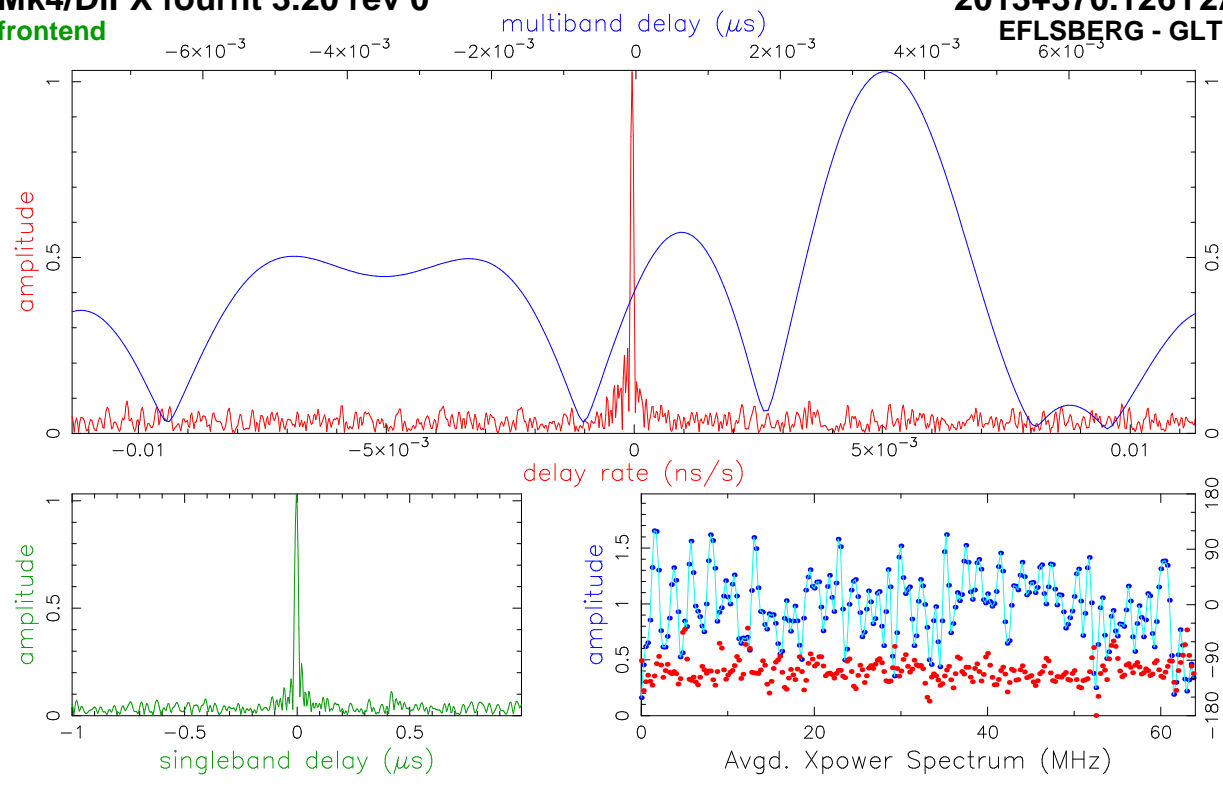


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:g	1000	1000	1000	1000	1000	1000	1000	1000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

Group delay (usec)(sbd)	2.88187004104E+03	Apriori delay (usec)	2.88089122244E+03	Resid mbdelay (usec)	-5.55641E-03	+/-	1.9E-04
Sband delay (usec)	2.88186438244E+03	Apriori clock (usec)	1.5498650E+01	Resid sbdelay (usec)	9.73160E-01	+/-	1.5E-03
Phase delay (usec)	2.88089121681E+03	Apriori clockrate (us/s)	-2.7499999E-07	Resid phdelay (usec)	-5.63772E-06	+/-	6.4E-07
Delay rate (us/s)	-6.56543428543E-01	Apriori rate (us/s)	-6.56552046069E-01	Resid rate (us/s)	8.61753E-06	+/-	6.2E-09
Total phase (deg)	149.7	Apriori accel (us/s/s)	-2.89846979494E-05	Resid phase (deg)	-174.8	+/-	19.9

ph/seg (deg)	40.3	Theor.	46.6	Amplitude	0.202 +/- 0.035	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	52.2	Search (1024X32)	0.155	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	40.5	Inc. seg. avg.	0.191	Inc. frq. avg.	0.207	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	46.4	Inc. frq. avg.	0.207			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
						Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 257.6 el 60.6 pa 51.1 g: az 133.2 el 47.2 pa -12.3 u,v (fr/asec) 4698.979 -3178.893 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bg..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bg.W.63.126Y2A

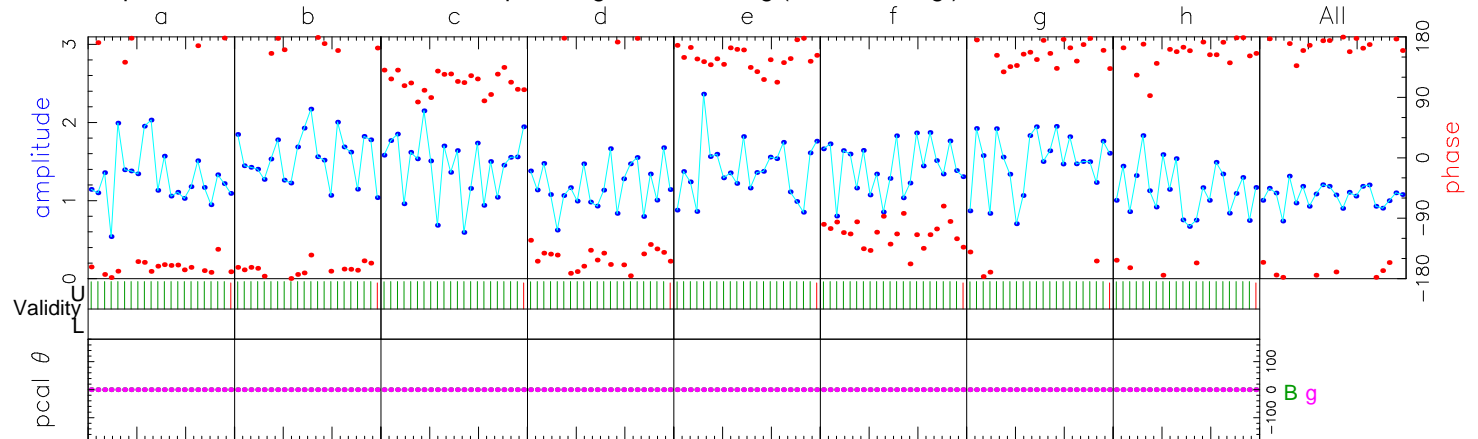


Fringe quality 6

SNR 37.8  
 Int time 179.736  
 Amp 1.032  
 Phase 175.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003153  
 MBD 0.003473  
 Fringe rate (Hz)  
 -0.003783  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

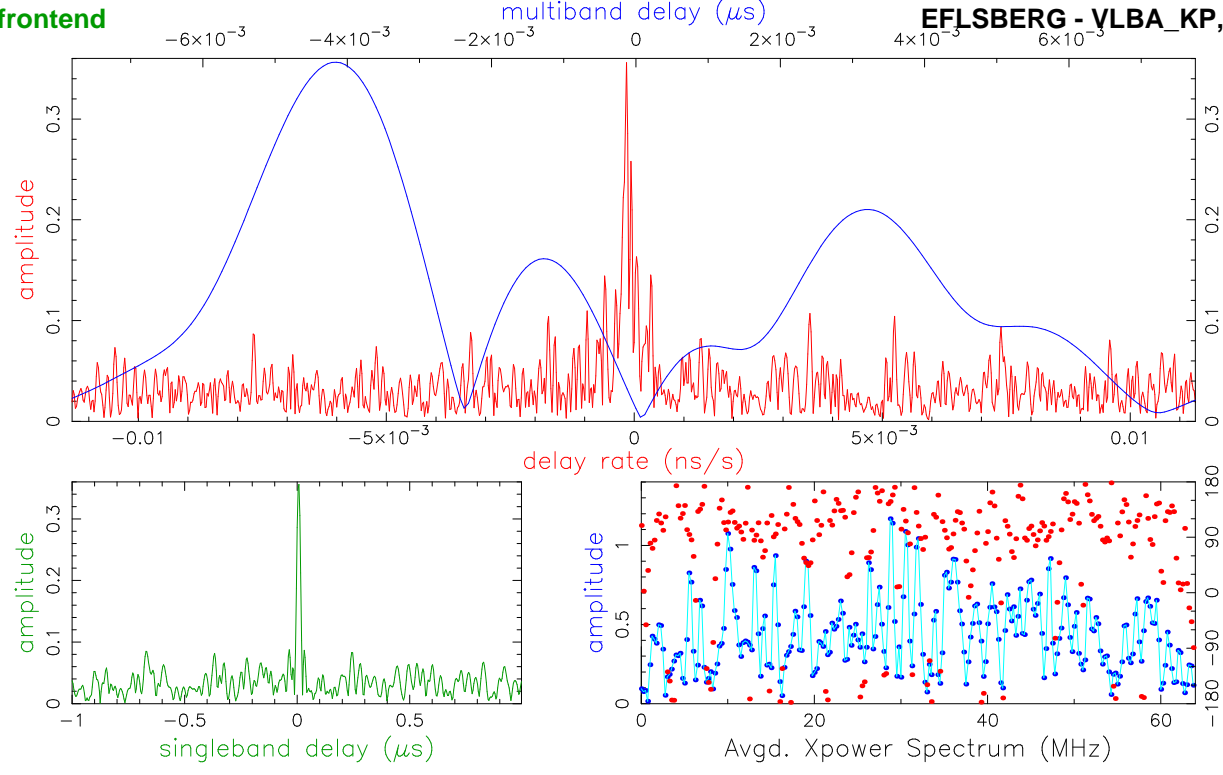
Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125104  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-169.5	-173.2	111.9	-154.0	146.6	-112.4	160.1	163.0	Phase	175.4
	1.2	1.5	1.4	1.1	1.3	1.4	1.4	1.0	Ampl.	1.3
	255.2	256.2	256.8	257.0	257.1	256.9	256.3	255.6	Sbd box	256.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B:g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.88089469556E+03		Apriori delay (usec)		2.88089122244E+03		Resid mbdelay (usec)		3.47312E-03	+/- 2.9E-05
Sband delay (usec)	2.88088806894E+03		Apriori clock (usec)		1.5498650E+01		Resid sbdelay (usec)		-3.15350E-03	+/- 2.3E-04
Phase delay (usec)	2.88089122810E+03		Apriori clockrate (us/s)		-2.7499999E-07		Resid phdelay (usec)		5.65498E-06	+/- 9.8E-08
Delay rate (us/s)	-6.56552089985E-01		Apriori rate (us/s)		-6.56552046069E-01		Resid rate (us/s)		-4.39164E-08	+/- 9.4E-10
Total phase (deg)	139.9		Apriori accel (us/s/s)		-2.89846979494E-05		Resid phase (deg)		175.4	+/- 3.0

ph/seg (deg) 15.2 7.1 Search (1024X32) 1.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 12.9 12.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.3 4.3 Inc. seg. avg. 1.055 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 29.4 7.5 Inc. frq. avg. 1.298 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 257.6 el 60.6 pa 51.1 g: az 133.2 el 47.2 pa -12.3 u,v (fr/asec) 4698.979 -3178.893 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bg..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bg.W.9.126Y2A

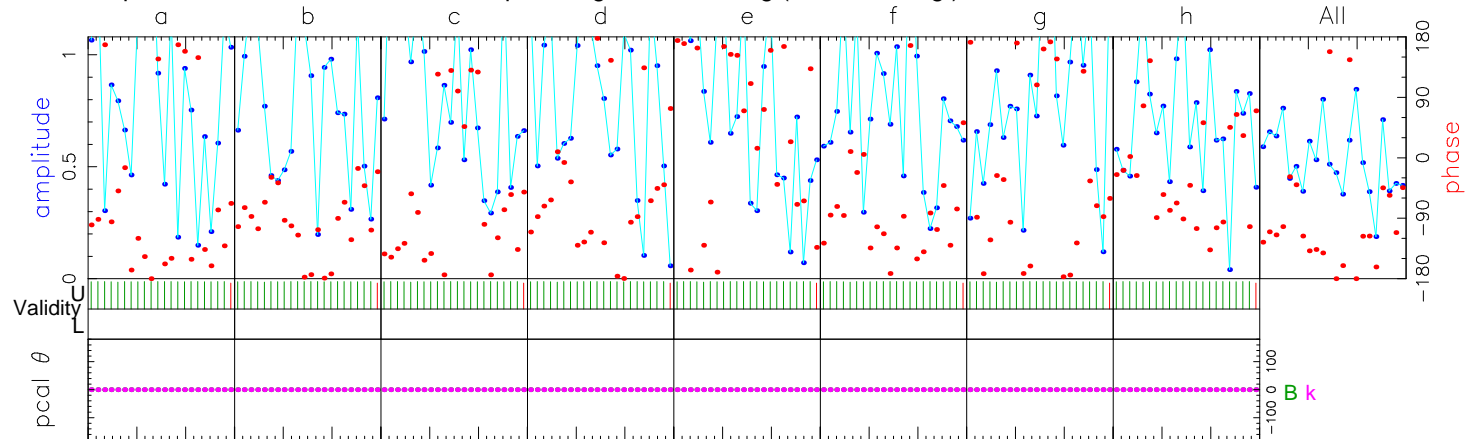


Fringe quality 9

SNR 13.2  
Int time 178.964  
Amp 0.360  
Phase -123.1  
PFD 3.4e-31  
Delays (us)  
SBD 0.006336  
MBD -0.004225  
Fringe rate (Hz)  
-0.012630  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125107  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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

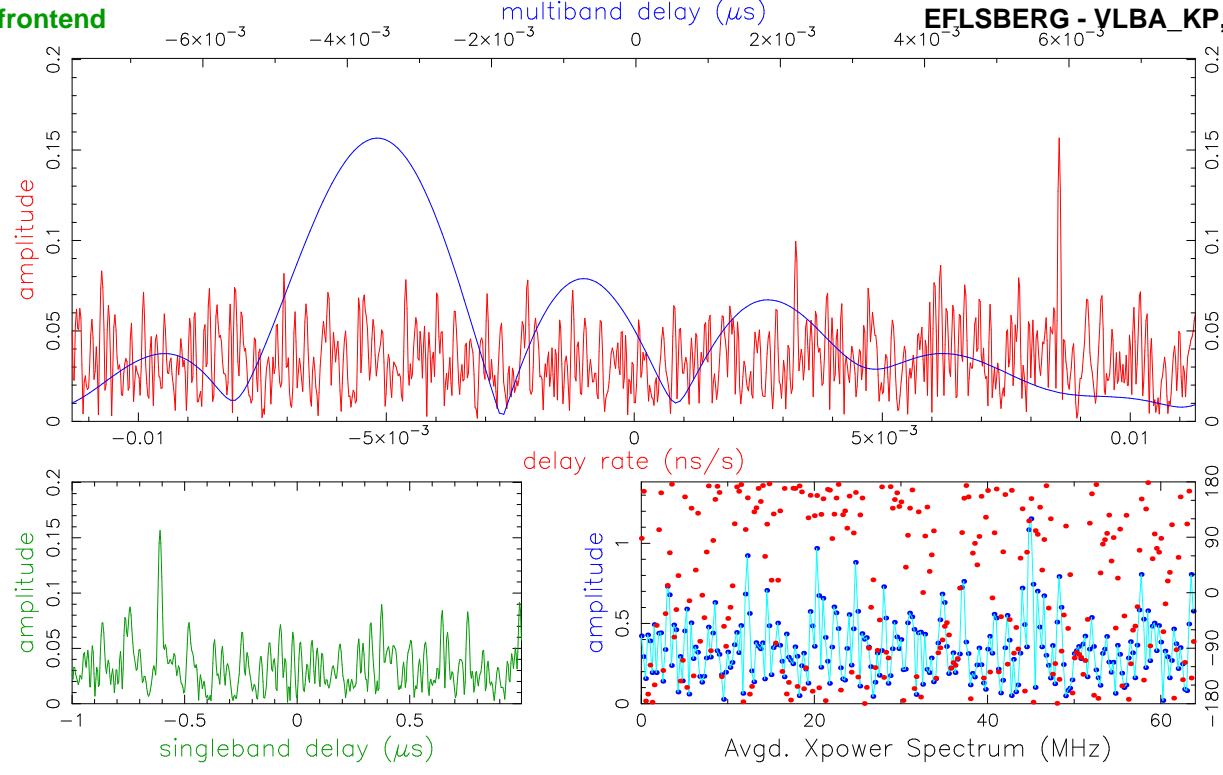


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-132.8	-97.8	-140.8	-99.7	167.3	-105.3	-150.0	-57.2	Phase	-123.1
	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.3	Ampl.	0.4
	259.1	258.8	258.1	259.2	258.7	258.6	260.2	259.8	Sbd box	258.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	9.45399696979E+03		Apriori delay (usec)		9.45398556973E+03		Resid mbdelay (usec)		-4.22494E-03	+/- 8.2E-05
Sband delay (usec)	9.45399190548E+03		Apriori clock (usec)		1.7199993E+01		Resid sbdelay (usec)		6.33575E-03	+/- 6.5E-04
Phase delay (usec)	9.45398556576E+03		Apriori clockrate (us/s)		-5.4210100E-09		Resid phdelay (usec)		-3.97124E-06	+/- 2.8E-07
Delay rate (us/s)	-1.51479647277E+00		Apriori rate (us/s)		-1.51479632614E+00		Resid rate (us/s)		-1.46626E-07	+/- 2.7E-09
Total phase (deg)	228.4		Apriori accel (us/s/s)		-3.36131792811E-05		Resid phase (deg)		-123.1	+/- 8.7

ph/seg (deg) 51.4 20.4 Search (1024X32) 0.340 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 65.5 35.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 44.4 12.3 Inc. seg. avg. 0.505 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 30.2 21.5 Inc. frq. avg. 0.423 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 257.6 el 60.6 pa 51.1 k: az 60.2 el 24.9 pa -67.8 u,v (fr/asec) 10876.310 -360.737 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bk..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bk.W.30.126Y2A

Mk4/DiFX fourfit 3.20 rev 0  
frontend

2013+370.126Y2A, No0048, Bk  
EFLSBERG - VLBA\_KP, fgroup W, pol LR

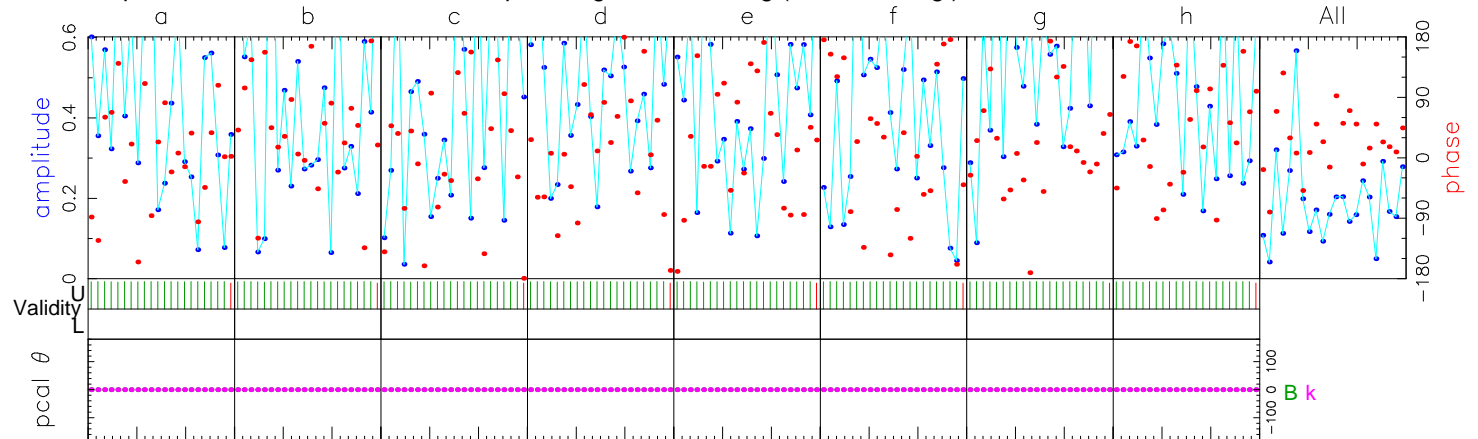


Fringe quality 0

SNR 5.7  
Int time 178.964  
Amp 0.201  
Phase 27.0  
PFD 7.2e-01  
Delays (us)  
SBD -0.609356  
MBD -0.003582  
Fringe rate (Hz)  
0.739501  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125109  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



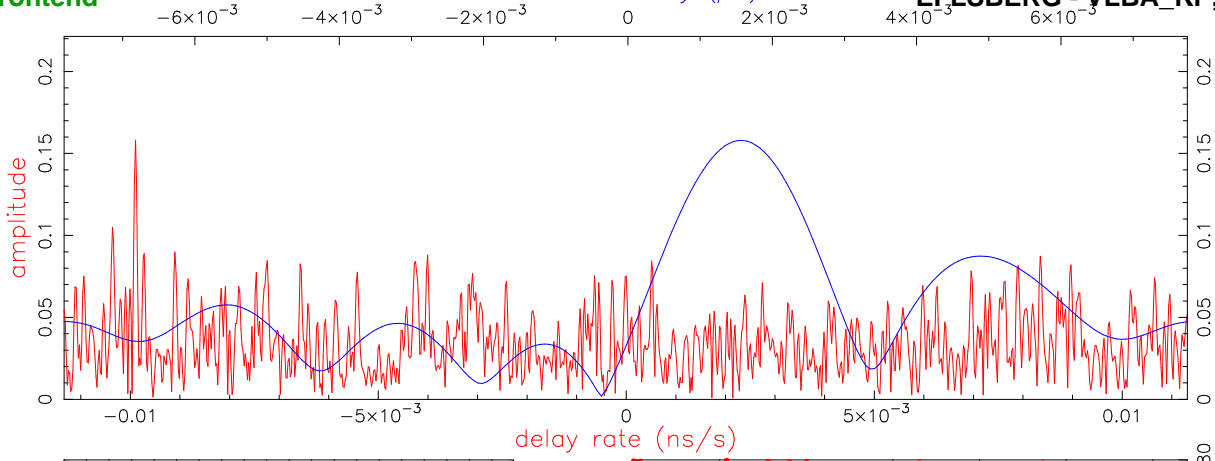
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		9.45337261262E+03				9.45398556973E+03			Resid mbdelay (usec)	-3.58211E-03 +/- 1.9E-04
Sband delay (usec)		9.45337621423E+03				1.7199993E+01			Resid sbdelay (usec)	-6.09356E-01 +/- 1.5E-03
Phase delay (usec)		9.45398557060E+03				-5.4210100E-09			Resid phdelay (usec)	8.70127E-07 +/- 6.5E-07
Delay rate (us/s)		-1.51478774126E+00				-1.51479632614E+00			Resid rate (us/s)	8.58488E-06 +/- 6.2E-09
Total phase (deg)			18.5			-3.36131792811E-05			Resid phase (deg)	27.0 +/- 20.0
	RMS	Theor.	Amplitude	0.201 +/- 0.035					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	44.7	46.9	Search (1024X32)	0.153					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	73.7	81.9	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	20.1	28.3	Inc. seg. avg.	0.186					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	44.0	49.4	Inc. frq. avg.	0.187					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 257.6 el 60.6 pa 51.1 k: az 60.2 el 24.9 pa -67.8 u,v (fr/asec) 10876.310 -360.737 simultaneous interpolator

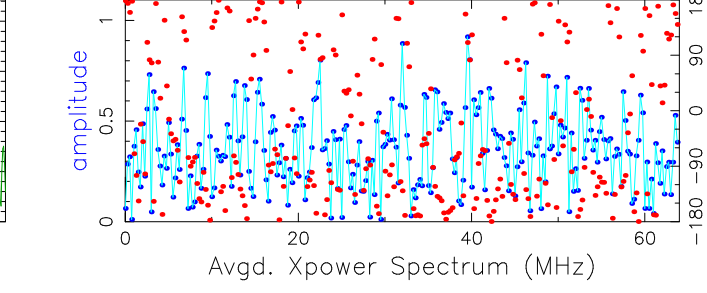
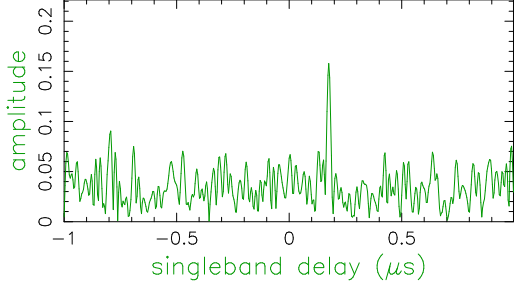
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bk..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bk.W.52.126Y2A



multiband delay ( $\mu\text{s}$ )

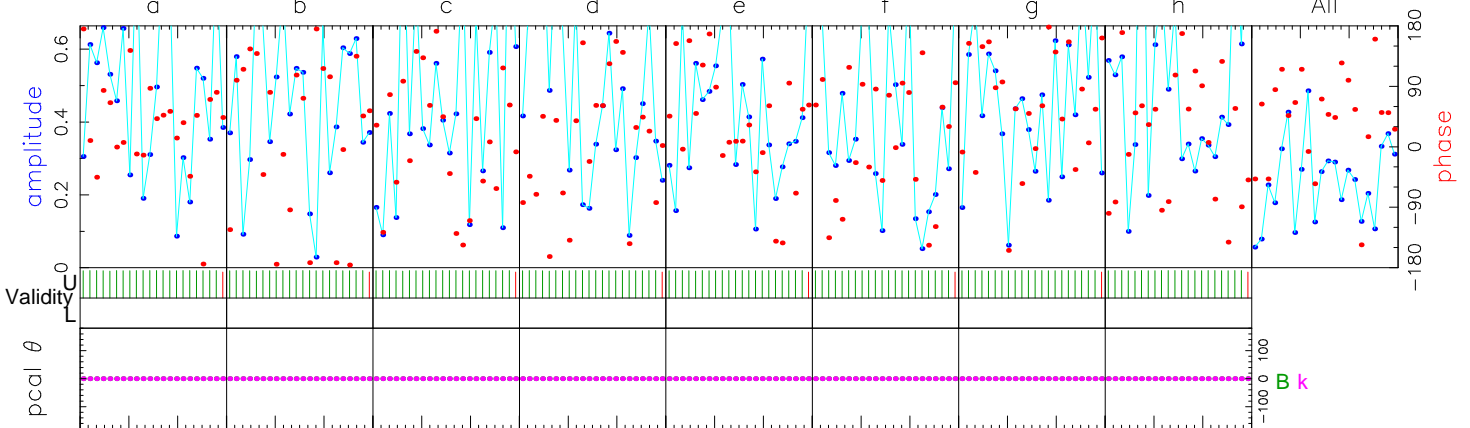


Fringe quality 0  
 SNR 5.8  
 Int time 178.963  
 Amp 0.221  
 Phase 53.4  
 PFD 6.1e-01  
 Delays (us)  
 SBD 0.175533  
 MBD 0.001557  
 Fringe rate (Hz)  
 -0.854232  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125112  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"



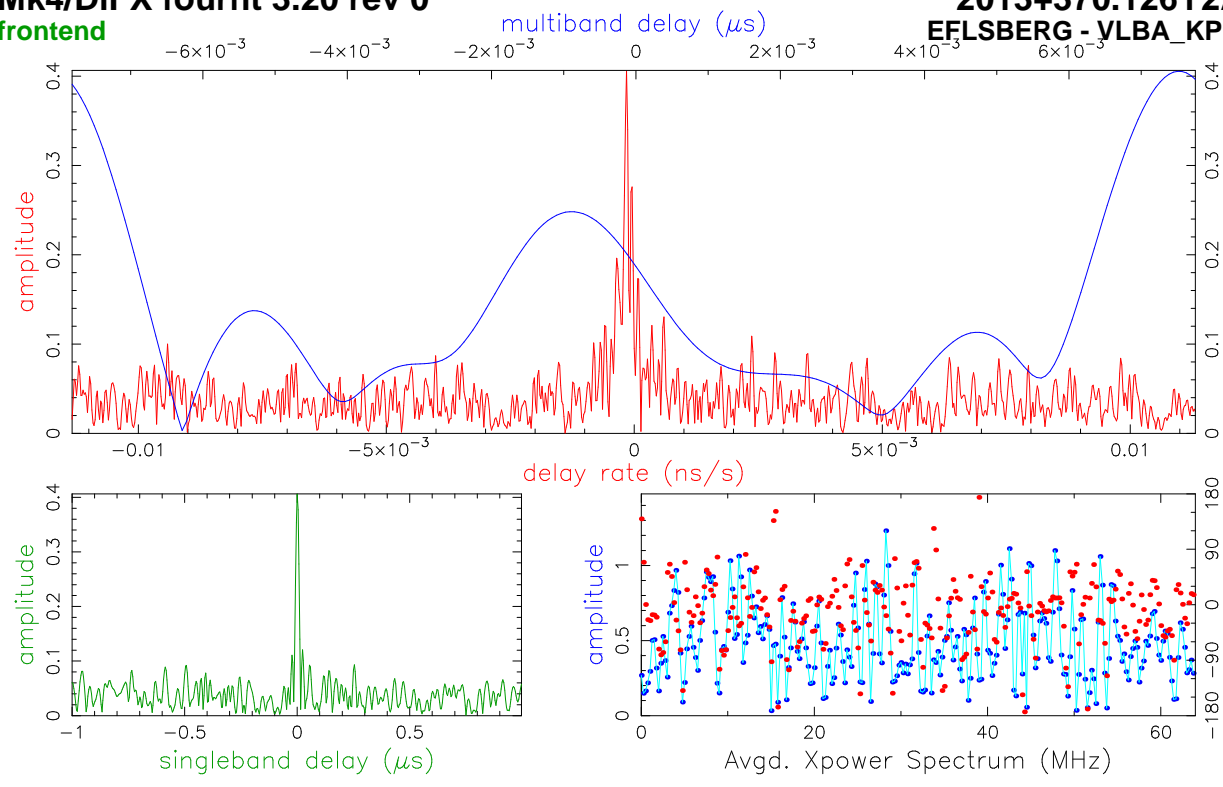
Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	41.2	113.5	57.5	18.3	37.2	65.7	81.2	19.3	Phase	53.4
	0.5	0.2	0.2	0.2	0.3	0.3	0.3	0.1	Ampl.	0.2
	301.5	299.4	486.3	464.0	443.1	118.9	66.6	212.1	Sbd box	301.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	9.45415900133E+03		Apriori delay (usec)		9.45398556973E+03		Resid mbdelay (usec)		1.55660E-03	+/- 1.9E-04
Sband delay (usec)	9.45416110273E+03		Apriori clock (usec)		1.7199993E+01		Resid sbdelay (usec)		1.75533E-01	+/- 1.5E-03
Phase delay (usec)	9.45398557145E+03		Apriori clockrate (us/s)		-5.4210100E-09		Resid phdelay (usec)		1.72305E-06	+/- 6.4E-07
Delay rate (us/s)	-1.51480624293E+00		Apriori rate (us/s)		-1.51479632614E+00		Resid rate (us/s)		-9.91679E-06	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-3.36131792811E-05		Resid phase (deg)		53.4	+/- 19.8

