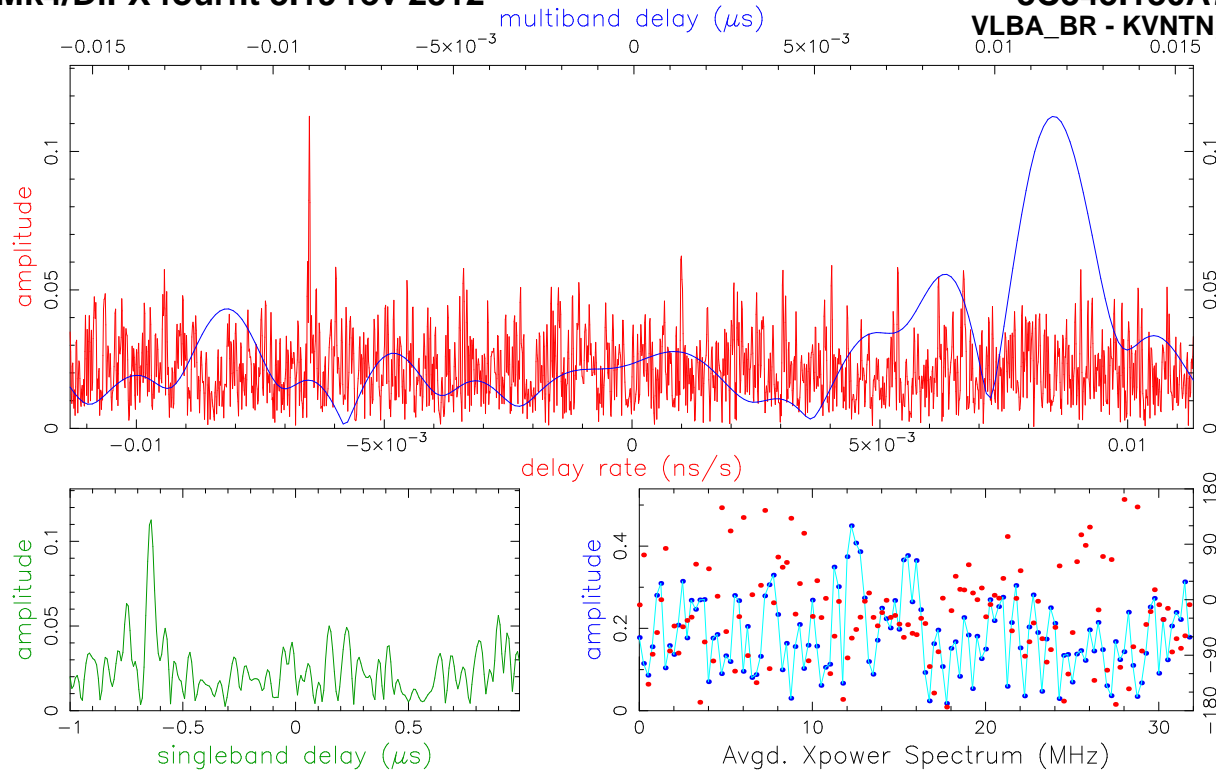


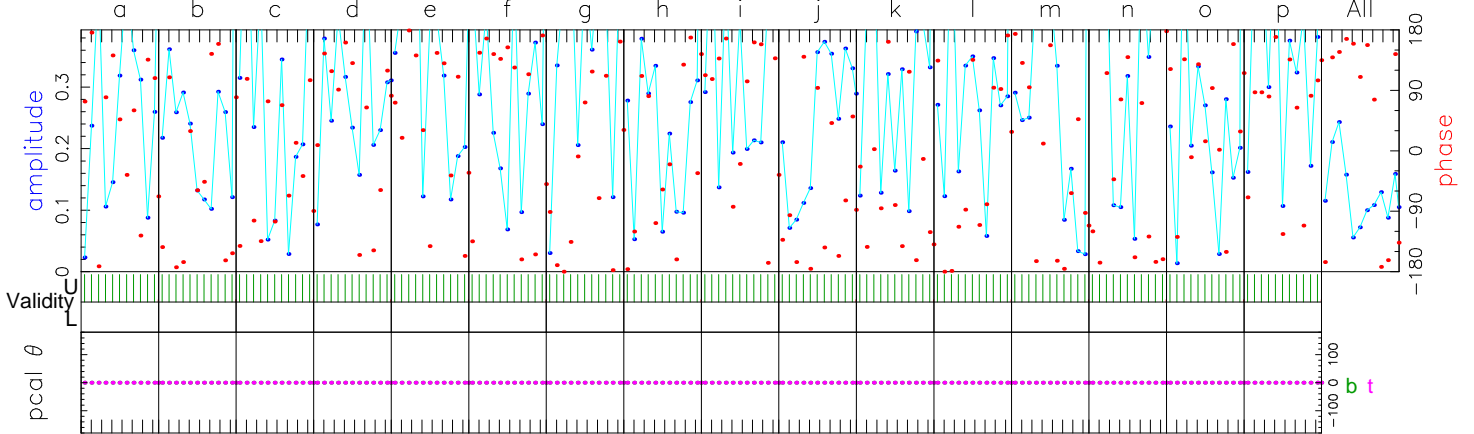
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, bt
VLBA_BR - KVNTN, fgroup W, pol RR



Fringe quality 0
SNR 6.4
Int time 419.803
Amp 0.131
Phase 153.5
PFD 4.7e-02
Delays (us)
SBD -0.643399
MBD 0.011621
Fringe rate (Hz)
-0.561815
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061702
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

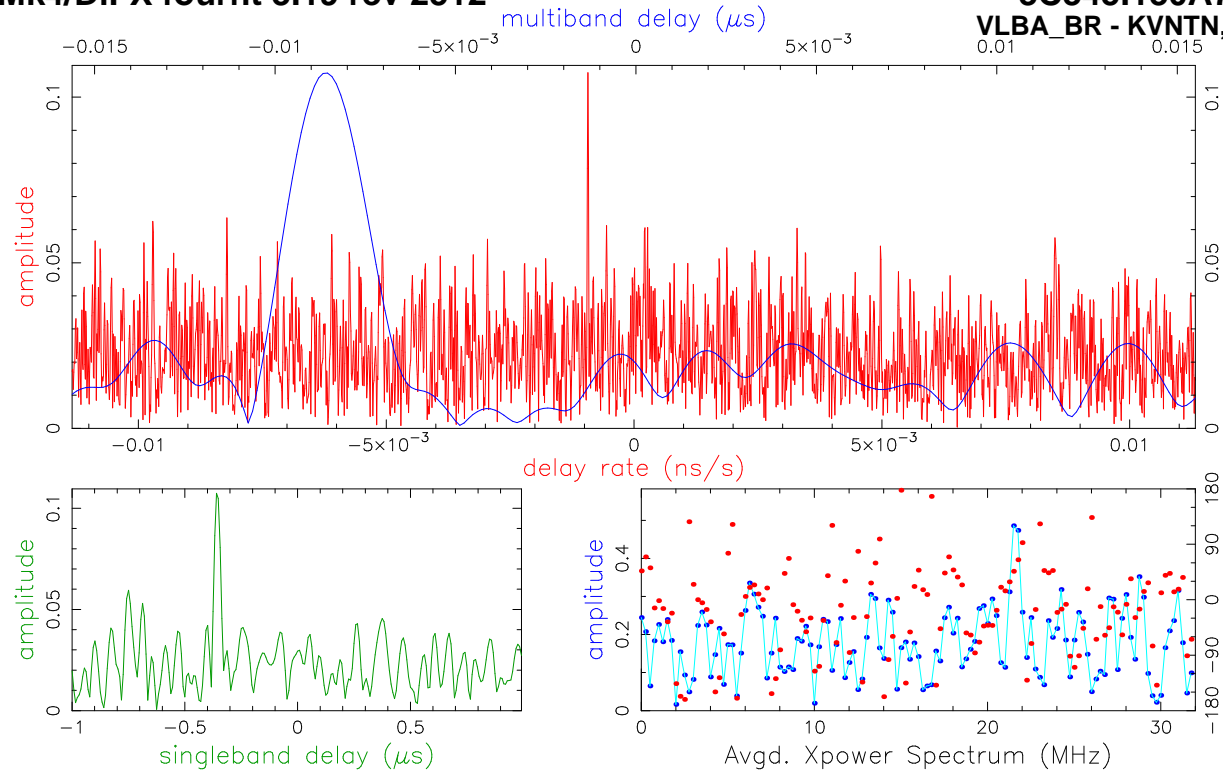


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
125.9	172.7	137.5	120.5	138.0	164.0	165.6	168.9	142.8	-175.8	-113.6	167.4	167.7	179.2	115.0	114.4	114.4	Phase	153.5
0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.0	0.1	0.2	0.1	0.3	0.1	0.2	0.2	Ampl.	0.1
29.2	176.4	131.8	56.2	55.0	46.5	249.1	176.1	9.0	100.9	17.2	169.9	9.9	45.6	234.1	47.9	47.9	Sbd box	46.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:t	0:0	0:0	0:0	0:0	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:t	0:0	0:0	0:0	0:0	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-9.89185773725E+02			Apriori delay (usec)			-9.88541144777E+02			Resid mbdelay (usec)			1.16211E-02			+/- 1.7E-04		
Sband delay (usec)	-9.89184543277E+02			Apriori clock (usec)			-2.8328976E+01			Resid sbdelay (usec)			-6.43399E-01			+/- 2.7E-03		
Phase delay (usec)	-9.88541139827E+02			Apriori clockrate (us/s)			-4.4239506E-07			Resid phdelay (usec)			4.95045E-06			+/- 5.8E-07		
Delay rate (us/s)	-1.48488691196E+00			Apriori rate (us/s)			-1.48488038985E+00			Resid rate (us/s)			-6.52211E-06			+/- 2.4E-09		
Total phase (deg)	77.5			Apriori accel (us/s/s)			1.92441827029E-05			Resid phase (deg)			153.5			+/- 18.0		

ph/seg (deg) RMS 35.0 Theor. 31.1 Amplitude 0.131 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.3 54.3 Search (2048X64) 0.110 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 34.8 35.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 53.7 62.7 Inc. seg. avg. 0.131 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.125 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 b: az 283.1 el 45.8 pa 57.8 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 11100.339 2457.355 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/bt..130A7B Output file: /Exps/c192a/v2/1234/No0041/bt.W.36.130A7B

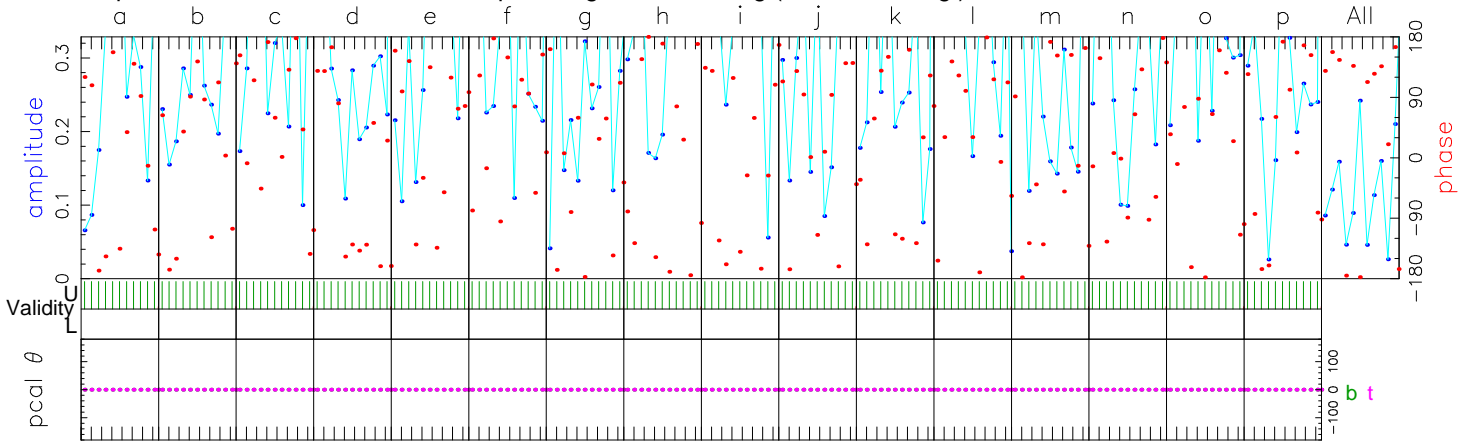
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, bt
VLBA_BR - KVNTN, fgroup W, pol LR



Fringe quality 0
SNR 6.1
Int time 419.802
Amp 0.110
Phase 152.2
PFD 2.2e-01
Delays (us)
SBD -0.356299
MBD -0.008609
Fringe rate (Hz)
-0.080235
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061707
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

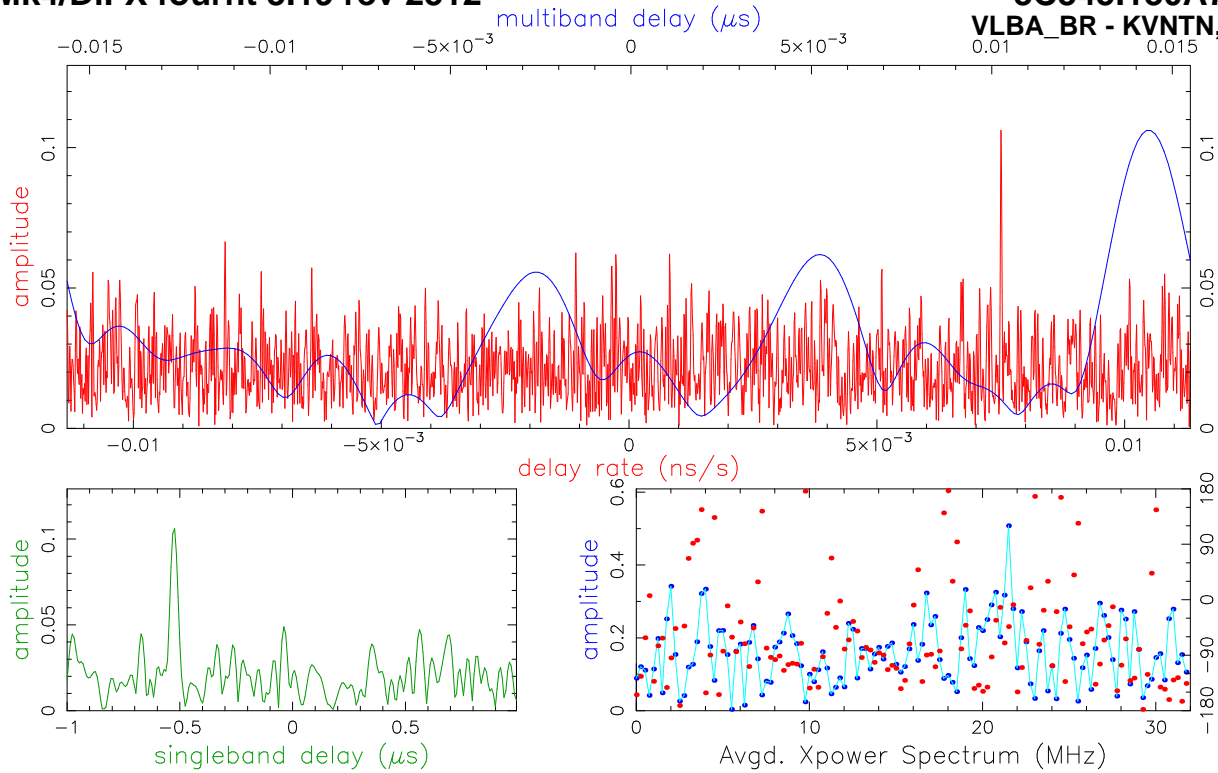


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
	-173.8	136.7	145.7	155.9	121.6	146.8	111.2	177.3	145.2	143.2	161.0	128.2	-172.1	-166.4	135.9	169.2	Phase	152.2		
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1		
	25.6	162.2	136.8	132.4	24.3	52.6	162.1	17.0	229.6	87.8	109.9	225.3	218.5	97.1	111.6	224.9	Sbd box	83.4		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used			
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
b:t	0:0	0:0	0:0	0:0	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:t	0:0	0:0	0:0	0:0	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			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids			
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks			
																	Chan ids			
																	Tracks			
Group delay (usec)(sbd)	-9.88893504148E+02				Apriori delay (usec)				-9.88541144777E+02				Resid mbdelay (usec)				-8.60937E-03		+/-	1.8E-04
Sband delay (usec)	-9.88897443777E+02				Apriori clock (usec)				-2.8328976E+01				Resid sbdelay (usec)				-3.56299E-01		+/-	2.8E-03
Phase delay (usec)	-9.88541139868E+02				Apriori clockrate (us/s)				-4.4239506E-07				Resid phdelay (usec)				4.90890E-06		+/-	6.0E-07
Delay rate (us/s)	-1.48488132130E+00				Apriori rate (us/s)				-1.48488038985E+00				Resid rate (us/s)				-9.31448E-07		+/-	2.5E-09
Total phase (deg)	76.2				Apriori accel (us/s/s)				1.92441827029E-05				Resid phase (deg)				152.2		+/-	18.7

ph/seg (deg) 45.7 32.4 Search (2048X64) 0.105 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 63.2 56.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 25.4 37.4 Inc. seg. avg. 0.104 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 35.6 65.3 Inc. frq. avg. 0.096 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 283.1 el 45.8 pa 57.8 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 11100.339 2457.355 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/bt..130A7B Output file: /Exps/c192a/v2/1234/No0041/bt.W.55.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, bt
VLBA_BR - KVNTN, fgroup W, pol RL

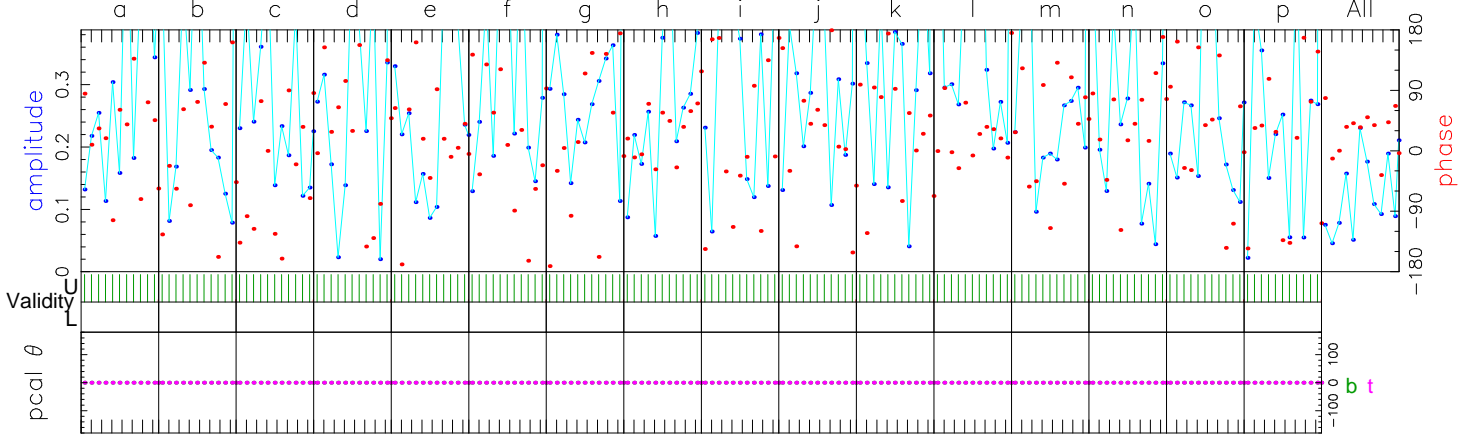


Fringe quality 0

SNR 6.0
Int time 419.803
Amp 0.129
Phase 35.2
PFD 4.0e-01
Delays (us)
SBD -0.526114
MBD 0.014282
Fringe rate (Hz) 0.647795
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

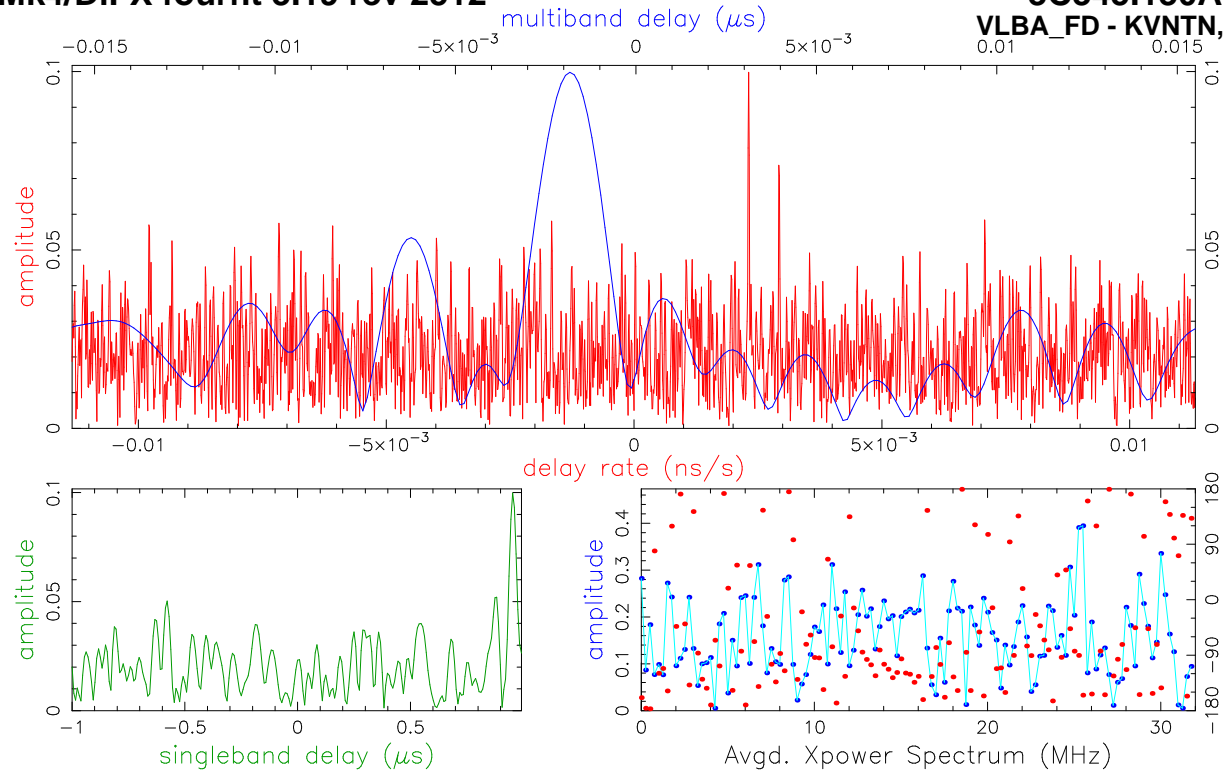
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061712
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
b:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
b:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
Group delay (usec)(sbd)			-9.89058112589E+02																
Sband delay (usec)			-9.89067258777E+02																
Phase delay (usec)			-9.88541143641E+02																
Delay rate (us/s)			-1.48487286960E+00																
Total phase (deg)					-40.8														
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) 32.6 33.1 Search (2048X64) 0.104 PCAL mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 55.8 57.7 Interp. 0.000 PCAL rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 50.4 38.2 Inc. seg. avg. 0.122 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 73.2 66.6 Inc. frq. avg. 0.129 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 283.1 el 45.8 pa 57.8 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 11100.339 2457.355 ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/bt..130A7B Output file: /Exps/c192a/v2/1234/No0041/bt.W.74.130A7B simultaneous interpolator

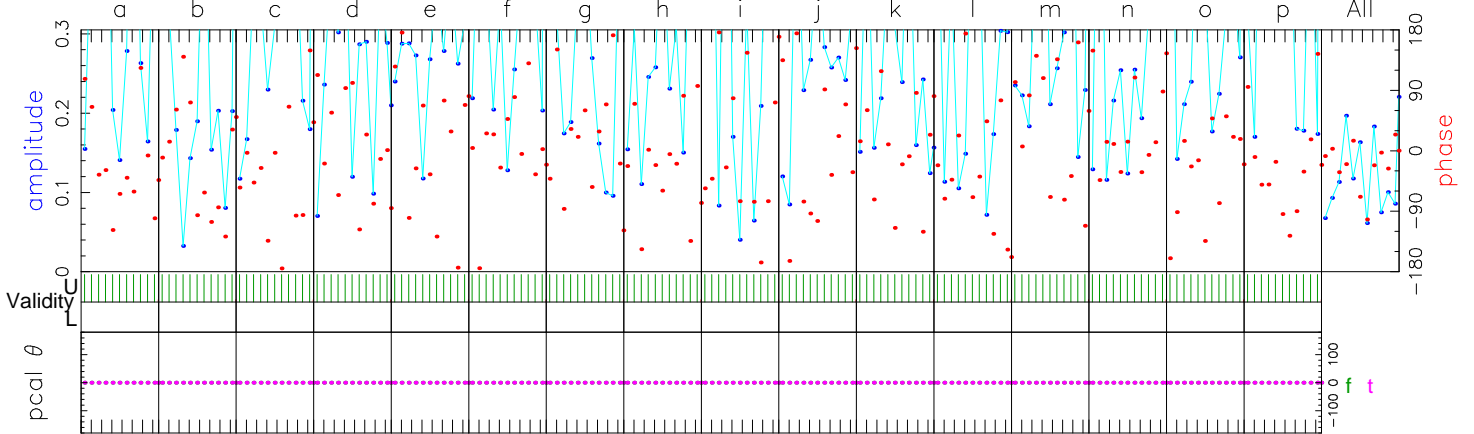


Fringe quality 0

SNR 5.6
Int time 419.830
Amp 0.102
Phase -20.9
PFD 9.9e-01
Delays (us)
SBD 0.954275
MBD -0.001817
Fringe rate (Hz) 0.199428
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061723
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

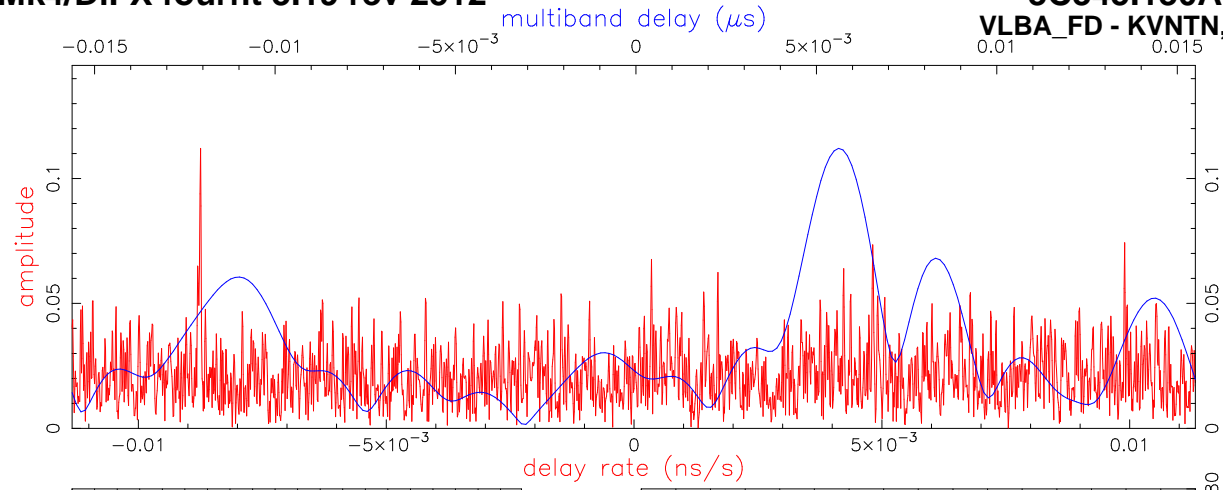


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-42.9	-24.4	-66.6	12.3	71.8	15.9	0.5	-17.2	-41.7	-85.3	6.0	-51.7	92.3	4.2	-24.9	-47.5		Phase	-20.9
	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.1	0.2		Ampl.	0.1
	250.3	77.0	165.2	118.2	129.1	233.3	82.0	159.5	75.1	209.0	169.6	91.6	105.9	221.6	215.7	251.7		Sbd box	251.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
ft	0:0	0:0	0:0	0:0	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	
ft	0:0	0:0	0:0	0:0	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	-6.37925204870E+03			Apriori delay (usec)			-6.38021898199E+03			Resid mbdelay (usec)			-1.81671E-03			+/- 1.9E-04			
Sband delay (usec)	-6.37926470649E+03			Apriori clock (usec)			-2.7256317E+01			Resid sbdelay (usec)			9.54275E-01			+/- 3.1E-03			
Phase delay (usec)	-6.38021898266E+03			Apriori clockrate (us/s)			-2.9094950E-07			Resid phdelay (usec)			-6.72520E-07			+/- 6.6E-07			
Delay rate (us/s)	-1.78218359104E+00			Apriori rate (us/s)			-1.78218590620E+00			Resid rate (us/s)			2.31516E-06			+/- 2.7E-09			
Total phase (deg)	-60.0			Apriori accel (us/s/s)			3.09548586555E-05			Resid phase (deg)			-20.9			+/- 20.5			

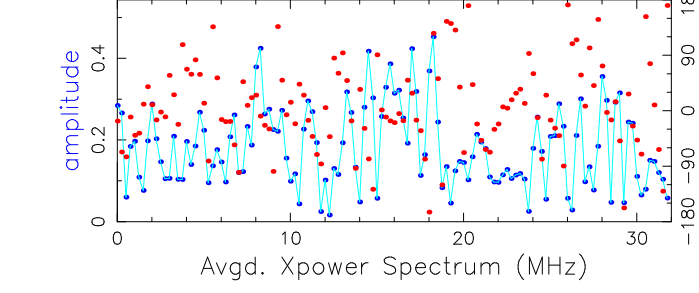
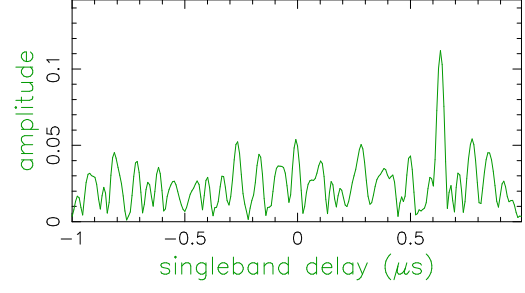
ph/seg (deg) 34.8 35.4 Search (2048X64) 0.097 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 47.9 61.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 49.7 40.9 Inc. seg. avg. 0.098 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 51.0 71.4 Inc. frq. avg. 0.096 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 301.9 el 27.8 pa 71.6 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 13331.915 1595.800 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ft..130A7B Output file: /Exps/c192a/v2/1234/No0041/ft.W.102.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

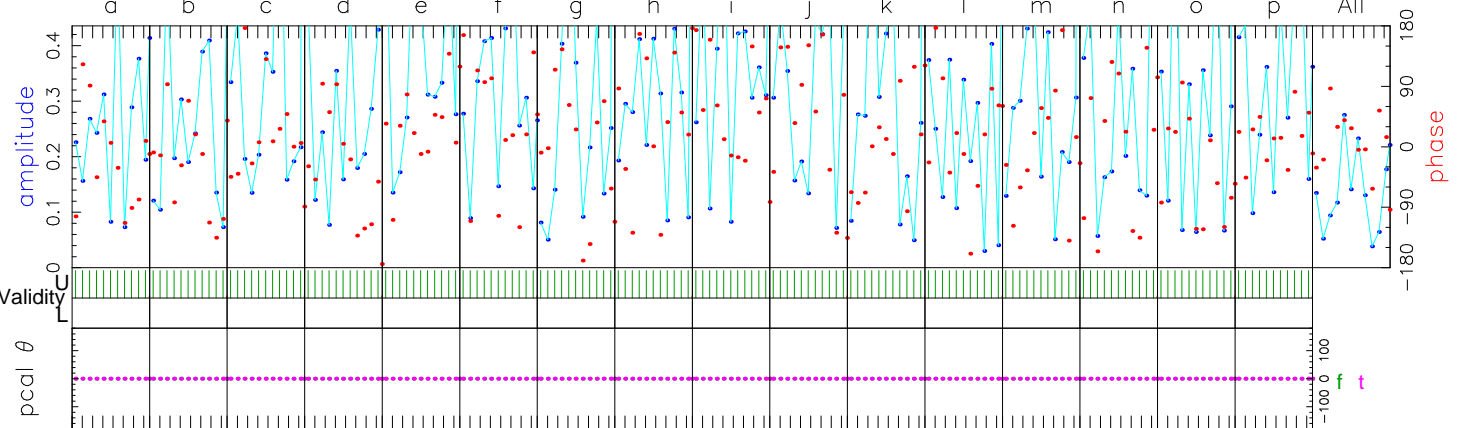
3C345.130A7B, No0041, ft
VLBA_FD - KVNTN, fgroup W, pol LR



Fringe quality 0
SNR 6.3
Int time 419.830
Amp 0.145
Phase 15.1
PFD 8.6e-02
Delays (us)
SBD 0.633346
MBD 0.005630
Fringe rate (Hz)
-0.754919
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061728
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"



Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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
	-35.4	-10.2	3.6	-39.9	34.7	67.0	59.0	125.5	38.5	98.5	-7.5	-6.4	-10.3	68.3	-33.7	13.7	Phase	15.1
	0.2	0.1	0.2	0.1	0.3	0.2	0.1	0.1	0.3	0.1	0.3	0.1	0.2	0.1	0.2	0.3	Ampl.	0.2
	206.7	90.6	121.2	87.0	209.6	90.3	135.4	22.9	216.2	157.2	186.2	83.1	82.6	192.0	240.1	210.2	Sbd box	210.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
ft	0:0	0:0	0:0	0:0	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	
ft	0:0	0:0	0:0	0:0	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

