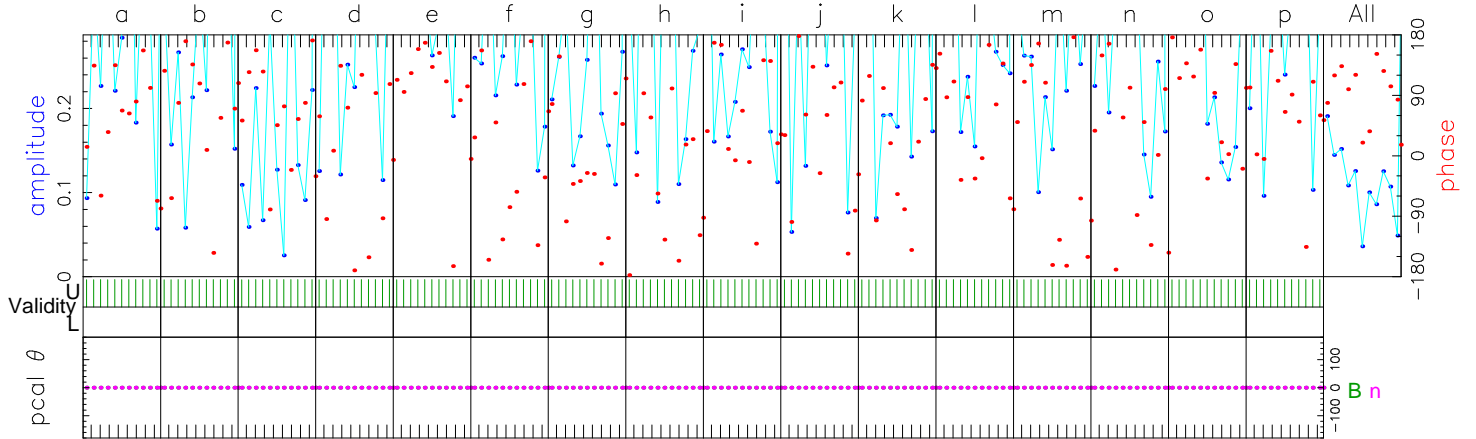


Fringe quality 0

SNR 5.6  
Int time 472.153  
Amp 0.096  
Phase 104.9  
PFD 9.9e-01  
Delays (us)  
SBD -0.819404  
MBD 0.010528  
Fringe rate (Hz)  
0.164010  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015259.74  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101149  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

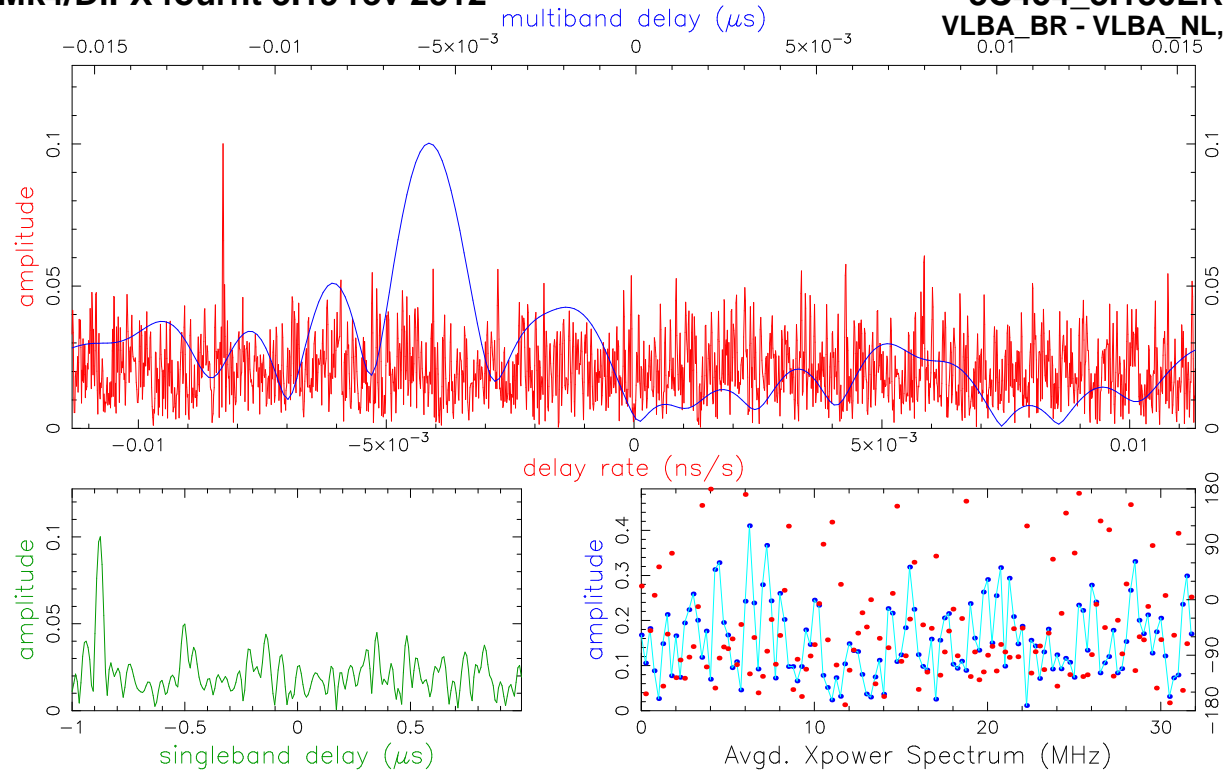


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
83.0	123.0	24.3	112.2	123.2	-146.5	-32.5	100.2	72.2	80.0	77.7	90.2	178.9	110.2	124.9	75.3	75.3	Phase	104.9
0.2	0.1	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1
26.0	249.5	211.5	118.4	23.8	33.6	185.1	162.4	168.1	154.5	229.3	253.0	251.5	64.1	142.3	242.3	242.3	Sbd box	24.1
U/L	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
B	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	PC amp	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Tracks	
Group delay (usec)(sbd)	-6.20471636800E+03			Apriori delay (usec)			-6.20388314621E+03			Resid mbdelay (usec)			1.05282E-02			+/- 1.9E-04		
Sband delay (usec)	-6.20470255021E+03			Apriori clock (usec)			-9.6958828E+00			Resid sbdelay (usec)			-8.19404E-01			+/- 3.1E-03		
Phase delay (usec)	-6.20388314283E+03			Apriori clockrate (us/s)			-3.3422351E-07			Resid phdelay (usec)			3.38315E-06			+/- 6.6E-07		
Delay rate (us/s)	-1.48353545087E+00			Apriori rate (us/s)			-1.48353735486E+00			Resid rate (us/s)			1.90399E-06			+/- 2.4E-09		
Total phase (deg)	27.6			Apriori accel (us/s/s)			3.62813216834E-05			Resid phase (deg)			104.9			+/- 20.3		

ph/seg (deg) RMS Theor. Amplitude 0.096 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 49.3 61.5 Search (2048X64) 0.092 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 58.4 40.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 79.1 71.0 Inc. seg. avg. 0.095 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

B: az 259.2 el 29.8 pa 40.5 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 8913.789 1672.732 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/Bn..130ERS Output file: /Exps/c192b/v2/1234/No0145/Bn.W.29.130ERS

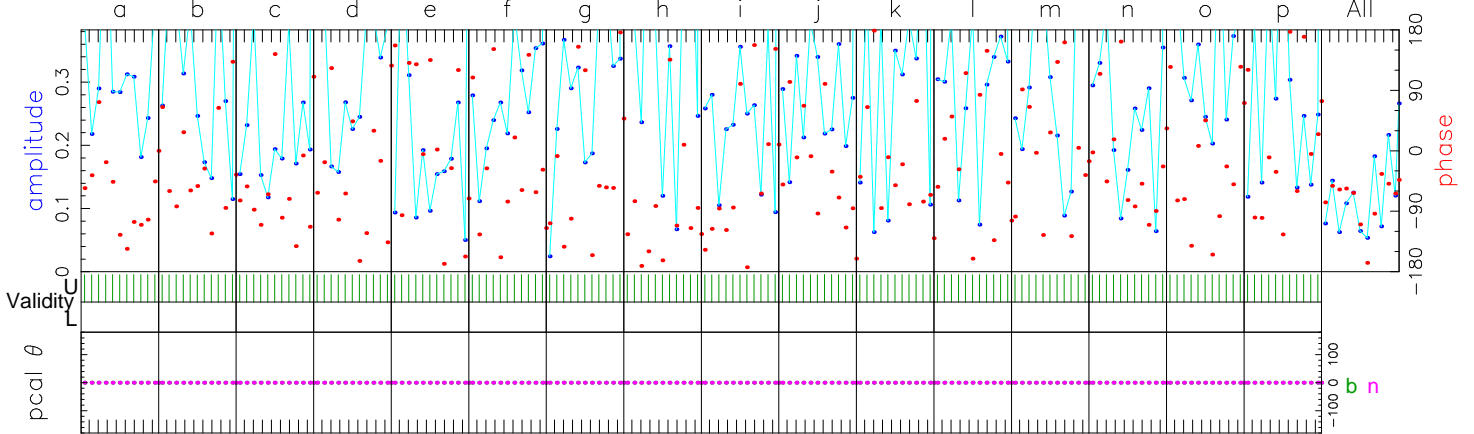


Fringe quality 0

SNR 6.0  
Int time 472.067  
Amp 0.128  
Phase -66.9  
PFD 3.7e-01  
Delays (us)  
SBD -0.877741  
MBD -0.005795  
Fringe rate (Hz)  
-0.715188  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

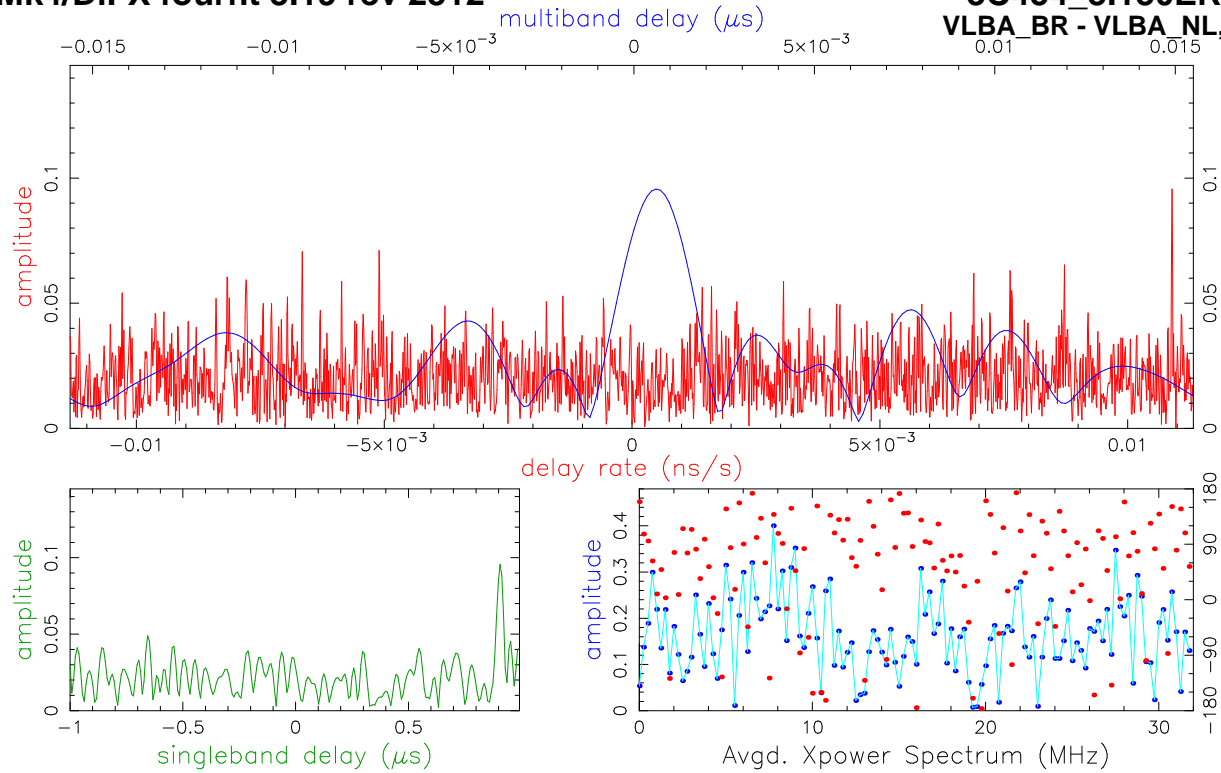
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101149  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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
	-61.9	-36.4	-84.2	-58.4	-169.3	-54.9	-100.5	-116.4	-139.3	-42.7	-46.6	-27.3	-11.6	-42.4	-75.1	-86.6	Phase	-66.9
	0.3	0.2	0.2	0.2	0.0	0.1	0.1	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	183.8	154.7	42.3	169.7	95.1	199.2	173.8	17.9	80.1	173.2	153.1	189.2	123.5	202.2	43.9	177.6	Sbd box	16.6
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b	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	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-5.85714303462E+03			Apriori delay (usec)			-5.85626223919E+03			Resid mbdelay (usec)			-5.79543E-03			+/- 1.8E-04		
Sband delay (usec)	-5.85713997969E+03			Apriori clock (usec)			-2.7130413E+01			Resid sbdelay (usec)			-8.77741E-01			+/- 2.9E-03		
Phase delay (usec)	-5.85626224135E+03			Apriori clockrate (us/s)			-3.7661858E-07			Resid phdelay (usec)			-2.15756E-06			+/- 6.1E-07		
Delay rate (us/s)	2.53319209094E-01			Apriori rate (us/s)			2.53327511718E-01			Resid rate (us/s)			-8.30262E-06			+/- 2.2E-09		
Total phase (deg)	-169.2			Apriori accel (us/s/s)			3.34783430605E-05			Resid phase (deg)			-66.9			+/- 19.0		

ph/seg (deg) 36.2 33.0 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 51.6 57.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.3 38.1 Inc. seg. avg. 0.121 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 55.0 66.5 Inc. frq. avg. 0.124 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 98.4 el 29.3 pa -43.4 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1450.374 1445.226 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/bn..130ERS Output file: /Exps/c192b/v2/1234/No0145/bn.W.30.130ERS

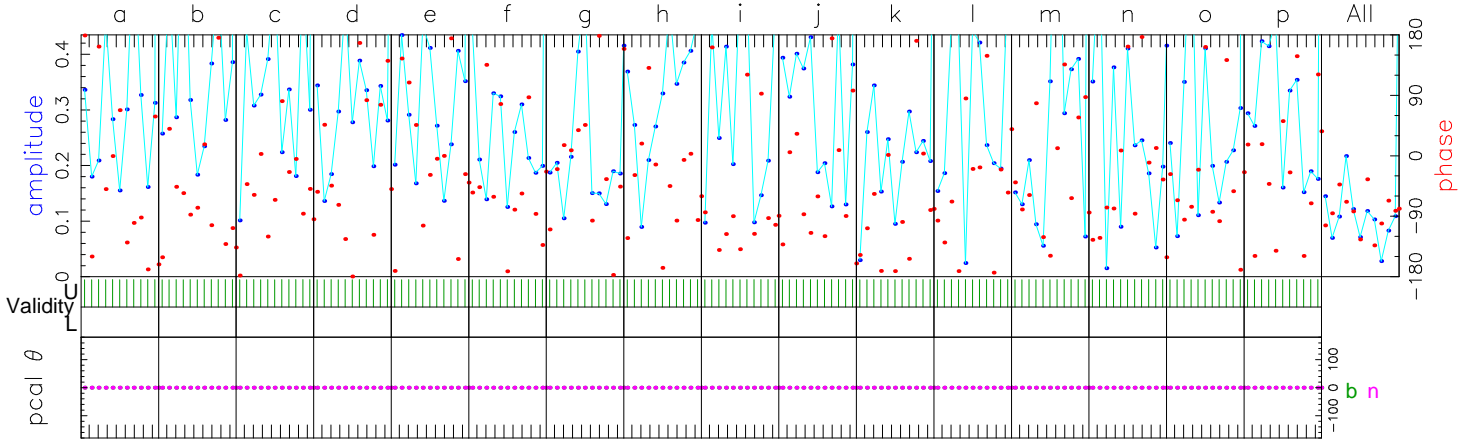


Fringe quality 0

SNR 5.7  
Int time 472.066  
Amp 0.145  
Phase -80.2  
PFD 9.5e-01  
Delays (us)  
SBD 0.907278  
MBD 0.000632  
Fringe rate (Hz) 0.939399  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build 2020:079:143639  
2020:086:101153  
2020:014:135814  
RA & Dec (J2000) 22h53m57.747940s +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

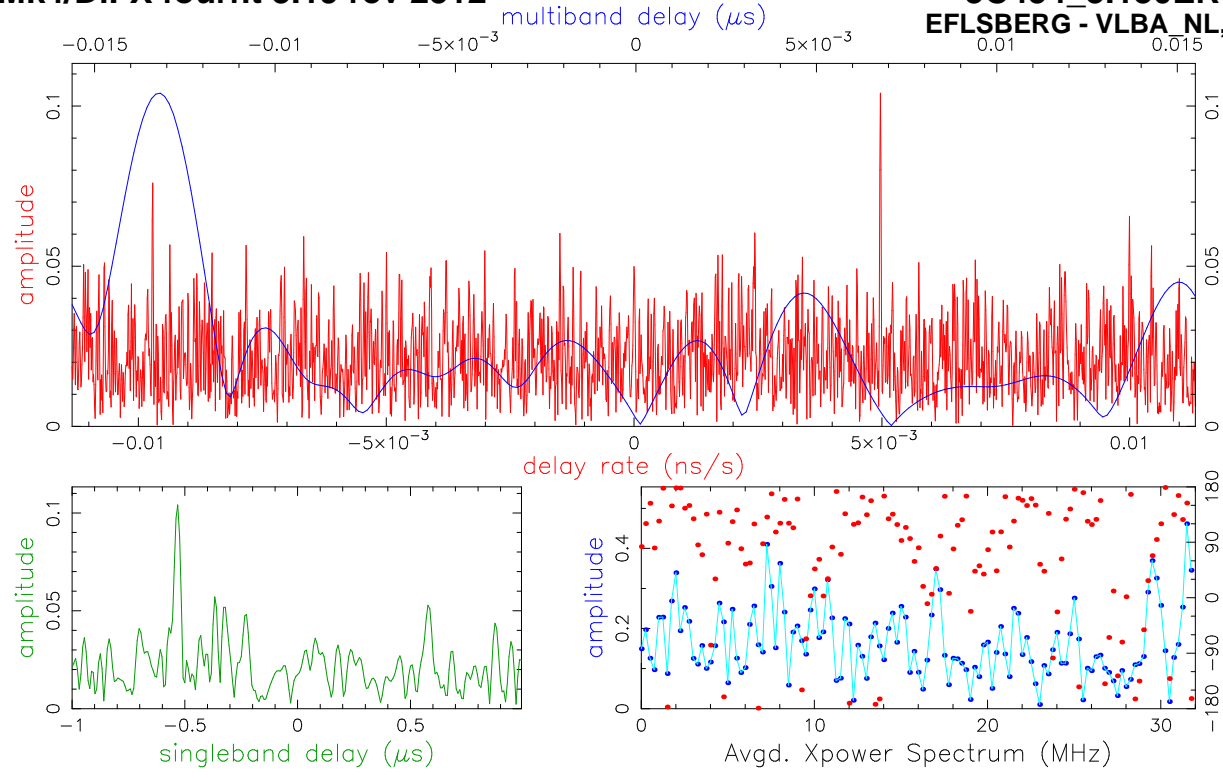


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-108.6	-86.6	-55.0	-154.3	-106.9	-62.5	4.1	-57.8	-142.7	-60.0	-97.7	-69.8	-8.2	-112.6	-96.9	-46.9	Phase	-80.2
	0.2	0.3	0.4	0.1	0.1	0.2	0.1	0.3	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1	Ampl.	0.1
	45.3	251.9	244.9	224.8	19.0	121.6	80.9	123.5	136.8	205.0	69.7	68.2	129.5	232.9	221.3	195.5	Sbd box	245.1
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b	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	PC amp	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-5.8553553736E+03			Apriori delay (usec)			-5.85626223919E+03			Resid mbdelay (usec)			6.31838E-04			+/- 1.9E-04		
Sband delay (usec)	-5.85535496119E+03			Apriori clock (usec)			-2.7130413E+01			Resid sbdelay (usec)			9.07278E-01			+/- 3.0E-03		
Phase delay (usec)	-5.85626224178E+03			Apriori clockrate (us/s)			-3.7661858E-07			Resid phdelay (usec)			-2.58713E-06			+/- 6.5E-07		
Delay rate (us/s)	2.53338417210E-01			Apriori rate (us/s)			2.53327511718E-01			Resid rate (us/s)			1.09055E-05			+/- 2.4E-09		
Total phase (deg)	-182.5			Apriori accel (us/s/s)			3.34783430605E-05			Resid phase (deg)			-80.2			+/- 20.1		

RMS Theor. Amplitude 0.145 +/- 0.025 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 29.4 34.9 Search (2048X64) 0.095 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 58.9 60.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 44.7 40.3 Inc. seg. avg. 0.138 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 60.3 70.3 Inc. frq. avg. 0.146 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

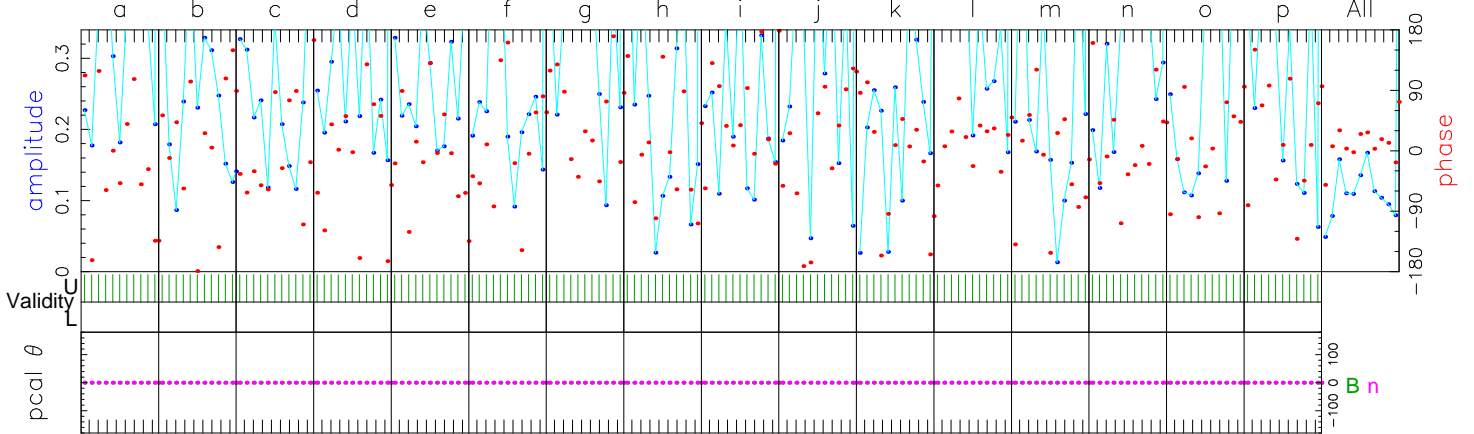
b: az 98.4 el 29.3 pa -43.4 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1450.374 1445.226 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/bn..130ERS Output file: /Exps/c192b/v2/1234/No0145/bn.W.45.130ERS

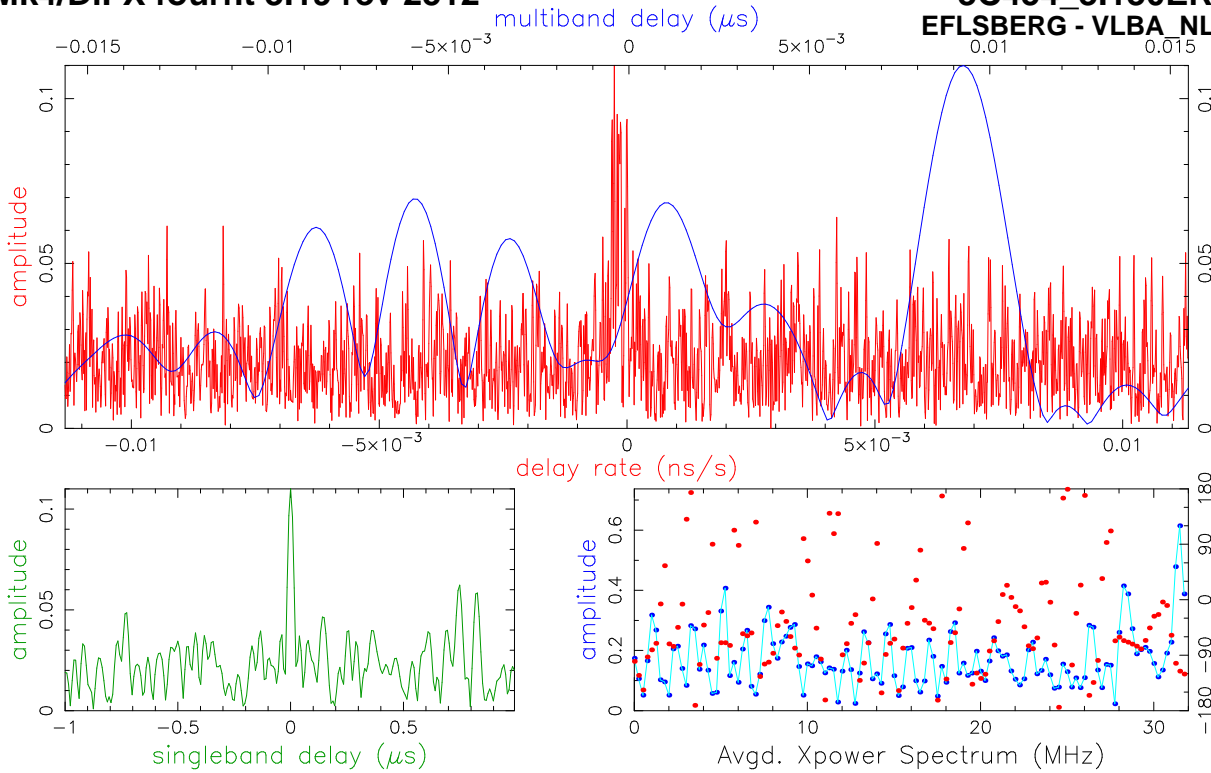


Fringe quality 0  
SNR 6.2  
Int time 472.153  
Amp 0.113  
Phase 11.8  
PFD 1.3e-01  
Delays (us)  
SBD -0.532821  
MBD -0.013233  
Fringe rate (Hz) 0.429034  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015259.74  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101154  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

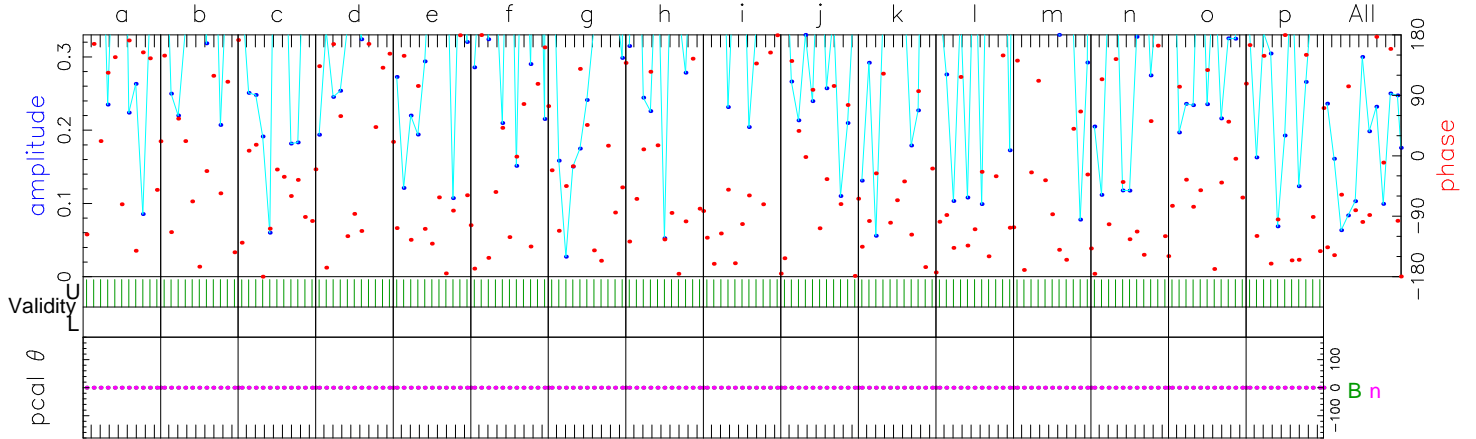


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
	-6.8	56.7	-25.8	33.3	-15.8	-21.2	39.7	20.3	42.5	31.8	20.4	18.6	-27.6	-8.8	-2.4	49.5	Phase	11.8						
	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.2	0.1	Ampl.	0.1						
	195.2	52.2	132.0	71.1	235.0	226.3	207.3	254.4	1.7	202.8	212.9	60.5	139.1	233.7	87.0	150.1	Sbd box	60.8						
U/L	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	APs used							
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs							
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs							
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase							
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC							
B	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	PC amp							
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids							
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks							
																	Chan ids							
																	Tracks							
Group delay (usec)(sbd)			-6.20442762876E+03														Apriori delay (usec)	-6.20388314621E+03	Resid mbdelay (usec)	-1.32325E-02	+/-	1.7E-04		
Sband delay (usec)			-6.20441596671E+03														Apriori clock (usec)	-9.6958828E+00	Resid sbdelay (usec)	-5.32821E-01	+/-	2.8E-03		
Phase delay (usec)			-6.20388314583E+03														Apriori clockrate (us/s)	-3.3422351E-07	Resid phdelay (usec)	3.80485E-07	+/-	5.9E-07		
Delay rate (us/s)			-1.48353237420E+00														Apriori rate (us/s)	-1.48353735486E+00	Resid rate (us/s)	4.98066E-06	+/-	2.2E-09		
Total phase (deg)					-65.5												Apriori accel (us/s/s)	3.62813216834E-05	Resid phase (deg)	11.8	+/-	18.4		
ph/seg (deg)		RMS	Theor.														Amplitude	0.113 +/- 0.018	Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5		
amp/seg (%)		23.3	32.0														Search (2048X64)	0.100	Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000 1.000	
ph/frq (deg)		41.6	55.8														Interp.	0.000	Bits/sample: 2x2			SampCntNorm: enabled	mb window (us)	-0.016 0.016
amp/frq (%)		29.3	36.9														Inc. seg. avg.	0.103	Sample rate(MISamp/s): 64			dr window (ns/s)	-0.011 0.011	
		55.4	64.4														Inc. frq. avg.	0.104	Data rate(Mb/s): 2048			ion window (TEC)	0.00 0.00	
																			nlags: 128			t_cohere infinite		



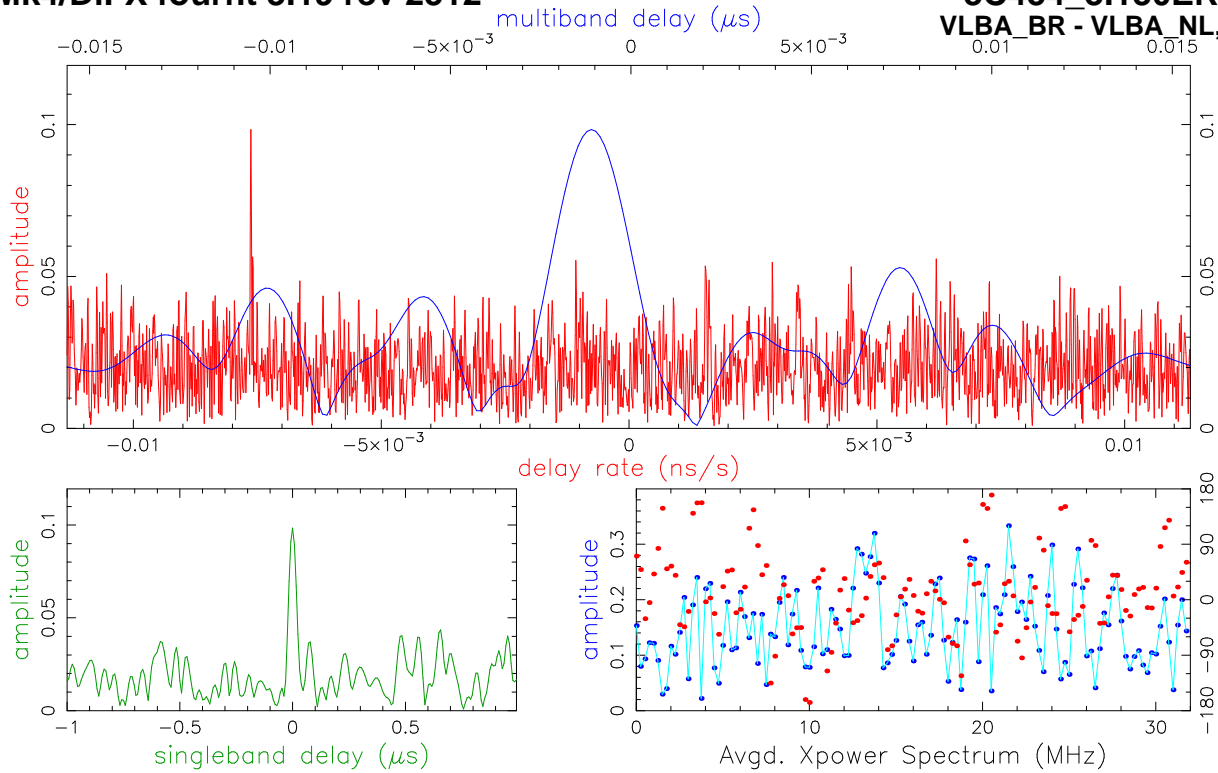
Fringe quality 0  
SNR 6.5  
Int time 472.152  
Amp 0.110  
Phase -126.0  
PFD 1.7e-02  
Delays (us)  
SBD -0.000112  
MBD 0.009259  
Fringe rate (Hz)  
-0.021934  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015259.74  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101143  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



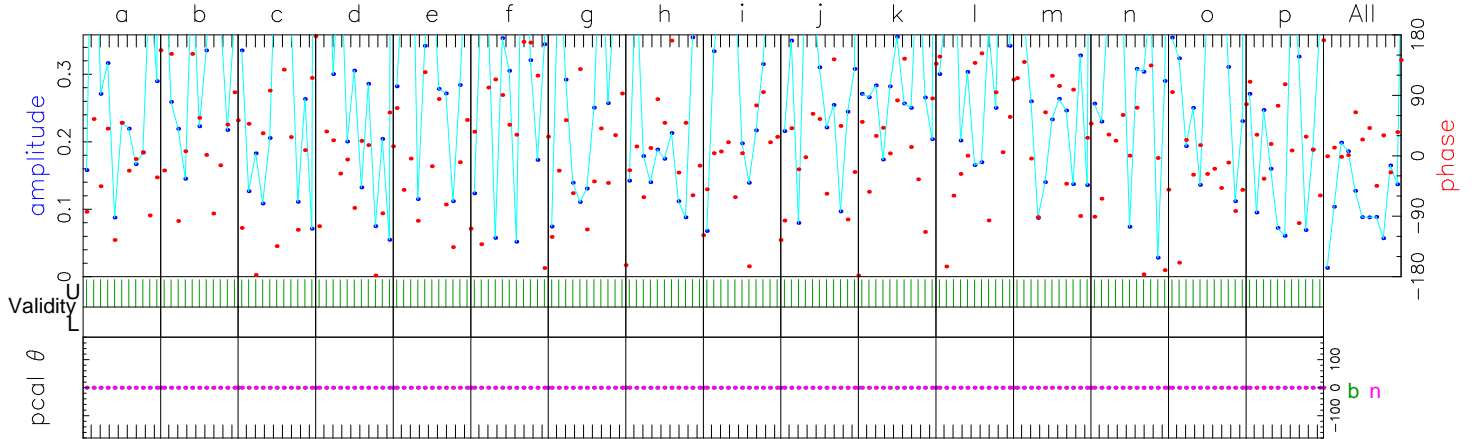
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-135.7	170.2	-56.9	171.8	-129.1	169.9	-60.4	-90.1	-139.0	173.6	-92.7	-129.6	-96.5	-152.4	-53.7	-161.5	Phase	-126.0				
	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.0	0.1	0.2	0.1	0.2	0.2	0.2	Ampl.	0.1				
	84.1	74.5	129.3	223.5	149.1	221.4	32.0	189.8	129.5	245.0	243.1	161.2	34.3	129.2	60.1	63.4	Sbd box	129.0				
U/L	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	APs used					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
B	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	PC amp					
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-6.20387388751E+03														Apriori delay (usec)	-6.20388314621E+03	Resid mbdelay (usec)	9.25870E-03	+/-	1.7E-04
Sband delay (usec)			-6.20388325871E+03														Apriori clock (usec)	-9.6958828E+07	Resid sbdelay (usec)	-1.12500E-04	+/-	2.6E-03
Phase delay (usec)			-6.20388315028E+03														Apriori clockrate (us/s)	-3.3422351E-07	Resid phdelay (usec)	-4.06426E-06	+/-	5.7E-07
Delay rate (us/s)			-1.48353760949E+00														Apriori rate (us/s)	-1.48353735486E+00	Resid rate (us/s)	-2.54631E-07	+/-	2.1E-09
Total phase (deg)																	Apriori accel (us/s/s)	3.62813216834E-05	Resid phase (deg)	-126.0	+/-	17.5

ph/seg (deg) 67.1 30.4 Amplitude 0.110 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 94.4 53.0 Search (2048X64) 0.109 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.4 35.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 74.9 61.2 Inc. seg. avg. 0.157 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.129 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 B: az 259.2 el 29.8 pa 40.5 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 8913.789 1672.732 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/Bn..130ERS Output file: /Exps/c192b/v2/1234/No0145/Bn.W.5.130ERS



Fringe quality 0  
SNR 5.8  
Int time 472.066  
Amp 0.119  
Phase 11.3  
PFD 7.2e-01  
Delays (us)  
SBD -0.000544  
MBD -0.001101  
Fringe rate (Hz)  
-0.657946  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101159  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

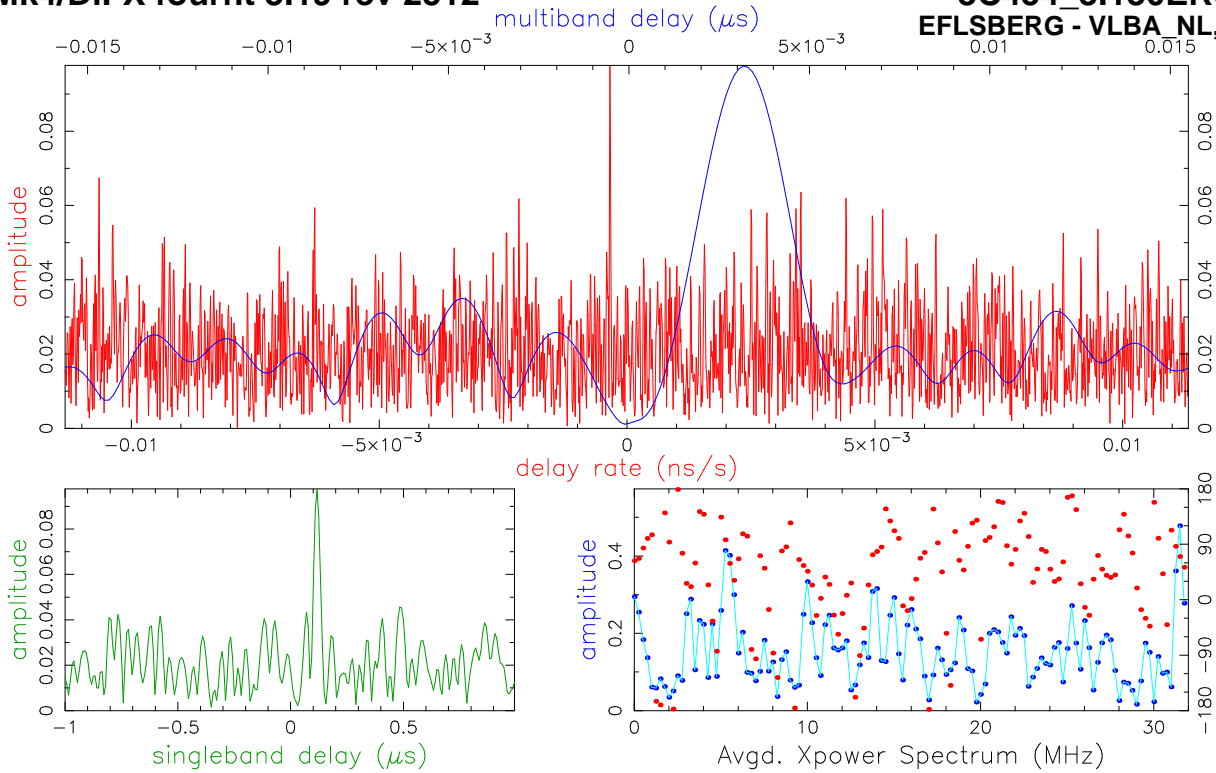


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-3.2	5.3	155.2	-14.1	5.0	142.2	21.8	-6.3	15.9	11.2	22.3	-7.9	91.0	64.6	-23.2	-8.7		Phase 11.3
	0.2	0.1	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.1		Ampl. 0.1
	79.2	117.0	228.6	219.9	123.2	167.8	97.8	50.8	128.6	119.0	255.4	243.6	123.6	33.4	230.0	130.3		Sbd box 128.9
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		APs used
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC
b	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		PC amp
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
																		Tracks

Group delay (usec)(sbd) -5.85626334067E+03 Apriori delay (usec) -5.85626223919E+03 Resid mbdelay (usec) -1.10148E-03 +/- 1.8E-04  
 Sband delay (usec) -5.85626278269E+03 Apriori clock (usec) -2.7130413E+01 Resid sbdelay (usec) -5.43500E-04 +/- 2.9E-03  
 Phase delay (usec) -5.85626223883E+03 Apriori clockrate (us/s) -3.7661858E-07 Resid phdelay (usec) 3.65687E-07 +/- 6.3E-07  
 Delay rate (us/s) 2.53319873616E-01 Apriori rate (us/s) 2.53327511718E-01 Resid rate (us/s) -7.63810E-06 +/- 2.3E-09  
 Total phase (deg) -90.9 Apriori accel (us/s/s) 3.34783430605E-05 Resid phase (deg) 11.3 +/- 19.6

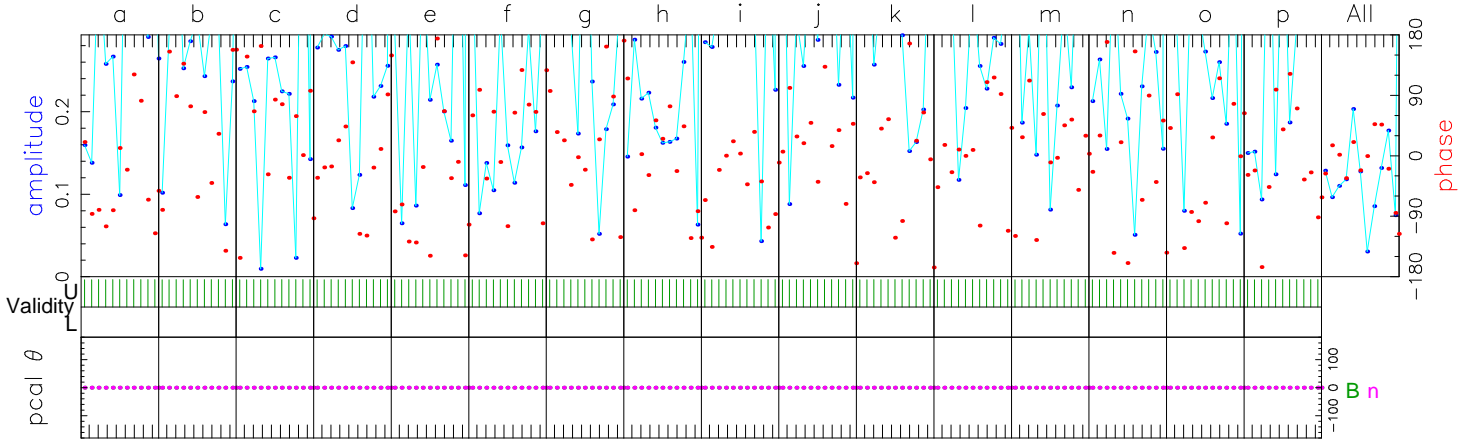
ph/seg (deg) RMS 30.4 Theor. 33.9 Amplitude 0.119 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 58.9 59.2 Search (2048X64) 0.095 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 60.0 39.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 61.0 68.4 Inc. seg. avg. 0.119 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

b: az 98.4 el 29.3 pa -43.4 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1450.374 1445.226 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/bn..130ERS Output file: /Exps/c192b/v2/1234/No0145/bn.W.67.130ERS



