

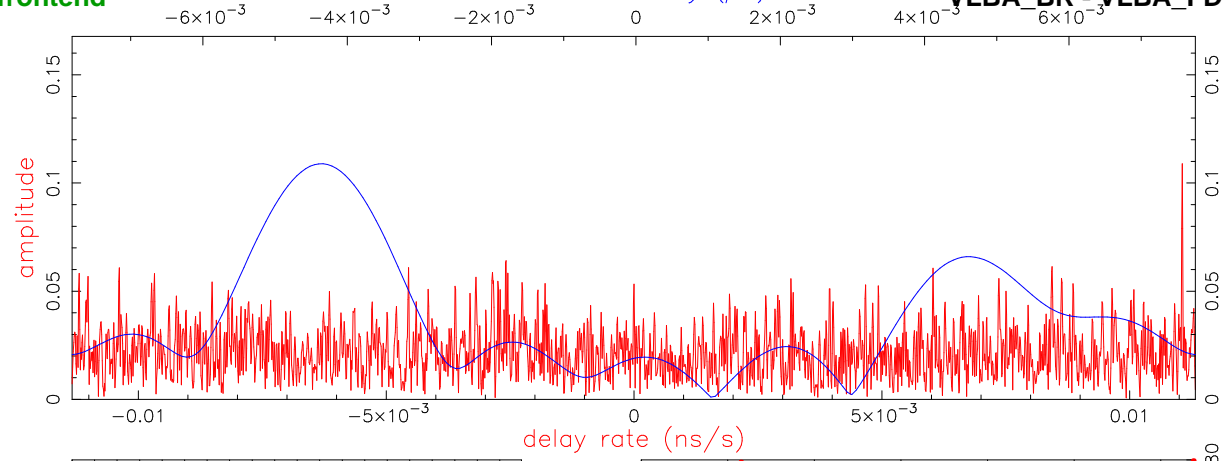
Mk4/DiFX fourfit 3.20 rev 0

frontend

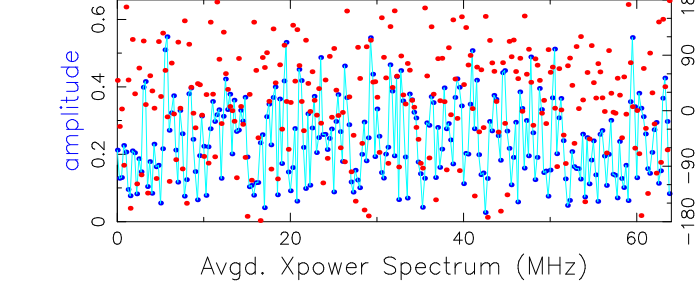
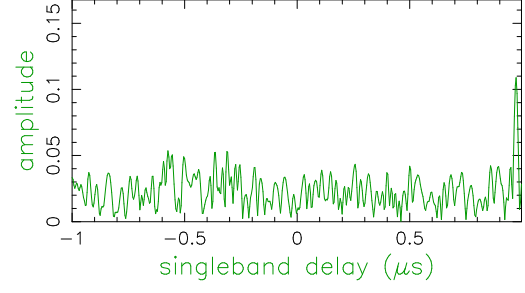
3C454_3.1270J7, No0080, bf

VLBA_BR - VLBA_FD, fgroup W, pol LL

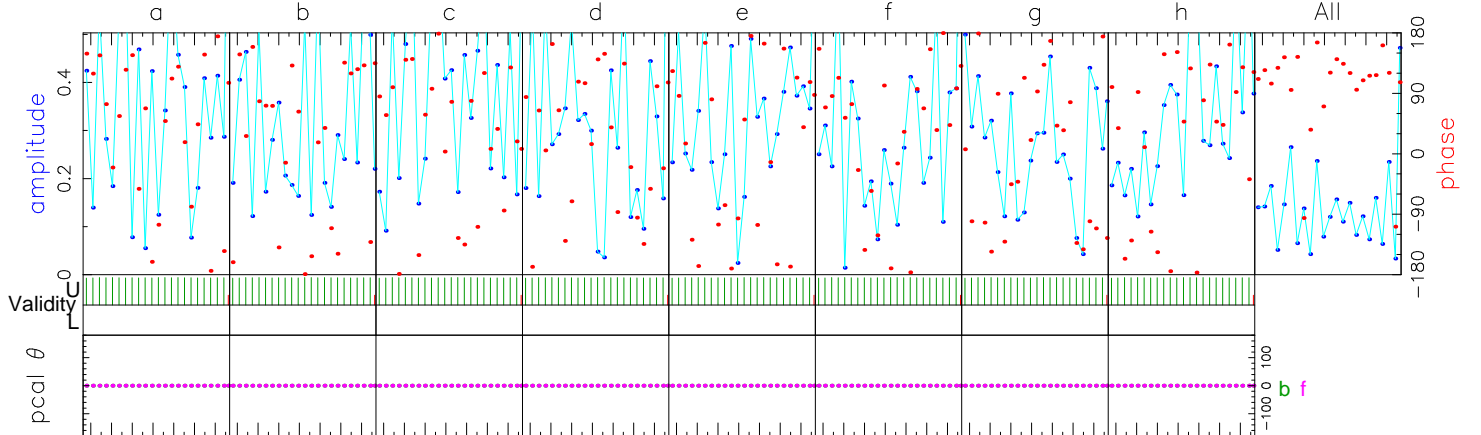
multiband delay (μ s)



Fringe quality 0
 SNR 6.0
 Int time 408.244
 Amp 0.168
 Phase 122.6
 PFD 3.4e-01
 Delays (us)
 SBD 0.971953
 MBD -0.004381
 Fringe rate (Hz) 0.954559
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020637.68
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134115
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

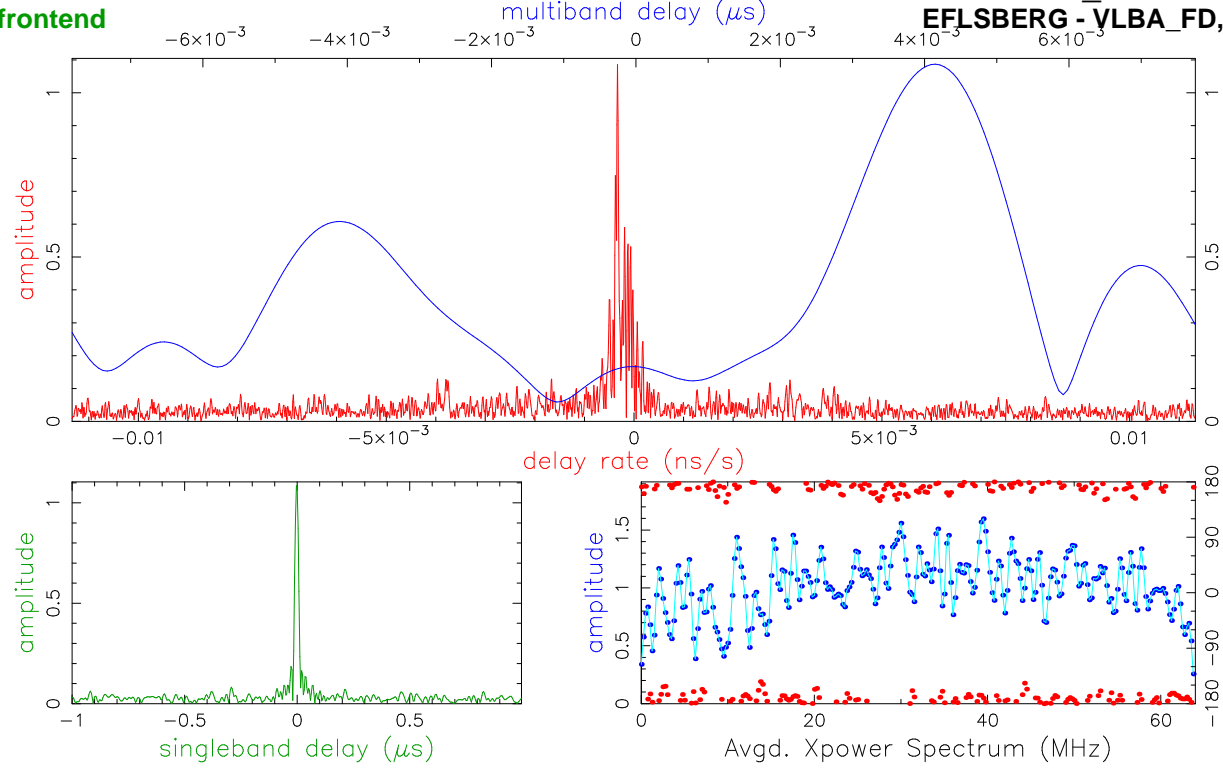


Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



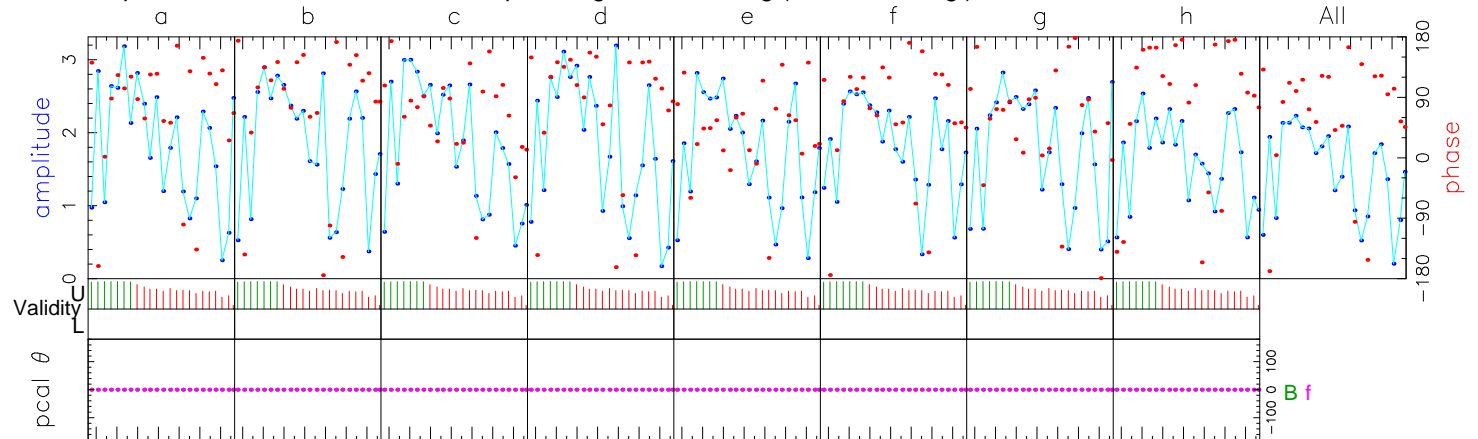
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	805/0	805/0	805/0	805/0	805/0	805/0	805/0	805/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
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)	-4.39229394293E+03				-4.39325831179E+03				-4.38114E-03	+/- 1.8E-04
Sband delay (usec)	-4.39228635854E+03				-1.0967960E+07				9.71953E-01	+/- 1.4E-03
Phase delay (usec)	-4.39325830784E+03				-1.5144557E-07				3.95385E-06	+/- 6.1E-07
Delay rate (us/s)	-6.87524329410E-03				-6.88632477461E-03				1.10815E-05	+/- 2.6E-09
Total phase (deg)			-229.3		3.07768094301E-05				122.6	+/- 19.0
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
Search (2048X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
ph/seg (deg)	49.2	45.5			0.168 +/- 0.028					
amp/seg (%)	72.7	79.5			0.106					
ph/frq (deg)	45.7	26.9			0.000					
amp/frq (%)	43.6	46.9			0.155					
b: az 103.7 el 33.6 pa -42.4										
f: az 101.0 el 49.4 pa -61.6										
u,v (fr/asec) 86.426 2703.700										
Control file: cf_1234_gmva										
Input file: /Exps/c192c/v1_CygA2/1234/No0080/bf..1270J7										
Output file: /Exps/c192c/v1_CygA2/1234/No0080/bf.W.12.1270J7										

simultaneous interpolator



Fringe quality 2
 SNR 53.5
 Int time 314.361
 Amp 1.105
 Phase 105.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.002239
 MBD 0.004184
 Fringe rate (Hz)
 -0.028606
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021328.82
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134118
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

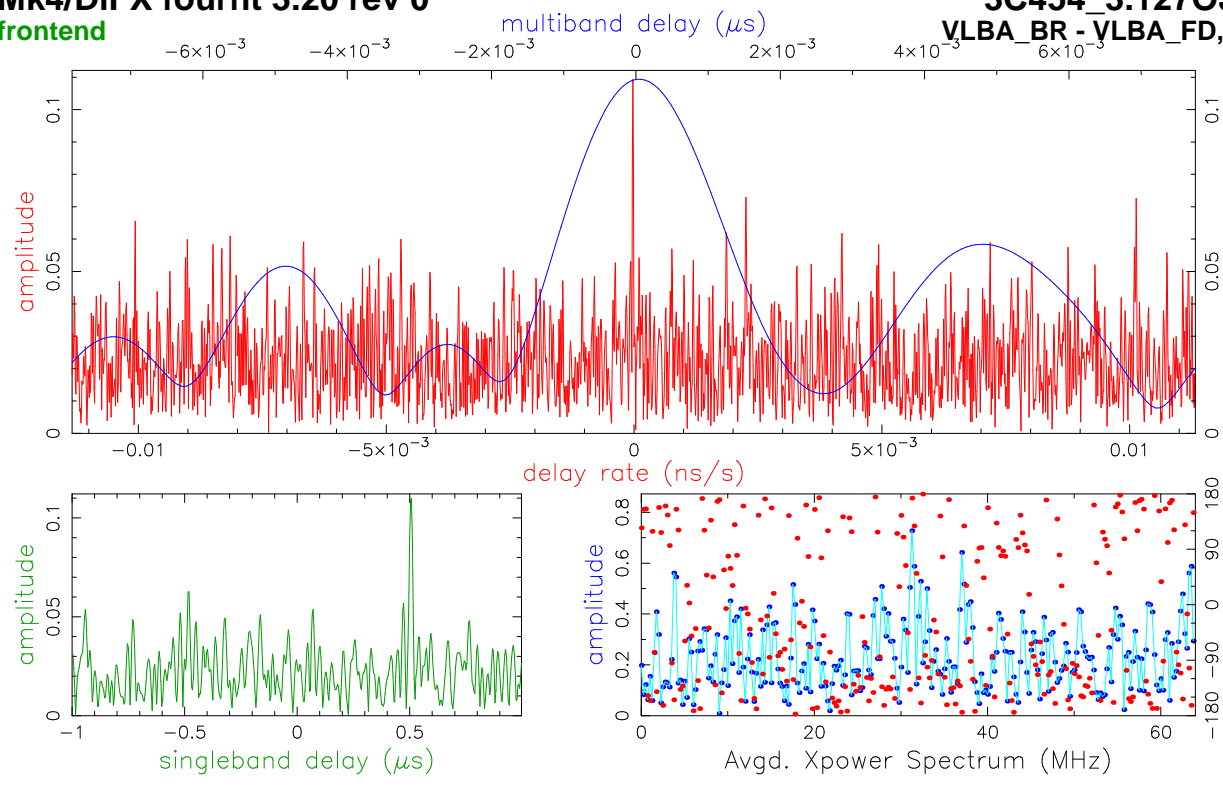
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	683/0	683/0	683/0	683/0	683/0	683/0	683/0	683/0		
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)	-7.33080319764E+03									
Sband delay (usec)	-7.33080962019E+03									
Phase delay (usec)	-7.33080737803E+03									
Delay rate (us/s)	-1.72924323629E+00									
Total phase (deg)			-195.6							
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								
Bits/sample:	2x2									
Sample rate (MSamp/s):	128									
Data rate (Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

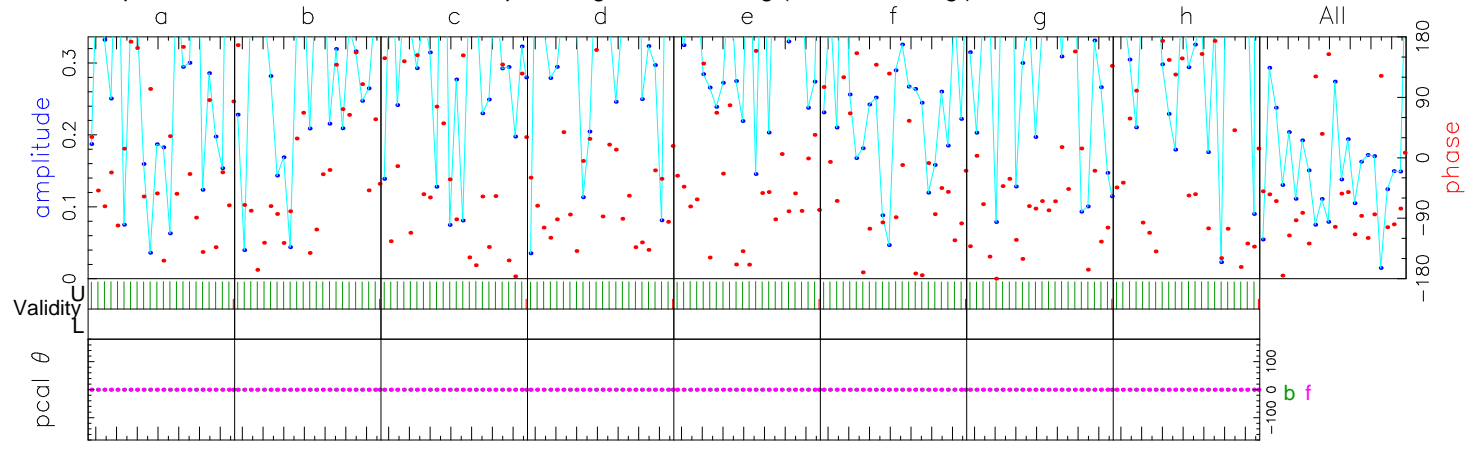
Mk4/DiFX fourfit 3.20 rev 0
 frontend

3C454_3.1270J7, No0080, bf
 VLBA_BR - VLBA_FD, fgroup W, pol RR



Fringe quality 0
 SNR 6.2
 Int time 408.243
 Amp 0.112
 Phase -86.1
 PFD 1.4e-01
 Delays (us)
 SBD 0.505931
 MBD 0.000085
 Fringe rate (Hz)
 -0.001826
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020637.68
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134120
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-78.5	-64.7	-137.6	-87.5	-62.9	-96.1	-71.1	-121.2	Phase	-86.1
	0.1	0.0	0.1	0.2	0.2	0.0	0.2	0.1	Ampl.	0.1
	446.5	151.3	199.9	385.7	103.5	509.6	413.0	239.3	Sbd box	386.5
U/L	805/0	805/0	805/0	805/0	805/0	805/0	805/0	805/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-4.39275822664E+03		Apriori delay (usec)		-4.39325831179E+03		Resid mbdelay (usec)		8.51508E-05	+/- 1.8E-04
Sband delay (usec)	-4.39275238079E+03		Apriori clock (usec)		-1.0967960E+00		Resid sbdelay (usec)		5.05931E-01	+/- 1.4E-03
Phase delay (usec)	-4.39325831457E+03		Apriori clockrate (us/s)		-1.5144557E-07		Resid phdelay (usec)		-2.77734E-06	+/- 6.0E-07
Delay rate (us/s)	-6.88634597536E-03		Apriori rate (us/s)		-6.88632477461E-03		Resid rate (us/s)		-2.12008E-08	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		3.07768094301E-05		Resid phase (deg)		-86.1	+/- 18.5

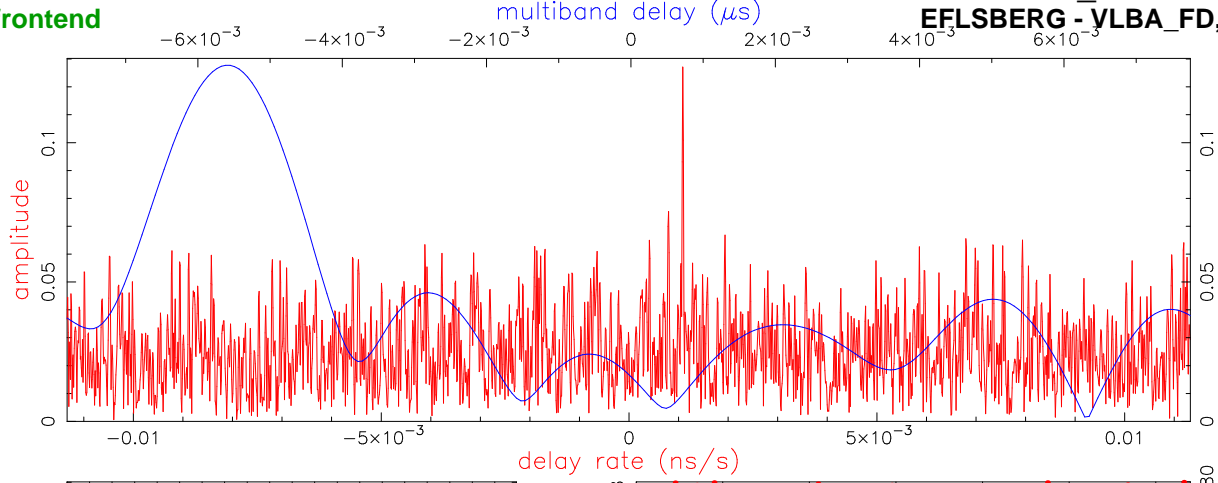
ph/seg (deg) 65.8 44.4 Search (2048X32) 0.109 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.5 77.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.6 26.2 Inc. seg. avg. 0.118 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 60.3 45.7 Inc. frq. avg. 0.107 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 103.7 el 33.6 pa -42.4 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 86.426 2703.700 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/bf..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/bf.W.32.1270J7

Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, Bf

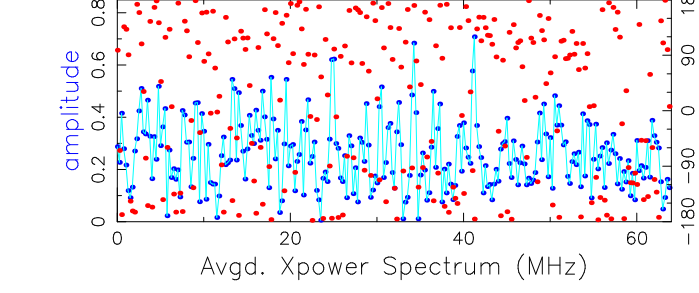
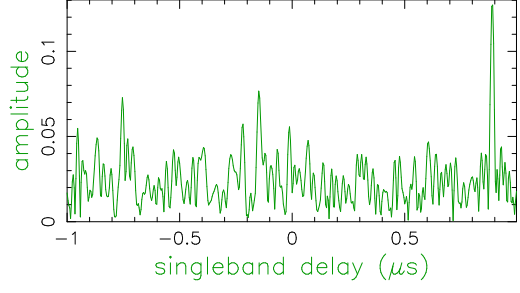
EFLSBERG - VLBA_FD, fgroup W, pol LR



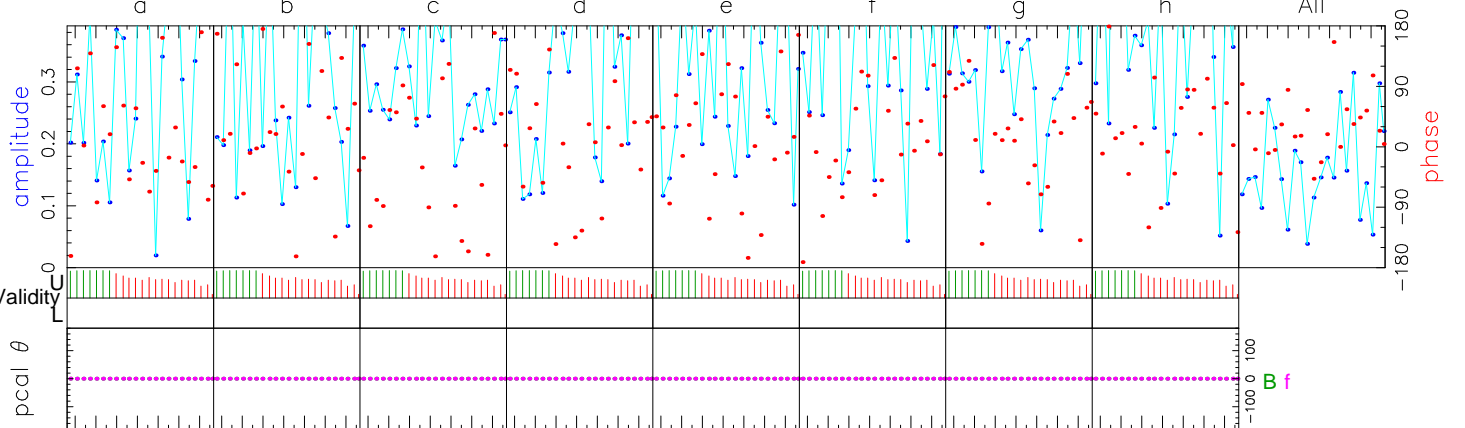
Fringe quality 0

SNR 6.3
 Int time 314.361
 Amp 0.130
 Phase 22.0
 PFD 8.3e-02
 Delays (us)
 SBD 0.888813
 MBD -0.005698
 Fringe rate (Hz) 0.094036
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021328.82
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134123
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"



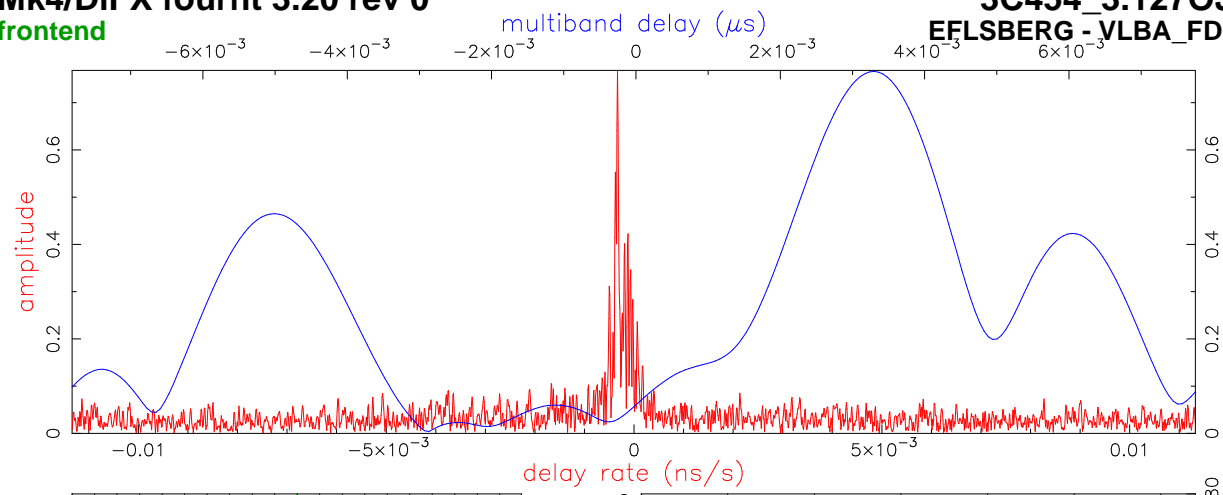
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



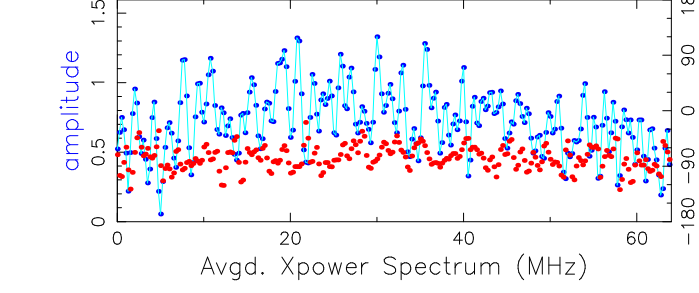
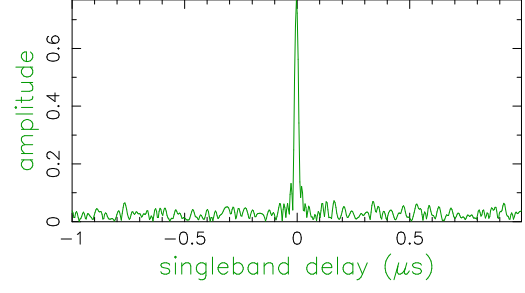
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	683/0	683/0	683/0	683/0	683/0	683/0	683/0	683/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-7.32992245415E+03									
Sband delay (usec)	-7.32991856844E+03									
Phase delay (usec)	-7.33080738073E+03									
Delay rate (us/s)	-1.72924181254E+00									
Total phase (deg)		-279.3								
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PCal period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PCal period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PCal period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										

B: az 264.5 el 25.7 pa 41.2 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 10383.784 3259.730 simultaneous interpolator

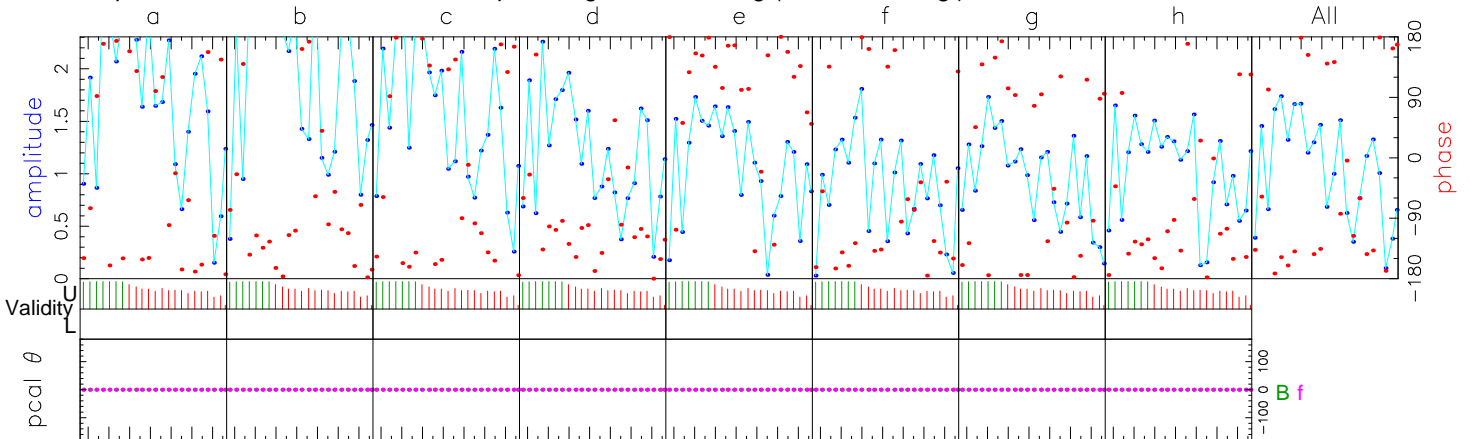
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/Bf..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/Bf.W.46.1270J7



Fringe quality 4
 SNR 37.2
 Int time 314.361
 Amp 0.768
 Phase -151.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.003237
 MBD 0.003309
 Fringe rate (Hz)
 -0.028545
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021328.82
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134114
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"



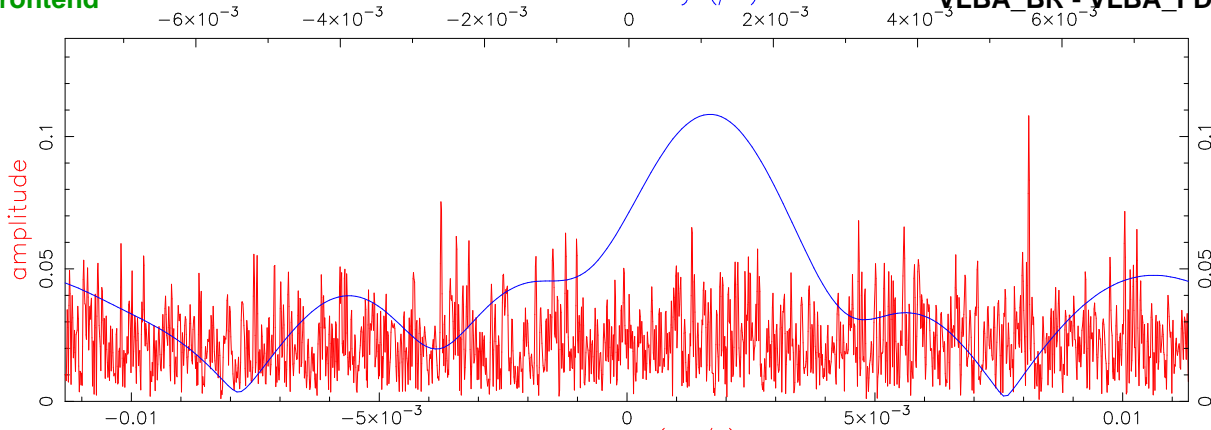
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-172.3	-125.7	-160.3	-107.6	150.2	-143.7	162.5	-124.9	Phase	-151.8
	1.2	1.3	1.1	0.9	0.7	0.6	0.6	0.7	Ampl.	0.9
	256.4	256.7	256.2	256.7	256.7	256.5	256.9	257.2	Sbd box	256.2
U/L	683/0	683/0	683/0	683/0	683/0	683/0	683/0	683/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-7.33080407264E+03		Apriori delay (usec)		-7.33080738144E+03		Resid mbdelay (usec)		3.30880E-03	+/- 2.9E-05
Sband delay (usec)	-7.33081061794E+03		Apriori clock (usec)		1.6325451E+01		Resid sbdelay (usec)		-3.23650E-03	+/- 2.3E-04
Phase delay (usec)	-7.33080738633E+03		Apriori clockrate (us/s)		-1.0905050E-07		Resid phdelay (usec)		-4.89625E-06	+/- 9.9E-08
Delay rate (us/s)	-1.72924323559E+00		Apriori rate (us/s)		-1.72924290421E+00		Resid rate (us/s)		-3.31384E-07	+/- 4.9E-10
Total phase (deg)			Apriori accel (us/s/s)		4.73514325271E-05		Resid phase (deg)		-151.8	+/- 3.1

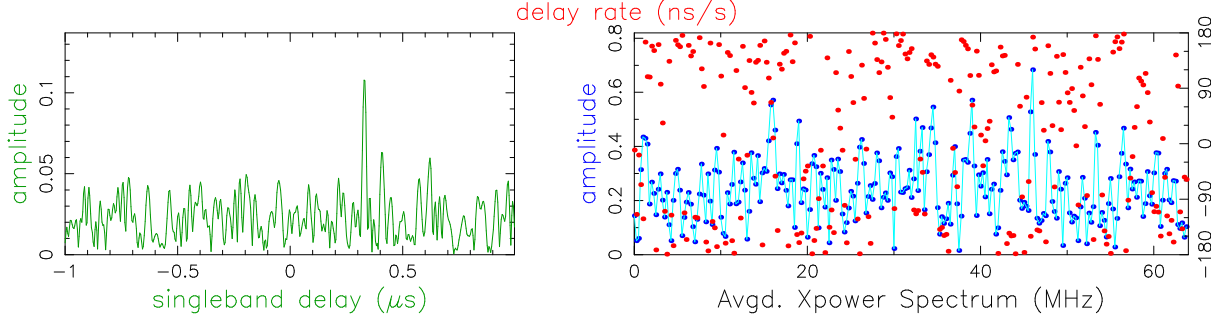
ph/seg (deg) 57.5 6.8 Amplitude 0.768 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.9 11.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.5 4.4 Inc. seg. avg. 1.112 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.4 7.6 Inc. frq. avg. 0.901 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 264.5 el 25.7 pa 41.2 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 10383.784 3259.730 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/Bf..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/Bf.W.5.1270J7

multiband delay (μs)



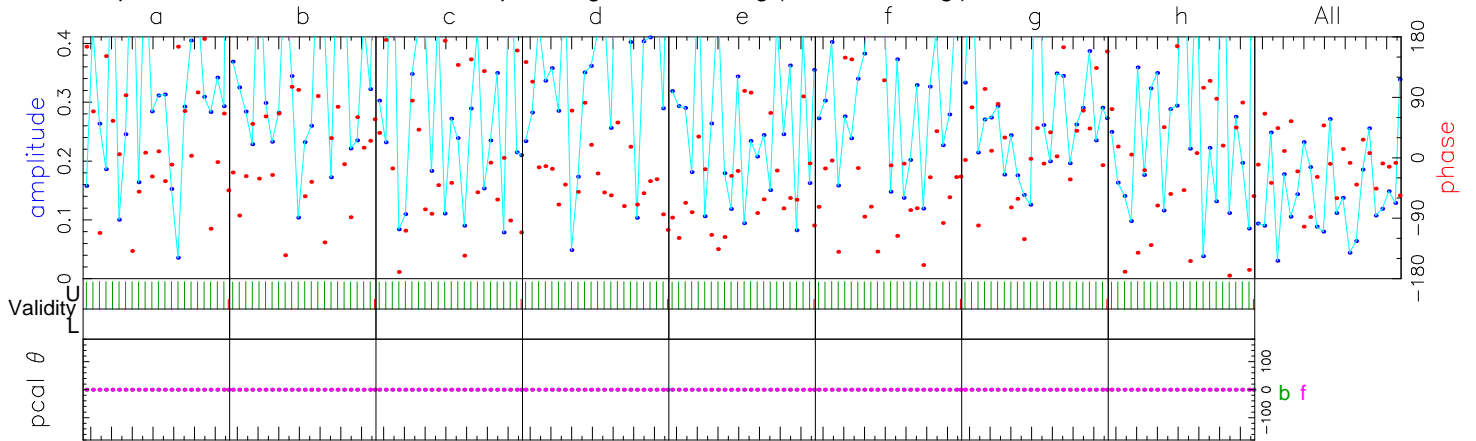
Fringe quality 0

SNR 6.1
Int time 408.243
Amp 0.137
Phase -16.5
PFD 2.8e-01
Delays (us)
SBD 0.330002
MBD 0.001247
Fringe rate (Hz)
0.699265
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



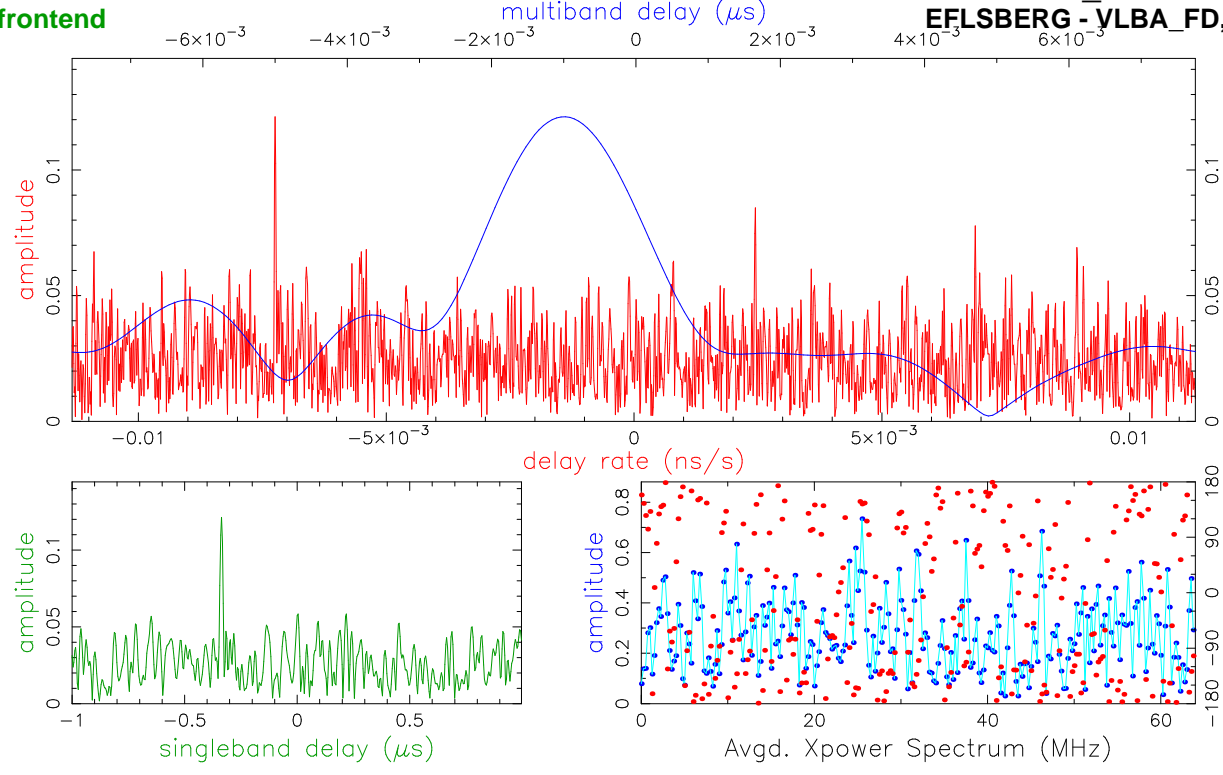
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020637.68
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134124
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



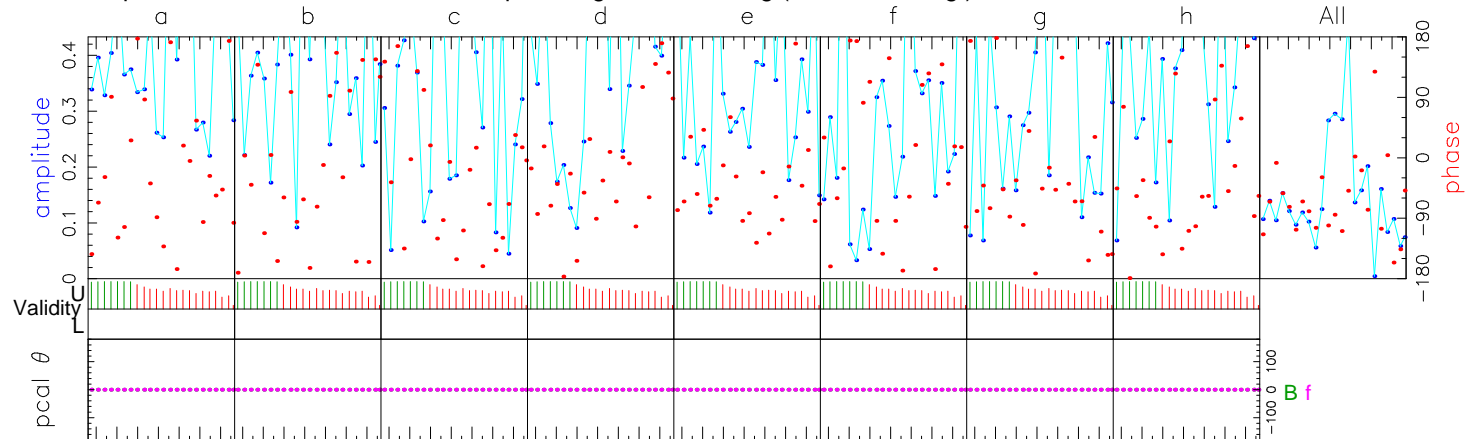
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	805/0	805/0	805/0	805/0	805/0	805/0	805/0	805/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-4.39292893988E+03				-4.39325831179E+03				1.24691E-03	+/- 1.8E-04
Sband delay (usec)	-4.39292831004E+03				-1.0967960E+07				3.30002E-01	+/- 1.4E-03
Phase delay (usec)	-4.39325831232E+03				-1.5144557E-07				-5.30554E-07	+/- 6.1E-07
Delay rate (us/s)	-6.87820700073E-03				-6.88632477461E-03				8.11777E-06	+/- 2.6E-09
Total phase (deg)			-8.4		3.07768094301E-05				-16.5	+/- 18.9
	RMS	Theor.	Amplitude	0.137 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	42.8	45.2	Search (2048X32)	0.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	70.9	79.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	39.7	26.7	Inc. seg. avg.	0.135	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	45.2	46.6	Inc. frq. avg.	0.147	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 103.7 el 33.6 pa -42.4 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 86.426 2703.700 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/bf..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/bf.W.52.1270J7



