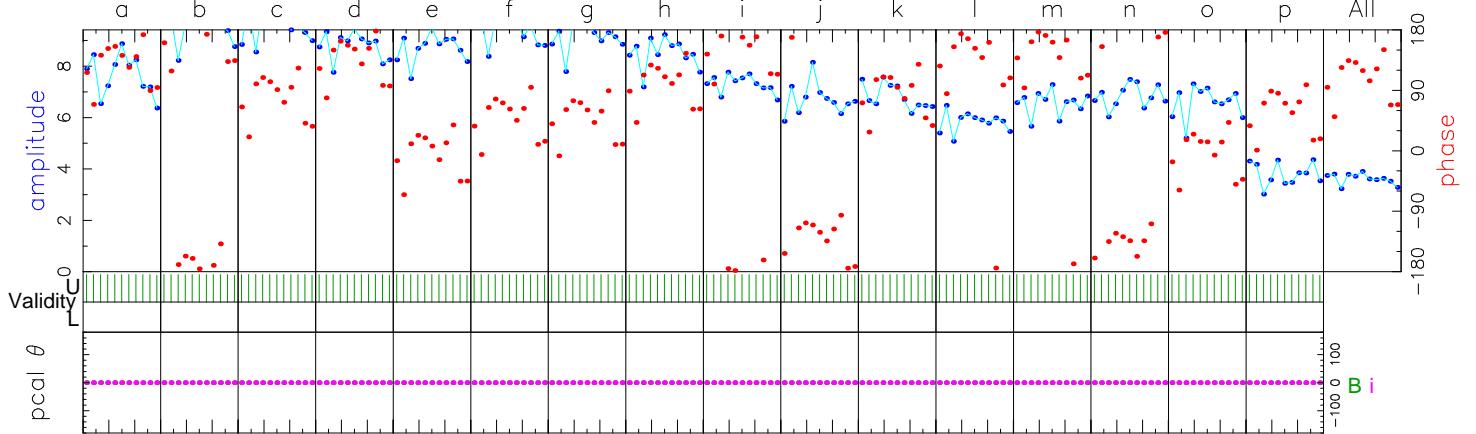


Fringe quality 3

SNR 115.1  
Int time 179.778  
Amp 3.138  
Phase 107.2  
PFD 0.0e+00  
Delays (us)  
SBD -0.000436  
MBD 0.010689  
Fringe rate (Hz) 0.004549  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053641  
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	128.0	174.4	78.9	135.4	-5.5	49.5	47.5	99.8	156.1	-134.4	84.0	141.7	148.1	-150.4	-3.5	55.6	128.9	Phase	107.2
B	6.6	8.2	8.3	7.6	7.4	8.3	8.0	7.4	6.3	5.8	5.9	5.0	5.7	6.0	5.6	3.2	6.6	Ampl.	6.6
B:i	128.9	128.9	129.0	129.0	128.9	129.0	128.9	129.0	128.9	129.1	129.1	128.8	129.0	129.0	129.0	129.3	128.9	Sbd box	128.9
B:i	352/0	352/0	352/0	352/0	352/0	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	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	PC phase	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	ManI PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

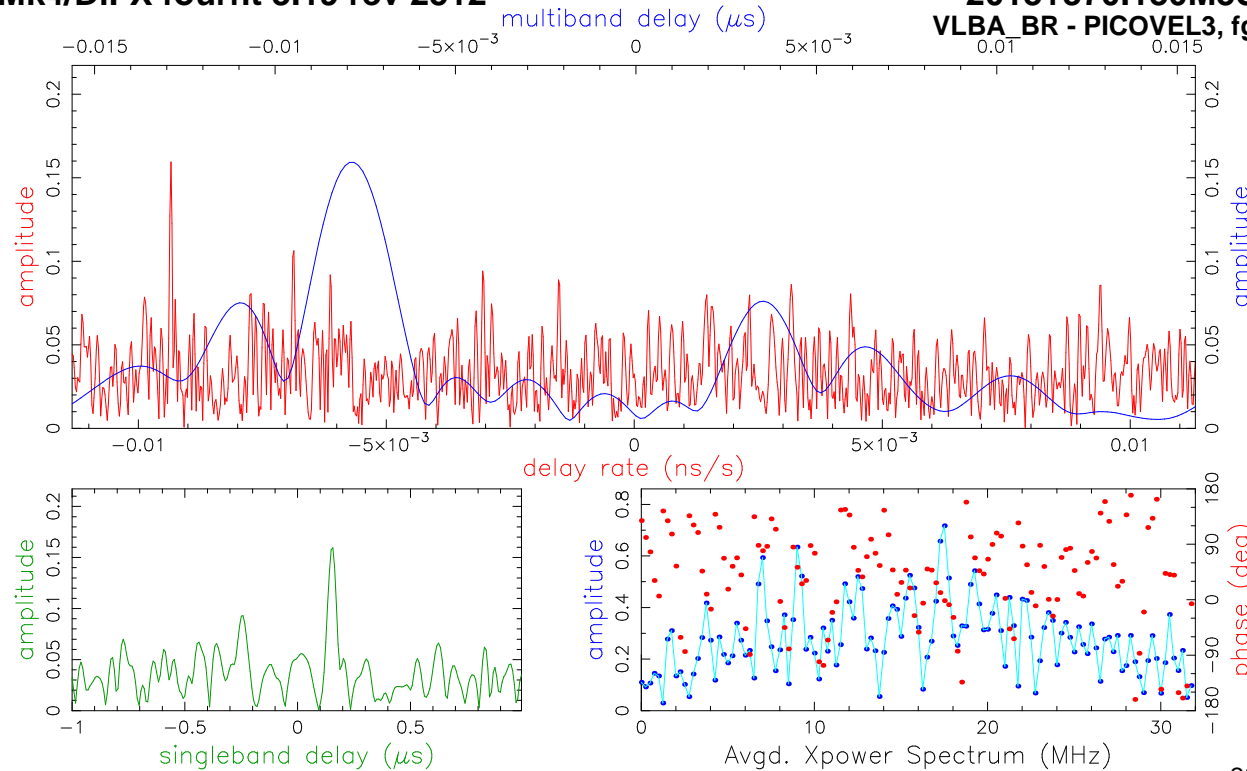
Group delay (usec)(sbd) -5.32451532374E+02 Apriori delay (usec) -5.32462221755E+02 Resid mbdelay (usec) 1.06894E-02 +/- 9.4E-06  
 Sband delay (usec) -5.32462657755E+02 Apriori clock (usec) 1.7349665E+01 Resid sbdelay (usec) -4.36000E-04 +/- 1.5E-04  
 Phase delay (usec) -5.32462218299E+02 Apriori clockrate (us/s) 1.5299999E-07 Resid phdelay (usec) 3.45598E-06 +/- 3.2E-08  
 Delay rate (us/s) 1.60236577324E-01 Apriori rate (us/s) 1.60236524510E-01 Resid rate (us/s) 5.28145E-08 +/- 3.1E-10  
 Total phase (deg) -174.3 Apriori accel (us/s/s) 1.44692420087E-05 Resid phase (deg) 107.2 +/- 1.0

RMS Theor. Amplitude 3.138 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 30.3 1.7 Search (1024X64) 3.051 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 16.7 2.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 71.4 2.0 Inc. seg. avg. 3.621 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 118.0 3.5 Inc. frq. avg. 6.576 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 290.9 el 32.4 pa 48.3 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1139.587 2063.444 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Bi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Bi.W.12.130M5S

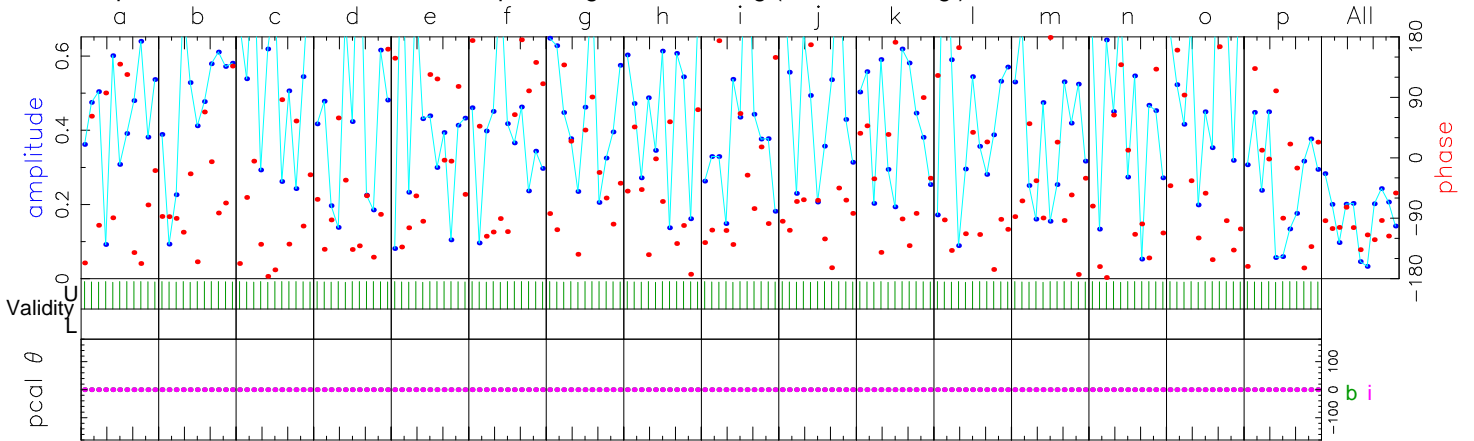
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, bi  
VLBA\_BR - PICOVEL3, fgroup W, pol RR



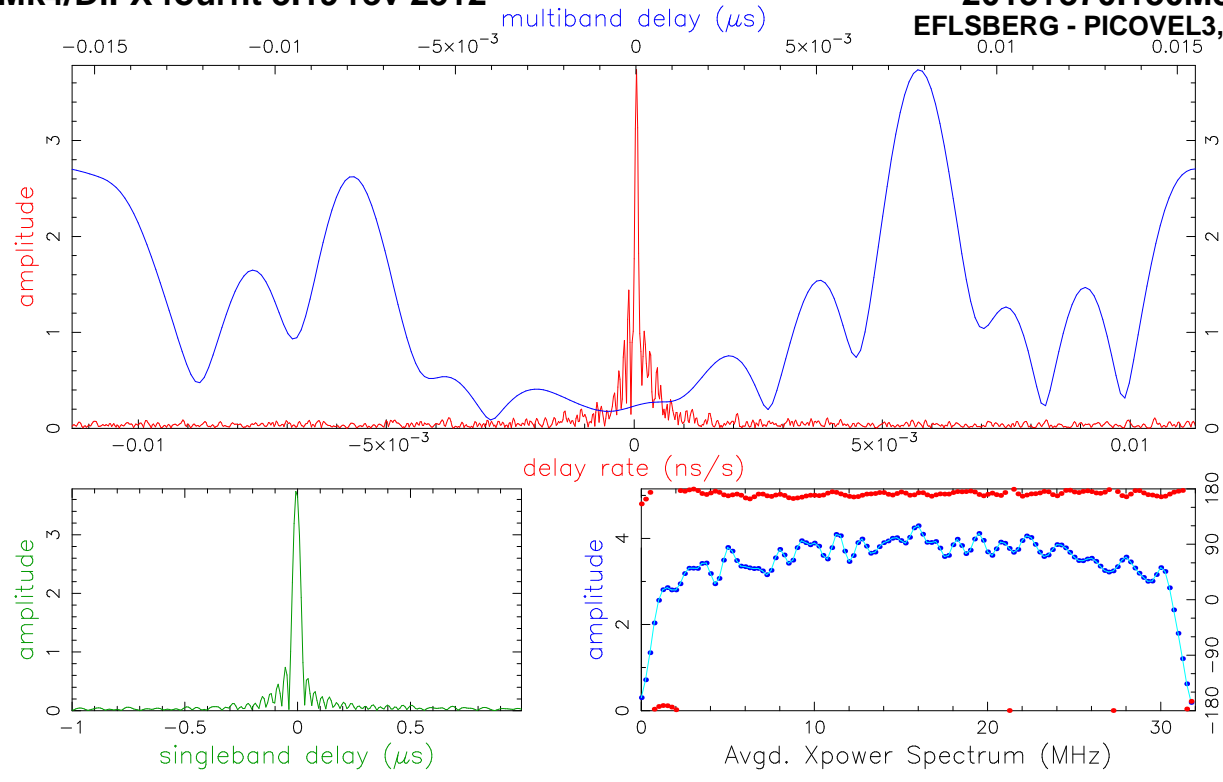
Fringe quality 0  
SNR 5.9  
Int time 178.604  
Amp 0.217  
Phase -98.5  
PFD 3.8e-01  
Delays (us)  
SBD 0.153047  
MBD -0.007855  
Fringe rate (Hz)  
-0.806539  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053642  
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
	-128.0	-76.8	-103.7	-107.5	-95.5	-154.3	-47.8	-62.2	-76.3	-90.3	-63.4	-106.3	-75.3	-164.7	-114.9	3.4	Phase	-98.5
	0.2	0.3	0.3	0.4	0.2	0.2	0.1	0.2	0.2	0.5	0.1	0.3	0.3	0.2	0.3	0.0	Ampl.	0.2
	111.4	130.1	62.3	147.2	54.3	30.3	1.4	64.4	255.6	149.6	107.3	120.9	4.6	242.4	196.4	120.2	Sbd box	148.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
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	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	
																	Tracks	
Group delay (usec)(sbd)	5.85642401200E+03			Apriori delay (usec)			5.85627561691E+03			Resid mbdelay (usec)			-7.85491E-03			+/- 1.8E-04		
Sband delay (usec)	5.85642866391E+03			Apriori clock (usec)			-7.2306663E-02			Resid sbdelay (usec)			1.53047E-01			+/- 2.9E-03		
Phase delay (usec)	5.85627561374E+03			Apriori clockrate (us/s)			1.1060491E-07			Resid phdelay (usec)			-3.17632E-06			+/- 6.3E-07		
Delay rate (us/s)	1.51383734764E+00			Apriori rate (us/s)			1.51384671075E+00			Resid rate (us/s)			-9.36311E-06			+/- 6.0E-09		
Total phase (deg)	132.2			Apriori accel (us/s/s)			-2.14592175050E-05			Resid phase (deg)			-98.5			+/- 19.4		

ph/seg (deg) 22.4 32.2 Search (1024X64) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 47.5 56.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 43.0 38.9 Inc. seg. avg. 0.196 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 53.6 67.9 Inc. frq. avg. 0.198 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 92.0 el 56.2 pa -56.8 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10905.923 -217.260 ion window (TEC) 0.00 0.00 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/bi..130M5S Output file: /Exps/c192c/v2/1234/No0067/bi.W.23.130M5S

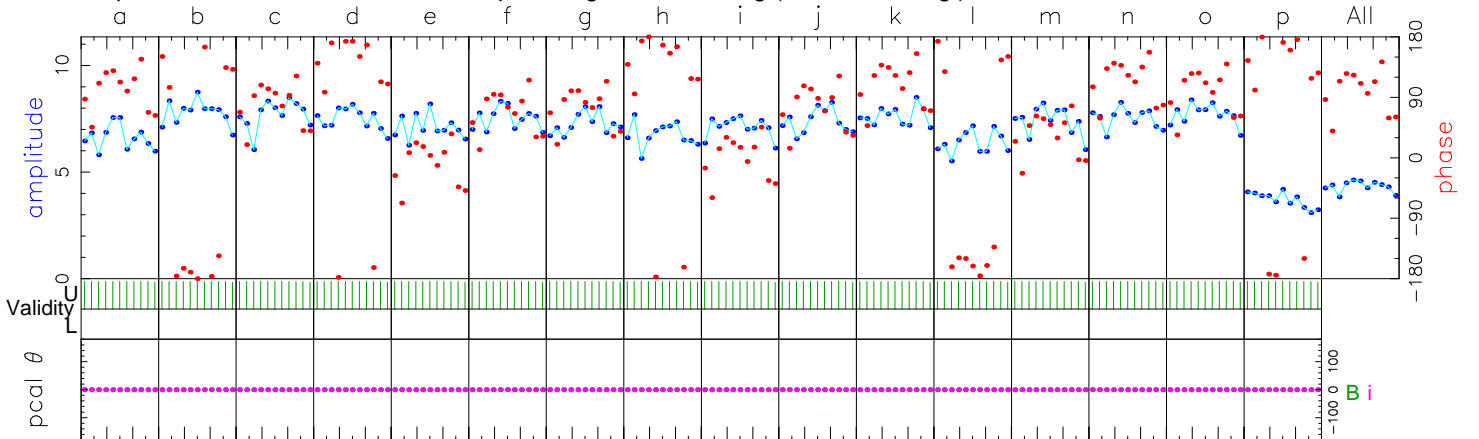


Fringe quality 3

SNR 138.7  
Int time 179.778  
Amp 3.783  
Phase 98.9  
PFD 0.0e+00  
Delays (us)  
SBD -0.004912  
MBD 0.007853  
Fringe rate (Hz) 0.004518  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053643  
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

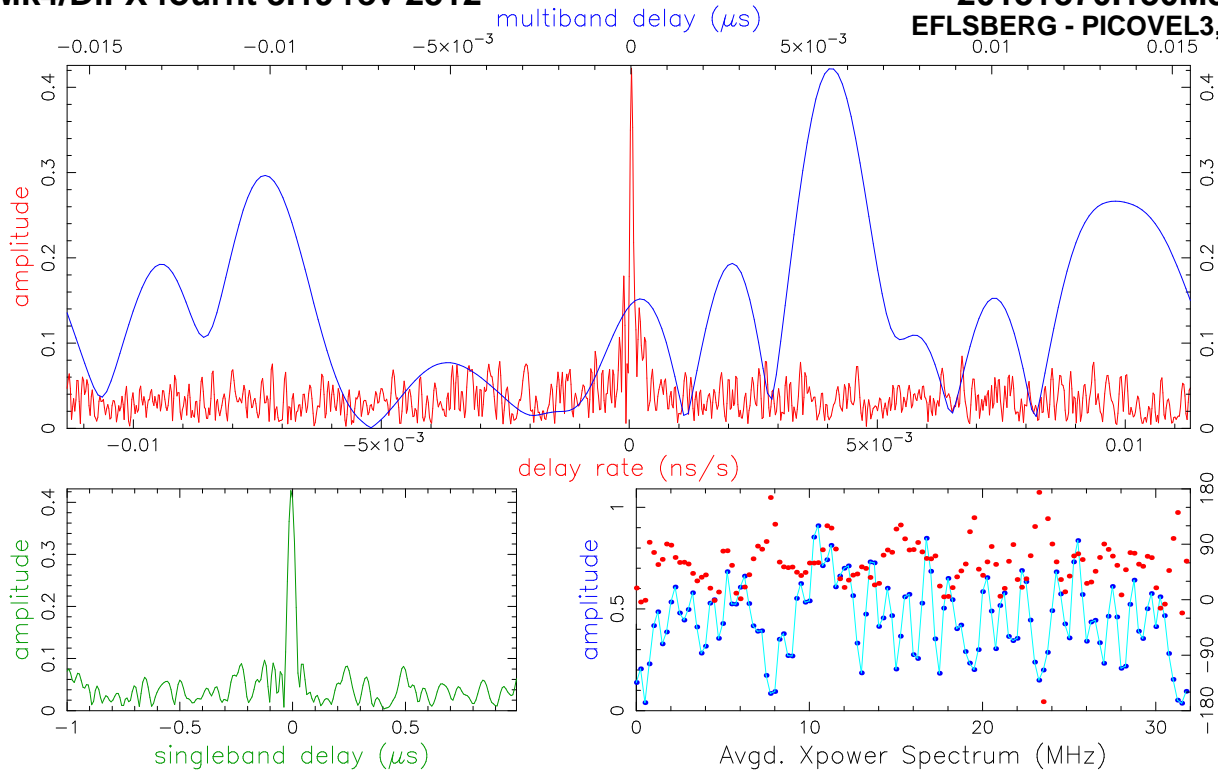


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
102.4	168.2	80.0	154.8	-8.1	68.9	74.1	154.1	0.9	75.6	109.6	-174.1	35.3	115.8	99.2	161.2	161.2	Phase	98.9
5.8	6.7	6.6	6.5	6.1	6.5	6.4	5.8	6.1	6.3	6.5	5.5	6.4	6.6	6.6	3.2	3.2	Ampl.	6.1
129.0	129.0	129.1	128.9	128.9	129.0	129.0	129.0	129.0	129.0	129.0	129.1	129.0	129.0	129.0	129.1	129.1	Sbd box	128.4
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	
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) -5.32454368593E+02 Apriori delay (usec) -5.32462221755E+02 Resid mbdelay (usec) 7.85316E-03 +/- 7.8E-06  
 Sband delay (usec) -5.32467133755E+02 Apriori clock (usec) 1.7349665E+01 Resid sbdelay (usec) -4.91200E-03 +/- 1.2E-04  
 Phase delay (usec) -5.32462218565E+02 Apriori clockrate (us/s) 1.5299999E-07 Resid phdelay (usec) 3.18994E-06 +/- 2.7E-08  
 Delay rate (us/s) 1.60236576957E-01 Apriori rate (us/s) 1.60236524510E-01 Resid rate (us/s) 5.24474E-08 +/- 2.6E-10  
 Total phase (deg) -182.6 Apriori accel (us/s/s) 1.44692420087E-05 Resid phase (deg) 98.9 +/- 0.8

RMS Theor. Amplitude 3.783 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 30.8 1.4 Search (1024X64) 3.645 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 15.9 2.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 60.0 1.7 Inc. seg. avg. 4.331 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 64.9 2.9 Inc. frq. avg. 6.094 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 290.9 el 32.4 pa 48.3 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1139.587 2063.444 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Bi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Bi.W.27.130M5S

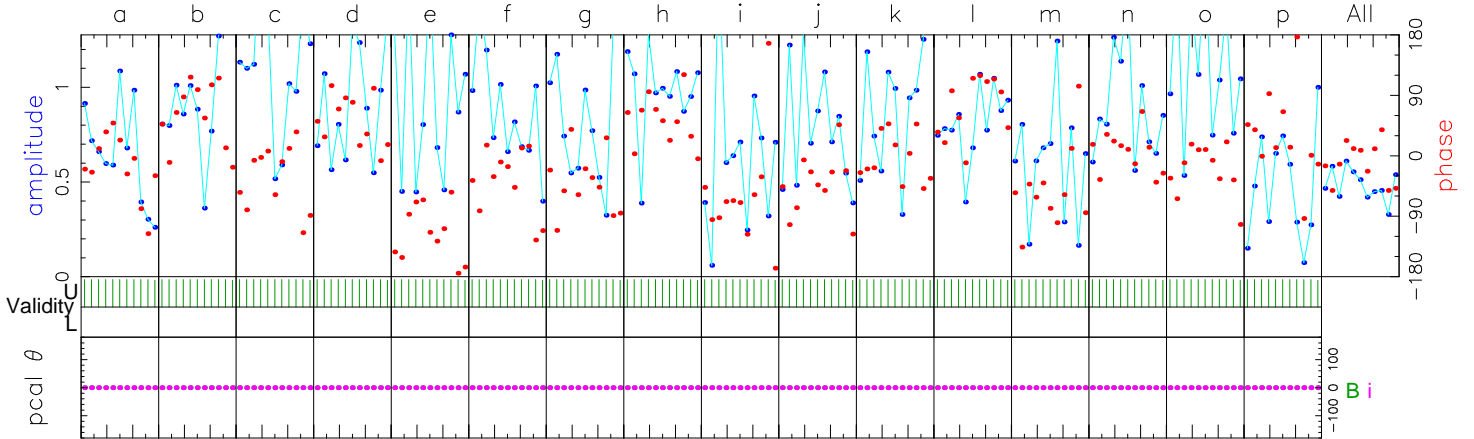


Fringe quality 9

SNR 15.6  
Int time 179.778  
Amp 0.426  
Phase -8.7  
PFD 0.0e+00  
Delays (us)  
SBD -0.005499  
MBD 0.005554  
Fringe rate (Hz) 0.004525  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053645  
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		
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
B:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)		-5.32456668093E+02																
Sband delay (usec)		-5.32467720255E+02																
Phase delay (usec)		-5.32462222036E+02																
Delay rate (us/s)		1.60236577042E-01																
Total phase (deg)																		
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		

ph/seg (deg) 29.7 12.2  
amp/seg (%) 23.3 21.2  
ph/frq (deg) 56.4 14.7  
amp/frq (%) 63.7 25.6

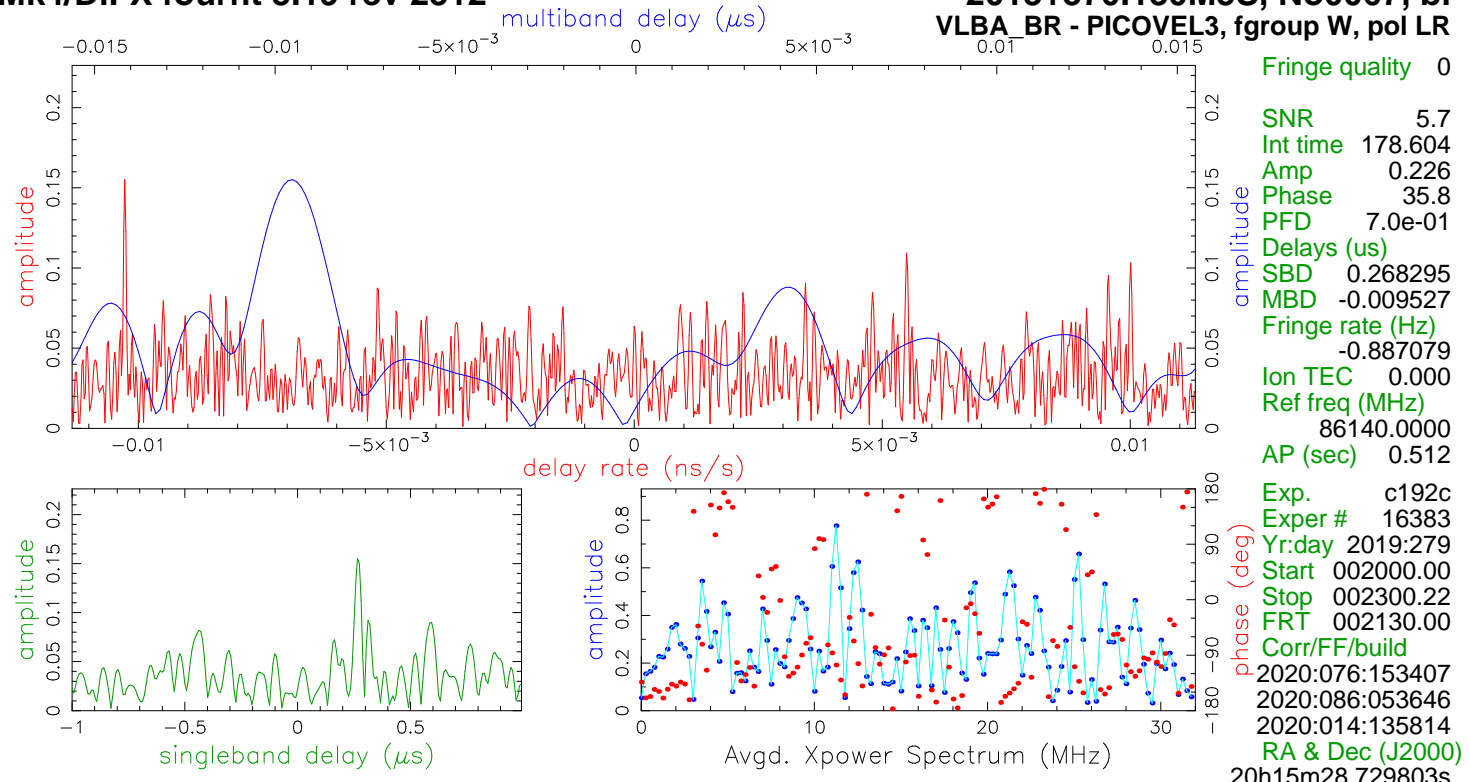
RMS Theor. Amplitude 0.426 +/- 0.027  
Search (1024X64) 0.405  
Interp. 0.000  
Inc. seg. avg. 0.475  
Inc. frq. avg. 0.635

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

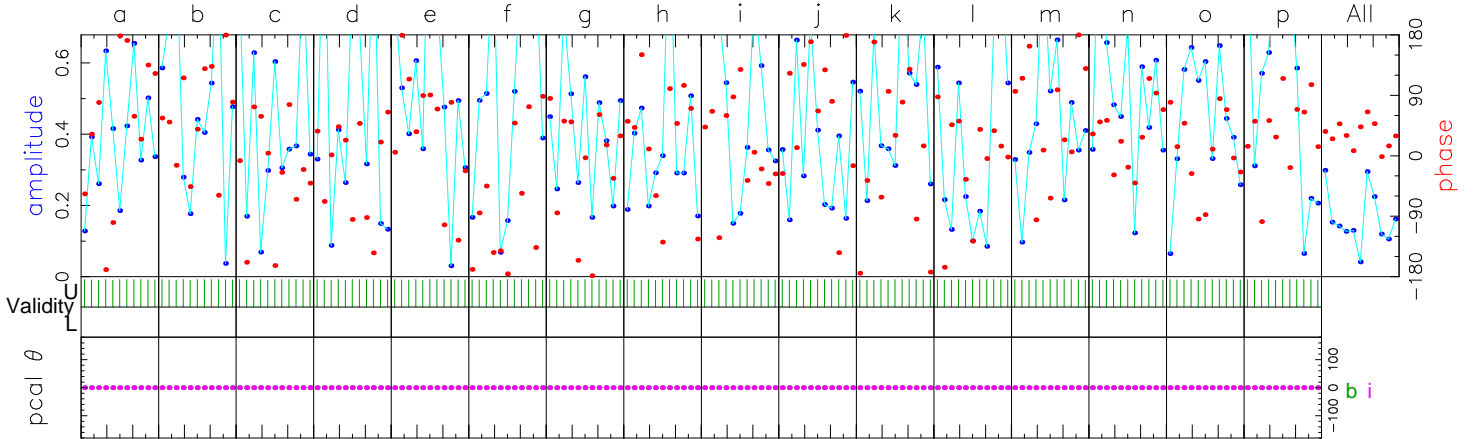
sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

B: az 290.9 el 32.4 pa 48.3 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1139.587 2063.444 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Bi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Bi.W.45.130M5S



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

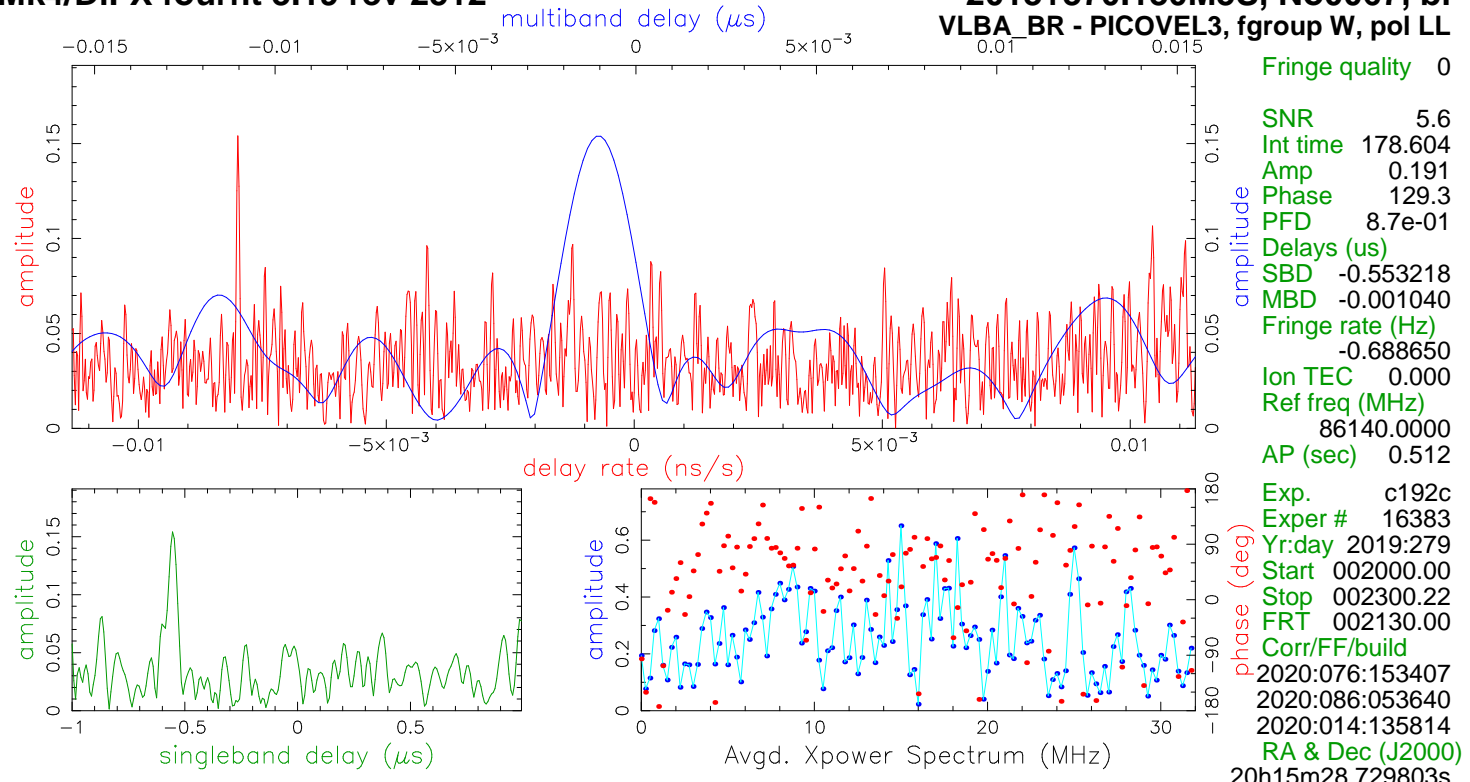


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	121.2	38.9	-8.2	-54.8	71.5	-102.3	37.8	85.6	11.4	84.6	107.6	31.8	52.4	38.9	3.0	36.9		Phase 35.8
	0.2	0.3	0.3	0.2	0.3	0.2	0.4	0.3	0.4	0.1	0.2	0.4	0.1	0.6	0.3	0.5		Ampl. 0.2
	226.3	119.0	121.1	69.7	61.4	173.8	118.7	31.2	30.7	168.7	145.0	56.0	230.9	163.6	19.1	163.3		Sbd box 163.3
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
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	5.85654733961E+03			Apriori delay (usec)			5.85627561691E+03			Resid mbdelay (usec)			-9.52731E-03			+/- 1.9E-04		
Sband delay (usec)	5.85654391141E+03			Apriori clock (usec)			-7.2306663E-02			Resid sbdelay (usec)			2.68295E-01			+/- 3.0E-03		
Phase delay (usec)	5.85627561807E+03			Apriori clockrate (us/s)			1.1060491E-07			Resid phdelay (usec)			1.15513E-06			+/- 6.4E-07		
Delay rate (us/s)	1.51383641264E+00			Apriori rate (us/s)			1.51384671075E+00			Resid rate (us/s)			-1.02981E-05			+/- 6.2E-09		
Total phase (deg)	266.5			Apriori accel (us/s/s)			-2.14592175050E-05			Resid phase (deg)			35.8			+/- 20.0		

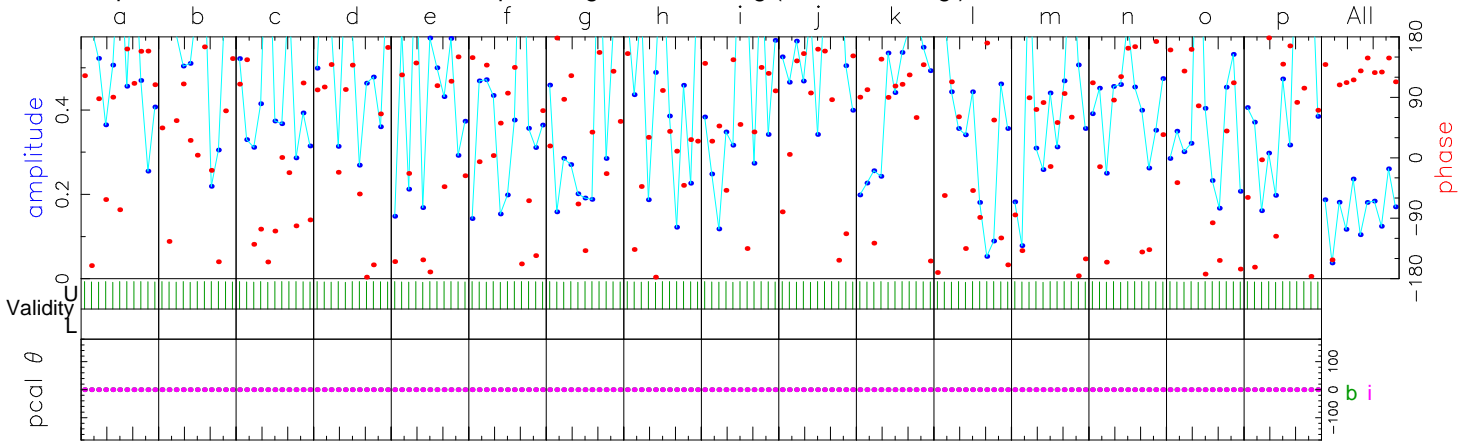
	RMS	Theor.	Amplitude	0.226 +/- 0.039	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	19.1	33.1	Search (1024X64)	0.152	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	48.3	57.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	59.6	40.0	Inc. seg. avg.	0.203	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	64.7	69.7	Inc. frq. avg.	0.240	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 128	t_cohere infinite

b: az 92.0 el 56.2 pa -56.8 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10905.923 -217.260 simultaneous interpolator

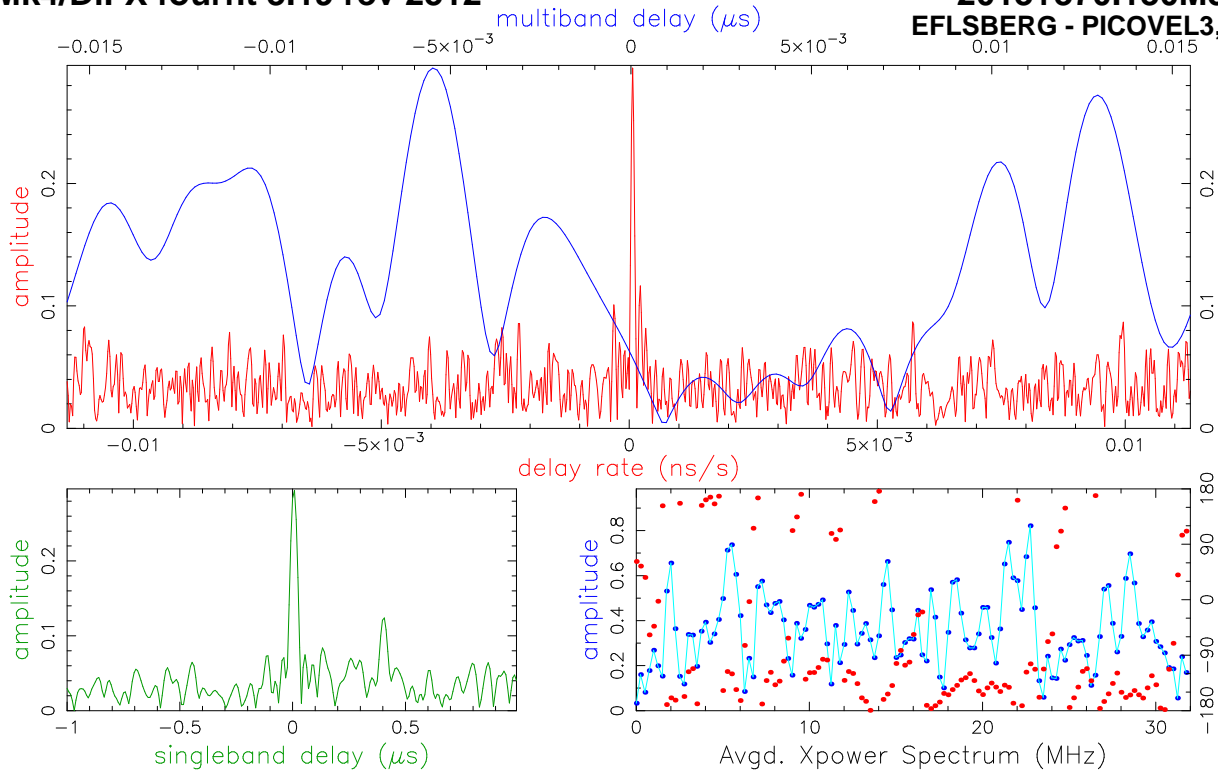
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/bi..130M5S Output file: /Exps/c192c/v2/1234/No0067/bi.W.52.130M5S



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		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
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)	5.85571207655E+03			Apriori delay (usec)			5.85627561691E+03			Resid mbdelay (usec)			-1.04036E-03			+/- 1.9E-04		
Sband delay (usec)	5.85572239841E+03			Apriori clock (usec)			-7.2306663E-02			Resid sbdelay (usec)			-5.53218E-01			+/- 3.1E-03		
Phase delay (usec)	5.85627562108E+03			Apriori clockrate (us/s)			1.1060491E-07			Resid phdelay (usec)			4.16904E-06			+/- 6.5E-07		
Delay rate (us/s)	1.51383871621E+00			Apriori rate (us/s)			1.51384671075E+00			Resid rate (us/s)			-7.99454E-06			+/- 6.3E-09		
Total phase (deg)	0.0			Apriori accel (us/s/s)			-2.14592175050E-05			Resid phase (deg)			129.3			+/- 20.3		
ph/seg (deg)	RMS	Theor.	Amplitude			0.191 +/- 0.034			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	27.3	33.7	Search (1024X64)			0.151			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000			
ph/frq (deg)	39.0	58.8	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016	
amp/frq (%)	48.9	40.6	Inc. seg. avg.			0.171			Sample rate(MSamp/s): 64			dr window (ns/s)			-0.011 0.011			
	50.0	70.9	Inc. frq. avg.			0.193			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)		0.00 0.00	
b: az 92.0 el 56.2 pa -56.8			i: az 293.8 el 34.2 pa 66.6			u,v (fr/asec)			-10905.923 -217.260			simultaneous interpolator						
Control file: cf_1234_gmva			Input file: /Exps/c192c/v2/1234/No0067/bi..130M5S			Output file: /Exps/c192c/v2/1234/No0067/bi.W.6.130M5S												

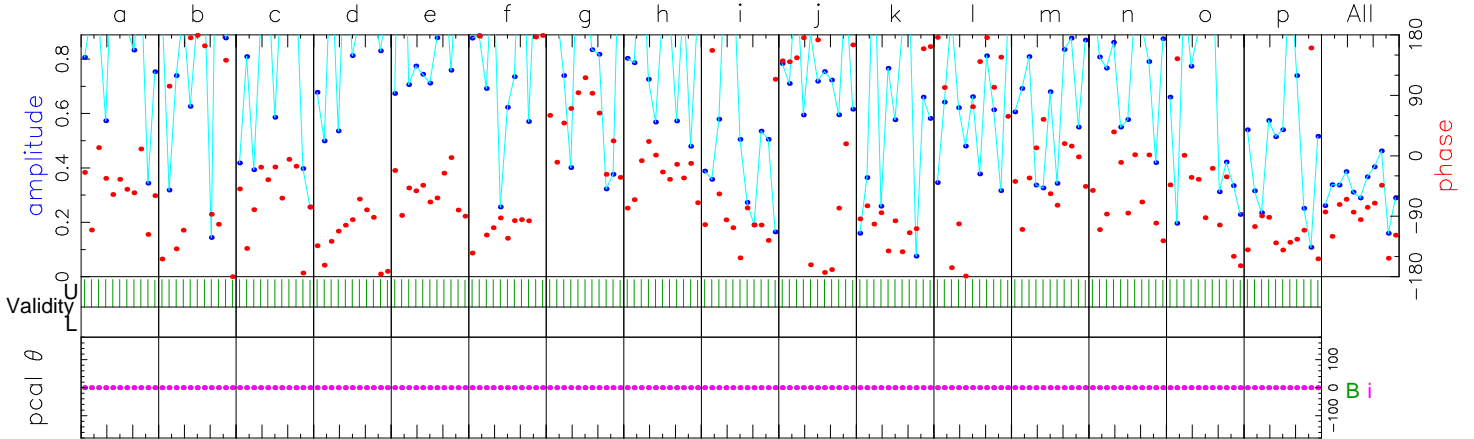


Fringe quality 9

SNR 10.9  
Int time 179.778  
Amp 0.296  
Phase -82.6  
PFD 3.7e-19  
Delays (us)  
SBD 0.005563  
MBD -0.005472  
Fringe rate (Hz) 0.004798  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

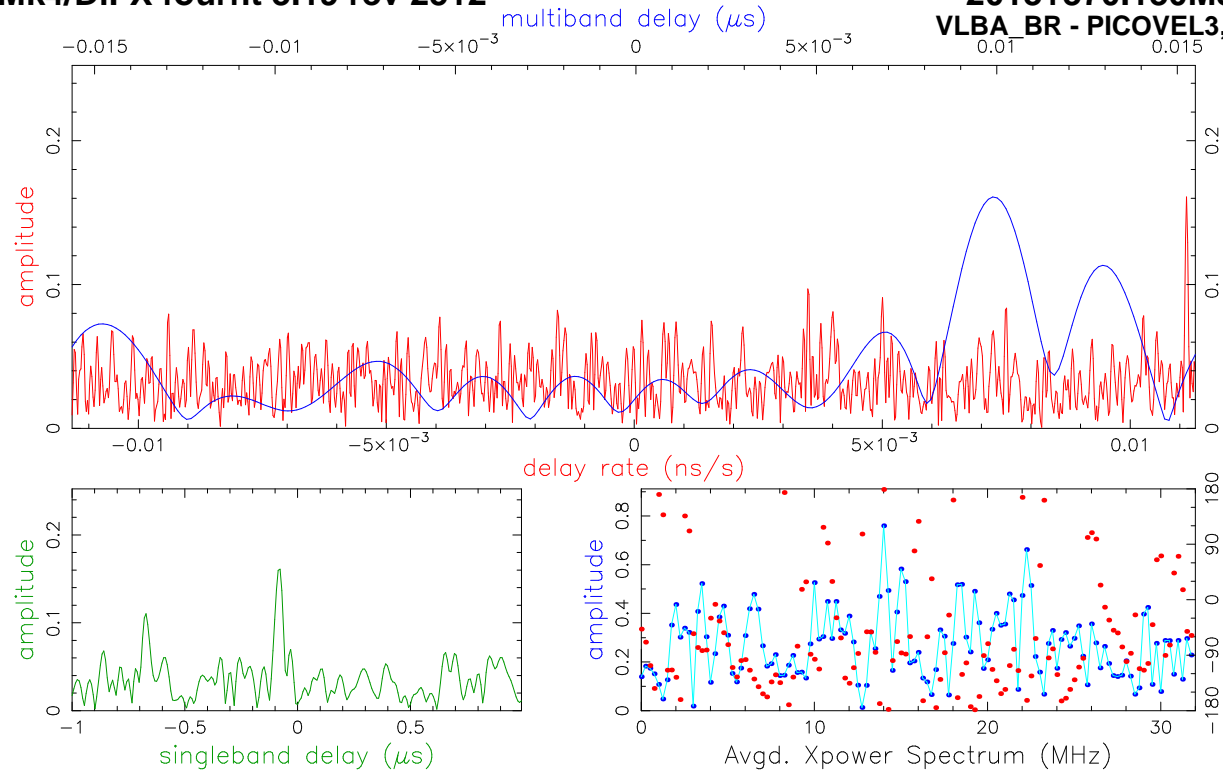
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053647  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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		
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
B:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	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
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)			-5.32467694137E+02															
Sband delay (usec)			-5.32456658755E+02															
Phase delay (usec)			-5.32462224419E+02															
Delay rate (us/s)			1.60236580215E-01															
Total phase (deg)					-4.1													
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) 29.8 17.5 Search (1024X64) 0.282 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 28.1 30.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 73.1 21.1 Inc. seg. avg. 0.313 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 101.5 36.8 Inc. frq. avg. 0.530 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 290.9 el 32.4 pa 48.3 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1139.587 2063.444 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Bi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Bi.W.66.130M5S