Fringe quality 0  
SNR 5.8  
Int time 472.152  
Amp 0.098  
Phase -2.9  
PFD 8.0e-01  
Delays (us)  
SBD 0.116270  
MBD 0.003213  
Fringe rate (Hz)  
-0.029529  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015259.74  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101200  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



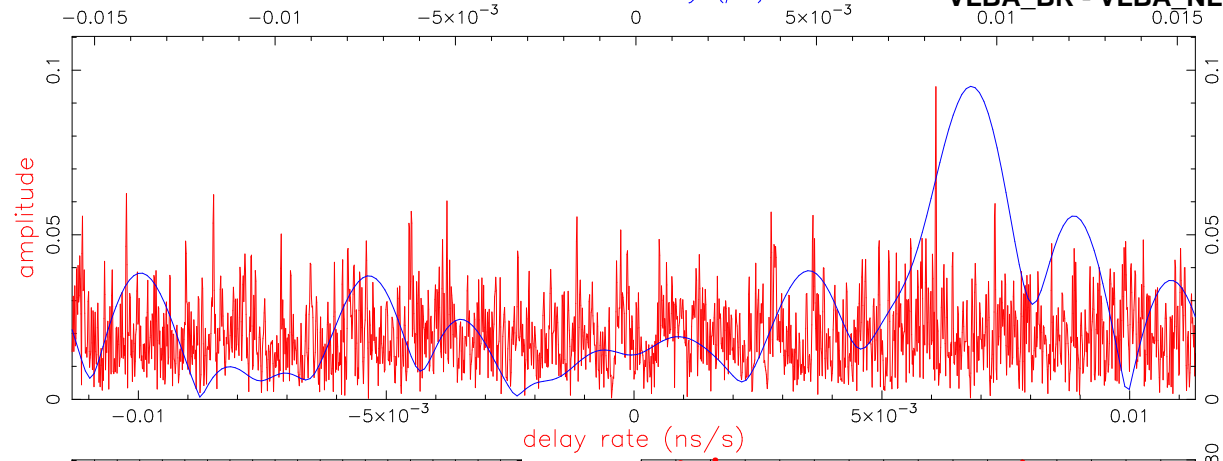
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-60.5	82.0	33.2	-12.7	-63.9	44.7	10.6	-9.7	-26.4	19.9	-11.6	-4.8	18.3	-19.1	13.0	-17.2	Phase	-2.9
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.2	0.2	Ampl.	0.1
	26.2	1.4	38.1	178.6	247.3	202.7	185.7	147.4	47.9	53.7	122.9	81.6	2.0	129.4	66.8	22.9	Sbd box	143.9
U/L	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
B	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	PC amp	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) -6.20375493272E+03 Apriori delay (usec) -6.20388314621E+03 Resid mbdelay (usec) 3.21349E-03 +/- 1.9E-04  
 Sband delay (usec) -6.20376687571E+03 Apriori clock (usec) -9.6958828E+00 Resid sbdelay (usec) 1.16270E-01 +/- 3.0E-03  
 Phase delay (usec) -6.20388314631E+03 Apriori clockrate (us/s) -3.3422351E-07 Resid phdelay (usec) -9.43902E-08 +/- 6.4E-07  
 Delay rate (us/s) -1.48353769767E+00 Apriori rate (us/s) -1.48353735486E+00 Resid rate (us/s) -3.42807E-07 +/- 2.3E-09  
 Total phase (deg) -80.3 Apriori accel (us/s/s) 3.62813216834E-05 Resid phase (deg) -2.9 +/- 19.7

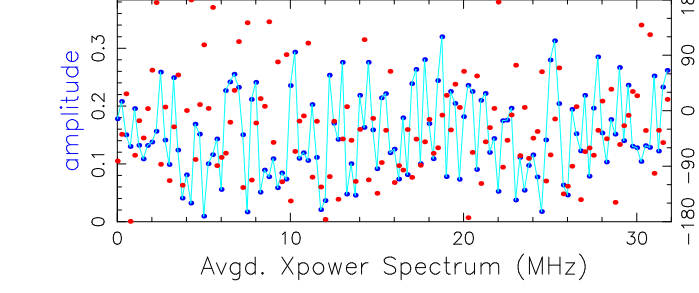
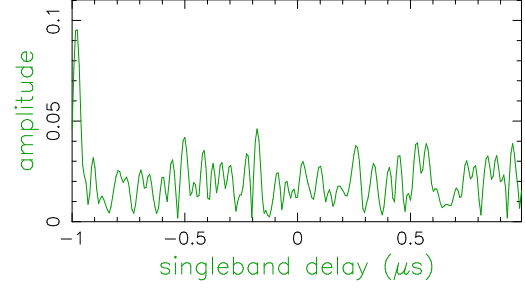
RMS Theor. Amplitude 0.098 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 36.8 34.2 Search (2048X64) 0.096 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 55.2 59.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 38.2 39.5 Inc. seg. avg. 0.100 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 55.0 68.9 Inc. frq. avg. 0.093 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 259.2 el 29.8 pa 40.5 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 8913.789 1672.732 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/Bn..130ERS Output file: /Exps/c192b/v2/1234/No0145/Bn.W.71.130ERS

multiband delay ( $\mu$ s)

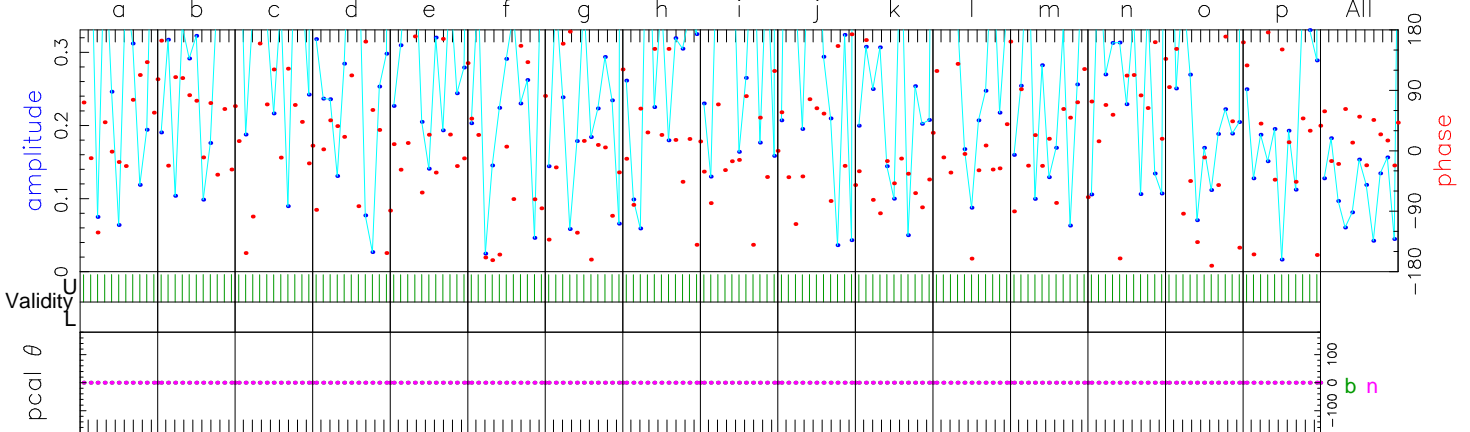


Fringe quality 0  
SNR 5.8  
Int time 472.066  
Amp 0.110  
Phase 16.4  
PFD 8.1e-01  
Delays (us)  
SBD -0.980329  
MBD 0.009359  
Fringe rate (Hz) 0.525334  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512



Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101143  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	41.4	39.4	45.4	6.0	-5.7	-57.5	-38.3	11.0	-8.7	1.1	-54.7	9.2	35.7	77.7	173.3	46.7	Phase	16.4
	0.3	0.2	0.1	0.1	0.2	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.0	0.1	Ampl.	0.1
	20.0	64.6	154.2	105.9	197.1	143.7	176.9	228.4	148.7	81.7	201.6	68.7	222.6	197.0	54.0	8.1	Sbd box	3.5
UL	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b	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	PC amp	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) -5.85725287996E+03 Apriori delay (usec) -5.85626223919E+03 Resid mbdelay (usec) 9.35923E-03 +/- 1.9E-04  
 Sband delay (usec) -5.85724256819E+03 Apriori clock (usec) -2.7130413E+01 Resid sbdelay (usec) -9.80329E-01 +/- 3.0E-03  
 Phase delay (usec) -5.85626223867E+03 Apriori clockrate (us/s) -3.7661858E-07 Resid phdelay (usec) 5.27256E-07 +/- 6.4E-07  
 Delay rate (us/s) 2.53333610319E-01 Apriori rate (us/s) 2.53327511718E-01 Resid rate (us/s) 6.09860E-06 +/- 2.3E-09  
 Total phase (deg) -85.9 Apriori accel (us/s/s) 3.34783430605E-05 Resid phase (deg) 16.4 +/- 19.8

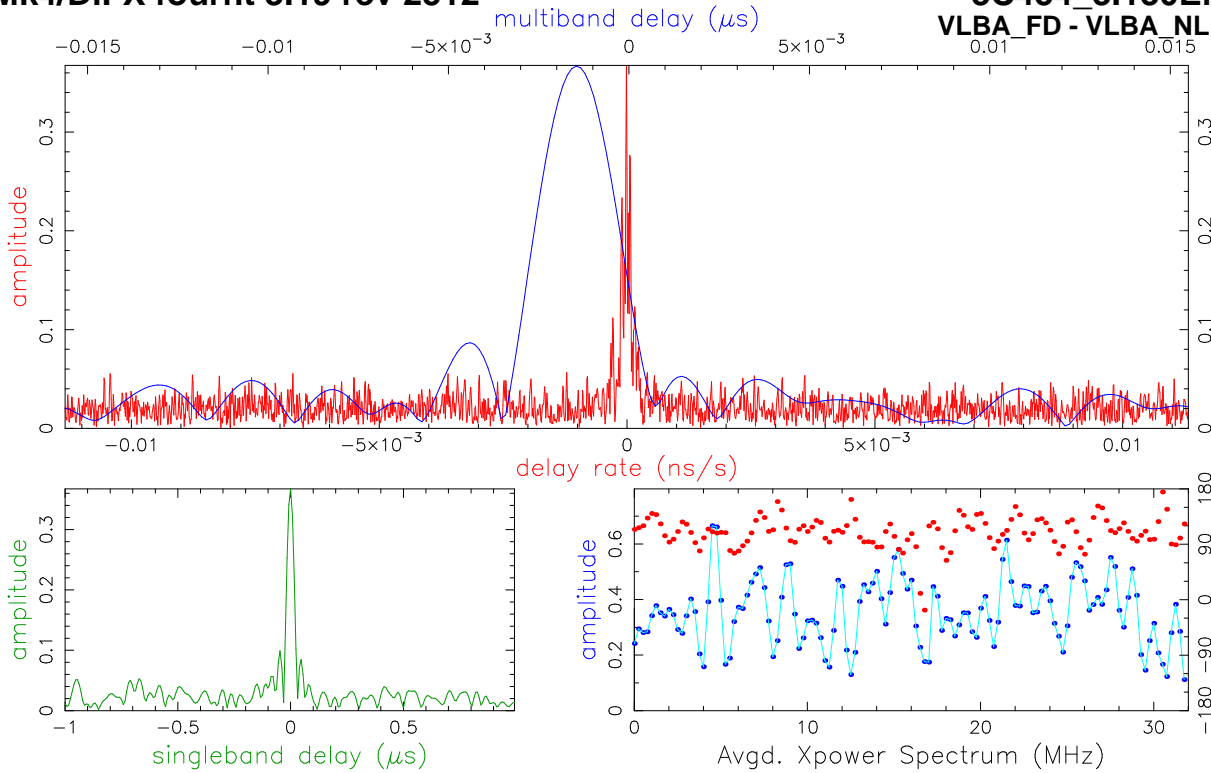
RMS Theor. Amplitude 0.110 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 31.9 34.2 Search (2048X64) 0.093 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 52.8 59.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 57.8 39.5 Inc. seg. avg. 0.106 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 59.9 69.0 Inc. frq. avg. 0.109 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

b: az 98.4 el 29.3 pa -43.4 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1450.374 1445.226 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/bn..130ERS Output file: /Exps/c192b/v2/1234/No0145/bn.W.7.130ERS



Mk4/DiFX fourfit 3.19 rev 2512

3C454\_3.130ERS, No0145, fn  
VLBA\_FD - VLBA\_NL, fgroup W, pol RR

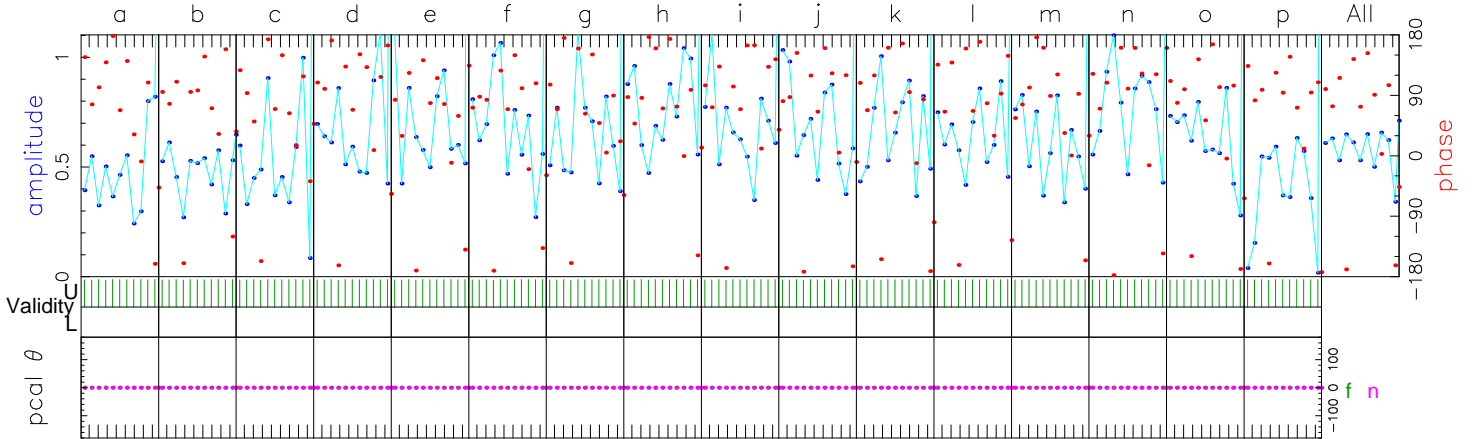


Fringe quality 7

SNR 21.8  
Int time 470.645  
Amp 0.368  
Phase 112.1  
PFD 0.0e+00  
Delays (us)  
SBD -0.001140  
MBD -0.001468  
Fringe rate (Hz)  
-0.000517  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

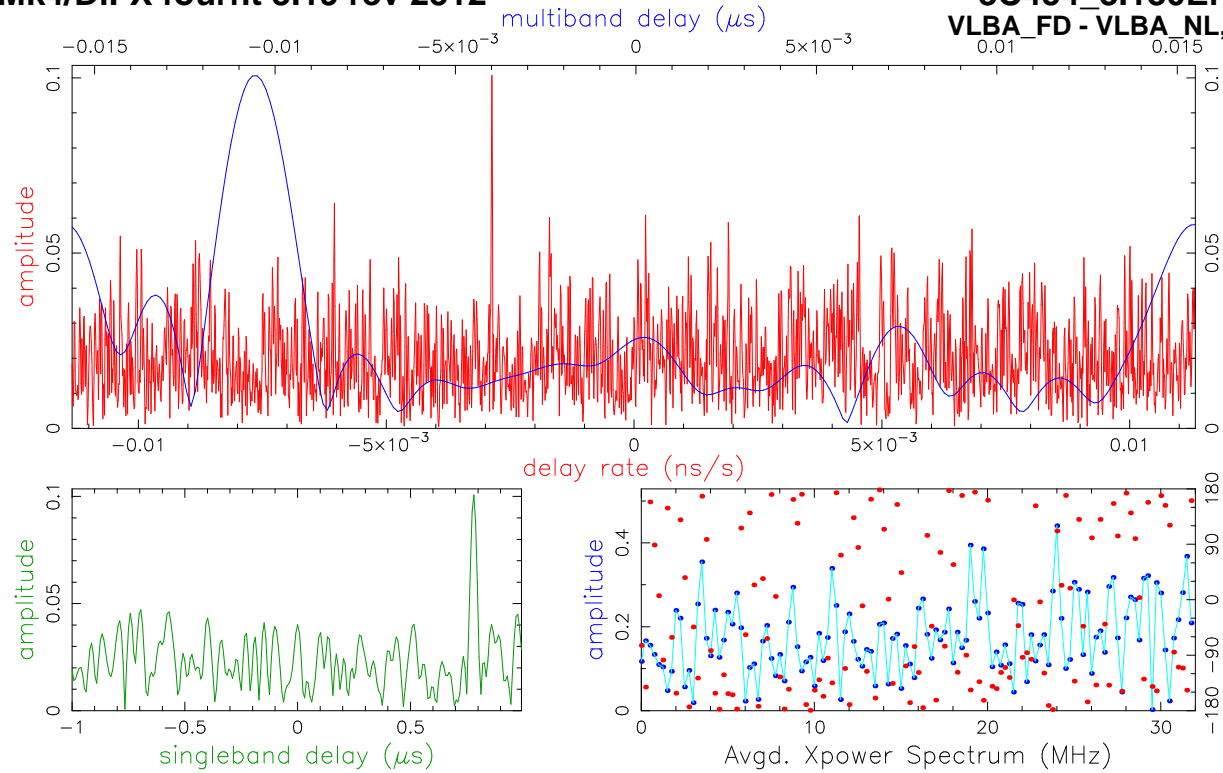
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101214  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



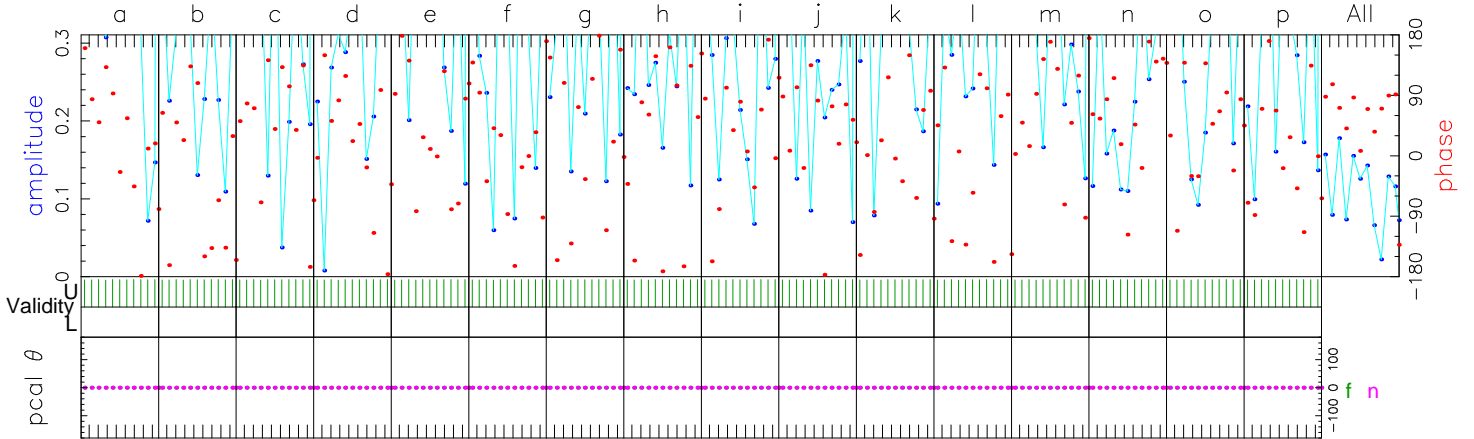
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	123.0	103.9	113.9	124.3	98.4	113.0	99.4	94.5	112.3	119.8	123.6	117.0	95.3	131.9	108.7	103.6	Phase	112.1
f	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.3	0.2	Ampl.	0.4
n	129.7	129.6	128.9	128.1	129.4	129.2	129.3	129.1	128.6	128.7	128.6	128.6	128.2	128.8	128.6	128.5	Sbd box	128.9
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
f	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	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-1.50769600136E+03			Apriori delay (usec)			-1.50769453373E+03			Resid mbdelay (usec)			-1.46762E-03			+/- 4.9E-05		
Sband delay (usec)	-1.50769567423E+03			Apriori clock (usec)			-2.6045895E+01			Resid sbdelay (usec)			-1.14050E-03			+/- 7.9E-04		
Phase delay (usec)	-1.50769453012E+03			Apriori clockrate (us/s)			-2.2517302E-07			Resid phdelay (usec)			3.61410E-06			+/- 1.7E-07		
Delay rate (us/s)	3.06121041711E-01			Apriori rate (us/s)			3.06121047708E-01			Resid rate (us/s)			-5.99723E-09			+/- 6.2E-10		
Total phase (deg)	63.2			Apriori accel (us/s/s)			2.93919193116E-06			Resid phase (deg)			112.1			+/- 5.3		

ph/seg (deg) 54.3 9.1 Search (2048X64) 0.347 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 61.8 15.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 11.9 10.5 Inc. seg. avg. 0.569 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 18.0 18.3 Inc. frq. avg. 0.368 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 f: az 96.8 el 43.9 pa -62.8 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1821.183 -1251.091 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/fn..130ERS Output file: /Exps/c192b/v2/1234/No0145/fn.W.112.130ERS



Fringe quality 0  
SNR 6.0  
Int time 470.646  
Amp 0.104  
Phase 72.3  
PFD 4.3e-01  
Delays (us)  
SBD 0.780384  
MBD -0.010559  
Fringe rate (Hz)  
-0.247126  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101219  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

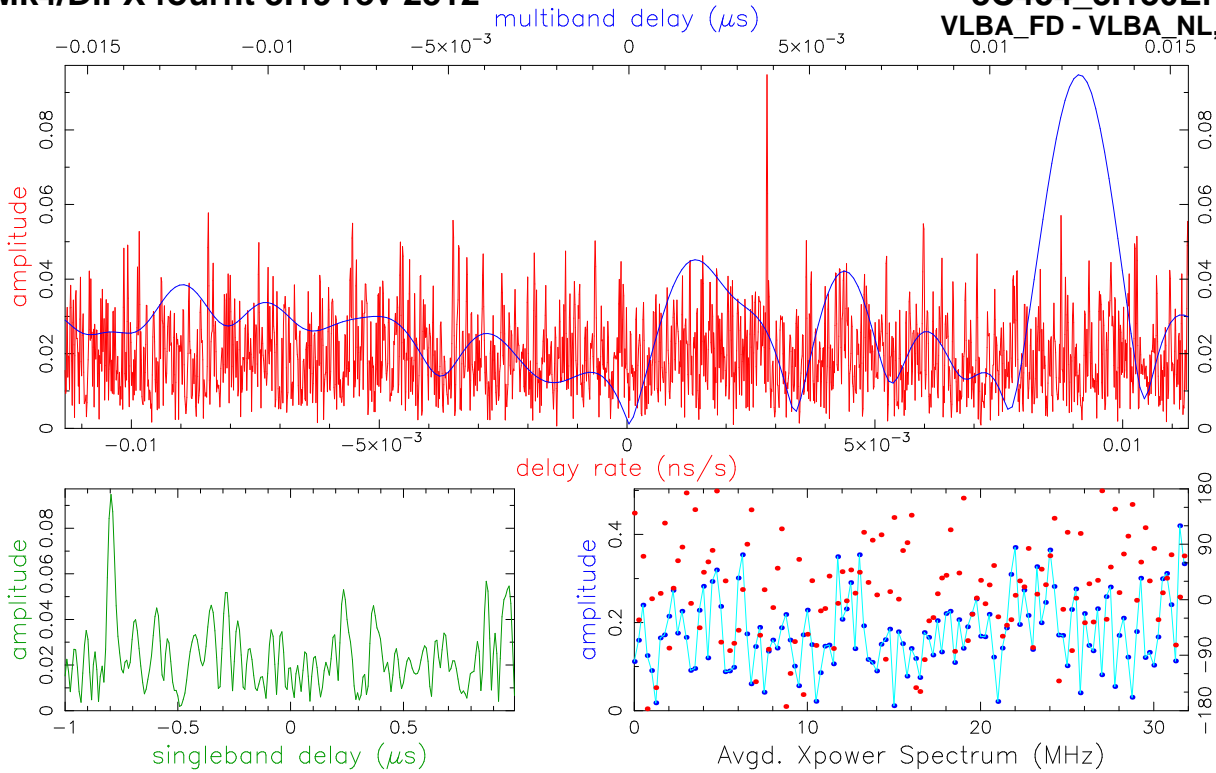


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	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		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	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		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)			-1.50692384310E+03															
Sband delay (usec)			-1.50691414923E+03															
Phase delay (usec)			-1.50769453140E+03															
Delay rate (us/s)			3.06118178821E-01															
Total phase (deg)				23.5														
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MISamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 29.4 33.2  
amp/seg (%) 46.4 57.9  
ph/frq (deg) 39.7 38.3  
amp/frq (%) 44.5 66.9  
f: az 96.8 el 43.9 pa -62.8  
n: az 118.8 el 50.1 pa -42.7  
u,v (fr/asec) -1821.183 -1251.091  
Control file: cf\_1234\_gmva  
Input file: /Exps/c192b/v2/1234/No0145/fn..130ERS  
Output file: /Exps/c192b/v2/1234/No0145/fn.W.130ERS

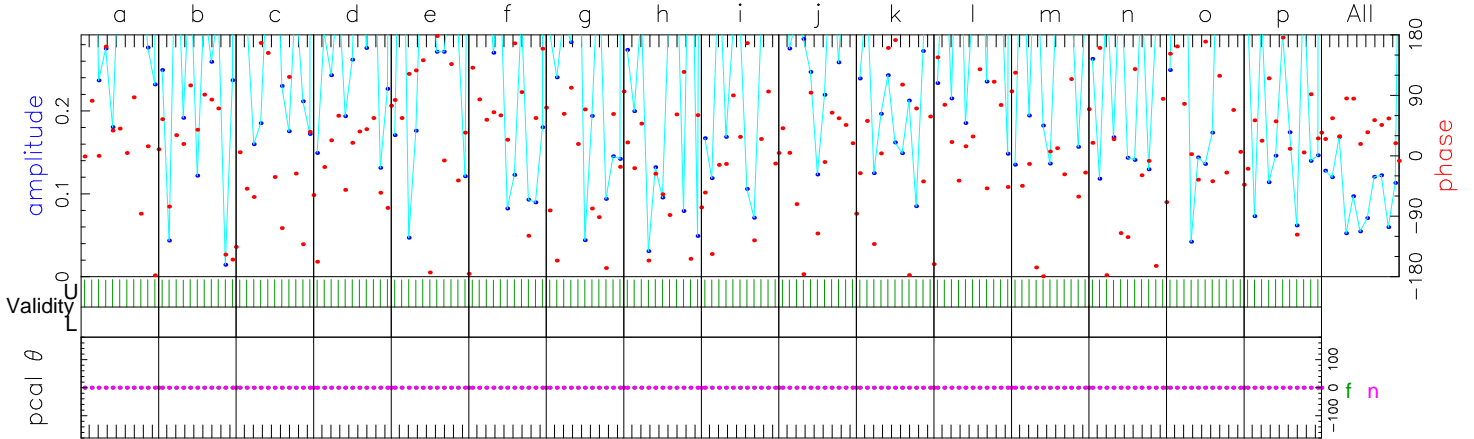
Mk4/DiFX fourfit 3.19 rev 2512

3C454\_3.130ERS, No0145, fn  
VLBA\_FD - VLBA\_NL, fgroup W, pol RL



Fringe quality 0  
SNR 5.6  
Int time 470.645  
Amp 0.097  
Phase 42.8  
PFD 9.9e-01  
Delays (us)  
SBD -0.796350  
MBD 0.012479  
Fringe rate (Hz) 0.243246  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101225  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

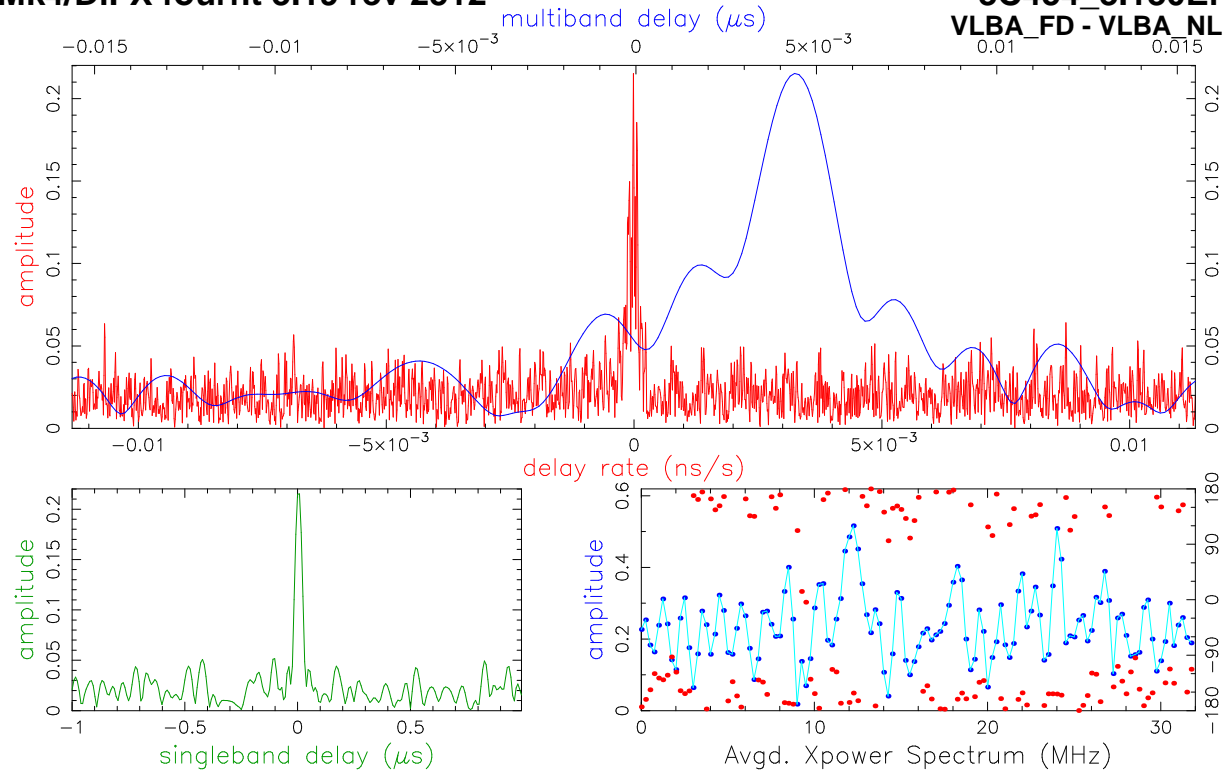


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	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		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	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		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) -1.50849455473E+03 Apriori delay (usec) -1.50769453373E+03 Resid mbdelay (usec) 1.24790E-02 +/- 1.9E-04  
Sband delay (usec) -1.50849088373E+03 Apriori clock (usec) -2.6045895E+01 Resid sbdelay (usec) -7.96350E-01 +/- 3.1E-03  
Phase delay (usec) -1.50769453235E+03 Apriori clockrate (us/s) -2.2517302E-07 Resid phdelay (usec) 1.38128E-06 +/- 6.6E-07  
Delay rate (us/s) 3.06123871558E-01 Apriori rate (us/s) 3.06121047708E-01 Resid rate (us/s) 2.82385E-06 +/- 2.4E-09  
Total phase (deg) -6.0 Apriori accel (us/s/s) 2.93919193116E-06 Resid phase (deg) 42.8 +/- 20.4

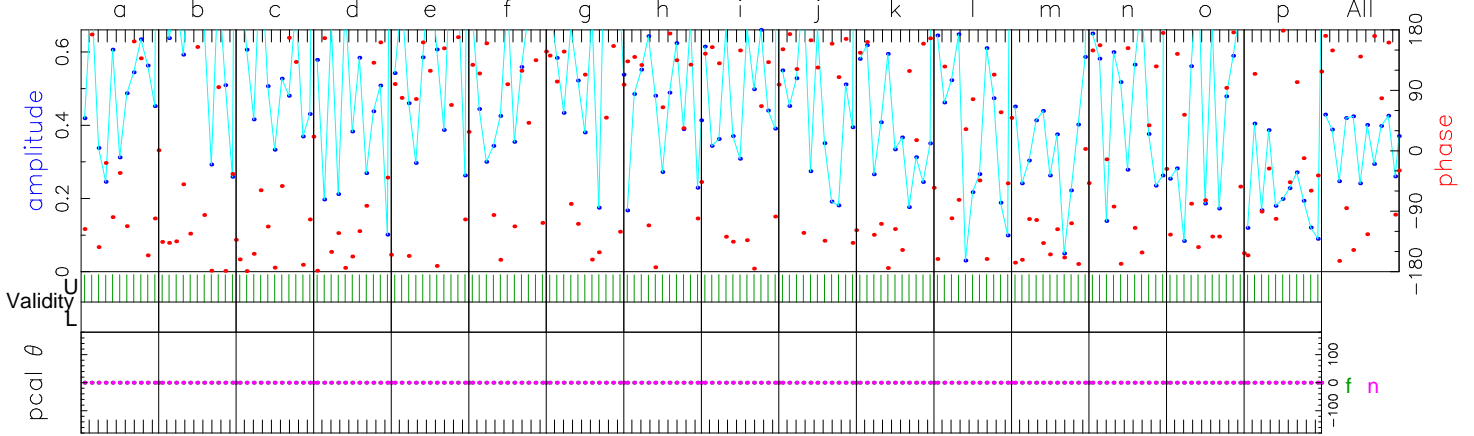
RMS Theor. Amplitude 0.097 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
ph/seg (deg) 23.1 35.3 Search (2048X64) 0.093 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
amp/seg (%) 42.7 61.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
ph/frq (deg) 64.4 40.7 Inc. seg. avg. 0.088 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
amp/frq (%) 63.2 71.1 Inc. frq. avg. 0.099 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 96.8 el 43.9 pa -62.8 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1821.183 -1251.091 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/fn..130ERS Output file: /Exps/c192b/v2/1234/No0145/fn.W.151.130ERS



Fringe quality 9  
SNR 13.1  
Int time 470.645  
Amp 0.220  
Phase -172.4  
PFD 3.0e-30  
Delays (us)  
SBD 0.003994  
MBD 0.004383  
Fringe rate (Hz) -0.000503  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build 2020:079:143639  
2020:086:101208  
2020:014:135814  
RA & Dec (J2000) 22h53m57.747940s +16°08'53.560909"

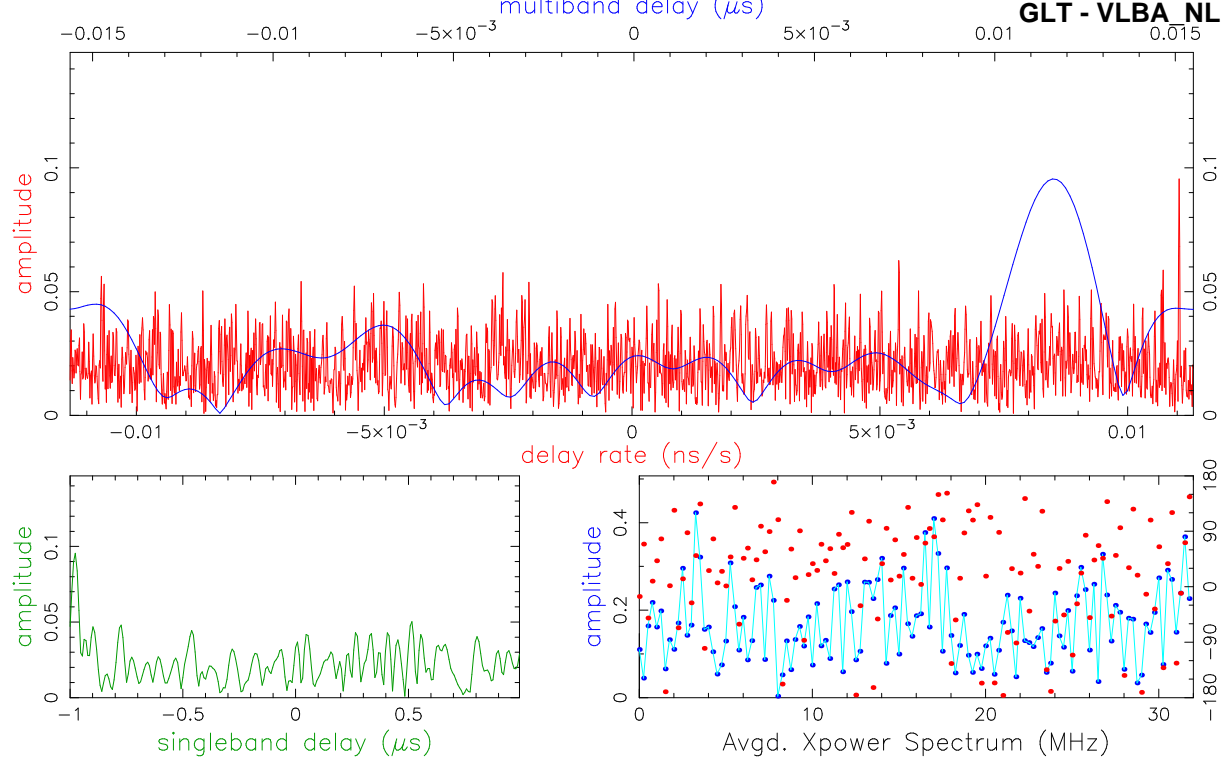
Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	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	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		
f	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		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	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		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		

Group delay (usec)(sbd)	-1.50769015082E+03	Apriori delay (usec)	-1.50769453373E+03	Resid mbdelay (usec)	4.38291E-03	+/-	8.3E-05
Sband delay (usec)	-1.50769053923E+03	Apriori clock (usec)	-2.6045895E+01	Resid sbdelay (usec)	3.99450E-03	+/-	1.3E-03
Phase delay (usec)	-1.50769453929E+03	Apriori clockrate (us/s)	-2.2517302E-07	Resid phdelay (usec)	-5.56041E-06	+/-	2.8E-07
Delay rate (us/s)	3.06121041865E-01	Apriori rate (us/s)	3.06121047708E-01	Resid rate (us/s)	-5.84347E-09	+/-	1.0E-09
Total phase (deg)	-221.3	Apriori accel (us/s/s)	2.93919193116E-06	Resid phase (deg)	-172.4	+/-	8.8

ph/seg (deg)	55.7	RMS	70.9	Theor.	15.2	Amplitude	0.220 +/- 0.017	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	70.9	Search (2048X64)	0.202	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	46.7	Inc. seg. avg.	0.345	Inc. frq. avg.	0.245	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	42.1	Inc. frq. avg.	0.245	Sample rate (MSamp/s):	64	Data rate (Mb/s):	2048	nlags: 128	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 96.8 el 43.9 pa -62.8		n: az 118.8 el 50.1 pa -42.7		u,v (fr/asec)	-1821.183 -1251.091							

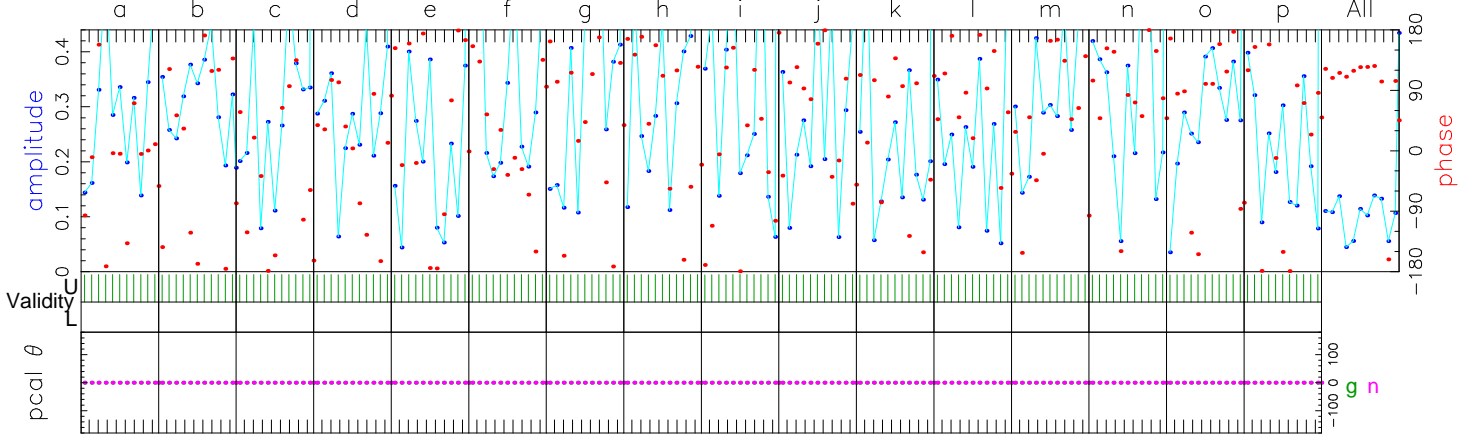


Fringe quality 0

SNR 5.7  
Int time 472.096  
Amp 0.147  
Phase 118.4  
PFD 9.6e-01  
Delays (us)  
SBD -0.977795  
MBD 0.011675  
Fringe rate (Hz) 0.951936  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101226  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