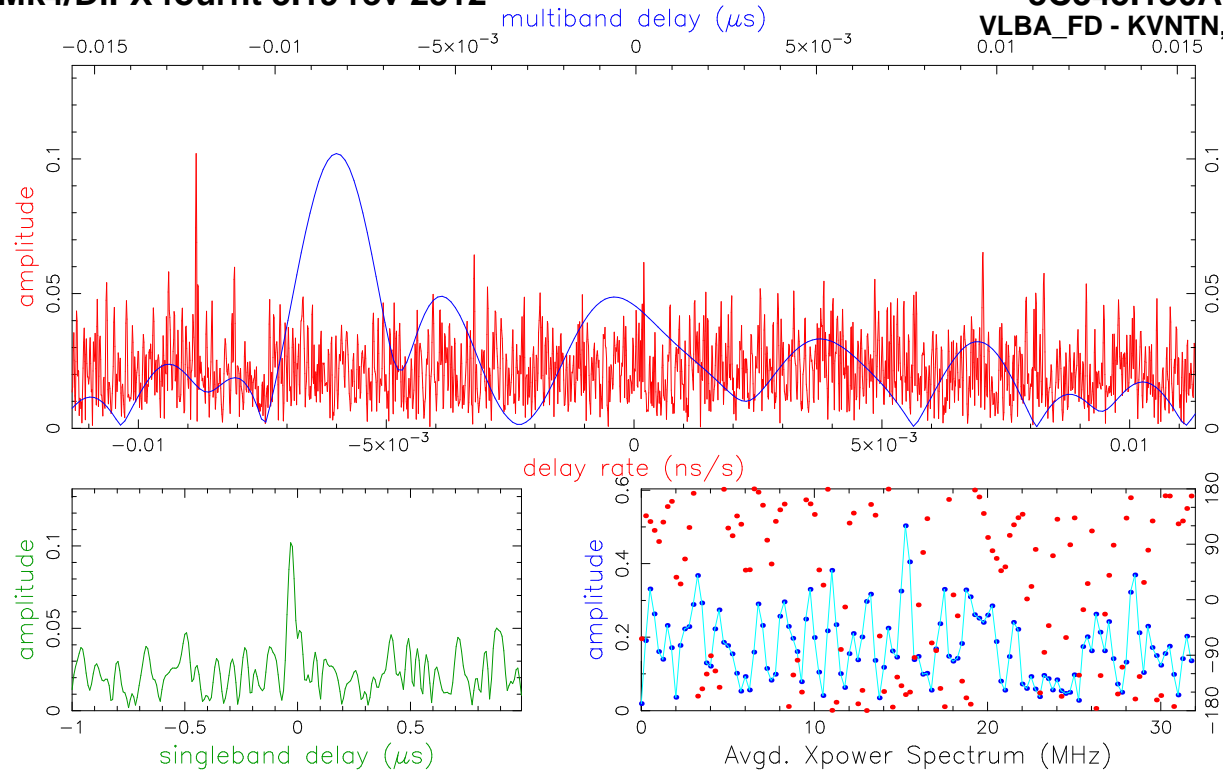
Group delay (usec)(sbd) -6.37958835239E+03 Apriori delay (usec) -6.38021898199E+03 Resid mbdelay (usec) 5.62960E-03 +/- 1.7E-04
 Sband delay (usec) -6.37958563549E+03 Apriori clock (usec) -2.7256317E+01 Resid sbdelay (usec) 6.33346E-01 +/- 2.7E-03
 Phase delay (usec) -6.38021898150E+03 Apriori clockrate (us/s) -2.9094950E-07 Resid phdelay (usec) 4.88199E-07 +/- 5.9E-07
 Delay rate (us/s) -1.78219467006E+00 Apriori rate (us/s) -1.78218590620E+00 Resid rate (us/s) -8.76386E-06 +/- 2.4E-09
 Total phase (deg) -24.0 Apriori accel (us/s/s) 3.09548586555E-05 Resid phase (deg) 15.1 +/- 18.2

RMS Theor. Amplitude 0.145 +/- 0.023 Pcd mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 41.0 31.6 Search (2048X64) 0.106 Pcd rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 65.5 55.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 52.0 36.5 Inc. seg. avg. 0.150 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 61.8 63.7 Inc. frq. avg. 0.154 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 301.9 el 27.8 pa 71.6 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 13331.915 1595.800 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ft..130A7B Output file: /Exps/c192a/v2/1234/No0041/ft.W.121.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ft
VLBA_FD - KVNTN, fgroup W, pol RL

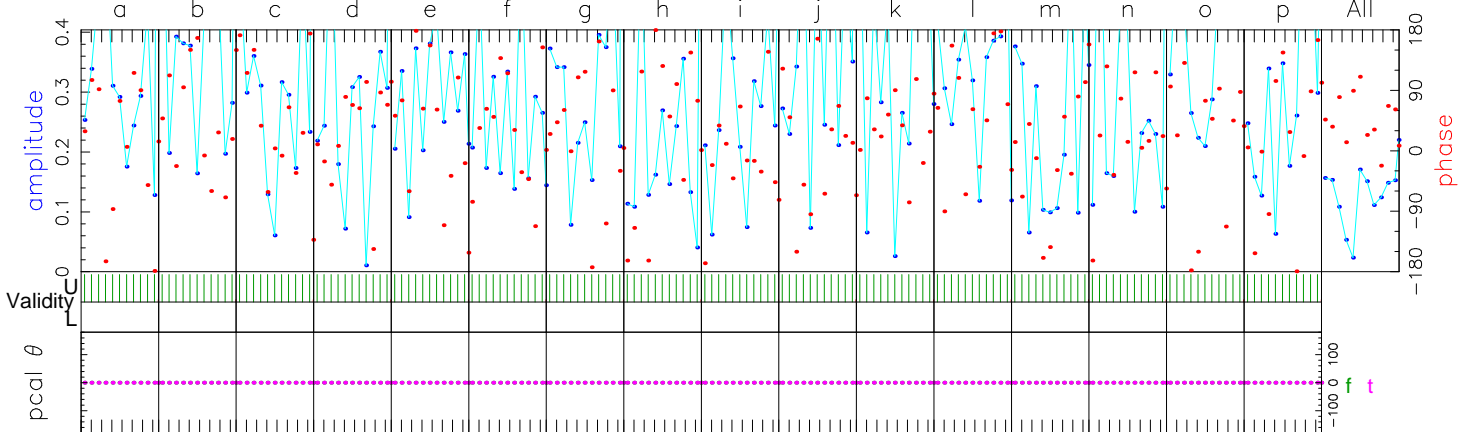


Fringe quality 0

SNR 5.8
Int time 419.830
Amp 0.135
Phase 48.9
PFD 8.2e-01
Delays (us)
SBD -0.028259
MBD -0.008297
Fringe rate (Hz)
-0.761932
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061734
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

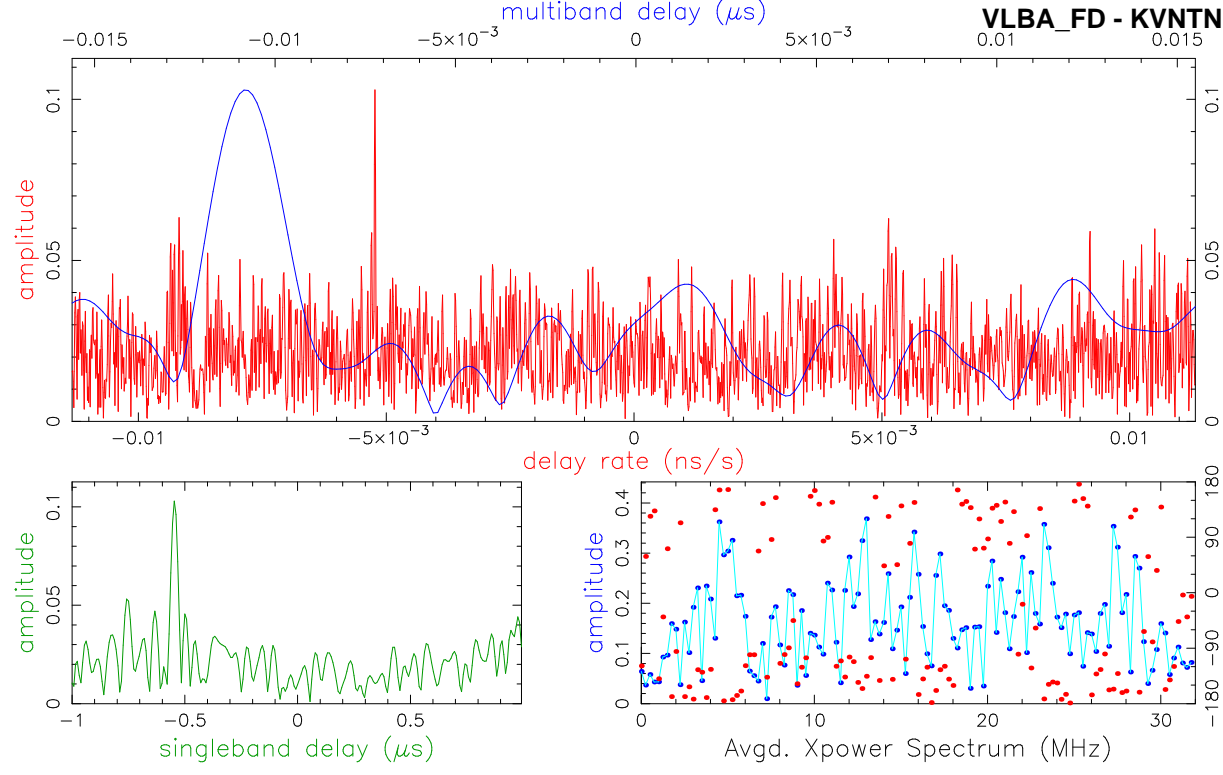


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
90.5	28.3	79.0	33.6	70.7	25.7	76.2	126.4	-4.8	14.7	31.4	91.8	1.7	37.7	86.8	71.8		Phase	48.9
0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.3	0.1	0.1	0.2	0.2	0.1		Ampl.	0.1
	186.8	198.0	242.3	154.6	92.2	246.0	161.9	88.3	219.0	119.3	124.6	63.5	241.2	227.9	182.7	37.2	Sbd box	125.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
ft	0:0	0:0	0:0	0:0	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	
ft	0:0	0:0	0:0	0:0	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd) -6.38025852940E+03 Apriori delay (usec) -6.38021898199E+03 Resid mbdelay (usec) -8.29741E-03 +/- 1.9E-04
 Sband delay (usec) -6.38024724049E+03 Apriori clock (usec) -2.7256317E+01 Resid sbdelay (usec) -2.82585E-02 +/- 3.0E-03
 Phase delay (usec) -6.38021898041E+03 Apriori clockrate (us/s) -2.9094950E-07 Resid phdelay (usec) -1.57719E-06 +/- 6.4E-07
 Delay rate (us/s) -1.78219475148E+00 Apriori rate (us/s) -1.78218590620E+00 Resid rate (us/s) -8.84528E-06 +/- 2.6E-09
 Total phase (deg) 9.8 Apriori accel (us/s/s) 3.09548586555E-05 Resid phase (deg) 48.9 +/- 19.8

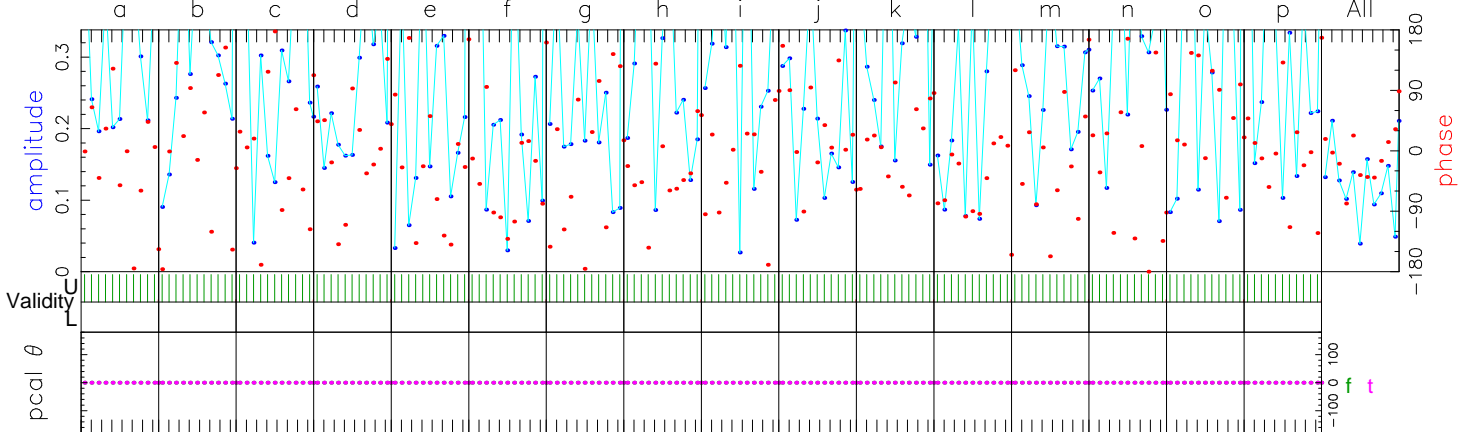
RMS Theor. Amplitude 0.135 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 36.1 34.2 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 47.9 59.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 39.3 39.5 Inc. seg. avg. 0.137 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 52.1 69.0 Inc. frq. avg. 0.129 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 301.9 el 27.8 pa 71.6 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 13331.915 1595.800 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ft..130A7B Output file: /Exps/c192a/v2/1234/No0041/ft.W.142.130A7B



Fringe quality 0
SNR 5.8
Int time 419.830
Amp 0.113
Phase -9.7
PFD 8.5e-01
Delays (us)
SBD -0.545835
MBD -0.010794
Fringe rate (Hz)
-0.450498
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061717
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



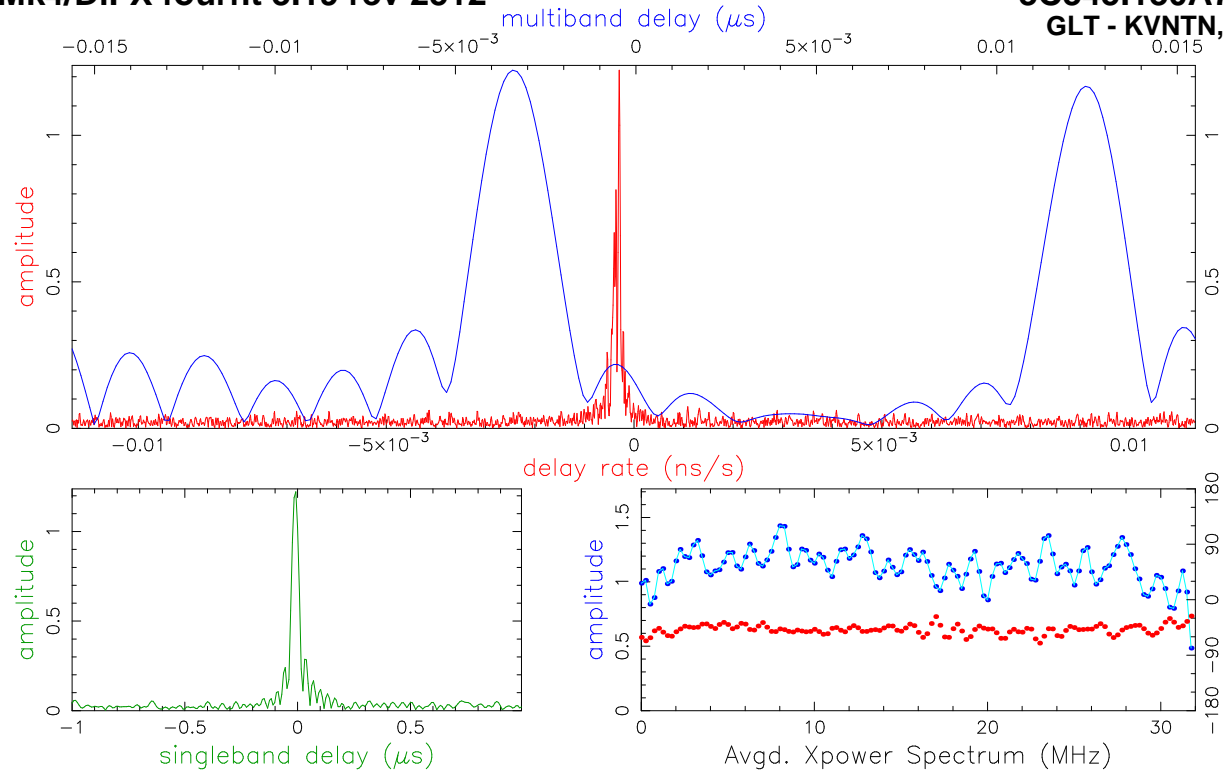
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
ft	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ft	0:0	0:0	0:0	0:0	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		
t	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		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)		-6.38076102556E+03																
Sband delay (usec)		-6.38076481699E+03																
Phase delay (usec)		-6.38021898230E+03																
Delay rate (us/s)		-1.78219113604E+00																
Total phase (deg)					-48.8													
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) 33.2 34.3
amp/seg (%) 48.2 59.9
ph/frq (deg) 53.3 39.7
amp/frq (%) 57.6 69.2
f: az 301.9 el 27.8 pa 71.6
Control file: cf_1234_gmva
t: az 65.6 el 48.4 pa -81.7
u,v (fr/asec) 13331.915 1595.800
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
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
ion window (TEC)
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00
simultaneous interpolator

Input file: /Exps/c192a/v2/1234/No0041/ft..130A7B
Output file: /Exps/c192a/v2/1234/No0041/ft.W.81.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, gt
GLT - KVNTN, fgroup W, pol RR

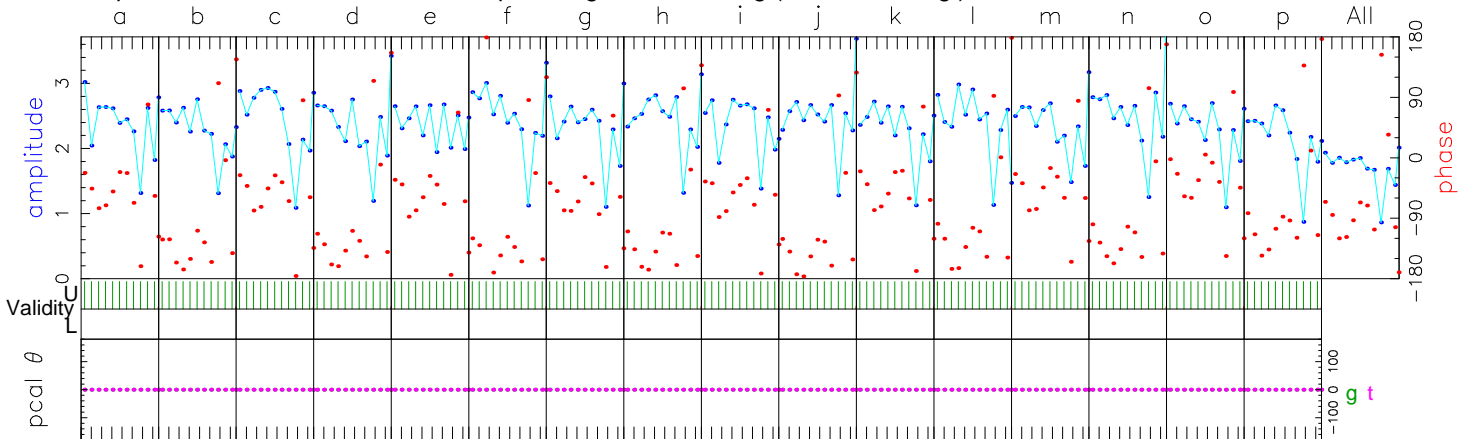


Fringe quality 2

SNR 69.4
Int time 419.610
Amp 1.239
Phase -89.9
PFD 0.0e+00
Delays (us)
SBD -0.010638
MBD -0.003391
Fringe rate (Hz)
-0.026017
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061724
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

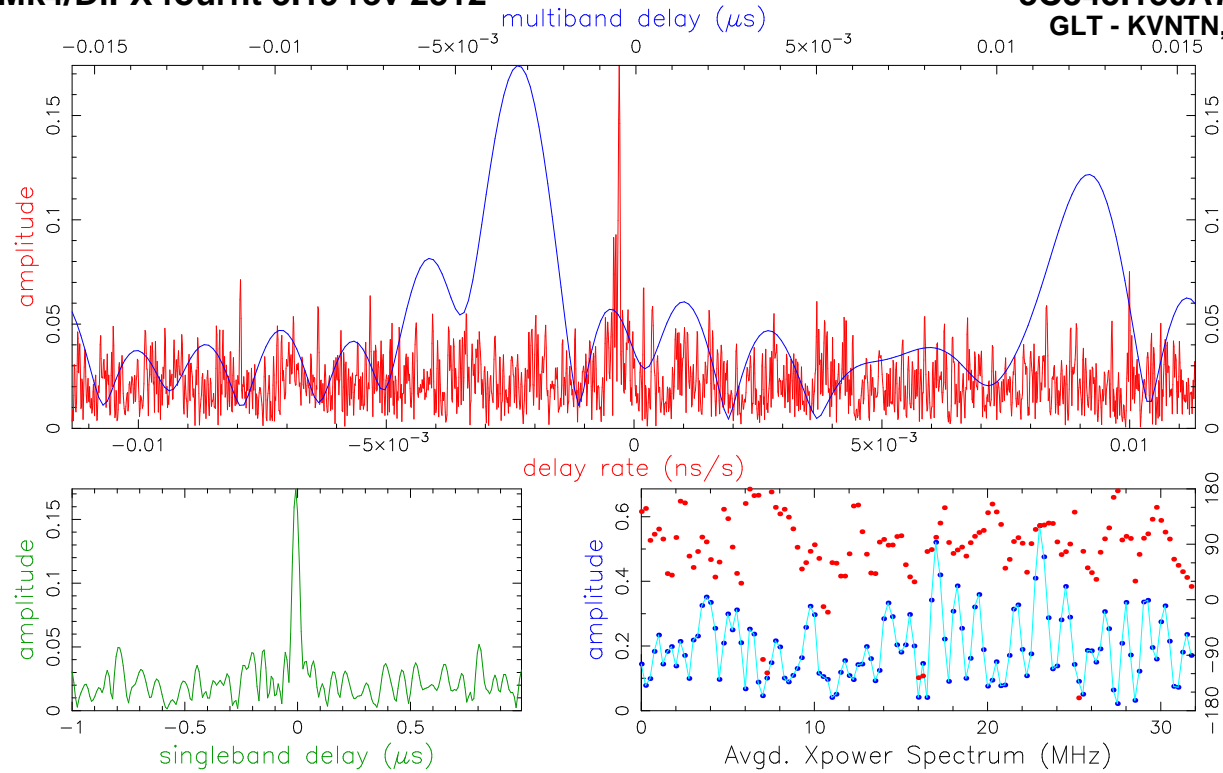


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-45.4	-137.6	-48.2	-132.6	-54.8	-142.6	-55.3	-137.3	-50.2	-144.5	-45.2	-129.5	-45.9	-126.0	-26.4	-107.2		Phase	-89.9
	1.7	1.7	1.8	1.7	1.6	1.8	1.7	1.8	1.7	1.7	1.6	1.7	1.6	1.7	1.6	1.6		Ampl.	1.7
	127.7	127.5	127.7	127.4	127.4	127.5	127.8	127.5	127.6	127.5	127.5	127.6	127.4	127.9	127.7	127.6		Sbd box	127.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
g:t	0:0	0:0	0:0	0:0	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:t	0:0	0:0	0:0	0:0	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	
t	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	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	-4.41656916382E+03			Apriori delay (usec)			-4.41656577328E+03			Resid mbdelay (usec)			-3.39054E-03			+/- 1.6E-05			
Sband delay (usec)	-4.41657641128E+03			Apriori clock (usec)			-2.6409302E+01			Resid sbdelay (usec)			-1.06380E-02			+/- 2.5E-04			
Phase delay (usec)	-4.41656577617E+03			Apriori clockrate (us/s)			-1.2500000E-07			Resid phdelay (usec)			-2.89758E-06			+/- 5.3E-08			
Delay rate (us/s)	-1.03020870092E+00			Apriori rate (us/s)			-1.03020839889E+00			Resid rate (us/s)			-3.02031E-07			+/- 2.2E-10			
Total phase (deg)	-345.4			Apriori accel (us/s/s)			5.39863166029E-05			Resid phase (deg)			-89.9			+/- 1.7			

ph/seg (deg) 54.8 2.9 Search (2048X64) 1.196 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 42.2 5.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.0 3.3 Inc. seg. avg. 1.674 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 37.2 5.8 Inc. frq. avg. 1.692 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 301.9 el 33.5 pa 14.8 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 7775.636 6326.804 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/gt..130A7B Output file: /Exps/c192a/v2/1234/No0041/gt.W.111.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, gt
GLT - KVNTN, fgroup W, pol LR

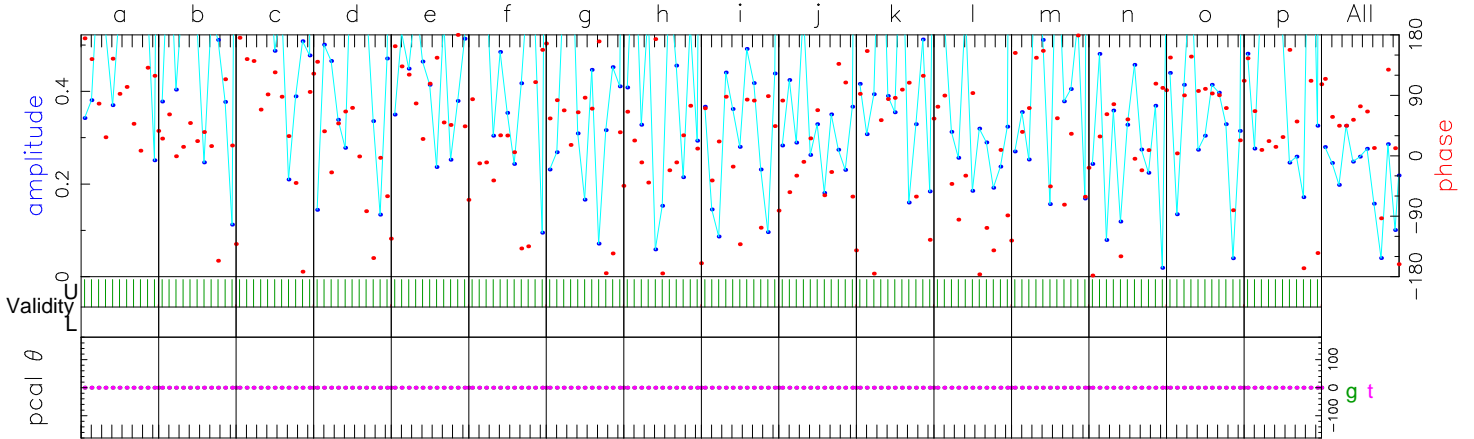


Fringe quality 9

SNR 9.7
Int time 419.605
Amp 0.174
Phase 66.2
PFD 8.0e-14
Delays (us)
SBD -0.008380
MBD -0.003260
Fringe rate (Hz)
-0.025376
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061730
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

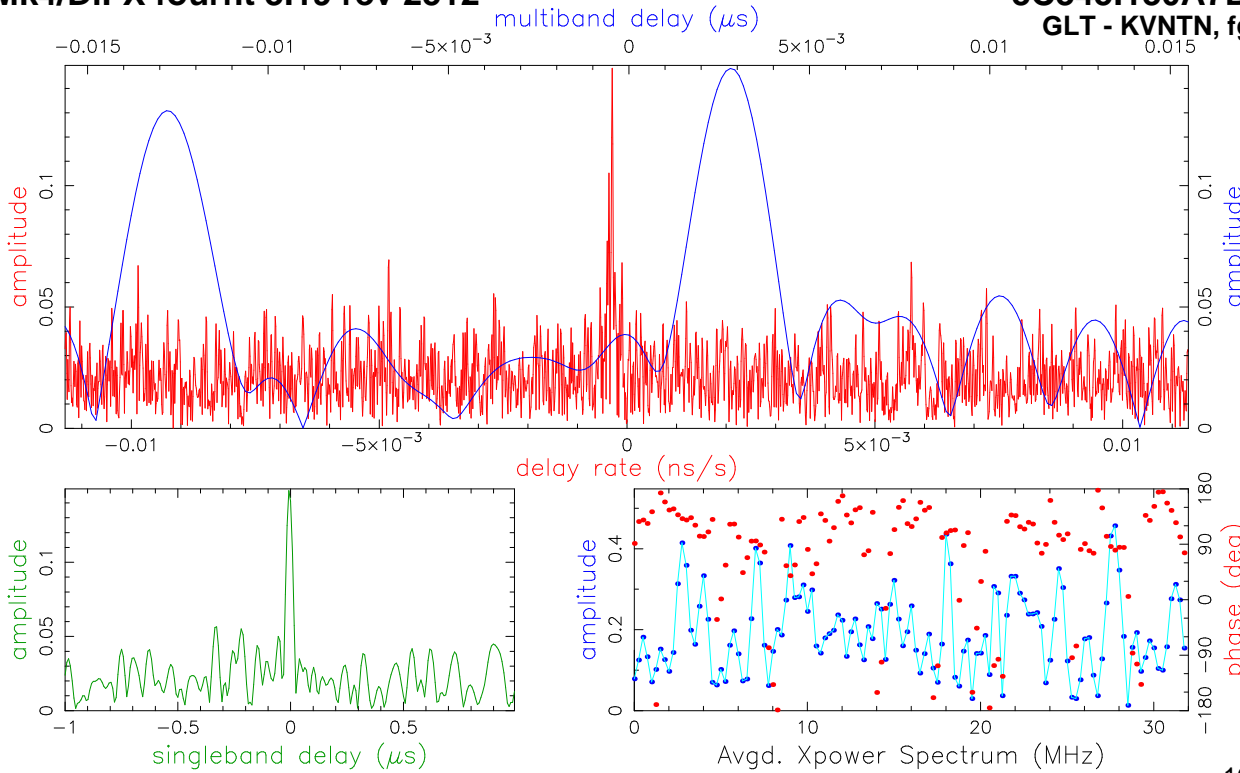


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
88.4	36.1	121.3	5.2	92.1	18.3	60.4	10.9	58.1	-5.3	97.5	-11.4	101.7	44.2	100.6	66.6	66.2	Phase	66.2				
0.4	0.3	0.4	0.2	0.3	0.1	0.2	0.3	0.1	0.2	0.3	0.0	0.1	0.2	0.3	0.2	0.2	Ampl.	0.2				
127.3	127.5	127.7	15.0	127.3	198.7	1.5	128.0	19.9	222.0	126.8	248.9	250.6	219.5	126.6	129.0	129.0	Sbd box	127.9				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:t	0:0	0:0	0:0	0:0	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:t	0:0	0:0	0:0	0:0	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					
t	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					
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-4.41656903288E+03														Apriori delay (usec)	-4.41656577328E+03	Resid mbdelay (usec)	-3.25960E-03	+/-	1.1E-04
Sband delay (usec)			-4.41657415378E+03														Apriori clock (usec)	-2.6409302E+01	Resid sbdelay (usec)	-8.38050E-03	+/-	1.8E-03
Phase delay (usec)			-4.41656577114E+03														Apriori clockrate (us/s)	-1.2500000E-07	Resid phdelay (usec)	2.13400E-06	+/-	3.8E-07
Delay rate (us/s)			-1.03020869349E+00														Apriori rate (us/s)	-1.03020839889E+00	Resid rate (us/s)	-2.94596E-07	+/-	1.6E-09
Total phase (deg)																	Apriori accel (us/s/s)	5.39863166029E-05	Resid phase (deg)	66.2	+/-	11.8

ph/seg (deg) 60.2 20.4 Search (2048X64) 0.165 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 54.5 35.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.8 23.5 Inc. seg. avg. 0.207 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 59.0 41.0 Inc. frq. avg. 0.206 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 301.9 el 33.5 pa 14.8 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 7775.636 6326.804 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/gt..130A7B Output file: /Exps/c192a/v2/1234/No0041/gt.W.128.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, gt
GLT - KVNTN, fgroup W, pol RL

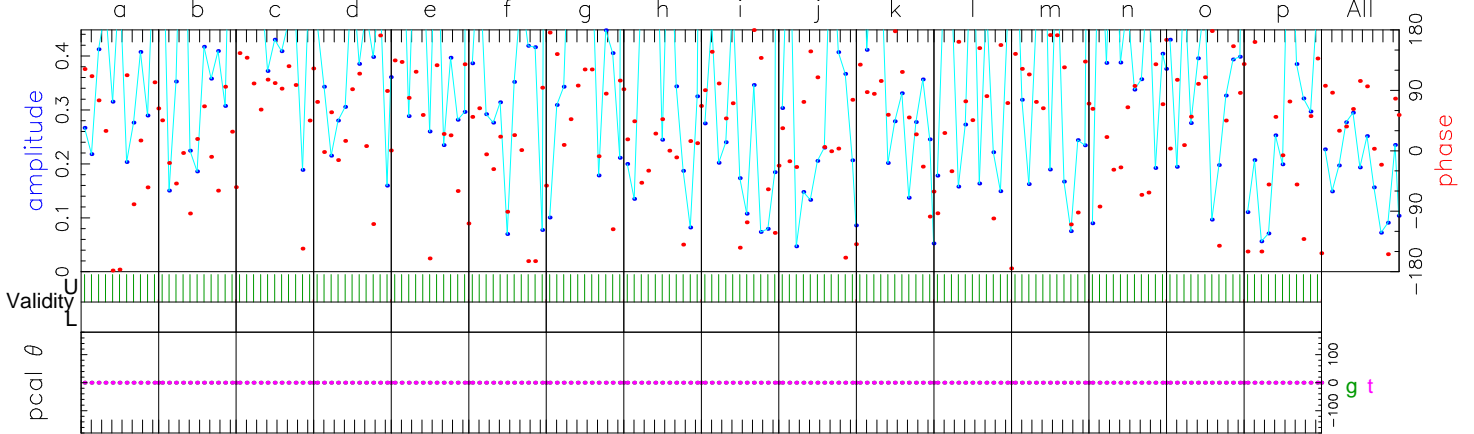


Fringe quality 9

SNR 8.4
Int time 419.610
Amp 0.150
Phase 67.0
PFD 2.0e-08
Delays (us)
SBD -0.005689
MBD 0.002837
Fringe rate (Hz)
-0.026205
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

