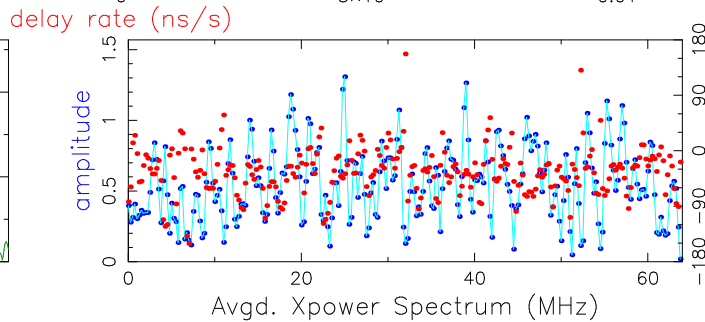
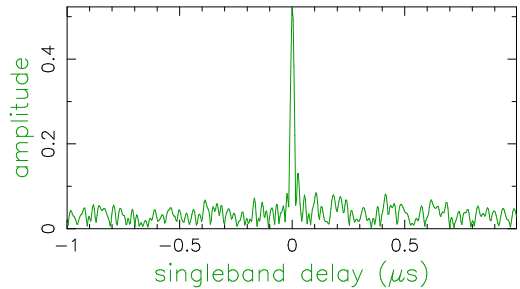


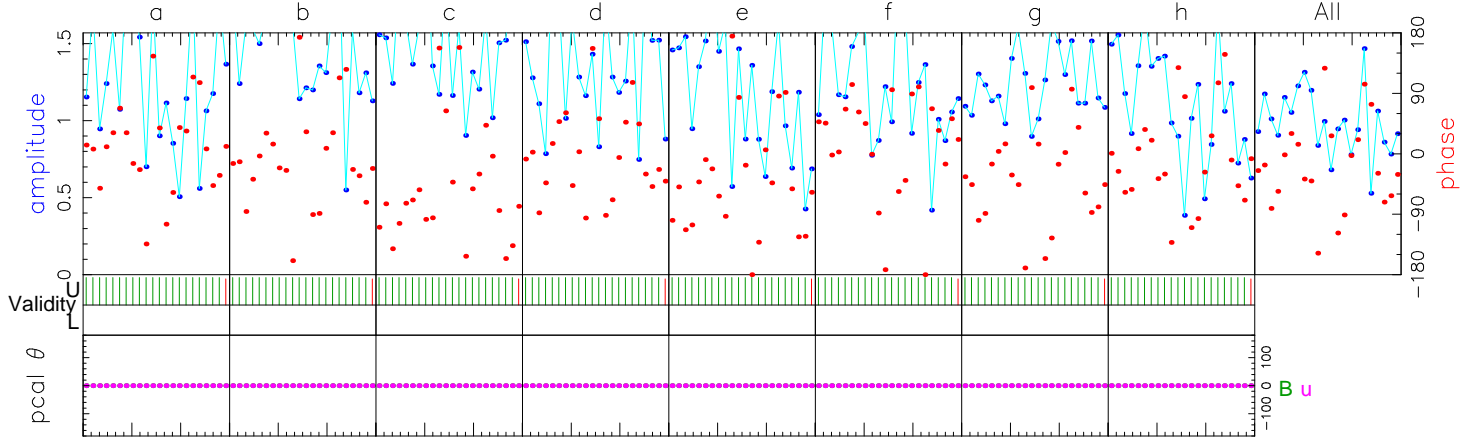
Fringe quality 8

SNR 19.2
Int time 179.778
Amp 0.523
Phase -24.2
PFD 0.0e+00
Delays (us)
SBD 0.000812
MBD -0.000061
Fringe rate (Hz)
-0.018320
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
2020:069:185016
2020:071:121819
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

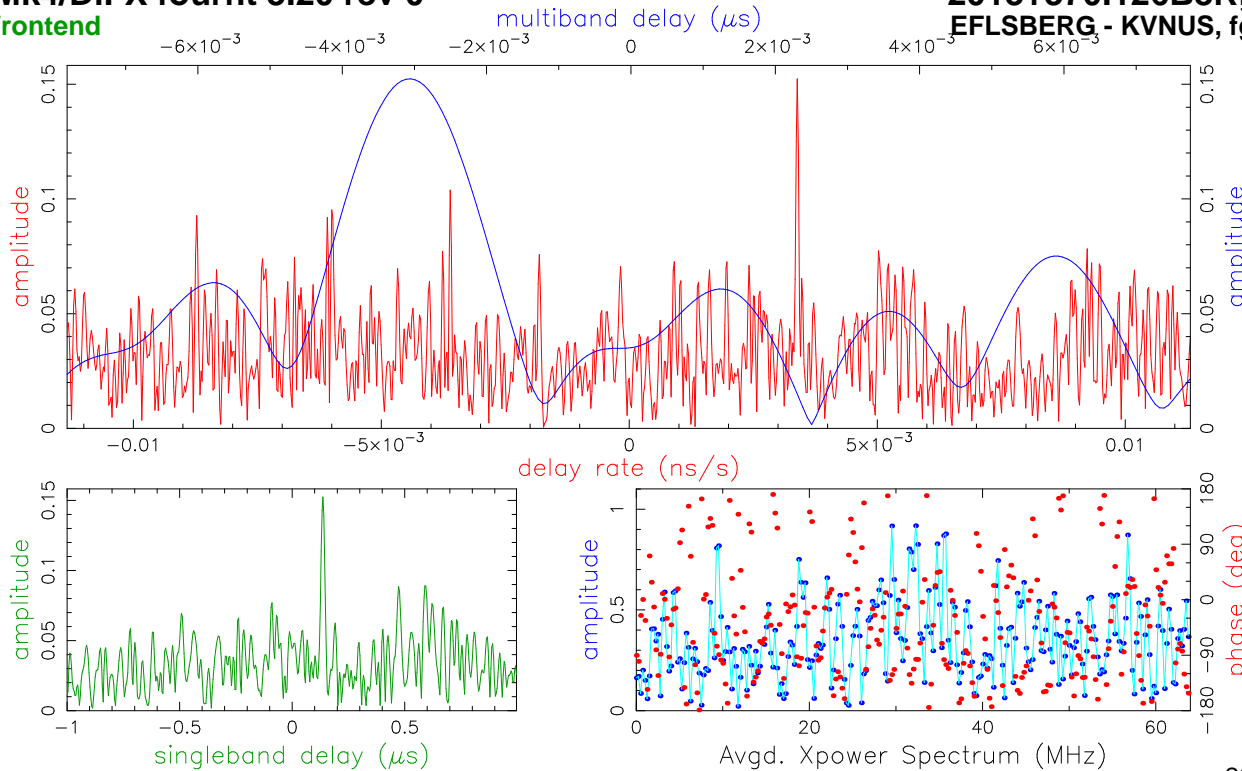


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
B:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	2.28278978567E+03									
Sband delay (usec)	2.28279065786E+03									
Phase delay (usec)	2.28278984558E+03									
Delay rate (us/s)	1.57421358793E+00									
Total phase (deg)			107.4							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
RMS	66.1	14.0								
ph/seg (deg)	66.1	14.0								
amp/seg (%)	97.6	24.4								
ph/frq (deg)	43.8	8.4								
amp/frq (%)	33.1	14.7								
Amplitude										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.523 +/- 0.027										
0.498										
0.000										
0.961										
0.652										
2.28278984636E+03										
8.2928257E+00										
-5.999998E-07										
1.57421380060E+00										
9.28960566430E-07										
-6.06840E-05										
8.11500E-04										
-7.79433E-07										
-2.12674E-07										
-24.2										
+/- 5.7E-05										
+/- 4.5E-04										
+/- 1.9E-07										
+/- 1.9E-09										
+/- 6.0										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
-1.000										
1.000										
-0.008										
0.008										
-0.011										
0.011										
0.00										
0.00										

Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, Bu
EFLSBERG - KVNUS, fgroup W, pol LR

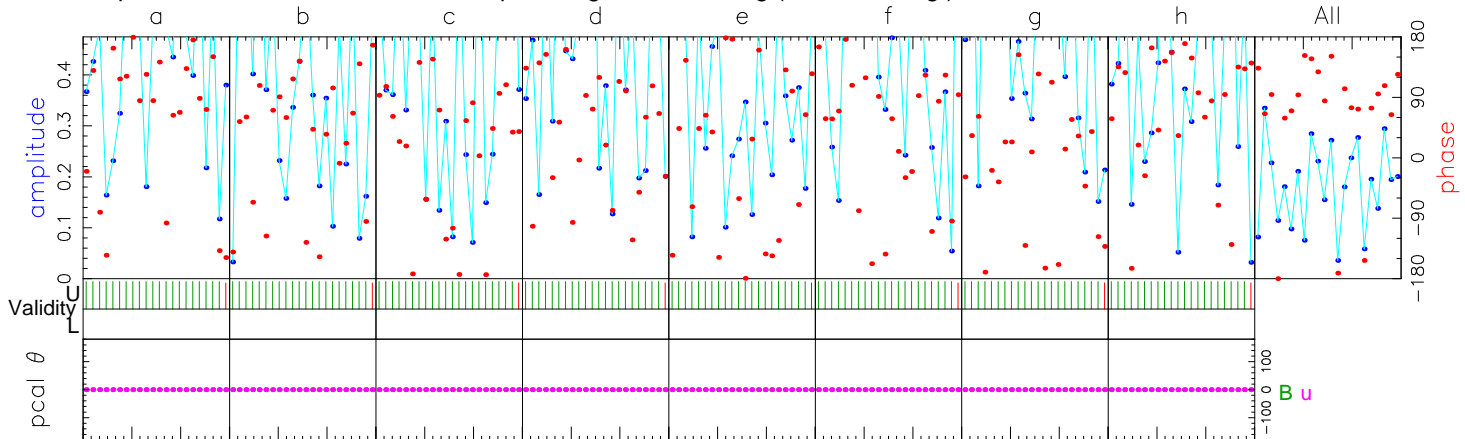


Fringe quality 0

SNR 5.6
Int time 179.778
Amp 0.158
Phase 101.3
PFD 9.4e-01
Delays (us)
SBD 0.136389
MBD -0.003070
Fringe rate (Hz)
0.292434
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
2020:069:185016
2020:071:121821
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

