

Fringe quality 0

SNR 5.9

Int time 177.989

Amp 0.225

Phase 66.2

PFD 3.3e-01

Delays (us)

SBD 0.296401

MBD -0.008123

Fringe rate (Hz)

0.842613

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 004000.00

Stop 004300.22

FRT 004130.00

Corr/FF/build

2020:076:160821

2020:086:054042

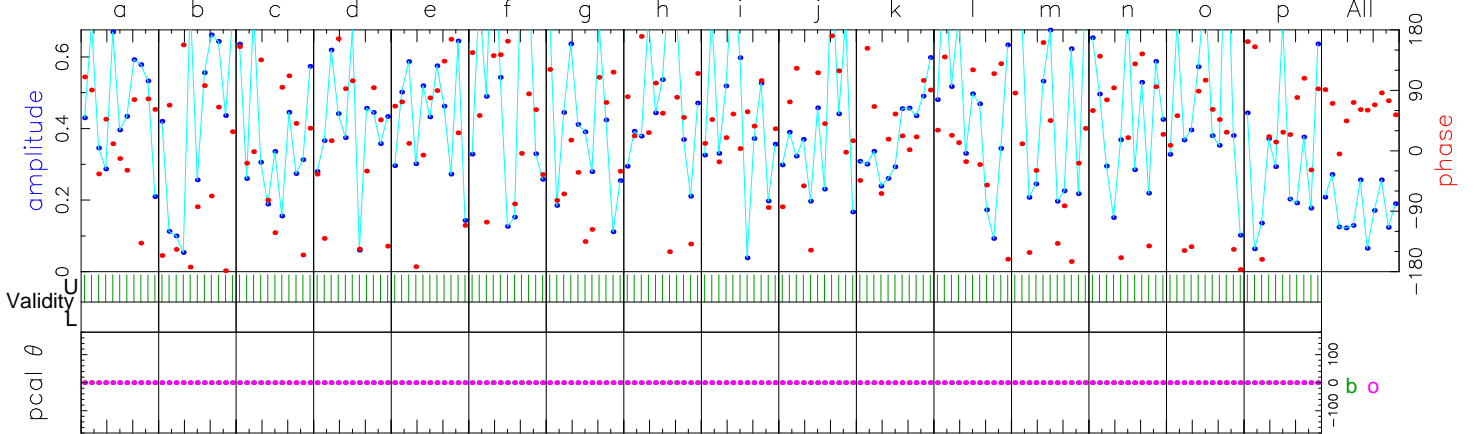
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	166.9					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
b:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL			Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL			Tracks					
Group delay (usec)(sbd)		-1.22650512652E+02																	Apriori delay (usec)	-1.22954889941E+02	Resid mbdelay (usec)	-8.12271E-03	+/-	1.8E-04
Sband delay (usec)		-1.22658488941E+02																	Apriori clock (usec)	-1.7291904E+01	Resid sbdelay (usec)	2.96401E-01	+/-	2.9E-03
Phase delay (usec)		-1.22954887807E+02																	Apriori clockrate (us/s)	-2.4337607E-07	Resid phdelay (usec)	2.13361E-06	+/-	6.2E-07
Delay rate (us/s)		-8.09117049529E-02																	Apriori rate (us/s)	-8.09214868544E-02	Resid rate (us/s)	9.78190E-06	+/-	6.0E-09
Total phase (deg)					-12.9														Apriori accel (us/s/s)	1.00974463681E-05	Resid phase (deg)	66.2	+/-	19.4

ph/seg (deg) 24.9 32.1 Amplitude 0.225 +/- 0.038 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

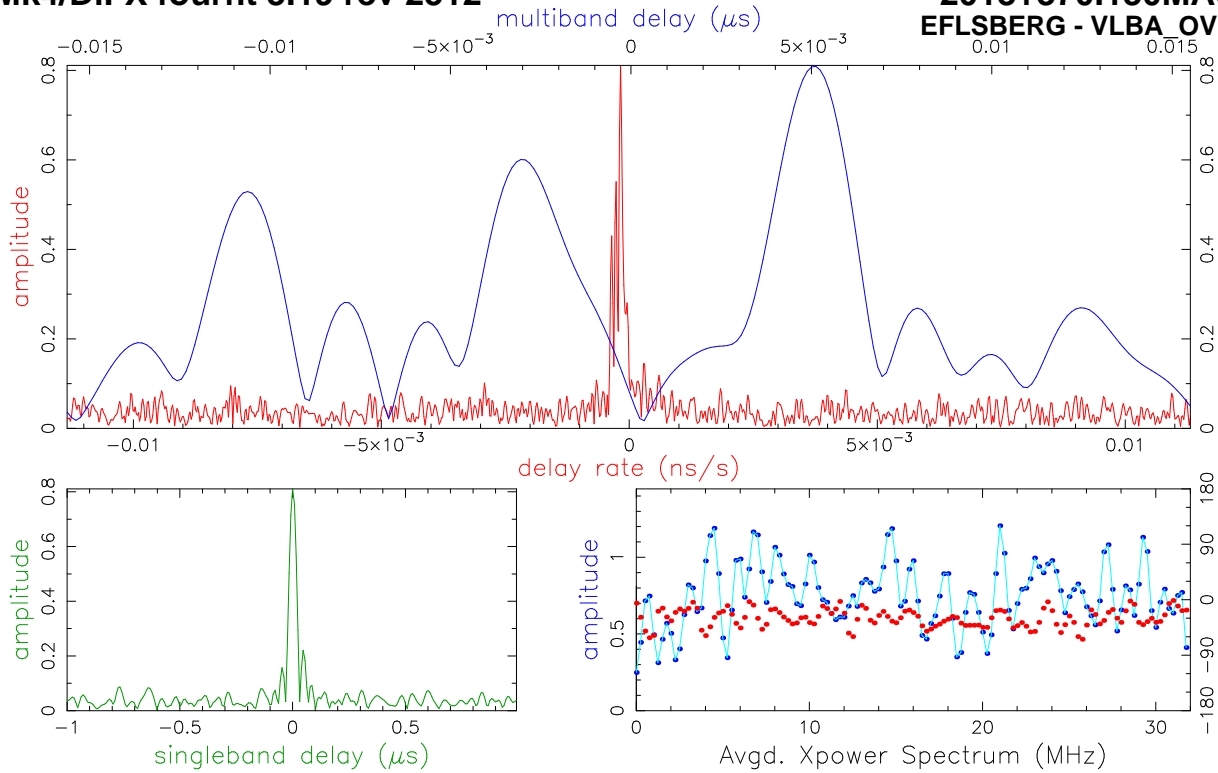
amp/seg (%) 40.5 56.0 Search (1024X64) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 28.8 38.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 48.9 67.5 Inc. seg. avg. 0.209 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011

b: az 96.2 el 59.5 pa -56.4 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 591.752 1584.496 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/bo.W.11.130MAS

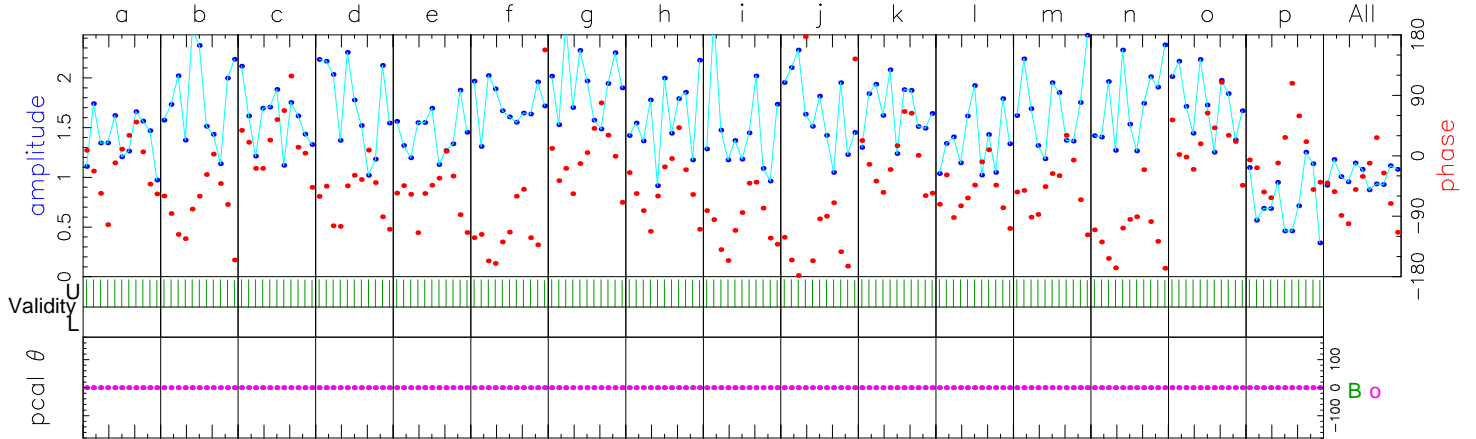


Fringe quality 6

SNR 29.6
Int time 178.189
Amp 0.811
Phase -52.9
PFD 0.0e+00
Delays (us)
SBD 0.001084
MBD 0.005089
Fringe rate (Hz)
-0.015499
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054043
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

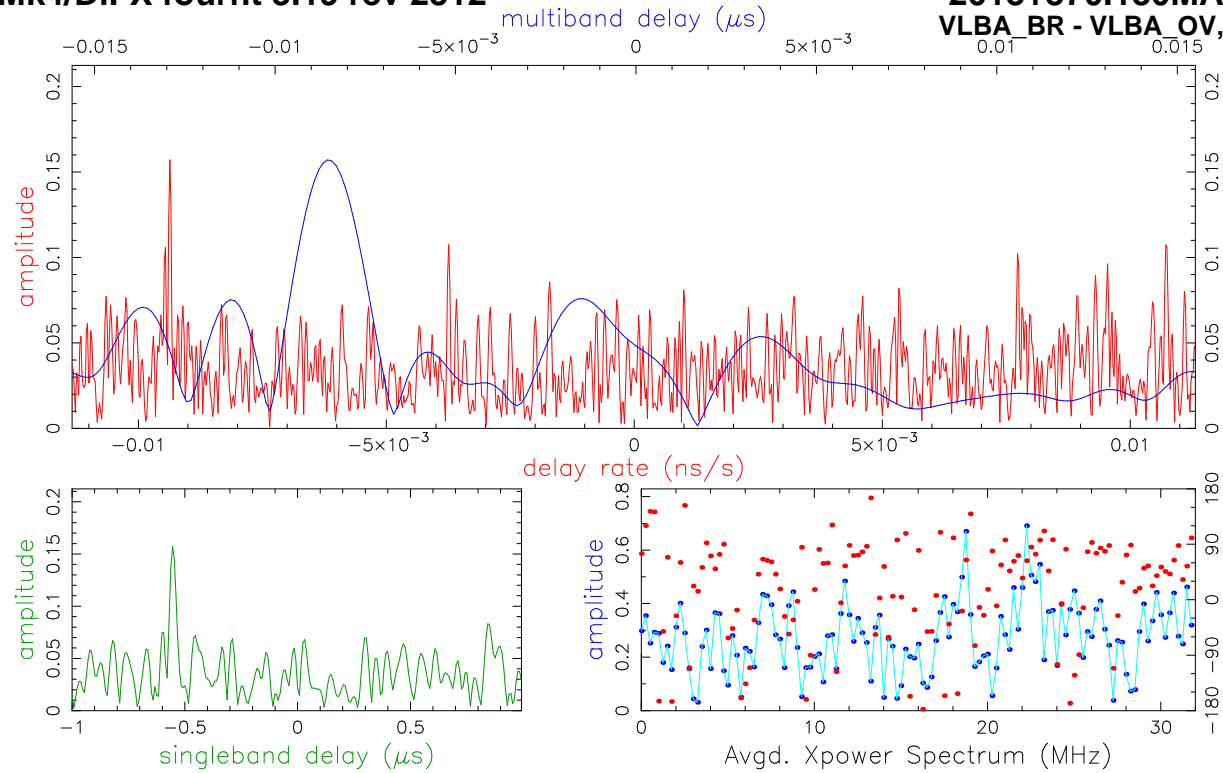


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-13.6	-77.8	23.3	-62.0	-59.3	-126.6	-4.6	-46.0	-95.9	-145.7	-8.5	-56.1	-53.6	-118.5	25.0	-9.4		Phase	-52.9				
	1.1	1.4	1.2	1.5	1.2	1.3	1.5	1.1	1.2	1.3	1.2	1.2	1.3	1.4	1.4	0.6		Ampl.	1.2				
	129.4	128.7	129.0	129.1	128.7	129.2	129.2	129.3	129.2	129.3	129.3	129.2	129.0	129.1	128.8	129.5		Sbd box	129.1				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-8.10809570476E+03															Apriori delay (usec)	-8.10810079336E+03	Resid mbdelay (usec)	5.08860E-03	+/-	3.6E-05
Sband delay (usec)			-8.10809970886E+03															Apriori clock (usec)	1.3011742E-01	Resid sbdelay (usec)	1.08450E-03	+/-	5.8E-04
Phase delay (usec)			-8.10810079506E+03															Apriori clockrate (us/s)	-2.0098100E-07	Resid phdelay (usec)	-1.70452E-06	+/-	1.2E-07
Delay rate (us/s)			-1.38629359963E+00															Apriori rate (us/s)	-1.38629341970E+00	Resid rate (us/s)	-1.79927E-07	+/-	1.2E-09
Total phase (deg)																		Apriori accel (us/s/s)	5.45147660285E-05	Resid phase (deg)	-52.9	+/-	3.9

ph/seg (deg) RMS Theor. Amplitude 0.811 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 39.4 6.4 Search (1024X64) 0.792 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 28.5 11.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 53.9 7.7 Inc. seg. avg. 1.013 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 59.2 13.5 Inc. frq. avg. 1.229 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

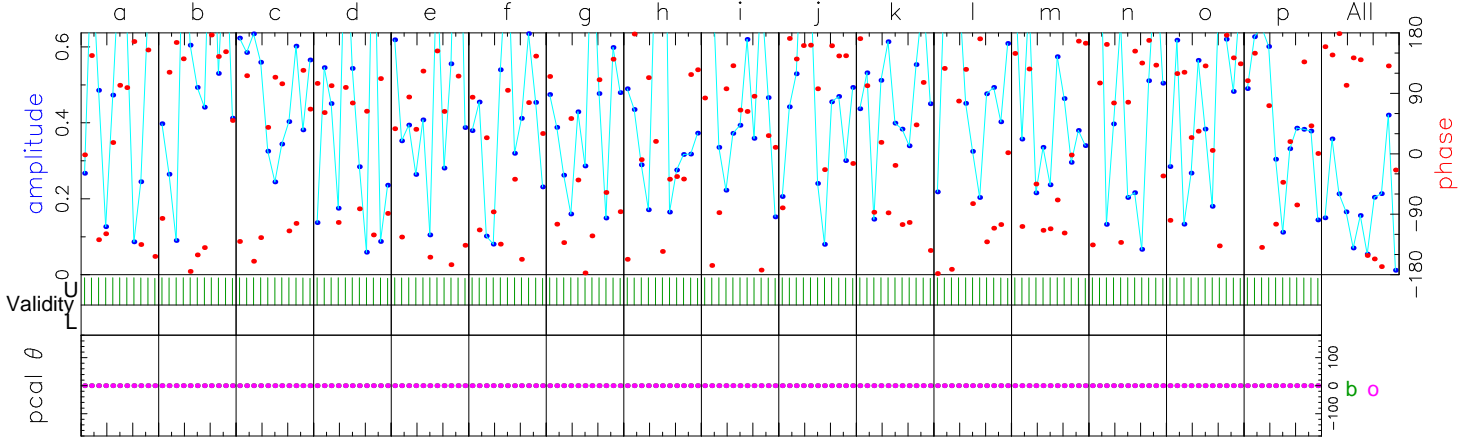
B: az 294.1 el 29.5 pa 46.8 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 10017.455 4374.223 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Bo.W.17.130MAS



Fringe quality 0
SNR 5.7
Int time 177.989
Amp 0.212
Phase 155.3
PFD 6.9e-01
Delays (us)
SBD -0.553765
MBD -0.008510
Fringe rate (Hz)
-0.808681
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054045
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

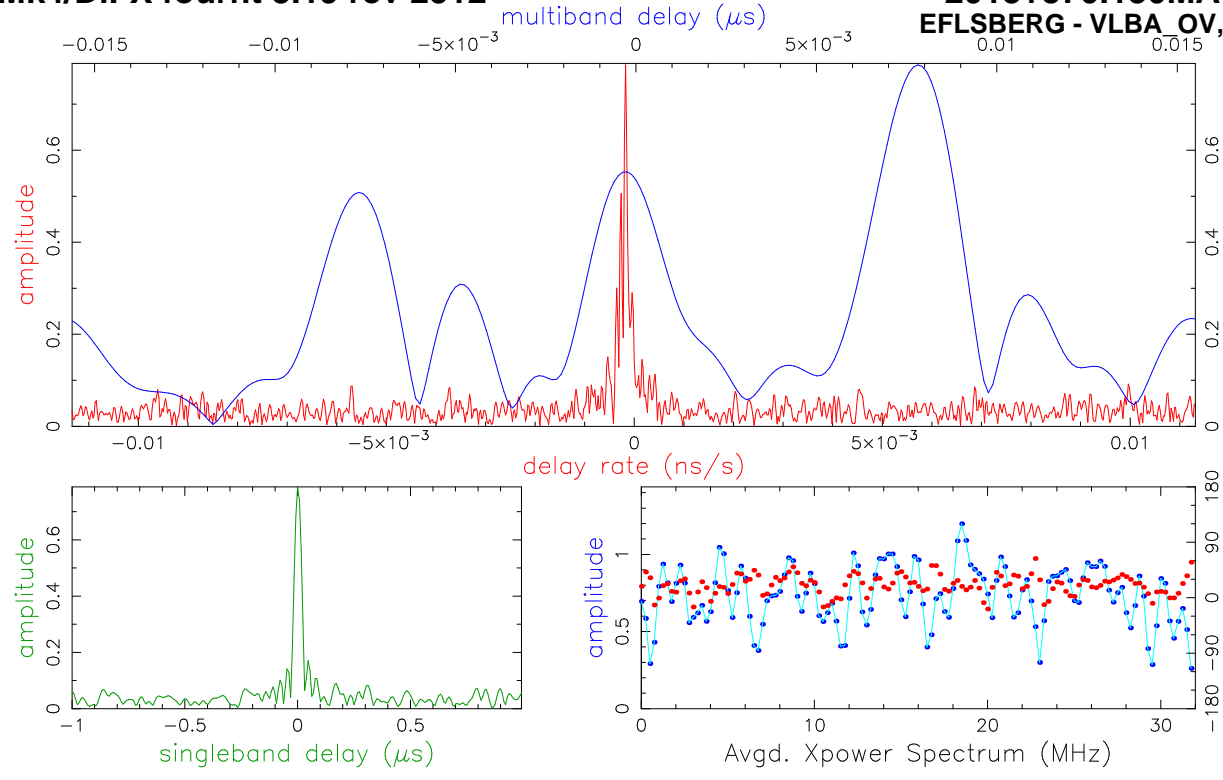


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	147.1	167.6	179.9	110.1	127.0	121.4	-147.7	-148.1	109.4	154.8	-35.8	177.0	-154.5	148.8	142.2	118.8	Phase	155.3
b	0.3	0.6	0.2	0.1	0.3	0.2	0.2	0.1	0.3	0.4	0.0	0.2	0.2	0.3	0.3	0.1	Ampl.	0.2
o	91.1	58.0	22.4	126.2	143.8	2.2	253.9	118.1	139.2	60.9	190.3	189.0	192.6	68.8	114.9	173.4	Sbd box	58.1
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) -1.23494650305E+02 Apriori delay (usec) -1.22954889941E+02 Resid mbdelay (usec) -8.51036E-03 +/- 1.9E-04
Sband delay (usec) -1.23508655441E+02 Apriori clock (usec) -1.7291904E+01 Resid sbdelay (usec) -5.53765E-01 +/- 3.0E-03
Phase delay (usec) -1.22954884932E+02 Apriori clockrate (us/s) -2.4337607E-07 Resid phdelay (usec) 5.00855E-06 +/- 6.4E-07
Delay rate (us/s) -8.09308748376E-02 Apriori rate (us/s) -8.09214868544E-02 Resid rate (us/s) -9.38798E-06 +/- 6.2E-09
Total phase (deg) 76.3 Apriori accel (us/s/s) 1.00974463681E-05 Resid phase (deg) 155.3 +/- 20.0

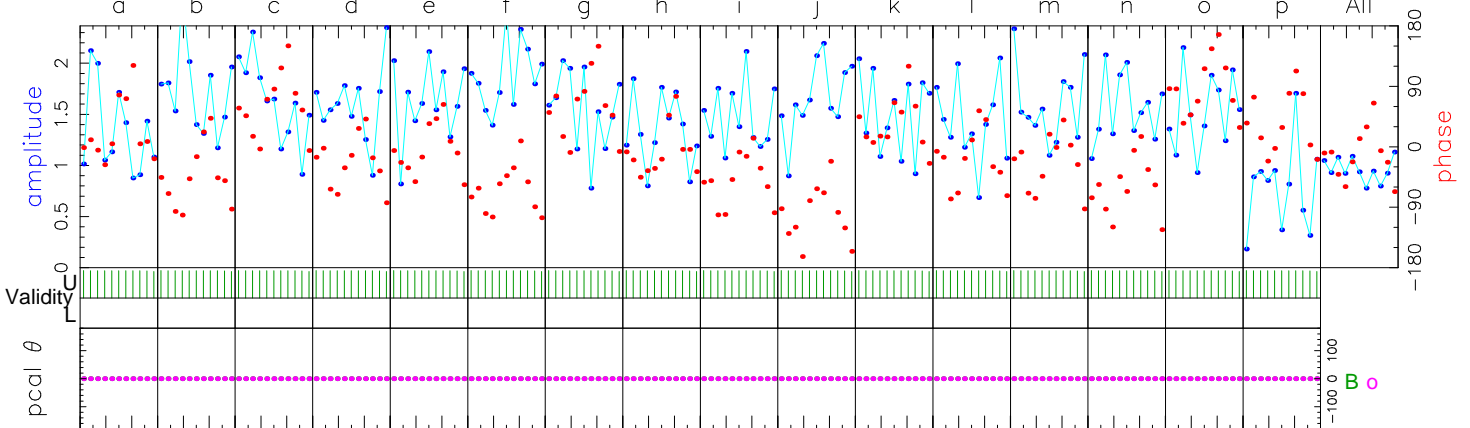
RMS Theor. Amplitude 0.212 +/- 0.037 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 62.3 33.1 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 75.9 57.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 57.6 39.9 Inc. seg. avg. 0.212 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 61.6 69.7 Inc. frq. avg. 0.196 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 96.2 el 59.5 pa -56.4 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 591.752 1584.496 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/bo.W.35.130MAS



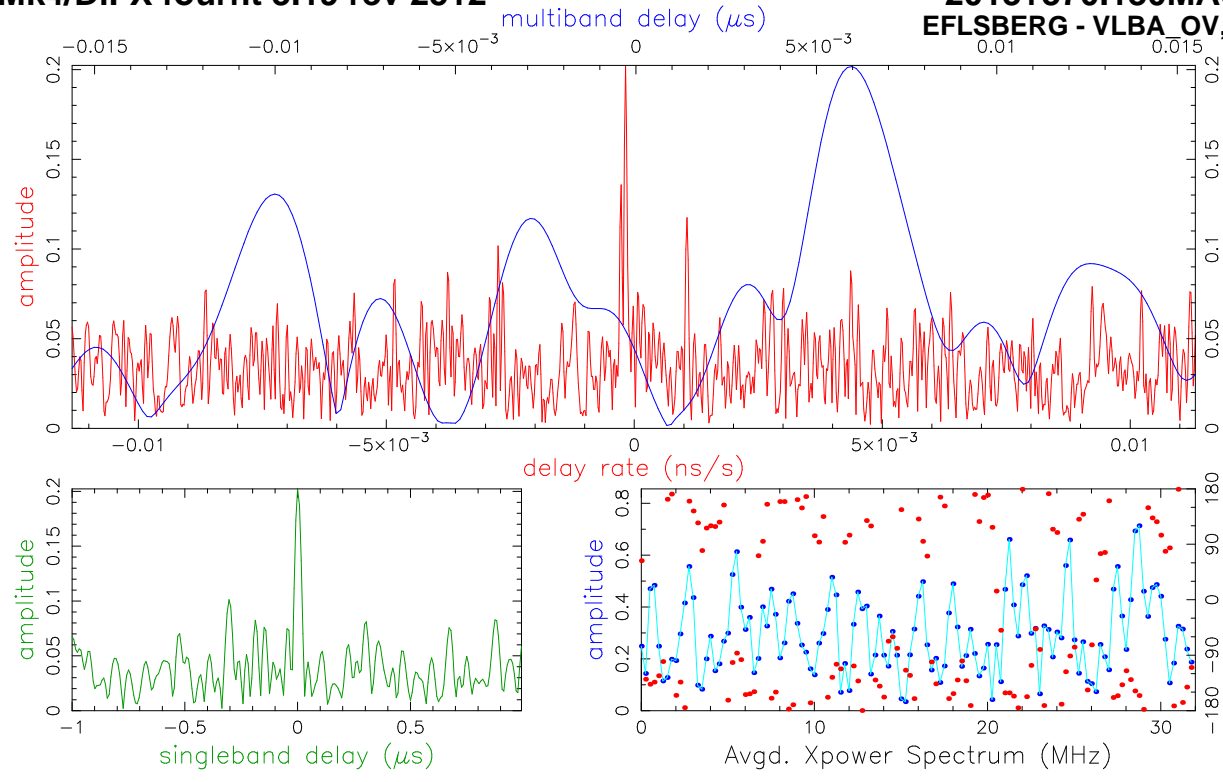
Fringe quality 6
SNR 28.8
Int time 178.189
Amp 0.789
Phase -15.0
PFD 0.0e+00
Delays (us)
SBD 0.001580
MBD 0.007829
Fringe rate (Hz)
-0.015616
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054045
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



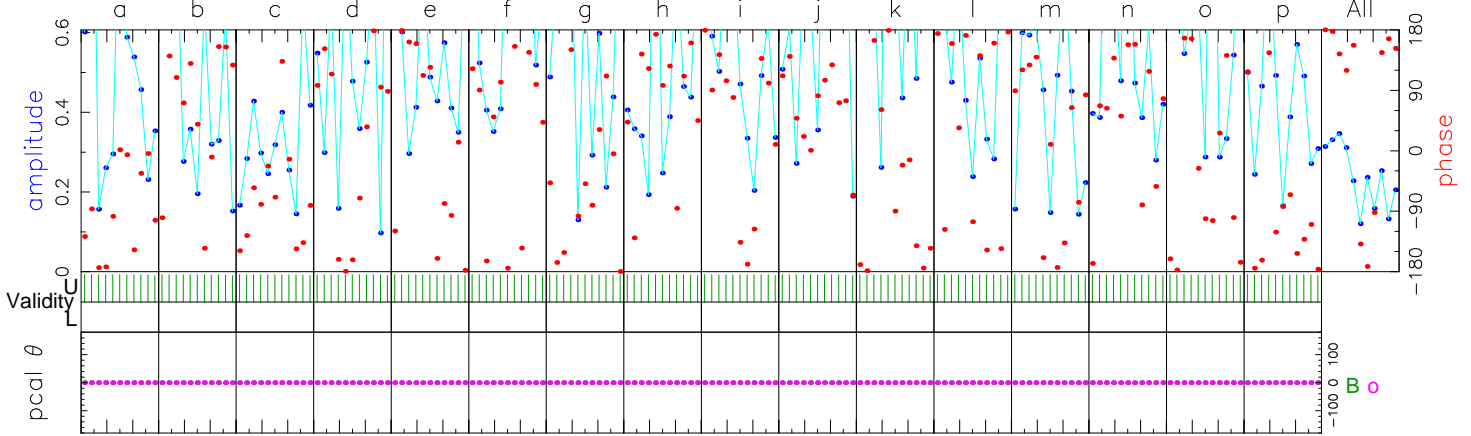
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	17.9	-53.6	54.1	-28.0	-2.7	-62.1	51.6	-7.2	-50.2	-99.1	31.4	-25.4	-25.3	-61.3	85.9	40.2		Phase	-15.0				
	1.0	1.3	1.2	1.3	1.3	1.6	1.1	1.1	1.2	1.3	1.2	1.1	1.2	1.2	1.1	0.5		Ampl.	1.2				
	129.6	128.9	128.8	129.1	129.1	129.3	129.6	129.0	129.3	129.4	129.8	129.0	129.2	129.7	129.2	128.5		Sbd box	129.2				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
B:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
B:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-8.10809296448E+03															Apriori delay (usec)	-8.10810079336E+03	Resid mbdelay (usec)	7.82888E-03	+/-	3.7E-05
Sband delay (usec)			-8.10809921386E+03															Apriori clock (usec)	1.3011742E-01	Resid sbdelay (usec)	1.57950E-03	+/-	6.0E-04
Phase delay (usec)			-8.10810079384E+03															Apriori clockrate (us/s)	-2.0098100E-07	Resid phdelay (usec)	-4.84814E-07	+/-	1.3E-07
Delay rate (us/s)			-1.38629360099E+00															Apriori rate (us/s)	-1.38629341970E+00	Resid rate (us/s)	-1.81290E-07	+/-	1.2E-09
Total phase (deg)																		Apriori accel (us/s/s)	5.45147660285E-05	Resid phase (deg)	-15.0	+/-	4.0

ph/seg (deg) RMS Theor. Amplitude 0.789 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 36.5 6.6 Search (1024X64) 0.778 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.0 11.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 53.8 8.0 Inc. seg. avg. 0.956 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 54.9 13.9 Inc. frq. avg. 1.158 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 B: az 294.1 el 29.5 pa 46.8 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 10017.455 4374.223 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Bo.W.36.130MAS



Fringe quality 9
 SNR 7.4
 Int time 178.189
 Amp 0.202
 Phase 165.1
 PFD 2.4e-05
 Delays (us)
 SBD 0.001246
 MBD 0.005957
 Fringe rate (Hz)
 -0.015966
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
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 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

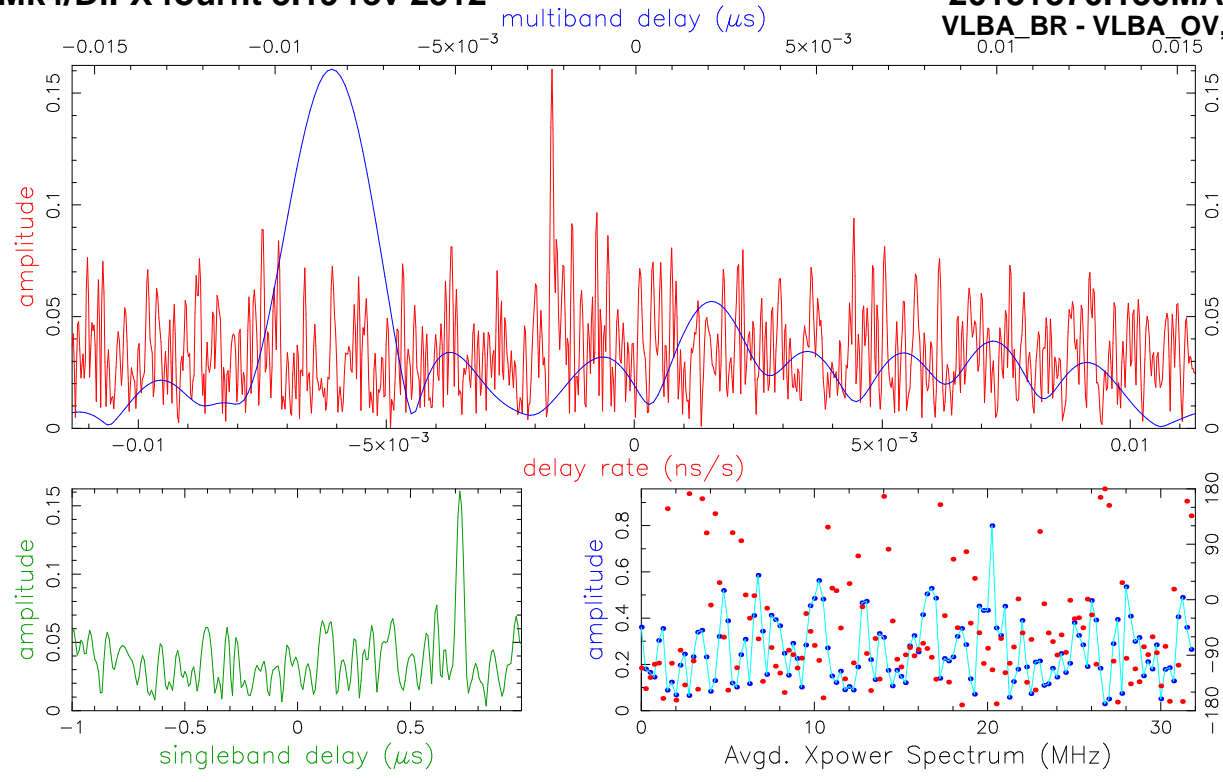


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
B:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
Group delay (usec)(sbd)			-8.10809483685E+03																
Sband delay (usec)			-8.10809954736E+03																
Phase delay (usec)			-8.10810078804E+03																
Delay rate (us/s)			-1.38629360505E+00																
Total phase (deg)				42.7															
Apriori delay (usec)																			
Apriori clock (usec)																			
Apriori clockrate (us/s)																			
Apriori rate (us/s)																			
Apriori accel (us/s/s)																			
Resid mbdelay (usec)																			
Resid sbdelay (usec)																			
Resid phdelay (usec)																			
Resid rate (us/s)																			
Resid phase (deg)																			
Pcal mode: MANUAL, MANUAL																			
Pcal rate: 0.000E+00, 0.000E+00 (us/s)																			
PC period (AP's) 5, 5																			
sb window (us)																			
SampCntNorm: enabled																			
mb window (us)																			
Sample rate(MSamp/s): 64																			
dr window (ns/s)																			
Data rate(Mb/s): 2048																			
nlags: 128 t_cohere infinite																			
ion window (TEC)																			
simultaneous interpolator																			

B: az 294.1 el 29.5 pa 46.8 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 10017.455 4374.223
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Bo.W.56.130MAS

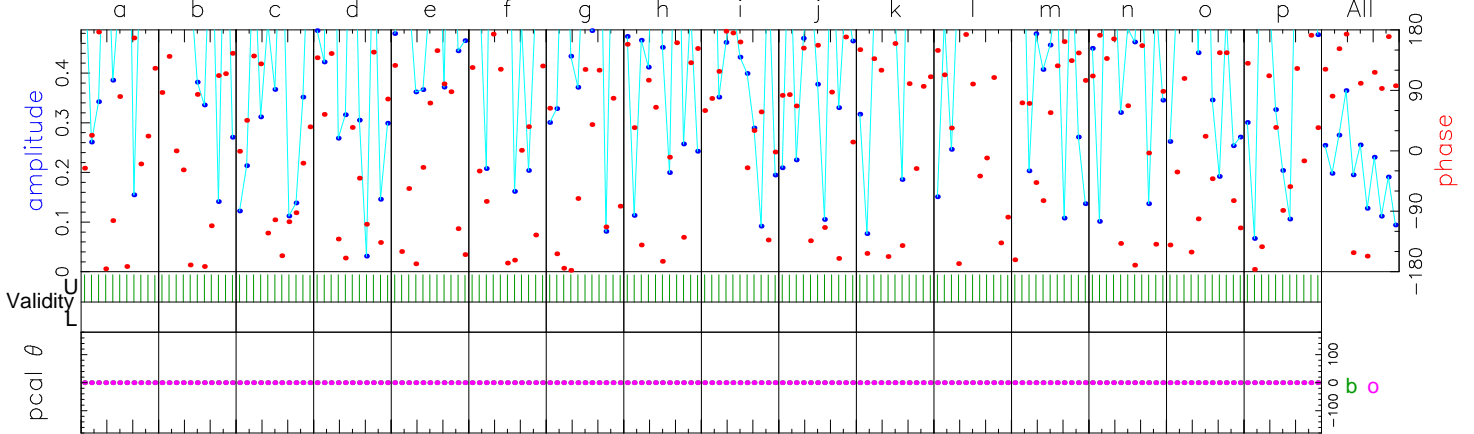
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, bo
VLBA_BR - VLBA_OV, fgroup W, pol LR



Fringe quality 0
SNR 5.9
Int time 177.989
Amp 0.162
Phase 140.0
PFD 4.2e-01
Delays (us)
SBD 0.719828
MBD -0.008428
Fringe rate (Hz)
-0.142397
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054048
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



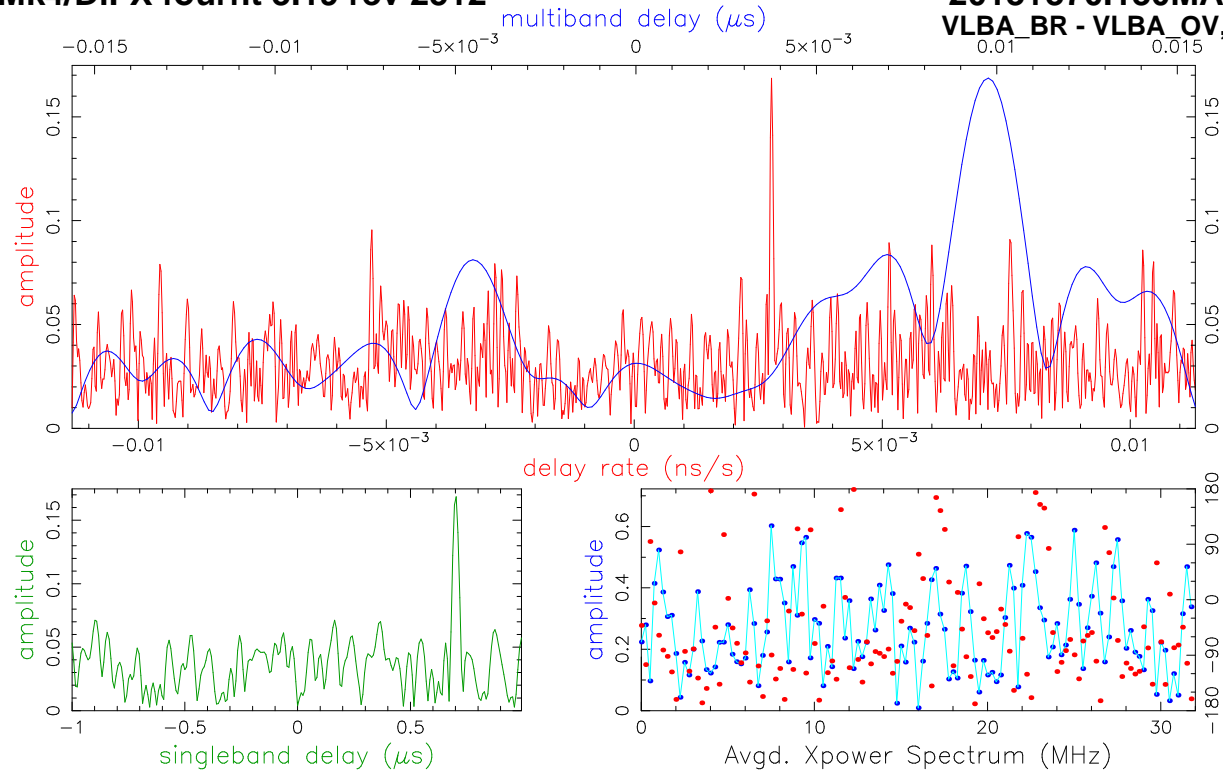
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
144.0	133.0	-162.2	123.6	144.8	160.8	143.6	144.7	108.2	127.9	129.7	177.2	120.5	152.1	-109.2	129.8	129.8	Phase	140.0				
0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.1	0.2	0.3	0.1	0.1	0.1	Ampl.	0.1				
33.1	210.6	31.5	153.1	7.3	211.5	11.6	126.5	162.5	165.6	238.4	2.6	44.3	218.4	238.2	94.9	94.9	Sbd box	221.1				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.22244568071E+02														Apriori delay (usec)	-1.22954889941E+02	Resid mbdelay (usec)	-8.42813E-03	+/-	1.8E-04
Sband delay (usec)			-1.22235061941E+02														Apriori clock (usec)	-1.7291904E+01	Resid sbdelay (usec)	7.19828E-01	+/-	2.9E-03
Phase delay (usec)			-1.22954885427E+02														Apriori clockrate (us/s)	-2.4337607E-07	Resid phdelay (usec)	4.51380E-06	+/-	6.3E-07
Delay rate (us/s)			-8.09231399406E-02														Apriori rate (us/s)	-8.09214868544E-02	Resid rate (us/s)	-1.65309E-06	+/-	6.0E-09
Total phase (deg)				61.0													Apriori accel (us/s/s)	1.00974463681E-05	Resid phase (deg)	140.0	+/-	19.5

ph/seg (deg) 43.6 32.4 Amplitude 0.162 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 55.8 56.5 Search (1024X64) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 37.5 39.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 47.7 68.1 Inc. seg. avg. 0.182 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 96.2 el 59.5 pa -56.4 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 591.752 1584.496 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/bo.W.57.130MAS

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, bo
VLBA_BR - VLBA_OV, fgroup W, pol RL

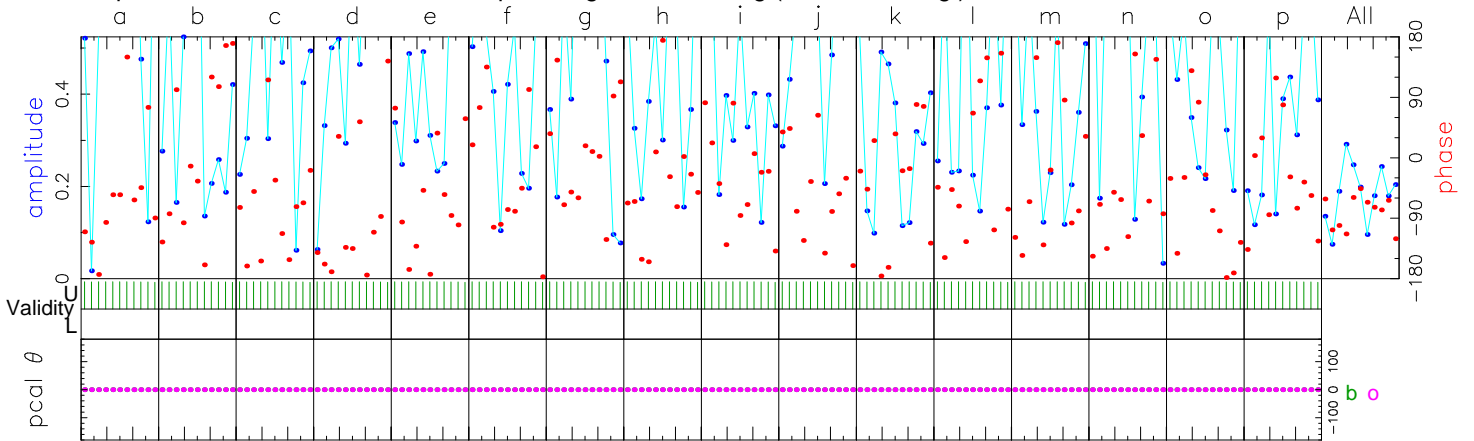


Fringe quality 0

SNR 6.2
Int time 177.989
Amp 0.175
Phase -81.3
PFD 6.4e-02
Delays (us)
SBD 0.700572
MBD 0.009727
Fringe rate (Hz) 0.238923
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054050
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-87.8	-76.9	-95.3	-153.5	-91.9	-17.0	-25.5	-54.7	-16.5	-53.9	4.1	-119.1	-113.8	-101.1	-98.5	-54.9	Phase	-81.3
	0.3	0.1	0.2	0.3	0.2	0.0	0.3	0.3	0.1	0.3	0.0	0.3	0.2	0.3	0.2	0.2	Ampl.	0.2
	218.6	240.6	33.7	225.6	168.8	68.2	176.6	250.6	23.2	217.1	9.2	120.5	240.6	130.9	187.3	246.0	Sbd box	218.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-1.22257662485E+02			Apriori delay (usec)			-1.22954889941E+02			Resid mbdelay (usec)			9.72746E-03			+/- 1.7E-04		
Sband delay (usec)	-1.22254317941E+02			Apriori clock (usec)			-1.7291904E+01			Resid sbdelay (usec)			7.00572E-01			+/- 2.8E-03		
Phase delay (usec)	-1.22954892564E+02			Apriori clockrate (us/s)			-2.4337607E-07			Resid phdelay (usec)			-2.62313E-06			+/- 5.9E-07		
Delay rate (us/s)	-8.09187131999E-02			Apriori rate (us/s)			-8.09214868544E-02			Resid rate (us/s)			2.77365E-06			+/- 5.7E-09		
Total phase (deg)	-160.4			Apriori accel (us/s/s)			1.00974463681E-05			Resid phase (deg)			-81.3			+/- 18.4		

ph/seg (deg) 24.0 30.6
amp/seg (%) 37.2 53.3
ph/frq (deg) 46.0 36.8
amp/frq (%) 59.0 64.3

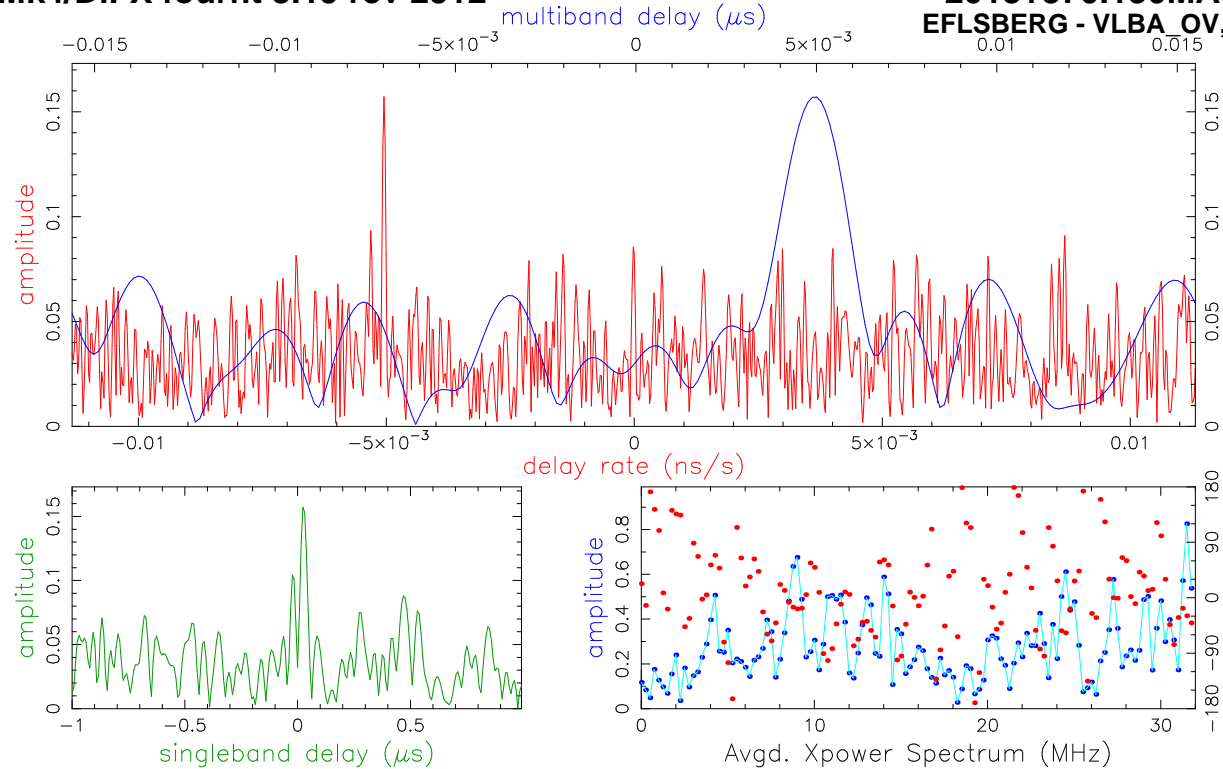
RMS Theor. Amplitude 0.175 +/- 0.028
Search (1024X64) 0.161
Interp. 0.000
Inc. seg. avg. 0.166
Inc. frq. avg. 0.176

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(MSamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