Fringe quality 0
 SNR 5.9
 Int time 314.361
 Amp 0.144
 Phase -71.5
 PFD 6.5e-01
 Delays (us)
 SBD -0.336258
 MBD -0.000991
 Fringe rate (Hz)
 -0.624890
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021328.82
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134127
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-72.3	-107.6	-96.0	-36.4	-58.4	-43.3	-77.0	-106.0	Phase	-71.5
	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.1	Ampl.	0.1
	103.8	453.8	214.0	312.8	170.8	241.6	465.1	484.9	Sbd box	170.9
U/L	683/0	683/0	683/0	683/0	683/0	683/0	683/0	683/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-7.33113649775E+03		Apriori delay (usec)		-7.33080738144E+03		Resid mbdelay (usec)		-9.91316E-04	+/- 1.8E-04
Sband delay (usec)	-7.33114363919E+03		Apriori clock (usec)		1.6325451E+01		Resid sbdelay (usec)		-3.36258E-01	+/- 1.5E-03
Phase delay (usec)	-7.33080738374E+03		Apriori clockrate (us/s)		-1.0905050E-07		Resid phdelay (usec)		-2.30461E-06	+/- 6.3E-07
Delay rate (us/s)	-1.72925015856E+00		Apriori rate (us/s)		-1.72924290421E+00		Resid rate (us/s)		-7.25435E-06	+/- 3.1E-09
Total phase (deg)			Apriori accel (us/s/s)		4.73514325271E-05		Resid phase (deg)		-71.5	+/- 19.5

ph/seg (deg) 50.6 43.1 Search (2048X32) 0.119 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 80.6 75.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.8 27.6 Inc. seg. avg. 0.133 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 43.8 48.1 Inc. frq. avg. 0.142 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 264.5 el 25.7 pa 41.2 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 10383.784 3259.730 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/Bf..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/Bf.W.66.1270J7

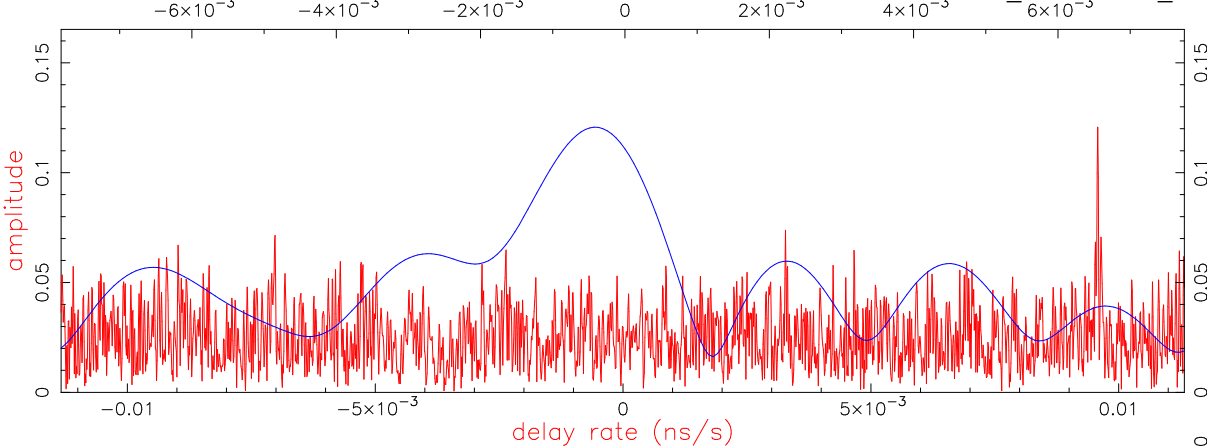
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, bf

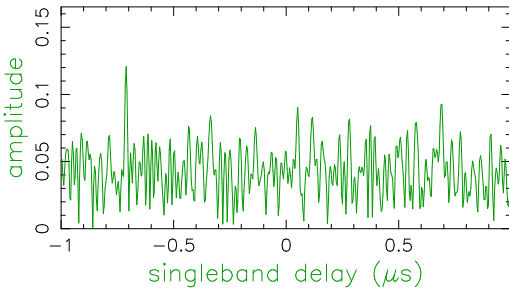
VLBA_BR - VLBA_FD, fgroup W, pol RL

multiband delay (μ s)

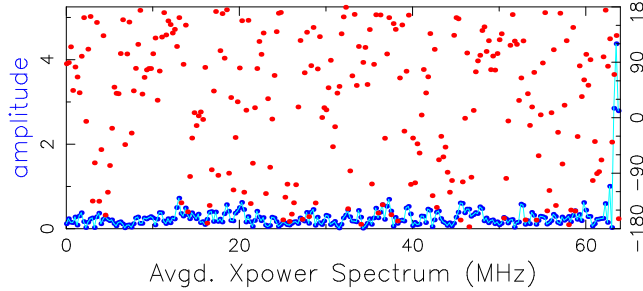


Fringe quality 0

SNR 6.7
 Int time 408.244
 Amp 0.165
 Phase -139.7
 PFD 7.3e-03
 Delays (us)
 SBD -0.711180
 MBD -0.000393
 Fringe rate (Hz) 0.825787
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

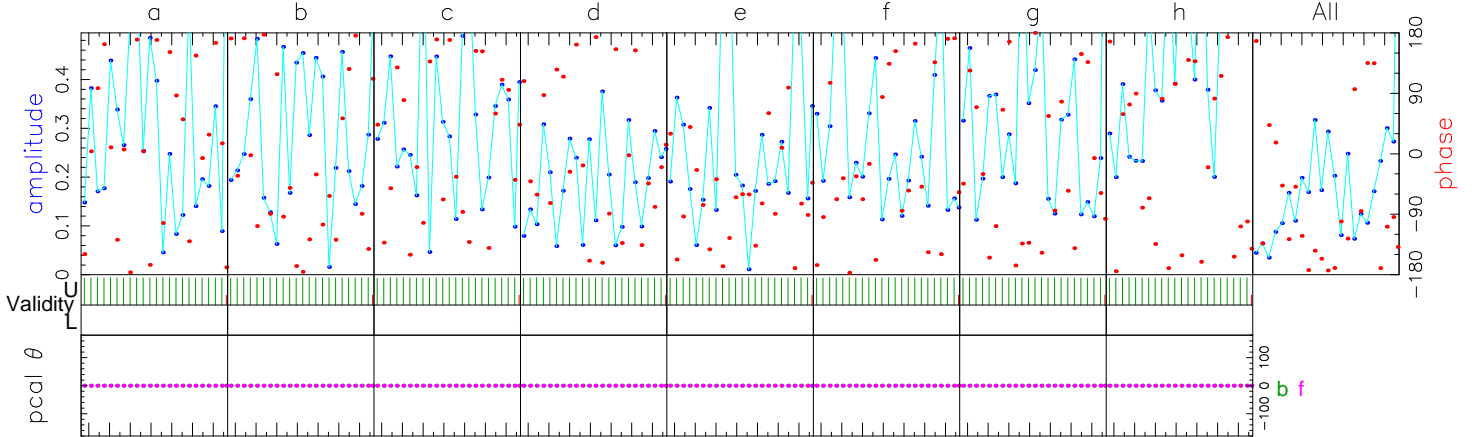


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020637.68
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134128
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	805/0	805/0	805/0	805/0	805/0	805/0	805/0	805/0		
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		Chan ids
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks
Group delay (usec)(sbd)	-4.39396183003E+03				-4.39325831179E+03					
Sband delay (usec)	-4.39396949154E+03				-1.0967960E+00					
Phase delay (usec)	-4.39325831629E+03				-1.5144557E-07					
Delay rate (us/s)	-6.87673820613E-03				-6.88632477461E-03					
Total phase (deg)			-131.6		3.07768094301E-05					
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
RMS	72.7	41.2			0.119					
Theor.	41.2				0.119					
Amplitude					0.165 +/- 0.025					
Search (2048X32)					0.119					
Interp.					0.000					
Inc. seg. avg.					0.190					
Inc. frq. avg.					0.162					
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										

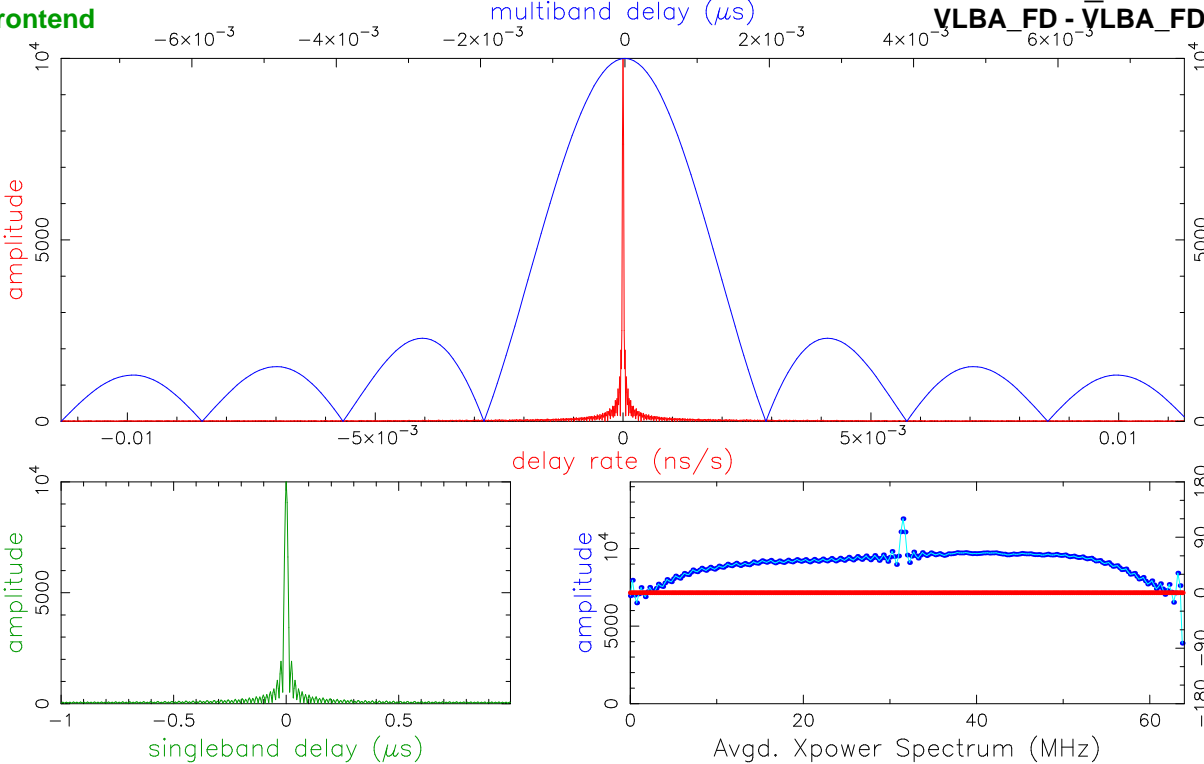
b: az 103.7 el 33.6 pa -42.4 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 86.426 2703.700 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/bf..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/bf.W.71.1270J7

Mk4/DiFX fourfit 3.20 rev 0

frontend

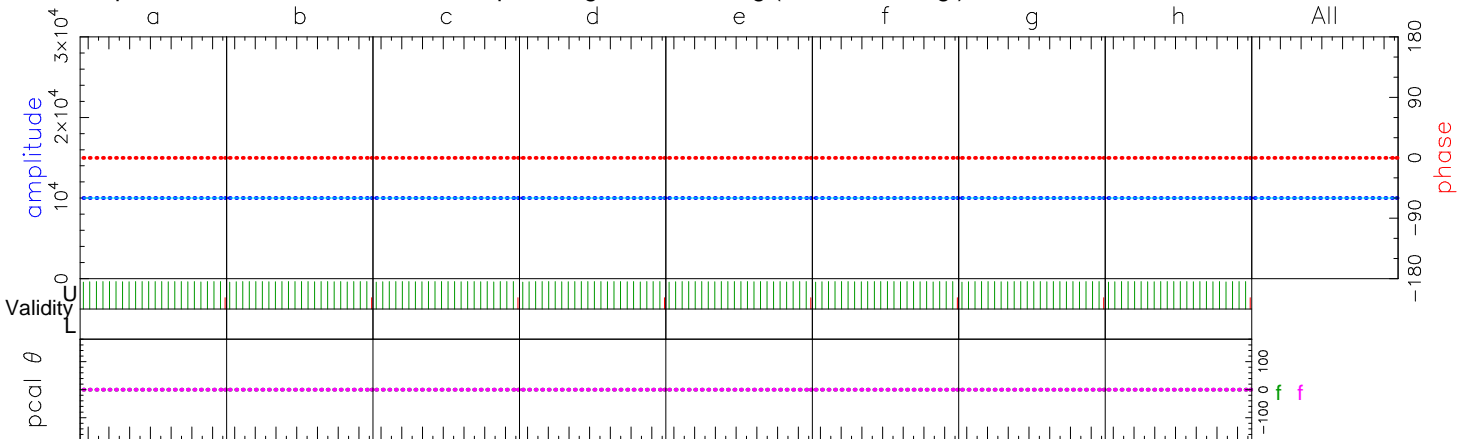
3C454_3.1270J7, No0080, ff

VLBA_FD - VLBA_FD, fgroup W, pol RR



Fringe quality 9
 SNR 554450.7
 Int time 411.084
 Amp 10000.004
 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 2019:279
 Stop 020636.66
 FRT 021329.84
 Corr/FF/build 021000.00
 2020:070:123456
 2020:071:134140
 2019:280:115849
 RA & Dec (J2000) 22h53m57.747940s +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	10000.0
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Mani PC	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
									Chan ids	
									Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00		+/- 2.0E-09
Sband delay (usec)	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00		+/- 1.6E-08
Phase delay (usec)	-2.23970536604E-20	-2.23970536604E-20	-2.23970536604E-20	-2.23970536604E-20	-2.23970536604E-20	-2.23970536604E-20	-2.23970536604E-20	-2.23970536604E-20		+/- 6.7E-12
Delay rate (us/s)	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00	0.00000000000E+00		+/- 2.8E-14
Total phase (deg)			-0.0							+/- 0.0

ph/seg (deg) 0.0 0.0
 amp/seg (%) 0.0 0.0
 ph/frq (deg) 0.0 0.0
 amp/frq (%) 0.0 0.0
 f: az 101.0 el 49.4 pa -61.6
 Control file: cf_1234_gmva

RMS Theor. Amplitude 10000.004 +/- 0.018
 Search (2048X32) 10000.003
 Intp. 0.000
 Inc. seg. avg. 10000.000
 Inc. frq. avg. 10000.003

Apriori delay (usec) 0.00000000000E+00
 Apriori clock (usec) 0.0000000E+00
 Apriori clockrate (us/s) 0.0000000E+00
 Apriori rate (us/s) 0.00000000000E+00
 Apriori accel (us/s/s) 0.00000000000E+00

Resid mbdelay (usec) 0.00000000000E+00
 Resid sbdelay (usec) 0.0000000E+00
 Resid phdelay (usec) -2.23971E-20
 Resid rate (us/s) 0.0000000E+00
 Resid phase (deg) -0.0

PCal mode: MANUAL, MANUAL
 PCal rate: 0.000E+00, 0.000E+00 (us/s)
 Bits/sample: 2x2
 Sample rate(MISamp/s): 128
 Data rate(Mb/s): 2048

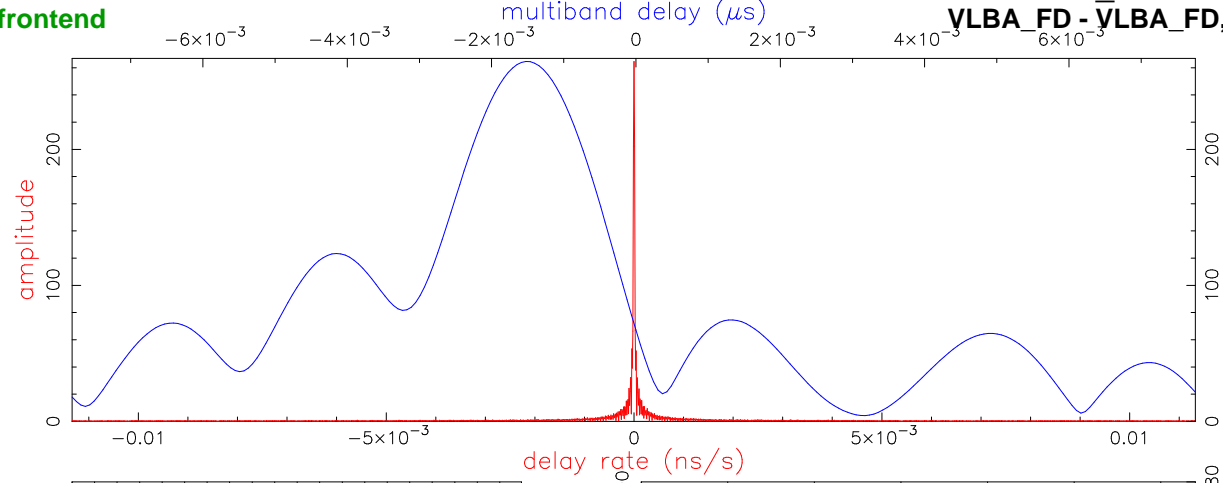
PC period (AP's) 5, 5
 sb window (us) -1.000 1.000
 SampCntNorm: enabled
 mb window (us) -0.008 0.008
 dr window (ns/s) -0.011 0.011
 nlags: 256 t_cohere infinite
 ion window (TEC) 0.00 0.00

simultaneous interpolator

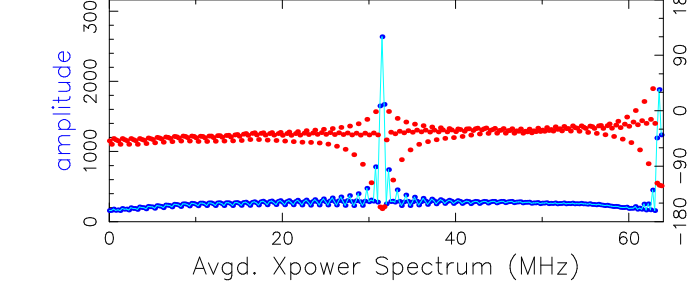
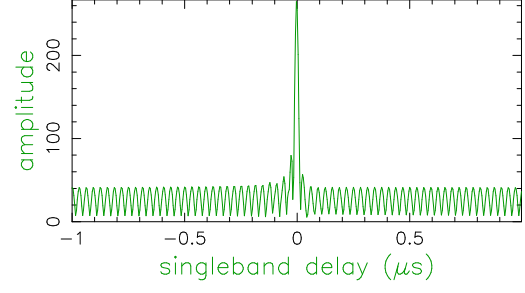
Input file: /Exps/c192c/v1_CygA2/1234/No0080/ff..1270J7
 Output file: /Exps/c192c/v1_CygA2/1234/No0080/ff.W.107.1270J7

Mk4/DiFX fourfit 3.20 rev 0
 frontend

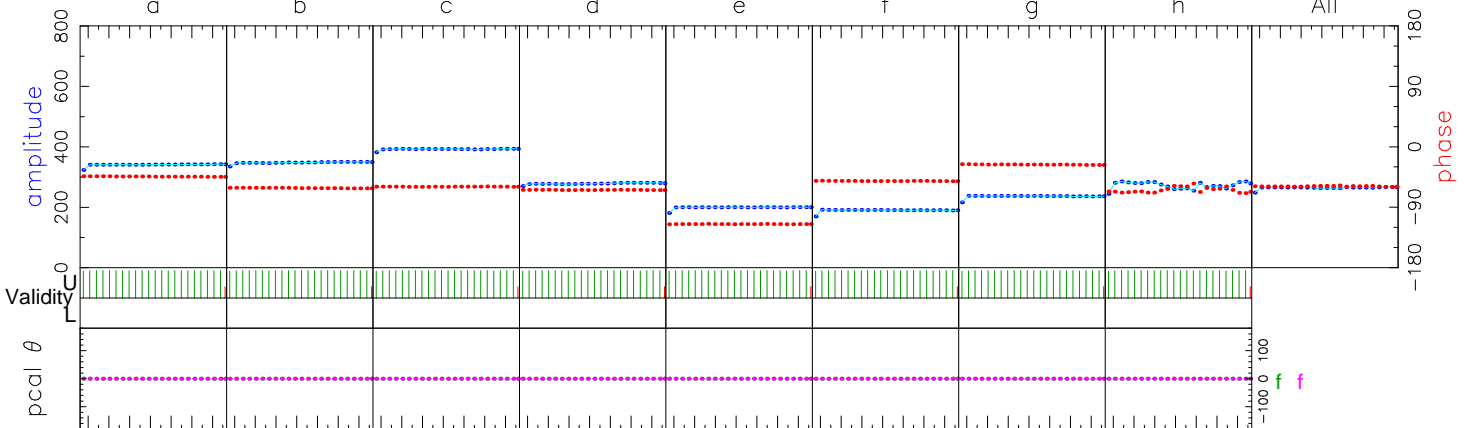
3C454_3.127OJ7, No0080, ff
 VLBA_FD - VLBA_FD, fgroup W, pol LR



Fringe quality 6
 SNR 14797.3
 Int time 411.084
 Amp 266.881
 Phase -58.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.002749
 MBD -0.001494
 Fringe rate (Hz) 0.000005
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build 2020:070:123456
 2020:071:134144
 2019:280:115849
 RA & Dec (J2000) 22h53m57.747940s
 +16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

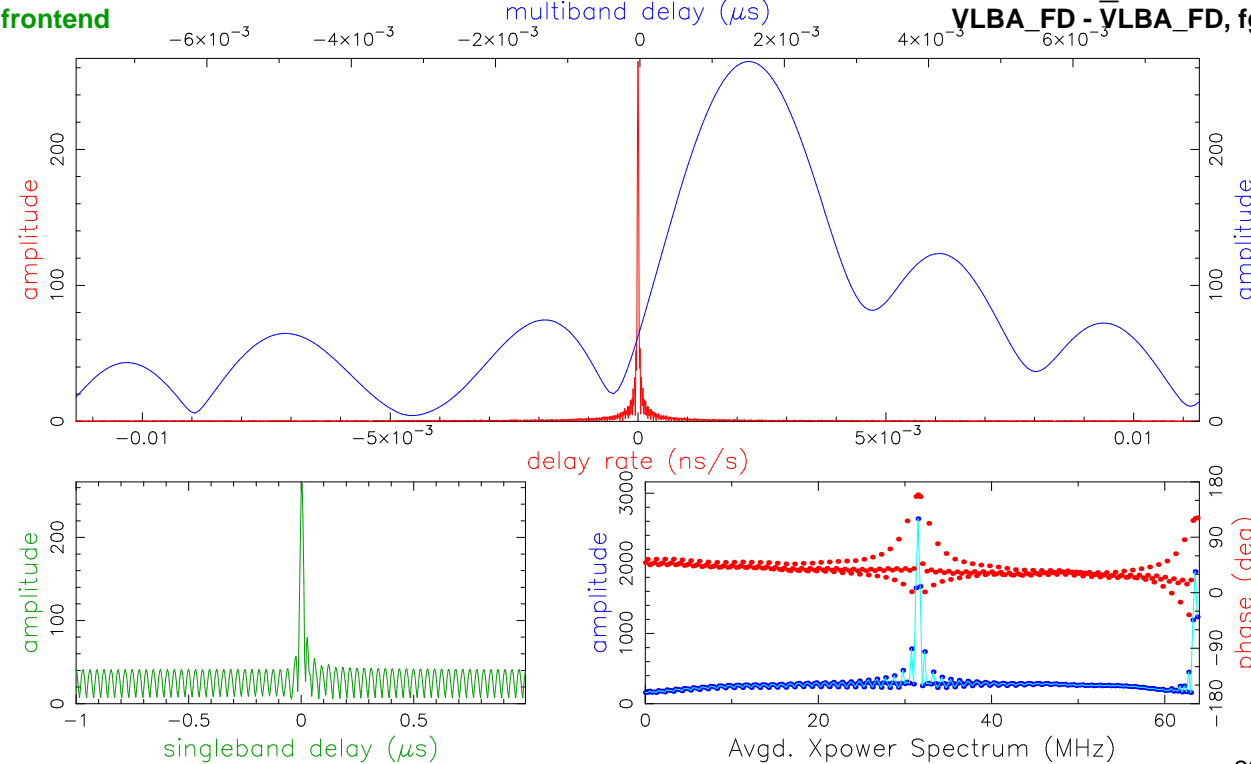


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-44.3	-61.4	-59.4	-64.2	-115.0	-50.9	-26.5	-64.3	Phase	-58.8
	340.8	347.9	392.4	278.4	199.5	190.1	236.4	272.3	Ampl.	282.2
	256.5	256.6	256.3	256.7	263.1	256.8	256.5	255.0	Sbd box	256.3
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.49396875000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-1.49397E-03	+/- 7.3E-08
Sband delay (usec)	-2.74875000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-2.74875E-03	+/- 5.8E-07
Phase delay (usec)	-1.89606706619E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-1.89607E-06	+/- 2.5E-10
Delay rate (us/s)	6.16445129038E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		6.16445E-11	+/- 1.0E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-58.8	+/- 0.0

ph/seg (deg) 0.5 0.0 Search (2048X32) 264.447 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 1.6 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.5 0.0 Inc. seg. avg. 264.649 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 26.3 0.0 Inc. frq. avg. 282.218 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 0.000 0.000 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/ff..127OJ7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/ff.W.125.127OJ7

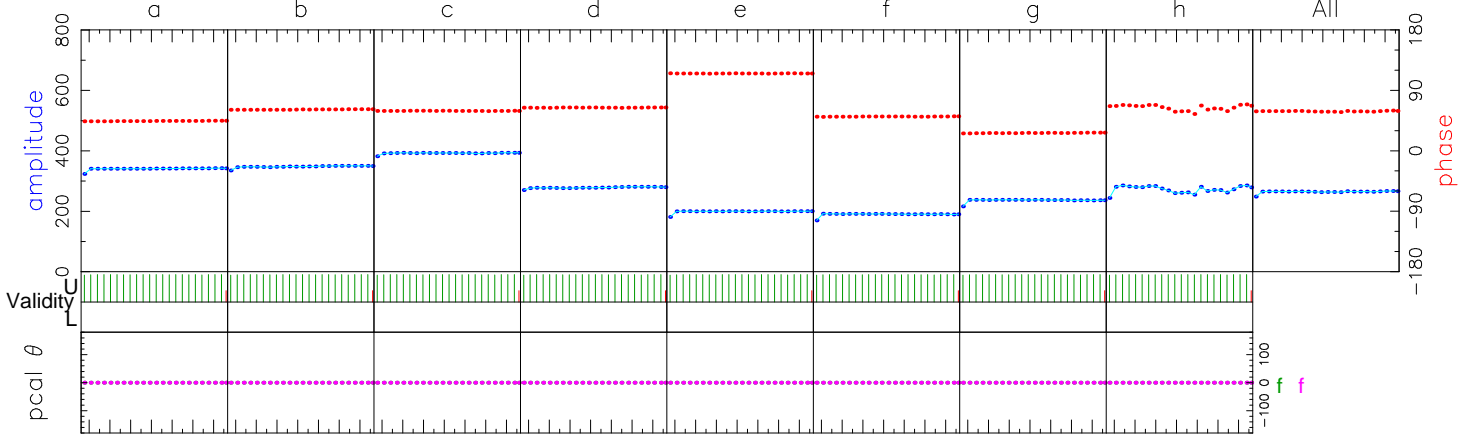
Mk4/DiFX fourfit 3.20 rev 0
frontend

3C454_3.1270J7, No0080, ff
VLBA_FD - VLBA_FD, fgroup W, pol RL



Fringe quality 6
SNR 14797.3
Int time 411.084
Amp 266.882
Phase 58.8
PFD 0.0e+00
Delays (us)
SBD 0.002749
MBD 0.001494
Fringe rate (Hz)
-0.000005
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134148
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

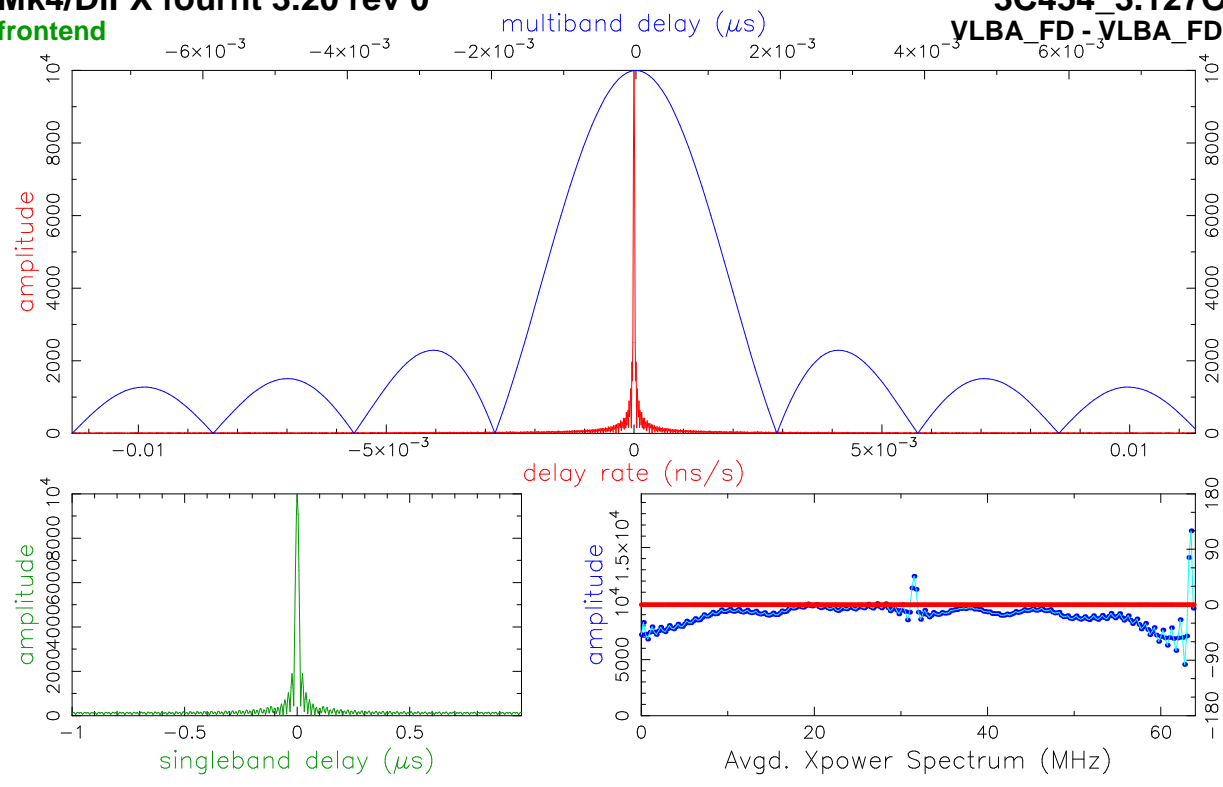


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.49396875000E-03				0.00000000000E+00				Resid mbdelay (usec)	1.49397E-03 +/- 7.3E-08
Sband delay (usec)	2.74875000000E-03				0.0000000E+00				Resid sbdelay (usec)	2.74875E-03 +/- 5.8E-07
Phase delay (usec)	1.89606706675E-06				0.0000000E+00				Resid phdelay (usec)	1.89607E-06 +/- 2.5E-10
Delay rate (us/s)	-6.16445129038E-11				0.00000000000E+00				Resid rate (us/s)	-6.16445E-11 +/- 1.0E-12
Total phase (deg)			58.8		0.00000000000E+00				Resid phase (deg)	58.8 +/- 0.0

RMS Theor. Amplitude 266.882 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.5 0.0 Search (2048X32) 264.448 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 1.6 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 27.5 0.0 Inc. seg. avg. 264.650 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 26.3 0.0 Inc. frq. avg. 282.218 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 f: az 101.0 el 49.4 pa -61.6 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/ff..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/ff.W.142.1270J7

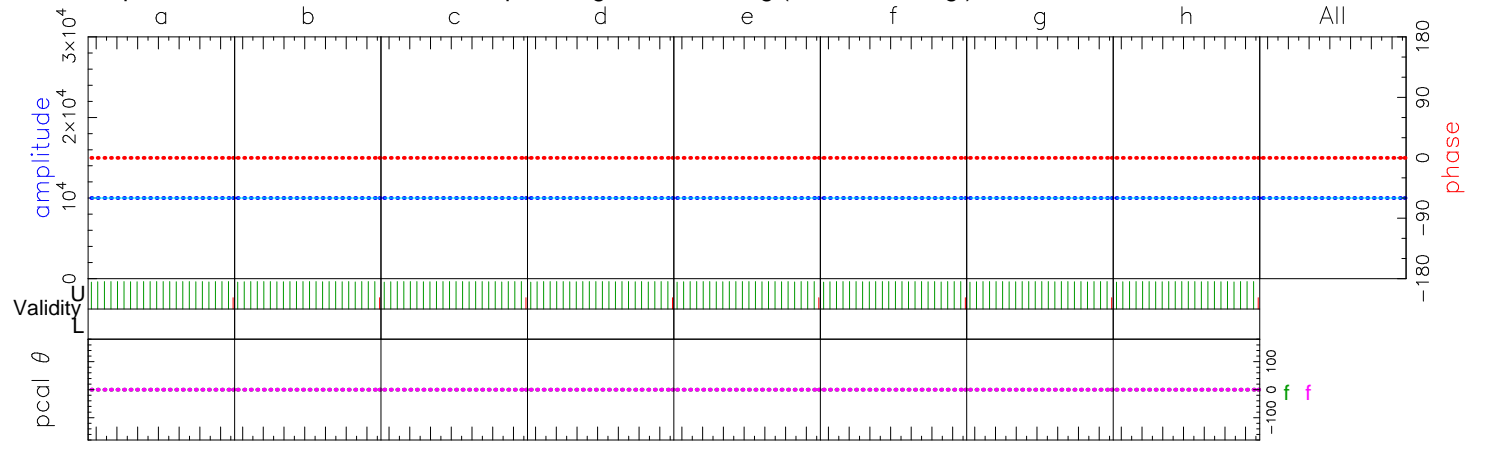
Mk4/DiFX fourfit 3.20 rev 0
frontend

3C454_3.1270J7, No0080, ff
VLBA_FD - VLBA_FD, fgroup W, pol LL



Fringe quality 9
SNR 554451.0
Int time 411.084
Amp 10000.000
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
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134135
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

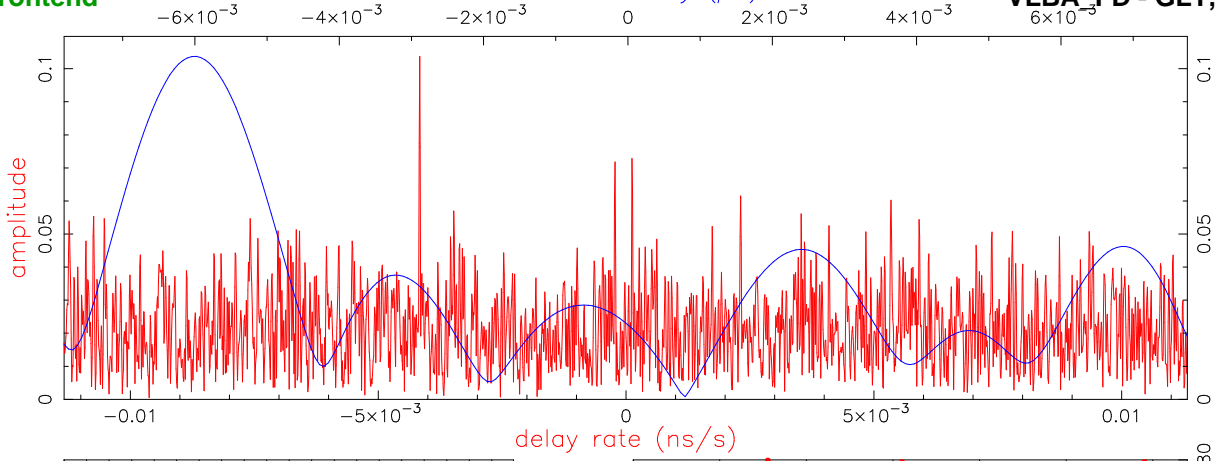
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



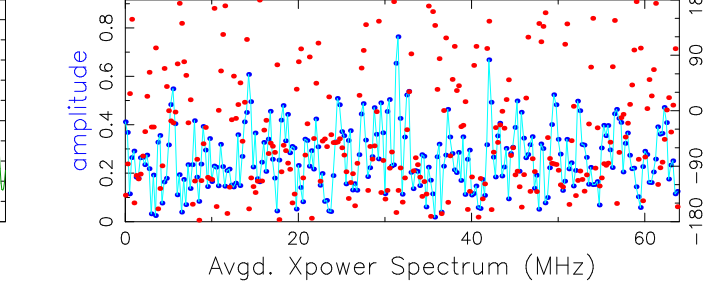
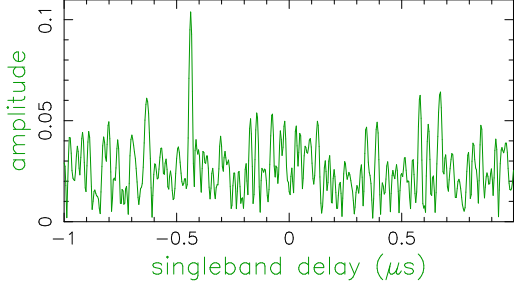
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Phase delay (usec)	-3.48271031228E-20	-3.48271031228E-20	-3.48271031228E-20	-3.48271031228E-20	-3.48271031228E-20	-3.48271031228E-20	-3.48271031228E-20	-3.48271031228E-20		
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Total phase (deg)			-0.0							
RMS										
Theor.										
Amplitude										
Search (2048X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

f: az 101.0 el 49.4 pa -61.6 f: az 101.0 el 49.4 pa -61.6 u,v (fr/asec) 0.000 0.000
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/ff..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/ff.W.87.1270J7

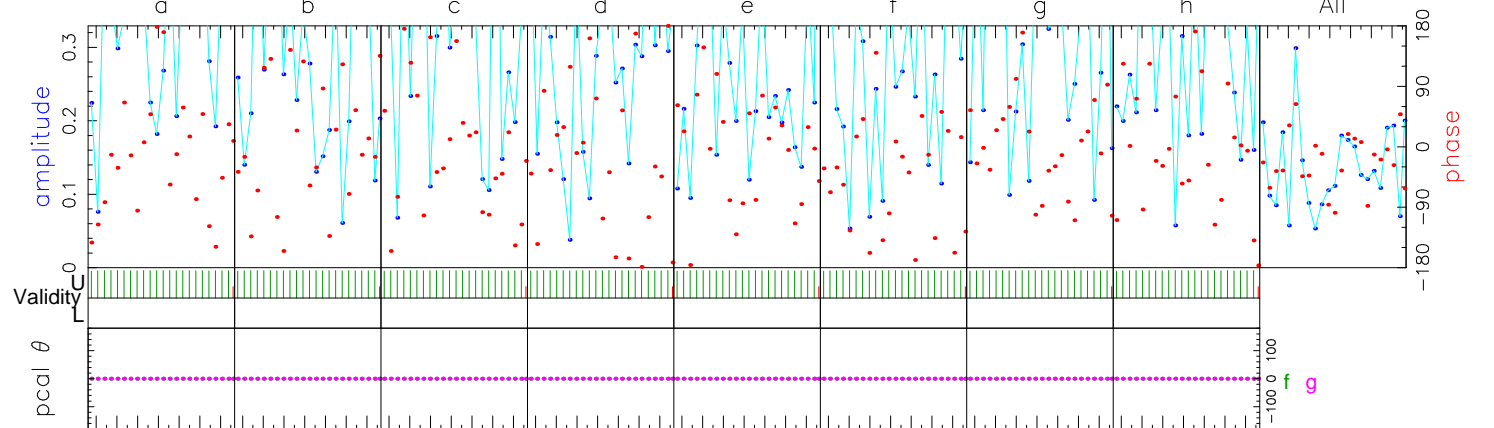
multiband delay (μ s)



Fringe quality 0
 SNR 5.8
 Int time 410.974
 Amp 0.110
 Phase -17.9
 PFD 8.9e-01
 Delays (us)
 SBD -0.437660
 MBD -0.006010
 Fringe rate (Hz)
 -0.359359
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134140
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-22.5	-3.0	-15.2	-58.1	11.4	-27.6	-5.7	-42.6	Phase	-17.9		
	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1		
	267.5	245.4	175.6	382.4	200.4	164.4	145.4	252.2	Sbd box	145.0		
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
g	0	0	0	0	0	0	0	0	PC freqs			
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
g	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	5.82922582331E+03		Apriori delay (usec)		5.82966933360E+03		Resid mbdelay (usec)		-6.01028E-03	+/- 1.9E-04		
Sband delay (usec)	5.82923167385E+03		Apriori clock (usec)		-8.3156186E-01		Resid sbdelay (usec)		-4.37660E-01	+/- 1.5E-03		
Phase delay (usec)	5.82966933302E+03		Apriori clockrate (us/s)		-1.6594950E-07		Resid phdelay (usec)		-5.78169E-07	+/- 6.4E-07		
Delay rate (us/s)	8.03903301600E-01		Apriori rate (us/s)		8.03907473408E-01		Resid rate (us/s)		-4.17181E-06	+/- 2.7E-09		
Total phase (deg)			Apriori accel (us/s/s)		-4.56449080141E-05		Resid phase (deg)		-17.9	+/- 19.9		
	RMS	Theor.	Amplitude	0.110 +/- 0.019		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	41.2	47.8	Search (2048X32)	0.100		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	63.6	83.4	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	24.4	28.2	Inc. seg. avg.	0.107		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	43.2	49.2	Inc. frq. avg.	0.103		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 101.0 el 49.4 pa -61.6	g: az 172.9 el 29.6 pa -1.6		u,v (fr/asec) -4862.860 -4963.140						simultaneous interpolator			
Control file: cf_1234_gmva		Input file: /Exps/c192c/v1_CygA2/1234/No0080/fg..127OJ7		Output file: /Exps/c192c/v1_CygA2/1234/No0080/fg.W.105.127OJ7								

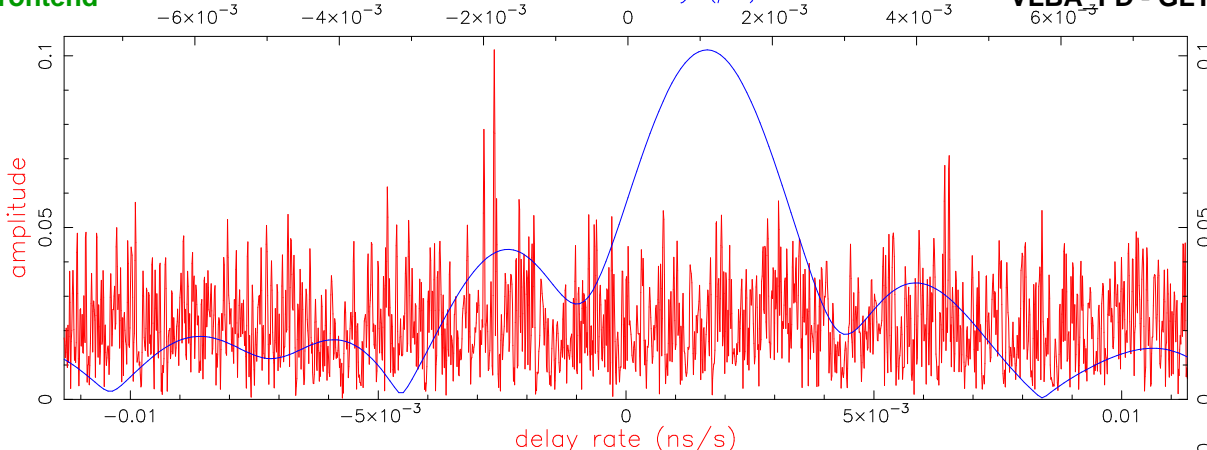
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, fg

