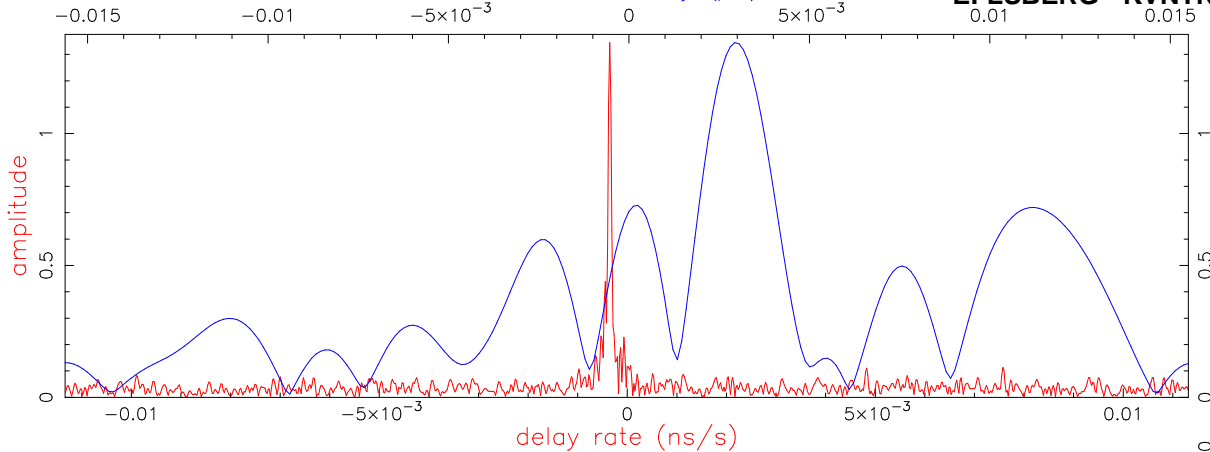
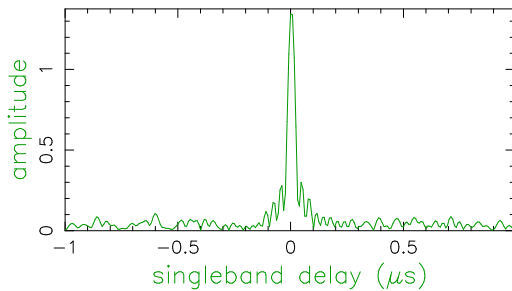


multiband delay (μ s)

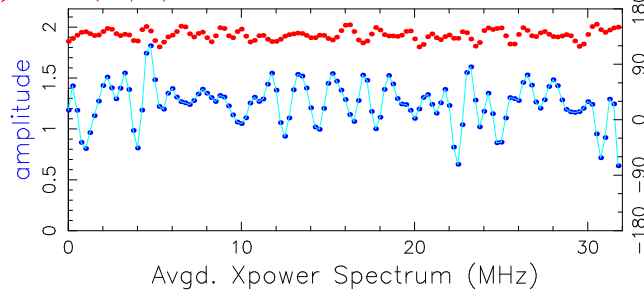
Fringe quality 5



SNR 50.4
Int time 179.778
Amp 1.376
Phase 140.8
PFD 0.0e+00
Delays (us)
SBD 0.003701
MBD 0.002987
Fringe rate (Hz)
-0.029915
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

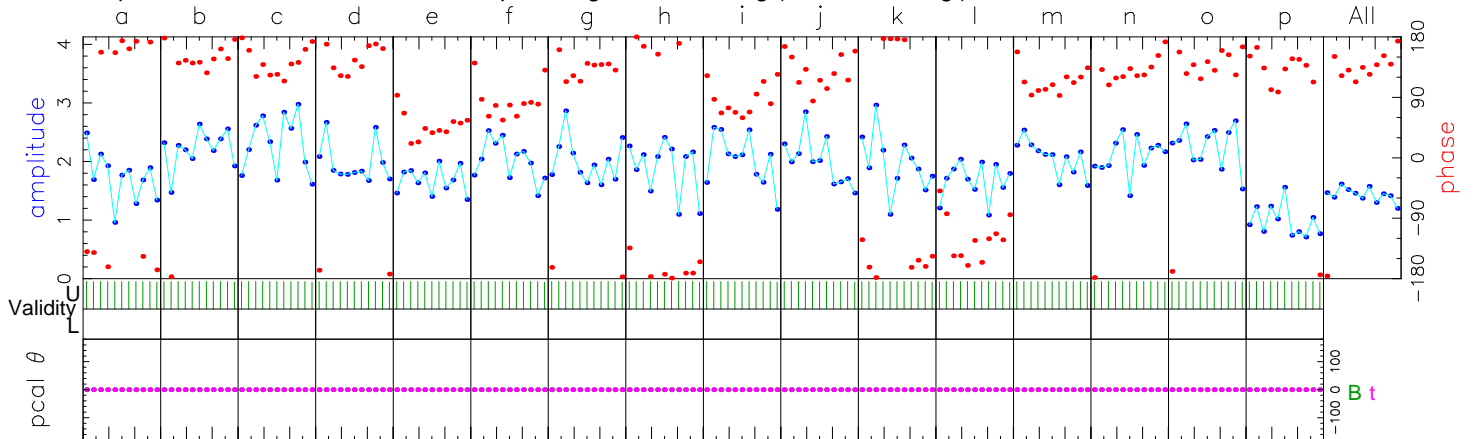


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043716
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-173.0	152.0	140.5	156.4	46.9	81.8	142.1	-175.6	83.0	127.7	-165.4	-122.4	113.7	135.2	144.3	134.9	Phase	140.8
	1.6	2.1	2.2	1.8	1.6	1.8	1.8	1.8	1.9	1.8	1.9	1.4	2.0	2.0	2.1	0.9	Ampl.	1.8
	128.7	129.4	129.4	129.8	129.9	130.0	130.0	130.0	129.8	130.0	129.9	130.0	129.6	129.6	129.2	129.2	Sbd box	129.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
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	Manl 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		
	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	

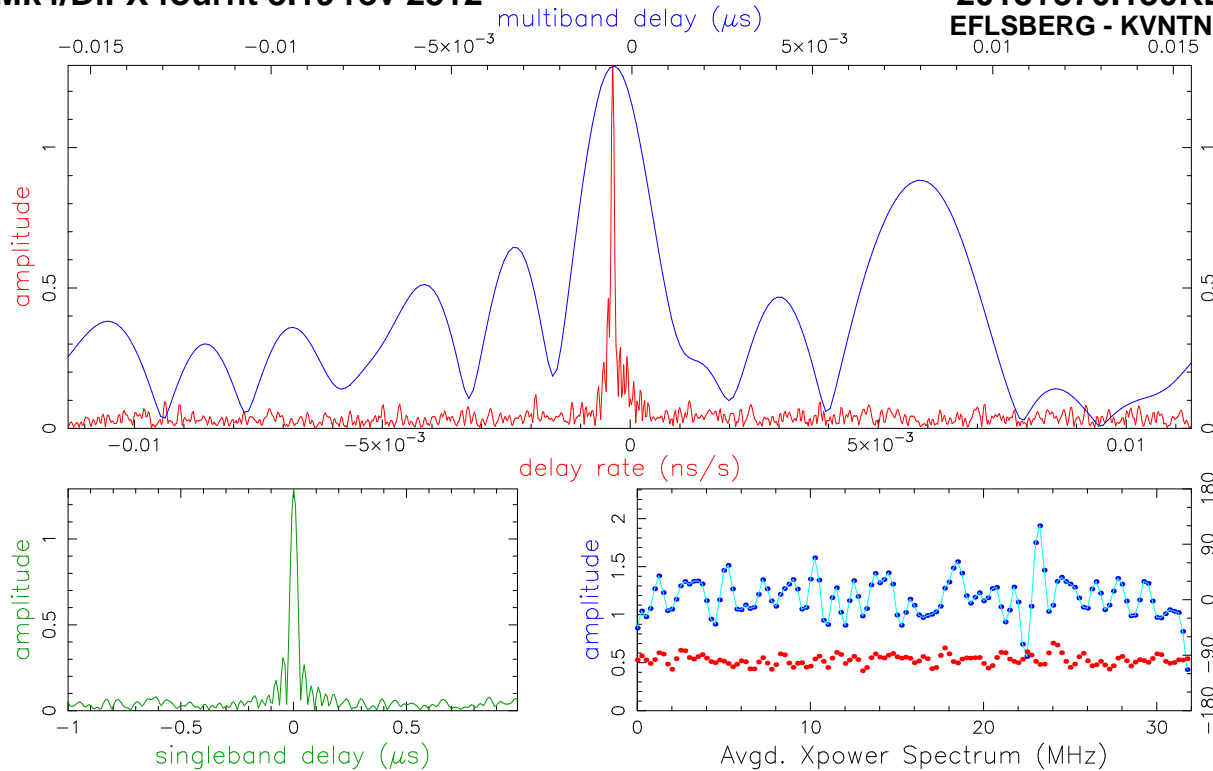
Group delay (usec)(sbd) 1.90274101882E+03 Apriori delay (usec) 1.90273803205E+03 Resid mbdelay (usec) 2.98677E-03 +/- 2.1E-05
Sband delay (usec) 1.90274173355E+03 Apriori clock (usec) -1.0970116E+01 Resid sbdelay (usec) 3.70150E-03 +/- 3.4E-04
Phase delay (usec) 1.90273803659E+03 Apriori clockrate (us/s) -3.9999999E-07 Resid phdelay (usec) 4.53980E-06 +/- 7.3E-08
Delay rate (us/s) 1.57628505877E+00 Apriori rate (us/s) 1.57628540606E+00 Resid rate (us/s) -3.47288E-07 +/- 7.0E-10
Total phase (deg) 169.8 Apriori accel (us/s/s) 5.06271912858E-06 Resid phase (deg) 140.8 +/- 2.3

RMS Theor. Amplitude 1.376 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 20.7 3.8 Search (1024X64) 1.313 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 9.3 6.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 48.8 4.5 Inc. seg. avg. 1.433 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 37.7 7.9 Inc. frq. avg. 1.792 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 84.9 el 47.2 pa -52.7 t: az 293.0 el 40.6 pa 75.1 u,v (fr/asec) -11333.961 1943.286 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/Bt..130KBL Output file: /Exps/c192c/v2/1234/No0011/Bt.W.10.130KBL

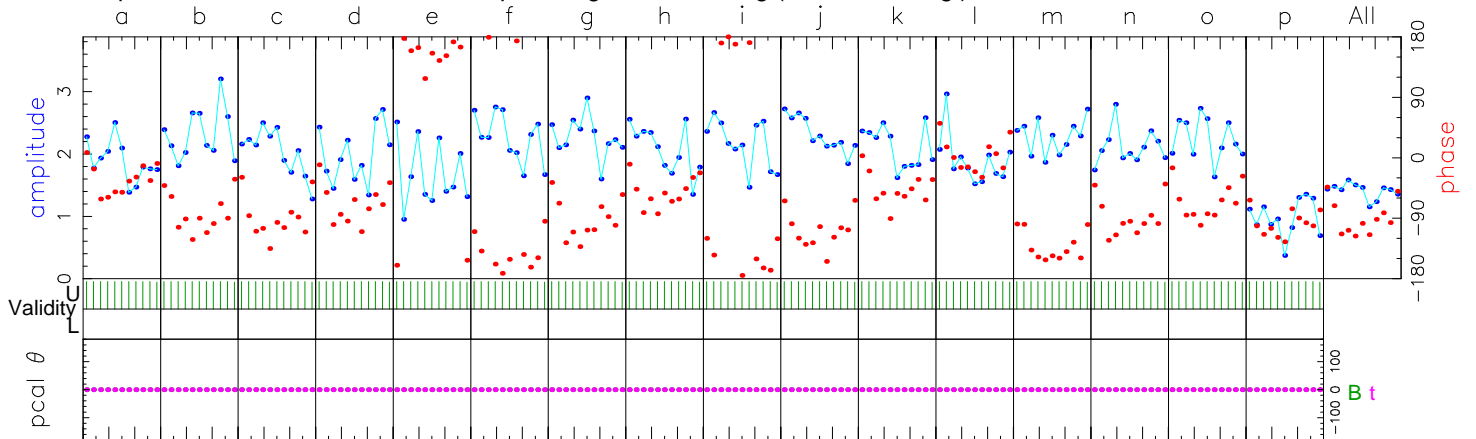
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, Bt
EFLSBERG - KVNTN, fgroup W, pol RR

Fringe quality 3

SNR 47.4
Int time 179.778
Amp 1.292
Phase -90.0
PFD 0.0e+00
Delays (us)
SBD 0.000827
MBD -0.000497
Fringe rate (Hz)
-0.029811
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043719
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	Phase	-90.0
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	1.8
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	129.1
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	APs used	
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 freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Mani PC	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	PC amp	

Group delay (usec)(sbd) 1.90273753554E+03 Apriori delay (usec) 1.90273803205E+03 Resid mbdelay (usec) -4.96513E-04 +/- 2.3E-05
Sband delay (usec) 1.90273885855E+03 Apriori clock (usec) -1.0970116E+01 Resid sbdelay (usec) 8.26500E-04 +/- 3.6E-04
Phase delay (usec) 1.90273802915E+03 Apriori clockrate (us/s) -3.9999999E-07 Resid phdelay (usec) -2.90341E-06 +/- 7.8E-08
Delay rate (us/s) 1.57628505999E+00 Apriori rate (us/s) 1.57628540606E+00 Resid rate (us/s) -3.46071E-07 +/- 7.5E-10
Total phase (deg) -61.0 Apriori accel (us/s/s) 5.06271912858E-06 Resid phase (deg) -90.0 +/- 2.4

RMS Theor. Amplitude 1.292 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 24.2 4.0 Search (1024X64) 1.253 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 12.9 7.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 52.7 4.8 Inc. seg. avg. 1.408 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 48.6 8.4 Inc. frq. avg. 1.847 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 84.9 el 47.2 pa -52.7 t: az 293.0 el 40.6 pa 75.1 u,v (fr/asec) -11333.961 1943.286 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/Bt..130KBL Output file: /Exps/c192c/v2/1234/No0011/Bt.W.31.130KBL

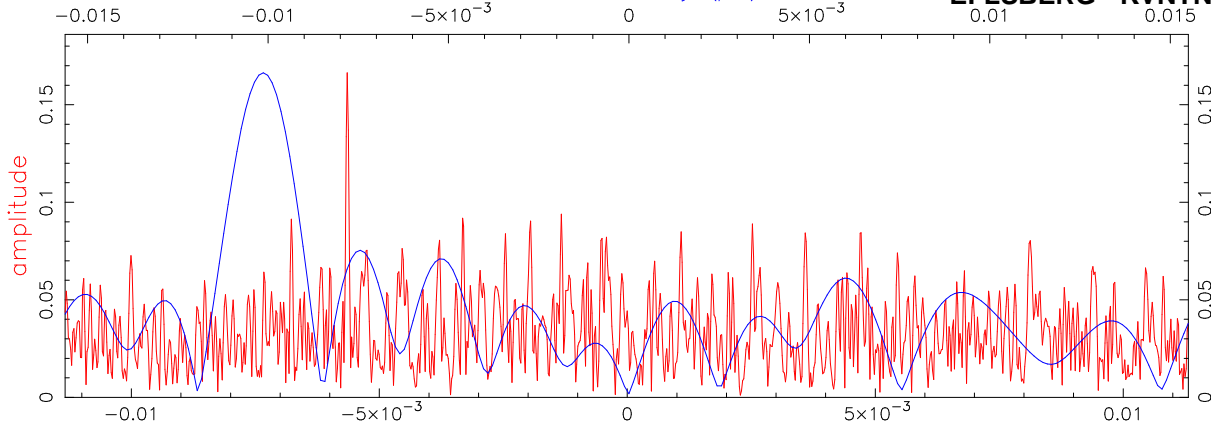
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, Bt

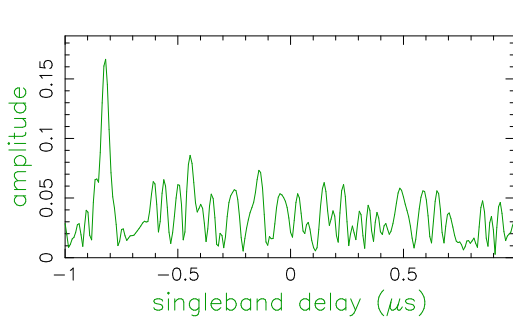
EFLSBERG - KVNTN, fgroup W, pol RL

multiband delay (μ s)

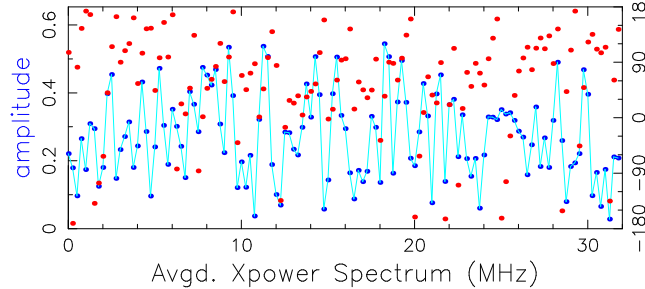
Fringe quality 0



SNR 6.1
Int time 179.778
Amp 0.186
Phase 81.3
PFD 1.0e-01
Delays (us)
SBD -0.822685
MBD -0.010137
Fringe rate (Hz)
-0.486773
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

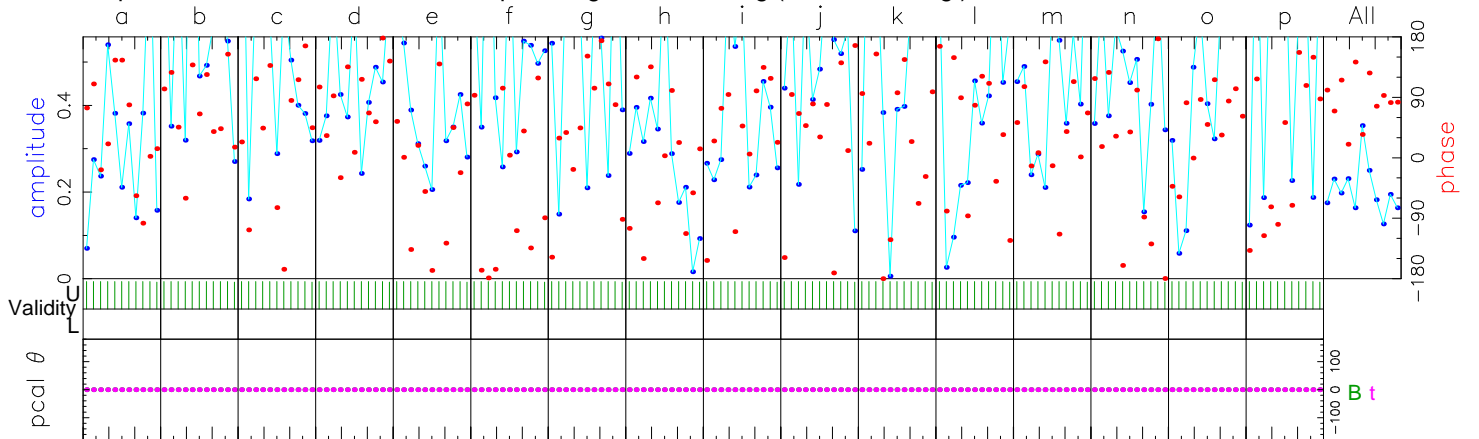


delay rate (ns/s)



Exp. c192c
Yr:day 16383
2020:076:014755
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043724
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

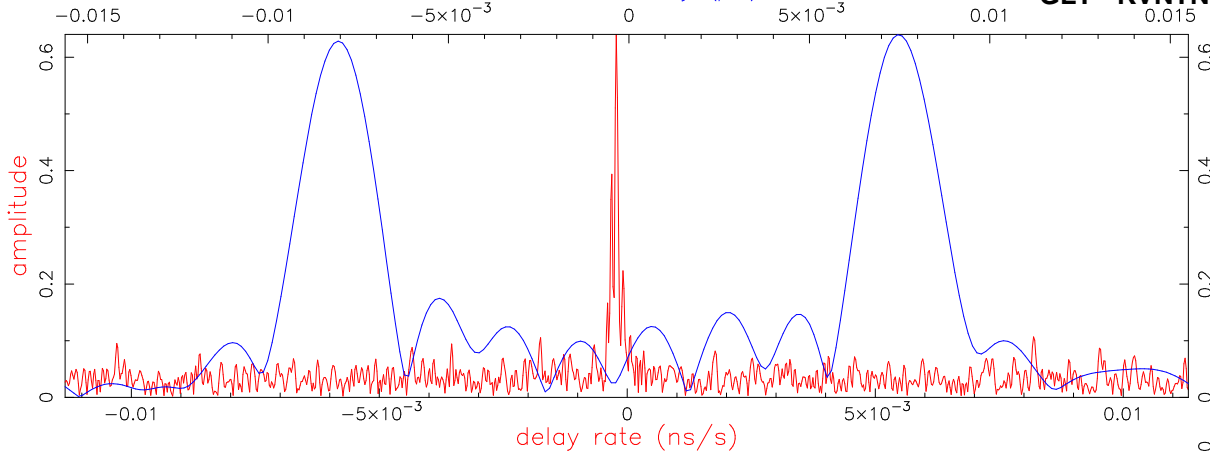
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



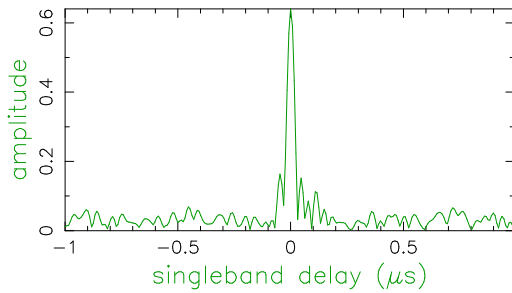
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
	29.8	89.5	93.4	83.1	39.5	163.7	71.6	23.3	85.0	84.7	68.5	107.2	47.6	122.0	66.4	118.3	Phase	81.3		
	0.1	0.4	0.3	0.3	0.1	0.1	0.2	0.0	0.2	0.3	0.2	0.1	0.3	0.2	0.4	0.2	Ampl.	0.2		
	157.6	24.4	248.4	248.7	163.5	223.9	157.8	73.0	147.9	124.2	7.4	64.7	106.5	118.3	22.9	72.9	Sbd box	23.7		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
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	Manl PC			
B	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				
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			
																	Chan ids			
																	Tracks			
Group delay (usec)(sbd)			1.90191539511E+03			Apriori delay (usec)			1.90273803205E+03			Resid mbdelay (usec)			-1.01369E-02	+/-	1.8E-04			
Sband delay (usec)			1.90191534655E+03			Apriori clock (usec)			-1.0970116E+01			Resid sbdelay (usec)			-8.22685E-01	+/-	2.8E-03			
Phase delay (usec)			1.90273803467E+03			Apriori clockrate (us/s)			-3.9999999E-07			Resid phdelay (usec)			2.62216E-06	+/-	6.0E-07			
Delay rate (us/s)			1.57627975512E+00			Apriori rate (us/s)			1.57628540606E+00			Resid rate (us/s)			-5.65095E-06	+/-	5.8E-09			
Total phase (deg)				110.4		Apriori accel (us/s/s)			5.06271912858E-06			Resid phase (deg)			81.3	+/-	18.6			
ph/seg (deg)	RMS	Theor.				Amplitude	0.186 +/- 0.030					PCal mode: MANUAL, MANUAL			PC period (AP's) 5, 5					
amp/seg (%)	35.0	30.9				Search (1024X64)	0.163					PCal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000	1.000			
ph/frq (deg)	41.4	54.0				Interp.	0.000					Bits/sample: 2x2			SampCntNorm: enabled	mb window (us)	-0.016	0.016		
amp/frq (%)	37.9	37.3				Inc. seg. avg.	0.200					Sample rate(MSamp/s): 64				dr window (ns/s)	-0.011	0.011		
	60.1	65.1				Inc. frq. avg.	0.172					Data rate(Mb/s): 2048			nlags: 128	t_cohere infinite	ion window (TEC)	0.00	0.00	
B: az 84.9 el 47.2 pa -52.7						t: az 293.0 el 40.6 pa 75.1						u,v (fr/asec) -11333.961 1943.286							simultaneous interpolator	
Control file: cf_1234_gmva						Input file: /Exps/c192c/v2/1234/No0011/Bt..130KBL						Output file: /Exps/c192c/v2/1234/No0011/Bt.W.69.130KBL								

multiband delay (μ s)

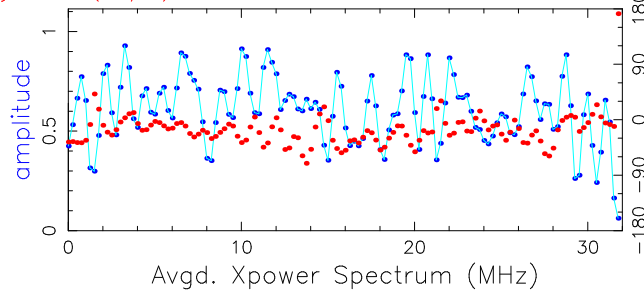
Fringe quality 6



SNR 23.5
Int time 179.854
Amp 0.640
Phase -58.7
PFD 0.0e+00
Delays (us)
SBD 0.000686
MBD 0.007474
Fringe rate (Hz)
-0.018361
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

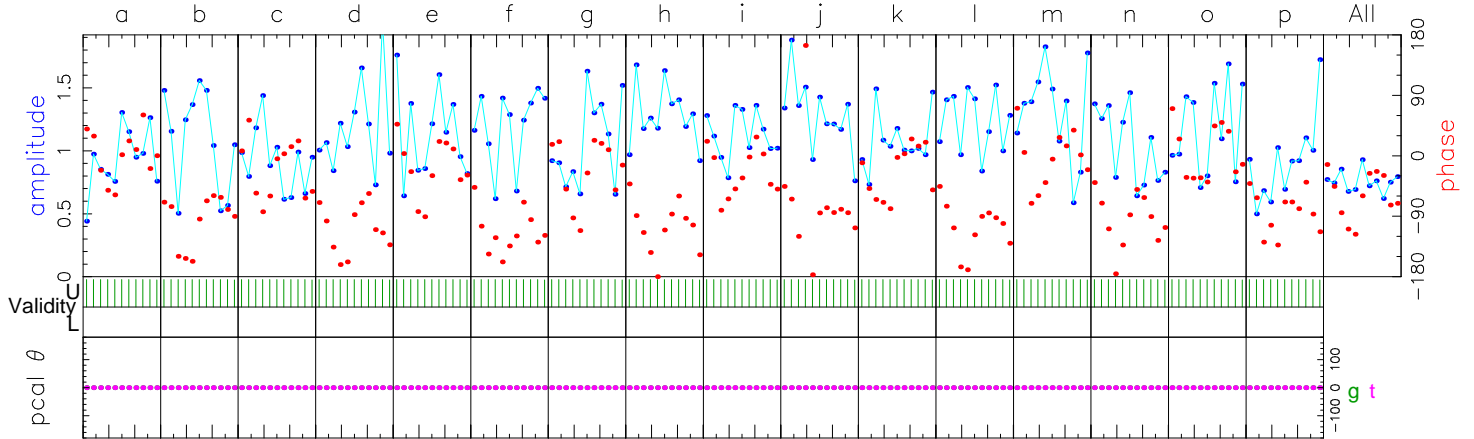


delay rate (ns/s)



Exp. c192c
Yr:day 16383
Exp:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043718
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



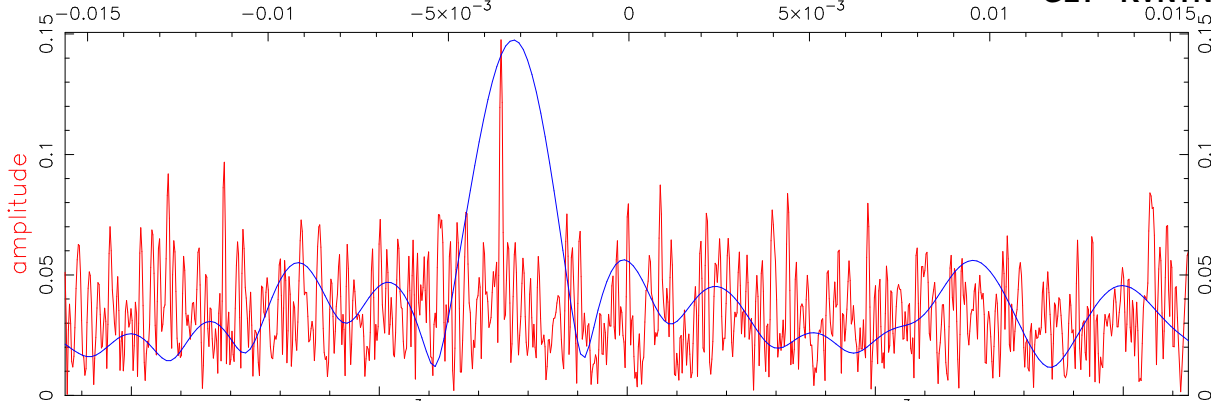
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
	1.6	-93.8	-25.8	-105.7	-7.5	-114.0	-11.8	-104.2	-21.5	-93.7	-26.3	-107.3	-10.9	-92.8	6.6	-85.5	Phase	-58.7		
	0.8	0.9	0.7	1.0	0.9	1.0	0.8	1.1	0.9	1.0	0.9	1.0	1.0	0.9	0.9	0.8	Ampl.	0.9		
U/L	129.0	128.2	129.2	128.7	129.1	128.8	129.4	129.3	128.8	129.0	128.9	129.3	129.0	129.1	129.1	129.6	Sbd box	129.1		
	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs			
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	Manl PC			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
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)			-3.99330113472E+03				Apriori delay (usec)				-3.99330860851E+03				Resid mbdelay (usec)				+/-	4.6E-05
Sband delay (usec)			-3.99330792201E+03				Apriori clock (usec)				-2.6475037E+01				Resid sbdelay (usec)				+/-	7.3E-04
Phase delay (usec)			-3.99330861040E+03				Apriori clockrate (us/s)				-1.2500000E-07				Resid phdelay (usec)				+/-	1.6E-07
Delay rate (us/s)			1.12029017370E+00				Apriori rate (us/s)				1.12029038685E+00				Resid rate (us/s)				+/-	1.5E-09
Total phase (deg)			-251.9				Apriori accel (us/s/s)				5.00803517857E-05				Resid phase (deg)				+/-	4.9

