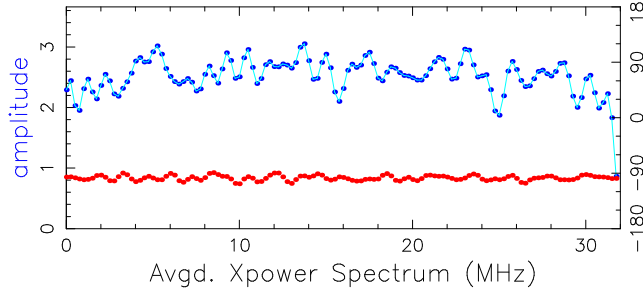
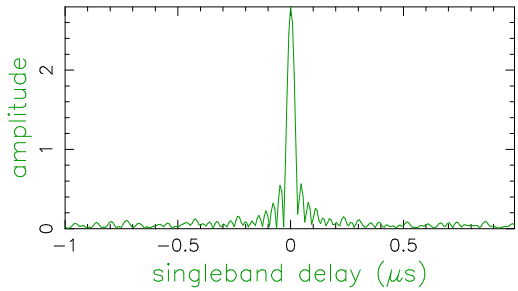


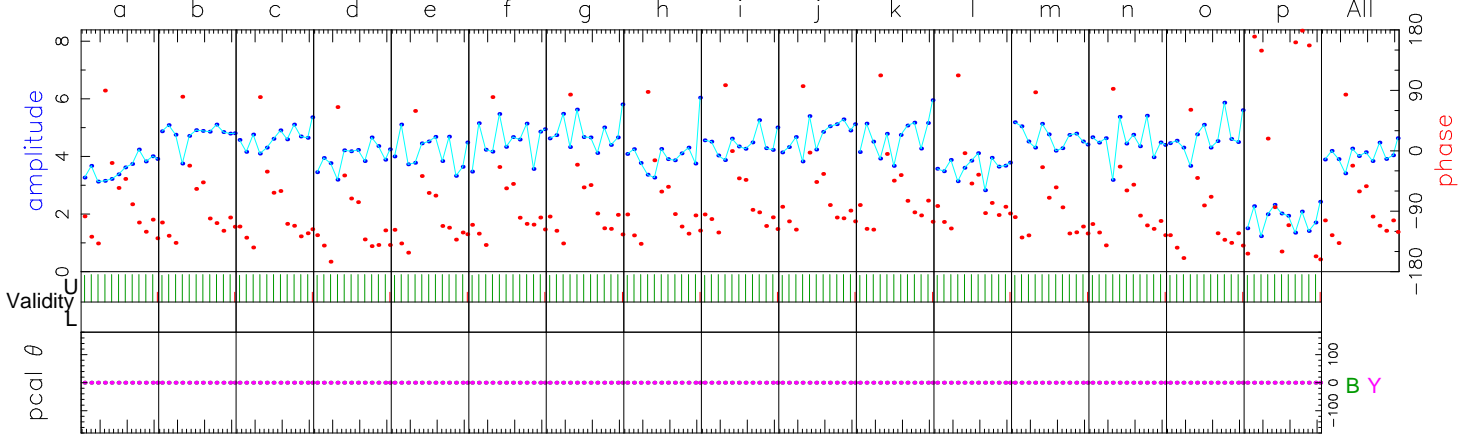
Fringe quality 4

SNR 97.5  
Int time 162.304  
Amp 2.798  
Phase -95.9  
PFD 0.0e+00  
Delays (us)  
SBD 0.000999  
MBD 0.000664  
Fringe rate (Hz) 0.009985  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512



Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build 2020:076:150631  
2020:086:053319  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s  
+37°10'59.514664"

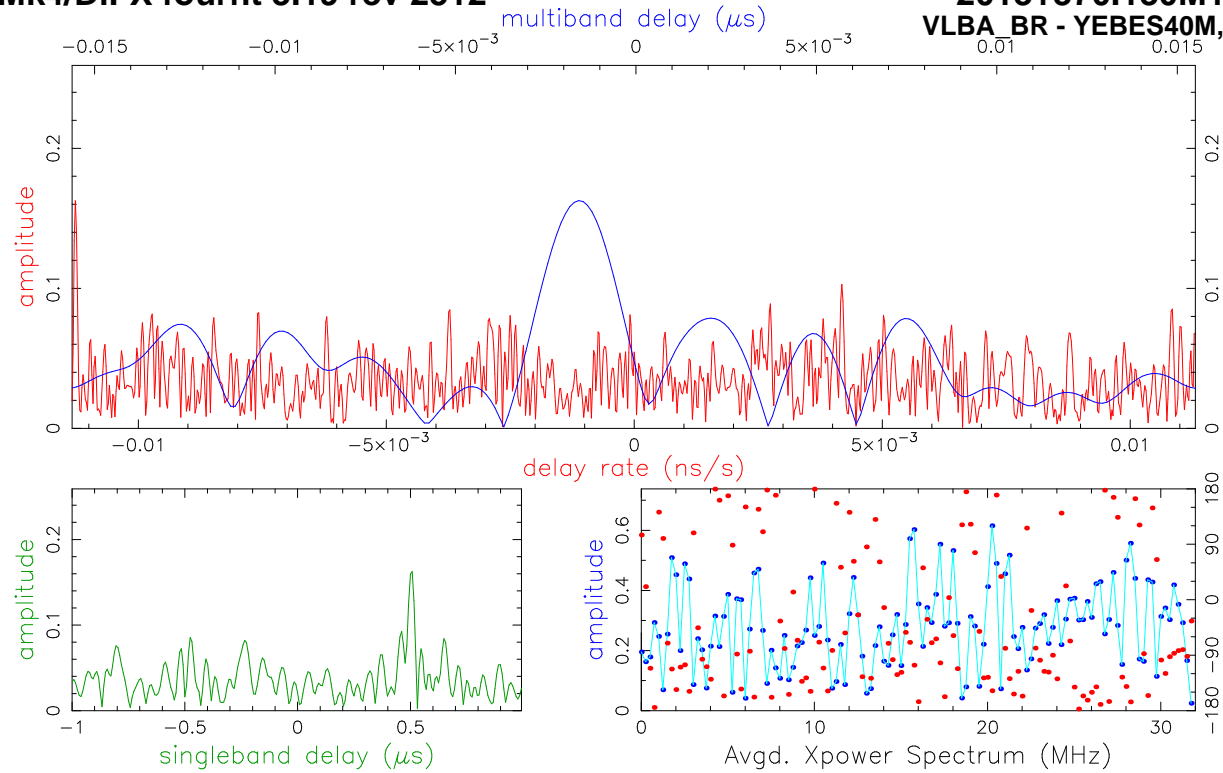
Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	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					
	-93.2	-94.7	-104.1	-117.8	-104.2	-92.0	-92.3	-96.5	-83.1	-78.0	-78.0	-76.4	-97.6	-95.6	-116.2	-161.3		Phase	-95.9				
	2.4	3.3	3.2	2.7	2.8	3.1	3.2	2.8	3.0	3.3	3.3	2.6	3.2	3.2	3.2	1.1		Ampl.	2.9				
	129.0	129.2	129.1	128.7	129.6	129.0	129.2	129.2	129.2	129.2	129.1	129.1	129.0	128.9	128.5	127.8		Sbd box	129.1				
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					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
B: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					
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-1.01437681253E+03															Apriori delay (usec)	-1.01437747697E+03	Resid mbdelay (usec)	6.64440E-04	+/-	1.1E-05
Sband delay (usec)			-1.01437647847E+03															Apriori clock (usec)	7.1172419E+00	Resid sbdelay (usec)	9.98500E-04	+/-	1.8E-04
Phase delay (usec)			-1.01437748006E+03															Apriori clockrate (us/s)	-4.2000000E-07	Resid phdelay (usec)	-3.09175E-06	+/-	3.8E-08
Delay rate (us/s)			1.00977115820E-01															Apriori rate (us/s)	1.00976999900E-01	Resid rate (us/s)	1.15920E-07	+/-	4.0E-10
Total phase (deg)																		Apriori accel (us/s/s)	1.37773302189E-05	Resid phase (deg)	-95.9	+/-	1.2

ph/seg (deg) 62.7 2.0 Theor. Amplitude 2.798 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 45.2 3.6 Search (1024X64) 2.734 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 21.6 2.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 19.5 4.1 Inc. seg. avg. 4.029 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 2.895 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 287.8 el 35.4 pa 49.5 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -714.302 1689.108 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/BY..130M17 Output file: /Exps/c192c/v2/1234/No0065/BY.W.106.130M17

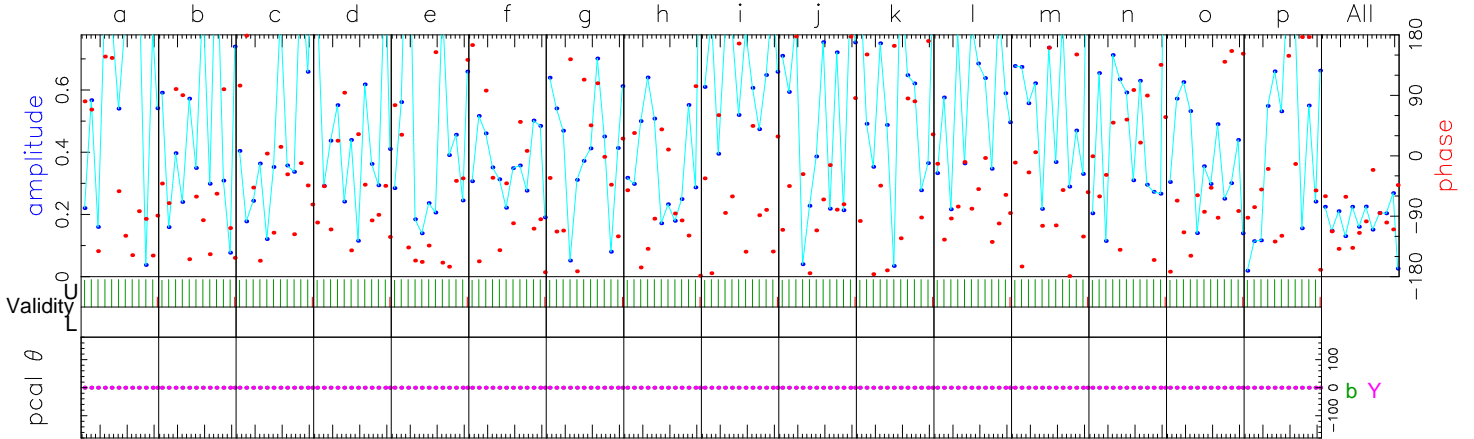


Fringe quality 0

SNR 5.8  
Int time 161.883  
Amp 0.259  
Phase -98.2  
PFD 6.2e-01  
Delays (us)  
SBD 0.504510  
MBD -0.001624  
Fringe rate (Hz)  
-0.971378  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053320  
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

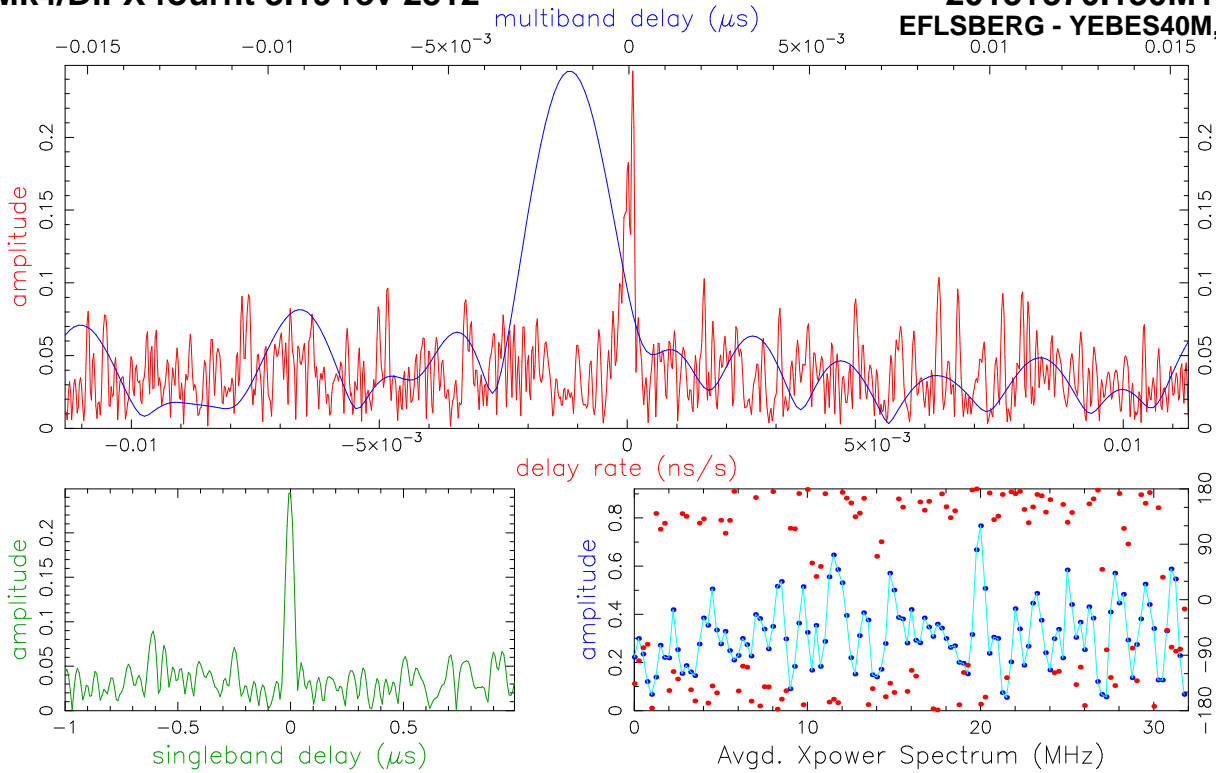


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-148.7	-88.5	-36.0	-68.5	-145.6	-109.4	-55.5	-120.3	-104.3	-112.4	-145.3	-70.1	-83.9	44.3	-108.8	-124.4		Phase -98.2
	0.4	0.3	0.4	0.5	0.3	0.2	0.1	0.3	0.4	0.4	0.2	0.7	0.3	0.3	0.4	0.2		Ampl. 0.3
	197.2	214.0	104.4	208.2	206.1	176.2	188.2	68.1	252.2	19.3	107.2	193.0	211.0	178.6	246.0	253.5		Sbd box 193.6
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
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
b: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
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	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
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks

Group delay (usec)(sbd) 3.72813817337E+03 Apriori delay (usec) 3.72763979741E+03 Resid mbdelay (usec) -1.62403E-03 +/- 1.9E-04  
 Sband delay (usec) 3.72814430691E+03 Apriori clock (usec) -1.0304679E+01 Resid sbdelay (usec) 5.04510E-01 +/- 3.0E-03  
 Phase delay (usec) 3.72763979424E+03 Apriori clockrate (us/s) -4.6239510E-07 Resid phdelay (usec) -3.16761E-06 +/- 6.4E-07  
 Delay rate (us/s) 1.49242878594E+00 Apriori rate (us/s) 1.49244006268E+00 Resid rate (us/s) -1.12767E-05 +/- 6.8E-09  
 Total phase (deg) -44.8 Apriori accel (us/s/s) -1.33947263513E-05 Resid phase (deg) -98.2 +/- 19.9

RMS Theor. Amplitude 0.259 +/- 0.045 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 34.8 34.4 Search (1024X64) 0.159 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 33.4 60.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 51.2 39.7 Inc. seg. avg. 0.252 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 61.6 69.3 Inc. frq. avg. 0.267 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

b: az 88.3 el 52.8 pa -56.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10746.539 -66.595 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/bY..130M17 Output file: /Exps/c192c/v2/1234/No0065/bY.W.117.130M17

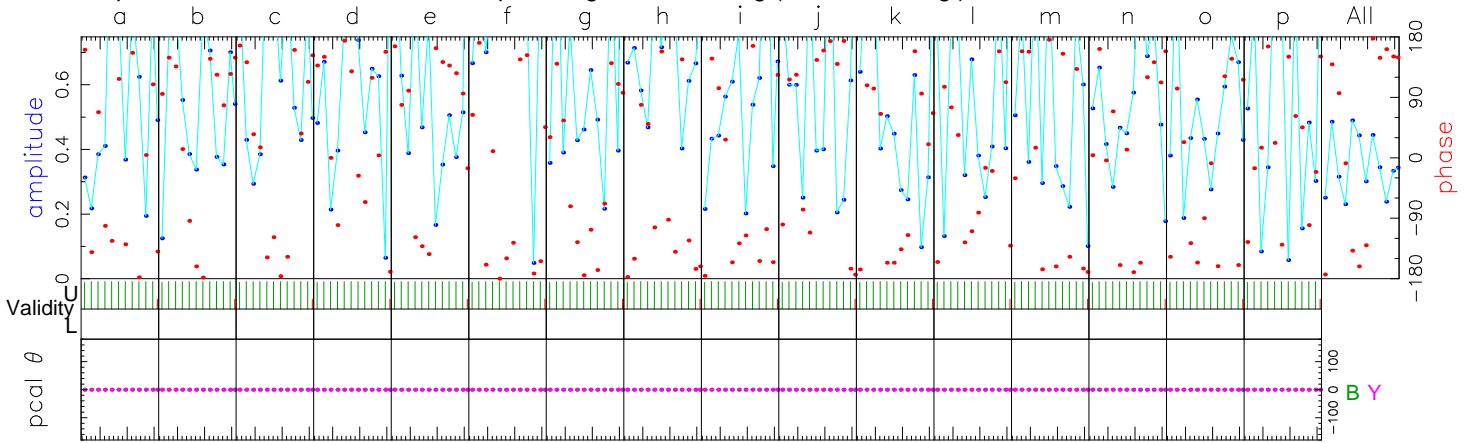


Fringe quality 9

SNR 8.7  
Int time 162.304  
Amp 0.249  
Phase 172.3  
PFD 6.7e-10  
Delays (us)  
SBD -0.003536  
MBD -0.001672  
Fringe rate (Hz) 0.010079  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

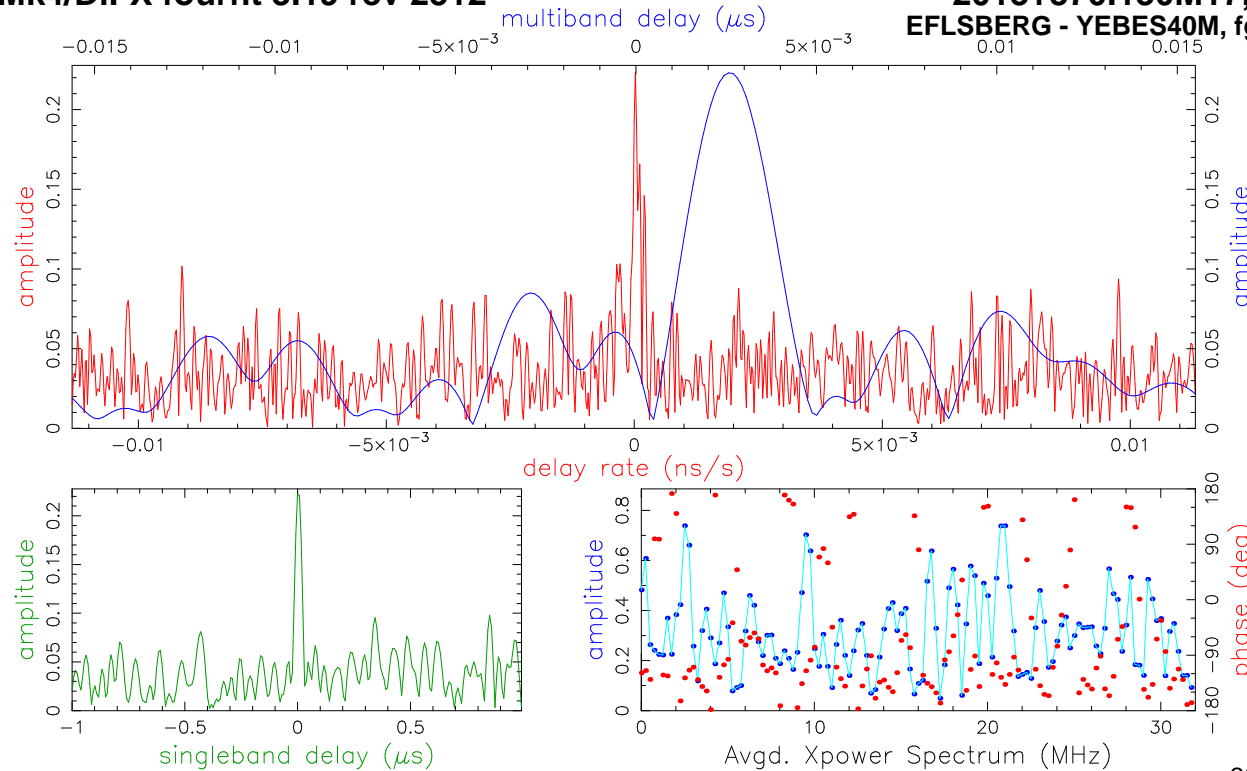
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053321  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



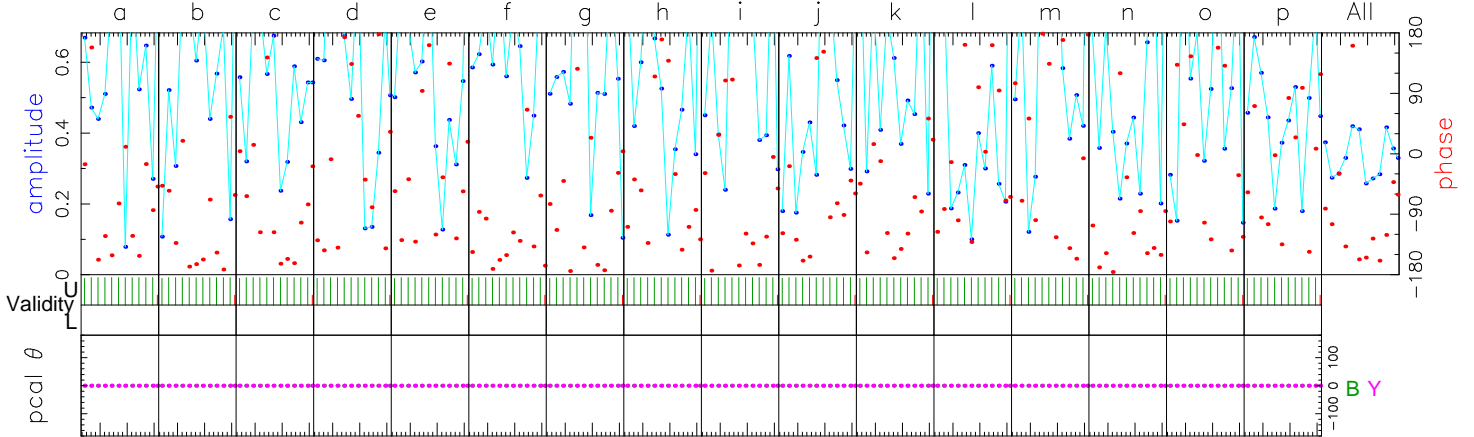
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	172.3	Phase				
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	172.3	Ampl.				
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	128.5	Sbd box				
B: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	128.5	APs used				
B: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	128.5	PC freqs				
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	128.5	PC phase				
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Mani PC				
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		PC amp				
Group delay (usec)(sbd)			-1.01437914878E+03															Resid mbdelay (usec)	-1.67181E-03	+/-	1.2E-04	
Sband delay (usec)			-1.01438101247E+03																Resid sbdelay (usec)	-3.53550E-03	+/-	2.0E-03
Phase delay (usec)			-1.01437747141E+03																Resid phdelay (usec)	5.55583E-06	+/-	4.3E-07
Delay rate (us/s)			1.00977116912E-01																Resid rate (us/s)	1.17011E-07	+/-	4.5E-09
Total phase (deg)				-139.5															Resid phase (deg)	172.3	+/-	13.2

ph/seg (deg) 64.5 22.8 Amplitude 0.249 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 55.4 39.9 Search (1024X64) 0.241 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.5 26.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 41.0 46.0 Inc. seg. avg. 0.327 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.249 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00



Fringe quality 9  
SNR 7.9  
Int time 162.304  
Amp 0.228  
Phase -122.0  
PFD 3.7e-07  
Delays (us)  
SBD 0.003518  
MBD 0.002650  
Fringe rate (Hz) 0.001868  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053323  
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

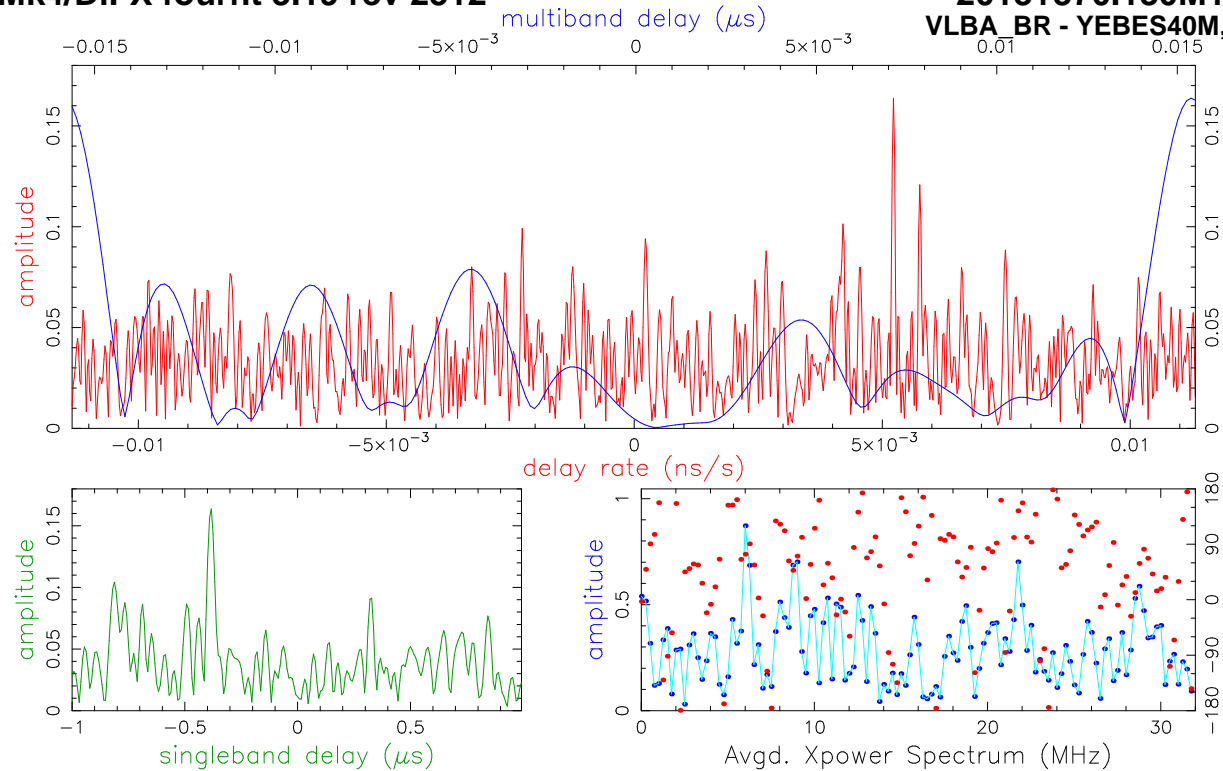


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-104.6	-132.3	-102.2	-147.6	-116.8	-125.7	-130.2	-116.5	-150.1	-115.4	-73.1	-109.6	-163.2	-132.9	178.4	-12.4		Phase	-122.0				
	0.3	0.2	0.2	0.2	0.2	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.0	0.1		Ampl.	0.2				
	54.0	141.9	51.6	22.2	83.4	129.6	252.0	210.3	250.5	12.5	130.6	65.9	183.1	130.1	94.4	83.6		Sbd box	129.5				
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					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
B: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					
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-1.01437482673E+03															Apriori delay (usec)	-1.01437747697E+03	Resid mbdelay (usec)	2.65024E-03	+/-	1.4E-04
Sband delay (usec)			-1.01437395847E+03															Apriori clock (usec)	7.1172419E+00	Resid sbdelay (usec)	3.51850E-03	+/-	2.2E-03
Phase delay (usec)			-1.01437748090E+03															Apriori clockrate (us/s)	-4.2000000E-07	Resid phdelay (usec)	-3.93298E-06	+/-	4.7E-07
Delay rate (us/s)			1.00977021584E-01															Apriori rate (us/s)	1.00976999900E-01	Resid rate (us/s)	2.16833E-08	+/-	5.0E-09
Total phase (deg)																		Apriori accel (us/s/s)	1.37773302189E-05	Resid phase (deg)	-122.0	+/-	14.4

ph/seg (deg) RMS Theor. Amplitude 0.228 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 53.6 43.7 Search (1024X64) 0.221 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 40.0 28.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 49.5 50.4 Inc. seg. avg. 0.305 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 B: az 287.8 el 35.4 pa 49.5 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -714.302 1689.108 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/BY..130M17 Output file: /Exps/c192c/v2/1234/No0065/BY.W.137.130M17 simultaneous interpolator

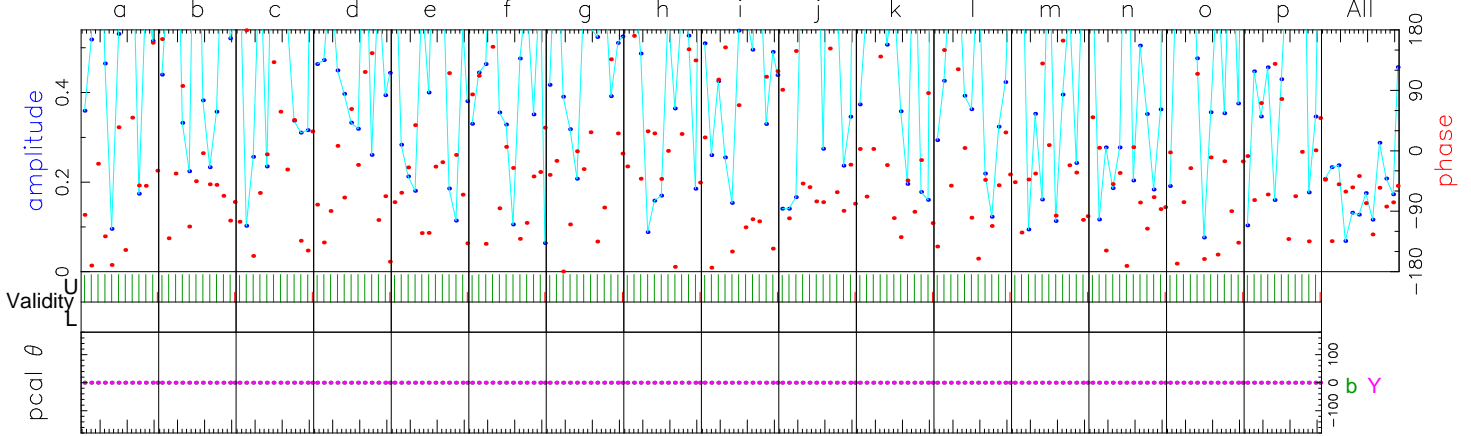
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, bY  
VLBA\_BR - YEBES40M, fgroup W, pol LR



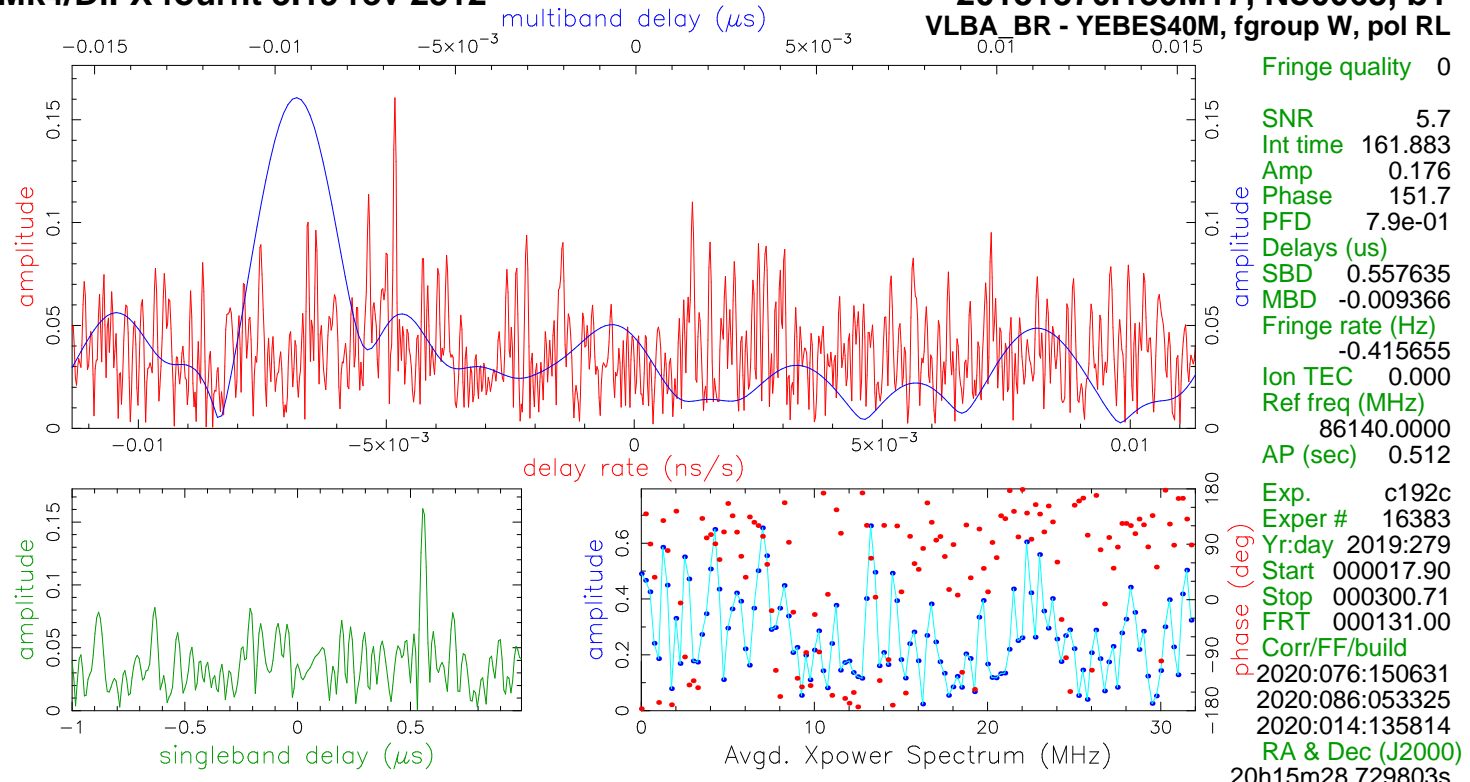
Fringe quality 0  
SNR 5.7  
Int time 161.883  
Amp 0.180  
Phase -69.5  
PFD 7.1e-01  
Delays (us)  
SBD -0.384804  
MBD 0.015379  
Fringe rate (Hz) 0.450356  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build 2020:076:150631  
2020:086:053323  
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

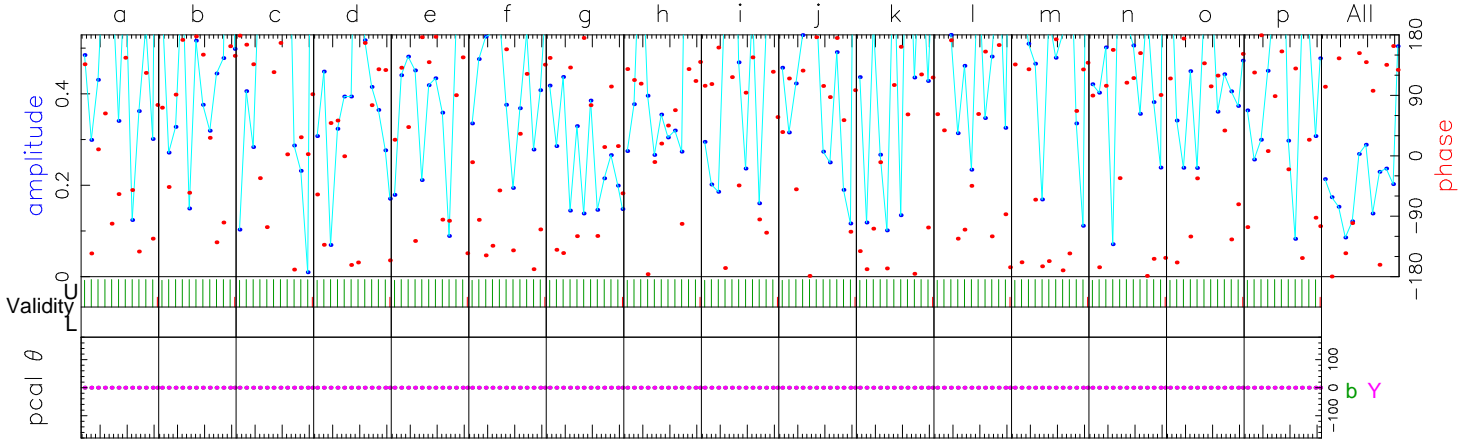


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-82.0	-64.9	-55.0	-90.2	-57.5	-113.3	-35.3	-5.7	-157.6	-75.6	-69.0	-89.6	-63.9	-91.2	-84.5	-29.7		Phase	-69.5				
	0.2	0.4	0.1	0.2	0.3	0.1	0.2	0.1	0.1	0.3	0.3	0.1	0.2	0.2	0.2	0.2		Ampl.	0.2				
	172.0	24.7	3.7	197.5	168.5	133.9	129.0	148.1	9.3	111.5	148.1	200.0	63.4	151.9	132.1	105.1		Sbd box	79.7				
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
b: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					
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			3.72724892614E+03															Apriori delay (usec)	3.72763979741E+03	Resid mbdelay (usec)	1.53787E-02	+/-	1.9E-04
Sband delay (usec)			3.72725499341E+03															Apriori clock (usec)	-1.0304679E+01	Resid sbdelay (usec)	-3.84804E-01	+/-	3.0E-03
Phase delay (usec)			3.72763979517E+03															Apriori clockrate (us/s)	-4.6239510E-07	Resid phdelay (usec)	-2.24048E-06	+/-	6.4E-07
Delay rate (us/s)			1.49244529087E+00															Apriori rate (us/s)	1.49244006268E+00	Resid rate (us/s)	5.22819E-06	+/-	6.9E-09
Total phase (deg)																		Apriori accel (us/s/s)	-1.33947263513E-05	Resid phase (deg)	-69.5	+/-	20.0

ph/seg (deg) RMS Theor. Amplitude 0.180 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 48.8 60.5 Search (1024X64) 0.161 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 36.5 40.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 52.1 69.8 Inc. seg. avg. 0.173 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 b: az 88.3 el 52.8 pa -56.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10746.539 -66.595 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/bY..130M17 Output file: /Exps/c192c/v2/1234/No0065/bY.W.140.130M17 simultaneous interpolator



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

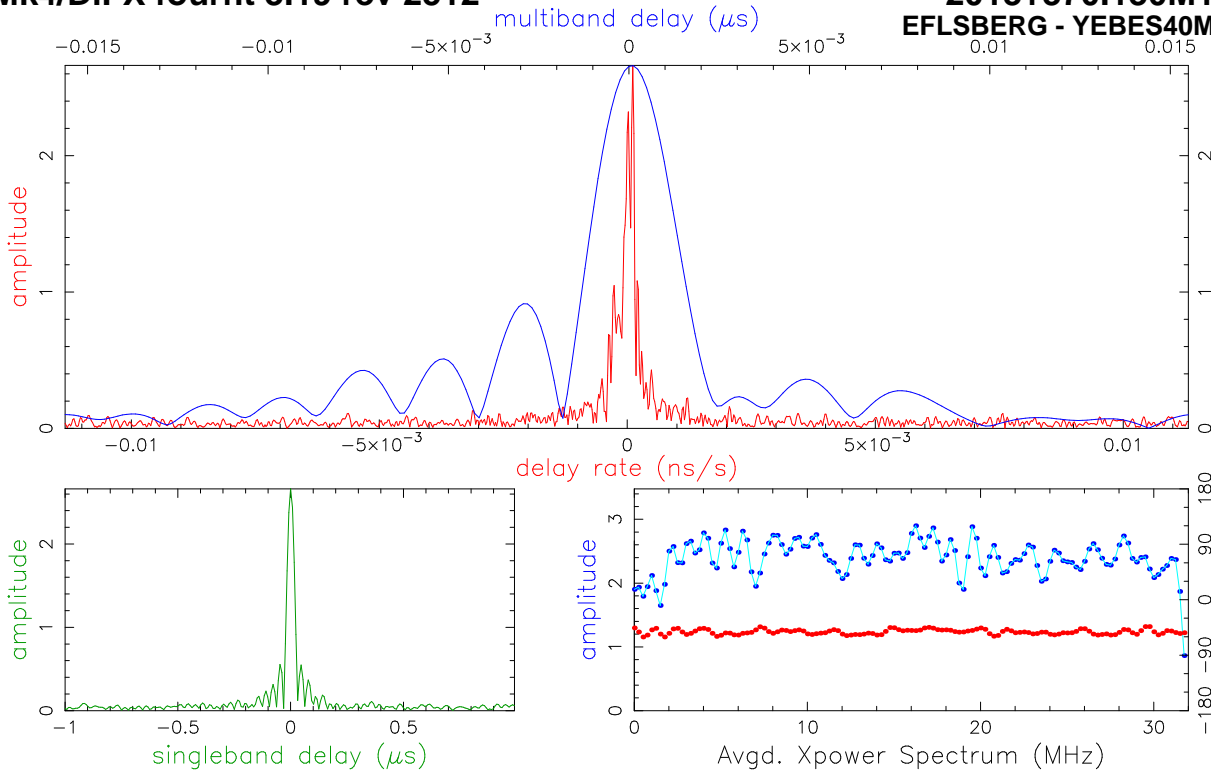


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	200.4
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	1000
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	1000
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	1000
b:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	1000
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	1000
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	W15UR	Tracks	1000
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	W15UL	Chan ids	1000
																		Tracks	1000
Group delay (usec)(sbd)		3.72819293105E+03				Apriori delay (usec)		3.72763979741E+03				Resid mbdelay (usec)		-9.36636E-03				+/-	1.9E-04
Sband delay (usec)		3.72819743241E+03				Apriori clock (usec)		-1.0304679E+01				Resid sbdelay (usec)		5.57635E-01				+/-	3.0E-03
Phase delay (usec)		3.72763980230E+03				Apriori clockrate (us/s)		-4.6239510E-07				Resid phdelay (usec)		4.89060E-06				+/-	6.5E-07
Delay rate (us/s)		1.49243523733E+00				Apriori rate (us/s)		1.49244006268E+00				Resid rate (us/s)		-4.82534E-06				+/-	6.9E-09
Total phase (deg)				205.1		Apriori accel (us/s/s)		-1.33947263513E-05				Resid phase (deg)		151.7				+/-	20.1

	RMS	Theor.	Amplitude	0.176 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	46.8	34.9	Search (1024X64)	0.157	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	54.5	60.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg)	26.5	40.3	Inc. seg. avg.	0.184	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	53.8	70.3	Inc. frq. avg.	0.154	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 88.3 el 52.8 pa -56.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10746.539 -66.595 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/bY..130M17 Output file: /Exps/c192c/v2/1234/No0065/bY.W.152.130M17

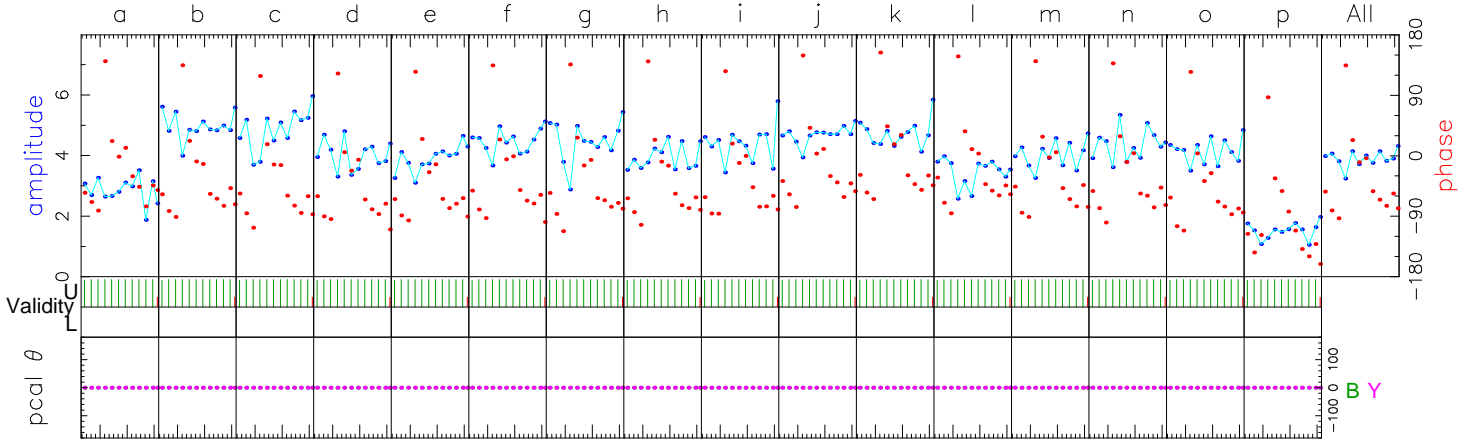


Fringe quality 3

SNR 92.7  
Int time 162.304  
Amp 2.662  
Phase -49.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.000488  
MBD 0.000082  
Fringe rate (Hz) 0.009975  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053316  
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

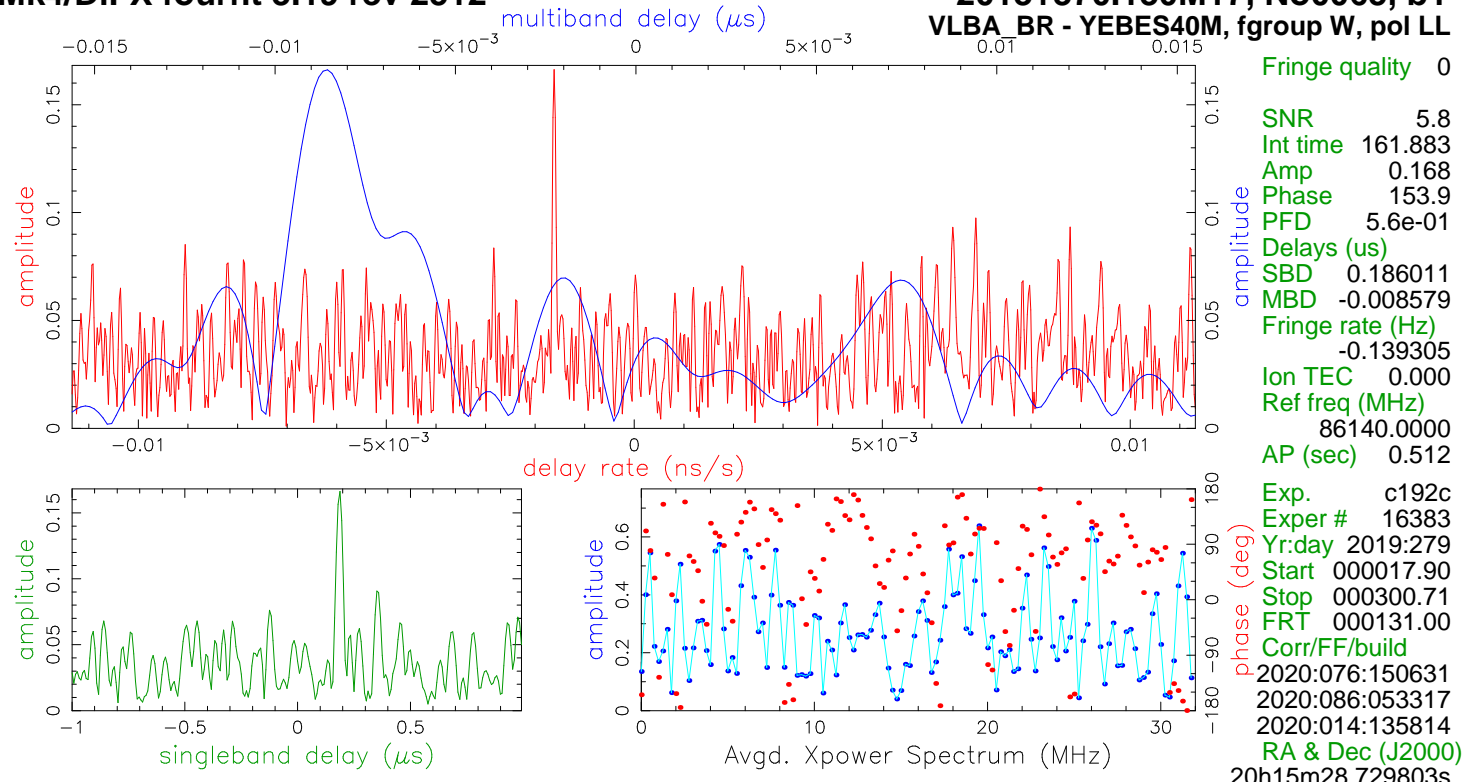


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-37.7	-50.9	-55.3	-61.8	-58.4	-48.5	-55.3	-54.8	-51.4	-31.3	-23.1	-39.1	-44.6	-47.8	-67.5	-113.5	Phase	-49.8				
	2.0	3.5	3.3	2.8	2.7	3.0	3.1	2.6	3.0	3.3	3.1	2.4	2.6	2.9	2.9	1.0	Ampl.	2.7				
	128.5	129.3	129.1	129.0	129.1	128.9	128.9	129.2	129.3	129.3	129.1	128.7	129.0	129.1	128.1	129.8	Sbd box	129.1				
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					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
B: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					
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.01437739491E+03														Apriori delay (usec)	-1.01437747697E+03	Resid mbdelay (usec)	8.20652E-05	+/-	1.2E-05
Sband delay (usec)			-1.01437698897E+03														Apriori clock (usec)	7.1172419E+00	Resid sbdelay (usec)	4.88000E-04	+/-	1.9E-04
Phase delay (usec)			-1.01437747858E+03														Apriori clockrate (us/s)	-4.2000000E-07	Resid phdelay (usec)	-1.60622E-06	+/-	4.0E-08
Delay rate (us/s)			1.00977115701E-01														Apriori rate (us/s)	1.00976999900E-01	Resid rate (us/s)	1.15801E-07	+/-	4.2E-10
Total phase (deg)					-1.6												Apriori accel (us/s/s)	1.37773302189E-05	Resid phase (deg)	-49.8	+/-	1.2