	RMS	Theor.	Amplitude	0.221 +/- 0.038	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	64.8	46.5	Search (1024X32)	0.156	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	87.4	81.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	35.0	28.0	Inc. seg. avg.	0.252	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	44.9	48.9	Inc. frq. avg.	0.223	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
						ion window (TEC) 0.00 0.00

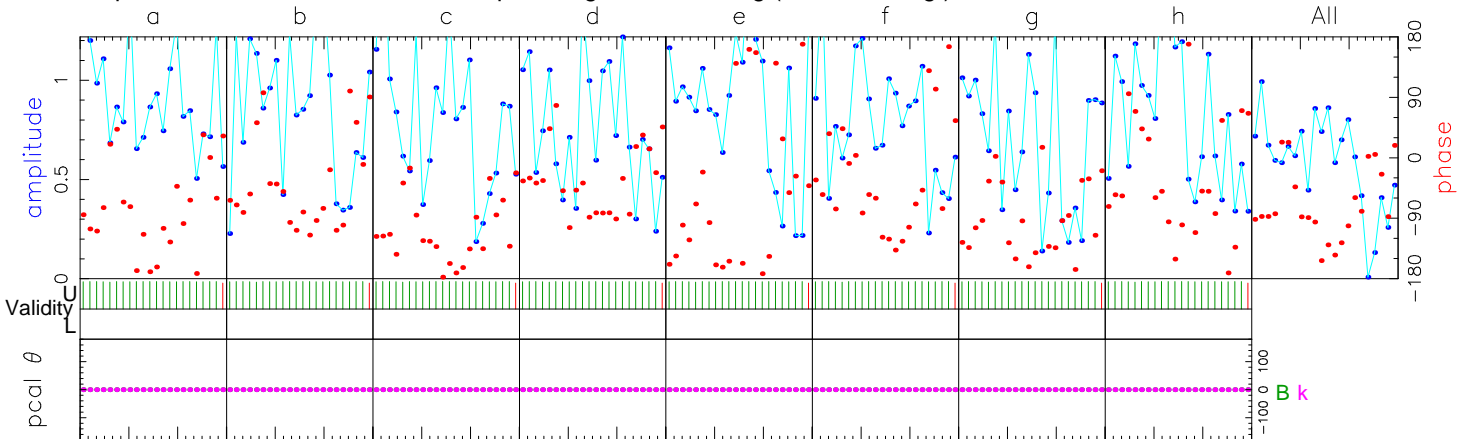


Fringe quality 8

SNR 14.9  
 Int time 178.963  
 Amp 0.406  
 Phase -85.1  
 PFD 1.7e-41  
 Delays (us)  
 SBD 0.000592  
 MBD 0.007541  
 Fringe rate (Hz)  
 -0.013244  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Yr:day 16383  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125104  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-82.9	-59.5	-118.8	-40.7	-144.2	-64.4	-102.8	-62.1	Phase	-85.1
	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.3	Ampl.	0.5
	257.9	257.2	257.5	258.0	258.1	257.7	257.4	256.5	Sbd box	257.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	9.45399311047E+03		Apriori delay (usec)		9.45398556973E+03		Resid mbdelay (usec)		7.54075E-03	+/- 7.3E-05
Sband delay (usec)	9.45398616198E+03		Apriori clock (usec)		1.7199993E+01		Resid sbdelay (usec)		5.92250E-04	+/- 5.8E-04
Phase delay (usec)	9.45398556698E+03		Apriori clockrate (us/s)		-5.4210100E-09		Resid phdelay (usec)		-2.74580E-06	+/- 2.5E-07
Delay rate (us/s)	-1.51479647989E+00		Apriori rate (us/s)		-1.51479632614E+00		Resid rate (us/s)		-1.53750E-07	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-3.36131792811E-05		Resid phase (deg)		-85.1	+/- 7.7

	RMS	Theor.	Amplitude	0.406 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	55.5	18.1	Search (1024X32)	0.396	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	72.6	31.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	37.7	10.9	Inc. seg. avg.	0.559	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	27.0	19.0	Inc. frq. avg.	0.472	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
						ion window (TEC) 0.00 0.00

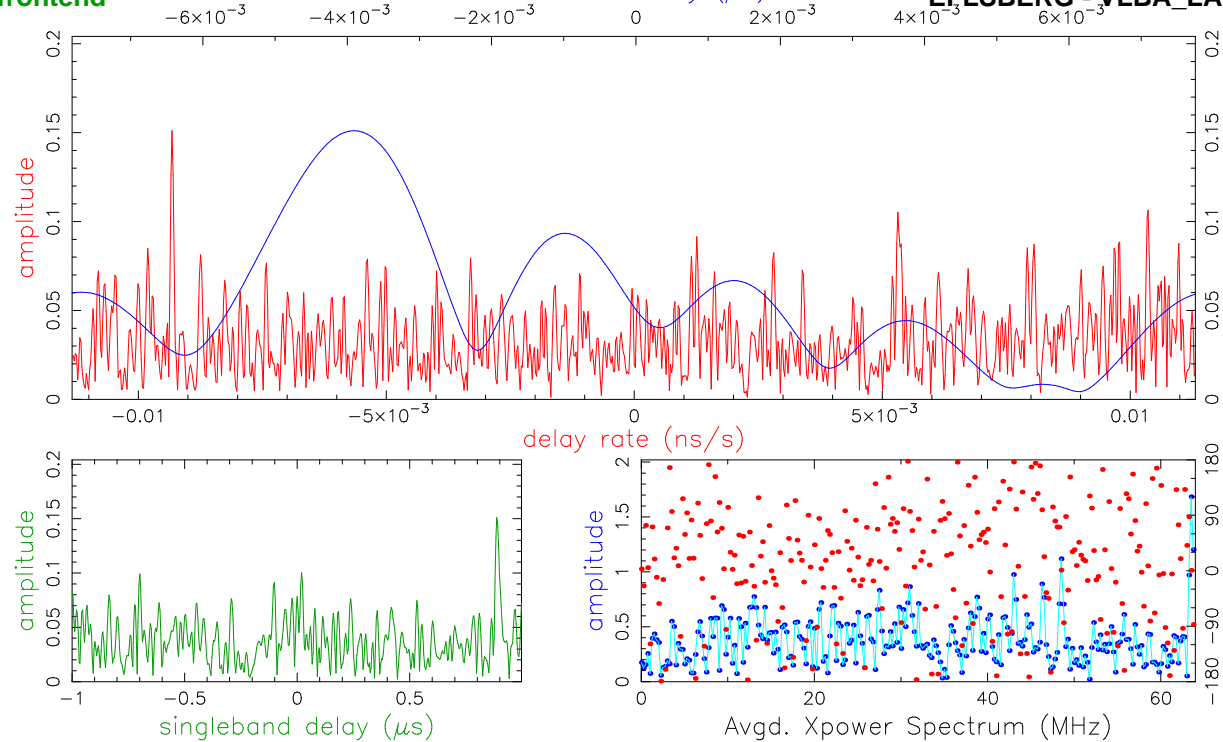
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126Y2A, No0048, BI

EFLSBERG - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)



Fringe quality 0

SNR 5.6

Int time 179.515

Amp 0.204

Phase -133.1

PFD 9.6e-01

Delays (us)

SBD 0.887628

MBD -0.003940

Fringe rate (Hz)

-0.804714

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 212000.00

Stop 212300.23

FRT 212130.00

Corr/FF/build

2020:070:030312

2020:071:125105

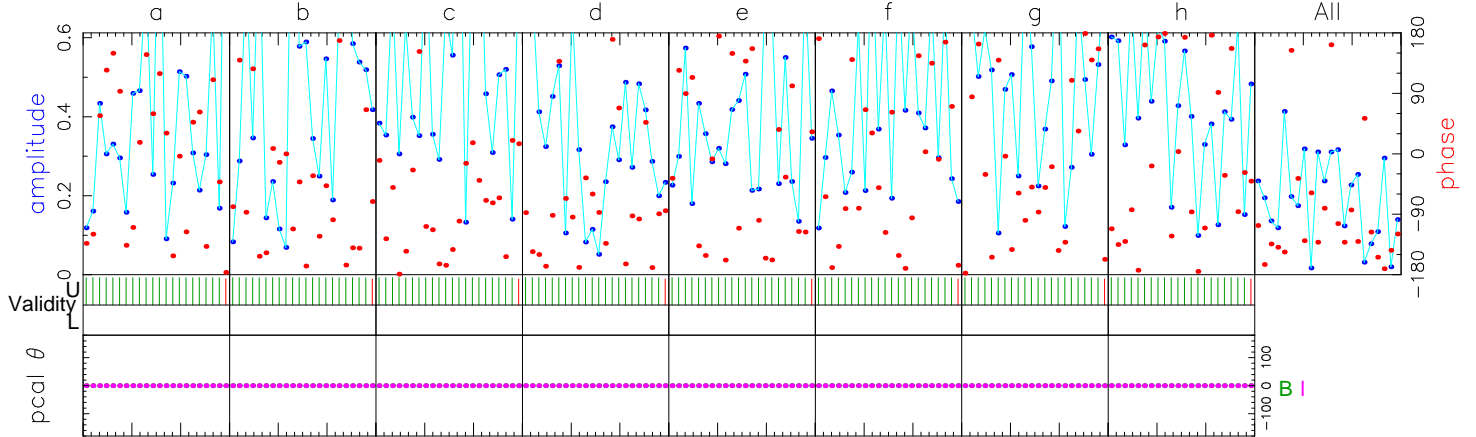
2019:280:115849

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	137.1	-128.6	-85.1	-127.7	-164.1	-145.0	-138.4	-129.9	Phase	-133.1
B	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.3	Ampl.	0.2
I	241.3	200.1	486.1	483.0	378.3	310.9	486.9	76.7	Sbd box	484.2
B	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	7.58078175224E+03	Apriori delay (usec)	7.57989506725E+03	Resid mbdelay (usec)	-3.94001E-03	+/-	2.0E-04
Sband delay (usec)	7.58078269550E+03	Apriori clock (usec)	1.7567019E+01	Resid sbdelay (usec)	8.87628E-01	+/-	1.5E-03
Phase delay (usec)	7.57989506296E+03	Apriori clockrate (us/s)	1.5147200E-07	Resid phdelay (usec)	-4.29171E-06	+/-	6.6E-07
Delay rate (us/s)	-1.45069251781E+00	Apriori rate (us/s)	-1.45068317588E+00	Resid rate (us/s)	-9.34193E-06	+/-	6.4E-09
Total phase (deg)	-99.6	Apriori accel (us/s/s)	-2.74228301730E-05	Resid phase (deg)	-133.1	+/-	20.6

ph/seg (deg)	54.4	Theor.	48.3	Amplitude	0.204 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	75.6	Search (1024X32)	0.149	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)	43.9	Inc. seg. avg.	0.193	Inc. frq. avg.	0.218	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	41.5	Inc. frq. avg.	0.218			Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 257.6 el 60.6 pa 51.1 I: az 63.9 el 30.6 pa -66.4 u,v (fr/asec) 10418.974 -378.400 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BI..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BI.W.14.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

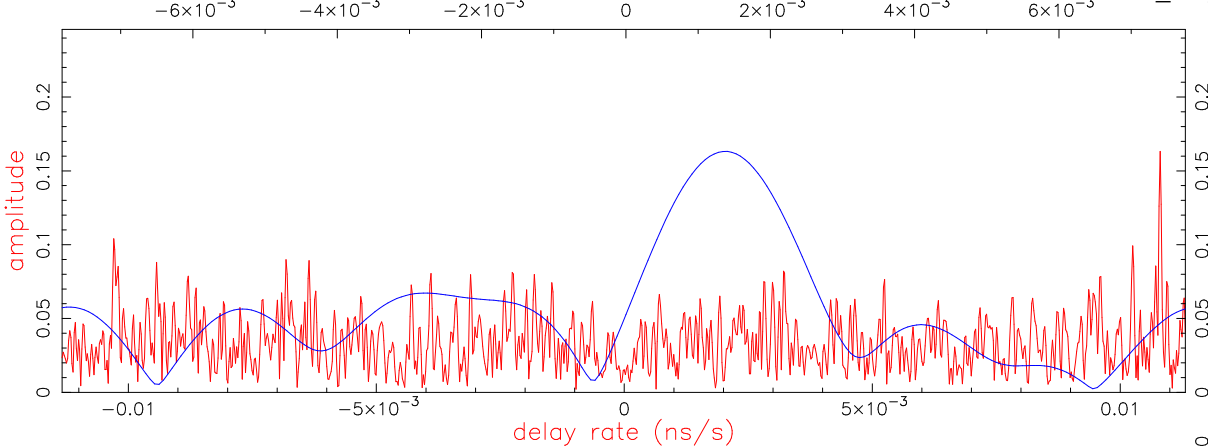
frontend

2013+370.126Y2A, No0048, BI

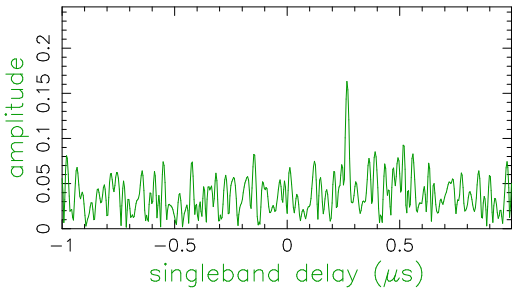
EFLSBERG - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu\text{s}$ )

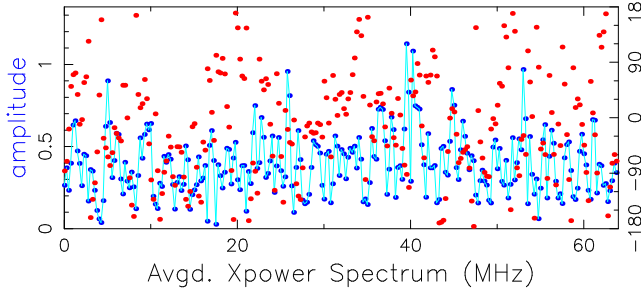
Fringe quality 0



SNR 6.0  
 Int time 179.515  
 Amp 0.246  
 Phase 156.3  
 PFD 2.3e-01  
 Delays (us)  
 SBD 0.266293  
 MBD 0.001389  
 Fringe rate (Hz) 0.931445  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

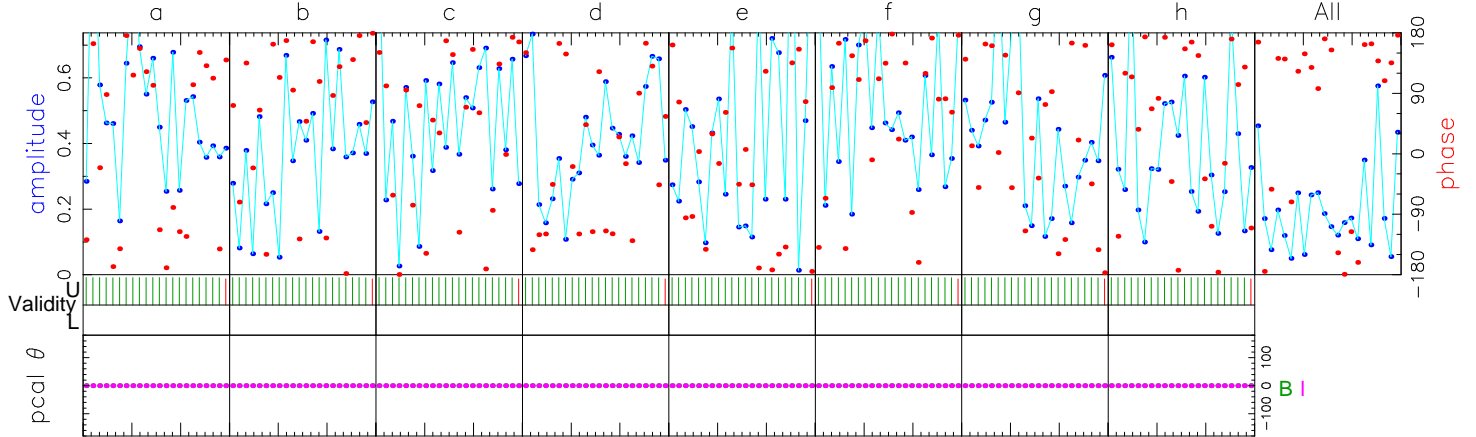


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125107  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	7.58016208107E+03		Apriori delay (usec)		7.57989506725E+03		Resid mbdelay (usec)		1.38882E-03	+/- 1.8E-04
Sband delay (usec)	7.58016136000E+03		Apriori clock (usec)		1.7567019E+01		Resid sbdelay (usec)		2.66293E-01	+/- 1.4E-03
Phase delay (usec)	7.57989507229E+03		Apriori clockrate (us/s)		1.5147200E-07		Resid phdelay (usec)		5.03988E-06	+/- 6.2E-07
Delay rate (us/s)	-1.45067236273E+00		Apriori rate (us/s)		-1.45068317588E+00		Resid rate (us/s)		1.08131E-05	+/- 5.9E-09
Total phase (deg)			189.8		Apriori accel (us/s/s)		-2.74228301730E-05		156.3	+/- 19.1

ph/seg (deg) 54.1 44.8 Search (1024X32) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 86.1 78.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 23.1 27.0 Inc. seg. avg. 0.232 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.3 47.2 Inc. frq. avg. 0.230 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 257.6 el 60.6 pa 51.1 I: az 63.9 el 30.6 pa -66.4 u,v (fr/asec) 10418.974 -378.400 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BI..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BI.W.34.126Y2A

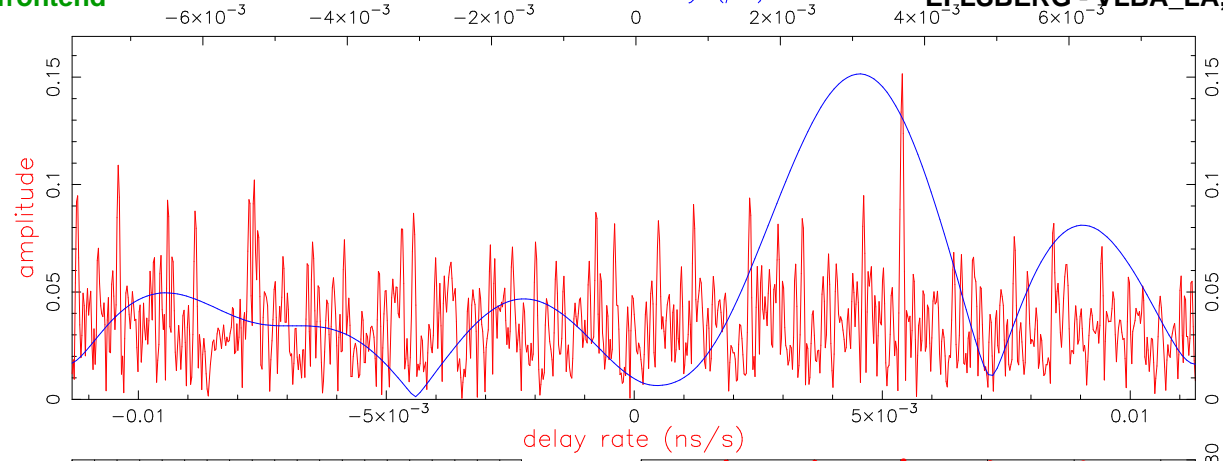
Mk4/DiFX fourfit 3.20 rev 0

frontend

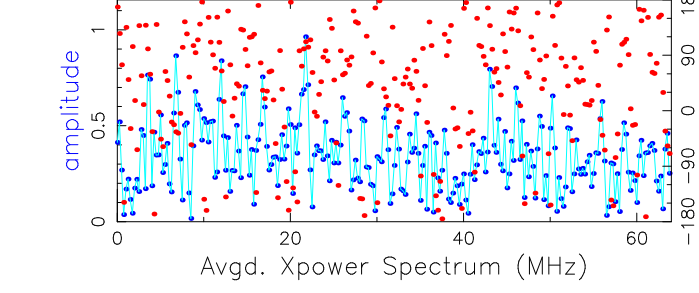
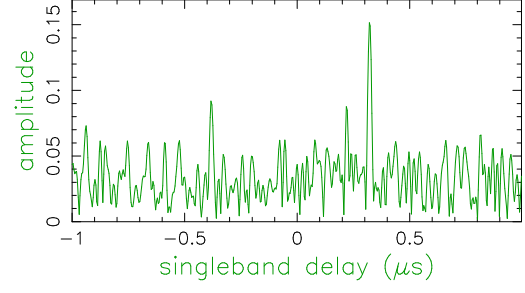
2013+370.126Y2A, No0048, BI

EFLSBERG - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

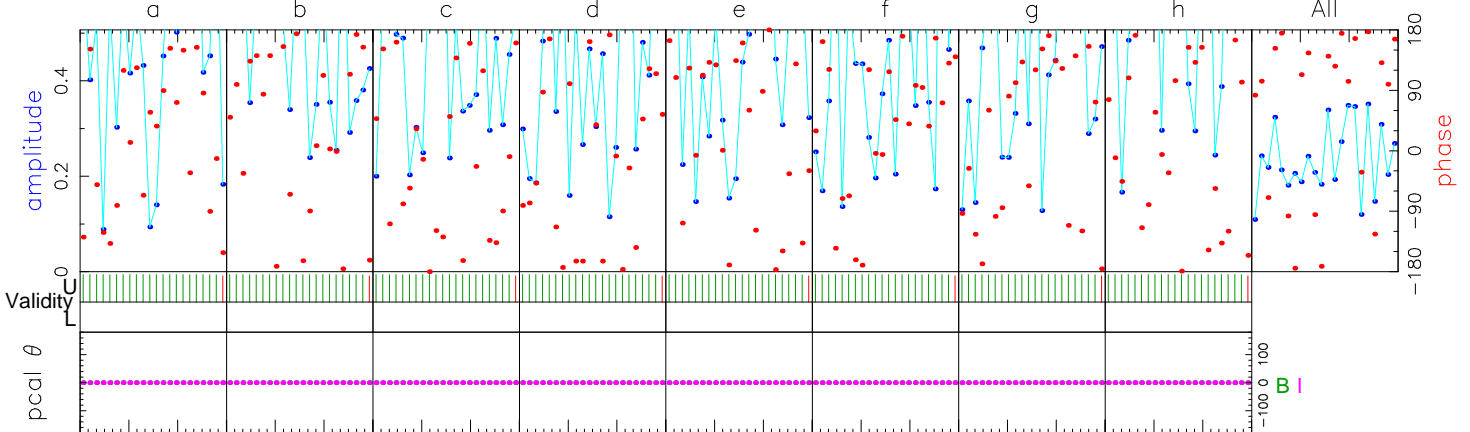


Fringe quality 0  
 SNR 5.6  
 Int time 179.515  
 Amp 0.169  
 Phase 156.5  
 PFD 8.9e-01  
 Delays (us)  
 SBD 0.321891  
 MBD 0.003097  
 Fringe rate (Hz) 0.466180  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125109  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	7.58021066390E+03					7.57989506725E+03			3.09665E-03	+/- 1.9E-04
Sband delay (usec)	7.58021695850E+03					1.7567019E+01			3.21891E-01	+/- 1.5E-03
Phase delay (usec)	7.57989507230E+03					1.5147200E-07			5.04668E-06	+/- 6.6E-07
Delay rate (us/s)	-1.45067776399E+00					-1.45068317588E+00			5.41189E-06	+/- 6.3E-09
Total phase (deg)			190.0			-2.74228301730E-05			156.5	+/- 20.4
pcal mode:	MANUAL, MANUAL								PC period (AP's) 5, 5	
pcal rate:	0.000E+00, 0.000E+00 (us/s)								sb window (us) -1.000 1.000	
Bits/sample:	2x2								SampCntNorm: enabled mb window (us) -0.008 0.008	
Sample rate (MSamp/s):	128								dr window (ns/s) -0.011 0.011	
Data rate (Mb/s):	2048								ion window (TEC) 0.00 0.00	
nlags:	256								t_cohere infinite	

B: az 257.6 el 60.6 pa 51.1 I: az 63.9 el 30.6 pa -66.4 u,v (fr/asec) 10418.974 -378.400 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BI..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BI.W.50.126Y2A



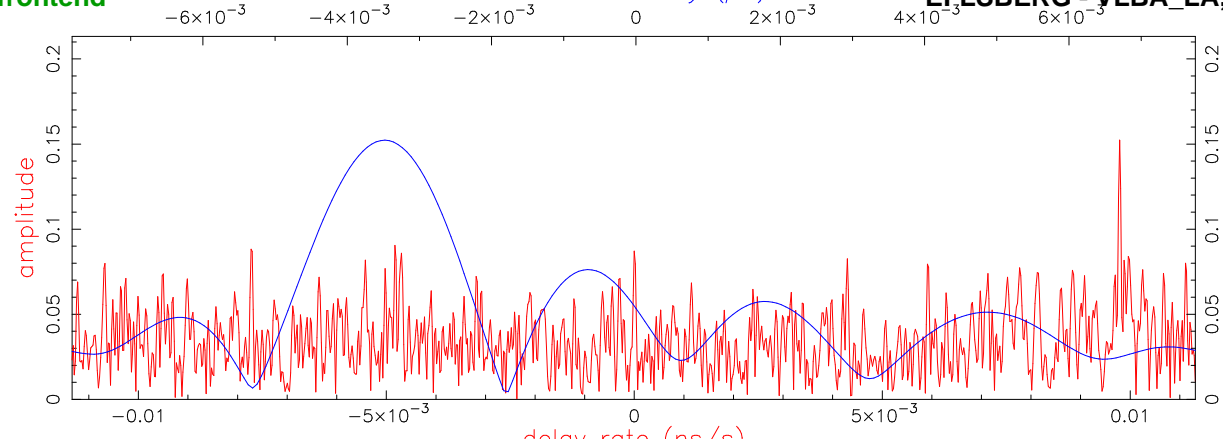
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126Y2A, No0048, BI

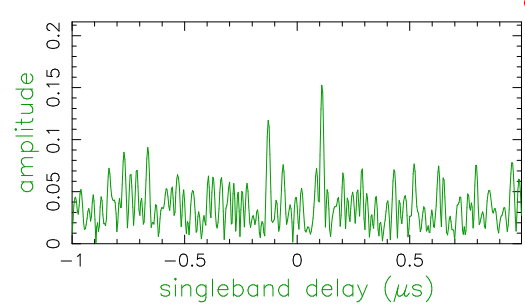
EFLSBERG - VLBA\_LA, fgroup W, pol RL

multiband delay ( $\mu$ s)

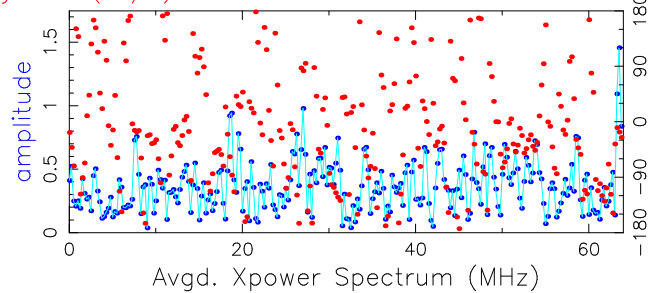


Fringe quality 0

SNR 5.6  
 Int time 179.515  
 Amp 0.213  
 Phase -153.7  
 PFD 9.0e-01  
 Delays (us)  
 SBD 0.110436  
 MBD -0.003486  
 Fringe rate (Hz)  
 0.844820  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

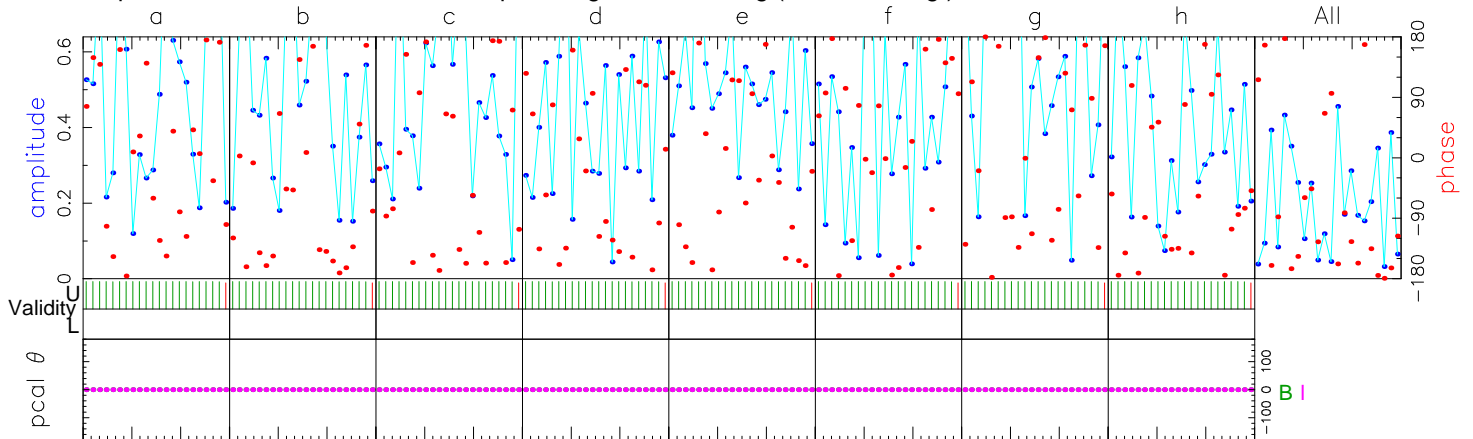


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125111  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-173.5	-134.0	-154.1	-142.0	-146.2	143.9	-153.0	-151.5	Phase	-153.7
	0.2	0.2	0.2	0.2	0.2	0.1	0.4	0.2	Ampl.	0.2
	228.4	424.2	420.2	414.7	398.2	465.0	284.8	224.3	Sbd box	285.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.58000095675E+03		Apriori delay (usec)		7.57989506725E+03		Resid mbdelay (usec)		-3.48551E-03	+/- 1.9E-04
Sband delay (usec)	7.58000550325E+03		Apriori clock (usec)		1.7567019E+01		Resid sbdelay (usec)		1.10436E-01	+/- 1.5E-03
Phase delay (usec)	7.57989506230E+03		Apriori clockrate (us/s)		1.5147200E-07		Resid phdelay (usec)		-4.95566E-06	+/- 6.6E-07
Delay rate (us/s)	-1.45067336835E+00		Apriori rate (us/s)		-1.45068317588E+00		Resid rate (us/s)		9.80753E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.74228301730E-05		Resid phase (deg)		-153.7	+/- 20.4

ph/seg (deg) 59.8 47.8 Search (1024X32) 0.151 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 95.0 83.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 28.5 28.8 Inc. seg. avg. 0.211 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.6 50.3 Inc. frq. avg. 0.196 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 257.6 el 60.6 pa 51.1 I: az 63.9 el 30.6 pa -66.4 u,v (fr/asec) 10418.974 -378.400 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BI\_.126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BI.W.70.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