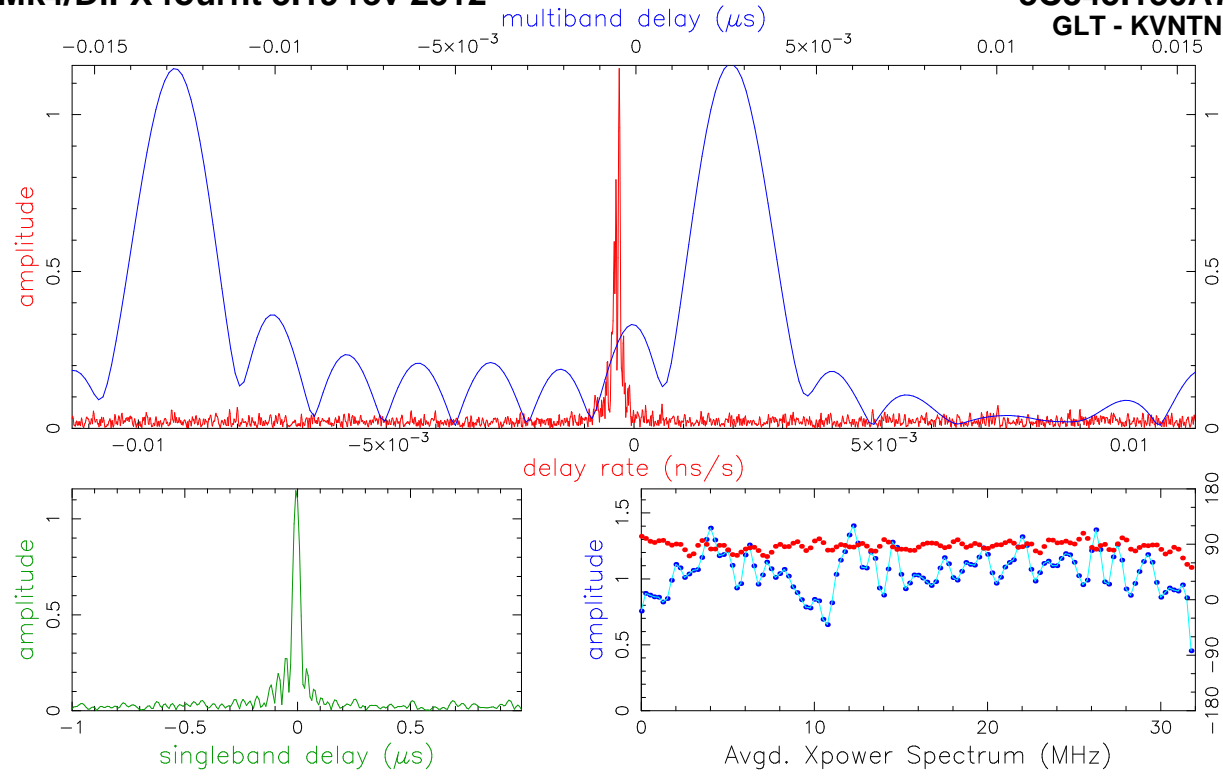
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061735
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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				
93.6	9.0	103.5	59.6	108.8	23.0	93.8	0.6	121.7	14.0	95.4	49.7	120.7	-13.8	78.1	87.3	87.3	Phase	67.0				
0.1	0.3	0.4	0.2	0.3	0.1	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2				
103.3	128.0	127.8	63.0	128.2	10.3	128.4	128.1	146.1	66.2	141.0	129.6	128.9	133.9	243.5	219.5	219.5	Sbd box	128.3				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:t	0:0	0:0	0:0	0:0	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:t	0:0	0:0	0:0	0:0	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					
t	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					
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-4.41656293580E+03														Apriori delay (usec)	-4.41656577328E+03	Resid mbdelay (usec)	2.83748E-03	+/-	1.3E-04
Sband delay (usec)			-4.41657146228E+03														Apriori clock (usec)	-2.6409302E+01	Resid sbdelay (usec)	-5.68900E-03	+/-	2.1E-03
Phase delay (usec)			-4.41656577111E+03														Apriori clockrate (us/s)	-1.2500000E-07	Resid phdelay (usec)	2.16103E-06	+/-	4.4E-07
Delay rate (us/s)			-1.03020870310E+00														Apriori rate (us/s)	-1.03020839889E+00	Resid rate (us/s)	-3.04210E-07	+/-	1.8E-09
Total phase (deg)																	Apriori accel (us/s/s)	5.39863166029E-05	Resid phase (deg)	67.0	+/-	13.7

ph/seg (deg) 57.8 23.7 Search (2048X64) 0.139 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 55.0 41.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 47.2 27.4 Inc. seg. avg. 0.179 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 66.0 47.8 Inc. frq. avg. 0.187 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 301.9 el 33.5 pa 14.8 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 7775.636 6326.804 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/gt..130A7B Output file: /Exps/c192a/v2/1234/No0041/gt.W.150.130A7B

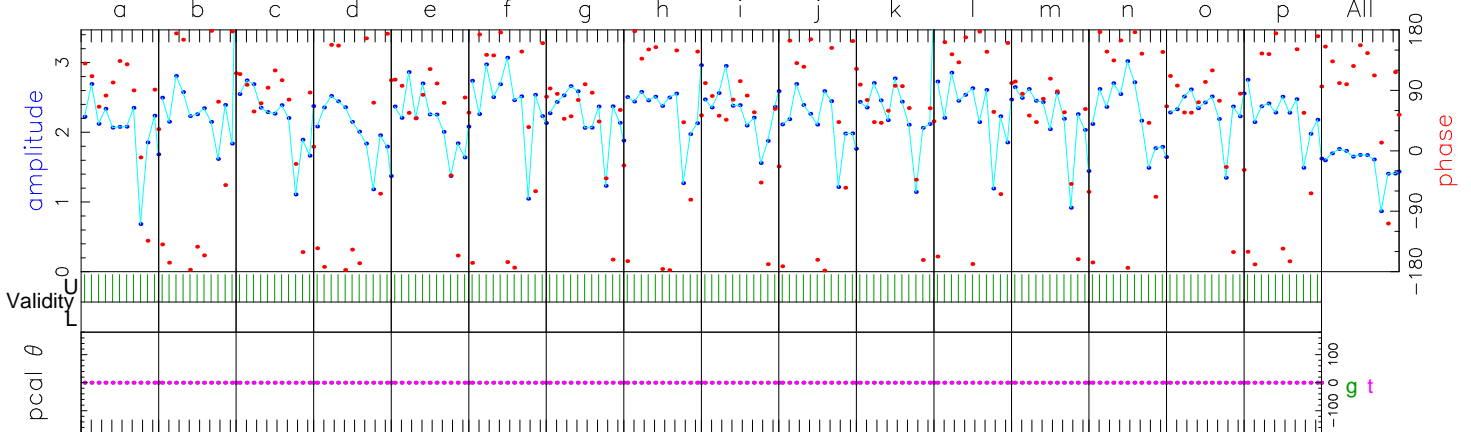


Fringe quality 1

SNR 64.8
Int time 419.605
Amp 1.157
Phase 128.3
PFD 0.0e+00
Delays (us)
SBD -0.005559
MBD -0.012773
Fringe rate (Hz)
-0.025998
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061718
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

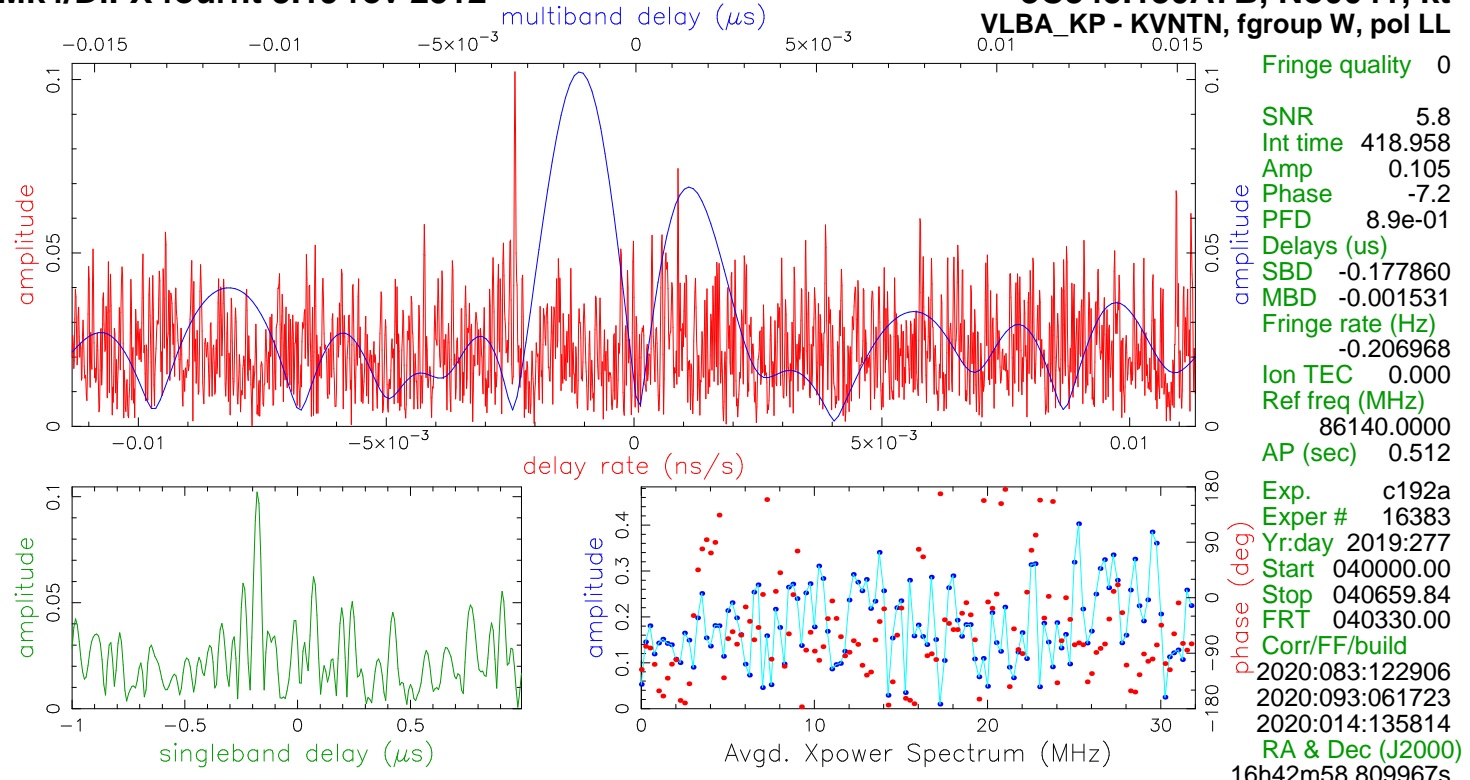


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
106.1	-168.8	92.8	-175.9	85.6	171.7	72.2	165.3	73.0	162.4	72.7	166.1	78.3	164.4	87.6	178.8	178.8	Phase	128.3
1.6	1.6	1.7	1.5	1.6	1.8	1.6	1.7	1.7	1.5	1.7	1.7	1.6	1.7	1.6	1.6	1.6	Ampl.	1.6
128.4	128.3	128.5	128.4	128.3	128.1	128.4	128.2	128.3	128.3	128.3	128.5	128.3	128.4	128.5	128.5	128.5	Sbd box	128.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:t	0:0	0:0	0:0	0:0	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:t	0:0	0:0	0:0	0:0	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-4.41657854675E+03			Apriori delay (usec)			-4.41656577328E+03			Resid mbdelay (usec)			-1.27735E-02			+/- 1.7E-05		
Sband delay (usec)	-4.41657133278E+03			Apriori clock (usec)			-2.6409302E+01			Resid sbdelay (usec)			-5.55950E-03			+/- 2.7E-04		
Phase delay (usec)	-4.41656576914E+03			Apriori clockrate (us/s)			-1.2500000E-07			Resid phdelay (usec)			4.13666E-06			+/- 5.7E-08		
Delay rate (us/s)	-1.03020870070E+00			Apriori rate (us/s)			-1.03020839889E+00			Resid rate (us/s)			-3.01807E-07			+/- 2.4E-10		
Total phase (deg)	-127.3			Apriori accel (us/s/s)			5.39863166029E-05			Resid phase (deg)			128.3			+/- 1.8		

ph/seg (deg) 54.6 3.1 Search (2048X64) 1.126 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 40.2 5.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 49.1 3.5 Inc. seg. avg. 1.551 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 42.4 6.2 Inc. frq. avg. 1.640 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 301.9 el 33.5 pa 14.8 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 7775.636 6326.804 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/gt..130A7B Output file: /Exps/c192a/v2/1234/No0041/gt.W.88.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, kt
VLBA_KP - KVNTN, fgroup W, pol LL



Fringe quality 0

SNR 5.8

Int time 418.958

Amp 0.105

Phase -7.2

PFD 8.9e-01

Delays (us)

SBD -0.177860

MBD -0.001531

Fringe rate (Hz)

-0.206968

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Exper # 16383

Yr:day 2019:277

Start 040000.00

Stop 040659.84

FRT 040330.00

Corr/FF/build

2020:083:122906

2020:093:061723

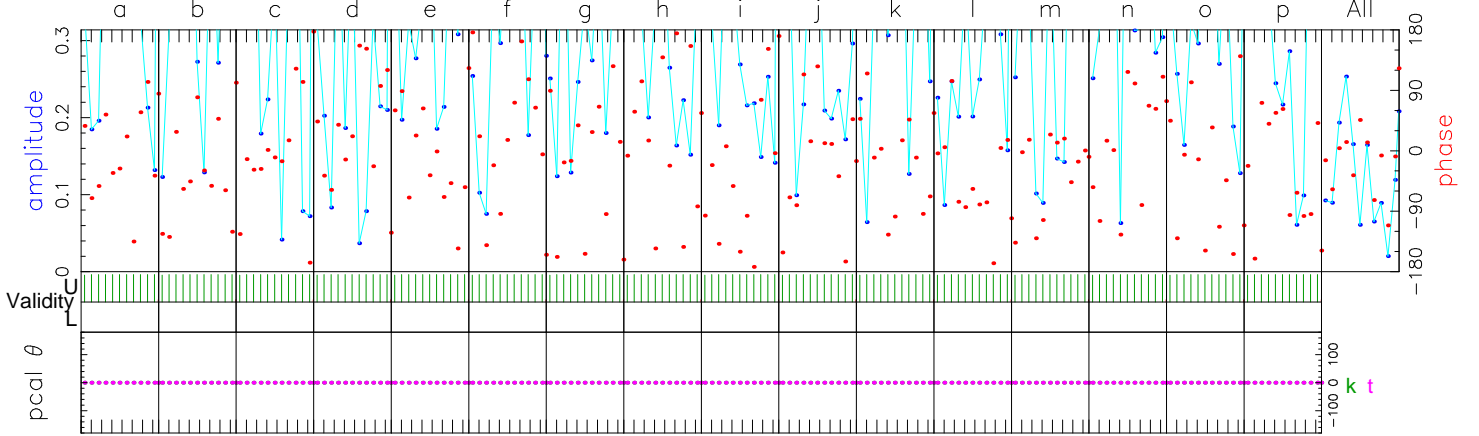
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:t	0:0	0:0	0:0	0:0	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		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)		-4.36019885921E+03																
Sband delay (usec)		-4.36018768753E+03																
Phase delay (usec)		-4.36000982826E+03																
Delay rate (us/s)		-1.73266595457E+00																
Total phase (deg)						-218.3												
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
Pcal mode: MANUAL, MANUAL																		
Pcal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(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 θ																		
pcal mode: MANUAL, MANUAL																		
PC period (AP's) 5, 5																		
simultaneous interpolator																		

ph/seg (deg) 46.3 34.5 Search (2048X64) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 65.6 60.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 44.4 39.9 Inc. seg. avg. 0.104 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

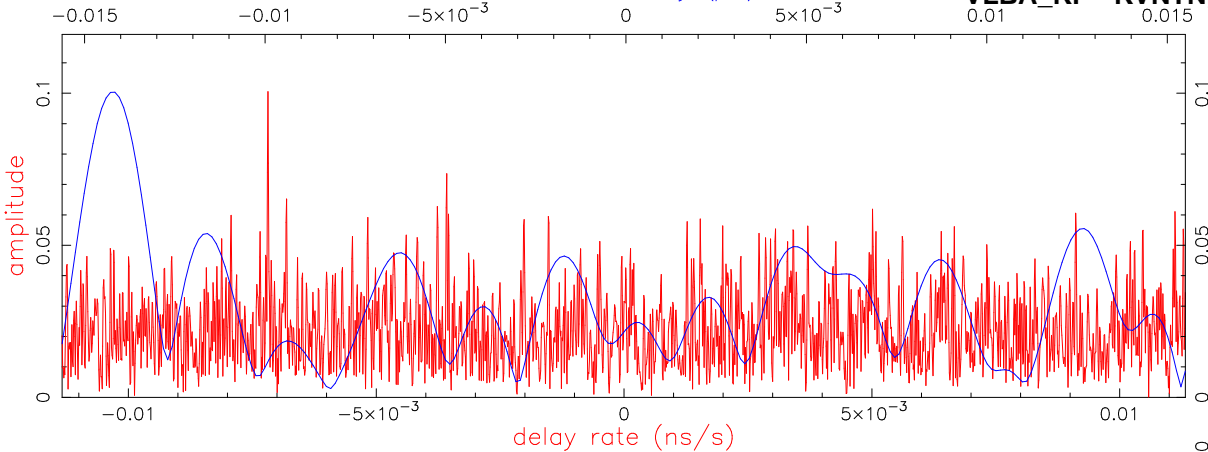
amp/frq (%) 60.8 69.6 Inc. frq. avg. 0.104 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

k: az 299.2 el 34.1 pa 74.3 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 12947.261 1124.856 ion window (TEC) 0.00 0.00

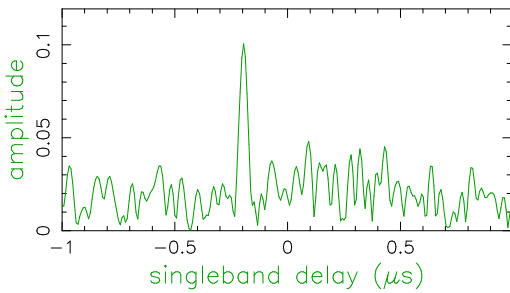
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/kt..130A7B Output file: /Exps/c192a/v2/1234/No0041/kt.W.103.130A7B

multiband delay (μ s)

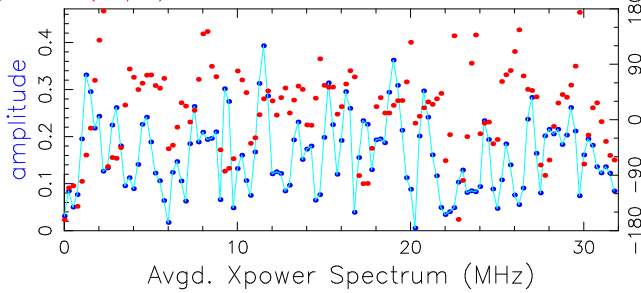
Fringe quality 0



SNR 5.6
Int time 418.958
Amp 0.119
Phase 60.6
PFD 9.9e-01
Delays (us)
SBD -0.194992
MBD -0.014215
Fringe rate (Hz)
-0.620029
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

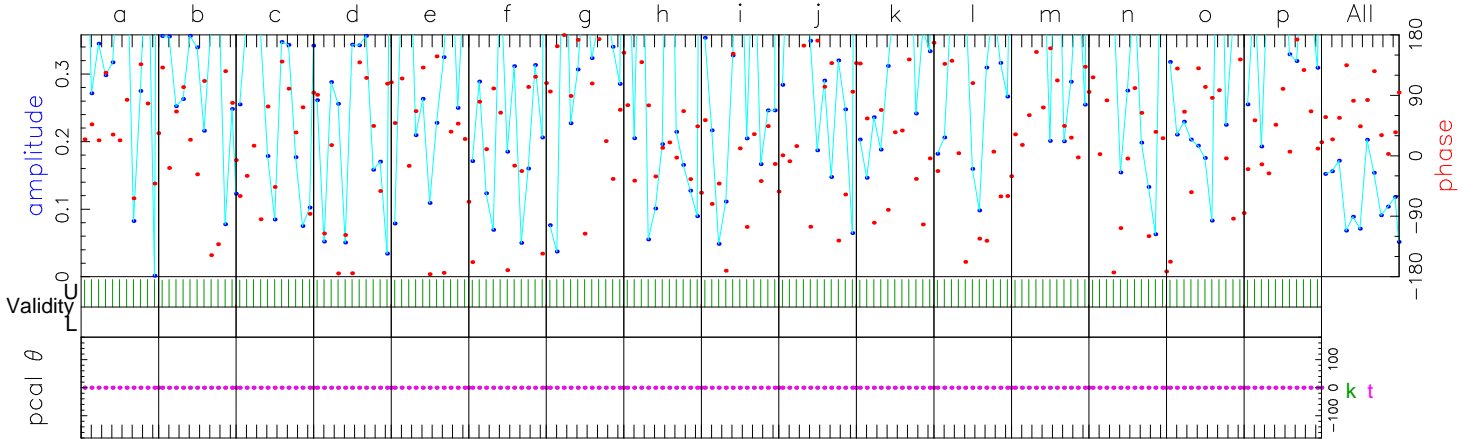


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061728
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



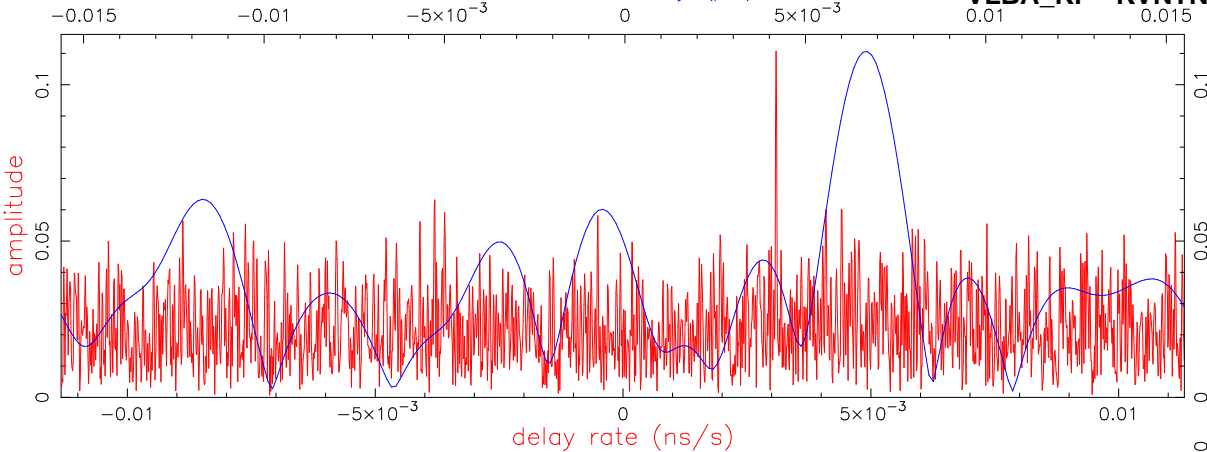
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k:t	0:0	0:0	0:0	0:0	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			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
Group delay (usec)(sbd)			-4.36021154253E+03																
Sband delay (usec)			-4.36020482053E+03																
Phase delay (usec)			-4.36000982607E+03																
Delay rate (us/s)			-1.73267074981E+00																
Total phase (deg)					-150.5														
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																			
ion window (TEC)																			
sb window (us)																			
mb window (us)																			
dr window (ns/s)																			
ion window (TEC)																			

ph/seg (deg) RMS Theor. Amplitude 0.119 +/- 0.021 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 48.9 61.6 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 56.8 40.7 Inc. seg. avg. 0.124 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 79.4 71.1 Inc. frq. avg. 0.120 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 299.2 el 34.1 pa 74.3 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 12947.261 1124.856 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/kt..130A7B Output file: /Exps/c192a/v2/1234/No0041/kt.W.122.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

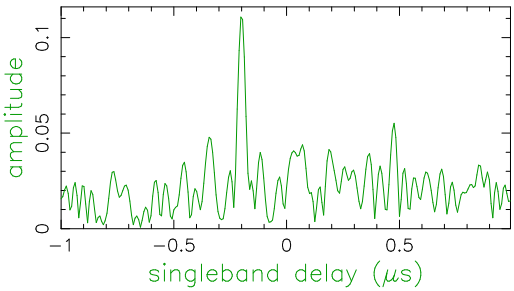
3C345.130A7B, No0041, kt
VLBA_KP - KVNTN, fgroup W, pol LR

multiband delay (μ s)

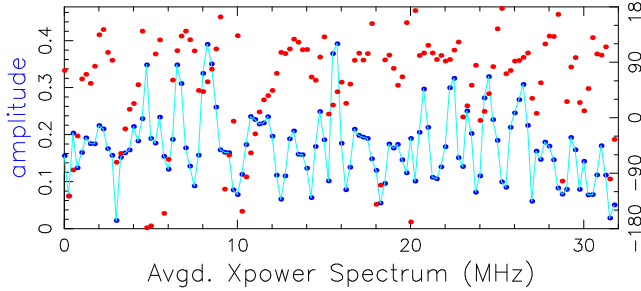


Fringe quality 0

SNR 6.3
Int time 418.958
Amp 0.116
Phase -22.6
PFD 7.7e-02
Delays (us)
SBD -0.199725
MBD 0.006696
Fringe rate (Hz)
0.266456
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

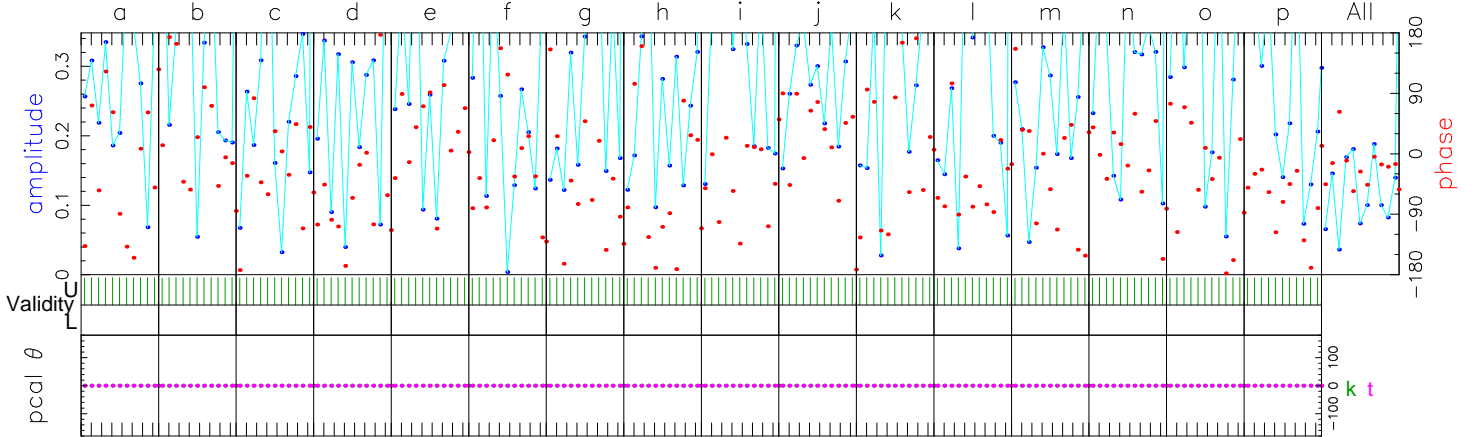


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061734
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



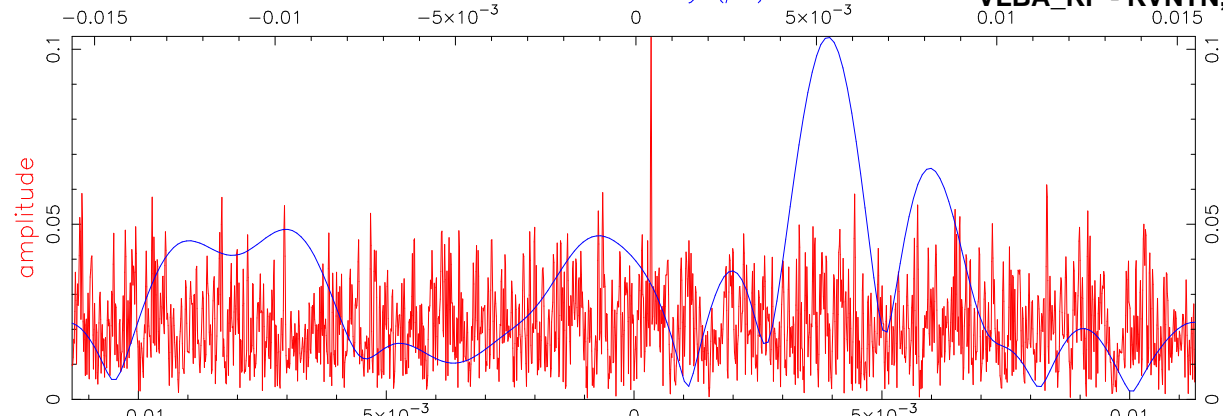
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-112.6	8.1	-34.3	-71.9	46.2	-36.6	-35.5	-141.5	-23.5	38.5	59.3	-50.4	-41.9	-2.8	-12.8	-50.8		Phase	-22.6				
	0.0	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.0	0.2	0.0	0.2	0.2	0.2		Ampl.	0.1				
	184.5	16.4	223.2	213.7	103.7	105.4	233.5	246.7	190.0	232.5	165.6	103.3	245.1	59.8	35.7	104.0		Sbd box	103.4				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
k:t	0:0	0:0	0:0	0:0	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					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-4.36022188206E+03															Apriori delay (usec)	-4.36000982803E+03	Resid mbdelay (usec)	6.69597E-03	+/-	1.7E-04
Sband delay (usec)			-4.36020955353E+03															Apriori clock (usec)	-2.8116564E+01	Resid sbdelay (usec)	-1.99725E-01	+/-	2.7E-03
Phase delay (usec)			-4.36000982876E+03															Apriori clockrate (us/s)	-3.9457898E-07	Resid phdelay (usec)	-7.30286E-07	+/-	5.9E-07
Delay rate (us/s)			-1.73266045859E+00															Apriori rate (us/s)	-1.73266355188E+00	Resid rate (us/s)	3.09329E-06	+/-	2.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	2.16307239907E-05	Resid phase (deg)	-22.6	+/-	18.2

	RMS	Theor.	Amplitude	0.116 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	30.3	31.5	Search (2048X64)	0.104	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	52.6	55.0	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	55.9	36.4	Inc. seg. avg.	0.107	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	69.5	63.5	Inc. frq. avg.	0.127	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

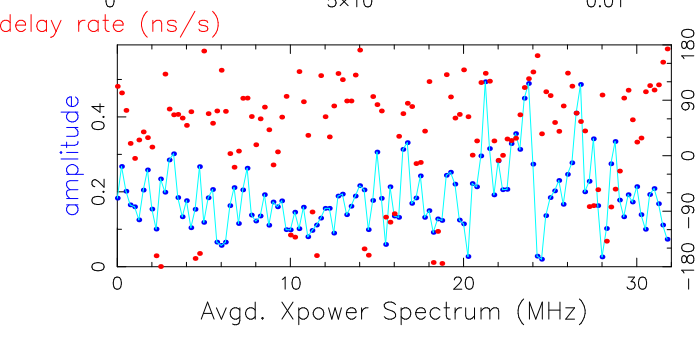
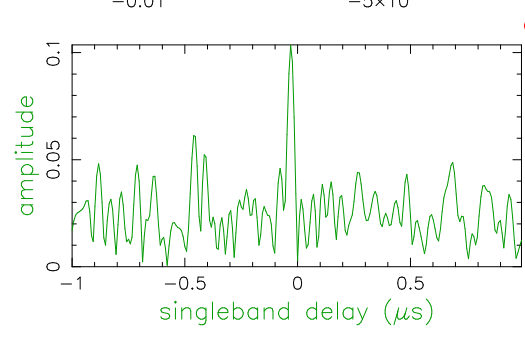
k: az 299.2 el 34.1 pa 74.3 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 12947.261 1124.856 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/kt..130A7B Output file: /Exps/c192a/v2/1234/No0041/kt.W.141.130A7B

multiband delay (μ s)