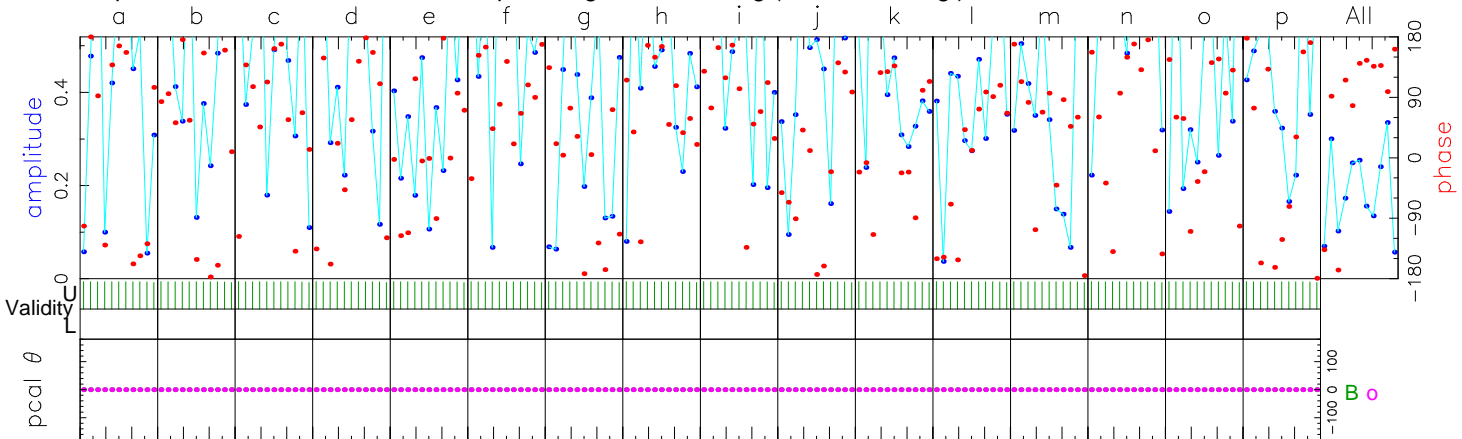
b: az 96.2 el 59.5 pa -56.4 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 591.752 1584.496 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/bo.W.76.130MAS



Fringe quality 0
SNR 5.8
Int time 178.189
Amp 0.173
Phase 120.6
PFD 5.3e-01
Delays (us)
SBD 0.026283
MBD 0.004913
Fringe rate (Hz)
-0.435125
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054050
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

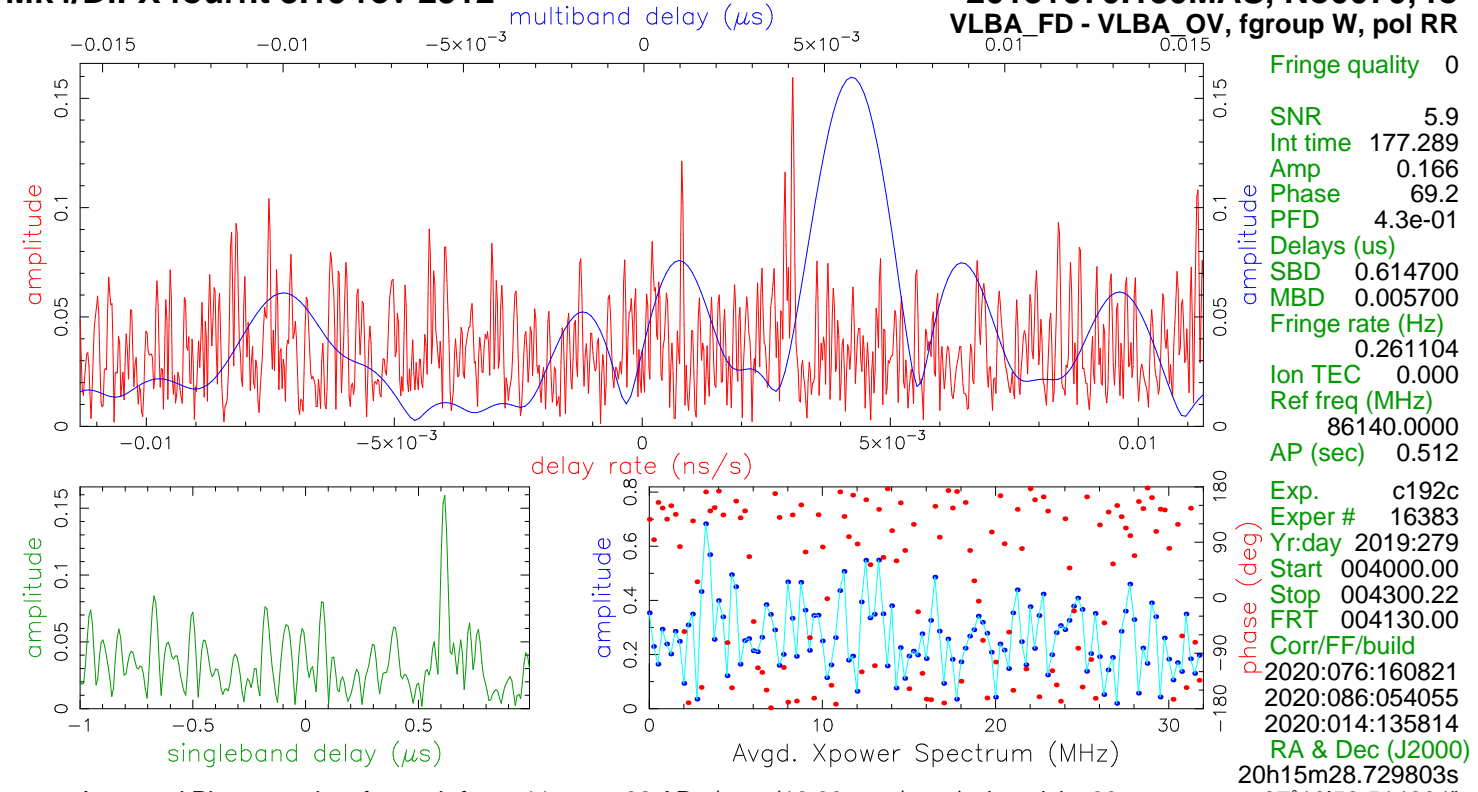


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	157.6	105.1	112.6	173.0	14.1	108.6	27.4	93.7	110.5	111.6	166.3	93.2	100.5	143.4	100.5	169.0	Phase	120.6
B	0.3	0.3	0.2	0.2	0.1	0.3	0.1	0.2	0.4	0.1	0.0	0.2	0.2	0.2	0.1	0.3	Ampl.	0.2
o	164.9	185.5	212.5	167.3	176.1	251.7	156.5	46.0	64.5	227.7	184.0	87.3	77.0	227.2	117.3	86.8	Sbd box	132.4
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

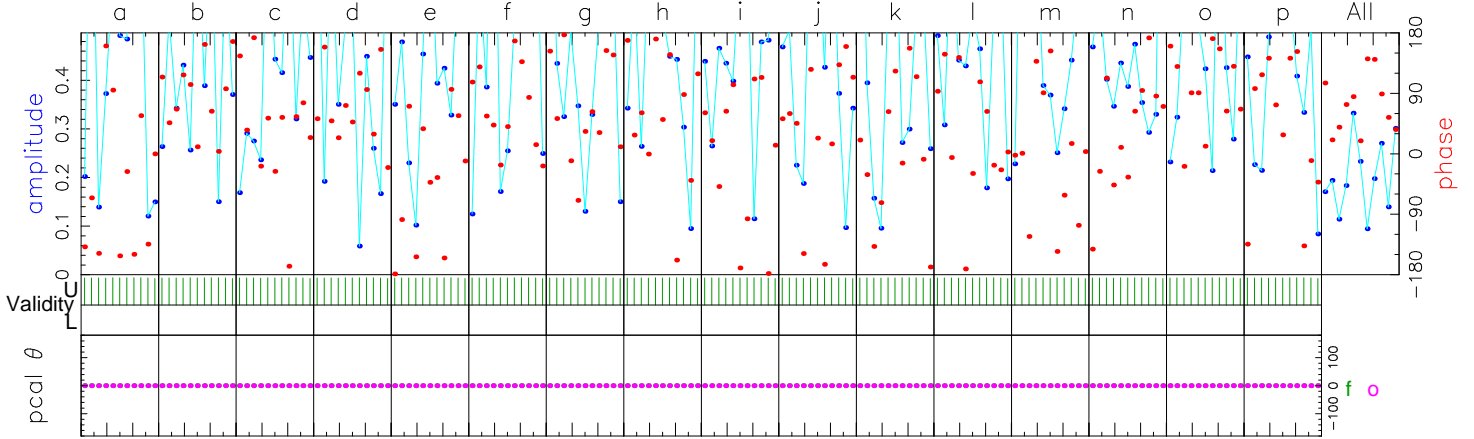
Group delay (usec)(sbd) -8.10806463059E+03 Apriori delay (usec) -8.10810079336E+03 Resid mbdelay (usec) 4.91277E-03 +/- 1.9E-04
 Sband delay (usec) -8.10807451086E+03 Apriori clock (usec) 1.3011742E-01 Resid sbdelay (usec) 2.62825E-02 +/- 3.0E-03
 Phase delay (usec) -8.10810078947E+03 Apriori clockrate (us/s) -2.0098100E-07 Resid phdelay (usec) 3.89028E-06 +/- 6.4E-07
 Delay rate (us/s) -1.38629847107E+00 Apriori rate (us/s) -1.38629341970E+00 Resid rate (us/s) -5.05137E-06 +/- 6.1E-09
 Total phase (deg) -1.8 Apriori accel (us/s/s) 5.45147660285E-05 Resid phase (deg) 120.6 +/- 19.7

RMS Theor. Amplitude 0.173 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 44.9 32.7 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 58.9 57.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 47.8 39.4 Inc. seg. avg. 0.176 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 60.8 68.8 Inc. frq. avg. 0.170 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 294.1 el 29.5 pa 46.8 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 10017.455 4374.223 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Bo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Bo.W.77.130MAS

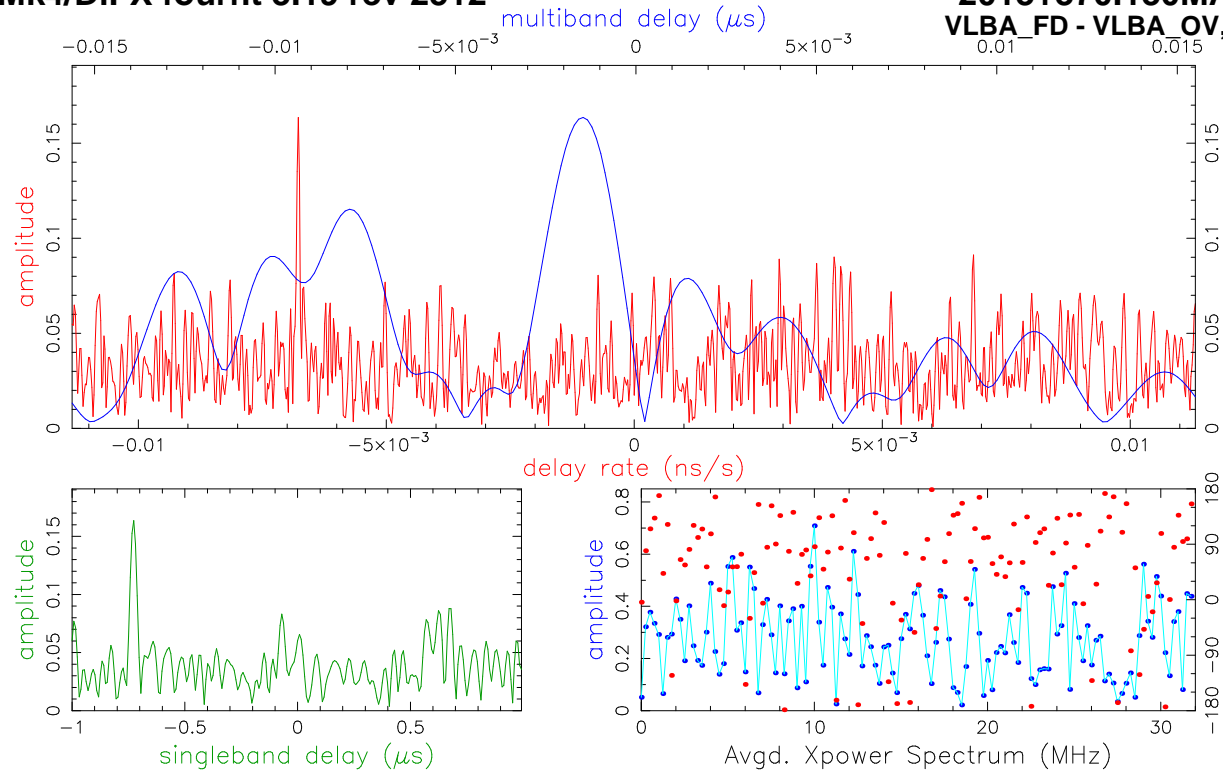


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-127.8	80.1	58.3	48.2	-9.2	71.0	117.3	103.4	64.2	74.6	53.4	27.0	-13.7	53.2	93.8	101.0	Phase	69.2
	0.1	0.3	0.2	0.3	0.1	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.2	Ampl.	0.2
	54.1	180.2	23.6	207.3	125.3	144.5	99.9	161.8	149.2	241.8	95.5	30.1	98.4	240.2	15.2	154.1	Sbd box	207.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd)	1.46125174225E+03	Apriori delay (usec)	1.46065229226E+03	Resid mbdelay (usec)	5.69999E-03	+/-	1.8E-04
Sband delay (usec)	1.46126699226E+03	Apriori clock (usec)	-1.6195913E+01	Resid sbdelay (usec)	6.14700E-01	+/-	2.9E-03
Phase delay (usec)	1.46065229450E+03	Apriori clockrate (us/s)	-9.1930498E-08	Resid phdelay (usec)	2.23139E-06	+/-	6.3E-07
Delay rate (us/s)	-1.80688040137E-01	Apriori rate (us/s)	-1.80691071297E-01	Resid rate (us/s)	3.03116E-06	+/-	6.1E-09
Total phase (deg)	233.2	Apriori accel (us/s/s)	-1.43661115354E-05	Resid phase (deg)	69.2	+/-	19.5
ph/seg (deg)	RMS 41.9 Theor. 32.4	Amplitude Search (1024X64)	0.166 +/- 0.028	PCal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	51.9 56.5	Interp.	0.157	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	58.4 39.1	Inc. seg. avg.	0.180	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
amp/frq (%)	53.2 68.2	Inc. frq. avg.	0.162	Sample rate(MSamp/s): 64	nlags: 128 t_cohere infinite	dr window (ns/s)	-0.011 0.011
f: az 64.9 el 69.4 pa -101.3	o: az 78.2 el 60.0 pa -78.1	u, v (fr/asec)	1287.833 -1538.353	Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00	

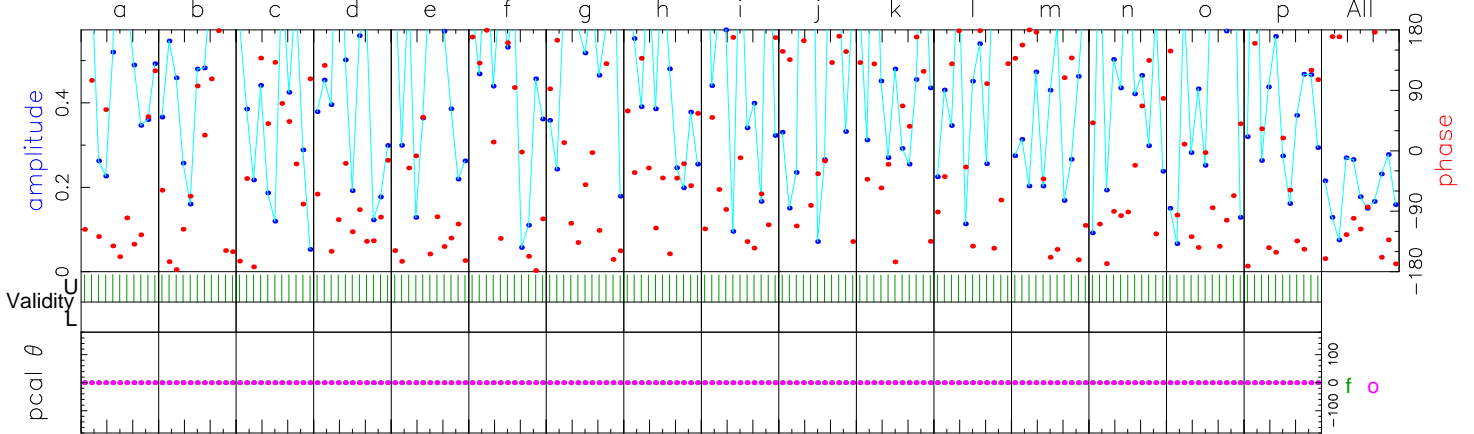


Fringe quality 0

SNR 6.0
Int time 177.289
Amp 0.191
Phase -140.6
PFD 2.6e-01
Delays (us)
SBD -0.727770
MBD -0.001490
Fringe rate (Hz)
-0.585105
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

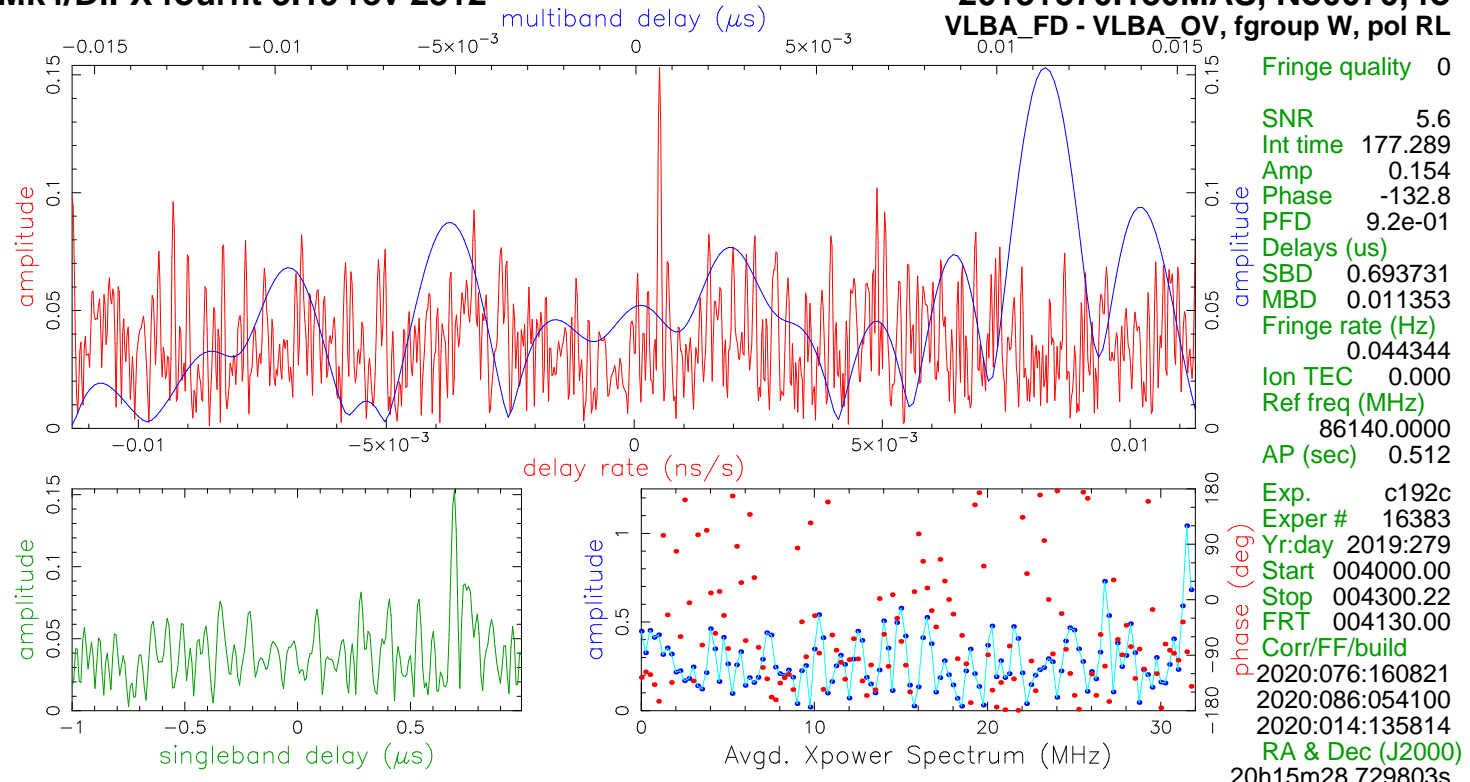
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054058
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

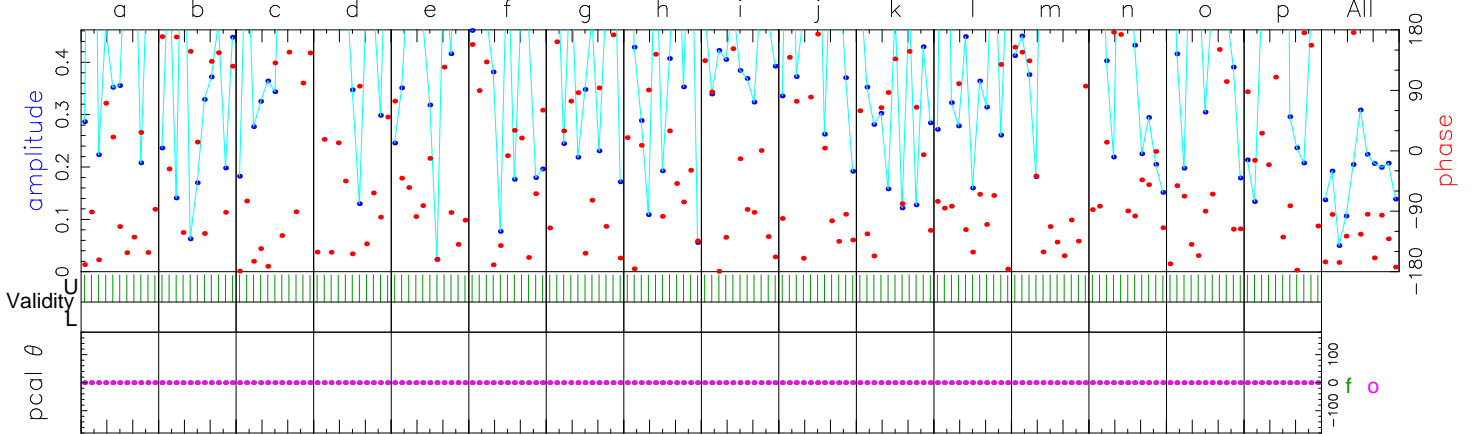


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		1.45993205218E+03																
Sband delay (usec)		1.45992452226E+03																
Phase delay (usec)		1.46065228773E+03																
Delay rate (us/s)		-1.80697863784E-01																
Total phase (deg)				23.4														
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MSamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
ion window (TEC)																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 35.7 31.8 Search (1024X64) 0.159 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 41.6 55.5 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 67.0 38.4 Inc. seg. avg. 0.194 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 57.0 67.0 Inc. frq. avg. 0.226 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 f: az 64.9 el 69.4 pa -101.3 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 1287.833 -1538.353 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/fo..130MAS Output file: /Exps/c192c/v2/1234/No0070/fo.W.129.130MAS simultaneous interpolator

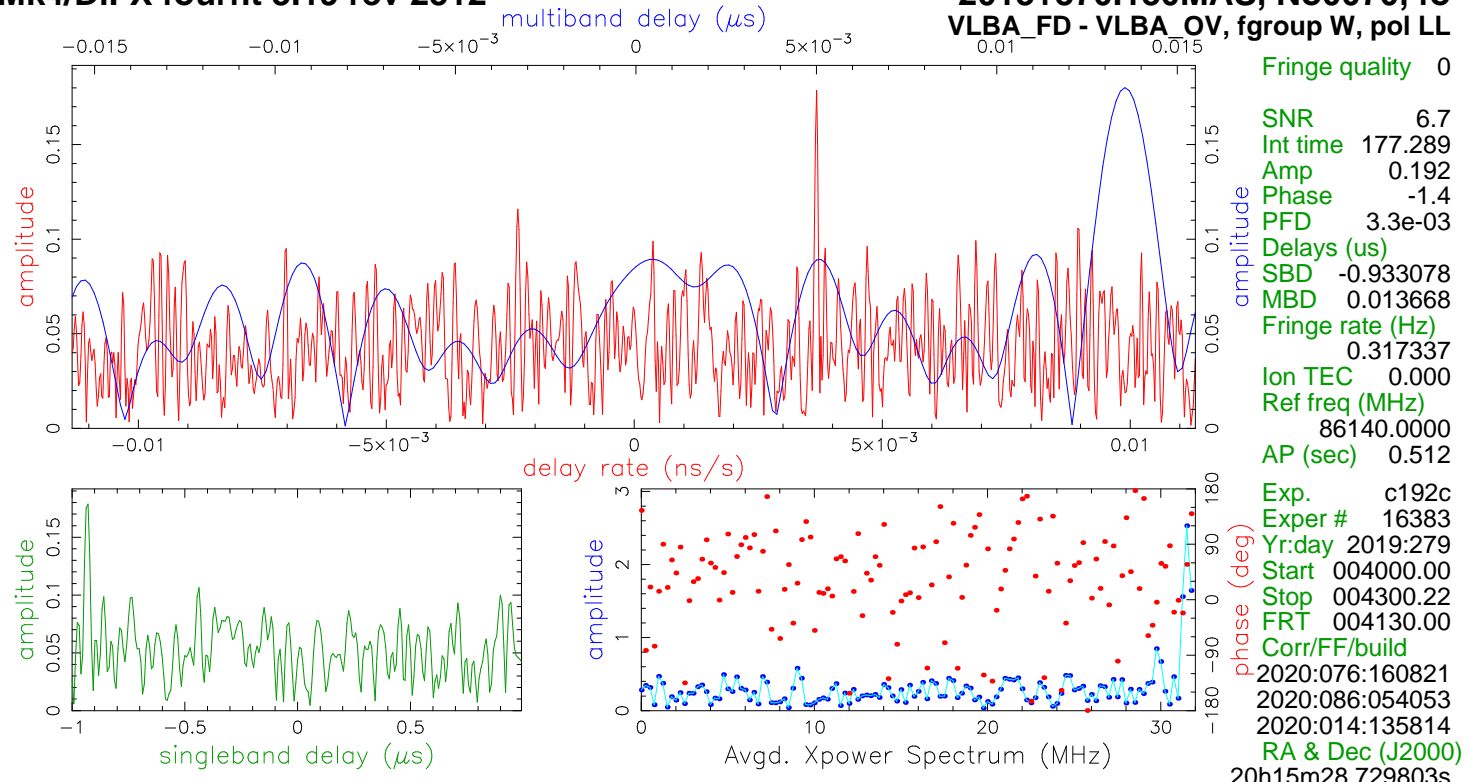


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-117.5	-159.9	-165.6	-86.1	-95.6	99.5	-166.3	-14.0	-150.2	-169.9	117.9	-100.9	-161.7	-93.2	-142.7	-130.9	Phase	-132.8				
	0.3	0.1	0.3	0.1	0.3	0.1	0.2	0.2	0.1	0.2	0.1	0.3	0.3	0.3	0.3	0.2	Ampl.	0.2				
	216.6	215.2	138.2	55.5	100.6	252.2	98.7	174.9	126.6	255.6	100.6	103.3	218.3	226.0	112.8	15.8	Sbd box	217.8				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			1.46135114497E+03														Apriori delay (usec)	1.46065229226E+03	Resid mbdelay (usec)	1.13527E-02	+/-	1.9E-04
Sband delay (usec)			1.46134602376E+03														Apriori clock (usec)	-1.6195913E+01	Resid sbdelay (usec)	6.93731E-01	+/-	3.1E-03
Phase delay (usec)			1.46065228798E+03														Apriori clockrate (us/s)	-9.1930498E-08	Resid phdelay (usec)	-4.28245E-06	+/-	6.6E-07
Delay rate (us/s)			-1.80690556513E-01														Apriori rate (us/s)	-1.80691071297E-01	Resid rate (us/s)	5.14784E-07	+/-	6.3E-09
Total phase (deg)					31.2												Apriori accel (us/s/s)	-1.43661115354E-05	Resid phase (deg)	-132.8	+/-	20.5

ph/seg (deg) RMS Theor. Amplitude 0.154 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 45.7 59.2 Search (1024X64) 0.150 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 62.3 40.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 62.9 71.4 Inc. seg. avg. 0.153 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 f: az 64.9 el 69.4 pa -101.3 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 1287.833 -1538.353 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/fo..130MAS Output file: /Exps/c192c/v2/1234/No0070/fo.W.150.130MAS simultaneous interpolator



Fringe quality 0

SNR 6.7

Int time 177.289

Amp 0.192

Phase -1.4

PFD 3.3e-03

Delays (us)

SBD -0.933078

MBD 0.013668

Fringe rate (Hz) 0.317337

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 004000.00

Stop 004300.22

FRT 004130.00

Corr/FF/build

2020:076:160821

2020:086:054053

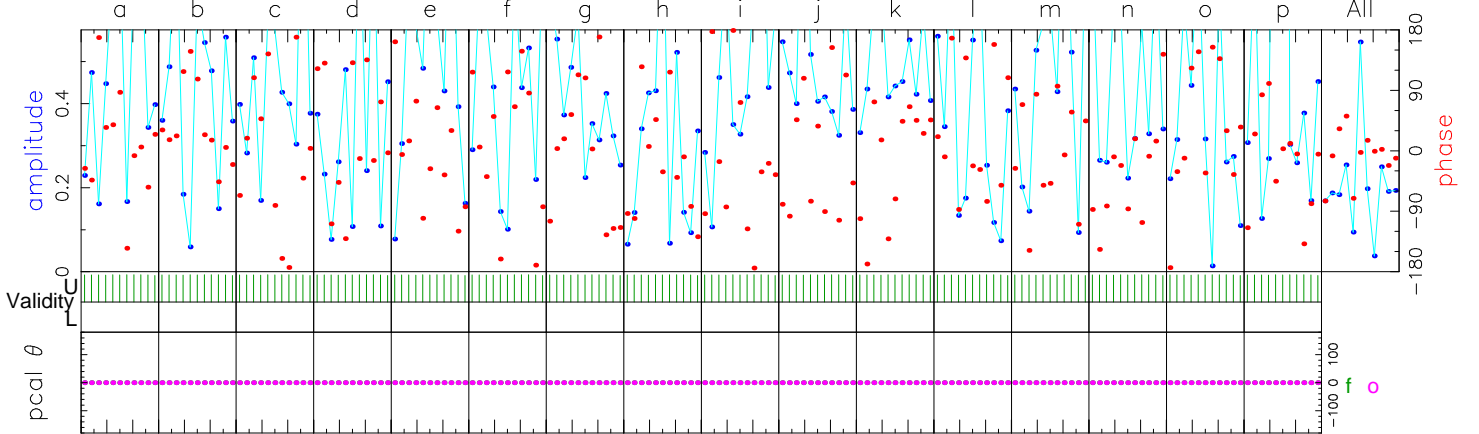
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)		1.45972845982E+03																1.36676E-02	+/- 1.6E-04
Sband delay (usec)		1.45971921476E+03																-9.33078E-01	+/- 2.6E-03
Phase delay (usec)		1.46065229222E+03																-4.66197E-08	+/- 5.5E-07
Delay rate (us/s)		-1.80687387324E-01																3.68397E-06	+/- 5.3E-09
Total phase (deg)					162.6													-1.4	+/- 17.1
ph/seg (deg)	RMS	Theor.																	
amp/seg (%)	36.9	28.4																	
ph/frq (deg)	68.0	49.6																	
amp/frq (%)	49.0	34.3																	
	93.7	59.8																	
f: az 64.9 el 69.4 pa -101.3																			
o: az 78.2 el 60.0 pa -78.1																			
u,v (fr/asec) 1287.833 -1538.353																			
Control file: cf_1234_gmva																			
Input file: /Exps/c192c/v2/1234/No0070/fo..130MAS																			
Output file: /Exps/c192c/v2/1234/No0070/fo.W.92.130MAS																			

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(MSamp/s): 64

Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

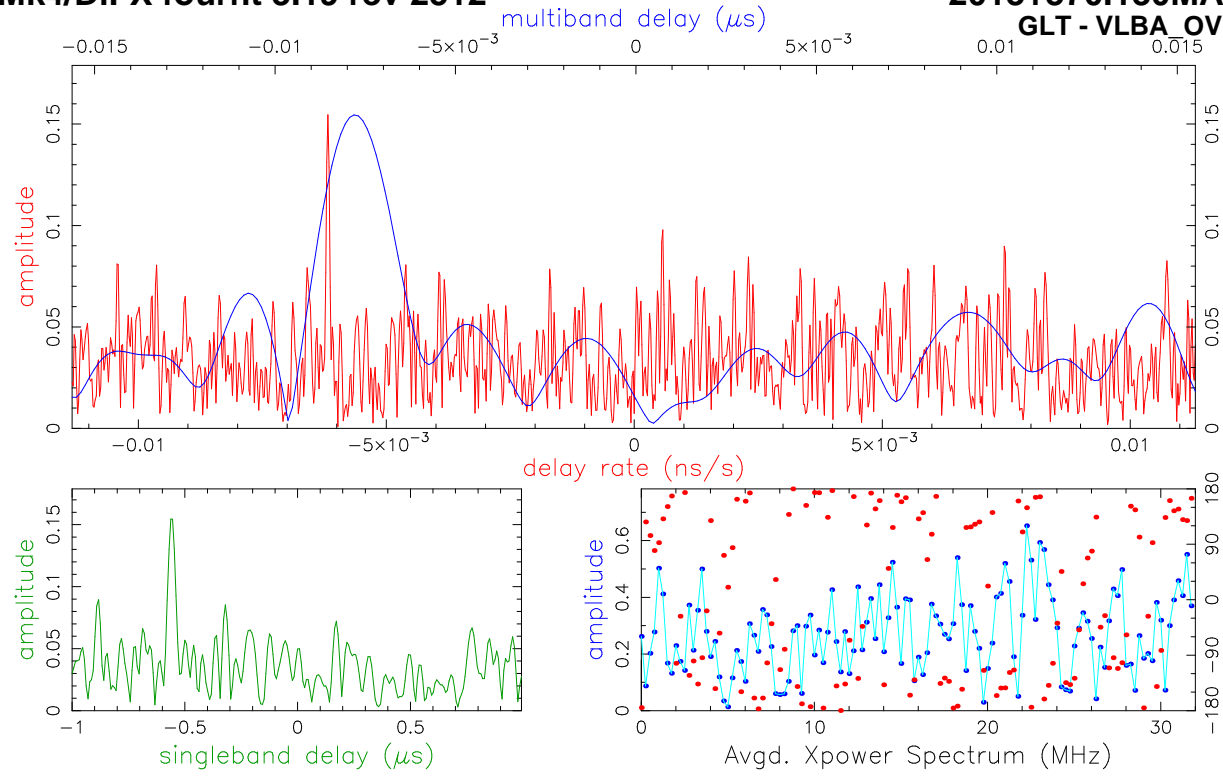
sb window (us) -1.000 1.000

mb window (us) -0.016 0.016

dr window (ns/s) -0.011 0.011

ion window (TEC) 0.00 0.00

simultaneous interpolator

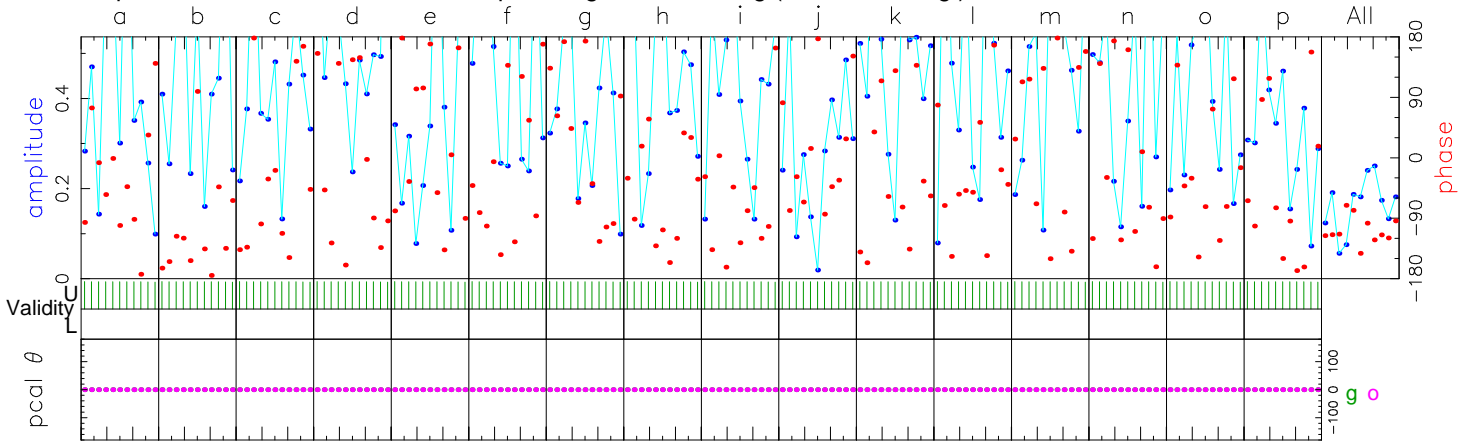


Fringe quality 0

SNR 5.8
Int time 178.378
Amp 0.179
Phase -108.8
PFD 6.5e-01
Delays (us)
SBD -0.558636
MBD -0.007806
Fringe rate (Hz)
-0.533867
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

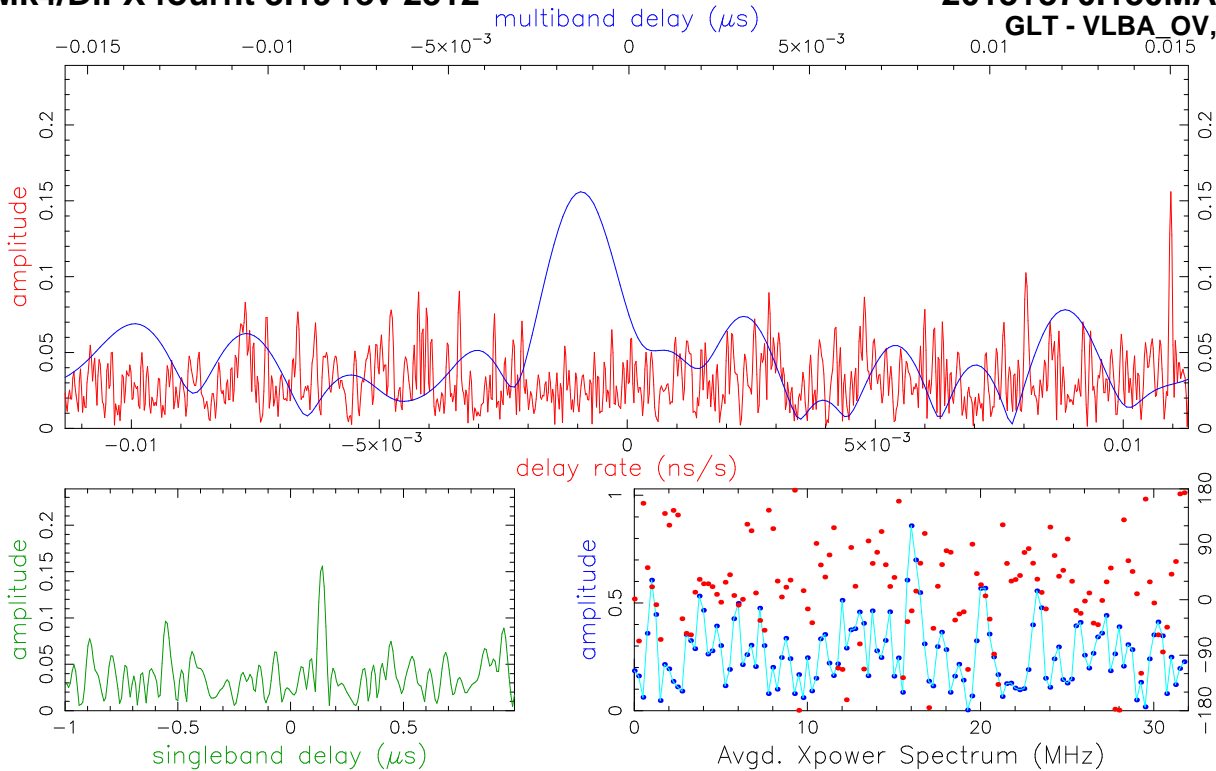
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054103
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-42.4	-136.4	-144.0	-141.8	-100.7	-96.6	-149.6	-71.1	-108.4	-38.7	-102.2	-85.4	-172.6	-106.8	-78.6	-159.6	Phase	-108.8				
	0.2	0.3	0.2	0.3	0.2	0.3	0.1	0.2	0.3	0.2	0.1	0.3	0.2	0.3	0.2	0.1	Ampl.	0.2				
	16.7	210.0	15.5	11.6	187.9	118.5	233.1	149.9	240.8	151.7	107.7	21.2	28.7	214.7	75.5	142.1	Sbd box	57.5				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-2.12151822763E+03														Apriori delay (usec)	-2.12094792113E+03	Resid mbdelay (usec)	-7.80650E-03	+/-	1.9E-04
Sband delay (usec)			-2.12150655763E+03														Apriori clock (usec)	-1.5365232E+01	Resid sbdelay (usec)	-5.58636E-01	+/-	3.0E-03
Phase delay (usec)			-2.12094792464E+03														Apriori clockrate (us/s)	7.4018997E-08	Resid phdelay (usec)	-3.50926E-06	+/-	6.4E-07
Delay rate (us/s)			-6.60381681420E-01														Apriori rate (us/s)	-6.60375483750E-01	Resid rate (us/s)	-6.19767E-06	+/-	6.2E-09
Total phase (deg)																	Apriori accel (us/s/s)	3.63437878892E-05	Resid phase (deg)	-108.8	+/-	19.9

ph/seg (deg) 19.7 33.0 Search (1024X64) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 37.1 57.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 41.3 39.8 Inc. seg. avg. 0.159 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 49.9 69.4 Inc. frq. avg. 0.176 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 194.6 el 50.4 pa 4.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 4783.721 4739.839 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/go..130MAS Output file: /Exps/c192c/v2/1234/No0070/go.W.160.130MAS



Fringe quality 0

SNR 5.7

Int time 178.322

Amp 0.239

Phase 105.1

PFD 6.9e-01

Delays (us)

SBD 0.138313

MBD -0.001351

Fringe rate (Hz)

0.944930

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 004000.00

Stop 004300.22

FRT 004130.00

Corr/FF/build

2020:076:160821

2020:086:054105

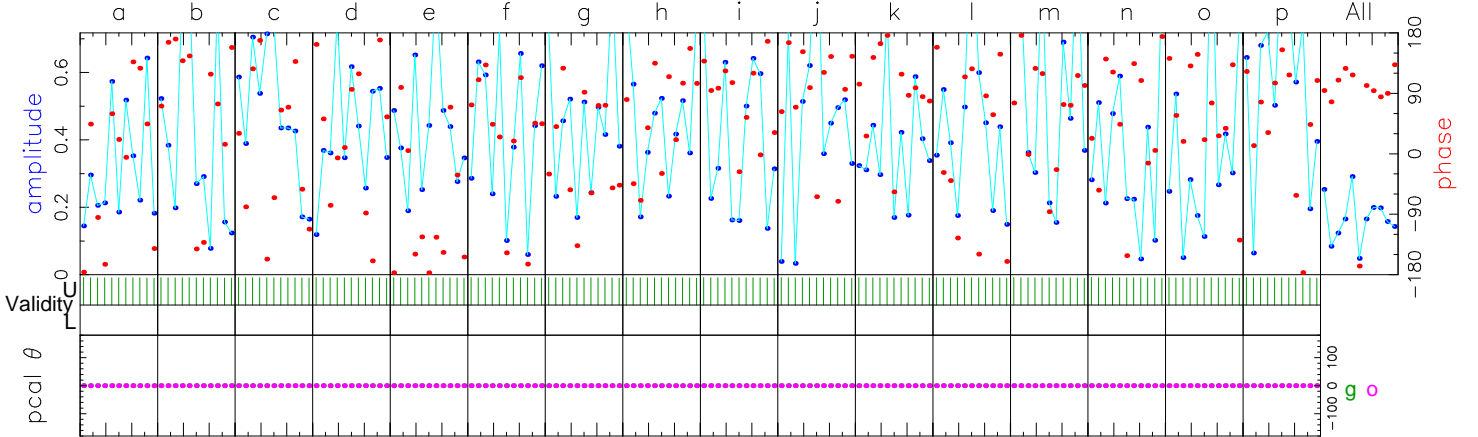
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
57.9	131.0	146.0	79.0	-155.2	72.5	-4.9	74.8	94.0	147.7	116.9	137.0	103.9	100.6	87.5	113.0	113.0	Phase	105.1
0.2	0.4	0.1	0.1	0.4	0.5	0.3	0.3	0.4	0.2	0.4	0.3	0.6	0.1	0.3	0.5	0.5	Ampl.	0.2
250.1	113.1	194.7	163.6	249.8	121.8	37.7	137.6	145.2	19.4	170.8	245.7	145.9	188.7	99.6	27.6	27.6	Sbd box	146.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)	-2.12082427246E+03			Apriori delay (usec)			-2.12094792113E+03			Resid mbdelay (usec)			-1.35133E-03			+/- 1.9E-04		
Sband delay (usec)	-2.12080960813E+03			Apriori clock (usec)			-1.5365232E+01			Resid sbdelay (usec)			1.38313E-01			+/- 3.0E-03		
Phase delay (usec)	-2.12094791774E+03			Apriori clockrate (us/s)			7.4018997E-08			Resid phdelay (usec)			3.38888E-06			+/- 6.4E-07		
Delay rate (us/s)	-6.60364514044E-01			Apriori rate (us/s)			-6.60375483750E-01			Resid rate (us/s)			1.09697E-05			+/- 6.2E-09		
Total phase (deg)	-228.4			Apriori accel (us/s/s)			3.63437878892E-05			Resid phase (deg)			105.1			+/- 20.0		

ph/seg (deg) RMS Theor. Amplitude 0.239 +/- 0.042 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 31.3 33.1 Search (1024X64) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

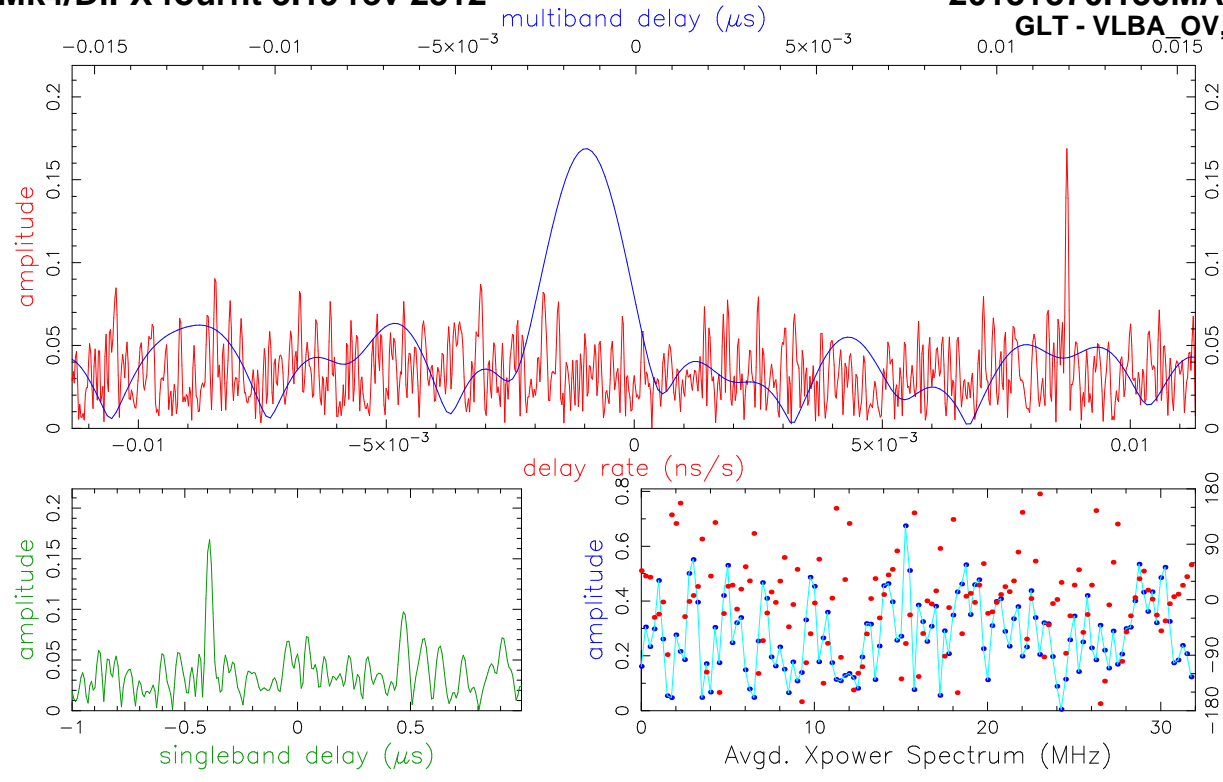
ph/frq (deg) 42.6 57.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 48.4 39.9 Inc. seg. avg. 0.217 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 62.6 69.7 Inc. frq. avg. 0.250 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

g: az 194.6 el 50.4 pa 4.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 4783.721 4739.839 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/go..130MAS Output file: /Exps/c192c/v2/1234/No0070/go.W.180.130MAS