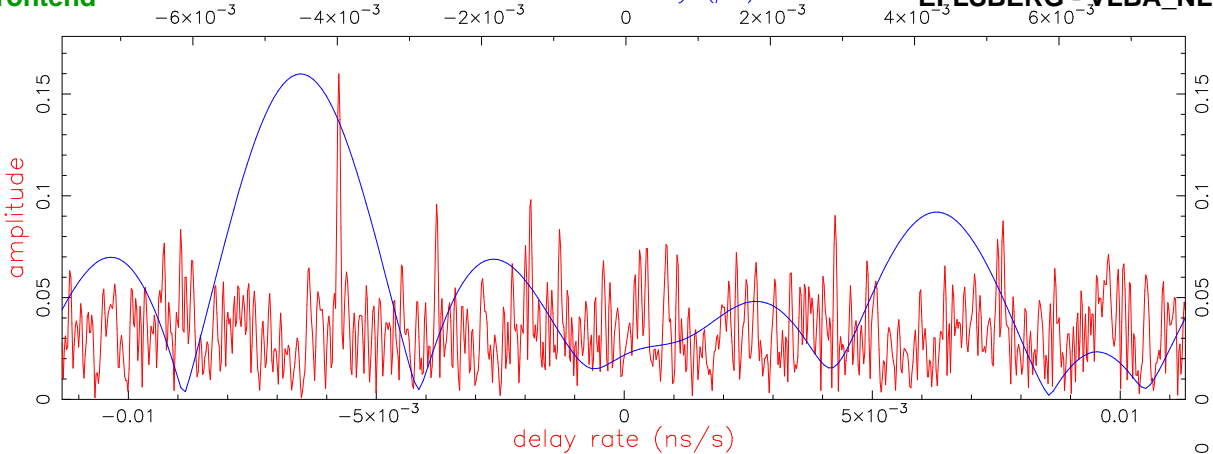
frontend

2013+370.126Y2A, No0048, Bn

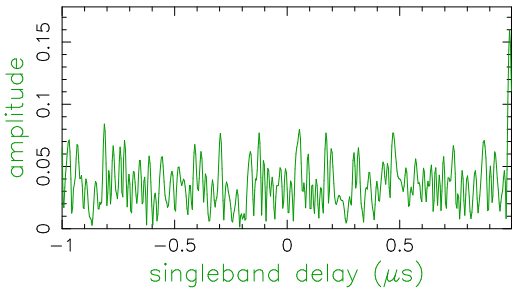
EFLSBERG - VLBA\_NL, fgroup W, pol LL

multiband delay ( $\mu$ s)

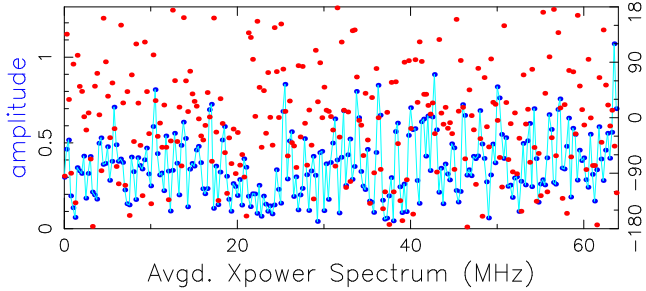
Fringe quality 0



SNR 5.9  
Int time 179.166  
Amp 0.178  
Phase -82.9  
PFD 4.5e-01  
Delays (us)  
SBD 0.988454  
MBD -0.004502  
Fringe rate (Hz)  
-0.496906  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

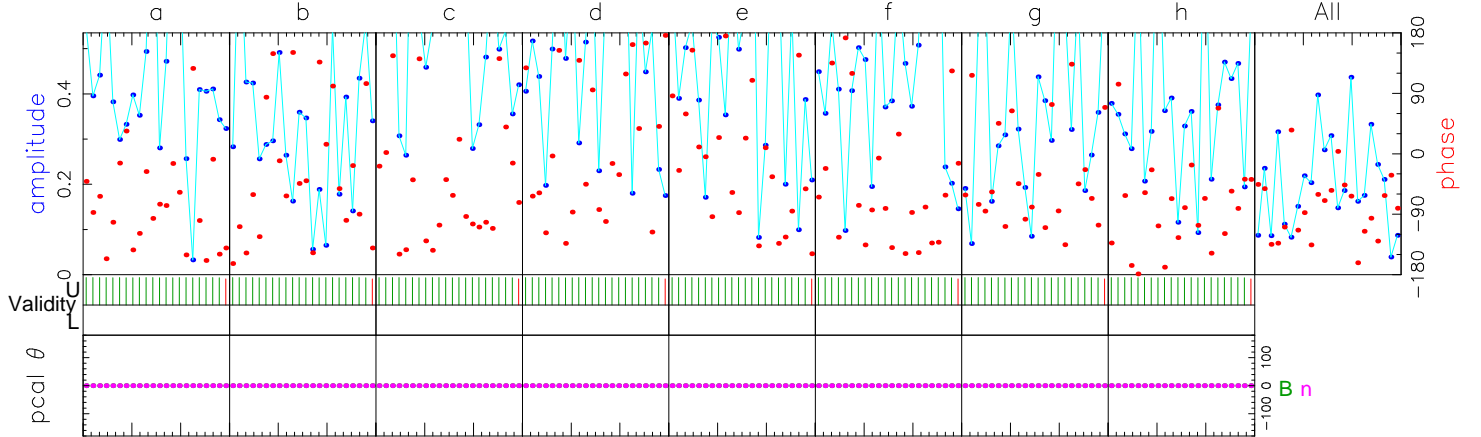


delay rate (ns/s)



Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125104  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-80.8	-103.9	-79.2	-91.8	-31.1	-105.4	-64.7	-89.5	Phase	-82.9
	0.3	0.1	0.3	0.1	0.1	0.2	0.2	0.2	Ampl.	0.2
	339.8	345.2	508.1	446.9	349.3	436.6	7.8	455.1	Sbd box	510.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.78110140558E+03		Apriori delay (usec)		3.78010590770E+03		Resid mbdelay (usec)		-4.50211E-03	+/- 1.9E-04
Sband delay (usec)	3.78109436145E+03		Apriori clock (usec)		-9.7353954E+00		Resid sbdelay (usec)		9.88454E-01	+/- 1.5E-03
Phase delay (usec)	3.78010590502E+03		Apriori clockrate (us/s)		-3.3422351E-07		Resid phdelay (usec)		-2.67329E-06	+/- 6.3E-07
Delay rate (us/s)	-1.28527555053E+00		Apriori rate (us/s)		-1.28526978195E+00		Resid rate (us/s)		-5.76858E-06	+/- 6.1E-09
Total phase (deg)	237.1		Apriori accel (us/s/s)		-1.29210784527E-05		Resid phase (deg)		-82.9	+/- 19.6

	RMS	Theor.	Amplitude	0.178 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	47.5	45.9	Search (1024X32)	0.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	71.0	80.1	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	26.2	27.7	Inc. seg. avg.	0.173	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	48.8	48.3	Inc. frq. avg.	0.168					

B: az 257.6 el 60.6 pa 51.1 n: az 74.2 el 43.4 pa -64.3 u,v (fr/asec) 9238.745 -79.386 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn.W.11.126Y2A

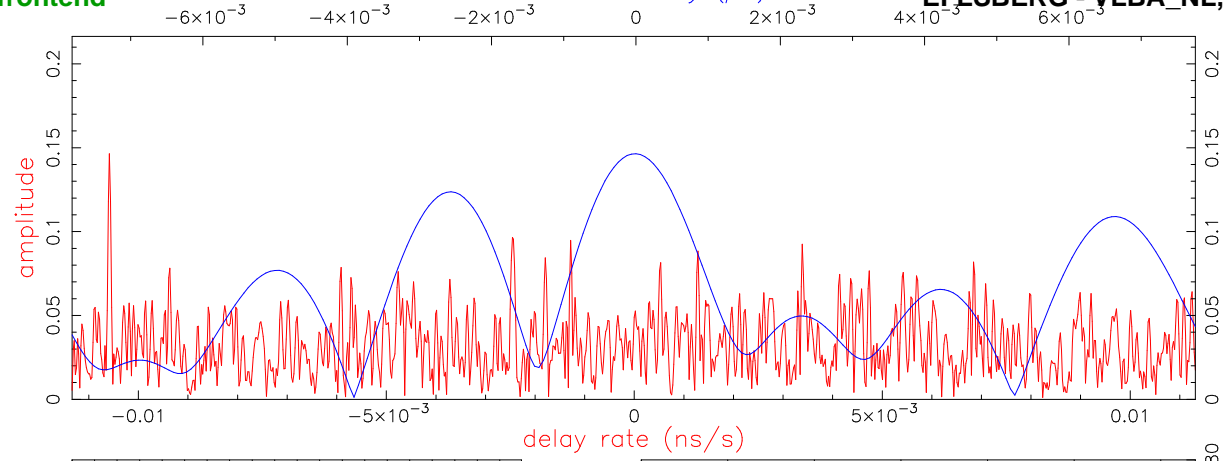
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126Y2A, No0048, Bn

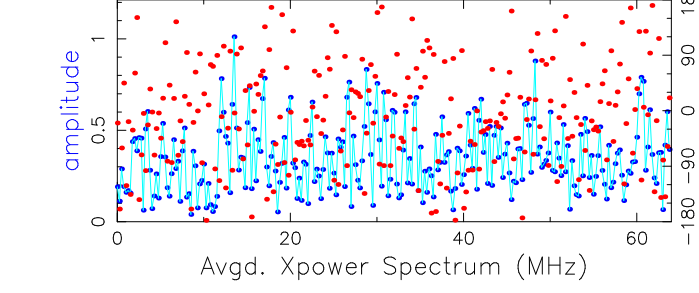
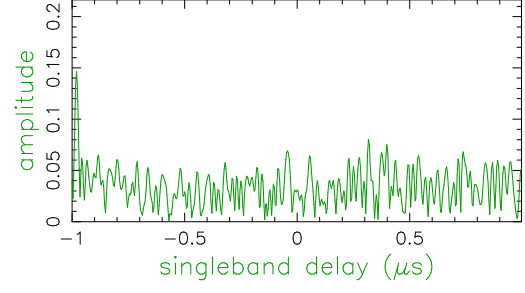
EFLSBERG - VLBA\_NL, fgroup W, pol RR

multiband delay ( $\mu$ s)



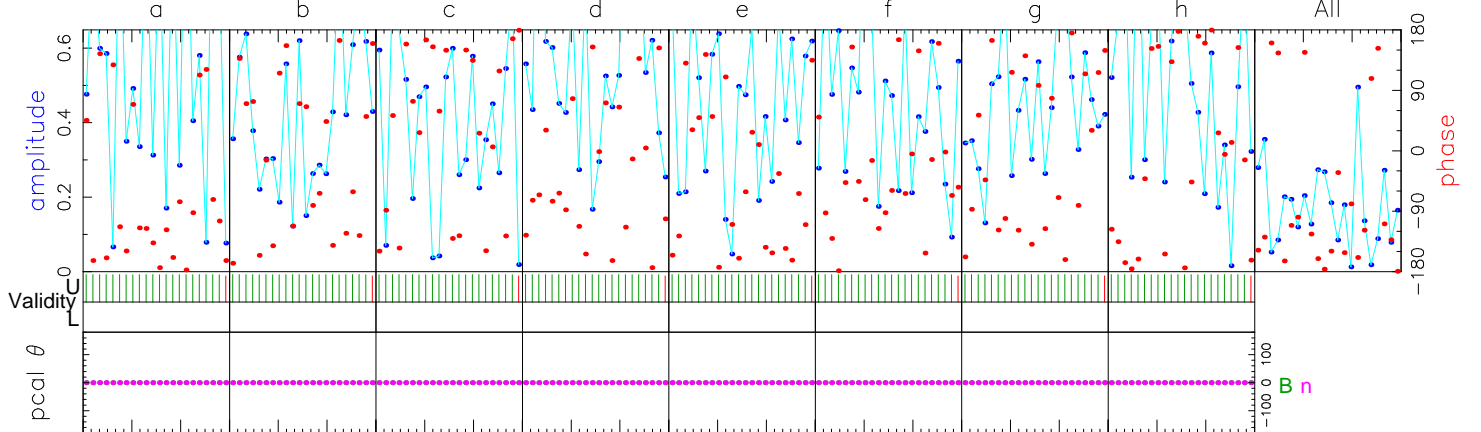
Fringe quality 0

SNR 5.4  
 Int time 179.166  
 Amp 0.216  
 Phase -149.8  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.980354  
 MBD -0.000009  
 Fringe rate (Hz)  
 -0.913855  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125107  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

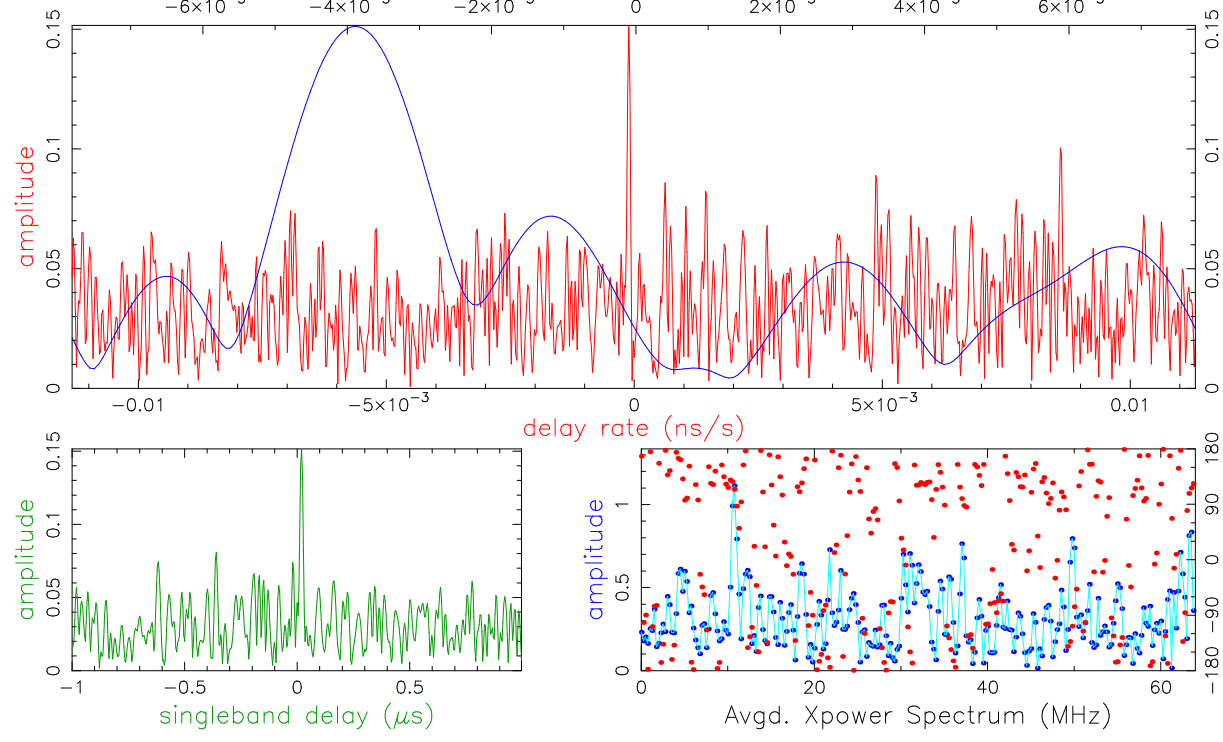
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-144.0	162.4	168.6	-92.1	-150.4	-81.2	-168.8	-171.2	Phase	-149.8
	0.5	0.2	0.2	0.2	0.1	0.3	0.2	0.4	Ampl.	0.2
	5.8	391.1	265.4	418.1	409.0	484.9	395.2	5.9	Sbd box	6.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.77912152335E+03		Apriori delay (usec)		3.78010590770E+03		Resid mbdelay (usec)		-9.34478E-06	+/- 2.0E-04
Sband delay (usec)	3.7791255395E+03		Apriori clock (usec)		-9.7353954E+00		Resid sbdelay (usec)		-9.80354E-01	+/- 1.6E-03
Phase delay (usec)	3.78010590287E+03		Apriori clockrate (us/s)		-3.3422351E-07		Resid phdelay (usec)		-4.83001E-06	+/- 6.9E-07
Delay rate (us/s)	-1.28528039090E+00		Apriori rate (us/s)		-1.28526978195E+00		Resid rate (us/s)		-1.06090E-05	+/- 6.6E-09
Total phase (deg)	170.2		Apriori accel (us/s/s)		-1.29210784527E-05		Resid phase (deg)		-149.8	+/- 21.4

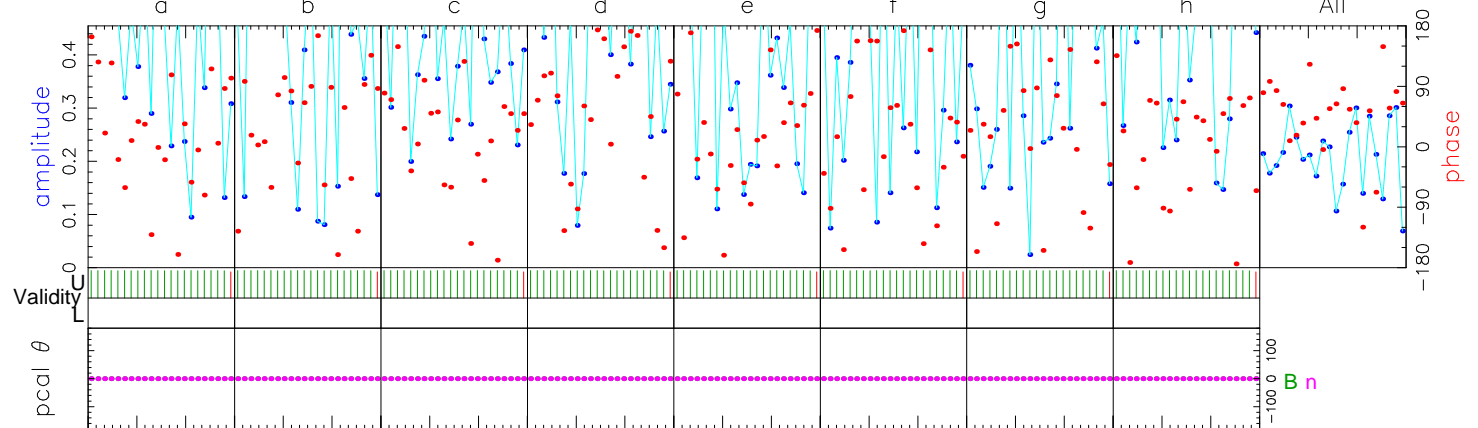
	RMS	Theor.	Amplitude	0.216 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	49.4	50.1	Search (1024X32)	0.145	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	80.0	87.5	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	46.4	30.2	Inc. seg. avg.	0.189	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	65.8	52.8	Inc. frq. avg.	0.239					

B: az 257.6 el 60.6 pa 51.1 n: az 74.2 el 43.4 pa -64.3 u,v (fr/asec) 9238.745 -79.386 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn.W.29.126Y2A



Fringe quality 0  
SNR 5.5  
Int time 179.166  
Amp 0.152  
Phase 54.2  
PFD 9.7e-01  
Delays (us)  
SBD 0.018912  
MBD -0.003904  
Fringe rate (Hz)  
-0.009551  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125109  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		3.78011762907E+03			3.78010590770E+03				Resid mbdelay (usec)	-3.90362E-03 +/- 2.0E-04
Sband delay (usec)		3.78012481945E+03			-9.7353954E+00				Resid sbdelay (usec)	1.89117E-02 +/- 1.6E-03
Phase delay (usec)		3.78010590944E+03			-3.3422351E-07				Resid phdelay (usec)	1.74718E-06 +/- 6.7E-07
Delay rate (us/s)		-1.28526989282E+00			Apriori rate (us/s)				Resid rate (us/s)	-1.10875E-07 +/- 6.4E-09
Total phase (deg)			14.2		Apriori accel (us/s/s)				Resid phase (deg)	54.2 +/- 20.7

ph/seg (deg) 57.3 48.4 Search (1024X32) 0.151 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 57.4 84.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 27.2 29.2 Inc. seg. avg. 0.156 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 37.6 51.0 Inc. frq. avg. 0.144 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 257.6 el 60.6 pa 51.1 n: az 74.2 el 43.4 pa -64.3 u,v (fr/asec) 9238.745 -79.386 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn.W.46.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

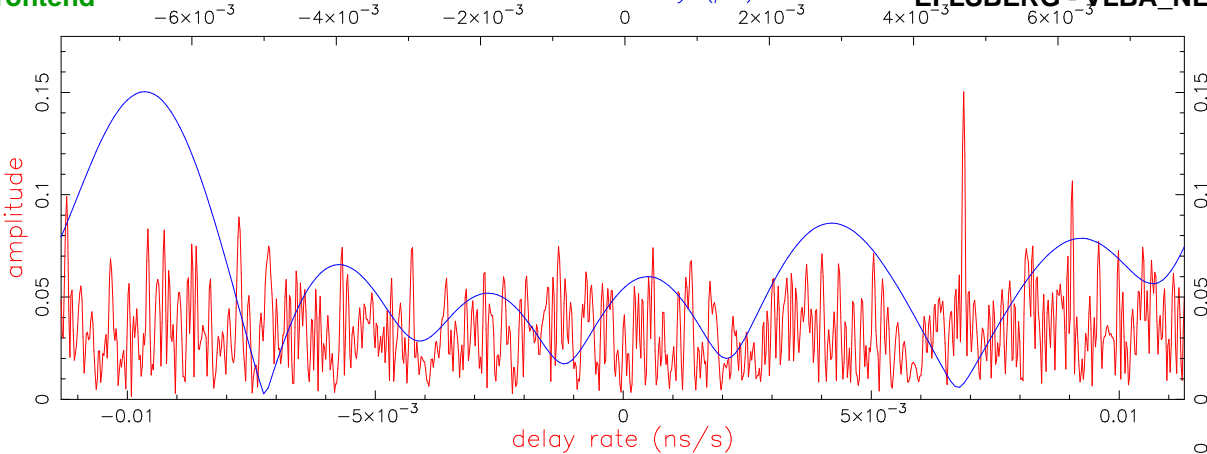
frontend

2013+370.126Y2A, No0048, Bn

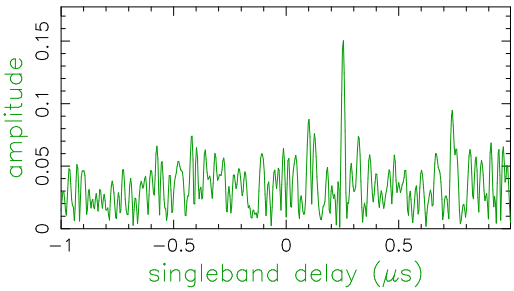
EFLSBERG - VLBA\_NL, fgroup W, pol RL

multiband delay ( $\mu\text{s}$ )

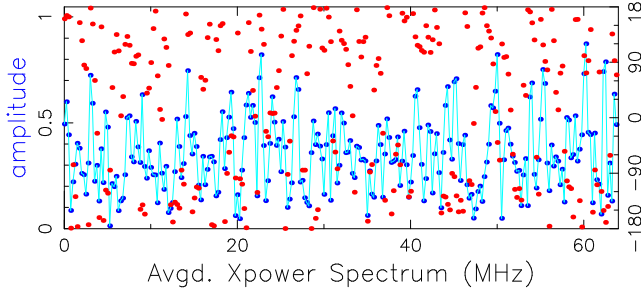
Fringe quality 0



SNR 5.6  
Int time 179.166  
Amp 0.177  
Phase -94.5  
PFD 9.6e-01  
Delays (us)  
SBD 0.252707  
MBD -0.006701  
Fringe rate (Hz) 0.591281  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

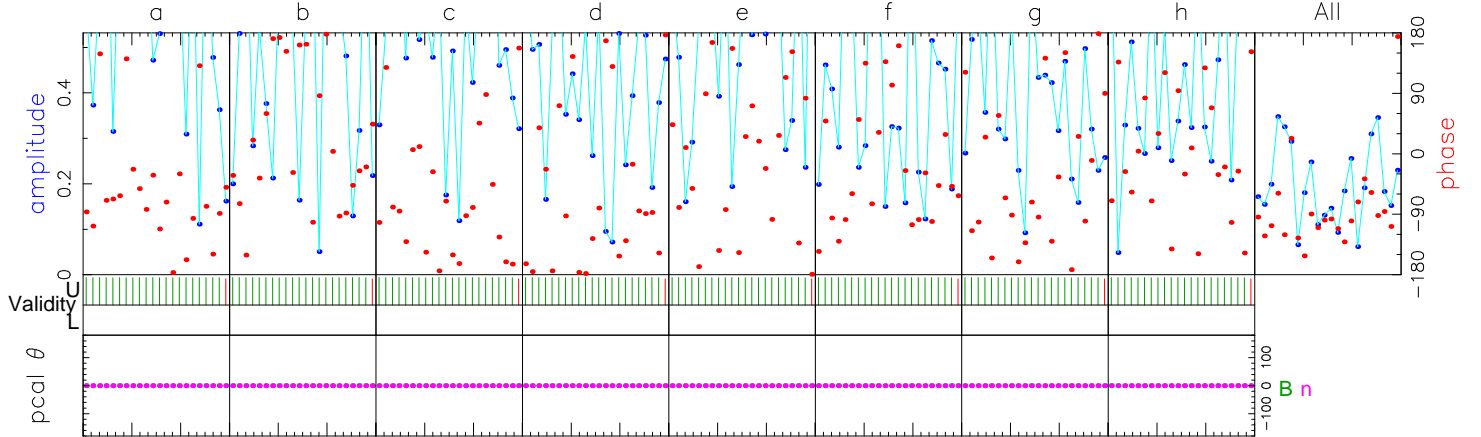


delay rate (ns/s)



Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125112  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



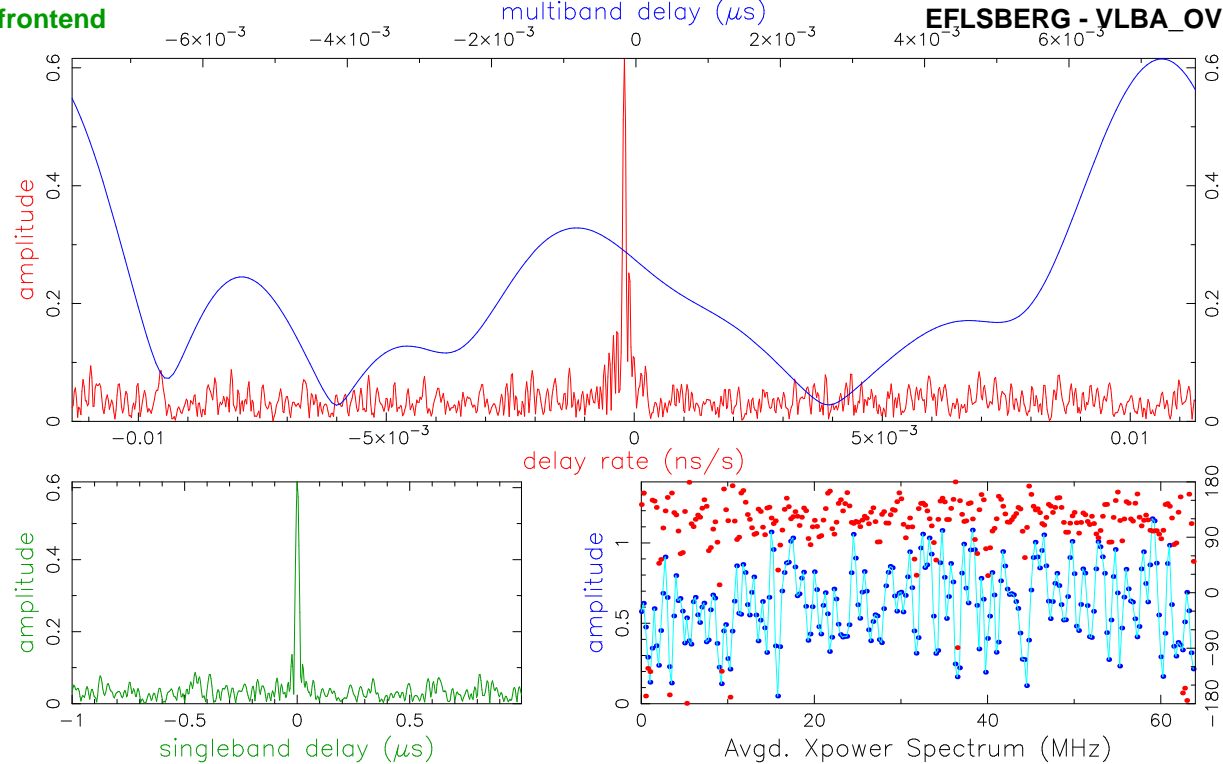
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-84.7	-95.3	-98.0	-146.4	-135.9	-67.7	-115.9	-46.5	Phase	-94.5
	0.4	0.1	0.2	0.2	0.0	0.2	0.2	0.1	Ampl.	0.2
	321.8	124.7	149.7	124.8	20.8	444.1	482.1	394.2	Sbd box	321.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.78036483143E+03		Apriori delay (usec)		3.78010590770E+03		Resid mbdelay (usec)		-6.70126E-03	+/- 2.0E-04
Sband delay (usec)	3.78035861470E+03		Apriori clock (usec)		-9.7353954E+00		Resid sbdelay (usec)		2.52707E-01	+/- 1.6E-03
Phase delay (usec)	3.78010590465E+03		Apriori clockrate (us/s)		-3.3422351E-07		Resid phdelay (usec)		-3.04817E-06	+/- 6.6E-07
Delay rate (us/s)	-1.28526291775E+00		Apriori rate (us/s)		-1.28526978195E+00		Resid rate (us/s)		6.86419E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.29210784527E-05		Resid phase (deg)		-94.5	+/- 20.6

