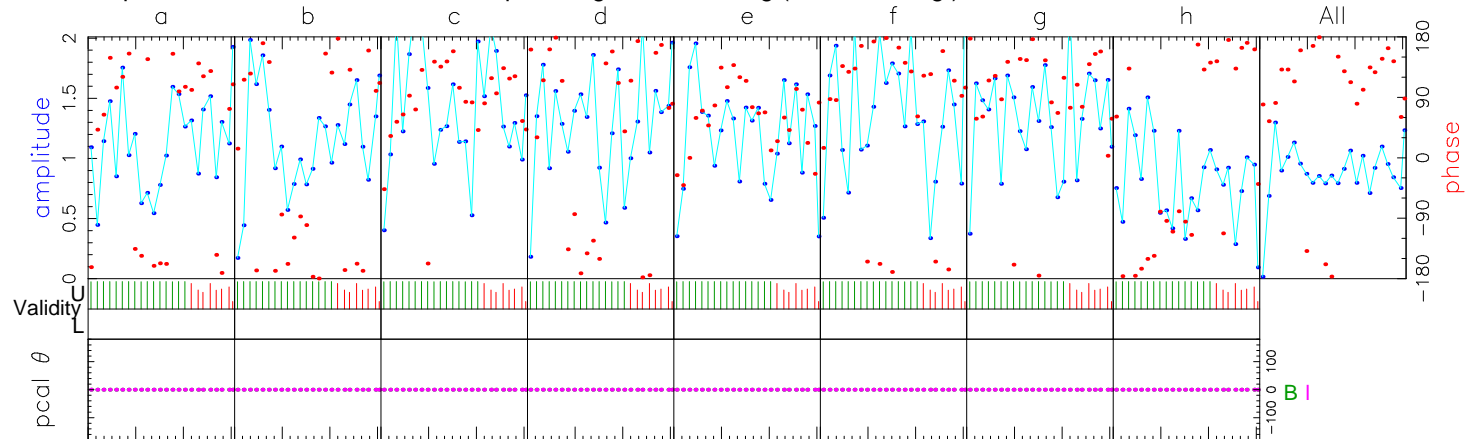


Fringe quality 8

SNR 23.6
 Int time 166.003
 Amp 0.670
 Phase 133.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.003635
 MBD 0.002995
 Fringe rate (Hz)
 -0.027487
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010259.71
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132814
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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

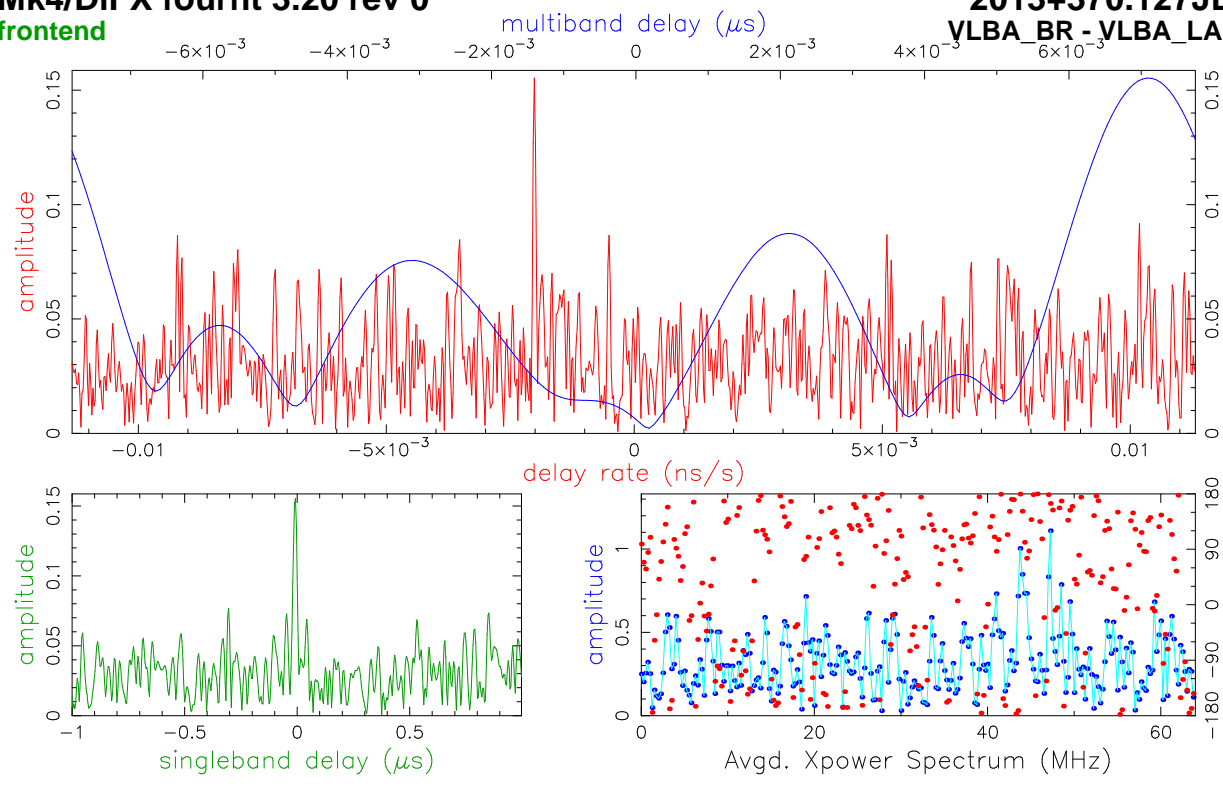


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.09563632593E+04		Apriori delay (usec)		-1.09563662545E+04		Resid mbdelay (usec)		2.99524E-03	+/- 4.6E-05
Sband delay (usec)	-1.09563698893E+04		Apriori clock (usec)		1.7569019E+01		Resid sbdelay (usec)		-3.63475E-03	+/- 3.6E-04
Phase delay (usec)	-1.09563662502E+04		Apriori clockrate (us/s)		1.5147200E-07		Resid phdelay (usec)		4.30383E-06	+/- 1.6E-07
Delay rate (us/s)	-1.13757174565E+00		Apriori rate (us/s)		-1.13757142655E+00		Resid rate (us/s)		-3.19099E-07	+/- 1.6E-09
Total phase (deg)	73.8		Apriori accel (us/s/s)		7.11433247491E-05		Resid phase (deg)		133.5	+/- 4.9

ph/seg (deg) 43.7 11.6 Search (1024X32) 0.647 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 47.2 20.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.0 6.9 Inc. seg. avg. 0.859 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 33.5 12.0 Inc. frq. avg. 0.822 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 297.2 el 26.6 pa 45.3 I: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 8240.850 5521.475 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/BI..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/BI.W.11.127JEK

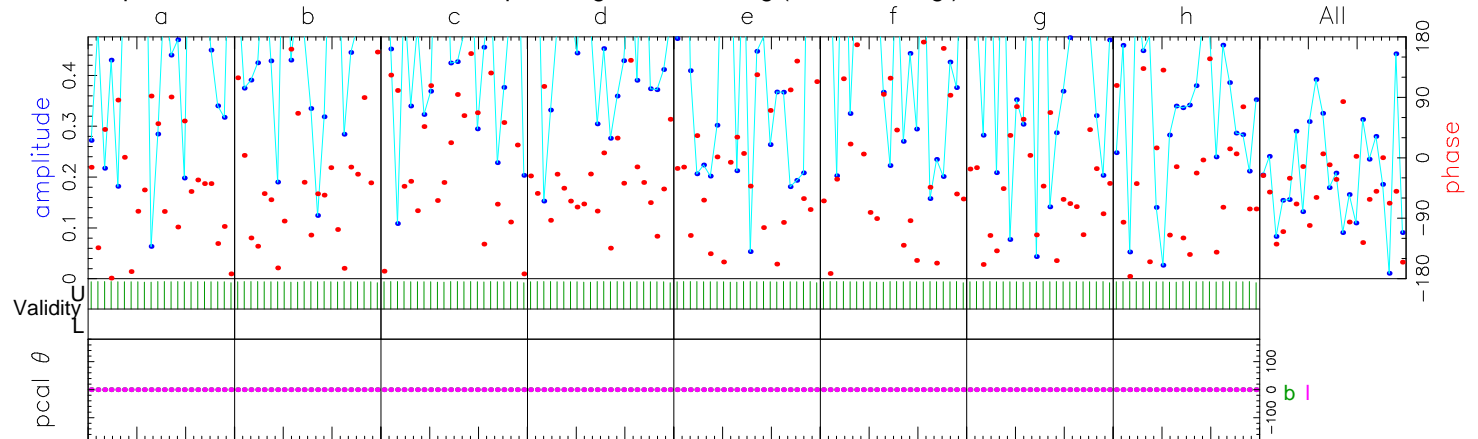
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, bl
VLBA_BR - VLBA_LA, fgroup W, pol LL



Fringe quality 0
SNR 5.7
Int time 178.561
Amp 0.159
Phase -53.7
PFD 7.3e-01
Delays (us)
SBD -0.009097
MBD 0.007077
Fringe rate (Hz)
-0.174523
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132814
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

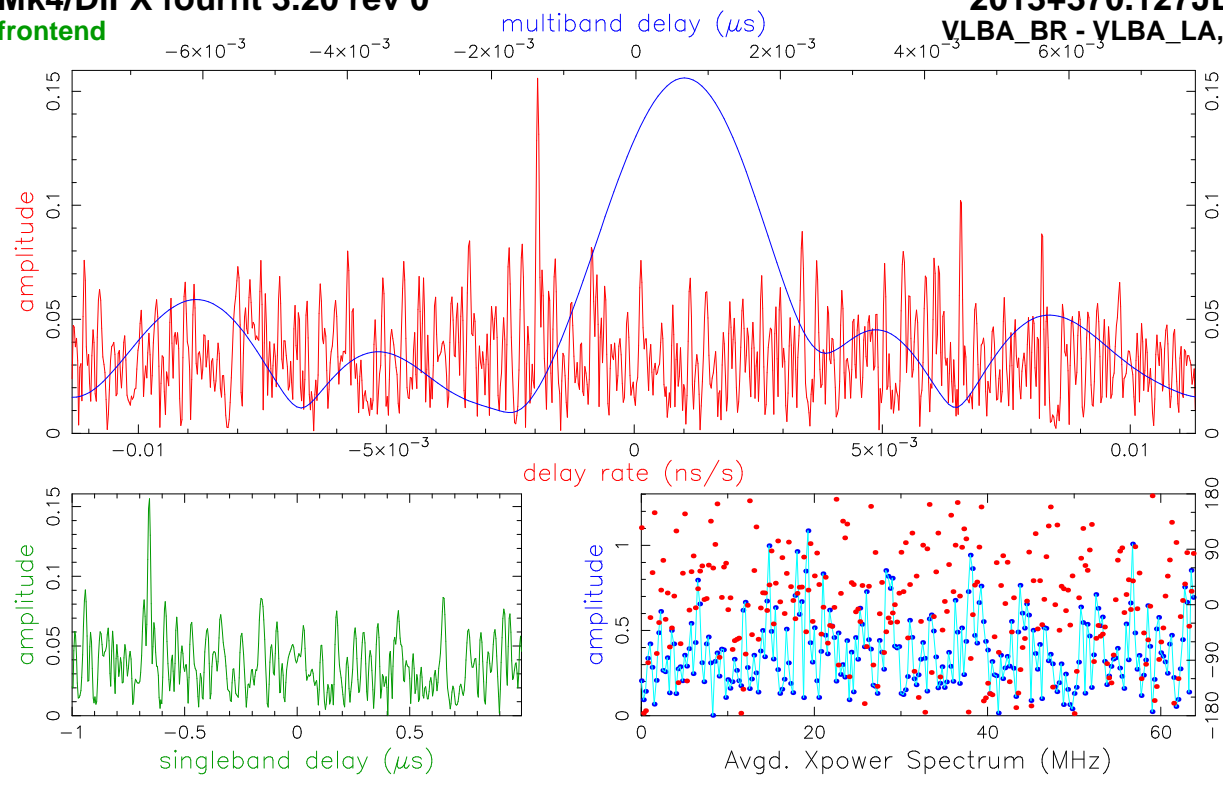


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.43874097123E+03				-1.43873242310E+03				7.07687E-03	+/- 1.9E-04
Sband delay (usec)	-1.43874152035E+03				1.4694527E-01				-9.09725E-03	+/- 1.5E-03
Phase delay (usec)	-1.43873242483E+03				1.0907692E-07				-1.73017E-06	+/- 6.5E-07
Delay rate (us/s)	1.09571162281E-01				1.09573188323E-01				-2.02604E-06	+/- 6.2E-09
Total phase (deg)			-26.8		1.85770501128E-05				-53.7	+/- 20.0
	RMS	Theor.	Amplitude	0.159 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	53.1	47.0	Search (1024X32)	0.147	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	75.0	82.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	35.1	28.3	Inc. seg. avg.	0.159	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	57.8	49.4	Inc. frq. avg.	0.149	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 100.8 el 62.8 pa -55.3 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -772.094 2242.601 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/bl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/bl.W.14.127JEK

Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, bl
VLBA_BR - VLBA_LA, fgroup W, pol RR

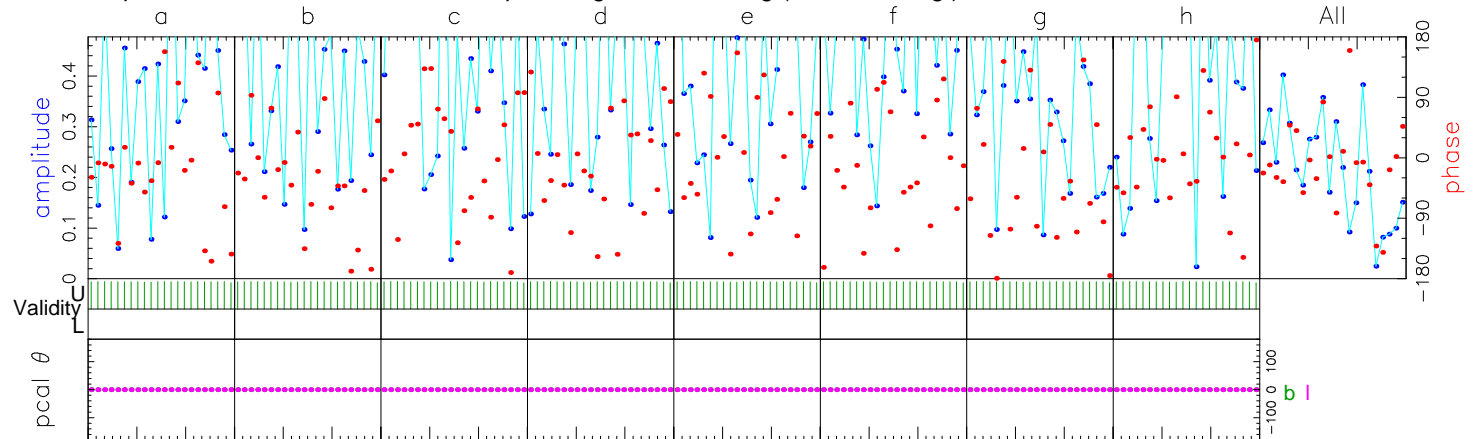


Fringe quality 0

SNR 5.7
Int time 178.561
Amp 0.159
Phase -8.8
PFD 6.8e-01
Delays (us)
SBD -0.657386
MBD 0.000627
Fringe rate (Hz)
-0.168637
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132816
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	423.2	216.9	88.5	251.1	285.4	95.1	303.6		
b	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.43938804640E+03									
Sband delay (usec)	-1.43938980910E+03									
Phase delay (usec)	-1.43873242338E+03									
Delay rate (us/s)	1.09571230620E-01									
Total phase (deg)			-342.0							
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)										

ph/seg (deg) 63.5 46.8
amp/seg (%) 76.9 81.6
ph/frq (deg) 36.5 28.2
amp/frq (%) 23.7 49.2

RMS Theor. Amplitude 0.159 +/- 0.028
Search (1024X32) 0.149
Interp. 0.000
Inc. seg. avg. 0.167
Inc. frq. avg. 0.156

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

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

b: az 100.8 el 62.8 pa -55.3 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -772.094 2242.601 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/bl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/bl.W.32.127JEK

Mk4/DiFX fourfit 3.20 rev 0

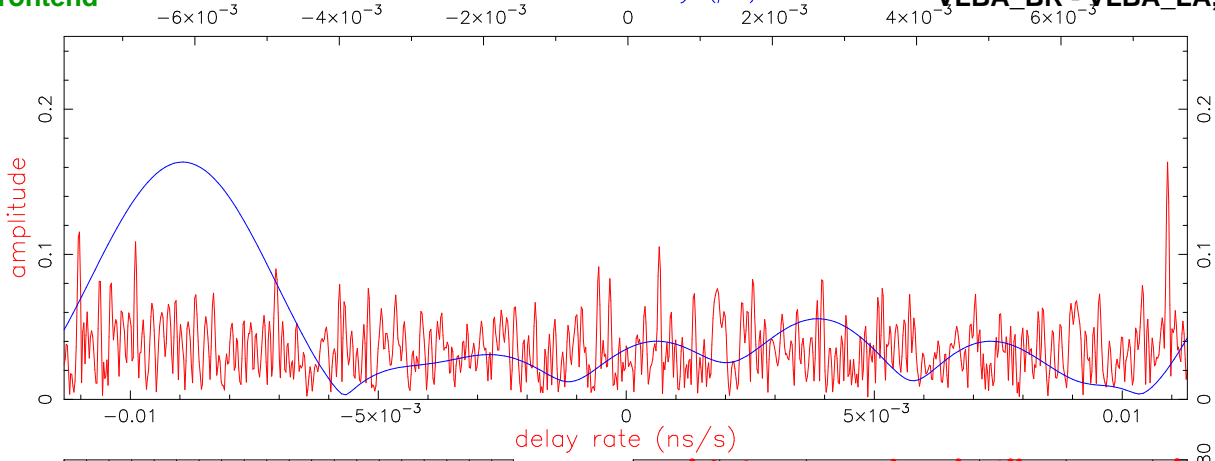
frontend

2013+370.127JEK, No0072, bl

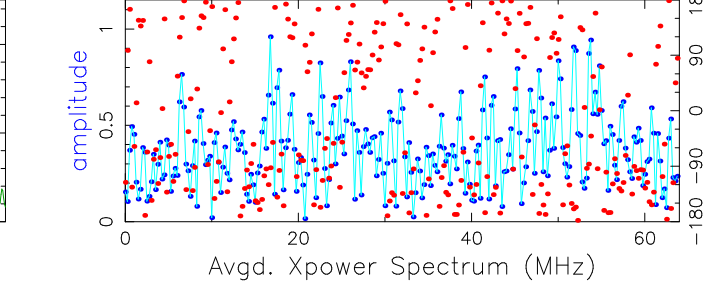
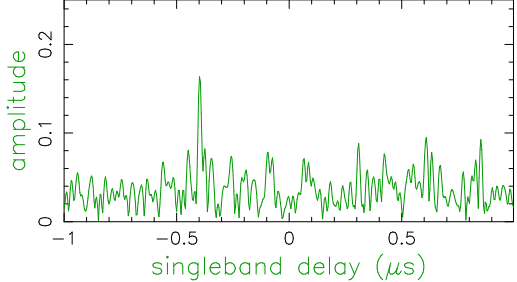
VLBA_BR - VLBA_LA, fgroup W, pol LR

multiband delay (μs)

Fringe quality 0

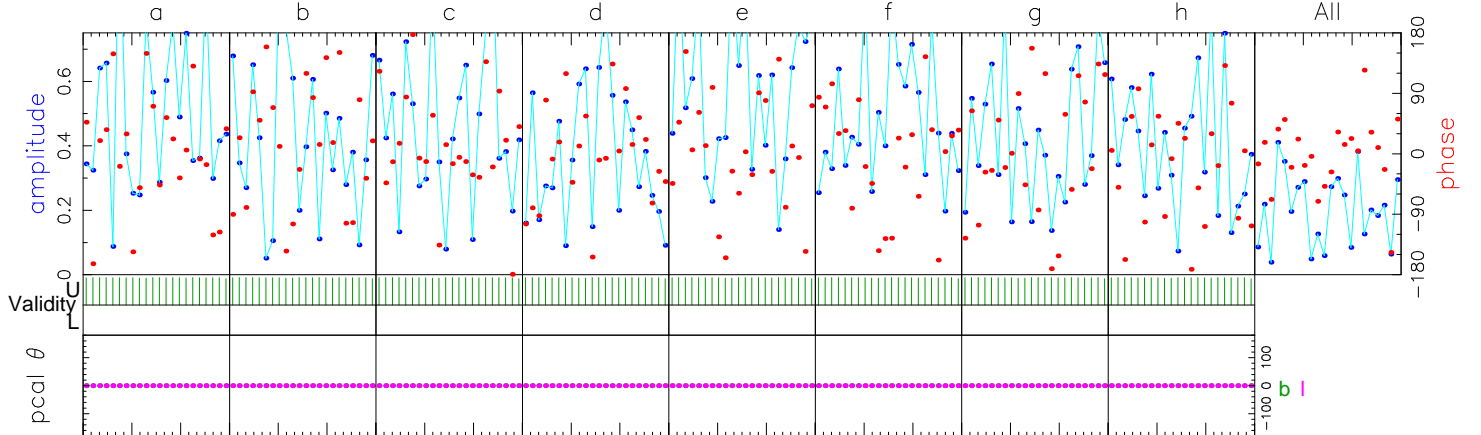


SNR 6.0
Int time 178.561
Amp 0.250
Phase 13.0
PFD 1.9e-01
Delays (us)
SBD -0.397269
MBD -0.006128
Fringe rate (Hz) 0.941753
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build 2020:070:104410
2020:071:132819
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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

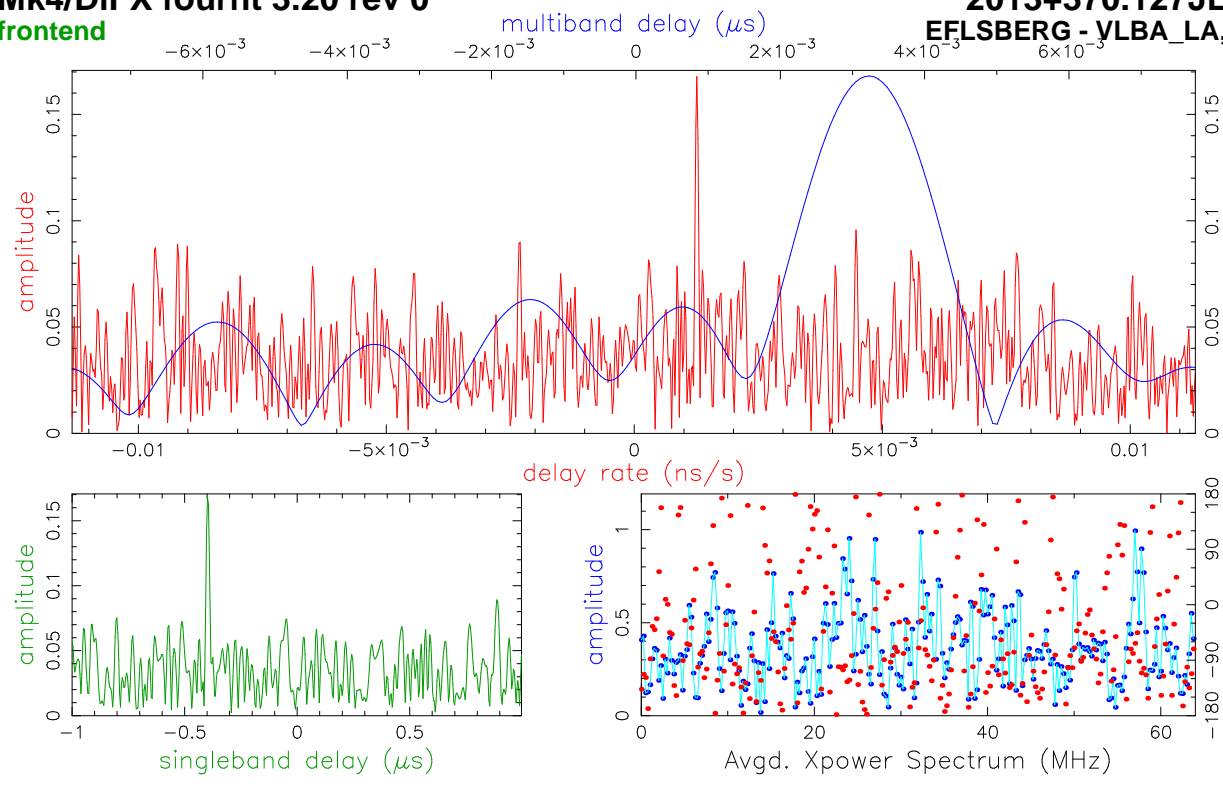


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.43912917563E+03									
Sband delay (usec)	-1.43912969235E+03									
Phase delay (usec)	-1.43873242268E+03									
Delay rate (us/s)	1.09584121148E-01									
Total phase (deg)			-320.2							
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)									13.0	+/- 19.0
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

b: az 100.8 el 62.8 pa -55.3 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -772.094 2242.601 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/bl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/bl.W.50.127JEK

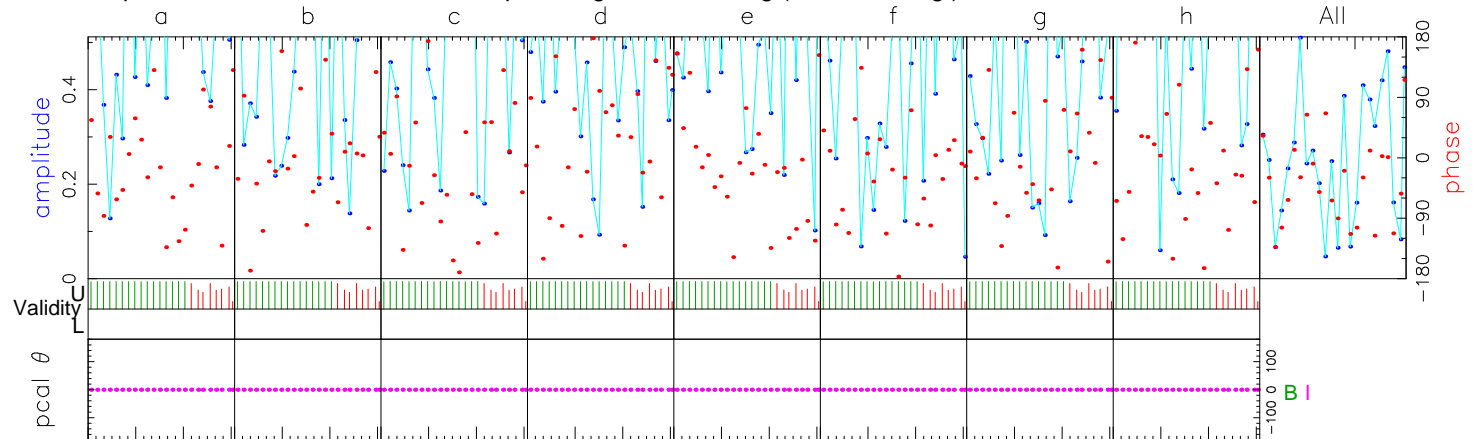
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, BI
EFLSBERG - VLBA_LA, fgroup W, pol LR



Fringe quality 0
SNR 6.0
Int time 166.003
Amp 0.171
Phase -23.7
PFD 2.5e-01
Delays (us)
SBD -0.397085
MBD 0.003279
Fringe rate (Hz) 0.108236
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010259.71
FRT 010130.00
Corr/FF/build 2020:070:104410
2020:071:132819
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-23.1	-31.9	-19.3	19.1	-30.6	-27.1	-9.5	-39.3	Phase	-23.7
	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.2	Ampl.	0.2
	50.4	271.2	416.2	429.1	166.8	367.1	460.1	404.9	Sbd box	155.3
U/L	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.09567692256E+04		Apriori delay (usec)		-1.09563662545E+04		Resid mbdelay (usec)		3.27896E-03	+/- 1.8E-04
Sband delay (usec)	-1.09567633395E+04		Apriori clock (usec)		1.7569019E+01		Resid sbdelay (usec)		-3.97085E-01	+/- 1.4E-03
Phase delay (usec)	-1.09563662553E+04		Apriori clockrate (us/s)		1.5147200E-07		Resid phdelay (usec)		-7.65288E-07	+/- 6.2E-07
Delay rate (us/s)	-1.13757017004E+00		Apriori rate (us/s)		-1.13757142655E+00		Resid rate (us/s)		1.25651E-06	+/- 6.2E-09
Total phase (deg)			Apriori accel (us/s/s)		7.11433247491E-05		Resid phase (deg)		-23.7	+/- 19.2

ph/seg (deg) 60.9 45.8 Amplitude 0.171 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 91.8 80.0 Search (1024X32) 0.163 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 20.1 27.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 31.7 47.3 Inc. seg. avg. 0.186 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 297.2 el 26.6 pa 45.3 I: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 8240.850 5521.475 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/BI..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/BI.W.51.127JEK

Mk4/DiFX fourfit 3.20 rev 0

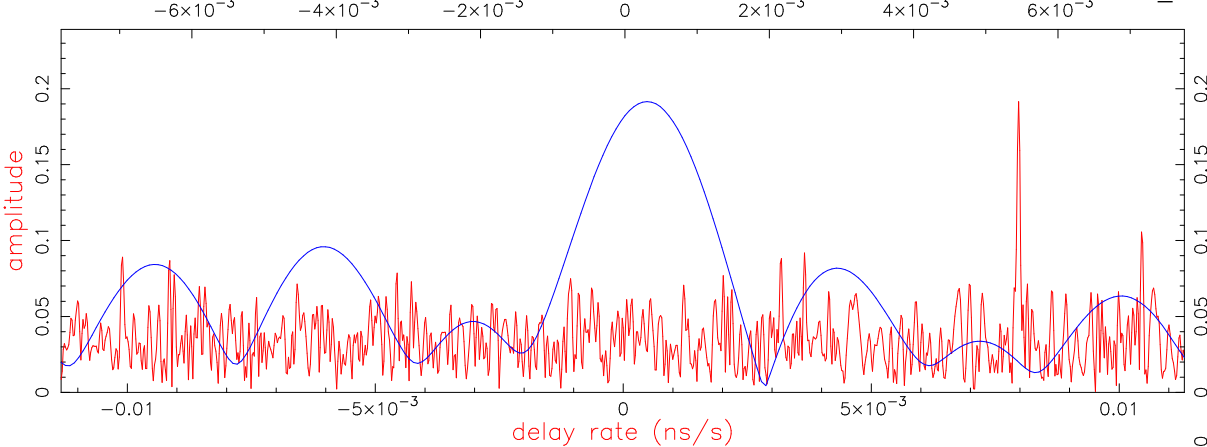
frontend

2013+370.127JEK, No0072, BI

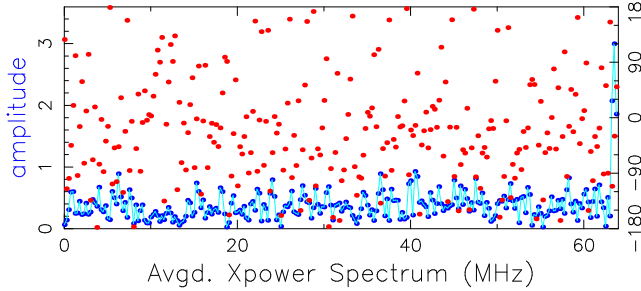
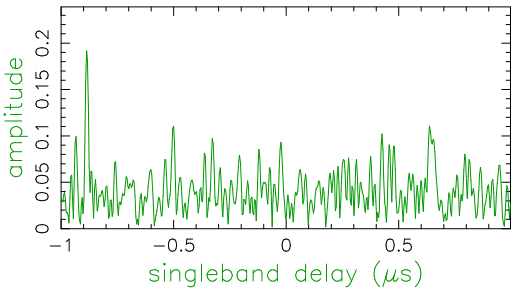
EFLSBERG - VLBA_LA, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

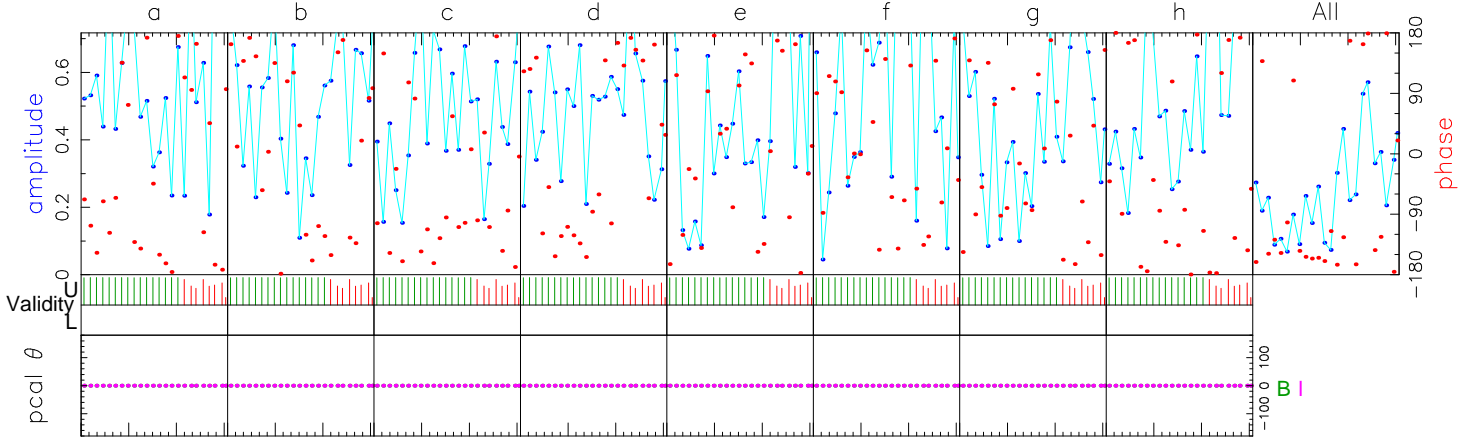


SNR 6.8
 Int time 166.003
 Amp 0.239
 Phase -162.5
 PFD 1.4e-03
 Delays (us)
 SBD -0.885619
 MBD 0.000304
 Fringe rate (Hz)
 0.686903
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010259.71
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132821
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-155.8	168.4	-133.2	-154.2	160.4	173.5	-155.9	-153.2	Phase	-162.5
	0.4	0.2	0.3	0.3	0.2	0.2	0.1	0.4	Ampl.	0.2
	28.5	74.3	102.3	501.3	200.9	16.7	460.5	373.7	Sbd box	30.3
U/L	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.09572565758E+04	Apriori delay (usec)	-1.09563662545E+04	Resid mbdelay (usec)	3.03780E-04	+/-	1.6E-04
Sband delay (usec)	-1.09572518738E+04	Apriori clock (usec)	1.7569019E+01	Resid sbdelay (usec)	-8.85619E-01	+/-	1.3E-03
Phase delay (usec)	-1.09563662598E+04	Apriori clockrate (us/s)	1.5147200E-07	Resid phdelay (usec)	-5.24159E-06	+/-	5.4E-07
Delay rate (us/s)	-1.13756345229E+00	Apriori rate (us/s)	-1.13757142655E+00	Resid rate (us/s)	7.97426E-06	+/-	5.5E-09
Total phase (deg)	-222.2	Apriori accel (us/s/s)	7.11433247491E-05	Resid phase (deg)	-162.5	+/-	16.8

ph/seg (deg)	39.1	Theor.	40.3	Amplitude	0.239 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	69.7	Search (1024X32)	0.189	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	25.5	Inc. seg. avg.	0.228	Bits/sample: 2x2		mb window (us)	-0.008 0.008
amp/frq (%)	41.6	Inc. frq. avg.	0.232	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
				nlags: 256	t_cohere infinite		

B: az 297.2 el 26.6 pa 45.3 I: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 8240.850 5521.475 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/Bl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/Bl.W.73.127JEK

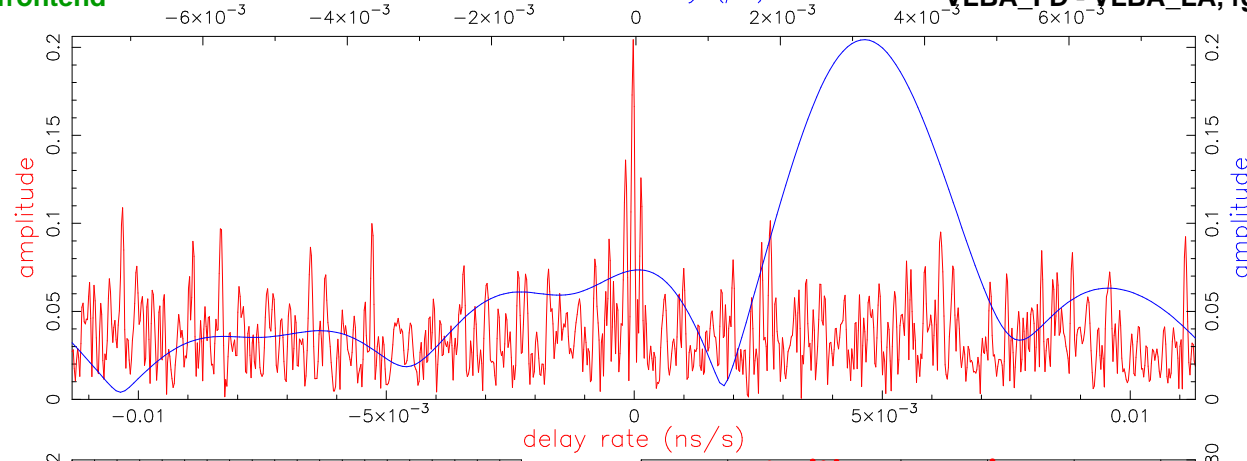
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, fl

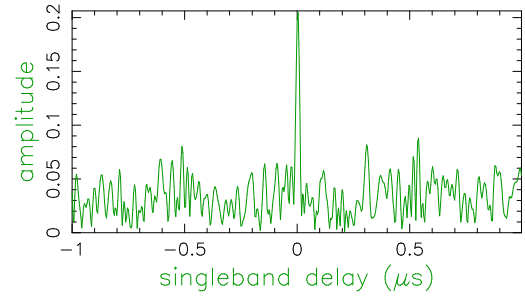
VLBA_FD - VLBA_LA, fgroup W, pol RR

multiband delay (μ s)

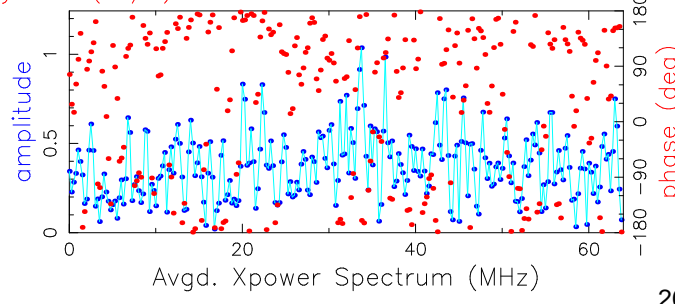


Fringe quality 9

SNR 7.5
 Int time 178.325
 Amp 0.206
 Phase 138.9
 PFD 8.1e-06
 Delays (us)
 SBD 0.002678
 MBD 0.003161
 Fringe rate (Hz)
 -0.001619
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

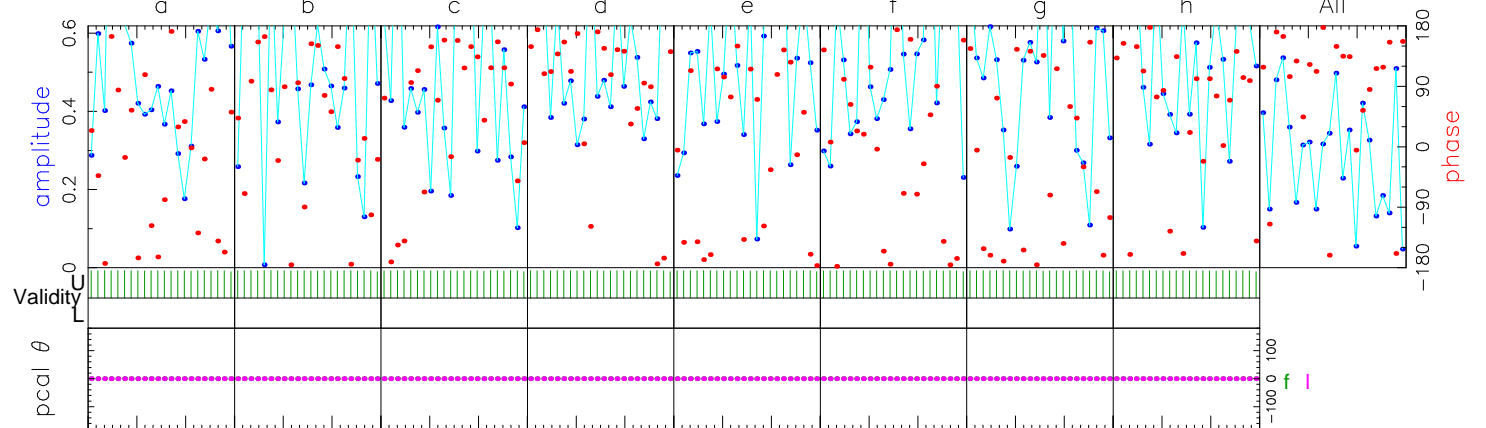


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132829
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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

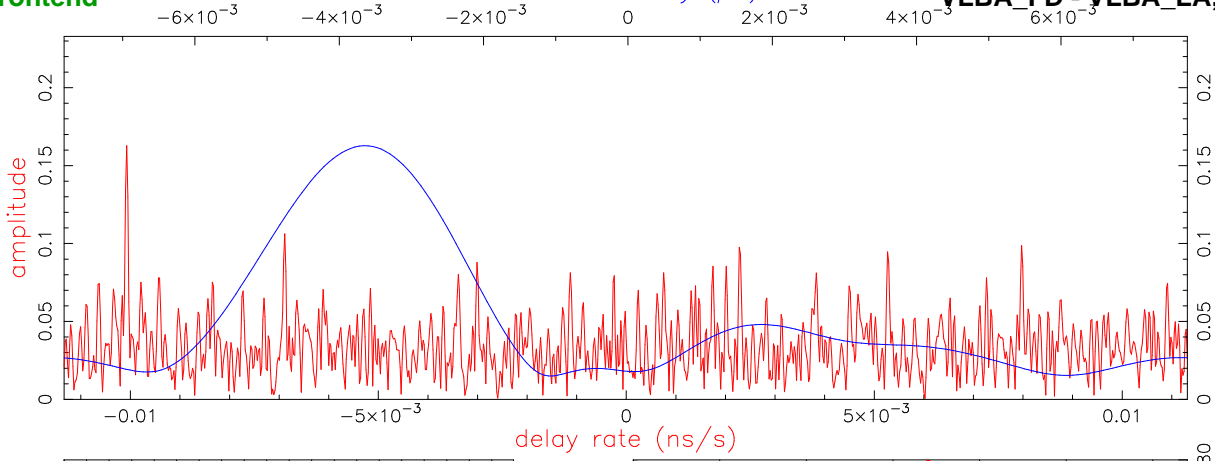


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	164.6	125.9	128.7	140.9	140.5	154.4	162.6	125.7		
Sband delay (usec)	0.1	0.2	0.3	0.4	0.2	0.1	0.2	0.3		
Phase delay (usec)	455.5	103.0	361.5	257.6	447.9	143.9	71.2	258.1		
Delay rate (us/s)										
Total phase (deg)			145.3							
Apriori delay (usec)					7.70462367227E+00					
Apriori clock (usec)					1.2431189E+00					
Apriori clockrate (us/s)					2.6052251E-07					
Apriori rate (us/s)					-1.91334868054E-02					
Apriori accel (us/s/s)					-5.15709726434E-06					
Resid mbdelay (usec)									3.16073E-03	+/- 1.4E-04
Resid sbdelay (usec)									2.67800E-03	+/- 1.1E-03
Resid phdelay (usec)									4.48034E-06	+/- 4.9E-07
Resid rate (us/s)									-1.87952E-08	+/- 4.7E-09
Resid phase (deg)									138.9	+/- 15.2
Pcal mode:	MANUAL, MANUAL		PC period (AP's) 5, 5							
Pcal rate:	0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000		1.000			
Bits/sample:	2x2		SampCntNorm: enabled		mb window (us)		-0.008		0.008	
Sample rate (MSamp/s):	128		dr window (ns/s)		-0.011		0.011			
Data rate (Mb/s):	2048		nlags: 256		t_cohere infinite		ion window (TEC)		0.00	
ph/seg (deg)	54.7	35.7	Search (1024X32)	0.200						
amp/seg (%)	81.8	62.3	Interp.	0.000						
ph/frq (deg)	17.9	21.5	Inc. seg. avg.	0.245						
amp/frq (%)	46.8	37.6	Inc. frq. avg.	0.196						
f: az 61.8 el 73.3 pa -107.2	l: az 78.8 el 73.2 pa -88.7		u, v (fr/asec) 132.733 -837.917						simultaneous interpolator	