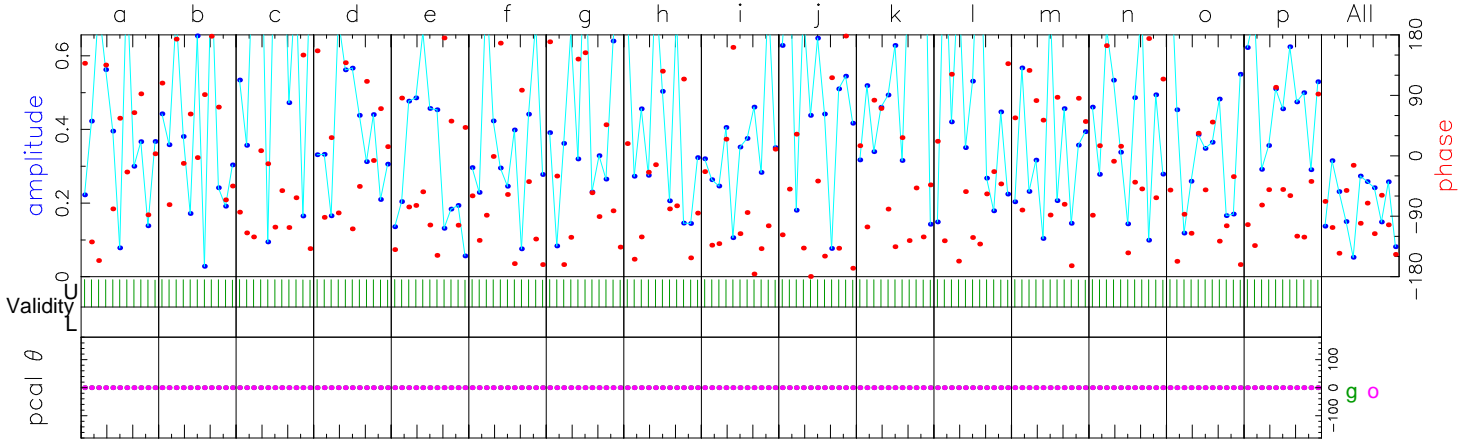


Fringe quality 0

SNR 6.2
Int time 178.378
Amp 0.219
Phase -96.1
PFD 7.9e-02
Delays (us)
SBD -0.392018
MBD -0.001417
Fringe rate (Hz) 0.752074
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054108
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-122.7	136.3	-83.8	-70.3	-88.6	-99.0	-145.3	-52.0	-102.2	-123.2	-91.2	-122.3	-18.5	-46.6	-85.7	-92.1		Phase -96.1	
	0.0	0.0	0.6	0.1	0.2	0.3	0.3	0.2	0.2	0.4	0.4	0.4	0.1	0.2	0.2	0.3		Ampl. 0.2	
	209.4	65.4	78.3	106.4	100.1	144.8	58.3	196.3	135.1	17.2	203.2	201.6	219.8	63.0	190.0	38.7		Sbd box 78.8	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																			Tracks
Group delay (usec)(sbd)			-2.12132433791E+03																Apriori delay (usec) -2.12094792113E+03 +/- 1.7E-04
Sband delay (usec)			-2.12133993863E+03																Resid sbdelay (usec) -3.92018E-01 +/- 2.8E-03
Phase delay (usec)			-2.12094792423E+03																Resid phdelay (usec) -3.09912E-06 +/- 6.0E-07
Delay rate (us/s)			-6.60366752922E-01																Resid rate (us/s) 8.73083E-06 +/- 5.7E-09
Total phase (deg)					-69.6														Resid phase (deg) -96.1 +/- 18.5

ph/seg (deg) 39.4 30.7
amp/seg (%) 50.4 53.6
ph/frq (deg) 48.0 37.1
amp/frq (%) 67.6 64.7

RMS Theor. Amplitude 0.219 +/- 0.035
Search (1024X64) 0.162
Interp. 0.000
Inc. seg. avg. 0.221
Inc. frq. avg. 0.203

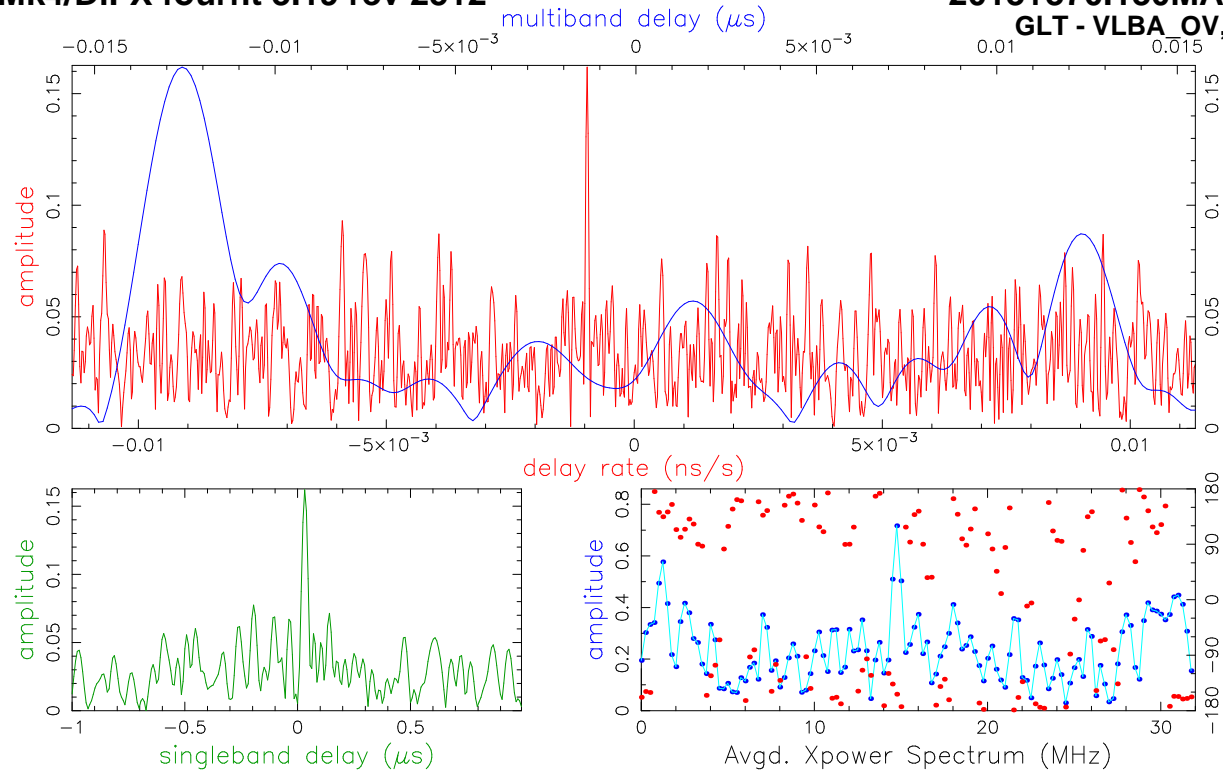
g: az 194.6 el 50.4 pa 4.2
o: az 78.2 el 60.0 pa -78.1
u,v (fr/asec) 4783.721 4739.839

Control file: cf_1234_gmva
Input file: /Exps/c192c/v2/1234/No0070/go..130MAS
Output file: /Exps/c192c/v2/1234/No0070/go.W.201.130MAS

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(MSamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

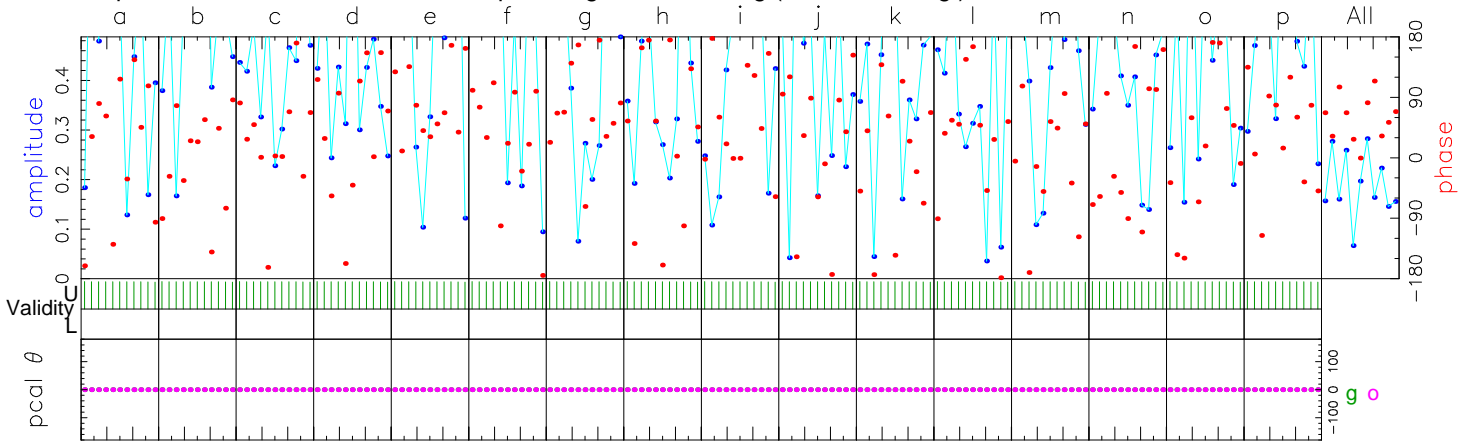
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

simultaneous interpolator



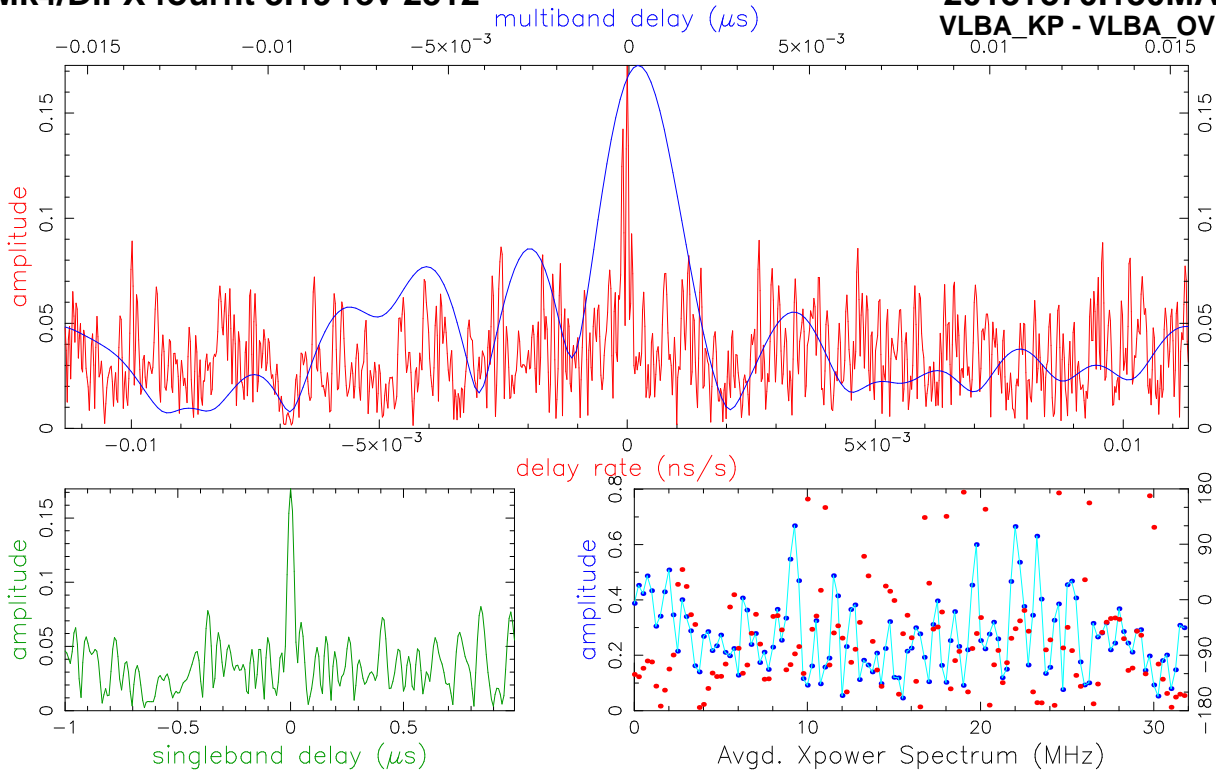
Fringe quality 0
SNR 5.9
Int time 178.322
Amp 0.163
Phase 59.0
PFD 3.3e-01
Delays (us)
SBD 0.032185
MBD -0.012554
Fringe rate (Hz)
-0.082485
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054110
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



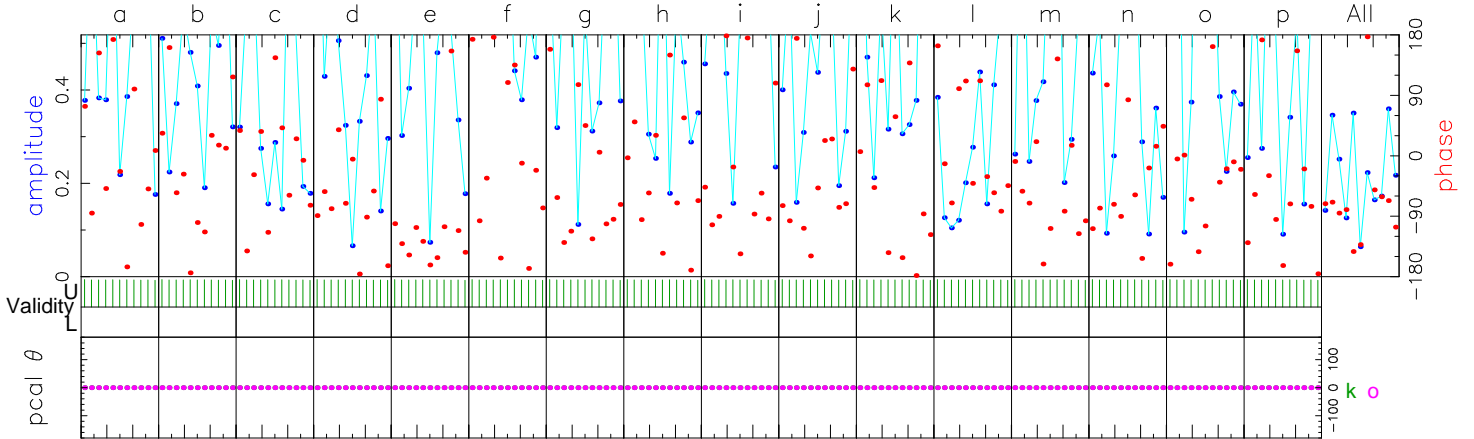
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
77.9	15.0	37.5	51.5	93.5	76.5	59.9	176.4	46.1	94.3	42.6	50.6	27.9	-83.4	68.2	55.3		Phase	59.0					
0.2	0.3	0.2	0.1	0.3	0.3	0.3	0.1	0.2	0.1	0.1	0.2	0.2	0.0	0.1	0.2		Ampl.	0.2					
115.7	132.0	46.0	120.3	13.3	44.8	132.8	3.9	77.2	6.0	15.7	250.5	196.7	162.2	191.0	169.9		Sbd box	133.1					
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-2.12092922555E+03															Apriori delay (usec)	-2.12094792113E+03	Resid mbdelay (usec)	-1.25544E-02	+/-	1.8E-04
Sband delay (usec)			-2.12091573563E+03															Apriori clock (usec)	-1.5365232E+01	Resid sbdelay (usec)	3.21855E-02	+/-	2.9E-03
Phase delay (usec)			-2.12094791923E+03															Apriori clockrate (us/s)	7.4018997E-08	Resid phdelay (usec)	1.90098E-06	+/-	6.2E-07
Delay rate (us/s)			-6.60376441318E-01															Apriori rate (us/s)	-6.60375483750E-01	Resid rate (us/s)	-9.57567E-07	+/-	6.0E-09
Total phase (deg)					-274.6													Apriori accel (us/s/s)	3.63437878892E-05	Resid phase (deg)	59.0	+/-	19.3

ph/seg (deg) RMS 32.9 Theor. 32.1 Amplitude 0.163 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 42.2 56.0 Search (1024X64) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 54.2 38.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 58.2 67.5 Inc. seg. avg. 0.165 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
g: az 194.6 el 50.4 pa 4.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 4783.721 4739.839 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/go..130MAS Output file: /Exps/c192c/v2/1234/No0070/go.W.220.130MAS simultaneous interpolator



Fringe quality 0
SNR 6.3
Int time 177.578
Amp 0.173
Phase -92.0
PFD 4.1e-02
Delays (us)
SBD 0.000176
MBD 0.000256
Fringe rate (Hz) 0.000812
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054106
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

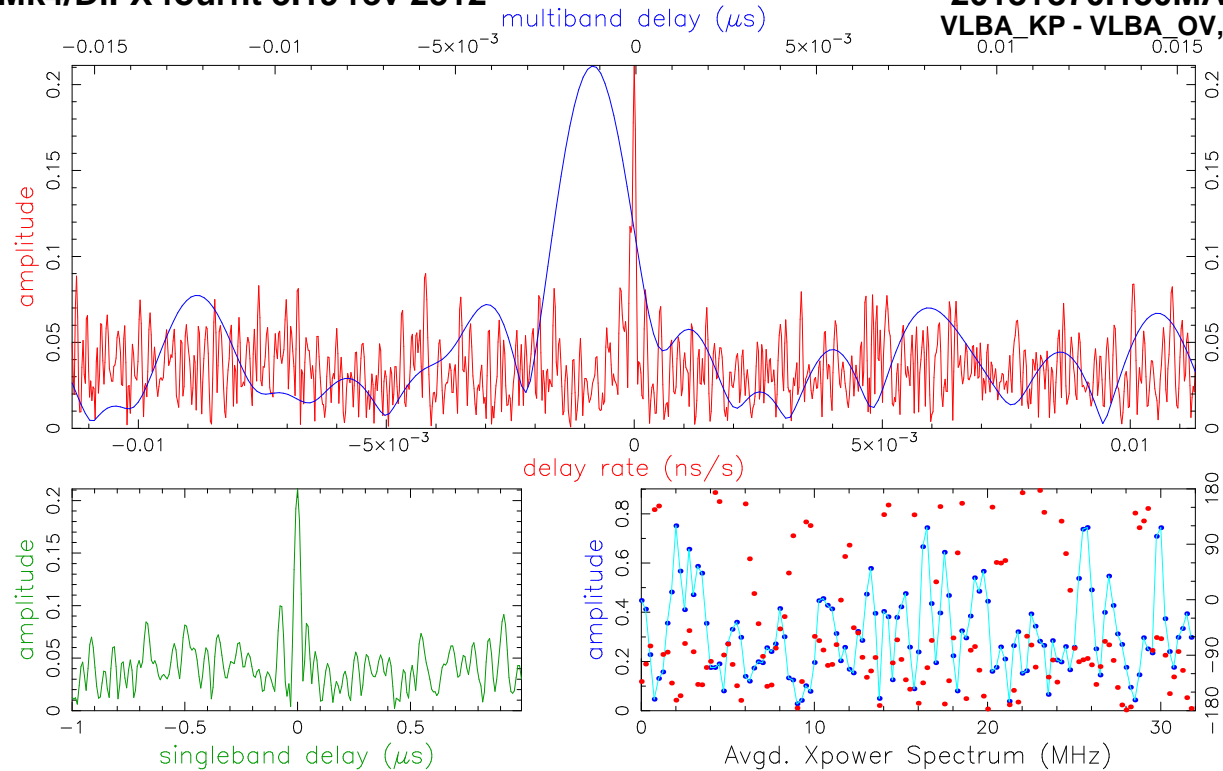


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-113.2	0.7	-30.5	-75.5	-127.1	-144.4	-103.4	-55.2	-106.0	-68.3	-116.9	-54.1	-95.8	-65.8	-82.4	-101.8		Phase	-92.0				
	0.1	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.4	0.1	0.1	0.1	0.2	0.2	0.2	0.2		Ampl.	0.2				
	70.4	185.2	78.8	128.2	128.3	164.9	157.8	237.8	128.8	72.3	124.0	122.9	59.4	234.3	190.0	254.7		Sbd box	129.0				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Group delay (usec)(sbd)			6.52494564291E+02															Apriori delay (usec)	6.52494308416E+02	Resid mbdelay (usec)	2.55875E-04	+/-	1.7E-04
Sband delay (usec)			6.52494484416E+02															Apriori clock (usec)	-1.7069811E+01	Resid sbdelay (usec)	1.76000E-04	+/-	2.7E-03
Phase delay (usec)			6.52494305451E+02															Apriori clockrate (us/s)	-1.9555999E-07	Resid phdelay (usec)	-2.96526E-06	+/-	5.9E-07
Delay rate (us/s)			-6.15553930079E-02															Apriori rate (us/s)	-6.15554024373E-02	Resid rate (us/s)	9.42948E-09	+/-	5.6E-09
Total phase (deg)				169.7														Apriori accel (us/s/s)	-8.72746718919E-06	Resid phase (deg)	-92.0	+/-	18.2

ph/seg (deg) 39.5 30.2 Search (1024X64) 0.163 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 61.1 52.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.9 36.4 Inc. seg. avg. 0.193 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 55.4 63.6 Inc. frq. avg. 0.174 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 69.6 el 63.8 pa -92.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 435.229 -1057.526 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/ko..130MAS Output file: /Exps/c192c/v2/1234/No0070/ko.W.189.130MAS simultaneous interpolator

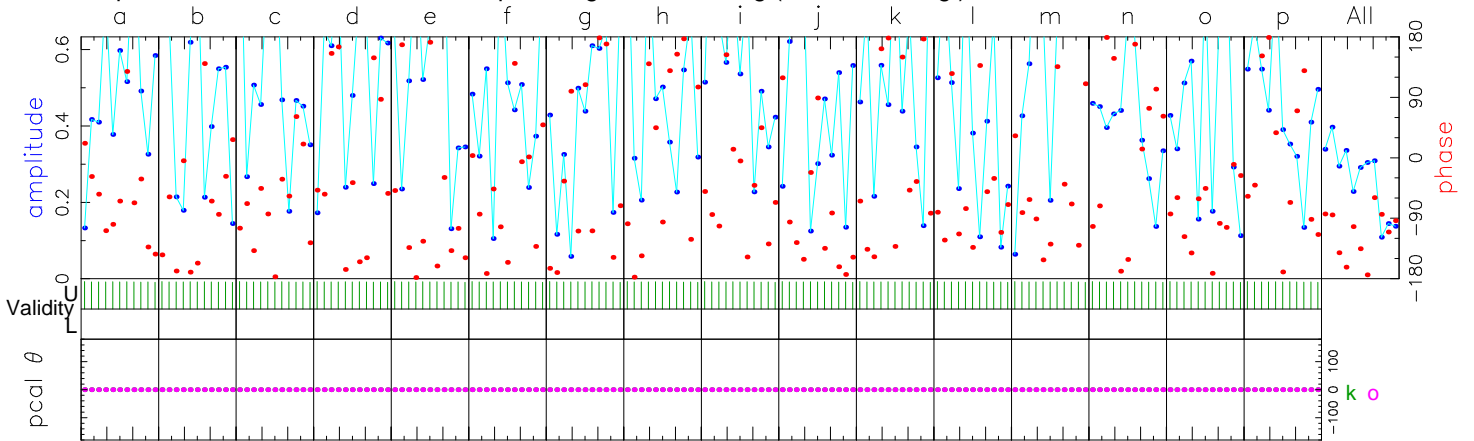
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, ko
VLBA_KP - VLBA_OV, fgroup W, pol RR



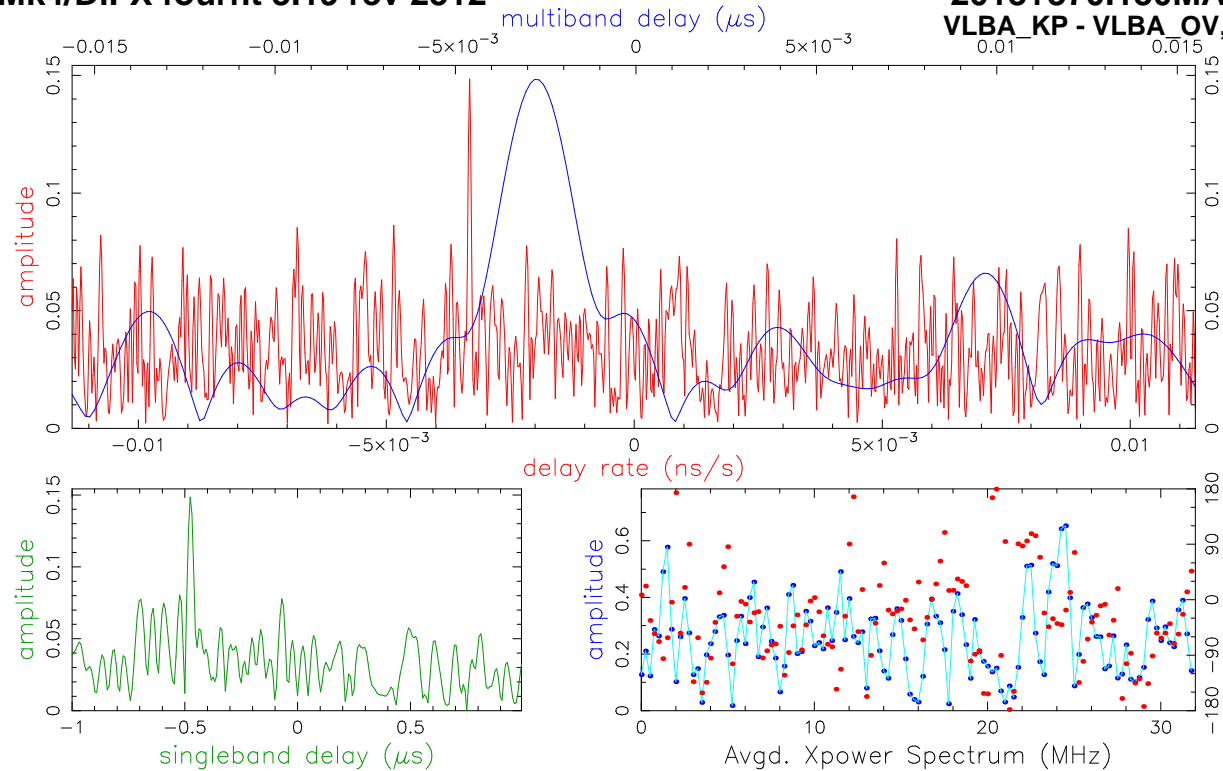
Fringe quality 9
SNR 7.7
Int time 177.578
Amp 0.211
Phase -113.6
PFD 2.3e-06
Delays (us)
SBD -0.000914
MBD -0.001200
Fringe rate (Hz) 0.000302
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054110
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-82.1	-111.5	-92.6	-152.2	-133.6	-84.9	-141.5	-167.1	-70.5	-138.6	-120.5	-89.4	-105.6	-174.3	-88.6	-83.6	Phase	-113.6
	0.3	0.2	0.3	0.2	0.3	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.1	Ampl.	0.2
	129.1	84.0	65.1	45.8	126.7	170.1	27.1	38.1	82.6	128.3	148.4	127.7	242.7	104.1	128.6	136.4	Sbd box	128.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	6.52493108103E+02			Apriori delay (usec)			6.52494308416E+02			Resid mbdelay (usec)			-1.20031E-03			+/- 1.4E-04		
Sband delay (usec)	6.52493394416E+02			Apriori clock (usec)			-1.7069811E+01			Resid sbdelay (usec)			-9.14000E-04			+/- 2.2E-03		
Phase delay (usec)	6.52494304751E+02			Apriori clockrate (us/s)			-1.9555999E-07			Resid phdelay (usec)			-3.66483E-06			+/- 4.8E-07		
Delay rate (us/s)	-6.15553989342E-02			Apriori rate (us/s)			-6.15554024373E-02			Resid rate (us/s)			3.50311E-09			+/- 4.6E-09		
Total phase (deg)	148.1			Apriori accel (us/s/s)			-8.72746718919E-06			Resid phase (deg)			-113.6			+/- 14.9		

ph/seg (deg) 34.9 24.7 Search (1024X64) 0.206 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 49.3 43.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 34.0 29.8 Inc. seg. avg. 0.241 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 39.2 52.0 Inc. frq. avg. 0.214 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.6 el 63.8 pa -92.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 435.229 -1057.526 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/ko..130MAS Output file: /Exps/c192c/v2/1234/No0070/ko.W.214.130MAS

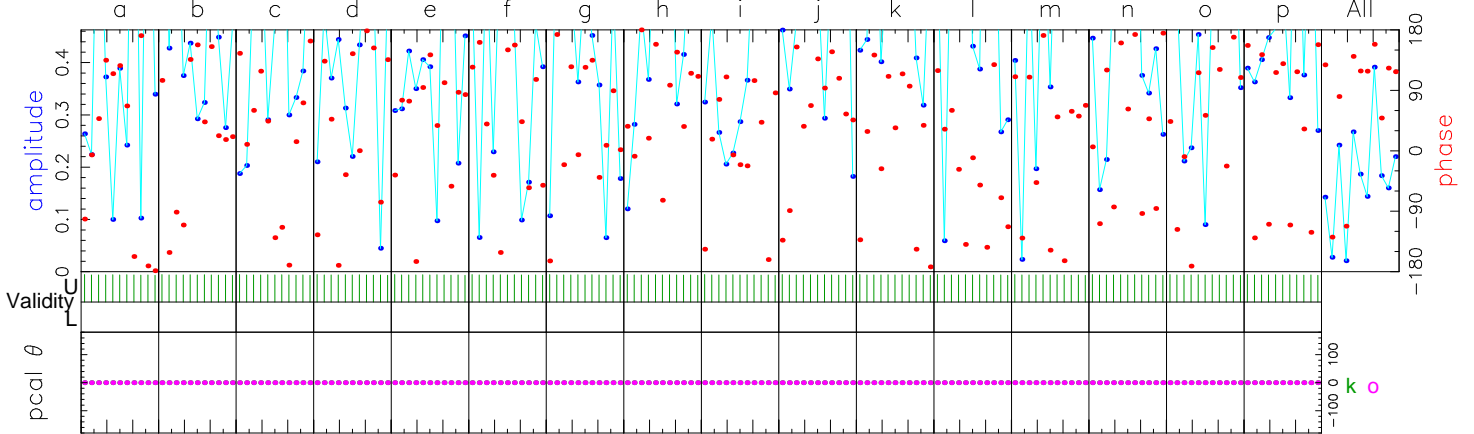


Fringe quality 0

SNR 5.4
Int time 177.578
Amp 0.154
Phase 122.3
PFD 1.0e+00
Delays (us)
SBD -0.475313
MBD -0.002743
Fringe rate (Hz)
-0.285746
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054112
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

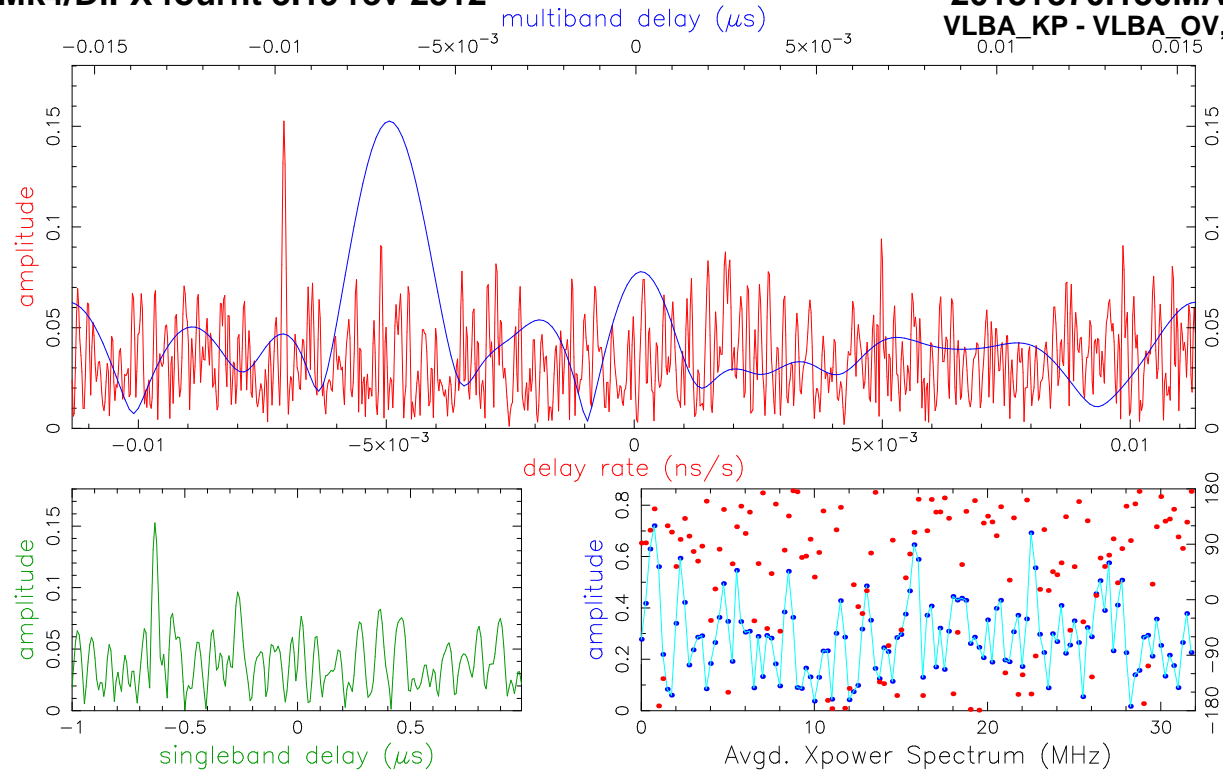


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	162.6	124.9	141.2	150.4	83.2	136.4	100.0	110.0	62.8	97.3	111.1	-145.8	94.5	162.9	125.6	165.0		Phase 122.3
	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.3	0.1	0.2	0.2		Ampl. 0.1
	47.3	196.4	9.5	50.9	195.2	42.0	19.8	144.9	238.9	193.4	40.5	51.5	177.3	119.8	170.2	6.3		Sbd box 68.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	6.52022815375E+02			Apriori delay (usec)			6.52494308416E+02			Resid mbdelay (usec)			-2.74304E-03			+/- 2.0E-04		
Sband delay (usec)	6.52018995916E+02			Apriori clock (usec)			-1.7069811E+01			Resid sbdelay (usec)			-4.75313E-01			+/- 3.2E-03		
Phase delay (usec)	6.52494312360E+02			Apriori clockrate (us/s)			-1.9555999E-07			Resid phdelay (usec)			3.94452E-06			+/- 6.8E-07		
Delay rate (us/s)	-6.15587196646E-02			Apriori rate (us/s)			-6.15554024373E-02			Resid rate (us/s)			-3.31723E-06			+/- 6.5E-09		
Total phase (deg)	24.0			Apriori accel (us/s/s)			-8.72746718919E-06			Resid phase (deg)			122.3			+/- 21.1		

ph/seg (deg) 57.7 35.0 Search (1024X64) 0.146 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 70.3 61.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.8 42.2 Inc. seg. avg. 0.158 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 43.7 73.7 Inc. frq. avg. 0.145 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 69.6 el 63.8 pa -92.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 435.229 -1057.526 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/ko..130MAS Output file: /Exps/c192c/v2/1234/No0070/ko.W.231.130MAS

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, ko
VLBA_KP - VLBA_OV, fgroup W, pol RL

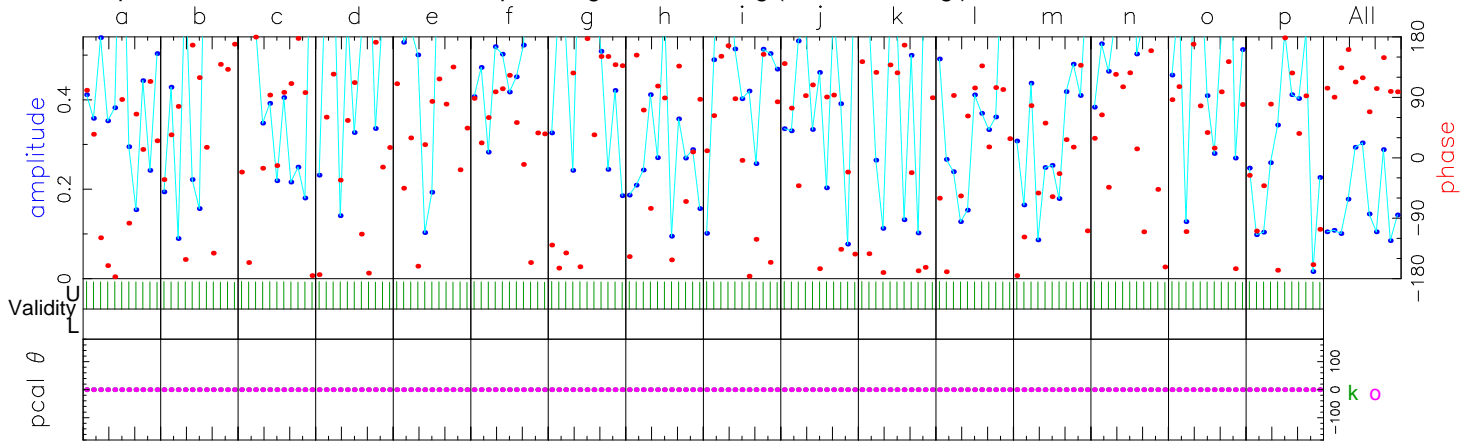


Fringe quality 0

SNR 5.6
Int time 177.578
Amp 0.180
Phase 117.5
PFD 9.6e-01
Delays (us)
SBD -0.632252
MBD -0.006837
Fringe rate (Hz)
-0.610057
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054115
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

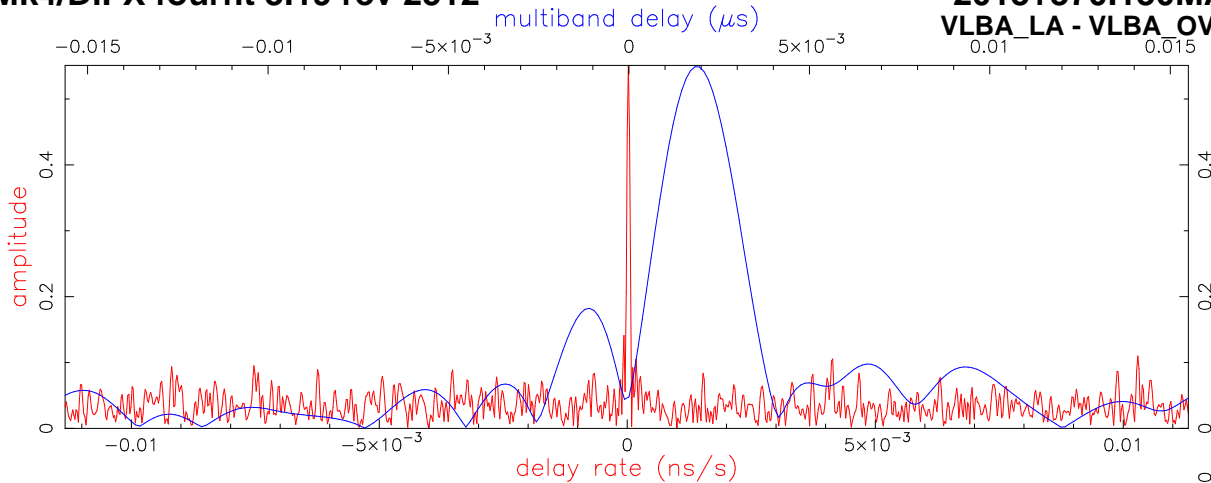
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
85.6	150.8	159.4	94.8	77.2	66.8	174.3	101.0	141.2	138.0	149.1	79.9	7.1	115.8	106.3	125.9		Phase	117.5
0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.1	0.3	0.2	0.3	0.2	0.1	0.2	0.4	0.1		Ampl.	0.2
78.0	245.4	245.3	70.7	190.9	123.2	48.5	77.8	130.8	140.1	47.5	84.9	3.8	95.4	22.4	59.2		Sbd box	48.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000		PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000		PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	6.51862471684E+02			Apriori delay (usec)			6.52494308416E+02			Resid mbdelay (usec)			-6.83673E-03			+/- 1.9E-04		
Sband delay (usec)	6.51862056416E+02			Apriori clock (usec)			-1.7069811E+01			Resid sbdelay (usec)			-6.32252E-01			+/- 3.1E-03		
Phase delay (usec)	6.52494312205E+02			Apriori clockrate (us/s)			-1.9555999E-07			Resid phdelay (usec)			3.78933E-06			+/- 6.6E-07		
Delay rate (us/s)	-6.15624845940E-02			Apriori rate (us/s)			-6.15554024373E-02			Resid rate (us/s)			-7.08216E-06			+/- 6.4E-09		
Total phase (deg)	19.2			Apriori accel (us/s/s)			-8.72746718919E-06			Resid phase (deg)			117.5			+/- 20.6		

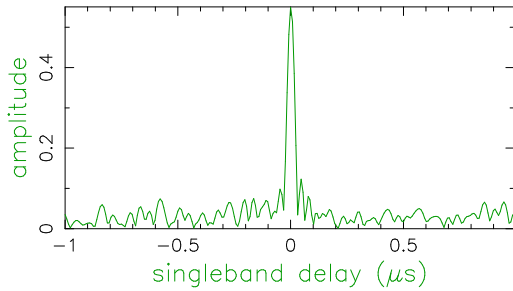
ph/seg (deg) 26.0 34.2 Search (1024X64) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 54.3 59.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 44.6 41.2 Inc. seg. avg. 0.169 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 65.4 71.9 Inc. frq. avg. 0.178 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.6 el 63.8 pa -92.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 435.229 -1057.526 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/ko..130MAS Output file: /Exps/c192c/v2/1234/No0070/ko.W.245.130MAS

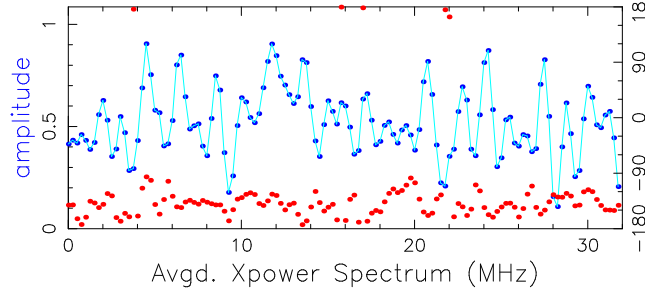


Fringe quality 9

SNR 20.1
Int time 177.864
Amp 0.551
Phase -145.2
PFD 0.0e+00
Delays (us)
SBD 0.001255
MBD 0.001891
Fringe rate (Hz) 0.002110
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

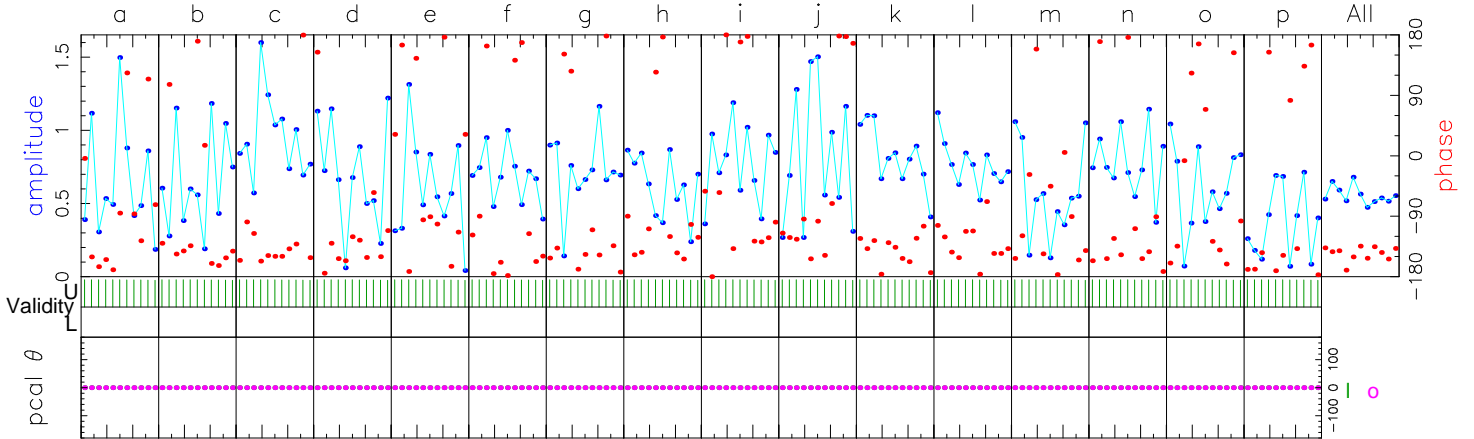


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054114
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-144.8	-152.8	-144.7	-140.1	-147.6	-161.1	-156.5	-133.5	-141.1	-132.0	-136.8	-125.2	-139.6	-152.3	-161.9	-177.8	Phase	-145.2
	0.3	0.6	0.9	0.6	0.4	0.5	0.6	0.5	0.6	0.7	0.8	0.7	0.4	0.7	0.4	0.3	Ampl.	0.6
	130.4	129.7	128.6	129.1	129.8	128.9	129.6	129.4	129.6	128.7	129.3	129.3	129.3	128.7	128.9	129.1	Sbd box	129.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
lo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
lo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

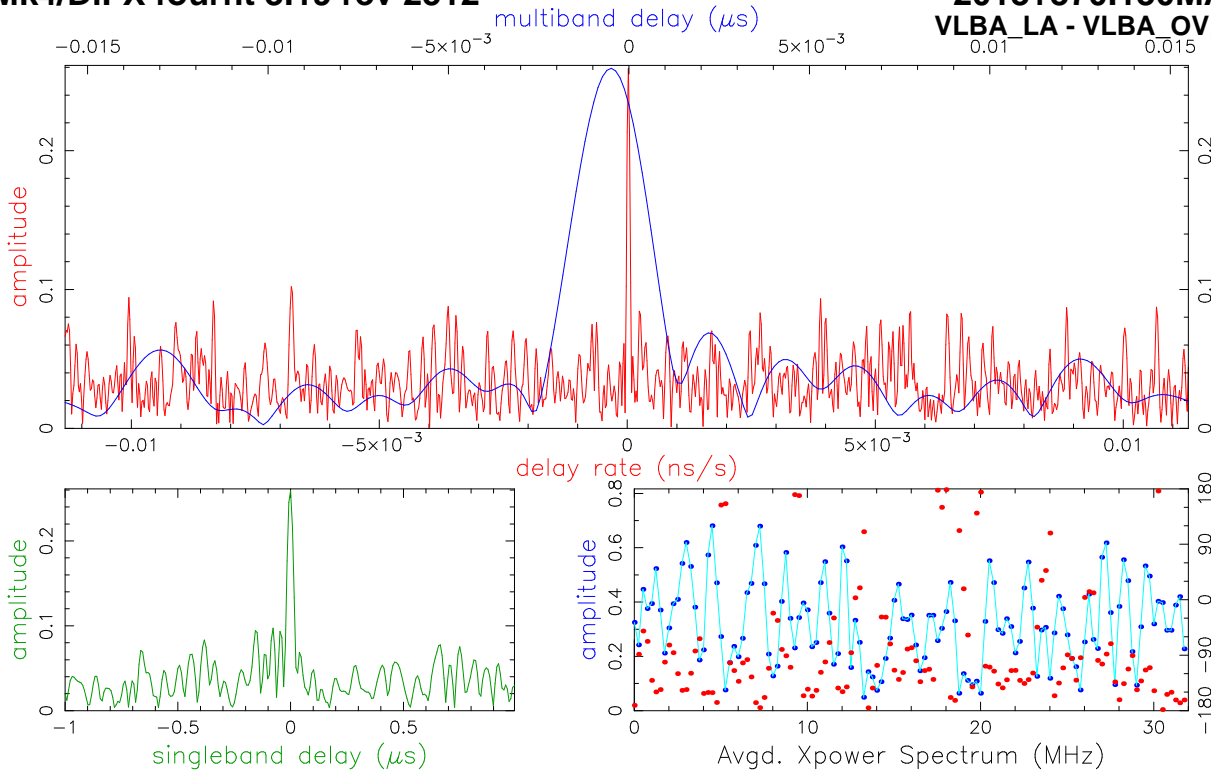
Group delay (usec)(sbd) 1.43373257004E+03 Apriori delay (usec) 1.43373067871E+03 Resid mbdelay (usec) 1.89133E-03 +/- 5.4E-05
 Sband delay (usec) 1.43373193371E+03 Apriori clock (usec) -1.7438719E+01 Resid sbdelay (usec) 1.25500E-03 +/- 8.6E-04
 Phase delay (usec) 1.43373067403E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) -4.68101E-06 +/- 1.8E-07
 Delay rate (us/s) -1.67811393613E-01 Apriori rate (us/s) -1.67811418111E-01 Resid rate (us/s) 2.44977E-08 +/- 1.8E-09
 Total phase (deg) 94.0 Apriori accel (us/s/s) -9.10680542650E-06 Resid phase (deg) -145.2 +/- 5.7