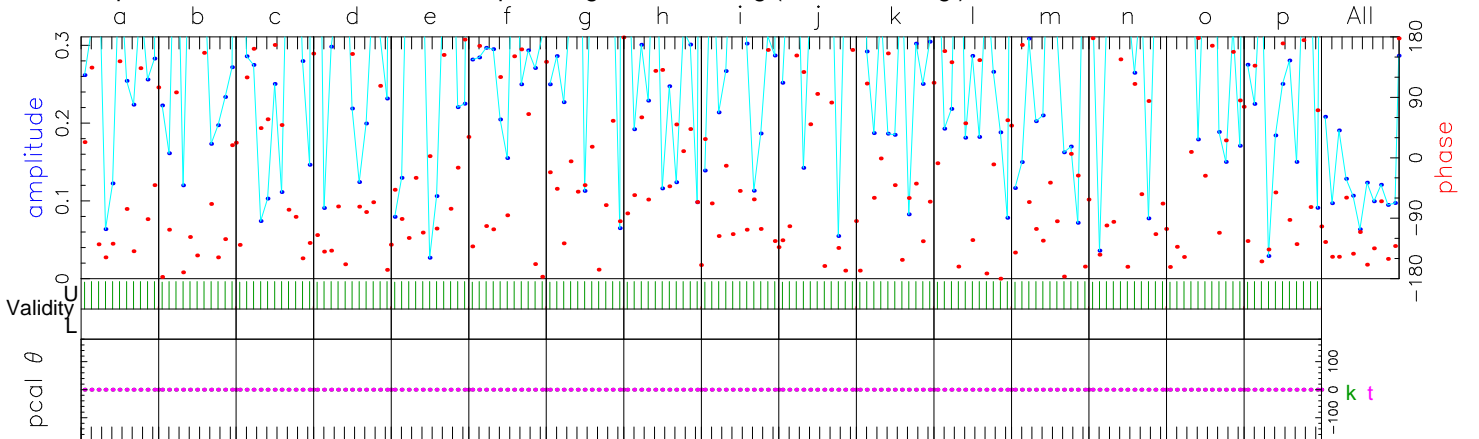


Fringe quality 0
SNR 5.8
Int time 418.958
Amp 0.104
Phase -128.1
PFD 8.1e-01
Delays (us)
SBD -0.030125
MBD 0.005342
Fringe rate (Hz)
0.029166
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061738
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	
	-159.0	-160.3	-134.8	-124.8	-94.6	-175.3	-39.3	2.1	-86.8	157.1	-117.3	-177.3	-100.7	-122.7	-159.9	-137.8		Phase	-128.1
	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1		Ampl.	0.1
	146.2	73.9	42.1	14.0	78.6	202.7	3.8	231.3	125.4	123.9	168.6	57.8	251.8	131.4	96.8	57.3		Sbd box	125.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
k:t	0:0	0:0	0:0	0:0	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

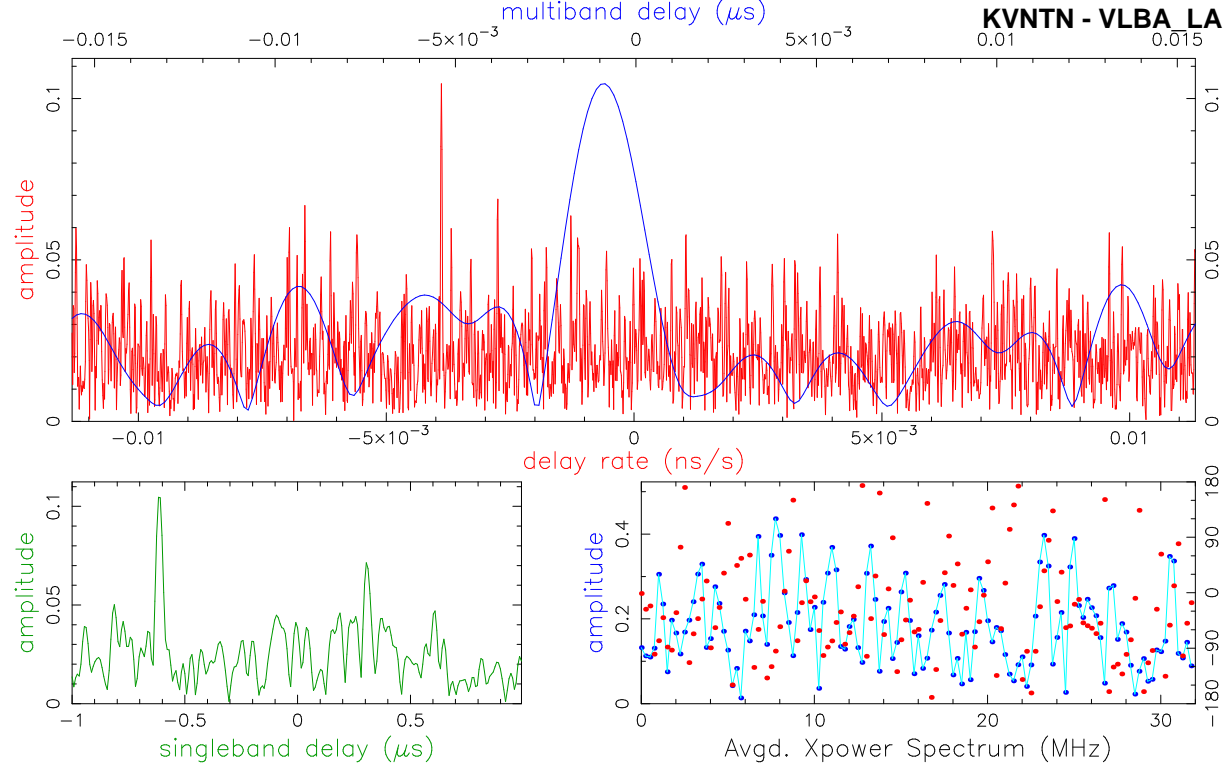
Group delay (usec)(sbd) -4.36003573601E+03 Apriori delay (usec) -4.36000982803E+03 Resid mbdelay (usec) 5.34202E-03 +/- 1.9E-04
 Sband delay (usec) -4.36003995303E+03 Apriori clock (usec) -2.8116564E+01 Resid sbdelay (usec) -3.01250E-02 +/- 3.0E-03
 Phase delay (usec) -4.36000983216E+03 Apriori clockrate (us/s) -3.9457898E-07 Resid phdelay (usec) -4.12938E-06 +/- 6.4E-07
 Delay rate (us/s) -1.73266321330E+00 Apriori rate (us/s) -1.73266355188E+00 Resid rate (us/s) 3.38585E-07 +/- 2.6E-09
 Total phase (deg) -339.1 Apriori accel (us/s/s) 2.16307239907E-05 Resid phase (deg) -128.1 +/- 19.8

RMS Theor. Amplitude 0.104 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 32.6 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 (%) 45.0 59.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 54.8 39.5 Inc. seg. avg. 0.104 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 55.7 69.0 Inc. frq. avg. 0.117 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 299.2 el 34.1 pa 74.3 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 12947.261 1124.856 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/kt..130A7B Output file: /Exps/c192a/v2/1234/No0041/kt.W.158.130A7B

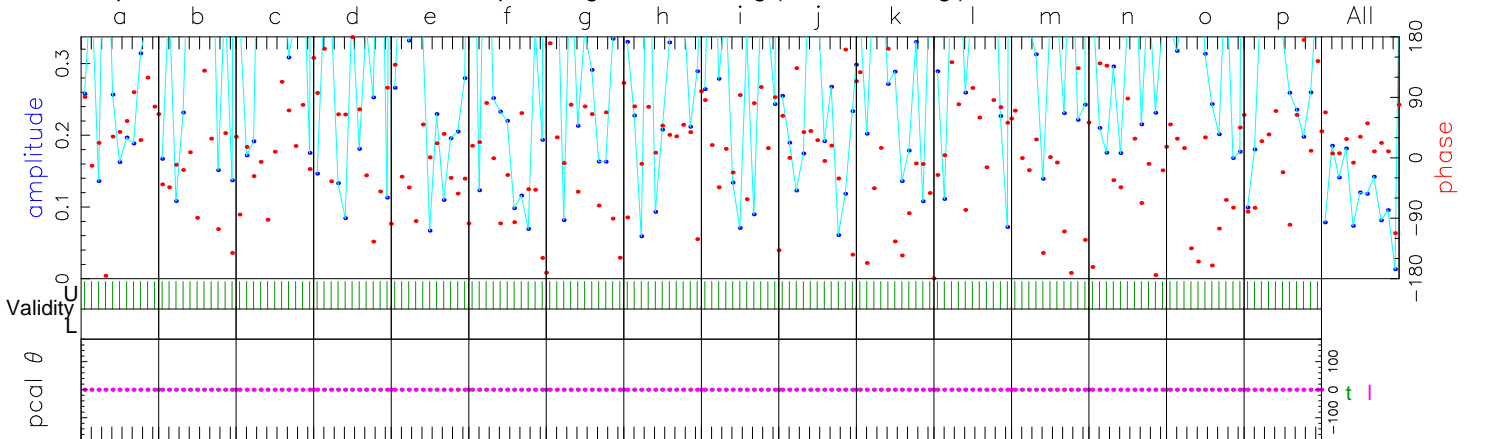
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tl
KVNTN - VLBA LA, fgroup W, pol LL



Fringe quality 0
SNR 6.0
Int time 419.829
Amp 0.112
Phase 21.8
PFD 4.0e-01
Delays (us)
SBD -0.613389
MBD -0.000860
Fringe rate (Hz)
-0.335263
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061745
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

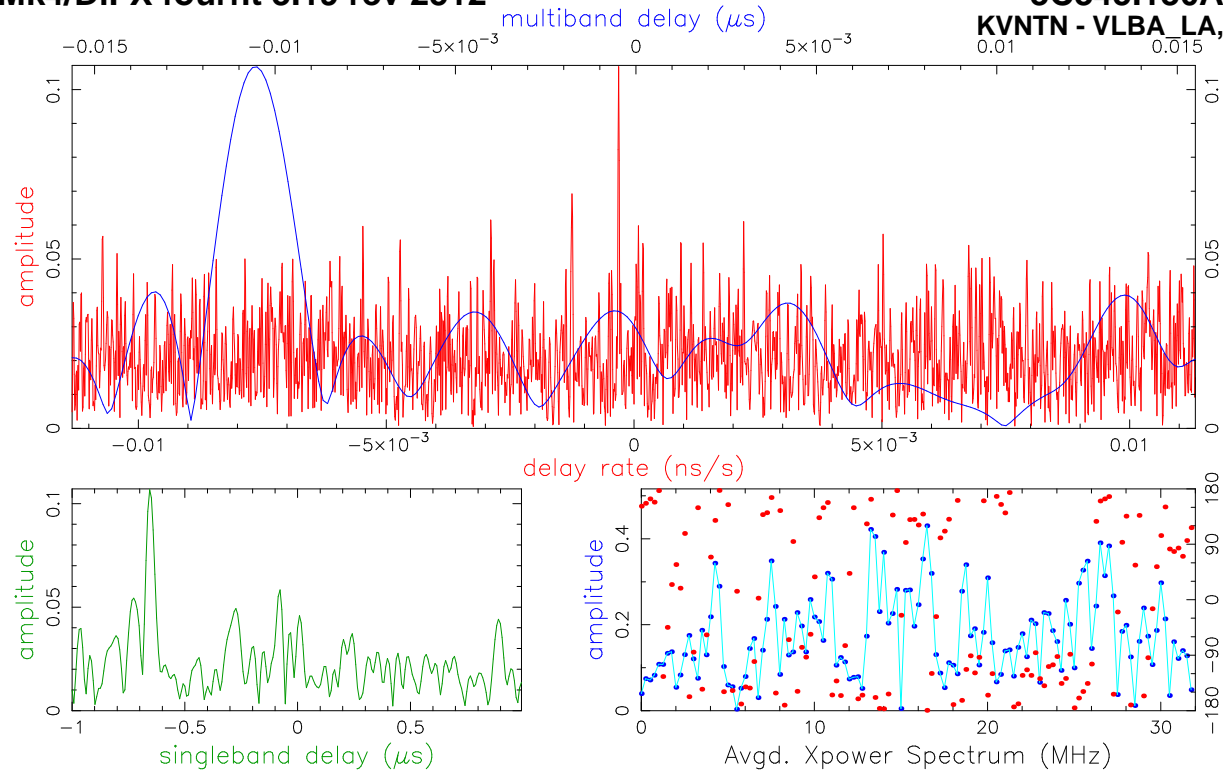


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
72.4	1.4	19.9	-58.1	-24.8	7.6	61.9	41.6	26.2	34.3	-58.5	65.3	3.0	4.5	-51.7	32.8	32.8	Phase	21.8
0.2	0.2	0.2	0.0	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
162.6	19.4	224.1	197.9	221.4	82.1	17.9	158.0	44.2	230.5	187.2	212.2	167.5	141.1	97.9	45.6	45.6	Sbd box	50.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 4.99998123917E+03 Apriori delay (usec) 5.00060709955E+03 Resid mbdelay (usec) -8.60386E-04 +/- 1.8E-04
 Sband delay (usec) 4.99999371005E+03 Apriori clock (usec) 2.8460262E+01 Resid sbdelay (usec) -6.13389E-01 +/- 2.9E-03
 Phase delay (usec) 5.00060710026E+03 Apriori clockrate (us/s) 5.5147201E-07 Resid phdelay (usec) 7.02046E-07 +/- 6.2E-07
 Delay rate (us/s) 1.71657175042E+00 Apriori rate (us/s) 1.71657564248E+00 Resid rate (us/s) -3.89207E-06 +/- 2.5E-09
 Total phase (deg) 221.8 Apriori accel (us/s/s) -2.90278063432E-05 Resid phase (deg) 21.8 +/- 19.1

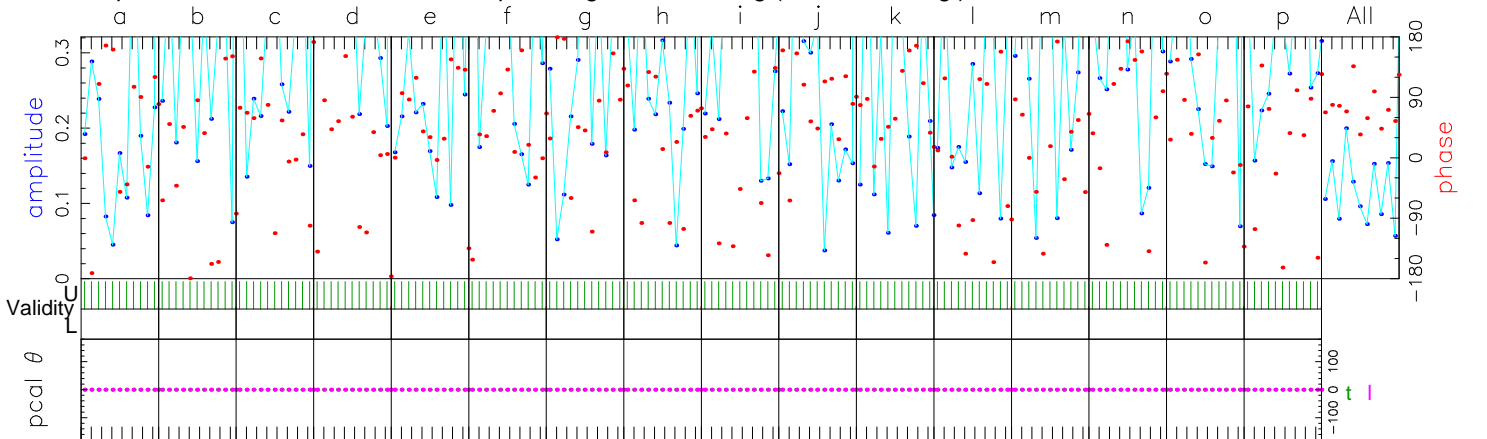
ph/seg (deg) 45.5 33.1 Amplitude 0.112 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.5 57.7 Search (2048X64) 0.099 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.1 38.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 46.7 66.7 Inc. seg. avg. 0.103 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.110 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 l: az 298.6 el 32.1 pa 68.3 u, v (fr/asec) -12840.942 -1986.563 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tl..130A7B Output file: /Exps/c192a/v2/1234/No0041/tl.W.180.130A7B

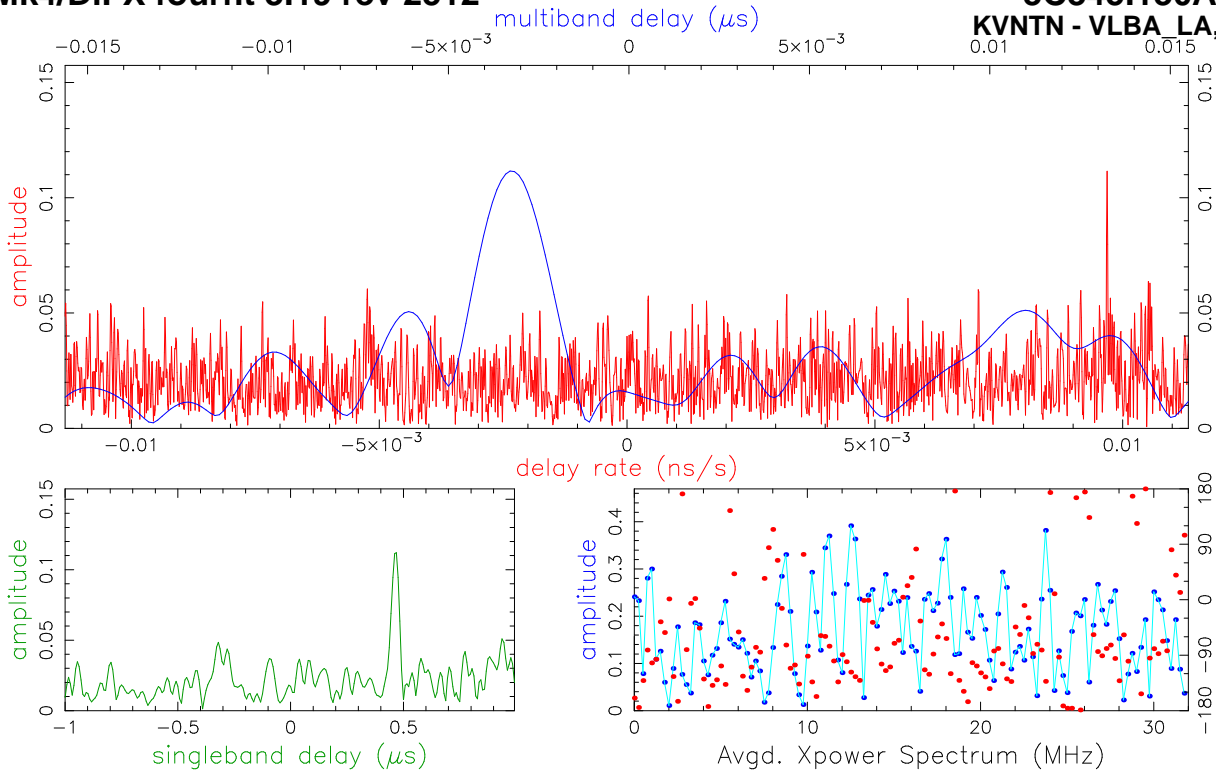


Fringe quality 0
SNR 6.0
Int time 419.829
Amp 0.107
Phase 75.8
PFD 4.0e-01
Delays (us)
SBD -0.654585
MBD -0.010562
Fringe rate (Hz)
-0.027206
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061750
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	Phase	75.8
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	Ampl.	0.1
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	45.2
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	ManI PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	4.99994028709E+03			Apriori delay (usec)			5.00060709955E+03			Resid mbdelay (usec)			-1.05625E-02			+/- 1.8E-04			
Sband delay (usec)	4.99995251405E+03			Apriori clock (usec)			2.8460262E+01			Resid sbdelay (usec)			-6.54585E-01			+/- 2.9E-03			
Phase delay (usec)	5.00060710200E+03			Apriori clockrate (us/s)			5.5147201E-07			Resid phdelay (usec)			2.44467E-06			+/- 6.2E-07			
Delay rate (us/s)	1.71657532665E+00			Apriori rate (us/s)			1.71657564248E+00			Resid rate (us/s)			-3.15835E-07			+/- 2.5E-09			
Total phase (deg)	275.8			Apriori accel (us/s/s)			-2.90278063432E-05			Resid phase (deg)			75.8			+/- 19.1			
ph/seg (deg)	RMS	Theor.	Amplitude			0.107 +/- 0.018			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5							
amp/seg (%)	26.8	33.1	Search (2048X64)			0.098			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000				
ph/frq (deg)	44.7	57.7	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016		
amp/frq (%)	41.3	38.2	Inc. seg. avg.			0.102			Sample rate(MISamp/s): 64			dr window (ns/s)			-0.011 0.011				
	48.2	66.7	Inc. frq. avg.			0.101			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)		0.00 0.00		
t: az 65.6 el 48.4 pa -81.7	l: az 298.6 el 32.1 pa 68.3			u, v (fr/asec)			-12840.942 -1986.563									simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c192a/v2/1234/No0041/tl..130A7B			Output file: /Exps/c192a/v2/1234/No0041/tl.W.196.130A7B															

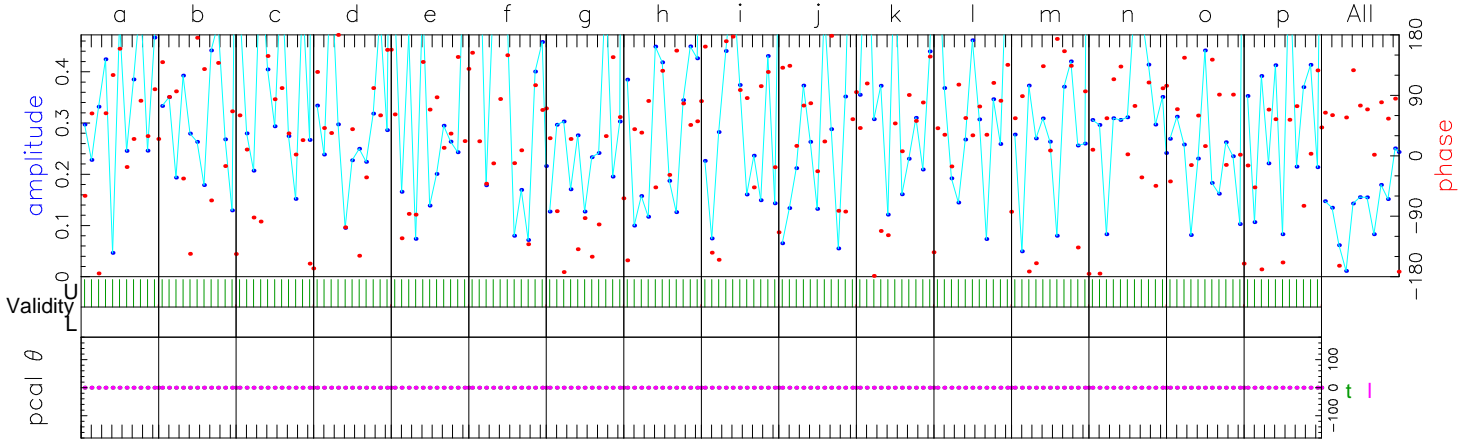


Fringe quality 0

SNR 6.4
Int time 419.829
Amp 0.157
Phase 76.3
PFD 4.4e-02
Delays (us)
SBD 0.465153
MBD -0.003191
Fringe rate (Hz) 0.835889
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

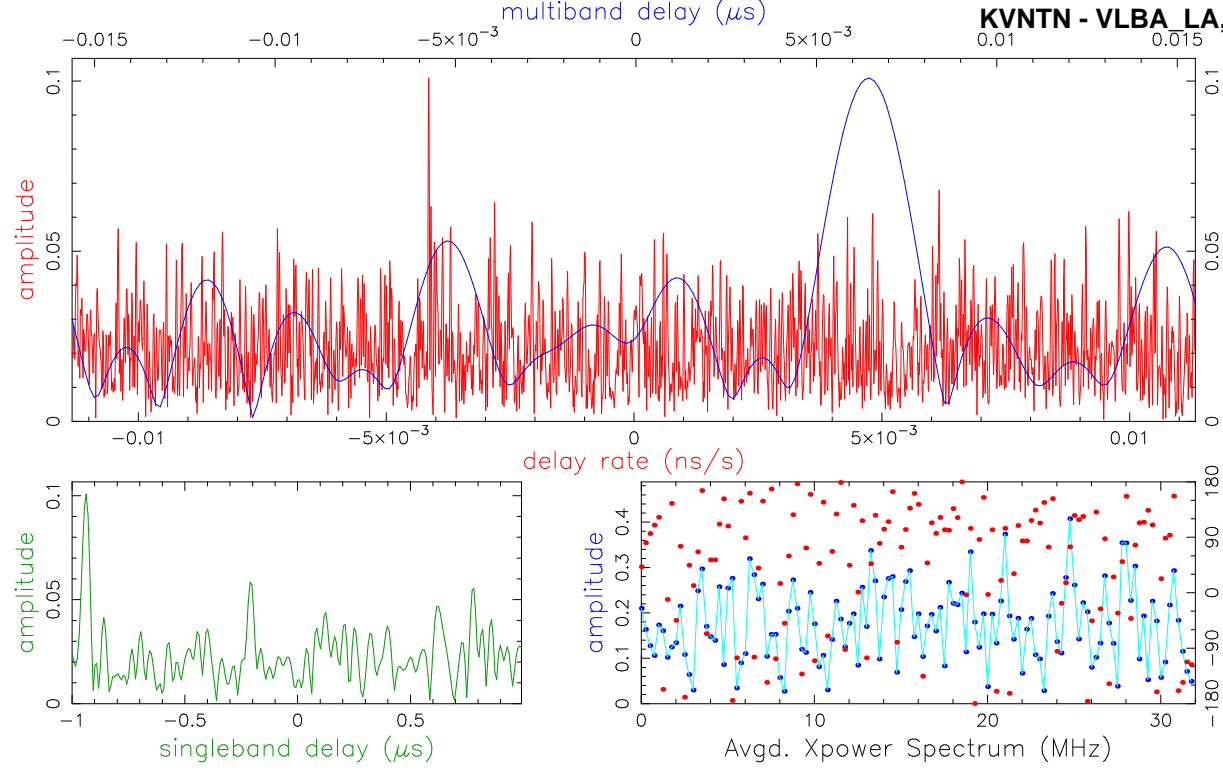
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061755
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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
73.1	134.9	62.4	83.2	55.5	69.7	-76.1	60.5	154.2	50.7	92.2	65.3	147.1	65.9	49.1	37.4	Phase	76.3	
0.2	0.1	0.1	0.2	0.2	0.3	0.0	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	Ampl.	0.2	
190.1	138.9	104.3	100.2	167.5	39.6	147.4	7.5	60.6	220.4	186.7	188.5	141.2	39.9	74.9	213.1	Sbd box	188.5	
UL	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	5.00107265892E+03		Apriori delay (usec)		5.00060709955E+03		Resid mbdelay (usec)		-3.19064E-03		+/- 1.7E-04							
Sband delay (usec)	5.00107225205E+03		Apriori clock (usec)		2.8460262E+01		Resid sbdelay (usec)		4.65153E-01		+/- 2.7E-03							
Phase delay (usec)	5.00060710202E+03		Apriori clockrate (us/s)		5.5147201E-07		Resid phdelay (usec)		2.46189E-06		+/- 5.8E-07							
Delay rate (us/s)	1.71658534632E+00		Apriori rate (us/s)		1.71657564248E+00		Resid rate (us/s)		9.70384E-06		+/- 2.4E-09							
Total phase (deg)	276.3		Apriori accel (us/s/s)		-2.90278063432E-05		Resid phase (deg)		76.3		+/- 17.9							

ph/seg (deg) 47.4 31.1 Search (2048X64) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.2 54.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 54.9 35.9 Inc. seg. avg. 0.162 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 46.3 62.6 Inc. frq. avg. 0.158 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 t: az 65.6 el 48.4 pa -81.7 l: az 298.6 el 32.1 pa 68.3 u, v (fr/asec) -12840.942 -1986.563 ion window (TEC) 0.00 0.00
 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tl..130A7B Output file: /Exps/c192a/v2/1234/No0041/tl.W.216.130A7B

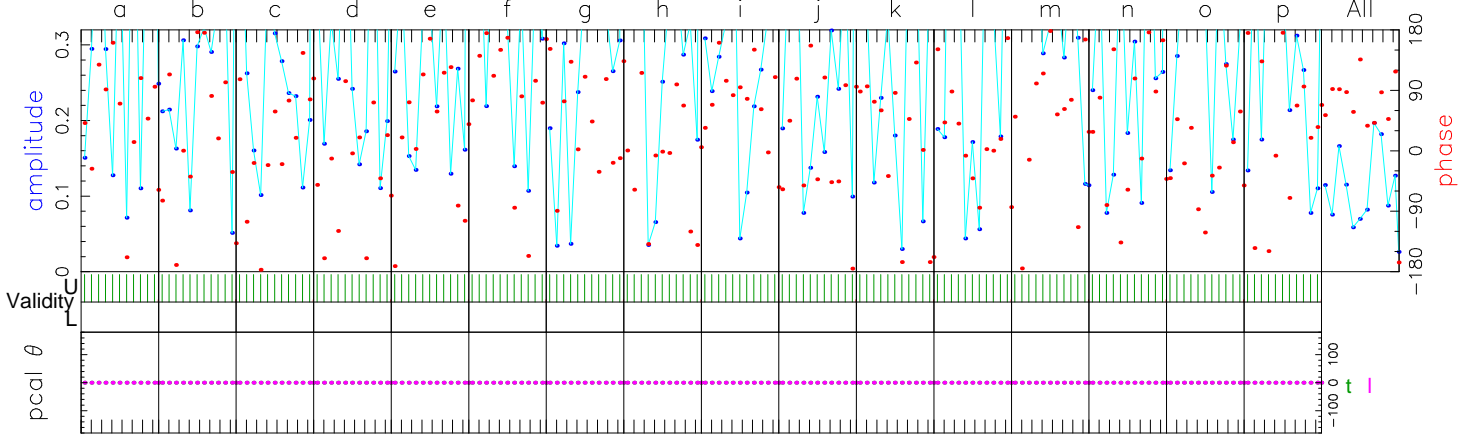


Fringe quality 0

SNR 5.7
Int time 419.829
Amp 0.107
Phase 76.1
PFD 9.8e-01
Delays (us)
SBD -0.938170
MBD 0.006427
Fringe rate (Hz)
-0.357489
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061800
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

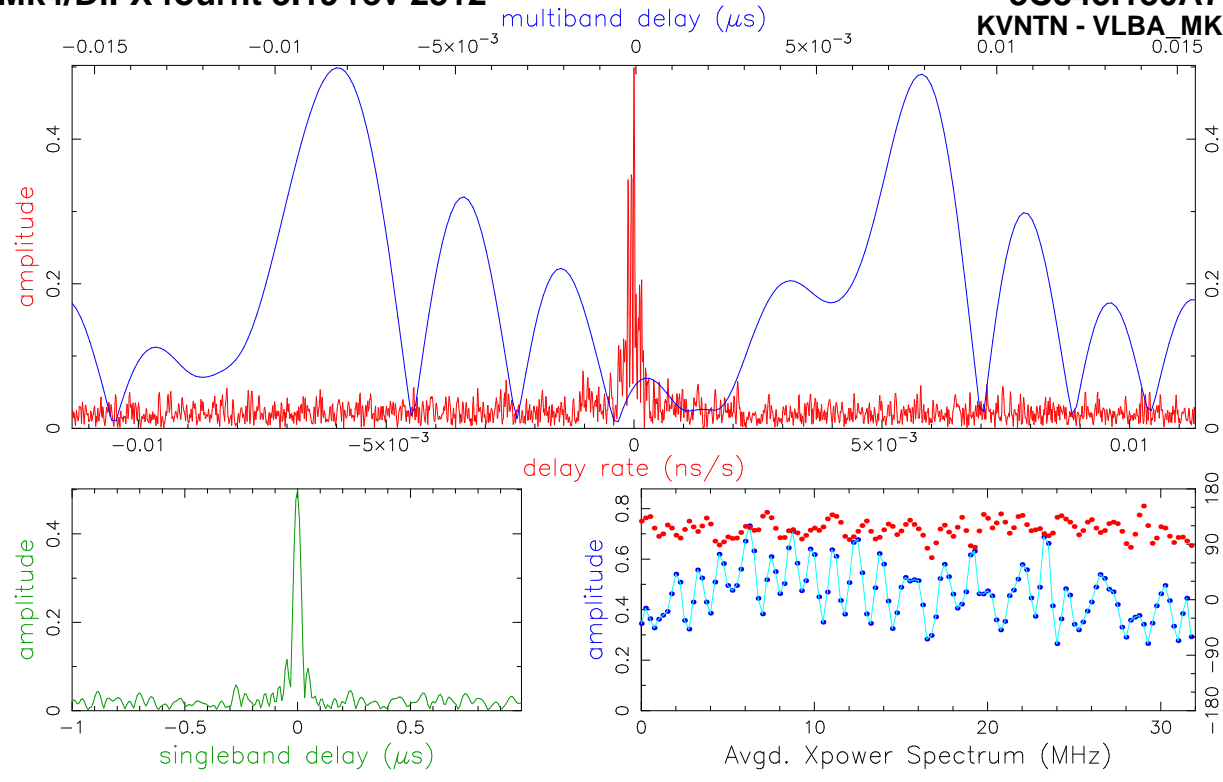


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
71.5	101.4	48.5	27.7	105.4	121.3	47.2	22.1	81.0	54.7	93.9	55.7	99.4	142.6	-9.7	177.4	177.4	Phase	76.1
0.3	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.0	0.0	Ampl.	0.1
72.0	126.4	132.7	146.2	151.5	8.3	180.7	168.5	63.1	107.6	238.5	165.9	157.9	102.7	31.6	17.3	17.3	Sbd box	8.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 4.99967602632E+03 Apriori delay (usec) 5.00060709955E+03 Resid mbdelay (usec) 6.42677E-03 +/- 1.9E-04
 Sband delay (usec) 4.99966892905E+03 Apriori clock (usec) 2.8460262E+01 Resid sbdelay (usec) -9.38170E-01 +/- 3.0E-03
 Phase delay (usec) 5.00060710201E+03 Apriori clockrate (us/s) 5.5147201E-07 Resid phdelay (usec) 2.45353E-06 +/- 6.5E-07
 Delay rate (us/s) 1.71657149239E+00 Apriori rate (us/s) 1.71657564248E+00 Resid rate (us/s) -4.15010E-06 +/- 2.7E-09
 Total phase (deg) 276.1 Apriori accel (us/s/s) -2.90278063432E-05 Resid phase (deg) 76.1 +/- 20.3

ph/seg (deg) RMS Theor. Amplitude 0.107 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 32.3 35.1 Search (2048X64) 0.099 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.5 61.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 49.4 40.5 Inc. seg. avg. 0.103 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 64.9 70.8 Inc. frq. avg. 0.110 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 l: az 298.6 el 32.1 pa 68.3 u, v (fr/asec) -12840.942 -1986.563 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tl..130A7B Output file: /Exps/c192a/v2/1234/No0041/tl.W.233.130A7B