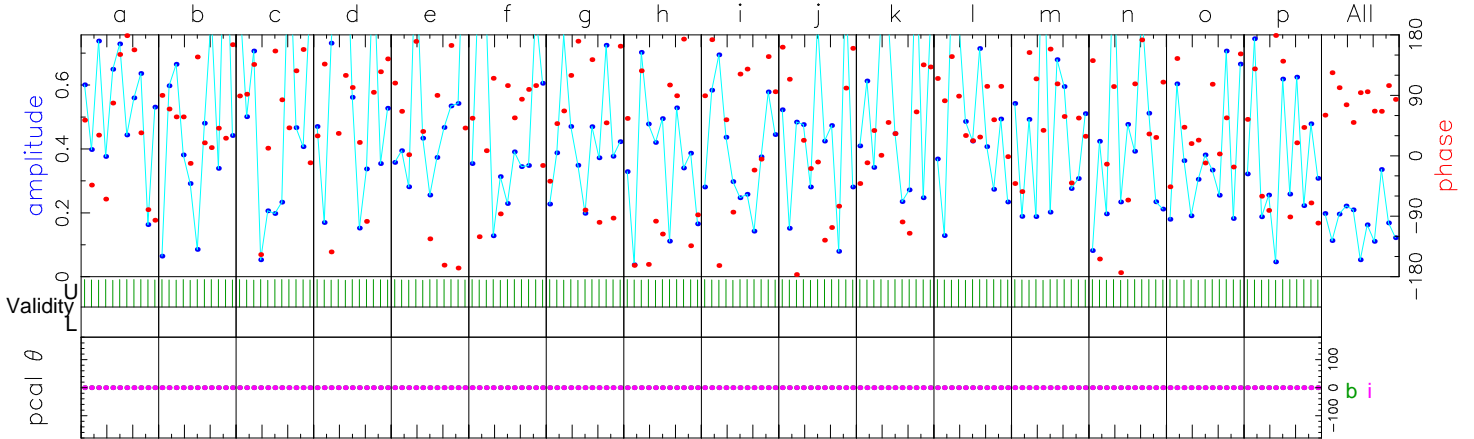


Fringe quality 0

SNR 6.0  
Int time 178.604  
Amp 0.252  
Phase 79.6  
PFD 2.6e-01  
Delays (us)  
SBD -0.081570  
MBD 0.009914  
Fringe rate (Hz) 0.960046  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053647  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

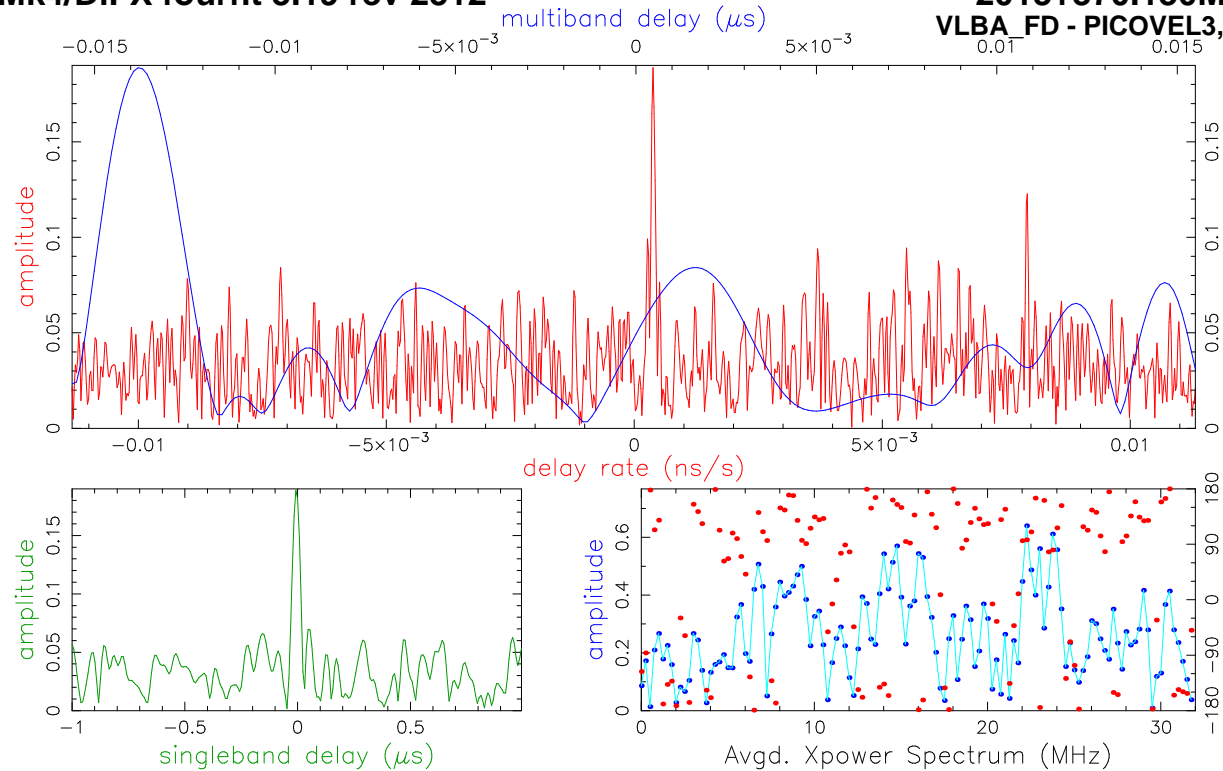
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used
b	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		
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
																		Tracks
Group delay (usec)(sbd)	5.85619178107E+03			Apriori delay (usec)			5.85627561691E+03			Resid mbdelay (usec)			9.91416E-03			+/-	1.8E-04	
Sband delay (usec)	5.85619404641E+03			Apriori clock (usec)			-7.2306663E-02			Resid sbdelay (usec)			-8.15705E-02			+/-	2.9E-03	
Phase delay (usec)	5.85627561948E+03			Apriori clockrate (us/s)			1.1060491E-07			Resid phdelay (usec)			2.56658E-06			+/-	6.2E-07	
Delay rate (us/s)	1.51385785593E+00			Apriori rate (us/s)			1.51384671075E+00			Resid rate (us/s)			1.11452E-05			+/-	5.9E-09	
Total phase (deg)	310.3			Apriori accel (us/s/s)			-2.14592175050E-05			Resid phase (deg)			79.6			+/-	19.2	

ph/seg (deg) 21.6 31.8 Amplitude 0.252 +/- 0.042 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 43.9 55.5 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 43.3 38.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 65.3 67.0 Inc. seg. avg. 0.230 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 b: az 92.0 el 56.2 pa -56.8 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10905.923 -217.260 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/bi..130M5S Output file: /Exps/c192c/v2/1234/No0067/bi.W.67.130M5S simultaneous interpolator



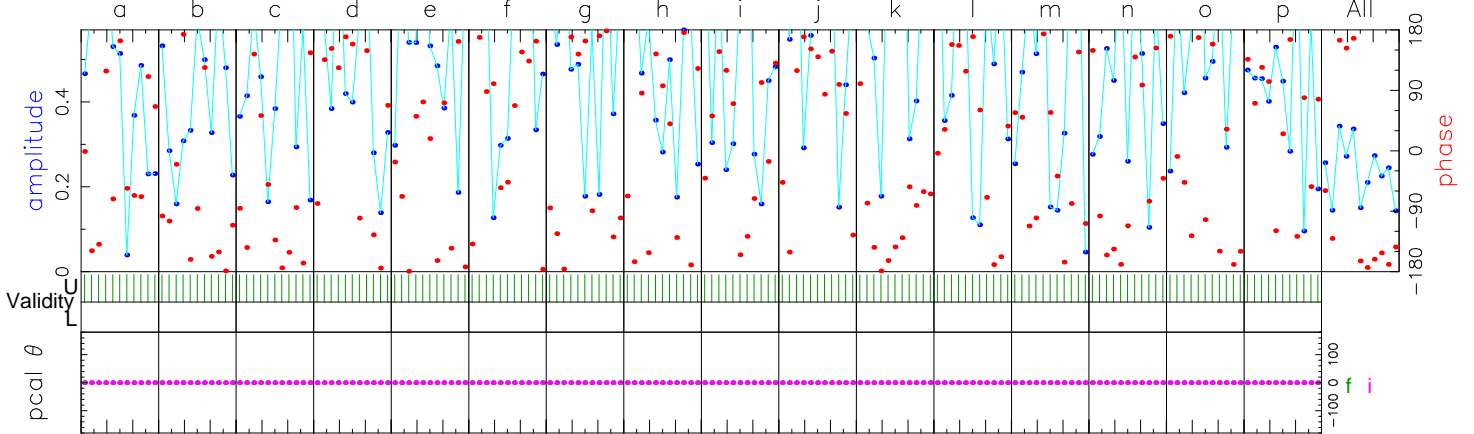


Fringe quality 0

SNR 6.9  
Int time 179.111  
Amp 0.190  
Phase -168.0  
PFD 5.5e-04  
Delays (us)  
SBD -0.005738  
MBD -0.013751  
Fringe rate (Hz)  
0.032960  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053654  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

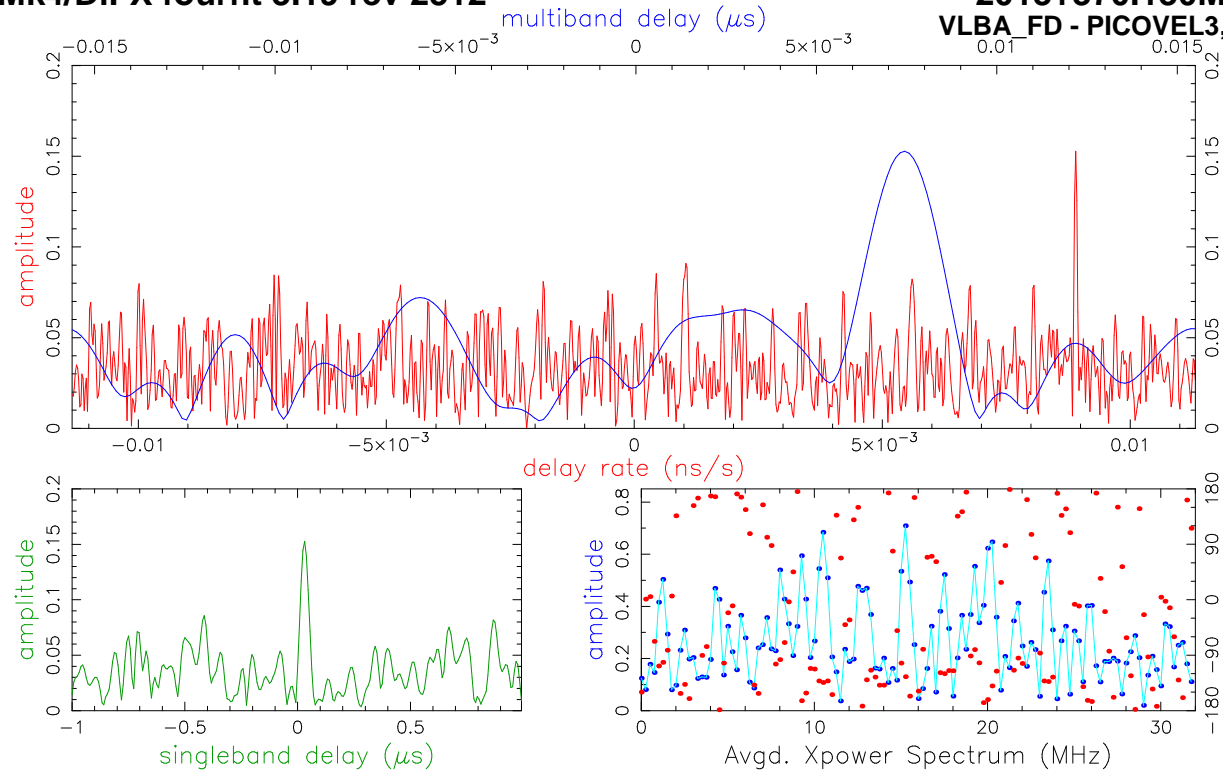
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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
	-139.8	-142.0	-157.7	164.8	137.7	143.6	-147.6	-179.0	-150.5	142.9	-113.5	151.1	-150.8	-178.7	-151.4	149.9	Phase	-168.0
	0.1	0.3	0.3	0.3	0.1	0.3	0.4	0.2	0.1	0.3	0.4	0.1	0.2	0.3	0.3	0.1	Ampl.	0.2
	183.5	230.3	133.9	72.5	238.3	76.8	127.6	148.1	231.1	8.4	129.2	203.7	3.9	116.3	6.1	187.8	Sbd box	128.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	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	
fi	0:0	0:0	0:0	0:0	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	
fi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	7.54183729409E+03			Apriori delay (usec)			7.54185104515E+03			Resid mbdelay (usec)			-1.37511E-02			+/- 1.6E-04		
Sband delay (usec)	7.54184530715E+03			Apriori clock (usec)			1.0235034E+00			Resid sbdelay (usec)			-5.73800E-03			+/- 2.5E-03		
Phase delay (usec)	7.54185103973E+03			Apriori clockrate (us/s)			2.6205050E-07			Resid phdelay (usec)			-5.41891E-06			+/- 5.3E-07		
Delay rate (us/s)	1.44377805600E+00			Apriori rate (us/s)			1.44377767336E+00			Resid rate (us/s)			3.82631E-07			+/- 5.1E-09		
Total phase (deg)	-157.5			Apriori accel (us/s/s)			-4.64649806404E-05			Resid phase (deg)			-168.0			+/- 16.5		

ph/seg (deg) RMS Theor. Amplitude 0.190 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 39.5 27.3 Search (1024X64) 0.186 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 43.0 47.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 35.8 33.0 Inc. seg. avg. 0.213 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 56.5 57.6 Inc. frq. avg. 0.193 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 66.6 el 65.5 pa -96.8 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10423.938 -3371.229 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/fi..130M5S Output file: /Exps/c192c/v2/1234/No0067/fi.W.107.130M5S

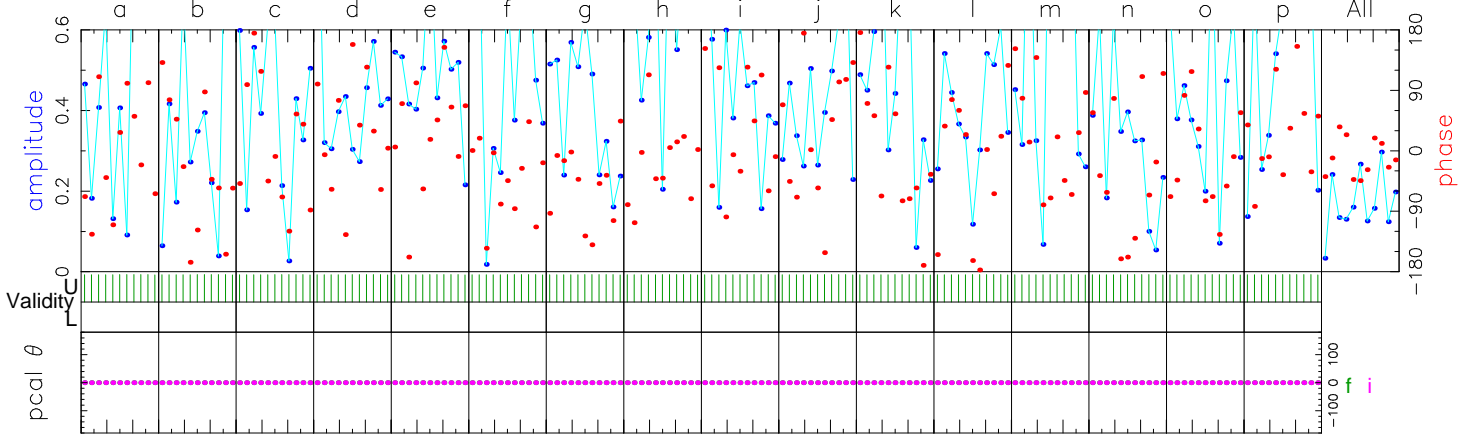


Fringe quality 0

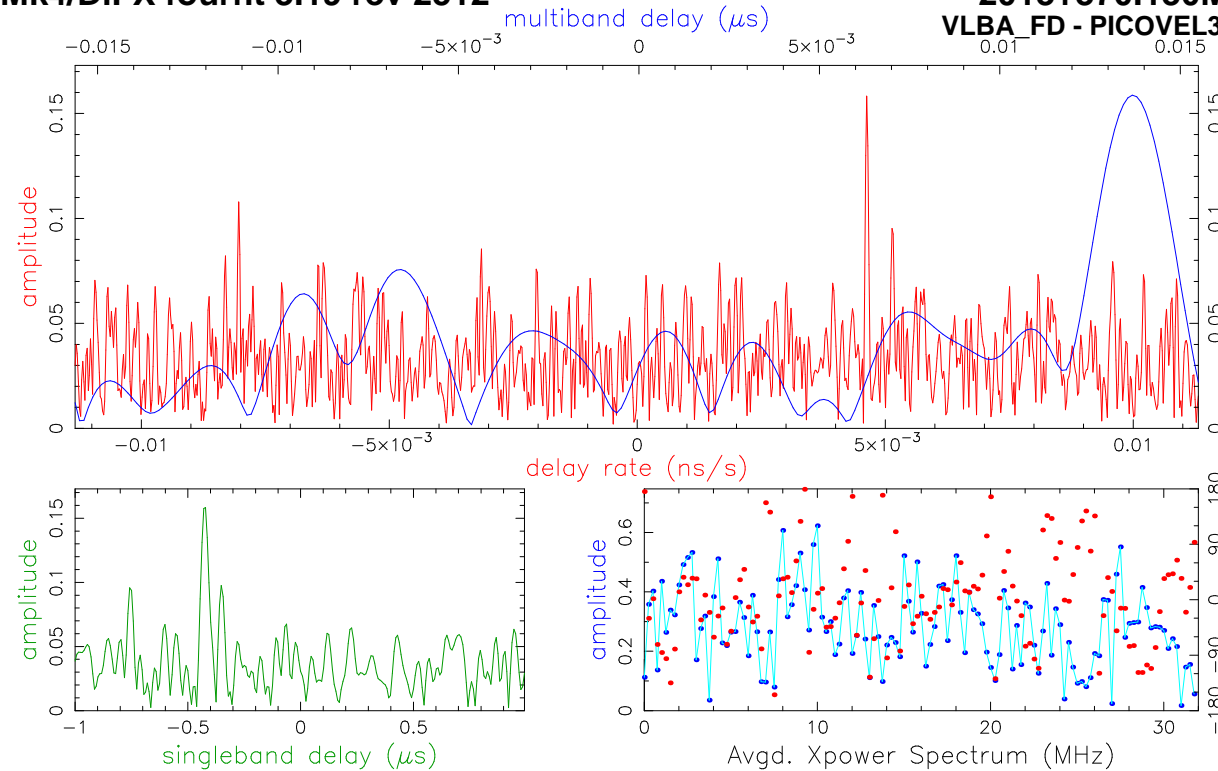
SNR 5.6  
Int time 179.111  
Amp 0.200  
Phase -9.6  
PFD 9.3e-01  
Delays (us)  
SBD 0.030146  
MBD 0.007430  
Fringe rate (Hz) 0.768142  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053656  
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
	-4.0	-73.3	-24.9	55.1	42.2	-18.1	-56.6	-22.5	-24.0	71.8	-53.6	36.2	-19.9	105.0	-30.2	12.7		Phase
	0.3	0.1	0.2	0.2	0.3	0.5	0.3	0.5	0.1	0.2	0.2	0.2	0.4	0.0	0.3	0.2		Ampl.
	202.2	52.0	66.9	29.3	120.5	134.5	130.1	132.8	76.1	225.1	111.9	115.1	155.9	247.3	209.7	64.6		Sbd box
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
f	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
fi	0:0	0:0	0:0	0:0	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
fi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
i	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
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	7.54188972466E+03			Apriori delay (usec)			7.54185104515E+03			Resid mbdelay (usec)			7.42951E-03			+/-	1.9E-04	
Sband delay (usec)	7.54188119115E+03			Apriori clock (usec)			1.0235034E+07			Resid sbdelay (usec)			3.01460E-02			+/-	3.1E-03	
Phase delay (usec)	7.54185104484E+03			Apriori clockrate (us/s)			2.6205050E-07			Resid phdelay (usec)			-3.08349E-07			+/-	6.6E-07	
Delay rate (us/s)	1.44378659073E+00			Apriori rate (us/s)			1.44377767336E+00			Resid rate (us/s)			8.91736E-06			+/-	6.3E-09	
Total phase (deg)	0.9			Apriori accel (us/s/s)			-4.64649806404E-05			Resid phase (deg)			-9.6			+/-	20.5	
ph/seg (deg)	RMS	Theor.	Amplitude			0.200 +/- 0.036			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	27.2	34.0	Search (1024X64)			0.147			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000	1.000		
ph/frq (deg)	48.4	59.3	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)	-0.016	0.016	
amp/frq (%)	52.6	40.9	Inc. seg. avg.			0.189			Sample rate(MSamp/s): 64			dr window (ns/s)			-0.011	0.011		
	65.1	71.5	Inc. frq. avg.			0.198			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)	0.00	0.00	

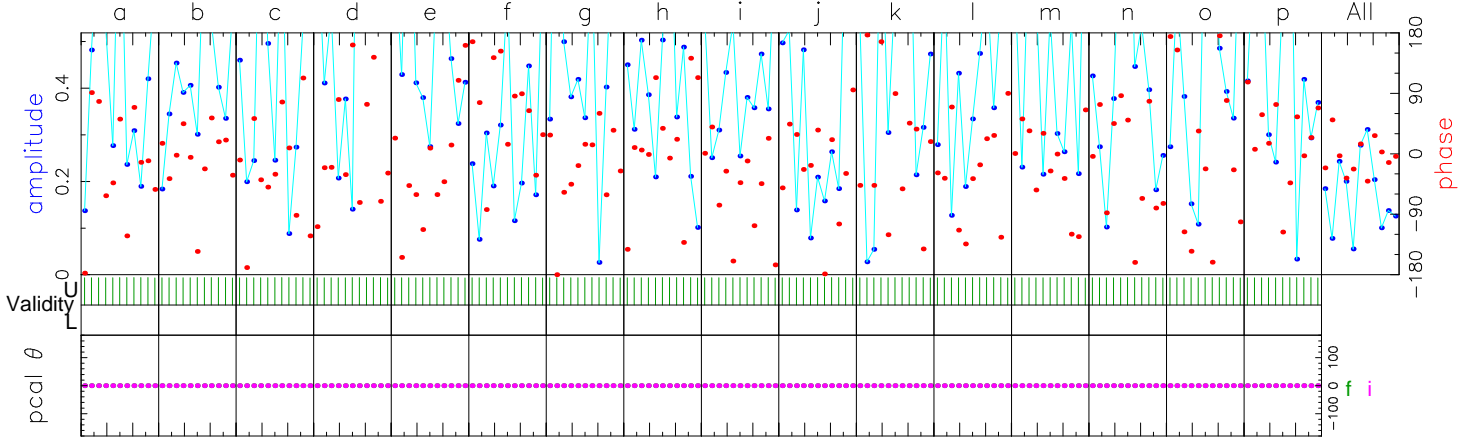


Fringe quality 0

SNR 5.9  
Int time 179.111  
Amp 0.173  
Phase -7.7  
PFD 3.6e-01  
Delays (us)  
SBD -0.425608  
MBD 0.013606  
Fringe rate (Hz)  
0.398754  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053659  
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



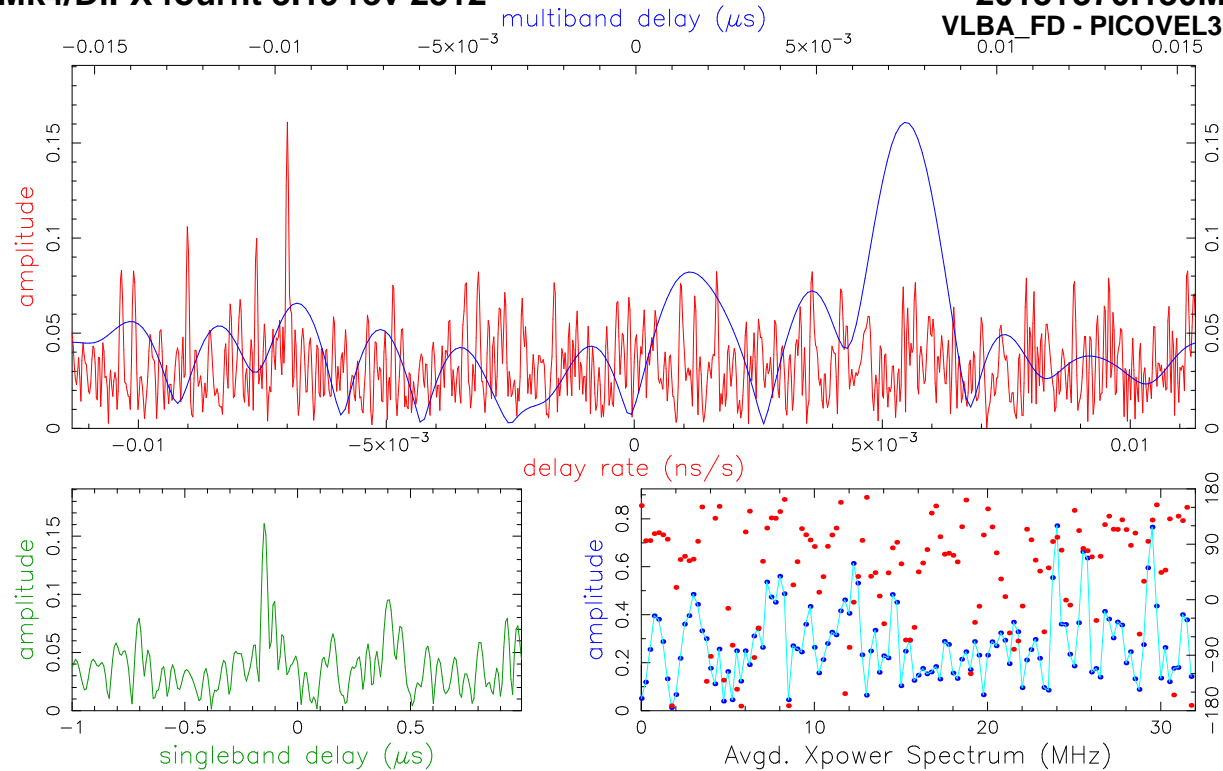
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f <i>i</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		
f <i>i</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		
f	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		
f	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

Group delay (usec)(sbd)	7.54142715159E+03	Apriori delay (usec)	7.54185104515E+03	Resid mbdelay (usec)	1.36064E-02	+/-	1.8E-04
Sband delay (usec)	7.54142543765E+03	Apriori clock (usec)	1.0235034E+00	Resid sbdelay (usec)	-4.25608E-01	+/-	2.9E-03
Phase delay (usec)	7.54185104490E+03	Apriori clockrate (us/s)	2.6205050E-07	Resid phdelay (usec)	-2.47606E-07	+/-	6.3E-07
Delay rate (us/s)	1.44378230251E+00	Apriori rate (us/s)	1.44377767336E+00	Resid rate (us/s)	4.62914E-06	+/-	6.0E-09
Total phase (deg)	2.8	Apriori accel (us/s/s)	-4.64649806404E-05	Resid phase (deg)	-7.7	+/-	19.4

ph/seg (deg)	26.2	RMS	26.2	Theor.	32.2	Amplitude	0.173 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	49.6	Search (1024X64)	0.157	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	Interp.	0.000	sb window (us)	-1.000	1.000	
ph/frq (deg)	47.7	Inc. seg. avg.	0.162	Bits/sample:	2x2	SampCntNorm:	enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	43.3	Inc. frq. avg.	0.173	Sample rate (MSamp/s):	64	Data rate (Mb/s):	2048	dr window (ns/s)	-0.011	0.011	
								nlags:	128	t_cohere:	infinite
								ion window (TEC)	0.00	0.00	

f: az 66.6 el 65.5 pa -96.8 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10423.938 -3371.229 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/fi..130M5S Output file: /Exps/c192c/v2/1234/No0067/fi.W.147.130M5S

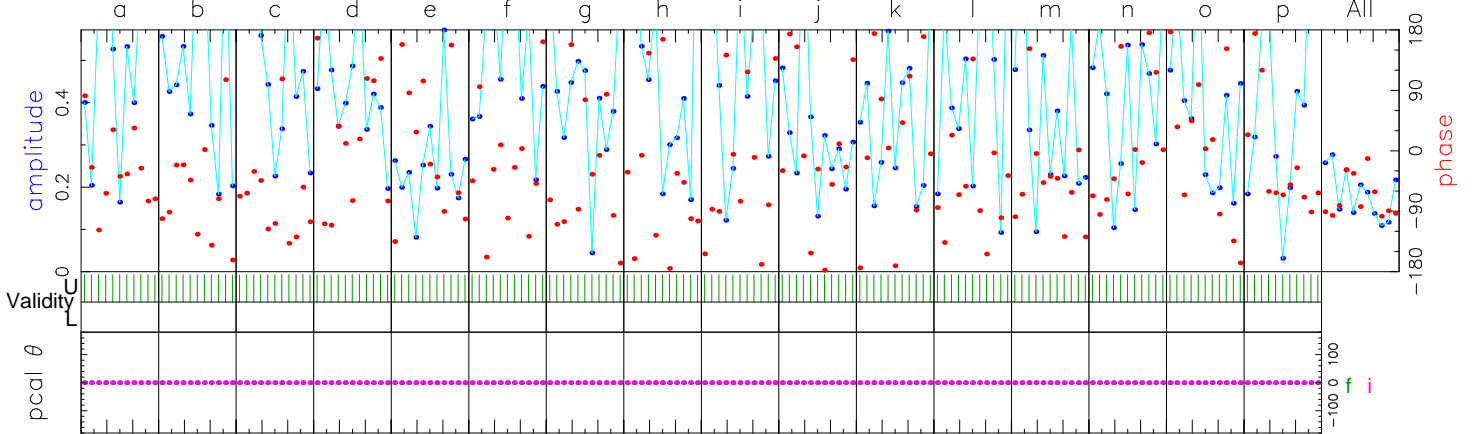


Fringe quality 0

SNR 5.9  
Int time 179.111  
Amp 0.191  
Phase -71.2  
PFD 3.1e-01  
Delays (us)  
SBD -0.146426  
MBD 0.007492  
Fringe rate (Hz)  
-0.603642  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053651  
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

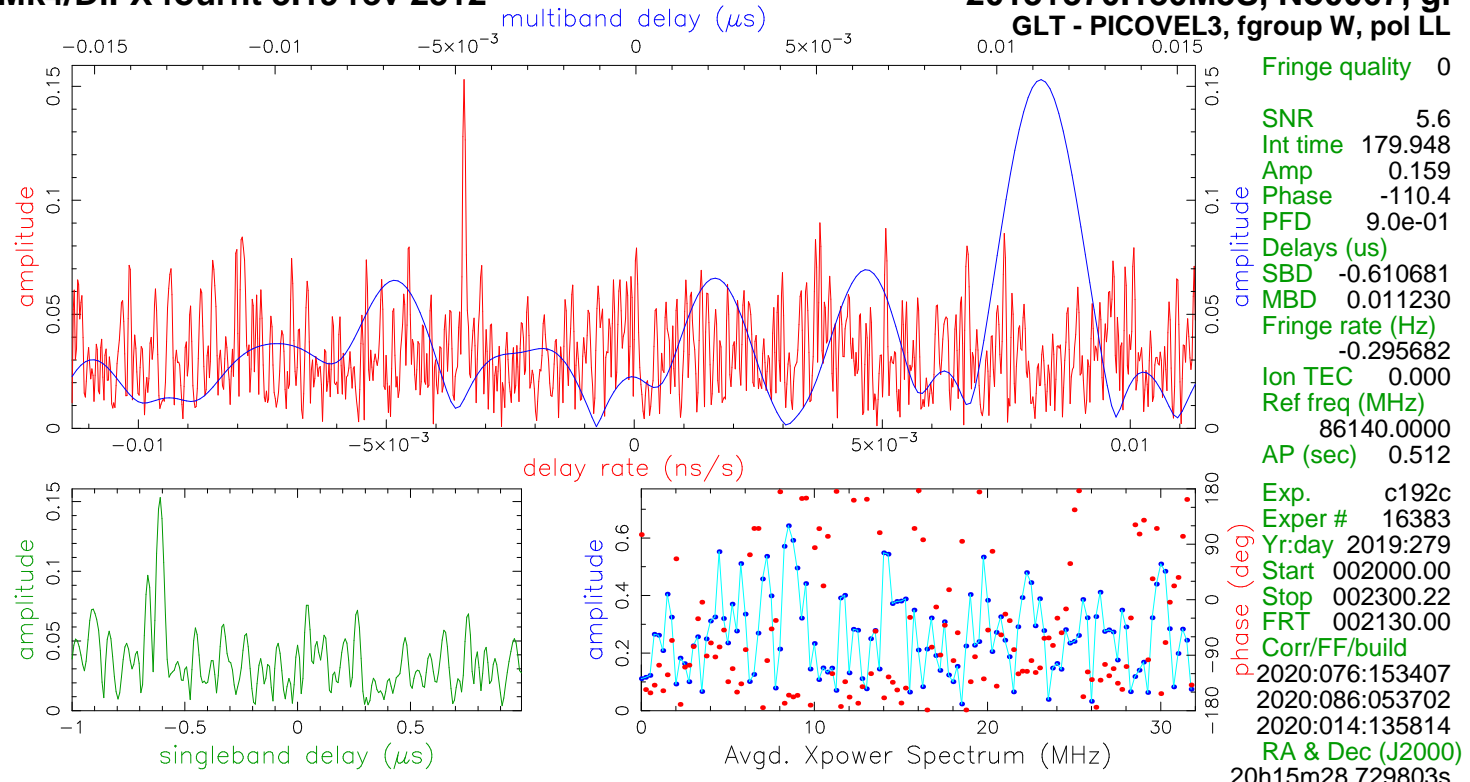


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-45.0	-69.9	-77.1	-39.3	-93.9	-62.8	-108.9	-104.1	-110.7	-35.0	38.2	-76.1	-67.5	-58.1	98.2	-68.1	Phase	-71.2
	0.4	0.2	0.5	0.0	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.3	0.3	0.2	0.1	0.3	Ampl.	0.2
	110.9	160.9	110.0	152.4	196.6	146.4	248.8	66.4	62.8	146.4	74.0	230.5	129.6	184.8	131.4	233.9	Sbd box	110.3
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	
f	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	
fi	0:0	0:0	0:0	0:0	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	
fi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	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	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	7.54170228754E+03			Apriori delay (usec)			7.54185104515E+03			Resid mbdelay (usec)			7.49239E-03			+/- 1.8E-04		
Sband delay (usec)	7.54170461865E+03			Apriori clock (usec)			1.0235034E+00			Resid sbdelay (usec)			-1.46426E-01			+/- 2.9E-03		
Phase delay (usec)	7.54185104285E+03			Apriori clockrate (us/s)			2.6205050E-07			Resid phdelay (usec)			-2.29568E-06			+/- 6.2E-07		
Delay rate (us/s)	1.44377066568E+00			Apriori rate (us/s)			1.44377767336E+00			Resid rate (us/s)			-7.00768E-06			+/- 6.0E-09		
Total phase (deg)				-60.7			Apriori accel (us/s/s)			-4.64649806404E-05			Resid phase (deg)			-71.2 +/- 19.3		

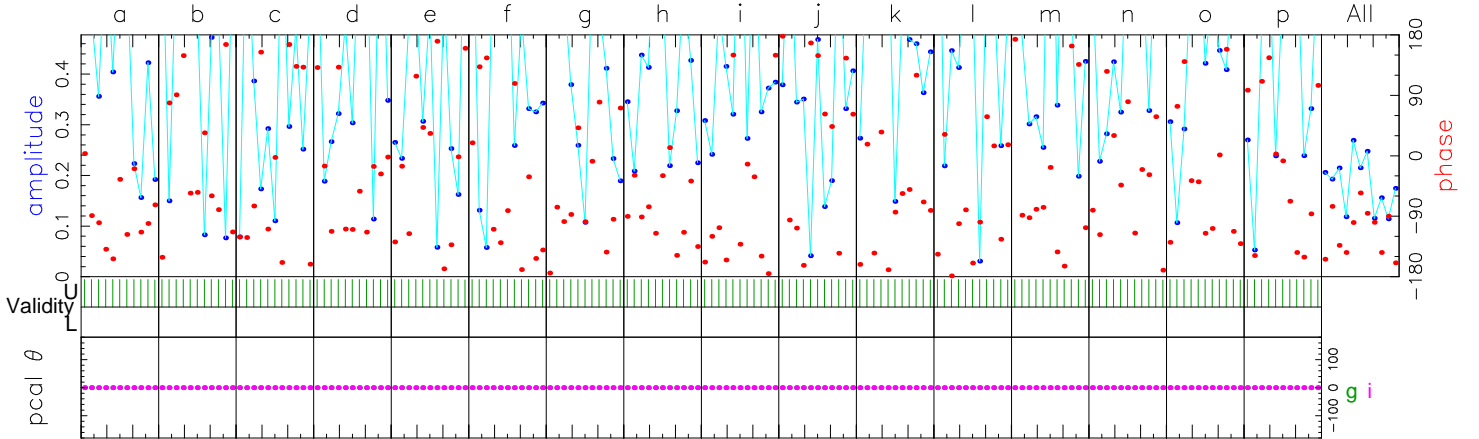
RMS 29.6 Theor. 32.0 Amplitude 0.191 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 37.3 55.9 Search (1024X64) 0.150 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 58.9 38.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 66.3 67.4 Inc. seg. avg. 0.189 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 66.3 67.4 Inc. frq. avg. 0.185 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 66.6 el 65.5 pa -96.8 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10423.938 -3371.229 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/fi..130M5S Output file: /Exps/c192c/v2/1234/No0067/fi.W.87.130M5S

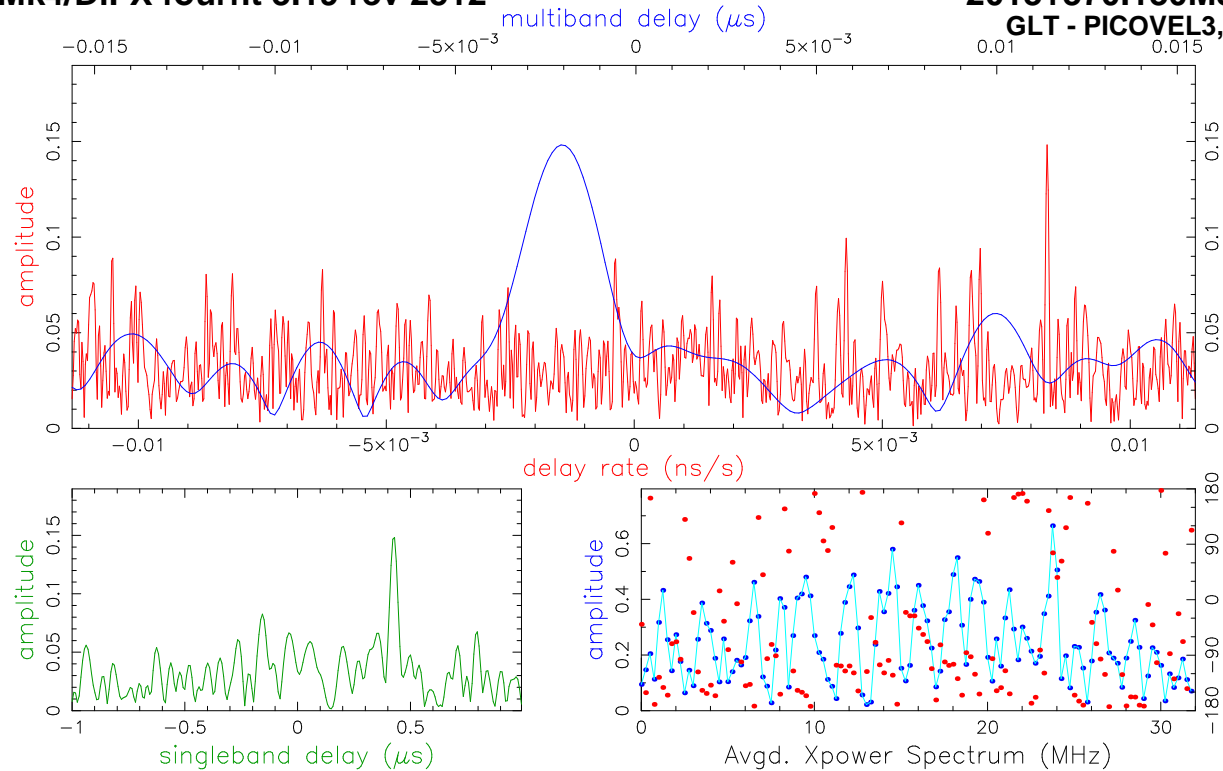


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



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	
-90.6	-100.2	-155.8	-74.8	167.4	-115.5	-83.8	-84.5	-134.3	-163.7	-81.4	-107.6	-120.0	-56.7	-95.0	-179.1	Phase	-110.4	
0.3	0.2	0.3	0.2	0.1	0.2	0.1	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.1	Ampl.	0.1	
167.7	136.4	155.4	231.4	244.8	14.4	207.0	49.8	180.6	21.8	63.8	193.6	92.0	216.5	31.1	82.1	Sbd box	50.8	
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	APs used		
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
g: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	PC phase		
g: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	ManI PC		
g	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			
g	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	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	4.57101186480E+03				Apriori delay (usec)				4.57162563480E+03				Resid mbdelay (usec)				1.12300E-02 +/- 1.9E-04	
Sband delay (usec)	4.57101495430E+03				Apriori clock (usec)				1.8539850E+00				Resid sbdelay (usec)				-6.10681E-01 +/- 3.1E-03	
Phase delay (usec)	4.57162563124E+03				Apriori clockrate (us/s)				4.2799997E-07				Resid phdelay (usec)				-3.55996E-06 +/- 6.6E-07	
Delay rate (us/s)	9.05150929085E-01				Apriori rate (us/s)				9.05154361658E-01				Resid rate (us/s)				-3.43257E-06 +/- 6.3E-09	
Total phase (deg)	-44.9				Apriori accel (us/s/s)				9.93929288881E-07				Resid phase (deg)				-110.4 +/- 20.4	

ph/seg (deg)	RMS	Theor.	Amplitude	0.159 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	33.8	33.8	Search (1024X64)	0.150	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	38.9	59.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	41.6	40.8	Inc. seg. avg.	0.163	Sample rate(MSamp/s): 64	dr window (ns/s) -0.016 0.016
	52.0	71.2	Inc. frq. avg.	0.150	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
g: az 188.3 el 50.6 pa 2.4	i: az 293.8 el 34.2 pa 66.6		u, v (fr/asec) -6506.465 2710.303		simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c192c/v2/1234/No0067/gi..130M5S		Output file: /Exps/c192c/v2/1234/No0067/gi.W.160.130M5S			

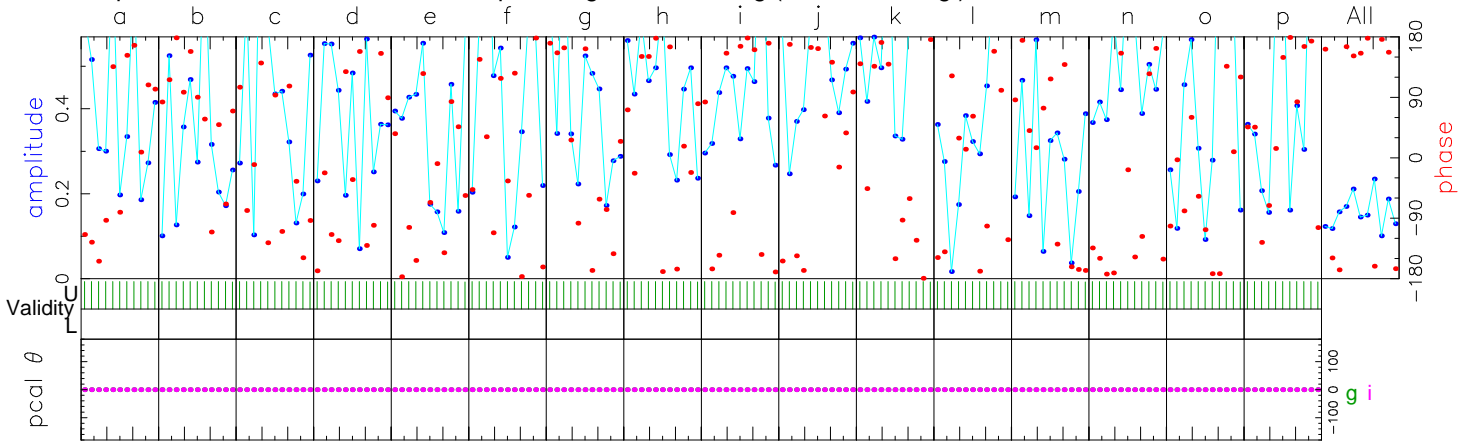


Fringe quality 0

SNR 5.5  
Int time 179.936  
Amp 0.190  
Phase 175.6  
PFD 9.8e-01  
Delays (us)  
SBD 0.426292  
MBD -0.002036  
Fringe rate (Hz) 0.717623  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053704  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