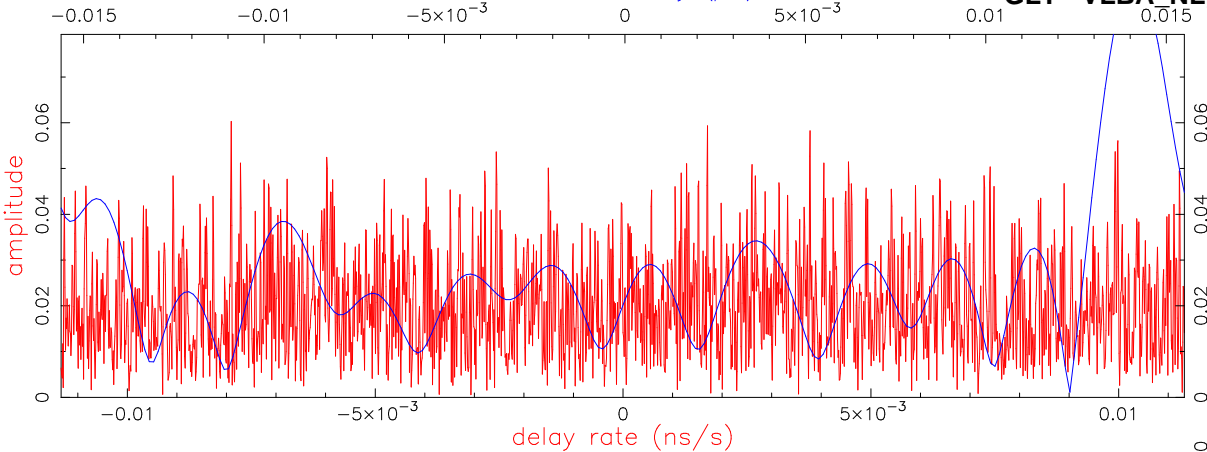


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
2.5	152.7	97.2	37.4	164.0	98.7	129.1	141.8	131.5	110.1	82.5	93.9	97.9	104.9	140.7	123.0	123.0	Phase	118.4
0.1	0.3	0.1	0.1	0.2	0.1	0.3	0.3	0.2	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.2	Ampl.	0.1
141.9	231.4	155.1	232.3	238.7	221.6	4.1	5.0	116.8	244.5	210.6	202.3	139.3	3.6	1.5	180.1	180.1	Sbd box	3.8
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	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	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)	-6.08714349542E+03			Apriori delay (usec)			-6.08615517086E+03			Resid mbdelay (usec)			1.16754E-02			+/- 1.9E-04		
Sband delay (usec)	-6.08713296536E+03			Apriori clock (usec)			-2.5211880E+01			Resid sbdelay (usec)			-9.77795E-01			+/- 3.0E-03		
Phase delay (usec)	-6.08615516704E+03			Apriori clockrate (us/s)			-5.9223514E-08			Resid phdelay (usec)			3.81706E-06			+/- 6.5E-07		
Delay rate (us/s)	-5.61142801274E-01			Apriori rate (us/s)			-5.61153852304E-01			Resid rate (us/s)			1.10510E-05			+/- 2.4E-09		
Total phase (deg)	-32.1			Apriori accel (us/s/s)			4.19308186433E-05			Resid phase (deg)			118.4			+/- 20.1		

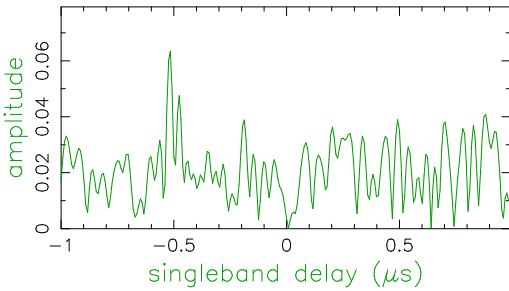
ph/seg (deg) 25.8 34.9 Search (2048X64) 0.092 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 38.6 60.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.7 40.3 Inc. seg. avg. 0.131 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 62.4 70.3 Inc. frq. avg. 0.143 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 g: az 165.7 el 29.3 pa -3.3 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 3423.565 3551.217 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/gn..130ERS Output file: /Exps/c192b/v2/1234/No0145/gn.W.152.130ERS

multiband delay ( $\mu$ s)

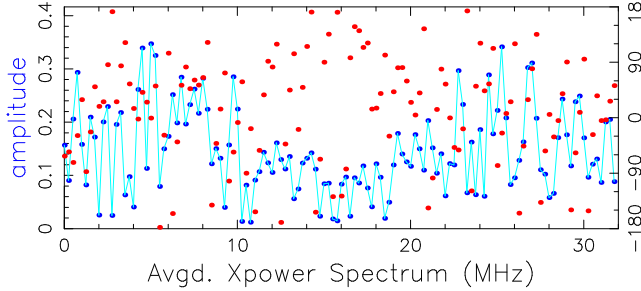
Fringe quality 0



SNR 3.8  
Int time 472.192  
Amp 0.079  
Phase 14.7  
PFD 1.0e+00  
Delays (us)  
SBD -0.518119  
MBD -0.016113  
Fringe rate (Hz)  
-0.682293  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

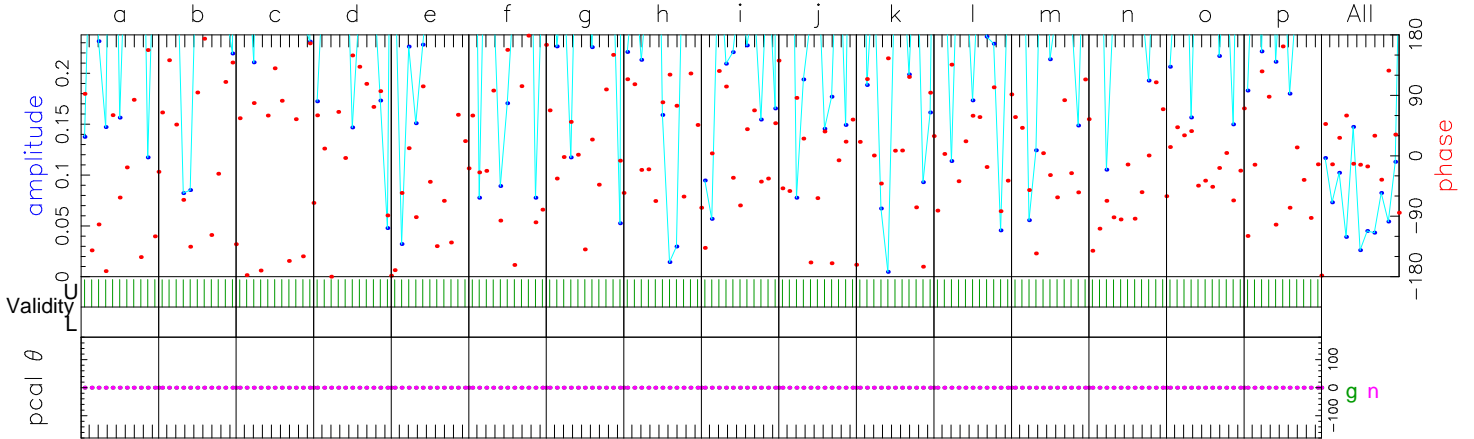


delay rate (ns/s)



Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101232  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

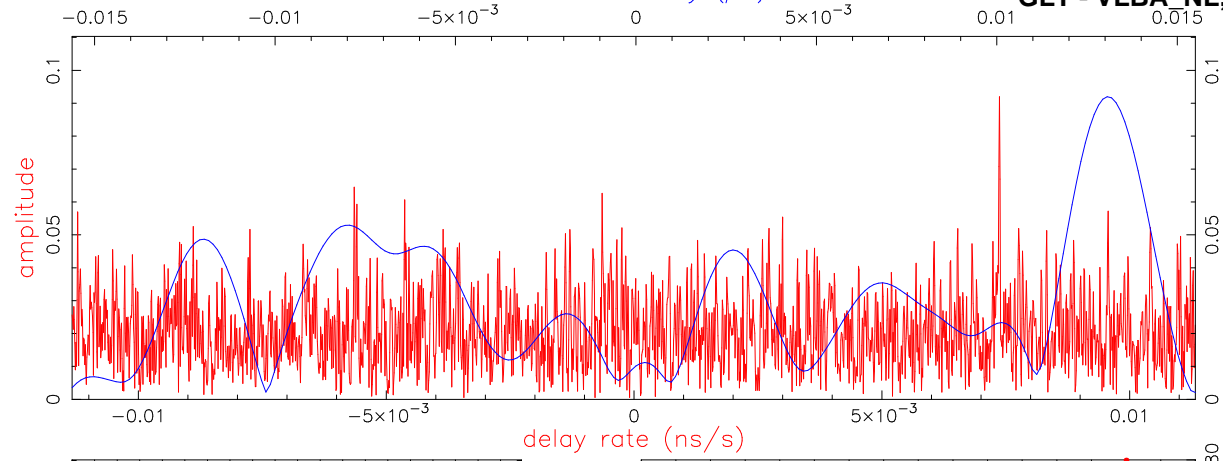
Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-156.5	120.6	136.0	79.7	-60.1	120.2	24.9	21.6	22.3	-19.6	16.2	2.5	21.4	-80.5	-11.0	-28.1	Phase	14.7				
	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.3	0.1	Ampl.	0.1				
	229.7	58.7	176.2	240.7	21.1	11.0	51.9	155.5	113.1	54.2	33.5	177.1	67.8	145.1	62.2	247.6	Sbd box	62.7				
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
n	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					
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Tracks					
Group delay (usec)(sbd)			-6.08667128414E+03														Apriori delay (usec)	-6.08615517086E+03	Resid mbdelay (usec)	-1.61133E-02	+/-	2.8E-04
Sband delay (usec)			-6.08667328936E+03														Apriori clock (usec)	-2.5211880E+01	Resid sbdelay (usec)	-5.18119E-01	+/-	4.5E-03
Phase delay (usec)			-6.08615517039E+03														Apriori clockrate (us/s)	-5.9223514E-08	Resid phdelay (usec)	4.72890E-07	+/-	9.7E-07
Delay rate (us/s)			-5.61161773052E-01														Apriori rate (us/s)	-5.61153852304E-01	Resid rate (us/s)	-7.92075E-06	+/-	3.5E-09
Total phase (deg)					-135.8												Apriori accel (us/s/s)	4.19308186433E-05	Resid phase (deg)	14.7	+/-	30.0

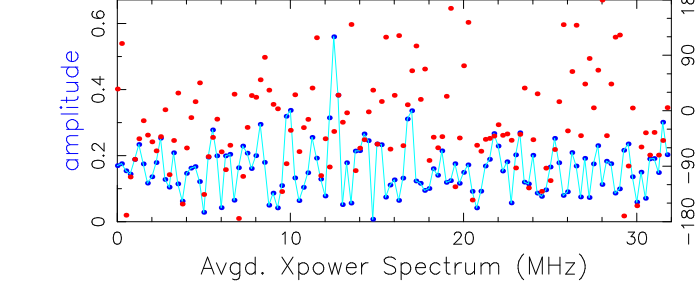
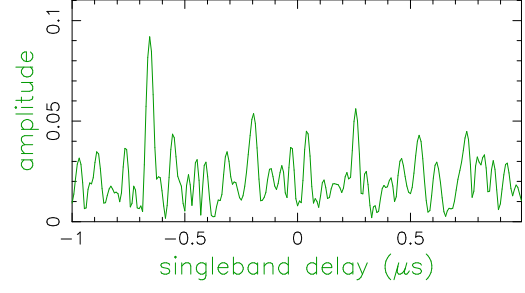
ph/seg (deg) 45.0 51.9 Search (2048X64) 0.094 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 63.6 90.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 79.9 60.0 Inc. seg. avg. 0.067 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 116.3 104.7 Inc. frq. avg. 0.092 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
g: az 165.7 el 29.3 pa -3.3 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 3423.565 3551.217 simultaneous interpolator

multiband delay ( $\mu$ s)



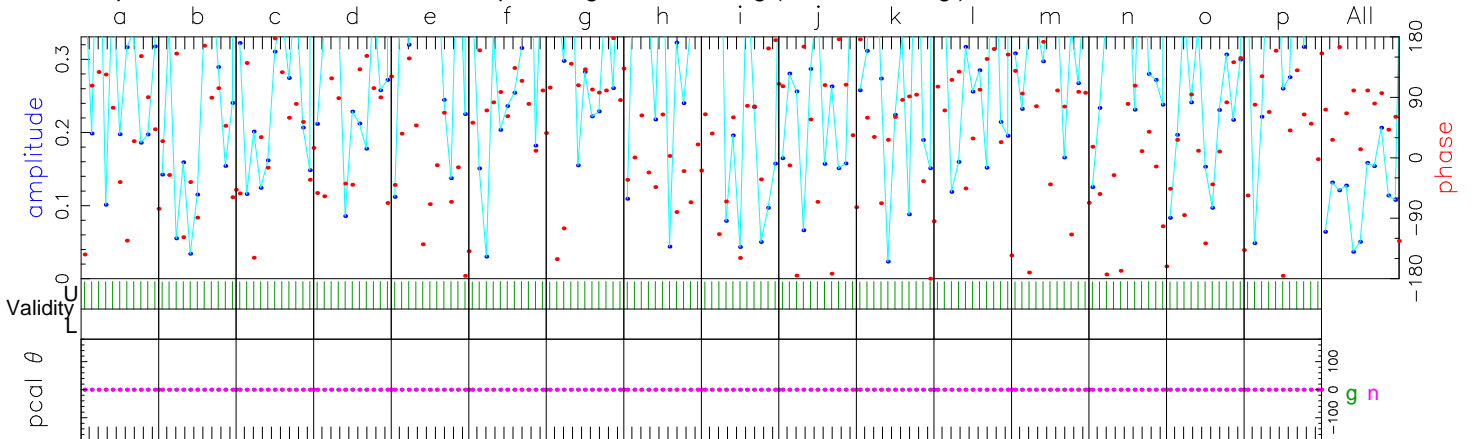
Fringe quality 0

SNR 5.5  
Int time 472.097  
Amp 0.110  
Phase 77.5  
PFD 1.0e+00  
Delays (us)  
SBD -0.655577  
MBD 0.013087  
Fringe rate (Hz)  
0.636020  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

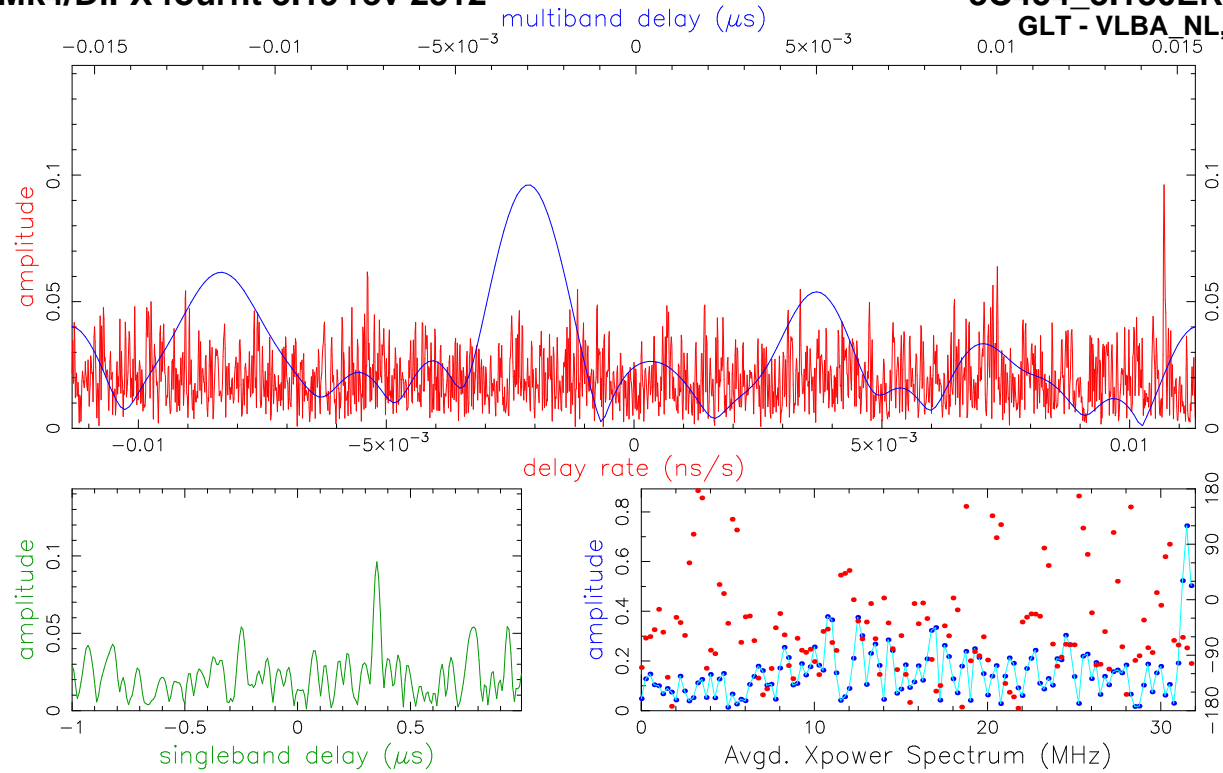


Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101237  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
106.5	59.3	75.5	87.1	-7.1	86.0	126.3	-0.9	71.7	73.0	67.2	105.8	116.6	11.9	45.3	85.4	85.4	Phase	77.5
0.1	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	Ampl.	0.1
152.0	76.3	90.1	224.3	122.3	45.5	45.0	44.7	142.5	190.8	215.7	234.9	150.3	197.3	216.3	1.4	1.4	Sbd box	45.1
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
g	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		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-6.0867983365E+03			Apriori delay (usec)			-6.08615517086E+03			Resid mbdelay (usec)			1.30872E-02			+/- 2.0E-04		
Sband delay (usec)	-6.08681074736E+03			Apriori clock (usec)			-2.5211880E+01			Resid sbdelay (usec)			-6.55577E-01			+/- 3.1E-03		
Phase delay (usec)	-6.08615516836E+03			Apriori clockrate (us/s)			-5.9223514E-08			Resid phdelay (usec)			2.49946E-06			+/- 6.8E-07		
Delay rate (us/s)	-5.61146468748E-01			Apriori rate (us/s)			-5.61153852304E-01			Resid rate (us/s)			7.38356E-06			+/- 2.5E-09		
Total phase (deg)	-72.9			Apriori accel (us/s/s)			4.19308186433E-05			Resid phase (deg)			77.5			+/- 21.0		
ph/seg (deg)	RMS	Theor.	Amplitude		0.110 +/- 0.020		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5									
amp/seg (%)	40.7	36.3	Search (2048X64)		0.091		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000		1.000					
ph/frq (deg)	60.0	63.3	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016		0.016			
amp/frq (%)	42.2	41.9	Inc. seg. avg.		0.116		Sample rate(MISamp/s): 64		Data rate(Mb/s): 2048		nlags: 128		t_cohere infinite		ion window (TEC)		0.00 0.00	
	83.5	73.1	Inc. frq. avg.		0.116													
g: az 165.7 el 29.3 pa -3.3	n: az 118.8 el 50.1 pa -42.7			u,v (fr/asec) 3423.565 3551.217												simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c192b/v2/1234/No0145/gn..130ERS			Output file: /Exps/c192b/v2/1234/No0145/gn.W.184.130ERS														

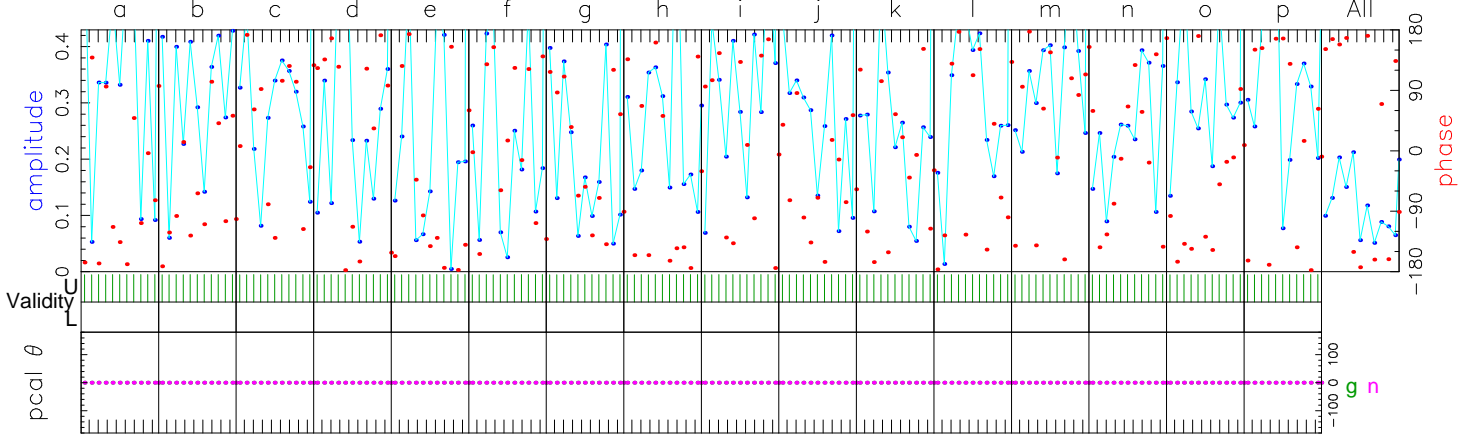


Fringe quality 0

SNR 5.7  
Int time 472.191  
Amp 0.143  
Phase 170.5  
PFD 9.3e-01  
Delays (us)  
SBD 0.351391  
MBD -0.002982  
Fringe rate (Hz) 0.923072  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101243  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

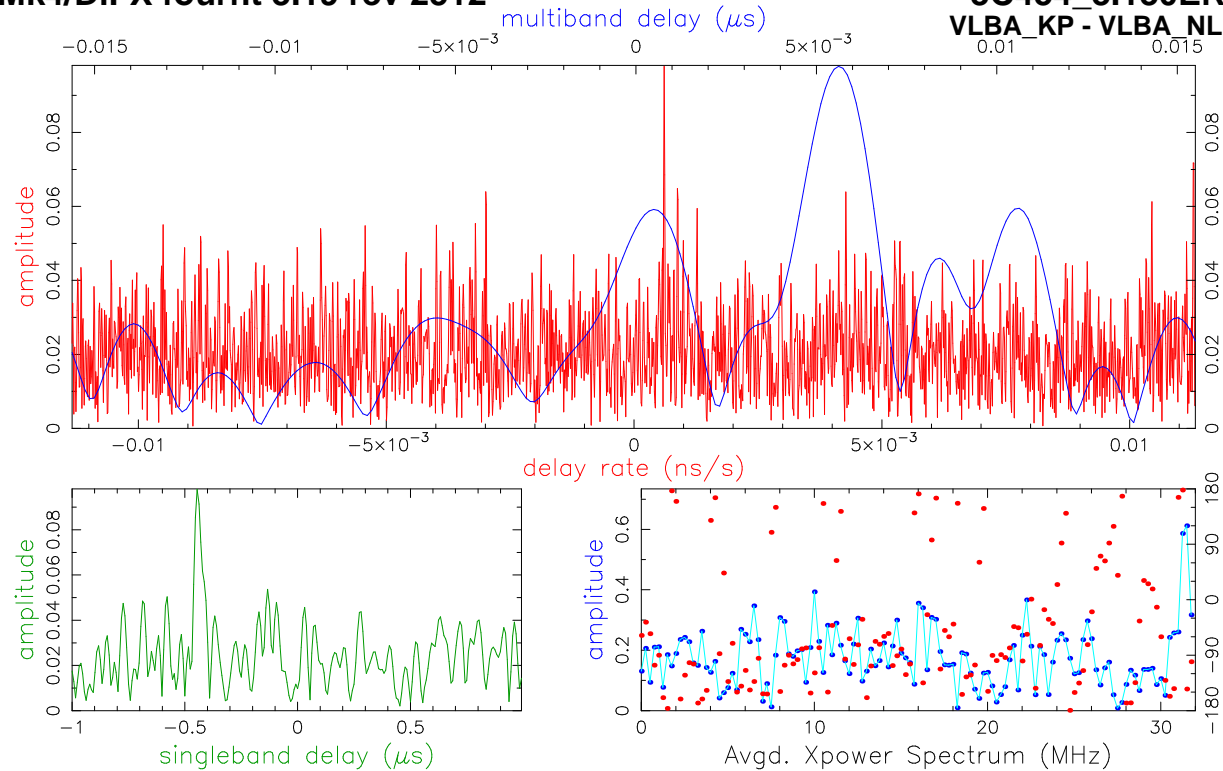
Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-160.8	-91.7	137.2	148.5	-166.0	129.6	128.1	178.8	170.4	-38.5	146.6	-178.9	134.0	36.1	-117.4	167.7	Phase	170.5				
	0.2	0.1	0.1	0.3	0.3	0.2	0.1	0.3	0.3	0.1	0.1	0.2	0.3	0.0	0.2	0.3	Ampl.	0.1				
	183.3	75.2	169.1	172.9	138.4	95.6	59.2	171.8	172.8	2.2	133.9	229.2	224.8	117.8	27.3	237.7	Sbd box	174.0				
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
g:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
n	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					
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)			-6.08581440296E+03														Apriori delay (usec)	-6.08615517086E+03	Resid mbdelay (usec)	-2.98210E-03	+/-	1.9E-04
Sband delay (usec)			-6.08580378036E+03														Apriori clock (usec)	-2.5211880E+01	Resid sbdelay (usec)	3.51391E-01	+/-	3.0E-03
Phase delay (usec)			-6.08615516536E+03														Apriori clockrate (us/s)	-5.9223514E-08	Resid phdelay (usec)	5.49701E-06	+/-	6.5E-07
Delay rate (us/s)			-5.61143136357E-01														Apriori rate (us/s)	-5.61153852304E-01	Resid rate (us/s)	1.07159E-05	+/-	2.4E-09
Total phase (deg)				20.0													Apriori accel (us/s/s)	4.19308186433E-05	Resid phase (deg)	170.5	+/-	20.1

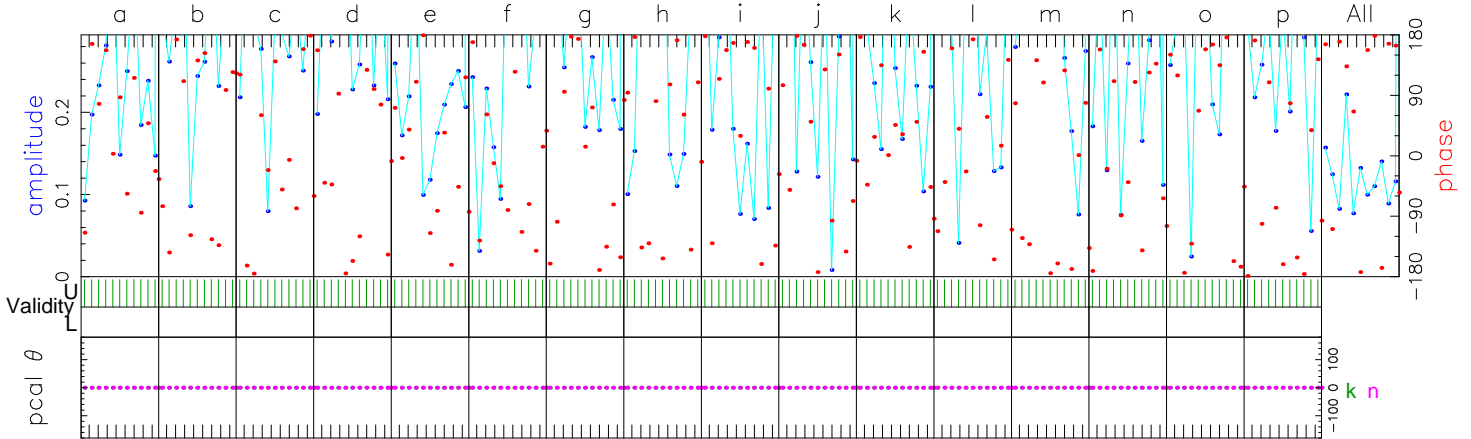
ph/seg (deg) 37.8 Theor. 34.7 Amplitude 0.143 +/- 0.025 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 58.5 60.6 Search (2048X64) 0.095 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 67.7 40.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 72.1 70.0 Inc. seg. avg. 0.144 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 g: az 165.7 el 29.3 pa -3.3 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 3423.565 3551.217 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/gn..130ERS Output file: /Exps/c192b/v2/1234/No0145/gn.W.207.130ERS simultaneous interpolator





Fringe quality 0  
SNR 5.8  
Int time 469.777  
Amp 0.098  
Phase 168.9  
PFD 7.9e-01  
Delays (us)  
SBD -0.444344  
MBD 0.005630  
Fringe rate (Hz)  
0.052739  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014506.66  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101233  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	62.9	168.5	-175.8	148.4	71.2	-75.3	-162.8	-175.2	177.2	171.7	6.2	-148.4	158.5	137.6	165.9	-178.6	Phase	168.9
	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.3	0.2	Ampl.	0.1
	7.3	241.4	217.6	120.4	112.6	34.8	118.7	74.0	74.3	144.3	121.0	160.4	198.8	123.0	72.5	61.8	Sbd box	72.1
U/L	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
k	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	PC amp	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

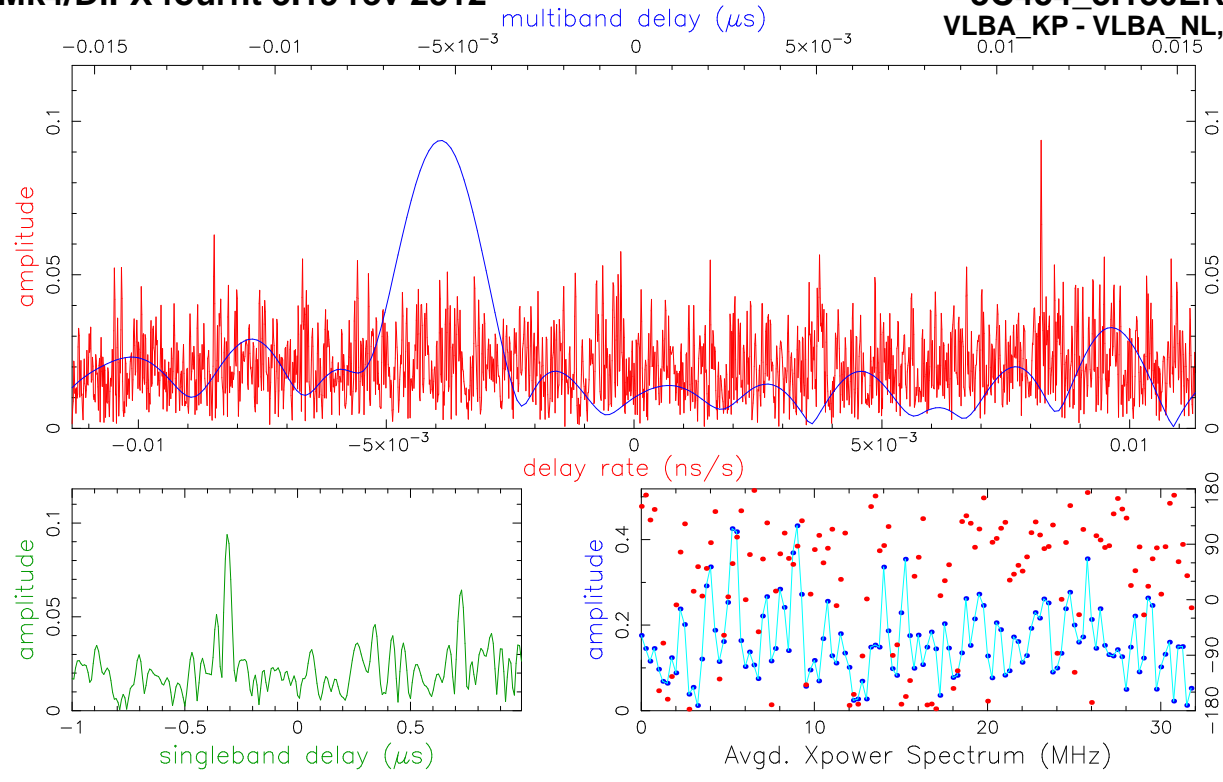
Group delay (usec)(sbd) -3.35600958448E+03 Apriori delay (usec) -3.35557771413E+03 Resid mbdelay (usec) 5.62965E-03 +/- 1.9E-04  
 Sband delay (usec) -3.35602205763E+03 Apriori clock (usec) -2.6914257E+01 Resid sbdelay (usec) -4.44344E-01 +/- 3.0E-03  
 Phase delay (usec) -3.35557770868E+03 Apriori clockrate (us/s) -3.2880250E-07 Resid phdelay (usec) 5.44810E-06 +/- 6.4E-07  
 Delay rate (us/s) 4.00084232841E-01 Apriori rate (us/s) 4.00083620589E-01 Resid rate (us/s) 6.12252E-07 +/- 2.3E-09  
 Total phase (deg) 62.7 Apriori accel (us/s/s) 1.33830281083E-05 Resid phase (deg) 168.9 +/- 19.7

RMS Theor. Amplitude 0.098 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 42.6 34.2 Search (2048X64) 0.092 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 56.1 59.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 68.4 39.5 Inc. seg. avg. 0.105 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 70.4 68.9 Inc. frq. avg. 0.102 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

k: az 93.4 el 37.2 pa -61.8 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -2362.736 -840.575 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/kn..130ERS Output file: /Exps/c192b/v2/1234/No0145/kn.W.173.130ERS

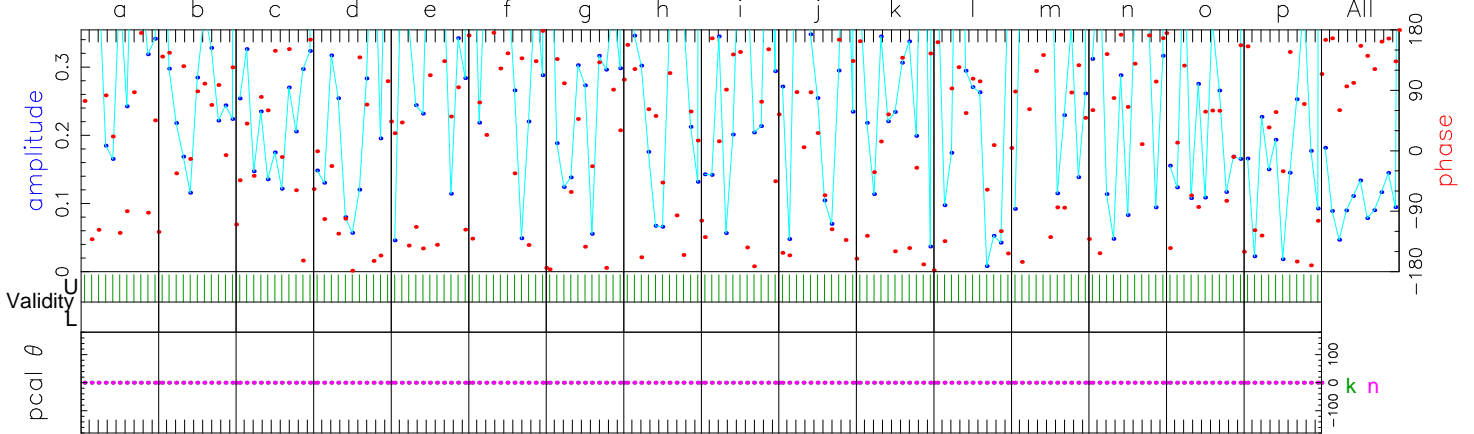
Mk4/DiFX fourfit 3.19 rev 2512

3C454\_3.130ERS, No0145, kn  
VLBA\_KP - VLBA\_NL, fgroup W, pol RR



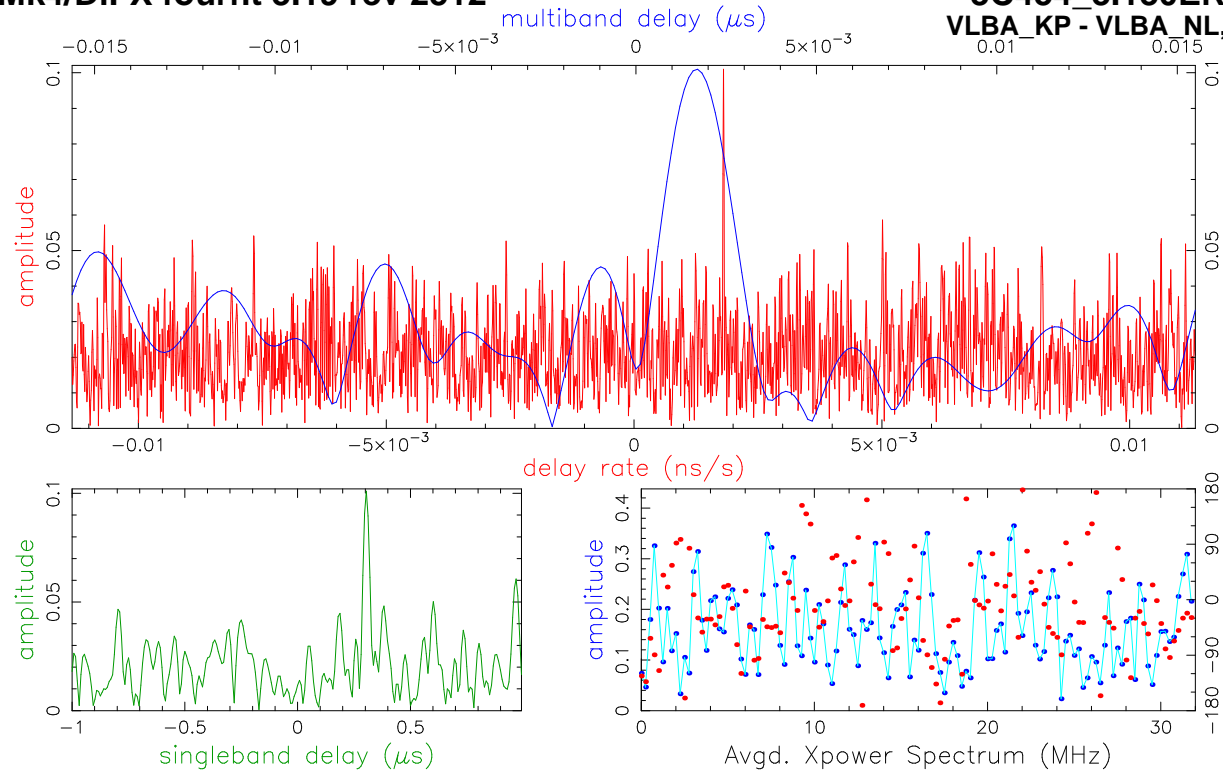
Fringe quality 0  
SNR 5.6  
Int time 469.777  
Amp 0.118  
Phase 143.0  
PFD 1.0e+00  
Delays (us)  
SBD -0.310784  
MBD -0.005428  
Fringe rate (Hz)  
0.708630  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014506.66  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101238  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



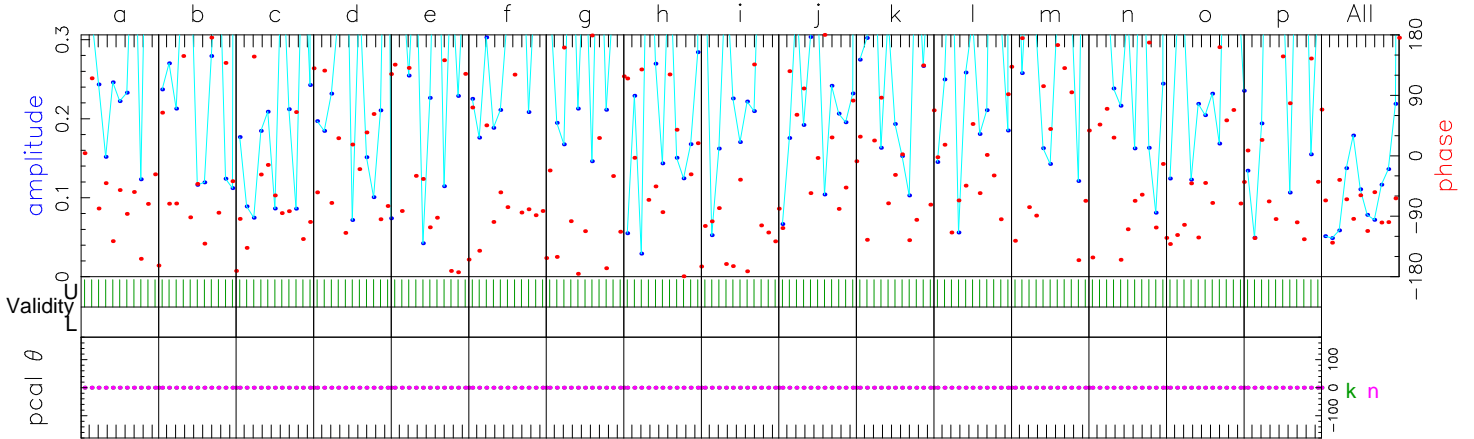
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-169.9	101.3	106.8	162.4	152.6	156.6	134.4	153.1	159.6	126.3	-172.2	129.8	146.1	143.7	70.4	140.2	Phase	143.0				
	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	Ampl.	0.1				
	8.8	222.1	119.9	83.1	121.7	248.5	237.2	136.7	232.8	97.9	45.0	160.9	231.4	4.4	192.2	146.0	Sbd box	89.2				
U/L	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
k	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	PC amp					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-3.35589564261E+03														Apriori delay (usec)	-3.3557771413E+03	Resid mbdelay (usec)	-5.42848E-03	+/-	1.9E-04
Sband delay (usec)			-3.35588849813E+03														Apriori clock (usec)	-2.6914257E+01	Resid sbdelay (usec)	-3.10784E-01	+/-	3.1E-03
Phase delay (usec)			-3.3557770952E+03														Apriori clockrate (us/s)	-3.2880250E-07	Resid phdelay (usec)	4.60984E-06	+/-	6.6E-07
Delay rate (us/s)			4.00091847077E-01														Apriori rate (us/s)	4.00083620589E-01	Resid rate (us/s)	8.22649E-06	+/-	2.4E-09
Total phase (deg)					36.7												Apriori accel (us/s/s)	1.33830281083E-05	Resid phase (deg)	143.0	+/-	20.5

ph/seg (deg) 35.1 35.5 Search (2048X64) 0.092 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 45.9 62.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 31.8 41.0 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 48.2 71.6 Inc. frq. avg. 0.104 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 93.4 el 37.2 pa -61.8 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -2362.736 -840.575 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/kn..130ERS Output file: /Exps/c192b/v2/1234/No0145/kn.W.187.130ERS



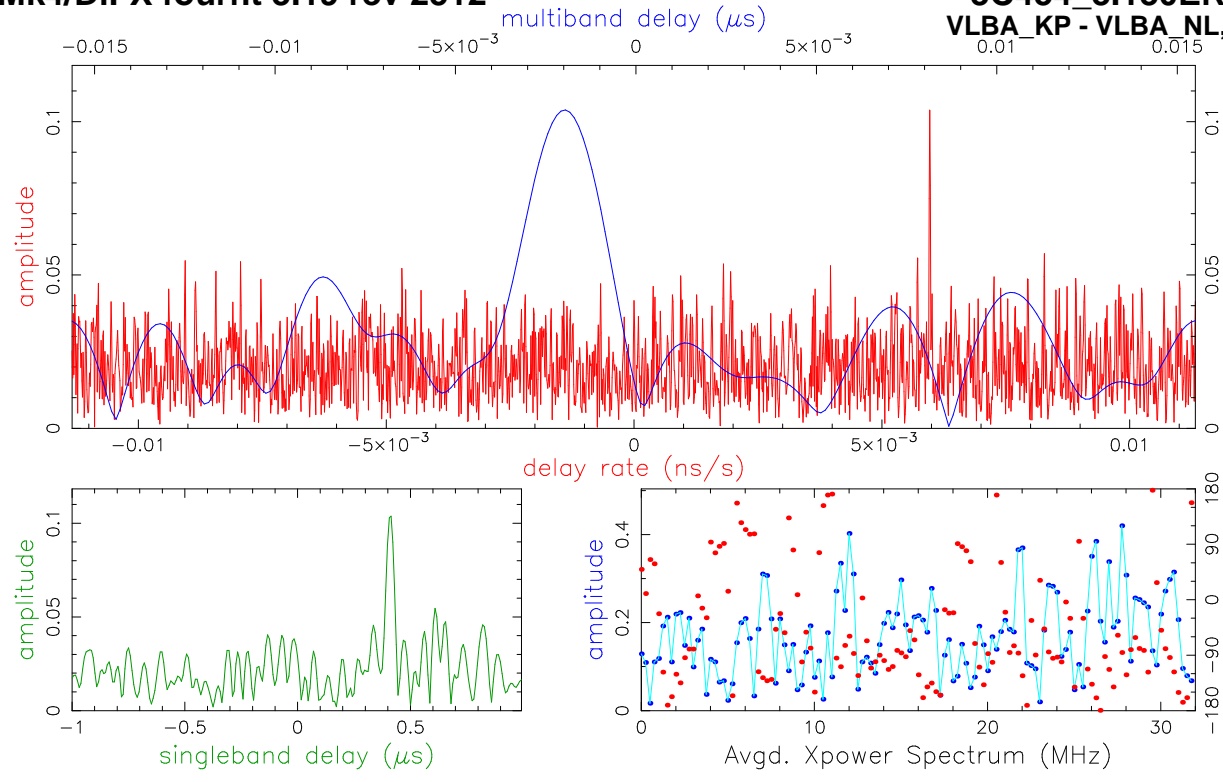
Fringe quality 0  
SNR 6.0  
Int time 469.778  
Amp 0.102  
Phase -79.3  
PFD 4.2e-01  
Delays (us)  
SBD 0.304440  
MBD 0.001680  
Fringe rate (Hz)  
0.155420  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014506.66  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101243  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