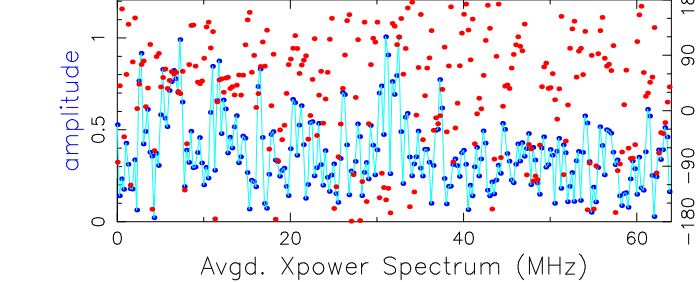
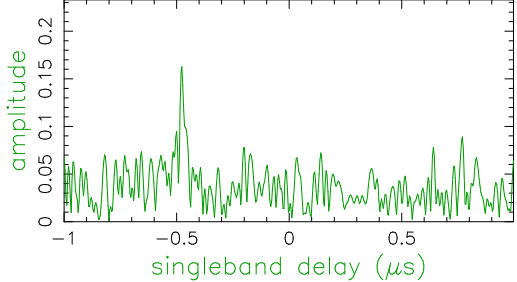
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/fl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/fl.W.113.127JEK

multiband delay (μ s)

Fringe quality 0

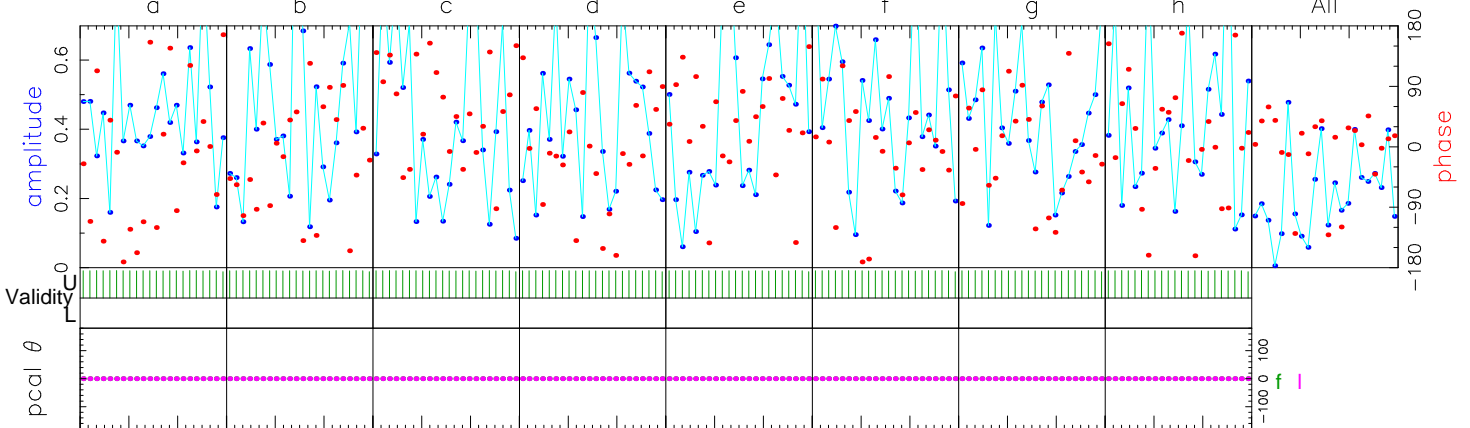


SNR 6.0
 Int time 178.325
 Amp 0.233
 Phase 9.9
 PFD 2.3e-01
 Delays (us)
 SBD -0.477775
 MBD -0.003621
 Fringe rate (Hz)
 -0.869136
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



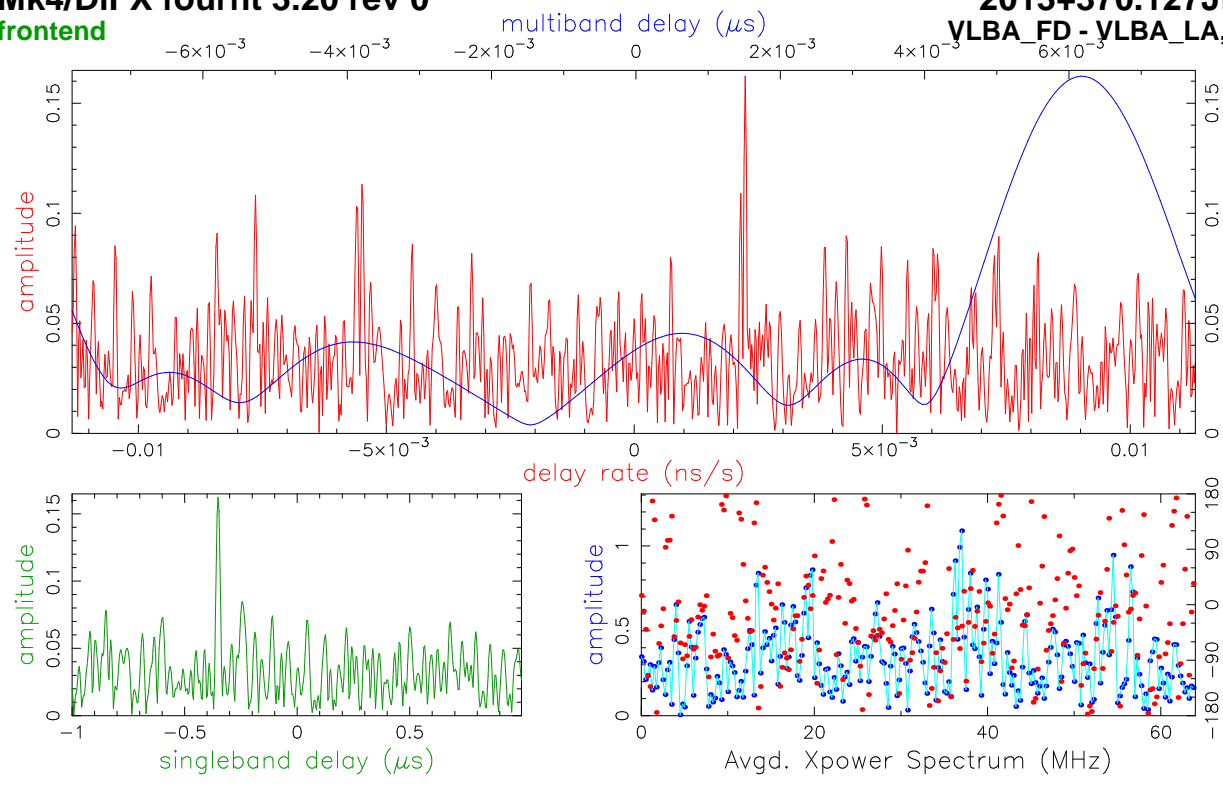
Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132831
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



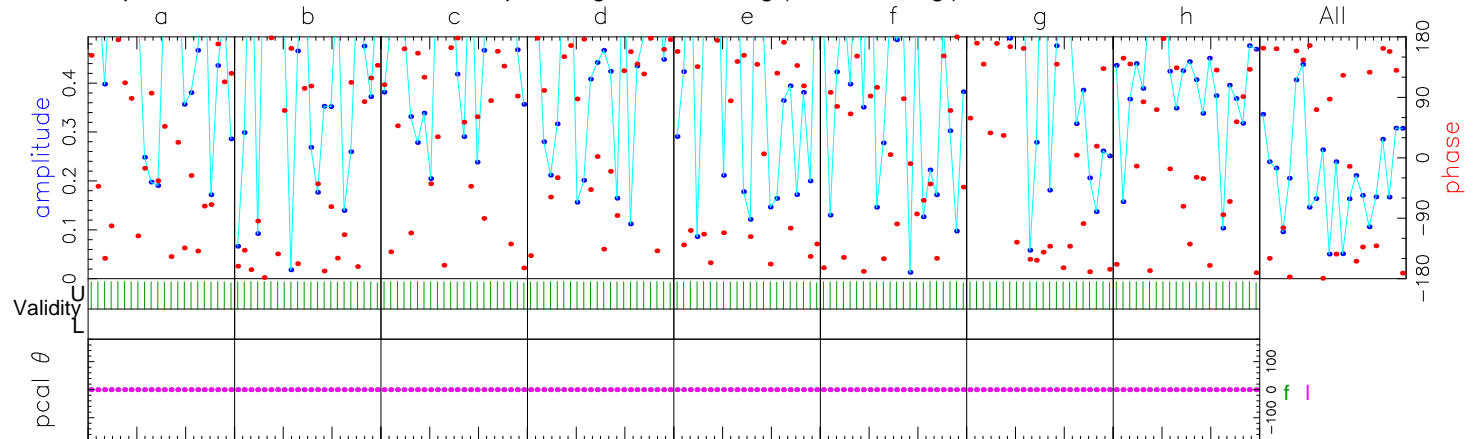
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-63.3	-4.3	47.5	-8.3	28.0	18.2	0.3	-17.1		Phase
	0.1	0.2	0.3	0.3	0.4	0.3	0.3	0.2		Ampl.
	140.2	273.3	326.7	205.8	136.9	328.5	346.8	70.5		Sbd box
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		134.7
f	1000	1000	1000	1000	1000	1000	1000	1000		APs used
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
										Chan ids
										Tracks
Group delay (usec)(sbd)	7.22909176909E+00		Apriori delay (usec)		7.70146294067E+00		Resid mbdelay (usec)		-3.62117E-03	+/- 1.8E-04
Sband delay (usec)	7.22368819067E+00		Apriori clock (usec)		1.2431189E+00		Resid sbdelay (usec)		-4.77775E-01	+/- 1.4E-03
Phase delay (usec)	7.70146326068E+00		Apriori clockrate (us/s)		2.6052251E-07		Resid phdelay (usec)		3.20006E-07	+/- 6.2E-07
Delay rate (us/s)	-1.91435766135E-02		Apriori rate (us/s)		-1.91334868054E-02		Resid rate (us/s)		-1.00898E-05	+/- 5.9E-09
Total phase (deg)			Apriori accel (us/s/s)		-5.15709726434E-06		Resid phase (deg)		9.9	+/- 19.1

ph/seg (deg) 55.3 44.8 Search (1024X32) 0.158 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 78.3 78.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 37.7 27.0 Inc. seg. avg. 0.232 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 39.6 47.2 Inc. frq. avg. 0.228 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 61.8 el 73.3 pa -107.2 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 132.733 -837.917 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/fl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/fl.W.133.127JEK



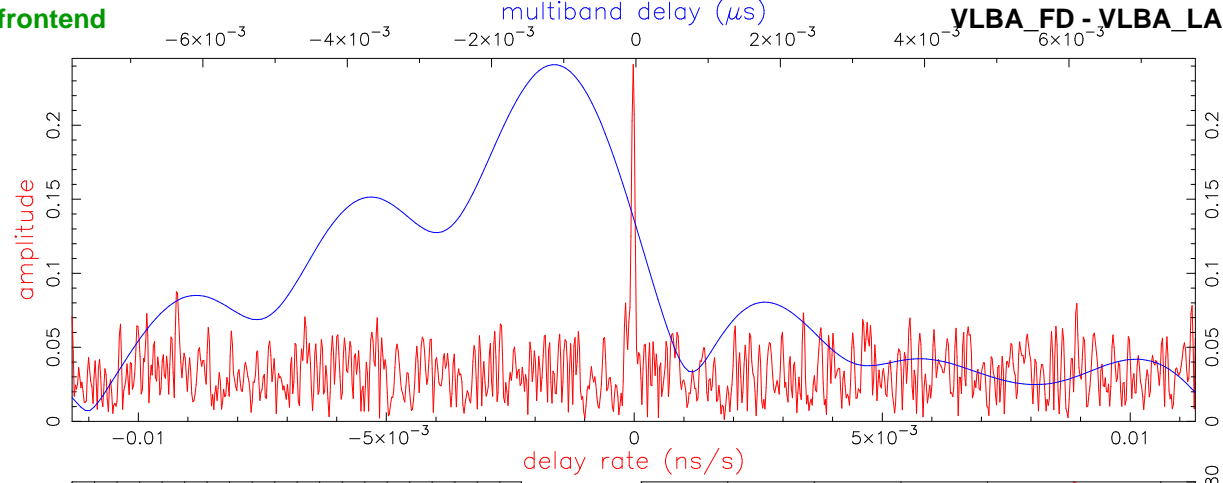
Fringe quality 0
 SNR 5.9
 Int time 178.325
 Amp 0.165
 Phase 171.6
 PFD 3.3e-01
 Delays (us)
 SBD -0.351348
 MBD 0.006181
 Fringe rate (Hz) 0.192451
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132833
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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

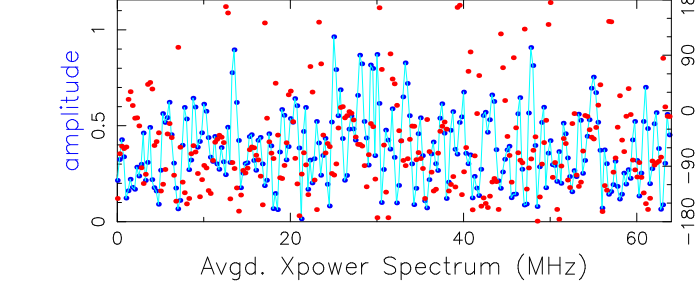
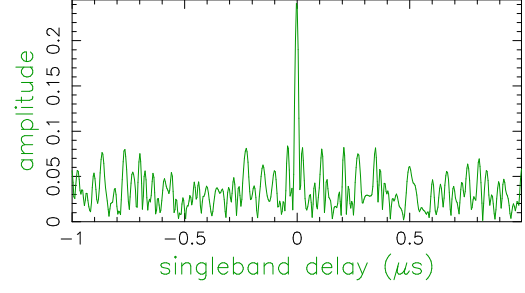


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0				
f	1000	1000	1000	1000	1000	1000	1000	1000				
l	1000	1000	1000	1000	1000	1000	1000	1000				
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
f	1000	1000	1000	1000	1000	1000	1000	1000				
l	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL				
Group delay (usec)(sbd)	7.34826917405E+00		Apriori delay (usec)		7.70146294067E+00		Resid mbdelay (usec)		6.18123E-03	+/- 1.8E-04		
Sband delay (usec)	7.35011444067E+00		Apriori clock (usec)		1.2431189E+00		Resid sbdelay (usec)		-3.51348E-01	+/- 1.5E-03		
Phase delay (usec)	7.70146847568E+00		Apriori clockrate (us/s)		2.6052251E-07		Resid phdelay (usec)		5.53501E-06	+/- 6.2E-07		
Delay rate (us/s)	-1.91312526453E-02		Apriori rate (us/s)		-1.91334868054E-02		Resid rate (us/s)		2.23416E-06	+/- 6.0E-09		
Total phase (deg)			Apriori accel (us/s/s)		-5.15709726434E-06		Resid phase (deg)		171.6	+/- 19.3		
RMS	58.1	45.3	Amplitude		0.165 +/- 0.028		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	70.4	79.1	Search (1024X32)		0.160		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
amp/seg (%)	14.9	27.3	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	40.9	47.7	Inc. seg. avg.		0.167		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
amp/frq (%)			Inc. frq. avg.		0.151		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

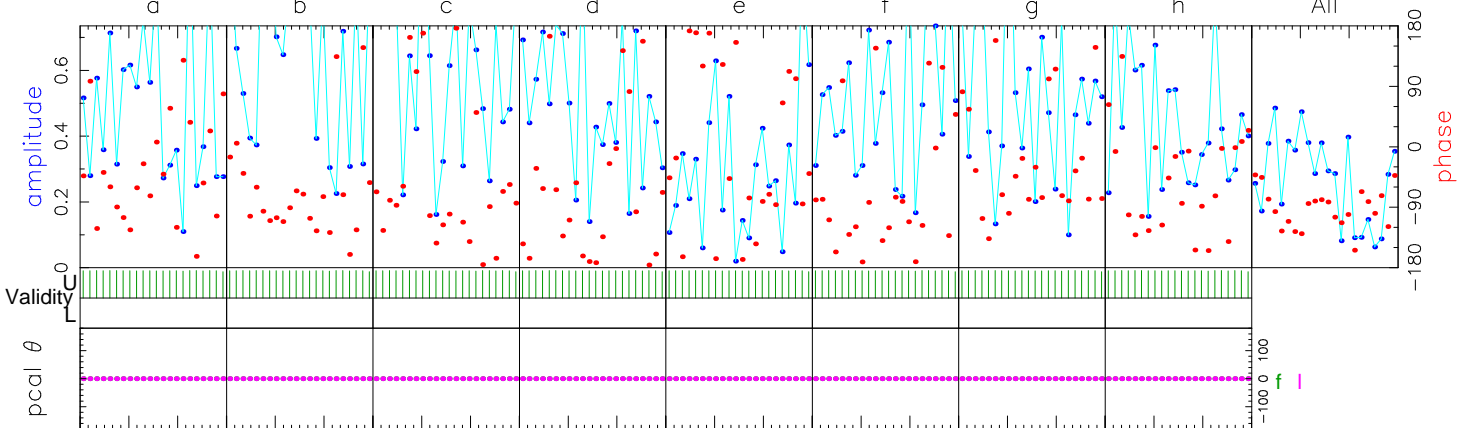
f: az 61.8 el 73.3 pa -107.2 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 132.733 -837.917 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/fl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/fl.W.150.127JEK



Fringe quality 9
SNR 9.0
Int time 178.325
Amp 0.245
Phase -93.2
PFD 6.7e-11
Delays (us)
SBD -0.002258
MBD -0.001120
Fringe rate (Hz)
-0.001929
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132826
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

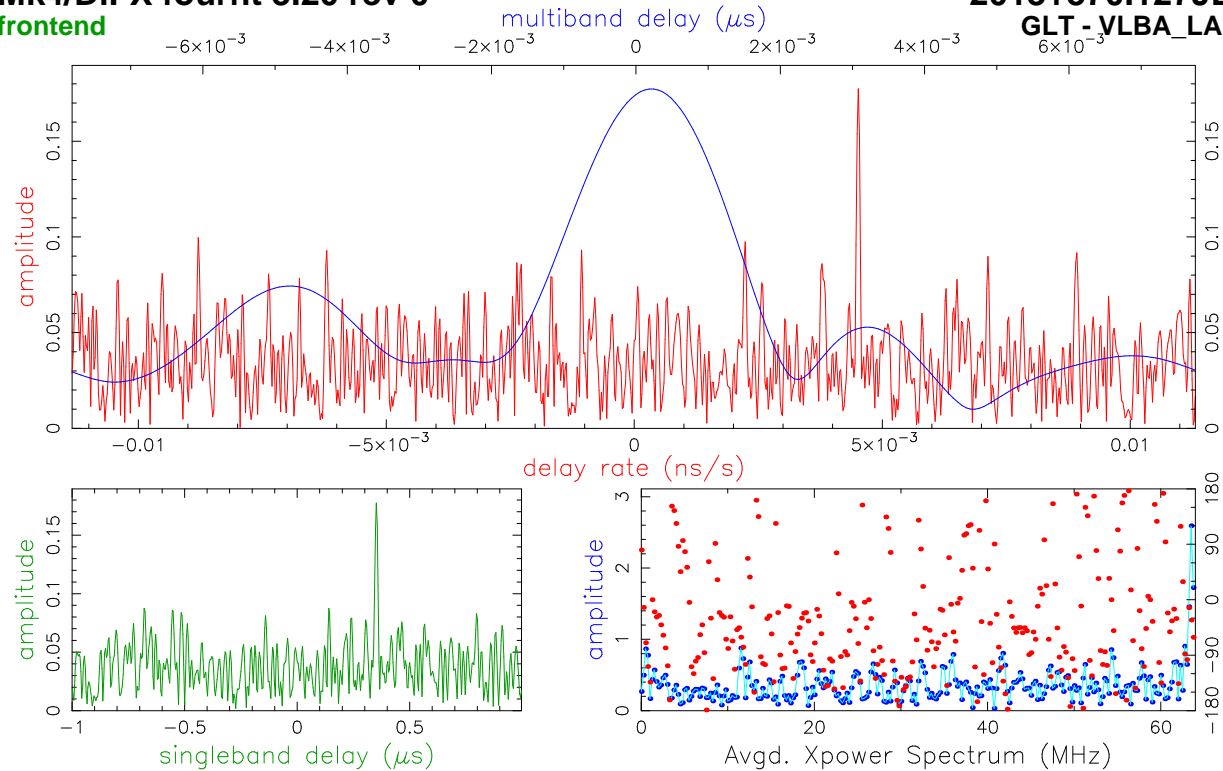


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



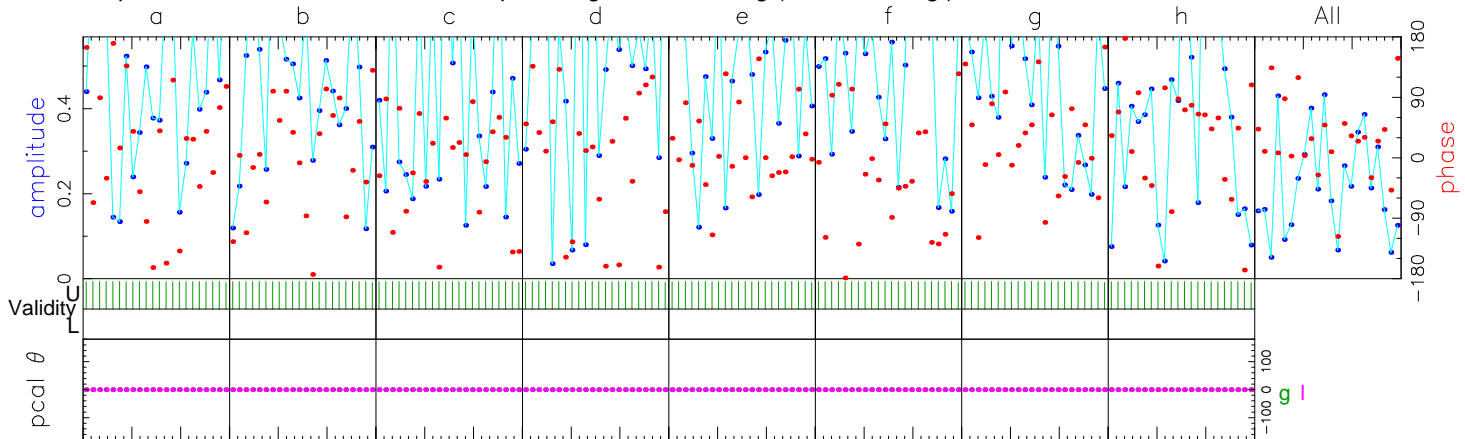
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-41.6	-84.4	-120.7	-127.7	-118.5	-127.2	-68.3	-56.8	Phase	-93.2
	0.2	0.5	0.4	0.3	0.1	0.3	0.3	0.2	Ampl.	0.3
	382.9	255.9	255.7	209.2	511.2	257.2	257.1	501.0	Sbd box	256.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	7.70034245352E+00		Apriori delay (usec)		7.70146294067E+00		Resid mbdelay (usec)		-1.12049E-03	+/- 1.2E-04
Sband delay (usec)	7.69920494067E+00		Apriori clock (usec)		1.2431189E+00		Resid sbdelay (usec)		-2.25800E-03	+/- 9.6E-04
Phase delay (usec)	7.70145993413E+00		Apriori clockrate (us/s)		2.6052251E-07		Resid phdelay (usec)		-3.00654E-06	+/- 4.1E-07
Delay rate (us/s)	-1.91335091945E-02		Apriori rate (us/s)		-1.91334868054E-02		Resid rate (us/s)		-2.23890E-08	+/- 4.0E-09
Total phase (deg)			Apriori accel (us/s/s)		-5.15709726434E-06		Resid phase (deg)		-93.2	+/- 12.8

ph/seg (deg) 28.7 30.0 Amplitude 0.245 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 54.2 52.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 37.5 18.1 Inc. seg. avg. 0.237 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 46.6 31.6 Inc. frq. avg. 0.266 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 61.8 el 73.3 pa -107.2 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 132.733 -837.917 ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/fl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/fl.W.91.127JEK simultaneous interpolator



Fringe quality 0
 SNR 6.5
 Int time 179.495
 Amp 0.190
 Phase 26.8
 PFD 1.1e-02
 Delays (us)
 SBD 0.351822
 MBD 0.000207
 Fringe rate (Hz) 0.389586
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build 2020:070:104410
 2020:071:132836
 2019:280:115849
 RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

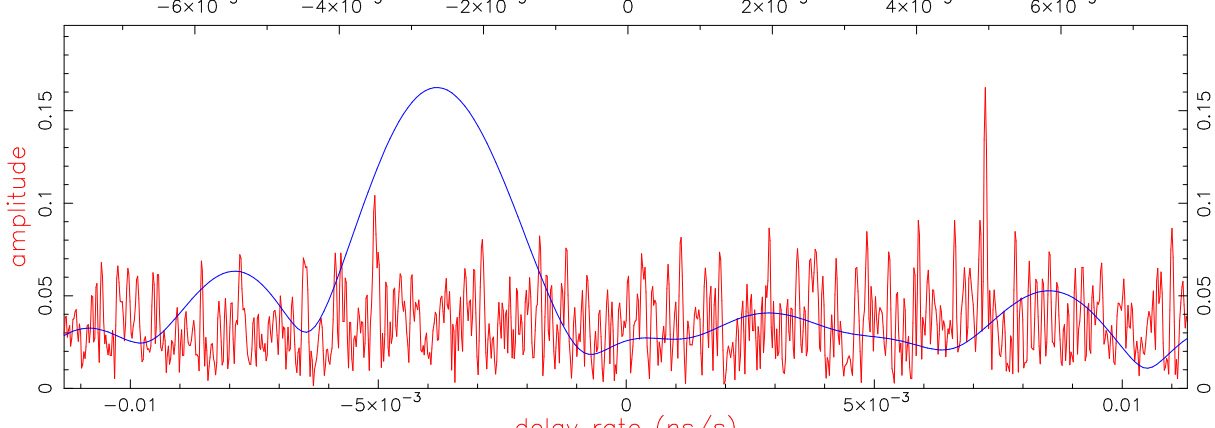
Group delay (usec)(sbd)	-4.11193829913E+03	Apriori delay (usec)	-4.11229788160E+03	Resid mbdelay (usec)	2.07472E-04	+/-	1.7E-04
Sband delay (usec)	-4.11194605935E+03	Apriori clock (usec)	2.0739985E+00	Resid sbdelay (usec)	3.51822E-01	+/-	1.3E-03
Phase delay (usec)	-4.11229788074E+03	Apriori clockrate (us/s)	4.2647201E-07	Resid phdelay (usec)	8.64898E-07	+/-	5.7E-07
Delay rate (us/s)	-4.36203775415E-01	Apriori rate (us/s)	-4.36208298124E-01	Resid rate (us/s)	4.52271E-06	+/-	5.5E-09
Total phase (deg)	-160.9	Apriori accel (us/s/s)	4.84157441133E-05	Resid phase (deg)	26.8	+/-	17.6

ph/seg (deg)	58.0	Theor.	41.3	Amplitude	0.190 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	71.3	Search (1024X32)	0.172	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	Inc. seg. avg.	0.190	Inc. seg. avg.	0.190	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	43.0	Inc. frq. avg.	0.186	Inc. frq. avg.	0.186	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	

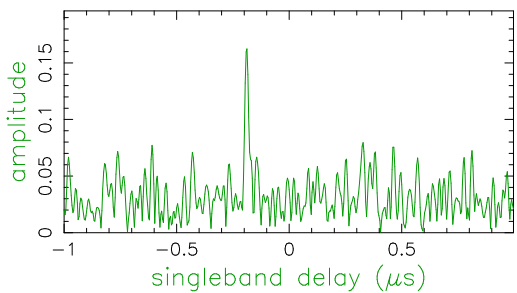
g: az 200.8 el 50.0 pa 5.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 3180.333 5613.917 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/gl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/gl.W.159.127JEK

multiband delay (μs)

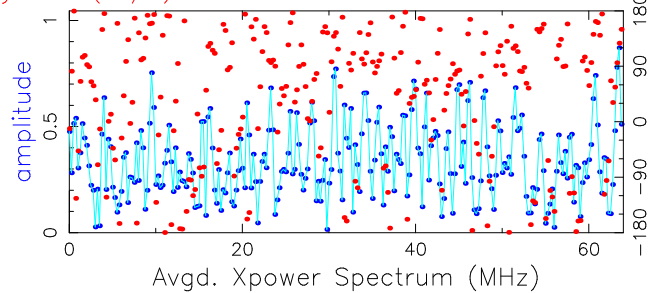
Fringe quality 0



SNR 6.0
 Int time 179.436
 Amp 0.196
 Phase 124.2
 PFD 1.9e-01
 Delays (us)
 SBD -0.189043
 MBD -0.002639
 Fringe rate (Hz) 0.625531
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

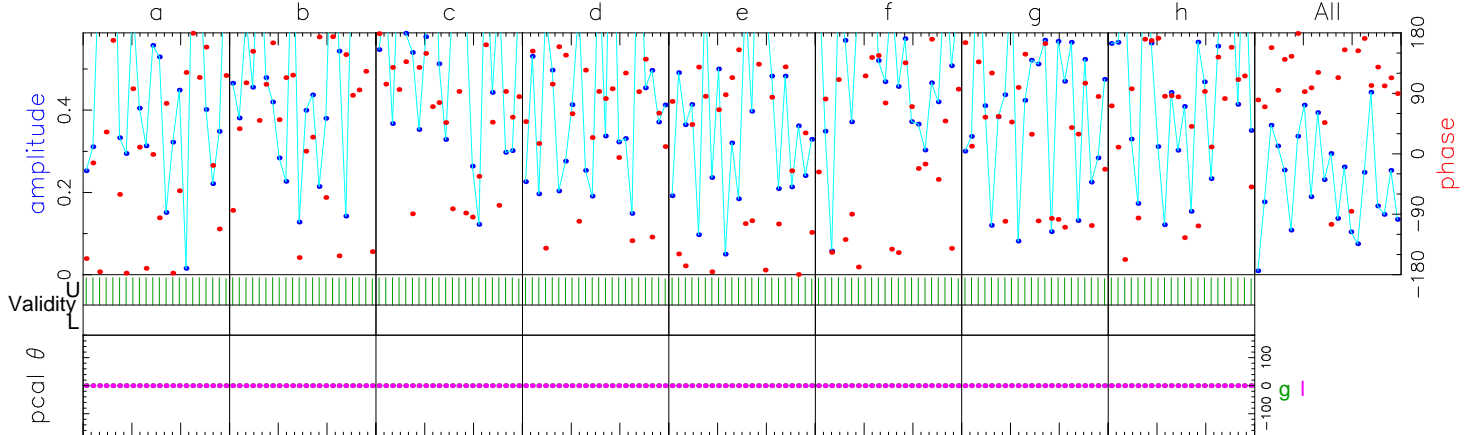


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132840
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

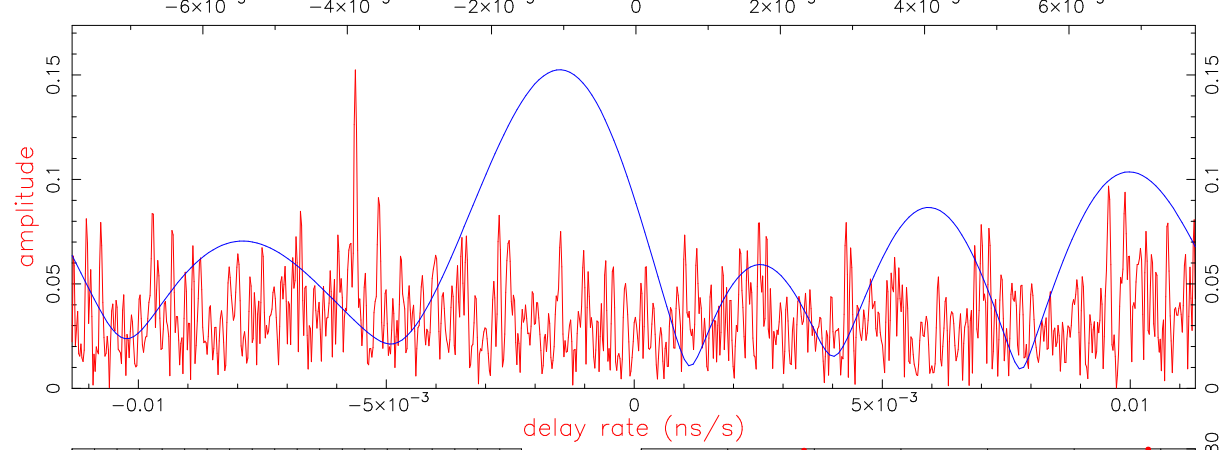
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-4.11248802079E+03									
Sband delay (usec)	-4.11248692435E+03									
Phase delay (usec)	-4.11229787760E+03									
Delay rate (us/s)	-4.36201036325E-01									
Total phase (deg)			-63.5							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.196 +/- 0.033										
0.161										
0.000										
0.211										
0.185										
PC period (AP's) 5, 5										
simultaneous interpolator										

ph/seg (deg) 54.2 44.6
 amp/seg (%) 79.8 77.8
 ph/frq (deg) 26.9 26.9
 amp/frq (%) 31.6 46.9
 g: az 200.8 el 50.0 pa 5.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 3180.333 5613.917
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/gl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/gl.W.185.127JEK

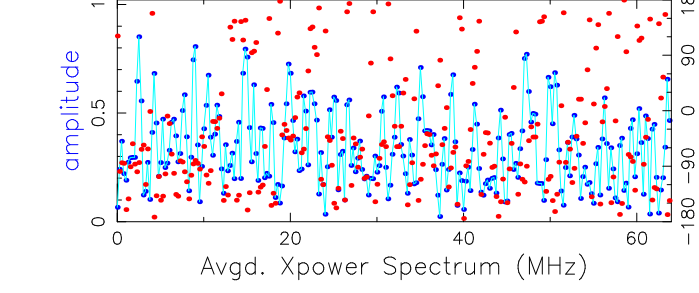
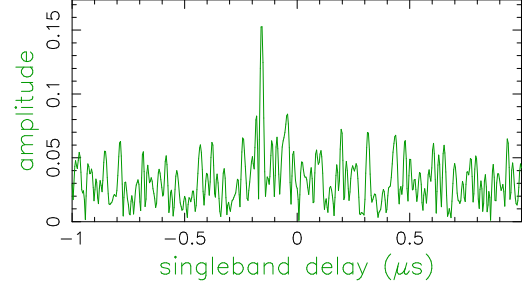
multiband delay (μ s)



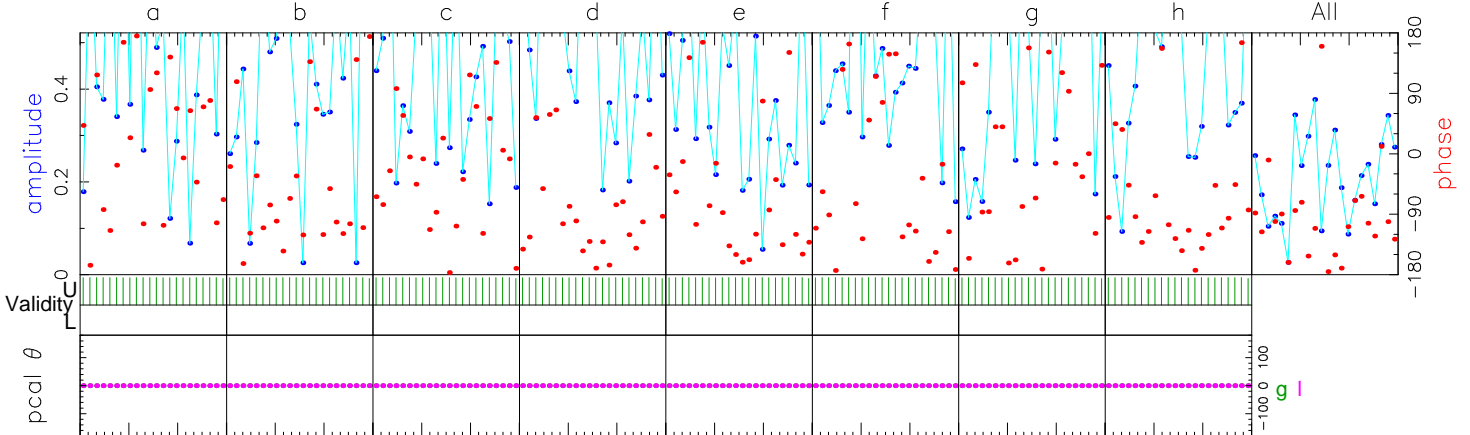
Fringe quality 0

SNR 5.7
 Int time 179.496
 Amp 0.174
 Phase -108.2
 PFD 7.0e-01
 Delays (us)
 SBD -0.158192
 MBD -0.001026
 Fringe rate (Hz)
 -0.485551
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132842
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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

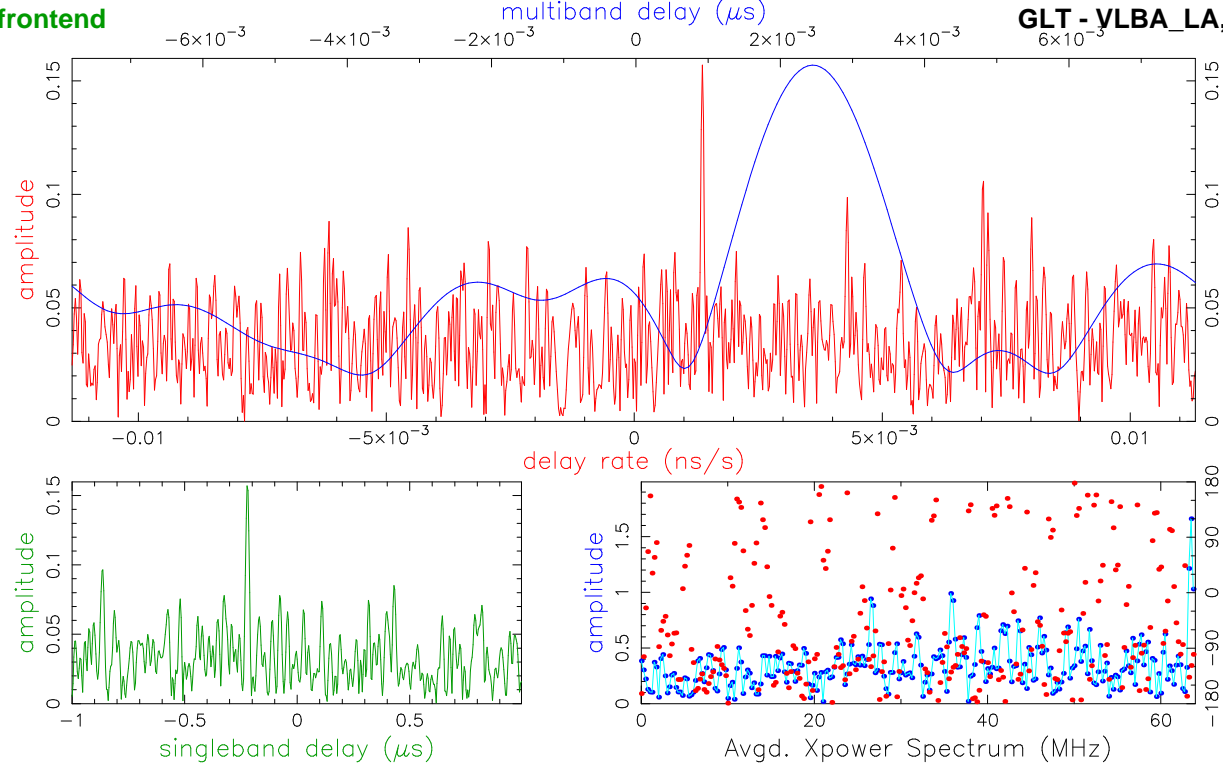


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-4.11245515783E+03									
Sband delay (usec)	-4.11245607360E+03									
Phase delay (usec)	-4.11229788509E+03									
Delay rate (us/s)	-4.36213934891E-01									
Total phase (deg)			-295.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

ph/seg (deg) 49.7 46.8 Search (1024X32) 0.146 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 69.0 81.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 84.9 28.2 Inc. seg. avg. 0.175 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 60.7 49.3 Inc. frq. avg. 0.186 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 g: az 200.8 el 50.0 pa 5.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 3180.333 5613.917 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/gl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/gl.W.204.127JEK

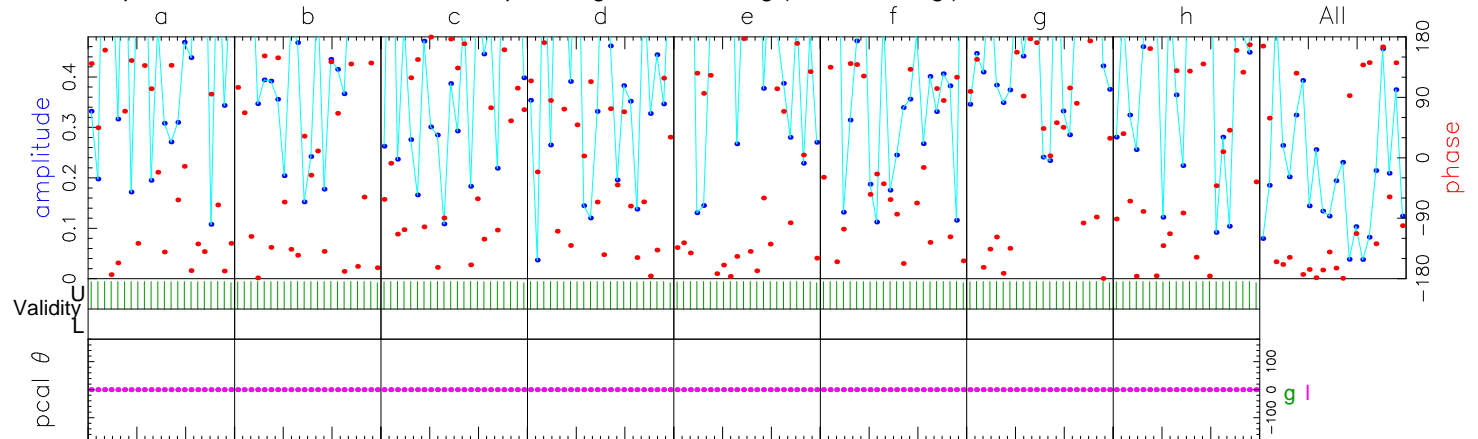
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, gl
GLT - VLBA_LA, fgroup W, pol RL



Fringe quality 0
SNR 5.8
Int time 179.436
Amp 0.160
Phase -174.3
PFD 5.2e-01
Delays (us)
SBD -0.221179
MBD 0.002450
Fringe rate (Hz) 0.117490
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build 2020:070:104410
2020:071:132844
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s
+37°10'59.514664"