	RMS	Theor.	Amplitude	0.177 +/- 0.032	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	40.6	48.4	Search (1024X32)	0.149	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	63.7	84.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	36.5	29.2	Inc. seg. avg.	0.172	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	62.2	50.9	Inc. frq. avg.	0.175	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

B: az 257.6 el 60.6 pa 51.1 n: az 74.2 el 43.4 pa -64.3 u,v (fr/asec) 9238.745 -79.386 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bn.W.71.126Y2A



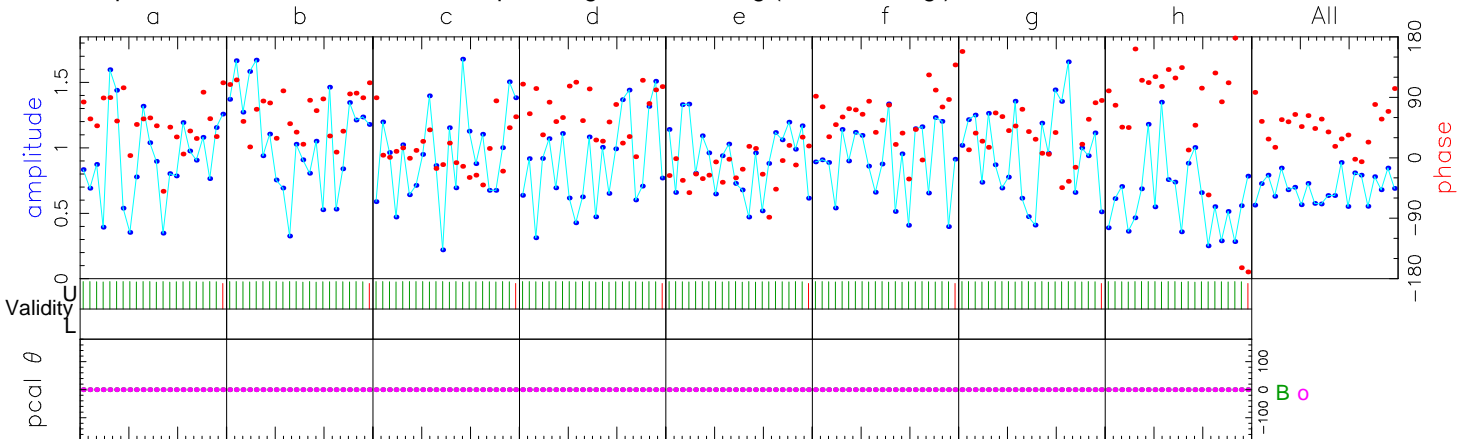


Fringe quality 8

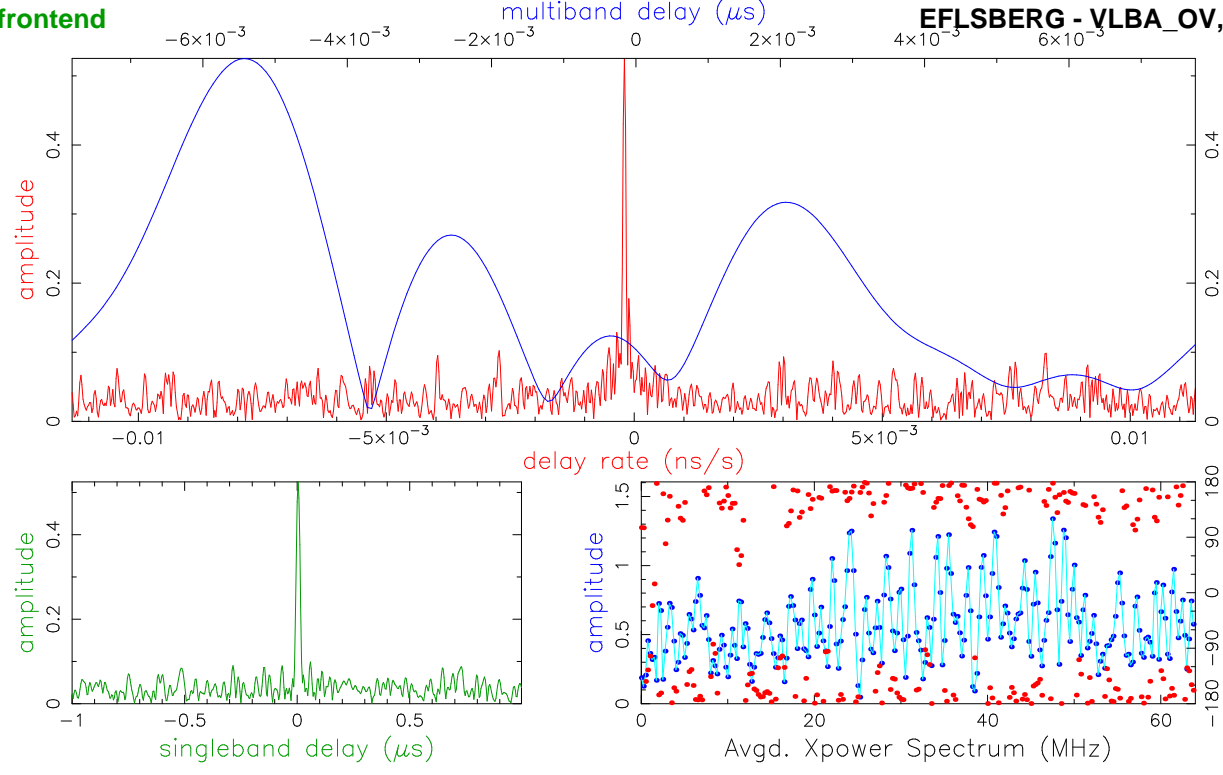
SNR 22.5  
 Int time 178.358  
 Amp 0.616  
 Phase 45.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000503  
 MBD 0.007299  
 Fringe rate (Hz)  
 -0.017396  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125105  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		1.01651391827E+04			1.01651318836E+04				7.29908E-03	+/- 4.8E-05
Sband delay (usec)		1.01651323871E+04			1.3252831E-01				5.03500E-04	+/- 3.8E-04
Phase delay (usec)		1.01651318850E+04			-2.0098100E-07				1.47927E-06	+/- 1.6E-07
Delay rate (us/s)		-1.46238480652E+00			-1.46238460458E+00				-2.01945E-07	+/- 1.6E-09
Total phase (deg)			208.0		-4.26524074807E-05				45.9	+/- 5.1
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
PC period (AP's) 5, 5										
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
ph/seg (deg)	27.5	11.9		Search (1024X32)	0.612					
amp/seg (%)	21.0	20.8		Interp.	0.000					
ph/frq (deg)	42.4	7.2		Inc. seg. avg.	0.678					
amp/frq (%)	29.7	12.6		Inc. frq. avg.	0.740					
B: az 257.6 el 60.6 pa 51.1				o: az 59.7 el 22.8 pa -59.7						
				u, v (fr/asec) 10491.346 -1432.043						
										simultaneous interpolator

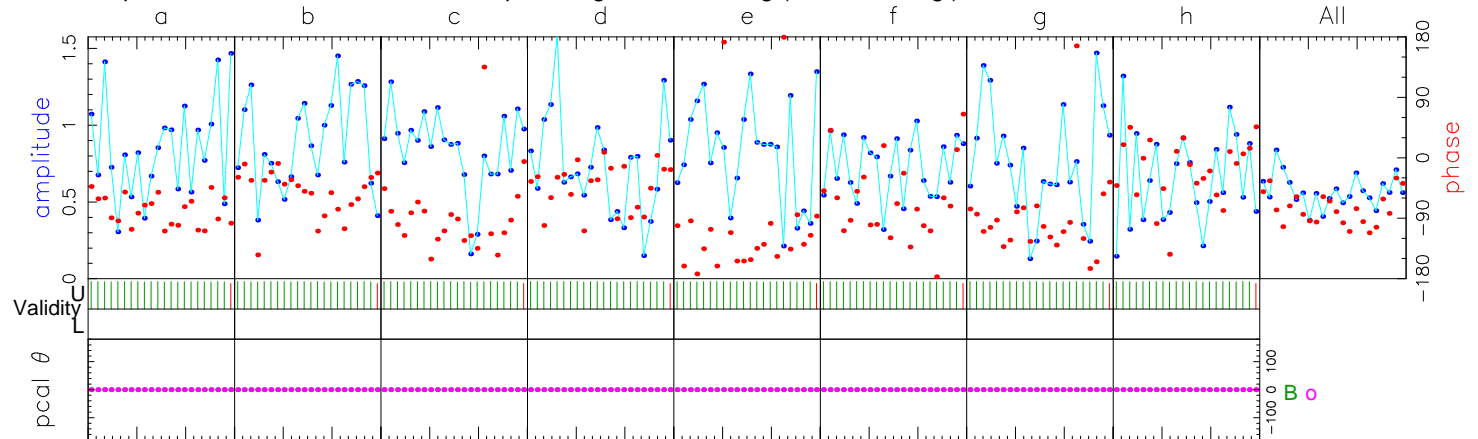


Fringe quality 8

SNR 19.2  
 Int time 178.357  
 Amp 0.525  
 Phase -75.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004128  
 MBD -0.005421  
 Fringe rate (Hz)  
 -0.016913  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125107  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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

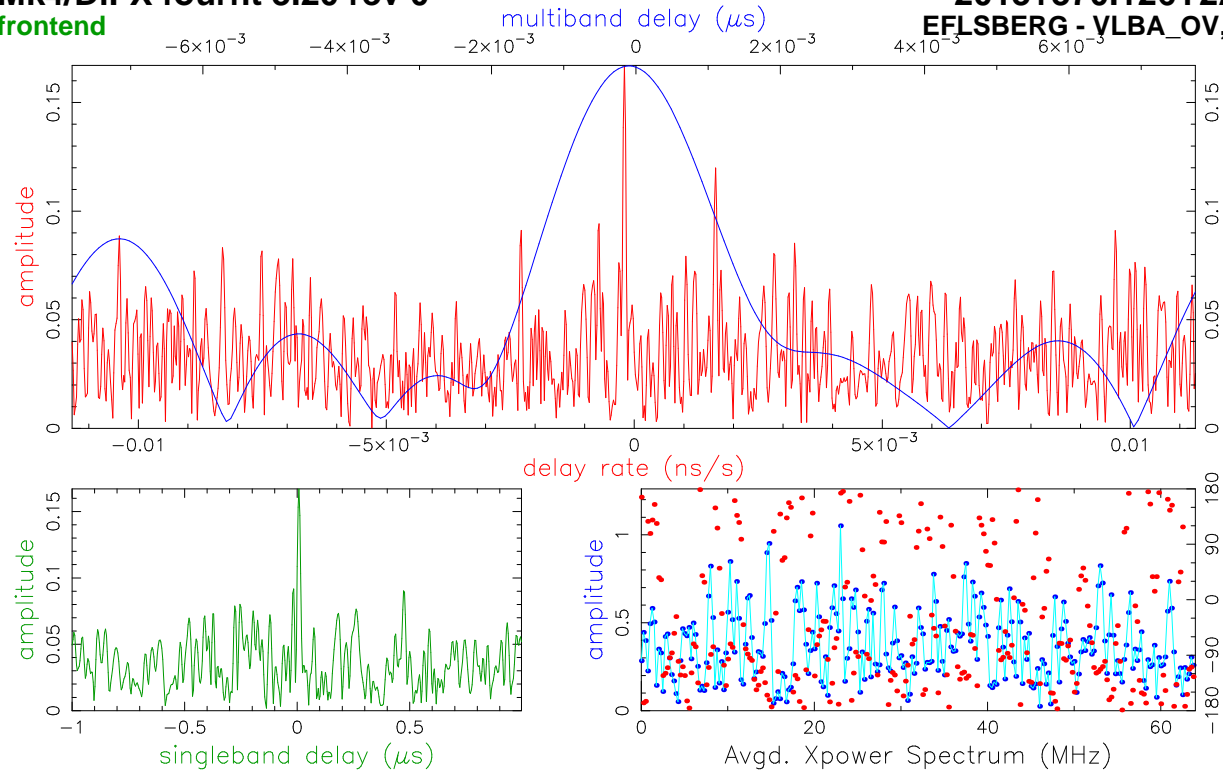


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-78.4	-50.6	-95.5	-40.1	-134.5	-68.9	-105.4	-11.2		-75.7	
	0.8	0.8	0.7	0.6	0.7	0.4	0.6	0.5		0.6	
	258.2	257.7	258.7	258.1	259.1	259.3	258.7	257.1		258.1	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000			
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000			
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)	1.01651420877E+04		Apriori delay (usec)		1.01651318836E+04		Resid mbdelay (usec)		-5.42092E-03	+/- 5.7E-05	
Sband delay (usec)	1.01651360113E+04		Apriori clock (usec)		1.3252831E-01		Resid sbdelay (usec)		4.12775E-03	+/- 4.5E-04	
Phase delay (usec)	1.01651318811E+04		Apriori clockrate (us/s)		-2.0098100E-07		Resid phdelay (usec)		-2.44060E-06	+/- 1.9E-07	
Delay rate (us/s)	-1.46238480092E+00		Apriori rate (us/s)		-1.46238460458E+00		Resid rate (us/s)		-1.96340E-07	+/- 1.9E-09	
Total phase (deg)			86.5		Apriori accel (us/s/s)		-4.26524074807E-05		Resid phase (deg)	-75.7	+/- 6.0

ph/seg (deg) 23.7 14.0 Search (1024X32) 0.522 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 21.7 24.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 42.5 8.4 Inc. seg. avg. 0.556 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 32.1 14.7 Inc. frq. avg. 0.636 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 257.6 el 60.6 pa 51.1 o: az 59.7 el 22.8 pa -59.7 u,v (fr/asec) 10491.346 -1432.043 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bo..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bo.W.35.126Y2A

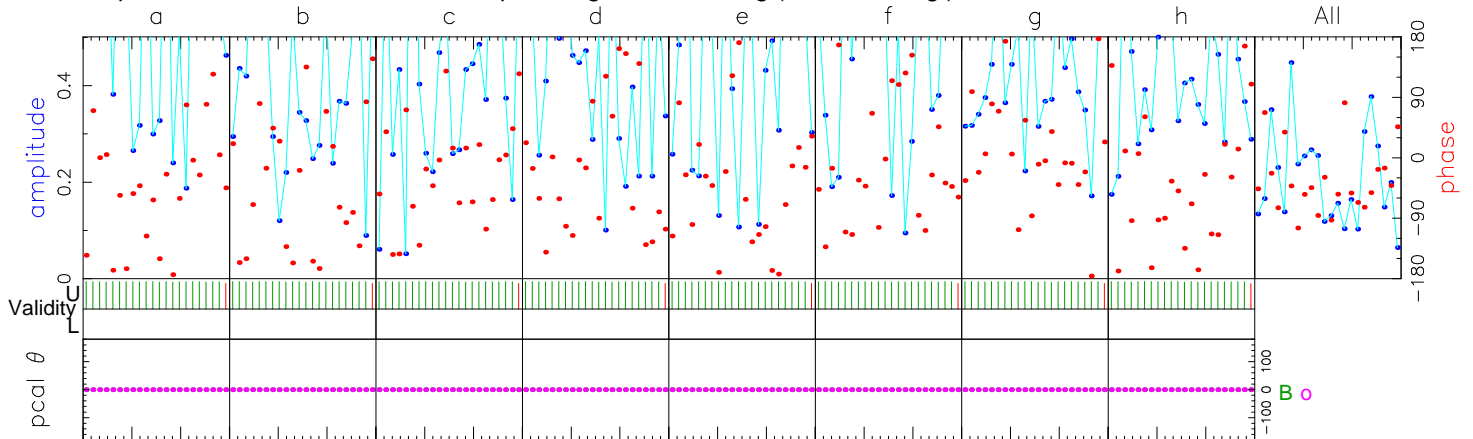
Mk4/DiFX fourfit 3.20 rev 0  
frontend

2013+370.126Y2A, No0048, Bo  
EFLSBERG - VLBA\_OV, fgroup W, pol LR



Fringe quality 0  
SNR 6.1  
Int time 178.357  
Amp 0.167  
Phase -46.0  
PFD 1.3e-01  
Delays (us)  
SBD 0.007397  
MBD -0.000100  
Fringe rate (Hz)  
-0.017822  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125109  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-34.0	-116.8	-33.9	-62.9	-40.5	-61.6	-1.7	-65.0	Phase	-46.0
	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	Ampl.	0.2
	243.6	227.6	20.4	78.6	258.0	258.3	439.9	305.0	Sbd box	258.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.01651317835E+04		Apriori delay (usec)		1.01651318836E+04		Resid mbdelay (usec)		-1.00103E-04	+/- 1.8E-04
Sband delay (usec)	1.01651392811E+04		Apriori clock (usec)		1.3252831E-01		Resid sbdelay (usec)		7.39750E-03	+/- 1.4E-03
Phase delay (usec)	1.01651318821E+04		Apriori clockrate (us/s)		-2.0098100E-07		Resid phdelay (usec)		-1.48184E-06	+/- 6.1E-07
Delay rate (us/s)	-1.46238481147E+00		Apriori rate (us/s)		-1.46238460458E+00		Resid rate (us/s)		-2.06893E-07	+/- 5.8E-09
Total phase (deg)	116.2		Apriori accel (us/s/s)		-4.26524074807E-05		Resid phase (deg)		-46.0	+/- 18.8

ph/seg (deg) 50.6 44.0 Amplitude 0.167 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 63.5 76.9 Search (1024X32) 0.162 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 37.0 26.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 36.2 46.4 Inc. seg. avg. 0.163 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 257.6 el 60.6 pa 51.1 o: az 59.7 el 22.8 pa -59.7 u,v (fr/asec) 10491.346 -1432.043 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bo..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bo.W.51.126Y2A

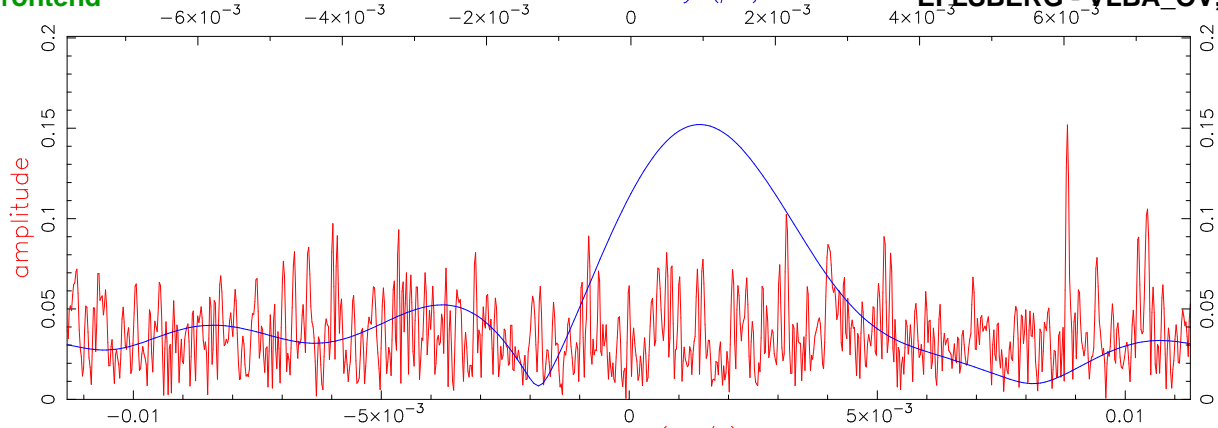
# Mk4/DiFX fourfit 3.20 rev 0

frontend

## 2013+370.126Y2A, No0048, Bo

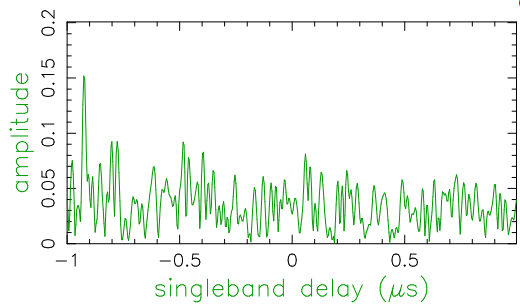
EFLSBERG - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

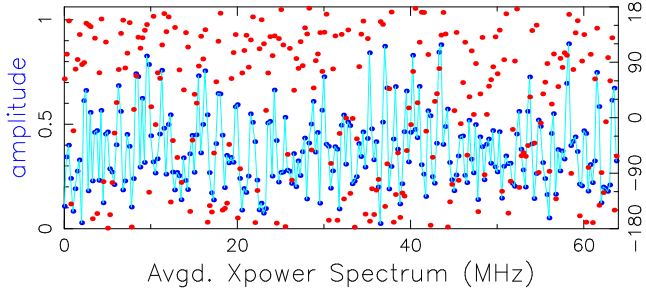


Fringe quality 0

SNR 5.6  
 Int time 178.358  
 Amp 0.201  
 Phase -85.7  
 PFD 8.9e-01  
 Delays (us)  
 SBD -0.924284  
 MBD 0.001028  
 Fringe rate (Hz)  
 0.762912  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

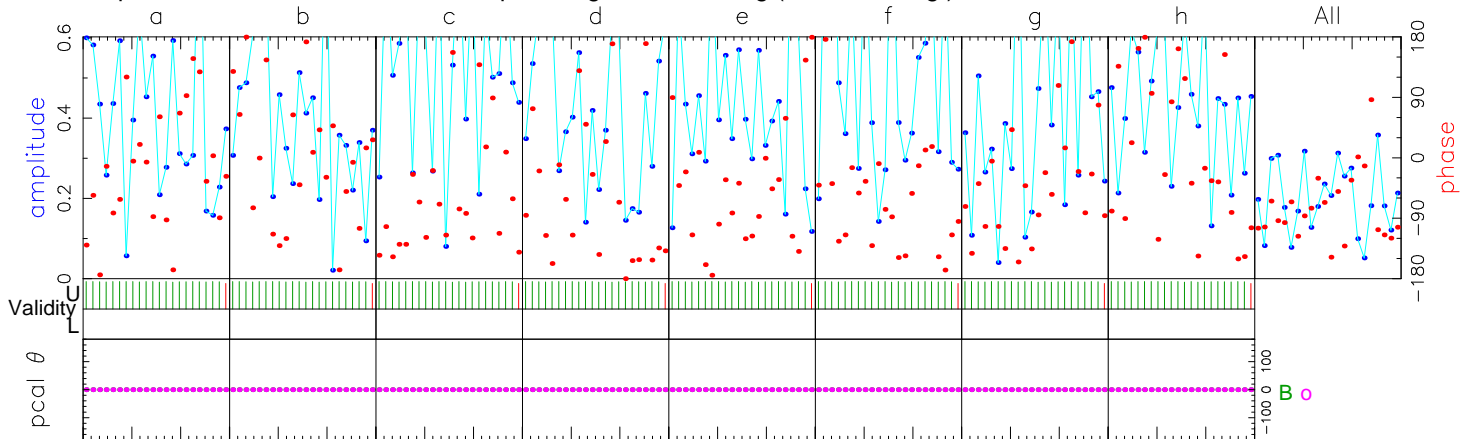


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125111  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-59.1	-42.5	-93.9	-125.1	-82.9	-73.3	-76.1	-114.6	Phase	-85.7
	0.1	0.1	0.4	0.2	0.3	0.3	0.2	0.1	Ampl.	0.2
	199.6	100.1	21.4	451.3	342.1	20.6	313.5	314.2	Sbd box	20.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.01642110368E+04		Apriori delay (usec)		1.01651318836E+04		Resid mbdelay (usec)		1.02820E-03	+/- 1.9E-04
Sband delay (usec)	1.01642075993E+04		Apriori clock (usec)		1.3252831E-01		Resid sbdelay (usec)		-9.24284E-01	+/- 1.5E-03
Phase delay (usec)	1.01651318808E+04		Apriori clockrate (us/s)		-2.0098100E-07		Resid phdelay (usec)		-2.76427E-06	+/- 6.6E-07
Delay rate (us/s)	-1.46237574793E+00		Apriori rate (us/s)		-1.46238460458E+00		Resid rate (us/s)		8.85665E-06	+/- 6.3E-09
Total phase (deg)	76.4		Apriori accel (us/s/s)		-4.26524074807E-05		Resid phase (deg)		-85.7	+/- 20.4

	RMS	Theor.	Amplitude	0.201 +/- 0.036	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	52.9	47.8	Search (1024X32)	0.150	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	63.0	83.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	29.6	28.8	Inc. seg. avg.	0.195	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	52.7	50.3	Inc. frq. avg.	0.188	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

B: az 257.6 el 60.6 pa 51.1 o: az 59.7 el 22.8 pa -59.7 u,v (fr/asec) 10491.346 -1432.043 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bo..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bo.W.69.126Y2A



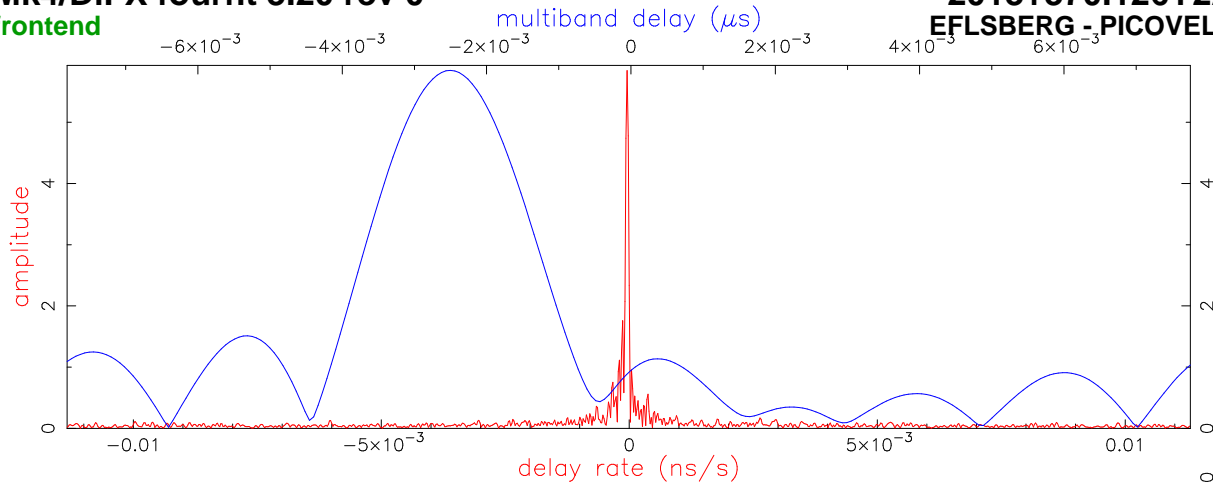


Mk4/DiFX fourfit 3.20 rev 0

frontend

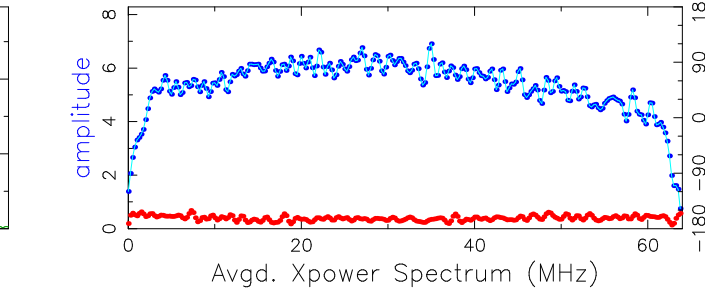
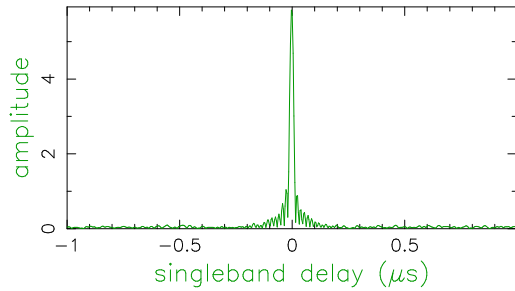
2013+370.126Y2A, No0048, BP