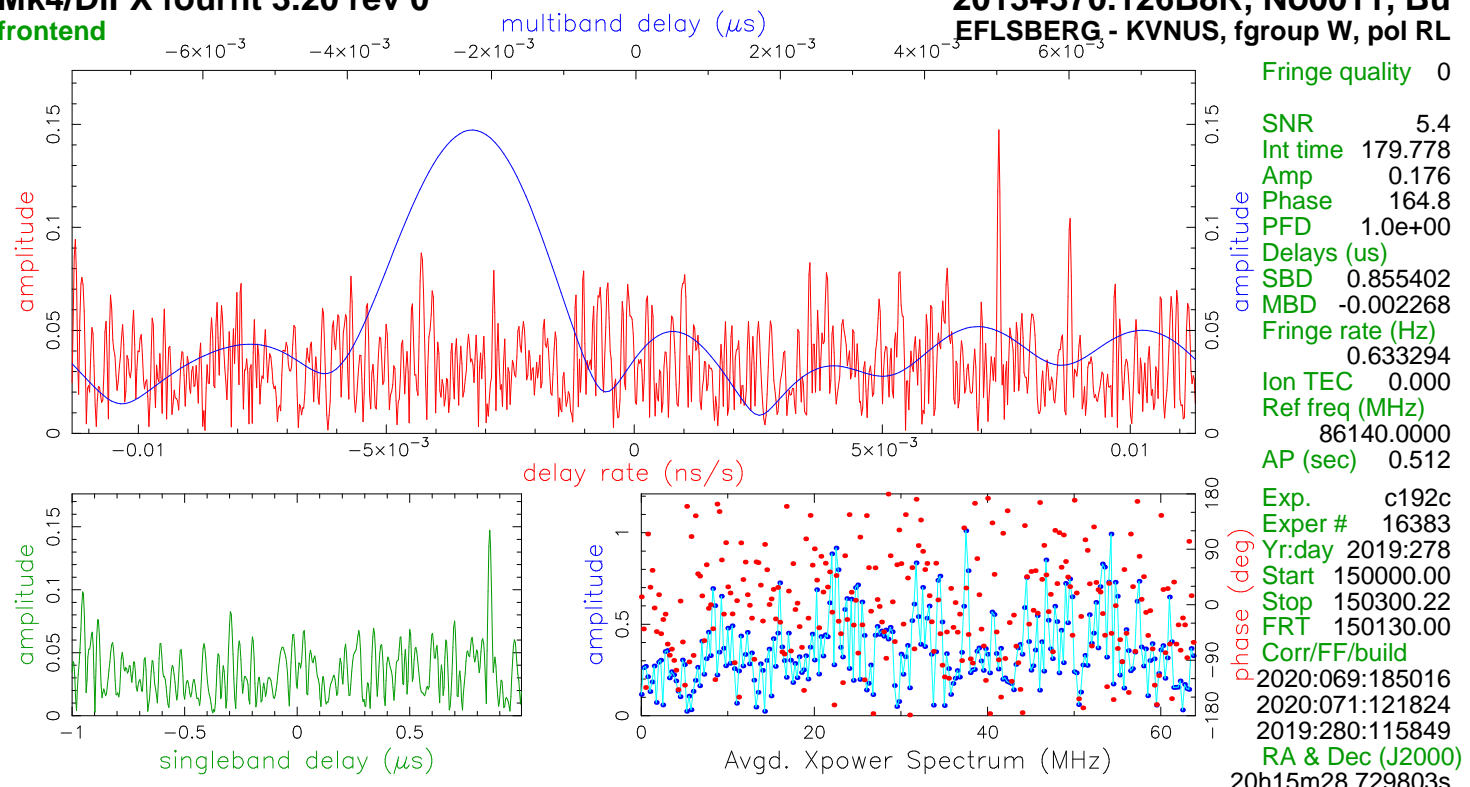


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	124.5	78.2	81.8	88.9	160.4	109.3	42.2	118.1	Phase	101.3
B	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	Ampl.	0.2
u	293.0	410.5	377.9	245.9	138.8	30.6	366.4	290.8	Sbd box	291.9
B	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

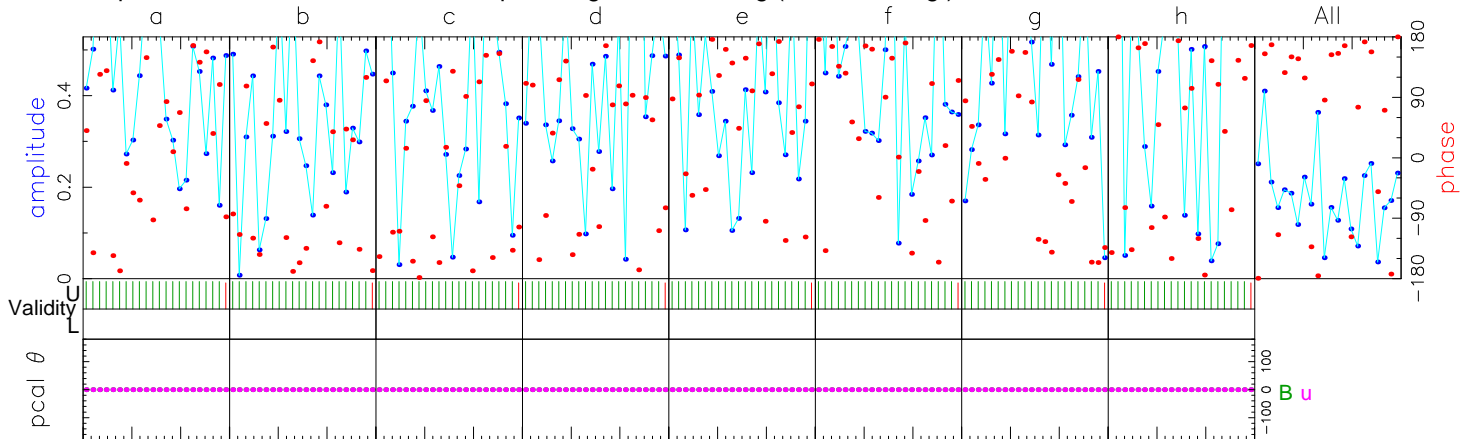
Group delay (usec)(sbd) 2.28292740177E+03 Apriori delay (usec) 2.28278984636E+03 Resid mbdelay (usec) -3.06959E-03 +/- 1.9E-04
 Sband delay (usec) 2.28292623511E+03 Apriori clock (usec) 8.2928257E+00 Resid sbdelay (usec) 1.36389E-01 +/- 1.5E-03
 Phase delay (usec) 2.28278984962E+03 Apriori clockrate (us/s) -5.9999998E-07 Resid phdelay (usec) 3.26509E-06 +/- 6.6E-07
 Delay rate (us/s) 1.57421719547E+00 Apriori rate (us/s) 1.57421380060E+00 Resid rate (us/s) 3.39487E-06 +/- 6.4E-09
 Total phase (deg) 232.8 Apriori accel (us/s/s) 9.28960566430E-07 Resid phase (deg) 101.3 +/- 20.5

RMS Theor. Amplitude 0.158 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 44.1 48.1 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 57.4 83.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 38.6 29.0 Inc. seg. avg. 0.142 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 31.8 50.6 Inc. frq. avg. 0.159 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 84.9 el 47.2 pa -52.7 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) -11322.629 1467.515 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/Bu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/Bu.W.53.126B8R



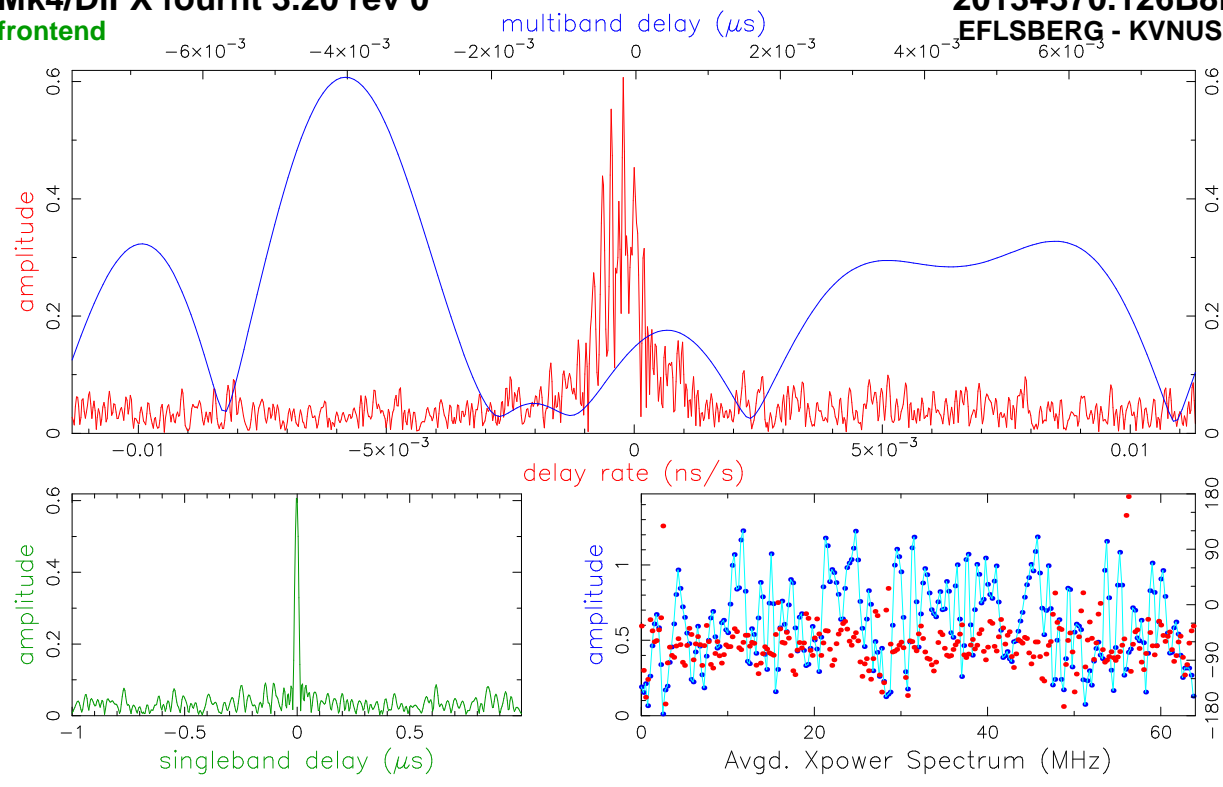
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
146.3	-166.8	-178.0	153.1	131.6	155.4	162.7	178.8	Phase	164.8
0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.3	Ampl.	0.2
319.8	167.2	180.9	437.5	216.1	434.0	170.8	476.2	Sbd box	476.0
U/L 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	PC freqs	
u 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:u 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:u 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B 1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u 1000	1000	1000	1000	1000	1000	1000	1000		
B W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
								Chan ids	
								Tracks	