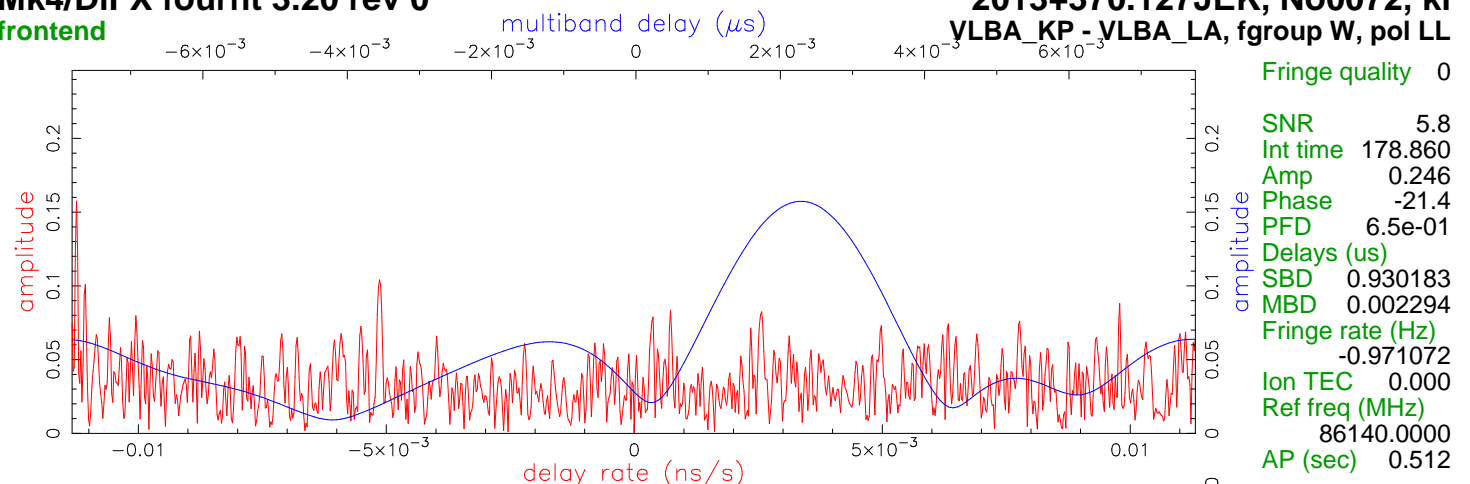
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



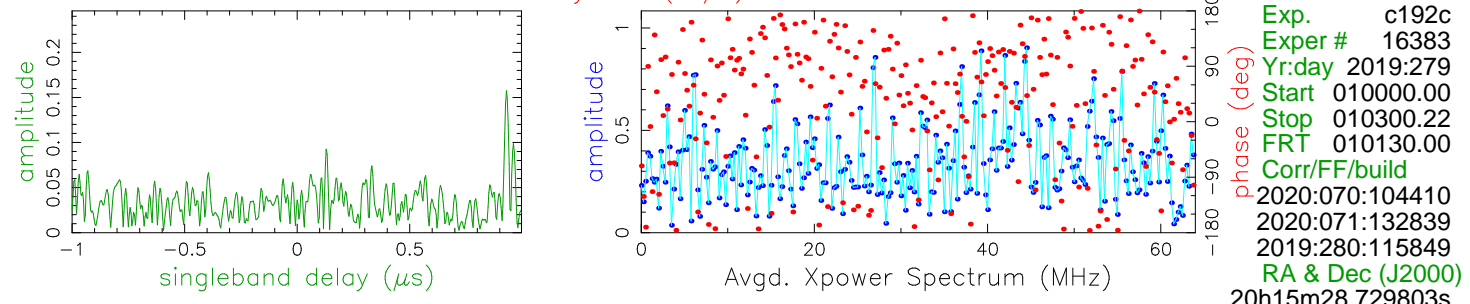
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-4.11251418115E+03				-4.11229788160E+03				2.45045E-03	+/- 1.9E-04
Sband delay (usec)	-4.11251906010E+03				2.0739985E+00				-2.21179E-01	+/- 1.5E-03
Phase delay (usec)	-4.11229788722E+03				4.2647201E-07				-5.62061E-06	+/- 6.3E-07
Delay rate (us/s)	-4.36206934186E-01				-4.36208298124E-01				1.36394E-06	+/- 6.1E-09
Total phase (deg)			-2.0		4.84157441133E-05				-174.3	+/- 19.7
ph/seg (deg)	53.4	46.2			0.151					
amp/seg (%)	90.1	80.6			0.000					
ph/frq (deg)	22.8	27.8			0.163					
amp/frq (%)	60.2	48.6			0.146					
g: az 200.8 el 50.0 pa 5.8	l: az 78.8 el 73.2 pa -88.7		u,v (fr/asec) 3180.333 5613.917		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c192c/v1_CygA2/1234/No0072/gl..127JEK		Output file: /Exps/c192c/v1_CygA2/1234/No0072/gl.W.220.127JEK		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
					Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	
					Sample rate(MSamp/s): 128		dr window (ns/s)		-0.011 0.011	
					Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	
									0.00 0.00	

Mk4/DiFX fourfit 3.20 rev 0
frontend

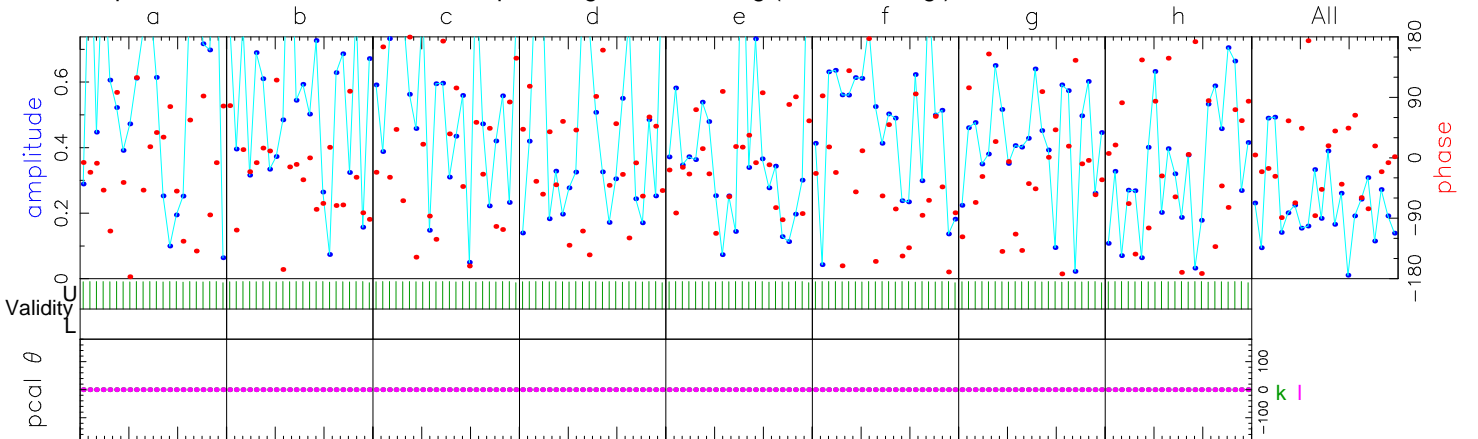
2013+370.127JEK, No0072, kl
VLBA_KP - VLBA_LA, fgroup W, pol LL



Fringe quality 0
SNR 5.8
Int time 178.860
Amp 0.246
Phase -21.4
PFD 6.5e-01
Delays (us)
SBD 0.930183
MBD 0.002294
Fringe rate (Hz) -0.971072
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132839
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-13.7	-25.5	-20.2	-44.5	2.4	-48.6	-30.1	16.0	Phase	-21.4
	0.3	0.5	0.1	0.2	0.4	0.2	0.2	0.1	Ampl.	0.2
	10.3	494.2	322.6	143.6	494.7	57.2	260.1	56.7	Sbd box	495.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

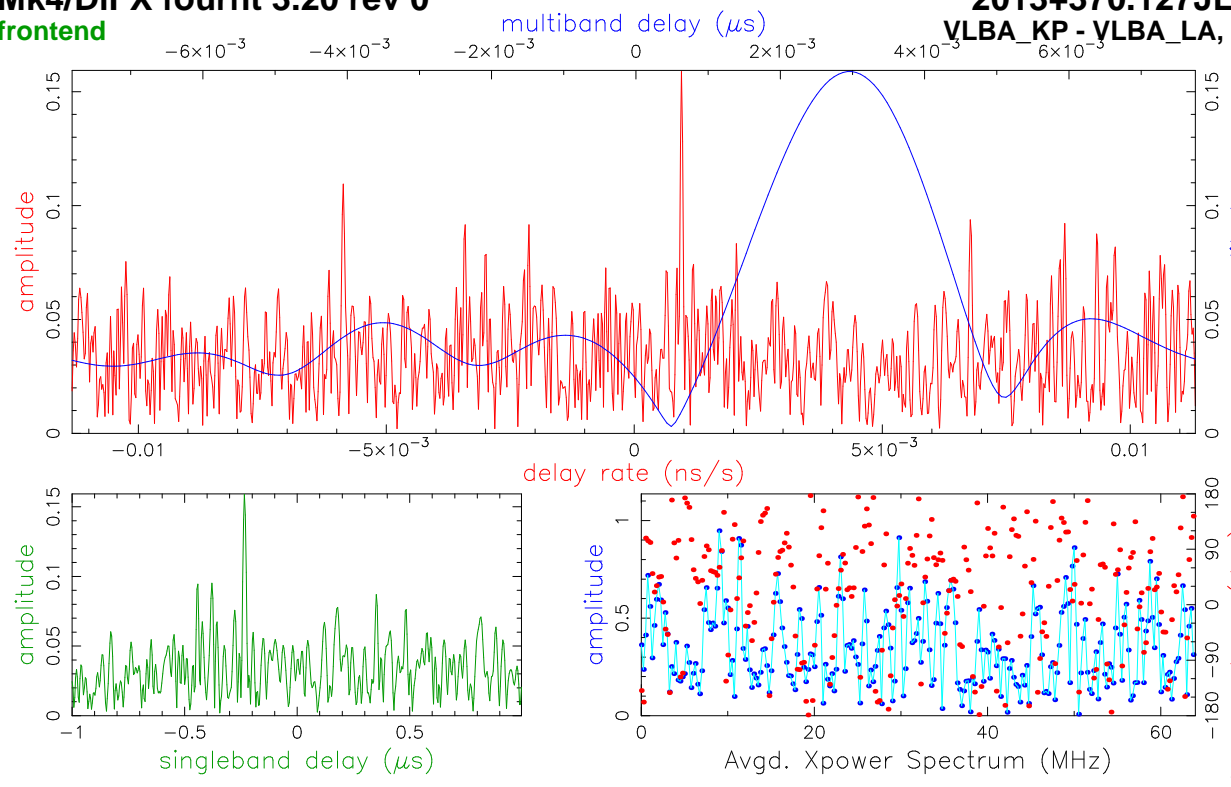
Group delay (usec)(sbd)	-6.52694694562E+02	Apriori delay (usec)	-6.53618863165E+02	Resid mbdelay (usec)	2.29360E-03	+/-	1.9E-04
Sband delay (usec)	-6.52688680665E+02	Apriori clock (usec)	3.6909726E-01	Resid sbdelay (usec)	9.30183E-01	+/-	1.5E-03
Phase delay (usec)	-6.53618863855E+02	Apriori clockrate (us/s)	1.5689301E-07	Resid phdelay (usec)	-6.89772E-07	+/-	6.4E-07
Delay rate (us/s)	1.06292819027E-01	Apriori rate (us/s)	1.06304092206E-01	Resid rate (us/s)	-1.12732E-05	+/-	6.2E-09
Total phase (deg)	-335.7	Apriori accel (us/s/s)	-2.99261817253E-07	Resid phase (deg)	-21.4	+/-	19.9

ph/seg (deg)	57.7	Theor.	46.6	Amplitude	0.246 +/- 0.043	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	86.3	Search (1024X32)	0.155	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	23.8	Inc. seg. avg.	0.267	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	55.6	Inc. frq. avg.	0.230	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011	0.011		
				Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 68.9 el 67.8 pa -95.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -765.803 -403.452 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/kl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/kl.W.177.127JEK

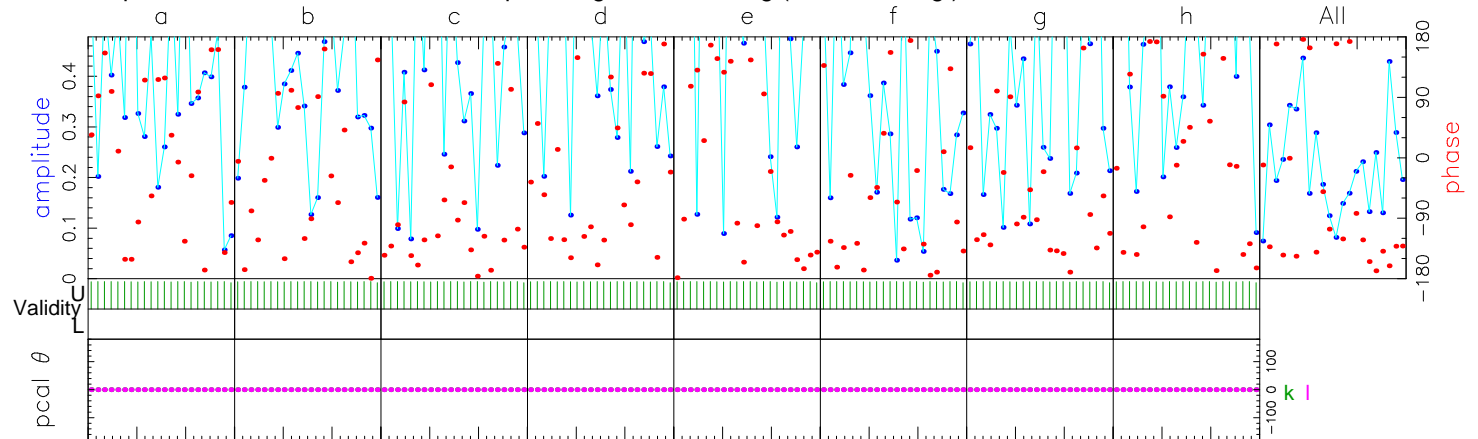
Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.127JEK, No0072, kl
 VLBA_KP - VLBA_LA, fgroup W, pol RR



Fringe quality 0
 SNR 5.8
 Int time 178.861
 Amp 0.159
 Phase -143.2
 PFD 5.4e-01
 Delays (us)
 SBD -0.234187
 MBD 0.002970
 Fringe rate (Hz) 0.082088
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132842
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-6.53850267686E+02				-6.53618863165E+02				2.97048E-03	+/- 1.9E-04
Sband delay (usec)	-6.53853050165E+02				3.6909726E-01				-2.34187E-01	+/- 1.5E-03
Phase delay (usec)	-6.53618867782E+02				1.5689301E-07				-4.61738E-06	+/- 6.4E-07
Delay rate (us/s)	1.06305045160E-01				1.06304092206E-01				9.52955E-07	+/- 6.1E-09
Total phase (deg)			-97.5		-2.99261817253E-07				-143.2	+/- 19.7
pcal mode:	MANUAL, MANUAL		PC period (AP's) 5, 5							
pcal rate:	0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000		1.000			
Bits/sample:	2x2		SampCntNorm: enabled		mb window (us)		-0.008		0.008	
Sample rate (MSamp/s):	128		dr window (ns/s)		-0.011		0.011			
Data rate (Mb/s):	2048		nlags: 256		t_cohere infinite		ion window (TEC)		0.00	
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										

ph/seg (deg) 54.3 46.3 Search (1024X32) 0.157 +/- 0.027
 amp/seg (%) 75.0 80.7 Interp. 0.000
 ph/frq (deg) 32.4 27.9 Inc. seg. avg. 0.171
 amp/frq (%) 39.2 48.7 Inc. frq. avg. 0.157
 k: az 68.9 el 67.8 pa -95.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -765.803 -403.452
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/kl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/kl.W.199.127JEK simultaneous interpolator

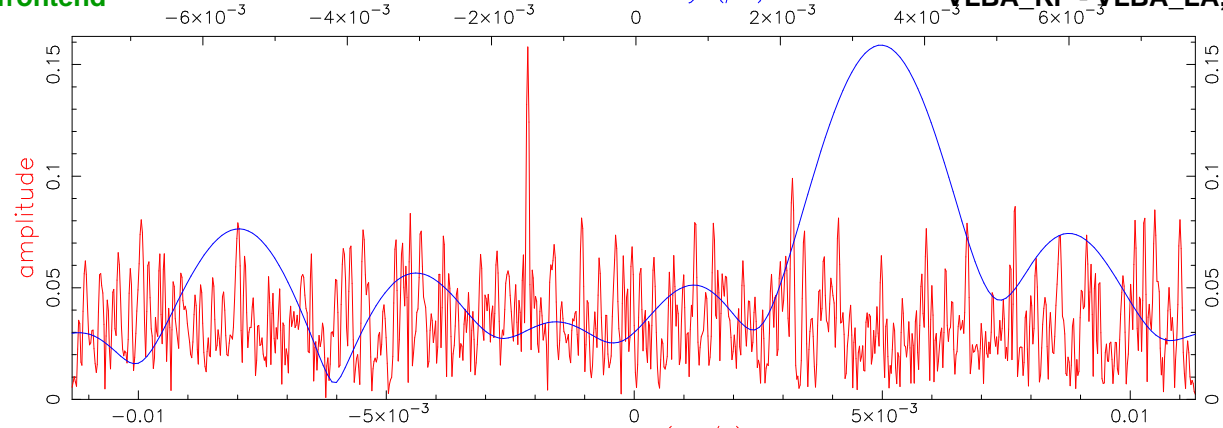
Mk4/DiFX fourfit 3.20 rev 0

frontend

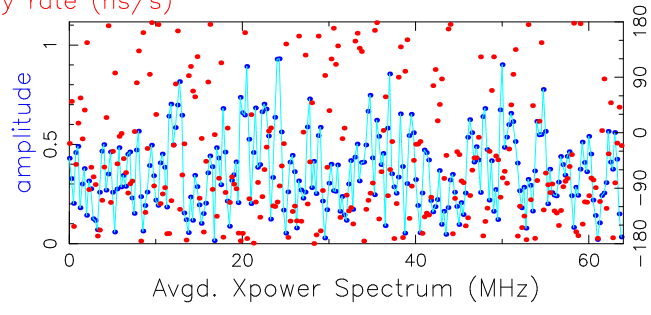
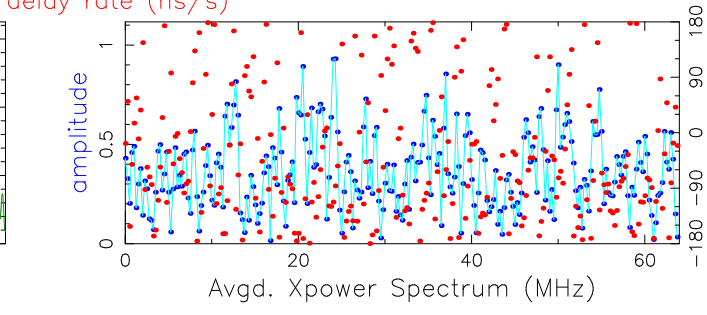
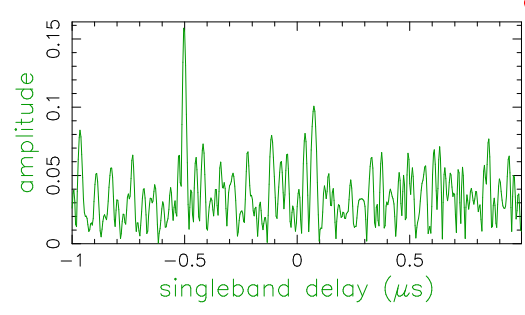
2013+370.127JEK, No0072, kl

VLBA_KP - VLBA_LA, fgroup W, pol LR

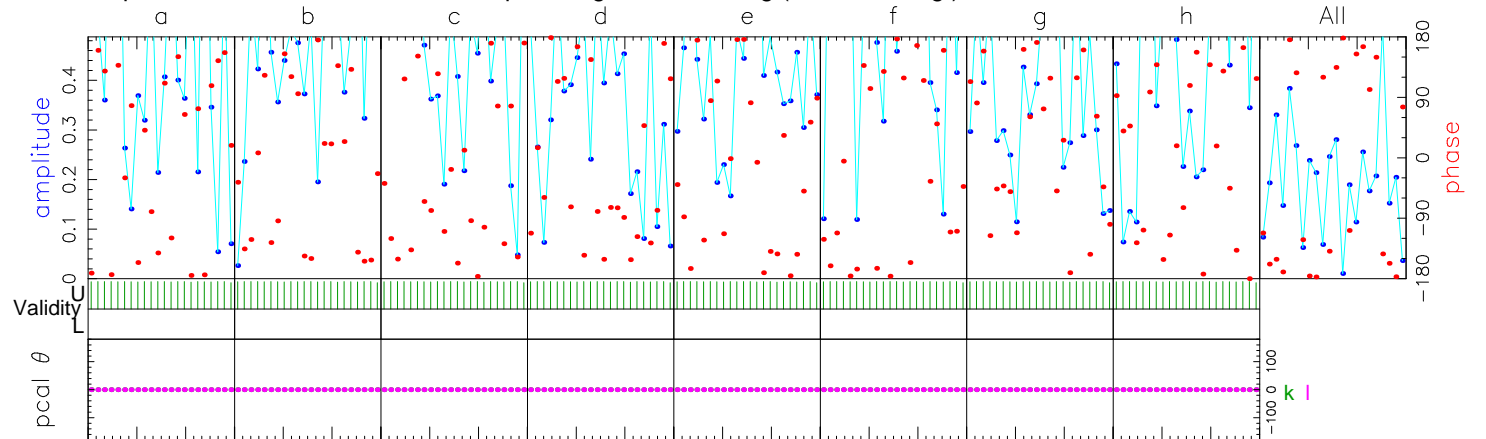
multiband delay (μ s)



Fringe quality 0
 SNR 5.9
 Int time 178.860
 Amp 0.163
 Phase -176.7
 PFD 4.4e-01
 Delays (us)
 SBD -0.502311
 MBD 0.003496
 Fringe rate (Hz)
 -0.184559
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132844
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-6.54115367356E+02									
Sband delay (usec)	-6.54121174415E+02									
Phase delay (usec)	-6.53618868863E+02									
Delay rate (us/s)	1.06301949663E-01									
Total phase (deg)			-131.0							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
PC period (AP's) 5, 5										
SampCntNorm: enabled										
nlags: 256										
t_cohere infinite										
simultaneous interpolator										

ph/seg (deg) 45.7 45.9 Search (1024X32) 0.154 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 75.3 80.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 32.0 27.7 Inc. seg. avg. 0.153 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 43.6 48.3 Inc. frq. avg. 0.158 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 68.9 el 67.8 pa -95.8 l: az 78.8 el 73.2 pa -88.7 u, v (fr/asec) -765.803 -403.452 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/kl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/kl.W.219.127JEK

Mk4/DiFX fourfit 3.20 rev 0

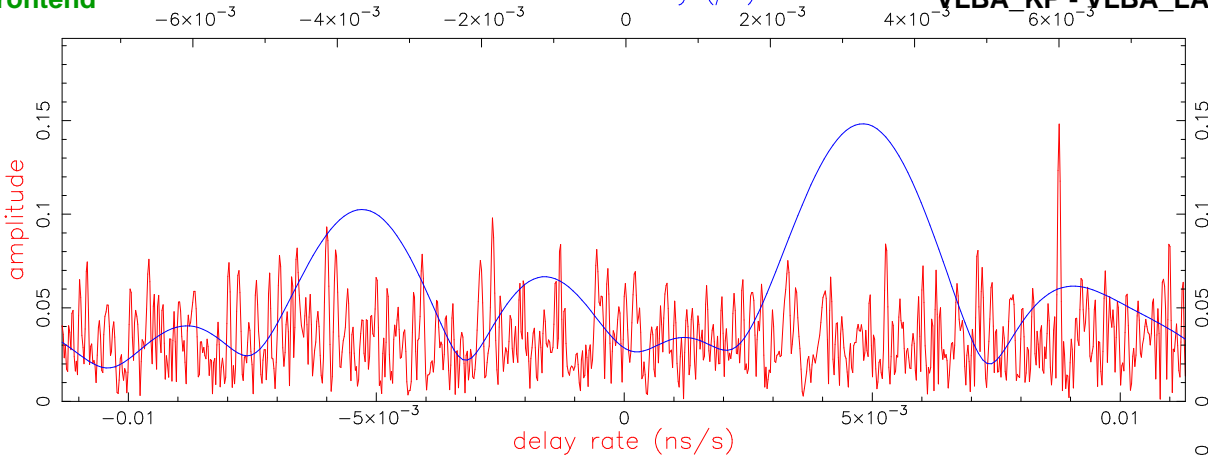
frontend

2013+370.127JEK, No0072, kl

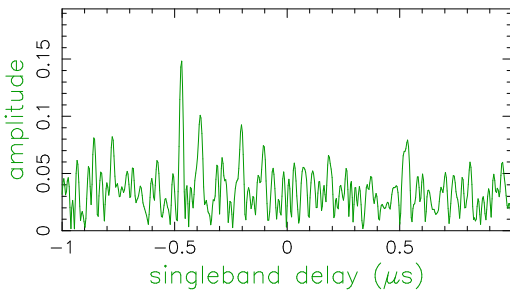
VLBA_KP - VLBA_LA, fgroup W, pol RL

multiband delay (μ s)

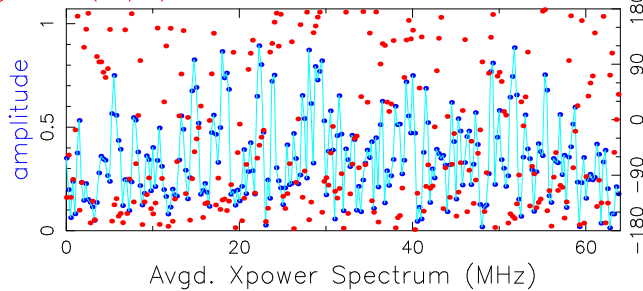
Fringe quality 0



SNR 5.5
 Int time 178.860
 Amp 0.194
 Phase 163.5
 PFD 1.0e+00
 Delays (us)
 SBD -0.469953
 MBD 0.003230
 Fringe rate (Hz) 0.756913
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

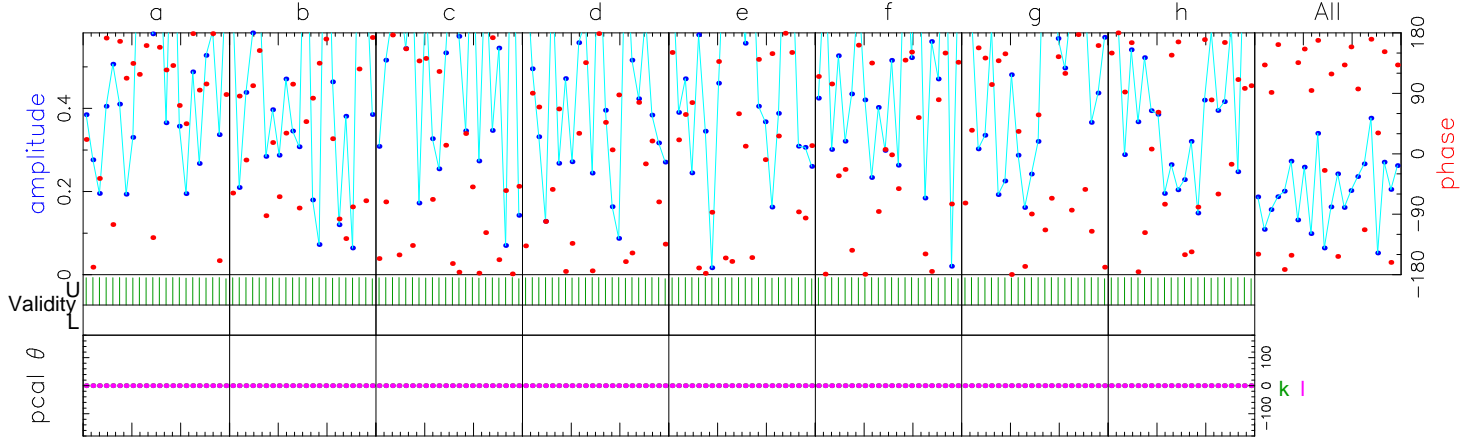


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132847
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



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

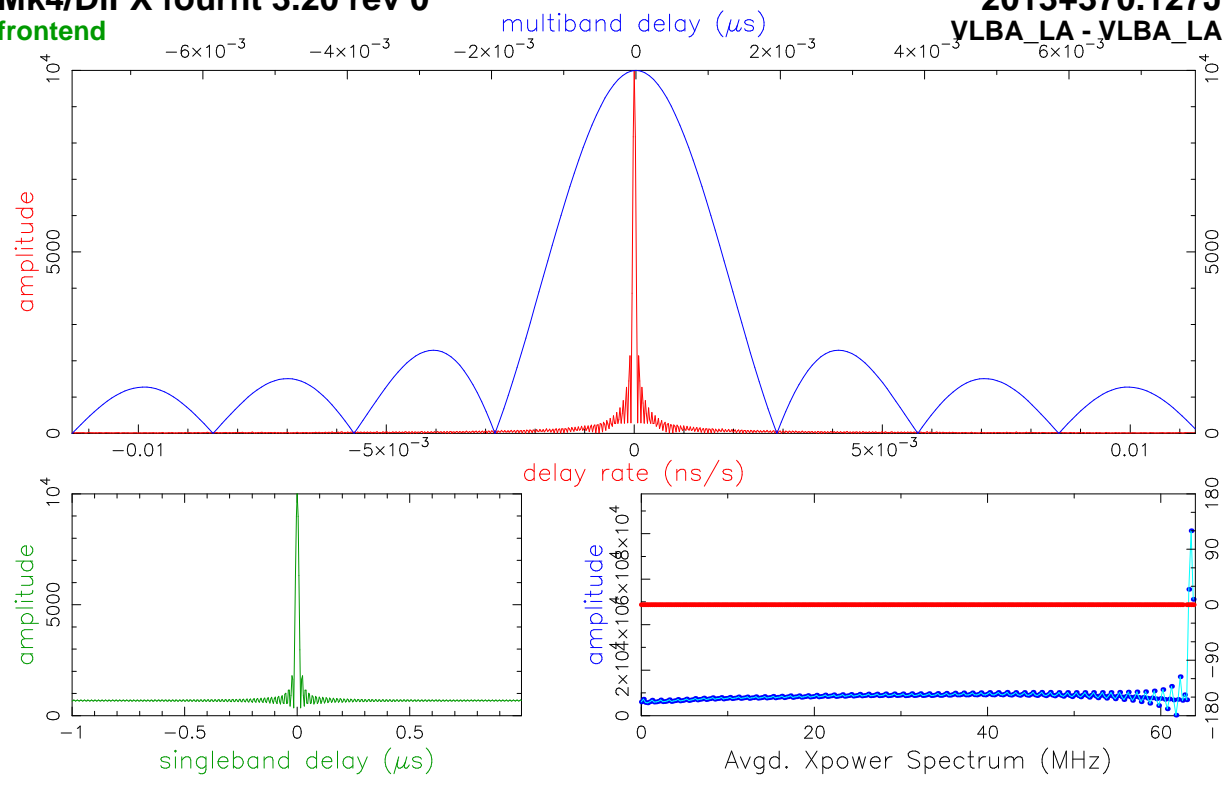
Group delay (usec)(sbd)	-6.54084382923E+02	Apriori delay (usec)	-6.53618863165E+02	Resid mbdelay (usec)	3.23024E-03	+/-	2.0E-04
Sband delay (usec)	-6.54088816415E+02	Apriori clock (usec)	3.6909726E-01	Resid sbdelay (usec)	-4.69953E-01	+/-	1.6E-03
Phase delay (usec)	-6.53618857894E+02	Apriori clockrate (us/s)	1.5689301E-07	Resid phdelay (usec)	5.27110E-06	+/-	6.8E-07
Delay rate (us/s)	1.06312879216E-01	Apriori rate (us/s)	1.06304092206E-01	Resid rate (us/s)	8.78701E-06	+/-	6.5E-09
Total phase (deg)	-150.8	Apriori accel (us/s/s)	-2.99261817253E-07	Resid phase (deg)	163.5	+/-	21.0

ph/seg (deg)	61.3	Theor.	Amplitude	0.194 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	64.6	49.2	Search (1024X32)	0.145	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	40.4	85.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	55.4	29.6	Inc. seg. avg.	0.192	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
		51.7	Inc. frq. avg.	0.196	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 68.9 el 67.8 pa -95.8 l: az 78.8 el 73.2 pa -88.7 u, v (fr/asec) -765.803 -403.452 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/kl..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/kl.W.235.127JEK

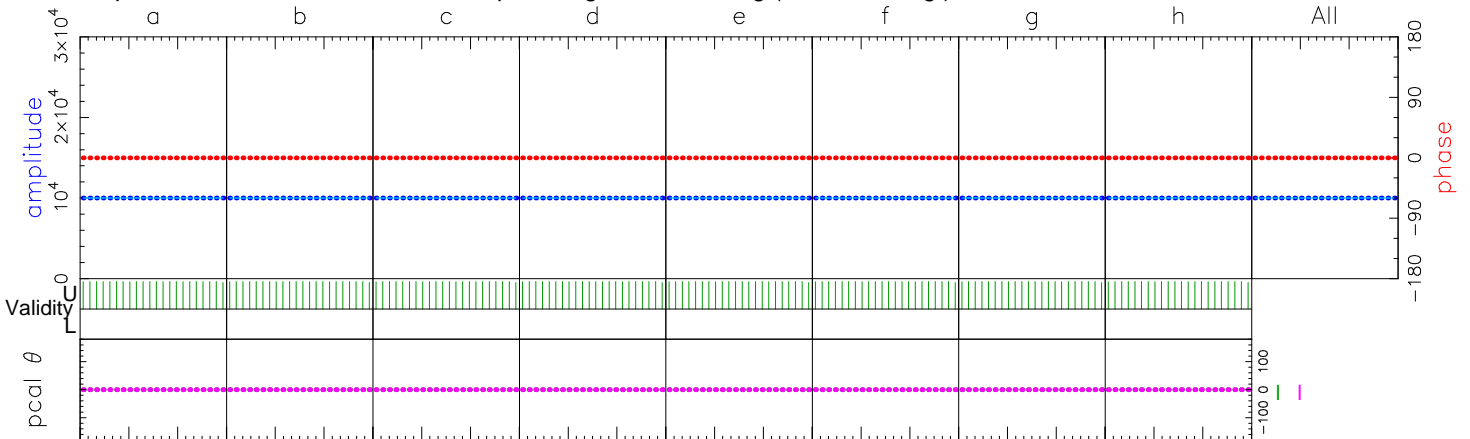
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, II
VLBA_LA - VLBA_LA, fgroup W, pol LL



Fringe quality 9
SNR 366525.0
Int time 179.644
Amp 10000.001
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 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132848
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	10000.0
	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	
									Chan ids	
									Tracks	

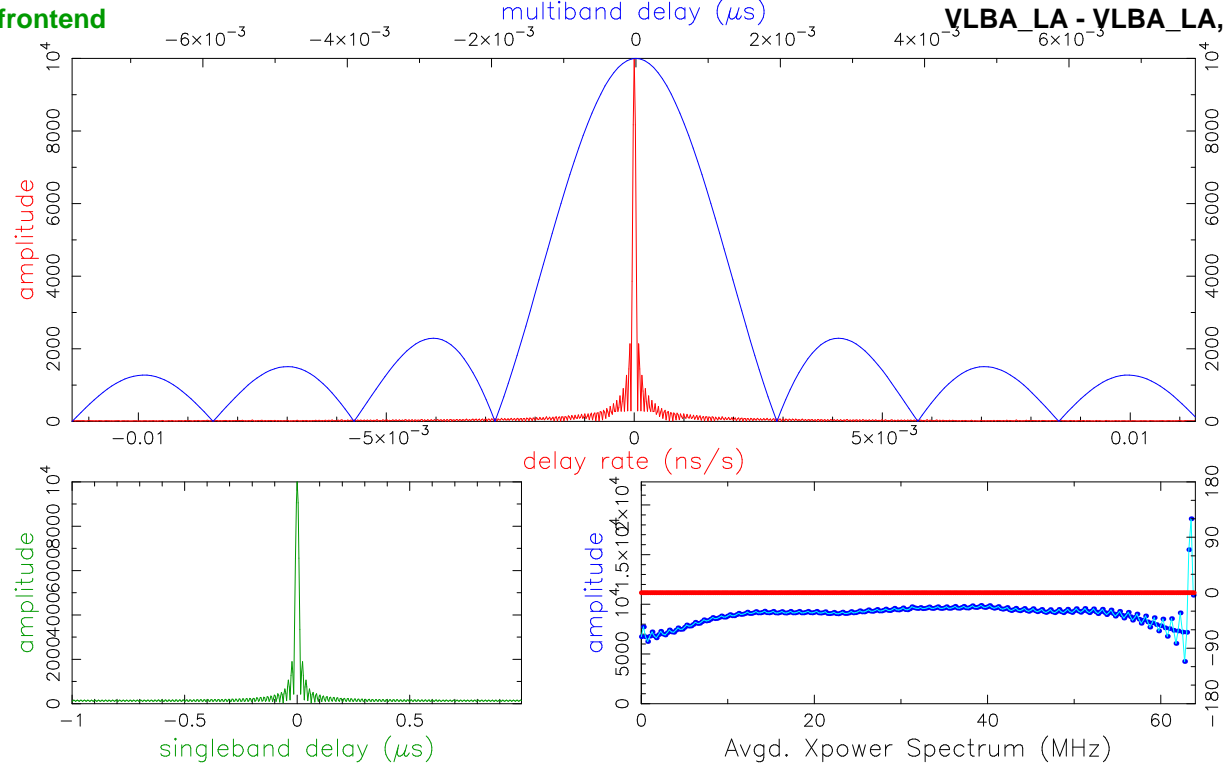
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.0E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.4E-08
 Phase delay (usec) 1.59808482862E-19 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 1.59808E-19 +/- 1.0E-11
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 10000.001 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 10000.002 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.002 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 i: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/II..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/II.W.239.127JEK

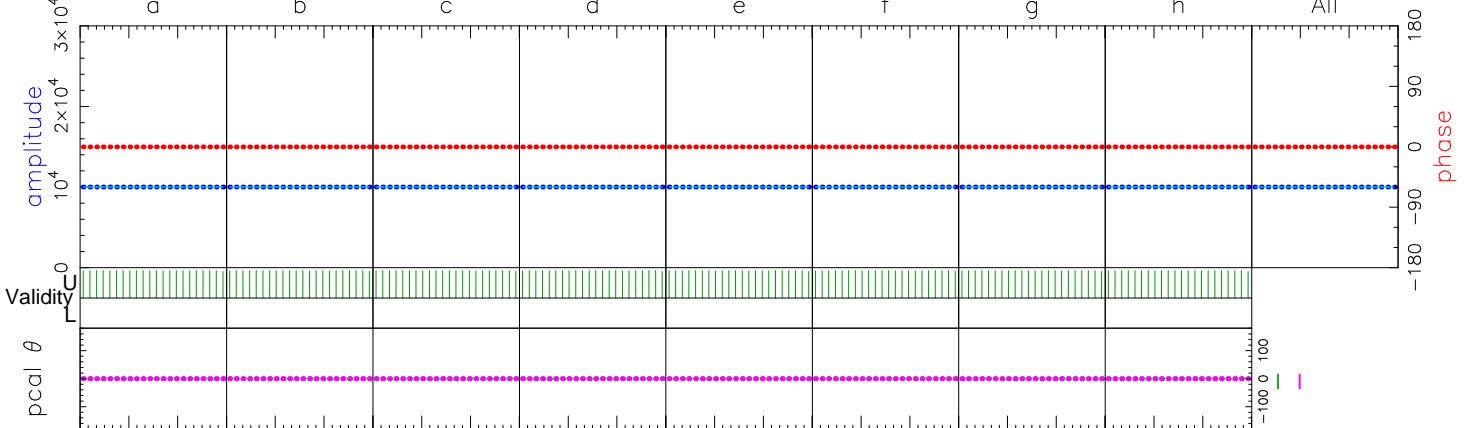
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, II
VLBA_LA - VLBA_LA, fgroup W, pol RR



Fringe quality 9
SNR 366525.3
Int time 179.644
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 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132850
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	10000.0
	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	0.0000000000E+00								Resid mbdelay (usec)	0.00000E+00 +/- 3.0E-09
Sband delay (usec)	0.0000000000E+00								Resid sbdelay (usec)	0.00000E+00 +/- 2.4E-08
Phase delay (usec)	5.97835006911E-20								Resid phdelay (usec)	5.97835E-20 +/- 1.0E-11
Delay rate (us/s)	0.0000000000E+00								Resid rate (us/s)	0.00000E+00 +/- 9.7E-14
Total phase (deg)		0.0							Resid phase (deg)	0.0 +/- 0.0

RMS Theor. Amplitude 10000.000 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 l: az 78.8 el 73.2 pa -88.7 i: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/II..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/II.W.251.127JEK

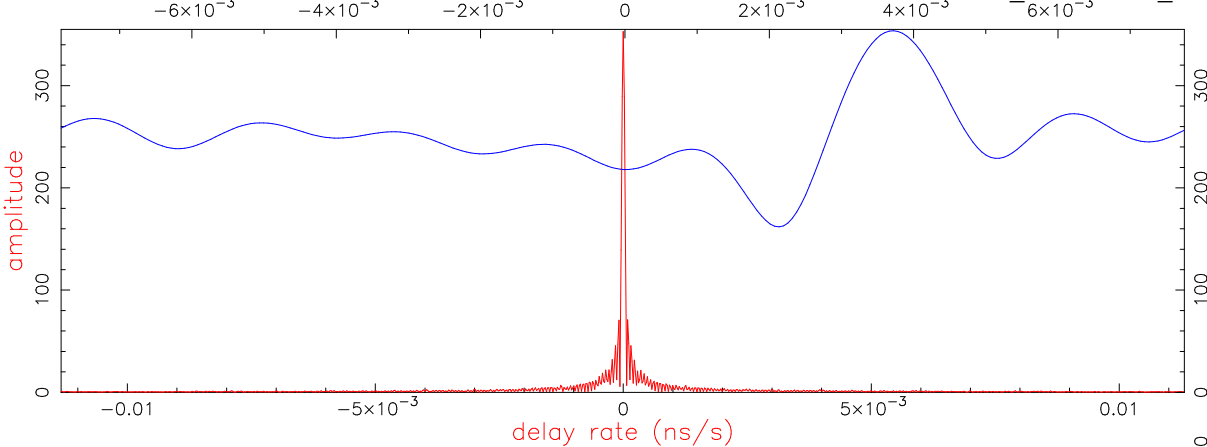
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, II

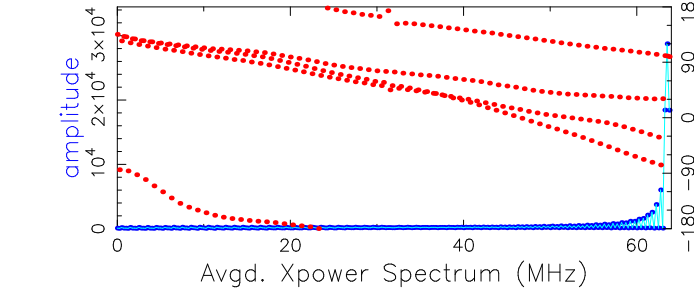
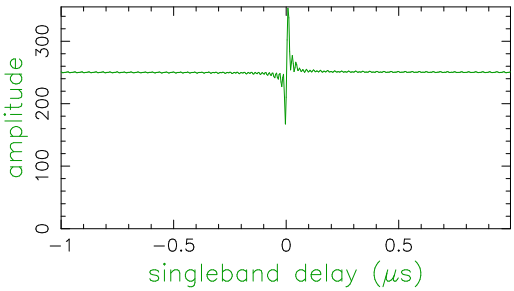
VLBA_LA - VLBA_LA, fgroup W, pol LR

multiband delay (μ s)