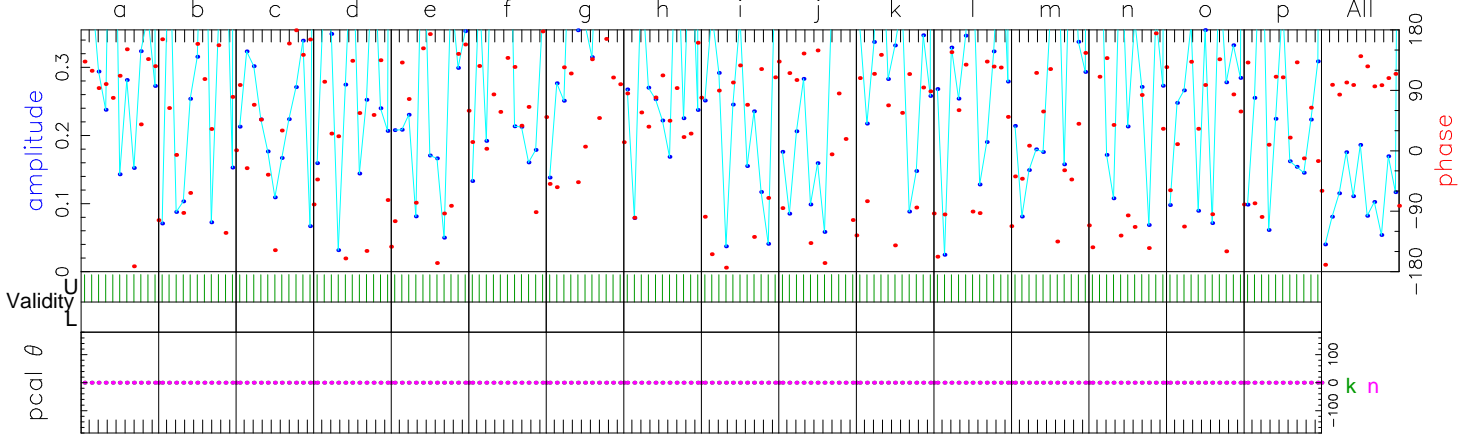
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U/L	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	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		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		-3.3552635387E+03																
Sband delay (usec)		-3.35527327363E+03																
Phase delay (usec)		-3.35557771669E+03																
Delay rate (us/s)		4.00085424866E-01																
Total phase (deg)					-185.6													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MISamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 27.3 33.1 Search (2048X64) 0.097 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 56.8 57.9 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 45.6 38.3 Inc. seg. avg. 0.095 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 53.6 66.8 Inc. frq. avg. 0.107 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 93.4 el 37.2 pa -61.8 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -2362.736 -840.575 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/kn..130ERS Output file: /Exps/c192b/v2/1234/No0145/kn.W.206.130ERS



Fringe quality 0  
SNR 6.2  
Int time 469.777  
Amp 0.118  
Phase 110.4  
PFD 1.1e-01  
Delays (us)  
SBD 0.410556  
MBD -0.002014  
Fringe rate (Hz) 0.514765  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014506.66  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101247  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

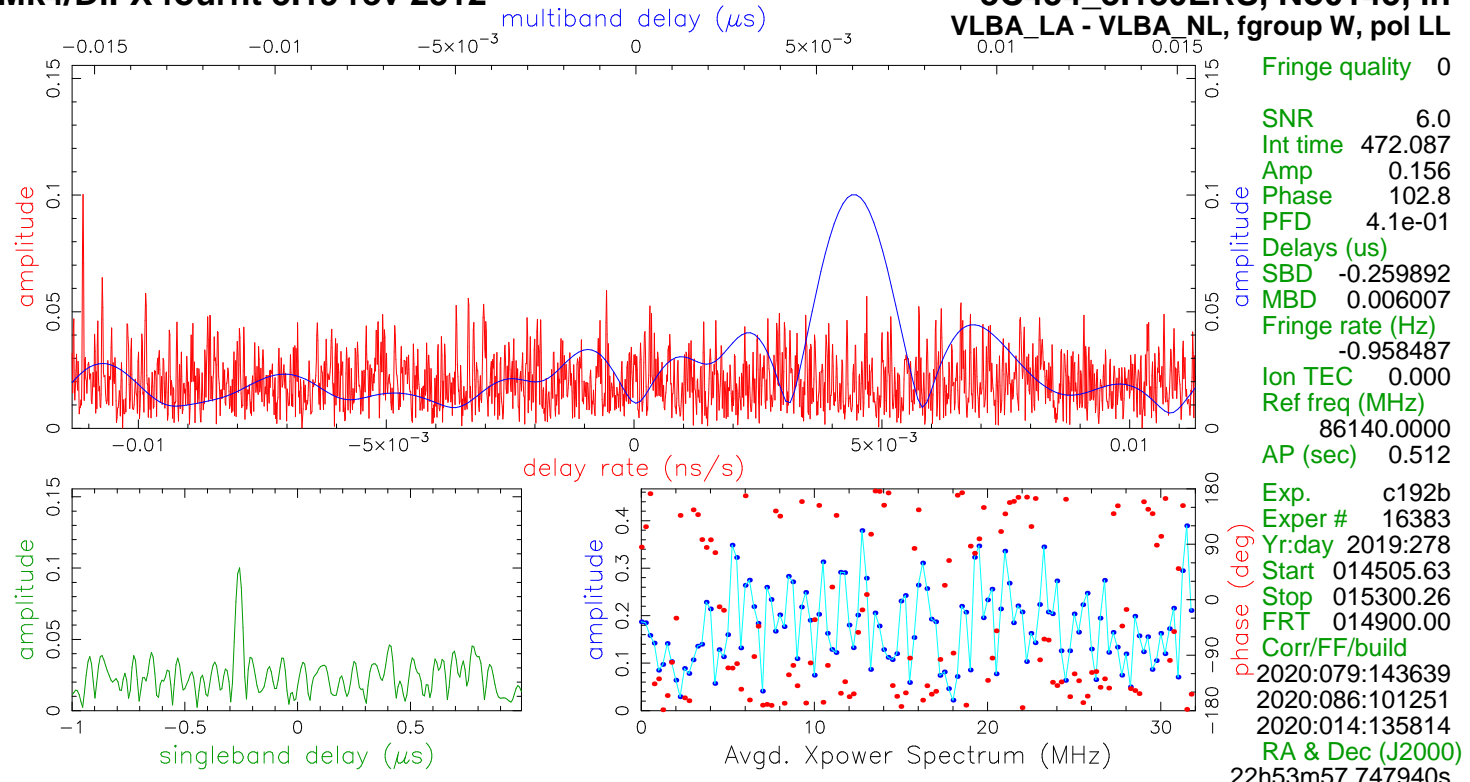


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
109.3	128.6	97.2	100.3	171.7	102.0	91.6	66.1	138.5	71.3	110.1	138.4	0.3	-179.3	111.2	16.9		Phase	110.4					
0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0		Ampl.	0.1				
181.0	222.3	37.6	49.0	135.6	214.0	52.5	171.2	5.7	206.9	191.1	220.9	24.7	222.2	112.8	156.2		Sbd box	181.6					
U/L	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0	925/0		APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k	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		PC amp					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Tracks					
Group delay (usec)(sbd)		-3.35517347791E+03																Apriori delay (usec)	-3.3557771413E+03	Resid mbdelay (usec)	-2.01378E-03	+/-	1.7E-04
Sband delay (usec)		-3.35516715813E+03																Apriori clock (usec)	-2.6914257E+01	Resid sbdelay (usec)	4.10556E-01	+/-	2.8E-03
Phase delay (usec)		-3.35557771057E+03																Apriori clockrate (us/s)	-3.2880250E-07	Resid phdelay (usec)	3.56041E-06	+/-	5.9E-07
Delay rate (us/s)		4.00089596505E-01																Apriori rate (us/s)	4.00083620589E-01	Resid rate (us/s)	5.97592E-06	+/-	2.2E-09
Total phase (deg)			4.1															Apriori accel (us/s/s)	1.33830281083E-05	Resid phase (deg)	110.4	+/-	18.4

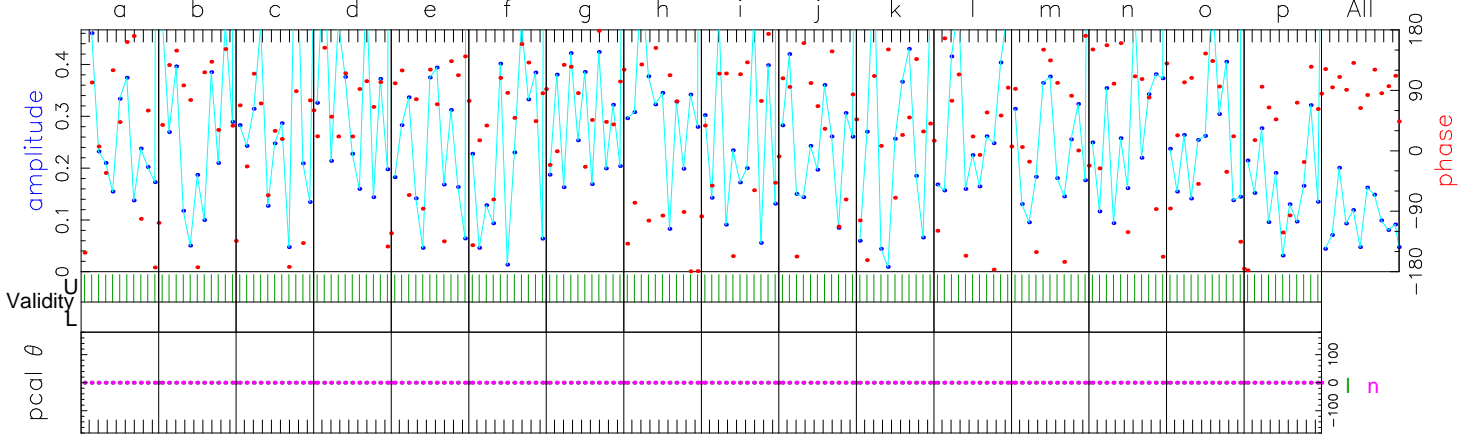
ph/seg (deg) 28.9 31.8 Amplitude 0.118 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 48.7 55.5 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.5 36.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 67.7 64.1 Inc. seg. avg. 0.110 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 k: az 93.4 el 37.2 pa -61.8 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -2362.736 -840.575 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/kn..130ERS Output file: /Exps/c192b/v2/1234/No0145/kn.W.220.130ERS simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C454\_3.130ERS, No0145, In VLBA\_LA - VLBA\_NL, fgroup W, pol LL



Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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	150.1	111.6	66.5	89.3	110.7	106.4	63.2	-162.6	127.8	97.2	62.8	88.5	114.3	149.1	98.6	81.9	Phase	102.8				
l	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	Ampl.	0.2				
n	16.7	93.9	239.0	95.6	173.5	103.3	171.6	199.7	7.5	93.8	61.7	93.9	196.8	12.6	31.8	211.4	Sbd box	95.7				
l	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)		-2.24130801873E+03															Apriori delay (usec)	-2.24103277587E+03	Resid mbdelay (usec)	6.00714E-03	+/-	1.8E-04
Sband delay (usec)		-2.24129266837E+03															Apriori clock (usec)	-2.7270247E+01	Resid sbdelay (usec)	-2.59892E-01	+/-	2.9E-03
Phase delay (usec)		-2.24103277255E+03															Apriori clockrate (us/s)	-4.8569552E-07	Resid phdelay (usec)	3.31522E-06	+/-	6.2E-07
Delay rate (us/s)		2.85300084126E-01															Apriori rate (us/s)	2.85311211209E-01	Resid rate (us/s)	-1.11271E-05	+/-	2.2E-09
Total phase (deg)					-9.9												Apriori accel (us/s/s)	9.20121355476E-06	Resid phase (deg)	102.8	+/-	19.1

	RMS	Theor.	Amplitude	0.156 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	19.5	33.1	Search (2048X64)	0.098	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	46.2	57.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	37.4	38.2	Inc. seg. avg.	0.139	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	46.2	66.7	Inc. frq. avg.	0.153	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

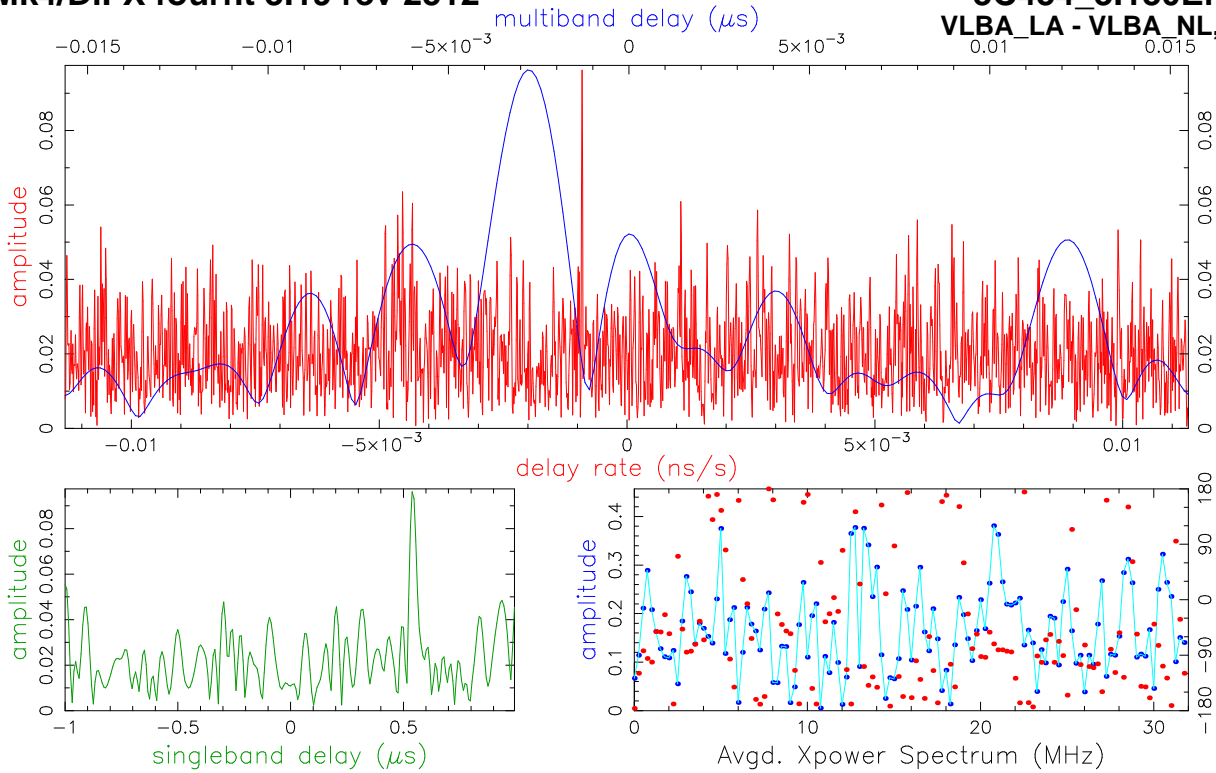
l: az 99.9 el 41.2 pa -56.1 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1685.482 -470.398 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/In..130ERS Output file: /Exps/c192b/v2/1234/No0145/In.W.231.130ERS



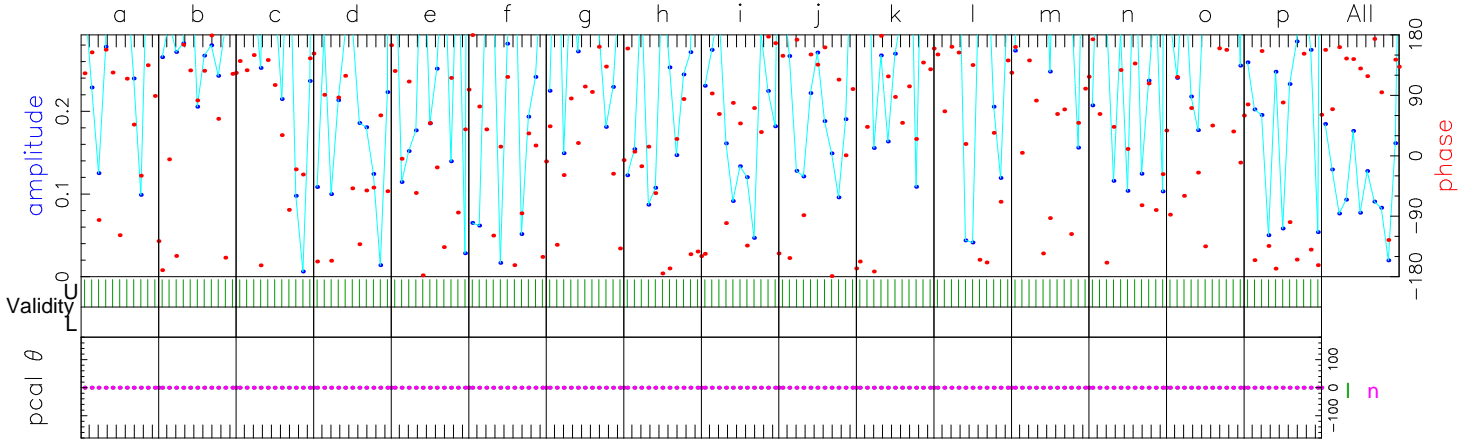
Mk4/DiFX fourfit 3.19 rev 2512

3C454\_3.130ERS, No0145, In  
VLBA\_LA - VLBA\_NL, fgroup W, pol LR



Fringe quality 0  
SNR 5.8  
Int time 472.088  
Amp 0.097  
Phase 136.7  
PFD 8.5e-01  
Delays (us)  
SBD 0.541631  
MBD -0.002723  
Fringe rate (Hz)  
-0.078149  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101302  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	128.7	146.0	143.6	-65.7	-161.2	177.4	106.9	-148.0	108.8	147.2	116.9	151.5	89.5	120.1	49.5	-174.5	Phase	136.7
l	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.1	Ampl.	0.1
n	198.5	247.7	220.9	12.4	250.7	186.8	18.1	250.3	137.8	117.8	40.1	197.7	177.4	238.3	12.7	198.0	Sbd box	198.3
l	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)			-2.24050424840E+03					Apriori delay (usec)		-2.24103277587E+03				Resid mbdelay (usec)		-2.72254E-03	+/-	1.9E-04
Sband delay (usec)			-2.24049114487E+03					Apriori clock (usec)		-2.7270247E+01				Resid sbdelay (usec)		5.41631E-01	+/-	3.0E-03
Phase delay (usec)			-2.24103277146E+03					Apriori clockrate (us/s)		-4.8569552E-07				Resid phdelay (usec)		4.40749E-06	+/-	6.4E-07
Delay rate (us/s)			2.85310303975E-01					Apriori rate (us/s)		2.85311211209E-01				Resid rate (us/s)		-9.07234E-07	+/-	2.3E-09
Total phase (deg)					23.9			Apriori accel (us/s/s)		9.20121355476E-06				Resid phase (deg)		136.7	+/-	19.8

ph/seg (deg) 41.4 34.4  
amp/seg (%) 53.6 60.0  
ph/frq (deg) 60.4 39.7  
amp/frq (%) 69.1 69.2

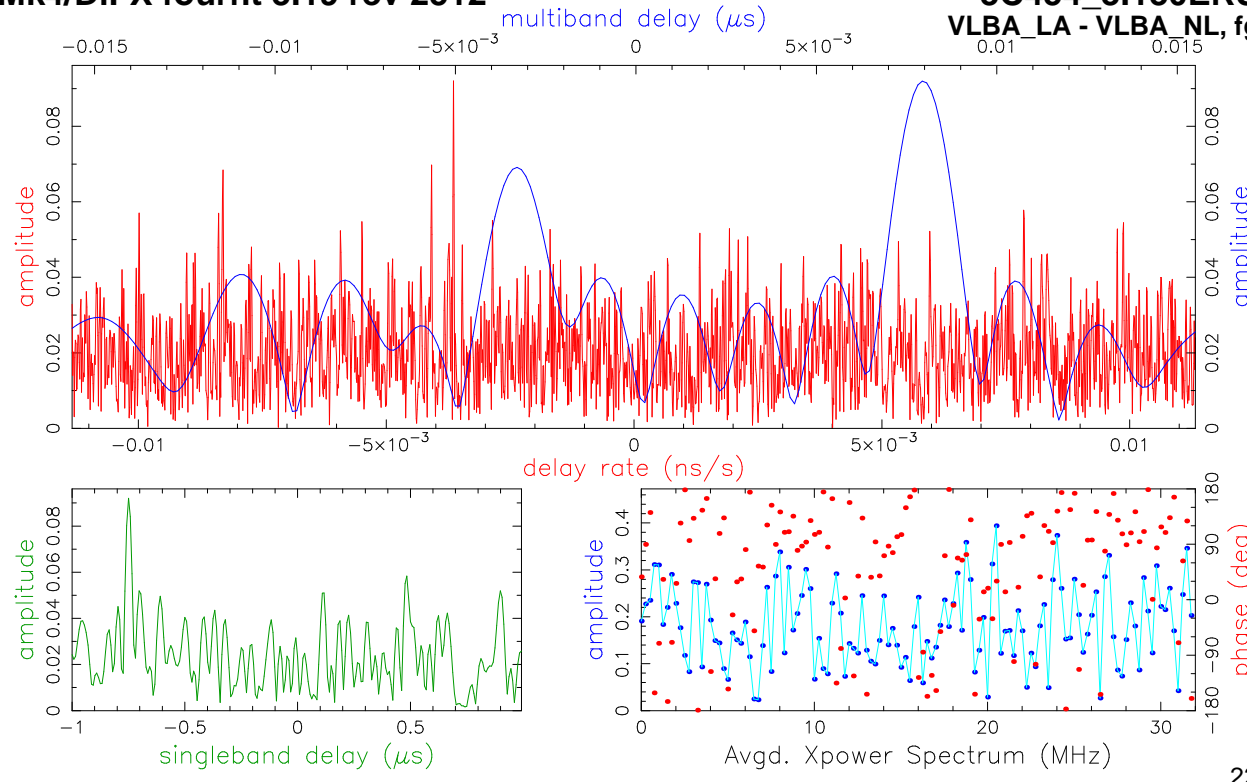
RMS Theor. Amplitude 0.097 +/- 0.017  
Search (2048X64) 0.094  
Interp. 0.000  
Inc. seg. avg. 0.095  
Inc. frq. avg. 0.092

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

l: az 99.9 el 41.2 pa -56.1 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1685.482 -470.398 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/In..130ERS Output file: /Exps/c192b/v2/1234/No0145/In.W.266.130ERS

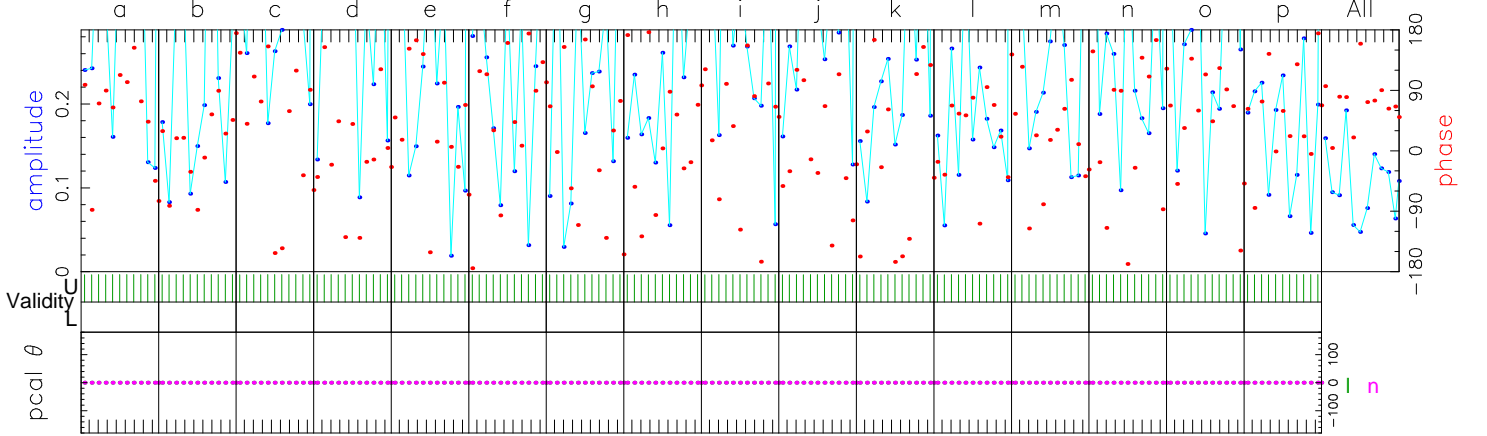


Fringe quality 0

SNR 5.5  
Int time 472.087  
Amp 0.096  
Phase 74.2  
PFD 1.0e+00  
Delays (us)  
SBD -0.749237  
MBD 0.007956  
Fringe rate (Hz)  
-0.313787  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101307  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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				
93.8	31.4	103.1	22.6	70.6	115.6	16.0	12.7	101.6	1.0	167.7	47.0	26.5	161.4	76.2	52.8	52.8	Phase	74.2				
0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	Ampl.	0.1				
33.4	240.3	39.9	94.7	74.8	27.7	57.3	51.0	100.9	1.3	222.8	164.4	38.8	43.5	34.0	143.7	143.7	Sbd box	33.1				
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)			-2.24177481948E+03														Apriori delay (usec)	-2.24103277587E+03	Resid mbdelay (usec)	7.95639E-03	+/-	2.0E-04
Sband delay (usec)			-2.24178201337E+03														Apriori clock (usec)	-2.7270247E+01	Resid sbdelay (usec)	-7.49237E-01	+/-	3.1E-03
Phase delay (usec)			-2.24103277347E+03														Apriori clockrate (us/s)	-4.8569552E-07	Resid phdelay (usec)	2.39276E-06	+/-	6.8E-07
Delay rate (us/s)			2.85307568458E-01														Apriori rate (us/s)	2.85311211209E-01	Resid rate (us/s)	-3.64275E-06	+/-	2.5E-09
Total phase (deg)																	Apriori accel (us/s/s)	9.20121355476E-06	Resid phase (deg)	74.2	+/-	20.9

ph/seg (deg) 38.2 36.3  
amp/seg (%) 49.5 63.3  
ph/frq (deg) 53.8 41.9  
amp/frq (%) 70.4 73.1

RMS Theor. Amplitude 0.096 +/- 0.018  
Search (2048X64) 0.091  
Interp. 0.000  
Inc. seg. avg. 0.092  
Inc. frq. avg. 0.106

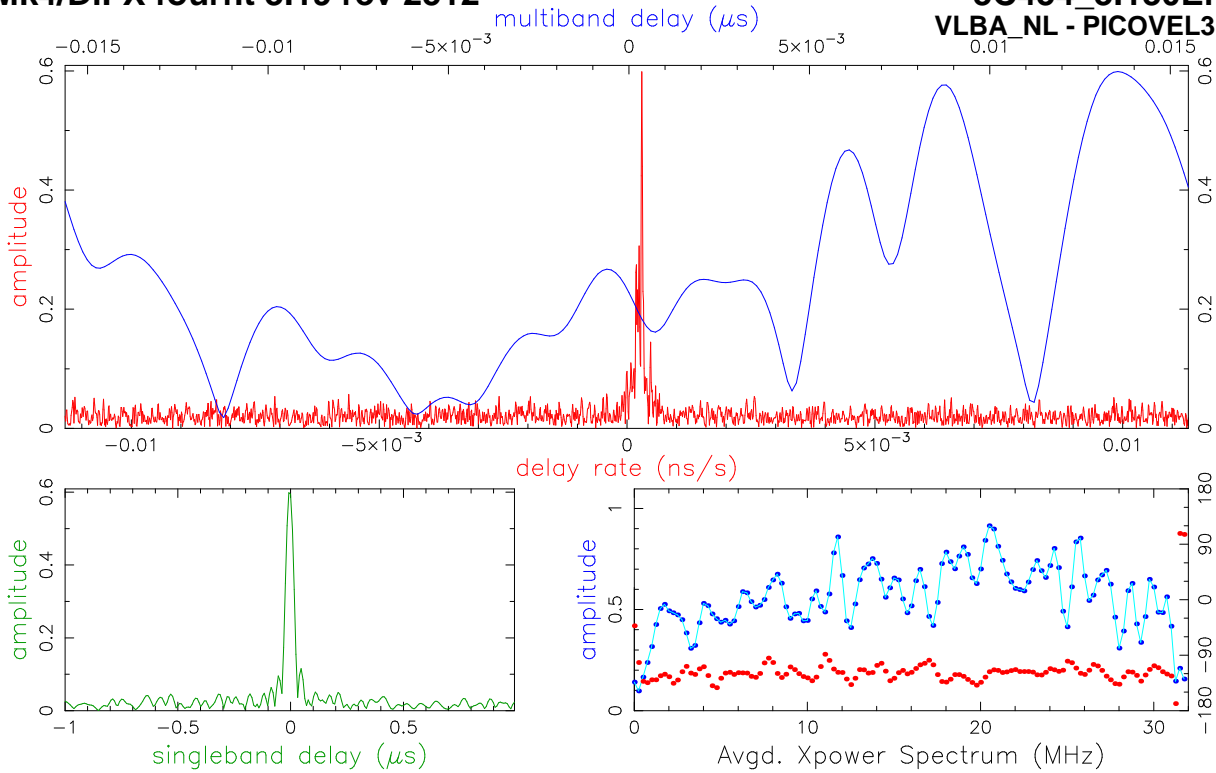
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
PCal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MISamp/s): 64  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

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

l: az 99.9 el 41.2 pa -56.1 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) -1685.482 -470.398 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/In..130ERS Output file: /Exps/c192b/v2/1234/No0145/In.W.282.130ERS



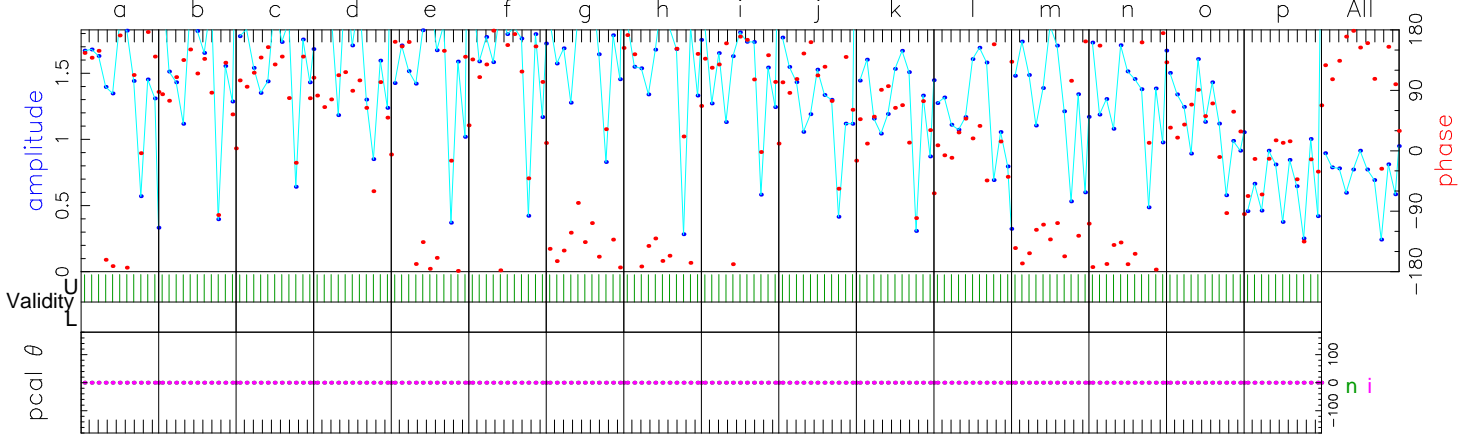


Fringe quality 4

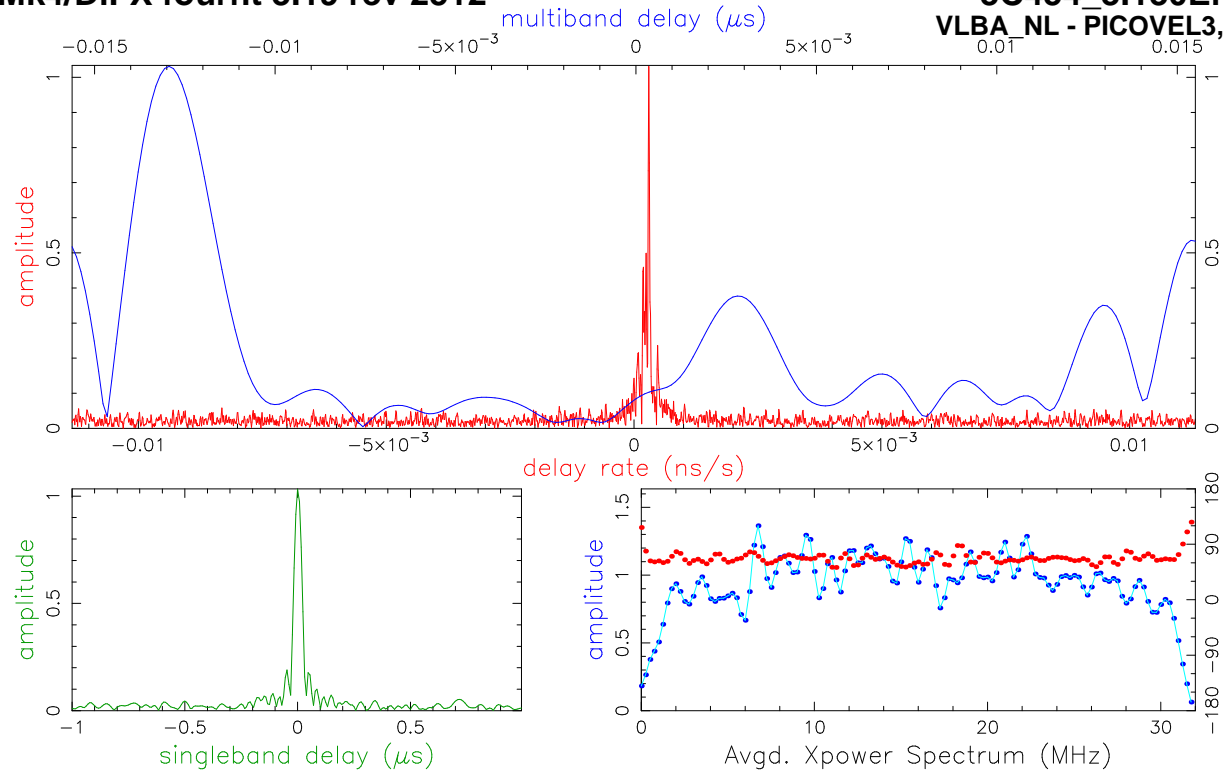
SNR 36.2  
Int time 472.559  
Amp 0.609  
Phase 139.2  
PFD 0.0e+00  
Delays (us)  
SBD -0.004262  
MBD 0.013583  
Fringe rate (Hz) 0.026182  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build 2020:079:143639  
2020:086:101254  
2020:014:135814  
RA & Dec (J2000) 22h53m57.747940s +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
ni	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)		3.26631966927E+03																
Sband delay (usec)		3.26633307442E+03																
Phase delay (usec)		3.26633734040E+03																
Delay rate (us/s)		1.58969445891E+00																
Total phase (deg)			180.9															
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MISamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		
pcal mode: MANUAL, MANUAL																		
PC period (AP's) 5, 5																		
Search (2048X64)																		
Interp.																		
Inc. seg. avg.																		
Inc. frq. avg.																		
0.609 +/- 0.017																		
0.554																		
0.000																		
0.711																		
1.152																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
SampCntNorm: enabled																		
Sample rate(MISamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		
-1.000 1.000																		
-0.016 0.016																		
-0.011 0.011																		
0.00 0.00																		

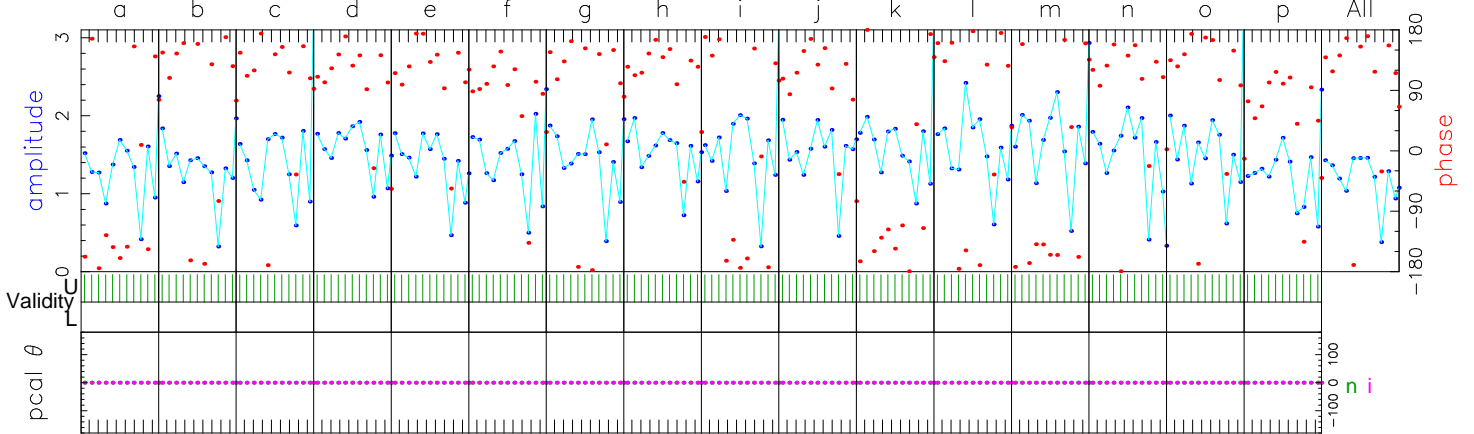


Fringe quality 3

SNR 61.5  
Int time 472.560  
Amp 1.034  
Phase 148.4  
PFD 0.0e+00  
Delays (us)  
SBD 0.001352  
MBD -0.012931  
Fringe rate (Hz) 0.026206  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

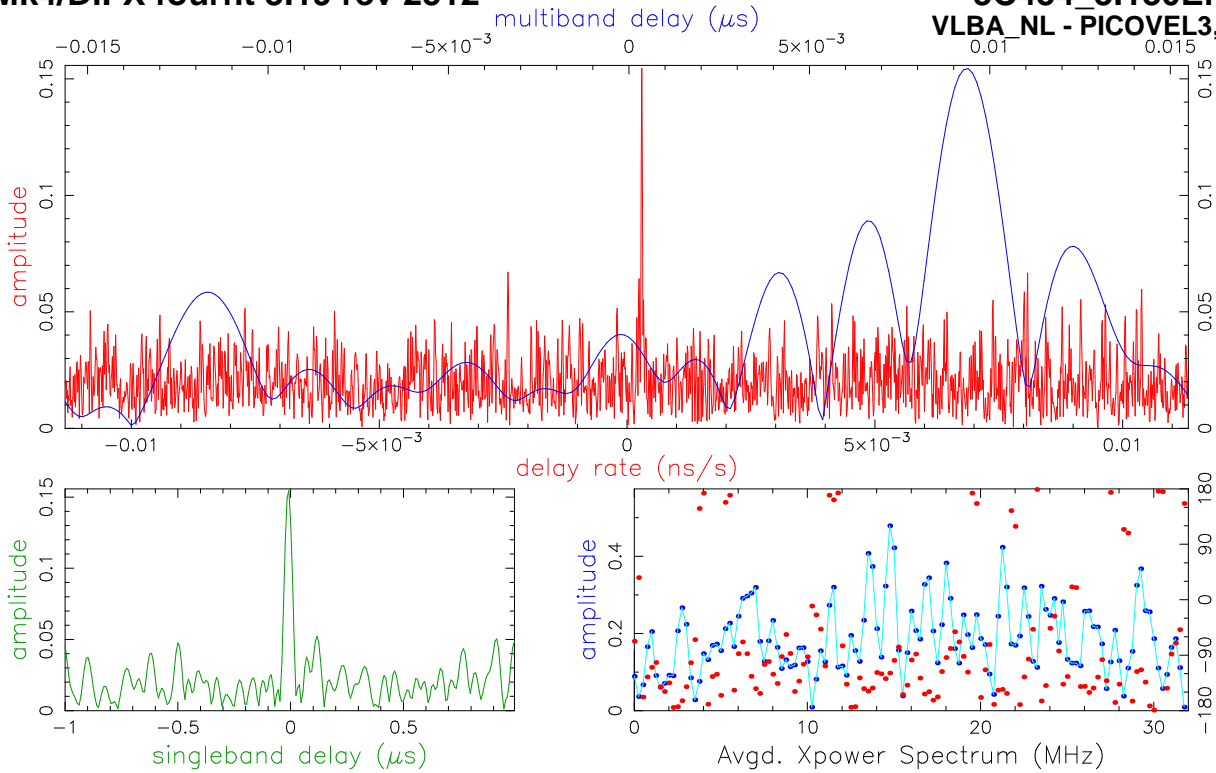
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101302  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



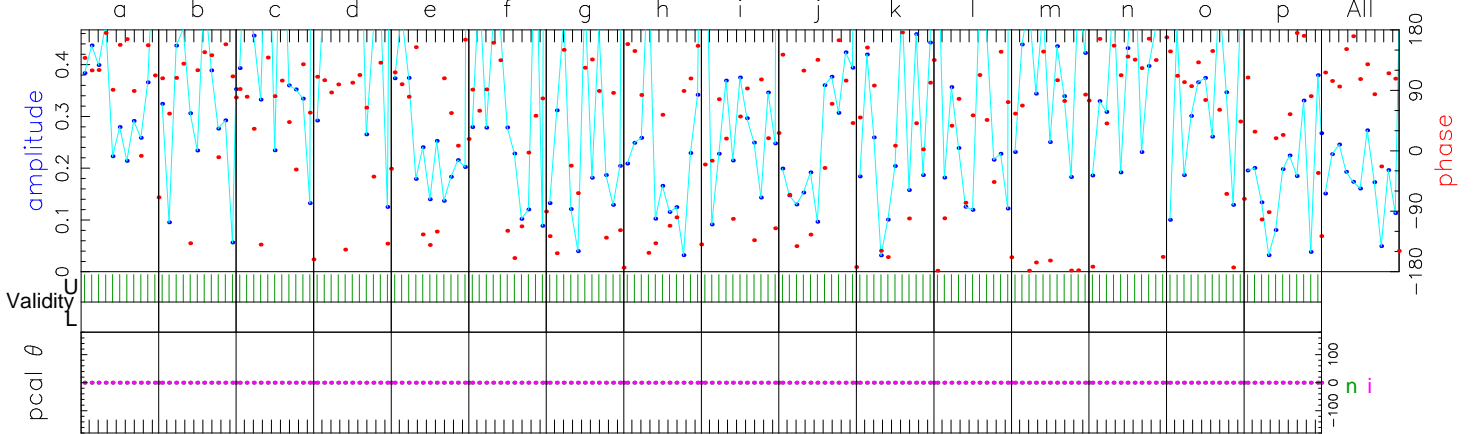
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	128.5	129.1	129.3	129.1	129.1	128.9	129.2	128.5	129.1	128.6	129.2	129.0	129.0	128.4	129.1	127.4		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
ni	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		3.26632440459E+03									3.26633733592E+03							
Sband delay (usec)		3.26633868792E+03									2.7037132E+01							
Phase delay (usec)		3.26633734070E+03									4.8722349E-07							
Delay rate (us/s)		1.58969445919E+00									1.58969415496E+00							
Total phase (deg)				190.1							-1.52295455607E-05							
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		

ph/seg (deg) 58.8 3.2 Search (2048X64) 0.937 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 34.1 5.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 35.2 3.7 Inc. seg. avg. 1.200 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 20.5 6.5 Inc. frq. avg. 1.211 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 118.8 el 50.1 pa -42.7 i: az 260.3 el 39.6 pa 54.8 u,v (fr/asec) -9508.343 251.724 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/ni..130ERS Output file: /Exps/c192b/v2/1234/No0145/ni.W.267.130ERS