RMS Theor. Amplitude 0.640 +/- 0.027
ph/seg (deg) 33.5 8.1 Search (1024X64) 0.613
amp/seg (%) 22.1 14.1 Interp. 0.000
ph/frq (deg) 48.2 9.8 Inc. seg. avg. 0.749
amp/frq (%) 44.7 17.0 Inc. frq. avg. 0.895

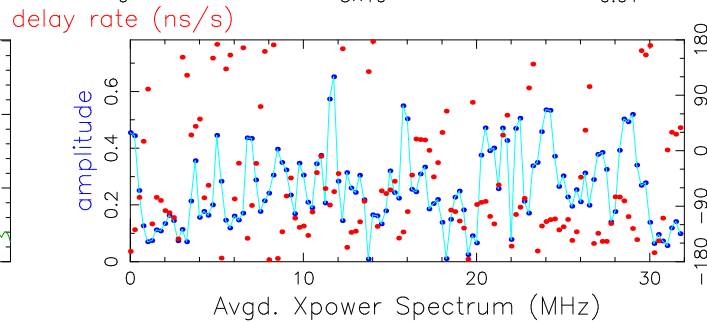
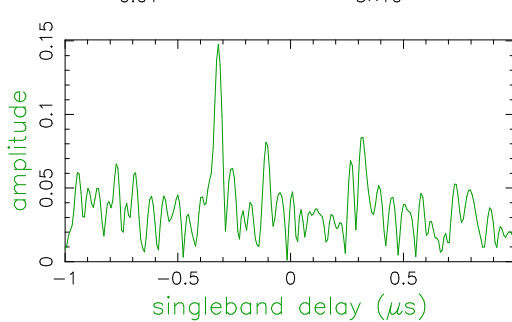
g: az 40.4 el 27.4 pa -11.0 t: az 293.0 el 40.6 pa 75.1 u,v (fr/asec) -8016.404 6032.408
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/gt..130KBL Output file: /Exps/c192c/v2/1234/No0011/gt.W.18.130KBL
simultaneous interpolator

multiband delay (μ s)

Fringe quality 0

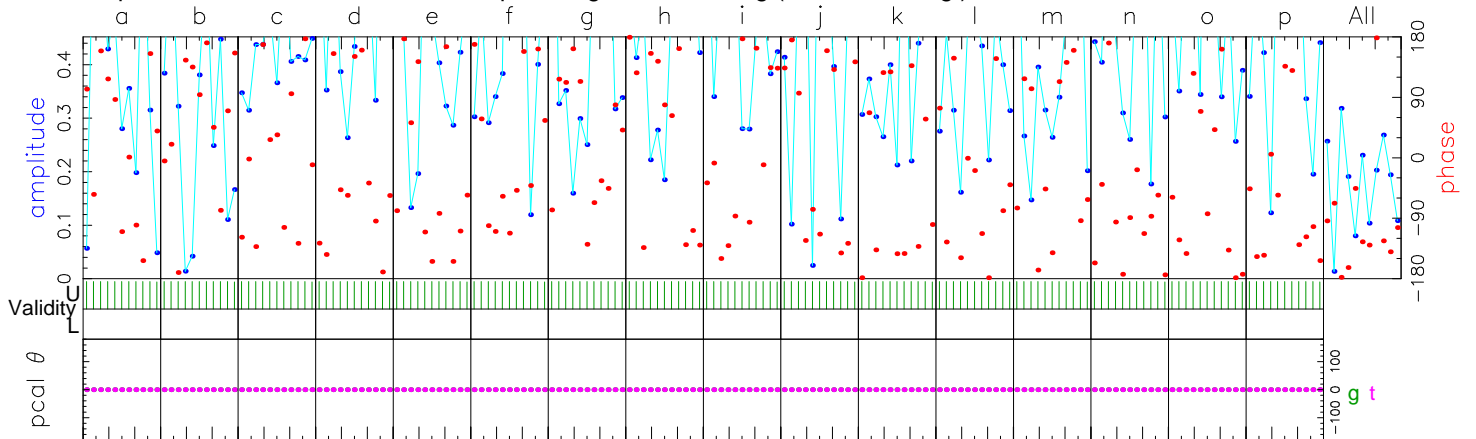


SNR 5.4
Int time 179.850
Amp 0.151
Phase -136.8
PFD 1.0e+00
Delays (us)
SBD -0.320682
MBD -0.003206
Fringe rate (Hz)
-0.219865
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043720
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-178.6	73.9	-108.0	-136.2	-118.1	-118.1	-49.5	-172.3	-117.2	-178.3	-158.7	-98.6	-149.8	-106.4	-138.4	-141.4	Phase	-136.8
	0.1	0.1	0.1	0.3	0.3	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.3	0.2	0.2	Ampl.	0.1
	130.1	101.2	179.1	239.0	94.5	91.5	22.8	198.6	220.6	83.5	162.3	41.9	106.0	193.0	179.9	77.6	Sbd box	88.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
gt	0:0	0:0	0:0	0:0	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	
gt	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) -3.99362431415E+03 Apriori delay (usec) -3.99330860851E+03 Resid mbdelay (usec) -3.20565E-03 +/- 2.0E-04
Sband delay (usec) -3.99362929051E+03 Apriori clock (usec) -2.6475037E+01 Resid sbdelay (usec) -3.20682E-01 +/- 3.2E-03
Phase delay (usec) -3.99330861292E+03 Apriori clockrate (us/s) -1.2500000E-07 Resid phdelay (usec) -4.41244E-06 +/- 6.8E-07
Delay rate (us/s) 1.12028783443E+00 Apriori rate (us/s) 1.12029038685E+00 Resid rate (us/s) -2.55242E-06 +/- 6.6E-09
Total phase (deg) -330.1 Apriori accel (us/s/s) 5.00803517857E-05 Resid phase (deg) -136.8 +/- 21.2

RMS Theor. Amplitude 0.151 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 43.5 35.1 Search (1024X64) 0.144 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 63.3 61.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 53.2 42.4 Inc. seg. avg. 0.154 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 56.2 73.9 Inc. frq. avg. 0.144 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

g: az 40.4 el 27.4 pa -11.0

t: az 293.0 el 40.6 pa 75.1

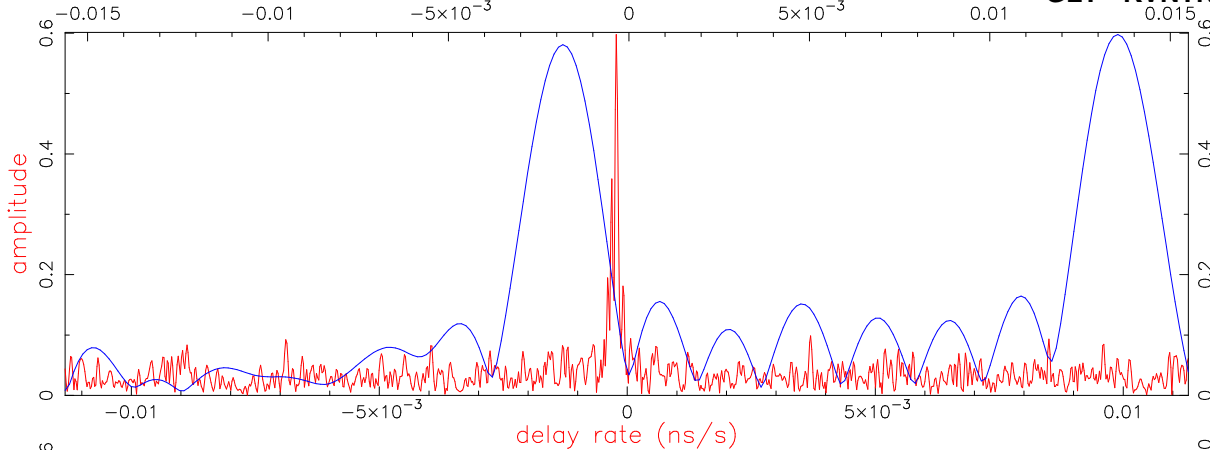
u,v (fr/asec) -8016.404 6032.408

simultaneous interpolator

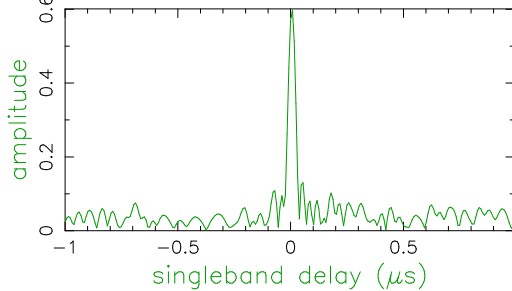
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/gt..130KBL Output file: /Exps/c192c/v2/1234/No0011/gt.W.35.130KBL

multiband delay (μ s)

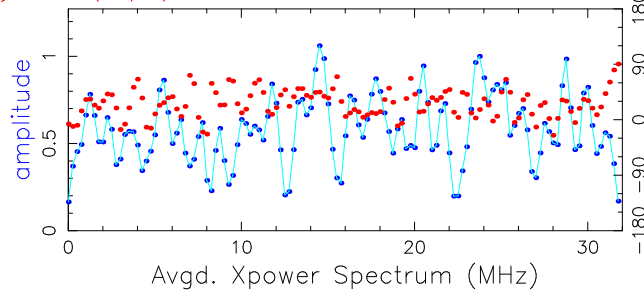
Fringe quality 6



SNR 22.1
Int time 179.850
Amp 0.601
Phase -18.7
PFD 0.0e+00
Delays (us)
SBD 0.005886
MBD 0.013543
Fringe rate (Hz)
-0.018647
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

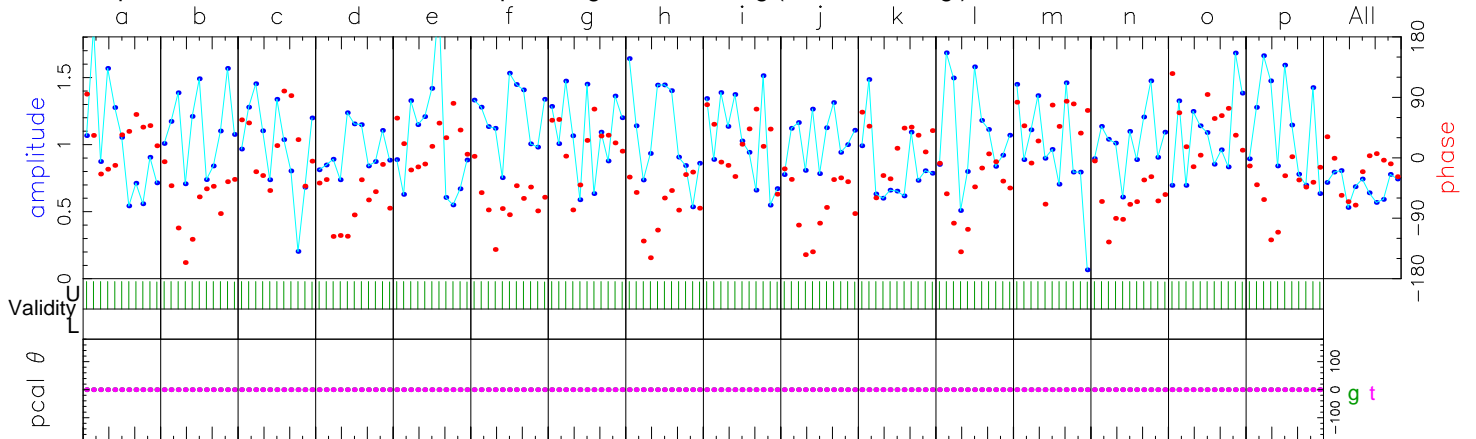


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043716
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	25.1	-62.1	16.0	-66.2	20.7	-62.4	21.6	-66.3	18.4	-69.7	26.0	-44.7	49.4	-60.2	42.9	-45.3	Phase	-18.7
g	0.8	0.9	0.7	0.8	0.9	1.0	0.9	0.9	0.8	0.8	0.7	0.9	0.7	0.9	0.9	0.9	Ampl.	0.8
t	129.7	129.3	129.6	130.4	129.7	129.8	130.0	130.1	129.2	129.6	129.6	129.7	129.3	129.7	130.3	130.0	Sbd box	129.8
g	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
g: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	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Manl 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	

Group delay (usec)(sbd) -3.99329506550E+03 Apriori delay (usec) -3.99330860851E+03 Resid mbdelay (usec) 1.35430E-02 +/- 4.9E-05
Sband delay (usec) -3.99330272201E+03 Apriori clock (usec) -2.6475037E+01 Resid sbdelay (usec) 5.88650E-03 +/- 7.8E-04
Phase delay (usec) -3.99330860911E+03 Apriori clockrate (us/s) -1.2500000E-07 Resid phdelay (usec) -6.04539E-07 +/- 1.7E-07
Delay rate (us/s) 1.12029017038E+00 Apriori rate (us/s) 1.12029038685E+00 Resid rate (us/s) -2.16470E-07 +/- 1.6E-09
Total phase (deg) -212.0 Apriori accel (us/s/s) 5.00803517857E-05 Resid phase (deg) -18.7 +/- 5.2

RMS Theor. Amplitude 0.601 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 31.0 8.6 Search (1024X64) 0.587 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 21.3 15.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 47.9 10.4 Inc. seg. avg. 0.684 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 41.6 18.1 Inc. frq. avg. 0.820 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

g: az 40.4 el 27.4 pa -11.0

t: az 293.0 el 40.6 pa 75.1

u,v (fr/asec) -8016.404 6032.408

simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/gt..130KBL Output file: /Exps/c192c/v2/1234/No0011/gt.W.4.130KBL

multiband delay (μ s)

Fringe quality 0

SNR 5.7

Int time 179.854

Amp 0.157

Phase -10.6

PFD 7.9e-01

Delays (us)

SBD 0.460125

MBD -0.013547

Fringe rate (Hz)

0.154205

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Yr:day 16383

Exp: 2019:278

Start 150000.00

Stop 150300.22

FRT 150130.00

Corr/FF/build

2020:076:014755

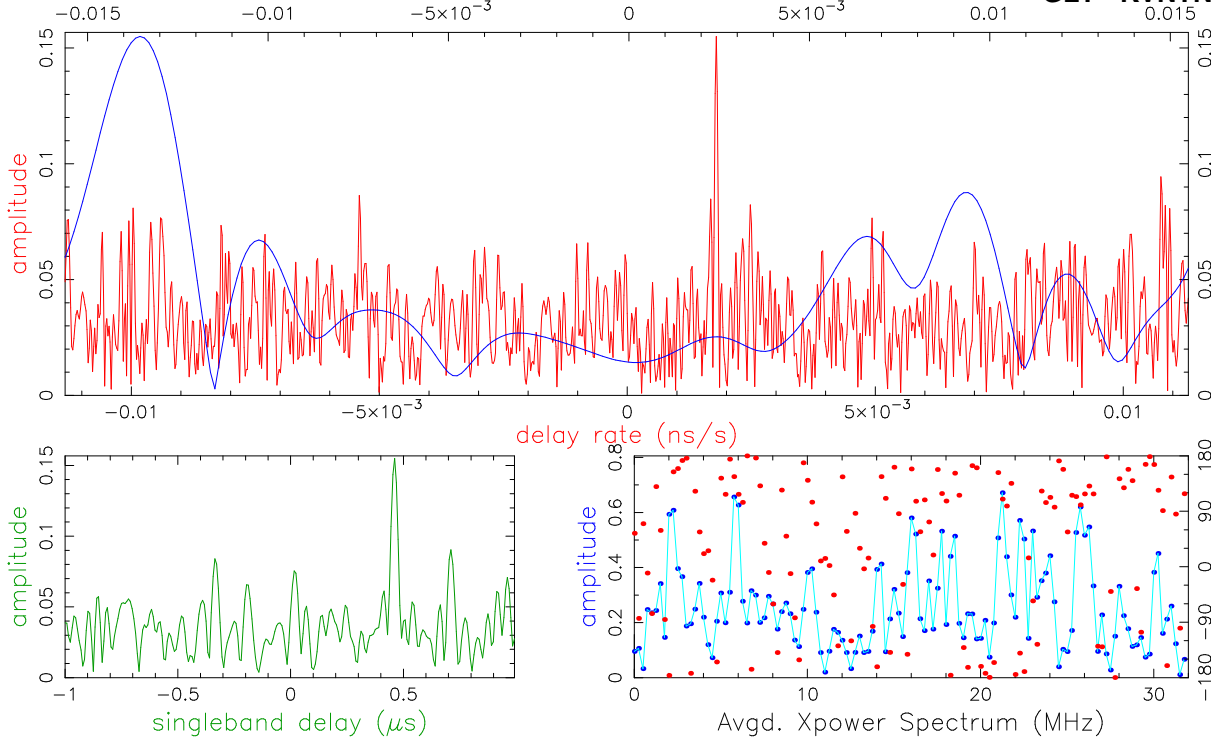
2020:086:043723

2020:014:135814

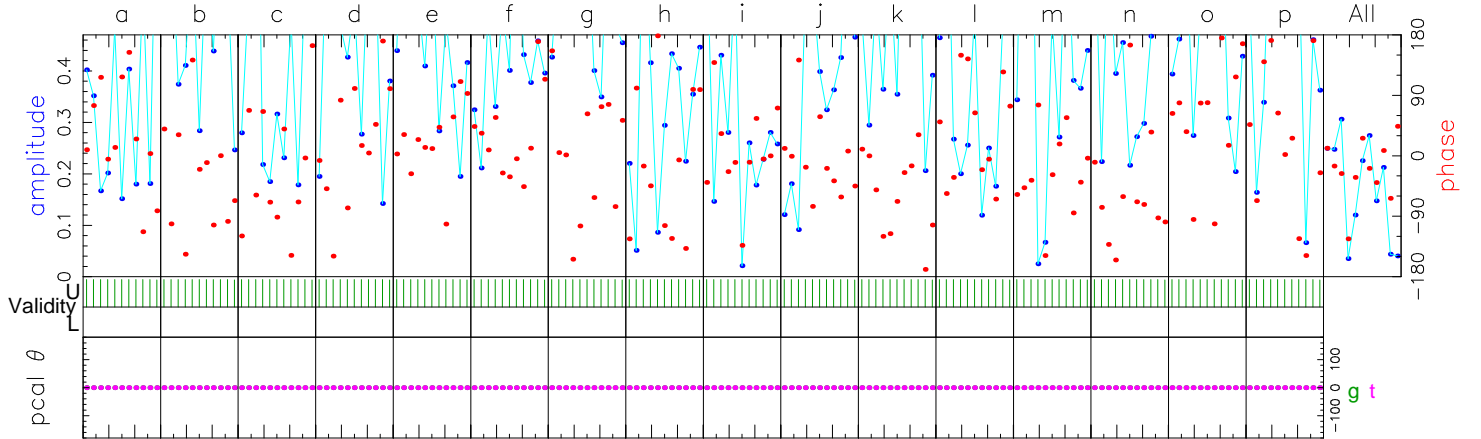
RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"



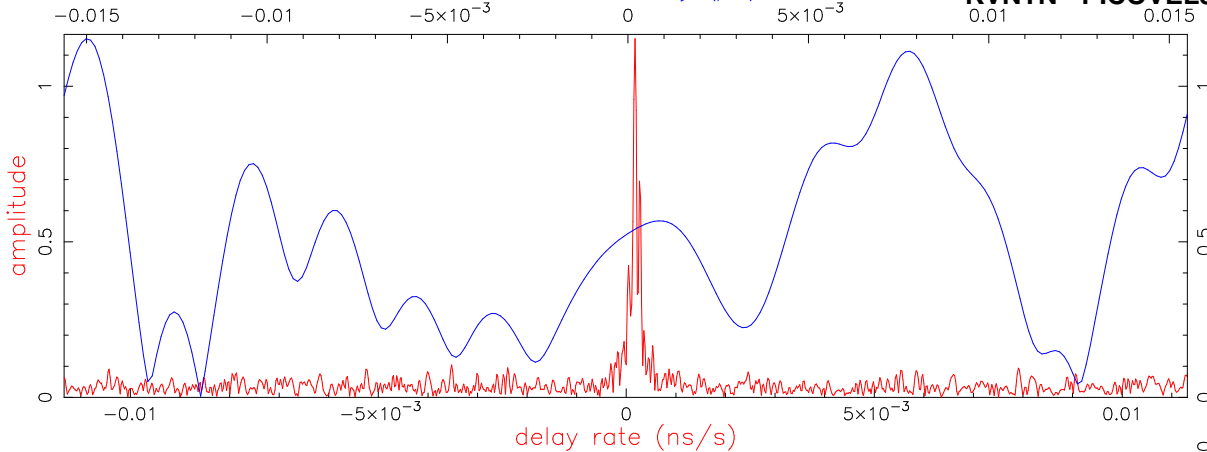
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



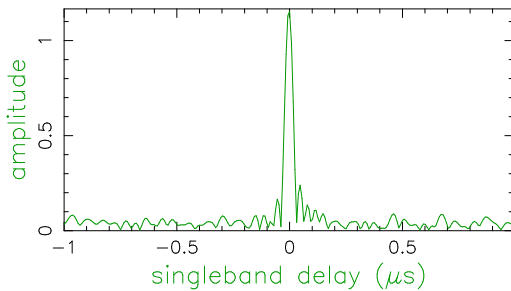
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-19.9	-47.2	-57.9	29.8	16.7	7.7	25.4	-47.1	0.3	-22.6	-37.6	41.5	-27.8	-82.1	90.7	47.6	Phase	-10.6	
	0.1	0.2	0.1	0.1	0.3	0.3	0.1	0.1	0.2	0.3	0.3	0.1	0.4	0.3	0.2	0.1	Ampl.	0.2	
	119.3	77.2	171.5	48.5	186.3	110.7	23.3	183.7	101.2	169.5	142.1	200.5	187.9	189.2	160.6	240.5	Sbd box	187.9	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs		
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		
g	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			
g	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)			-3.99285340539E+03			Apriori delay (usec)			-3.99330860851E+03			Resid mbdelay (usec)			-1.35469E-02			+/-	1.9E-04
Sband delay (usec)			-3.99284848351E+03			Apriori clock (usec)			-2.6475037E+01			Resid sbdelay (usec)			4.60125E-01			+/-	3.0E-03
Phase delay (usec)			-3.99330860885E+03			Apriori clockrate (us/s)			-1.2500000E-07			Resid phdelay (usec)			-3.40300E-07			+/-	6.5E-07
Delay rate (us/s)			1.12029217701E+00			Apriori rate (us/s)			1.12029038685E+00			Resid rate (us/s)			1.79017E-06			+/-	6.2E-09
Total phase (deg)			-203.8			Apriori accel (us/s/s)			5.00803517857E-05			Resid phase (deg)			-10.6			+/-	20.1

multiband delay (μ s)

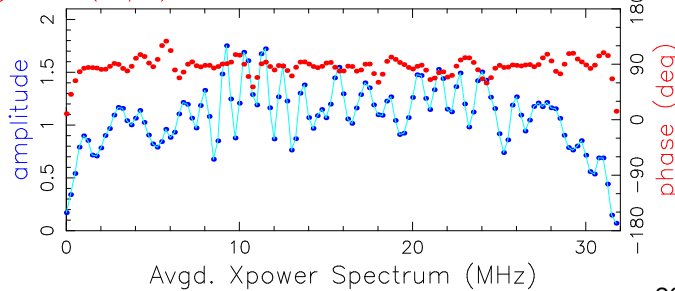
Fringe quality 3



SNR 42.8
Int time 179.957
Amp 1.167
Phase 156.1
PFD 0.0e+00
Delays (us)
SBD -0.002929
MBD -0.014996
Fringe rate (Hz)
0.015932
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

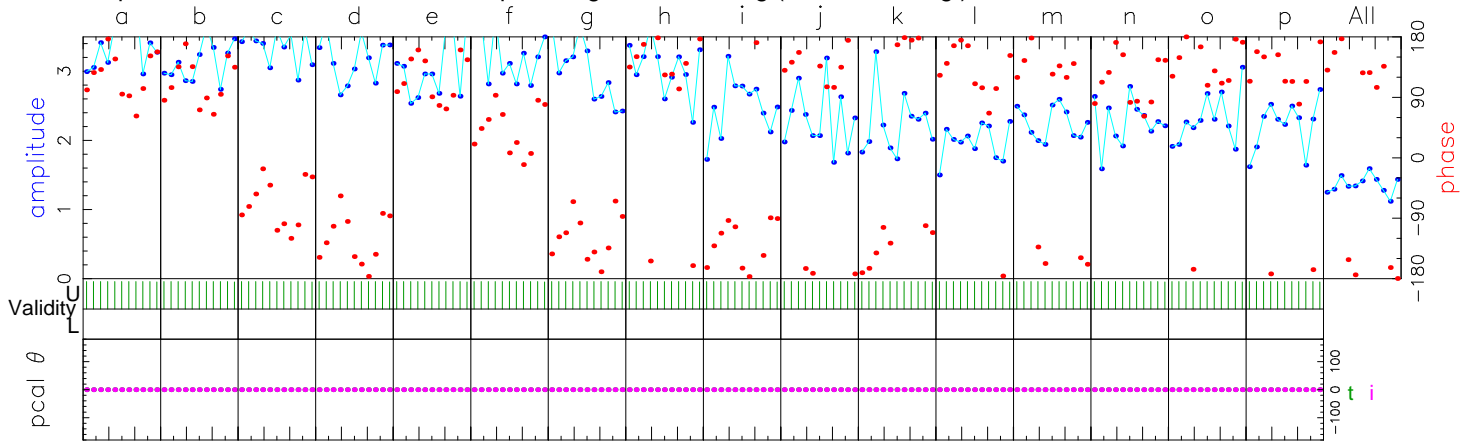


delay rate (ns/s)



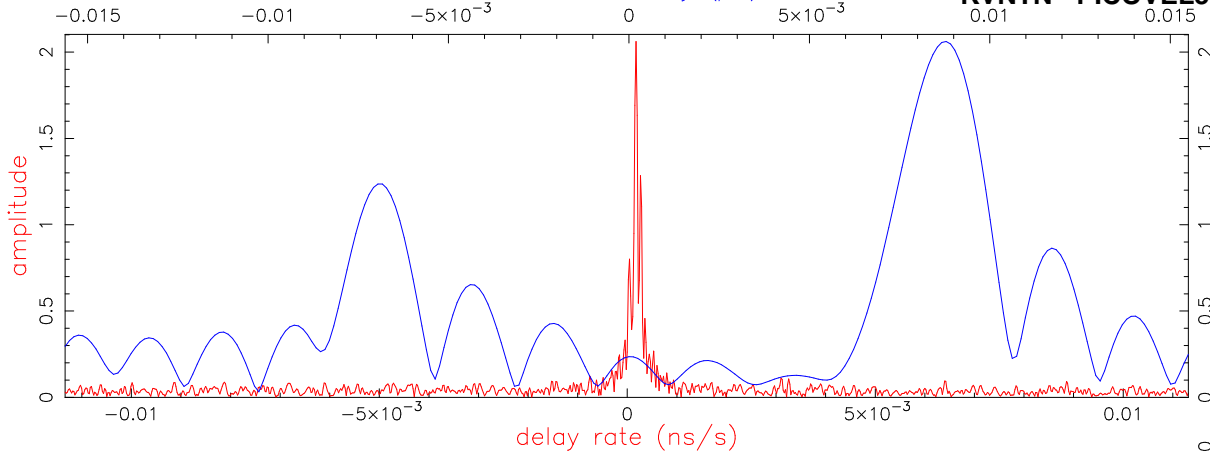
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043717
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



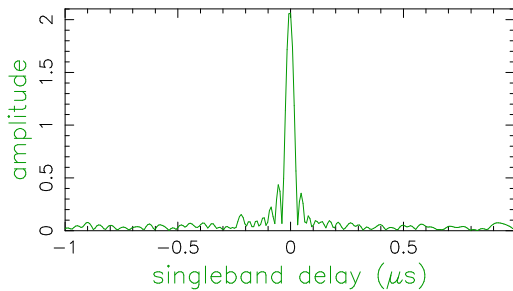
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	120.7	111.4	-68.5	-121.9	116.3	43.7	-117.6	155.3	-131.8	149.6	-151.1	136.0	159.7	110.4	146.5	143.3	Phase	156.1	
	2.9	2.6	2.8	2.6	2.6	2.7	2.5	2.6	2.0	2.0	1.9	1.6	1.8	1.9	2.0	1.8	Ampl.	2.3	
	129.1	128.9	128.7	128.4	128.1	128.1	128.0	128.1	128.2	128.1	128.0	128.1	128.3	128.1	129.0	129.0	Sbd box	128.6	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
ti	0:0	0:0	0:0	0:0	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		
ti	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids		
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)	9.80777562068E+02				Apriori delay (usec)				9.80792557952E+02				Resid mbdelay (usec)				-1.49959E-02		+/- 2.5E-05
Sband delay (usec)	9.80789629452E+02				Apriori clock (usec)				2.8314640E+01				Resid sbdelay (usec)				-2.92850E-03		+/- 4.0E-04
Phase delay (usec)	9.80792562986E+02				Apriori clockrate (us/s)				5.5299997E-07				Resid phdelay (usec)				5.03448E-06		+/- 8.6E-08
Delay rate (us/s)	-1.82624296145E+00				Apriori rate (us/s)				-1.82624314641E+00				Resid rate (us/s)				1.84958E-07		+/- 8.3E-10
Total phase (deg)	135.2				Apriori accel (us/s/s)				-8.75802293526E-06				Resid phase (deg)				156.1		+/- 2.7

ph/seg (deg) RMS Theor. Amplitude 1.167 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 32.7 4.4 Search (1024X64) 1.113 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 20.0 7.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 65.9 5.4 Inc. seg. avg. 1.360 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 101.1 9.3 Inc. frq. avg. 2.262 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 t: az 293.0 el 40.6 pa 75.1 i: az 67.5 el 36.7 pa -68.0 u,v (fr/asec) 13131.834 -982.099 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/ti..130KBL Output file: /Exps/c192c/v2/1234/No0011/ti.W.13.130KBL