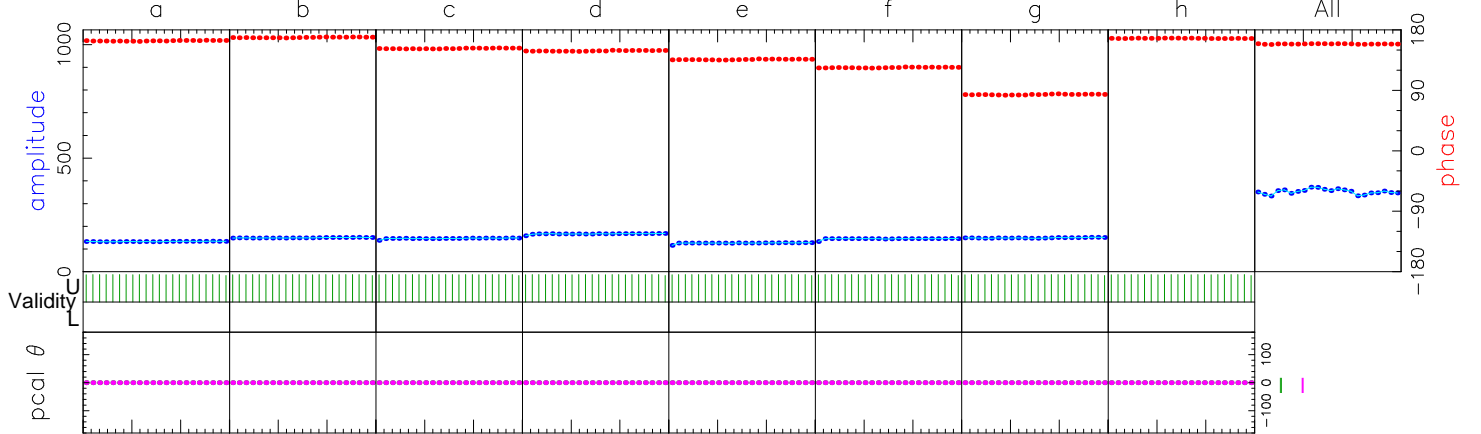
Fringe quality 5

SNR 13013.1
 Int time 179.644
 Amp 355.040
 Phase 158.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.008781
 MBD 0.003638
 Fringe rate (Hz)
 0.000002
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132852
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

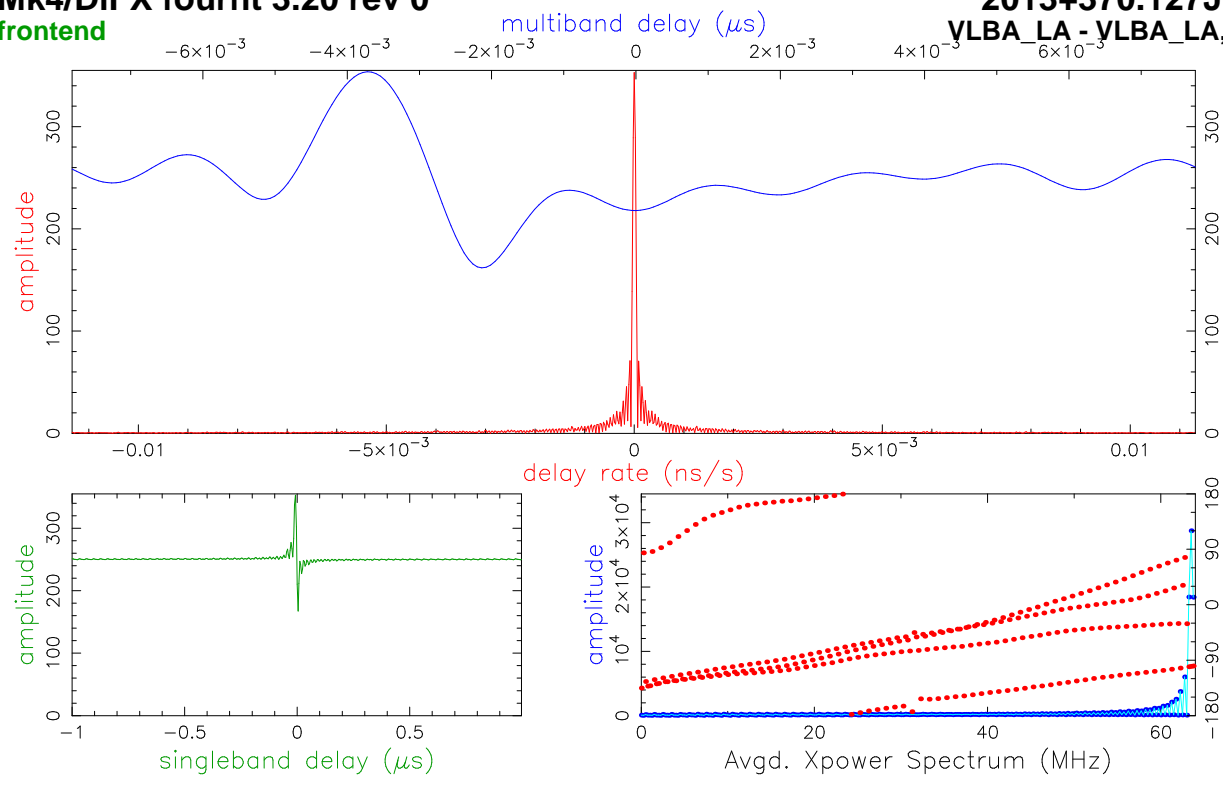
Group delay (usec)(sbd) 3.63806250000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 3.63806E-03 +/- 8.3E-08
 Sband delay (usec) 8.78075000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 8.78075E-03 +/- 6.6E-07
 Phase delay (usec) 5.12474793233E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 5.12475E-06 +/- 2.8E-10
 Delay rate (us/s) 2.40909590659E-11 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) 2.40910E-11 +/- 2.7E-12
 Total phase (deg) 158.9 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 158.9 +/- 0.0

RMS Theor. Amplitude 355.040 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.4 0.0 Search (1024X32) 348.489 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 3.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 36.0 0.0 Inc. seg. avg. 352.897 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 171.1 0.0 Inc. frq. avg. 374.763 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 i: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/II..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/II.W.267.127JEK

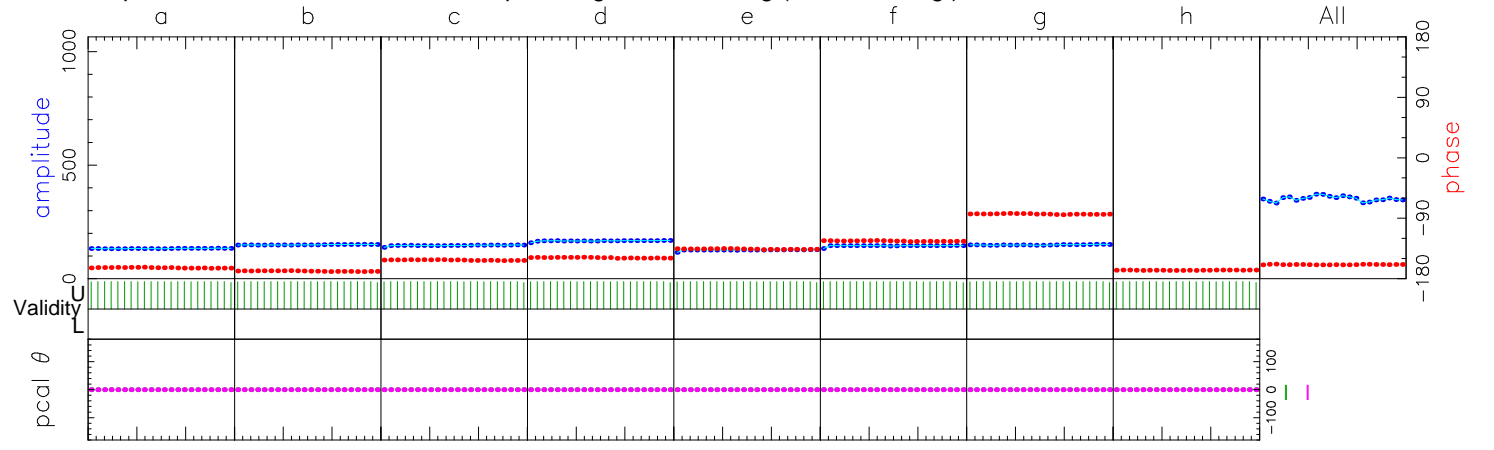
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, II
VLBA_LA - VLBA_LA, fgroup W, pol RL



Fringe quality 5
SNR 13013.1
Int time 179.644
Amp 355.039
Phase -158.9
PFD 0.0e+00
Delays (us)
SBD -0.008781
MBD -0.003638
Fringe rate (Hz)
-0.000002
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132854
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

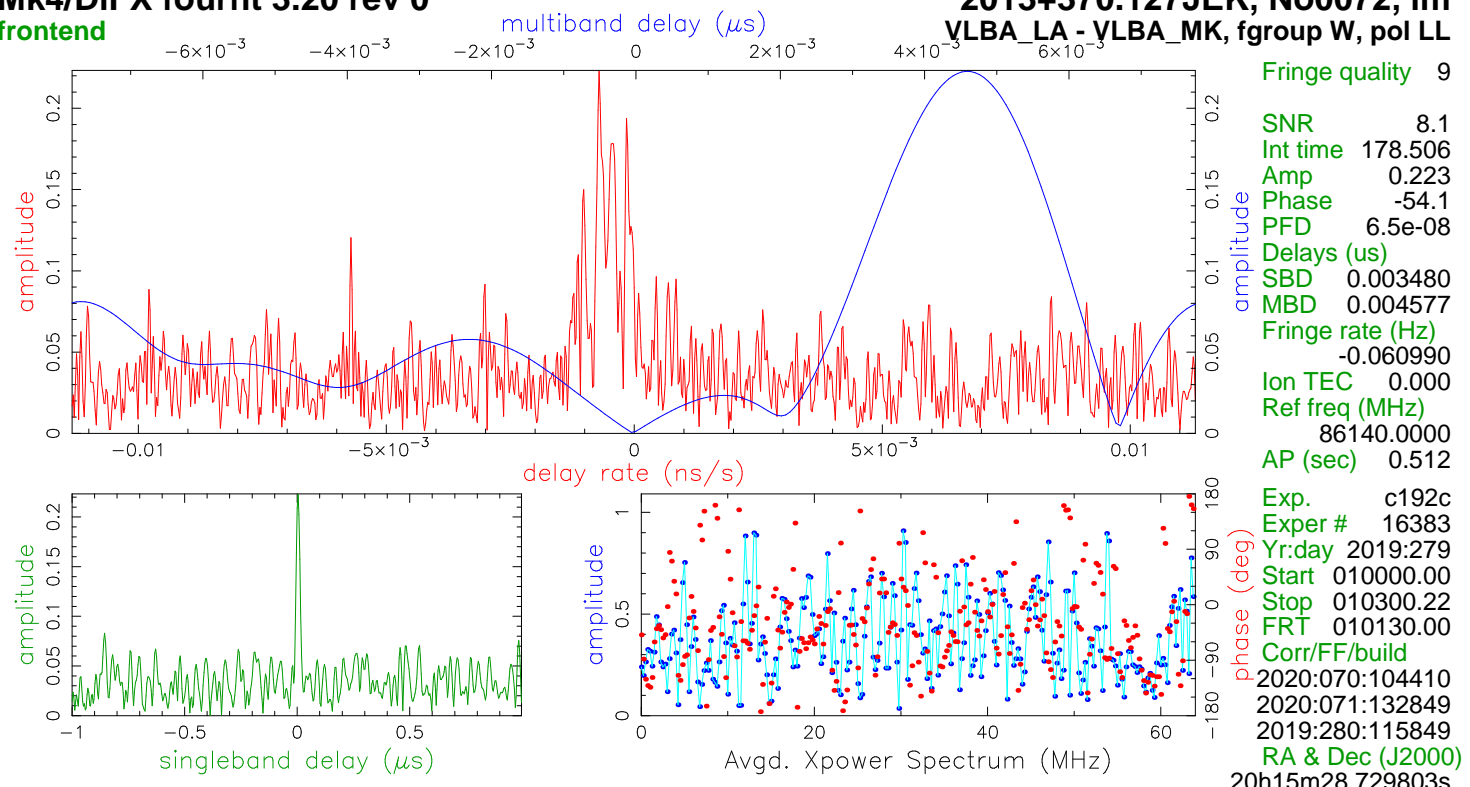


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	374.8
	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	254.8
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.63806250000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-3.63806E-03	+/- 8.3E-08
Sband delay (usec)	-8.78075000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-8.78075E-03	+/- 6.6E-07
Phase delay (usec)	-5.12474793241E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-5.12475E-06	+/- 2.8E-10
Delay rate (us/s)	-2.40909590659E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-2.40910E-11	+/- 2.7E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-158.9	+/- 0.0

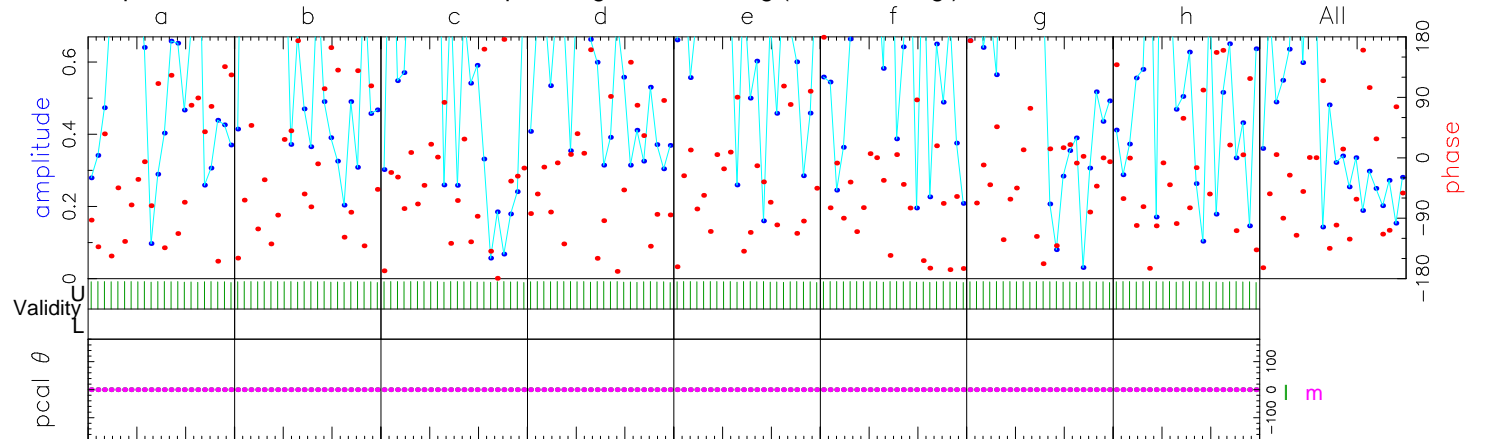
ph/seg (deg) 0.4 0.0 Search (1024X32) 348.488 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 3.0 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 36.0 0.0 Inc. seg. avg. 352.896 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 171.1 0.0 Inc. frq. avg. 374.762 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
I: az 78.8 el 73.2 pa -88.7 I: az 78.8 el 73.2 pa -88.7 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/No0072/II..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/II.W.283.127JEK

Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, Im
VLBA_LA - VLBA_MK, fgroup W, pol LL



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-94.5	-74.4	-33.6	-52.2	-49.1	-69.8	-44.7	-58.3	Phase	-54.1
	0.1	0.2	0.4	0.1	0.3	0.3	0.3	0.2	Ampl.	0.2
	491.4	266.4	258.0	148.3	258.5	258.0	51.3	256.1	Sbd box	257.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.05084098998E+04		Apriori delay (usec)		1.05084053229E+04		Resid mbdelay (usec)		4.57694E-03	+/- 1.3E-04
Sband delay (usec)	1.05084088026E+04		Apriori clock (usec)		-3.3675053E-07		Resid sbdelay (usec)		3.47975E-03	+/- 1.1E-03
Phase delay (usec)	1.05084053212E+04		Apriori clockrate (us/s)		-3.4277971E-07		Resid phdelay (usec)		-1.74464E-06	+/- 4.5E-07
Delay rate (us/s)	-7.39347936862E-01		Apriori rate (us/s)		-7.39347228830E-01		Resid rate (us/s)		-7.08032E-07	+/- 4.4E-09
Total phase (deg)	131.0		Apriori accel (us/s/s)		-3.91390788542E-05		Resid phase (deg)		-54.1	+/- 14.1

ph/seg (deg) 82.3 33.0 Amplitude 0.223 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 158.8 57.6 Search (1024X32) 0.218 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 21.8 19.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

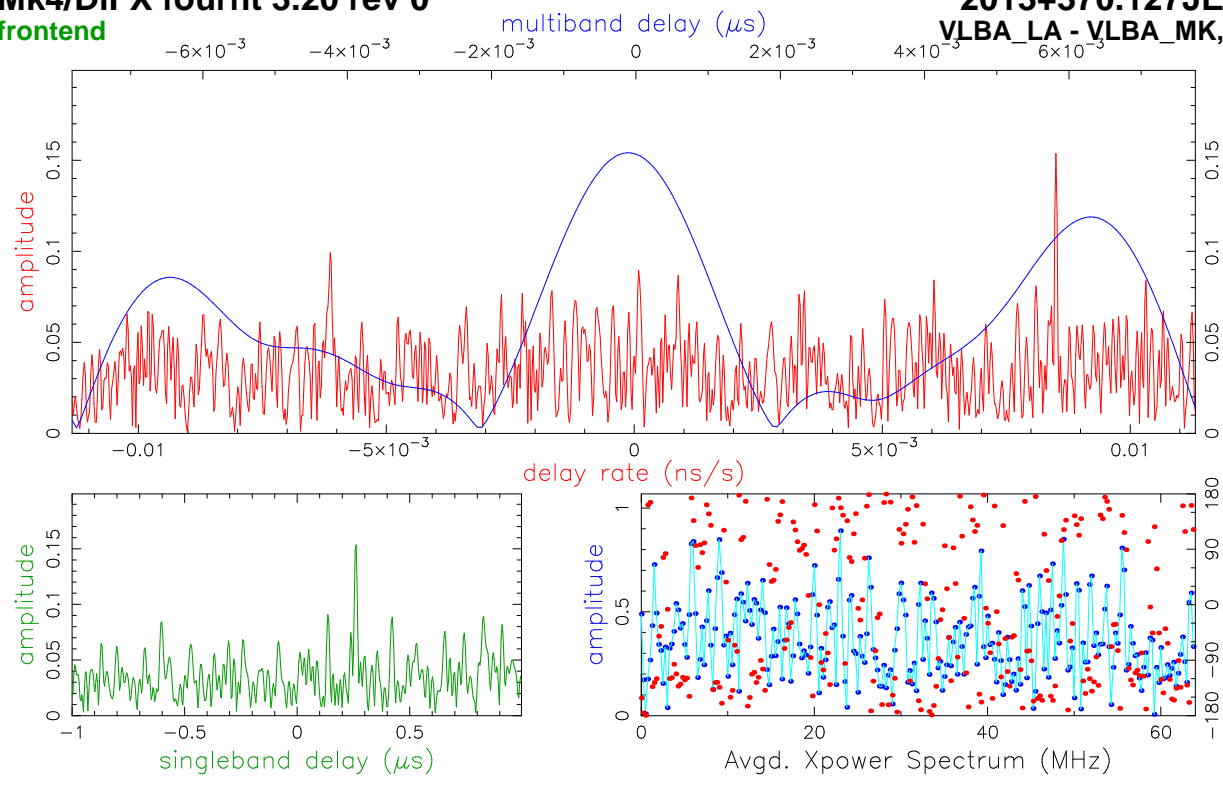
amp/frq (%) 44.3 34.7 Inc. seg. avg. 0.386 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011

l: az 78.8 el 73.2 pa -88.7 m: az 57.5 el 27.4 pa -85.0 u,v (fr/asec) 5293.072 -638.129 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/Im..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/Im.W.241.127JEK simultaneous interpolator

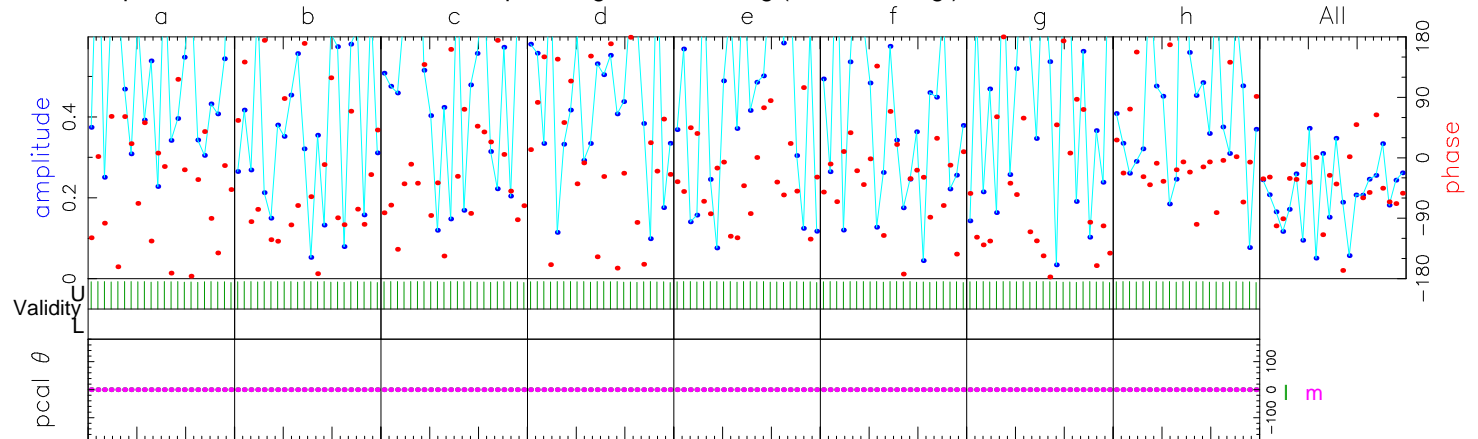
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, Im
VLBA_LA - VLBA_MK, fgroup W, pol RR



Fringe quality 0
SNR 5.7
Int time 178.507
Amp 0.199
Phase -45.1
PFD 7.6e-01
Delays (us)
SBD 0.260289
MBD -0.000194
Fringe rate (Hz) 0.734463
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132851
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-35.1	-92.4	-43.6	-117.8	-39.2	-25.4	-140.5	-20.1	Phase	-45.1
	0.2	0.1	0.3	0.0	0.3	0.3	0.2	0.4	Ampl.	0.2
	317.0	10.2	323.4	309.4	325.1	463.9	480.6	323.6	Sbd box	323.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.05086707536E+04		Apriori delay (usec)		1.05084053229E+04		Resid mbdelay (usec)		-1.94291E-04	+/- 1.9E-04
Sband delay (usec)	1.05086656121E+04		Apriori clock (usec)		-3.3675053E+00		Resid sbdelay (usec)		2.60289E-01	+/- 1.5E-03
Phase delay (usec)	1.05084053214E+04		Apriori clockrate (us/s)		-3.4277971E-07		Resid phdelay (usec)		-1.45328E-06	+/- 6.5E-07
Delay rate (us/s)	-7.39338702437E-01		Apriori rate (us/s)		-7.39347228830E-01		Resid rate (us/s)		8.52639E-06	+/- 6.2E-09
Total phase (deg)	140.0		Apriori accel (us/s/s)		-3.91390788542E-05		Resid phase (deg)		-45.1	+/- 20.1

ph/seg (deg) 49.5 47.1 Search (1024X32) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 65.5 82.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 54.5 28.4 Inc. seg. avg. 0.203 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 59.5 49.6 Inc. frq. avg. 0.215 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
l: az 78.8 el 73.2 pa -88.7 m: az 57.5 el 27.4 pa -85.0 u,v (fr/asec) 5293.072 -638.129 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/Im..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/Im.W.260.127JEK

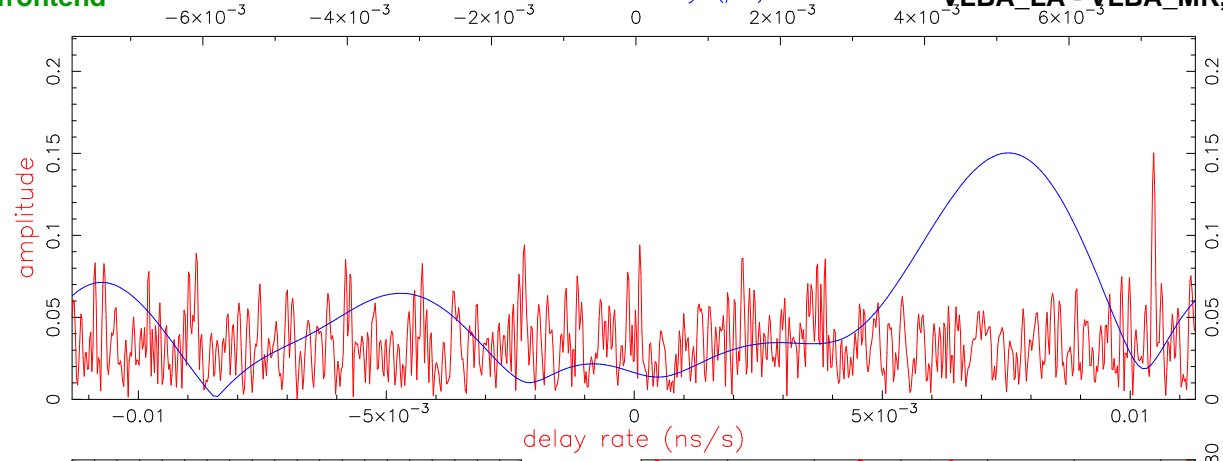
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, Im

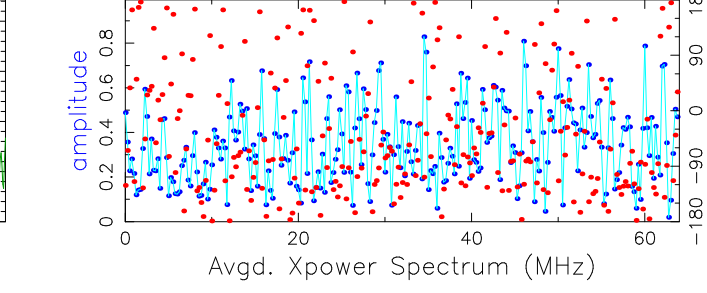
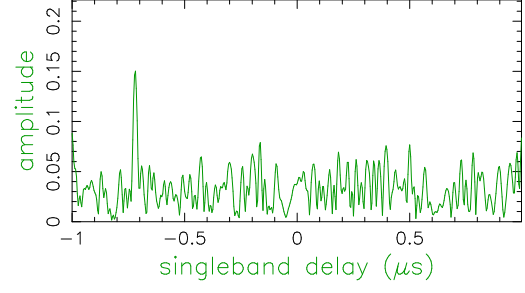
VLBA_LA - VLBA_MK, fgroup W, pol LR

multiband delay (μ s)



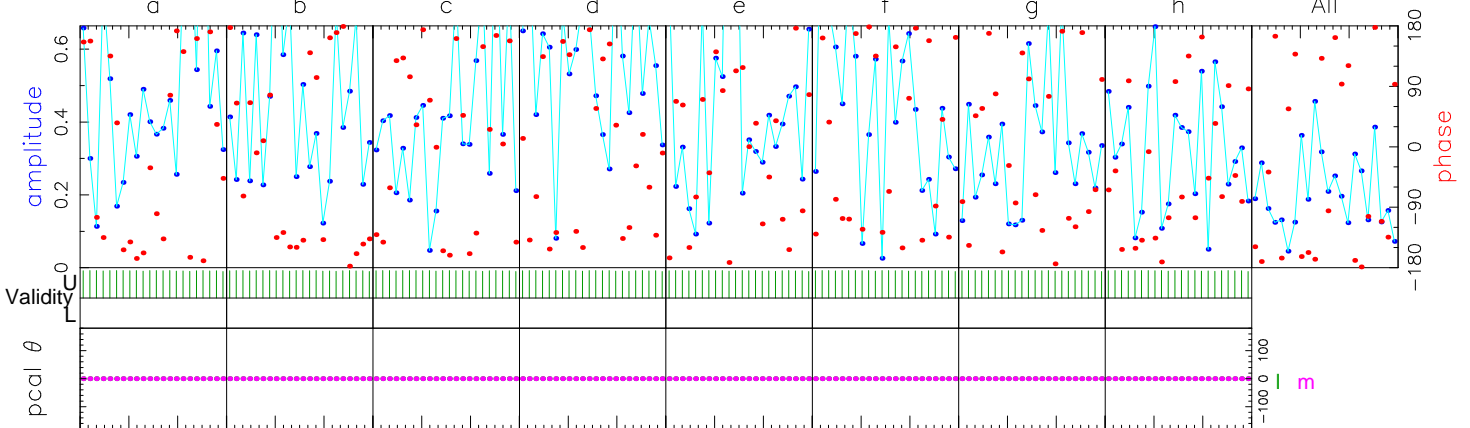
Fringe quality 0

SNR 5.5
 Int time 178.507
 Amp 0.221
 Phase -174.3
 PFD 9.8e-01
 Delays (us)
 SBD -0.719985
 MBD 0.005138
 Fringe rate (Hz) 0.902631
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132854
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



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

Group delay (usec)(sbd) 1.05076917111E+04 Apriori delay (usec) 1.05084053229E+04 Resid mbdelay (usec) 5.13817E-03 +/- 2.0E-04
 Sband delay (usec) 1.05076853379E+04 Apriori clock (usec) -3.3675053E+00 Resid sbdelay (usec) -7.19985E-01 +/- 1.6E-03
 Phase delay (usec) 1.05084053173E+04 Apriori clockrate (us/s) -3.4277971E-07 Resid phdelay (usec) -5.62158E-06 +/- 6.7E-07
 Delay rate (us/s) -7.39336750174E-01 Apriori rate (us/s) -7.39347228830E-01 Resid rate (us/s) 1.04787E-05 +/- 6.4E-09
 Total phase (deg) 10.8 Apriori accel (us/s/s) -3.91390788542E-05 Resid phase (deg) -174.3 +/- 20.7

ph/seg (deg) 60.8 48.6 Search (1024X32) 0.146 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 79.4 84.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 41.1 29.3 Inc. seg. avg. 0.226 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.7 51.1 Inc. frq. avg. 0.217 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 l: az 78.8 el 73.2 pa -88.7 m: az 57.5 el 27.4 pa -85.0 u,v (fr/asec) 5293.072 -638.129 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/Im..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/Im.W.279.127JEK

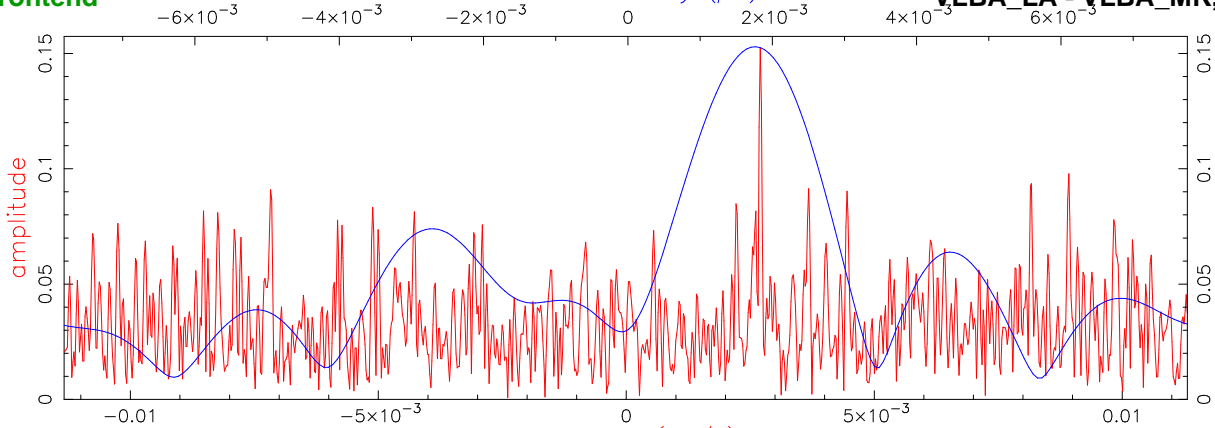
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, Im

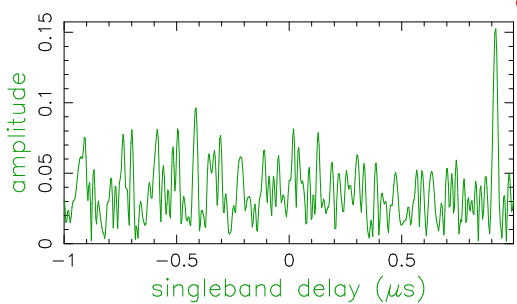
VLBA_LA - VLBA_MK, fgroup W, pol RL

multiband delay (μ s)

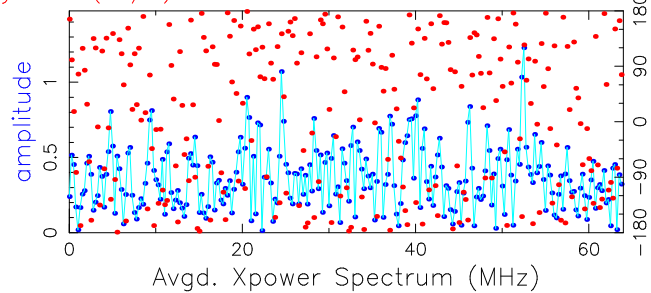


Fringe quality 0

SNR 5.6
Int time 178.506
Amp 0.157
Phase -108.4
PFD 9.0e-01
Delays (us)
SBD 0.916563
MBD 0.001682
Fringe rate (Hz) 0.232920
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

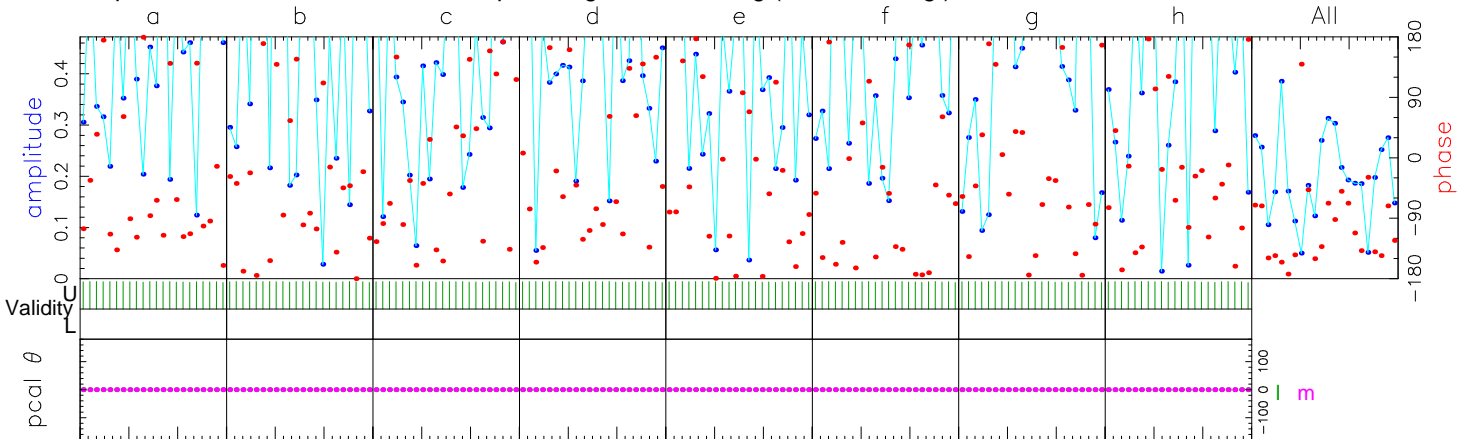


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132856
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

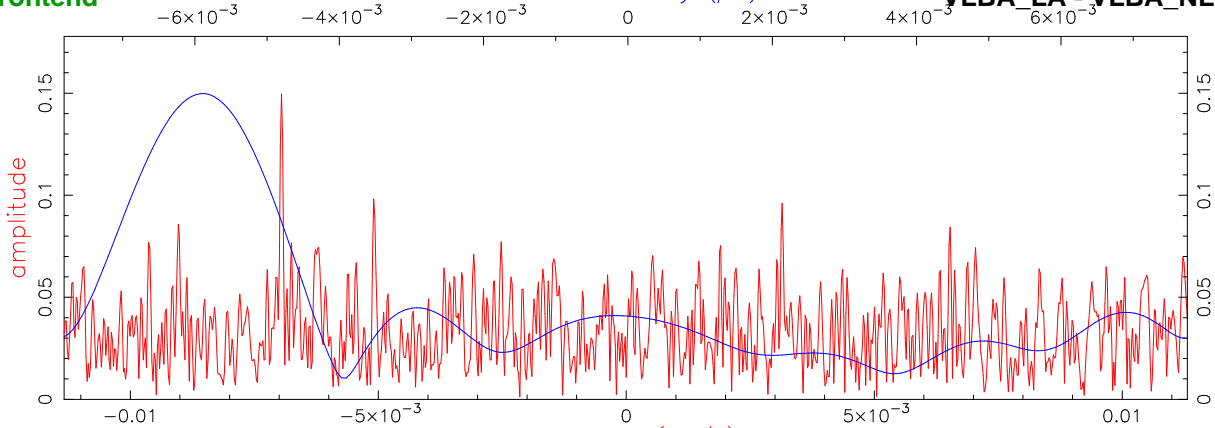


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-96.4	-123.0	-151.9	-90.7	-118.6	-136.6	-89.6	-73.5	Phase	-108.4
	0.3	0.2	0.1	0.2	0.1	0.2	0.1	0.2	Ampl.	0.2
	491.8	51.7	392.0	3.7	152.2	70.0	359.5	293.1	Sbd box	491.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.05093288801E+04		Apriori delay (usec)		1.05084053229E+04		Resid mbdelay (usec)		1.68218E-03	+/- 1.9E-04
Sband delay (usec)	1.05093218861E+04		Apriori clock (usec)		-3.3675053E+00		Resid sbdelay (usec)		9.16563E-01	+/- 1.5E-03
Phase delay (usec)	1.05084053194E+04		Apriori clockrate (us/s)		-3.4277971E-07		Resid phdelay (usec)		-3.49465E-06	+/- 6.6E-07
Delay rate (us/s)	-7.39344524862E-01		Apriori rate (us/s)		-7.39347228830E-01		Resid rate (us/s)		2.70397E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-3.91390788542E-05		Resid phase (deg)		-108.4	+/- 20.4

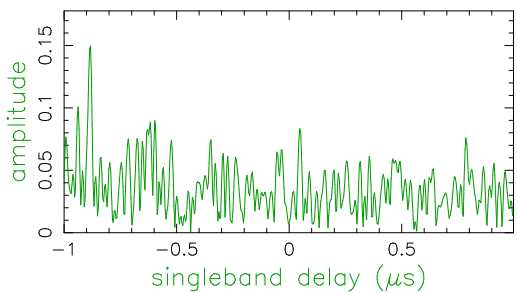
ph/seg (deg) 47.9 47.8 Search (1024X32) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 62.6 83.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 29.0 28.8 Inc. seg. avg. 0.153 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 38.6 50.3 Inc. frq. avg. 0.150 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
l: az 78.8 el 73.2 pa -88.7 m: az 57.5 el 27.4 pa -85.0 u,v (fr/asec) 5293.072 -638.129 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/Im..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/Im.W.300.127JEK

multiband delay (μ s)

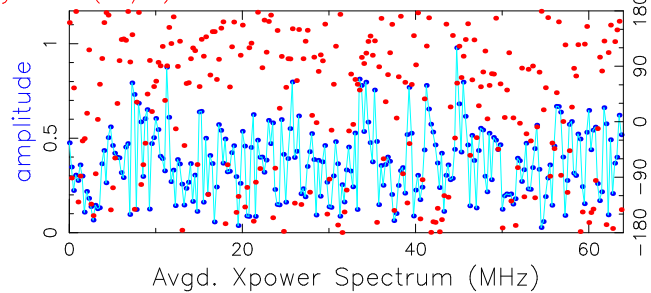
Fringe quality 0



SNR 5.5
Int time 178.481
Amp 0.178
Phase 91.5
PFD 9.8e-01
Delays (us)
SBD -0.884347
MBD -0.005949
Fringe rate (Hz)
-0.599252
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

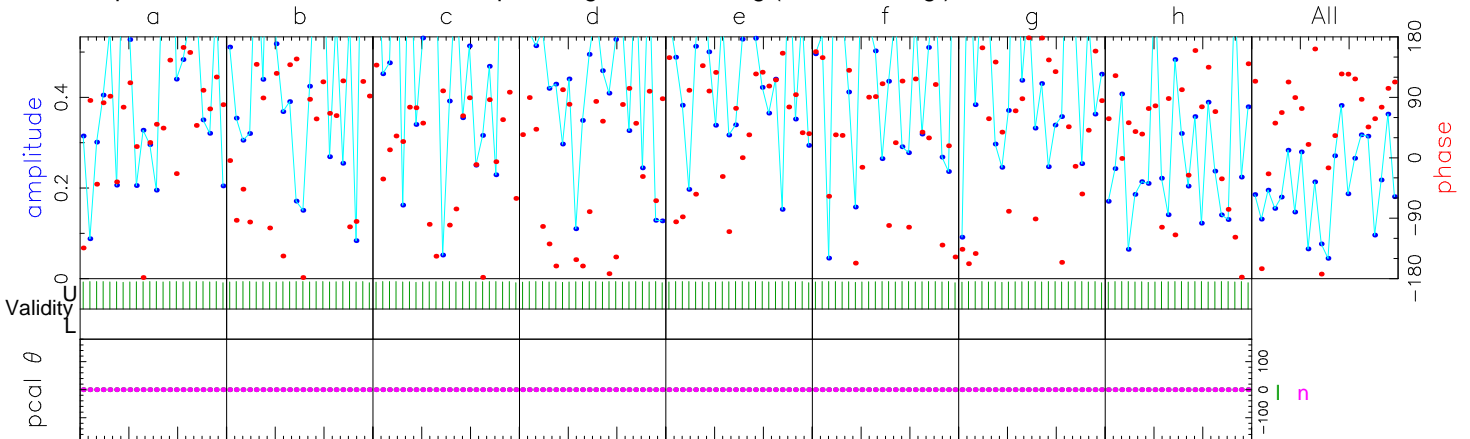


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132848
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