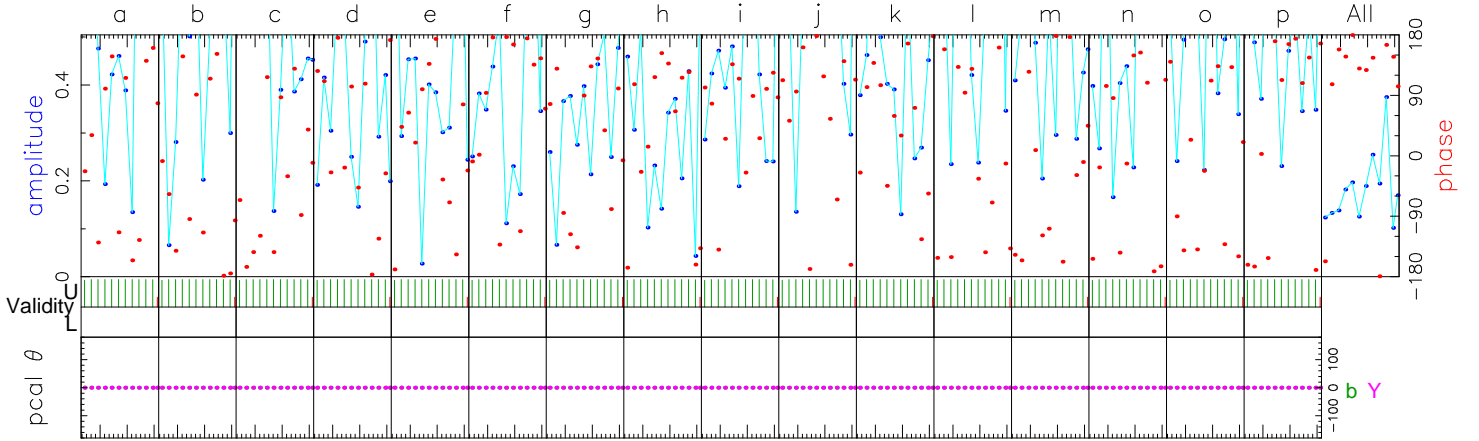
ph/seg (deg) 62.3 2.1 Search (1024X64) 2.625 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 46.9 3.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 20.8 2.5 Inc. seg. avg. 3.883 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 21.9 4.3 Inc. frq. avg. 2.747 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
B: az 287.8 el 35.4 pa 49.5 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -714.302 1689.108 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/BY..130M17 Output file: /Exps/c192c/v2/1234/No0065/BY.W.86.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, bY  
VLBA\_BR - YEBES40M, fgroup W, pol LL



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	
-178.4	168.4	-125.2	154.6	127.0	149.5	108.9	123.4	79.1	134.8	116.4	164.7	-159.4	149.8	150.9	174.9	Phase	153.9	
0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.1	0.3	0.2	0.3	0.2	0.4	Ampl.	0.2	
197.2	65.0	249.2	5.0	245.9	125.6	201.6	201.2	229.4	155.3	53.1	153.7	104.5	221.2	42.9	153.0	Sbd box	152.8	
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	APs used		
b	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	PC phase		
b: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	Mani PC		
b: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	PC amp		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	

Group delay (usec)(sbd)	3.72781871862E+03	Apriori delay (usec)	3.72763979741E+03	Resid mbdelay (usec)	-8.57878E-03	+/-	1.9E-04
Sband delay (usec)	3.72782580841E+03	Apriori clock (usec)	-1.0304679E+01	Resid sbdelay (usec)	1.86011E-01	+/-	3.0E-03
Phase delay (usec)	3.72763980237E+03	Apriori clockrate (us/s)	-4.6239510E-07	Resid phdelay (usec)	4.96242E-06	+/-	6.4E-07
Delay rate (us/s)	1.49243844548E+00	Apriori rate (us/s)	1.49244006268E+00	Resid rate (us/s)	-1.61720E-06	+/-	6.8E-09
Total phase (deg)	207.4	Apriori accel (us/s/s)	-1.33947263513E-05	Resid phase (deg)	153.9	+/-	19.7

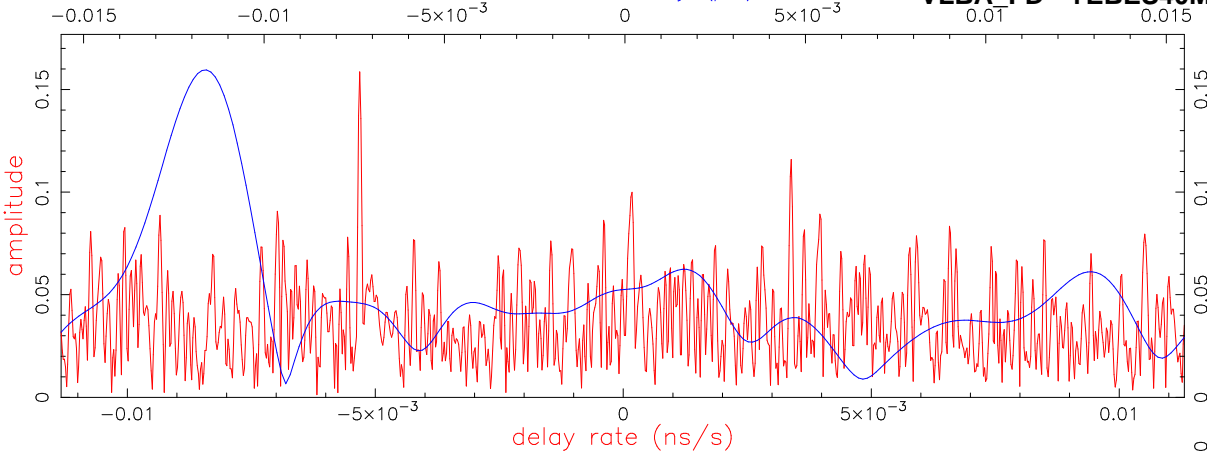
ph/seg (deg)	RMS	Theor.	Amplitude	0.168 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	27.3	34.2	Search (1024X64)	0.163	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	44.7	59.7	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016	
amp/frq (%)	39.0	39.5	Inc. seg. avg.	0.157	Sample rate(MISamp/s):	64	dr window (ns/s)	-0.011 0.011		
	57.5	68.9	Inc. frq. avg.	0.160	Data rate(Mb/s):	2048	nlags: 128	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 88.3 el 52.8 pa -56.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10746.539 -66.595 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/bY..130M17 Output file: /Exps/c192c/v2/1234/No0065/bY.W.87.130M17

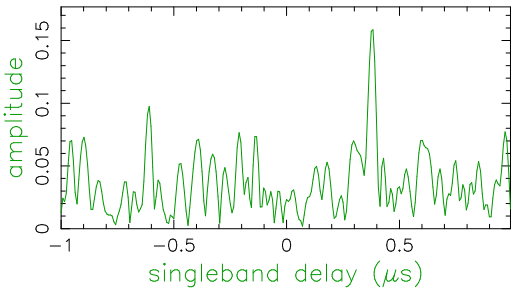


multiband delay ( $\mu$ s)

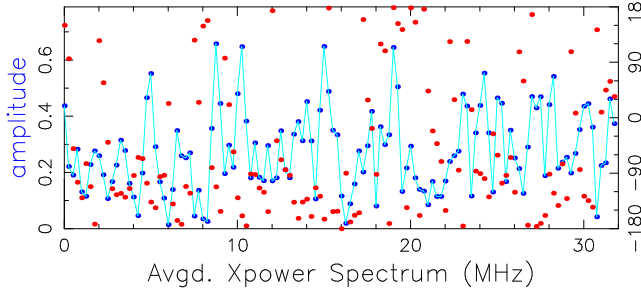


Fringe quality 0

SNR 5.6  
Int time 161.556  
Amp 0.177  
Phase -43.9  
PFD 9.2e-01  
Delays (us)  
SBD 0.379330  
MBD -0.011782  
Fringe rate (Hz)  
-0.457655  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

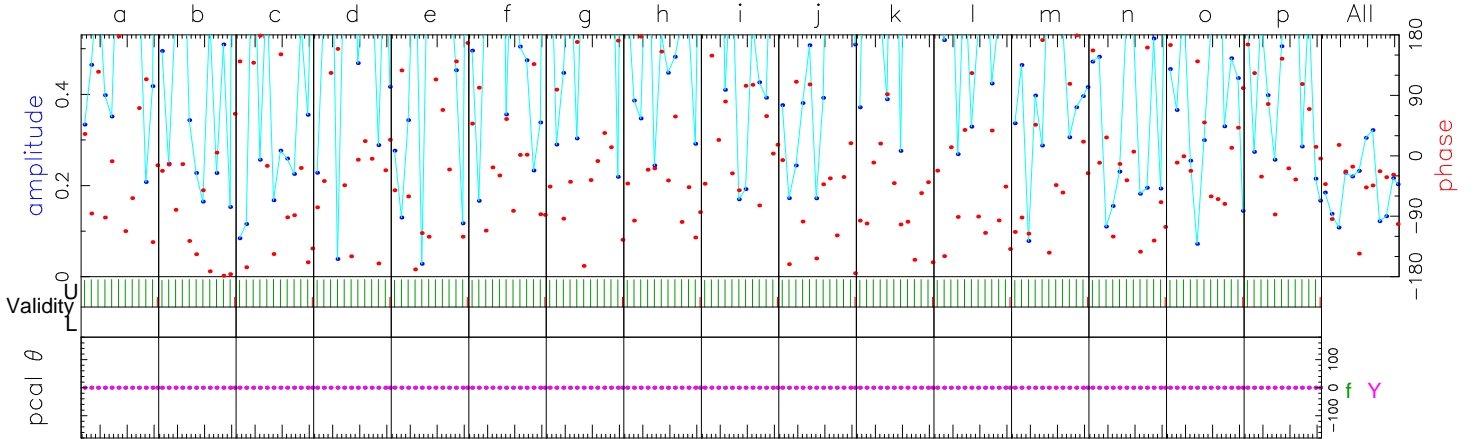


delay rate (ns/s)



Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053318  
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

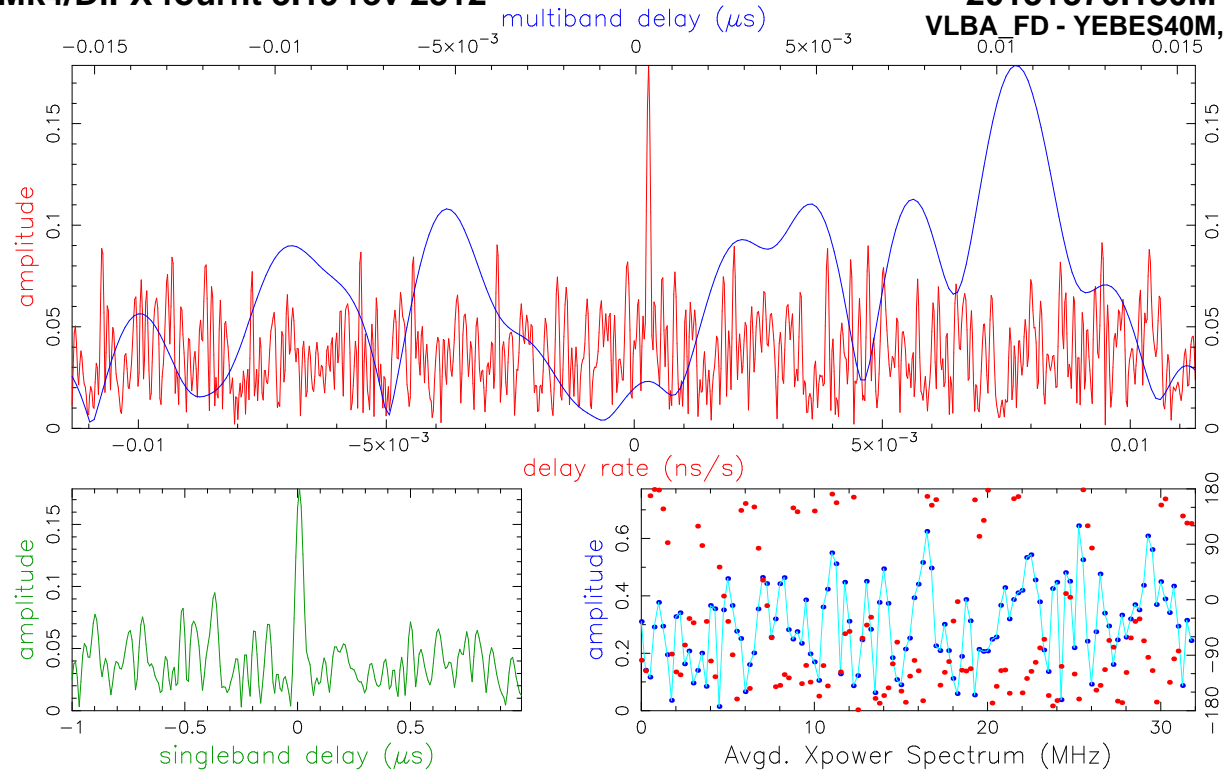


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-94.3	-51.4	-148.6	-23.3	174.1	-33.0	-35.3	-58.6	20.0	-34.8	-73.1	-55.8	-86.7	-60.8	-21.4	26.5	Phase	-43.9
	0.1	0.1	0.1	0.2	0.1	0.4	0.3	0.3	0.3	0.2	0.5	0.3	0.1	0.1	0.3	0.1	Ampl.	0.2
	121.1	168.5	147.8	240.5	169.0	252.6	125.0	69.8	52.3	144.0	176.7	161.3	191.2	70.4	103.4	206.9	Sbd box	177.6
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	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
f: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	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	

Group delay (usec)(sbd) 5.47955276699E+03 Apriori delay (usec) 5.47915829880E+03 Resid mbdelay (usec) -1.17818E-02 +/- 1.9E-04  
 Sband delay (usec) 5.47953762930E+03 Apriori clock (usec) -9.2090502E+00 Resid sbdelay (usec) 3.79330E-01 +/- 3.1E-03  
 Phase delay (usec) 5.47915829739E+03 Apriori clockrate (us/s) -3.1094951E-07 Resid phdelay (usec) -1.41561E-06 +/- 6.6E-07  
 Delay rate (us/s) 1.45257707994E+00 Apriori rate (us/s) 1.45258239286E+00 Resid rate (us/s) -5.31292E-06 +/- 7.0E-09  
 Total phase (deg) 265.4 Apriori accel (us/s/s) -3.87511306462E-05 Resid phase (deg) -43.9 +/- 20.4

RMS Theor. Amplitude 0.177 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 41.7 35.4 Search (1024X64) 0.158 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 48.4 61.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 58.1 40.9 Inc. seg. avg. 0.185 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 71.9 71.3 Inc. frq. avg. 0.179 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 67.5 el 61.5 pa -93.1 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10482.362 -3240.232 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/fY..130M17 Output file: /Exps/c192c/v2/1234/No0065/fY.W.100.130M17

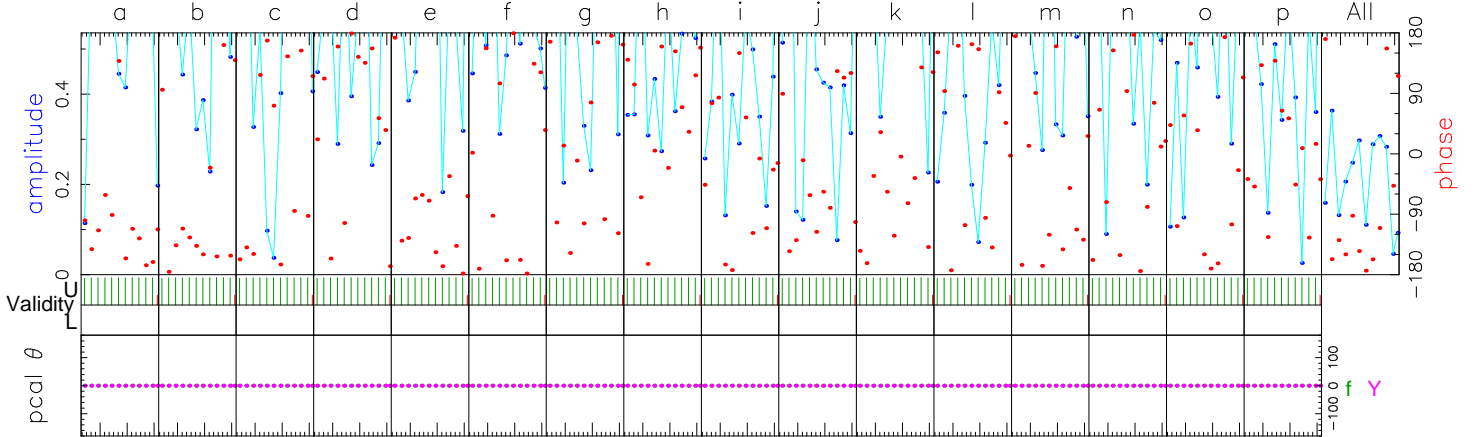


Fringe quality 0

SNR 6.2  
Int time 161.555  
Amp 0.179  
Phase -148.7  
PFD 6.9e-02  
Delays (us)  
SBD 0.007923  
MBD 0.010533  
Fringe rate (Hz) 0.024554  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build 2020:076:150631  
2020:086:053320  
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



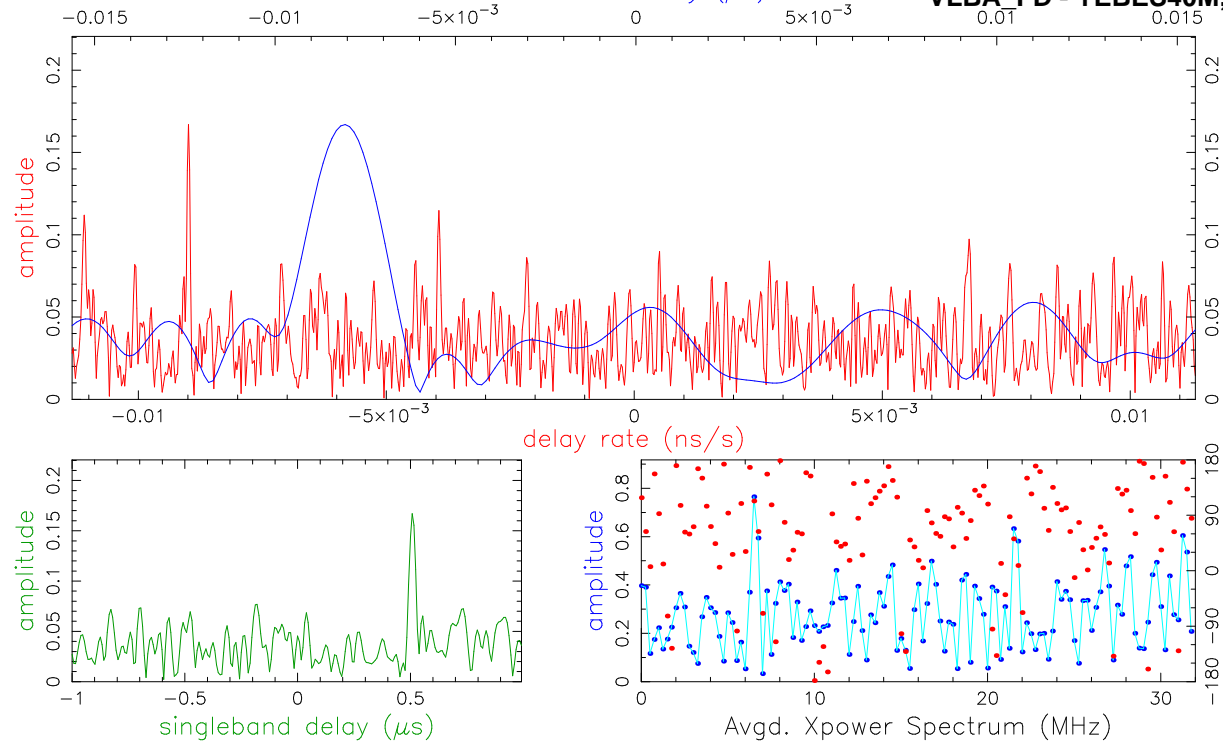
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-123.0	-161.7	-164.3	140.4	-107.5	-178.8	-144.0	63.0	39.1	-119.5	-64.3	153.7	-130.6	142.0	-165.1	-16.3		Phase	-148.7
	0.5	0.4	0.4	0.2	0.4	0.4	0.4	0.1	0.1	0.2	0.3	0.1	0.3	0.2	0.2	0.1		Ampl.	0.2
	130.7	129.3	129.8	79.1	129.3	40.6	155.0	102.7	103.7	233.9	59.1	187.5	100.5	243.0	225.7	87.5		Sbd box	130.0
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used	
f	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	
f: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	
f: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	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	

Group delay (usec)(sbd) 5.47916883168E+03 Apriori delay (usec) 5.47915829880E+03 Resid mbdelay (usec) 1.05329E-02 +/- 1.7E-04  
 Sband delay (usec) 5.47916622130E+03 Apriori clock (usec) -9.2090502E+00 Resid sbdelay (usec) 7.92250E-03 +/- 2.8E-03  
 Phase delay (usec) 5.47915829401E+03 Apriori clockrate (us/s) -3.1094951E-07 Resid phdelay (usec) -4.79381E-06 +/- 6.0E-07  
 Delay rate (us/s) 1.45258267791E+00 Apriori rate (us/s) 1.45258239286E+00 Resid rate (us/s) 2.85050E-07 +/- 6.3E-09  
 Total phase (deg) 160.6 Apriori accel (us/s/s) -3.87511306462E-05 Resid phase (deg) -148.7 +/- 18.5

RMS Theor. Amplitude 0.179 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 45.9 32.0 Search (1024X64) 0.175 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 57.9 55.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 82.2 36.9 Inc. seg. avg. 0.189 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 85.4 64.4 Inc. frq. avg. 0.226 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

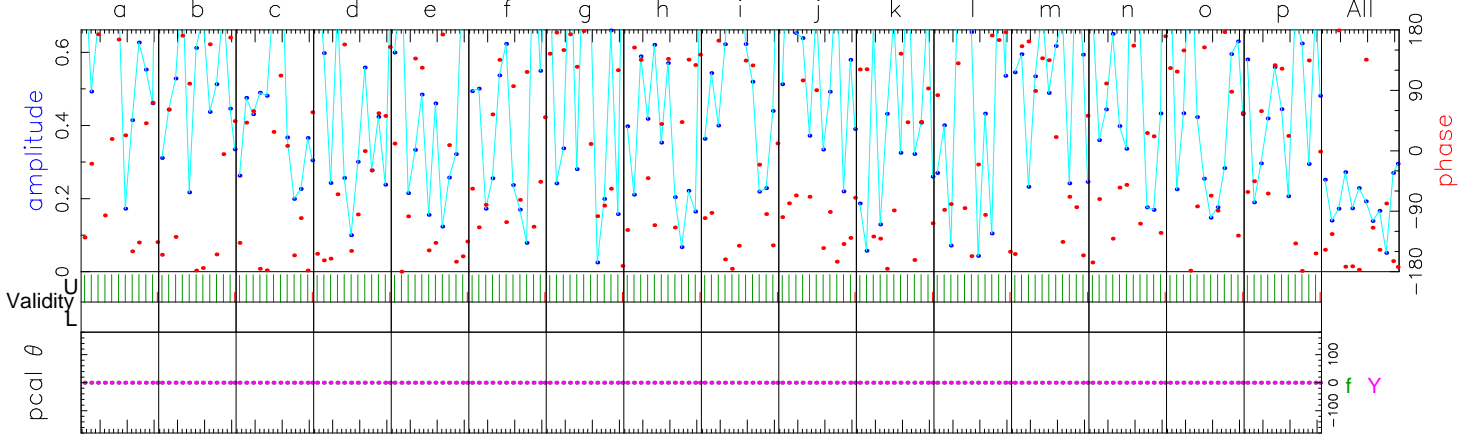
f: az 67.5 el 61.5 pa -93.1 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10482.362 -3240.232 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/fY..130M17 Output file: /Exps/c192c/v2/1234/No0065/fY.W.115.130M17

multiband delay ( $\mu$ s)



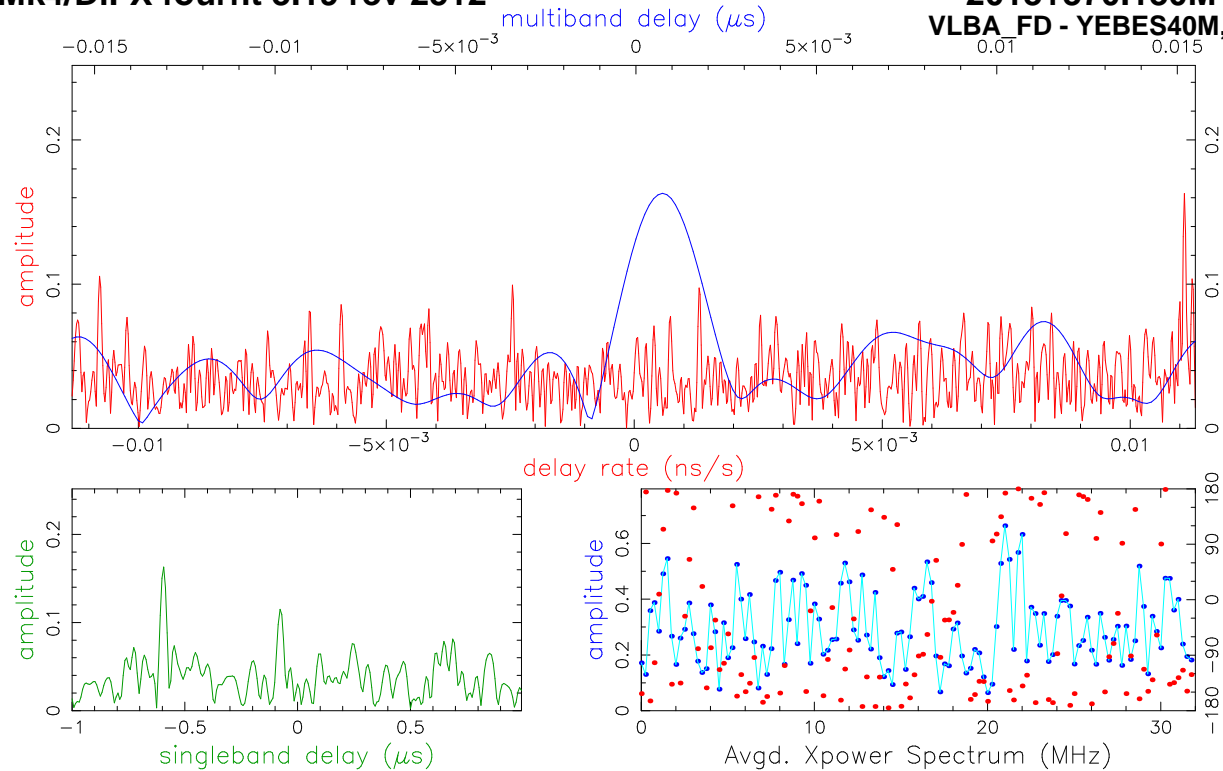
Fringe quality 0  
SNR 5.8  
Int time 161.556  
Amp 0.221  
Phase -163.4  
PFD 5.1e-01  
Delays (us)  
SBD 0.509247  
MBD -0.008062  
Fringe rate (Hz) -0.775915  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053322  
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	
	-135.5	177.3	105.7	-121.6	-166.4	-94.1	169.7	169.8	-158.5	-114.7	145.3	-154.8	-176.9	-150.4	164.4	-162.4	Phase	-163.4	
	0.2	0.4	0.2	0.1	0.3	0.2	0.3	0.2	0.4	0.3	0.1	0.4	0.3	0.3	0.3	0.2	Ampl.	0.2	
	116.8	38.4	131.0	35.9	18.9	171.9	100.4	65.1	193.8	105.1	203.5	75.6	253.4	142.9	34.5	155.8	Sbd box	194.2	
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		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase		
f: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		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
																	Tracks		
Group delay (usec)(sbd)			5.47968148655E+03						5.47915829880E+03								Resid mbdelay (usec)	-8.06225E-03	+/- 1.9E-04
Sband delay (usec)			5.47966754530E+03						-9.2090502E+00								Resid sbdelay (usec)	5.09247E-01	+/- 3.0E-03
Phase delay (usec)			5.47915829353E+03						-3.1094951E-07								Resid phdelay (usec)	-5.27038E-06	+/- 6.3E-07
Delay rate (us/s)			1.45257338527E+00						1.45258239286E+00								Resid rate (us/s)	-9.00760E-06	+/- 6.7E-09
Total phase (deg)				145.8					-3.87511306462E-05								Resid phase (deg)	-163.4	+/- 19.7

ph/seg (deg) 37.7 34.1 Amplitude 0.221 +/- 0.038 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 41.0 59.5 Search (1024X64) 0.165 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 41.3 39.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 44.9 68.7 Inc. seg. avg. 0.213 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 f: az 67.5 el 61.5 pa -93.1 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10482.362 -3240.232 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/fY..130M17 Output file: /Exps/c192c/v2/1234/No0065/fY.W.134.130M17 simultaneous interpolator

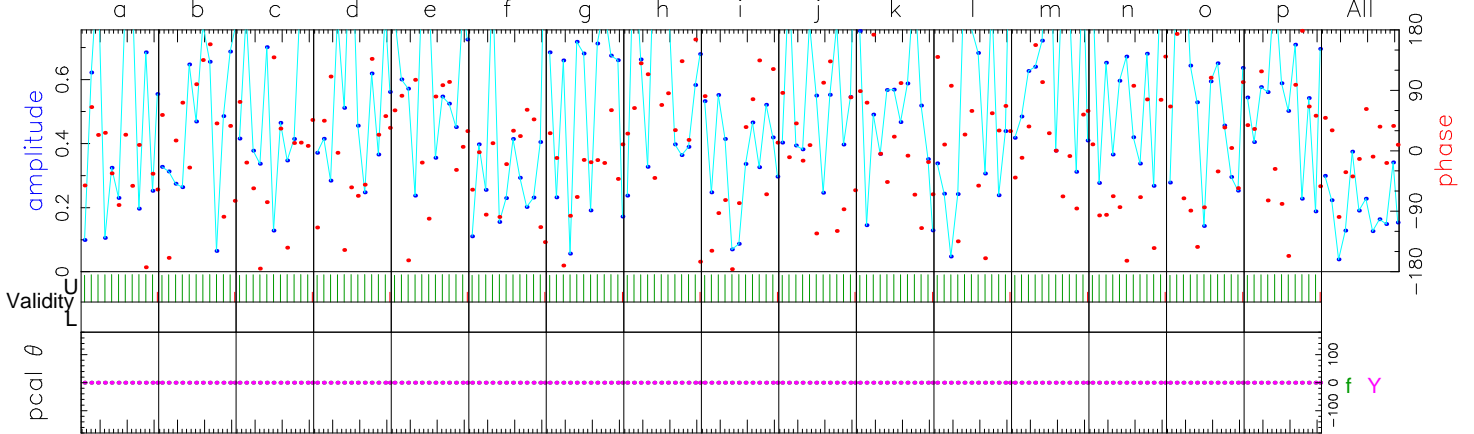


Fringe quality 0

SNR 5.7  
Int time 161.555  
Amp 0.252  
Phase 12.5  
PFD 8.1e-01  
Delays (us)  
SBD -0.594875  
MBD 0.000717  
Fringe rate (Hz) 0.957874  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053326  
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
	-4.6	79.9	-0.4	-9.5	40.6	-11.2	-16.3	73.9	39.3	-6.7	-11.0	39.0	16.4	-17.5	-76.0	21.0	Phase	12.5
	0.4	0.2	0.5	0.3	0.3	0.3	0.5	0.5	0.0	0.2	0.3	0.4	0.6	0.0	0.2	0.2	Ampl.	0.2
	216.5	97.7	182.2	86.5	86.4	32.3	79.4	52.5	43.9	16.0	241.8	110.4	51.3	199.6	60.1	20.1	Sbd box	52.9
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	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
f: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	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	

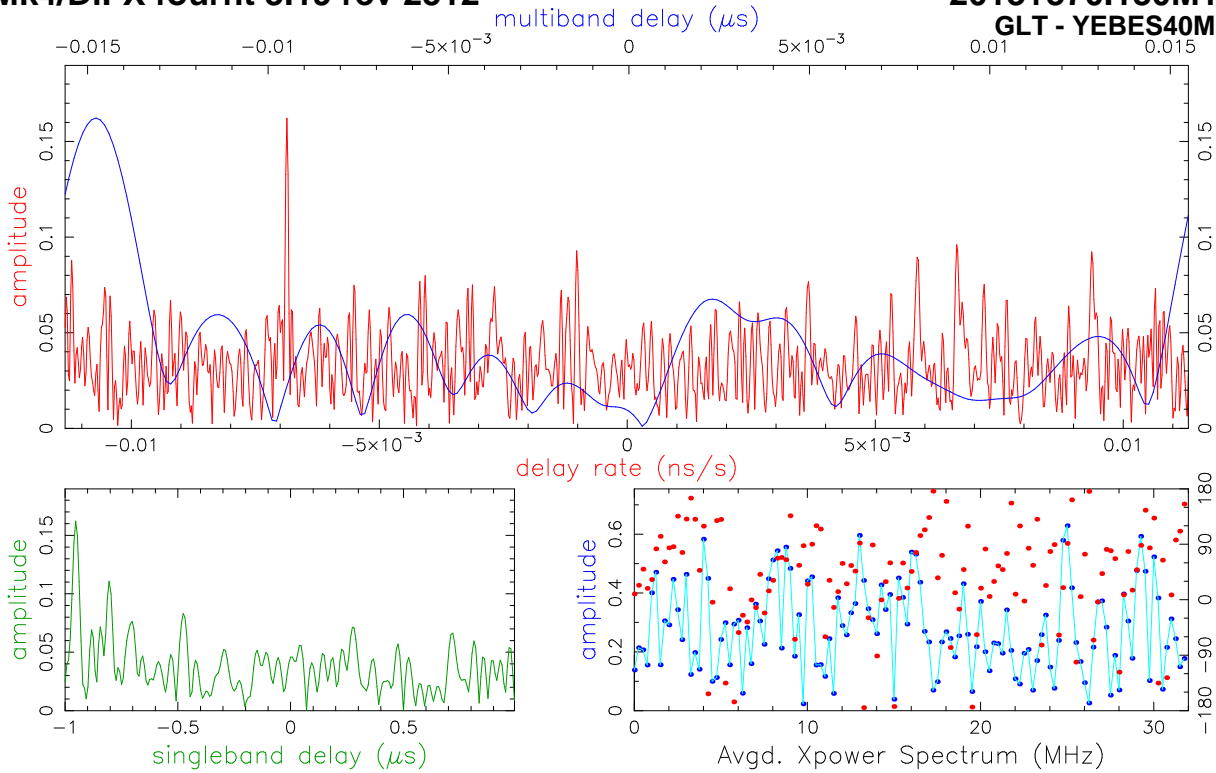
Group delay (usec)(sbd) 5.47856526611E+03 Apriori delay (usec) 5.47915829880E+03 Resid mbdelay (usec) 7.17304E-04 +/- 1.9E-04  
 Sband delay (usec) 5.47856342380E+03 Apriori clock (usec) -9.2090502E+00 Resid sbdelay (usec) -5.94875E-01 +/- 3.0E-03  
 Phase delay (usec) 5.47915829921E+03 Apriori clockrate (us/s) -3.1094951E-07 Resid phdelay (usec) 4.02897E-07 +/- 6.5E-07  
 Delay rate (us/s) 1.45259351284E+00 Apriori rate (us/s) 1.45258239286E+00 Resid rate (us/s) 1.11200E-05 +/- 6.9E-09  
 Total phase (deg) 321.8 Apriori accel (us/s/s) -3.87511306462E-05 Resid phase (deg) 12.5 +/- 20.2

RMS Theor. Amplitude 0.252 +/- 0.044 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 46.0 35.0 Search (1024X64) 0.160 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 63.4 61.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 40.2 40.4 Inc. seg. avg. 0.265 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 68.6 70.5 Inc. frq. avg. 0.242 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 67.5 el 61.5 pa -93.1 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10482.362 -3240.232 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/fY..130M17 Output file: /Exps/c192c/v2/1234/No0065/fY.W.158.130M17

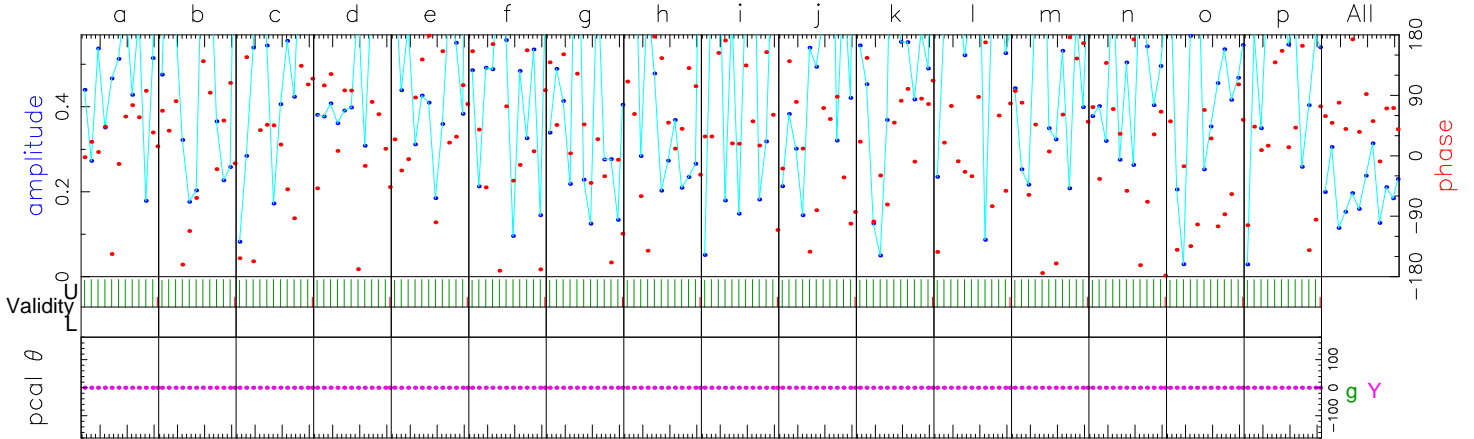
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, gY  
GLT - YEBES40M, fgroup W, pol LL



Fringe quality 0  
SNR 5.7  
Int time 162.281  
Amp 0.190  
Phase 61.4  
PFD 8.5e-01  
Delays (us)  
SBD -0.952318  
MBD -0.014753  
Fringe rate (Hz)  
-0.592094  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053327  
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

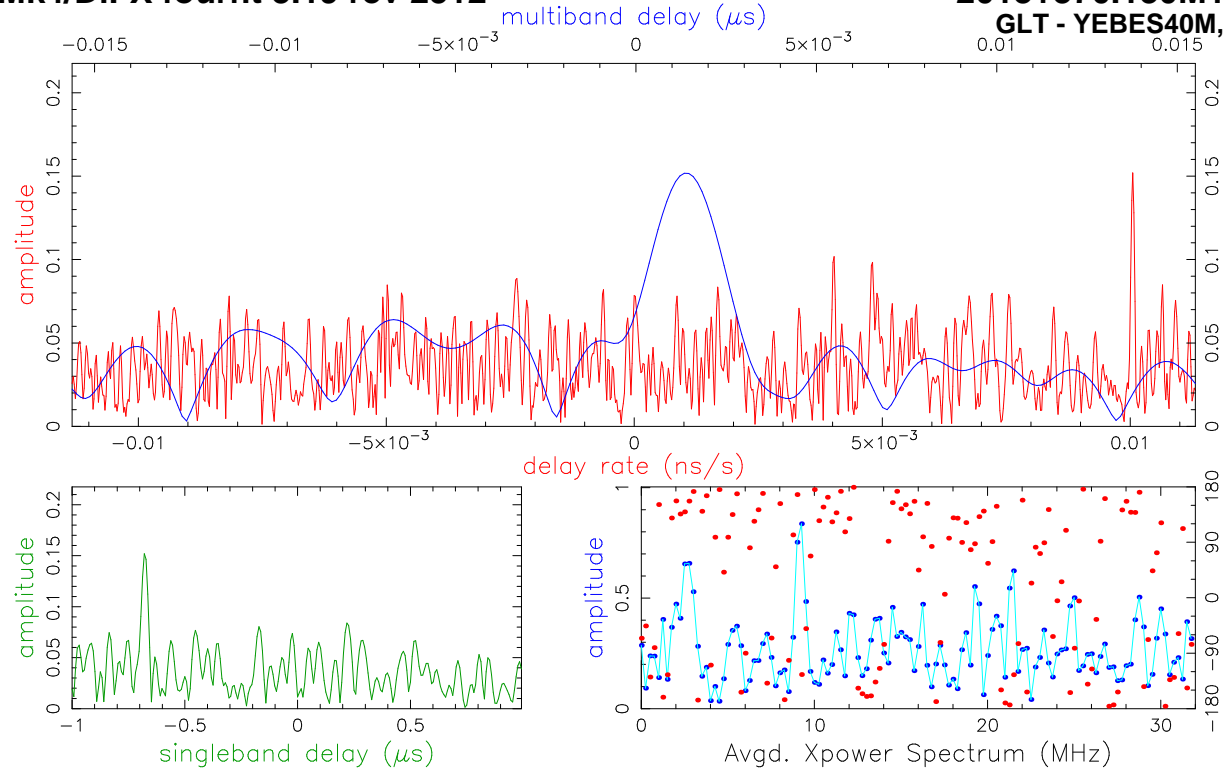


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
33.1	75.1	87.1	62.9	49.4	119.7	79.3	89.8	74.3	21.2	64.9	18.9	124.1	51.1	-76.0	61.5	61.5	Phase	61.4				
0.4	0.3	0.2	0.3	0.3	0.1	0.2	0.2	0.3	0.1	0.4	0.3	0.2	0.1	0.1	0.2	0.2	Ampl.	0.2				
45.5	152.4	213.5	156.1	194.1	229.6	197.7	9.8	148.8	158.4	6.9	5.4	174.9	27.2	132.0	161.8	161.8	Sbd box	7.1				
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					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g: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					
g: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					
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					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			3.18705925305E+03														Apriori delay (usec)	3.18801150653E+03	Resid mbdelay (usec)	-1.47535E-02	+/-	1.9E-04
Sband delay (usec)			3.18705918853E+03														Apriori clock (usec)	-8.3787680E-03	Resid sbdelay (usec)	-9.52318E-01	+/-	3.0E-03
Phase delay (usec)			3.18801150851E+03														Apriori clockrate (us/s)	-1.4500001E-07	Resid phdelay (usec)	1.97974E-06	+/-	6.5E-07
Delay rate (us/s)			8.59178873231E-01														Apriori rate (us/s)	8.59185746856E-01	Resid rate (us/s)	-6.87363E-06	+/-	6.9E-09
Total phase (deg)				123.4													Apriori accel (us/s/s)	5.09677777456E-06	Resid phase (deg)	61.4	+/-	20.3

ph/seg (deg) 42.4 35.1 Amplitude 0.190 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 44.7 61.2 Search (1024X64) 0.156 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 48.4 40.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 55.1 70.7 Inc. seg. avg. 0.198 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
g: az 182.0 el 50.7 pa 0.6 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -6173.235 2623.125 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/gY..130M17 Output file: /Exps/c192c/v2/1234/No0065/gY.W.168.130M17 simultaneous interpolator

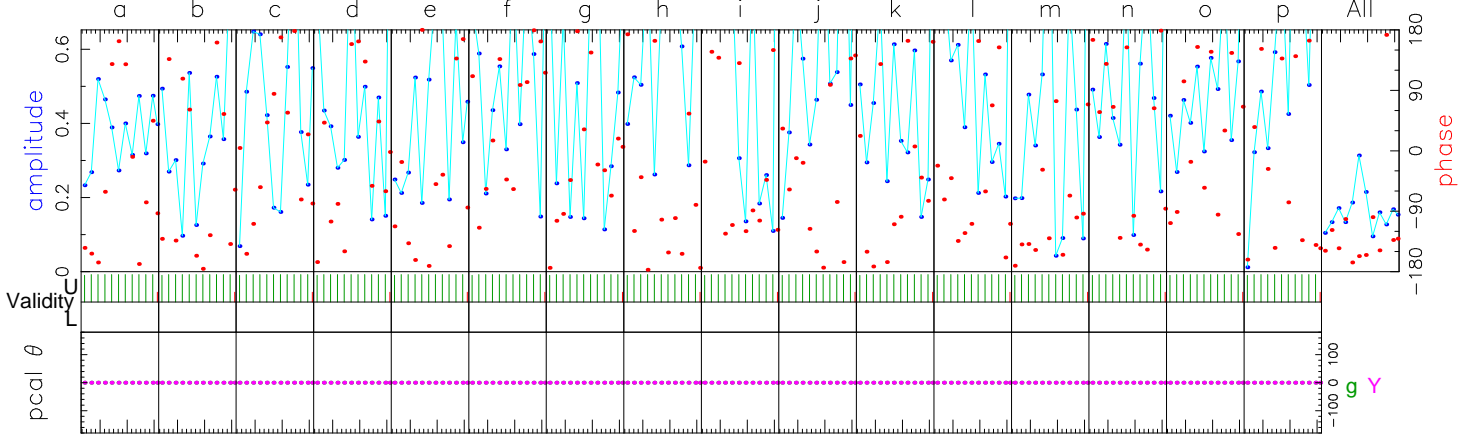
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, gY  
GLT - YEBES40M, fgroup W, pol RR



Fringe quality 0  
SNR 5.3  
Int time 162.255  
Amp 0.218  
Phase -145.0  
PFD 1.0e+00  
Delays (us)  
SBD -0.677160  
MBD 0.001401  
Fringe rate (Hz) 0.867613  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053329  
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