Group delay (usec)(sbd)	2.28364695356E+03	Apriori delay (usec)	2.28278984636E+03	Resid mbdelay (usec)	-2.26780E-03	+/-	2.0E-04
Sband delay (usec)	2.28364524811E+03	Apriori clock (usec)	8.2928257E+00	Resid sbdelay (usec)	8.55402E-01	+/-	1.6E-03
Phase delay (usec)	2.28278985167E+03	Apriori clockrate (us/s)	-5.9999998E-07	Resid phdelay (usec)	5.31292E-06	+/-	6.8E-07
Delay rate (us/s)	1.57422115252E+00	Apriori rate (us/s)	1.57421380060E+00	Resid rate (us/s)	7.35192E-06	+/-	6.6E-09
Total phase (deg)	296.3	Apriori accel (us/s/s)	9.28960566430E-07	Resid phase (deg)	164.8	+/-	21.2

ph/seg (deg)	55.0	Theor.	49.8	Amplitude	0.176 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	65.0		86.9	Search (1024X32)	0.147	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	22.3		30.0	Inc. seg. avg.	0.161	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	44.0		52.4	Inc. frq. avg.	0.164	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

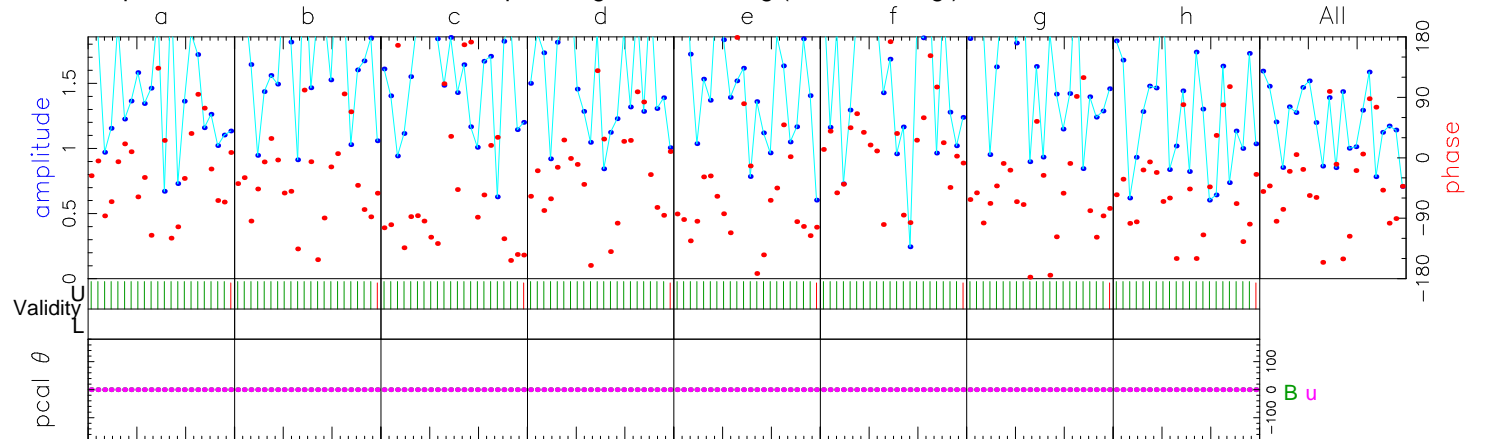


Fringe quality 8

SNR 22.7
Int time 179.778
Amp 0.619
Phase -45.5
PFD 0.0e+00
Delays (us)
SBD -0.002052
MBD -0.003978
Fringe rate (Hz)
-0.018333
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
2020:069:185016
2020:071:121816
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

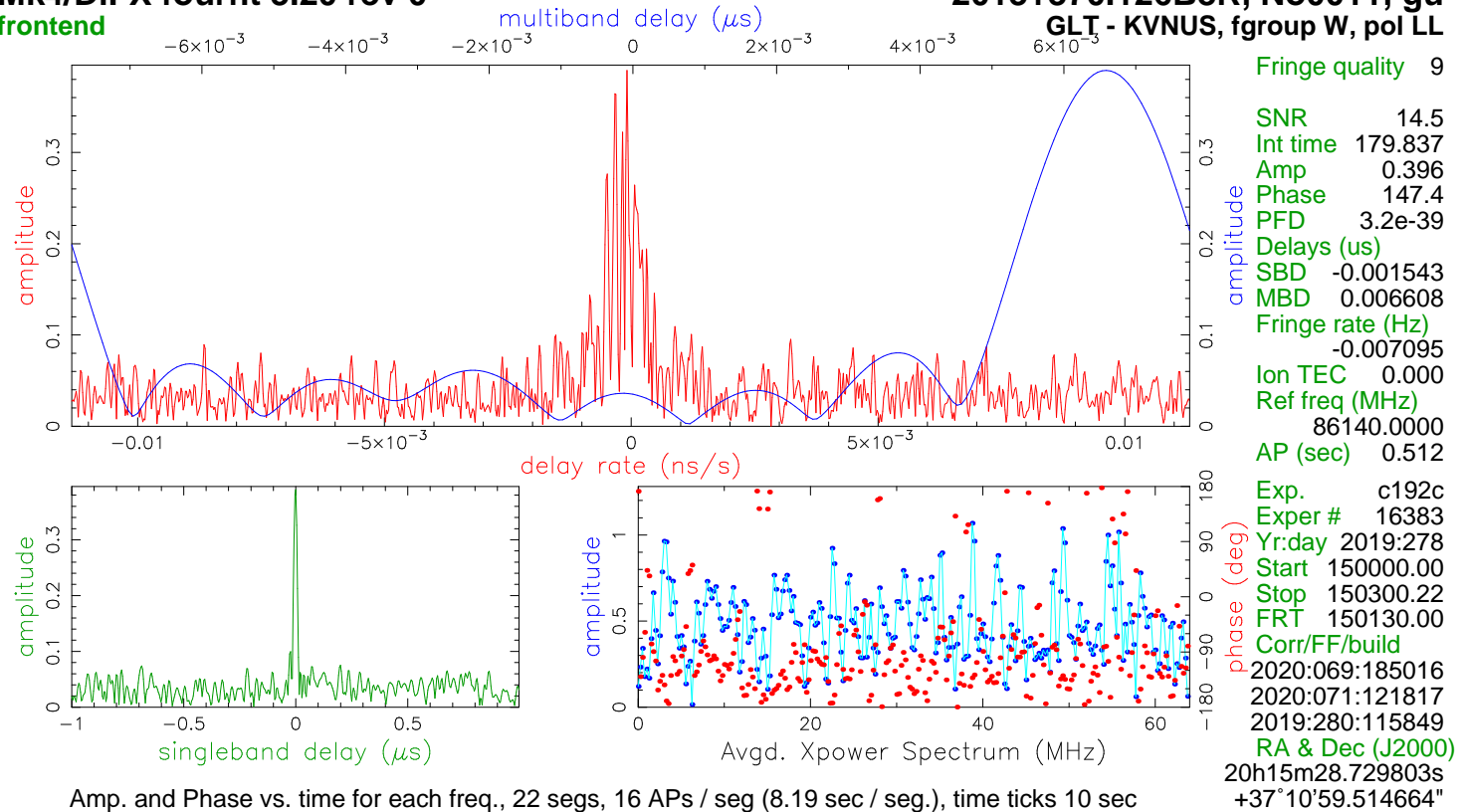


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-22.1	-35.1	-112.4	-15.3	-82.5	21.2	-59.2	-57.4	Phase	-45.5
	0.7	0.9	0.8	0.7	0.9	0.8	0.8	0.6	Ampl.	0.8
	255.1	256.5	257.5	257.1	257.0	257.2	256.9	255.7	Sbd box	256.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.28278586855E+03		Apriori delay (usec)		2.28278984636E+03		Resid mbdelay (usec)		-3.97781E-03	+/- 4.8E-05
Sband delay (usec)	2.28278779436E+03		Apriori clock (usec)		8.2928257E+00		Resid sbdelay (usec)		-2.05200E-03	+/- 3.8E-04
Phase delay (usec)	2.28278984489E+03		Apriori clockrate (us/s)		-5.9999998E-07		Resid phdelay (usec)		-1.46743E-06	+/- 1.6E-07
Delay rate (us/s)	1.57421358778E+00		Apriori rate (us/s)		1.57421380060E+00		Resid rate (us/s)		-2.12824E-07	+/- 1.6E-09
Total phase (deg)	86.0		Apriori accel (us/s/s)		9.28960566430E-07		Resid phase (deg)		-45.5	+/- 5.0

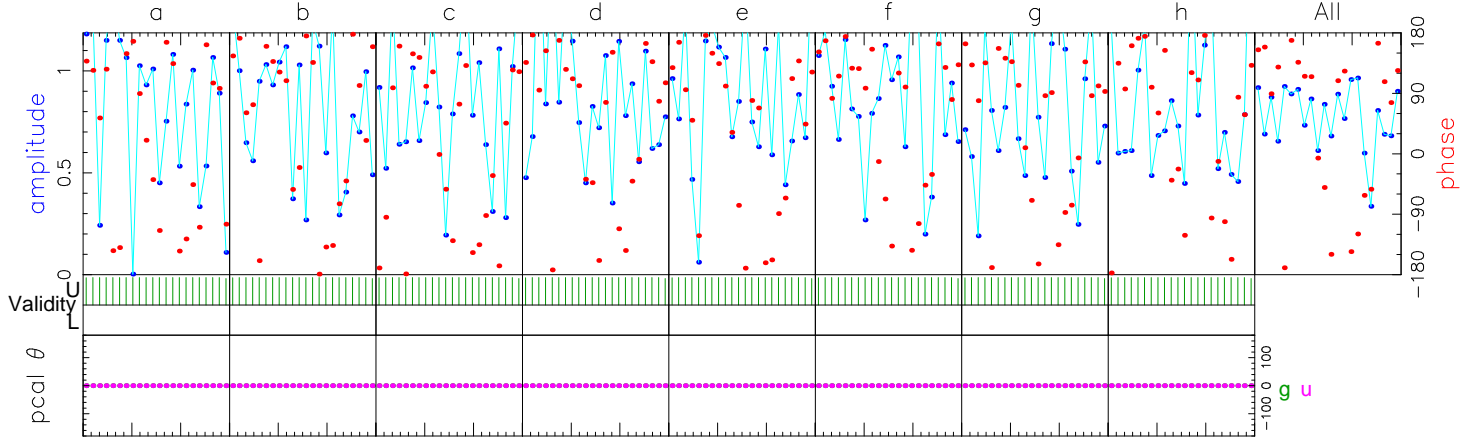
ph/seg (deg) RMS Theor. Amplitude 0.619 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 67.0 11.8 Search (1024X32) 0.582 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 102.4 20.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 45.1 7.1 Inc. seg. avg. 1.171 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 29.4 12.5 Inc. frq. avg. 0.771 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 84.9 el 47.2 pa -52.7 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) -11322.629 1467.515 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/Bu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/Bu.W.8.126B8R