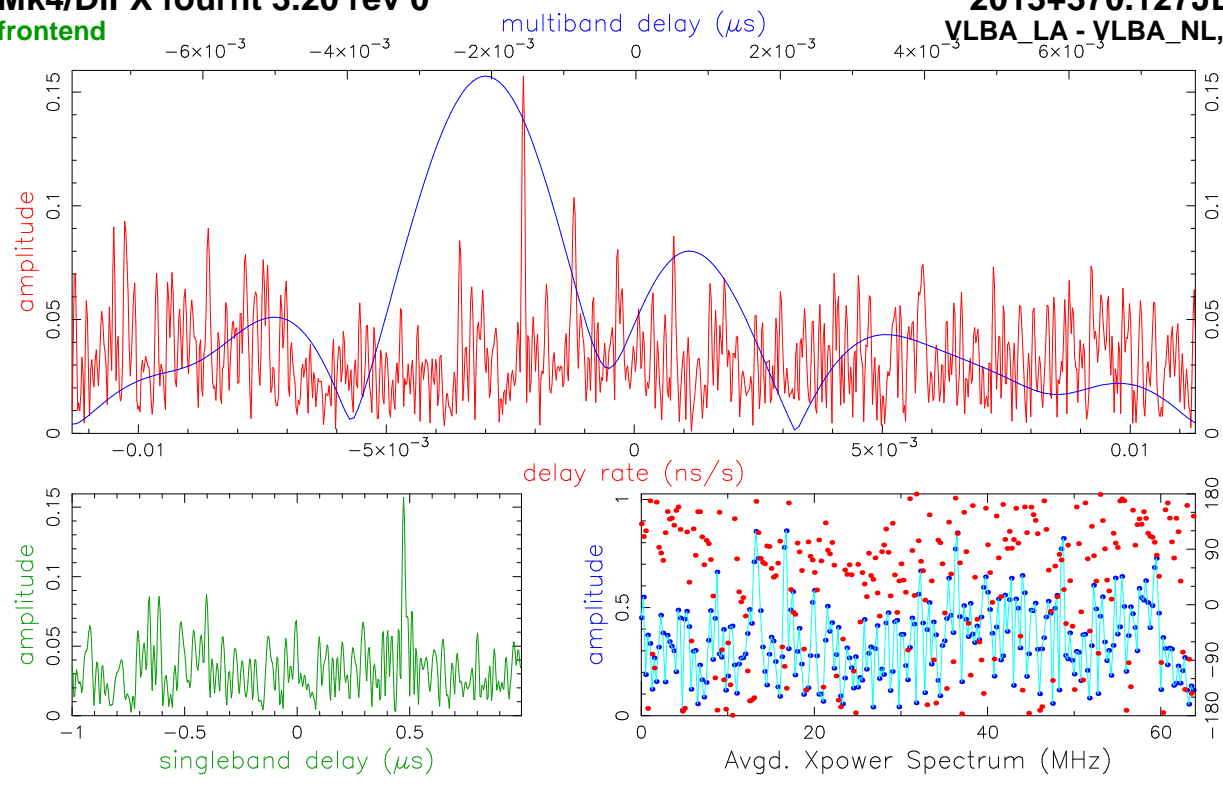


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	APs used	PC freqs
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	PC phase
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	Mani PC
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	PC amp
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	Tracks
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	Tracks
Group delay (usec)(sbd)	-7.70286244765E+02									
Sband delay (usec)	-7.70289642612E+02									
Phase delay (usec)	-7.69405292660E+02									
Delay rate (us/s)	2.57718237595E-01									
Total phase (deg)			32.5							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

ph/seg (deg) 55.9 48.5 Search (1024X32) 0.178 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 71.2 84.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 21.5 29.3 Inc. seg. avg. 0.179 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 30.7 51.1 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
l: az 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/In..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/In.W.240.127JEK

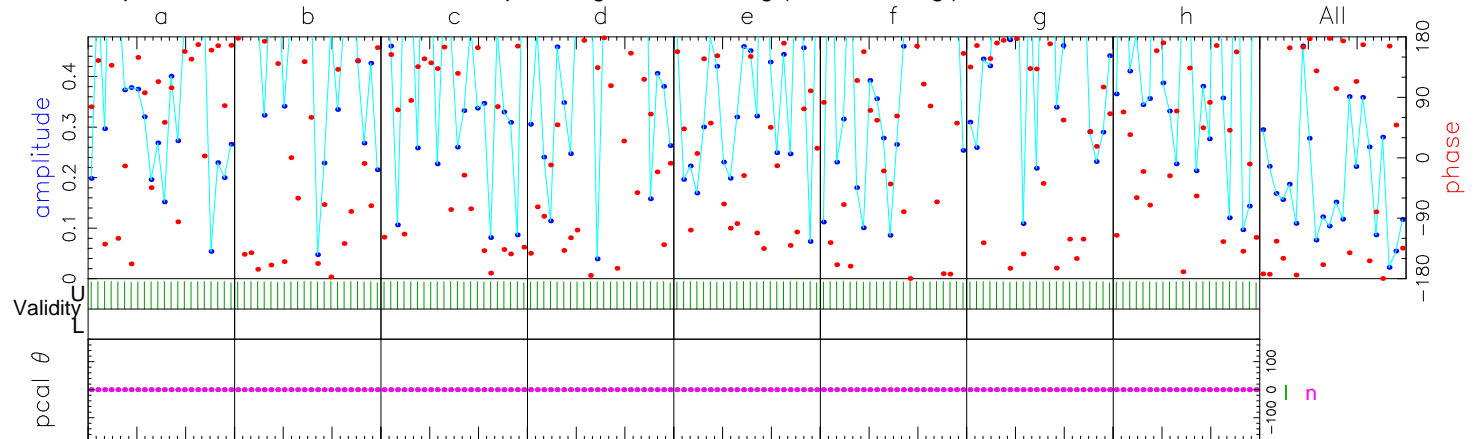
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, In
VLBA_LA - VLBA_NL, fgroup W, pol RR



Fringe quality 0
SNR 5.7
Int time 178.482
Amp 0.160
Phase -178.1
PFD 7.0e-01
Delays (us)
SBD 0.472655
MBD -0.002083
Fringe rate (Hz)
-0.192810
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132852
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

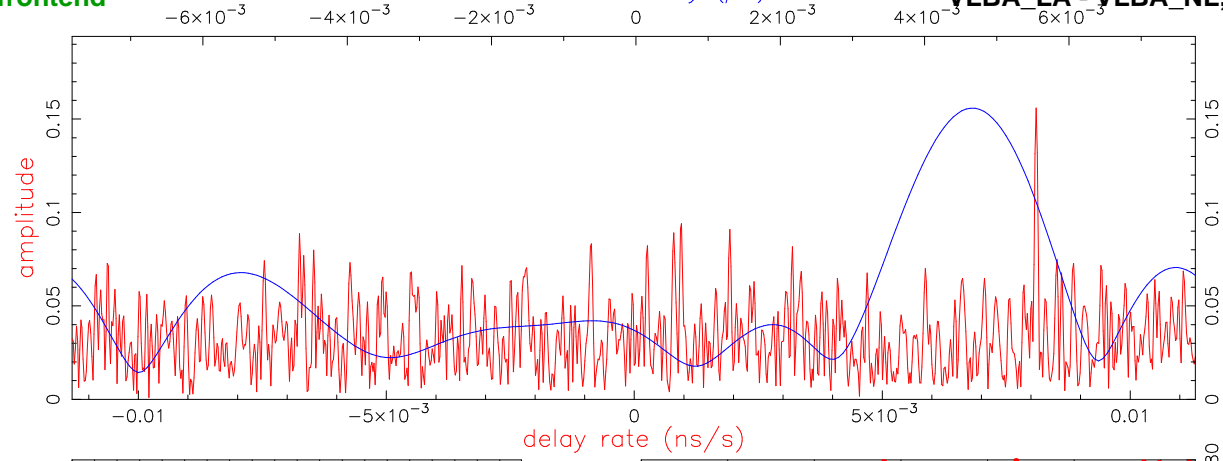
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



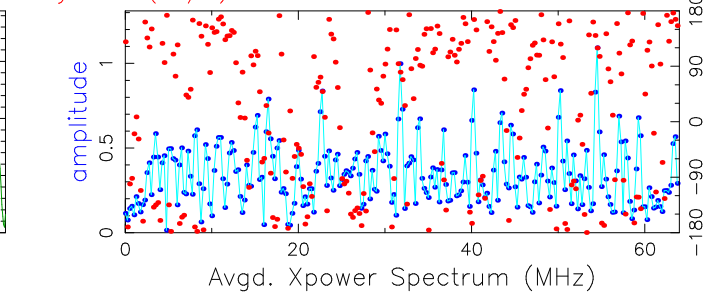
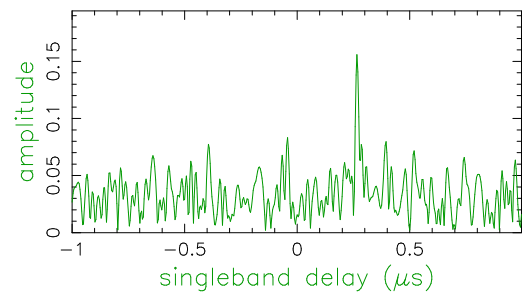
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-7.68938628877E+02								Resid mbdelay (usec)	-2.08326E-03 +/- 1.9E-04
Sband delay (usec)	-7.68932640362E+02								Resid sbdelay (usec)	4.72655E-01 +/- 1.5E-03
Phase delay (usec)	-7.69405301356E+02								Resid phdelay (usec)	-5.74381E-06 +/- 6.4E-07
Delay rate (us/s)	2.57722955982E-01								Resid rate (us/s)	-2.23834E-06 +/- 6.2E-09
Total phase (deg)			-237.2						Resid phase (deg)	-178.1 +/- 20.0
Apriori delay (usec)					-7.69405295612E+02				PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
Apriori clock (usec)					-2.7308826E+01				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
Apriori clockrate (us/s)					-4.8569552E-07				Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
Apriori rate (us/s)					2.57725194320E-01				Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
Apriori accel (us/s/s)					-1.61223870577E-06				Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

ph/seg (deg) 47.8 46.9 Search (1024X32) 0.156 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 73.3 81.8 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 22.0 28.3 Inc. seg. avg. 0.146 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 37.1 49.3 Inc. frq. avg. 0.149 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
l: az 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/In..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/In.W.263.127JEK

multiband delay (μ s)

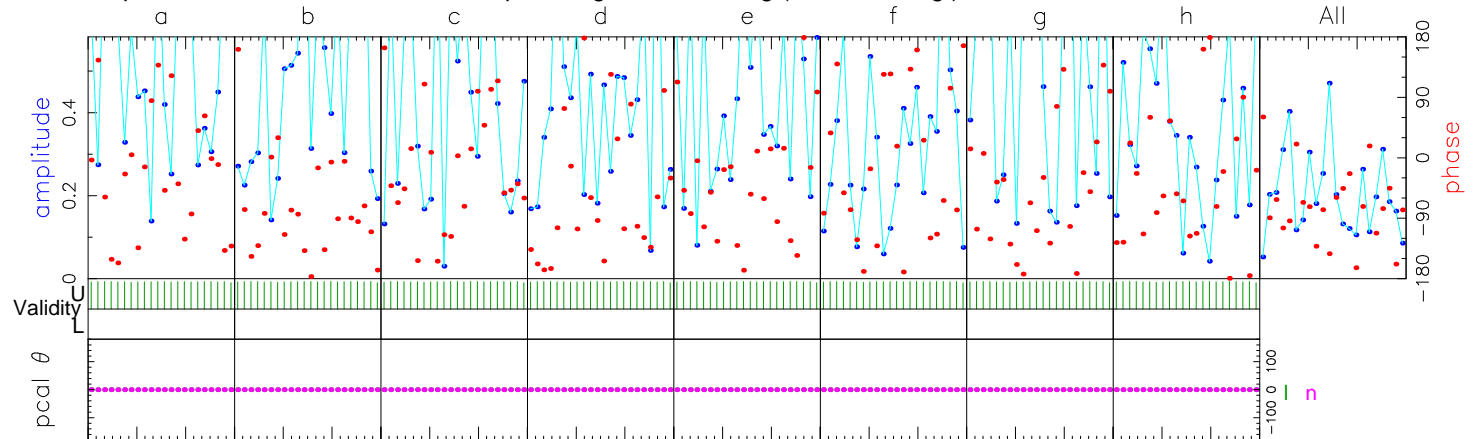


Fringe quality 0
SNR 5.7
Int time 178.481
Amp 0.194
Phase -86.2
PFD 7.8e-01
Delays (us)
SBD 0.265753
MBD 0.004662
Fringe rate (Hz)
0.698399
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132854
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

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

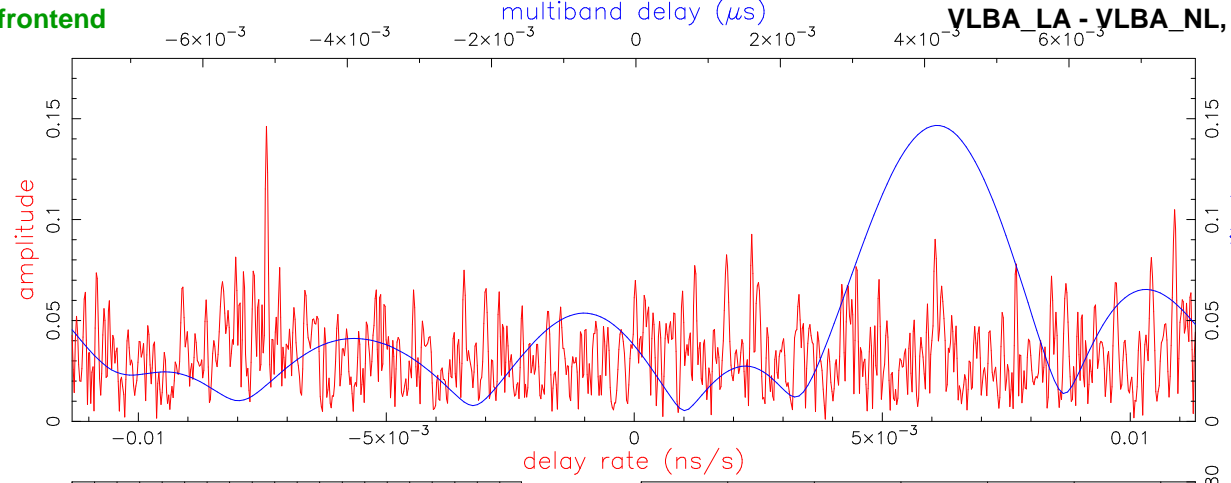


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-7.69135008753E+02				-7.69405295612E+02				4.66186E-03	+/- 1.9E-04
Sband delay (usec)	-7.69139542362E+02				-2.7308826E+01				2.65753E-01	+/- 1.5E-03
Phase delay (usec)	-7.69405298393E+02				-4.8569552E-07				-2.78062E-06	+/- 6.5E-07
Delay rate (us/s)	2.57733302040E-01				2.57725194320E-01				8.10772E-06	+/- 6.2E-09
Total phase (deg)			-145.3		-1.61223870577E-06				-86.2	+/- 20.1
Apriori delay (usec)				0.155						
Apriori clock (usec)				0.155						
Apriori clockrate (us/s)				0.000						
Apriori rate (us/s)				0.184						
Apriori accel (us/s/s)				0.184						
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

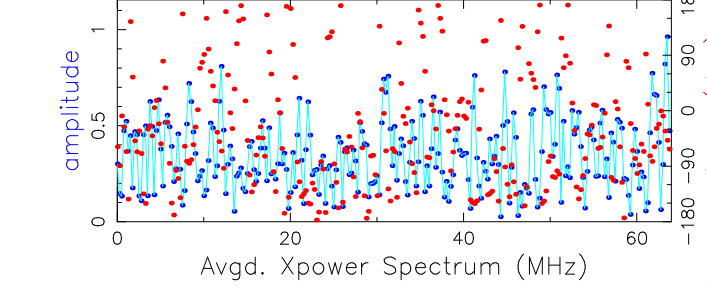
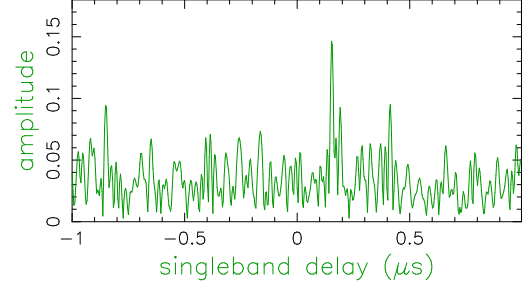
ph/seg (deg) 56.7 47.2 Search (1024X32) 0.155 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 73.2 82.4 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 27.7 28.5 Inc. seg. avg. 0.192 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 46.4 49.7 Inc. frq. avg. 0.184 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
l: az 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/In..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/In.W.284.127JEK

Mk4/DiFX fourfit 3.20 rev 0
frontend

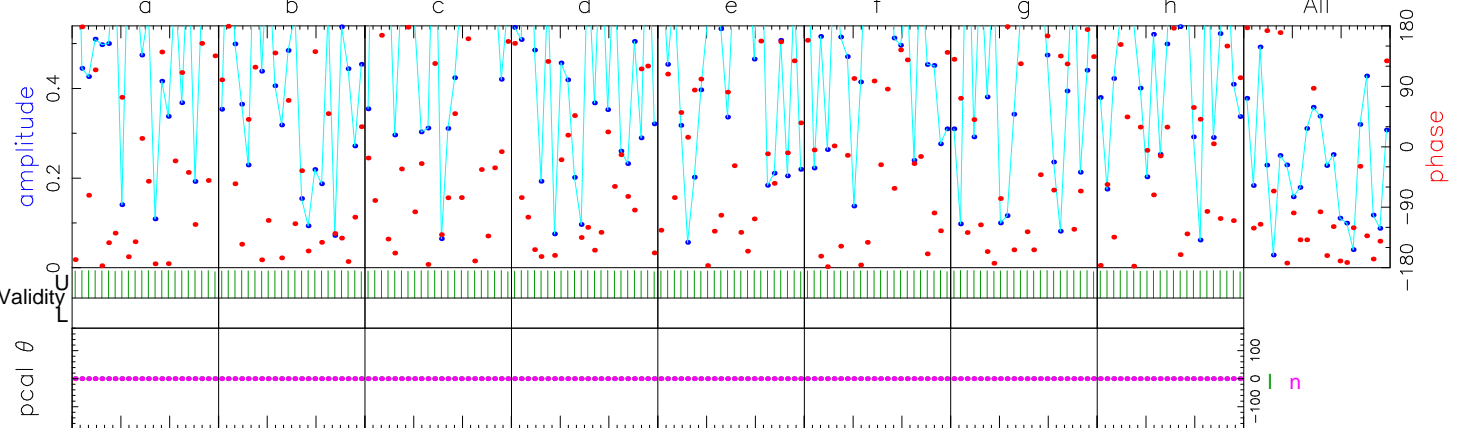
2013+370.127JEK, No0072, In
VLBA_LA - VLBA_NL, fgroup W, pol RL



Fringe quality 0
SNR 5.5
Int time 178.482
Amp 0.180
Phase -147.9
PFD 9.9e-01
Delays (us)
SBD 0.153991
MBD 0.004253
Fringe rate (Hz) -0.639146
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132857
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



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



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

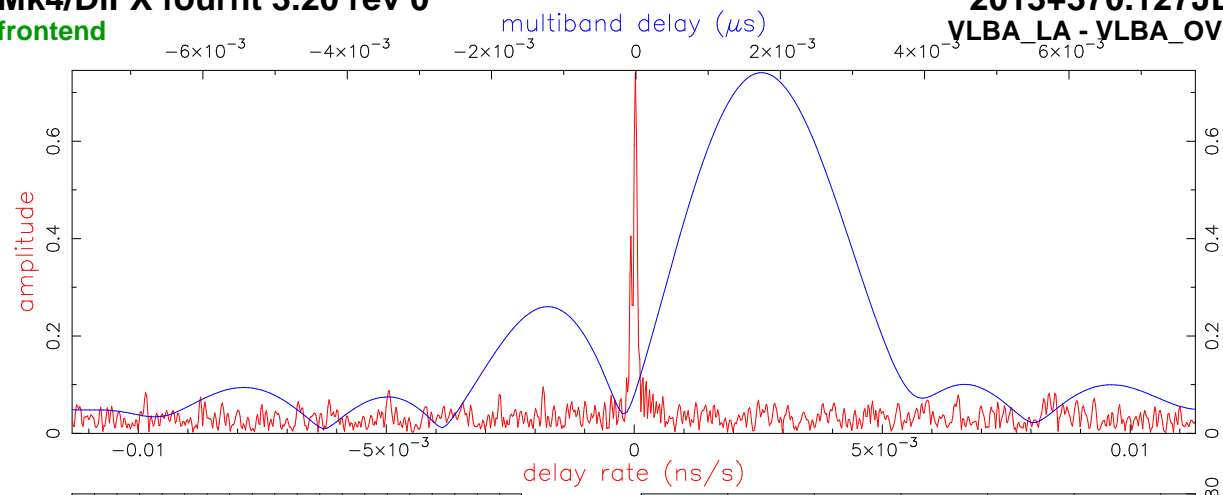
Group delay (usec)(sbd) -7.69244792901E+02 Apriori delay (usec) -7.69405295612E+02 Resid mbdelay (usec) 4.25271E-03 +/- 2.0E-04
 Sband delay (usec) -7.69251305112E+02 Apriori clock (usec) -2.7308826E+01 Resid sbdelay (usec) 1.53991E-01 +/- 1.6E-03
 Phase delay (usec) -7.69405300381E+02 Apriori clockrate (us/s) -4.8569552E-07 Resid phdelay (usec) -4.76843E-06 +/- 6.7E-07
 Delay rate (us/s) 2.57717774465E-01 Apriori rate (us/s) 2.57725194320E-01 Resid rate (us/s) -7.41986E-06 +/- 6.5E-09
 Total phase (deg) -206.9 Apriori accel (us/s/s) -1.61223870577E-06 Resid phase (deg) -147.9 +/- 20.9

ph/seg (deg) 51.9 49.1 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 98.9 85.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.0 29.6 Inc. seg. avg. 0.205 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 32.9 51.7 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
 l: az 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 ion window (TEC) 0.00 0.00
 simultaneous interpolator

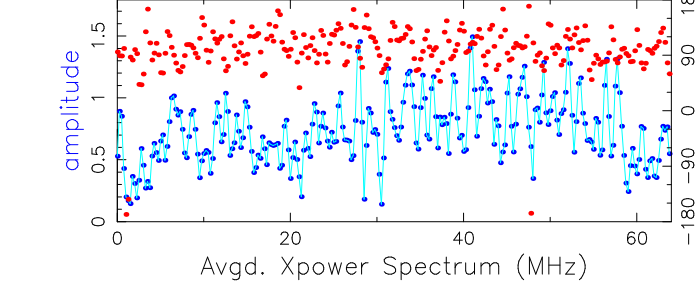
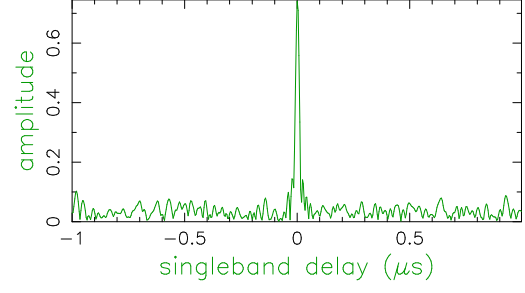
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/In..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/In.W.306.127JEK

Mk4/DiFX fourfit 3.20 rev 0
frontend

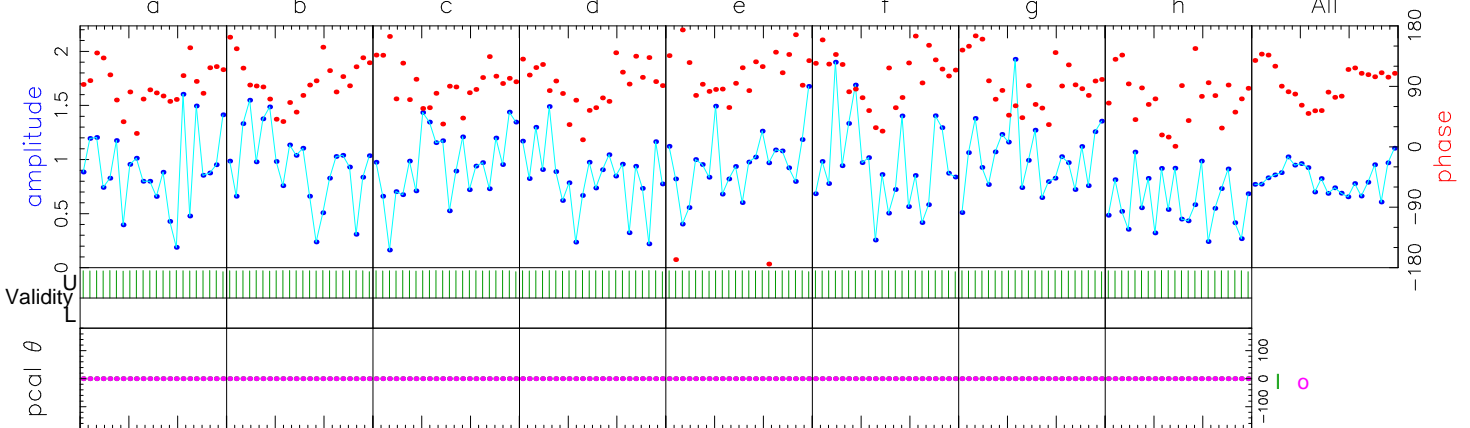
2013+370.127JEK, No0072, lo
VLBA_LA - VLBA_OV, fgroup W, pol LL



Fringe quality 8
SNR 27.2
Int time 178.328
Amp 0.745
Phase 95.0
PFD 0.0e+00
Delays (us)
SBD 0.001041
MBD 0.001767
Fringe rate (Hz) 0.001374
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132849
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



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

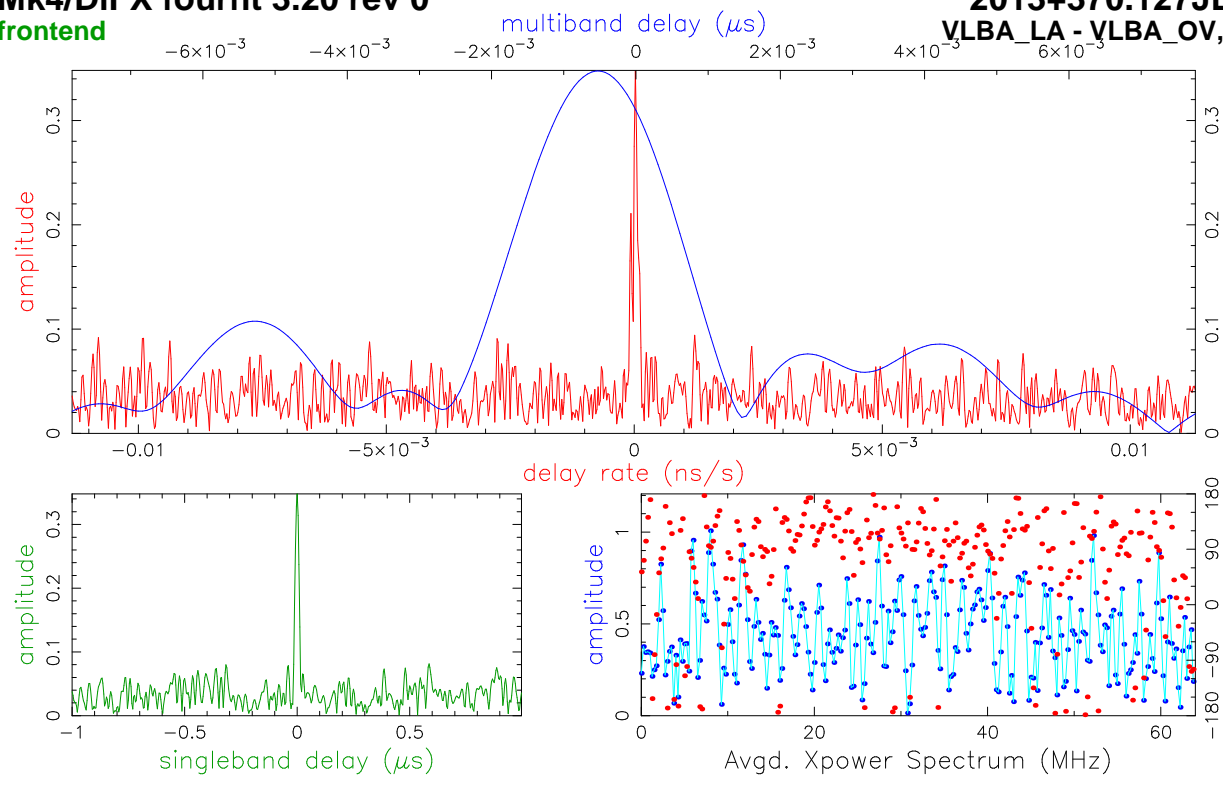


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0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

Group delay (usec)(sbd) 1.22606291850E+03 Apriori delay (usec) 1.22606115167E+03 Resid mbdelay (usec) 1.76683E-03 +/- 4.0E-05
 Sband delay (usec) 1.22606219242E+03 Apriori clock (usec) -1.7439144E+01 Resid sbdelay (usec) 1.04075E-03 +/- 3.2E-04
 Phase delay (usec) 1.22606115473E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) 3.06329E-06 +/- 1.4E-07
 Delay rate (us/s) -1.78083562105E-01 Apriori rate (us/s) -1.78083578056E-01 Resid rate (us/s) 1.59510E-08 +/- 1.3E-09
 Total phase (deg) 312.6 Apriori accel (us/s/s) -8.00253510317E-06 Resid phase (deg) 95.0 +/- 4.2

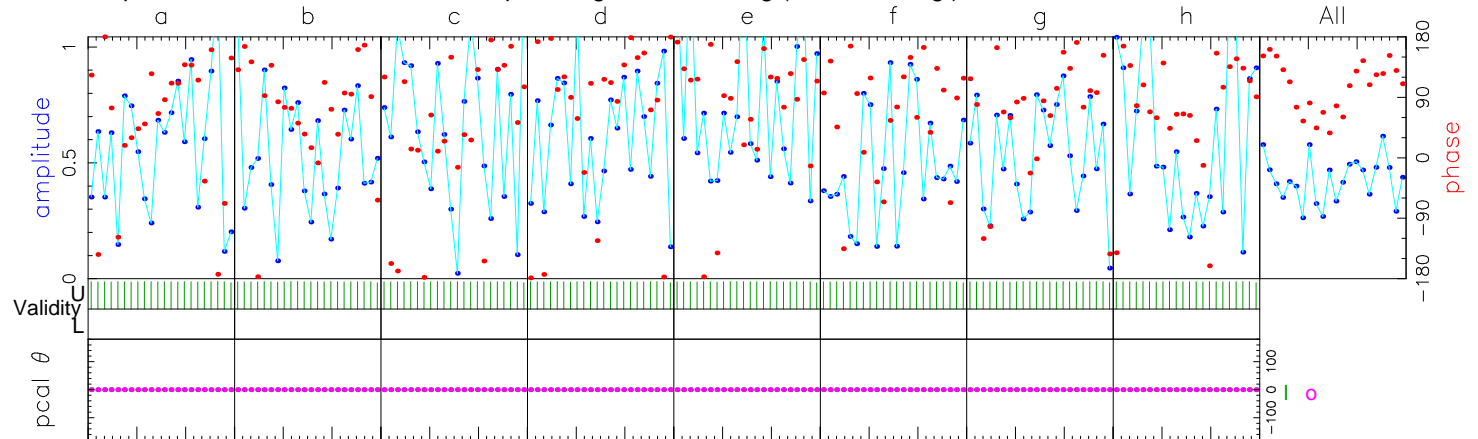
RMS Theor. Amplitude 0.745 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 26.3 9.9 Search (1024X32) 0.716 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 20.4 17.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 15.2 6.0 Inc. seg. avg. 0.812 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 14.7 10.4 Inc. frq. avg. 0.753 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 o: az 79.8 el 63.9 pa -79.7 u,v (fr/asec) 1274.913 -629.086 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/lo..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/lo.W.245.127JEK



Fringe quality 9
 SNR 12.7
 Int time 178.329
 Amp 0.348
 Phase 111.0
 PFD 1.4e-28
 Delays (us)
 SBD -0.000548
 MBD -0.000535
 Fringe rate (Hz) 0.001275
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132851
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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

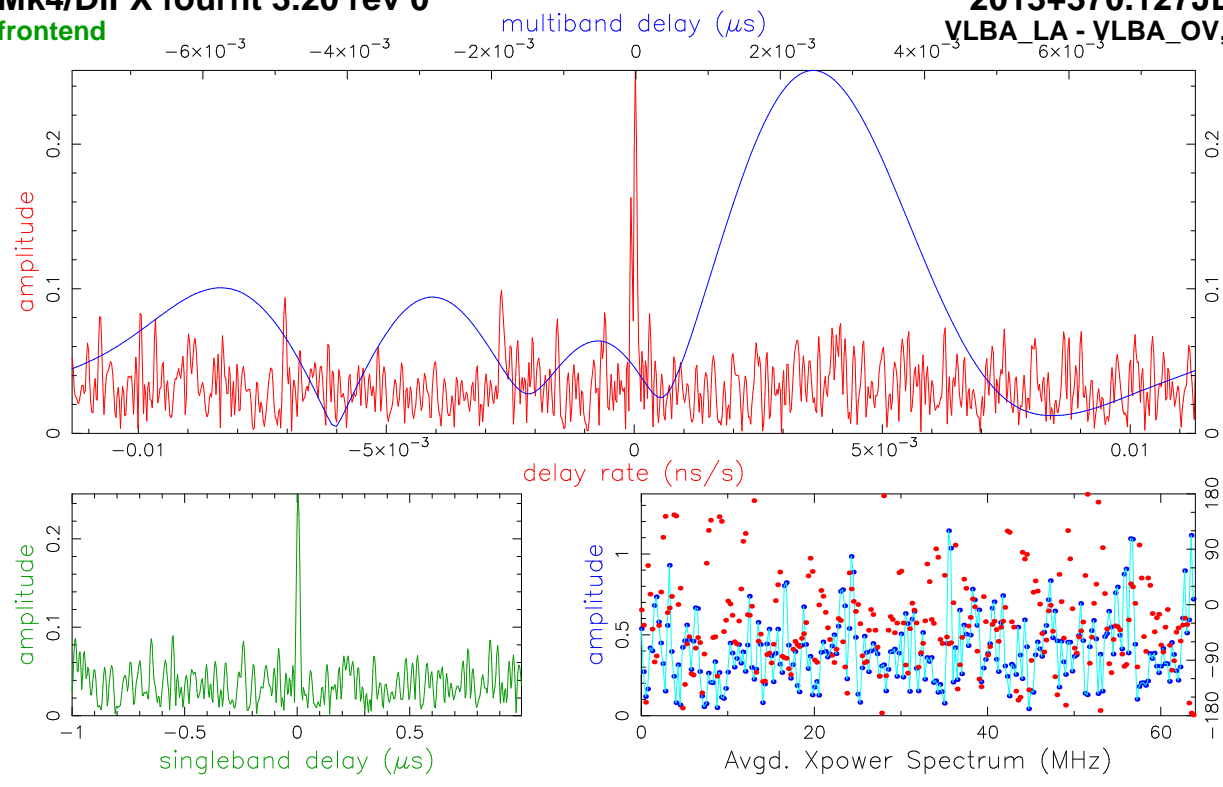


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.22606061672E+03				1.22606115167E+03			Resid mbdelay (usec)	-5.34950E-04 +/- 8.5E-05
Sband delay (usec)		1.22606060317E+03				-1.7439144E+01			Resid sbdelay (usec)	-5.48500E-04 +/- 6.8E-04
Phase delay (usec)		1.22606115524E+03				-3.5245298E-07			Resid phdelay (usec)	3.57810E-06 +/- 2.9E-07
Delay rate (us/s)		-1.78083563257E-01				-1.78083578056E-01			Resid rate (us/s)	1.47989E-08 +/- 2.8E-09
Total phase (deg)			328.6			-8.00253510317E-06			Resid phase (deg)	111.0 +/- 9.0

ph/seg (deg) 37.4 21.1 Amplitude 0.348 +/- 0.027 PCAL mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 36.0 36.9 Search (1024X32) 0.339 PCAL rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 13.3 12.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 24.9 22.3 Inc. seg. avg. 0.401 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 l: az 78.8 el 73.2 pa -88.7 o: az 79.8 el 63.9 pa -79.7 u,v (fr/asec) 1274.913 -629.086 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/lo..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/lo.W.261.127JEK simultaneous interpolator

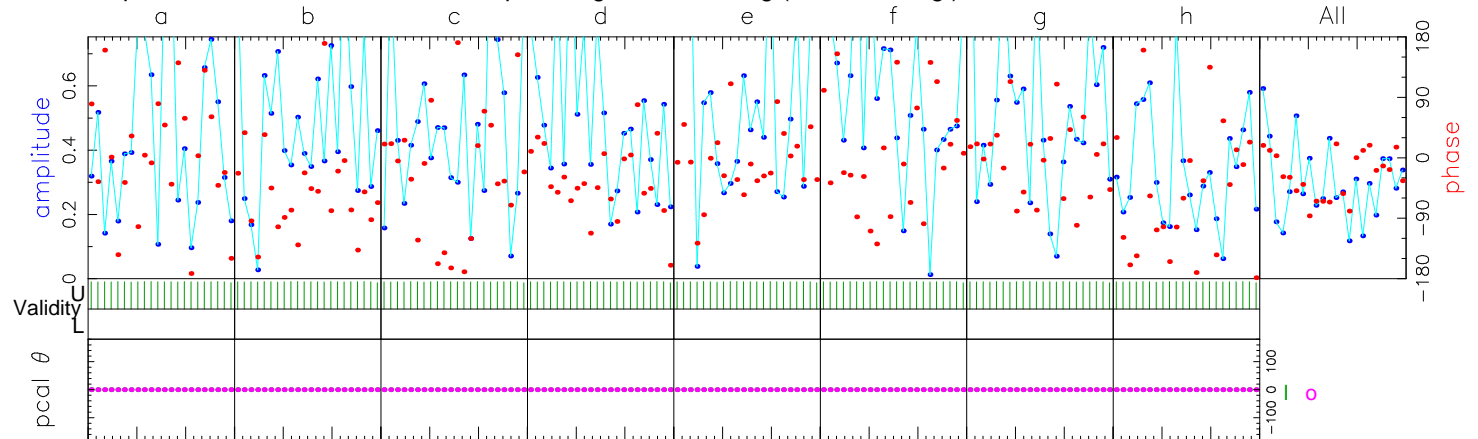
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, lo
VLBA_LA - VLBA_OV, fgroup W, pol LR



Fringe quality 9
SNR 9.2
Int time 178.328
Amp 0.251
Phase -23.1
PFD 9.8×10^{-12}
Delays (us)
SBD 0.003940
MBD 0.002456
Fringe rate (Hz) 0.001470
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build 2020:070:104410
2020:071:132854
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	3.9	-54.4	-7.4	-33.2	-5.1	-31.4	-9.0	-78.9		Phase	-23.1
	0.2	0.3	0.1	0.4	0.5	0.2	0.4	0.1		Ampl.	0.3
	87.5	257.3	195.4	258.6	257.9	475.4	257.9	137.1		Sbd box	258.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000			
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks	
										Chan ids	
										Tracks	
Group delay (usec)(sbd)		1.22606360718E+03				1.22606115167E+03			Resid mbdelay (usec)	2.45552E-03	+/- 1.2E-04
Sband delay (usec)		1.22606509142E+03				-1.7439144E+01			Resid sbdelay (usec)	3.93975E-03	+/- 9.4E-04
Phase delay (usec)		1.22606115092E+03				-3.5245298E-07			Resid phdelay (usec)	-7.43736E-07	+/- 4.0E-07
Delay rate (us/s)		-1.78083560990E-01				-1.78083578056E-01			Resid rate (us/s)	1.70663E-08	+/- 3.9E-09
Total phase (deg)			194.6			-8.00253510317E-06			Resid phase (deg)	-23.1	+/- 12.5

ph/seg (deg) 33.8 29.3
amp/seg (%) 51.4 51.2
ph/frq (deg) 31.0 17.7
amp/frq (%) 48.0 30.9

RMS Theor. Amplitude 0.251 +/- 0.027
Search (1024X32) 0.248
Interp. 0.000
Inc. seg. avg. 0.267
Inc. frq. avg. 0.260

Group delay (usec)(sbd) 1.22606360718E+03
Sband delay (usec) 1.22606509142E+03
Phase delay (usec) 1.22606115092E+03
Delay rate (us/s) -1.78083560990E-01
Total phase (deg) 194.6

Apriori delay (usec) 1.22606115167E+03
Apriori clock (usec) -1.7439144E+01
Apriori clockrate (us/s) -3.5245298E-07
Apriori rate (us/s) -1.78083578056E-01
Apriori accel (us/s/s) -8.00253510317E-06

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

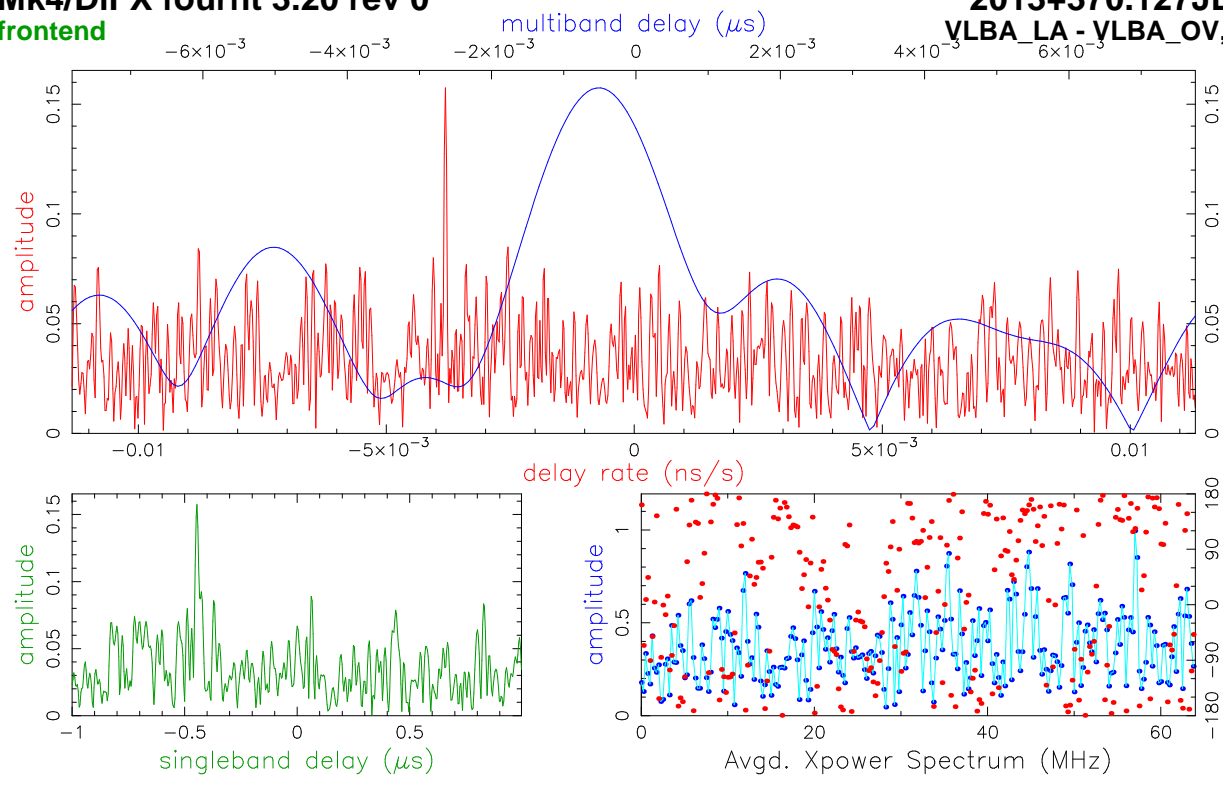
sb window (us) -1.000 1.000
mb window (us) -0.008 0.008
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7
o: az 79.8 el 63.9 pa -79.7
u,v (fr/asec) 1274.913 -629.086

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/lo..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/lo.W.281.127JEK simultaneous interpolator

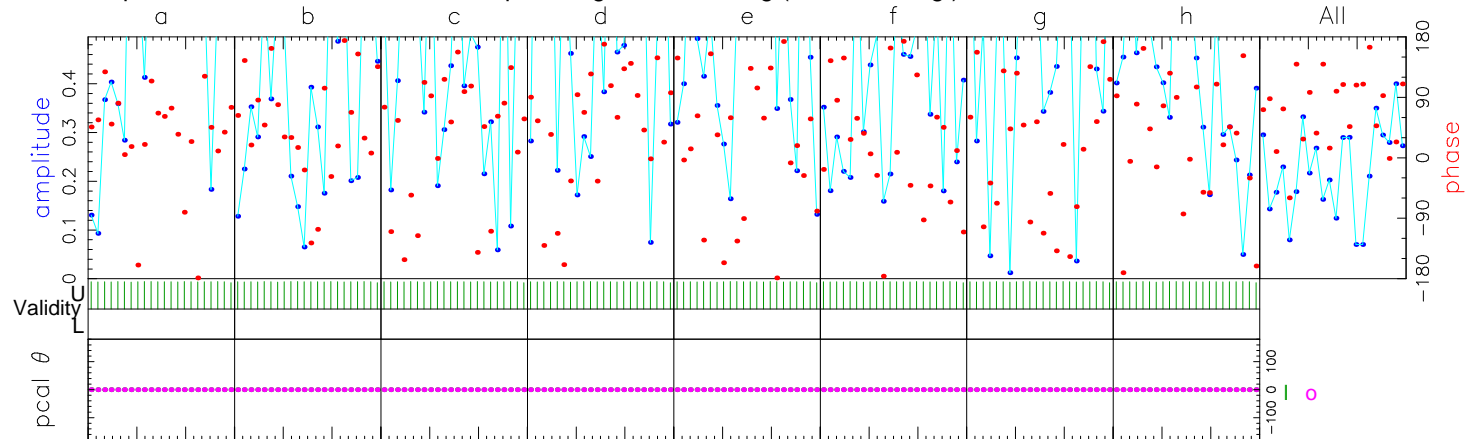
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, lo
VLBA_LA - VLBA_OV, fgroup W, pol RL