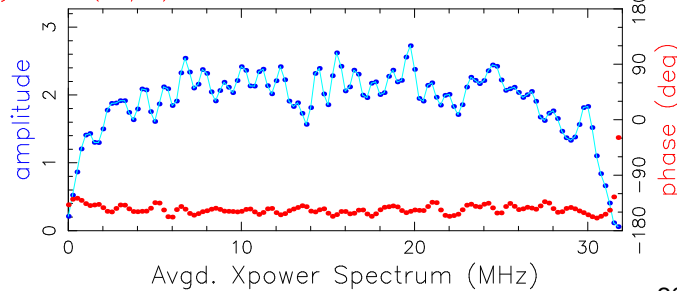
multiband delay (μ s)

Fringe quality 4

SNR 77.1
Int time 179.957
Amp 2.103
Phase 142.2
PFD 0.0e+00
Delays (us)
SBD -0.003770
MBD 0.008749
Fringe rate (Hz)
0.016157
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

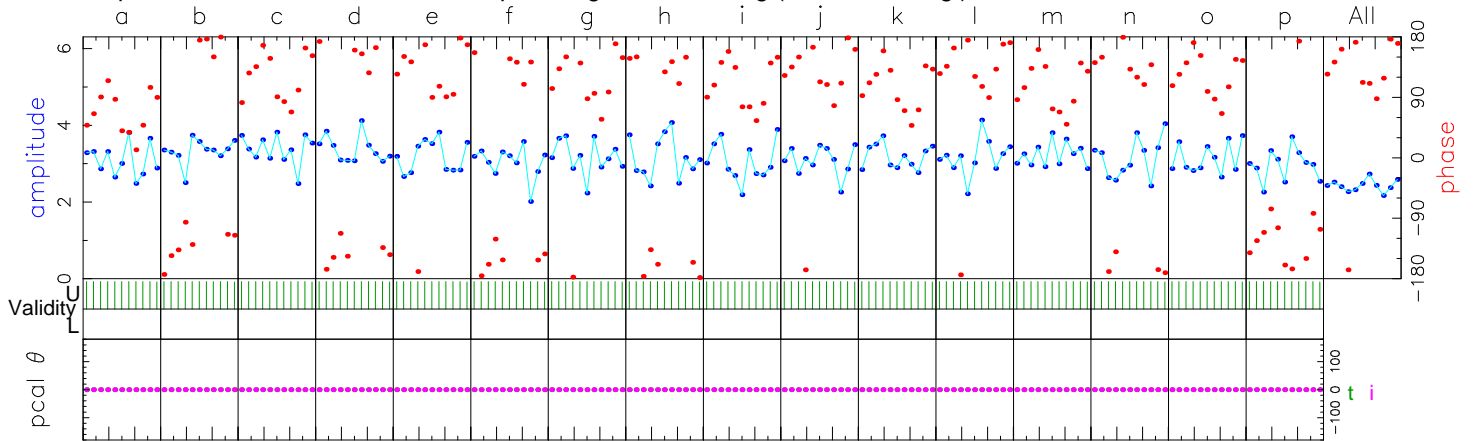


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043720
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

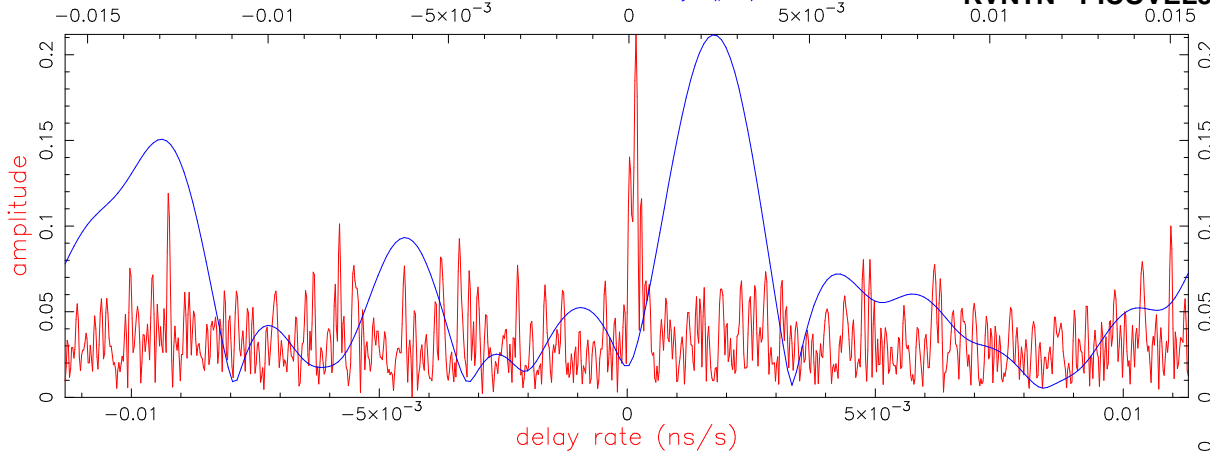


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	68.1	-152.7	120.5	-171.7	137.1	178.0	125.9	163.5	112.7	137.6	108.3	141.2	104.8	158.7	122.3	-128.8	Phase	142.2	
	2.7	2.8	2.8	2.8	2.6	2.4	2.6	2.7	2.5	2.6	2.7	2.7	2.7	2.6	2.7	2.5	Ampl.	2.6	
	130.0	129.5	128.7	128.8	128.6	128.4	128.8	128.5	128.5	128.6	128.5	128.6	128.7	128.6	129.3	129.5	Sbd box	128.5	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
ti	0:0	0:0	0:0	0:0	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		
ti	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks		
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
																	Tracks		
Group delay (usec)(sbd)	9.80801306787E+02				Apriori delay (usec)				9.80792557952E+02				Resid mbdelay (usec)				8.74883E-03		+/- 1.4E-05
Sband delay (usec)	9.80788787452E+02				Apriori clock (usec)				2.8314640E+01				Resid sbdelay (usec)				-3.77050E-03		+/- 2.2E-04
Phase delay (usec)	9.80792562537E+02				Apriori clockrate (us/s)				5.5299997E-07				Resid phdelay (usec)				4.58465E-06		+/- 4.8E-08
Delay rate (us/s)	-1.82624295884E+00				Apriori rate (us/s)				-1.82624314641E+00				Resid rate (us/s)				1.87567E-07		+/- 4.6E-10
Total phase (deg)	121.3				Apriori accel (us/s/s)				-8.75802293526E-06				Resid phase (deg)				142.2		+/- 1.5

ph/seg (deg) 32.4 2.5 Amplitude 2.103 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 17.1 4.3 Search (1024X64) 1.966 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 43.4 3.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 26.4 5.2 Inc. seg. avg. 2.429 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 i: az 67.5 el 36.7 pa -68.0 u,v (fr/asec) 13131.834 -982.099 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/ti..130KBL Output file: /Exps/c192c/v2/1234/No0011/ti.W.37.130KBL

multiband delay (μ s)

Fringe quality 9

SNR 7.8

Int time 179.957

Amp 0.212

Phase -33.1

PFD 1.3e-06

Delays (us)

SBD -0.006939

MBD 0.002361

Fringe rate (Hz)

0.015759

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 150000.00

Stop 150300.22

FRT 150130.00

Corr/FF/build

2020:076:014755

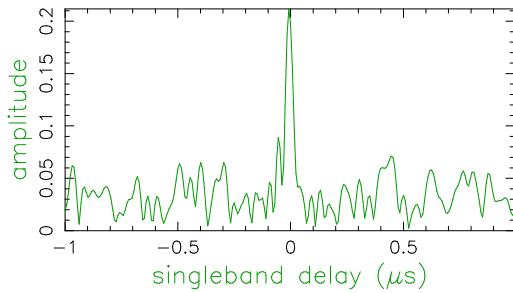
2020:086:043722

2020:014:135814

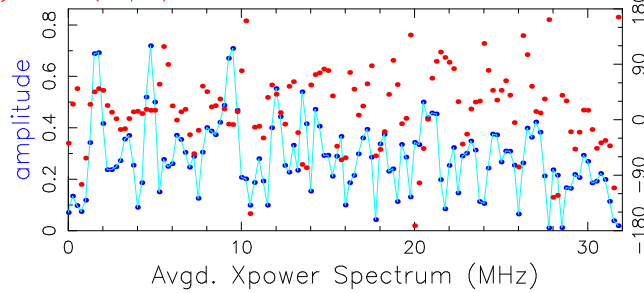
RA & Dec (J2000)

20h15m28.729803s

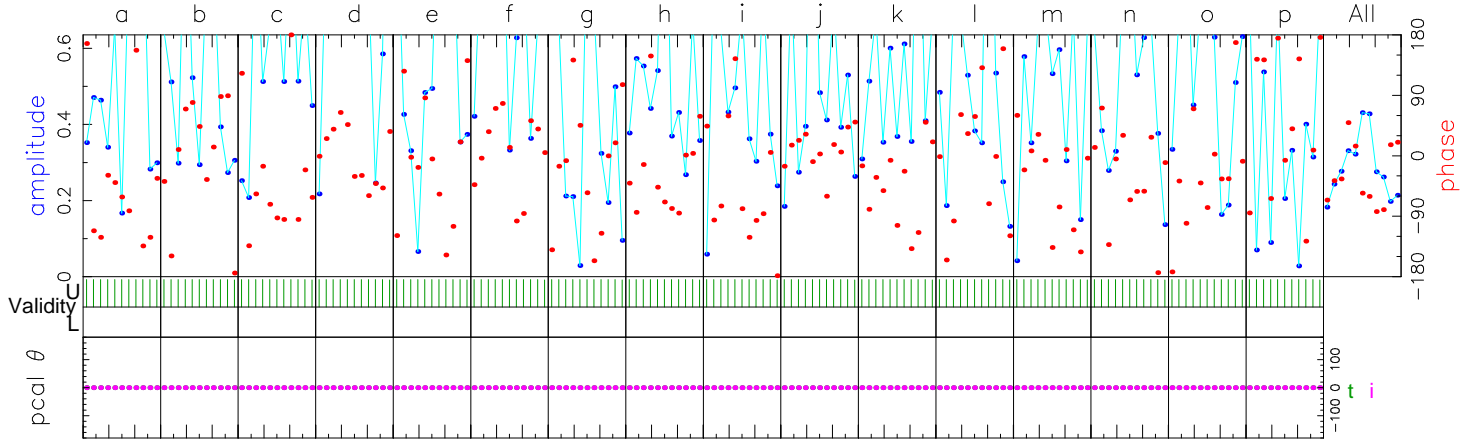
+37°10'59.514664"



delay rate (ns/s)



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-108.1	33.2	-78.6	5.7	-92.3	18.2	-70.9	-46.7	-88.8	8.4	-47.7	-22.8	-31.7	-16.0	-49.7	-163.6	Phase	-33.1
	0.3	0.2	0.4	0.6	0.2	0.4	0.2	0.3	0.3	0.5	0.3	0.2	0.3	0.3	0.3	0.1	Ampl.	0.3
	4.1	88.7	185.2	128.6	154.3	128.8	117.3	91.7	164.1	127.9	126.4	16.8	38.8	51.8	36.7	123.9	Sbd box	128.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
ti	0:0	0:0	0:0	0:0	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	
ti	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	

Group delay (usec)(sbd)	9.80794918693E+02	Apriori delay (usec)	9.80792557952E+02	Resid mbdelay (usec)	2.36074E-03	+/-	1.4E-04
Sband delay (usec)	9.80785618952E+02	Apriori clock (usec)	2.8314640E+01	Resid sbdelay (usec)	-6.93900E-03	+/-	2.2E-03
Phase delay (usec)	9.80792556884E+02	Apriori clockrate (us/s)	5.529997E-07	Resid phdelay (usec)	-1.06788E-06	+/-	4.8E-07
Delay rate (us/s)	-1.82624296345E+00	Apriori rate (us/s)	-1.82624314641E+00	Resid rate (us/s)	1.82951E-07	+/-	4.6E-09
Total phase (deg)	306.0	Apriori accel (us/s/s)	-8.75802293526E-06	Resid phase (deg)	-33.1	+/-	14.7

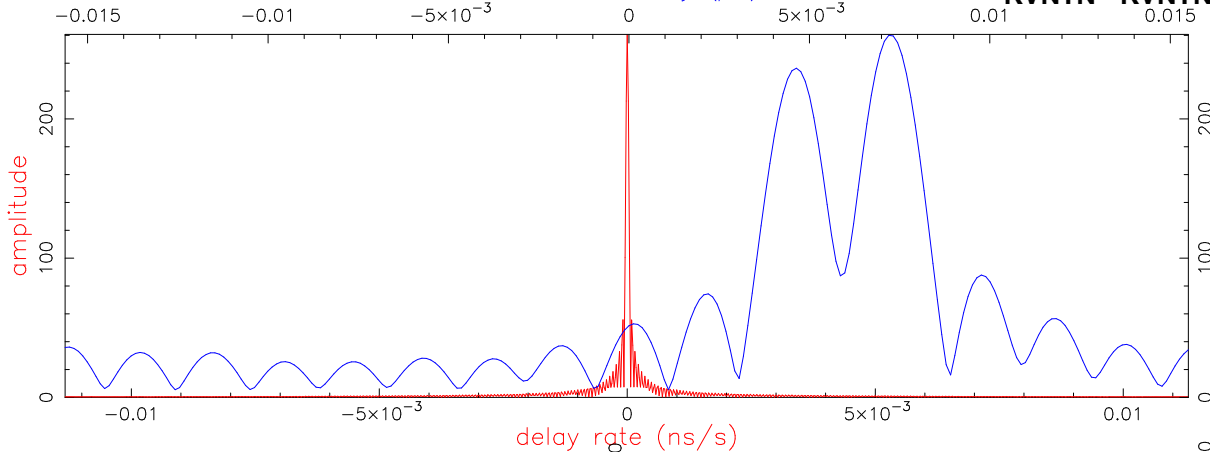
	RMS	Theor.	Amplitude	0.212 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	44.1	24.5	Search (1024X64)	0.208	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	52.1	42.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	56.1	29.5	Inc. seg. avg.	0.264	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.011	0.011
amp/frq (%)	68.2	51.5	Inc. frq. avg.	0.262	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

t: az 293.0 el 40.6 pa 75.1 i: az 67.5 el 36.7 pa -68.0 u,v (fr/asec) 13131.834 -982.099 simultaneous interpolator

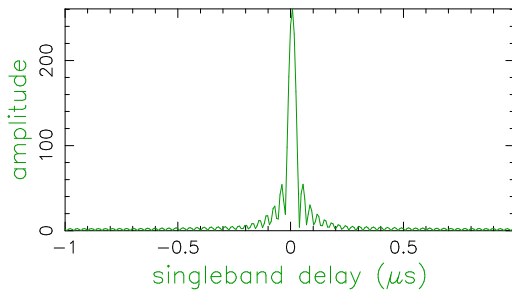
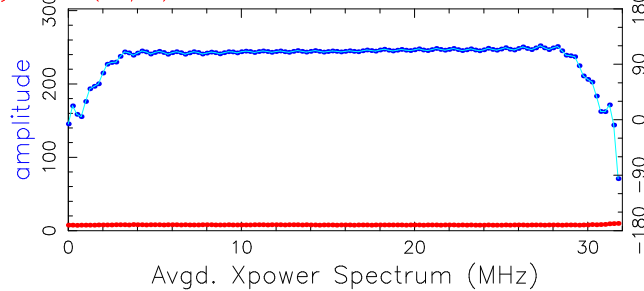
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/ti..130KBL Output file: /Exps/c192c/v2/1234/No0011/ti.W.51.130KBL

multiband delay (μ s)

Fringe quality 5

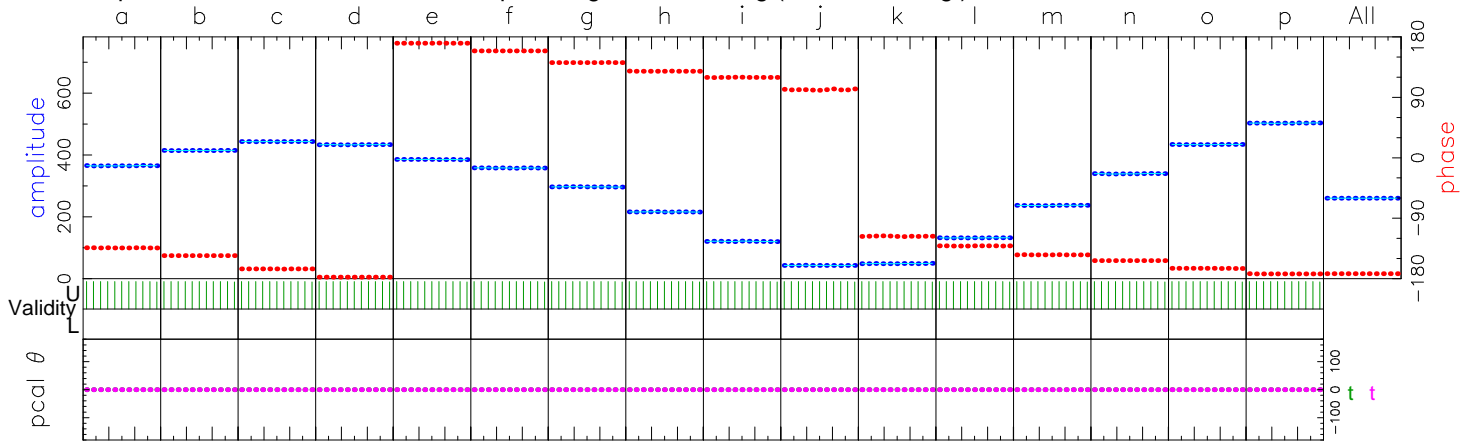


SNR 9562.8
Int time 179.969
Amp 260.669
Phase -172.4
PFD 0.0e+00
Delays (us)
SBD 0.006951
MBD 0.007255
Fringe rate (Hz) 0.000001
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

singleband delay (μ s)

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043730
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	Phase	-172.4
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	298.2
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	Sbd box	129.9
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	APs used	
t	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	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	ManI PC	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	PC amp	

Group delay (usec)(sbd)	7.25521875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	7.25522E-03	+/-	1.1E-07
Sband delay (usec)	6.95100000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	6.95100E-03	+/-	1.8E-06
Phase delay (usec)	-5.55989160124E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-5.55989E-06	+/-	3.9E-10
Delay rate (us/s)	1.27540371525E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.27540E-11	+/-	3.7E-12
Total phase (deg)	-172.4	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-172.4	+/-	0.0

ph/seg (deg)	0.0	Theor.	Amplitude	260.669 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	0.1	0.0	Search (1024X64)	259.620	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	43.9	0.0	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
amp/frq (%)	56.7	0.0	Inc. seg. avg.	260.370	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
			Inc. frq. avg.	298.209	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 t: az 293.0 el 40.6 pa 75.1 u,v (fr/asec) 0.000 0.000

simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tt..130KBL Output file: /Exps/c192c/v2/1234/No0011/tt.W.107.130KBL

multiband delay (μ s)

Fringe quality 9

SNR 366857.1

Int time 179.969

Amp 10000.001

Phase -0.0

PFD 0.0e+00

Delays (us)

SBD 0.000000

MBD 0.000000

Fringe rate (Hz)

0.000000

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Yr:day 16383

Start 150000.00

Stop 150300.22

FRT 150130.00

Corr/FF/build

2020:076:014755

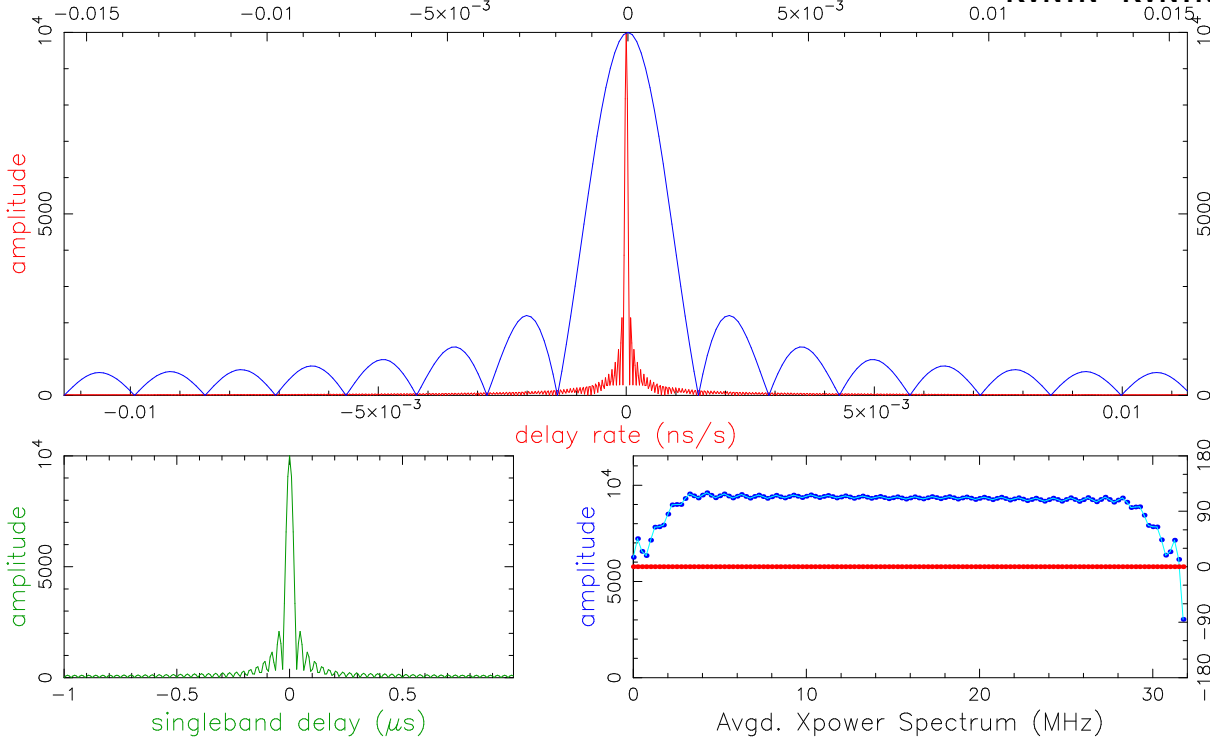
2020:086:043723

2020:014:135814

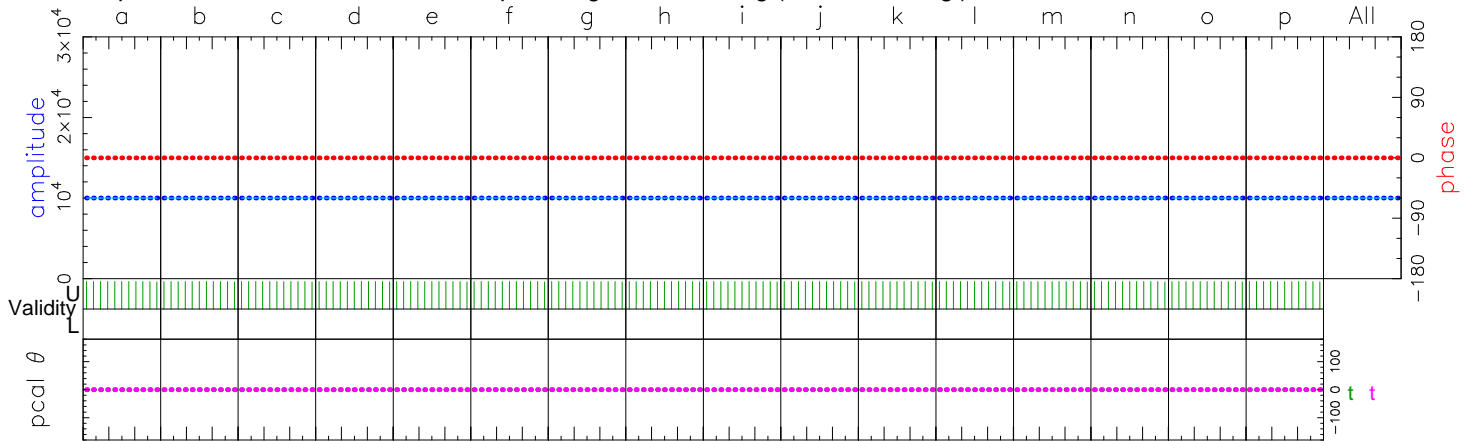
RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	Phase	-0.0
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	10000.0
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	Sbd box	129.0
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	APs used	
t	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	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Manl PC	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	PC amp	
t	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	
t	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)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	2.9E-09
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	4.7E-08
Phase delay (usec)	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	+/-	1.0E-11
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	9.7E-14
Total phase (deg)	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	+/-	0.0
Apriori delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	2.9E-09
Apriori clock (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	4.7E-08
Apriori clockrate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	1.0E-11
Apriori rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	9.7E-14
Apriori accel (us/s/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	0.0
Resid mbdelay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	2.9E-09
Resid sbdelay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	4.7E-08
Resid phdelay (usec)	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	-3.66821274755E-20	+/-	1.0E-11
Resid rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	9.7E-14
Resid phase (deg)	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	+/-	0.0

ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.001 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (1024X64) 10000.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 t: az 293.0 el 40.6 pa 75.1 t: az 293.0 el 40.6 pa 75.1 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tt..130KBL Output file: /Exps/c192c/v2/1234/No0011/tt.W.57.130KBL simultaneous interpolator

multiband delay (μ s)

Fringe quality 9

SNR 366857.1

Int time 179.969

Amp 10000.001

Phase -0.0

PFD 0.0e+00

Delays (us)

SBD 0.000000

MBD 0.000000

Fringe rate (Hz)

0.000000

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 150000.00

Stop 150300.22

FRT 150130.00

Corr/FF/build

2020:076:014755

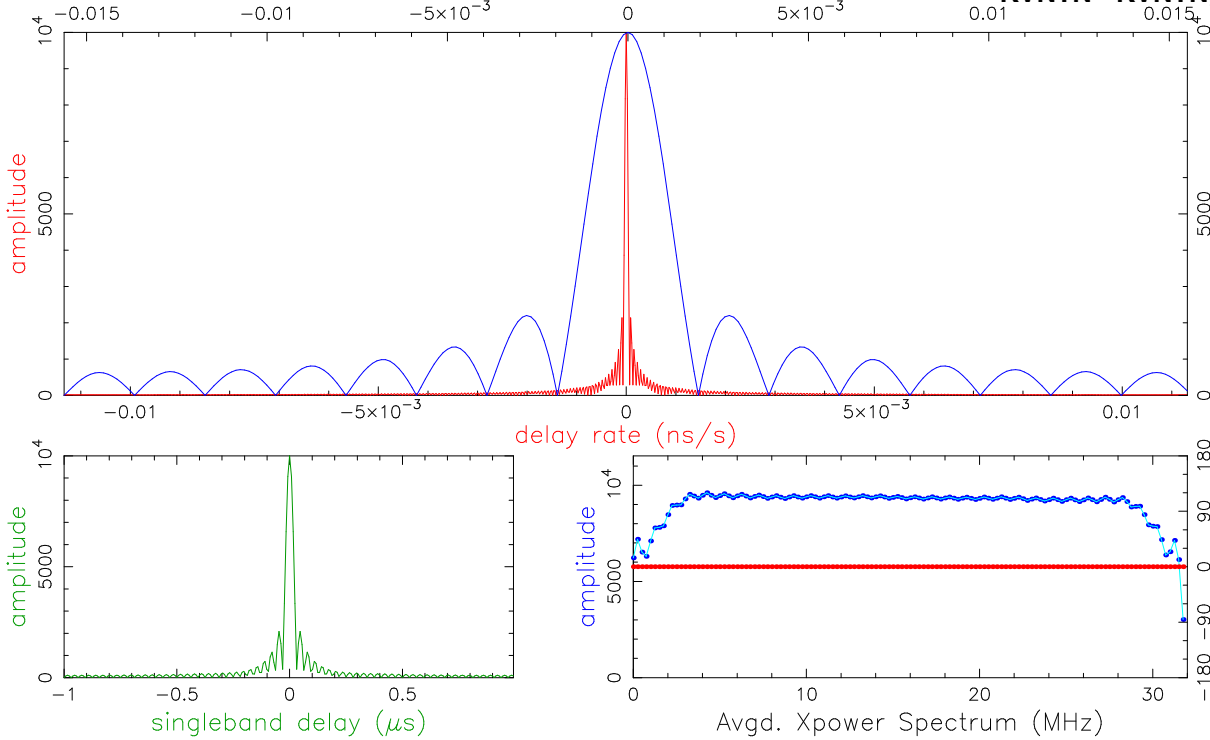
2020:086:043725

2020:014:135814

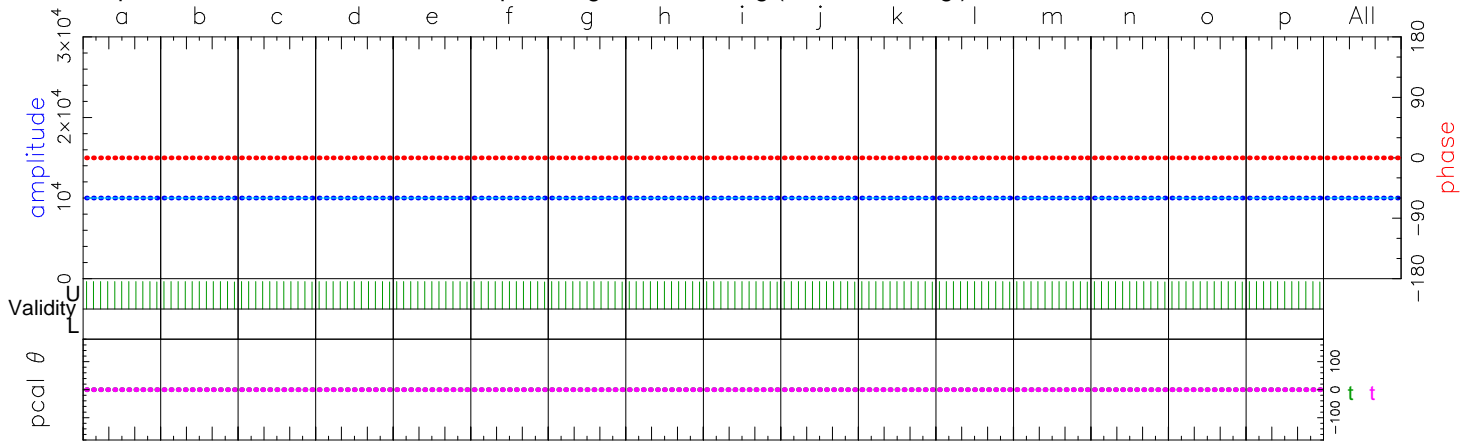
RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
0.0	0.0	-0.0	-0.0	-0.0	-0.0	0.0	-0.0	0.0	-0.0	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	Phase	-0.0
10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	Sbd box	129.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
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	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	Manl 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	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	0.0000000000E+00				Apriori delay (usec)				0.0000000000E+00				Resid mbdelay (usec)				+/- 2.9E-09	
Sband delay (usec)	0.0000000000E+00				Apriori clock (usec)				0.0000000E+00				Resid sbdelay (usec)				+/- 4.7E-08	
Phase delay (usec)	-1.00038713926E-20				Apriori clockrate (us/s)				0.0000000E+00				Resid phdelay (usec)				+/- 1.0E-11	
Delay rate (us/s)	0.0000000000E+00				Apriori rate (us/s)				0.0000000000E+00				Resid rate (us/s)				+/- 9.7E-14	
Total phase (deg)	-0.0				Apriori accel (us/s/s)				0.0000000000E+00				Resid phase (deg)				+/- 0.0	

ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.001 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (1024X64) 10000.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 t: az 293.0 el 40.6 pa 75.1 t: az 293.0 el 40.6 pa 75.1 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tt..130KBL Output file: /Exps/c192c/v2/1234/No0011/tt.W.70.130KBL simultaneous interpolator

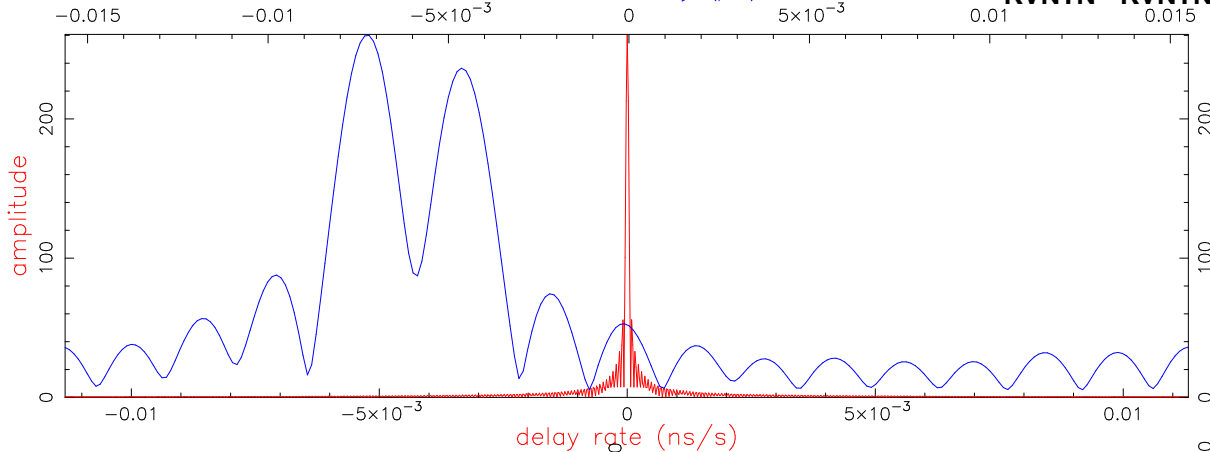
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tt

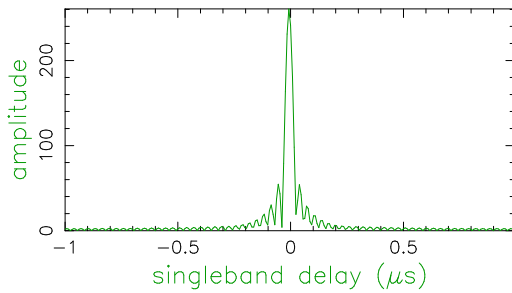
KVNTN - KVNTN, fgroup W, pol LR

multiband delay (μ s)

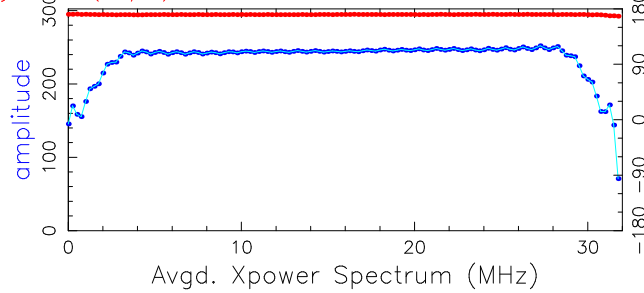
Fringe quality 5



SNR 9562.8
Int time 179.969
Amp 260.669
Phase 172.4
PFD 0.0e+00
Delays (us)
SBD -0.006951
MBD -0.007255
Fringe rate (Hz)
-0.000001
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

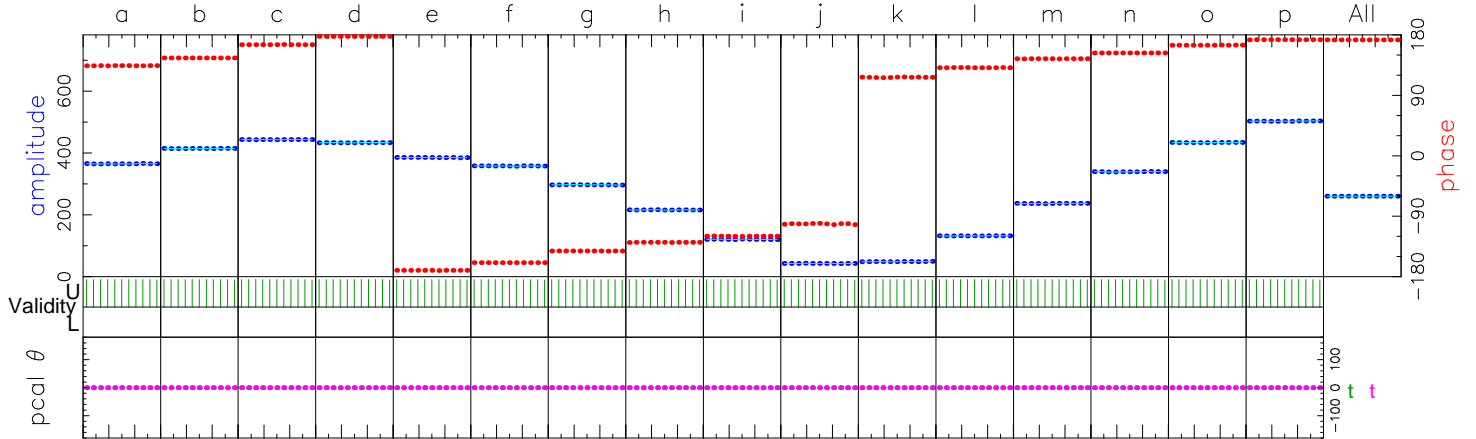


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043726
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	134.0	145.6	165.4	177.7	-170.5	-159.0	-141.7	-128.7	-119.6	-101.3	116.8	131.1	144.4	153.0	164.6	172.7	Phase	172.4
t	365.1	414.6	443.5	433.2	385.4	358.1	297.0	216.1	120.8	43.1	49.0	132.3	237.0	339.4	433.8	503.0	Ampl.	298.2
t	128.1	128.3	128.3	128.2	128.2	128.2	128.2	128.2	128.3	128.2	128.3	128.3	128.2	128.2	128.2	128.1	Sbd box	128.1
t	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	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	
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	
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	Manl 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	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	
t																	Chan ids	
t																	Tracks	

Group delay (usec)(sbd) -7.25521875000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -7.25522E-03 +/- 1.1E-07
Sband delay (usec) -6.95100000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) -6.95100E-03 +/- 1.8E-06
Phase delay (usec) 5.55989160119E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 5.55989E-06 +/- 3.9E-10
Delay rate (us/s) -1.27540371525E-11 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -1.27540E-11 +/- 3.7E-12
Total phase (deg) 172.4 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 172.4 +/- 0.0

RMS Theor. Amplitude 260.669 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 0.0 0.0 Search (1024X64) 259.620 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 0.1 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 43.9 0.0 Inc. seg. avg. 260.370 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 56.7 0.0 Inc. frq. avg. 298.209 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 t: az 293.0 el 40.6 pa 75.1 u,v (fr/asec) 0.000 0.000

simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tt..130KBL Output file: /Exps/c192c/v2/1234/No0011/tt.W.80.130KBL

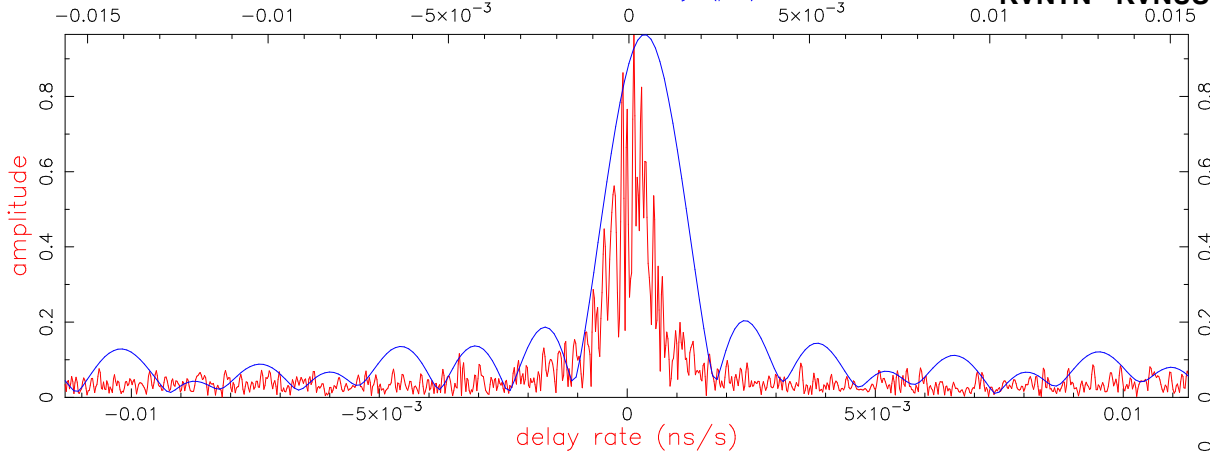
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tu

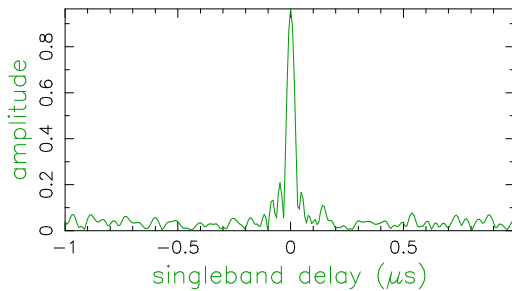
KVNTN - KVNUS, fgroup W, pol RR

multiband delay (μ s)

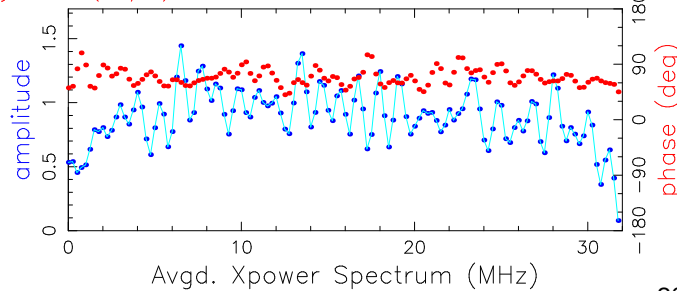
Fringe quality 5



SNR 35.4
Int time 179.956
Amp 0.965
Phase 68.5
PFD 0.0e+00
Delays (us)
SBD 0.000403
MBD 0.000436
Fringe rate (Hz)
0.011446
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

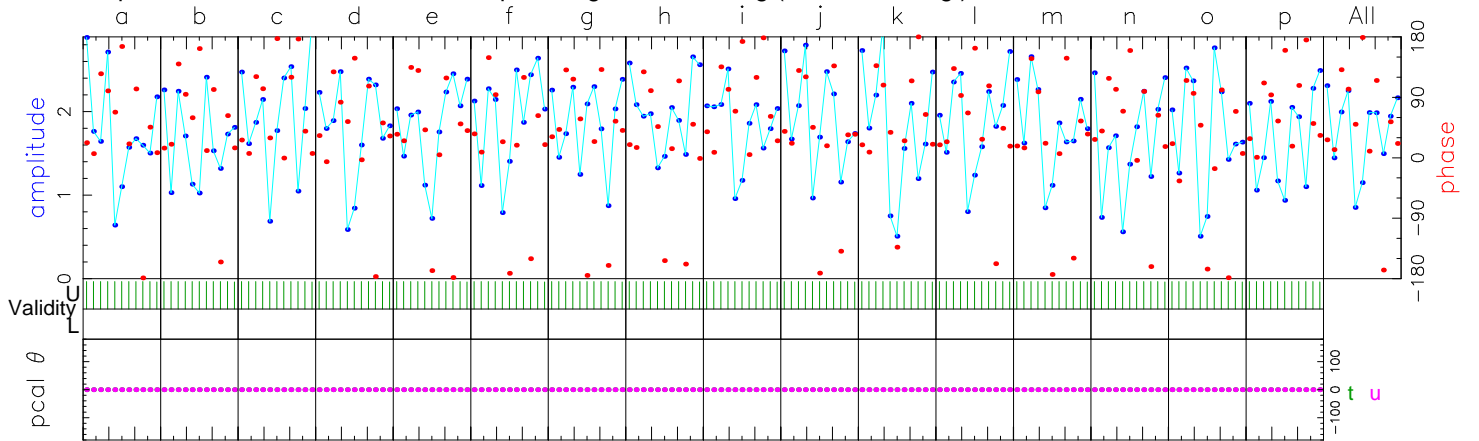


delay rate (ns/s)



Exp. c192c
Yr:day 16383
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043730
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
63.2	63.9	57.6	70.7	80.2	74.6	78.0	53.4	75.9	76.0	67.5	71.1	71.4	67.6	61.9	63.1	68.5	Phase	68.5
1.0	0.9	1.0	1.0	1.0	0.9	1.1	1.0	1.0	1.0	1.1	1.1	0.8	1.0	0.8	1.2	1.0	Ampl.	1.0
129.1	128.9	128.6	129.0	129.5	128.7	129.1	129.3	129.1	129.2	129.2	129.1	128.8	129.1	128.7	129.1	129.1	Sbd box	129.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl PC	
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 amp	
t	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		
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	

Group delay (usec)(sbd) 3.80052249952E+02 Apriori delay (usec) 3.80051814310E+02 Resid mbdelay (usec) 4.35642E-04 +/- 3.0E-05
Sband delay (usec) 3.80052217810E+02 Apriori clock (usec) 1.9262941E+01 Resid sbdelay (usec) 4.03500E-04 +/- 4.9E-04
Phase delay (usec) 3.80051816519E+02 Apriori clockrate (us/s) -1.9999998E-07 Resid phdelay (usec) 2.20838E-06 +/- 1.0E-07
Delay rate (us/s) -2.07147259090E-03 Apriori rate (us/s) -2.07160546387E-03 Resid rate (us/s) 1.32873E-07 +/- 1.0E-09
Total phase (deg) 171.0 Apriori accel (us/s/s) -4.13375856215E-06 Resid phase (deg) 68.5 +/- 3.2

RMS Theor. Amplitude 0.965 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 64.8 5.4 Search (1024X64) 0.961 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 96.7 9.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 7.9 6.5 Inc. seg. avg. 1.773 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 10.2 11.3 Inc. frq. avg. 0.967 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) 11.332 -475.771 simultaneous interpolator

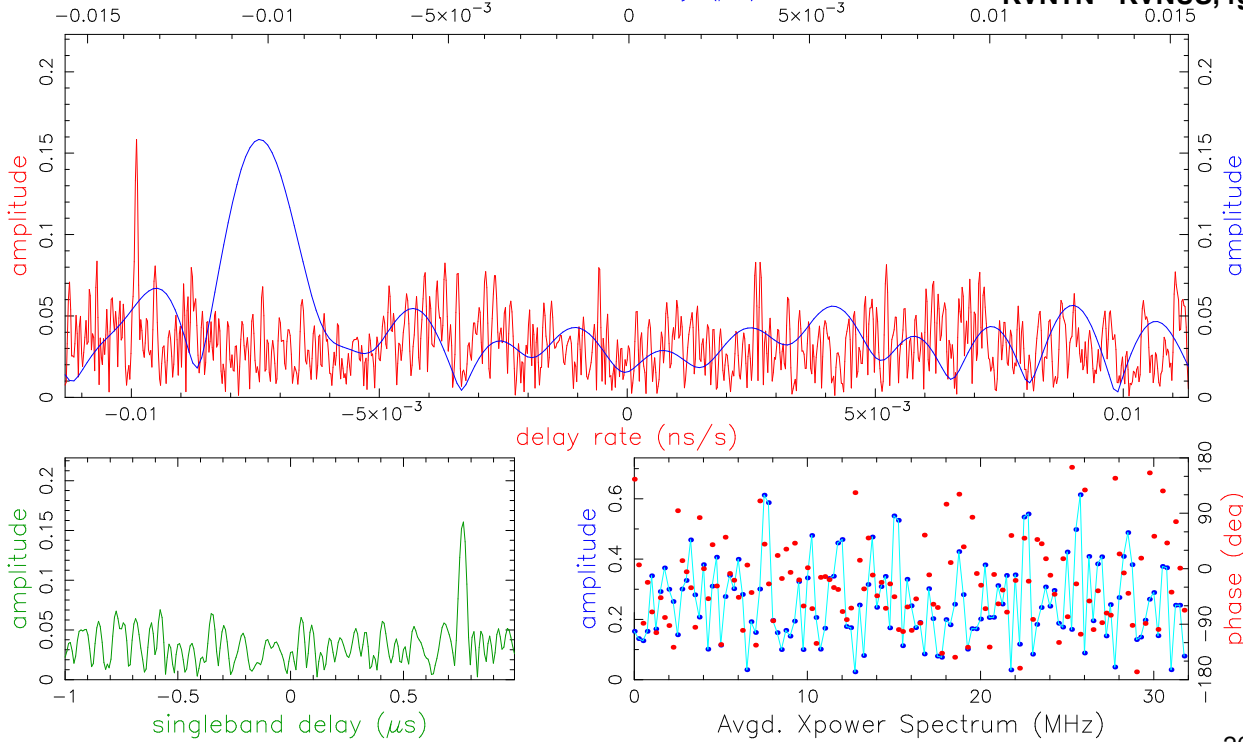
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tu..130KBL Output file: /Exps/c192c/v2/1234/No0011/tu.W.109.130KBL

multiband delay (μ s)

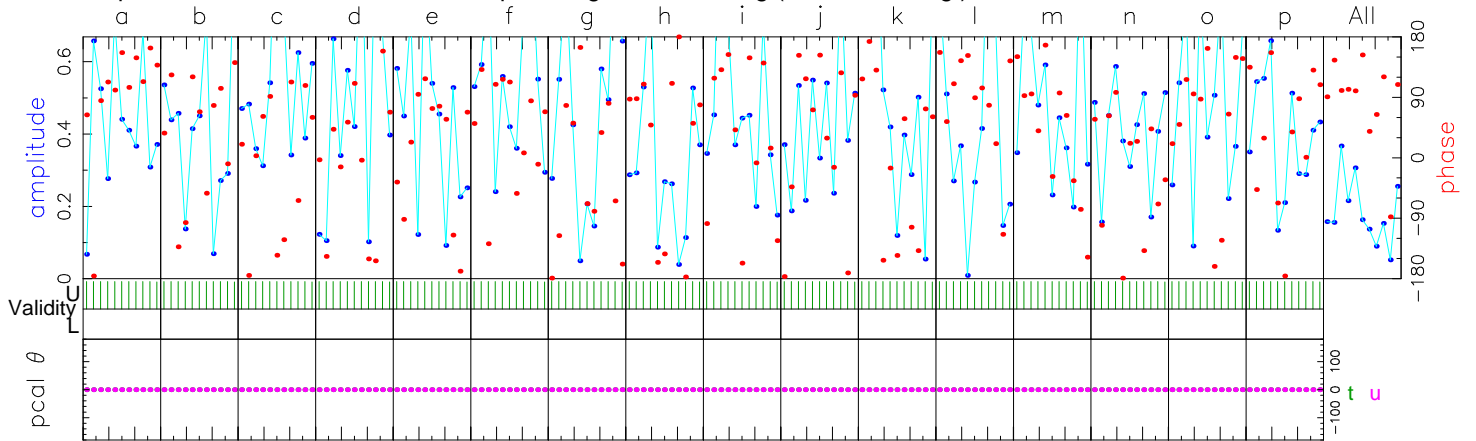
Fringe quality 0

SNR 5.8
Int time 179.956
Amp 0.223
Phase 105.0
PFD 4.8e-01
Delays (us)
SBD 0.763758
MBD -0.010214
Fringe rate (Hz)
-0.853962
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043732
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	127.5	99.7	148.2	62.3	60.6	75.5	5.1	83.7	140.3	116.3	137.8	95.4	96.4	33.3	130.0	84.8	Phase	105.0
	0.5	0.2	0.1	0.2	0.2	0.3	0.0	0.3	0.4	0.3	0.3	0.4	0.2	0.1	0.4	0.2	Ampl.	0.2
	226.7	128.2	214.8	218.4	224.8	208.7	137.0	188.1	15.1	103.7	85.0	79.5	122.8	122.2	191.1	92.0	Sbd box	226.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl 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) 3.80822850192E+02 Apriori delay (usec) 3.80051814310E+02 Resid mbdelay (usec) -1.02141E-02 +/- 1.8E-04
Sband delay (usec) 3.80815572810E+02 Apriori clock (usec) 1.9262941E+01 Resid sbdelay (usec) 7.63758E-01 +/- 3.0E-03
Phase delay (usec) 3.80051817696E+02 Apriori clockrate (us/s) -1.9999998E-07 Resid phdelay (usec) 3.38553E-06 +/- 6.3E-07
Delay rate (us/s) -2.08151911318E-03 Apriori rate (us/s) -2.07160546387E-03 Resid rate (us/s) -9.91365E-06 +/- 6.1E-09
Total phase (deg) 207.5 Apriori accel (us/s/s) -4.13375856215E-06 Resid phase (deg) 105.0 +/- 19.6

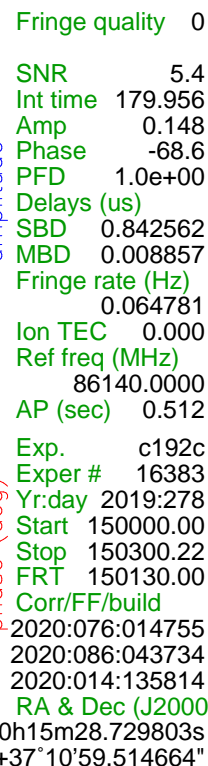
RMS Theor. Amplitude 0.223 +/- 0.038 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 59.1 32.5 Search (1024X64) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 58.1 56.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 43.3 39.2 Inc. seg. avg. 0.225 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 57.9 68.5 Inc. frq. avg. 0.208 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) 11.332 -475.771 simultaneous interpolator

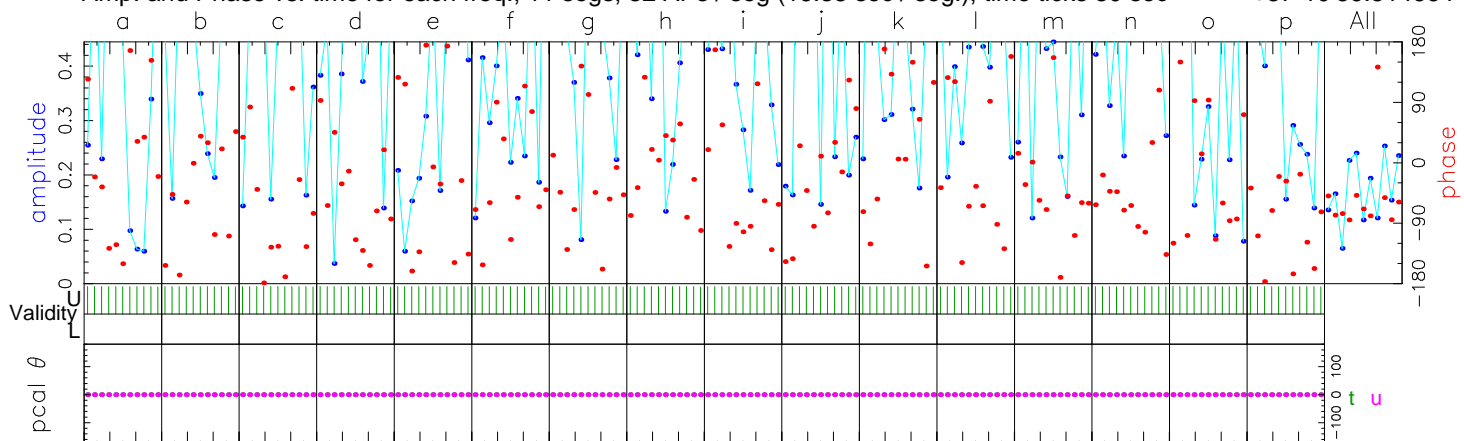
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tu..130KBL Output file: /Exps/c192c/v2/1234/No0011/tu.W.122.130KBL

multiband delay (μs)

KVNTN - KVNUS, fgroup W, pol RL



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-101.4	-26.4	-178.8	-80.1	-116.5	-8.1	-51.8	-24.0	-108.0	-33.4	-137.8	-83.5	-65.4	-52.3	-106.3	-76.2	Phase	-68.6
	0.2	0.1	0.1	0.3	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0.3	Ampl.	0.1
	195.0	102.2	88.8	146.4	208.1	217.7	18.0	239.0	209.1	5.7	222.4	130.4	131.9	141.5	138.4	137.3	Sbd box	236.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl 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	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	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)				3.80904421280E+02			Apriori delay (usec)			3.80051814310E+02			Resid mbdelay (usec)			8.85697E-03	+/-	2.0E-04
Sband delay (usec)				3.80894376810E+02			Apriori clock (usec)			1.9262941E+01			Resid sbdelay (usec)			8.42562E-01	+/-	3.2E-03
Phase delay (usec)				3.80051812100E+02			Apriori clockrate (us/s)			-1.9999998E-07			Resid phdelay (usec)			-2.21056E-06	+/-	6.8E-07
Delay rate (us/s)				-2.07085342207E-03			Apriori rate (us/s)			-2.07160546387E-03			Resid rate (us/s)			7.52042E-07	+/-	6.5E-09
Total phase (deg)				33.9			Apriori accel (us/s/s)			-4.13375856215E-06			Resid phase (deg)			-68.6	+/-	21.1
		RMS	Theor.		Amplitude		0.148 +/- 0.027			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5					
ph/seg (deg)		46.8	35.0		Search (1024X64)		0.147			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000		1.000
amp/seg (%)		43.0	61.1		Interp.		0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016
ph/frq (deg)		48.5	42.2		Inc. seg. avg.		0.146			Sample rate(MSamp/s): 64						dr window (ns/s)		-0.011
amp/frq (%)		54.5	73.7		Inc. frq. avg.		0.141			Data rate(Mb/s): 2048			nlags: 128			t_cohere infinite		ion window (TEC)
t: az 293.0	el 40.6	pa 75.1		u: az 292.1	el 39.3	pa 71.1		u,v (fr/asec)	11.332	-475.771								simultaneous interpolator
Control file: cf_1234	gmva			Input file: /Exps/c192c/v2/1234/No0011	tu.130KBL			Output file: /Exps/c192c/v2/1234/No0011	tu.W.138.130KBL									

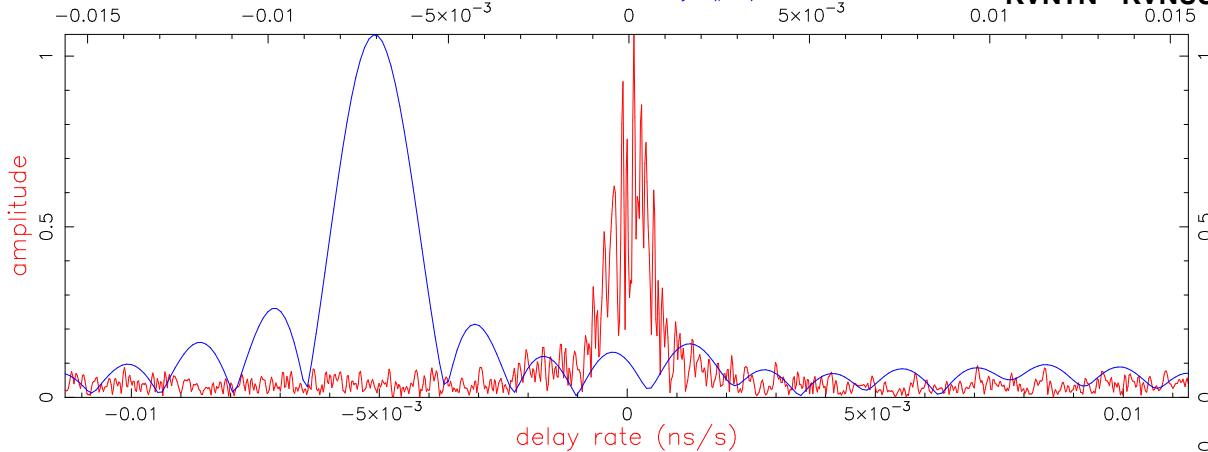
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tu

