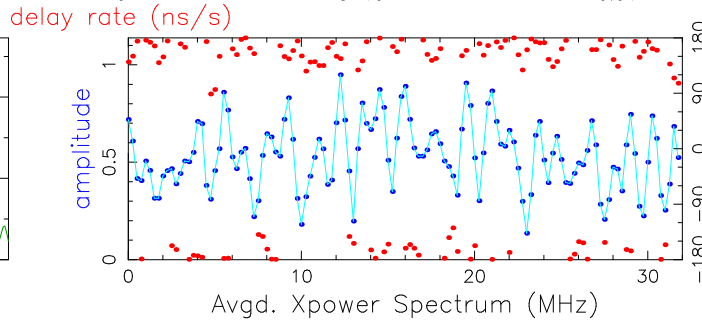
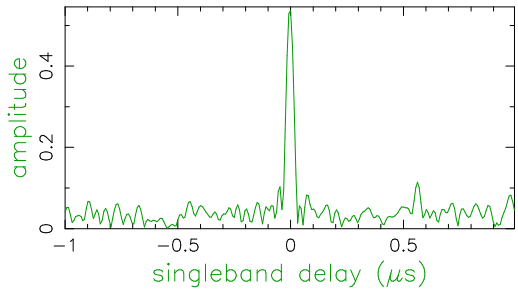


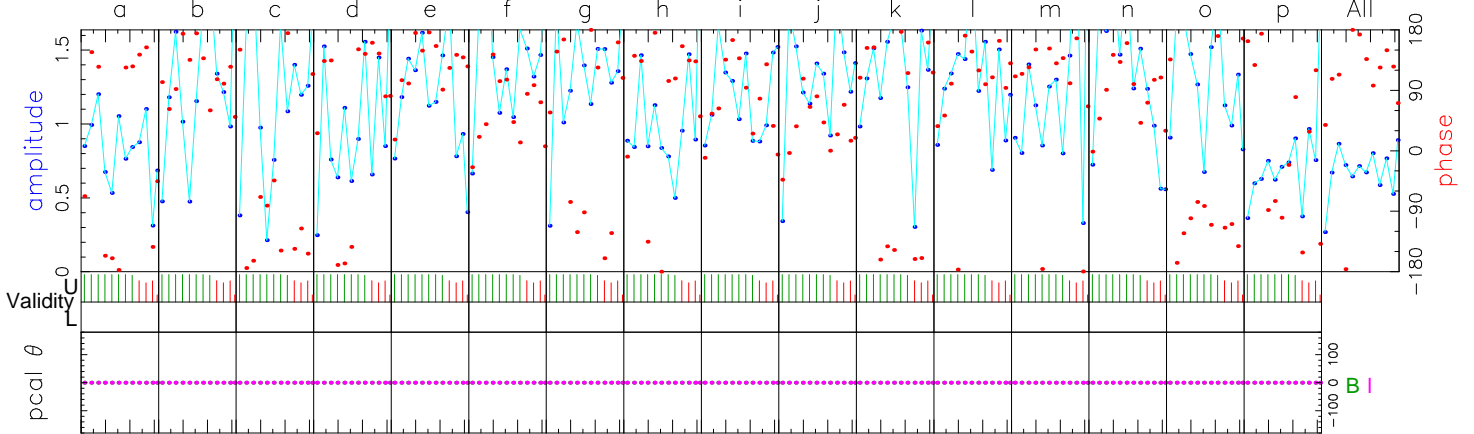
Fringe quality 8

SNR 19.2  
Int time 166.003  
Amp 0.546  
Phase 133.4  
PFD 0.0e+00  
Delays (us)  
SBD -0.003310  
MBD 0.003022  
Fringe rate (Hz)  
-0.027657  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010259.71  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054403  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 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	
	160.1	107.3	-150.8	147.7	130.3	59.6	-167.5	141.1	83.2	39.6	172.7	124.5	135.8	98.8	-133.0	-149.0		Phase	133.4
	0.6	0.9	0.9	0.8	1.0	1.0	0.7	0.6	0.8	1.1	1.1	1.0	1.0	1.0	1.0	0.1		Ampl.	0.8
	129.7	128.9	128.9	128.6	128.6	128.7	128.3	128.1	128.4	129.1	128.5	129.0	129.4	128.9	129.0	131.7		Sbd box	128.6
U/L	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0		APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	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 phase	
B:I	0:0	0:0	0:0	0:0	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	
I	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	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

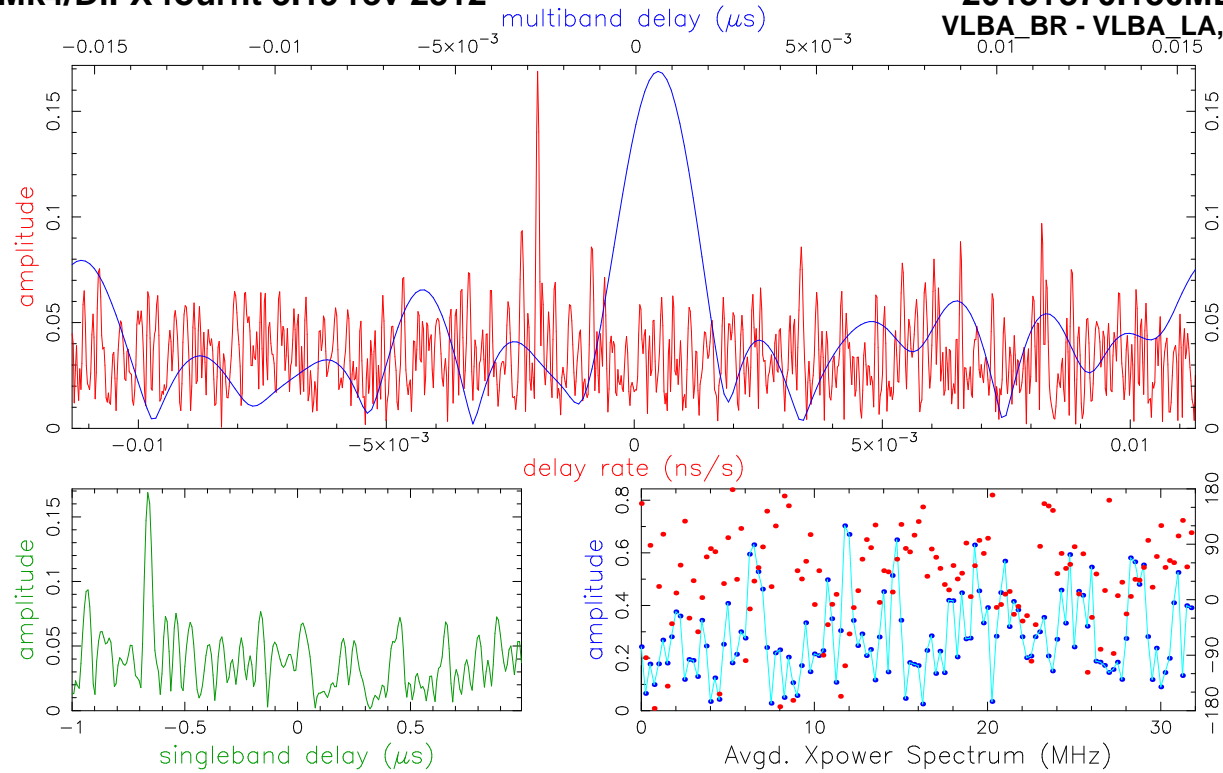
Group delay (usec)(sbd) -1.09563632329E+04 Apriori delay (usec) -1.09563662545E+04 Resid mbdelay (usec) 3.02163E-03 +/- 5.6E-05  
 Sband delay (usec) -1.09563695645E+04 Apriori clock (usec) 1.7569019E+01 Resid sbdelay (usec) -3.31000E-03 +/- 9.0E-04  
 Phase delay (usec) -1.09563662502E+04 Apriori clockrate (us/s) 1.5147200E-07 Resid phdelay (usec) 4.30085E-06 +/- 1.9E-07  
 Delay rate (us/s) -1.13757174761E+00 Apriori rate (us/s) -1.13757142655E+00 Resid rate (us/s) -3.21066E-07 +/- 1.9E-09  
 Total phase (deg) 73.7 Apriori accel (us/s/s) 7.11433247491E-05 Resid phase (deg) 133.4 +/- 6.0

ph/seg (deg) RMS Theor. Amplitude 0.546 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 42.6 10.1 Search (1024X64) 0.514 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 36.3 17.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 56.9 11.9 Inc. seg. avg. 0.655 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 71.2 20.8 Inc. frq. avg. 0.826 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 297.2 el 26.6 pa 45.3 I: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 8240.850 5521.475 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/BI..130MEY Output file: /Exps/c192c/v2/1234/No0072/BI.W.13.130MEY

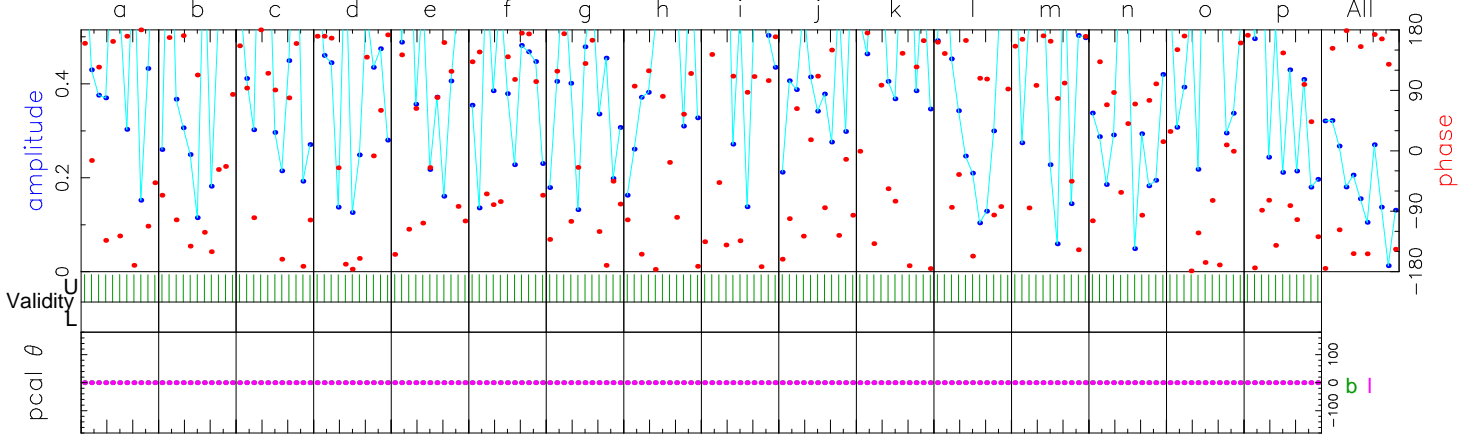
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, bl  
VLBA\_BR - VLBA\_LA, fgroup W, pol RR



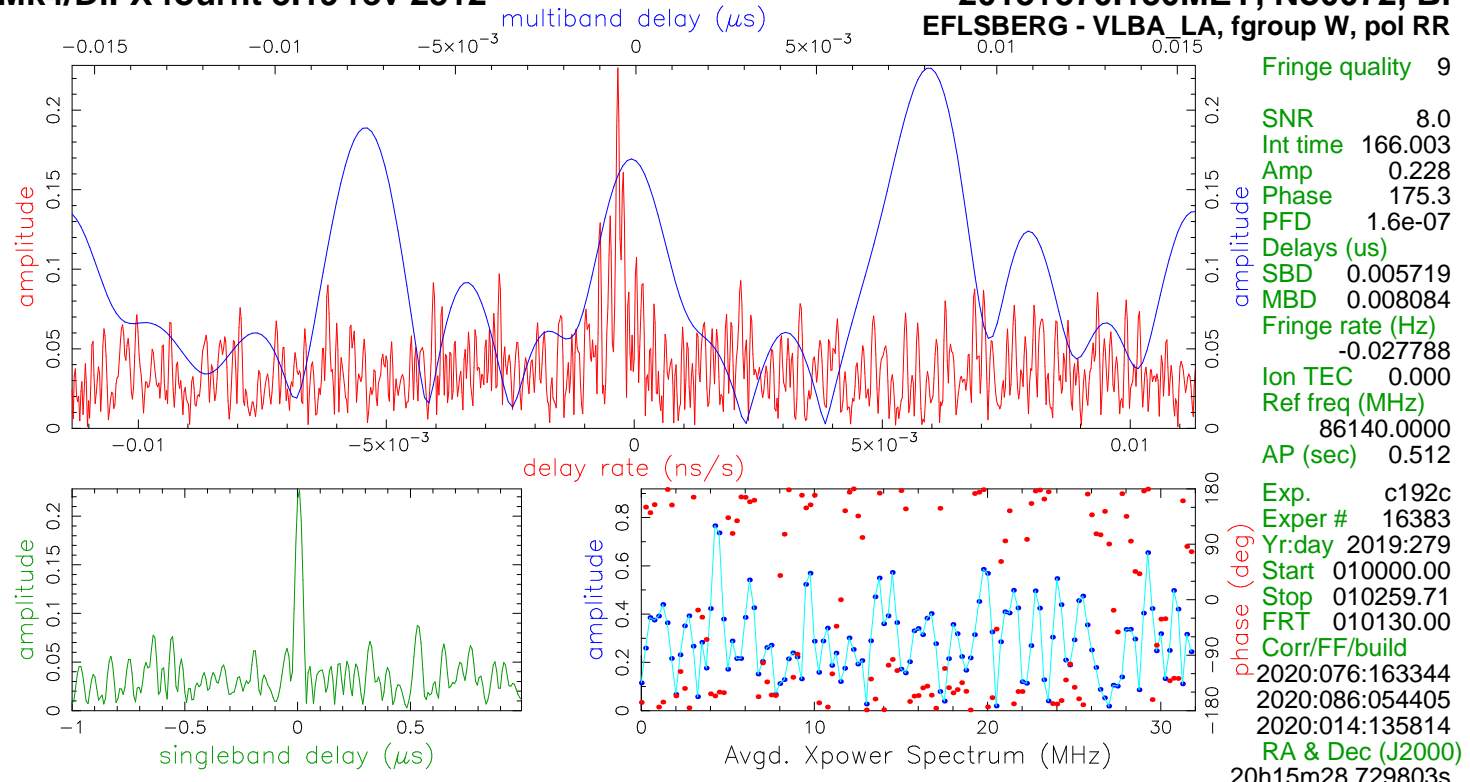
Fringe quality 0  
SNR 6.2  
Int time 178.561  
Amp 0.172  
Phase -174.5  
PFD 7.4e-02  
Delays (us)  
SBD -0.662377  
MBD 0.000626  
Fringe rate (Hz)  
-0.168050  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054405  
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

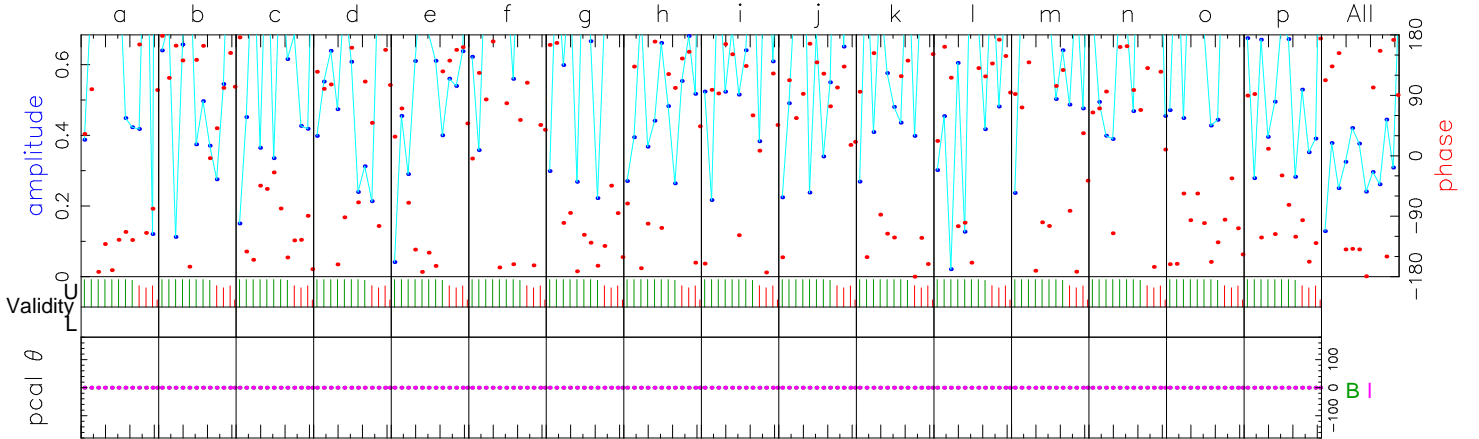


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-156.8	-136.2	150.0	163.4	-135.2	-160.8	-169.6	132.3	-173.3	-107.0	173.4	175.4	152.5	20.1	-168.9	-143.6	Phase	-174.5
	0.3	0.1	0.3	0.2	0.3	0.1	0.2	0.1	0.3	0.2	0.3	0.1	0.3	0.1	0.2	0.2	Ampl.	0.2
	245.2	69.6	43.2	6.4	121.2	109.4	46.0	113.6	9.0	38.2	187.2	129.8	48.1	176.6	52.9	253.7	Sbd box	44.2
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	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b: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	PC phase	
b: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	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		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-1.43938804734E+03		Apriori delay (usec)		-1.43873242310E+03		Resid mbdelay (usec)		6.25756E-04		+/-		1.7E-04					
Sband delay (usec)	-1.43939480010E+03		Apriori clock (usec)		1.4694527E-01		Resid sbdelay (usec)		-6.62377E-01		+/-		2.8E-03					
Phase delay (usec)	-1.43873242872E+03		Apriori clockrate (us/s)		1.0907692E-07		Resid phdelay (usec)		-5.62594E-06		+/-		6.0E-07					
Delay rate (us/s)	1.09571237434E-01		Apriori rate (us/s)		1.09573188323E-01		Resid rate (us/s)		-1.95089E-06		+/-		5.7E-09					
Total phase (deg)			-147.6		Apriori accel (us/s/s)		1.85770501128E-05		Resid phase (deg)				-174.5		+/-		18.5	

ph/seg (deg) 31.3 30.7 Search (1024X64) 0.172 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 56.0 53.5 Interp. 0.165 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 55.0 37.0 Inc. seg. avg. 0.170 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 50.5 64.5 Inc. frq. avg. 0.173 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
b: az 100.8 el 62.8 pa -55.3 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -772.094 2242.601 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/bl..130MEY Output file: /Exps/c192c/v2/1234/No0072/bl.W.29.130MEY



Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 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	146.3	-106.6	158.2	175.9	107.6	-121.7	176.4	131.0	88.8	-163.1	154.4	164.5	115.6	-101.8	-96.6	175.3	Phase	
	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.3	0.4	0.5	0.5	0.4	0.2	0.5	0.6	0.2	0.2	Ampl.	
	194.1	128.6	129.7	22.8	103.0	129.7	129.5	138.2	129.2	130.3	130.5	128.7	90.6	129.9	130.1	131.8	129.7	Sbd box	
U/L	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	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	1000	1000	PC freqs
B:I	0:0	0:0	0:0	0:0	0:0	0:0	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:I	0:0	0:0	0:0	0:0	0:0	0:0	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
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
B	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
																			Chan ids
																			Tracks
Group delay (usec)(sbd)	-1.09563581709E+04			Apriori delay (usec)			-1.09563662545E+04			Resid mbdelay (usec)			8.08366E-03			+/- 1.3E-04			
Sband delay (usec)	-1.09563605355E+04			Apriori clock (usec)			1.7569019E+01			Resid sbdelay (usec)			5.71900E-03			+/- 2.1E-03			
Phase delay (usec)	-1.09563662489E+04			Apriori clockrate (us/s)			1.5147200E-07			Resid phdelay (usec)			5.65409E-06			+/- 4.6E-07			
Delay rate (us/s)	-1.13757174914E+00			Apriori rate (us/s)			-1.13757142655E+00			Resid rate (us/s)			-3.22594E-07			+/- 4.6E-09			
Total phase (deg)	115.7			Apriori accel (us/s/s)			7.11433247491E-05			Resid phase (deg)			175.3			+/- 14.3			

ph/seg (deg) 44.6 24.1 Search (1024X64) 0.217 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 60.9 42.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 56.7 28.5 Inc. seg. avg. 0.292 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

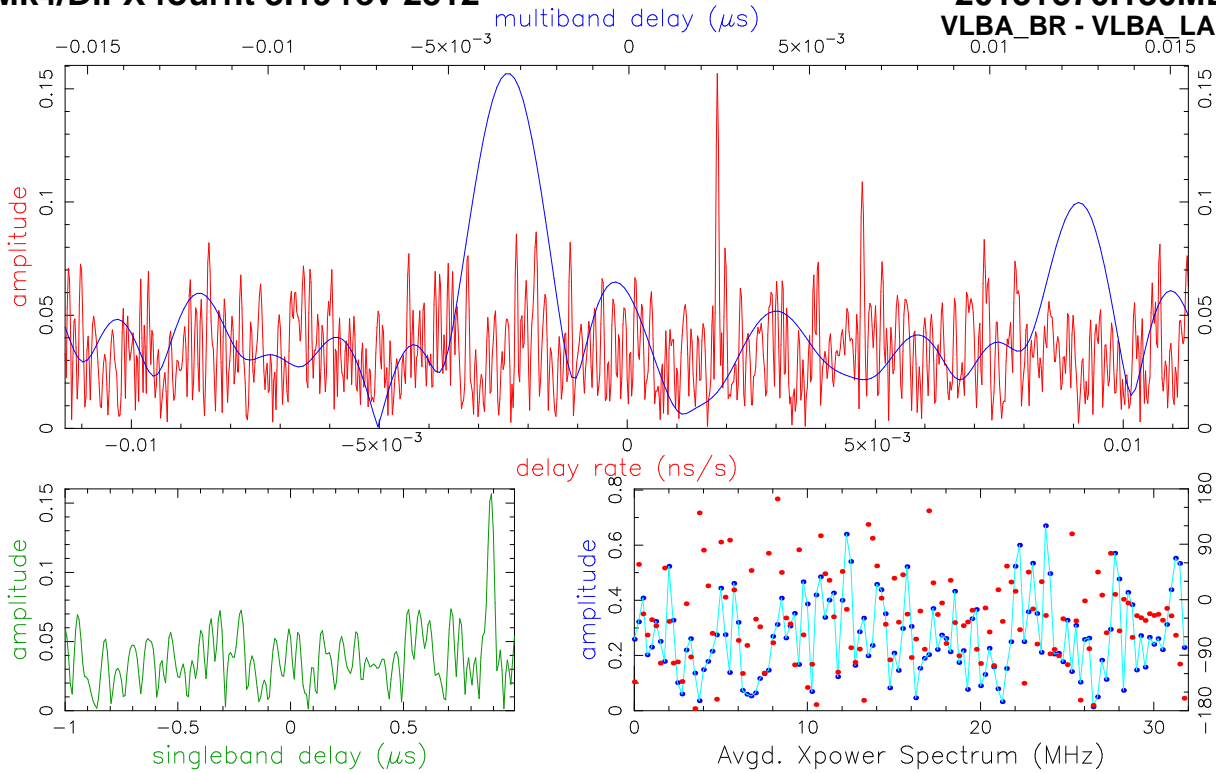
amp/frq (%) 84.3 49.8 Inc. frq. avg. 0.342 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

B: az 297.2 el 26.6 pa 45.3 I: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 8240.850 5521.475 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/BI..130MEY Output file: /Exps/c192c/v2/1234/No0072/BI.W.30.130MEY

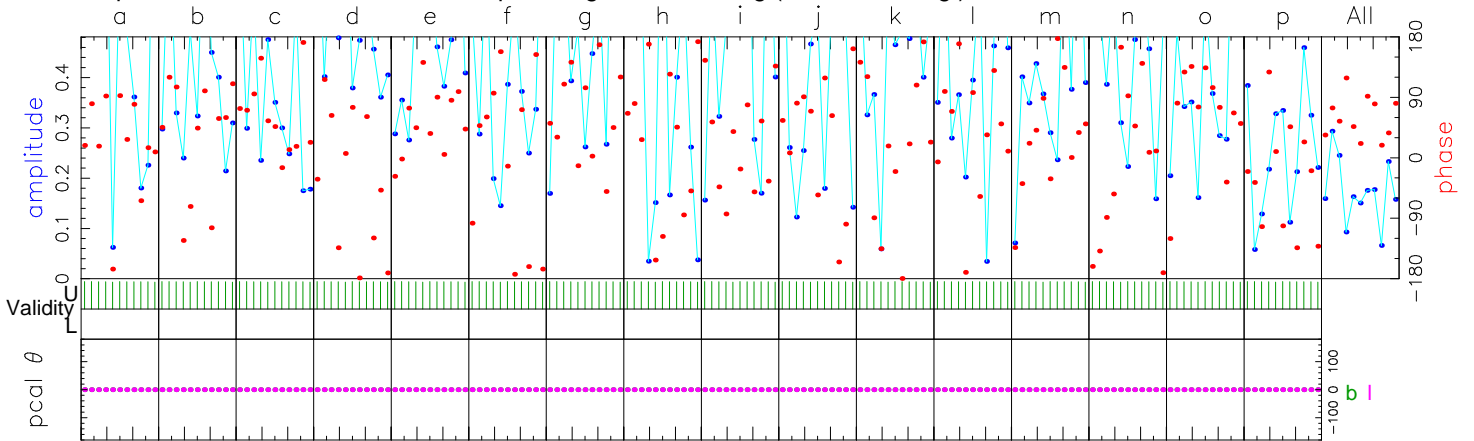
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, bl  
VLBA\_BR - VLBA\_LA, fgroup W, pol LL



Fringe quality 0  
SNR 5.8  
Int time 178.561  
Amp 0.160  
Phase 60.0  
PFD 5.7e-01  
Delays (us)  
SBD 0.888089  
MBD -0.003390  
Fringe rate (Hz) 0.156877  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054402  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

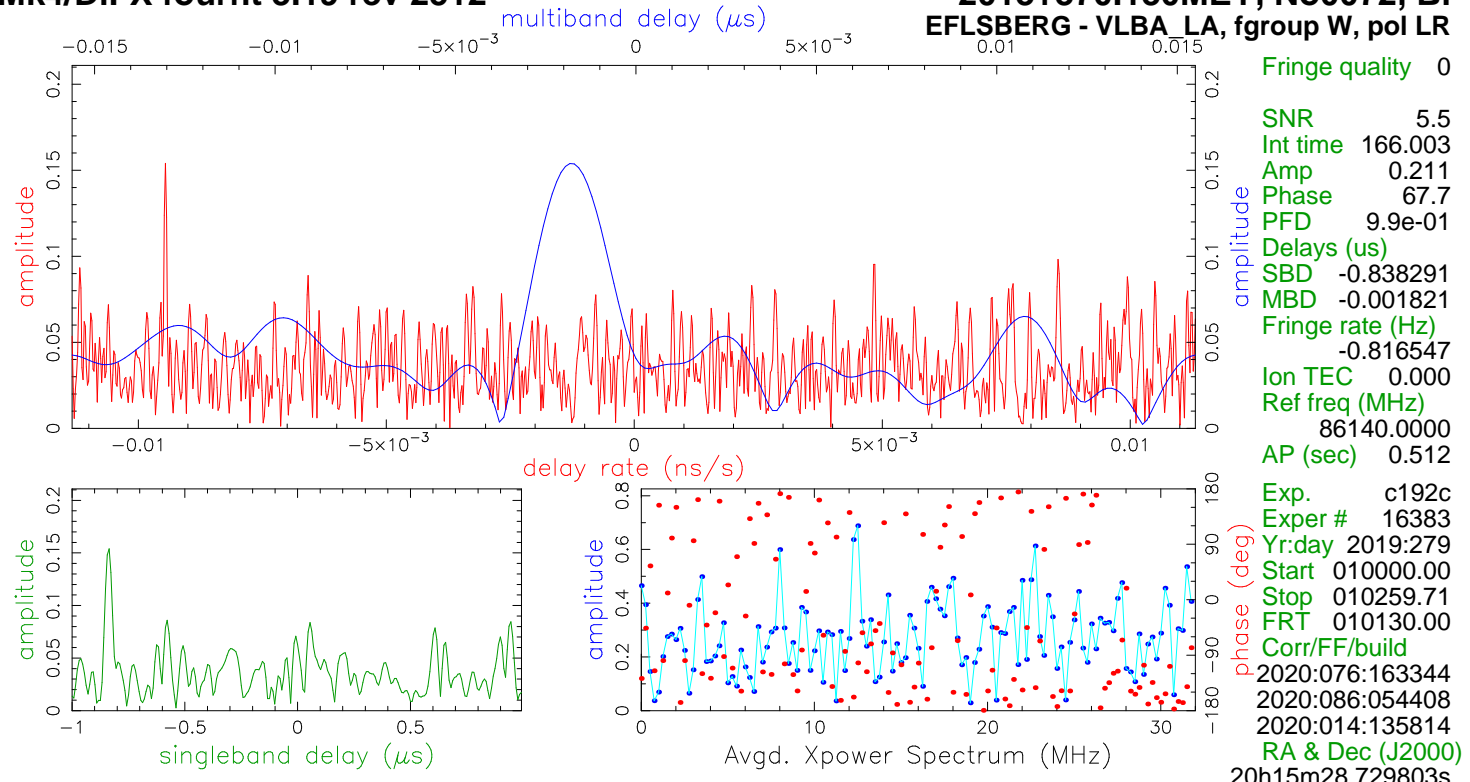
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



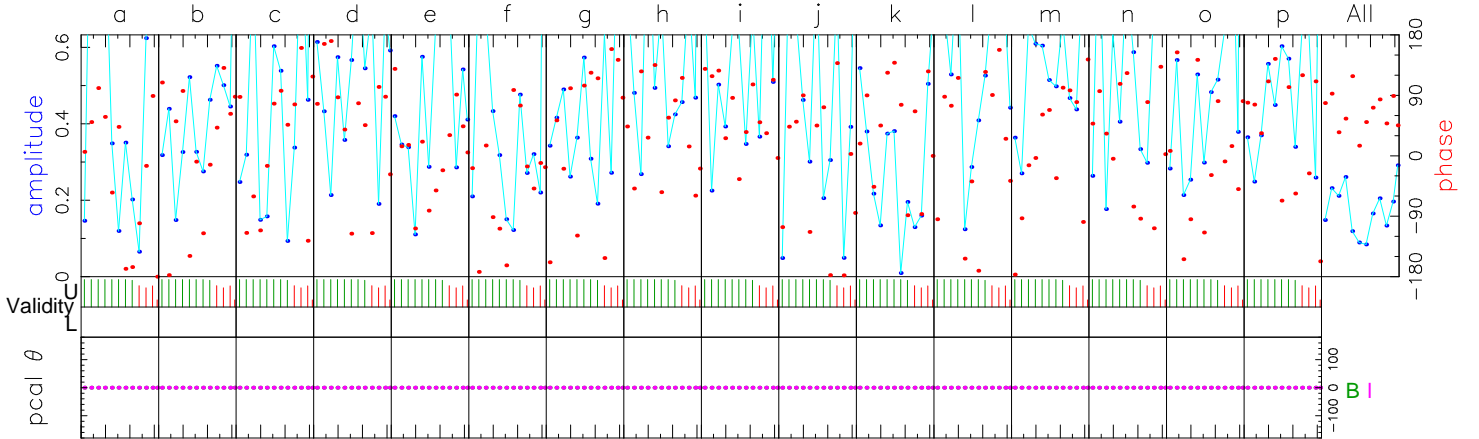
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
45.2	90.3	57.3	27.2	64.6	150.7	72.9	20.4	12.1	63.7	84.9	69.6	43.6	-161.8	87.2	-28.9		Phase	60.0	
0.4	0.2	0.3	0.1	0.4	0.1	0.3	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.1		Ampl.	0.2	
107.2	94.0	231.4	93.8	243.3	189.8	175.5	86.1	220.8	255.0	41.7	125.7	87.0	5.2	204.2	157.9		Sbd box	242.7	
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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
b: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		ManI PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
Group delay (usec)(sbd)	-1.43782956352E+03			Apriori delay (usec)			-1.43873242310E+03			Resid mbdelay (usec)			-3.39043E-03			+/- 1.9E-04			
Sband delay (usec)	-1.43784433410E+03			Apriori clock (usec)			1.4694527E-01			Resid sbdelay (usec)			8.88089E-01			+/- 3.0E-03			
Phase delay (usec)	-1.43873242116E+03			Apriori clockrate (us/s)			1.0907692E-07			Resid phdelay (usec)			1.93391E-06			+/- 6.4E-07			
Delay rate (us/s)	1.09575009510E-01			Apriori rate (us/s)			1.09573188323E-01			Resid rate (us/s)			1.82119E-06			+/- 6.1E-09			
Total phase (deg)	-273.2			Apriori accel (us/s/s)			1.85770501128E-05			Resid phase (deg)			60.0			+/- 19.8			

ph/seg (deg) RMS 30.3 Theor. 32.8 Amplitude 0.160 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 40.3 57.2 Search (1024X64) 0.154 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 55.6 39.5 Inc. seg. avg. 0.151 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 68.6 69.0 Inc. frq. avg. 0.158 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 b: az 100.8 el 62.8 pa -55.3 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -772.094 2242.601 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/bl..130MEY Output file: /Exps/c192c/v2/1234/No0072/bl.W.5.130MEY





Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 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	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	APs used							
B	1000	1000	1000	1000	1000	1000	1000	1000	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	1000	1000	1000	PC phase						
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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						
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp						
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids						
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL				Tracks						
B	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)			-1.09572118251E+04																	Apriori delay (usec)	-1.09563662545E+04	Resid mbdelay (usec)	-1.82056E-03	+/-	2.0E-04	
Sband delay (usec)			-1.09572045455E+04																		Apriori clock (usec)	1.7569019E+01	Resid sbdelay (usec)	-8.38291E-01	+/-	3.1E-03
Phase delay (usec)			-1.09563662524E+04																		Apriori clockrate (us/s)	1.5147200E-07	Resid phdelay (usec)	2.18206E-06	+/-	6.8E-07
Delay rate (us/s)			-1.13758090585E+00																		Apriori rate (us/s)	-1.13757142655E+00	Resid rate (us/s)	-9.47930E-06	+/-	6.8E-09
Total phase (deg)					8.0																Apriori accel (us/s/s)	7.11433247491E-05	Resid phase (deg)	67.7	+/-	20.9

ph/seg (deg) 28.6 35.4

amp/seg (%) 39.5 61.8

ph/frq (deg) 45.4 41.9

amp/frq (%) 56.9 73.1

B: az 297.2 el 26.6 pa 45.3

I: az 78.8 el 73.2 pa -88.7

u,v (fr/asec) 8240.850 5521.475

Control file: cf\_1234\_gmva

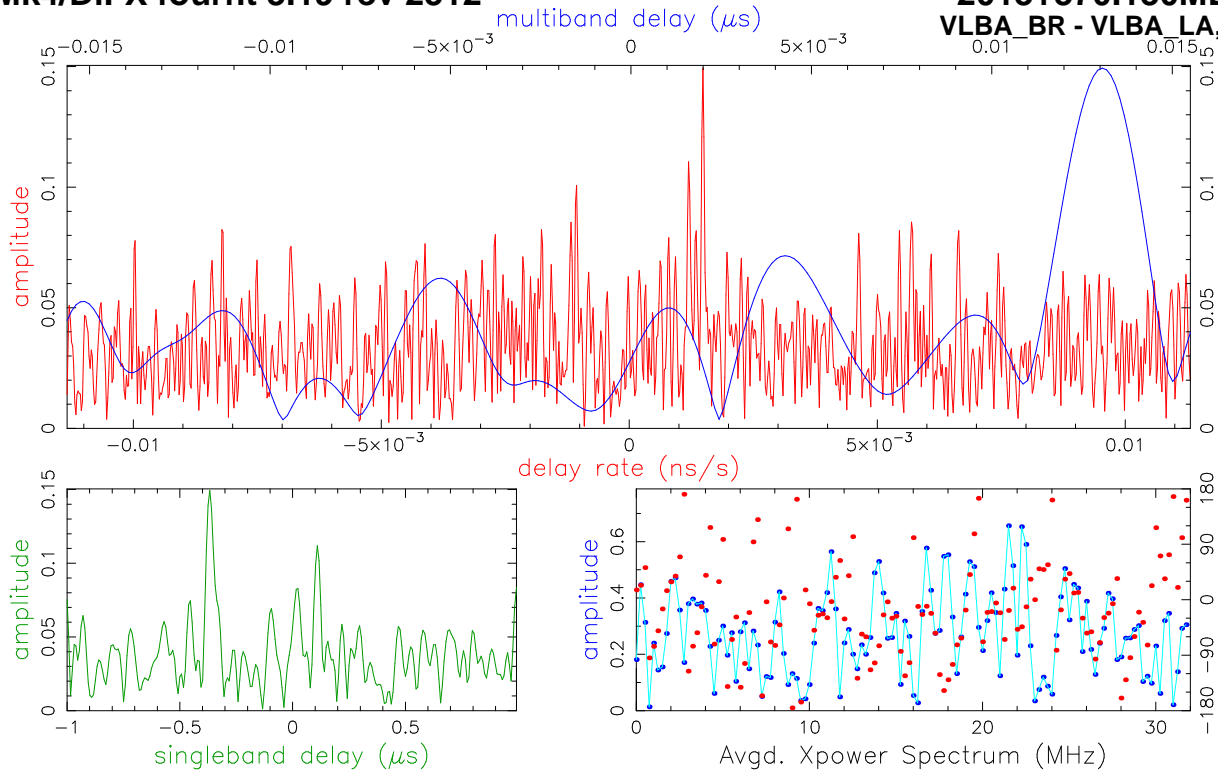
Input file: /Exps/c192c/v2/1234/No0072/BI..130MEY

Output file: /Exps/c192c/v2/1234/No0072/BI.W.53.130MEY

simultaneous interpolator

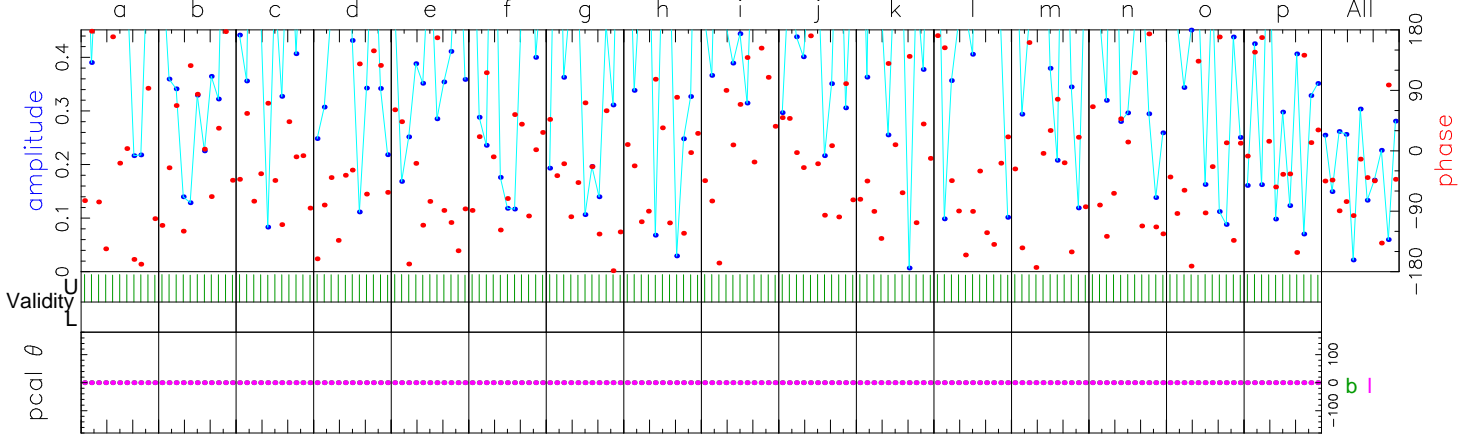
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, bl  
VLBA\_BR - VLBA\_LA, fgroup W, pol RL



Fringe quality 0  
SNR 5.5  
Int time 178.561  
Amp 0.150  
Phase -56.5  
PFD 1.0e+00  
Delays (us)  
SBD -0.367741  
MBD 0.013060  
Fringe rate (Hz)  
0.127669  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054409  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

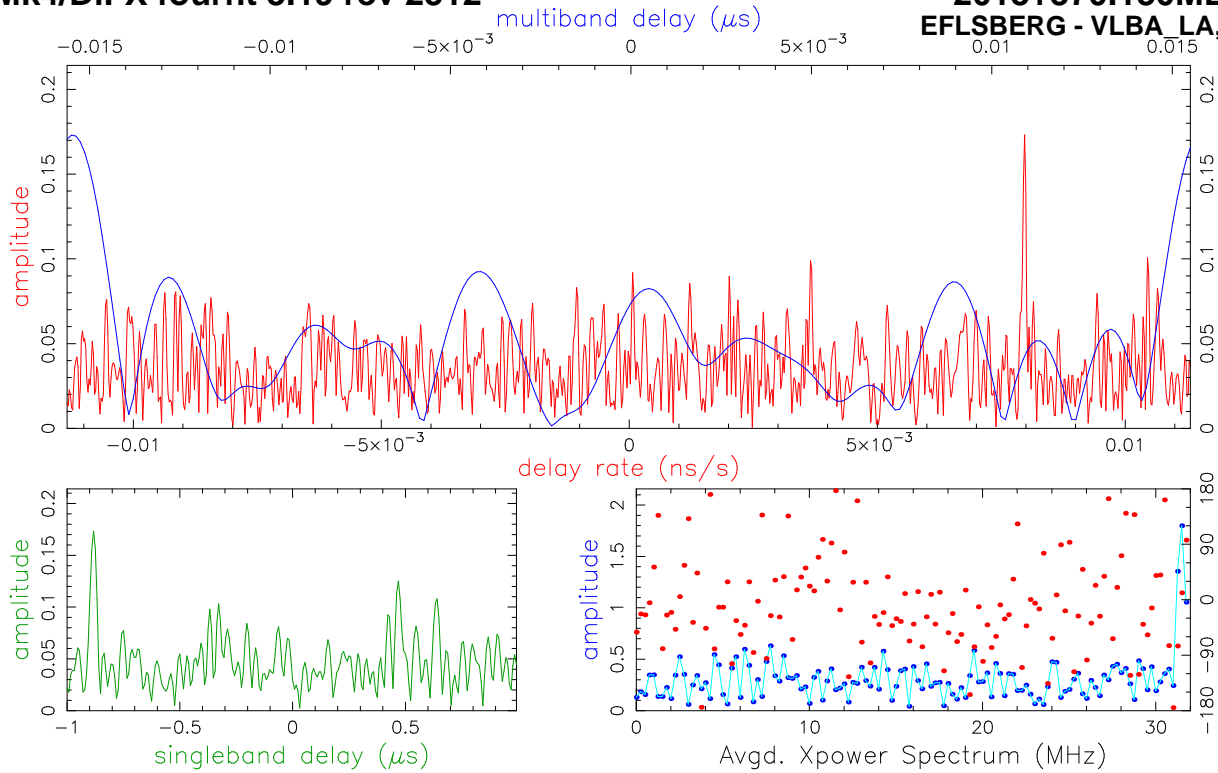
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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
	-89.6	-70.3	-35.4	-83.0	-103.5	-27.4	-59.6	-27.5	85.2	-27.8	-60.6	-105.4	-37.5	-83.1	-79.3	11.6	Phase	-56.5
	0.2	0.1	0.4	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	Ampl.	0.1
	130.9	75.2	235.9	223.4	152.6	89.1	79.7	134.0	216.0	38.1	82.9	52.7	64.2	165.1	254.9	14.9	Sbd box	81.9
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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b: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	PC phase	
b: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	Manl 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		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-1.43909436324E+03			Apriori delay (usec)			-1.43873242310E+03			Resid mbdelay (usec)			1.30599E-02			+/-	2.0E-04	
Sband delay (usec)	-1.43910016410E+03			Apriori clock (usec)			1.4694527E-01			Resid sbdelay (usec)			-3.67741E-01			+/-	3.2E-03	
Phase delay (usec)	-1.43873242492E+03			Apriori clockrate (us/s)			1.0907692E-07			Resid phdelay (usec)			-1.82212E-06			+/-	6.8E-07	
Delay rate (us/s)	1.09574670437E-01			Apriori rate (us/s)			1.09573188323E-01			Resid rate (us/s)			1.48211E-06			+/-	6.5E-09	
Total phase (deg)	-29.7			Apriori accel (us/s/s)			1.85770501128E-05			Resid phase (deg)			-56.5			+/-	21.0	

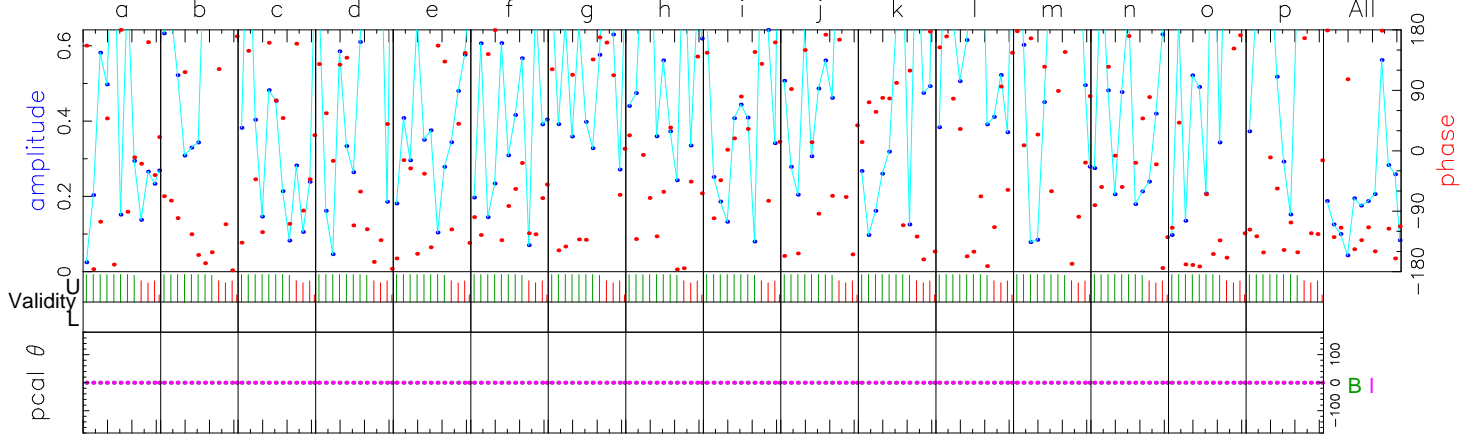
ph/seg (deg) RMS Theor. Amplitude 0.150 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 66.0 60.7 Search (1024X64) 0.145 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.6 42.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 60.9 73.3 Inc. seg. avg. 0.164 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 100.8 el 62.8 pa -55.3 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -772.094 2242.601 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/bl..130MEY Output file: /Exps/c192c/v2/1234/No0072/bl.W.67.130MEY



Fringe quality 0  
SNR 6.1  
Int time 166.003  
Amp 0.214  
Phase -149.9  
PFD 1.3e-01  
Delays (us)  
SBD -0.882478  
MBD 0.015775  
Fringe rate (Hz)  
0.686894  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010259.71  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054411  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