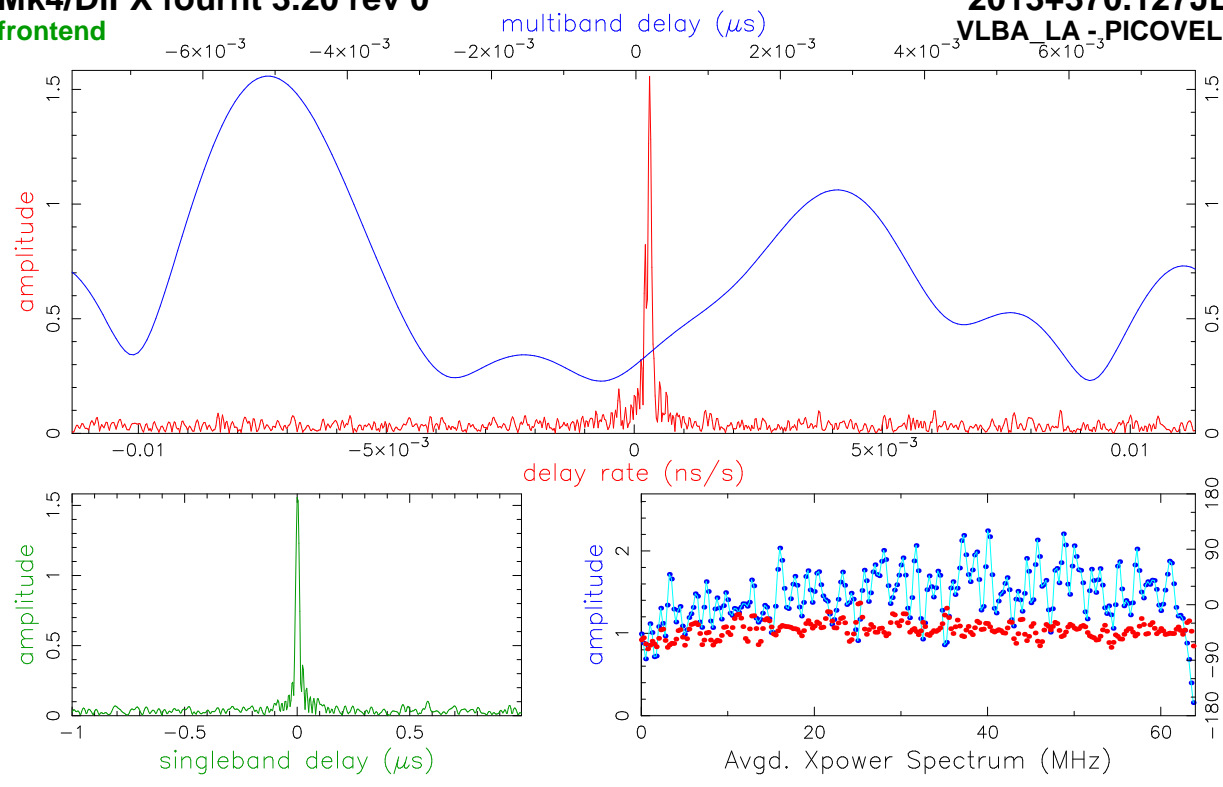
Fringe quality 0
SNR 5.8
Int time 178.328
Amp 0.165
Phase 65.8
PFD 6.4e-01
Delays (us)
SBD -0.445976
MBD -0.000541
Fringe rate (Hz)
-0.328633
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132856
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
l:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		1.22560748544E+03				1.22606115167E+03			Resid mbdelay (usec)	-5.41227E-04 +/- 1.9E-04
Sband delay (usec)		1.22561517542E+03				-1.7439144E+01			Resid sbdelay (usec)	-4.45976E-01 +/- 1.5E-03
Phase delay (usec)		1.22606115379E+03				-3.5245298E-07			Resid phdelay (usec)	2.12126E-06 +/- 6.4E-07
Delay rate (us/s)		-1.78087393163E-01				-1.78083578056E-01			Resid rate (us/s)	-3.81511E-06 +/- 6.2E-09
Total phase (deg)			283.4			-8.00253510317E-06			Resid phase (deg)	65.8 +/- 19.9
RMS	53.2	46.6		0.165 +/- 0.029					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	53.2	46.6		Search (1024X32)	0.152				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	70.9	81.4		Interp.	0.000				Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	33.1	28.1		Inc. seg. avg.	0.177				Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	53.0	49.1		Inc. frq. avg.	0.161				Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 o: az 79.8 el 63.9 pa -79.7 u,v (fr/asec) 1274.913 -629.086 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/lo..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/lo.W.301.127JEK

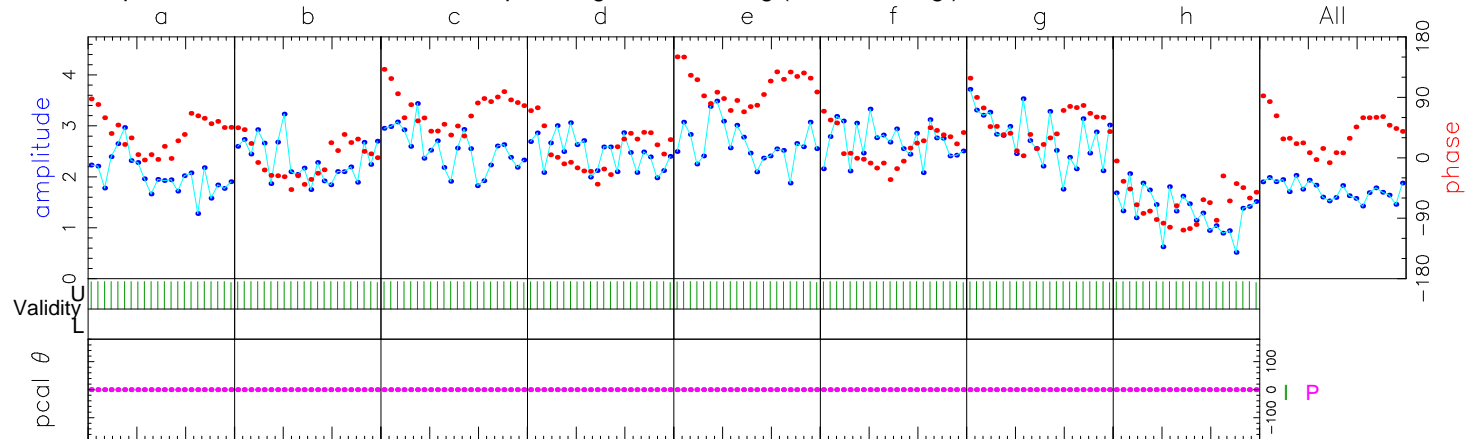


Fringe quality 3

SNR 58.0
 Int time 179.453
 Amp 1.583
 Phase 36.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.001623
 MBD -0.005053
 Fringe rate (Hz) 0.027400
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132849
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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

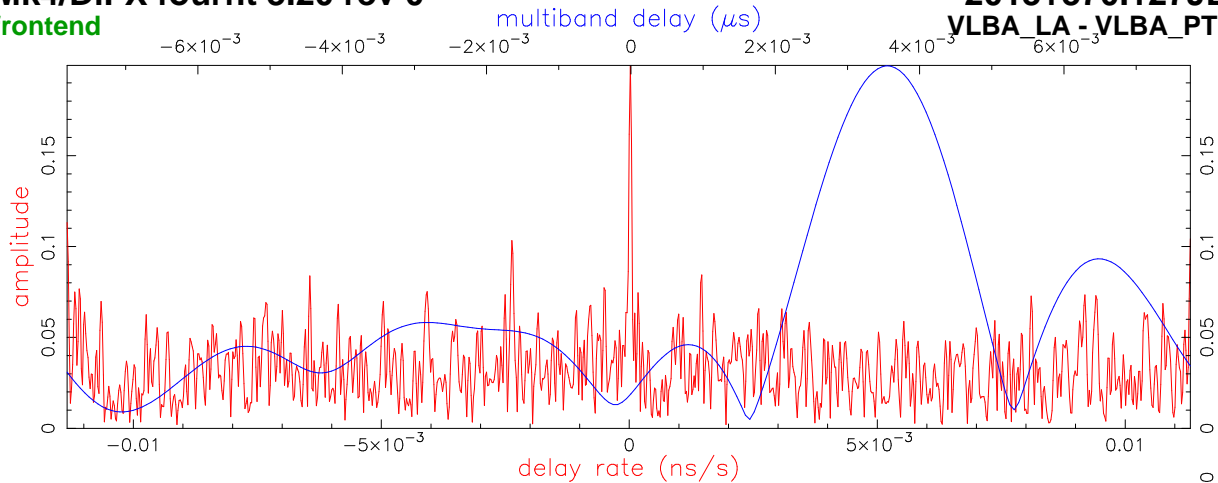


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	37.2	-2.2	72.4	12.4	104.9	16.3	50.9	-69.4	Phase	36.9
	1.8	2.1	2.3	2.1	2.4	2.4	2.1	1.2	Ampl.	2.1
	257.0	257.2	257.2	257.3	256.9	256.8	256.6	255.2	Sbd box	257.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.08476724824E+04		Apriori delay (usec)		1.08476775350E+04		Resid mbdelay (usec)		-5.05259E-03	+/- 1.9E-05
Sband delay (usec)	1.08476791575E+04		Apriori clock (usec)		-6.1798644E-01		Resid sbdelay (usec)		1.62250E-03	+/- 1.5E-04
Phase delay (usec)	1.08476775361E+04		Apriori clockrate (us/s)		1.5279932E-09		Resid phdelay (usec)		1.18940E-06	+/- 6.4E-08
Delay rate (us/s)	1.32990980664E+00		Apriori rate (us/s)		1.32990948855E+00		Resid rate (us/s)		3.18084E-07	+/- 6.1E-10
Total phase (deg)			Apriori accel (us/s/s)		-5.89295925569E-05		Resid phase (deg)		36.9	+/- 2.0

ph/seg (deg) 26.7 4.6 Search (1024X32) 1.486 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 14.7 8.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 57.6 2.8 Inc. seg. avg. 1.738 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 41.4 4.9 Inc. frq. avg. 2.098 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 I: az 78.8 el 73.2 pa -88.7 P: az 297.8 el 27.0 pa 62.6 u,v (fr/asec) -9613.104 -3591.371 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IP..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IP.W.242.127JEK

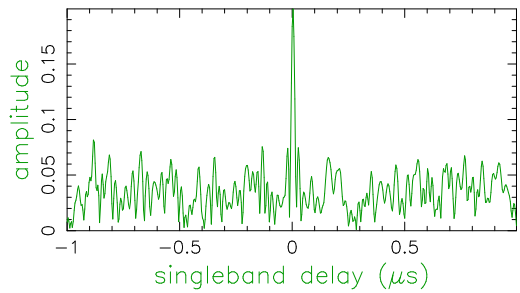
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, lp
VLBA_LA - VLBA_PT, fgroup W, pol LL

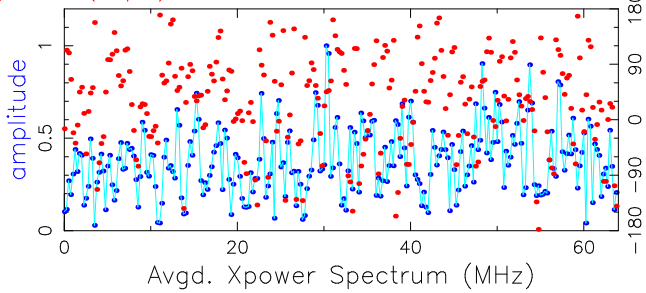


Fringe quality 9

SNR 7.3
Int time 179.070
Amp 0.200
Phase 45.3
PFD 4.3e-05
Delays (us)
SBD 0.003459
MBD 0.003539
Fringe rate (Hz) 0.002150
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

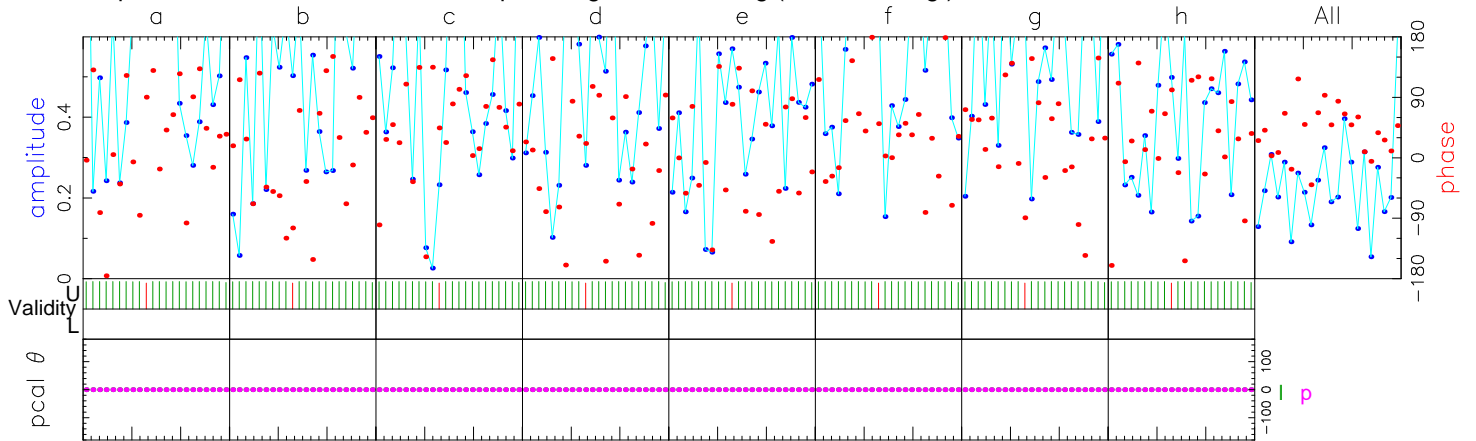


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132849
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



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

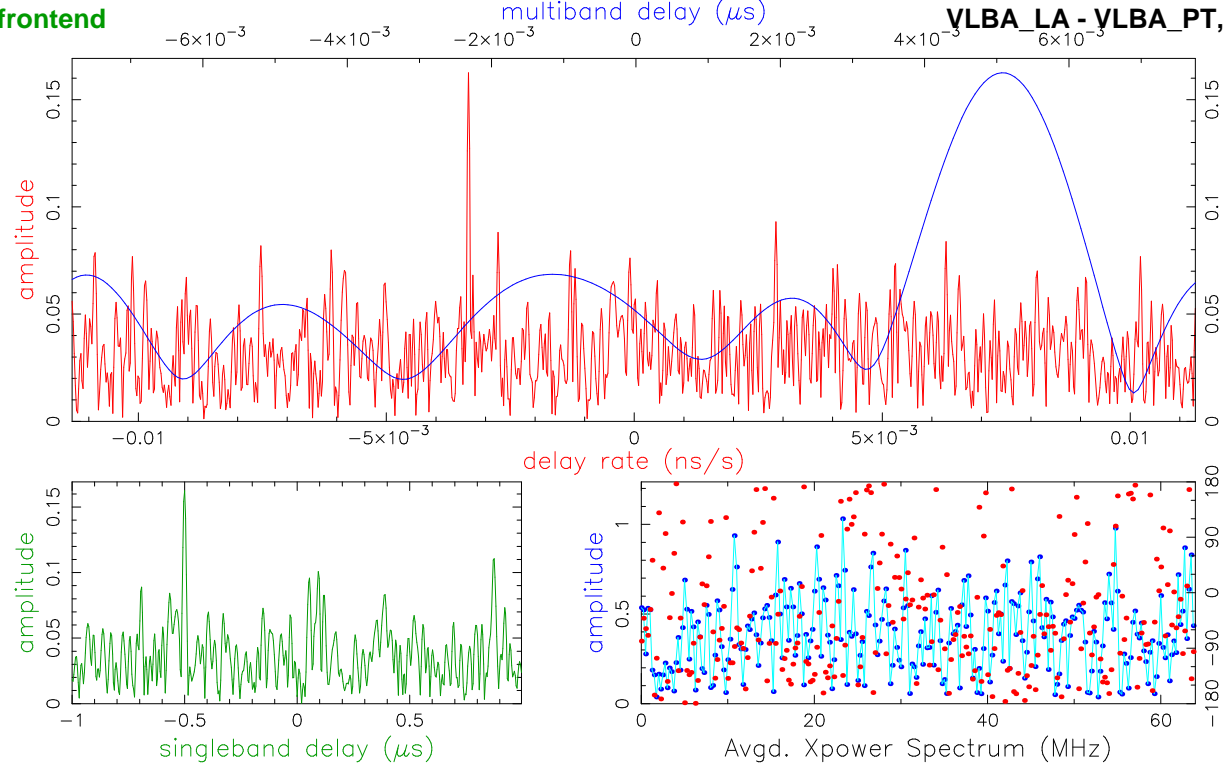
Group delay (usec)(sbd)	1.90377020347E+02	Apriori delay (usec)	1.90373480891E+02	Resid mbdelay (usec)	3.53946E-03	+/-	1.5E-04
Sband delay (usec)	1.90376940391E+02	Apriori clock (usec)	-1.2755054E+01	Resid sbdelay (usec)	3.45950E-03	+/-	1.2E-03
Phase delay (usec)	1.90373482353E+02	Apriori clockrate (us/s)	-5.5535860E-07	Resid phdelay (usec)	1.46219E-06	+/-	5.1E-07
Delay rate (us/s)	-3.74882422697E-02	Apriori rate (us/s)	-3.74882672237E-02	Resid rate (us/s)	2.49540E-08	+/-	4.9E-09
Total phase (deg)	277.2	Apriori accel (us/s/s)	3.55380843206E-07	Resid phase (deg)	45.3	+/-	15.7

ph/seg (deg)	37.6	Theor.	36.8	Amplitude	0.200 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	59.9	Search (1024X32)	0.198	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	18.2	Inc. seg. avg.	0.197	Inc. frq. avg.	0.192	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	38.1	Inc. frq. avg.	0.192			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
						Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 78.8 el 73.2 pa -88.7 p: az 74.3 el 71.3 pa -92.3 u,v (fr/asec) 270.268 167.901 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/lp..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/lp.W.243.127JEK

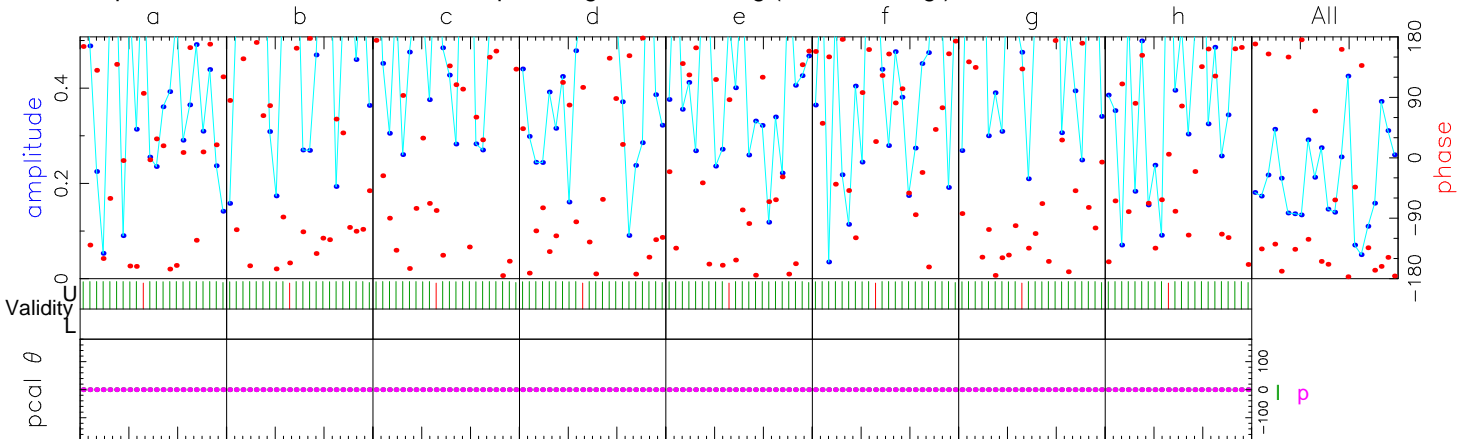
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, lp
VLBA_LA - VLBA_PT, fgroup W, pol RR



Fringe quality 0
SNR 6.0
Int time 179.070
Amp 0.169
Phase -163.2
PFD 2.6e-01
Delays (us)
SBD -0.500874
MBD 0.005057
Fringe rate (Hz)
-0.287556
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132851
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

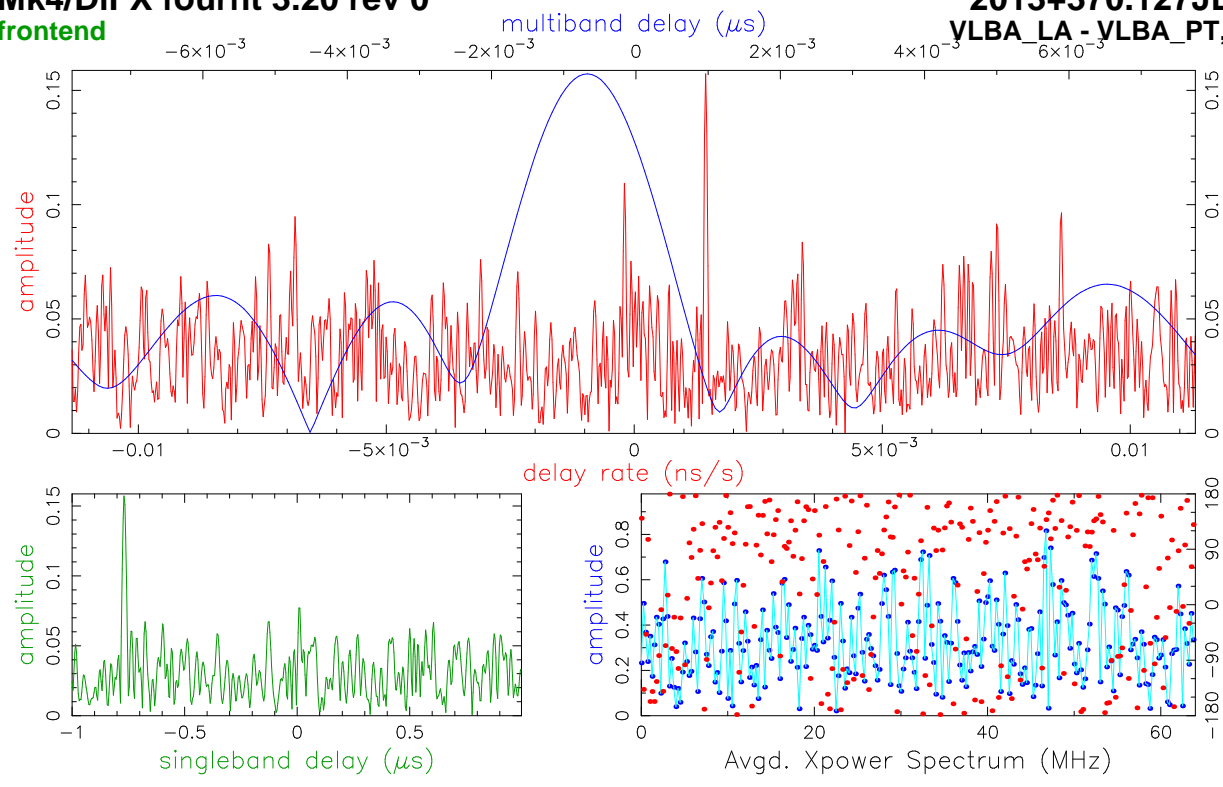


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	174.9	-147.7	-171.2	-156.4	-162.5	100.3	-141.6	-170.4	Phase	-163.2
l	0.1	0.3	0.2	0.2	0.2	0.1	0.3	0.1	Ampl.	0.2
p	281.3	128.3	460.6	480.2	320.2	67.3	128.3	484.7	Sbd box	128.8
l	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.89878537675E+02					1.90373480891E+02			Resid mbdelay (usec)	5.05678E-03 +/- 1.8E-04
Sband delay (usec)	1.89872606891E+02					-1.2755054E+01			Resid sbdelay (usec)	-5.00874E-01 +/- 1.4E-03
Phase delay (usec)	1.90373475627E+02					-5.5535860E-07			Resid phdelay (usec)	-5.26387E-06 +/- 6.2E-07
Delay rate (us/s)	-3.74916054682E-02					-3.74882672237E-02			Resid rate (us/s)	-3.33824E-06 +/- 5.9E-09
Total phase (deg)			68.6			3.55380843206E-07			Resid phase (deg)	-163.2 +/- 19.2
	RMS	Theor.	Amplitude	0.169 +/- 0.028					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	50.3	45.0	Search (1024X32)	0.159					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	64.0	78.5	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	42.1	27.1	Inc. seg. avg.	0.165					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	40.9	47.3	Inc. frq. avg.	0.171					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
									nlags: 256	t_cohere infinite

l: az 78.8 el 73.2 pa -88.7 p: az 74.3 el 71.3 pa -92.3 u,v (fr/asec) 270.268 167.901 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/lp..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/lp.W.259.127JEK

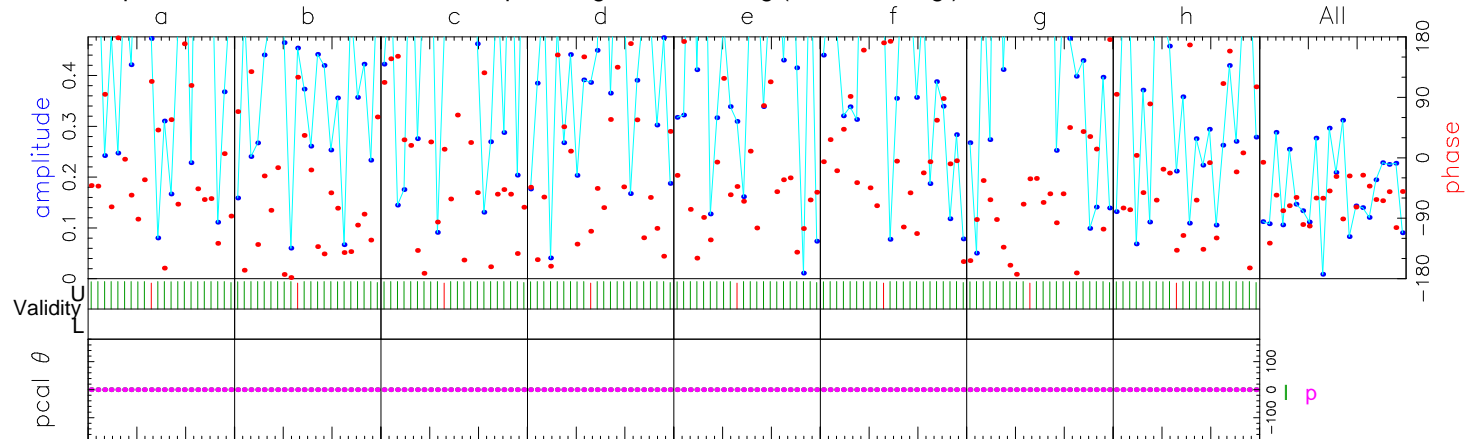
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127JEK, No0072, lp
VLBA_LA - VLBA_PT, fgroup W, pol LR

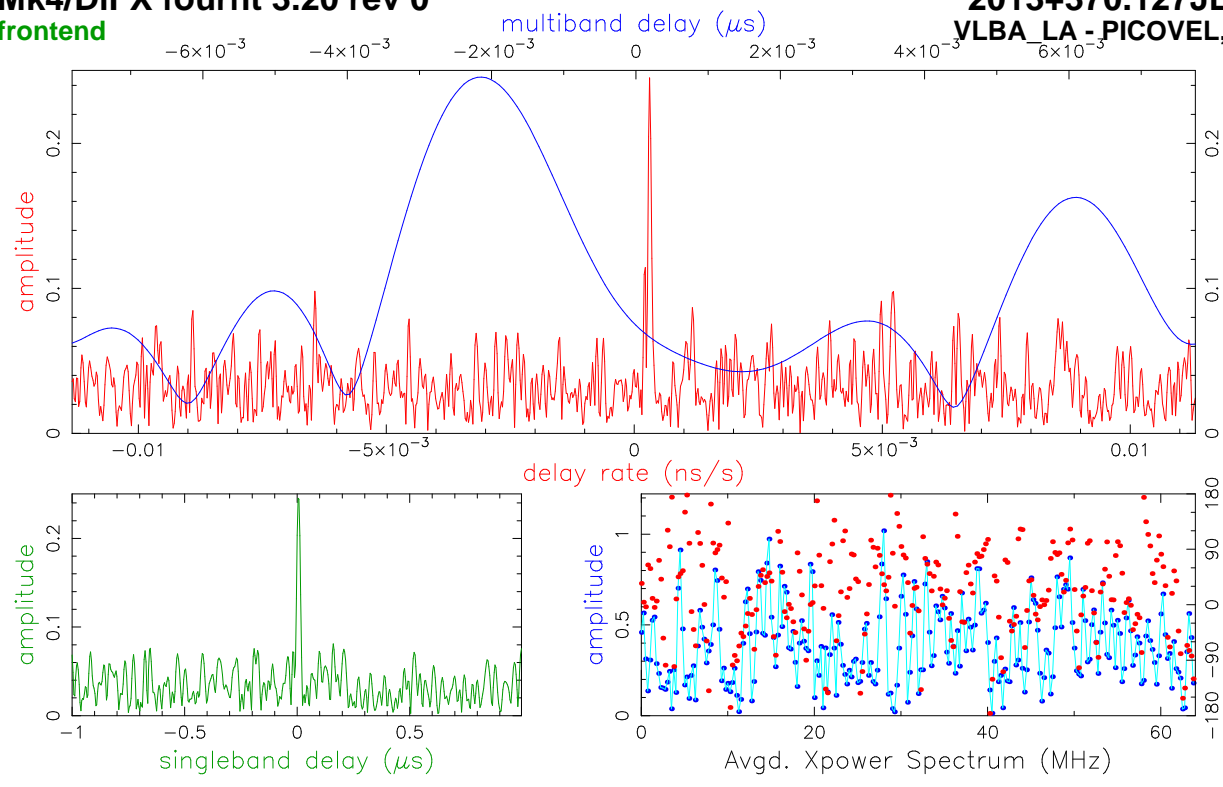


Fringe quality 0
SNR 5.8
Int time 179.070
Amp 0.159
Phase -63.7
PFD 6.3e-01
Delays (us)
SBD -0.768712
MBD -0.000659
Fringe rate (Hz) 0.124228
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132853
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

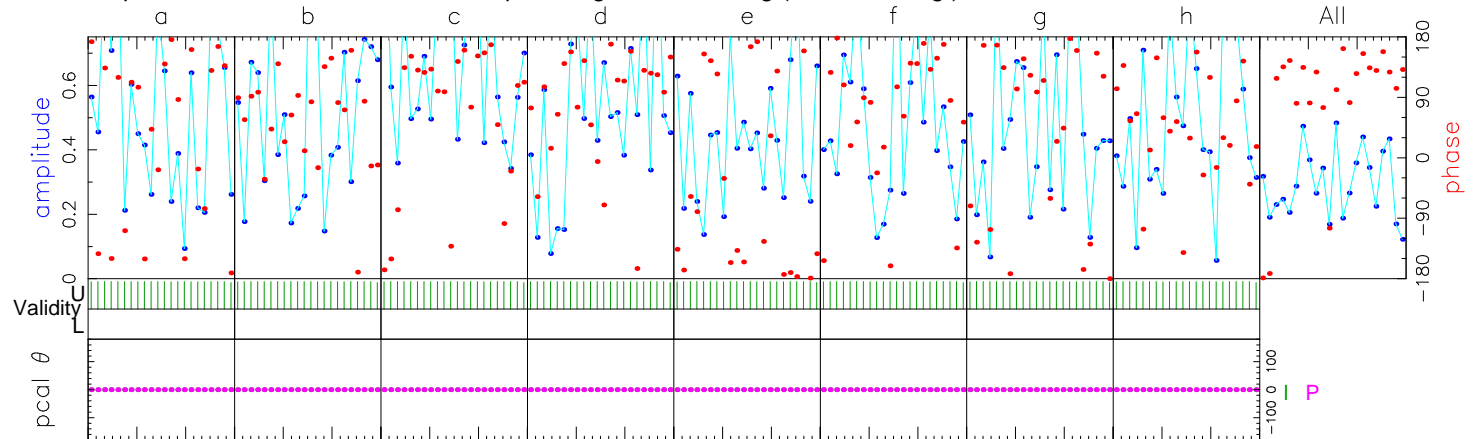


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-59.3	-100.3	-30.1	-89.6	-64.0	-23.1	-77.7	-65.2	Phase	-63.7		
	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.1	Ampl.	0.2		
	365.2	397.9	150.2	55.4	429.9	167.0	60.7	58.0	Sbd box	60.2		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
p	1000	1000	1000	1000	1000	1000	1000	1000				
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	1.89607197024E+02		Apriori delay (usec)		1.90373480891E+02		Resid mbdelay (usec)		-6.58866E-04	+/- 1.9E-04		
Sband delay (usec)	1.89604768641E+02		Apriori clock (usec)		-1.2755054E+01		Resid sbdelay (usec)		-7.68712E-01	+/- 1.5E-03		
Phase delay (usec)	1.90373478836E+02		Apriori clockrate (us/s)		-5.5535860E-07		Resid phdelay (usec)		-2.05418E-06	+/- 6.4E-07		
Delay rate (us/s)	-3.74868250638E-02		Apriori rate (us/s)		-3.74882672237E-02		Resid rate (us/s)		1.44216E-06	+/- 6.2E-09		
Total phase (deg)	168.1		Apriori accel (us/s/s)		3.55380843206E-07		Resid phase (deg)		-63.7	+/- 19.9		
	RMS	Theor.	Amplitude	0.159 +/- 0.028		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	28.6	46.6	Search (1024X32)	0.154		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	51.5	81.3	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	28.9	28.1	Inc. seg. avg.	0.132		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	39.3	49.0	Inc. frq. avg.	0.152		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
l: az 78.8 el 73.2 pa -88.7		p: az 74.3 el 71.3 pa -92.3		u,v (fr/asec) 270.268 167.901						simultaneous interpolator		
Control file: cf_1234_gmva		Input file: /Exps/c192c/v1_CygA2/1234/No0072/lp..127JEK		Output file: /Exps/c192c/v1_CygA2/1234/No0072/lp.W.276.127JEK								



Fringe quality 9
SNR 9.2
Int time 179.453
Amp 0.250
Phase 127.5
PFD 9.5e-12
Delays (us)
SBD 0.005764
MBD -0.002071
Fringe rate (Hz) 0.027452
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build 2020:070:104410
2020:071:132855
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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

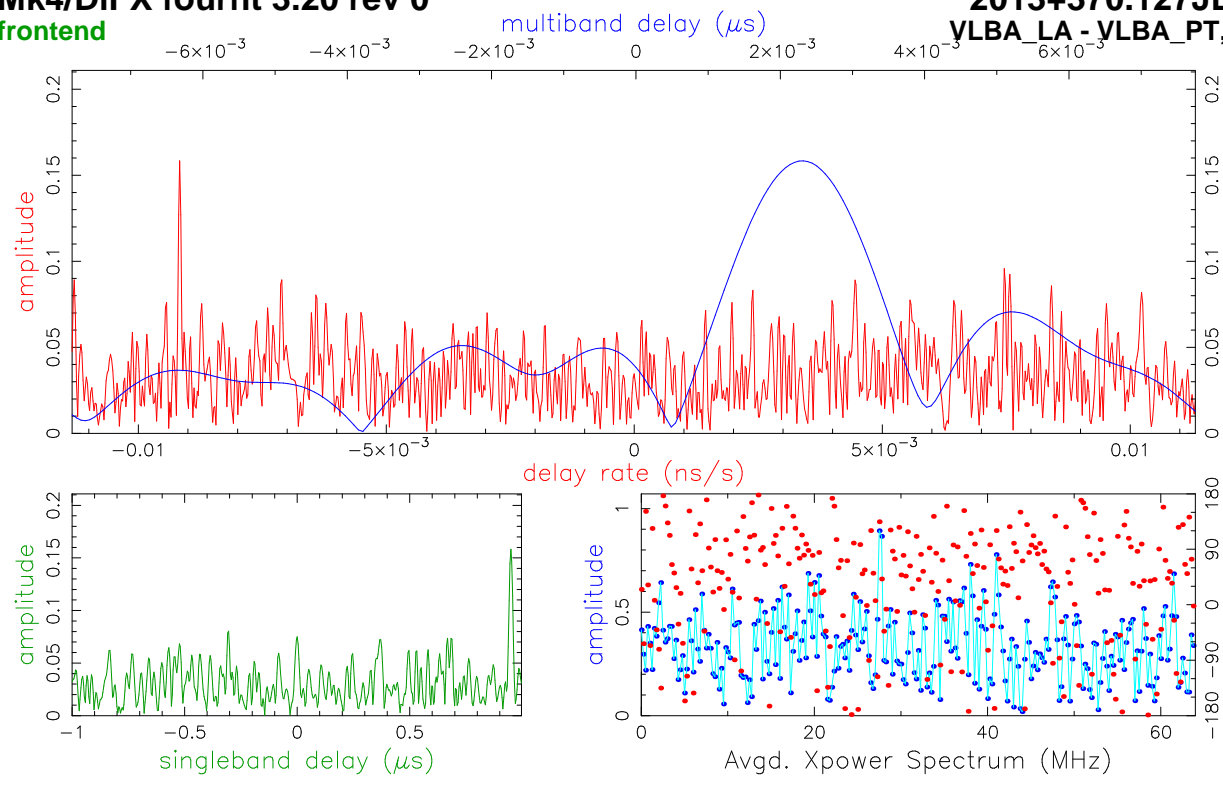


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	147.7	66.4	143.3	119.3	-167.9	115.1	151.9	56.5	Phase	127.5
	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	Ampl.	0.3
	71.3	257.4	257.5	259.1	258.2	257.1	258.8	253.8	Sbd box	258.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.08476910890E+04		Apriori delay (usec)		1.08476775350E+04		Resid mbdelay (usec)		-2.07096E-03	+/- 1.2E-04
Sband delay (usec)	1.08476832995E+04		Apriori clock (usec)		-6.1798644E-01		Resid sbdelay (usec)		5.76450E-03	+/- 9.4E-04
Phase delay (usec)	1.08476775391E+04		Apriori clockrate (us/s)		1.5279932E-09		Resid phdelay (usec)		4.11270E-06	+/- 4.0E-07
Delay rate (us/s)	1.32990980725E+00		Apriori rate (us/s)		1.32990948855E+00		Resid rate (us/s)		3.18695E-07	+/- 3.9E-09
Total phase (deg)			Apriori accel (us/s/s)		-5.89295925569E-05		Resid phase (deg)		127.5	+/- 12.5

ph/seg (deg) 40.9 29.3 Search (1024X32) 0.236 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 45.5 51.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 49.0 17.7 Inc. seg. avg. 0.263 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 34.1 30.9 Inc. frq. avg. 0.299 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
I: az 78.8 el 73.2 pa -88.7 P: az 297.8 el 27.0 pa 62.6 u,v (fr/asec) -9613.104 -3591.371 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IP..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IP.W.288.127JEK

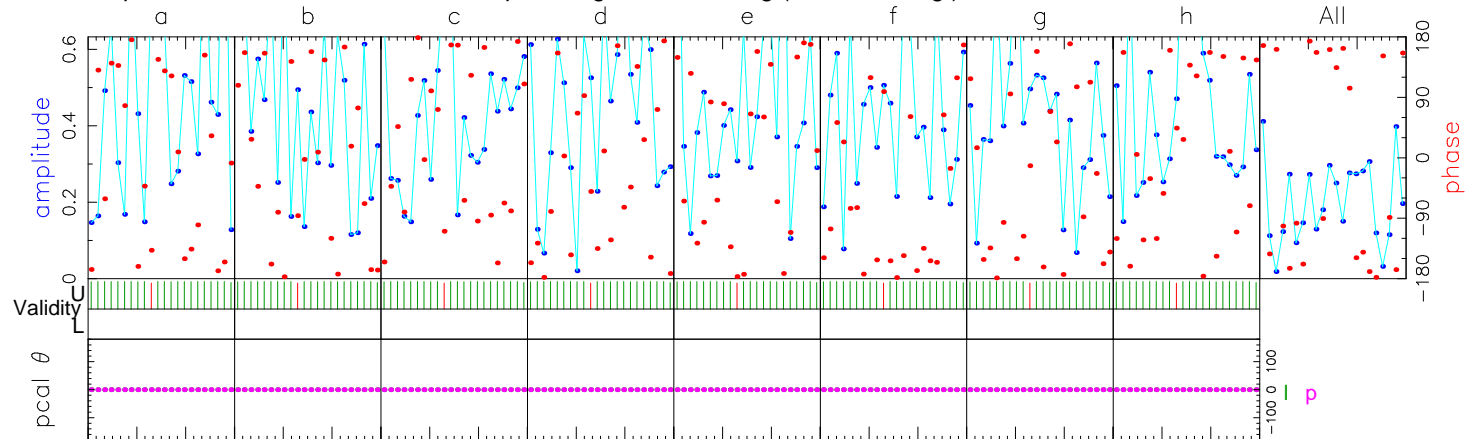
Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.127JEK, No0072, lp
 VLBA_LA - VLBA_PT, fgroup W, pol RL



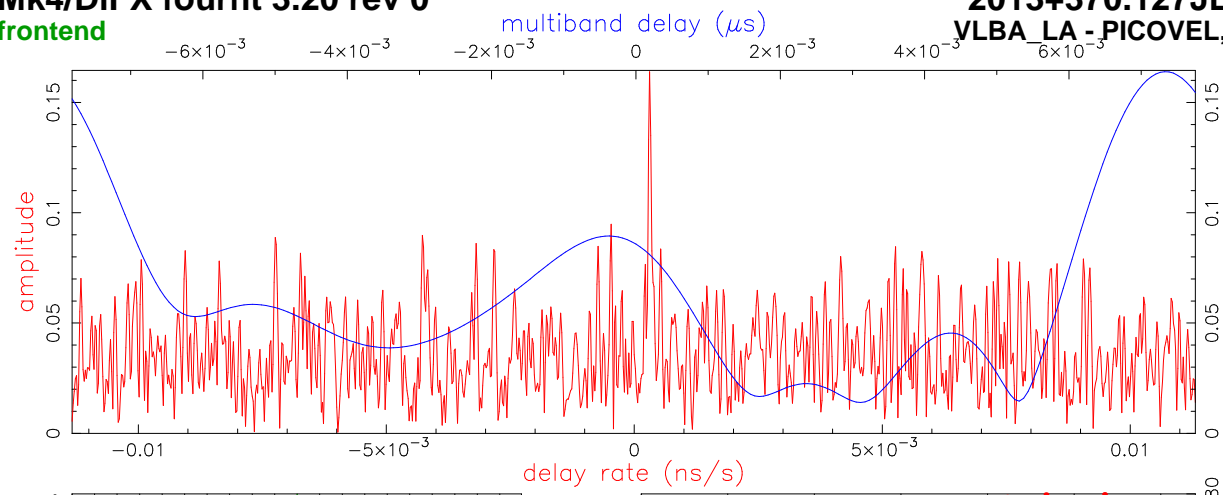
Fringe quality 0
 SNR 5.8
 Int time 179.070
 Amp 0.211
 Phase -174.9
 PFD 5.7e-01
 Delays (us)
 SBD 0.949396
 MBD 0.002310
 Fringe rate (Hz)
 -0.791486
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132855
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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