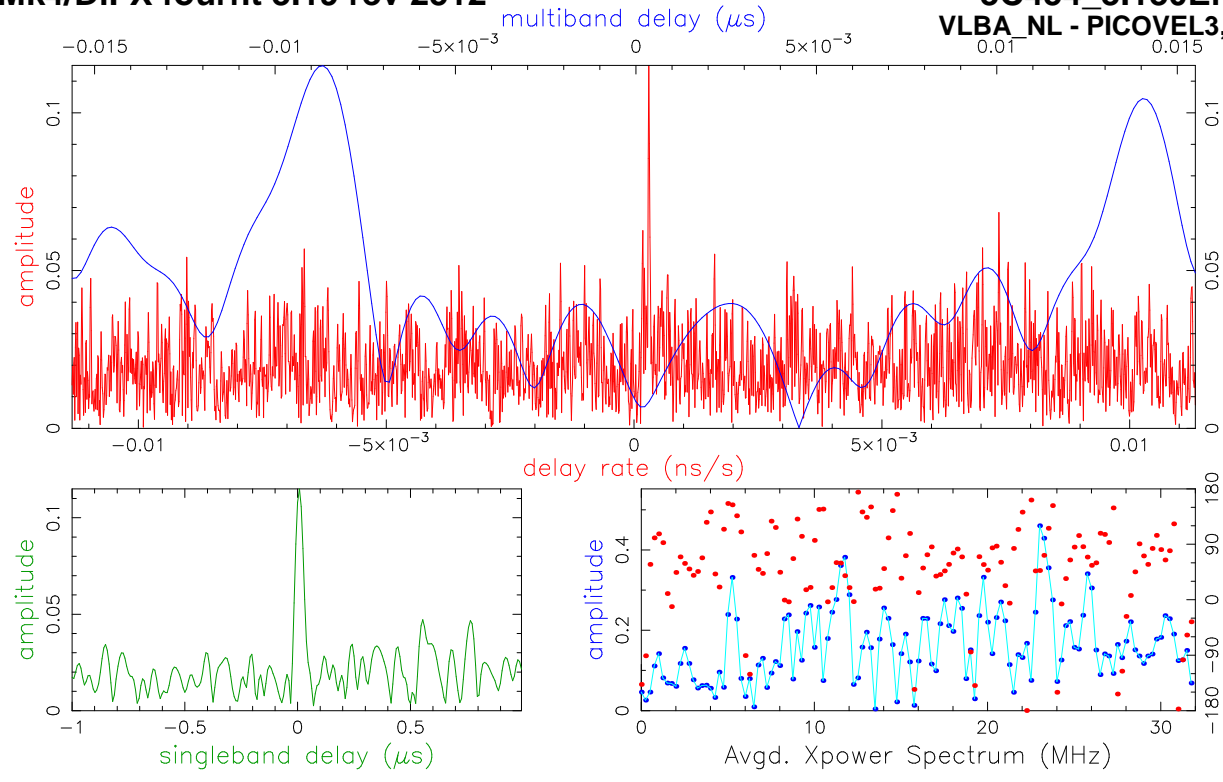
Fringe quality 9  
SNR 9.3  
Int time 472.559  
Amp 0.156  
Phase 116.9  
PFD 8.3e-12  
Delays (us)  
SBD -0.010205  
MBD 0.009341  
Fringe rate (Hz) 0.026221  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101309  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



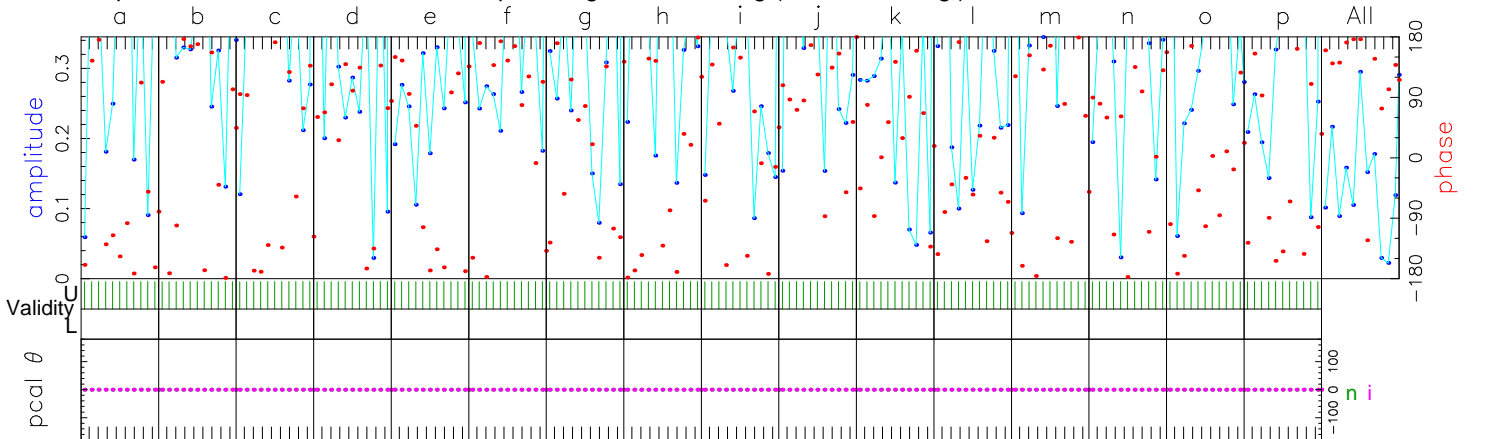
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	129.2	131.4	92.8	108.1	117.5	100.9	150.3	164.1	10.0	99.4	105.5	101.4	135.7	149.5	91.3	46.5	Phase	116.9
n	0.3	0.2	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.0	Ampl.	0.2
i	47.8	128.0	127.2	128.6	189.9	251.7	246.8	201.3	249.8	176.1	172.5	65.8	127.9	127.0	128.0	187.9	Sbd box	127.7
n	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
ni	0:0	0:0	0:0	0:0	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	3.26631542702E+03			Apriori delay (usec)			3.26633733592E+03			Resid mbdelay (usec)			9.34111E-03			+/- 1.2E-04		
Sband delay (usec)	3.26632713092E+03			Apriori clock (usec)			2.7037132E+01			Resid sbdelay (usec)			-1.02050E-02			+/- 1.9E-03		
Phase delay (usec)	3.26633733969E+03			Apriori clockrate (us/s)			4.8722349E-07			Resid phdelay (usec)			3.76976E-06			+/- 4.0E-07		
Delay rate (us/s)	1.58969445936E+00			Apriori rate (us/s)			1.58969415496E+00			Resid rate (us/s)			3.04398E-07			+/- 1.5E-09		
Total phase (deg)	158.6			Apriori accel (us/s/s)			-1.52295455607E-05			Resid phase (deg)			116.9			+/- 12.4		

ph/seg (deg) 48.6 21.4 Search (2048X64) 0.143 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 41.9 37.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 41.2 24.8 Inc. seg. avg. 0.167 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 57.4 43.2 Inc. frq. avg. 0.165 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 118.8 el 50.1 pa -42.7 i: az 260.3 el 39.6 pa 54.8 u,v (fr/asec) -9508.343 251.724 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/ni..130ERS Output file: /Exps/c192b/v2/1234/No0145/ni.W.286.130ERS



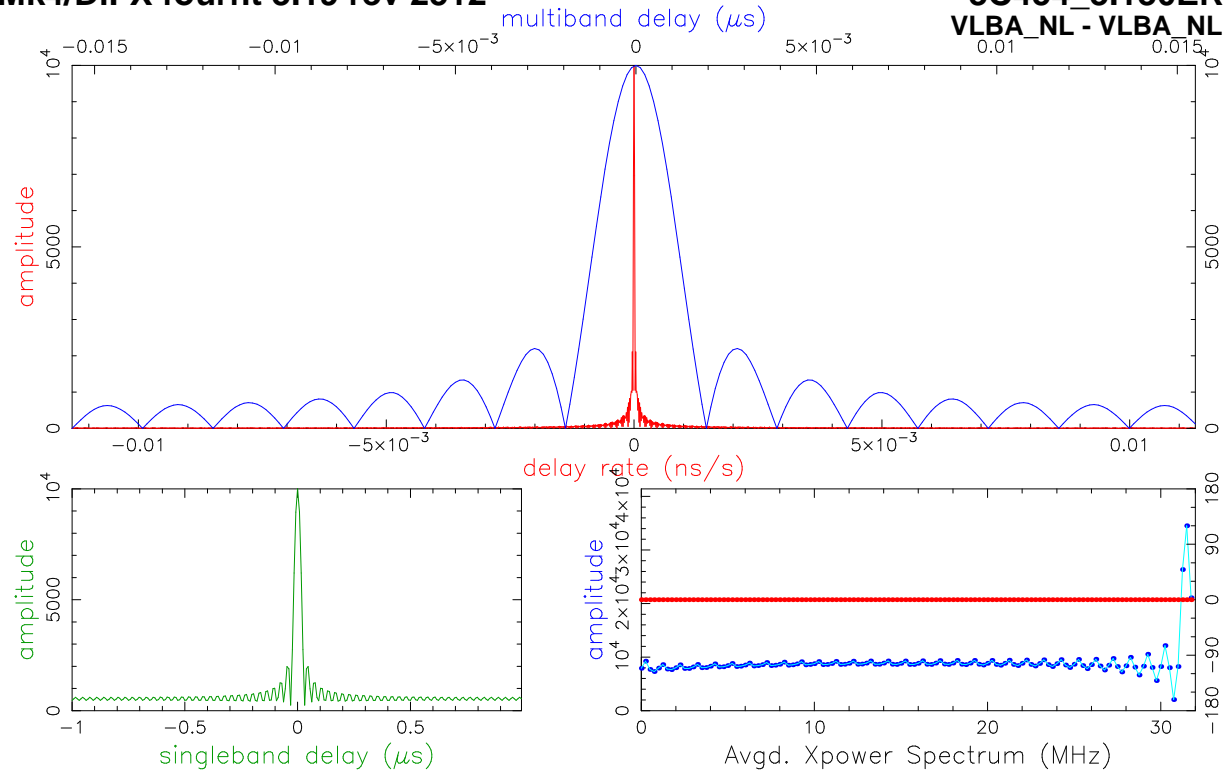
Fringe quality 0  
SNR 6.8  
Int time 472.560  
Amp 0.115  
Phase 162.5  
PFD 2.4e-03  
Delays (us)  
SBD 0.007194  
MBD -0.008697  
Fringe rate (Hz)  
0.025995  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101313  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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
Phase	-158.5	165.0	-175.5	105.5	158.8	149.9	165.0	-155.2	160.7	108.9	35.1	-69.9	155.2	115.0	-60.2	-145.8	162.5	
Ampl.	0.2	0.3	0.2	0.2	0.2	0.2	0.0	0.2	0.1	0.3	0.1	0.2	0.3	0.2	0.1	0.2	0.2	
Sbd box	176.2	129.4	129.3	71.0	141.4	131.1	247.7	214.5	127.1	129.8	61.1	130.1	131.1	6.1	101.3	126.7	129.9	
APs used	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	1000	
PC freqs	n 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
PC phase	ni 0:0	0:0	0:0	0:0	0:0	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	ni 0:0	0:0	0:0	0:0	0:0	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	n 1000	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	1000	
Tracks	n W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Tracks	i W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)			3.26635988902E+03															
Sband delay (usec)			3.26634452992E+03															
Phase delay (usec)			3.26633734116E+03															
Delay rate (us/s)			1.58969445674E+00															
Total phase (deg)				204.2														
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MISamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 42.1 29.0 Search (2048X64) 0.112 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 68.1 50.7 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 68.9 33.5 Inc. seg. avg. 0.119 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 89.7 58.5 Inc. frq. avg. 0.164 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 118.8 el 50.1 pa -42.7 i: az 260.3 el 39.6 pa 54.8 u,v (fr/asec) -9508.343 251.724 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/ni..130ERS Output file: /Exps/c192b/v2/1234/No0145/ni.W.303.130ERS

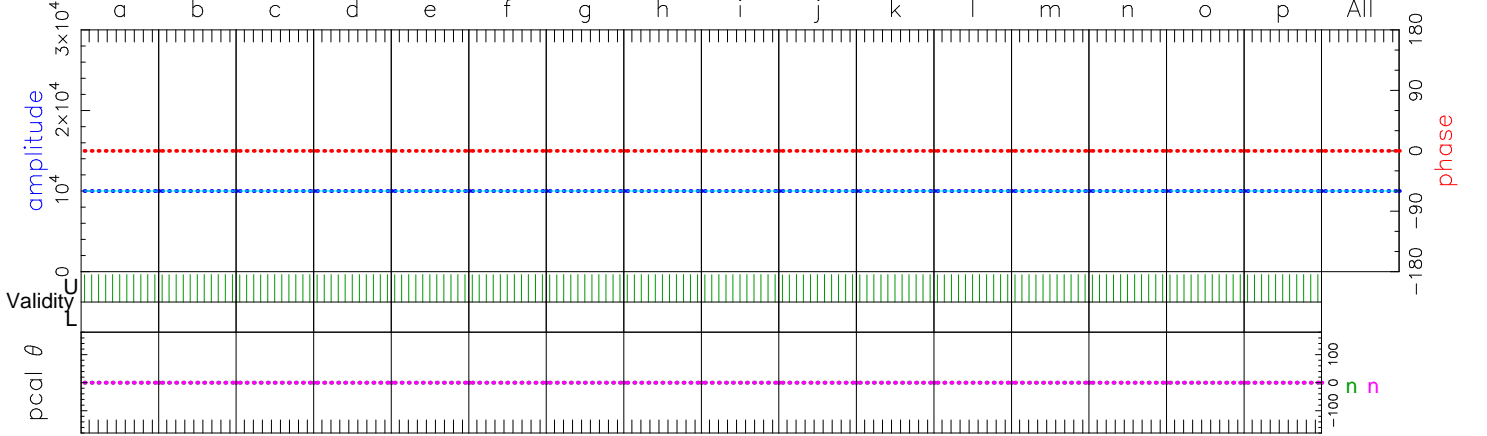


Fringe quality 9

SNR 594464.2  
Int time 472.559  
Amp 10000.002  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz)  
0.000000  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101254  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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
UL	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
n:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
n	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		Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
n	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			+/- 1.8E-09			
Sband delay (usec)	0.0000000000E+00			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			0.00000E+00			+/- 2.9E-08			
Phase delay (usec)	2.04591892547E-19			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			2.04592E-19			+/- 6.2E-12			
Delay rate (us/s)	0.0000000000E+00			Apriori rate (us/s)			0.0000000000E+00			Resid rate (us/s)			0.00000E+00			+/- 2.3E-14			
Total phase (deg)	0.0			Apriori accel (us/s/s)			0.0000000000E+00			Resid phase (deg)			0.0			+/- 0.0			

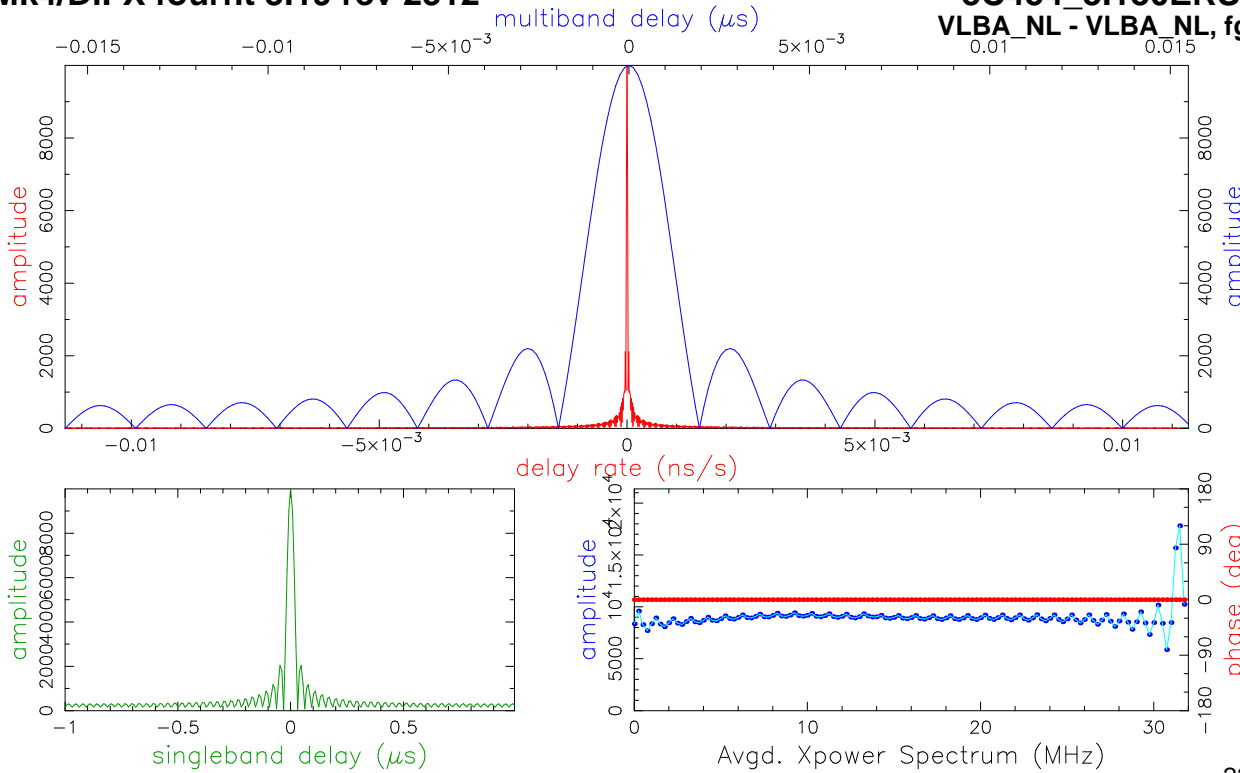
ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.002 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (2048X64) 10000.003 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.003 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nn..130ERS Output file: /Exps/c192b/v2/1234/No0145/nn.W.240.130ERS

Mk4/DiFX fourfit 3.19 rev 2512

3C454\_3.130ERS, No0145, nn  
VLBA\_NL - VLBA\_NL, fgroup W, pol RR

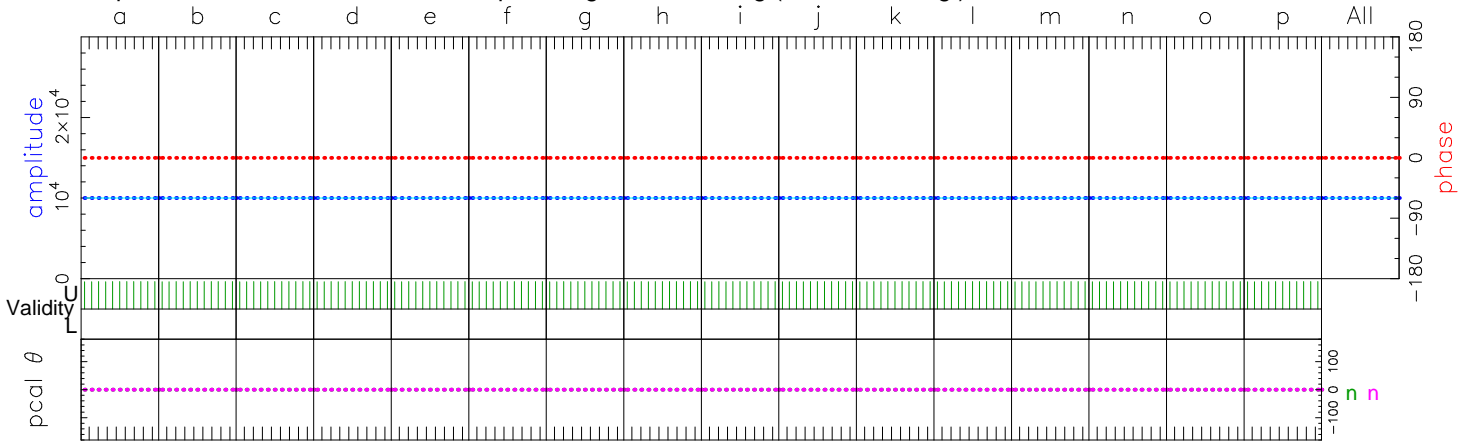


Fringe quality 9

SNR 594464.0  
Int time 472.560  
Amp 9999.992  
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. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101300  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

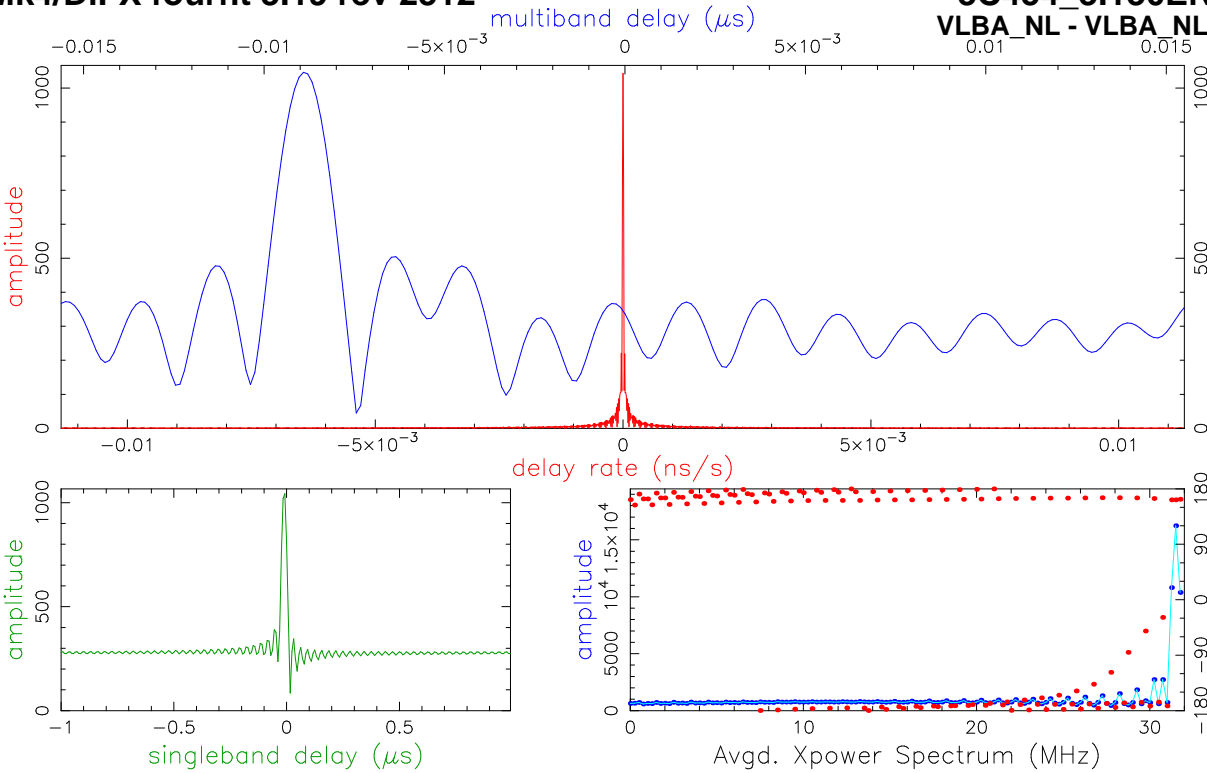


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-0.0	0.0	-0.0	0.0	-0.0	0.0	0.0	-0.0	0.0	-0.0	0.0	0.0	0.0	0.0	-0.0	-0.0		Phase	0.0
	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	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	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
n:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
n	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		Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
n	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			+/- 1.8E-09			
Sband delay (usec)	0.0000000000E+00			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			0.00000E+00			+/- 2.9E-08			
Phase delay (usec)	2.09739797329E-20			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			2.09740E-20			+/- 6.2E-12			
Delay rate (us/s)	0.0000000000E+00			Apriori rate (us/s)			0.0000000000E+00			Resid rate (us/s)			0.00000E+00			+/- 2.3E-14			
Total phase (deg)	0.0			Apriori accel (us/s/s)			0.0000000000E+00			Resid phase (deg)			0.0			+/- 0.0			

ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.992 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (2048X64) 9999.992 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(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 az 118.8 el 50.1 pa -42.7 n: az 118.8 el 50.1 pa -42.7 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/c192b/v2/1234/No0145/nn..130ERS Output file: /Exps/c192b/v2/1234/No0145/nn.W.256.130ERS simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C454\_3.130ERS, No0145, nn  
VLBA\_NL - VLBA\_NL, fgroup W, pol LR

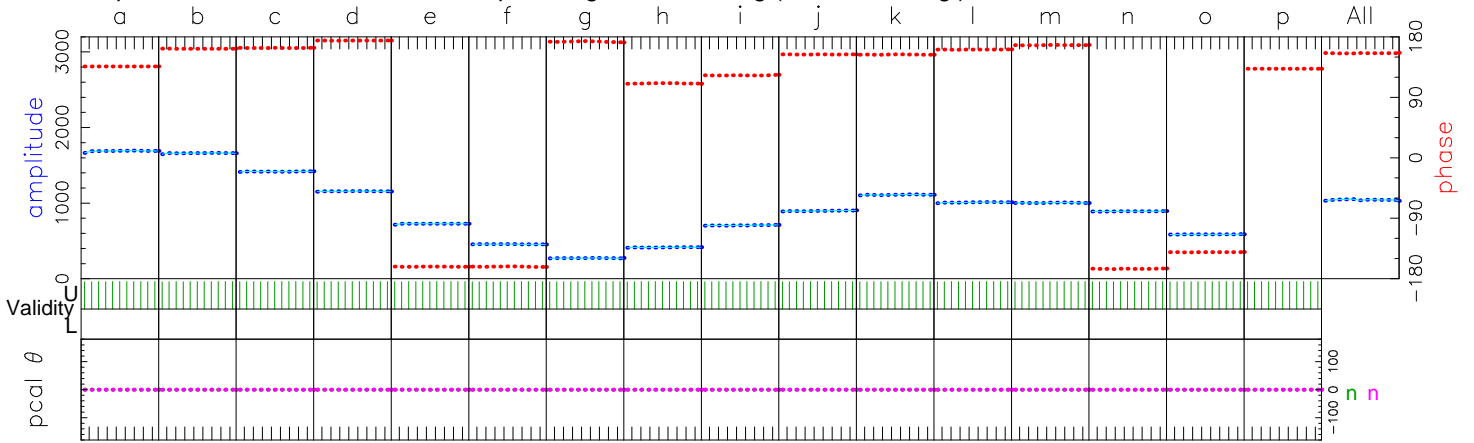


Fringe quality 5

SNR 63411.4  
Int time 472.559  
Amp 1066.698  
Phase 155.6  
PFD 0.0e+00  
Delays (us)  
SBD -0.011014  
MBD -0.008808  
Fringe rate (Hz) 0.000002  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101305  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

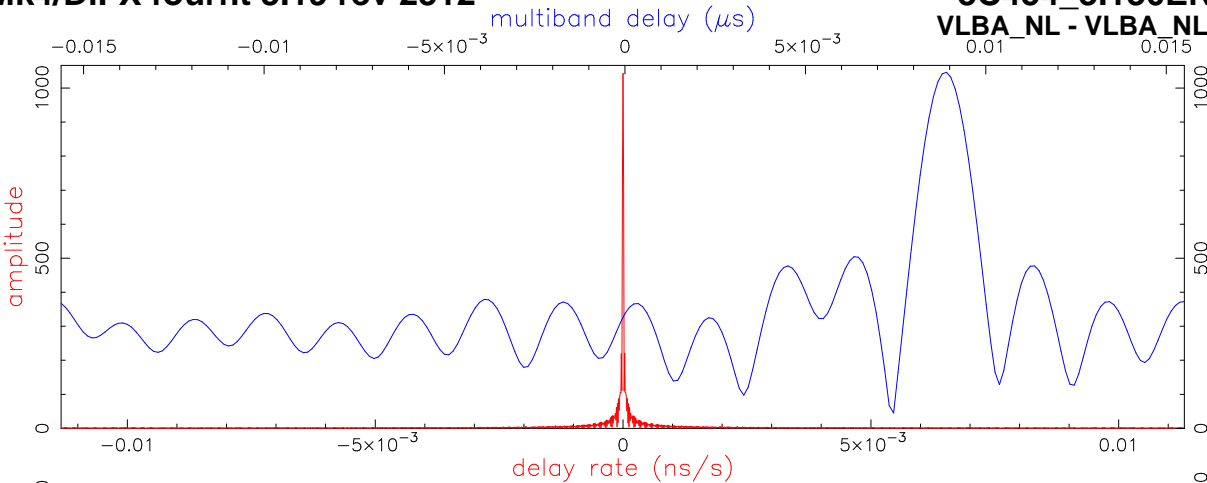
Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	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	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	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
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd)	-8.80831250000E-03			Apriori delay (usec)			0.00000000000E+00			Resid mbdelay (usec)			-8.80831E-03			+/-	1.7E-08	
Sband delay (usec)	-1.10145000000E-02			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			-1.10145E-02			+/-	2.7E-07	
Phase delay (usec)	5.01782609910E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			5.01783E-06			+/-	5.8E-11	
Delay rate (us/s)	1.77139404896E-11			Apriori rate (us/s)			0.00000000000E+00			Resid rate (us/s)			1.77139E-11			+/-	2.1E-13	
Total phase (deg)	155.6			Apriori accel (us/s/s)			0.00000000000E+00			Resid phase (deg)			155.6			+/-	0.0	

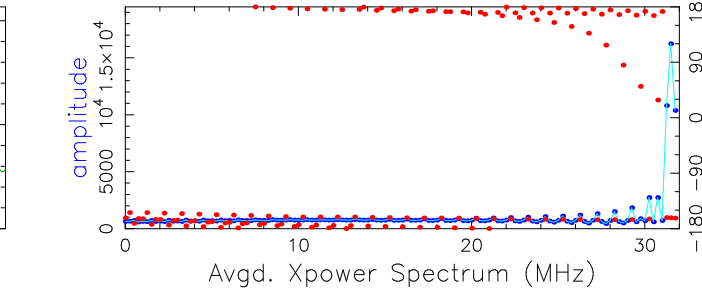
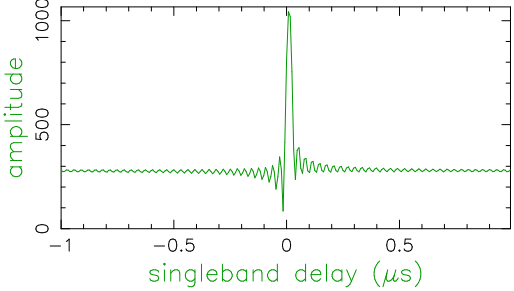
ph/seg (deg) 0.1 0.0 Theor. Amplitude 1066.698 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 2.2 0.0 Search (2048X64) 1041.735 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 31.8 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 86.5 0.0 Inc. seg. avg. 1043.804 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 1146.970 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nn..130ERS Output file: /Exps/c192b/v2/1234/No0145/nn.W.276.130ERS



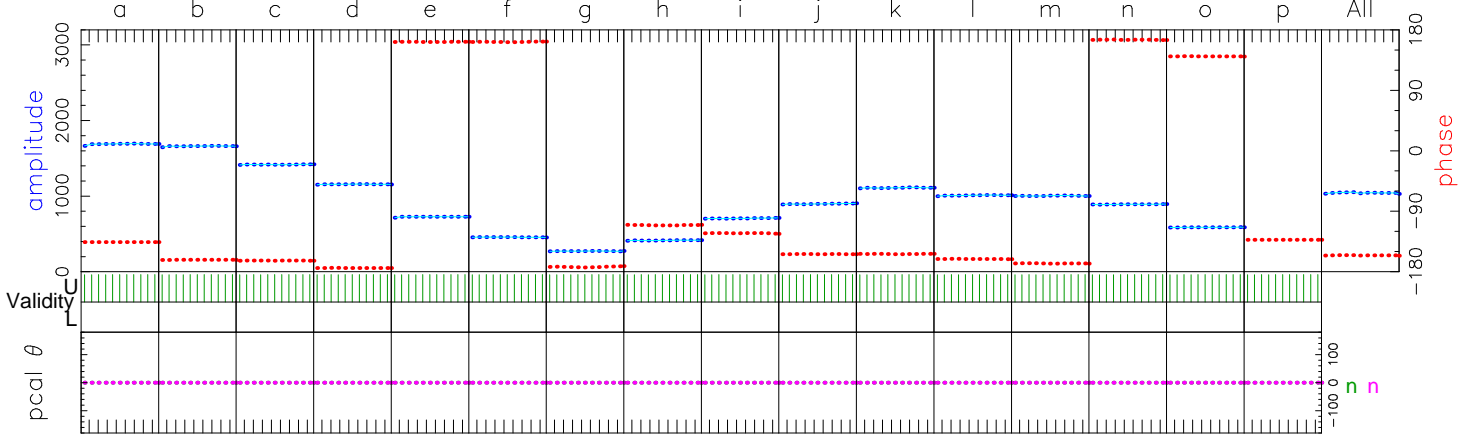
Fringe quality 5

SNR 63411.3  
Int time 472.560  
Amp 1066.697  
Phase -155.6  
PFD 0.0e+00  
Delays (us)  
SBD 0.011014  
MBD 0.008808  
Fringe rate (Hz)  
-0.000002  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



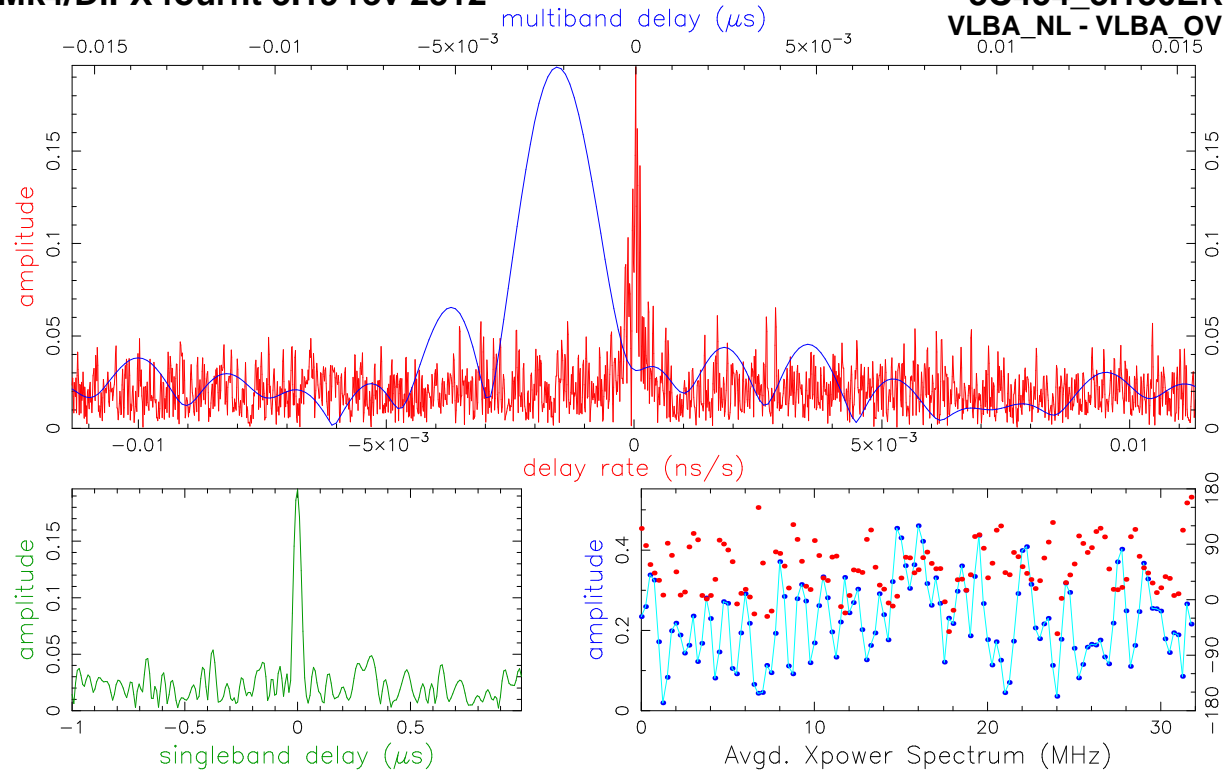
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101310  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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	
-135.8	-162.2	-163.4	-174.4	162.0	162.0	-172.8	-110.6	-122.7	-153.7	-153.5	-161.0	-167.6	165.2	140.5	-132.4	Phase	-155.6	
1688.7	1660.8	1417.7	1156.4	726.5	457.1	272.9	414.7	706.7	897.4	1110.4	1010.1	1004.8	891.6	587.8	4347.8	Ampl.	1147.0	
130.0	130.0	130.0	129.9	130.0	130.2	130.8	130.6	129.9	129.9	130.1	130.1	129.9	129.9	129.9	131.5	Sbd box	130.4	
U/L 927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used		
n 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
n 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
n:n 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
n:n 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
n 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	PC amp		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)	8.80831250000E-03			Apriori delay (usec)			0.00000000000E+00			Resid mbdelay (usec)			8.80831E-03			+/- 1.7E-08		
Sband delay (usec)	1.10145000000E-02			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			1.10145E-02			+/- 2.7E-07		
Phase delay (usec)	-5.01782609894E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			-5.01783E-06			+/- 5.8E-11		
Delay rate (us/s)	-1.77139404896E-11			Apriori rate (us/s)			0.00000000000E+00			Resid rate (us/s)			-1.77139E-11			+/- 2.1E-13		
Total phase (deg)	-155.6			Apriori accel (us/s/s)			0.00000000000E+00			Resid phase (deg)			-155.6			+/- 0.0		
RMS	Theor.		Amplitude		1066.697 +/- 0.017		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5									
ph/seg (deg)	0.1	0.0	Search (2048X64)		1041.734		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000		1.000					
amp/seg (%)	2.2	0.0	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016		0.016			
ph/frq (deg)	31.8	0.0	Inc. seg. avg.		1043.804		Sample rate(MISamp/s): 64		dr window (ns/s)		-0.011		0.011					
amp/frq (%)	86.5	0.0	Inc. frq. avg.		1146.969		Data rate(Mb/s): 2048		nlags: 128		t_cohere infinite		ion window (TEC)		0.00		0.00	
n: az 118.8 el 50.1 pa -42.7	n: az 118.8 el 50.1 pa -42.7			u,v (fr/asec) 0.000 0.000												simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c192b/v2/1234/No0145/nn..130ERS			Output file: /Exps/c192b/v2/1234/No0145/nn.W.291.130ERS														



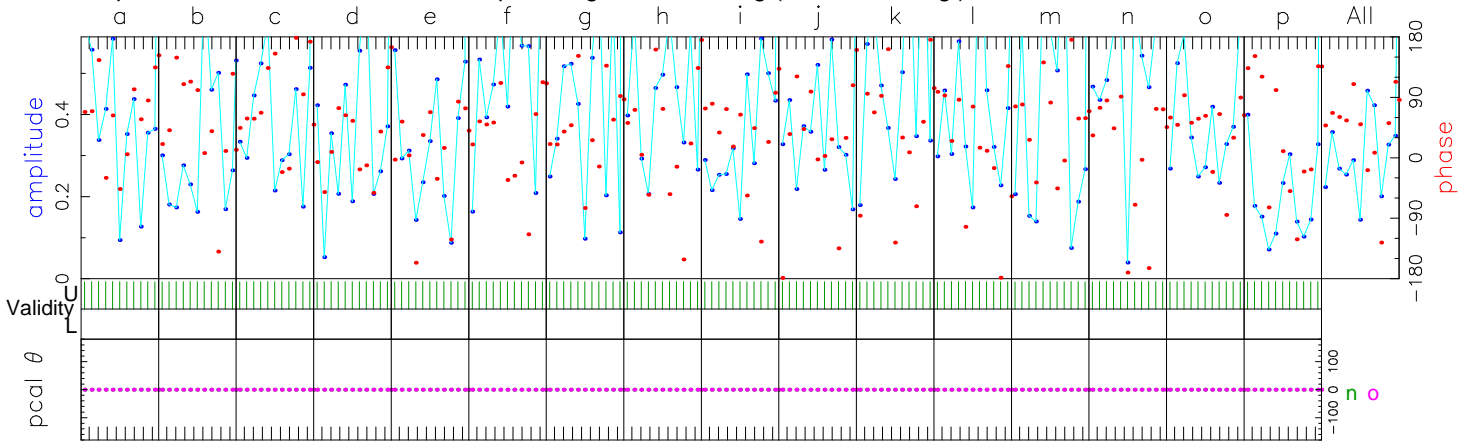


Fringe quality 9

SNR 11.7  
 Int time 471.087  
 Amp 0.196  
 Phase 50.8  
 PFD 1.1e-22  
 Delays (us)  
 SBD -0.001844  
 MBD -0.002203  
 Fringe rate (Hz) 0.003256  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c192b  
 Exper # 16383  
 Yr:day 2019:278  
 Start 014505.63  
 Stop 015300.26  
 FRT 014900.00  
 Corr/FF/build  
 2020:079:143639  
 2020:086:101255  
 2020:014:135814  
 RA & Dec (J2000)  
 22h53m57.747940s  
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

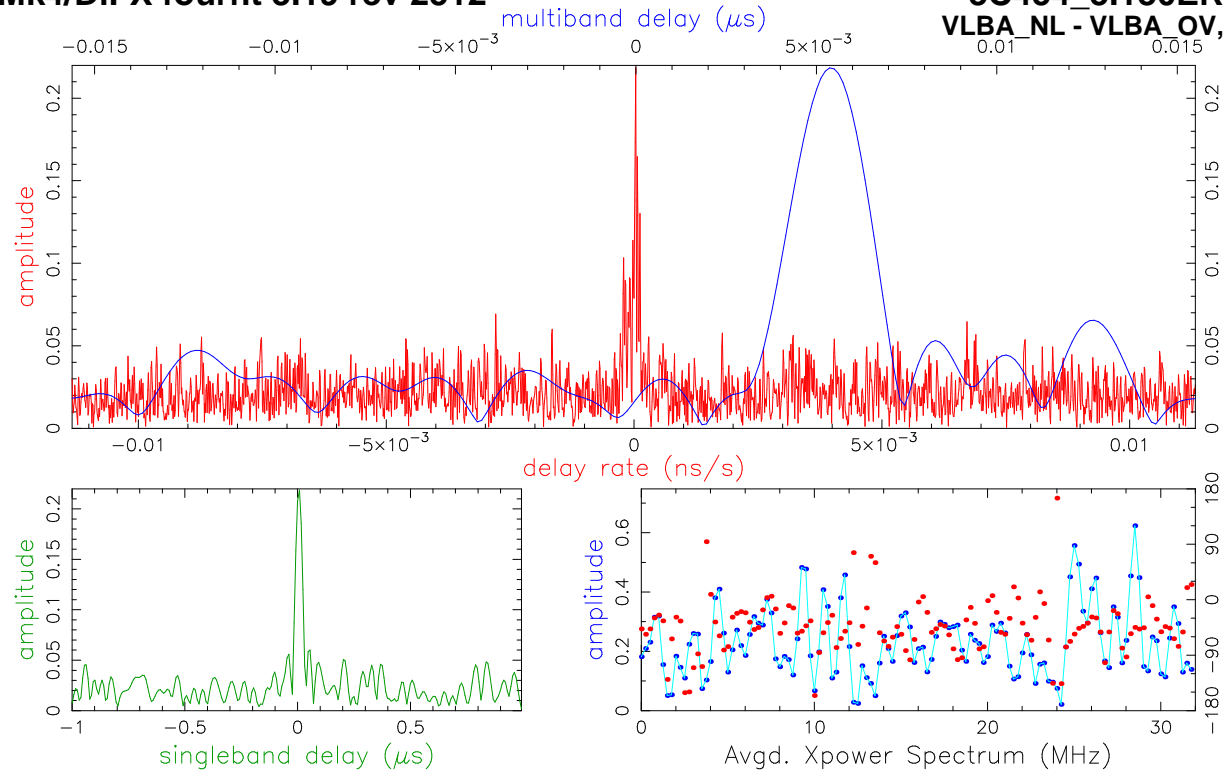


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	113.9	Phase 50.8
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	55.0	Ampl. 0.2
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	113.9	Sbd box 128.8
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	104.7	APs used
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	104.7	PC freqs
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	104.7	PC phase
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	104.7	Mani PC
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	104.7	PC amp
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
																		Chan ids
																		Tracks