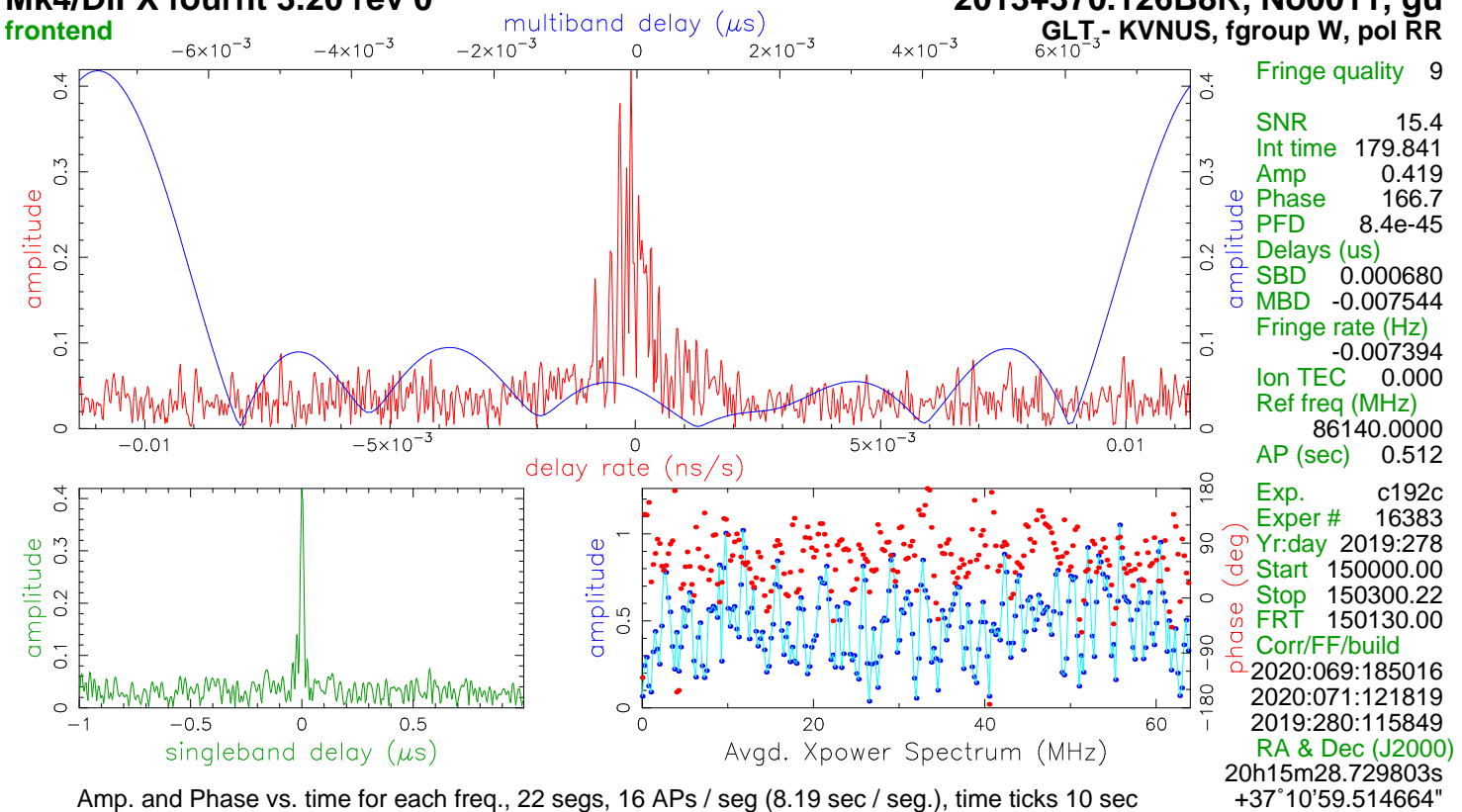


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

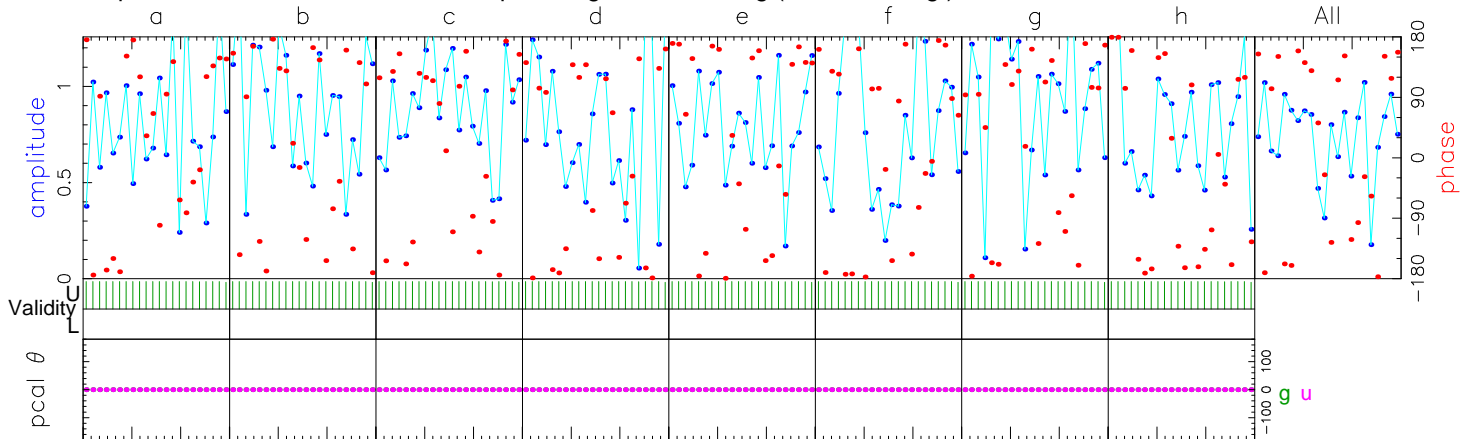


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
153.5	151.1	148.0	141.5	138.1	155.4	143.0	150.3	150.3	Phase	147.4
0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	Ampl.	0.4
256.7	256.3	256.9	256.1	256.5	256.8	256.6	256.7	256.7	Sbd box	256.6
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
g 0	0	0	0	0	0	0	0	0	PC freqs	
u 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:u 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:u 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	PC amp	
u 1000	1000	1000	1000	1000	1000	1000	1000	1000		
g W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids	
u W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.61326581149E+03		Apriori delay (usec)	-3.61325679420E+03	Resid mbdelay (usec)	6.60771E-03	+/-	7.5E-05		
Sband delay (usec)	-3.61325833770E+03		Apriori clock (usec)	-7.2120943E+00	Resid sbdelay (usec)	-1.54350E-03	+/-	5.9E-04		
Phase delay (usec)	-3.61325678944E+03		Apriori clockrate (us/s)	-3.2499998E-07	Resid phdelay (usec)	4.75414E-06	+/-	2.5E-07		
Delay rate (us/s)	1.11821869902E+00		Apriori rate (us/s)	1.11821878138E+00	Resid rate (us/s)	-8.23670E-08	+/-	2.4E-09		
Total phase (deg)		56.7	Apriori accel (us/s/s)	4.59465932236E-05	Resid phase (deg)	147.4	+/-	7.9		

ph/seg (deg) 78.0 18.5 Search (1024X32) 0.374 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 104.2 32.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 6.6 11.2 Inc. seg. avg. 0.741 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 10.4 19.5 Inc. frq. avg. 0.384 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
g: az 40.4 el 27.4 pa -11.0 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) -8005.073 5556.637 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/gu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/gu.W.14.126B8R

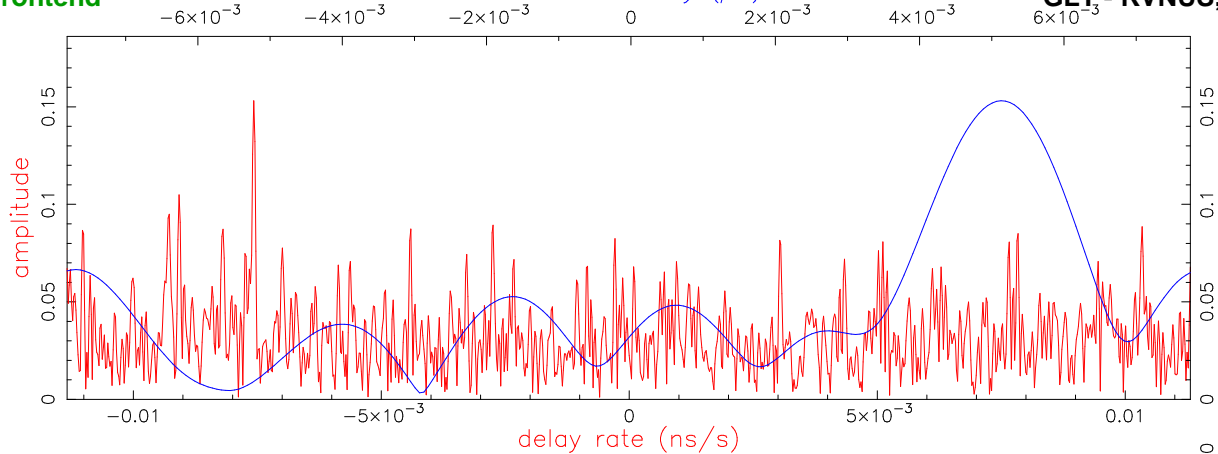


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



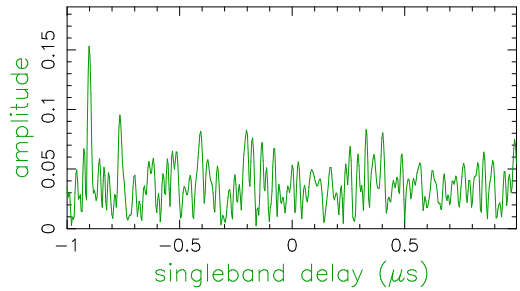
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
162.5	178.3	154.6	169.0	169.3	166.5	162.3	168.5	168.5	Phase	166.7		
0.3	0.5	0.4	0.5	0.4	0.4	0.5	0.4	0.4	Ampl.	0.4		
257.0	257.4	257.5	256.9	257.0	257.6	256.7	256.7	257.5	Sbd box	257.2		
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
g 0	0	0	0	0	0	0	0	0	PC freqs			
u 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
g:u 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
g:u 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
g 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
u 1000	1000	1000	1000	1000	1000	1000	1000	1000				
g W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids			
u W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-3.61324871296E+03		Apriori delay (usec)	-3.61325679420E+03		Resid mbdelay (usec)	-7.54376E-03		+/-	7.1E-05		
Sband delay (usec)	-3.61325611445E+03		Apriori clock (usec)	-7.2120943E+00		Resid sbdelay (usec)	6.79750E-04		+/-	5.6E-04		
Phase delay (usec)	-3.61325678882E+03		Apriori clockrate (us/s)	-3.2499998E-07		Resid phdelay (usec)	5.37567E-06		+/-	2.4E-07		
Delay rate (us/s)	1.11821869555E+00		Apriori rate (us/s)	1.11821878138E+00		Resid rate (us/s)	-8.58389E-08		+/-	2.3E-09		
Total phase (deg)		76.0	Apriori accel (us/s/s)	4.59465932236E-05		Resid phase (deg)	166.7		+/-	7.5		
RMS	74.4	17.5	Amplitude	0.419 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	74.4	17.5	Search (1024X32)	0.407		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	92.3	30.5	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	7.5	10.5	Inc. seg. avg.	0.710		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011	0.011	
amp/frq (%)	11.1	18.4	Inc. frq. avg.	0.414		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
g: az 40.4 el 27.4 pa -11.0			u: az 292.1 el 39.3 pa 71.1			u,v (fr/asec) -8005.073 5556.637						simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c192c/v1_CygA2/1234/No0011/gu..126B8R			Output file: /Exps/c192c/v1_CygA2/1234/No0011/gu.W.34.126B8R						

multiband delay (μs)