RMS Theor. Amplitude 0.551 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 10.1 9.5 Search (1024X64) 0.547 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 10.8 16.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 13.9 11.4 Inc. seg. avg. 0.550 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 29.2 19.9 Inc. frq. avg. 0.551 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.2 el 69.2 pa -86.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 1200.172 -694.598 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/lo..130MAS Output file: /Exps/c192c/v2/1234/No0070/lo.W.239.130MAS

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, lo
VLBA_LA - VLBA_OV, fgroup W, pol RR

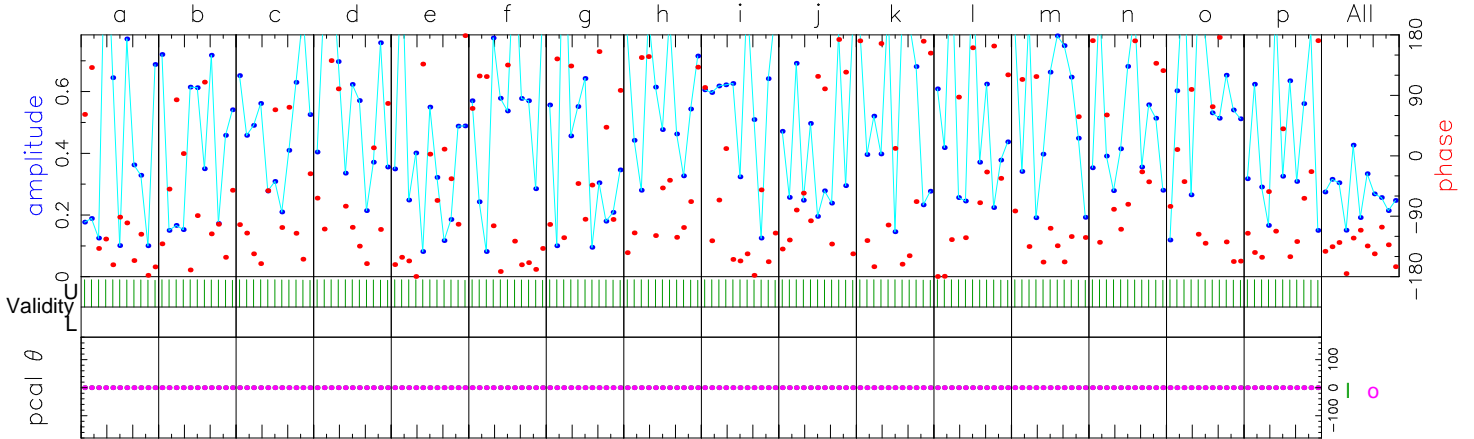


Fringe quality 9

SNR 9.5
Int time 177.864
Amp 0.261
Phase -134.2
PFD 3.1e-13
Delays (us)
SBD -0.002143
MBD -0.000531
Fringe rate (Hz) 0.002262
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

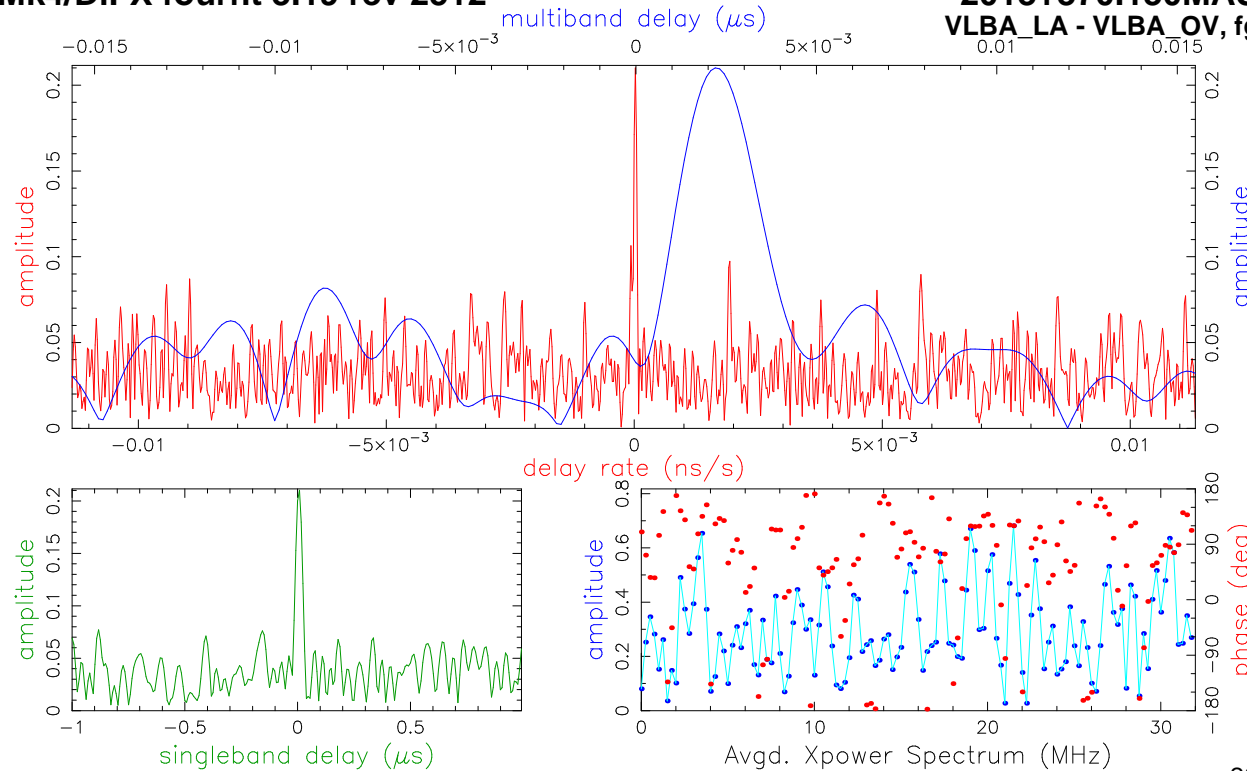
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054116
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



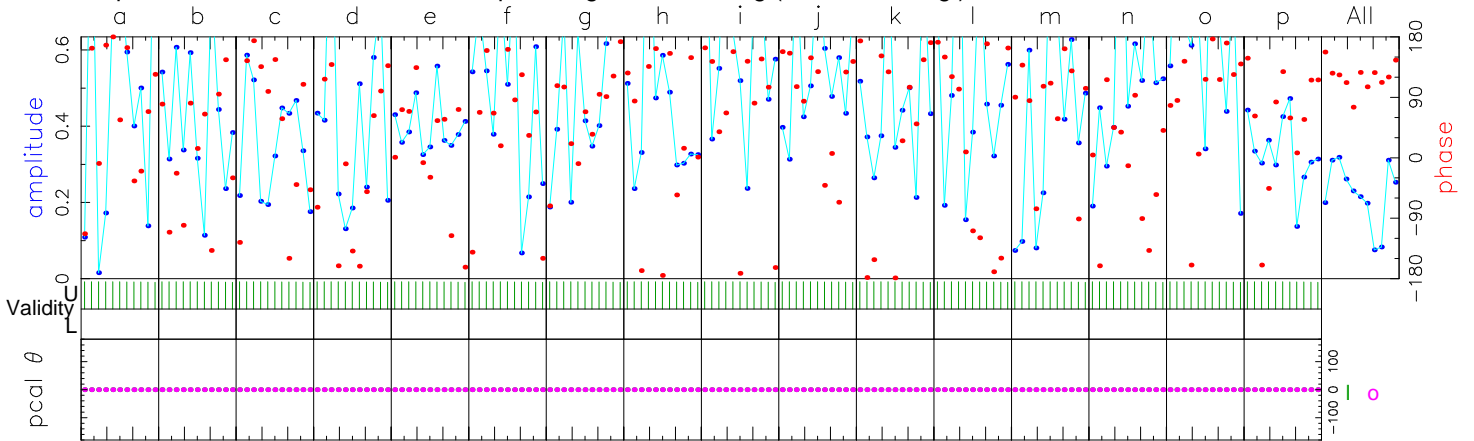
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-138.5	-119.9	-121.4	-134.7	-136.7	-158.5	-116.2	-125.7	-137.7	-141.7	-148.8	-158.0	-133.3	-130.8	-119.6	-105.3	Phase	-134.2
	0.3	0.2	0.3	0.2	0.2	0.4	0.2	0.3	0.3	0.3	0.4	0.2	0.4	0.2	0.2	0.3	Ampl.	0.2
	121.9	135.4	79.9	169.4	144.4	128.4	67.5	74.2	81.5	181.4	128.6	147.8	5.9	240.3	86.4	43.6	Sbd box	128.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)		1.43373014795E+03				Apriori delay (usec)		1.43373067871E+03				Resid mbdelay (usec)		-5.30763E-04		+/-	1.1E-04	
Sband delay (usec)		1.43372853571E+03				Apriori clock (usec)		-1.7438719E+01				Resid sbdelay (usec)		-2.14300E-03		+/-	1.8E-03	
Phase delay (usec)		1.43373067438E+03				Apriori clockrate (us/s)		-3.5245298E-07				Resid phdelay (usec)		-4.32859E-06		+/-	3.9E-07	
Delay rate (us/s)		-1.67811391849E-01				Apriori rate (us/s)		-1.67811418111E-01				Resid rate (us/s)		2.62620E-08		+/-	3.7E-09	
Total phase (deg)				104.9		Apriori accel (us/s/s)		-9.10680542650E-06				Resid phase (deg)		-134.2		+/-	12.0	

ph/seg (deg) 19.9 19.9 Search (1024X64) 0.258 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 27.6 34.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 15.3 24.0 Inc. seg. avg. 0.256 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 25.7 42.0 Inc. frq. avg. 0.246 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
l: az 78.2 el 69.2 pa -86.2 o: az 78.2 el 60.0 pa -78.1 u, v (fr/asec) 1200.172 -694.598 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/lo..130MAS Output file: /Exps/c192c/v2/1234/No0070/lo.W.254.130MAS



Fringe quality 9
SNR 7.7
Int time 177.864
Amp 0.212
Phase 121.3
PFD 2.0e-06
Delays (us)
SBD 0.005801
MBD 0.002210
Fringe rate (Hz) 0.002382
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054118
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

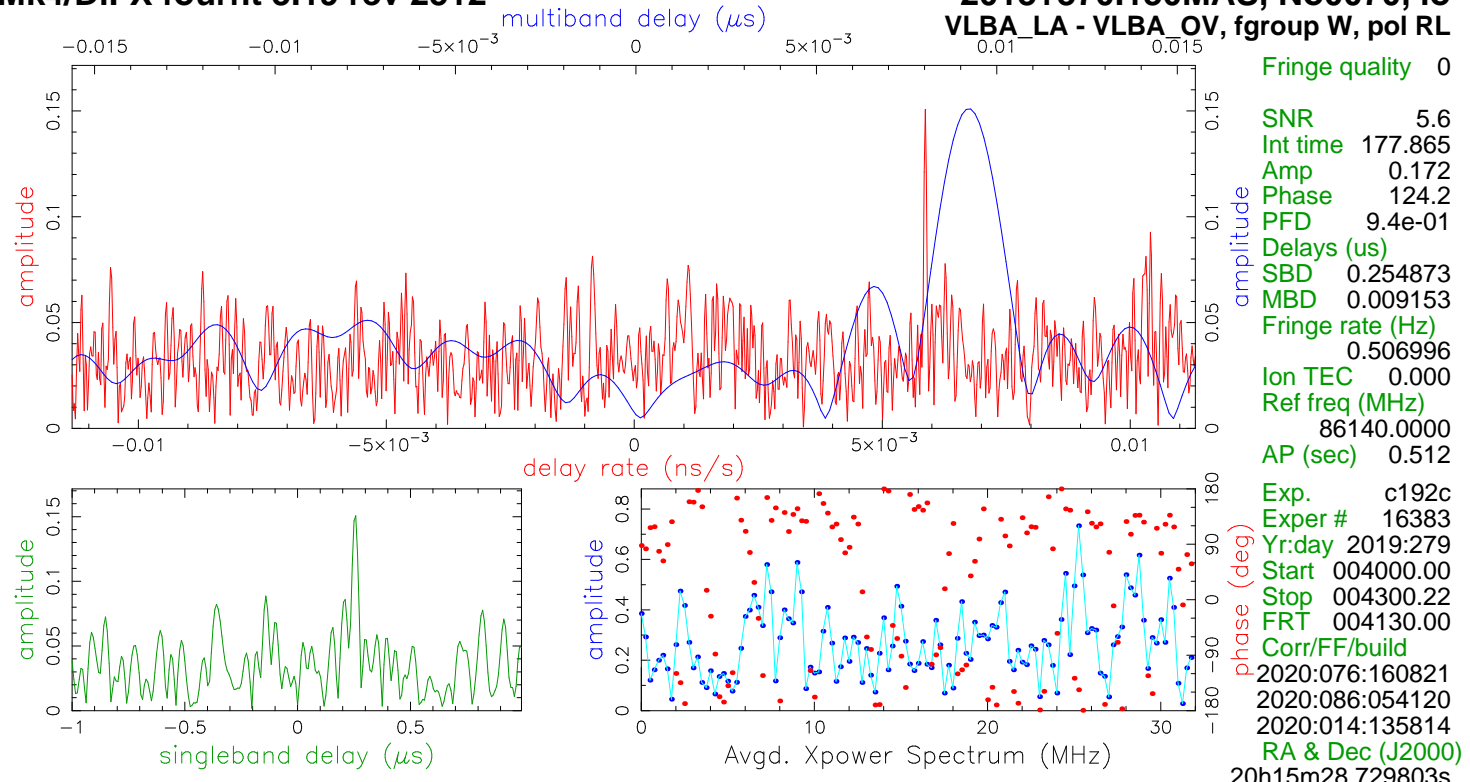


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	137.1	34.4	149.8	133.9	55.2	90.7	91.0	145.0	129.5	122.0	144.7	169.1	106.8	22.0	127.4	96.4	Phase	121.3
l	0.2	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.1	0.4	0.2	Ampl.	0.2
o	28.1	217.8	16.0	168.6	165.2	104.5	232.7	130.3	129.9	16.6	197.1	129.6	128.7	61.7	130.1	153.9	Sbd box	129.7
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

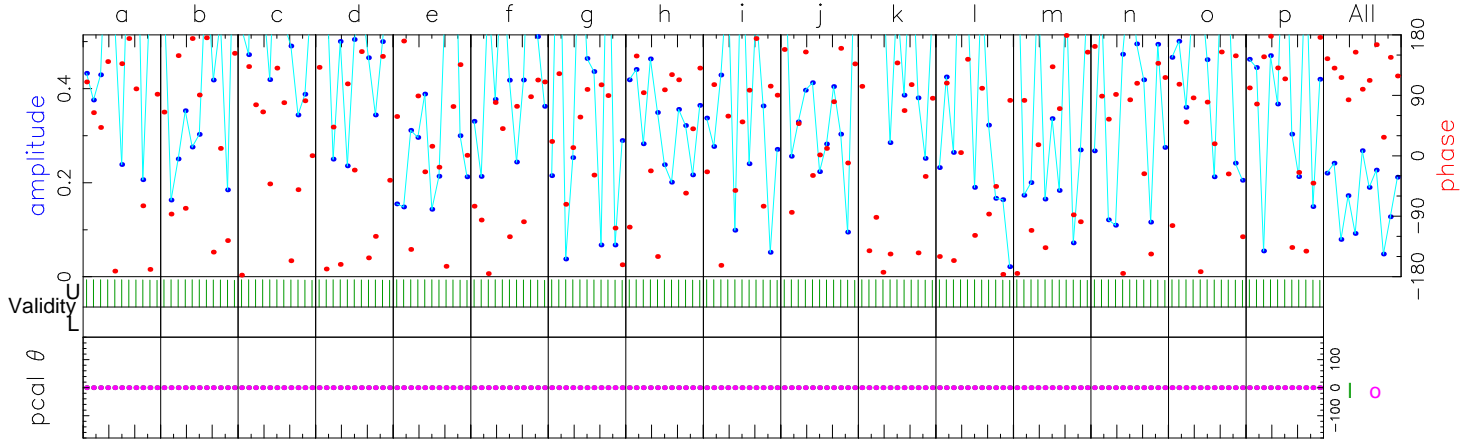
Group delay (usec)(sbd) 1.43373288870E+03 Apriori delay (usec) 1.43373067871E+03 Resid mbdelay (usec) 2.20999E-03 +/- 1.4E-04
 Sband delay (usec) 1.43373647921E+03 Apriori clock (usec) -1.7438719E+01 Resid sbdelay (usec) 5.80050E-03 +/- 2.2E-03
 Phase delay (usec) 1.43373068263E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) 3.91297E-06 +/- 4.8E-07
 Delay rate (us/s) -1.67811390453E-01 Apriori rate (us/s) -1.67811418111E-01 Resid rate (us/s) 2.76578E-08 +/- 4.6E-09
 Total phase (deg) 0.5 Apriori accel (us/s/s) -9.10680542650E-06 Resid phase (deg) 121.3 +/- 14.9

RMS Theor. Amplitude 0.212 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 20.3 24.6 Search (1024X64) 0.204 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 38.0 43.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 45.7 29.7 Inc. seg. avg. 0.204 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 50.1 51.9 Inc. frq. avg. 0.218 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.2 el 69.2 pa -86.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 1200.172 -694.598 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/lo..130MAS Output file: /Exps/c192c/v2/1234/No0070/lo.W.271.130MAS

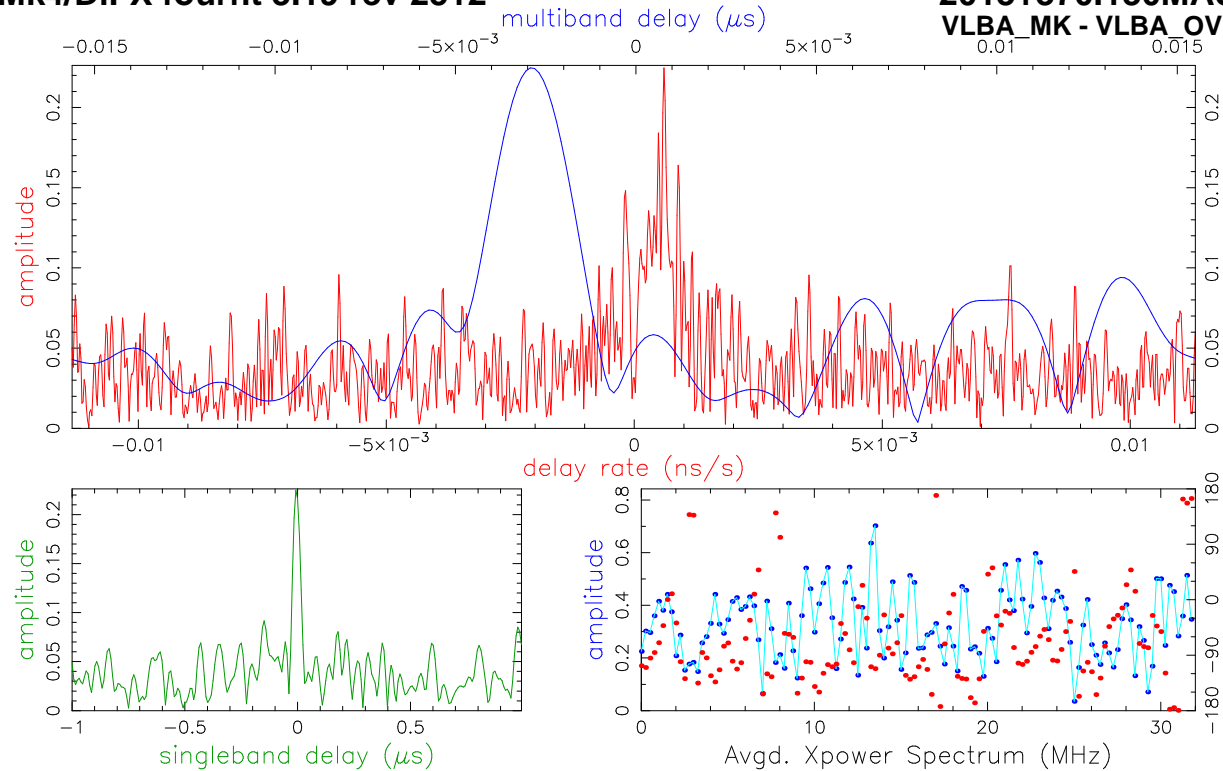


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
128.7	156.0	90.3	172.7	85.7	107.4	81.4	130.9	82.0	114.5	152.2	124.8	168.7	112.1	117.8	148.3	148.3	Phase	124.2
0.4	0.2	0.3	0.2	0.1	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.1	0.2	0.1	Ampl.	0.2
218.6	84.3	246.1	105.1	136.2	57.1	86.8	120.3	176.3	9.4	231.1	180.8	204.7	98.0	60.1	162.9	162.9	Sbd box	161.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)		1.43398983211E+03								Apriori delay (usec)	1.43373067871E+03						Resid mbdelay (usec)	9.15339E-03 +/- 1.9E-04
Sband delay (usec)		1.43398555171E+03								Apriori clock (usec)	-1.7438719E+01						Resid sbdelay (usec)	2.54873E-01 +/- 3.1E-03
Phase delay (usec)		1.43373068272E+03								Apriori clockrate (us/s)	-3.5245298E-07						Resid phdelay (usec)	4.00450E-06 +/- 6.6E-07
Delay rate (us/s)		-1.67805532391E-01								Apriori rate (us/s)	-1.67811418111E-01						Resid rate (us/s)	5.88572E-06 +/- 6.4E-09
Total phase (deg)			3.3							Apriori accel (us/s/s)	-9.10680542650E-06						Resid phase (deg)	124.2 +/- 20.5

ph/seg (deg) 37.4 34.0 Search (1024X64) 0.148 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 47.0 59.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.2 41.0 Inc. seg. avg. 0.163 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 50.4 71.6 Inc. frq. avg. 0.154 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 l: az 78.2 el 69.2 pa -86.2 o: az 78.2 el 60.0 pa -78.1 u, v (fr/asec) 1200.172 -694.598 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/lo..130MAS Output file: /Exps/c192c/v2/1234/No0070/lo.W.287.130MAS

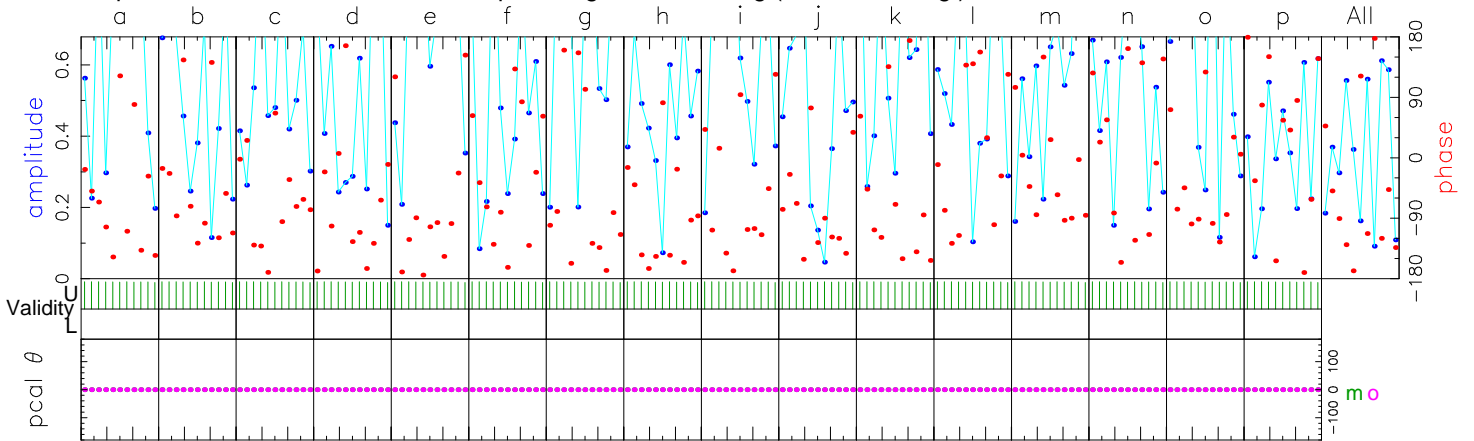


Fringe quality 9

SNR 8.2
Int time 177.292
Amp 0.226
Phase -106.8
PFD 3.3e-08
Delays (us)
SBD -0.005797
MBD -0.002856
Fringe rate (Hz)
0.051770
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054115
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-106.5	-75.2	-87.1	-109.3	-120.2	-126.4	-138.5	-108.7	-122.2	-99.4	-130.9	-96.9	-45.1	159.2	-74.1	143.8	Phase	-106.8
	0.3	0.3	0.3	0.3	0.4	0.0	0.4	0.3	0.3	0.3	0.3	0.2	0.4	0.2	0.4	0.2	Ampl.	0.2
	7.9	220.8	108.0	241.0	128.0	104.9	127.4	253.5	121.4	213.0	159.1	230.0	128.7	132.0	128.0	155.1	Sbd box	128.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

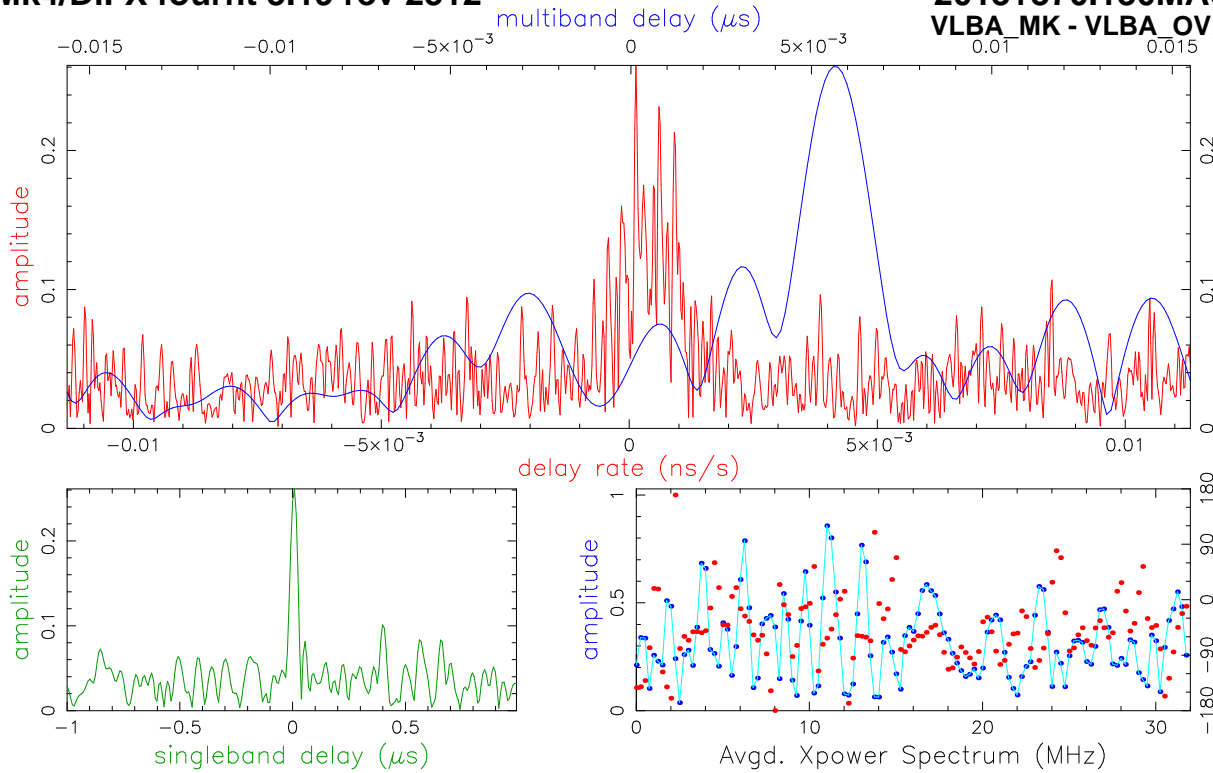
Group delay (usec)(sbd) -9.93260022452E+03 Apriori delay (usec) -9.93259736896E+03 Resid mbdelay (usec) -2.85557E-03 +/- 1.3E-04
 Sband delay (usec) -9.93260316596E+03 Apriori clock (usec) -1.4071626E+01 Resid sbdelay (usec) -5.79700E-03 +/- 2.1E-03
 Phase delay (usec) -9.93259737240E+03 Apriori clockrate (us/s) -9.6732924E-09 Resid phdelay (usec) -3.44465E-06 +/- 4.5E-07
 Delay rate (us/s) 5.21800684200E-01 Apriori rate (us/s) 5.21800083200E-01 Resid rate (us/s) 6.01000E-07 +/- 4.3E-09
 Total phase (deg) -237.1 Apriori accel (us/s/s) 3.45940793611E-05 Resid phase (deg) -106.8 +/- 13.9

RMS Theor. Amplitude 0.226 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 73.4 23.1 Search (1024X64) 0.223 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 101.8 40.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 46.0 27.9 Inc. seg. avg. 0.328 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 50.9 48.6 Inc. frq. avg. 0.249 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 57.0 el 23.4 pa -82.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) -3731.611 213.866 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/mo..130MAS Output file: /Exps/c192c/v2/1234/No0070/mo.W.246.130MAS

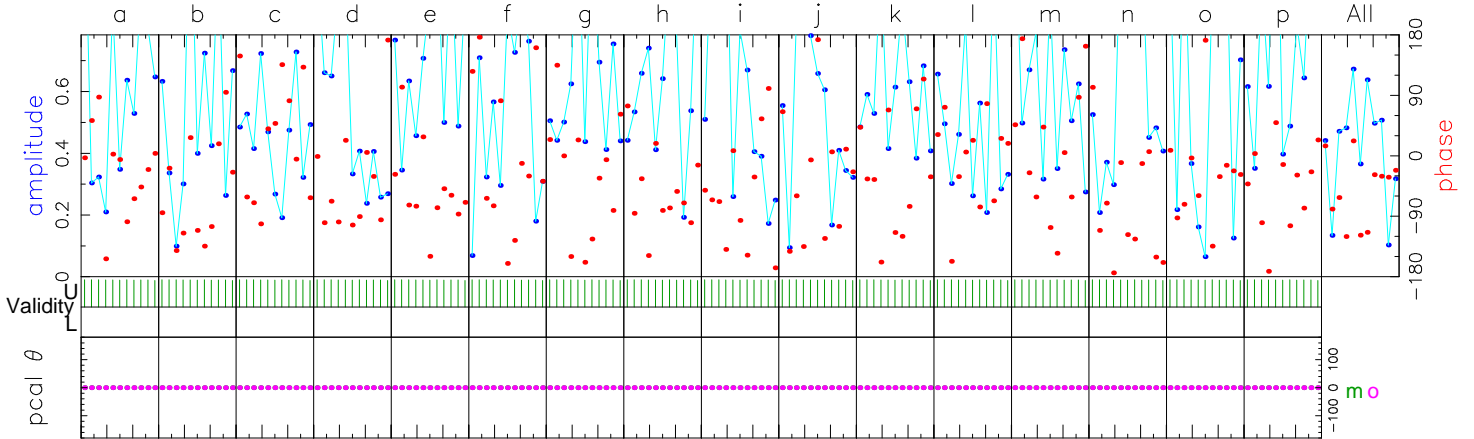
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, mo
VLBA_MK - VLBA_OV, fgroup W, pol RR



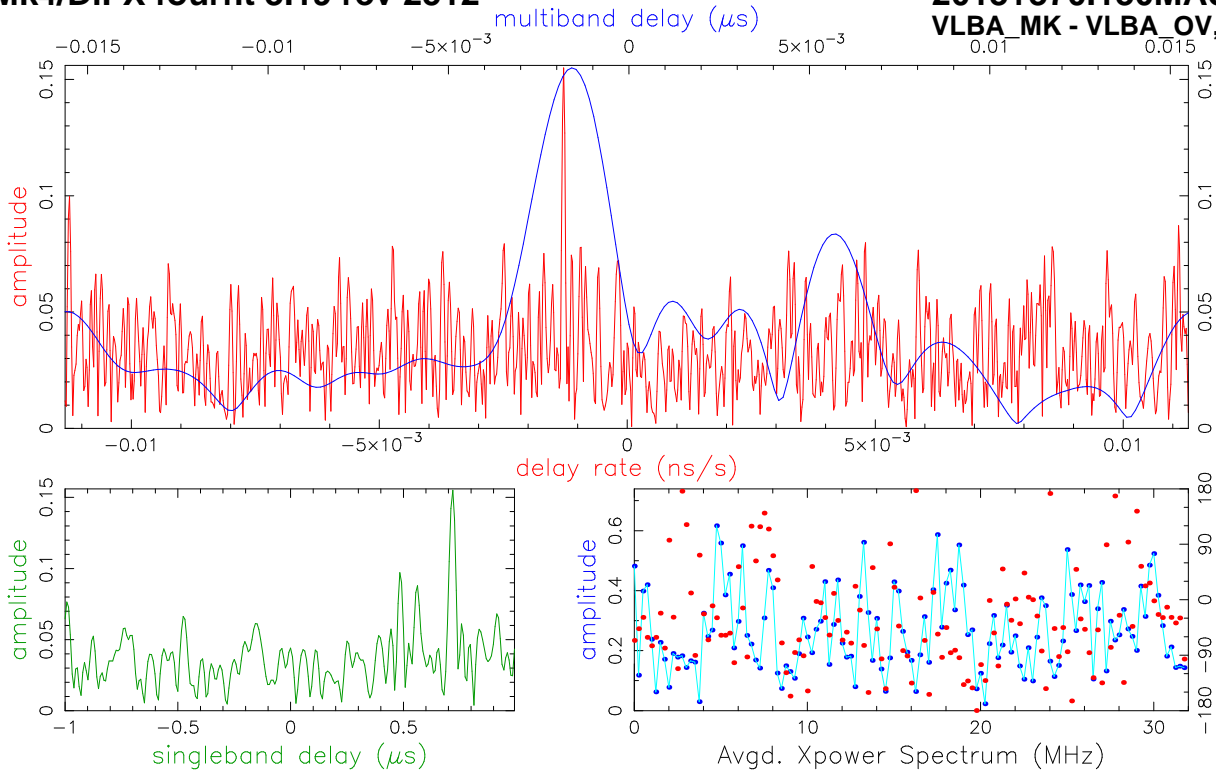
Fringe quality 9
SNR 9.5
Int time 177.292
Amp 0.261
Phase -49.0
PFD 3.7e-13
Delays (us)
SBD 0.006659
MBD 0.005652
Fringe rate (Hz) 0.010666
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054118
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



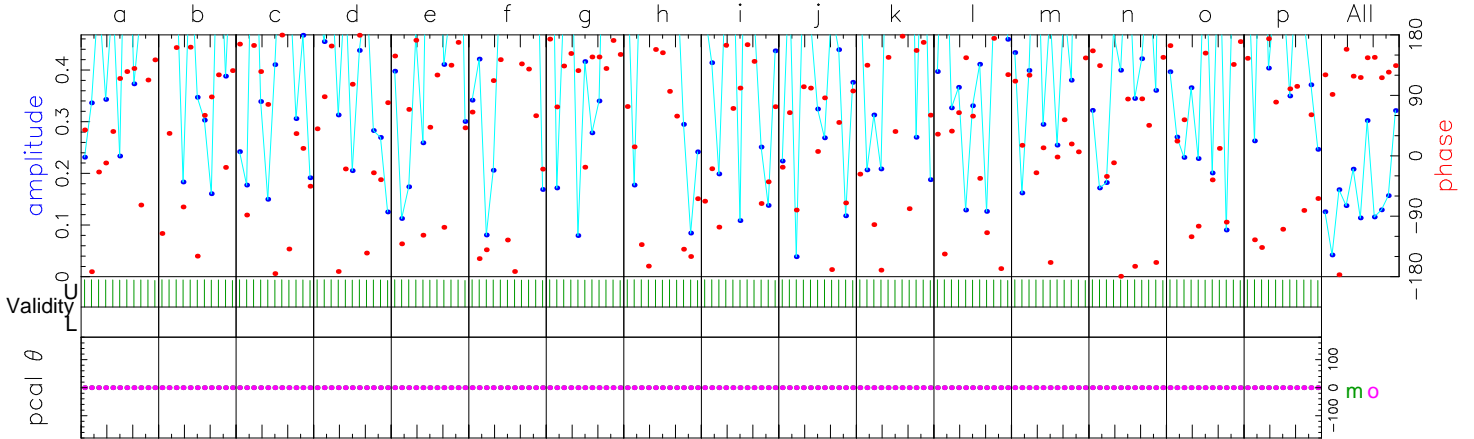
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0						
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
m:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
m:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Group delay (usec)(sbd)		-9.9325917170E+03															Apriori delay (usec)	-9.93259736896E+03	Resid mbdelay (usec)	5.65186E-03	+/-	1.1E-04
Sband delay (usec)		-9.93259070996E+03															Apriori clock (usec)	-1.4071626E+01	Resid sbdelay (usec)	6.65900E-03	+/-	1.8E-03
Phase delay (usec)		-9.93259737054E+03															Apriori clockrate (us/s)	-9.6732924E-09	Resid phdelay (usec)	-1.58036E-06	+/-	3.9E-07
Delay rate (us/s)		5.21800207022E-01															Apriori rate (us/s)	5.21800083200E-01	Resid rate (us/s)	1.23822E-07	+/-	3.7E-09
Total phase (deg)																	Apriori accel (us/s/s)	3.45940793611E-05	Resid phase (deg)	-49.0	+/-	12.0

ph/seg (deg) 48.8 20.0 Search (1024X64) 0.261 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 90.1 34.9 Interp. 0.248 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 29.3 24.1 Inc. seg. avg. 0.397 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 49.2 42.0 Inc. frq. avg. 0.266 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 57.0 el 23.4 pa -82.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) -3731.611 213.866 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/mo..130MAS Output file: /Exps/c192c/v2/1234/No0070/mo.W.268.130MAS



Fringe quality 0
SNR 5.7
Int time 177.292
Amp 0.156
Phase 135.9
PFD 8.6e-01
Delays (us)
SBD 0.717884
MBD -0.001583
Fringe rate (Hz)
-0.111710
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054121
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

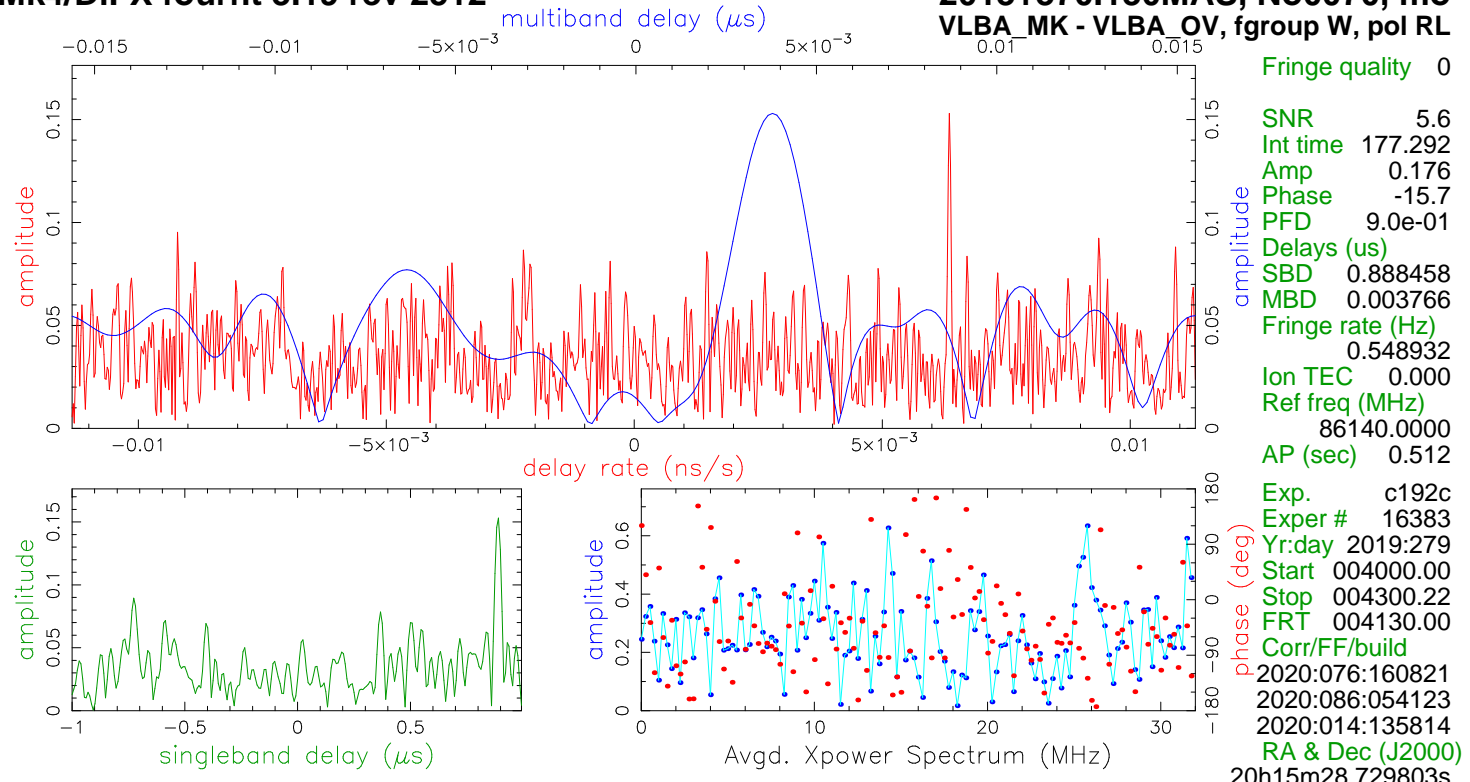


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	101.4	133.0	173.2	127.3	133.2	140.2	149.0	149.8	141.0	81.1	-169.0	151.0	45.3	123.4	154.0	173.3	Phase	135.9
	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	118.1	218.7	174.5	4.6	199.6	159.1	221.0	124.1	174.2	11.8	62.0	58.6	200.9	190.9	225.7	86.7	Sbd box	220.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-9.93188020217E+03			Apriori delay (usec)			-9.93259736896E+03			Resid mbdelay (usec)			-1.58321E-03			+/- 1.9E-04		
Sband delay (usec)	-9.93187948446E+03			Apriori clock (usec)			-1.4071626E+01			Resid sbdelay (usec)			7.17884E-01			+/- 3.0E-03		
Phase delay (usec)	-9.93259736457E+03			Apriori clockrate (us/s)			-9.6732924E-09			Resid phdelay (usec)			4.38352E-06			+/- 6.5E-07		
Delay rate (us/s)	5.21798786358E-01			Apriori rate (us/s)			5.21800083200E-01			Resid rate (us/s)			-1.29684E-06			+/- 6.3E-09		
Total phase (deg)	5.6			Apriori accel (us/s/s)			3.45940793611E-05			Resid phase (deg)			135.9			+/- 20.3		

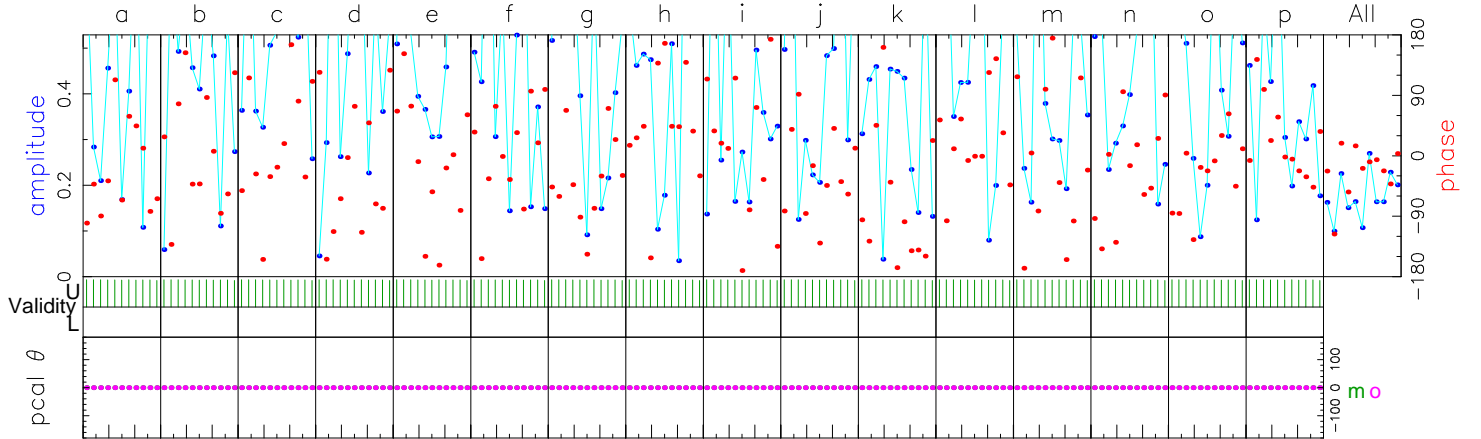
ph/seg (deg) 24.1 33.6 Search (1024X64) 0.149 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 51.3 58.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 37.3 40.6 Inc. seg. avg. 0.142 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 54.3 70.8 Inc. frq. avg. 0.149 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 57.0 el 23.4 pa -82.2 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) -3731.611 213.866 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/mo..130MAS Output file: /Exps/c192c/v2/1234/No0070/mo.W.299.130MAS

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, mo
VLBA_MK - VLBA_OV, fgroup W, pol RL