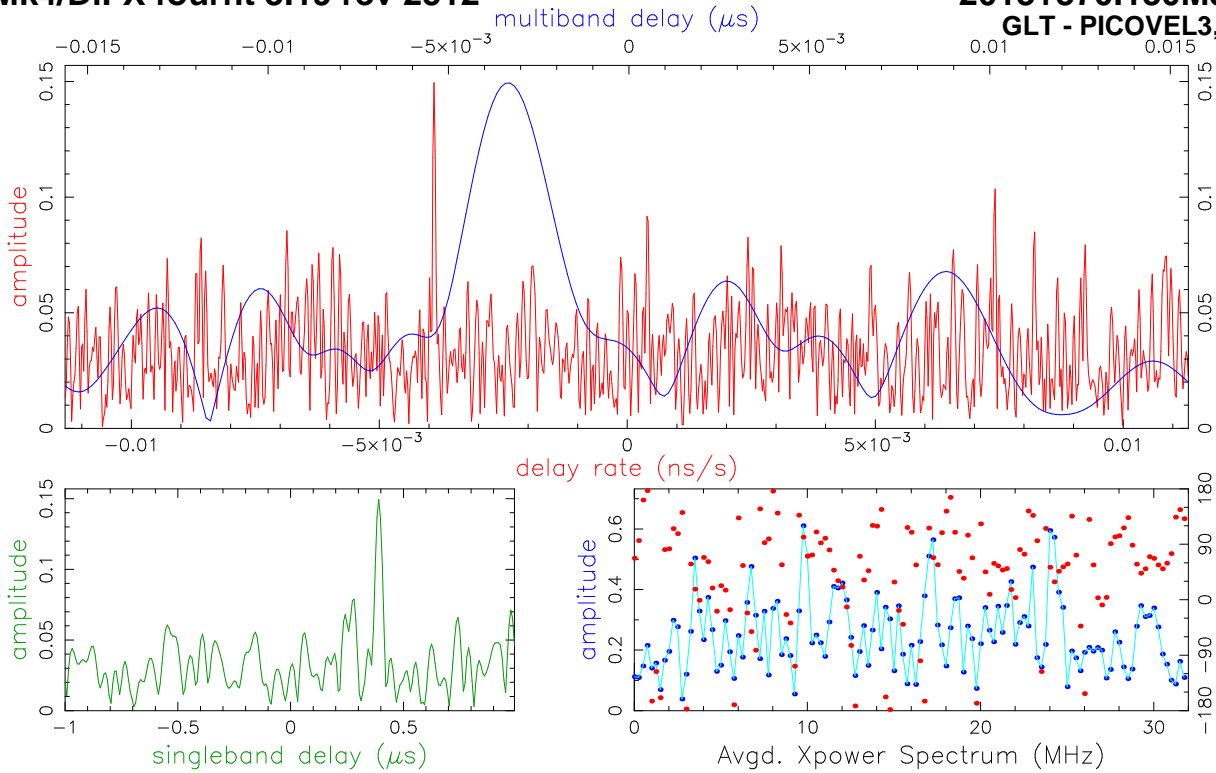
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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	
	-178.0	96.5	-152.9	-116.9	-156.5	158.3	-177.0	138.1	-170.6	145.6	-173.7	-179.0	147.9	-161.5	159.7	147.8	Phase	175.6	
	0.3	0.2	0.2	0.2	0.0	0.1	0.3	0.2	0.4	0.3	0.4	0.2	0.1	0.4	0.1	0.2	Ampl.	0.2	
	204.6	95.7	66.9	138.7	167.5	139.9	231.7	19.0	184.3	112.0	157.3	129.1	25.0	152.9	33.2	235.8	Sbd box	183.6	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
g: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		
g: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		
g	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			
g	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)			4.57206109910E+03							4.57162563480E+03							Resid mbdelay (usec)	-2.03571E-03	+/- 2.0E-04
Sband delay (usec)			4.57205192680E+03							1.8539850E+00							Resid sbdelay (usec)	4.26292E-01	+/- 3.1E-03
Phase delay (usec)			4.57162564047E+03							4.2799997E-07							Resid phdelay (usec)	5.66396E-06	+/- 6.7E-07
Delay rate (us/s)			9.05162692548E-01							9.05154361658E-01							Resid rate (us/s)	8.33089E-06	+/- 6.4E-09
Total phase (deg)				241.2						9.93929288881E-07							Resid phase (deg)	175.6	+/- 20.8

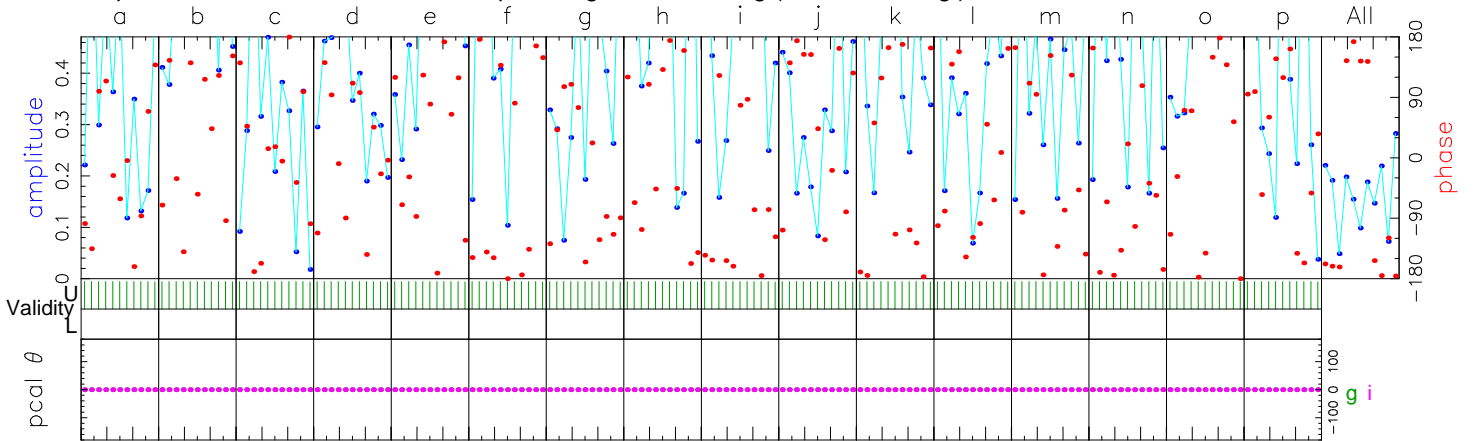
ph/seg (deg) RMS Theor. Amplitude 0.190 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 19.3 34.4 Search (1024X64) 0.143 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 26.5 60.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 35.8 41.5 Inc. seg. avg. 0.168 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 63.7 72.5 Inc. frq. avg. 0.173 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

g: az 188.3 el 50.6 pa 2.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -6506.465 2710.303 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/gi..130M5S Output file: /Exps/c192c/v2/1234/No0067/gi.W.174.130M5S



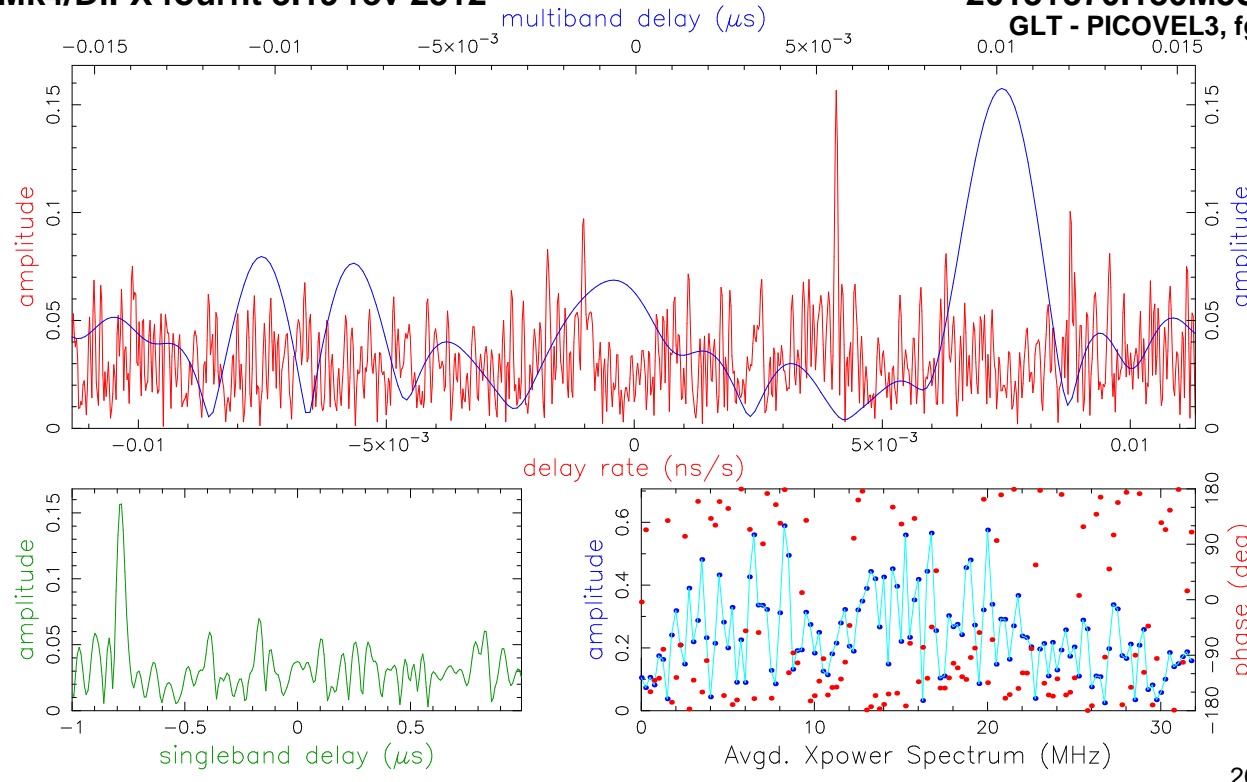
Fringe quality 0  
SNR 5.5  
Int time 179.948  
Amp 0.157  
Phase -179.3  
PFD 9.9e-01  
Delays (us)  
SBD 0.390577  
MBD -0.003351  
Fringe rate (Hz)  
-0.335518  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053706  
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



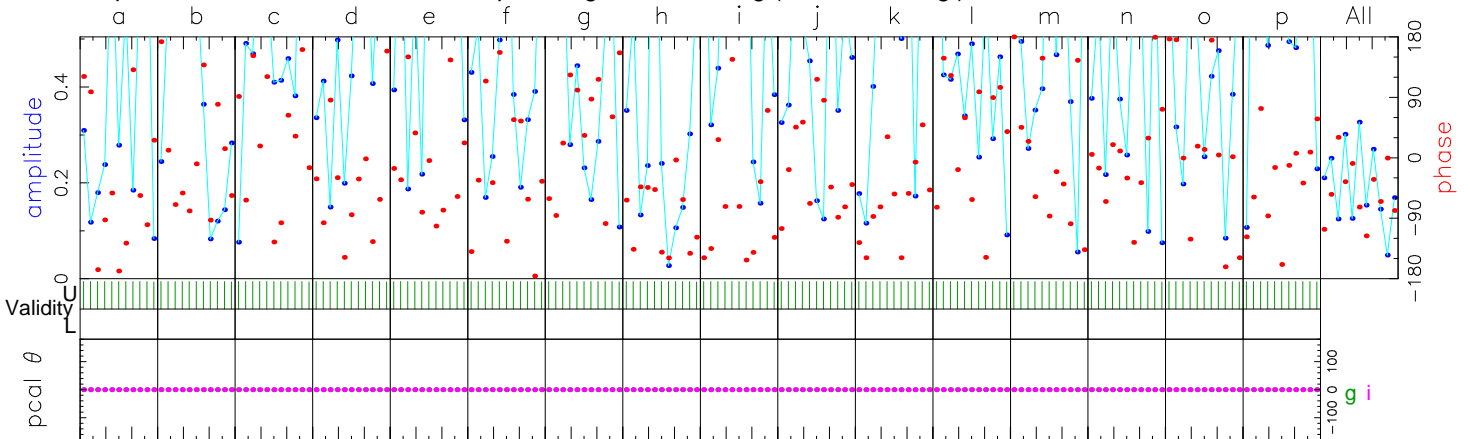
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-155.1	168.4	117.8	56.8	140.6	178.9	-85.0	-157.9	-164.5	176.2	-164.2	-135.9	-163.5	-137.2	152.5	130.8	Phase	-179.3
	0.1	0.1	0.0	0.1	0.2	0.5	0.1	0.2	0.2	0.4	0.1	0.1	0.1	0.2	0.3	0.3	Ampl.	0.1
	138.3	237.2	150.6	233.2	83.2	179.0	33.4	228.3	199.5	78.3	178.0	247.3	71.6	81.0	17.7	180.8	Sbd box	179.0
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	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g: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	
g: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	
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
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)		4.57202853388E+03				Apriori delay (usec)		4.57162563480E+03				Resid mbdelay (usec)		-3.35093E-03			+/-	2.0E-04
Sband delay (usec)		4.57201621130E+03				Apriori clock (usec)		1.8539850E+00				Resid sbdelay (usec)		3.90577E-01			+/-	3.1E-03
Phase delay (usec)		4.57162562902E+03				Apriori clockrate (us/s)		4.2799997E-07				Resid phdelay (usec)		-5.78040E-06			+/-	6.7E-07
Delay rate (us/s)		9.05150466630E-01				Apriori rate (us/s)		9.05154361658E-01				Resid rate (us/s)		-3.89503E-06			+/-	6.5E-09
Total phase (deg)					-113.7	Apriori accel (us/s/s)		9.93929288881E-07				Resid phase (deg)		-179.3			+/-	20.9

ph/seg (deg) RMS Theor. Amplitude 0.157 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 29.4 34.7 Search (1024X64) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 45.9 60.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 52.6 41.8 Inc. seg. avg. 0.147 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 76.2 73.0 Inc. frq. avg. 0.150 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 g: az 188.3 el 50.6 pa 2.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -6506.465 2710.303 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/gi..130M5S Output file: /Exps/c192c/v2/1234/No0067/gi.W.188.130M5S



Fringe quality 0  
SNR 5.8  
Int time 179.936  
Amp 0.168  
Phase -56.0  
PFD 4.7e-01  
Delays (us)  
SBD -0.785106  
MBD 0.010028  
Fringe rate (Hz) 0.352228  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build 2020:076:153407  
2020:086:053708  
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



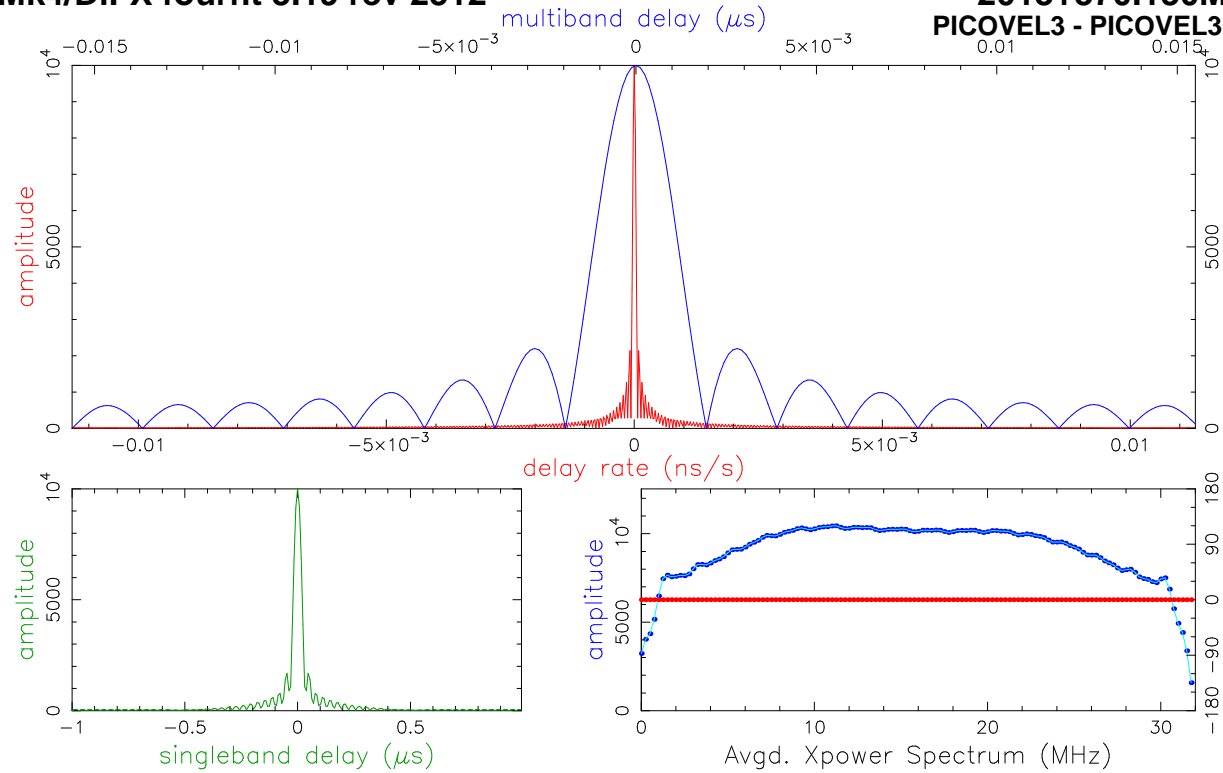
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-99.5	-44.8	71.4	-57.0	-33.3	-88.4	0.4	-84.5	-121.0	-31.5	-45.0	121.5	-80.5	-28.5	-134.6	-24.1		Phase -56.0
	0.2	0.2	0.1	0.3	0.3	0.1	0.1	0.3	0.3	0.3	0.3	0.0	0.2	0.2	0.1	0.3		Ampl. 0.2
	25.3	77.7	211.3	184.4	151.5	181.8	83.7	31.8	15.1	132.3	220.0	114.2	147.2	157.4	49.1	28.6		Sbd box 28.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
g: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
g: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
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 4.57085441243E+03 Apriori delay (usec) 4.57162563480E+03 Resid mbdelay (usec) 1.00276E-02 +/- 1.8E-04  
Sband delay (usec) 4.57084052830E+03 Apriori clock (usec) 1.8539850E+00 Resid sbdelay (usec) -7.85106E-01 +/- 2.9E-03  
Phase delay (usec) 4.57162563300E+03 Apriori clockrate (us/s) 4.2799997E-07 Resid phdelay (usec) -1.80540E-06 +/- 6.3E-07  
Delay rate (us/s) 9.05158450682E-01 Apriori rate (us/s) 9.05154361658E-01 Resid rate (us/s) 4.08902E-06 +/- 6.1E-09  
Total phase (deg) 9.5 Apriori accel (us/s/s) 9.93929288881E-07 Resid phase (deg) -56.0 +/- 19.6

ph/seg (deg) RMS Theor. Amplitude 0.168 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 43.6 32.5 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 56.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 70.1 39.2 Inc. seg. avg. 0.176 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

g: az 188.3 el 50.6 pa 2.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -6506.465 2710.303 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/gi..130M5S Output file: /Exps/c192c/v2/1234/No0067/gi.W.202.130M5S



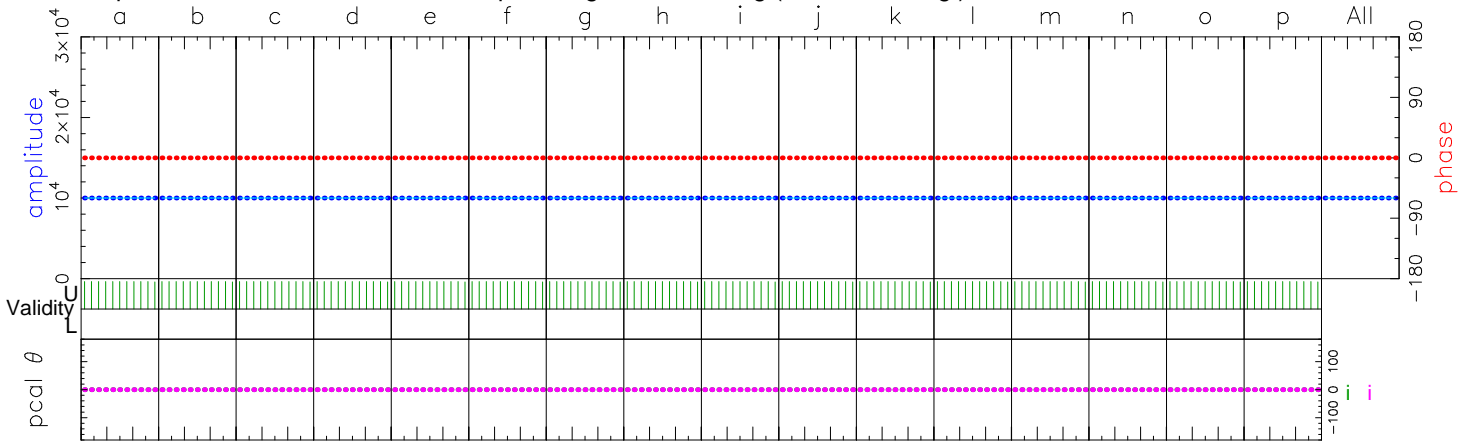


Fringe quality 9

SNR 366869.6  
 Int time 179.982  
 Amp 10000.002  
 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 002000.00  
 Stop 002300.22  
 FRT 002130.00  
 Corr/FF/build  
 2020:076:153407  
 2020:086:053703  
 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

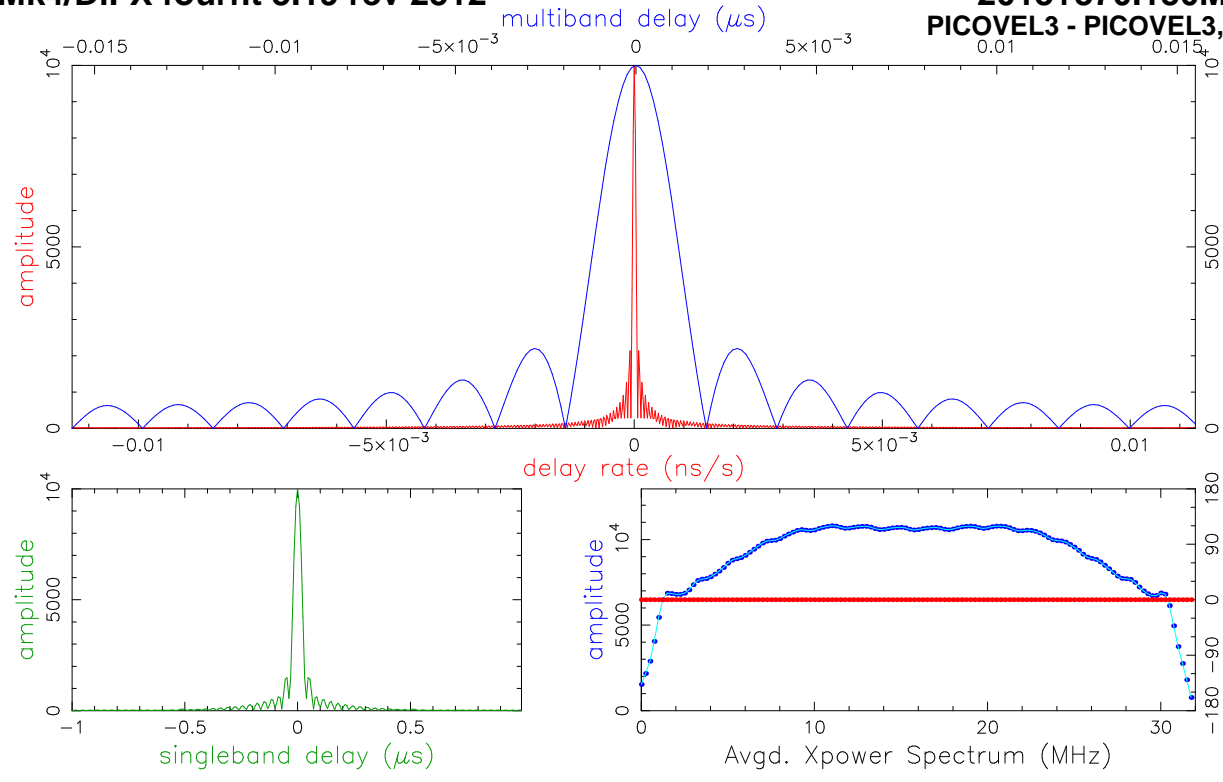


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
0.0	-0.0	0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	-0.0	Phase	-0.0
10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	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	129.0	Sbd box	129.0
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	
ii	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
iii	0:0	0:0	0:0	0:0	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	
iiii	0:0	0:0	0:0	0:0	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	
ii	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	
ii	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 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) -2.18807206428E-19 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -2.18807E-19 +/- 1.0E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14  
 Total phase (deg) -0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) -0.0 +/- 0.0

RMS Theor. Amplitude 10000.002 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 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  
 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. 10000.002 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

i: az 293.8 el 34.2 pa 66.6 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ii..130M5S Output file: /Exps/c192c/v2/1234/No0067/ii.W.170.130M5S

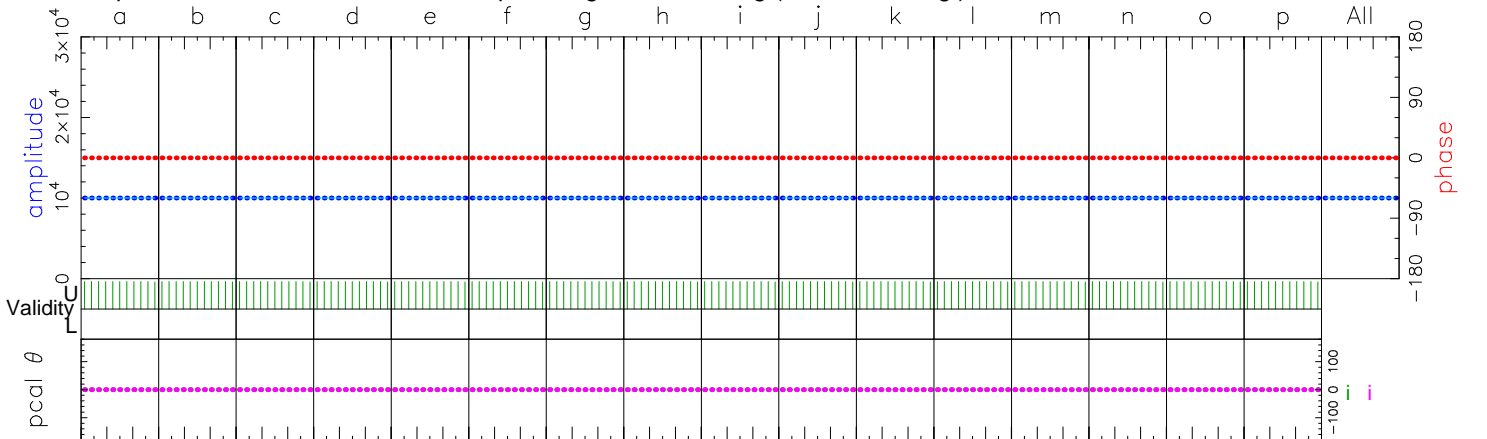


Fringe quality 9

SNR 366869.6  
 Int time 179.982  
 Amp 10000.002  
 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 002000.00  
 Stop 002300.22  
 FRT 002130.00  
 Corr/FF/build  
 2020:076:153407  
 2020:086:053705  
 2020:014:135814  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

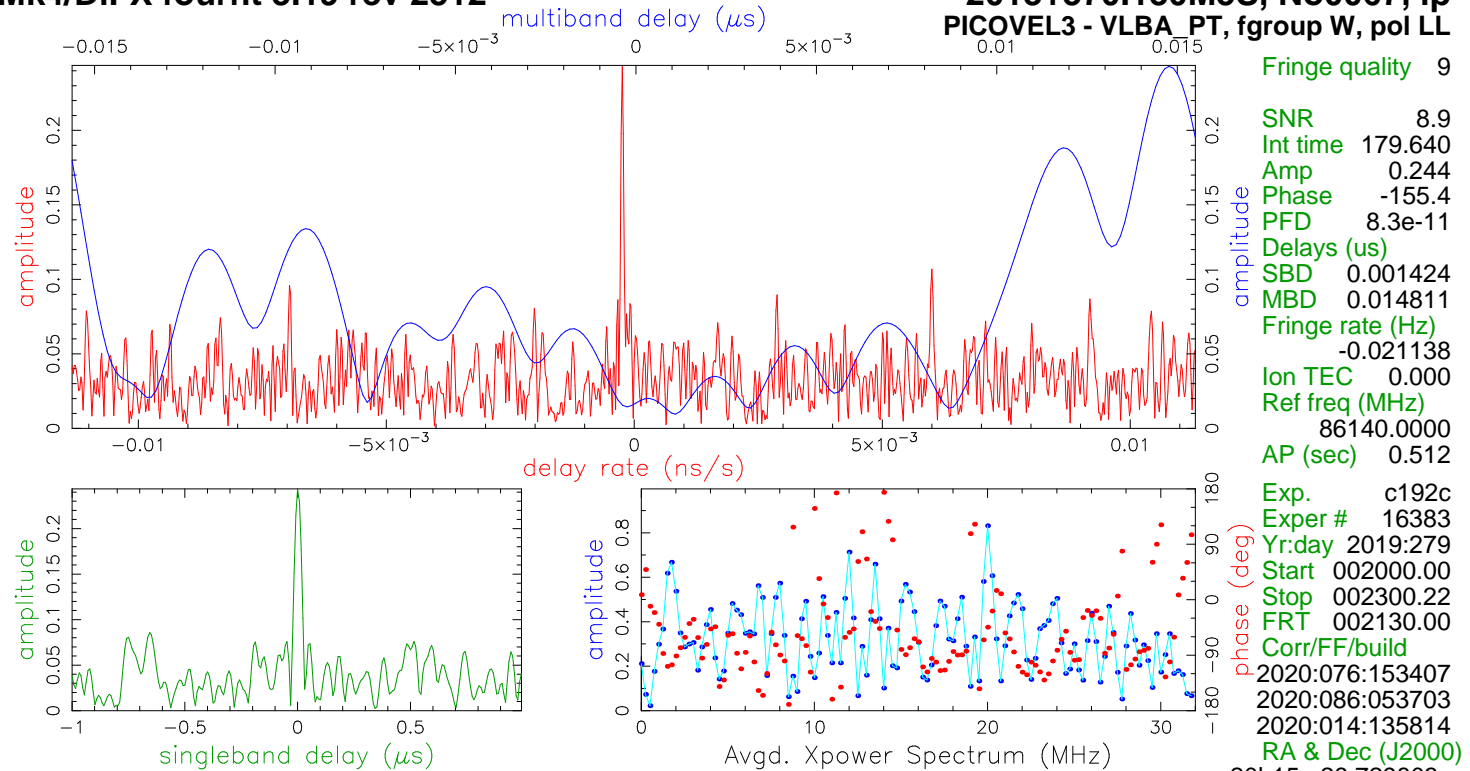
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



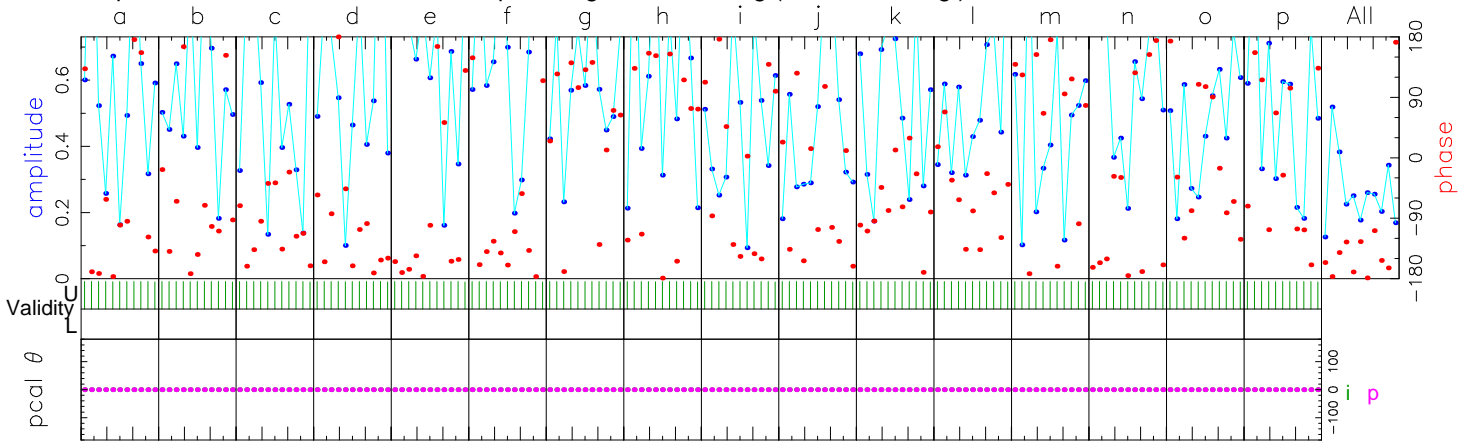
86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-0.0	-0.0	0.0	-0.0	-0.0	0.0	0.0	0.0	-0.0	0.0	-0.0	0.0	-0.0	-0.0	-0.0	-0.0	Phase	-0.0
10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	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	
ii 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
iii 0:0	0:0	0:0	0:0	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	
iiii 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
iiiii 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
iiiiii W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
iiiiiii W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
iiiiiiii W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
iiiiiiii W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)	0.000000000000E+00		Apriori delay (usec)		0.000000000000E+00		Resid mbdelay (usec)		0.000000E+00		+/- 2.9E-09						
Sband delay (usec)	0.000000000000E+00		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		0.000000E+00		+/- 4.7E-08						
Phase delay (usec)	-1.40542286890E-19		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-1.40542E-19		+/- 1.0E-11						
Delay rate (us/s)	0.000000000000E+00		Apriori rate (us/s)		0.000000000000E+00		Resid rate (us/s)		0.000000E+00		+/- 9.7E-14						
Total phase (deg)	-0.0		Apriori accel (us/s/s)		0.000000000000E+00		Resid phase (deg)		-0.0		+/- 0.0						
RMS	Theor.	Amplitude		10000.002 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5									
ph/seg (deg)	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				
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.		10000.002		Data rate(Mb/s): 2048		nlags: 128		t_cohere infinite		ion window (TEC)		0.00		0.00

i: az 293.8 el 34.2 pa 66.6      i: az 293.8 el 34.2 pa 66.6      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c192c/v2/1234/No0067/ii..130M5S    Output file: /Exps/c192c/v2/1234/No0067/ii.W.185.130M5S



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



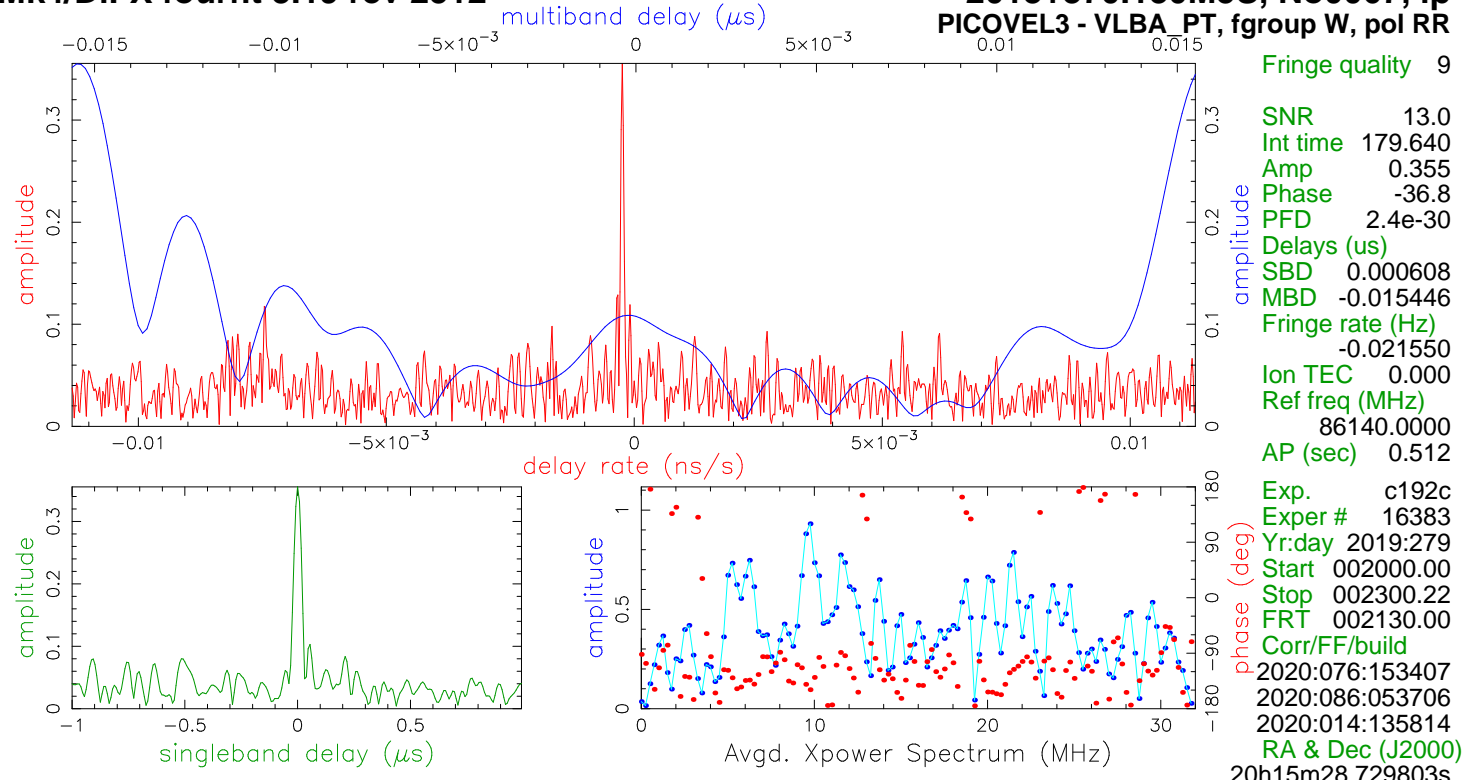
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-167.7	-115.9	-114.5	-134.0	-169.5	-160.6	112.1	144.8	-169.5	-137.7	-59.5	-51.7	158.7	-171.4	-94.5	-174.1		Phase -155.4					
	0.5	0.3	0.4	0.5	0.6	0.4	0.5	0.2	0.2	0.4	0.3	0.3	0.3	0.4	0.1	0.2		Ampl. 0.3					
	130.2	128.5	128.8	128.6	128.1	129.4	129.3	128.2	166.6	77.3	128.7	46.8	203.0	129.2	107.1	195.7		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					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
ip	0:0	0:0	0:0	0:0	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					
ip	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-7.22235540507E+03															Apriori delay (usec)	-7.22237021652E+03	Resid mbdelay (usec)	1.48115E-02	+/-	1.2E-04
Sband delay (usec)			-7.22236879252E+03															Apriori clock (usec)	-1.2534731E+01	Resid sbdelay (usec)	1.42400E-03	+/-	1.9E-03
Phase delay (usec)			-7.22237022153E+03															Apriori clockrate (us/s)	-5.5688657E-07	Resid phdelay (usec)	-5.01171E-06	+/-	4.1E-07
Delay rate (us/s)			-1.48806937407E+00															Apriori rate (us/s)	-1.48806912868E+00	Resid rate (us/s)	-2.45392E-07	+/-	4.0E-09
Total phase (deg)																		Apriori accel (us/s/s)	4.10176902665E-05	Resid phase (deg)	-155.4	+/-	12.8

RMS Theor. Amplitude 0.244 +/- 0.027  
 ph/seg (deg) 24.5 21.3 Search (1024X64) 0.239  
 amp/seg (%) 44.9 37.2 Interp. 0.000  
 ph/frq (deg) 55.5 25.7 Inc. seg. avg. 0.248  
 amp/frq (%) 72.9 44.8 Inc. frq. avg. 0.327

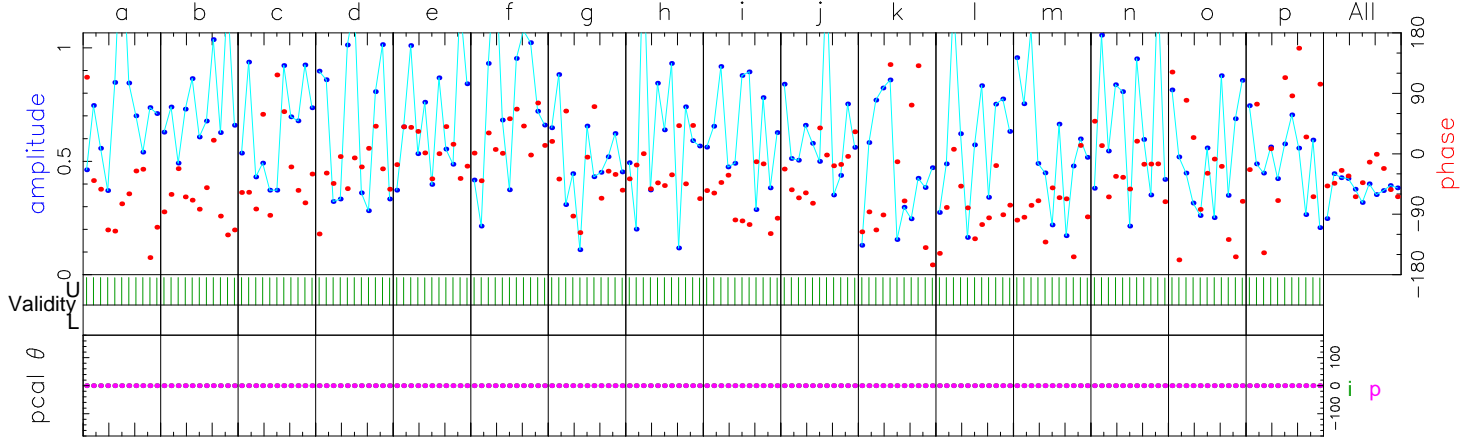
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 Pcal rate: 0.000E+00, 0.000E+00 (us/s)  
 Bits/sample: 2x2 SampCntNorm: enabled  
 Sample rate(MSamp/s): 64  
 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

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

i: az 293.8 el 34.2 pa 66.6 p: az 74.1 el 63.4 pa -86.1 u,v (fr/asec) 10737.737 2663.183 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ip..130M5S Output file: /Exps/c192c/v2/1234/No0067/ip.W.167.130M5S



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	
-76.3	-71.0	-37.2	-26.8	4.5	25.5	-23.4	-27.0	-68.6	-20.2	-132.9	-67.9	-84.1	-15.7	-65.9	42.9	Phase	-36.8	
0.5	0.6	0.4	0.5	0.6	0.7	0.4	0.5	0.5	0.2	0.4	0.5	0.6	0.1	0.1	0.1	Ampl.	0.4	
130.3	129.7	129.4	129.0	129.3	129.8	129.3	129.0	128.9	129.5	85.7	128.6	128.3	129.5	48.3	12.9	Sbd box	129.1	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
i	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	PC phase		
ip	0:0	0:0	0:0	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		
ip	0:0	0:0	0:0	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	Chan ids		
p	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	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)	-7.22235441230E+03				Apriori delay (usec)				-7.22237021652E+03				Resid mbdelay (usec)				-1.54458E-02 +/- 8.3E-05	
Sband delay (usec)	-7.22236960852E+03				Apriori clock (usec)				-1.2534731E+01				Resid sbdelay (usec)				6.08000E-04 +/- 1.3E-03	
Phase delay (usec)	-7.22237021771E+03				Apriori clockrate (us/s)				-5.5688657E-07				Resid phdelay (usec)				-1.18805E-06 +/- 2.8E-07	
Delay rate (us/s)	-1.48806937885E+00				Apriori rate (us/s)				-1.48806912868E+00				Resid rate (us/s)				-2.50173E-07 +/- 2.7E-09	
Total phase (deg)	-199.2				Apriori accel (us/s/s)				4.10176902665E-05				Resid phase (deg)				-36.8 +/- 8.8	

ph/seg (deg) 19.6 14.6      Amplitude 0.355 +/- 0.027      Pcal mode: MANUAL, MANUAL      PC period (AP's) 5, 5

amp/seg (%) 16.1 25.5      Search (1024X64) 0.344      Pcal rate: 0.000E+00, 0.000E+00 (us/s)      sb window (us) -1.000 1.000

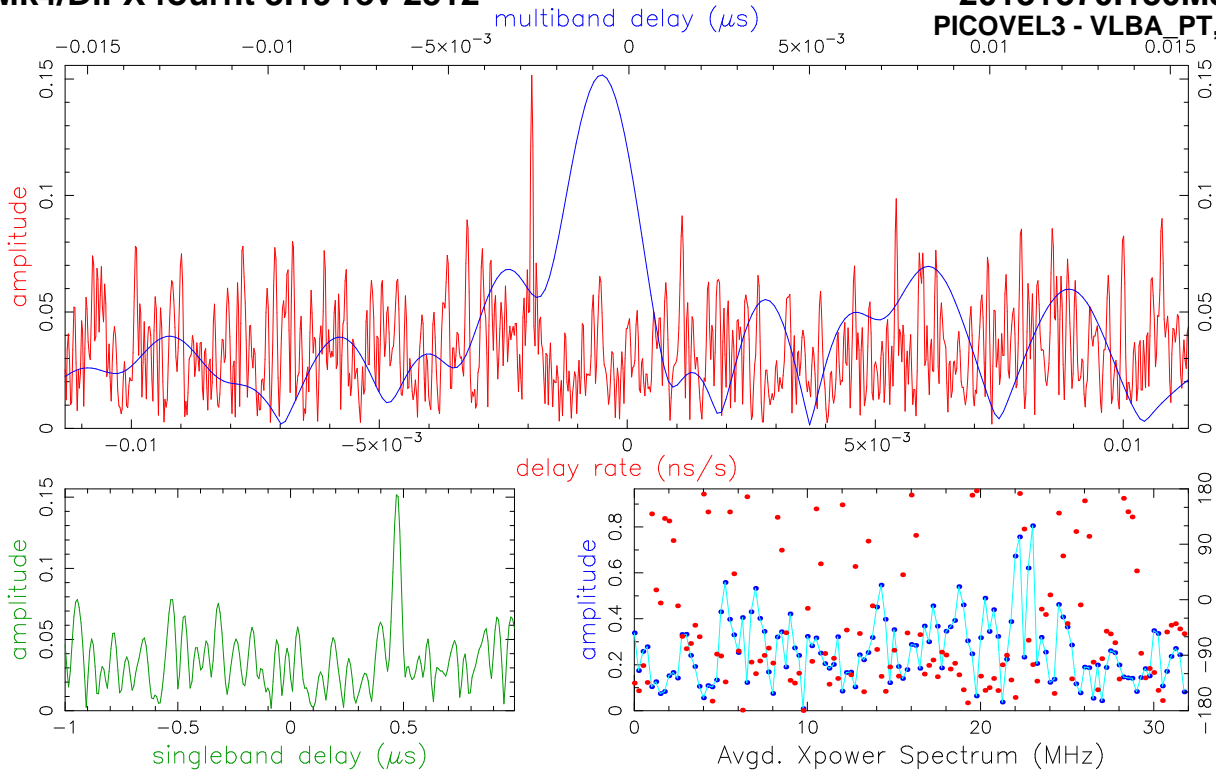
ph/frq (deg) 46.3 17.6      Interp. 0.000      Bits/sample: 2x2      SampCntNorm: enabled      mb window (us) -0.016 0.016

amp/frq (%) 52.9 30.7      Inc. seg. avg. 0.365      Sample rate(MSamp/s): 64      dr window (ns/s) -0.011 0.011

inc. frq. avg. 0.426      Data rate(Mb/s): 2048      nlags: 128      t\_cohere infinite      ion window (TEC) 0.00 0.00