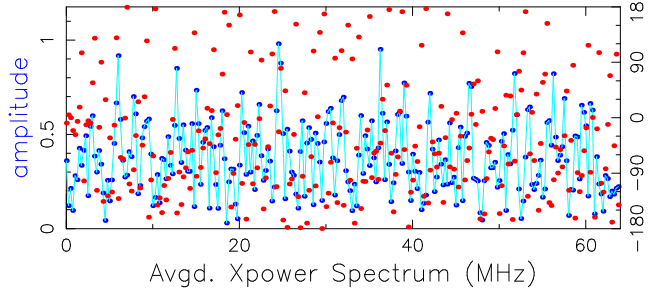


Fringe quality 0

SNR 5.6
 Int time 179.837
 Amp 0.186
 Phase -78.1
 PFD 8.7e-01
 Delays (us)
 SBD -0.901520
 MBD 0.005137
 Fringe rate (Hz)
 -0.652395
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

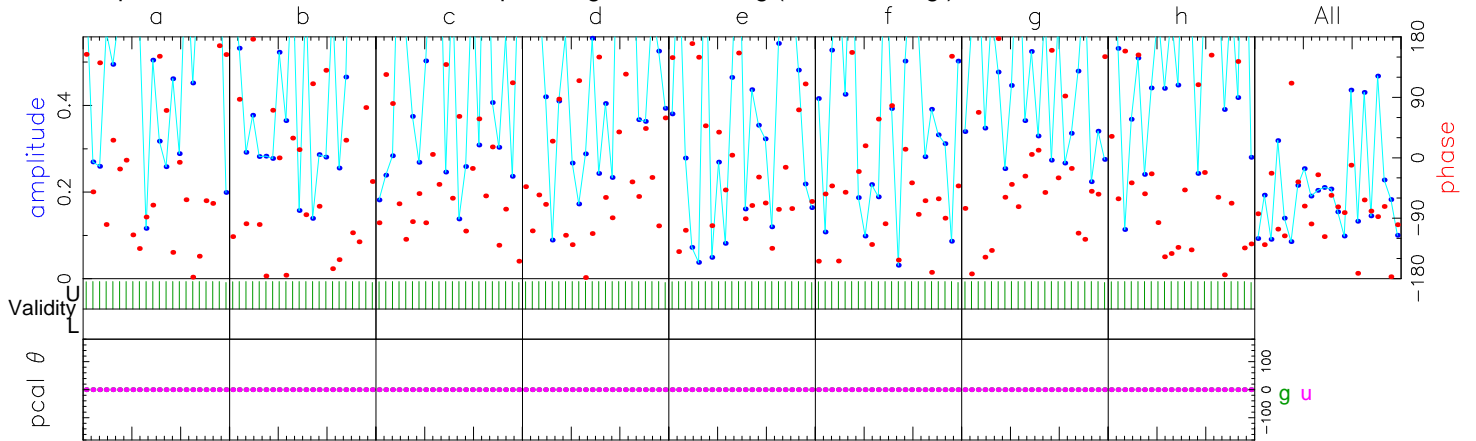


delay rate (ns/s)



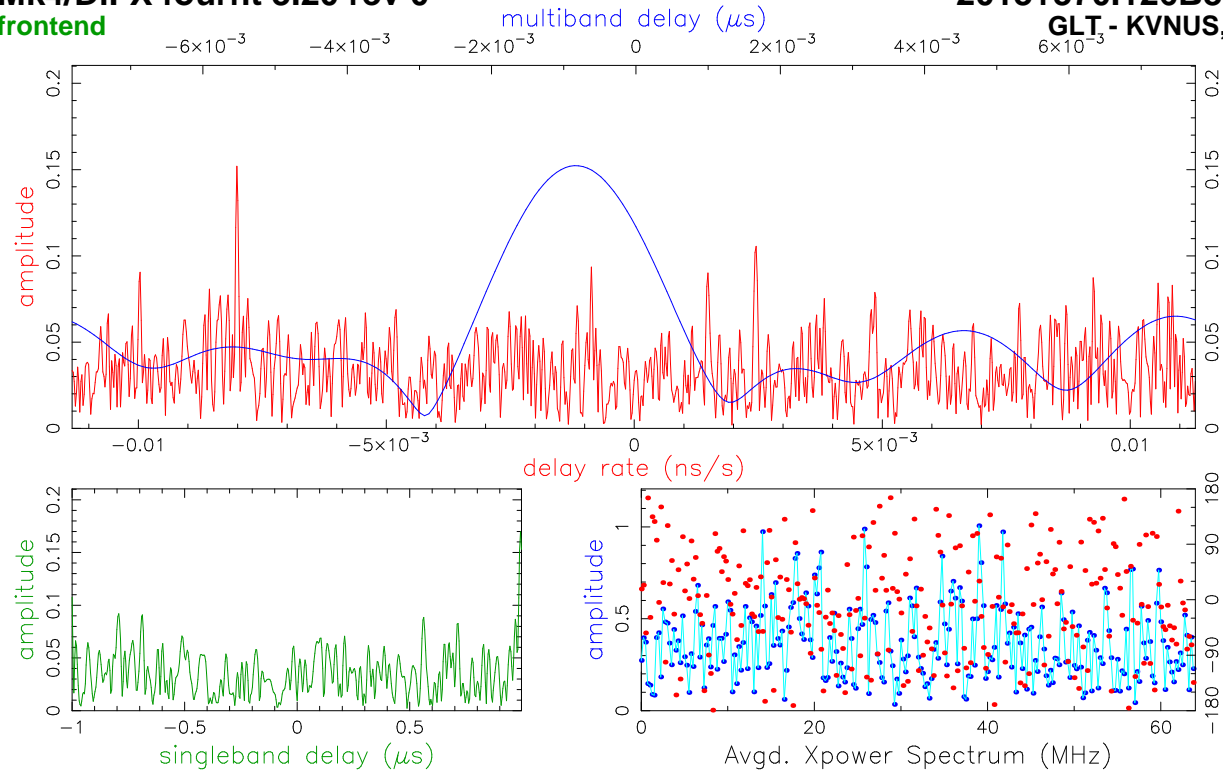
Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121822
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-103.1	-107.9	-60.1	-53.4	-52.9	-83.2	-74.2	-97.4	Phase	-78.1
	0.2	0.1	0.3	0.2	0.1	0.2	0.2	0.3	Ampl.	0.2
	289.6	509.3	162.0	199.7	483.2	121.5	342.1	255.4	Sbd box	26.2
U/L	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	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:u	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	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.61415790724E+03		Apriori delay (usec)		-3.61325679420E+03		Resid mbdelay (usec)		5.13696E-03	+/- 1.9E-04
Sband delay (usec)	-3.61415831395E+03		Apriori clock (usec)		-7.2120943E+00		Resid sbdelay (usec)		-9.01520E-01	+/- 1.5E-03
Phase delay (usec)	-3.61325679672E+03		Apriori clockrate (us/s)		-3.2499998E-07		Resid phdelay (usec)		-2.51944E-06	+/- 6.6E-07
Delay rate (us/s)	1.11821120773E+00		Apriori rate (us/s)		1.11821878138E+00		Resid rate (us/s)		-7.57365E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		4.59465932236E-05		Resid phase (deg)		-78.1	+/- 20.3

ph/seg (deg) 55.7 47.6 Search (1024X32) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 79.9 83.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.1 28.7 Inc. seg. avg. 0.187 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.6 50.1 Inc. frq. avg. 0.175 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 40.4 el 27.4 pa -11.0 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) -8005.073 5556.637 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/gu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/gu.W.54.126B8R

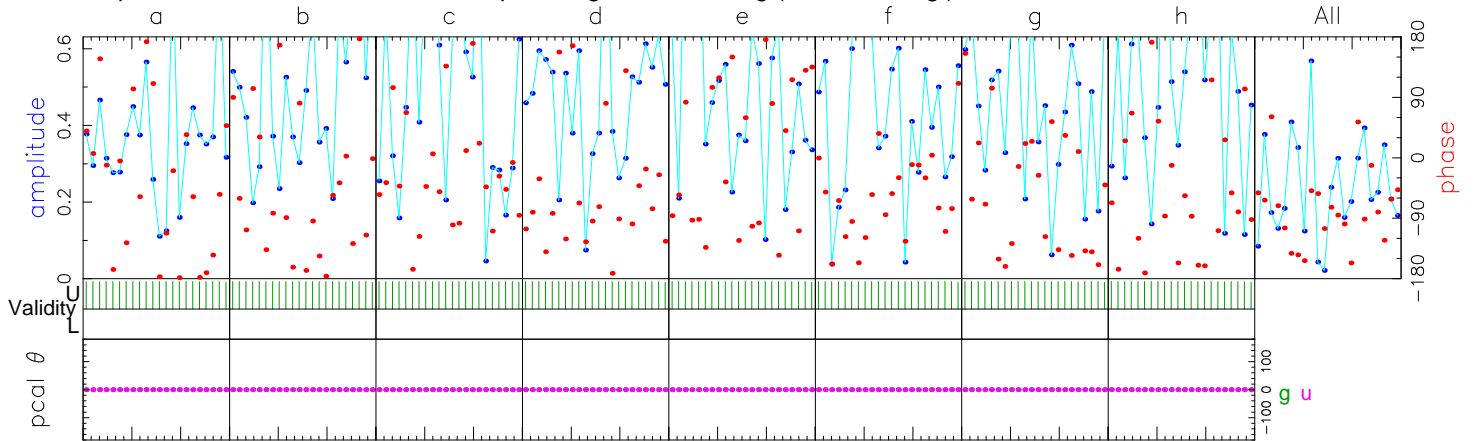


Fringe quality 0

SNR 6.2
 Int time 179.841
 Amp 0.210
 Phase -84.8
 PFD 6.4e-02
 Delays (us)
 SBD 0.992212
 MBD -0.000758
 Fringe rate (Hz)
 -0.691492
 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
 2020:069:185016
 2020:071:121824
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