EFLSBERG - PICOVEL, fgroup W, pol LL



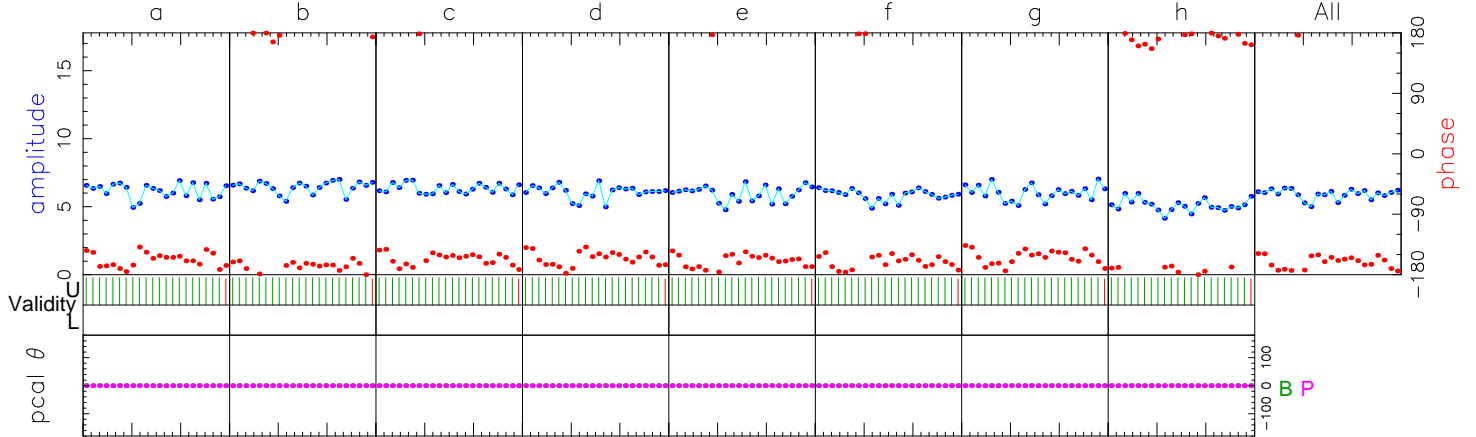
Fringe quality 9

SNR 217.3  
 Int time 179.587  
 Amp 5.929  
 Phase -162.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002318  
 MBD -0.002456  
 Fringe rate (Hz)  
 -0.004035  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125106  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.28887109647E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03		
Sband delay (usec)	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03	-1.28887095875E+03		
Phase delay (usec)	-1.28886864573E+03	-1.28886864573E+03	-1.28886864573E+03	-1.28886864573E+03	-1.28886864573E+03	-1.28886864573E+03	-1.28886864573E+03	-1.28886864573E+03		
Delay rate (us/s)	-2.75472343690E-02	-2.75472343690E-02	-2.75472343690E-02	-2.75472343690E-02	-2.75472343690E-02	-2.75472343690E-02	-2.75472343690E-02	-2.75472343690E-02		
Total phase (deg)			-51.6							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
ion window (TEC)										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

B: az 257.6 el 60.6 pa 51.1 P: az 278.7 el 68.7 pa 82.3 u,v (fr/asec) 214.498 2295.546 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BP..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BP.W.21.126Y2A

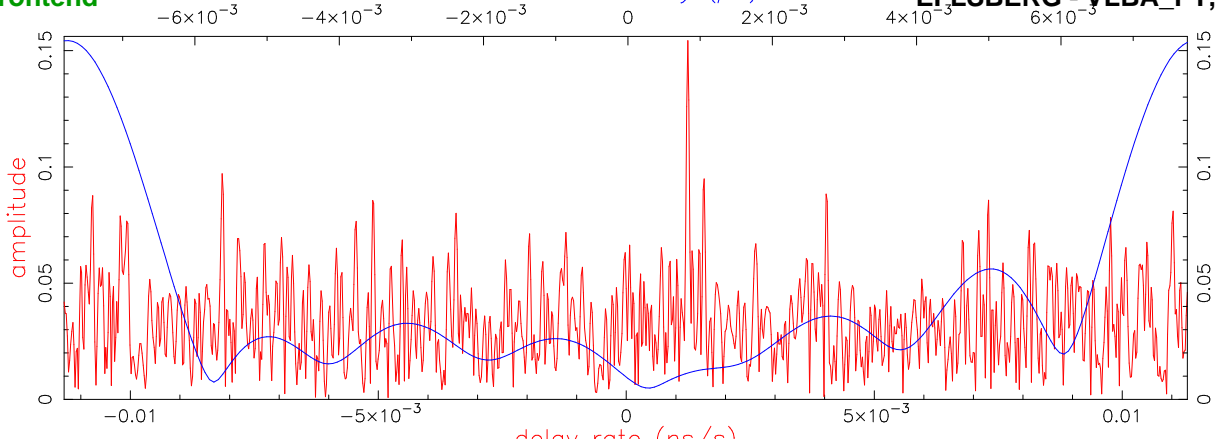
Mk4/DiFX fourfit 3.20 rev 0

frontend

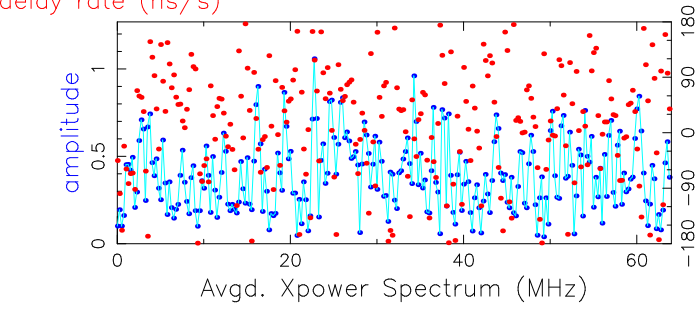
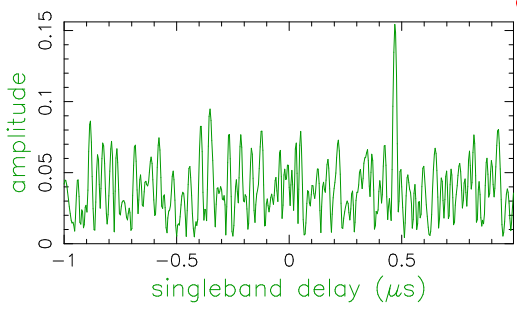
2013+370.126Y2A, No0048, Bp

EFLSBERG - VLBA\_PT, fgroup W, pol RR

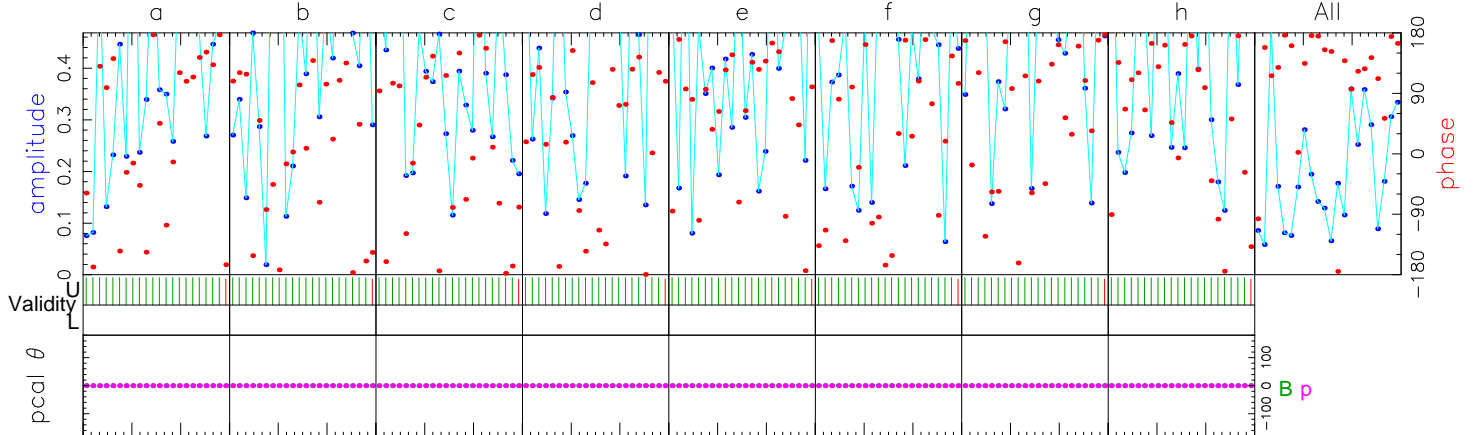
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 5.7  
 Int time 179.557  
 Amp 0.156  
 Phase 137.4  
 PFD 7.8e-01  
 Delays (us)  
 SBD 0.469862  
 MBD -0.007735  
 Fringe rate (Hz) 0.106480  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125108  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"



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



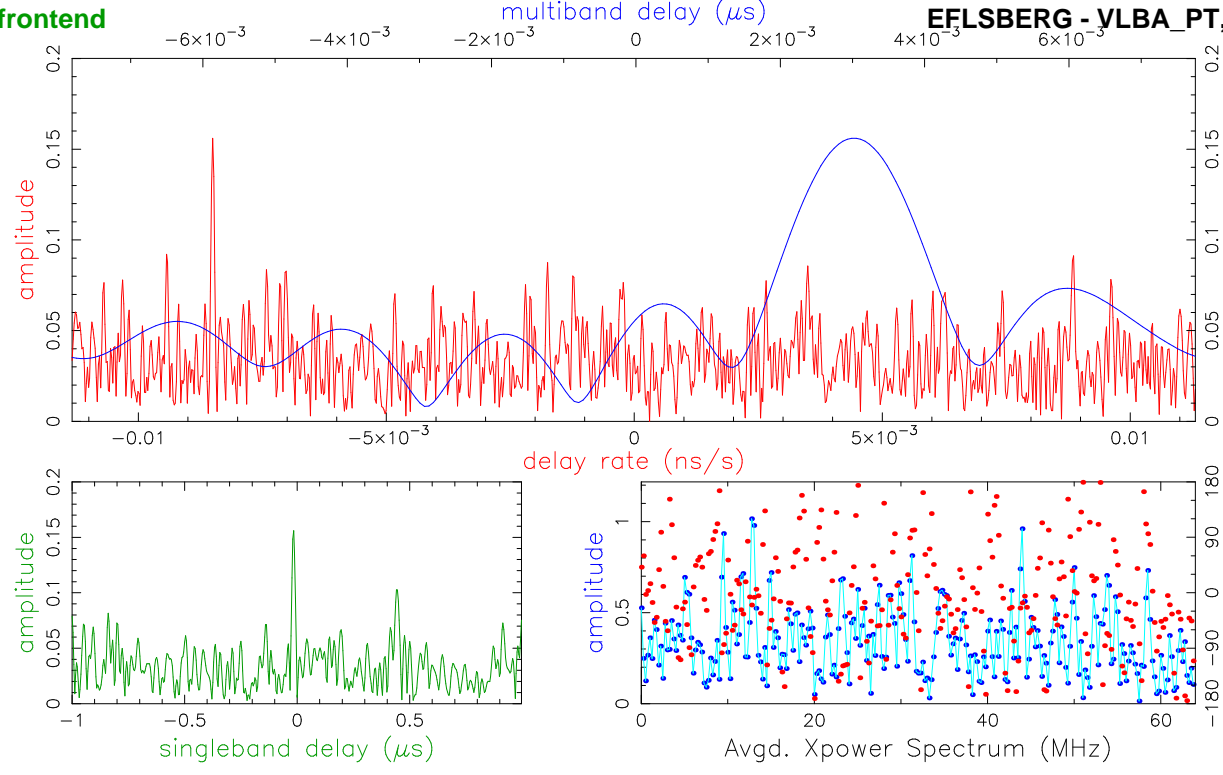
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	8.22128374252E+03		Apriori delay (usec)		8.22080710271E+03		Resid mbdelay (usec)		-7.73519E-03	+/- 1.9E-04
Sband delay (usec)	8.22127696471E+03		Apriori clock (usec)		4.8192959E+00		Resid sbdelay (usec)		4.69862E-01	+/- 1.5E-03
Phase delay (usec)	8.22080710714E+03		Apriori clockrate (us/s)		-4.0388659E-07		Resid phdelay (usec)		4.42972E-06	+/- 6.5E-07
Delay rate (us/s)	-1.47610342166E+00		Apriori rate (us/s)		-1.47610465779E+00		Resid rate (us/s)		1.23613E-06	+/- 6.2E-09
Total phase (deg)	75.2		Apriori accel (us/s/s)		-2.94630957954E-05		Resid phase (deg)		137.4	+/- 20.1

ph/seg (deg) 49.9 47.2 Search (1024X32) 0.152 Pcd mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 79.3 82.4 Interp. 0.000 Pcd rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 20.5 28.5 Inc. seg. avg. 0.150 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 8.0 49.7 Inc. frq. avg. 0.145 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 257.6 el 60.6 pa 51.1 p: az 62.4 el 28.6 pa -67.1 u,v (fr/asec) 10600.611 -353.061 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bp..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bp.W.39.126Y2A



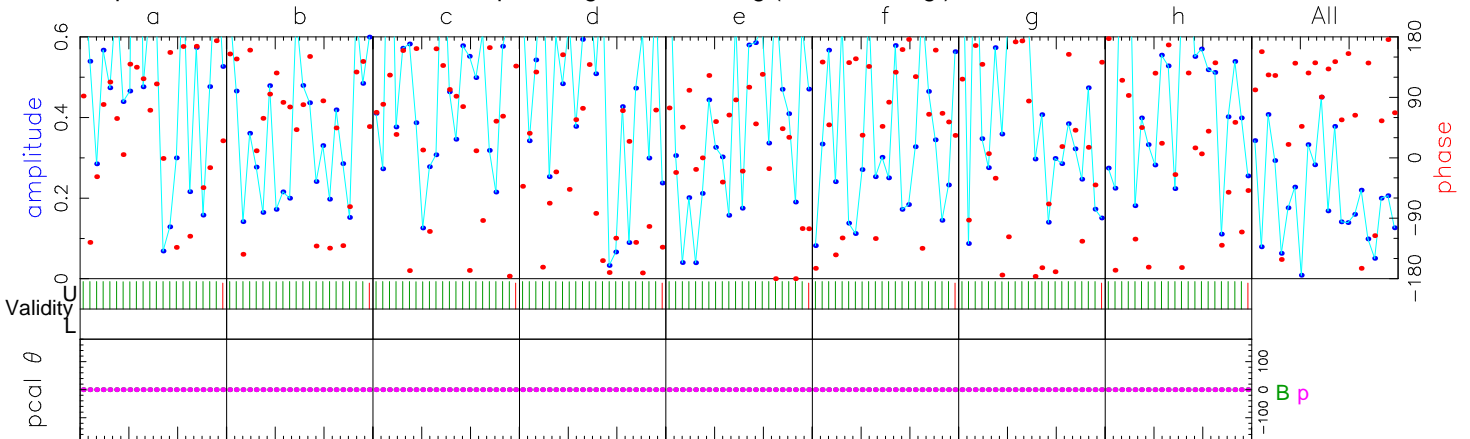
Mk4/DiFX fourfit 3.20 rev 0  
 frontend

2013+370.126Y2A, No0048, Bp  
 EFLSBERG - VLBA\_PT, fgroup W, pol LR



Fringe quality 0  
 SNR 5.7  
 Int time 179.557  
 Amp 0.200  
 Phase 120.7  
 PFD 6.7e-01  
 Delays (us)  
 SBD -0.016566  
 MBD 0.002982  
 Fringe rate (Hz)  
 -0.732703  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125111  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

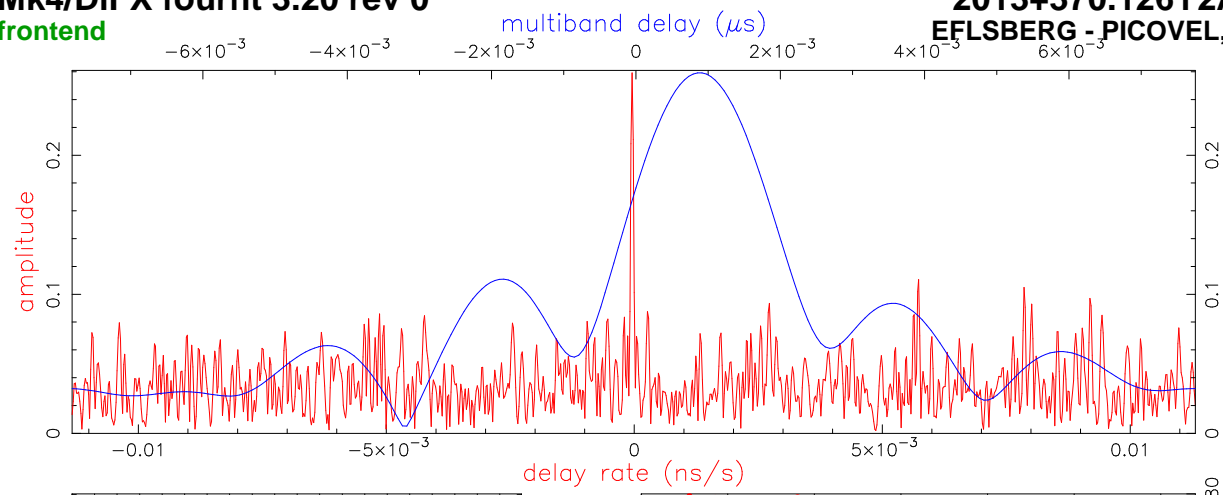
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



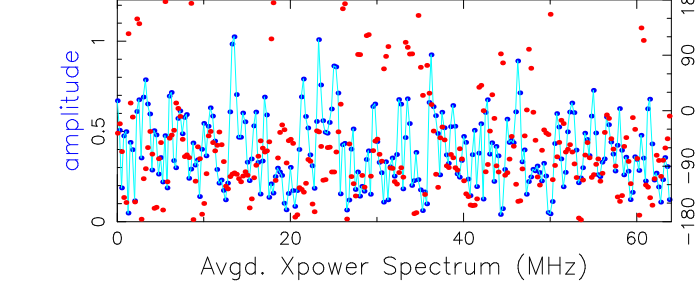
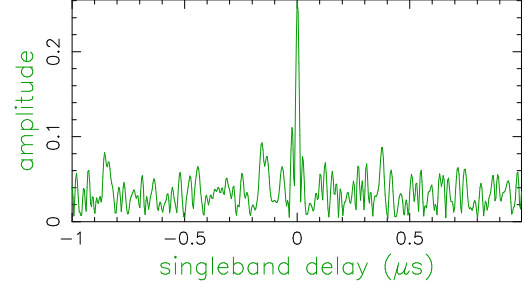
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	117.3	109.9	129.6	-174.8	72.9	124.7	161.2	100.2	Phase	120.7
B	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.2	Ampl.	0.2
p	251.8	135.2	254.0	77.6	86.9	305.9	496.2	178.8	Sbd box	252.8
B:p	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B:p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.22079445999E+03		Apriori delay (usec)		8.22080710271E+03		Resid mbdelay (usec)		2.98228E-03	+/- 1.9E-04
Sband delay (usec)	8.22079053646E+03		Apriori clock (usec)		4.8192959E+00		Resid sbdelay (usec)		-1.65663E-02	+/- 1.5E-03
Phase delay (usec)	8.22080710660E+03		Apriori clockrate (us/s)		-4.0388659E-07		Resid phdelay (usec)		3.89080E-06	+/- 6.4E-07
Delay rate (us/s)	-1.47611316375E+00		Apriori rate (us/s)		-1.47610465779E+00		Resid rate (us/s)		-8.50596E-06	+/- 6.2E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.94630957954E-05		Resid phase (deg)		120.7	+/- 19.9

ph/seg (deg) 55.5 46.8 Amplitude 0.200 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 82.1 81.6 Search (1024X32) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 38.1 28.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 44.2 49.2 Inc. seg. avg. 0.198 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.197 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

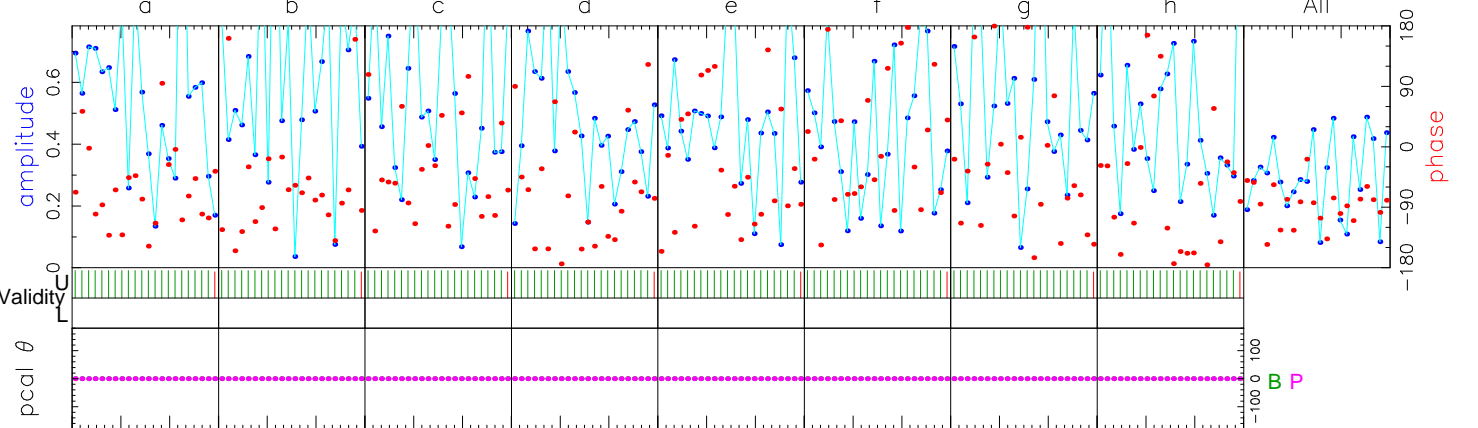
B: az 257.6 el 60.6 pa 51.1 p: az 62.4 el 28.6 pa -67.1 u,v (fr/asec) 10600.611 -353.061 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bp..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bp.W.62.126Y2A



Fringe quality 9  
 SNR 9.6  
 Int time 179.587  
 Amp 0.261  
 Phase -84.5  
 PFD 2.3e-13  
 Delays (us)  
 SBD 0.000998  
 MBD 0.000911  
 Fringe rate (Hz) -0.004119  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125111  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-78.7	-92.4	-70.7	-100.2	-85.0	-52.0	-92.1	-91.9	Phase	-84.5
	0.4	0.5	0.3	0.2	0.2	0.1	0.3	0.2	Ampl.	0.3
	257.3	256.6	257.1	480.9	220.1	260.5	288.7	201.1	Sbd box	257.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.28886772913E+03		Apriori delay (usec)		-1.28886864050E+03		Resid mbdelay (usec)		9.11369E-04	+/- 1.1E-04
Sband delay (usec)	-1.28886764250E+03		Apriori clock (usec)		1.6949013E+01		Resid sbdelay (usec)		9.98000E-04	+/- 9.0E-04
Phase delay (usec)	-1.28886864322E+03		Apriori clockrate (us/s)		1.5299999E-07		Resid phdelay (usec)		-2.72478E-06	+/- 3.9E-07
Delay rate (us/s)	-2.75472353510E-02		Apriori rate (us/s)		-2.75471875291E-02		Resid rate (us/s)		-4.78220E-08	+/- 3.7E-09
Total phase (deg)			Apriori accel (us/s/s)		1.84892806735E-05		Resid phase (deg)		-84.5	+/- 12.0

ph/seg (deg) 29.6 28.1 Search (1024X32) 0.257 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 49.2 49.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 16.8 16.9 Inc. seg. avg. 0.264 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 39.1 29.6 Inc. frq. avg. 0.254 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 257.6 el 60.6 pa 51.1 P: az 278.7 el 68.7 pa 82.3 u,v (fr/asec) 214.498 2295.546 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BP..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BP.W.66.126Y2A



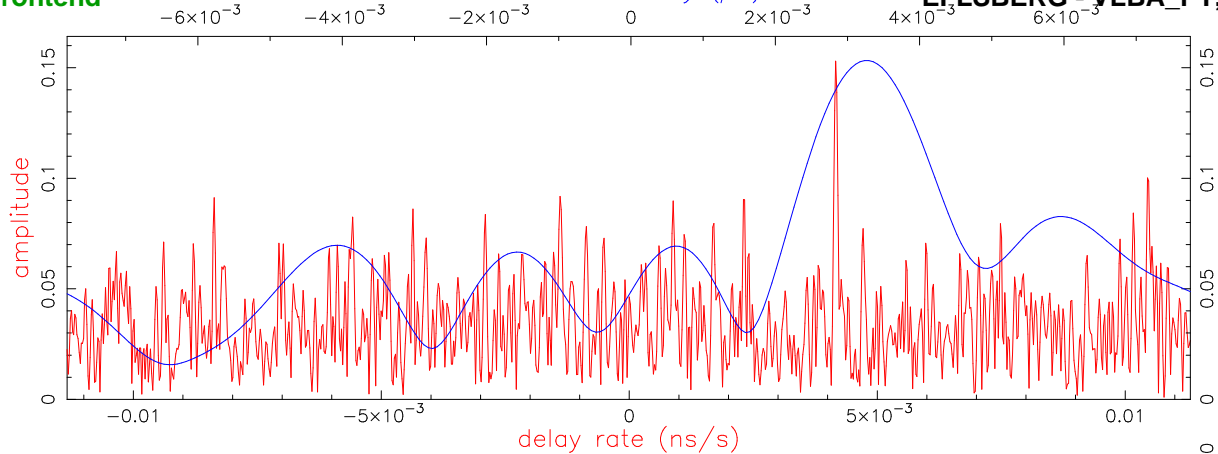
# Mk4/DiFX fourfit 3.20 rev 0

frontend

# 2013+370.126Y2A, No0048, Bp

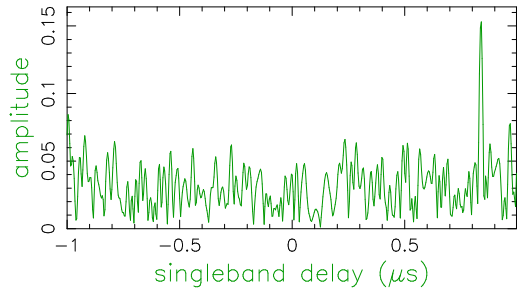
EFLSBERG - VLBA\_PT, fgroup W, pol RL

multiband delay ( $\mu\text{s}$ )

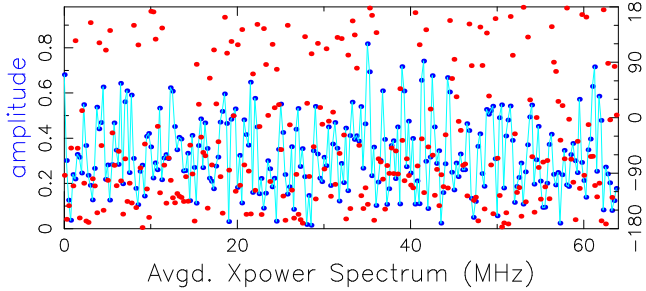


Fringe quality 0

SNR 5.7  
 Int time 179.557  
 Amp 0.164  
 Phase 143.4  
 PFD 8.0e-01  
 Delays (us)  
 SBD 0.838427  
 MBD 0.003203  
 Fringe rate (Hz)  
 0.359923  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

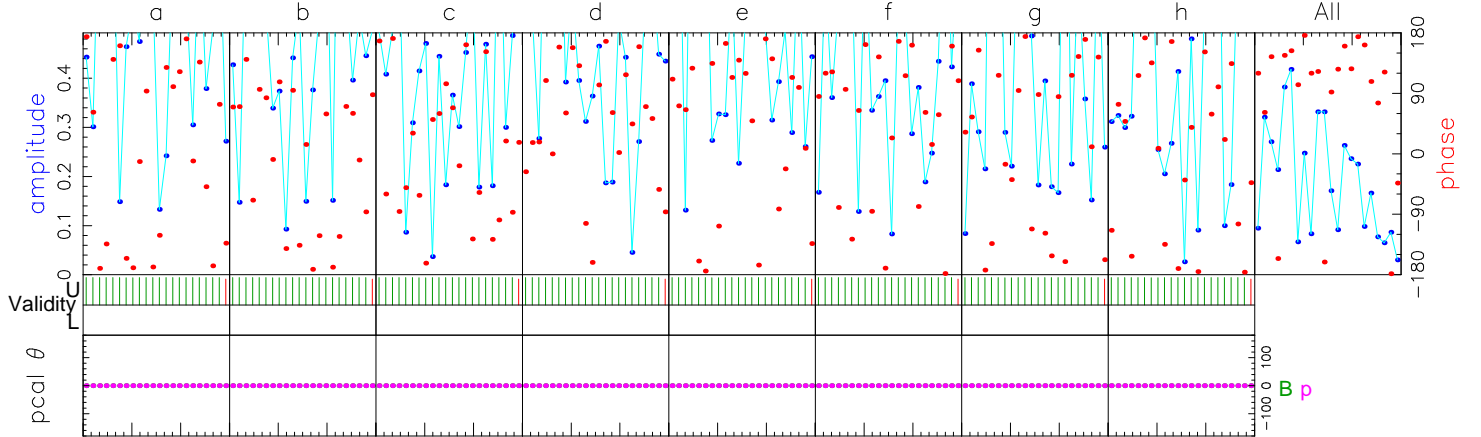


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125113  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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

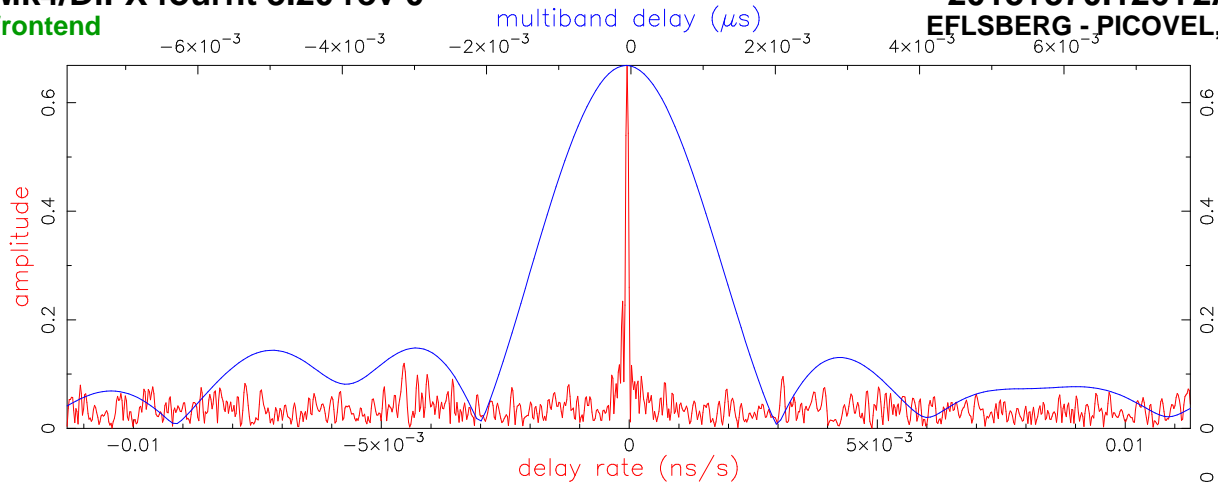


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	153.2	96.6	-104.6	77.8	143.5	145.9	166.1	138.0	Phase	143.4
B	0.3	0.1	0.1	0.1	0.3	0.2	0.2	0.2	Ampl.	0.2
p	471.1	110.2	127.6	160.9	250.7	7.5	340.0	374.8	Sbd box	471.6
B:p	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B:p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.22163843025E+03		Apriori delay (usec)		8.22080710271E+03		Resid mbdelay (usec)		3.20254E-03	+/- 1.9E-04
Sband delay (usec)	8.22164552996E+03		Apriori clock (usec)		4.8192959E+00		Resid sbdelay (usec)		8.38427E-01	+/- 1.5E-03
Phase delay (usec)	8.22080710733E+03		Apriori clockrate (us/s)		-4.0388659E-07		Resid phdelay (usec)		4.62295E-06	+/- 6.5E-07
Delay rate (us/s)	-1.47610047944E+00		Apriori rate (us/s)		-1.47610465779E+00		Resid rate (us/s)		4.17835E-06	+/- 6.2E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.94630957954E-05		Resid phase (deg)		143.4	+/- 20.2