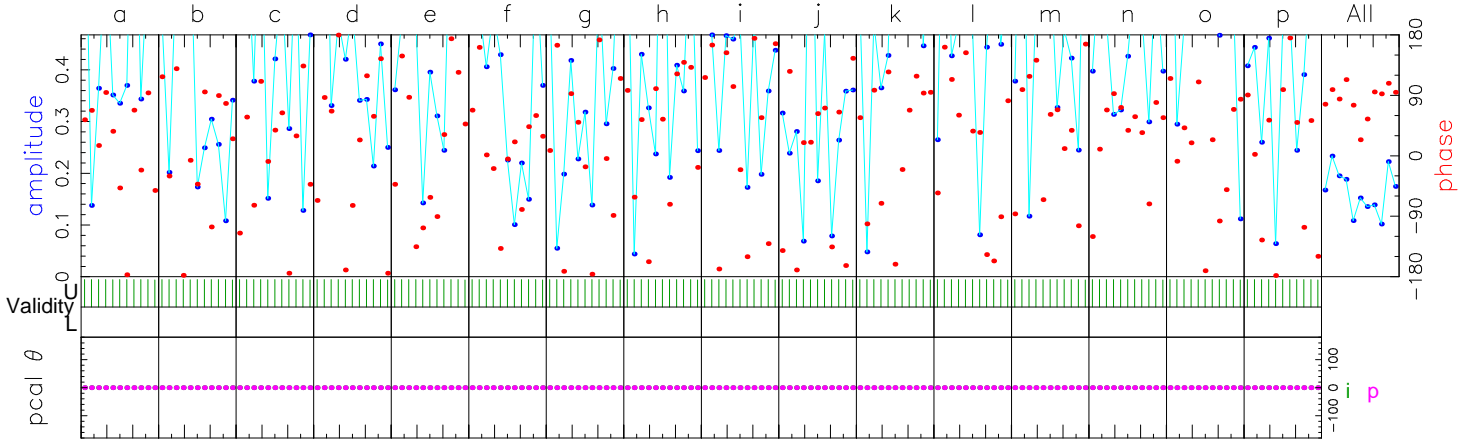
i: az 293.8 el 34.2 pa 66.6      p: az 74.1 el 63.4 pa -86.1      u,v (fr/asec) 10737.737 2663.183      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c192c/v2/1234/No0067/ip..130M5S      Output file: /Exps/c192c/v2/1234/No0067/ip.W.190.130M5S



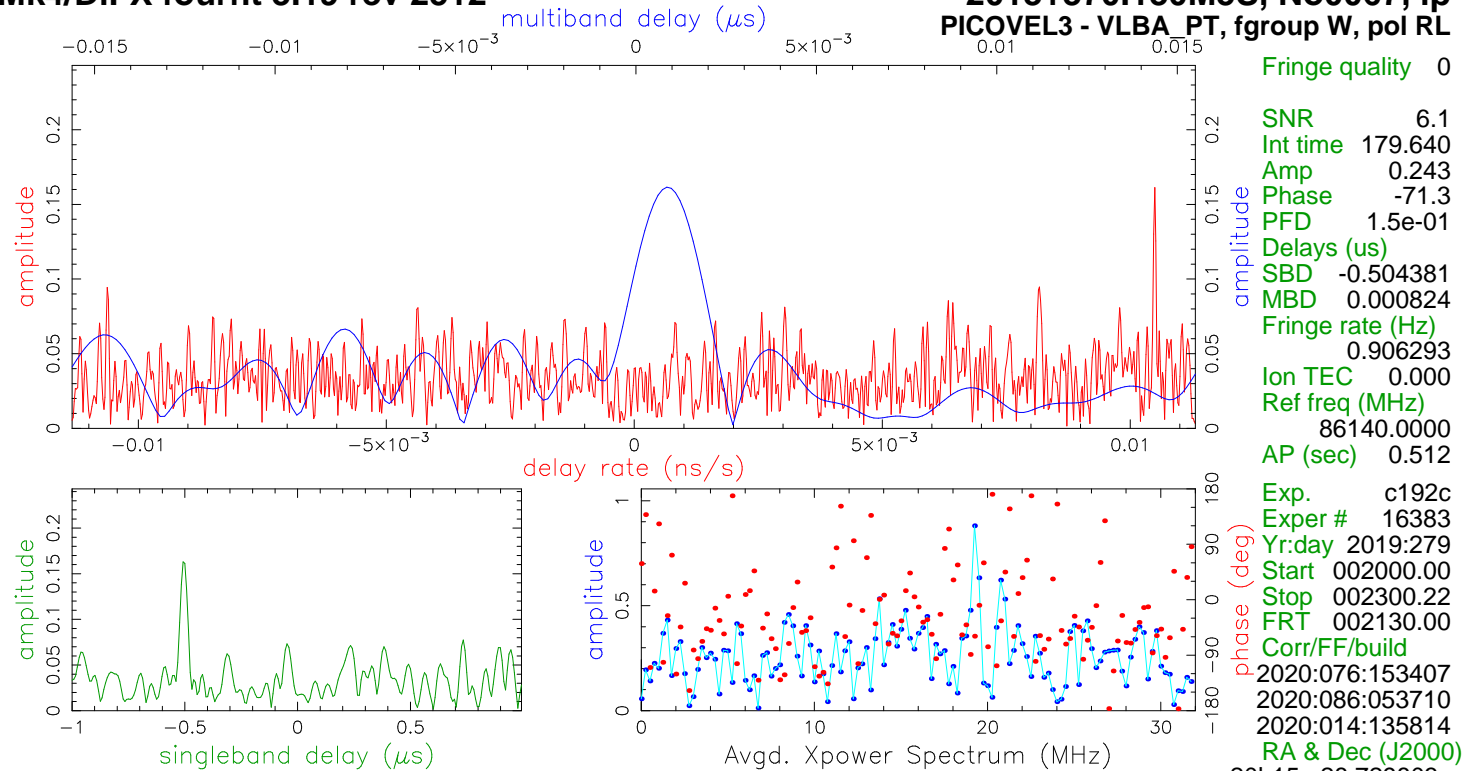
Fringe quality 0  
 SNR 5.6  
 Int time 179.640  
 Amp 0.156  
 Phase 86.7  
 PFD 8.7e-01  
 Delays (us)  
 SBD 0.472297  
 MBD -0.000814  
 Fringe rate (Hz)  
 -0.165880  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 002000.00  
 Stop 002300.22  
 FRT 002130.00  
 Corr/FF/build  
 2020:076:153407  
 2020:086:053708  
 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

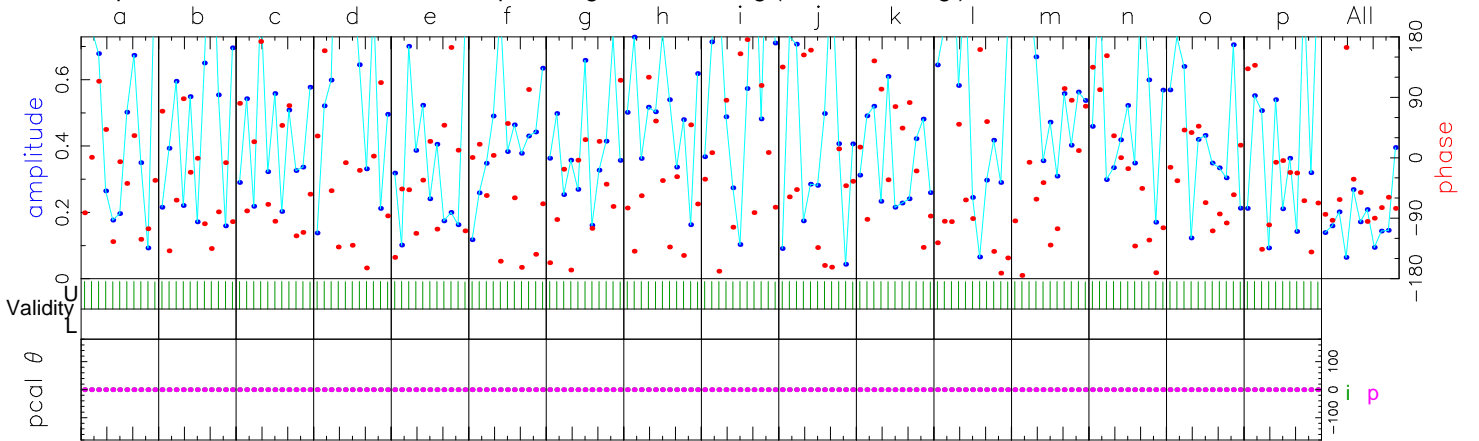


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
52.0	108.7	42.6	121.4	120.0	40.7	88.7	93.9	154.0	93.9	98.5	145.7	86.9	49.4	54.8	101.5	101.5	Phase	86.7				
0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.1	0.4	0.2	0.1	0.3	0.2	0.1	0.1	Ampl.	0.2				
190.5	21.0	66.4	255.7	44.7	219.9	56.3	237.3	123.1	255.3	188.7	21.0	12.6	243.1	63.1	46.3	46.3	Sbd box	189.5				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
i	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					
ip	0:0	0:0	0:0	0:0	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					
ip	0:0	0:0	0:0	0:0	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					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
i	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					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)		-7.22190228009E+03															Apriori delay (usec)	-7.22237021652E+03	Resid mbdelay (usec)	-8.13570E-04	+/-	1.9E-04
Sband delay (usec)		-7.22189792002E+03															Apriori clock (usec)	-1.2534731E+01	Resid sbdelay (usec)	4.72297E-01	+/-	3.1E-03
Phase delay (usec)		-7.22237021372E+03															Apriori clockrate (us/s)	-5.5688657E-07	Resid phdelay (usec)	2.79665E-06	+/-	6.5E-07
Delay rate (us/s)		-1.48807105439E+00															Apriori rate (us/s)	-1.48806912868E+00	Resid rate (us/s)	-1.92571E-06	+/-	6.3E-09
Total phase (deg)					-75.6												Apriori accel (us/s/s)	4.10176902665E-05	Resid phase (deg)	86.7	+/-	20.3

ph/seg (deg) 24.6 33.7 RMS Theor. Amplitude 0.156 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 27.6 58.7 Search (1024X64) 0.150 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 36.8 40.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 57.3 70.9 Inc. seg. avg. 0.143 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 i: az 293.8 el 34.2 pa 66.6 p: az 74.1 el 63.4 pa -86.1 u,v (fr/asec) 10737.737 2663.183 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ip..130M5S Output file: /Exps/c192c/v2/1234/No0067/ip.W.208.130M5S simultaneous interpolator

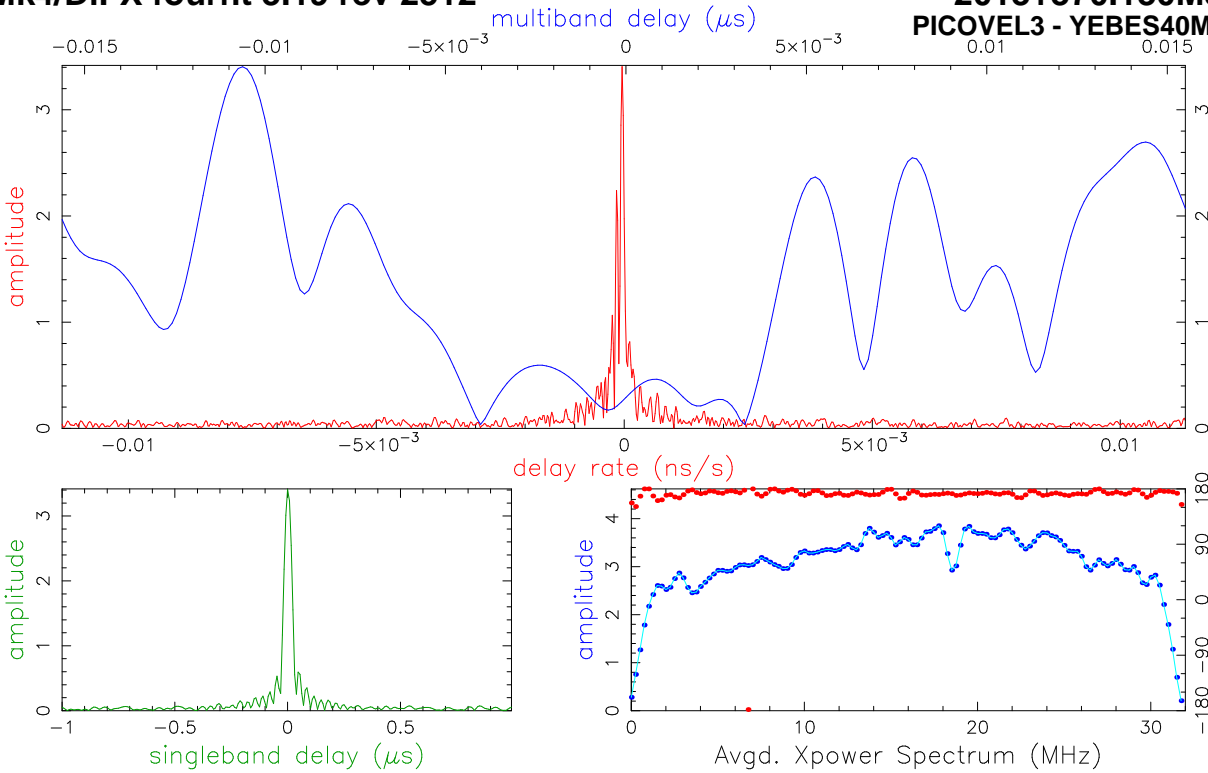


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-26.7	-90.2	-94.5	-85.4	-77.1	-78.6	-48.4	-82.1	-52.5	-104.4	-27.4	-104.5	-52.9	-69.1	-31.2	-69.2	Phase	-71.3
	0.4	0.4	0.2	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.5	0.1	0.1	0.4	0.3	Ampl.	0.2
	178.3	116.1	122.1	143.2	218.3	214.4	47.8	210.2	76.8	143.5	171.7	101.5	166.3	113.7	63.8	66.9	Sbd box	64.4
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	
i	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	
ip	0:0	0:0	0:0	0:0	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	
ip	0:0	0:0	0:0	0:0	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	
p	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	
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)	-7.22286939250E+03			Apriori delay (usec)			-7.22237021652E+03			Resid mbdelay (usec)			8.24021E-04			+/- 1.8E-04		
Sband delay (usec)	-7.22287459752E+03			Apriori clock (usec)			-1.2534731E+01			Resid sbdelay (usec)			-5.04381E-01			+/- 2.8E-03		
Phase delay (usec)	-7.22237021882E+03			Apriori clockrate (us/s)			-5.5688657E-07			Resid phdelay (usec)			-2.29829E-06			+/- 6.1E-07		
Delay rate (us/s)	-1.48805860752E+00			Apriori rate (us/s)			-1.48806912868E+00			Resid rate (us/s)			1.05212E-05			+/- 5.8E-09		
Total phase (deg)	-233.6			Apriori accel (us/s/s)			4.10176902665E-05			Resid phase (deg)			-71.3			+/- 18.9		

ph/seg (deg) 41.9 31.3 Search (1024X64) 0.159 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 52.4 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) 27.0 37.7 Inc. seg. avg. 0.231 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 49.6 65.9 Inc. frq. avg. 0.217 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 i: az 293.8 el 34.2 pa 66.6 p: az 74.1 el 63.4 pa -86.1 u,v (fr/asec) 10737.737 2663.183 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ip..130M5S Output file: /Exps/c192c/v2/1234/No0067/ip.W.223.130M5S

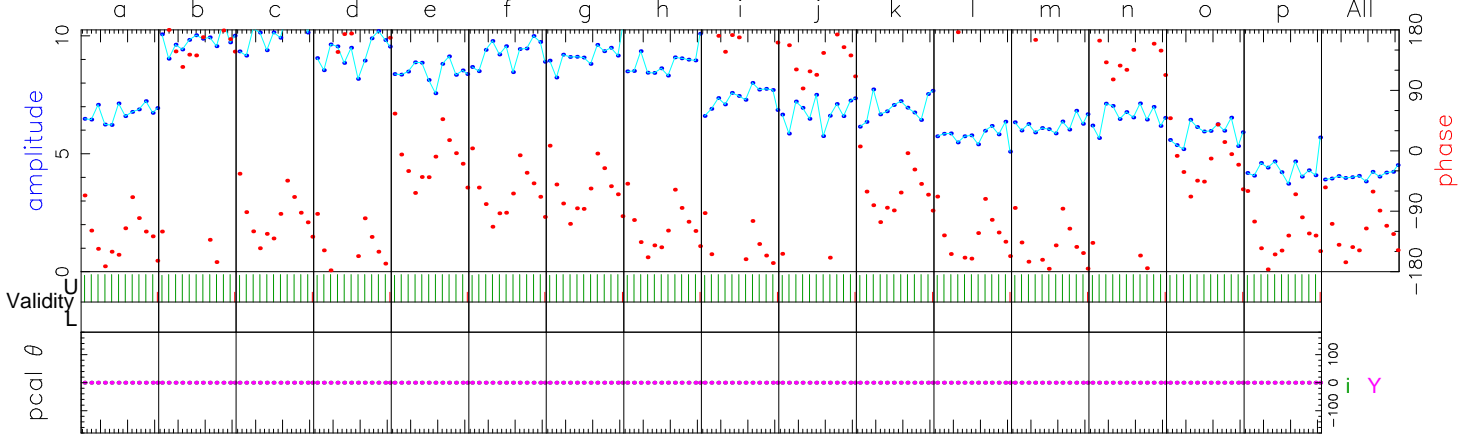


Fringe quality 3

SNR 119.1  
 Int time 162.334  
 Amp 3.419  
 Phase -116.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001581  
 MBD -0.010622  
 Fringe rate (Hz)  
 -0.004428  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 002016.90  
 Stop 002259.71  
 FRT 002130.00  
 Corr/FF/build  
 2020:076:153407  
 2020:086:053703  
 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

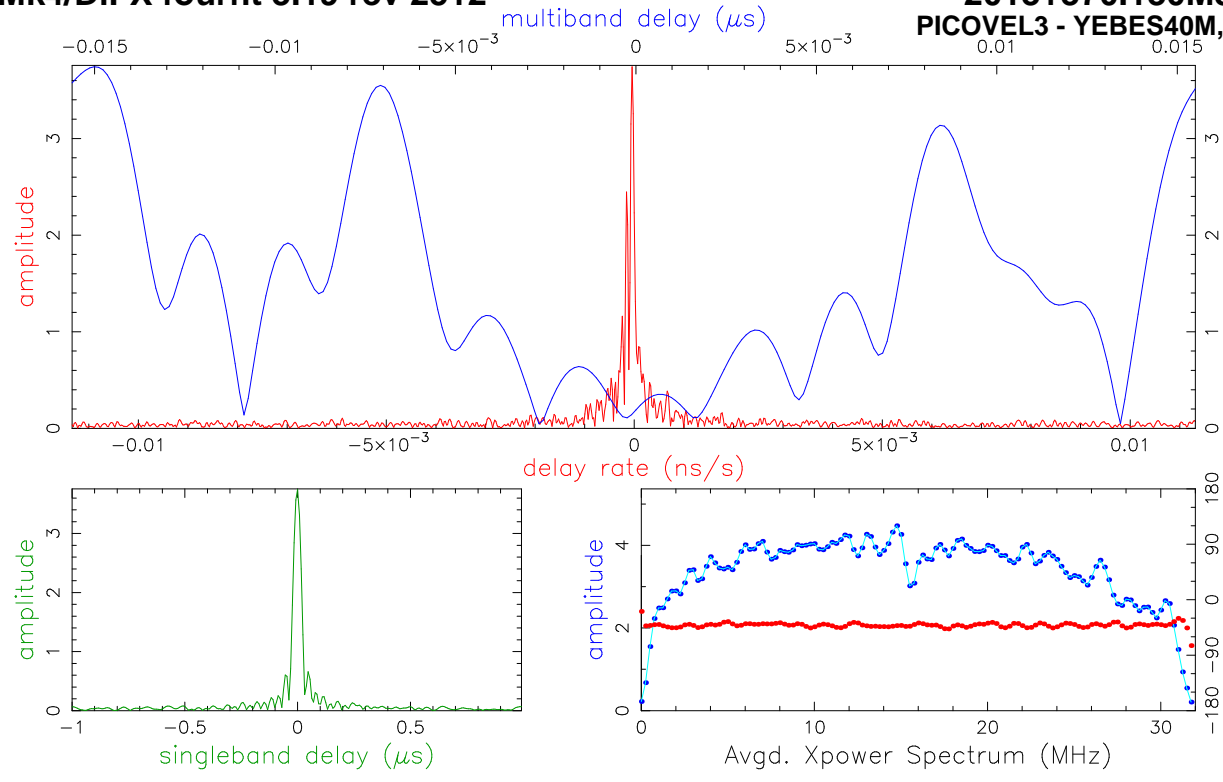


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-123.9	171.9	-97.4	-157.9	-10.9	-61.7	-57.5	-112.8	-162.2	144.7	-60.1	-129.0	-143.3	153.0	-14.7	-123.4	Phase	-116.9
	5.7	8.2	8.5	7.7	7.0	7.7	7.6	7.4	6.1	5.6	5.8	4.8	5.2	5.5	4.9	3.6	Ampl.	6.3
	128.5	129.5	129.2	128.9	129.1	128.9	128.9	129.2	129.3	129.3	129.0	129.0	129.0	129.0	128.3	128.8	Sbd box	129.2
UL	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	
Y	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	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) -3.51111804639E+02 Apriori delay (usec) -3.51101182507E+02 Resid mbdelay (usec) -1.06221E-02 +/- 9.1E-06  
 Sband delay (usec) -3.51099602007E+02 Apriori clock (usec) -1.0232926E+01 Resid sbdelay (usec) 1.58050E-03 +/- 1.4E-04  
 Phase delay (usec) -3.51101186277E+02 Apriori clockrate (us/s) -5.7299998E-07 Resid phdelay (usec) -3.76977E-06 +/- 3.1E-08  
 Delay rate (us/s) -4.31473059620E-02 Apriori rate (us/s) -4.31472545618E-02 Resid rate (us/s) -5.14002E-08 +/- 3.3E-10  
 Total phase (deg) -66.9 Apriori accel (us/s/s) -1.38751487855E-06 Resid phase (deg) -116.9 +/- 1.0

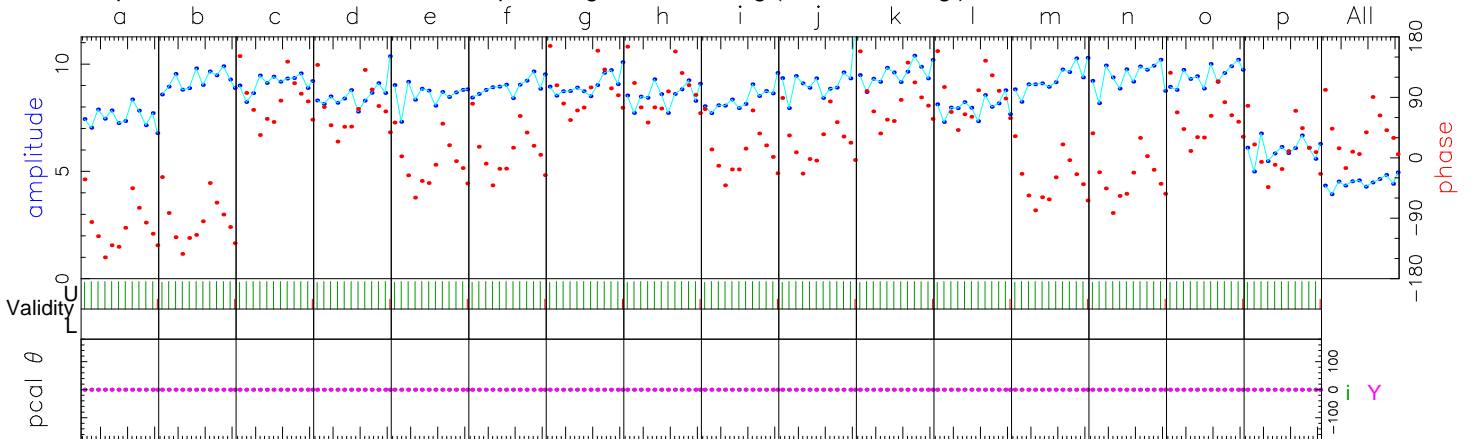
RMS Theor. Amplitude 3.419 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 33.6 1.7 Search (1024X64) 3.335 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 19.3 2.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 65.1 1.9 Inc. seg. avg. 4.060 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 94.4 3.4 Inc. frq. avg. 6.334 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

i: az 293.8 el 34.2 pa 66.6 Y: az 291.7 el 35.3 pa 62.6 u,v (fr/asec) 308.737 -415.226 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/iY..130M5S Output file: /Exps/c192c/v2/1234/No0067/iY.W.168.130M5S



Fringe quality 3  
SNR 130.9  
Int time 162.334  
Amp 3.757  
Phase 35.7  
PFD 0.0e+00  
Delays (us)  
SBD -0.001700  
MBD -0.014992  
Fringe rate (Hz)  
-0.004412  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002016.90  
Stop 002259.71  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053705  
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



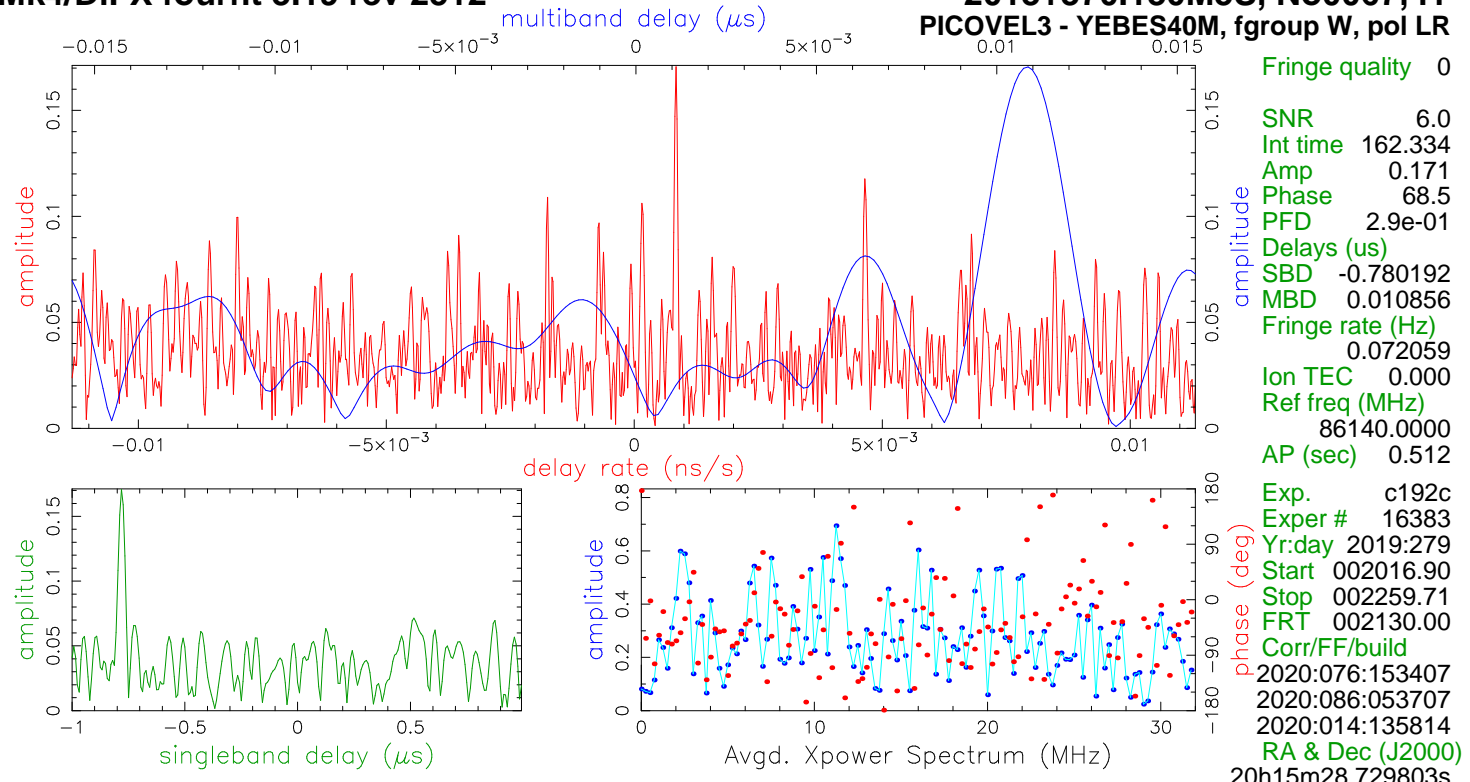
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-101.0	-92.5	87.1	72.5	-8.0	11.1	102.3	100.8	10.6	27.1	86.9	94.0	-31.3	-26.3	59.7	13.4	Phase	35.7
	6.3	7.8	7.6	7.1	7.2	7.5	7.5	7.1	6.9	7.6	7.9	6.6	7.8	7.9	8.0	4.9	Ampl.	7.2
	129.1	129.3	129.1	128.9	129.5	129.1	129.2	129.2	129.2	129.2	129.1	129.0	129.1	129.1	128.7	128.3	Sbd box	128.8
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	
Y	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		
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) -3.51116174671E+02 Apriori delay (usec) -3.51101182507E+02 Resid mbdelay (usec) -1.49922E-02 +/- 8.2E-06  
 Sband delay (usec) -3.51102882507E+02 Apriori clock (usec) -1.0232926E+01 Resid sbdelay (usec) -1.70000E-03 +/- 1.3E-04  
 Phase delay (usec) -3.51101181356E+02 Apriori clockrate (us/s) -5.7299998E-07 Resid phdelay (usec) 1.15109E-06 +/- 2.8E-08  
 Delay rate (us/s) -4.31473057792E-02 Apriori rate (us/s) -4.31472545618E-02 Resid rate (us/s) -5.12174E-08 +/- 3.0E-10  
 Total phase (deg) -274.3 Apriori accel (us/s/s) -1.38751487855E-06 Resid phase (deg) 35.7 +/- 0.9

RMS Theor. Amplitude 3.757 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 33.9 1.5 Search (1024X64) 3.674 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 19.9 2.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 68.9 1.8 Inc. seg. avg. 4.465 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 94.8 3.1 Inc. frq. avg. 7.233 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

i: az 293.8 el 34.2 pa 66.6 Y: az 291.7 el 35.3 pa 62.6 u,v (fr/asec) 308.737 -415.226 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/iY...130M5S Output file: /Exps/c192c/v2/1234/No0067/iY.W.181.130M5S





Fringe quality 0

SNR 6.0

Int time 162.334

Amp 0.171

Phase 68.5

PFD 2.9e-01

Delays (us)

SBD -0.780192

MBD 0.010856

Fringe rate (Hz)

0.072059

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 002016.90

Stop 002259.71

FRT 002130.00

Corr/FF/build

2020:076:153407

2020:086:053707

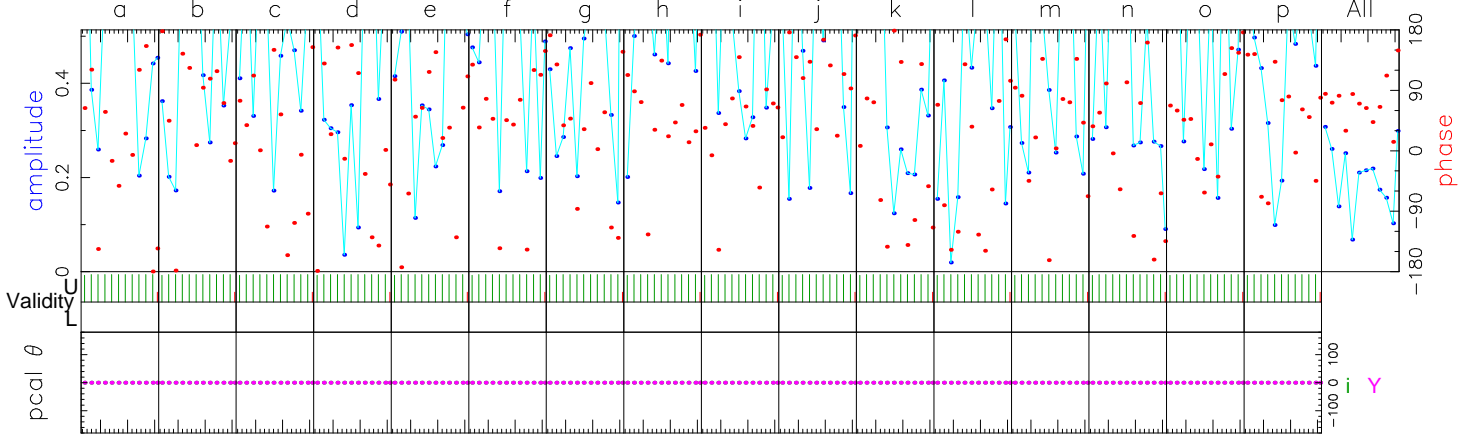
2020:014:135814

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				
	43.7	94.3	-12.1	-123.5	82.6	74.8	74.9	59.3	38.2	101.4	0.8	158.2	70.8	55.4	65.7	61.7	Phase	68.5				
	0.2	0.3	0.1	0.1	0.1	0.4	0.2	0.4	0.3	0.3	0.0	0.1	0.3	0.1	0.3	0.2	Ampl.	0.2				
	126.7	57.0	140.2	142.8	128.0	27.9	105.1	28.5	161.3	193.3	192.1	99.4	205.0	195.0	189.7	67.6	Sbd box	29.1				
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					
Y	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-3.51871576524E+02														Apriori delay (usec)	-3.51101182507E+02	Resid mbdelay (usec)	1.08560E-02	+/-	1.8E-04
Sband delay (usec)			-3.51881374507E+02														Apriori clock (usec)	-1.0232926E+01	Resid sbdelay (usec)	-7.80192E-01	+/-	2.9E-03
Phase delay (usec)			-3.51101180298E+02														Apriori clockrate (us/s)	-5.7299998E-07	Resid phdelay (usec)	2.20948E-06	+/-	6.2E-07
Delay rate (us/s)			-4.31464180330E-02														Apriori rate (us/s)	-4.31472545618E-02	Resid rate (us/s)	8.36529E-07	+/-	6.6E-09
Total phase (deg)					-241.5												Apriori accel (us/s/s)	-1.38751487855E-06	Resid phase (deg)	68.5	+/-	19.2

ph/seg (deg) RMS Theor. Amplitude 0.171 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

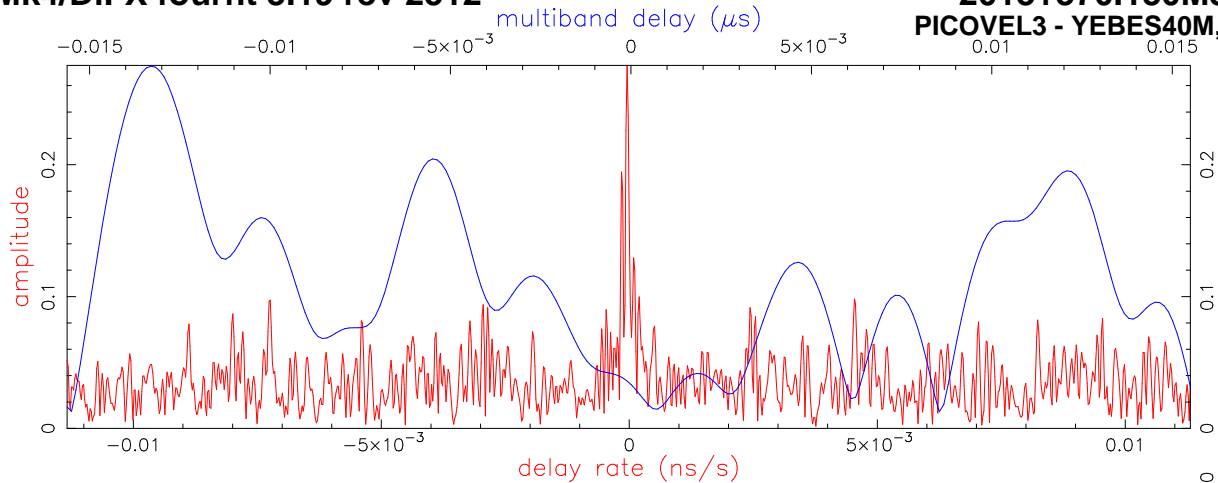
amp/seg (%) 42.9 58.2 Search (1024X64) 0.168 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 60.5 38.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 66.7 67.2 Inc. seg. avg. 0.167 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

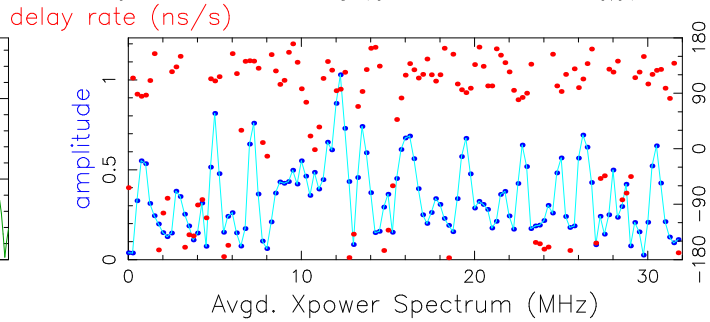
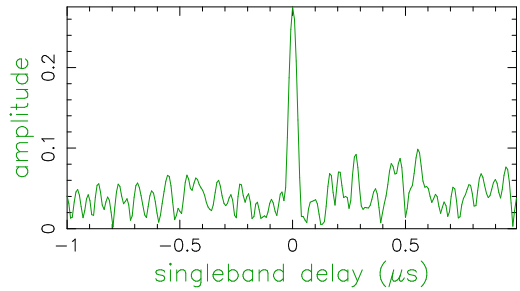
i: az 293.8 el 34.2 pa 66.6 Y: az 291.7 el 35.3 pa 62.6 u,v (fr/asec) 308.737 -415.226 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/iY..130M5S Output file: /Exps/c192c/v2/1234/No0067/iY.W.196.130M5S simultaneous interpolator



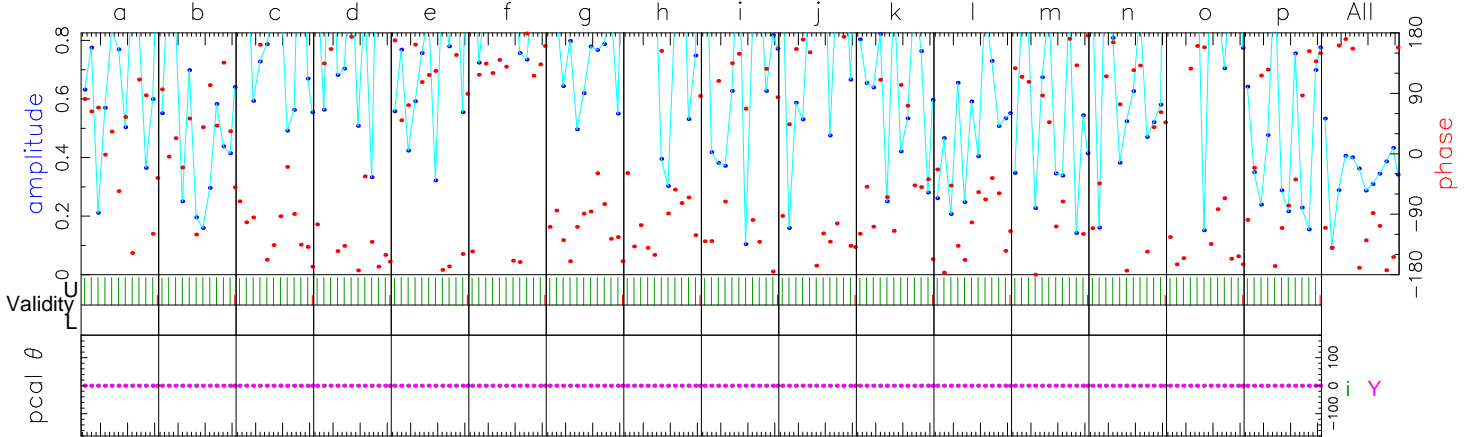
Fringe quality 9

SNR 9.6  
Int time 162.334  
Amp 0.275  
Phase -154.4  
PFD 1.7e-13  
Delays (us)  
SBD 0.001213  
MBD -0.013277  
Fringe rate (Hz)  
-0.004577  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002016.90  
Stop 002259.71  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053709  
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



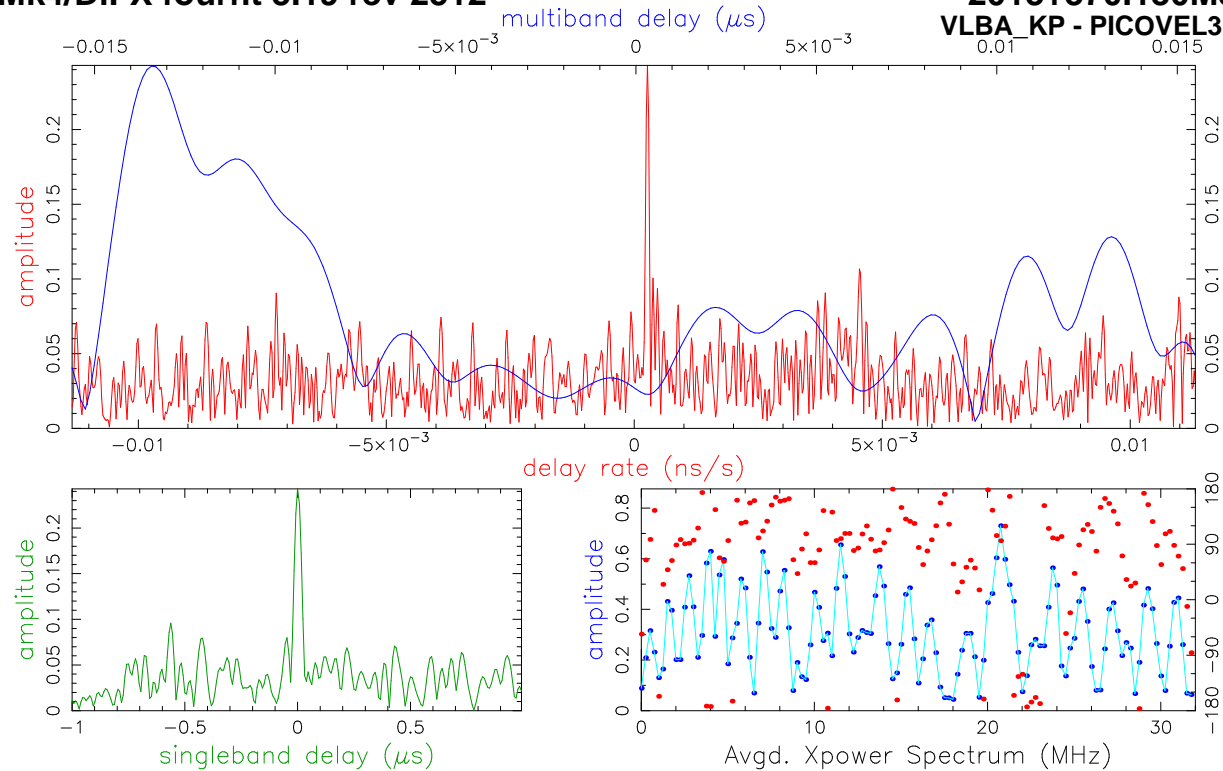
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	47.7	36.4	-116.4	-159.5	141.1	153.0	-104.8	-103.4	-165.8	-150.8	-79.2	-90.3	127.6	127.3	-153.6	-164.5	Phase	-154.4
	0.2	0.3	0.7	0.7	0.5	0.8	0.6	0.6	0.4	0.6	0.2	0.3	0.3	0.3	0.7	0.1	Ampl.	0.4
	169.9	130.6	130.0	128.6	129.3	129.1	130.1	129.2	130.5	129.8	4.5	129.3	141.7	191.2	128.5	67.0	Sbd box	129.2
UL	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	
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd)	-3.51114459889E+02	Apriori delay (usec)	-3.51101182507E+02	Resid mbdelay (usec)	-1.32774E-02	+/-	1.1E-04
Sband delay (usec)	-3.51099970007E+02	Apriori clock (usec)	-1.0232926E+01	Resid sbdelay (usec)	1.21250E-03	+/-	1.8E-03
Phase delay (usec)	-3.51101187484E+02	Apriori clockrate (us/s)	-5.7299998E-07	Resid phdelay (usec)	-4.97742E-06	+/-	3.9E-07
Delay rate (us/s)	-4.31473076909E-02	Apriori rate (us/s)	-4.31472545618E-02	Resid rate (us/s)	-5.31291E-08	+/-	4.1E-09
Total phase (deg)	-104.4	Apriori accel (us/s/s)	-1.38751487855E-06	Resid phase (deg)	-154.4	+/-	11.9

ph/seg (deg)	RMS 38.0	Theor. 20.7	Amplitude Search (1024X64)	0.275 +/- 0.029	0.269	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	46.3	36.1	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.016	0.016	
ph/frq (deg)	79.9	23.9	Inc. seg. avg.	0.328	0.328	Bits/sample: 2x2	Sample rate(MISamp/s): 64	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	101.0	41.7	Inc. frq. avg.	0.429	0.429	Data rate(Mb/s): 2048	nlags: 128	t_cohere infinite	ion window (TEC)	0.00	0.00