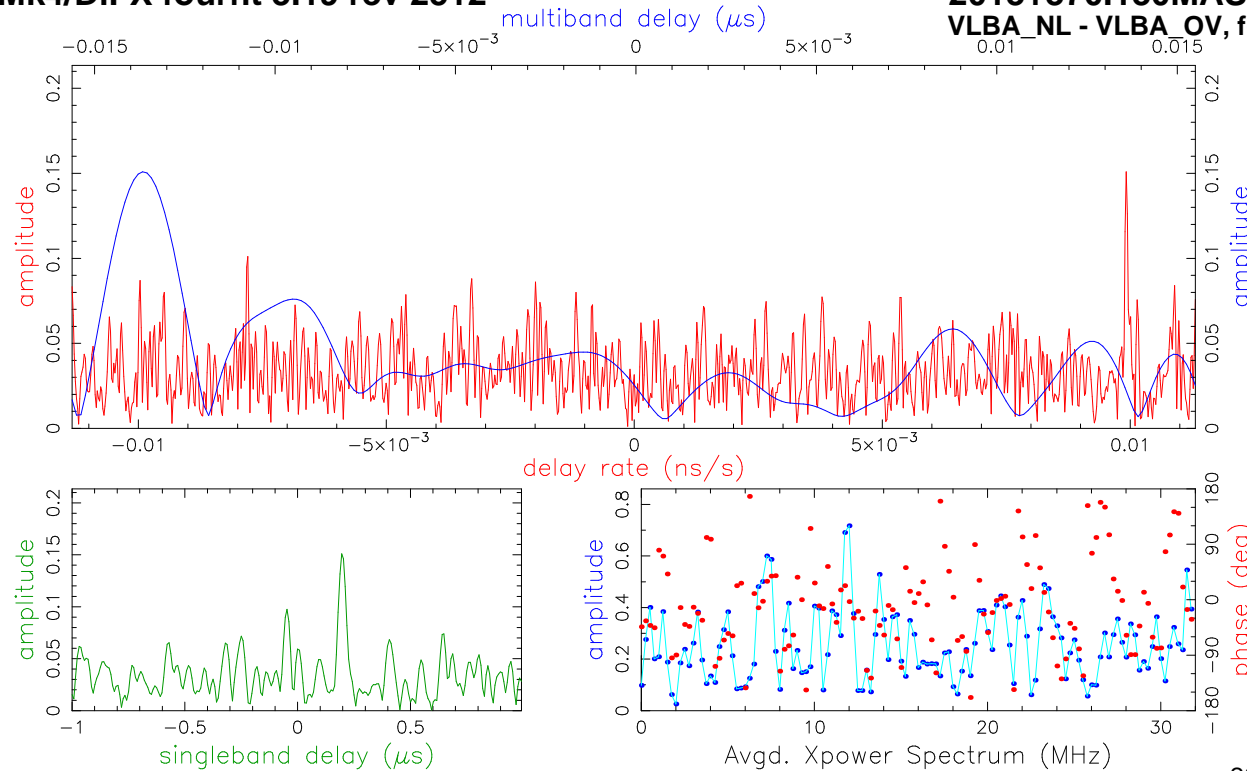


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-42.3	5.6	21.8	-93.6	33.9	-11.4	-39.8	54.7	35.2	-16.0	-119.3	4.9	-126.8	-48.6	-26.5	20.6		Phase -15.7					
	0.2	0.0	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.4	0.2	0.4	0.1	0.3	0.4	0.3		Ampl. 0.2					
	161.5	47.3	155.8	78.7	38.6	155.2	29.3	153.8	90.8	243.9	5.0	244.2	151.1	54.7	177.1	24.7		Sbd box 242.7					
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-9.93171860319E+03															Apriori delay (usec)	-9.93259736896E+03	Resid mbdelay (usec)	3.76577E-03	+/-	1.9E-04
Sband delay (usec)			-9.93170891046E+03															Apriori clock (usec)	-1.4071626E+01	Resid sbdelay (usec)	8.88458E-01	+/-	3.1E-03
Phase delay (usec)			-9.93259736946E+03															Apriori clockrate (us/s)	-9.6732924E-09	Resid phdelay (usec)	-5.06638E-07	+/-	6.6E-07
Delay rate (us/s)			5.21806455753E-01															Apriori rate (us/s)	5.21800083200E-01	Resid rate (us/s)	6.37255E-06	+/-	6.3E-09
Total phase (deg)																		Apriori accel (us/s/s)	3.45940793611E-05	Resid phase (deg)	-15.7	+/-	20.4

	RMS	Theor.	Amplitude	0.176 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	37.0	33.8	Search (1024X64)	0.149	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	34.8	59.0	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	56.8	40.8	Inc. seg. avg.	0.171	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	66.7	71.2	Inc. frq. avg.	0.189	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
m: az 57.0 el 23.4 pa -82.2			o: az 78.2 el 60.0 pa -78.1		u,v (fr/asec) -3731.611 213.866	simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c192c/v2/1234/No0070/mo..130MAS		Output file: /Exps/c192c/v2/1234/No0070/mo.W.312.130MAS	

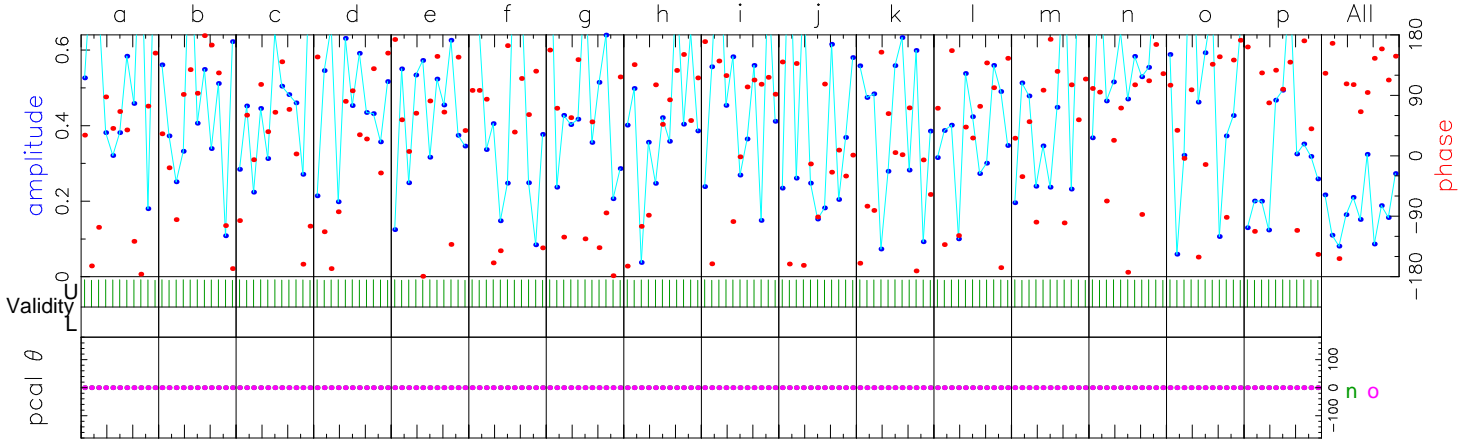


Fringe quality 0

SNR 5.5
Int time 177.251
Amp 0.213
Phase 122.7
PFD 9.7e-01
Delays (us)
SBD 0.197701
MBD -0.013639
Fringe rate (Hz) 0.856248
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

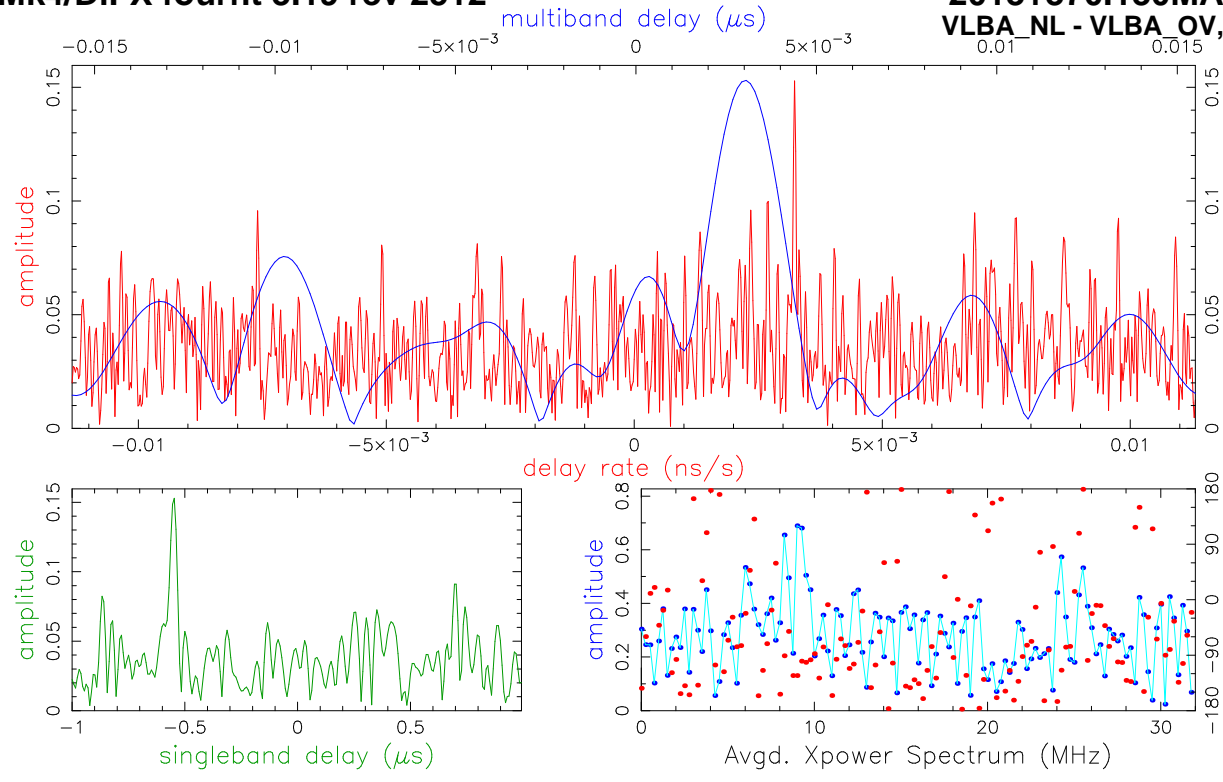
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054124
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
153.7	132.6	62.9	110.9	106.1	103.4	-171.8	114.0	133.0	-106.7	-52.8	114.8	88.8	113.8	126.8	141.5		Phase	122.7	
0.2	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.1	0.1	0.2	0.2	0.4	0.3	0.3		Ampl.	0.2	
17.0	205.8	123.3	46.0	14.3	79.5	184.9	151.2	100.2	230.2	184.4	185.0	195.2	100.0	140.6	64.9		Sbd box	154.3	
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	2.51337682749E+03			Apriori delay (usec)			2.51317171673E+03			Resid mbdelay (usec)			-1.36392E-02			+/- 1.9E-04			
Sband delay (usec)	2.51336941723E+03			Apriori clock (usec)			9.8695240E+00			Resid sbdelay (usec)			1.97701E-01			+/- 3.1E-03			
Phase delay (usec)	2.51317172069E+03			Apriori clockrate (us/s)			1.3324251E-07			Resid phdelay (usec)			3.95807E-06			+/- 6.7E-07			
Delay rate (us/s)	-4.26472742543E-01			Apriori rate (us/s)			-4.26482682735E-01			Resid rate (us/s)			9.94019E-06			+/- 6.4E-09			
Total phase (deg)	7.3			Apriori accel (us/s/s)			-9.14325053283E-06			Resid phase (deg)			122.7			+/- 20.7			

ph/seg (deg) 38.5 34.3 Search (1024X64) 0.149 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.2 59.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 65.1 41.4 Inc. seg. avg. 0.212 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 48.1 72.2 Inc. frq. avg. 0.209 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 113.9 el 80.2 pa -58.0 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 3062.313 -133.676 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/no..130MAS Output file: /Exps/c192c/v2/1234/No0070/no.W.317.130MAS

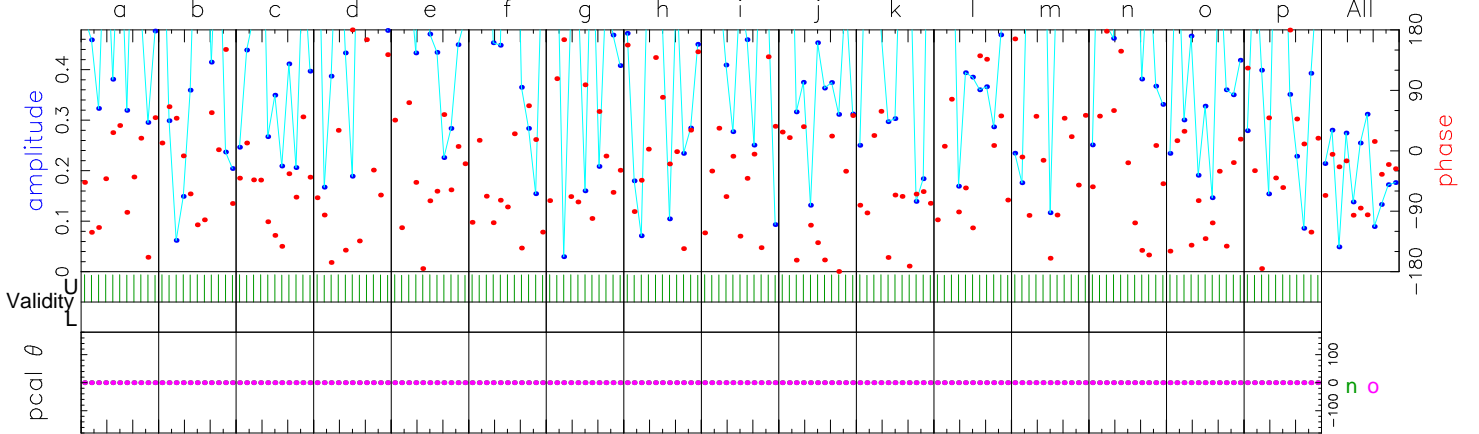


Fringe quality 0

SNR 5.6
 Int time 177.251
 Amp 0.160
 Phase -46.1
 PFD 9.0e-01
 Delays (us)
 SBD -0.549479
 MBD 0.002973
 Fringe rate (Hz) 0.279187
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054126
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

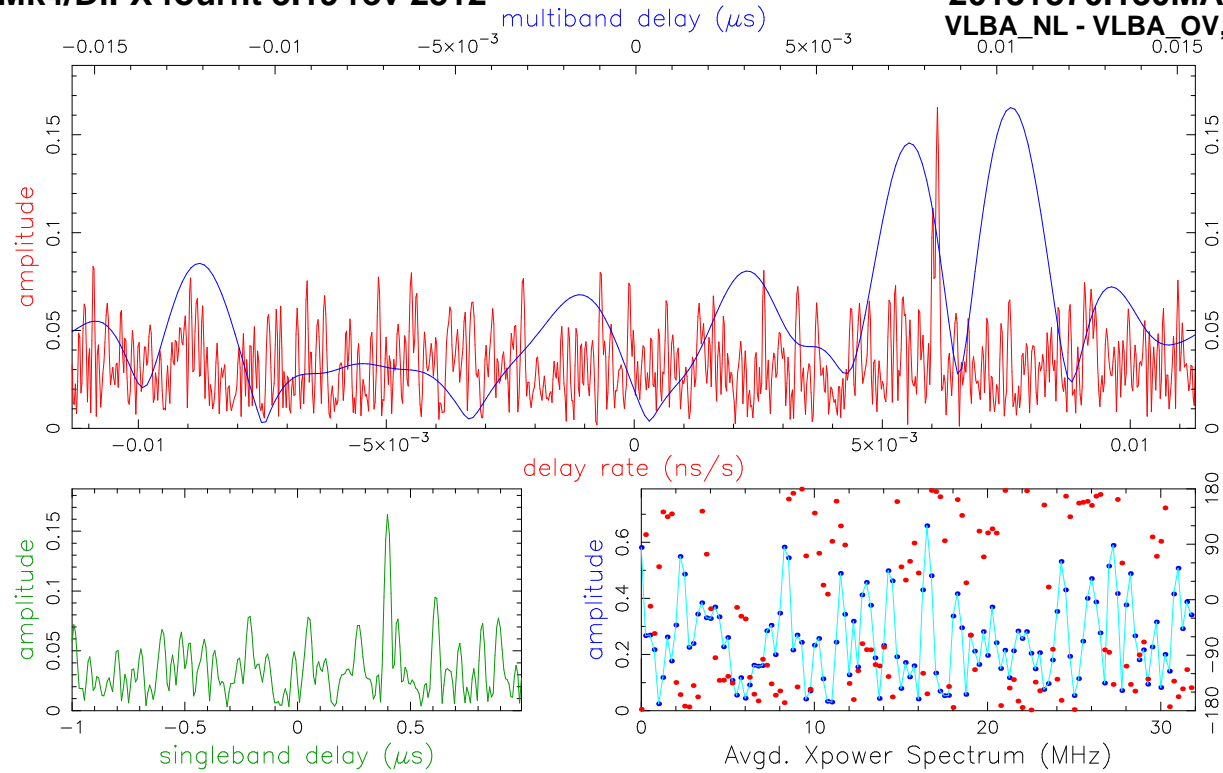


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-27.1	-36.6	-39.8	-113.4	-36.6	-68.3	-55.9	79.4	-71.6	14.2	-77.9	-21.2	-7.7	-140.1	-45.6	-38.9		Phase -46.1
	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.3	0.1	0.3	0.0	0.2	0.2		Ampl. 0.2
	200.2	147.5	71.7	209.5	116.7	206.0	211.7	195.1	21.2	62.4	128.9	120.6	193.4	176.9	217.5	49.3		Sbd box 58.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	2.51261218936E+03			Apriori delay (usec)			2.51317171673E+03			Resid mbdelay (usec)			2.97262E-03			+/-	1.9E-04	
Sband delay (usec)	2.51262223773E+03			Apriori clock (usec)			9.8695240E+00			Resid sbdelay (usec)			-5.49479E-01			+/-	3.1E-03	
Phase delay (usec)	2.51317171525E+03			Apriori clockrate (us/s)			1.3324251E-07			Resid phdelay (usec)			-1.48557E-06			+/-	6.6E-07	
Delay rate (us/s)	-4.26479441645E-01			Apriori rate (us/s)			-4.26482682735E-01			Resid rate (us/s)			3.24109E-06			+/-	6.3E-09	
Total phase (deg)	198.5			Apriori accel (us/s/s)			-9.14325053283E-06			Resid phase (deg)			-46.1			+/-	20.4	

ph/seg (deg) 36.6 33.8 Search (1024X64) 0.146 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 57.2 59.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 51.9 40.8 Inc. seg. avg. 0.168 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 53.9 71.2 Inc. frq. avg. 0.156 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 113.9 el 80.2 pa -58.0 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 3062.313 -133.676 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/no..130MAS Output file: /Exps/c192c/v2/1234/No0070/no.W.332.130MAS

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, no VLBA_NL - VLBA_OV, fgroup W, pol LR

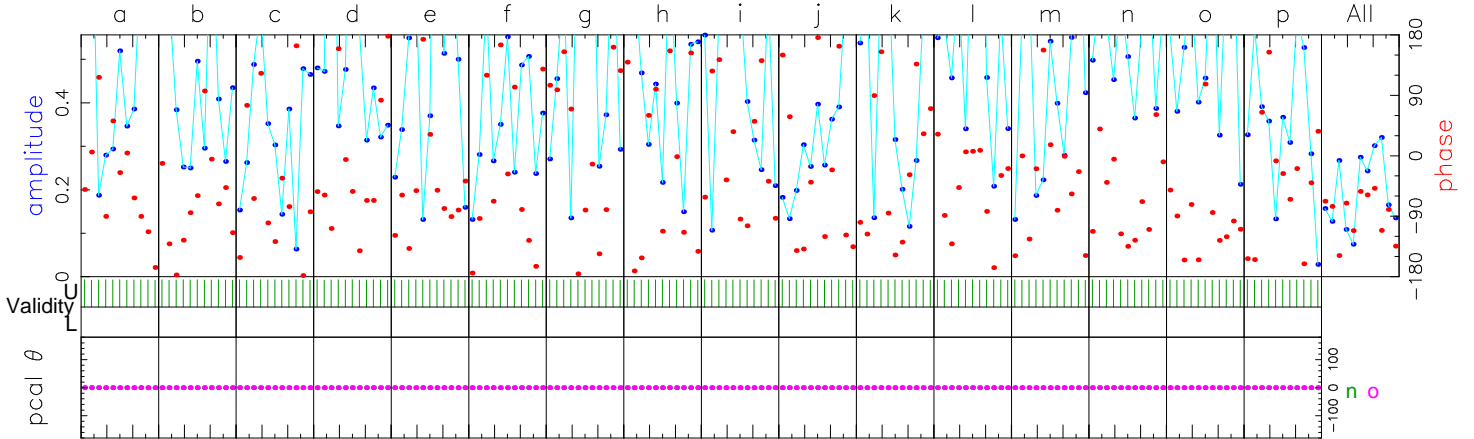


Fringe quality 0

SNR 6.0
 Int time 177.251
 Amp 0.185
 Phase -84.0
 PFD 2.6e-01
 Delays (us)
 SBD 0.398985
 MBD 0.010403
 Fringe rate (Hz) 0.526754
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build 2020:076:160821
 2020:086:054128
 2020:014:135814
 RA & Dec (J2000) 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

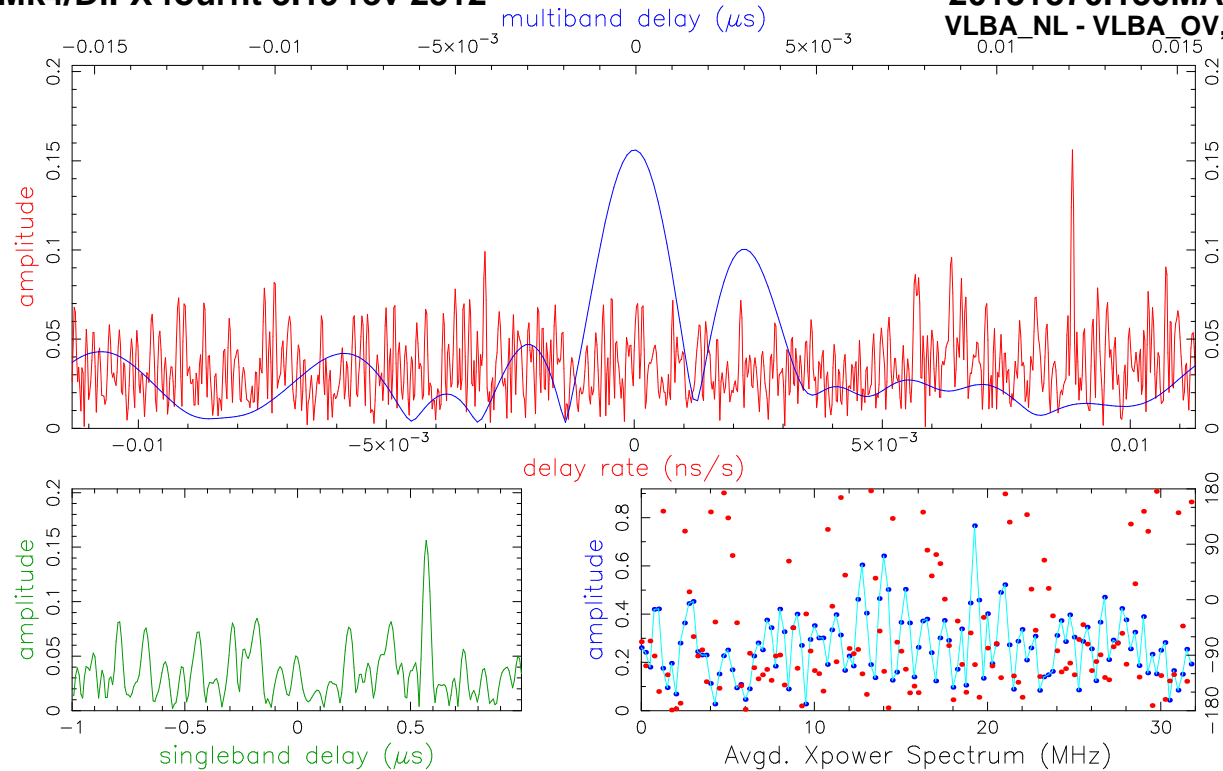


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd)	2.51355711981E+03			Apriori delay (usec)			2.51317171673E+03			Resid mbdelay (usec)			1.04031E-02			+/-	1.8E-04	
Sband delay (usec)	2.51357070173E+03			Apriori clock (usec)			9.8695240E+00			Resid sbdelay (usec)			3.98985E-01			+/-	2.9E-03	
Phase delay (usec)	2.51317171402E+03			Apriori clockrate (us/s)			1.3324251E-07			Resid phdelay (usec)			-2.70819E-06			+/-	6.2E-07	
Delay rate (us/s)	-4.26476567643E-01			Apriori rate (us/s)			-4.26482682735E-01			Resid rate (us/s)			6.11509E-06			+/-	5.9E-09	
Total phase (deg)	160.6			Apriori accel (us/s/s)			-9.14325053283E-06			Resid phase (deg)			-84.0			+/-	19.2	

ph/seg (deg) 32.4 31.8 Search (1024X64) 0.161 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 53.9 55.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 54.2 38.4 Inc. seg. avg. 0.194 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 77.4 67.0 Inc. frq. avg. 0.216 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 113.9 el 80.2 pa -58.0 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 3062.313 -133.676 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/no..130MAS Output file: /Exps/c192c/v2/1234/No0070/no.W.346.130MAS

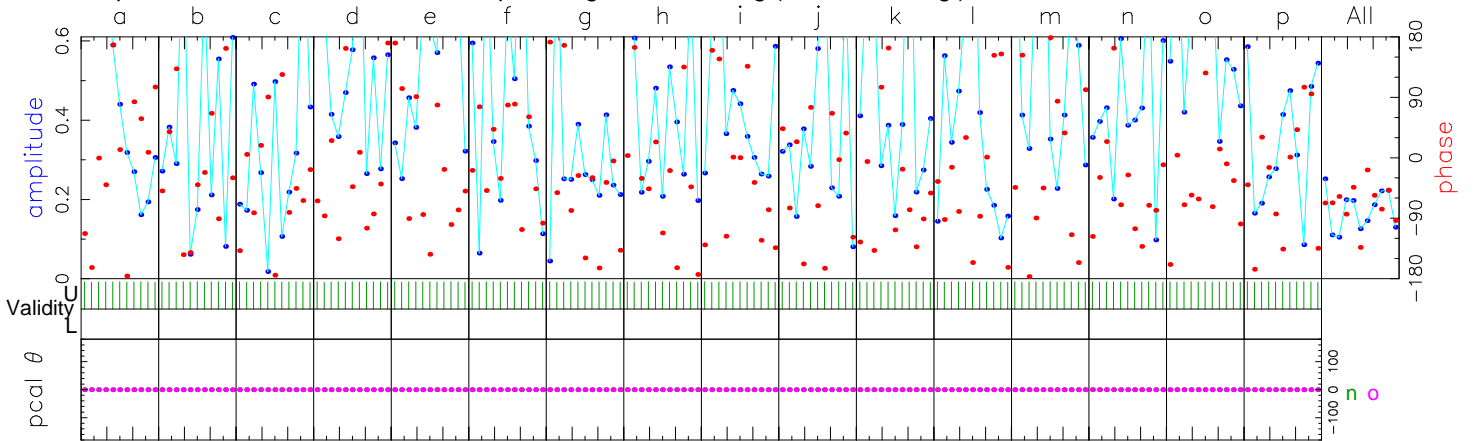
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, no VLBA_NL - VLBA_OV, fgroup W, pol RL



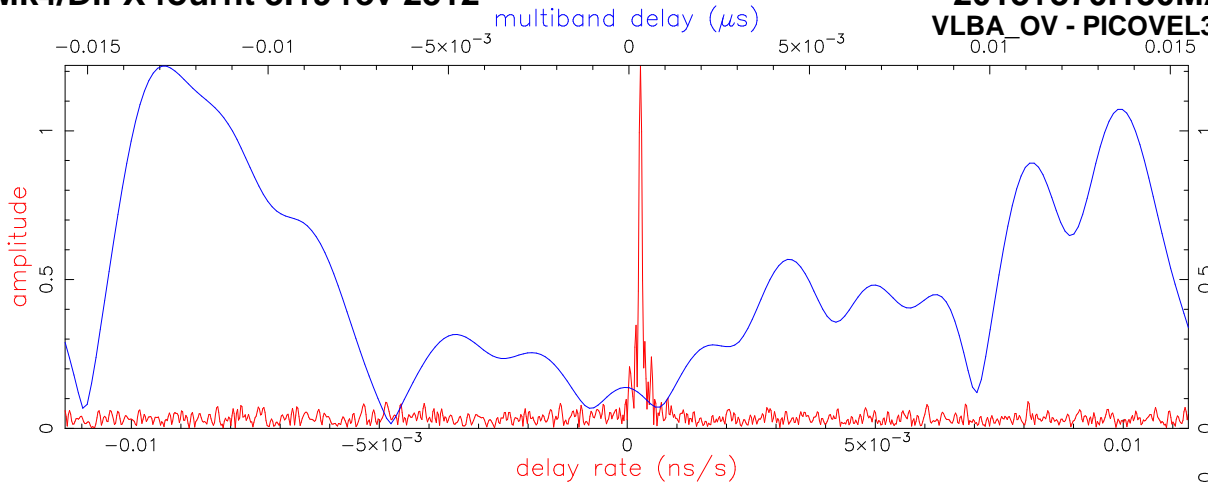
Fringe quality 0
 SNR 5.7
 Int time 177.252
 Amp 0.203
 Phase -65.6
 PFD 8.0e-01
 Delays (us)
 SBD 0.570786
 MBD -0.000039
 Fringe rate (Hz) 0.762298
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054130
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



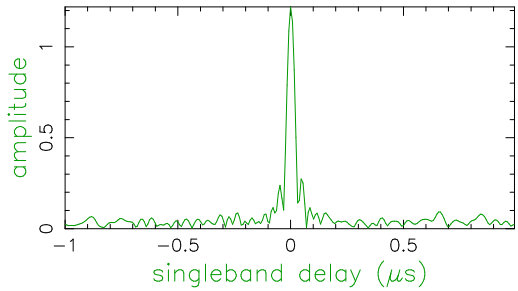
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-100.4	-59.5	-64.8	-64.3	-76.7	-15.0	-64.3	-29.0	-154.4	-10.1	-85.6	-92.0	-87.4	-62.4	-47.7	-38.0		Phase	-65.6			
	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.4	0.4	0.1		Ampl.	0.2			
	255.1	93.7	193.3	119.3	91.5	235.2	152.7	189.2	99.8	47.6	72.4	37.3	226.8	203.1	223.1	114.6		Sbd box	202.1			
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used				
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs				
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase				
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC				
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp				
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids				
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks				
Group delay (usec)(sbd)		2.51373417734E+03							2.51317171673E+03										Resid mbdelay (usec)	-3.93901E-05	+/-	1.9E-04
Sband delay (usec)		2.51374250223E+03							9.8695240E+00										Resid sbdelay (usec)	5.70786E-01	+/-	3.0E-03
Phase delay (usec)		2.51317171462E+03							1.3324251E-07										Resid phdelay (usec)	-2.11390E-06	+/-	6.5E-07
Delay rate (us/s)		-4.26473833212E-01							-4.26482682735E-01										Resid rate (us/s)	8.84952E-06	+/-	6.2E-09
Total phase (deg)				179.0					-9.14325053283E-06										Resid phase (deg)	-65.6	+/-	20.1

ph/seg (deg) 28.6 33.4 Search (1024X64) 0.149 Pcd mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 32.8 58.3 Interp. 0.000 Pcd rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 36.8 40.3 Inc. seg. avg. 0.192 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 51.1 70.3 Inc. frq. avg. 0.184 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 113.9 el 80.2 pa -58.0 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 3062.313 -133.676 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/no..130MAS Output file: /Exps/c192c/v2/1234/No0070/no.W.363.130MAS

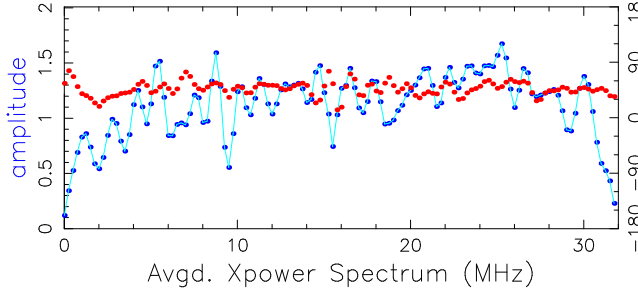


Fringe quality 4

SNR 44.5
Int time 178.386
Amp 1.220
Phase 127.3
PFD 0.0e+00
Delays (us)
SBD 0.000989
MBD -0.012873
Fringe rate (Hz) 0.022559
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

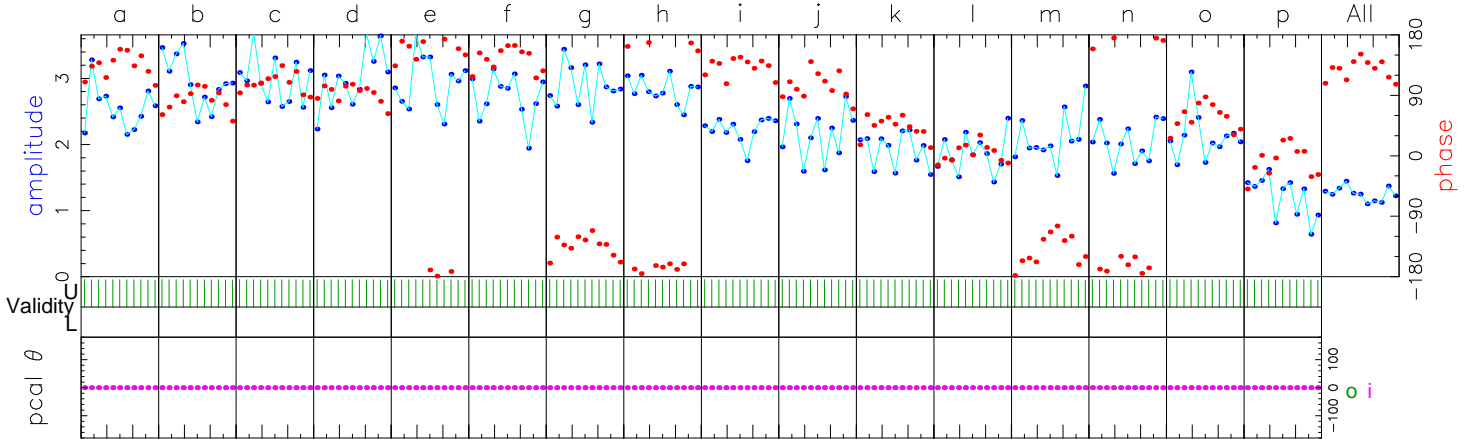


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054125
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

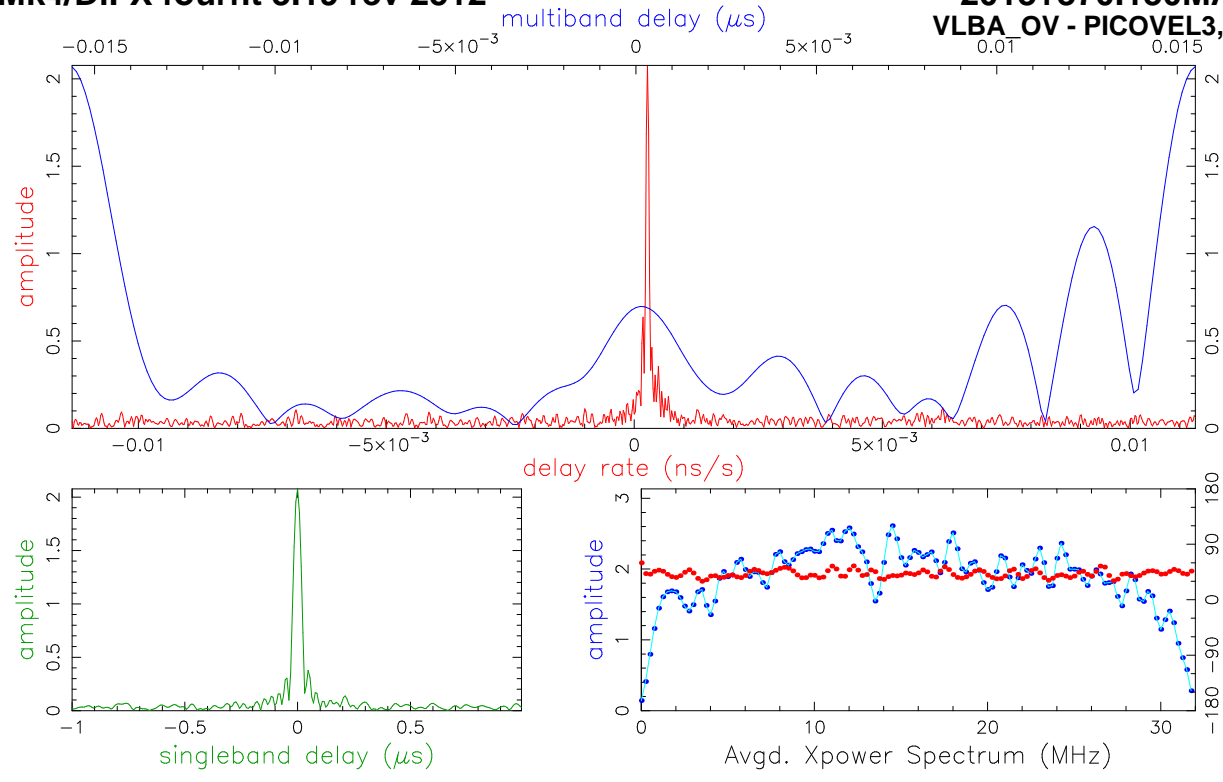


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 7.77807543923E+03 Apriori delay (usec) 7.77808831223E+03 Resid mbdelay (usec) -1.28730E-02 +/- 2.4E-05
 Sband delay (usec) 7.77808930123E+03 Apriori clock (usec) 1.7219730E+01 Resid sbdelay (usec) 9.89000E-04 +/- 3.9E-04
 Phase delay (usec) 7.77808831633E+03 Apriori clockrate (us/s) 3.5398100E-07 Resid phdelay (usec) 4.10526E-06 +/- 8.3E-08
 Delay rate (us/s) 1.56325806034E+00 Apriori rate (us/s) 1.56325779845E+00 Resid rate (us/s) 2.61891E-07 +/- 8.0E-10
 Total phase (deg) 204.7 Apriori accel (us/s/s) -4.11220419917E-05 Resid phase (deg) 127.3 +/- 2.6

RMS Theor. Amplitude 1.220 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 14.1 4.3 Search (1024X64) 1.200 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 8.8 7.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 73.7 5.1 Inc. seg. avg. 1.253 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 98.7 9.0 Inc. frq. avg. 2.303 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 i: az 295.8 el 30.5 pa 64.6 u,v (fr/asec) -11278.208 -2374.360 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oi..130MAS Output file: /Exps/c192c/v2/1234/No0070/oi.W.319.130MAS

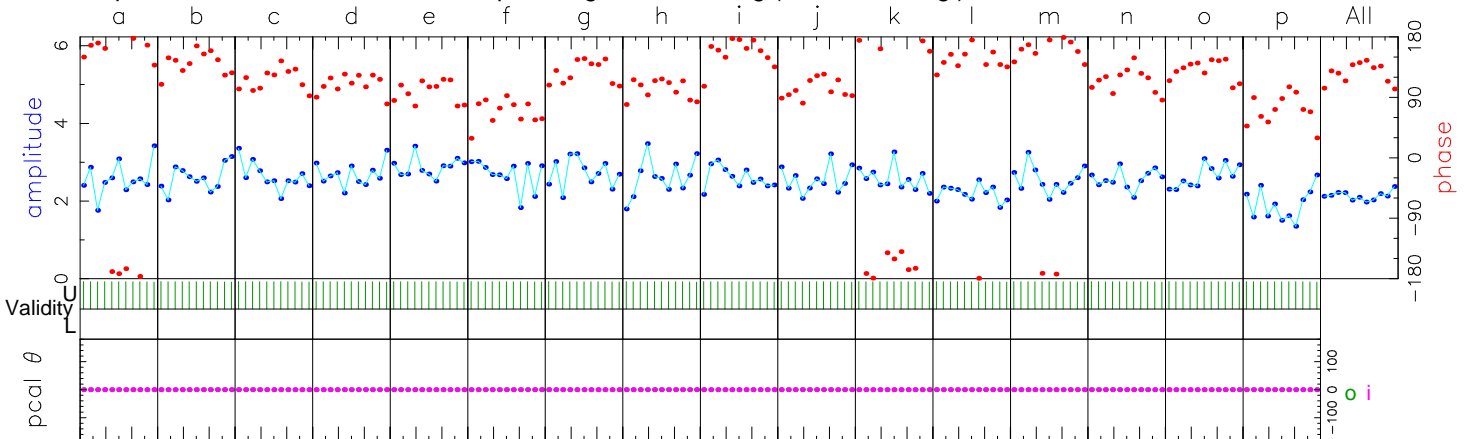


Fringe quality 5

SNR 75.8
Int time 178.386
Amp 2.077
Phase 125.5
PFD 0.0e+00
Delays (us)
SBD -0.001231
MBD -0.015708
Fringe rate (Hz) 0.022493
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Yr:day 16383
2020:076:160821
2020:086:054127
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	171.3	140.0	115.2	108.2	97.4	68.7	128.9	101.6	157.4	102.1	-171.0	149.4	165.1	114.4	130.6	67.9	Phase	125.5
o	2.5	2.5	2.6	2.6	2.8	2.6	2.6	2.6	2.5	2.5	2.4	2.1	2.5	2.5	2.6	1.8	Ampl.	2.5
i	128.2	128.9	129.0	128.6	128.6	128.7	128.6	128.8	128.6	128.4	128.5	128.7	128.6	128.3	128.6	127.3	Sbd box	128.8
o	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

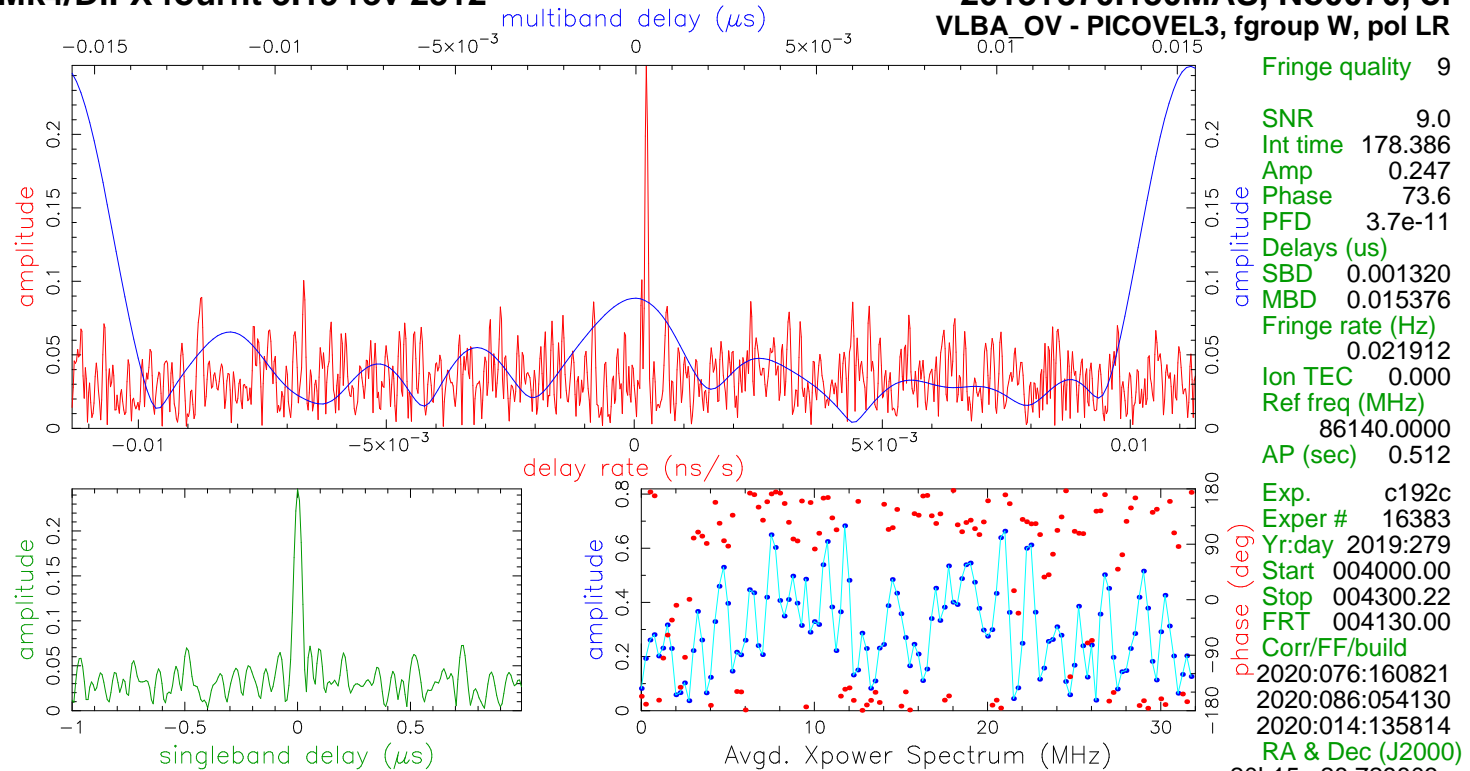
Group delay (usec)(sbd) 7.77807260395E+03 Apriori delay (usec) 7.77808831223E+03 Resid mbdelay (usec) -1.57083E-02 +/- 1.4E-05
 Sband delay (usec) 7.77808708173E+03 Apriori clock (usec) 1.7219730E+01 Resid sbdelay (usec) -1.23050E-03 +/- 2.3E-04
 Phase delay (usec) 7.77808831627E+03 Apriori clockrate (us/s) 3.5398100E-07 Resid phdelay (usec) 4.04719E-06 +/- 4.9E-08
 Delay rate (us/s) 1.56325805958E+00 Apriori rate (us/s) 1.56325779845E+00 Resid rate (us/s) 2.61122E-07 +/- 4.7E-10
 Total phase (deg) 202.9 Apriori accel (us/s/s) -4.11220419917E-05 Resid phase (deg) 125.5 +/- 1.5

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) -0.016 0.016
 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 i: az 295.8 el 30.5 pa 64.6 u,v (fr/asec) -11278.208 -2374.360 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oi..130MAS Output file: /Exps/c192c/v2/1234/No0070/oi.W.338.130MAS

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, oi
VLBA_OV - PICOVEL3, fgroup W, pol LR



Fringe quality 9

SNR 9.0

Int time 178.386

Amp 0.247

Phase 73.6

PFD 3.7e-11

Delays (us)

SBD 0.001320

MBD 0.015376

Fringe rate (Hz)

0.021912

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 004000.00

Stop 004300.22

FRT 004130.00

Corr/FF/build

2020:076:160821

2020:086:054130

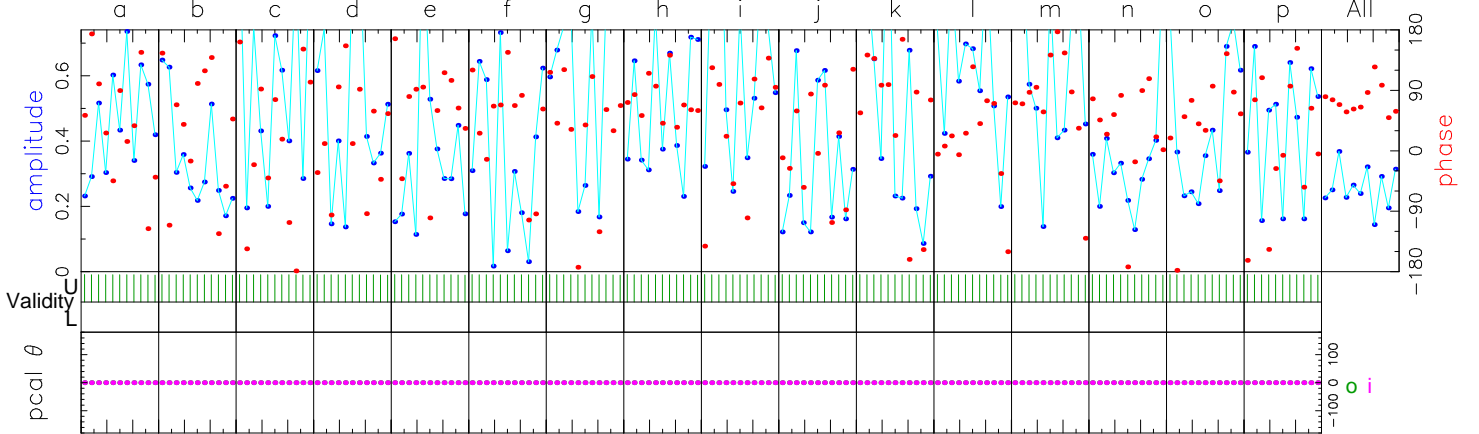
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
	39.5	123.6	120.3	27.3	85.2	46.8	71.2	77.6	96.6	38.7	111.0	36.8	93.7	45.5	70.8	74.8		Phase	73.6	
	0.1	0.1	0.2	0.3	0.2	0.2	0.4	0.4	0.5	0.2	0.4	0.4	0.4	0.2	0.3	0.1		Ampl.	0.3	
	33.1	41.1	23.9	183.6	134.6	119.3	129.0	128.8	128.8	205.0	130.1	127.9	129.7	3.2	19.7	76.4		Sbd box	129.2	
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs		
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase		
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids		
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks		
																		Chan ids		
																		Tracks		
Group delay (usec)(sbd)		7.77810368871E+03								7.77808831223E+03								Resid mbdelay (usec)	1.53765E-02	+/- 1.2E-04
Sband delay (usec)		7.77808963223E+03								1.7219730E+01								Resid sbdelay (usec)	1.32000E-03	+/- 1.9E-03
Phase delay (usec)		7.77808831460E+03								3.5398100E-07								Resid phdelay (usec)	2.37288E-06	+/- 4.1E-07
Delay rate (us/s)		1.56325805283E+00								1.56325779845E+00								Resid rate (us/s)	2.54378E-07	+/- 3.9E-09
Total phase (deg)				151.0						-4.11220419917E-05								Resid phase (deg)	73.6	+/- 12.7

ph/seg (deg) RMS Theor. Amplitude 0.247 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 20.6 21.1 Search (1024X64) 0.231 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