	RMS	Theor.	Amplitude	0.164 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	51.8	47.3	Search (1024X32)	0.152	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	77.4	82.5	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	57.3	28.5	Inc. seg. avg.	0.154	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	46.1	49.7	Inc. frq. avg.	0.175	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

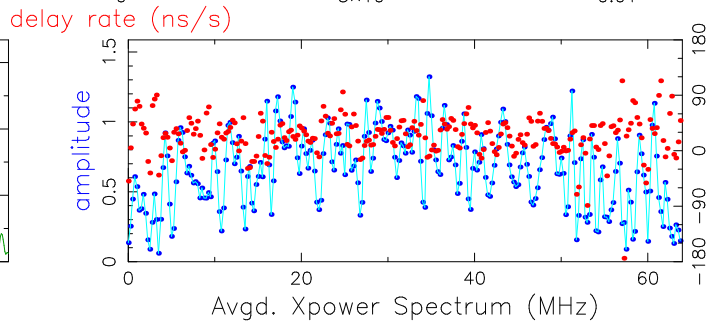
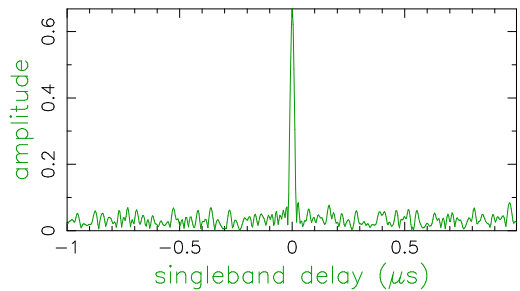
B: az 257.6 el 60.6 pa 51.1 p: az 62.4 el 28.6 pa -67.1 u,v (fr/asec) 10600.611 -353.061 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/Bp..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/Bp.W.79.126Y2A



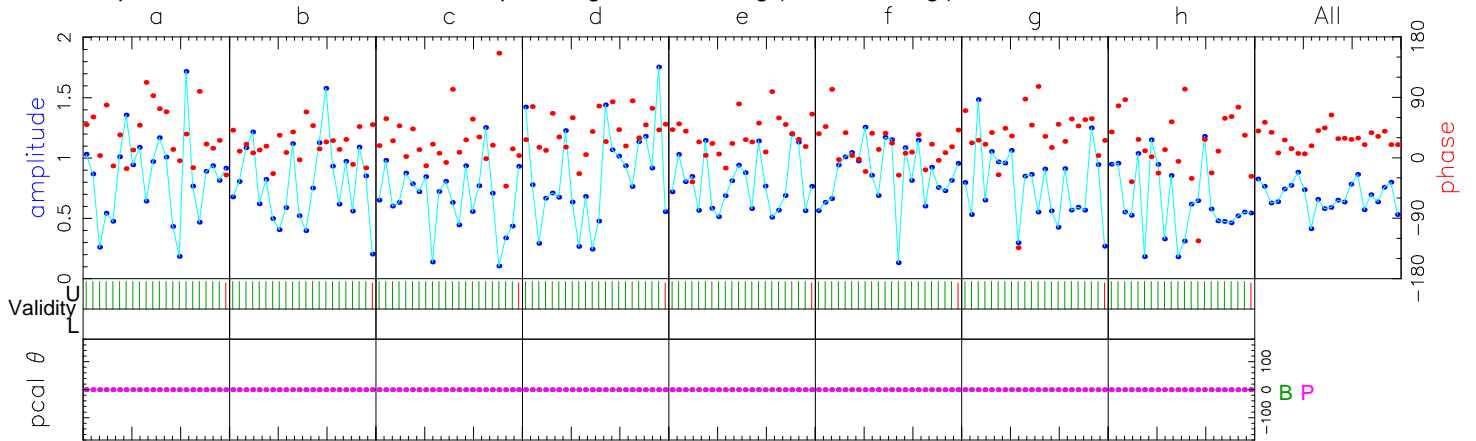
Fringe quality 9

SNR 24.5  
 Int time 179.587  
 Amp 0.669  
 Phase 28.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000207  
 MBD -0.000059  
 Fringe rate (Hz)  
 -0.003910  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

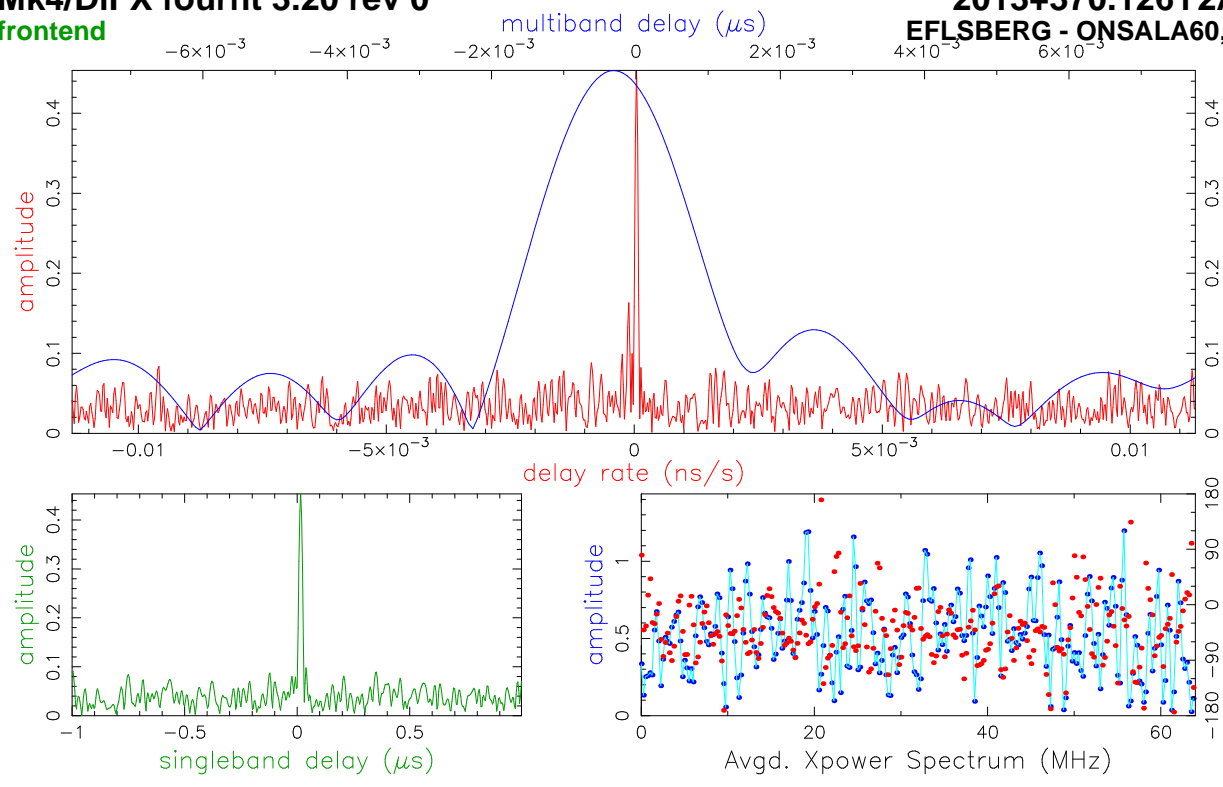


Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125113  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.28886869950E+03									
Sband delay (usec)	-1.28886843325E+03									
Phase delay (usec)	-1.28886863957E+03									
Delay rate (us/s)	-2.75472329221E-02									
Total phase (deg)			-220.5							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.669 +/- 0.027										
0.667										
0.000										
0.678										
0.672										
1.6949013E+01										
1.5299999E-07										
-2.75471875291E-02										
1.84892806735E-05										
-5.90055E-05										
2.07250E-04										
9.27205E-07										
-4.53930E-08										
28.8										
+/- 4.4E-05										
+/- 3.5E-04										
+/- 1.5E-07										
+/- 1.4E-09										
+/- 4.7										
PC period (AP's) 5, 5										
Chan ids										
Tracks										
Chan ids										
Tracks										
pcal θ										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
-1.000 1.000										
-0.008 0.008										
-0.011 0.011										
0.00 0.00										

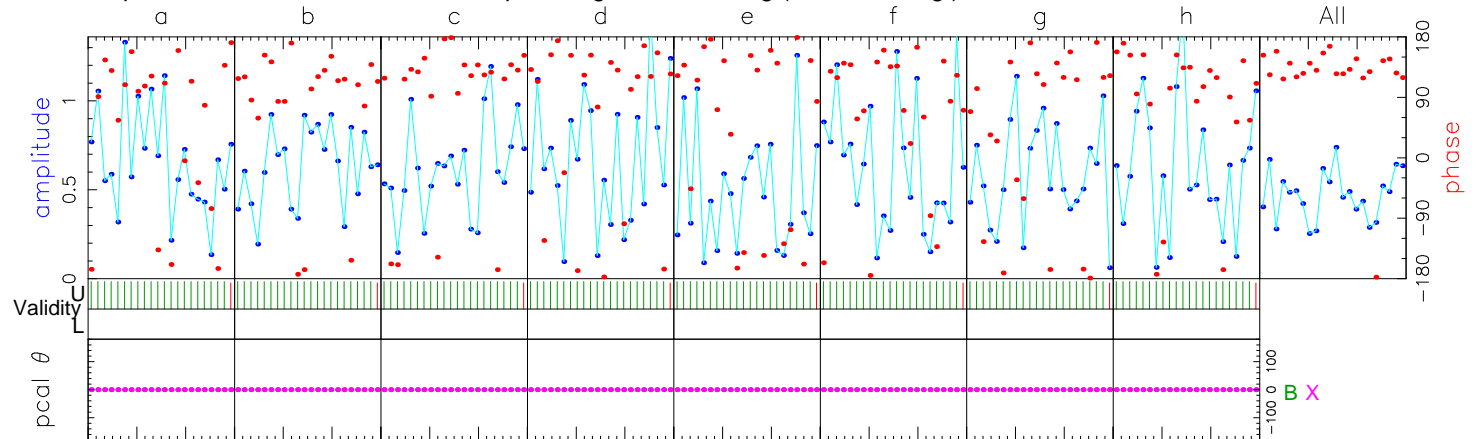


Fringe quality 9

SNR 16.6  
Int time 179.771  
Amp 0.454  
Phase 135.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.015397  
MBD -0.000311  
Fringe rate (Hz) 0.004668  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

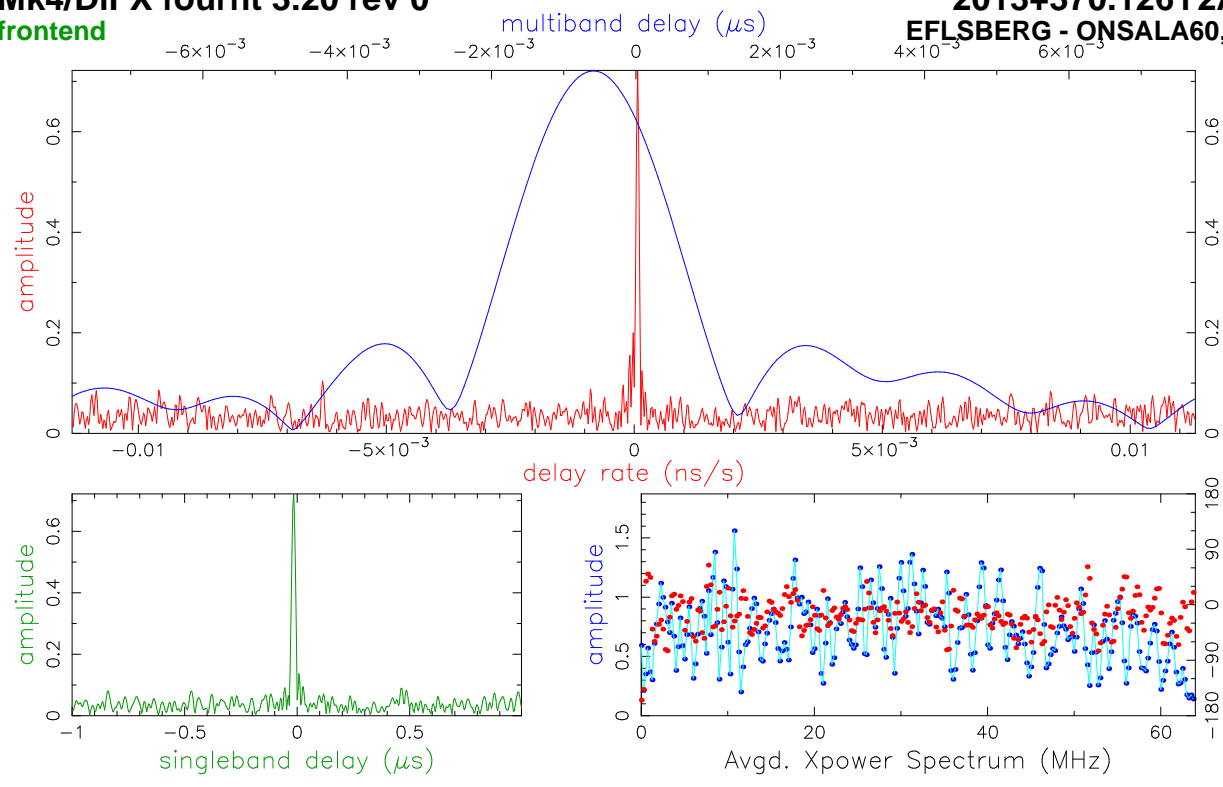
Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125119  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



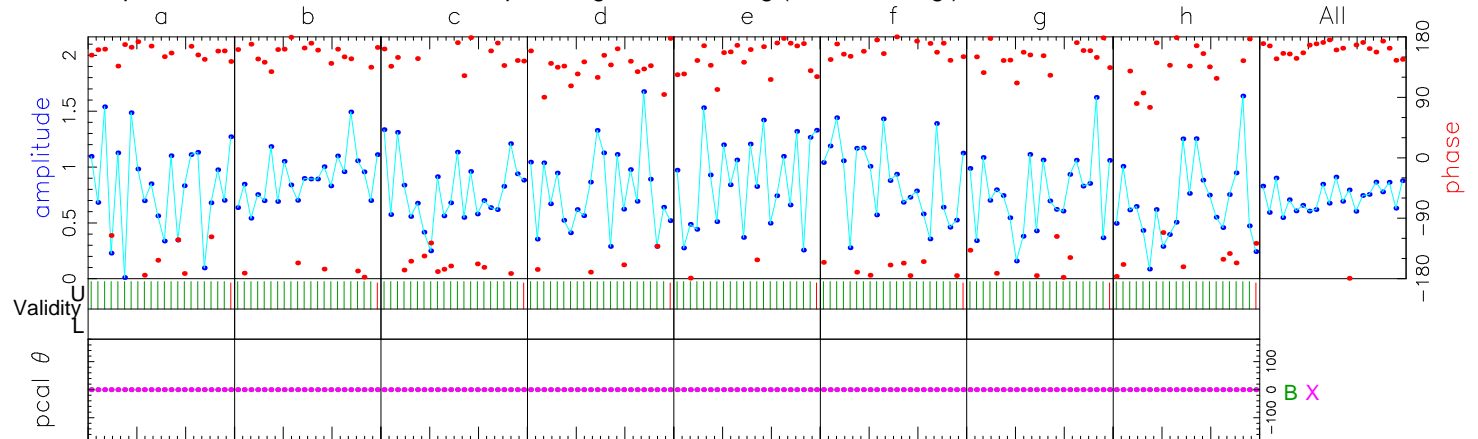
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	127.5	127.9	140.9	144.4	152.4	130.5	141.9	125.3	Phase	135.8
	0.4	0.5	0.5	0.6	0.3	0.5	0.3	0.5	Ampl.	0.5
	260.1	260.7	261.2	261.3	260.7	261.5	259.6	260.5	Sbd box	260.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	8.97280025138E+02		Apriori delay (usec)		8.97264710820E+02		Resid mbdelay (usec)		-3.10682E-04	+/- 6.5E-05
Sband delay (usec)	8.97280107820E+02		Apriori clock (usec)		-1.5607327E+01		Resid sbdelay (usec)		1.53970E-02	+/- 5.2E-04
Phase delay (usec)	8.97264715198E+02		Apriori clockrate (us/s)		-7.2800002E-07		Resid phdelay (usec)		4.37870E-06	+/- 2.2E-07
Delay rate (us/s)	-2.78461413589E-02		Apriori rate (us/s)		-2.78461955522E-02		Resid rate (us/s)		5.41933E-08	+/- 2.1E-09
Total phase (deg)	204.2		Apriori accel (us/s/s)		-9.67892419073E-06		Resid phase (deg)		135.8	+/- 6.9

ph/seg (deg) 17.2 16.2 Search (1024X32) 0.428 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 30.1 28.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 10.7 9.7 Inc. seg. avg. 0.455 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 17.9 17.0 Inc. frq. avg. 0.452 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 257.6 el 60.6 pa 51.1 X: az 252.2 el 55.9 pa 40.0 u,v (fr/asec) 192.048 -1077.554 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BX..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BX.W.118.126Y2A



Fringe quality 9  
 SNR 26.5  
 Int time 179.771  
 Amp 0.722  
 Phase 162.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.016125  
 MBD -0.000597  
 Fringe rate (Hz) 0.005071  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125122  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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

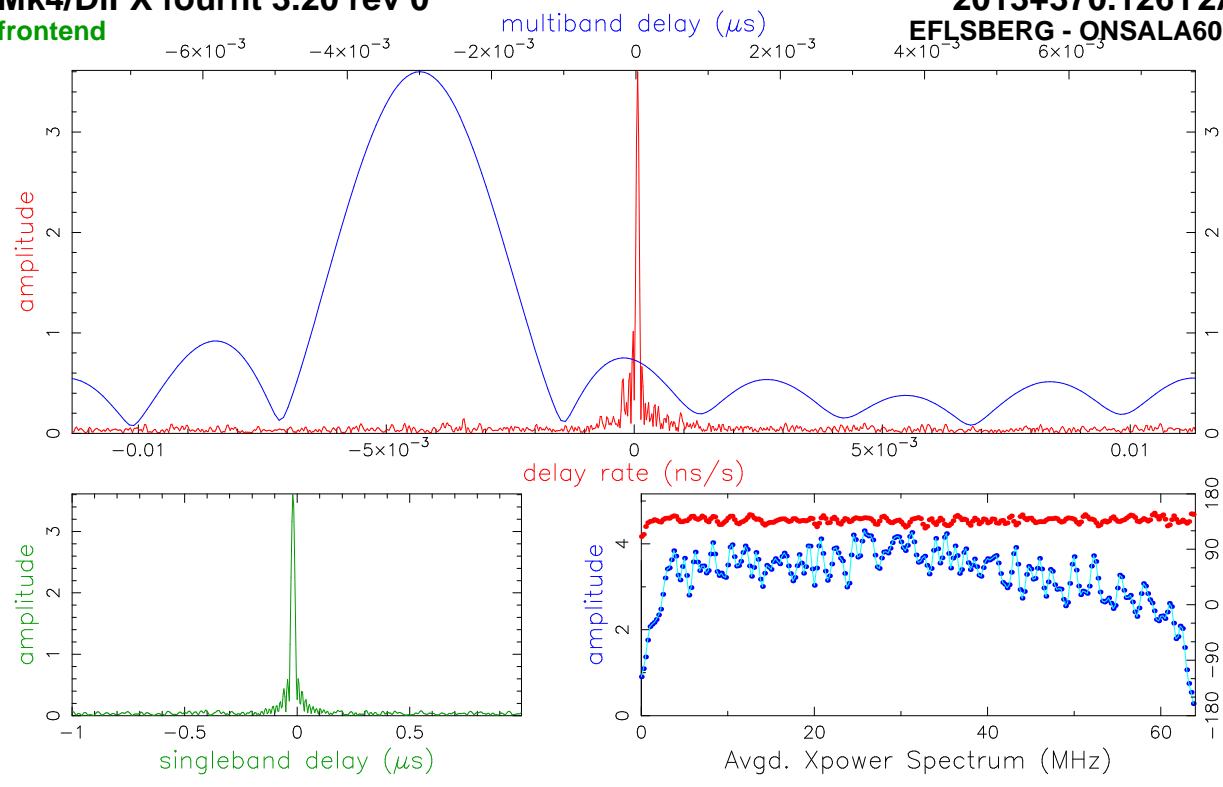


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
X	1000	1000	1000	1000	1000	1000	1000	1000			
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
X	1000	1000	1000	1000	1000	1000	1000	1000			
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
Group delay (usec)(sbd)	8.97248488937E+02					8.97264710820E+02			Resid mbdelay (usec)	-5.96882E-04	+/- 4.1E-05
Sband delay (usec)	8.97248586070E+02					-1.5607327E+01			Resid sbdelay (usec)	-1.61247E-02	+/- 3.3E-04
Phase delay (usec)	8.97264716058E+02					-7.2800002E-07			Resid phdelay (usec)	5.23868E-06	+/- 1.4E-07
Delay rate (us/s)	-2.78461366810E-02					-2.78461955522E-02			Resid rate (us/s)	5.88712E-08	+/- 1.3E-09
Total phase (deg)		230.9				-9.67892419073E-06			Resid phase (deg)	162.5	+/- 4.3

ph/seg (deg) 9.9 10.2 Search (1024X32) 0.700 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 15.7 17.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 10.5 6.1 Inc. seg. avg. 0.721 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 13.1 10.7 Inc. frq. avg. 0.726 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 257.6 el 60.6 pa 51.1 X: az 252.2 el 55.9 pa 40.0 u,v (fr/asec) 192.048 -1077.554 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BX..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BX.W.138.126Y2A

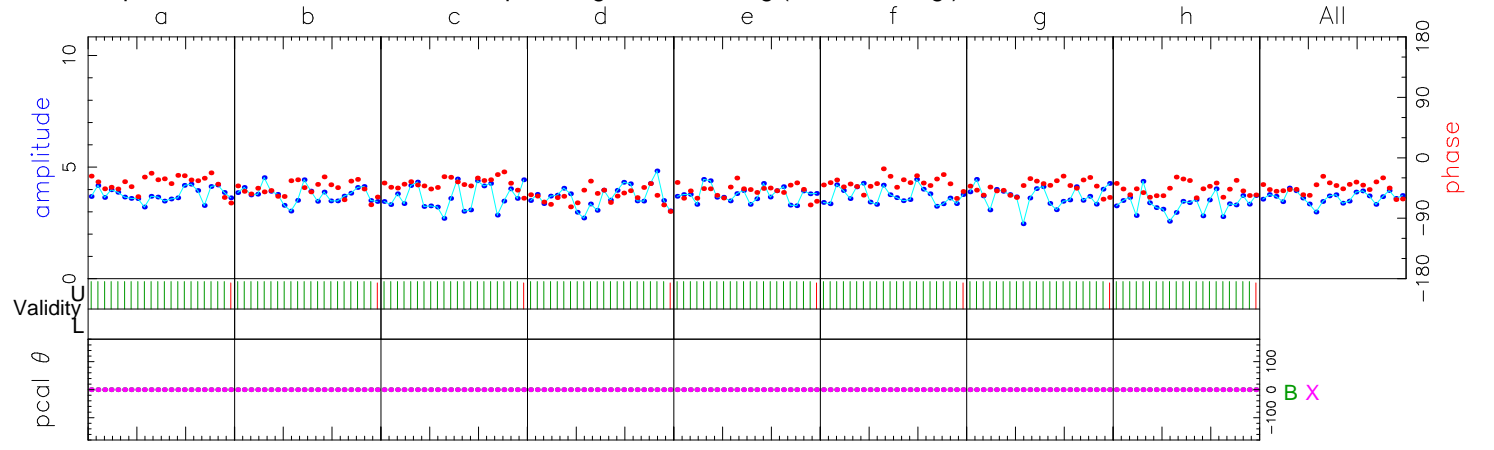
Mk4/DiFX fourfit 3.20 rev 0  
frontend

2013+370.126Y2A, No0048, BX  
EFLSBERG - ONSALA60, fgroup W, pol LL



Fringe quality 9  
SNR 132.5  
Int time 179.771  
Amp 3.614  
Phase -44.6  
PFD 0.0e+00  
Delays (us)  
SBD -0.018711  
MBD -0.002971  
Fringe rate (Hz) 0.004943  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125115  
2019:280:115849  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

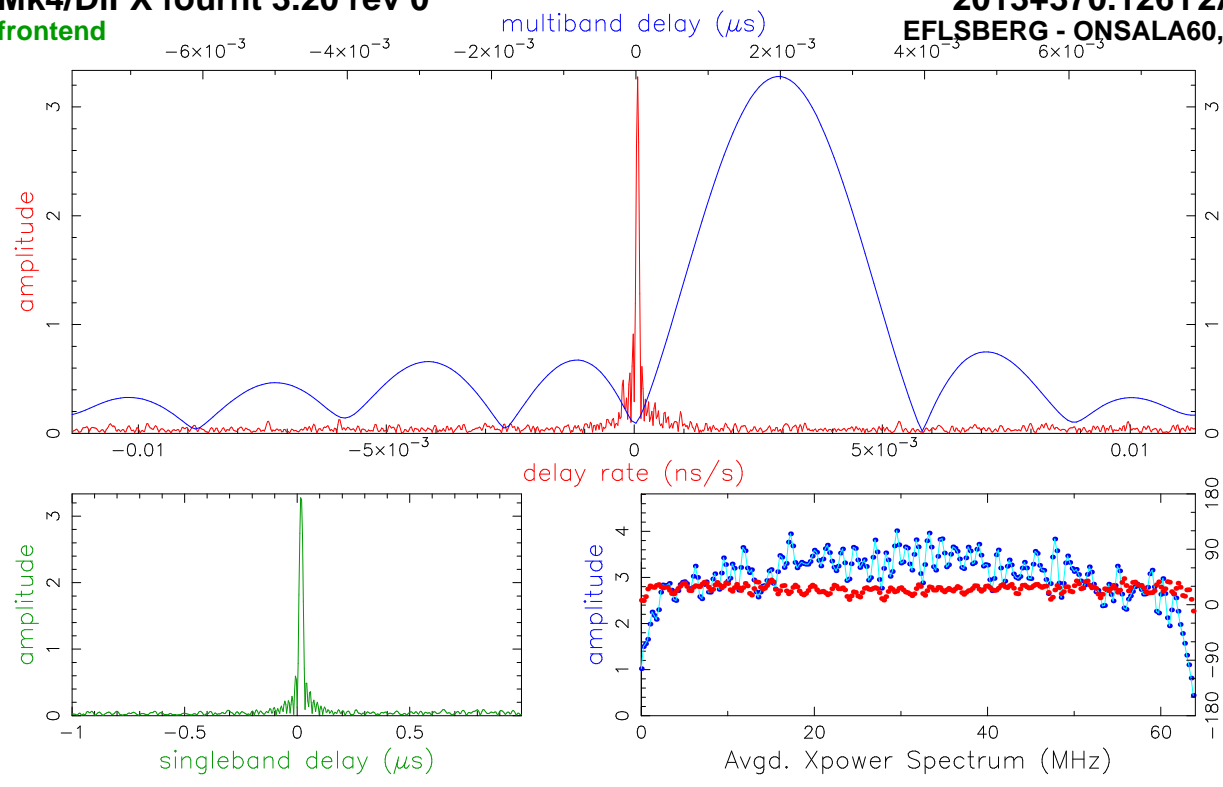
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-37.5	-46.5	-38.2	-56.9	-49.2	-38.1	-44.1	-47.0	Phase	-44.6
	3.7	3.7	3.6	3.6	3.7	3.7	3.6	3.3	Ampl.	3.6
	252.3	251.9	252.4	252.2	252.5	252.1	252.4	251.7	Sbd box	252.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.97246114687E+02		Apriori delay (usec)		8.97264710820E+02		Resid mbdelay (usec)		-2.97113E-03	+/- 8.2E-06
Sband delay (usec)	8.97246000070E+02		Apriori clock (usec)		-1.5607327E+01		Resid sbdelay (usec)		-1.87107E-02	+/- 6.5E-05
Phase delay (usec)	8.97264709380E+02		Apriori clockrate (us/s)		-7.2800002E-07		Resid phdelay (usec)		-1.43961E-06	+/- 2.8E-08
Delay rate (us/s)	-2.78461381704E-02		Apriori rate (us/s)		-2.78461955522E-02		Resid rate (us/s)		5.73818E-08	+/- 2.7E-10
Total phase (deg)	23.8		Apriori accel (us/s/s)		-9.67892419073E-06		Resid phase (deg)		-44.6	+/- 0.9