Group delay (usec)(sbd) 5.11096876672E+03 Apriori delay (usec) 5.11097096972E+03 Resid mbdelay (usec) -2.20301E-03 +/- 9.3E-05  
 Sband delay (usec) 5.11096912572E+03 Apriori clock (usec) 9.8575497E+00 Resid sbdelay (usec) -1.84400E-03 +/- 1.5E-03  
 Phase delay (usec) 5.11097097136E+03 Apriori clockrate (us/s) 1.3324251E-07 Resid phdelay (usec) 1.63867E-06 +/- 3.2E-07  
 Delay rate (us/s) -4.09909720156E-01 Apriori rate (us/s) -4.09909757952E-01 Resid rate (us/s) 3.77966E-08 +/- 1.2E-09  
 Total phase (deg) 170.3 Apriori accel (us/s/s) -2.51974041604E-05 Resid phase (deg) 50.8 +/- 9.8

RMS Theor. Amplitude 0.196 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 64.5 17.0 Search (2048X64) 0.182 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 72.7 29.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 25.0 19.7 Inc. seg. avg. 0.288 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 32.1 34.3 Inc. frq. avg. 0.195 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 o: az 93.0 el 31.4 pa -55.9 u,v (fr/asec) 2399.767 -73.986 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/no..130ERS Output file: /Exps/c192b/v2/1234/No0145/no.W.242.130ERS

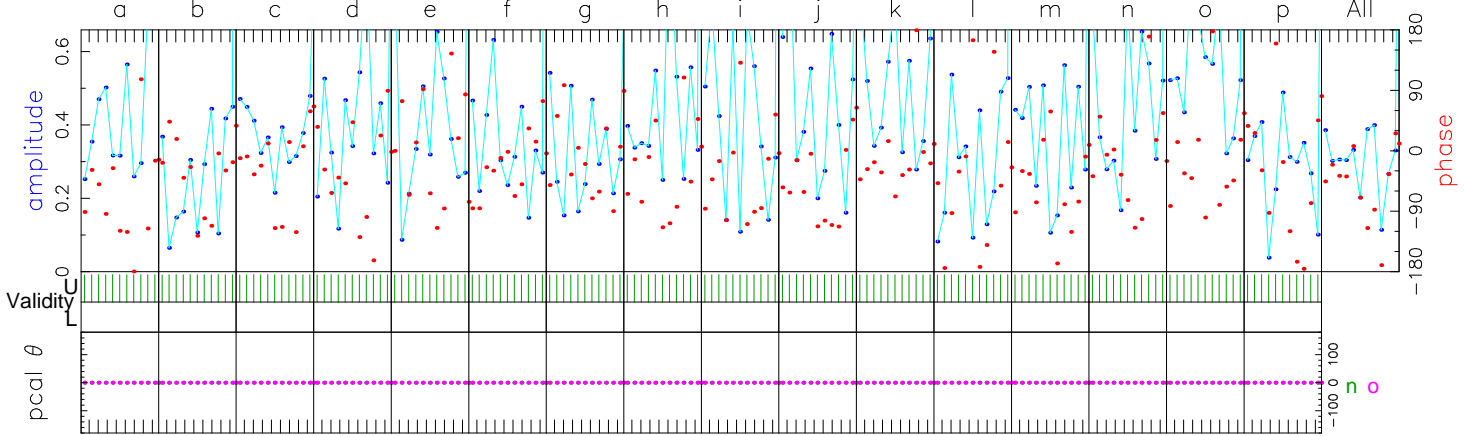


Fringe quality 9

SNR 13.0  
Int time 471.087  
Amp 0.220  
Phase -44.0  
PFD 3.5e-30  
Delays (us)  
SBD 0.005746  
MBD 0.005406  
Fringe rate (Hz) 0.003224  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101301  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

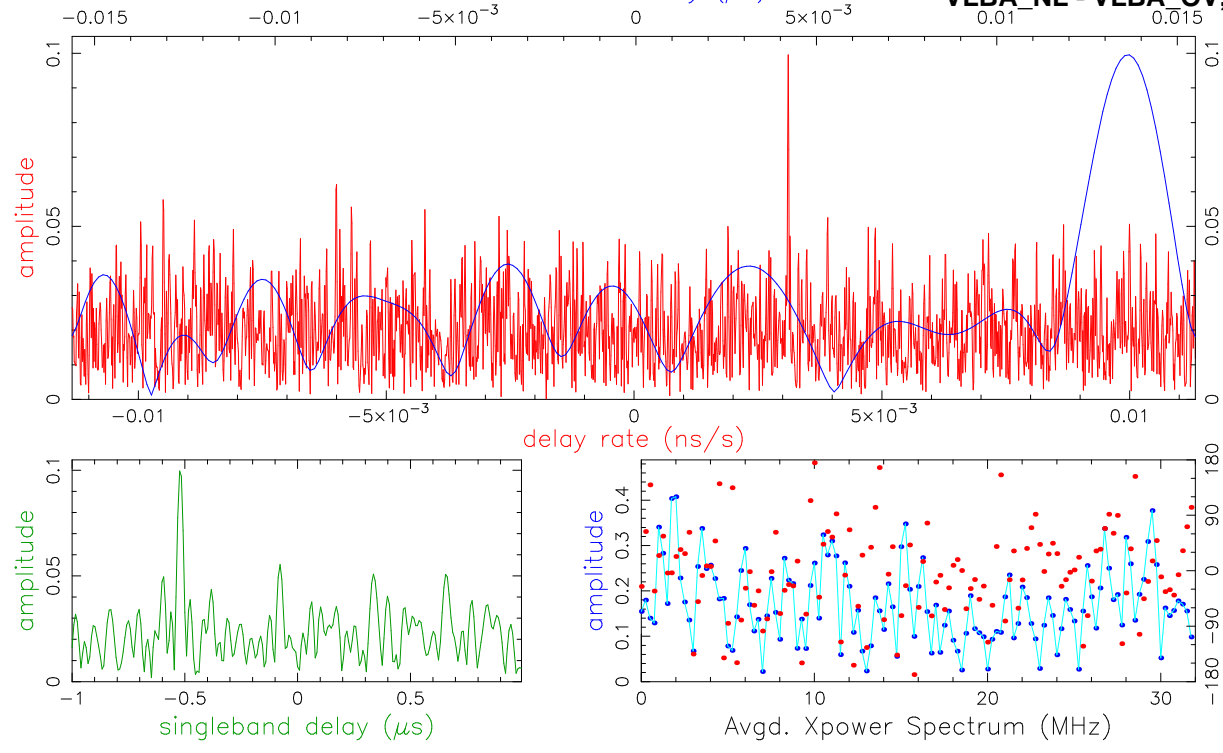
Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	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	-39.3	-16.7	-54.5	-19.4	-29.7	-26.1	-52.1	-55.6	-56.7	-29.7	-64.2	-53.5	-41.8	-43.8	-42.5	Phase	-44.0
	0.3	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.3	0.3	0.4	0.1	0.3	0.2	0.3	0.1	Ampl.	0.2
	129.3	237.8	129.3	129.9	142.6	129.8	129.9	130.2	128.7	129.3	130.0	52.9	129.9	129.1	130.1	10.1	Sbd box	129.7
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Tracks	
Group delay (usec)(sbd)	5.11097637550E+03			Apriori delay (usec)			5.11097096972E+03			Resid mbdelay (usec)			5.40578E-03			+/-	8.3E-05	
Sband delay (usec)	5.11097671572E+03			Apriori clock (usec)			9.8575497E+00			Resid sbdelay (usec)			5.74600E-03			+/-	1.3E-03	
Phase delay (usec)	5.11097096830E+03			Apriori clockrate (us/s)			1.3324251E-07			Resid phdelay (usec)			-1.41950E-06			+/-	2.8E-07	
Delay rate (us/s)	-4.09909720528E-01			Apriori rate (us/s)			-4.09909757952E-01			Resid rate (us/s)			3.74239E-08			+/-	1.0E-09	
Total phase (deg)	75.4			Apriori accel (us/s/s)			-2.51974041604E-05			Resid phase (deg)			-44.0			+/-	8.8	

ph/seg (deg) 53.8 15.2 Search (2048X64) 0.210 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 60.0 26.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 17.8 17.6 Inc. seg. avg. 0.296 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 39.3 30.7 Inc. frq. avg. 0.217 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 118.8 el 50.1 pa -42.7 o: az 93.0 el 31.4 pa -55.9 u,v (fr/asec) 2399.767 -73.986 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/no..130ERS Output file: /Exps/c192b/v2/1234/No0145/no.W.263.130ERS

multiband delay ( $\mu$ s)

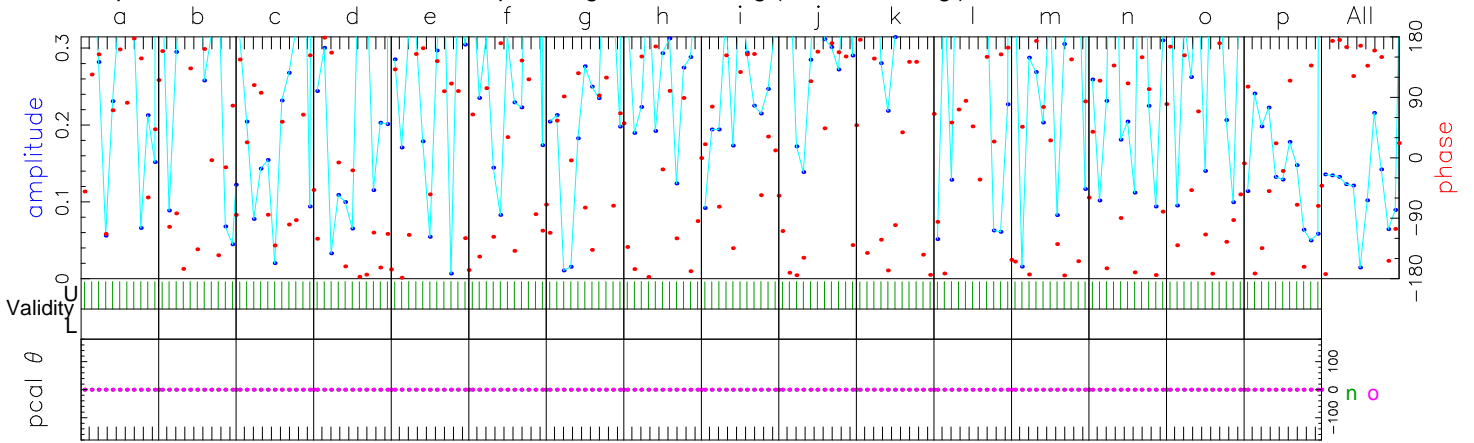


Fringe quality 0

SNR 6.0  
 Int time 471.086  
 Amp 0.105  
 Phase 166.7  
 PFD 3.4e-01  
 Delays (us)  
 SBD -0.520294  
 MBD 0.013637  
 Fringe rate (Hz) 0.267913  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c192b  
 Exper # 16383  
 Yr:day 2019:278  
 Start 014505.63  
 Stop 015300.26  
 FRT 014900.00  
 Corr/FF/build  
 2020:079:143639  
 2020:086:101309  
 2020:014:135814  
 RA & Dec (J2000)  
 22h53m57.747940s  
 +16°08'53.560909"

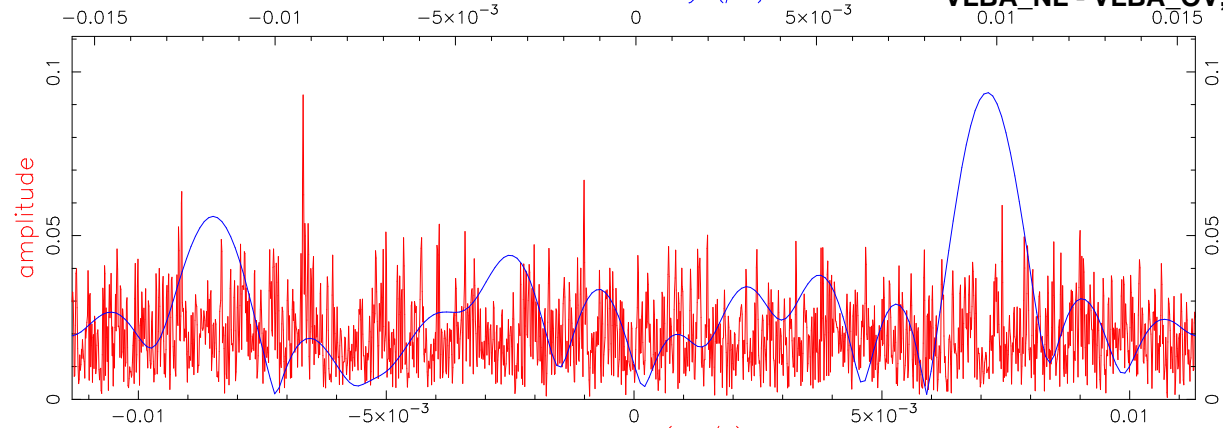
Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	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
130.0	-163.7	68.7	-157.2	151.7	153.6	125.8	-169.5	114.4	174.8	176.4	92.6	171.0	146.3	-163.1	-104.8	Phase	166.7	
0.1	0.2	0.0	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.0	Ampl.	0.1	
192.8	52.7	141.0	191.8	52.0	231.6	2.2	2.9	149.5	62.5	62.3	160.7	86.7	124.7	102.2	220.1	Sbd box	62.4	
UL	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o																	Tracks	
Group delay (usec)(sbd)	5.11045335683E+03			Apriori delay (usec)			5.11097096972E+03			Resid mbdelay (usec)			1.36371E-02			+/- 1.8E-04		
Sband delay (usec)	5.11045067572E+03			Apriori clock (usec)			9.8575497E+00			Resid sbdelay (usec)			-5.20294E-01			+/- 2.9E-03		
Phase delay (usec)	5.11097097510E+03			Apriori clockrate (us/s)			1.3324251E-07			Resid phdelay (usec)			5.37481E-06			+/- 6.1E-07		
Delay rate (us/s)	-4.09906647751E-01			Apriori rate (us/s)			-4.09909757952E-01			Resid rate (us/s)			3.11020E-06			+/- 2.2E-09		
Total phase (deg)	286.1			Apriori accel (us/s/s)			-2.51974041604E-05			Resid phase (deg)			166.7			+/- 19.0		

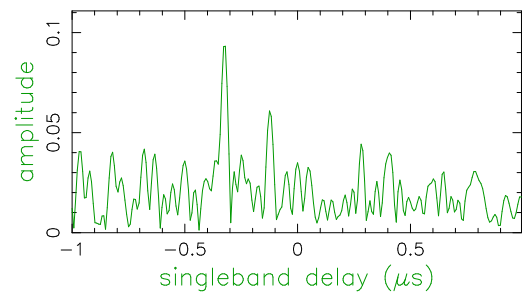
ph/seg (deg) 35.2 32.9 Search (2048X64) 0.097 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 50.8 57.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 48.8 38.0 Inc. seg. avg. 0.103 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 62.3 66.3 Inc. frq. avg. 0.101 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 118.8 el 50.1 pa -42.7 o: az 93.0 el 31.4 pa -55.9 u,v (fr/asec) 2399.767 -73.986 ion window (TEC) 0.00 0.00 simultaneous interpolator

multiband delay ( $\mu$ s)

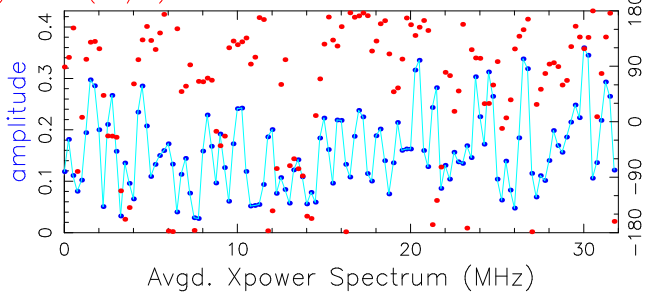


Fringe quality 0

SNR 5.7  
Int time 471.087  
Amp 0.111  
Phase 5.3  
PFD 9.6e-01  
Delays (us)  
SBD -0.324124  
MBD 0.009861  
Fringe rate (Hz)  
-0.575894  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

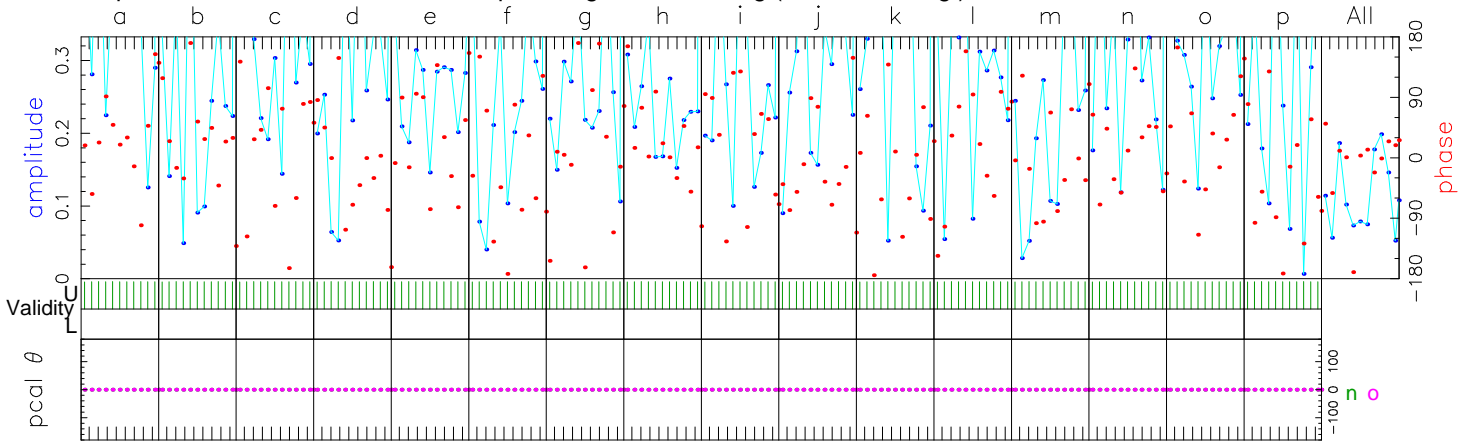


delay rate (ns/s)



Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101315  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

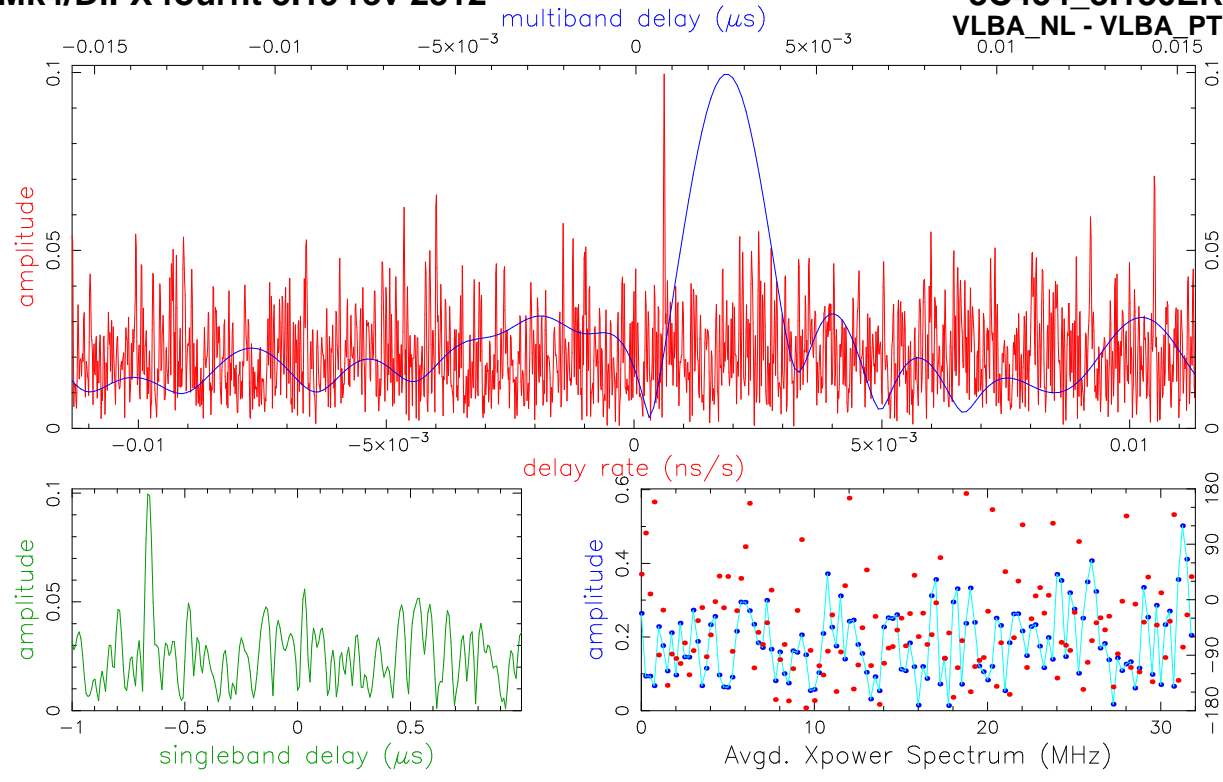


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	18.5	35.7	125.0	-35.4	38.2	-30.5	68.0	21.0	72.4	-31.4	-40.9	61.7	-17.5	16.3	32.0	-49.9		Phase	5.3
	0.3	0.1	0.1	0.2	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1		Ampl.	0.1
	88.6	110.1	162.8	62.5	164.2	217.9	206.3	29.5	176.9	134.6	25.9	247.7	215.1	133.4	112.7	89.8		Sbd box	87.5
UL	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

Group delay (usec)(sbd) 5.11063708087E+03 Apriori delay (usec) 5.11097096972E+03 Resid mbdelay (usec) 9.86115E-03 +/- 1.9E-04  
 Sband delay (usec) 5.11064684572E+03 Apriori clock (usec) 9.8575497E+00 Resid sbdelay (usec) -3.24124E-01 +/- 3.0E-03  
 Phase delay (usec) 5.11097096989E+03 Apriori clockrate (us/s) 1.3324251E-07 Resid phdelay (usec) 1.71401E-07 +/- 6.5E-07  
 Delay rate (us/s) -4.09916443510E-01 Apriori rate (us/s) -4.09909757952E-01 Resid rate (us/s) -6.68556E-06 +/- 2.4E-09  
 Total phase (deg) 124.8 Apriori accel (us/s/s) -2.51974041604E-05 Resid phase (deg) 5.3 +/- 20.2

RMS Theor. Amplitude 0.111 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 58.5 35.0 Search (2048X64) 0.092 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 57.4 61.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 52.9 40.4 Inc. seg. avg. 0.112 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 61.4 70.4 Inc. frq. avg. 0.110 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 o: az 93.0 el 31.4 pa -55.9 u,v (fr/asec) 2399.767 -73.986 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/no..130ERS Output file: /Exps/c192b/v2/1234/No0145/no.W.312.130ERS

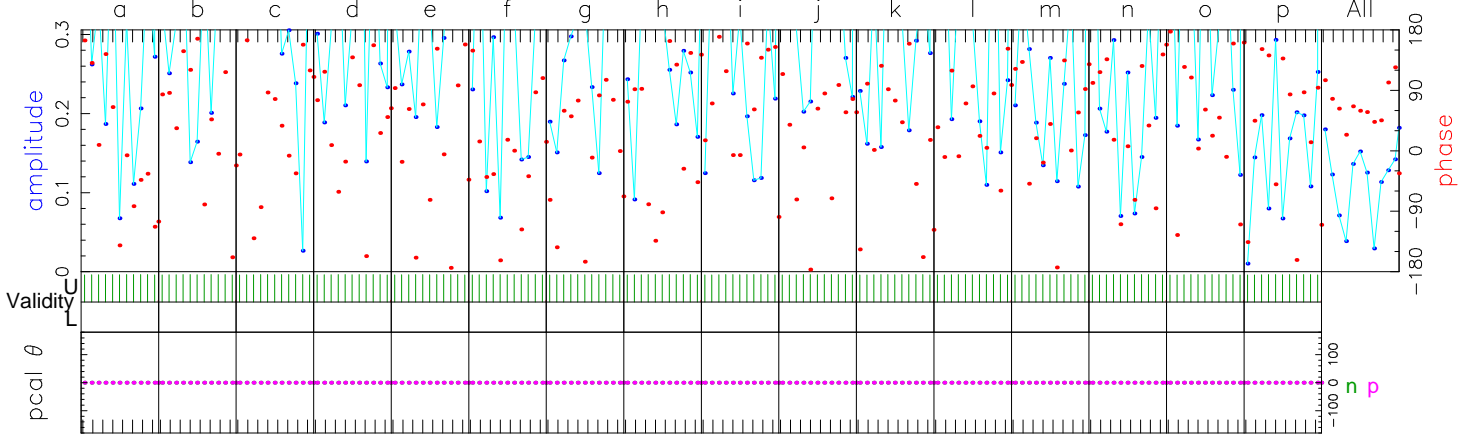


Fringe quality 0

SNR 5.8  
Int time 427.428  
Amp 0.102  
Phase 76.7  
PFD 8.8e-01  
Delays (us)  
SBD -0.660481  
MBD 0.002477  
Fringe rate (Hz)  
0.052564  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014549.66  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101255  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 76 APs / seg (38.91 sec / seg.), time ticks 60 sec

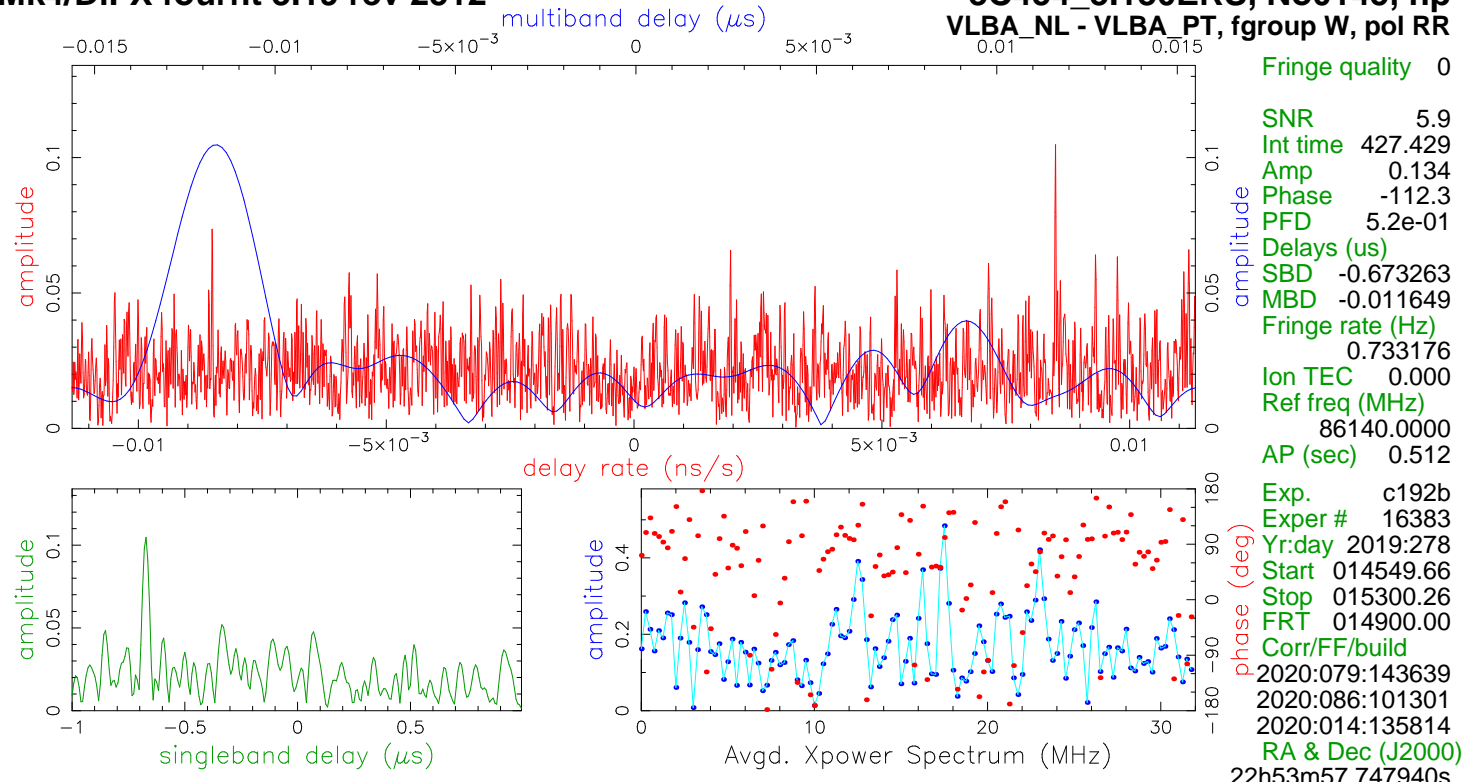


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
4.5	101.1	70.0	82.8	108.3	26.2	64.7	-139.4	110.5	70.5	74.0	50.5	64.9	91.2	94.6	101.6	101.6	Phase	76.7
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
197.9	159.9	97.9	21.0	176.8	45.8	29.1	233.6	49.8	150.1	123.4	43.4	157.6	244.1	212.8	188.8	188.8	Sbd box	44.5
UL	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
n:p	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	Tracks	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)	2.58017189893E+03			Apriori delay (usec)			2.58082567206E+03			Resid mbdelay (usec)			2.47687E-03			+/- 1.9E-04		
Sband delay (usec)	2.58016519106E+03			Apriori clock (usec)			1.4561592E+01			Resid sbdelay (usec)			-6.60481E-01			+/- 3.0E-03		
Phase delay (usec)	2.58082567453E+03			Apriori clockrate (us/s)			-6.9663080E-08			Resid phdelay (usec)			2.47204E-06			+/- 6.4E-07		
Delay rate (us/s)	-3.27773389365E-01			Apriori rate (us/s)			-3.27773999582E-01			Resid rate (us/s)			6.10217E-07			+/- 2.6E-09		
Total phase (deg)	217.4			Apriori accel (us/s/s)			-1.04117720859E-05			Resid phase (deg)			76.7			+/- 19.9		

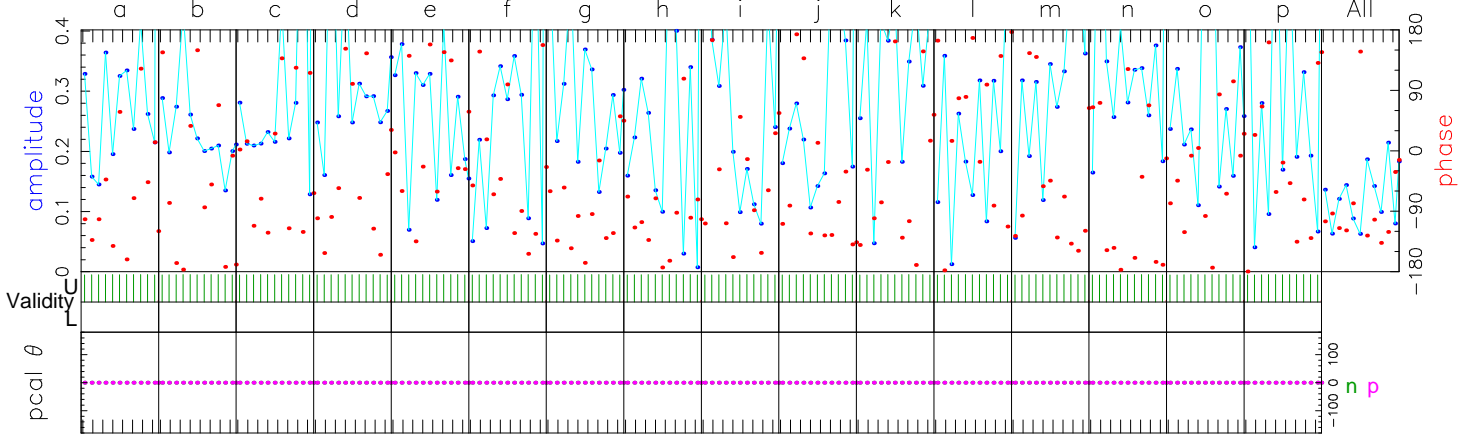
ph/seg (deg) RMS Theor. Amplitude 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 30.5 34.5 Search (2048X64) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 45.6 60.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 48.9 39.8 Inc. seg. avg. 0.096 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 47.2 69.5 Inc. frq. avg. 0.092 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 p: az 97.4 el 39.9 pa -58.5 u,v (fr/asec) 1936.653 619.818 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/np..130ERS Output file: /Exps/c192b/v2/1234/No0145/np.W.244.130ERS



Amp. and Phase vs. time for each freq., 12 segs, 76 APs / seg (38.91 sec / seg.), time ticks 60 sec

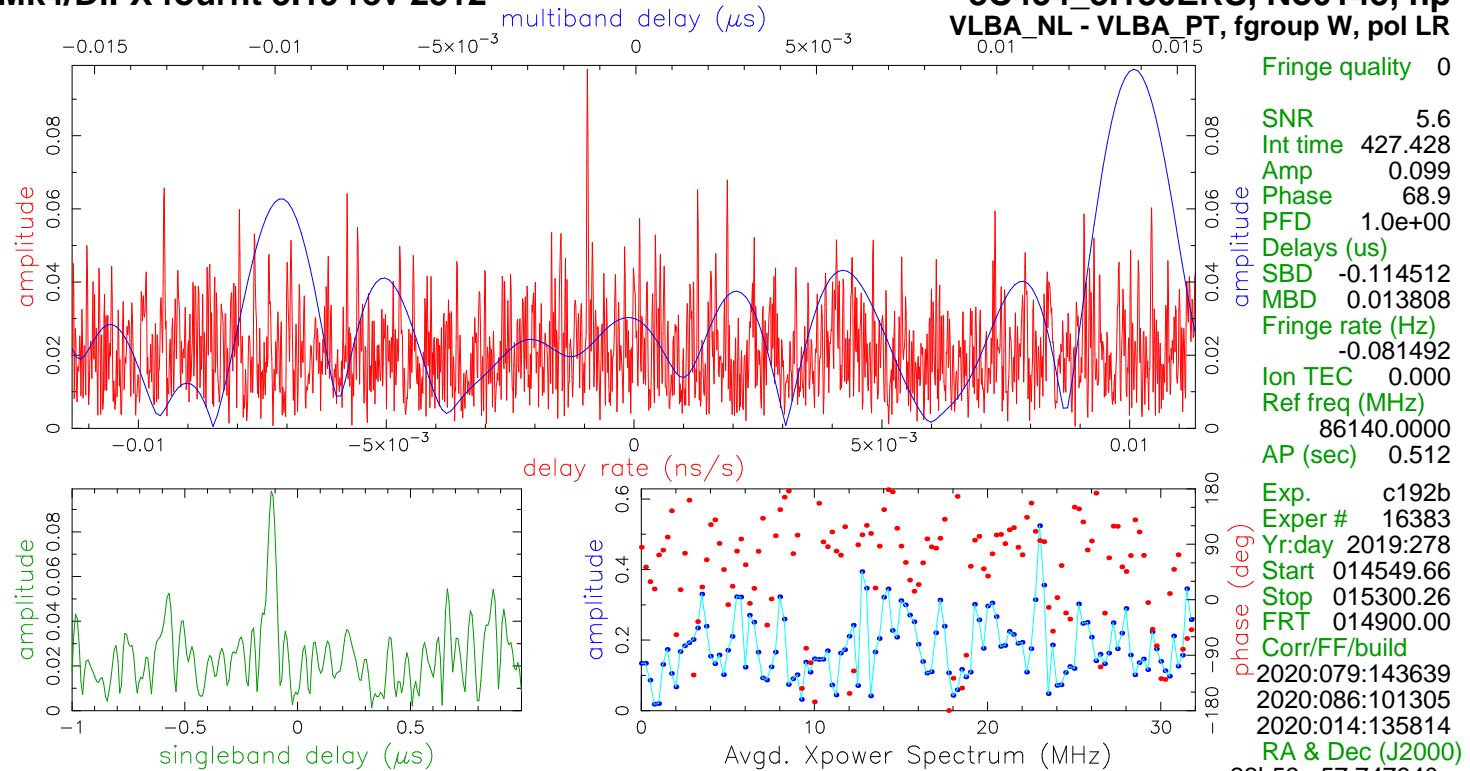


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-92.7	-174.4	-121.6	-123.4	-64.8	-104.5	-105.5	-117.2	-89.7	-107.1	-104.4	-159.8	-123.8	154.1	-80.6	-89.2		Phase	-112.3
	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2		Ampl.	0.1
	192.2	105.1	56.6	198.1	79.6	229.1	66.9	165.6	244.7	64.1	145.7	237.0	148.0	250.5	80.6	227.9		Sbd box	42.8
U/L	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0		APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
Group delay (usec)(sbd)	2.58015777273E+03			Apriori delay (usec)			2.58082567206E+03			Resid mbdelay (usec)			-1.16493E-02			+/- 1.8E-04			
Sband delay (usec)	2.58015240906E+03			Apriori clock (usec)			1.4561592E+01			Resid sbdelay (usec)			-6.73263E-01			+/- 2.9E-03			
Phase delay (usec)	2.58082566844E+03			Apriori clockrate (us/s)			-6.9663080E-08			Resid phdelay (usec)			-3.62210E-06			+/- 6.2E-07			
Delay rate (us/s)	-3.27765488132E-01			Apriori rate (us/s)			-3.27773999582E-01			Resid rate (us/s)			8.51145E-06			+/- 2.5E-09			
Total phase (deg)	28.4			Apriori accel (us/s/s)			-1.04117720859E-05			Resid phase (deg)			-112.3			+/- 19.3			

	RMS	Theor.	Amplitude	0.134 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	42.2	33.4	Search (2048X64)	0.102	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	47.6	58.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg)	37.9	38.6	Inc. seg. avg.	0.133	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	46.5	67.3	Inc. frq. avg.	0.125	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 p: az 97.4 el 39.9 pa -58.5 u,v (fr/asec) 1936.653 619.818 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/np..130ERS Output file: /Exps/c192b/v2/1234/No0145/np.W.258.130ERS



Fringe quality 0

SNR 5.6

Int time 427.428

Amp 0.099

Phase 68.9

PFD 1.0e+00

Delays (us)

SBD -0.114512

MBD 0.013808

Fringe rate (Hz)

-0.081492

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:278

Start 014549.66

Stop 015300.26

FRT 014900.00

Corr/FF/build

2020:079:143639

2020:086:101305

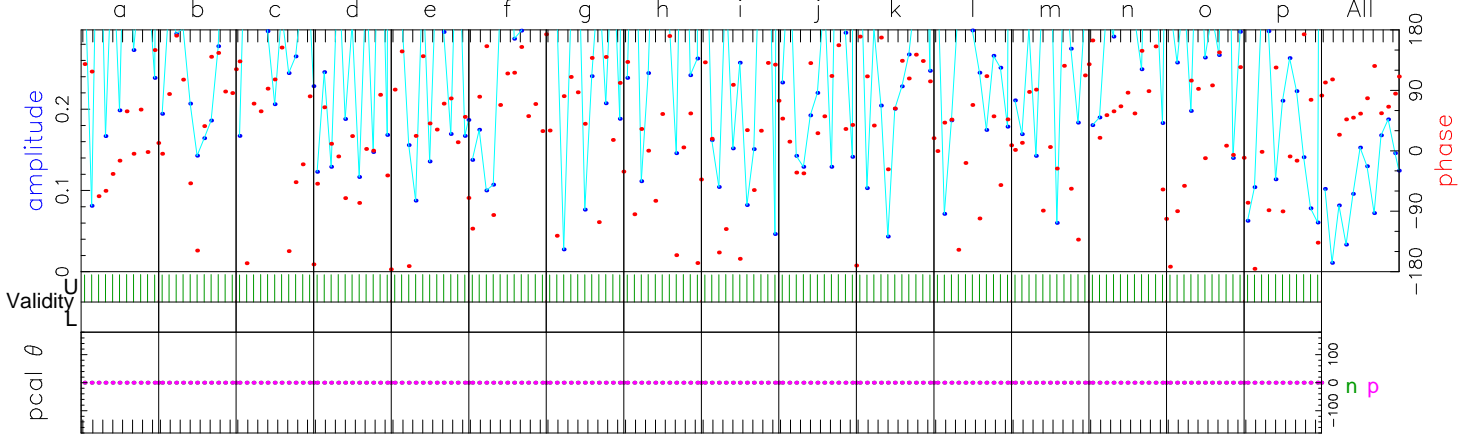
2020:014:135814

RA & Dec (J2000)

22h53m57.747940s

+16°08'53.560909"

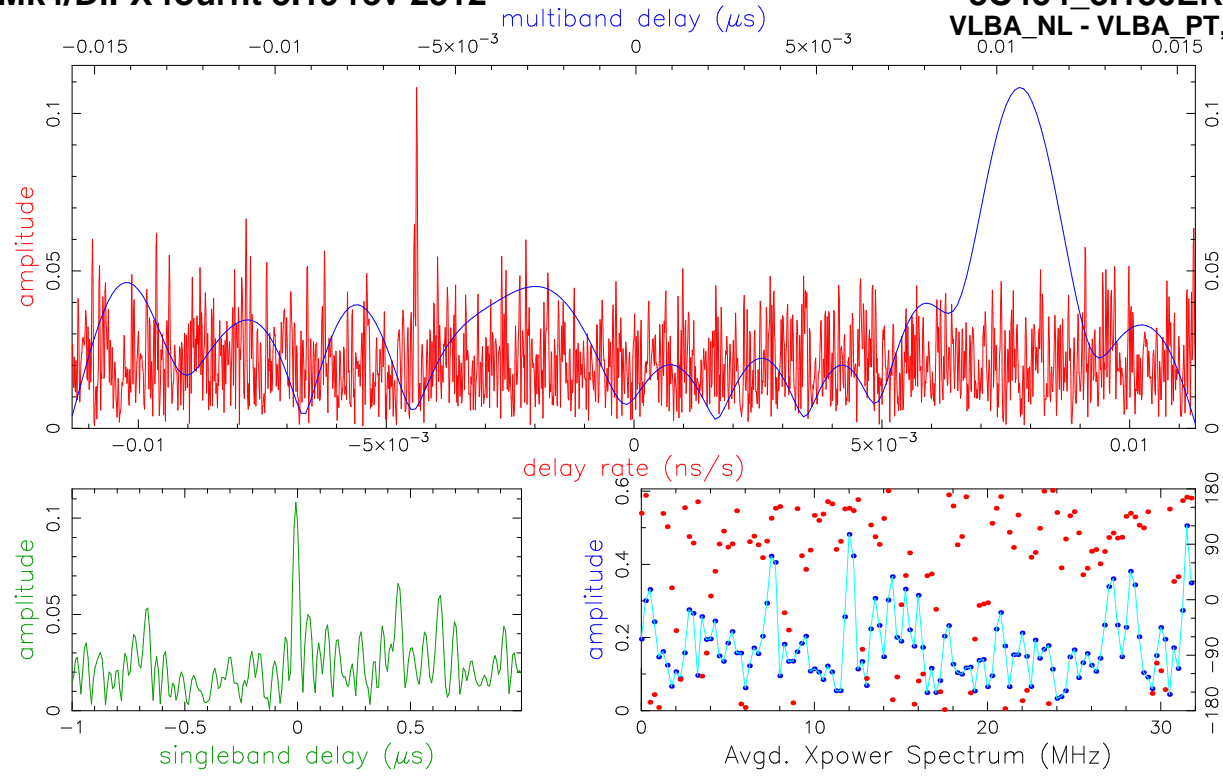
Amp. and Phase vs. time for each freq., 12 segs, 76 APs / seg (38.91 sec / seg.), time ticks 60 sec