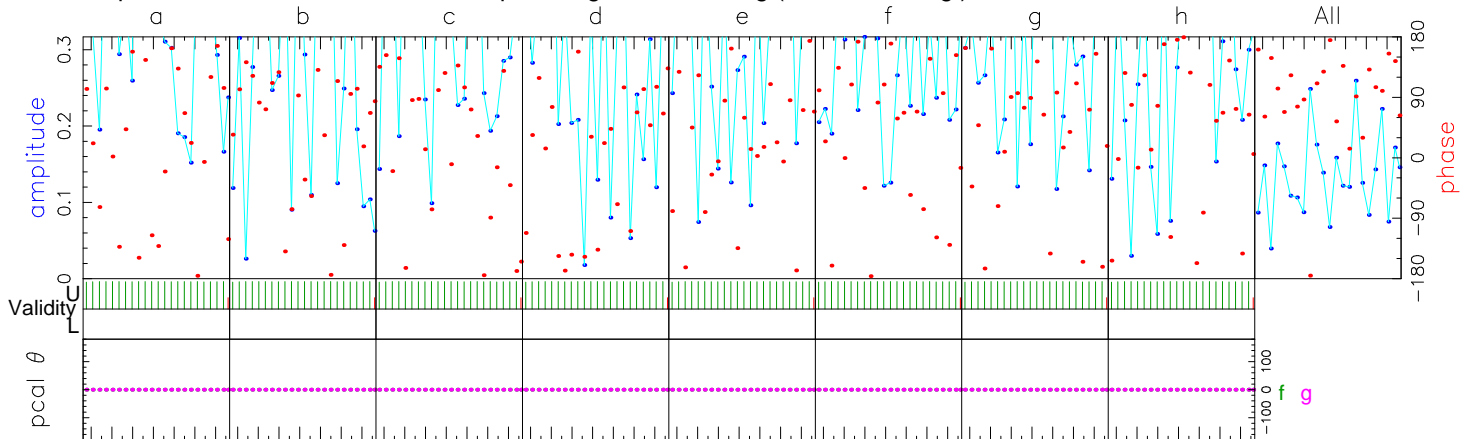
VLBA_FD - GLT, fgroupp W, pol LR

multiband delay (μ s)



Fringe quality 0
 SNR 5.7
 Int time 410.974
 Amp 0.106
 Phase 105.4
 PFD 9.2e-01
 Delays (us)
 SBD -0.252444
 MBD 0.001097
 Fringe rate (Hz)
 -0.229103
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134144
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
146.2	103.7	108.0	81.0	61.5	107.1	113.5	127.0	127.0	Phase	105.4
0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
242.6	409.1	298.3	183.6	406.8	122.0	423.5	464.3	464.3	Sbd box	192.4
U/L 807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g 0	0	0	0	0	0	0	0	0	PC freqs	
f:g 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fg 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g 1000	1000	1000	1000	1000	1000	1000	1000	1000		
f W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W07UL	Chan ids	
g W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.82942043097E+03		Apriori delay (usec)	5.82966933360E+03		Resid mbdelay (usec)	1.09738E-03		+/-	1.9E-04
Sband delay (usec)	5.82941688960E+03		Apriori clock (usec)	-8.3156186E-01		Resid sbdelay (usec)	-2.52444E-01		+/-	1.5E-03
Phase delay (usec)	5.82966933700E+03		Apriori clockrate (us/s)	-1.6594950E-07		Resid phdelay (usec)	3.39861E-06		+/-	6.5E-07
Delay rate (us/s)	8.03904813750E-01		Apriori rate (us/s)	8.03907473408E-01		Resid rate (us/s)	-2.65966E-06		+/-	2.7E-09
Total phase (deg)		248.0	Apriori accel (us/s/s)	-4.56449080141E-05		Resid phase (deg)	105.4		+/-	20.0
	RMS	Theor.	Amplitude	0.106 +/- 0.018		Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	44.8	48.0	Search (2048X32)	0.098		Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	62.8	83.8	Interp.	0.000		Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	28.1	28.3	Inc. seg. avg.	0.104		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	19.4	49.4	Inc. frq. avg.	0.100		Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00
f: az 101.0 el 49.4 pa -61.6			g: az 172.9 el 29.6 pa -1.6			u,v (fr/asec) -4862.860 -4963.140				simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c192c/v1_CygA2/1234/No0080/fg..1270J7			Output file: /Exps/c192c/v1_CygA2/1234/No0080/fg.W.127.1270J7				

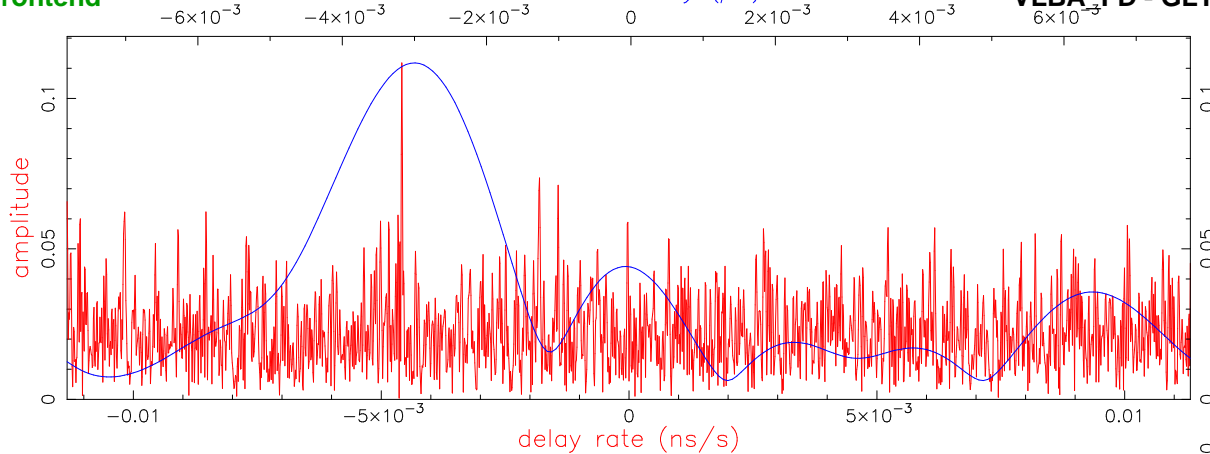
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, fg

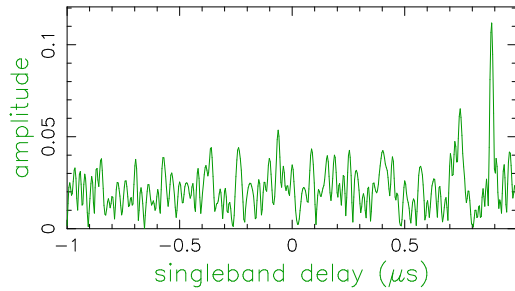
VLBA_FD - GLT, fgroupp W, pol RL

multiband delay (μ s)

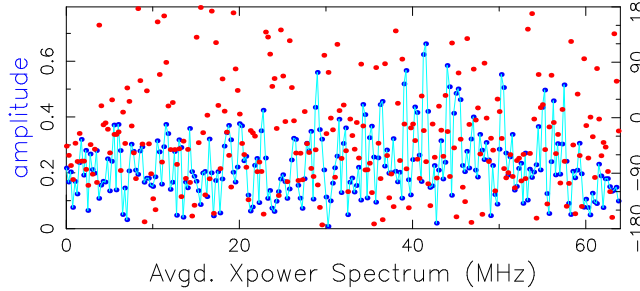


Fringe quality 0

SNR 6.2
Int time 410.865
Amp 0.121
Phase 102.2
PFD 1.1e-01
Delays (us)
SBD 0.885653
MBD -0.003015
Fringe rate (Hz)
-0.395087
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

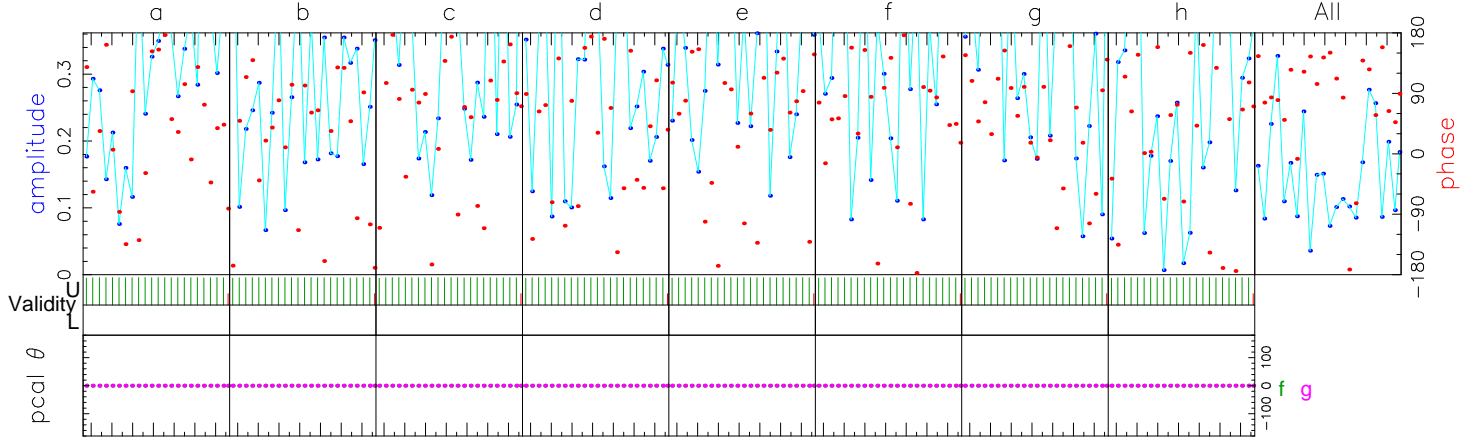


delay rate (ns/s)



Exp. c192c
Yr:day 16383
Start 2020:070:123456
Stop 2020:071:134149
FRT 2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
g	0	0	0	0	0	0	0	0		
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

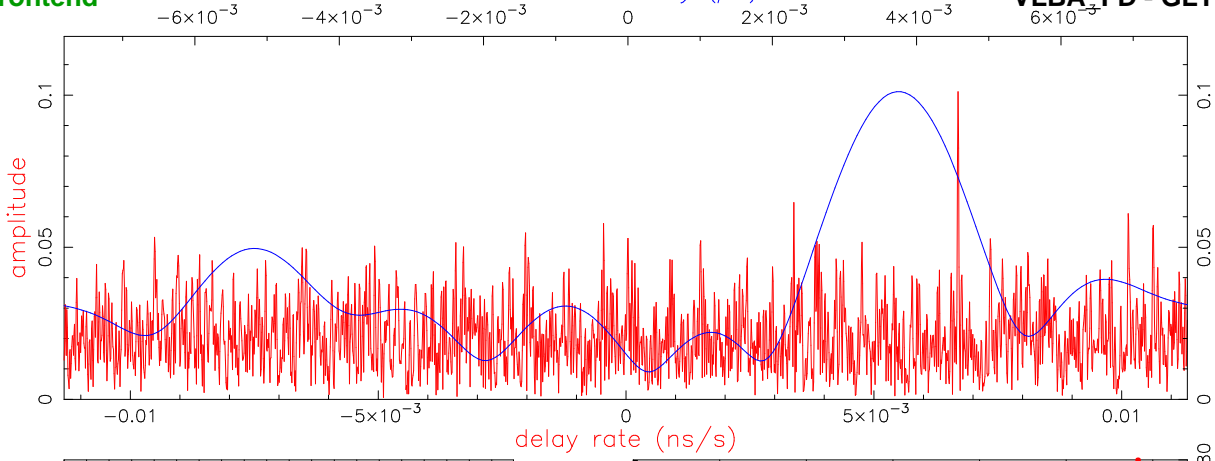
Group delay (usec)(sbd)	5.83055694318E+03	Apriori delay (usec)	5.82966933360E+03	Resid mbdelay (usec)	-3.01541E-03	+/-	1.7E-04
Sband delay (usec)	5.83055498660E+03	Apriori clock (usec)	-8.3156186E-01	Resid sbdelay (usec)	8.85653E-01	+/-	1.4E-03
Phase delay (usec)	5.82966933689E+03	Apriori clockrate (us/s)	-1.6594950E-07	Resid phdelay (usec)	3.29606E-06	+/-	5.9E-07
Delay rate (us/s)	8.03902886837E-01	Apriori rate (us/s)	8.03907473408E-01	Resid rate (us/s)	-4.58657E-06	+/-	2.5E-09
Total phase (deg)	244.8	Apriori accel (us/s/s)	-4.56449080141E-05	Resid phase (deg)	102.2	+/-	18.4

ph/seg (deg)	58.0	RMS	44.0	Theor.	58.0	Amplitude	0.121 +/- 0.019	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.0	Search (2048X32)	0.108	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)	20.8	Inc. seg. avg.	0.125	Inc. frq. avg.	0.113	Bits/sample:	2x2	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011	0.011		
amp/frq (%)	41.9	Inc. frq. avg.	0.113	u,v (fr/asec)	-4862.860 -4963.140	Data rate (Mb/s):	2048	nlags:	256	ion window (TEC)	0.00	0.00		

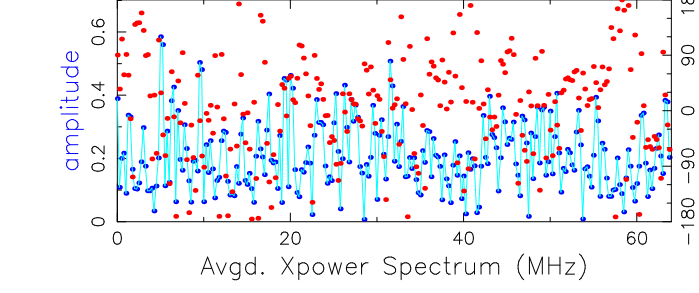
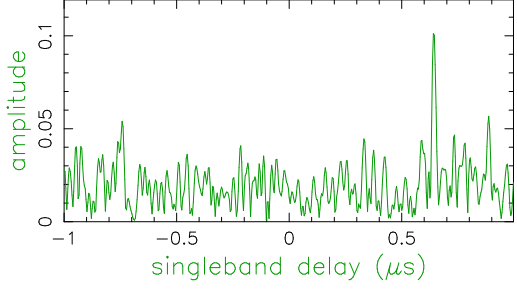
f: az 101.0 el 49.4 pa -61.6 g: az 172.9 el 29.6 pa -1.6 u,v (fr/asec) -4862.860 -4963.140 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fg..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fg.W.145.1270J7

multiband delay (μ s)

Fringe quality 0

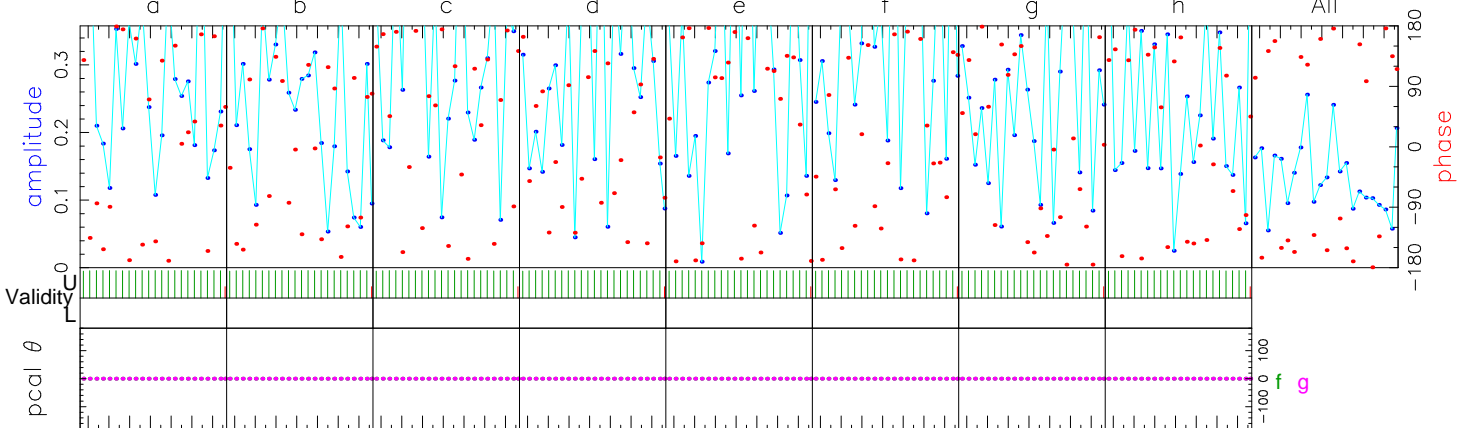


SNR 5.7
 Int time 410.866
 Amp 0.119
 Phase 173.2
 PFD 9.5e-01
 Delays (us)
 SBD 0.642340
 MBD 0.003726
 Fringe rate (Hz)
 0.577788
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134135
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



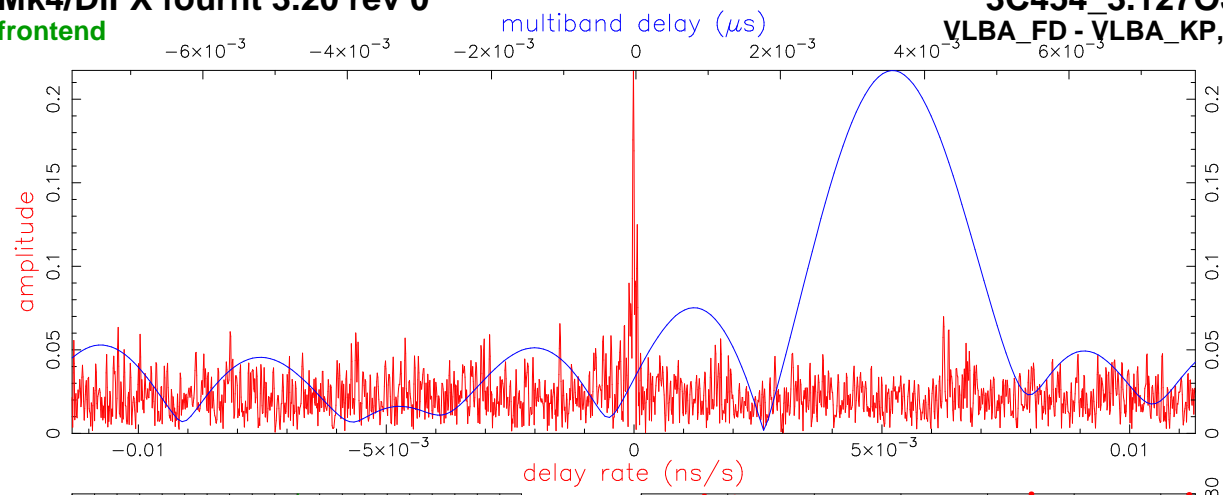
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
g	0	0	0	0	0	0	0	0		
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	5.83031368449E+03	Apriori delay (usec)		5.82966933360E+03	Resid mbdelay (usec)		3.72589E-03	+/-	1.9E-04	
Sband delay (usec)	5.83031167385E+03	Apriori clock (usec)		-8.3156186E-01	Resid sbdelay (usec)		6.42340E-01	+/-	1.5E-03	
Phase delay (usec)	5.82966933918E+03	Apriori clockrate (us/s)		-1.6594950E-07	Resid phdelay (usec)		5.58462E-06	+/-	6.5E-07	
Delay rate (us/s)	8.03914180952E-01	Apriori rate (us/s)		8.03907473408E-01	Resid rate (us/s)		6.70754E-06	+/-	2.7E-09	
Total phase (deg)		315.7	Apriori accel (us/s/s)		-4.56449080141E-05	Resid phase (deg)		173.2	+/-	20.1

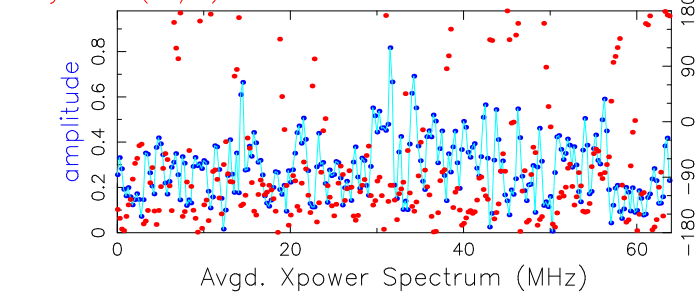
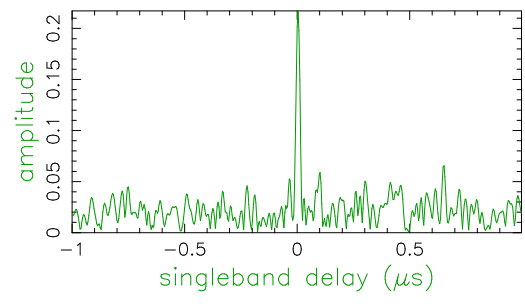
ph/seg (deg)	42.0	48.2	Amplitude	0.119 +/- 0.021	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5						
amp/seg (%)	58.6	84.1	Search (2048X32)	0.100	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000			
ph/frq (deg)	38.5	28.4	Inc. seg. avg.	0.115	Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008	0.008		
amp/frq (%)	53.5	49.6	Inc. frq. avg.	0.111	Sample rate(MISamp/s): 128		Data rate(Mb/s): 2048		dr window (ns/s)	-0.011	0.011		
f: az 101.0 el 49.4 pa -61.6		g: az 172.9 el 29.6 pa -1.6		u,v (fr/asec) -4862.860 -4963.140		nlags: 256		t_cohere infinite		ion window (TEC)		0.00	0.00

Mk4/DiFX fourfit 3.20 rev 0
frontend

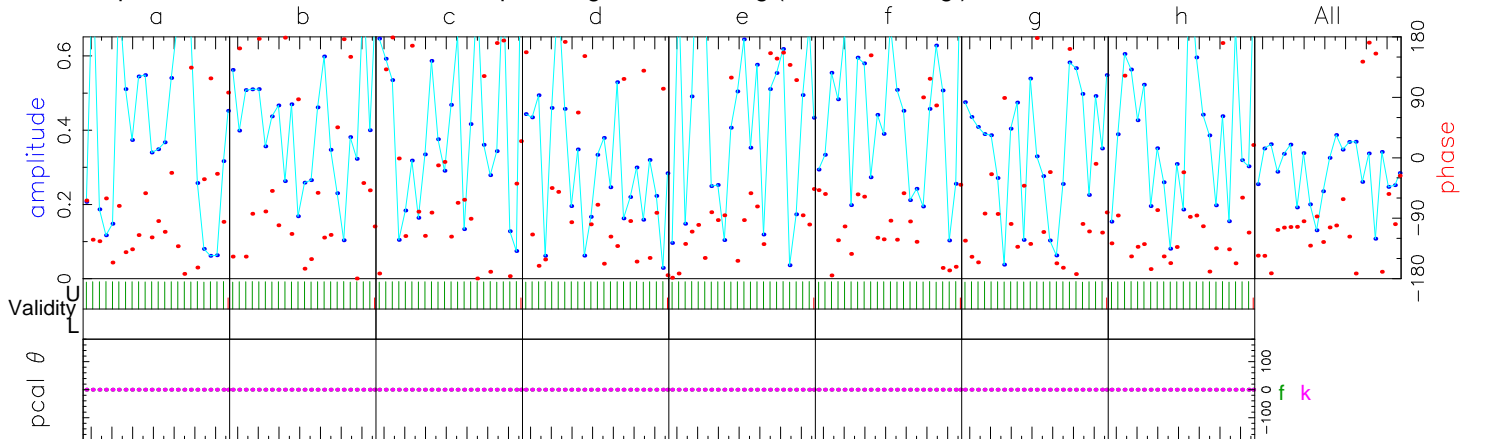
3C454_3.1270J7, No0080, fk
VLBA_FD - VLBA_KP, fgroup W, pol RR



Fringe quality 9
SNR 12.0
Int time 408.867
Amp 0.217
Phase -123.9
PFD 1.6e-24
Delays (us)
SBD 0.003673
MBD 0.003553
Fringe rate (Hz) -0.001094
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134140
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-116.5	-117.3	-149.1	-128.3	-130.9	-109.7	-121.5	-124.7	Phase	-123.9
	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	Ampl.	0.2
	257.3	257.5	256.8	257.4	258.2	257.9	258.6	258.7	Sbd box	257.9
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.69593710407E+03				1.69593355085E+03				Resid mbdelay (usec)	3.55322E-03 +/- 9.0E-05
Sband delay (usec)	1.69593722360E+03				8.7444746E-01				Resid sbdelay (usec)	3.67275E-03 +/- 7.2E-04
Phase delay (usec)	1.69593354686E+03				1.0362949E-07				Resid phdelay (usec)	-3.99634E-06 +/- 3.1E-07
Delay rate (us/s)	-1.08996211435E-01				-1.08996198729E-01				Resid rate (us/s)	-1.27059E-08 +/- 1.3E-09
Total phase (deg)			-98.6		-9.63584515790E-06				Resid phase (deg)	-123.9 +/- 9.5
	RMS	Theor.	Amplitude	0.217 +/- 0.018					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	44.9	22.9	Search (2048X32)	0.214					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	49.1	39.9	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	13.0	13.5	Inc. seg. avg.	0.269					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	16.8	23.5	Inc. frq. avg.	0.215					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 101.0 el 49.4 pa -61.6 k: az 97.3 el 42.7 pa -61.1 u,v (fr/asec) 636.175 -391.837 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fk..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fk.W.108.1270J7

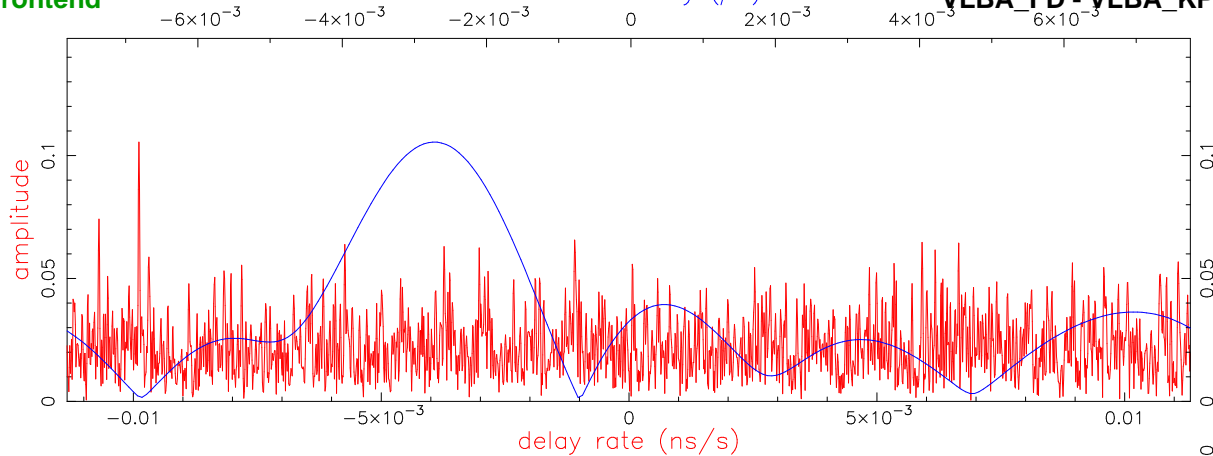
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.127OJ7, No0080, fk

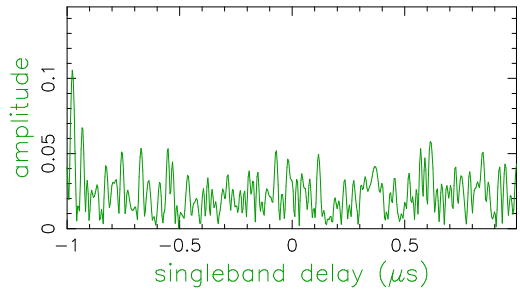
VLBA_FD - VLBA_KP, fgroup W, pol LR

multiband delay (μ s)

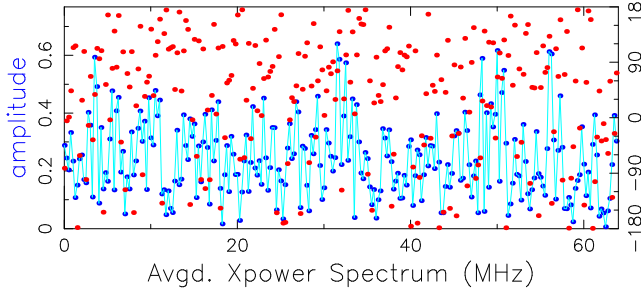


Fringe quality 0

SNR 5.8
 Int time 408.868
 Amp 0.148
 Phase 33.5
 PFD 7.4e-01
 Delays (us)
 SBD -0.976245
 MBD -0.002725
 Fringe rate (Hz)
 -0.852575
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

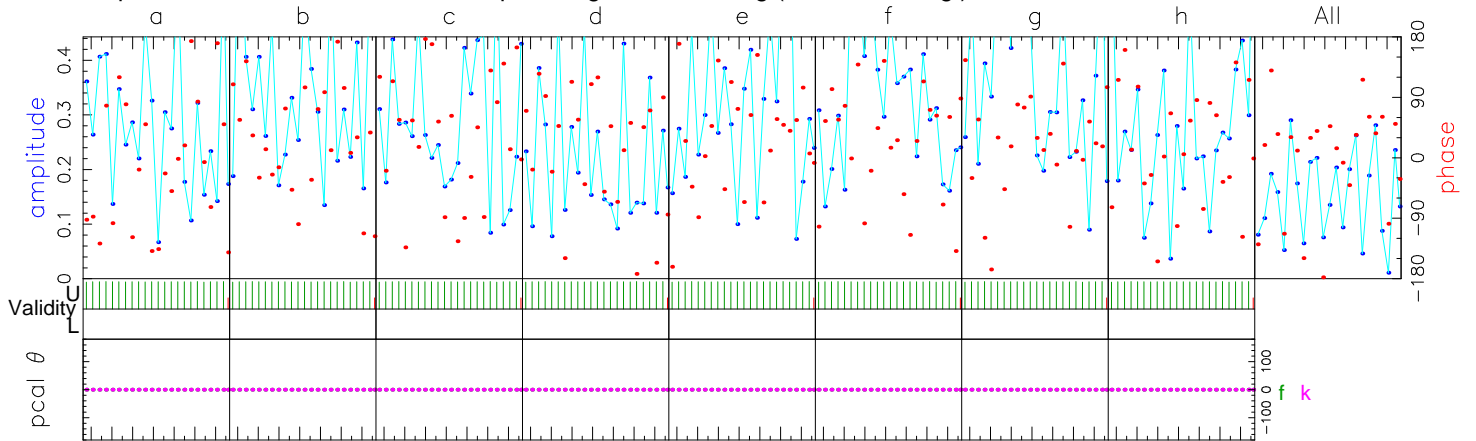


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134144
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-5.0	31.2	59.2	63.7	26.4	32.8	33.3	9.8	Phase	33.5
	0.1	0.2	0.1	0.2	0.2	0.1	0.3	0.1	Ampl.	0.1
	70.2	7.6	188.7	305.6	5.5	41.2	7.2	76.7	Sbd box	7.1
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 1.69496207548E+03 Apriori delay (usec) 1.69593355085E+03 Resid mbdelay (usec) -2.72538E-03 +/- 1.9E-04
 Sband delay (usec) 1.69495730560E+03 Apriori clock (usec) 8.7444746E-01 Resid sbdelay (usec) -9.76245E-01 +/- 1.5E-03
 Phase delay (usec) 1.69593355193E+03 Apriori clockrate (us/s) 1.0362949E-07 Resid phdelay (usec) 1.07947E-01 +/- 6.3E-07
 Delay rate (us/s) -1.09006096275E-01 Apriori rate (us/s) -1.08996198729E-01 Resid rate (us/s) -9.89755E-06 +/- 2.7E-09
 Total phase (deg) 58.8 Apriori accel (us/s/s) -9.63584515790E-06 Resid phase (deg) 33.5 +/- 19.6

RMS Theor. Amplitude 0.148 +/- 0.025 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 80.9 47.1 Search (2048X32) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 87.7 82.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 24.7 27.8 Inc. seg. avg. 0.160 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 48.3 48.5 Inc. frq. avg. 0.138 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 101.0 el 49.4 pa -61.6 k: az 97.3 el 42.7 pa -61.1 u,v (fr/asec) 636.175 -391.837 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fk..127OJ7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fk.W.128.127OJ7

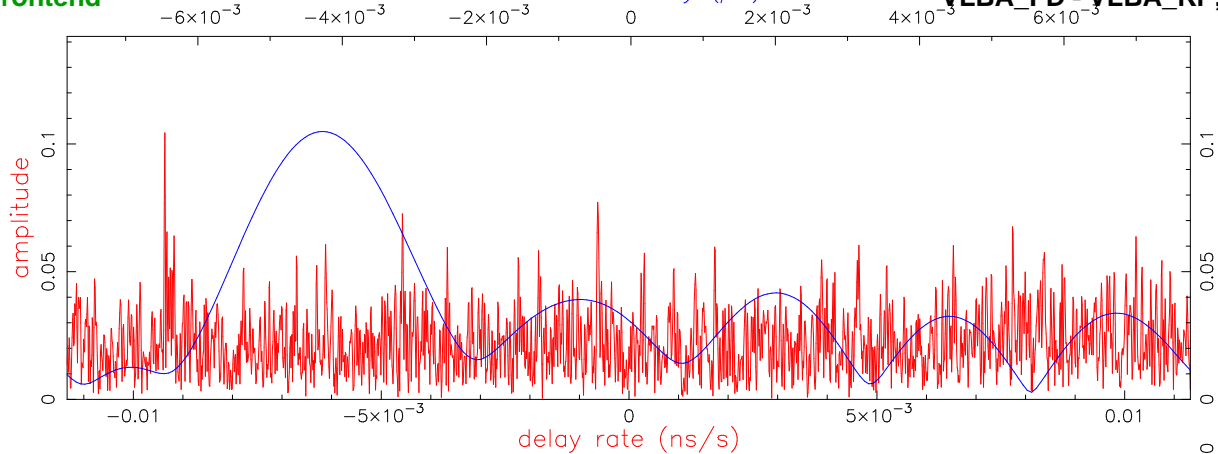
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.127OJ7, No0080, fk

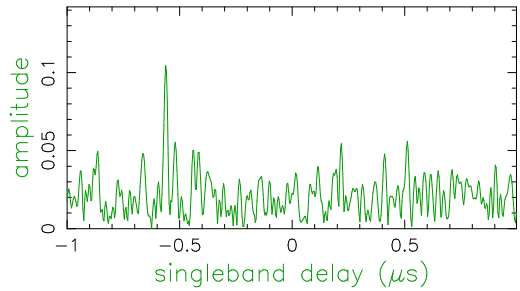
VLBA_FD - VLBA_KP, fgroup W, pol RL

multiband delay (μs)

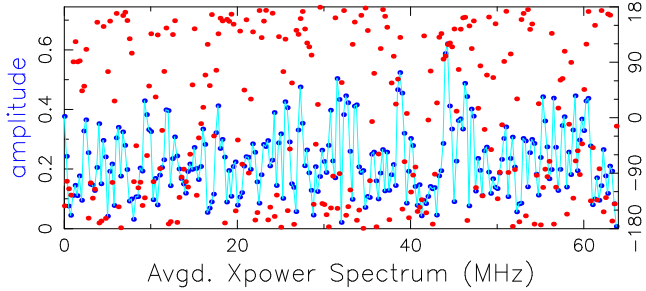


Fringe quality 0

SNR 5.8
 Int time 408.867
 Amp 0.142
 Phase -123.6
 PFD 7.6e-01
 Delays (us)
 SBD -0.561208
 MBD -0.004157
 Fringe rate (Hz)
 -0.807830
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

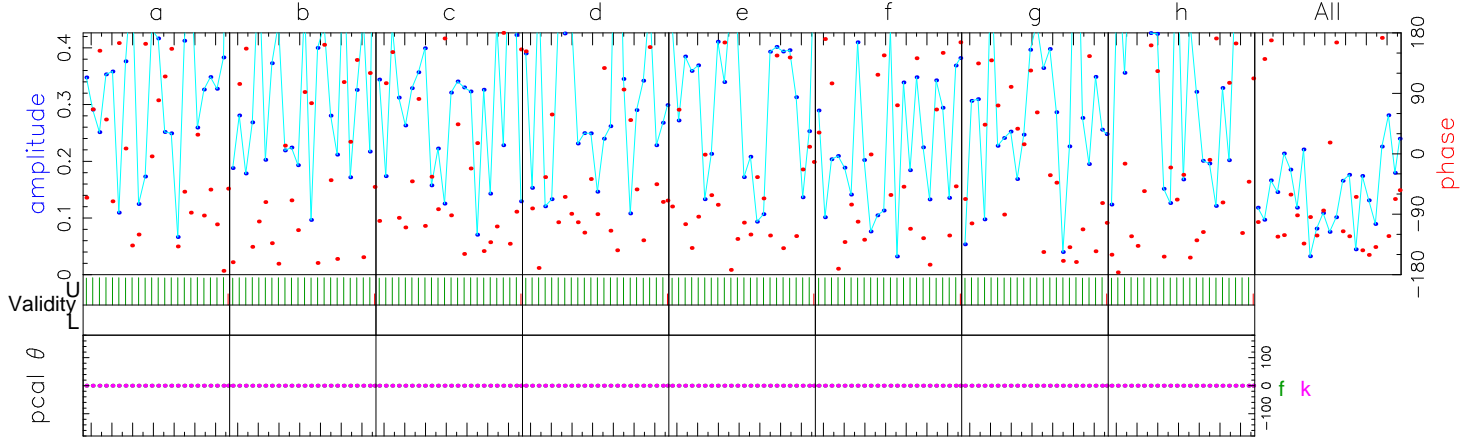


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134149
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

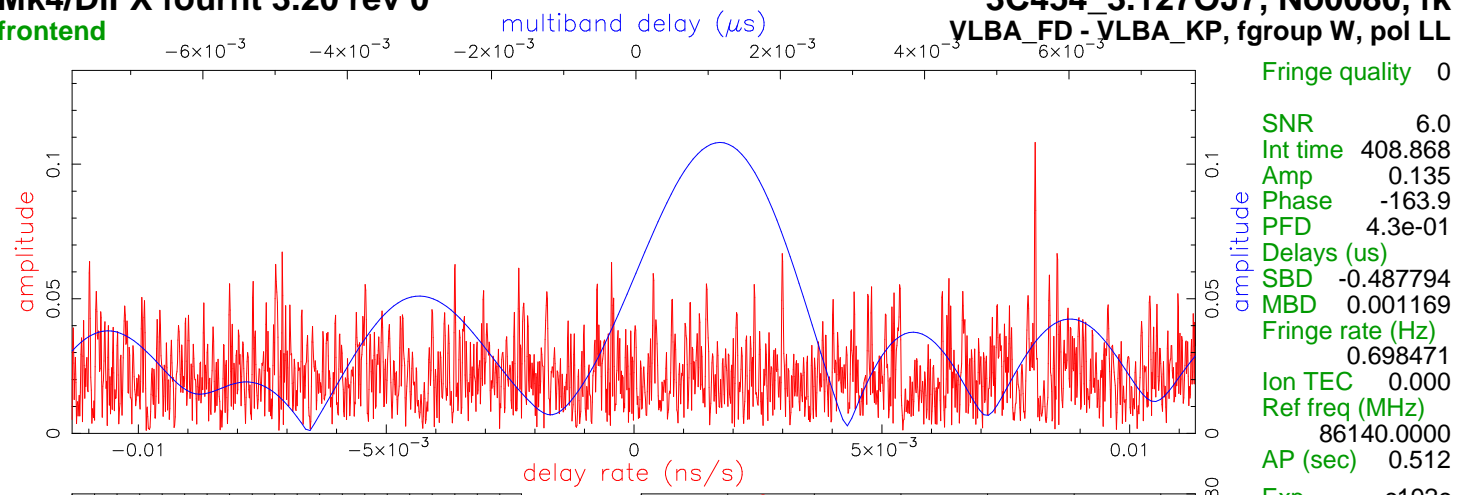


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.69536689368E+03	Apriori delay (usec)	1.69593355085E+03	Resid mbdelay (usec)	-4.15717E-03	+/-	1.9E-04
Sband delay (usec)	1.69537234285E+03	Apriori clock (usec)	8.7444746E-01	Resid sbdelay (usec)	-5.61208E-01	+/-	1.5E-03
Phase delay (usec)	1.69593354687E+03	Apriori clockrate (us/s)	1.0362949E-07	Resid phdelay (usec)	-3.98421E-06	+/-	6.3E-07
Delay rate (us/s)	-1.09005576836E-01	Apriori rate (us/s)	-1.08996198729E-01	Resid rate (us/s)	-9.37811E-06	+/-	2.7E-09
Total phase (deg)	-98.2	Apriori accel (us/s/s)	-9.63584515790E-06	Resid phase (deg)	-123.6	+/-	19.7

ph/seg (deg)	52.0	Theor.	47.2	Amplitude	0.142 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	69.6		82.3	Search (2048X32)	0.104	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	34.1		27.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	39.1		48.5	Inc. seg. avg.	0.145	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.139	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 101.0 el 49.4 pa -61.6 k: az 97.3 el 42.7 pa -61.1 u,v (fr/asec) 636.175 -391.837 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fk..127OJ7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fk.W.148.127OJ7



Fringe quality 0

SNR 6.0

Int time 408.868

Amp 0.135

Phase -163.9

PFD 4.3e-01

Delays (us)

SBD -0.487794

MBD 0.001169

Fringe rate (Hz) 0.698471

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 020636.66

Stop 021329.84

FRT 021000.00

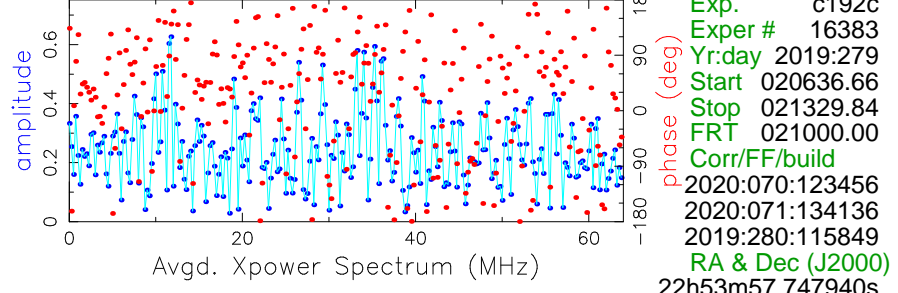
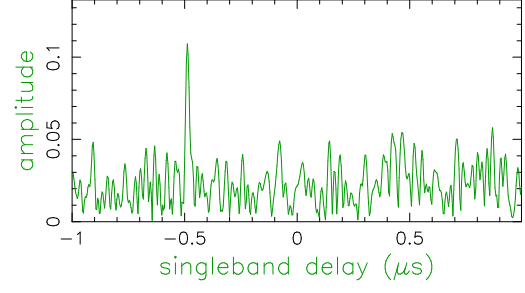
Corr/FF/build