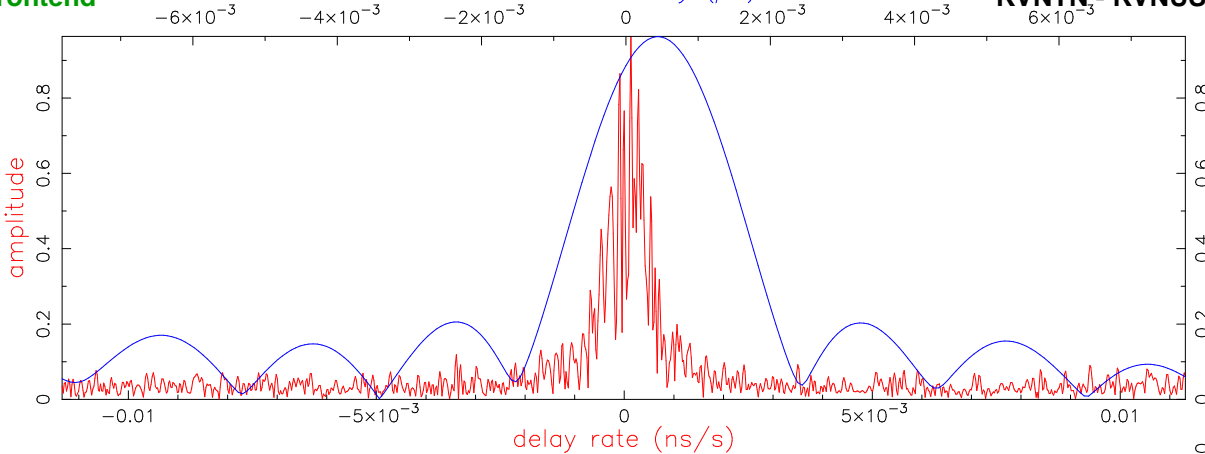


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-62.8	-112.6	-47.1	-84.7	-131.1	-65.2	-74.9	-107.0	Phase	-84.8
	0.1	0.2	0.3	0.3	0.1	0.3	0.1	0.3	Ampl.	0.2
	284.5	413.5	248.2	511.5	437.1	510.9	114.8	53.6	Sbd box	511.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:u	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	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.61225755175E+03		Apriori delay (usec)		-3.61325679420E+03		Resid mbdelay (usec)		-7.57554E-04	+/- 1.7E-04
Sband delay (usec)	-3.61226458245E+03		Apriori clock (usec)		-7.2120943E+00		Resid sbdelay (usec)		9.92212E-01	+/- 1.4E-03
Phase delay (usec)	-3.61325679693E+03		Apriori clockrate (us/s)		-3.2499998E-07		Resid phdelay (usec)		-2.73434E-06	+/- 5.9E-07
Delay rate (us/s)	1.11821075385E+00		Apriori rate (us/s)		1.11821878138E+00		Resid rate (us/s)		-8.02754E-06	+/- 5.7E-09
Total phase (deg)			Apriori accel (us/s/s)		4.59465932236E-05		Resid phase (deg)		-84.8	+/- 18.4

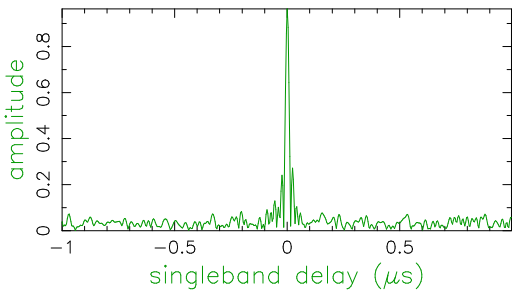
ph/seg (deg) 56.8 43.2 Search (1024X32) 0.161 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 86.6 75.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.1 26.1 Inc. seg. avg. 0.230 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 40.5 45.5 Inc. frq. avg. 0.190 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 40.4 el 27.4 pa -11.0 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) -8005.073 5556.637 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/gu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/gu.W.72.126B8R

multiband delay (μ s)

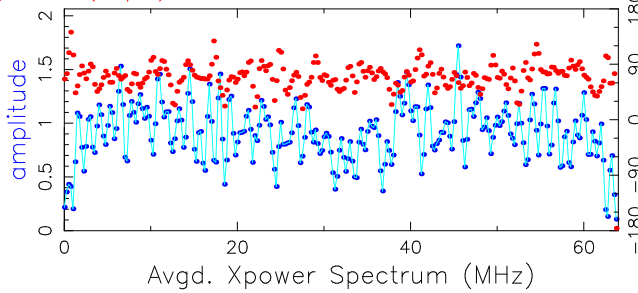
Fringe quality 7



SNR 35.3
 Int time 179.956
 Amp 0.964
 Phase 68.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.000288
 MBD 0.000440
 Fringe rate (Hz)
 0.011444
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

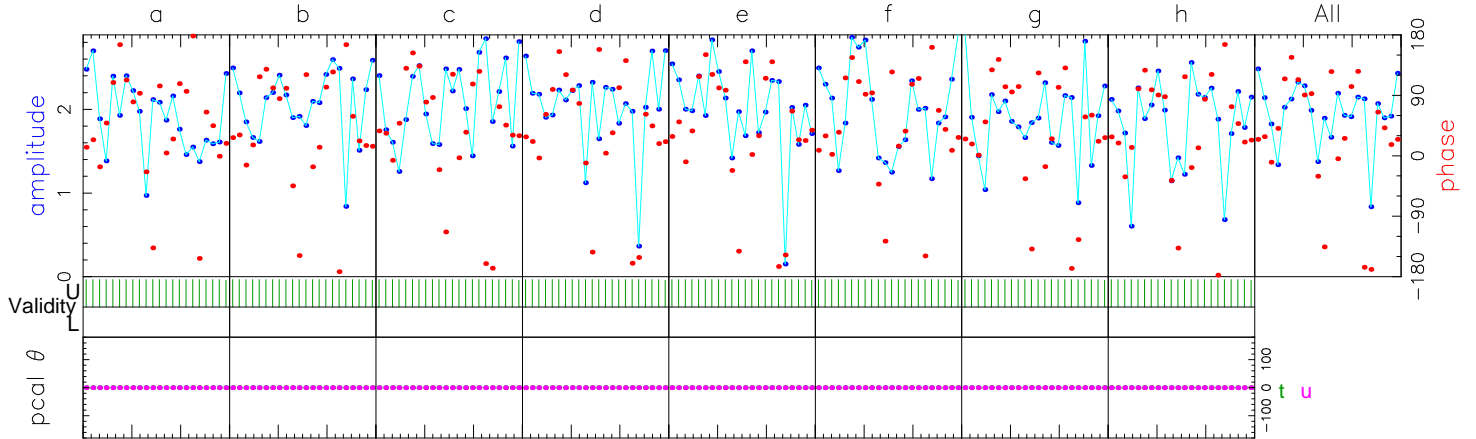


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121830
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

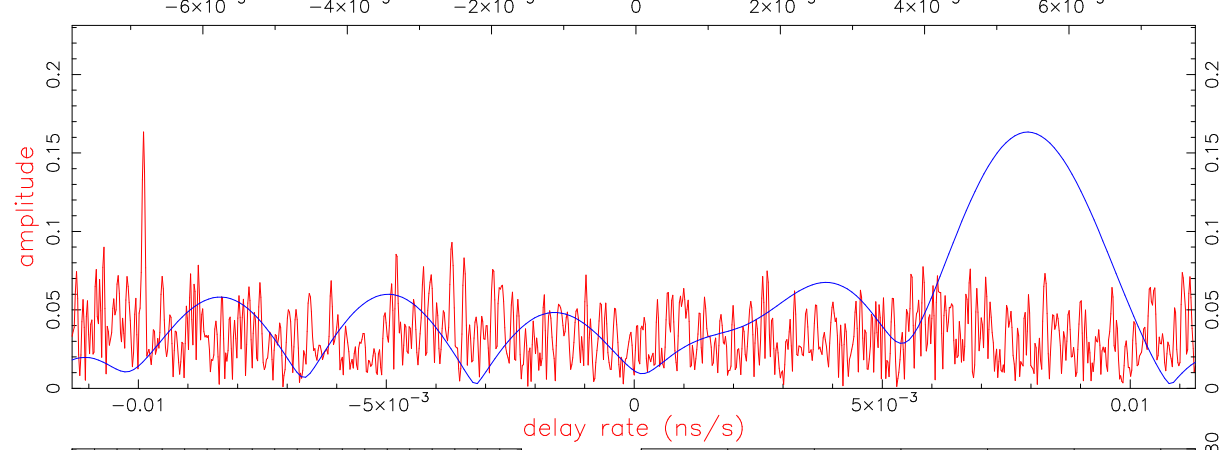
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



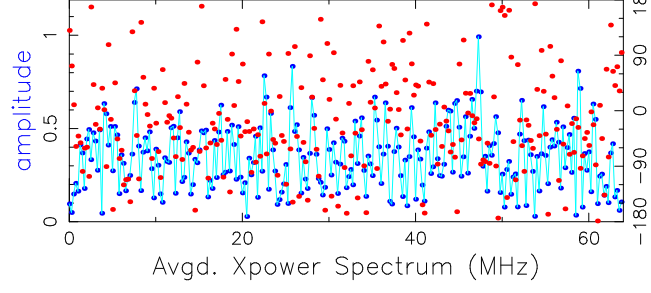
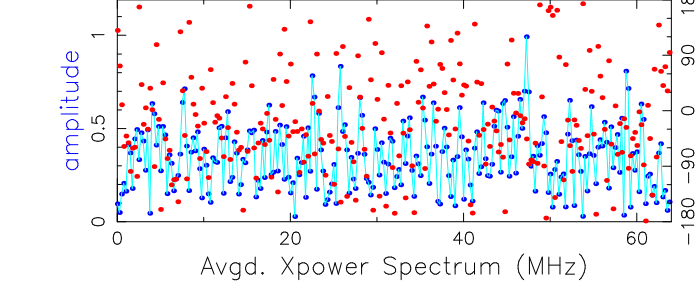
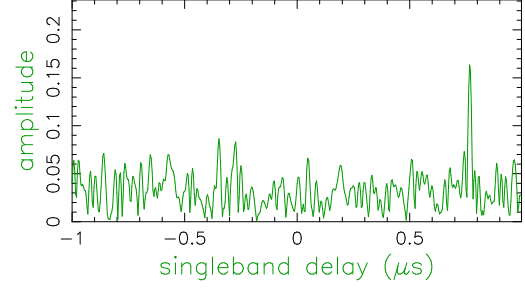
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.80052254452E+02					3.80051814310E+02			Resid mbdelay (usec)	4.40142E-04 +/- 3.1E-05
Sband delay (usec)	3.80052102060E+02					1.9262941E+01			Resid sbdelay (usec)	2.87750E-04 +/- 2.4E-04
Phase delay (usec)	3.80051816511E+02					-1.9999998E-07			Resid phdelay (usec)	2.20063E-06 +/- 1.0E-07
Delay rate (us/s)	-2.07147260932E-03					-2.07160546387E-03			Resid rate (us/s)	1.32855E-07 +/- 1.0E-09
Total phase (deg)			170.7			-4.13375856215E-06			Resid phase (deg)	68.2 +/- 3.2
	RMS	Theor.	Amplitude	0.964 +/- 0.027					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	69.7	7.6	Search (1024X32)	0.960					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	109.4	13.3	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	6.1	4.6	Inc. seg. avg.	1.933					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	5.6	8.0	Inc. frq. avg.	0.964					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

multiband delay (μs)