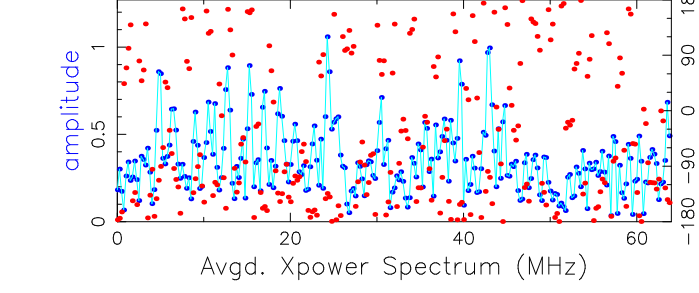
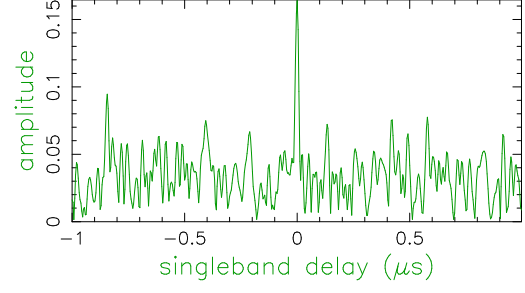


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0				
l	1000	1000	1000	1000	1000	1000	1000	1000				
p	1000	1000	1000	1000	1000	1000	1000	1000				
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
l	1000	1000	1000	1000	1000	1000	1000	1000				
p	1000	1000	1000	1000	1000	1000	1000	1000				
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL				
Group delay (usec)(sbd)		1.91328915880E+02				1.90373480891E+02			Resid mbdelay (usec)	2.30999E-03 +/- 1.9E-04		
Sband delay (usec)		1.91322877141E+02				-1.2755054E+01			Resid sbdelay (usec)	9.49396E-01 +/- 1.5E-03		
Phase delay (usec)		1.90373475251E+02				-5.5535860E-07			Resid phdelay (usec)	-5.63988E-06 +/- 6.4E-07		
Delay rate (us/s)		-3.74974555963E-02				-3.74882672237E-02			Resid rate (us/s)	-9.18837E-06 +/- 6.1E-09		
Total phase (deg)			56.9			3.55380843206E-07			Resid phase (deg)	-174.9 +/- 19.8		
ph/seg (deg)	44.4	46.4		0.211 +/- 0.036					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	72.5	80.9		0.154					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	24.4	28.0		0.000					Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
amp/frq (%)	38.6	48.8		0.204					Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011	
				0.196					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 p: az 74.3 el 71.3 pa -92.3 u,v (fr/asec) 270.268 167.901 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/lp..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/lp.W.293.127JEK

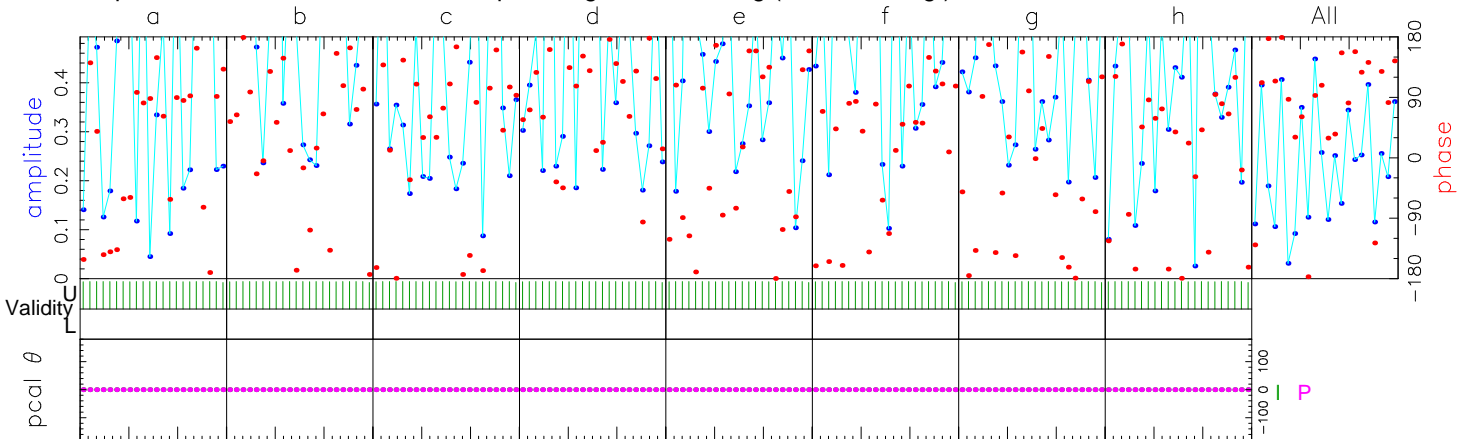


Fringe quality 0
 SNR 6.0
 Int time 179.454
 Amp 0.165
 Phase 119.8
 PFD 2.0e-01
 Delays (us)
 SBD -0.000741
 MBD 0.007313
 Fringe rate (Hz) 0.026807
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132857
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.08476692233E+04	Apriori delay (usec)	1.08476775350E+04	Resid mbdelay (usec)	7.31335E-03	+/-	1.8E-04
Sband delay (usec)	1.08476767937E+04	Apriori clock (usec)	-6.1798644E-01	Resid sbdelay (usec)	-7.41250E-04	+/-	1.4E-03
Phase delay (usec)	1.08476775388E+04	Apriori clockrate (us/s)	1.5279932E-09	Resid phdelay (usec)	3.86211E-06	+/-	6.1E-07
Delay rate (us/s)	1.32990979976E+00	Apriori rate (us/s)	1.32990948855E+00	Resid rate (us/s)	3.11208E-07	+/-	5.9E-09
Total phase (deg)	69.8	Apriori accel (us/s/s)	-5.89295925569E-05	Resid phase (deg)	119.8	+/-	19.0

ph/seg (deg)	57.1	Theor.	44.6	Amplitude	0.165 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	84.7		77.8	Search (1024X32)	0.163	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	44.0		26.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	44.8		46.9	Inc. seg. avg.	0.182	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.179	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

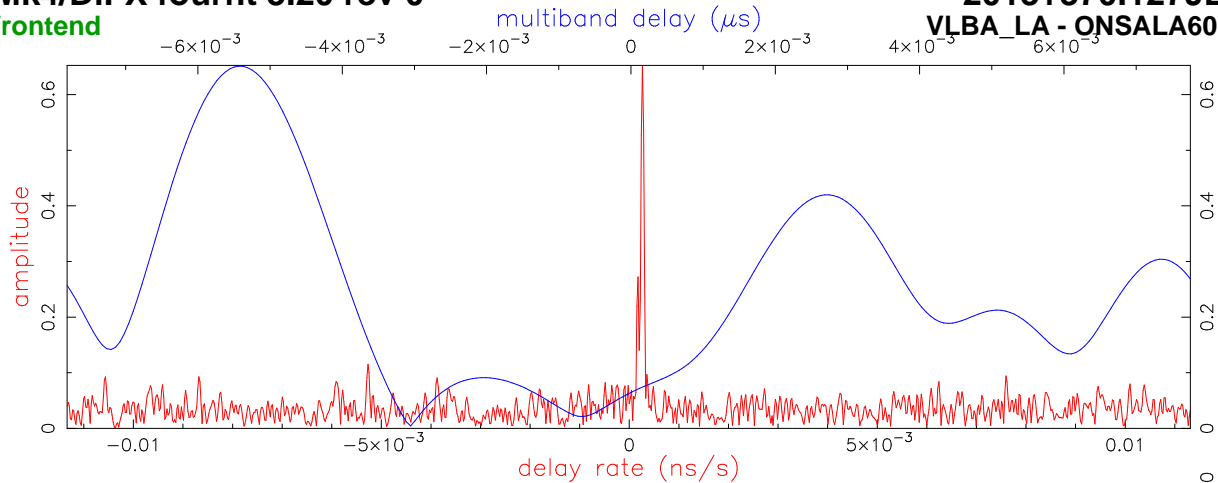
I: az 78.8 el 73.2 pa -88.7 P: az 297.8 el 27.0 pa 62.6 u,v (fr/asec) -9613.104 -3591.371 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IP..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IP.W.304.127JEK

Mk4/DiFX fourfit 3.20 rev 0

frontend

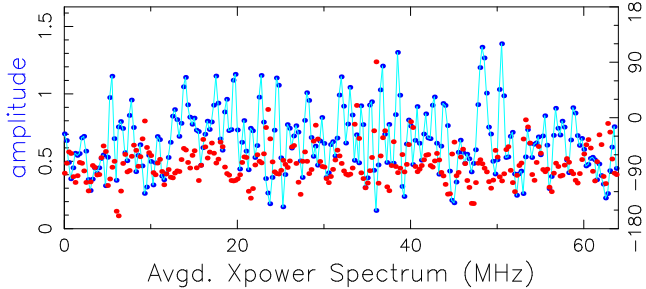
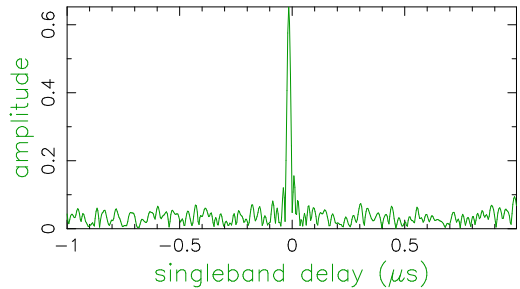
2013+370.127JEK, No0072, IX

VLBA_LA - ONSALA60, fgroup W, pol LL



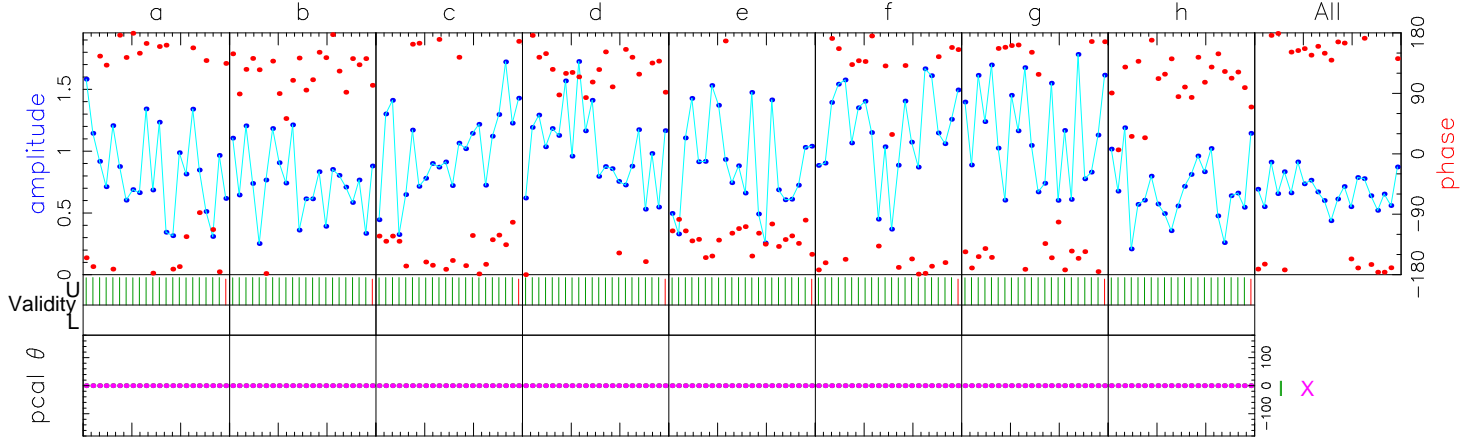
Fringe quality 8

SNR 23.9
 Int time 179.448
 Amp 0.653
 Phase 171.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.015097
 MBD -0.005402
 Fringe rate (Hz)
 0.022227
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.00
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132849
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



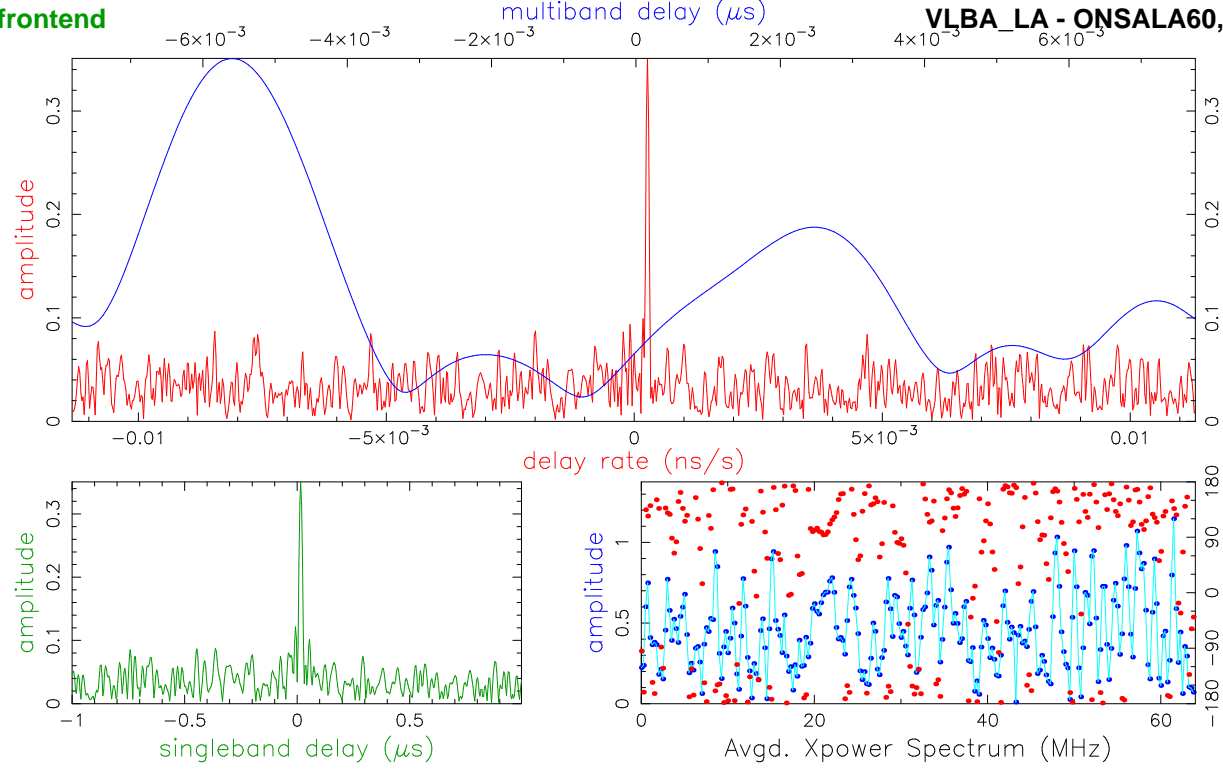
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0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

Group delay (usec)(sbd)	1.07601259698E+04	Apriori delay (usec)	1.07601469967E+04	Resid mbdelay (usec)	-5.40184E-03	+/-	4.5E-05
Sband delay (usec)	1.07601318997E+04	Apriori clock (usec)	-3.3185955E+01	Resid sbdelay (usec)	-1.50970E-02	+/-	3.6E-04
Phase delay (usec)	1.07601470022E+04	Apriori clockrate (us/s)	-8.7947201E-07	Resid phdelay (usec)	5.51586E-06	+/-	1.5E-07
Delay rate (us/s)	1.01273238064E+00	Apriori rate (us/s)	1.01273212262E+00	Resid rate (us/s)	2.58028E-07	+/-	1.5E-09
Total phase (deg)	276.9	Apriori accel (us/s/s)	-7.50077682264E-05	Resid phase (deg)	171.0	+/-	4.8

ph/seg (deg)	19.0	Theor.	11.2	Amplitude	0.653 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	19.9		19.6	Search (1024X32)	0.633	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	46.3		6.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	35.0		11.8	Inc. seg. avg.	0.674	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.813	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

I: az 78.8 el 73.2 pa -88.7 X: az 297.5 el 27.1 pa 36.4 u,v (fr/asec) -7346.570 -6255.897 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IX..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IX.W.244.127JEK

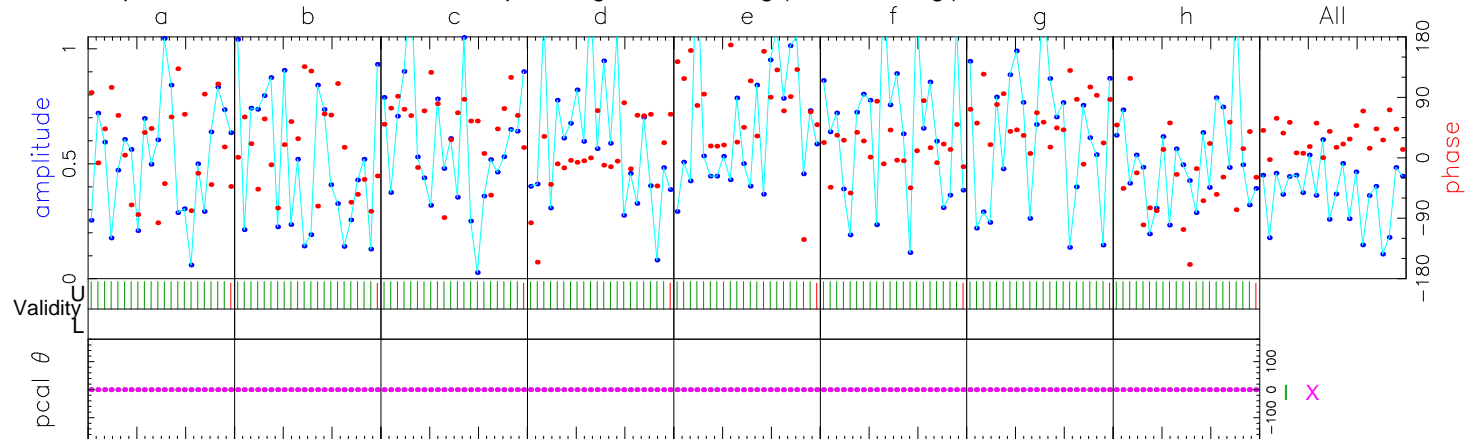


Fringe quality 9

SNR 12.8
Int time 179.449
Amp 0.351
Phase 29.9
PFD 2.4e-29
Delays (us)
SBD 0.015551
MBD -0.005599
Fringe rate (Hz) 0.022237
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build 2020:070:104410
2020:071:132852
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	13.4	3.2	59.1	7.8	85.2	15.6	55.7	-32.7		Phase 29.9
	0.3	0.3	0.4	0.5	0.5	0.6	0.5	0.3		Ampl. 0.4
	34.9	261.5	260.7	260.7	260.4	260.6	260.4	259.7		Sbd box 261.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used
I	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
X	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
I	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
X	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Tracks
Group delay (usec)(sbd)	1.07601570224E+04		Apriori delay (usec)		1.07601469967E+04		Resid mbdelay (usec)		-5.59925E-03	+/- 8.4E-05
Sband delay (usec)	1.07601625477E+04		Apriori clock (usec)		-3.3185955E+01		Resid sbdelay (usec)		1.55510E-02	+/- 6.7E-04
Phase delay (usec)	1.07601469976E+04		Apriori clockrate (us/s)		-8.7947201E-07		Resid phdelay (usec)		9.63702E-07	+/- 2.9E-07
Delay rate (us/s)	1.01273238077E+00		Apriori rate (us/s)		1.01273212262E+00		Resid rate (us/s)		2.58150E-07	+/- 2.8E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.50077682264E-05		Resid phase (deg)		29.9	+/- 8.9

ph/seg (deg) 21.3 20.9 Search (1024X32) 0.337 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 37.6 36.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 41.2 12.6 Inc. seg. avg. 0.350 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 35.1 22.0 Inc. frq. avg. 0.412 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
I: az 78.8 el 73.2 pa -88.7 X: az 297.5 el 27.1 pa 36.4 u,v (fr/asec) -7346.570 -6255.897 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IX..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IX.W.265.127JEK

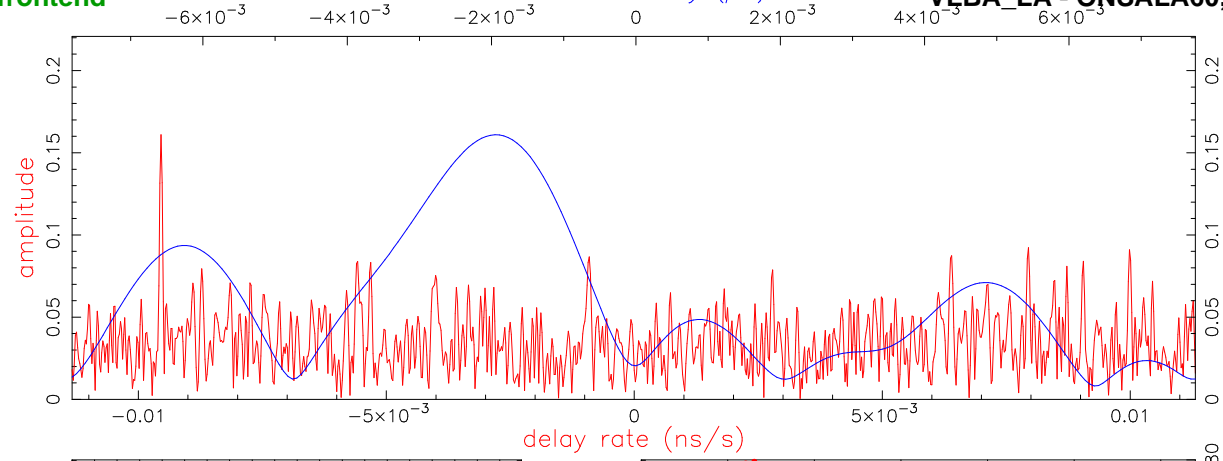
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, IX

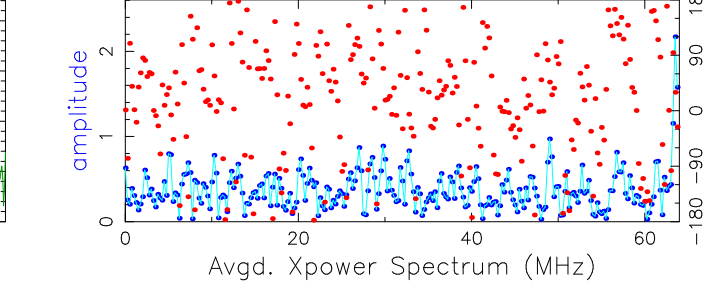
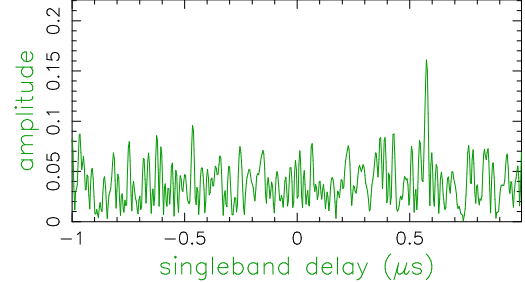
VLBA_LA - ONSALA60, fgroup W, pol LR

multiband delay (μ s)



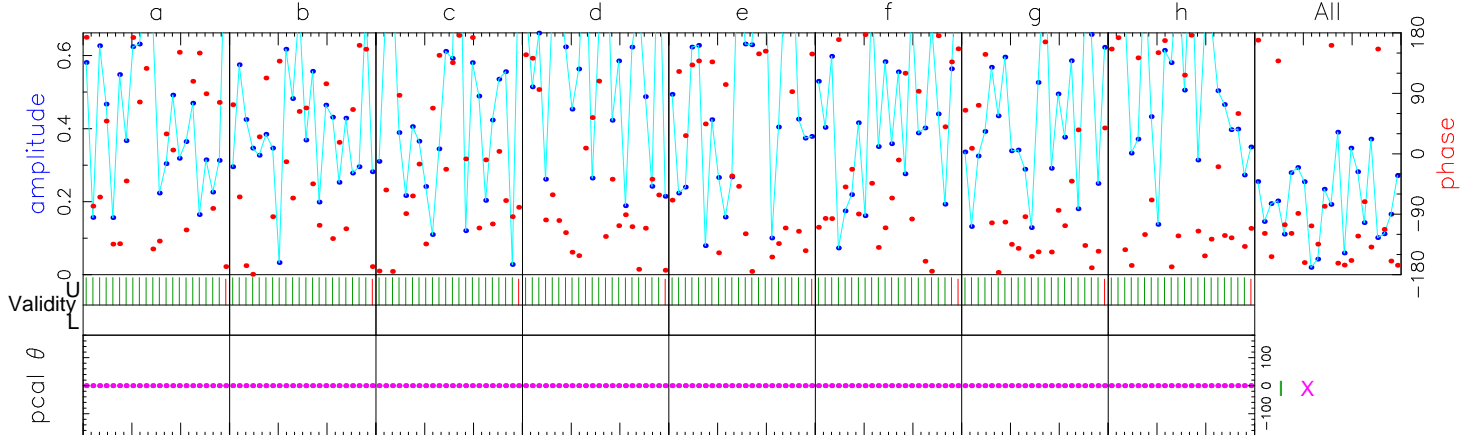
Fringe quality 0

SNR 5.9
Int time 179.448
Amp 0.221
Phase -144.9
PFD 3.4e-01
Delays (us)
SBD 0.574983
MBD -0.001952
Fringe rate (Hz)
-0.824096
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132854
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



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

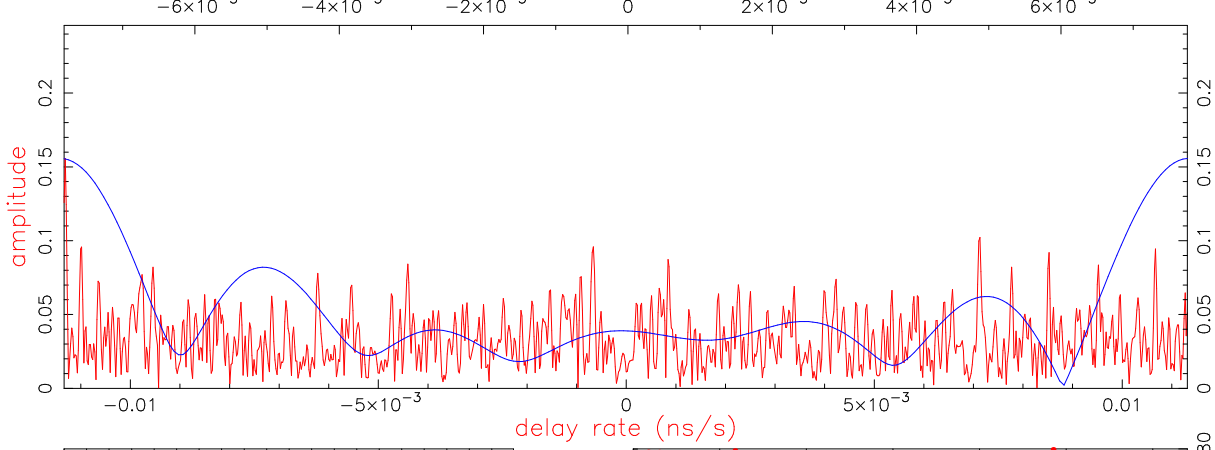
Group delay (usec)(sbd) 1.07607231697E+04 Apriori delay (usec) 1.07601469967E+04 Resid mbdelay (usec) -1.95198E-03 +/- 1.8E-04
 Sband delay (usec) 1.07607219799E+04 Apriori clock (usec) -3.3185955E+01 Resid sbdelay (usec) 5.74983E-01 +/- 1.5E-03
 Phase delay (usec) 1.07601469920E+04 Apriori clockrate (us/s) -8.7947201E-07 Resid phdelay (usec) -4.67120E-06 +/- 6.2E-07
 Delay rate (us/s) 1.01272255568E+00 Apriori rate (us/s) 1.01273212262E+00 Resid rate (us/s) -9.56694E-06 +/- 6.0E-09
 Total phase (deg) -39.0 Apriori accel (us/s/s) -7.50077682264E-05 Resid phase (deg) -144.9 +/- 19.4

ph/seg (deg) 40.2 45.4 Amplitude 0.221 +/- 0.037 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.3 79.2 Search (1024X32) 0.159 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 40.6 27.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 59.3 47.8 Inc. seg. avg. 0.211 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.219 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

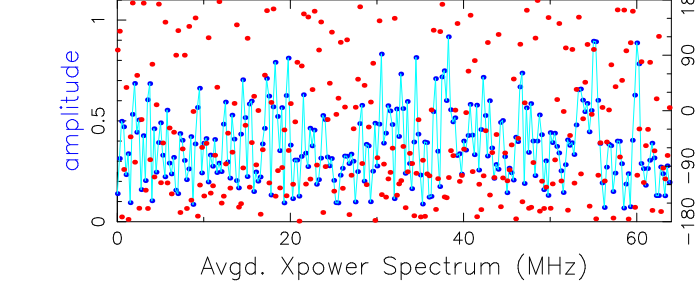
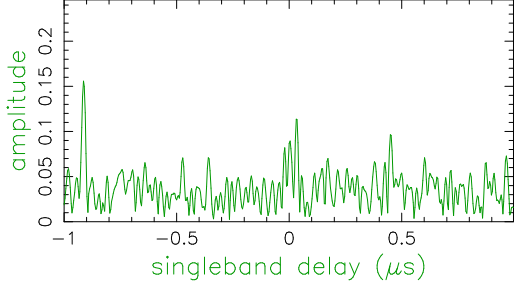
I: az 78.8 el 73.2 pa -88.7 X: az 297.5 el 27.1 pa 36.4 u,v (fr/asec) -7346.570 -6255.897 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IX..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IX.W.286.127JEK

multiband delay (μ s)

Fringe quality 0

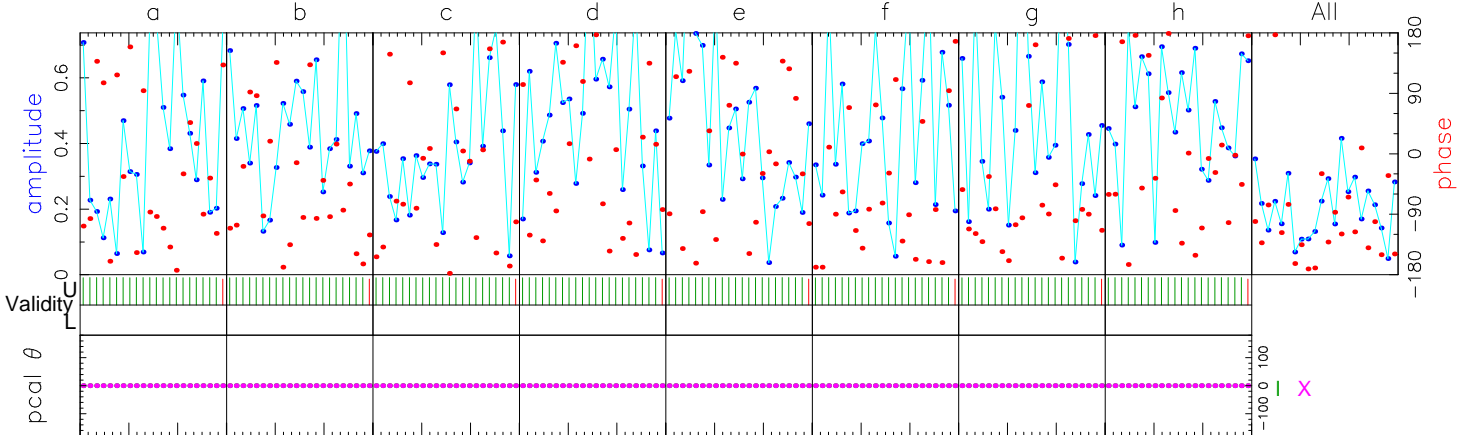


SNR 5.7
Int time 179.449
Amp 0.246
Phase -113.7
PFD 7.0e-01
Delays (us)
SBD -0.913028
MBD -0.007852
Fringe rate (Hz)
-0.976345
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.00
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132857
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-113.3	-97.6	-135.6	-84.4	-168.3	-115.7	-110.9	-102.9	Phase	-113.7
	0.3	0.3	0.2	0.2	0.2	0.2	0.5	0.2	Ampl.	0.2
	411.0	416.1	418.7	94.8	53.7	238.4	23.6	230.2	Sbd box	23.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	1.07592328944E+04	Apriori delay (usec)	1.07601469967E+04	Resid mbdelay (usec)	-7.85231E-03	+/-	1.9E-04
Sband delay (usec)	1.07592339682E+04	Apriori clock (usec)	-3.3185955E+01	Resid sbdelay (usec)	-9.13028E-01	+/-	1.5E-03
Phase delay (usec)	1.07601469930E+04	Apriori clockrate (us/s)	-8.7947201E-07	Resid phdelay (usec)	-3.66683E-06	+/-	6.4E-07
Delay rate (us/s)	1.01272078822E+00	Apriori rate (us/s)	1.01273212262E+00	Resid rate (us/s)	-1.13344E-05	+/-	6.2E-09
Total phase (deg)	-7.8	Apriori accel (us/s/s)	-7.50077682264E-05	Resid phase (deg)	-113.7	+/-	20.0

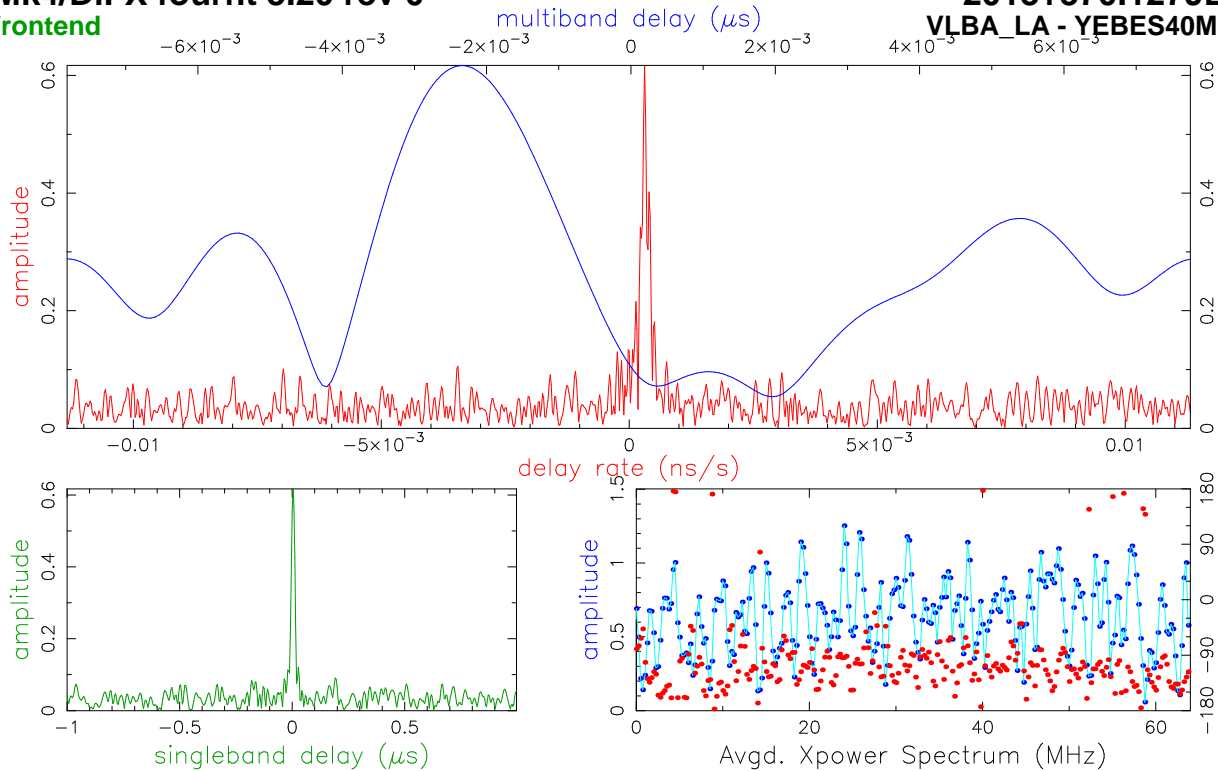
ph/seg (deg)	49.2	Theor.	46.9	Amplitude	0.246 +/- 0.043	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	67.2	Search (1024X32)	0.154	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	28.0	Inc. seg. avg.	0.244	Inc. frq. avg.	0.234	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	40.6	Inc. frq. avg.	0.234			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
						Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, IY

VLBA_LA - YEBES40M, fgroup W, pol LL

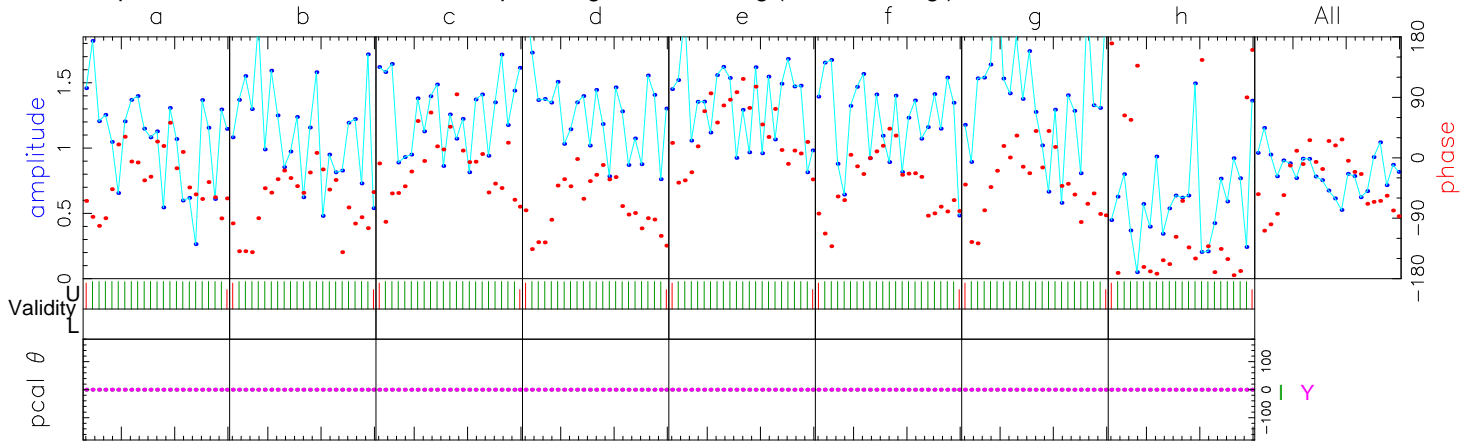


Fringe quality 7

SNR 21.5
 Int time 162.024
 Amp 0.617
 Phase -38.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.004135
 MBD -0.002335
 Fringe rate (Hz)
 0.026591
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Yr:day 16383
 Start 2020:070:104410
 Stop 2020:071:132849
 FRT 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd) 1.03899617562E+04 Apriori delay (usec) 1.03899640909E+04 Resid mbdelay (usec) -2.33464E-03 +/- 5.1E-05
 Sband delay (usec) 1.03899682256E+04 Apriori clock (usec) -1.0453288E+01 Resid sbdelay (usec) 4.13475E-03 +/- 4.0E-04
 Phase delay (usec) 1.03899640896E+04 Apriori clockrate (us/s) -5.7147201E-07 Resid phdelay (usec) -1.24298E-06 +/- 1.7E-07
 Delay rate (us/s) 1.28410855930E+00 Apriori rate (us/s) 1.28410825061E+00 Resid rate (us/s) 3.08690E-07 +/- 1.8E-09
 Total phase (deg) 244.5 Apriori accel (us/s/s) -5.97480847763E-05 Resid phase (deg) -38.5 +/- 5.3

RMS Theor. Amplitude 0.617 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 42.0 12.8 Search (1024X32) 0.614 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 40.5 22.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 63.6 7.5 Inc. seg. avg. 0.800 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 45.0 13.2 Inc. frq. avg. 0.829 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 58.7 u,v (fr/asec) -9284.842 -3972.727 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IY..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IY.W.246.127JEK

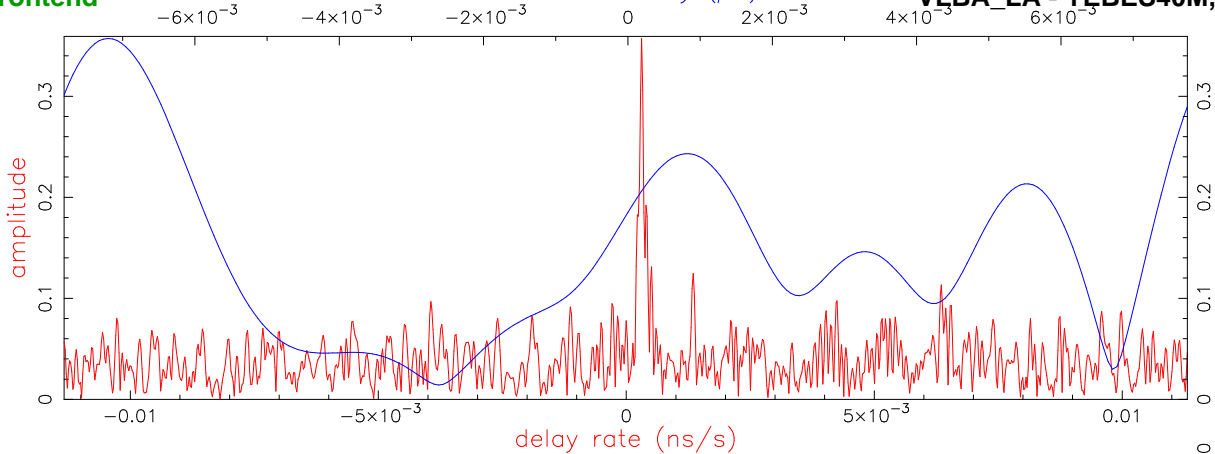
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, IY

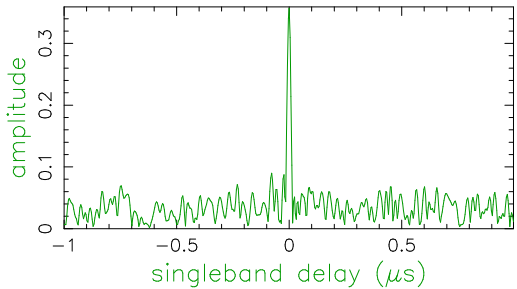
VLBA_LA - YEBES40M, fgroup W, pol RR

multiband delay (μ s)

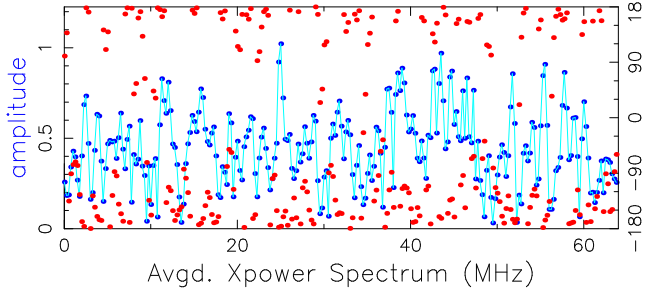


Fringe quality 9

SNR 12.5
Int time 162.024
Amp 0.359
Phase -91.7
PFD 2.0e-27
Delays (us)
SBD -0.000968
MBD -0.007232
Fringe rate (Hz) 0.026306
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