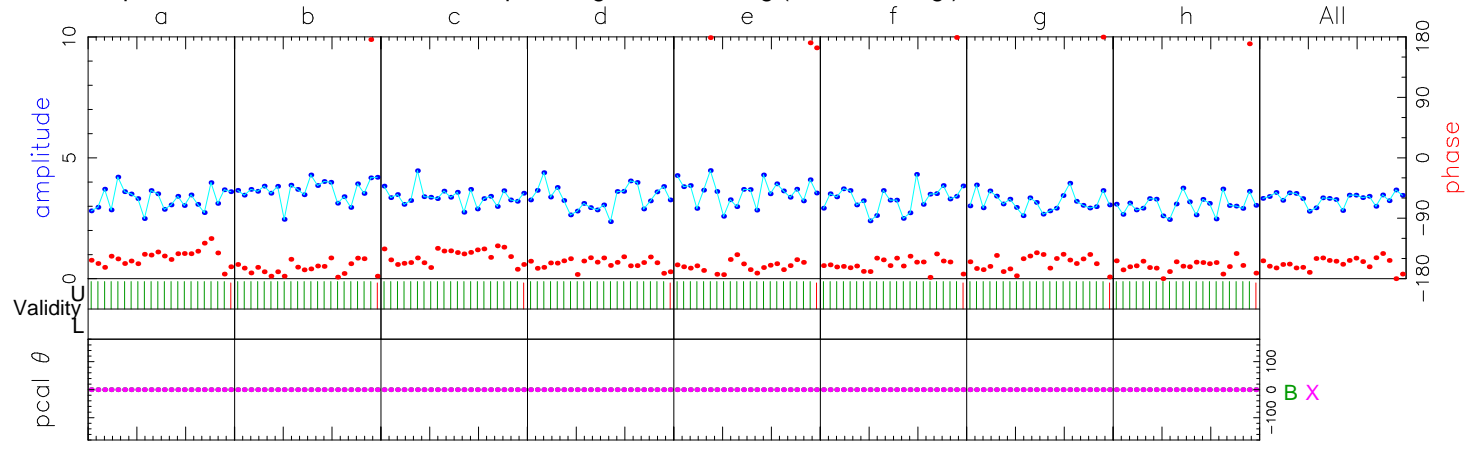
ph/seg (deg) 8.7 2.0 Theor. Amplitude 3.614 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 6.9 3.5 Search (1024X32) 3.475 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 7.3 1.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 3.4 2.1 Inc. seg. avg. 3.639 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
B: az 257.6 el 60.6 pa 51.1 X: az 252.2 el 55.9 pa 40.0 u,v (fr/asec) 192.048 -1077.554 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BX..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BX.W.81.126Y2A simultaneous interpolator





Fringe quality 9  
 SNR 122.3  
 Int time 179.771  
 Amp 3.336  
 Phase -157.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.017378  
 MB 0.002033  
 Fringe rate (Hz) 0.004964  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125117  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-148.2	-165.0	-146.3	-157.6	-165.3	-160.0	-157.4	-162.7	Phase	-157.9
	3.2	3.6	3.3	3.3	3.5	3.3	3.1	3.0	Ampl.	3.3
	261.0	261.4	261.7	261.4	261.4	261.8	261.8	260.8	Sbd box	261.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.97282369125E+02		Apriori delay (usec)		8.97264710820E+02		Resid mbdelay (usec)		2.03331E-03	+/- 8.9E-06
Sband delay (usec)	8.97282088820E+02		Apriori clock (usec)		-1.5607327E+01		Resid sbdelay (usec)		1.73780E-02	+/- 7.0E-05
Phase delay (usec)	8.97264705727E+02		Apriori clockrate (us/s)		-7.2800002E-07		Resid phdelay (usec)		-5.09245E-06	+/- 3.0E-08
Delay rate (us/s)	-2.78461379252E-02		Apriori rate (us/s)		-2.78461955522E-02		Resid rate (us/s)		5.76270E-08	+/- 2.9E-10
Total phase (deg)			Apriori accel (us/s/s)		-9.67892419073E-06		Resid phase (deg)		-157.9	+/- 0.9

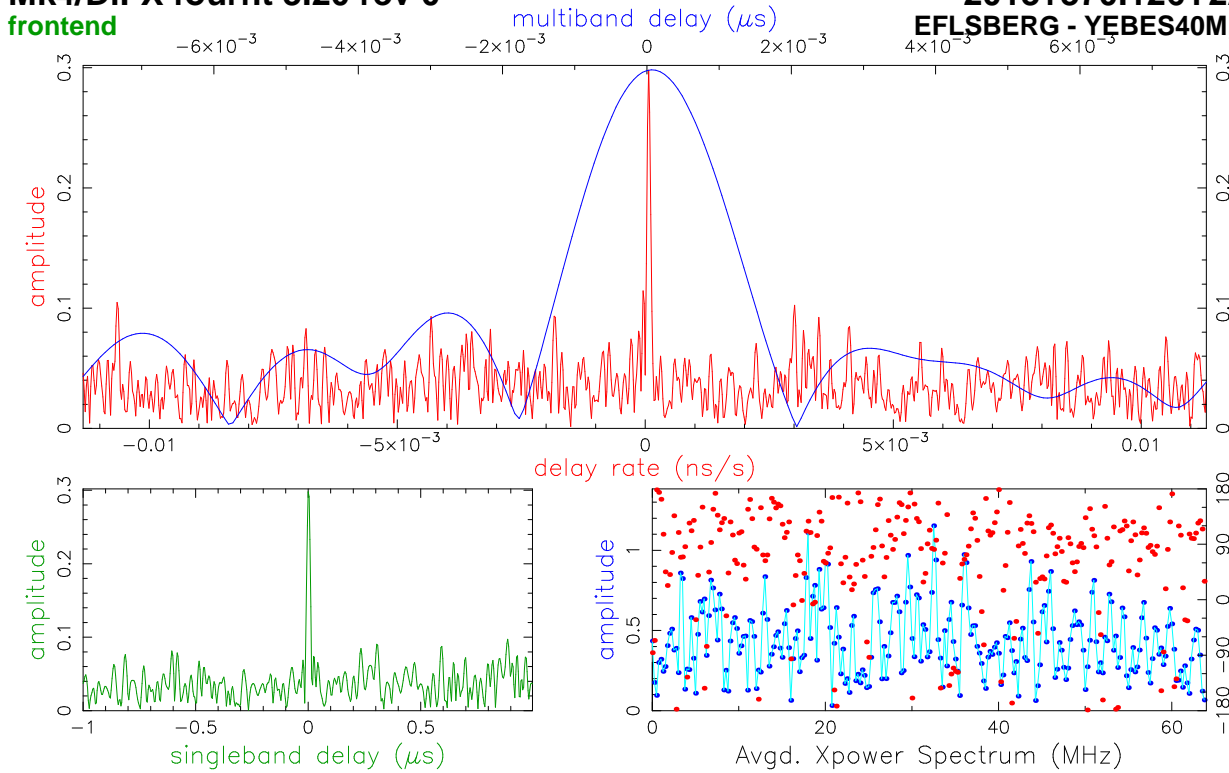
ph/seg (deg) 8.7 2.2 Search (1024X32) 3.175 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 7.0 3.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 7.8 1.3 Inc. seg. avg. 3.313 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 5.6 2.3 Inc. frq. avg. 3.298 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 257.6 el 60.6 pa 51.1 X: az 252.2 el 55.9 pa 40.0 u,v (fr/asec) 192.048 -1077.554 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BX..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BX.W.99.126Y2A

# Mk4/DiFX fourfit 3.20 rev 0

frontend

# 2013+370.126Y2A, No0048, BY

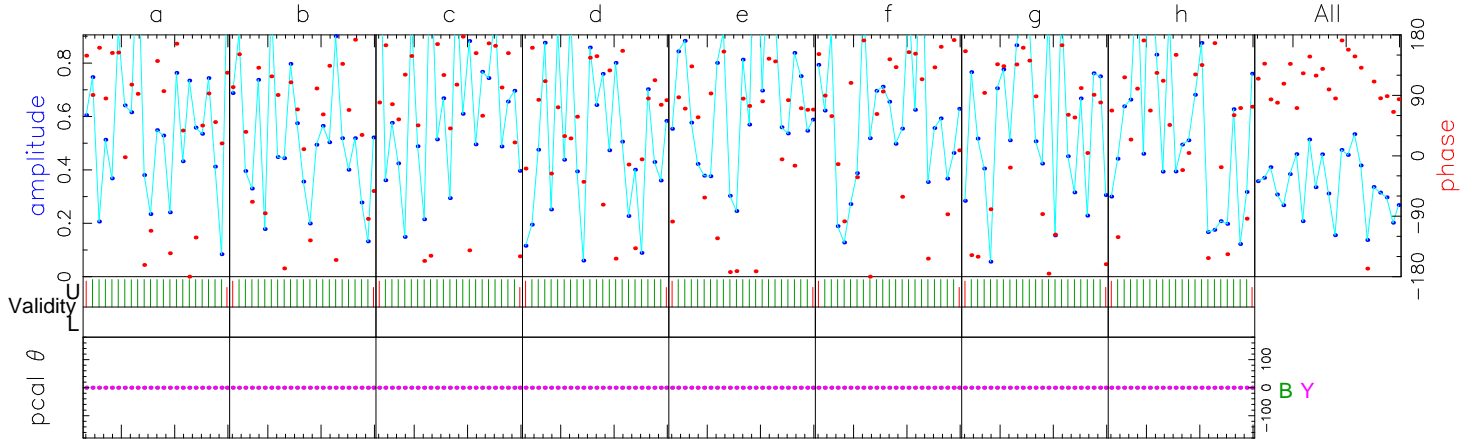
EFLSBERG - YEBES40M, fgroup W, pol RR



Fringe quality 9

SNR 10.5  
 Int time 162.261  
 Amp 0.302  
 Phase 119.2  
 PFD 1.6e-17  
 Delays (us)  
 SBD 0.001480  
 MBD 0.000120  
 Fringe rate (Hz) 0.006187  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212016.90  
 Stop 212259.71  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125118  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	119.5	119.3	132.8	98.7	110.1	131.4	138.8	89.7	Phase	119.2
B	0.3	0.3	0.4	0.2	0.3	0.3	0.3	0.3	Ampl.	0.3
Y	257.5	257.6	256.9	461.3	256.8	256.7	257.0	258.6	Sbd box	257.4
B	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.29710115435E+03		Apriori delay (usec)		-1.29710127428E+03		Resid mbdelay (usec)		1.19933E-04	+/- 1.0E-04
Sband delay (usec)	-1.29709979453E+03		Apriori clock (usec)		7.1212740E+00		Resid sbdelay (usec)		1.47975E-03	+/- 8.2E-04
Phase delay (usec)	-1.29710127044E+03		Apriori clockrate (us/s)		-4.2000000E-07		Resid phdelay (usec)		3.84290E-06	+/- 3.5E-07
Delay rate (us/s)	-4.45078218066E-02		Apriori rate (us/s)		-4.45078936260E-02		Resid rate (us/s)		7.18194E-08	+/- 3.7E-09
Total phase (deg)			Apriori accel (us/s/s)		1.52807129121E-05		Resid phase (deg)		119.2	+/- 10.9

	RMS	Theor.	Amplitude	0.302 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	33.2	26.1	Search (1024X32)	0.294	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	38.9	45.6	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	18.7	15.4	Inc. seg. avg.	0.315	Sample rate(MSamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	15.2	26.9	Inc. frq. avg.	0.299	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 257.6 el 60.6 pa 51.1 Y: az 270.0 el 68.7 pa 72.6 u,v (fr/asec) 333.452 1772.679 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BY..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BY.W.105.126Y2A

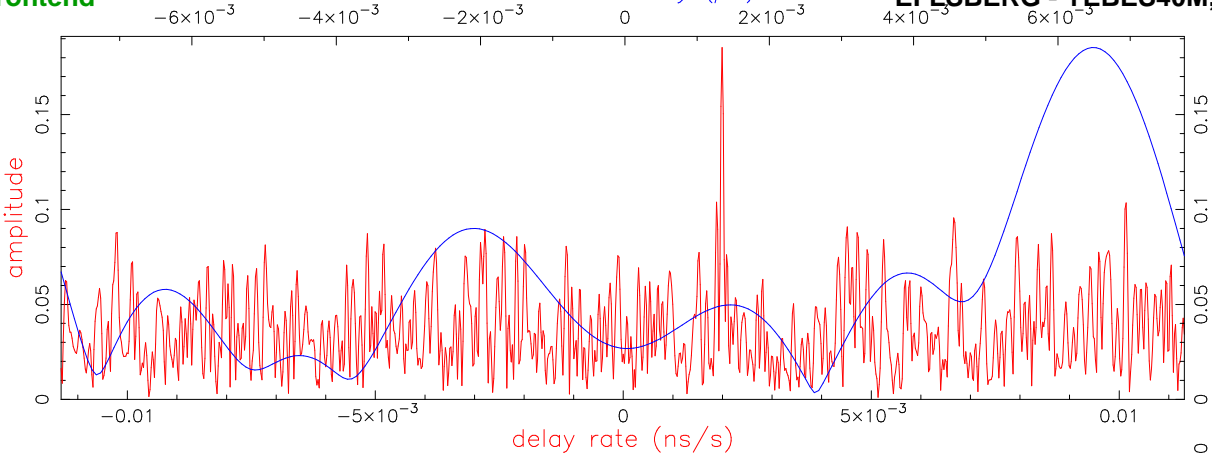
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126Y2A, No0048, BY

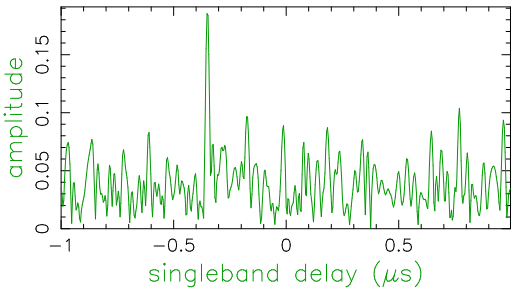
EFLSBERG - YEYES40M, fgroup W, pol LR

multiband delay ( $\mu\text{s}$ )

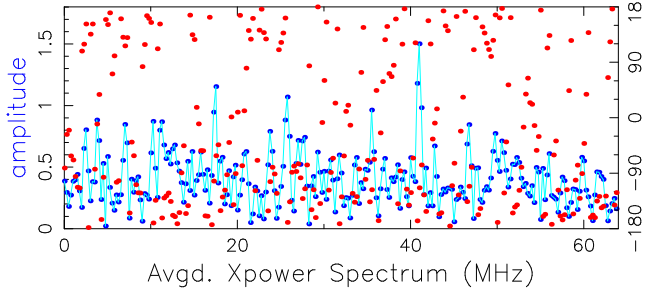


Fringe quality 0

SNR 6.6  
 Int time 162.261  
 Amp 0.191  
 Phase 71.8  
 PFD 6.8e-03  
 Delays (us)  
 SBD -0.349797  
 MBD 0.006509  
 Fringe rate (Hz) 0.171715  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

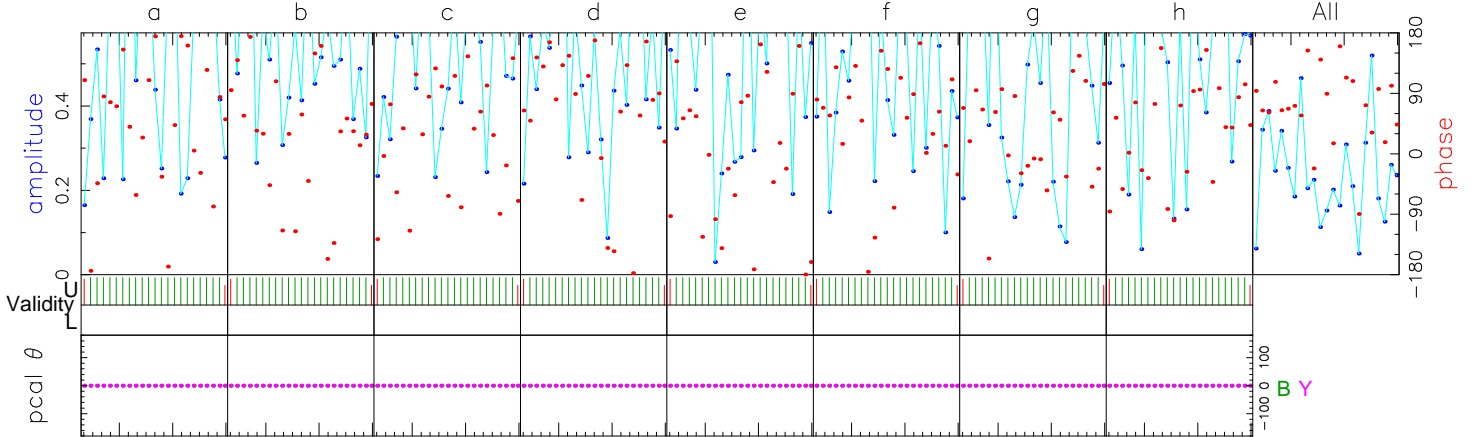


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212016.90  
 Stop 212259.71  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125120  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
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)	-1.29745414051E+03	Apriori delay (usec)	-1.29710127428E+03	Resid mbdelay (usec)	6.50877E-03	+/-	1.7E-04
Sband delay (usec)	-1.29745107128E+03	Apriori clock (usec)	7.1212740E+00	Resid sbdelay (usec)	-3.49797E-01	+/-	1.3E-03
Phase delay (usec)	-1.29710127196E+03	Apriori clockrate (us/s)	-4.2000000E-07	Resid phdelay (usec)	2.31375E-06	+/-	5.6E-07
Delay rate (us/s)	-4.45059001884E-02	Apriori rate (us/s)	-4.45078936260E-02	Resid rate (us/s)	1.99344E-06	+/-	6.0E-09
Total phase (deg)	-204.1	Apriori accel (us/s/s)	1.52807129121E-05	Resid phase (deg)	71.8	+/-	17.4

ph/seg (deg)	55.3	Theor.	41.8	Amplitude	0.191 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	67.3	Search (1024X32)	0.184	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	27.8	Inc. seg. avg.	0.194	Inc. seg. avg.	0.194	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	33.7	Inc. frq. avg.	0.189	Inc. frq. avg.	0.189	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011			
						Data rate (Mb/s):	2048	nlags:	256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 257.6 el 60.6 pa 51.1 Y: az 270.0 el 68.7 pa 72.6 u,v (fr/asec) 333.452 1772.679 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BY..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BY.W.126.126Y2A

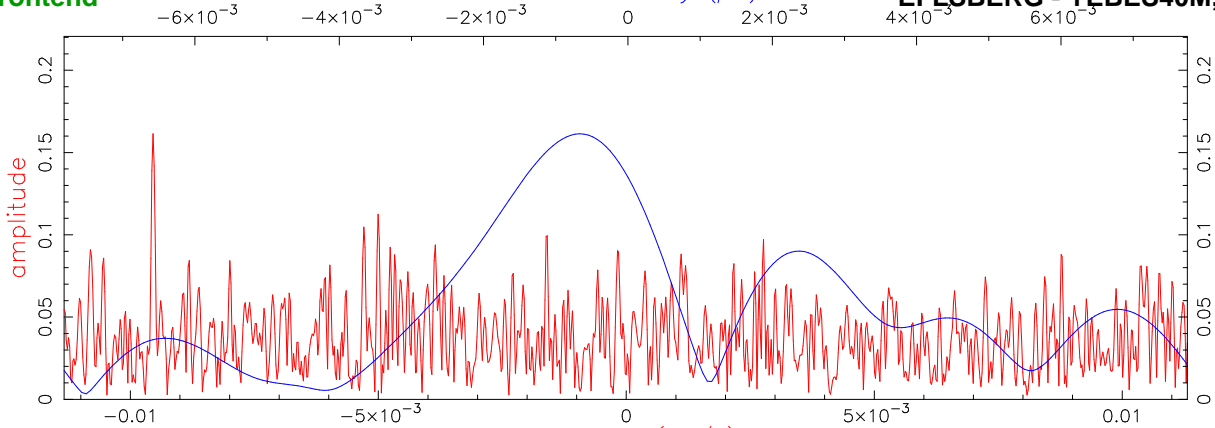
Mk4/DiFX fourfit 3.20 rev 0

frontend

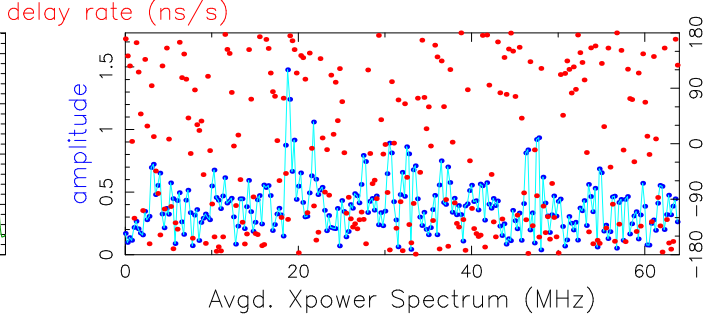
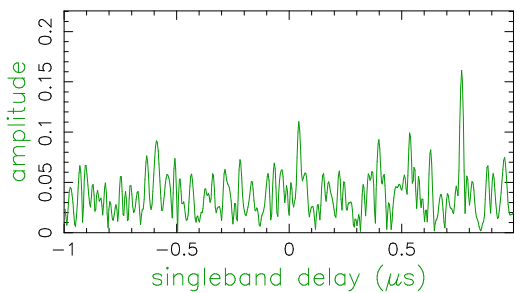
2013+370.126Y2A, No0048, BY

EFLSBERG - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

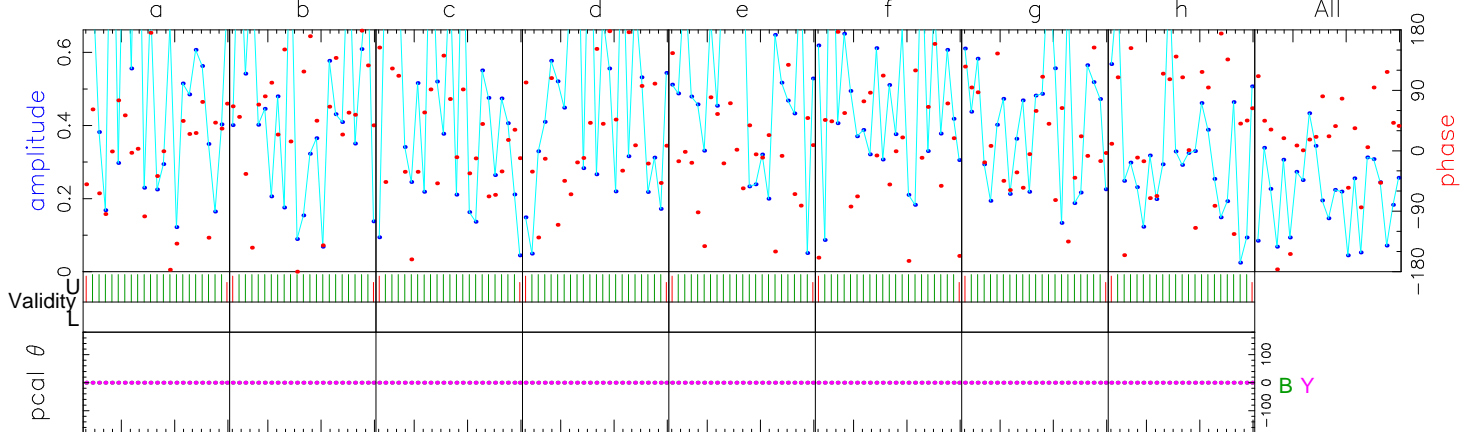


Fringe quality 0  
 SNR 5.6  
 Int time 162.261  
 Amp 0.221  
 Phase 30.7  
 PFD 8.9e-01  
 Delays (us)  
 SBD 0.766143  
 MBD -0.000666  
 Fringe rate (Hz)  
 -0.822551  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212016.90  
 Stop 212259.71  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125122  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
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)	-1.29633631571E+03	Apriori delay (usec)	-1.29710127428E+03	Resid mbdelay (usec)	-6.66435E-04	+/-	1.9E-04
Sband delay (usec)	-1.29633513128E+03	Apriori clock (usec)	7.1212740E+00	Resid sbdelay (usec)	7.66143E-01	+/-	1.5E-03
Phase delay (usec)	-1.29710127329E+03	Apriori clockrate (us/s)	-4.2000000E-07	Resid phdelay (usec)	9.91191E-07	+/-	6.6E-07
Delay rate (us/s)	-4.45174426303E-02	Apriori rate (us/s)	-4.45078936260E-02	Resid rate (us/s)	-9.54900E-06	+/-	7.0E-09
Total phase (deg)	-245.1	Apriori accel (us/s/s)	1.52807129121E-05	Resid phase (deg)	30.7	+/-	20.4

ph/seg (deg)	68.5	Theor.	48.8	Amplitude	0.221 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	72.7	Search (1024X32)	0.159	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	40.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	38.9	Inc. seg. avg.	0.215	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011	0.011		
		Inc. frq. avg.	0.228	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

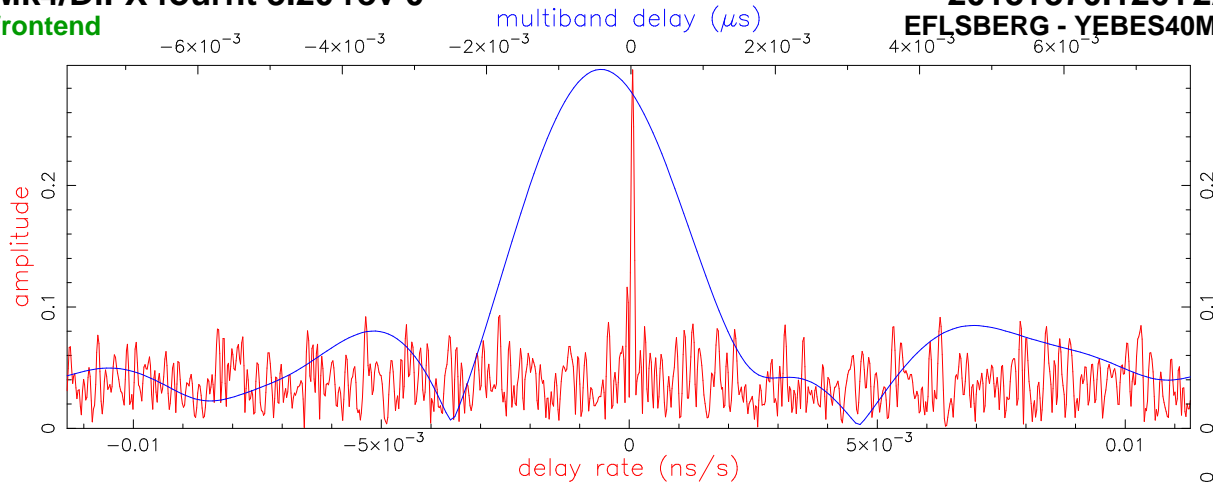
B: az 257.6 el 60.6 pa 51.1 Y: az 270.0 el 68.7 pa 72.6 u, v (fr/asec) 333.452 1772.679 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BY..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BY.W.142.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

frontend

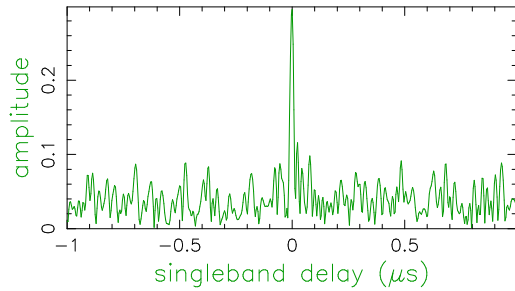
2013+370.126Y2A, No0048, BY

EFLSBERG - YEBES40M, fgroup W, pol LL

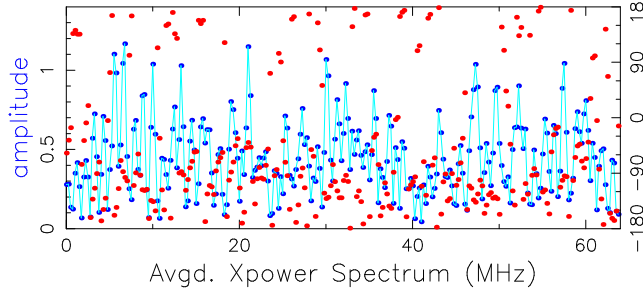


Fringe quality 9

SNR 10.4  
 Int time 162.261  
 Amp 0.299  
 Phase -128.6  
 PFD 4.8e-17  
 Delays (us)  
 SBD -0.001432  
 MBD -0.000483  
 Fringe rate (Hz)  
 0.005970  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

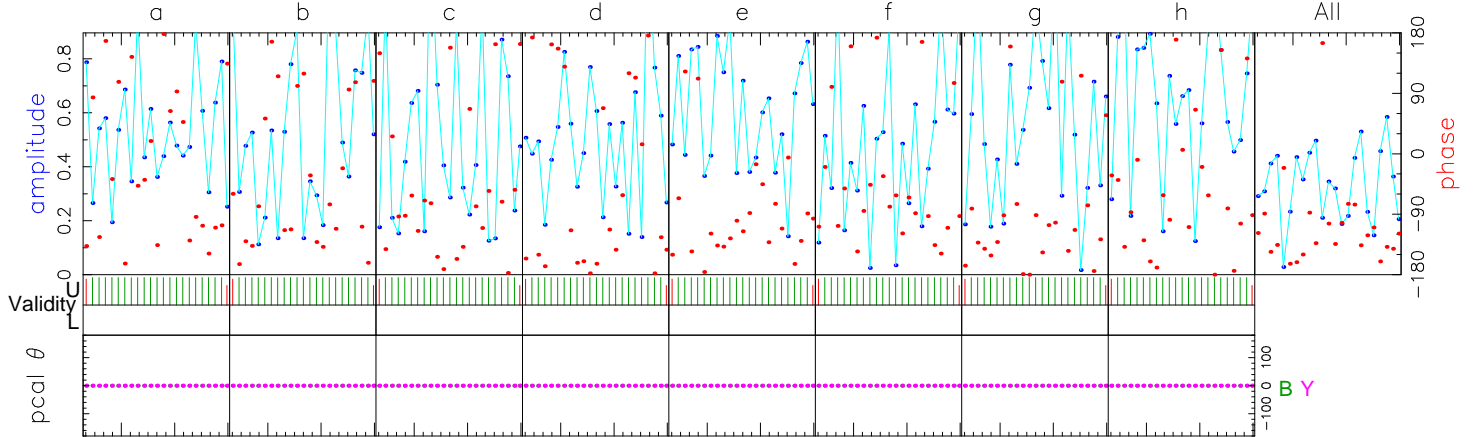


delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212016.90  
 Stop 212259.71  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125115  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-125.8	-126.8	-118.7	-171.9	-120.5	-109.7	-133.2	-117.4	Phase	-128.6
	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.3	Ampl.	0.3
	56.4	495.7	257.4	257.3	256.9	255.7	256.9	256.5	Sbd box	256.6
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