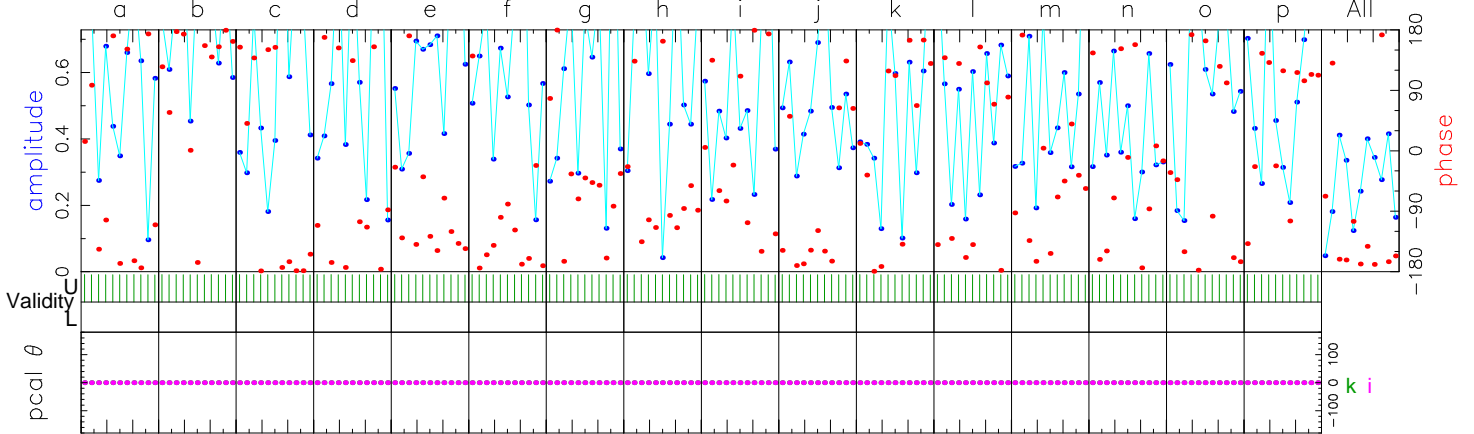
i: az 293.8 el 34.2 pa 66.6 Y: az 291.7 el 35.3 pa 62.6 u,v (fr/asec) 308.737 -415.226 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/iY...130M5S Output file: /Exps/c192c/v2/1234/No0067/iY.W.213.130M5S



Fringe quality 9  
SNR 8.9  
Int time 178.748  
Amp 0.243  
Phase -163.6  
PFD 1.3e-10  
Delays (us)  
SBD 0.000884  
MBD -0.013369  
Fringe rate (Hz) 0.022554  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build 2020:076:153407  
2020:086:053703  
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
	-173.8	157.7	174.0	177.6	-122.0	-149.7	-64.7	-109.3	-122.6	-172.0	132.1	157.9	-64.6	-108.8	175.5	122.6	Phase	-163.6
	0.2	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.2	0.3	0.3	0.3	0.3	0.1	0.3	0.3	Ampl.	0.3
	185.0	129.4	128.8	128.8	129.0	129.3	128.9	129.7	255.2	126.9	128.1	134.8	231.7	191.6	71.8	126.9	Sbd box	129.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	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	
ki	0:0	0:0	0:0	0:0	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	
ki	0:0	0:0	0:0	0:0	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	
i	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	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

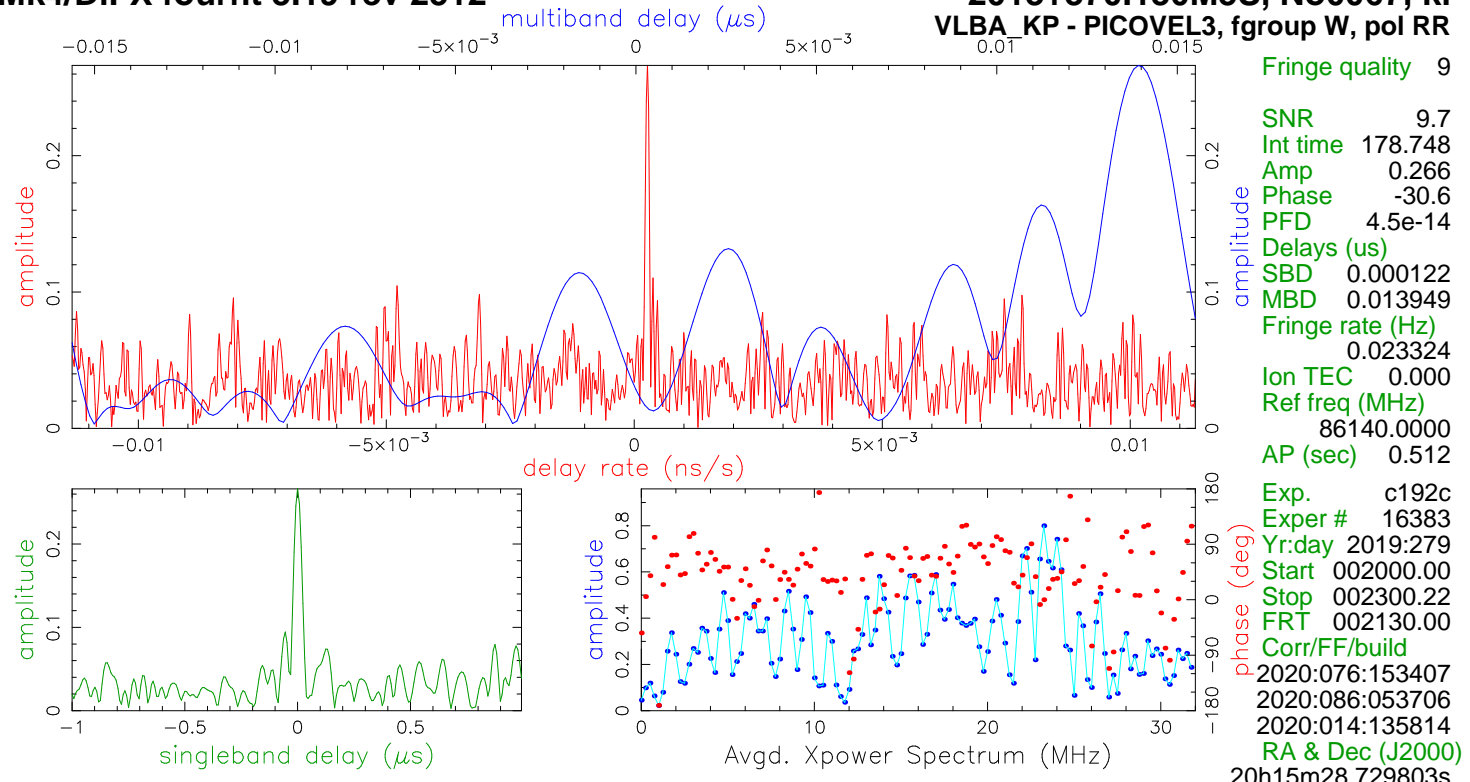
Group delay (usec)(sbd) 6.59495650260E+03 Apriori delay (usec) 6.59496987113E+03 Resid mbdelay (usec) -1.33685E-02 +/- 1.2E-04  
 Sband delay (usec) 6.59497075563E+03 Apriori clock (usec) 1.4973058E-01 Resid sbdelay (usec) 8.84500E-04 +/- 1.9E-03  
 Phase delay (usec) 6.59496986586E+03 Apriori clockrate (us/s) 1.5842101E-07 Resid phdelay (usec) -5.27445E-06 +/- 4.2E-07  
 Delay rate (us/s) 1.55570003316E+00 Apriori rate (us/s) 1.55569977134E+00 Resid rate (us/s) 2.61825E-07 +/- 4.0E-09  
 Total phase (deg) 88.2 Apriori accel (us/s/s) -4.00886798676E-05 Resid phase (deg) -163.6 +/- 12.9

RMS Theor. Amplitude 0.243 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 40.7 21.4 Search (1024X64) 0.239 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 50.5 37.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 55.5 25.8 Inc. seg. avg. 0.250 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 74.2 45.1 Inc. frq. avg. 0.329 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

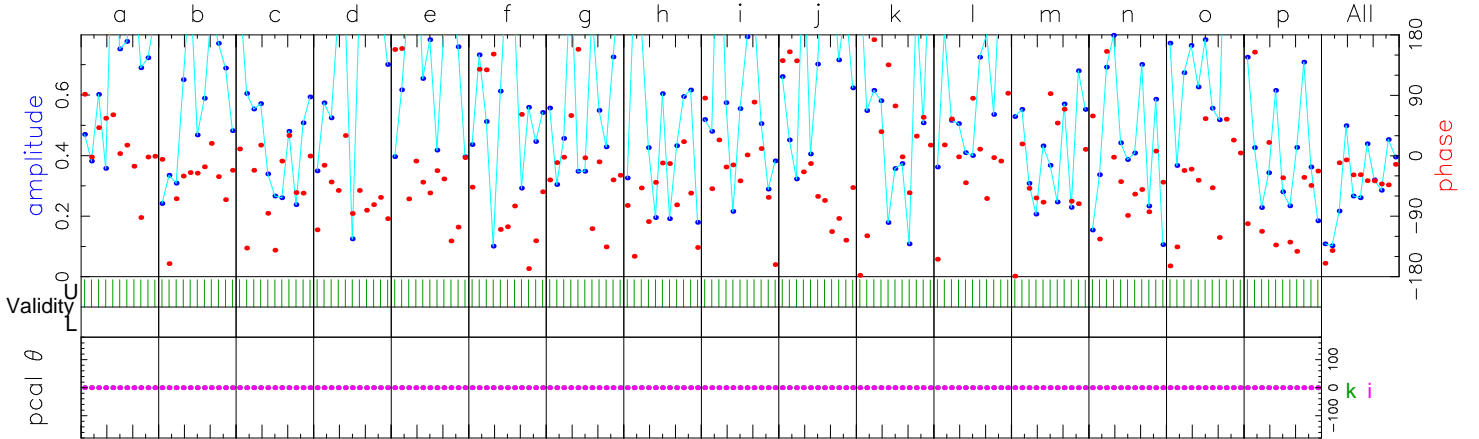
k: az 69.7 el 59.9 pa -89.1 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11224.084 -2846.654 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ki..130M5S Output file: /Exps/c192c/v2/1234/No0067/ki.W.169.130M5S

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, ki  
VLBA\_KP - PICOVEL3, fgroup W, pol RR

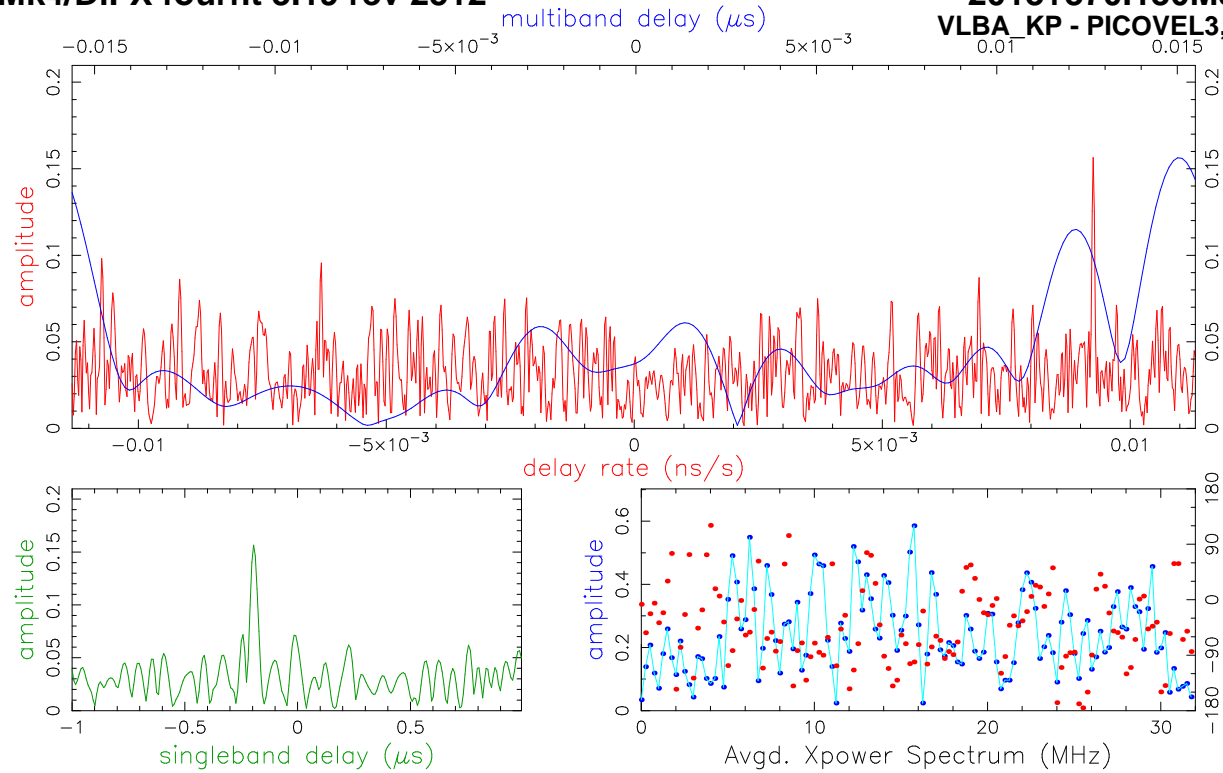


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



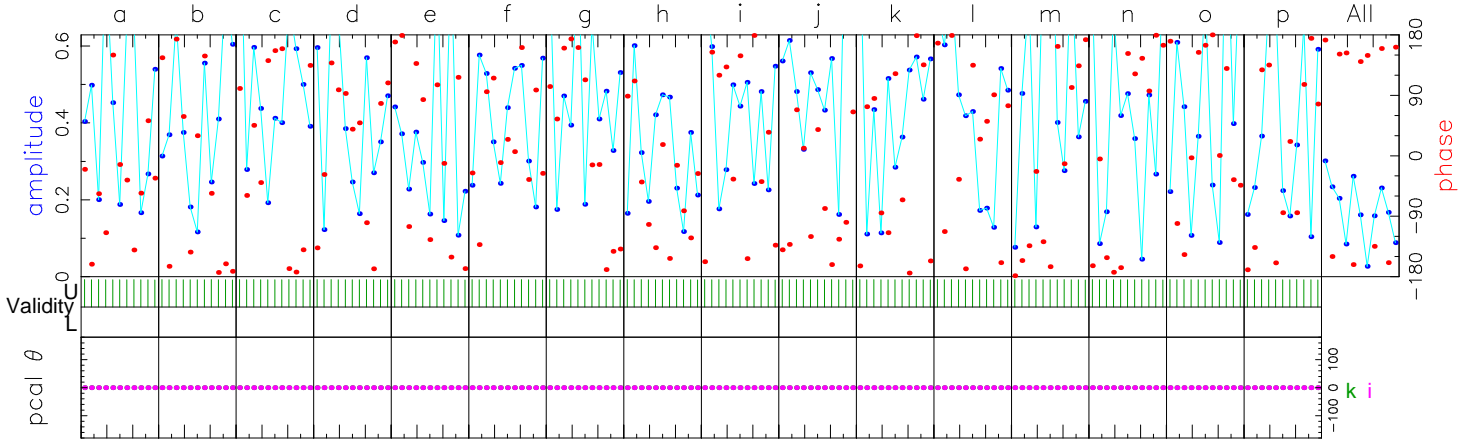
86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
14.5	-27.3	-21.5	-56.2	-59.0	-116.3	-25.8	-61.5	10.8	-83.6	52.9	9.0	-11.6	-43.0	0.3	-88.2	Phase	-30.6						
0.5	0.5	0.3	0.6	0.4	0.2	0.3	0.3	0.4	0.4	0.2	0.4	0.2	0.2	0.4	0.2	Ampl.	0.3						
129.8	129.4	82.4	128.4	129.0	57.7	228.2	8.7	127.6	128.6	176.5	129.7	22.8	240.5	129.8	230.8	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	APs used							
k	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	PC phase							
ki	0:0	0:0	0:0	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							
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000								
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids						
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks						
Group delay (usec)(sbd)																	6.59498381995E+03	Apriori delay (usec)	6.59496987113E+03	Resid mbdelay (usec)	1.39488E-02	+/-	1.1E-04
Sband delay (usec)																	6.59496999313E+03	Apriori clock (usec)	1.4973058E-01	Resid sbdelay (usec)	1.22000E-04	+/-	1.8E-03
Phase delay (usec)																	6.59496987015E+03	Apriori clockrate (us/s)	1.5842101E-07	Resid phdelay (usec)	-9.86773E-07	+/-	3.8E-07
Delay rate (us/s)																	1.55570004211E+00	Apriori rate (us/s)	1.55569977134E+00	Resid rate (us/s)	2.70770E-07	+/-	3.6E-09
Total phase (deg)																	221.2	Apriori accel (us/s/s)	-4.00886798676E-05	Resid phase (deg)	-30.6	+/-	11.8

RMS Theor. Amplitude 0.266 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 52.8 19.5 Search (1024X64) 0.259 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 49.7 34.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 46.1 23.5 Inc. seg. avg. 0.287 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 53.0 41.1 Inc. frq. avg. 0.314 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 k: az 69.7 el 59.9 pa -89.1 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11224.084 -2846.654 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ki..130M5S Output file: /Exps/c192c/v2/1234/No0067/ki.W.189.130M5S



Fringe quality 0  
SNR 5.7  
Int time 178.748  
Amp 0.210  
Phase 178.9  
PFD 7.2e-01  
Delays (us)  
SBD -0.194493  
MBD 0.015058  
Fringe rate (Hz) 0.799011  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build 2020:076:153407  
2020:086:053708  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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

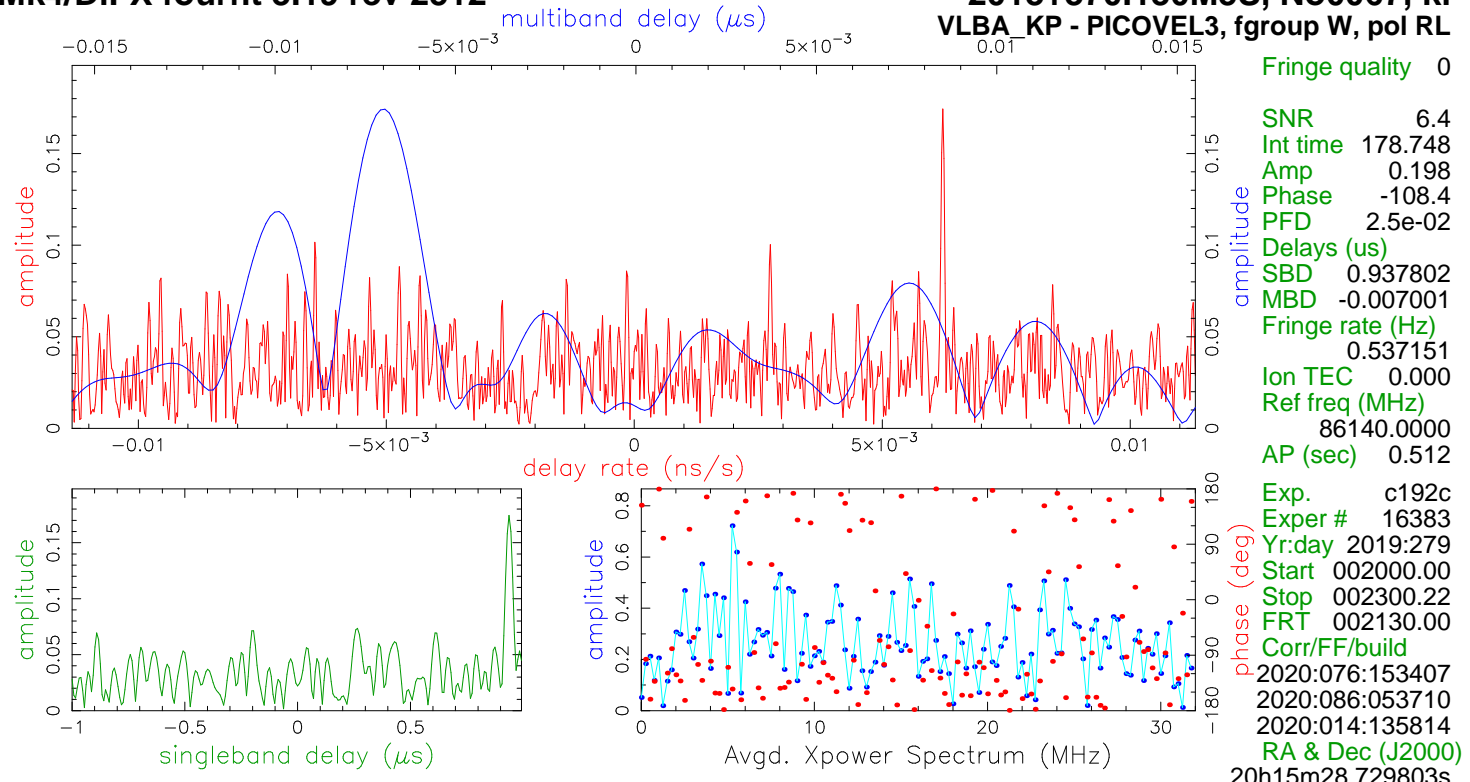


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-85.0	177.7	152.5	126.3	163.3	24.0	159.1	-93.9	-165.3	-112.2	-173.8	175.6	-171.0	168.1	-161.5	148.2	178.9	Phase	
	0.3	0.4	0.3	0.2	0.3	0.1	0.2	0.1	0.3	0.2	0.4	0.3	0.4	0.3	0.4	0.2	0.2	0.2	Ampl.
	55.2	116.3	1.4	246.9	225.3	144.6	9.6	112.8	177.9	139.9	86.1	238.3	159.8	103.3	20.0	101.0	104.1	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	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	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
k: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
k: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
k	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
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL			Chan ids
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR			Tracks
																			Tracks
Group delay (usec)(sbd)	6.59476617912E+03			Apriori delay (usec)			6.59496987113E+03			Resid mbdelay (usec)			1.50580E-02			+/- 1.9E-04			
Sband delay (usec)	6.59477537863E+03			Apriori clock (usec)			1.4973058E-01			Resid sbdelay (usec)			-1.94493E-01			+/- 3.0E-03			
Phase delay (usec)	6.59496987690E+03			Apriori clockrate (us/s)			1.5842101E-07			Resid phdelay (usec)			5.76991E-06			+/- 6.5E-07			
Delay rate (us/s)	1.55570904706E+00			Apriori rate (us/s)			1.55569977134E+00			Resid rate (us/s)			9.27573E-06			+/- 6.2E-09			
Total phase (deg)	70.7			Apriori accel (us/s/s)			-4.00886798676E-05			Resid phase (deg)			178.9			+/- 20.0			

ph/seg (deg) 27.9 33.2 Search (1024X64) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 51.8 57.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 60.7 40.0 Inc. seg. avg. 0.200 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 55.1 69.9 Inc. frq. avg. 0.216 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 k: az 69.7 el 59.9 pa -89.1 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11224.084 -2846.654 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ki..130M5S Output file: /Exps/c192c/v2/1234/No0067/ki.W.204.130M5S simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, ki  
VLBA\_KP - PICOVEL3, fgroup W, pol RL



Fringe quality 0

SNR 6.4

Int time 178.748

Amp 0.198

Phase -108.4

PFD 2.5e-02

Delays (us)

SBD 0.937802

MBD -0.007001

Fringe rate (Hz)

0.537151

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 002000.00

Stop 002300.22

FRT 002130.00

Corr/FF/build

2020:076:153407

2020:086:053710

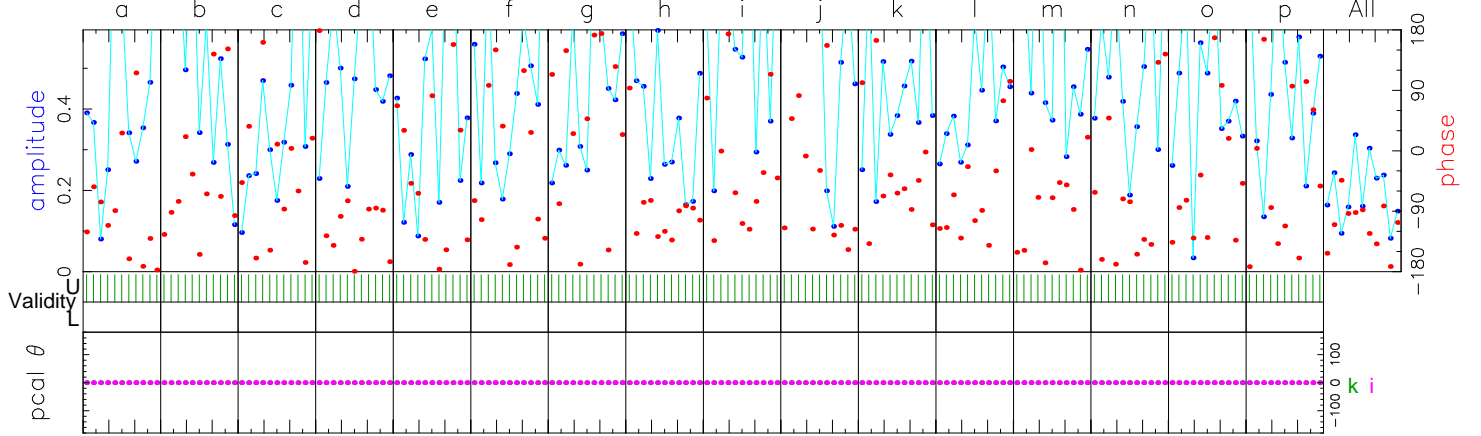
2020:014:135814

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
	-126.9	-79.4	-50.4	-121.3	177.3	-158.7	145.4	-110.0	-67.9	-90.1	-65.1	-100.2	-83.5	-155.9	-99.4	-139.1		Phase -108.4
	0.2	0.4	0.1	0.5	0.2	0.1	0.2	0.3	0.2	0.2	0.3	0.2	0.4	0.3	0.2	0.2		Ampl. 0.2
	28.0	98.8	116.4	249.2	45.5	174.8	135.9	176.5	140.3	115.8	222.8	62.2	248.3	240.1	4.3	29.9		Sbd box 249.0
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
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
ki	0:0	0:0	0:0	0:0	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
ki	0:0	0:0	0:0	0:0	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
i	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
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 6.59590036992E+03 Apriori delay (usec) 6.59496987113E+03 Resid mbdelay (usec) -7.00122E-03 +/- 1.7E-04

Sband delay (usec) 6.59590767363E+03 Apriori clock (usec) 1.4973058E-01 Resid sbdelay (usec) 9.37802E-01 +/- 2.7E-03

Phase delay (usec) 6.59496986764E+03 Apriori clockrate (us/s) 1.5842101E-07 Resid phdelay (usec) -3.49467E-06 +/- 5.8E-07

Delay rate (us/s) 1.55570600713E+00 Apriori rate (us/s) 1.55569977134E+00 Resid rate (us/s) 6.23579E-06 +/- 5.6E-09

Total phase (deg) 143.4 Apriori accel (us/s/s) -4.00886798676E-05 Resid phase (deg) -108.4 +/- 18.0

ph/seg (deg) RMS Theor. Amplitude 0.198 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 34.3 29.8 Search (1024X64) 0.166 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

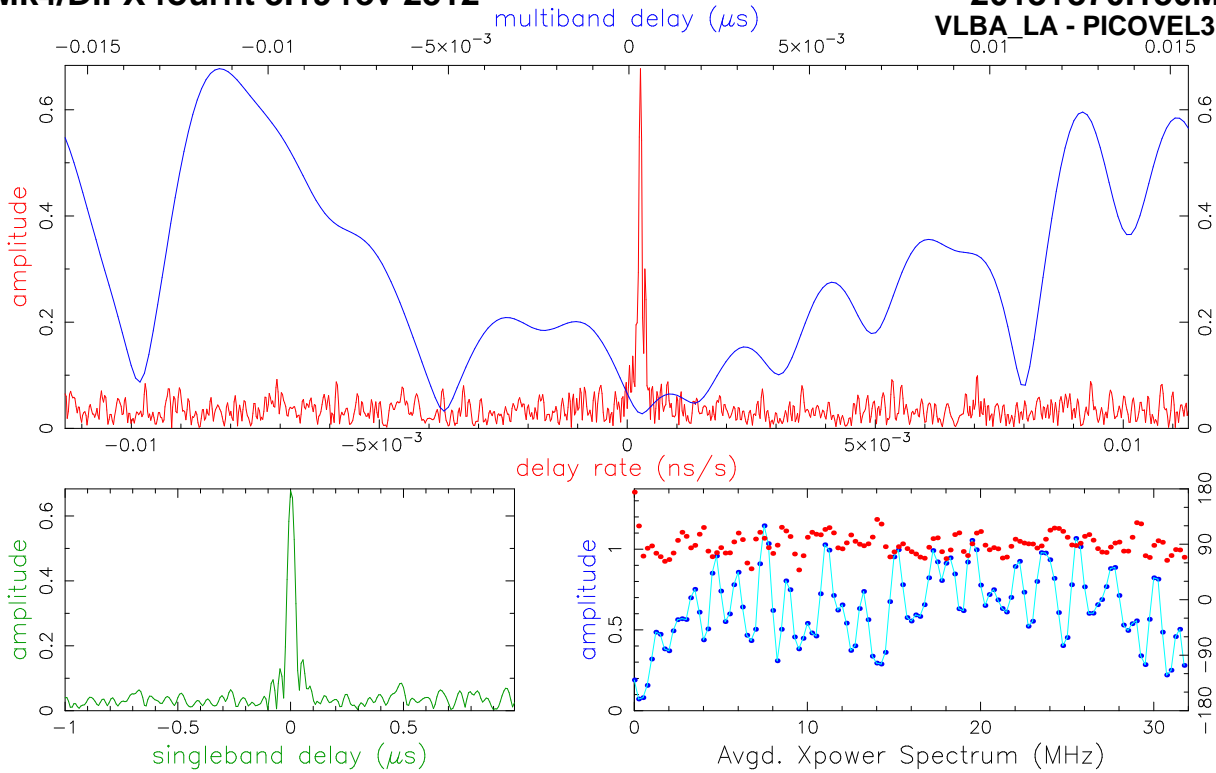
ph/frq (deg) 46.0 52.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 47.7 35.9 Inc. seg. avg. 0.197 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 52.7 62.7 Inc. frq. avg. 0.210 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.7 el 59.9 pa -89.1 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11224.084 -2846.654 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ki..130M5S Output file: /Exps/c192c/v2/1234/No0067/ki.W.225.130M5S

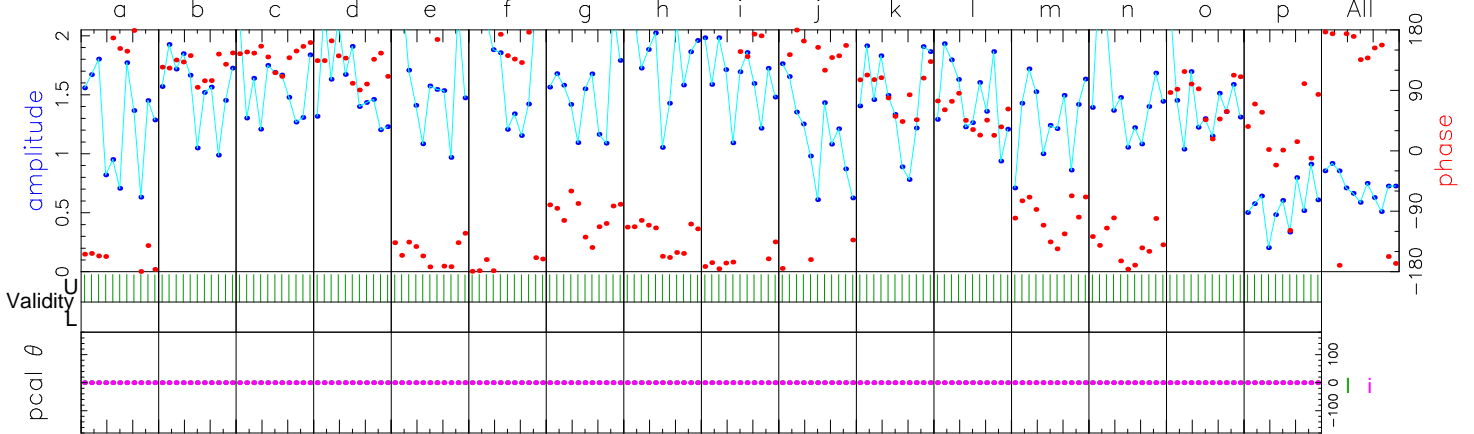


Fringe quality 7

SNR 25.0  
Int time 179.549  
Amp 0.684  
Phase 171.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.002516  
MBD -0.011349  
Fringe rate (Hz) 0.022853  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053714  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

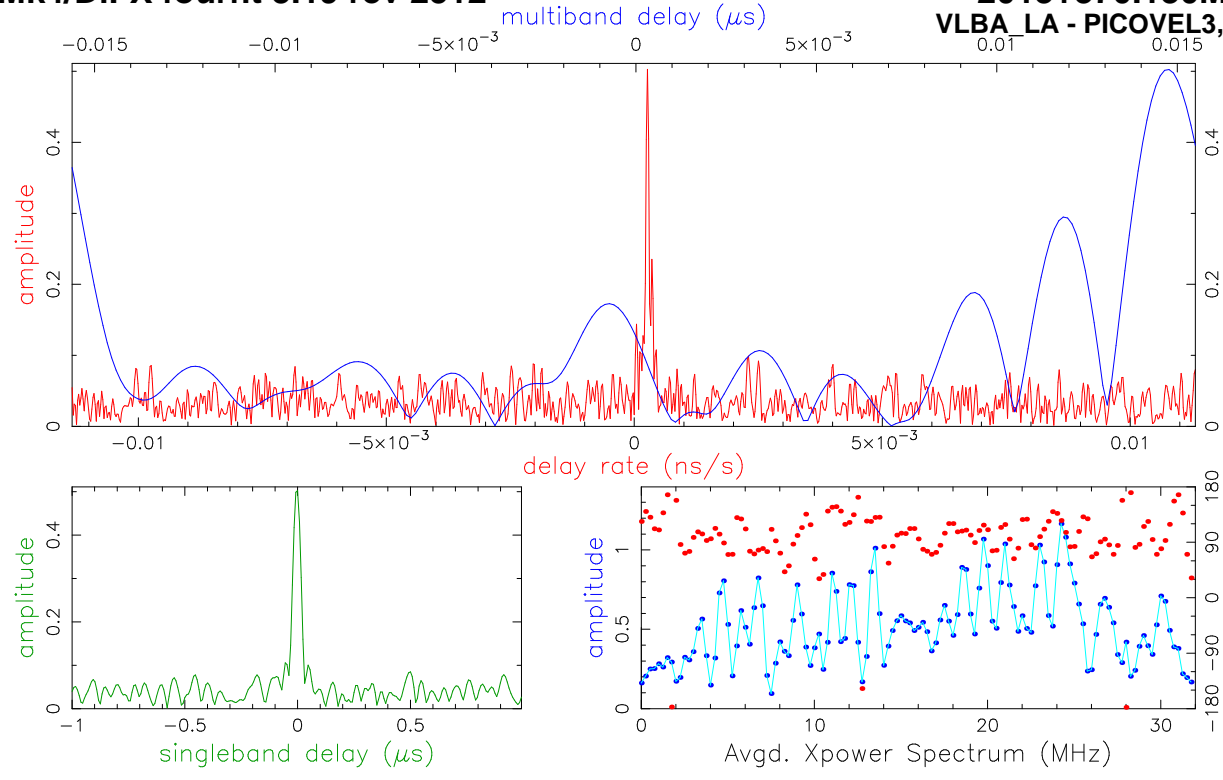
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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		
l	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
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	7.50326650082E+03			Apriori delay (usec)			7.50327785007E+03			Resid mbdelay (usec)			-1.13492E-02			+/-	4.3E-05	
Sband delay (usec)	7.50328036657E+03			Apriori clock (usec)			-2.1899012E-01			Resid sbdelay (usec)			2.51650E-03			+/-	6.9E-04	
Phase delay (usec)	7.50327785559E+03			Apriori clockrate (us/s)			1.5279932E-09			Resid phdelay (usec)			5.51910E-06			+/-	1.5E-07	
Delay rate (us/s)	1.45030519450E+00			Apriori rate (us/s)			1.45030492920E+00			Resid rate (us/s)			2.65300E-07			+/-	1.4E-09	
Total phase (deg)	172.9			Apriori accel (us/s/s)			-4.11437147976E-05			Resid phase (deg)			171.1			+/-	4.6	

ph/seg (deg) RMS Theor. Amplitude 0.684 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 20.7 7.6 Search (1024X64) 0.674 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 18.0 13.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 75.2 9.2 Inc. seg. avg. 0.715 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 106.1 16.0 Inc. frq. avg. 1.324 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 77.3 el 65.2 pa -84.0 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10465.848 -2524.044 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/li..130M5S Output file: /Exps/c192c/v2/1234/No0067/li.W.243.130M5S

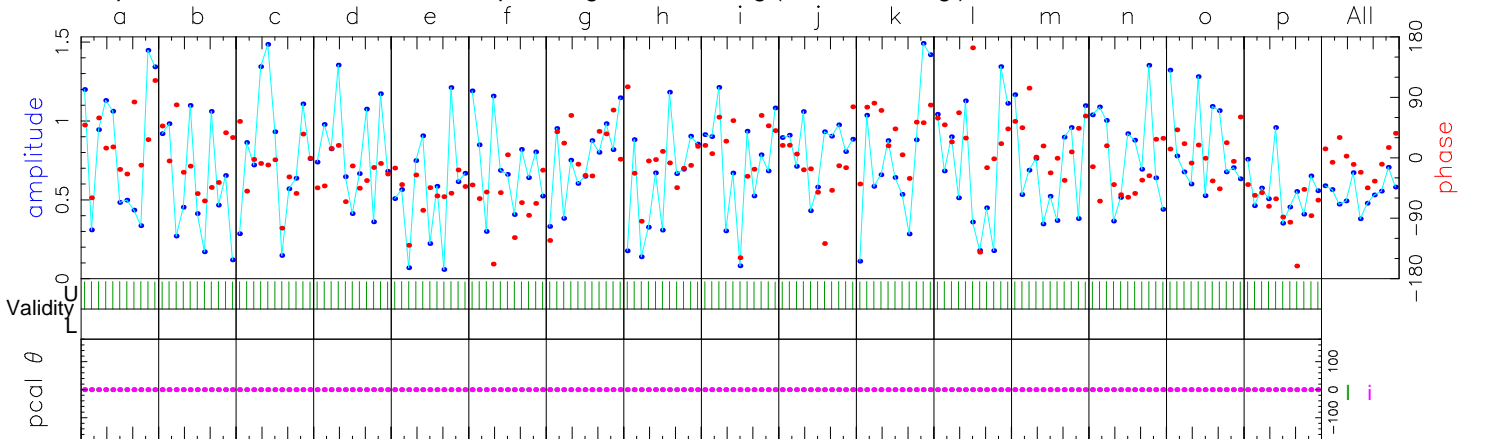


Fringe quality 8

SNR 18.7  
Int time 179.549  
Amp 0.511  
Phase -1.4  
PFD 0.0e+00  
Delays (us)  
SBD -0.003503  
MBD 0.014715  
Fringe rate (Hz) 0.022737  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053718  
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

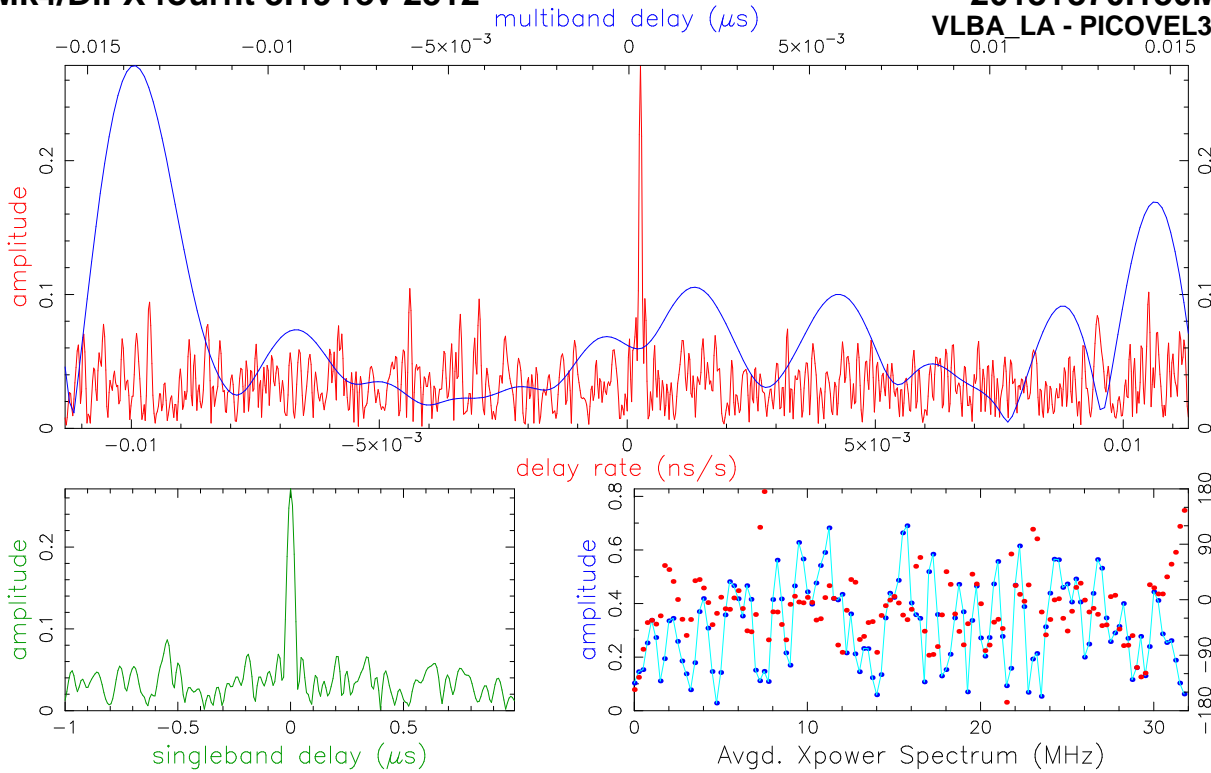


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)	7.50326131466E+03			Apriori delay (usec)			7.50327785007E+03			Resid mbdelay (usec)			1.47146E-02			+/-	5.8E-05	
Sband delay (usec)	7.50327434707E+03			Apriori clock (usec)			-2.1899012E-01			Resid sbdelay (usec)			-3.50300E-03			+/-	9.2E-04	
Phase delay (usec)	7.50327785002E+03			Apriori clockrate (us/s)			1.5279932E-09			Resid phdelay (usec)			-4.37190E-08			+/-	2.0E-07	
Delay rate (us/s)	1.45030519315E+00			Apriori rate (us/s)			1.45030492920E+00			Resid rate (us/s)			2.63949E-07			+/-	1.9E-09	
Total phase (deg)	0.4			Apriori accel (us/s/s)			-4.11437147976E-05			Resid phase (deg)			-1.4			+/-	6.1	
ph/seg (deg)	RMS	Theor.	Amplitude			0.511 +/- 0.027			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	24.3	10.1	Search (1024X64)			0.500			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000	1.000		
ph/frq (deg)	18.7	17.7	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)	-0.016	0.016	
amp/frq (%)	37.9	12.2	Inc. seg. avg.			0.540			Sample rate(MSamp/s): 64			dr window (ns/s)			-0.011	0.011		
	24.3	21.4	Inc. frq. avg.			0.591			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)	0.00	0.00	

l: az 77.3 el 65.2 pa -84.0 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10465.848 -2524.044 simultaneous interpolator

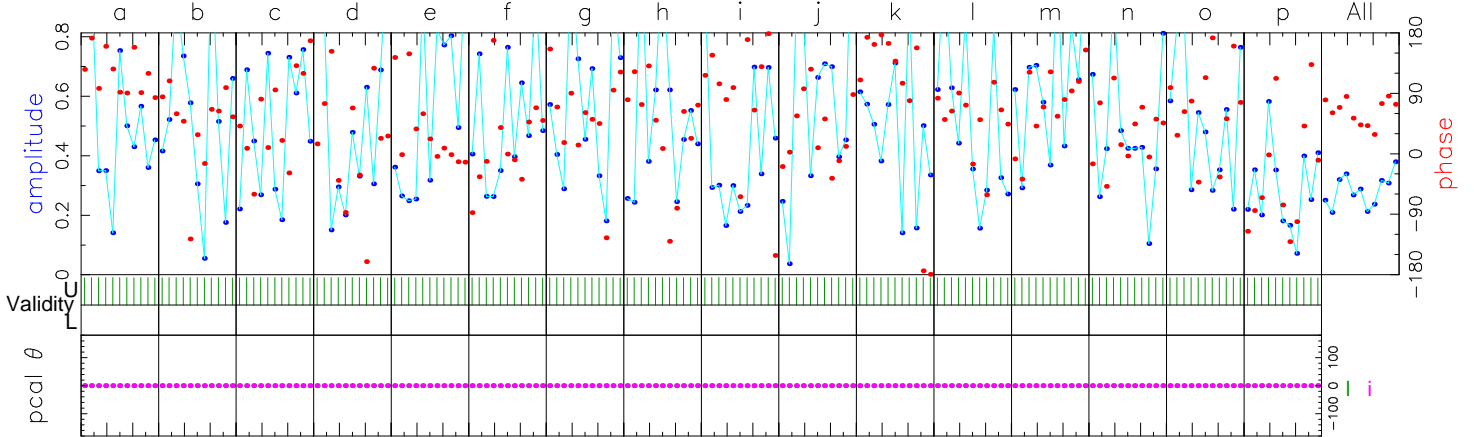
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/li..130M5S Output file: /Exps/c192c/v2/1234/No0067/li.W.277.130M5S