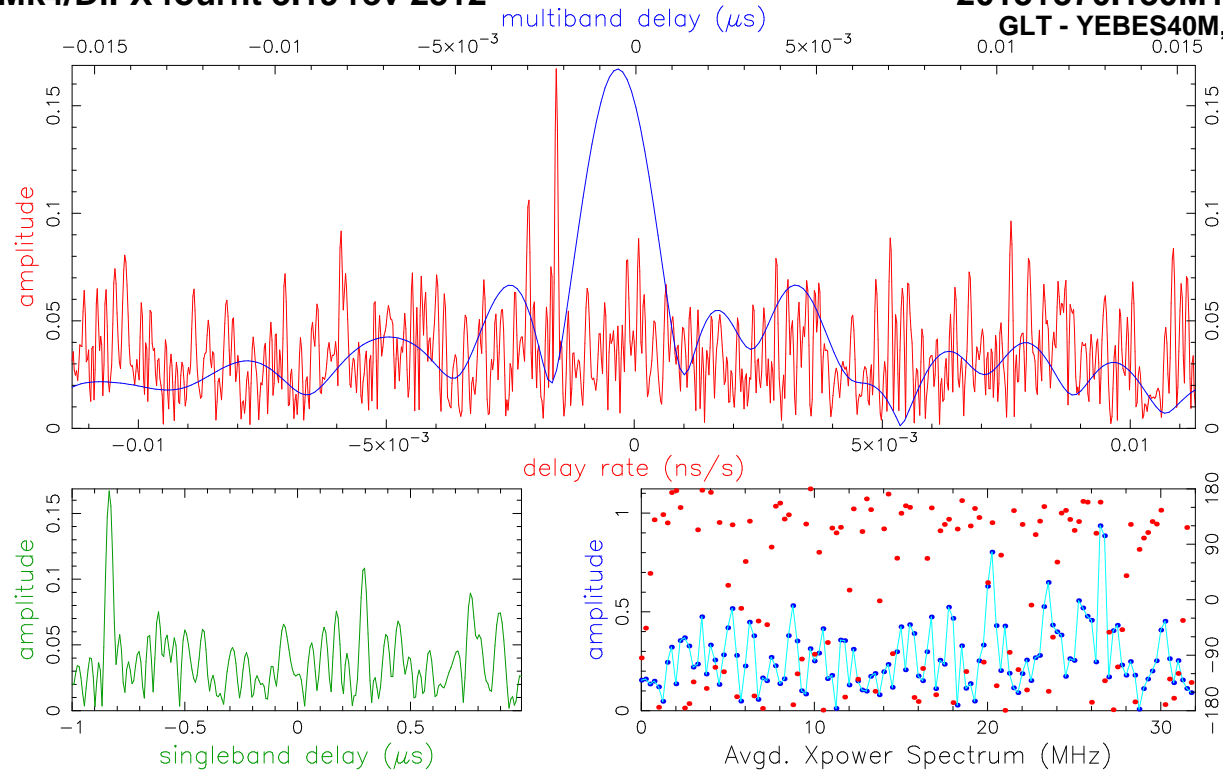


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-163.9	-165.1	-117.0	172.2	-130.3	125.8	-86.7	-129.3	-136.7	-152.4	-156.2	-88.0	-110.4	168.0	179.8	-172.7	Phase	-145.0
	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.5	0.4	0.3	0.2	0.4	0.4	0.3	0.1	0.5	Ampl.	0.2
	3.9	110.6	77.3	32.3	58.0	126.2	97.6	42.6	220.4	63.5	238.9	185.8	29.1	110.1	78.1	41.0	Sbd box	42.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g: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	
g: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	
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	
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)			3.18732540789E+03			Apriori delay (usec)		3.18801150653E+03		Resid mbdelay (usec)		1.40137E-03		+/-	2.0E-04			
Sband delay (usec)			3.18733434653E+03			Apriori clock (usec)		-8.3787680E+00		Resid sbdelay (usec)		-6.77160E-01		+/-	3.2E-03			
Phase delay (usec)			3.18801150185E+03			Apriori clockrate (us/s)		-1.4500001E-07		Resid phdelay (usec)		-4.67456E-06		+/-	6.9E-07			
Delay rate (us/s)			8.59195818980E-01			Apriori rate (us/s)		8.59185746856E-01		Resid rate (us/s)		1.00721E-05		+/-	7.4E-09			
Total phase (deg)			-83.0			Apriori accel (us/s/s)		5.09677777456E-06		Resid phase (deg)		-145.0		+/-	21.4			

ph/seg (deg) RMS Theor. Amplitude 0.218 +/- 0.041 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 37.9 37.1 Search (1024X64) 0.149 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 37.9 64.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 41.5 42.9 Inc. seg. avg. 0.193 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 67.9 74.8 Inc. frq. avg. 0.206 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 g: az 182.0 el 50.7 pa 0.6 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -6173.235 2623.125 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/gY..130M17 Output file: /Exps/c192c/v2/1234/No0065/gY.W.183.130M17

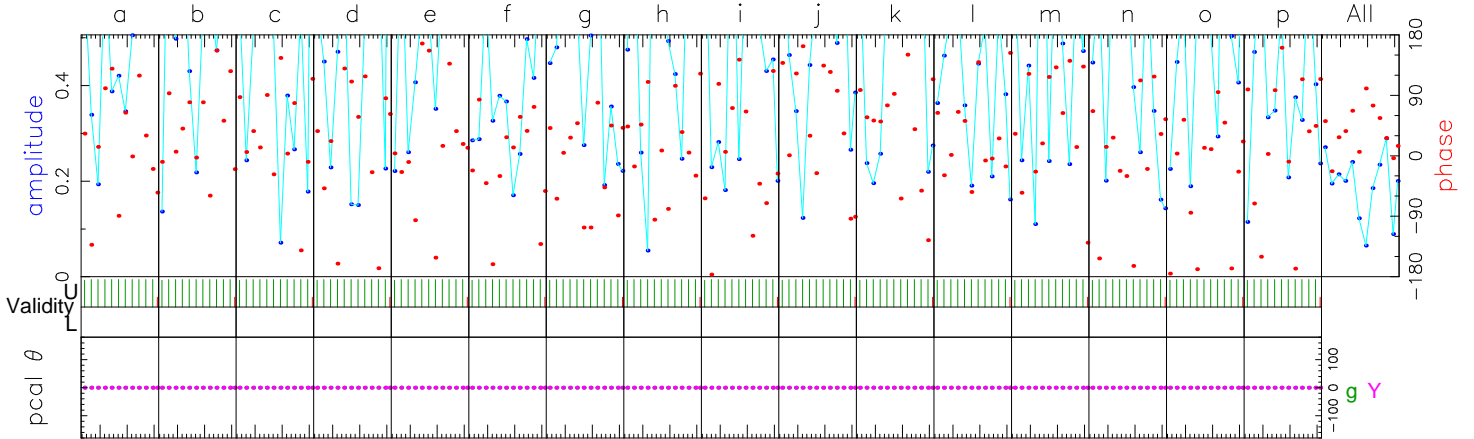
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, gY  
GLT - YEBES40M, fgroup W, pol LR



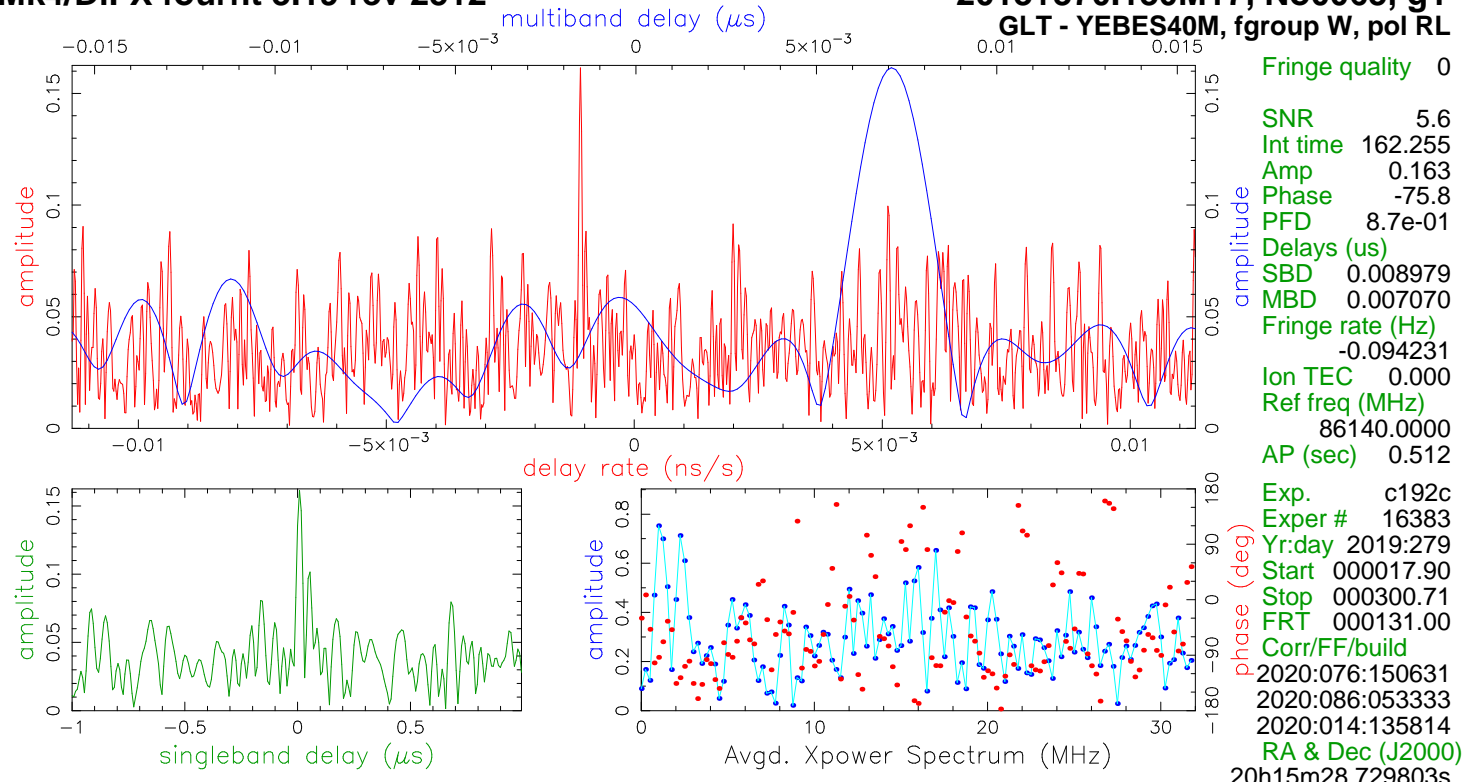
Fringe quality 0  
SNR 5.8  
Int time 162.281  
Amp 0.169  
Phase 37.8  
PFD 5.0e-01  
Delays (us)  
SBD -0.834874  
MBD -0.000503  
Fringe rate (Hz)  
-0.136151  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053332  
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

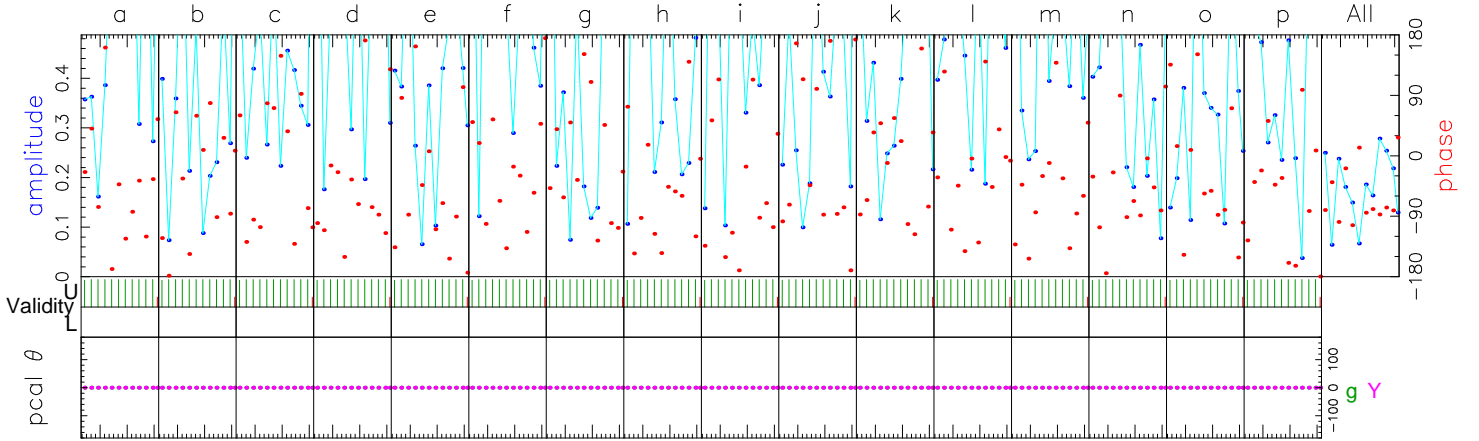


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	32.8	55.8	46.1	89.1	36.9	-6.1	14.6	-11.0	30.1	81.1	56.7	21.4	66.4	9.6	35.3	101.6	Phase	37.8				
	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	Ampl.	0.2				
	229.9	21.8	145.3	150.6	82.1	239.5	166.2	23.1	145.4	141.9	136.2	113.7	64.0	214.0	50.5	146.5	Sbd box	22.1				
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					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g: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					
g: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					
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					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Tracks					
Group delay (usec)(sbd)			3.18716725375E+03														Apriori delay (usec)	3.18801150653E+03	Resid mbdelay (usec)	-5.02775E-04	+/-	1.9E-04
Sband delay (usec)			3.18717663253E+03														Apriori clock (usec)	-8.3787680E+00	Resid sbdelay (usec)	-8.34874E-01	+/-	3.0E-03
Phase delay (usec)			3.18801150775E+03														Apriori clockrate (us/s)	-1.4500001E-07	Resid phdelay (usec)	1.22024E-06	+/-	6.3E-07
Delay rate (us/s)			8.59184166284E-01														Apriori rate (us/s)	8.59185746856E-01	Resid rate (us/s)	-1.58057E-06	+/-	6.7E-09
Total phase (deg)				99.8													Apriori accel (us/s/s)	5.09677777456E-06	Resid phase (deg)	37.8	+/-	19.7

ph/seg (deg) RMS Theor. Amplitude 0.169 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 34.5 34.0 Search (1024X64) 0.162 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 42.9 59.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 34.0 39.3 Inc. seg. avg. 0.164 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 43.2 68.6 Inc. frq. avg. 0.156 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 g: az 182.0 el 50.7 pa 0.6 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -6173.235 2623.125 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/gY..130M17 Output file: /Exps/c192c/v2/1234/No0065/gY.W.199.130M17



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



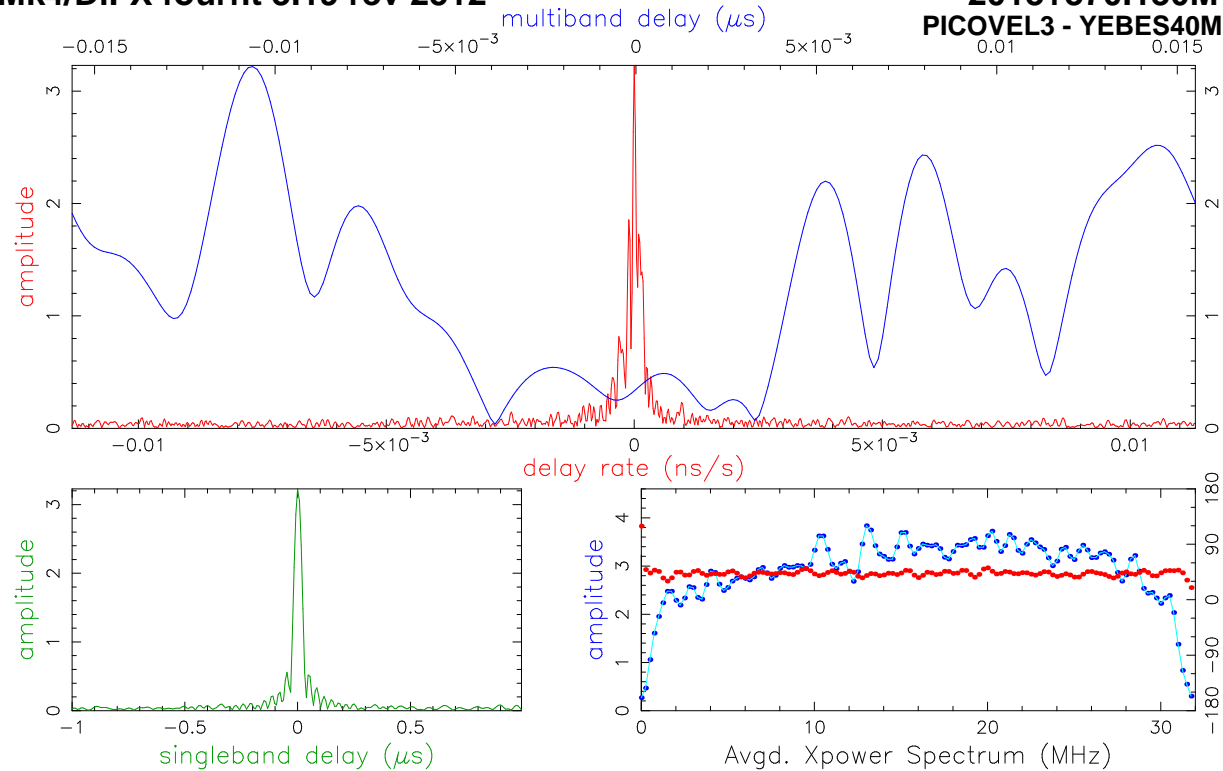
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-93.1	-3.9	6.2	-85.5	-110.4	-56.3	-46.3	-85.5	-115.3	-126.5	-69.2	-54.0	-74.3	-64.4	-159.0	-67.9		Phase	-75.8
	0.3	0.1	0.0	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2		Ampl.	0.1
	121.2	57.0	232.0	129.0	137.8	194.0	41.9	91.4	47.0	217.4	171.9	235.3	162.7	213.2	81.0	11.3		Sbd box	130.1
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	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
g: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	
g: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	
g	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			
g	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) 3.18801857652E+03 Apriori delay (usec) 3.18801150653E+03 Resid mbdelay (usec) 7.06999E-03 +/- 1.9E-04  
 Sband delay (usec) 3.18802048553E+03 Apriori clock (usec) -8.3787680E+00 Resid sbdelay (usec) 8.97900E-03 +/- 3.1E-03  
 Phase delay (usec) 3.18801150408E+03 Apriori clockrate (us/s) -1.4500001E-07 Resid phdelay (usec) -2.44346E-06 +/- 6.6E-07  
 Delay rate (us/s) 8.59184652930E-01 Apriori rate (us/s) 8.59185746856E-01 Resid rate (us/s) -1.09393E-06 +/- 7.0E-09  
 Total phase (deg) -13.8 Apriori accel (us/s/s) 5.09677777456E-06 Resid phase (deg) -75.8 +/- 20.3

RMS Theor. Amplitude 0.163 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 39.4 35.2 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 44.4 61.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 43.6 40.6 Inc. seg. avg. 0.156 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 62.6 70.9 Inc. frq. avg. 0.146 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

g: az 182.0 el 50.7 pa 0.6 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -6173.235 2623.125 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/gY..130M17 Output file: /Exps/c192c/v2/1234/No0065/gY.W.214.130M17



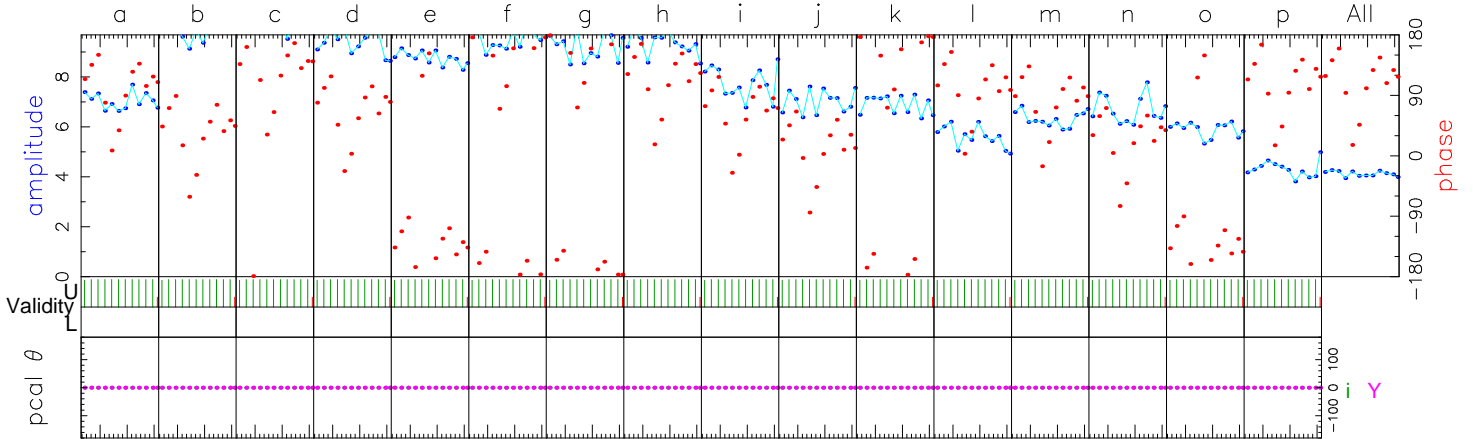


Fringe quality 2

SNR 112.5  
 Int time 162.304  
 Amp 3.229  
 Phase 112.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001458  
 MBD -0.010638  
 Fringe rate (Hz)  
 0.000664  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build  
 2020:076:150631  
 2020:086:053328  
 2020:014:135814  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

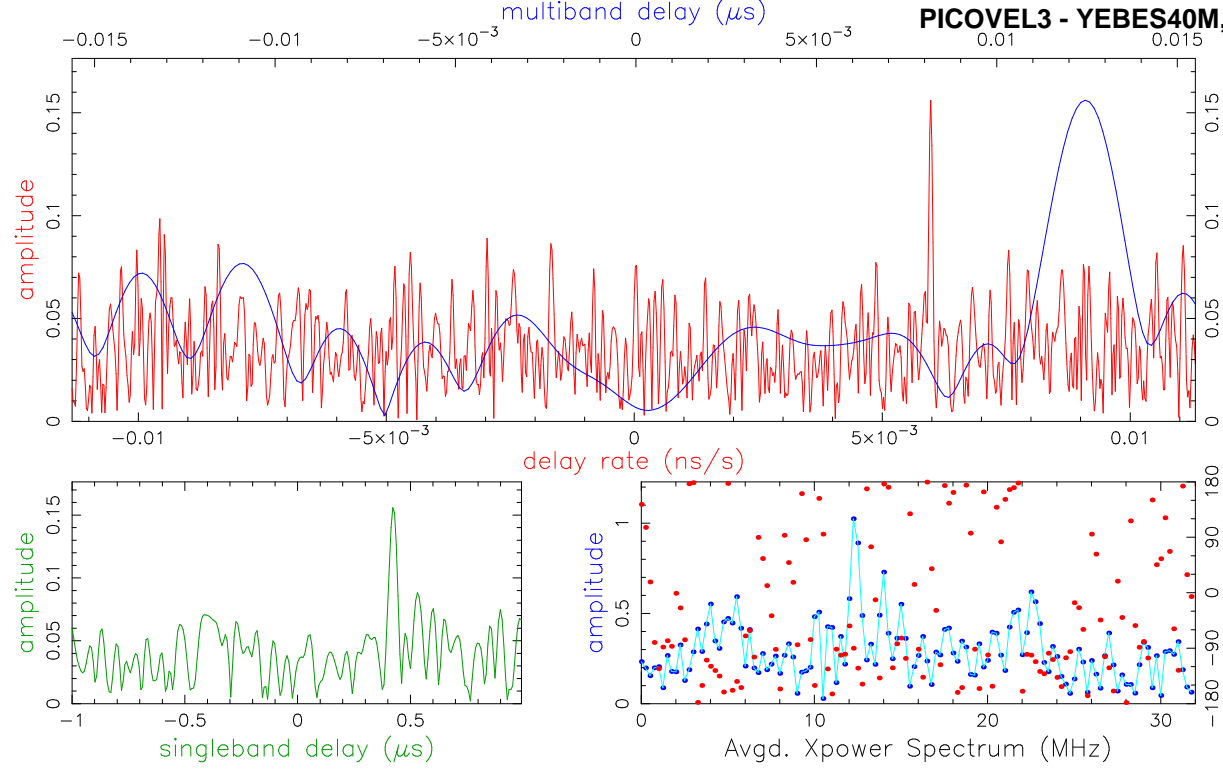
Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	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					
105.1	39.0	131.5	69.6	-142.5	169.2	172.1	117.9	69.8	15.9	168.3	101.7	84.7	29.0	-141.8	108.3		Phase	112.4					
5.5	7.6	7.8	7.3	6.7	7.5	7.1	7.2	6.0	5.4	5.4	4.3	4.9	5.2	4.5	3.3		Ampl.	6.0					
128.5	129.5	129.1	128.9	129.1	128.9	129.0	129.1	129.2	129.3	129.0	129.0	128.8	129.1	128.2	128.7		Sbd box	129.2					
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	1000				
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	1000				
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	1000				
i:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	1000				
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-3.00440859574E+02															Apriori delay (usec)	-3.00430222043E+02	Resid mbdelay (usec)	-1.06375E-02	+/-	9.6E-06
Sband delay (usec)			-3.00428764043E+02															Apriori clock (usec)	-1.0232240E+01	Resid sbdelay (usec)	1.45800E-03	+/-	1.5E-04
Phase delay (usec)			-3.00430218417E+02															Apriori clockrate (us/s)	-5.7299998E-07	Resid phdelay (usec)	3.62551E-06	+/-	3.3E-08
Delay rate (us/s)			-4.13209235106E-02															Apriori rate (us/s)	-4.13209312183E-02	Resid rate (us/s)	7.70769E-09	+/-	3.5E-10
Total phase (deg)																		Apriori accel (us/s/s)	-1.65695523738E-06	Resid phase (deg)	112.4	+/-	1.0

ph/seg (deg) 40.9 1.8 Theor. Amplitude 3.229 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 28.2 3.1 Search (1024X64) 3.135 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 64.8 2.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 94.6 3.6 Inc. seg. avg. 4.131 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 i: az 291.9 el 37.9 pa 68.5 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) 295.381 -431.252 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/iY..130M17 Output file: /Exps/c192c/v2/1234/No0065/iY.W.175.130M17 simultaneous interpolator



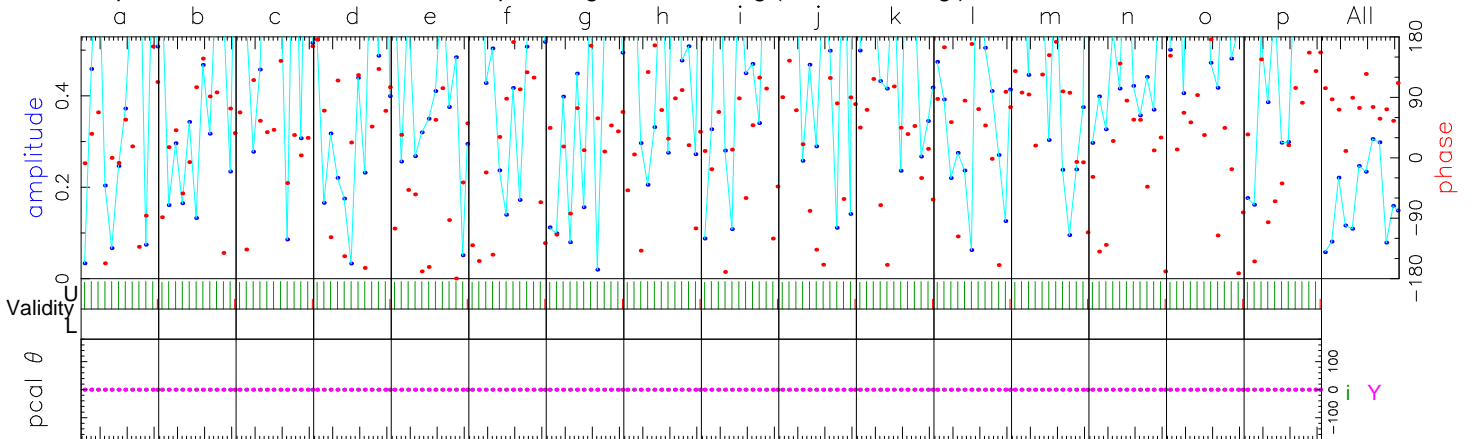


Fringe quality 0

SNR 5.5  
Int time 162.304  
Amp 0.176  
Phase 75.5  
PFD 1.0e+00  
Delays (us)  
SBD 0.424221  
MBD 0.012421  
Fringe rate (Hz) 0.514892  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

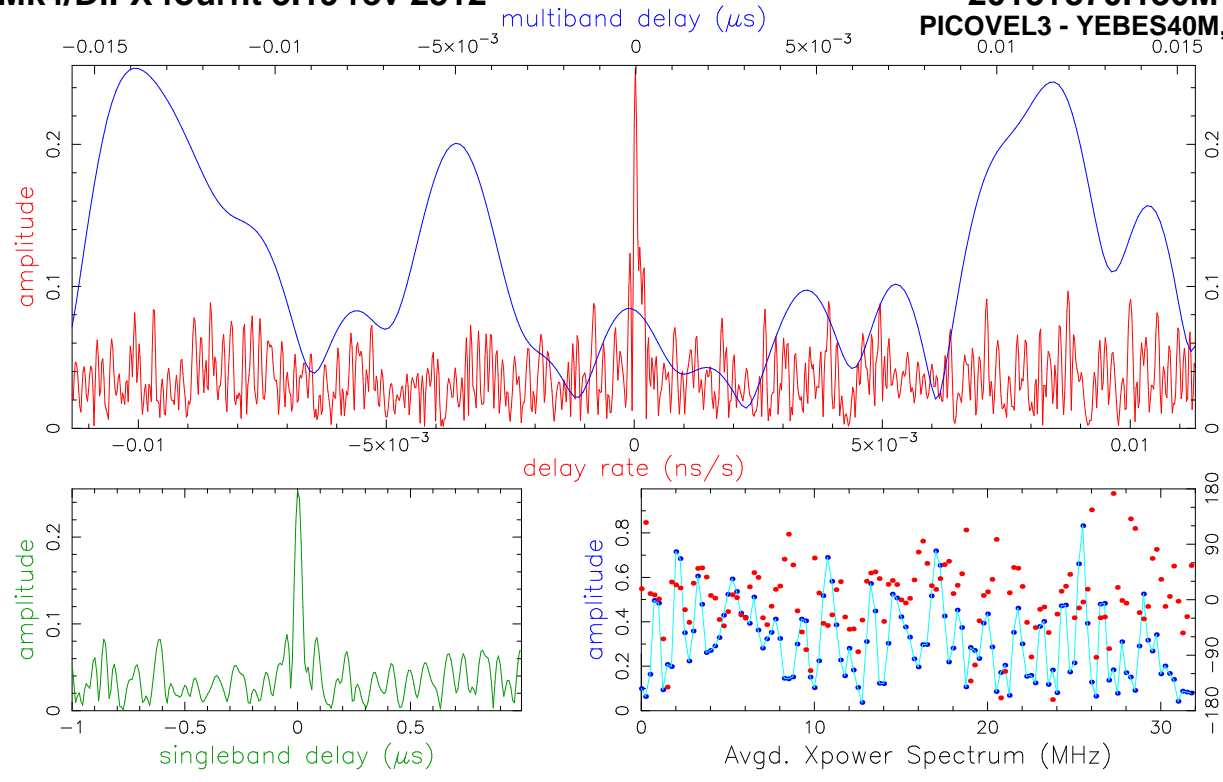
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053333  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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
73.4	80.4	52.4	106.7	-118.6	-163.6	47.8	50.1	72.5	102.6	55.8	79.3	100.0	45.2	55.8	119.0	Phase	75.5	
0.1	0.1	0.4	0.2	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2	Ampl.	0.2
192.3	120.9	181.8	138.7	43.0	243.9	5.7	197.1	4.4	254.4	52.4	79.9	219.6	157.0	41.1	8.4	Sbd box	183.3	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
i:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
i:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-3.00011551368E+02			Apriori delay (usec)			-3.00430222043E+02			Resid mbdelay (usec)			1.24207E-02			+/- 2.0E-04		
Sband delay (usec)	-3.00006001043E+02			Apriori clock (usec)			-1.0232240E+01			Resid sbdelay (usec)			4.24221E-01			+/- 3.2E-03		
Phase delay (usec)	-3.00430219608E+02			Apriori clockrate (us/s)			-5.7299998E-07			Resid phdelay (usec)			2.43522E-06			+/- 6.8E-07		
Delay rate (us/s)	-4.13149538276E-02			Apriori rate (us/s)			-4.13209312183E-02			Resid rate (us/s)			5.97739E-06			+/- 7.2E-09		
Total phase (deg)	-42.1			Apriori accel (us/s/s)			-1.65695523738E-06			Resid phase (deg)			75.5			+/- 21.0		

ph/seg (deg) 28.2 36.3      Amplitude 0.176 +/- 0.032      Pcal mode: MANUAL, MANUAL      PC period (AP's) 5, 5  
amp/seg (%) 55.4 63.4      Search (1024X64) 0.153      Pcal rate: 0.000E+00, 0.000E+00 (us/s)      sb window (us) -1.000 1.000  
ph/frq (deg) 59.8 41.9      Interp. 0.000      Bits/sample: 2x2      SampCntNorm: enabled      mb window (us) -0.016 0.016  
amp/frq (%) 55.8 73.2      Inc. seg. avg. 0.162      Sample rate(MISamp/s): 64      dr window (ns/s) -0.011 0.011  
i: az 291.9 el 37.9 pa 68.5      Y: az 289.5 el 38.9 pa 64.3      u,v (fr/asec) 295.381 -431.252      ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva      Input file: /Exps/c192c/v2/1234/No0065/iY..130M17      Output file: /Exps/c192c/v2/1234/No0065/iY.W.208.130M17      simultaneous interpolator

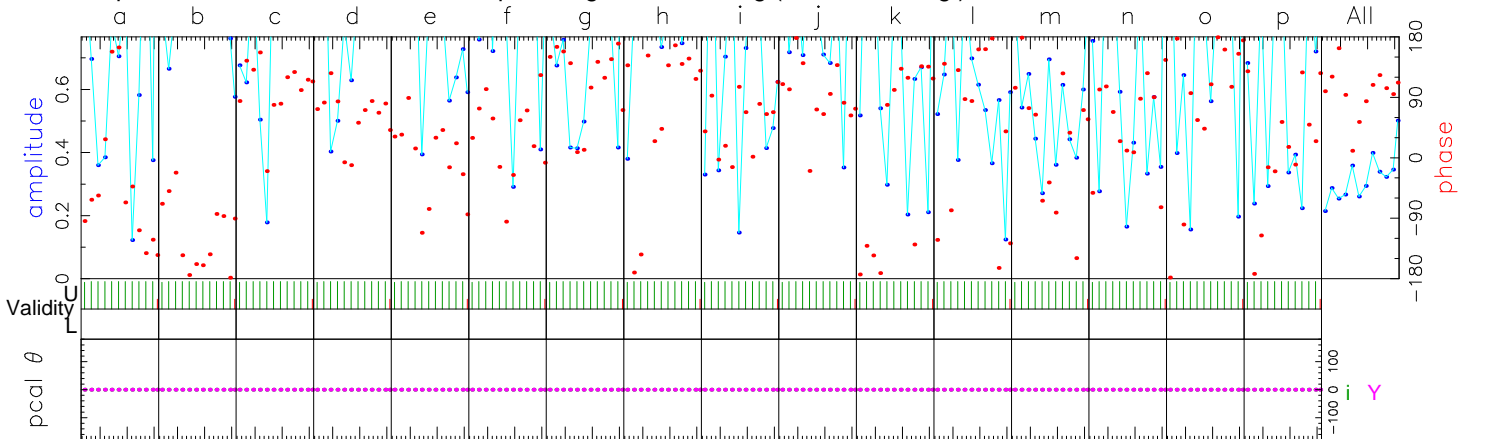


Fringe quality 9

SNR 8.9  
 Int time 162.304  
 Amp 0.256  
 Phase 97.6  
 PFD 1.0e-10  
 Delays (us)  
 SBD 0.002249  
 MBD -0.013856  
 Fringe rate (Hz) 0.001315  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build 2020:076:150631  
 2020:086:053335  
 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					
	-117.3	-121.6	109.9	64.1	16.9	44.2	128.8	142.4	47.4	94.0	172.7	159.6	80.5	72.8	138.7	34.7		Phase	97.6				
	0.4	0.6	0.8	0.8	0.6	0.6	0.5	0.7	0.5	0.6	0.4	0.3	0.2	0.4	0.4	0.3		Ampl.	0.5				
	128.0	129.3	129.1	128.5	130.1	129.0	129.8	129.3	129.5	129.3	130.3	51.3	144.0	231.4	128.1	245.8		Sbd box	129.3				
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 phase					
i:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
i:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
																			Tracks				
Group delay (usec)(sbd)			-3.00412828023E+02															Apriori delay (usec)	-3.00430222043E+02	Resid mbdelay (usec)	-1.38560E-02	+/-	1.2E-04
Sband delay (usec)			-3.00427973043E+02															Apriori clock (usec)	-1.0232240E+01	Resid sbdelay (usec)	2.24900E-03	+/-	1.9E-03
Phase delay (usec)			-3.00430218894E+02															Apriori clockrate (us/s)	-5.7299998E-07	Resid phdelay (usec)	3.14893E-06	+/-	4.1E-07
Delay rate (us/s)			-4.13209159560E-02															Apriori rate (us/s)	-4.13209312183E-02	Resid rate (us/s)	1.52623E-08	+/-	4.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	-1.65695523738E-06	Resid phase (deg)	97.6	+/-	12.9

ph/seg (deg) 36.9 22.3  
 amp/seg (%) 32.2 38.9  
 ph/frq (deg) 72.2 25.7  
 amp/frq (%) 118.7 44.9

RMS Theor. Amplitude 0.256 +/- 0.029  
 Search (1024X64) 0.247  
 Interp. 0.000  
 Inc. seg. avg. 0.289  
 Inc. frq. avg. 0.457

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

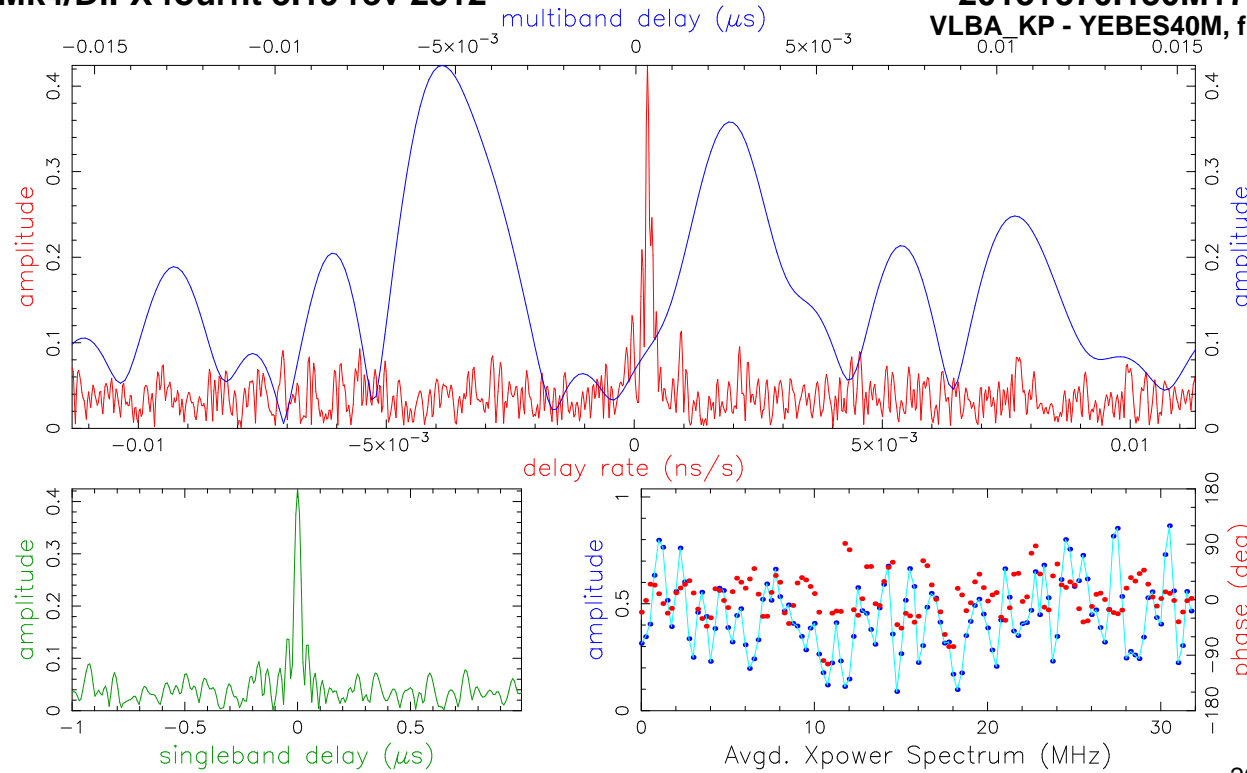
sb window (us) -1.000 1.000  
 mb window (us) -0.016 0.016  
 dr window (ns/s) -0.011 0.011  
 ion window (TEC) 0.00 0.00

i: az 291.9 el 37.9 pa 68.5 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) 295.381 -431.252 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/iY..130M17 Output file: /Exps/c192c/v2/1234/No0065/iY.W.221.130M17

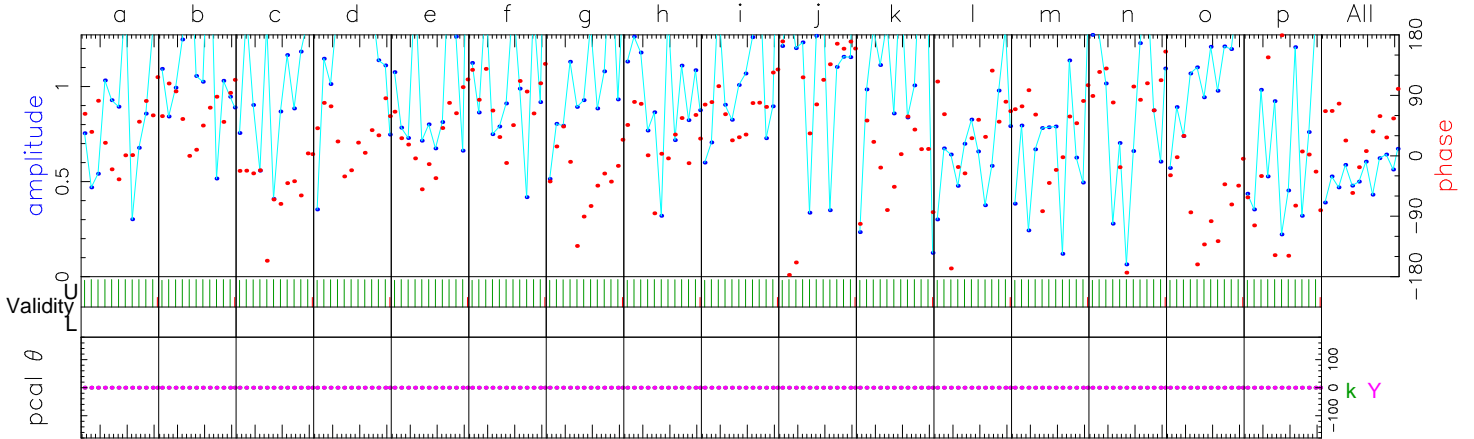
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kY  
VLBA\_KP - YEBES40M, fgroup W, pol LL



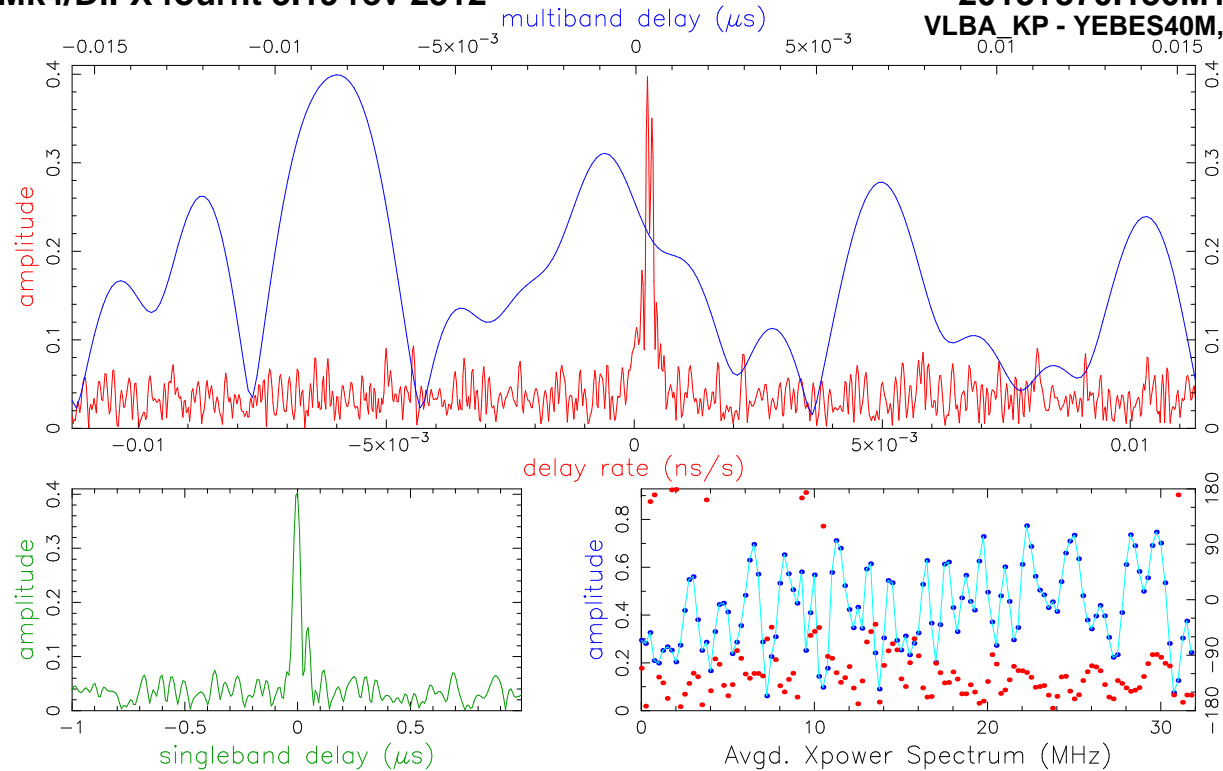
Fringe quality 9  
SNR 14.7  
Int time 161.653  
Amp 0.424  
Phase 36.1  
PFD 1.0e-40  
Delays (us)  
SBD 0.000080  
MBD -0.005373  
Fringe rate (Hz)  
0.023800  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053335  
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	
	33.9	57.6	-38.9	25.4	38.2	84.4	-35.0	33.9	73.9	149.9	3.9	56.4	40.8	100.0	-69.9	-63.5		Phase 36.1	
	0.6	0.9	0.8	1.0	0.7	0.8	0.7	0.7	0.9	0.9	0.8	0.4	0.4	0.7	0.7	0.4		Ampl. 0.7	
	128.2	129.3	128.9	129.0	129.4	128.2	129.2	129.2	129.4	129.1	128.6	130.1	129.3	128.2	128.2	125.8		Sbd box 129.0	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
k: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	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k	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	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL			Tracks
																			Tracks
Group delay (usec)(sbd)	4.40282843277E+03			Apriori delay (usec)			4.40283380563E+03			Resid mbdelay (usec)			-5.37286E-03			+/- 7.3E-05			
Sband delay (usec)	4.40283388513E+03			Apriori clock (usec)			-1.0082699E+01			Resid sbdelay (usec)			7.95000E-05			+/- 1.2E-03			
Phase delay (usec)	4.40283380680E+03			Apriori clockrate (us/s)			-4.1457899E-07			Resid phdelay (usec)			1.16339E-06			+/- 2.5E-07			
Delay rate (us/s)	1.55644180423E+00			Apriori rate (us/s)			1.55644152794E+00			Resid rate (us/s)			2.76289E-07			+/- 2.7E-09			
Total phase (deg)	42.3			Apriori accel (us/s/s)			-3.16865212267E-05			Resid phase (deg)			36.1			+/- 7.8			

ph/seg (deg) 40.0 13.5 Theor. Amplitude 0.424 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 32.2 23.5 Search (1024X64) 0.407 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 62.5 15.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 80.9 27.1 Inc. seg. avg. 0.520 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 k: az 69.4 el 55.9 pa -86.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11223.927 -2674.860 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/kY..130M17 Output file: /Exps/c192c/v2/1234/No0065/kY.W.224.130M17 simultaneous interpolator