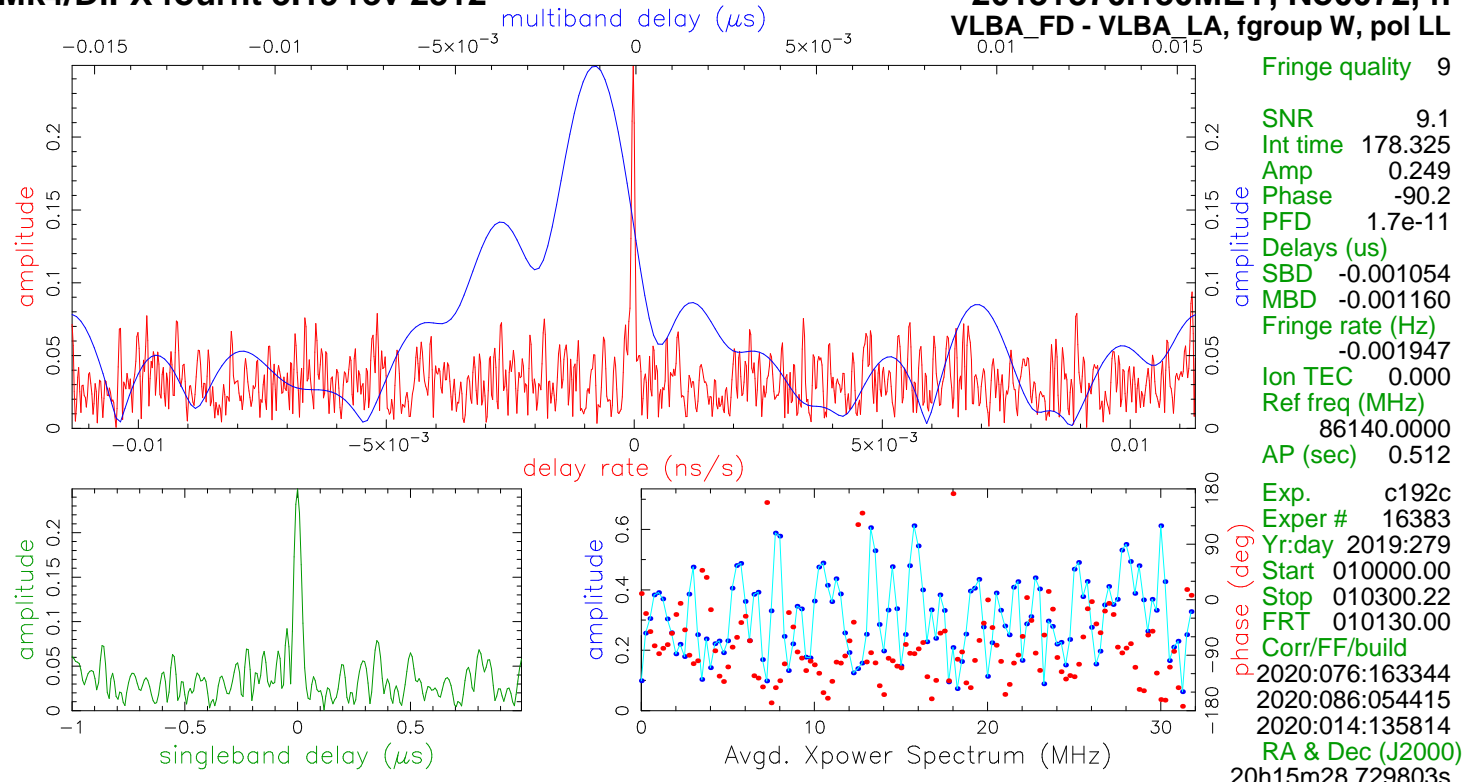
Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 sec / seg.), time ticks 30 sec



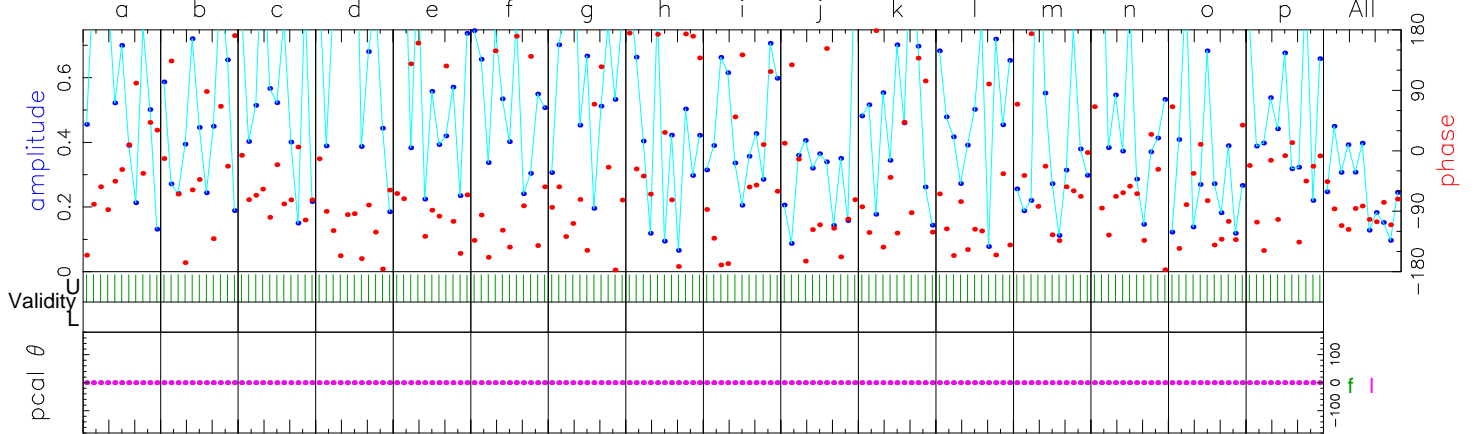
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-120.4	-147.0	154.0	-160.5	-138.9	-100.4	173.5	-73.9	84.0	-156.0	-178.6	-164.4	172.1	-87.5	-165.6	-125.5	Phase	-149.9				
	0.2	0.5	0.1	0.4	0.1	0.3	0.4	0.2	0.1	0.3	0.2	0.3	0.1	0.1	0.5	0.5	Ampl.	0.2				
	120.2	43.4	205.9	37.1	216.7	95.2	249.8	250.0	31.3	233.7	105.4	8.1	230.8	124.7	16.3	126.4	Sbd box	16.0				
U/L	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	335/0	APs used					
B	1000	1000	1000	1000	1000	1000	1000	1000	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					
B:I	0:0	0:0	0:0	0:0	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:I	0:0	0:0	0:0	0:0	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					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
B	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					
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Group delay (usec)(sbd)			-1.09572567299E+04														Apriori delay (usec)	-1.09563662545E+04	Resid mbdelay (usec)	1.57747E-02	+/-	1.8E-04
Sband delay (usec)			-1.09572487325E+04														Apriori clock (usec)	1.7569019E+01	Resid sbdelay (usec)	-8.82478E-01	+/-	2.8E-03
Phase delay (usec)			-1.09563662594E+04														Apriori clockrate (us/s)	1.5147200E-07	Resid phdelay (usec)	-4.83300E-06	+/-	6.1E-07
Delay rate (us/s)			-1.13756345239E+00														Apriori rate (us/s)	-1.13757142655E+00	Resid rate (us/s)	7.97416E-06	+/-	6.1E-09
Total phase (deg)					-209.5												Apriori accel (us/s/s)	7.11433247491E-05	Resid phase (deg)	-149.9	+/-	18.8

ph/seg (deg) 40.4 31.8 Amplitude 0.214 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 71.4 55.5 Search (1024X64) 0.170 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.4 37.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 69.6 65.6 Inc. seg. avg. 0.211 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.220 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 B: az 297.2 el 26.6 pa 45.3 I: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 8240.850 5521.475 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/BI..130MEY Output file: /Exps/c192c/v2/1234/No0072/BI.W.79.130MEY





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

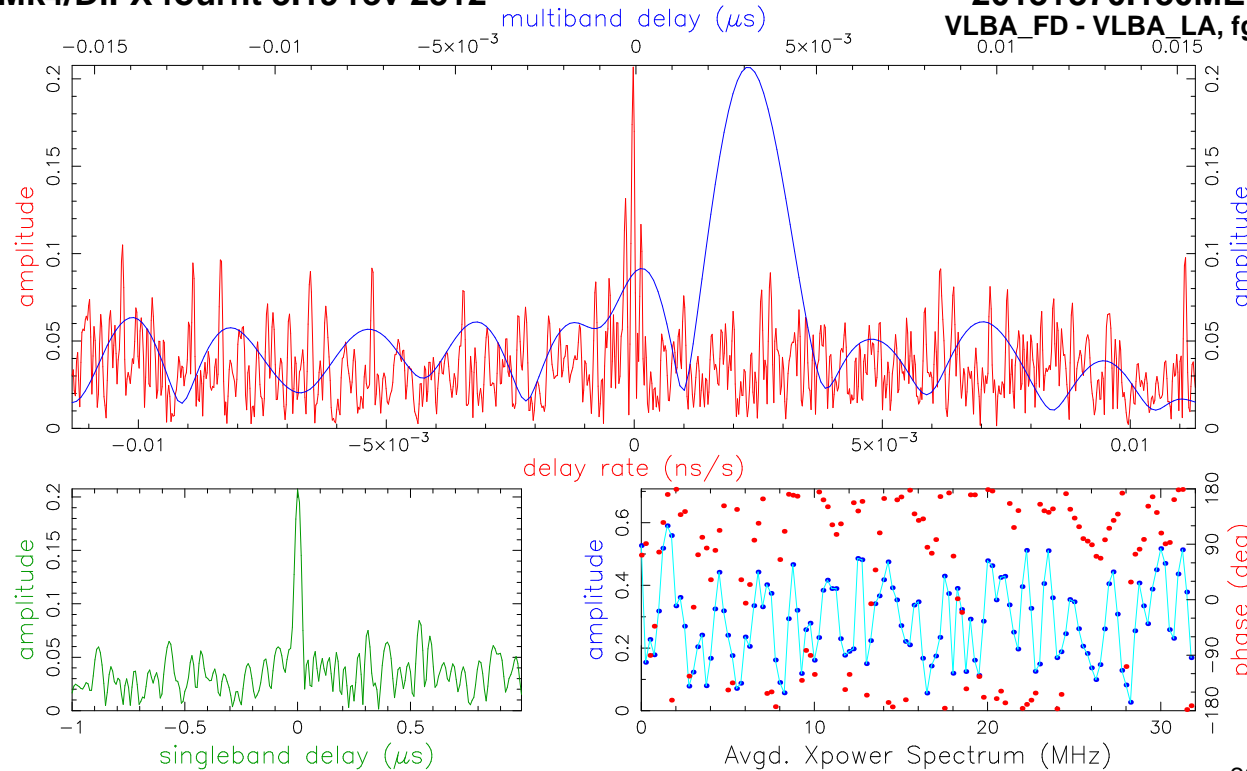


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	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		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)		7.70030304727E+00								7.70146294067E+00								
Sband delay (usec)		7.70040844067E+00								1.2431189E+00								
Phase delay (usec)		7.70146003093E+00								2.6052251E-07								
Delay rate (us/s)		-1.91335094099E-02								-1.91334868054E-02								
Total phase (deg)					-83.9					-5.15709726434E-06								
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (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)																		

ph/seg (deg) 20.3 20.9 Search (1024X64) 0.246 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 45.5 36.4 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 40.3 25.2 Inc. seg. avg. 0.248 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 52.7 43.9 Inc. frq. avg. 0.273 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
f: az 61.8 el 73.3 pa -107.2 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 132.733 -837.917 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/fl..130MEY Output file: /Exps/c192c/v2/1234/No0072/fl.W.100.130MEY simultaneous interpolator

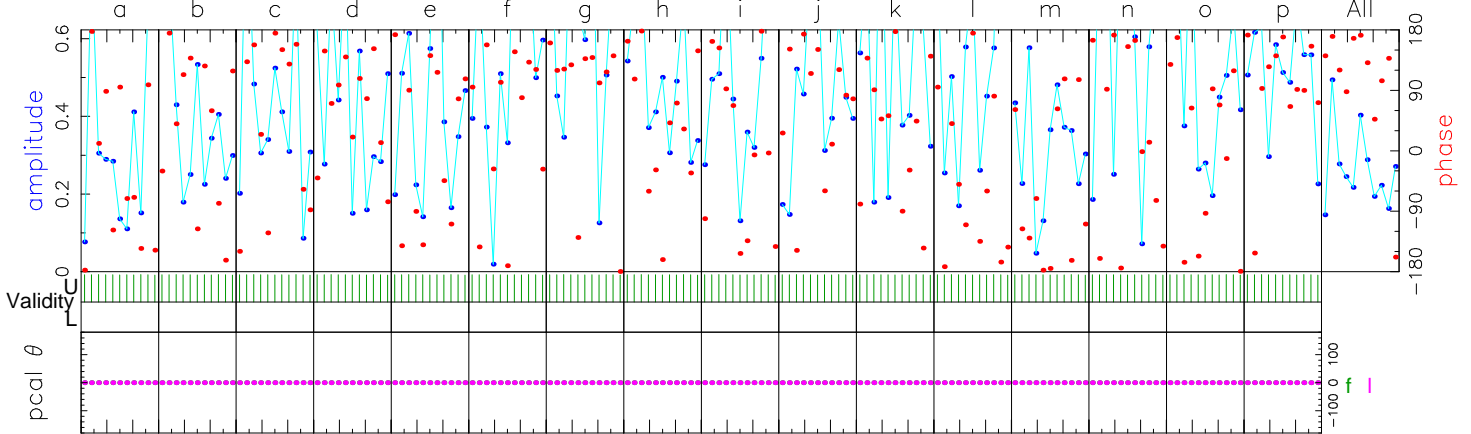
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, fl  
VLBA\_FD - VLBA\_LA, fgroup W, pol RR



Fringe quality 9  
SNR 7.6  
Int time 178.325  
Amp 0.208  
Phase 143.4  
PFD 5.5e-06  
Delays (us)  
SBD 0.001693  
MBD 0.003126  
Fringe rate (Hz) -0.001625  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054417  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

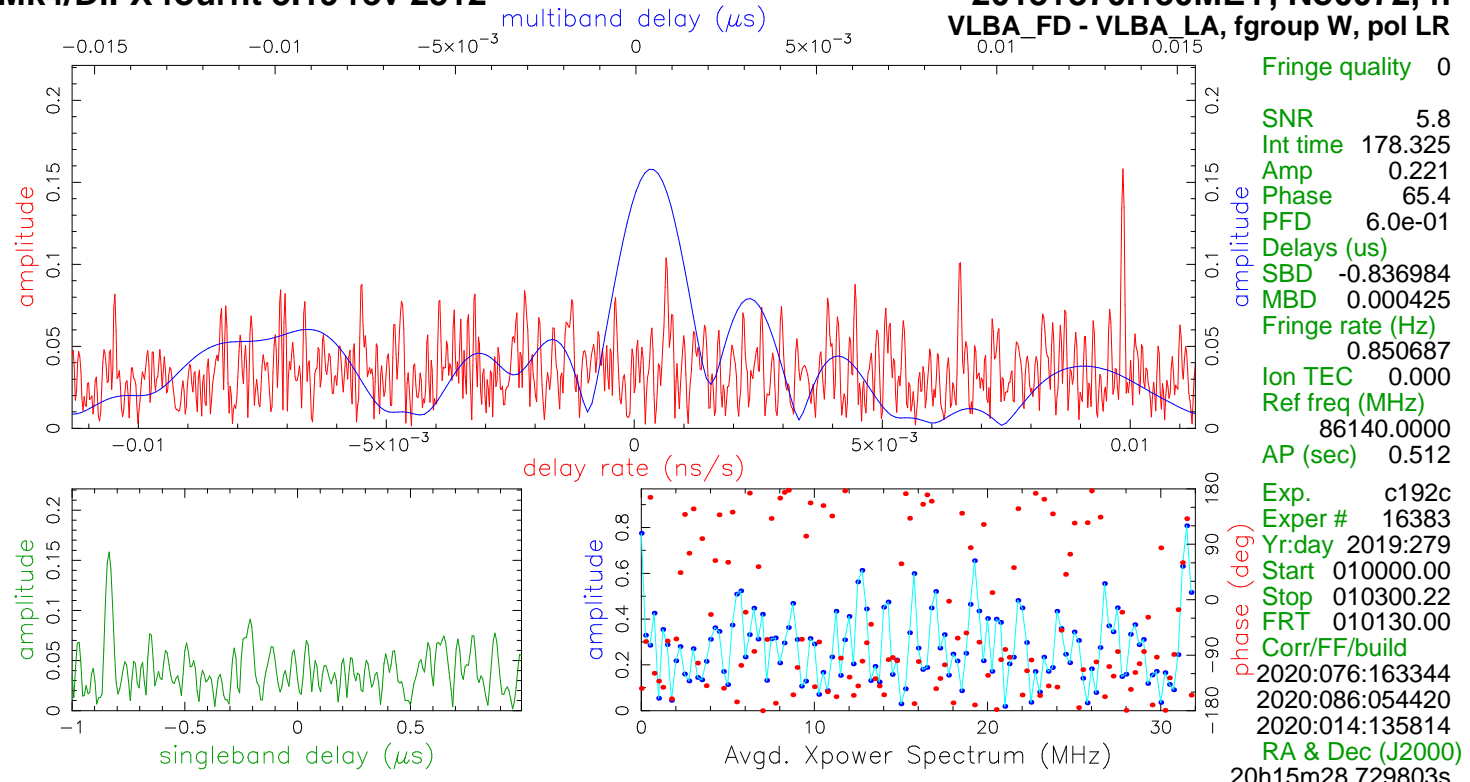
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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
	-179.5	170.7	160.1	91.9	130.6	134.0	147.3	112.8	164.2	125.2	106.6	-175.7	167.2	177.9	126.5	127.0	Phase	143.4
	0.1	0.0	0.3	0.2	0.2	0.3	0.6	0.1	0.1	0.2	0.1	0.2	0.1	0.3	0.3	0.4	Ampl.	0.2
	174.4	46.0	128.1	122.0	180.1	13.4	129.6	159.7	43.4	180.8	156.2	72.4	26.6	214.4	130.0	129.5	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	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	
f	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	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	7.70458848477E+00			Apriori delay (usec)			7.70146294067E+00			Resid mbdelay (usec)			3.12554E-03			+/- 1.4E-04		
Sband delay (usec)	7.70315644067E+00			Apriori clock (usec)			1.2431189E+00			Resid sbdelay (usec)			1.69350E-03			+/- 2.3E-03		
Phase delay (usec)	7.70146756465E+00			Apriori clockrate (us/s)			2.6052251E-07			Resid phdelay (usec)			4.62398E-06			+/- 4.9E-07		
Delay rate (us/s)	-1.91335056758E-02			Apriori rate (us/s)			-1.91334868054E-02			Resid rate (us/s)			-1.88703E-08			+/- 4.7E-09		
Total phase (deg)	149.8			Apriori accel (us/s/s)			-5.15709726434E-06			Resid phase (deg)			143.4			+/- 15.1		
ph/seg (deg)	RMS	Theor.	Amplitude			0.208 +/- 0.027			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	42.7	25.1	Search (1024X64)			0.203			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000			
ph/frq (deg)	55.1	43.7	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016	
amp/frq (%)	29.7	30.2	Inc. seg. avg.			0.243			Sample rate(MISamp/s): 64			dr window (ns/s)			-0.011 0.011			
	63.0	52.7	Inc. frq. avg.			0.199			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)		0.00 0.00	
f: az 61.8 el 73.3 pa -107.2	l: az 78.8 el 73.2 pa -88.7			u, v (fr/asec)			132.733 -837.917									simultaneous interpolator		

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, fl  
VLBA\_FD - VLBA\_LA, fgroup W, pol LR



Fringe quality 0

SNR 5.8

Int time 178.325

Amp 0.221

Phase 65.4

PFD 6.0e-01

Delays (us)

SBD -0.836984

MBD 0.000425

Fringe rate (Hz)

0.850687

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 010000.00

Stop 010300.22

FRT 010130.00

Corr/FF/build

2020:076:163344

2020:086:054420

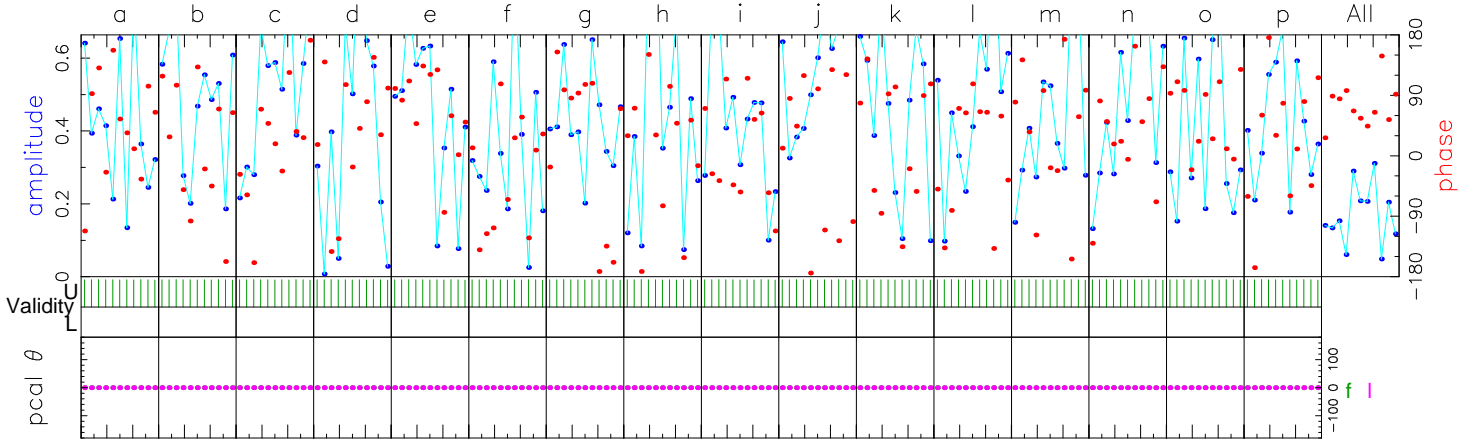
2020:014:135814

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
	41.9	60.8	56.1	69.6	91.4	5.5	116.7	62.4	4.7	149.8	38.1	27.6	83.9	66.5	65.7	53.6	Phase	65.4
	0.2	0.3	0.3	0.3	0.5	0.2	0.3	0.3	0.2	0.3	0.1	0.1	0.2	0.4	0.4	0.2	Ampl.	0.2
	188.7	19.9	33.9	41.9	196.9	161.8	27.5	26.3	150.2	231.9	45.1	100.7	70.7	240.1	121.6	114.3	Sbd box	21.9
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	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	6.85813836575E+00			Apriori delay (usec)			7.70146294067E+00			Resid mbdelay (usec)			4.25425E-04			+/- 1.9E-04		
Sband delay (usec)	6.86447944067E+00			Apriori clock (usec)			1.2431189E+00			Resid sbdelay (usec)			-8.36984E-01			+/- 3.0E-03		
Phase delay (usec)	7.70146505076E+00			Apriori clockrate (us/s)			2.6052251E-07			Resid phdelay (usec)			2.11009E-06			+/- 6.4E-07		
Delay rate (us/s)	-1.91236111731E-02			Apriori rate (us/s)			-1.91334868054E-02			Resid rate (us/s)			9.87563E-06			+/- 6.1E-09		
Total phase (deg)	71.8			Apriori accel (us/s/s)			-5.15709726434E-06			Resid phase (deg)			65.4			+/- 19.8		

ph/seg (deg) 32.6 32.8 Search (1024X64) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 51.0 57.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 38.8 39.6 Inc. seg. avg. 0.205 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

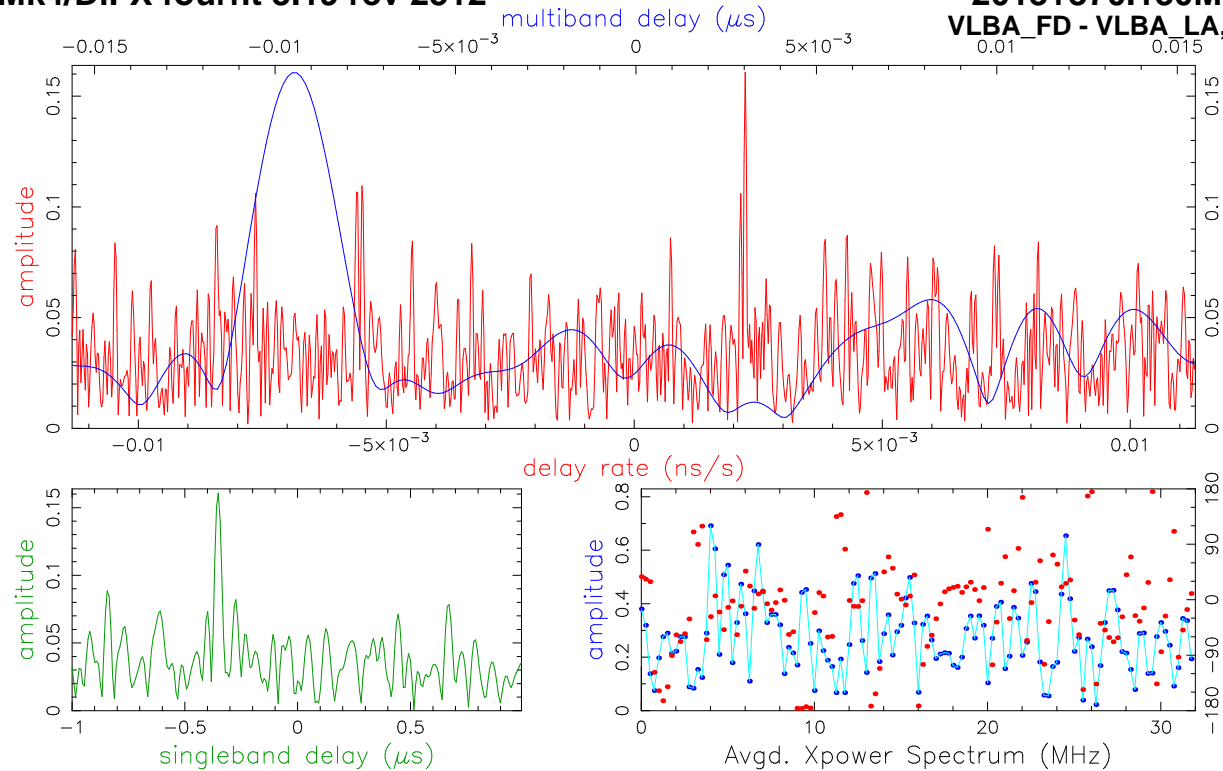
amp/frq (%) 45.9 69.1 Inc. frq. avg. 0.211 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

f: az 61.8 el 73.3 pa -107.2 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 132.733 -837.917 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/fl..130MEY Output file: /Exps/c192c/v2/1234/No0072/fl.W.137.130MEY

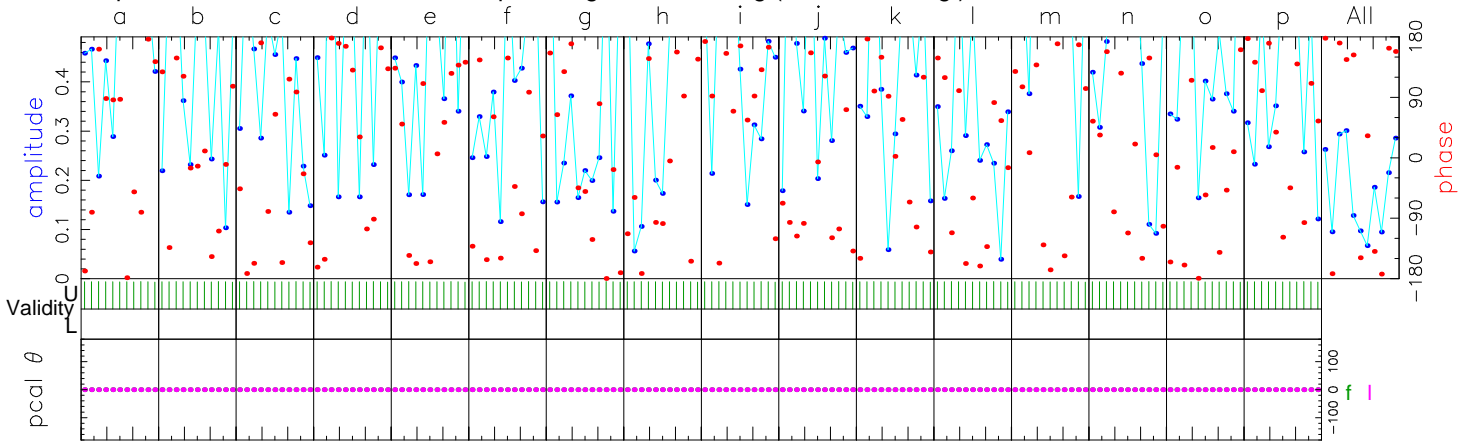
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, fl  
VLBA\_FD - VLBA\_LA, fgroup W, pol RL



Fringe quality 0  
SNR 5.9  
Int time 178.325  
Amp 0.164  
Phase 170.5  
PFD 3.9e-01  
Delays (us)  
SBD -0.353032  
MBD -0.009457  
Fringe rate (Hz) 0.192380  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054422  
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

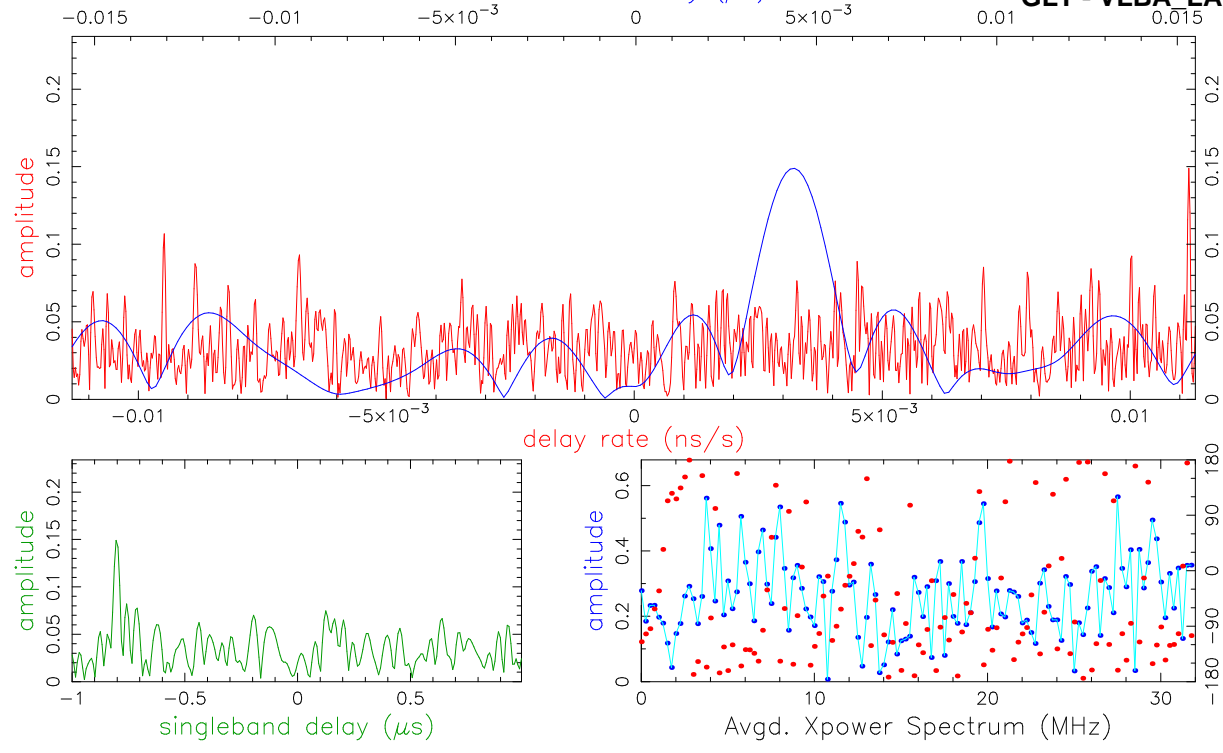


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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			
l	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	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
																			Tracks
Group delay (usec)(sbd)	7.34825595530E+00			Apriori delay (usec)			7.70146294067E+00			Resid mbdelay (usec)			-9.45699E-03			+/- 1.8E-04			
Sband delay (usec)	7.34843044067E+00			Apriori clock (usec)			1.2431189E+00			Resid sbdelay (usec)			-3.53032E-01			+/- 2.9E-03			
Phase delay (usec)	7.70146843972E+00			Apriori clockrate (us/s)			2.6052251E-07			Resid phdelay (usec)			5.49905E-06			+/- 6.3E-07			
Delay rate (us/s)	-1.91312534644E-02			Apriori rate (us/s)			-1.91334868054E-02			Resid rate (us/s)			2.23334E-06			+/- 6.0E-09			
Total phase (deg)	176.9			Apriori accel (us/s/s)			-5.15709726434E-06			Resid phase (deg)			170.5			+/- 19.5			
	RMS	Theor.	Amplitude	0.164 +/- 0.028		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5											
ph/seg (deg)	47.6	32.3	Search (1024X64)	0.158		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000		1.000							
amp/seg (%)	55.8	56.3	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016		0.016					
ph/frq (deg)	30.4	38.9	Inc. seg. avg.	0.162		Sample rate(MSamp/s): 64		dr window (ns/s)		-0.011		0.011							
amp/frq (%)	64.5	67.9	Inc. frq. avg.	0.147		Data rate(Mb/s): 2048		nlags: 128		t_cohere infinite		ion window (TEC)		0.00		0.00			
f: az 61.8 el 73.3 pa -107.2	l: az 78.8 el 73.2 pa -88.7			u, v (fr/asec) 132.733 -837.917												simultaneous interpolator			

Mk4/DiFX fourfit 3.19 rev 2512

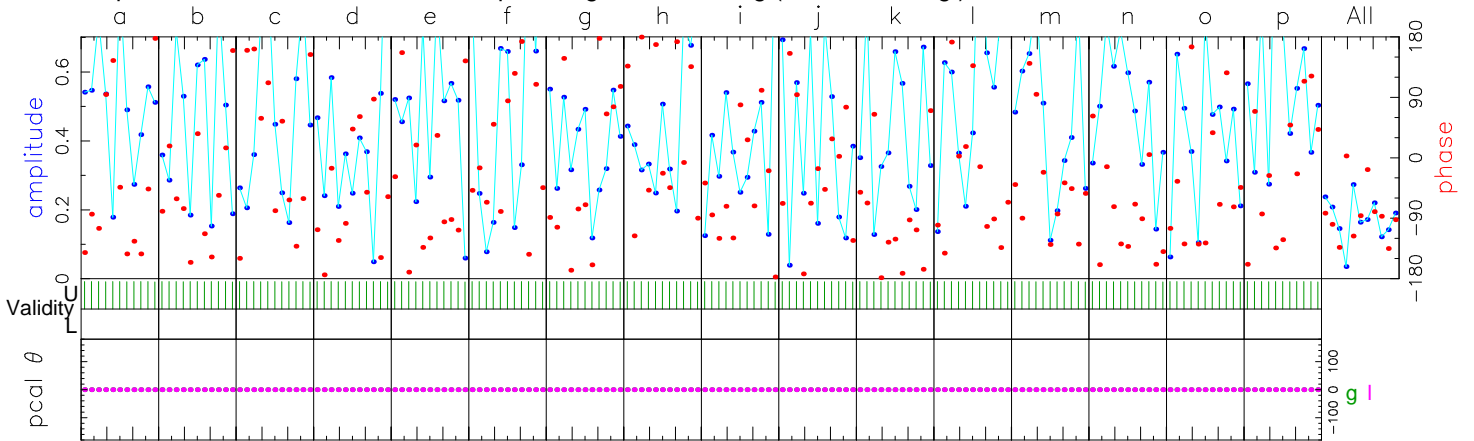
2013+370.130MEY, No0072, gl  
GLT - VLBA LA, fgroup W, pol LL

multiband delay ( $\mu$ s)



Fringe quality 0  
SNR 5.5  
Int time 179.495  
Amp 0.234  
Phase -92.7  
PFD 9.8e-01  
Delays (us)  
SBD -0.802258  
MBD 0.004389  
Fringe rate (Hz) 0.964999  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054422  
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		
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
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		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		

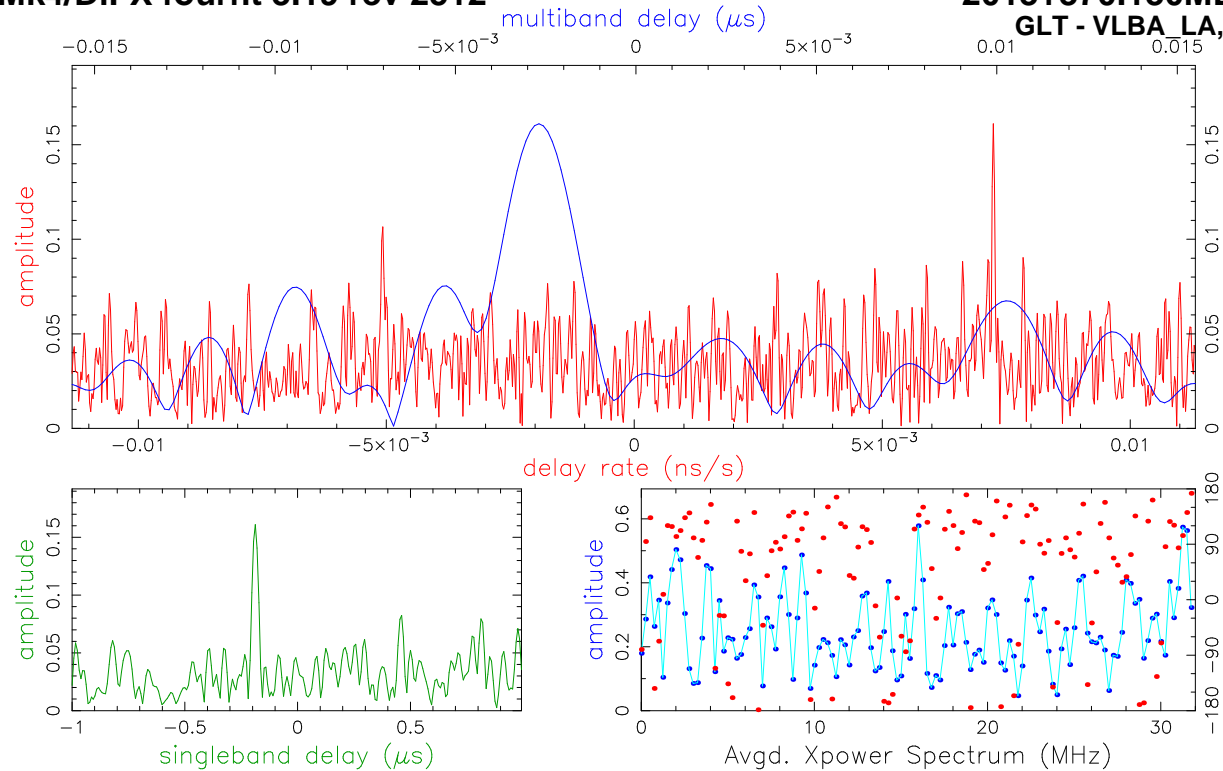
Group delay (usec)(sbd) -4.11310599236E+03 Apriori delay (usec) -4.11229788160E+03 Resid mbdelay (usec) 4.38925E-03 +/- 2.0E-04  
 Sband delay (usec) -4.11310013960E+03 Apriori clock (usec) 2.0739985E+00 Resid sbdelay (usec) -8.02258E-01 +/- 3.1E-03  
 Phase delay (usec) -4.11229788459E+03 Apriori clockrate (us/s) 4.2647201E-07 Resid phdelay (usec) -2.99052E-06 +/- 6.7E-07  
 Delay rate (us/s) -4.36197095440E-01 Apriori rate (us/s) -4.36208298124E-01 Resid rate (us/s) 1.12027E-05 +/- 6.4E-09  
 Total phase (deg) -280.4 Apriori accel (us/s/s) 4.84157441133E-05 Resid phase (deg) -92.7 +/- 20.8

RMS Theor. Amplitude 0.234 +/- 0.042 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 41.7 34.4 Search (1024X64) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 43.5 60.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 40.0 41.5 Inc. seg. avg. 0.229 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 46.2 72.4 Inc. frq. avg. 0.210 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

g: az 200.8 el 50.0 pa 5.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 3180.333 5613.917 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/gl..130MEY Output file: /Exps/c192c/v2/1234/No0072/gl.W.155.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, gl  
GLT - VLBA LA, fgroup W, pol RR

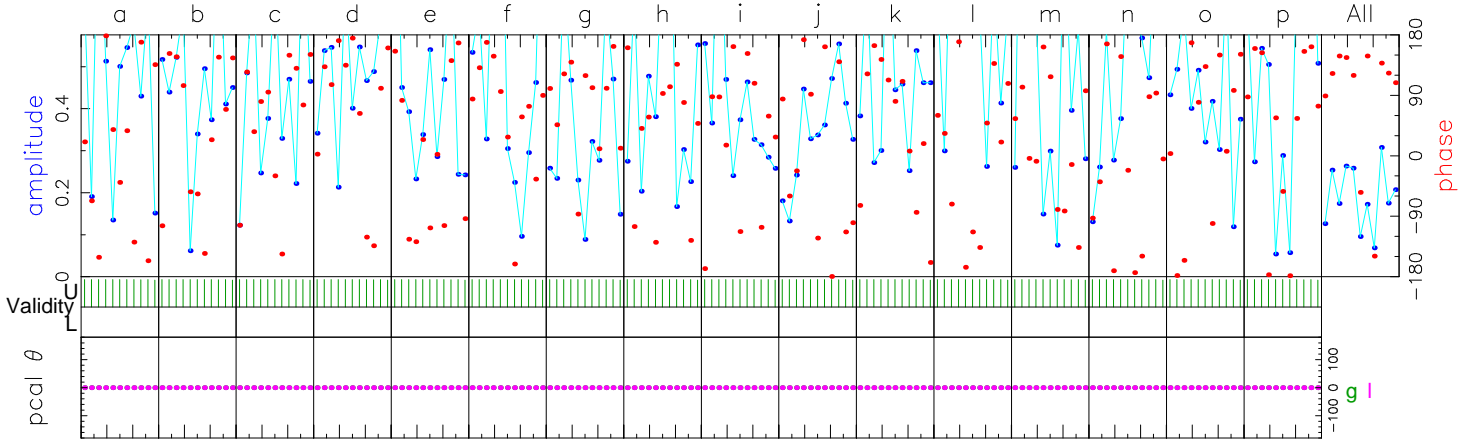


Fringe quality 0

SNR 5.9  
Int time 179.436  
Amp 0.192  
Phase 131.3  
PFD 3.6e-01  
Delays (us)  
SBD -0.188192  
MBD -0.002678  
Fringe rate (Hz) 0.625500  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

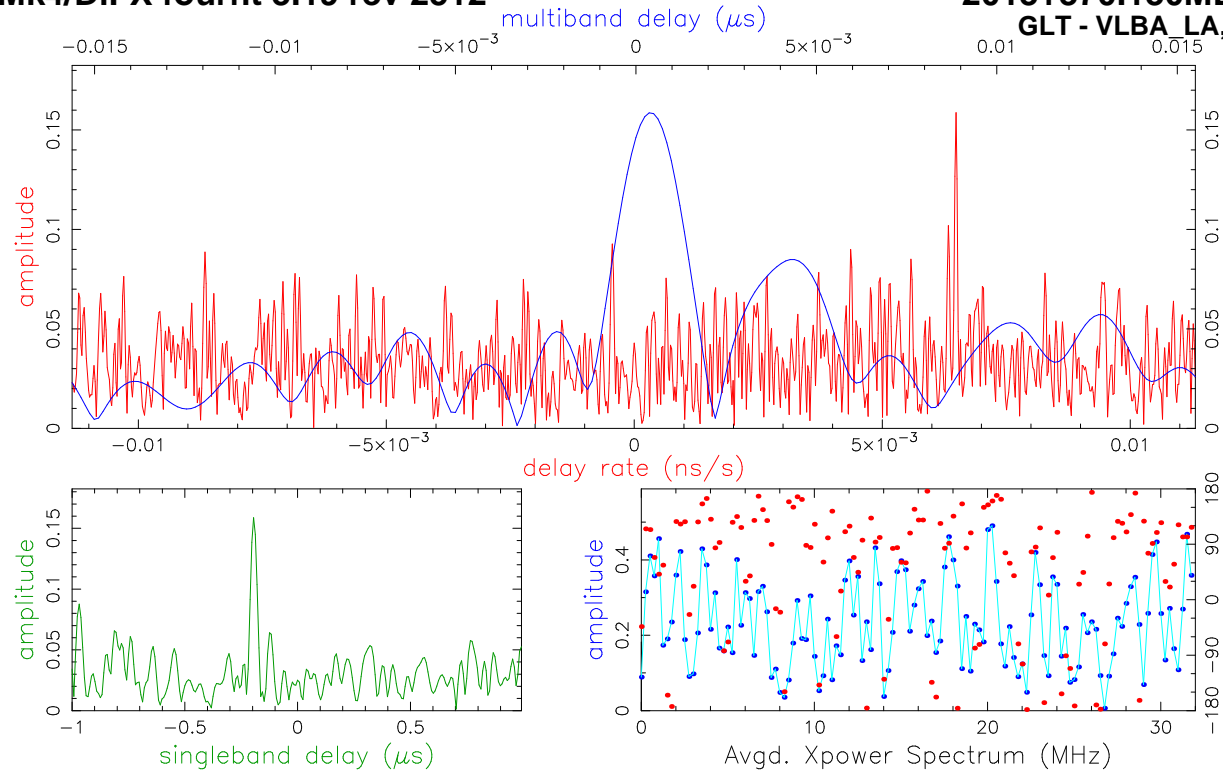
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054424  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