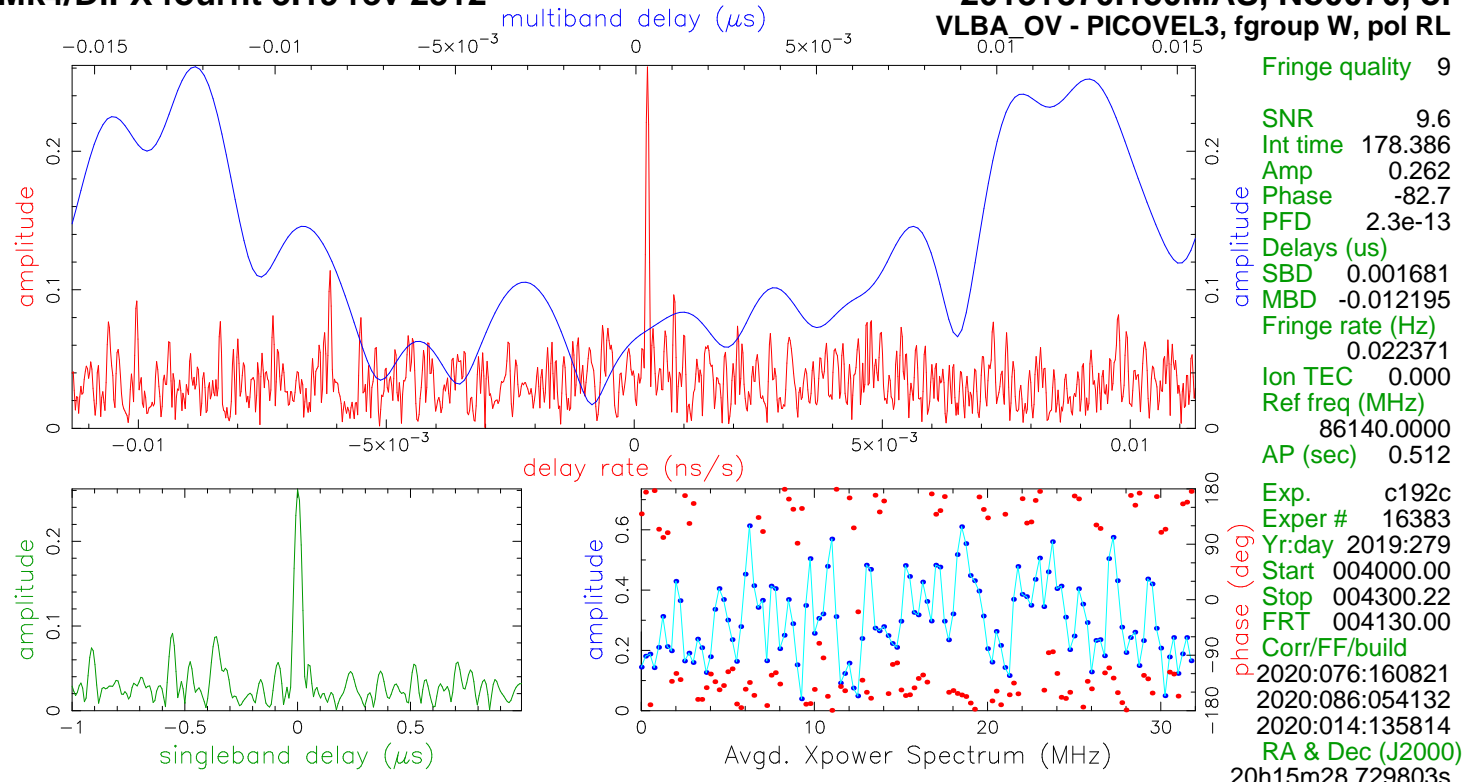
ph/frq (deg) 24.8 36.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 32.2 25.4 Inc. seg. avg. 0.242 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

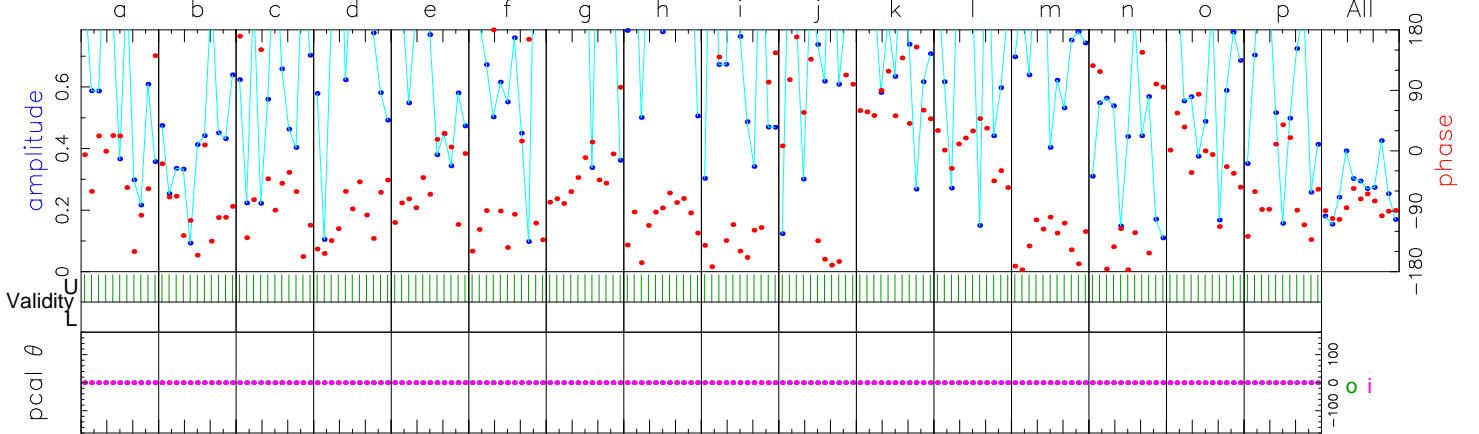
50.5 44.4 Inc. frq. avg. 0.253 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 i: az 295.8 el 30.5 pa 64.6 u,v (fr/asec) -11278.208 -2374.360 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oi..130MAS Output file: /Exps/c192c/v2/1234/No0070/oi.W.358.130MAS

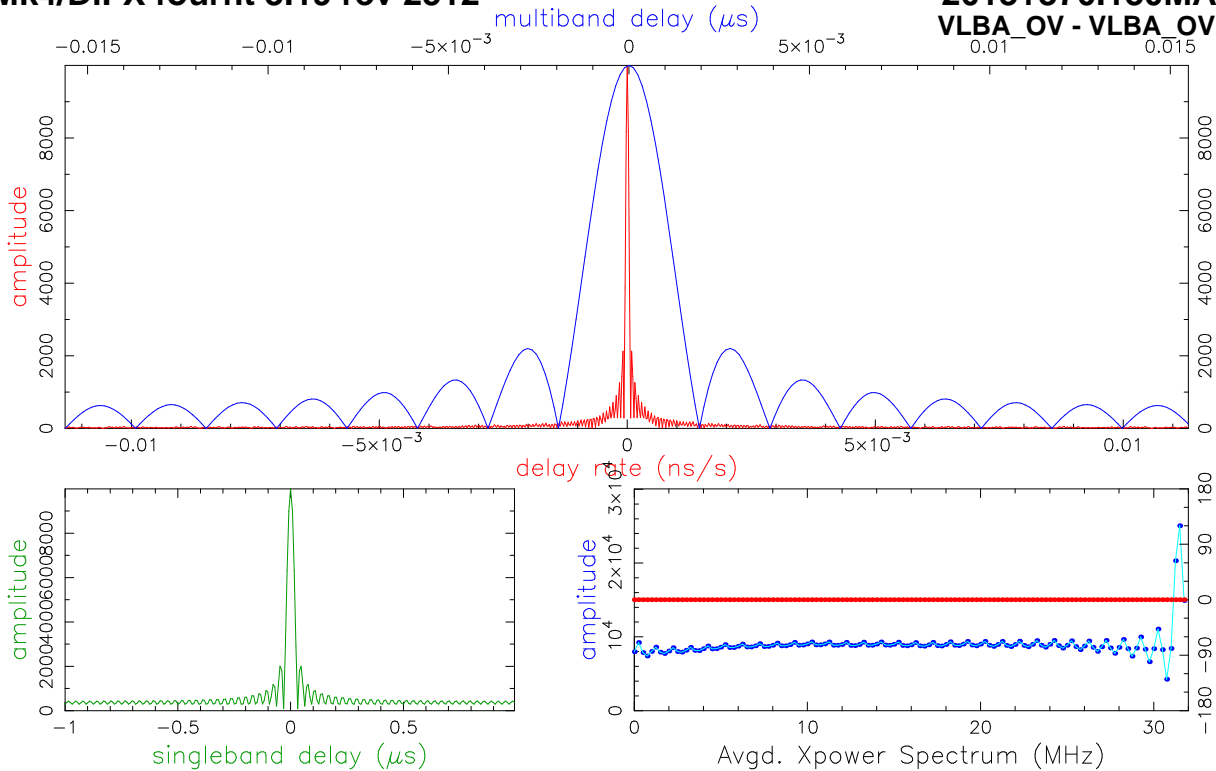


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-17.3	-93.2	-95.4	-96.7	-61.0	-117.8	-45.9	-95.0	-151.9	151.2	73.5	7.3	-134.4	-175.6	-2.3	-76.7	Phase	-82.7				
	0.4	0.3	0.4	0.6	0.5	0.6	0.9	0.8	0.6	0.5	0.6	0.6	0.7	0.3	0.5	0.4	Ampl.	0.5				
	127.3	129.8	128.8	129.0	129.2	129.4	128.7	129.3	129.6	129.2	128.5	128.8	128.6	191.1	130.2	127.7	Sbd box	129.2				
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)			7.77807611745E+03														Apriori delay (usec)	7.77808831223E+03	Resid mbdelay (usec)	-1.21948E-02	+/-	1.1E-04
Sband delay (usec)			7.77808999373E+03														Apriori clock (usec)	1.7219730E+01	Resid sbdelay (usec)	1.68150E-03	+/-	1.8E-03
Phase delay (usec)			7.77808830956E+03														Apriori clockrate (us/s)	3.5398100E-07	Resid phdelay (usec)	-2.66557E-06	+/-	3.9E-07
Delay rate (us/s)			1.56325805816E+00														Apriori rate (us/s)	1.56325779845E+00	Resid rate (us/s)	2.59705E-07	+/-	3.7E-09
Total phase (deg)																	Apriori accel (us/s/s)	-4.11220419917E-05	Resid phase (deg)	-82.7	+/-	12.0

	RMS	Theor.	Amplitude	0.262 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	14.4	19.9	Search (1024X64)	0.257	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	31.3	34.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	75.1	24.0	Inc. seg. avg.	0.254	Sample rate(MSamp/s): 64	dr window (ns/s) -0.016 0.016
amp/frq (%)	127.1	41.8	Inc. frq. avg.	0.507	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
o: az 78.2 el 60.0 pa -78.1			i: az 295.8 el 30.5 pa 64.6		u,v (fr/asec) -11278.208 -2374.360	simultaneous interpolator

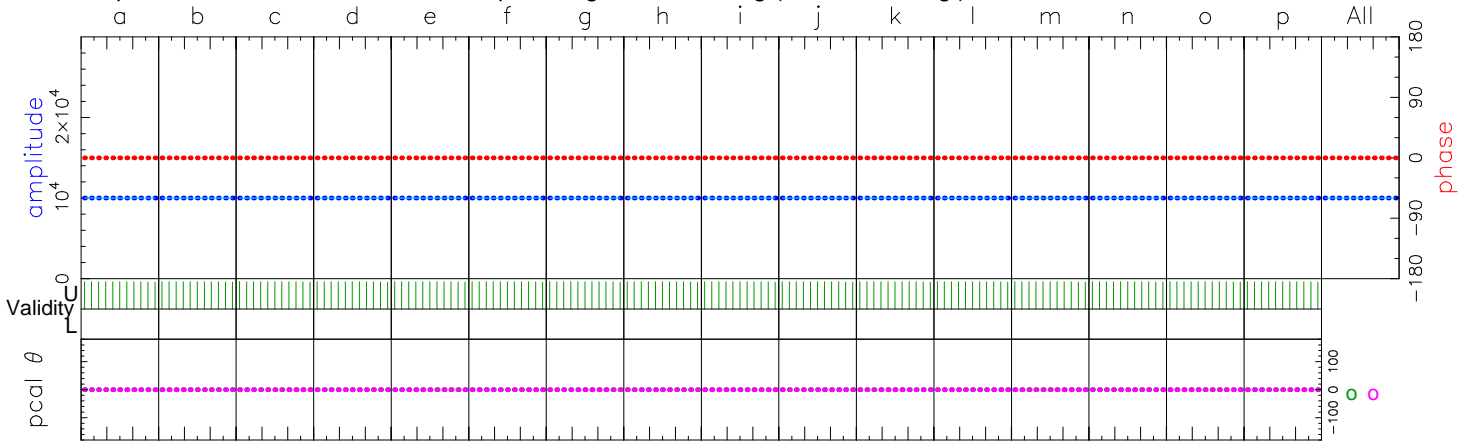


Fringe quality 9

SNR 365239.9
Int time 178.386
Amp 9999.998
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

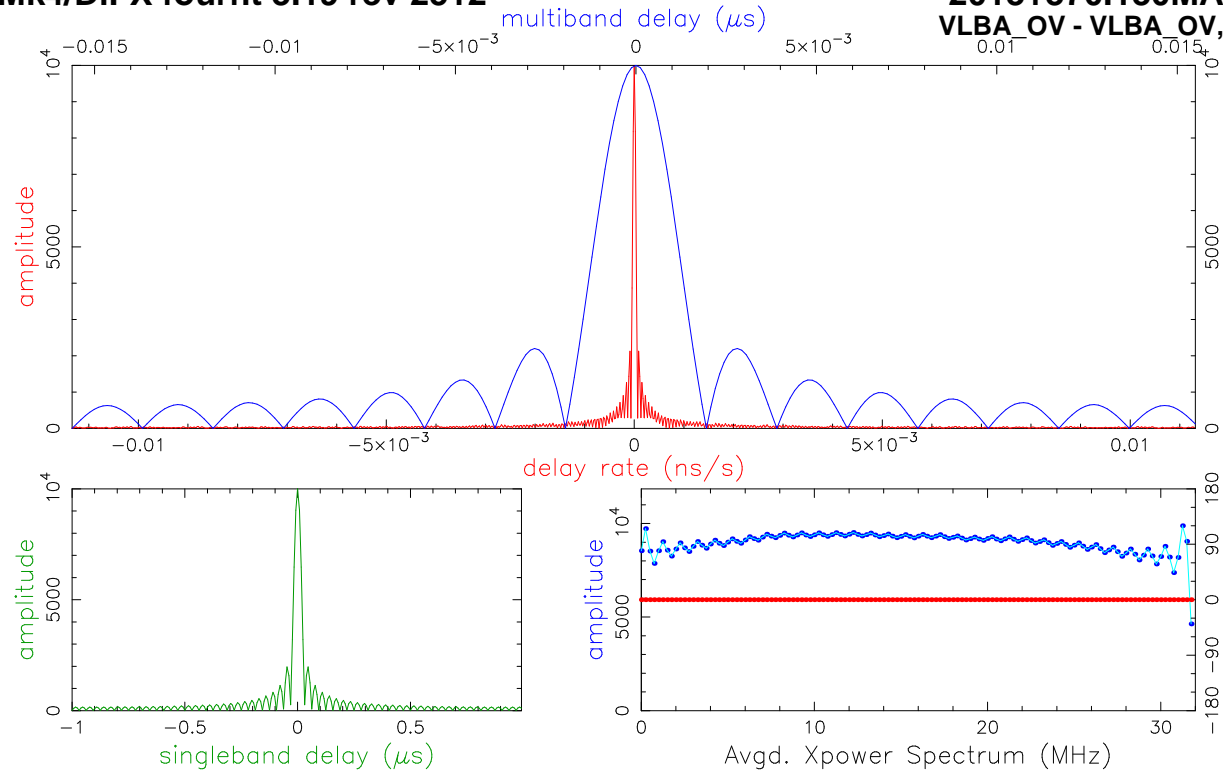
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054125
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-0.0	-0.0	-0.0	0.0	-0.0	-0.0	0.0	-0.0	0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	0.0	Phase	0.0
10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	Sbd box	129.0
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
o 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
o W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	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		+/- 4.7E-08						
Phase delay (usec)	1.64607057131E-20		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		1.64607E-20		+/- 1.0E-11						
Delay rate (us/s)	0.0000000000E+00		Apriori rate (us/s)		0.0000000000E+00		Resid rate (us/s)		0.00000E+00		+/- 9.7E-14						
Total phase (deg)	0.0		Apriori accel (us/s/s)		0.0000000000E+00		Resid phase (deg)		0.0		+/- 0.0						

ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.998 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (1024X64) 9999.998 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 o: az 78.2 el 60.0 pa -78.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oo..130MAS Output file: /Exps/c192c/v2/1234/No0070/oo.W.321.130MAS simultaneous interpolator

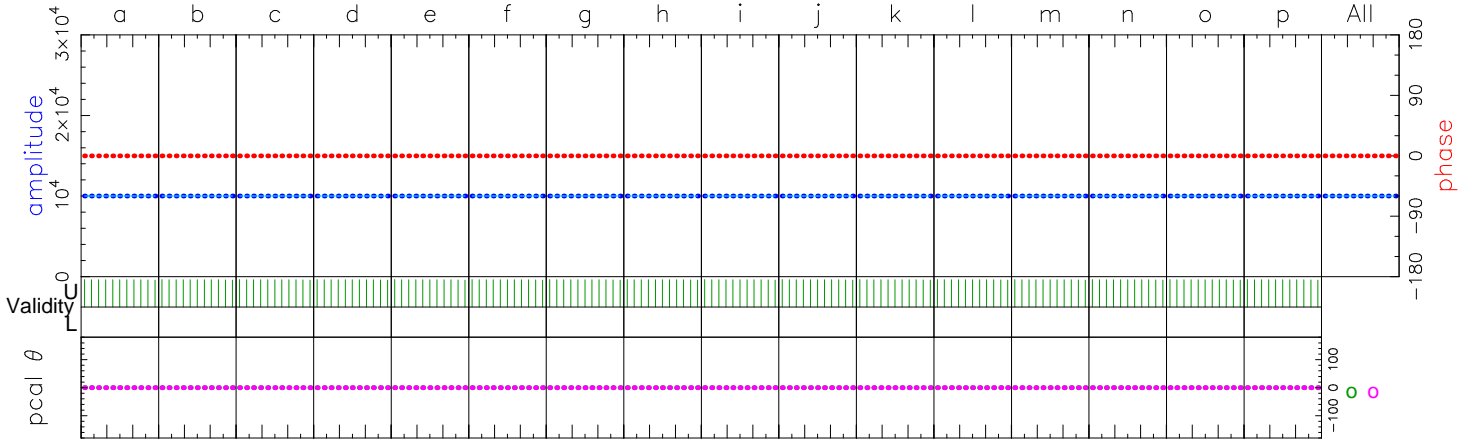


Fringe quality 9

SNR 365239.9
Int time 178.386
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
Yr:day 16383
Start 2019:279
Stop 2019:279
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054128
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

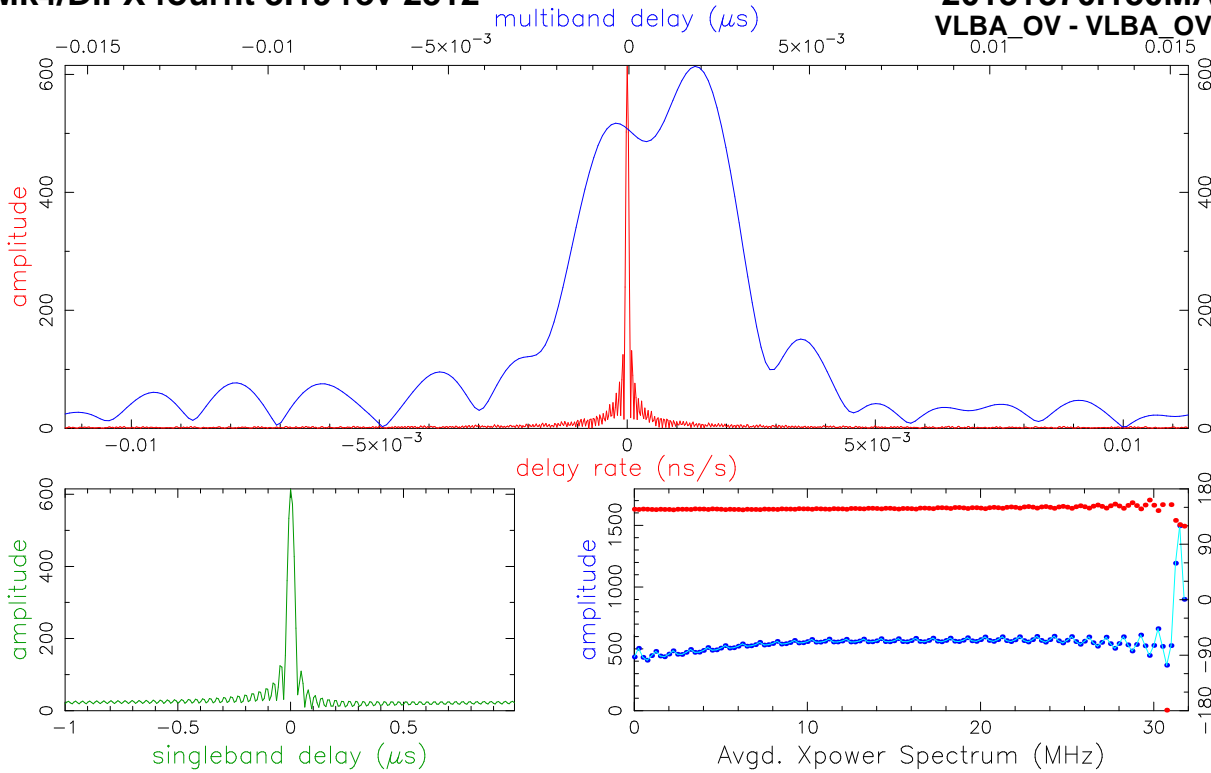


86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-0.0	0.0	0.0	-0.0	0.0	-0.0	-0.0	0.0	-0.0	0.0	-0.0	0.0	0.0	-0.0	0.0	0.0	Phase	-0.0
10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	Sbd box	129.0
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
o 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
o W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	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		+/- 4.7E-08						
Phase delay (usec)	-4.79649525341E-20		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-4.79650E-20		+/- 1.0E-11						
Delay rate (us/s)	0.0000000000E+00		Apriori rate (us/s)		0.0000000000E+00		Resid rate (us/s)		0.00000E+00		+/- 9.7E-14						
Total phase (deg)	-0.0		Apriori accel (us/s/s)		0.0000000000E+00		Resid phase (deg)		-0.0		+/- 0.0						

ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.001 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (1024X64) 10000.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 o: az 78.2 el 60.0 pa -78.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oo..130MAS Output file: /Exps/c192c/v2/1234/No0070/oo.W.342.130MAS simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, oo
VLBA_OV - VLBA_OV, fgroup W, pol LR

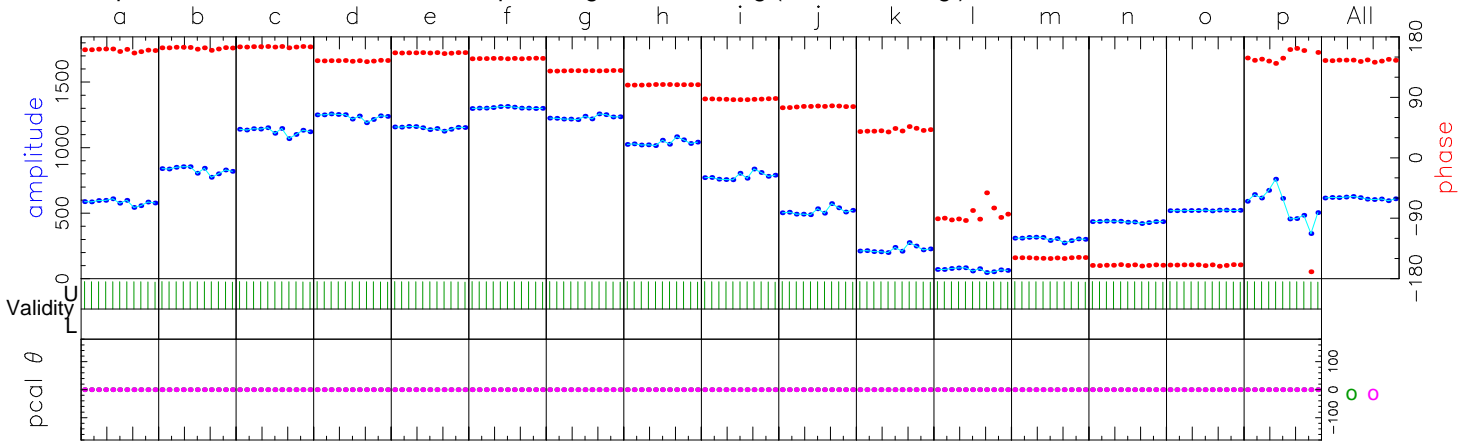


Fringe quality 5

SNR 22468.6
Int time 178.386
Amp 615.173
Phase 144.6
PFD 0.0e+00
Delays (us)
SBD 0.001270
MBD 0.001849
Fringe rate (Hz)
-0.000011
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr/day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054130
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

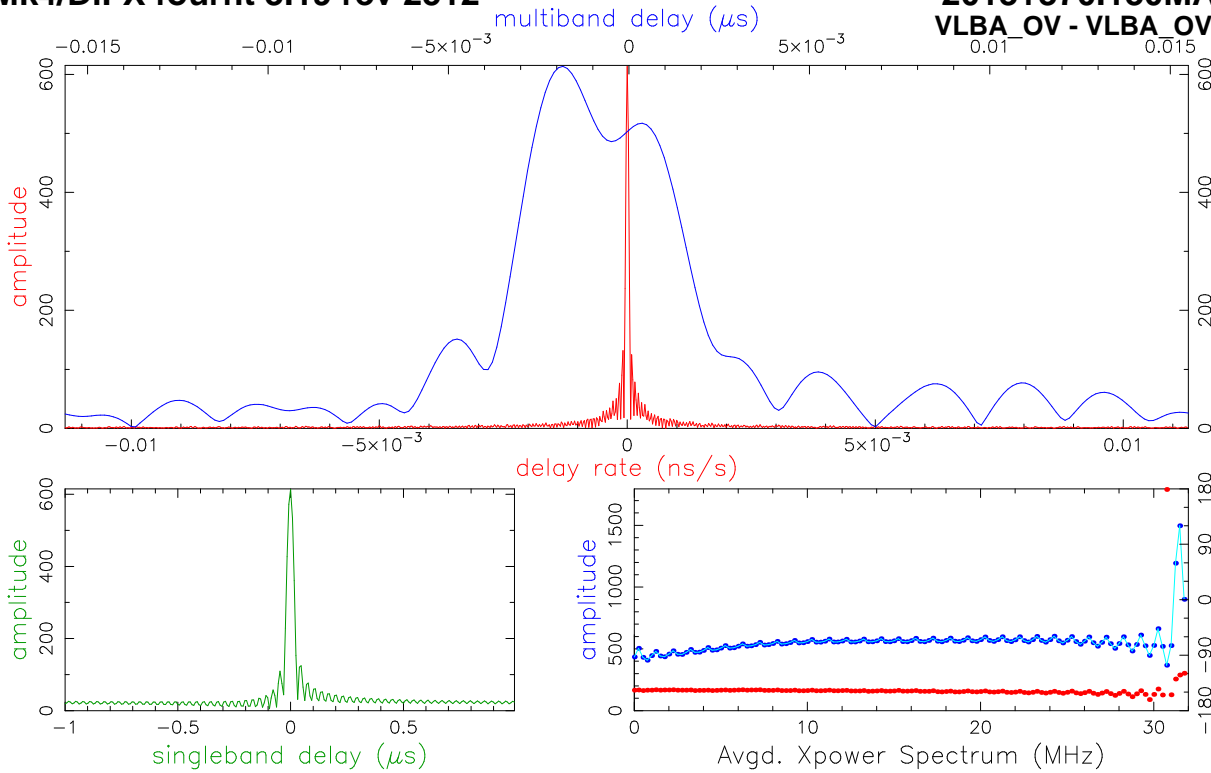


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	160.0	163.2	165.0	144.3	156.0	147.7	129.4	108.6	87.2	76.1	41.4	-86.0	-149.0	-160.0	-159.7	152.1	Phase	144.6
	583.3	827.8	1126.7	1237.2	1149.7	1304.2	1230.5	1037.3	782.3	514.8	223.7	67.5	303.2	433.9	520.8	547.5	Ampl.	743.2
	129.2	129.5	129.0	129.2	129.3	129.0	129.1	129.0	129.0	129.0	128.5	129.0	129.0	129.4	129.0	128.1	Sbd box	129.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)	1.84934375000E-03			Apriori delay (usec)			0.00000000000E+00			Resid mbdelay (usec)			1.84934E-03			+/- 4.8E-08		
Sband delay (usec)	1.27000000000E-03			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			1.27000E-03			+/- 7.7E-07		
Phase delay (usec)	4.66391092573E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			4.66391E-06			+/- 1.6E-10		
Delay rate (us/s)	-1.23289025808E-10			Apriori rate (us/s)			0.00000000000E+00			Resid rate (us/s)			-1.23289E-10			+/- 1.6E-12		
Total phase (deg)	144.6			Apriori accel (us/s/s)			0.00000000000E+00			Resid phase (deg)			144.6			+/- 0.0		

ph/seg (deg) 1.1 0.0 Theor. Amplitude 615.173 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 1.5 0.0 Search (1024X64) 611.389 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 59.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 66.1 0.0 Inc. seg. avg. 613.642 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
o: az 78.2 el 60.0 pa -78.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oo..130MAS Output file: /Exps/c192c/v2/1234/No0070/oo.W.359.130MAS simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, oo
VLBA_OV - VLBA_OV, fgroup W, pol RL

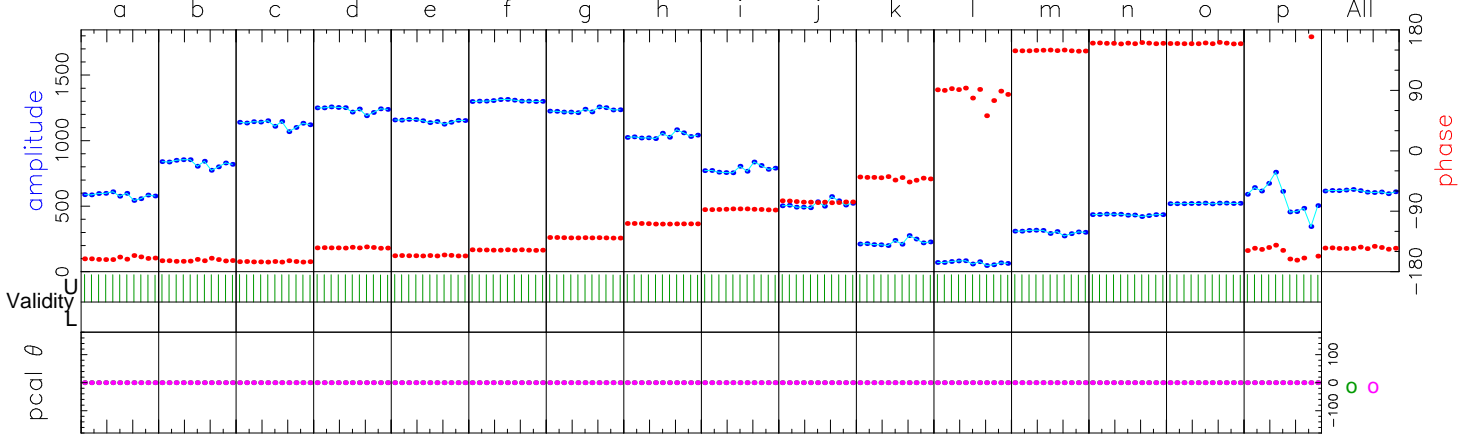


Fringe quality 5

SNR 22468.6
Int time 178.386
Amp 615.173
Phase -144.6
PFD 0.0e+00
Delays (us)
SBD -0.001270
MBD -0.001849
Fringe rate (Hz) 0.000011
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054132
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-160.0	-163.2	-165.0	-144.3	-156.0	-147.7	-129.4	-108.6	-87.2	-76.1	-41.4	86.0	149.0	160.0	159.7	-152.1		Phase	-144.6				
	583.3	827.8	1126.7	1237.2	1149.7	1304.2	1230.5	1037.3	782.3	514.8	223.7	67.5	303.2	433.9	520.8	547.5		Ampl.	743.2				
	128.8	128.5	129.0	128.8	128.7	129.0	128.9	129.0	129.0	129.0	129.5	129.0	129.0	128.6	129.0	129.9		Sbd box	128.8				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Group delay (usec)(sbd)			-1.84934375000E-03															Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.84934E-03	+/-	4.8E-08
Sband delay (usec)			-1.27000000000E-03															Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.27000E-03	+/-	7.7E-07
Phase delay (usec)			-4.66391092584E-06															Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.66391E-06	+/-	1.6E-10
Delay rate (us/s)			1.23289025808E-10															Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.23289E-10	+/-	1.6E-12
Total phase (deg)																		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-144.6	+/-	0.0

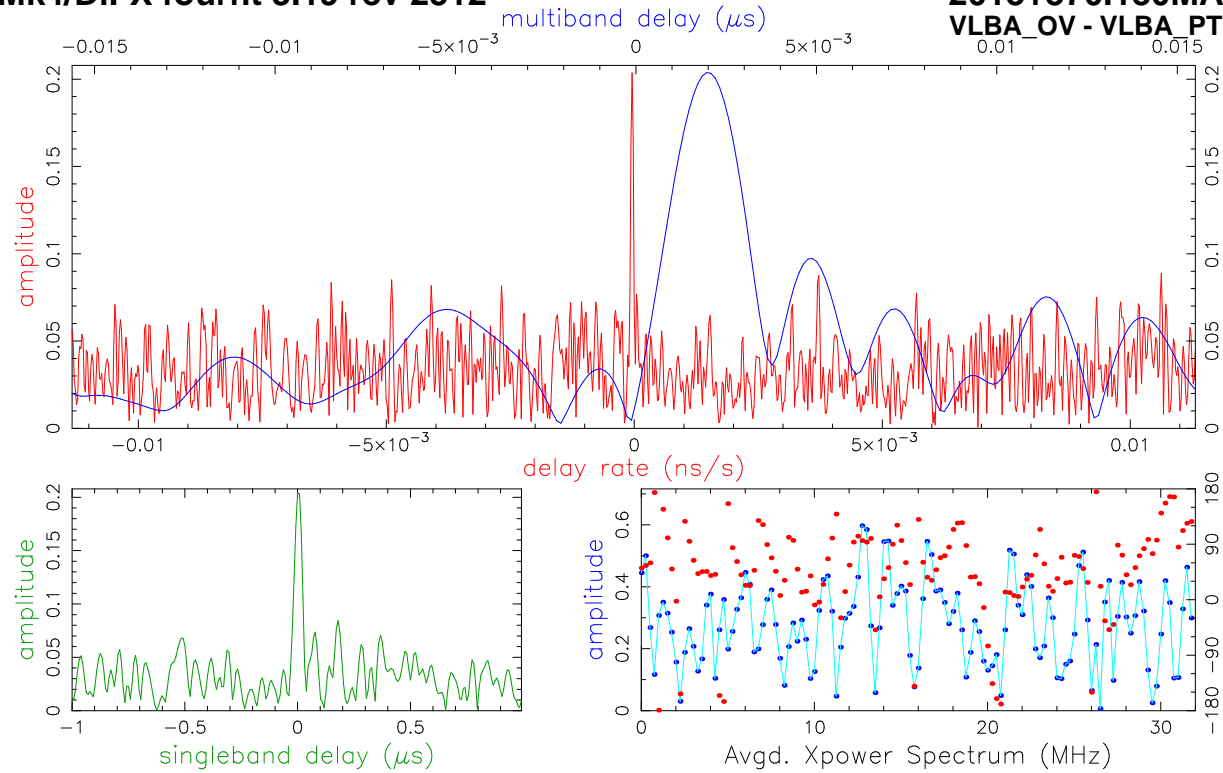
ph/seg (deg) 1.1 0.0
amp/seg (%) 1.5 0.0
ph/frq (deg) 59.0 0.0
amp/frq (%) 66.1 0.0

o: az 78.2 el 60.0 pa -78.1
Control file: cf_1234_gmva

o: az 78.2 el 60.0 pa -78.1
Input file: /Exps/c192c/v2/1234/No0070/oo..130MAS

u,v (fr/asec) 0.000 0.000
Output file: /Exps/c192c/v2/1234/No0070/oo.W.379.130MAS

simultaneous interpolator

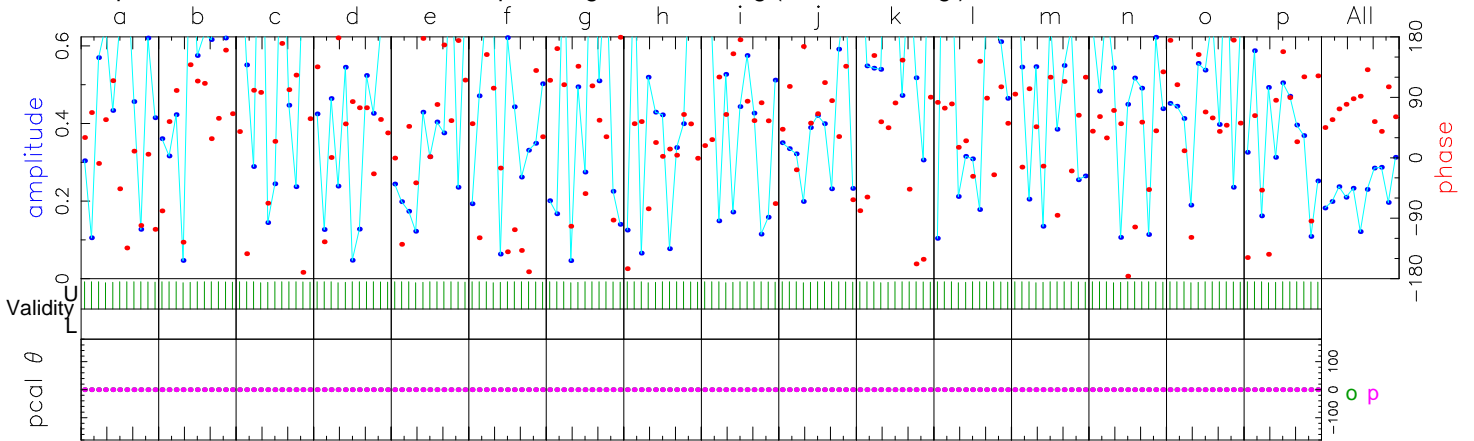


Fringe quality 9

SNR 7.6
Int time 177.279
Amp 0.208
Phase 72.0
PFD 6.1e-06
Delays (us)
SBD 0.003887
MBD 0.002054
Fringe rate (Hz)
-0.004367
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054125
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

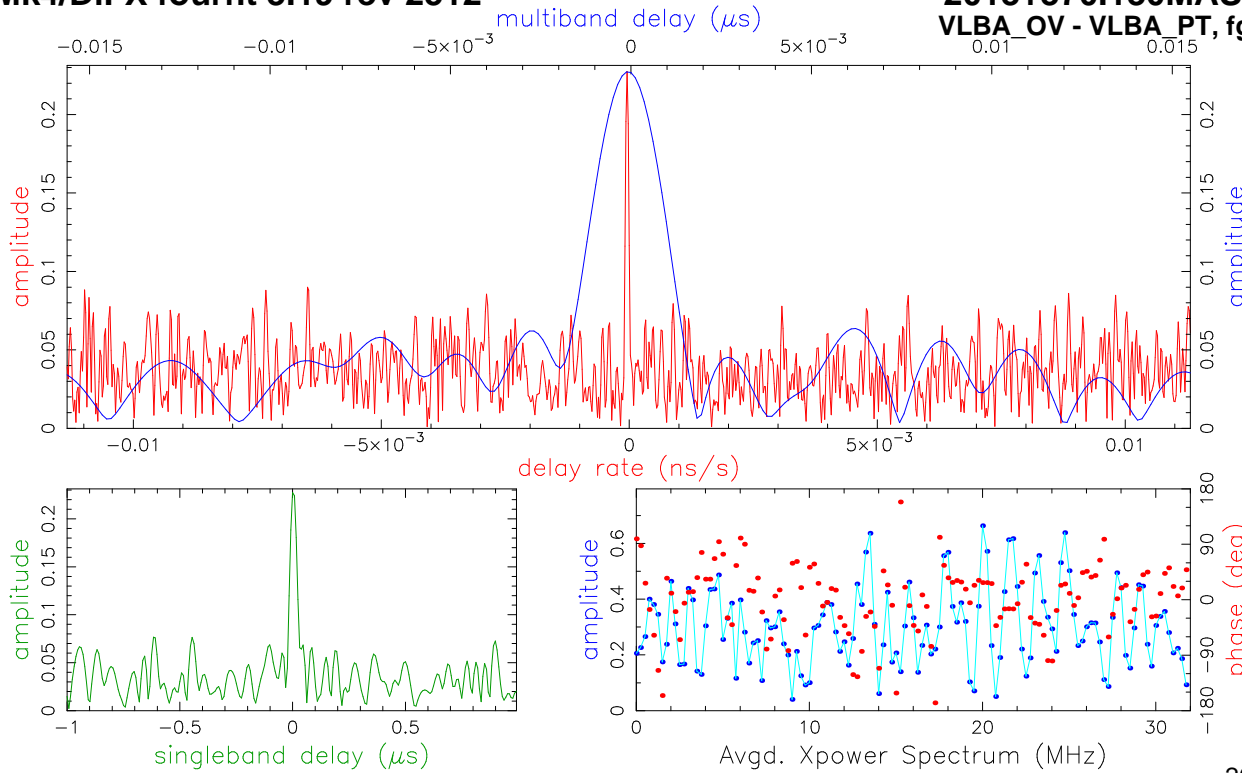


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-11.5	92.8	108.8	51.5	92.8	175.1	93.7	23.6	49.7	74.9	62.5	63.8	68.4	54.8	74.8	114.8	Phase	72.0				
	0.2	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.4	0.2	0.3	0.3	0.2	Ampl.	0.2				
	136.9	129.9	239.1	114.0	182.5	8.1	45.2	128.8	223.8	245.2	105.7	127.9	139.5	96.6	127.4	137.8	Sbd box	129.5				
UL	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	APs used					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.19817090004E+03														Apriori delay (usec)	-1.19817295403E+03	Resid mbdelay (usec)	2.05399E-03	+/-	1.4E-04
Sband delay (usec)			-1.19816906703E+03														Apriori clock (usec)	4.6843319E+00	Resid sbdelay (usec)	3.88700E-03	+/-	2.3E-03
Phase delay (usec)			-1.19817295171E+03														Apriori clockrate (us/s)	-2.0290559E-07	Resid phdelay (usec)	2.32120E-06	+/-	4.9E-07
Delay rate (us/s)			1.30040620227E-01														Apriori rate (us/s)	1.30040670925E-01	Resid rate (us/s)	-5.06973E-08	+/-	4.7E-09
Total phase (deg)																	Apriori accel (us/s/s)	9.22192402290E-06	Resid phase (deg)	72.0	+/-	15.1

ph/seg (deg) RMS Theor. Amplitude 0.208 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 26.7 25.1 Search (1024X64) 0.200 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.6 43.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 43.0 30.3 Inc. seg. avg. 0.207 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 40.4 52.8 Inc. frq. avg. 0.215 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 p: az 74.5 el 67.4 pa -88.8 u,v (fr/asec) -928.054 848.138 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/op..130MAS Output file: /Exps/c192c/v2/1234/No0070/op.W.325.130MAS

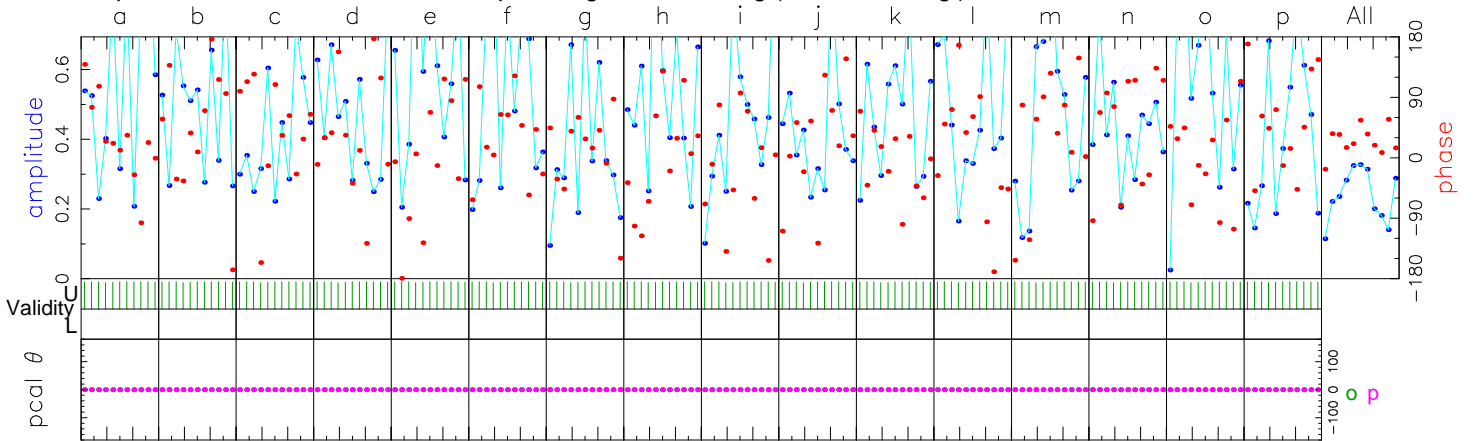


Fringe quality 9

SNR 8.4
 Int time 177.279
 Amp 0.231
 Phase 27.5
 PFD 6.6e-09
 Delays (us)
 SBD 0.003295
 MBD -0.000085
 Fringe rate (Hz)
 -0.003838
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

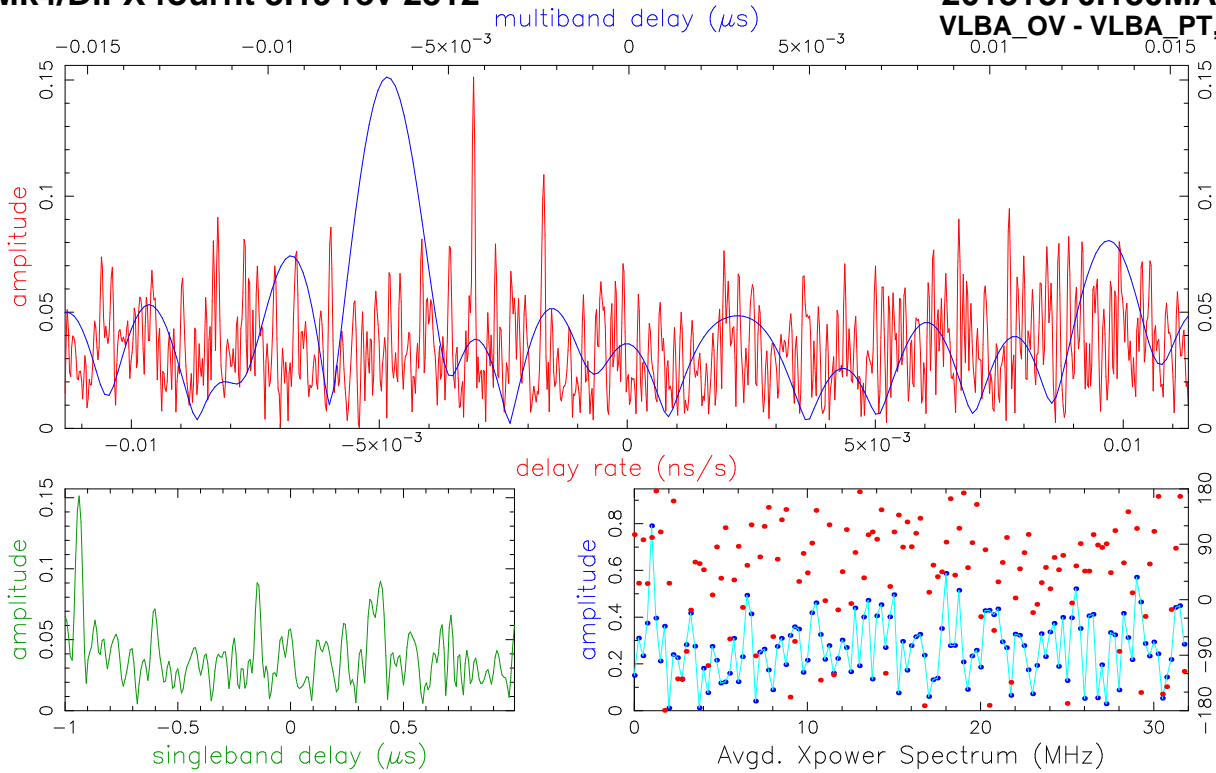
Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054128
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