2020:070:123456

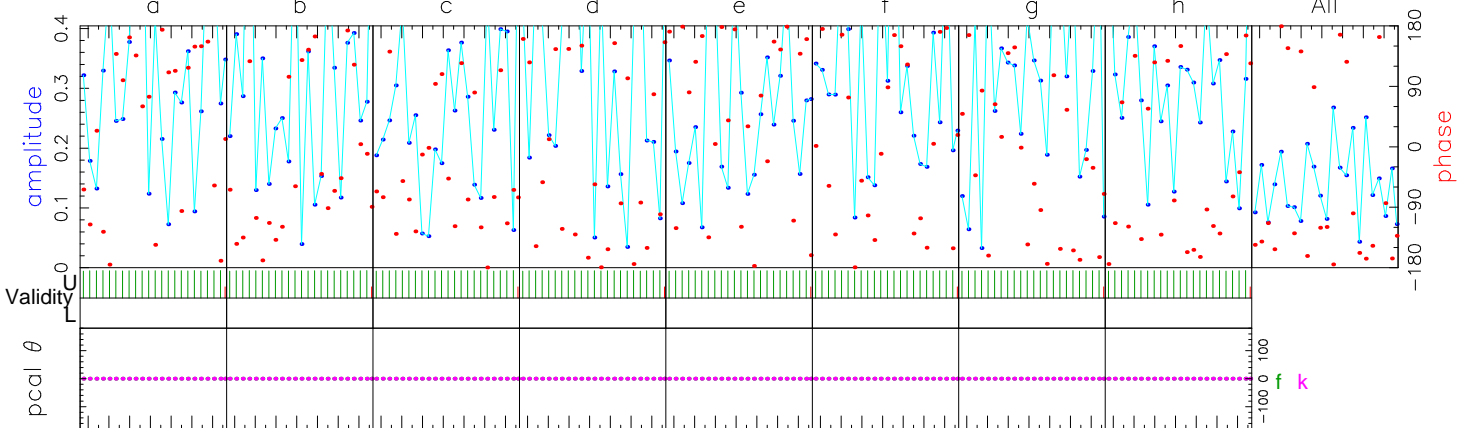
2020:071:134136

2019:280:115849

RA & Dec (J2000) 22h53m57.747940s +16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



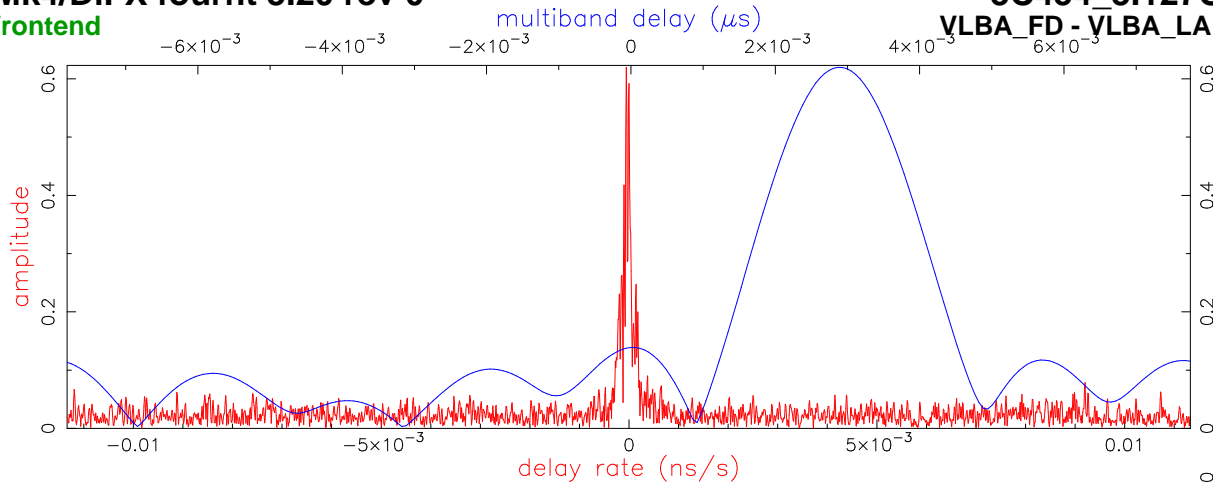
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	1.69545034461E+03				1.69593355085E+03				1.16876E-03	+/- 1.8E-04
Sband delay (usec)	1.69544575685E+03				8.7444746E-01				-4.87794E-01	+/- 1.4E-03
Phase delay (usec)	1.69593354557E+03				1.0362949E-07				-5.28429E-06	+/- 6.2E-07
Delay rate (us/s)	-1.08988090178E-01				-1.08996198729E-01				8.10855E-06	+/- 2.6E-09
Total phase (deg)			-138.5		-9.63584515790E-06				-163.9	+/- 19.1
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
SampCntNorm: enabled										
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) 44.4 45.9										
amp/seg (%) 63.9 80.1										
ph/frq (deg) 30.9 27.1										
amp/frq (%) 38.2 47.3										
Search (2048X32) 0.102										
Interp. 0.000										
Inc. seg. avg. 0.135										
Inc. frq. avg. 0.133										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256 t_cohere infinite										
sb window (us) -1.000 1.000										
mb window (us) -0.008 0.008										
dr window (ns/s) -0.011 0.011										
ion window (TEC) 0.00 0.00										
f: az 101.0 el 49.4 pa -61.6										
k: az 97.3 el 42.7 pa -61.1										
u,v (fr/asec) 636.175 -391.837										
Control file: cf_1234_gmva										
Input file: /Exps/c192c/v1_CygA2/1234/No0080/fk..1270J7										
Output file: /Exps/c192c/v1_CygA2/1234/No0080/fk.W.88.1270J7										

Mk4/DiFX fourfit 3.20 rev 0

frontend

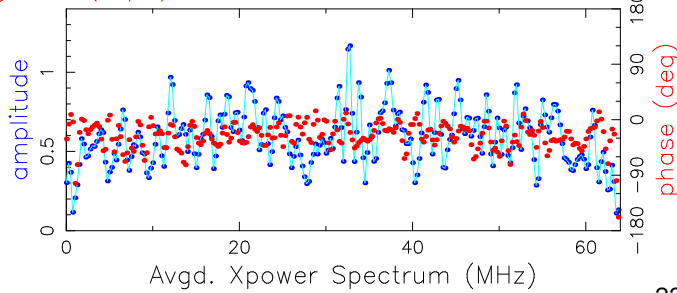
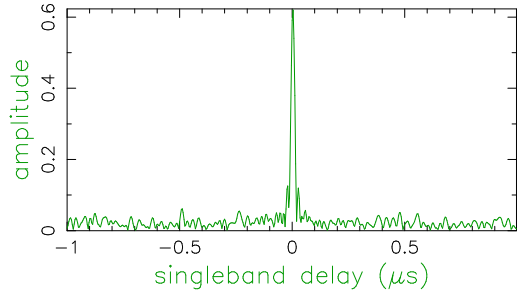
3C454_3.1270J7, No0080, fl

VLBA_FD - VLBA_LA, fgroup W, pol RR



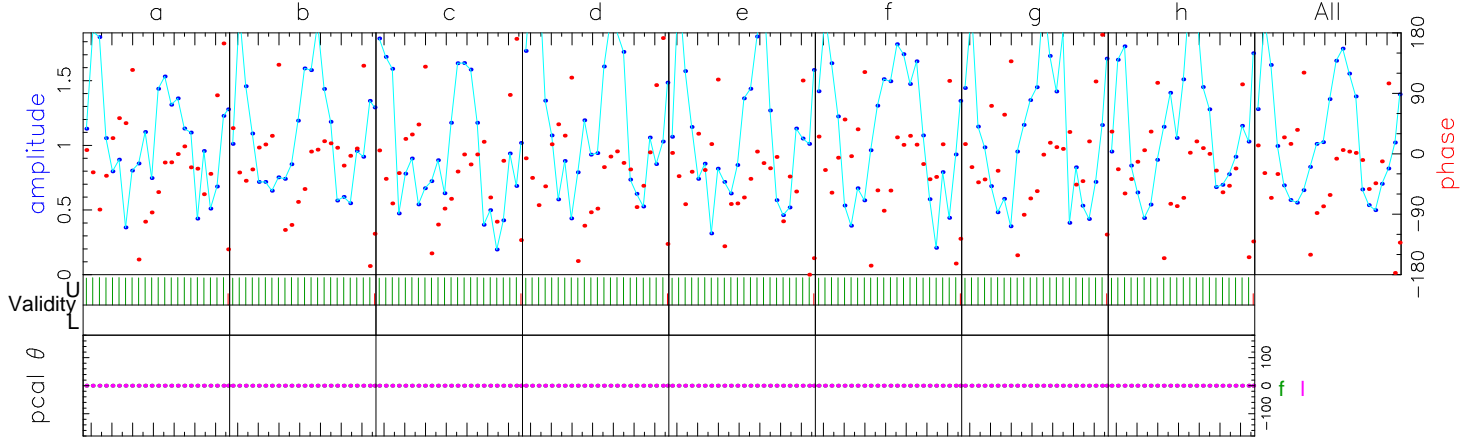
Fringe quality 7

SNR 34.5
 Int time 410.148
 Amp 0.623
 Phase -23.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.002964
 MBD 0.002870
 Fringe rate (Hz)
 -0.005054
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134140
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-28.8	-14.4	-24.6	-31.4	-34.3	-12.4	-17.4	-25.2	Phase	-23.7
	0.6	0.6	0.5	0.7	0.7	0.7	0.6	0.6	Ampl.	0.6
	258.0	257.5	257.6	257.7	257.3	257.9	257.9	258.5	Sbd box	257.8
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	7.57428224564E+02		Apriori delay (usec)		7.57425354962E+02		Resid mbdelay (usec)		2.86960E-03	+/- 3.1E-05
Sband delay (usec)	7.57428318712E+02		Apriori clock (usec)		1.2441895E+00		Resid sbdelay (usec)		2.96375E-03	+/- 2.5E-04
Phase delay (usec)	7.57425354199E+02		Apriori clockrate (us/s)		2.6052251E-07		Resid phdelay (usec)		-7.63345E-07	+/- 1.1E-07
Delay rate (us/s)	1.13372143780E-02		Apriori rate (us/s)		1.13372730530E-02		Resid rate (us/s)		-5.86749E-08	+/- 4.5E-10
Total phase (deg)	3.9		Apriori accel (us/s/s)		-6.39000711623E-06		Resid phase (deg)		-23.7	+/- 3.3

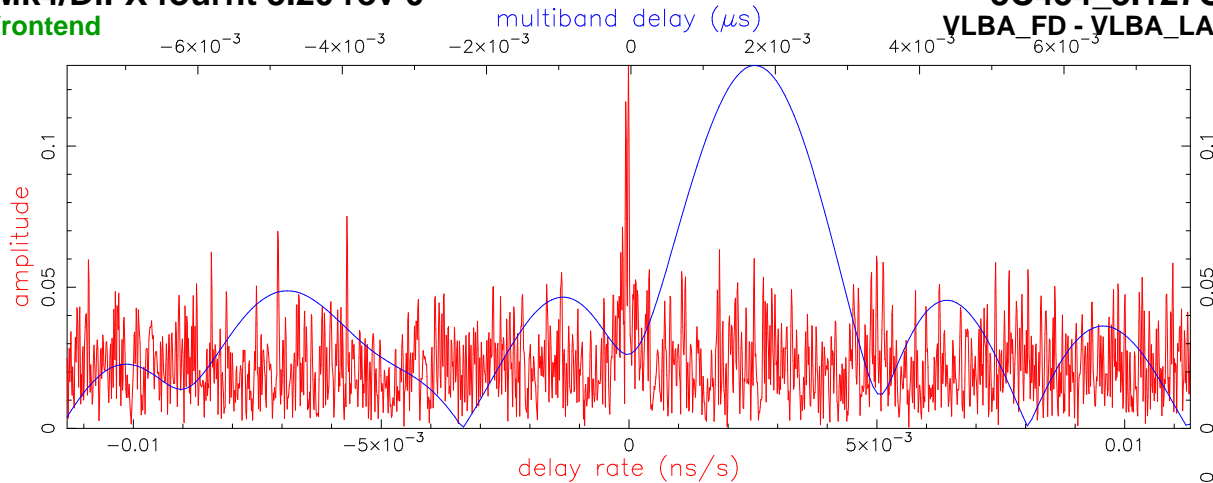
	RMS	Theor.	Amplitude	0.623 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	68.4	8.0	Search (2048X32)	0.611	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/seg (%)	99.2	13.9	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	8.7	4.7	Inc. seg. avg.	1.050	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00
amp/frq (%)	8.8	8.2	Inc. frq. avg.	0.623				

f: az 101.0 el 49.4 pa -61.6 l: az 104.8 el 46.4 pa -54.4 u,v (fr/asec) -77.155 -784.097 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fl..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fl.W.111.1270J7

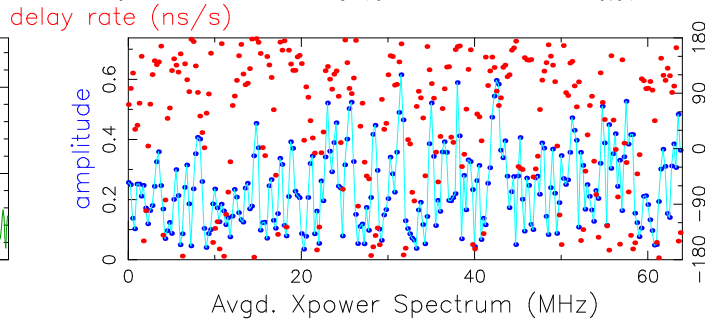
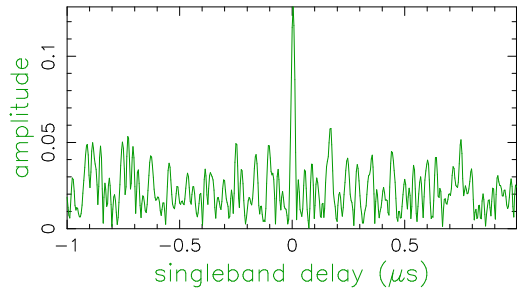
Mk4/DiFX fourfit 3.20 rev 0
frontend

3C454_3.1270J7, No0080, fl
VLBA_FD - VLBA_LA, fgroup W, pol LR



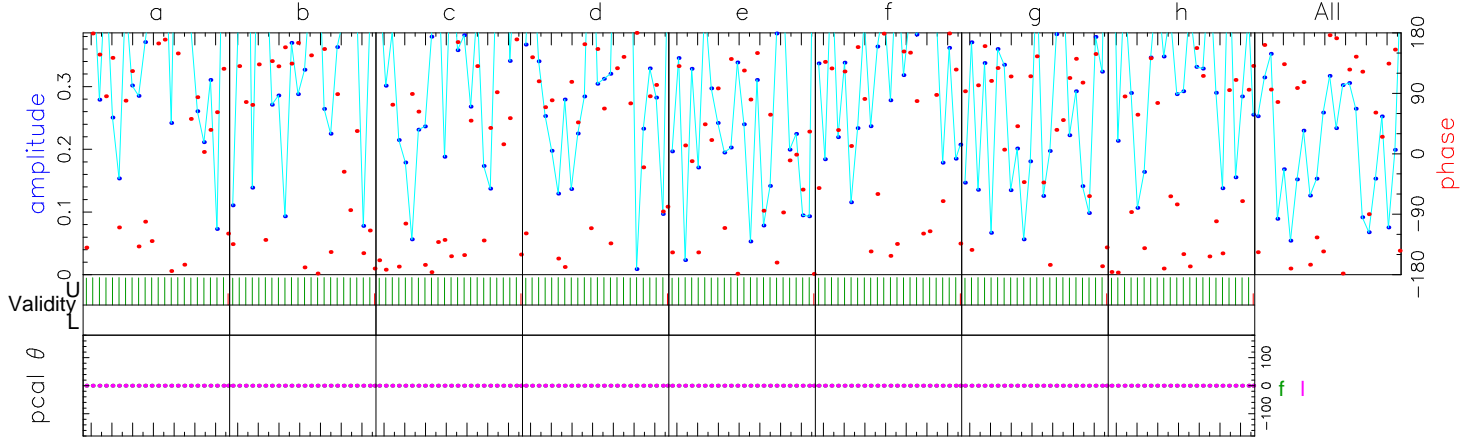
Fringe quality 0

SNR 7.1
Int time 410.149
Amp 0.129
Phase 152.9
PFD 3.2e-04
Delays (us)
SBD 0.004066
MBD 0.001719
Fringe rate (Hz)
-0.000629
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134145
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

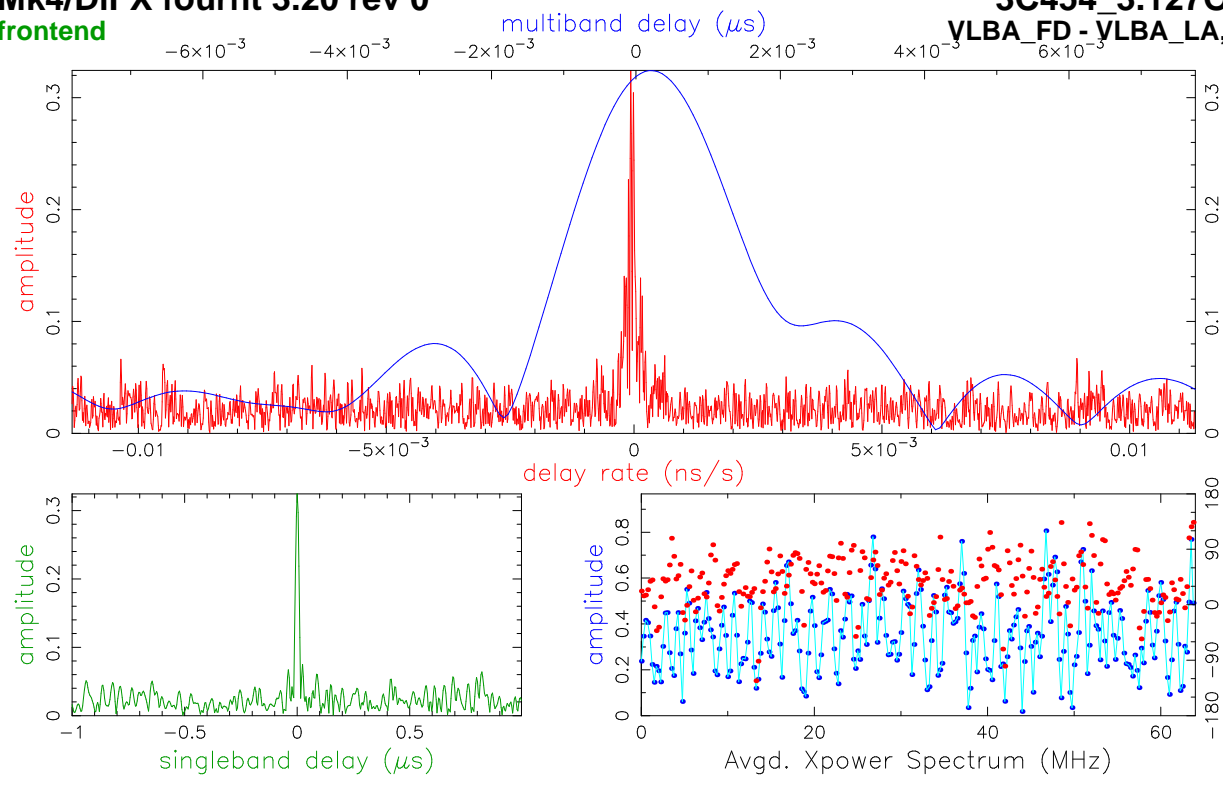
Group delay (usec)(sbd)	7.57427074120E+02	Apriori delay (usec)	7.57425354962E+02	Resid mbdelay (usec)	1.71916E-03	+/-	1.5E-04
Sband delay (usec)	7.57429420462E+02	Apriori clock (usec)	1.2441895E+00	Resid sbdelay (usec)	4.06550E-03	+/-	1.2E-03
Phase delay (usec)	7.57425359893E+02	Apriori clockrate (us/s)	2.6052251E-07	Resid phdelay (usec)	4.93069E-06	+/-	5.2E-07
Delay rate (us/s)	1.13372657477E-02	Apriori rate (us/s)	1.13372730530E-02	Resid rate (us/s)	-7.30523E-09	+/-	2.2E-09
Total phase (deg)	180.4	Apriori accel (us/s/s)	-6.39000711623E-06	Resid phase (deg)	152.9	+/-	16.1

ph/seg (deg)	58.3	Theor.	38.6	Amplitude	0.129 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	94.2	Search (2048X32)	0.123	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	16.9	Inc. seg. avg.	0.167	Inc. frq. avg.	0.123	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	36.8	Inc. frq. avg.	0.123			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	
						nlags:	256	t_cohere	infinite	

f: az 101.0 el 49.4 pa -61.6 l: az 104.8 el 46.4 pa -54.4 u,v (fr/asec) -77.155 -784.097 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fl..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fl.W.131.1270J7

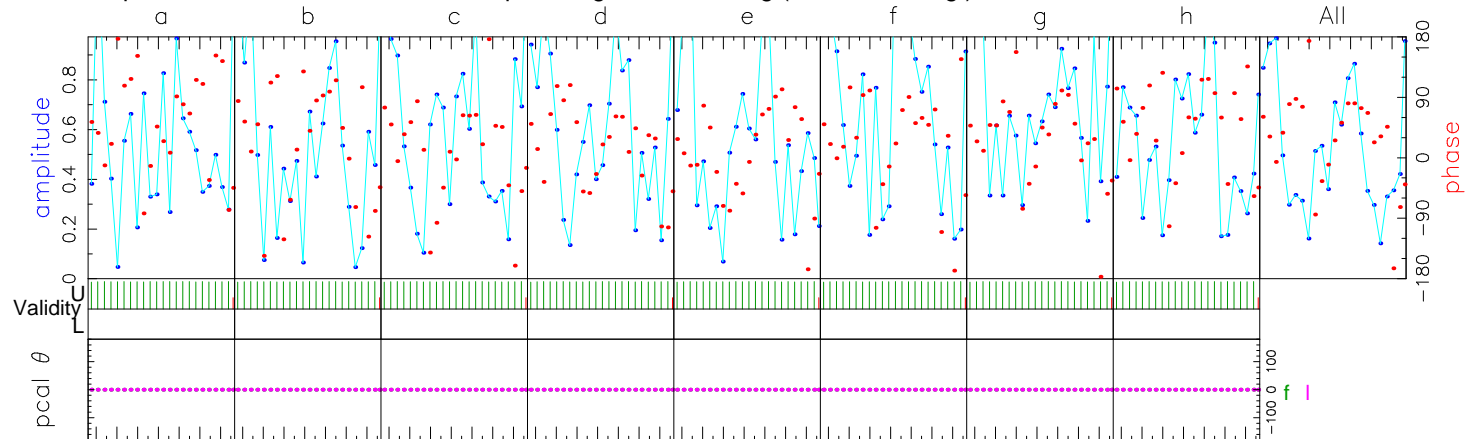
Mk4/DiFX fourfit 3.20 rev 0
frontend

3C454_3.1270J7, No0080, fl
VLBA_FD - VLBA_LA, fgroup W, pol RL



Fringe quality 9
SNR 18.0
Int time 410.149
Amp 0.324
Phase 38.4
PFD 0.0e+00
Delays (us)
SBD 0.000197
MBD 0.000215
Fringe rate (Hz)
-0.005406
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134150
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

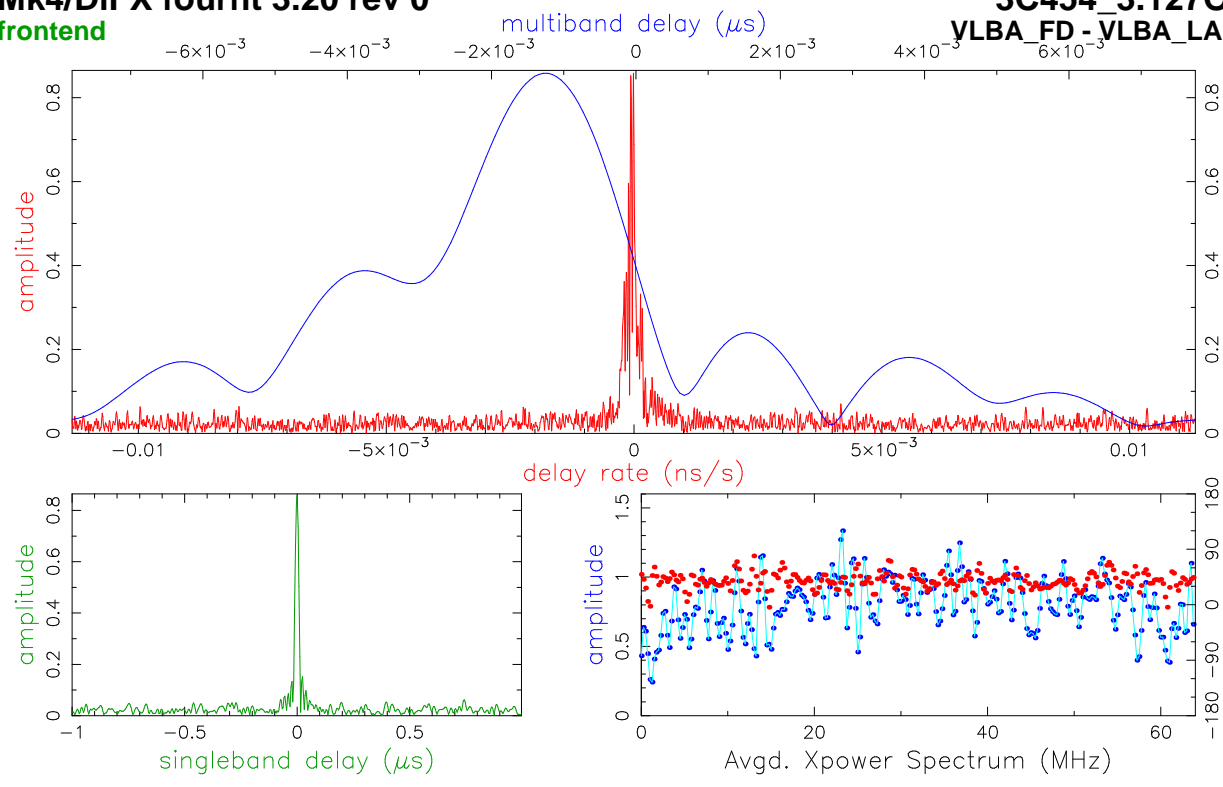


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	0.3
l	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.1
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	7.57425570191E+02		Apriori delay (usec)		7.57425354962E+02		Resid mbdelay (usec)		2.15228E-04	+/- 6.0E-05
Sband delay (usec)	7.57425551962E+02		Apriori clock (usec)		1.2441895E+00		Resid sbdelay (usec)		1.97000E-04	+/- 4.8E-04
Phase delay (usec)	7.57425356201E+02		Apriori clockrate (us/s)		2.6052251E-07		Resid phdelay (usec)		1.23875E-06	+/- 2.1E-07
Delay rate (us/s)	1.13372102981E-02		Apriori rate (us/s)		1.13372730530E-02		Resid rate (us/s)		-6.27548E-08	+/- 8.6E-10
Total phase (deg)	65.9		Apriori accel (us/s/s)		-6.39000711623E-06		Resid phase (deg)		38.4	+/- 6.4

ph/seg (deg) 65.2 15.3 Search (2048X32) 0.309 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 97.7 26.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 18.8 9.0 Inc. seg. avg. 0.503 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 22.9 15.7 Inc. frq. avg. 0.333 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 l: az 104.8 el 46.4 pa -54.4 u,v (fr/asec) -77.155 -784.097 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fl..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fl.W.150.1270J7

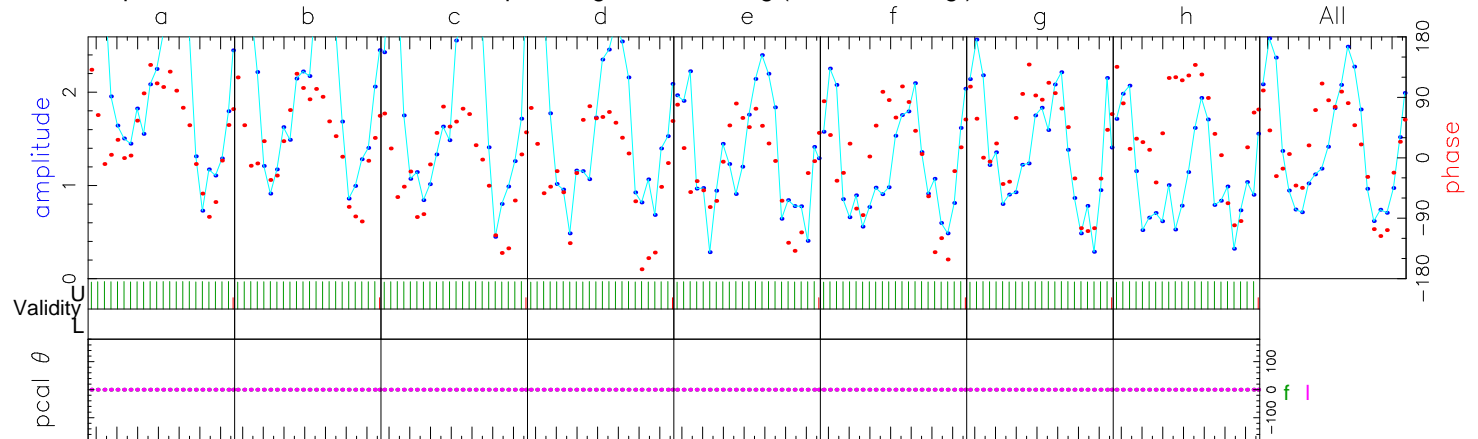
Mk4/DiFX fourfit 3.20 rev 0
frontend

3C454_3.1270J7, No0080, fl
VLBA_FD - VLBA_LA, fgroup W, pol LL



Fringe quality 4
 SNR 47.9
 Int time 410.149
 Amp 0.865
 Phase 40.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.001136
 MBD -0.001264
 Fringe rate (Hz)
 -0.000686
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134136
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.57424090745E+02		Apriori delay (usec)		7.57425354962E+02		Resid mbdelay (usec)		-1.26422E-03	+/- 2.3E-05
Sband delay (usec)	7.57424218712E+02		Apriori clock (usec)		1.2441895E+00		Resid sbdelay (usec)		-1.13625E-03	+/- 1.8E-04
Phase delay (usec)	7.57425356259E+02		Apriori clockrate (us/s)		2.6052251E-07		Resid phdelay (usec)		1.29682E-06	+/- 7.7E-08
Delay rate (us/s)	1.13372650937E-02		Apriori rate (us/s)		1.13372730530E-02		Resid rate (us/s)		-7.95923E-09	+/- 3.2E-10
Total phase (deg)	67.7		Apriori accel (us/s/s)		-6.39000711623E-06		Resid phase (deg)		40.2	+/- 2.4

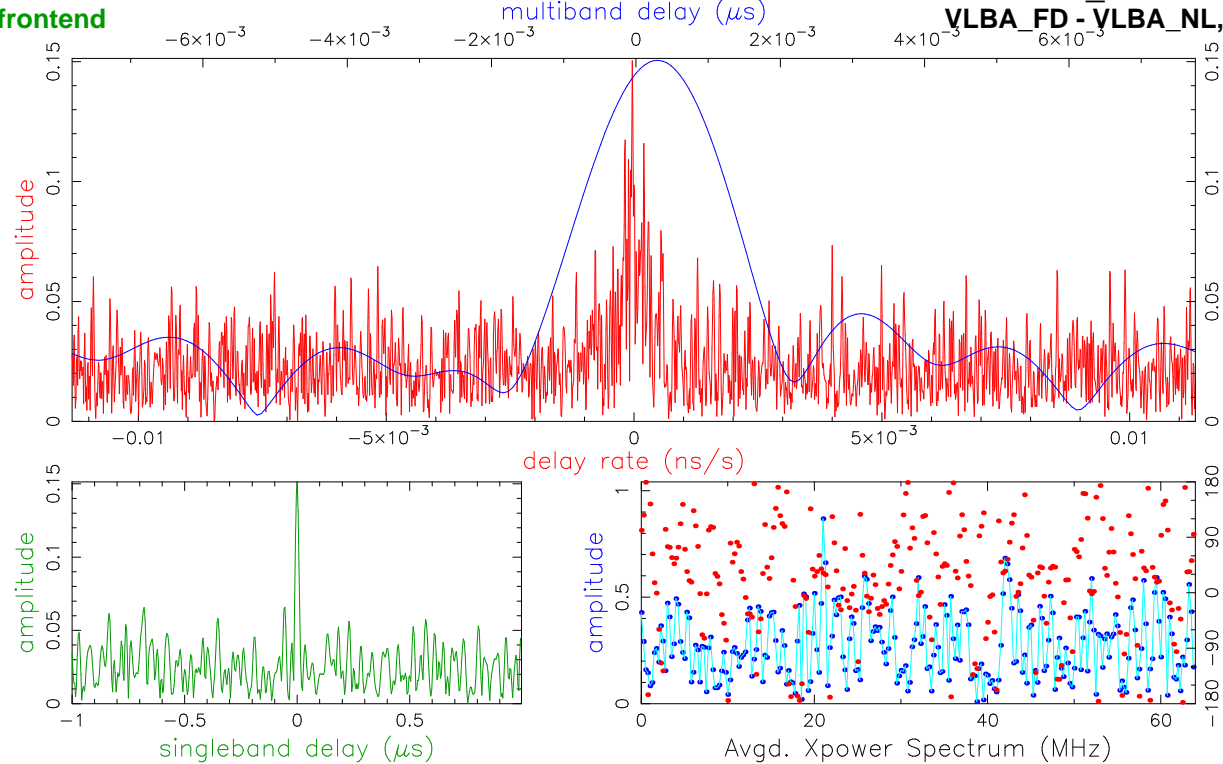
ph/seg (deg) 72.7 5.7 Search (2048X32) 0.827 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 99.3 10.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 25.6 3.4 Inc. seg. avg. 1.438 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 28.9 5.9 Inc. frq. avg. 0.921 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 l: az 104.8 el 46.4 pa -54.4 u,v (fr/asec) -77.155 -784.097 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fl..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fl.W.90.1270J7 simultaneous interpolator

Mk4/DiFX fourfit 3.20 rev 0

frontend

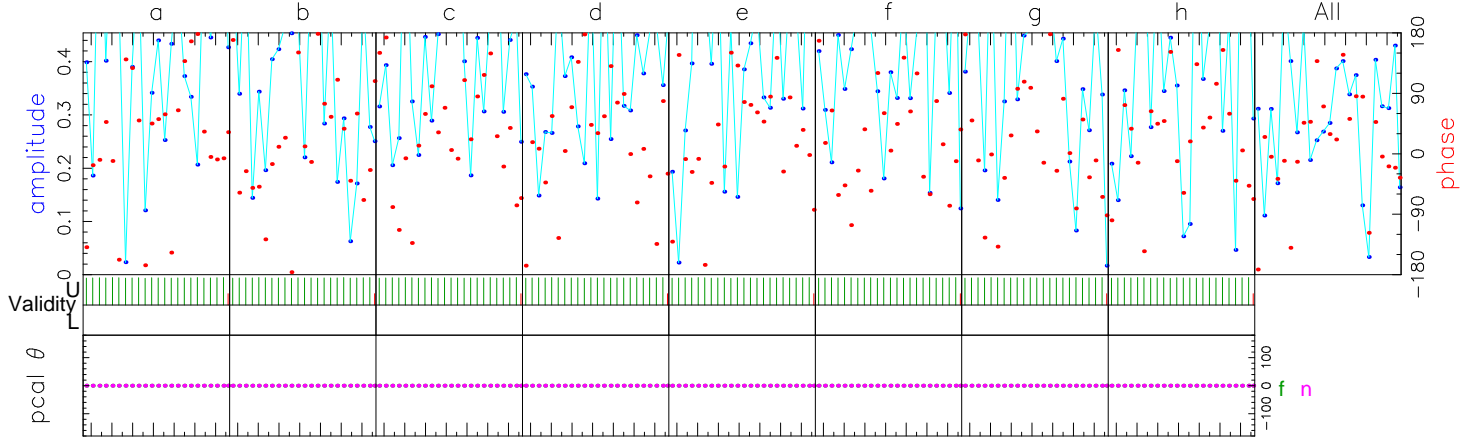
3C454_3.1270J7, No0080, fn

VLBA_FD - VLBA_NL, fgroup W, pol RR



Fringe quality 9
 SNR 8.4
 Int time 407.302
 Amp 0.151
 Phase 28.3
 PFD 2.4e-08
 Delays (us)
 SBD -0.001038
 MBD 0.000250
 Fringe rate (Hz)
 -0.003057
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134140
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

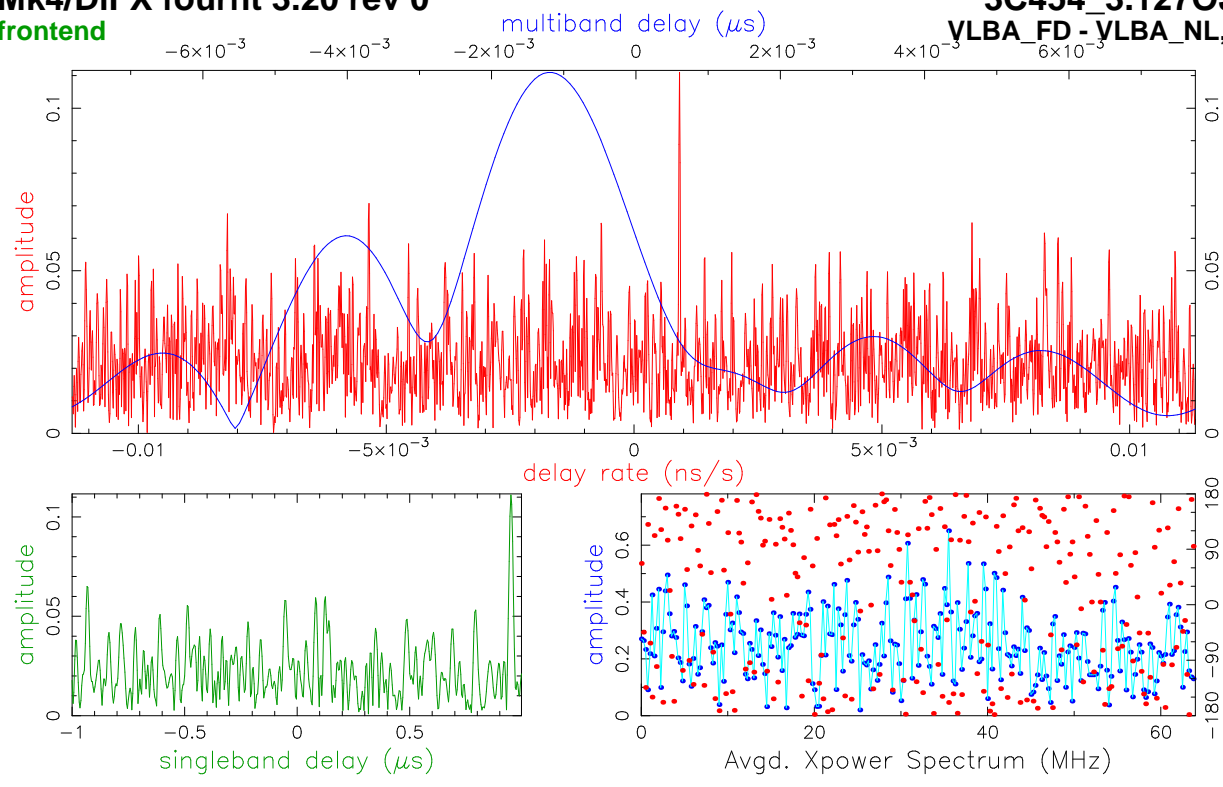


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
30.3	-0.7	36.6	37.1	34.0	4.7	21.7	52.6	Phase	28.3	
0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	Ampl.	0.1	
257.7	81.9	371.0	433.6	86.5	256.5	256.9	250.3	Sbd box	256.7	
U/L 807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used		
f 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
n 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
f:n 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
f:n 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
f 1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
n 1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.04740810544E+03		Apriori delay (usec)	-1.04740835507E+03		Resid mbdelay (usec)	2.49630E-04	+/-	1.3E-04	
Sband delay (usec)	-1.04740939307E+03		Apriori clock (usec)	-2.6066631E+01		Resid sbdelay (usec)	-1.03800E-03	+/-	1.0E-03	
Phase delay (usec)	-1.04740835416E+03		Apriori clockrate (us/s)	-2.2517302E-07		Resid phdelay (usec)	9.12157E-07	+/-	4.4E-07	
Delay rate (us/s)	3.08689547533E-01		Apriori rate (us/s)	3.08689583023E-01		Resid rate (us/s)	-3.54902E-08	+/-	1.9E-09	
Total phase (deg)		-225.9	Apriori accel (us/s/s)	4.91527435050E-07		Resid phase (deg)	28.3	+/-	13.7	

ph/seg (deg) 75.2 32.9 Amplitude 0.151 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 128.3 57.4 Search (2048X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 19.2 19.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 20.9 33.9 Inc. seg. avg. 0.261 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 n: az 126.5 el 54.1 pa -38.5 u,v (fr/asec) -1841.241 -1309.289 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fn..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fn.W.109.1270J7 simultaneous interpolator

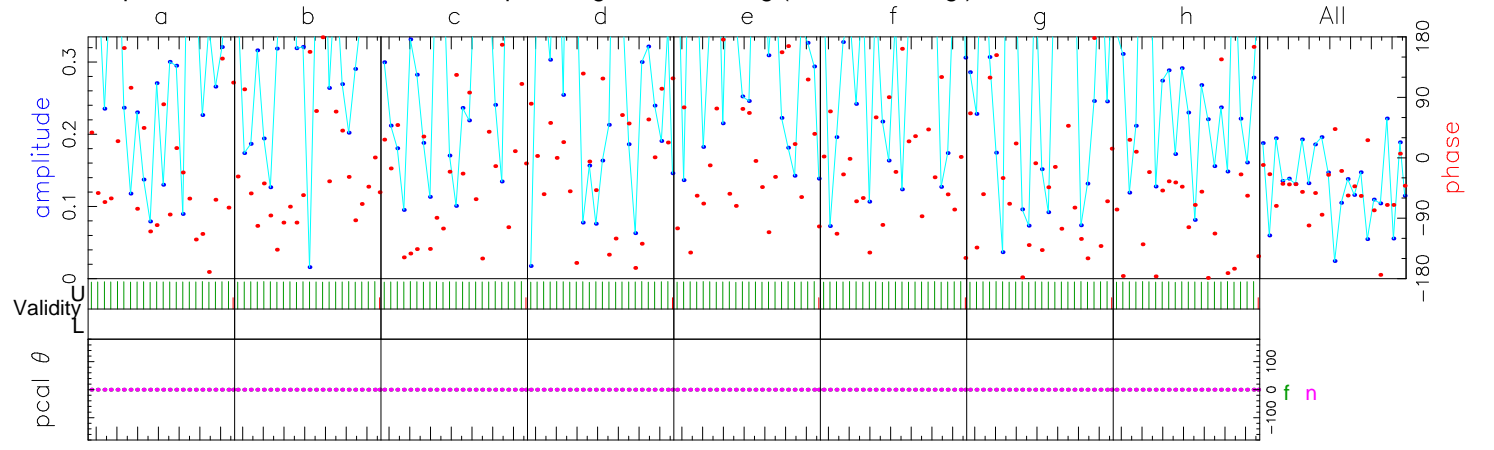
Mk4/DiFX fourfit 3.20 rev 0
frontend

3C454_3.1270J7, No0080, fn
VLBA_FD - VLBA_NL, fgroup W, pol LR



Fringe quality 0
SNR 6.1
Int time 407.302
Amp 0.112
Phase -49.2
PFD 1.9e-01
Delays (us)
SBD 0.949987
MBD -0.001172
Fringe rate (Hz) 0.079338
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134144
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