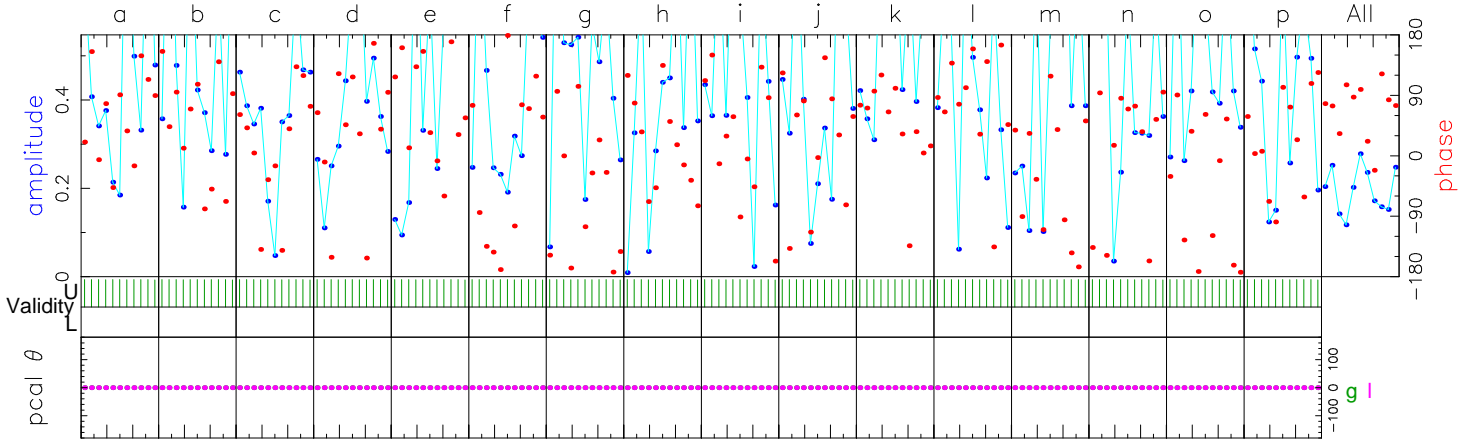
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-145.7	146.6	91.6	138.3	-177.0	104.1	110.1	100.0	110.4	-174.8	118.0	170.4	24.7	141.7	149.1	136.6	Phase	131.3	
	0.2	0.3	0.2	0.3	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.5	Ampl.	0.2	
	53.1	75.9	236.7	149.3	242.1	70.2	3.6	97.7	69.6	7.0	211.1	124.1	88.6	150.0	216.3	134.8	Sbd box	104.9	
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		
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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		
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		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)			-4.11248805919E+03							-4.11229788160E+03							Resid mbdelay (usec)	-2.67759E-03	+/- 1.8E-04
Sband delay (usec)			-4.11248607360E+03							2.0739985E+00							Resid sbdelay (usec)	-1.88192E-01	+/- 2.9E-03
Phase delay (usec)			-4.11229787737E+03							4.2647201E-07							Resid phdelay (usec)	4.23485E-06	+/- 6.3E-07
Delay rate (us/s)			-4.36201036692E-01							-4.36208298124E-01							Resid rate (us/s)	7.26143E-06	+/- 6.0E-09
Total phase (deg)					-56.4					4.84157441133E-05							Resid phase (deg)	131.3	+/- 19.4

ph/seg (deg) 60.5 32.2 Amplitude 0.192 +/- 0.033 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 48.4 56.2 Search (1024X64) 0.159 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 46.6 38.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 55.9 67.7 Inc. seg. avg. 0.197 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 g: az 200.8 el 50.0 pa 5.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 3180.333 5613.917 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/gl..130MEY Output file: /Exps/c192c/v2/1234/No0072/gl.W.165.130MEY simultaneous interpolator



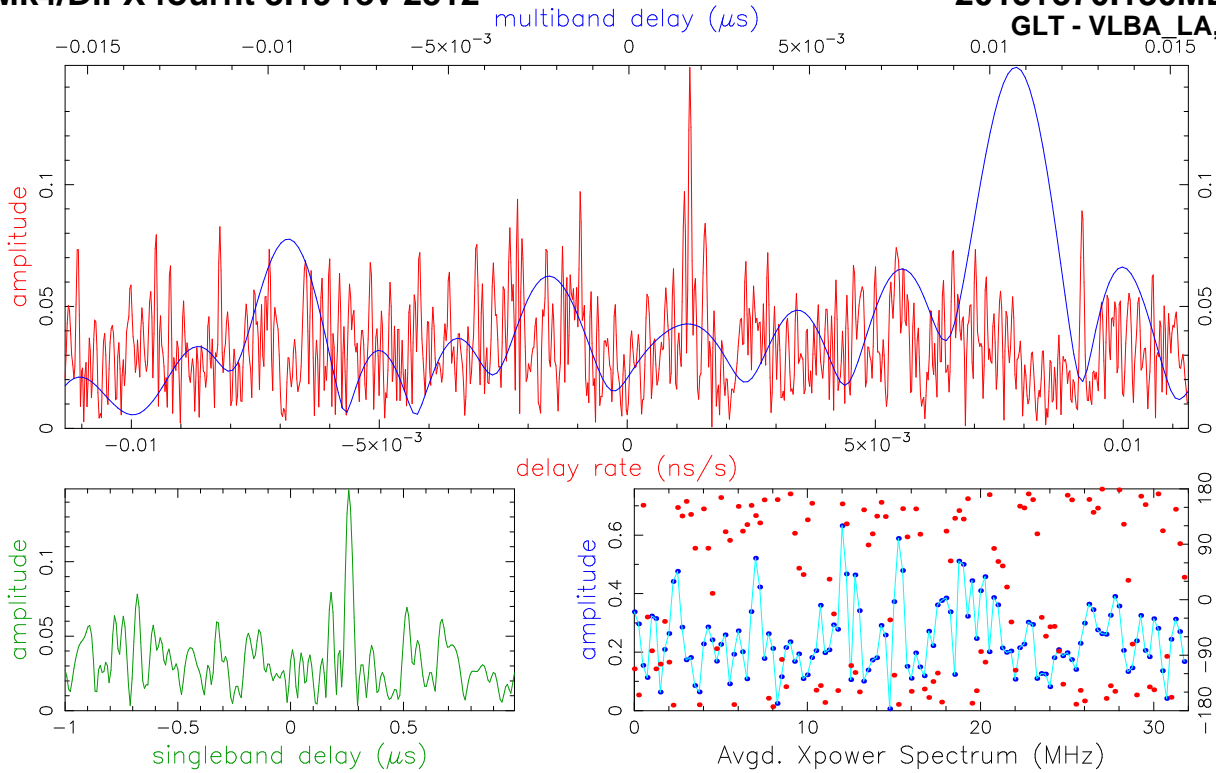
Fringe quality 0  
SNR 5.8  
Int time 179.496  
Amp 0.182  
Phase 71.8  
PFD 5.2e-01  
Delays (us)  
SBD -0.194570  
MBD 0.000413  
Fringe rate (Hz) 0.558742  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054427  
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
62.4	79.2	82.9	91.7	80.0	144.1	45.5	9.4	60.8	58.3	68.6	117.7	-77.3	101.0	98.2	43.2	Phase	71.8	
0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.4	0.3	0.1	0.2	0.1	0.3	Ampl.	0.2	
222.6	135.0	37.2	6.0	70.9	72.5	40.1	201.4	70.1	145.5	113.0	148.1	113.9	239.5	216.6	59.3	Sbd box	104.1	
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	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-4.11248496862E+03			Apriori delay (usec)			-4.11229788160E+03			Resid mbdelay (usec)			4.12985E-04			+/-	1.9E-04	
Sband delay (usec)	-4.11249245160E+03			Apriori clock (usec)			2.0739985E+00			Resid sbdelay (usec)			-1.94570E-01			+/-	3.0E-03	
Phase delay (usec)	-4.11229787929E+03			Apriori clockrate (us/s)			4.2647201E-07			Resid phdelay (usec)			2.31468E-06			+/-	6.3E-07	
Delay rate (us/s)	-4.36201811679E-01			Apriori rate (us/s)			-4.36208298124E-01			Resid rate (us/s)			6.48645E-06			+/-	6.1E-09	
Total phase (deg)	-115.9			Apriori accel (us/s/s)			4.84157441133E-05			Resid phase (deg)			71.8			+/-	19.7	

ph/seg (deg) RMS Theor. Amplitude 0.182 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 39.9 32.6 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 39.3 57.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 51.8 39.4 Inc. seg. avg. 0.194 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 52.0 68.7 Inc. frq. avg. 0.176 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 g: az 200.8 el 50.0 pa 5.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 3180.333 5613.917 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/gl..130MEY Output file: /Exps/c192c/v2/1234/No0072/gl.W.183.130MEY

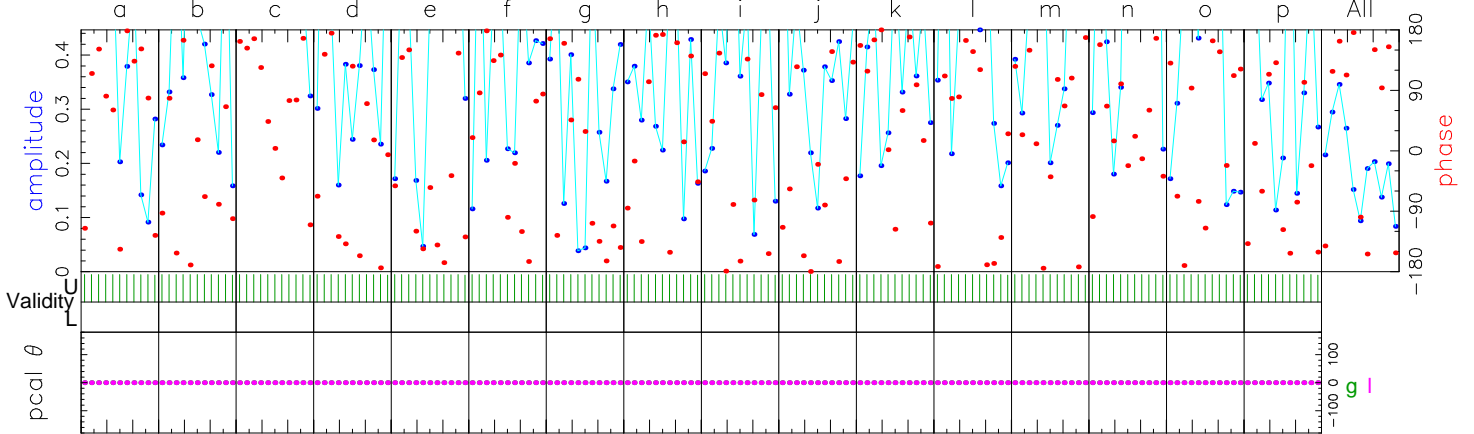


Fringe quality 0

SNR 5.4  
Int time 179.436  
Amp 0.149  
Phase 158.8  
PFD 1.0e+00  
Delays (us)  
SBD 0.258220  
MBD 0.010711  
Fringe rate (Hz)  
0.108572  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054429  
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				
	142.9	178.3	127.7	150.5	-159.9	130.0	-138.2	179.6	169.5	-149.6	147.5	142.8	140.1	46.8	170.2	-110.9	Phase	158.8				
	0.2	0.1	0.3	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.4	0.3	0.2	0.2	0.1	Ampl.	0.1				
	231.0	214.8	160.9	189.6	171.6	122.1	204.0	214.0	164.1	29.4	155.7	162.5	128.8	217.9	39.3	168.7	Sbd box	162.1				
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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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					
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					
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)			-4.11203717031E+03														Apriori delay (usec)	-4.11229788160E+03	Resid mbdelay (usec)	1.07113E-02	+/-	2.0E-04
Sband delay (usec)			-4.11203966160E+03														Apriori clock (usec)	2.0739985E+00	Resid sbdelay (usec)	2.58220E-01	+/-	3.2E-03
Phase delay (usec)			-4.11229787648E+03														Apriori clockrate (us/s)	4.2647201E-07	Resid phdelay (usec)	5.12054E-06	+/-	6.8E-07
Delay rate (us/s)			-4.36207037710E-01														Apriori rate (us/s)	-4.36208298124E-01	Resid rate (us/s)	1.26041E-06	+/-	6.5E-09
Total phase (deg)																	Apriori accel (us/s/s)	4.84157441133E-05	Resid phase (deg)	158.8	+/-	21.1

ph/seg (deg) 49.7 35.0  
amp/seg (%) 62.2 61.1  
ph/frq (deg) 48.5 42.2  
amp/frq (%) 62.9 73.7

RMS Theor. Amplitude 0.149 +/- 0.027  
Search (1024X64) 0.145  
Interp. 0.000  
Inc. seg. avg. 0.168  
Inc. frq. avg. 0.148

g: az 200.8 el 50.0 pa 5.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 3180.333 5613.917

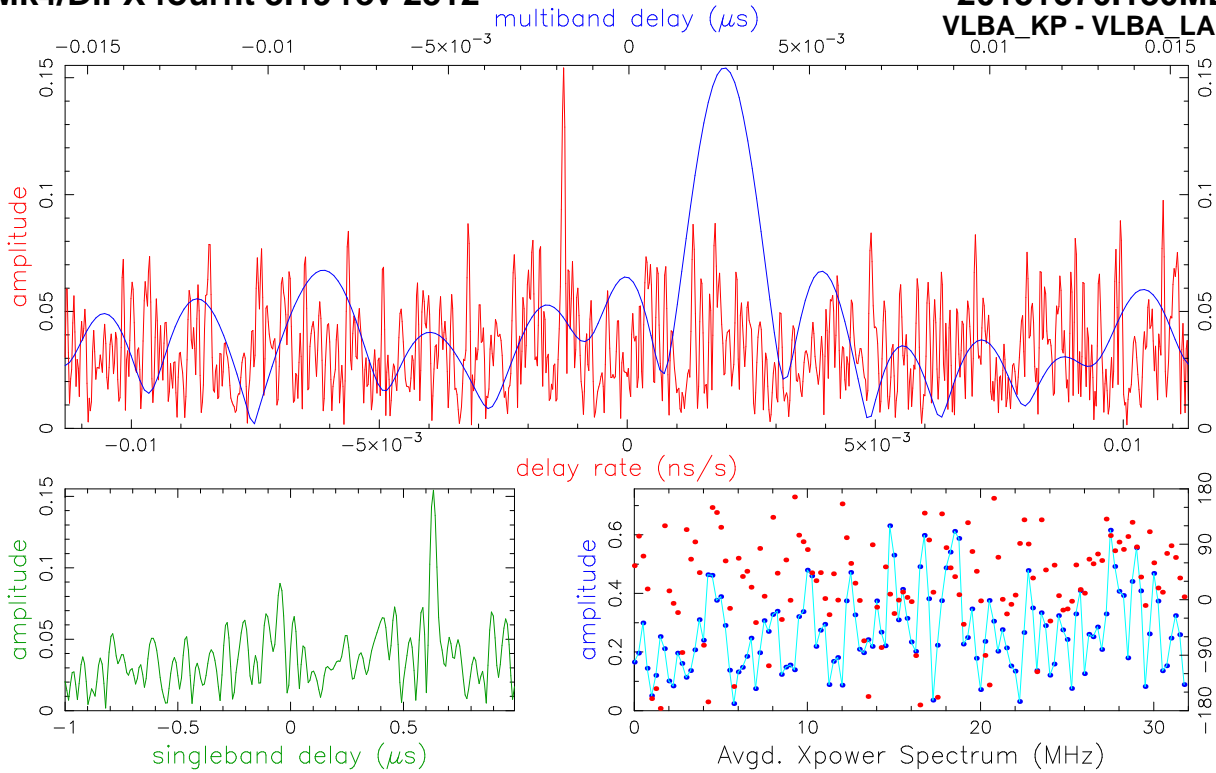
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/gl..130MEY Output file: /Exps/c192c/v2/1234/No0072/gl.W.198.130MEY simultaneous interpolator



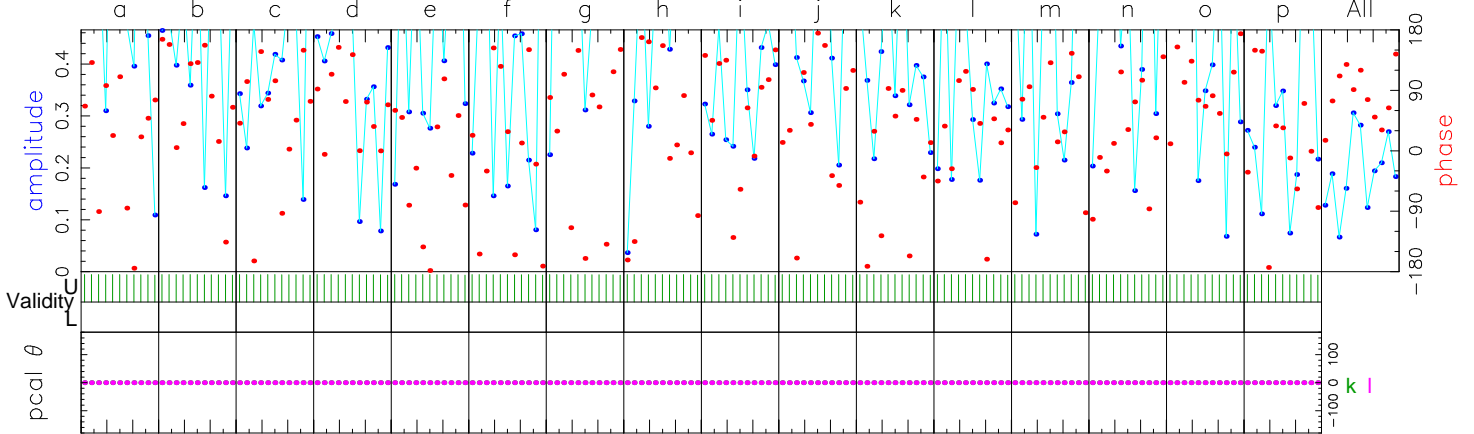
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, kl  
VLBA\_KP - VLBA\_LA, fgroup W, pol LL



Fringe quality 0  
SNR 5.6  
Int time 178.860  
Amp 0.155  
Phase 82.8  
PFD 8.6e-01  
Delays (us)  
SBD 0.631850  
MBD 0.002635  
Fringe rate (Hz)  
-0.110256  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054427  
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



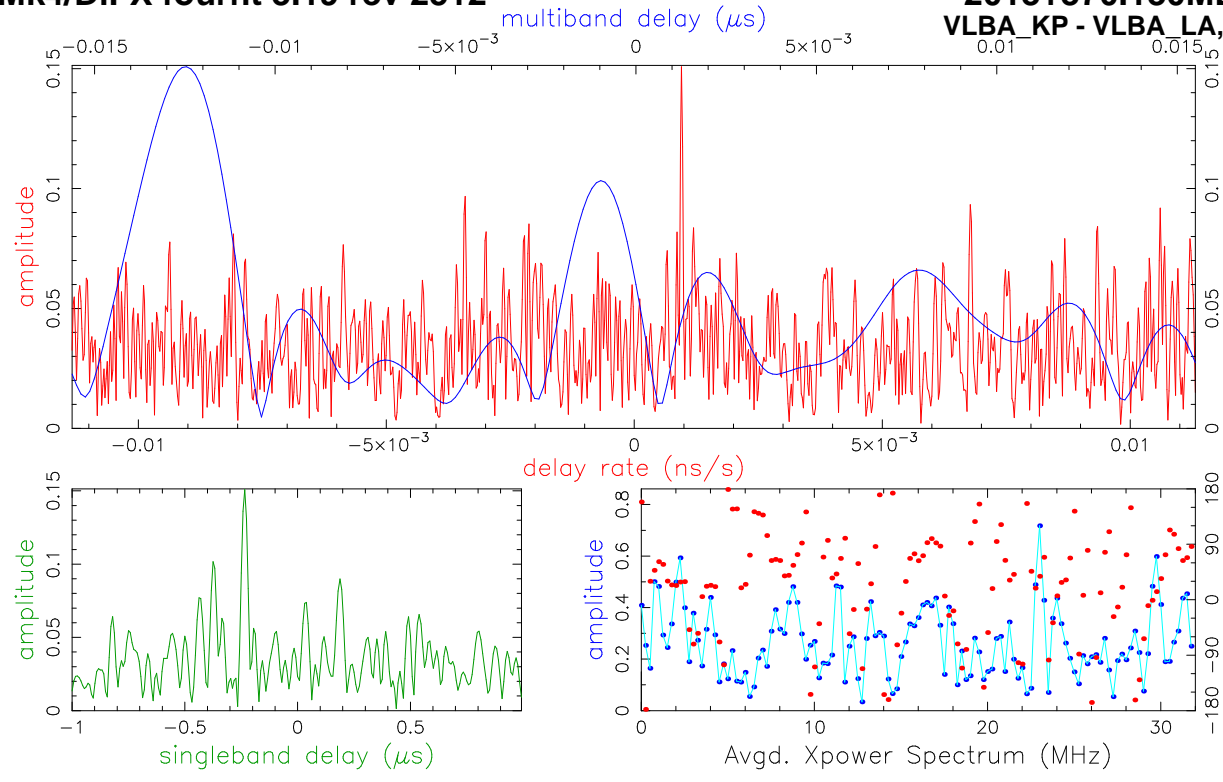
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
l	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	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
Group delay (usec)(sbd)			-6.52991227763E+02																
Sband delay (usec)			-6.52987013665E+02																
Phase delay (usec)			-6.53618860494E+02																
Delay rate (us/s)			1.06302812246E-01																
Total phase (deg)						-231.5													
Apriori delay (usec)																			
Apriori clock (usec)																			
Apriori clockrate (us/s)																			
Apriori rate (us/s)																			
Apriori accel (us/s/s)																			
Resid mbdelay (usec)																			
Resid sbdelay (usec)																			
Resid phdelay (usec)																			
Resid rate (us/s)																			
Resid phase (deg)																			
PCal mode: MANUAL, MANUAL																			
PCal rate: 0.000E+00, 0.000E+00 (us/s)																			
Bits/sample: 2x2																			
Sample rate(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)																			

ph/seg (deg) 39.0 33.6  
amp/seg (%) 51.2 58.7  
ph/frq (deg) 45.2 40.6  
amp/frq (%) 56.2 70.8  
k: az 68.9 el 67.8 pa -95.8  
Control file: cf\_1234\_gmva

Amplitude 0.155 +/- 0.027  
Search (1024X64) 0.150  
Interp. 0.000  
Inc. seg. avg. 0.165  
Inc. frq. avg. 0.153  
l: az 78.8 el 73.2 pa -88.7  
Input file: /Exps/c192c/v2/1234/No0072/kl..130MEY

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) -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

u,v (fr/asec) -765.803 -403.452  
Output file: /Exps/c192c/v2/1234/No0072/kl.W.182.130MEY

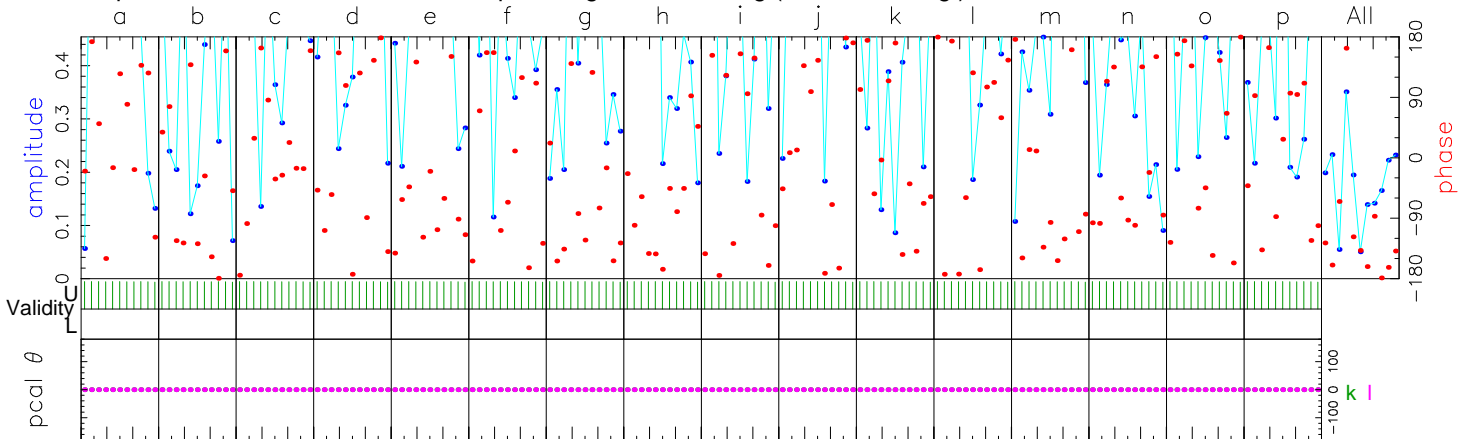


Fringe quality 0

SNR 5.5  
Int time 178.861  
Amp 0.151  
Phase -151.2  
PFD 9.8e-01  
Delays (us)  
SBD -0.234946  
MBD -0.012476  
Fringe rate (Hz) 0.082013  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054429  
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					
125.1	-155.3	-14.5	-161.2	-100.8	-177.9	-150.0	-93.2	-162.7	145.9	-96.6	163.6	-125.1	-137.5	-168.4	-89.8		Phase	-151.2					
0.2	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.4	0.1	0.1	0.3	0.3	0.1	0.3	0.0		Ampl.	0.2					
170.9	192.6	10.3	12.5	24.0	37.4	103.1	193.6	100.1	240.2	171.8	98.1	98.7	139.3	115.3	166.1		Sbd box	98.9					
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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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					
l	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					
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-6.53850088905E+02															Apriori delay (usec)	-6.53618863165E+02	Resid mbdelay (usec)	-1.24757E-02	+/-	2.0E-04
Sband delay (usec)			-6.53853808665E+02															Apriori clock (usec)	3.6909726E-01	Resid sbdelay (usec)	-2.34946E-01	+/-	3.1E-03
Phase delay (usec)			-6.53618868040E+02															Apriori clockrate (us/s)	1.5689301E-07	Resid phdelay (usec)	-4.87528E-06	+/-	6.7E-07
Delay rate (us/s)			1.06305044300E-01															Apriori rate (us/s)	1.06304092206E-01	Resid rate (us/s)	9.52095E-07	+/-	6.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	-2.99261817253E-07	Resid phase (deg)	-151.2	+/-	20.8

ph/seg (deg) 39.1 34.4  
amp/seg (%) 57.3 60.1  
ph/frq (deg) 57.6 41.5  
amp/frq (%) 76.1 72.5

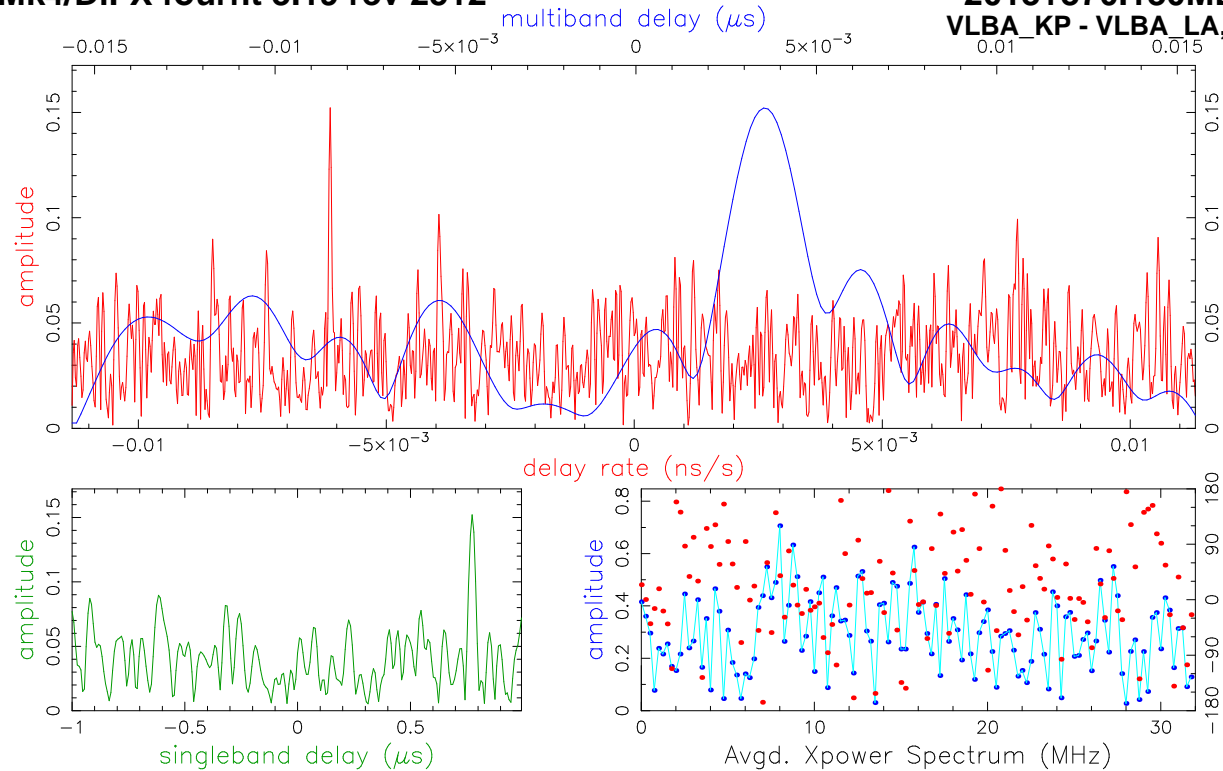
RMS Theor. Amplitude 0.151 +/- 0.027  
Search (1024X64) 0.149  
Interp. 0.000  
Inc. seg. avg. 0.153  
Inc. frq. avg. 0.164

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

k: az 68.9 el 67.8 pa -95.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -765.803 -403.452 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/kl..130MEY Output file: /Exps/c192c/v2/1234/No0072/kl.W.205.130MEY

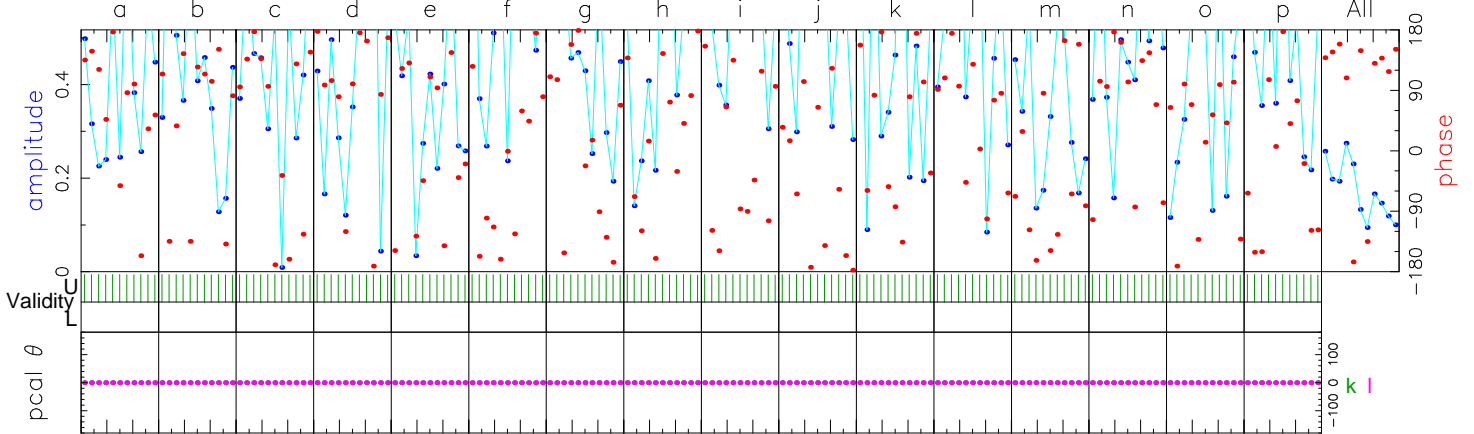


Fringe quality 0

SNR 5.6  
Int time 178.861  
Amp 0.172  
Phase 146.2  
PFD 9.6e-01  
Delays (us)  
SBD 0.773803  
MBD 0.003582  
Fringe rate (Hz)  
-0.530022  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

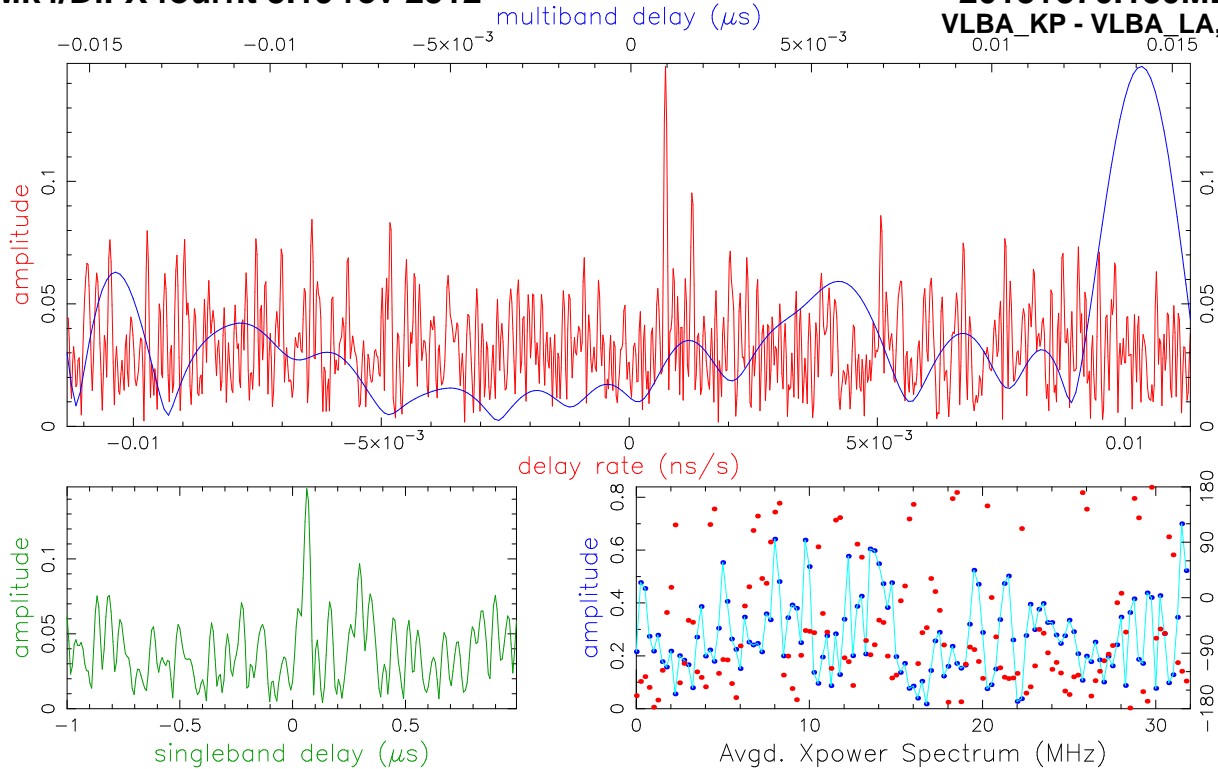
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054431  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



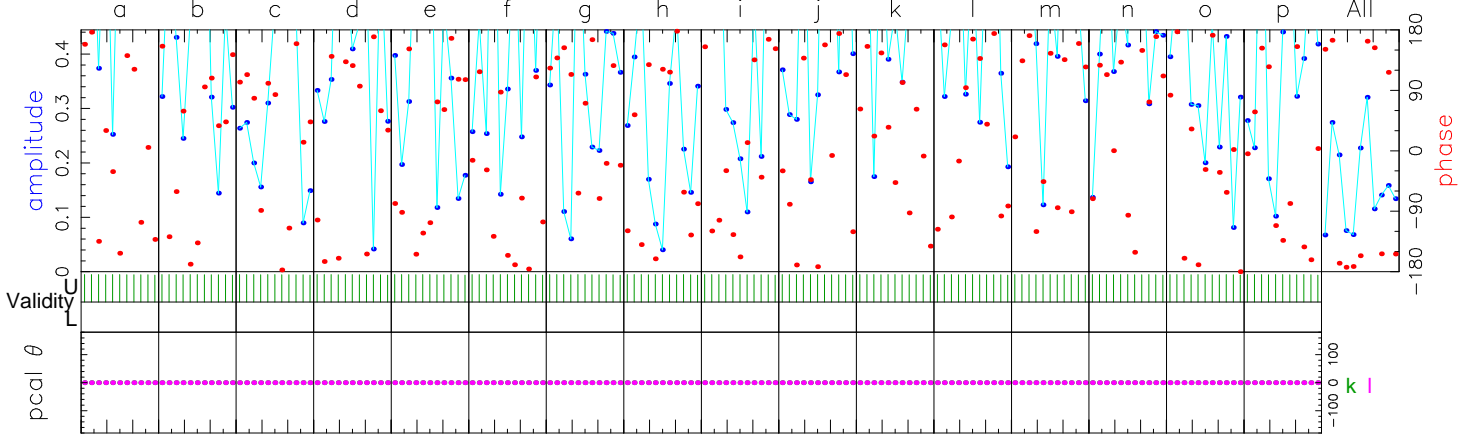
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	101.9	150.8	157.2	157.6	152.9	155.0	159.7	109.1	-134.9	133.9	-176.1	92.3	-123.0	126.0	98.3	-166.9		Phase 146.2					
	0.3	0.2	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.1		Ampl. 0.2					
	175.6	108.2	175.8	227.3	75.4	218.7	233.8	11.9	167.9	248.6	184.8	34.3	218.1	211.5	61.9	41.4		Sbd box 228.0					
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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-6.52834031374E+02															Apriori delay (usec)	-6.53618863165E+02	Resid mbdelay (usec)	3.58179E-03	+/-	1.9E-04
Sband delay (usec)			-6.52845060165E+02															Apriori clock (usec)	3.6909726E-01	Resid sbdelay (usec)	7.73803E-01	+/-	3.1E-03
Phase delay (usec)			-6.53618858451E+02															Apriori clockrate (us/s)	1.5689301E-07	Resid phdelay (usec)	4.71405E-06	+/-	6.6E-07
Delay rate (us/s)			1.06297939175E-01															Apriori rate (us/s)	1.06304092206E-01	Resid rate (us/s)	-6.15303E-06	+/-	6.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	-2.99261817253E-07	Resid phase (deg)	146.2	+/-	20.6

ph/seg (deg) 32.1 34.1 Search (1024X64) 0.172 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 41.4 59.6 Interp. 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.5 41.2 Inc. seg. avg. 0.167 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 55.6 71.9 Inc. frq. avg. 0.175 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 68.9 el 67.8 pa -95.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -765.803 -403.452 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/kl..130MEY Output file: /Exps/c192c/v2/1234/No0072/kl.W.221.130MEY



Fringe quality 0  
SNR 5.4  
Int time 178.861  
Amp 0.148  
Phase 176.0  
PFD 1.0e+00  
Delays (us)  
SBD 0.064402  
MBD 0.014128  
Fringe rate (Hz) 0.062633  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054433  
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

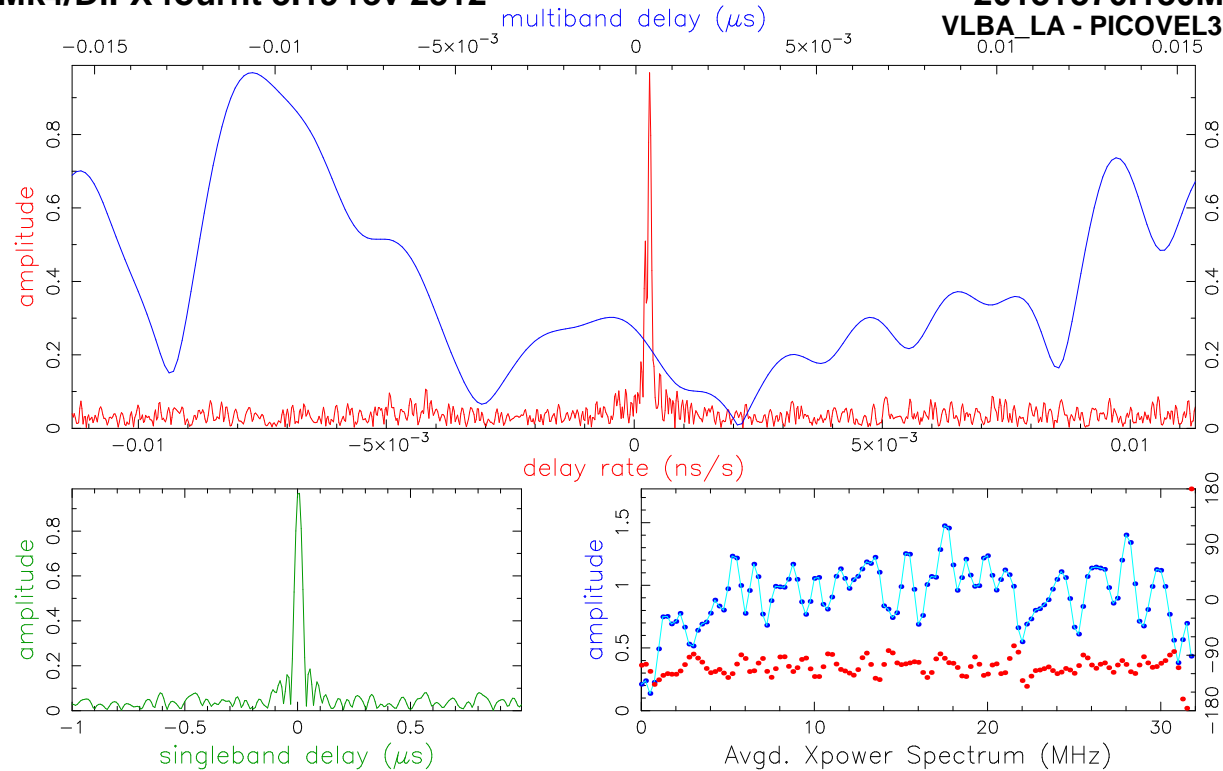


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-178.3	158.8	154.1	149.4	-145.2	-151.1	79.1	-157.1	-171.7	159.1	90.9	-162.1	168.9	150.9	-170.1	-157.7		176.0	Phase
0.2	0.1	0.2	0.2	0.2	0.2	0.0	0.1	0.3	0.2	0.1	0.1	0.2	0.3	0.1	0.1		0.1	Ampl.
232.3	198.4	167.2	18.8	19.7	166.9	16.1	162.3	138.0	181.0	30.3	242.4	230.9	20.1	254.9	128.0		137.2	Sbd box
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
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			PC freqs
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			PC phase
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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
l	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
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) -6.53542235214E+02 Apriori delay (usec) -6.53618863165E+02 Resid mbdelay (usec) 1.41280E-02 +/- 2.0E-04  
 Sband delay (usec) -6.53554460665E+02 Apriori clock (usec) 3.6909726E-01 Resid sbdelay (usec) 6.44025E-02 +/- 3.2E-03  
 Phase delay (usec) -6.53618857489E+02 Apriori clockrate (us/s) 1.5689301E-07 Resid phdelay (usec) 5.67624E-06 +/- 6.8E-07  
 Delay rate (us/s) 1.06304819315E-01 Apriori rate (us/s) 1.06304092206E-01 Resid rate (us/s) 7.27109E-07 +/- 6.6E-09  
 Total phase (deg) -138.3 Apriori accel (us/s/s) -2.99261817253E-07 Resid phase (deg) 176.0 +/- 21.2

ph/seg (deg) RMS Theor. Amplitude 0.148 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 27.2 35.1 Search (1024X64) 0.144 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 56.2 61.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 41.4 42.4 Inc. seg. avg. 0.138 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 46.9 73.9 Inc. frq. avg. 0.130 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

k: az 68.9 el 67.8 pa -95.8 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) -765.803 -403.452 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/kl..130MEY Output file: /Exps/c192c/v2/1234/No0072/kl.W.238.130MEY

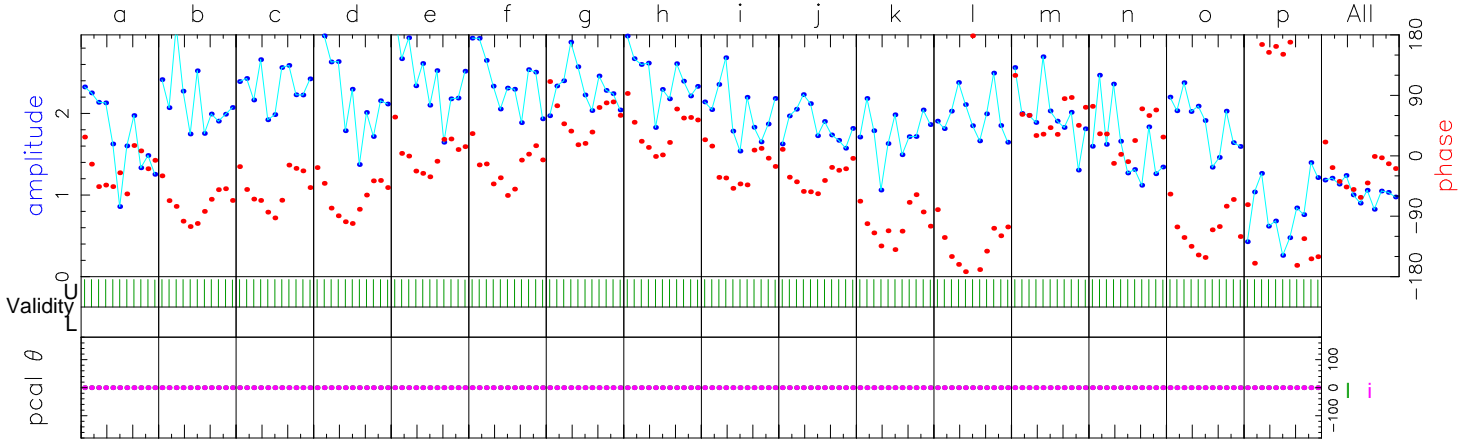


Fringe quality 5

SNR 36.2  
Int time 179.644  
Amp 0.988  
Phase -24.5  
PFD 0.0e+00  
Delays (us)  
SBD 0.004081  
MBD -0.010667  
Fringe rate (Hz)  
0.027233  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

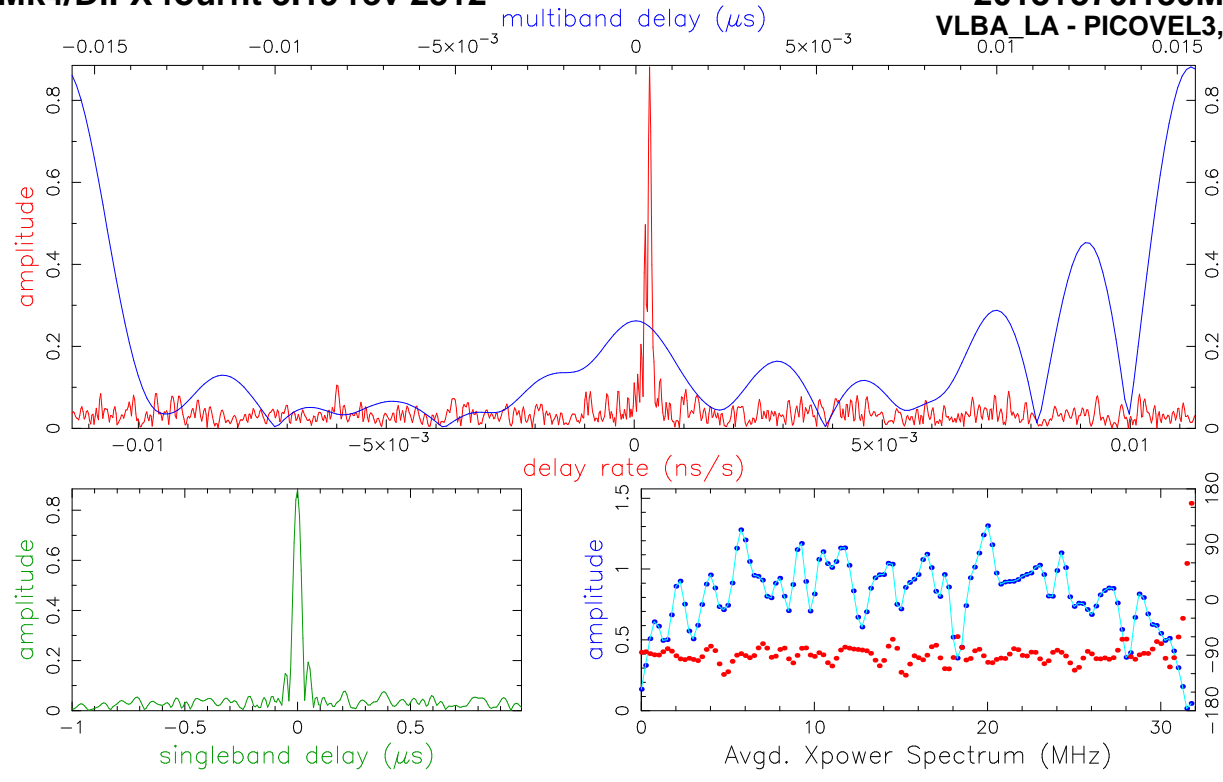
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054434  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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			
l	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			
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
l	1000	1000	1000	1000	1000	1000	1000	1000	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			
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)		1.08480660678E+04																	
Sband delay (usec)		1.08480808160E+04																	
Phase delay (usec)		1.08480767342E+04																	
Delay rate (us/s)		1.32990980470E+00																	
Total phase (deg)					317.2														
Apriori delay (usec)																			
Apriori clock (usec)																			
Apriori clockrate (us/s)																			
Apriori rate (us/s)																			
Apriori accel (us/s/s)																			
Resid mbdelay (usec)																			
Resid sbdelay (usec)																			
Resid phdelay (usec)																			
Resid rate (us/s)																			
Resid phase (deg)																			
Pcal mode: MANUAL, MANUAL																			
Pcal rate: 0.000E+00, 0.000E+00 (us/s)																			
PC period (AP's) 5, 5																			
sb window (us)																			
mb window (us)																			
dr window (ns/s)																			
ion window (TEC)																			
simultaneous interpolator																			

ph/seg (deg) 23.8 5.2 Search (1024X64) 0.949 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 14.2 9.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 71.7 6.3 Inc. seg. avg. 1.053 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 88.5 11.0 Inc. frq. avg. 1.772 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 78.8 el 73.2 pa -88.7 i: az 297.8 el 27.0 pa 62.6 u,v (fr/asec) -9613.104 -3591.371 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/li..130MEY Output file: /Exps/c192c/v2/1234/No0072/li.W.241.130MEY