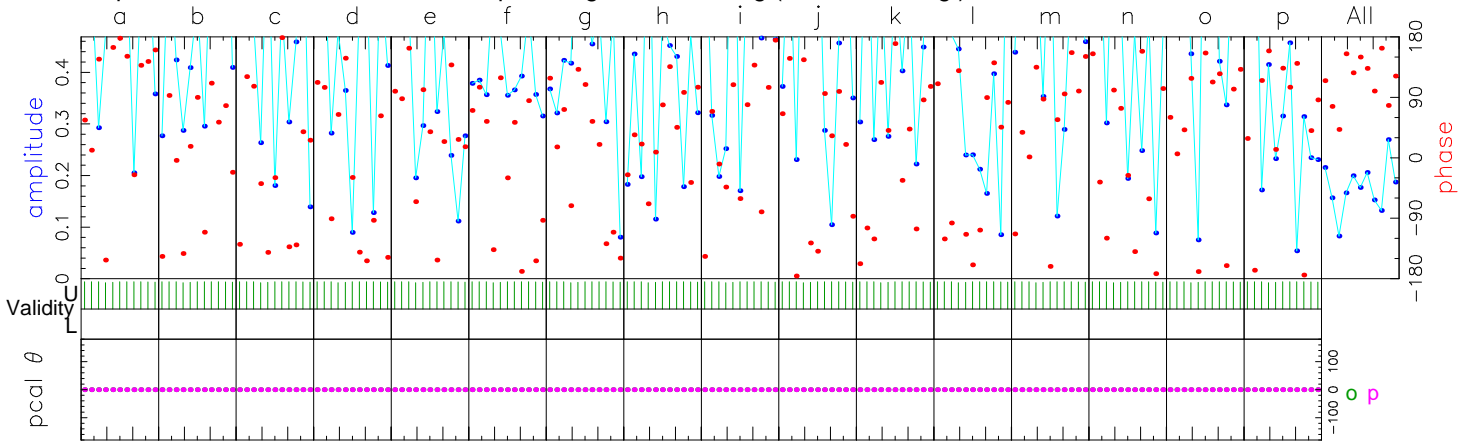
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	352/0	352/0	352/0	352/0						
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Group delay (usec)(sbd)		-1.19817303875E+03															Apriori delay (usec)	-1.19817295403E+03	Resid mbdelay (usec)	-8.47243E-05	+/-	1.3E-04
Sband delay (usec)		-1.19816965953E+03															Apriori clock (usec)	4.6843319E+00	Resid sbdelay (usec)	3.29450E-03	+/-	2.0E-03
Phase delay (usec)		-1.19817295314E+03															Apriori clockrate (us/s)	-2.0290559E-07	Resid phdelay (usec)	8.87152E-07	+/-	4.4E-07
Delay rate (us/s)		1.30040626366E-01															Apriori rate (us/s)	1.30040670925E-01	Resid rate (us/s)	-4.45584E-08	+/-	4.2E-09
Total phase (deg)					-66.1												Apriori accel (us/s/s)	9.22192402290E-06	Resid phase (deg)	27.5	+/-	13.6

ph/seg (deg) 20.7 22.5 Search (1024X64) 0.227 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 30.9 39.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.4 27.2 Inc. seg. avg. 0.222 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 29.4 47.5 Inc. frq. avg. 0.223 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 78.2 el 60.0 pa -78.1 p: az 74.5 el 67.4 pa -88.8 u,v (fr/asec) -928.054 848.138 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/op..130MAS Output file: /Exps/c192c/v2/1234/No0070/op.W.344.130MAS



Fringe quality 0
SNR 5.5
Int time 177.279
Amp 0.156
Phase 116.5
PFD 9.8e-01
Delays (us)
SBD -0.938568
MBD -0.006691
Fringe rate (Hz)
-0.267148
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054130
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
UL	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	352/0	352/0	352/0	352/0						
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Group delay (usec)(sbd)			-1.19911714536E+03														Apriori delay (usec)	-1.19817295403E+03	Resid mbdelay (usec)	-6.69133E-03	+/-	2.0E-04
Sband delay (usec)			-1.1991152153E+03														Apriori clock (usec)	4.6843319E+00	Resid sbdelay (usec)	-9.38568E-01	+/-	3.1E-03
Phase delay (usec)			-1.19817295027E+03														Apriori clockrate (us/s)	-2.0290559E-07	Resid phdelay (usec)	3.75792E-06	+/-	6.7E-07
Delay rate (us/s)			1.30037569602E-01														Apriori rate (us/s)	1.30040670925E-01	Resid rate (us/s)	-3.10132E-06	+/-	6.5E-09
Total phase (deg)				22.9													Apriori accel (us/s/s)	9.22192402290E-06	Resid phase (deg)	116.5	+/-	20.8

ph/seg (deg) 35.8 34.4
amp/seg (%) 34.9 60.0
ph/frq (deg) 39.7 41.5
amp/frq (%) 56.7 72.5

RMS Theor. Amplitude 0.156 +/- 0.028
Search (1024X64) 0.149
Interp. 0.000
Inc. seg. avg. 0.155
Inc. frq. avg. 0.148

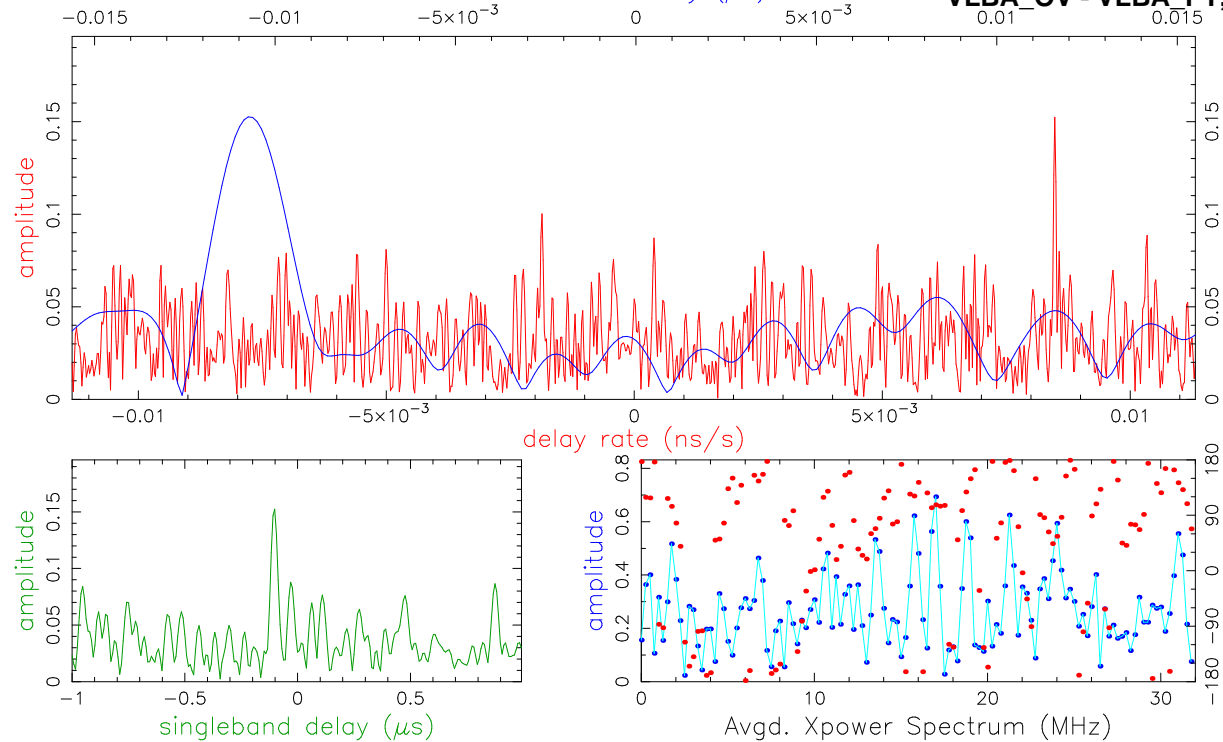
pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MSamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 p: az 74.5 el 67.4 pa -88.8 u,v (fr/asec) -928.054 848.138 simultaneous interpolator

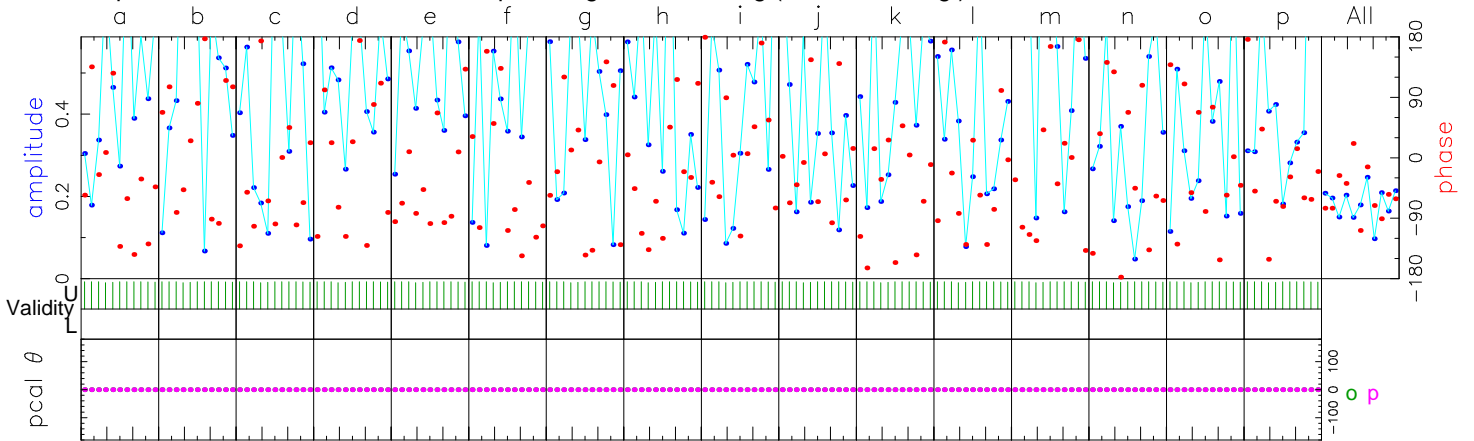
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/op..130MAS Output file: /Exps/c192c/v2/1234/No0070/op.W.364.130MAS

multiband delay (μ s)



Fringe quality 0
SNR 5.6
Int time 177.278
Amp 0.196
Phase -55.6
PFD 9.3e-01
Delays (us)
SBD -0.103948
MBD -0.010769
Fringe rate (Hz) 0.732128
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004000.00
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054133
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

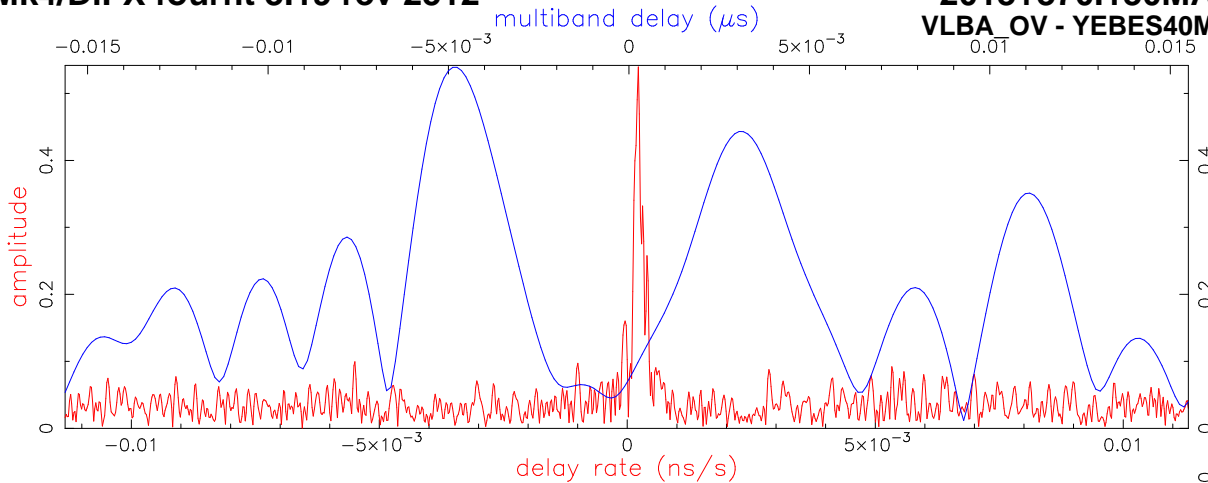


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-55.9	-0.1	-75.1	-135.2	-59.5	-94.3	-44.8	-35.4	-43.2	-25.9	-22.5	-57.9	-94.9	-150.9	-51.7	-44.2		Phase	-55.6
	0.3	0.1	0.4	0.1	0.4	0.3	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.3		Ampl.	0.2
	132.3	235.2	228.3	41.7	255.3	41.5	174.7	97.8	205.2	125.5	226.4	18.1	255.1	233.4	135.1	114.1		Sbd box	115.7
UL	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

Group delay (usec)(sbd) -1.19827747281E+03 Apriori delay (usec) -1.19817295403E+03 Resid mbdelay (usec) -1.07688E-02 +/- 1.9E-04
 Sband delay (usec) -1.19827690253E+03 Apriori clock (usec) 4.6843319E+00 Resid sbdelay (usec) -1.03948E-01 +/- 3.1E-03
 Phase delay (usec) -1.19817295582E+03 Apriori clockrate (us/s) -2.0290559E-07 Resid phdelay (usec) -1.79451E-06 +/- 6.6E-07
 Delay rate (us/s) 1.30049170209E-01 Apriori rate (us/s) 1.30040670925E-01 Resid rate (us/s) 8.49928E-06 +/- 6.4E-09
 Total phase (deg) -149.3 Apriori accel (us/s/s) 9.22192402290E-06 Resid phase (deg) -55.6 +/- 20.5

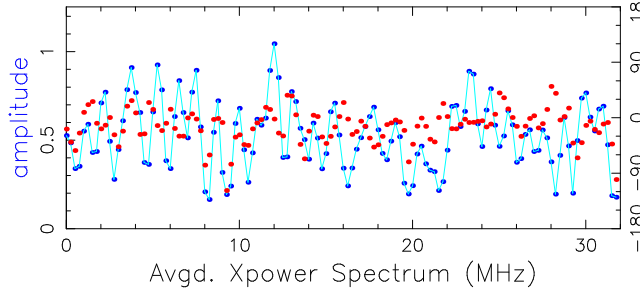
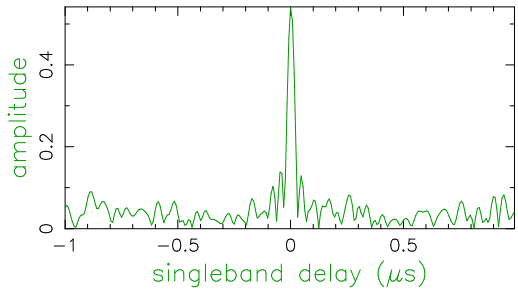
RMS Theor. Amplitude 0.196 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 35.4 33.9 Search (1024X64) 0.147 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 32.0 59.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 42.0 40.9 Inc. seg. avg. 0.199 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 53.6 71.5 Inc. frq. avg. 0.178 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 p: az 74.5 el 67.4 pa -88.8 u,v (fr/asec) -928.054 848.138 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/op..130MAS Output file: /Exps/c192c/v2/1234/No0070/op.W.384.130MAS



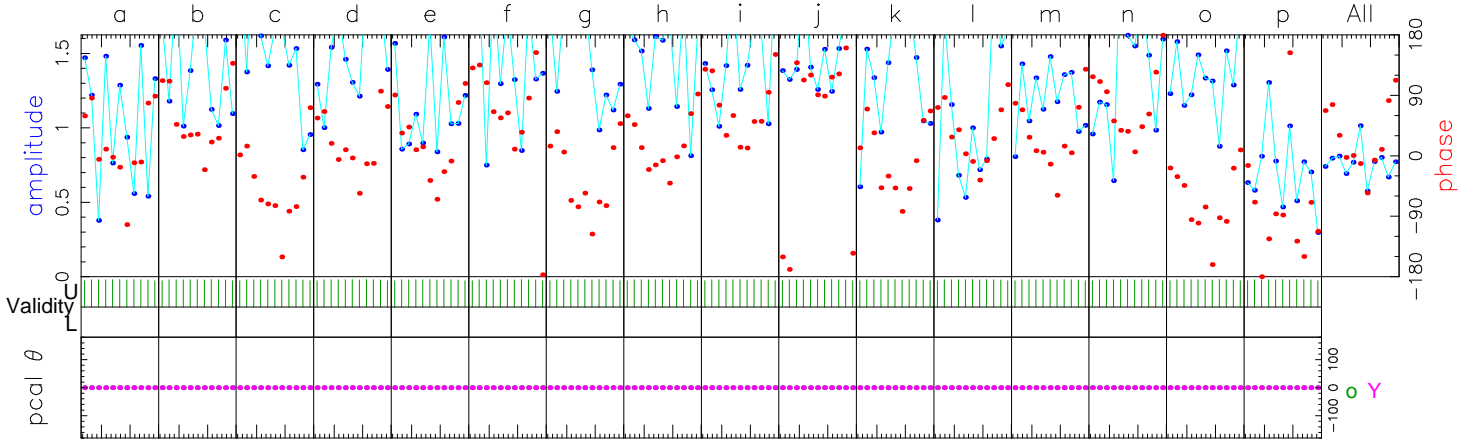
Fringe quality 7

SNR 18.8
Int time 160.838
Amp 0.542
Phase 25.5
PFD 0.0e+00
Delays (us)
SBD 0.001543
MBD -0.004801
Fringe rate (Hz)
0.018718
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004016.90
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054125
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 29 APs / seg (14.85 sec / seg.), time ticks 10 sec

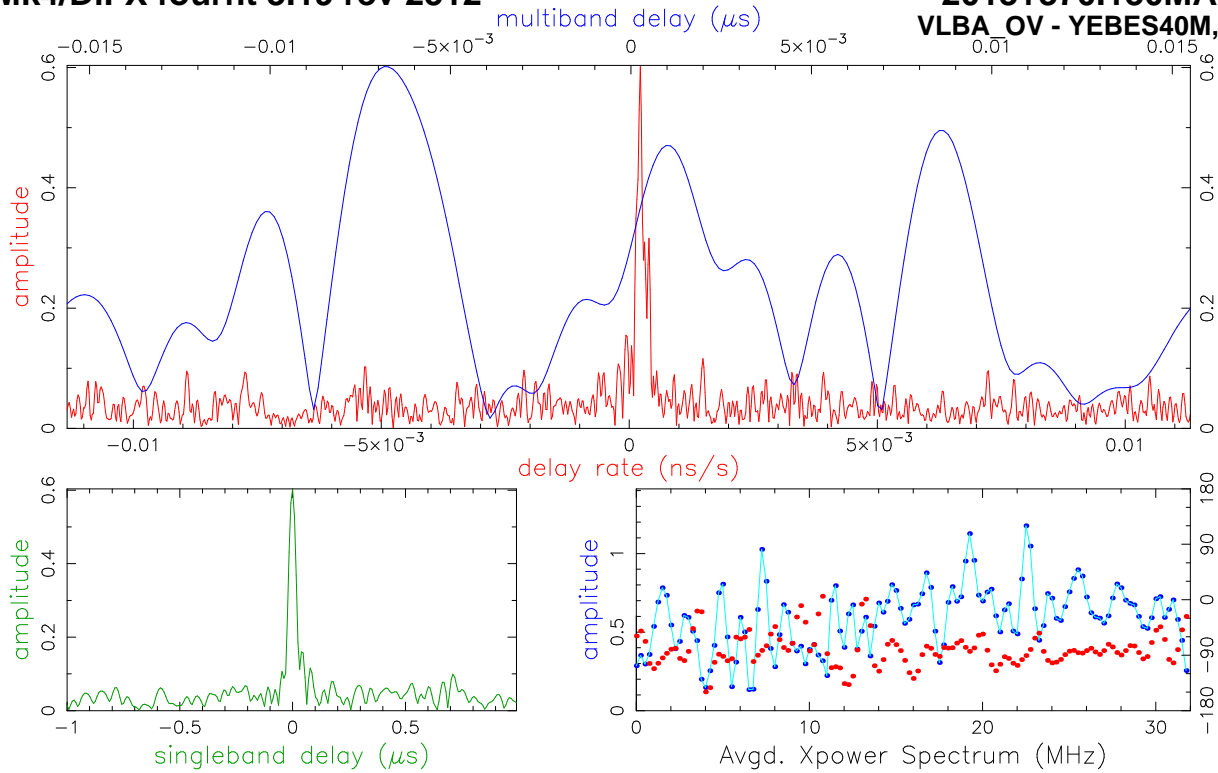


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 7.37427330072E+03 Apriori delay (usec) 7.37427810218E+03 Resid mbdelay (usec) -4.80146E-03 +/- 5.7E-05
 Sband delay (usec) 7.37427964568E+03 Apriori clock (usec) 6.9861164E+00 Resid sbdelay (usec) 1.54350E-03 +/- 9.2E-04
 Phase delay (usec) 7.37427810301E+03 Apriori clockrate (us/s) -2.1901900E-07 Resid phdelay (usec) 8.23732E-07 +/- 2.0E-07
 Delay rate (us/s) 1.51861295354E+00 Apriori rate (us/s) 1.51861273625E+00 Resid rate (us/s) 2.17292E-07 +/- 2.1E-09
 Total phase (deg) 285.4 Apriori accel (us/s/s) -4.22292803877E-05 Resid phase (deg) 25.5 +/- 6.1

RMS Theor. Amplitude 0.542 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 48.1 10.1 Search (1024X64) 0.536 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 45.5 17.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 66.7 12.2 Inc. seg. avg. 0.754 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 78.1 21.3 Inc. frq. avg. 0.902 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 Y: az 294.0 el 31.8 pa 60.9 u,v (fr/asec) -10958.483 -2772.911 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oY..130MAS Output file: /Exps/c192c/v2/1234/No0070/oY.W.324.130MAS

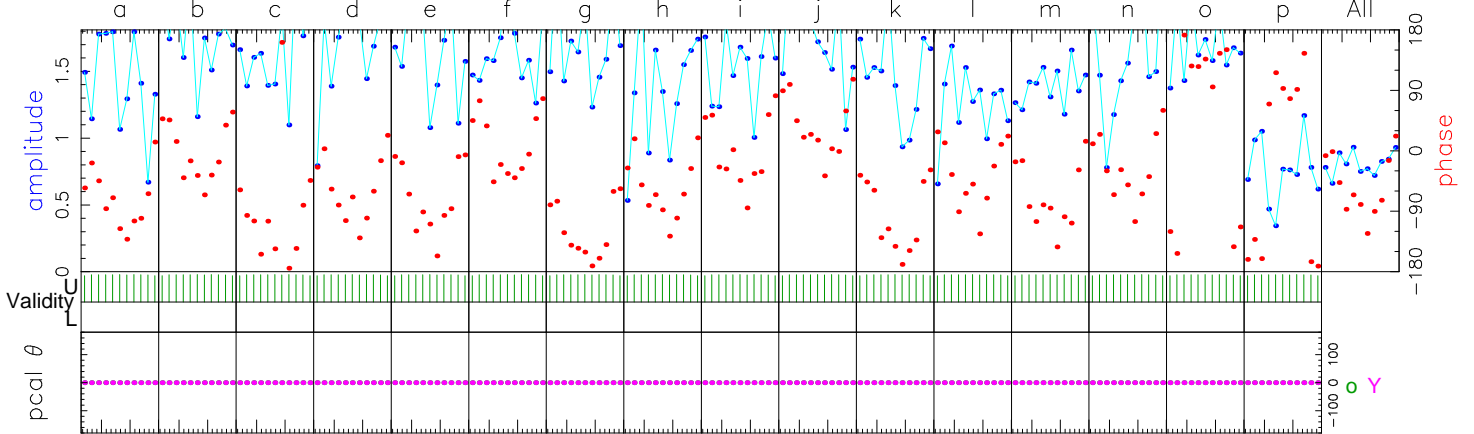


Fringe quality 6

SNR 20.9
Int time 160.838
Amp 0.604
Phase -52.1
PFD 0.0e+00
Delays (us)
SBD -0.001332
MBD -0.006781
Fringe rate (Hz)
0.018946
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004016.90
Stop 004300.22
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054129
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 29 APs / seg (14.85 sec / seg.), time ticks 10 sec



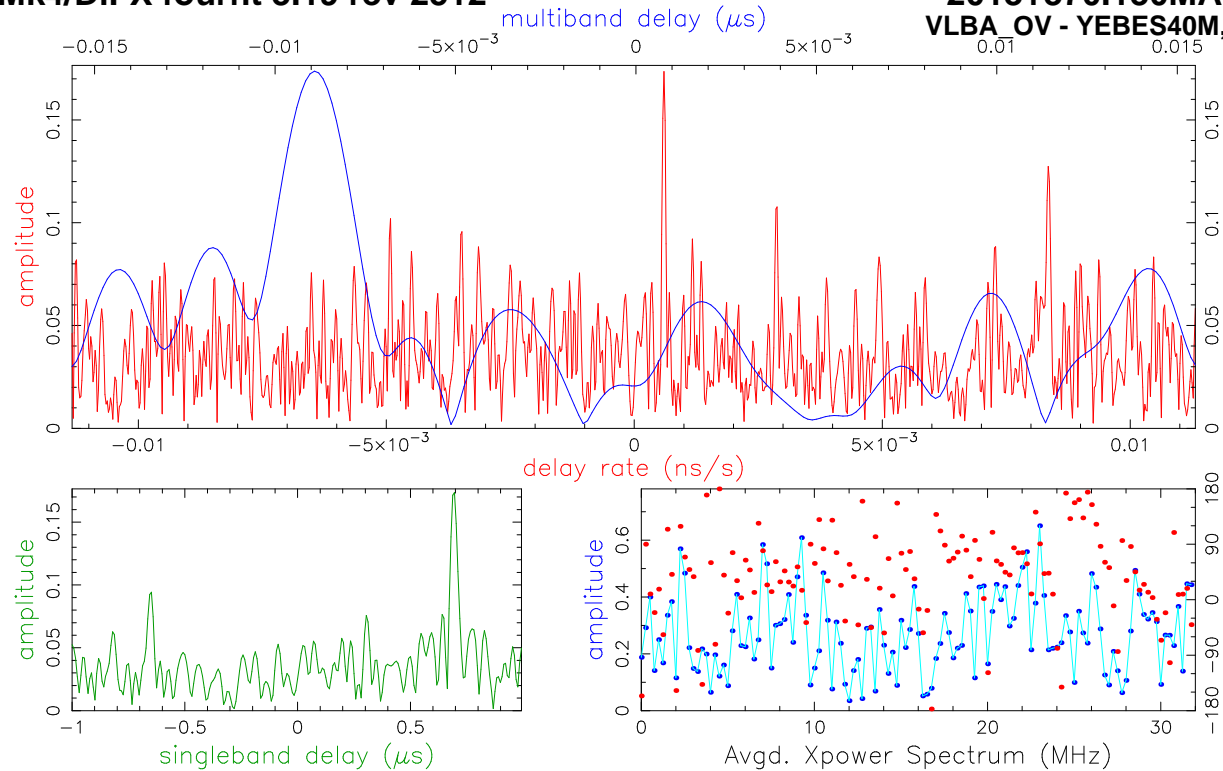
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-73.6	1.9	-117.7	-58.0	-71.8	5.2	-115.4	-51.2	-0.5	36.6	-88.8	-36.0	-72.6	-22.4	164.9	155.0	Phase	-52.1
	1.1	1.4	1.2	1.2	1.1	1.2	1.3	1.0	1.0	1.3	1.0	0.9	1.0	1.1	1.2	0.4	Ampl.	1.1
	128.8	129.1	128.8	128.4	129.2	128.5	129.1	129.0	128.6	128.5	128.6	128.7	128.7	128.7	128.3	125.8	Sbd box	128.8
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) 7.37427132156E+03 Apriori delay (usec) 7.37427810218E+03 Resid mbdelay (usec) -6.78062E-03 +/- 5.2E-05
 Sband delay (usec) 7.37427677018E+03 Apriori clock (usec) 6.9861164E+00 Resid sbdelay (usec) -1.33200E-03 +/- 8.2E-04
 Phase delay (usec) 7.37427810050E+03 Apriori clockrate (us/s) -2.1901900E-07 Resid phdelay (usec) -1.68137E-06 +/- 1.8E-07
 Delay rate (us/s) 1.51861295619E+00 Apriori rate (us/s) 1.51861273625E+00 Resid rate (us/s) 2.19942E-07 +/- 1.9E-09
 Total phase (deg) 207.8 Apriori accel (us/s/s) -4.22292803877E-05 Resid phase (deg) -52.1 +/- 5.5

RMS Theor. Amplitude 0.604 +/- 0.029
 ph/seg (deg) 43.1 9.1 Search (1024X64) 0.600 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 36.8 15.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 72.0 11.0 Inc. seg. avg. 0.800 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 86.3 19.1 Inc. frq. avg. 1.063 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 78.2 el 60.0 pa -78.1 Y: az 294.0 el 31.8 pa 60.9 u,v (fr/asec) -10958.483 -2772.911 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oY..130MAS Output file: /Exps/c192c/v2/1234/No0070/oY.W.348.130MAS

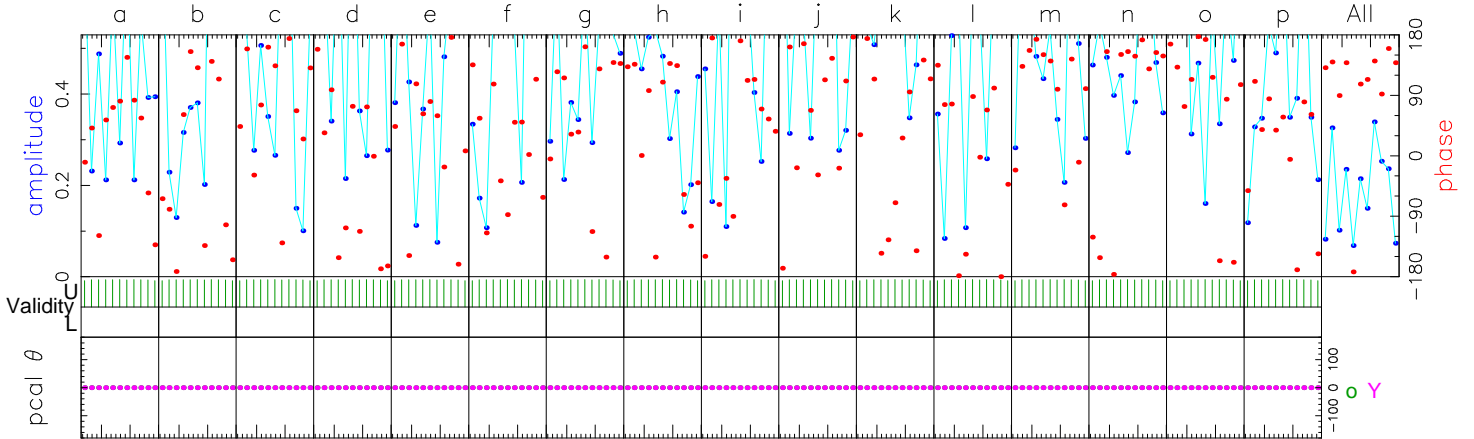
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, oY
VLBA_OV - YEBES40M, fgroup W, pol LR



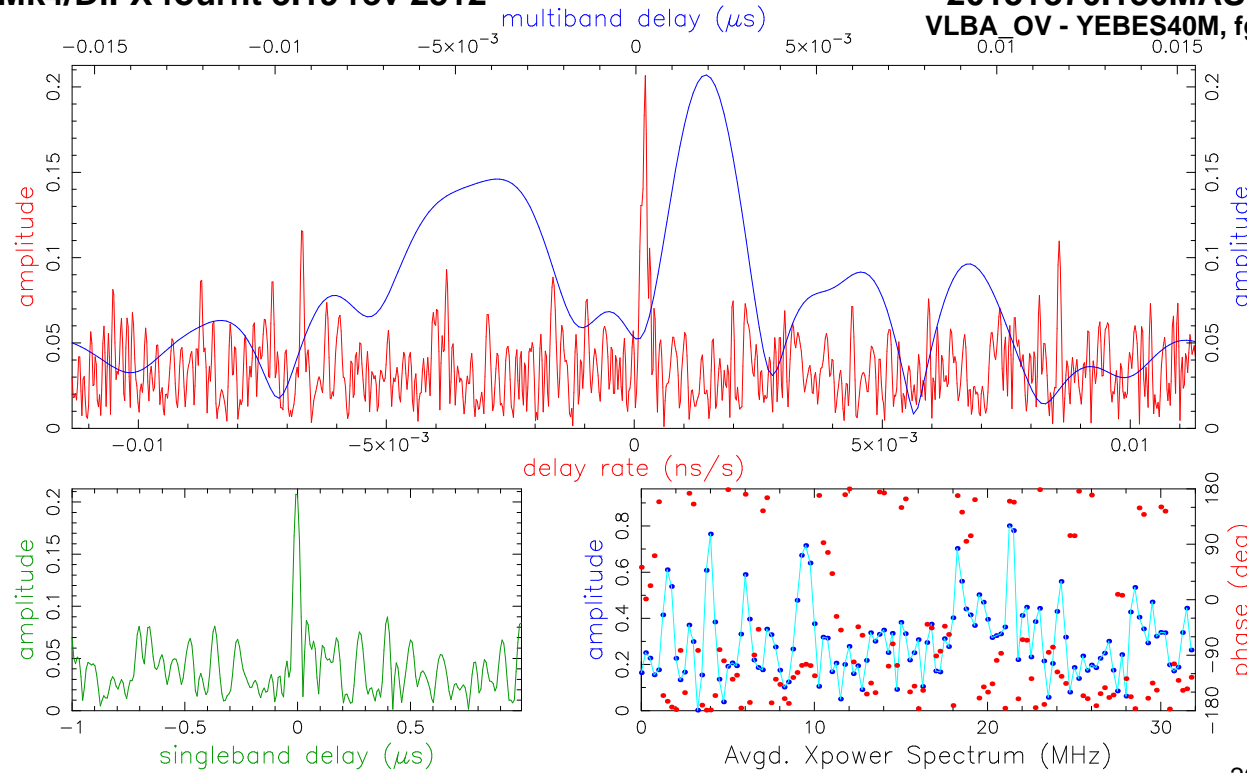
Fringe quality 0
SNR 6.1
Int time 160.838
Amp 0.177
Phase 129.7
PFD 1.2e-01
Delays (us)
SBD 0.691912
MBD -0.008845
Fringe rate (Hz) 0.051313
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004016.90
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054131
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 29 APs / seg (14.85 sec / seg.), time ticks 10 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	67.8	Phase 129.7
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	125.7	Ampl. 0.2
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	125.7	Sbd box 217.6
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	67.8	APs used
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	67.8	PC freqs
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	67.8	PC phase
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	67.8	Mani PC
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	67.8	PC amp
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)		7.37495675767E+03								7.37427810218E+03							-8.84451E-03	+/- 1.8E-04
Sband delay (usec)		7.37497001368E+03								6.9861164E+00							6.91912E-01	+/- 2.8E-03
Phase delay (usec)		7.37427810637E+03								-2.1901900E-07							4.18401E-06	+/- 6.0E-07
Delay rate (us/s)		1.51861333194E+00								1.51861273625E+00							5.95689E-07	+/- 6.4E-09
Total phase (deg)					29.7					-4.22292803877E-05							129.7	+/- 18.7

ph/seg (deg) 27.7 31.1 Search (1024X64) 0.171 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 54.3 54.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 45.1 37.5 Inc. seg. avg. 0.166 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 62.8 65.4 Inc. frq. avg. 0.179 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
o: az 78.2 el 60.0 pa -78.1 Y: az 294.0 el 31.8 pa 60.9 u,v (fr/asec) -10958.483 -2772.911 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oY..130MAS Output file: /Exps/c192c/v2/1234/No0070/oY.W.368.130MAS

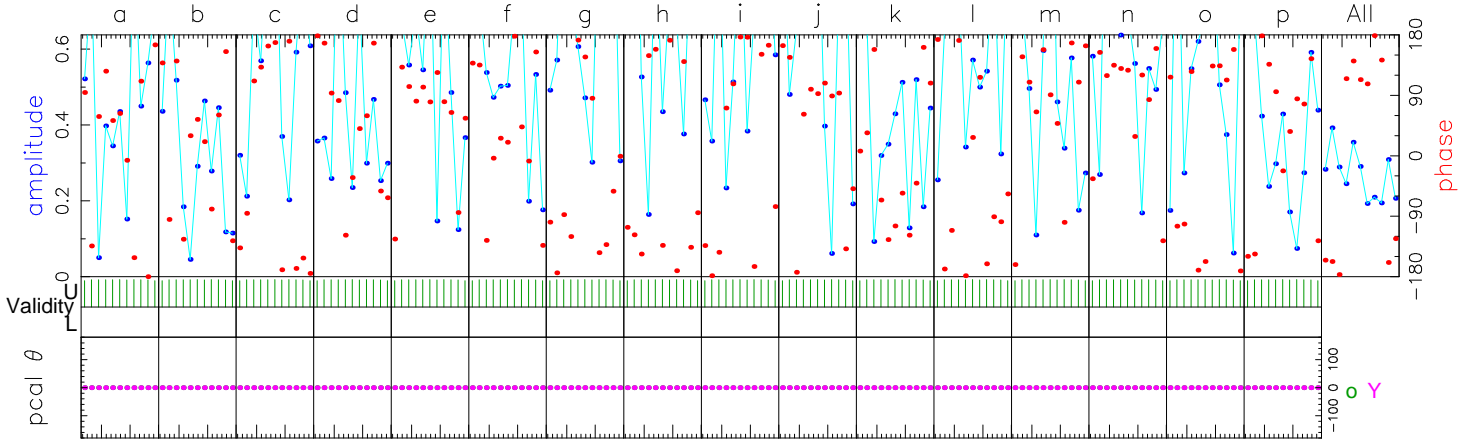


Fringe quality 9

SNR 7.4
Int time 160.838
Amp 0.213
Phase 168.3
PFD 2.6e-05
Delays (us)
SBD -0.004003
MBD 0.001877
Fringe rate (Hz) 0.018874
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 004016.90
Stop 004300.22
FRT 004130.00
Corr/FF/build 2020:076:160821
2020:086:054133
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 29 APs / seg (14.85 sec / seg.), time ticks 10 sec

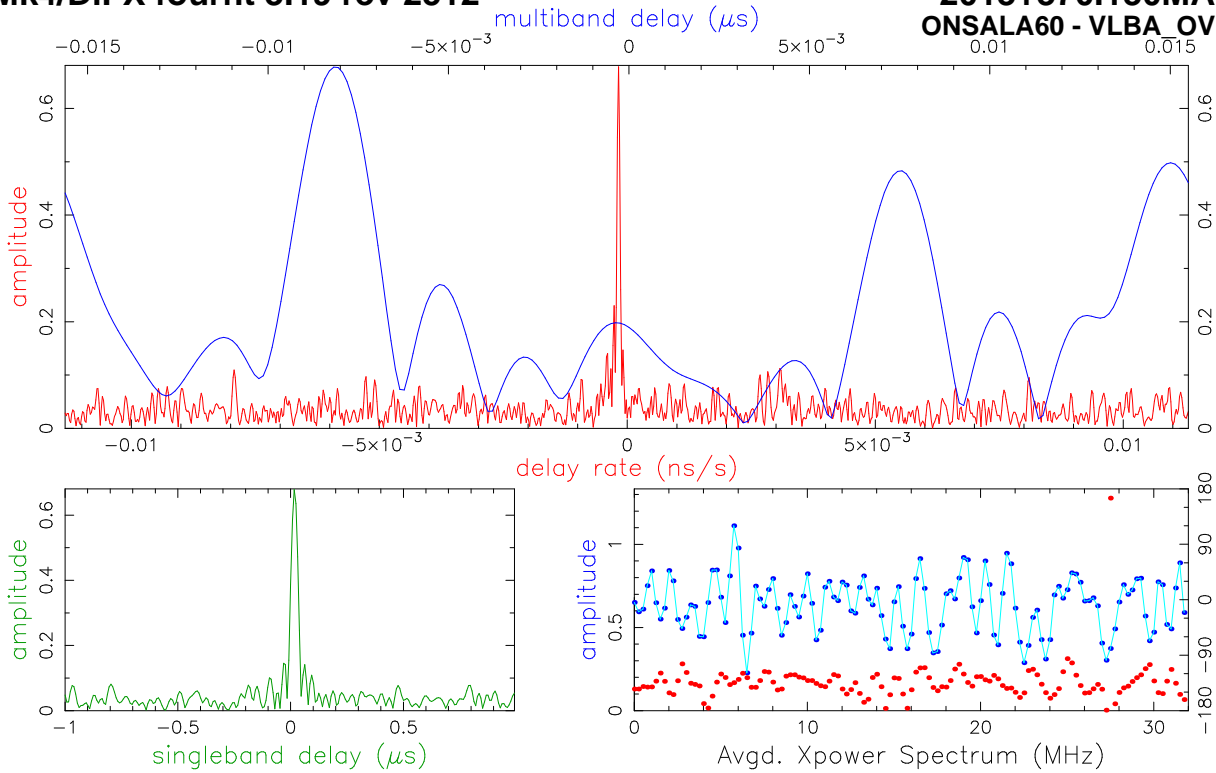


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	155.3	133.5	173.9	93.3	93.8	108.2	-124.1	-143.2	-177.3	124.3	-31.3	-133.2	133.4	124.5	176.8	-176.2	168.3	Phase
o	0.2	0.0	0.5	0.1	0.4	0.2	0.4	0.6	0.5	0.4	0.2	0.3	0.3	0.4	0.2	0.2	0.3	Ampl.
Y	29.3	194.5	129.8	179.9	127.6	225.4	128.2	129.1	129.0	128.2	246.3	85.1	130.6	38.8	128.9	137.8	128.5	Sbd box
o	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 7.37427997941E+03 Apriori delay (usec) 7.37427810218E+03 Resid mbdelay (usec) 1.87722E-03 +/- 1.5E-04
 Sband delay (usec) 7.37427409918E+03 Apriori clock (usec) 6.9861164E+00 Resid sbdelay (usec) -4.00300E-03 +/- 2.3E-03
 Phase delay (usec) 7.37427810761E+03 Apriori clockrate (us/s) -2.1901900E-07 Resid phdelay (usec) 5.42627E-06 +/- 5.0E-07
 Delay rate (us/s) 1.51861295535E+00 Apriori rate (us/s) 1.51861273625E+00 Resid rate (us/s) 2.29106E-07 +/- 5.3E-09
 Total phase (deg) 68.2 Apriori accel (us/s/s) -4.22292803877E-05 Resid phase (deg) 168.3 +/- 15.5

ph/seg (deg) RMS Theor. Amplitude 0.213 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 42.2 25.8 Search (1024X64) 0.206 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 40.4 45.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 64.3 31.1 Inc. seg. avg. 0.245 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 83.5 54.3 Inc. frq. avg. 0.270 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 78.2 el 60.0 pa -78.1 Y: az 294.0 el 31.8 pa 60.9 u,v (fr/asec) -10958.483 -2772.911 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/oY..130MAS Output file: /Exps/c192c/v2/1234/No0070/oY.W.385.130MAS

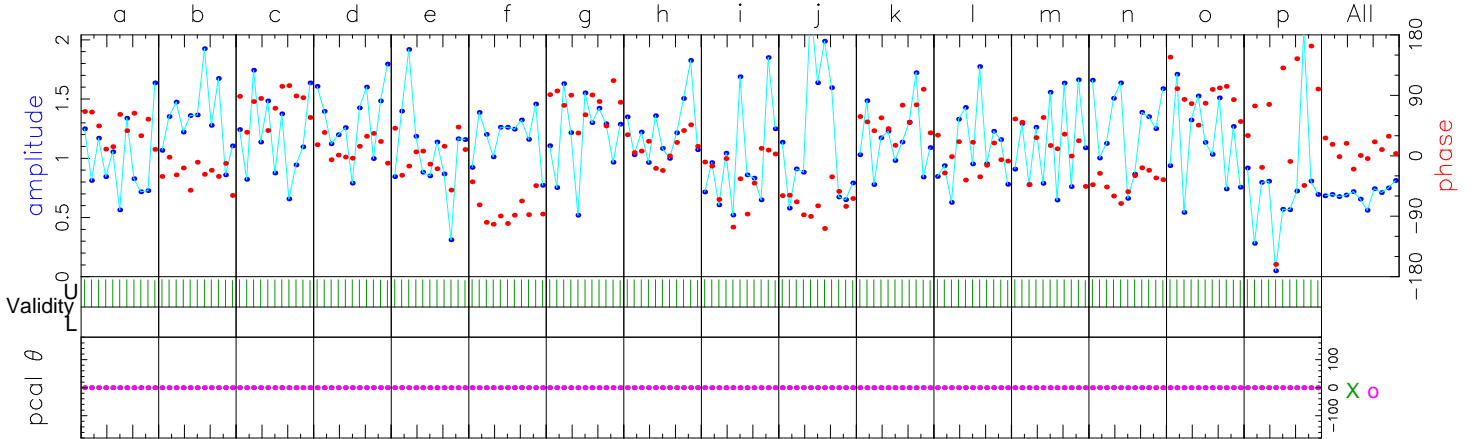


Fringe quality 7

SNR 24.8
 Int time 178.189
 Amp 0.681
 Phase 9.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.017120
 MBD -0.008122
 Fringe rate (Hz)
 -0.016045
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

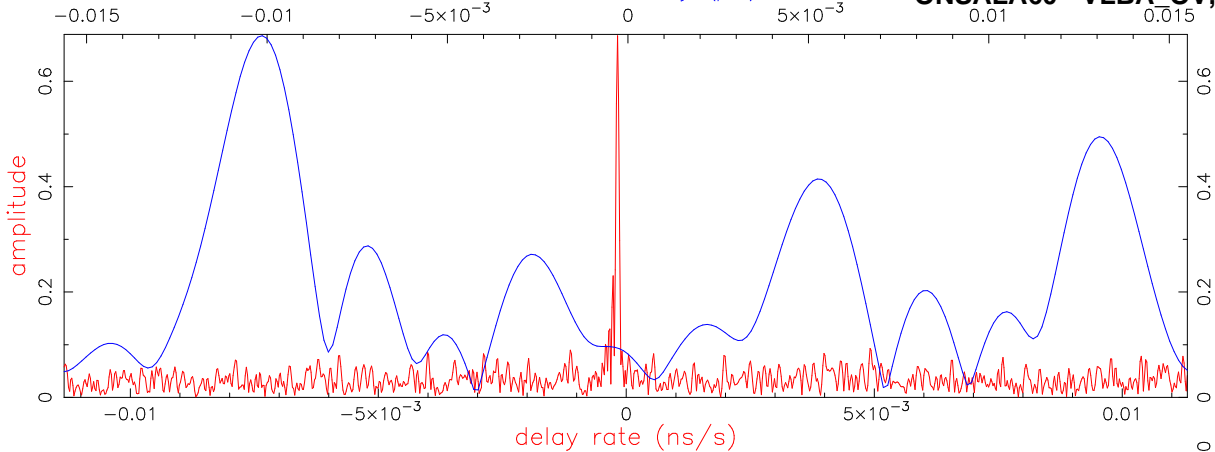
Exp. c192c
 Yr:day 16383
 2020:076:160821
 2020:086:054127
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