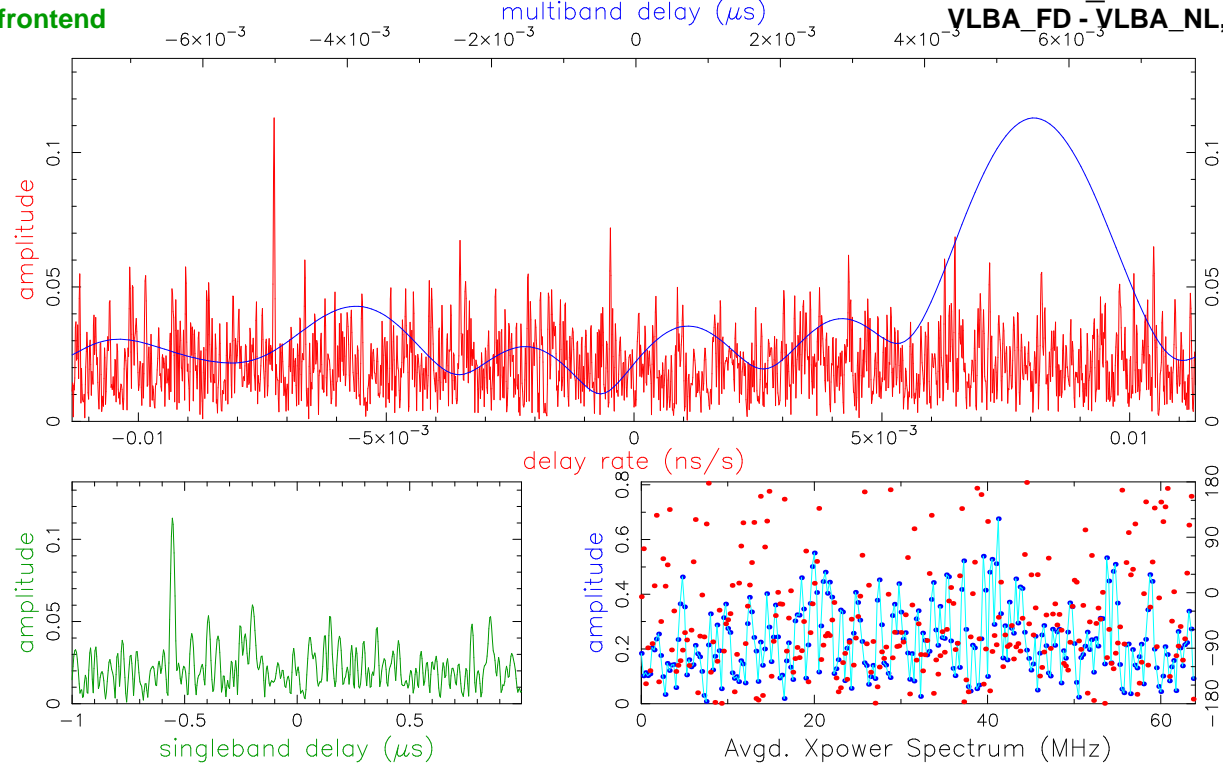


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-61.7	-58.2	-61.7	-13.9	-39.9	-17.3	-59.6	-95.3	Phase	-49.2
	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	431.0	58.8	362.1	22.6	297.5	500.3	344.5	113.1	Sbd box	500.2
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.04645640239E+03		Apriori delay (usec)		-1.04740835507E+03		Resid mbdelay (usec)		-1.17232E-03	+/- 1.8E-04
Sband delay (usec)	-1.04645836807E+03		Apriori clock (usec)		-2.6066631E+01		Resid sbdelay (usec)		9.49987E-01	+/- 1.4E-03
Phase delay (usec)	-1.04740835666E+03		Apriori clockrate (us/s)		-2.2517302E-07		Resid phdelay (usec)		-1.58709E-06	+/- 6.0E-07
Delay rate (us/s)	3.08690504055E-01		Apriori rate (us/s)		3.08689583023E-01		Resid rate (us/s)		9.21031E-07	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		4.91527435050E-07		Resid phase (deg)		-49.2	+/- 18.7

ph/seg (deg) 43.7 44.7 Search (2048X32) 0.109 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 51.0 78.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 28.8 26.4 Inc. seg. avg. 0.103 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 30.0 46.0 Inc. frq. avg. 0.111 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 n: az 126.5 el 54.1 pa -38.5 u,v (fr/asec) -1841.241 -1309.289 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fn..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fn.W.129.1270J7

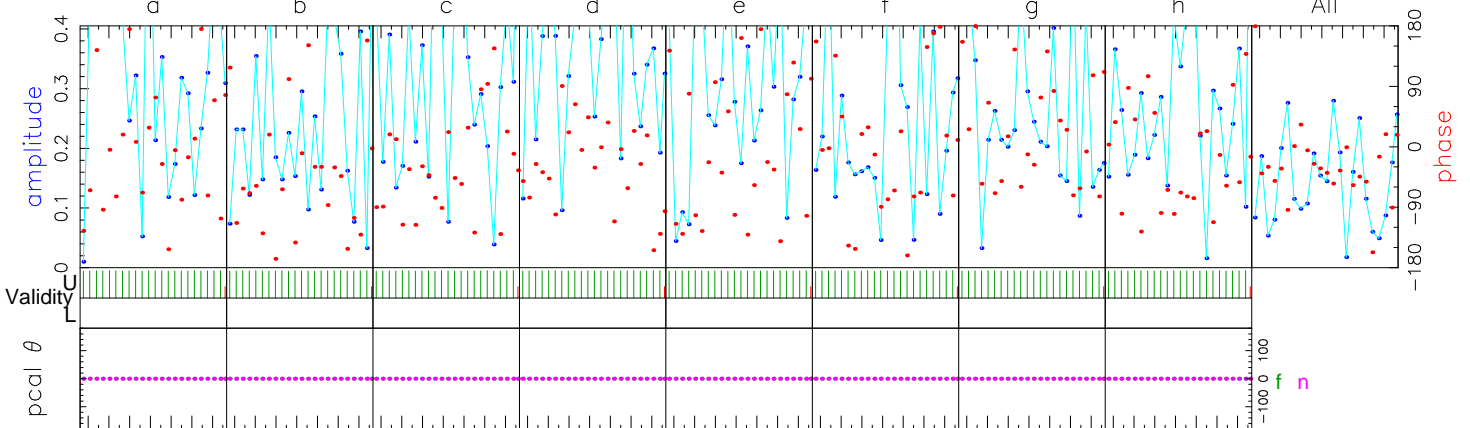
Mk4/DiFX fourfit 3.20 rev 0
 frontend

3C454_3.1270J7, No0080, fn
 VLBA_FD - VLBA_NL, fgroup W, pol RL



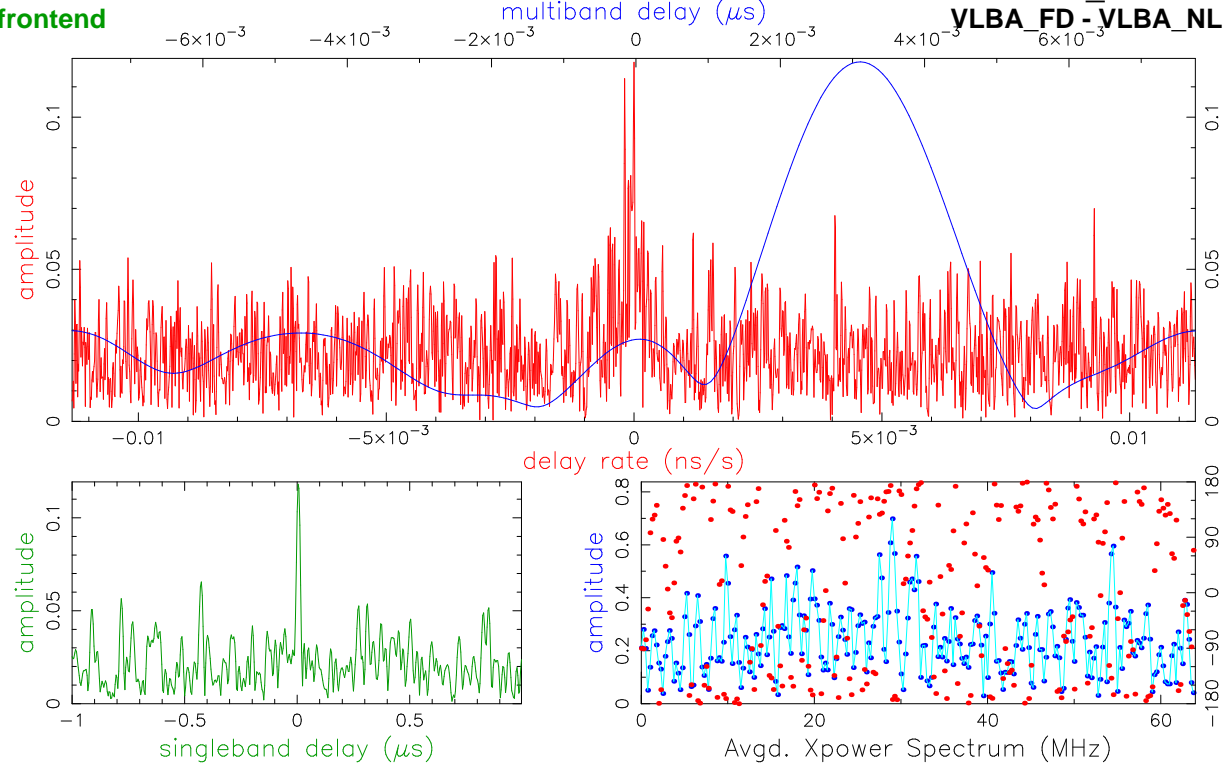
Fringe quality 0
 SNR 6.3
 Int time 407.301
 Amp 0.135
 Phase -42.0
 PFD 1.0e-01
 Delays (us)
 SBD -0.553716
 MBD 0.005526
 Fringe rate (Hz)
 -0.626165
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134149
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



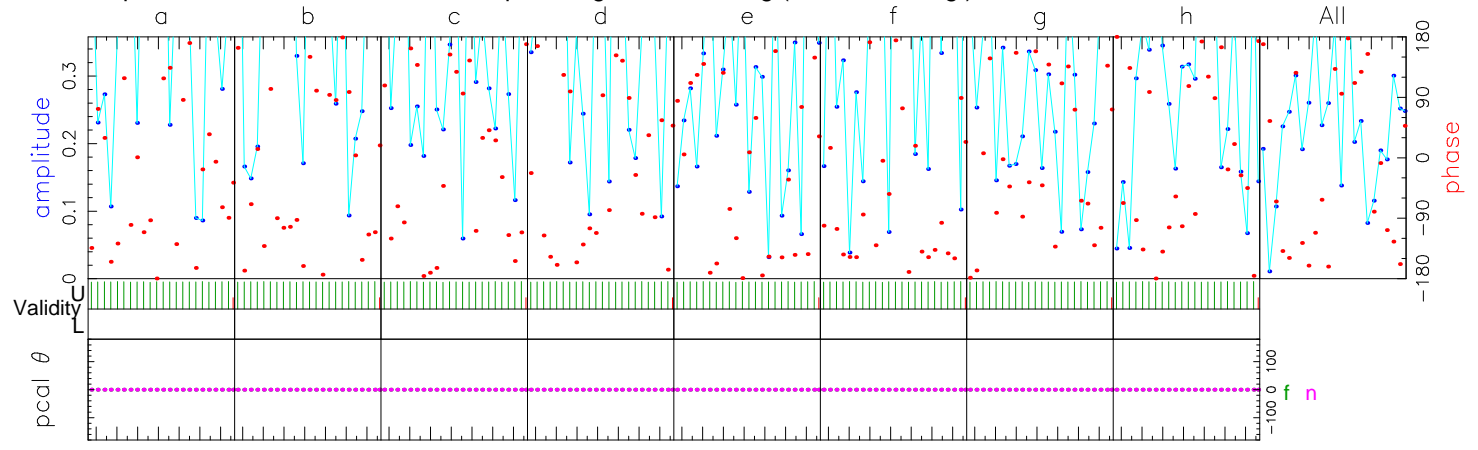
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
Group delay (usec)(sbd)	-23.6	-62.7	-45.9	-28.3	-107.6	-46.9	0.6	-52.2		-42.0
Sband delay (usec)	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1		0.1
Phase delay (usec)	329.9	33.5	217.1	115.6	286.5	454.1	415.8	74.9		115.2
Delay rate (us/s)	U/L 807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
Total phase (deg)	f 1000	1000	1000	1000	1000	1000	1000	1000		
	n 1000	1000	1000	1000	1000	1000	1000	1000		
	f:n 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
	f:n 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
	f 1000	1000	1000	1000	1000	1000	1000	1000		
	n 1000	1000	1000	1000	1000	1000	1000	1000		
	f W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
	n W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
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)										

ph/seg (deg) 49.5 43.9 43.9 43.9 43.9 43.9 43.9 43.9 43.9 43.9 43.9
 amp/seg (%) 69.3 76.7 76.7 76.7 76.7 76.7 76.7 76.7 76.7 76.7 76.7
 ph/frq (deg) 34.7 25.9 25.9 25.9 25.9 25.9 25.9 25.9 25.9 25.9 25.9
 amp/frq (%) 43.4 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2
 f: az 101.0 el 49.4 pa -61.6 n: az 126.5 el 54.1 pa -38.5 u,v (fr/asec) -1841.241 -1309.289
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fn..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fn.W.147.1270J7

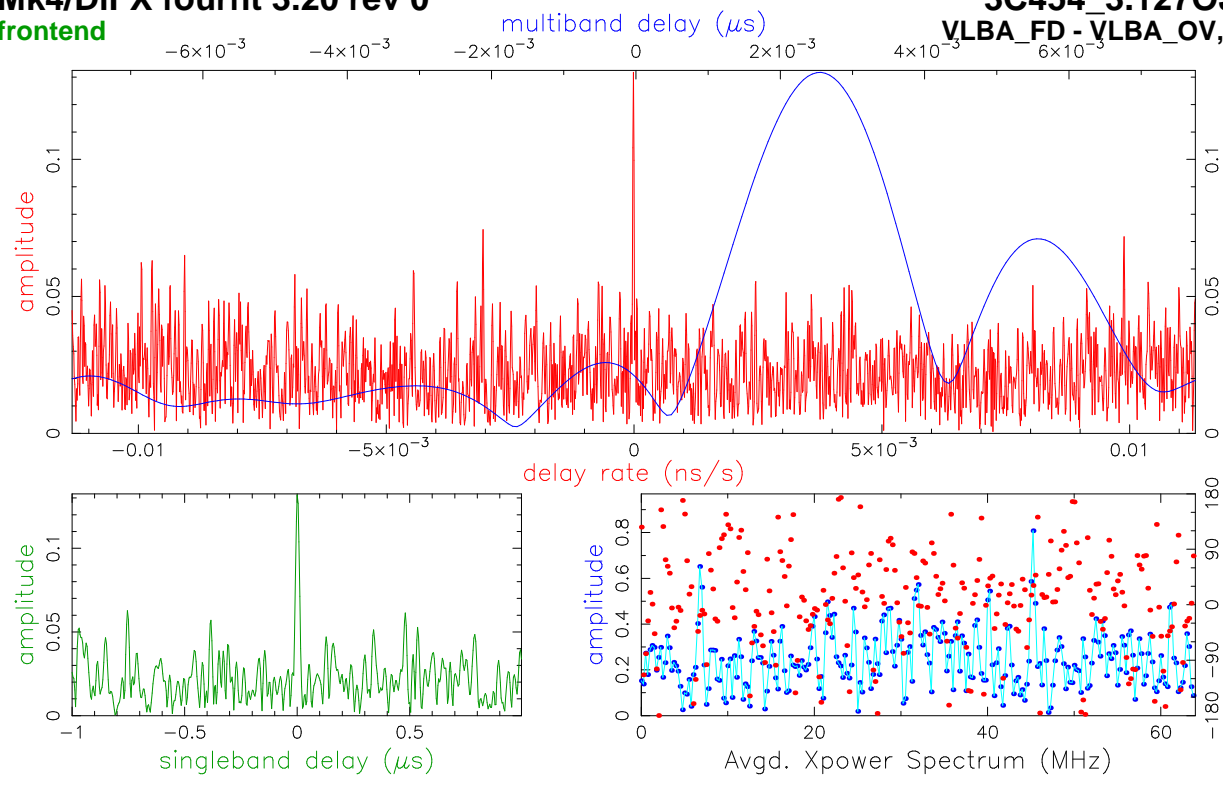


Fringe quality 0
 SNR 6.6
 Int time 407.302
 Amp 0.119
 Phase -164.6
 PFD 1.3e-02
 Delays (us)
 SBD 0.005364
 MBD 0.003156
 Fringe rate (Hz) 0.000175
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134136
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

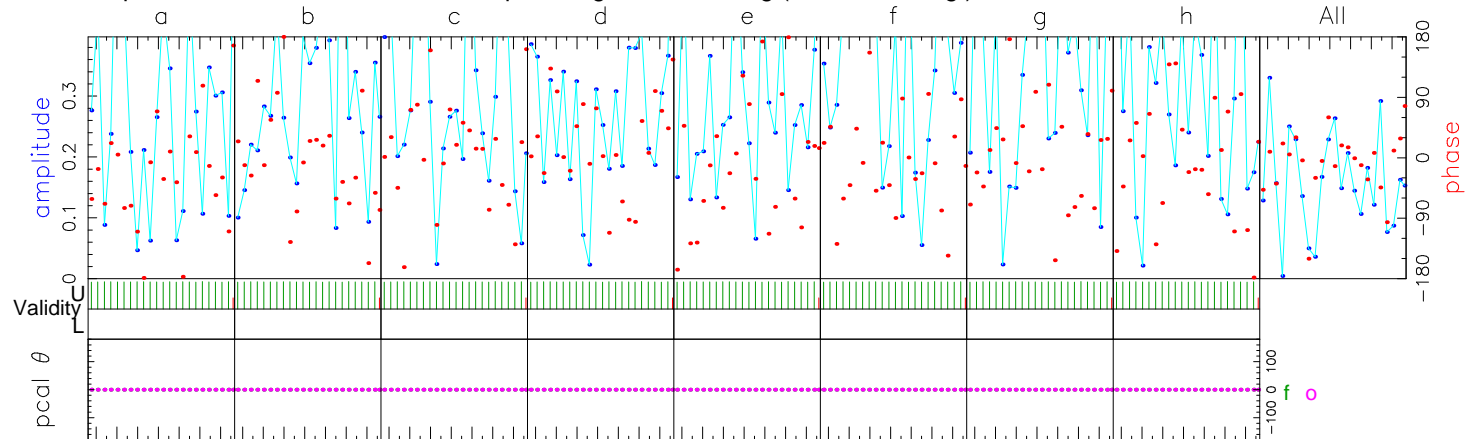


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.04740519914E+03	-1.04740299132E+03	-1.04740836038E+03	-1.0474083507E+03	-1.0474083507E+03	-1.0474083507E+03	-1.0474083507E+03	-1.0474083507E+03	3.15594E-03	+/- 1.6E-04
Sband delay (usec)	-151.1	-158.2	-167.9	-173.4	176.2	-142.9	177.2	-170.3	5.36375E-03	+/- 1.3E-03
Phase delay (usec)	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	-5.30948E-06	+/- 5.6E-07
Delay rate (us/s)	58.0	212.2	211.2	145.2	511.6	431.7	482.6	443.6	2.02718E-09	+/- 2.4E-09
Total phase (deg)			-58.8						-164.6	+/- 17.4
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)									-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)	74.4	41.7		0.119 +/- 0.018						
amp/seg (%)	123.2	72.8		0.000						
ph/frq (deg)	15.9	24.6		0.178						
amp/frq (%)	36.2	42.9		0.111						
f: az 101.0 el 49.4 pa -61.6										
n: az 126.5 el 54.1 pa -38.5										
u,v (fr/asec)										
Control file: cf_1234_gmva										
Input file: /Exps/c192c/v1_CygA2/1234/No0080/fn..1270J7										
Output file: /Exps/c192c/v1_CygA2/1234/No0080/fn.W.89.1270J7										



Fringe quality 9
SNR 7.3
Int time 407.239
Amp 0.132
Phase -1.0
PFD 8.3e-05
Delays (us)
SBD 0.001012
MBD 0.002546
Fringe rate (Hz)
-0.000629
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134140
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

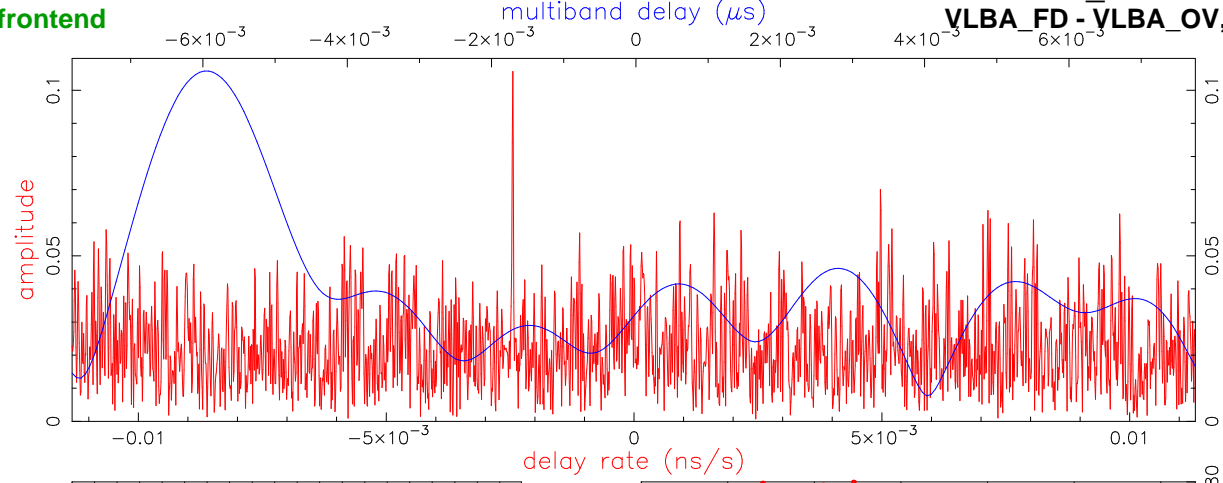


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-17.1	-3.2	15.8	28.1	-5.6	-21.3	-6.8	19.8	Phase	-1.0
	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	Ampl.	0.1
	30.4	256.8	257.9	317.8	241.4	258.0	96.9	291.0	Sbd box	257.3
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.42343864825E+03		Apriori delay (usec)		3.42343610250E+03		Resid mbdelay (usec)		2.54575E-03	+/- 1.5E-04
Sband delay (usec)	3.42343711475E+03		Apriori clock (usec)		-1.6196402E+01		Resid sbdelay (usec)		1.01225E-03	+/- 1.2E-03
Phase delay (usec)	3.42343610247E+03		Apriori clockrate (us/s)		-9.1930498E-08		Resid phdelay (usec)		-3.11122E-08	+/- 5.1E-07
Delay rate (us/s)	-1.3640222294E-01		Apriori rate (us/s)		-1.36402214993E-01		Resid rate (us/s)		-7.30098E-09	+/- 2.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.13020366360E-05		Resid phase (deg)		-1.0	+/- 15.7

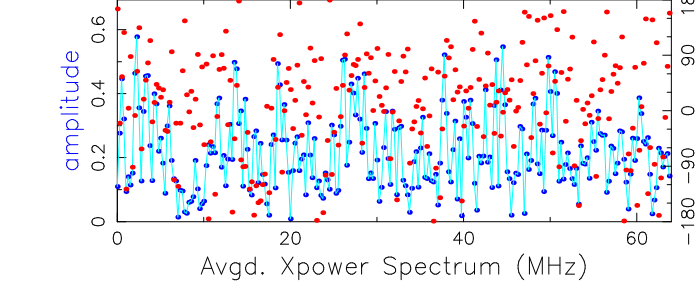
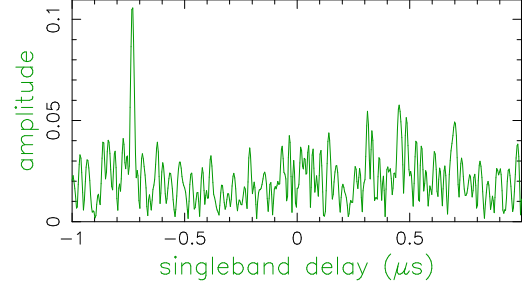
ph/seg (deg) 46.5 37.6 Search (2048X32) 0.128 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 64.6 65.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 19.6 22.2 Inc. seg. avg. 0.131 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 34.7 38.7 Inc. frq. avg. 0.128 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 o: az 97.3 el 36.6 pa -55.3 u,v (fr/asec) 782.512 -1303.529 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fo..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fo.W.110.1270J7

Mk4/DiFX fourfit 3.20 rev 0
frontend

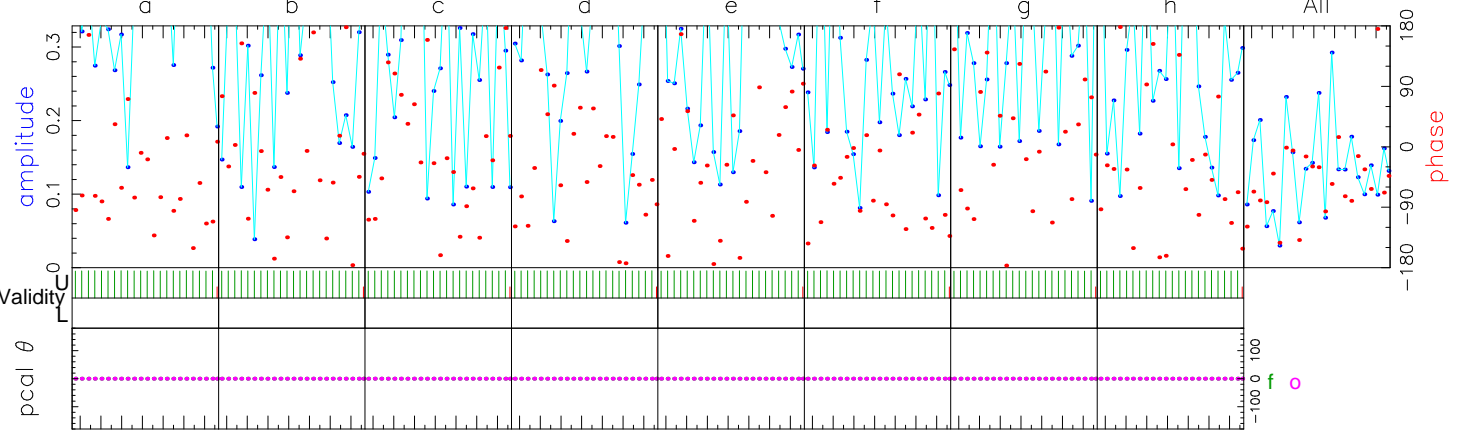
3C454_3.1270J7, No0080, fo
VLBA_FD - VLBA_OV, fgroup W, pol LR



Fringe quality 0
SNR 5.9
Int time 407.240
Amp 0.110
Phase -49.7
PFD 5.3e-01
Delays (us)
SBD -0.732238
MBD -0.006014
Fringe rate (Hz)
-0.210770
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134145
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

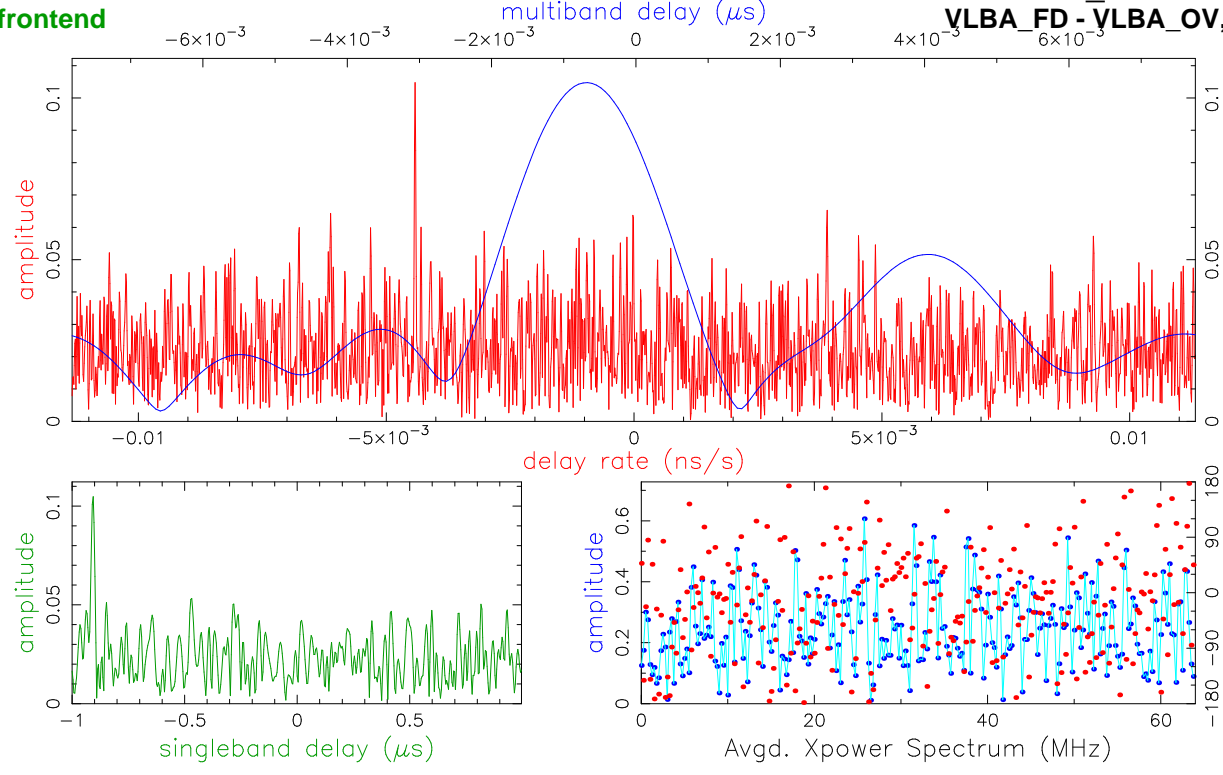


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-70.2	-62.4	-0.6	-31.8	-8.7	-69.1	-0.3	-71.7	Phase	-49.7
	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	Ampl.	0.1
	69.7	7.0	217.7	35.7	368.7	414.4	398.0	385.6	Sbd box	69.5
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.42271133844E+03		Apriori delay (usec)		3.42343610250E+03		Resid mbdelay (usec)		-6.01406E-03	+/- 1.8E-04
Sband delay (usec)	3.42270386500E+03		Apriori clock (usec)		-1.6196402E+01		Resid sbdelay (usec)		-7.32238E-01	+/- 1.5E-03
Phase delay (usec)	3.42343610090E+03		Apriori clockrate (us/s)		-9.1930498E-08		Resid phdelay (usec)		-1.60308E-06	+/- 6.2E-07
Delay rate (us/s)	-1.36404661823E-01		Apriori rate (us/s)		-1.36402214993E-01		Resid rate (us/s)		-2.44683E-06	+/- 2.6E-09
Total phase (deg)	263.3		Apriori accel (us/s/s)		-2.13020366360E-05		Resid phase (deg)		-49.7	+/- 19.3

ph/seg (deg) 50.8 46.3 Amplitude 0.110 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 64.7 80.8 Search (2048X32) 0.104 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 37.2 27.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 48.5 47.7 Inc. seg. avg. 0.105 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 o: az 97.3 el 36.6 pa -55.3 u,v (fr/asec) 782.512 -1303.529 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fo..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fo.W.130.1270J7 simultaneous interpolator

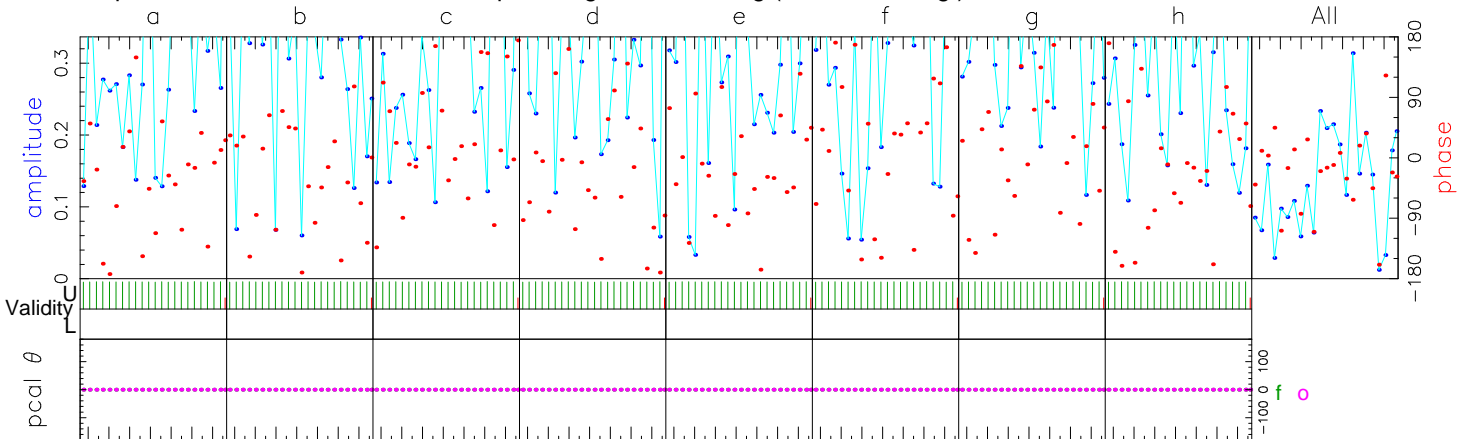
Mk4/DiFX fourfit 3.20 rev 0
 frontend

3C454_3.1270J7, No0080, fo
 VLBA_FD - VLBA_OV, fgroup W, pol RL



Fringe quality 0
 SNR 5.8
 Int time 407.239
 Amp 0.112
 Phase -16.6
 PFD 7.8e-01
 Delays (us)
 SBD -0.907282
 MBD -0.000694
 Fringe rate (Hz)
 -0.380707
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134149
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-26.9	-0.8	6.0	-63.5	-9.8	32.8	-11.2	-34.9	Phase	-16.6
	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	Ampl.	0.1
	22.0	301.2	150.8	189.7	25.9	347.5	475.3	36.8	Sbd box	24.7
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.42252915838E+03		Apriori delay (usec)		3.42343610250E+03		Resid mbdelay (usec)		-6.94124E-04	+/- 1.9E-04
Sband delay (usec)	3.42252882100E+03		Apriori clock (usec)		-1.6196402E+01		Resid sbdelay (usec)		-9.07282E-01	+/- 1.5E-03
Phase delay (usec)	3.42343610196E+03		Apriori clockrate (us/s)		-9.1930498E-08		Resid phdelay (usec)		-5.35958E-07	+/- 6.4E-07
Delay rate (us/s)	-1.36406634621E-01		Apriori rate (us/s)		-1.36402214993E-01		Resid rate (us/s)		-4.41963E-06	+/- 2.7E-09
Total phase (deg)	296.4		Apriori accel (us/s/s)		-2.13020366360E-05		Resid phase (deg)		-16.6	+/- 19.7

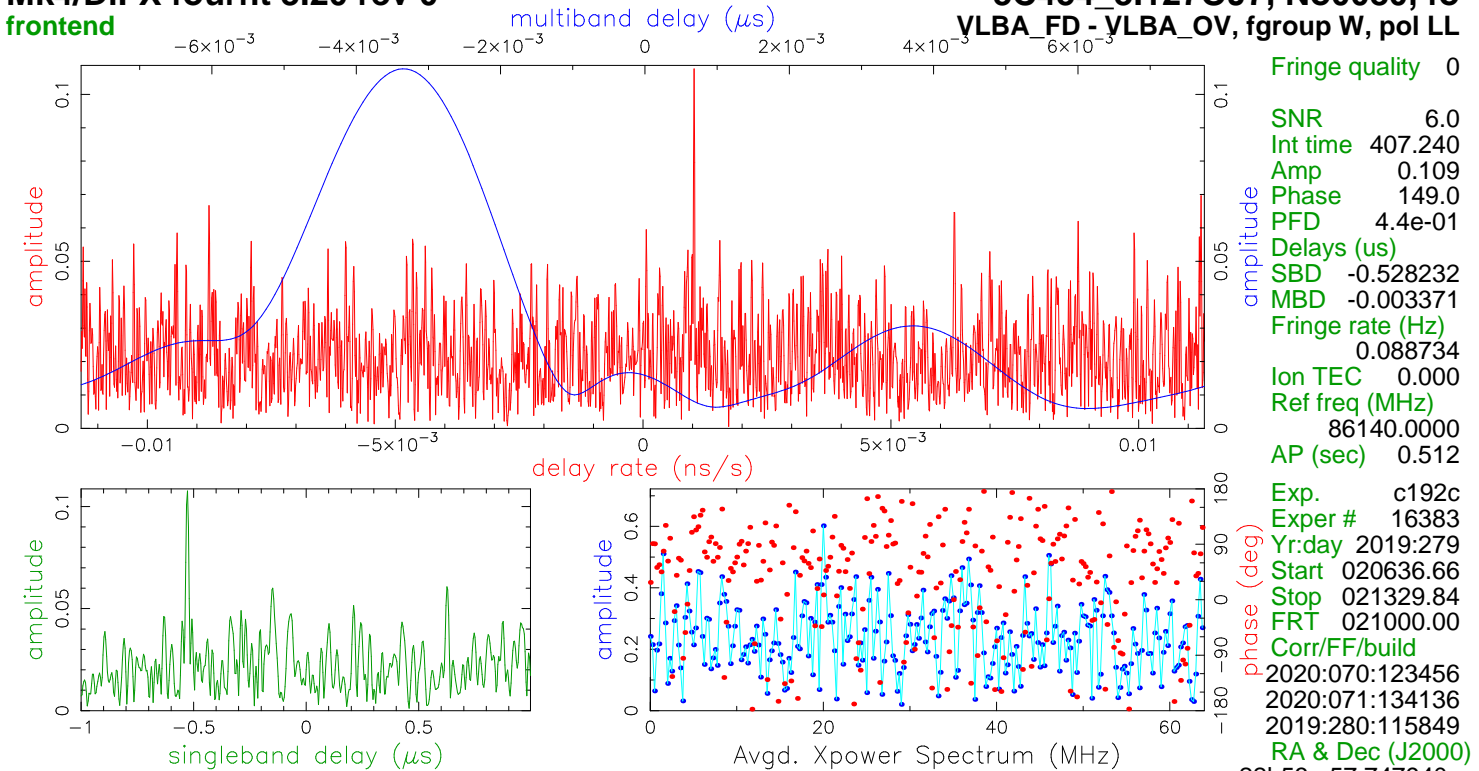
RMS Theor. Amplitude 0.112 +/- 0.019
 ph/seg (deg) 58.7 47.3 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 75.4 82.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.4 27.9 Inc. seg. avg. 0.105 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.0 48.6 Inc. frq. avg. 0.110 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 o: az 97.3 el 36.6 pa -55.3 u,v (fr/asec) 782.512 -1303.529 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fo..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fo.W.149.1270J7

Mk4/DiFX fourfit 3.20 rev 0

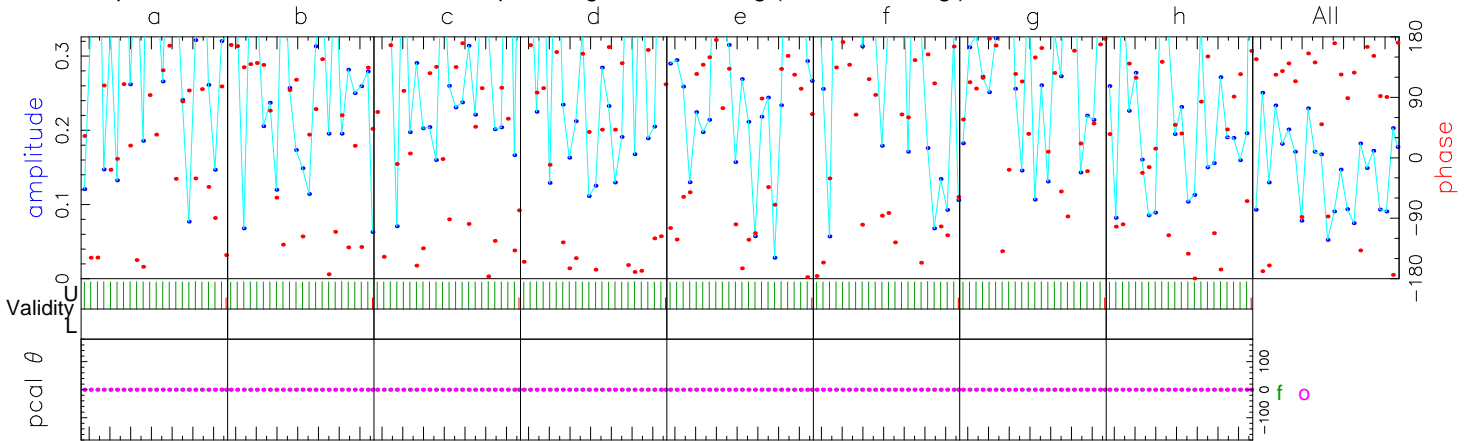
frontend

3C454_3.1270J7, No0080, fo

VLBA_FD - VLBA_OV, fgroup W, pol LL



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
114.6	156.6	133.7	174.9	154.7	146.3	135.2	136.4	136.4	Phase	149.0
0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.0	Ampl.	0.1
222.8	417.1	311.7	183.9	115.8	75.4	51.8	133.8	133.8	Sbd box	121.8
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	3.42290148176E+03	Apriori delay (usec)	3.42343610250E+03	Resid mbdelay (usec)	-3.37074E-03	+/-	1.8E-04
Sband delay (usec)	3.42290787025E+03	Apriori clock (usec)	-1.6196402E+01	Resid sbdelay (usec)	-5.28232E-01	+/-	1.4E-03
Phase delay (usec)	3.42343610731E+03	Apriori clockrate (us/s)	-9.1930498E-08	Resid phdelay (usec)	4.80627E-06	+/-	6.2E-07
Delay rate (us/s)	-1.36401184874E-01	Apriori rate (us/s)	-1.36402214993E-01	Resid rate (us/s)	1.03012E-06	+/-	2.6E-09
Total phase (deg)		Apriori accel (us/s/s)	-2.13020366360E-05	Resid phase (deg)	149.0	+/-	19.2

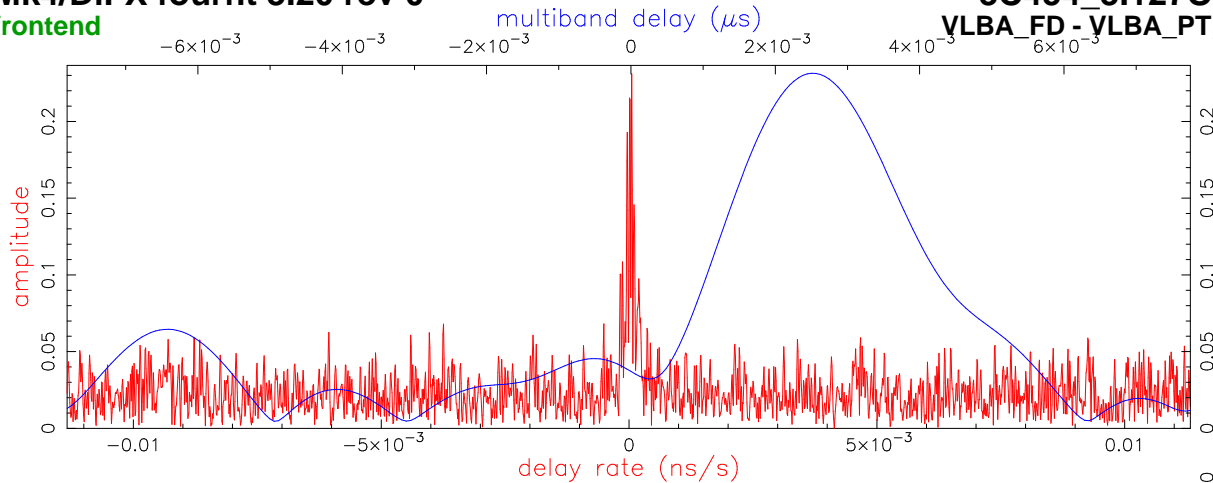
ph/seg (deg)	RMS 54.3	Theor. 46.0	Amplitude Search (2048X32)	0.109 +/- 0.018	0.106	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	63.7	80.2	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	20.6	27.1	Inc. seg. avg.	0.113	0.113	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	40.3	47.3	Inc. frq. avg.	0.102	0.102	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 101.0 el 49.4 pa -61.6 o: az 97.3 el 36.6 pa -55.3 u,v (fr/asec) 782.512 -1303.529 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fo..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fo.W.91.1270J7