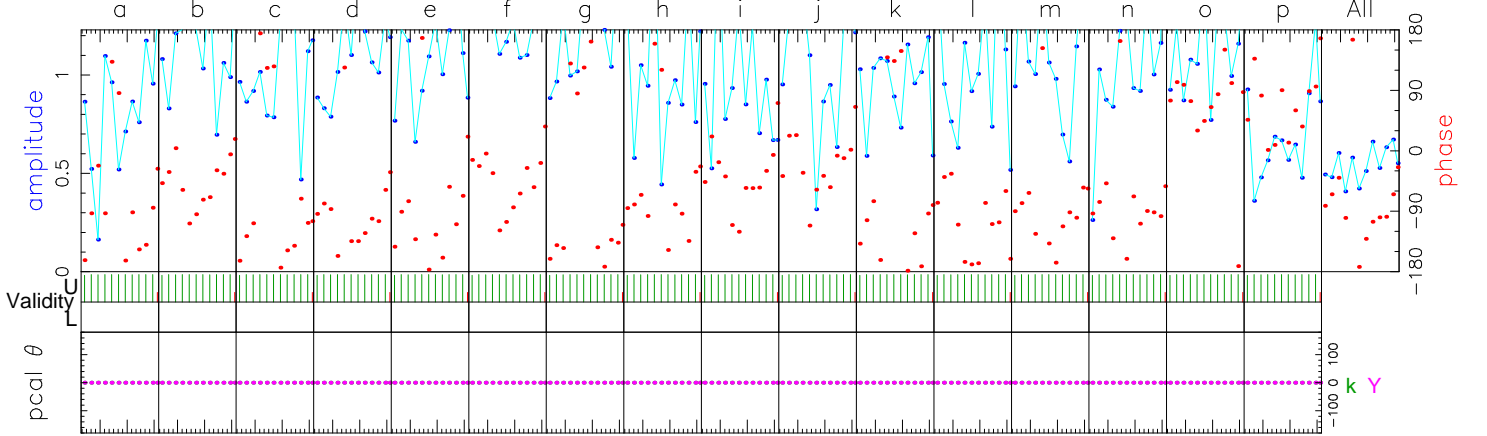


Fringe quality 9

SNR 14.3  
Int time 161.653  
Amp 0.410  
Phase -97.0  
PFD 1.3e-37  
Delays (us)  
SBD -0.003267  
MBD -0.008477  
Fringe rate (Hz) 0.023653  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build 2020:076:150631  
2020:086:053337  
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
	-127.3	-50.4	-151.1	-113.5	-113.5	-40.7	-168.4	-107.2	-47.6	-16.7	-153.4	-100.4	-102.8	-102.3	89.1	64.6	Phase	-97.0
	0.5	0.9	0.8	0.8	0.8	1.0	0.9	0.6	0.7	0.8	0.6	0.8	0.8	0.8	0.8	0.5	Ampl.	0.7
	128.7	128.9	128.8	128.5	129.1	128.7	128.5	129.2	128.4	127.7	129.3	128.3	128.4	128.2	128.4	126.7	Sbd box	128.6
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	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
k: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	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
																	Tracks	
Group delay (usec)(sbd)			4.40282532830E+03					Apriori delay (usec)	4.40283380563E+03				Resid mbdelay (usec)	-8.47733E-03			+/-	7.6E-05
Sband delay (usec)			4.40283053913E+03					Apriori clock (usec)	-1.0082699E+01				Resid sbdelay (usec)	-3.26650E-03			+/-	1.2E-03
Phase delay (usec)			4.40283380251E+03					Apriori clockrate (us/s)	-4.1457899E-07				Resid phdelay (usec)	-3.12654E-06			+/-	2.8E-07
Delay rate (us/s)			1.55644180252E+00					Apriori rate (us/s)	1.55644152794E+00				Resid rate (us/s)	2.74583E-07			+/-	2.8E-09
Total phase (deg)					-90.8			Apriori accel (us/s/s)	-3.16865212267E-05				Resid phase (deg)	-97.0			+/-	8.0

ph/seg (deg) 46.0 13.9  
amp/seg (%) 39.1 24.3  
ph/frq (deg) 77.2 16.1  
amp/frq (%) 91.2 28.1

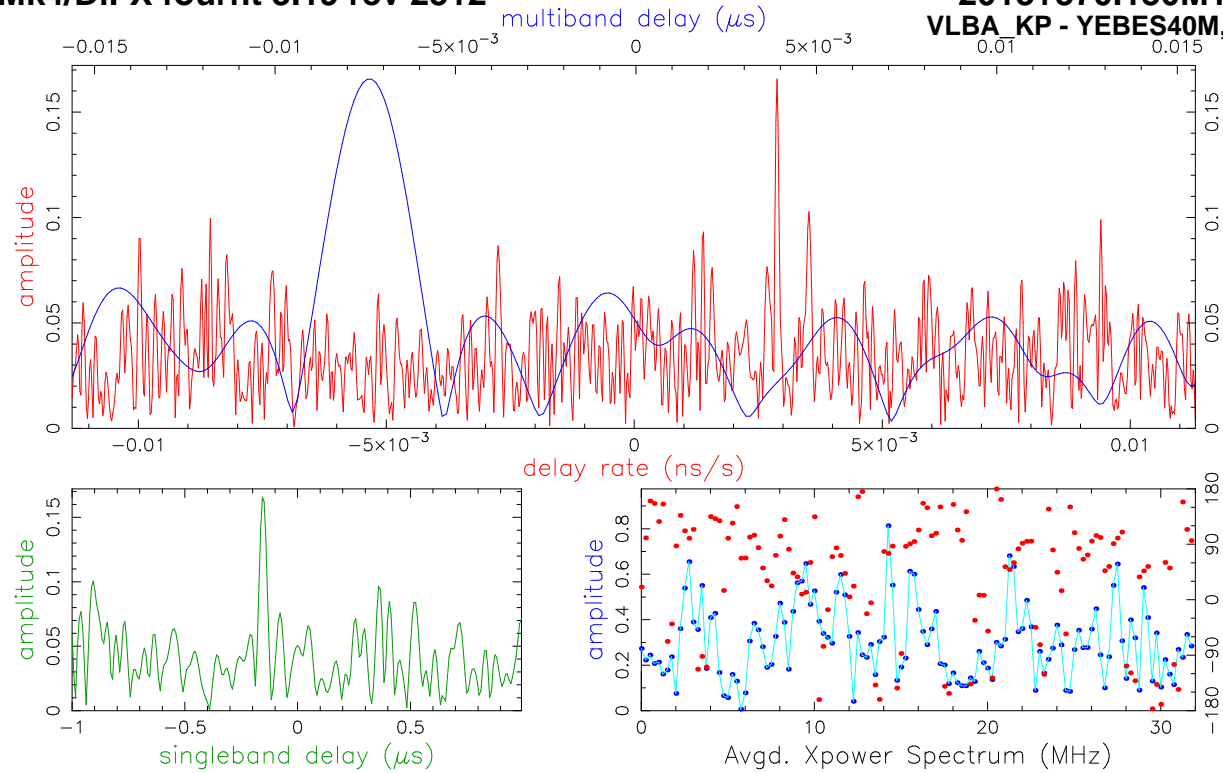
RMS Theor. Amplitude 0.410 +/- 0.029  
Search (1024X64) 0.389  
Interp. 0.000  
Inc. seg. avg. 0.530  
Inc. frq. avg. 0.728

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

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

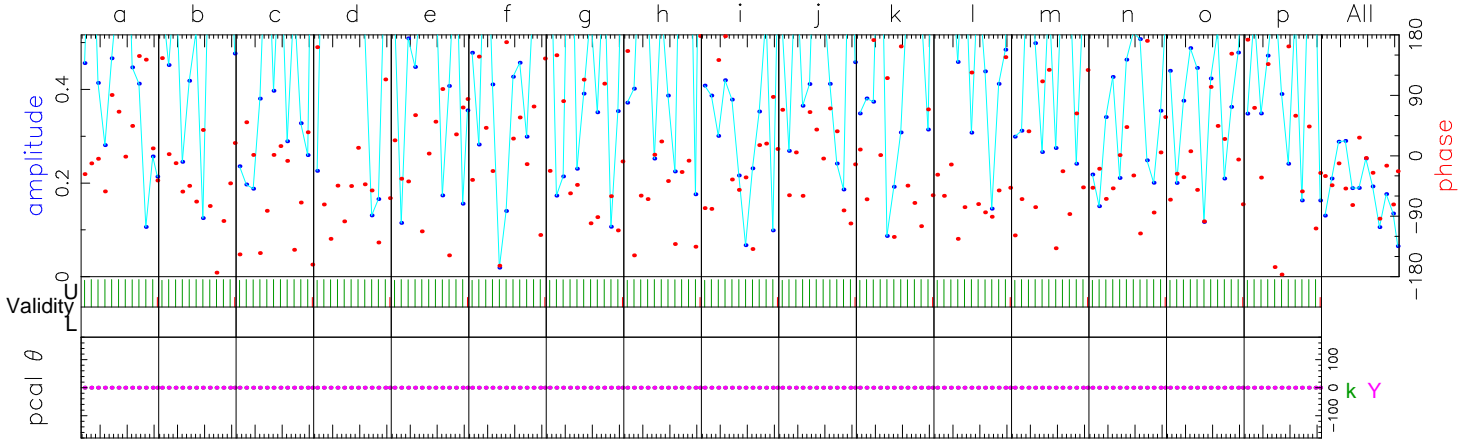
k: az 69.4 el 55.9 pa -86.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11223.927 -2674.860 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/kY..130M17 Output file: /Exps/c192c/v2/1234/No0065/kY.W.237.130M17



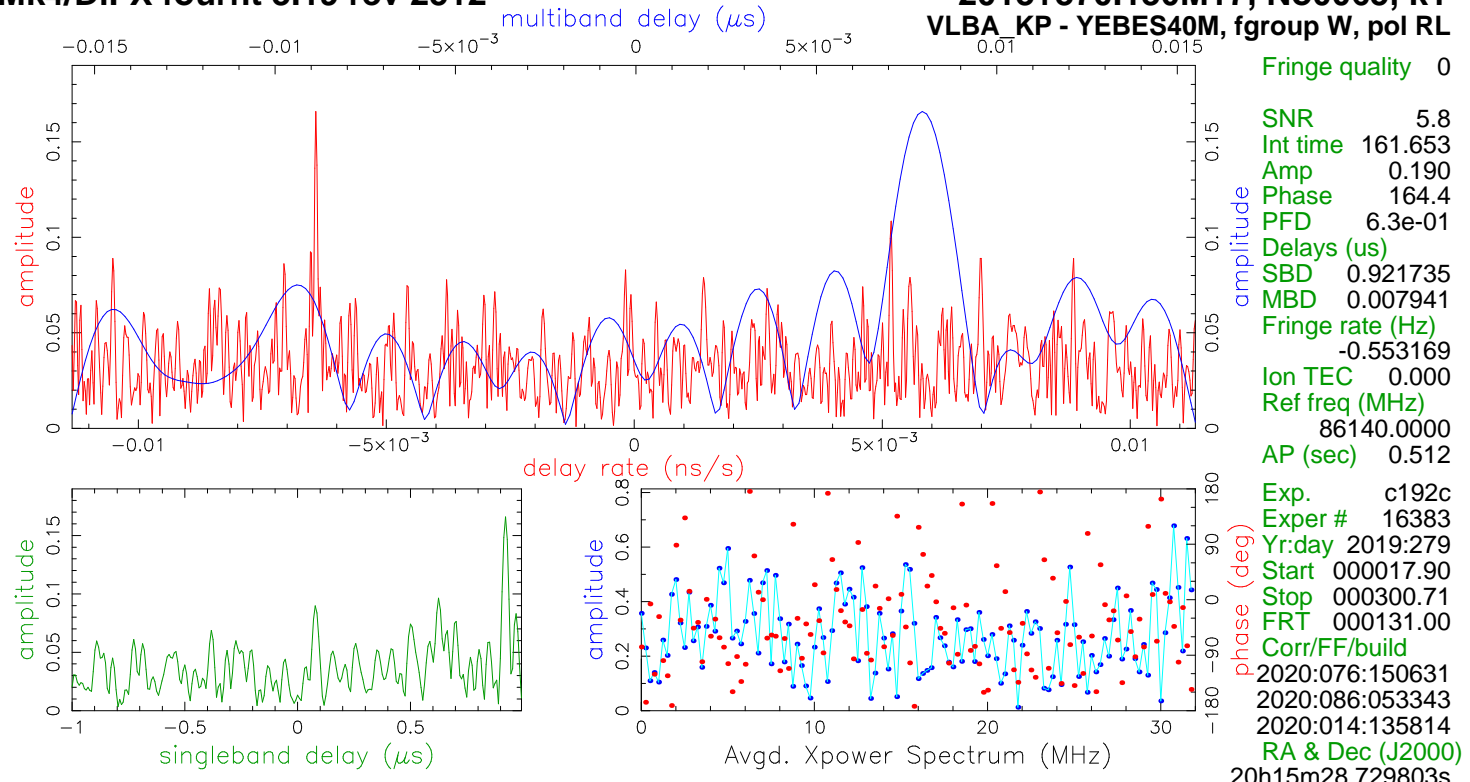
Fringe quality 0  
 SNR 5.8  
 Int time 161.653  
 Amp 0.172  
 Phase -31.0  
 PFD 5.1e-01  
 Delays (us)  
 SBD -0.153389  
 MBD -0.007345  
 Fringe rate (Hz) 0.247973  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build 2020:076:150631  
 2020:086:053339  
 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

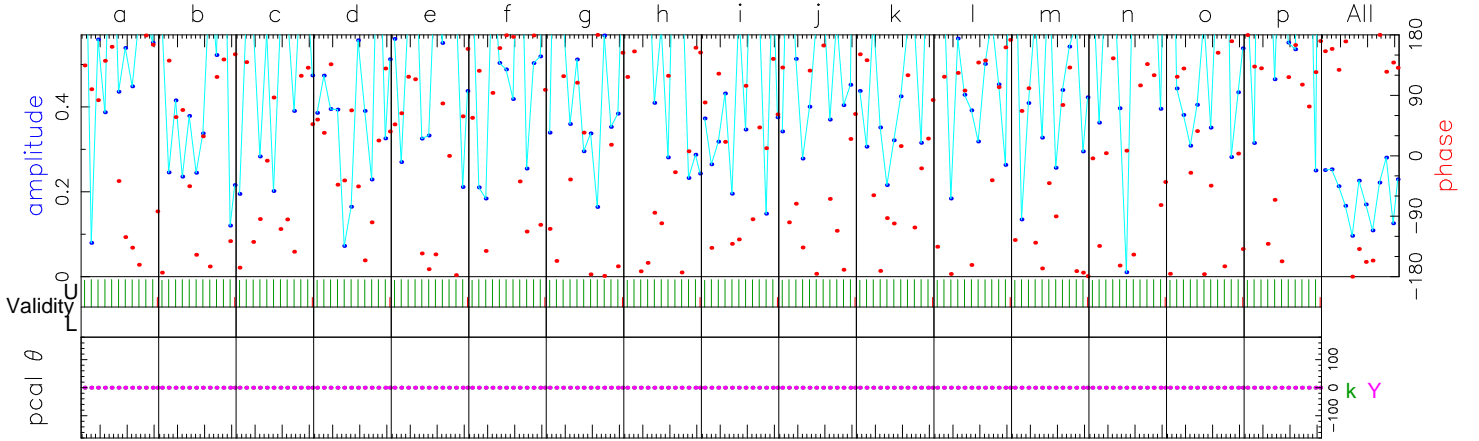


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k: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		
k: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		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd)		4.40267021101E+03				Apriori delay (usec)		4.40283380563E+03			Resid mbdelay (usec)		-7.34462E-03		+/-	1.9E-04		
Sband delay (usec)		4.40268041713E+03				Apriori clock (usec)		-1.0082699E+01			Resid sbdelay (usec)		-1.53389E-01		+/-	3.0E-03		
Phase delay (usec)		4.40283380463E+03				Apriori clockrate (us/s)		-4.1457899E-07			Resid phdelay (usec)		-9.99235E-07		+/-	6.3E-07		
Delay rate (us/s)		1.55644440666E+00				Apriori rate (us/s)		1.55644152794E+00			Resid rate (us/s)		2.87872E-06		+/-	6.7E-09		
Total phase (deg)					-24.8	Apriori accel (us/s/s)		-3.16865212267E-05			Resid phase (deg)		-31.0		+/-	19.7		

ph/seg (deg) 33.6 34.1 Search (1024X64) 0.162 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 39.7 59.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 54.1 39.3 Inc. seg. avg. 0.168 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 51.8 68.6 Inc. frq. avg. 0.173 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 k: az 69.4 el 55.9 pa -86.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11223.927 -2674.860 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/kY..130M17 Output file: /Exps/c192c/v2/1234/No0065/kY.W.251.130M17



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



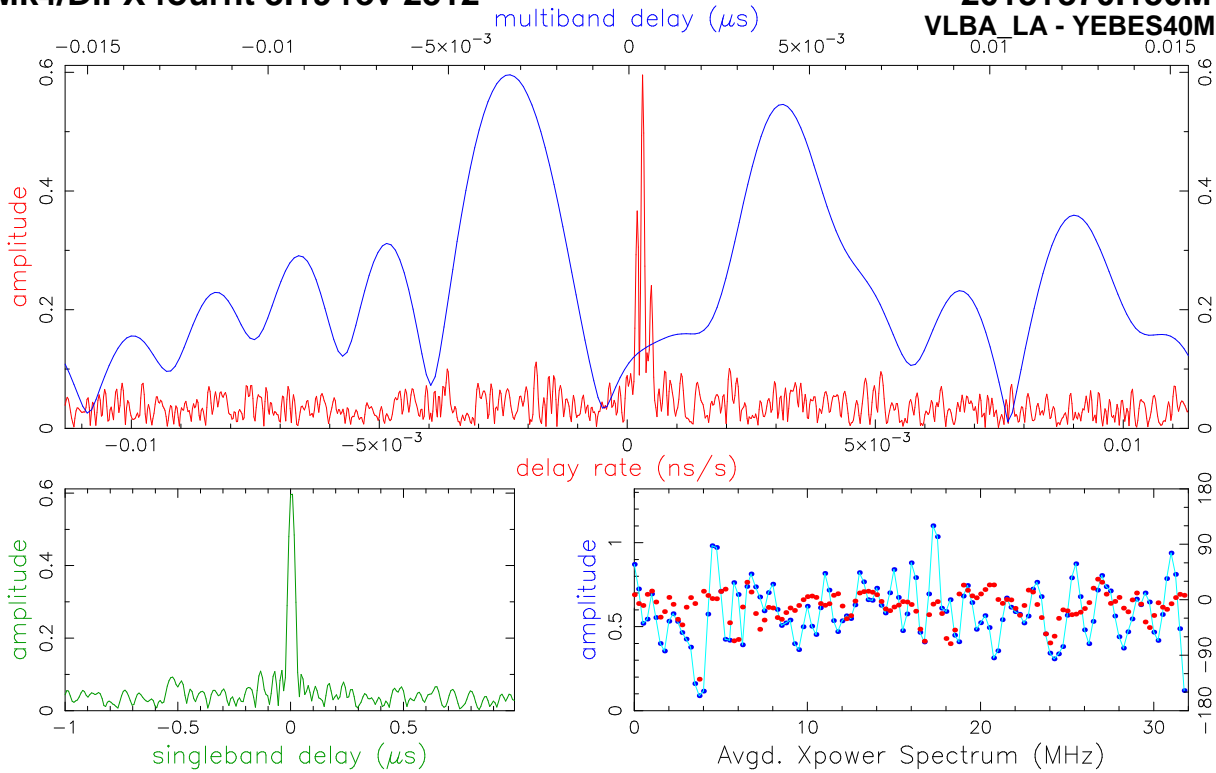
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	173.2	147.3	-164.9	21.6	117.6	156.1	172.7	-170.7	140.5	-143.3	-42.1	147.1	-158.8	144.6	173.7	148.2	Phase	164.4
	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.2	0.0	0.3	0.2	0.2	0.3	0.5	Ampl.	0.2
	245.7	254.5	174.5	189.9	14.0	161.6	241.0	192.1	223.6	253.9	183.7	145.7	196.3	51.7	214.3	223.3	Sbd box	247.0
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
k: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	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
k	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)		4.40374799676E+03								4.40283380563E+03							Resid mbdelay (usec)	7.94113E-03 +/- 1.9E-04
Sband delay (usec)		4.40375554013E+03								-1.0082699E+01							Resid sbdelay (usec)	9.21735E-01 +/- 3.0E-03
Phase delay (usec)		4.40283381094E+03								-4.1457899E-07							Resid phdelay (usec)	5.30298E-06 +/- 6.4E-07
Delay rate (us/s)		1.55643510620E+00								1.55644152794E+00							Resid rate (us/s)	-6.42174E-06 +/- 6.8E-09
Total phase (deg)				170.6						-3.16865212267E-05							Resid phase (deg)	164.4 +/- 19.9

	RMS	Theor.	Amplitude	0.190 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	30.9	34.4	Search (1024X64)	0.164	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	39.2	60.1	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	62.1	39.7	Inc. seg. avg.	0.188	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	66.4	69.3	Inc. frq. avg.	0.188	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11223.927 -2674.860 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/kY...130M17 Output file: /Exps/c192c/v2/1234/No0065/kY.W.281.130M17



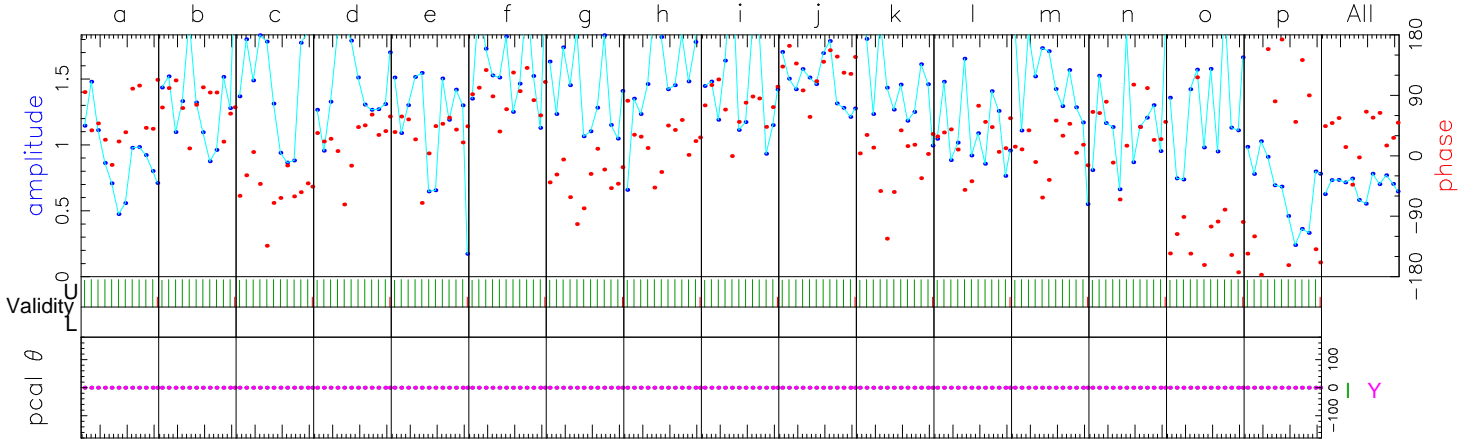


Fringe quality 6

SNR 21.3  
Int time 162.012  
Amp 0.612  
Phase 33.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.003990  
MBD -0.003278  
Fringe rate (Hz)  
0.025815  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053339  
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

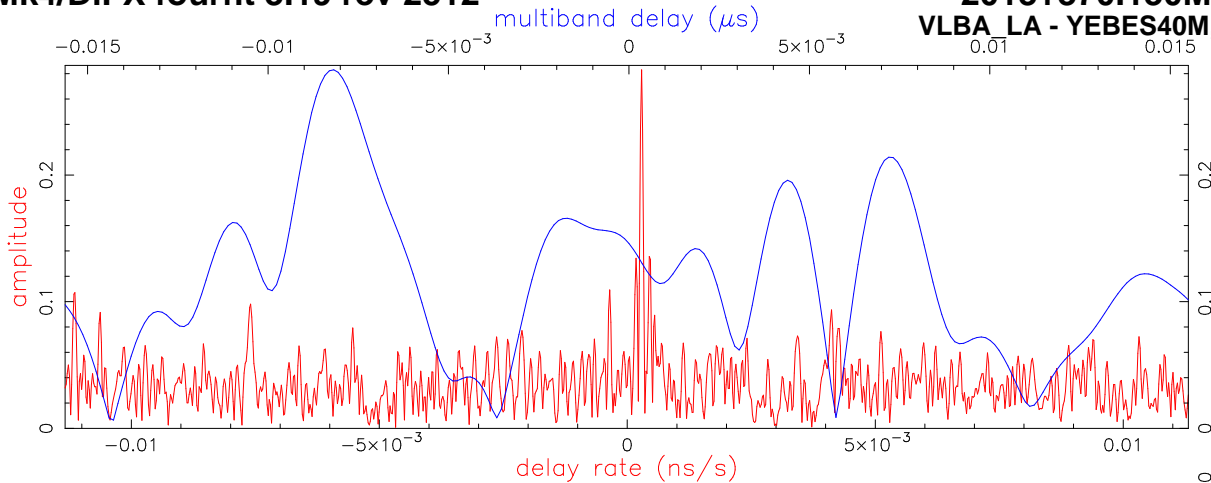


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	53.8	70.5	-49.8	20.2	32.0	94.8	-38.9	17.5	71.0	128.7	-6.9	19.7	9.5	44.6	-130.6	-177.7		Phase 33.2
	0.7	1.1	1.2	1.2	1.0	1.4	1.2	1.3	1.2	1.3	1.1	0.9	1.2	0.9	0.9	0.4		Ampl. 1.1
	127.9	129.8	129.4	129.2	129.3	129.2	128.8	129.3	129.5	129.3	129.4	128.5	129.2	128.8	128.1	127.8		Sbd box 129.5
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 phase
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 5.43658810629E+03 Apriori delay (usec) 5.43659138424E+03 Resid mbdelay (usec) -3.27795E-03 +/- 5.1E-05  
 Sband delay (usec) 5.43659537474E+03 Apriori clock (usec) -1.0451232E+01 Resid sbdelay (usec) 3.99050E-03 +/- 8.1E-04  
 Phase delay (usec) 5.43659138531E+03 Apriori clockrate (us/s) -5.7147201E-07 Resid phdelay (usec) 1.07187E-06 +/- 1.7E-07  
 Delay rate (us/s) 1.45271294271E+00 Apriori rate (us/s) 1.45271264302E+00 Resid rate (us/s) 2.99682E-07 +/- 1.8E-09  
 Total phase (deg) 335.0 Apriori accel (us/s/s) -3.34086267399E-05 Resid phase (deg) 33.2 +/- 5.4

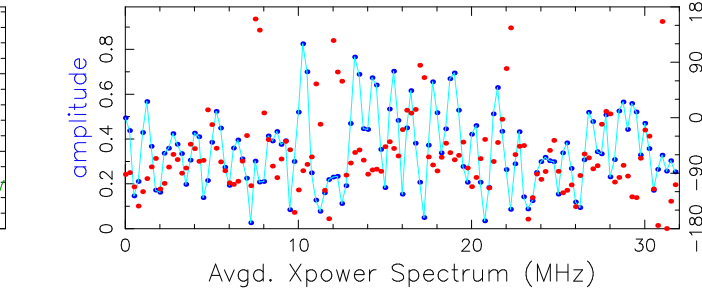
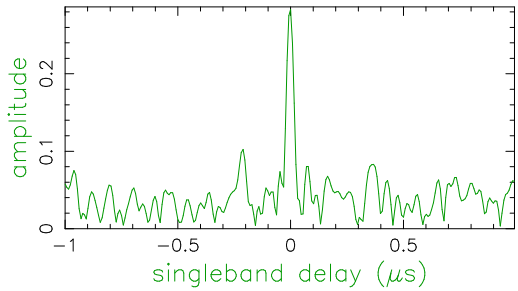
RMS Theor. Amplitude 0.612 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 31.6 9.3 Search (1024X64) 0.572 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 17.8 16.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 75.7 10.8 Inc. seg. avg. 0.685 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 86.1 18.8 Inc. frq. avg. 1.060 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 76.3 el 61.3 pa -82.0 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10478.194 -2392.051 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/IY..130M17 Output file: /Exps/c192c/v2/1234/No0065/IY.W.249.130M17



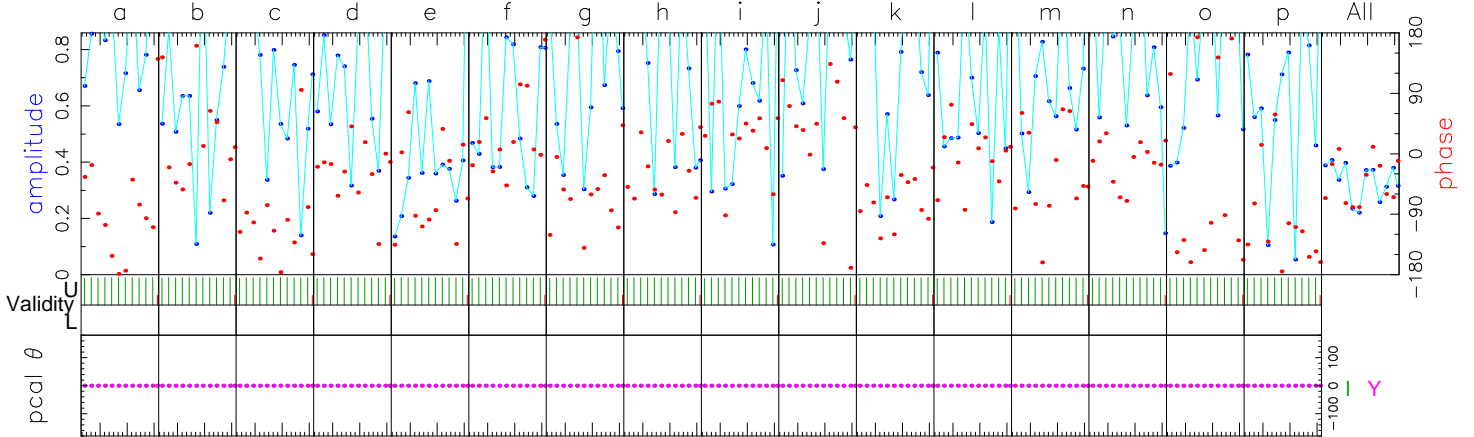
Fringe quality 9

SNR 10.0  
Int time 162.012  
Amp 0.287  
Phase -40.4  
PFD 4.4e-15  
Delays (us)  
SBD -0.002793  
MBD -0.008255  
Fringe rate (Hz)  
0.025550  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053340  
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
	-96.5	-9.8	-115.9	-20.4	-62.3	16.6	-78.2	-23.7	38.1	72.4	-60.9	-8.9	-37.7	-10.0	-145.8	-127.9	Phase	-40.4
	0.5	0.5	0.6	0.6	0.2	0.4	0.5	0.6	0.6	0.5	0.7	0.4	0.3	0.7	0.6	0.3	Ampl.	0.5
	127.1	128.7	128.6	128.5	175.9	127.6	129.1	128.8	128.8	128.0	128.7	129.8	31.7	128.7	128.3	124.0	Sbd box	128.6
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) 5.43658312921E+03 Apriori delay (usec) 5.43659138424E+03 Resid mbdelay (usec) -8.25503E-03 +/- 1.1E-04  
 Sband delay (usec) 5.43658859074E+03 Apriori clock (usec) -1.0451232E+01 Resid sbdelay (usec) -2.79350E-03 +/- 1.7E-03  
 Phase delay (usec) 5.43659138294E+03 Apriori clockrate (us/s) -5.7147201E-07 Resid phdelay (usec) -1.30255E-06 +/- 3.7E-07  
 Delay rate (us/s) 1.45271293963E+00 Apriori rate (us/s) 1.45271264302E+00 Resid rate (us/s) 2.96609E-07 +/- 3.9E-09  
 Total phase (deg) 261.4 Apriori accel (us/s/s) -3.34086267399E-05 Resid phase (deg) -40.4 +/- 11.5

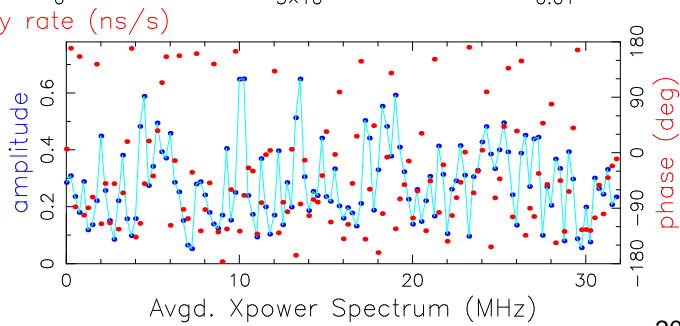
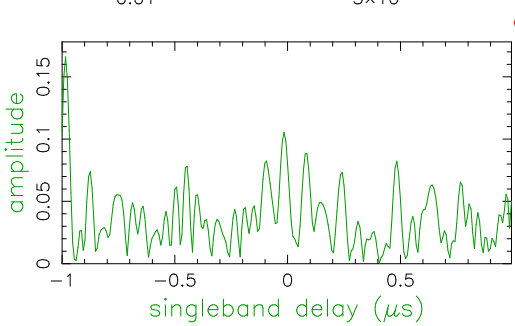
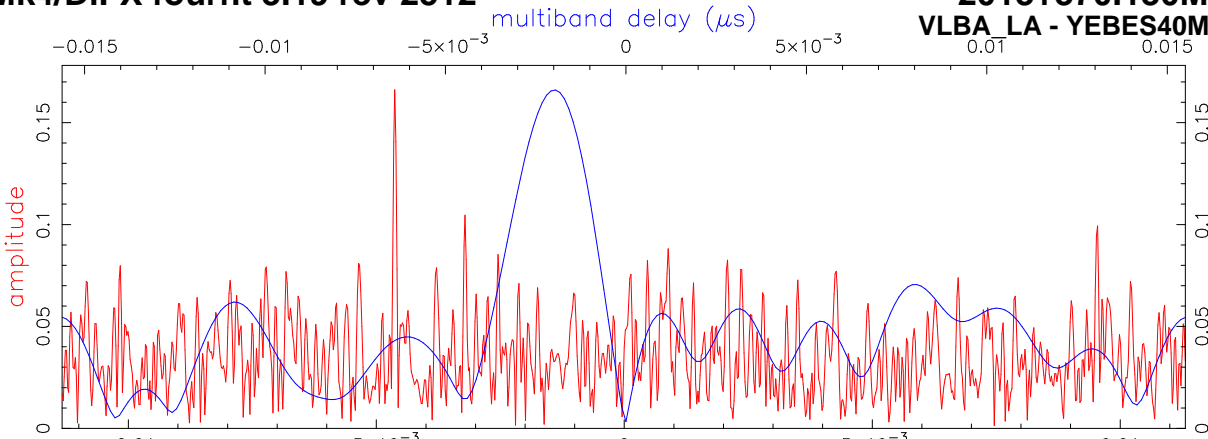
RMS Theor. Amplitude 0.287 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 32.7 19.9 Search (1024X64) 0.274 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 27.9 34.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 63.0 23.0 Inc. seg. avg. 0.315 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 90.4 40.1 Inc. frq. avg. 0.470 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 76.3 el 61.3 pa -82.0 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10478.194 -2392.051 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/IY..130M17 Output file: /Exps/c192c/v2/1234/No0065/IY.W.261.130M17

Fringe quality 0

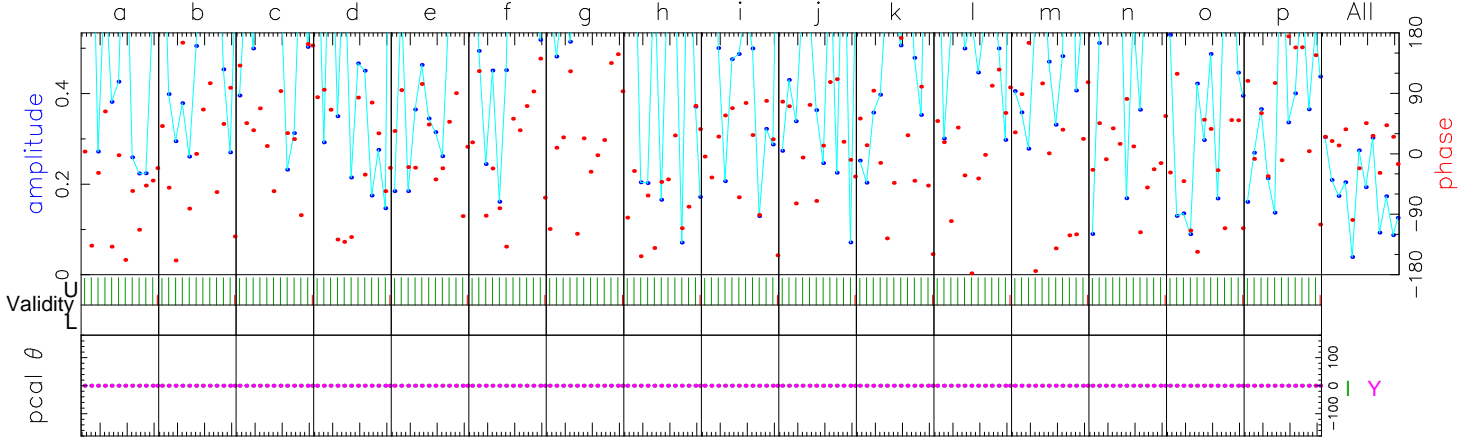
SNR 5.8  
Int time 162.012  
Amp 0.178  
Phase 18.2  
PFD 6.0e-01  
Delays (us)  
SBD -0.984586  
MBD -0.001988  
Fringe rate (Hz)  
-0.399127  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053343  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

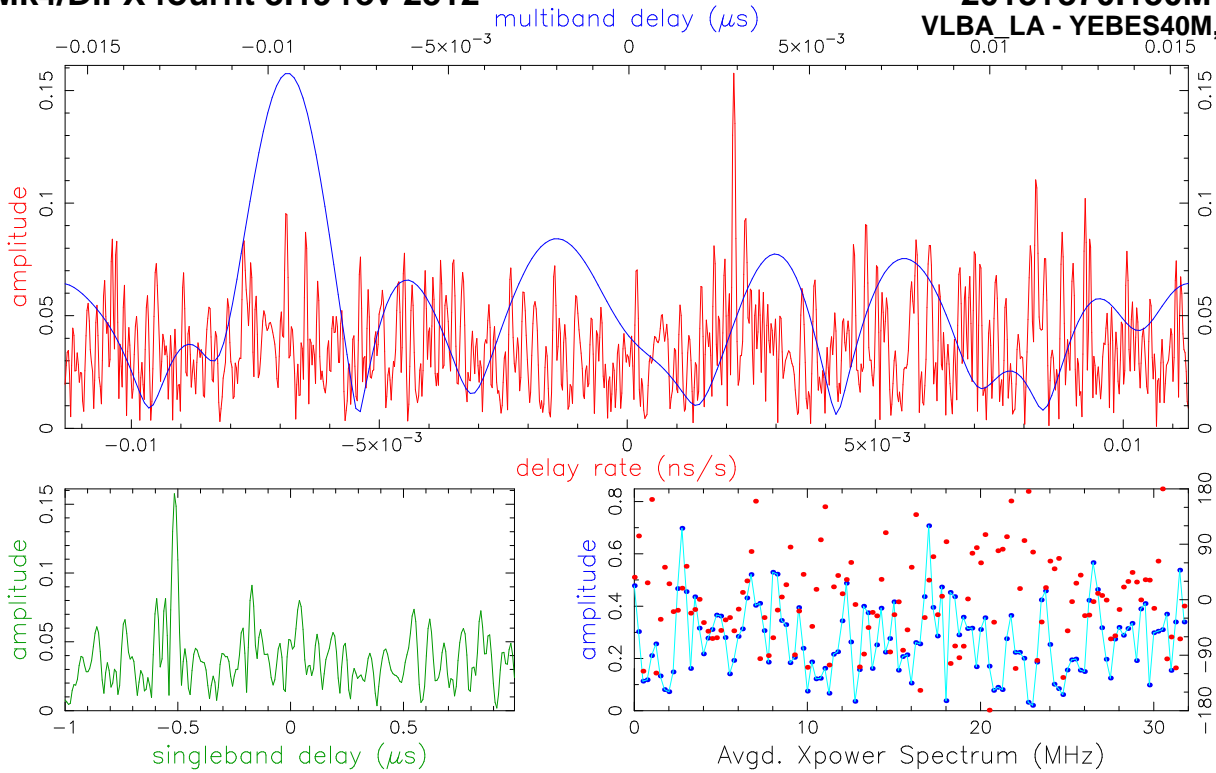
Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



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	
-58.2	31.0	36.0	55.7	35.1	49.9	30.8	-54.4	9.7	35.5	-29.7	45.0	125.7	3.0	5.0	94.0	Phase	18.2	
0.2	0.2	0.3	0.1	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.1	0.5	0.1	Ampl.	0.2	
131.0	180.6	142.8	15.6	199.1	197.3	30.8	225.0	204.3	128.4	65.4	118.5	239.1	3.2	229.9	65.6	Sbd box	3.0	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used		
I	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	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	ManI PC		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC		
I	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	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	

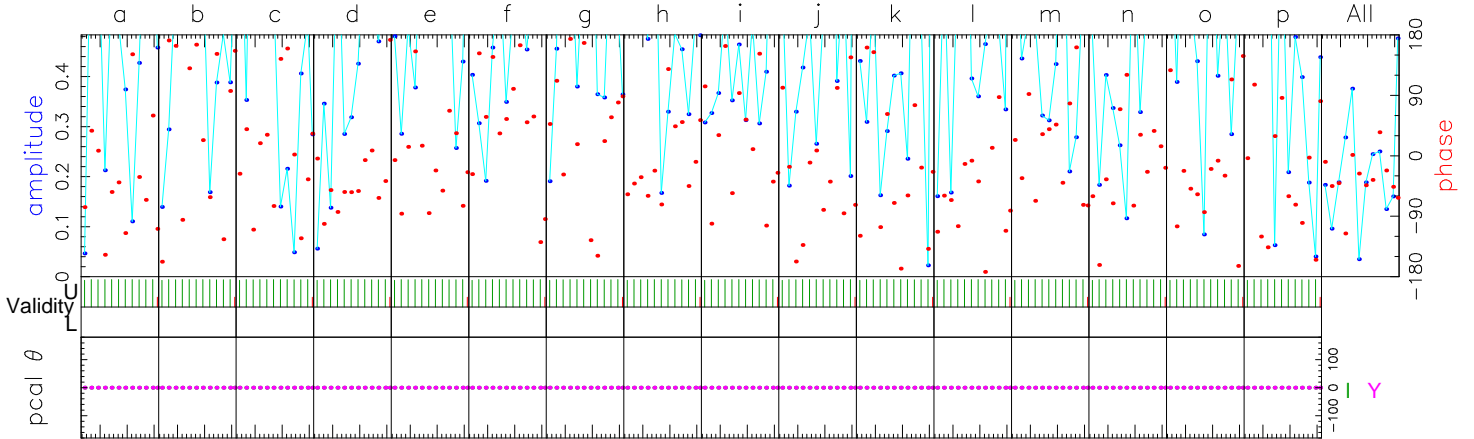
Group delay (usec)(sbd)	5.43562064599E+03	Apriori delay (usec)	5.43659138424E+03	Resid mbdelay (usec)	-1.98825E-03	+/-	1.9E-04
Sband delay (usec)	5.43560679824E+03	Apriori clock (usec)	-1.0451232E+01	Resid sbdelay (usec)	-9.84586E-01	+/-	3.0E-03
Phase delay (usec)	5.43659138482E+03	Apriori clockrate (us/s)	-5.7147201E-07	Resid phdelay (usec)	5.86019E-07	+/-	6.4E-07
Delay rate (us/s)	1.45270800956E+00	Apriori rate (us/s)	1.45271264302E+00	Resid rate (us/s)	-4.63347E-06	+/-	6.8E-09
Total phase (deg)	320.0	Apriori accel (us/s/s)	-3.34086267399E-05	Resid phase (deg)	18.2	+/-	19.8

ph/seg (deg)	41.6	RMS	51.0	Theor.	34.3	Amplitude	0.178 +/- 0.031	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5				
amp/seg (%)	51.0	Search (1024X64)	0.162	Inc. seg. avg.	0.168	Inc. frq. avg.	0.181	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000				
ph/frq (deg)	50.4	Interp.	0.000	Sample rate (MSamp/s):	64	Data rate (Mb/s):	2048	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016			
amp/frq (%)	60.5	Search (1024X64)	0.162	Inc. seg. avg.	0.168	Inc. frq. avg.	0.181	Sample rate (MSamp/s):	64	Data rate (Mb/s):	2048	nlags: 128	t_cohere infinite	dr window (ns/s)	-0.011 0.011
I: az 76.3 el 61.3 pa -82.0	Y: az 289.5 el 38.9 pa 64.3	u, v (fr/asec)	-10478.194 -2392.051	ion window (TEC)	0.00	0.00	simultaneous interpolator								



Fringe quality 0  
SNR 5.5  
Int time 162.012  
Amp 0.161  
Phase -31.2  
PFD 9.8e-01  
Delays (us)  
SBD -0.513701  
MBD -0.009455  
Fringe rate (Hz) 0.184403  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053345  
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

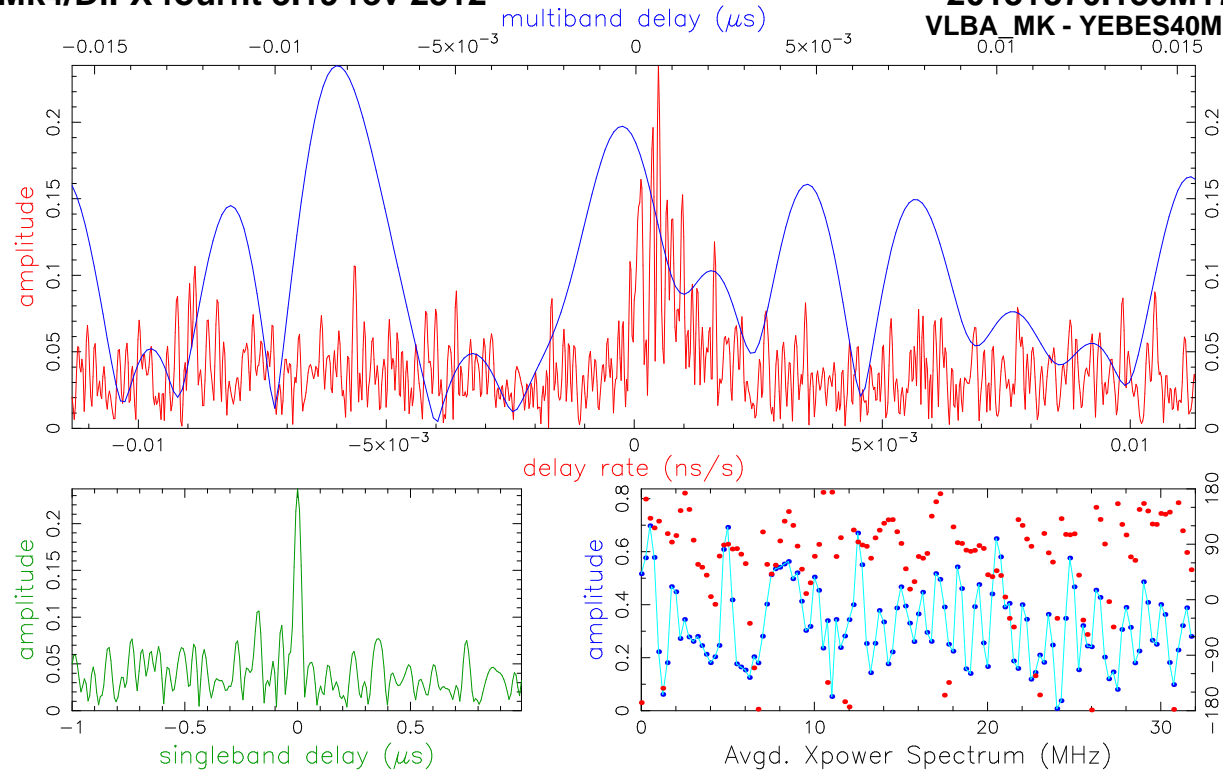


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-25.1	167.9	-39.5	-48.1	-17.1	100.3	108.0	-24.6	-4.8	-55.4	-44.3	-49.0	-10.5	-18.0	-38.7	-88.2	Phase	-31.2	
	0.3	0.2	0.2	0.3	0.3	0.1	0.1	0.4	0.1	0.2	0.0	0.3	0.3	0.2	0.1	0.1	Ampl.	0.2	
	45.4	160.5	234.5	64.1	209.9	50.8	225.8	63.1	179.1	151.6	245.2	20.8	136.0	117.9	189.7	196.1	Sbd box	63.2	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)			5.43608192951E+03						Apriori delay (usec)	5.43659138424E+03							Resid mbdelay (usec)	-9.45472E-03	+/- 2.0E-04
Sband delay (usec)			5.43607768324E+03						Apriori clock (usec)	-1.0451232E+01							Resid sbdelay (usec)	-5.13701E-01	+/- 3.1E-03
Phase delay (usec)			5.43659138323E+03						Apriori clockrate (us/s)	-5.7147201E-07							Resid phdelay (usec)	-1.00620E-06	+/- 6.7E-07
Delay rate (us/s)			1.45271478376E+00						Apriori rate (us/s)	1.45271264302E+00							Resid rate (us/s)	2.14074E-06	+/- 7.1E-09
Total phase (deg)				270.6					Apriori accel (us/s/s)	-3.34086267399E-05							Resid phase (deg)	-31.2	+/- 20.7