	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	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Tracks
Group delay (usec)(sbd)	2.58071447990E+03			Apriori delay (usec)			2.58082567206E+03			Resid mbdelay (usec)			1.38078E-02			+/- 1.9E-04		
Sband delay (usec)	2.58071116006E+03			Apriori clock (usec)			1.4561592E+01			Resid sbdelay (usec)			-1.14512E-01			+/- 3.1E-03		
Phase delay (usec)	2.58082567428E+03			Apriori clockrate (us/s)			-6.9663080E-08			Resid phdelay (usec)			2.22264E-06			+/- 6.6E-07		
Delay rate (us/s)	-3.27774945625E-01			Apriori rate (us/s)			-3.27773999582E-01			Resid rate (us/s)			-9.46043E-07			+/- 2.7E-09		
Total phase (deg)	209.7			Apriori accel (us/s/s)			-1.04117720859E-05			Resid phase (deg)			68.9			+/- 20.5		
ph/seg (deg)	RMS	Theor.	Amplitude			0.099 +/- 0.018			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	29.2	35.5	Search (2048X64)			0.093			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000			
ph/frq (deg)	53.1	41.0	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016	
amp/frq (%)	62.1	71.5	Inc. seg. avg.			0.090			Sample rate(MSamp/s): 64			dr window (ns/s)			-0.011 0.011			
			Inc. frq. avg.			0.105			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)		0.00 0.00	

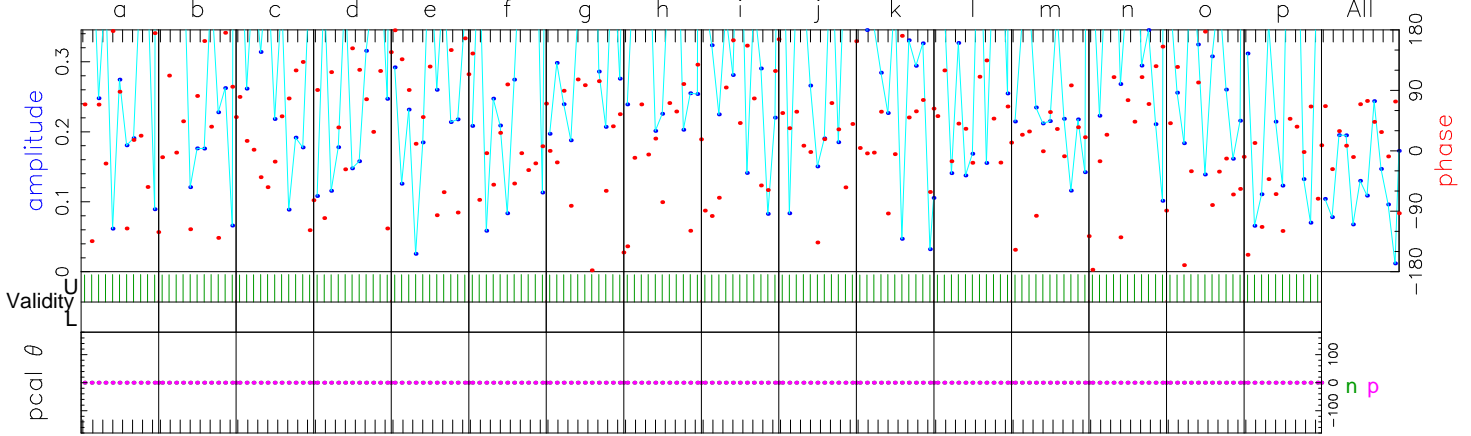
n: az 118.8 el 50.1 pa -42.7 p: az 97.4 el 39.9 pa -58.5 u,v (fr/asec) 1936.653 619.818 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/np..130ERS Output file: /Exps/c192b/v2/1234/No0145/np.W.275.130ERS



Fringe quality 0  
SNR 6.1  
Int time 427.428  
Amp 0.115  
Phase 31.1  
PFD 2.2e-01  
Delays (us)  
SBD -0.007484  
MBD 0.010640  
Fringe rate (Hz)  
-0.378561  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014549.66  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101310  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 76 APs / seg (38.91 sec / seg.), time ticks 60 sec



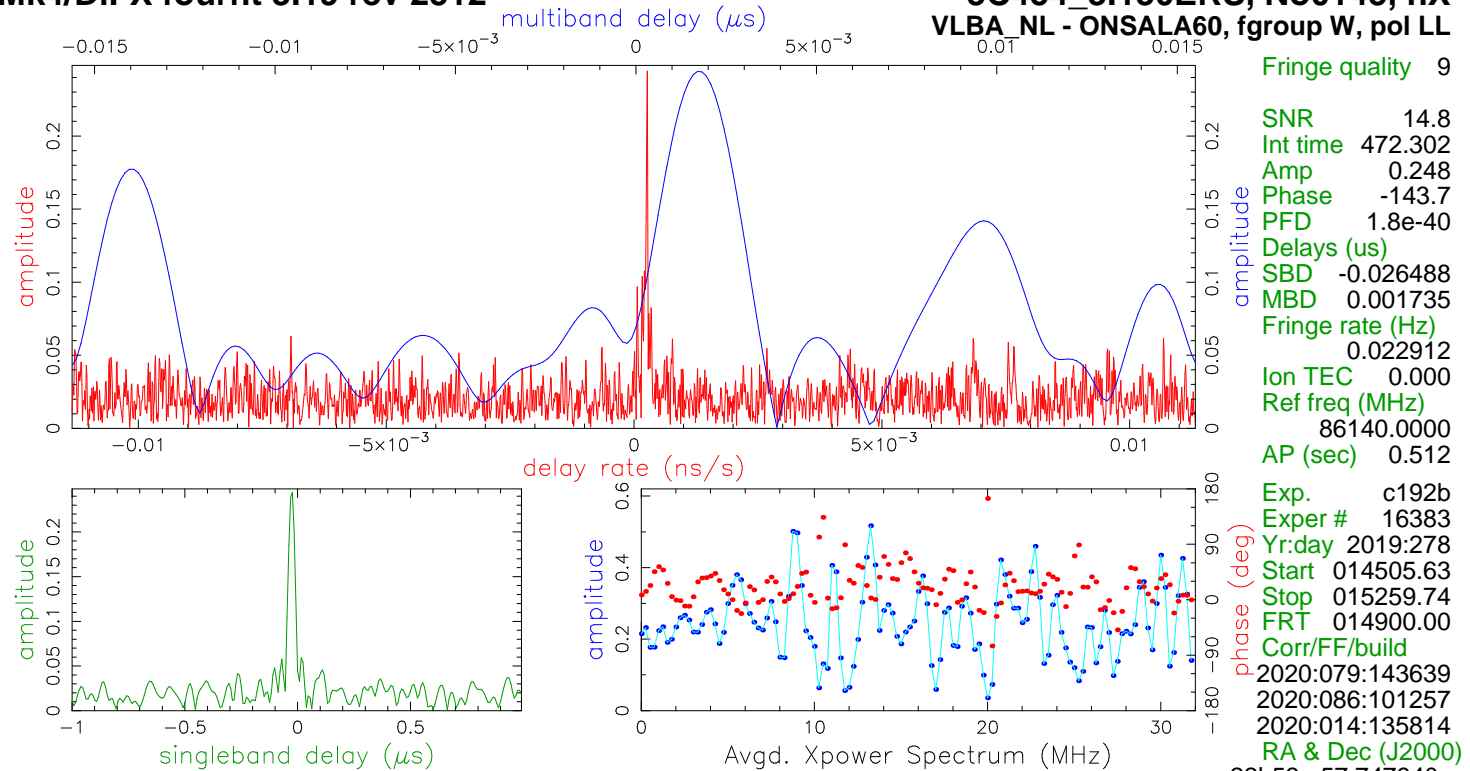
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
5.0	38.8	9.6	69.3	165.4	-23.9	85.6	37.7	49.4	32.2	21.0	53.4	18.7	85.4	-19.3	-11.6		Phase	31.1	
0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.0	0.3	0.2	0.2	0.2	0.2	0.1	0.1		Ampl.	0.1	
178.7	8.3	37.8	207.5	169.6	248.0	158.9	91.2	213.6	128.1	25.3	171.3	210.1	23.2	198.5	238.3		Sbd box	128.0	
U/L	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0	841/0		APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
n:p	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			
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

Group delay (usec)(sbd) 2.58080506182E+03 Apriori delay (usec) 2.58082567206E+03 Resid mbdelay (usec) 1.06398E-02 +/- 1.8E-04  
 Sband delay (usec) 2.58081818756E+03 Apriori clock (usec) 1.4561592E+01 Resid sbdelay (usec) -7.48450E-03 +/- 2.8E-03  
 Phase delay (usec) 2.58082567306E+03 Apriori clockrate (us/s) -6.9663080E-08 Resid phdelay (usec) 1.00434E-06 +/- 6.0E-07  
 Delay rate (us/s) -3.27778394302E-01 Apriori rate (us/s) -3.27773999582E-01 Resid rate (us/s) -4.39472E-06 +/- 2.4E-09  
 Total phase (deg) 171.9 Apriori accel (us/s/s) -1.04117720859E-05 Resid phase (deg) 31.1 +/- 18.7

ph/seg (deg) RMS Theor. Amplitude 0.115 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 36.3 32.4 Search (2048X64) 0.105 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 60.7 56.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 50.1 37.4 Inc. seg. avg. 0.115 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 60.4 65.4 Inc. frq. avg. 0.122 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 p: az 97.4 el 39.9 pa -58.5 u,v (fr/asec) 1936.653 619.818 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/np..130ERS Output file: /Exps/c192b/v2/1234/No0145/np.W.294.130ERS





Fringe quality 9

SNR 14.8

Int time 472.302

Amp 0.248

Phase -143.7

PFD 1.8e-40

Delays (us)

SBD -0.026488

MBD 0.001735

Fringe rate (Hz)

0.022912

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:278

Start 014505.63

Stop 015259.74

FRT 014900.00

Corr/FF/build

2020:079:143639

2020:086:101257

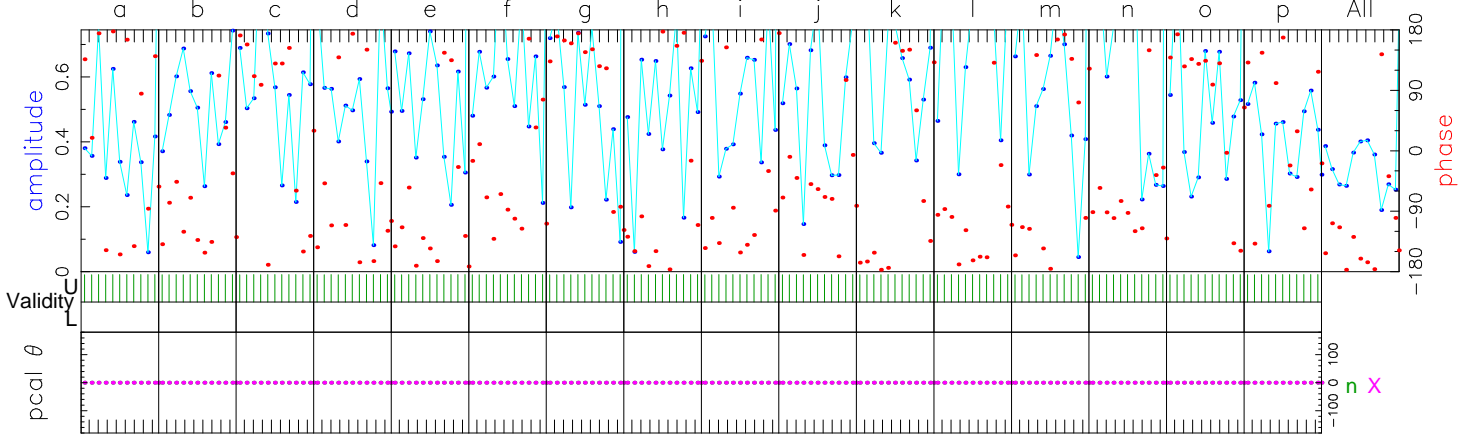
2020:014:135814

RA & Dec (J2000)

22h53m57.747940s

+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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
	170.4	-92.1	157.2	-127.5	-132.0	-71.1	159.6	-148.2	-121.7	-44.0	-174.4	-127.6	-166.0	-89.9	149.4	170.2		Phase -143.7
	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.5	0.5	0.4	0.5	0.4	0.1		Ampl. 0.3
	124.9	125.7	126.0	125.7	126.6	125.1	125.3	125.3	125.7	125.8	125.4	125.7	125.7	126.0	125.6	125.7		Sbd box 125.6
UL	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0		APs used
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp
X	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
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 7.53047197529E+03 Apriori delay (usec) 7.53050149077E+03 Resid mbdelay (usec) 1.73452E-03 +/- 7.3E-05

Sband delay (usec) 7.53047500227E+03 Apriori clock (usec) -5.8632298E+00 Resid sbdelay (usec) -2.64885E-02 +/- 1.2E-03

Phase delay (usec) 7.53050148614E+03 Apriori clockrate (us/s) -3.9377651E-07 Resid phdelay (usec) -4.63256E-06 +/- 2.5E-07

Delay rate (us/s) 1.38230253424E+00 Apriori rate (us/s) 1.38230226826E+00 Resid rate (us/s) 2.65985E-07 +/- 9.2E-10

Total phase (deg) 5.7 Apriori accel (us/s/s) -4.56495082922E-05 Resid phase (deg) -143.7 +/- 7.8

RMS Theor. Amplitude 0.248 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 46.5 13.5 Search (2048X64) 0.238 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

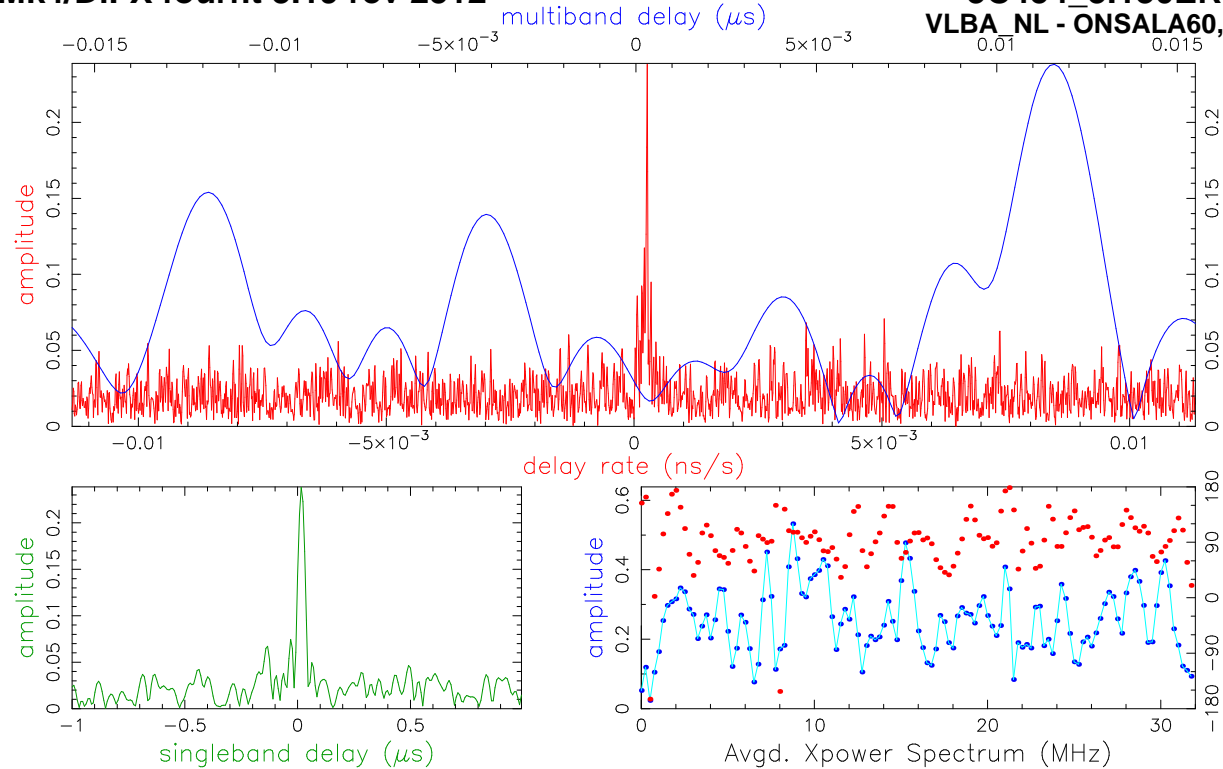
amp/seg (%) 40.4 23.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 52.6 15.5 Inc. seg. avg. 0.309 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 60.0 27.1 Inc. frq. avg. 0.344 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 X: az 260.0 el 25.6 pa 33.6 u,v (fr/asec) -8327.157 -2492.259 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nX..130ERS Output file: /Exps/c192b/v2/1234/No0145/nX.W.249.130ERS

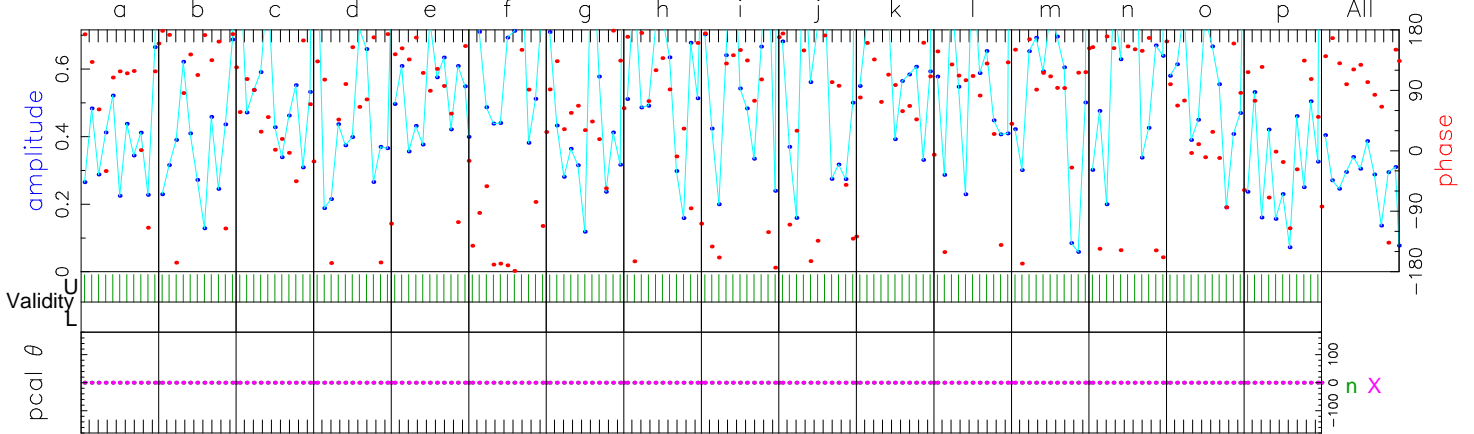


Fringe quality 9

SNR 14.2  
Int time 472.303  
Amp 0.239  
Phase 128.1  
PFD 6.4e-37  
Delays (us)  
SBD 0.016858  
MBD 0.011581  
Fringe rate (Hz) 0.023123  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015259.74  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101302  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

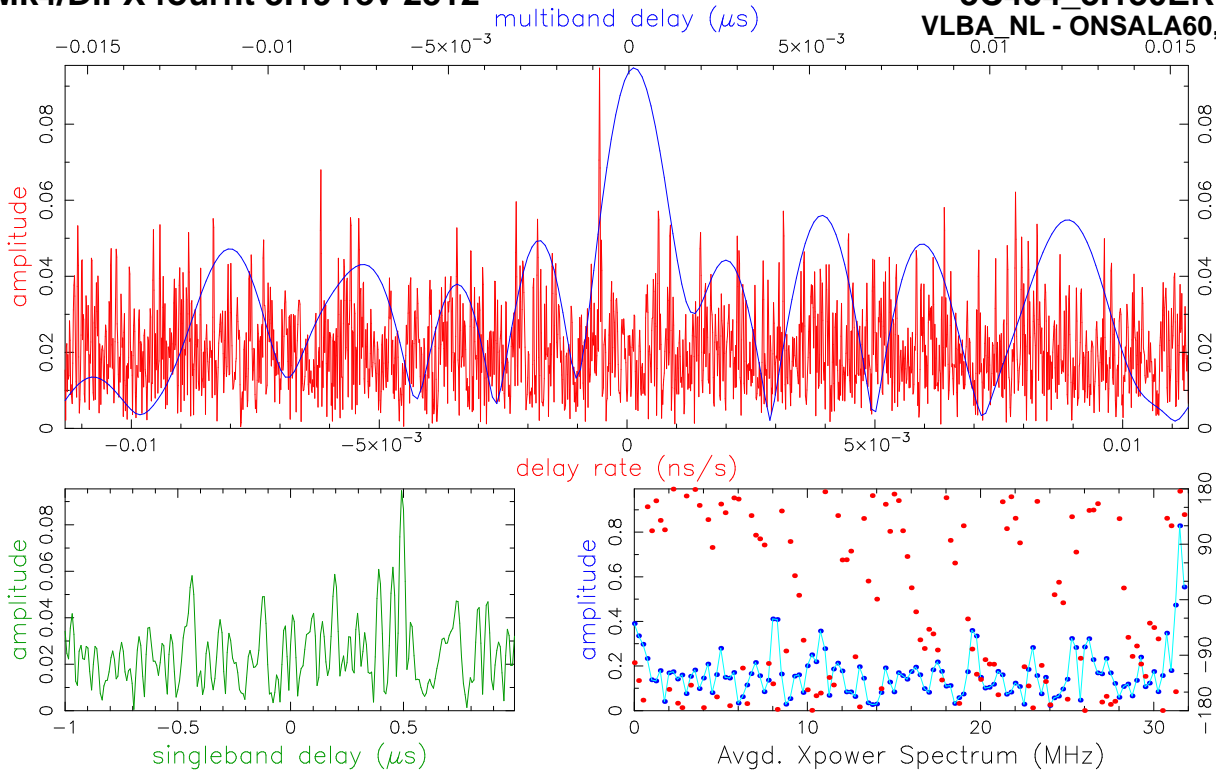


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
108.7	157.3	45.3	117.9	129.7	-147.4	67.1	147.6	159.0	-175.7	99.2	121.6	117.9	173.7	41.5	52.6	Phase	128.1	
0.2	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.5	0.4	0.4	0.6	0.3	0.1	Ampl.	0.3	
115.8	131.8	131.3	131.4	131.7	131.1	131.3	131.0	130.9	131.1	131.2	130.6	130.8	131.1	131.4	198.9	Sbd box	131.2	
U/L	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) 7.53051307213E+03 Apriori delay (usec) 7.53050149077E+03 Resid mbdelay (usec) 1.15814E-02 +/- 7.6E-05  
 Sband delay (usec) 7.53051834877E+03 Apriori clock (usec) -5.8632298E+00 Resid sbdelay (usec) 1.68580E-02 +/- 1.2E-03  
 Phase delay (usec) 7.53050149490E+03 Apriori clockrate (us/s) -3.9377651E-07 Resid phdelay (usec) 4.13002E-06 +/- 2.6E-07  
 Delay rate (us/s) 1.38230253669E+00 Apriori rate (us/s) 1.38230226826E+00 Resid rate (us/s) 2.68435E-07 +/- 9.5E-10  
 Total phase (deg) 277.4 Apriori accel (us/s/s) -4.56495082922E-05 Resid phase (deg) 128.1 +/- 8.1

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

n: az 118.8 el 50.1 pa -42.7 X: az 260.0 el 25.6 pa 33.6 u,v (fr/asec) -8327.157 -2492.259 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nX..130ERS Output file: /Exps/c192b/v2/1234/No0145/nX.W.268.130ERS

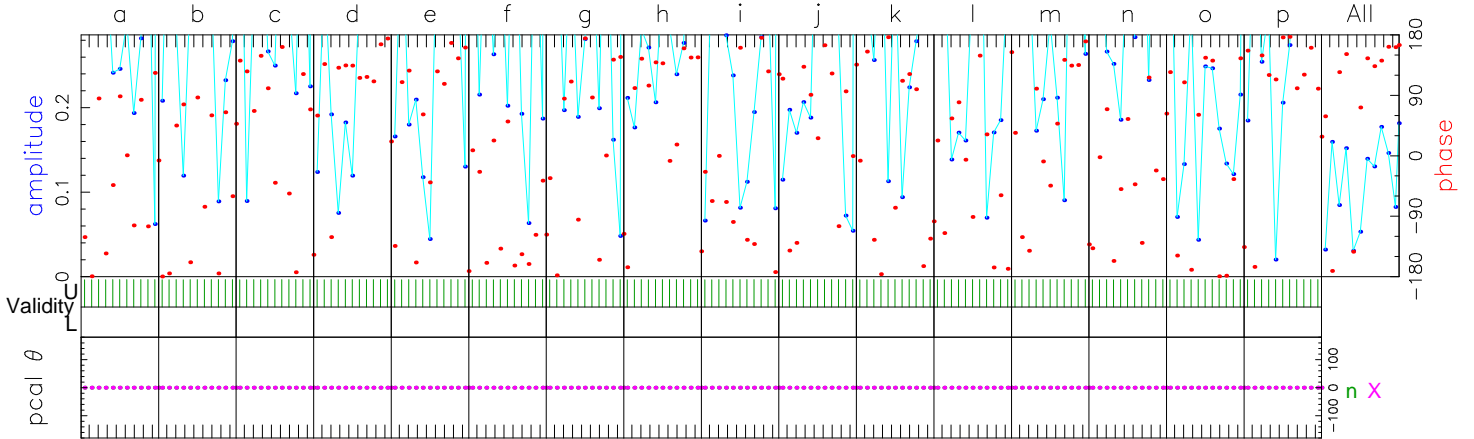


Fringe quality 0

SNR 5.7  
Int time 472.302  
Amp 0.095  
Phase 149.1  
PFD 9.7e-01  
Delays (us)  
SBD 0.493810  
MBD 0.000101  
Fringe rate (Hz)  
-0.047871  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015259.74  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101309  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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			
	-150.5	119.3	130.0	134.5	137.9	-112.7	116.7	132.9	-105.1	133.2	-163.4	-156.1	138.2	-34.3	151.5	139.8		Phase 149.1			
	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3		Ampl. 0.1			
	202.4	202.6	225.1	192.0	192.9	249.1	160.6	193.6	211.4	231.3	72.9	184.6	118.7	113.1	152.6	17.9		Sbd box 192.2			
UL	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0		APs used			
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs			
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase			
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC			
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp			
X	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			
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks			
																		Chan ids			
																		Tracks			
Group delay (usec)(sbd)		7.53100159208E+03								7.53050149077E+03								Resid mbdelay (usec)	1.01311E-04	+/-	1.9E-04
Sband delay (usec)		7.53099530077E+03								-5.8632298E+00								Resid sbdelay (usec)	4.93810E-01	+/-	3.0E-03
Phase delay (usec)		7.53050149558E+03								-3.9377651E-07								Resid phdelay (usec)	4.80956E-06	+/-	6.5E-07
Delay rate (us/s)		1.38230171252E+00								1.38230226826E+00								Resid rate (us/s)	-5.55732E-07	+/-	2.4E-09
Total phase (deg)					298.5					-4.56495082922E-05								Resid phase (deg)	149.1	+/-	20.2

ph/seg (deg) 44.2 35.0  
amp/seg (%) 55.0 61.1  
ph/frq (deg) 67.7 40.4  
amp/frq (%) 83.0 70.6

RMS Theor. Amplitude 0.095 +/- 0.017  
Search (2048X64) 0.090  
Interp. 0.000  
Inc. seg. avg. 0.091  
Inc. frq. avg. 0.106

Group delay (usec)(sbd) 7.53100159208E+03  
Sband delay (usec) 7.53099530077E+03  
Phase delay (usec) 7.53050149558E+03  
Delay rate (us/s) 1.38230171252E+00  
Total phase (deg) 298.5

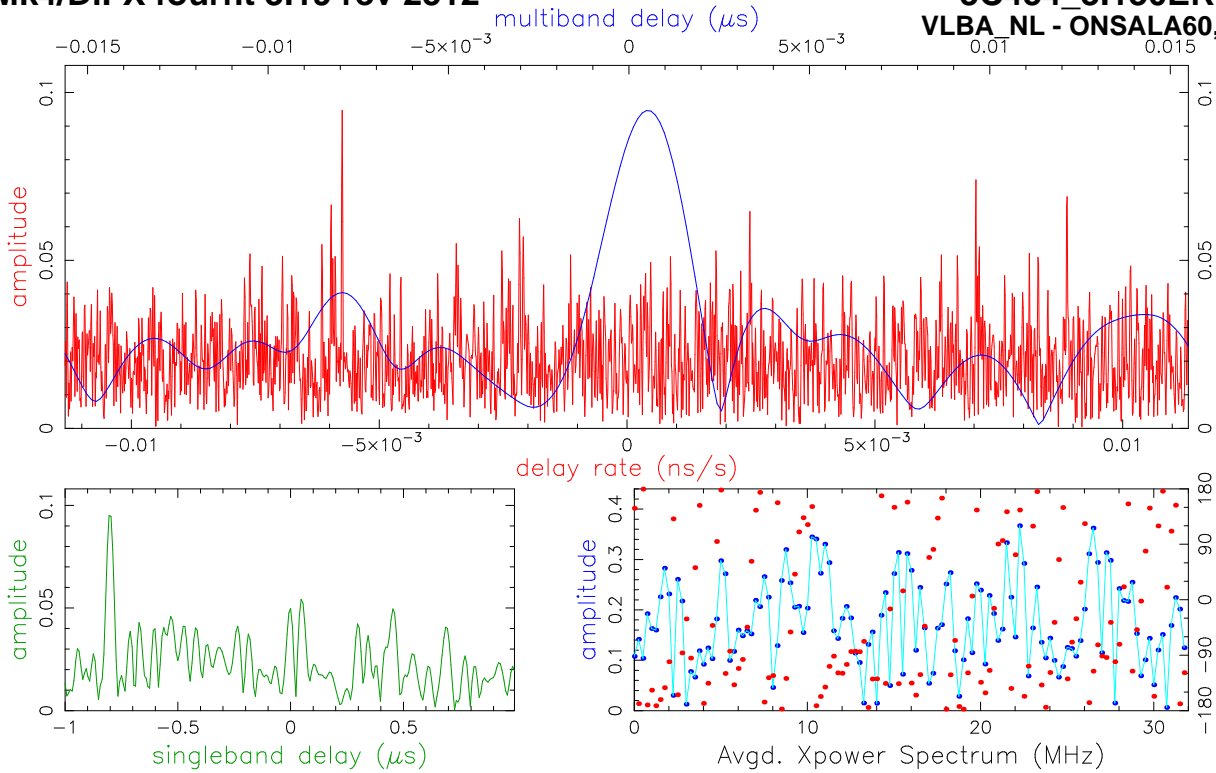
Apriori delay (usec) 7.53050149077E+03  
Apriori clock (usec) -5.8632298E+00  
Apriori clockrate (us/s) -3.9377651E-07  
Apriori rate (us/s) 1.38230226826E+00  
Apriori accel (us/s/s) -4.56495082922E-05

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

n: az 118.8 el 50.1 pa -42.7 X: az 260.0 el 25.6 pa 33.6 u,v (fr/asec) -8327.157 -2492.259 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nX..130ERS Output file: /Exps/c192b/v2/1234/No0145/nX.W.290.130ERS

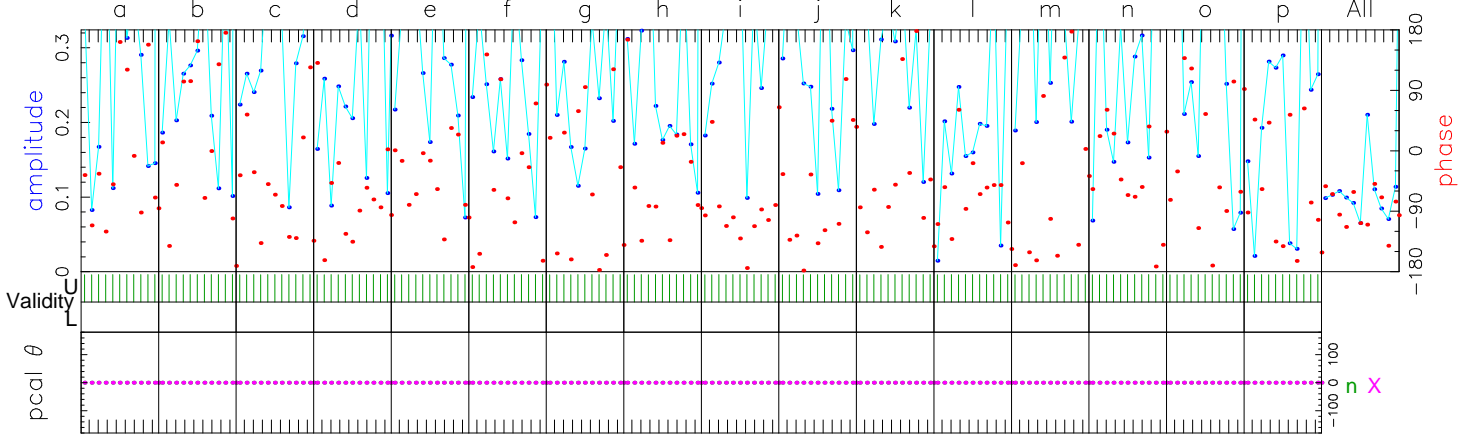


Fringe quality 0

SNR 5.8  
Int time 472.303  
Amp 0.108  
Phase -85.5  
PFD 8.7e-01  
Delays (us)  
SBD -0.800928  
MBD 0.000517  
Fringe rate (Hz)  
-0.495678  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014505.63  
Stop 015259.74  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101315  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

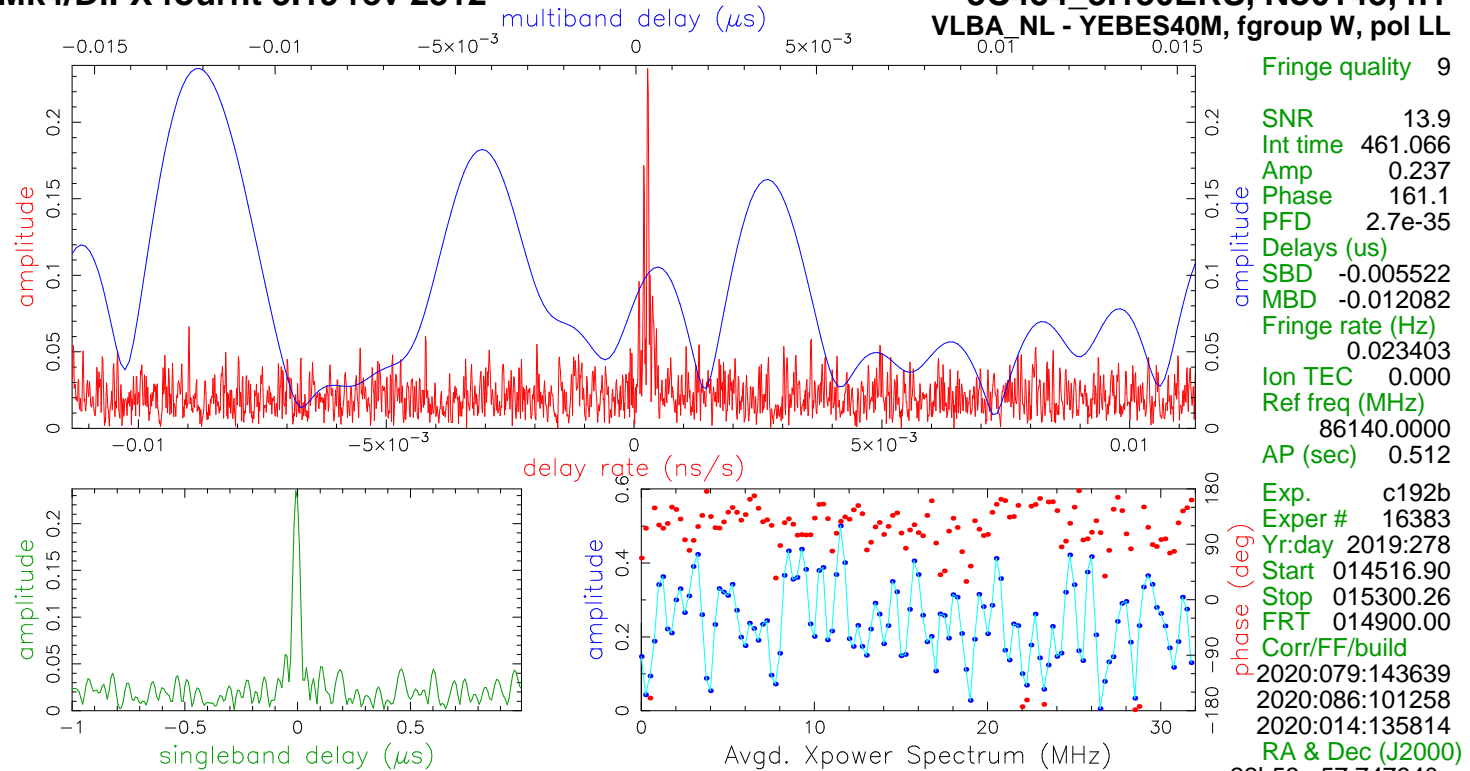


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-102.9	-169.7	-59.0	-87.1	-39.3	-143.9	-17.8	-67.3	-100.5	-115.1	-98.9	-65.3	-161.9	-46.8	-52.4	-77.9	Phase	-85.5
	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	208.1	129.0	167.1	51.7	28.1	87.5	14.2	95.3	26.4	135.3	196.3	55.7	24.5	62.1	75.3	246.5	Sbd box	26.5
U/L	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	926/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 7.52968950742E+03 Apriori delay (usec) 7.53050149077E+03 Resid mbdelay (usec) 5.16648E-04 +/- 1.9E-04  
 Sband delay (usec) 7.52970056227E+03 Apriori clock (usec) -5.8632298E+00 Resid sbdelay (usec) -8.00928E-01 +/- 3.0E-03  
 Phase delay (usec) 7.53050148801E+03 Apriori clockrate (us/s) -3.9377651E-07 Resid phdelay (usec) -2.75667E-06 +/- 6.4E-07  
 Delay rate (us/s) 1.38229651392E+00 Apriori rate (us/s) 1.38230226826E+00 Resid rate (us/s) -5.75433E-06 +/- 2.3E-09  
 Total phase (deg) 63.9 Apriori accel (us/s/s) -4.56495082922E-05 Resid phase (deg) -85.5 +/- 19.9

RMS Theor. Amplitude 0.108 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 28.3 34.4 Search (2048X64) 0.093 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 42.8 60.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 45.3 39.8 Inc. seg. avg. 0.100 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 62.7 69.4 Inc. frq. avg. 0.105 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 X: az 260.0 el 25.6 pa 33.6 u,v (fr/asec) -8327.157 -2492.259 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nX..130ERS Output file: /Exps/c192b/v2/1234/No0145/nX.W.309.130ERS



Fringe quality 9

SNR 13.9

Int time 461.066

Amp 0.237

Phase 161.1

PFD 2.7e-35

Delays (us)

SBD -0.005522

MBD -0.012082

Fringe rate (Hz)

0.023403

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:278

Start 014516.90

Stop 015300.26

FRT 014900.00

Corr/FF/build

2020:079:143639

2020:086:101258

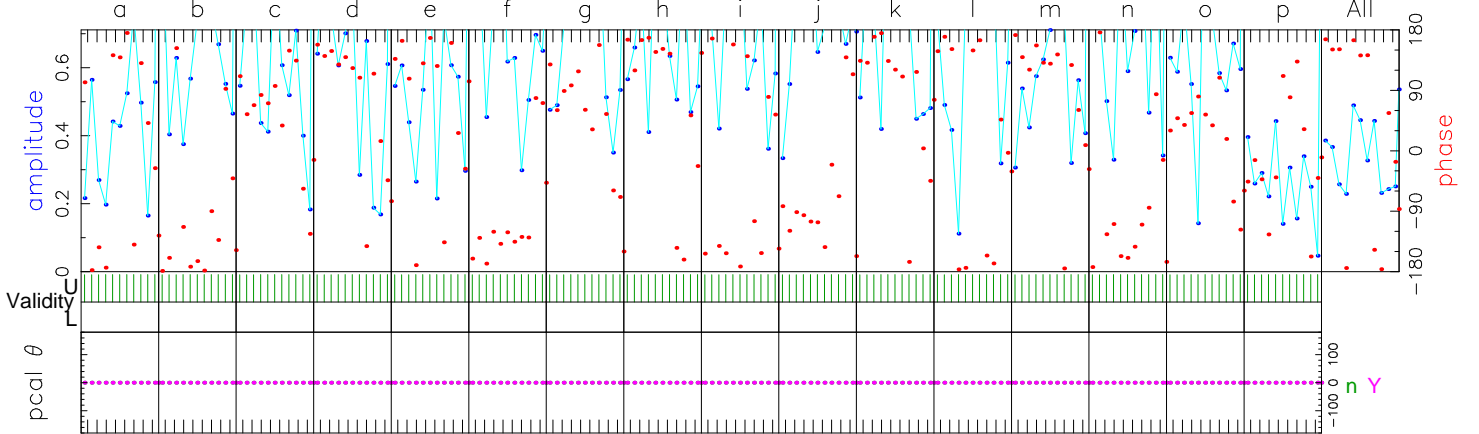
2020:014:135814

RA & Dec (J2000)

22h53m57.747940s

+16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 82 APs / seg (41.98 sec / seg.), time ticks 60 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
	173.1	-160.7	85.0	144.5	153.5	-144.6	82.8	157.9	-174.3	-104.4	137.1	169.6	135.3	-149.8	39.0	-22.5	Phase	161.1
	0.2	0.4	0.4	0.4	0.3	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.1	Ampl.	0.4
	127.2	128.7	128.6	128.0	128.9	127.9	127.9	128.1	128.2	128.3	128.1	127.1	127.7	128.8	127.2	125.8	Sbd box	128.3
UL	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	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 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	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	
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		
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	

Group delay (usec)(sbd) 3.50503683810E+03 Apriori delay (usec) 3.50504891960E+03 Resid mbdelay (usec) -1.20815E-02 +/- 7.7E-05

Sband delay (usec) 3.50504339710E+03 Apriori clock (usec) 1.6843704E+01 Resid sbdelay (usec) -5.52250E-03 +/- 1.2E-03

Phase delay (usec) 3.50504892480E+03 Apriori clockrate (us/s) -8.5776492E-08 Resid phdelay (usec) 5.19452E-06 +/- 2.7E-07

Delay rate (us/s) 1.54778428183E+00 Apriori rate (us/s) 1.54778401014E+00 Resid rate (us/s) 2.71686E-07 +/- 9.9E-10

Total phase (deg) 137.6 Apriori accel (us/s/s) -1.80329627011E-05 Resid phase (deg) 161.1 +/- 8.2

ph/seg (deg) RMS Theor. Amplitude 0.237 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 65.8 14.3 Search (2048X64) 0.232 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