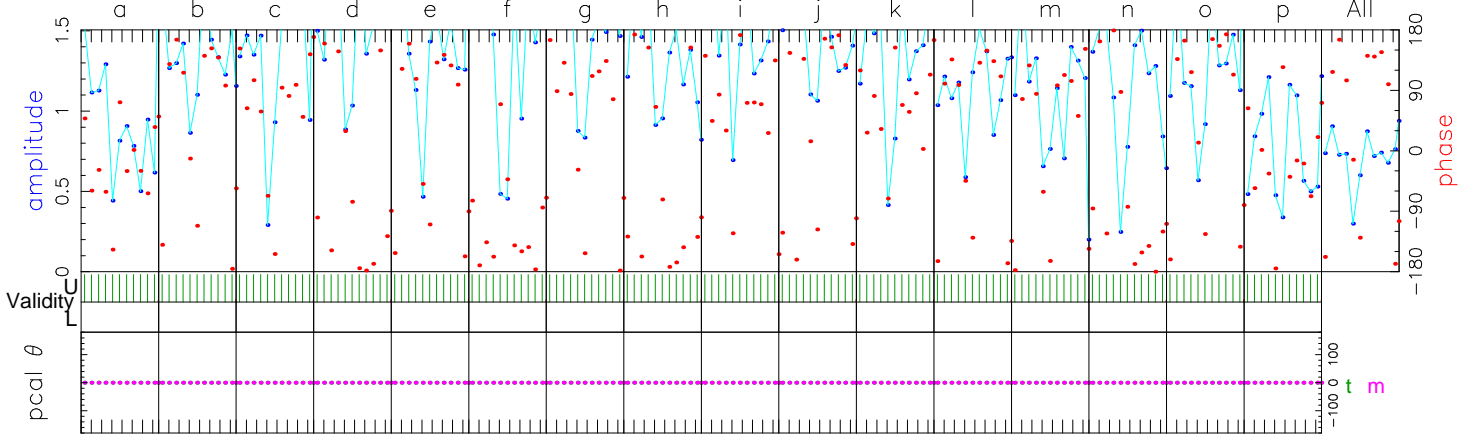


Fringe quality 5

SNR 28.1
Int time 419.111
Amp 0.502
Phase 150.4
PFD 0.0e+00
Delays (us)
SBD -0.002045
MBD -0.008250
Fringe rate (Hz)
0.000423
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

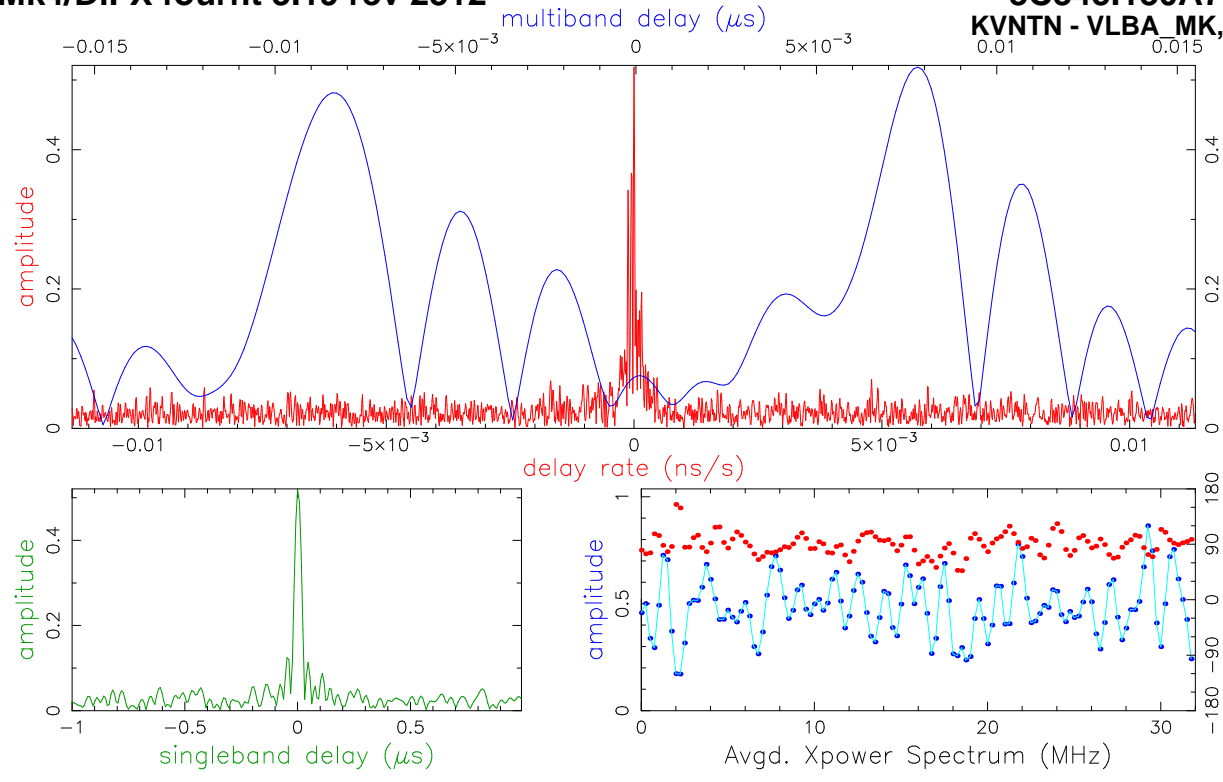
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061746
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



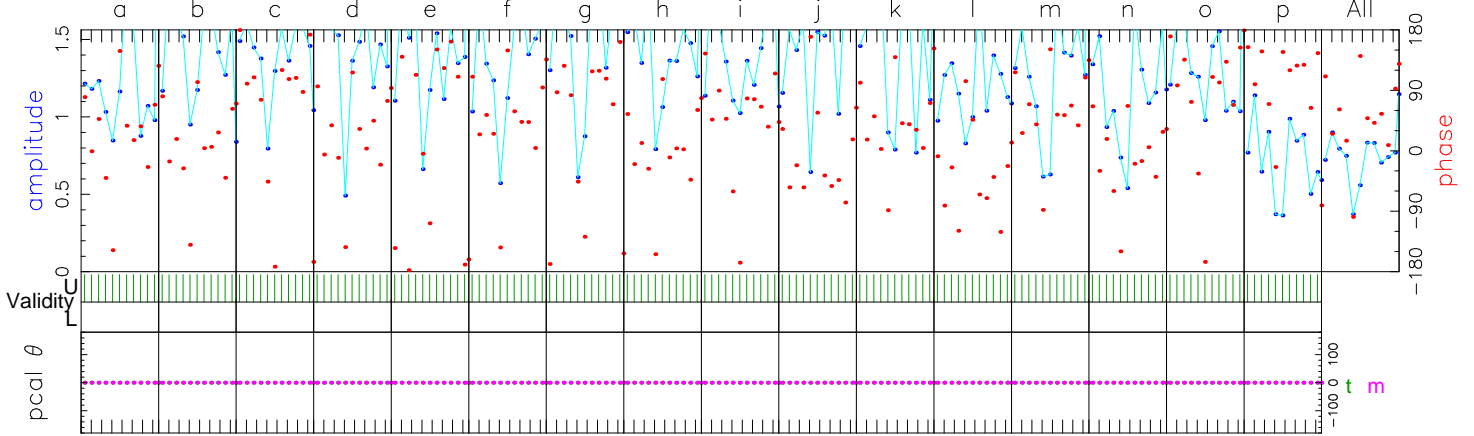
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)		-2.23276571549E+03																
Sband delay (usec)		-2.23275951096E+03																
Phase delay (usec)		-2.23275746111E+03																
Delay rate (us/s)		1.28656033392E+00																
Total phase (deg)			107.9															
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)																		

ph/seg (deg) 63.6 7.1 Search (2048X64) 0.470 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 51.2 12.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 79.5 8.2 Inc. seg. avg. 0.704 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 82.2 14.2 Inc. frq. avg. 0.876 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
t: az 65.6 el 48.4 pa -81.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9536.665 3317.239 ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tm..130A7B Output file: /Exps/c192a/v2/1234/No0041/tm.W.183.130A7B simultaneous interpolator



Fringe quality 5
SNR 29.2
Int time 419.112
Amp 0.521
Phase 53.9
PFD 0.0e+00
Delays (us)
SBD 0.001691
MBD 0.007830
Fringe rate (Hz) 0.000465
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061752
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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
35.0	14.5	121.5	32.2	157.7	55.1	118.7	5.4	74.2	-28.5	37.9	-52.3	64.4	-4.6	117.6	117.1	117.1	Phase	53.9
0.7	1.0	1.0	1.0	0.9	1.0	1.0	1.0	0.9	1.0	1.0	0.7	1.0	0.8	0.9	0.6	0.6	Ampl.	0.9
130.8	129.7	128.9	128.7	128.9	128.8	128.5	128.6	128.7	129.0	128.8	128.3	129.2	129.1	129.5	131.3	131.3	Sbd box	129.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
tm	0:0	0:0	0:0	0:0	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	
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

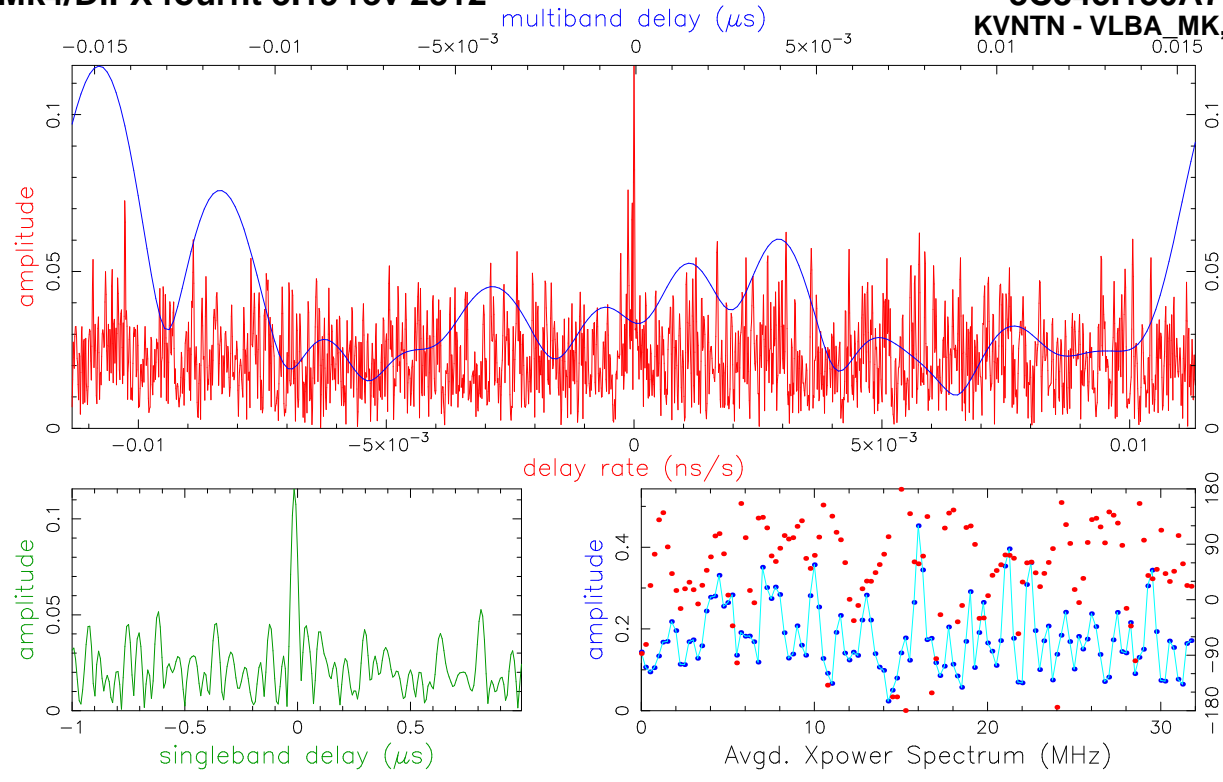
Group delay (usec)(sbd) -2.23274963546E+03 Apriori delay (usec) -2.23275746596E+03 Resid mbdelay (usec) 7.83050E-03 +/- 3.7E-05
 Sband delay (usec) -2.23275577446E+03 Apriori clock (usec) 2.5144247E+01 Resid sbdelay (usec) 1.69150E-03 +/- 5.9E-04
 Phase delay (usec) -2.23275746422E+03 Apriori clockrate (us/s) 2.0869229E-07 Resid phdelay (usec) 1.73820E-06 +/- 1.3E-07
 Delay rate (us/s) 1.28656033442E+00 Apriori rate (us/s) 1.28656032902E+00 Resid rate (us/s) 5.40063E-09 +/- 5.2E-10
 Total phase (deg) 11.4 Apriori accel (us/s/s) 2.71316868450E-05 Resid phase (deg) 53.9 +/- 3.9

ph/seg (deg) RMS Theor. Amplitude 0.521 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 60.6 6.8 Search (2048X64) 0.483 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 48.4 11.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 62.5 7.9 Inc. seg. avg. 0.723 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 76.8 13.7 Inc. frq. avg. 0.893 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9536.665 3317.239 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tm..130A7B Output file: /Exps/c192a/v2/1234/No0041/tm.W.205.130A7B

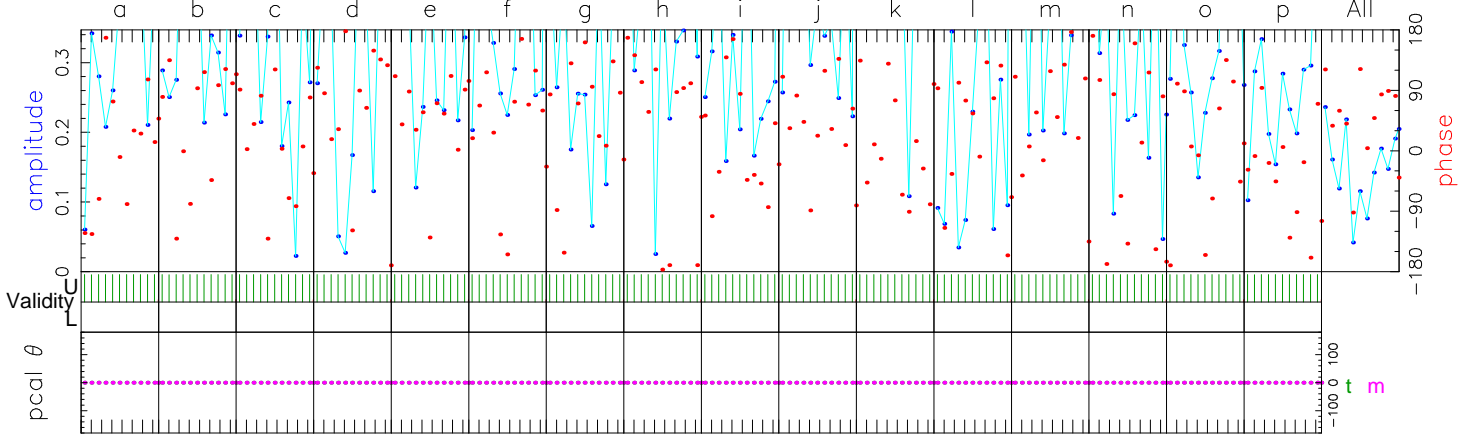
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tm
KVNTN - VLBA_MK, fgroup W, pol LR



Fringe quality 0
SNR 6.5
Int time 419.112
Amp 0.116
Phase 71.7
PFD 2.6e-02
Delays (us)
SBD -0.014520
MBD -0.014854
Fringe rate (Hz) 0.000134
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061757
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

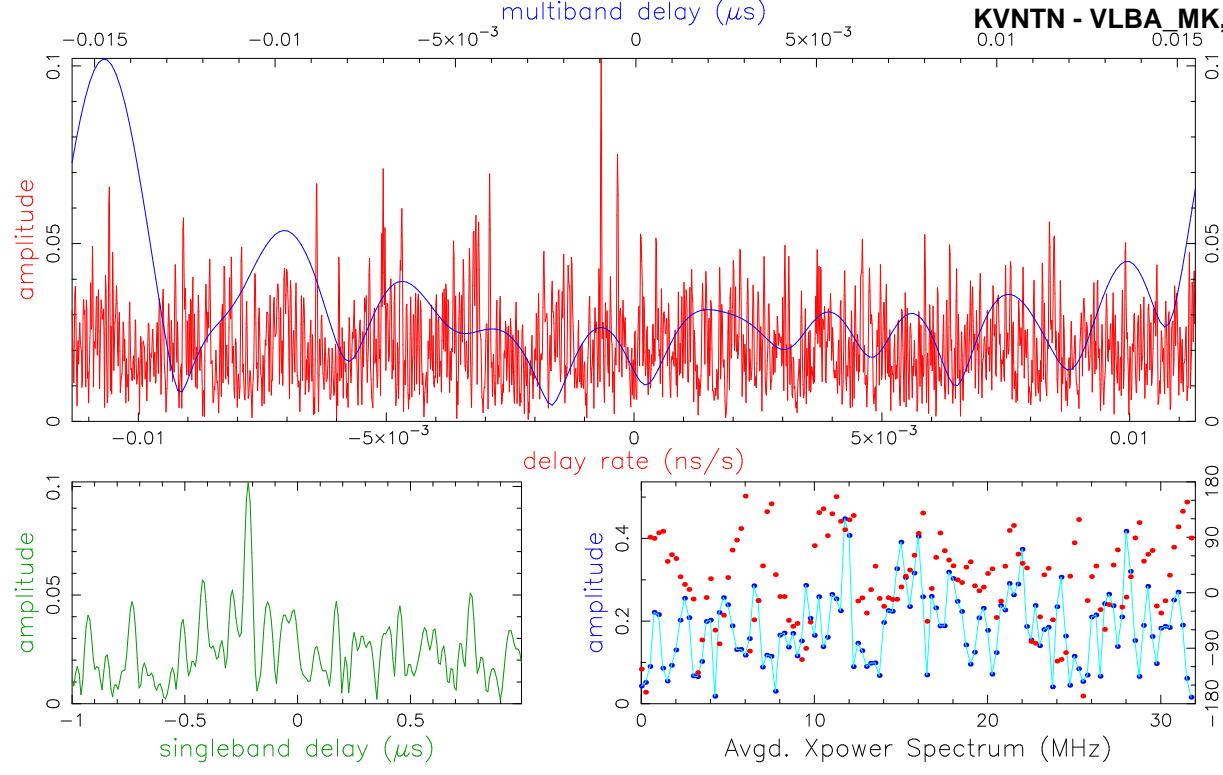


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000		PC freqs
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
																		Tracks
Group delay (usec)(sbd)	-2.23277232021E+03			Apriori delay (usec)			-2.23275746596E+03			Resid mbdelay (usec)			-1.48542E-02			+/- 1.7E-04		
Sband delay (usec)	-2.23277198646E+03			Apriori clock (usec)			2.5144247E+01			Resid sbdelay (usec)			-1.45205E-02			+/- 2.7E-03		
Phase delay (usec)	-2.23275746365E+03			Apriori clockrate (us/s)			2.0869229E-07			Resid phdelay (usec)			2.31129E-06			+/- 5.7E-07		
Delay rate (us/s)	1.28656033057E+00			Apriori rate (us/s)			1.28656032902E+00			Resid rate (us/s)			1.55670E-09			+/- 2.4E-09		
Total phase (deg)	29.2			Apriori accel (us/s/s)			2.71316868450E-05			Resid phase (deg)			71.7			+/- 17.7		

ph/seg (deg) 60.6 30.6 Search (2048X64) 0.113 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 55.6 53.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 59.7 35.4 Inc. seg. avg. 0.130 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 72.3 61.8 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
 t: az 65.6 el 48.4 pa -81.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9536.665 3317.239 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tm..130A7B Output file: /Exps/c192a/v2/1234/No0041/tm.W.225.130A7B simultaneous interpolator

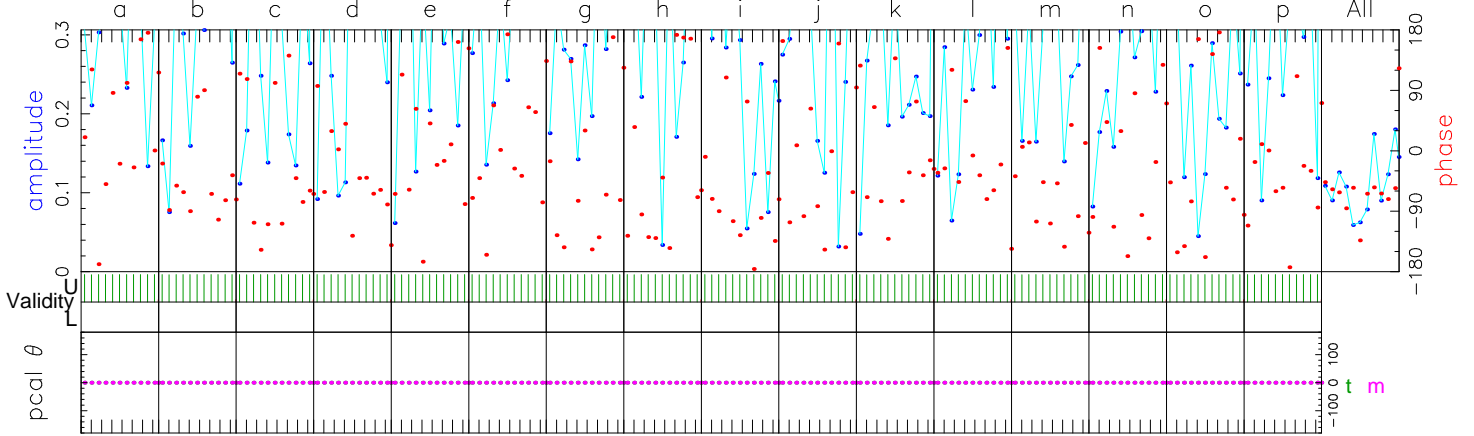
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tm
KVNTN - VLBA_MK, fgroup W, pol RL



Fringe quality 0
SNR 5.7
Int time 419.111
Amp 0.102
Phase -64.1
PFD 9.4e-01
Delays (us)
SBD -0.219068
MBD -0.014735
Fringe rate (Hz)
-0.056939
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061802
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

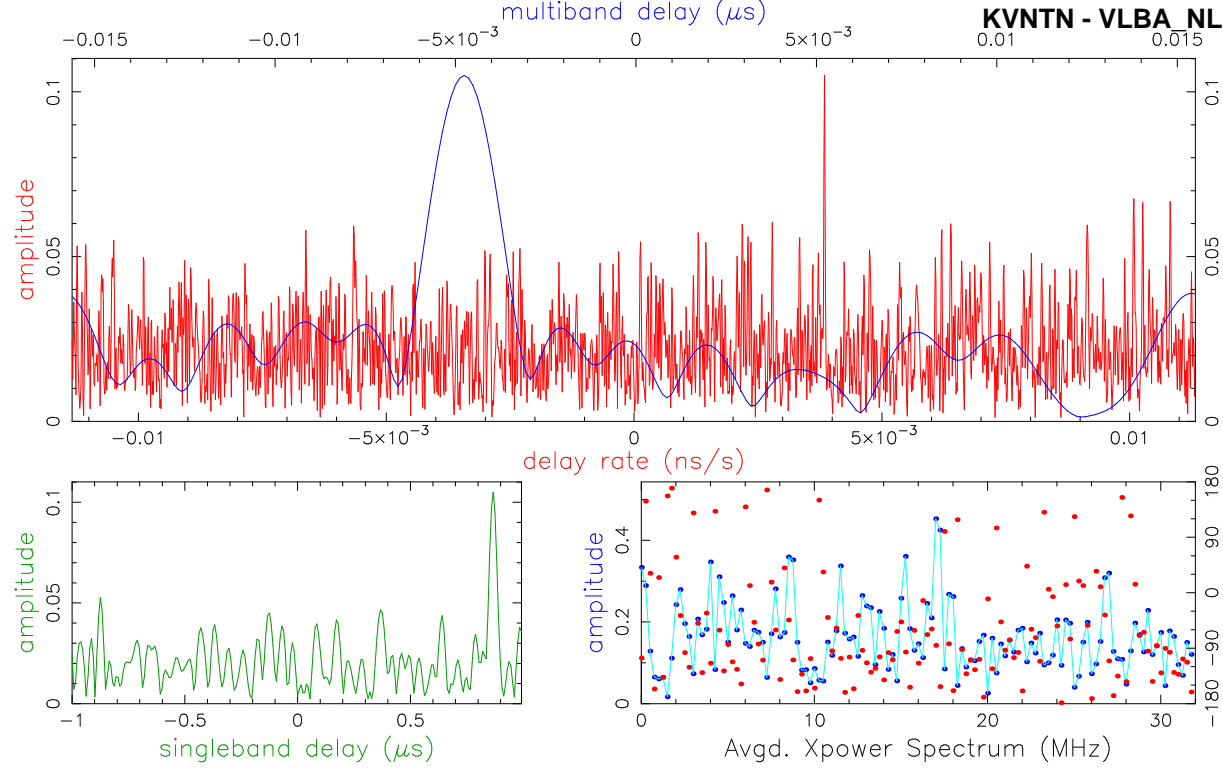


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used					
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR			Chan ids					
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL			Tracks					
Group delay (usec)(sbd)		-2.23299095113E+03																	Apriori delay (usec)	-2.23275746596E+03	Resid mbdelay (usec)	-1.47352E-02	+/-	1.9E-04
Sband delay (usec)		-2.23297653446E+03																	Apriori clock (usec)	2.5144247E+01	Resid sbdelay (usec)	-2.19068E-01	+/-	3.0E-03
Phase delay (usec)		-2.23275746803E+03																	Apriori clockrate (us/s)	2.0869229E-07	Resid phdelay (usec)	-2.06848E-06	+/-	6.5E-07
Delay rate (us/s)		1.28655966802E+00																	Apriori rate (us/s)	1.28656032902E+00	Resid rate (us/s)	-6.61000E-07	+/-	2.7E-09
Total phase (deg)																			Apriori accel (us/s/s)	2.71316868450E-05	Resid phase (deg)	-64.1	+/-	20.1

ph/seg (deg) RMS Theor. Amplitude 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 34.8 Search (2048X64) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 38.3 60.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 58.3 40.1 Inc. seg. avg. 0.093 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 t: az 65.6 el 48.4 pa -81.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9536.665 3317.239 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tm..130A7B Output file: /Exps/c192a/v2/1234/No0041/tm.W.241.130A7B simultaneous interpolator

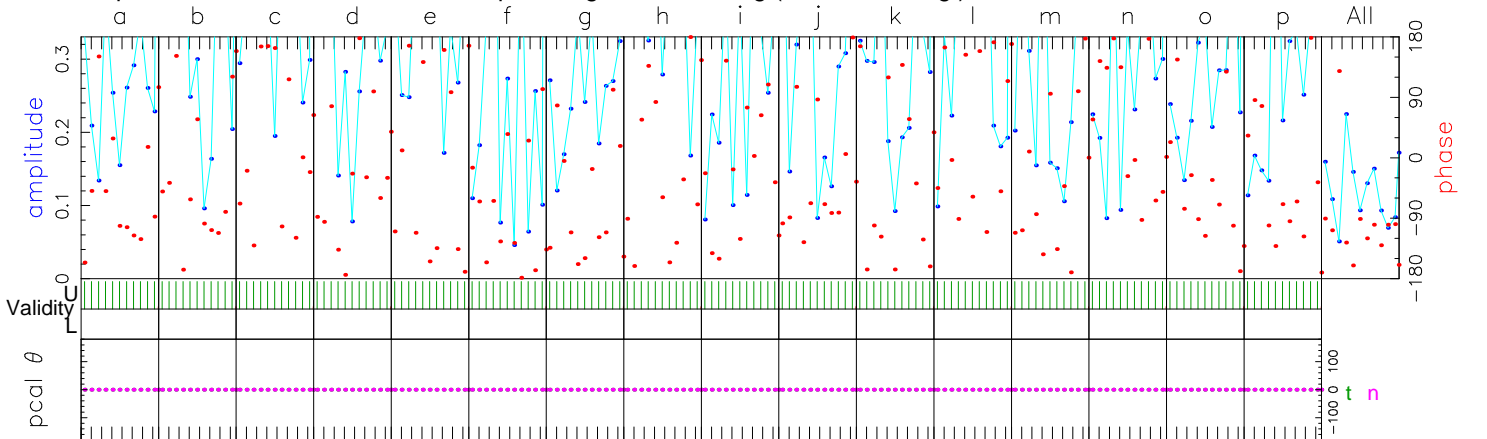
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tn
KVNTN - VLBA_NL, fgroup W, pol LL



Fringe quality 0
SNR 5.9
Int time 419.831
Amp 0.110
Phase -116.9
PFD 6.4e-01
Delays (us)
SBD 0.866542
MBD -0.004757
Fringe rate (Hz)
0.331197
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061746
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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
	-89.0	-104.3	-125.8	-70.0	-159.4	-114.4	-110.5	-125.4	-34.5	-96.8	-141.5	-134.5	-146.5	-109.6	-95.7	-97.3	Phase	-116.9
	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.2	Ampl.	0.1
	127.9	103.1	114.6	122.3	239.2	123.2	25.4	144.0	16.1	184.0	2.4	182.3	209.0	192.6	75.7	109.8	Sbd box	239.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	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	
tn	0:0	0:0	0:0	0:0	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	
tn	0:0	0:0	0:0	0:0	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

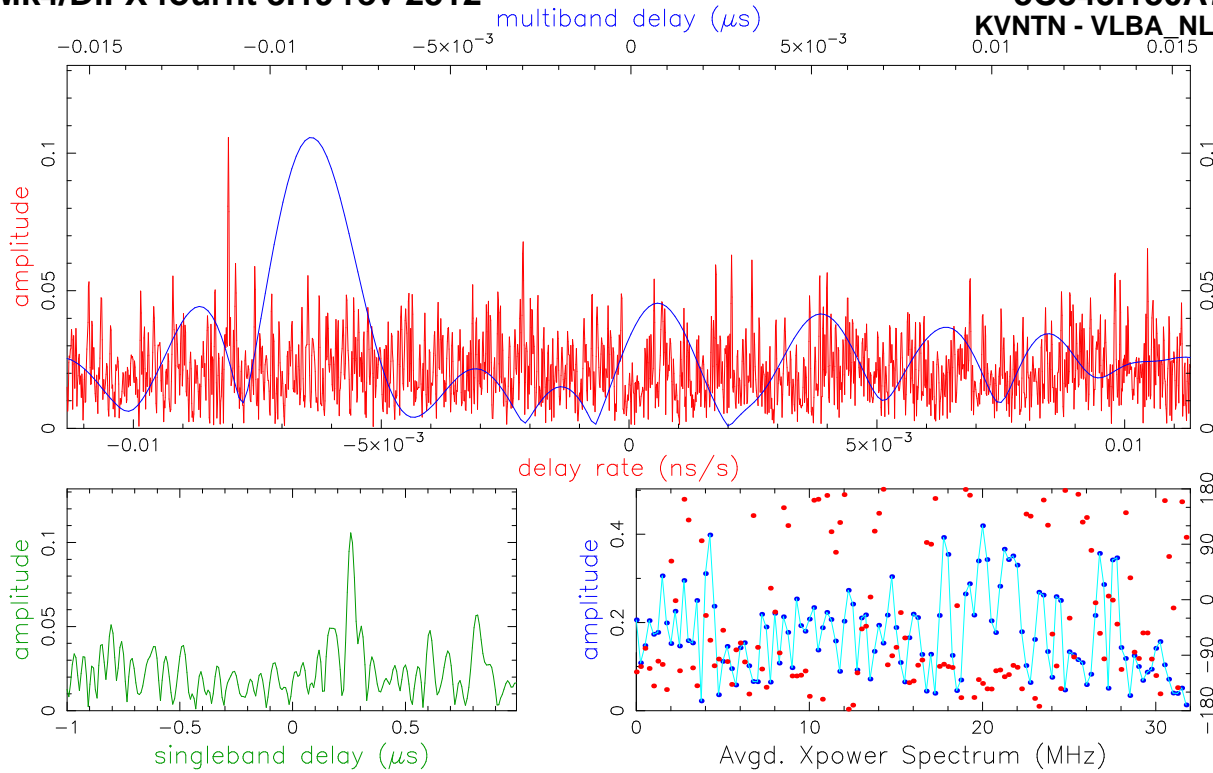
Group delay (usec)(sbd) 7.22278817961E+03 Apriori delay (usec) 7.22191793665E+03 Resid mbdelay (usec) -4.75704E-03 +/- 1.8E-04
 Sband delay (usec) 7.22278447815E+03 Apriori clock (usec) 1.2280598E+00 Resid sbdelay (usec) 8.66542E-01 +/- 2.9E-03
 Phase delay (usec) 7.22191793288E+03 Apriori clockrate (us/s) 6.5776486E-08 Resid phdelay (usec) -3.76840E-06 +/- 6.3E-07
 Delay rate (us/s) 1.66591961622E+00 Apriori rate (us/s) 1.66591577135E+00 Resid rate (us/s) 3.84487E-06 +/- 2.6E-09
 Total phase (deg) -94.2 Apriori accel (us/s/s) -4.68599565440E-05 Resid phase (deg) -116.9 +/- 19.5

RMS Theor. Amplitude 0.110 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 40.0 33.7 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 47.1 58.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 32.7 39.0 Inc. seg. avg. 0.107 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 44.4 68.0 Inc. frq. avg. 0.099 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12495.308 -3711.314 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tn..130A7B Output file: /Exps/c192a/v2/1234/No0041/tn.W.182.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tn
KVNTN - VLBA_NL, fgroup W, pol LR