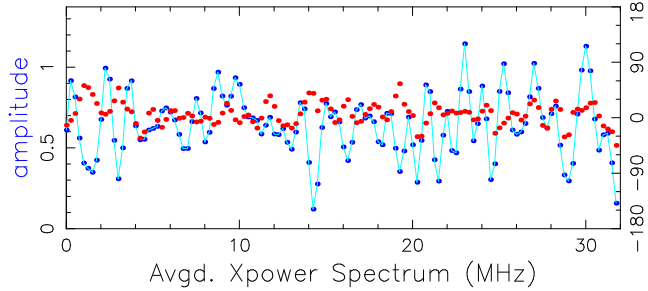
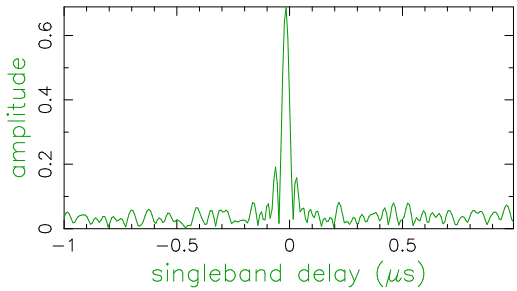
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)			-8.05869384445E+03															
Sband delay (usec)			-8.05869985236E+03															
Phase delay (usec)			-8.05871697206E+03															
Delay rate (us/s)			-1.26656335581E+00															
Total phase (deg)					-350.3													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
Pcal mode: MANUAL, MANUAL																		
Pcal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MSamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128 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																		
Search (1024X64)																		
Interp.																		
Inc. seg. avg.																		
Inc. frq. avg.																		
0.681 +/- 0.027																		
0.644																		
0.000																		
0.693																		
1.014																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
SampCntNorm: enabled																		
simultaneous interpolator																		

multiband delay (μs)



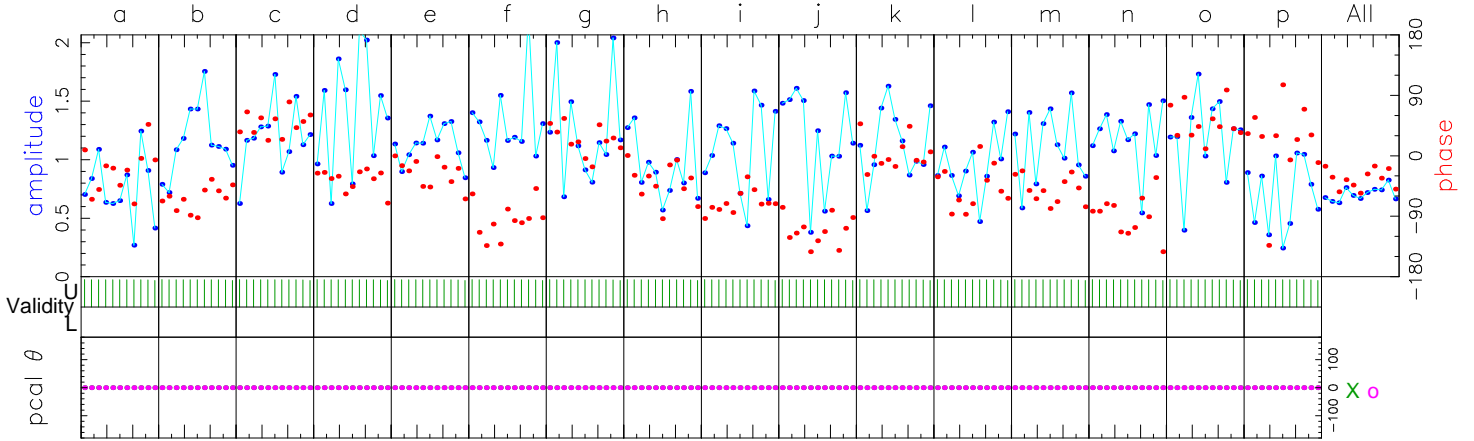
Fringe quality 7

SNR 25.2
Int time 178.189
Amp 0.689
Phase -33.8
PFD 0.0e+00
Delays (us)
SBD -0.017076
MBD -0.010161
Fringe rate (Hz)
-0.015738
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Yr:day 16383
Start 2019:279
Stop 2019:279
FRT 004130.00
Corr/FF/build
2020:076:160821
2020:086:054129
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

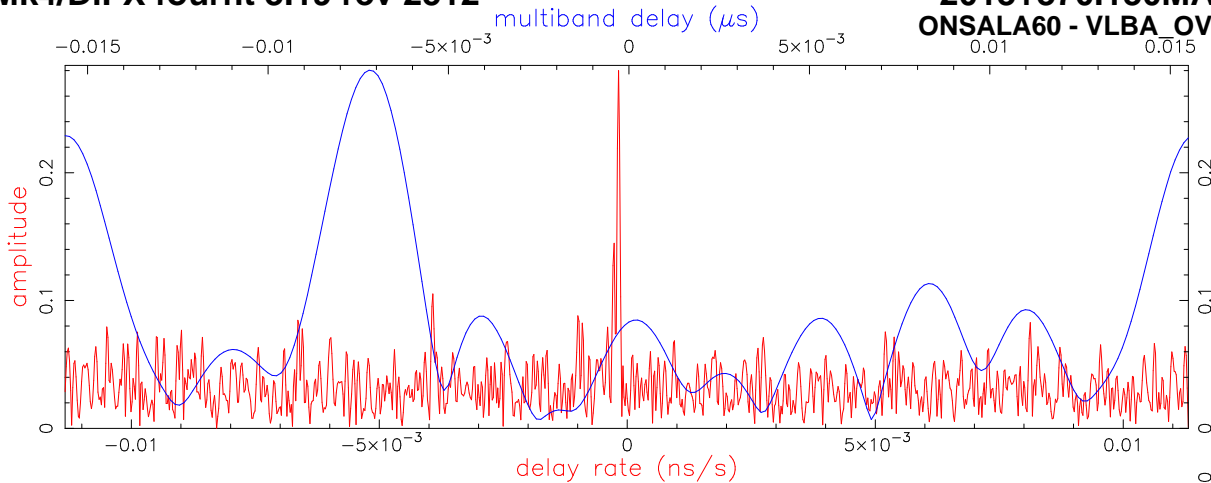


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All			
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000					
X:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
X:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000					
x	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR					
Group delay (usec)(sbd)			-8.05872713301E+03														-8.05871697236E+03	Resid mbdelay (usec)	-1.01606E-02	+/-	4.3E-05
Sband delay (usec)			-8.05873404836E+03															Resid sbdelay (usec)	-1.70760E-02	+/-	6.8E-04
Phase delay (usec)			-8.05871697345E+03															Resid phdelay (usec)	-1.09095E-06	+/-	1.5E-07
Delay rate (us/s)			-1.26656335224E+00															Resid rate (us/s)	-1.82697E-07	+/-	1.4E-09
Total phase (deg)						-33.5												Resid phase (deg)	-33.8	+/-	4.6

	RMS	Theor.	Amplitude	0.689 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000			
ph/seg (deg)	14.1	7.6	Search (1024X64)	0.674	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.016 0.016			
amp/seg (%)	8.5	13.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011			
ph/frq (deg)	52.3	9.1	Inc. seg. avg.	0.701	Sample rate(MSamp/s): 64		ion window (TEC)	0.00 0.00			
amp/frq (%)	56.8	15.9	Inc. frq. avg.	1.016	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite					
X: az 293.9 el 29.5 pa 38.1			o: az 78.2 el 60.0 pa -78.1			u,v (fr/asec) 9160.523 5155.058			simultaneous interpolator		
Control file: cf_1234_gmva			Input file: /Exps/c192c/v2/1234/No0070/Xo..130MAS			Output file: /Exps/c192c/v2/1234/No0070/Xo.W.354.130MAS					

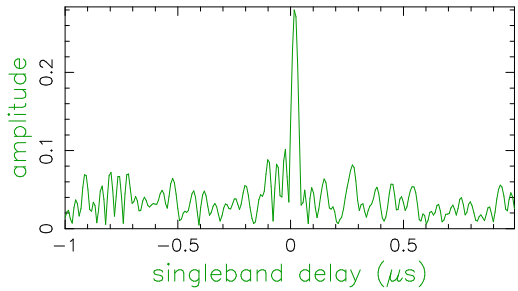
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, Xo
 ONSALA60 - VLBA OV, fgroup W, pol LR

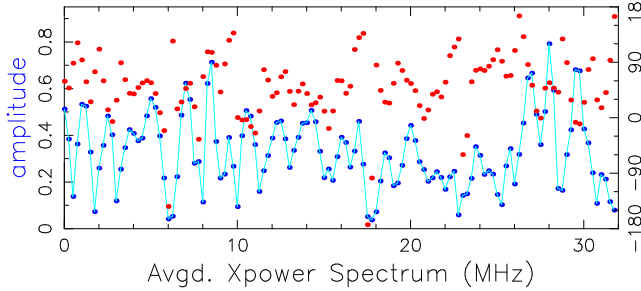


Fringe quality 9

SNR 10.4
 Int time 178.189
 Amp 0.284
 Phase -162.4
 PFD 7.8e-17
 Delays (us)
 SBD 0.018460
 MBD -0.007102
 Fringe rate (Hz)
 -0.015910
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

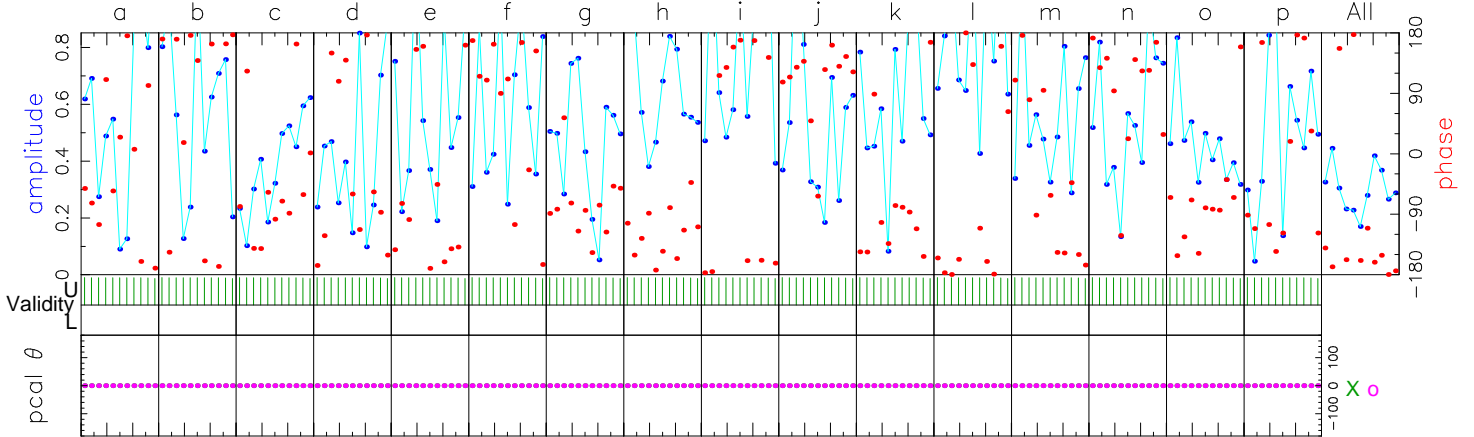


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054132
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-127.1	174.3	-86.5	-138.5	-166.1	148.4	-83.9	-118.9	169.6	129.3	-117.9	176.4	-163.9	121.9	-98.5	-133.7		Phase	-162.4				
	0.1	0.5	0.2	0.3	0.5	0.3	0.4	0.6	0.7	0.4	0.4	0.7	0.3	0.4	0.3	0.2		Ampl.	0.4				
	211.2	131.1	219.0	162.5	132.0	135.5	131.1	130.6	131.0	131.3	132.1	131.0	106.0	117.1	132.2	9.6		Sbd box	131.4				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-8.05869282463E+03															Apriori delay (usec)	-8.05871697236E+03	Resid mbdelay (usec)	-7.10227E-03	+/-	1.0E-04
Sband delay (usec)			-8.05869851186E+03															Apriori clock (usec)	1.5746180E+01	Resid sbdelay (usec)	1.84605E-02	+/-	1.7E-03
Phase delay (usec)			-8.05871697760E+03															Apriori clockrate (us/s)	5.2701902E-07	Resid phdelay (usec)	-5.23830E-06	+/-	3.6E-07
Delay rate (us/s)			-1.26656335424E+00															Apriori rate (us/s)	-1.26656316955E+00	Resid rate (us/s)	-1.84695E-07	+/-	3.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	5.91599798048E-05	Resid phase (deg)	-162.4	+/-	11.1

ph/seg (deg) 23.1 18.3
 amp/seg (%) 28.7 32.0
 ph/frq (deg) 51.5 22.1
 amp/frq (%) 69.7 38.6

RMS Theor. Amplitude 0.284 +/- 0.027
 Search (1024X64) 0.269
 Interp. 0.000
 Inc. seg. avg. 0.288
 Inc. frq. avg. 0.368

Group delay (usec)(sbd) -8.05869282463E+03
 Sband delay (usec) -8.05869851186E+03
 Phase delay (usec) -8.05871697760E+03
 Delay rate (us/s) -1.26656335424E+00
 Total phase (deg) -162.1

Apriori delay (usec) -8.05871697236E+03
 Apriori clock (usec) 1.5746180E+01
 Apriori clockrate (us/s) 5.2701902E-07
 Apriori rate (us/s) -1.26656316955E+00
 Apriori accel (us/s/s) 5.91599798048E-05

Resid mbdelay (usec) -7.10227E-03
 Resid sbdelay (usec) 1.84605E-02
 Resid phdelay (usec) -5.23830E-06
 Resid rate (us/s) -1.84695E-07
 Resid phase (deg) -162.4

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(MSamp/s): 64
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

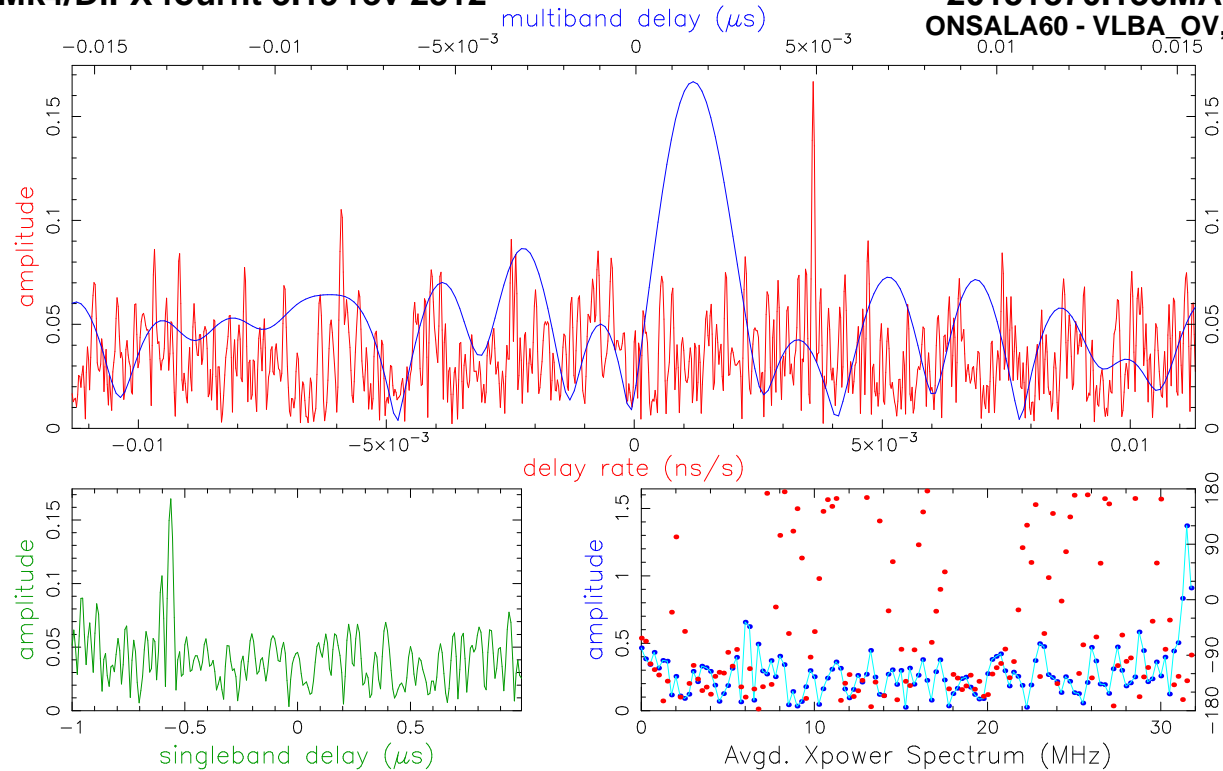
sb window (us) -1.000 1.000
 mb window (us) -0.016 0.016
 dr window (ns/s) -0.011 0.011
 ion window (TEC) 0.00 0.00

X: az 293.9 el 29.5 pa 38.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 9160.523 5155.058 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Xo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Xo.W.377.130MAS

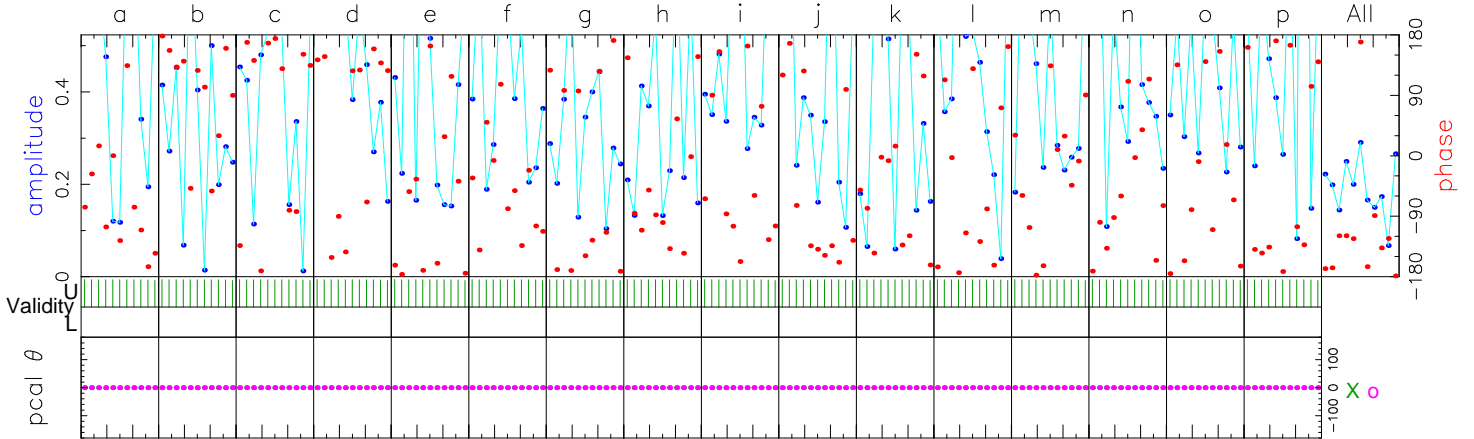
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MAS, No0070, Xo
 ONSALA60 - VLBA OV, fgroup W, pol RL



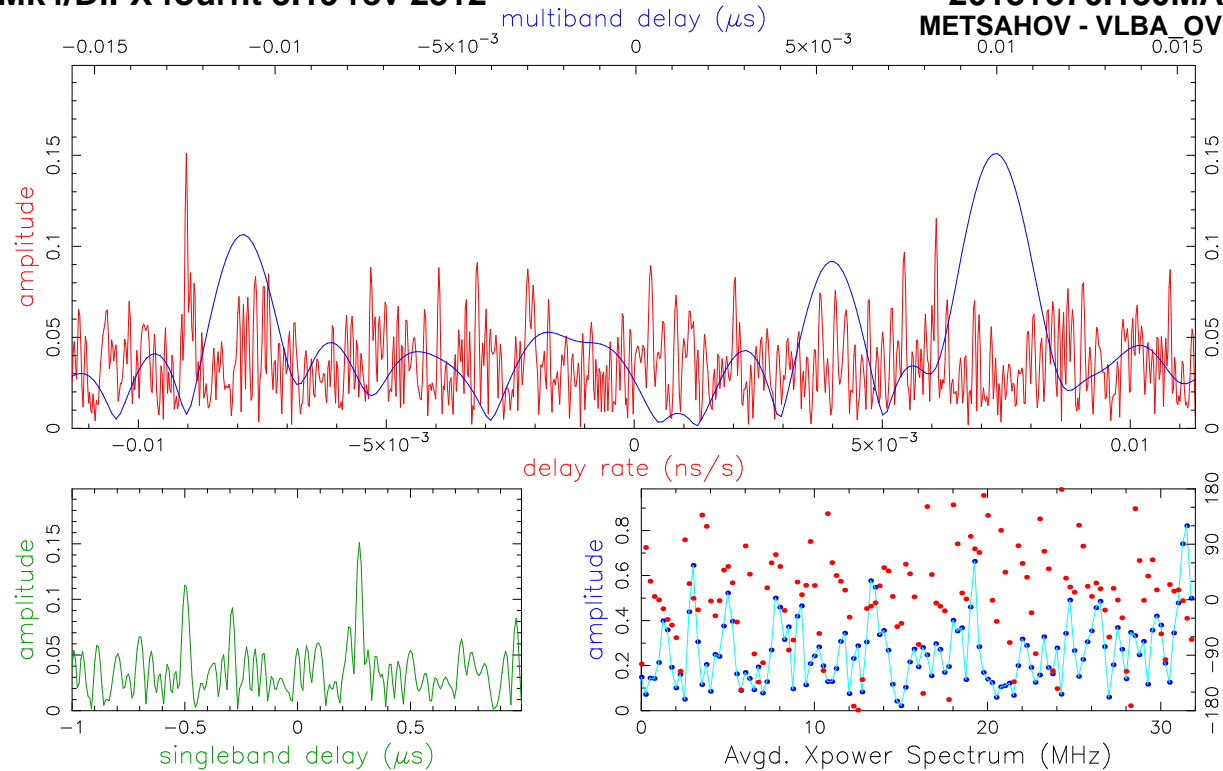
Fringe quality 0
 SNR 6.1
 Int time 178.189
 Amp 0.175
 Phase -149.6
 PFD 1.2e-01
 Delays (us)
 SBD -0.563761
 MBD 0.001593
 Fringe rate (Hz) 0.310786
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054134
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-85.7	151.3	175.7	176.2	-139.8	-89.9	171.7	-64.3	-128.3	-164.8	-101.3	-170.5	-28.3	-86.1	-150.9	-161.6	Phase	-149.6				
	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.3	0.3	0.1	0.3	0.0	0.1	0.2	0.5	Ampl.	0.2				
	196.0	193.1	248.3	55.5	10.5	4.2	91.0	163.9	1.3	73.5	199.9	32.0	211.4	220.1	155.7	47.5	Sbd box	56.8				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-8.05927787974E+03														Apriori delay (usec)	-8.05871697236E+03	Resid mbdelay (usec)	1.59262E-03	+/-	1.8E-04
Sband delay (usec)			-8.05928073386E+03														Apriori clock (usec)	1.5746180E+01	Resid sbdelay (usec)	-5.63761E-01	+/-	2.8E-03
Phase delay (usec)			-8.05871697719E+03														Apriori clockrate (us/s)	5.2701902E-07	Resid phdelay (usec)	-4.82578E-06	+/-	6.0E-07
Delay rate (us/s)			-1.26655956162E+00														Apriori rate (us/s)	-1.26656316955E+00	Resid rate (us/s)	3.60792E-06	+/-	5.8E-09
Total phase (deg)																	Apriori accel (us/s/s)	5.91599798048E-05	Resid phase (deg)	-149.6	+/-	18.8

ph/seg (deg) RMS Theor. Amplitude 0.175 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 30.9 31.1 Search (1024X64) 0.162 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.2 54.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 56.5 37.5 Inc. seg. avg. 0.176 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 72.3 65.5 Inc. frq. avg. 0.180 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 X: az 293.9 el 29.5 pa 38.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 9160.523 5155.058 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Xo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Xo.W.393.130MAS

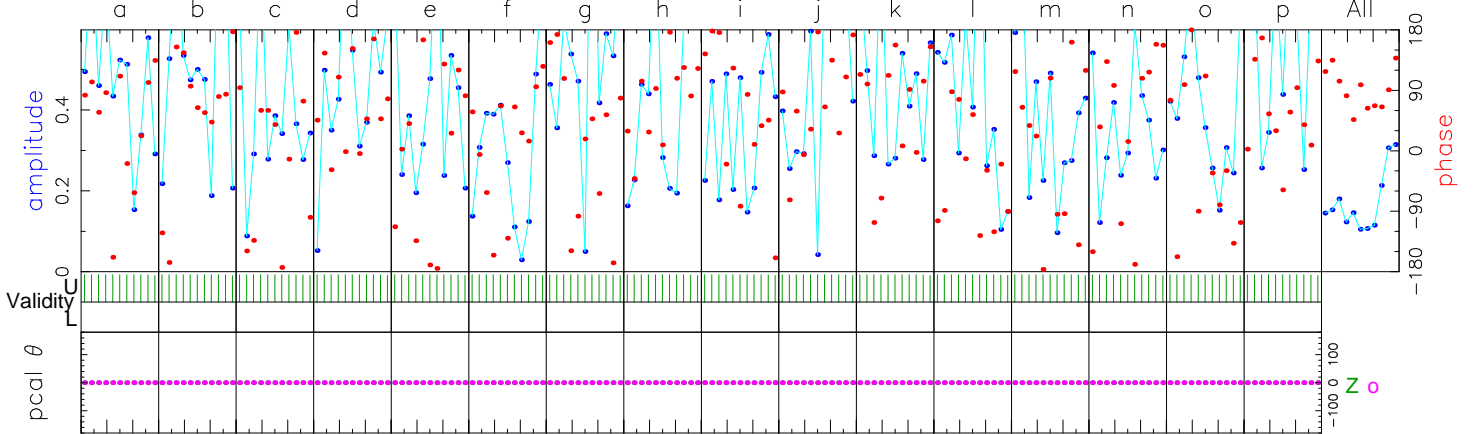


Fringe quality 0

SNR 5.5
 Int time 178.147
 Amp 0.199
 Phase 95.6
 PFD 9.9e-01
 Delays (us)
 SBD 0.273441
 MBD 0.009969
 Fringe rate (Hz)
 -0.779969
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054134
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

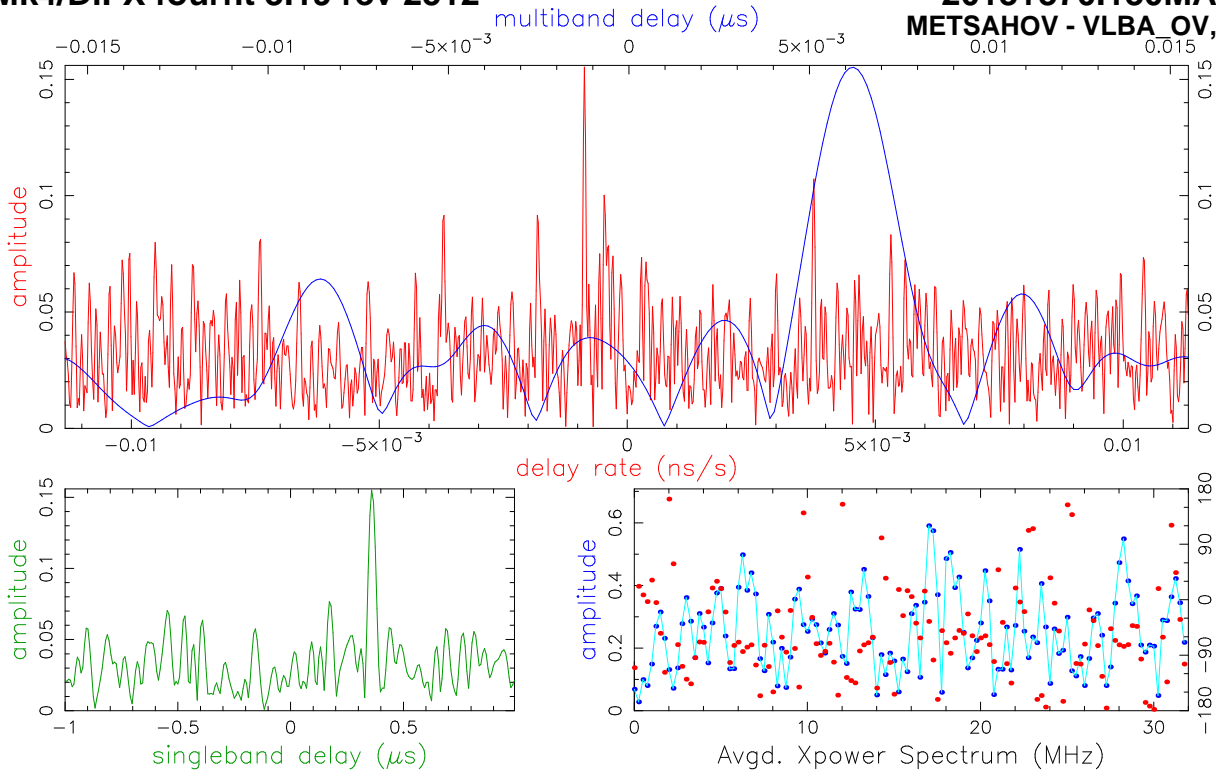


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	862.8	95.6
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	62.8	0.2
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	164.0	0.2
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	164.0	0.2
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	164.0	0.2
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	164.0	0.2
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	164.0	0.2
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		

Group delay (usec)(sbd) -9.53848793638E+03 Apriori delay (usec) -9.53874790582E+03 Resid mbdelay (usec) 9.96944E-03 +/- 2.0E-04
 Sband delay (usec) -9.53847446432E+03 Apriori clock (usec) -1.6485584E+01 Resid sbdelay (usec) 2.73441E-01 +/- 3.1E-03
 Phase delay (usec) -9.53874790274E+03 Apriori clockrate (us/s) 1.5311808E-08 Resid phdelay (usec) 3.08370E-06 +/- 6.7E-07
 Delay rate (us/s) -1.19396546085E+00 Apriori rate (us/s) -1.19395640618E+00 Resid rate (us/s) -9.05467E-06 +/- 6.4E-09
 Total phase (deg) -123.0 Apriori accel (us/s/s) 6.86065396406E-05 Resid phase (deg) 95.6 +/- 20.8

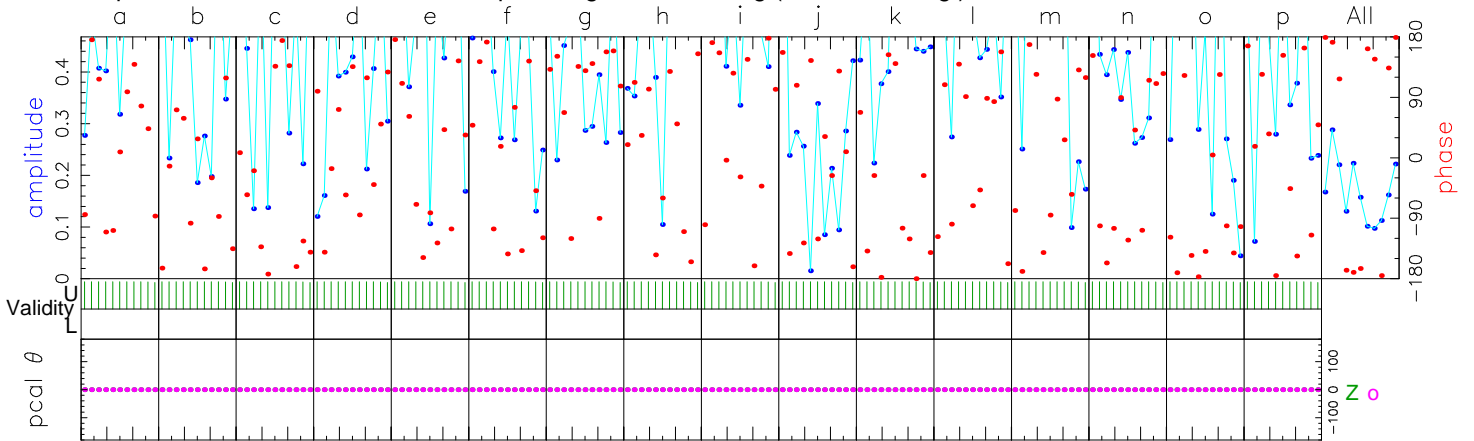
RMS Theor. Amplitude 0.199 +/- 0.036 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 29.1 34.5 Search (1024X64) 0.149 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 49.4 60.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 62.0 41.6 Inc. seg. avg. 0.193 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 68.9 72.6 Inc. frq. avg. 0.204 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 301.7 el 25.1 pa 32.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 8645.637 5902.843 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Zo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Zo.W.392.130MAS



Fringe quality 0
 SNR 5.7
 Int time 178.147
 Amp 0.156
 Phase 169.0
 PFD 8.1e-01
 Delays (us)
 SBD 0.360742
 MBD 0.006210
 Fringe rate (Hz)
 -0.073778
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054136
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

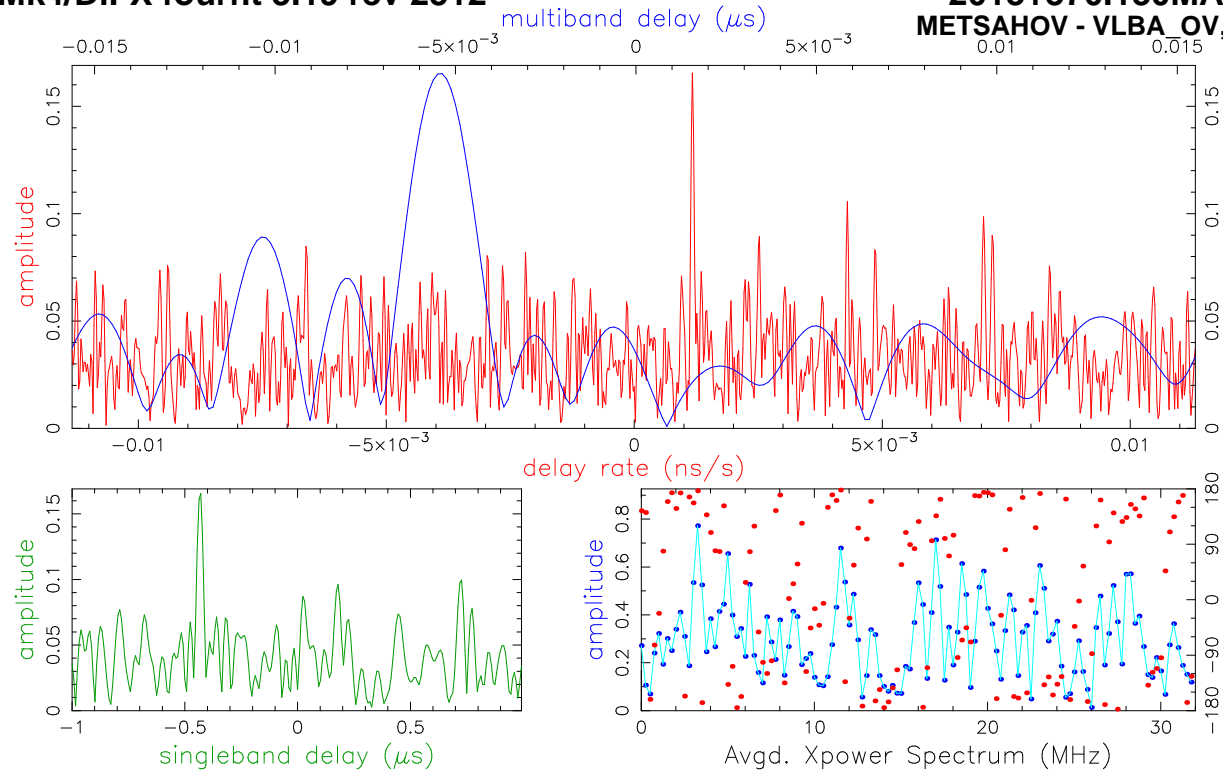
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	111.4	-128.3	-156.2	11.6	-168.1	173.5	147.7	117.4	169.2	179.9	-157.9	143.8	175.5	160.1	-174.3	155.3	Phase	169.0				
	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.3	0.2	Ampl.	0.1				
	208.2	105.1	12.0	243.0	168.0	86.6	219.6	106.7	175.0	254.4	130.6	216.1	251.4	91.0	168.8	141.7	Sbd box	175.2				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-9.53839794560E+03														Apriori delay (usec)	-9.53874790582E+03	Resid mbdelay (usec)	6.21022E-03	+/-	1.9E-04
Sband delay (usec)			-9.53838716382E+03														Apriori clock (usec)	-1.6485584E+01	Resid sbdelay (usec)	3.60742E-01	+/-	3.0E-03
Phase delay (usec)			-9.53874790037E+03														Apriori clockrate (us/s)	1.5311808E-08	Resid phdelay (usec)	5.44833E-06	+/-	6.5E-07
Delay rate (us/s)			-1.19395726267E+00														Apriori rate (us/s)	-1.19395640618E+00	Resid rate (us/s)	-8.56489E-07	+/-	6.3E-09
Total phase (deg)																	Apriori accel (us/s/s)	6.86065396406E-05	Resid phase (deg)	169.0	+/-	20.2

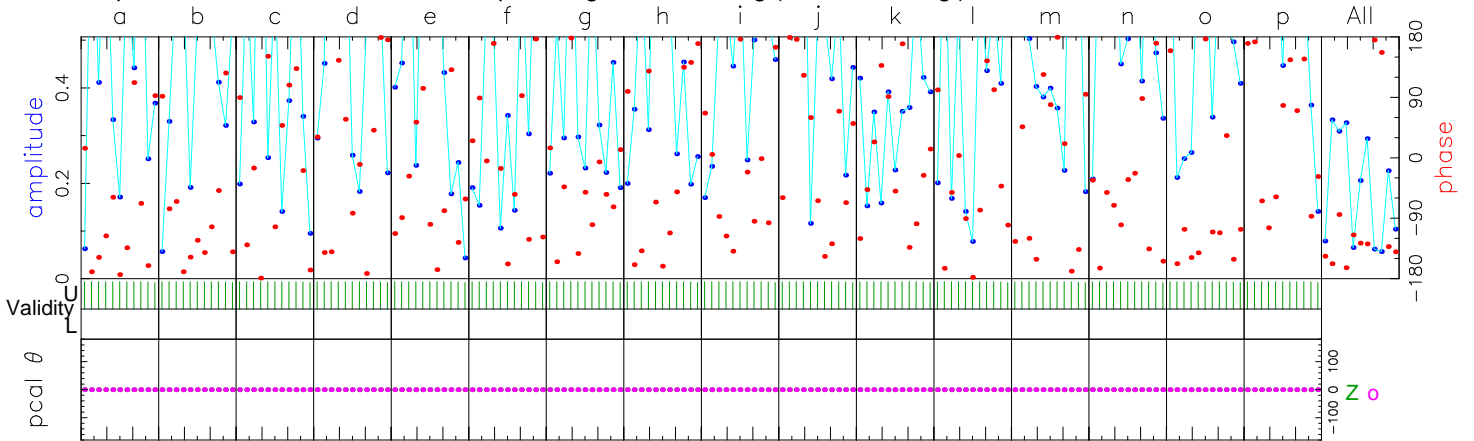
	RMS	Theor.	Amplitude	0.156 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	24.6	33.5	Search (1024X64)	0.150	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	38.6	58.4	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	53.0	40.3	Inc. seg. avg.	0.147	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	48.1	70.4	Inc. frq. avg.	0.148	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 128	t_cohere infinite

Z: az 301.7 el 25.1 pa 32.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 8645.637 5902.843 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Zo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Zo.W.401.130MAS

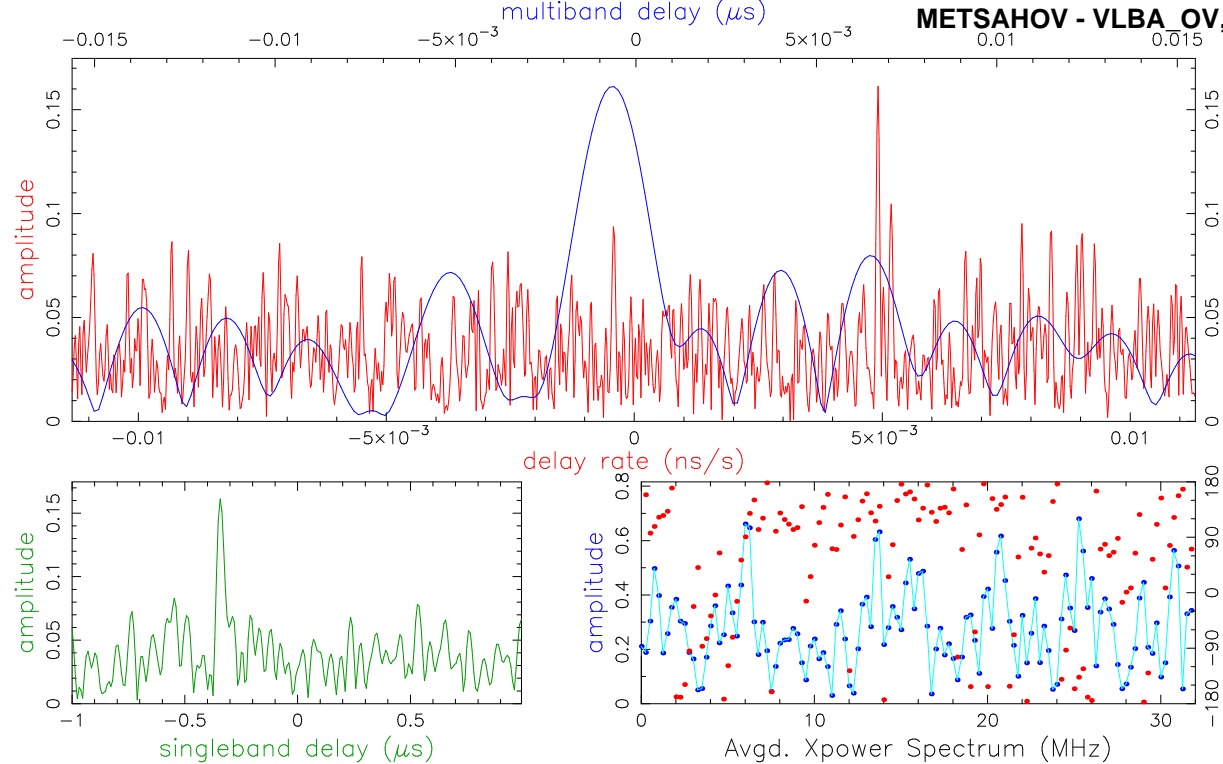


Fringe quality 0
 SNR 6.1
 Int time 178.147
 Amp 0.169
 Phase -137.3
 PFD 1.0e-01
 Delays (us)
 SBD -0.432703
 MBD -0.005426
 Fringe rate (Hz) 0.100826
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build 2020:076:160821
 2020:086:054138
 2020:014:135814
 RA & Dec (J2000) 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

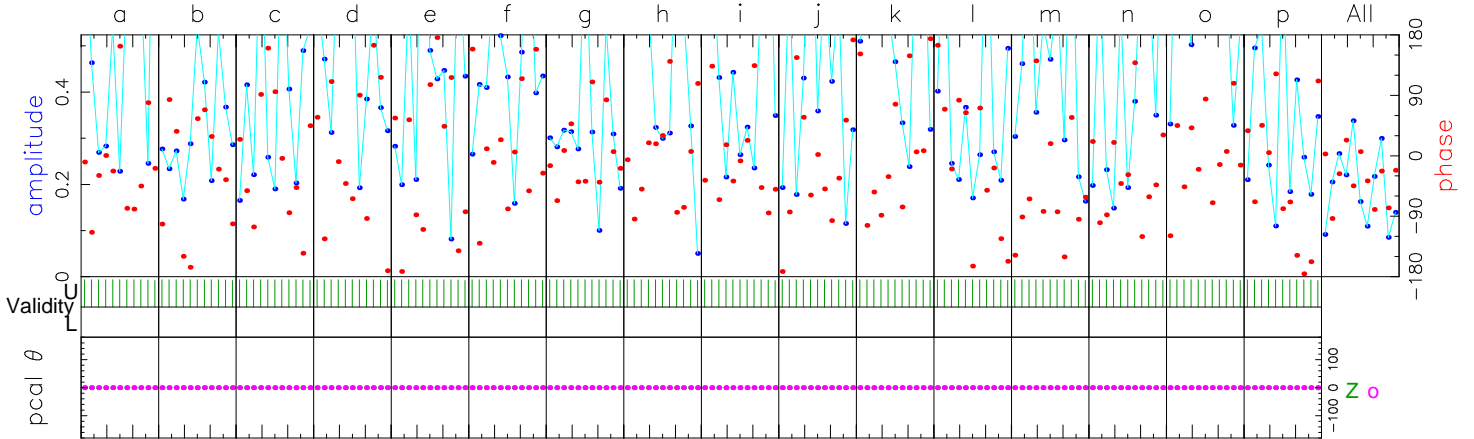


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-134.7	-122.5	179.1	168.7	-104.0	179.3	-100.7	-145.0	-104.0	177.8	-72.0	-107.9	-161.9	-96.1	-147.9	178.8	Phase	-137.3
	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.1	Ampl.	0.2
	24.1	233.9	83.8	10.8	180.2	80.2	136.8	114.5	166.0	1.5	144.5	128.7	9.6	3.0	150.5	227.0	Sbd box	73.6
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-9.53919083231E+03			Apriori delay (usec)			-9.53874790582E+03			Resid mbdelay (usec)			-5.42649E-03			+/- 1.8E-04		
Sband delay (usec)	-9.53918060932E+03			Apriori clock (usec)			-1.6485584E+01			Resid sbdelay (usec)			-4.32703E-01			+/- 2.8E-03		
Phase delay (usec)	-9.53874791025E+03			Apriori clockrate (us/s)			1.5311808E-08			Resid phdelay (usec)			-4.42681E-06			+/- 6.0E-07		
Delay rate (us/s)	-1.19395523570E+00			Apriori rate (us/s)			-1.19395640618E+00			Resid rate (us/s)			1.17049E-06			+/- 5.8E-09		
Total phase (deg)	-355.9			Apriori accel (us/s/s)			6.86065396406E-05			Resid phase (deg)			-137.3			+/- 18.7		
ph/seg (deg)	RMS	Theor.	Amplitude			0.169 +/- 0.028			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	32.1	30.9	Search (1024X64)			0.162			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000			
ph/frq (deg)	66.9	54.0	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016	
amp/frq (%)	39.7	37.3	Inc. seg. avg.			0.165			Sample rate(MSamp/s): 64			dr window (ns/s)			-0.011 0.011			
	46.8	65.1	Inc. frq. avg.			0.163			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)		0.00 0.00	
Z: az 301.7 el 25.1 pa 32.1	o: az 78.2 el 60.0 pa -78.1			u,v (fr/asec) 8645.637 5902.843												simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c192c/v2/1234/No0070/Zo..130MAS			Output file: /Exps/c192c/v2/1234/No0070/Zo.W.408.130MAS														



Fringe quality 0
 SNR 5.9
 Int time 178.147
 Amp 0.175
 Phase -33.8
 PFD 3.8e-01
 Delays (us)
 SBD -0.342786
 MBD -0.000641
 Fringe rate (Hz)
 0.424038
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 004000.00
 Stop 004300.22
 FRT 004130.00
 Corr/FF/build
 2020:076:160821
 2020:086:054140
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-39.2	11.7	7.0	-49.0	-144.4	-25.2	1.3	-41.4	-44.8	-55.4	-40.1	39.8	-69.6	-53.3	1.8	-73.2	Phase	-33.8
	0.4	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.4	0.1	Ampl.	0.2
	187.9	107.6	100.8	50.0	132.6	37.6	16.9	200.4	143.2	196.1	163.0	237.9	214.2	86.9	36.4	193.3	Sbd box	85.1
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd)	-9.53909229674E+03	Apriori delay (usec)	-9.53874790582E+03	Resid mbdelay (usec)	-6.40915E-04	+/-	1.8E-04
Sband delay (usec)	-9.53909069132E+03	Apriori clock (usec)	-1.6485584E+01	Resid sbdelay (usec)	-3.42786E-01	+/-	2.9E-03
Phase delay (usec)	-9.53874790691E+03	Apriori clockrate (us/s)	1.5311808E-08	Resid phdelay (usec)	-1.09007E-06	+/-	6.3E-07
Delay rate (us/s)	-1.19395148353E+00	Apriori rate (us/s)	-1.19395640618E+00	Resid rate (us/s)	4.92266E-06	+/-	6.0E-09
Total phase (deg)	-252.5	Apriori accel (us/s/s)	6.86065396406E-05	Resid phase (deg)	-33.8	+/-	19.4

ph/seg (deg)	RMS 35.9	Theor. 32.2	Amplitude Search (1024X64)	0.175 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	54.1	56.3	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	44.8	38.9	Inc. seg. avg.	0.182	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%)	65.6	67.9	Inc. frq. avg.	0.166	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
					Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 301.7 el 25.1 pa 32.1 o: az 78.2 el 60.0 pa -78.1 u,v (fr/asec) 8645.637 5902.843 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0070/Zo..130MAS Output file: /Exps/c192c/v2/1234/No0070/Zo.W.413.130MAS