Fringe quality 0

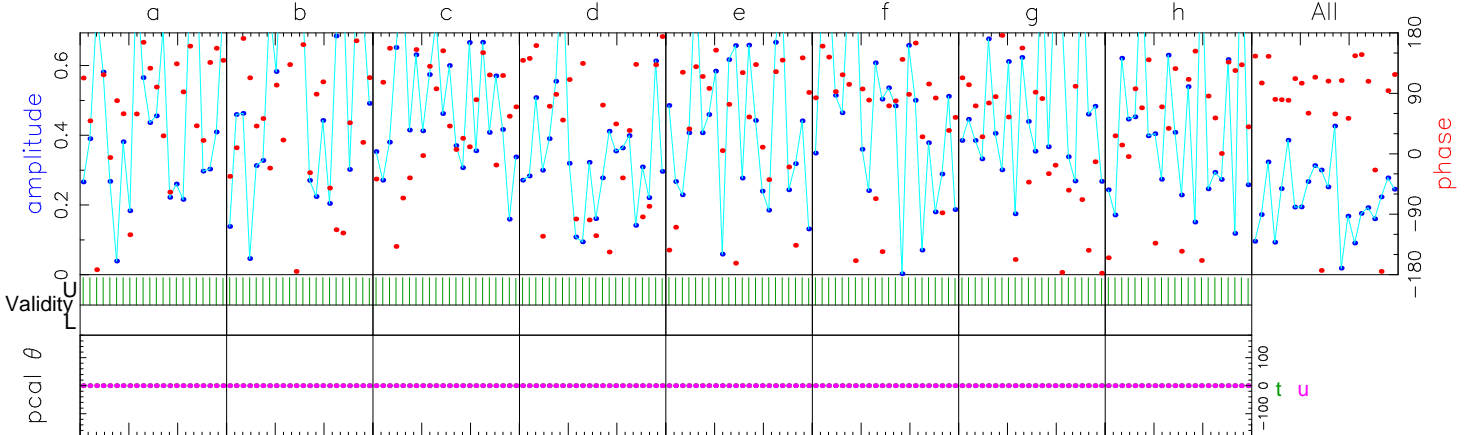


SNR 6.1
 Int time 179.956
 Amp 0.231
 Phase 105.1
 PFD 1.6e-01
 Delays (us)
 SBD 0.766882
 MBD 0.005417
 Fringe rate (Hz)
 -0.853904
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Yr:day 16383
 Start 2019:278
 Stop 2019:278
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121832
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
t:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd) 3.80822855817E+02 Apriori delay (usec) 3.80051814310E+02 Resid mbdelay (usec) 5.41651E-03 +/- 1.8E-04
 Sband delay (usec) 3.80818696060E+02 Apriori clock (usec) 1.9262941E+01 Resid sbdelay (usec) 7.66882E-01 +/- 1.4E-03
 Phase delay (usec) 3.80051817699E+02 Apriori clockrate (us/s) -1.9999998E-07 Resid phdelay (usec) 3.38847E-06 +/- 6.1E-07
 Delay rate (us/s) -2.08151844147E-03 Apriori rate (us/s) -2.07160546387E-03 Resid rate (us/s) -9.91298E-06 +/- 5.9E-09
 Total phase (deg) 207.6 Apriori accel (us/s/s) -4.13375856215E-06 Resid phase (deg) 105.1 +/- 18.9

ph/seg (deg) 45.5 44.4 Search (1024X32) 0.158 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.9 77.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 21.5 26.8 Inc. seg. avg. 0.236 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.6 46.7 Inc. frq. avg. 0.216 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 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/v1_CygA2/1234/No0011/tu...126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/tu.W.127.126B8R

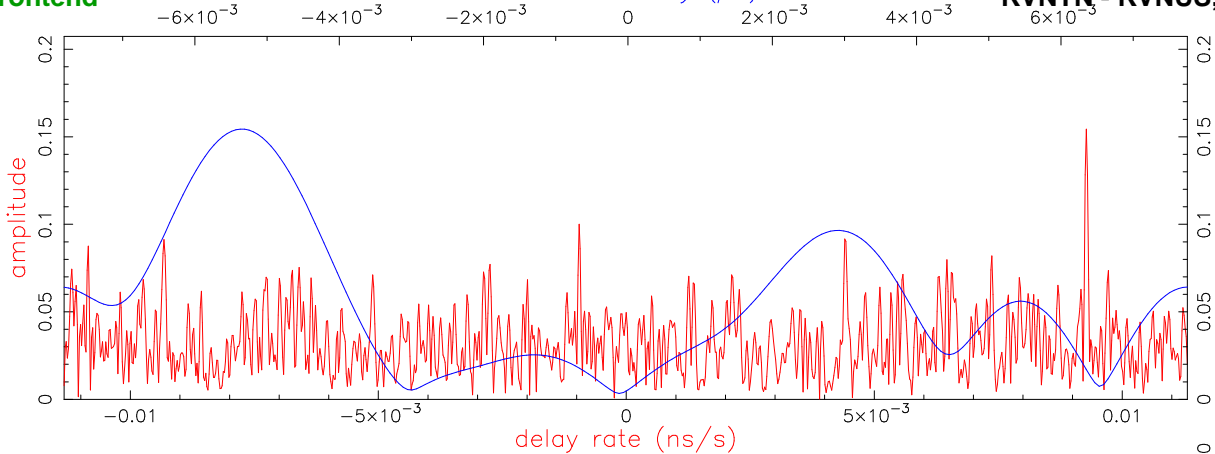
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, tu

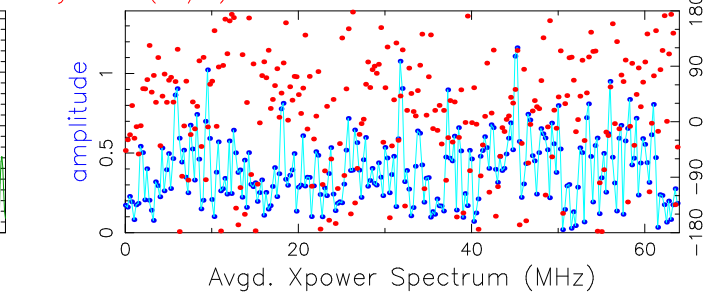
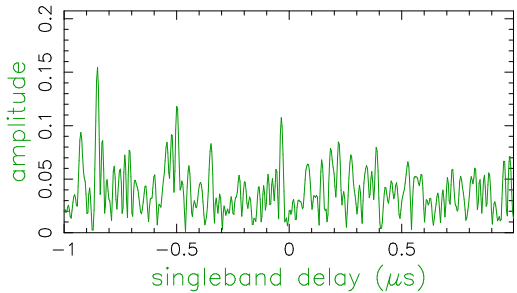
KVNTN - KVNUS, fgroup W, pol RL

multiband delay (μs)



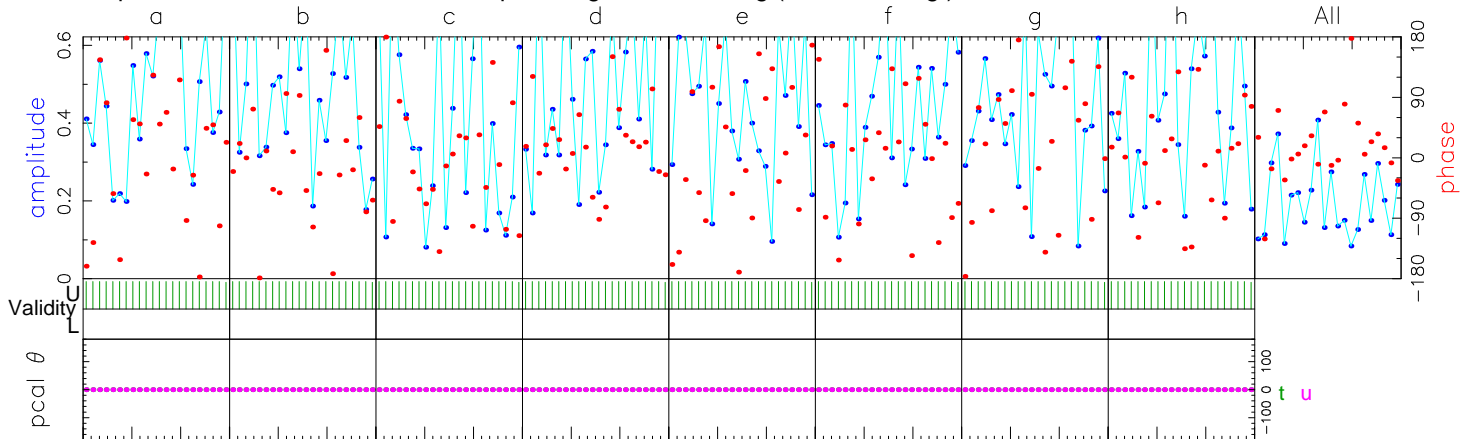
Fringe quality 0

SNR 5.7
Int time 179.956
Amp 0.207
Phase 12.9
PFD 8.2e-01
Delays (us)
SBD -0.851967
MBD -0.005346
Fringe rate (Hz)
0.800840
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
2020:069:185016
2020:071:121835
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	61.9	-2.4	-4.8	7.0	-28.5	8.7	92.4	19.7	Phase	12.9
	0.2	0.3	0.2	0.5	0.1	0.2	0.1	0.3	Ampl.	0.2
	262.3	38.2	120.0	39.2	409.2	399.1	468.1	248.9	Sbd box	38.9
U/L	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	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:u	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	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.79202718632E+02		Apriori delay (usec)		3.80051814310E+02		Resid mbdelay (usec)		-5.34568E-03	+/- 1.9E-04
Sband delay (usec)	3.79199847310E+02		Apriori clock (usec)		1.9262941E+01		Resid sbdelay (usec)		-8.51967E-01	+/- 1.5E-03
Phase delay (usec)	3.80051814727E+02		Apriori clockrate (us/s)		-1.9999998E-07		Resid phdelay (usec)		4.17136E-07	+/- 6.5E-07
Delay rate (us/s)	-2.06230850344E-03		Apriori rate (us/s)		-2.07160546387E-03		Resid rate (us/s)		9.29696E-06	+/- 6.3E-09
Total phase (deg)	115.4		Apriori accel (us/s/s)		-4.13375856215E-06		Resid phase (deg)		12.9	+/- 20.2