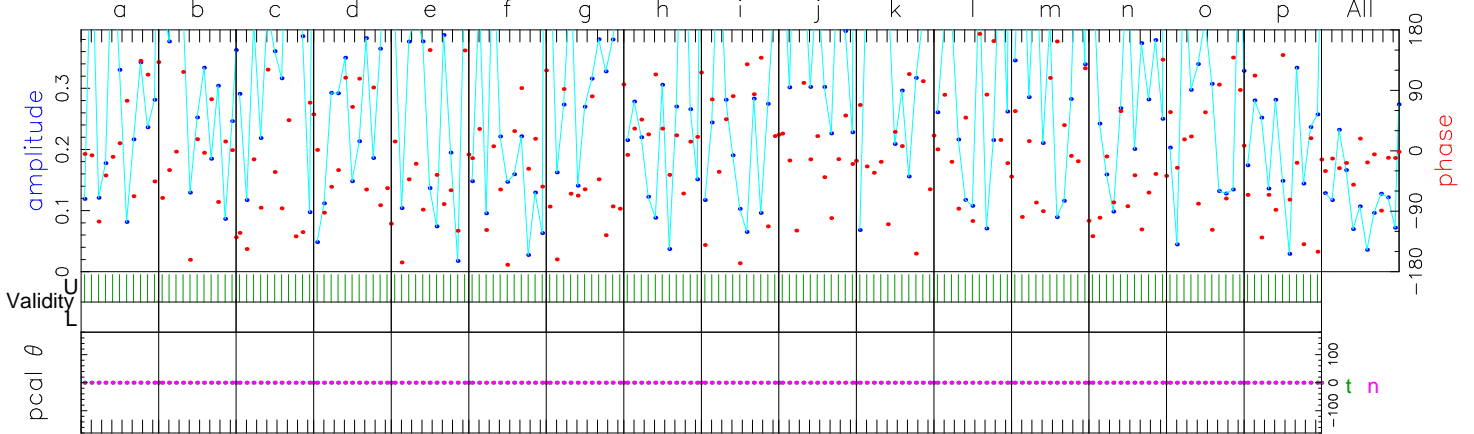


Fringe quality 0

SNR 5.9
Int time 419.831
Amp 0.132
Phase -22.4
PFD 5.3e-01
Delays (us)
SBD 0.258988
MBD -0.008860
Fringe rate (Hz)
-0.697221
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061757
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	Phase	-22.4	
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	Ampl.	0.1	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	162.2	
tn	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used		
t	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 phase		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Mani PC		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		PC amp		
																		Chan ids		
																		Tracks		
																		Chan ids		
																		Tracks		
Group delay (usec)(sbd)		7.22219032709E+03				Apriori delay (usec)		7.22191793665E+03		Resid mbdelay (usec)		-8.85956E-03		+/-	1.8E-04					
Sband delay (usec)		7.22217692515E+03				Apriori clock (usec)		1.2280598E+00		Resid sbdelay (usec)		2.58988E-01		+/-	2.9E-03					
Phase delay (usec)		7.22191793593E+03				Apriori clockrate (us/s)		6.5776486E-08		Resid phdelay (usec)		-7.21195E-07		+/-	6.2E-07					
Delay rate (us/s)		1.66590767731E+00				Apriori rate (us/s)		1.66591577135E+00		Resid rate (us/s)		-8.09404E-06		+/-	2.6E-09					
Total phase (deg)				0.3		Apriori accel (us/s/s)		-4.68599565440E-05		Resid phase (deg)		-22.4		+/-	19.3					

ph/seg (deg) 26.4 33.4
amp/seg (%) 49.7 58.4
ph/frq (deg) 43.1 38.6
amp/frq (%) 47.6 67.4

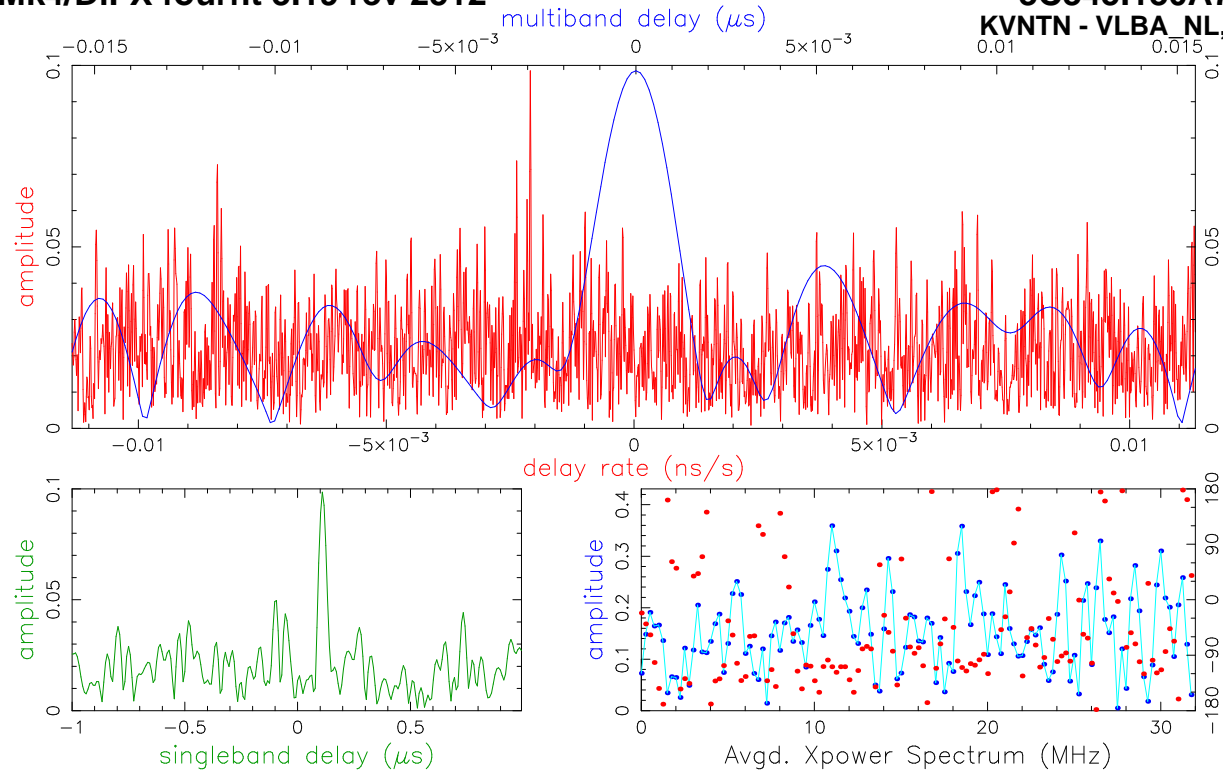
RMS Theor. Amplitude 0.132 +/- 0.022
Search (2048X64) 0.103
Interp. 0.000
Inc. seg. avg. 0.125
Inc. frq. avg. 0.136

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

t: az 65.6 el 48.4 pa -81.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12495.308 -3711.314 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tn..130A7B Output file: /Exps/c192a/v2/1234/No0041/tn.W.222.130A7B

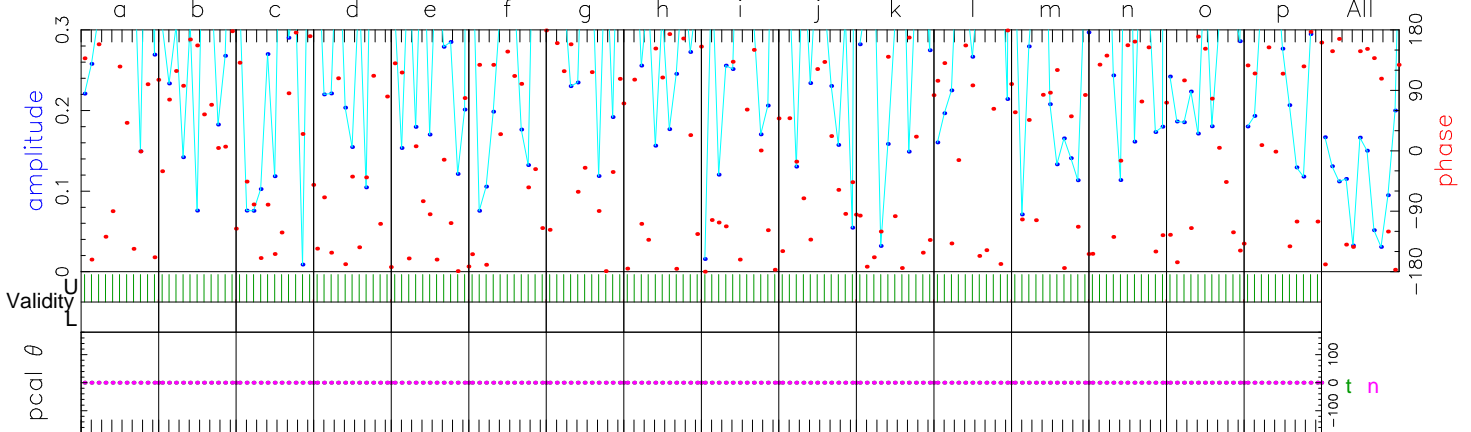


Fringe quality 0

SNR 5.5
Int time 419.831
Amp 0.100
Phase 173.5
PFD 1.0e+00
Delays (us)
SBD 0.110201
MBD -0.000021
Fringe rate (Hz)
-0.180096
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061801
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	173.5	Phase
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	0.1	Ampl.
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.1	Sbd box
tn	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	143.1	APs used
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.0	PC freqs
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.0	PC phase
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		0.0	Mani PC
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		0.0	PC amp

Group delay (usec)(sbd) 7.22204291536E+03 Apriori delay (usec) 7.22191793665E+03 Resid mbdelay (usec) -2.12870E-05 +/- 2.0E-04
 Sband delay (usec) 7.22202813715E+03 Apriori clock (usec) 1.2280598E+00 Resid sbdelay (usec) 1.10201E-01 +/- 3.1E-03
 Phase delay (usec) 7.22191794224E+03 Apriori clockrate (us/s) 6.5776486E-08 Resid phdelay (usec) 5.59402E-06 +/- 6.7E-07
 Delay rate (us/s) 1.66591368062E+00 Apriori rate (us/s) 1.66591577135E+00 Resid rate (us/s) -2.09073E-06 +/- 2.8E-09
 Total phase (deg) 196.1 Apriori accel (us/s/s) -4.68599565440E-05 Resid phase (deg) 173.5 +/- 20.7

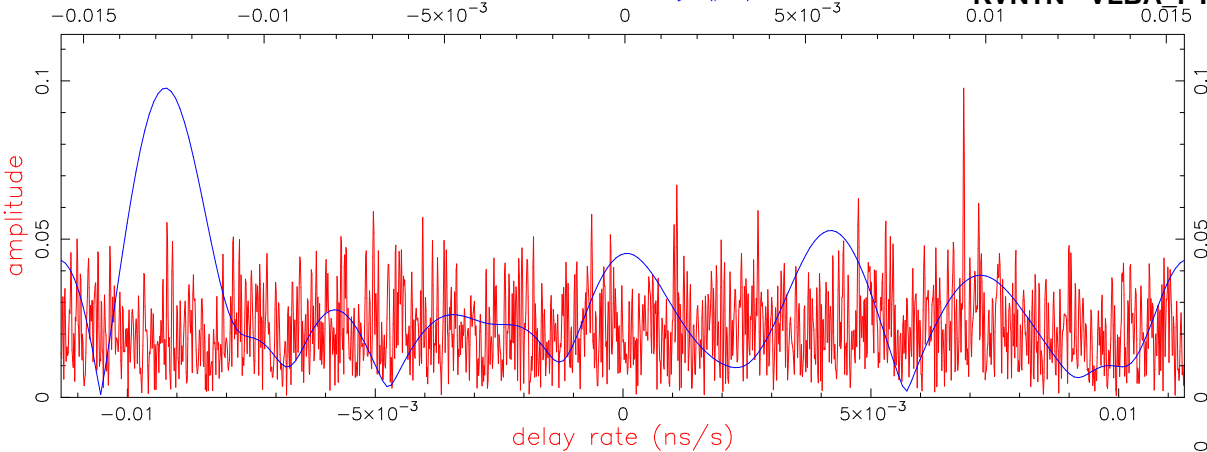
ph/seg (deg) RMS 38.6 Theor. 35.9 Amplitude 0.100 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 62.0 62.7 Search (2048X64) 0.097 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.9 41.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 54.0 72.4 Inc. seg. avg. 0.098 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 t: az 65.6 el 48.4 pa -81.7 n: az 301.9 el 25.2 pa 55.5 u, v (fr/asec) -12495.308 -3711.314 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tn..130A7B Output file: /Exps/c192a/v2/1234/No0041/tn.W.238.130A7B simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

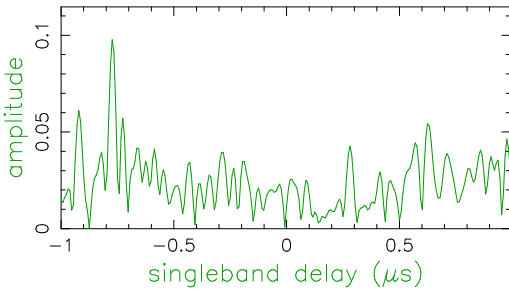
3C345.130A7B, No0041, tp
KVNTN - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)

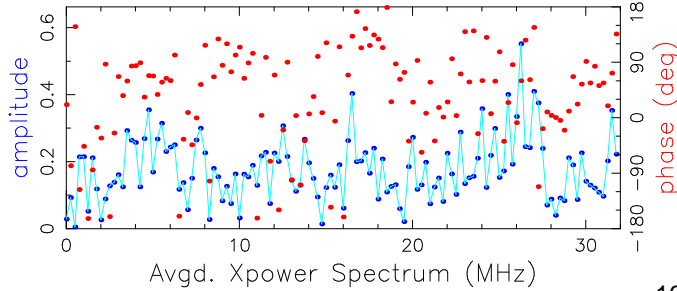
Fringe quality 0



SNR 5.5
Int time 419.829
Amp 0.115
Phase 6.7
PFD 1.0e+00
Delays (us)
SBD -0.772030
MBD -0.012717
Fringe rate (Hz)
0.593284
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

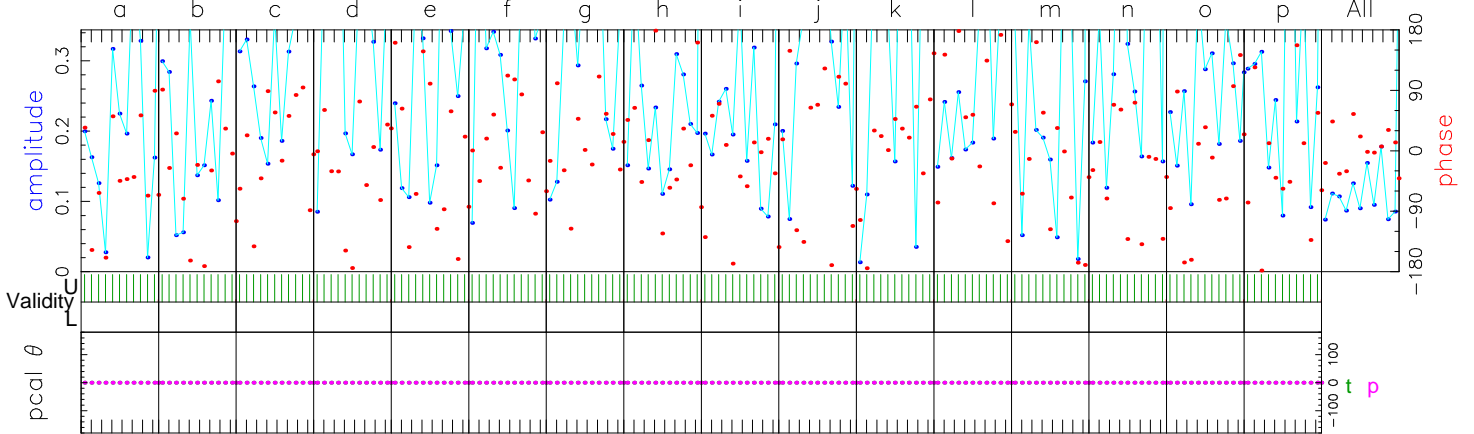


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061757
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

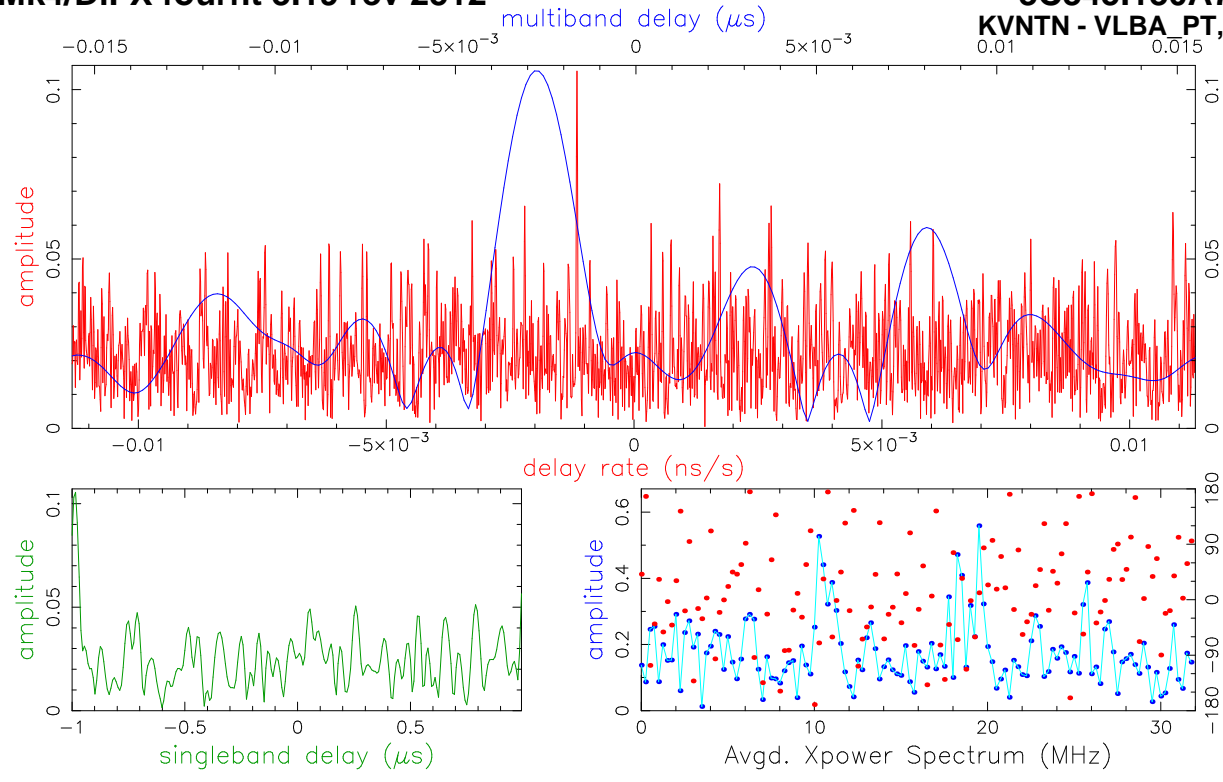


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-3.0	2.4	39.9	-2.7	-101.0	-2.7	6.9	-0.4	-11.4	116.4	24.9	168.7	-19.6	7.4	-7.2	-34.0		Phase	6.7
	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.1		Ampl.	0.1
	201.1	120.2	54.4	95.9	25.8	119.2	240.9	63.0	35.0	226.3	30.4	16.3	5.4	11.2	34.0	97.7		Sbd box	30.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used	
t	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	
tp	0:0	0:0	0:0	0:0	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	
tp	0:0	0:0	0:0	0:0	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	
t	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	
t	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)	4.78736868908E+03			Apriori delay (usec)			4.78813140610E+03			Resid mbdelay (usec)			-1.27170E-02			+/- 2.0E-04			
Sband delay (usec)	4.78735937560E+03			Apriori clock (usec)			1.5795111E+01			Resid sbdelay (usec)			-7.72030E-01			+/- 3.1E-03			
Phase delay (usec)	4.78813140631E+03			Apriori clockrate (us/s)			-3.8865937E-09			Resid phdelay (usec)			2.17315E-07			+/- 6.7E-07			
Delay rate (us/s)	1.72553996052E+00			Apriori rate (us/s)			1.72553307307E+00			Resid rate (us/s)			6.88744E-06			+/- 2.8E-09			
Total phase (deg)	122.3			Apriori accel (us/s/s)			-2.64478236786E-05			Resid phase (deg)			6.7			+/- 20.9			

ph/seg (deg) 27.7 36.1 Search (2048X64) 0.096 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 47.9 63.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 62.4 41.7 Inc. seg. avg. 0.108 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 65.4 72.8 Inc. frq. avg. 0.116 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 t: az 65.6 el 48.4 pa -81.7 p: az 298.8 el 32.7 pa 70.0 u, v (fr/asec) -12902.934 -1673.922 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tp..130A7B Output file: /Exps/c192a/v2/1234/No0041/tp.W.223.130A7B simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tp
KVNTN - VLBA_PT, fgroup W, pol RR

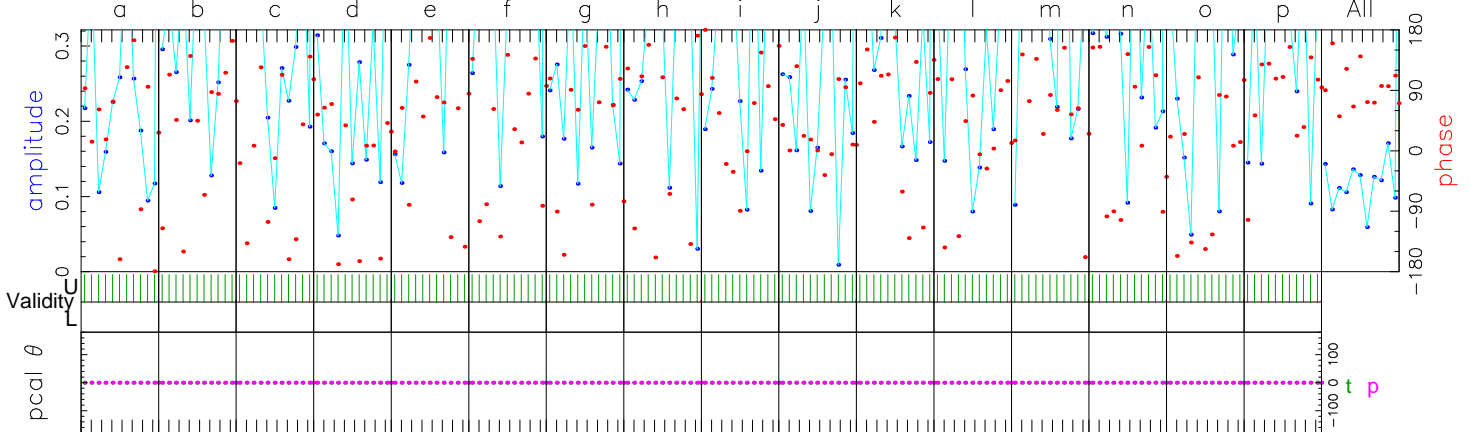


Fringe quality 0

SNR 6.0
Int time 419.829
Amp 0.107
Phase 94.9
PFD 4.4e-01
Delays (us)
SBD -0.987256
MBD -0.002808
Fringe rate (Hz)
-0.099360
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061802
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000			
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
tp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
tp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
t	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			
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR			
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR			
Group delay (usec)(sbd)		4.78712859781E+03								4.78813140610E+03							Resid mbdelay (usec)	-2.80828E-03	+/- 1.8E-04
Sband delay (usec)		4.78714415010E+03								1.5795111E+01							Resid sbdelay (usec)	-9.87256E-01	+/- 2.9E-03
Phase delay (usec)		4.78813140916E+03								-3.8865937E-09							Resid phdelay (usec)	3.06184E-06	+/- 6.2E-07
Delay rate (us/s)		1.72553191960E+00								1.72553307307E+00							Resid rate (us/s)	-1.15348E-06	+/- 2.5E-09
Total phase (deg)					210.5					-2.64478236786E-05							Resid phase (deg)	94.9	+/- 19.2

ph/seg (deg) 31.7 33.2
amp/seg (%) 53.4 57.9
ph/frq (deg) 41.6 38.3
amp/frq (%) 56.1 66.9

t: az 65.6 el 48.4 pa -81.7
p: az 298.8 el 32.7 pa 70.0
u, v (fr/asec) -12902.934 -1673.922

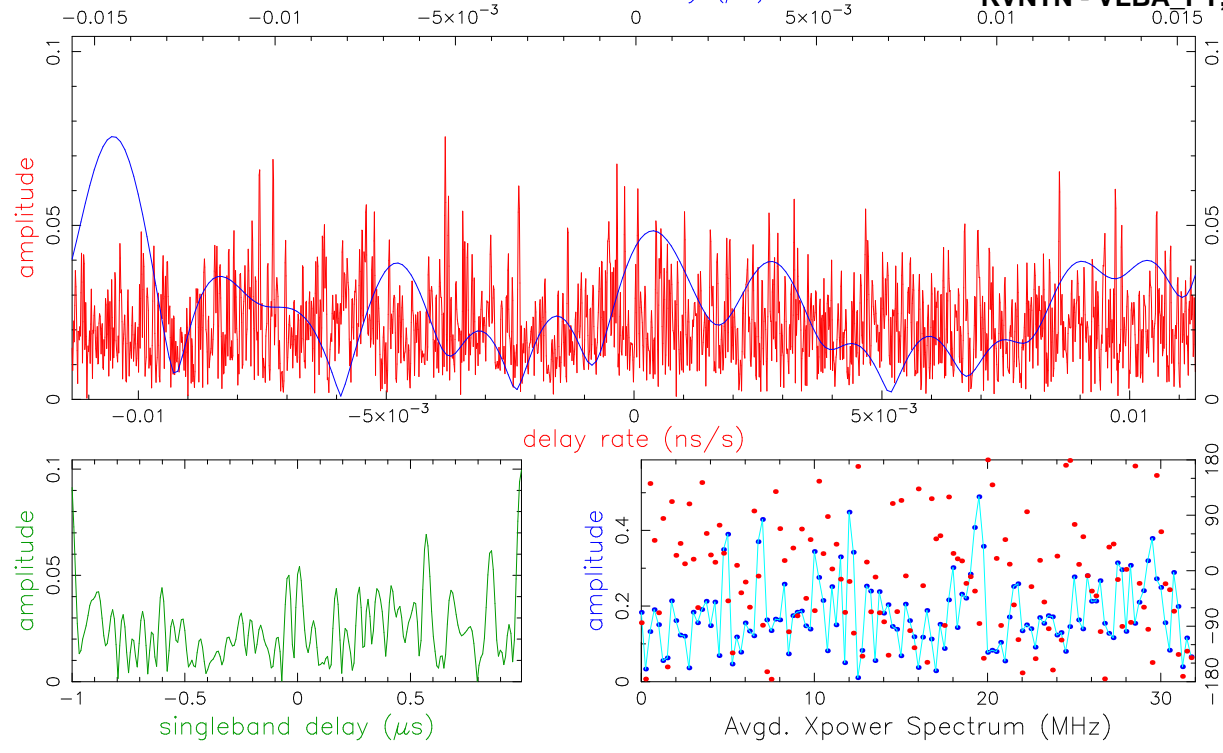
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tp..130A7B Output file: /Exps/c192a/v2/1234/No0041/tp.W.240.130A7B

simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

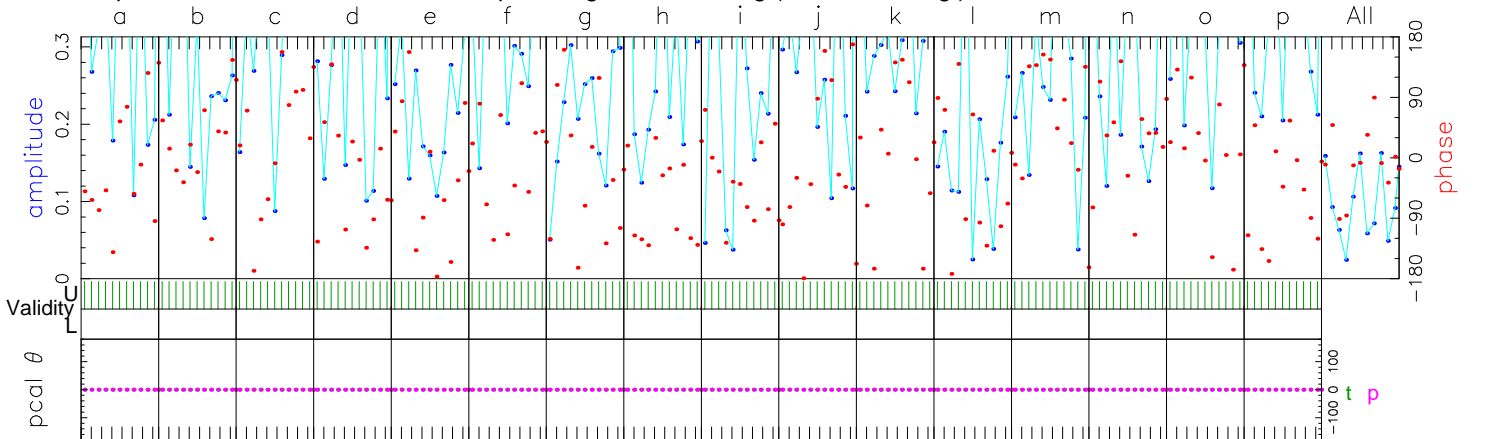
3C345.130A7B, No0041, tp
KVNTN - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)



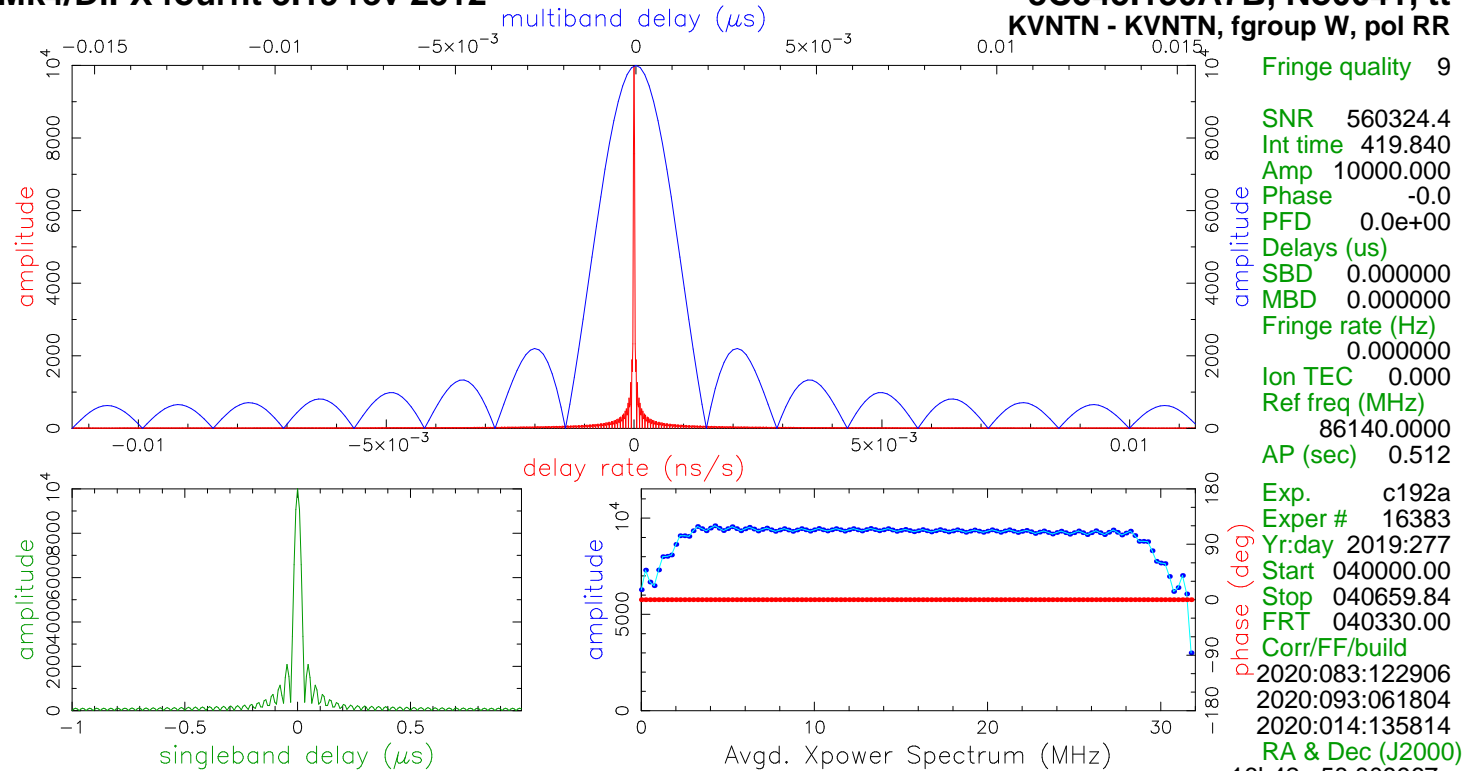
Fringe quality 0
SNR 5.6
Int time 419.829
Amp 0.104
Phase -2.5
PFD 1.0e+00
Delays (us)
SBD 0.991218
MBD -0.014537
Fringe rate (Hz)
-0.328834
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061807
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	
	-26.3	9.4	79.9	-1.4	49.2	6.0	-52.0	-51.0	-22.3	-69.0	60.4	-97.5	83.0	12.6	65.1	-51.3		Phase	-2.5
	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1		Ampl.	0.1
	3.2	206.6	7.5	221.6	74.4	11.0	77.8	2.4	131.0	232.1	164.8	2.6	179.1	62.3	163.6	86.8		Sbd box	255.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used	
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000		PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
tp	0:0	0:0	0:0	0:0	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	
tp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	4.78911686903E+03			Apriori delay (usec)			4.78813140610E+03			Resid mbdelay (usec)			-1.45371E-02			+/- 1.9E-04			
Sband delay (usec)	4.78912262435E+03			Apriori clock (usec)			1.5795111E+01			Resid sbdelay (usec)			9.91218E-01			+/- 3.1E-03			
Phase delay (usec)	4.78813140602E+03			Apriori clockrate (us/s)			-3.8865937E-09			Resid phdelay (usec)			-7.98458E-08			+/- 6.6E-07			
Delay rate (us/s)	1.72552925564E+00			Apriori rate (us/s)			1.72553307307E+00			Resid rate (us/s)			-3.81743E-06			+/- 2.7E-09			
Total phase (deg)	113.1			Apriori accel (us/s/s)			-2.64478236786E-05			Resid phase (deg)			-2.5			+/- 20.5			

ph/seg (deg) 50.9 35.6 Search (2048X64) 0.097 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 46.4 62.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 58.1 41.1 Inc. seg. avg. 0.084 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 48.0 71.7 Inc. frq. avg. 0.096 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 t: az 65.6 el 48.4 pa -81.7 p: az 298.8 el 32.7 pa 70.0 u, v (fr/asec) -12902.934 -1673.922 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tp..130A7B Output file: /Exps/c192a/v2/1234/No0041/tp.W.255.130A7B simultaneous interpolator