KVNTN - KVNUS, fgroup W, pol LL

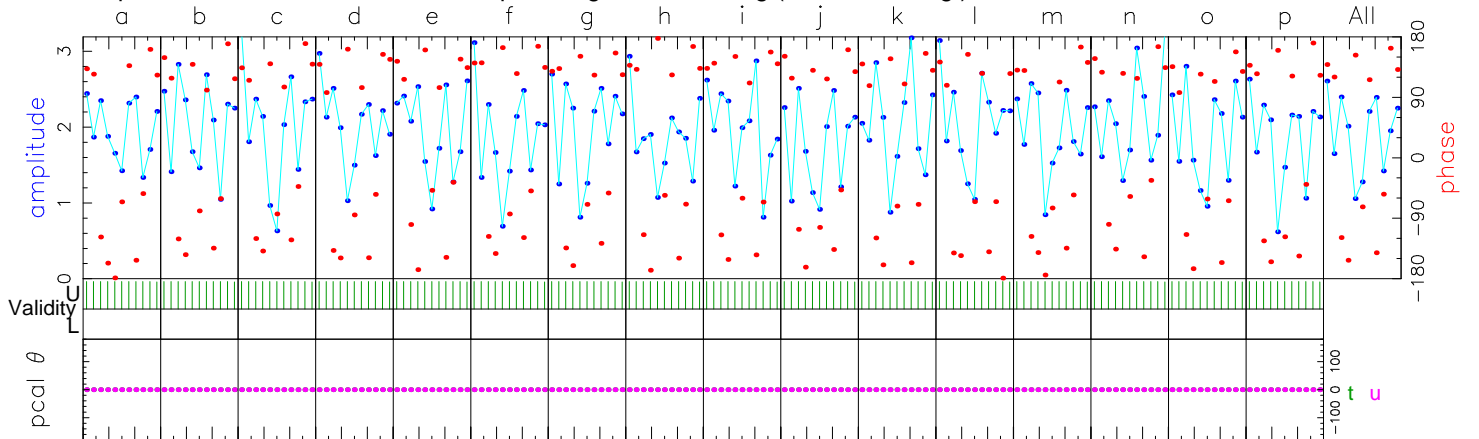
multiband delay (μ s)

Fringe quality 5



SNR 39.0
 Int time 179.956
 Amp 1.064
 Phase 175.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.007009
 MBD -0.007042
 Fringe rate (Hz)
 0.011499
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:076:014755
 2020:086:043729
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
	175.6	175.3	174.1	171.6	165.1	-174.5	175.8	174.9	179.9	177.1	177.6	173.6	-169.1	171.3	163.9	174.0	Phase	175.3		
	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.1	1.0	1.1	1.2	1.0	1.0	1.0	1.2	Ampl.	1.1		
	128.0	128.2	127.9	128.1	128.2	128.2	128.2	128.2	128.2	128.1	128.2	128.2	128.4	128.1	128.0	127.6	Sbd box	128.1		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl 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			
																	Tracks			
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids			
																	Tracks			
Group delay (usec)(sbd)	3.80044772171E+02					Apriori delay (usec)					3.80051814310E+02					Resid mbdelay (usec)		-7.04214E-03	+/-	2.8E-05
Sband delay (usec)	3.80044805310E+02					Apriori clock (usec)					1.9262941E+01					Resid sbdelay (usec)		-7.00900E-03	+/-	4.4E-04
Phase delay (usec)	3.80051819964E+02					Apriori clockrate (us/s)					-1.9999998E-07					Resid phdelay (usec)		5.65348E-06	+/-	9.5E-08
Delay rate (us/s)	-2.07147197445E-03					Apriori rate (us/s)					-2.07160546387E-03					Resid rate (us/s)		1.33489E-07	+/-	9.1E-10
Total phase (deg)	277.8					Apriori accel (us/s/s)					-4.13375856215E-06					Resid phase (deg)		175.3	+/-	2.9

RMS Theor. Amplitude 1.064 +/- 0.027
 ph/seg (deg) 65.6 4.9 Search (1024X64) 1.039
 amp/seg (%) 93.3 8.5 Interp. 0.000
 ph/frq (deg) 6.8 5.9 Inc. seg. avg. 1.923
 amp/frq (%) 5.6 10.3 Inc. frq. avg. 1.063

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) 11.332 -475.771 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tu..130KBL Output file: /Exps/c192c/v2/1234/No0011/tu.W.97.130KBL

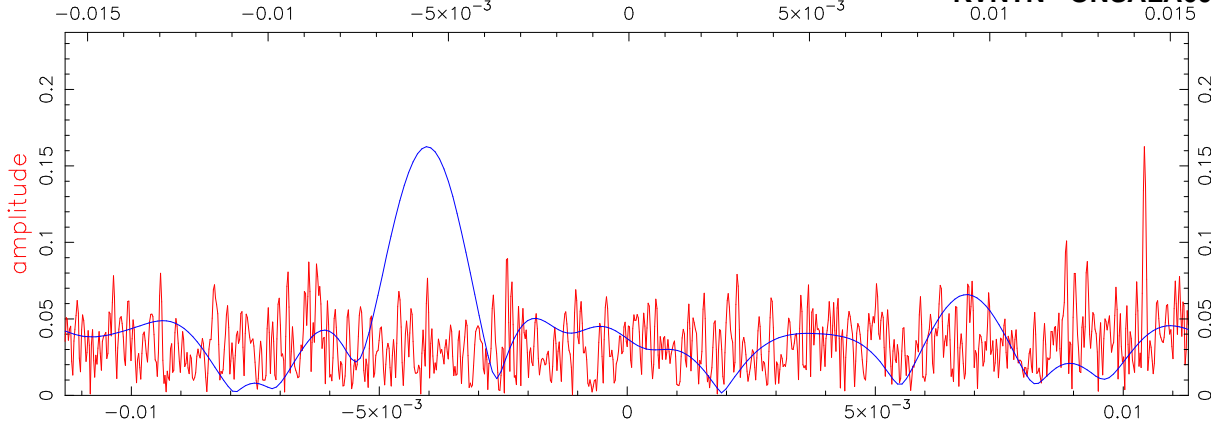
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tX

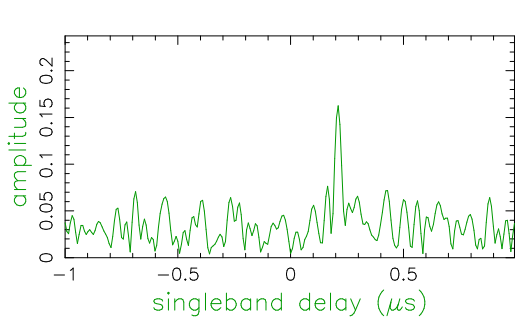
KVNTN - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

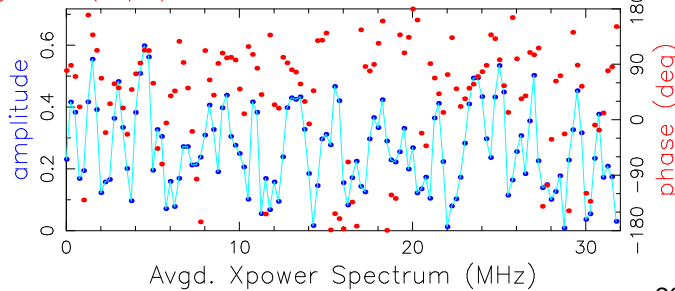
Fringe quality 0



SNR 6.0
Int time 179.778
Amp 0.237
Phase -108.9
PFD 2.6e-01
Delays (us)
SBD 0.209993
MBD -0.005601
Fringe rate (Hz)
0.899165
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

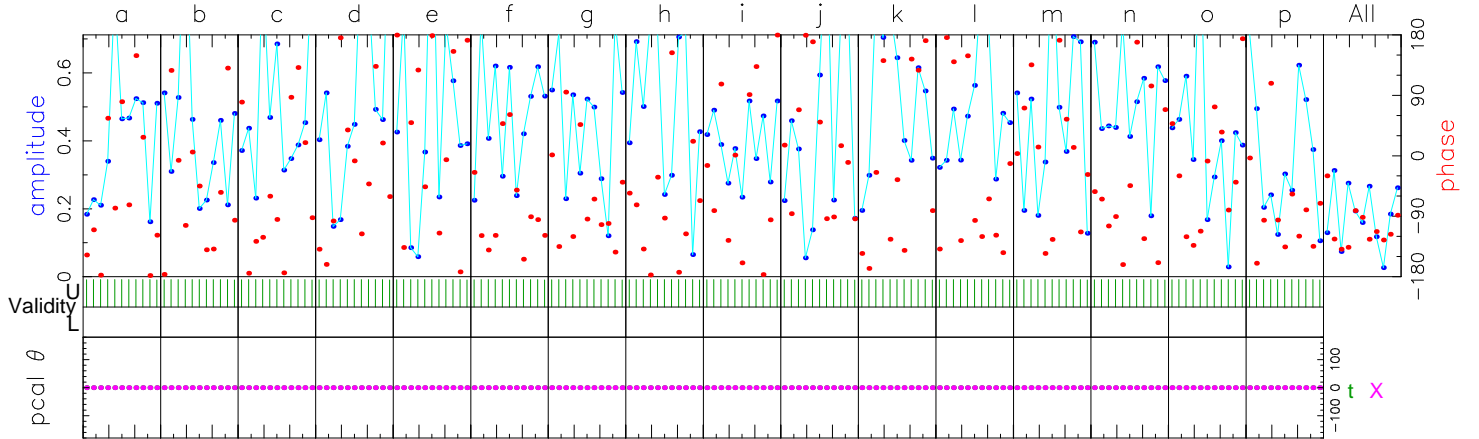


delay rate (ns/s)



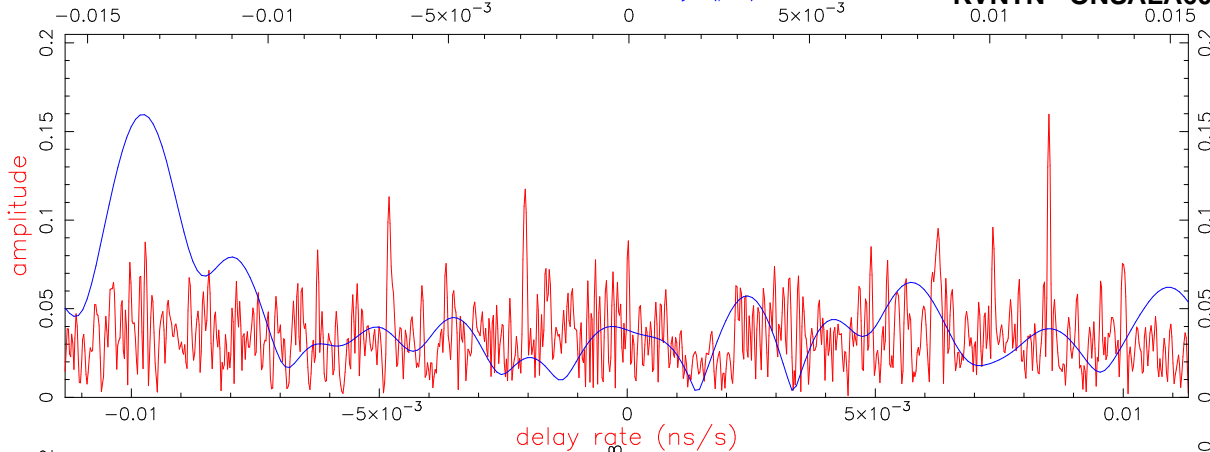
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043730
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-107.8	-95.4	-117.1	-75.6	-164.6	-106.3	-93.0	-111.6	-177.1	-24.6	-150.0	-126.1	-108.9	-117.7	-78.1	-100.2	Phase	-108.9
	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.1	0.3	0.2	0.4	0.1	0.3	0.2	0.3	Ampl.	0.2
	69.1	255.7	128.9	21.3	246.6	98.5	154.1	39.1	45.1	218.7	112.8	204.0	162.9	123.7	179.7	13.8	Sbd box	155.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
t:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)				-2.61206524364E+03				Apriori delay (usec)		-2.61227839228E+03				Resid mbdelay (usec)		-5.60137E-03	+/-	1.8E-04
Sband delay (usec)				-2.61206839928E+03				Apriori clock (usec)		-4.6206093E+00				Resid sbdelay (usec)		2.09993E-01	+/-	2.9E-03
Phase delay (usec)				-2.61227839579E+03				Apriori clockrate (us/s)		-3.2800002E-07				Resid phdelay (usec)		-3.51332E-06	+/-	6.2E-07
Delay rate (us/s)				-1.44155087788E+00				Apriori rate (us/s)		-1.44156131629E+00				Resid rate (us/s)		1.04384E-05	+/-	5.9E-09
Total phase (deg)				-4.9				Apriori accel (us/s/s)		-6.19736200602E-06				Resid phase (deg)		-108.9	+/-	19.2

RMS Theor. Amplitude 0.237 +/- 0.040 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 30.3 31.8 Search (1024X64) 0.153 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 54.5 55.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 37.4 38.4 Inc. seg. avg. 0.230 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 46.8 67.0 Inc. frq. avg. 0.229 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
t: az 293.0 el 40.6 pa 75.1 X: az 96.8 el 50.1 pa -42.1 u,v (fr/asec) 10362.838 -2503.650 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tX..130KBL Output file: /Exps/c192c/v2/1234/No0011/tX.W.106.130KBL

multiband delay (μ s)

Fringe quality 0

SNR 5.9

Int time 179.778

Amp 0.205

Phase 58.8

PFD 4.0e-01

Delays (us)

SBD -0.622733

MBD -0.013474

Fringe rate (Hz)

0.733071

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 150000.00

Stop 150300.22

FRT 150130.00

Corr/FF/build

2020:076:014755

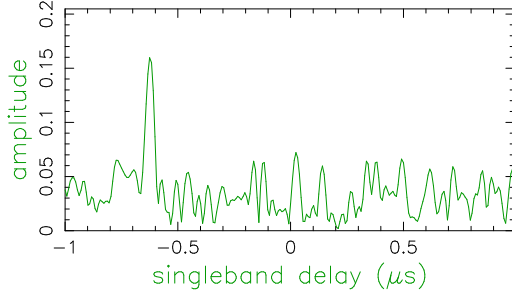
2020:086:043732

2020:014:135814

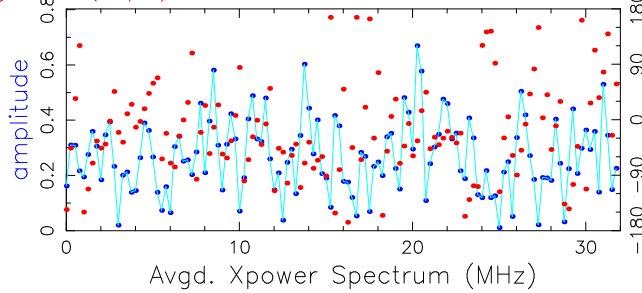
RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"



delay rate (ns/s)



phase (deg)

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

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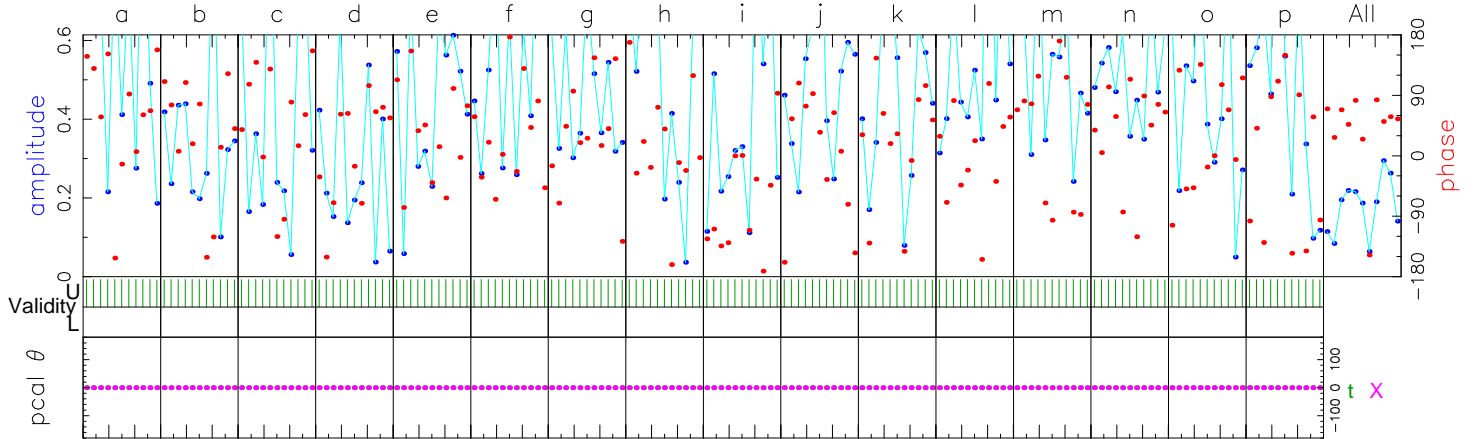
-180 90 0 180

-180 90 0 180

-180 90 0 180

-180 90 0 180

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
94.5	94.7	81.4	46.6	53.9	24.7	34.4	28.2	-65.4	42.1	57.2	45.1	109.6	57.2	49.2	128.4	128.4	Phase	58.8
0.4	0.1	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.4	0.4	0.2	0.3	0.1	0.3	0.3	Ampl.	0.2
24.2	36.2	148.2	8.6	220.9	132.5	20.7	192.6	9.9	113.7	251.3	208.9	32.3	88.8	240.8	28.0	28.0	Sbd box	49.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd)	-2.61288561621E+03	Apriori delay (usec)	-2.61227839228E+03	Resid mbdelay (usec)	-1.34739E-02	+/-	1.8E-04
Sband delay (usec)	-2.61290112578E+03	Apriori clock (usec)	-4.6206093E+00	Resid sbdelay (usec)	-6.22733E-01	+/-	2.9E-03
Phase delay (usec)	-2.61227839038E+03	Apriori clockrate (us/s)	-3.2800002E-07	Resid phdelay (usec)	1.89719E-06	+/-	6.3E-07
Delay rate (us/s)	-1.44155280606E+00	Apriori rate (us/s)	-1.44156131629E+00	Resid rate (us/s)	8.51023E-06	+/-	6.0E-09
Total phase (deg)	-197.1	Apriori accel (us/s/s)	-6.19736200602E-06	Resid phase (deg)	58.8	+/-	19.5

ph/seg (deg) 49.9 32.3 Search (1024X64) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 44.2 56.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 45.8 38.9 Inc. seg. avg. 0.197 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 51.1 68.0 Inc. frq. avg. 0.212 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

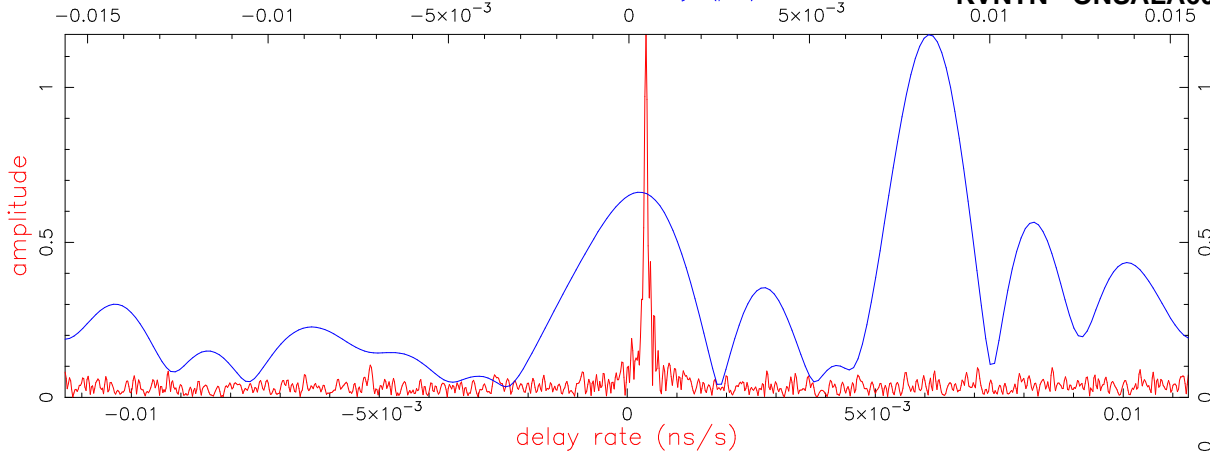
t: az 293.0 el 40.6 pa 75.1 X: az 96.8 el 50.1 pa -42.1 u,v (fr/asec) 10362.838 -2503.650 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tX..130KBL Output file: /Exps/c192c/v2/1234/No0011/tX.W.120.130KBL

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tX

KVNTN - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 3

SNR 42.9

Int time 179.778

Amp 1.171

Phase -46.1

PFD 0.0e+00

Delays (us)

SBD -0.023775

MBD 0.008330

Fringe rate (Hz)

0.032246

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Yr:day 16383

Start 150000.00

Stop 150300.22

FRT 150130.00

Corr/FF/build

2020:076:014755

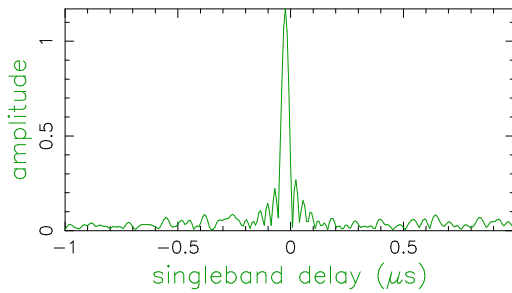
2020:086:043726

2020:014:135814

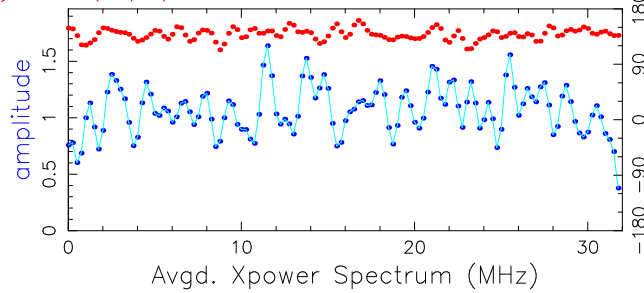
RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

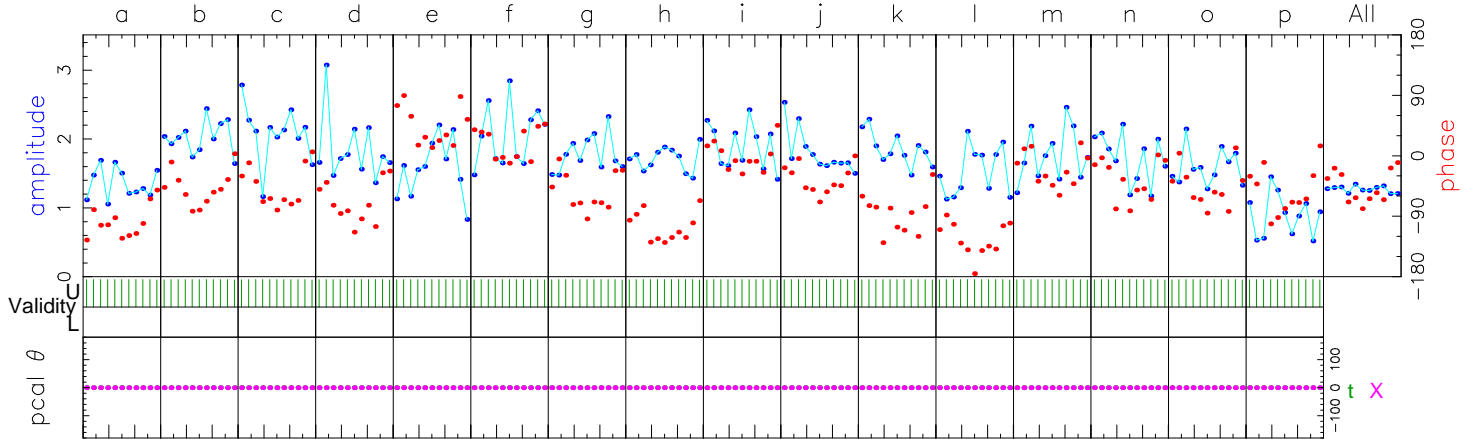
singleband delay (μ s)

delay rate (ns/s)



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	-97.4	-48.1	-45.3	-68.1	39.3	18.5	-55.3	-105.8	-0.6	-33.5	-85.9	-126.7	-19.3	-32.0	-45.4	-59.7	Phase	-46.1
t	1.3	1.9	1.8	1.6	1.4	1.9	1.6	1.6	1.8	1.7	1.7	1.4	1.6	1.5	1.4	0.7	Ampl.	1.5
X	127.5	126.0	125.8	125.7	125.8	125.5	125.3	125.8	125.5	125.5	125.8	125.6	125.7	125.9	126.1	126.1	Sbd box	126.0
tX	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
tX	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd)	-2.61230131253E+03	Apriori delay (usec)	-2.61227839228E+03	Resid mbdelay (usec)	8.32975E-03	+/-	2.5E-05
Sband delay (usec)	-2.61230216728E+03	Apriori clock (usec)	-4.6206093E+00	Resid sbdelay (usec)	-2.37750E-02	+/-	4.0E-04
Phase delay (usec)	-2.61227839377E+03	Apriori clockrate (us/s)	-3.2800002E-07	Resid phdelay (usec)	-1.48726E-06	+/-	8.6E-08
Delay rate (us/s)	-1.44156094194E+00	Apriori rate (us/s)	-1.44156131629E+00	Resid rate (us/s)	3.74348E-07	+/-	8.3E-10
Total phase (deg)	-302.0	Apriori accel (us/s/s)	-6.19736200602E-06	Resid phase (deg)	-46.1	+/-	2.7

ph/seg (deg)	RMS	Theor.	Amplitude	1.171 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	23.2	4.4	Search (1024X64)	1.163	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	9.4	7.7	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
amp/frq (%)	46.0	5.3	Inc. seg. avg.	1.268	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
	40.4	9.3	Inc. frq. avg.	1.548	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 X: az 96.8 el 50.1 pa -42.1 u,v (fr/asec) 10362.838 -2503.650 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tX..130KBL Output file: /Exps/c192c/v2/1234/No0011/tX.W.77.130KBL

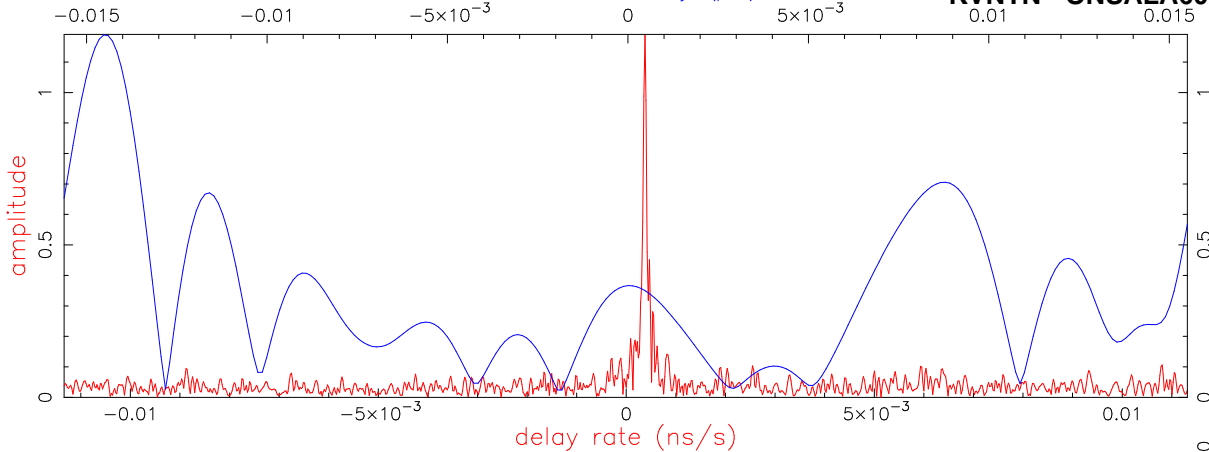
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tX

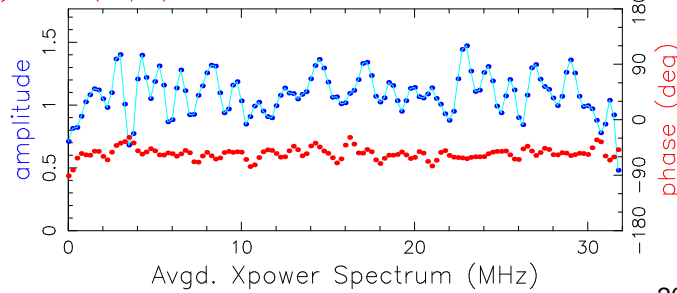
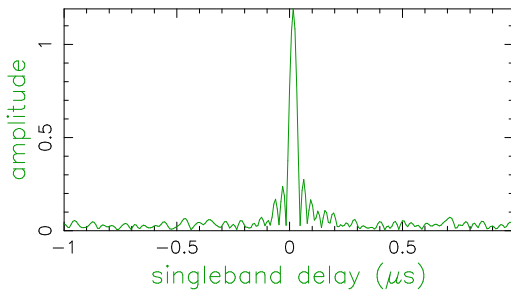
KVNTN - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