	RMS	Theor.	Amplitude	0.161 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	35.4	35.9	Search (1024X64)	0.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	68.8	62.7	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	70.1	41.5	Inc. seg. avg.	0.172	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	77.2	72.4	Inc. frq. avg.	0.172	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 128	t_cohere infinite

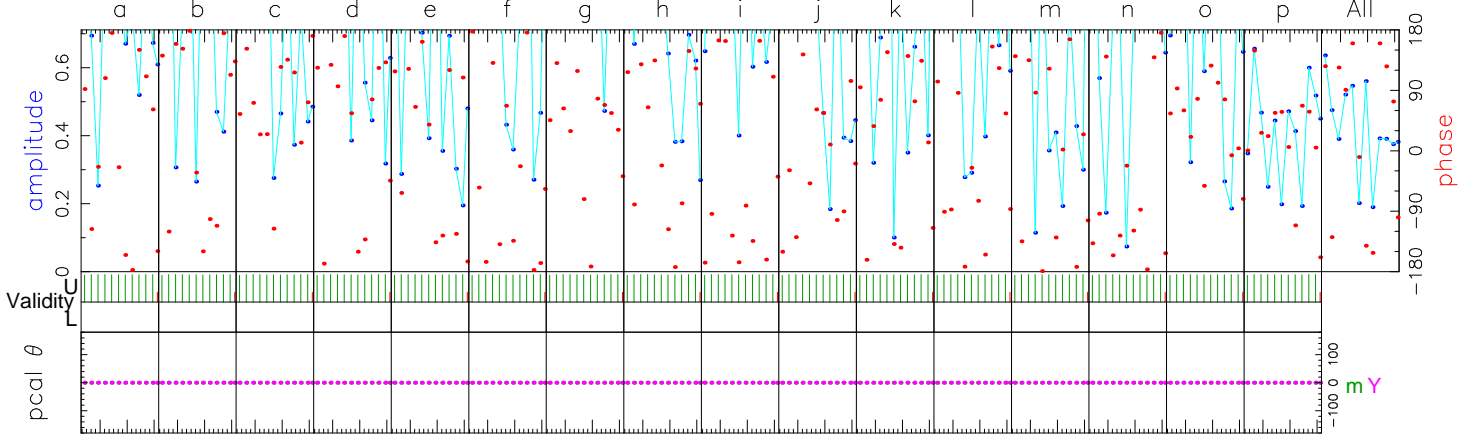
I: az 76.3 el 61.3 pa -82.0 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10478.194 -2392.051 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/IY..130M17 Output file: /Exps/c192c/v2/1234/No0065/IY.W.299.130M17



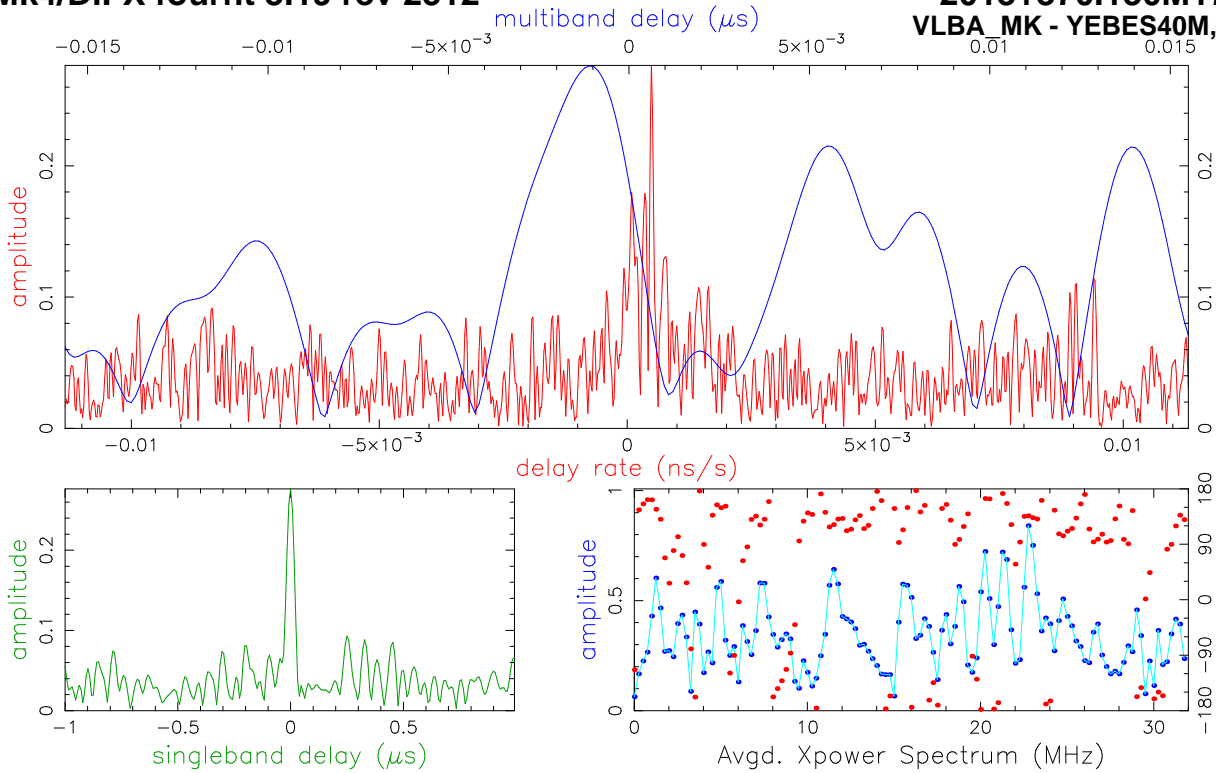
Fringe quality 9  
SNR 8.2  
Int time 161.575  
Amp 0.237  
Phase 149.2  
PFD 3.1e-08  
Delays (us)  
SBD 0.000177  
MBD -0.008273  
Fringe rate (Hz)  
0.041567  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053341  
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
	141.3	-171.2	73.1	149.7	148.6	-161.7	66.7	129.0	-151.9	-110.3	137.9	161.5	171.7	-147.0	67.7	39.2	Phase	149.2
	0.3	0.6	0.5	0.6	0.3	0.4	0.6	0.3	0.6	0.2	0.4	0.1	0.4	0.6	0.5	0.2	Ampl.	0.4
	126.9	128.9	127.9	129.1	54.6	129.6	127.8	75.0	129.4	181.8	128.2	64.8	128.8	129.3	127.7	131.2	Sbd box	129.0
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	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
m: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	
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
																	Tracks	
Group delay (usec)(sbd)		-7.45026494810E+03				Apriori delay (usec)		-7.45025667503E+03				Resid mbdelay (usec)		-8.27308E-03			+/-	1.3E-04
Sband delay (usec)		-7.45025649753E+03				Apriori clock (usec)		-7.0849600E+00				Resid sbdelay (usec)		1.77500E-04			+/-	2.1E-03
Phase delay (usec)		-7.45025667021E+03				Apriori clockrate (us/s)		-2.2869228E-07				Resid phdelay (usec)		4.81200E-06			+/-	4.5E-07
Delay rate (us/s)		2.02749574610E+00				Apriori rate (us/s)		2.02749526356E+00				Resid rate (us/s)		4.82546E-07			+/-	4.8E-09
Total phase (deg)					-206.0	Apriori accel (us/s/s)		1.83766276431E-05				Resid phase (deg)		149.2			+/-	13.9

ph/seg (deg) RMS Theor. Amplitude 0.237 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 96.6 42.1 Search (1024X64) 0.235 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 62.2 27.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 98.0 48.6 Inc. seg. avg. 0.389 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 m: az 55.4 el 15.6 pa -76.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -14577.314 -1005.419 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/mY..130M17 Output file: /Exps/c192c/v2/1234/No0065/mY.W.265.130M17 simultaneous interpolator

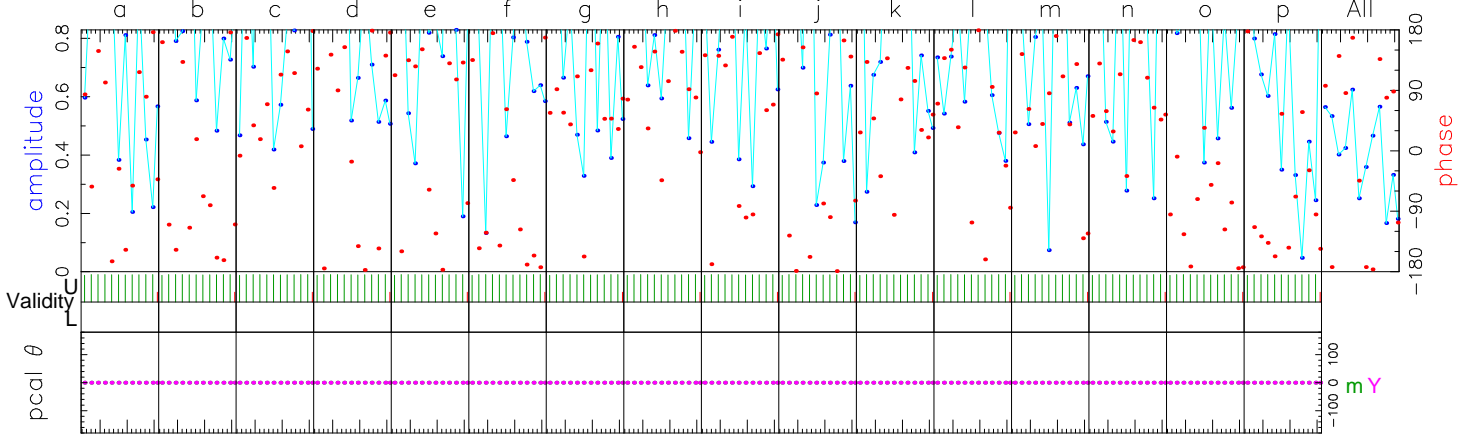


Fringe quality 9

SNR 9.6  
Int time 161.575  
Amp 0.276  
Phase 143.4  
PFD 1.6e-13  
Delays (us)  
SBD -0.000672  
MBD -0.001071  
Fringe rate (Hz)  
0.041350  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

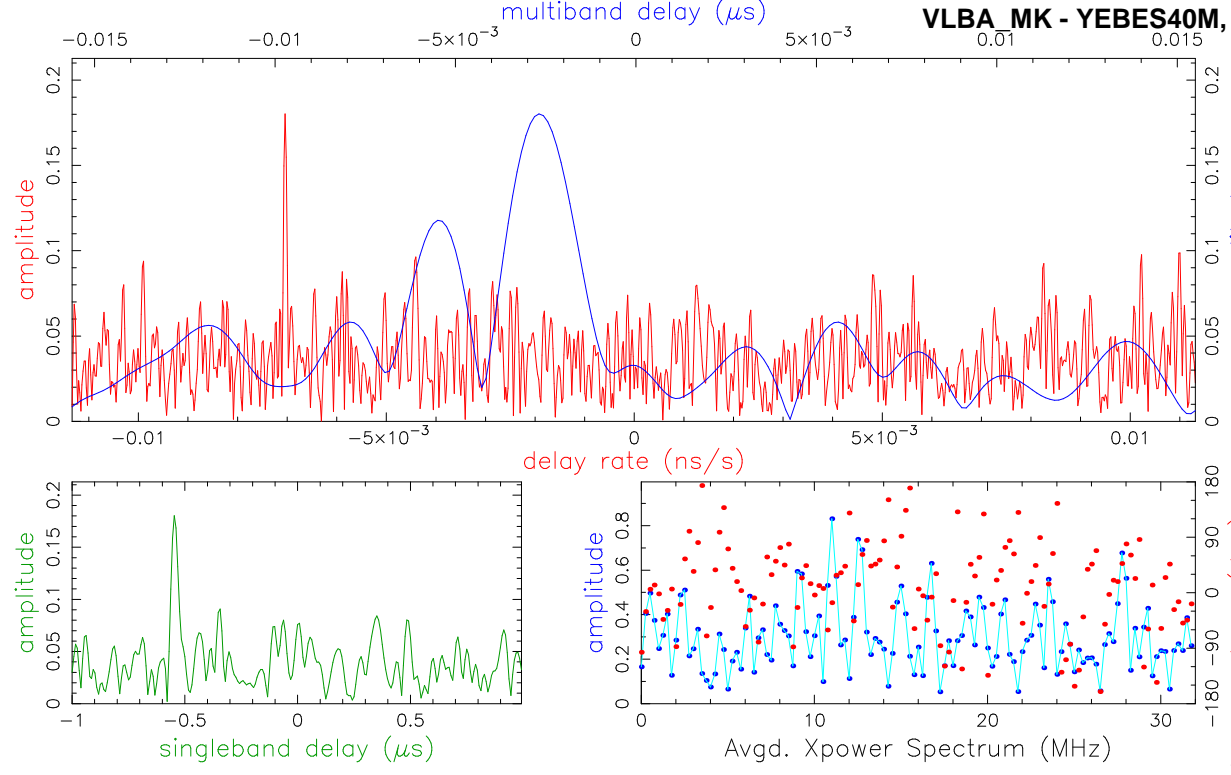
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053344  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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



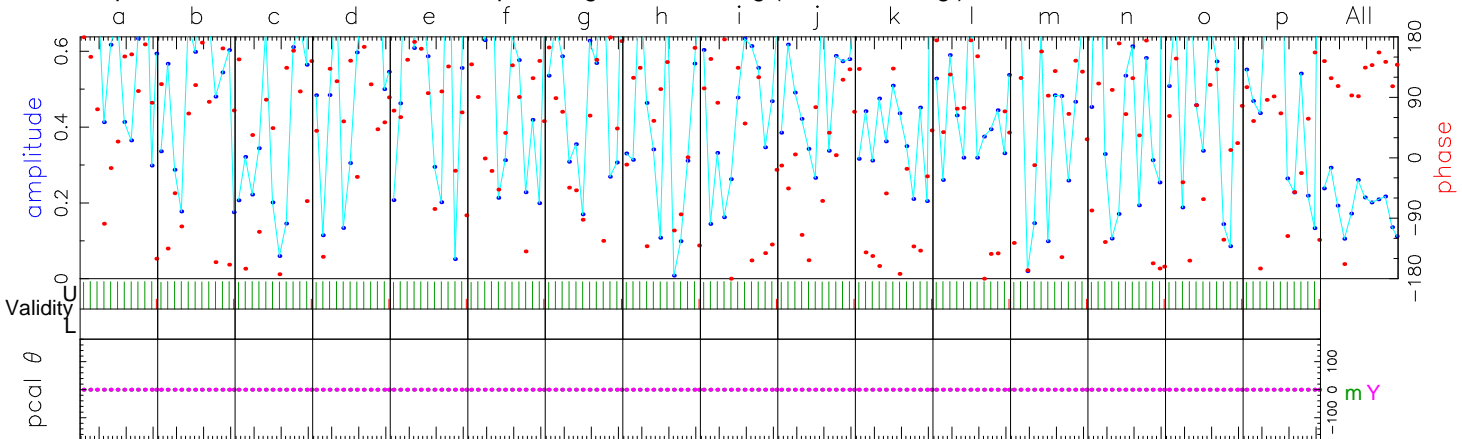
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	133.6	-132.0	68.0	154.3	161.1	-158.5	75.3	117.3	144.8	-173.5	66.0	142.5	89.8	102.8	-93.5	-139.4	Phase	143.4				
	0.3	0.6	0.5	0.7	0.5	0.5	0.6	0.6	0.4	0.6	0.5	0.2	0.4	0.6	0.5	0.4	Ampl.	0.5				
	120.4	128.8	129.7	129.1	129.2	129.1	129.7	129.0	129.3	129.2	129.5	72.5	68.9	128.6	128.4	127.7	Sbd box	128.9				
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					
m	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					
m: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					
m: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					
m	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					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-7.45025774601E+03														Apriori delay (usec)	-7.45025667503E+03	Resid mbdelay (usec)	-1.07098E-03	+/-	1.1E-04
Sband delay (usec)			-7.45025734753E+03														Apriori clock (usec)	-7.0849600E+00	Resid sbdelay (usec)	-6.72500E-04	+/-	1.8E-03
Phase delay (usec)			-7.45025667040E+03														Apriori clockrate (us/s)	-2.2869228E-07	Resid phdelay (usec)	4.62461E-06	+/-	3.8E-07
Delay rate (us/s)			2.02749574359E+00														Apriori rate (us/s)	2.02749526356E+00	Resid rate (us/s)	4.80029E-07	+/-	4.1E-09
Total phase (deg)																	Apriori accel (us/s/s)	1.83766276431E-05	Resid phase (deg)	143.4	+/-	11.9

ph/seg (deg) 68.1 20.7 Theor. Amplitude 0.276 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 72.2 36.1 Search (1024X64) 0.270 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 63.0 23.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 94.2 41.7 Inc. seg. avg. 0.393 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 m: az 55.4 el 15.6 pa -76.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -14577.314 -1005.419 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator



Fringe quality 0  
SNR 6.3  
Int time 161.575  
Amp 0.213  
Phase 126.9  
PFD 4.6e-02  
Delays (us)  
SBD -0.545785  
MBD -0.002659  
Fringe rate (Hz)  
-0.606564  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053346  
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
UL	134.6	152.8	131.2	90.5	130.8	88.2	127.7	143.0	141.8	0.3	-153.4	145.5	152.7	148.1	102.2	80.6	Phase	126.9
m	0.3	0.3	0.2	0.4	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	Ampl.	0.2
Y	230.1	74.1	169.3	206.4	78.6	224.3	249.0	38.8	97.1	240.4	179.9	154.7	75.6	98.0	83.4	237.0	Sbd box	59.1
m	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m: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	
m: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	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

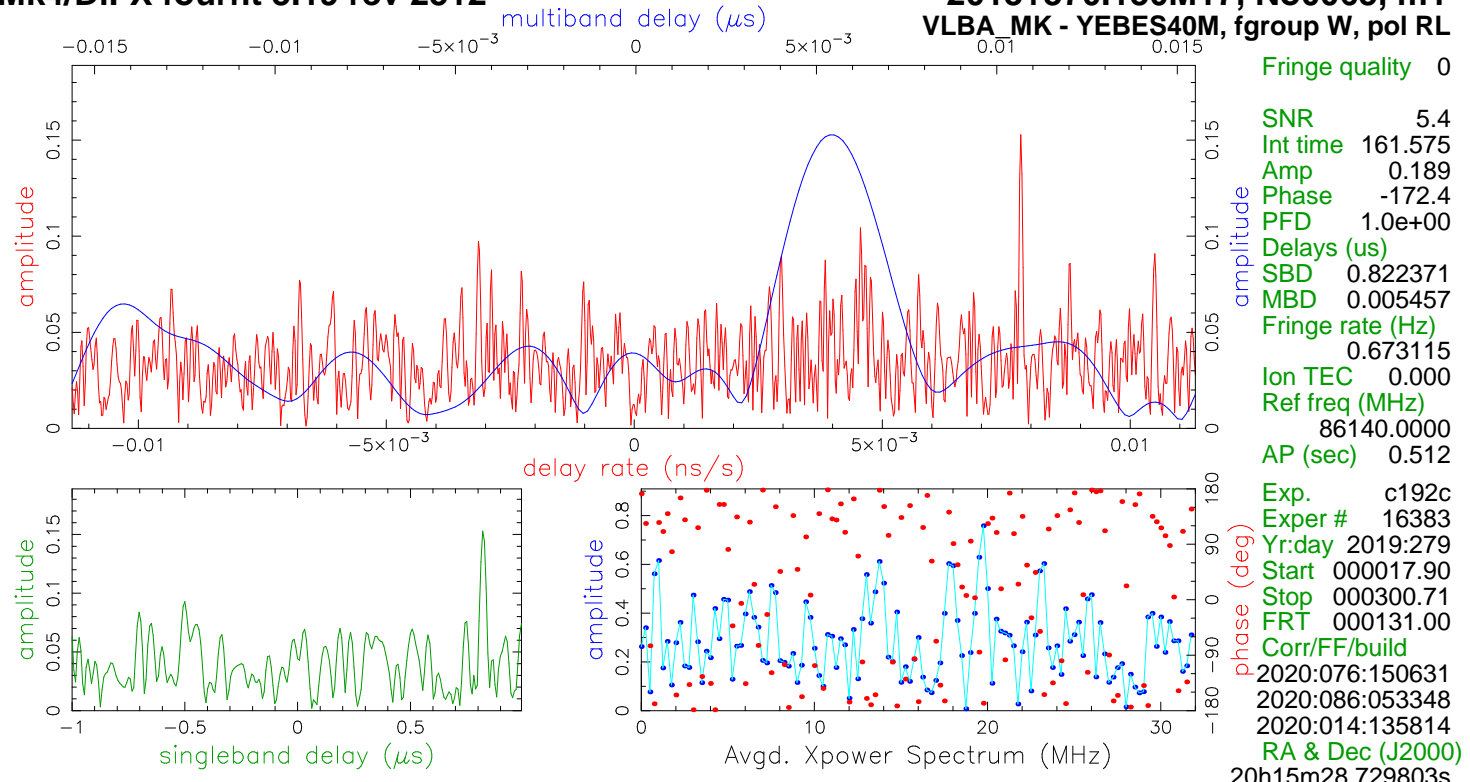
Group delay (usec)(sbd) -7.45079058410E+03 Apriori delay (usec) -7.45025667503E+03 Resid mbdelay (usec) -2.65907E-03 +/- 1.7E-04  
 Sband delay (usec) -7.45080246003E+03 Apriori clock (usec) -7.0849600E-07 Resid sbdelay (usec) -5.45785E-01 +/- 2.7E-03  
 Phase delay (usec) -7.45025667093E+03 Apriori clockrate (us/s) -2.2869228E-07 Resid phdelay (usec) 4.09336E-06 +/- 5.9E-07  
 Delay rate (us/s) 2.02748822195E+00 Apriori rate (us/s) 2.02749526356E+00 Resid rate (us/s) -7.04160E-06 +/- 6.3E-09  
 Total phase (deg) -228.3 Apriori accel (us/s/s) 1.83766276431E-05 Resid phase (deg) 126.9 +/- 18.3

ph/seg (deg) RMS Theor. Amplitude 0.213 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 30.6 31.6 Search (1024X64) 0.176 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 31.0 55.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 46.8 36.5 Inc. seg. avg. 0.205 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 40.7 63.7 Inc. frq. avg. 0.215 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

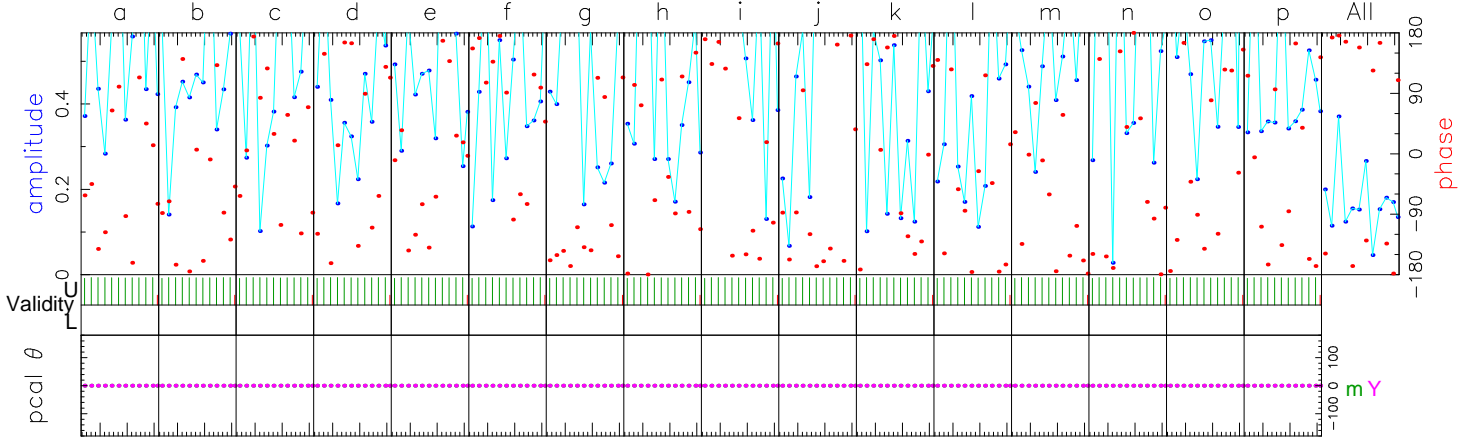
m: az 55.4 el 15.6 pa -76.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -14577.314 -1005.419 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/mY..130M17 Output file: /Exps/c192c/v2/1234/No0065/mY.W.306.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, mY  
VLBA\_MK - YEBES40M, fgroup W, pol RL



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	59.8	-108.9	0.8	172.7	-134.5	145.8	-155.0	138.2	-177.7	-169.2	-162.0	-172.7	-104.9	177.0	170.9	-154.1		Phase -172.4					
	0.1	0.2	0.1	0.2	0.1	0.1	0.4	0.2	0.4	0.4	0.2	0.1	0.1	0.3	0.3	0.2		Ampl. 0.2					
	128.7	209.4	212.7	86.2	129.0	184.8	99.5	23.2	167.7	46.8	160.2	177.9	122.2	200.7	23.7	53.7		Sbd box 234.3					
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					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
m: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					
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
Y	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					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Tracks					
Group delay (usec)(sbd)		-7.44943871800E+03																Apriori delay (usec)	-7.45025667503E+03	Resid mbdelay (usec)	5.45703E-03	+/-	2.0E-04
Sband delay (usec)		-7.44943430403E+03																Apriori clock (usec)	-7.0849600E+00	Resid sbdelay (usec)	8.22371E-01	+/-	3.2E-03
Phase delay (usec)		-7.45025668059E+03																Apriori clockrate (us/s)	-2.2869228E-07	Resid phdelay (usec)	-5.56046E-06	+/-	6.9E-07
Delay rate (us/s)		2.02750307775E+00																Apriori rate (us/s)	2.02749526356E+00	Resid rate (us/s)	7.81419E-06	+/-	7.3E-09
Total phase (deg)																		Apriori accel (us/s/s)	1.83766276431E-05	Resid phase (deg)	-172.4	+/-	21.4

	RMS	Theor.	Amplitude	0.189 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	33.1	37.1	Search (1024X64)	0.152	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	53.4	64.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg)	66.5	42.8	Inc. seg. avg.	0.177	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	66.2	74.7	Inc. frq. avg.	0.178	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

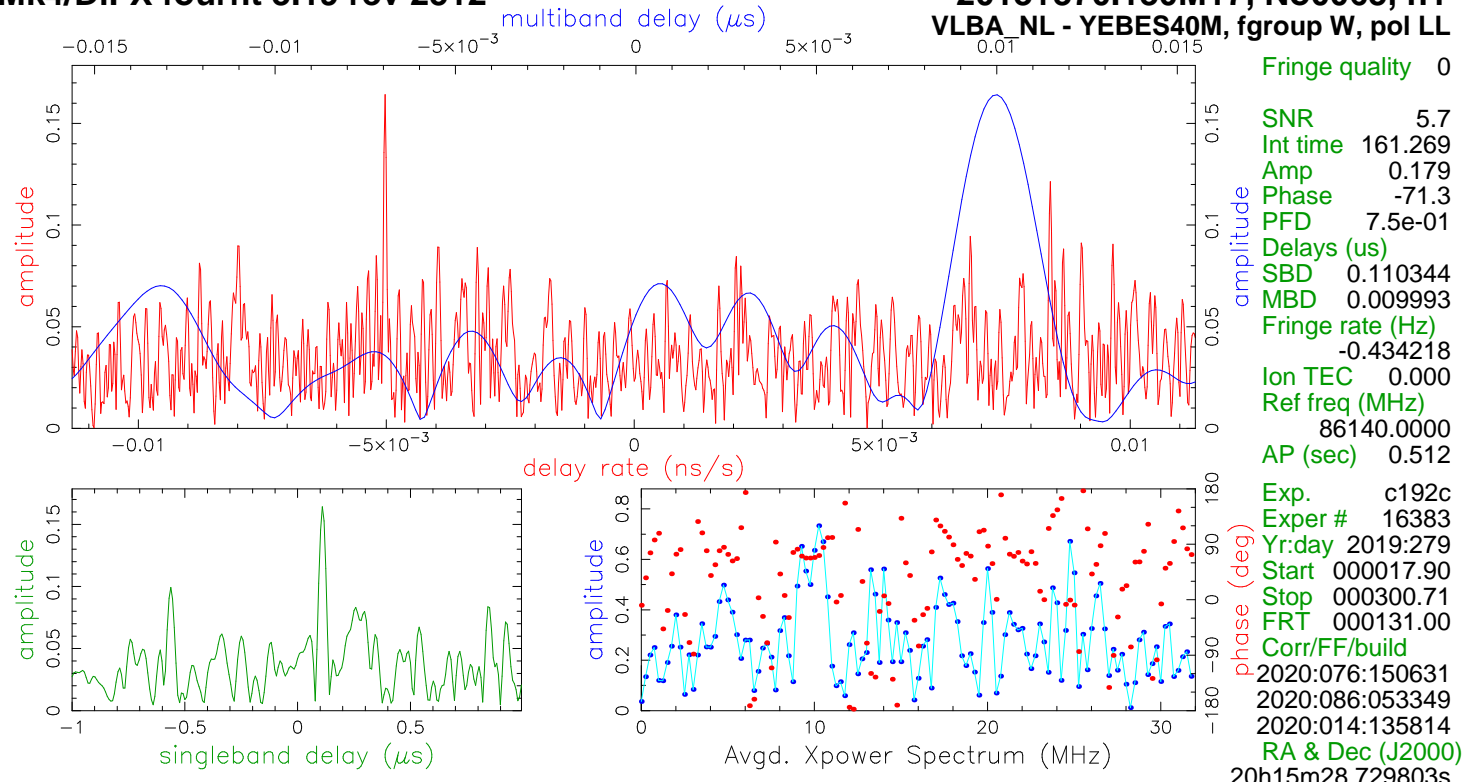
m: az 55.4 el 15.6 pa -76.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -14577.314 -1005.419 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/mY..130M17 Output file: /Exps/c192c/v2/1234/No0065/mY.W.318.130M17

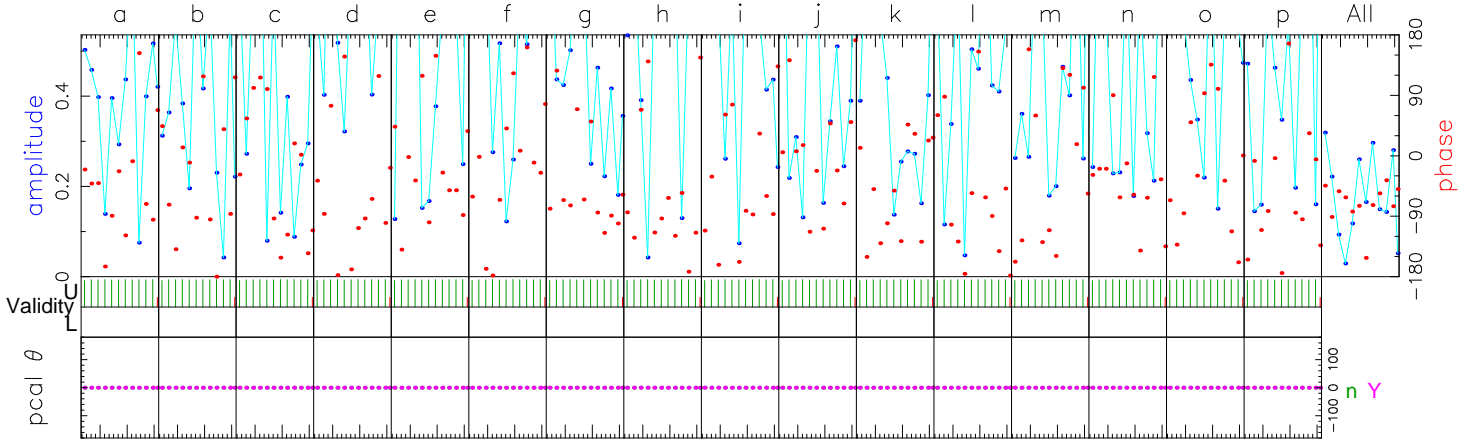


Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, nY  
VLBA\_NL - YEBES40M, fgroup W, pol LL



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

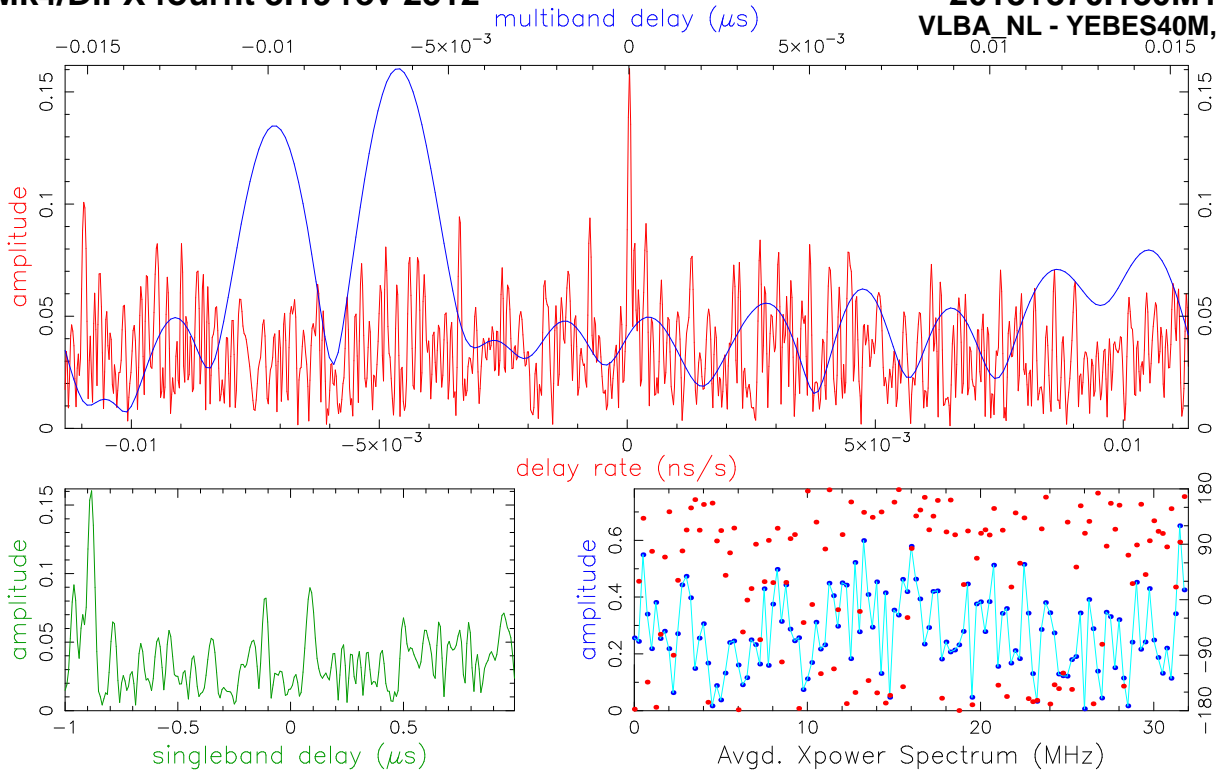


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-53.9	-90.4	152.7	-109.0	-52.9	-27.4	-69.4	-110.6	-73.6	-16.6	-65.7	-93.6	130.3	-39.3	-100.6	-86.4		Phase -71.3
	0.3	0.2	0.0	0.2	0.3	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.1	0.3	0.2	0.1		Ampl. 0.2
	26.0	187.6	75.6	14.0	25.9	63.3	44.3	143.0	58.1	163.5	165.4	95.5	50.0	226.1	44.3	48.4		Sbd box 143.1
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
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
n: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
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	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
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	7.13342357575E+03			Apriori delay (usec)			7.13331983246E+03			Resid mbdelay (usec)			9.99329E-03			+/- 1.9E-04		
Sband delay (usec)	7.13343017696E+03			Apriori clock (usec)			1.6855846E+01			Resid sbdelay (usec)			1.10344E-01			+/- 3.0E-03		
Phase delay (usec)	7.13331983016E+03			Apriori clockrate (us/s)			-8.5776492E-08			Resid phdelay (usec)			-2.29976E-06			+/- 6.5E-07		
Delay rate (us/s)	1.19807136482E+00			Apriori rate (us/s)			1.19807640566E+00			Resid rate (us/s)			-5.04084E-06			+/- 6.9E-09		
Total phase (deg)	61.2			Apriori accel (us/s/s)			-3.67275129053E-05			Resid phase (deg)			-71.3			+/- 20.1		

RMS Theor. Amplitude 0.179 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 29.4 34.8 Search (1024X64) 0.160 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 56.3 60.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 62.8 40.1 Inc. seg. avg. 0.169 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 56.5 70.1 Inc. frq. avg. 0.173 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 n: az 98.4 el 73.0 pa -67.6 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -8647.594 -2027.069 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/nY..130M17 Output file: /Exps/c192c/v2/1234/No0065/nY.W.321.130M17

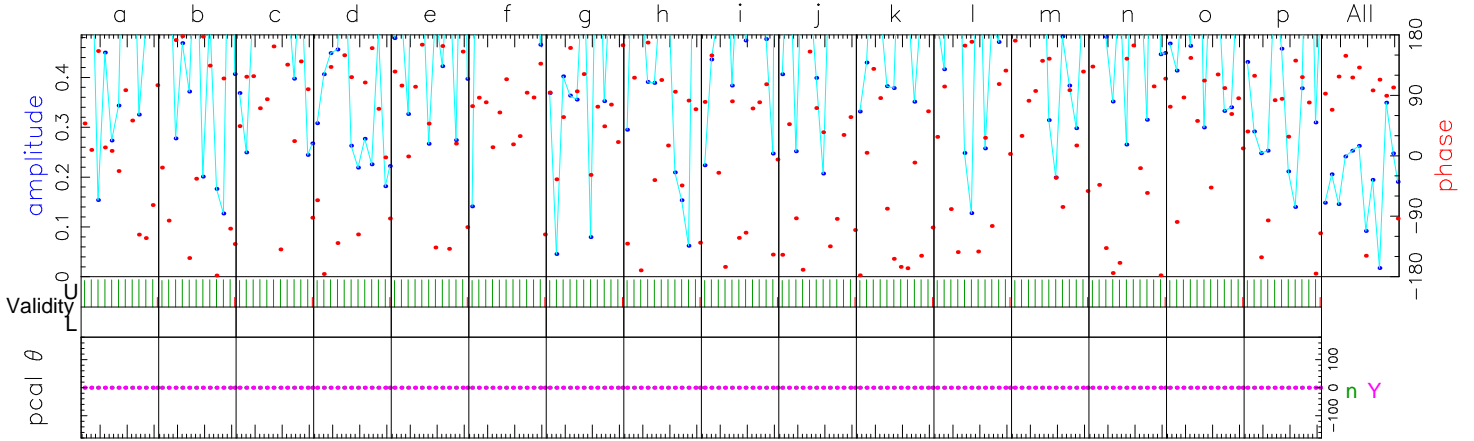
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, nY  
VLBA\_NL - YEBES40M, fgroup W, pol RR



Fringe quality 0  
SNR 5.6  
Int time 161.269  
Amp 0.162  
Phase 111.0  
PFD 9.0e-01  
Delays (us)  
SBD -0.885095  
MBD -0.006413  
Fringe rate (Hz) 0.004247  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build 2020:076:150631  
2020:086:053350  
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

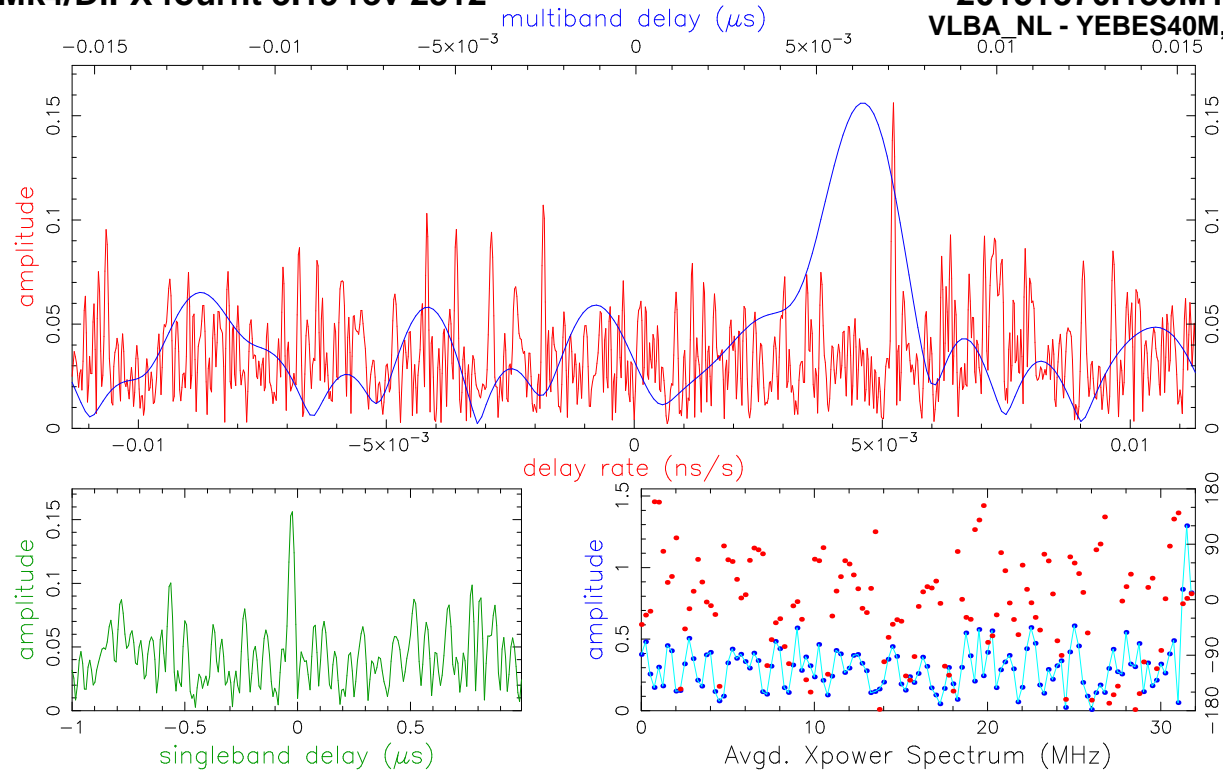


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	36.0	-119.7	123.7	154.7	143.6	74.6	79.1	111.7	116.9	136.7	168.4	-159.8	102.2	163.6	75.5	95.5	Phase	111.0
	0.2	0.2	0.4	0.2	0.3	0.5	0.3	0.2	0.1	0.0	0.2	0.1	0.2	0.2	0.3	0.2	Ampl.	0.2
	81.1	233.3	17.0	37.4	94.7	16.0	58.4	227.5	56.9	218.8	106.8	245.1	142.0	54.6	67.6	85.1	Sbd box	15.7
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
n: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	
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) 7.13243841991E+03 Apriori delay (usec) 7.13331983246E+03 Resid mbdelay (usec) -6.41255E-03 +/- 1.9E-04  
 Sband delay (usec) 7.13243473796E+03 Apriori clock (usec) 1.6855846E+01 Resid sbdelay (usec) -8.85095E-01 +/- 3.1E-03  
 Phase delay (usec) 7.13331983604E+03 Apriori clockrate (us/s) -8.5776492E-08 Resid phdelay (usec) 3.58055E-06 +/- 6.6E-07  
 Delay rate (us/s) 1.19807645496E+00 Apriori rate (us/s) 1.19807640566E+00 Resid rate (us/s) 4.93014E-08 +/- 7.0E-09  
 Total phase (deg) 243.6 Apriori accel (us/s/s) -3.67275129053E-05 Resid phase (deg) 111.0 +/- 20.4

RMS Theor. Amplitude 0.162 +/- 0.029  
 ph/seg (deg) 45.6 35.3 Search (1024X64) 0.159 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 57.1 61.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 56.1 40.8 Inc. seg. avg. 0.165 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 82.9 71.2 Inc. frq. avg. 0.183 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 n: az 98.4 el 73.0 pa -67.6 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -8647.594 -2027.069 ion window (TEC) 0.00 0.00  
 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/nY..130M17 Output file: /Exps/c192c/v2/1234/No0065/nY.W.335.130M17

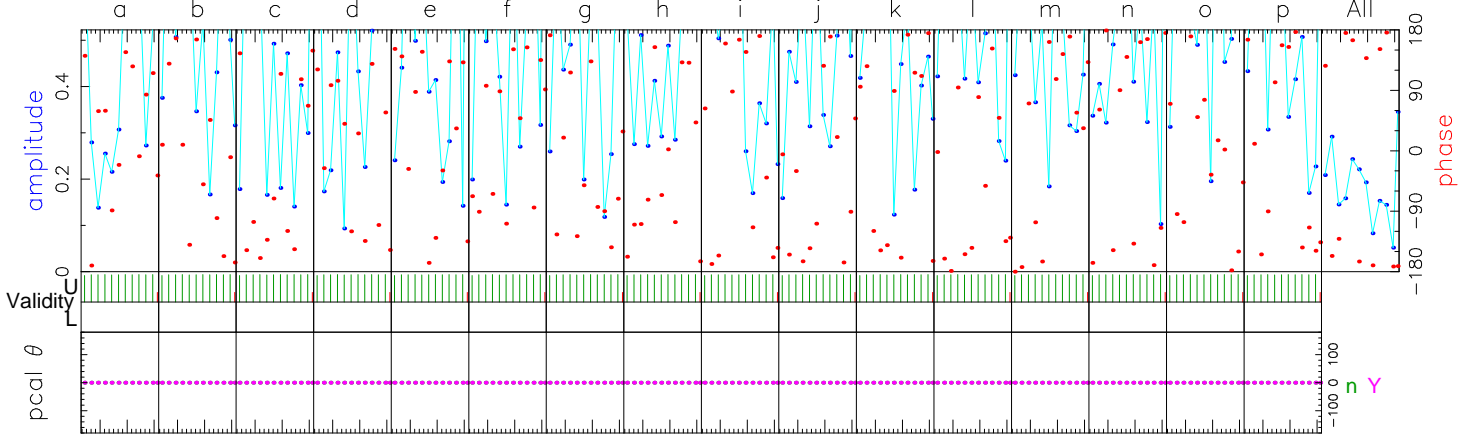


Fringe quality 0

SNR 5.5  
Int time 161.269  
Amp 0.174  
Phase 175.7  
PFD 9.8e-01  
Delays (us)  
SBD -0.026610  
MBD 0.006287  
Fringe rate (Hz) 0.450541  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