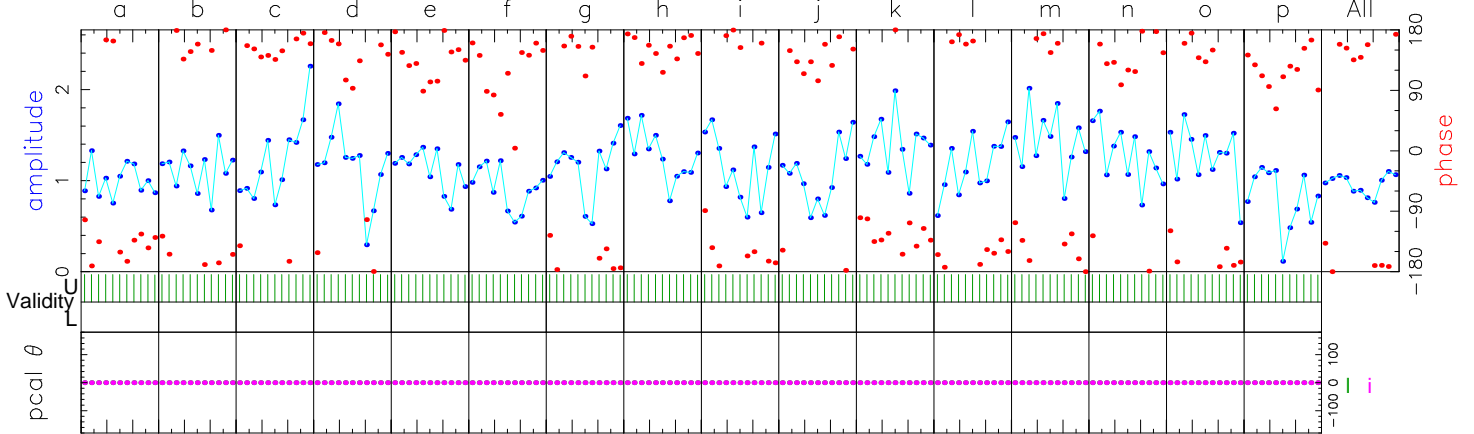


Fringe quality 7

SNR 32.4  
Int time 179.644  
Amp 0.885  
Phase 171.7  
PFD 0.0e+00  
Delays (us)  
SBD -0.001720  
MBD 0.015373  
Fringe rate (Hz) 0.027330  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054436  
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

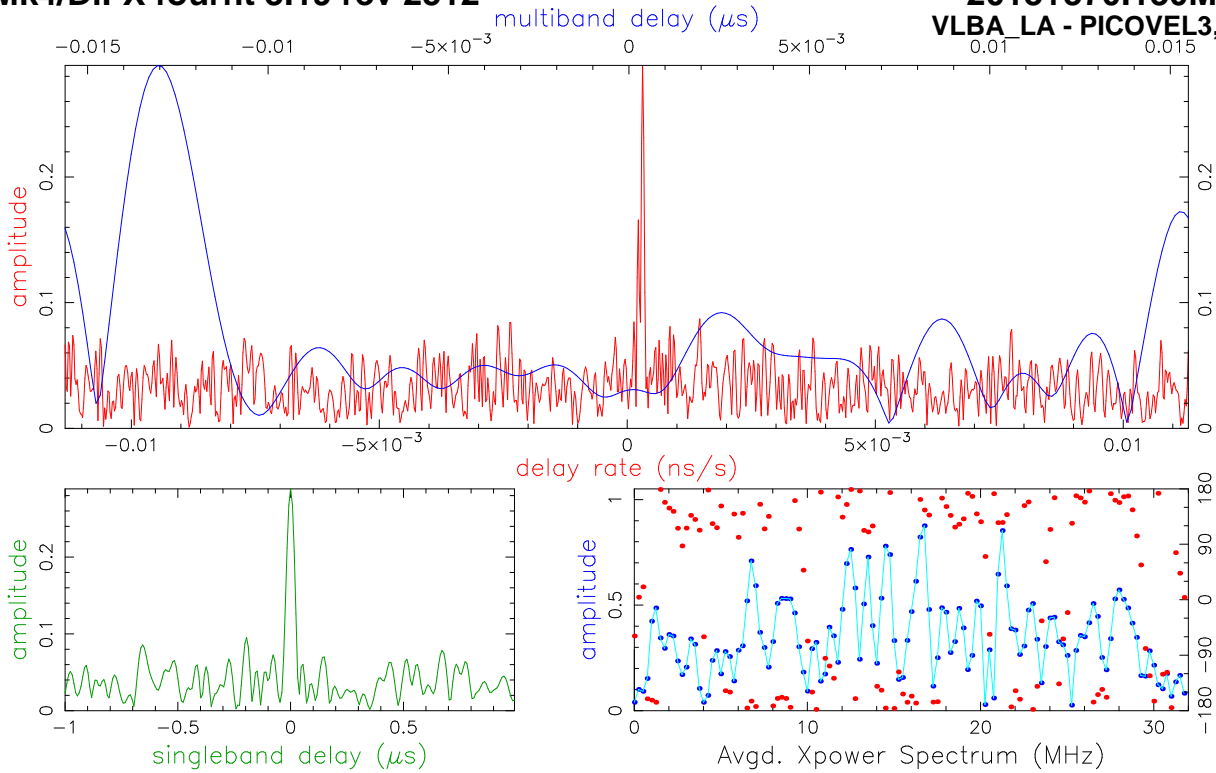


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	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) 1.08480608580E+04 Apriori delay (usec) 1.08480767350E+04 Resid mbdelay (usec) 1.53730E-02 +/- 3.3E-05  
 Sband delay (usec) 1.08480750150E+04 Apriori clock (usec) -2.1898648E-01 Resid sbdelay (usec) -1.72000E-03 +/- 5.3E-04  
 Phase delay (usec) 1.08480767405E+04 Apriori clockrate (us/s) 1.5279932E-09 Resid phdelay (usec) 5.53556E-06 +/- 1.1E-07  
 Delay rate (us/s) 1.32990980583E+00 Apriori rate (us/s) 1.32990948855E+00 Resid rate (us/s) 3.17275E-07 +/- 1.1E-09  
 Total phase (deg) 153.4 Apriori accel (us/s/s) -5.89295925569E-05 Resid phase (deg) 171.7 +/- 3.5

ph/seg (deg) RMS 24.6 Theor. 5.9 Amplitude 0.885 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 15.0 10.2 Search (1024X64) 0.841 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.2 7.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 23.2 12.3 Inc. seg. avg. 0.960 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

l: az 78.8 el 73.2 pa -88.7 i: az 297.8 el 27.0 pa 62.6 u,v (fr/asec) -9613.104 -3591.371 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/li..130MEY Output file: /Exps/c192c/v2/1234/No0072/li.W.252.130MEY

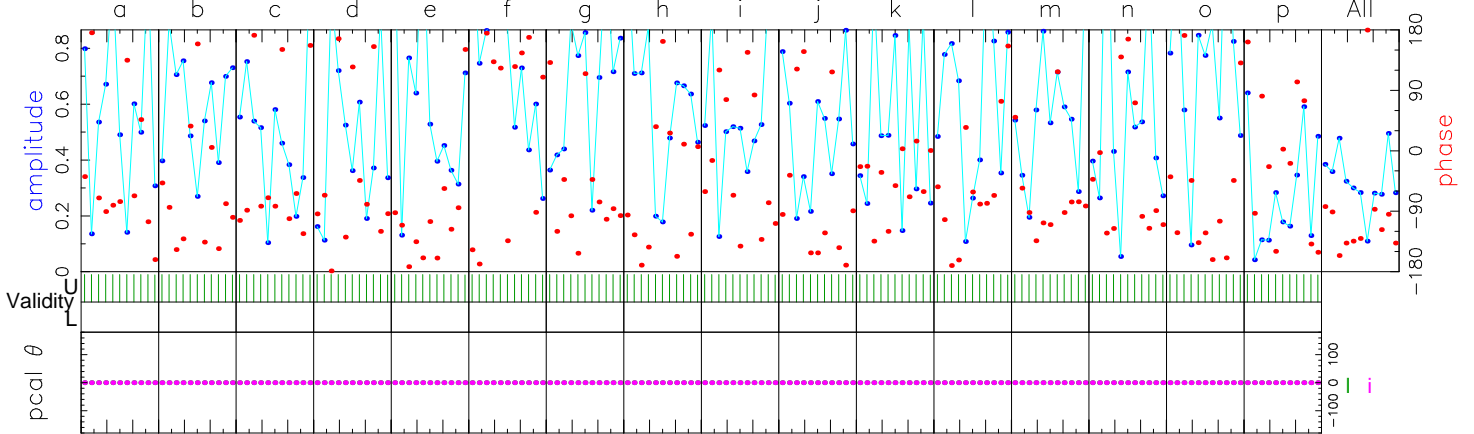


Fringe quality 9

SNR 10.6  
Int time 179.644  
Amp 0.289  
Phase -118.2  
PFD 8.2e-18  
Delays (us)  
SBD -0.000011  
MBD -0.013029  
Fringe rate (Hz)  
0.027445  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054438  
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



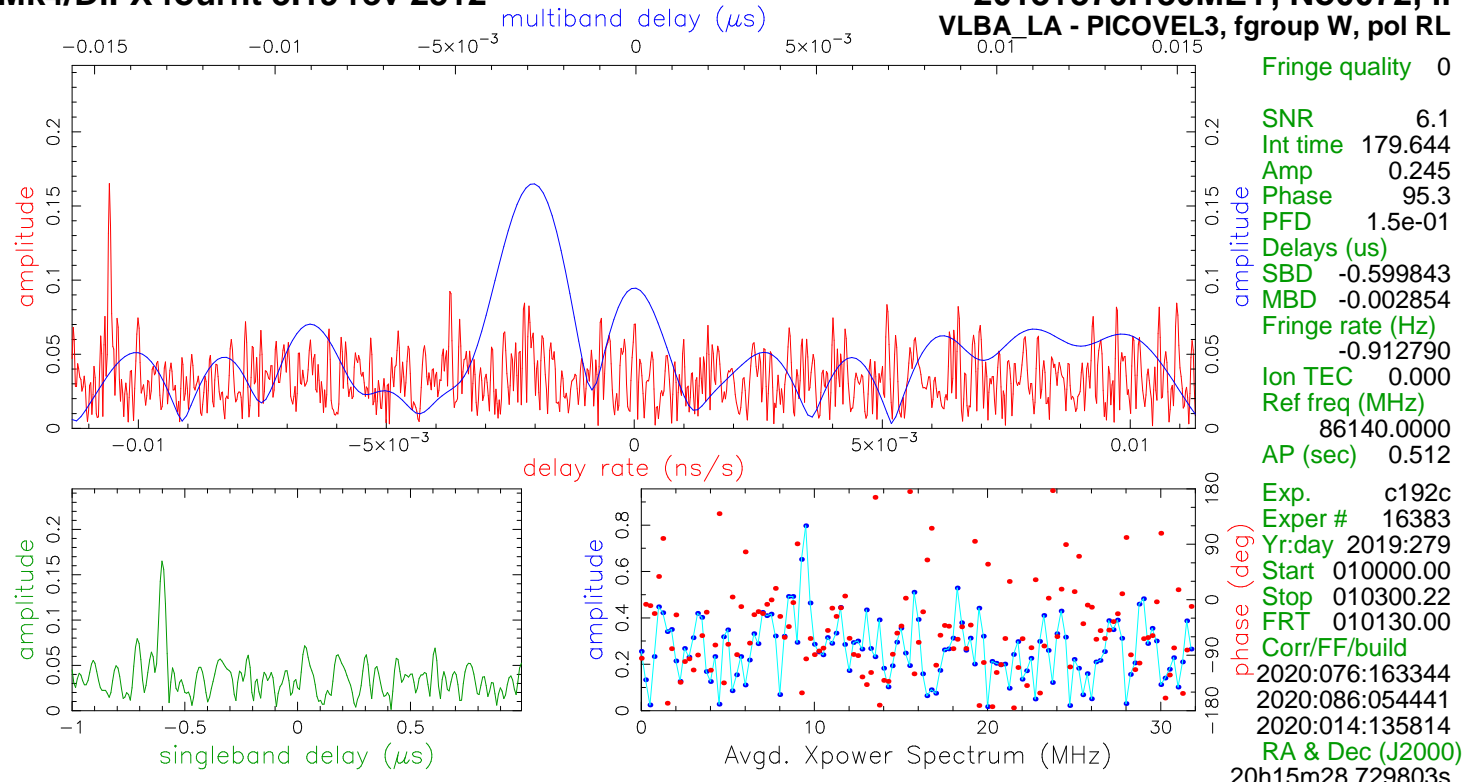
86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-79.1	-99.3	-128.7	-144.4	-134.1	172.4	-105.8	-117.9	-81.8	-137.2	-63.1	-109.1	-94.8	-115.5	-130.0	143.1	Phase	-118.2
0.4	0.3	0.3	0.3	0.5	0.5	0.4	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.5	0.1	Ampl.	0.3
129.6	121.2	130.1	78.2	130.1	128.7	129.6	94.0	57.5	155.9	127.6	28.4	180.1	77.0	129.1	201.0	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	
l 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	
li 0:0	0:0	0:0	0:0	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	
li 0:0	0:0	0:0	0:0	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	
W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																Chan ids	
																Tracks	
Group delay (usec)(sbd)	1.08480637056E+04		Apriori delay (usec)		1.08480767350E+04		Resid mbdelay (usec)		-1.30294E-02		+/-		1.0E-04				
Sband delay (usec)	1.08480767240E+04		Apriori clock (usec)		-2.1898648E-01		Resid sbdelay (usec)		-1.10000E-05		+/-		1.6E-03				
Phase delay (usec)	1.08480767311E+04		Apriori clockrate (us/s)		1.5279932E-09		Resid phdelay (usec)		-3.81002E-06		+/-		3.5E-07				
Delay rate (us/s)	1.32990980716E+00		Apriori rate (us/s)		1.32990948855E+00		Resid rate (us/s)		3.18609E-07		+/-		3.4E-09				
Total phase (deg)	223.6		Apriori accel (us/s/s)		-5.89295925569E-05		Resid phase (deg)		-118.2		+/-		10.8				

ph/seg (deg) 30.1 18.0 Search (1024X64) 0.275 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 37.2 31.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 40.7 21.7 Inc. seg. avg. 0.310 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 41.5 37.8 Inc. frq. avg. 0.322 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Ion TEC 0.000 ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 i: az 297.8 el 27.0 pa 62.6 u,v (fr/asec) -9613.104 -3591.371 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/li..130MEY Output file: /Exps/c192c/v2/1234/No0072/li.W.268.130MEY

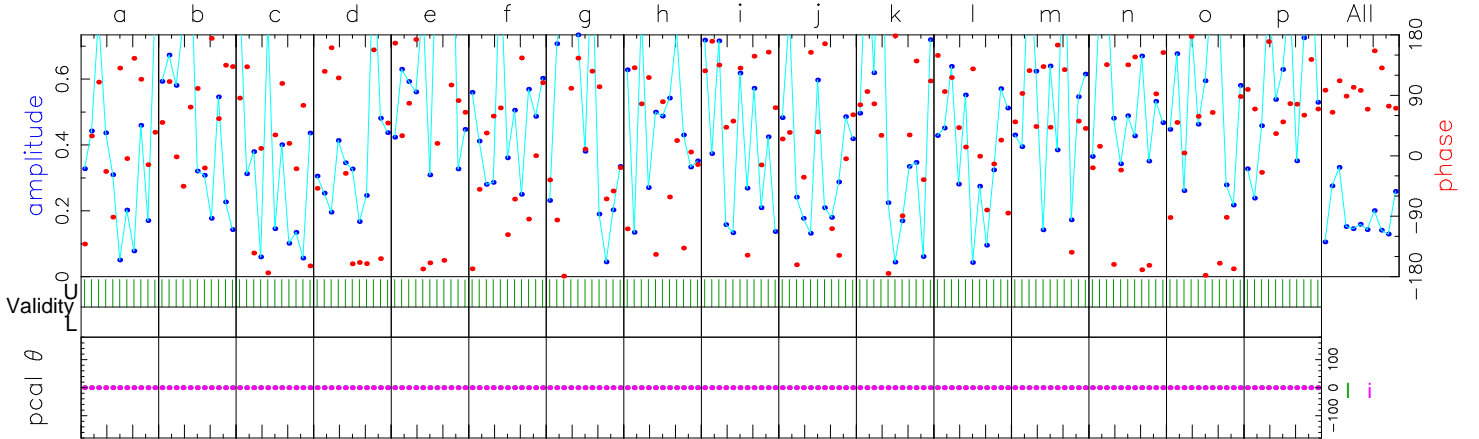
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, li  
VLBA\_LA - PICOVEL3, fgroup W, pol RL



Fringe quality 0  
SNR 6.1  
Int time 179.644  
Amp 0.245  
Phase 95.3  
PFD 1.5e-01  
Delays (us)  
SBD -0.599843  
MBD -0.002854  
Fringe rate (Hz)  
-0.912790  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054441  
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		
l	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		
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		
W	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
U	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)	1.08474801305E+04			Apriori delay (usec)			1.08480767350E+04			Resid mbdelay (usec)			-2.85444E-03			+/-	1.8E-04	
Sband delay (usec)	1.08474768920E+04			Apriori clock (usec)			-2.1898648E-01			Resid sbdelay (usec)			-5.99843E-01			+/-	2.8E-03	
Phase delay (usec)	1.08480767380E+04			Apriori clockrate (us/s)			1.5279932E-09			Resid phdelay (usec)			3.07436E-06			+/-	6.1E-07	
Delay rate (us/s)	1.32989889196E+00			Apriori rate (us/s)			1.32990948855E+00			Resid rate (us/s)			-1.05966E-05			+/-	5.8E-09	
Total phase (deg)	77.0			Apriori accel (us/s/s)			-5.89295925569E-05			Resid phase (deg)			95.3			+/-	18.9	

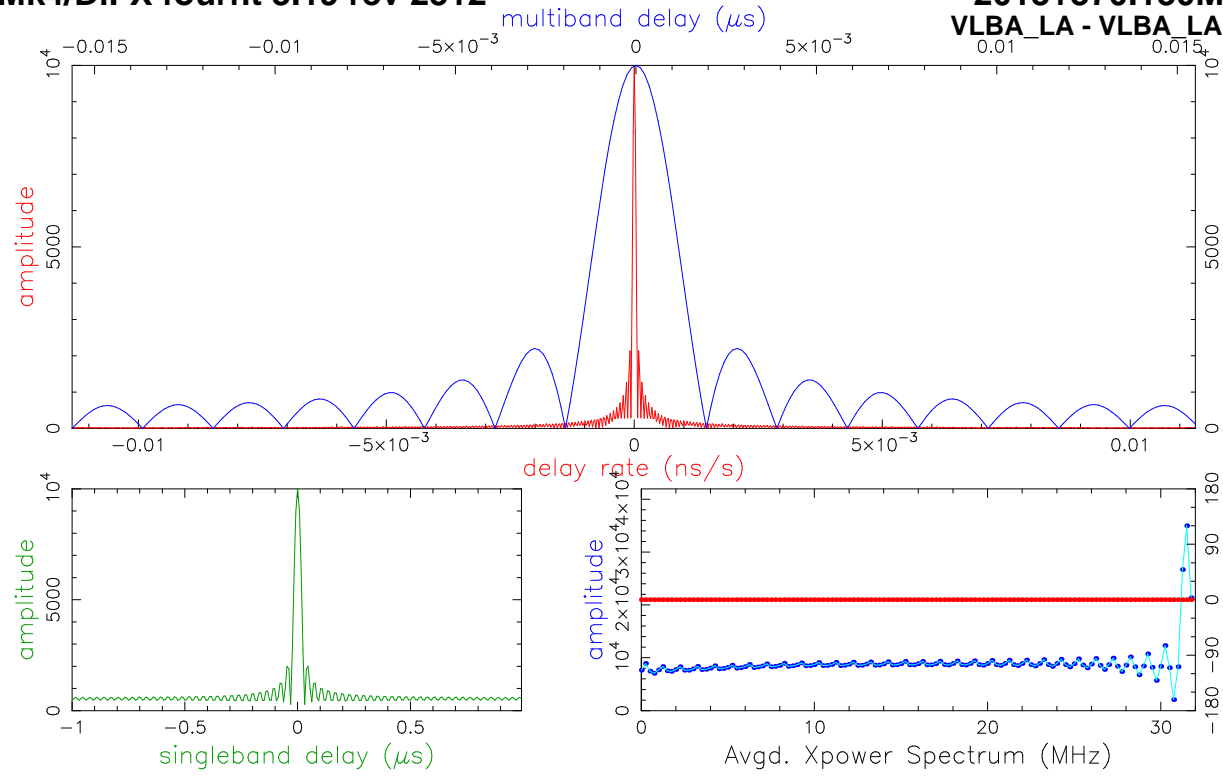
ph/seg (deg) 26.9 31.3 Search (1024X64) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 43.2 54.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 50.3 37.7 Inc. seg. avg. 0.239 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 65.5 65.8 Inc. frq. avg. 0.256 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 i: az 297.8 el 27.0 pa 62.6 u,v (fr/asec) -9613.104 -3591.371 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/li..130MEY Output file: /Exps/c192c/v2/1234/No0072/li.W.283.130MEY



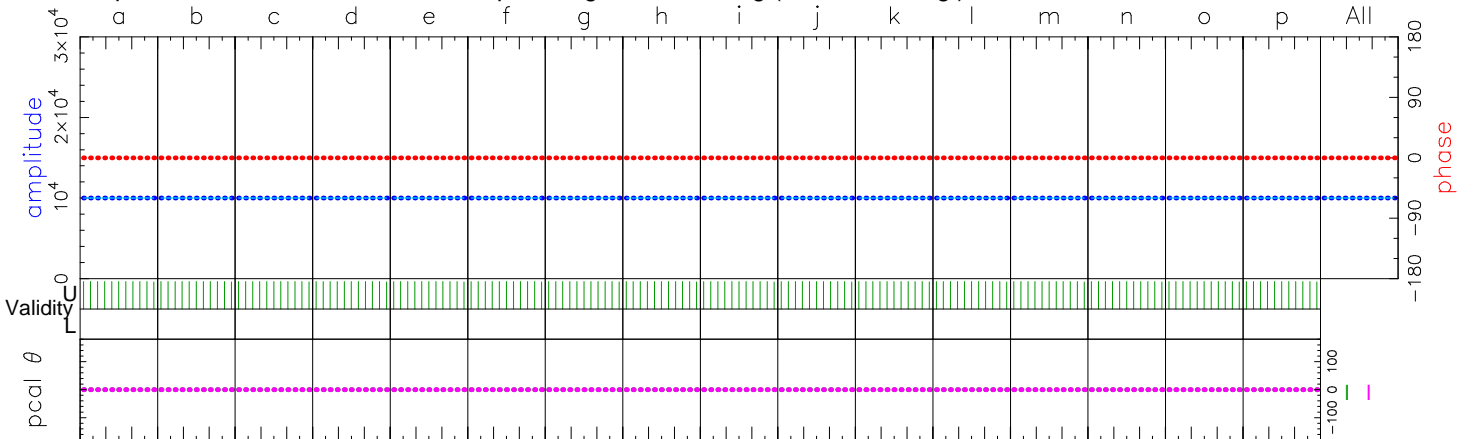
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, II  
VLBA\_LA - VLBA\_LA, fgroup W, pol LL



Fringe quality 9  
SNR 366525.0  
Int time 179.644  
Amp 10000.001  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz)  
0.000000  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054434  
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

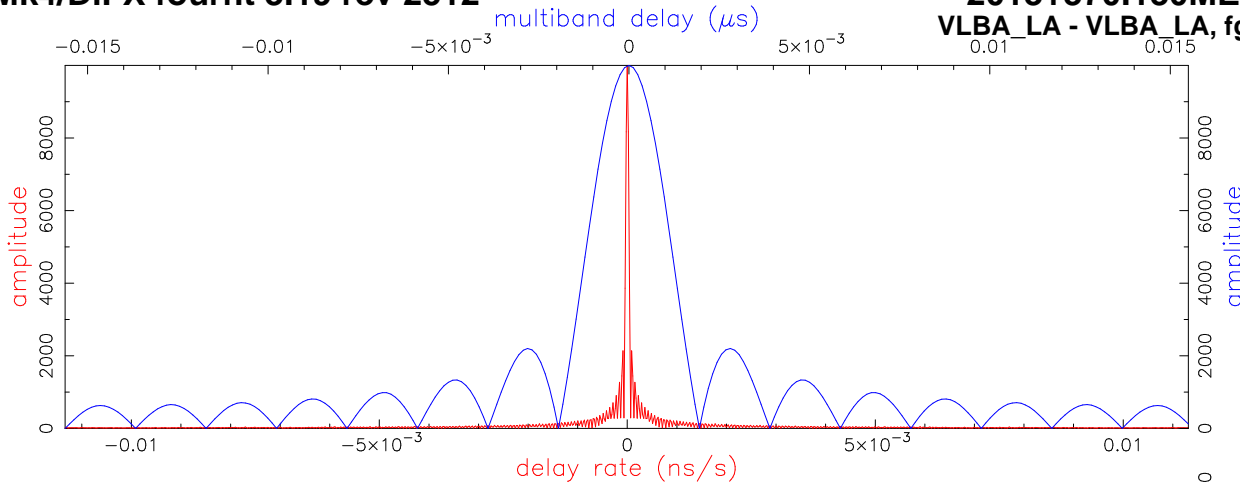


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
	1000	1000	1000	1000	1000	1000	1000	1000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

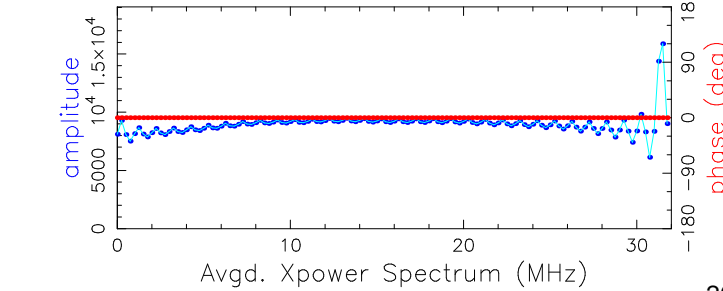
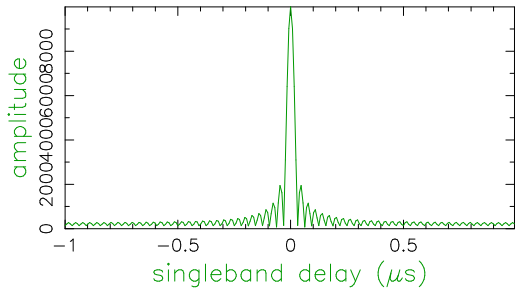
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 2.9E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 4.7E-08  
 Phase delay (usec) 9.17184457138E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 9.17184E-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 10000.001 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X64) 10000.002 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  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.002 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

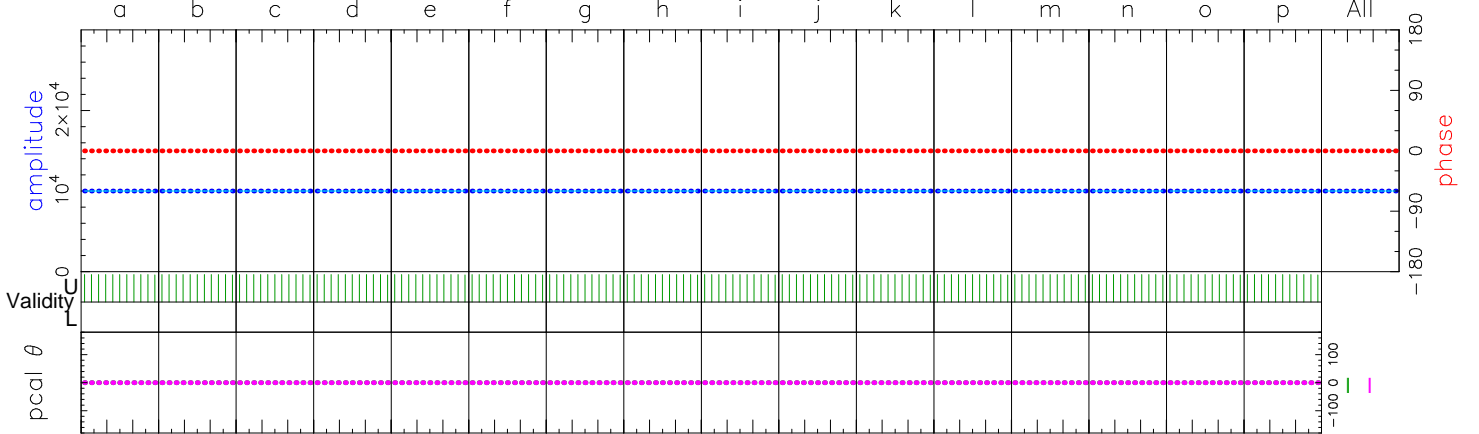
l: az 78.8 el 73.2 pa -88.7 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/II..130MEY Output file: /Exps/c192c/v2/1234/No0072/II.W.240.130MEY



Fringe quality 9  
SNR 366525.2  
Int time 179.644  
Amp 9999.997  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054436  
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	
I 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	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	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		
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

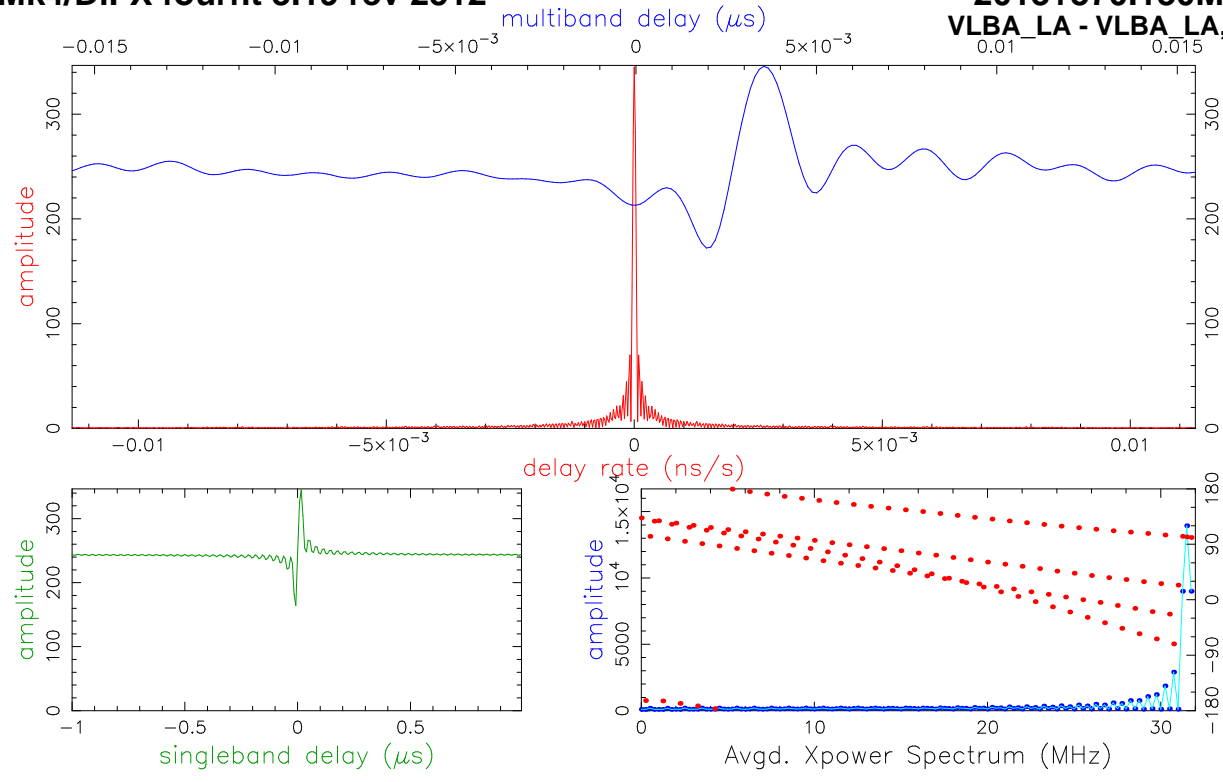
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 2.9E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 4.7E-08  
 Phase delay (usec) 7.17365071964E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 7.17365E-20 +/- 1.0E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 9999.997 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (1024X64) 9999.997 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.997 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 l: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/II..130MEY Output file: /Exps/c192c/v2/1234/No0072/II.W.246.130MEY

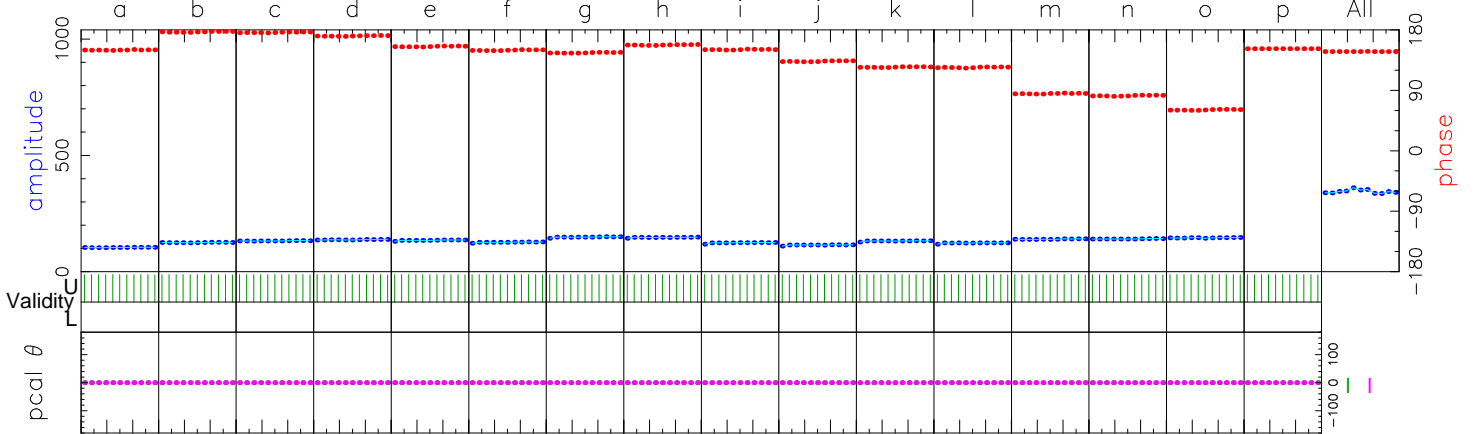
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, II  
VLBA\_LA - VLBA\_LA, fgroup W, pol LR



Fringe quality 5  
SNR 12704.0  
Int time 179.644  
Amp 346.606  
Phase 147.6  
PFD 0.0e+00  
Delays (us)  
SBD 0.013981  
MBD 0.003623  
Fringe rate (Hz) 0.000003  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054438  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

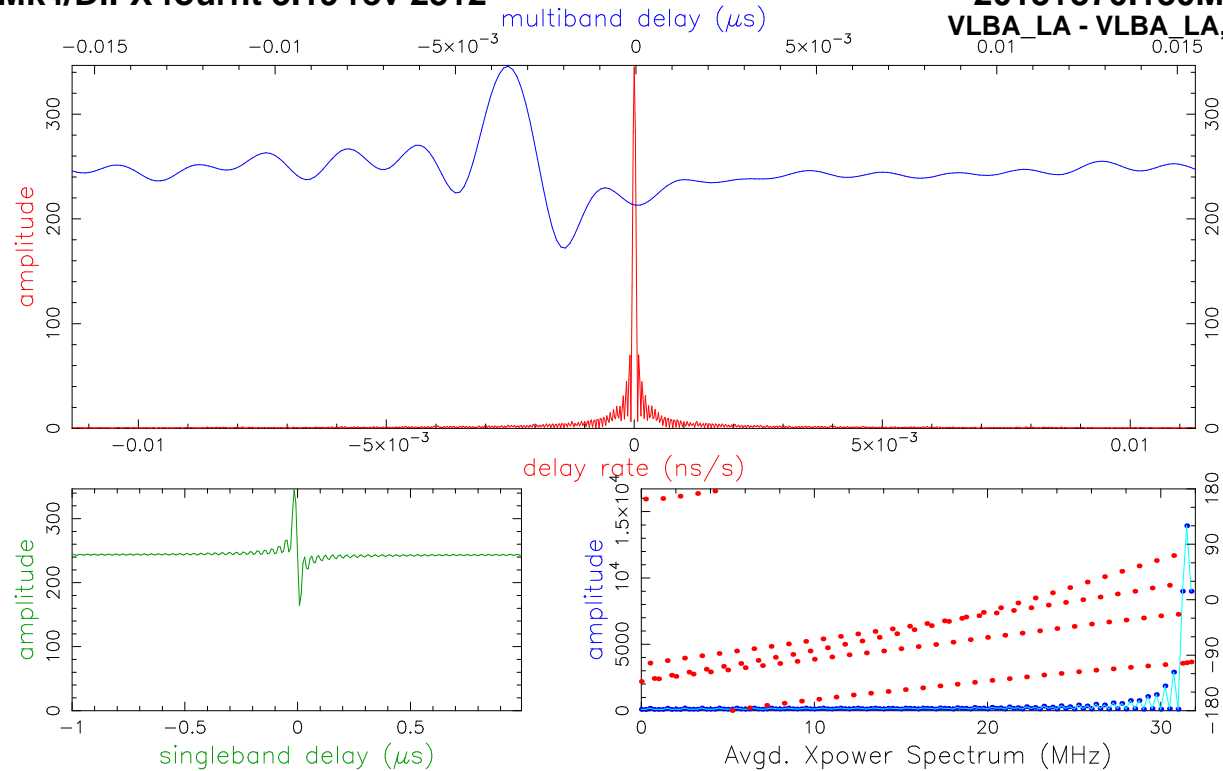
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l: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		
l: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		
I	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		
W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
Group delay (usec)(sbd) 3.62315625000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 3.62316E-03 +/- 8.5E-08																		
Sband delay (usec) 1.39810000000E-02 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 1.39810E-02 +/- 1.4E-06																		
Phase delay (usec) 4.75875808991E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 4.75876E-06 +/- 2.9E-10																		
Delay rate (us/s) 2.97594200225E-11 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) 2.97594E-11 +/- 2.8E-12																		
Total phase (deg) 147.6 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 147.6 +/- 0.0																		
ph/seg (deg)	RMS 0.1	Theor. 0.0	Amplitude 346.606 +/- 0.027		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		mb window (us) -0.016 0.016		dr window (ns/s) -0.011 0.011		ion window (TEC) 0.00 0.00	
amp/seg (%)	2.2	0.0	Search (1024X64) 342.795		Bits/sample: 2x2		SampCntNorm: enabled		Sample rate(MSamp/s): 64		Data rate(Mb/s): 2048		nlags: 128		t_cohere infinite		simultaneous interpolator	
ph/frq (deg)	37.3	0.0	Inc. seg. avg. 345.104		Data rate(Mb/s): 2048		nlags: 128		t_cohere infinite		ion window (TEC) 0.00 0.00		simultaneous interpolator					
amp/frq (%)	264.6	0.0	Inc. frq. avg. 368.768															

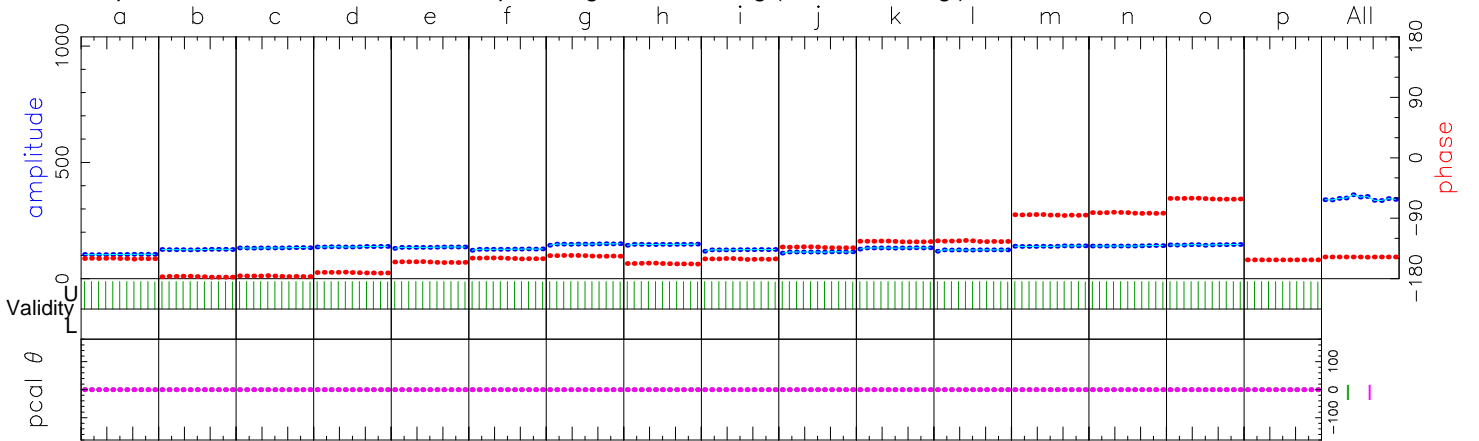
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, II  
VLBA\_LA - VLBA\_LA, fgroup W, pol RL



Fringe quality 5  
SNR 12704.0  
Int time 179.644  
Amp 346.605  
Phase -147.6  
PFD 0.0e+00  
Delays (us)  
SBD -0.013981  
MBD -0.003623  
Fringe rate (Hz) -0.000003  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054441  
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
	-149.9	-177.0	-176.1	-170.8	-155.2	-149.6	-145.9	-157.5	-150.5	-133.1	-124.5	-124.1	-85.1	-82.0	-60.9	-151.9		Phase -147.6
	104.4	125.6	132.9	137.6	135.3	126.9	148.8	147.5	124.2	114.8	132.1	123.3	140.0	141.3	146.0	3919.7		Ampl. 368.8
	128.7	128.4	128.5	128.7	128.6	128.8	128.3	128.5	128.6	128.7	128.7	128.8	128.7	128.7	128.6	126.0		Sbd box 127.2
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
I	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 phase
I	0:0	0:0	0:0	0:0	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
I	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		
I	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
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)			-3.62315625000E-03					Apriori delay (usec)		0.00000000000E+00			Resid mbdelay (usec)		-3.62316E-03		+/-	8.5E-08
Sband delay (usec)			-1.39810000000E-02					Apriori clock (usec)		0.0000000E+00			Resid sbdelay (usec)		-1.39810E-02		+/-	1.4E-06
Phase delay (usec)			-4.75875808982E-06					Apriori clockrate (us/s)		0.0000000E+00			Resid phdelay (usec)		-4.75876E-06		+/-	2.9E-10
Delay rate (us/s)			-2.97594200225E-11					Apriori rate (us/s)		0.00000000000E+00			Resid rate (us/s)		-2.97594E-11		+/-	2.8E-12
Total phase (deg)								Apriori accel (us/s/s)		0.00000000000E+00			Resid phase (deg)		-147.6		+/-	0.0

ph/seg (deg) 0.1 0.0  
amp/seg (%) 2.2 0.0  
ph/frq (deg) 37.3 0.0  
amp/frq (%) 264.6 0.0

RMS Theor. Amplitude 346.605 +/- 0.027  
Search (1024X64) 342.794  
Interp. 0.000  
Inc. seg. avg. 345.104  
Inc. frq. avg. 368.767

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
PCal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MISamp/s): 64  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

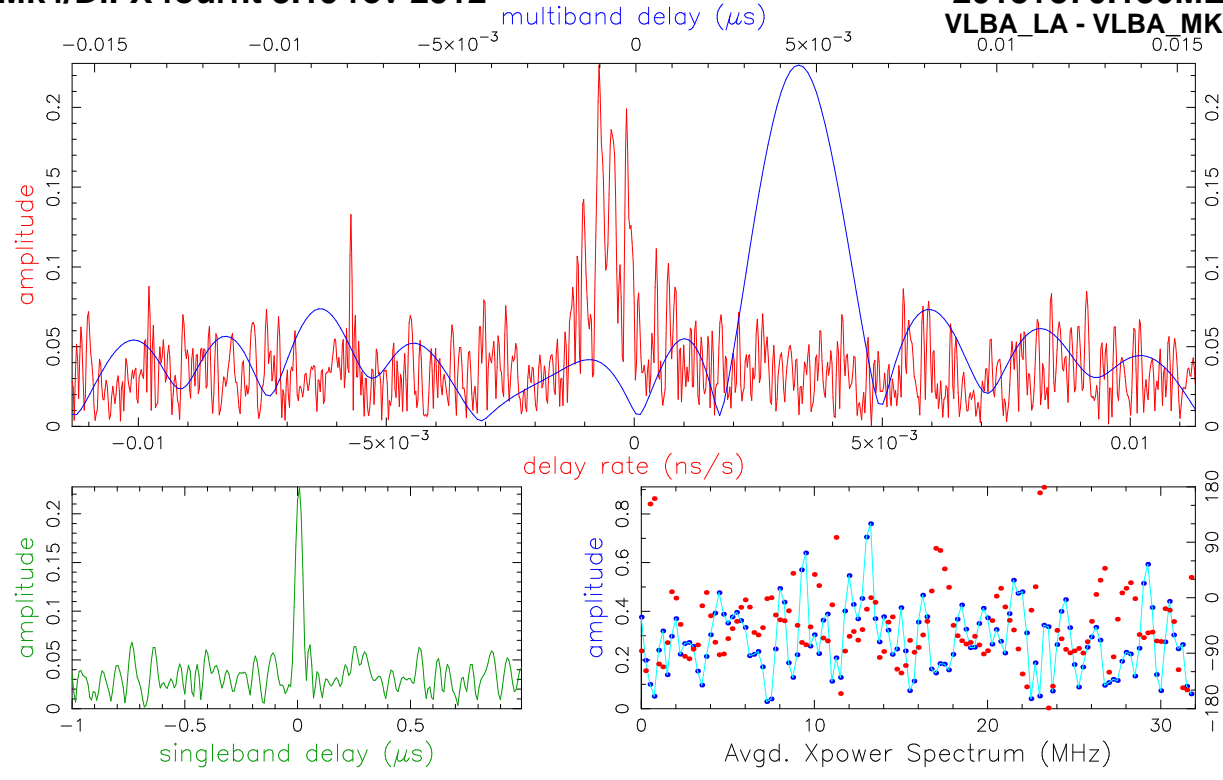
sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 I: az 78.8 el 73.2 pa -88.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/II..130MEY Output file: /Exps/c192c/v2/1234/No0072/II.W.287.130MEY