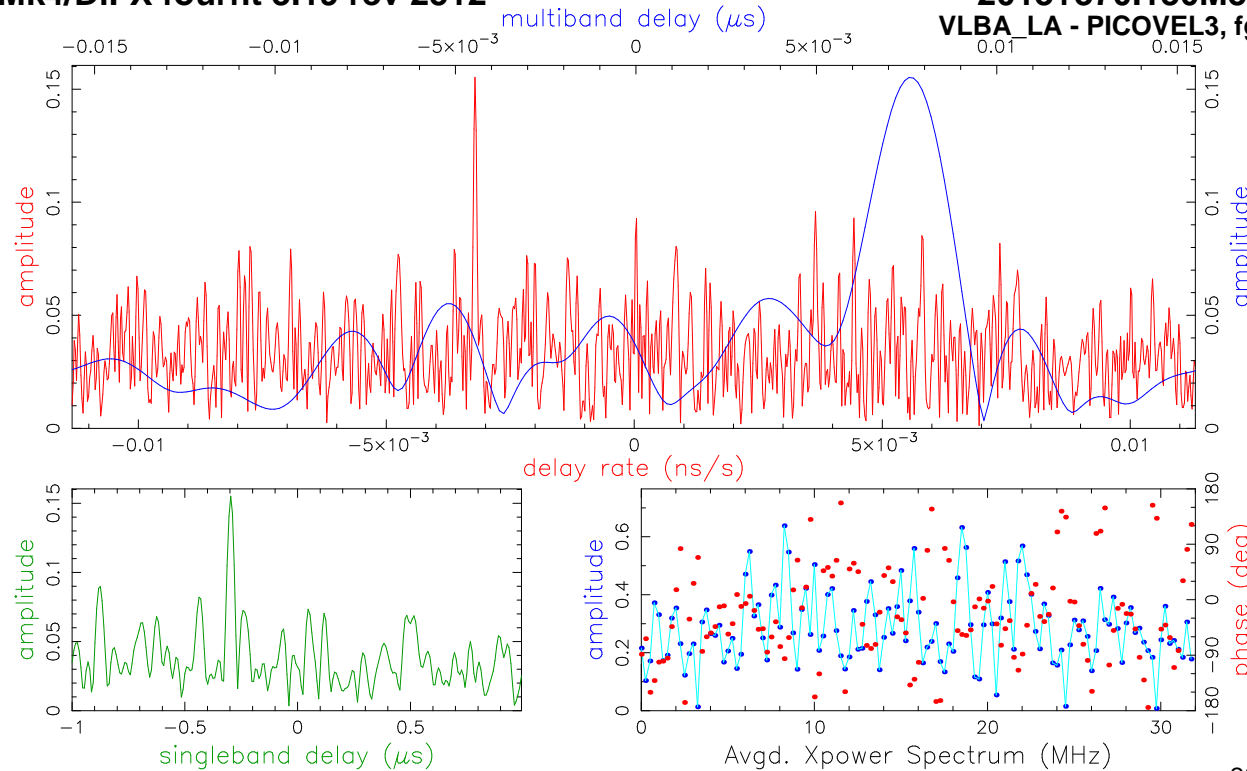


Fringe quality 9  
SNR 9.9  
Int time 179.549  
Amp 0.271  
Phase 65.4  
PFD 6.4e-15  
Delays (us)  
SBD 0.000331  
MBD -0.013709  
Fringe rate (Hz)  
0.022056  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053722  
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		
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks		
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	7.50326414110E+03			Apriori delay (usec)			7.50327785007E+03			Resid mbdelay (usec)			-1.37090E-02			+/- 1.1E-04			
Sband delay (usec)	7.50327818157E+03			Apriori clock (usec)			-2.1899012E-01			Resid sbdelay (usec)			3.31500E-04			+/- 1.7E-03			
Phase delay (usec)	7.50327785218E+03			Apriori clockrate (us/s)			1.5279932E-09			Resid phdelay (usec)			2.11009E-06			+/- 3.7E-07			
Delay rate (us/s)	1.45030518525E+00			Apriori rate (us/s)			1.45030492920E+00			Resid rate (us/s)			2.56047E-07			+/- 3.6E-09			
Total phase (deg)	67.2			Apriori accel (us/s/s)			-4.11437147976E-05			Resid phase (deg)			65.4			+/- 11.5			
ph/seg (deg)	RMS	Theor.	Amplitude			0.271 +/- 0.027			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5							
amp/seg (%)	18.6	19.1	Search (1024X64)			0.259			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000				
ph/frq (deg)	19.7	33.4	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016		
amp/frq (%)	46.5	23.1	Inc. seg. avg.			0.270			Sample rate(MSamp/s): 64			dr window (ns/s)			-0.011 0.011				
	45.7	40.3	Inc. frq. avg.			0.321			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)		0.00 0.00		

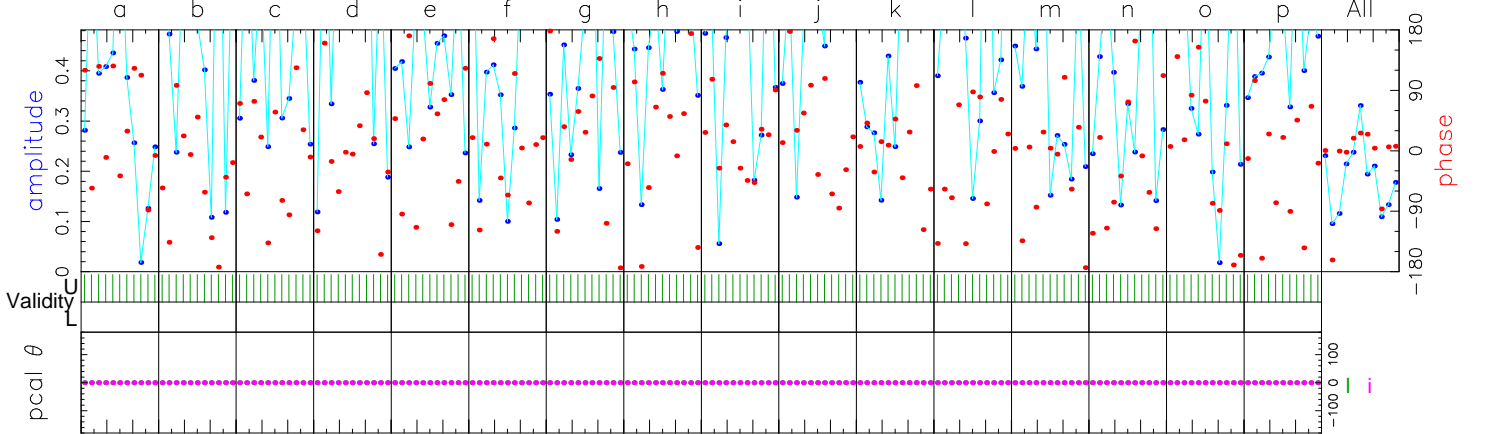


Fringe quality 0

SNR 5.7  
Int time 179.549  
Amp 0.161  
Phase 7.0  
PFD 7.9e-01  
Delays (us)  
SBD -0.296513  
MBD 0.007626  
Fringe rate (Hz)  
-0.276825  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053724  
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

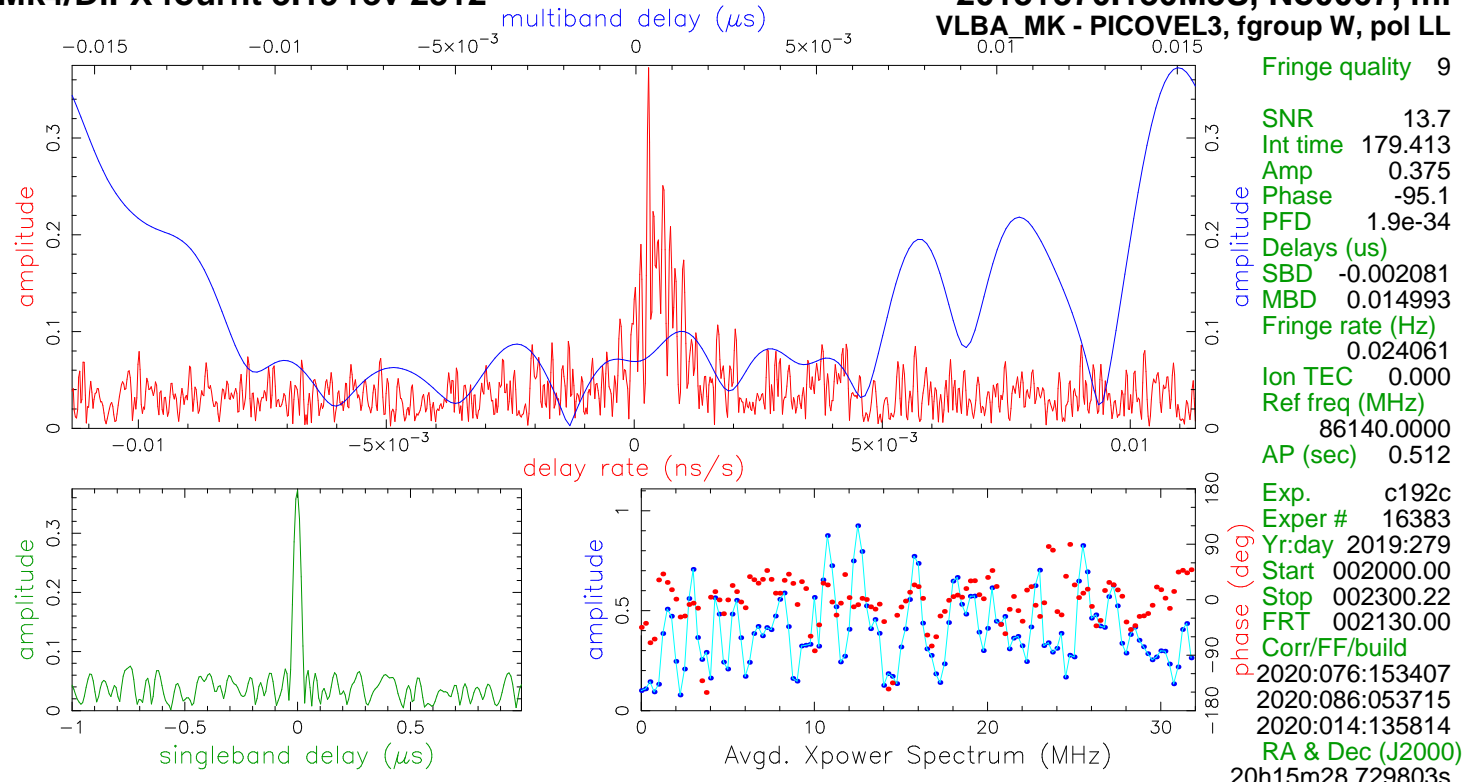


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		Chan ids
U	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)	7.50297297612E+03			Apriori delay (usec)			7.50327785007E+03			Resid mbdelay (usec)			7.62605E-03			+/-	1.9E-04	
Sband delay (usec)	7.50298133707E+03			Apriori clock (usec)			-2.1899012E-01			Resid sbdelay (usec)			-2.96513E-01			+/-	3.0E-03	
Phase delay (usec)	7.50327785029E+03			Apriori clockrate (us/s)			1.5279932E-09			Resid phdelay (usec)			2.25070E-07			+/-	6.5E-07	
Delay rate (us/s)	1.45030171554E+00			Apriori rate (us/s)			1.45030492920E+00			Resid rate (us/s)			-3.21366E-06			+/-	6.2E-09	
Total phase (deg)	8.7			Apriori accel (us/s/s)			-4.11437147976E-05			Resid phase (deg)			7.0			+/-	20.1	

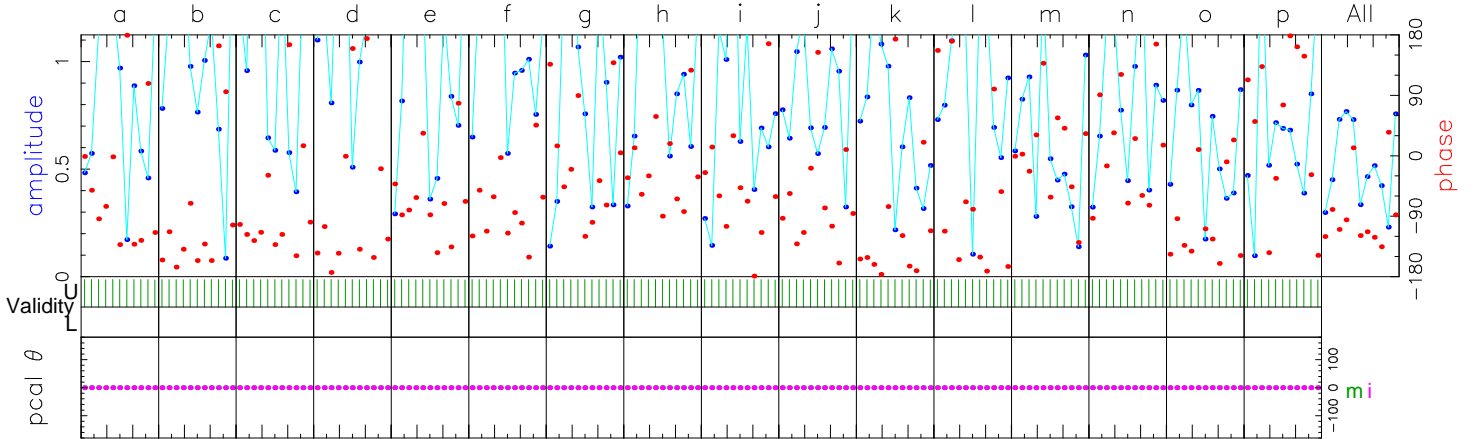
ph/seg (deg) RMS Theor. Amplitude 0.161 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 47.5 58.3 Search (1024X64) 0.153 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 40.2 40.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 44.3 70.3 Inc. seg. avg. 0.165 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 I: az 77.3 el 65.2 pa -84.0 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -10465.848 -2524.044 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/li..130M5S Output file: /Exps/c192c/v2/1234/No0067/li.W.318.130M5S simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, mi  
VLBA\_MK - PICOVEL3, fgroup W, pol LL



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

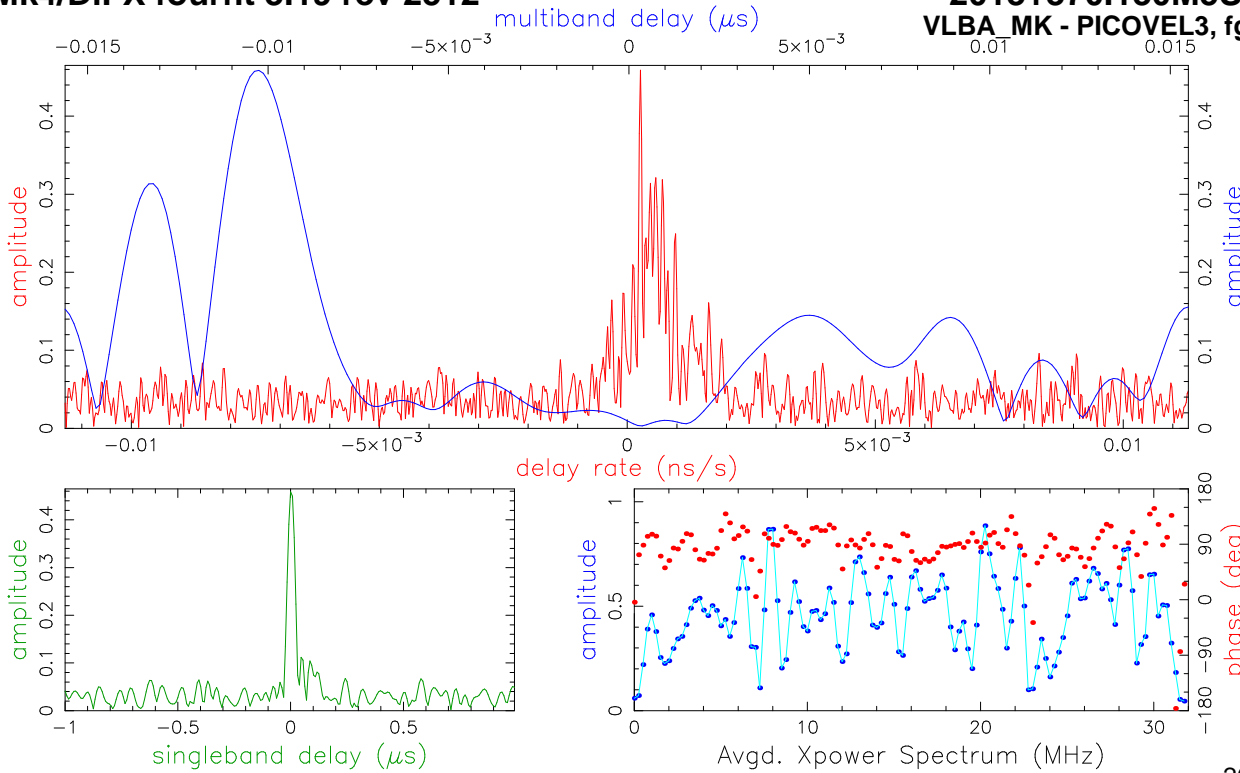


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-89.9	-135.3	-108.1	-130.2	-68.6	-71.0	-30.4	-28.8	-55.3	-101.4	-146.8	-153.9	18.8	2.4	-118.7	161.6		Phase	-95.1
	0.5	0.8	0.9	0.6	0.7	0.7	0.5	0.6	0.4	0.6	0.6	0.6	0.3	0.3	0.4	0.3		Ampl.	0.5
	127.4	128.7	128.7	129.1	128.8	128.1	128.3	128.3	128.7	128.7	128.5	128.8	128.6	128.9	127.6	127.1		Sbd box	128.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
m	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	
m: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	
m: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	
m	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	
m	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	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	-4.65810006613E+03			Apriori delay (usec)			-4.65808380959E+03			Resid mbdelay (usec)			1.49935E-02			+/- 7.9E-05			
Sband delay (usec)	-4.65808589109E+03			Apriori clock (usec)			3.1476924E+00			Resid sbdelay (usec)			-2.08150E-03			+/- 1.3E-03			
Phase delay (usec)	-4.65808381265E+03			Apriori clockrate (us/s)			3.4430770E-07			Resid phdelay (usec)			-3.06569E-06			+/- 2.7E-07			
Delay rate (us/s)	2.08490416775E+00			Apriori rate (us/s)			2.08490388842E+00			Resid rate (us/s)			2.79323E-07			+/- 2.6E-09			
Total phase (deg)	-223.9			Apriori accel (us/s/s)			6.78442470196E-06			Resid phase (deg)			-95.1			+/- 8.3			

	RMS	Theor.	Amplitude	0.375 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	54.6	13.8	Search (1024X64)	0.357	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	63.2	24.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg)	62.3	16.7	Inc. seg. avg.	0.504	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	67.6	29.1	Inc. frq. avg.	0.532	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 128	t_cohere infinite

m: az 56.3 el 19.5 pa -79.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -14998.630 -1365.441 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/mi..130M5S Output file: /Exps/c192c/v2/1234/No0067/mi.W.250.130M5S

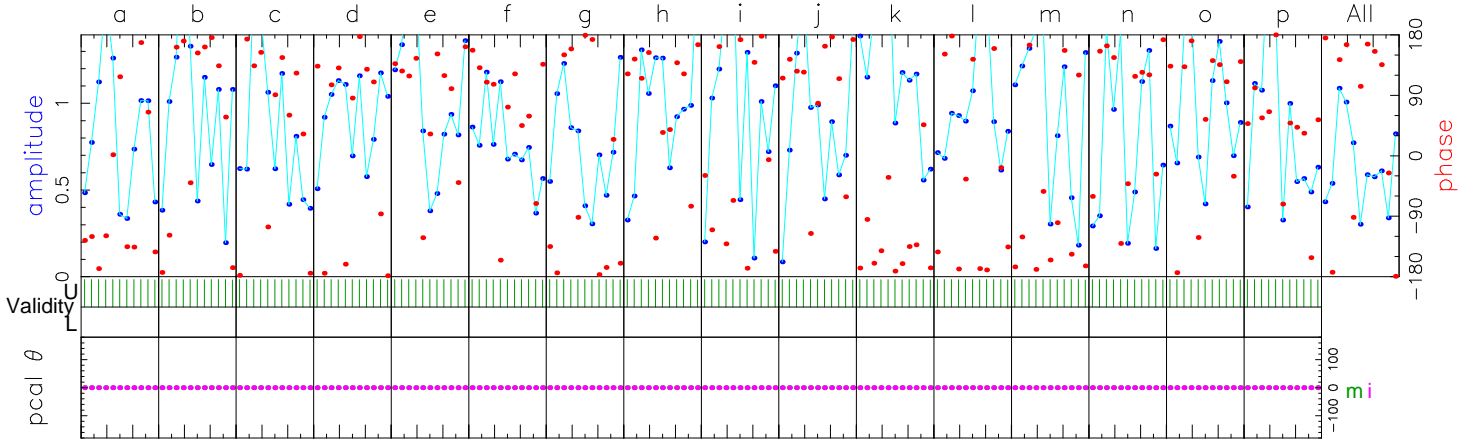


Fringe quality 7

SNR 17.0  
Int time 179.414  
Amp 0.465  
Phase 167.9  
PFD 0.0e+00  
Delays (us)  
SBD 0.003026  
MBD -0.010263  
Fringe rate (Hz) 0.023865  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053717  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

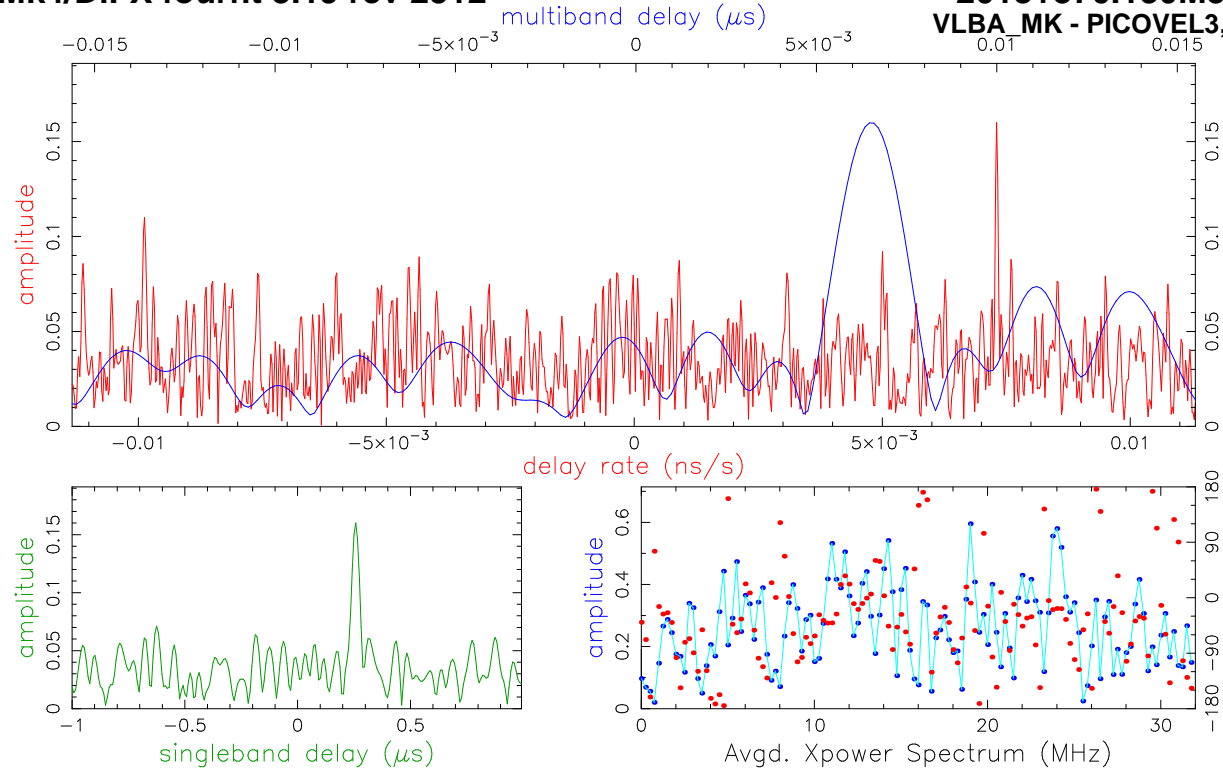
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m: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		
m: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		
m	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		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		-4.65809407219E+03																
Sband delay (usec)		-4.65808078409E+03																
Phase delay (usec)		-4.65808380417E+03																
Delay rate (us/s)		2.08490416547E+00																
Total phase (deg)					39.1													
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																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		
simultaneous interpolator																		

m: az 56.3 el 19.5 pa -79.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -14998.630 -1365.441

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/mi..130M5S Output file: /Exps/c192c/v2/1234/No0067/mi.W.266.130M5S

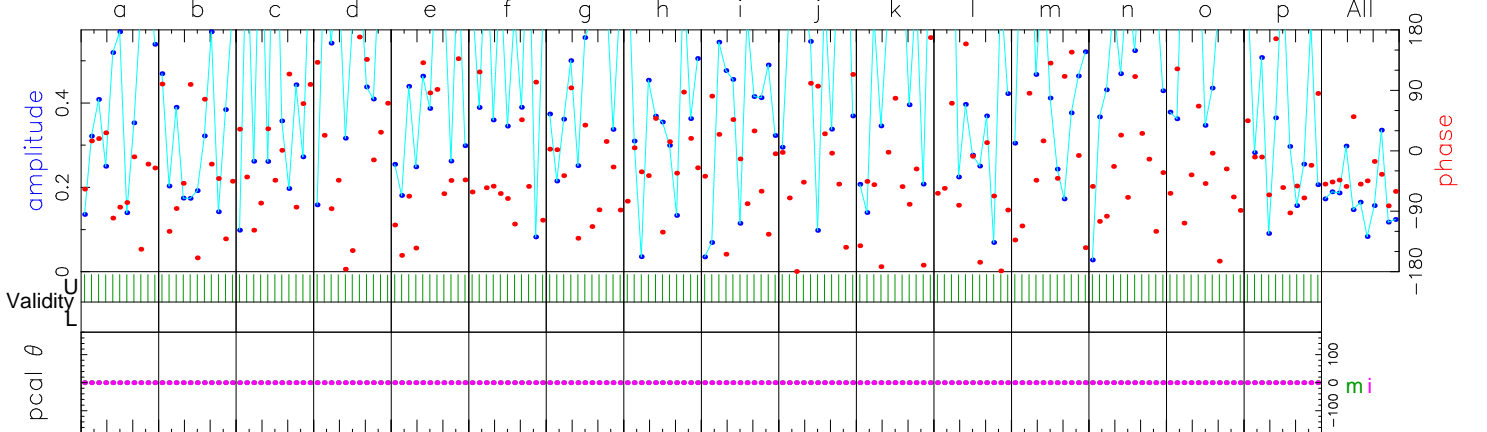


Fringe quality 0

SNR 5.9  
Int time 179.413  
Amp 0.191  
Phase -41.4  
PFD 4.3e-01  
Delays (us)  
SBD 0.257231  
MBD 0.006523  
Fringe rate (Hz) 0.629641  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build 2020:076:153407  
2020:086:053720  
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
	-43.3	-51.7	-34.2	36.9	157.4	-65.0	-34.3	-12.4	-32.6	-54.2	-54.2	-59.0	-36.7	-34.7	-54.1	-23.7	Phase	-41.4
	0.3	0.1	0.3	0.1	0.1	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.3	0.4	0.2	Ampl.	0.2
	75.8	30.1	211.0	141.8	250.2	162.3	8.2	99.7	50.1	247.1	81.6	32.9	242.2	184.9	180.6	100.3	Sbd box	161.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m: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	
m: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	
m	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		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-4.65782728689E+03			Apriori delay (usec)			-4.65808380959E+03			Resid mbdelay (usec)			6.52270E-03			+/-	1.8E-04	
Sband delay (usec)	-4.65782657859E+03			Apriori clock (usec)			3.1476924E+00			Resid sbdelay (usec)			2.57231E-01			+/-	2.9E-03	
Phase delay (usec)	-4.65808381092E+03			Apriori clockrate (us/s)			3.4430770E-07			Resid phdelay (usec)			-1.33352E-06			+/-	6.3E-07	
Delay rate (us/s)	2.08491119793E+00			Apriori rate (us/s)			2.08490388842E+00			Resid rate (us/s)			7.30951E-06			+/-	6.1E-09	
Total phase (deg)	-170.2			Apriori accel (us/s/s)			6.78442470196E-06			Resid phase (deg)			-41.4			+/-	19.5	

ph/seg (deg) 32.4 32.4  
amp/seg (%) 46.4 56.5  
ph/frq (deg) 50.0 39.1  
amp/frq (%) 61.0 68.2

RMS Theor. Amplitude 0.191 +/- 0.033  
Search (1024X64) 0.159  
Interp. 0.000  
Inc. seg. avg. 0.185  
Inc. frq. avg. 0.169

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

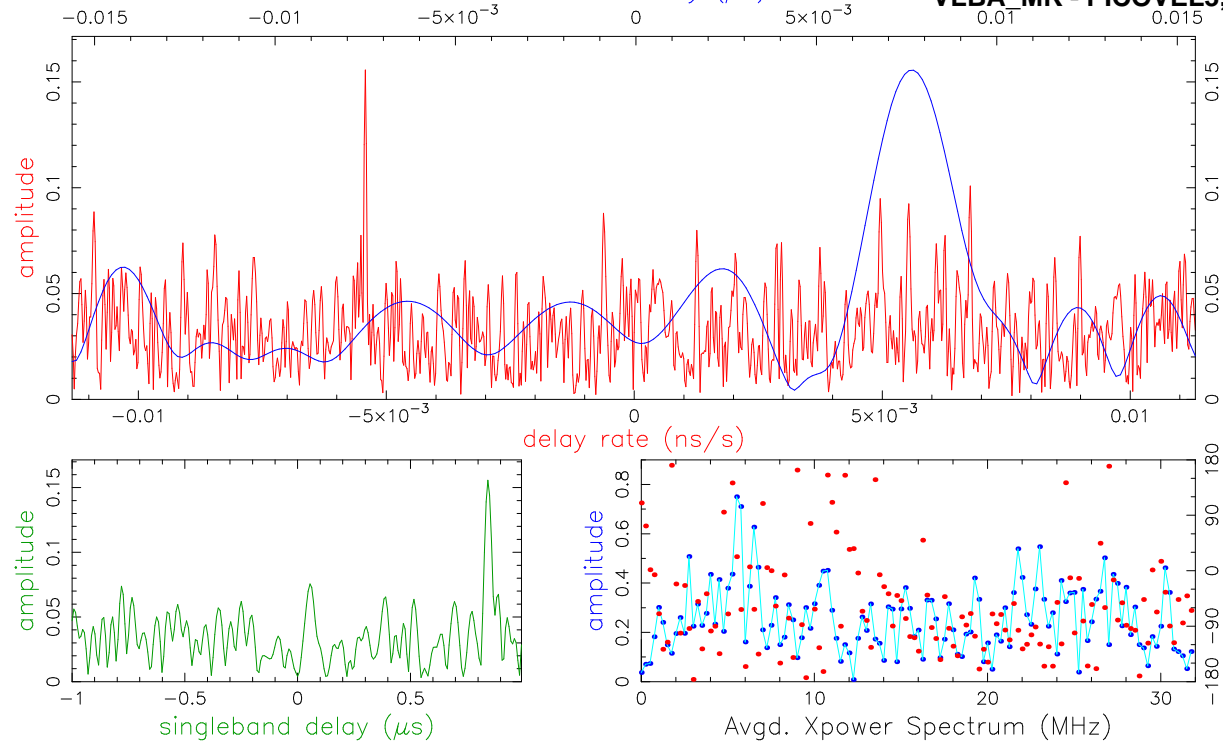
m: az 56.3 el 19.5 pa -79.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -14998.630 -1365.441 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/mi..130M5S Output file: /Exps/c192c/v2/1234/No0067/mi.W.292.130M5S

Mk4/DiFX fourfit 3.19 rev 2512

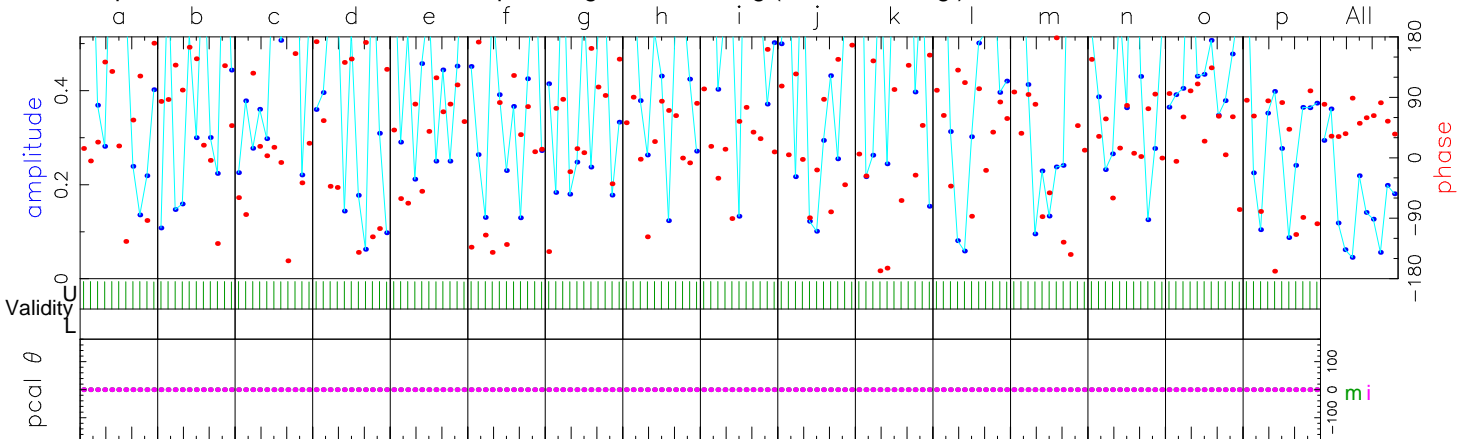
2013+370.130M5S, No0067, mi  
VLBA\_MK - PICOVEL3, fgroup W, pol RL

multiband delay ( $\mu$ s)



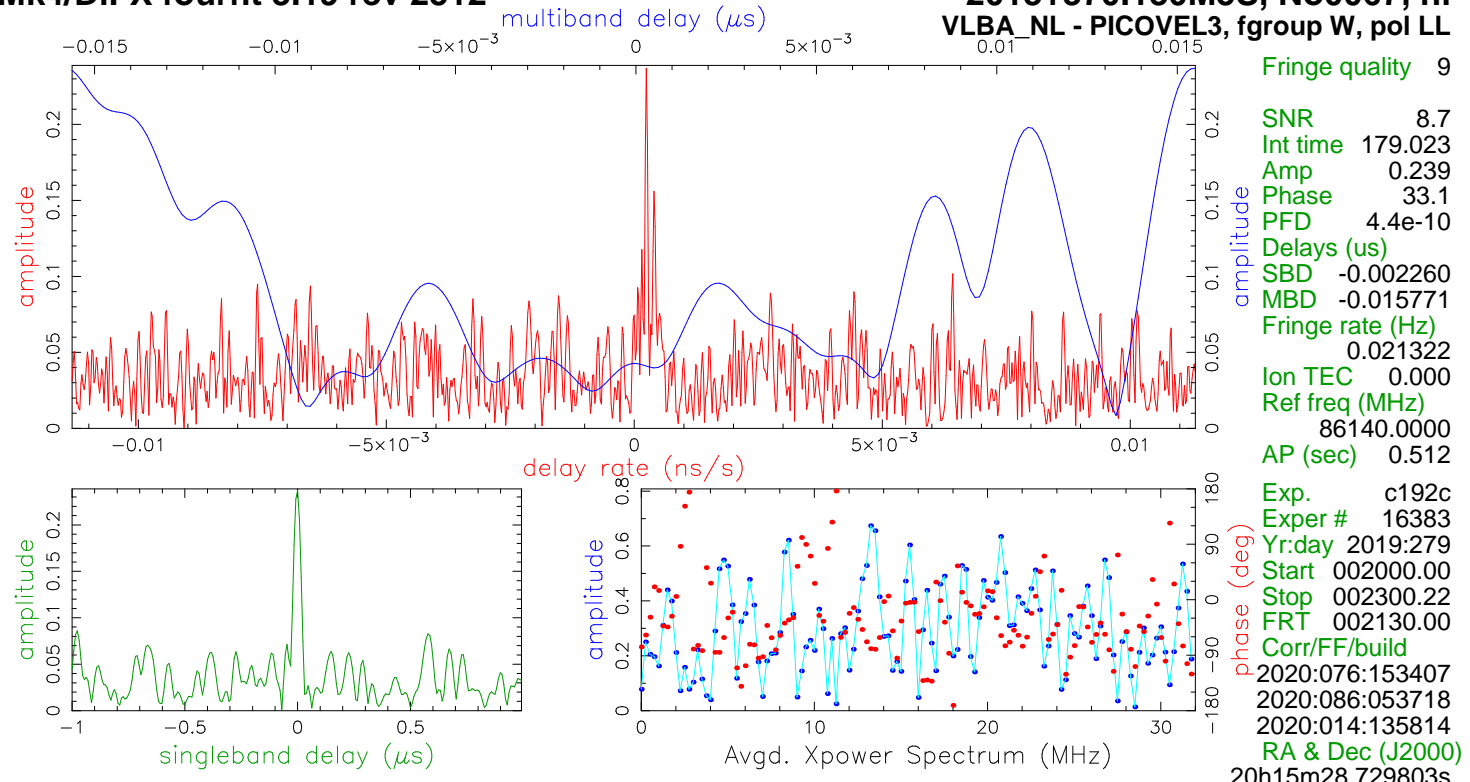
Fringe quality 0  
SNR 5.7  
Int time 179.414  
Amp 0.171  
Phase 52.2  
PFD 7.6e-01  
Delays (us)  
SBD 0.844455  
MBD 0.007641  
Fringe rate (Hz)  
-0.467726  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053723  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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

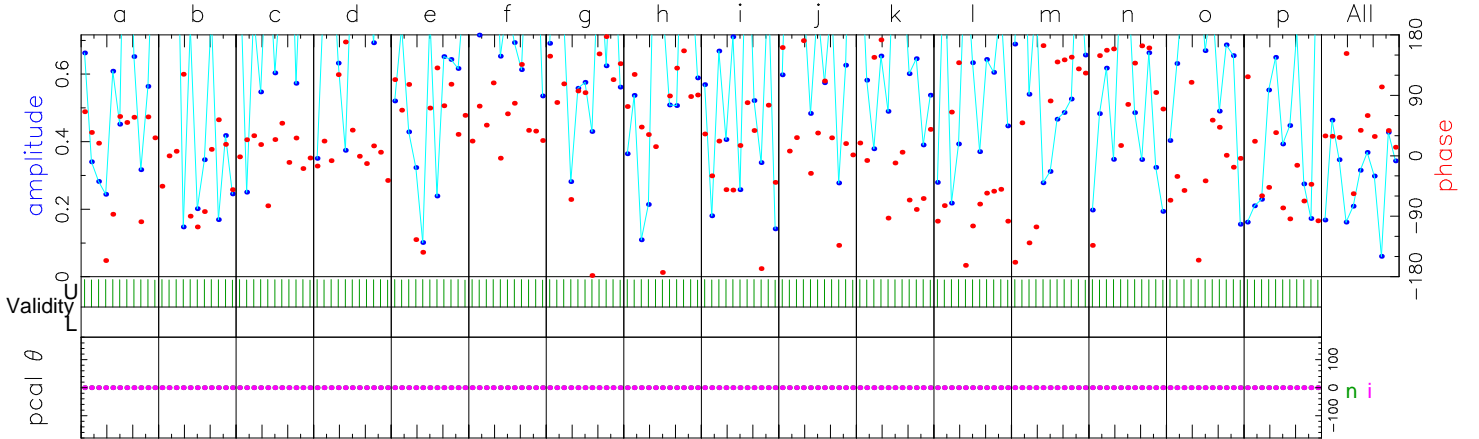


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
m: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			
m: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			
m	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			
m	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	
Group delay (usec)(sbd)			-4.65723241900E+03																
Sband delay (usec)			-4.65723935459E+03																
Phase delay (usec)			-4.65808380790E+03																
Delay rate (us/s)			2.08489845859E+00																
Total phase (deg)					-76.6														
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)																			
PCal period (AP's) 5, 5																			
sb window (us)																			
mb window (us)																			
dr window (ns/s)																			
ion window (TEC)																			
simultaneous interpolator																			

ph/seg (deg) 20.2 33.3  
amp/seg (%) 61.6 58.1  
ph/frq (deg) 55.4 40.2  
amp/frq (%) 63.6 70.1  
m: az 56.3 el 19.5 pa -79.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -14998.630 -1365.441  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/mi..130M5S Output file: /Exps/c192c/v2/1234/No0067/mi.W.313.130M5S



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

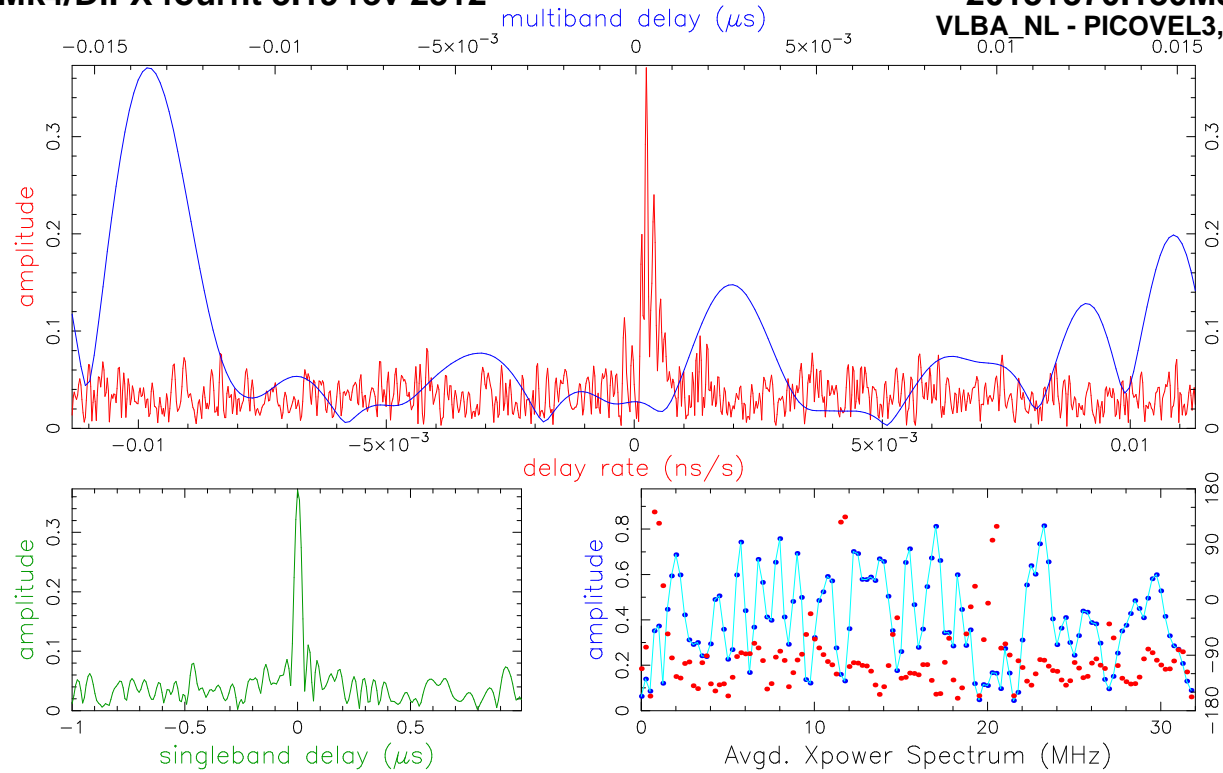


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	1000	1000	1000	1000	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		
n: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		
n: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		
n	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		
n	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)		8.89268641788E+03								8.89270218902E+03							-1.57711E-02	+/- 1.2E-04
Sband delay (usec)		8.89269992902E+03								2.7088671E+01							-2.26000E-03	+/- 2.0E-03
Phase delay (usec)		8.89270219008E+03								4.8722349E-07							1.06623E-06	+/- 4.2E-07
Delay rate (us/s)		1.19266731866E+00								1.19266707113E+00							2.47532E-07	+/- 4.1E-09
Total phase (deg)					235.4					-4.28285109252E-05							33.1	+/- 13.1

	RMS	Theor.	Amplitude	0.239 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	50.7	21.7	Search (1024X64)	0.233	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	53.3	38.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg)	68.7	26.2	Inc. seg. avg.	0.268	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	97.5	45.8	Inc. frq. avg.	0.388	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 104.5 el 76.7 pa -64.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -8612.391 -2061.519 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ni..130M5S Output file: /Exps/c192c/v2/1234/No0067/ni.W.271.130M5S

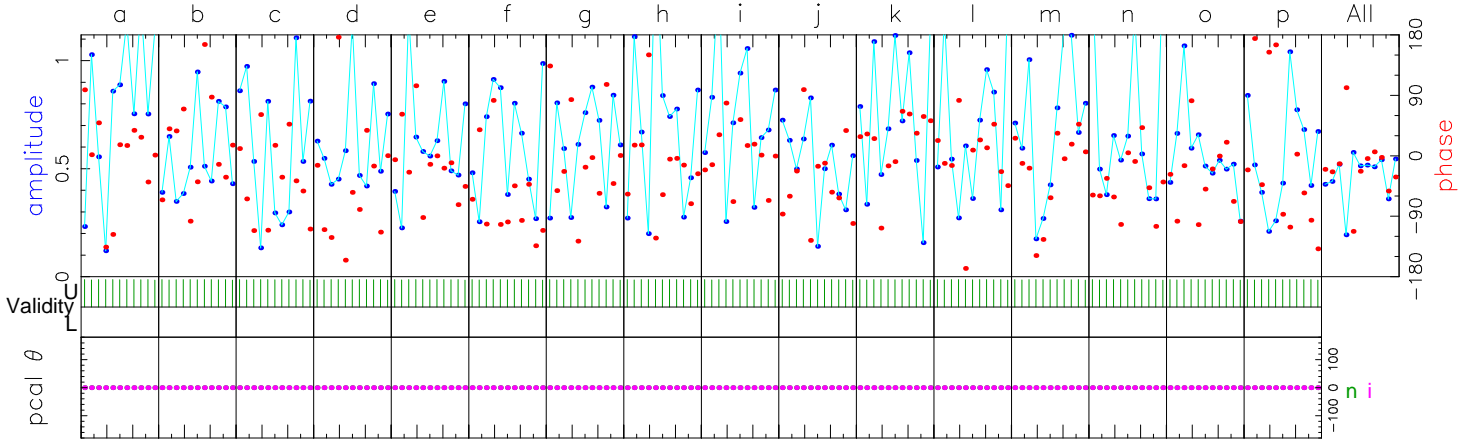


Fringe quality 9

SNR 13.7  
Int time 179.024  
Amp 0.373  
Phase -22.4  
PFD 5.5e-34  
Delays (us)  
SBD 0.002013  
MBD -0.013493  
Fringe rate (Hz) 0.021254  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build 2020:076:153407  
2020:086:053720  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s  
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n: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		
n: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		
n	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		
n	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)	8.89268869588E+03			Apriori delay (usec)			8.89270218902E+03			Resid mbdelay (usec)			-1.34931E-02			+/-	7.9E-05	
Sband delay (usec)	8.89270420152E+03			Apriori clock (usec)			2.7088671E+01			Resid sbdelay (usec)			2.01250E-03			+/-	1.3E-03	
Phase delay (usec)	8.89270218830E+03			Apriori clockrate (us/s)			4.8722349E-07			Resid phdelay (usec)			-7.22346E-07			+/-	2.7E-07	
Delay rate (us/s)	1.19266731787E+00			Apriori rate (us/s)			1.19266707113E+00			Resid rate (us/s)			2.46734E-07			+/-	2.6E-09	
Total phase (deg)	179.9			Apriori accel (us/s/s)			-4.28285109252E-05			Resid phase (deg)			-22.4			+/-	8.4	

ph/seg (deg) 48.7 13.9  
amp/seg (%) 37.8 24.3  
ph/frq (deg) 35.7 16.8  
amp/frq (%) 34.9 29.3