Fringe quality 9

SNR 560324.4

Int time 419.840

Amp 10000.000

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. c192a

Yr:day 16383

Start 2019:277

Stop 2019:277

FRT 040330.00

Corr/FF/build

2020:083:122906

2020:093:061804

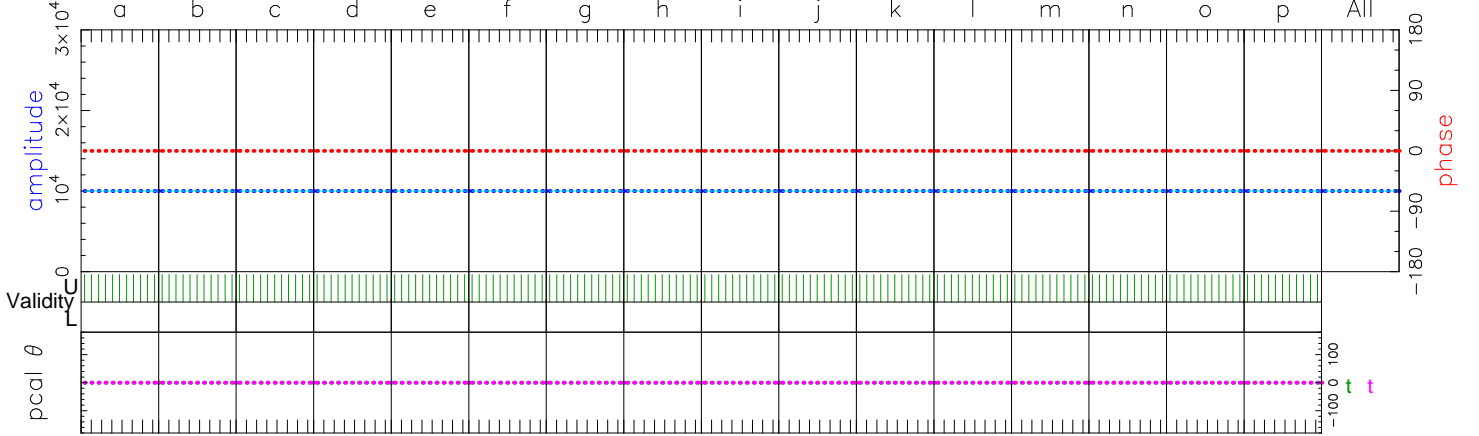
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t 31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs	
t 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
t:t 0:0	0:0	0:0	0:0	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	
t 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
t 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 +/- 1.9E-09

Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 3.1E-08

Phase delay (usec) -2.97684915476E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -2.97685E-20 +/- 6.6E-12

Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.7E-14

Total phase (deg) -0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) -0.0 +/- 0.0

ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 0.0 0.0 Search (2048X64) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

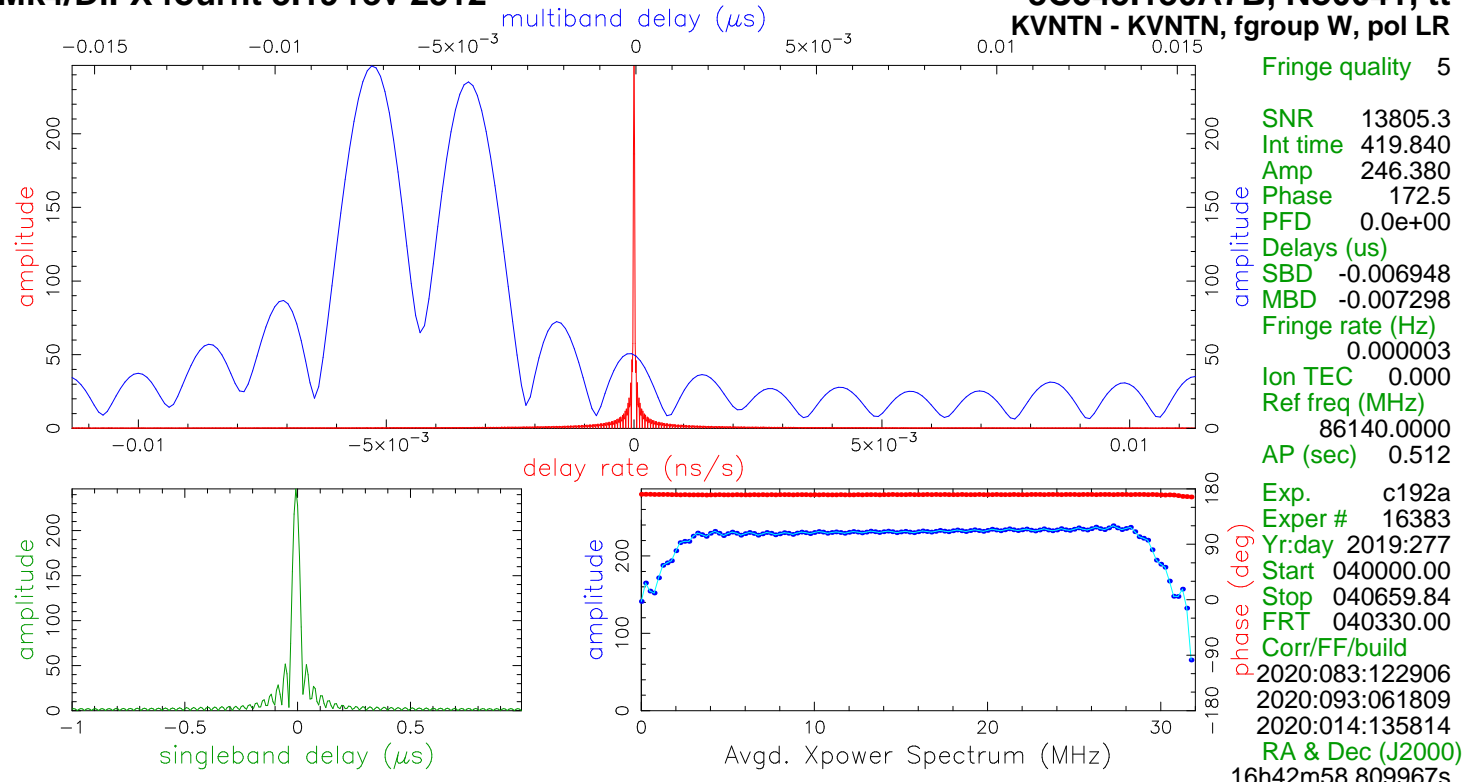
Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 t: az 65.6 el 48.4 pa -81.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tt..130A7B Output file: /Exps/c192a/v2/1234/No0041/tt.W.247.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tt
KVNTN - KVNTN, fgroup W, pol LR



Fringe quality 5

SNR 13805.3

Int time 419.840

Amp 246.380

Phase 172.5

PFD 0.0e+00

Delays (us)

SBD -0.006948

MBD -0.007298

Fringe rate (Hz)

0.000003

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Exper # 16383

Yr:day 2019:277

Start 040000.00

Stop 040659.84

FRT 040330.00

Corr/FF/build

2020:083:122906

2020:093:061809

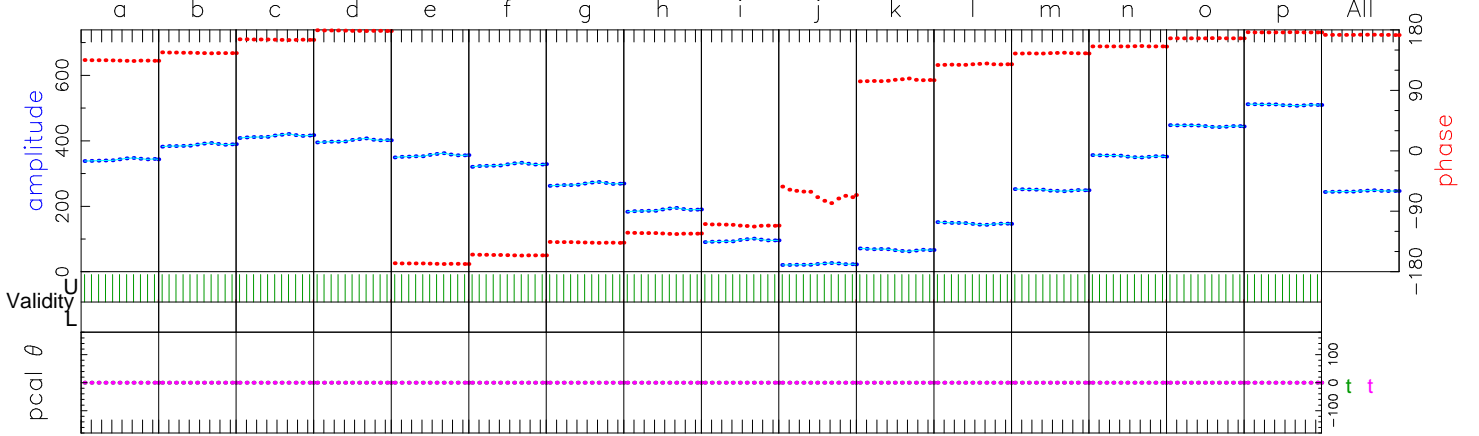
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	Phase	172.5	
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	Ampl.	285.9	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	128.1	
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used		
t:t	0:0	0:0	0:0	0:0	0:0	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 freqs		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	ManI PC		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		PC amp		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids		
																		Tracks		
																		Chan ids		
																		Tracks		
Group delay (usec)(sbd)		-7.29846875000E-03																Resid mbdelay (usec)	-7.29847E-03	+/- 7.8E-08
Sband delay (usec)		-6.94750000000E-03																Resid sbdelay (usec)	-6.94750E-03	+/- 1.2E-06
Phase delay (usec)		5.56197606502E-06																Resid phdelay (usec)	5.56198E-06	+/- 2.7E-10
Delay rate (us/s)		3.96792266967E-11																Resid rate (us/s)	3.96792E-11	+/- 1.1E-12
Total phase (deg)					172.5													Resid phase (deg)	172.5	+/- 0.0

ph/seg (deg) 0.1 0.0 Theor. Amplitude 246.380 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

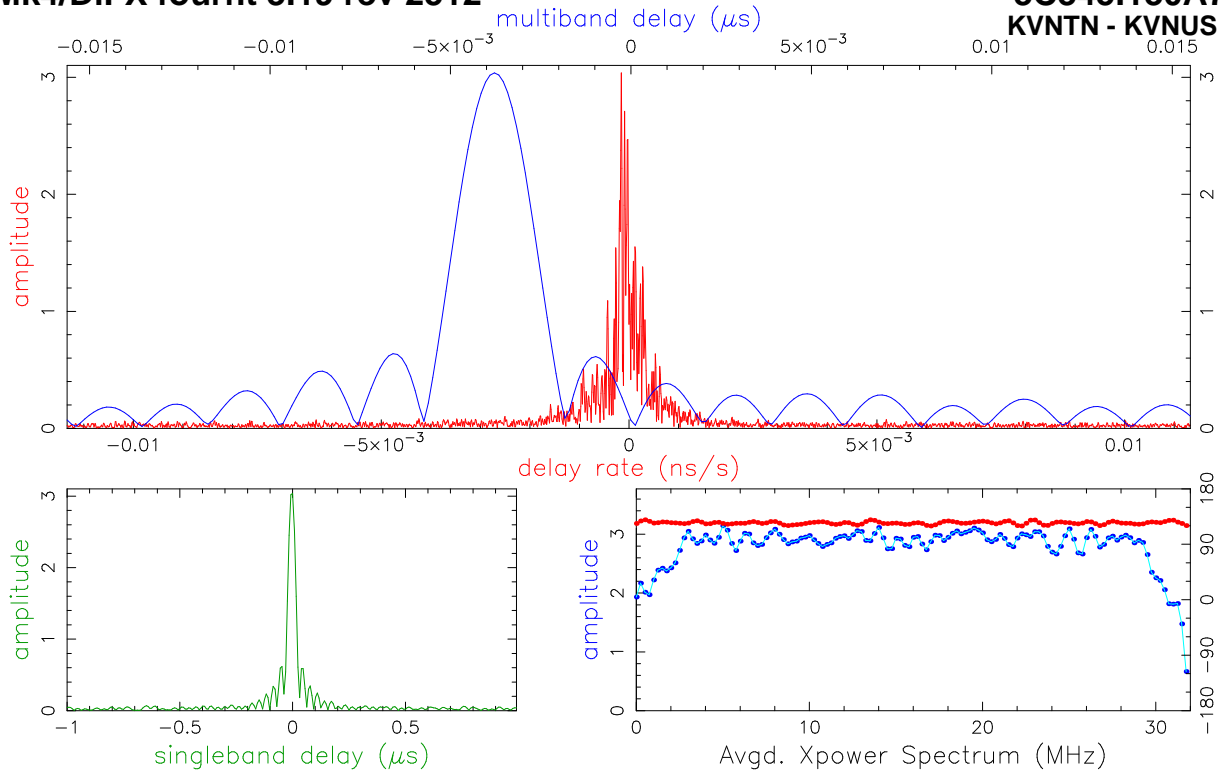
amp/seg (%) 0.6 0.0 Search (2048X64) 245.985 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 52.6 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 59.0 0.0 Inc. seg. avg. 246.095 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

t: az 65.6 el 48.4 pa -81.7 t: az 65.6 el 48.4 pa -81.7 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/c192a/v2/1234/No0041/tt..130A7B Output file: /Exps/c192a/v2/1234/No0041/tt.W.264.130A7B simultaneous interpolator

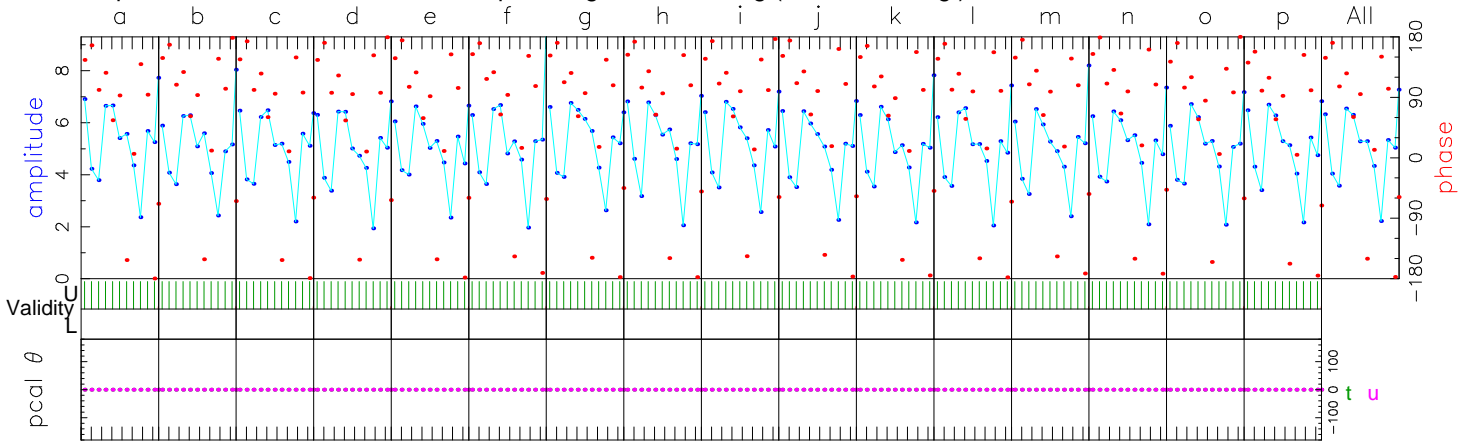


Fringe quality 5

SNR 173.8
Int time 419.840
Amp 3.102
Phase 125.9
PFD 0.0e+00
Delays (us)
SBD -0.003648
MBD -0.003783
Fringe rate (Hz)
-0.013306
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061803
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	128.5	128.5
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

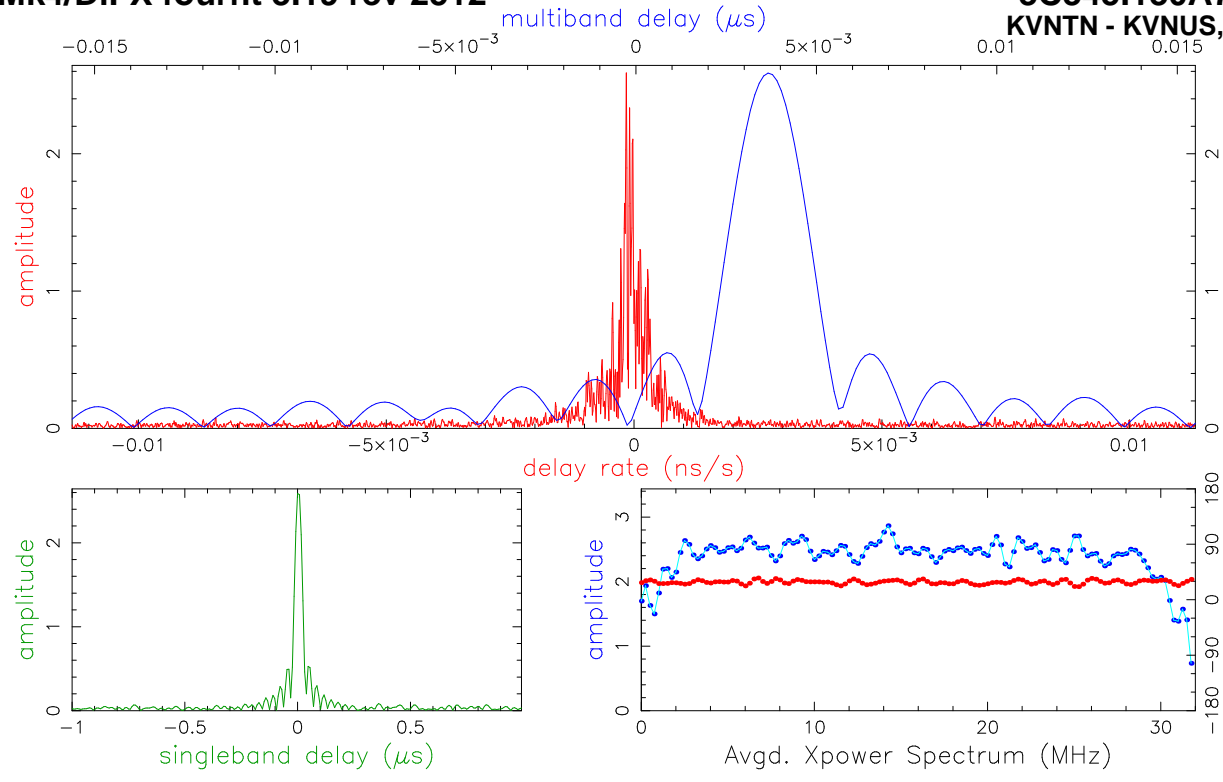
Group delay (usec)(sbd) -6.86523526853E+02 Apriori delay (usec) -6.86519743969E+02 Resid mbdelay (usec) -3.78288E-03 +/- 6.2E-06
 Sband delay (usec) -6.86523391969E+02 Apriori clock (usec) 1.9282120E+01 Resid sbdelay (usec) -3.64800E-03 +/- 9.9E-05
 Phase delay (usec) -6.86519739910E+02 Apriori clockrate (us/s) -1.9999998E-07 Resid phdelay (usec) 4.05878E-06 +/- 2.1E-08
 Delay rate (us/s) 5.12313216752E-02 Apriori rate (us/s) 5.12314761415E-02 Resid rate (us/s) -1.54466E-07 +/- 8.8E-11
 Total phase (deg) -142.5 Apriori accel (us/s/s) 1.41132908190E-06 Resid phase (deg) 125.9 +/- 0.7

RMS Theor. Amplitude 3.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 56.2 1.1 Search (2048X64) 2.993 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 72.2 2.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 3.6 1.3 Inc. seg. avg. 4.952 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 3.8 2.3 Inc. frq. avg. 3.043 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) -379.845 -123.979 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tu...130A7B Output file: /Exps/c192a/v2/1234/No0041/tu.W.243.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tu
KVNTN - KVNUS, fgroup W, pol RR

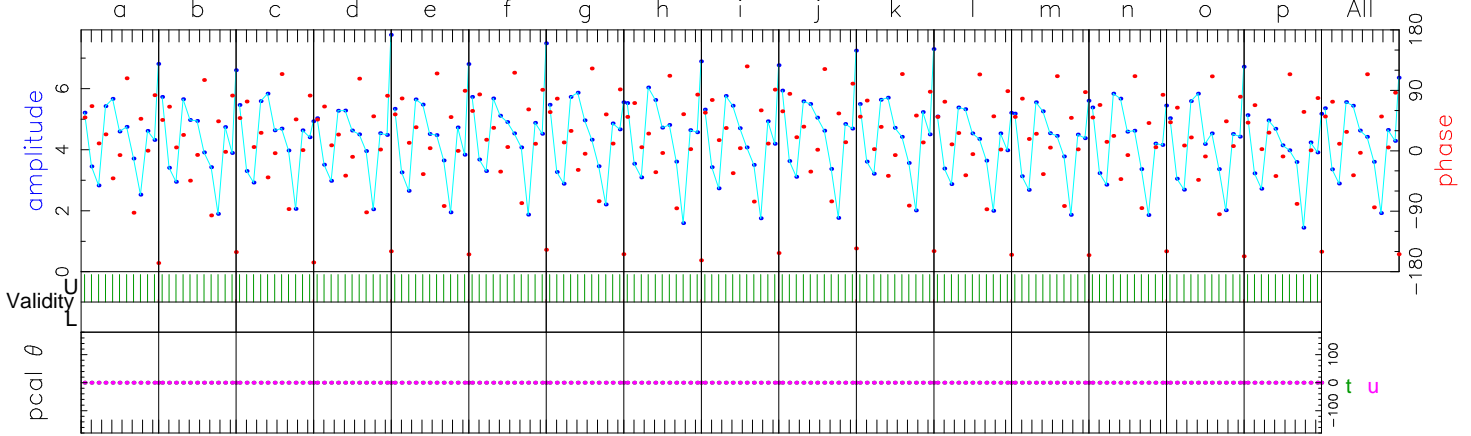


Fringe quality 5

SNR 148.1
Int time 419.840
Amp 2.643
Phase 28.0
PFD 0.0e+00
Delays (us)
SBD 0.003680
MBD 0.003683
Fringe rate (Hz)
-0.013321
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061808
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

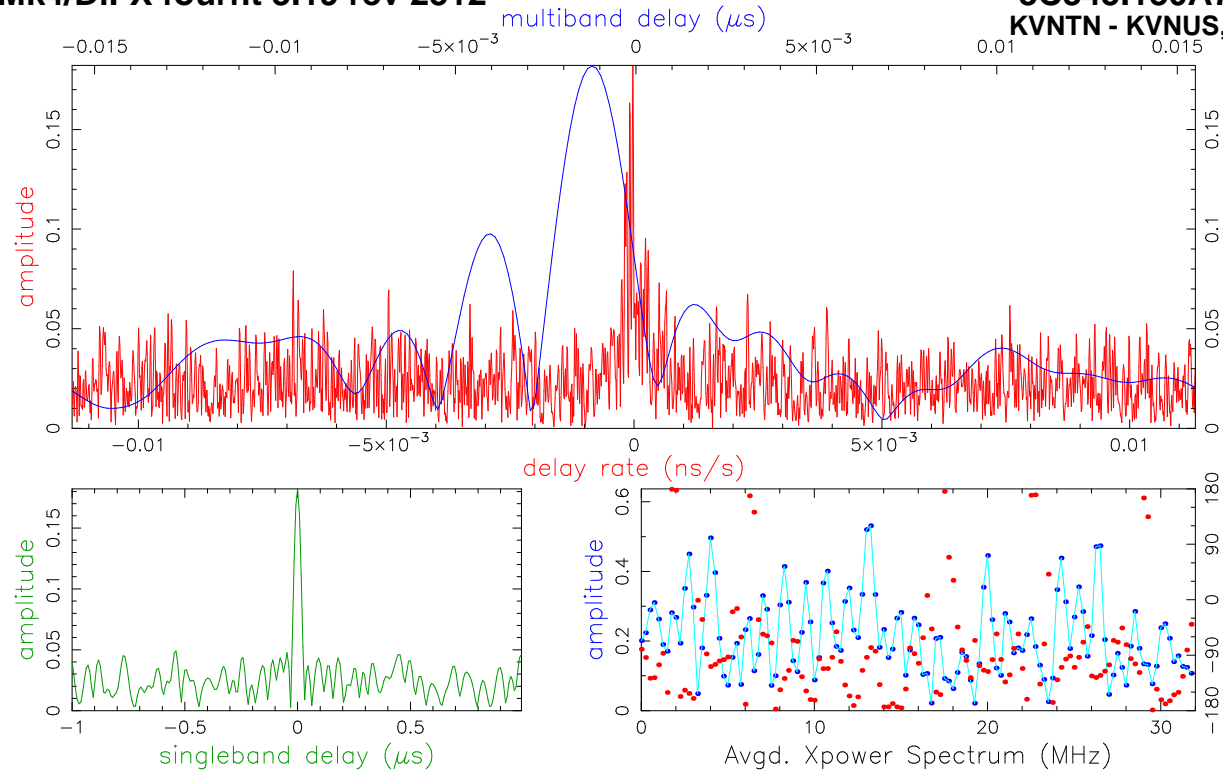


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
U/L	25.7	22.1	25.0	24.3	30.1	35.3	31.2	27.6	32.5	37.2	29.1	26.7	29.0	25.0	22.7	22.8	Phase	28.0				
t	2.6	2.6	2.6	2.6	2.5	2.7	2.7	2.7	2.6	2.7	2.7	2.5	2.6	2.6	2.5	2.4	Ampl.	2.6				
u	129.5	129.5	129.5	129.5	129.6	129.5	129.3	129.4	129.6	129.5	129.3	129.4	129.4	129.4	129.4	129.6	Sbd box	129.5				
tu	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used					
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs					
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
tu	0:0	0:0	0:0	0:0	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					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC					
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-6.86516060572E+02														Apriori delay (usec)	-6.86519743969E+02	Resid mbdelay (usec)	3.68340E-03	+/-	7.3E-06
Sband delay (usec)			-6.86516063469E+02														Apriori clock (usec)	1.9282120E+01	Resid sbdelay (usec)	3.68050E-03	+/-	1.2E-04
Phase delay (usec)			-6.86519743066E+02														Apriori clockrate (us/s)	-1.9999998E-07	Resid phdelay (usec)	9.02503E-07	+/-	2.5E-08
Delay rate (us/s)			5.12313214938E-02														Apriori rate (us/s)	5.12314761415E-02	Resid rate (us/s)	-1.54648E-07	+/-	1.0E-10
Total phase (deg)					-240.4												Apriori accel (us/s/s)	1.41132908190E-06	Resid phase (deg)	28.0	+/-	0.8

ph/seg (deg) 56.2 1.3 Theor. Amplitude 2.643 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 72.5 2.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 4.7 1.5 Inc. seg. avg. 4.208 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 3.8 2.7 Inc. frq. avg. 2.595 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u, v (fr/asec) -379.845 -123.979 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tu...130A7B Output file: /Exps/c192a/v2/1234/No0041/tu.W.260.130A7B

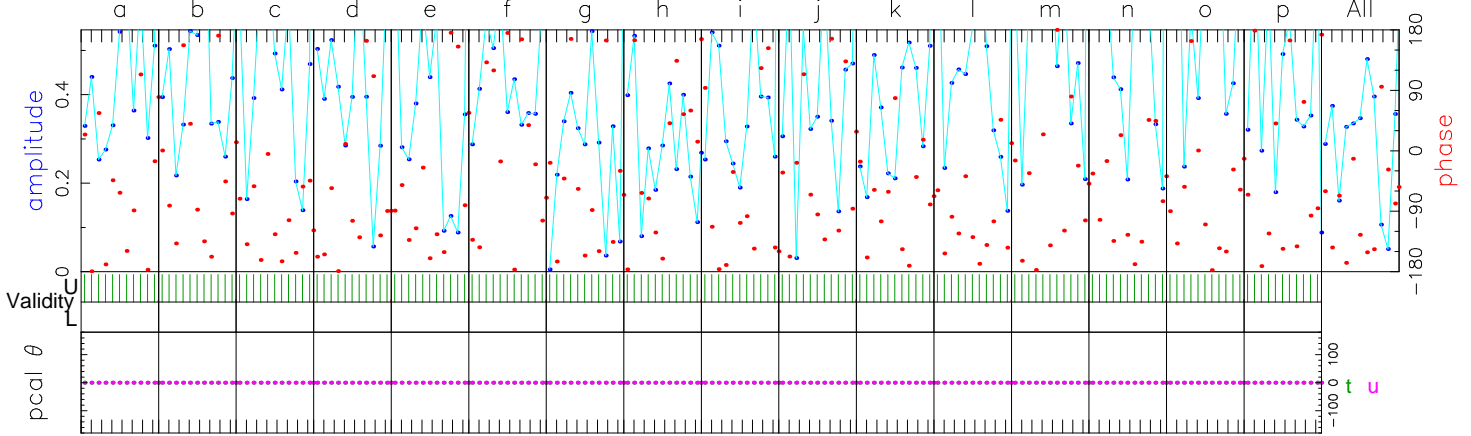
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tu
KVNTN - KVNUS, fgroup W, pol LR



Fringe quality 9
SNR 10.2
Int time 419.840
Amp 0.182
Phase -116.4
PFD 7.9e-16
Delays (us)
SBD -0.000951
MBD -0.001202
Fringe rate (Hz)
-0.002288
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061813
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

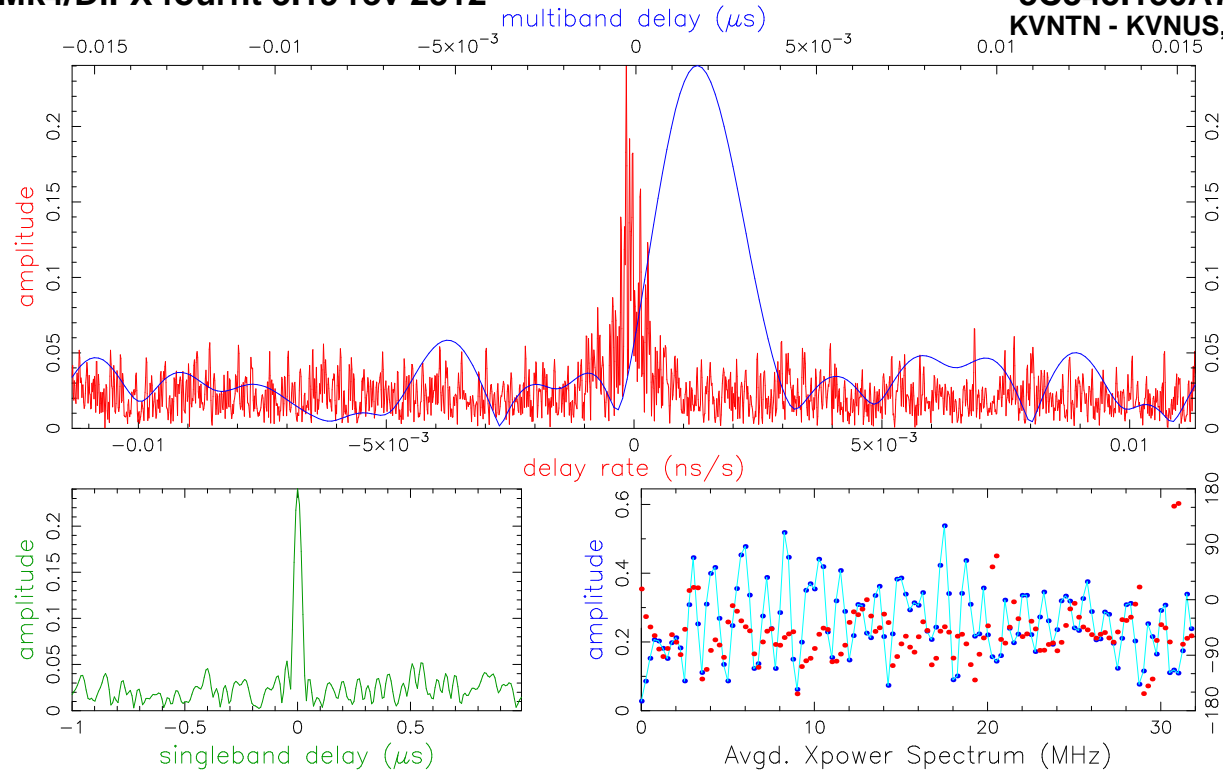


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-122.1	-107.9	-94.2	-124.4	-100.6	-164.8	-118.3	137.2	-156.1	-141.3	-82.7	-112.2	-87.9	-68.5	-119.1	-139.9	Phase	-116.4				
	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.2	0.4	0.3	Ampl.	0.2				
	76.7	17.7	129.4	128.8	122.6	35.8	192.9	26.4	106.3	128.9	192.9	129.3	57.9	44.5	128.1	129.8	Sbd box	128.9				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used					
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs					
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
tu	0:0	0:0	0:0	0:0	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					
tu	0:0	0:0	0:0	0:0	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					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-6.86520946425E+02														Apriori delay (usec)	-6.86519743969E+02	Resid mbdelay (usec)	-1.20246E-03	+/-	1.1E-04
Sband delay (usec)			-6.86520694469E+02														Apriori clock (usec)	1.9282120E+01	Resid sbdelay (usec)	-9.50500E-04	+/-	1.7E-03
Phase delay (usec)			-6.86519747723E+02														Apriori clockrate (us/s)	-1.9999998E-07	Resid phdelay (usec)	-3.75459E-06	+/-	3.6E-07
Delay rate (us/s)			5.12314495769E-02														Apriori rate (us/s)	5.12314761415E-02	Resid rate (us/s)	-2.65645E-08	+/-	1.5E-09
Total phase (deg)																	Apriori accel (us/s/s)	1.41132908190E-06	Resid phase (deg)	-116.4	+/-	11.2