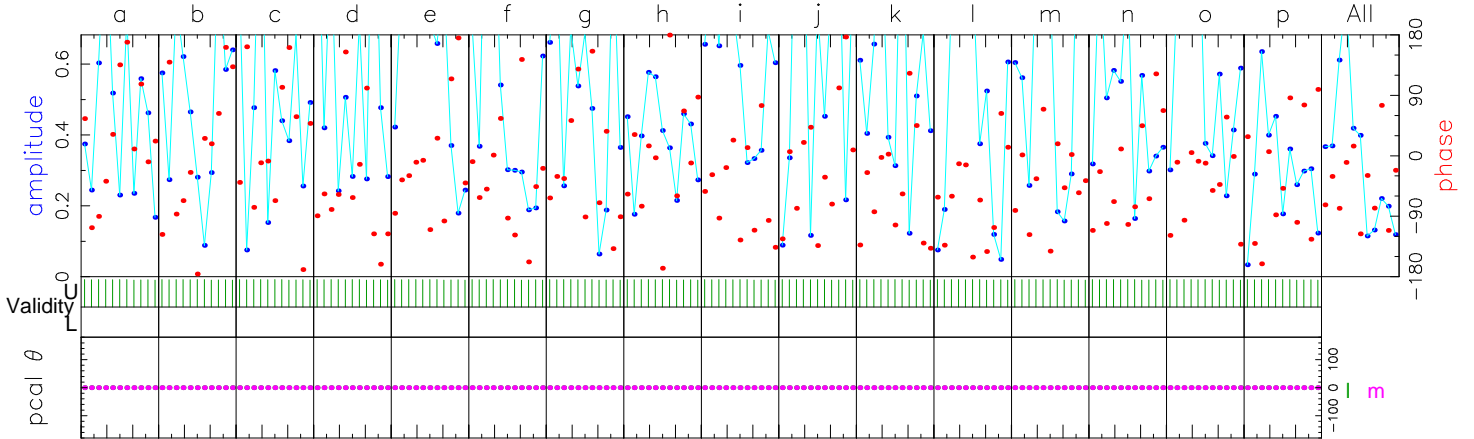
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, Im  
VLBA\_LA - VLBA\_MK, fgroup W, pol LL



Fringe quality 9  
SNR 8.3  
Int time 178.506  
Amp 0.228  
Phase -44.2  
PFD 1.8e-08  
Delays (us)  
SBD 0.006408  
MBD 0.004508  
Fringe rate (Hz)  
-0.060722  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054436  
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



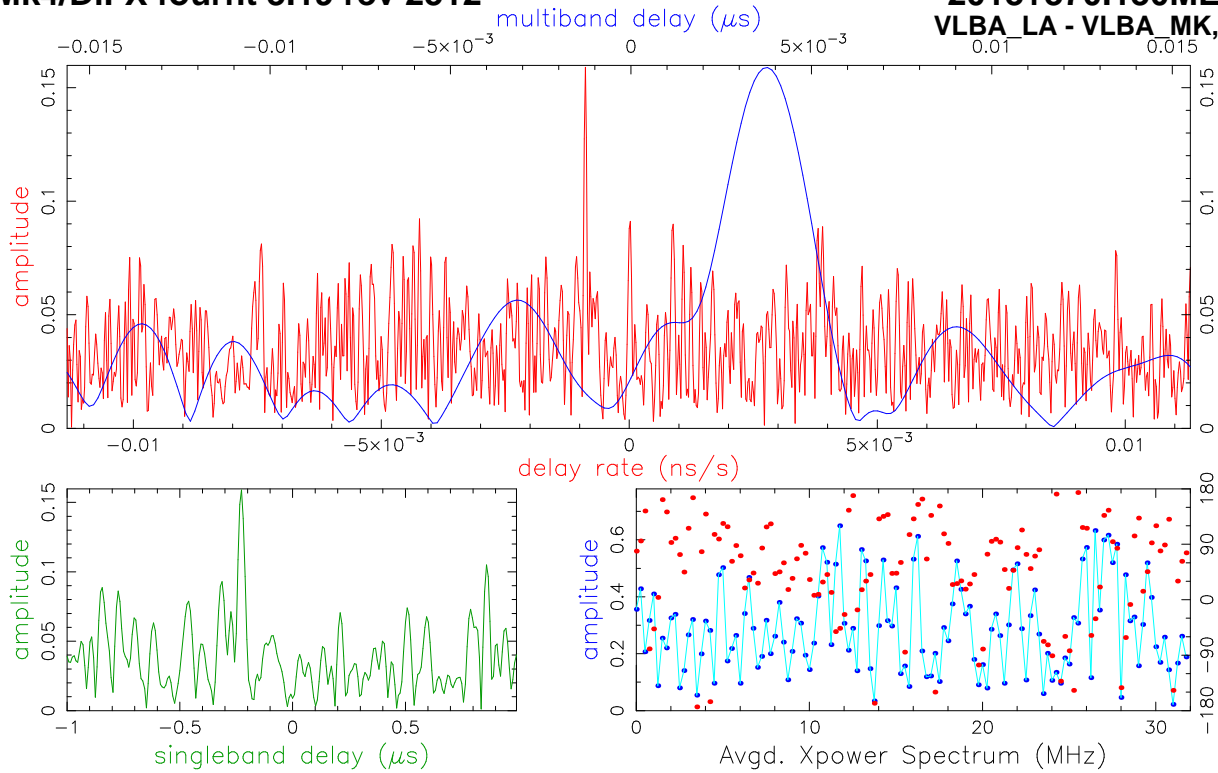
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-1.1	-129.4	-7.9	-93.7	-35.3	-27.4	-76.0	-8.0	-53.2	-29.8	-60.8	-53.3	-38.0	-47.4	-26.9	-117.4	Phase	-44.2				
	0.1	0.0	0.2	0.4	0.4	0.3	0.2	0.1	0.4	0.2	0.3	0.3	0.3	0.2	0.4	0.1	Ampl.	0.2				
	149.8	255.5	172.3	130.9	130.0	128.7	213.8	57.9	52.4	134.9	76.3	194.7	167.9	113.6	129.9	23.9	Sbd box	129.8				
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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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					
m	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					
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			1.05084098308E+04														Apriori delay (usec)	1.05084053229E+04	Resid mbdelay (usec)	4.50794E-03	+/-	1.3E-04
Sband delay (usec)			1.05084117309E+04														Apriori clock (usec)	-3.3675053E+00	Resid sbdelay (usec)	6.40800E-03	+/-	2.1E-03
Phase delay (usec)			1.05084053215E+04														Apriori clockrate (us/s)	-3.4277971E-07	Resid phdelay (usec)	-1.42657E-06	+/-	4.5E-07
Delay rate (us/s)			-7.39347933751E-01														Apriori rate (us/s)	-7.39347228830E-01	Resid rate (us/s)	-7.04921E-07	+/-	4.3E-09
Total phase (deg)				140.9													Apriori accel (us/s/s)	-3.91390788542E-05	Resid phase (deg)	-44.2	+/-	13.8

ph/seg (deg) 54.3 22.9 Search (1024X64) 0.221 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 103.3 39.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 39.6 27.6 Inc. seg. avg. 0.316 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 54.3 48.2 Inc. frq. avg. 0.226 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 78.8 el 73.2 pa -88.7 m: az 57.5 el 27.4 pa -85.0 u,v (fr/asec) 5293.072 -638.129 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lm..130MEY Output file: /Exps/c192c/v2/1234/No0072/lm.W.248.130MEY

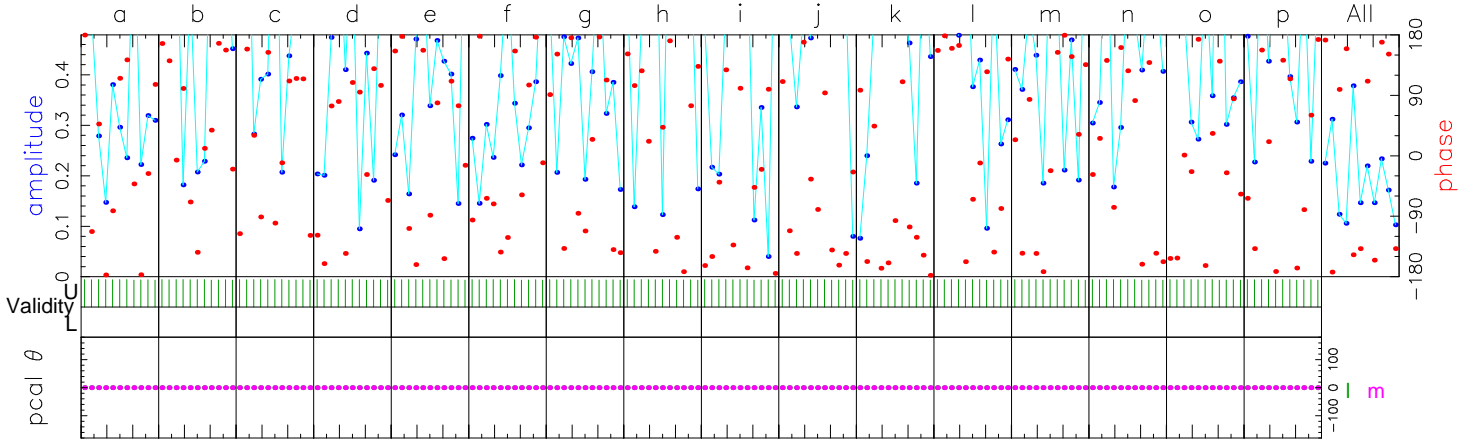
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, Im  
VLBA\_LA - VLBA\_MK, fgroup W, pol RR



Fringe quality 0  
SNR 5.8  
Int time 178.507  
Amp 0.160  
Phase 178.2  
PFD 5.2e-01  
Delays (us)  
SBD -0.227930  
MBD 0.003748  
Fringe rate (Hz)  
-0.075871  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054438  
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



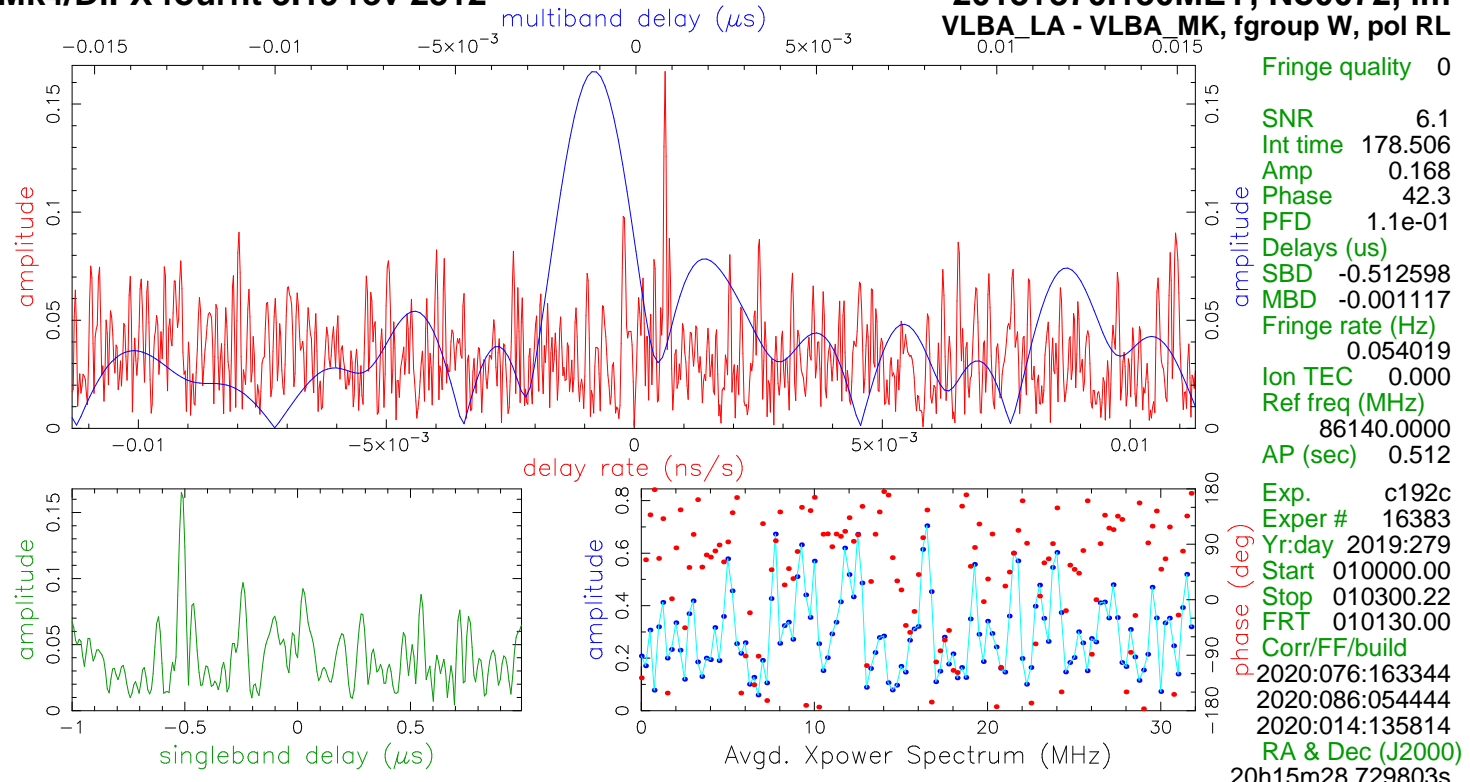
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		1.05081903210E+04																
Sband delay (usec)		1.05081773934E+04																
Phase delay (usec)		1.05084053286E+04																
Delay rate (us/s)		-7.39348109623E-01																
Total phase (deg)					3.3													
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)																		
simultaneous interpolator																		

ph/seg (deg) 40.3 32.6 Search (1024X64) 0.156 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 57.6 57.0 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 38.1 39.4 Inc. seg. avg. 0.170 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 42.8 68.7 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  
l: az 78.8 el 73.2 pa -88.7 m: az 57.5 el 27.4 pa -85.0 u,v (fr/asec) 5293.072 -638.129 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lm..130MEY Output file: /Exps/c192c/v2/1234/No0072/lm.W.264.130MEY

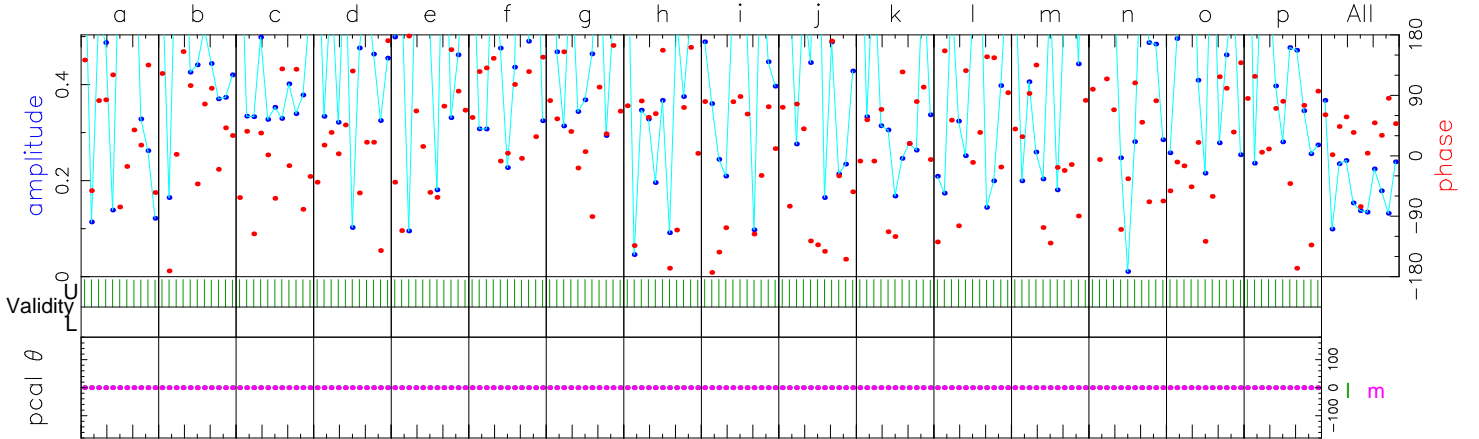


Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, Im  
VLBA\_LA - VLBA\_MK, 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



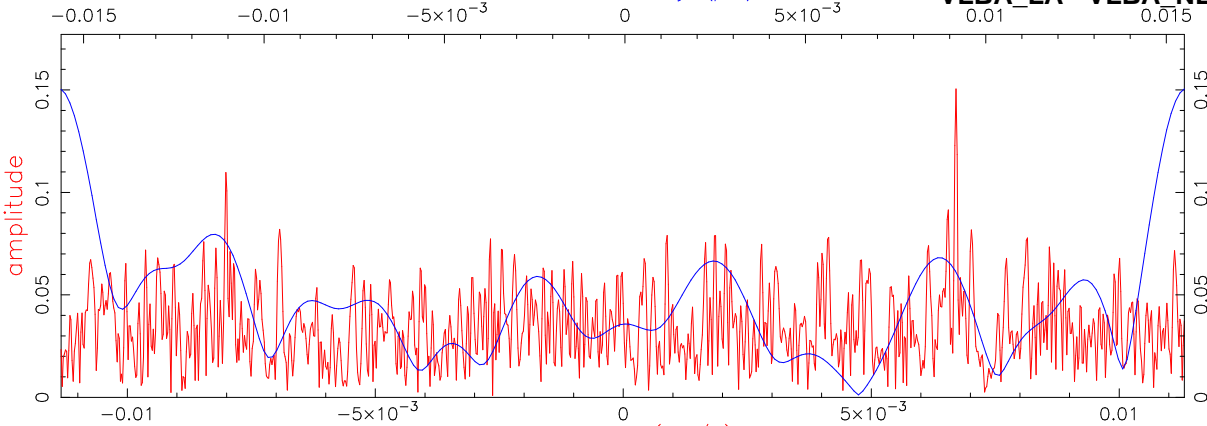
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All								
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used								
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs								
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase								
l: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		ManI PC								
l: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		PC amp								
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids								
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks								
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids								
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks								
Group delay (usec)(sbd)		1.05079042063E+04																Apriori delay (usec)	1.05084053229E+04	Resid mbdelay (usec)	-1.11658E-03	+/-	1.8E-04			
Sband delay (usec)		1.05078927249E+04																	Apriori clock (usec)	-3.3675053E+00	Resid sbdelay (usec)	-5.12598E-01	+/-	2.8E-03		
Phase delay (usec)		1.05084053243E+04																	Apriori clockrate (us/s)	-3.4277971E-07	Resid phdelay (usec)	1.36351E-06	+/-	6.0E-07		
Delay rate (us/s)		-7.39346601720E-01																	Apriori rate (us/s)	-7.39347228830E-01	Resid rate (us/s)	6.27110E-07	+/-	5.8E-09		
Total phase (deg)				227.4															Apriori accel (us/s/s)	-3.91390788542E-05	Resid phase (deg)	42.3	+/-	18.7		
ph/seg (deg)	RMS	Theor.																	Amplitude	0.168 +/- 0.027	PCal mode: MANUAL, MANUAL			PC period (AP's)	5, 5	
amp/seg (%)	42.5	31.0																	Search (1024X64)	0.159	PCal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000 1.000	
ph/frq (deg)	46.5	54.1																	Interp.	0.000	Bits/sample: 2x2			SampCntNorm: enabled	mb window (us)	-0.016 0.016
amp/frq (%)	53.3	37.4																	Inc. seg. avg.	0.170	Sample rate(MISamp/s): 64			dr window (ns/s)	-0.011 0.011	
	39.8	65.3																	Inc. frq. avg.	0.169	Data rate(Mb/s): 2048			ion window (TEC)	0.00 0.00	

l: az 78.8 el 73.2 pa -88.7 m: az 57.5 el 27.4 pa -85.0 u,v (fr/asec) 5293.072 -638.129 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/Im..130MEY Output file: /Exps/c192c/v2/1234/No0072/Im.W.311.130MEY

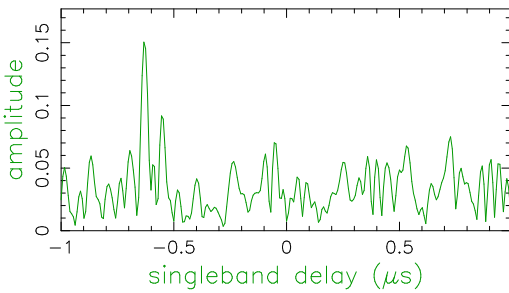


multiband delay ( $\mu$ s)



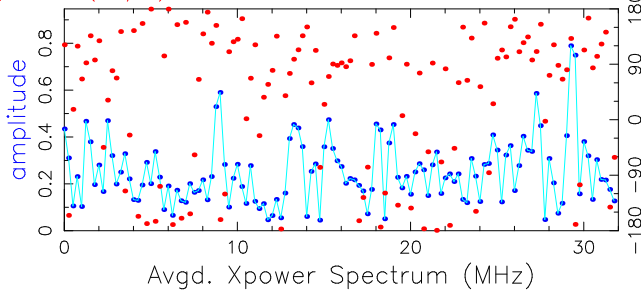
Fringe quality 0

SNR 5.6  
 Int time 178.481  
 Amp 0.177  
 Phase 7.6  
 PFD 9.5e-01  
 Delays (us)  
 SBD -0.630094  
 MBD 0.015600  
 Fringe rate (Hz) 0.579192  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



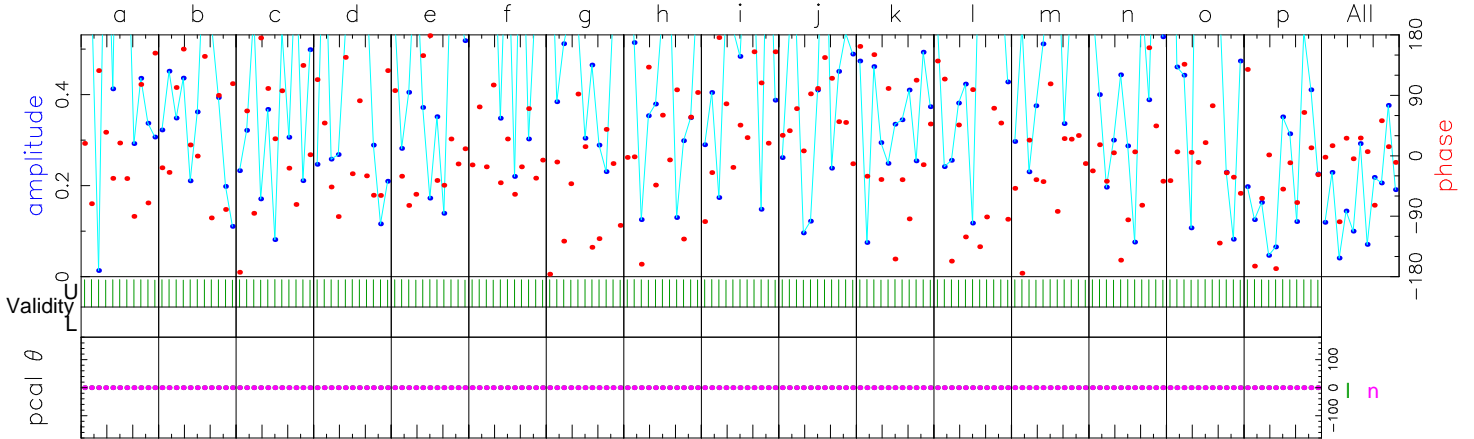
singleband delay ( $\mu$ s)

delay rate (ns/s)



Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 010000.00  
 Stop 010300.22  
 FRT 010130.00  
 Corr/FF/build  
 2020:076:163344  
 2020:086:054436  
 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

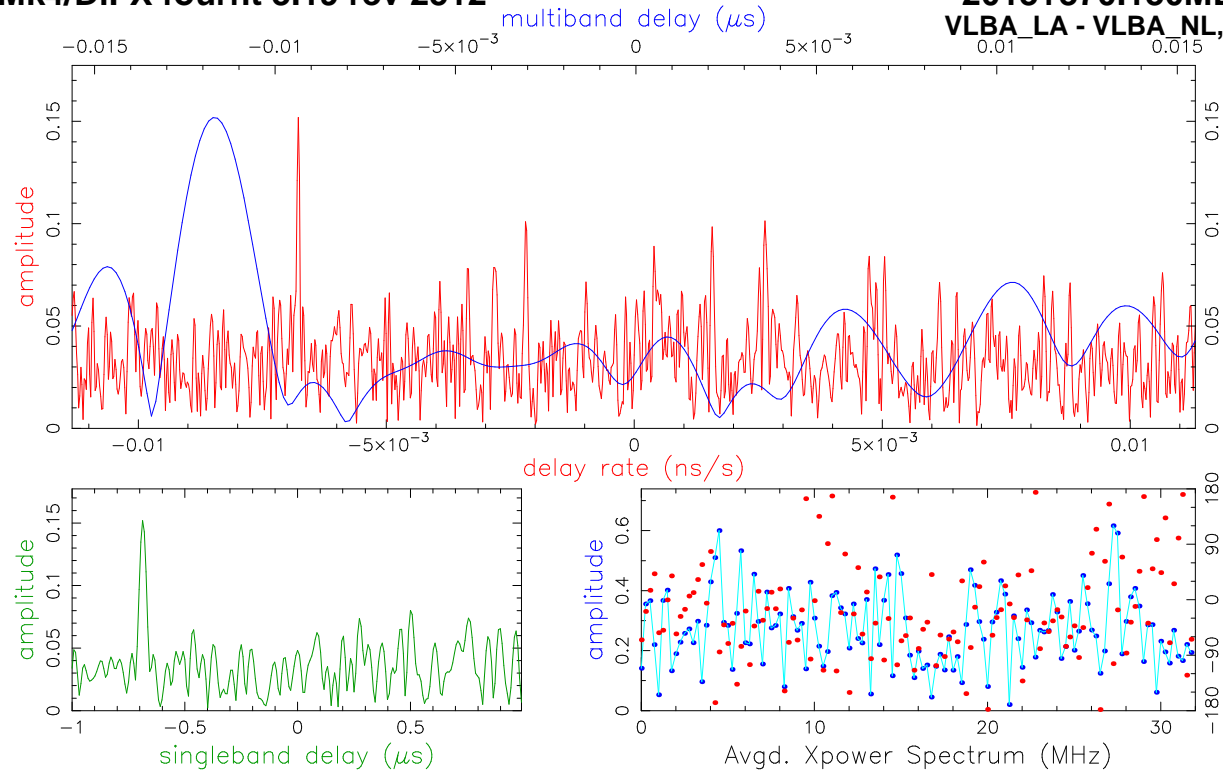


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000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

Group delay (usec)(sbd) -7.70045945862E+02 Apriori delay (usec) -7.69405295612E+02 Resid mbdelay (usec) 1.55997E-02 +/- 1.9E-04  
 Sband delay (usec) -7.70035389612E+02 Apriori clock (usec) -2.7308826E+01 Resid sbdelay (usec) -6.30094E-01 +/- 3.1E-03  
 Phase delay (usec) -7.69405295367E+02 Apriori clockrate (us/s) -4.8569552E-07 Resid phdelay (usec) 2.45090E-07 +/- 6.6E-07  
 Delay rate (us/s) 2.57731918163E-01 Apriori rate (us/s) 2.57725194320E-01 Resid rate (us/s) 6.72384E-06 +/- 6.4E-09  
 Total phase (deg) -51.4 Apriori accel (us/s/s) -1.61223870577E-06 Resid phase (deg) 7.6 +/- 20.6

RMS Theor. Amplitude 0.177 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 43.8 34.1 Search (1024X64) 0.142 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 64.7 59.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 64.2 41.1 Inc. seg. avg. 0.179 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 77.6 71.8 Inc. frq. avg. 0.171 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/In...130MEY Output file: /Exps/c192c/v2/1234/No0072/In.W.249.130MEY

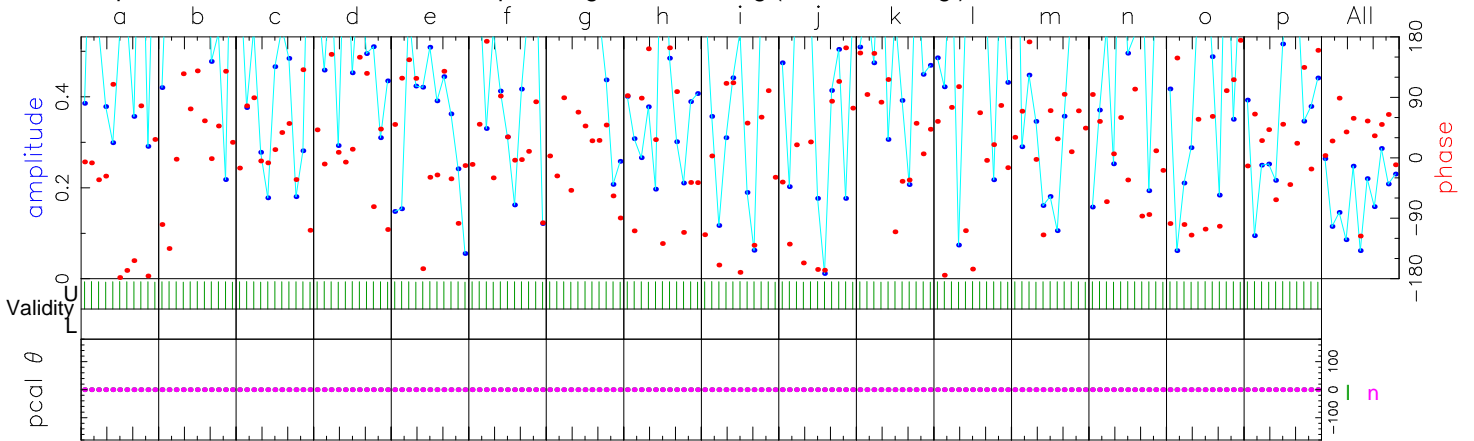


Fringe quality 0

SNR 5.6  
Int time 178.482  
Amp 0.177  
Phase 38.9  
PFD 9.6e-01  
Delays (us)  
SBD -0.686244  
MBD -0.011686  
Fringe rate (Hz)  
-0.585252  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054438  
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

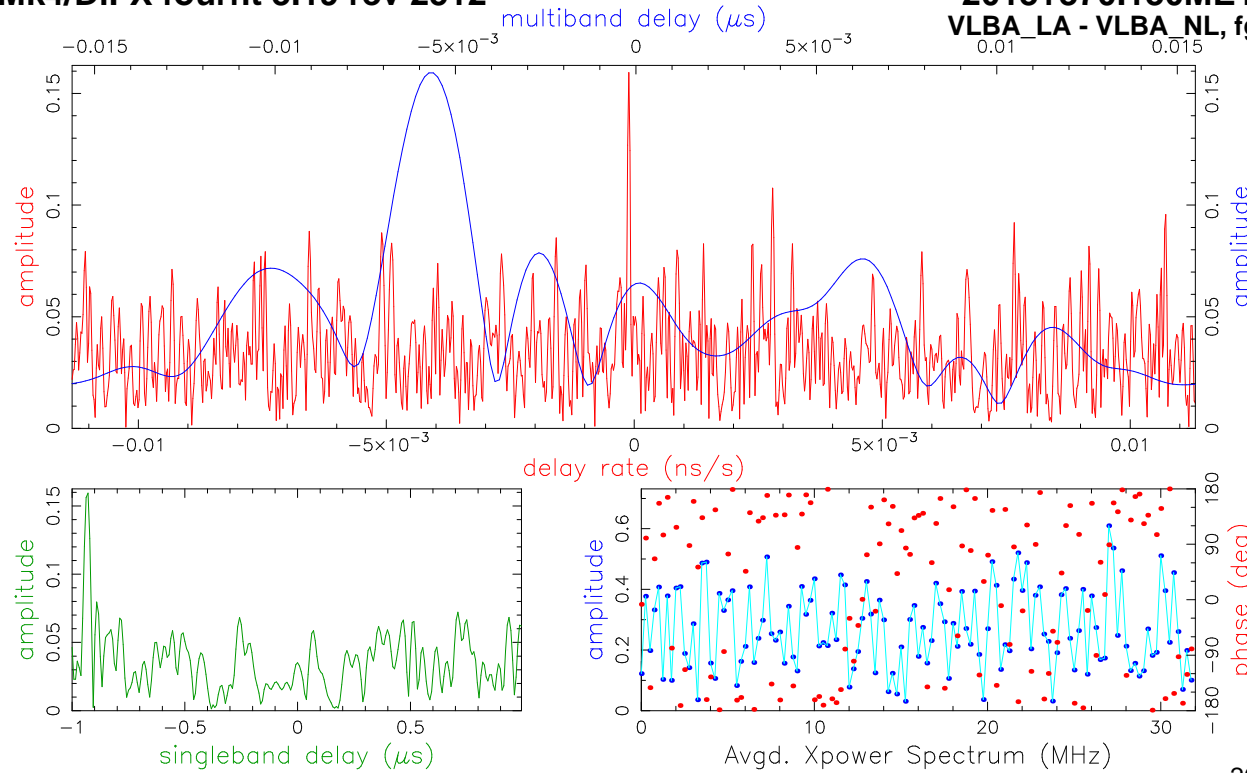


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		-7.70104481136E+02																
Sband delay (usec)		-7.70091539612E+02																
Phase delay (usec)		-7.69405294357E+02																
Delay rate (us/s)		2.57718400124E-01																
Total phase (deg)					-20.1													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(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) 54.1 34.2 Search (1024X64) 0.147 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 51.5 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) 63.5 41.2 Inc. seg. avg. 0.182 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 65.7 71.9 Inc. frq. avg. 0.173 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 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/In...130MEY Output file: /Exps/c192c/v2/1234/No0072/In.W.266.130MEY

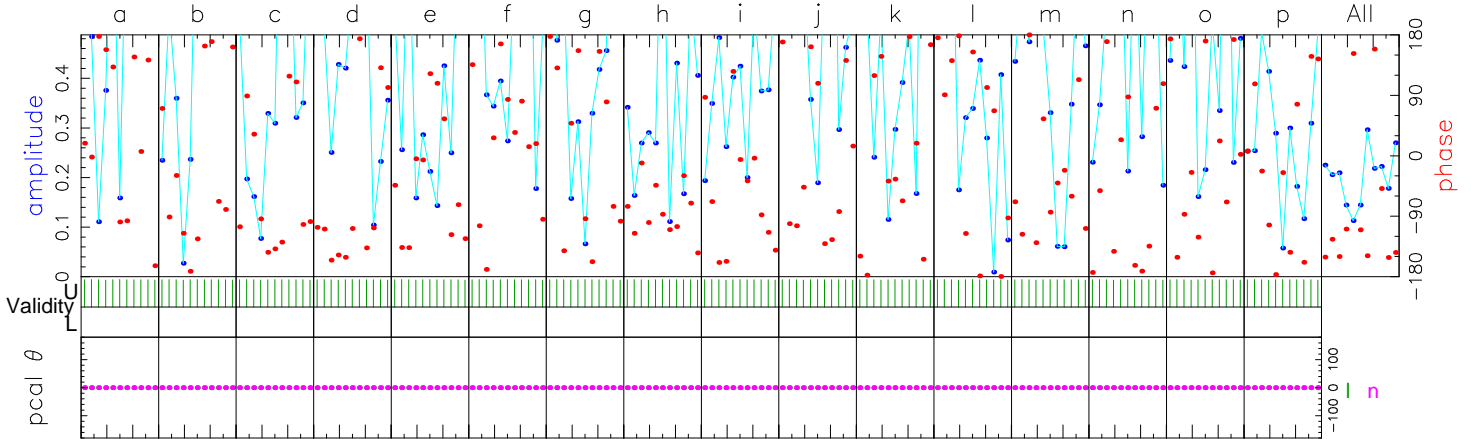
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, In  
VLBA\_LA - VLBA\_NL, fgroup W, pol LR



Fringe quality 0  
SNR 5.9  
Int time 178.481  
Amp 0.163  
Phase -141.5  
PFD 3.1e-01  
Delays (us)  
SBD -0.932880  
MBD -0.005660  
Fringe rate (Hz)  
-0.009249  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054441  
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

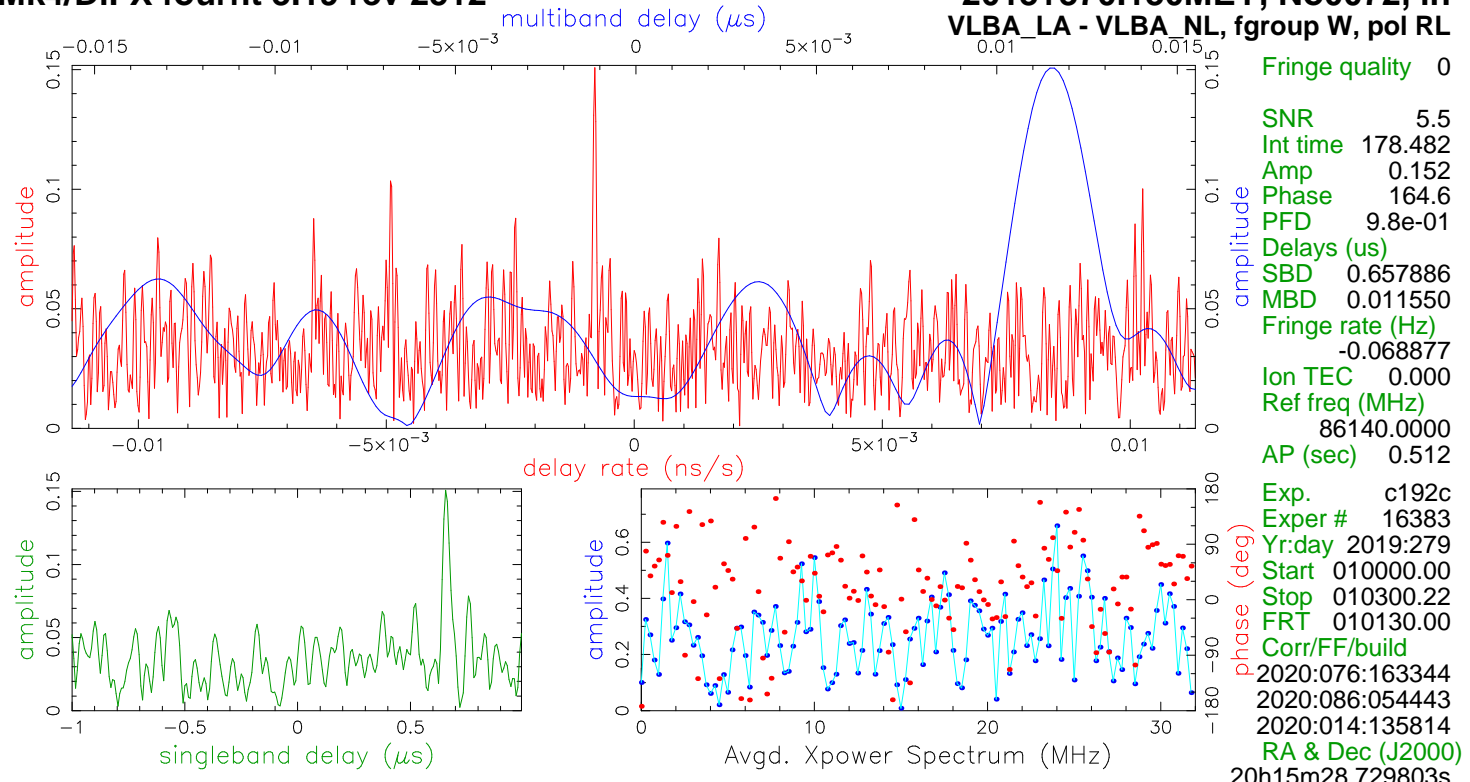


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd)		-7.70348455892E+02																
Sband delay (usec)		-7.70338175612E+02																
Phase delay (usec)		-7.69405300176E+02																
Delay rate (us/s)		2.57725086944E-01																
Total phase (deg)					-200.6													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(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)																		

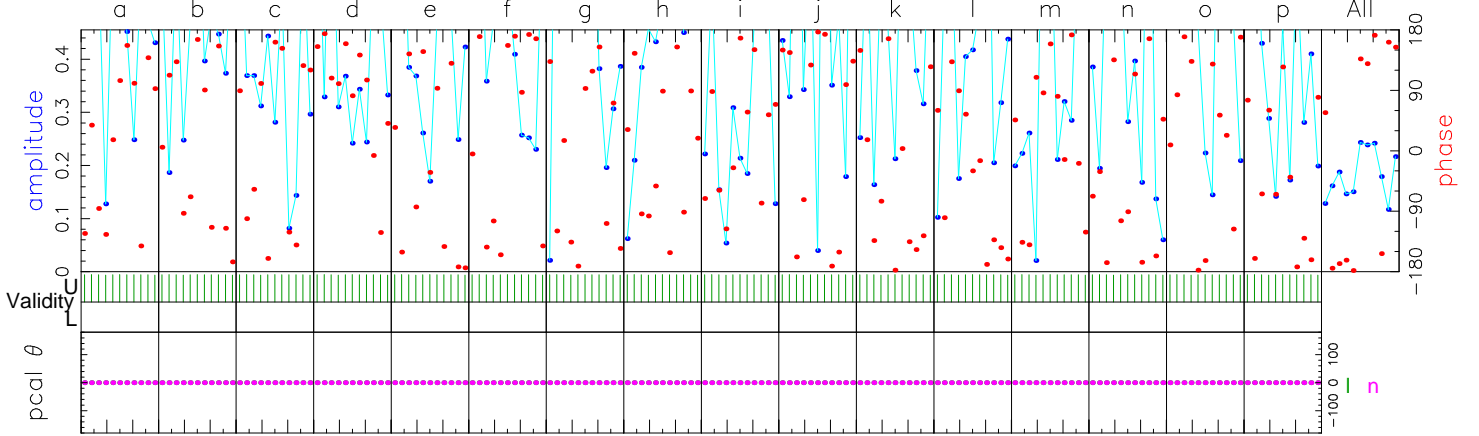
ph/seg (deg) 41.9 32.0 Search (1024X64) 0.157 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 40.3 55.8 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 60.2 38.6 Inc. seg. avg. 0.175 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 60.8 67.3 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  
l: az 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/In..130MEY Output file: /Exps/c192c/v2/1234/No0072/In.W.285.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, In VLBA\_LA - VLBA\_NL, 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

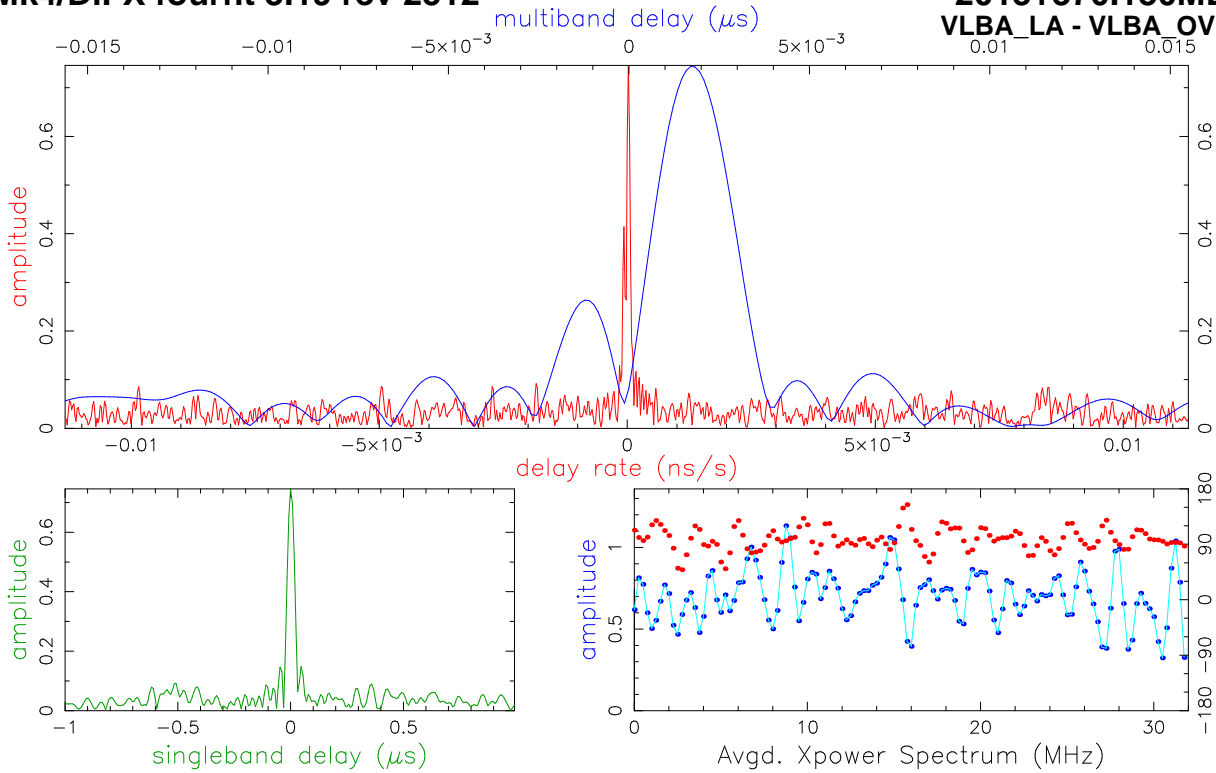


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0				
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks		
Group delay (usec)(sbd)		-7.68737495993E+02																		
Sband delay (usec)		-7.68747409612E+02																		
Phase delay (usec)		-7.69405290304E+02																		
Delay rate (us/s)		2.57724394731E-01																		
Total phase (deg)			105.6																	
Apriori delay (usec)																				
Apriori clock (usec)																				
Apriori clockrate (us/s)																				
Apriori rate (us/s)																				
Apriori accel (us/s/s)																				
Resid mbdelay (usec)																				
Resid sbdelay (usec)																				
Resid phdelay (usec)																				
Resid rate (us/s)																				
Resid phase (deg)																				
PCal mode: MANUAL, MANUAL																				
PCal rate: 0.000E+00, 0.000E+00 (us/s)																				
Bits/sample: 2x2																				
Sample rate(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) 40.6 34.3 Search (1024X64) 0.149 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 35.9 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) 42.5 41.4 Inc. seg. avg. 0.155 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 69.5 72.3 Inc. frq. avg. 0.140 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 78.8 el 73.2 pa -88.7 n: az 131.3 el 83.4 pa -43.1 u,v (fr/asec) -1856.582 -659.421 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/In...130MEY Output file: /Exps/c192c/v2/1234/No0072/In.W.302.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, lo  
VLBA\_LA - VLBA\_OV, fgroup W, pol LL