RMS Theor. Amplitude 0.373 +/- 0.027  
Search (1024X64) 0.365  
Interp. 0.000  
Inc. seg. avg. 0.454  
Inc. frq. avg. 0.419

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

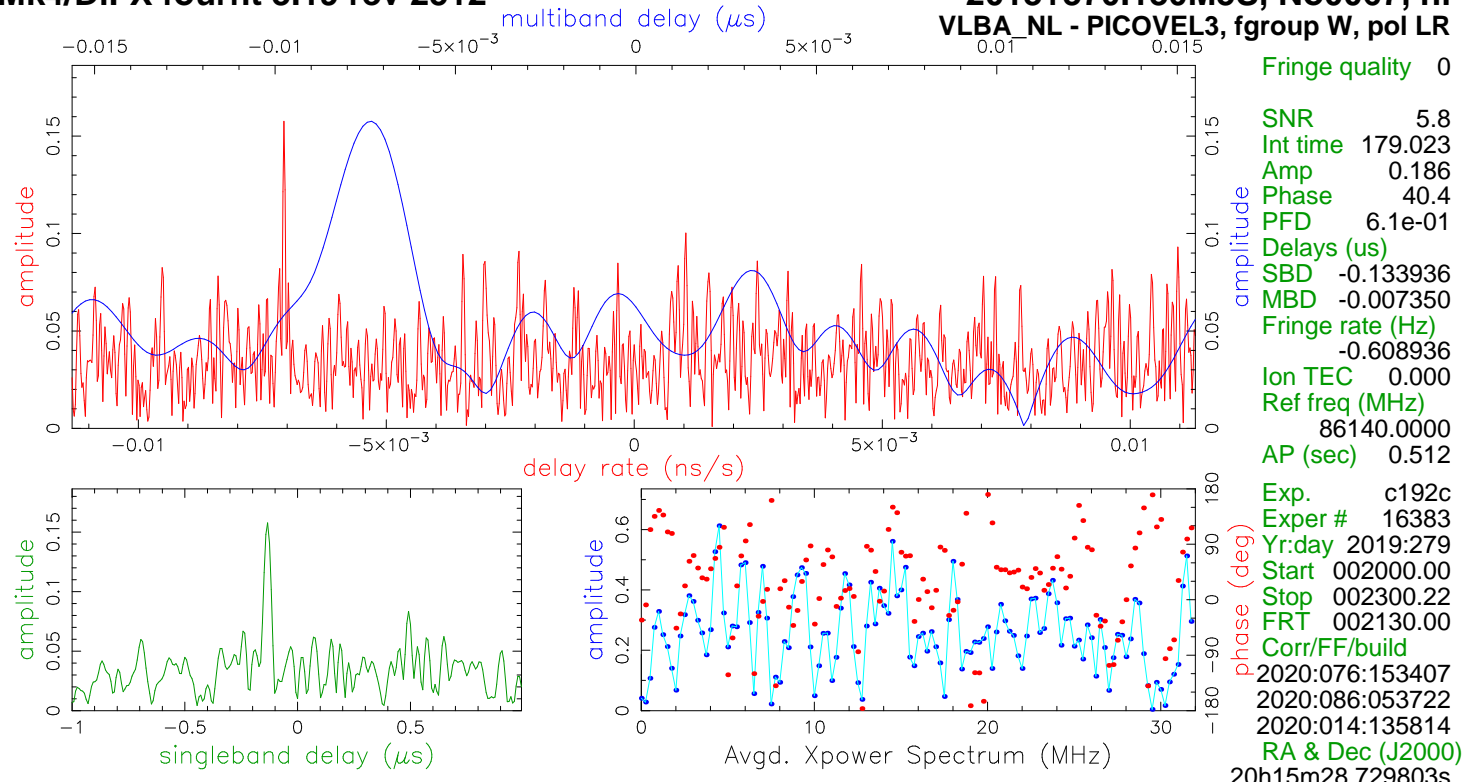
sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

n: az 104.5 el 76.7 pa -64.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -8612.391 -2061.519 simultaneous interpolator

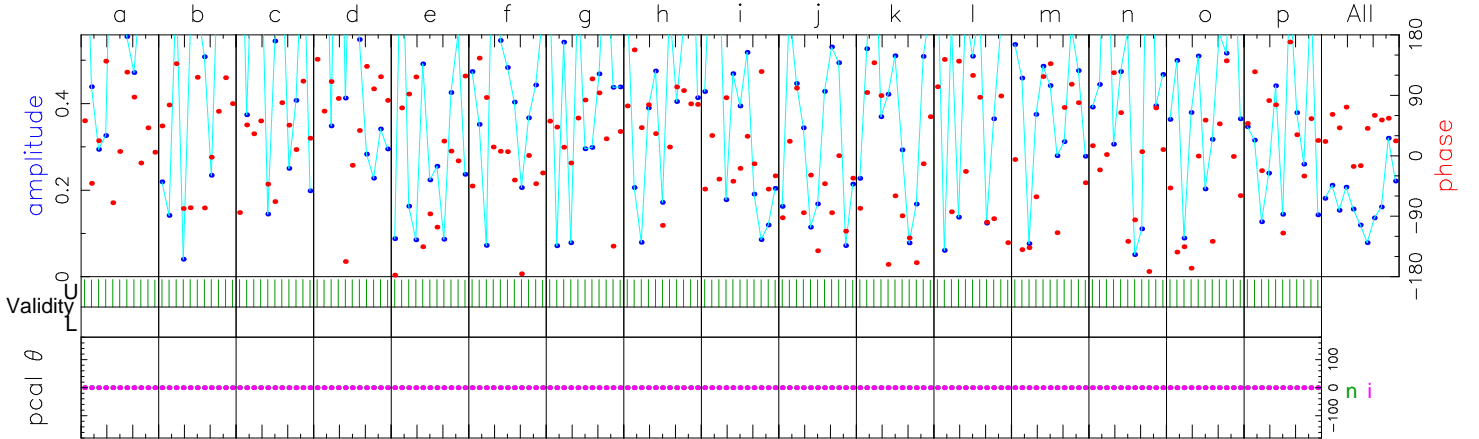


Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, ni  
VLBA\_NL - PICOVEL3, fgroup W, pol LR



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
n	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
n: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
n	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		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	8.89256983899E+03			Apriori delay (usec)			8.89270218902E+03			Resid mbdelay (usec)			-7.35003E-03			+/-	1.9E-04	
Sband delay (usec)	8.89256825302E+03			Apriori clock (usec)			2.7088671E+01			Resid sbdelay (usec)			-1.33936E-01			+/-	3.0E-03	
Phase delay (usec)	8.89270219032E+03			Apriori clockrate (us/s)			4.8722349E-07			Resid phdelay (usec)			1.30358E-06			+/-	6.4E-07	
Delay rate (us/s)	1.1926600199E+00			Apriori rate (us/s)			1.19266707113E+00			Resid rate (us/s)			-7.06914E-06			+/-	6.1E-09	
Total phase (deg)	242.7			Apriori accel (us/s/s)			-4.28285109252E-05			Resid phase (deg)			40.4			+/-	19.8	

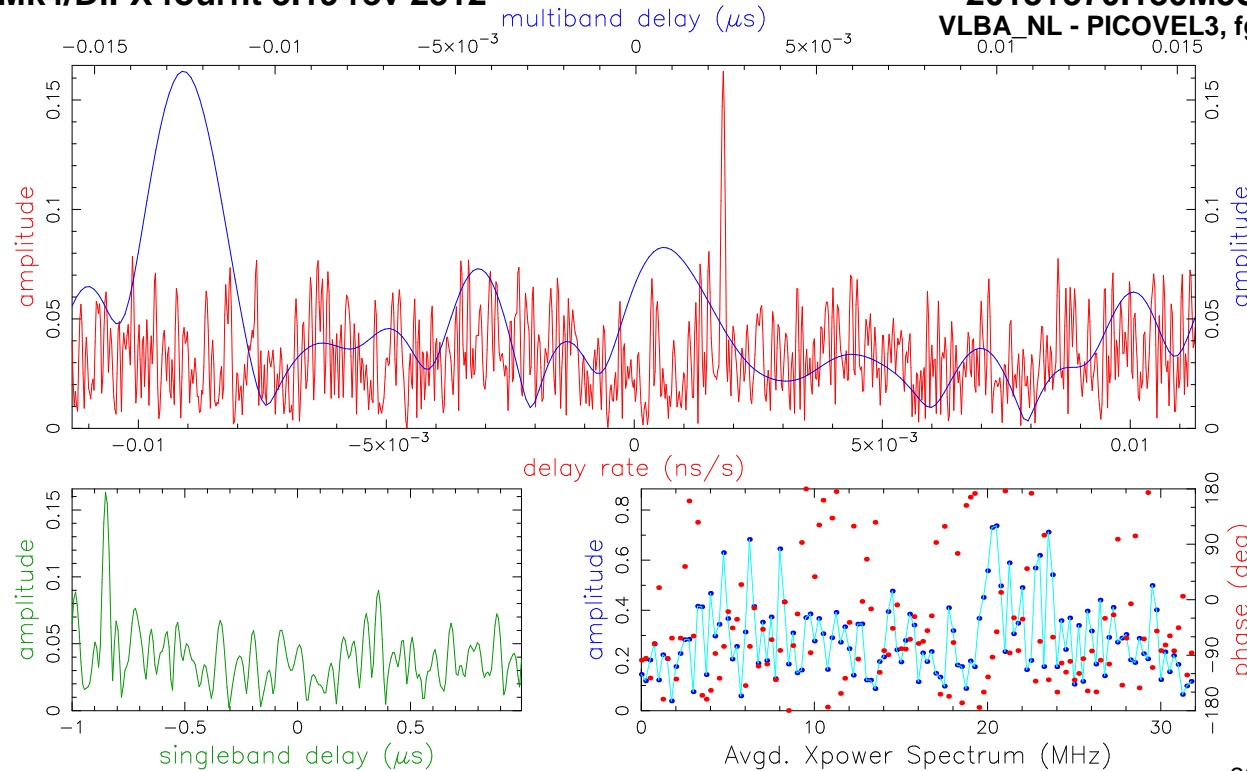
	RMS	Theor.	Amplitude	0.186 +/- 0.032	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	28.9	32.9	Search (1024X64)	0.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	40.2	57.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	49.1	39.7	Inc. seg. avg.	0.179	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	78.7	69.2	Inc. frq. avg.	0.196	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

n: az 104.5 el 76.7 pa -64.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -8612.391 -2061.519 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ni..130M5S Output file: /Exps/c192c/v2/1234/No0067/ni.W.308.130M5S

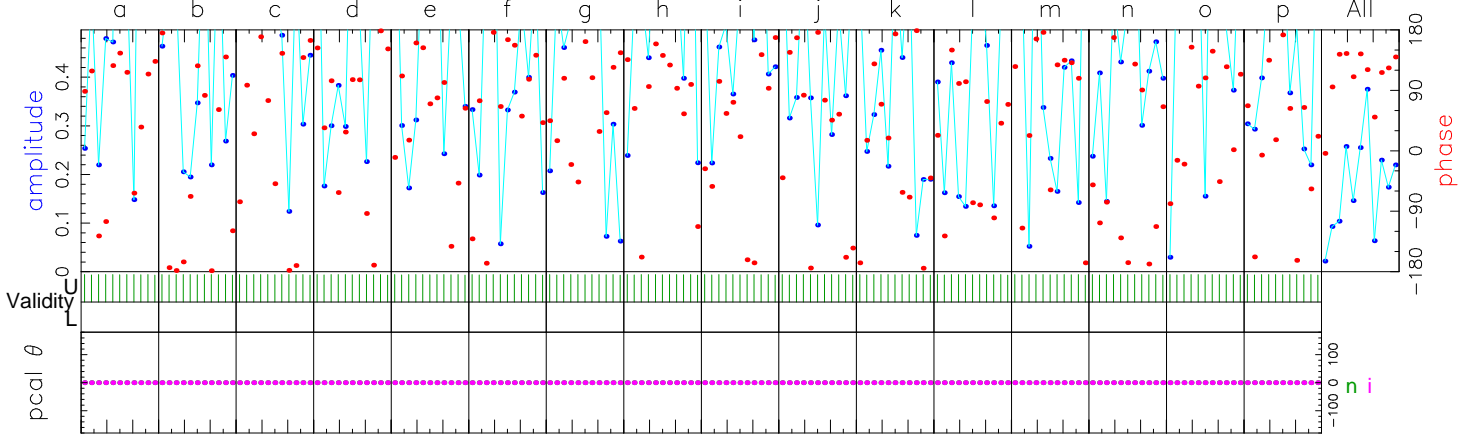
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, ni  
VLBA\_NL - PICOVEL3, fgroup W, pol RL



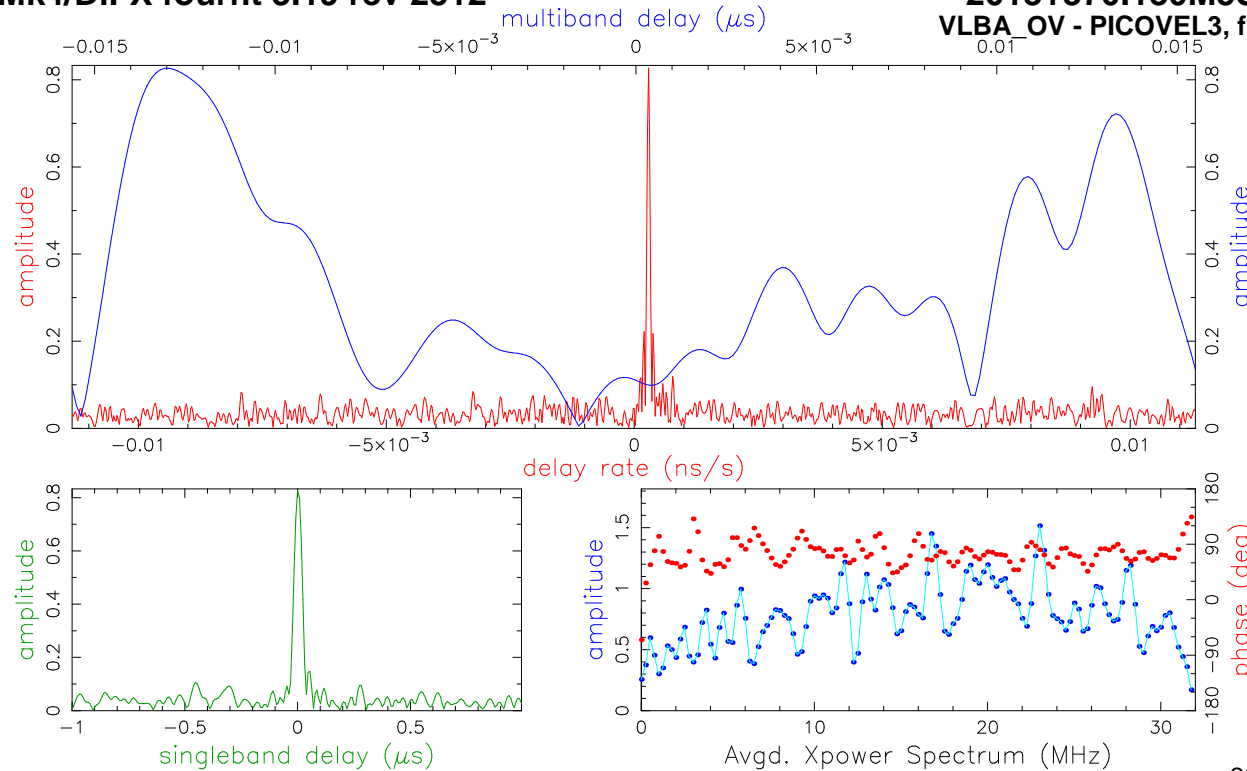
Fringe quality 0  
SNR 6.0  
Int time 179.024  
Amp 0.166  
Phase 125.9  
PFD 2.2e-01  
Delays (us)  
SBD -0.849626  
MBD -0.012550  
Fringe rate (Hz) 0.153901  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build 2020:076:153407  
2020:086:053726  
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	116.2	148.8	132.3	142.4	75.0	150.6	57.2	118.6	113.6	118.6	-139.9	38.6	166.9	-172.6	77.3	74.8	Phase	125.9
n	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.4	0.2	0.1	0.1	0.1	0.3	0.2	0.1	0.1	Ampl.	0.2
i	20.0	222.3	242.3	43.6	55.8	133.5	167.8	20.5	125.6	88.6	118.2	35.9	195.2	98.5	205.8	252.6	Sbd box	20.2
n	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n: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	
n: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	
n	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	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Tracks	
Group delay (usec)(sbd)	8.89184588929E+03			Apriori delay (usec)			8.89270218902E+03			Resid mbdelay (usec)			-1.25497E-02			+/- 1.8E-04		
Sband delay (usec)	8.89185256352E+03			Apriori clock (usec)			2.7088671E+01			Resid sbdelay (usec)			-8.49626E-01			+/- 2.9E-03		
Phase delay (usec)	8.89270219308E+03			Apriori clockrate (us/s)			4.8722349E-07			Resid phdelay (usec)			4.05914E-06			+/- 6.2E-07		
Delay rate (us/s)	1.19266885777E+00			Apriori rate (us/s)			1.19266707113E+00			Resid rate (us/s)			1.78664E-06			+/- 5.9E-09		
Total phase (deg)	328.2			Apriori accel (us/s/s)			-4.28285109252E-05			Resid phase (deg)			125.9			+/- 19.1		

ph/seg (deg) 47.8 31.6 Search (1024X64) 0.159 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 60.6 55.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 50.8 38.2 Inc. seg. avg. 0.155 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 62.0 66.6 Inc. frq. avg. 0.170 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
n: az 104.5 el 76.7 pa -64.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -8612.391 -2061.519 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/ni..130M5S Output file: /Exps/c192c/v2/1234/No0067/ni.W.329.130M5S

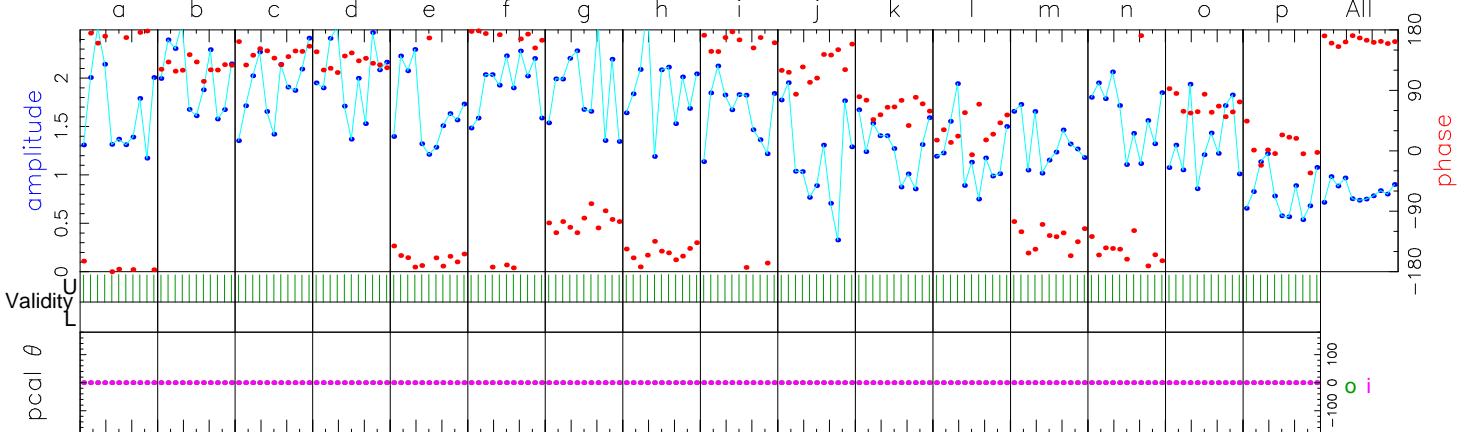


Fringe quality 7

SNR 30.4  
Int time 177.916  
Amp 0.833  
Phase 163.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.002365  
MBD -0.013002  
Fringe rate (Hz) 0.023957  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053725  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	176.2	123.9	144.6	130.2	-163.0	174.8	-107.1	-152.6	166.0	123.4	64.0	28.3	-128.4	-151.1	65.7	1.9	Phase	163.1
o	1.6	2.0	1.9	2.0	1.6	1.9	1.8	1.9	1.6	1.1	1.3	1.1	1.3	1.5	1.3	0.8	Ampl.	1.5
i	128.1	128.9	129.1	129.2	129.1	129.0	128.5	128.7	129.0	128.8	128.9	128.4	128.8	128.9	129.0	127.1	Sbd box	129.3
o	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o	0:0	0:0	0:0	0:0	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	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

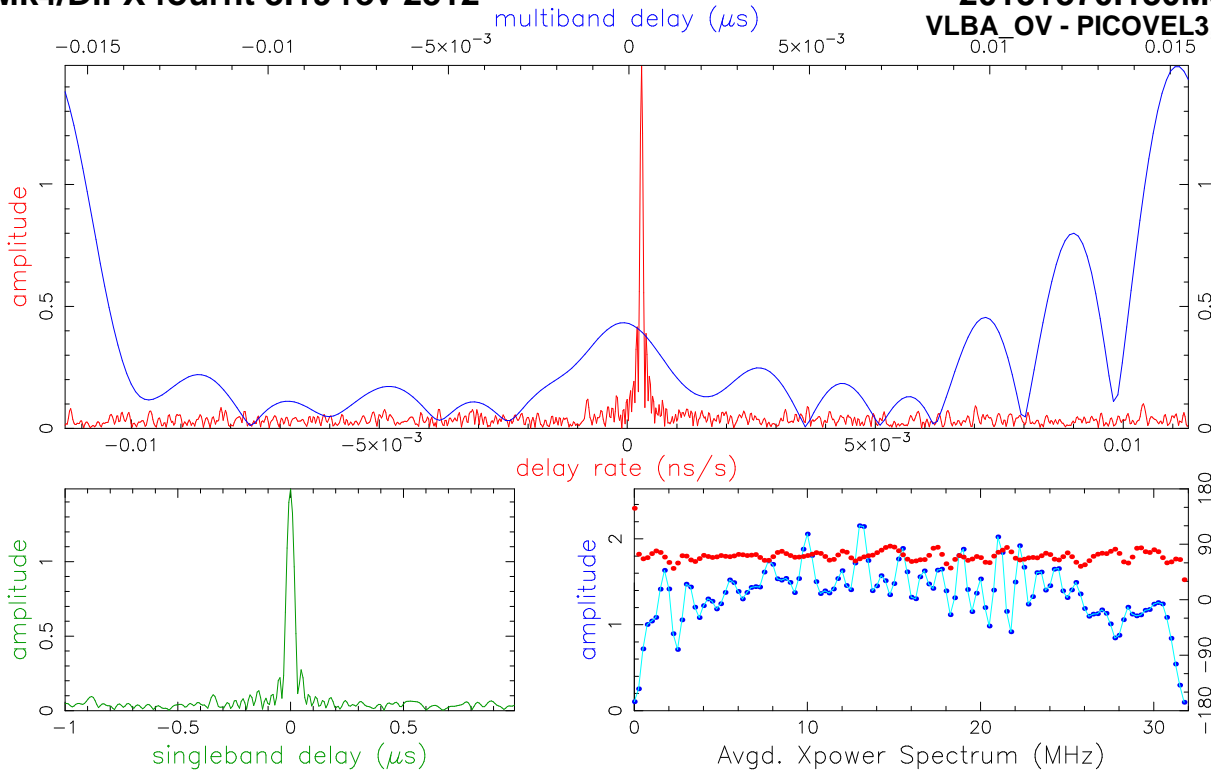
Group delay (usec)(sbd) 5.87497007574E+03 Apriori delay (usec) 5.87498307809E+03 Resid mbdelay (usec) -1.30024E-02 +/- 3.6E-05  
 Sband delay (usec) 5.87498544359E+03 Apriori clock (usec) 1.7219307E+01 Resid sbdelay (usec) 2.36550E-03 +/- 5.7E-04  
 Phase delay (usec) 5.87498308335E+03 Apriori clockrate (us/s) 3.5398100E-07 Resid phdelay (usec) 5.25928E-06 +/- 1.2E-07  
 Delay rate (us/s) 1.60656033545E+00 Apriori rate (us/s) 1.60656005733E+00 Resid rate (us/s) 2.78119E-07 +/- 1.2E-09  
 Total phase (deg) 287.9 Apriori accel (us/s/s) -3.10023287722E-05 Resid phase (deg) 163.1 +/- 3.8

RMS Theor. Amplitude 0.833 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 4.7 6.3 Search (1024X64) 0.790 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 10.7 10.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 78.5 7.5 Inc. seg. avg. 0.825 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 95.6 13.2 Inc. frq. avg. 1.533 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

o: az 76.6 el 56.1 pa -76.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11582.094 -1768.149 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/oi..130M5S Output file: /Exps/c192c/v2/1234/No0067/oi.W.325.130M5S

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, oi  
VLBA\_OV - PICOVEL3, fgroup W, pol RR

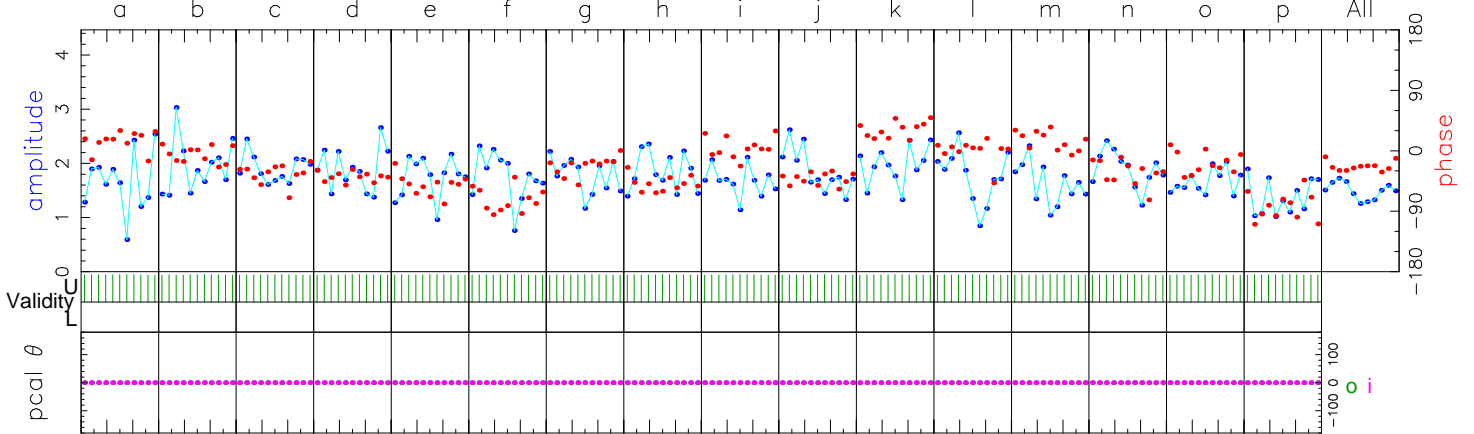


Fringe quality 7

SNR 54.3  
Int time 177.917  
Amp 1.489  
Phase -23.4  
PFD 0.0e+00  
Delays (us)  
SBD -0.001183  
MBD 0.015187  
Fringe rate (Hz) 0.024046  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053727  
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

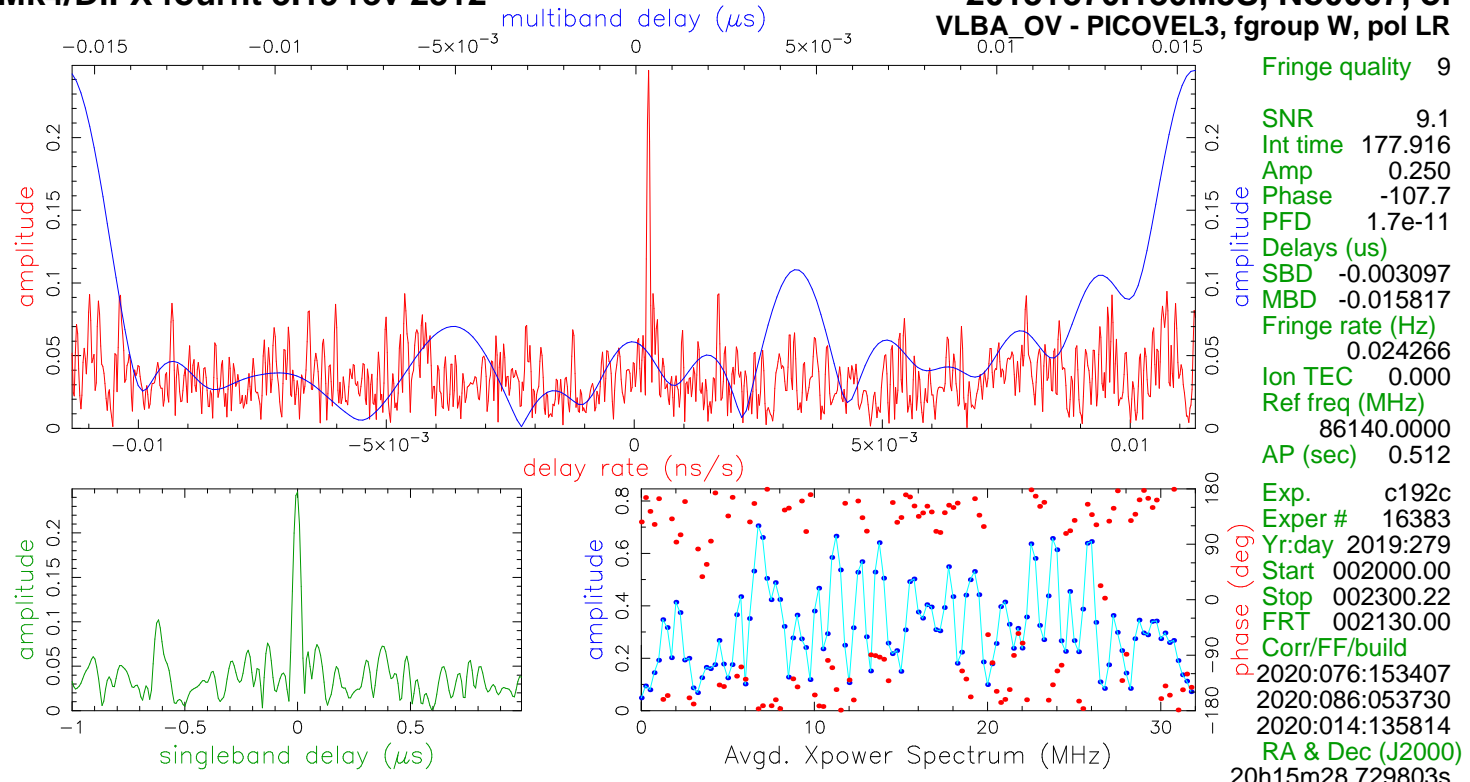


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	15.5	-6.3	-33.6	-38.3	-52.3	-75.5	-22.9	-49.3	5.2	-42.1	31.6	0.2	14.7	-32.3	-17.9	-82.0		Phase	-23.4
o	1.6	1.9	1.9	1.9	1.7	1.7	1.7	1.8	1.6	1.8	1.9	1.7	1.6	1.8	1.6	1.3		Ampl.	1.7
i	128.2	128.7	128.7	128.6	128.6	128.5	128.8	128.8	128.4	128.4	128.4	128.9	128.6	128.5	128.8	127.2		Sbd box	128.8
o	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Mani PC	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	5.87496701545E+03			Apriori delay (usec)			5.87498307809E+03			Resid mbdelay (usec)			1.51874E-02			+/- 2.0E-05			
Sband delay (usec)	5.87498189509E+03			Apriori clock (usec)			1.7219307E+01			Resid sbdelay (usec)			-1.18300E-03			+/- 3.2E-04			
Phase delay (usec)	5.87498307734E+03			Apriori clockrate (us/s)			3.5398100E-07			Resid phdelay (usec)			-7.54038E-07			+/- 6.8E-08			
Delay rate (us/s)	1.60656033648E+00			Apriori rate (us/s)			1.60656005733E+00			Resid rate (us/s)			2.79150E-07			+/- 6.5E-10			
Total phase (deg)	101.4			Apriori accel (us/s/s)			-3.10023287722E-05			Resid phase (deg)			-23.4			+/- 2.1			

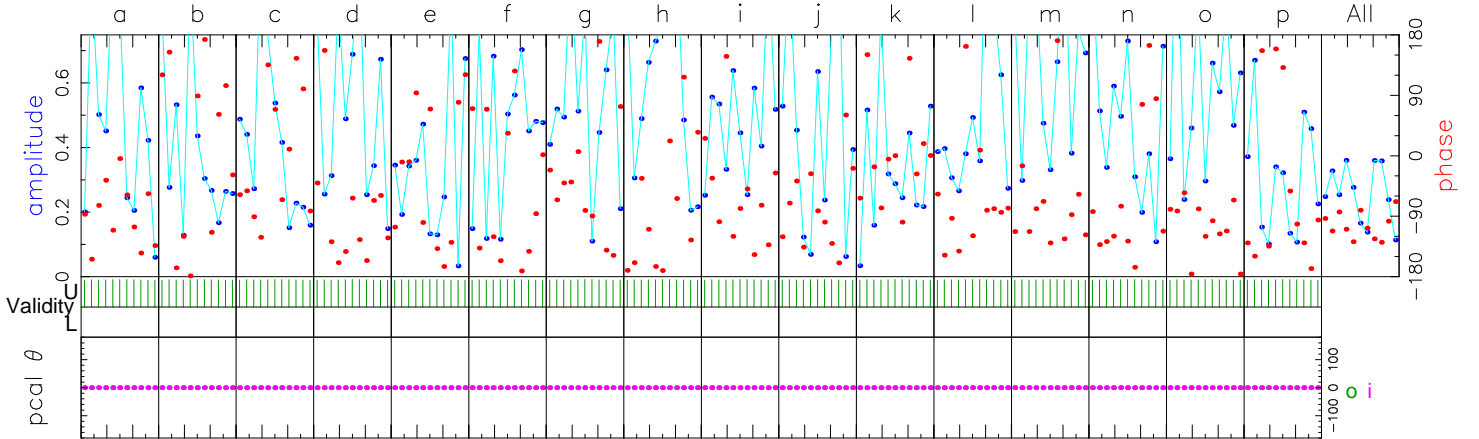
ph/seg (deg) 6.8 3.5 Theor. Amplitude 1.489 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 10.1 6.1 Search (1024X64) 1.435 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.9 4.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 19.0 7.4 Inc. seg. avg. 1.494 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 o: az 76.6 el 56.1 pa -76.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11582.094 -1768.149 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/oi..130M5S Output file: /Exps/c192c/v2/1234/No0067/oi.W.339.130M5S simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, oi  
VLBA\_OV - PICOVEL3, fgroup W, pol LR



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

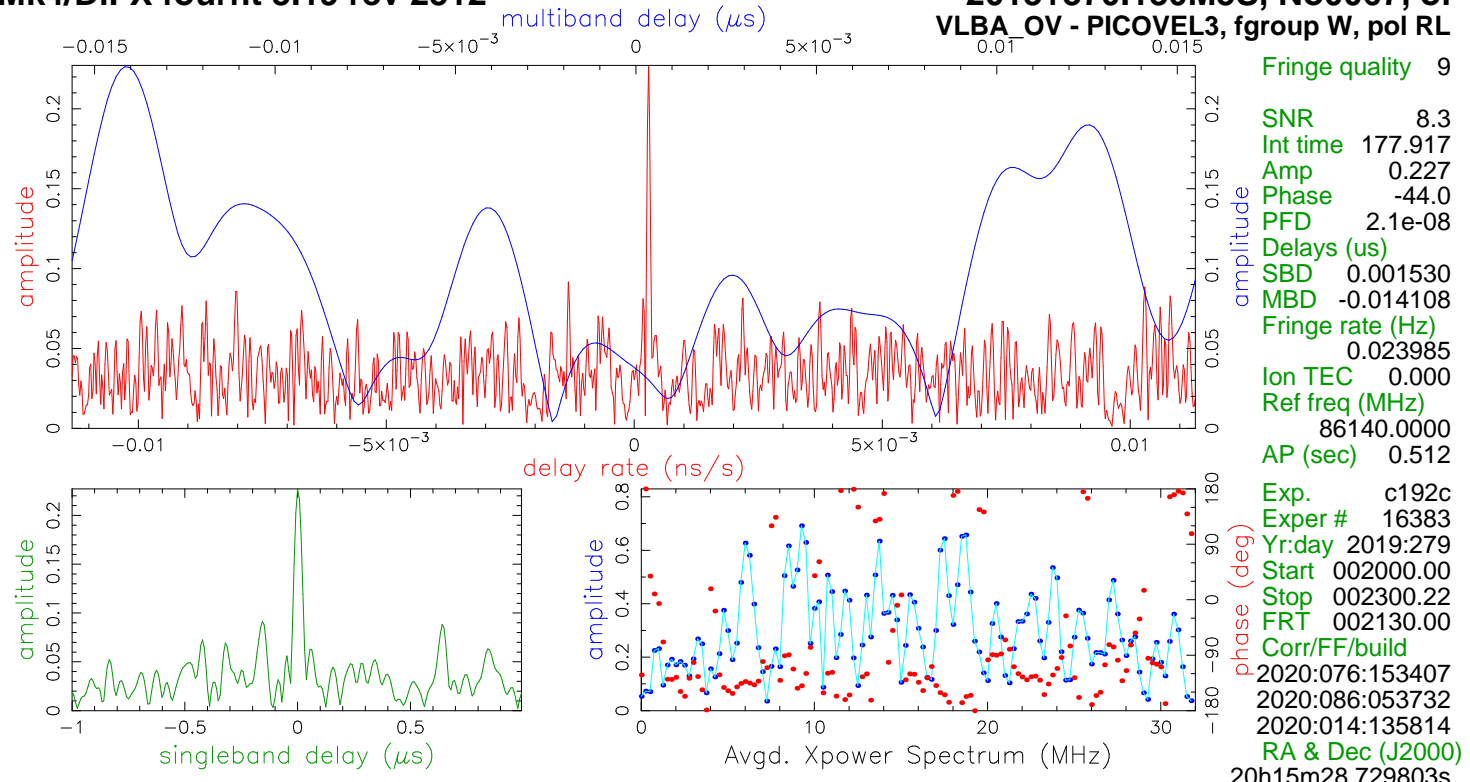


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-90.0	155.4	-102.2	-105.9	-143.6	-143.8	-74.9	-128.4	-95.0	-100.1	-32.8	-91.7	-103.8	-118.8	-102.2	-152.4	Phase	-107.7
	0.3	0.2	0.1	0.4	0.1	0.2	0.3	0.2	0.3	0.3	0.1	0.4	0.5	0.4	0.5	0.2	Ampl.	0.3
	127.2	20.4	210.7	93.1	9.1	212.1	68.9	235.6	127.5	127.6	169.4	128.7	129.2	127.9	128.5	130.2	Sbd box	128.6
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	5.87496726152E+03			Apriori delay (usec)			5.87498307809E+03			Resid mbdelay (usec)			-1.58166E-02			+/- 1.2E-04		
Sband delay (usec)	5.87497998059E+03			Apriori clock (usec)			1.7219307E+01			Resid sbdelay (usec)			-3.09750E-03			+/- 1.9E-03		
Phase delay (usec)	5.87498307462E+03			Apriori clockrate (us/s)			3.5398100E-07			Resid phdelay (usec)			-3.47391E-06			+/- 4.1E-07		
Delay rate (us/s)	1.60656033903E+00			Apriori rate (us/s)			1.60656005733E+00			Resid rate (us/s)			2.81698E-07			+/- 3.9E-09		
Total phase (deg)	17.1			Apriori accel (us/s/s)			-3.10023287722E-05			Resid phase (deg)			-107.7			+/- 12.6		

ph/seg (deg) 19.8 20.9 Search (1024X64) 0.236 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 34.4 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) 39.7 25.2 Inc. seg. avg. 0.242 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 53.3 43.9 Inc. frq. avg. 0.257 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
o: az 76.6 el 56.1 pa -76.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11582.094 -1768.149 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/oi..130M5S Output file: /Exps/c192c/v2/1234/No0067/oi.W.361.130M5S

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M5S, No0067, oi  
VLBA\_OV - PICOVEL3, fgroup W, pol RL



Fringe quality 9

SNR 8.3

Int time 177.917

Amp 0.227

Phase -44.0

PFD 2.1e-08

Delays (us)

SBD 0.001530

MBD -0.014108

Fringe rate (Hz)

0.023985

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 002000.00

Stop 002300.22

FRT 002130.00

Corr/FF/build

2020:076:153407

2020:086:053732

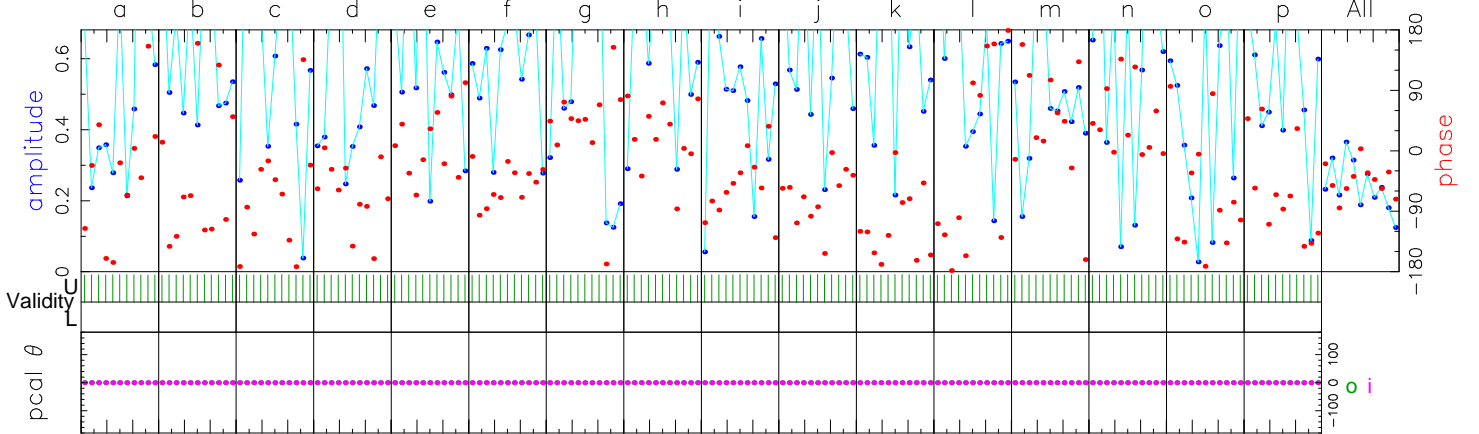
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-39.2	-103.3	-81.3	-55.2	-2.1	-48.5	44.3	24.8	-58.0	-60.9	-122.1	-154.8	44.1	23.8	-127.1	-59.1		Phase	-44.0				
	0.2	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.6	0.5	0.4	0.3	0.6	0.3	0.3		Ampl.	0.4				
	68.1	130.7	226.9	129.8	129.4	128.9	128.0	128.7	129.7	128.0	128.7	128.4	127.0	128.9	169.8	251.1		Sbd box	129.2				
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
oi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			5.87500021989E+03															Apriori delay (usec)	5.87498307809E+03	Resid mbdelay (usec)	-1.41082E-02	+/-	1.3E-04
Sband delay (usec)			5.87498460809E+03															Apriori clock (usec)	1.7219307E+01	Resid sbdelay (usec)	1.53000E-03	+/-	2.1E-03
Phase delay (usec)			5.87498307667E+03															Apriori clockrate (us/s)	3.5398100E-07	Resid phdelay (usec)	-1.42041E-06	+/-	4.5E-07
Delay rate (us/s)			1.60656033577E+00															Apriori rate (us/s)	1.60656005733E+00	Resid rate (us/s)	2.78438E-07	+/-	4.3E-09
Total phase (deg)				80.8														Apriori accel (us/s/s)	-3.10023287722E-05	Resid phase (deg)	-44.0	+/-	13.8

ph/seg (deg) 23.2 22.9 Search (1024X64) 0.219 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

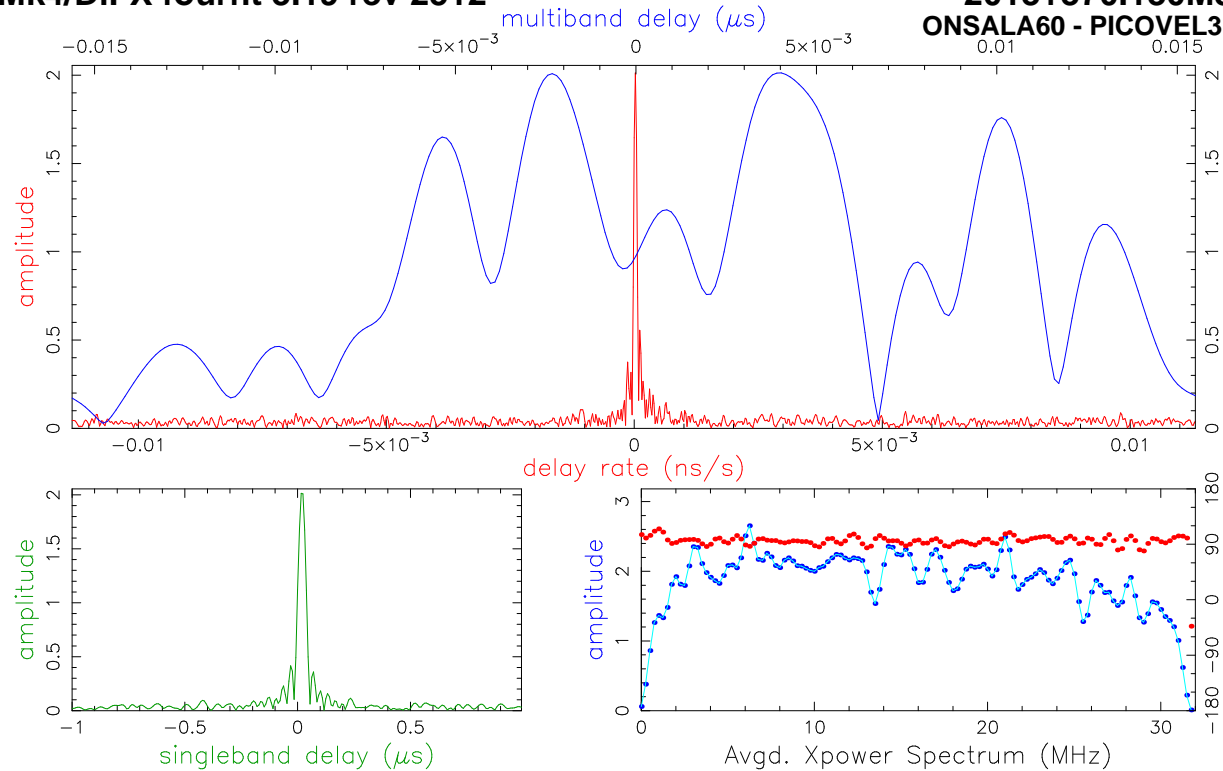
amp/seg (%) 30.4 40.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 64.2 27.7 Inc. seg. avg. 0.225 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 98.9 48.3 Inc. frq. avg. 0.375 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

o: az 76.6 el 56.1 pa -76.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -11582.094 -1768.149 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/oi..130M5S Output file: /Exps/c192c/v2/1234/No0067/oi.W.377.130M5S