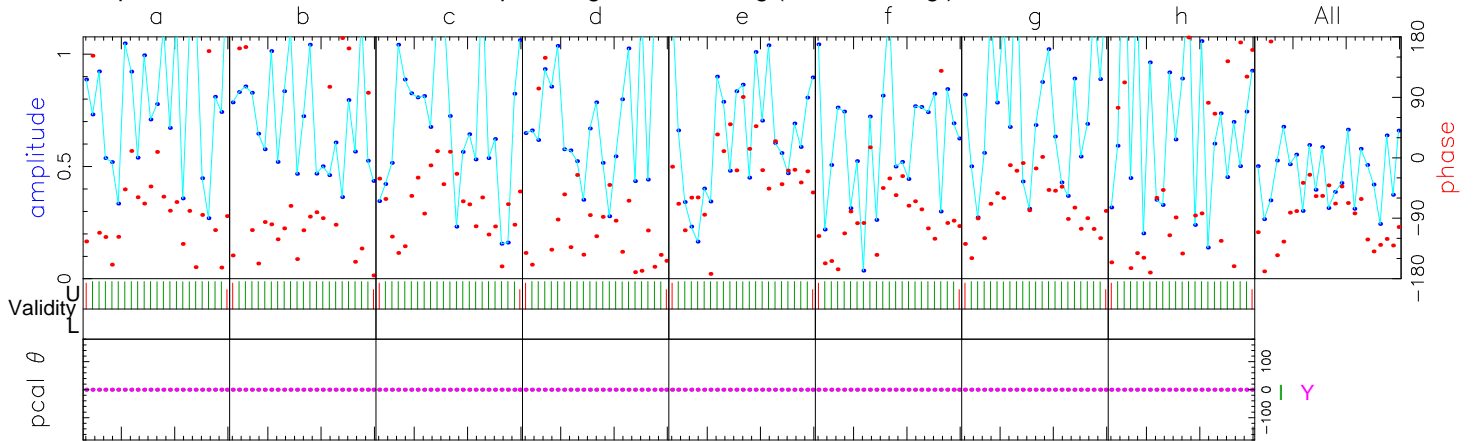


delay rate (ns/s)



Exp. c192c
Yr:day 2019:279
Start 010016.90
Stop 010259.71
FRT 010130.00
Corr/FF/build 2020:070:104410
2020:071:132852
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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

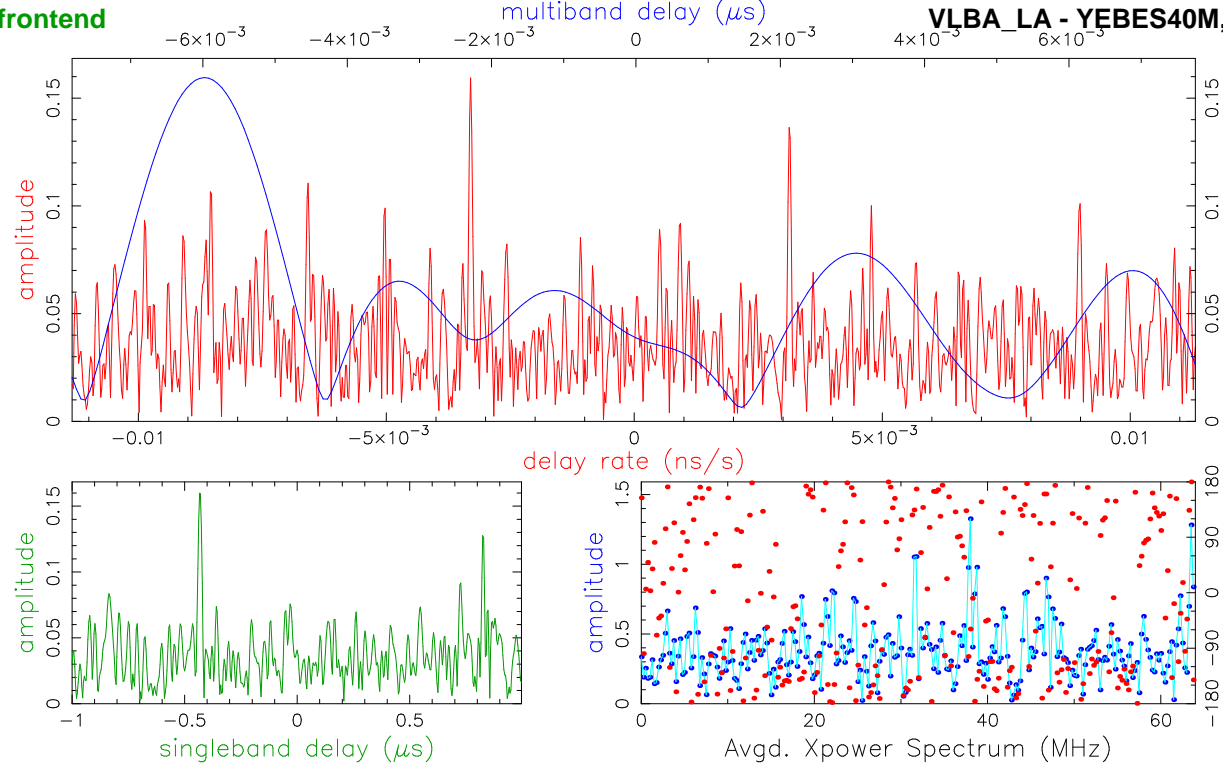


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-89.4	-130.2	-65.4	-130.9	-11.9	-88.1	-66.5	-166.7	Phase	-91.7
	0.5	0.5	0.5	0.5	0.5	0.4	0.6	0.4	Ampl.	0.5
	256.4	256.7	256.5	256.5	256.4	255.8	256.5	254.7	Sbd box	256.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.03899568587E+04	Apriori delay (usec)	1.03899640909E+04	Resid mbdelay (usec)	-7.23210E-03	+/-	8.7E-05
Sband delay (usec)	1.03899631231E+04	Apriori clock (usec)	-1.0453288E+01	Resid sbdelay (usec)	-9.67750E-04	+/-	6.9E-04
Phase delay (usec)	1.03899640879E+04	Apriori clockrate (us/s)	-5.7147201E-07	Resid phdelay (usec)	-2.95817E-06	+/-	3.0E-07
Delay rate (us/s)	1.28410855600E+00	Apriori rate (us/s)	1.28410825061E+00	Resid rate (us/s)	3.05383E-07	+/-	3.1E-09
Total phase (deg)	191.3	Apriori accel (us/s/s)	-5.97480847763E-05	Resid phase (deg)	-91.7	+/-	9.2

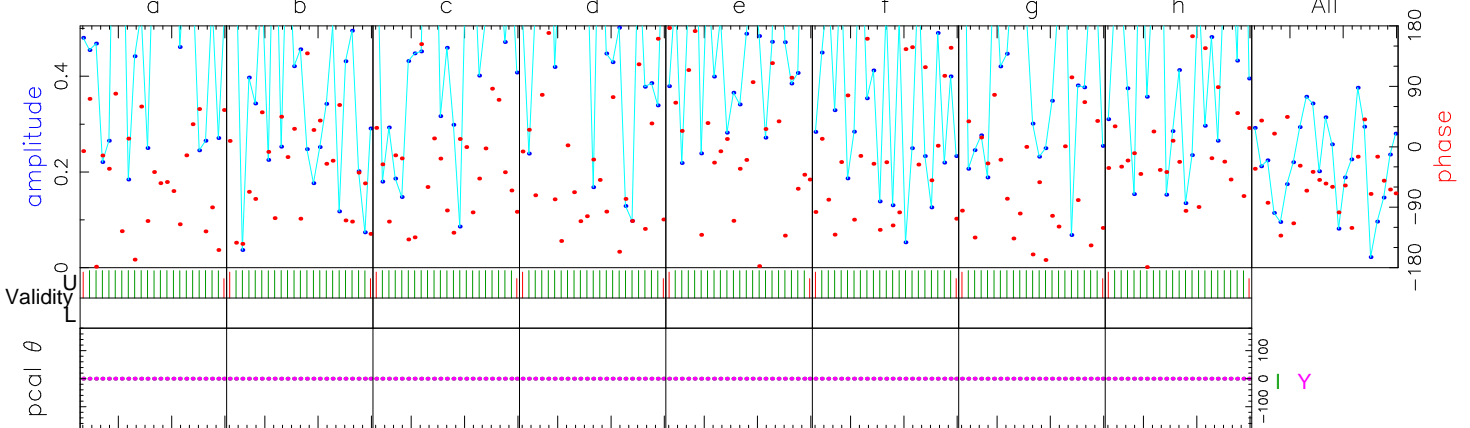
ph/seg (deg)	43.9	RMS	22.0	Theor.	Amplitude	0.359 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	47.6	43.9	22.0	22.0	Search (1024X32)	0.353	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	52.2	47.6	38.4	38.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
amp/frq (%)	37.5	52.2	13.0	13.0	Inc. seg. avg.	0.435	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011		
		37.5	22.6	22.6	Inc. frq. avg.	0.466	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 58.7 u,v (fr/asec) -9284.842 -3972.727 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IY..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IY.W.262.127JEK



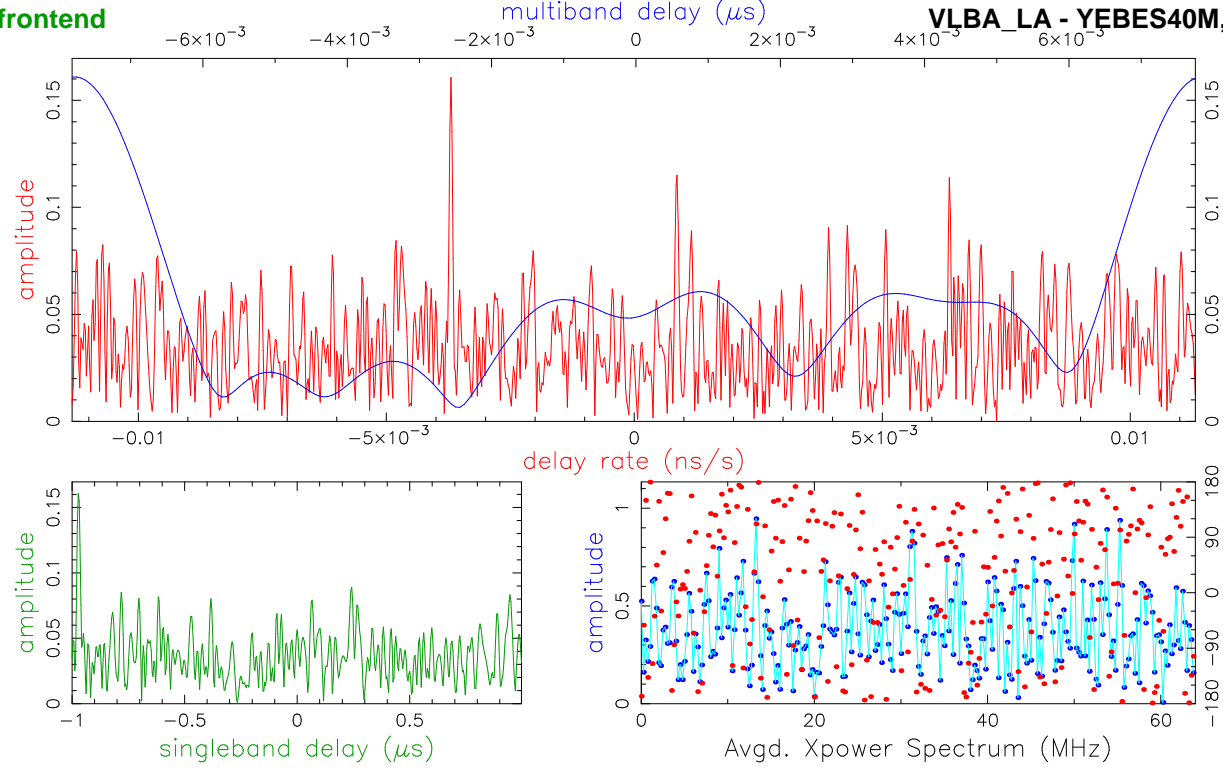
Fringe quality 0
 SNR 5.7
 Int time 162.024
 Amp 0.168
 Phase -44.8
 PFD 8.4e-01
 Delays (us)
 SBD -0.431692
 MBD -0.006025
 Fringe rate (Hz)
 -0.285420
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Yr:day 16383
 Start 2020:070:104410
 Stop 2020:071:132854
 FRT 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



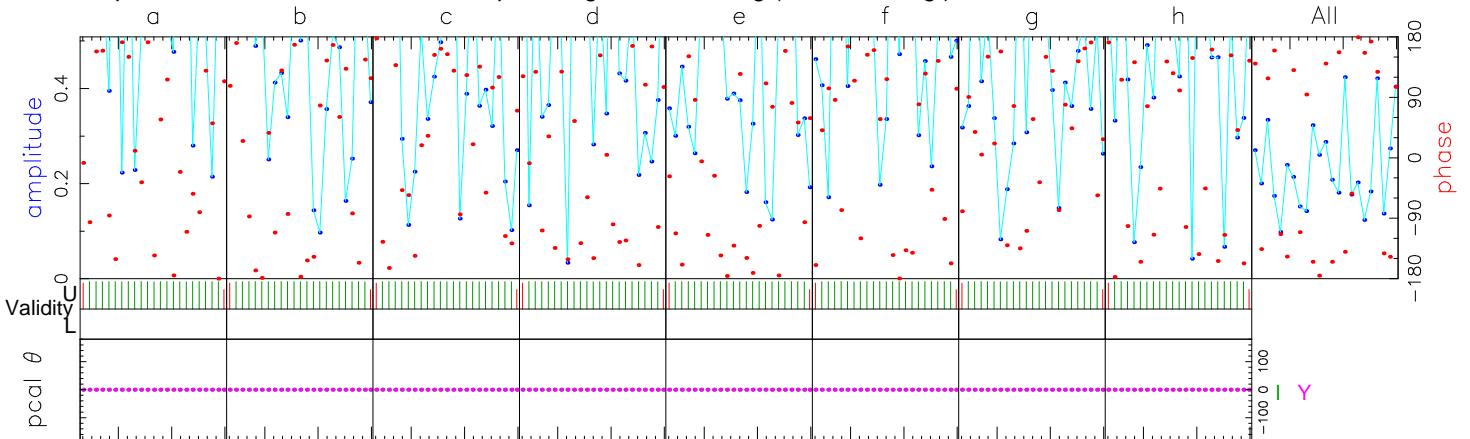
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-38.9	-49.3	-36.9	-94.0	16.8	-45.1	-76.5	-26.9	Phase	-44.8
	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	Ampl.	0.2
	19.6	79.0	292.5	228.0	82.0	467.5	264.0	146.5	Sbd box	146.5
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.03895361907E+04		Apriori delay (usec)		1.03899640909E+04		Resid mbdelay (usec)		-6.02514E-03	+/- 1.9E-04
Sband delay (usec)	1.03895323986E+04		Apriori clock (usec)		-1.0453288E+01		Resid sbdelay (usec)		-4.31692E-01	+/- 1.5E-03
Phase delay (usec)	1.03899640894E+04		Apriori clockrate (us/s)		-5.7147201E-07		Resid phdelay (usec)		-1.44391E-06	+/- 6.5E-07
Delay rate (us/s)	1.28410493718E+00		Apriori rate (us/s)		1.28410825061E+00		Resid rate (us/s)		-3.31344E-06	+/- 6.9E-09
Total phase (deg)	238.3		Apriori accel (us/s/s)		-5.97480847763E-05		Resid phase (deg)		-44.8	+/- 20.2

ph/seg (deg) 48.6 48.5 Search (1024X32) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.8 84.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 35.7 28.6 Inc. seg. avg. 0.167 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.2 50.0 Inc. frq. avg. 0.166 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 58.7 u,v (fr/asec) -9284.842 -3972.727 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IY..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IY.W.282.127JEK



Fringe quality 0
 SNR 5.6
 Int time 162.024
 Amp 0.170
 Phase 174.3
 PFD 8.6e-01
 Delays (us)
 SBD -0.971424
 MBD -0.007716
 Fringe rate (Hz)
 -0.318372
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010016.90
 Stop 010259.71
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132856
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-159.6	169.9	145.6	-179.9	-163.1	175.8	81.3	-177.4	Phase	174.3
	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.2	Ampl.	0.2
	296.3	507.9	10.5	151.8	274.0	7.2	317.3	320.2	Sbd box	8.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.03889876253E+04		Apriori delay (usec)		1.03899640909E+04		Resid mbdelay (usec)		-7.71559E-03	+/- 1.9E-04
Sband delay (usec)	1.03889926671E+04		Apriori clock (usec)		-1.0453288E+01		Resid sbdelay (usec)		-9.71424E-01	+/- 1.5E-03
Phase delay (usec)	1.03899640965E+04		Apriori clockrate (us/s)		-5.7147201E-07		Resid phdelay (usec)		5.62050E-06	+/- 6.5E-07
Delay rate (us/s)	1.28410455463E+00		Apriori rate (us/s)		1.28410825061E+00		Resid rate (us/s)		-3.69599E-06	+/- 7.0E-09
Total phase (deg)	97.3		Apriori accel (us/s/s)		-5.97480847763E-05		Resid phase (deg)		174.3	+/- 20.3

ph/seg (deg) 51.4 48.6 Search (1024X32) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 71.3 84.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 42.4 28.7 Inc. seg. avg. 0.180 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.2 50.1 Inc. frq. avg. 0.165 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 58.7 u,v (fr/asec) -9284.842 -3972.727 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IY..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IY.W.299.127JEK

Mk4/DiFX fourfit 3.20 rev 0

frontend

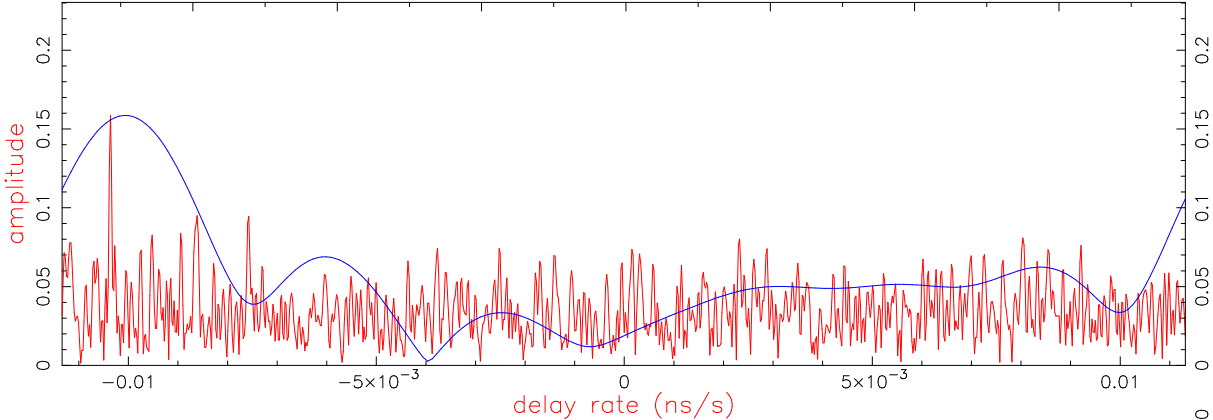
2013+370.127JEK, No0072, IZ

VLBA_LA - METSAHOV, fgroup W, pol LL

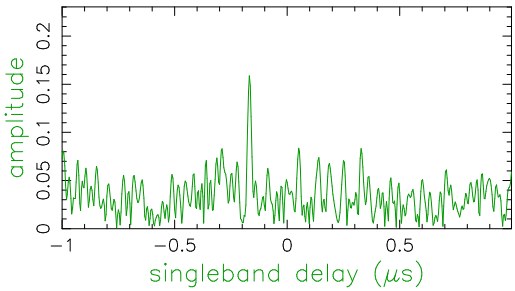
multiband delay (μs)

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

Fringe quality 0

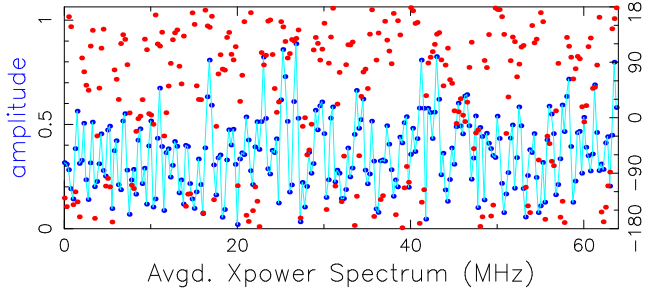


SNR 5.8
Int time 178.907
Amp 0.230
Phase 79.1
PFD 5.5e-01
Delays (us)
SBD -0.167569
MBD -0.006933
Fringe rate (Hz)
-0.894227
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



singleband delay (μs)

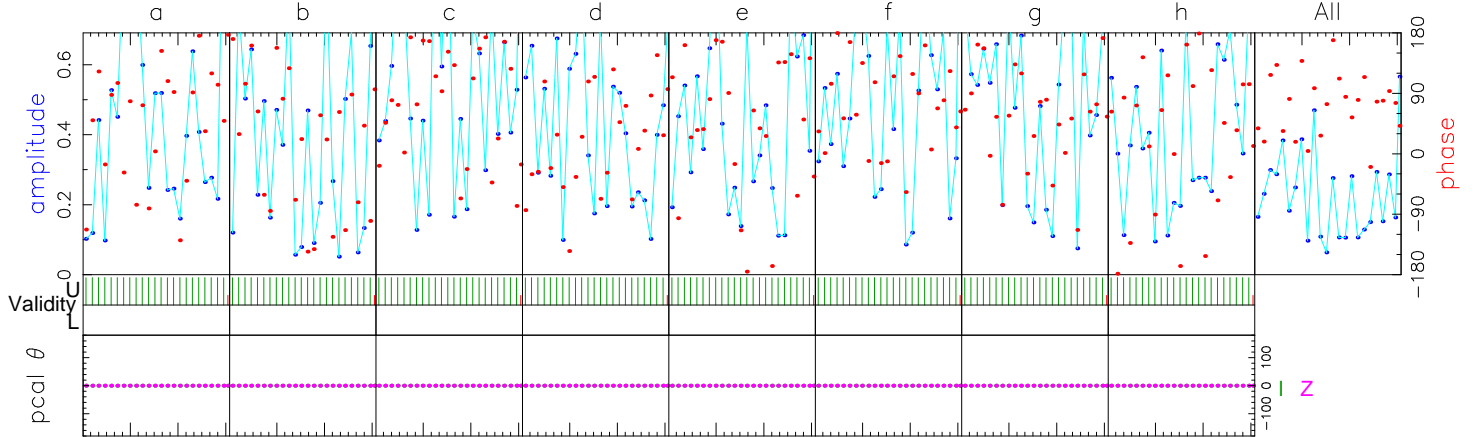
delay rate (ns/s)



Avgd. Xpower Spectrum (MHz)

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.51
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132850
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.21462005983E+04	Apriori delay (usec)	1.21463637810E+04	Resid mbdelay (usec)	-6.93272E-03	+/-	1.9E-04
Sband delay (usec)	1.21461962122E+04	Apriori clock (usec)	-9.5357573E-01	Resid sbdelay (usec)	-1.67569E-01	+/-	1.5E-03
Phase delay (usec)	1.21463637835E+04	Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	2.55107E-06	+/-	6.4E-07
Delay rate (us/s)	9.29071374105E-01	Apriori rate (us/s)	9.29081755190E-01	Resid rate (us/s)	-1.03811E-05	+/-	6.1E-09
Total phase (deg)	112.5	Apriori accel (us/s/s)	-8.39554692424E-05	Resid phase (deg)	79.1	+/-	19.7

ph/seg (deg)	45.9	RMS	48.3	Theor.	0.230 +/- 0.040	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	82.0	Search (1024X32)	0.155	Amplitude	0.230 +/- 0.040	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	32.4	Interp.	0.000	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	44.8	Inc. seg. avg.	0.237	Inc. seg. avg.	0.237	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
		Inc. frq. avg.	0.227	Inc. frq. avg.	0.227	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

I: az 78.8 el 73.2 pa -88.7

Z: az 305.5 el 23.1 pa 30.6

u,v (fr/asec) -6751.851 -6974.359

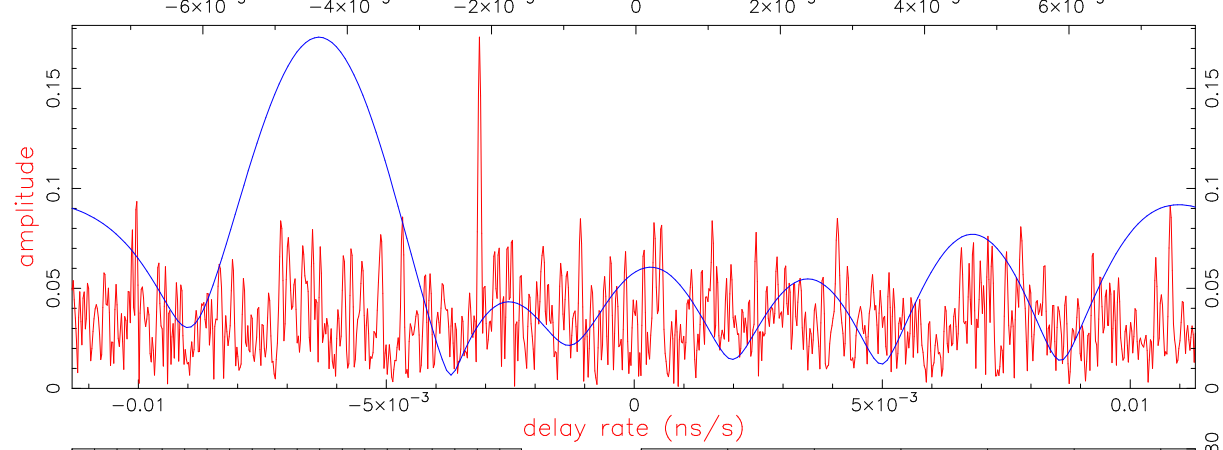
simultaneous interpolator

Control file: cf_1234_gmva

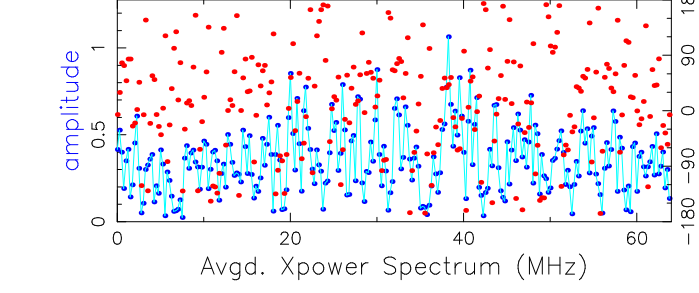
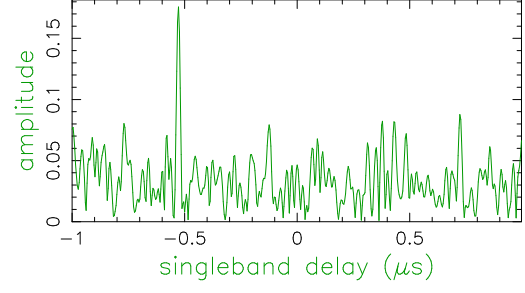
Input file: /Exps/c192c/v1_CygA2/1234/No0072/IZ..127JEK

Output file: /Exps/c192c/v1_CygA2/1234/No0072/IZ.W.247.127JEK

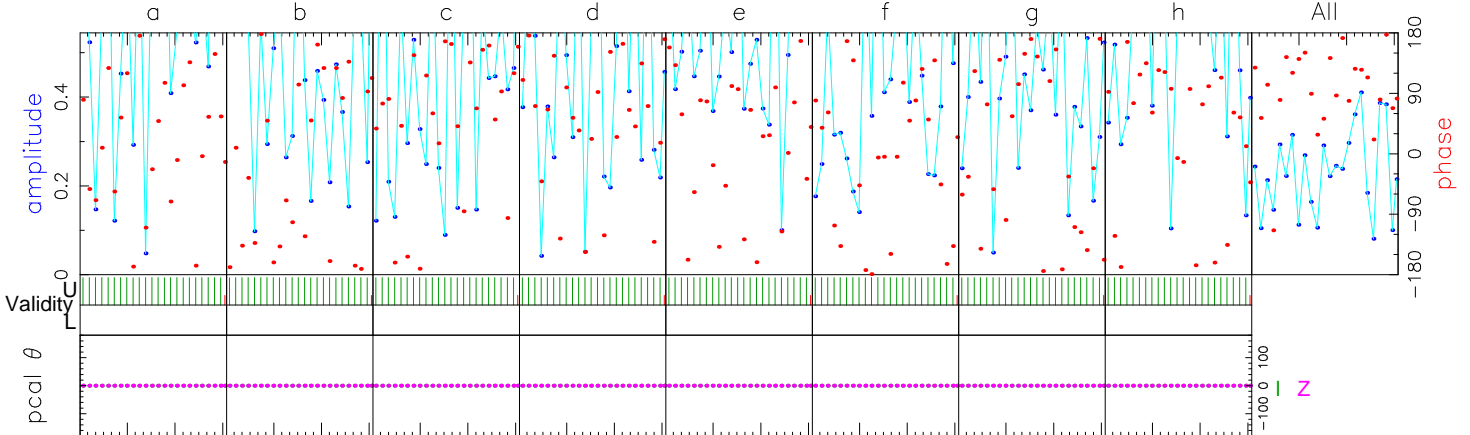
multiband delay (μ s)



Fringe quality 0
 SNR 6.4
 Int time 178.907
 Amp 0.182
 Phase 112.8
 PFD 1.7e-02
 Delays (us)
 SBD -0.527845
 MBD -0.004402
 Fringe rate (Hz)
 -0.269410
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 010000.51
 Stop 010300.22
 FRT 010130.00
 Corr/FF/build
 2020:070:104410
 2020:071:132852
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	1.21458281294E+04	Apriori delay (usec)	1.21463637810E+04	Resid mbdelay (usec)	-4.40156E-03	+/-	1.7E-04
Sband delay (usec)	1.21458359362E+04	Apriori clock (usec)	-9.5357573E-01	Resid sbdelay (usec)	-5.27845E-01	+/-	1.3E-03
Phase delay (usec)	1.21463637846E+04	Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	3.63595E-06	+/-	5.7E-07
Delay rate (us/s)	9.29078627608E-01	Apriori rate (us/s)	9.29081755190E-01	Resid rate (us/s)	-3.12758E-06	+/-	5.5E-09
Total phase (deg)	146.2	Apriori accel (us/s/s)	-8.39554692424E-05	Resid phase (deg)	112.8	+/-	17.8

ph/seg (deg)	50.7	Theor.	43.6	Amplitude	0.182 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	63.9	Search (1024X32)	0.170	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	36.0	Inc. seg. avg.	0.187	Inc. frq. avg.	0.191	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	37.7	Inc. frq. avg.	0.191			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

I: az 78.8 el 73.2 pa -88.7 Z: az 305.5 el 23.1 pa 30.6 u,v (fr/asec) -6751.851 -6974.359 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IZ..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IZ.W.266.127JEK

Mk4/DiFX fourfit 3.20 rev 0

frontend

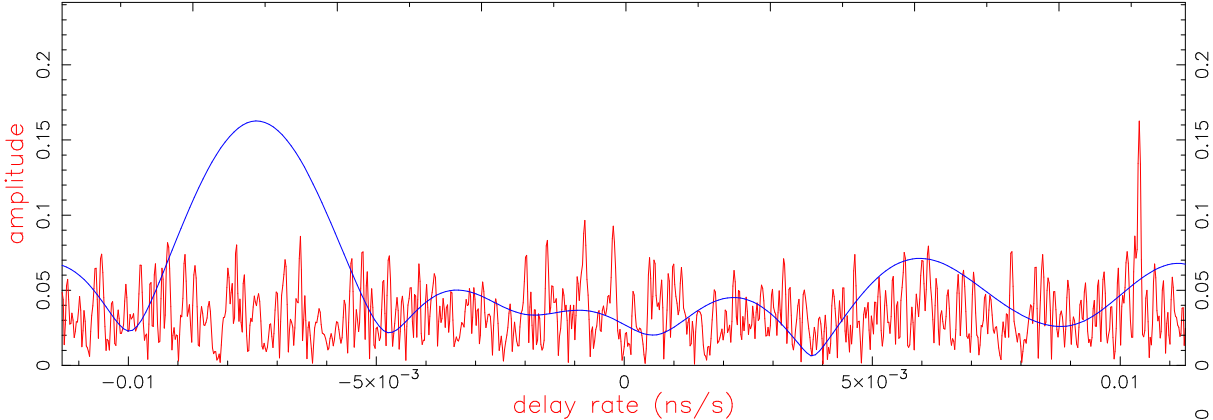
2013+370.127JEK, No0072, IZ

VLBA_LA - METSAHOV, fgroup W, pol LR

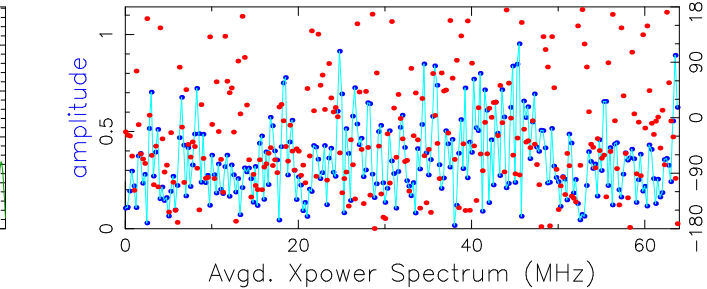
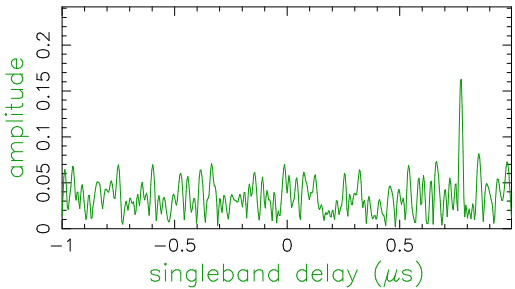
multiband delay (μ s)

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

Fringe quality 0

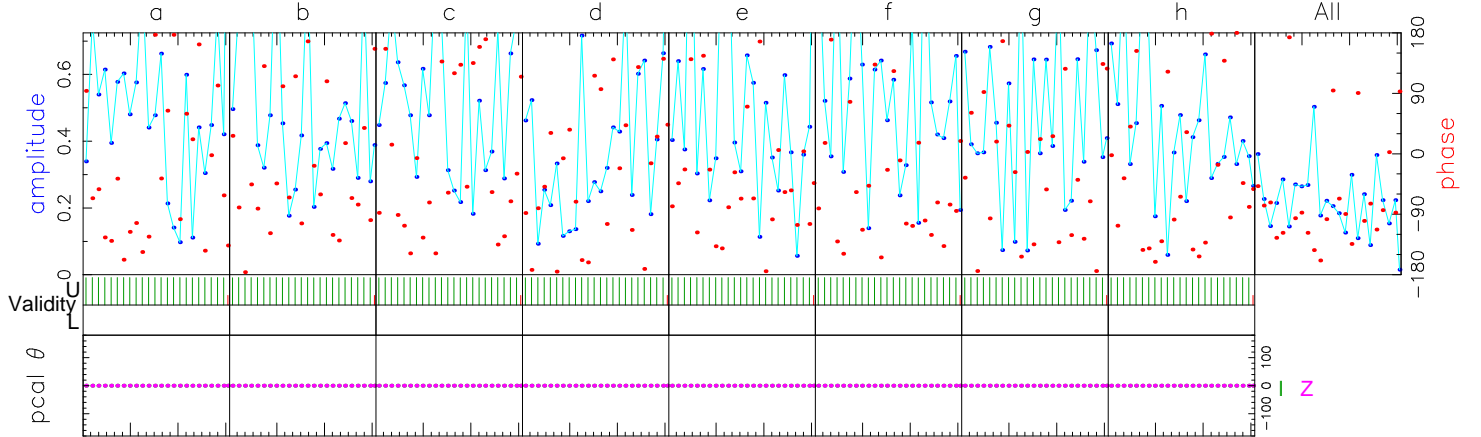


SNR 6.1
Int time 178.907
Amp 0.242
Phase -104.1
PFD 1.5e-01
Delays (us)
SBD 0.771618
MBD -0.005143
Fringe rate (Hz)
0.896118
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.51
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132854
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-112.7	-83.1	-112.2	151.0	-87.7	-100.7	-95.4	-109.4	Phase	-104.1
	0.3	0.2	0.3	0.1	0.3	0.4	0.2	0.3	Ampl.	0.2
	494.9	403.5	106.3	472.2	474.4	454.4	373.1	453.8	Sbd box	454.5
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.21471398880E+04	Apriori delay (usec)	1.21463637810E+04	Resid mbdelay (usec)	-5.14293E-03	+/-	1.8E-04
Sband delay (usec)	1.21471353987E+04	Apriori clock (usec)	-9.5357573E-01	Resid sbdelay (usec)	7.71618E-01	+/-	1.4E-03
Phase delay (usec)	1.21463637776E+04	Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	-3.35578E-06	+/-	6.1E-07
Delay rate (us/s)	9.29092158231E-01	Apriori rate (us/s)	9.29081755190E-01	Resid rate (us/s)	1.04030E-05	+/-	5.9E-09
Total phase (deg)	-70.6	Apriori accel (us/s/s)	-8.39554692424E-05	Resid phase (deg)	-104.1	+/-	18.8

ph/seg (deg)	64.0	Theor.	46.2	Amplitude	0.242 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	67.6	Search (1024X32)	0.157	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	44.7	Inc. seg. avg.	0.249	Inc. frq. avg.	0.231	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	38.4	Inc. frq. avg.	0.231	u,v (fr/asec)	-6751.851 -6974.359	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	

I: az 78.8 el 73.2 pa -88.7 Z: az 305.5 el 23.1 pa 30.6 u,v (fr/asec) -6751.851 -6974.359 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IZ..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IZ.W.285.127JEK

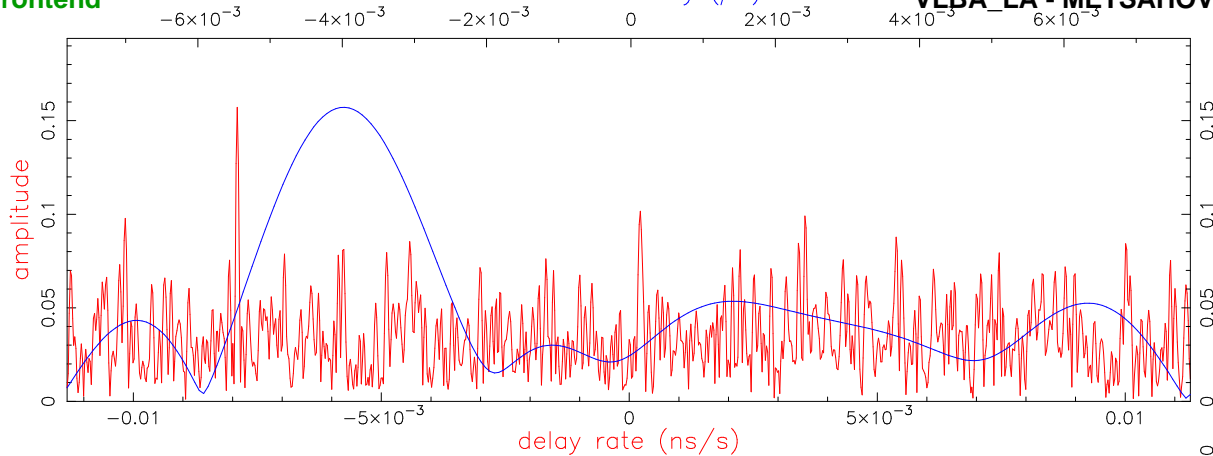
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127JEK, No0072, IZ

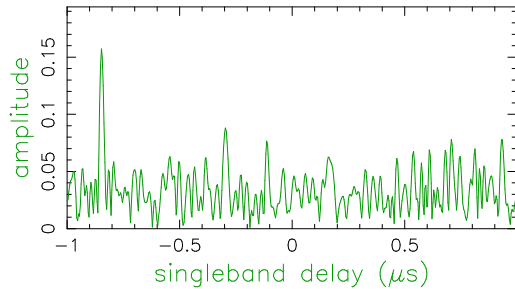
VLBA_LA - METSAHOV, fgroup W, pol RL

multiband delay (μ s)

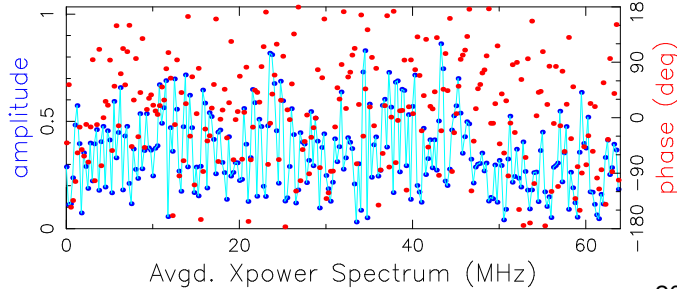


Fringe quality 0

SNR 5.8
Int time 178.907
Amp 0.194
Phase 23.2
PFD 6.5e-01
Delays (us)
SBD -0.847048
MBD -0.003973
Fringe rate (Hz)
-0.681269
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

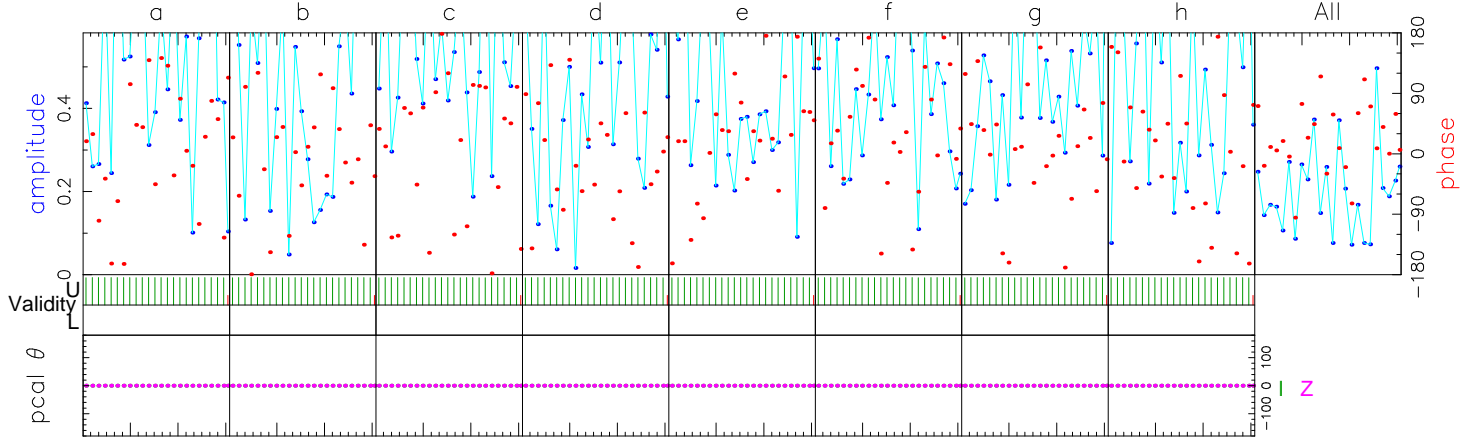


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 010000.51
Stop 010300.22
FRT 010130.00
Corr/FF/build
2020:070:104410
2020:071:132856
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.21455160582E+04	Apriori delay (usec)	1.21463637810E+04	Resid mbdelay (usec)	-3.97277E-03	+/-	1.9E-04
Sband delay (usec)	1.21455167330E+04	Apriori clock (usec)	-9.5357573E-01	Resid sbdelay (usec)	-8.47048E-01	+/-	1.5E-03
Phase delay (usec)	1.21463637817E+04	Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	7.48817E-01	+/-	6.4E-07
Delay rate (us/s)	9.29073846333E-01	Apriori rate (us/s)	9.29081755190E-01	Resid rate (us/s)	-7.90886E-06	+/-	6.2E-09
Total phase (deg)	56.6	Apriori accel (us/s/s)	-8.39554692424E-05	Resid phase (deg)	23.2	+/-	19.9

ph/seg (deg)	50.7	RMS	72.8	Theor.	48.7	Amplitude	0.194 +/- 0.034	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	72.8	Search (1024X32)	0.154	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	Inc. seg. avg.	0.183	Inc. frq. avg.	0.187	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	31.4	Inc. frq. avg.	0.187	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags:	256	t_cohere	infinite

I: az 78.8 el 73.2 pa -88.7 Z: az 305.5 el 23.1 pa 30.6 u,v (fr/asec) -6751.851 -6974.359 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0072/IZ..127JEK Output file: /Exps/c192c/v1_CygA2/1234/No0072/IZ.W.303.127JEK