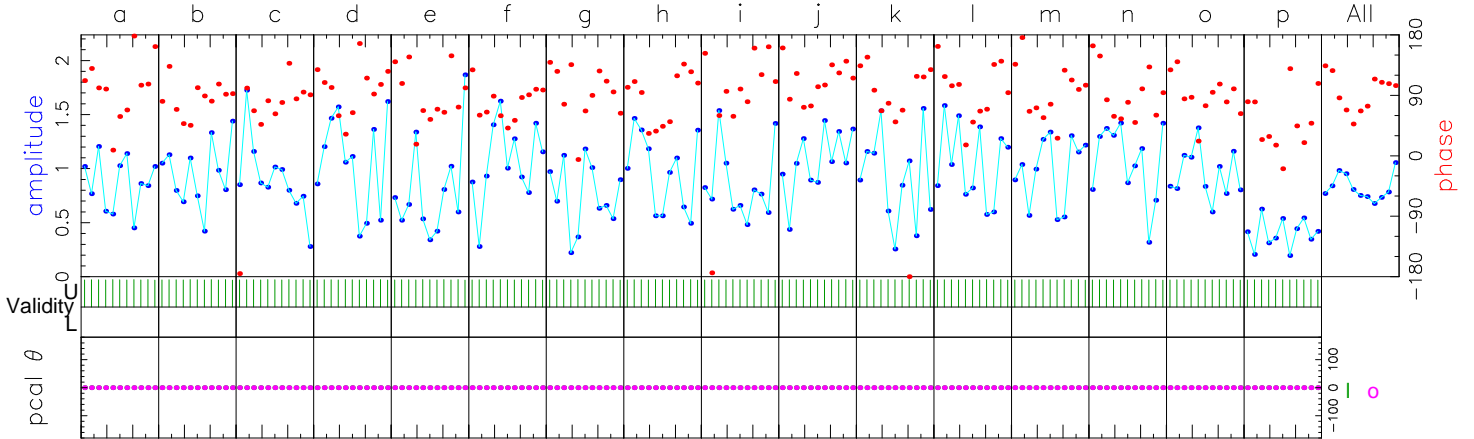


Fringe quality 8

SNR 27.2  
Int time 178.328  
Amp 0.746  
Phase 94.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.001194  
MBD 0.001771  
Fringe rate (Hz) 0.001352  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054436  
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
	101.9	86.3	89.6	94.2	91.3	78.9	93.8	90.4	111.6	113.6	110.8	100.5	96.4	87.3	86.8	40.5	Phase	94.0
	0.7	0.9	0.8	0.9	0.6	1.0	0.6	0.8	0.7	1.0	0.7	0.8	0.8	0.9	0.8	0.3	Ampl.	0.8
	129.3	128.6	129.2	128.7	128.5	128.7	130.0	129.2	129.3	129.3	129.6	129.0	129.3	129.4	129.2	128.5	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	
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	

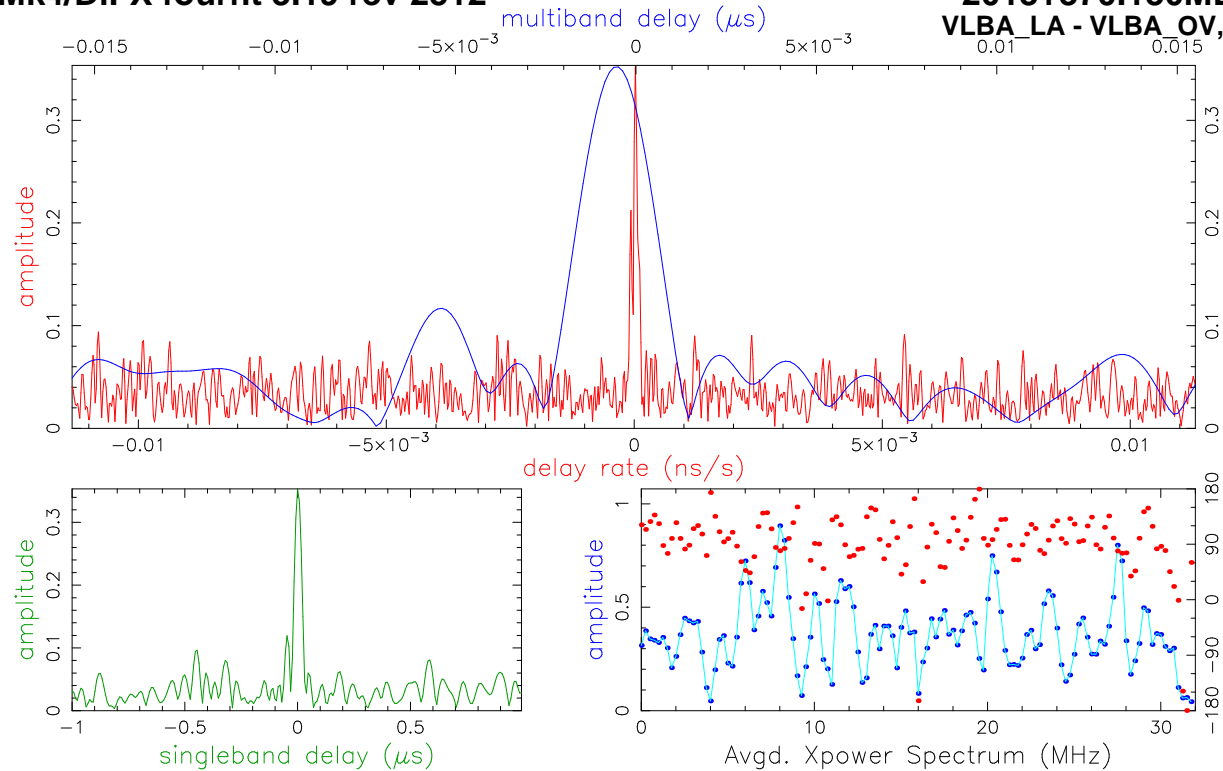
Group delay (usec)(sbd) 1.22606292237E+03 Apriori delay (usec) 1.22606115167E+03 Resid mbdelay (usec) 1.77071E-03 +/- 4.0E-05  
 Sband delay (usec) 1.22606234517E+03 Apriori clock (usec) -1.7439144E+01 Resid sbdelay (usec) 1.19350E-03 +/- 6.3E-04  
 Phase delay (usec) 1.22606115470E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) 3.03078E-06 +/- 1.4E-07  
 Delay rate (us/s) -1.78083562360E-01 Apriori rate (us/s) -1.78083578056E-01 Resid rate (us/s) 1.56960E-08 +/- 1.3E-09  
 Total phase (deg) 311.6 Apriori accel (us/s/s) -8.00253510317E-06 Resid phase (deg) 94.0 +/- 4.2

RMS Theor. Amplitude 0.746 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 26.4 7.0 Search (1024X64) 0.721 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 18.7 12.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 17.7 8.4 Inc. seg. avg. 0.821 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 21.5 14.7 Inc. frq. avg. 0.756 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 o: az 79.8 el 63.9 pa -79.7 u,v (fr/asec) 1274.913 -629.086 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lo..130MEY Output file: /Exps/c192c/v2/1234/No0072/lo.W.247.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, lo  
VLBA\_LA - VLBA\_OV, fgroup W, pol RR

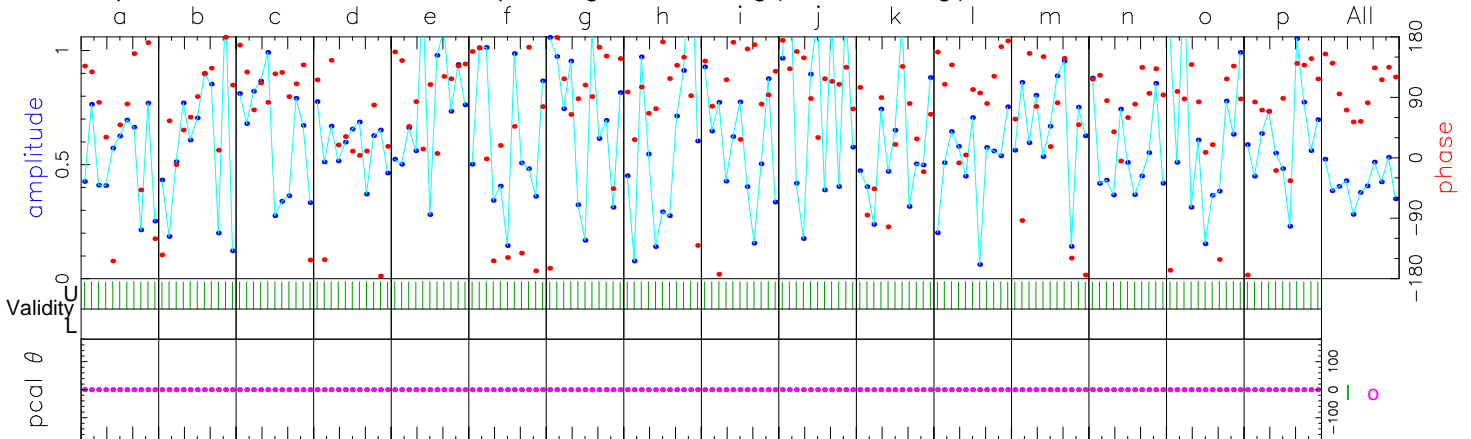


Fringe quality 9

SNR 12.9  
Int time 178.329  
Amp 0.353  
Phase 109.8  
PFD 1.1e-29  
Delays (us)  
SBD 0.001529  
MBD -0.000506  
Fringe rate (Hz) 0.001326  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054438  
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

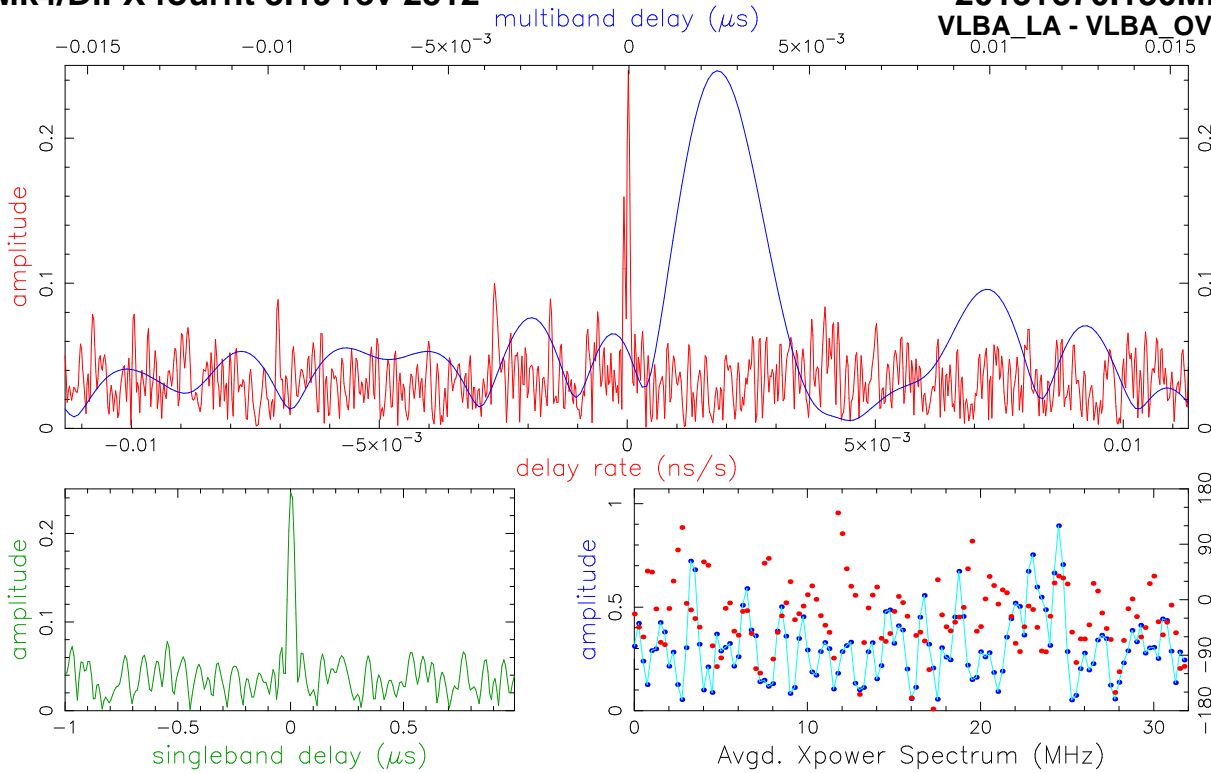


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	125.2	109.1	116.2	60.5	95.0	116.0	136.0	116.4	120.8	115.6	64.5	115.6	106.4	92.7	112.3	110.8	109.8	Phase	
	0.3	0.3	0.5	0.2	0.4	0.2	0.5	0.4	0.4	0.6	0.2	0.3	0.3	0.4	0.4	0.4	0.4	Ampl.	
	131.7	156.5	129.4	243.1	129.2	29.2	128.4	129.5	129.1	128.6	45.8	14.0	66.6	129.1	129.2	130.7	129.2	Sbd box	
	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	
l	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 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	0:0	0:0	PC phase
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	

Group delay (usec)(sbd) 1.22606064603E+03 Apriori delay (usec) 1.22606115167E+03 Resid mbdelay (usec) -5.05638E-04 +/- 8.4E-05  
 Sband delay (usec) 1.22606268067E+03 Apriori clock (usec) -1.7439144E+01 Resid sbdelay (usec) 1.52900E-03 +/- 1.3E-03  
 Phase delay (usec) 1.22606115521E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) 3.54017E-06 +/- 2.9E-07  
 Delay rate (us/s) -1.78083562660E-01 Apriori rate (us/s) -1.78083578056E-01 Resid rate (us/s) 1.53955E-08 +/- 2.8E-09  
 Total phase (deg) 327.4 Apriori accel (us/s/s) -8.00253510317E-06 Resid phase (deg) 109.8 +/- 8.9

RMS Theor. Amplitude 0.353 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 34.6 14.7 Search (1024X64) 0.345 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 28.2 25.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 21.1 17.8 Inc. seg. avg. 0.408 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 33.4 31.0 Inc. frq. avg. 0.352 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 o: az 79.8 el 63.9 pa -79.7 u,v (fr/asec) 1274.913 -629.086 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lo..130MEY Output file: /Exps/c192c/v2/1234/No0072/lo.W.262.130MEY

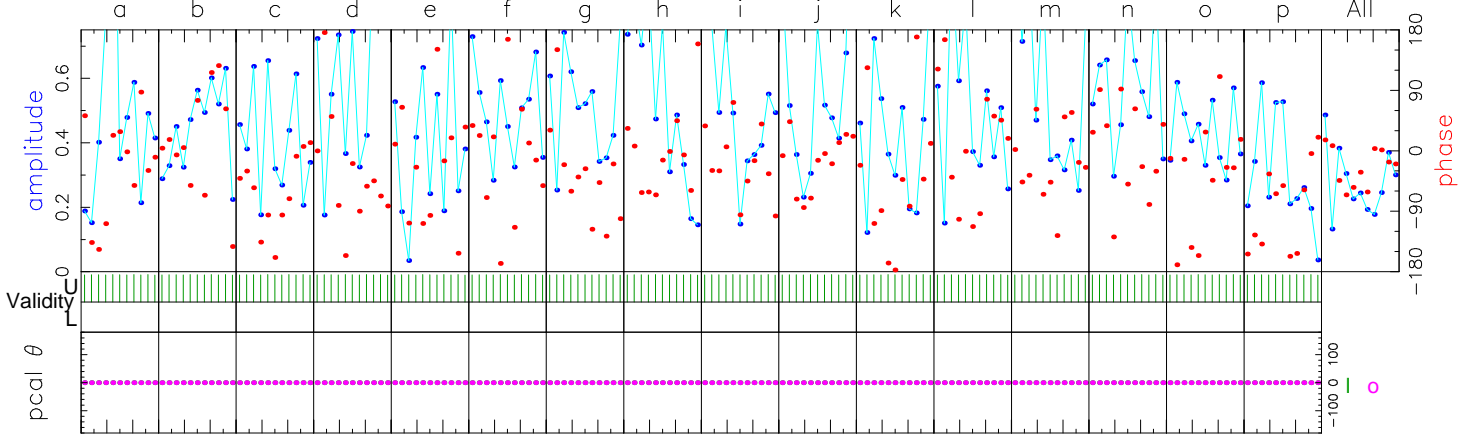


Fringe quality 9

SNR 9.1  
Int time 178.329  
Amp 0.250  
Phase -23.2  
PFD 1.2e-11  
Delays (us)  
SBD 0.002972  
MBD 0.002469  
Fringe rate (Hz) 0.001478  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054442  
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

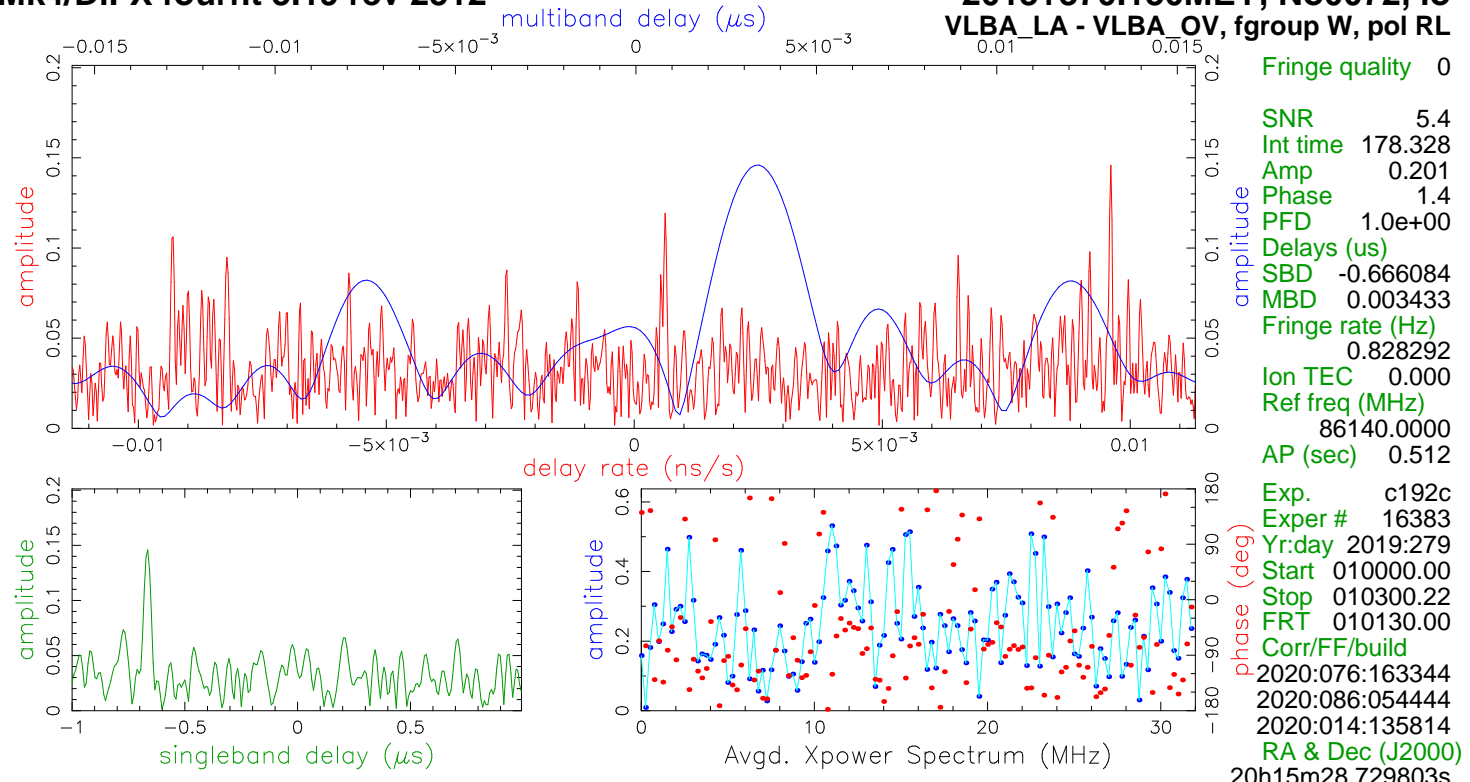


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-13.4	37.6	-55.1	-53.2	-8.4	3.7	-52.2	-17.9	-5.3	-2.0	-65.6	-2.5	-22.1	8.1	-36.0	-92.7		Phase -23.2
	0.3	0.2	0.3	0.4	0.1	0.2	0.3	0.4	0.4	0.5	0.2	0.2	0.4	0.3	0.1	0.2		Ampl. 0.3
	55.5	43.6	202.6	128.0	253.7	98.6	28.3	130.6	129.9	129.5	244.7	238.1	128.9	30.6	69.9	210.0		Sbd box 129.4
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
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks

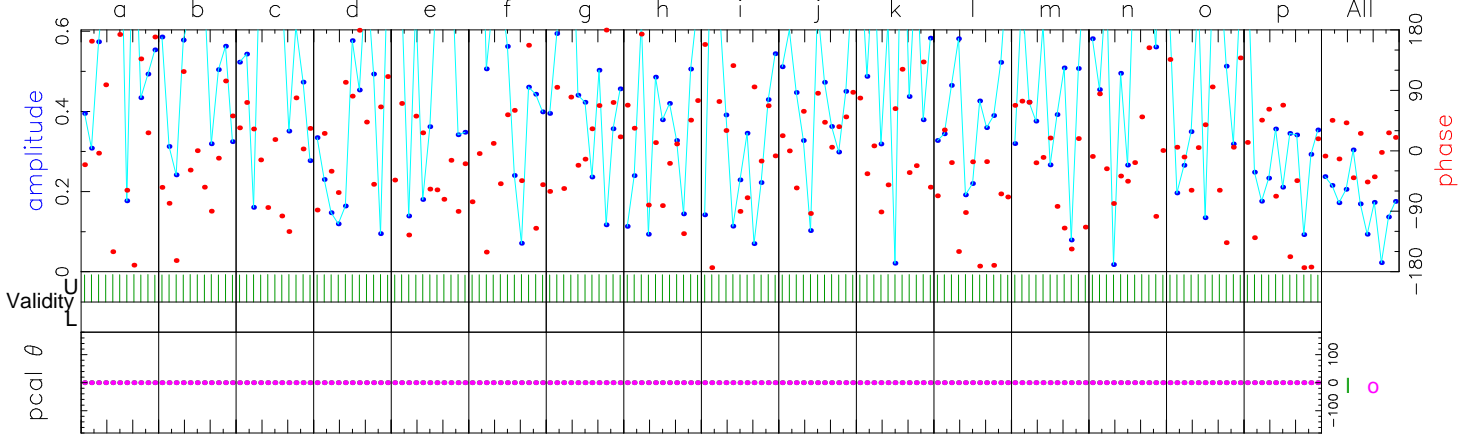
Group delay (usec)(sbd) 1.22606362084E+03 Apriori delay (usec) 1.22606115167E+03 Resid mbdelay (usec) 2.46917E-03 +/- 1.2E-04  
 Sband delay (usec) 1.22606412417E+03 Apriori clock (usec) -1.7439144E+01 Resid sbdelay (usec) 2.97250E-03 +/- 1.9E-03  
 Phase delay (usec) 1.22606115092E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) -7.48488E-07 +/- 4.0E-07  
 Delay rate (us/s) -1.78083560900E-01 Apriori rate (us/s) -1.78083578056E-01 Resid rate (us/s) 1.71556E-08 +/- 3.9E-09  
 Total phase (deg) 194.4 Apriori accel (us/s/s) -8.00253510317E-06 Resid phase (deg) -23.2 +/- 12.5

RMS Theor. Amplitude 0.250 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 27.9 20.8 Search (1024X64) 0.242 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 41.1 36.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 34.3 25.1 Inc. seg. avg. 0.261 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 47.2 43.8 Inc. frq. avg. 0.257 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 o: az 79.8 el 63.9 pa -79.7 u,v (fr/asec) 1274.913 -629.086 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lo..130MEY Output file: /Exps/c192c/v2/1234/No0072/lo.W.293.130MEY



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



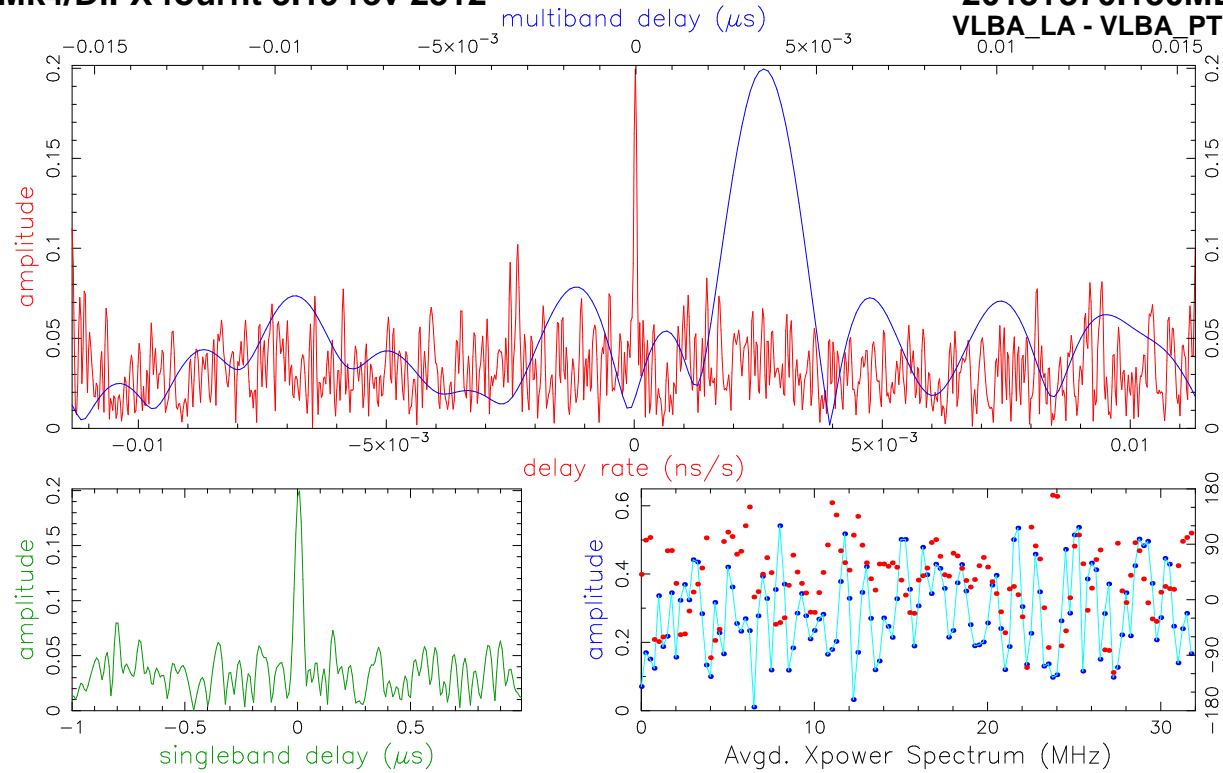
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
l	1000	1000	1000	1000	1000	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 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							
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					
Group delay (usec)(sbd)		1.22540833459E+03																1.22606115167E+03	Resid mbdelay (usec)	3.43292E-03	+/-	2.0E-04	
Sband delay (usec)		1.22539506817E+03																	-1.7439144E+01	Resid sbdelay (usec)	-6.66084E-01	+/-	3.2E-03
Phase delay (usec)		1.22606115171E+03																	-3.5245298E-07	Resid phdelay (usec)	4.43644E-08	+/-	6.9E-07
Delay rate (us/s)		-1.78073962405E-01																	-1.78083578056E-01	Resid rate (us/s)	9.61565E-06	+/-	6.6E-09
Total phase (deg)				219.0															-8.00253510317E-06	Resid phase (deg)	1.4	+/-	21.4

	RMS	Theor.	Amplitude	0.201 +/- 0.038	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	31.7	35.5	Search (1024X64)	0.143	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	51.2	61.9	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	56.6	42.8	Inc. seg. avg.	0.200	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	69.0	74.6	Inc. frq. avg.	0.218	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

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

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lo..130MEY Output file: /Exps/c192c/v2/1234/No0072/lo.W.307.130MEY



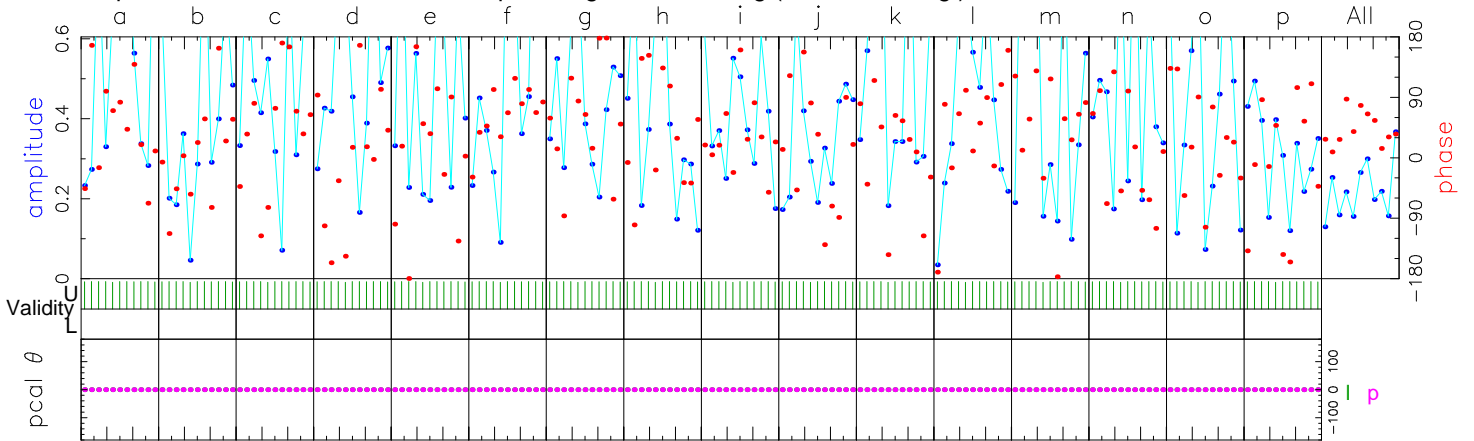


Fringe quality 9

SNR 7.4  
Int time 179.070  
Amp 0.202  
Phase 44.0  
PFD 2.5e-05  
Delays (us)  
SBD 0.005118  
MBD 0.003529  
Fringe rate (Hz) 0.002047  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054437  
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		
l	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		
l: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		
l: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		
l	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		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		

Group delay (usec)(sbd)	1.90377009940E+02	Apriori delay (usec)	1.90373480891E+02	Resid mbdelay (usec)	3.52905E-03	+/-	1.5E-04
Sband delay (usec)	1.90378598391E+02	Apriori clock (usec)	-1.2755054E+01	Resid sbdelay (usec)	5.11750E-03	+/-	2.3E-03
Phase delay (usec)	1.90373482311E+02	Apriori clockrate (us/s)	-5.5535860E-07	Resid phdelay (usec)	1.42002E-06	+/-	5.0E-07
Delay rate (us/s)	-3.74882434644E-02	Apriori rate (us/s)	-3.74882672237E-02	Resid rate (us/s)	2.37594E-08	+/-	4.8E-09
Total phase (deg)	275.8	Apriori accel (us/s/s)	3.55380843206E-07	Resid phase (deg)	44.0	+/-	15.5

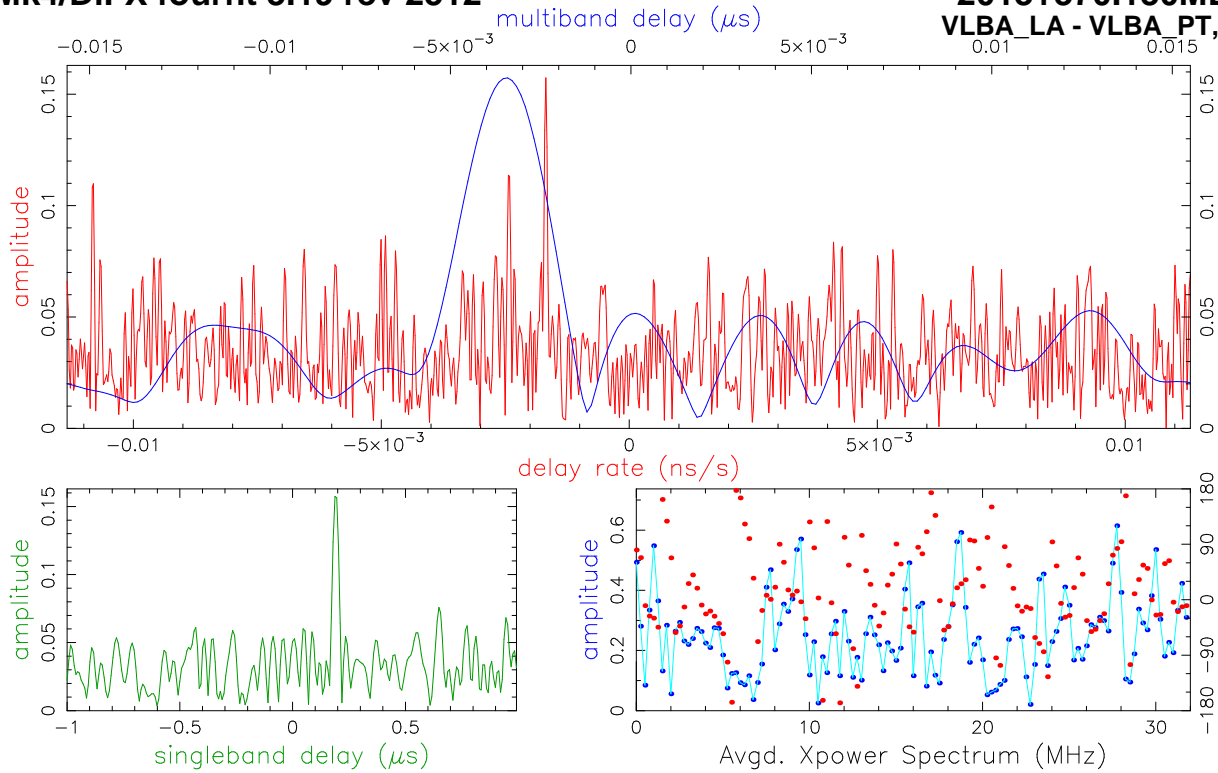
ph/seg (deg)	24.5	RMS	24.5	Theor.	25.8	Amplitude	0.202 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	35.1	Search (1024X64)	0.198	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	Interp.	0.000	sb window (us)	-1.000	1.000	
ph/frq (deg)	29.9	Inc. seg. avg.	0.200	Bits/sample:	2x2	SampCntNorm:	enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	60.5	Inc. frq. avg.	0.193	Sample rate (MSamp/s):	64	Data rate (Mb/s):	2048	nlags:	128	t_cohere	infinite
								ion window (TEC)	0.00	0.00	

l: az 78.8 el 73.2 pa -88.7 p: az 74.3 el 71.3 pa -91.8 u,v (fr/asec) 270.268 167.901 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lp..130MEY Output file: /Exps/c192c/v2/1234/No0072/lp.W.259.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, lp  
VLBA\_LA - VLBA\_PT, fgroupp W, pol RR



Fringe quality 0

SNR 5.9

Int time 179.070

Amp 0.163

Phase 53.5

PFD 3.5e-01

Delays (us)

SBD 0.191182

MBD -0.003444

Fringe rate (Hz)

-0.144817

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 010000.00

Stop 010300.22

FRT 010130.00

Corr/FF/build

2020:076:163344

2020:086:054440

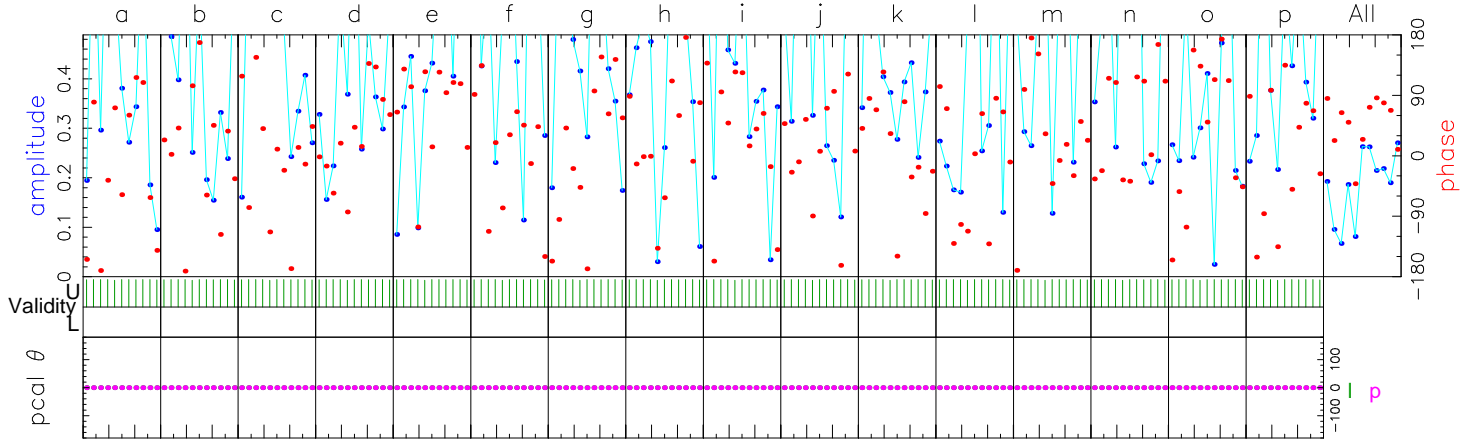
2020:014:135814

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			
l	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			
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
l	1000	1000	1000	1000	1000	1000	1000	1000	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			
l	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)		1.90557537367E+02								1.90373480891E+02							Resid mbdelay (usec)	-3.44352E-03	+/- 1.8E-04
Sband delay (usec)		1.90564663391E+02								-1.2755054E+01							Resid sbdelay (usec)	1.91182E-01	+/- 2.9E-03
Phase delay (usec)		1.90373482616E+02								-5.5535860E-07							Resid phdelay (usec)	1.72486E-06	+/- 6.3E-07
Delay rate (us/s)		-3.74899484071E-02								-3.74882672237E-02							Resid rate (us/s)	-1.68118E-06	+/- 6.0E-09
Total phase (deg)					285.3					3.55380843206E-07							Resid phase (deg)	53.5	+/- 19.4

ph/seg (deg) 38.1 32.2 Search (1024X64) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 45.9 56.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 42.0 38.8 Inc. seg. avg. 0.162 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

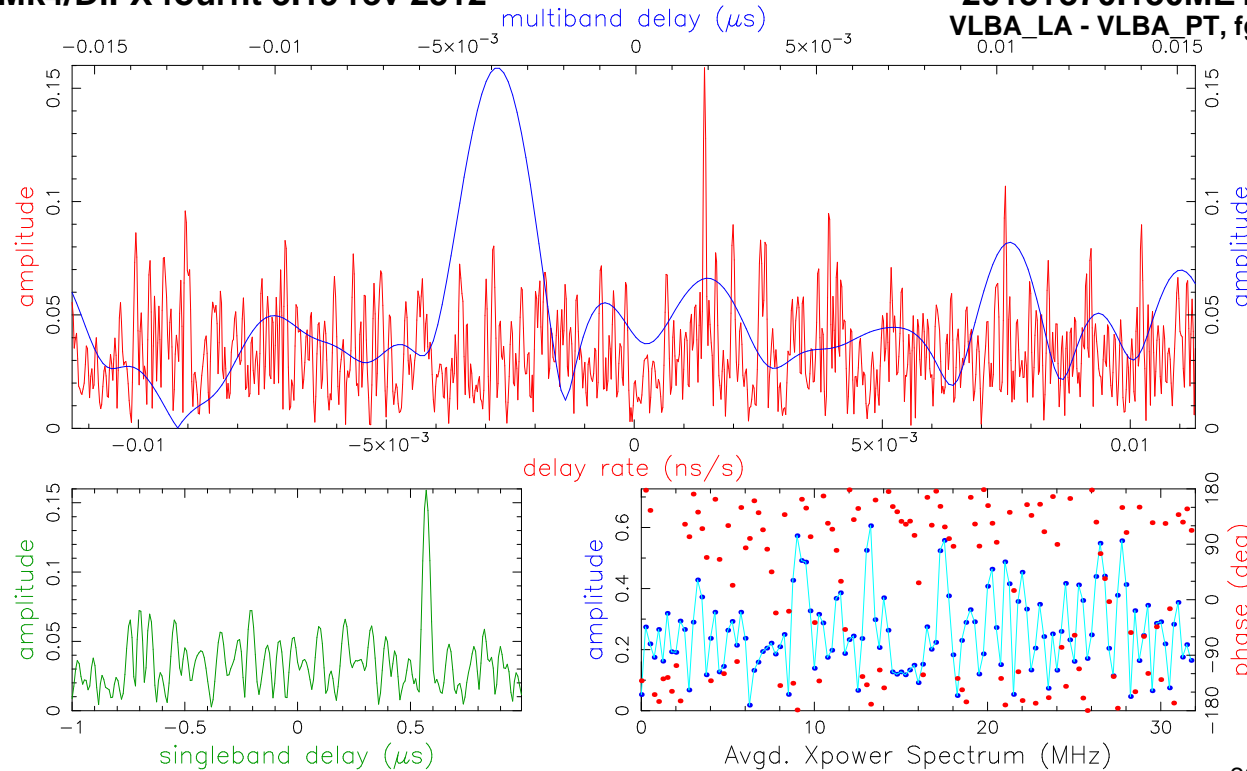
amp/frq (%) 54.1 67.7 Inc. frq. avg. 0.155 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

l: az 78.8 el 73.2 pa -88.7 p: az 74.3 el 71.3 pa -91.8 u,v (fr/asec) 270.268 167.901 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lp..130MEY Output file: /Exps/c192c/v2/1234/No0072/lp.W.279.130MEY

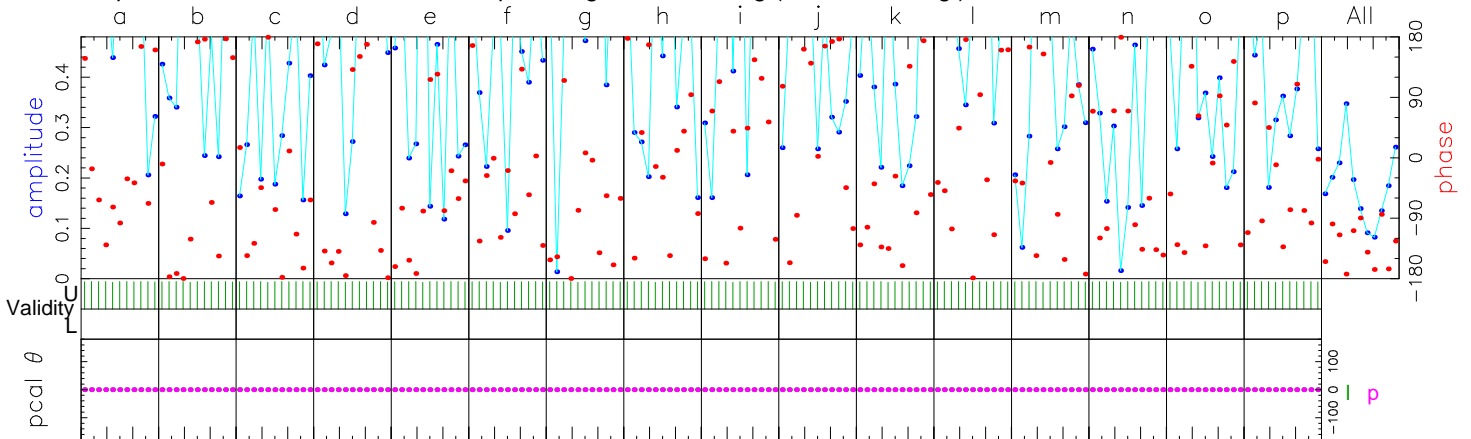
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, lp  
VLBA\_LA - VLBA\_PT, fgroup W, pol LR



Fringe quality 0  
SNR 5.8  
Int time 179.070  
Amp 0.160  
Phase -130.9  
PFD 5.2e-01  
Delays (us)  
SBD 0.570089  
MBD -0.003845  
Fringe rate (Hz) 0.121679  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054442  
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

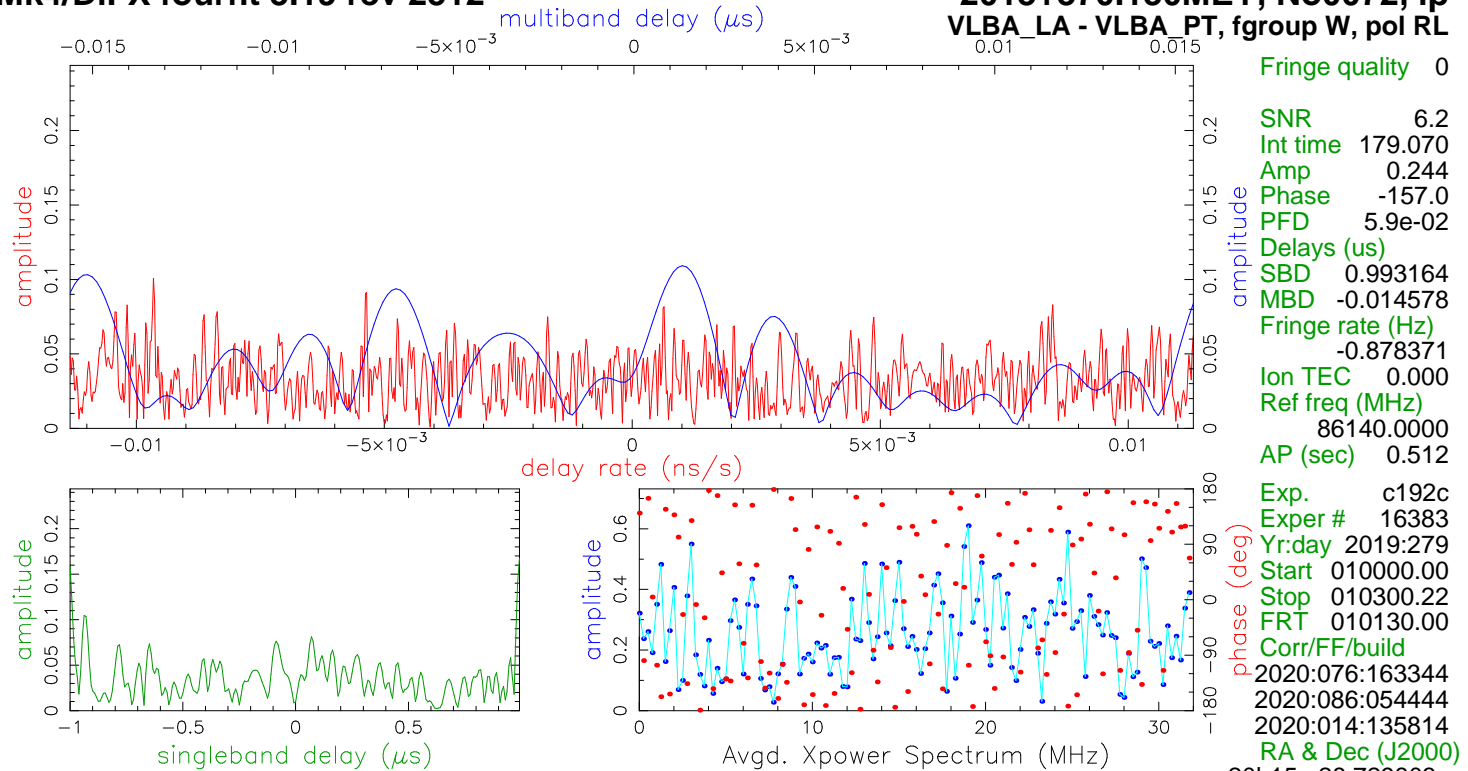


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		
l	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