Fringe quality 3

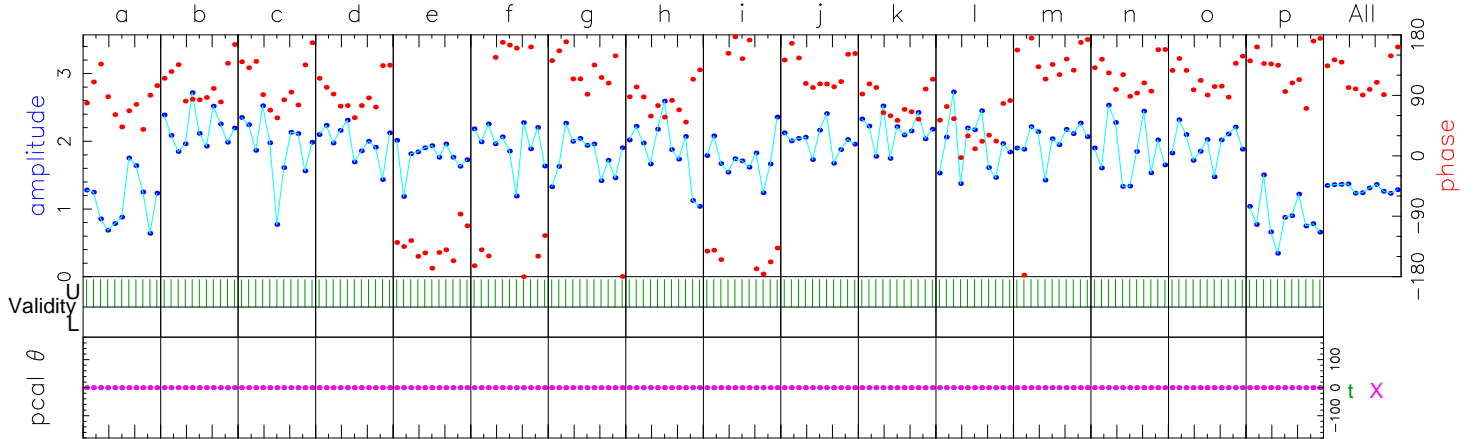


SNR 43.6
Int time 179.778
Amp 1.191
Phase 119.6
PFD 0.0e+00
Delays (us)
SBD 0.015883
MBD -0.014479
Fringe rate (Hz)
0.032132
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Yr:day 16383
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043728
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	79.6	107.0	109.9	91.6	-136.0	-172.0	134.1	79.1	-167.4	126.8	79.3	42.1	149.2	119.8	117.0	130.4	Phase	119.6
t	1.0	1.9	1.6	1.8	1.7	1.7	1.6	1.7	1.6	1.8	2.0	1.7	1.9	1.7	1.8	0.8	Ampl.	1.6
X	130.7	131.5	130.9	131.0	130.9	130.5	130.5	130.6	130.3	130.5	130.6	130.8	130.7	131.0	131.1	132.1	Sbd box	131.0
tX	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
tX	0:0	0:0	0:0	0:0	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	
X	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	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)				-2.61226162156E+03		Apriori delay (usec)			-2.61227839228E+03		Resid mbdelay (usec)			-1.44793E-02		+/-	2.5E-05	
Sband delay (usec)				-2.61226250878E+03		Apriori clock (usec)			-4.6206093E+00		Resid sbdelay (usec)			1.58835E-02		+/-	3.9E-04	
Phase delay (usec)				-2.61227838842E+03		Apriori clockrate (us/s)			-3.2800002E-07		Resid phdelay (usec)			3.85827E-06		+/-	8.5E-08	
Delay rate (us/s)				-1.44156094327E+00		Apriori rate (us/s)			-1.44156131629E+00		Resid rate (us/s)			3.73019E-07		+/-	8.1E-10	
Total phase (deg)				-136.3		Apriori accel (us/s/s)			-6.19736200602E-06		Resid phase (deg)			119.6		+/-	2.6	

ph/seg (deg) 24.6 4.4 Theor. Amplitude 1.191 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 10.8 7.6 Search (1024X64) 1.170 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 49.3 5.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 47.0 9.2 Inc. seg. avg. 1.303 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 t: az 293.0 el 40.6 pa 75.1 X: az 96.8 el 50.1 pa -42.1 u,v (fr/asec) 10362.838 -2503.650 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tX..130KBL Output file: /Exps/c192c/v2/1234/No0011/tX.W.92.130KBL simultaneous interpolator

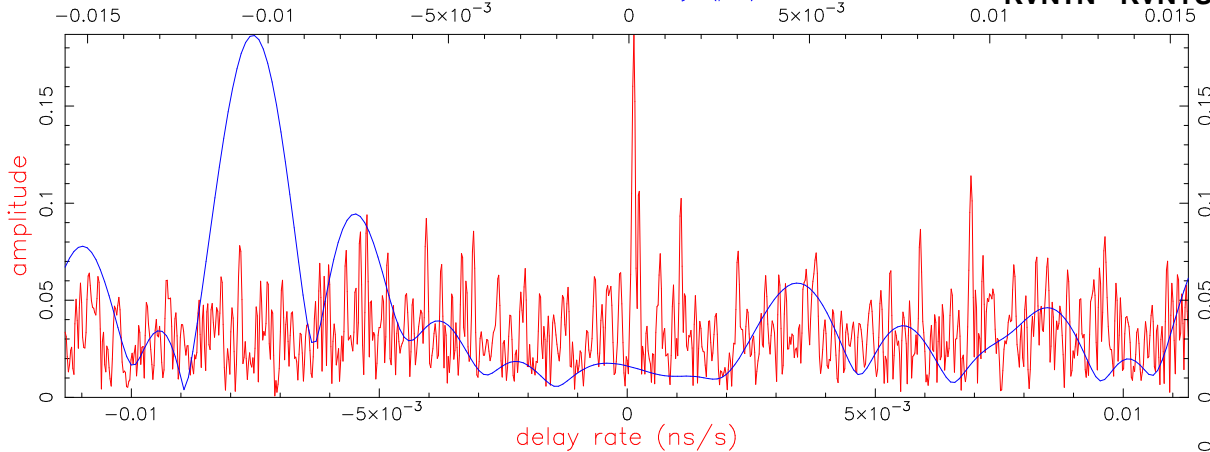
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, ty

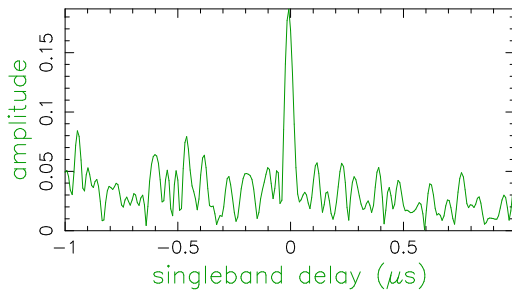
KVNTN - KVNYS, fgroup W, pol LR

multiband delay (μ s)

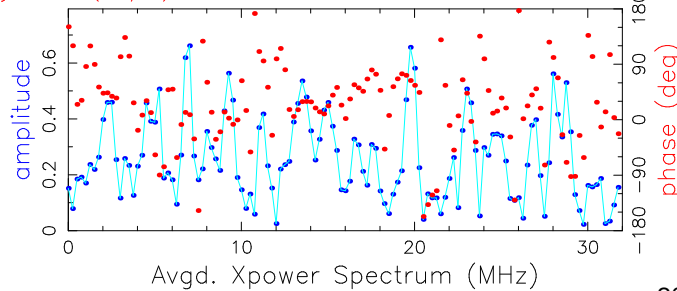
Fringe quality 0



SNR 6.9
Int time 179.969
Amp 0.187
Phase 39.8
PFD 1.0e-03
Delays (us)
SBD -0.009155
MBD -0.010413
Fringe rate (Hz)
0.011860
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

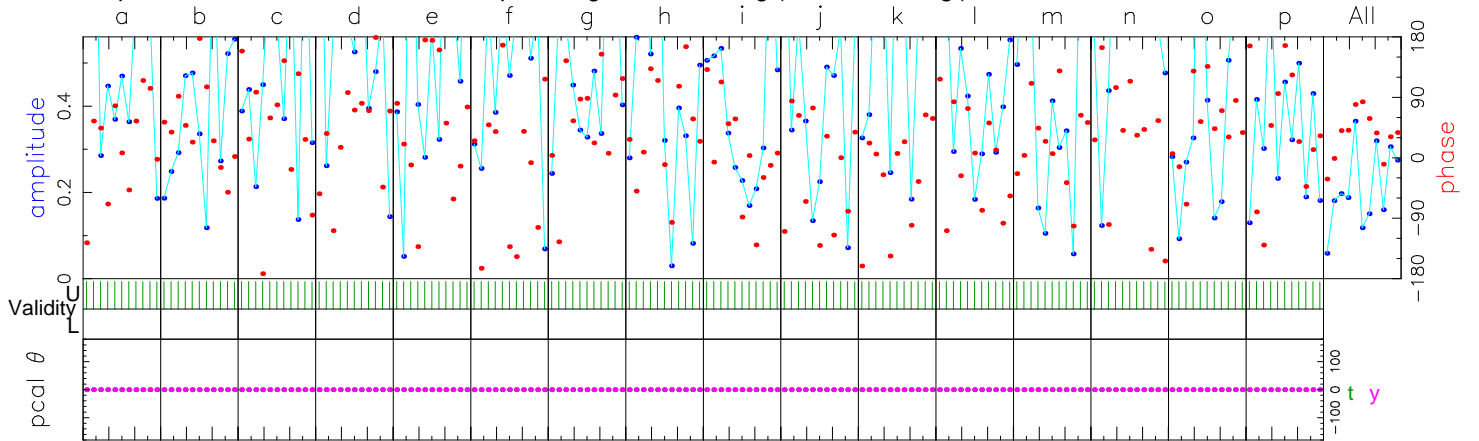


delay rate (ns/s)



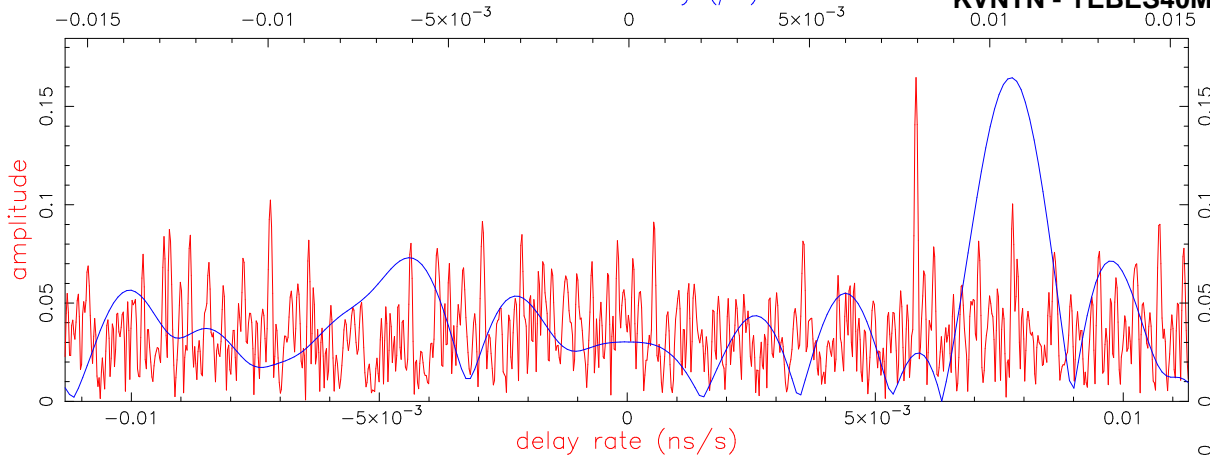
Exp. c192c
Yr:day 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043730
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



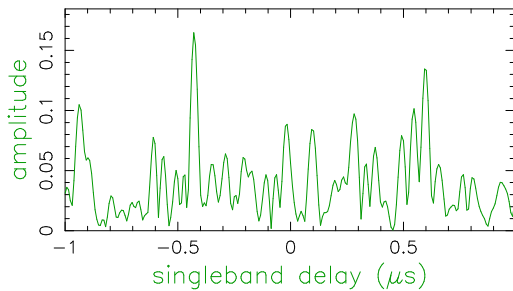
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	Phase	39.8
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	0.2
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	127.8
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	APs used	
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 freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	PC amp	
y	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)				-3.36168272612E+02						-3.36157859347E+02							-1.04133E-02	+/- 1.6E-04
Sband delay (usec)				-3.36167013847E+02						-1.4599724E+00							-9.15450E-03	+/- 2.5E-03
Phase delay (usec)				-3.36157858063E+02						1.0000001E-07							1.28461E-06	+/- 5.4E-07
Delay rate (us/s)				-4.30906175216E-02						-4.30907552085E-02							1.37687E-07	+/- 5.2E-09
Total phase (deg)					38.3					-2.36794484161E-06							39.8	+/- 16.7
ph/seg (deg)																		
amp/seg (%)																		
ph/frq (deg)																		
amp/frq (%)																		

t: az 293.0 el 40.6 pa 75.1 y: az 289.7 el 41.8 pa 69.5 u,v (fr/asec) 307.402 -571.647 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/ty..130KBL Output file: /Exps/c192c/v2/1234/No0011/ty.W.105.130KBL

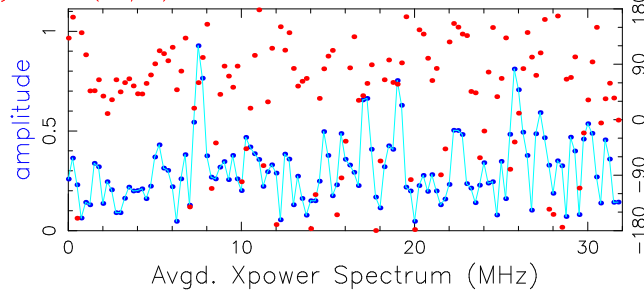
multiband delay (μ s)

Fringe quality 0

SNR 5.8
Int time 162.348
Amp 0.185
Phase 73.9
PFD 6.6e-01
Delays (us)
SBD -0.428311
MBD 0.010603
Fringe rate (Hz)
0.501981
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

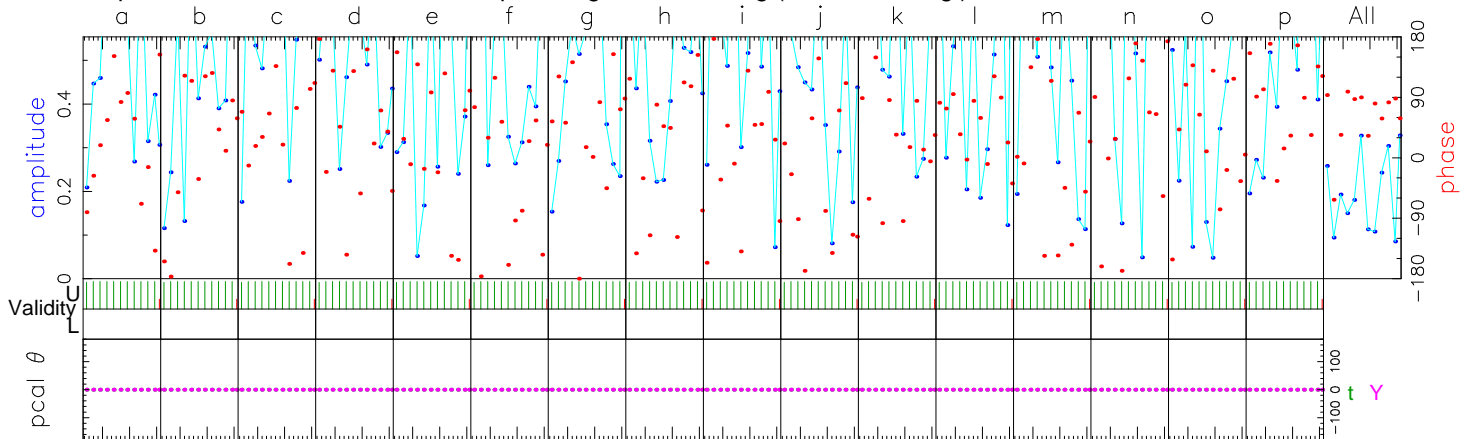


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150016.89
Stop 150259.71
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043731
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
	48.6	83.5	60.6	79.3	96.8	111.8	77.4	135.0	59.3	50.3	19.7	70.1	-137.7	92.6	50.6	76.9	Phase	73.9						
	0.2	0.3	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.1	0.2	0.4	0.1	0.3	0.2	0.3	Ampl.	0.2						
	84.7	77.4	52.1	102.1	190.0	78.9	205.1	187.0	64.1	8.8	83.0	74.7	49.7	116.4	127.5	14.2	Sbd box	74.2						
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used							
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs							
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs							
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							
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp							
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000								
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids							
																	Tracks							
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids							
																	Tracks							
Group delay (usec)(sbd)	5.44626064743E+02					Apriori delay (usec)					5.45052961516E+02					Resid mbdelay (usec)					1.06032E-02		+/-	1.9E-04
Sband delay (usec)	5.44624651016E+02					Apriori clock (usec)					1.8100965E+01					Resid sbdelay (usec)					-4.28311E-01		+/-	3.0E-03
Phase delay (usec)	5.45052963898E+02					Apriori clockrate (us/s)					-2.0000006E-08					Resid phdelay (usec)					2.38155E-06		+/-	6.4E-07
Delay rate (us/s)	-1.78086777824E+00					Apriori rate (us/s)					-1.78087360574E+00					Resid rate (us/s)					5.82750E-06		+/-	6.8E-09
Total phase (deg)	111.7					Apriori accel (us/s/s)					-9.69536225054E-06					Resid phase (deg)					73.9		+/-	19.9

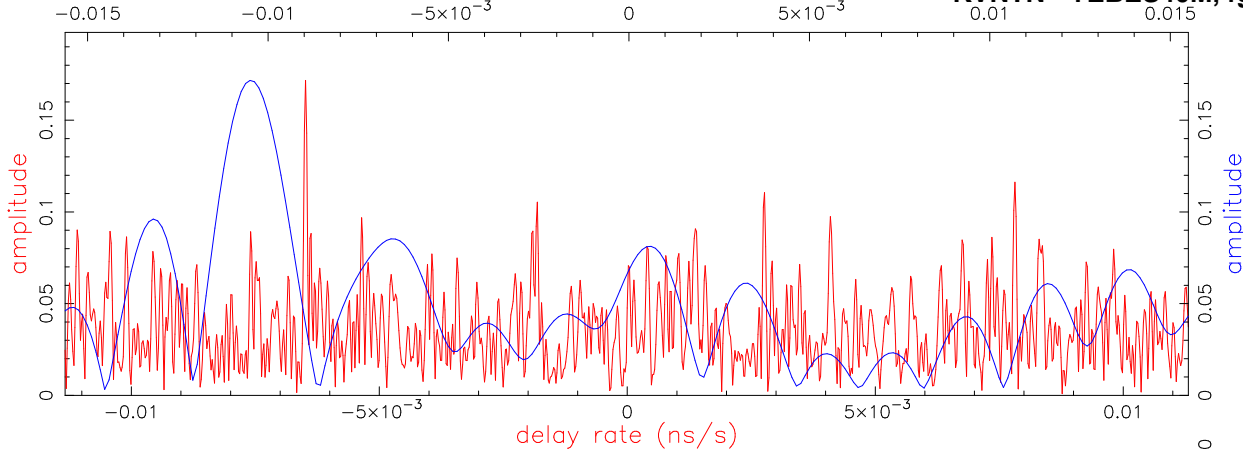
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tY

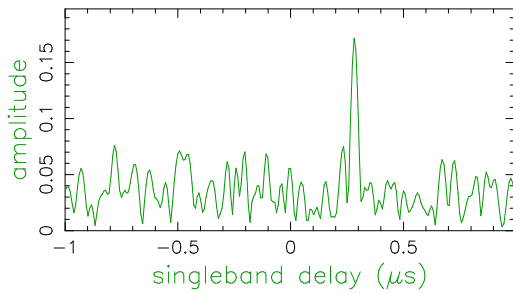
KVNTN - YEBES40M, fgroup W, pol RL

multiband delay (μ s)

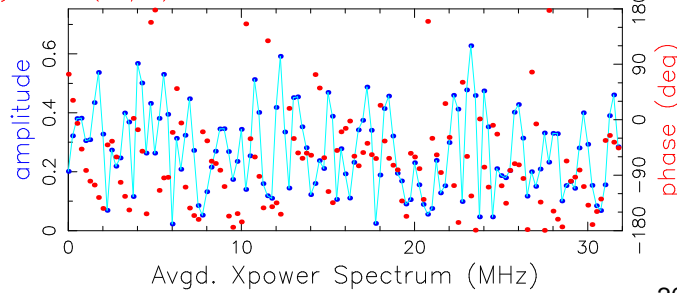
Fringe quality 0



SNR 6.0
Int time 162.348
Amp 0.198
Phase 158.4
PFD 2.2e-01
Delays (us)
SBD 0.282644
MBD -0.010442
Fringe rate (Hz)
-0.559473
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

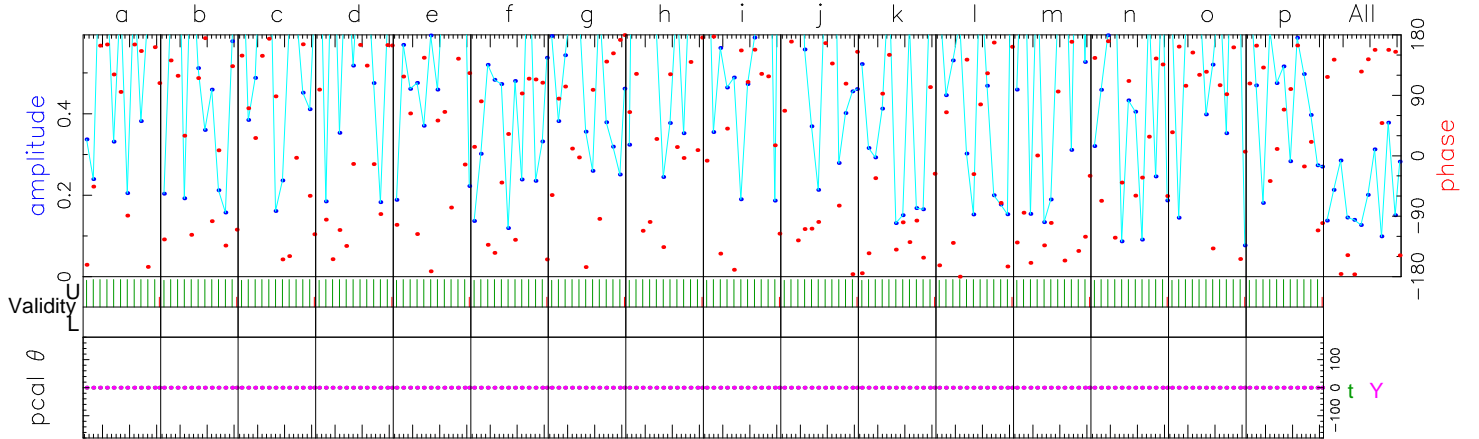


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150016.89
Stop 150259.71
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043733
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
160.6	166.4	159.9	178.5	116.6	155.1	70.3	75.1	134.2	-179.4	179.1	155.9	-122.6	177.5	137.5	69.3	69.3	Phase	158.4
0.5	0.3	0.3	0.3	0.2	0.1	0.0	0.2	0.3	0.4	0.2	0.2	0.3	0.1	0.5	0.1	0.1	Ampl.	0.2
165.1	143.1	174.0	141.9	103.0	36.7	89.7	227.1	62.8	82.2	231.8	14.4	93.8	71.6	66.9	16.8	16.8	Sbd box	165.2
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
t	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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)			5.45323769398E+02							5.45052961516E+02							-1.04421E-02	+/- 1.8E-04
Sband delay (usec)			5.45335605516E+02							1.8100965E+01							2.82644E-01	+/- 2.9E-03
Phase delay (usec)			5.45052966625E+02							-2.0000006E-08							5.10935E-06	+/- 6.2E-07
Delay rate (us/s)			-1.78088010067E+00							-1.78087360574E+00							-6.49493E-06	+/- 6.5E-09
Total phase (deg)				196.2						-9.69536225054E-06							158.4	+/- 19.1
ph/seg (deg)	RMS	Theor.																
amp/seg (%)	42.5	33.1																
ph/frq (deg)	52.4	57.7																
amp/frq (%)	48.9	38.2																
	66.4	66.6																
t: az 293.0 el 40.6 pa 75.1																		
Control file: cf_1234_gmva																		

Group delay (usec)(sbd) 5.45323769398E+02 Apriori delay (usec) 5.45052961516E+02 Resid mbdelay (usec) -1.04421E-02 +/- 1.8E-04
Sband delay (usec) 5.45335605516E+02 Apriori clock (usec) 1.8100965E+01 Resid sbdelay (usec) 2.82644E-01 +/- 2.9E-03
Phase delay (usec) 5.45052966625E+02 Apriori clockrate (us/s) -2.0000006E-08 Resid phdelay (usec) 5.10935E-06 +/- 6.2E-07
Delay rate (us/s) -1.78088010067E+00 Apriori rate (us/s) -1.78087360574E+00 Resid rate (us/s) -6.49493E-06 +/- 6.5E-09
Total phase (deg) 196.2 Apriori accel (us/s/s) -9.69536225054E-06 Resid phase (deg) 158.4 +/- 19.1

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 Y: az 70.1 el 38.2 pa -64.0 u,v (fr/asec) 12804.061 -1366.677 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tY..130KBL Output file: /Exps/c192c/v2/1234/No0011/tY.W.128.130KBL

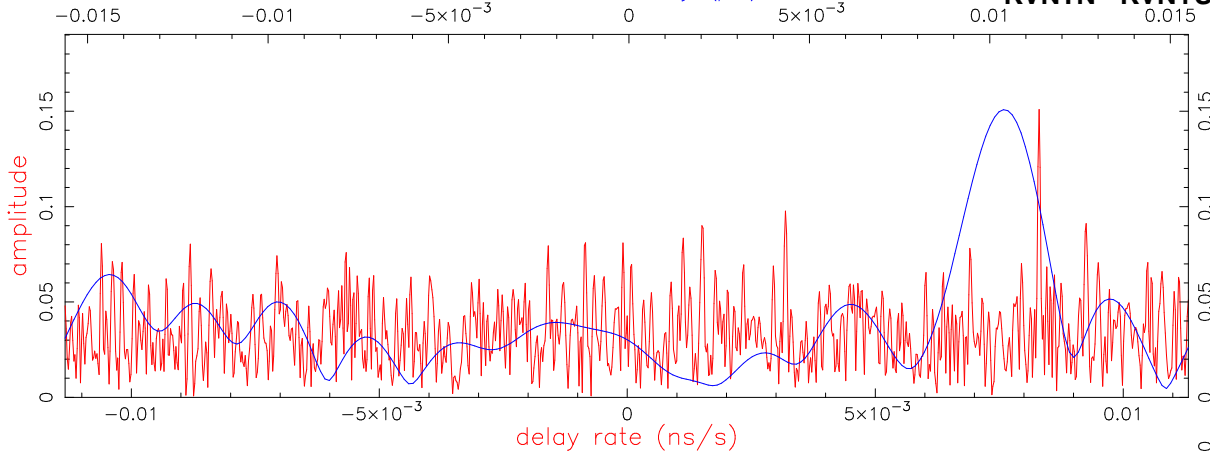
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, ty

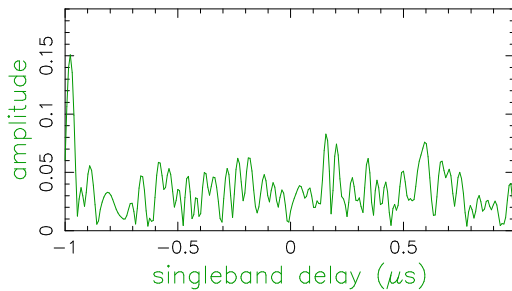
KVNTN - KVNYS, fgroup W, pol RL

multiband delay (μ s)

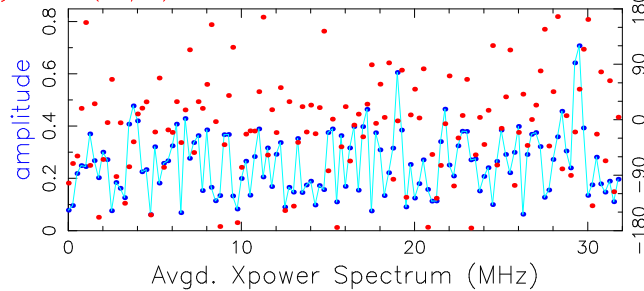
Fringe quality 0



SNR 5.5
Int time 179.969
Amp 0.190
Phase 65.4
PFD 9.7e-01
Delays (us)
SBD -0.977218
MBD 0.010403
Fringe rate (Hz)
0.715644
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

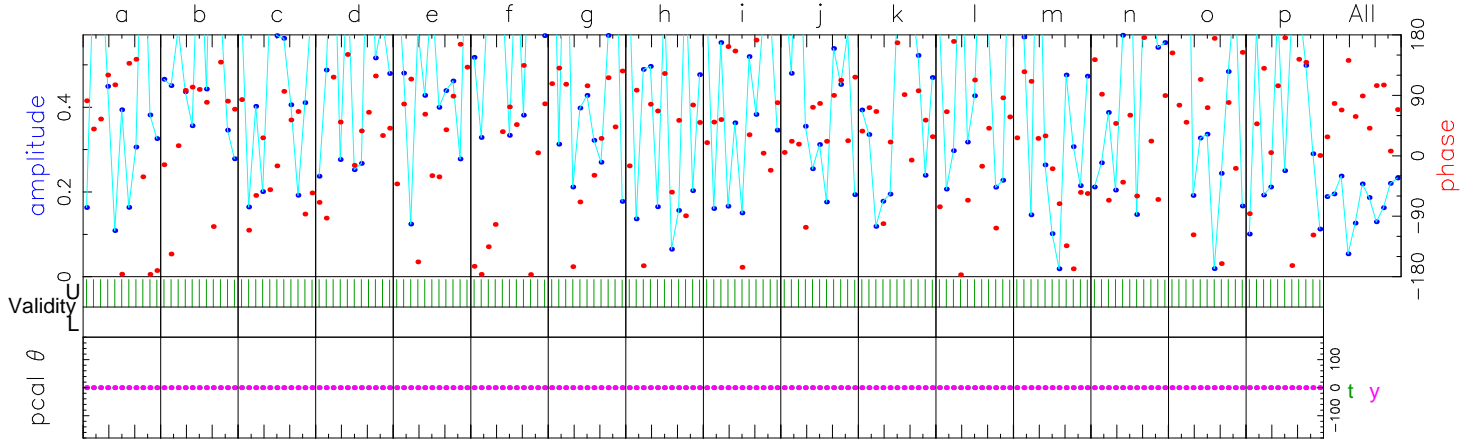


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043733
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