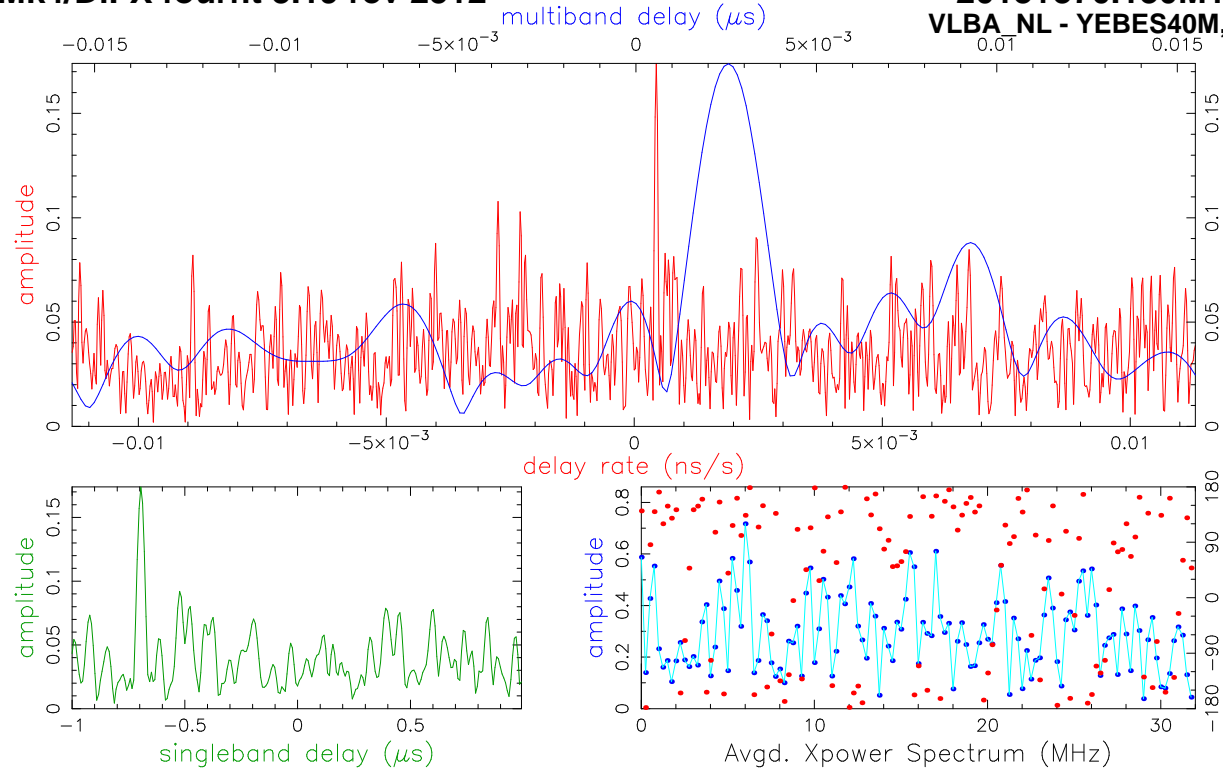
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053353  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

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	
U/L	109.4	-150.5	-151.0	142.0	119.4	-172.2	-116.3	-174.3	163.1	-138.8	178.7	-176.9	140.5	164.6	-53.7	177.8	175.7	Phase	
n	0.2	0.1	0.3	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.4	0.2	0.3	0.4	0.0	0.3	0.2	Ampl.	
Y	236.8	91.7	39.8	48.9	114.3	154.8	111.8	213.6	108.9	167.1	125.3	215.0	31.5	124.9	78.2	214.5	125.6	Sbd box	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	APs used
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
n	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
																			Tracks
Group delay (usec)(sbd)		7.13329486898E+03								7.13331983246E+03							6.28652E-03	+/- 2.0E-04	
Sband delay (usec)		7.13329322246E+03								1.6855846E+01							-2.66100E-02	+/- 3.1E-03	
Phase delay (usec)		7.13331983813E+03								-8.5776492E-08							5.66695E-06	+/- 6.7E-07	
Delay rate (us/s)		1.19808163600E+00								1.19807640566E+00							5.23034E-06	+/- 7.1E-09	
Total phase (deg)				308.3						-3.67275129053E-05							175.7	+/- 20.7	
ph/seg (deg)	RMS	Theor.																	
amp/seg (%)	28.0	35.9																	
ph/frq (deg)	46.3	62.6																	
amp/frq (%)	51.1	41.4																	
	58.3	72.3																	
n: az 98.4 el 73.0 pa -67.6																			
Y: az 289.5 el 38.9 pa 64.3																			
u,v (fr/asec) -8647.594 -2027.069																			
Control file: cf_1234_gmva																			
Input file: /Exps/c192c/v2/1234/No0065/nY..130M17																			
Output file: /Exps/c192c/v2/1234/No0065/nY.W.355.130M17																			

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

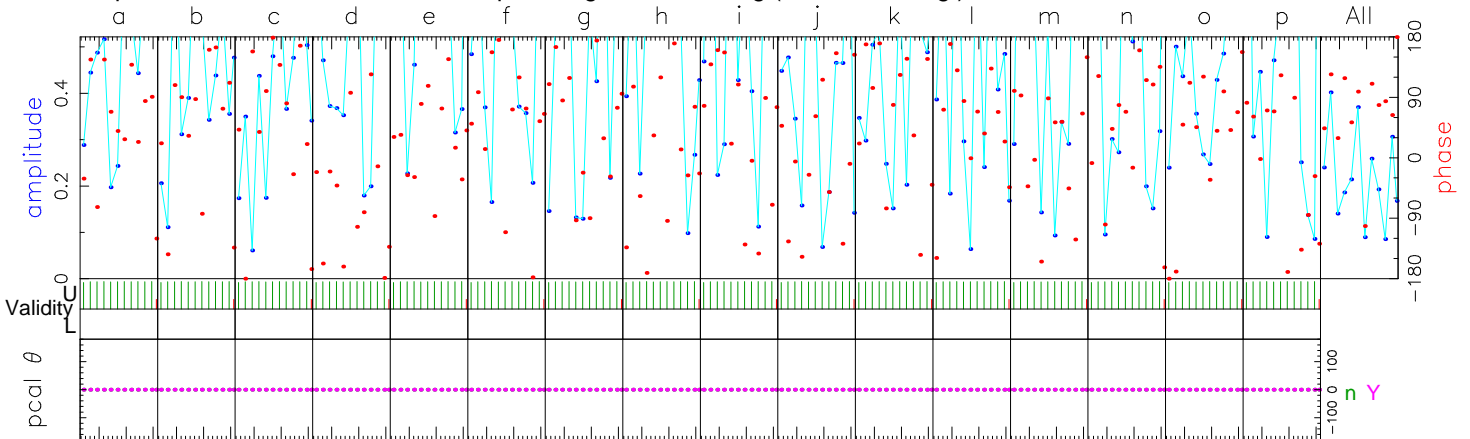


Fringe quality 0

SNR 6.0  
Int time 161.269  
Amp 0.174  
Phase 88.0  
PFD 1.8e-01  
Delays (us)  
SBD -0.694740  
MBD 0.002566  
Fringe rate (Hz) 0.037784  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build 2020:076:150631  
2020:086:053355  
2020:014:135814  
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

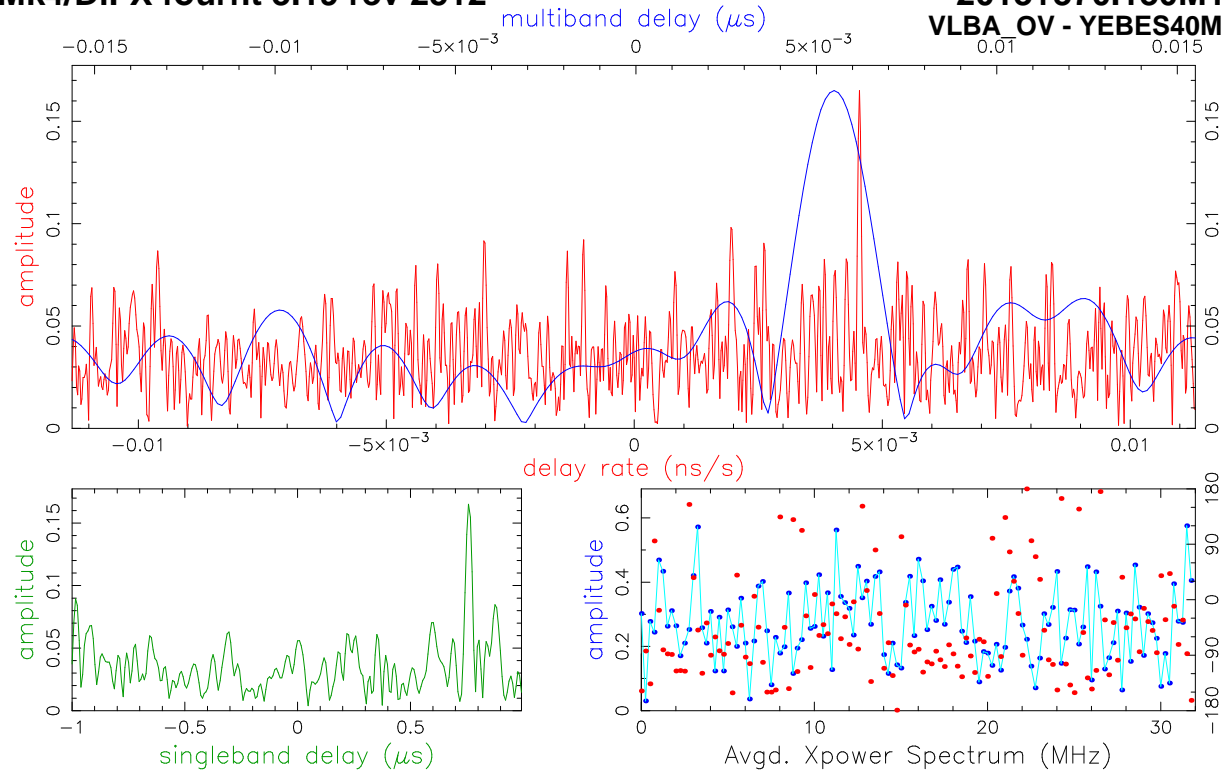
Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	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
	82.1	102.4	118.4	-101.8	50.6	94.2	88.7	127.9	97.0	-14.4	126.2	93.6	60.3	94.9	79.3	98.4	Phase	88.0
	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.3	0.3	Ampl.	0.2
	98.1	252.0	60.0	235.4	39.9	178.6	236.9	187.9	223.8	114.1	147.5	146.7	137.3	246.0	246.0	60.3	Sbd box	40.1
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	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
n: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	
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
																	Tracks	

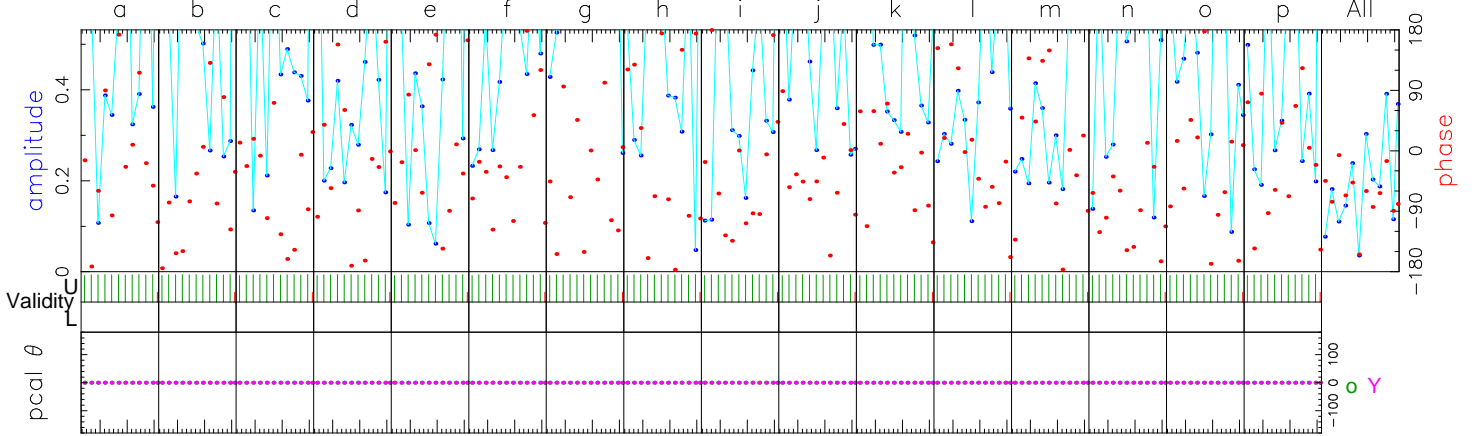
Group delay (usec)(sbd) 7.13263489869E+03 Apriori delay (usec) 7.13331983246E+03 Resid mbdelay (usec) 2.56623E-03 +/- 1.8E-04  
 Sband delay (usec) 7.13262509246E+03 Apriori clock (usec) 1.6855846E+01 Resid sbdelay (usec) -6.94740E-01 +/- 2.9E-03  
 Phase delay (usec) 7.13331983530E+03 Apriori clockrate (us/s) -8.5776492E-08 Resid phdelay (usec) 2.83735E-06 +/- 6.1E-07  
 Delay rate (us/s) 1.19807684429E+00 Apriori rate (us/s) 1.19807640566E+00 Resid rate (us/s) 4.38634E-07 +/- 6.5E-09  
 Total phase (deg) 220.5 Apriori accel (us/s/s) -3.67275129053E-05 Resid phase (deg) 88.0 +/- 19.0

RMS Theor. Amplitude 0.174 +/- 0.029  
 ph/seg (deg) 61.0 32.9 Search (1024X64) 0.171 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 63.4 57.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 57.5 38.0 Inc. seg. avg. 0.193 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 44.4 66.2 Inc. frq. avg. 0.177 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 n: az 98.4 el 73.0 pa -67.6 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -8647.594 -2027.069 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/nY..130M17 Output file: /Exps/c192c/v2/1234/No0065/nY.W.372.130M17 simultaneous interpolator



Fringe quality 0  
SNR 5.8  
Int time 161.274  
Amp 0.177  
Phase -55.6  
PFD 6.5e-01  
Delays (us)  
SBD 0.759519  
MBD 0.005491  
Fringe rate (Hz) 0.391157  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build 2020:076:150631  
2020:086:053349  
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	
	-35.1	-90.6	-11.4	-76.4	-40.8	-52.3	-64.1	-142.9	-83.6	-32.7	-8.9	-49.8	3.2	-97.7	-58.3	-20.8		Phase	-55.6
	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.3	0.2	0.1		Ampl.	0.2
	187.7	168.3	98.4	17.5	22.2	207.0	98.1	62.9	88.5	201.3	161.1	216.5	217.1	89.7	126.8	77.0		Sbd box	226.2
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	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
o	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	

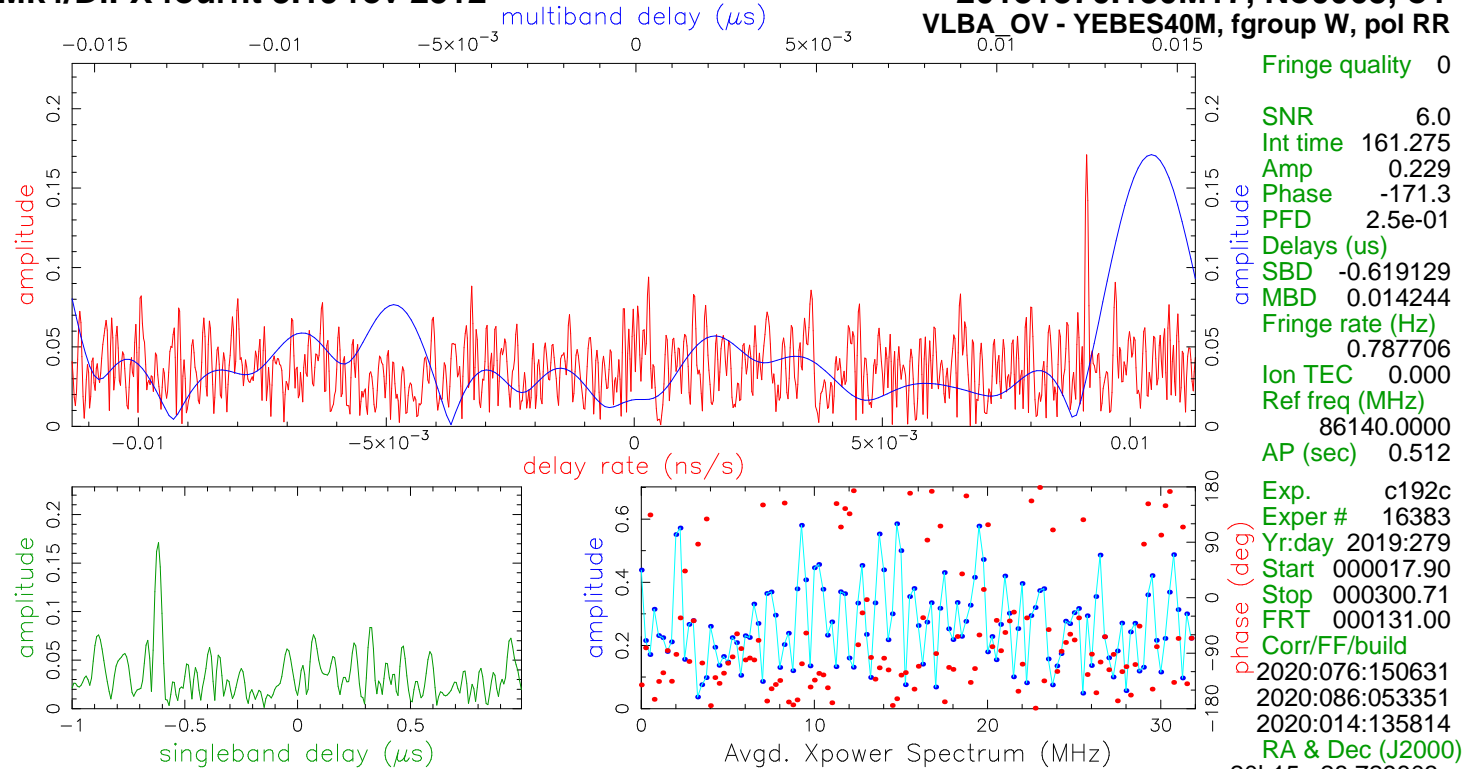
Group delay (usec)(sbd) 3.62922579812E+03 Apriori delay (usec) 3.62847030717E+03 Resid mbdelay (usec) 5.49095E-03 +/- 1.9E-04  
 Sband delay (usec) 3.62922982617E+03 Apriori clock (usec) 6.9866419E+00 Resid sbdelay (usec) 7.59519E-01 +/- 3.0E-03  
 Phase delay (usec) 3.62847030537E+03 Apriori clockrate (us/s) -2.1901900E-07 Resid phdelay (usec) -1.79214E-06 +/- 6.4E-07  
 Delay rate (us/s) 1.59623142422E+00 Apriori rate (us/s) 1.59622688328E+00 Resid rate (us/s) 4.54094E-06 +/- 6.8E-09  
 Total phase (deg) 37.7 Apriori accel (us/s/s) -2.23110298307E-05 Resid phase (deg) -55.6 +/- 19.9

ph/seg (deg) RMS Theor. Amplitude 0.177 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 38.4 34.5 Search (1024X64) 0.161 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 62.5 60.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 39.6 39.8 Inc. seg. avg. 0.169 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 41.0 69.4 Inc. frq. avg. 0.176 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

o: az 74.9 el 52.2 pa -74.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11501.969 -1579.546 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/oY..130M17 Output file: /Exps/c192c/v2/1234/No0065/oY.W.326.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, oY  
VLBA\_OV - YEBES40M, fgroup W, pol RR



Fringe quality 0

SNR 6.0

Int time 161.275

Amp 0.229

Phase -171.3

PFD 2.5e-01

Delays (us)

SBD -0.619129

MBD 0.014244

Fringe rate (Hz) 0.787706

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 000017.90

Stop 000300.71

FRT 000131.00

Corr/FF/build

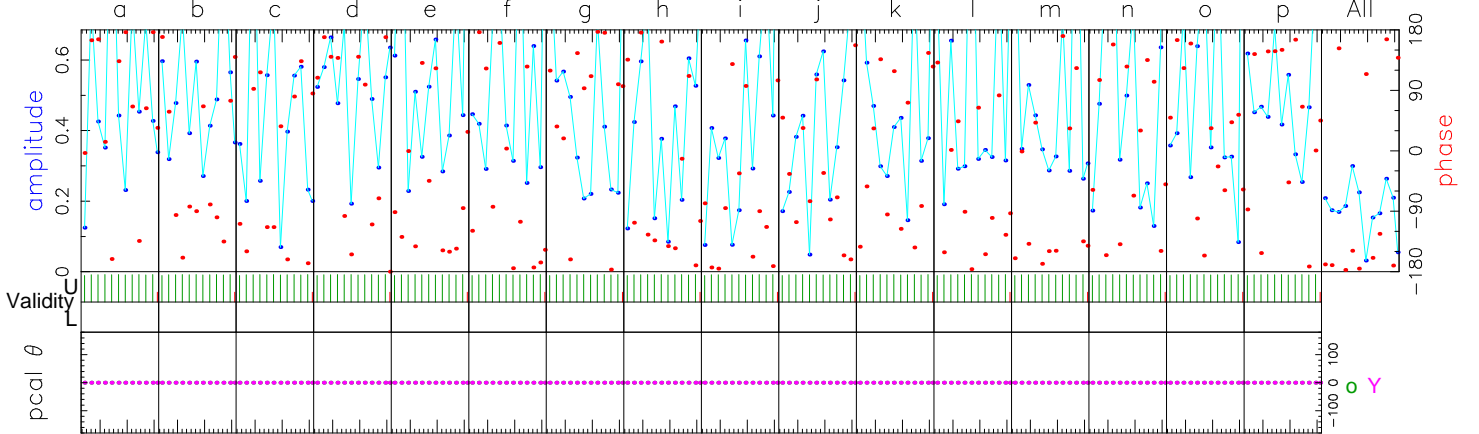
2020:076:150631

2020:086:053351

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
	148.8	-128.3	160.4	161.7	-127.9	-150.9	126.6	-158.7	-151.0	-132.9	-149.3	161.7	173.9	-166.1	-71.5	164.4		Phase -171.3
	0.3	0.3	0.2	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.3	0.3	0.1	0.2		Ampl. 0.2
	233.5	99.8	235.0	48.6	40.4	217.4	16.1	14.8	32.1	15.7	103.1	57.5	47.7	171.7	190.3	37.6		Sbd box 49.8
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
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	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) 3.62785955107E+03 Apriori delay (usec) 3.62847030717E+03 Resid mbdelay (usec) 1.42439E-02 +/- 1.8E-04

Sband delay (usec) 3.62785117817E+03 Apriori clock (usec) 6.9866419E+00 Resid sbdelay (usec) -6.19129E-01 +/- 2.9E-03

Phase delay (usec) 3.62847030164E+03 Apriori clockrate (us/s) -2.1901900E-07 Resid phdelay (usec) -5.52329E-06 +/- 6.2E-07

Delay rate (us/s) 1.59623602776E+00 Apriori rate (us/s) 1.59622688328E+00 Resid rate (us/s) 9.14448E-06 +/- 6.6E-09

Total phase (deg) -78.0 Apriori accel (us/s/s) -2.23110298307E-05 Resid phase (deg) -171.3 +/- 19.2

RMS Theor. Amplitude 0.229 +/- 0.038 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 31.5 33.2 Search (1024X64) 0.170 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

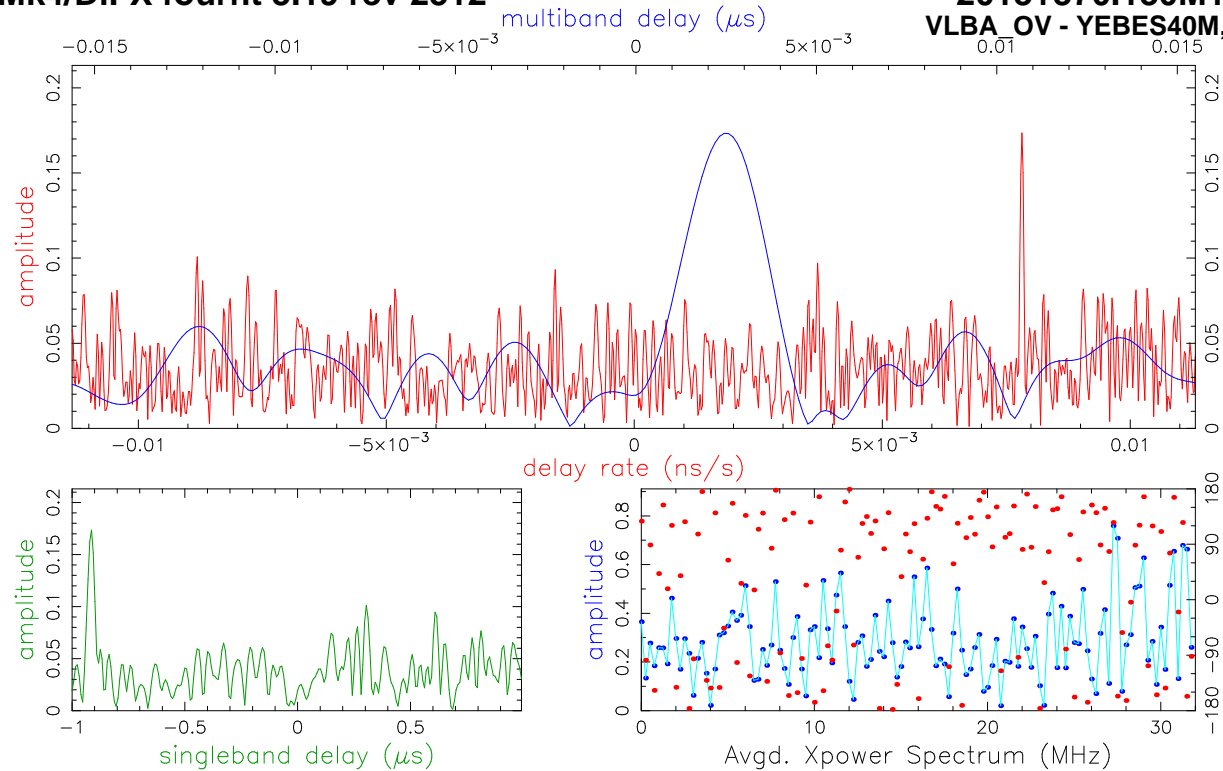
amp/seg (%) 40.5 58.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 42.4 38.3 Inc. seg. avg. 0.211 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 47.5 66.9 Inc. frq. avg. 0.223 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

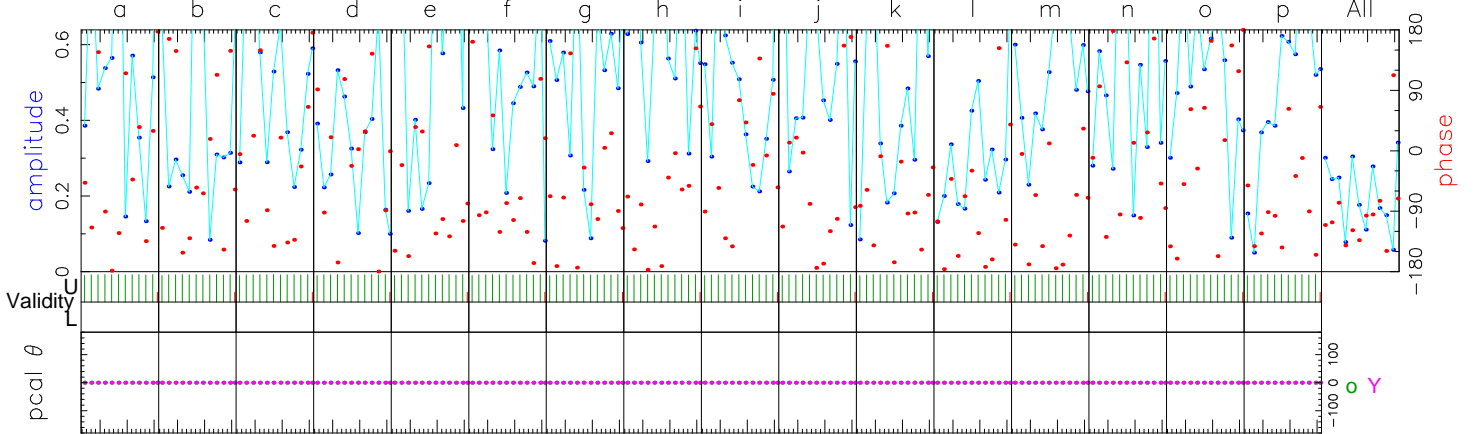
o: az 74.9 el 52.2 pa -74.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11501.969 -1579.546 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/oY..130M17 Output file: /Exps/c192c/v2/1234/No0065/oY.W.341.130M17



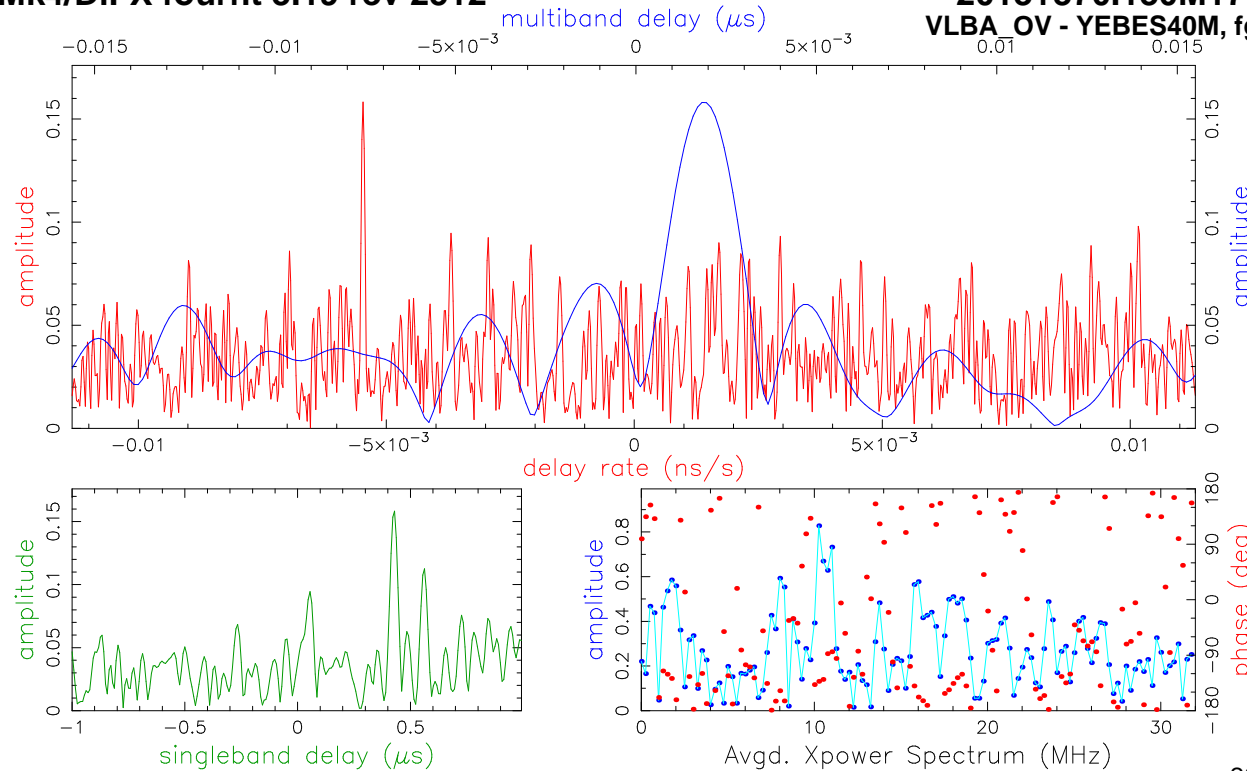
Fringe quality 0  
SNR 6.0  
Int time 161.274  
Amp 0.213  
Phase -106.1  
PFD 1.8e-01  
Delays (us)  
SBD -0.915278  
MBD 0.002497  
Fringe rate (Hz) 0.673579  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053353  
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	
	-117.2	-103.0	-52.1	134.5	-86.9	-126.9	-93.7	-108.7	-46.5	-124.4	-96.9	-112.5	-116.9	-154.5	158.2	-76.1	Phase	-106.1	
	0.3	0.2	0.1	0.1	0.4	0.3	0.3	0.4	0.2	0.3	0.4	0.2	0.2	0.2	0.0	0.3	Ampl.	0.2	
	162.6	31.4	171.3	47.9	1.9	250.6	208.5	11.3	21.0	155.1	254.0	192.0	9.4	251.0	175.6	33.6	Sbd box	11.8	
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		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC		
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
o	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)			3.62756655466E+03								3.62847030717E+03						Resid mbdelay (usec)	2.49749E-03	+/- 1.8E-04
Sband delay (usec)			3.62755502867E+03								6.9866419E+00						Resid sbdelay (usec)	-9.15278E-01	+/- 2.9E-03
Phase delay (usec)			3.62847030374E+03								-2.1901900E-07						Resid phdelay (usec)	-3.42128E-06	+/- 6.1E-07
Delay rate (us/s)			1.59623470287E+00								1.59622688328E+00						Resid rate (us/s)	7.81959E-06	+/- 6.5E-09
Total phase (deg)											-2.23110298307E-05						Resid phase (deg)	-106.1	+/- 19.0

ph/seg (deg) 48.4 32.9 Amplitude 0.213 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 51.8 57.4 Search (1024X64) 0.172 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 49.9 38.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 53.0 66.3 Inc. seg. avg. 0.208 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 o: az 74.9 el 52.2 pa -74.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11501.969 -1579.546 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/oY..130M17 Output file: /Exps/c192c/v2/1234/No0065/oY.W.356.130M17 simultaneous interpolator

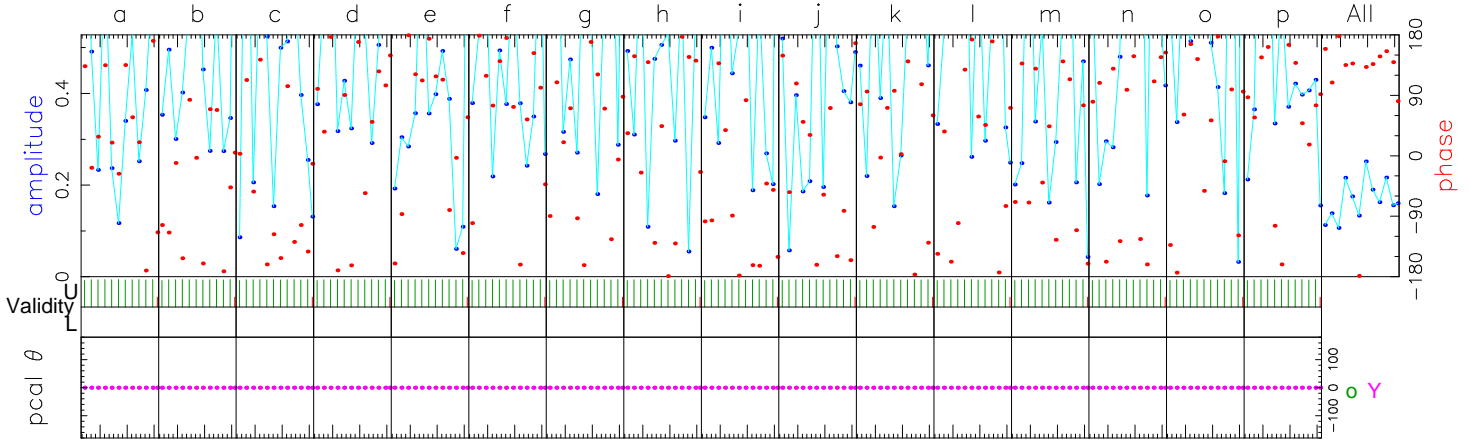


Fringe quality 0

SNR 5.5  
Int time 161.275  
Amp 0.176  
Phase 142.4  
PFD 9.7e-01  
Delays (us)  
SBD 0.427177  
MBD 0.001885  
Fringe rate (Hz)  
-0.471081  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053356  
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



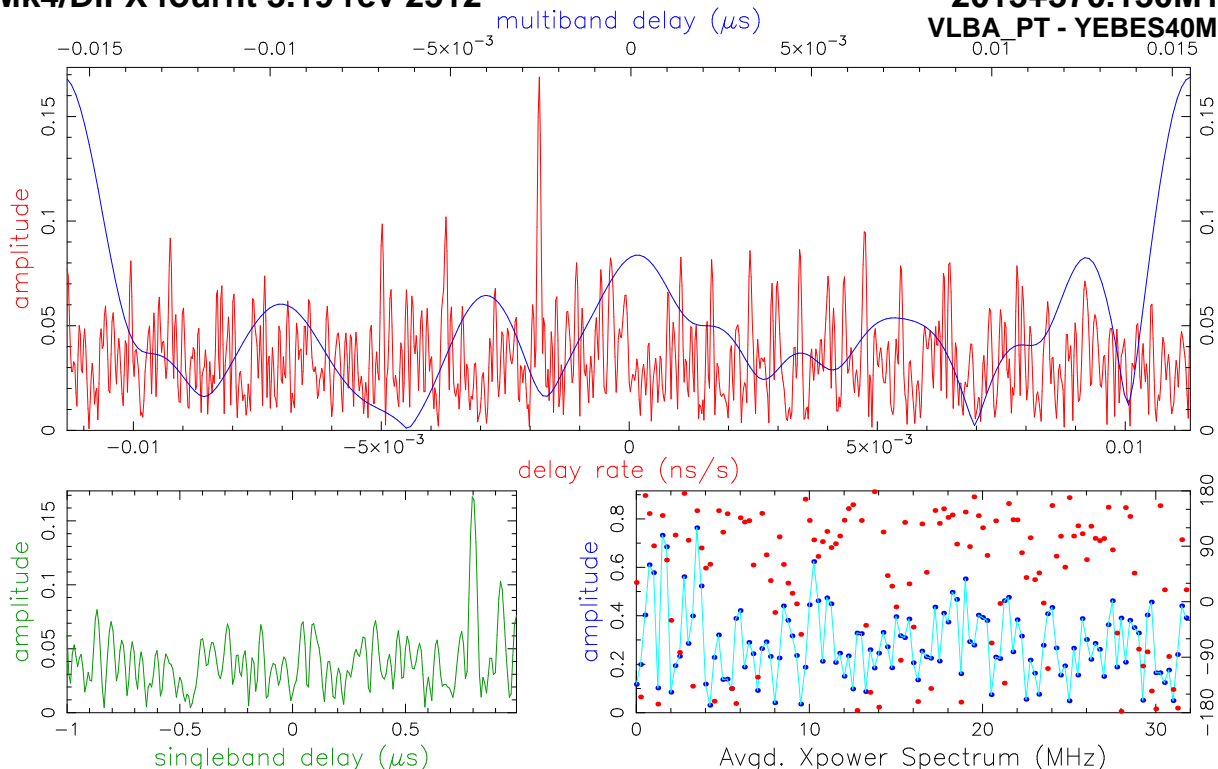
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	123.1	-5.4	176.7	131.9	136.2	129.6	153.9	166.7	-149.0	163.9	111.7	170.7	144.9	145.1	119.0	134.8	Phase	142.4
	0.2	0.1	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.4	0.2	0.3	Ampl.	0.2
	181.6	11.0	153.3	212.6	225.2	16.9	223.3	100.8	198.0	153.5	146.7	122.7	14.7	12.0	34.2	94.1	Sbd box	183.7
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	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
o	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) 3.62890969218E+03 Apriori delay (usec) 3.62847030717E+03 Resid mbdelay (usec) 1.88502E-03 +/- 1.9E-04  
 Sband delay (usec) 3.62889748467E+03 Apriori clock (usec) 6.9866419E+00 Resid sbdelay (usec) 4.27177E-01 +/- 3.1E-03  
 Phase delay (usec) 3.62847031176E+03 Apriori clockrate (us/s) -2.1901900E-07 Resid phdelay (usec) 4.59263E-06 +/- 6.7E-07  
 Delay rate (us/s) 1.59622141449E+00 Apriori rate (us/s) 1.59622688328E+00 Resid rate (us/s) -5.46879E-06 +/- 7.1E-09  
 Total phase (deg) 235.7 Apriori accel (us/s/s) -2.23110298307E-05 Resid phase (deg) 142.4 +/- 20.7

RMS Theor. Amplitude 0.176 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 22.8 35.8 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 27.6 62.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 47.8 41.3 Inc. seg. avg. 0.156 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 54.2 72.2 Inc. frq. avg. 0.159 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

o: az 74.9 el 52.2 pa -74.9 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11501.969 -1579.546 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/oY..130M17 Output file: /Exps/c192c/v2/1234/No0065/oY.W.374.130M17





Fringe quality 0

SNR 6.0

Int time 162.163

Amp 0.173

Phase 138.6

PFD 2.5e-01

Delays (us)

SBD 0.800124

MBD -0.015744

Fringe rate (Hz)

-0.156505

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 000017.90

Stop 000300.71

FRT 000131.00

Corr/FF/build

2020:076:150631

2020:086:053350

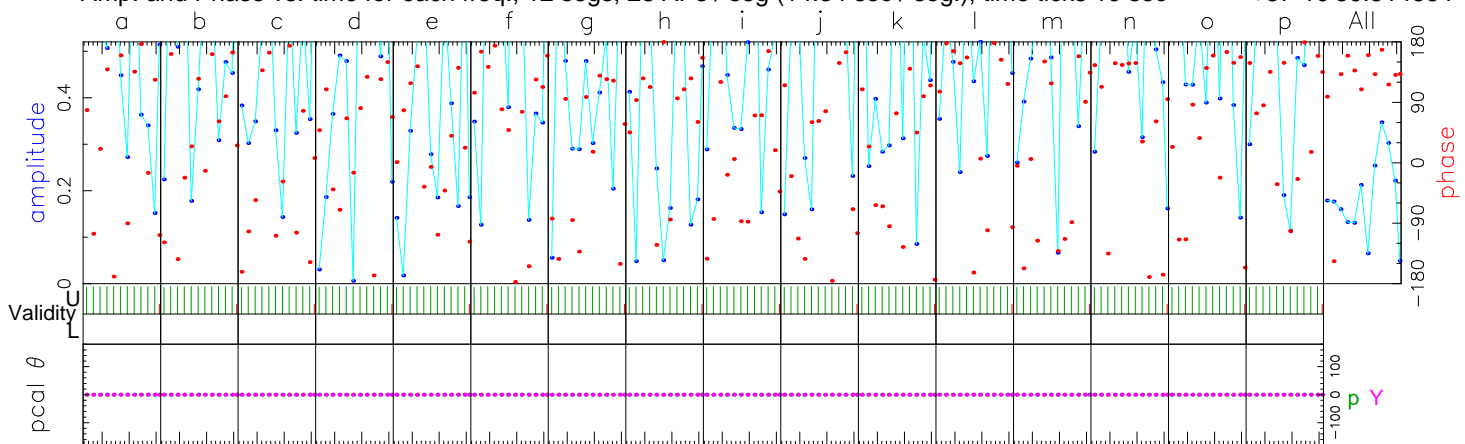
2020:014:135814

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
	165.4	114.5	-169.9	123.2	7.5	133.5	147.1	109.2	-8.4	146.5	115.2	159.6	-159.7	151.9	157.9	93.2	Phase	138.6
	0.2	0.1	0.2	0.2	0.1	0.4	0.2	0.1	0.2	0.2	0.2	0.4	0.2	0.4	0.2	0.2	Ampl.	0.2
	140.9	126.8	43.0	245.7	52.1	232.0	145.6	46.2	32.1	211.6	188.7	229.8	220.4	232.1	30.4	124.0	Sbd box	231.4
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	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
p: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	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
p	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) 5.11134942613E+03 Apriori delay (usec) 5.11055267013E+03 Resid mbdelay (usec) -1.57440E-02 +/- 1.8E-04

Sband delay (usec) 5.11135279413E+03 Apriori clock (usec) 2.3018236E+00 Resid sbdelay (usec) 8.00124E-01 +/- 2.9E-03

Phase delay (usec) 5.11055267460E+03 Apriori clockrate (us/s) -1.6113413E-08 Resid phdelay (usec) 4.46864E-06 +/- 6.2E-07

Delay rate (us/s) 1.49017986664E+00 Apriori rate (us/s) 1.49018168351E+00 Resid rate (us/s) -1.81687E-06 +/- 6.6E-09

Total phase (deg) 140.4 Apriori accel (us/s/s) -3.30426230184E-05 Resid phase (deg) 138.6 +/- 19.2

RMS Theor. Amplitude 0.173 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 30.5 33.2 Search (1024X64) 0.167 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

amp/seg (%) 48.7 58.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

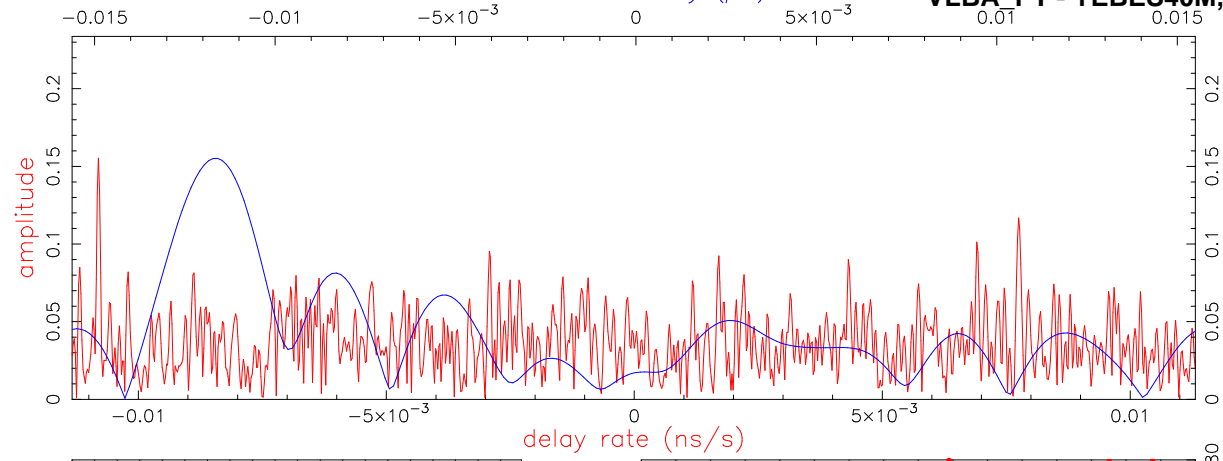
ph/frq (deg) 60.6 38.3 Inc. seg. avg. 0.168 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 60.8 66.9 Inc. frq. avg. 0.180 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

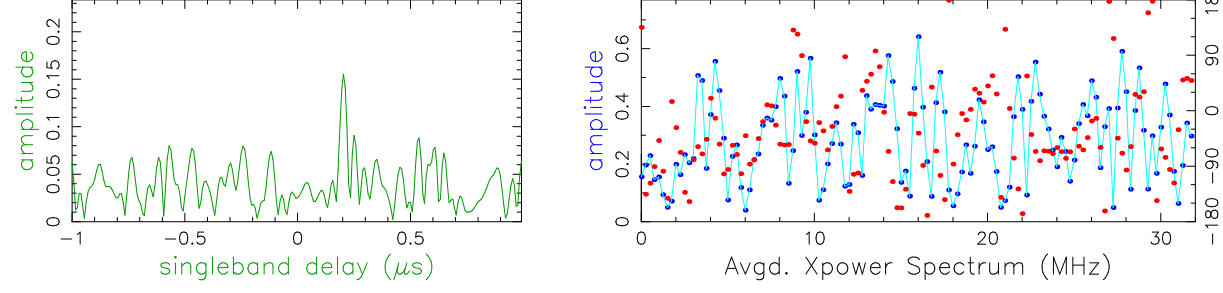
p: az 73.4 el 59.4 pa -83.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10747.775 -2516.858 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/pY..130M17 Output file: /Exps/c192c/v2/1234/No0065/pY.W.331.130M17

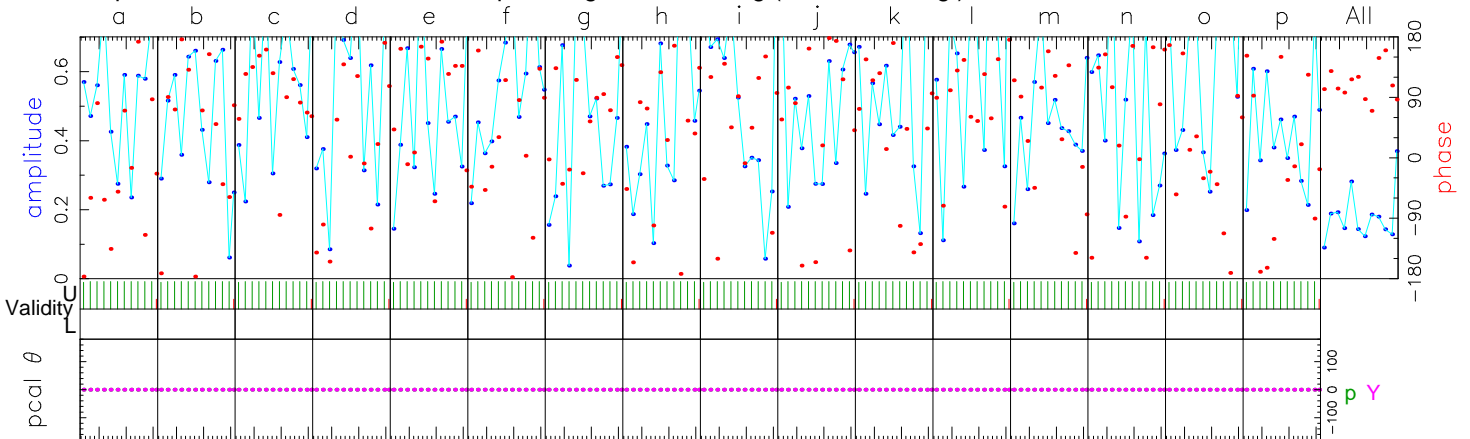
multiband delay ( $\mu$ s)