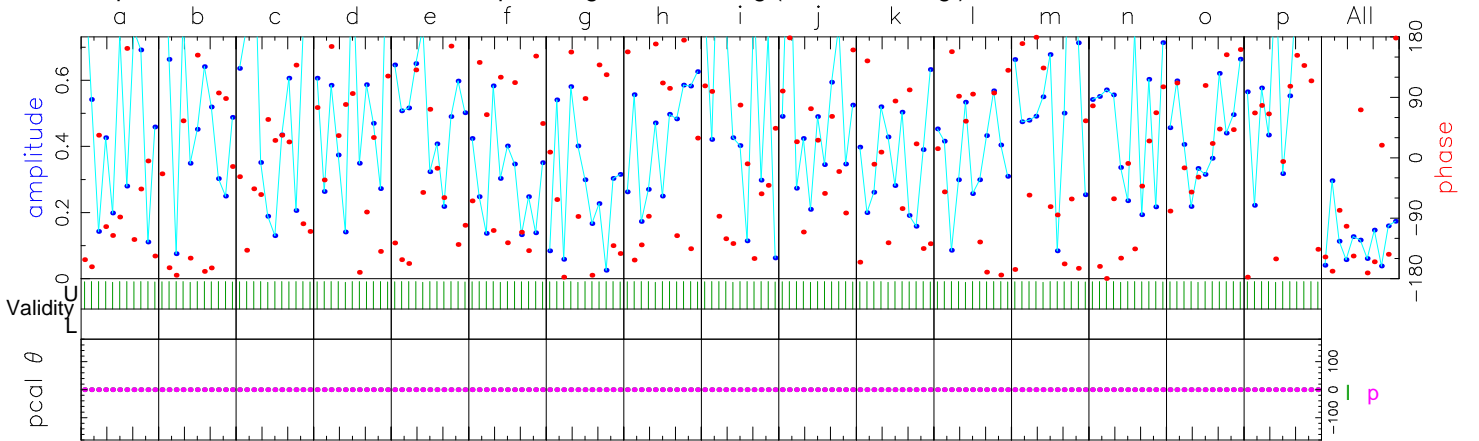
Group delay (usec)(sbd) 1.90932135756E+02 Apriori delay (usec) 1.90373480891E+02 Resid mbdelay (usec) -3.84513E-03 +/- 1.9E-04  
 Sband delay (usec) 1.90943569391E+02 Apriori clock (usec) -1.2755054E+01 Resid sbdelay (usec) 5.70089E-01 +/- 3.0E-03  
 Phase delay (usec) 1.90373476671E+02 Apriori clockrate (us/s) -5.5535860E-07 Resid phdelay (usec) -4.22000E-06 +/- 6.3E-07  
 Delay rate (us/s) -3.74868546461E-02 Apriori rate (us/s) -3.74882672237E-02 Resid rate (us/s) 1.41258E-06 +/- 6.1E-09  
 Total phase (deg) 100.9 Apriori accel (us/s/s) 3.55380843206E-07 Resid phase (deg) -130.9 +/- 19.7

ph/seg (deg) 31.1 32.6 Amplitude 0.160 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 48.9 57.0 Search (1024X64) 0.156 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 53.4 39.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 65.3 68.7 Inc. seg. avg. 0.160 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.165 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 78.8 el 73.2 pa -88.7 p: az 74.3 el 71.3 pa -91.8 u,v (fr/asec) 270.268 167.901 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lp..130MEY Output file: /Exps/c192c/v2/1234/No0072/lp.W.297.130MEY

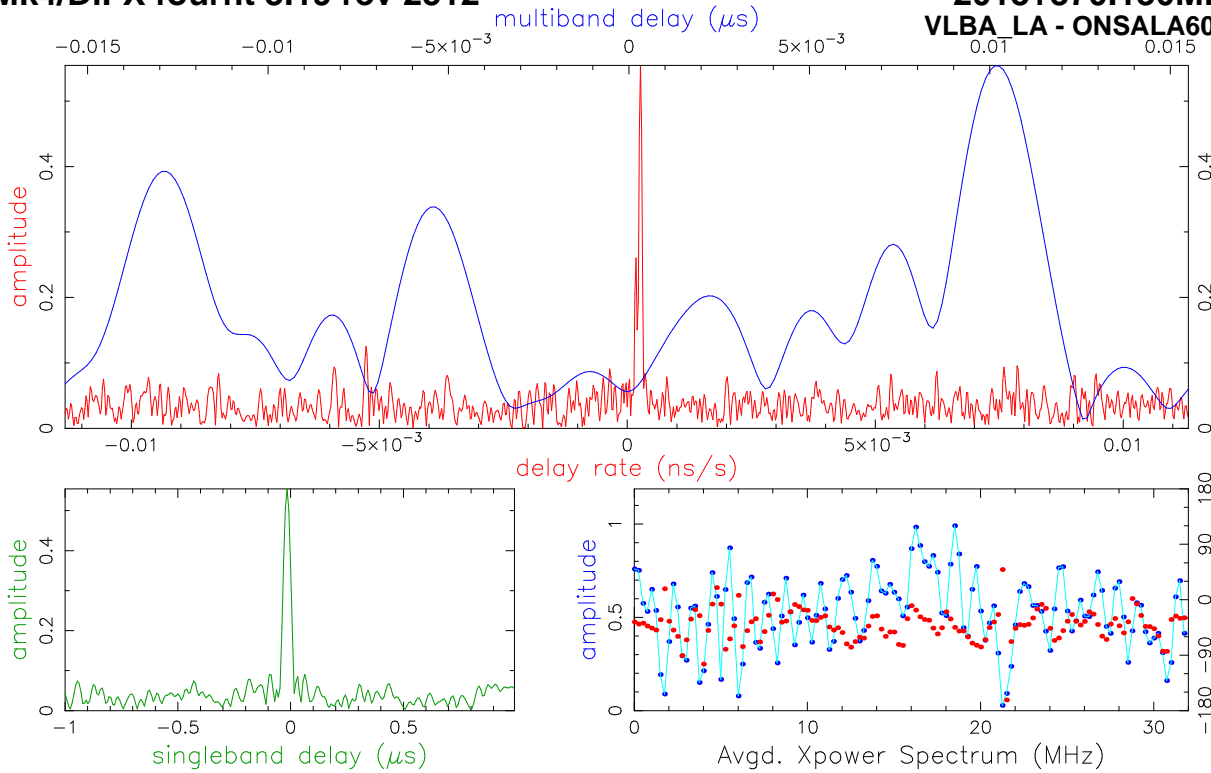


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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
	-119.7	162.0	-57.5	103.9	-130.9	-155.5	-149.6	-173.3	-111.5	78.5	-109.9	106.5	-131.9	168.7	60.0	144.0	Phase	-157.0
	0.5	0.1	0.4	0.3	0.3	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.4	0.1	0.2	0.5	Ampl.	0.2
	86.4	139.7	108.3	137.2	255.6	47.3	240.4	82.5	32.0	69.7	144.7	10.8	19.3	188.3	116.2	255.5	Sbd box	256.1
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	
l	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	
lp	0:0	0:0	0:0	0:0	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	
lp	0:0	0:0	0:0	0:0	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	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	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	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	1.91358902940E+02			Apriori delay (usec)			1.90373480891E+02			Resid mbdelay (usec)			-1.45780E-02			+/- 1.7E-04		
Sband delay (usec)	1.91366644641E+02			Apriori clock (usec)			-1.2755054E+01			Resid sbdelay (usec)			9.93164E-01			+/- 2.8E-03		
Phase delay (usec)	1.90373475828E+02			Apriori clockrate (us/s)			-5.5535860E-07			Resid phdelay (usec)			-5.06300E-06			+/- 5.9E-07		
Delay rate (us/s)	-3.74984642351E-02			Apriori rate (us/s)			-3.74882672237E-02			Resid rate (us/s)			-1.01970E-05			+/- 5.7E-09		
Total phase (deg)	74.8			Apriori accel (us/s/s)			3.55380843206E-07			Resid phase (deg)			-157.0			+/- 18.4		

RMS Theor. Amplitude 0.244 +/- 0.039 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 73.3 30.5 Search (1024X64) 0.160 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 51.1 53.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 74.9 36.8 Inc. seg. avg. 0.152 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 58.2 64.1 Inc. frq. avg. 0.203 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 l: az 78.8 el 73.2 pa -88.7 p: az 74.3 el 71.3 pa -91.8 u,v (fr/asec) 270.268 167.901 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/lp..130MEY Output file: /Exps/c192c/v2/1234/No0072/lp.W.314.130MEY

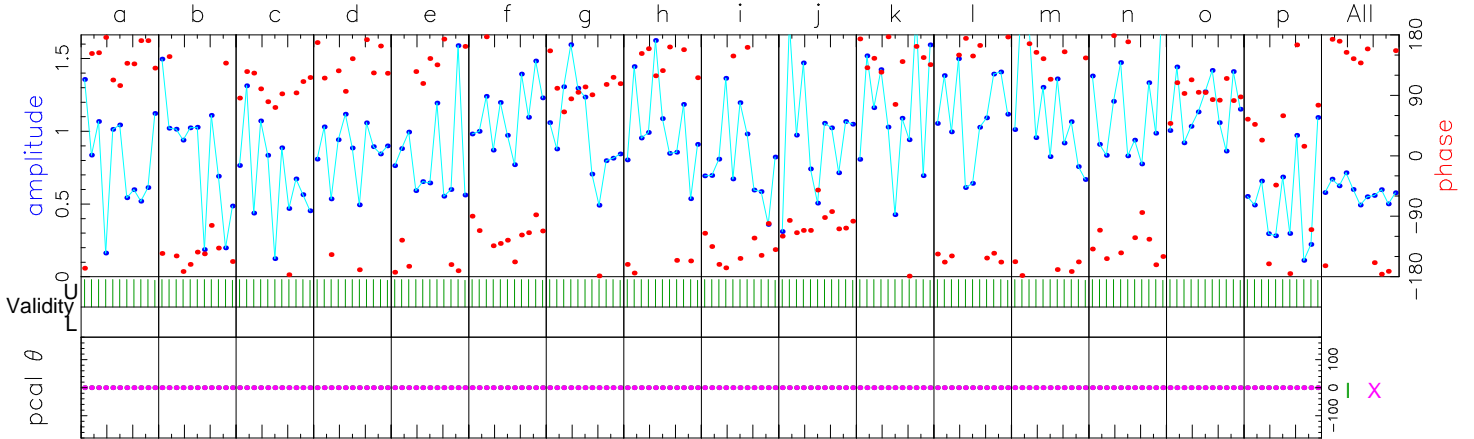


Fringe quality 7

SNR 20.3  
Int time 179.448  
Amp 0.555  
Phase 169.4  
PFD 0.0e+00  
Delays (us)  
SBD -0.015861  
MBD 0.010192  
Fringe rate (Hz) 0.022196  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054437  
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

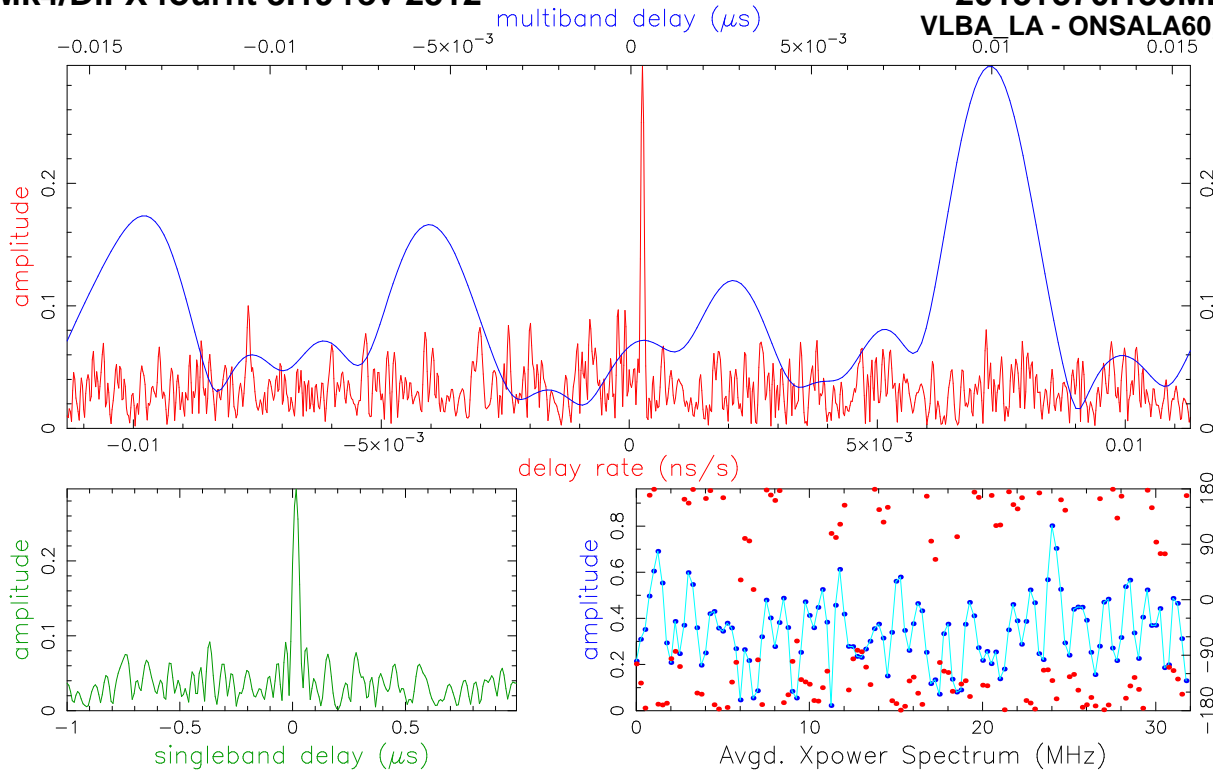


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	146.4	-153.5	105.7	142.1	172.0	-121.8	102.6	158.0	-154.9	-100.2	147.3	-169.9	170.2	-143.4	91.2	76.1		Phase 169.4
	0.7	0.7	0.6	0.7	0.7	1.0	0.9	0.9	0.7	0.9	1.0	1.0	1.0	1.0	1.1	0.2		Ampl. 0.8
	126.9	127.5	126.7	126.5	127.9	126.7	127.1	127.3	126.1	127.0	127.0	126.5	126.9	126.7	126.5	124.3		Sbd box 127.0
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
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
I: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		ManI PC
I: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		PC amp
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 1.07601259385E+04 Apriori delay (usec) 1.07601469967E+04 Resid mbdelay (usec) 1.01918E-02 +/- 5.3E-05  
 Sband delay (usec) 1.07601311357E+04 Apriori clock (usec) -3.3185955E+01 Resid sbdelay (usec) -1.58610E-02 +/- 8.5E-04  
 Phase delay (usec) 1.07601470021E+04 Apriori clockrate (us/s) -8.7947201E-07 Resid phdelay (usec) 5.46173E-06 +/- 1.8E-07  
 Delay rate (us/s) 1.01273238029E+00 Apriori rate (us/s) 1.01273212262E+00 Resid rate (us/s) 2.57671E-07 +/- 1.7E-09  
 Total phase (deg) 275.3 Apriori accel (us/s/s) -7.50077682264E-05 Resid phase (deg) 169.4 +/- 5.6

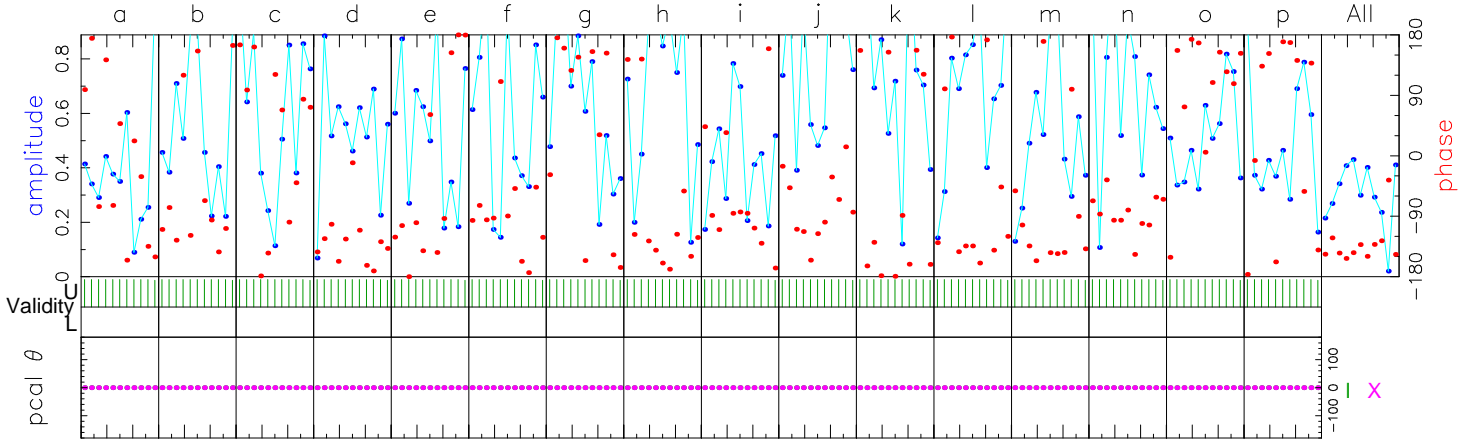
RMS Theor. Amplitude 0.555 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 20.1 9.4 Search (1024X64) 0.536 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 12.9 16.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 55.7 11.3 Inc. seg. avg. 0.580 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 64.3 19.7 Inc. frq. avg. 0.820 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 X: az 297.5 el 27.1 pa 36.4 u,v (fr/asec) -7346.570 -6255.897 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IX..130MEY Output file: /Exps/c192c/v2/1234/No0072/IX.W.256.130MEY



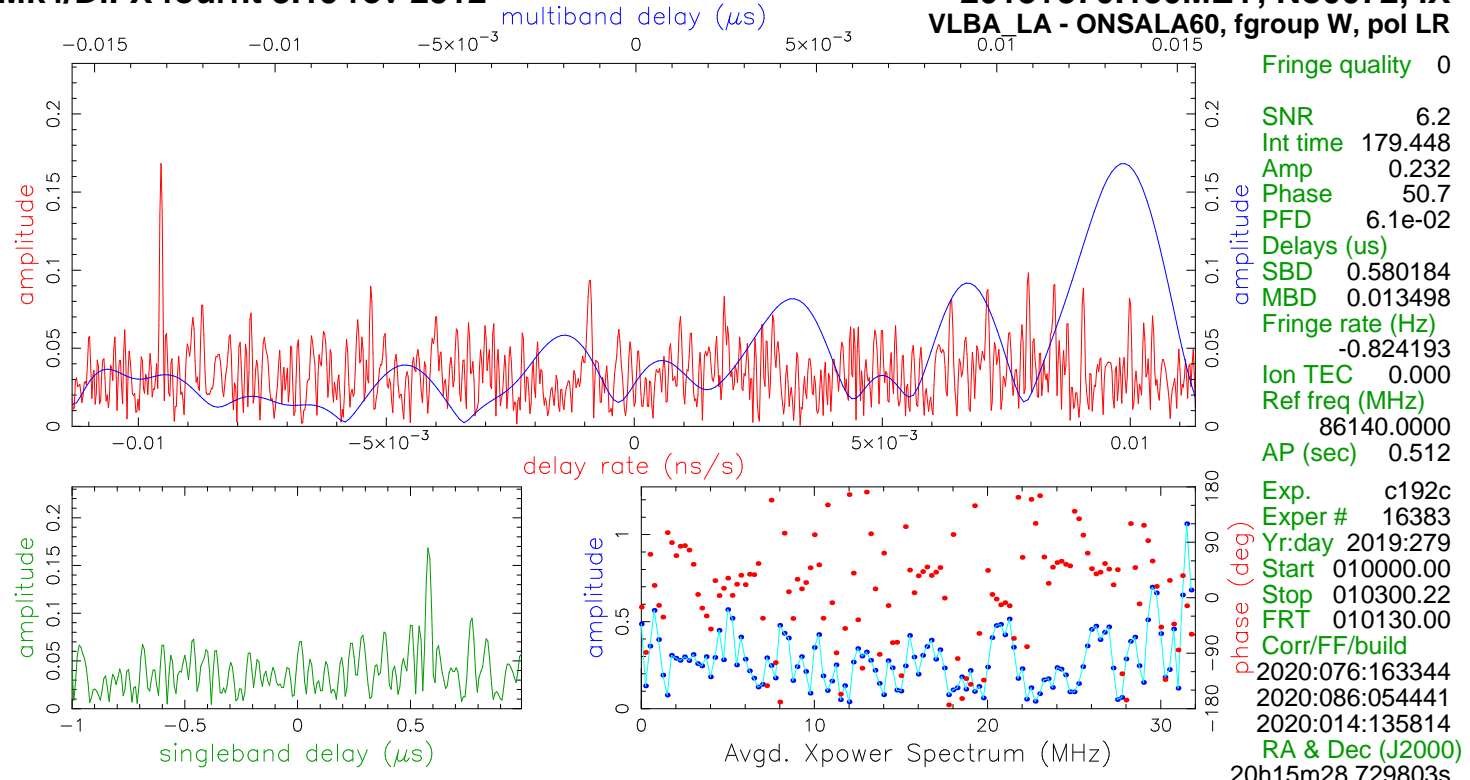
Fringe quality 9  
SNR 10.9  
Int time 179.449  
Amp 0.296  
Phase -140.8  
PFD 4.5e-19  
Delays (us)  
SBD 0.014495  
MBD 0.009934  
Fringe rate (Hz) 0.022503  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054439  
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					
	-158.0	-144.5	133.0	-131.1	-141.0	-91.4	163.6	-142.3	-103.4	-64.1	-179.7	-142.1	-143.0	-84.3	132.8	171.6		Phase -140.8					
	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.3	0.6	0.6	0.5	0.4	0.6	0.3	0.3		Ampl. 0.4					
	173.3	130.6	206.3	130.7	131.0	130.8	129.9	131.3	200.3	130.8	131.0	131.1	129.8	130.3	130.0	130.1		Sbd box 130.9					
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					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			1.07601569302E+04															Apriori delay (usec)	1.07601469967E+04	Resid mbdelay (usec)	9.93356E-03	+/-	9.9E-05
Sband delay (usec)			1.07601614917E+04															Apriori clock (usec)	-3.3185955E+01	Resid sbdelay (usec)	1.44950E-02	+/-	1.6E-03
Phase delay (usec)			1.07601469921E+04															Apriori clockrate (us/s)	-8.7947201E-07	Resid phdelay (usec)	-4.54125E-06	+/-	3.4E-07
Delay rate (us/s)			1.01273238386E+00															Apriori rate (us/s)	1.01273212262E+00	Resid rate (us/s)	2.61241E-07	+/-	3.3E-09
Total phase (deg)																		Apriori accel (us/s/s)	-7.50077682264E-05	Resid phase (deg)	-140.8	+/-	10.6

ph/seg (deg) 33.1 17.5 Search (1024X64) 0.296 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 38.6 30.6 Interp. 0.290 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.1 21.1 Inc. seg. avg. 0.289 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 61.1 36.9 Inc. frq. avg. 0.391 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 I: az 78.8 el 73.2 pa -88.7 X: az 297.5 el 27.1 pa 36.4 u,v (fr/asec) -7346.570 -6255.897 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IX..130MEY Output file: /Exps/c192c/v2/1234/No0072/IX.W.272.130MEY simultaneous interpolator



Fringe quality 0

SNR 6.2

Int time 179.448

Amp 0.232

Phase 50.7

PFD 6.1e-02

Delays (us)

SBD 0.580184

MBD 0.013498

Fringe rate (Hz)

-0.824193

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 010000.00

Stop 010300.22

FRT 010130.00

Corr/FF/build

2020:076:163344

2020:086:054441

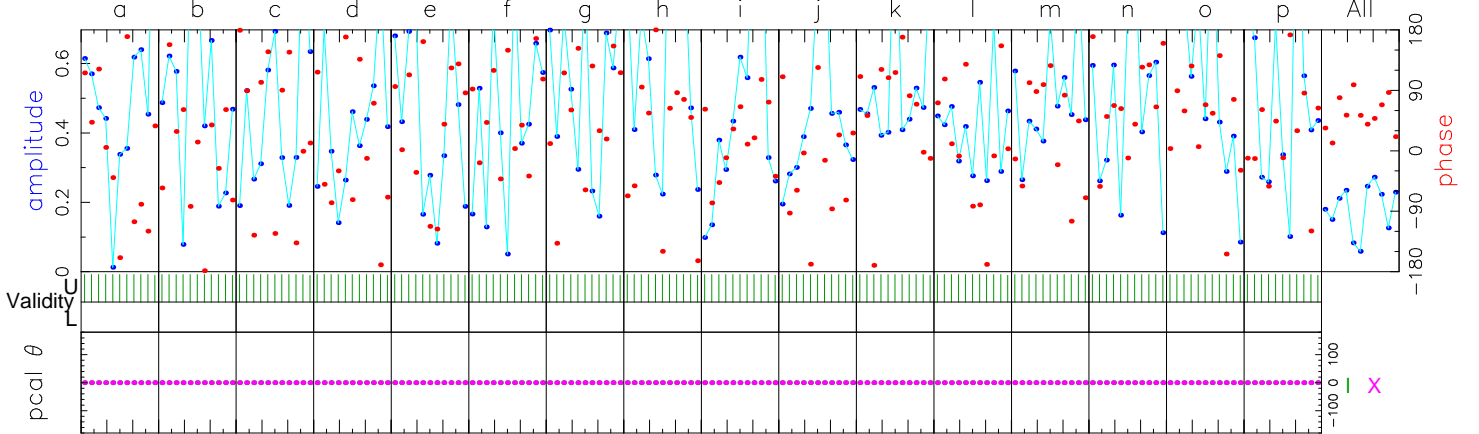
2020:014:135814

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				
	46.1	-14.1	91.5	-86.0	91.0	45.7	80.7	67.9	37.7	-20.3	90.6	16.2	50.5	67.0	59.8	21.7	Phase	50.7				
	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.4	0.5	0.2	0.4	0.2	0.3	0.4	0.6	0.5	Ampl.	0.2				
	119.5	143.5	22.7	216.1	79.0	232.3	17.3	38.6	78.9	176.4	118.7	24.0	23.9	184.3	202.7	3.4	Sbd box	203.3				
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					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
X																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			1.07607229950E+04														Apriori delay (usec)	1.07601469967E+04	Resid mbdelay (usec)	1.34983E-02	+/-	1.7E-04
Sband delay (usec)			1.07607271802E+04														Apriori clock (usec)	-3.3185955E+01	Resid sbdelay (usec)	5.80184E-01	+/-	2.8E-03
Phase delay (usec)			1.07601469983E+04														Apriori clockrate (us/s)	-8.7947201E-07	Resid phdelay (usec)	1.63417E-06	+/-	5.9E-07
Delay rate (us/s)			1.01272255455E+00														Apriori rate (us/s)	1.01273212262E+00	Resid rate (us/s)	-9.56807E-06	+/-	5.7E-09
Total phase (deg)				156.6													Apriori accel (us/s/s)	-7.50077682264E-05	Resid phase (deg)	50.7	+/-	18.4

ph/seg (deg) 26.1 30.5 Search (1024X64) 0.164 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

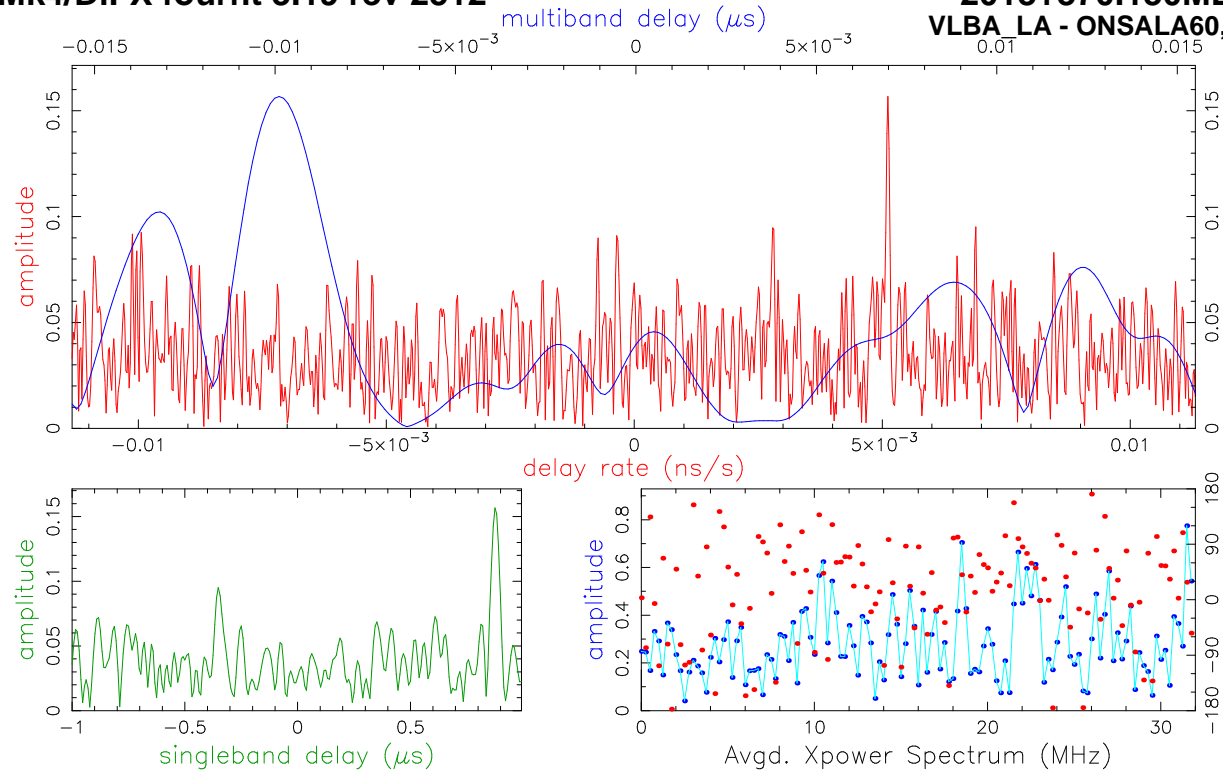
amp/seg (%) 40.0 53.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 51.1 36.8 Inc. seg. avg. 0.219 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 64.3 64.2 Inc. frq. avg. 0.232 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

I: az 78.8 el 73.2 pa -88.7 X: az 297.5 el 27.1 pa 36.4 u,v (fr/asec) -7346.570 -6255.897 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IX..130MEY Output file: /Exps/c192c/v2/1234/No0072/IX.W.288.130MEY

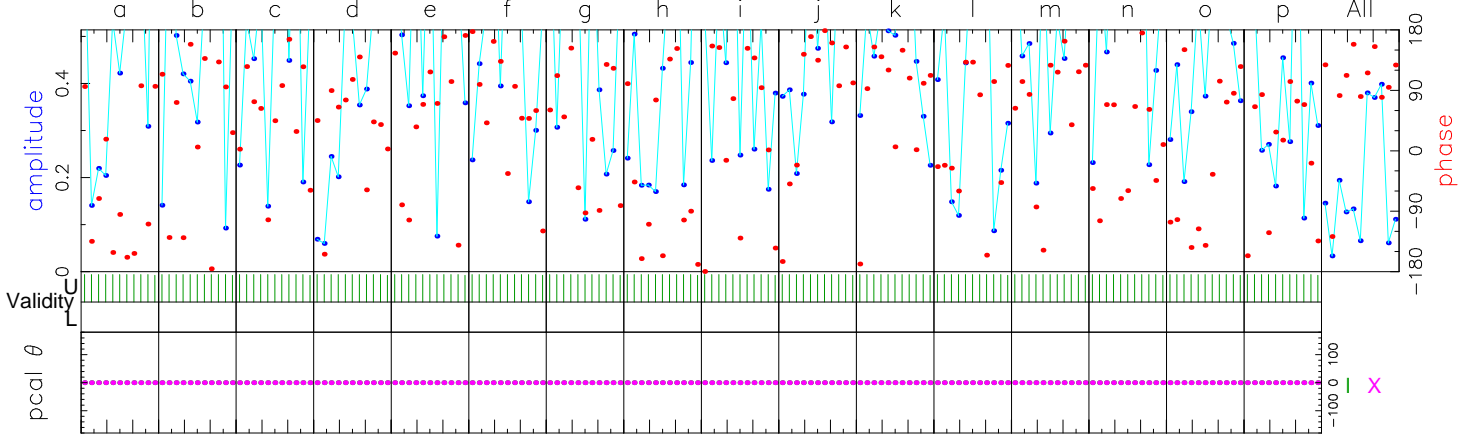


Fringe quality 0

SNR 5.8  
Int time 179.449  
Amp 0.171  
Phase 115.6  
PFD 6.4e-01  
Delays (us)  
SBD 0.877077  
MBD -0.009882  
Fringe rate (Hz) 0.440739  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.00  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054443  
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



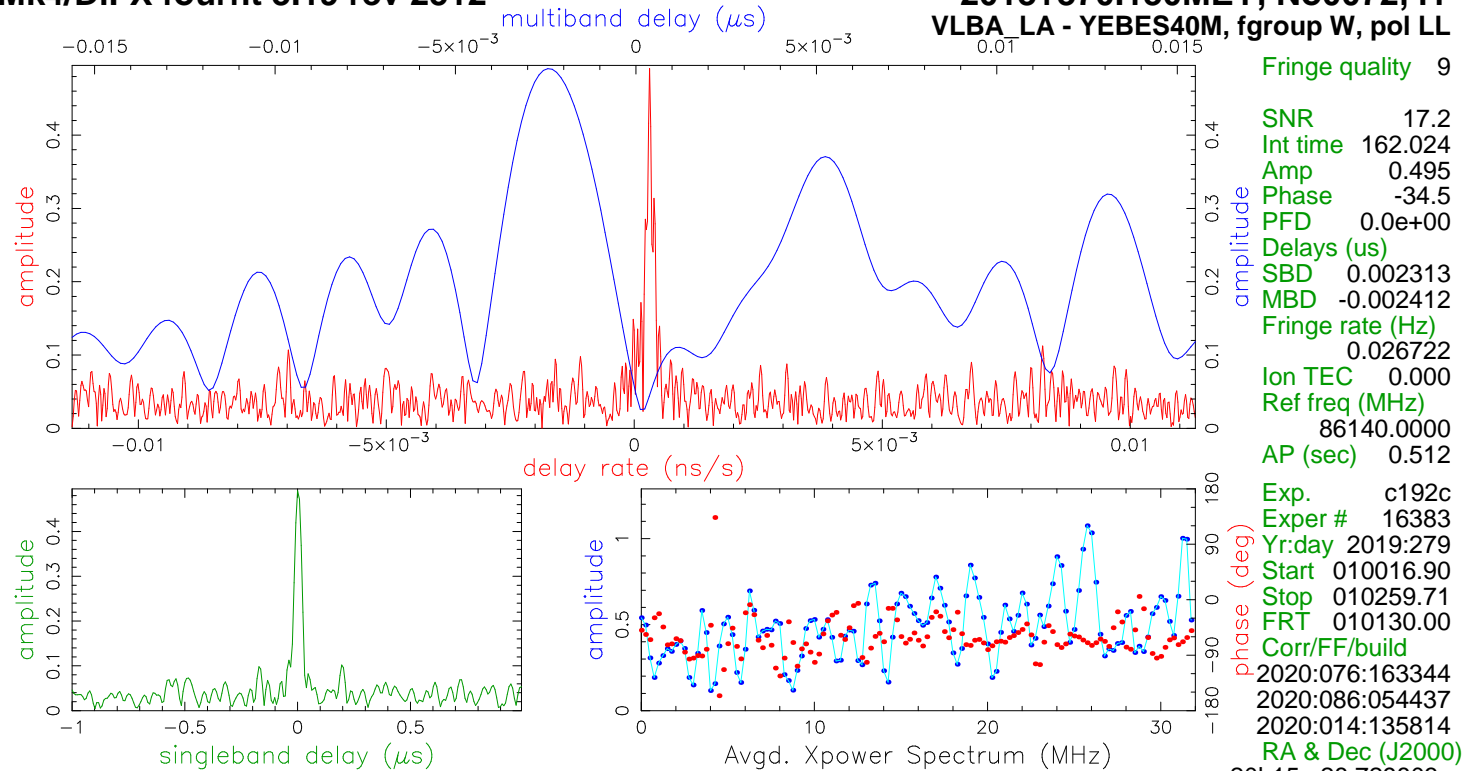
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
																			Tracks
Group delay (usec)(sbd)		1.07610121145E+04																	
Sband delay (usec)		1.07610240732E+04																	
Phase delay (usec)		1.07601470004E+04																	
Delay rate (us/s)		1.01273723916E+00																	
Total phase (deg)				221.5															
ph/seg (deg)	44.2	33.0																	
amp/seg (%)	83.8	57.5																	
ph/frq (deg)	55.5	39.7																	
amp/frq (%)	63.7	69.4																	

Group delay (usec)(sbd) 1.07610121145E+04 Apriori delay (usec) 1.07601469967E+04 Resid mbdelay (usec) -9.88219E-03 +/- 1.9E-04  
 Sband delay (usec) 1.07610240732E+04 Apriori clock (usec) -3.3185955E+01 Resid sbdelay (usec) 8.77077E-01 +/- 3.0E-03  
 Phase delay (usec) 1.07601470004E+04 Apriori clockrate (us/s) -8.7947201E-07 Resid phdelay (usec) 3.72905E-06 +/- 6.4E-07  
 Delay rate (us/s) 1.01273723916E+00 Apriori rate (us/s) 1.01273212262E+00 Resid rate (us/s) 5.11654E-06 +/- 6.2E-09  
 Total phase (deg) 221.5 Apriori accel (us/s/s) -7.50077682264E-05 Resid phase (deg) 115.6 +/- 19.9

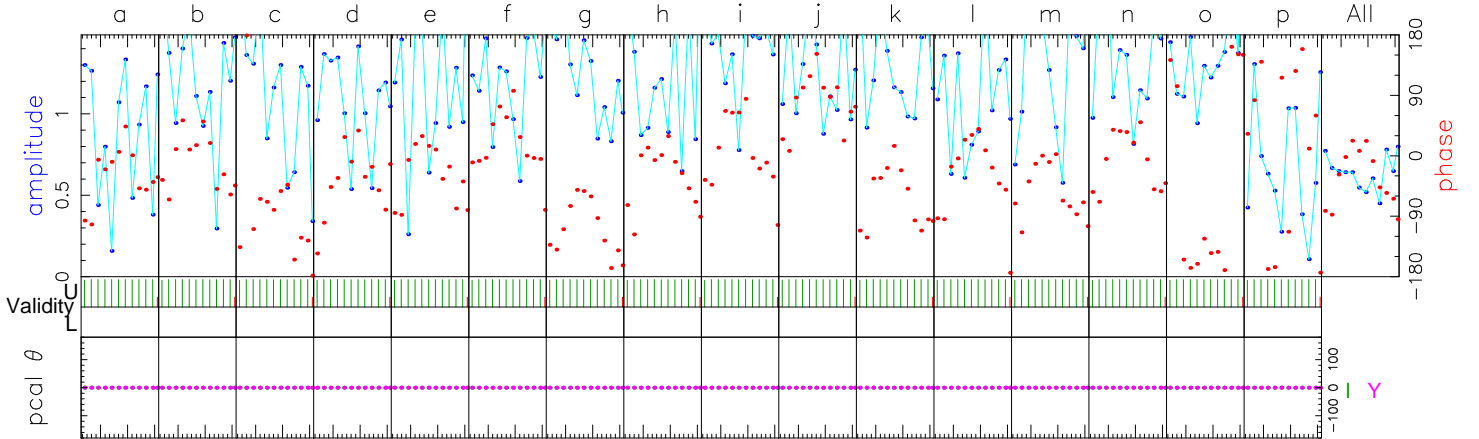
ph/seg (deg) 44.2 33.0 Theor. Amplitude 0.171 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 83.8 57.5 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 55.5 39.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 63.7 69.4 Inc. seg. avg. 0.172 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.186 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 X: az 297.5 el 27.1 pa 36.4 u,v (fr/asec) -7346.570 -6255.897 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IX..130MEY Output file: /Exps/c192c/v2/1234/No0072/IX.W.303.130MEY





Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



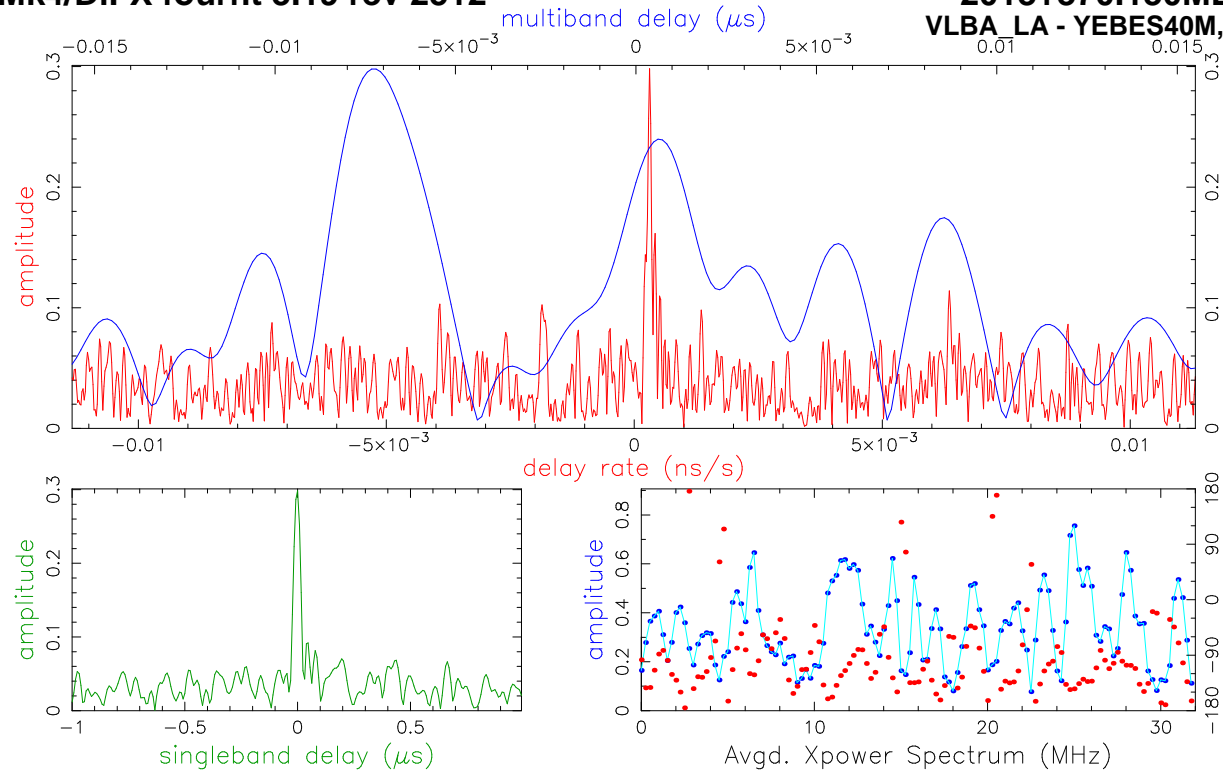
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-35.3	-8.8	-105.4	-39.4	-31.9	16.3	-104.8	-34.0	3.7	78.0	-64.4	-23.1	-48.8	-10.3	-178.4	137.7	Phase	-34.5
	0.6	1.0	0.9	0.7	0.9	0.9	1.0	0.9	1.0	0.9	1.0	0.8	1.1	1.0	1.1	0.3	Ampl.	0.8
	127.7	129.5	129.5	129.6	129.6	129.1	129.9	129.6	129.3	129.4	129.4	129.0	129.1	128.9	128.7	127.7	Sbd box	129.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	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	
I: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	
I: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	
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
I	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)	1.03899616790E+04	Apriori delay (usec)	1.03899640909E+04	Resid mbdelay (usec)	-2.41189E-03	+/-	6.3E-05
Sband delay (usec)	1.03899664039E+04	Apriori clock (usec)	-1.0453288E+01	Resid sbdelay (usec)	2.31300E-03	+/-	1.0E-03
Phase delay (usec)	1.03899640897E+04	Apriori clockrate (us/s)	-5.7147201E-07	Resid phdelay (usec)	-1.11293E-06	+/-	2.1E-07
Delay rate (us/s)	1.28410856083E+00	Apriori rate (us/s)	1.28410825061E+00	Resid rate (us/s)	3.10211E-07	+/-	2.3E-09
Total phase (deg)	248.5	Apriori accel (us/s/s)	-5.97480847763E-05	Resid phase (deg)	-34.5	+/-	6.7

ph/seg (deg)	RMS 39.6	Theor. 11.5	Amplitude Search (1024X64)	0.495 +/- 0.029	0.490	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	34.4	20.1	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	75.4	13.3	Inc. seg. avg.	0.622	0.622	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	84.6	23.2	Inc. frq. avg.	0.847	0.847	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

I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 59.0 u,v (fr/asec) -9284.842 -3972.727 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IY..130MEY Output file: /Exps/c192c/v2/1234/No0072/IY.W.254.130MEY