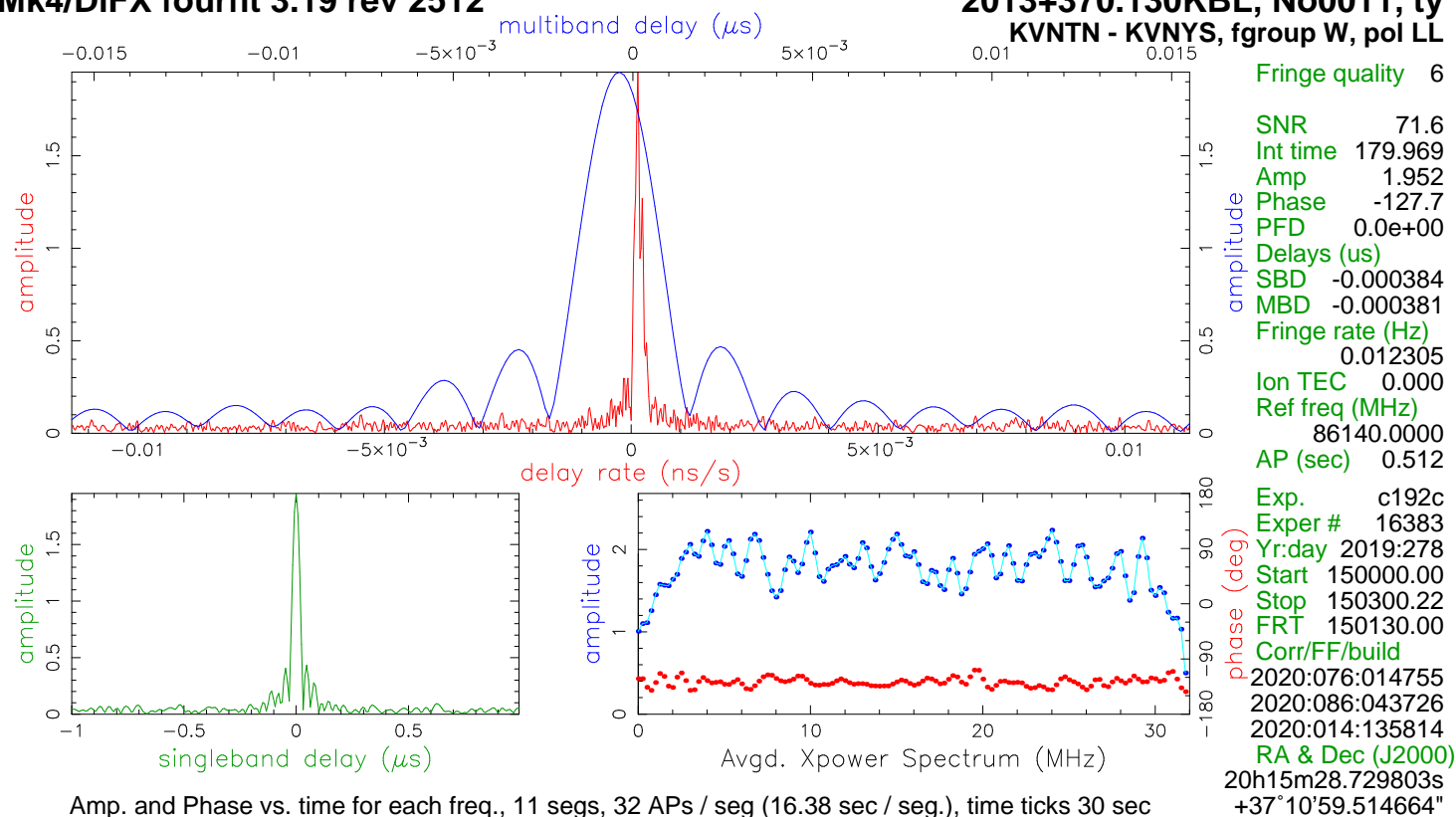
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



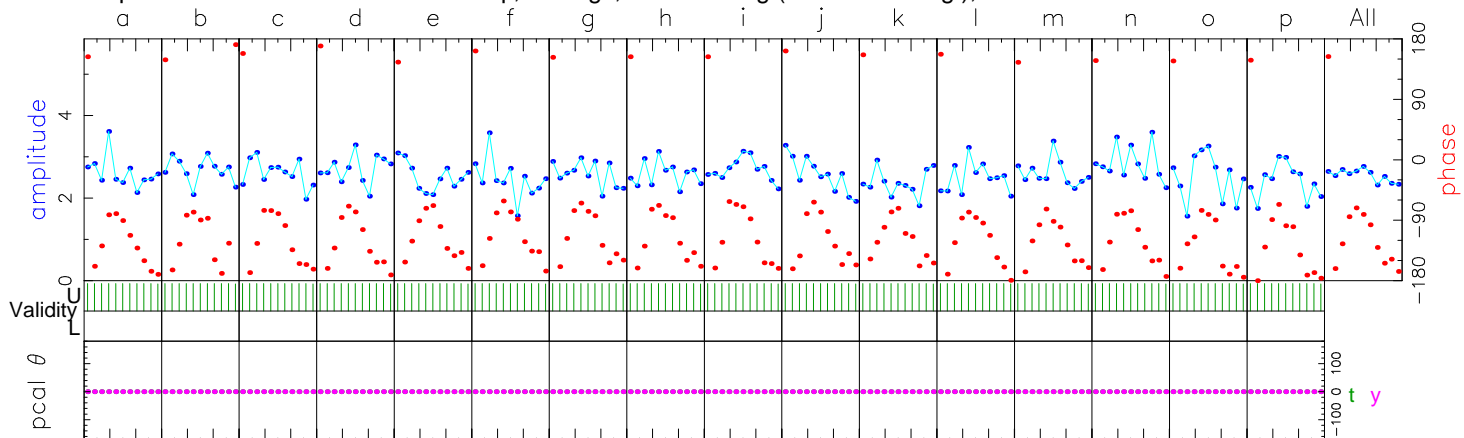
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
	84.5	95.1	-8.2	75.5	59.2	134.5	92.0	61.2	39.3	39.8	63.7	39.2	21.4	34.4	79.1	135.3	Phase	65.4		
	0.2	0.2	0.2	0.3	0.2	0.1	0.4	0.1	0.3	0.4	0.3	0.1	0.2	0.2	0.3	0.2	Ampl.	0.2		
	239.5	35.2	35.7	194.6	147.7	15.2	174.8	39.4	72.0	122.5	68.5	10.7	248.9	163.2	176.8	61.7	Sbd box	3.9		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
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	Manl PC			
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids			
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks			
																	Chan ids			
																	Tracks			
Group delay (usec)(sbd)	-3.37147456260E+02				Apriori delay (usec)				-3.36157859347E+02				Resid mbdelay (usec)				1.04031E-02		+/-	1.9E-04
Sband delay (usec)	-3.37135077347E+02				Apriori clock (usec)				-1.4599724E+00				Resid sbdelay (usec)				-9.77218E-01		+/-	3.1E-03
Phase delay (usec)	-3.36157857239E+02				Apriori clockrate (us/s)				1.0000001E-07				Resid phdelay (usec)				2.10811E-06		+/-	6.7E-07
Delay rate (us/s)	-4.30824472925E-02				Apriori rate (us/s)				-4.30907552085E-02				Resid rate (us/s)				8.30792E-06		+/-	6.4E-09
Total phase (deg)	63.9				Apriori accel (us/s/s)				-2.36794484161E-06				Resid phase (deg)				65.4		+/-	20.7

ph/seg (deg) 37.2 34.3 Theor. Amplitude 0.190 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 39.4 59.9 Interp. 0.147 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.9 41.4 Inc. seg. avg. 0.190 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 51.5 72.2 Inc. frq. avg. 0.182 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 t: az 293.0 el 40.6 pa 75.1 y: az 289.7 el 41.8 pa 69.5 u,v (fr/asec) 307.402 -571.647 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/ty..130KBL Output file: /Exps/c192c/v2/1234/No0011/ty.W.133.130KBL

**2013+370.130KBL, No0011, ty
KVNTN - KVNYS, fgroup W, pol LL**



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

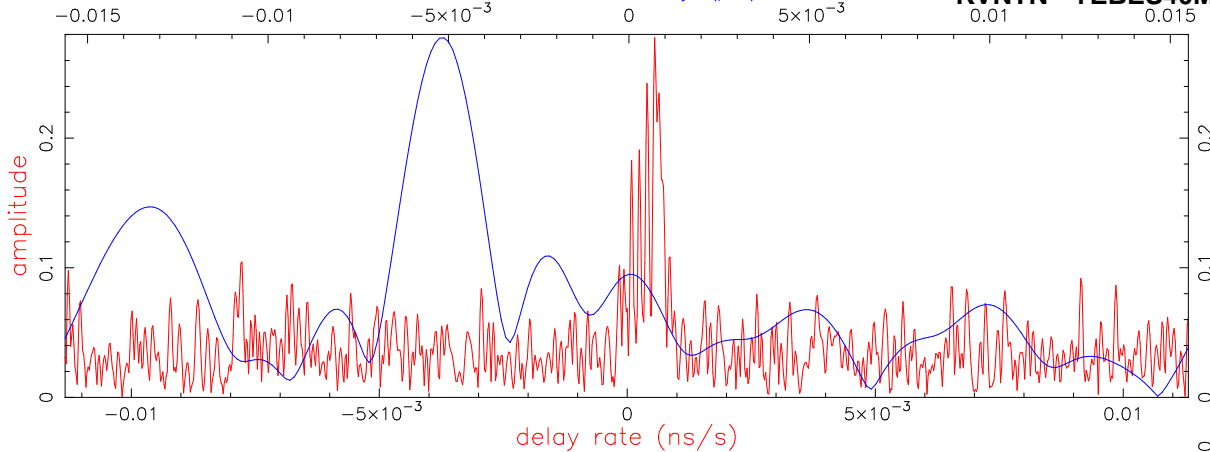


U/L t y t:y t t t y	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All			
	-132.7	-132.0	-128.7	-130.7	-129.4	-122.2	-120.5	-122.3	-120.4	-128.9	-127.0	-125.6	-128.9	-127.8	-133.8	-132.8	Phase	-127.7			
	2.0	2.0	2.0	2.1	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.1	1.8	1.7	Ampl.	2.0			
	129.0	128.9	129.1	129.0	128.8	128.8	129.1	128.8	129.0	128.8	128.8	129.0	128.9	129.0	128.9	129.2	Sbd box	129.0			
	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used				
	t 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
	y 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
	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 phase			
	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	Manl PC			
	t 1000	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	1000					
t W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids				
y W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks				
																	Chan ids				
Group delay (usec)(sbd)			-3.36158240643E+02			Apriori delay (usec)			-3.36157859347E+02			Resid mbdelay (usec)			-3.81296E-04			+/-	1.5E-05		
Sband delay (usec)			-3.36158243847E+02			Apriori clock (usec)			-1.4599724E+00			Resid sbdelay (usec)			-3.84500E-04			+/-	2.4E-04		
Phase delay (usec)			-3.36157863466E+02			Apriori clockrate (us/s)			1.0000001E-07			Resid phdelay (usec)			-4.11907E-06			+/-	5.2E-08		
Delay rate (us/s)			-4.30906123590E-02			Apriori rate (us/s)			-4.30907552085E-02			Resid rate (us/s)			1.42849E-07			+/-	5.0E-10		
Total phase (deg)			-129.2			Apriori accel (us/s/s)			-2.36794484161E-06			Resid phase (deg)			-127.7			+/-	1.6		
ph/seg (deg)			RMS	Theor.	Amplitude			1.952 +/- 0.027			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5							
amp/seg (%)			40.5	2.7	Search (1024X64)			1.876			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000	1.000			
ph/frq (deg)			31.6	4.6	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)			-0.016	0.016
amp/frq (%)			4.6	3.2	Inc. seg. avg.			2.549			Sample rate(MSamp/s): 64						dr window (ns/s)			-0.011	0.011
			5.1	5.6	Inc. frq. avg.			1.954			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)			0.00	0.00
t: az 293.0 el 40.6 pa 75.1 y: az 289.7 el 41.8 pa 69.5 u,v (fr/asec) 307.402 -571.647 simultaneous interpolator																					
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tv_130KBL Output file: /Exps/c192c/v2/1234/No0011/tv.W.76.130KBL																					

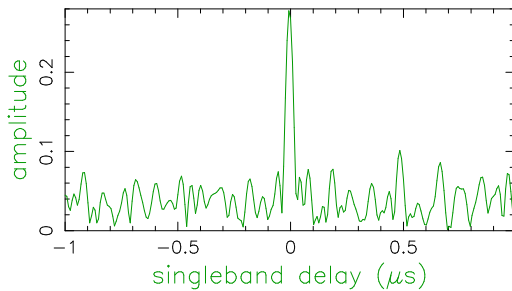
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tY
KVNTN - YEBES40M, fgroup W, pol LLmultiband delay (μ s)

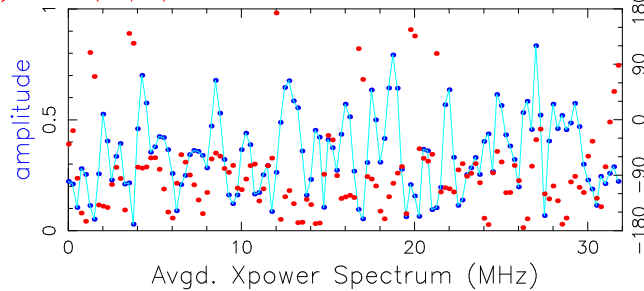
Fringe quality 9



SNR 9.8
Int time 162.348
Amp 0.280
Phase -108.2
PFD 3.8e-14
Delays (us)
SBD -0.005489
MBD -0.005149
Fringe rate (Hz)
0.047530
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

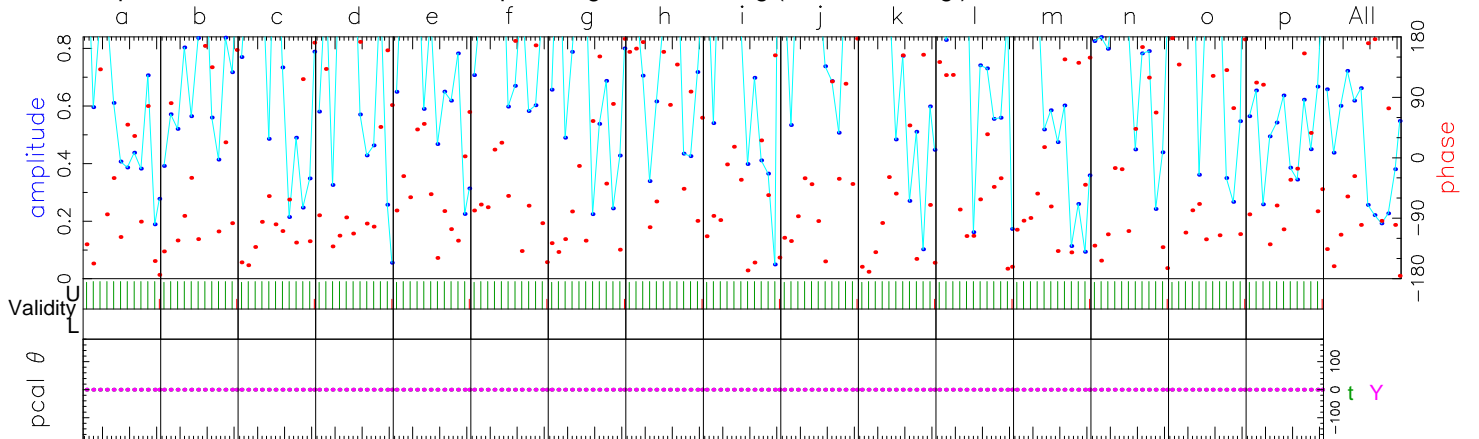


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150016.89
Stop 150259.71
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043726
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



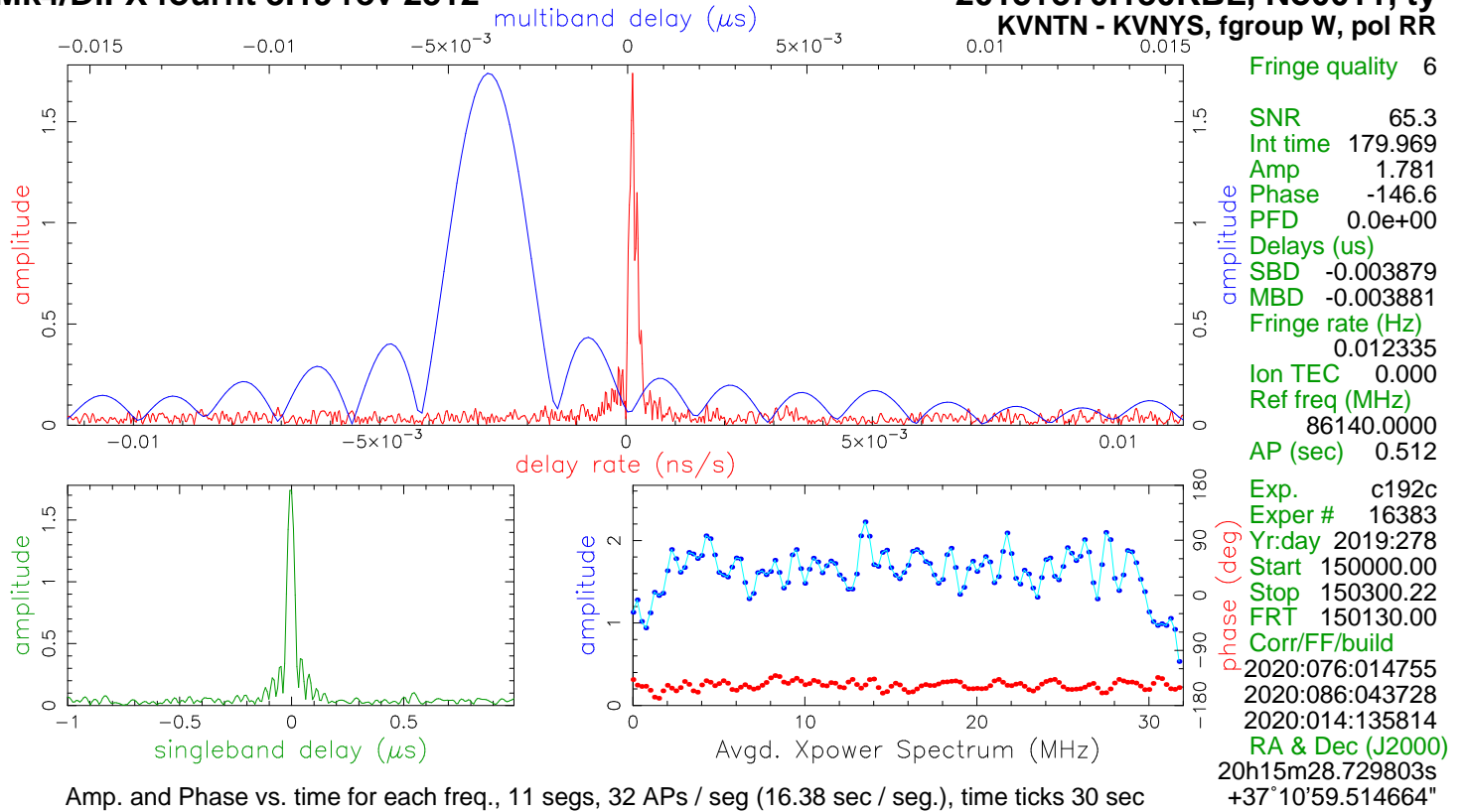
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-126.0	-132.6	-122.0	-123.9	-50.0	-71.2	-110.1	156.2	-65.4	-77.0	-132.3	-131.8	-92.6	-121.3	-143.5	-83.3	Phase	-108.2
	0.1	0.2	0.6	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.2	0.4	0.2	0.4	0.2	0.2	Ampl.	0.3
	166.2	192.9	128.4	255.0	16.4	127.5	196.3	45.4	128.8	127.7	128.5	167.3	127.3	223.8	128.9	32.5	Sbd box	128.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
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	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 5.45047812592E+02 Apriori delay (usec) 5.45052961516E+02 Resid mbdelay (usec) -5.14892E-03 +/- 1.1E-04
Sband delay (usec) 5.45047472016E+02 Apriori clock (usec) 1.8100965E+01 Resid sbdelay (usec) -5.48950E-03 +/- 1.8E-03
Phase delay (usec) 5.45052958026E+02 Apriori clockrate (us/s) -2.0000006E-08 Resid phdelay (usec) -3.48984E-06 +/- 3.8E-07
Delay rate (us/s) -1.78087305396E+00 Apriori rate (us/s) -1.78087360574E+00 Resid rate (us/s) 5.51779E-07 +/- 4.0E-09
Total phase (deg) -70.4 Apriori accel (us/s/s) -9.69536225054E-06 Resid phase (deg) -108.2 +/- 11.8

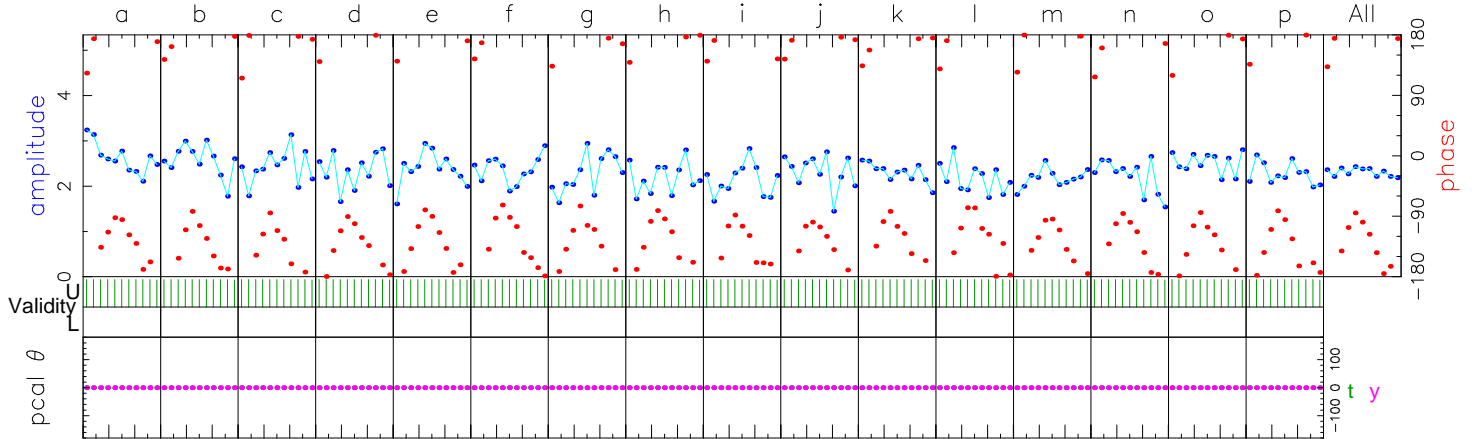
RMS Theor. Amplitude 0.280 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 72.0 20.4 Search (1024X64) 0.274 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 93.4 35.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 39.2 23.5 Inc. seg. avg. 0.428 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 50.6 41.0 Inc. frq. avg. 0.318 Data rate(Mb/s): 2048 nlags: 128 t_coherence infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 Y: az 70.1 el 38.2 pa -64.0 u,v (fr/asec) 12804.061 -1366.677 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tY..130KBL Output file: /Exps/c192c/v2/1234/No0011/tY.W.79.130KBL



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-147.4	-147.8	-152.2	-148.9	-137.9	-142.6	-145.8	-145.7	-148.8	-149.7	-148.8	-139.9	-144.5	-146.8	-149.0	-148.5	Phase	-146.6				
	1.9	2.0	1.8	1.9	1.8	1.7	1.7	1.6	1.6	1.8	1.6	1.5	1.7	1.5	1.8	1.8	Ampl.	1.7				
	128.7	128.5	128.3	128.7	128.5	128.3	128.4	128.1	128.6	128.6	128.6	128.5	128.7	128.3	128.3	128.7	Sbd box	128.5				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
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	PC phase					
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	Manl PC					
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-3.36161740049E+02							-3.36157859347E+02							Apriori delay (usec)	-3.36157859347E+02	Resid mbdelay (usec)	-3.88070E-03	+/-	1.7E-05
Sband delay (usec)			-3.36161738347E+02							-1.4599724E+00							Apriori clock (usec)	-1.4599724E+00	Resid sbdelay (usec)	-3.87900E-03	+/-	2.6E-04
Phase delay (usec)			-3.36157864074E+02							1.0000001E-07							Apriori clockrate (us/s)	1.0000001E-07	Resid phdelay (usec)	-4.72687E-06	+/-	5.7E-08
Delay rate (us/s)			-4.30906120076E-02							-4.30907552085E-02							Apriori rate (us/s)	-4.30907552085E-02	Resid rate (us/s)	1.43201E-07	+/-	5.4E-10
Total phase (deg)			-148.1							-2.36794484161E-06							Apriori accel (us/s/s)	-2.36794484161E-06	Resid phase (deg)	-146.6	+/-	1.8

RMS Theor. Amplitude 1.781 +/- 0.027

ph/seg (deg) 41.9 2.9 Search (1024X64) 1.676

amp/seg (%) 30.1 5.1 Interp. 0.000

ph/frq (deg) 3.9 3.5 Inc. seg. avg. 2.307

amp/frq (%) 7.8 6.1 Inc. frq. avg. 1.740

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5

PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011

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

t: az 293.0 el 40.6 pa 75.1 y: az 289.7 el 41.8 pa 69.5 u,v (fr/asec) 307.402 -571.647 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/ty..130KBL Output file: /Exps/c192c/v2/1234/No0011/ty.W.90.130KBL

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tY

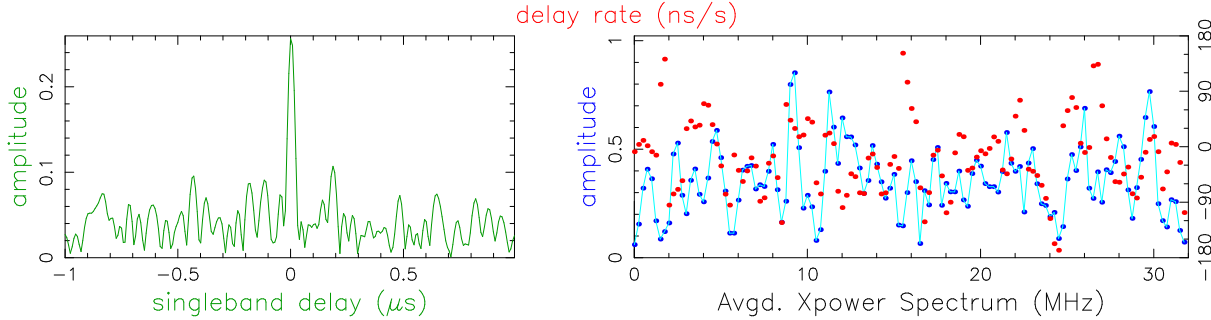
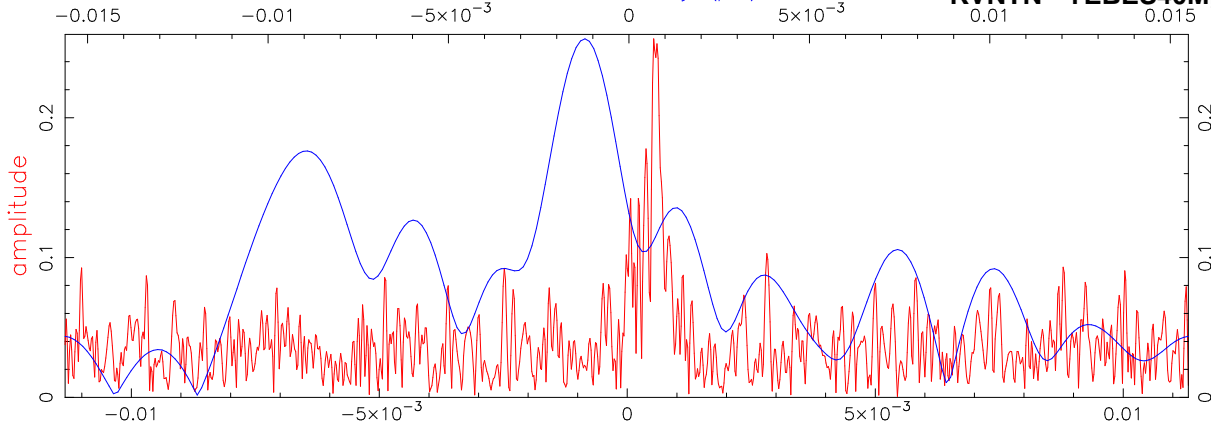
KVNTN - YEBES40M, fgroup W, pol RR

multiband delay (μ s)

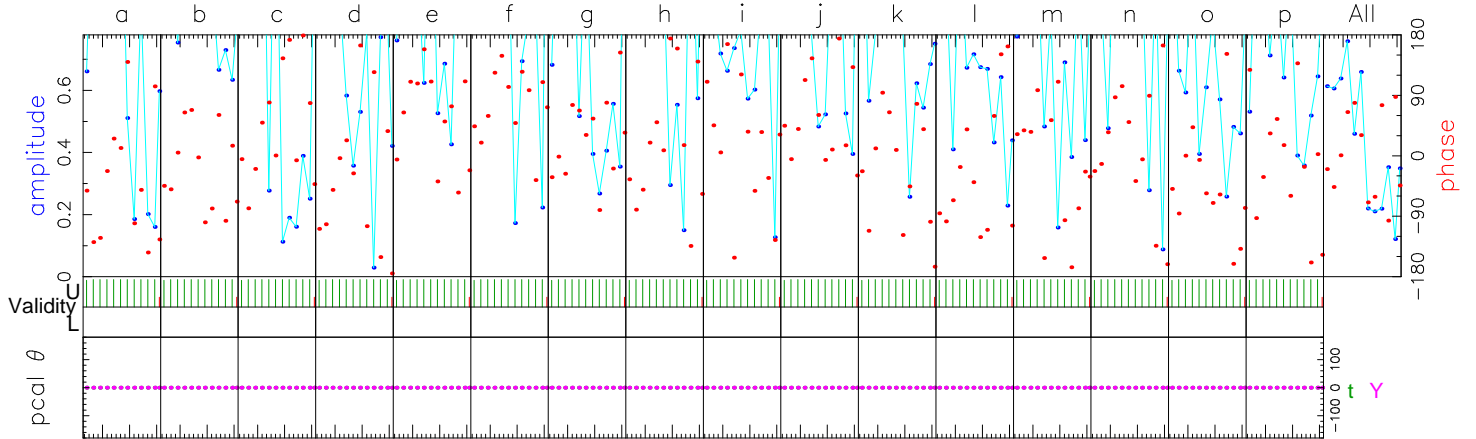
Fringe quality 9

SNR 9.0
 Int time 162.348
 Amp 0.260
 Phase 6.9
 PFD 3.1×10^{-11}
 Delays (us)
 SBD 0.002664
 MBD -0.001205
 Fringe rate (Hz)
 0.046713
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2020:076:014755
 Start 150016.89
 Stop 150259.71
 FRT 150130.00
 Corr/FF/build
 2020:076:014755
 2020:086:043728
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	130.0	130.3	128.5	128.2	129.2	128.0	129.0	188.5	13.2	128.1	164.2	28.9	230.1	127.7	130.4	155.9	Sbd box	129.3
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
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 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	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
t	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	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) 5.45051756186E+02 Apriori delay (usec) 5.45052961516E+02 Resid mbdelay (usec) -1.20533E-03 +/- 1.2E-04
 Sband delay (usec) 5.45055625516E+02 Apriori clock (usec) 1.8100965E+01 Resid sbdelay (usec) 2.66400E-03 +/- 1.9E-03
 Phase delay (usec) 5.45052961739E+02 Apriori clockrate (us/s) -2.0000006E-08 Resid phdelay (usec) 2.22790E-07 +/- 4.1E-07
 Delay rate (us/s) -1.78087306344E+00 Apriori rate (us/s) -1.78087360574E+00 Resid rate (us/s) 5.42295E-07 +/- 4.4E-09
 Total phase (deg) 44.7 Apriori accel (us/s/s) -9.69536225054E-06 Resid phase (deg) 6.9 +/- 12.7