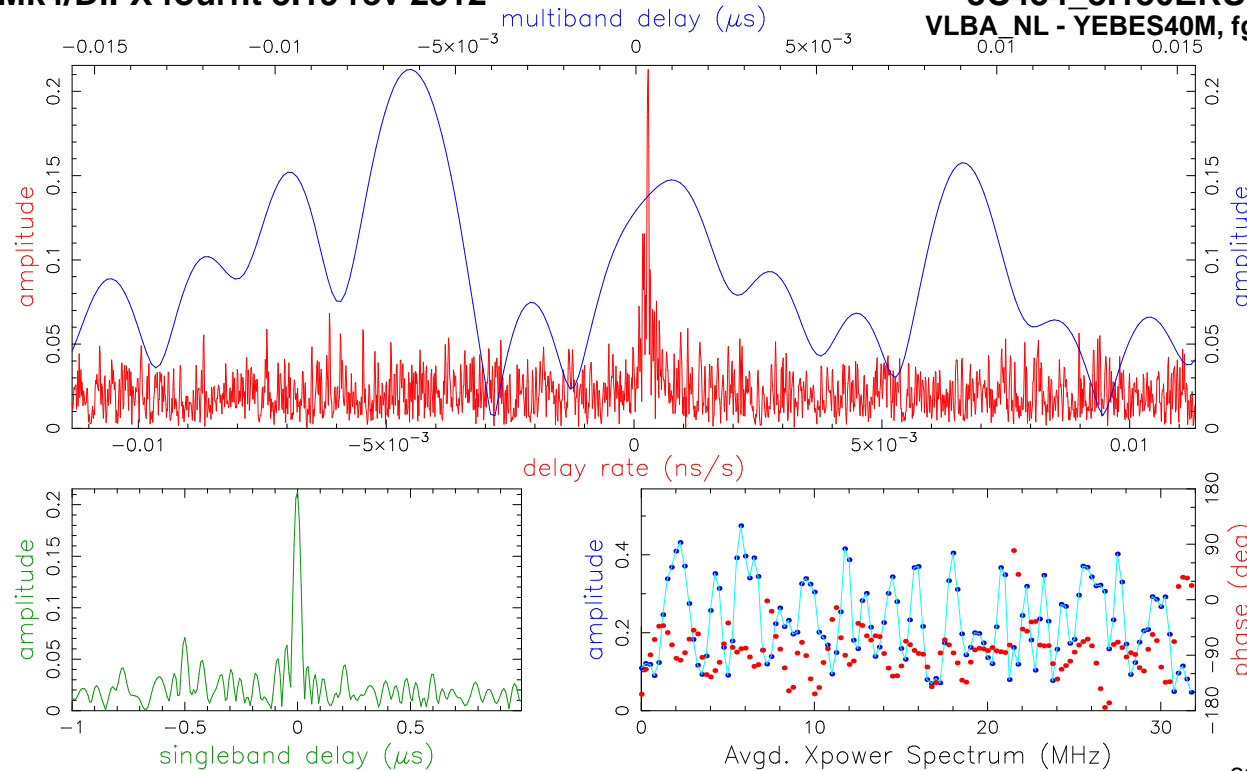
ph/frq (deg) 56.8 24.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 73.7 16.5 Inc. seg. avg. 0.324 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 76.0 28.7 Inc. frq. avg. 0.374 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 Y: az 257.7 el 38.7 pa 50.5 u,v (fr/asec) -9263.632 -212.759 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nY..130ERS Output file: /Exps/c192b/v2/1234/No0145/nY.W.250.130ERS

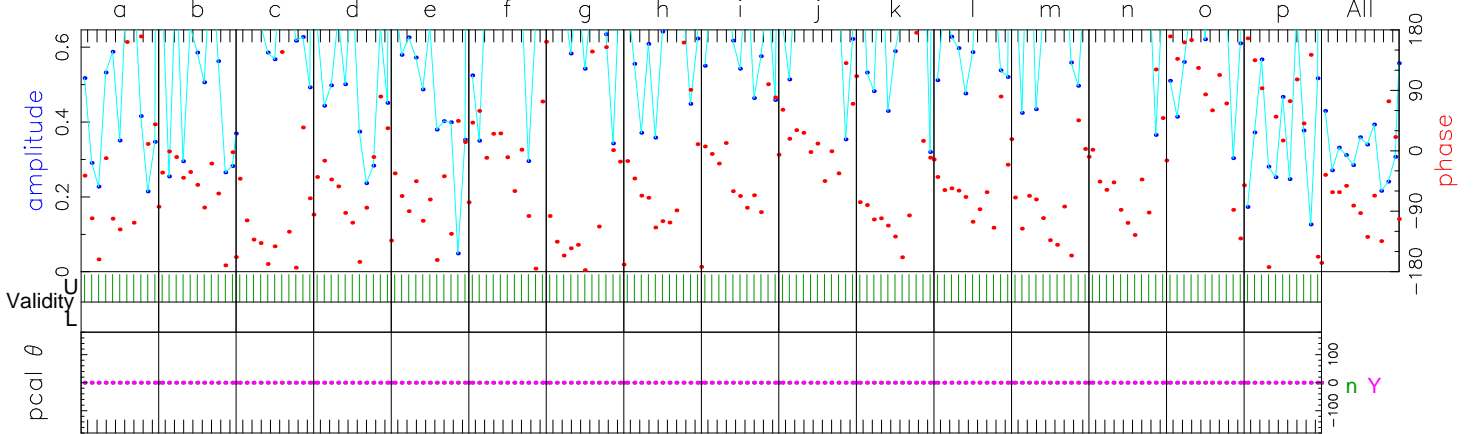


Fringe quality 9

SNR 12.6  
Int time 461.067  
Amp 0.215  
Phase -64.9  
PFD 6.2e-28  
Delays (us)  
SBD -0.002546  
MBD -0.006274  
Fringe rate (Hz) 0.024409  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014516.90  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build  
2020:079:143639  
2020:086:101303  
2020:014:135814  
RA & Dec (J2000)  
22h53m57.747940s  
+16°08'53.560909"

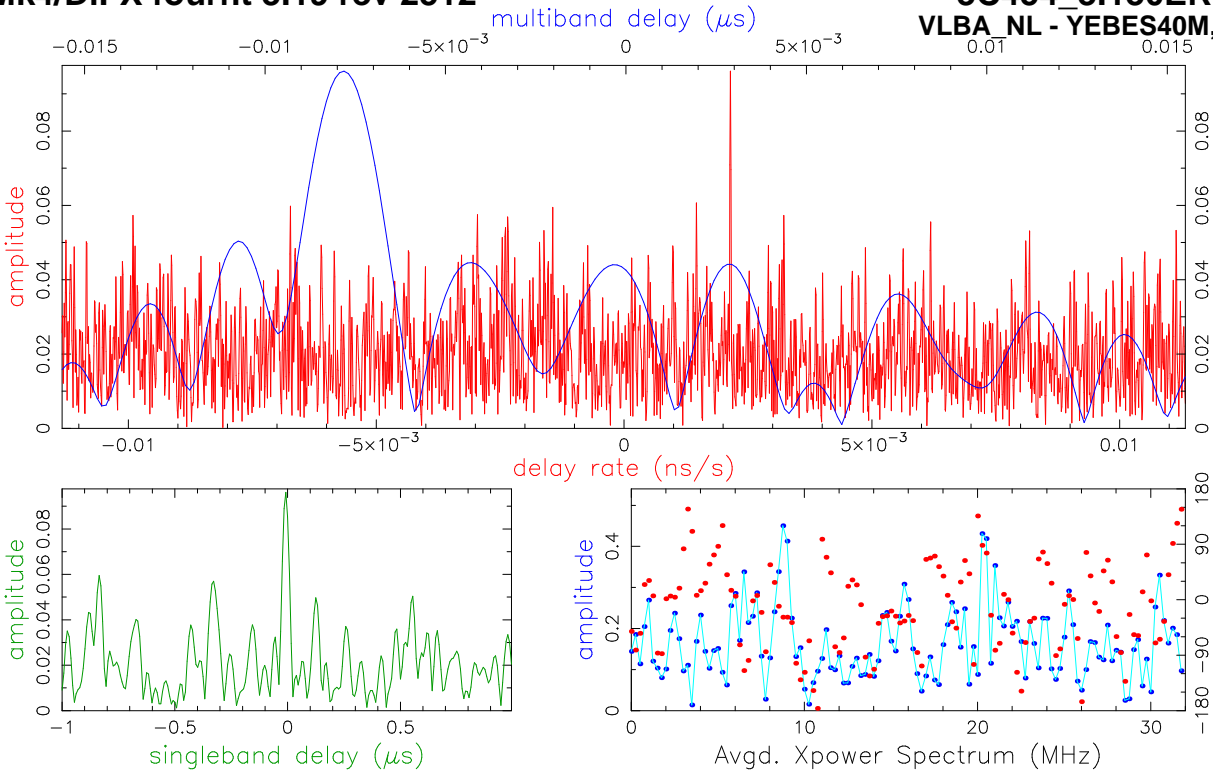
Amp. and Phase vs. time for each freq., 12 segs, 82 APs / seg (41.98 sec / seg.), time ticks 60 sec



	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	-35.9	-131.8	-50.0	-68.7	12.6	-139.3	-74.7	-25.6	13.9	-96.5	-66.3	-91.6	-67.2	124.6	106.6	Phase	-64.9
	0.2	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.6	0.4	0.5	0.5	0.5	0.4	0.2	Ampl.	0.4
	207.1	129.0	128.7	129.4	129.4	128.9	128.2	129.6	128.1	128.7	128.4	129.0	128.8	128.8	128.6	127.7	Sbd box	128.7
U/L	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	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 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	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	
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		
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) 3.50504264597E+03 Apriori delay (usec) 3.50504891960E+03 Resid mbdelay (usec) -6.27363E-03 +/- 8.5E-05  
 Sband delay (usec) 3.50504637360E+03 Apriori clock (usec) 1.6843704E+01 Resid sbdelay (usec) -2.54600E-03 +/- 1.4E-03  
 Phase delay (usec) 3.50504891751E+03 Apriori clockrate (us/s) -8.5776492E-08 Resid phdelay (usec) -2.09409E-06 +/- 2.9E-07  
 Delay rate (us/s) 1.54778429350E+00 Apriori rate (us/s) 1.54778401014E+00 Resid rate (us/s) 2.83359E-07 +/- 1.1E-09  
 Total phase (deg) 271.5 Apriori accel (us/s/s) -1.80329627011E-05 Resid phase (deg) -64.9 +/- 9.1

RMS Theor. Amplitude 0.215 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 58.3 15.7 Search (2048X64) 0.206 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 55.4 27.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 78.7 18.1 Inc. seg. avg. 0.306 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 95.1 31.6 Inc. frq. avg. 0.371 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

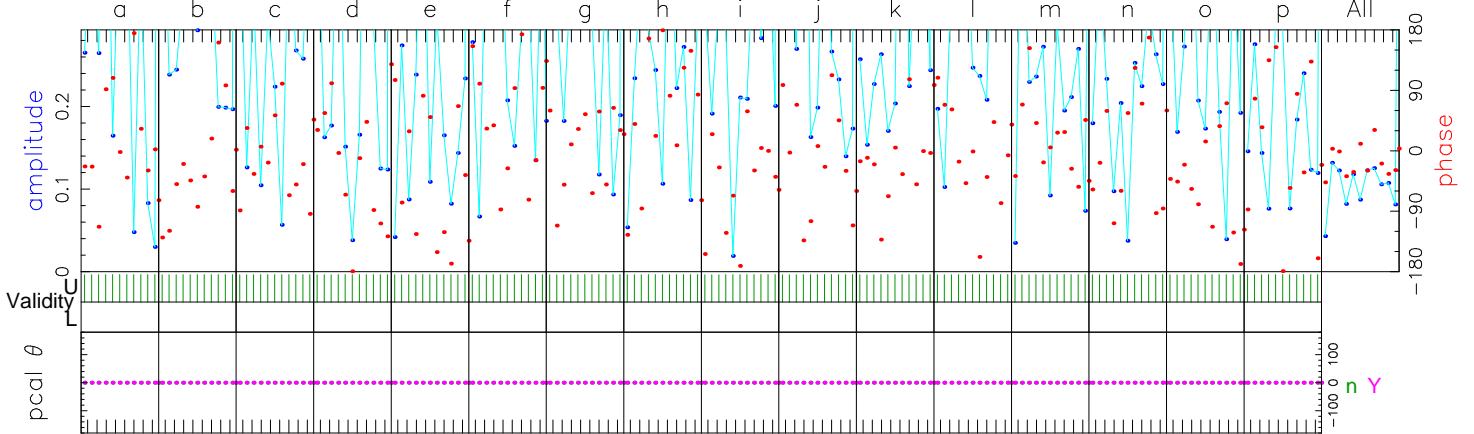


Fringe quality 0

SNR 5.7  
Int time 461.066  
Amp 0.098  
Phase -13.7  
PFD 9.8e-01  
Delays (us)  
SBD -0.008627  
MBD -0.007830  
Fringe rate (Hz) 0.185032  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:278  
Start 014516.90  
Stop 015300.26  
FRT 014900.00  
Corr/FF/build 2020:079:143639  
2020:086:101309  
2020:014:135814  
RA & Dec (J2000) 22h53m57.747940s +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 82 APs / seg (41.98 sec / seg.), time ticks 60 sec



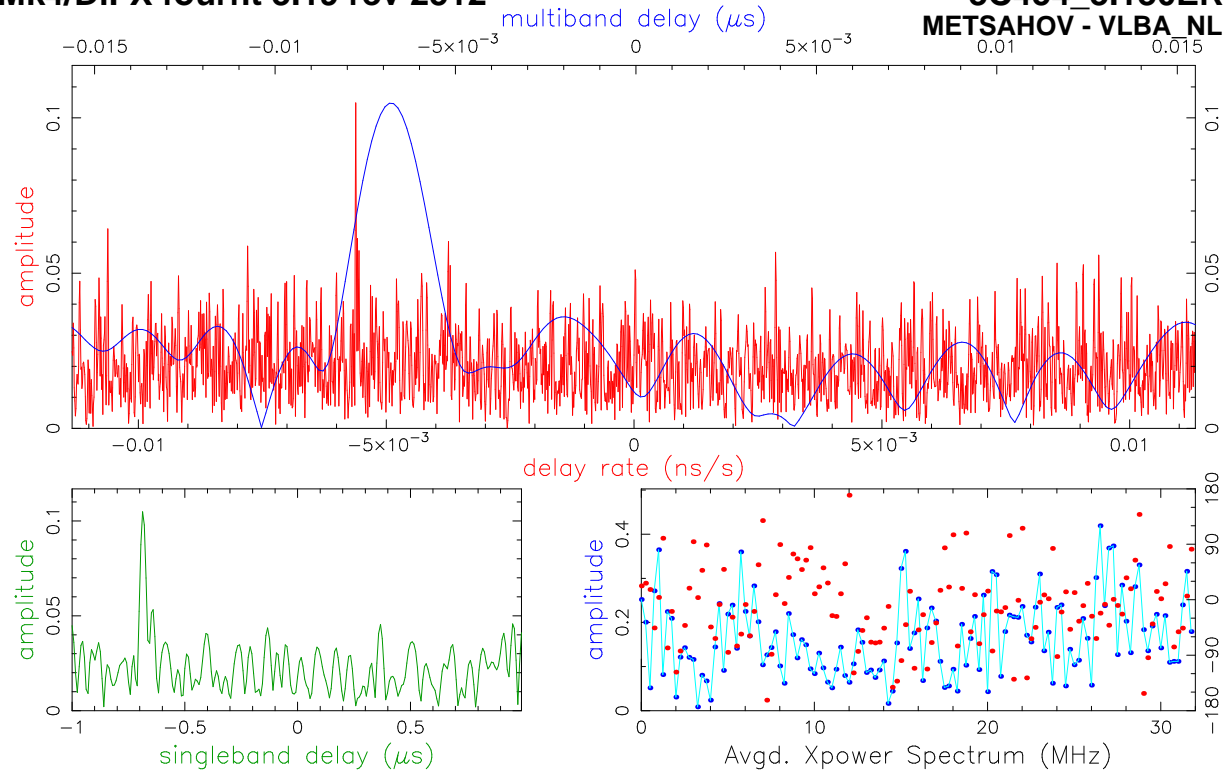
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	3.7	-60.7	-44.6	16.0	-125.2	38.9	5.9	81.8	-29.7	-20.2	-23.7	-3.5	23.4	-43.2	-66.8	128.5	Phase	-13.7
	0.2	0.2	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.2	0.0	Ampl.	0.1
	240.2	15.1	128.1	63.3	11.0	145.2	17.3	162.4	8.2	198.9	128.9	128.4	255.5	169.1	107.0	60.9	Sbd box	127.9
UL	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	905/0	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	
n	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	
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	
Group delay (usec)(sbd)		3.50504108912E+03		Apriori delay (usec)		3.50504891960E+03		Resid mbdelay (usec)		-7.83049E-03		+/-	1.9E-04					
Sband delay (usec)		3.50504029310E+03		Apriori clock (usec)		1.6843704E+01		Resid sbdelay (usec)		-8.62650E-03		+/-	3.0E-03					
Phase delay (usec)		3.50504891916E+03		Apriori clockrate (us/s)		-8.5776492E-08		Resid phdelay (usec)		-4.42764E-07		+/-	6.5E-07					
Delay rate (us/s)		1.54778615818E+00		Apriori rate (us/s)		1.54778401014E+00		Resid rate (us/s)		2.14804E-06		+/-	2.4E-09					
Total phase (deg)			322.8	Apriori accel (us/s/s)		-1.80329627011E-05		Resid phase (deg)		-13.7		+/-	20.3					

ph/seg (deg) 23.2 35.1 Amplitude 0.098 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 40.3 61.3 Search (2048X64) 0.095 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 62.6 40.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 71.8 70.8 Inc. seg. avg. 0.089 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.100 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

n: az 118.8 el 50.1 pa -42.7 Y: az 257.7 el 38.7 pa 50.5 u,v (fr/asec) -9263.632 -212.759 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/nY..130ERS Output file: /Exps/c192b/v2/1234/No0145/nY.W.287.130ERS

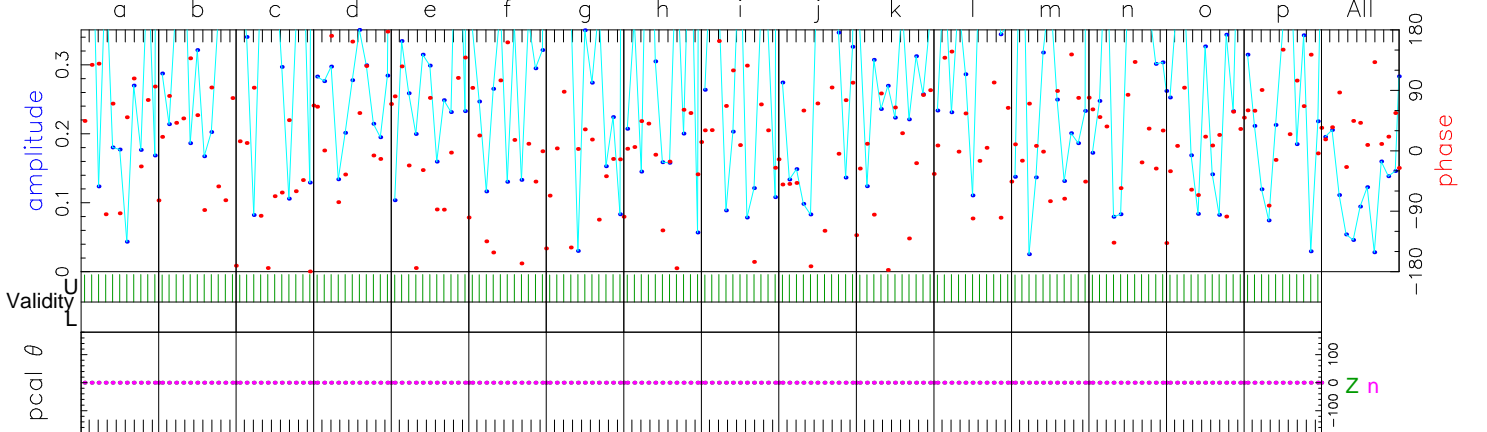






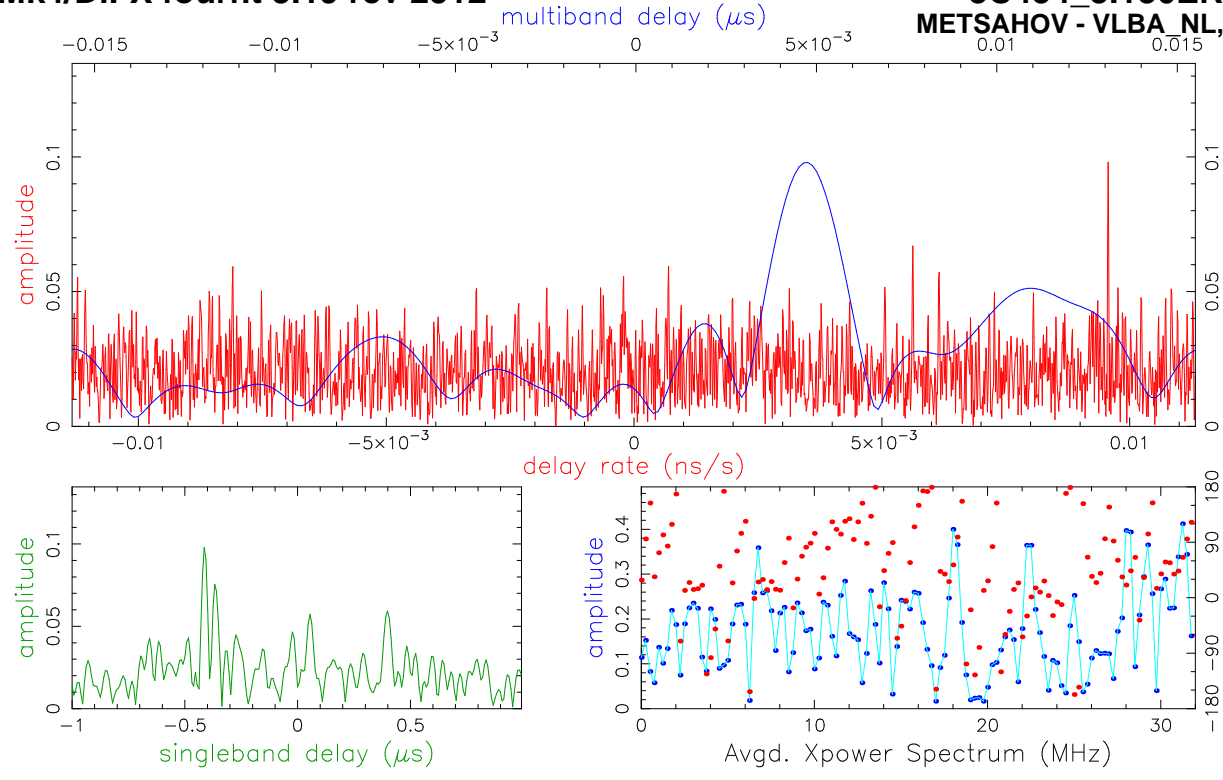
Fringe quality 0  
 SNR 6.3  
 Int time 472.066  
 Amp 0.117  
 Phase 31.0  
 PFD 9.6e-02  
 Delays (us)  
 SBD -0.685799  
 MBD -0.006790  
 Fringe rate (Hz)  
 -0.484636  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192b  
 Exper # 16383  
 Yr:day 2019:278  
 Start 014505.63  
 Stop 015300.26  
 FRT 014900.00  
 Corr/FF/build  
 2020:079:143639  
 2020:086:101318  
 2020:014:135814  
 RA & Dec (J2000)  
 22h53m57.747940s  
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
85.9	33.1	-52.0	74.8	84.5	36.7	-11.2	30.6	49.9	42.8	30.4	39.8	-5.8	39.5	15.5	55.1	55.1	Phase	31.0				
0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	Ampl.	0.1			
96.8	166.4	142.7	95.9	253.0	47.5	75.6	238.7	115.0	185.4	104.1	193.5	102.0	66.9	252.7	50.1	50.1	Sbd box	41.2				
UL	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-9.85609391184E+03														Apriori delay (usec)	-9.85539962190E+03	Resid mbdelay (usec)	-6.78994E-03	+/-	1.7E-04
Sband delay (usec)			-9.85608542140E+03														Apriori clock (usec)	-2.6329397E+01	Resid sbdelay (usec)	-6.85799E-01	+/-	2.8E-03
Phase delay (usec)			-9.85539962090E+03														Apriori clockrate (us/s)	-1.1793070E-07	Resid phdelay (usec)	9.98812E-07	+/-	5.9E-07
Delay rate (us/s)			-1.36507236914E+00														Apriori rate (us/s)	-1.36506674299E+00	Resid rate (us/s)	-5.62615E-06	+/-	2.2E-09
Total phase (deg)			-124.1														Apriori accel (us/s/s)	5.86489752818E-05	Resid phase (deg)	31.0	+/-	18.3

ph/seg (deg) 41.0 31.7 Search (2048X64) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 55.1 55.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 37.2 36.6 Inc. seg. avg. 0.114 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 44.5 63.9 Inc. frq. avg. 0.115 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Z: az 269.8 el 19.0 pa 31.1 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 8247.829 3008.330 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/Zn..130ERS Output file: /Exps/c192b/v2/1234/No0145/Zn.W.321.130ERS simultaneous interpolator

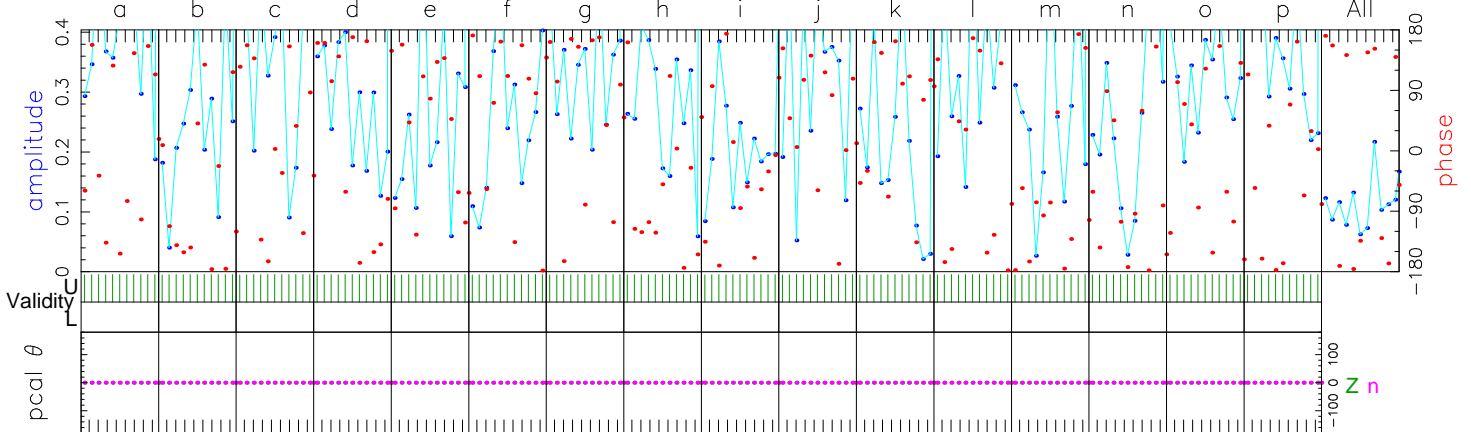


Fringe quality 0

SNR 5.9  
 Int time 472.067  
 Amp 0.135  
 Phase 172.5  
 PFD 7.1e-01  
 Delays (us)  
 SBD -0.412432  
 MBD 0.004735  
 Fringe rate (Hz)  
 0.824991  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192b  
 Exper # 16383  
 Yr:day 2019:278  
 Start 014505.63  
 Stop 015300.26  
 FRT 014900.00  
 Corr/FF/build  
 2020:079:143639  
 2020:086:101323  
 2020:014:135814  
 RA & Dec (J2000)  
 22h53m57.747940s  
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec

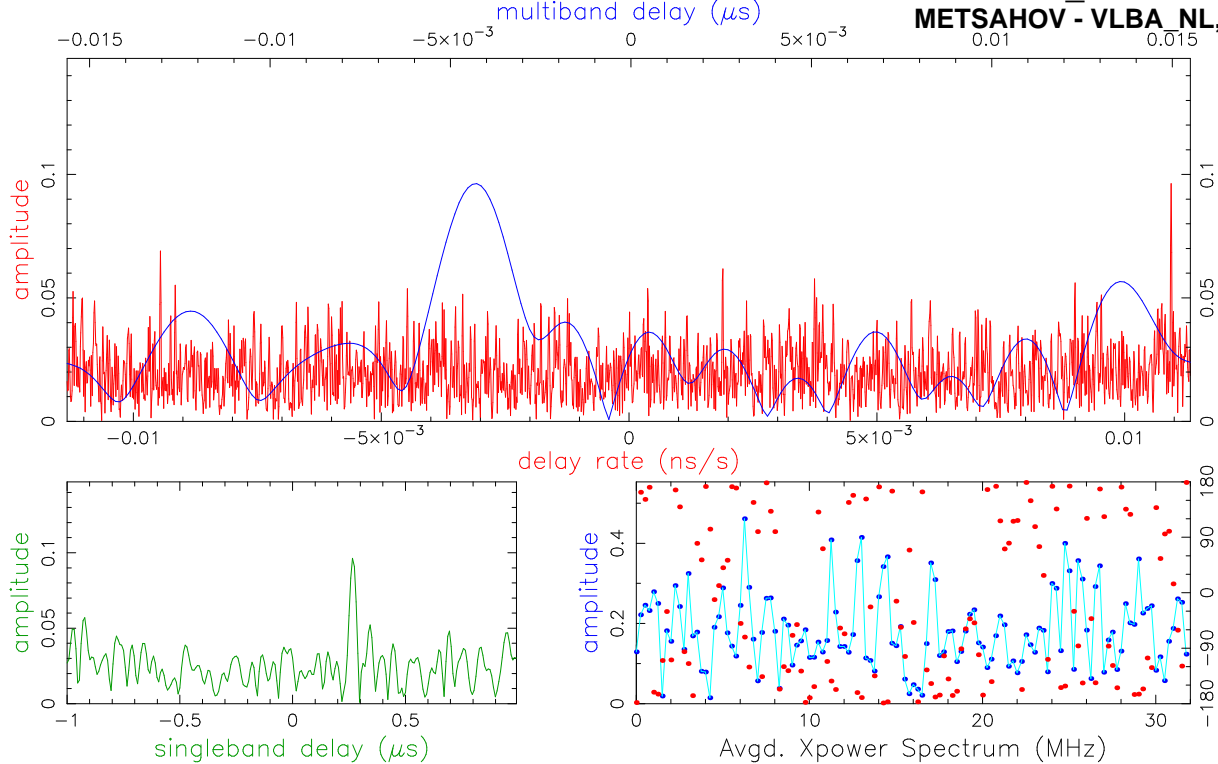


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-155.9	173.3	156.2	179.6	129.4	143.1	164.9	-108.0	-114.3	99.4	135.8	175.5	-138.6	171.4	168.5	168.5	172.5	Phase
	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.1	0.2	0.1	0.4	0.2	0.1	0.1	0.1	0.1	Ampl.
	81.3	190.4	58.9	92.8	150.1	186.8	49.5	120.1	27.4	189.6	154.8	76.0	52.8	30.2	92.3	45.3	76.2	Sbd box
U/L	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks

Group delay (usec)(sbd) -9.85580113681E+03 Apriori delay (usec) -9.85539962190E+03 Resid mbdelay (usec) 4.73509E-03 +/- 1.8E-04  
 Sband delay (usec) -9.85581205340E+03 Apriori clock (usec) -2.6329397E-01 Resid sbdelay (usec) -4.12432E-01 +/- 2.9E-03  
 Phase delay (usec) -9.85539961634E+03 Apriori clockrate (us/s) -1.1793070E-07 Resid phdelay (usec) 5.56119E-06 +/- 6.3E-07  
 Delay rate (us/s) -1.36505716567E+00 Apriori rate (us/s) -1.36506674299E+00 Resid rate (us/s) 9.57732E-06 +/- 2.3E-09  
 Total phase (deg) 17.4 Apriori accel (us/s/s) 5.86489752818E-05 Resid phase (deg) 172.5 +/- 19.6

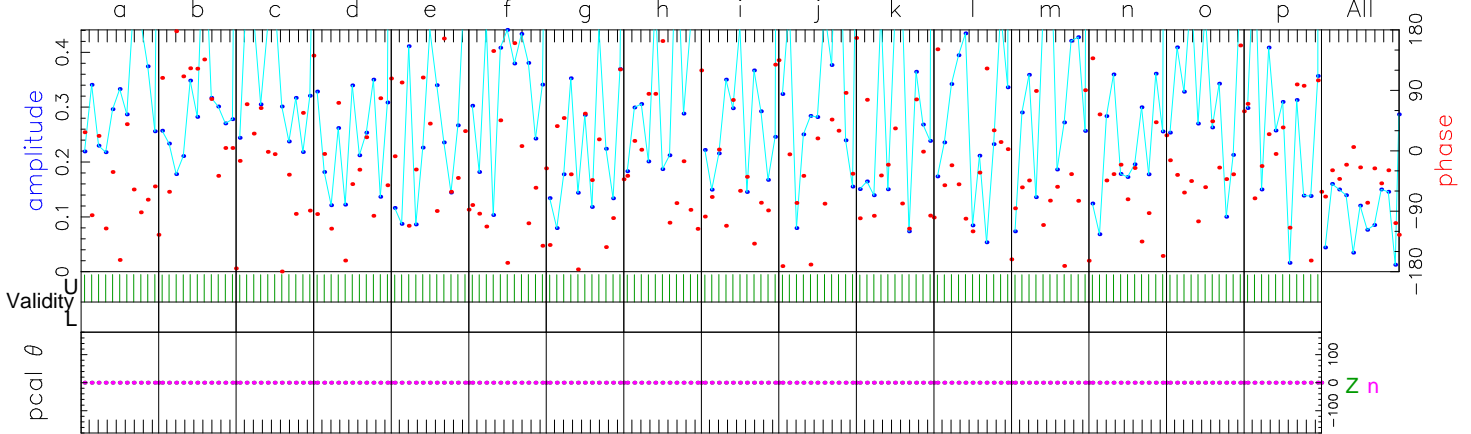
RMS Theor. Amplitude 0.135 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 31.4 33.9 Search (2048X64) 0.096 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 42.5 59.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 42.2 39.2 Inc. seg. avg. 0.130 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 58.8 68.4 Inc. frq. avg. 0.135 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Z: az 269.8 el 19.0 pa 31.1 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 8247.829 3008.330 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/Zn..130ERS Output file: /Exps/c192b/v2/1234/No0145/Zn.W.335.130ERS



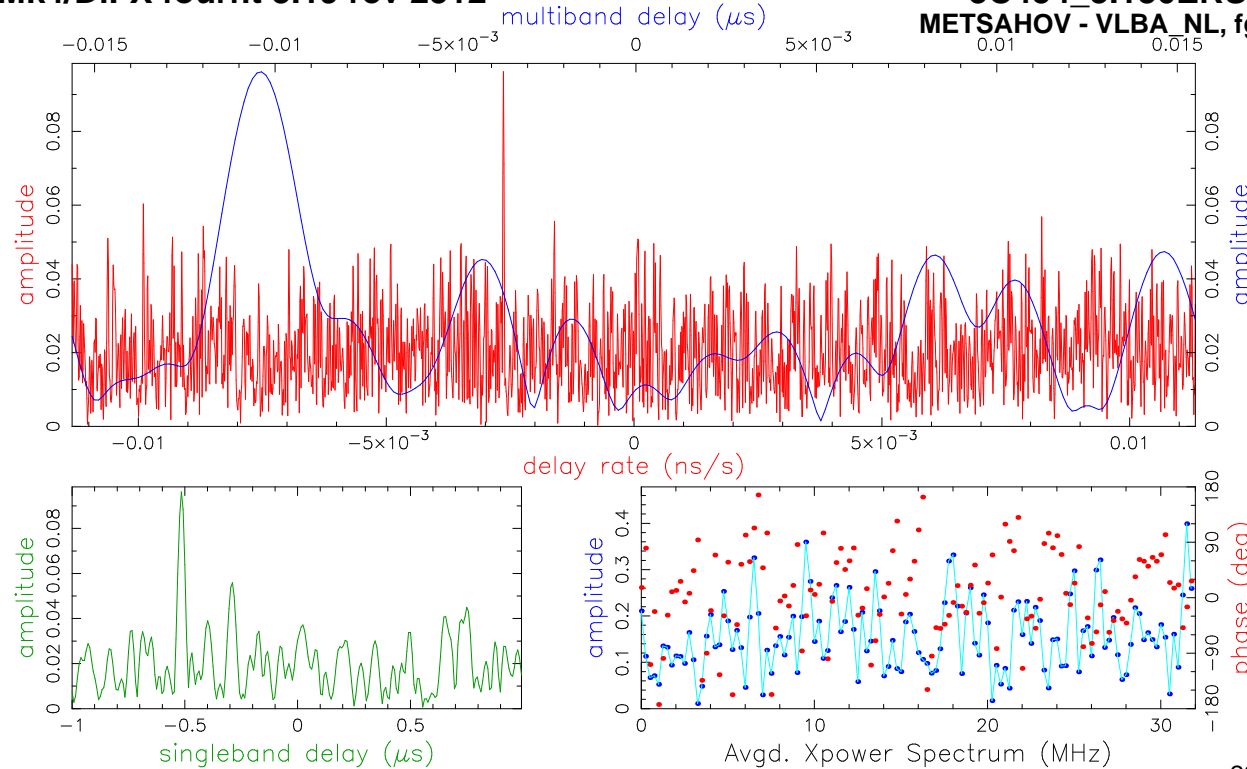
Fringe quality 0  
 SNR 5.7  
 Int time 472.067  
 Amp 0.147  
 Phase -36.4  
 PFD 8.9e-01  
 Delays (us)  
 SBD 0.267361  
 MBD -0.004277  
 Fringe rate (Hz)  
 0.943478  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192b  
 Exper # 16383  
 Yr:day 2019:278  
 Start 014505.63  
 Stop 015300.26  
 FRT 014900.00  
 Corr/FF/build  
 2020:079:143639  
 2020:086:101327  
 2020:014:135814  
 RA & Dec (J2000)  
 22h53m57.747940s  
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-63.4	97.9	7.5	-46.0	-16.0	-112.3	21.2	-51.9	-84.1	1.7	-28.6	-29.4	-71.6	-49.0	-43.2	29.3	Phase	-36.4				
	0.3	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.3	0.2	Ampl.	0.2				
	225.4	244.6	234.6	77.7	1.5	107.5	188.6	130.1	170.3	76.0	75.7	174.2	5.4	185.1	162.7	239.0	Sbd box	163.2				
UL	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	APs used					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-9.85512264901E+03														Apriori delay (usec)	-9.85539962190E+03	Resid mbdelay (usec)	-4.27711E-03	+/-	1.9E-04
Sband delay (usec)			-9.85513226140E+03														Apriori clock (usec)	-2.6329397E+01	Resid sbdelay (usec)	2.67361E-01	+/-	3.0E-03
Phase delay (usec)			-9.85539962308E+03														Apriori clockrate (us/s)	-1.1793070E-07	Resid phdelay (usec)	-1.17381E-06	+/-	6.4E-07
Delay rate (us/s)			-1.36505579015E+00														Apriori rate (us/s)	-1.36506674299E+00	Resid rate (us/s)	1.09528E-05	+/-	2.3E-09
Total phase (deg)					-191.4												Apriori accel (us/s/s)	5.86489752818E-05	Resid phase (deg)	-36.4	+/-	19.9

ph/seg (deg) RMS Theor. Amplitude 0.147 +/- 0.026 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 30.9 34.5 Search (2048X64) 0.093 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 53.6 60.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 53.5 39.9 Inc. seg. avg. 0.132 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 56.9 69.6 Inc. frq. avg. 0.163 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Z: az 269.8 el 19.0 pa 31.1 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 8247.829 3008.330 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/Zn..130ERS Output file: /Exps/c192b/v2/1234/No0145/Zn.W.347.130ERS

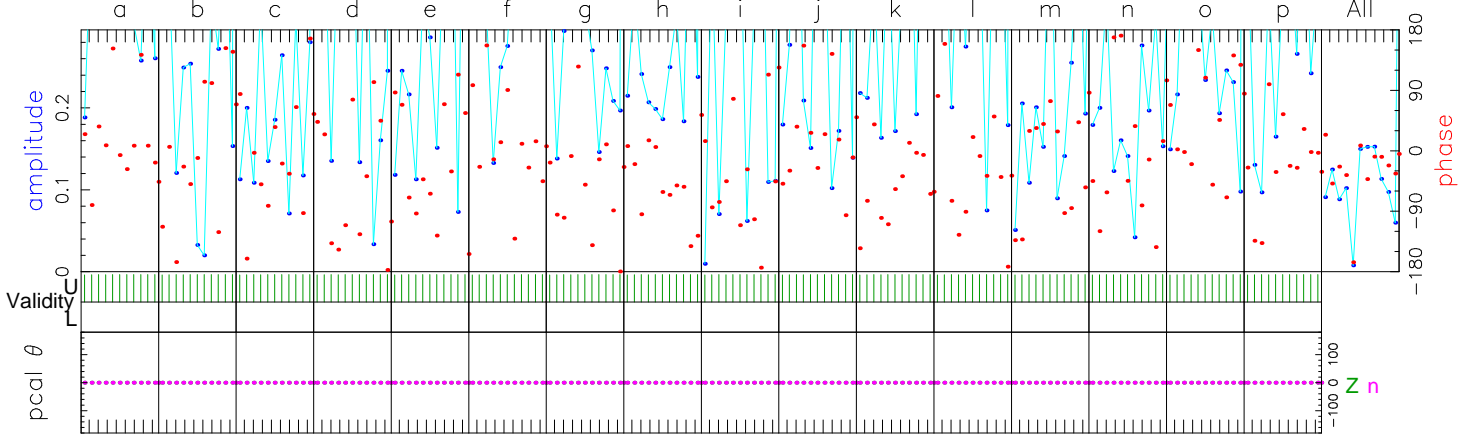


Fringe quality 0

SNR 5.7  
 Int time 472.066  
 Amp 0.098  
 Phase -19.2  
 PFD 9.3e-01  
 Delays (us)  
 SBD -0.514867  
 MBD -0.010403  
 Fringe rate (Hz)  
 -0.227073  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192b  
 Exper # 16383  
 Yr:day 2019:278  
 Start 014505.63  
 Stop 015300.26  
 FRT 014900.00  
 Corr/FF/build  
 2020:079:143639  
 2020:086:101330  
 2020:014:135814  
 RA & Dec (J2000)  
 22h53m57.747940s  
 +16°08'53.560909"

Amp. and Phase vs. time for each freq., 12 segs, 84 APs / seg (43.01 sec / seg.), time ticks 60 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	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0	927/0		
Z	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		
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)		-9.85591002537E+03																
Sband delay (usec)		-9.85591448940E+03																
Phase delay (usec)		-9.85539962252E+03																
Delay rate (us/s)		-1.36506937909E+00																
Total phase (deg)																		
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MISamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
ion window (TEC)																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 48.8 34.7 Search (2048X64) 0.094 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 50.2 60.6 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 52.1 40.1 Inc. seg. avg. 0.091 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 66.7 69.9 Inc. frq. avg. 0.097 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Z: az 269.8 el 19.0 pa 31.1 n: az 118.8 el 50.1 pa -42.7 u,v (fr/asec) 8247.829 3008.330 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0145/Zn..130ERS Output file: /Exps/c192b/v2/1234/No0145/Zn.W.355.130ERS