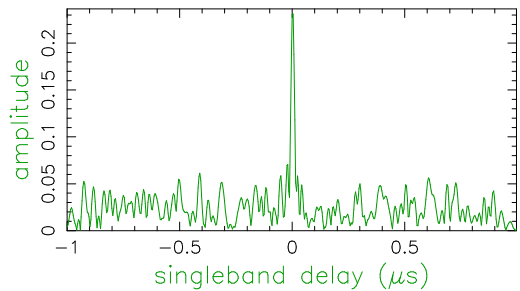
Mk4/DiFX fourfit 3.20 rev 0
frontend

3C454_3.1270J7, No0080, fp
VLBA_FD - VLBA_PT, fgroup W, pol RR

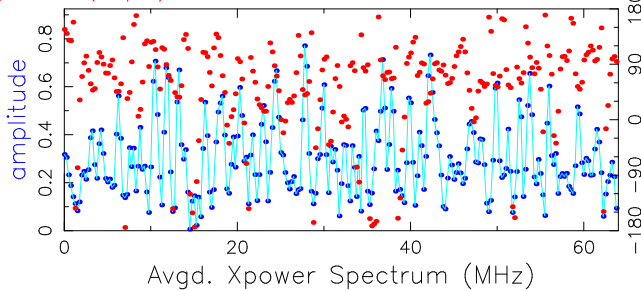


Fringe quality 9

SNR 13.1
Int time 409.583
Amp 0.237
Phase 70.9
PFD 2.0e-30
Delays (us)
SBD 0.002010
MBD 0.002441
Fringe rate (Hz) 0.004948
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

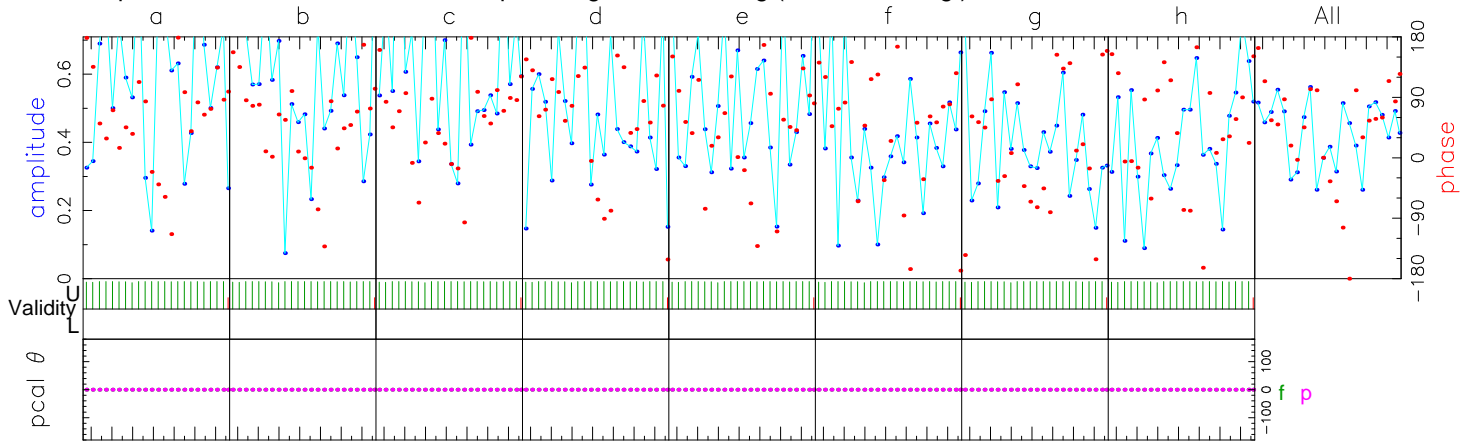


delay rate (ns/s)



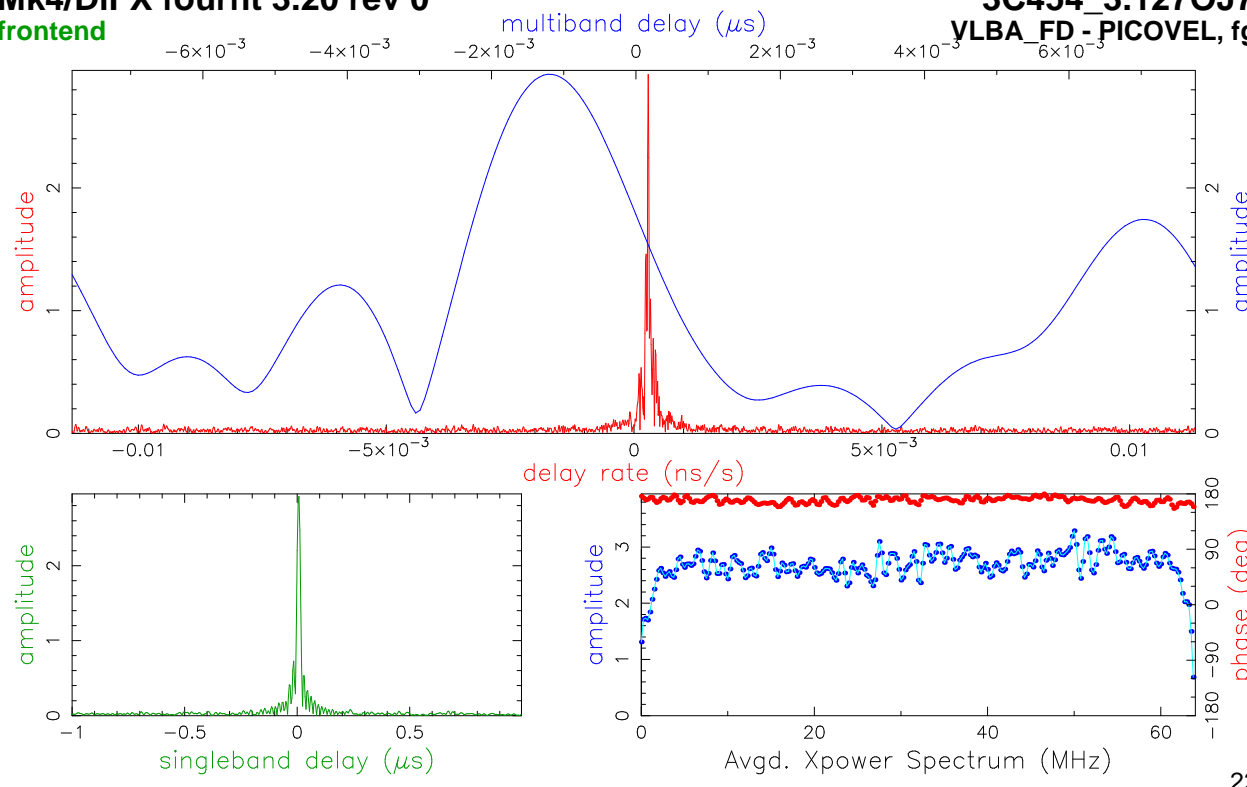
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134141
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



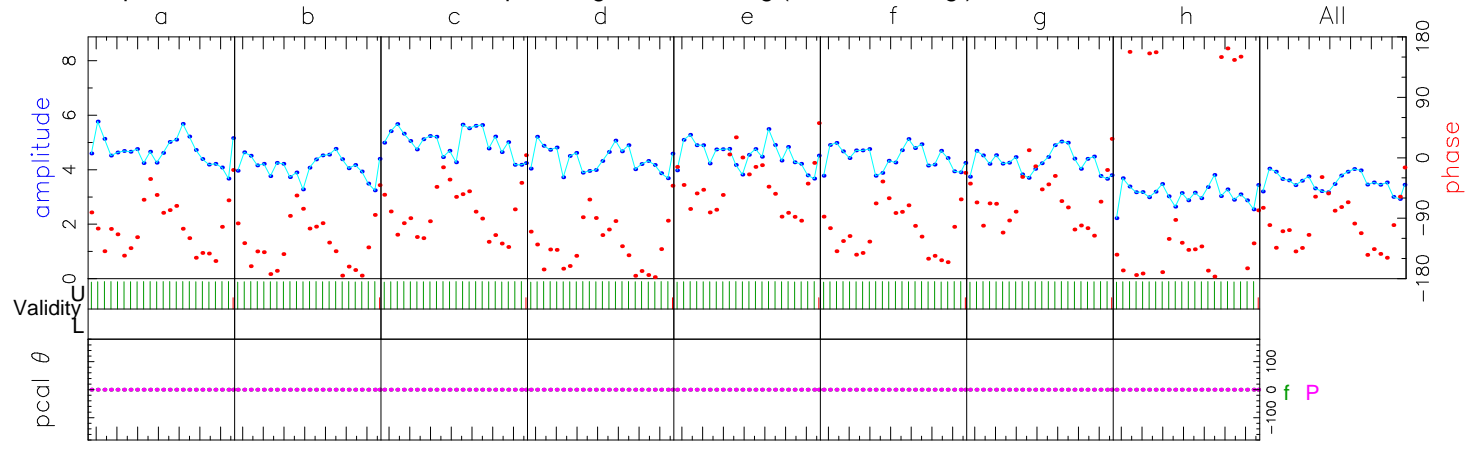
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.03242514377E+03			1.03242270272E+03				2.44105E-03	+/- 8.3E-05
Sband delay (usec)		1.03242471272E+03			-1.1513147E+01				2.01000E-03	+/- 6.6E-04
Phase delay (usec)		1.03242270500E+03			-2.9483610E-07				2.28509E-06	+/- 2.8E-07
Delay rate (us/s)		-3.26803731584E-02			-3.26804305948E-02				5.74364E-08	+/- 1.2E-09
Total phase (deg)			291.2		-7.25627950760E-06				70.9	+/- 8.8
		RMS	Theor.	Amplitude	0.237 +/- 0.018					
ph/seg (deg)		68.6	21.0	Search (2048X32)	0.228					
amp/seg (%)		91.3	36.6	Interp.	0.000					
ph/frq (deg)		21.4	12.4	Inc. seg. avg.	0.405					
amp/frq (%)		41.5	21.6	Inc. frq. avg.	0.233					
f: az 101.0 el 49.4 pa -61.6				p: az 101.9 el 45.2 pa -57.0						
				u,v (fr/asec) 184.242 -626.536						
										simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fp..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fp.W.112.1270J7



Fringe quality 3
SNR 163.9
Int time 410.660
Amp 2.958
Phase -100.9
PFD 0.0e+00
Delays (us)
SBD 0.006517
MBD -0.001230
Fringe rate (Hz)
0.024520
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134142
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

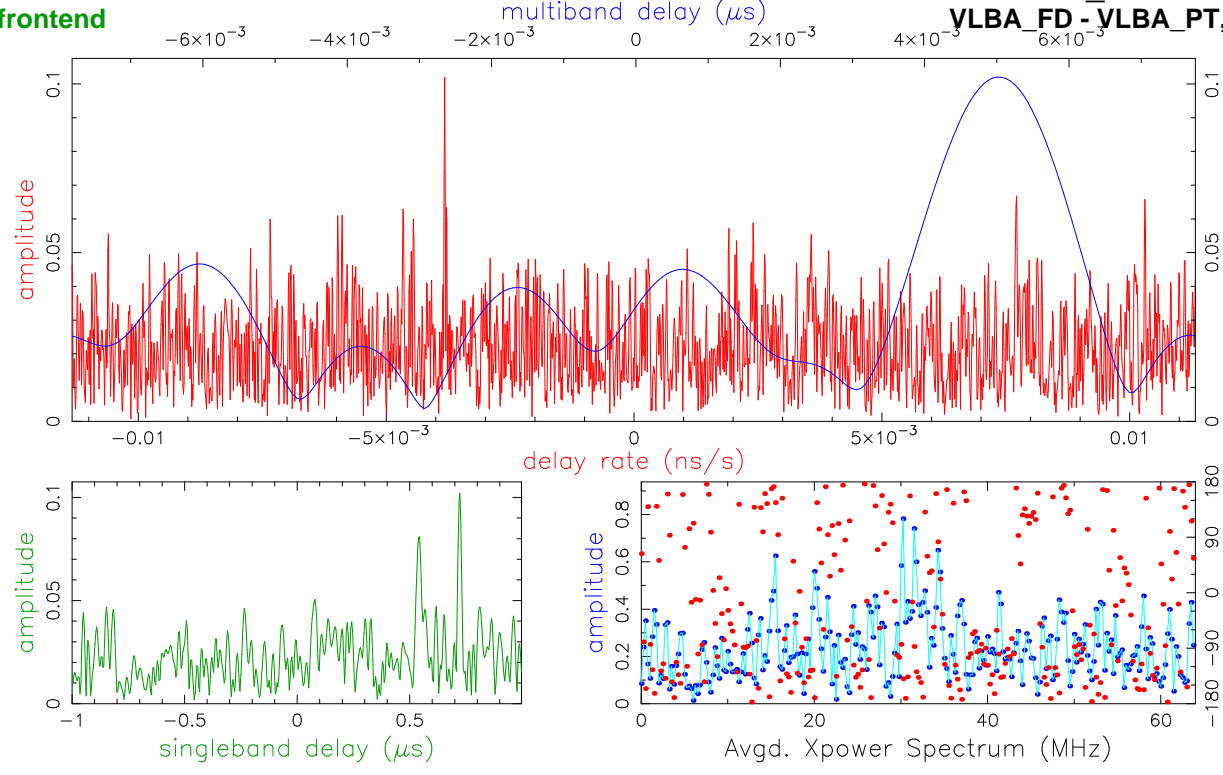
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-104.3	-129.6	-82.1	-131.9	-43.6	-108.2	-65.4	-166.6	Phase	-100.9	
	3.9	3.3	4.1	3.7	3.7	3.7	3.5	2.6	Ampl.	3.6	
	258.5	258.0	258.1	257.9	257.9	258.0	257.7	256.4	Sbd box	258.7	
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
P	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	4.57489087240E+03		Apriori delay (usec)		4.57489210244E+03		Resid mbdelay (usec)		-1.23004E-03	+/- 6.6E-06	
Sband delay (usec)	4.57489861969E+03		Apriori clock (usec)		6.2620938E-01		Resid sbdelay (usec)		6.51725E-03	+/- 5.3E-05	
Phase delay (usec)	4.57489209918E+03		Apriori clockrate (us/s)		2.6205050E-07		Resid phdelay (usec)		-3.25516E-06	+/- 2.3E-08	
Delay rate (us/s)	1.86619816208E+00		Apriori rate (us/s)		1.86619787743E+00		Resid rate (us/s)		2.84651E-07	+/- 9.5E-11	
Total phase (deg)	152.5		Apriori accel (us/s/s)		-2.72676129677E-05		Resid phase (deg)		-100.9	+/- 0.7	
	RMS	Theor.	Amplitude	2.958 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	35.8	1.7	Search (2048X32)	2.799		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	22.5	2.9	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	42.9	1.0	Inc. seg. avg.	3.544		Sample rate(MISamp/s): 128		Data rate(Mb/s): 2048		dr window (ns/s)	-0.011 0.011
amp/frq (%)	25.1	1.7	Inc. frq. avg.	3.558		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
f: az 101.0 el 49.4 pa -61.6	P: az 264.7 el 34.4 pa 55.8		u,v (fr/asec)		-11171.025 -1357.167				simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c192c/v1_CygA2/1234/No0080/fP..1270J7		Output file: /Exps/c192c/v1_CygA2/1234/No0080/fP.W.114.1270J7								

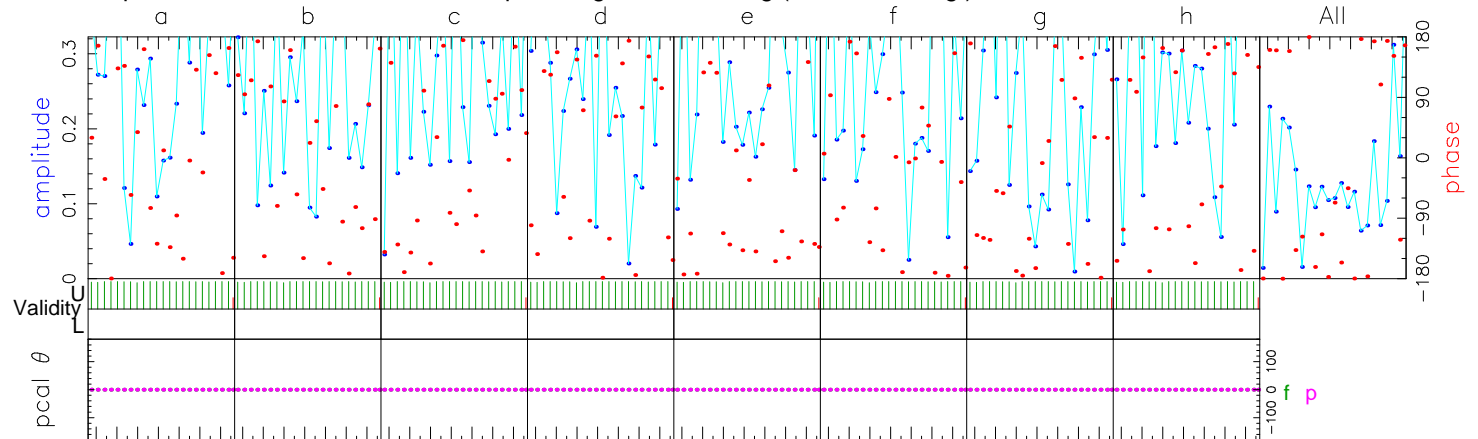
Mk4/DiFX fourfit 3.20 rev 0
 frontend

3C454_3.1270J7, No0080, fp
 VLBA_FD - VLBA_PT, fgroup W, pol LR



Fringe quality 0
 SNR 5.7
 Int time 409.584
 Amp 0.108
 Phase -176.0
 PFD 9.6e-01
 Delays (us)
 SBD 0.721609
 MBD 0.004977
 Fringe rate (Hz)
 -0.329673
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134146
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	162.1	-162.7	-172.8	-177.7	-163.3	167.3	-156.9	178.4	Phase	-176.0
	0.1	0.0	0.1	0.1	0.2	0.0	0.1	0.2	Ampl.	0.1
	13.3	429.6	215.3	197.6	116.0	411.0	164.6	442.3	Sbd box	441.7
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	1.03314643004E+03		Apriori delay (usec)		1.03242270272E+03		Resid mbdelay (usec)		4.97732E-03	+/- 1.9E-04
Sband delay (usec)	1.03314431222E+03		Apriori clock (usec)		-1.1513147E+01		Resid sbdelay (usec)		7.21609E-01	+/- 1.5E-03
Phase delay (usec)	1.03242269704E+03		Apriori clockrate (us/s)		-2.9483610E-07		Resid phdelay (usec)		-5.67645E-06	+/- 6.5E-07
Delay rate (us/s)	-3.26842577682E-02		Apriori rate (us/s)		-3.26804305948E-02		Resid rate (us/s)		-3.82717E-06	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.25627950760E-06		Resid phase (deg)		-176.0	+/- 20.2

ph/seg (deg) 47.4 48.4 Search (2048X32) 0.099 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 78.8 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) 15.8 28.5 Inc. seg. avg. 0.101 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 55.6 49.8 Inc. frq. avg. 0.097 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 p: az 101.9 el 45.2 pa -57.0 u,v (fr/asec) 184.242 -626.536 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fp..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fp.W.132.1270J7 simultaneous interpolator

Mk4/DiFX fourfit 3.20 rev 0

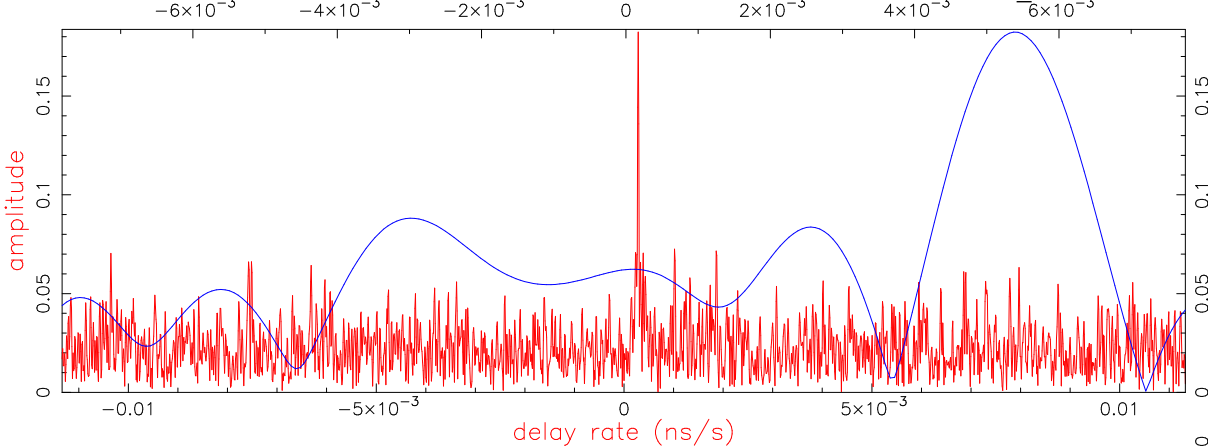
frontend

3C454_3.127OJ7, No0080, fP

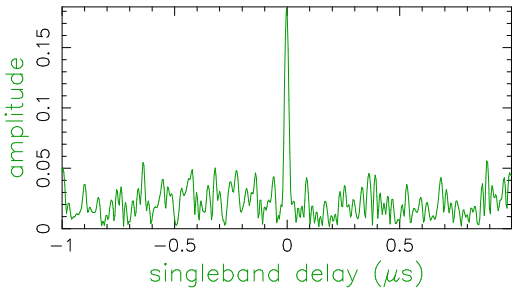
VLBA_FD - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

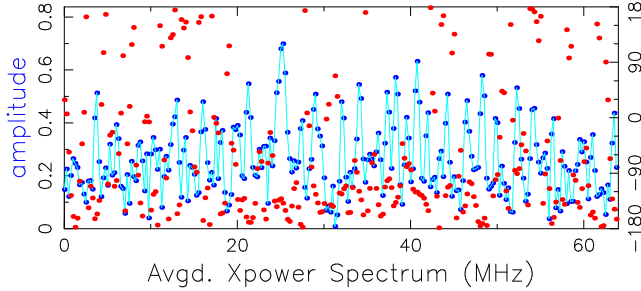
Fringe quality 9



SNR 10.2
Int time 410.661
Amp 0.184
Phase 134.5
PFD 1.1e-15
Delays (us)
SBD -0.002673
MBD 0.005413
Fringe rate (Hz) 0.024779
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

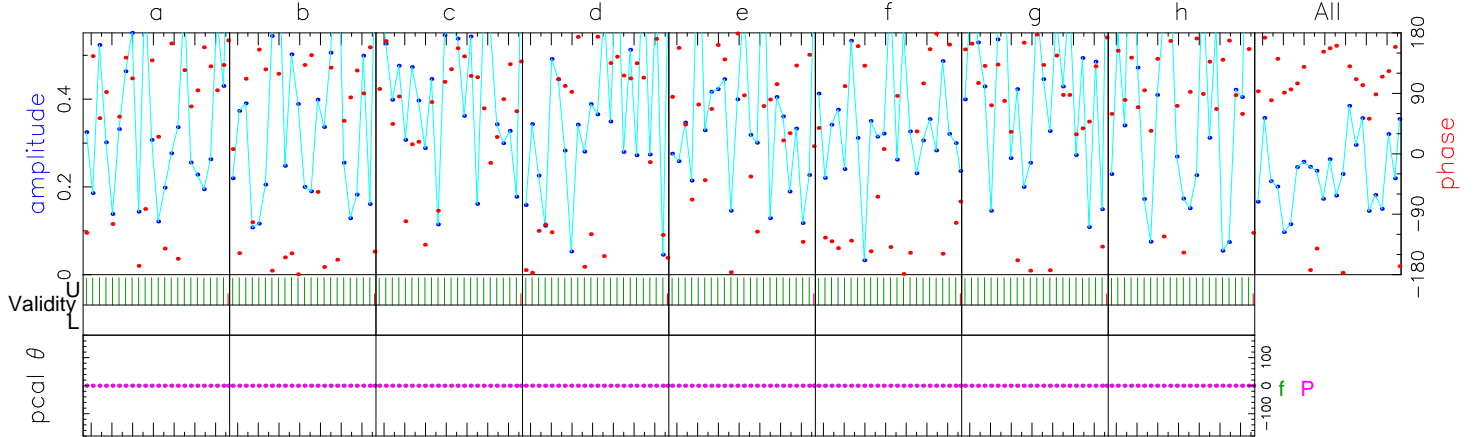


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134146
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

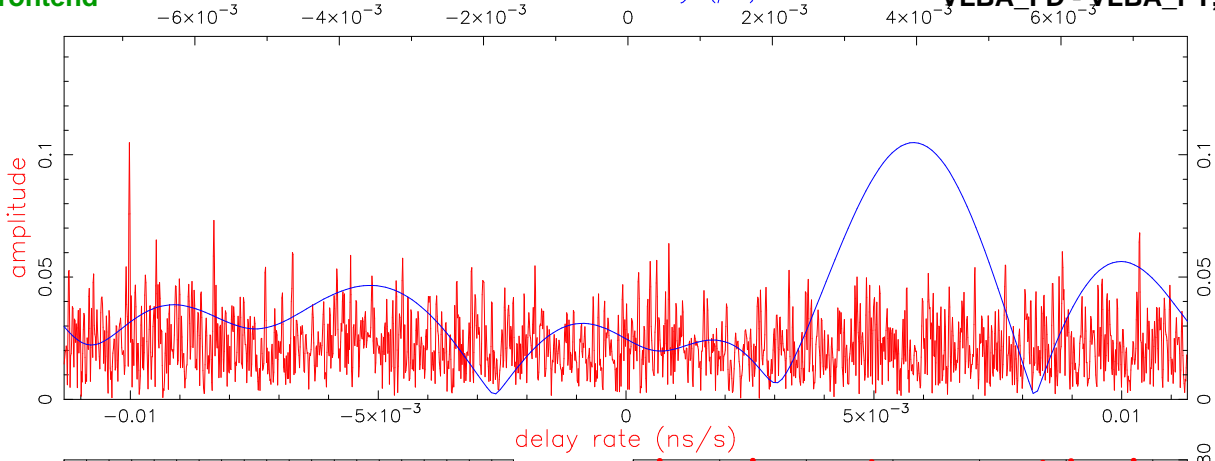
Group delay (usec)(sbd)	4.57488189080E+03	Apriori delay (usec)	4.57489210244E+03	Resid mbdelay (usec)	5.41337E-03	+/-	1.1E-04
Sband delay (usec)	4.57488942969E+03	Apriori clock (usec)	6.2620938E-01	Resid sbdelay (usec)	-2.67275E-03	+/-	8.5E-04
Phase delay (usec)	4.57489210678E+03	Apriori clockrate (us/s)	2.6205050E-07	Resid phdelay (usec)	4.33853E-06	+/-	3.6E-07
Delay rate (us/s)	1.86619816509E+00	Apriori rate (us/s)	1.86619787743E+00	Resid rate (us/s)	2.87660E-07	+/-	1.5E-09
Total phase (deg)	28.0	Apriori accel (us/s/s)	-2.72676129677E-05	Resid phase (deg)	134.5	+/-	11.3

ph/seg (deg)	40.8	RMS	27.0	Theor.	Amplitude	0.184 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	49.6	Search (2048X32)	0.181	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	40.4	Inc. seg. avg.	0.208	Inc. frq. avg.	0.207	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	28.0	Inc. frq. avg.	0.207	u,v (fr/asec)	-11171.025 -1357.167	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
						Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00	

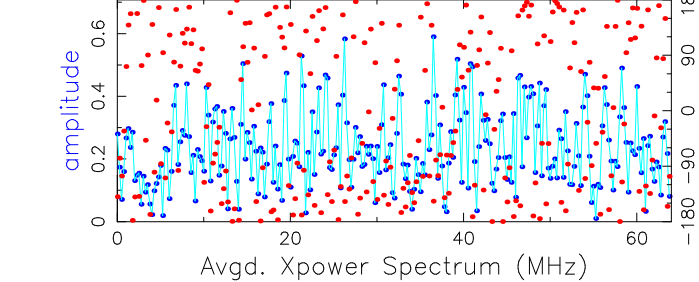
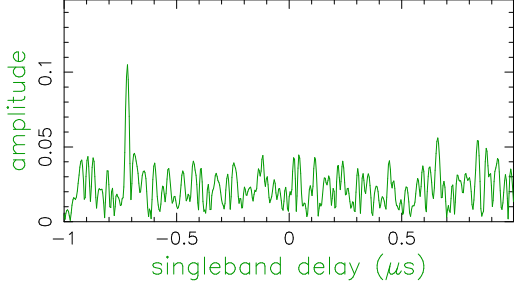
f: az 101.0 el 49.4 pa -61.6 P: az 264.7 el 34.4 pa 55.8 u,v (fr/asec) -11171.025 -1357.167 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fP..127OJ7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fP.W.134.127OJ7

multiband delay (μ s)

Fringe quality 0

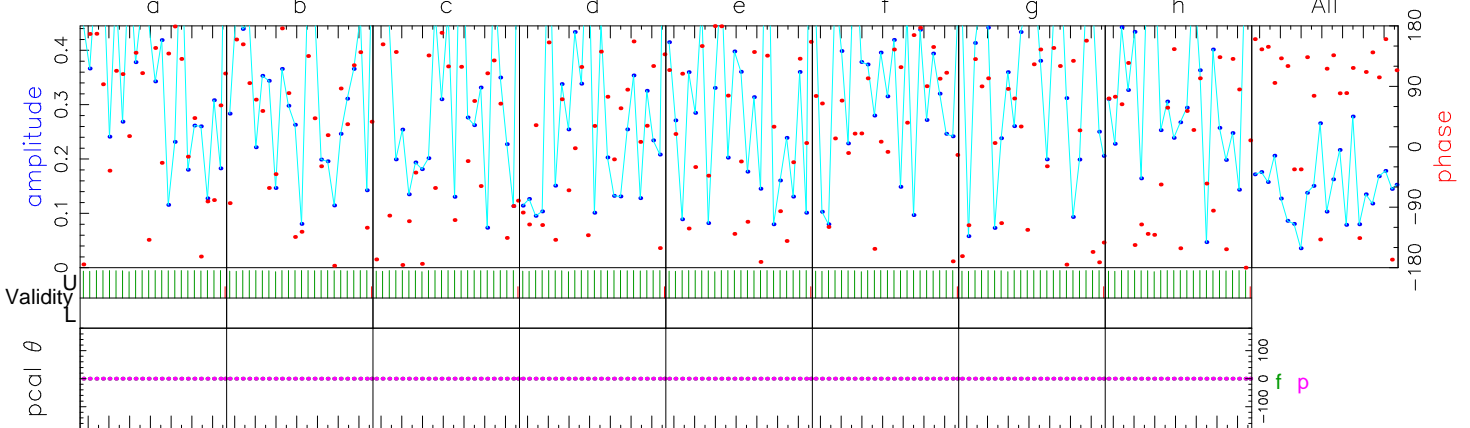


SNR 5.8
 Int time 409.585
 Amp 0.148
 Phase 131.4
 PFD 7.9e-01
 Delays (us)
 SBD -0.718933
 MBD 0.003951
 Fringe rate (Hz)
 -0.864269
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134151
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	130.4	108.1	168.8	131.7	163.3	68.9	140.1	151.2	Phase	131.4
	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.1	Ampl.	0.2
	26.7	134.5	283.4	297.4	267.2	81.2	72.3	355.2	Sbd box	73.0
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
p	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	1.03170790376E+03		Apriori delay (usec)		1.03242270272E+03		Resid mbdelay (usec)		3.95105E-03	+/- 1.9E-04
Sband delay (usec)	1.03170377022E+03		Apriori clock (usec)		-1.1513147E+01		Resid sbdelay (usec)		-7.18933E-01	+/- 1.5E-03
Phase delay (usec)	1.03242270695E+03		Apriori clockrate (us/s)		-2.9483610E-07		Resid phdelay (usec)		4.23603E-06	+/- 6.4E-07
Delay rate (us/s)	-3.26904639039E-02		Apriori rate (us/s)		-3.26804305948E-02		Resid rate (us/s)		-1.00333E-05	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.25627950760E-06		Resid phase (deg)		131.4	+/- 19.7

ph/seg (deg) 62.7 47.3 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 69.1 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) 35.0 27.9 Inc. seg. avg. 0.157 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.6 48.7 Inc. frq. avg. 0.154 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 p: az 101.9 el 45.2 pa -57.0 u,v (fr/asec) 184.242 -626.536 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fp..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fp.W.151.1270J7 simultaneous interpolator

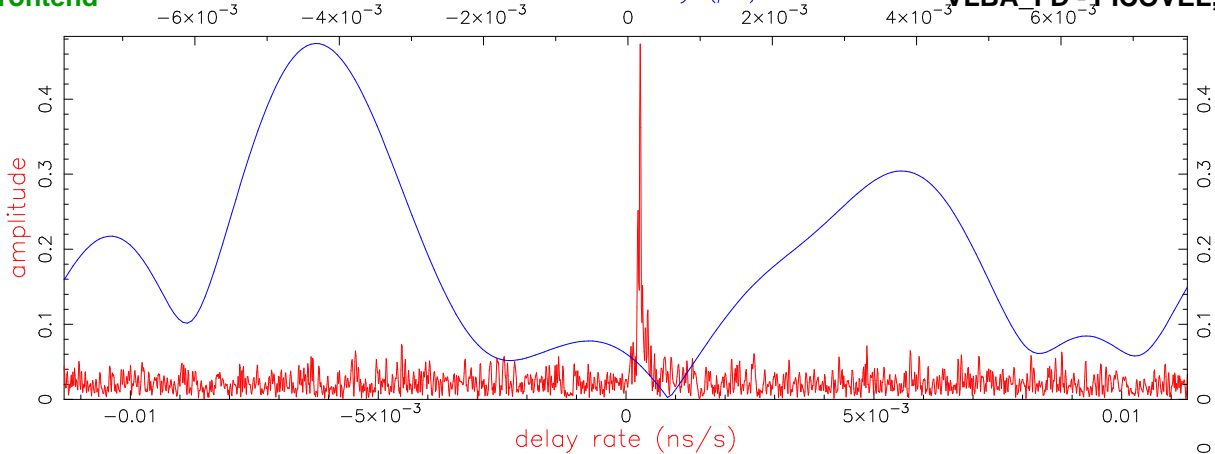
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, fP

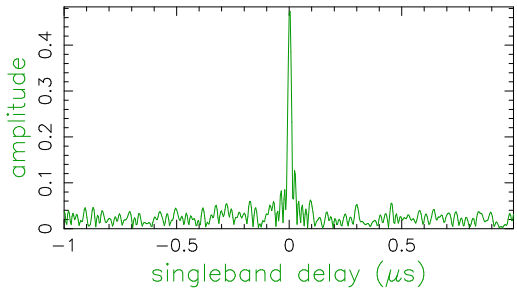
VLBA_FD - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

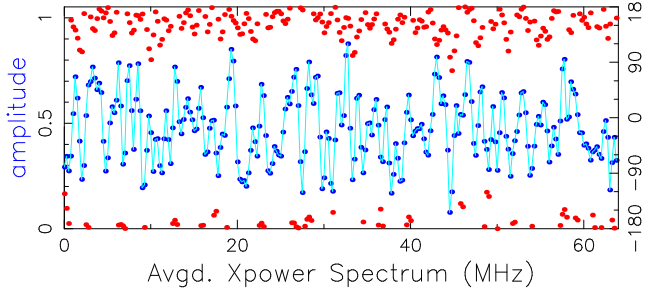


Fringe quality 7

SNR 26.8
 Int time 410.660
 Amp 0.484
 Phase -122.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.002136
 MBD -0.004383
 Fringe rate (Hz)
 0.024515
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

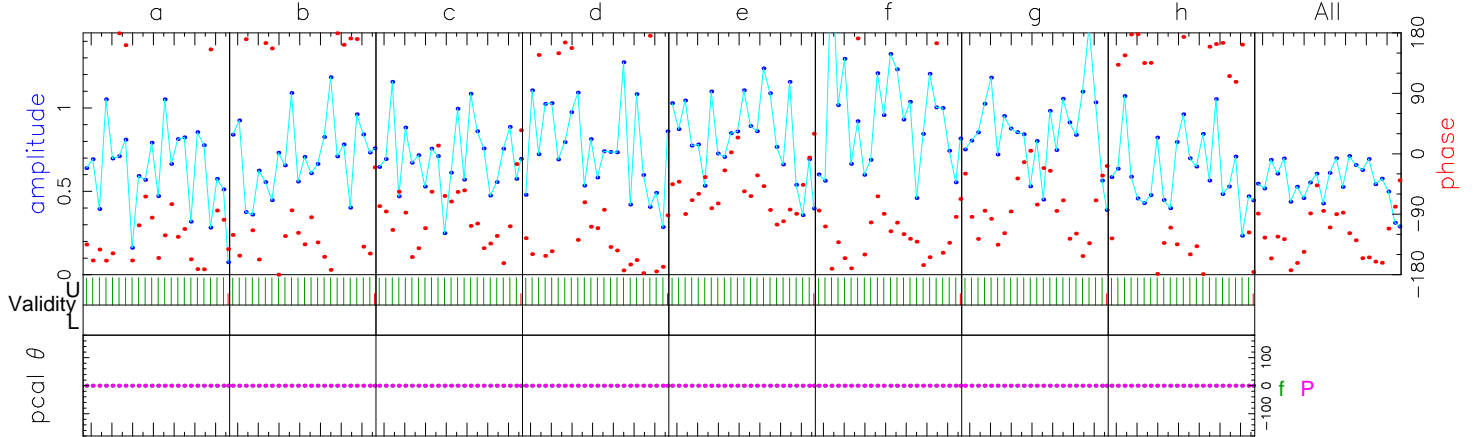


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134151
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



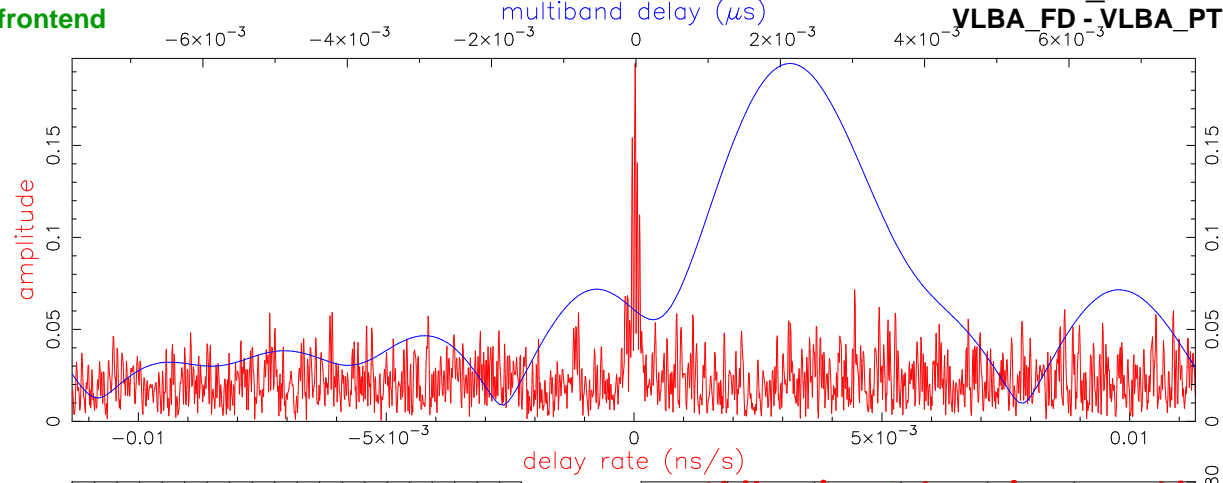
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-136.7	-151.0	-94.6	-153.5	-56.5	-133.3	-85.3	176.4	Phase	-122.7
	0.5	0.6	0.5	0.6	0.7	0.8	0.6	0.5	Ampl.	0.6
	257.2	257.4	257.5	257.1	257.3	257.4	256.9	255.5	Sbd box	257.5
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	4.57488771984E+03	Apriori delay (usec)	4.57489210244E+03	Resid mbdelay (usec)	-4.38260E-03	+/-	4.1E-05
Sband delay (usec)	4.57489423869E+03	Apriori clock (usec)	6.2620938E-01	Resid sbdelay (usec)	2.13625E-03	+/-	3.2E-04
Phase delay (usec)	4.57489209848E+03	Apriori clockrate (us/s)	2.6205050E-07	Resid phdelay (usec)	-3.95634E-06	+/-	1.4E-07
Delay rate (us/s)	1.86619816203E+00	Apriori rate (us/s)	1.86619787743E+00	Resid rate (us/s)	2.84594E-07	+/-	5.8E-10
Total phase (deg)	130.8	Apriori accel (us/s/s)	-2.72676129677E-05	Resid phase (deg)	-122.7	+/-	4.3

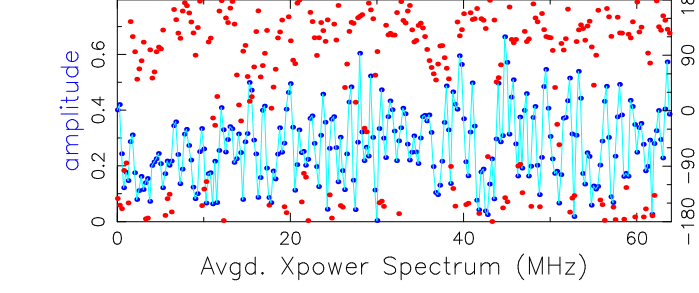
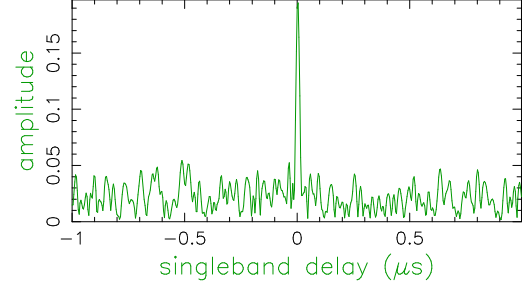
ph/seg (deg)	RMS 35.1	Theor. 10.3	Amplitude 0.484 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	27.9	17.9	Search (2048X32) 0.459	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	45.3	6.0	Inc. seg. avg. 0.556	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	31.6	10.6	Inc. frq. avg. 0.602	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011	
				Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite
						ion window (TEC) 0.00 0.00

f: az 101.0 el 49.4 pa -61.6 P: az 264.7 el 34.4 pa 55.8 u,v (fr/asec) -11171.025 -1357.167 simultaneous interpolator