Fringe quality 0  
SNR 5.4  
Int time 162.163  
Amp 0.234  
Phase 111.7  
PFD 1.0e+00  
Delays (us)  
SBD 0.203604  
MBD -0.011650  
Fringe rate (Hz)  
-0.932797  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053353  
2020:014:135814  
RA & Dec (J2000)  
20h15m28.729803s  
+37°10'59.514664"

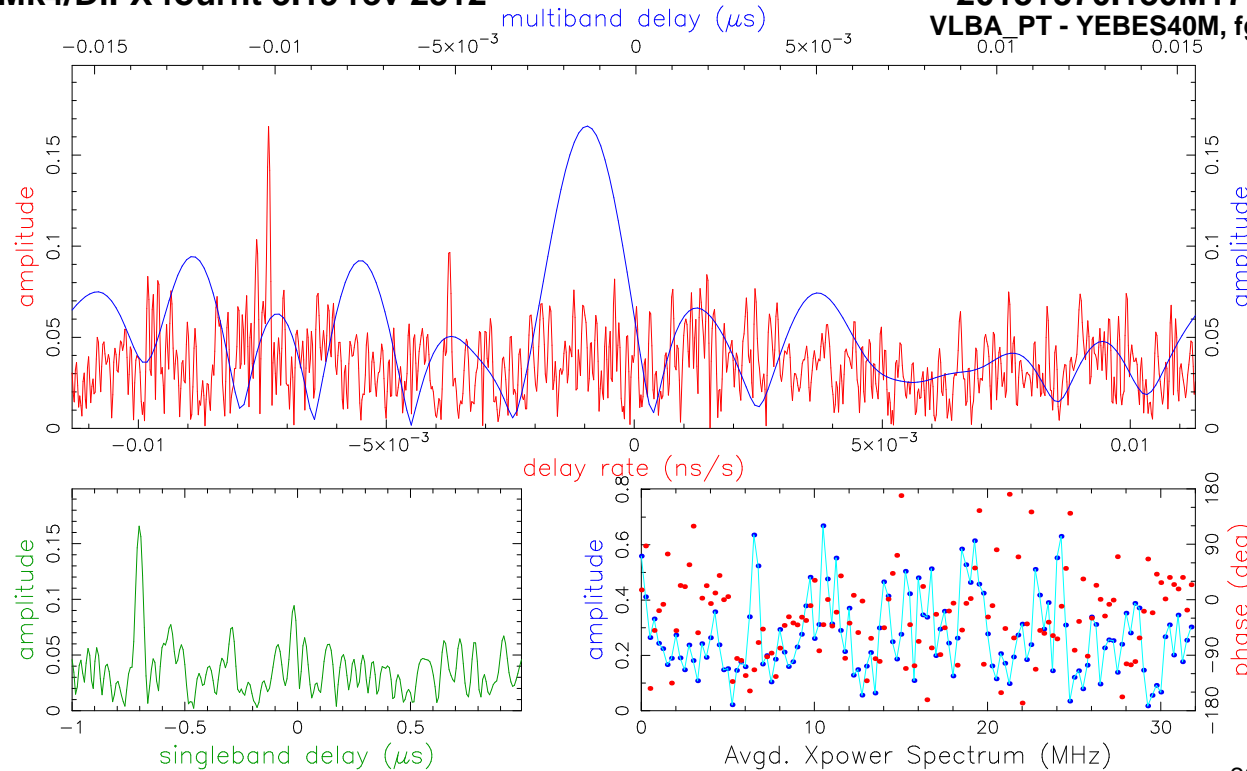


Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	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				
	-96.5	107.6	115.9	121.8	142.7	126.0	72.2	104.1	89.1	136.1	78.4	96.2	96.3	161.3	-9.0	-144.3	Phase	111.7				
	0.1	0.3	0.6	0.2	0.3	0.1	0.3	0.3	0.3	0.3	0.4	0.6	0.2	0.4	0.1	0.1	Ampl.	0.2				
	84.2	185.0	155.8	122.0	99.9	80.5	206.6	130.0	190.2	222.9	242.8	155.3	135.6	239.2	134.8	79.2	Sbd box	155.1				
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					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
p: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					
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			5.11075976986E+03														Apriori delay (usec)	5.11055267013E+03	Resid mbdelay (usec)	-1.16503E-02	+/-	2.0E-04
Sband delay (usec)			5.11075627363E+03														Apriori clock (usec)	2.3018236E+00	Resid sbdelay (usec)	2.03604E-01	+/-	3.2E-03
Phase delay (usec)			5.11055267373E+03														Apriori clockrate (us/s)	-1.6113413E-08	Resid phdelay (usec)	3.60047E-06	+/-	6.8E-07
Delay rate (us/s)			1.49017085466E+00														Apriori rate (us/s)	1.49018168351E+00	Resid rate (us/s)	-1.08289E-05	+/-	7.3E-09
Total phase (deg)				113.4													Apriori accel (us/s/s)	-3.30426230184E-05	Resid phase (deg)	111.7	+/-	21.2

ph/seg (deg) 25.0 36.7 Amplitude 0.234 +/- 0.043 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 39.4 64.0 Search (1024X64) 0.154 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 63.5 42.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 68.2 73.9 Inc. seg. avg. 0.213 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 p: az 73.4 el 59.4 pa -83.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10747.775 -2516.858 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/pY..130M17 Output file: /Exps/c192c/v2/1234/No0065/pY.W.349.130M17 simultaneous interpolator

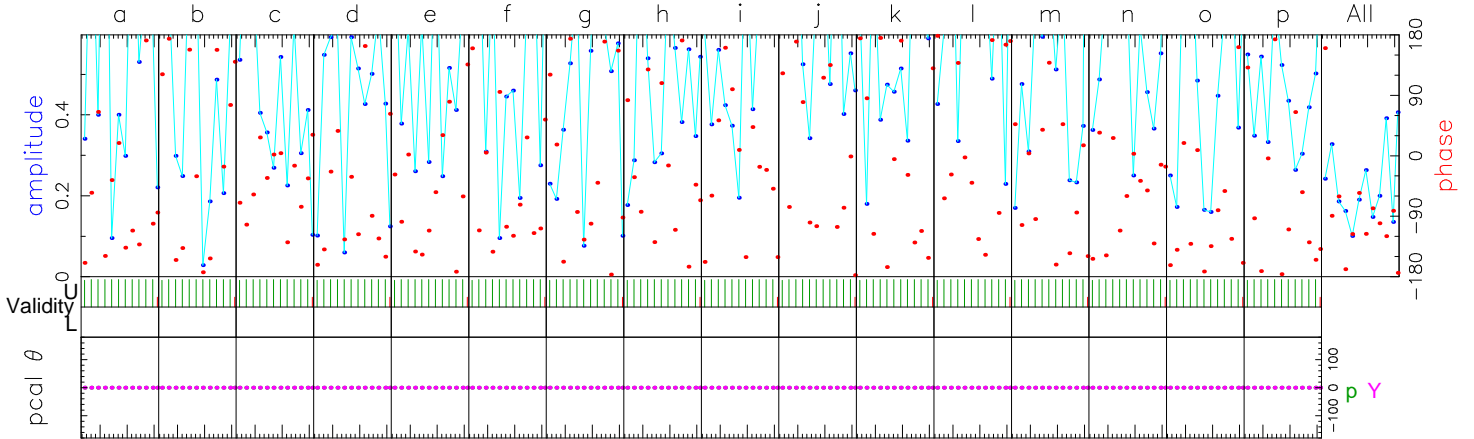


Fringe quality 0

SNR 5.8  
Int time 162.163  
Amp 0.199  
Phase -110.7  
PFD 5.9e-01  
Delays (us)  
SBD -0.701747  
MBD -0.001315  
Fringe rate (Hz)  
-0.636461  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053355  
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

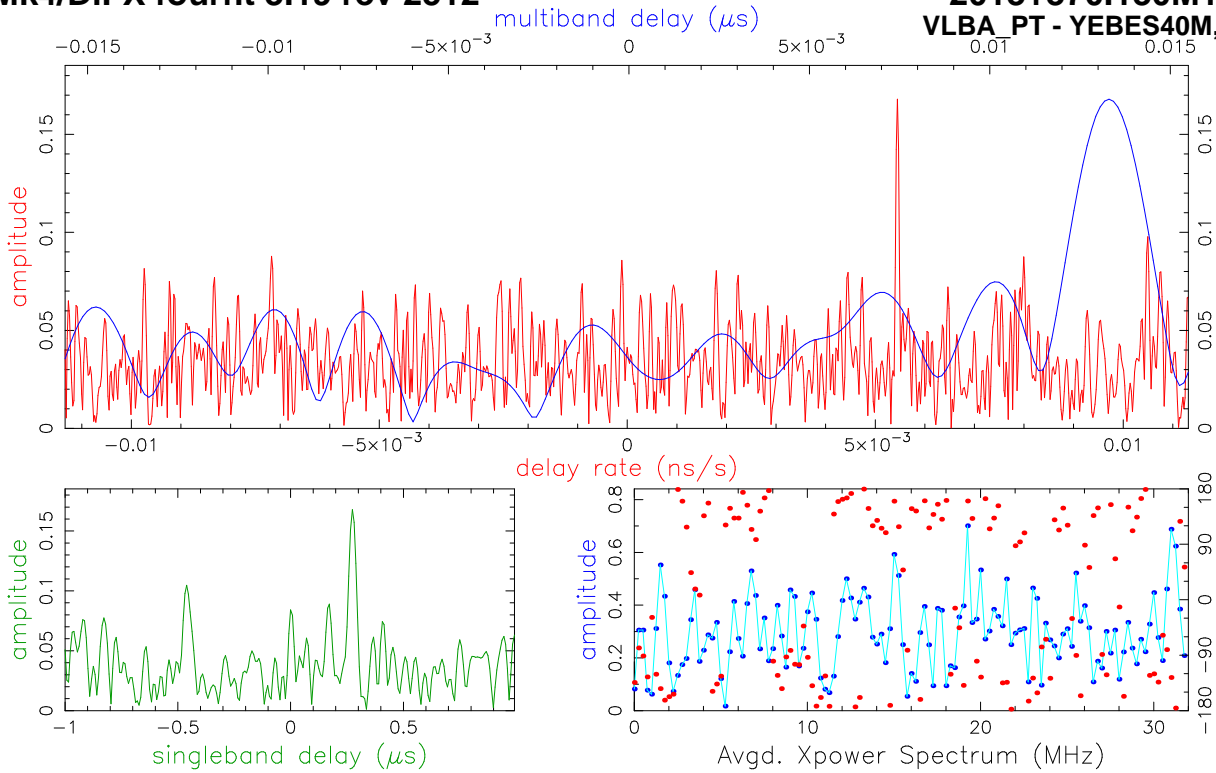


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-122.2	149.8	-45.9	-99.0	-65.4	-115.3	-139.3	-99.6	-58.1	-165.3	-147.3	-92.5	-134.1	-47.3	-103.2	-156.1	Phase	-110.7	
	0.4	0.3	0.4	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.4	0.4	0.1	0.3	0.2	0.3	Ampl.	0.2	
	40.0	222.9	39.3	218.9	4.1	245.4	154.8	114.9	167.3	4.9	40.9	37.1	208.3	146.8	61.0	37.3	Sbd box	39.2	
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		
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase		
p: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		
p	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		
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)		5.10986385466E+03		Apriori delay (usec)		5.11055267013E+03		Resid mbdelay (usec)		-1.31547E-03		+/-	1.9E-04						
Sband delay (usec)		5.10985092263E+03		Apriori clock (usec)		2.3018236E+00		Resid sbdelay (usec)		-7.01747E-01		+/-	3.0E-03						
Phase delay (usec)		5.11055266656E+03		Apriori clockrate (us/s)		-1.6113413E-08		Resid phdelay (usec)		-3.56890E-06		+/-	6.4E-07						
Delay rate (us/s)		1.49017429483E+00		Apriori rate (us/s)		1.49018168351E+00		Resid rate (us/s)		-7.38869E-06		+/-	6.8E-09						
Total phase (deg)				Apriori accel (us/s/s)		-3.30426230184E-05		Resid phase (deg)		-110.7		+/-	19.8						

ph/seg (deg) 42.7 34.3 Search (1024X64) 0.160 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 61.9 59.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 47.4 39.6 Inc. seg. avg. 0.223 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 62.9 69.1 Inc. frq. avg. 0.220 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 p: az 73.4 el 59.4 pa -83.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10747.775 -2516.858 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/pY..130M17 Output file: /Exps/c192c/v2/1234/No0065/pY.W.373.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, pY  
VLBA\_PT - YEBES40M, fgroup W, pol RL

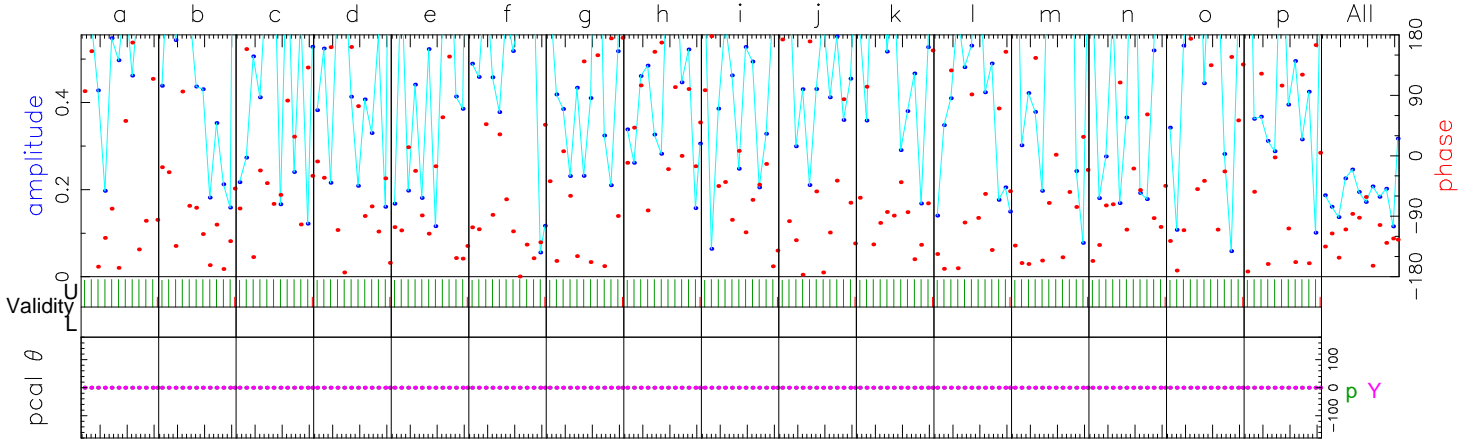


Fringe quality 0

SNR 5.9  
Int time 162.163  
Amp 0.185  
Phase -114.9  
PFD 4.5e-01  
Delays (us)  
SBD 0.274392  
MBD 0.013302  
Fringe rate (Hz) 0.469054  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053357  
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				
	-175.3	-79.0	-61.2	-116.6	-133.1	-114.4	-156.6	51.3	-79.9	-129.1	-103.7	-145.2	-98.8	-81.8	-113.1	176.0	Phase	-114.9				
	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.4	0.3	0.1	0.2	Ampl.	0.2				
	141.7	110.9	235.6	57.1	255.3	138.2	181.8	239.4	28.8	250.4	163.6	124.4	56.1	129.7	68.5	132.6	Sbd box	164.1				
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					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
p: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					
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			5.11081597194E+03														Apriori delay (usec)	5.11055267013E+03	Resid mbdelay (usec)	1.33018E-02	+/-	1.8E-04
Sband delay (usec)			5.11082706213E+03														Apriori clock (usec)	2.3018236E+00	Resid sbdelay (usec)	2.74392E-01	+/-	2.9E-03
Phase delay (usec)			5.11055266642E+03														Apriori clockrate (us/s)	-1.6113413E-08	Resid phdelay (usec)	-3.70541E-06	+/-	6.3E-07
Delay rate (us/s)			1.49018712876E+00														Apriori rate (us/s)	1.49018168351E+00	Resid rate (us/s)	5.44525E-06	+/-	6.7E-09
Total phase (deg)																	Apriori accel (us/s/s)	-3.30426230184E-05	Resid phase (deg)	-114.9	+/-	19.6

ph/seg (deg) 27.9 33.9  
amp/seg (%) 28.0 59.2  
ph/frq (deg) 57.4 39.1  
amp/frq (%) 49.4 68.3

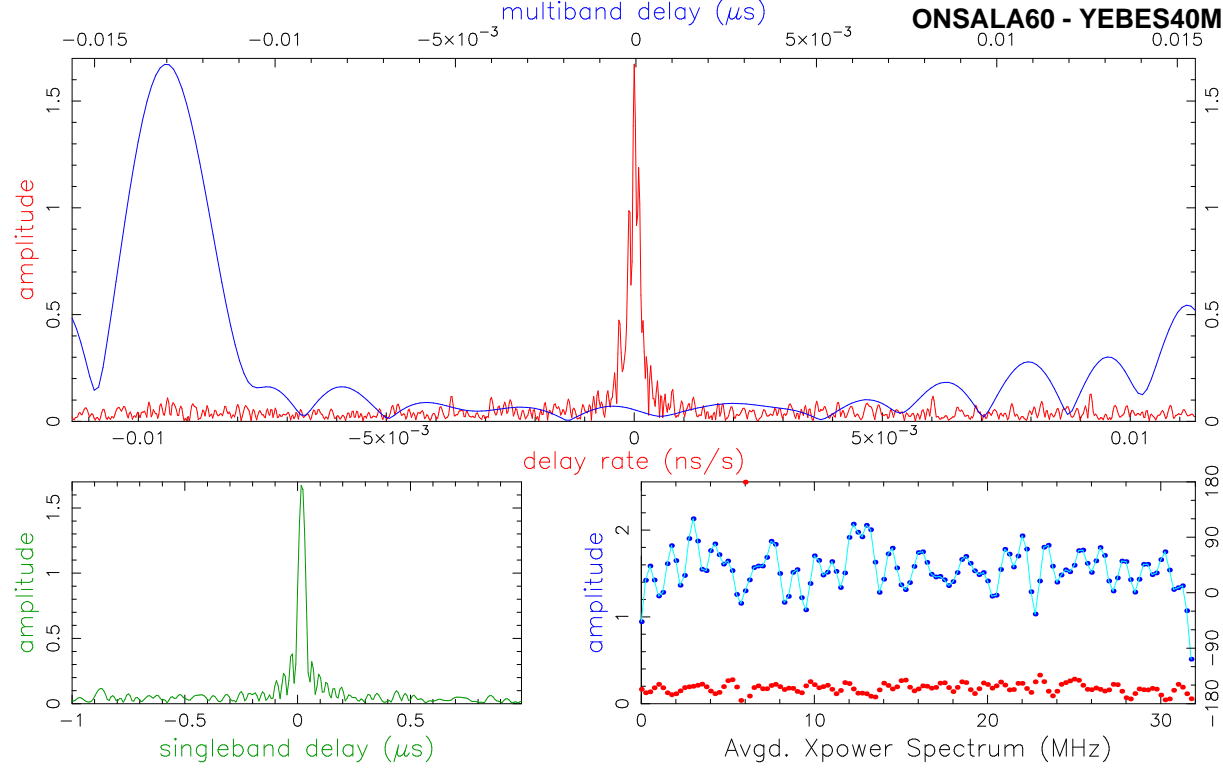
RMS Theor. Amplitude 0.185 +/- 0.032  
Search (1024X64) 0.163  
Interp. 0.000  
Inc. seg. avg. 0.177  
Inc. frq. avg. 0.197

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

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

p: az 73.4 el 59.4 pa -83.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -10747.775 -2516.858 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/pY..130M17 Output file: /Exps/c192c/v2/1234/No0065/pY.W.389.130M17

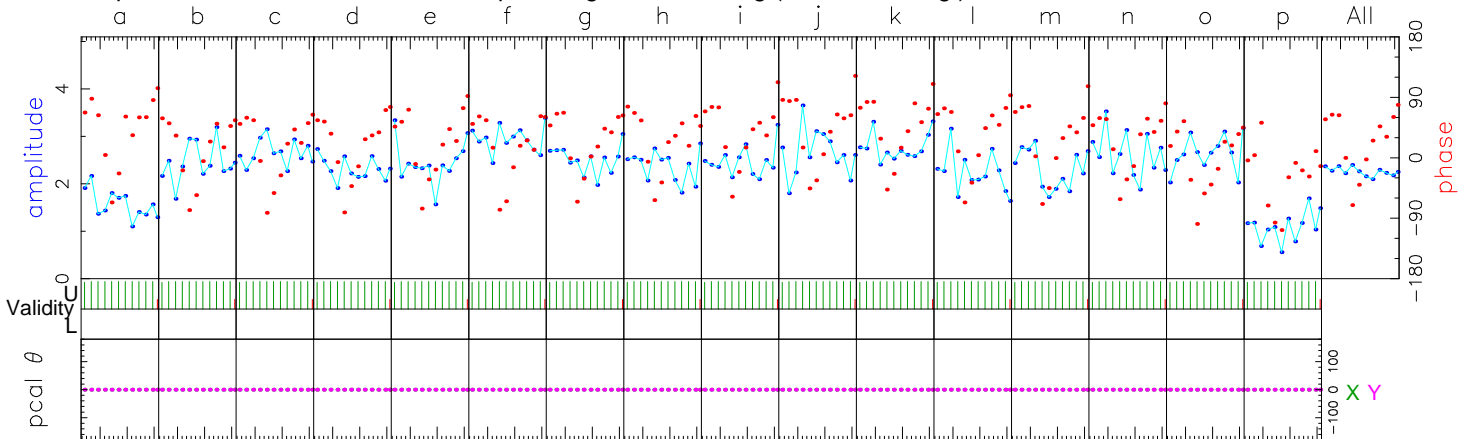


Fringe quality 5

SNR 59.2  
 Int time 162.240  
 Amp 1.700  
 Phase 27.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.018737  
 MBD -0.012994  
 Fringe rate (Hz)  
 -0.000192  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build  
 2020:076:150631  
 2020:086:053352  
 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					
	48.7	14.2	16.7	22.7	27.2	18.8	28.8	28.3	38.5	38.7	50.3	40.7	37.3	29.9	-1.0	-23.7		Phase	27.4				
	1.1	1.8	1.9	1.7	1.8	2.1	1.9	1.7	1.9	1.9	2.0	1.6	1.7	2.0	1.9	0.9		Ampl.	1.7				
	129.9	131.9	131.5	131.5	131.2	131.3	131.4	131.5	131.5	131.6	131.5	131.2	131.4	131.1	130.9	131.7		Sbd box	131.4				
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					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	1000				
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	1000				
X: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					
X: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					
X	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					
X	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					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-1.23741248787E+03															Apriori delay (usec)	-1.23743074344E+03	Resid mbdelay (usec)	-1.29944E-02	+/-	1.8E-05
Sband delay (usec)			-1.23741200644E+03															Apriori clock (usec)	2.2731556E+01	Resid sbdelay (usec)	1.87370E-02	+/-	2.9E-04
Phase delay (usec)			-1.23743074255E+03															Apriori clockrate (us/s)	3.0800002E-07	Resid phdelay (usec)	8.82287E-07	+/-	6.2E-08
Delay rate (us/s)			2.07792774410E-01															Apriori rate (us/s)	2.07792776633E-01	Resid rate (us/s)	-2.22345E-09	+/-	6.6E-10
Total phase (deg)					-58.9													Apriori accel (us/s/s)	1.98711955251E-05	Resid phase (deg)	27.4	+/-	1.9

ph/seg (deg) 43.7 3.4  
 amp/seg (%) 33.4 5.9  
 ph/frq (deg) 19.5 3.9  
 amp/frq (%) 18.9 6.8

RMS Theor. Amplitude 1.700 +/- 0.029  
 Search (1024X64) 1.654  
 Interp. 0.000  
 Inc. seg. avg. 2.257  
 Inc. frq. avg. 1.734

Group delay (usec)(sbd) -1.23741248787E+03  
 Sband delay (usec) -1.23741200644E+03  
 Phase delay (usec) -1.23743074255E+03  
 Delay rate (us/s) 2.07792774410E-01  
 Total phase (deg) -58.9

Apriori delay (usec) -1.23743074344E+03  
 Apriori clock (usec) 2.2731556E+01  
 Apriori clockrate (us/s) 3.0800002E-07  
 Apriori rate (us/s) 2.07792776633E-01  
 Apriori accel (us/s/s) 1.98711955251E-05

Resid mbdelay (usec) -1.29944E-02  
 Resid sbdelay (usec) 1.87370E-02  
 Resid phdelay (usec) 8.82287E-07  
 Resid rate (us/s) -2.22345E-09  
 Resid phase (deg) 27.4

PCal mode: MANUAL, MANUAL  
 PCal rate: 0.000E+00, 0.000E+00 (us/s)  
 Bits/sample: 2x2  
 Sample rate(MISamp/s): 64  
 Data rate(Mb/s): 2048

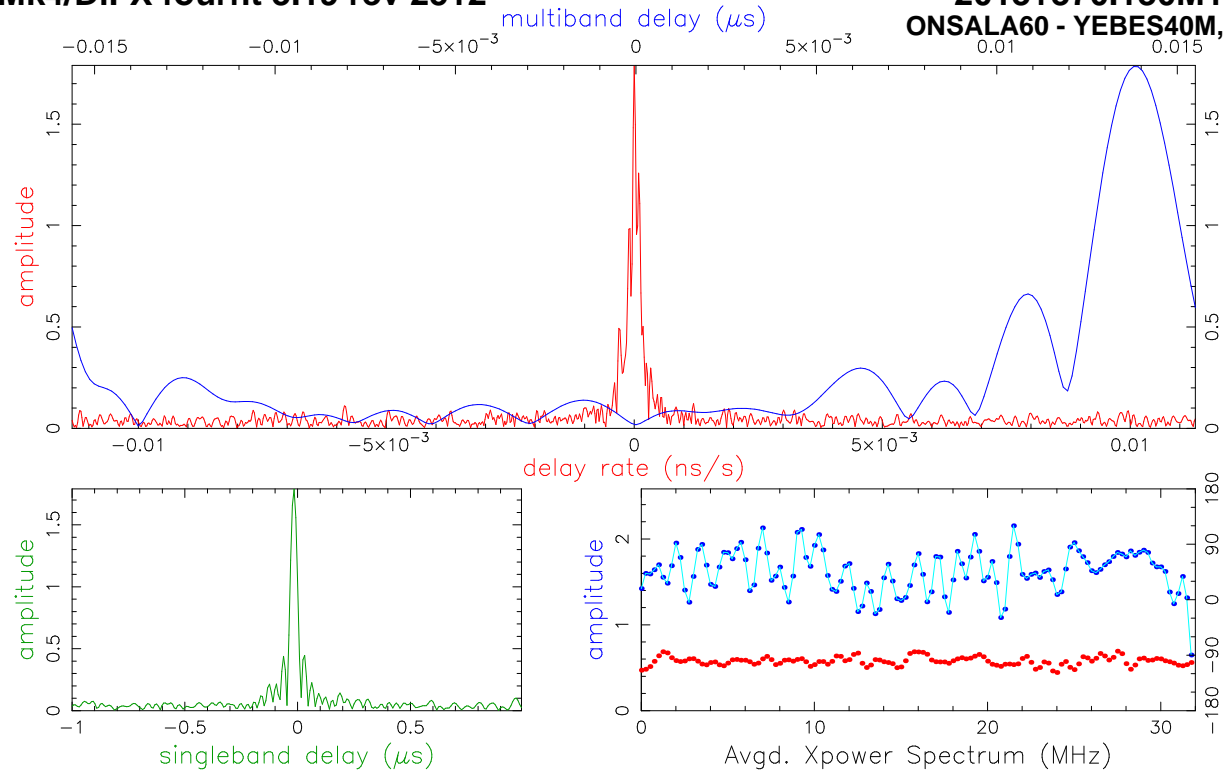
PC period (AP's) 5, 5  
 sb window (us) -1.000 1.000  
 mb window (us) -0.016 0.016  
 dr window (ns/s) -0.011 0.011  
 ion window (TEC) 0.00 0.00

nlags: 128 t\_cohere infinite

X: az 286.6 el 34.6 pa 40.4  
 Y: az 289.5 el 38.9 pa 64.3  
 u,v (fr/asec) -1477.178 2555.945

Control file: cf\_1234\_gmva  
 Input file: /Exps/c192c/v2/1234/No0065/XY..130M17  
 Output file: /Exps/c192c/v2/1234/No0065/XY.W.343.130M17

simultaneous interpolator

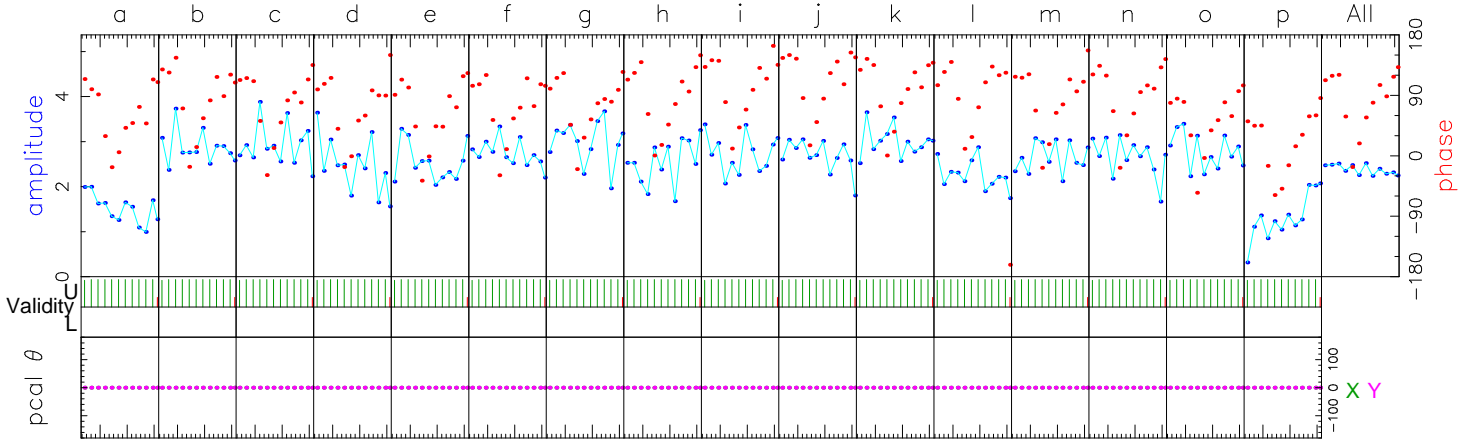


Fringe quality 4

SNR 62.4  
 Int time 162.240  
 Amp 1.790  
 Phase 84.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.016735  
 MBD 0.013842  
 Fringe rate (Hz)  
 -0.000199  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build  
 2020:076:150631  
 2020:086:053354  
 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					
	66.2	92.0	78.0	75.3	71.1	76.0	77.8	88.9	109.1	113.4	100.7	99.1	85.7	91.9	58.9	26.0		Phase 84.4					
	1.1	2.0	2.2	1.9	1.7	2.0	2.3	1.8	2.0	2.1	2.2	1.7	1.9	1.9	2.1	1.0		Ampl. 1.9					
	127.8	127.1	126.9	126.4	126.9	126.5	127.0	127.1	126.9	126.9	126.7	126.7	127.0	126.4	126.5	126.5		Sbd box 126.9					
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					
X	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					
X: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					
X: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					
X	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					
X	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					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-1.23744815122E+03															Apriori delay (usec)	-1.23743074344E+03	Resid mbdelay (usec)	1.38422E-02	+/-	1.7E-05
Sband delay (usec)			-1.23744747894E+03															Apriori clock (usec)	2.2731556E+01	Resid sbdelay (usec)	-1.67355E-02	+/-	2.8E-04
Phase delay (usec)			-1.23743074071E+03															Apriori clockrate (us/s)	3.0800002E-07	Resid phdelay (usec)	2.72184E-06	+/-	5.9E-08
Delay rate (us/s)			2.07792774318E-01															Apriori rate (us/s)	2.07792776633E-01	Resid rate (us/s)	-2.31557E-09	+/-	6.3E-10
Total phase (deg)					-1.8													Apriori accel (us/s/s)	1.98711955251E-05	Resid phase (deg)	84.4	+/-	1.8

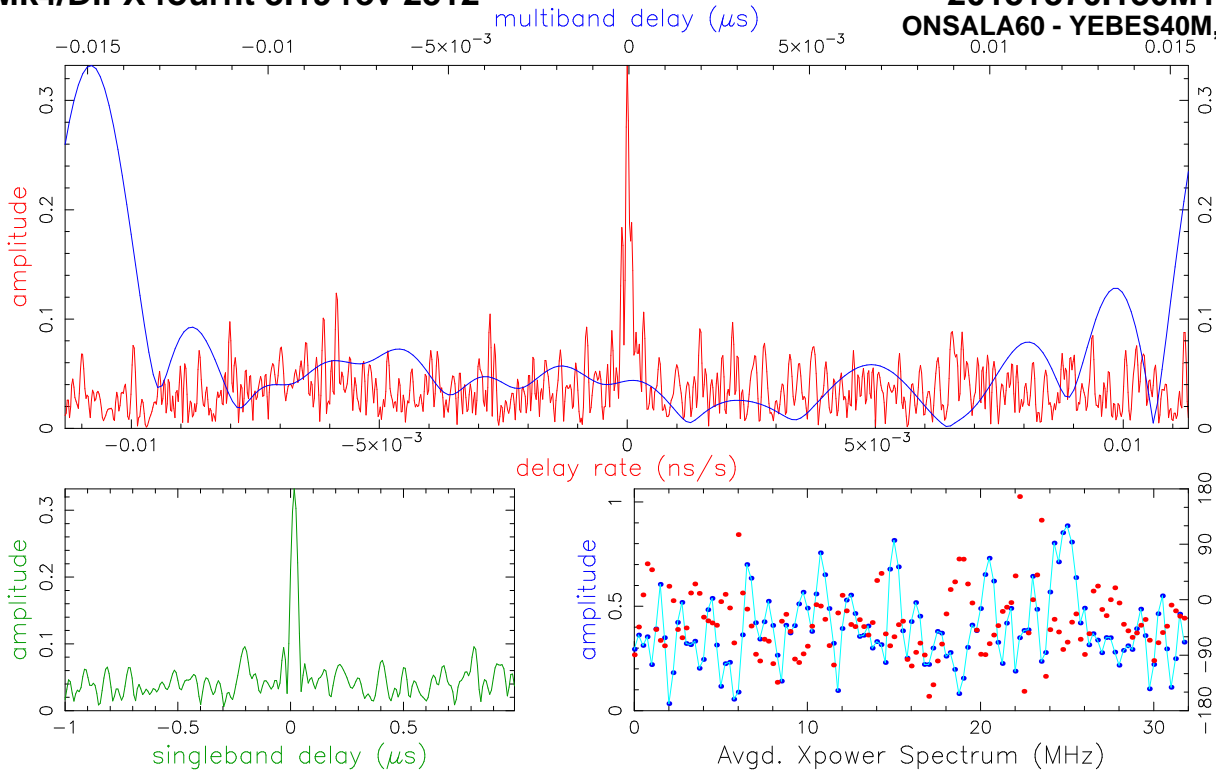
ph/seg (deg) 43.7 3.2  
 amp/seg (%) 33.9 5.6  
 ph/frq (deg) 22.2 3.7  
 amp/frq (%) 20.3 6.4

RMS Theor. Amplitude 1.790 +/- 0.029  
 Search (1024X64) 1.763  
 Interp. 0.000  
 Inc. seg. avg. 2.385  
 Inc. frq. avg. 1.874

Group delay (usec)(sbd) -1.23744815122E+03 Apriori delay (usec) -1.23743074344E+03 Resid mbdelay (usec) 1.38422E-02 +/- 1.7E-05  
 Sband delay (usec) -1.23744747894E+03 Apriori clock (usec) 2.2731556E+01 Resid sbdelay (usec) -1.67355E-02 +/- 2.8E-04  
 Phase delay (usec) -1.23743074071E+03 Apriori clockrate (us/s) 3.0800002E-07 Resid phdelay (usec) 2.72184E-06 +/- 5.9E-08  
 Delay rate (us/s) 2.07792774318E-01 Apriori rate (us/s) 2.07792776633E-01 Resid rate (us/s) -2.31557E-09 +/- 6.3E-10  
 Total phase (deg) -1.8 Apriori accel (us/s/s) 1.98711955251E-05 Resid phase (deg) 84.4 +/- 1.8

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

X: az 286.6 el 34.6 pa 40.4 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -1477.178 2555.945 simultaneous interpolator

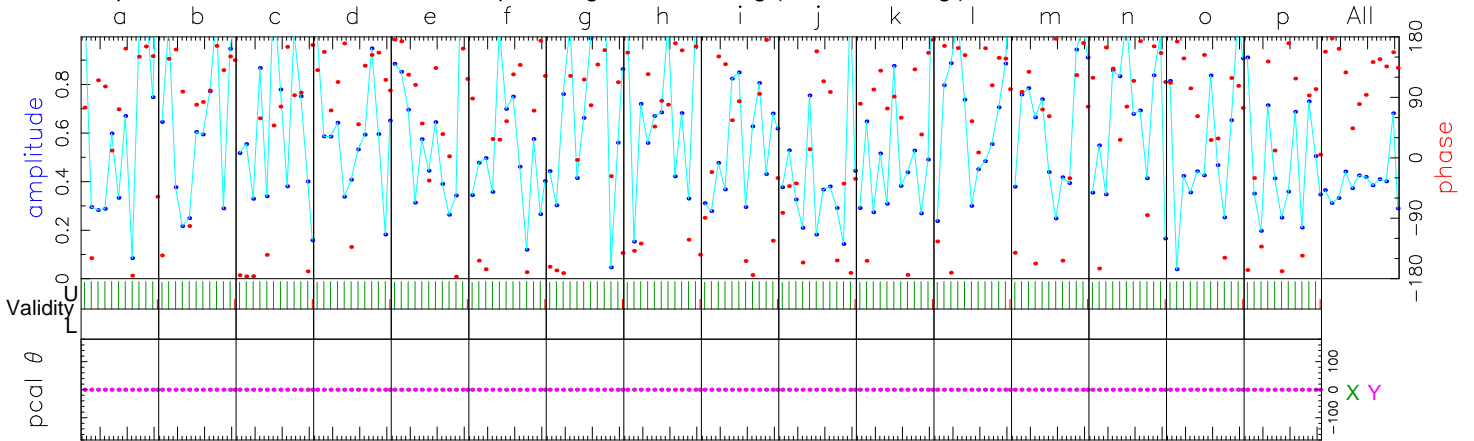


Fringe quality 9

SNR 11.6  
 Int time 162.240  
 Amp 0.332  
 Phase 132.4  
 PFD 1.5e-22  
 Delays (us)  
 SBD 0.015953  
 MBD -0.014907  
 Fringe rate (Hz) 0.000423  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build  
 2020:076:150631  
 2020:086:053356  
 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					
	132.6	140.8	106.9	132.6	140.0	95.7	139.4	147.3	132.9	-117.2	126.5	150.7	134.4	135.5	97.2	139.0	Phase	132.4					
	0.3	0.5	0.4	0.4	0.4	0.2	0.5	0.4	0.2	0.1	0.3	0.5	0.4	0.4	0.2	0.2	Ampl.	0.3					
	255.6	131.1	13.9	130.6	131.0	101.4	131.2	131.2	95.3	15.0	218.9	130.9	131.9	131.4	65.5	250.0	Sbd box	131.0					
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used						
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs						
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase						
X: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						
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp						
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids						
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks						
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids						
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks						
Group delay (usec)(sbd)			-1.23741440062E+03														Apriori delay (usec)	-1.23743074344E+03	Resid mbdelay (usec)	-1.49072E-02	+/-	9.3E-05	
Sband delay (usec)			-1.23741479044E+03															Apriori clock (usec)	2.2731556E+01	Resid sbdelay (usec)	1.59530E-02	+/-	1.5E-03
Phase delay (usec)			-1.23743073917E+03															Apriori clockrate (us/s)	3.0800002E-07	Resid phdelay (usec)	4.26949E-06	+/-	3.2E-07
Delay rate (us/s)			2.07792781546E-01															Apriori rate (us/s)	2.07792776633E-01	Resid rate (us/s)	4.91314E-09	+/-	3.4E-09
Total phase (deg)					46.2													Apriori accel (us/s/s)	1.98711955251E-05	Resid phase (deg)	132.4	+/-	9.9

ph/seg (deg) 38.3 17.2  
 amp/seg (%) 36.6 29.9  
 ph/frq (deg) 34.1 19.8  
 amp/frq (%) 35.5 34.6

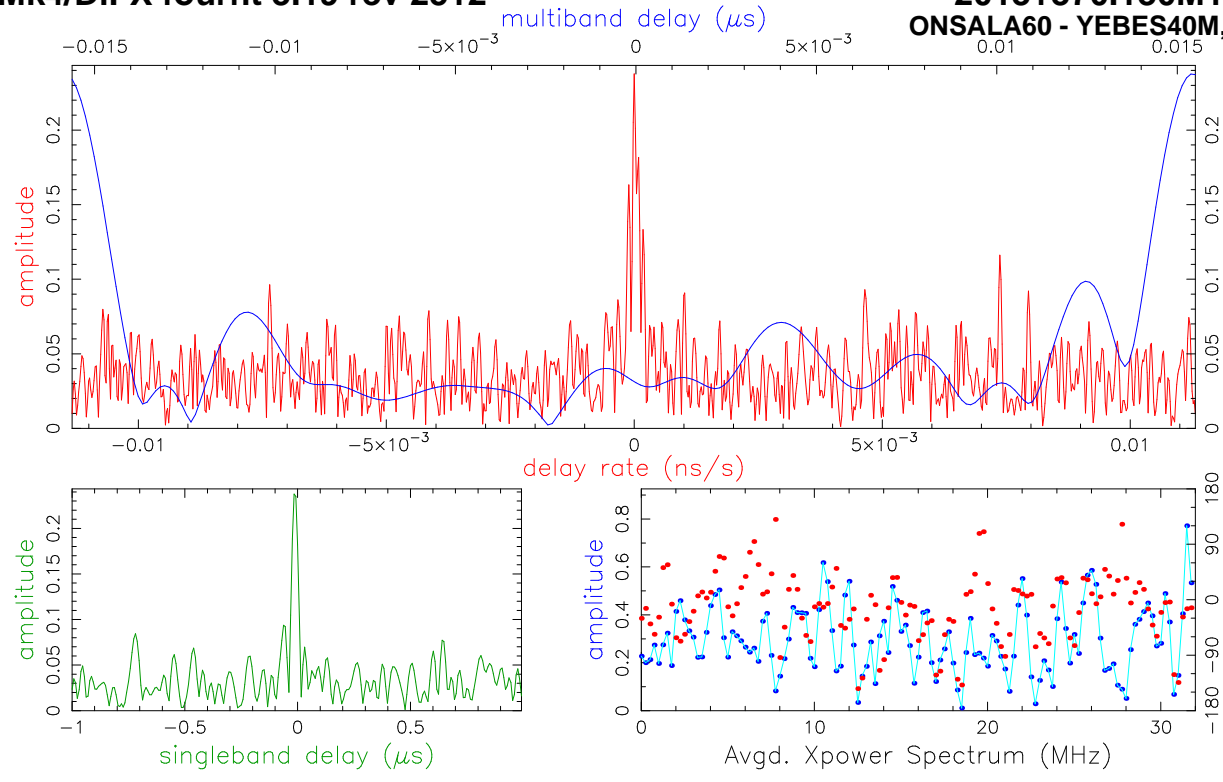
RMS Theor. Amplitude 0.332 +/- 0.029  
 Search (1024X64) 0.322  
 Interp. 0.000  
 Inc. seg. avg. 0.392  
 Inc. frq. avg. 0.330

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

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

X: az 286.6 el 34.6 pa 40.4 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -1477.178 2555.945 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/XY..130M17 Output file: /Exps/c192c/v2/1234/No0065/XY.W.380.130M17

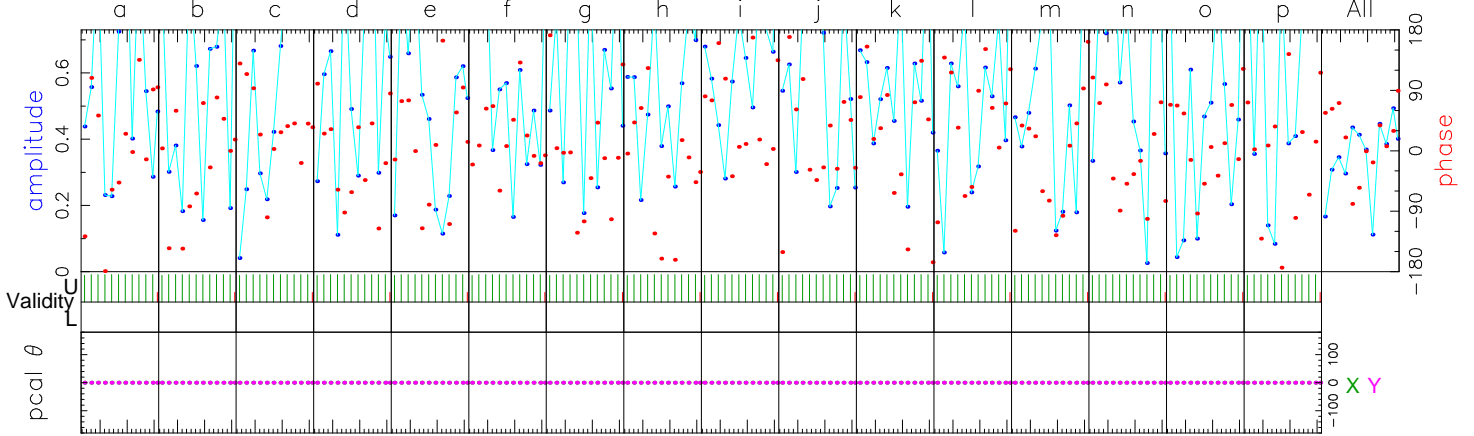


Fringe quality 9

SNR 8.5  
 Int time 162.240  
 Amp 0.243  
 Phase 15.8  
 PFD 4.2e-09  
 Delays (us)  
 SBD -0.012081  
 MBD -0.015821  
 Fringe rate (Hz) 0.000808  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build  
 2020:076:150631  
 2020:086:053358  
 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				
	43.6	-1.6	34.1	-8.2	39.6	16.7	-30.1	-22.5	32.4	16.0	58.1	58.8	-9.6	10.9	7.1	51.1	Phase	15.8				
	0.2	0.3	0.4	0.3	0.2	0.4	0.4	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.1	Ampl.	0.2				
	48.6	164.5	126.8	98.1	27.1	127.0	127.7	253.4	52.6	108.9	128.0	26.5	19.5	111.8	59.3	70.9	Sbd box	127.5				
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					
X	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					
X: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					
X: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					
X	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					
X	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					
																	Tracks					
Group delay (usec)(sbd)			-1.23744656490E+03														Apriori delay (usec)	-1.23743074344E+03	Resid mbdelay (usec)	-1.58215E-02	+/-	1.3E-04
Sband delay (usec)			-1.23744282444E+03														Apriori clock (usec)	2.2731556E+01	Resid sbdelay (usec)	-1.20810E-02	+/-	2.0E-03
Phase delay (usec)			-1.23743074293E+03														Apriori clockrate (us/s)	3.0800002E-07	Resid phdelay (usec)	5.09560E-07	+/-	4.4E-07
Delay rate (us/s)			2.07792786016E-01														Apriori rate (us/s)	2.07792776633E-01	Resid rate (us/s)	9.38272E-09	+/-	4.6E-09
Total phase (deg)					-70.4												Apriori accel (us/s/s)	1.98711955251E-05	Resid phase (deg)	15.8	+/-	13.5

ph/seg (deg) 46.8 23.4  
 amp/seg (%) 61.6 40.9  
 ph/frq (deg) 29.3 27.0  
 amp/frq (%) 40.1 47.2

RMS Theor. Amplitude 0.243 +/- 0.029  
 Search (1024X64) 0.230  
 Interp. 0.000  
 Inc. seg. avg. 0.319  
 Inc. frq. avg. 0.238

Group delay (usec)(sbd) -1.23744656490E+03  
 Sband delay (usec) -1.23744282444E+03  
 Phase delay (usec) -1.23743074293E+03  
 Delay rate (us/s) 2.07792786016E-01  
 Total phase (deg) -70.4