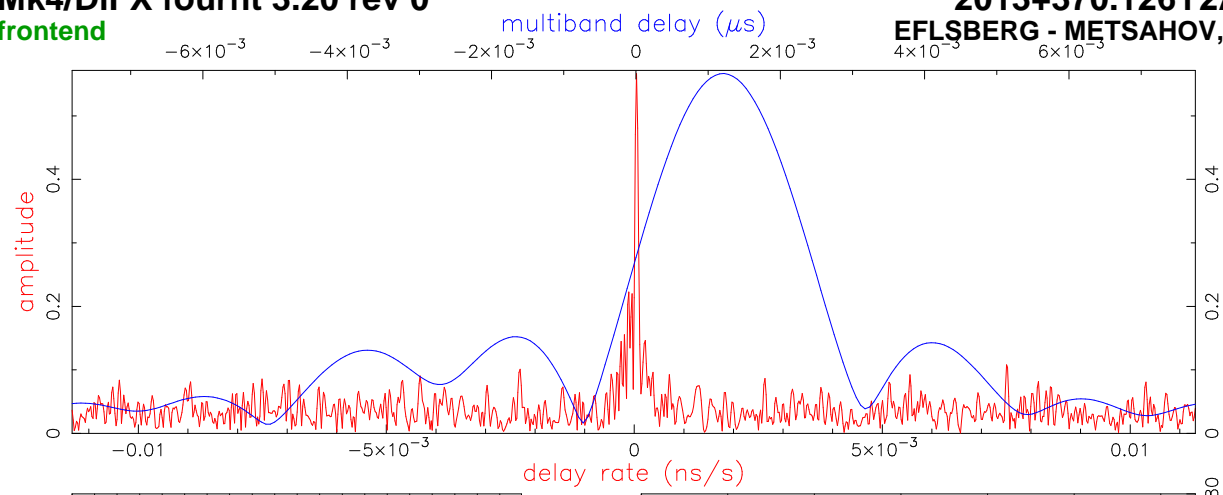
Group delay (usec)(sbd)	-1.29710175744E+03	Apriori delay (usec)	-1.29710127428E+03	Resid mbdelay (usec)	-4.83161E-04	+/-	1.0E-04
Sband delay (usec)	-1.29710270653E+03	Apriori clock (usec)	7.1212740E+00	Resid sbdelay (usec)	-1.43225E-03	+/-	8.3E-04
Phase delay (usec)	-1.29710127843E+03	Apriori clockrate (us/s)	-4.2000000E-07	Resid phdelay (usec)	-4.14651E-06	+/-	3.5E-07
Delay rate (us/s)	-4.45078243191E-02	Apriori rate (us/s)	-4.45078936260E-02	Resid rate (us/s)	6.93069E-08	+/-	3.8E-09
Total phase (deg)	-44.5	Apriori accel (us/s/s)	1.52807129121E-05	Resid phase (deg)	-128.6	+/-	11.0

ph/seg (deg)	37.2	Theor.	26.4	Amplitude	0.299 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	46.6	Search (1024X32)	0.294	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	20.6	Inc. seg. avg.	0.304	Inc. frq. avg.	0.300	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	27.4	Inc. frq. avg.	0.300			Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011		
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

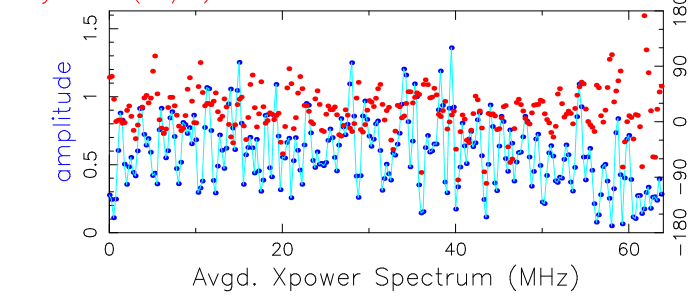
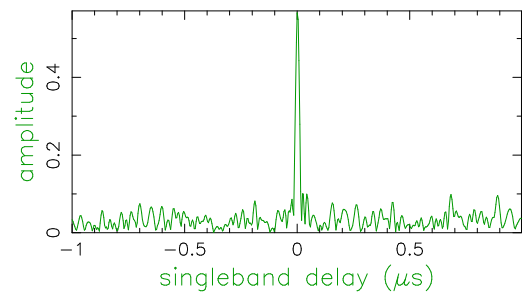
B: az 257.6 el 60.6 pa 51.1 Y: az 270.0 el 68.7 pa 72.6 u,v (fr/asec) 333.452 1772.679 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BY..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BY.W.82.126Y2A

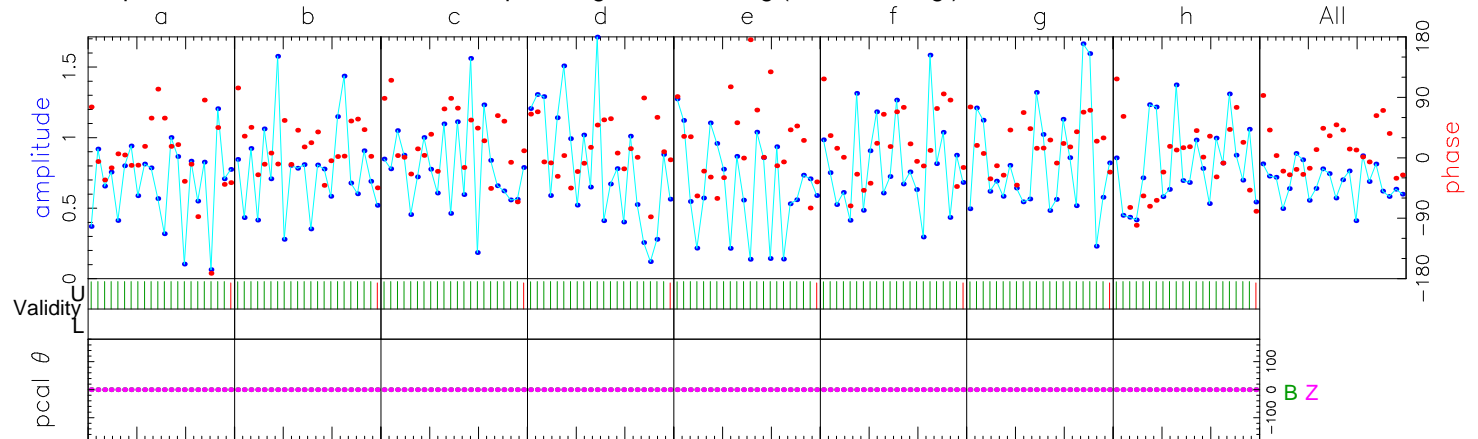




Fringe quality 9  
SNR 21.0  
Int time 179.639  
Amp 0.572  
Phase 15.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.001277  
MBD 0.001238  
Fringe rate (Hz) 0.003084  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:278  
Start 212000.00  
Stop 212300.23  
FRT 212130.00  
Corr/FF/build  
2020:070:030312  
2020:071:125118  
2019:280:115849  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

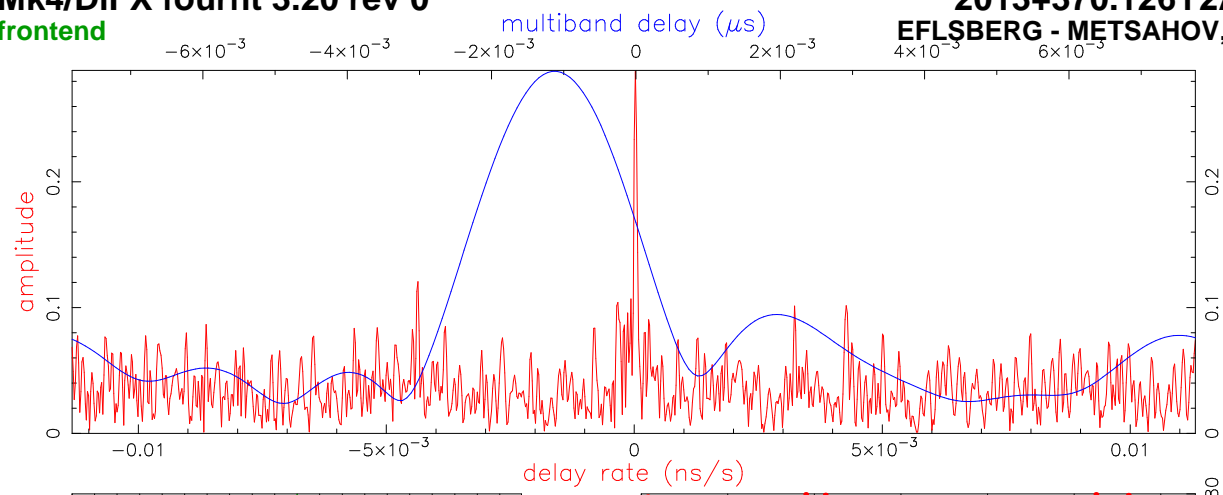


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

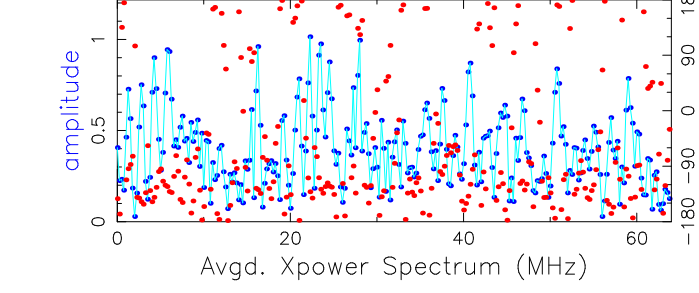
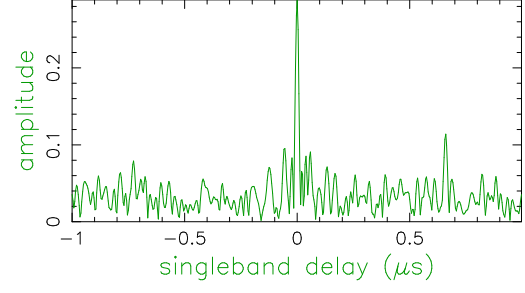


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	9.7	14.2	29.8	14.7	11.5	22.3	23.6	-4.3	Phase	15.8
	0.5	0.7	0.6	0.7	0.4	0.5	0.7	0.5	Ampl.	0.6
	257.2	257.2	257.6	256.9	257.6	257.8	257.1	256.6	Sbd box	257.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.50371992609E+03		Apriori delay (usec)		2.50371868858E+03		Resid mbdelay (usec)		1.23751E-03	+/- 5.2E-05
Sband delay (usec)	2.50371996533E+03		Apriori clock (usec)		1.6618298E+01		Resid sbdelay (usec)		1.27675E-03	+/- 4.1E-04
Phase delay (usec)	2.50371868909E+03		Apriori clockrate (us/s)		-2.1629280E-07		Resid phdelay (usec)		5.09762E-07	+/- 1.8E-07
Delay rate (us/s)	2.50521634369E-02		Apriori rate (us/s)		2.50521276292E-02		Resid rate (us/s)		3.58077E-08	+/- 1.7E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.97977761015E-05		Resid phase (deg)		15.8	+/- 5.5

ph/seg (deg) 34.6 12.8 Search (1024X32) 0.543 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 29.3 22.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 11.3 7.7 Inc. seg. avg. 0.670 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 15.0 13.5 Inc. frq. avg. 0.569 Data rate (M/Samp/s): 128 Sample rate (M/Samp/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
B: az 257.6 el 60.6 pa 51.1 Z: az 261.3 el 49.0 pa 38.0 u,v (fr/asec) -196.543 -1860.155 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ.W.106.126Y2A

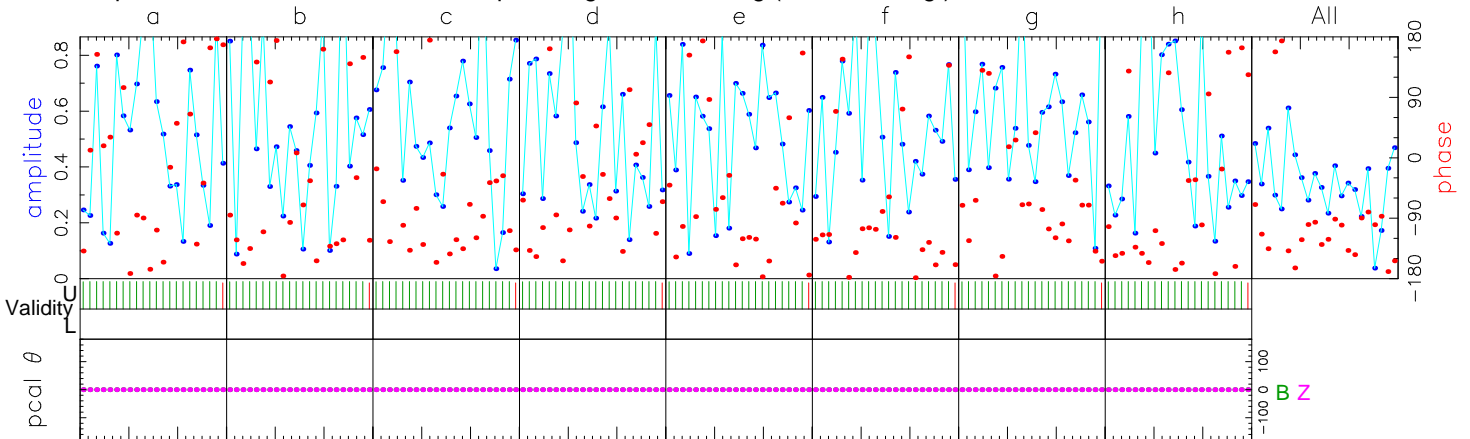


Fringe quality 9  
 SNR 10.6  
 Int time 179.639  
 Amp 0.289  
 Phase -125.4  
 PFD 8.3e-18  
 Delays (us)  
 SBD -0.000610  
 MBD -0.001140  
 Fringe rate (Hz) 0.002834  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125120  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-150.3	-138.2	-111.2	-104.3	-118.2	-143.7	-96.4	-152.9	Phase	-125.4
	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	Ampl.	0.3
	430.4	257.2	257.1	261.9	256.7	256.3	256.9	256.6	Sbd box	256.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.50371754838E+03		Apriori delay (usec)		2.50371868858E+03		Resid mbdelay (usec)		-1.14020E-03	+/- 1.0E-04
Sband delay (usec)	2.50371807808E+03		Apriori clock (usec)		1.6618298E+01		Resid sbdelay (usec)		-6.10500E-04	+/- 8.1E-04
Phase delay (usec)	2.50371868454E+03		Apriori clockrate (us/s)		-2.1629280E-07		Resid phdelay (usec)		-4.04304E-06	+/- 3.5E-07
Delay rate (us/s)	2.50521605332E-02		Apriori rate (us/s)		2.50521276292E-02		Resid rate (us/s)		3.29040E-08	+/- 3.4E-09
Total phase (deg)	174.9		Apriori accel (us/s/s)		-1.97977761015E-05		Resid phase (deg)		-125.4	+/- 10.8

	RMS	Theor.	Amplitude	0.289 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	34.8	25.4	Search (1024X32)	0.272	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	46.9	44.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	23.9	15.3	Inc. seg. avg.	0.314	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	21.4	26.7	Inc. frq. avg.	0.296	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 257.6 el 60.6 pa 51.1 Z: az 261.3 el 49.0 pa 38.0 u,v (fr/asec) -196.543 -1860.155 simultaneous interpolator

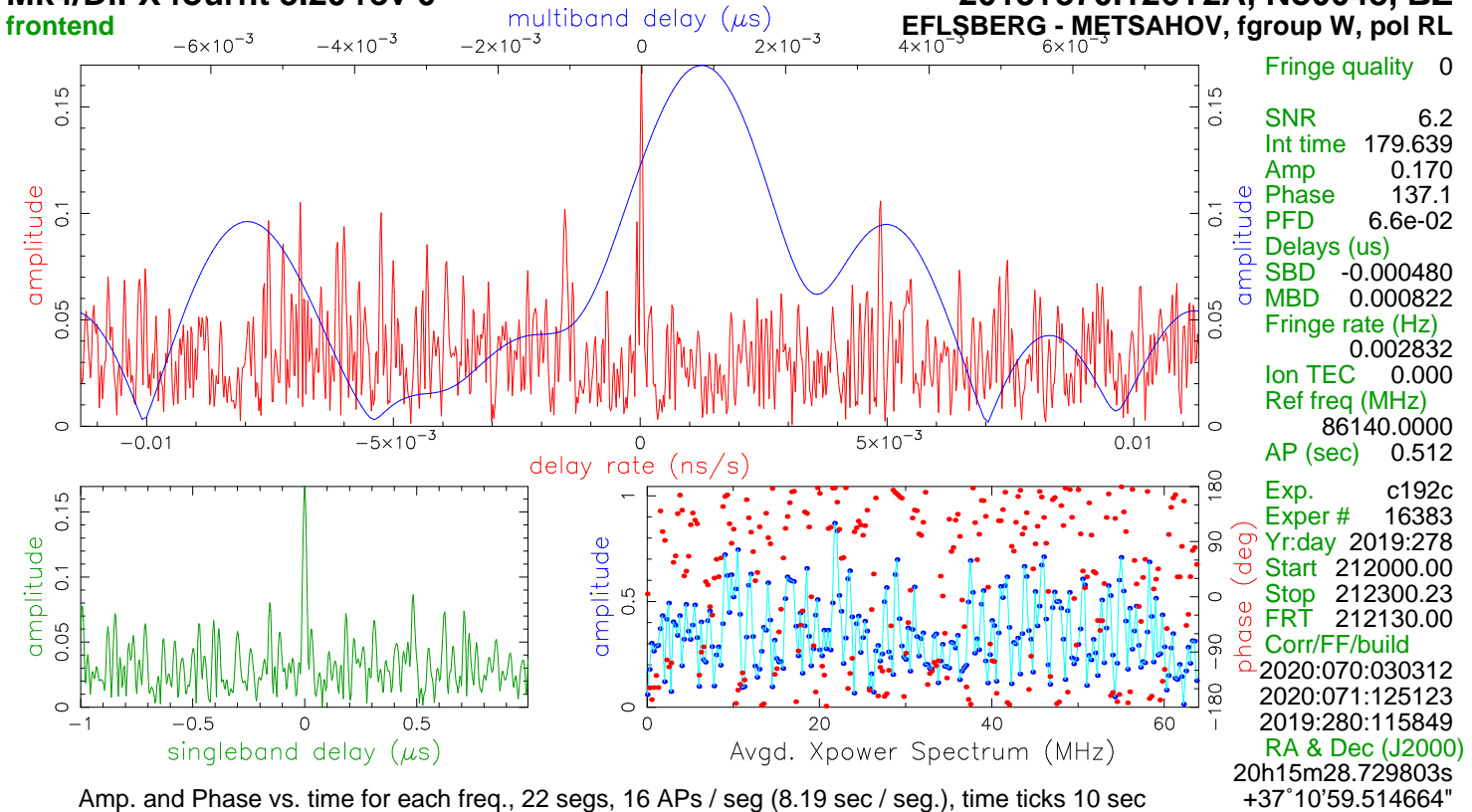
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ.W.125.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

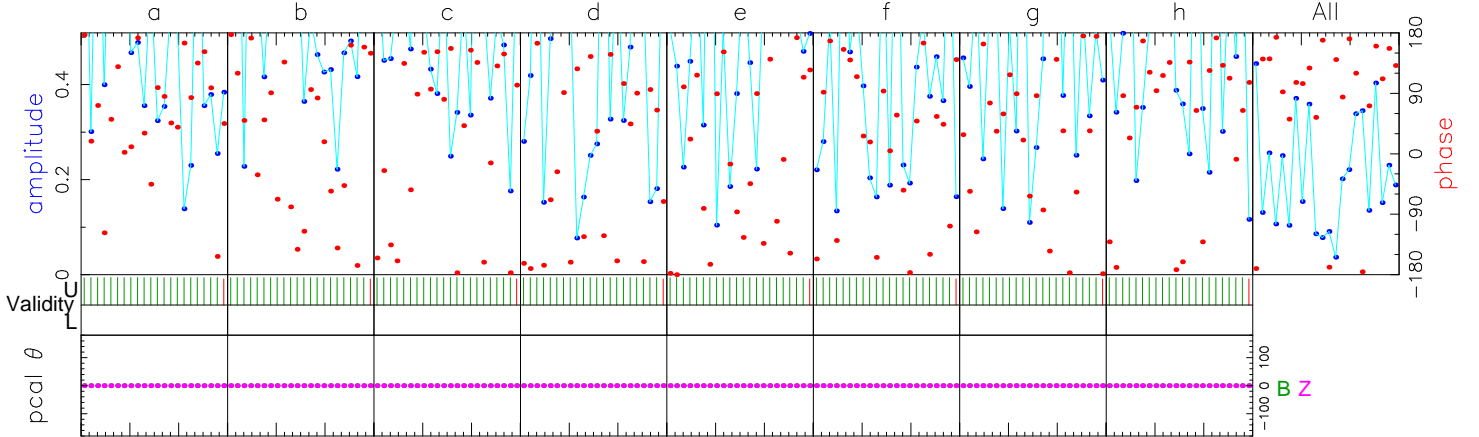
frontend

2013+370.126Y2A, No0048, BZ

EFLSBERG - METSAHOV, fgroup W, pol RL



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	81.8	158.8	139.0	180.0	-177.7	116.2	139.3	114.9	Phase	137.1
	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.3	Ampl.	0.2
	18.4	380.2	257.4	339.7	255.8	371.3	96.0	256.2	Sbd box	256.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.50371951069E+03		Apriori delay (usec)	2.50371868858E+03	Resid mbdelay (usec)	8.22112E-04	+/-	1.7E-04		
Sband delay (usec)	2.50371820808E+03		Apriori clock (usec)	1.6618298E+01	Resid sbdelay (usec)	-4.80500E-04	+/-	1.4E-03		
Phase delay (usec)	2.50371869300E+03		Apriori clockrate (us/s)	-2.1629280E-07	Resid phdelay (usec)	4.42231E-06	+/-	5.9E-07		
Delay rate (us/s)	2.50521605063E-02		Apriori rate (us/s)	2.50521276292E-02	Resid rate (us/s)	3.28771E-08	+/-	5.7E-09		
Total phase (deg)		77.5	Apriori accel (us/s/s)	-1.97977761015E-05	Resid phase (deg)	137.1	+/-	18.4		

	RMS	Theor.	Amplitude	0.170 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	42.0	43.2	Search (1024X32)	0.159	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	73.1	75.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	37.3	26.1	Inc. seg. avg.	0.166	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	39.1	45.5	Inc. frq. avg.	0.182	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 257.6 el 60.6 pa 51.1 Z: az 261.3 el 49.0 pa 38.0 u,v (fr/asec) -196.543 -1860.155 simultaneous interpolator

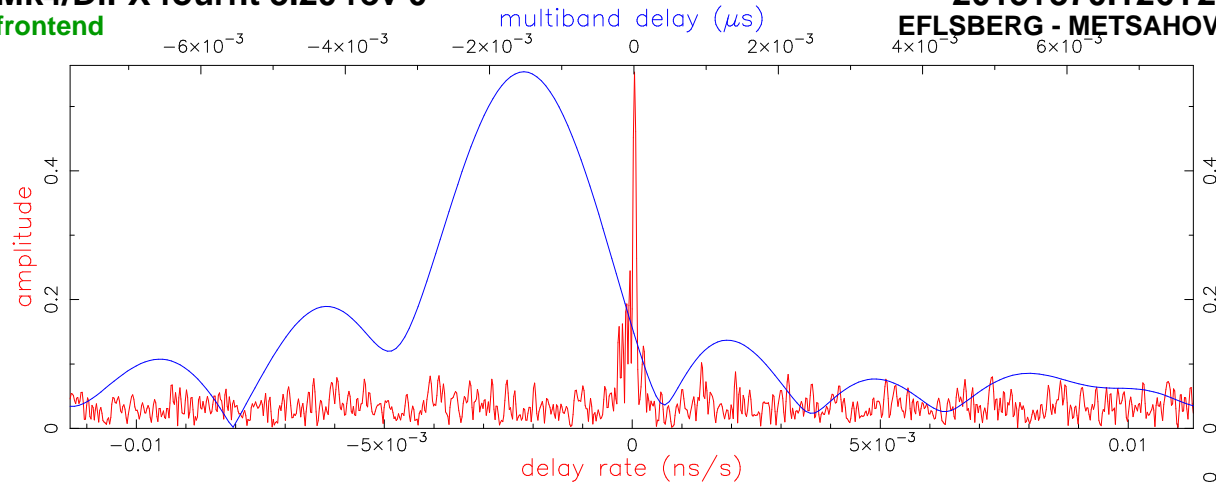
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ.W.151.126Y2A

Mk4/DiFX fourfit 3.20 rev 0

frontend

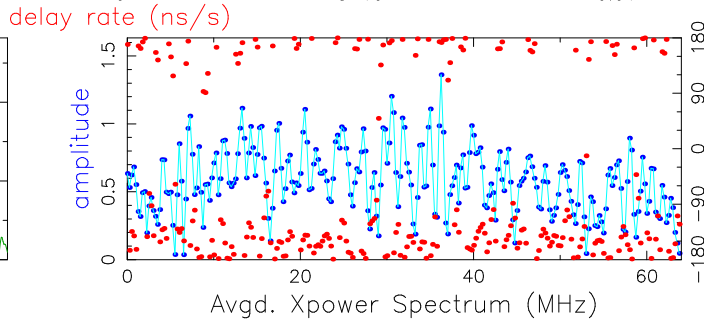
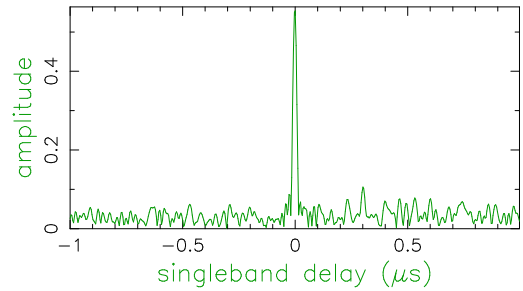
2013+370.126Y2A, No0048, BZ

EFLSBERG - METSAHOV, fgroup W, pol LL



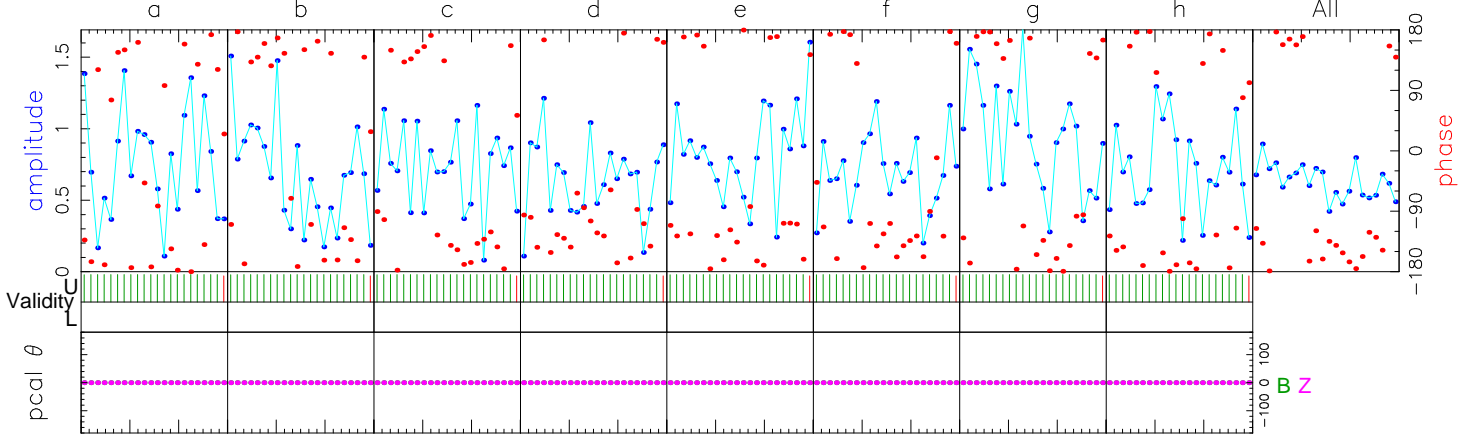
Fringe quality 9

SNR 20.7  
 Int time 179.639  
 Amp 0.564  
 Phase -163.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001808  
 MBD -0.001575  
 Fringe rate (Hz)  
 0.002895  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c192c  
 Yr:day 16383  
 Yr:day 2019:278  
 Start 212000.00  
 Stop 212300.23  
 FRT 212130.00  
 Corr/FF/build  
 2020:070:030312  
 2020:071:125116  
 2019:280:115849  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-177.4	-178.6	-169.0	-137.2	-154.6	-147.4	-168.9	-174.8	Phase	-163.8
	0.5	0.5	0.5	0.5	0.7	0.5	0.8	0.6	Ampl.	0.6
	256.6	256.7	257.2	256.6	256.0	256.8	256.3	255.9	Sbd box	256.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.50371711399E+03	Apriori delay (usec)	2.50371868858E+03	Resid mbdelay (usec)	-1.57459E-03	+/-	5.3E-05
Sband delay (usec)	2.50371688083E+03	Apriori clock (usec)	1.6618298E+01	Resid sbdelay (usec)	-1.80775E-03	+/-	4.2E-04
Phase delay (usec)	2.50371868330E+03	Apriori clockrate (us/s)	-2.1629280E-07	Resid phdelay (usec)	-5.28358E-06	+/-	1.8E-07
Delay rate (us/s)	2.50521612418E-02	Apriori rate (us/s)	2.50521276292E-02	Resid rate (us/s)	3.36126E-08	+/-	1.7E-09
Total phase (deg)	136.5	Apriori accel (us/s/s)	-1.97977761015E-05	Resid phase (deg)	-163.8	+/-	5.5

ph/seg (deg)	30.1	Theor.	13.0	Amplitude	0.564 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	23.9	Search (1024X32)	0.530	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	16.5	Inc. seg. avg.	0.619	Bits/sample: 2x2		mb window (us)	-0.008 0.008
amp/frq (%)	16.5	Inc. frq. avg.	0.564	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011
				Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00

B: az 257.6 el 60.6 pa 51.1 Z: az 261.3 el 49.0 pa 38.0 u,v (fr/asec) -196.543 -1860.155 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ..126Y2A Output file: /Exps/c192c/v1\_CygA2/1234/No0048/BZ.W.88.126Y2A