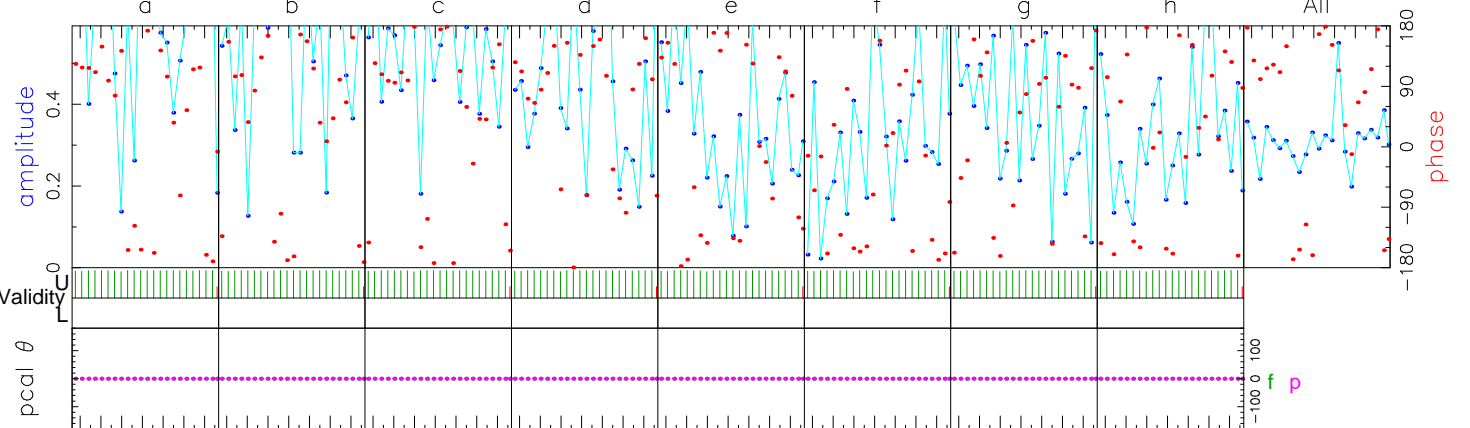
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fP..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fP.W.152.1270J7



Fringe quality 9
SNR 10.9
Int time 409.585
Amp 0.197
Phase 145.2
PFD 4.2e-19
Delays (us)
SBD 0.002384
MBD 0.002109
Fringe rate (Hz) 0.001756
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134137
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		1.03242481134E+03			1.03242270272E+03				2.10862E-03	+/- 9.9E-05
Sband delay (usec)		1.03242508672E+03			-1.1513147E+01				2.38400E-03	+/- 7.9E-04
Phase delay (usec)		1.03242270740E+03			-2.9483610E-07				4.68135E-06	+/- 3.4E-07
Delay rate (us/s)		-3.26804102139E-02			-3.26804305948E-02				2.03810E-08	+/- 1.4E-09
Total phase (deg)			5.5		-7.25627950760E-06				145.2	+/- 10.5
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-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) 60.8 25.2 Search (2048X32) 0.191 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 68.1 43.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 28.0 14.8 Inc. seg. avg. 0.287 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 48.6 25.9 Inc. frq. avg. 0.197 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 p: az 101.9 el 45.2 pa -57.0 u,v (fr/asec) 184.242 -626.536 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fp..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fp.W.92.1270J7

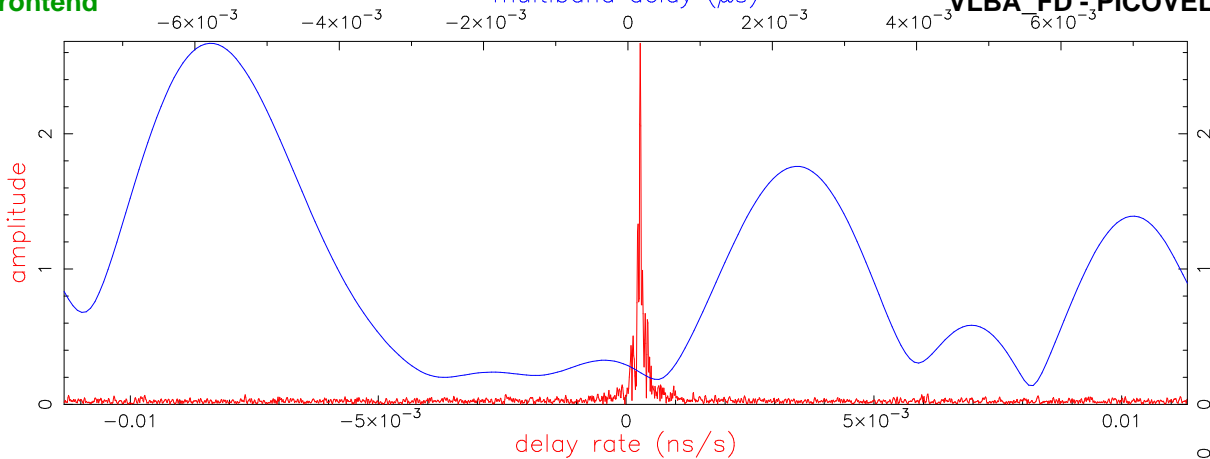
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.127OJ7, No0080, fP

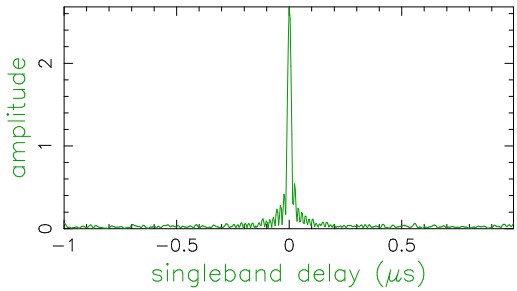
VLBA_FD_PICOVEL, fgroup W, pol LL

multiband delay (μ s)

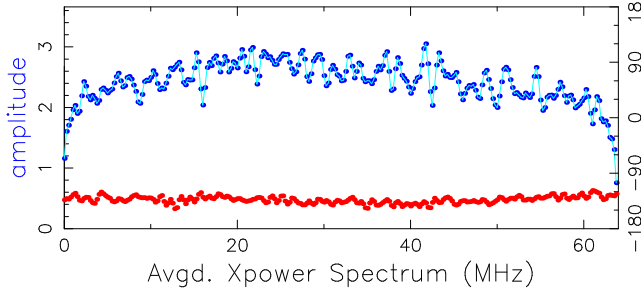


Fringe quality 2

SNR 148.6
 Int time 410.661
 Amp 2.682
 Phase -56.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.000918
 MBD -0.005752
 Fringe rate (Hz)
 0.024507
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

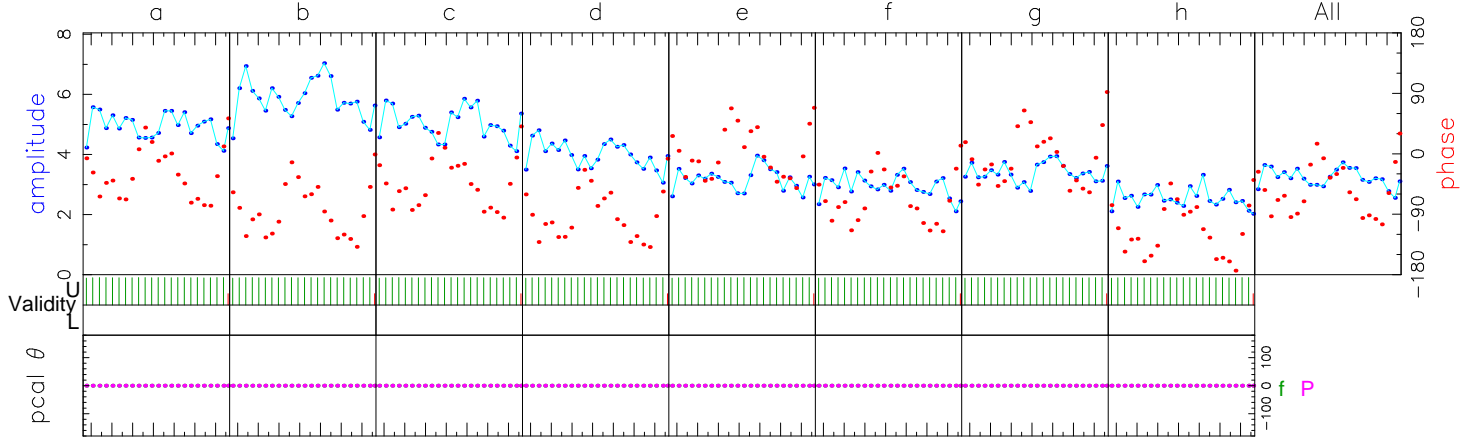


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134137
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-32.1	-86.5	-45.5	-93.6	-1.1	-69.9	-7.6	-116.9	Phase	-56.8
	4.1	4.8	4.1	3.3	2.6	2.5	2.7	2.1	Ampl.	3.3
	257.0	256.6	257.0	256.7	256.8	257.1	256.6	255.1	Sbd box	257.2
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	4.57488635034E+03	Apriori delay (usec)	4.57489210244E+03	Resid mbdelay (usec)	-5.75210E-03	+/-	7.3E-06
Sband delay (usec)	4.57489302019E+03	Apriori clock (usec)	6.2620938E-01	Resid sbdelay (usec)	9.17750E-04	+/-	5.8E-05
Phase delay (usec)	4.57489210061E+03	Apriori clockrate (us/s)	2.6205050E-07	Resid phdelay (usec)	-1.83110E-06	+/-	2.5E-08
Delay rate (us/s)	1.86619816193E+00	Apriori rate (us/s)	1.86619787743E+00	Resid rate (us/s)	2.84498E-07	+/-	1.0E-10
Total phase (deg)	196.7	Apriori accel (us/s/s)	-2.72676129677E-05	Resid phase (deg)	-56.8	+/-	0.8

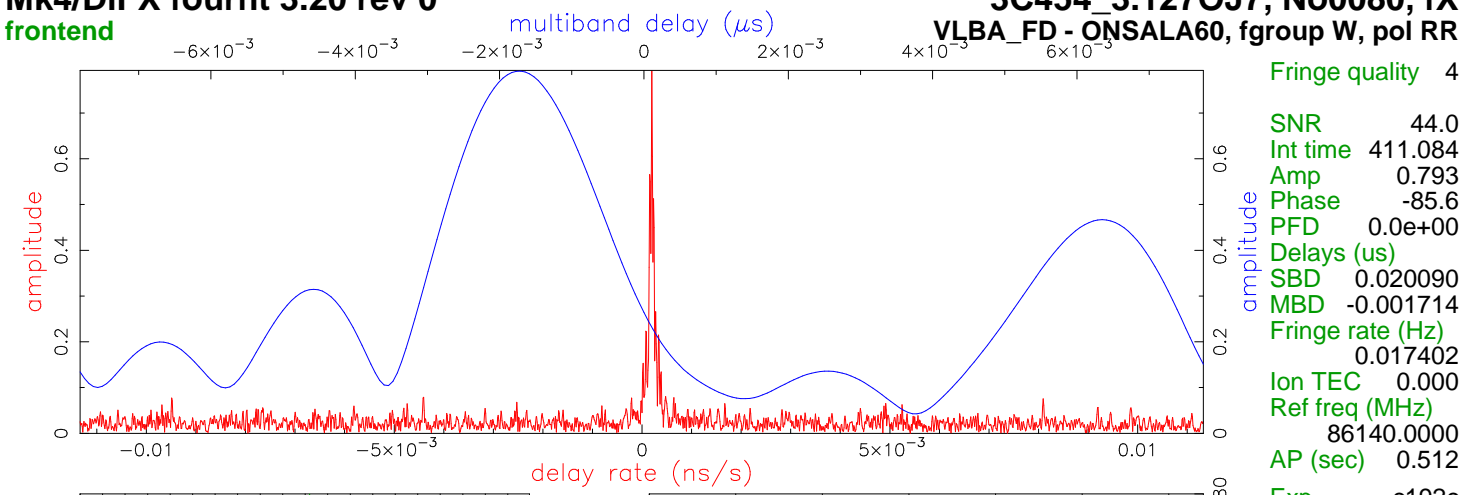
ph/seg (deg)	35.8	1.8	Search (2048X32)	2.593	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	23.4	3.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	45.2	1.1	Inc. seg. avg.	3.233	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	40.8	1.9	Inc. frq. avg.	3.288	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

f: az 101.0 el 49.4 pa -61.6 P: az 264.7 el 34.4 pa 55.8 u,v (fr/asec) -11171.025 -1357.167 simultaneous interpolator

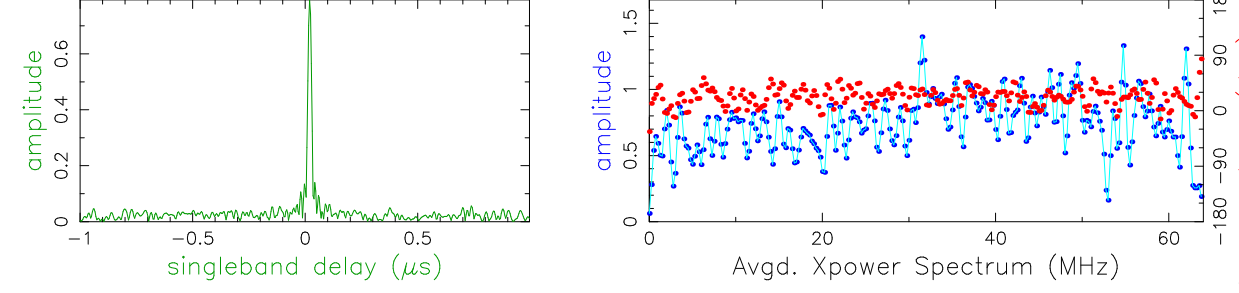
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fP..127OJ7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fP.W.94.127OJ7

Mk4/DiFX fourfit 3.20 rev 0
frontend

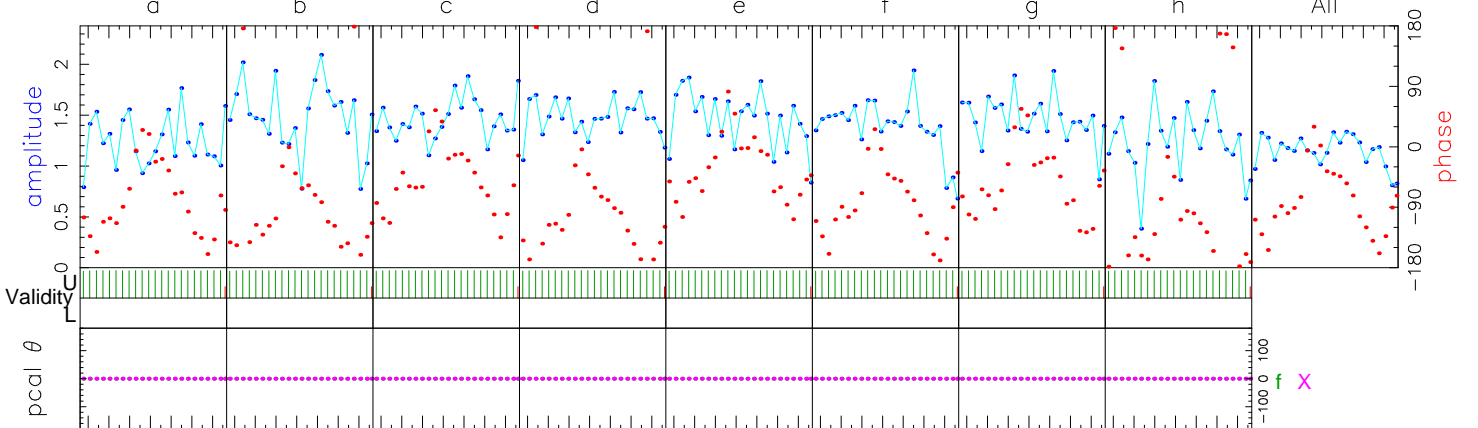
3C454_3.1270J7, No0080, fX
VLBA_FD - ONSALA60, fgroup W, pol RR



Fringe quality 4
SNR 44.0
Int time 411.084
Amp 0.793
Phase -85.6
PFD 0.0e+00
Delays (us)
SBD 0.020090
MBD -0.001714
Fringe rate (Hz) 0.017402
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134142
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-86.5	-115.4	-50.5	-118.6	-37.7	-87.3	-57.0	-144.6	Phase	-85.6
	0.8	1.1	1.0	1.0	1.0	0.9	1.0	0.8	Ampl.	1.0
	261.7	261.9	262.0	262.0	261.4	262.0	261.4	261.1	Sbd box	262.1
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.49576849229E+03		Apriori delay (usec)		8.49575458085E+03		Resid mbdelay (usec)		-1.71356E-03	+/- 2.5E-05
Sband delay (usec)	8.49577467060E+03		Apriori clock (usec)		-3.1945377E+01		Resid sbdelay (usec)		2.00897E-02	+/- 2.0E-04
Phase delay (usec)	8.49575457809E+03		Apriori clockrate (us/s)		-6.1894950E-07		Resid phdelay (usec)		-2.75895E-06	+/- 8.4E-08
Delay rate (us/s)	1.61462354752E+00		Apriori rate (us/s)		1.61462334551E+00		Resid rate (us/s)		2.02017E-07	+/- 3.5E-10
Total phase (deg)	128.4		Apriori accel (us/s/s)		-5.58602398068E-05		Resid phase (deg)		-85.6	+/- 2.6

ph/seg (deg) 49.4 6.2 Search (2048X32) 0.765 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 48.8 10.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 40.4 3.7 Inc. seg. avg. 1.148 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 24.3 6.4 Inc. frq. avg. 0.959 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 X: az 265.7 el 22.2 pa 34.0 u,v (fr/asec) -9712.674 -4059.294 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fX..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fX.W.116.1270J7

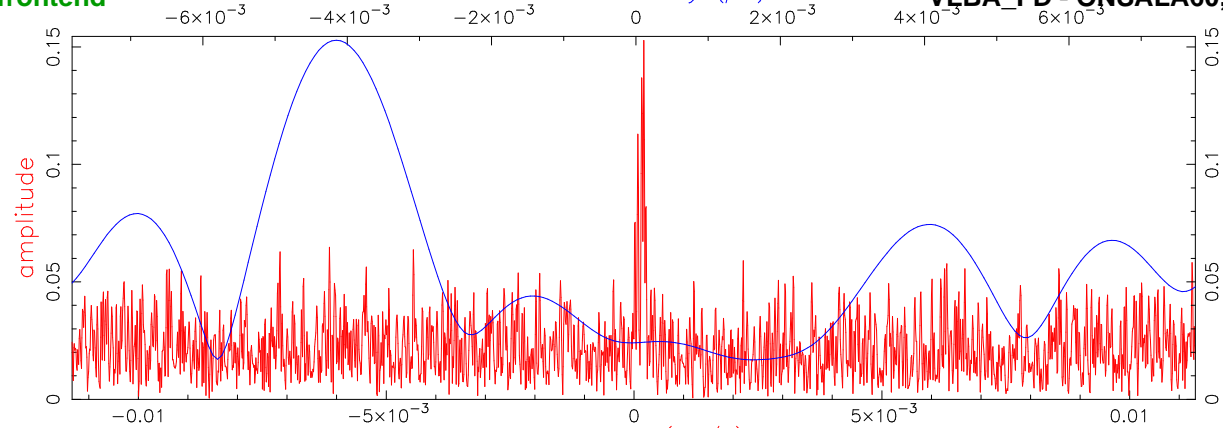
Mk4/DiFX fourfit 3.20 rev 0

frontend

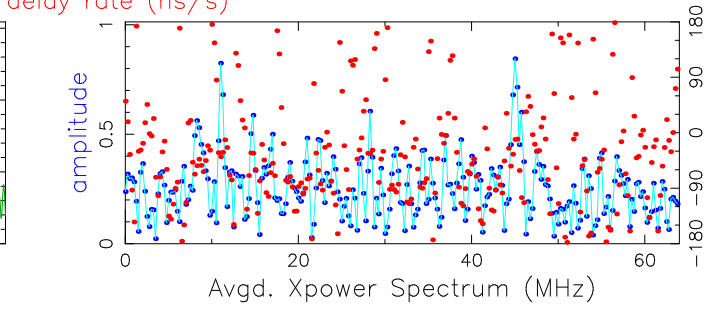
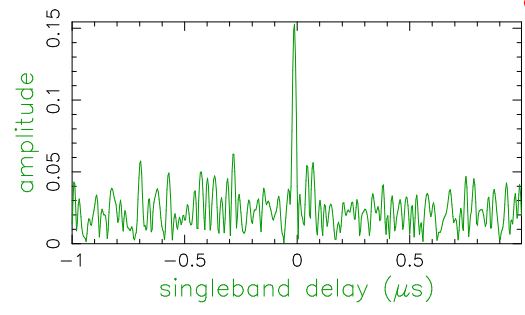
3C454_3.1270J7, No0080, fX

VLBA_FD - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

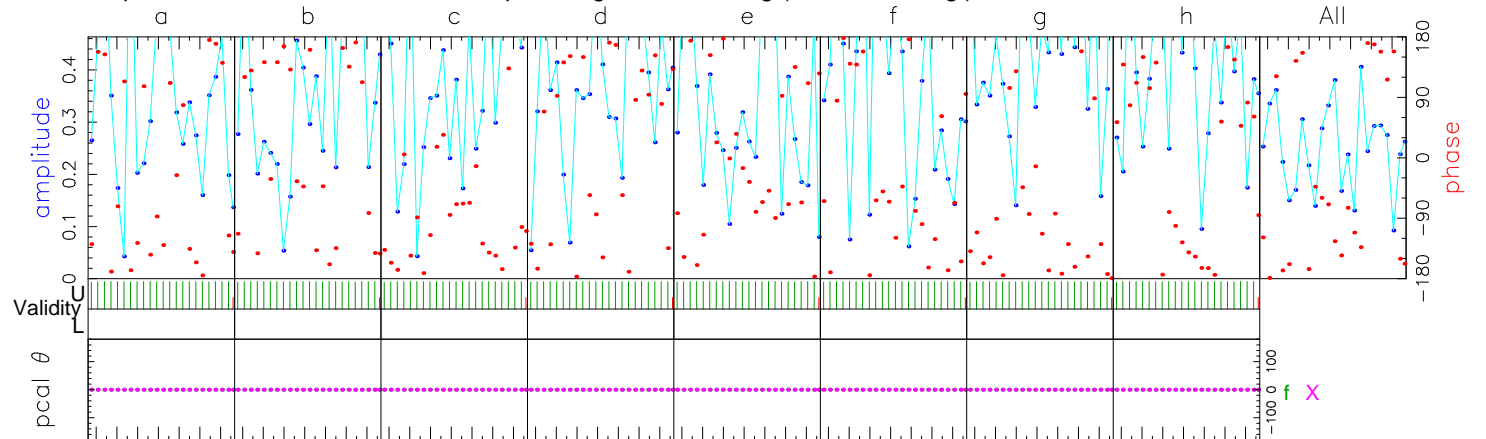


Fringe quality 9
 SNR 8.6
 Int time 411.084
 Amp 0.154
 Phase -158.7
 PFD 4.0e-09
 Delays (us)
 SBD -0.013081
 MBD -0.004183
 Fringe rate (Hz) 0.017373
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134151
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-169.8	177.2	-124.9	156.9	-108.3	-135.1	-141.7	156.7	Phase	-158.7
	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.2	Ampl.	0.2
	254.1	162.8	253.6	253.1	52.0	163.3	253.1	250.9	Sbd box	253.7
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.49573477276E+03		Apriori delay (usec)		8.49575458085E+03		Resid mbdelay (usec)		-4.18309E-03	+/- 1.3E-04
Sband delay (usec)	8.49574150010E+03		Apriori clock (usec)		-3.1945377E+01		Resid sbdelay (usec)		-1.30807E-02	+/- 1.0E-03
Phase delay (usec)	8.49575457573E+03		Apriori clockrate (us/s)		-6.1894950E-07		Resid phdelay (usec)		-5.11852E-06	+/- 4.3E-07
Delay rate (us/s)	1.61462354720E+00		Apriori rate (us/s)		1.61462334551E+00		Resid rate (us/s)		2.01689E-07	+/- 1.8E-09
Total phase (deg)			Apriori accel (us/s/s)		-5.58602398068E-05		Resid phase (deg)		-158.7	+/- 13.4

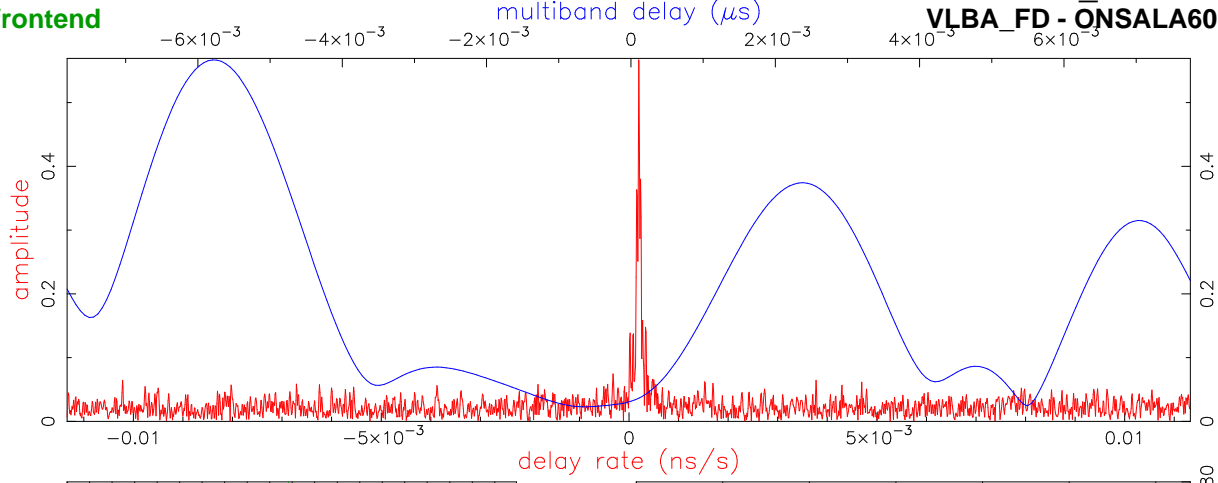
ph/seg (deg) 55.7 32.1 Search (2048X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 82.7 56.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.1 18.9 Inc. seg. avg. 0.218 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 33.7 33.0 Inc. frq. avg. 0.170 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 X: az 265.7 el 22.2 pa 34.0 u,v (fr/asec) -9712.674 -4059.294 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fX..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fX.W.153.1270J7

Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, fX

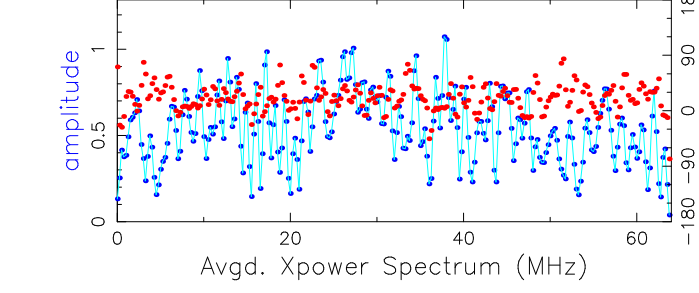
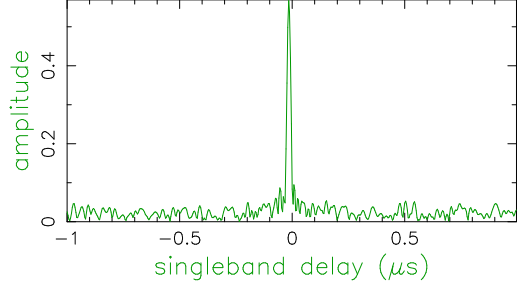
VLBA_FD - ONSALA60, fgroup W, pol LL



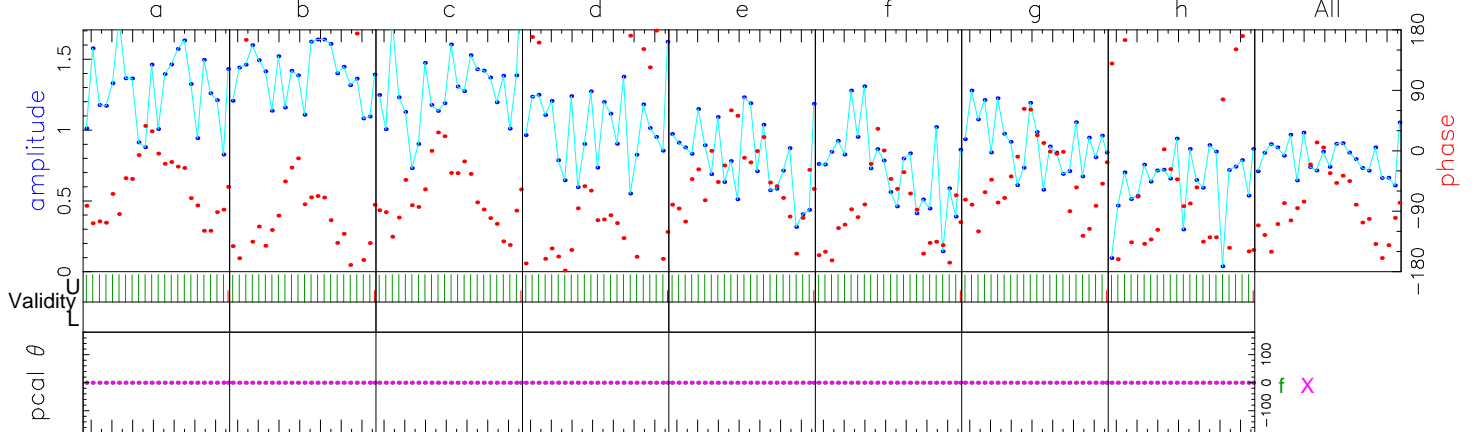
Fringe quality 3

SNR 31.6
Int time 411.084
Amp 0.569
Phase -84.5
PFD 0.0e+00
Delays (us)
SBD -0.014806
MBD -0.005763
Fringe rate (Hz) 0.017394
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134138
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-59.0	-113.1	-69.4	-146.9	-40.5	-94.7	-48.6	-121.7	Phase	-84.5
	0.9	1.0	0.9	0.7	0.6	0.5	0.6	0.4	Ampl.	0.7
	253.1	252.6	253.0	252.7	253.2	253.0	252.8	251.5	Sbd box	253.2
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.49573319279E+03		Apriori delay (usec)		8.49575458085E+03		Resid mbdelay (usec)		-5.76306E-03	+/- 3.4E-05
Sband delay (usec)	8.49573977510E+03		Apriori clock (usec)		-3.1945377E+01		Resid sbdelay (usec)		-1.48057E-02	+/- 2.7E-04
Phase delay (usec)	8.49575457812E+03		Apriori clockrate (us/s)		-6.1894950E-07		Resid phdelay (usec)		-2.72432E-06	+/- 1.2E-07
Delay rate (us/s)	1.61462354743E+00		Apriori rate (us/s)		1.61462334551E+00		Resid rate (us/s)		2.01927E-07	+/- 4.9E-10
Total phase (deg)	129.5		Apriori accel (us/s/s)		-5.58602398068E-05		Resid phase (deg)		-84.5	+/- 3.6

ph/seg (deg) 47.2 8.7 Search (2048X32) 0.555 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 44.9 15.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 41.4 5.1 Inc. seg. avg. 0.791 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 42.5 9.0 Inc. frq. avg. 0.686 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 X: az 265.7 el 22.2 pa 34.0 u,v (fr/asec) -9712.674 -4059.294 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fX..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fX.W.97.1270J7

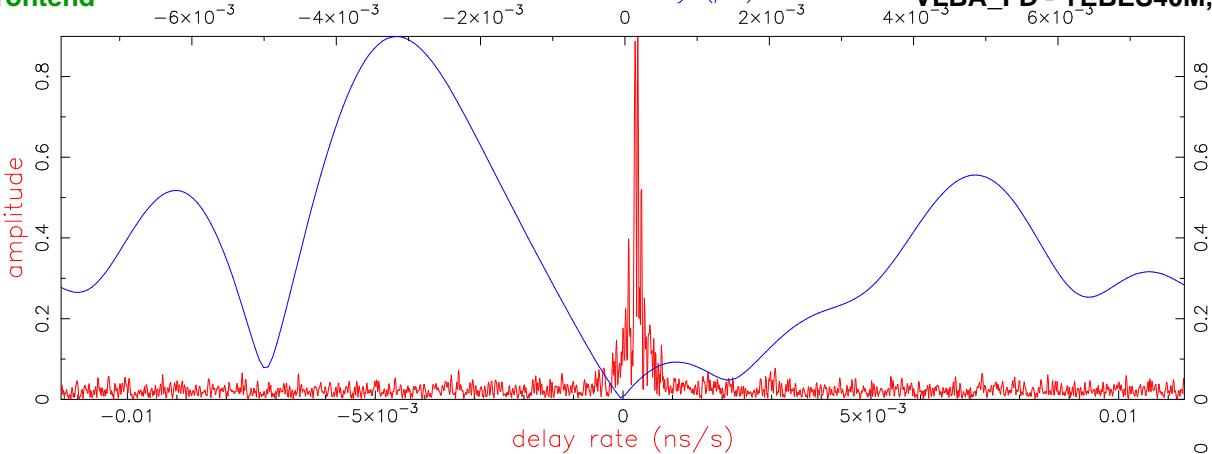
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, fY

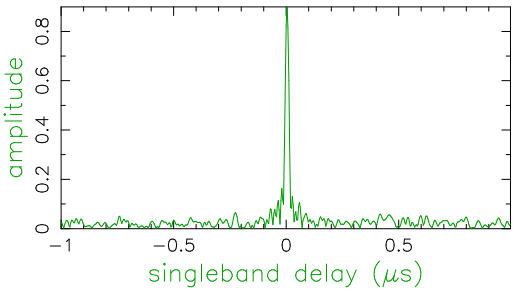
VLBA_FD - YEYES40M, fgroup W, pol RR

multiband delay (μ s)

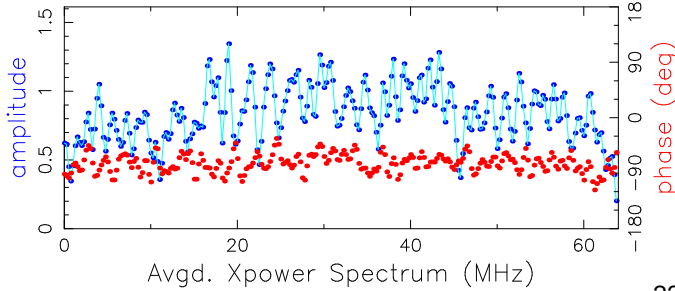


Fringe quality 2

SNR 49.2
Int time 400.593
Amp 0.900
Phase 6.2
PFD 0.0e+00
Delays (us)
SBD 0.003779
MBD -0.003167
Fringe rate (Hz) 0.025830
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

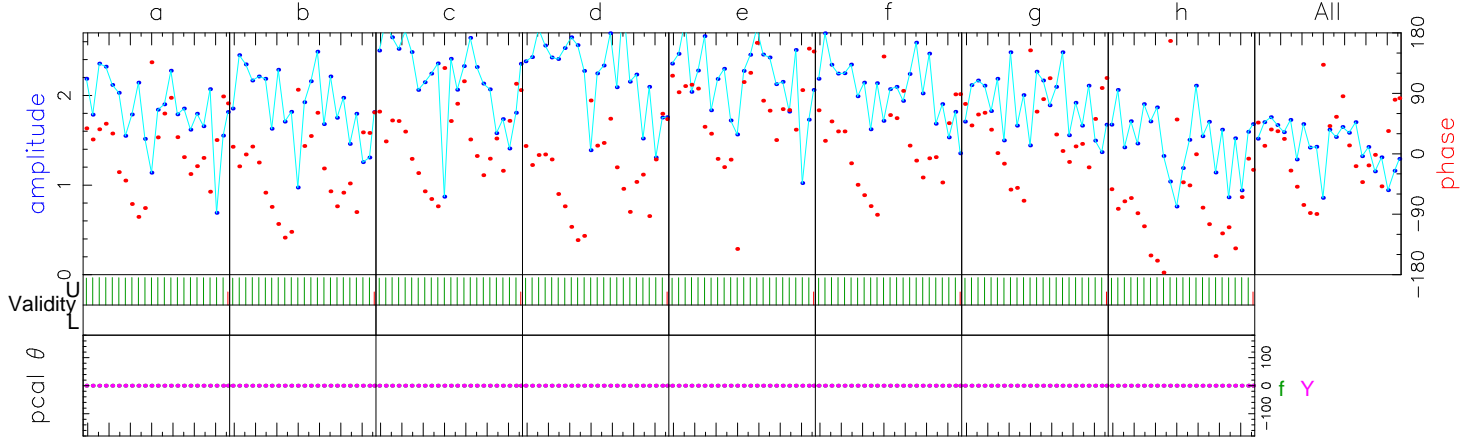


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020646.90
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134143
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All			
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		258.0			
f	1000	1000	1000	1000	1000	1000	1000	1000					
Y	1000	1000	1000	1000	1000	1000	1000	1000					
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
f	1000	1000	1000	1000	1000	1000	1000	1000					
Y	1000	1000	1000	1000	1000	1000	1000	1000					
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR					
Group delay (usec)(sbd)		4.74825332593E+03			4.74825649278E+03				Resid mbdelay (usec)	-3.16685E-03	+/- 2.2E-05		
Sband delay (usec)		4.74826027178E+03			-9.2114477E+00				Resid sbdelay (usec)	3.77900E-03	+/- 1.8E-04		
Phase delay (usec)		4.74825649298E+03			-3.1094951E-07				Resid phdelay (usec)	2.01129E-07	+/- 7.5E-08		
Delay rate (us/s)		1.82035179284E+00			1.82035149298E+00				Resid rate (us/s)	2.99861E-07	+/- 3.2E-10		
Total phase (deg)			109.9						Resid phase (deg)	6.2	+/- 2.3		
ph/seg (deg)	RMS 57.3	Theor. 5.6	Amplitude 5.7	0.900 +/- 0.018	Search (2048X32) 0.879	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		sb window (us)	-1.000	1.000	
amp/seg (%)	67.4	9.7	Interp. 3.3	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled		mb window (us)	-0.008	0.008	
ph/frq (deg)	54.0	3.3	Inc. seg. avg. 3.3	1.447	1.447	Bits/sample: 2x2		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	38.5	5.7	Inc. frq. avg. 5.7	1.211	1.211	Data rate(Mb/s): 2048		nlags: 256		t_cohere infinite	ion window (TEC)	0.00	0.00

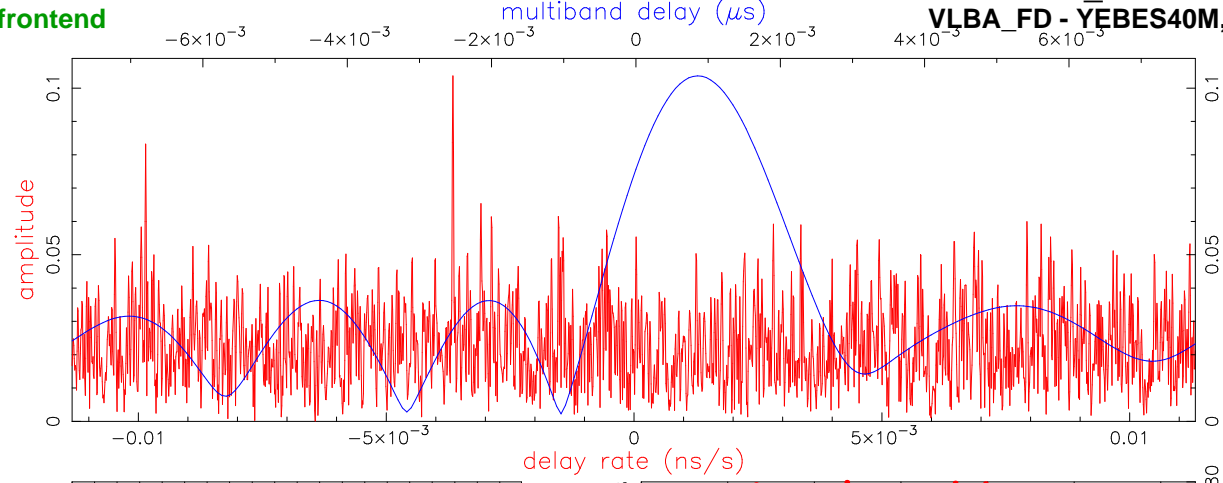
f: az 101.0 el 49.4 pa -61.6 Y: az 262.6 el 33.8 pa 51.8 u,v (fr/asec) -10901.307 -1813.478 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fY..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fY.W.118.1270J7

Mk4/DiFX fourfit 3.20 rev 0

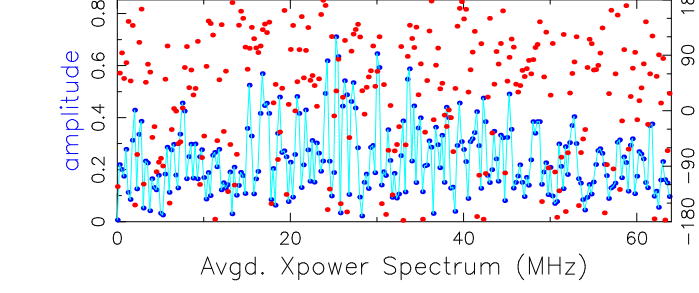
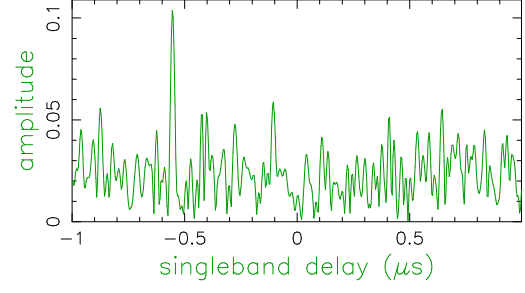
frontend

3C454_3.1270J7, No0080, fY

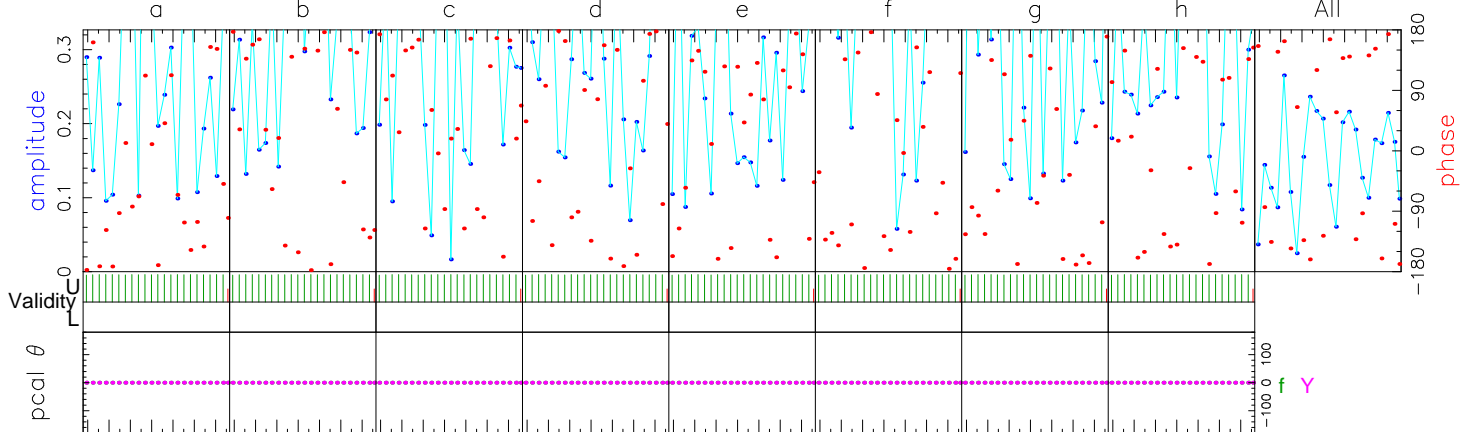
VLBA_FD - YEBES40M, fgroup W, pol LR



Fringe quality 0
 SNR 5.7
 Int time 400.594
 Amp 0.109
 Phase -173.4
 PFD 9.4e-01
 Delays (us)
 SBD -0.553567
 MBD 0.000881
 Fringe rate (Hz) -0.314796
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020646.90
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134147
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-139.6	-179.5	179.0	-178.2	160.4	-160.5	-124.7	158.0	Phase	-173.4
	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	111.3	384.9	343.5	54.0	147.2	465.8	241.2	477.5	Sbd box	115.3
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	4.74771049896E+03		Apriori delay (usec)		4.74825649278E+03		Resid mbdelay (usec)		8.81180E-04	+/- 1.9E-04
Sband delay (usec)	4.74770292628E+03		Apriori clock (usec)		-9.2114477E+00		Resid sbdelay (usec)		-5.53567E-01	+/- 1.5E-03
Phase delay (usec)	4.74825648719E+03		Apriori clockrate (us/s)		-3.1094951E-07		Resid phdelay (usec)		-5.59052E-06	+/- 6.5E-07
Delay rate (us/s)	1.82034783851E+00		Apriori rate (us/s)		1.82035149298E+00		Resid rate (us/s)		-3.65447E-06	+/- 2.8E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.97216416756E-05		Resid phase (deg)		-173.4	+/- 20.1