Apriori delay (usec) -1.23743074344E+03  
 Apriori clock (usec) 2.2731556E+01  
 Apriori clockrate (us/s) 3.0800002E-07  
 Apriori rate (us/s) 2.07792776633E-01  
 Apriori accel (us/s/s) 1.98711955251E-05

Resid mbdelay (usec) -1.58215E-02 +/- 1.3E-04  
 Resid sbdelay (usec) -1.20810E-02 +/- 2.0E-03  
 Resid phdelay (usec) 5.09560E-07 +/- 4.4E-07  
 Resid rate (us/s) 9.38272E-09 +/- 4.6E-09  
 Resid phase (deg) 15.8 +/- 13.5

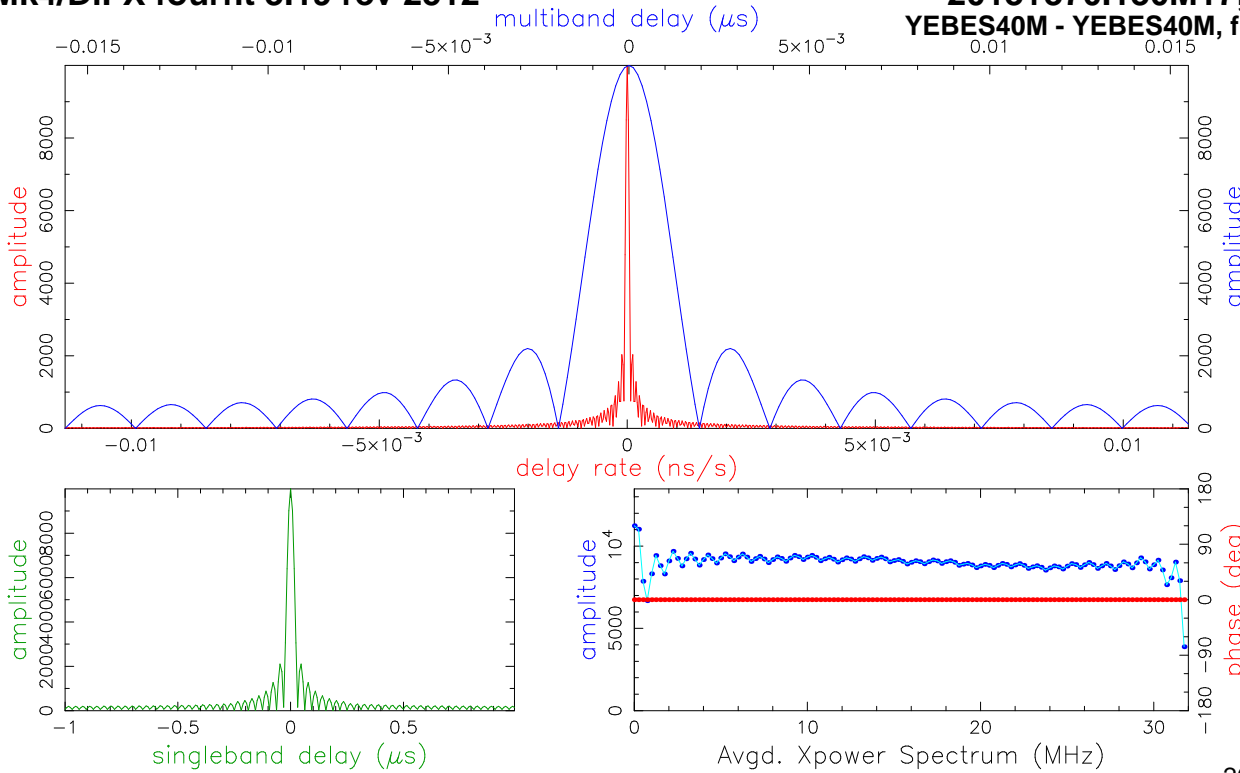
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 PCal rate: 0.000E+00, 0.000E+00 (us/s)  
 Bits/sample: 2x2 SampCntNorm: enabled  
 Sample rate(MSamp/s): 64  
 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

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 286.6 el 34.6 pa 40.4 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -1477.178 2555.945 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/XY..130M17 Output file: /Exps/c192c/v2/1234/No0065/XY.W.392.130M17



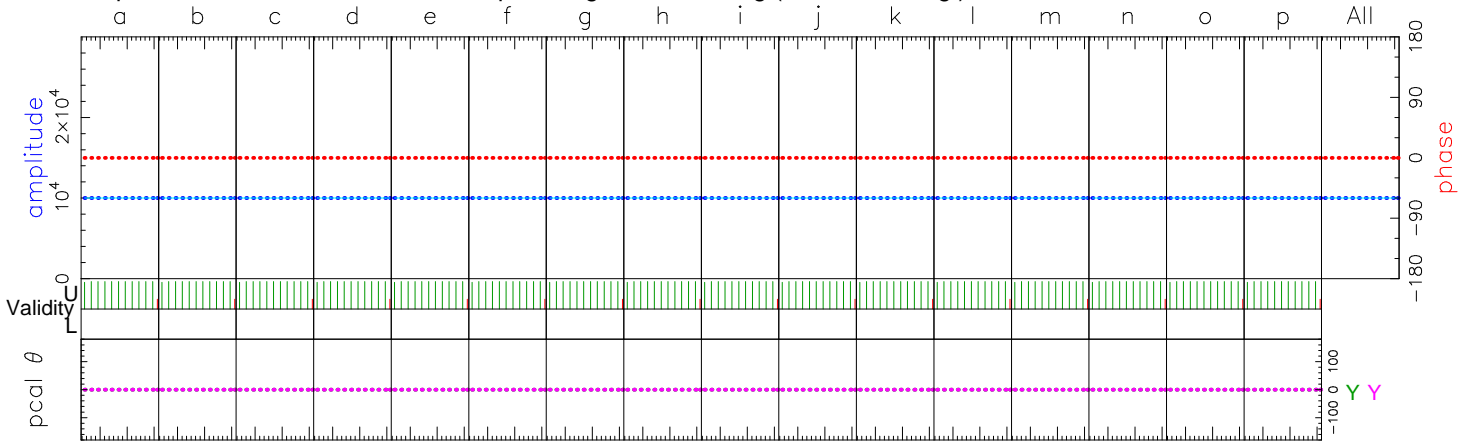


Fringe quality 9

SNR 348387.3  
Int time 162.304  
Amp 9999.995  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Yr:day 16383  
Start 2019:279  
Stop 2019:279  
FRT 00017.90  
Start 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053353  
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

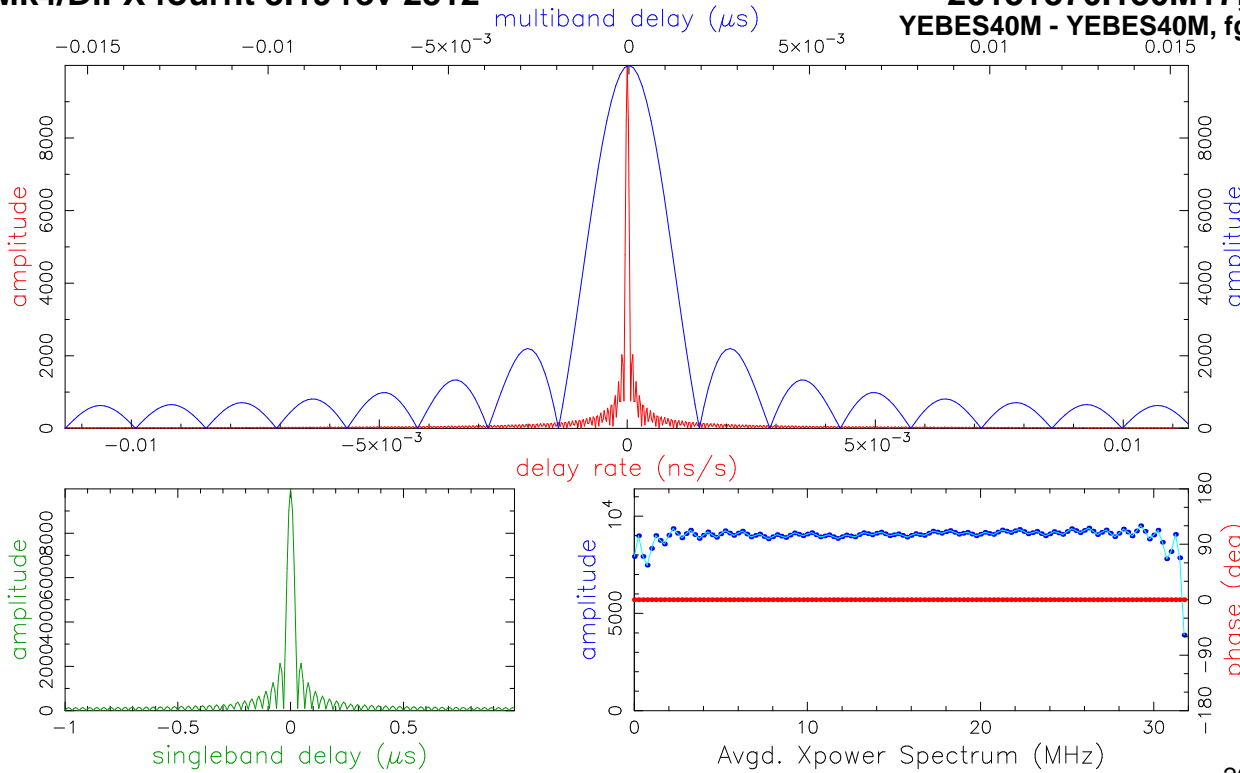


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC
Y	1000	1000	1000	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	1000	1000	1000	
Y	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)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	3.1E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	4.9E-08
Phase delay (usec)	7.50618438612E-20	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	7.50618E-20	+/-	1.1E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	1.1E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.995 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X64) 9999.995 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 9999.995 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Y: az 289.5 el 38.9 pa 64.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/YY..130M17 Output file: /Exps/c192c/v2/1234/No0065/YY.W.352.130M17

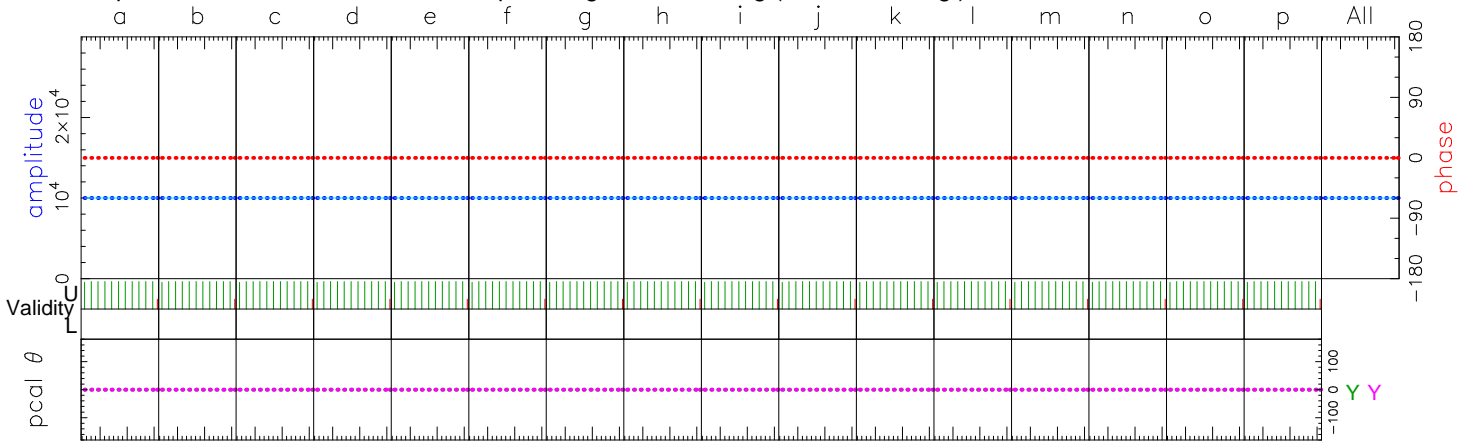


Fringe quality 9

SNR 348387.3  
Int time 162.304  
Amp 9999.995  
Phase -0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192c  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053355  
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

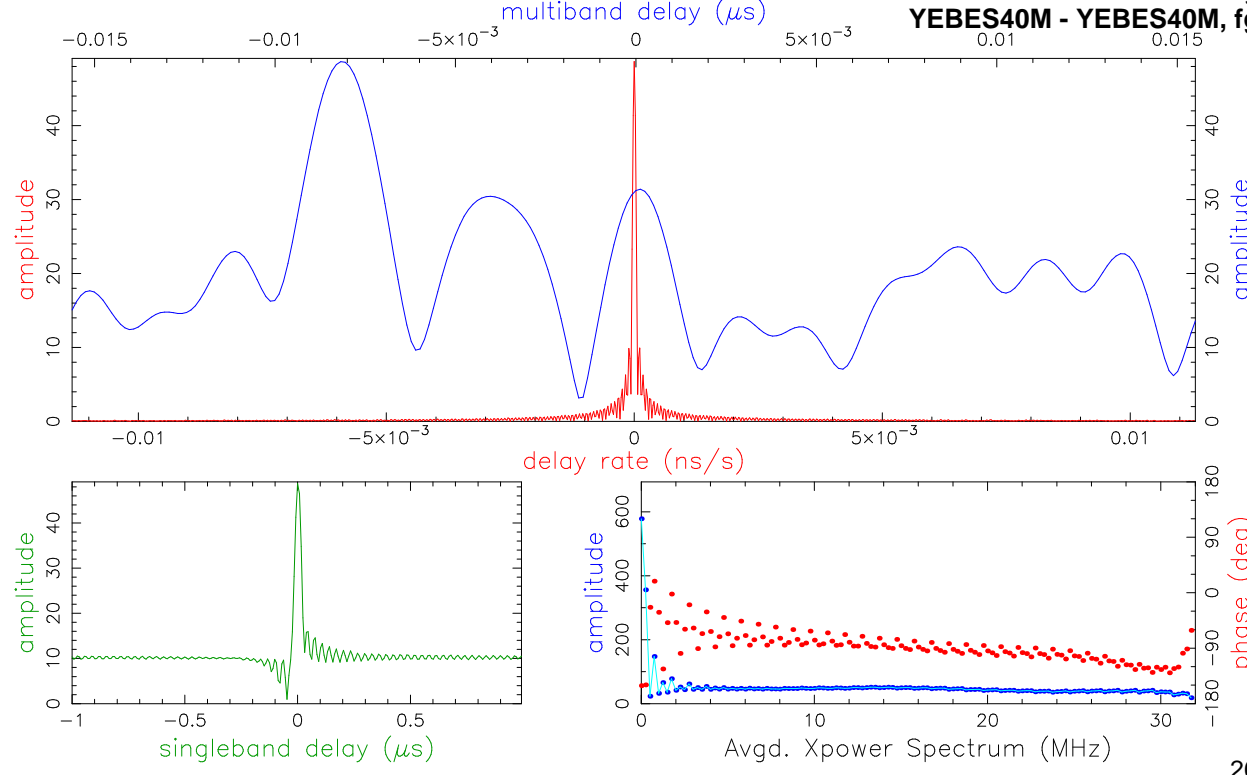


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-0.0	0.0	0.0	-0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	0.0	-0.0	0.0	-0.0	-0.0	0.0		Phase	-0.0
	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	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	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
Y: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:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks	
Y	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) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.1E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 4.9E-08  
 Phase delay (usec) -4.3766634522E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -4.37667E-20 +/- 1.1E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 1.1E-13  
 Total phase (deg) -0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) -0.0 +/- 0.0

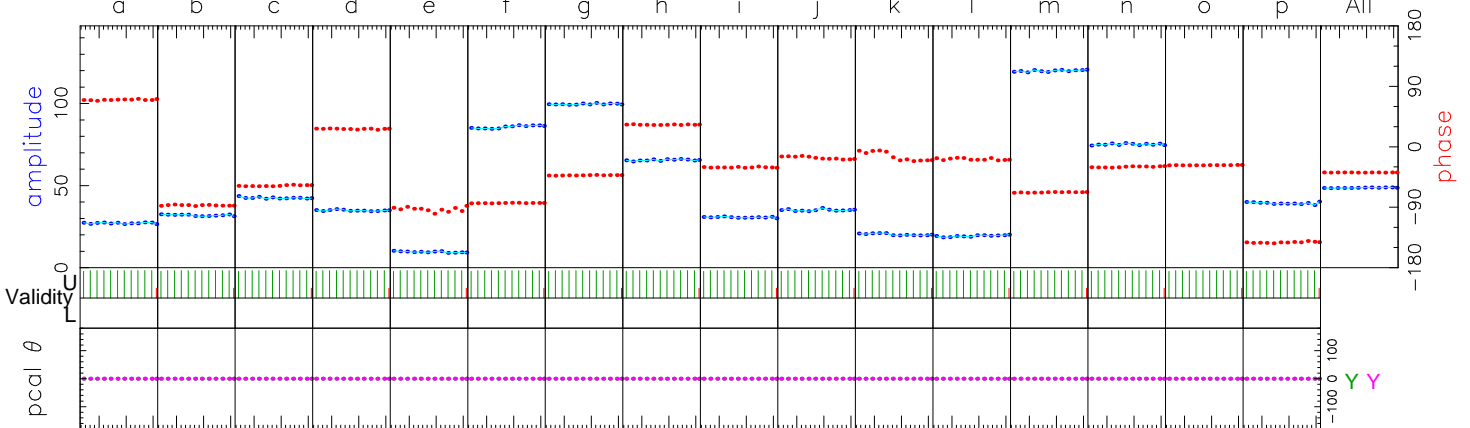
RMS Theor. Amplitude 9999.995 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (1024X64) 9999.995 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.995 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Y: az 289.5 el 38.9 pa 64.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/YY..130M17 Output file: /Exps/c192c/v2/1234/No0065/YY.W.367.130M17



Fringe quality 5  
SNR 1710.6  
Int time 162.304  
Amp 49.101  
Phase -38.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.002215  
MBD -0.008124  
Fringe rate (Hz)  
-0.000006  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192c  
Exper # 16383  
Yr:day 2019:279  
Start 000017.90  
Stop 000300.71  
FRT 000131.00  
Corr/FF/build  
2020:076:150631  
2020:086:053356  
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
	69.9	-87.1	-57.9	26.6	-93.2	-83.7	-42.4	32.9	-30.6	-16.3	-13.7	-18.4	-67.8	-29.9	-27.3	-142.3	Phase	-38.2
	27.2	32.0	42.6	34.9	9.7	85.7	99.6	65.6	30.7	35.1	20.2	19.3	119.8	75.1	261.3	39.3	Ampl.	62.4
	128.8	127.7	129.7	128.5	126.2	128.6	129.2	127.9	127.2	128.2	129.8	129.7	130.4	126.8	129.9	131.3	Sbd box	129.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
Y: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:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

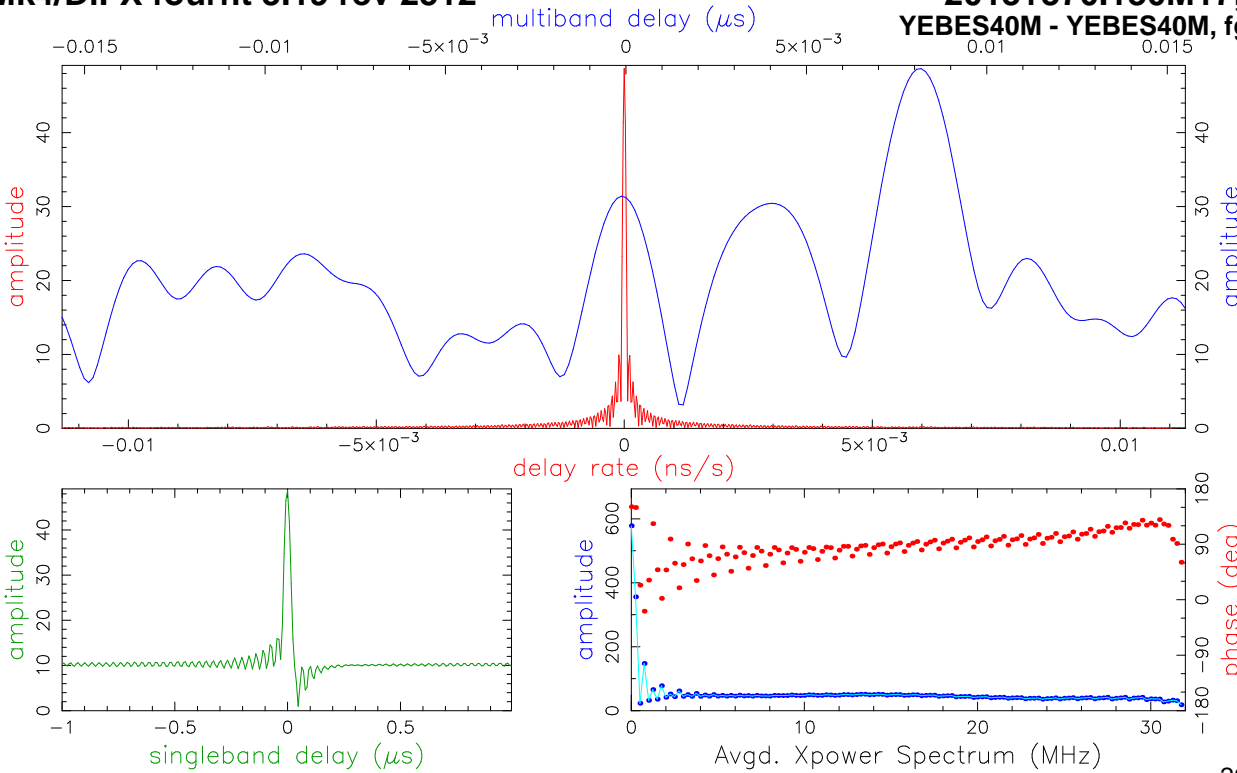
Group delay (usec)(sbd) -8.12371875000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -8.12372E-03 +/- 6.3E-07  
 Sband delay (usec) 2.21500000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 2.21500E-03 +/- 1.0E-05  
 Phase delay (usec) -1.23333087596E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -1.23333E-06 +/- 2.2E-09  
 Delay rate (us/s) -6.51873010017E-11 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -6.51873E-11 +/- 2.3E-11  
 Total phase (deg) -38.2 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) -38.2 +/- 0.1

ph/seg (deg) 0.1 0.1 Theor. Amplitude 49.101 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.9 0.2 Search (1024X64) 48.281 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 54.9 0.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 124.5 0.2 Inc. seg. avg. 48.687 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 62.379 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Y: az 289.5 el 38.9 pa 64.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/YY..130M17 Output file: /Exps/c192c/v2/1234/No0065/YY.W.381.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, YY  
 YEBES40M - YEBES40M, fgroup W, pol RL

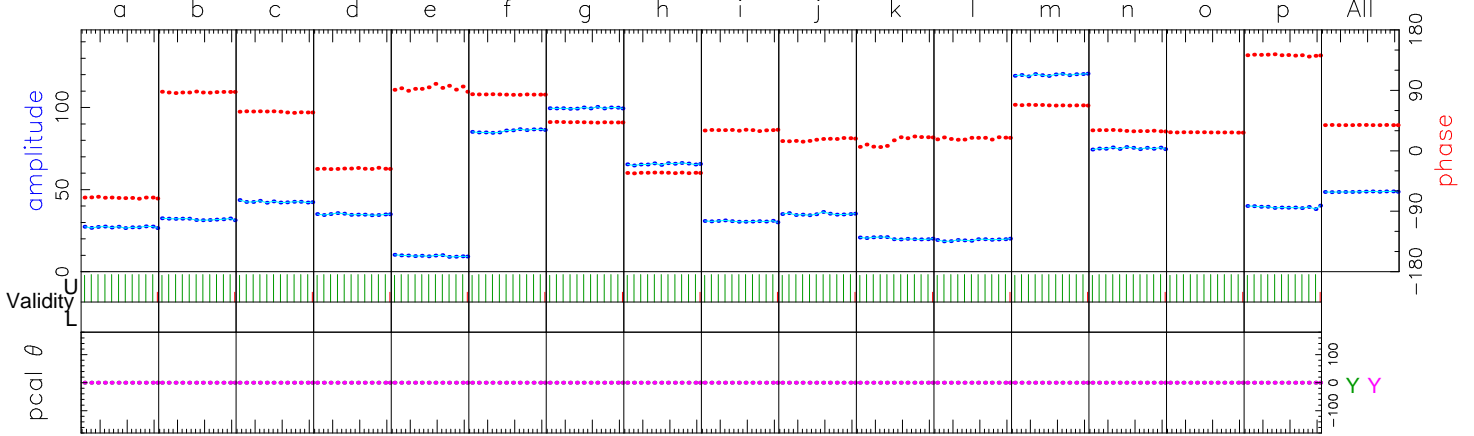


Fringe quality 5

SNR 1710.6  
 Int time 162.304  
 Amp 49.101  
 Phase 38.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002215  
 MBD 0.008124  
 Fringe rate (Hz) 0.000006  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

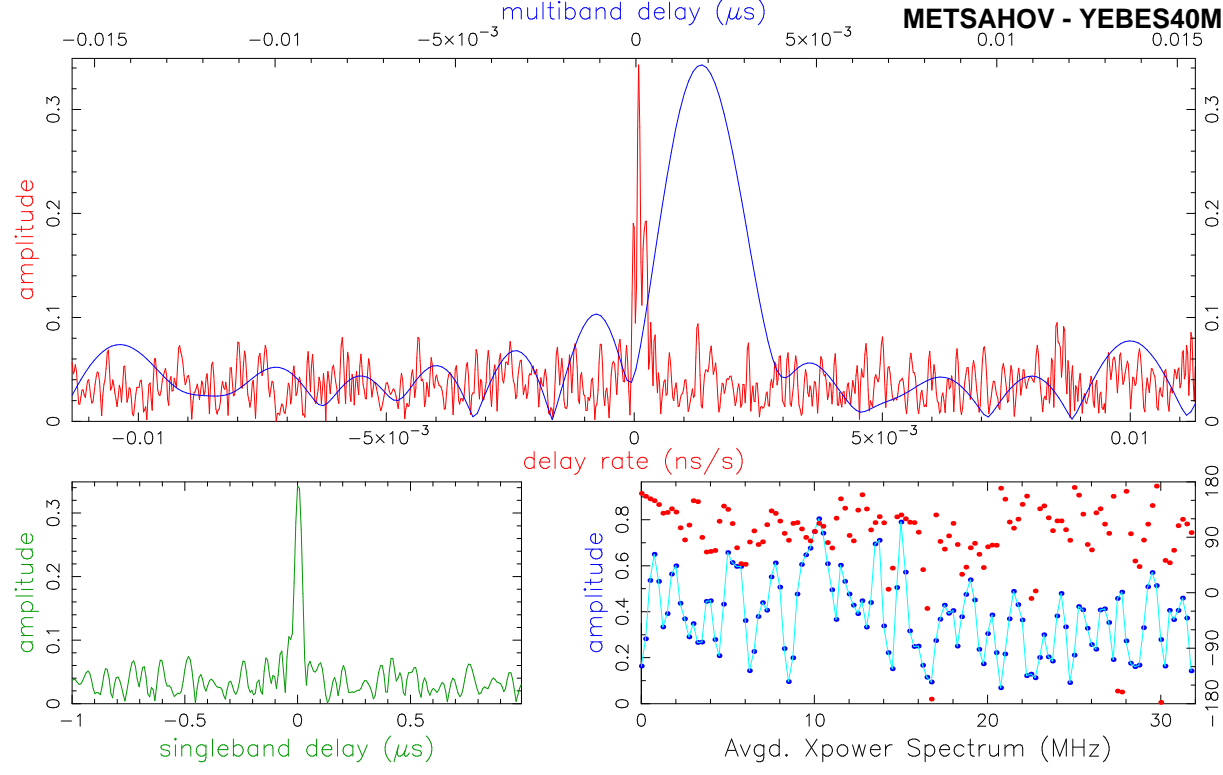
Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build  
 2020:076:150631  
 2020:086:053358  
 2020:014:135814  
 RA & Dec (J2000)  
 20h15m28.729803s  
 +37°10'59.514664"

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
	-69.9	87.1	57.9	-26.6	93.2	83.7	42.4	-32.9	30.6	16.3	13.7	18.4	67.8	29.9	27.3	142.3	Phase	38.2
	27.2	32.0	42.6	34.9	9.7	85.7	99.6	65.6	30.7	35.1	20.2	19.3	119.8	75.1	261.3	39.3	Ampl.	62.4
	129.2	130.3	128.3	129.5	131.8	129.4	128.8	130.1	130.8	129.8	128.2	128.3	127.6	131.2	128.1	126.7	Sbd box	128.7
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
Y: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:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
Y	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)	8.12371875000E-03			Apriori delay (usec)			0.0000000000E+00			Resid mbdelay (usec)			8.12372E-03			+/-	6.3E-07	
Sband delay (usec)	-2.2150000000E-03			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			-2.21500E-03			+/-	1.0E-05	
Phase delay (usec)	1.23333087604E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			1.23333E-06			+/-	2.2E-09	
Delay rate (us/s)	6.51873010017E-11			Apriori rate (us/s)			0.0000000000E+00			Resid rate (us/s)			6.51873E-11			+/-	2.3E-11	
Total phase (deg)	38.2			Apriori accel (us/s/s)			0.0000000000E+00			Resid phase (deg)			38.2			+/-	0.1	

ph/seg (deg) 0.1 0.1 Theor. Amplitude 49.101 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.9 0.2 Search (1024X64) 48.281 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 54.9 0.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 124.5 0.2 Inc. seg. avg. 48.687 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Y: az 289.5 el 38.9 pa 64.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) 0.000 0.000 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/YY..130M17 Output file: /Exps/c192c/v2/1234/No0065/YY.W.394.130M17 simultaneous interpolator

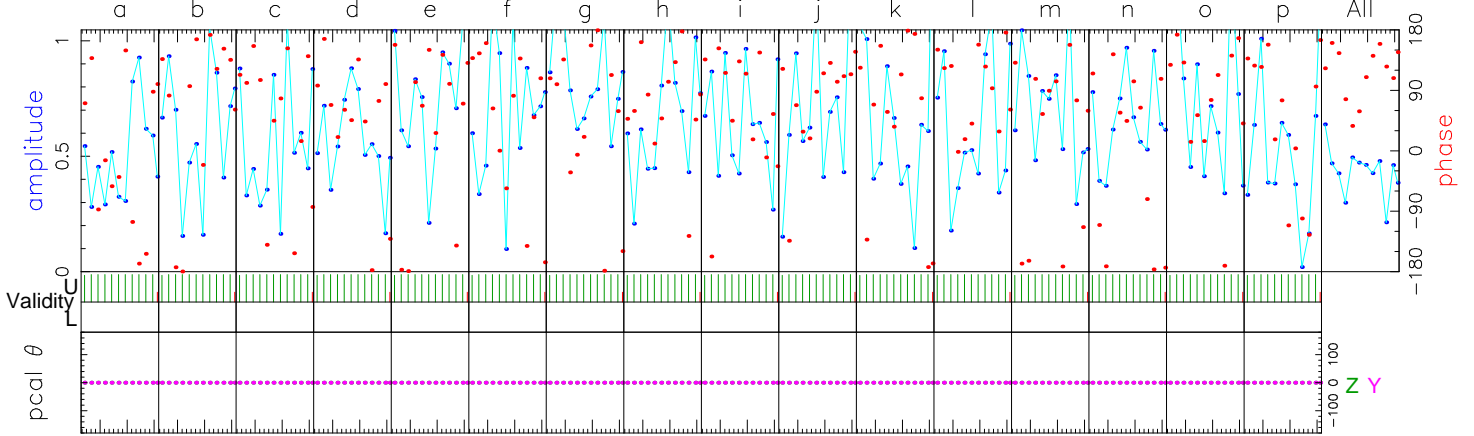


Fringe quality 9

SNR 12.2  
 Int time 162.265  
 Amp 0.349  
 Phase 116.5  
 PFD 1.2e-25  
 Delays (us)  
 SBD 0.003405  
 MBD 0.001836  
 Fringe rate (Hz) 0.007206  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build  
 2020:076:150631  
 2020:086:053359  
 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

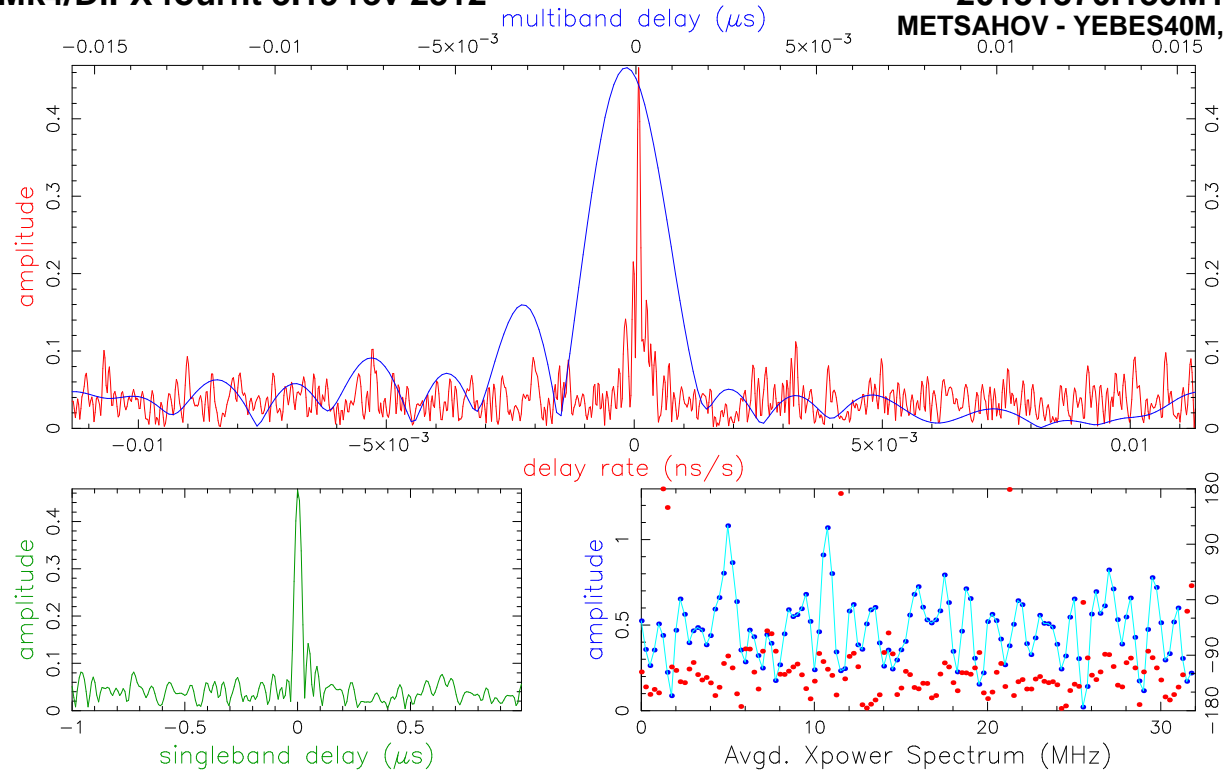


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-143.3	136.6	123.8	88.5	124.1	98.9	118.3	91.2	111.9	98.6	130.3	102.6	141.3	112.9	123.8	119.5	Phase	116.5
	0.1	0.5	0.3	0.3	0.5	0.3	0.4	0.4	0.3	0.5	0.3	0.4	0.4	0.3	0.5	0.3	Ampl.	0.3
	103.8	129.7	131.6	178.5	129.5	128.3	73.6	131.3	72.8	130.3	174.6	127.5	129.0	150.8	128.8	50.8	Sbd box	129.4
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	
Z	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	
Z: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	
Z: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	
Z	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	
Z	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) -2.86364221487E+03 Apriori delay (usec) -2.86364405066E+03 Resid mbdelay (usec) 1.83580E-03 +/- 8.9E-05  
 Sband delay (usec) -2.86364064516E+03 Apriori clock (usec) -9.4989796E+00 Resid sbdelay (usec) 3.40550E-03 +/- 1.4E-03  
 Phase delay (usec) -2.86364404690E+03 Apriori clockrate (us/s) -2.0370720E-07 Resid phdelay (usec) 3.75789E-06 +/- 3.0E-07  
 Delay rate (us/s) 2.56744558099E-01 Apriori rate (us/s) 2.56744474440E-01 Resid rate (us/s) 8.36594E-08 +/- 3.2E-09  
 Total phase (deg) -72.1 Apriori accel (us/s/s) 3.00950889333E-05 Resid phase (deg) 116.5 +/- 9.4

ph/seg (deg) RMS Theor. Amplitude 0.349 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 38.8 16.3 Search (1024X64) 0.337 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 38.8 28.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 31.3 18.8 Inc. seg. avg. 0.421 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 30.8 32.9 Inc. frq. avg. 0.347 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Z: az 294.2 el 29.5 pa 34.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -1821.212 3349.164 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/ZY..130M17 Output file: /Exps/c192c/v2/1234/No0065/ZY.W.398.130M17

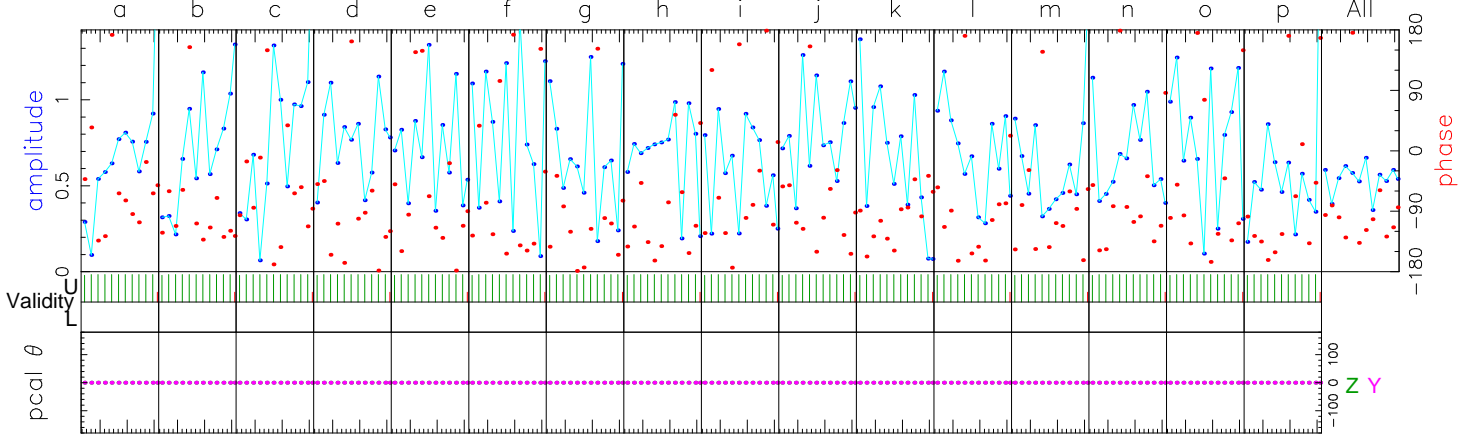


Fringe quality 9

SNR 16.3  
 Int time 162.265  
 Amp 0.469  
 Phase -112.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001974  
 MBD -0.000246  
 Fringe rate (Hz) 0.007205  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c192c  
 Exper # 16383  
 Yr:day 2019:279  
 Start 000017.90  
 Stop 000300.71  
 FRT 000131.00  
 Corr/FF/build 2020:076:150631  
 2020:086:053401  
 2020:014:135814  
 RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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



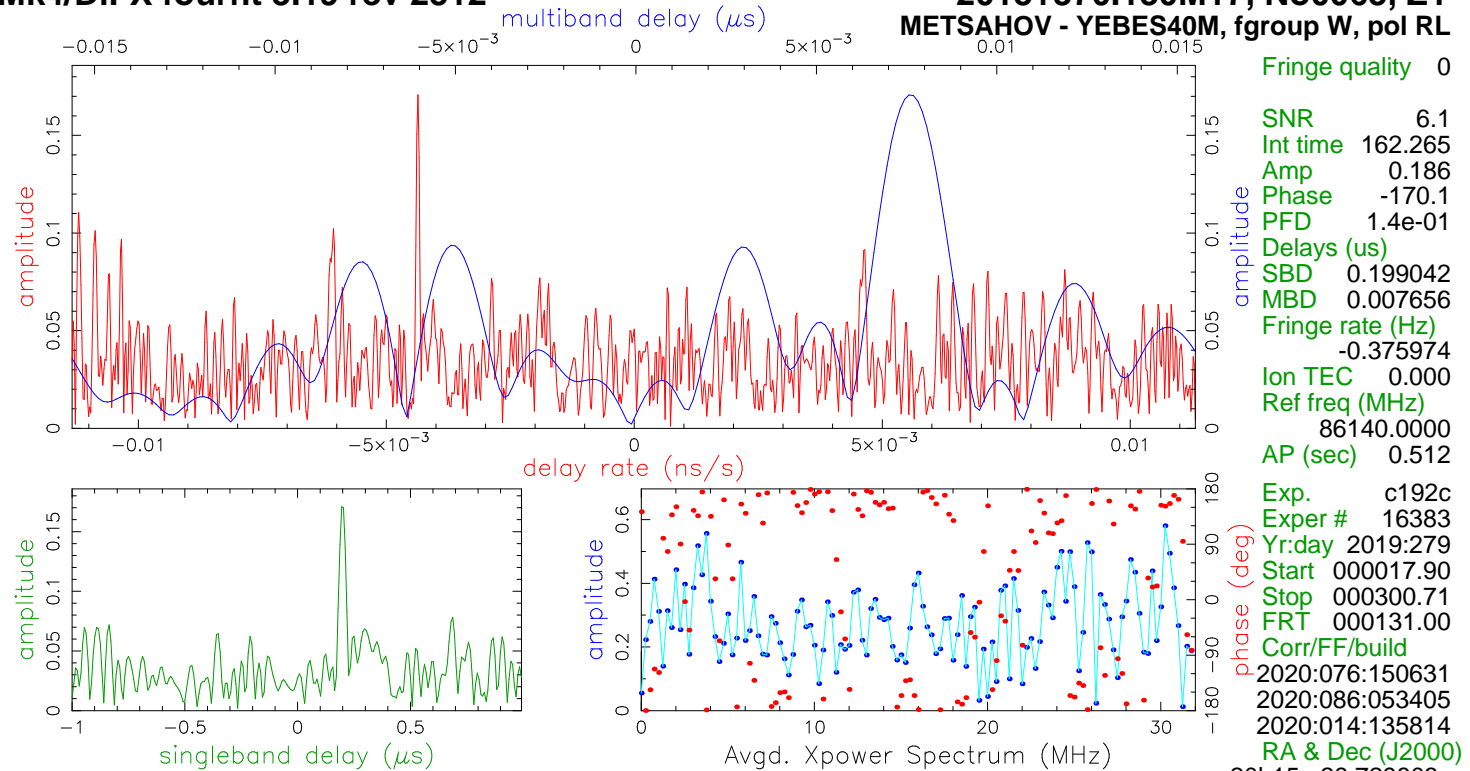
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-80.6	-117.6	-103.3	-127.0	-126.1	-131.0	-117.8	-120.3	-105.5	-108.5	-100.8	-110.1	-114.1	-96.8	-113.4	-144.1		Phase	-112.9				
	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.6	0.6	0.5	0.4	0.5	0.6	0.3		Ampl.	0.5				
	133.7	128.7	129.7	128.9	8.8	128.2	129.4	130.3	72.4	129.1	129.4	128.6	129.0	128.9	128.9	14.1		Sbd box	129.3				
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
Z: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					
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-2.86364429658E+03															Apriori delay (usec)	-2.86364405066E+03	Resid mbdelay (usec)	-2.45923E-04	+/-	6.6E-05
Sband delay (usec)			-2.86364207666E+03															Apriori clock (usec)	-9.4989796E+00	Resid sbdelay (usec)	1.97400E-03	+/-	1.1E-03
Phase delay (usec)			-2.86364405430E+03															Apriori clockrate (us/s)	-2.0370720E-07	Resid phdelay (usec)	-3.64141E-06	+/-	2.3E-07
Delay rate (us/s)			2.56744558084E-01															Apriori rate (us/s)	2.56744474440E-01	Resid rate (us/s)	8.36438E-08	+/-	2.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	3.00950889333E-05	Resid phase (deg)	-112.9	+/-	7.0

ph/seg (deg) 31.2 12.1 Theor. Amplitude 0.469 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 23.8 21.2 Search (1024X64) 0.452 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 15.6 14.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 15.2 24.5 Inc. seg. avg. 0.529 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.466 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

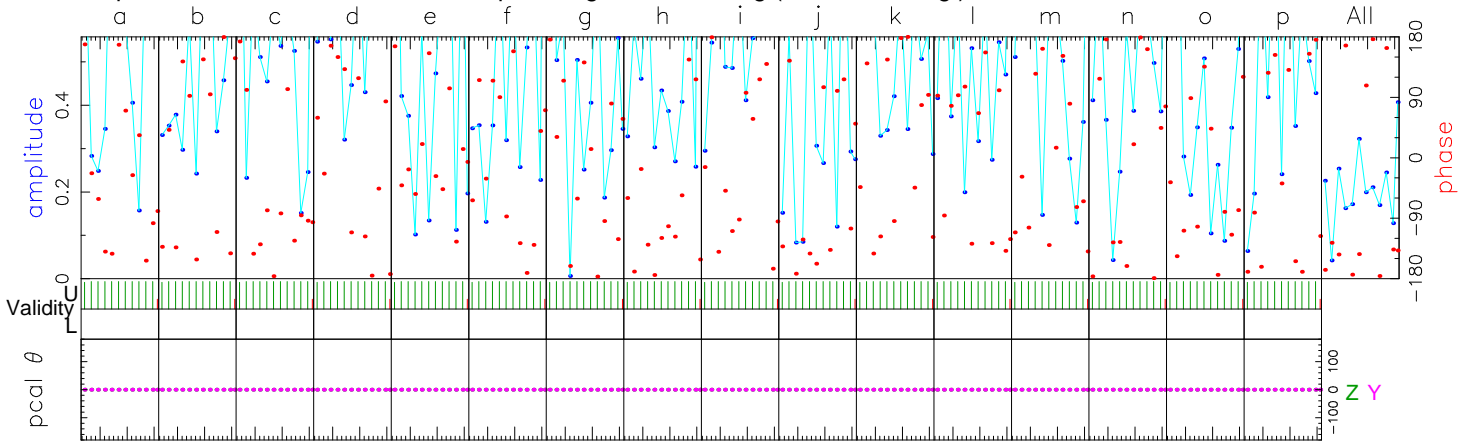
Z: az 294.2 el 29.5 pa 34.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -1821.212 3349.164 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/ZY..130M17 Output file: /Exps/c192c/v2/1234/No0065/ZY.W.405.130M17





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
	-139.3	158.3	-144.0	156.5	14.2	148.4	166.2	-137.3	-154.0	177.3	-162.9	163.6	-95.3	158.8	-127.5	174.0	Phase	-170.1
	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.3	0.2	0.4	Ampl.	0.2
	126.4	102.1	79.0	161.6	128.5	52.0	206.8	198.4	100.3	21.1	253.1	13.0	52.6	165.9	112.3	153.9	Sbd box	154.5
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	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	1000
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	1000
Z: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	
Z: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	
Z	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	
Z	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)	-2.86344889477E+03	Apriori delay (usec)	-2.86364405066E+03	Resid mbdelay (usec)	7.65589E-03	+/-	1.8E-04
Sband delay (usec)	-2.86344500866E+03	Apriori clock (usec)	-9.4989796E+00	Resid sbdelay (usec)	1.99042E-01	+/-	2.8E-03
Phase delay (usec)	-2.86364405615E+03	Apriori clockrate (us/s)	-2.0370720E-07	Resid phdelay (usec)	-5.48543E-06	+/-	6.1E-07
Delay rate (us/s)	2.56740109756E-01	Apriori rate (us/s)	2.56744474440E-01	Resid rate (us/s)	-4.36468E-06	+/-	6.5E-09
Total phase (deg)	-358.7	Apriori accel (us/s/s)	3.00950889333E-05	Resid phase (deg)	-170.1	+/-	18.8

ph/seg (deg)	33.9	Theor.	Amplitude	0.186 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	47.0	32.6	Search (1024X64)	0.167	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	58.4	37.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
amp/frq (%)	48.9	65.7	Inc. seg. avg.	0.183	Sample rate(MISamp/s): 64	dr window (ns/s)	-0.011 0.011	
			Inc. frq. avg.	0.190	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 294.2 el 29.5 pa 34.7 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -1821.212 3349.164 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192c/v2/1234/No0065/ZY..130M17 Output file: /Exps/c192c/v2/1234/No0065/ZY.W.416.130M17