RMS Theor. Amplitude 0.182 +/- 0.018
ph/seg (deg) 69.6 19.4 Search (2048X64) 0.170 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 93.6 33.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 39.3 22.4 Inc. seg. avg. 0.279 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 47.4 39.2 Inc. frq. avg. 0.190 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) -379.845 -123.979 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tu...130A7B Output file: /Exps/c192a/v2/1234/No0041/tu.W.278.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, tu
KVNTN - KVNUS, fgroup W, pol RL

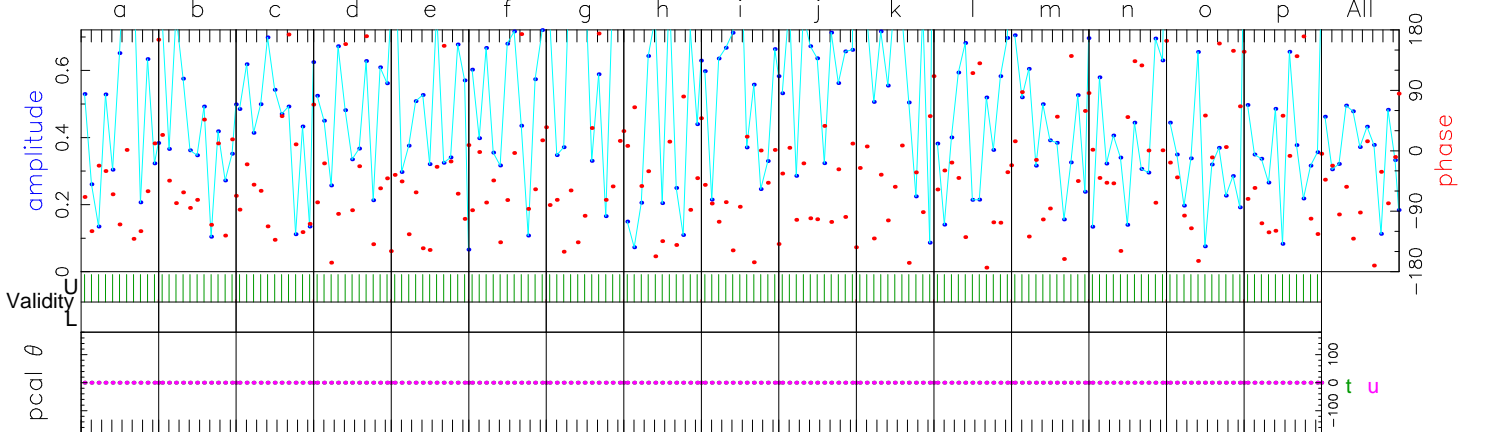


Fringe quality 9

SNR 13.5
Int time 419.840
Amp 0.240
Phase -64.7
PFD 1.3e-32
Delays (us)
SBD 0.000583
MBD 0.001704
Fringe rate (Hz) -0.013421
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061817
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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
	-64.5	-35.4	-86.6	-88.2	-69.6	-51.0	-77.5	-57.9	-77.3	-52.2	-48.8	-80.8	-23.6	-37.9	-100.1	-93.2		Phase -64.7
	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.2	0.3	0.4	0.4	0.2	0.1	0.2	0.0	0.2		Ampl. 0.2
	129.3	129.7	127.9	129.1	128.6	129.4	128.5	98.6	129.8	129.1	128.7	130.3	194.6	182.0	209.0	11.1		Sbd box 129.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000		PC freqs
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
tu	0:0	0:0	0:0	0:0	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
tu	0:0	0:0	0:0	0:0	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
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

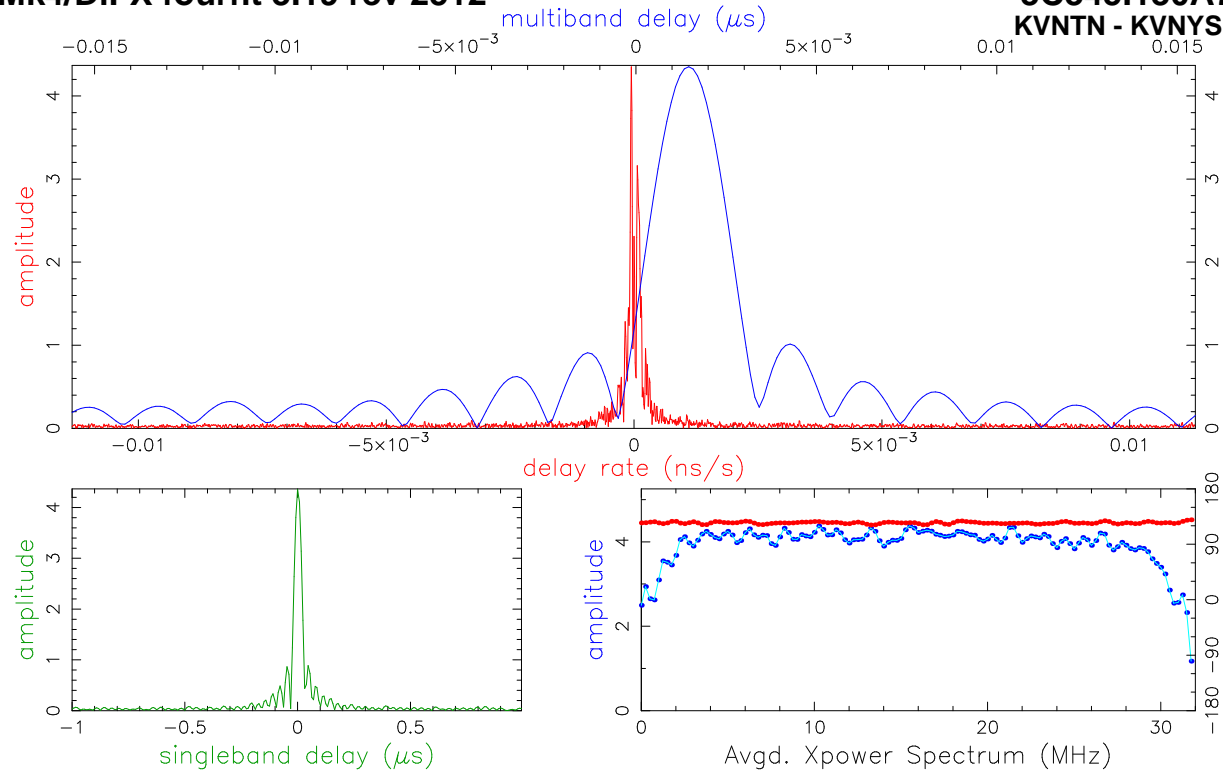
Group delay (usec)(sbd) -6.86518040103E+02 Apriori delay (usec) -6.86519743969E+02 Resid mbdelay (usec) 1.70387E-03 +/- 8.0E-05
 Sband delay (usec) -6.86519161469E+02 Apriori clock (usec) 1.9282120E+01 Resid sbdelay (usec) 5.82500E-04 +/- 1.3E-03
 Phase delay (usec) -6.86519746055E+02 Apriori clockrate (us/s) -1.9999998E-07 Resid phdelay (usec) -2.08636E-06 +/- 2.7E-07
 Delay rate (us/s) 5.12313203325E-02 Apriori rate (us/s) 5.12314761415E-02 Resid rate (us/s) -1.55809E-07 +/- 1.1E-09
 Total phase (deg) -333.1 Apriori accel (us/s/s) 1.41132908190E-06 Resid phase (deg) -64.7 +/- 8.5

RMS Theor. Amplitude 0.240 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 53.8 14.7 Search (2048X64) 0.235 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 72.7 25.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 23.3 17.0 Inc. seg. avg. 0.366 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 41.5 29.7 Inc. frq. avg. 0.242 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) -379.845 -123.979 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/tu...130A7B Output file: /Exps/c192a/v2/1234/No0041/tu.W.294.130A7B

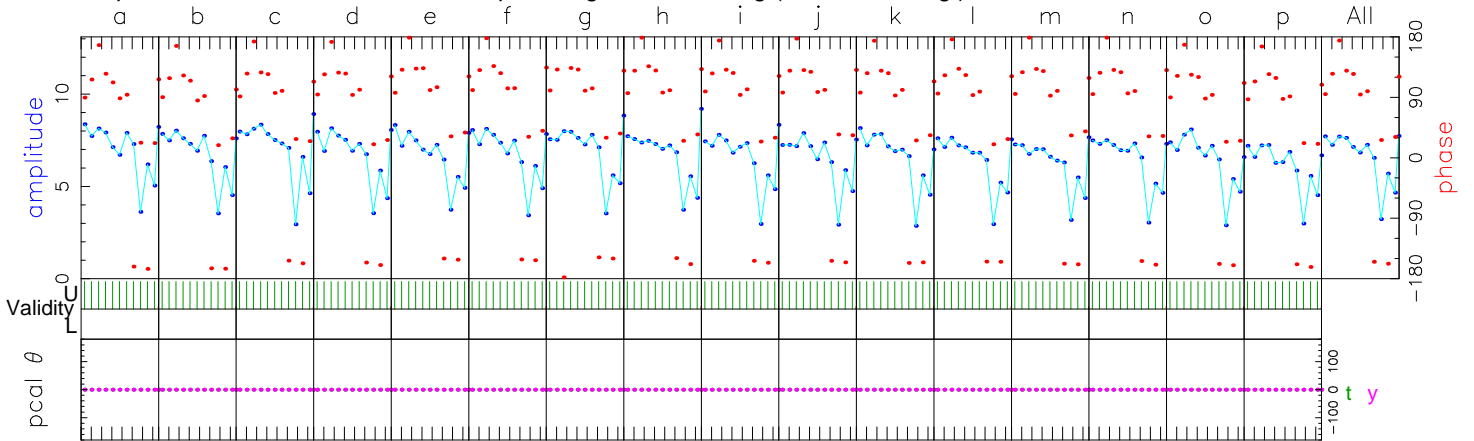
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ty
KVNTN - KVNYs, fgroup W, pol LL



Fringe quality 5
SNR 244.8
Int time 419.840
Amp 4.368
Phase 124.9
PFD 0.0e+00
Delays (us)
SBD 0.001523
MBD 0.001465
Fringe rate (Hz)
-0.004880
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061803
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

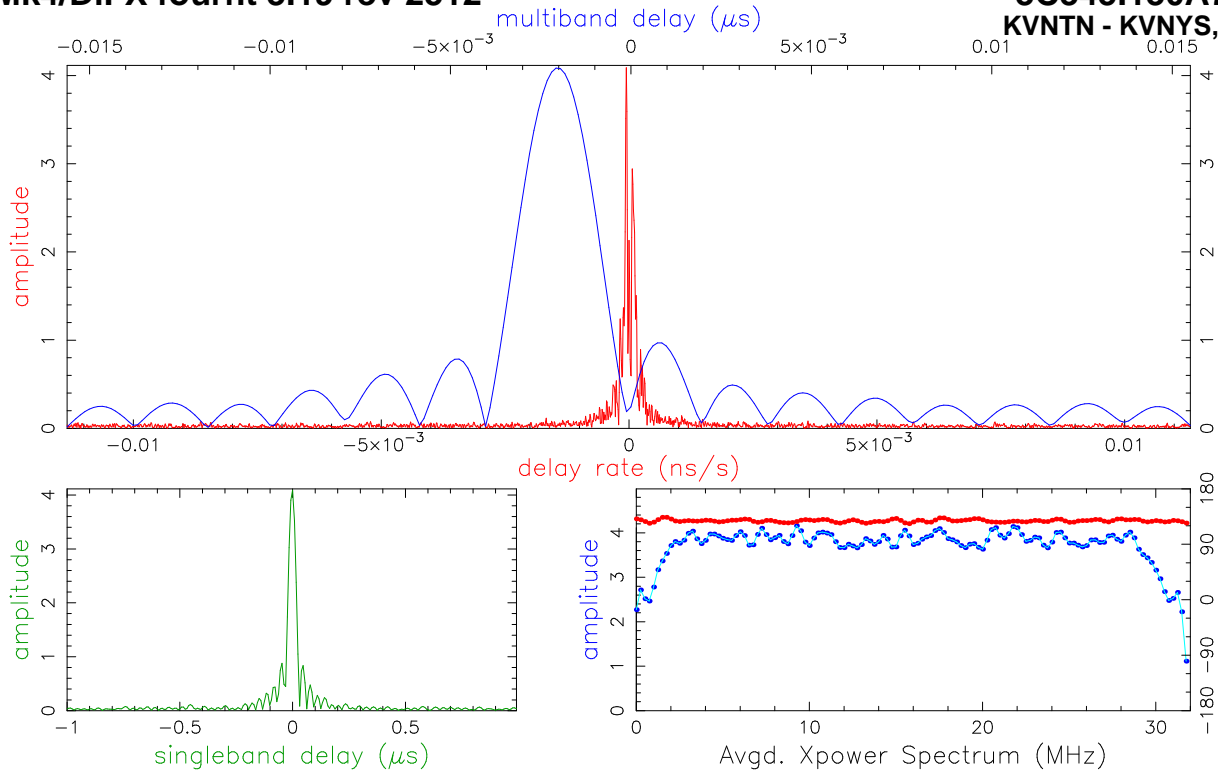


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)		-4.66575256834E+02																
Sband delay (usec)		-4.66575198442E+02																
Phase delay (usec)		-4.66576717413E+02																
Delay rate (us/s)		4.50166011164E-02																
Total phase (deg)					-157.7													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
Pcal mode:																		
Pcal rate:																		
Bits/sample:																		
Sample rate(MISamp/s):																		
Data rate(Mb/s):																		
nlags:																		
t_cohere																		
ion window (TEC)																		

ph/seg (deg) 57.0 0.8
amp/seg (%) 58.4 1.4
ph/frq (deg) 4.5 0.9
amp/frq (%) 3.8 1.6
RMS Theor. Amplitude 4.368 +/- 0.018
Search (2048X64) 4.340
Interp. 0.000
Inc. seg. avg. 6.523
Inc. frq. avg. 4.364
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
t: az 65.6 el 48.4 pa -81.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) -339.680 -534.480 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ty..130A7B Output file: /Exps/c192a/v2/1234/No0041/ty.W.242.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ty
KVNTN - KVNYs, fgroup W, pol RR

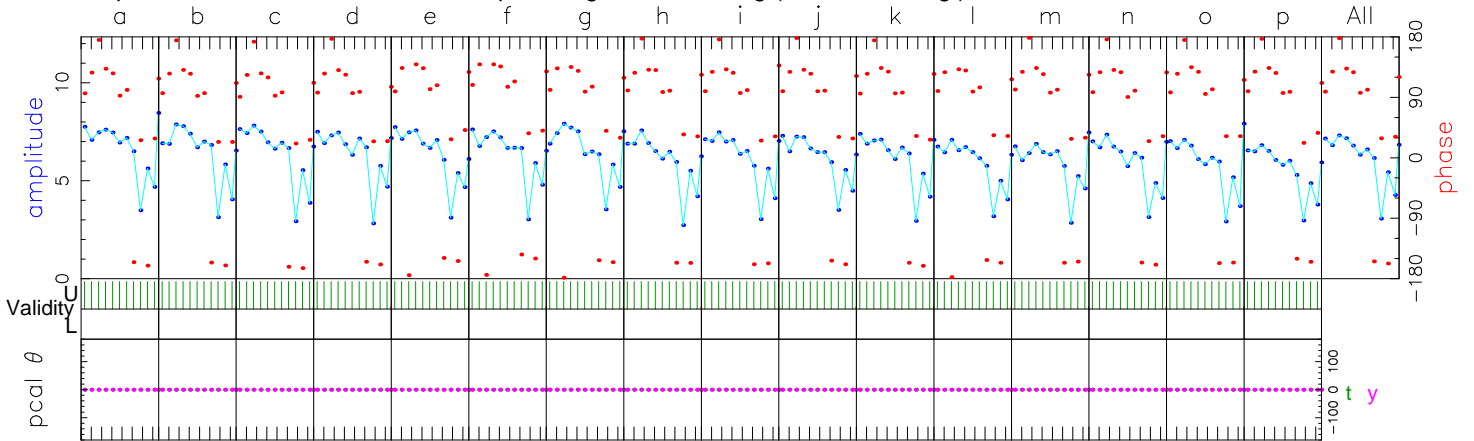


Fringe quality 5

SNR 230.6
Int time 419.840
Amp 4.115
Phase 128.3
PFD 0.0e+00
Delays (us)
SBD -0.002040
MBD -0.002029
Fringe rate (Hz)
-0.004857
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192a
Exper # 16383
Yr:day 2019:277
Start 040000.00
Stop 040659.84
FRT 040330.00
Corr/FF/build
2020:083:122906
2020:093:061809
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	128.3	128.3					
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000					
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000					
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000					
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-4.66578750084E+02															Apriori delay (usec)	-4.66576721442E+02	Resid mbdelay (usec)	-2.02864E-03	+/-	4.7E-06
Sband delay (usec)			-4.66578761442E+02															Apriori clock (usec)	-1.4825573E+00	Resid sbdelay (usec)	-2.04000E-03	+/-	7.5E-05
Phase delay (usec)			-4.66576717305E+02															Apriori clockrate (us/s)	1.0000001E-07	Resid phdelay (usec)	4.13783E-06	+/-	1.6E-08
Delay rate (us/s)			4.50166013857E-02															Apriori rate (us/s)	4.50166577692E-02	Resid rate (us/s)	-5.63835E-08	+/-	6.6E-11
Total phase (deg)																		Apriori accel (us/s/s)	-1.91137878213E-06	Resid phase (deg)	128.3	+/-	0.5

ph/seg (deg) 56.9 0.9
amp/seg (%) 57.5 1.5
ph/frq (deg) 3.4 1.0
amp/frq (%) 4.6 1.7

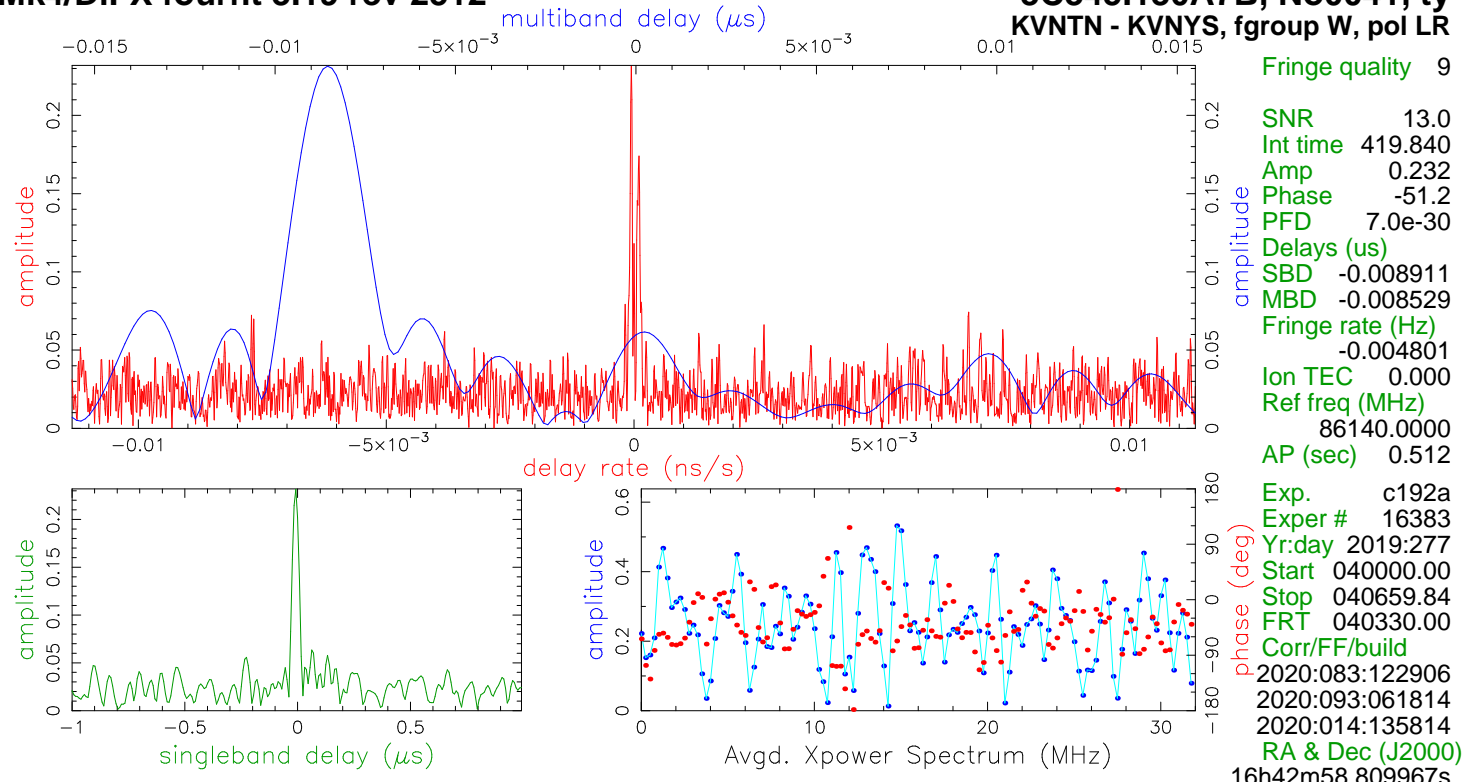
RMS Theor. Amplitude 4.115 +/- 0.018
Search (2048X64) 4.072
Interp. 0.000
Inc. seg. avg. 6.109
Inc. frq. avg. 4.095

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

t: az 65.6 el 48.4 pa -81.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) -339.680 -534.480 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ty..130A7B Output file: /Exps/c192a/v2/1234/No0041/ty.W.261.130A7B



Fringe quality 9

SNR 13.0

Int time 419.840

Amp 0.232

Phase -51.2

PFD 7.0e-30

Delays (us)

SBD -0.008911

MBD -0.008529

Fringe rate (Hz)

-0.004801

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Yr:day 16383

Start 2019:277

Stop 2019:277

FRT 040330.00

Corr/FF/build

2020:083:122906

2020:093:061814

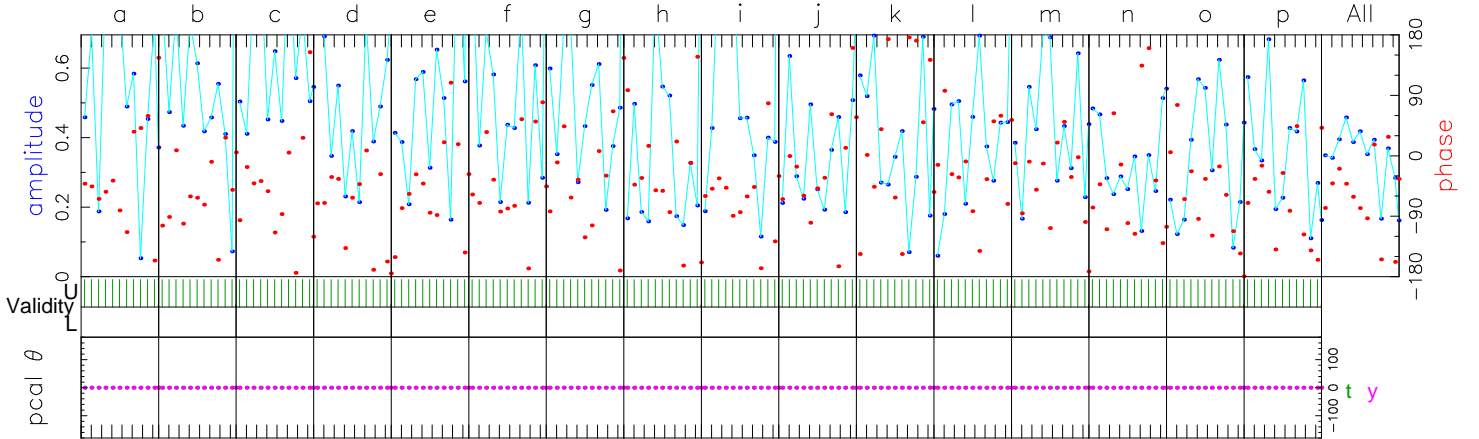
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	127.9				
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs					
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
ty	0:0	0:0	0:0	0:0	0:0	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					
t y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-4.66585250647E+02															Apriori delay (usec)	-4.66576721442E+02	Resid mbdelay (usec)	-8.52920E-03	+/-	8.3E-05
Sband delay (usec)			-4.66585631942E+02															Apriori clock (usec)	-1.4825573E+00	Resid sbdelay (usec)	-8.91050E-03	+/-	1.3E-03
Phase delay (usec)			-4.66576723094E+02															Apriori clockrate (us/s)	1.0000001E-07	Resid phdelay (usec)	-1.65190E-06	+/-	2.8E-07
Delay rate (us/s)			4.50166020298E-02															Apriori rate (us/s)	4.50166577692E-02	Resid rate (us/s)	-5.57394E-08	+/-	1.2E-09
Total phase (deg)																		Apriori accel (us/s/s)	-1.91137878213E-06	Resid phase (deg)	-51.2	+/-	8.8

RMS Theor. Amplitude 0.232 +/- 0.018

ph/seg (deg) 58.0 15.3 Search (2048X64) 0.226

amp/seg (%) 62.0 26.7 Interp. 0.000

ph/frq (deg) 17.6 17.6 Inc. seg. avg. 0.343

amp/frq (%) 37.2 30.8 Inc. frq. avg. 0.230

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

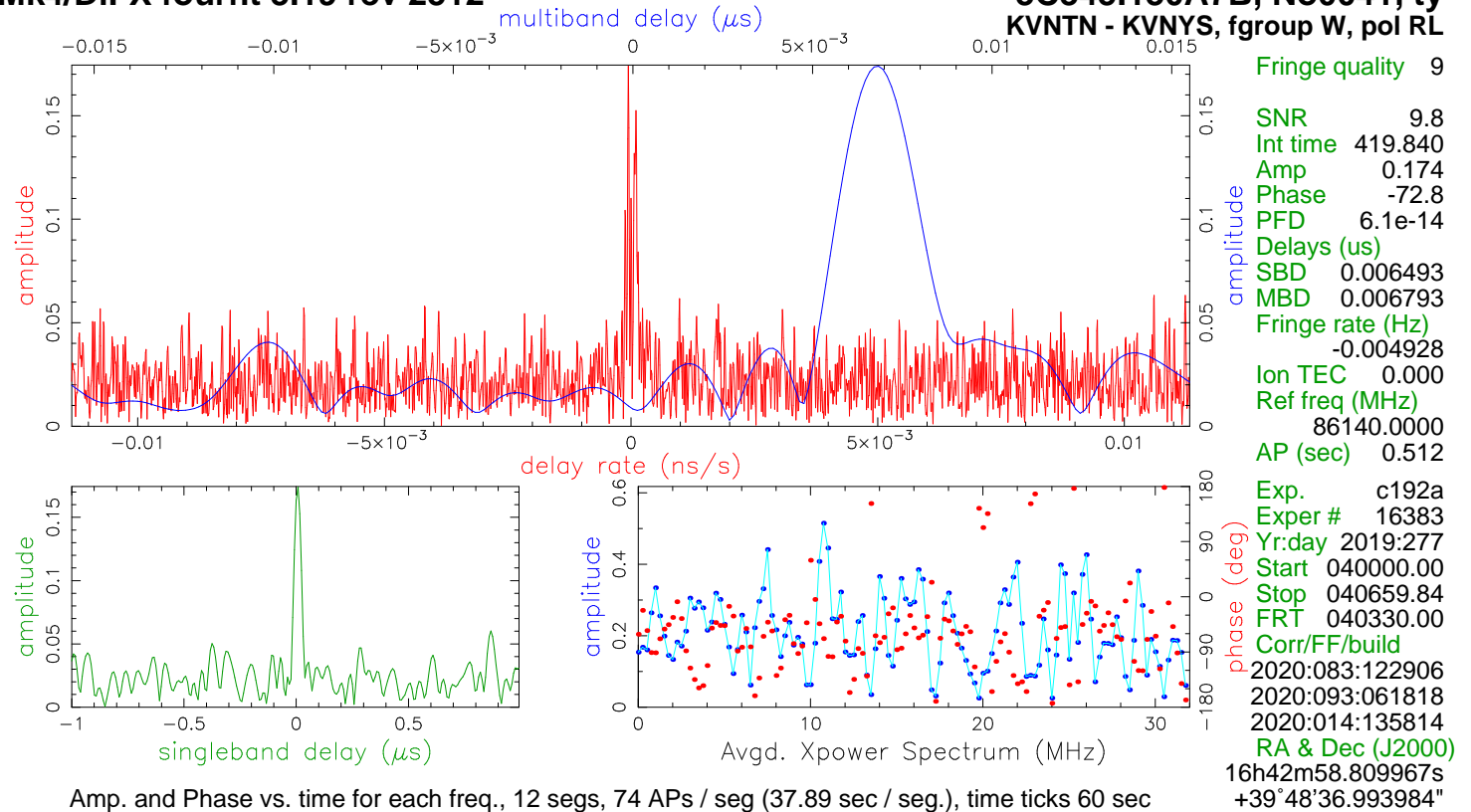
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 y: az 70.3 el 50.4 pa -76.7 u, v (fr/asec) -339.680 -534.480 simultaneous interpolator

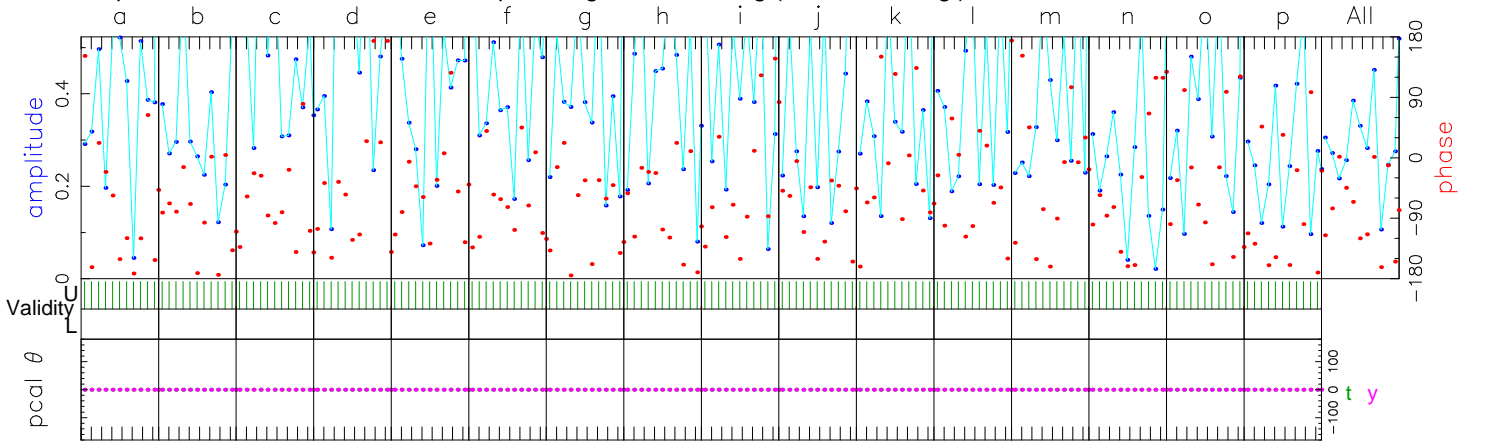
Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ty..130A7B Output file: /Exps/c192a/v2/1234/No0041/ty.W.281.130A7B

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130A7B, No0041, ty
KVNTN - KVNYS, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 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				
	-115.6	-70.4	-77.1	-64.4	-79.2	-63.4	-52.9	-54.1	-109.8	-85.9	-40.7	-58.9	-54.9	-83.0	-63.4	-121.2	Phase	-72.8				
	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.1	Ampl.	0.2				
	242.9	234.7	130.4	77.1	205.9	194.0	80.9	192.9	120.2	129.1	207.9	130.6	247.1	210.4	242.1	19.2	Sbd box	129.8				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used					
t	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	31000	PC freqs					
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
ty	0:0	0:0	0:0	0:0	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					
ty	0:0	0:0	0:0	0:0	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					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-4.66569928772E+02														Apriori delay (usec)	-4.66576721442E+02	Resid mbdelay (usec)	6.79267E-03	+/-	1.1E-04
Sband delay (usec)			-4.66570228942E+02														Apriori clock (usec)	-1.4825573E+00	Resid sbdelay (usec)	6.49250E-03	+/-	1.8E-03
Phase delay (usec)			-4.66576723790E+02														Apriori clockrate (us/s)	1.0000001E-07	Resid phdelay (usec)	-2.34769E-06	+/-	3.8E-07
Delay rate (us/s)			4.50166005595E-02														Apriori rate (us/s)	4.50166577692E-02	Resid rate (us/s)	-5.72097E-08	+/-	1.6E-09
Total phase (deg)																	Apriori accel (us/s/s)	-1.91137878213E-06	Resid phase (deg)	-72.8	+/-	11.7

ph/seg (deg) 57.0 20.3 Search (2048X64) 0.173 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 81.2 35.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 24.5 23.4 Inc. seg. avg. 0.269 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 36.0 40.9 Inc. frq. avg. 0.171 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

t: az 65.6 el 48.4 pa -81.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) -339.680 -534.480 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v2/1234/No0041/ty..130A7B Output file: /Exps/c192a/v2/1234/No0041/ty.W.296.130A7B