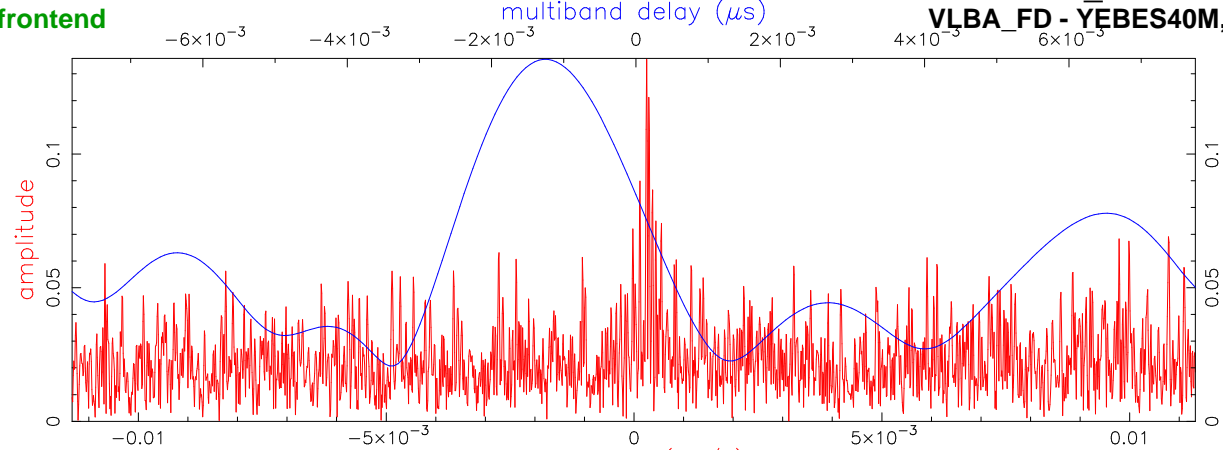
ph/seg (deg) 57.4 48.1 Search (2048X32) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.1 84.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.7 28.4 Inc. seg. avg. 0.117 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 39.3 49.5 Inc. frq. avg. 0.105 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 Y: az 262.6 el 33.8 pa 51.8 u,v (fr/asec) -10901.307 -1813.478 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fY..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fY.W.136.1270J7

Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, fY

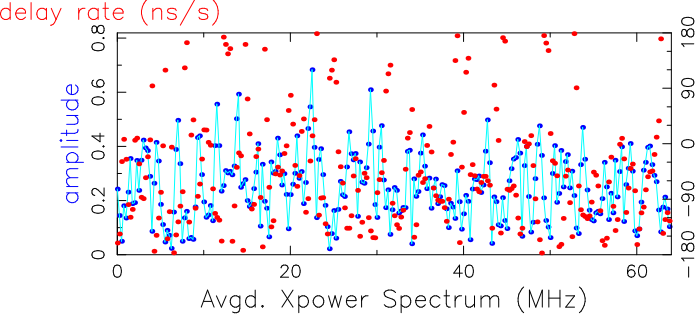
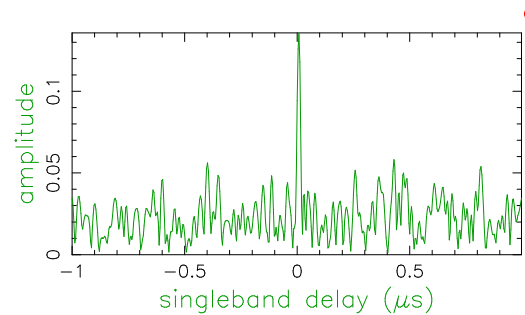
VLBA_FD - YEBES40M, fgroup W, pol RL



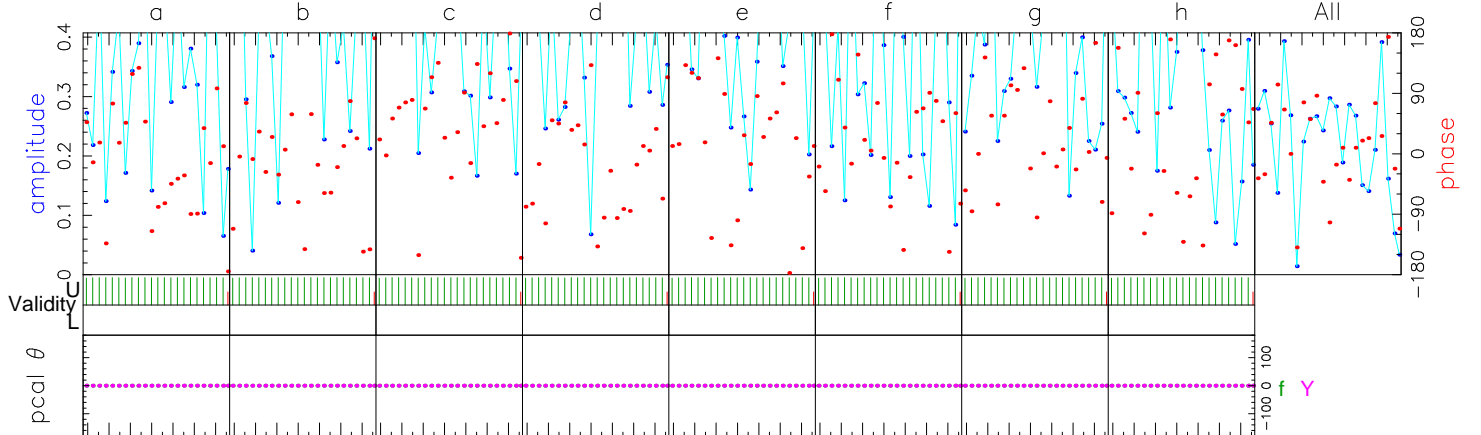
Fringe quality 9

SNR 7.4
 Int time 400.593
 Amp 0.136
 Phase 16.4
 PFD 3.4e-05
 Delays (us)
 SBD 0.007241
 MBD -0.001262
 Fringe rate (Hz) 0.021552
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020646.90
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134152
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-6.1	-12.0	62.3	-28.8	57.1	24.1	24.8	-81.5	Phase	16.4
	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2
	465.7	42.0	258.5	258.5	257.8	49.0	259.1	255.6	Sbd box	258.9
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	4.74827085604E+03	Apriori delay (usec)	4.74825649278E+03	Resid mbdelay (usec)	-1.26174E-03	+/-	1.5E-04
Sband delay (usec)	4.74826373403E+03	Apriori clock (usec)	-9.2114477E+00	Resid sbdelay (usec)	7.24125E-03	+/-	1.2E-03
Phase delay (usec)	4.74825649331E+03	Apriori clockrate (us/s)	-3.1094951E-07	Resid phdelay (usec)	5.28545E-07	+/-	5.0E-07
Delay rate (us/s)	1.82035174318E+00	Apriori rate (us/s)	1.82035149298E+00	Resid rate (us/s)	2.50202E-07	+/-	2.1E-09
Total phase (deg)	120.1	Apriori accel (us/s/s)	-2.97216416756E-05	Resid phase (deg)	16.4	+/-	15.4

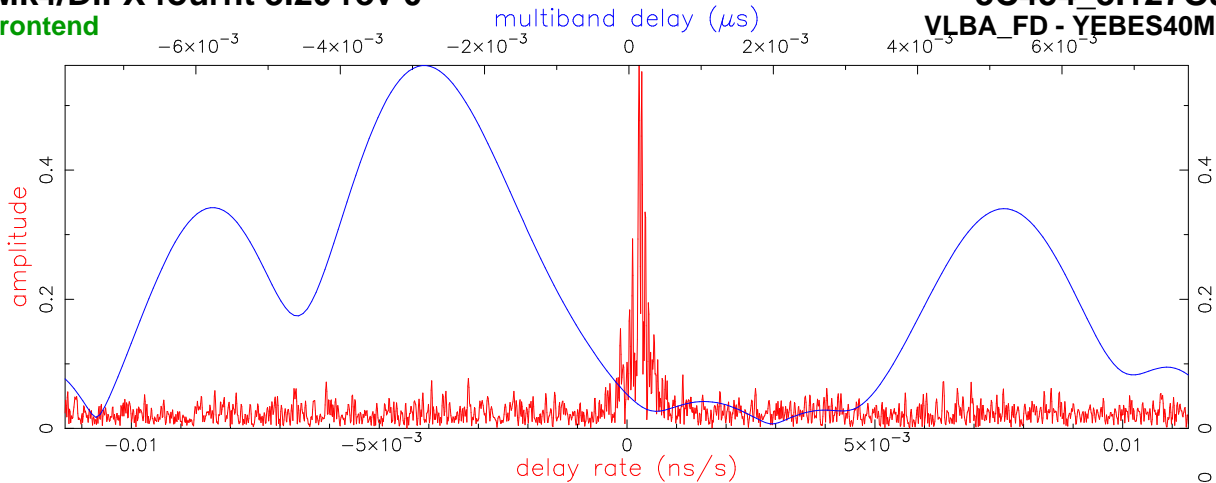
ph/seg (deg) 69.8 37.0 Search (2048X32) 0.130 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 96.8 64.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 53.0 21.8 Inc. seg. avg. 0.189 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 49.0 38.1 Inc. frq. avg. 0.164 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 101.0 el 49.4 pa -61.6 Y: az 262.6 el 33.8 pa 51.8 u,v (fr/asec) -10901.307 -1813.478 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fY..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fY.W.154.1270J7

Mk4/DiFX fourfit 3.20 rev 0

frontend

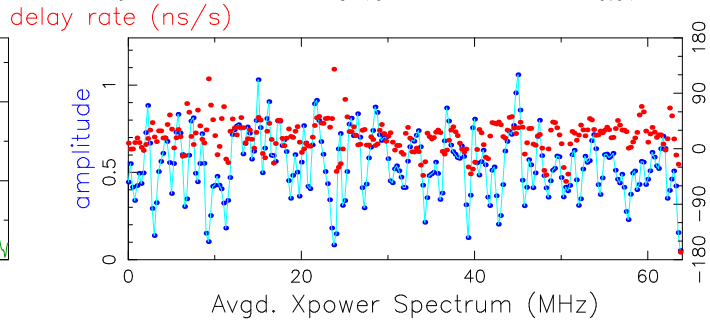
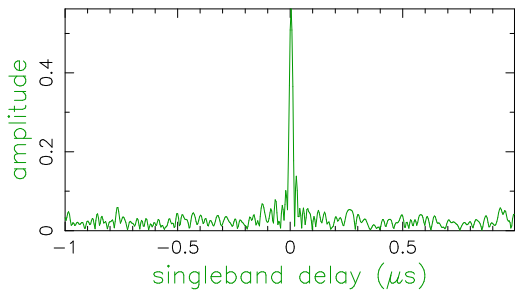
3C454_3.127OJ7, No0080, fY

VLBA_FD - YEBES40M, fgroup W, pol LL



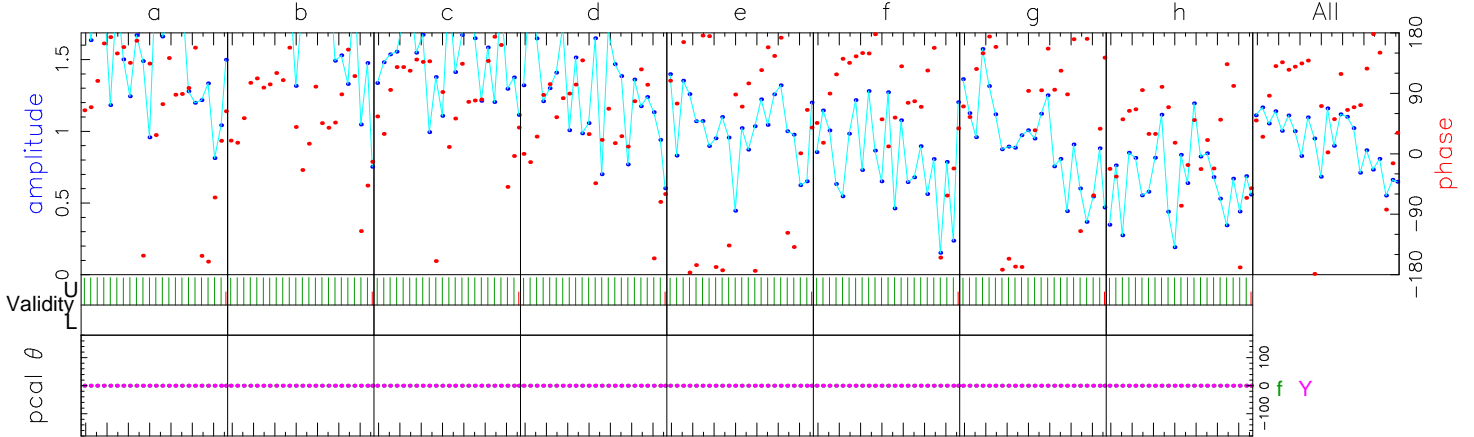
Fringe quality 3

SNR 30.8
 Int time 400.594
 Amp 0.562
 Phase 98.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.003926
 MBD -0.002837
 Fringe rate (Hz)
 0.021142
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020646.90
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134138
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	121.9	72.3	103.5	52.2	158.9	99.6	135.4	30.2	Phase	98.2
	0.9	1.1	0.9	0.7	0.6	0.4	0.5	0.4	Ampl.	0.7
	257.5	257.4	257.6	257.3	257.8	257.9	257.1	255.6	Sbd box	258.0
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 4.74825365597E+03 Apriori delay (usec) 4.74825649278E+03 Resid mbdelay (usec) -2.83681E-03 +/- 3.5E-05
 Sband delay (usec) 4.74826041878E+03 Apriori clock (usec) -9.2114477E-07 Resid sbdelay (usec) 3.92600E-03 +/- 2.8E-04
 Phase delay (usec) 4.74825649595E+03 Apriori clockrate (us/s) -3.1094951E-07 Resid phdelay (usec) 3.16580E-06 +/- 1.2E-07
 Delay rate (us/s) 1.82035173841E+00 Apriori rate (us/s) 1.82035149298E+00 Resid rate (us/s) 2.45432E-07 +/- 5.2E-10
 Total phase (deg) 201.9 Apriori accel (us/s/s) -2.97216416756E-05 Resid phase (deg) 98.2 +/- 3.7

RMS Theor. Amplitude 0.562 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 64.6 8.9 Search (2048X32) 0.558 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 74.6 15.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 46.7 5.3 Inc. seg. avg. 0.927 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 48.4 9.2 Inc. frq. avg. 0.692 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 101.0 el 49.4 pa -61.6 Y: az 262.6 el 33.8 pa 51.8 u,v (fr/asec) -10901.307 -1813.478 simultaneous interpolator

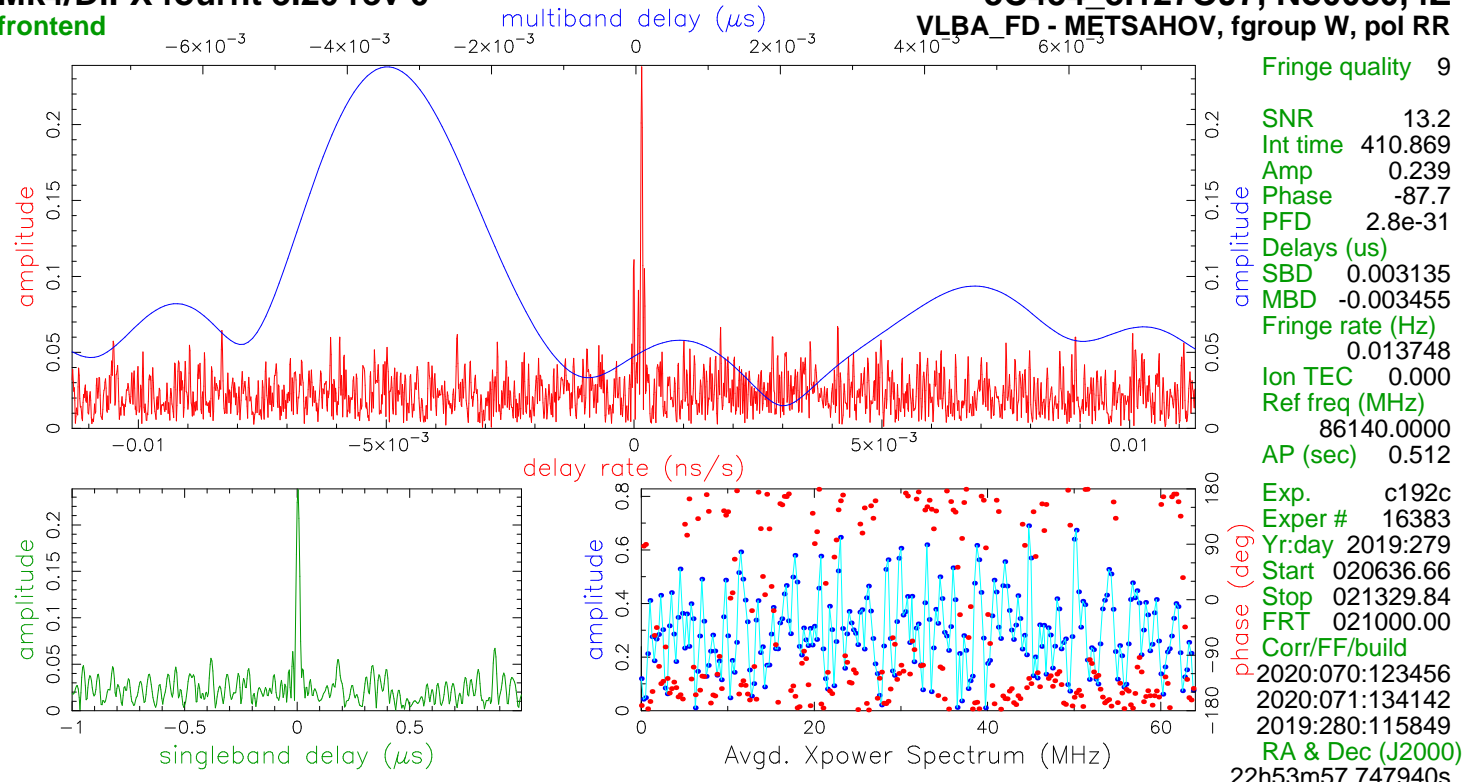
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fY..127OJ7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fY.W.95.127OJ7

Mk4/DiFX fourfit 3.20 rev 0

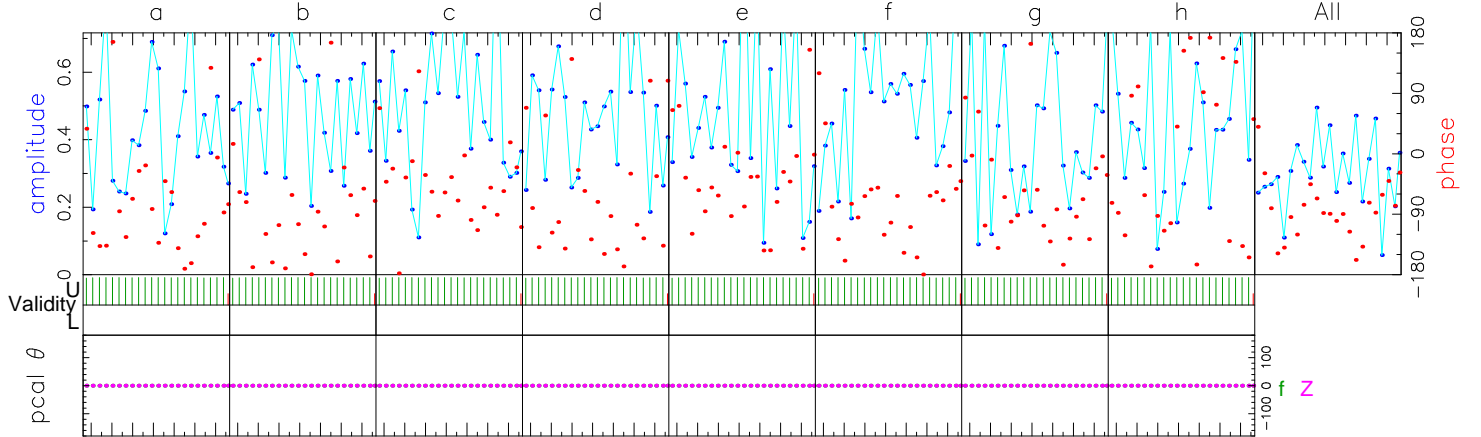
frontend

3C454_3.1270J7, No0080, fZ

VLBA_FD - METSAHOV, fgroup W, pol RR



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-111.0	-110.4	-54.1	-111.6	-42.8	-82.5	-78.5	-164.7	Phase	-87.7
	0.2	0.3	0.4	0.3	0.3	0.4	0.3	0.2	Ampl.	0.3
	231.5	257.4	257.7	257.6	257.5	257.4	256.7	255.8	Sbd box	257.8
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.07804275060E+04		Apriori delay (usec)		1.07804309606E+04		Resid mbdelay (usec)		-3.45462E-03	+/- 8.2E-05
Sband delay (usec)	1.07804340954E+04		Apriori clock (usec)		2.8910232E-01		Resid sbdelay (usec)		3.13475E-03	+/- 6.5E-04
Phase delay (usec)	1.07804309578E+04		Apriori clockrate (us/s)		-1.0724231E-07		Resid phdelay (usec)		-2.82659E-06	+/- 2.8E-07
Delay rate (us/s)	1.57808306073E+00		Apriori rate (us/s)		1.57808290113E+00		Resid rate (us/s)		1.59603E-07	+/- 1.2E-09
Total phase (deg)	253.0		Apriori accel (us/s/s)		-6.86453638265E-05		Resid phase (deg)		-87.7	+/- 8.7

	RMS	Theor.	Amplitude	0.239 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	43.6	20.8	Search (2048X32)	0.230	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	52.2	36.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	42.5	12.2	Inc. seg. avg.	0.286	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	31.2	21.4	Inc. frq. avg.	0.276	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 101.0 el 49.4 pa -61.6	Z: az 275.4 el 15.7 pa 31.0		u,v (fr/asec) -9513.225 -4570.989		nlags: 256 t_cohere infinite	

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fZ..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fZ.W.117.1270J7 simultaneous interpolator

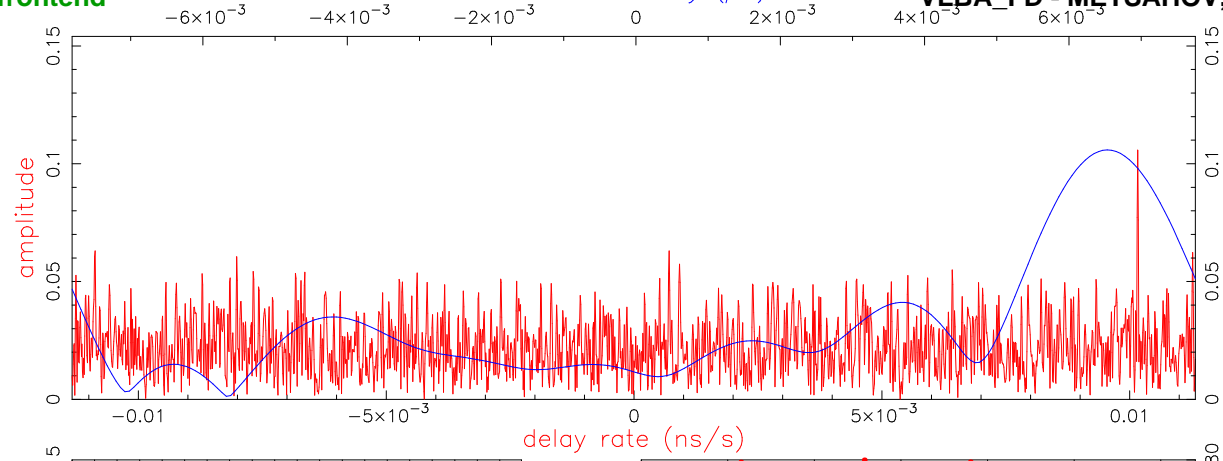
Mk4/DiFX fourfit 3.20 rev 0

frontend

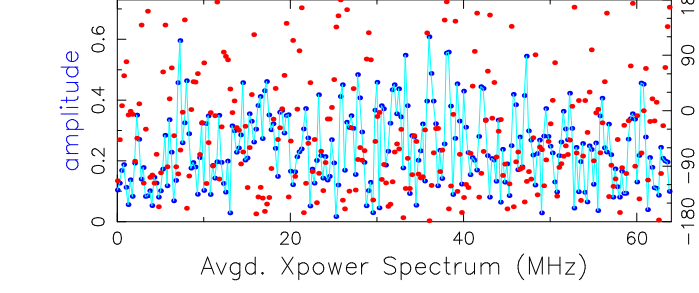
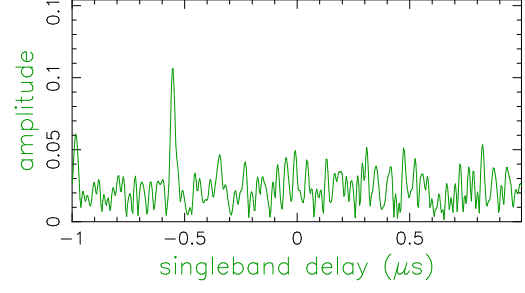
3C454_3.1270J7, No0080, fZ

VLBA_FD - METSAHOV, fgroup W, pol LR

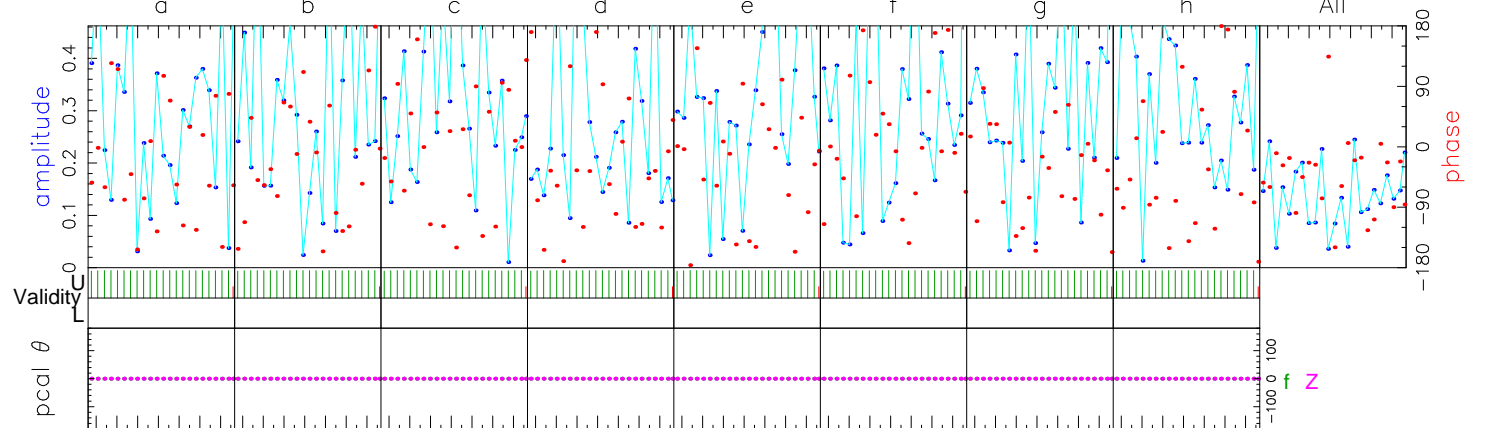
multiband delay (μ s)



Fringe quality 0
 SNR 6.0
 Int time 410.870
 Amp 0.154
 Phase -51.8
 PFD 4.4e-01
 Delays (us)
 SBD -0.552847
 MBD 0.006564
 Fringe rate (Hz) 0.876778
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134147
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.07798750250E+04				1.07804309606E+04			6.56440E-03	+/- 1.8E-04
Sband delay (usec)		1.07798781136E+04				2.8910232E-01			-5.52847E-01	+/- 1.4E-03
Phase delay (usec)		1.07804309589E+04				-1.0724231E-07			-1.67048E-06	+/- 6.2E-07
Delay rate (us/s)		1.57809307965E+00				1.57808290113E+00			1.01785E-05	+/- 2.6E-09
Total phase (deg)			288.9			-6.86453638265E-05			-51.8	+/- 19.2
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
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)	55.3	46.0		Search (2048X32)	0.100					
amp/seg (%)	61.8	80.2		Interp.	0.000					
ph/frq (deg)	20.1	27.1		Inc. seg. avg.	0.147					
amp/frq (%)	29.6	47.3		Inc. frq. avg.	0.142					
f: az 101.0 el 49.4 pa -61.6				Z: az 275.4 el 15.7 pa 31.0						
				u,v (fr/asec) -9513.225 -4570.989						
Control file: cf_1234_gmva				Input file: /Exps/c192c/v1_CygA2/1234/No0080/fZ..1270J7						
				Output file: /Exps/c192c/v1_CygA2/1234/No0080/fZ.W.137.1270J7						

simultaneous interpolator

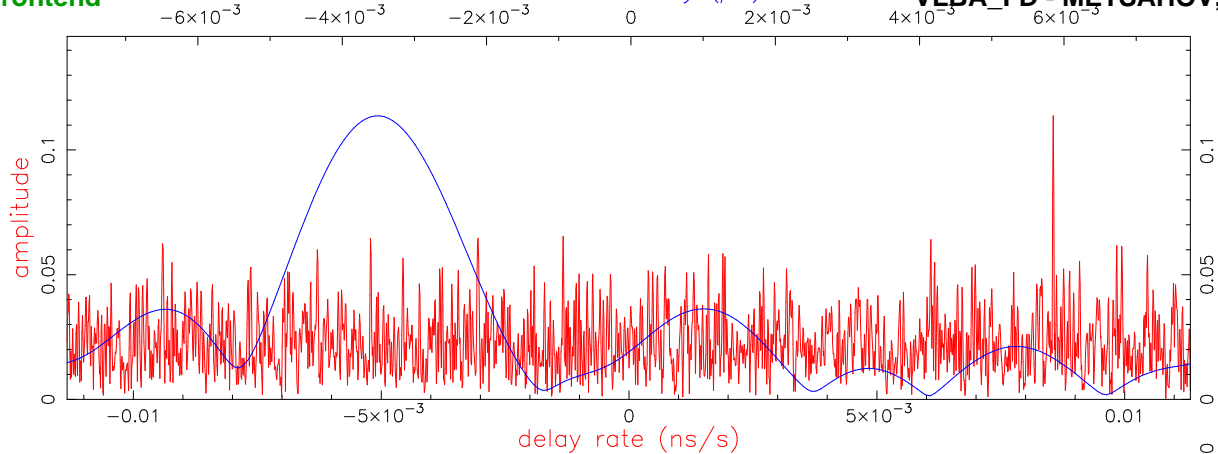
Mk4/DiFX fourfit 3.20 rev 0

frontend

3C454_3.1270J7, No0080, fZ

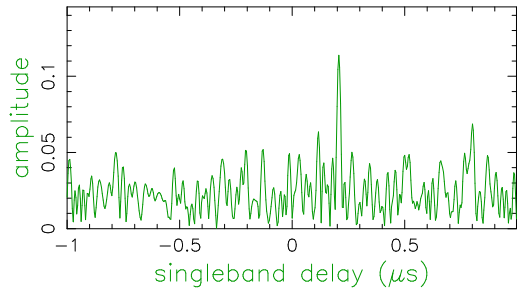
VLBA_FD - METSAHOV, fgroup W, pol RL

multiband delay (μs)

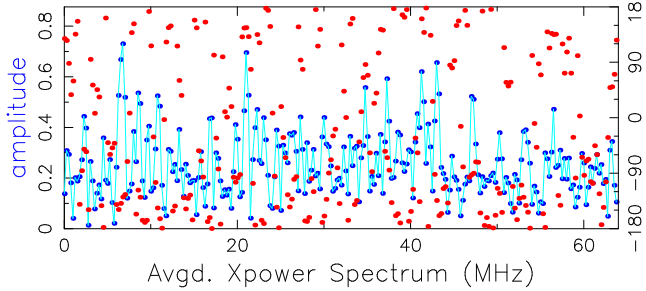


Fringe quality 0

SNR 6.3
 Int time 410.869
 Amp 0.146
 Phase 111.1
 PFD 7.6e-02
 Delays (us)
 SBD 0.207180
 MBD -0.003508
 Fringe rate (Hz)
 0.737820
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

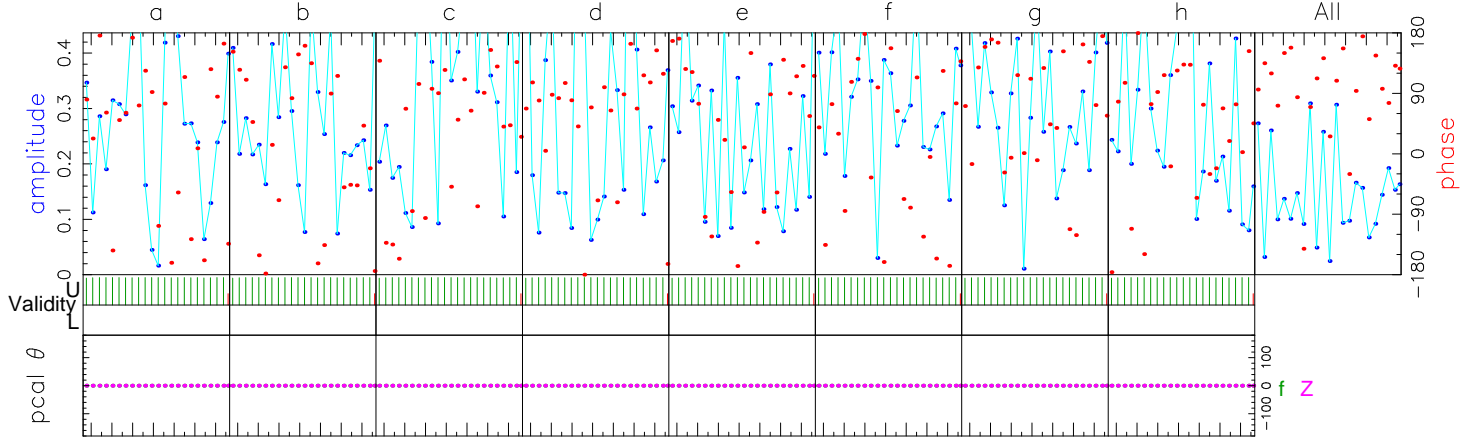


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 020636.66
 Stop 021329.84
 FRT 021000.00
 Corr/FF/build
 2020:070:123456
 2020:071:134152
 2019:280:115849
 RA & Dec (J2000)
 22h53m57.747940s
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	1.07806305774E+04								Resid mbdelay (usec)	-3.50821E-03 +/- 1.7E-04
Sband delay (usec)	1.07806381409E+04								Resid sbdelay (usec)	2.07180E-01 +/- 1.4E-03
Phase delay (usec)	1.07804309642E+04								Resid phdelay (usec)	3.58247E-06 +/- 5.9E-07
Delay rate (us/s)	1.57809146649E+00								Resid rate (us/s)	8.56536E-06 +/- 2.5E-09
Total phase (deg)			91.8						Resid phase (deg)	111.1 +/- 18.2
ph/seg (deg)	52.4	43.6							PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	79.3	76.1							PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	14.4	25.7							Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%)	28.9	44.9							Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
									Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

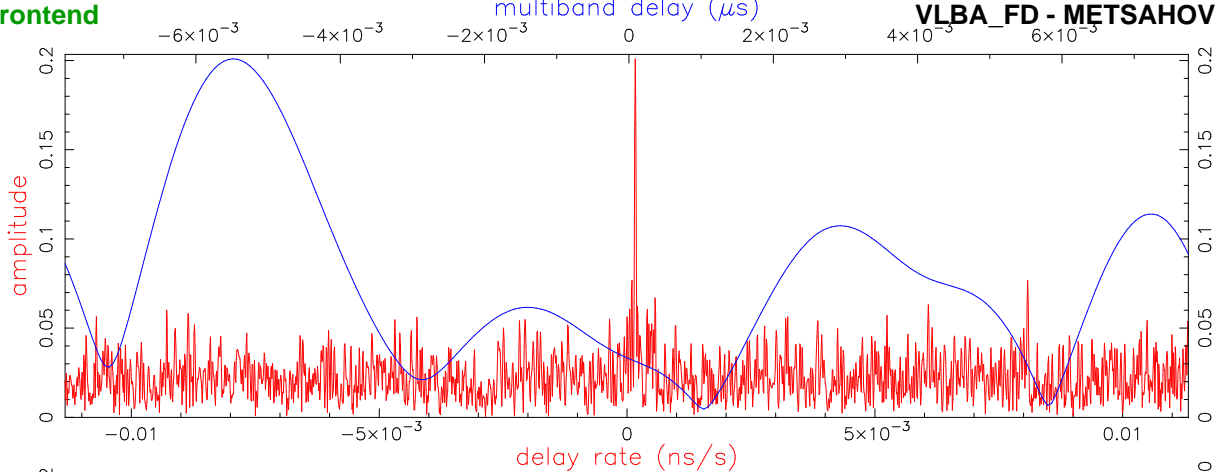
f: az 101.0 el 49.4 pa -61.6 Z: az 275.4 el 15.7 pa 31.0 u,v (fr/asec) -9513.225 -4570.989 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fZ..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fZ.W.155.1270J7

Mk4/DiFX fourfit 3.20 rev 0

frontend

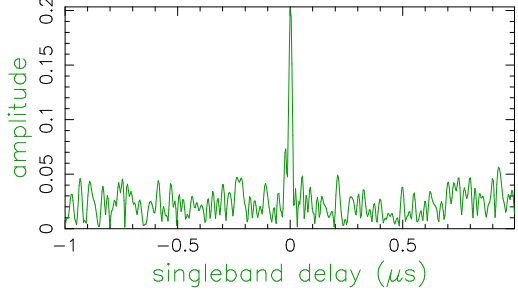
3C454_3.1270J7, No0080, fZ

VLBA_FD - METSAHOV, fgroup W, pol LL

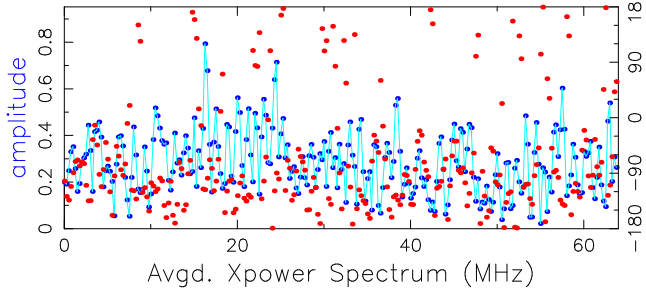


Fringe quality 9

SNR 11.3
Int time 410.870
Amp 0.203
Phase -34.0
PFD 8.2e-21
Delays (us)
SBD 0.001376
MBD -0.005442
Fringe rate (Hz)
0.014193
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

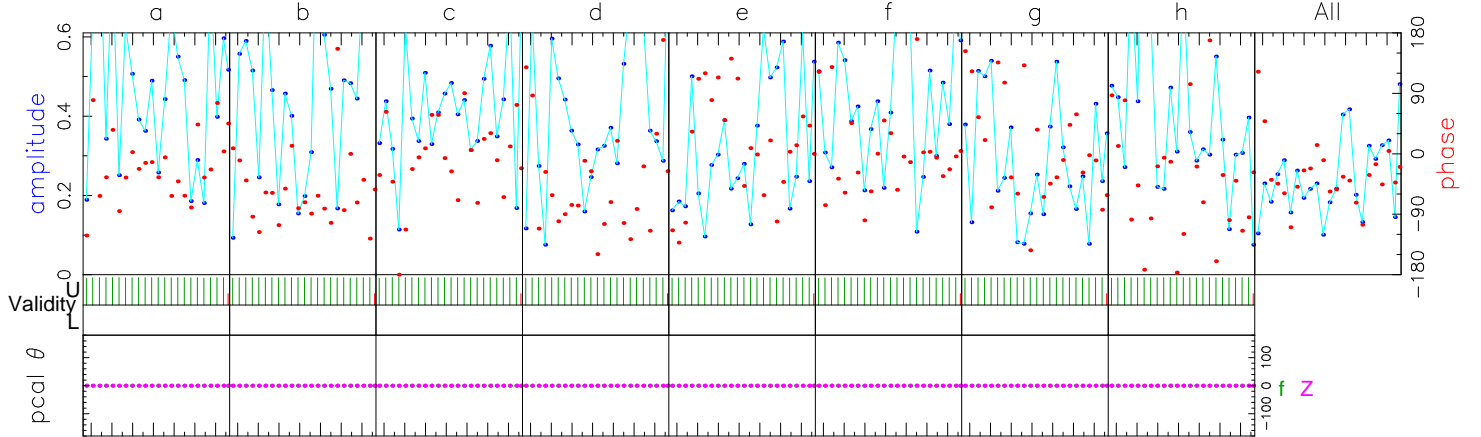


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 020636.66
Stop 021329.84
FRT 021000.00
Corr/FF/build
2020:070:123456
2020:071:134138
2019:280:115849
RA & Dec (J2000)
22h53m57.747940s
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-18.2	-63.3	-3.4	-78.3	10.6	-14.5	-9.5	-98.6	Phase	-34.0
	0.3	0.4	0.3	0.2	0.1	0.3	0.1	0.1	Ampl.	0.2
	257.3	257.0	257.2	256.7	250.9	257.0	123.5	254.7	Sbd box	257.4
U/L	807/0	807/0	807/0	807/0	807/0	807/0	807/0	807/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.07804255189E+04		Apriori delay (usec)		1.07804309606E+04		Resid mbdelay (usec)		-5.44168E-03	+/- 9.6E-05
Sband delay (usec)	1.07804323369E+04		Apriori clock (usec)		2.8910232E-01		Resid sbdelay (usec)		1.37625E-03	+/- 7.6E-04
Phase delay (usec)	1.07804309595E+04		Apriori clockrate (us/s)		-1.0724231E-07		Resid phdelay (usec)		-1.09685E-06	+/- 3.3E-07
Delay rate (us/s)	1.57808306590E+00		Apriori rate (us/s)		1.57808290113E+00		Resid rate (us/s)		1.64769E-07	+/- 1.4E-09
Total phase (deg)	306.7		Apriori accel (us/s/s)		-6.86453638265E-05		Resid phase (deg)		-34.0	+/- 10.2

ph/seg (deg) 47.3 24.4 Search (2048X32) 0.197 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 48.8 42.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 43.1 14.4 Inc. seg. avg. 0.221 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 47.9 25.1 Inc. frq. avg. 0.233 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 101.0 el 49.4 pa -61.6 Z: az 275.4 el 15.7 pa 31.0 u,v (fr/asec) -9513.225 -4570.989 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0080/fZ..1270J7 Output file: /Exps/c192c/v1_CygA2/1234/No0080/fZ.W.96.1270J7