RMS Theor. Amplitude 0.260 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 63.7 22.0 Search (1024X64) 0.250 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 106.9 38.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 51.5 25.4 Inc. seg. avg. 0.409 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 65.4 44.3 Inc. frq. avg. 0.349 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 Y: az 70.1 el 38.2 pa -64.0 u,v (fr/asec) 12804.061 -1366.677 simultaneous interpolator

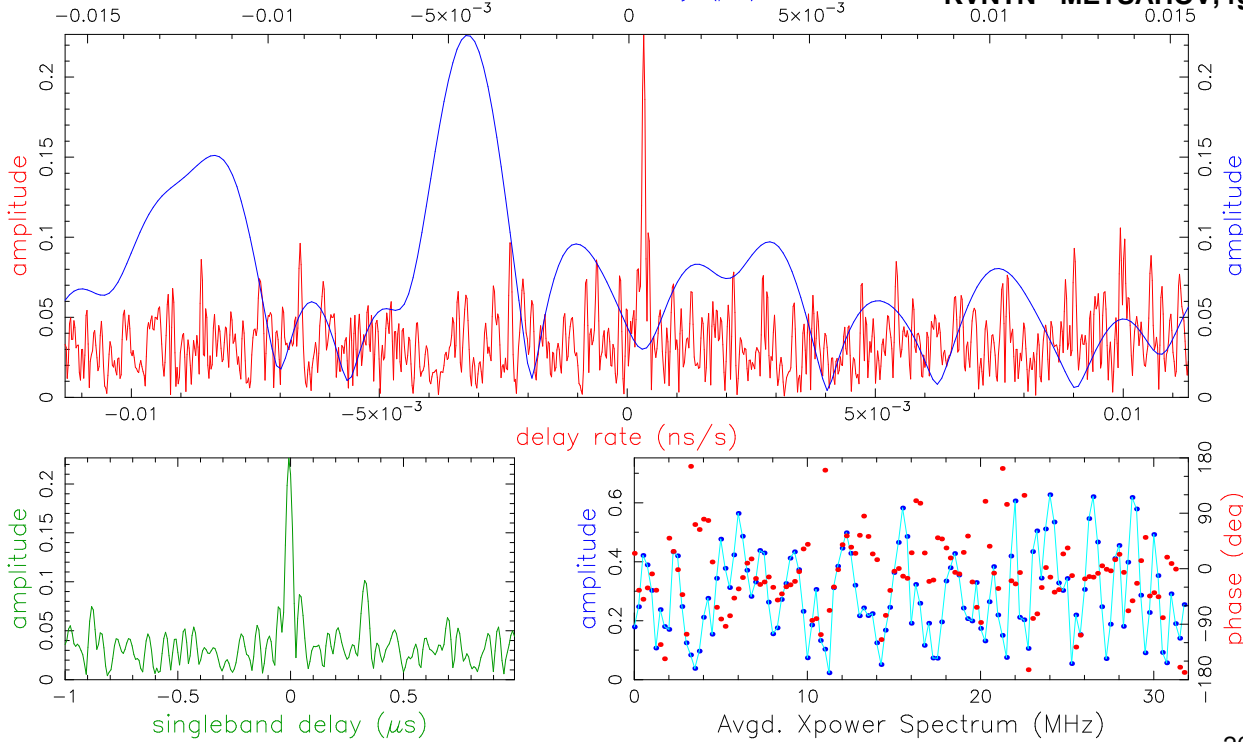
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tY..130KBL Output file: /Exps/c192c/v2/1234/No0011/tY.W.95.130KBL

multiband delay (μ s)

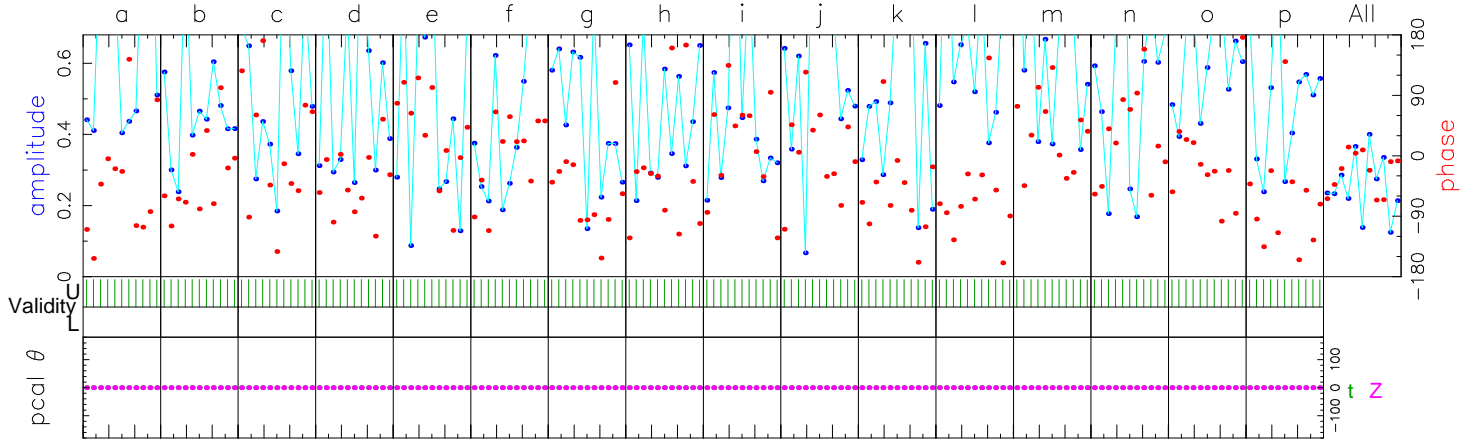
Fringe quality 9

SNR 8.3
Int time 179.730
Amp 0.227
Phase -26.7
PFD 1.7e-08
Delays (us)
SBD -0.006785
MBD -0.004463
Fringe rate (Hz)
0.028478
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043732
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



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



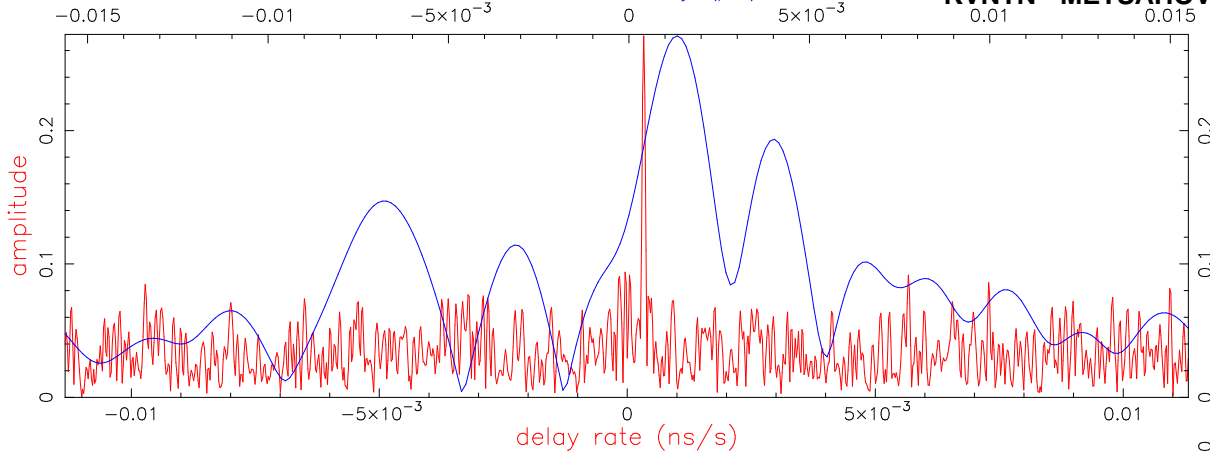
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-65.7	-43.8	7.4	-34.0	75.5	23.6	-55.9	-80.6	48.7	1.6	-61.7	-80.1	30.7	19.7	-28.3	-85.3	Phase	-26.7	
	0.4	0.3	0.1	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.3	0.4	0.3	Ampl.	0.3	
	129.1	146.7	21.6	128.5	208.9	92.1	127.2	129.6	104.5	127.7	148.3	128.8	128.6	129.1	128.8	86.6	Sbd box	128.1	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
t:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
t:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids		
																	Tracks		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
																	Tracks		
Group delay (usec)(sbd)				-3.80558552594E+03			Apriori delay (usec)			-3.80558106287E+03			Resid mbdelay (usec)			-4.46307E-03			+/- 1.3E-04
Sband delay (usec)				-3.80558784787E+03			Apriori clock (usec)			2.7593346E+01			Resid sbdelay (usec)			-6.78500E-03			+/- 2.1E-03
Phase delay (usec)				-3.80558106373E+03			Apriori clockrate (us/s)			1.8370719E-07			Resid phdelay (usec)			-8.59976E-07			+/- 4.4E-07
Delay rate (us/s)				-1.30823027777E+00			Apriori rate (us/s)			-1.30823060837E+00			Resid rate (us/s)			3.30602E-07			+/- 4.3E-09
Total phase (deg)				-298.7			Apriori accel (us/s/s)			-1.42858636408E-06			Resid phase (deg)			-26.7			+/- 13.8

RMS Theor. Amplitude 0.227 +/- 0.027
ph/seg (deg) 28.9 22.9 Search (1024X64) 0.224
amp/seg (%) 39.0 39.9 Interp. 0.000
ph/frq (deg) 52.9 27.6 Inc. seg. avg. 0.238
amp/frq (%) 58.4 48.1 Inc. frq. avg. 0.299

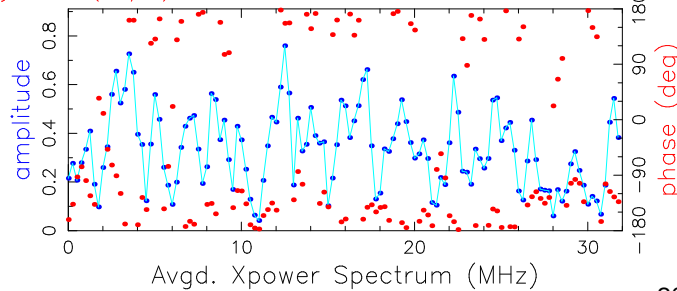
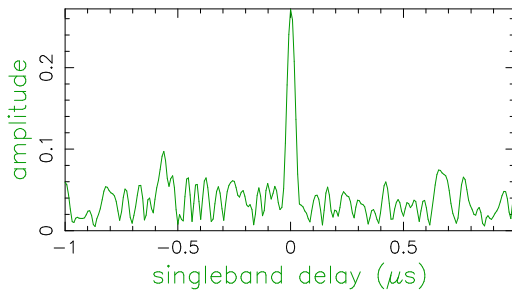
t: az 293.0 el 40.6 pa 75.1 Z: az 113.3 el 55.6 pa -34.9 u,v (fr/asec) 9406.833 -2393.717
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tZ..130KBL Output file: /Exps/c192c/v2/1234/No0011/tZ.W.121.130KBL
simultaneous interpolator

multiband delay (μ s)

Fringe quality 9

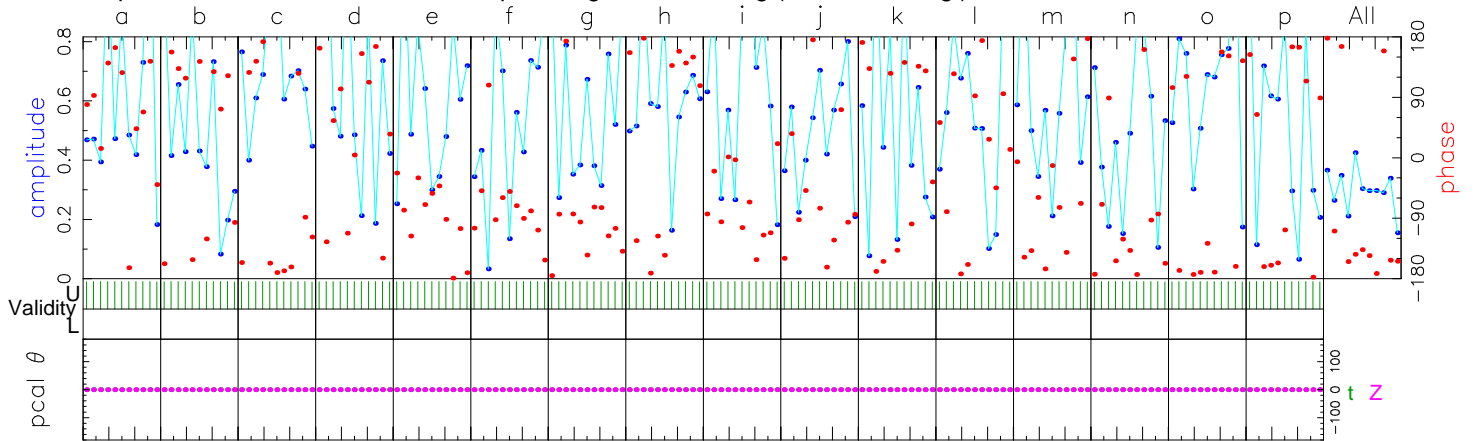


SNR 10.0
Int time 179.730
Amp 0.272
Phase -159.7
PFD 4.3e-15
Delays (us)
SBD 0.001667
MBD 0.001337
Fringe rate (Hz)
0.028776
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043734
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	118.9	170.2	-171.3	-177.6	-90.6	-91.1	-130.2	176.8	-78.1	-104.3	164.8	124.4	-140.8	-155.1	174.6	177.9	Phase	-159.7
t	0.4	0.4	0.6	0.2	0.4	0.5	0.5	0.5	0.4	0.2	0.4	0.2	0.3	0.4	0.5	0.4	Ampl.	0.4
Z	130.4	255.6	129.1	189.8	129.6	129.8	128.0	129.2	129.8	59.7	129.9	122.4	110.9	128.0	130.2	129.8	Sbd box	129.2
t	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
tZ	0:0	0:0	0:0	0:0	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	
tZ	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
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	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) -3.80557972547E+03 Apriori delay (usec) -3.80558106287E+03 Resid mbdelay (usec) 1.33740E-03 +/- 1.1E-04
Sband delay (usec) -3.80557939637E+03 Apriori clock (usec) 2.7593346E+01 Resid sbdelay (usec) 1.66650E-03 +/- 1.7E-03
Phase delay (usec) -3.80558106802E+03 Apriori clockrate (us/s) 1.8370719E-07 Resid phdelay (usec) -5.15138E-06 +/- 3.7E-07
Delay rate (us/s) -1.30823027431E+00 Apriori rate (us/s) -1.30823060837E+00 Resid rate (us/s) 3.34057E-07 +/- 3.6E-09
Total phase (deg) -71.8 Apriori accel (us/s/s) -1.42858636408E-06 Resid phase (deg) -159.7 +/- 11.5

RMS Theor. Amplitude 0.272 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 25.7 19.1 Search (1024X64) 0.266 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 27.7 33.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 51.5 23.0 Inc. seg. avg. 0.284 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 57.7 40.1 Inc. frq. avg. 0.359 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 Z: az 113.3 el 55.6 pa -34.9 u,v (fr/asec) 9406.833 -2393.717 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tZ..130KBL Output file: /Exps/c192c/v2/1234/No0011/tZ.W.136.130KBL

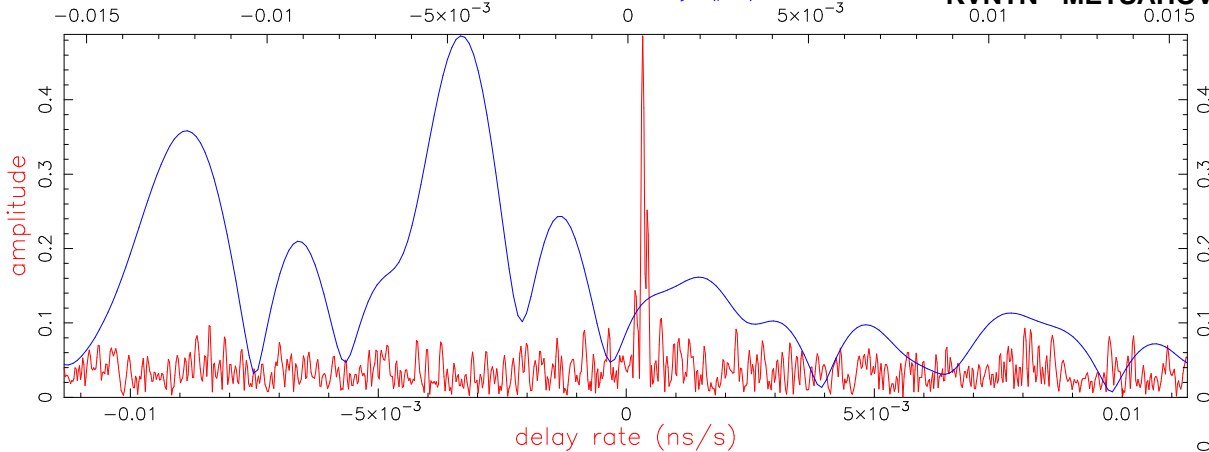
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KBL, No0011, tZ

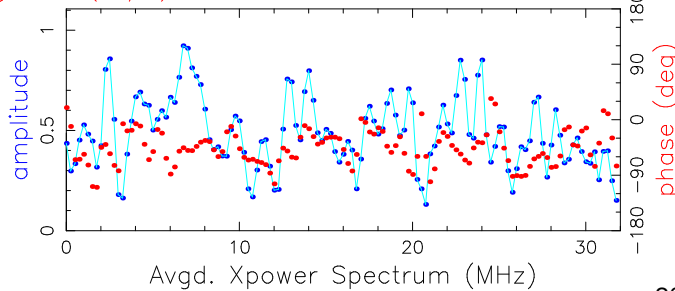
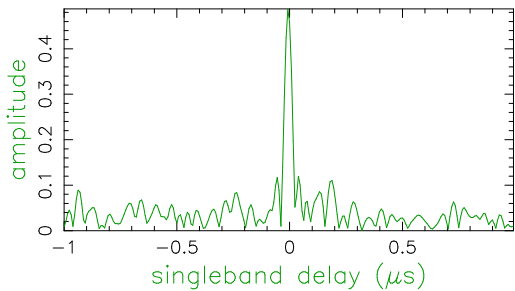
KVNTN - METSAHOV, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 8

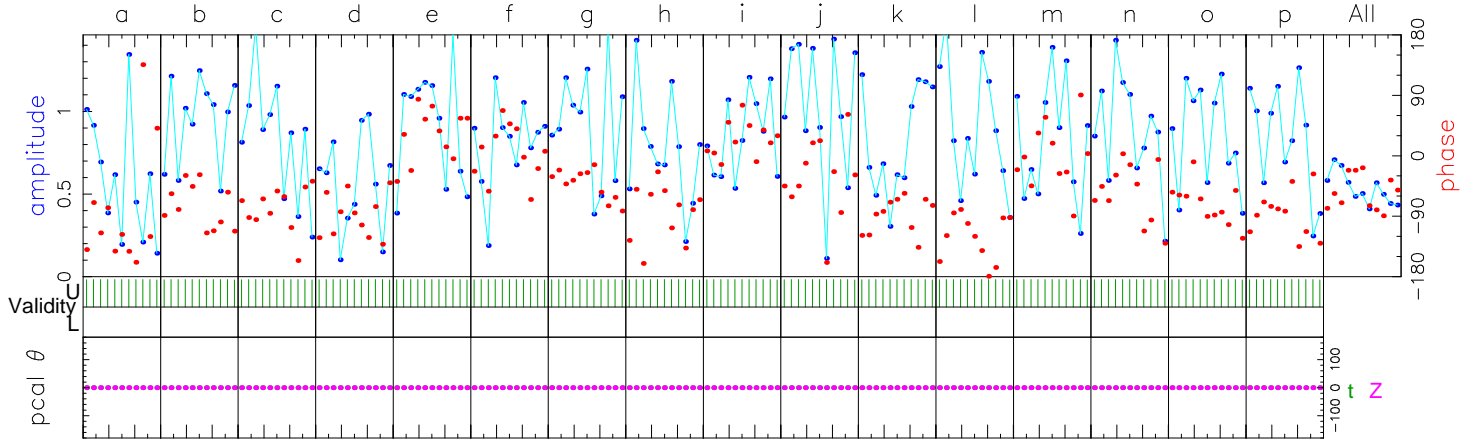


SNR 17.9
Int time 179.730
Amp 0.488
Phase -55.1
PFD 0.0e+00
Delays (us)
SBD -0.006264
MBD -0.004603
Fringe rate (Hz)
0.028261
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043726
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	-125.1	-72.2	-77.8	-92.3	34.6	9.5	-44.5	-78.1	26.2	-26.2	-92.9	-129.2	-3.6	-43.3	-67.7	-91.9	Phase	-55.1
t	0.5	0.8	0.8	0.5	0.7	0.7	0.9	0.6	0.8	0.8	0.7	0.8	0.7	0.7	0.8	0.7	Ampl.	0.7
Z	129.5	128.8	128.8	128.6	128.5	128.5	127.7	126.9	128.0	128.1	127.9	128.6	127.7	128.2	127.6	128.1	Sbd box	128.2
tZ	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
tZ	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
tZ	0:0	0:0	0:0	0:0	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	
tZ	0:0	0:0	0:0	0:0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) -3.80558566597E+03 Apriori delay (usec) -3.80558106287E+03 Resid mbdelay (usec) -4.60310E-03 +/- 6.0E-05
Sband delay (usec) -3.80558732687E+03 Apriori clock (usec) 2.7593346E+01 Resid sbdelay (usec) -6.26400E-03 +/- 9.6E-04
Phase delay (usec) -3.80558106465E+03 Apriori clockrate (us/s) 1.8370719E-07 Resid phdelay (usec) -1.77777E-06 +/- 2.1E-07
Delay rate (us/s) -1.30823028029E+00 Apriori rate (us/s) -1.30823060837E+00 Resid rate (us/s) 3.28078E-07 +/- 2.0E-09
Total phase (deg) -327.2 Apriori accel (us/s/s) -1.42858636408E-06 Resid phase (deg) -55.1 +/- 6.4

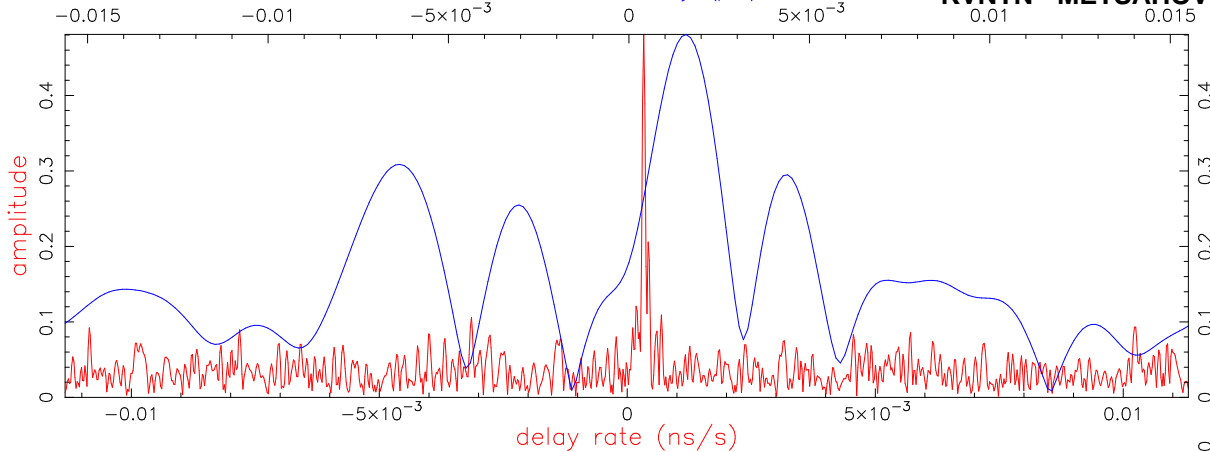
RMS Theor. Amplitude 0.488 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 25.1 10.6 Search (1024X64) 0.468 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 21.1 18.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 52.5 12.8 Inc. seg. avg. 0.526 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 50.4 22.4 Inc. frq. avg. 0.693 Data rate(Mb/s): 2048 nlags: 128 t_coherence infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 Z: az 113.3 el 55.6 pa -34.9 u,v (fr/asec) 9406.833 -2393.717 simultaneous interpolator

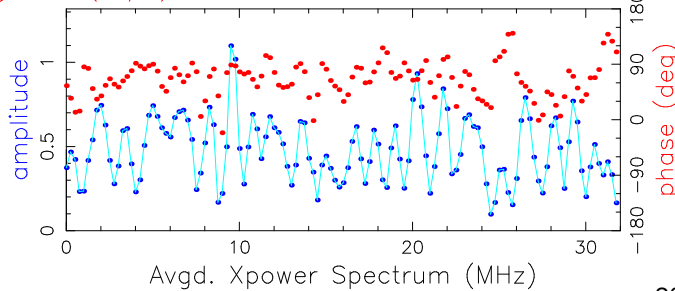
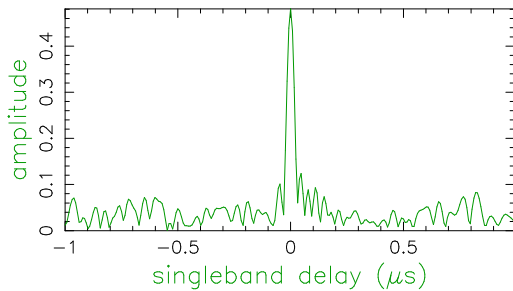
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tZ..130KBL Output file: /Exps/c192c/v2/1234/No0011/tZ.W.78.130KBL

multiband delay (μ s)

Fringe quality 9

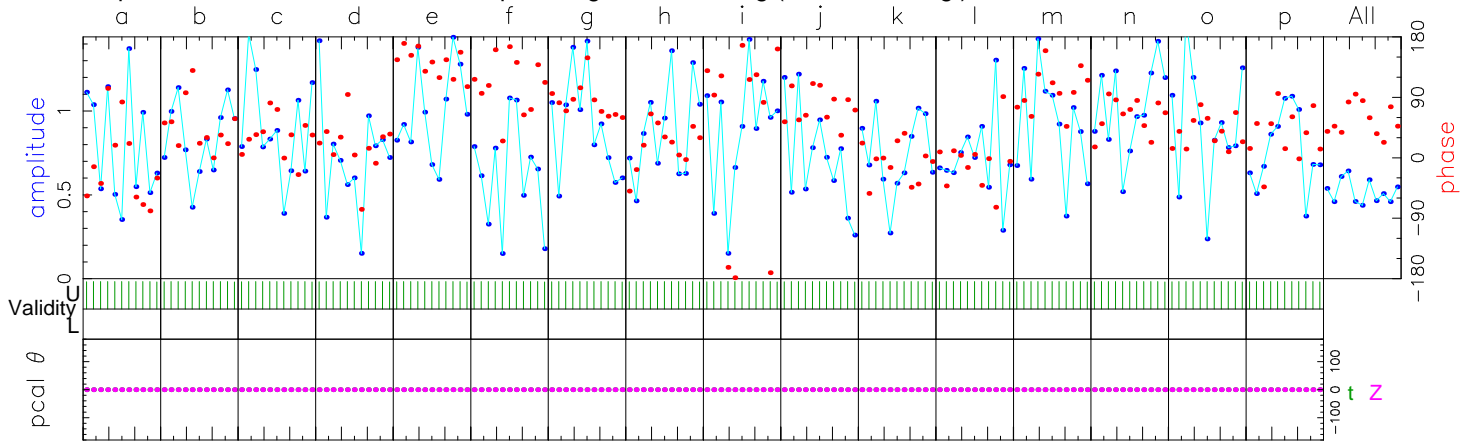


SNR 17.6
Int time 179.730
Amp 0.481
Phase 56.6
PFD 0.0e+00
Delays (us)
SBD -0.000252
MBD 0.001574
Fringe rate (Hz)
0.027956
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:076:014755
2020:086:043728
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	Phase	56.6
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	0.7
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	129.0
tZ	0:0	0:0	0:0	0:0	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	
tZ	0:0	0:0	0:0	0:0	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	PC phase	
t	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
t	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	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd) -3.80557948875E+03 Apriori delay (usec) -3.80558106287E+03 Resid mbdelay (usec) 1.57412E-03 +/- 6.1E-05
Sband delay (usec) -3.80558131487E+03 Apriori clock (usec) 2.7593346E+01 Resid sbdelay (usec) -2.52000E-04 +/- 9.8E-04
Phase delay (usec) -3.80558106105E+03 Apriori clockrate (us/s) 1.8370719E-07 Resid phdelay (usec) 1.82386E-06 +/- 2.1E-07
Delay rate (us/s) -1.30823028383E+00 Apriori rate (us/s) -1.30823060837E+00 Resid rate (us/s) 3.24539E-07 +/- 2.0E-09
Total phase (deg) -215.5 Apriori accel (us/s/s) -1.42858636408E-06 Resid phase (deg) 56.6 +/- 6.5

RMS Theor. Amplitude 0.481 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 22.8 10.8 Search (1024X64) 0.466 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 16.2 18.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 54.2 13.0 Inc. seg. avg. 0.511 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 56.5 22.7 Inc. frq. avg. 0.700 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 293.0 el 40.6 pa 75.1 Z: az 113.3 el 55.6 pa -34.9 u,v (fr/asec) 9406.833 -2393.717 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0011/tZ..130KBL Output file: /Exps/c192c/v2/1234/No0011/tZ.W.94.130KBL