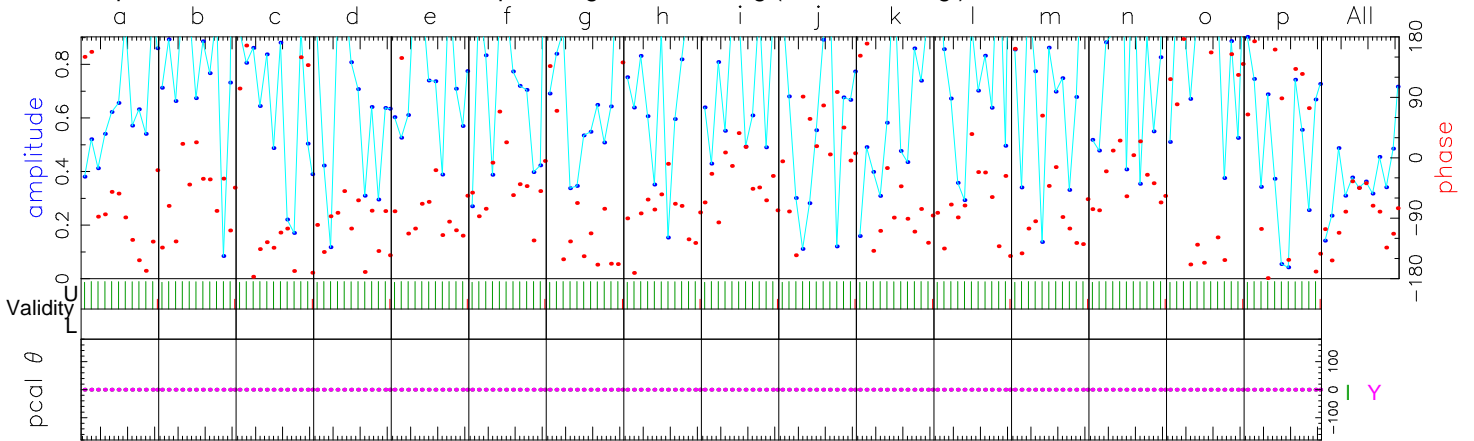


Fringe quality 9

SNR 10.5  
Int time 162.024  
Amp 0.301  
Phase -85.3  
PFD 2.5e-17  
Delays (us)  
SBD -0.002310  
MBD -0.007281  
Fringe rate (Hz) 0.025892  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010016.90  
Stop 010259.71  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054439  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec

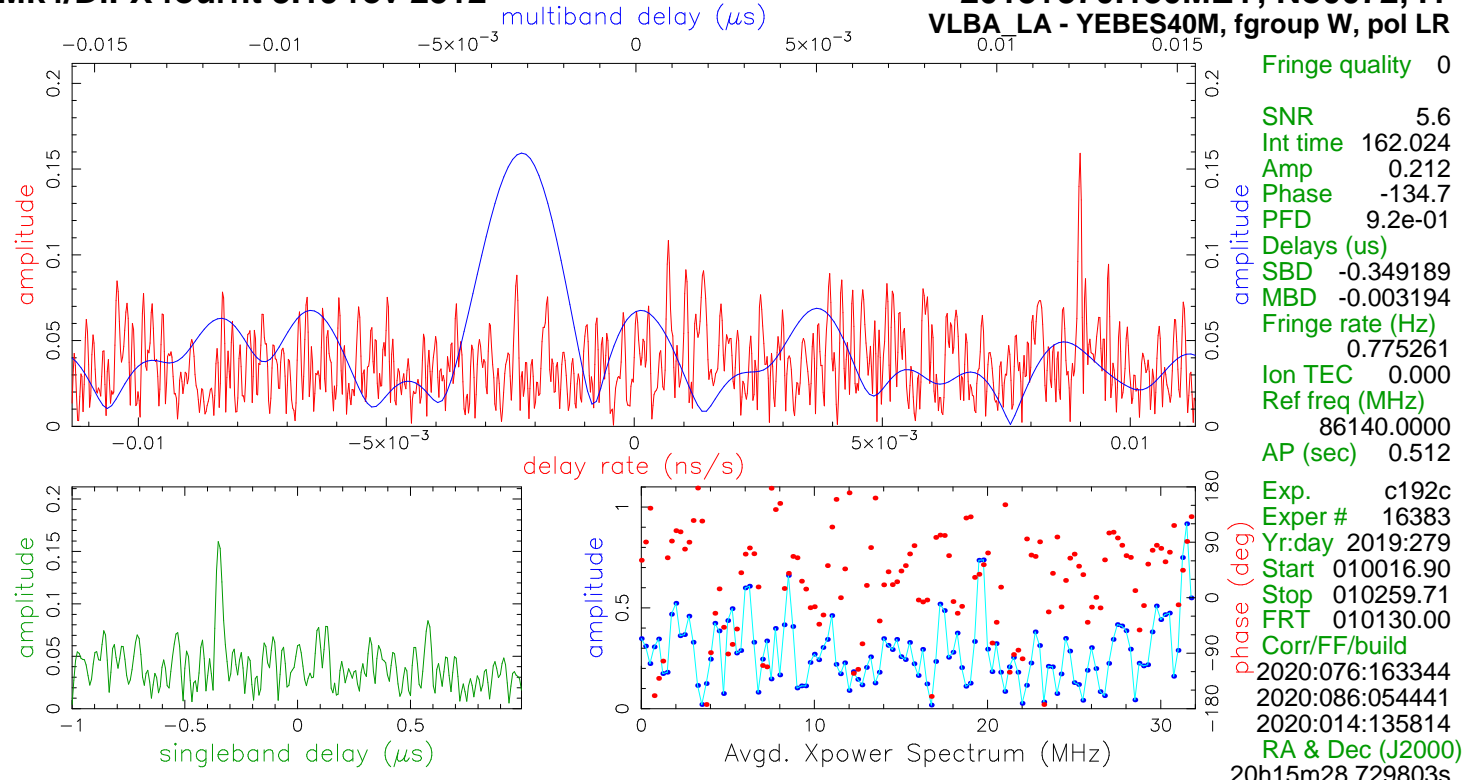


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-110.3	-53.3	-171.6	-89.9	-90.5	-36.5	-156.5	-91.5	-30.5	15.0	-97.8	-73.6	-100.6	-17.4	175.9	151.9	Phase	-85.3
	0.4	0.6	0.4	0.5	0.6	0.5	0.4	0.7	0.6	0.4	0.5	0.5	0.5	0.7	0.6	0.3	Ampl.	0.5
	242.4	129.1	128.3	128.4	129.4	128.8	128.2	129.0	129.2	129.0	128.2	127.8	128.3	128.2	128.3	127.3	Sbd box	128.7
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	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 freqs	
I: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 phase	
I: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	
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	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) 1.03899568099E+04 Apriori delay (usec) 1.03899640909E+04 Resid mbdelay (usec) -7.28098E-03 +/- 1.0E-04  
 Sband delay (usec) 1.03899617814E+04 Apriori clock (usec) -1.0453288E+01 Resid sbdelay (usec) -2.30950E-03 +/- 1.6E-03  
 Phase delay (usec) 1.03899640881E+04 Apriori clockrate (us/s) -5.7147201E-07 Resid phdelay (usec) -2.74910E-06 +/- 3.5E-07  
 Delay rate (us/s) 1.28410855120E+00 Apriori rate (us/s) 1.28410825061E+00 Resid rate (us/s) 3.00584E-07 +/- 3.8E-09  
 Total phase (deg) 197.8 Apriori accel (us/s/s) -5.97480847763E-05 Resid phase (deg) -85.3 +/- 10.9

RMS Theor. Amplitude 0.301 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 36.9 18.9 Search (1024X64) 0.289 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 43.7 33.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 65.3 21.9 Inc. seg. avg. 0.344 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 74.7 38.2 Inc. frq. avg. 0.469 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 59.0 u,v (fr/asec) -9284.842 -3972.727 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IY..130MEY Output file: /Exps/c192c/v2/1234/No0072/IY.W.271.130MEY



Fringe quality 0

SNR 5.6

Int time 162.024

Amp 0.212

Phase -134.7

PDF 9.2e-01

Delays (us)

SBD -0.349189

MBD -0.003194

Fringe rate (Hz)

0.775261

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 010016.90

Stop 010259.71

FRT 010130.00

Corr/FF/build

2020:076:163344

2020:086:054441

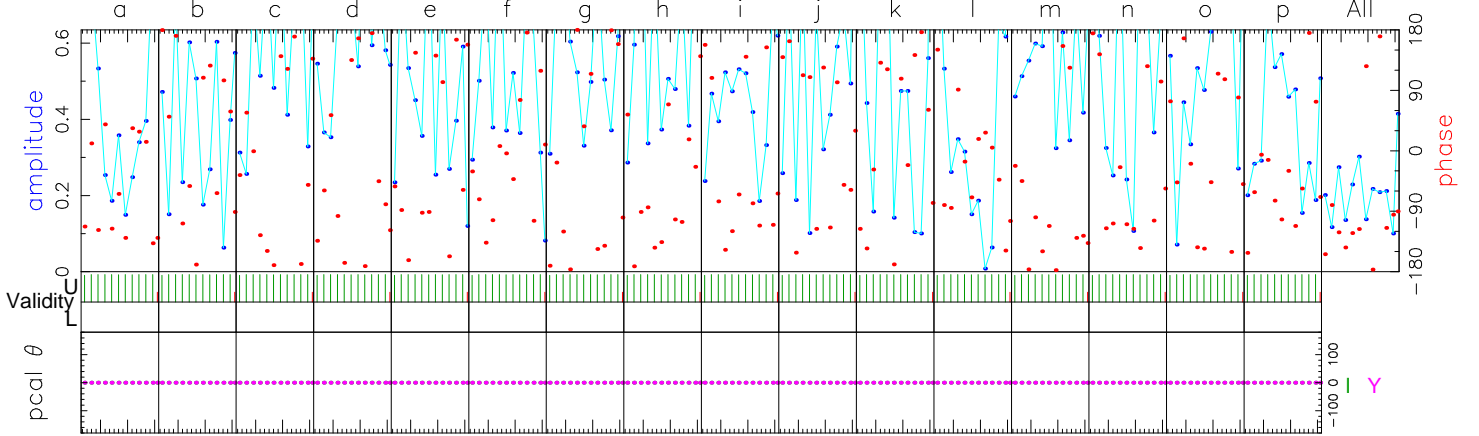
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 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	
	-80.1	-153.1	-177.6	-145.4	-130.5	-75.0	-157.3	-97.9	-127.8	165.7	157.9	-101.2	-132.6	-163.8	162.5	-64.5	Phase	-134.7	
	0.2	0.1	0.3	0.4	0.3	0.2	0.4	0.3	0.3	0.1	0.2	0.2	0.5	0.3	0.2	0.3	Ampl.	0.2	
	161.1	166.1	31.4	53.1	28.7	101.5	178.5	139.1	202.1	149.4	217.1	215.0	83.4	211.3	231.9	190.0	Sbd box	84.3	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used		
I	1000	1000	1000	1000	1000	1000	1000	1000	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		
I: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		
I: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		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks		
I	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		
Group delay (usec)(sbd)		1.03896171470E+04								1.03899640909E+04							Resid mbdelay (usec)	-3.19389E-03	+/- 1.9E-04
Sband delay (usec)		1.03896149014E+04								-1.0453288E+01							Resid sbdelay (usec)	-3.49189E-01	+/- 3.1E-03
Phase delay (usec)		1.03899640865E+04								-5.7147201E-07							Resid phdelay (usec)	-4.34237E-06	+/- 6.6E-07
Delay rate (us/s)		1.28411725062E+00								1.28410825061E+00							Resid rate (us/s)	9.00001E-06	+/- 7.0E-09
Total phase (deg)			148.4							-5.97480847763E-05							Resid phase (deg)	-134.7	+/- 20.5

ph/seg (deg) 43.5 35.4 Search (1024X64) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 51.1 61.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 46.1 40.9 Inc. seg. avg. 0.222 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

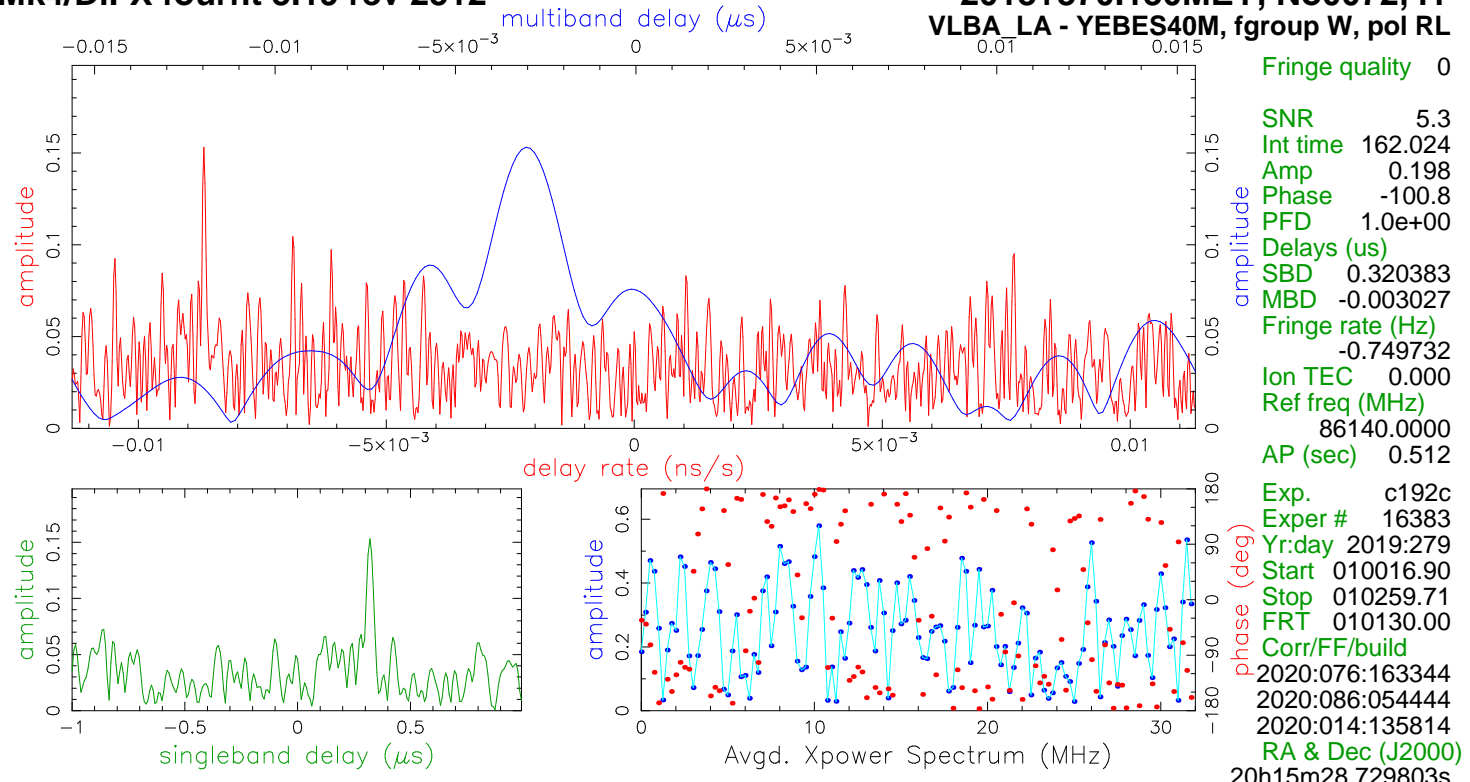
amp/frq (%) 55.0 71.4 Inc. frq. avg. 0.213 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 59.0 u,v (fr/asec) -9284.842 -3972.727 ion window (TEC) 0.00 0.00 simultaneous interpolator

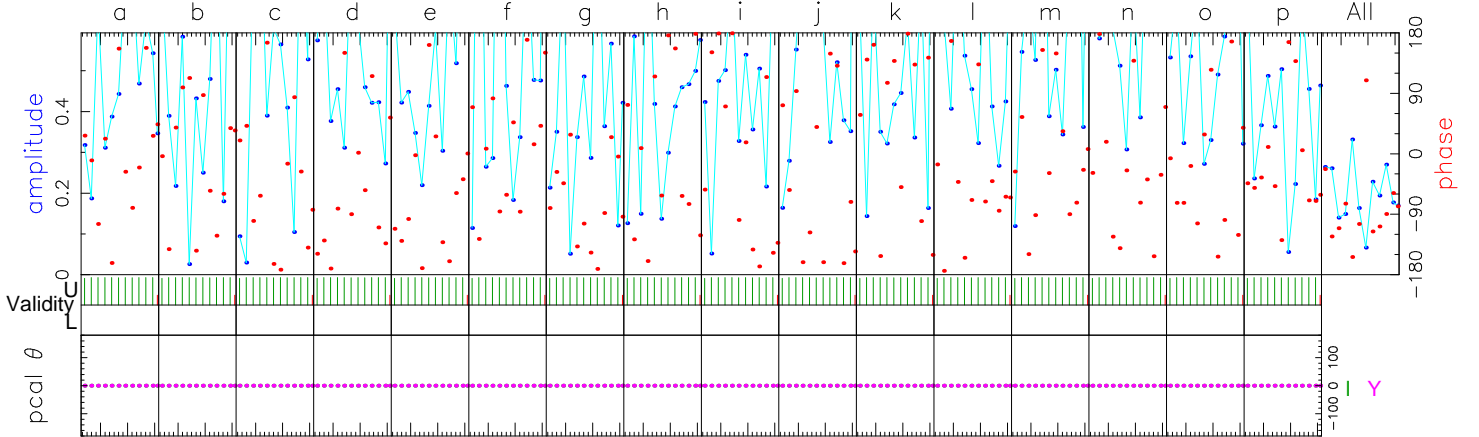
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IY..130MEY Output file: /Exps/c192c/v2/1234/No0072/IY.W.286.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, IY  
VLBA\_LA - YEBES40M, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 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
	-45.0	4.3	-93.5	-111.8	-85.9	-103.0	-89.4	-149.7	-161.3	-170.6	172.7	-73.1	-91.6	-81.3	-100.3	-42.8		Phase -100.8
	0.2	0.1	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.2	0.2	0.3	0.3		Ampl. 0.2
	145.6	82.5	165.3	114.7	197.4	153.4	243.9	166.8	201.6	81.8	231.2	60.8	209.7	55.8	80.9	3.4		Sbd box 170.0
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used
I	1000	1000	1000	1000	1000	1000	1000	1000	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
I: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
I: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		Chan ids
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks
I	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)	1.03902735640E+04	Apriori delay (usec)	1.03899640909E+04	Resid mbdelay (usec)	-3.02683E-03	+/-	2.0E-04
Sband delay (usec)	1.03902844744E+04	Apriori clock (usec)	-1.0453288E+01	Resid sbdelay (usec)	3.20383E-01	+/-	3.2E-03
Phase delay (usec)	1.03899640876E+04	Apriori clockrate (us/s)	-5.7147201E-07	Resid phdelay (usec)	-3.25099E-06	+/-	6.9E-07
Delay rate (us/s)	1.28409954697E+00	Apriori rate (us/s)	1.28410825061E+00	Resid rate (us/s)	-8.70364E-06	+/-	7.4E-09
Total phase (deg)	182.2	Apriori accel (us/s/s)	-5.97480847763E-05	Resid phase (deg)	-100.8	+/-	21.5

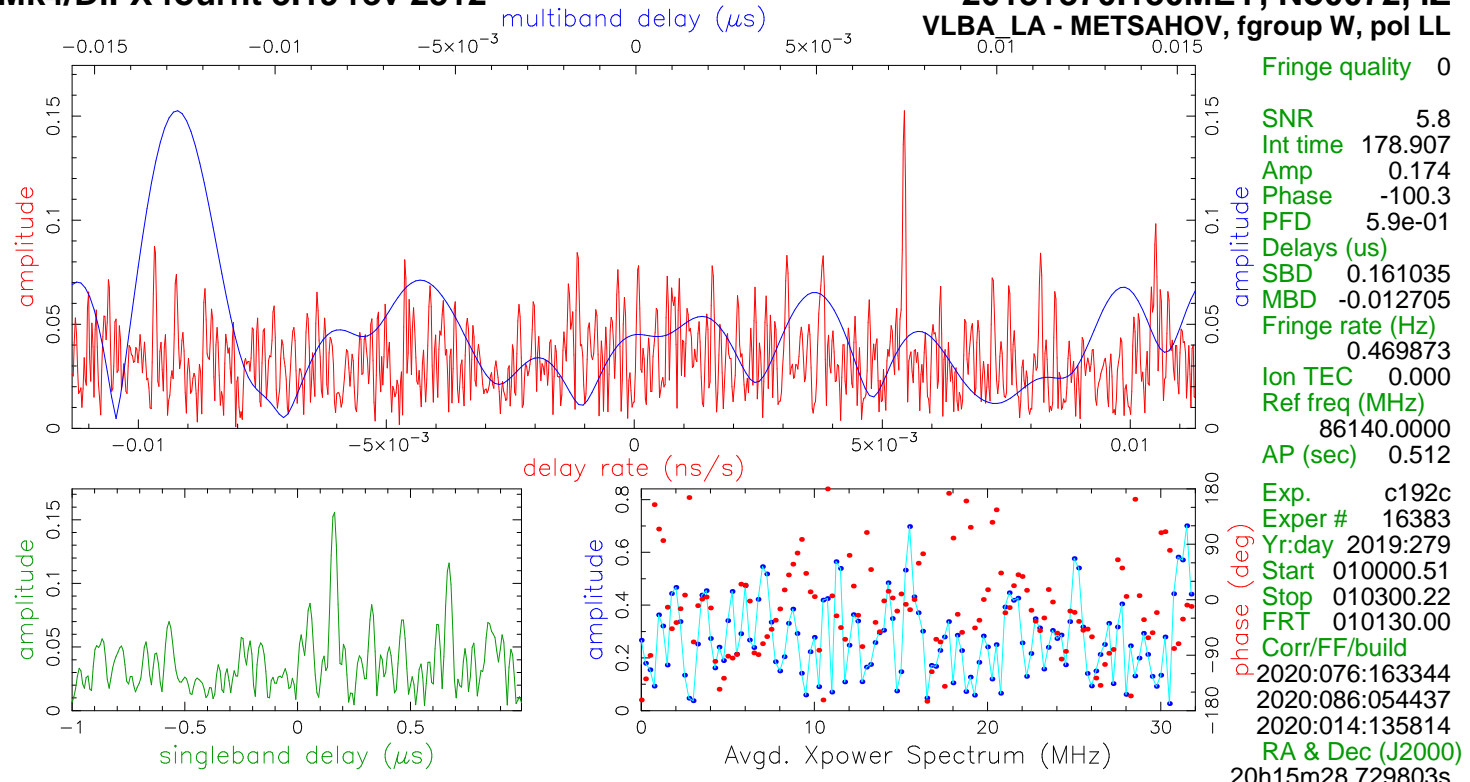
ph/seg (deg)	RMS 55.6	Theor. 37.2	Amplitude Search (1024X64)	0.198 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	56.5	65.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	51.9	43.0	Inc. seg. avg.	0.216	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	48.3	75.0	Inc. frq. avg.	0.211	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

I: az 78.8 el 73.2 pa -88.7 Y: az 296.3 el 28.3 pa 59.0 u,v (fr/asec) -9284.842 -3972.727 simultaneous interpolator

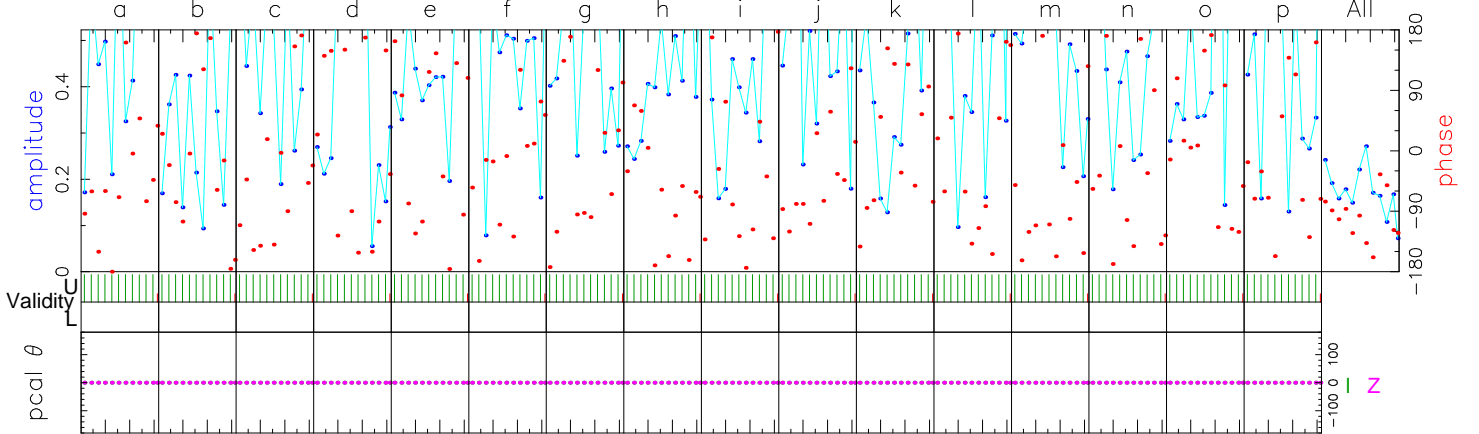
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IY..130MEY Output file: /Exps/c192c/v2/1234/No0072/IY.W.308.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130MEY, No0072, IZ  
VLBA\_LA - METSAHOV, fgroup W, pol LL



Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 sec / seg.), time ticks 30 sec



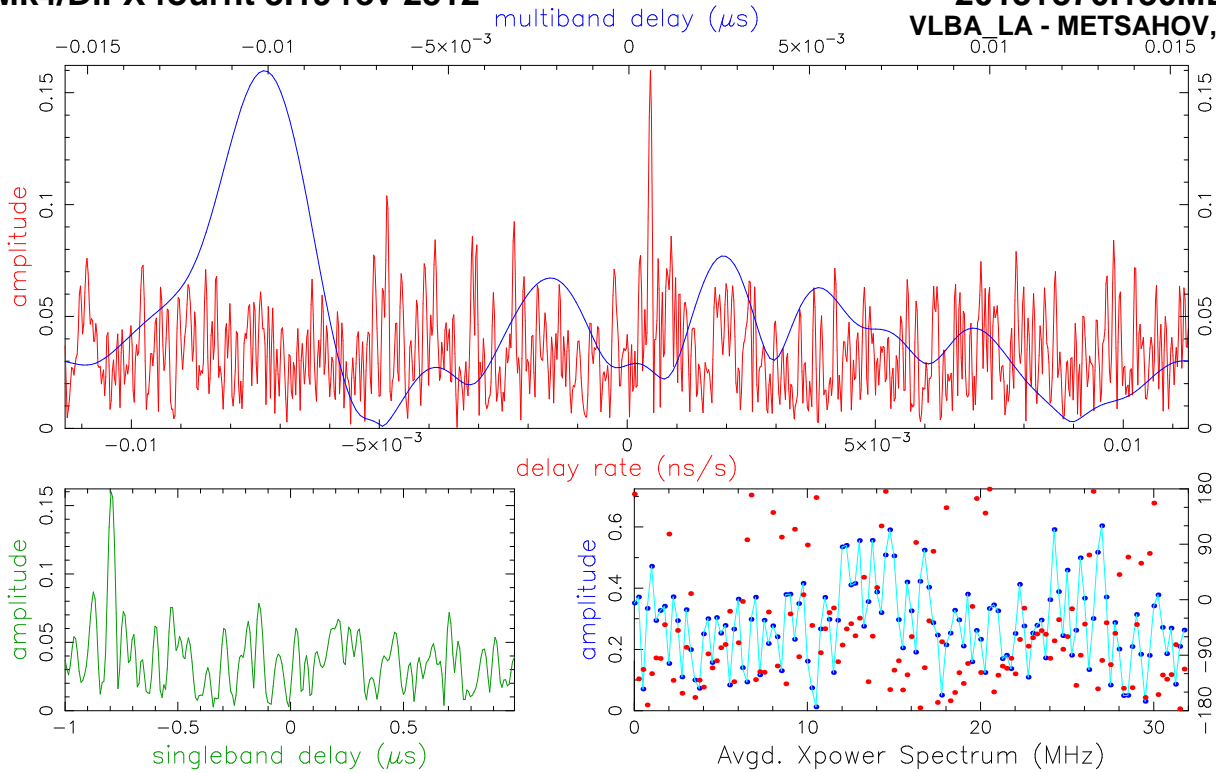
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd)	1.21465385760E+04	Apriori delay (usec)	1.21463637810E+04	Resid mbdelay (usec)	-1.27049E-02	+/-	1.9E-04
Sband delay (usec)	1.21465248165E+04	Apriori clock (usec)	-9.5357573E-01	Resid sbdelay (usec)	1.61035E-01	+/-	3.0E-03
Phase delay (usec)	1.21463637777E+04	Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	-3.23469E-06	+/-	6.4E-07
Delay rate (us/s)	9.29087209951E-01	Apriori rate (us/s)	9.29081755190E-01	Resid rate (us/s)	5.45476E-06	+/-	6.2E-09
Total phase (deg)	-66.9	Apriori accel (us/s/s)	-8.39554692424E-05	Resid phase (deg)	-100.3	+/-	19.8

ph/seg (deg)	RMS 34.3	Theor. 34.3	Amplitude Search (1024X64)	0.174 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	32.8	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)	44.6	39.6	Inc. seg. avg.	0.169	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	65.7	69.1	Inc. frq. avg.	0.170	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

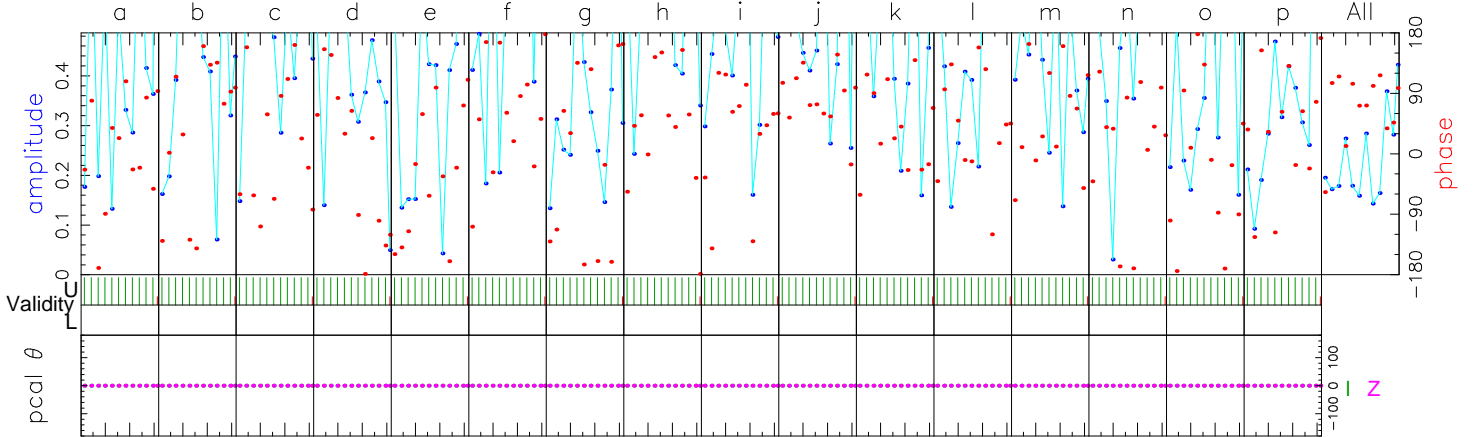
I: az 78.8 el 73.2 pa -88.7 Z: az 305.5 el 23.1 pa 30.6 u,v (fr/asec) -6751.851 -6974.359 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IZ...130MEY Output file: /Exps/c192c/v2/1234/No0072/IZ.W.260.130MEY



Fringe quality 0  
SNR 5.9  
Int time 178.907  
Amp 0.162  
Phase 66.6  
PFD 3.2e-01  
Delays (us)  
SBD -0.793932  
MBD -0.010086  
Fringe rate (Hz) 0.039967  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.51  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build 2020:076:163344  
2020:086:054440  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

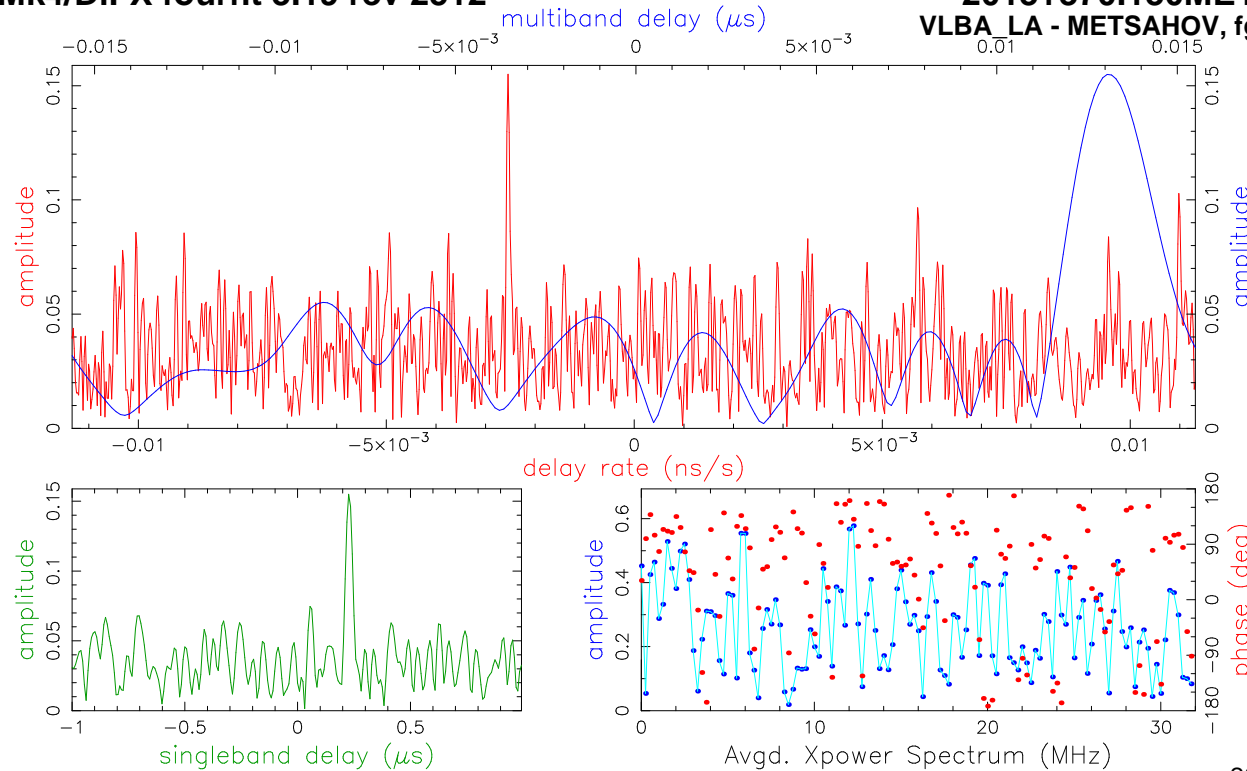
Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 sec / seg.), time ticks 30 sec



	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					
	23.7	125.1	-21.6	83.0	72.4	51.7	164.5	46.1	80.1	87.7	57.3	35.3	28.1	72.5	-85.3	77.2		Phase	66.6				
	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.3	0.5	0.2	0.2	0.2	0.2	0.0	0.2		Ampl.	0.2				
	92.3	183.7	23.8	243.2	206.0	93.8	24.1	193.5	28.0	27.4	118.3	15.8	125.0	243.2	154.1	160.8		Sbd box	27.4				
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	351/0	351/0	351/0	351/0		APs used					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
I	1000	1000	1000	1000	1000	1000	1000	1000	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					
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																			Tracks				
Group delay (usec)(sbd)			1.21455724453E+04															Apriori delay (usec)	1.21463637810E+04	Resid mbdelay (usec)	-1.00857E-02	+/-	1.8E-04
Sband delay (usec)			1.21455698490E+04															Apriori clock (usec)	-9.5357573E-01	Resid sbdelay (usec)	-7.93932E-01	+/-	2.9E-03
Phase delay (usec)			1.21463637831E+04															Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	2.14795E-06	+/-	6.2E-07
Delay rate (us/s)			9.29082219167E-01															Apriori rate (us/s)	9.29081755190E-01	Resid rate (us/s)	4.63978E-07	+/-	6.0E-09
Total phase (deg)			100.0															Apriori accel (us/s/s)	-8.39554692424E-05	Resid phase (deg)	66.6	+/-	19.3

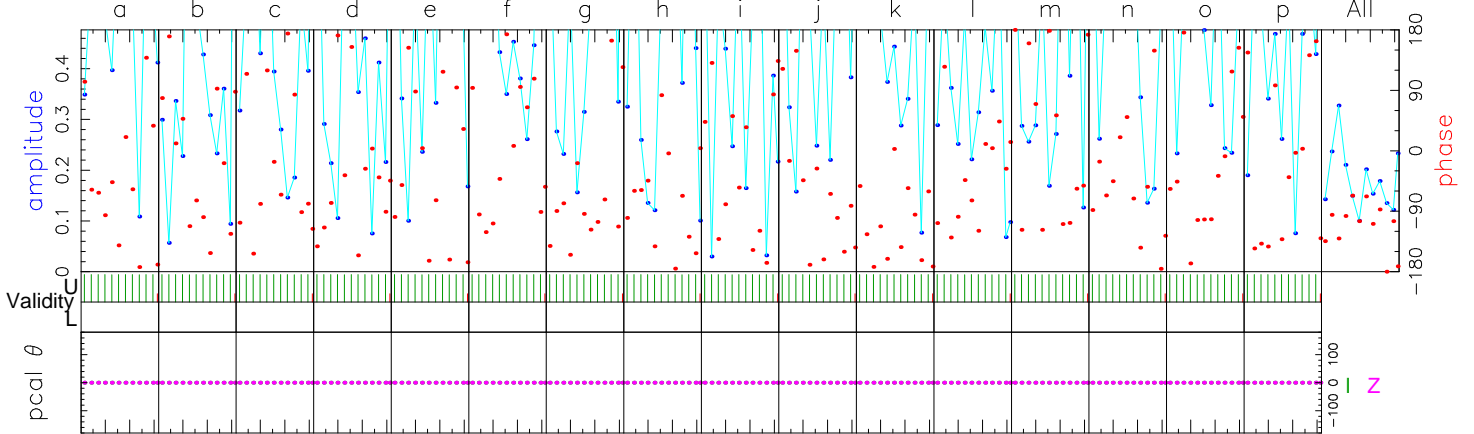
ph/seg (deg) RMS Theor. Amplitude 0.162 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 50.5 33.5 Search (1024X64) 0.158 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 60.1 58.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 59.7 38.7 Inc. seg. avg. 0.191 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 68.4 67.5 Inc. frq. avg. 0.166 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 Z: az 305.5 el 23.1 pa 30.6 u,v (fr/asec) -6751.851 -6974.359 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IZ...130MEY Output file: /Exps/c192c/v2/1234/No0072/IZ.W.280.130MEY



Fringe quality 0  
 SNR 5.7  
 Int time 178.907  
 Amp 0.159  
 Phase -107.5  
 PFD 7.9e-01  
 Delays (us)  
 SBD 0.228121  
 MBD 0.013110  
 Fringe rate (Hz)  
 -0.219655  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 010000.51  
 Stop 010300.22  
 FRT 010130.00  
 Corr/FF/build  
 2020:076:163344  
 2020:086:054442  
 2020:014:135814  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 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	351/0	351/0	351/0	351/0		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks

Group delay (usec)(sbd) 1.21465956411E+04 Apriori delay (usec) 1.21463637810E+04 Resid mbdelay (usec) 1.31101E-02 +/- 1.9E-04  
 Sband delay (usec) 1.21465919015E+04 Apriori clock (usec) -9.5357573E-01 Resid sbdelay (usec) 2.28121E-01 +/- 3.0E-03  
 Phase delay (usec) 1.21463637775E+04 Apriori clockrate (us/s) -3.6776479E-07 Resid phdelay (usec) -3.46786E-06 +/- 6.5E-07  
 Delay rate (us/s) 9.29079205214E-01 Apriori rate (us/s) 9.29081755190E-01 Resid rate (us/s) -2.54998E-06 +/- 6.3E-09  
 Total phase (deg) -74.1 Apriori accel (us/s/s) -8.39554692424E-05 Resid phase (deg) -107.5 +/- 20.1

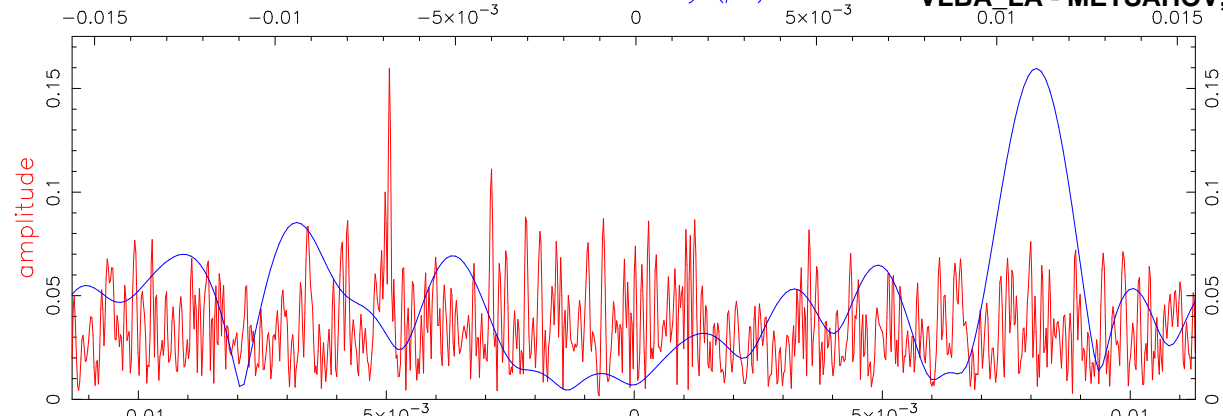
ph/seg (deg) RMS Theor. Amplitude 0.159 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 32.1 34.9 Search (1024X64) 0.152 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 42.1 60.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 43.6 40.3 Inc. seg. avg. 0.155 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 51.1 70.3 Inc. frq. avg. 0.153 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 Z: az 305.5 el 23.1 pa 30.6 u,v (fr/asec) -6751.851 -6974.359 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IZ...130MEY Output file: /Exps/c192c/v2/1234/No0072/IZ.W.298.130MEY

Mk4/DiFX fourfit 3.19 rev 2512

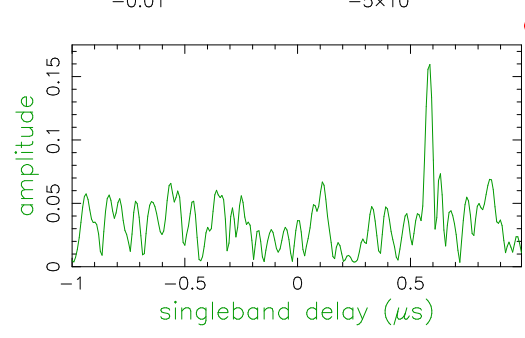
2013+370.130MEY, No0072, IZ  
VLBA\_LA - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu$ s)

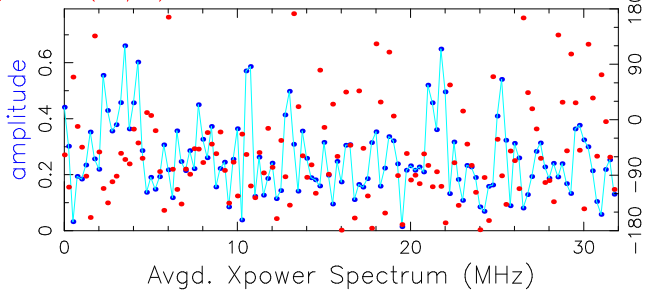


Fringe quality 0

SNR 5.9  
Int time 178.907  
Amp 0.175  
Phase -19.6  
PFD 3.4e-01  
Delays (us)  
SBD 0.583066  
MBD 0.011115  
Fringe rate (Hz)  
-0.425992  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

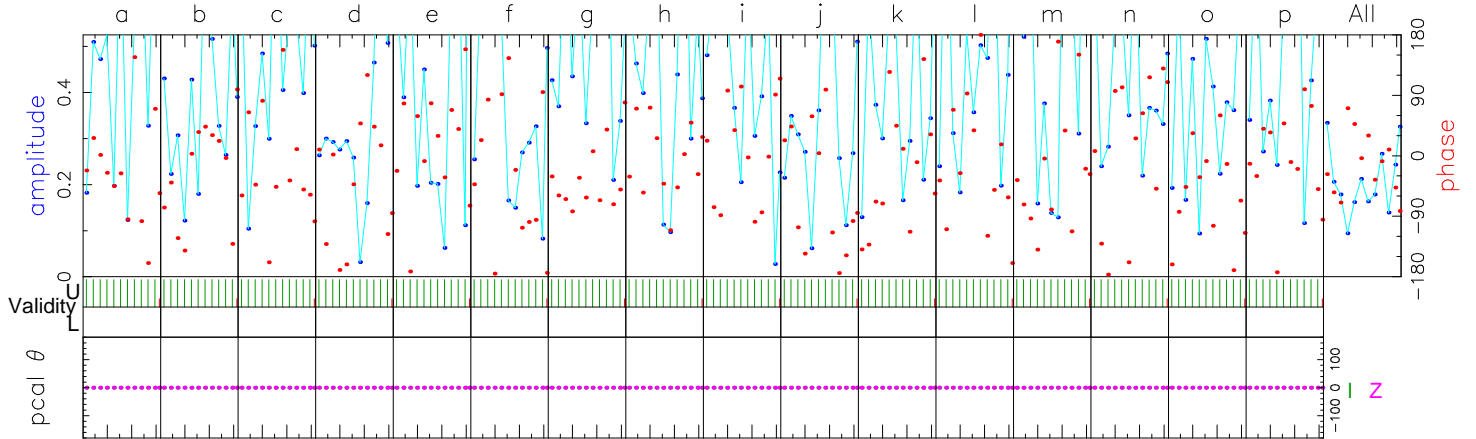


delay rate (ns/s)



Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 010000.51  
Stop 010300.22  
FRT 010130.00  
Corr/FF/build  
2020:076:163344  
2020:086:054445  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 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	
	-20.2	-8.0	-43.2	-28.2	36.9	87.0	-33.1	4.3	-19.2	-126.1	-35.3	-77.6	-41.2	80.1	-56.1	-4.3		Phase	-19.6
	0.2	0.2	0.3	0.1	0.2	0.0	0.4	0.4	0.2	0.0	0.1	0.2	0.3	0.2	0.2	0.4		Ampl.	0.2
	62.6	79.9	202.9	212.9	63.9	112.3	203.4	195.7	226.9	207.5	25.0	7.3	56.9	57.8	247.8	15.7		Sbd box	203.6
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	351/0	351/0	351/0	351/0		APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	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	
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

Group delay (usec)(sbd) 1.21469373960E+04 Apriori delay (usec) 1.21463637810E+04 Resid mbdelay (usec) 1.11150E-02 +/- 1.8E-04  
 Sband delay (usec) 1.21469468465E+04 Apriori clock (usec) -9.5357573E-01 Resid sbdelay (usec) 5.83066E-01 +/- 2.9E-03  
 Phase delay (usec) 1.21463637803E+04 Apriori clockrate (us/s) -3.6776479E-07 Resid phdelay (usec) -6.33542E-07 +/- 6.2E-07  
 Delay rate (us/s) 9.29076809847E-01 Apriori rate (us/s) 9.29081755190E-01 Resid rate (us/s) -4.94534E-06 +/- 6.0E-09  
 Total phase (deg) 13.8 Apriori accel (us/s/s) -8.39554692424E-05 Resid phase (deg) -19.6 +/- 19.4

RMS Theor. Amplitude 0.175 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 44.4 33.5 Search (1024X64) 0.153 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 47.1 58.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 55.4 38.7 Inc. seg. avg. 0.186 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 68.7 67.6 Inc. frq. avg. 0.173 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 78.8 el 73.2 pa -88.7 Z: az 305.5 el 23.1 pa 30.6 u,v (fr/asec) -6751.851 -6974.359 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0072/IZ...130MEY Output file: /Exps/c192c/v2/1234/No0072/IZ.W.320.130MEY