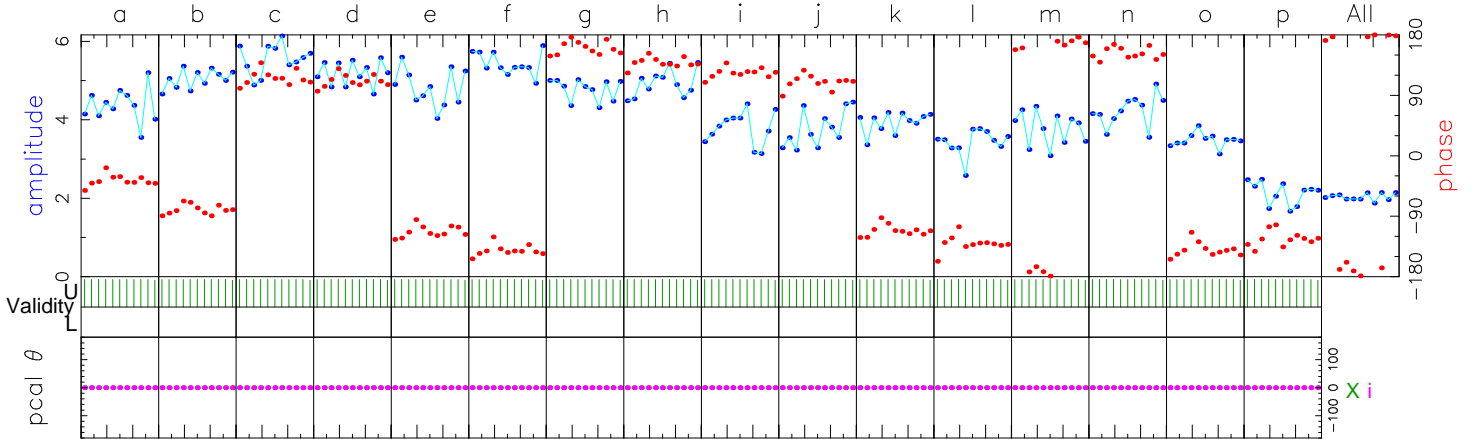


Fringe quality 5

SNR 75.4  
 Int time 179.778  
 Amp 2.056  
 Phase -176.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.019434  
 MBD 0.003977  
 Fringe rate (Hz)  
 0.002627  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

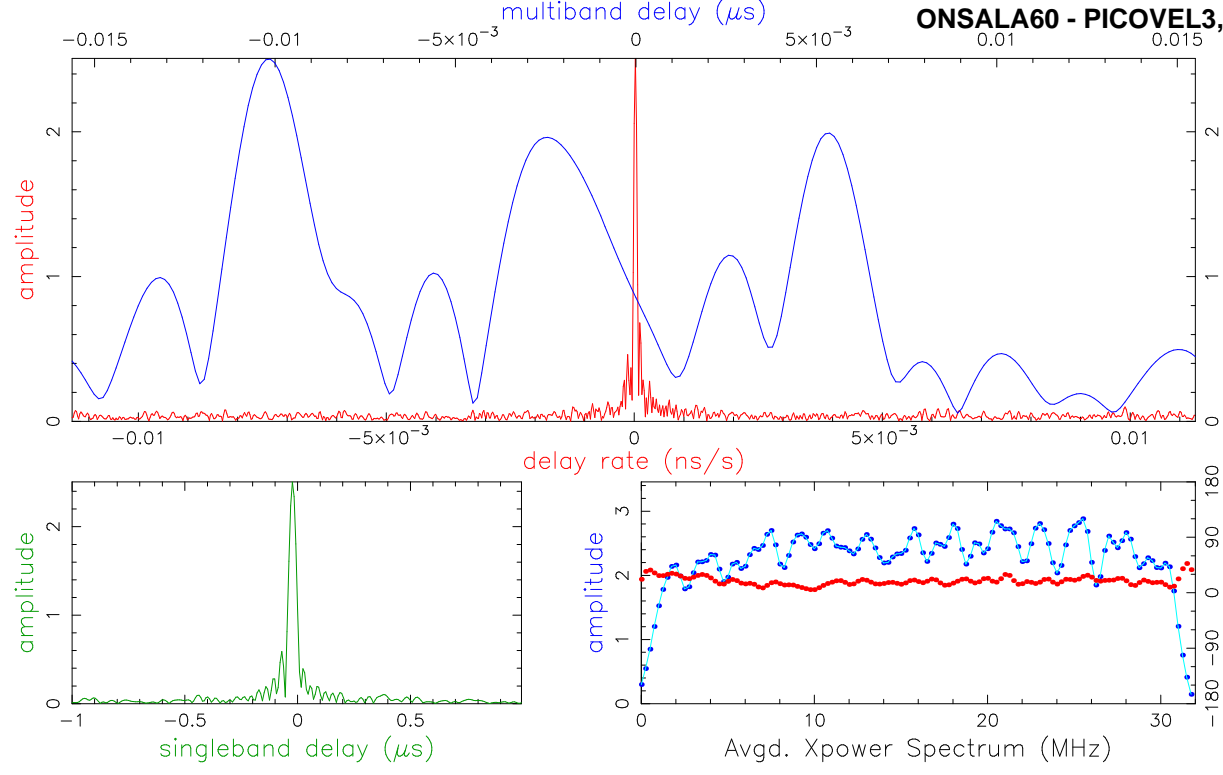
Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 002000.00  
 Stop 002300.22  
 FRT 002130.00  
 Corr/FF/build  
 2020:076:153407  
 2020:086:053727  
 2020:014:135814  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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



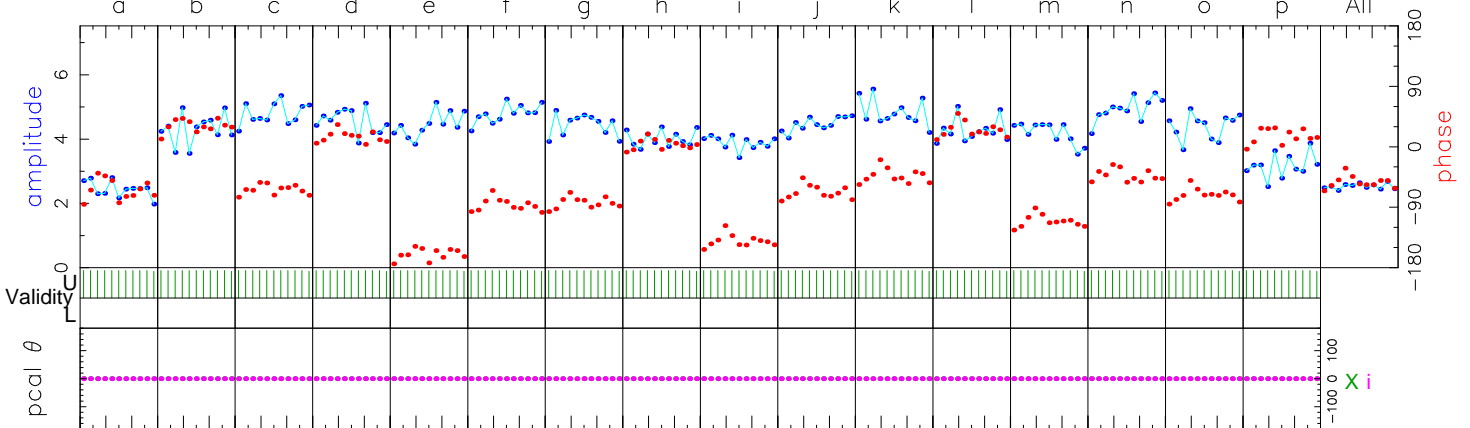
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X: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		
X:ii	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X:i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)			-6.23225019168E+02															
Sband delay (usec)			-6.23209562093E+02															
Phase delay (usec)			-6.23229001783E+02															
Delay rate (us/s)			2.73941565009E-01															
Total phase (deg)					-76.9													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
PCal period (AP's) 5, 5																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		
simultaneous interpolator																		

ph/seg (deg) 8.5 2.5 Search (1024X64) 1.956 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 4.2 4.4 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 69.2 3.0 Inc. seg. avg. 2.034 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 114.4 5.3 Inc. frq. avg. 4.236 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 X: az 290.3 el 32.0 pa 39.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1952.606 2888.530 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Xi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Xi.W.337.130M5S



Fringe quality 5  
SNR 91.9  
Int time 179.778  
Amp 2.507  
Phase -52.5  
PFD 0.0e+00  
Delays (us)  
SBD -0.022488  
MBD -0.010170  
Fringe rate (Hz) 0.002671  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build  
2020:076:153407  
2020:086:053730  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

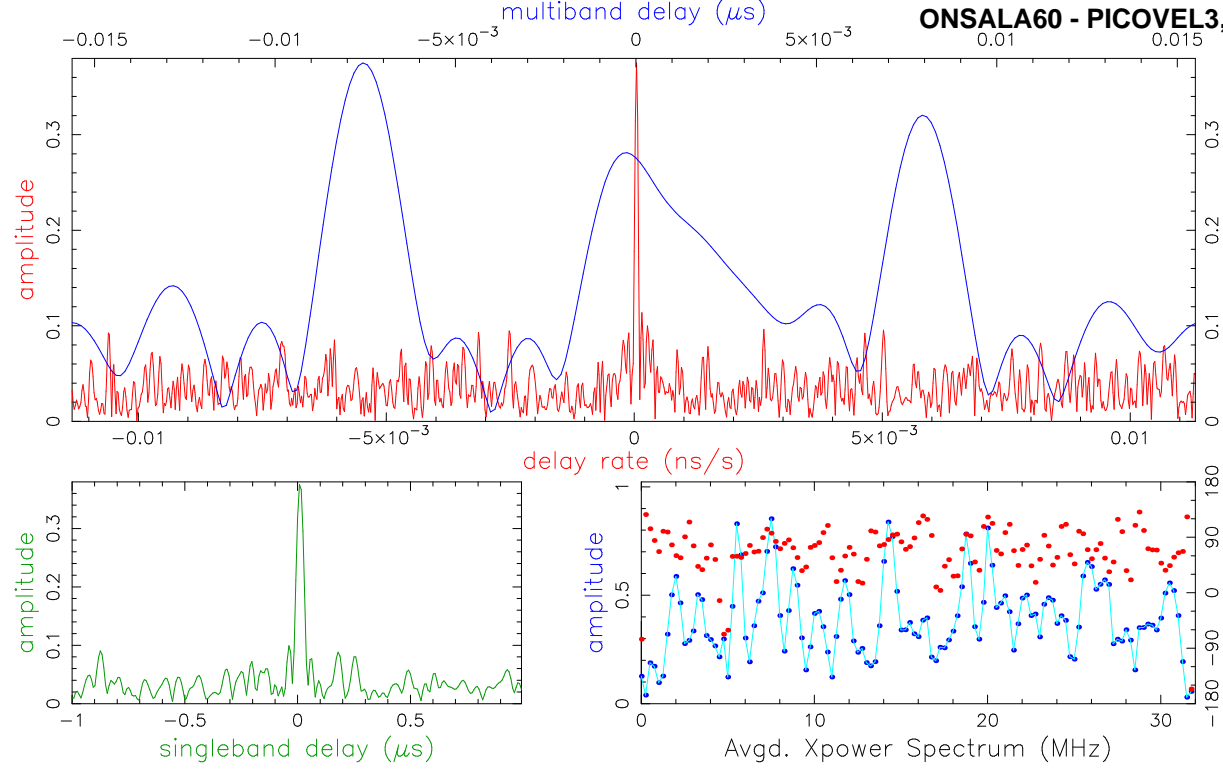
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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	
	-63.7	31.2	-63.6	14.9	-159.8	-86.3	-83.2	3.6	-140.1	-67.5	-43.3	25.7	-110.5	-42.5	-71.2	16.1		Phase	-52.5
	2.4	4.3	4.8	4.5	4.4	4.7	4.4	4.0	3.8	4.4	4.8	4.2	4.1	4.9	4.3	3.1		Ampl.	4.2
	127.6	126.8	126.7	126.8	126.5	126.4	126.8	126.7	126.8	126.7	126.6	126.7	126.8	126.4	127.0	126.5		Sbd box	126.1
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	
X	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	
X: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	
X: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	
X	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	
X	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)			-6.23239166481E+02					Apriori delay (usec)		-6.23228996093E+02				Resid mbdelay (usec)		-1.01704E-02		+/-	1.2E-05
Sband delay (usec)			-6.23251483593E+02					Apriori clock (usec)		3.2964855E+01				Resid sbdelay (usec)		-2.24875E-02		+/-	1.9E-04
Phase delay (usec)			-6.23228997786E+02					Apriori clockrate (us/s)		8.8100003E-07				Resid phdelay (usec)		-1.69311E-06		+/-	4.0E-08
Delay rate (us/s)			2.73941565519E-01					Apriori rate (us/s)		2.73941534507E-01				Resid rate (us/s)		3.10121E-08		+/-	3.9E-10
Total phase (deg)								Apriori accel (us/s/s)		1.98596876569E-05				Resid phase (deg)		-52.5		+/-	1.2

ph/seg (deg) 8.7 2.1 Search (1024X64) 2.421 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 3.4 3.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 60.4 2.5 Inc. seg. avg. 2.532 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 71.9 4.4 Inc. frq. avg. 4.193 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
X: az 290.3 el 32.0 pa 39.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1952.606 2888.530 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Xi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Xi.W.365.130M5S



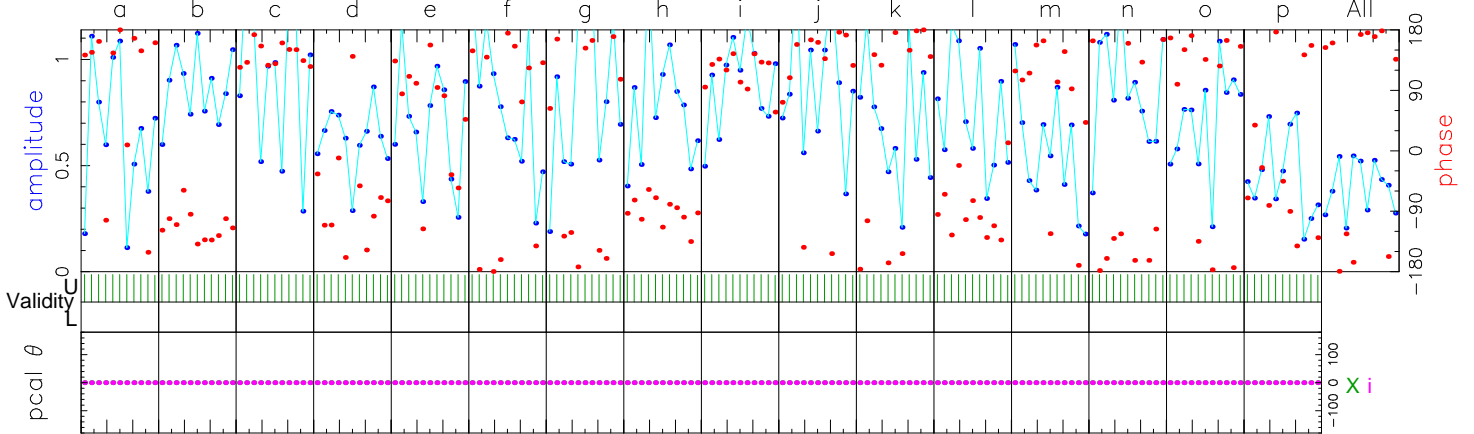


Fringe quality 9

SNR 13.9  
Int time 179.778  
Amp 0.380  
Phase 177.9  
PFD 1.2e-35  
Delays (us)  
SBD 0.010735  
MBD -0.007555  
Fringe rate (Hz) 0.003267  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 002000.00  
Stop 002300.22  
FRT 002130.00  
Corr/FF/build 2020:076:153407  
2020:086:053733  
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					
	165.8	-112.2	141.7	-90.8	94.6	155.1	174.9	-86.1	117.2	157.1	175.2	-91.6	127.4	-166.3	156.4	-94.0		Phase 177.9					
	0.5	0.8	0.9	0.4	0.4	0.7	0.7	0.8	0.7	0.8	0.7	0.6	0.4	0.7	0.6	0.2		Ampl. 0.6					
	131.6	131.3	130.7	130.3	130.9	130.7	131.2	131.2	130.2	130.7	130.5	130.1	130.4	131.4	130.6	66.8		Sbd box 130.4					
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
Xi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
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)			-6.23205301306E+02															Apriori delay (usec)	-6.23228996093E+02	Resid mbdelay (usec)	-7.55521E-03	+/-	7.7E-05
Sband delay (usec)			-6.23218261093E+02															Apriori clock (usec)	3.2964855E+01	Resid sbdelay (usec)	1.07350E-02	+/-	1.2E-03
Phase delay (usec)			-6.23228990357E+02															Apriori clockrate (us/s)	8.8100003E-07	Resid phdelay (usec)	5.73595E-06	+/-	2.7E-07
Delay rate (us/s)			2.73941572436E-01															Apriori rate (us/s)	2.73941534507E-01	Resid rate (us/s)	3.79291E-08	+/-	2.5E-09
Total phase (deg)					-82.6													Apriori accel (us/s/s)	1.98596876569E-05	Resid phase (deg)	177.9	+/-	8.2

ph/seg (deg) 25.2 13.6  
amp/seg (%) 31.8 23.8  
ph/frq (deg) 62.5 16.5  
amp/frq (%) 77.0 28.7

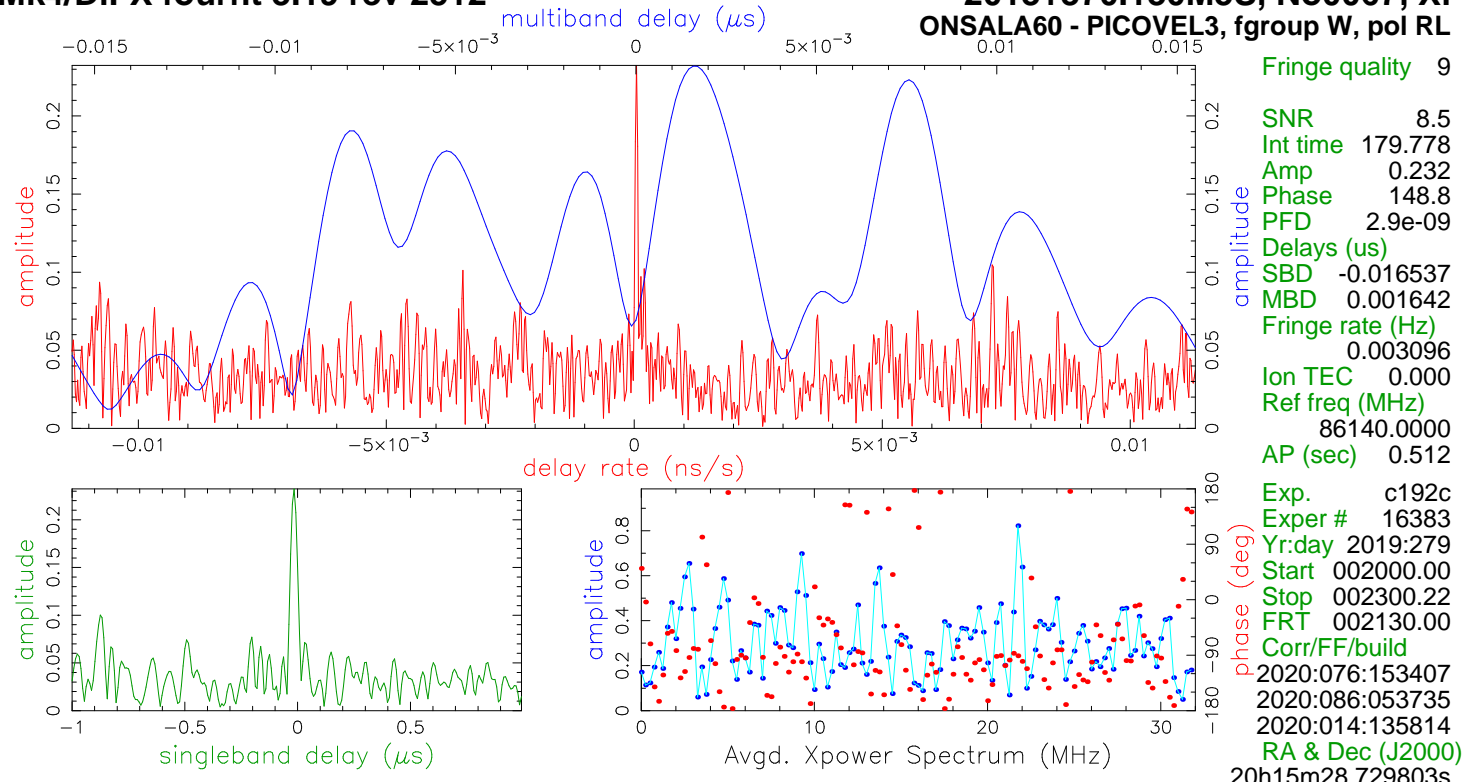
RMS Theor. Amplitude 0.380 +/- 0.027  
Search (1024X64) 0.362  
Interp. 0.000  
Inc. seg. avg. 0.389  
Inc. frq. avg. 0.595

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

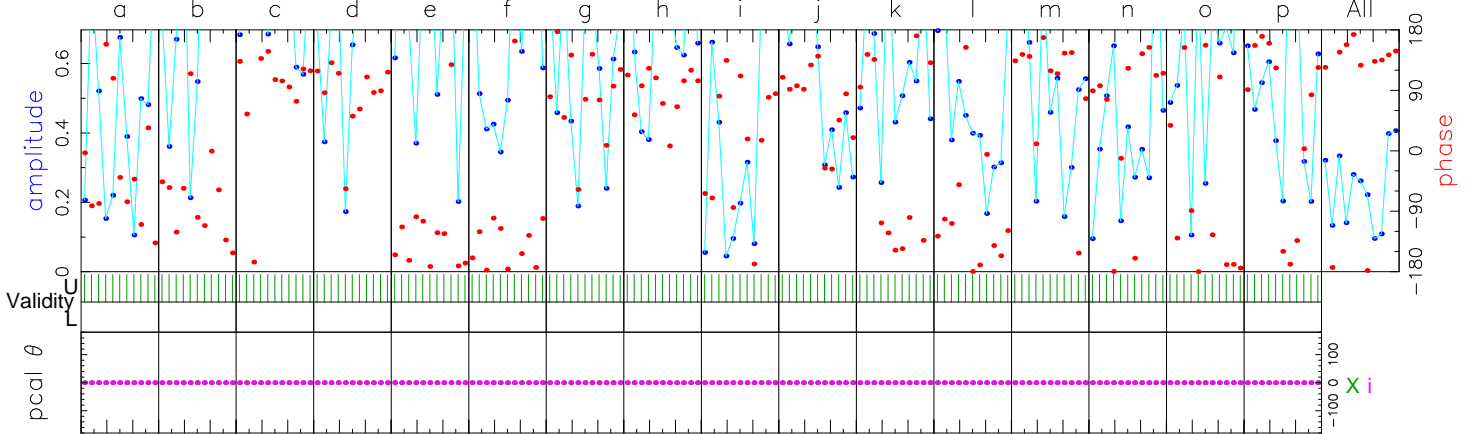
sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

X: az 290.3 el 32.0 pa 39.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1952.606 2888.530 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Xi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Xi.W.383.130M5S



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
	-80.4	-87.1	114.1	97.6	-146.6	-152.8	96.4	89.9	54.7	94.6	-166.2	-127.2	138.7	125.0	-178.4	161.5	Phase	148.8
	0.3	0.5	0.7	0.7	0.6	0.6	0.4	0.7	0.2	0.5	0.4	0.3	0.5	0.3	0.4	0.3	Ampl.	0.4
	25.2	127.7	127.5	126.6	126.8	127.4	126.6	127.3	244.0	127.8	126.3	234.4	127.6	128.3	127.5	125.9	Sbd box	126.9
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Xi	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
Xi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) -6.23258604431E+02 Apriori delay (usec) -6.23228996093E+02 Resid mbdelay (usec) 1.64166E-03 +/- 1.3E-04

Sband delay (usec) -6.23245532593E+02 Apriori clock (usec) 3.2964855E+01 Resid sbdelay (usec) -1.65365E-02 +/- 2.0E-03

Phase delay (usec) -6.23228991295E+02 Apriori clockrate (us/s) 8.8100003E-07 Resid phdelay (usec) 4.79835E-06 +/- 4.3E-07

Delay rate (us/s) 2.73941570452E-01 Apriori rate (us/s) 2.73941534507E-01 Resid rate (us/s) 3.59451E-08 +/- 4.2E-09

Total phase (deg) -111.6 Apriori accel (us/s/s) 1.98596876569E-05 Resid phase (deg) 148.8 +/- 13.4

RMS Theor. Amplitude 0.232 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 20.7 22.3 Search (1024X64) 0.221 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

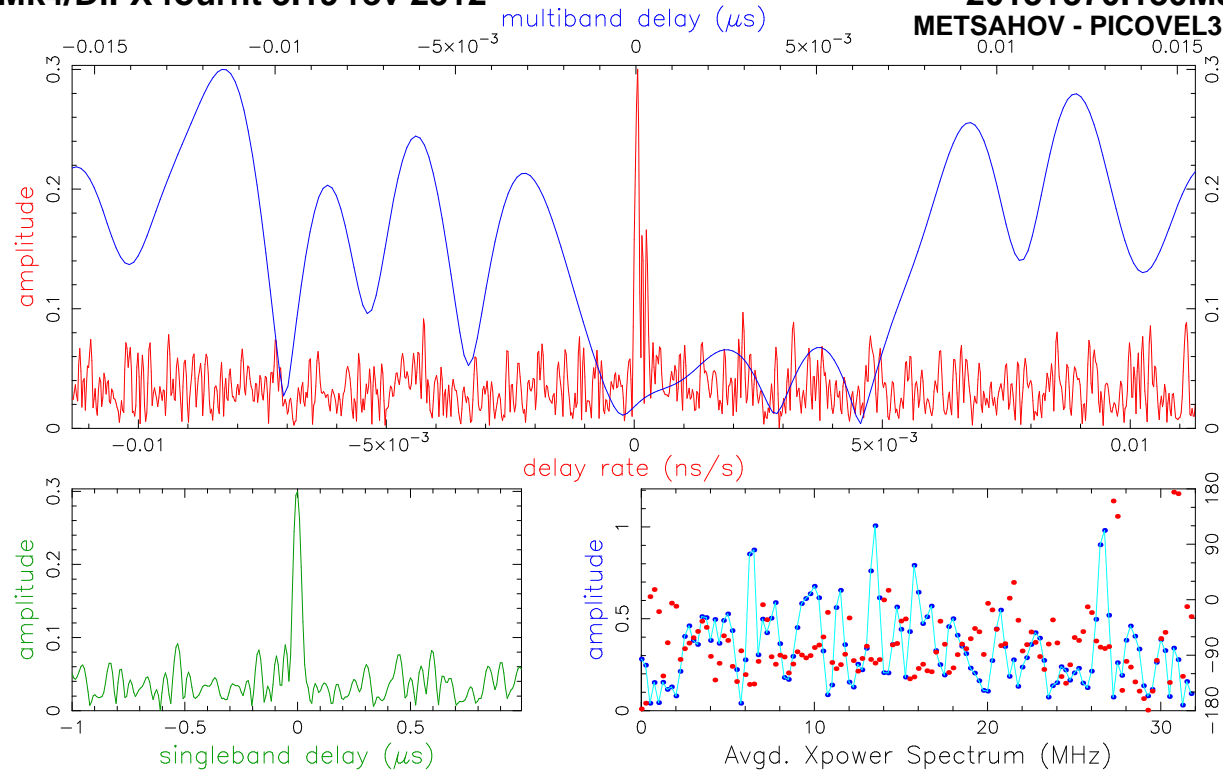
amp/seg (%) 46.8 38.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 72.2 26.9 Inc. seg. avg. 0.228 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 117.7 46.9 Inc. frq. avg. 0.419 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

X: az 290.3 el 32.0 pa 39.4 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -1952.606 2888.530 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Xi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Xi.W.398.130M5S

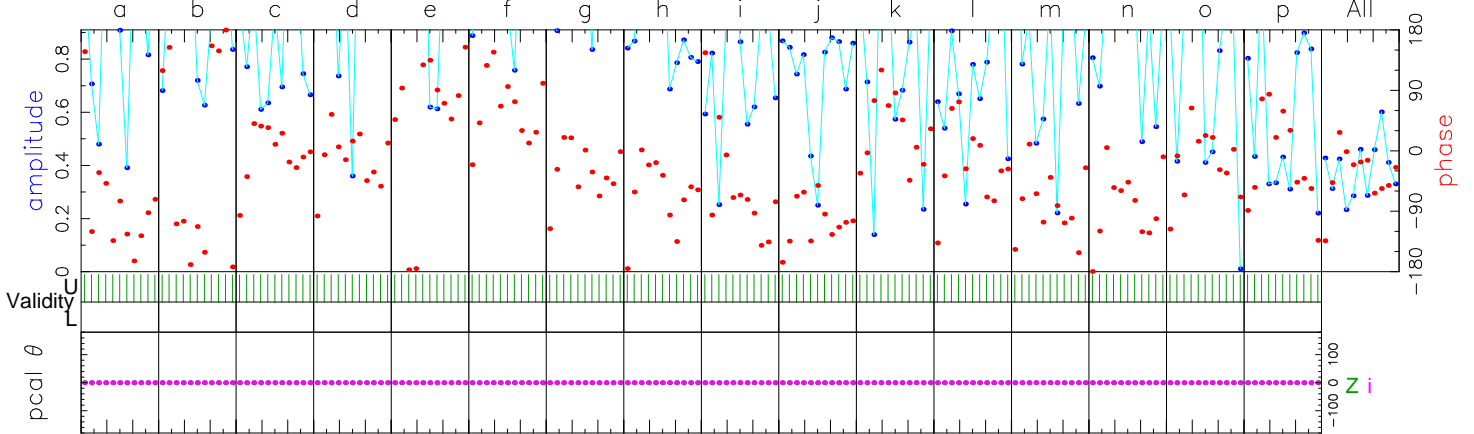


Fringe quality 9

SNR 11.1  
 Int time 179.816  
 Amp 0.303  
 Phase -37.7  
 PFD 2.2e-20  
 Delays (us)  
 SBD -0.002938  
 MBD -0.011416  
 Fringe rate (Hz)  
 0.006433  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 002000.00  
 Stop 002300.22  
 FRT 002130.00  
 Corr/FF/build  
 2020:076:153407  
 2020:086:053728  
 2020:014:135814  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

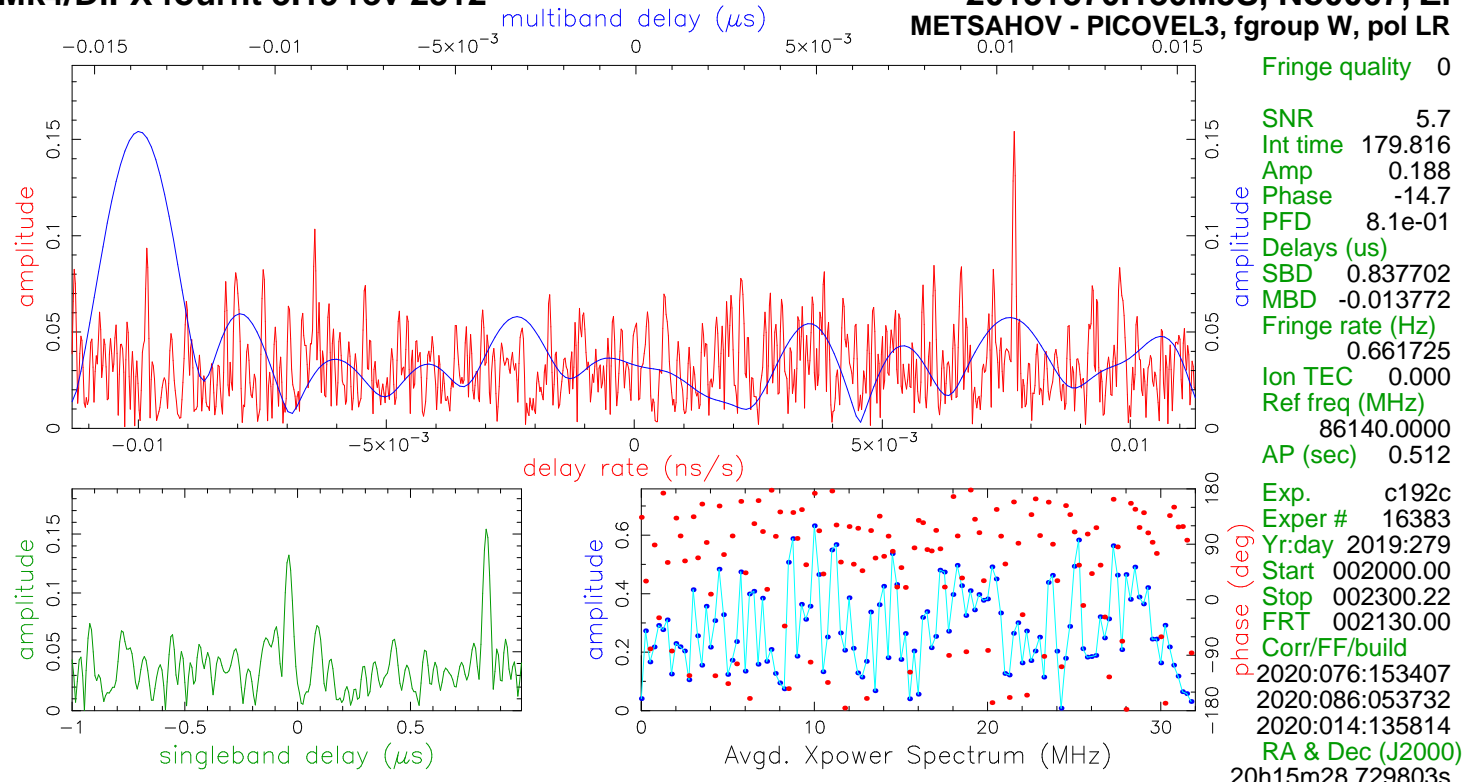
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



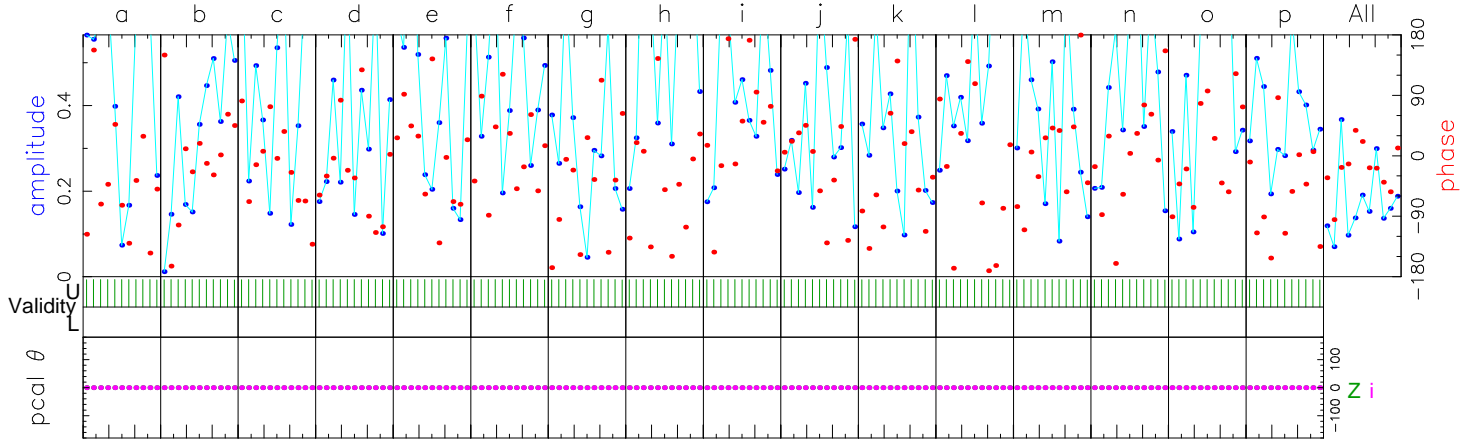
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	128.5	128.6
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Zi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
Zi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
Z	1000	1000	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	1000	1000
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)			-2.18349112577E+03															
Sband delay (usec)			-2.18348264827E+03															
Phase delay (usec)			-2.18347971148E+03															
Delay rate (us/s)			3.34949154930E-01															
Total phase (deg)																		
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) 39.9 17.1 Search (1024X64) 0.290 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 42.9 29.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 72.3 20.6 Inc. seg. avg. 0.369 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 125.0 35.9 Inc. frq. avg. 0.604 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Z: az 298.0 el 27.3 pa 33.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -2383.716 3661.298 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Zi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Zi.W.348.130M5S



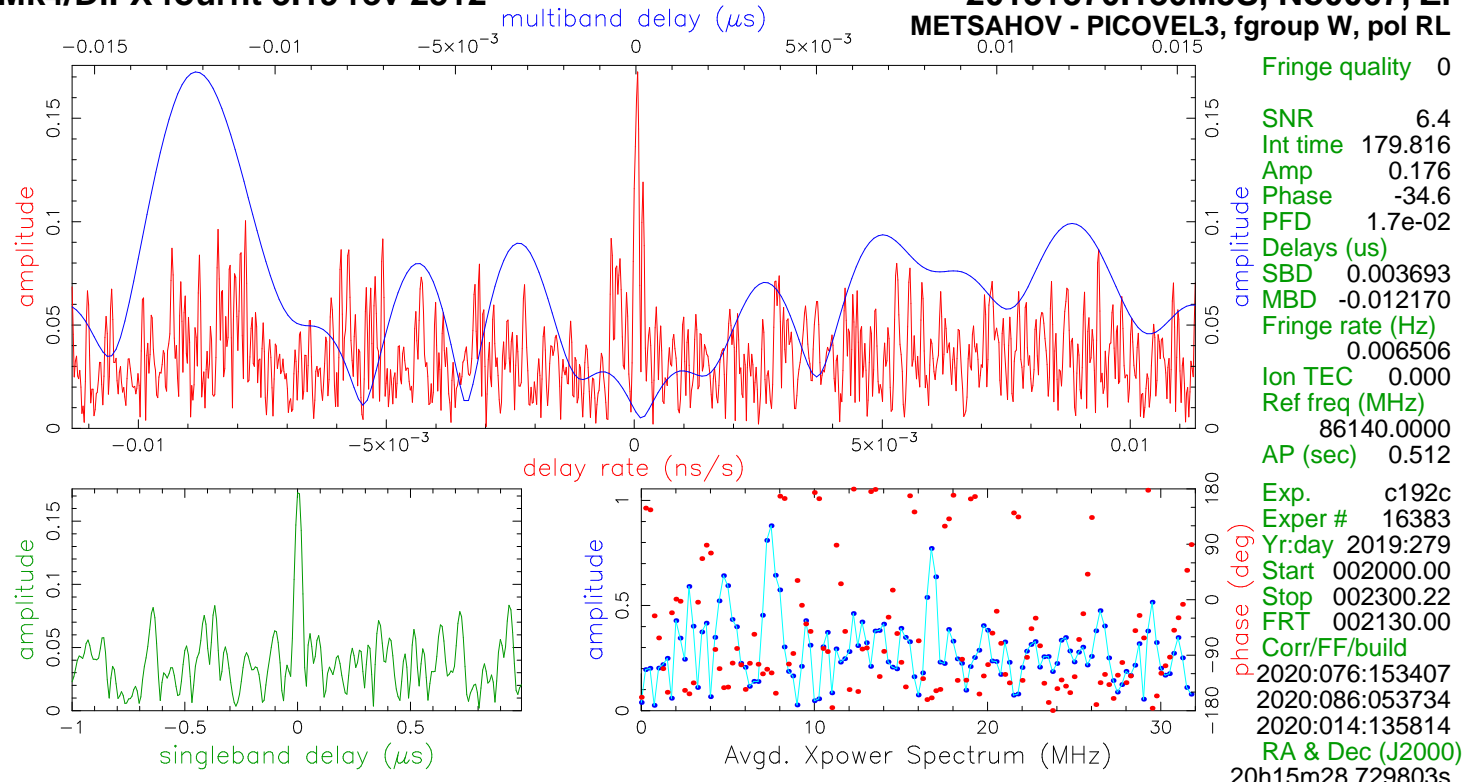


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

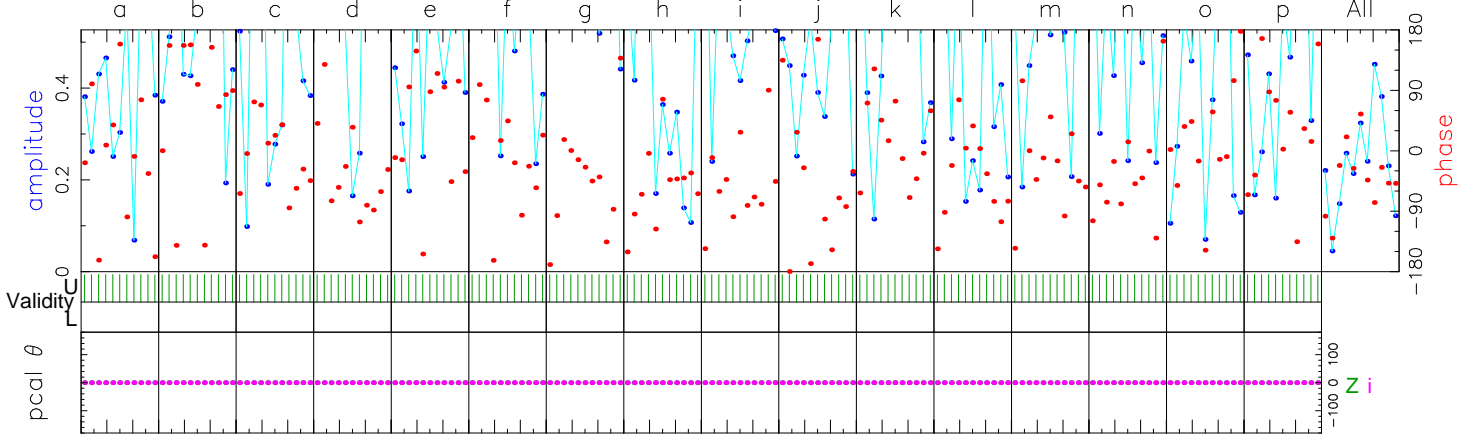


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-67.9	5.1	-11.4	-38.1	28.2	-5.2	-62.3	-41.6	51.4	-31.9	-37.5	-126.4	-29.0	21.7	7.5	-63.7	Phase	-14.7				
	0.2	0.3	0.3	0.2	0.3	0.3	0.1	0.3	0.2	0.2	0.2	0.0	0.2	0.3	0.3	0.2	Ampl.	0.2				
	251.2	67.6	205.5	211.8	48.1	159.3	136.6	143.6	139.9	120.7	175.6	112.8	231.3	66.3	60.0	78.9	Sbd box	236.2				
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					
Z	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					
Zi	0:0	0:0	0:0	0:0	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					
Zi	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
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)			-2.18264973232E+03														Apriori delay (usec)	-2.18347971027E+03	Resid mbdelay (usec)	-1.37721E-02	+/-	1.9E-04
Sband delay (usec)			-2.18264200827E+03														Apriori clock (usec)	7.3370296E-01	Resid sbdelay (usec)	8.37702E-01	+/-	3.0E-03
Phase delay (usec)			-2.18347971074E+03														Apriori clockrate (us/s)	3.6929281E-07	Resid phdelay (usec)	-4.73714E-07	+/-	6.5E-07
Delay rate (us/s)			3.34956762220E-01														Apriori rate (us/s)	3.34949080246E-01	Resid rate (us/s)	7.68197E-06	+/-	6.3E-09
Total phase (deg)																	Apriori accel (us/s/s)	2.97328200867E-05	Resid phase (deg)	-14.7	+/-	20.2

ph/seg (deg) RMS Theor. Amplitude 0.188 +/- 0.033 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 55.4 58.4 Search (1024X64) 0.150 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 46.9 40.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 47.7 70.5 Inc. seg. avg. 0.181 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 Z: az 298.0 el 27.3 pa 33.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -2383.716 3661.298 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Zi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Zi.W.380.130M5S simultaneous interpolator



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-8.1	136.0	-4.8	-57.8	87.0	25.9	-52.8	-60.0	-69.5	-117.6	2.7	-53.9	-33.0	-63.1	6.7	51.8	Phase	-34.6
	0.1	0.3	0.3	0.5	0.2	0.2	0.4	0.3	0.3	0.2	0.4	0.2	0.4	0.4	0.3	0.1	Ampl.	0.2
	251.2	153.6	68.6	129.6	132.4	18.1	129.3	247.9	128.8	125.5	130.5	54.6	130.1	127.7	127.4	194.9	Sbd box	129.5
UL	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z: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	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	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	

Group delay (usec)(sbd)	-2.18346062981E+03	Apriori delay (usec)	-2.18347971027E+03	Resid mbdelay (usec)	-1.21695E-02	+/-	1.7E-04
Sband delay (usec)	-2.18347601777E+03	Apriori clock (usec)	7.3370296E-01	Resid sbdelay (usec)	3.69250E-03	+/-	2.7E-03
Phase delay (usec)	-2.18347971138E+03	Apriori clockrate (us/s)	3.6929281E-07	Resid phdelay (usec)	-1.11459E-06	+/-	5.7E-07
Delay rate (us/s)	3.34949155774E-01	Apriori rate (us/s)	3.34949080246E-01	Resid rate (us/s)	7.55280E-08	+/-	5.5E-09
Total phase (deg)	-121.8	Apriori accel (us/s/s)	2.97328200867E-05	Resid phase (deg)	-34.6	+/-	17.8

ph/seg (deg)	RMS 49.2	Theor. 29.5	Amplitude Search (1024X64)	0.176 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	72.7	51.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	70.9	35.6	Inc. seg. avg.	0.212	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	83.2	62.1	Inc. frq. avg.	0.231	Sample rate(MSamp/s): 64	dr window (ns/s) -0.016 0.016
					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 128	t_cohere infinite

Z: az 298.0 el 27.3 pa 33.5 i: az 293.8 el 34.2 pa 66.6 u,v (fr/asec) -2383.716 3661.298 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0067/Zi..130M5S Output file: /Exps/c192c/v2/1234/No0067/Zi.W.397.130M5S