	RMS	Theor.	Amplitude	0.207 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	54.8	47.4	Search (1024X32)	0.150	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	64.7	82.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	43.0	28.6	Inc. seg. avg.	0.198	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	58.7	49.9	Inc. frq. avg.	0.204	Data rate(Mb/s): 2048	nlags: 256 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/v1_CygA2/1234/No0011/tu...126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/tu.W.148.126B8R

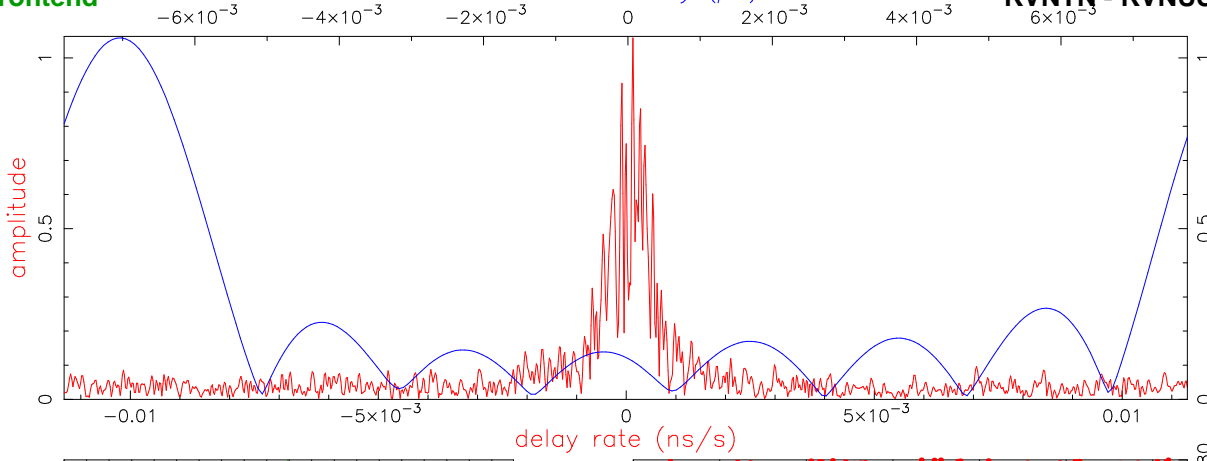
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, tu

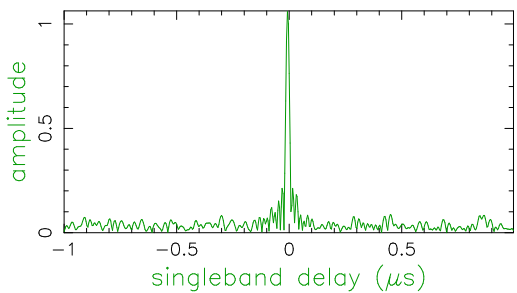
KVNTN - KVNUS, fgroup W, pol LL

multiband delay (μ s)

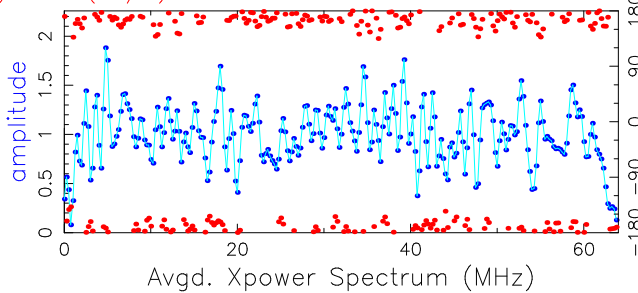


Fringe quality 7

SNR 39.0
Int time 179.956
Amp 1.063
Phase 175.4
PFD 0.0e+00
Delays (us)
SBD -0.007010
MBD -0.007044
Fringe rate (Hz)
0.011502
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

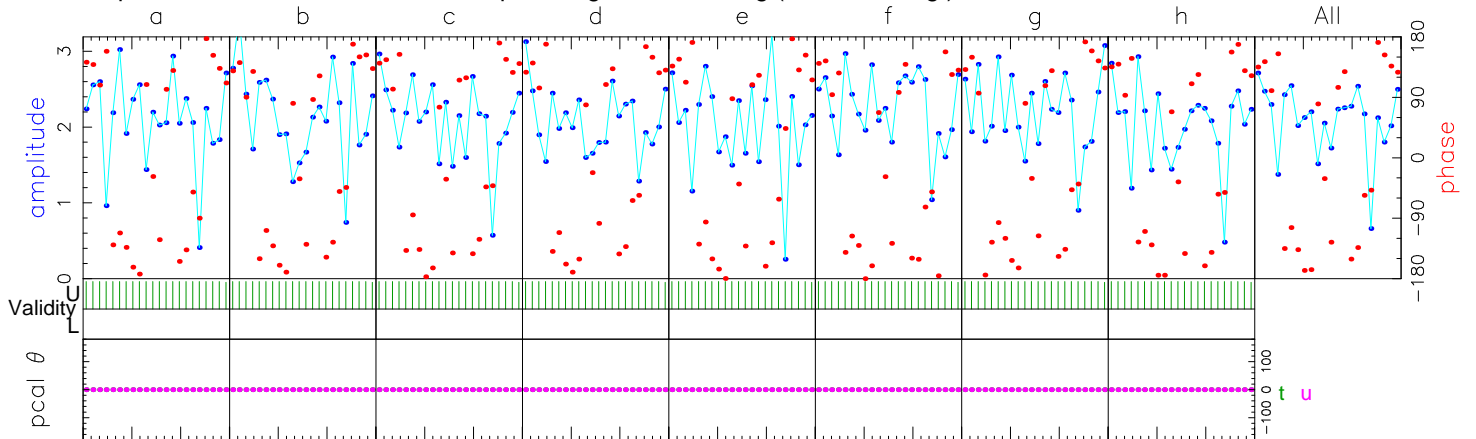


delay rate (ns/s)



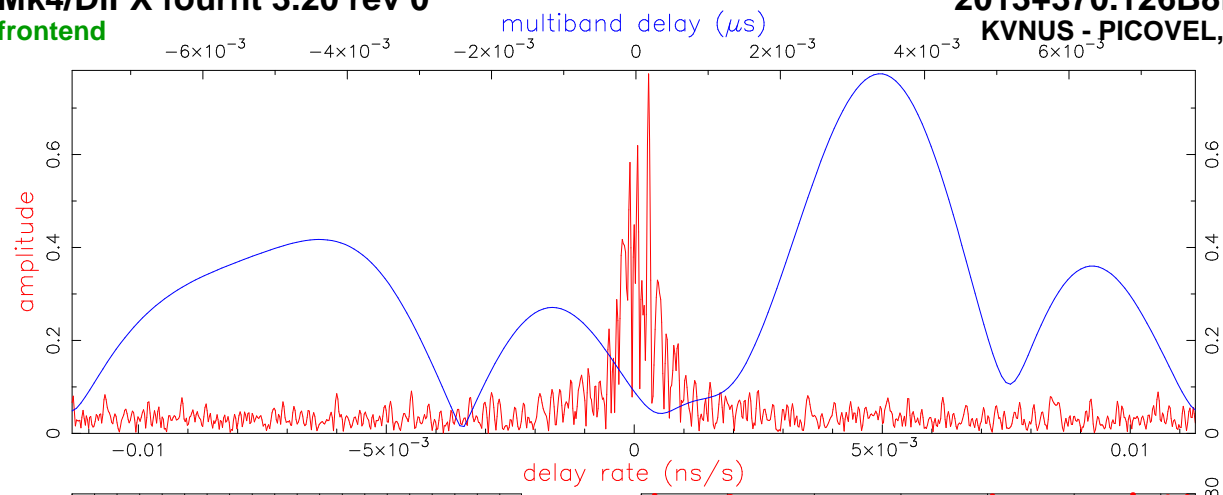
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:069:185016
2020:071:121827
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
t:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	3.80044770639E+02				3.80051814310E+02					
Sband delay (usec)	3.80044803810E+02				1.9262941E+01					
Phase delay (usec)	3.80051819966E+02				-1.9999998E-07					
Delay rate (us/s)	-2.07147194044E-03				-2.07160546387E-03					
Total phase (deg)			277.9		-4.13375856215E-06					
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
Channels										
Tracks										
Channels										
Tracks										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
ph/seg (deg)	69.9	6.9								
amp/seg (%)	105.7	12.0								
ph/frq (deg)	3.7	4.2								
amp/frq (%)	4.0	7.3								
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
1.063 +/- 0.027										
1.036										
0.000										
2.077										
1.058										
3.80051814310E+02										
1.9262941E+01										
-1.9999998E-07										
-2.07160546387E-03										
-4.13375856215E-06										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
pcal θ										
Channels										
Tracks										
Channels										
Tracks										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
simultaneous interpolator										

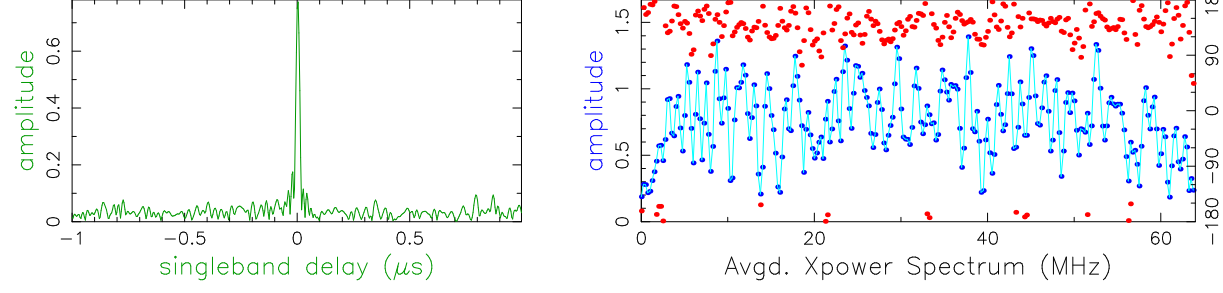
t: az 293.0 el 40.6 pa 75.1 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) 11.332 -475.771 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/tu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/tu.W.81.126B8R



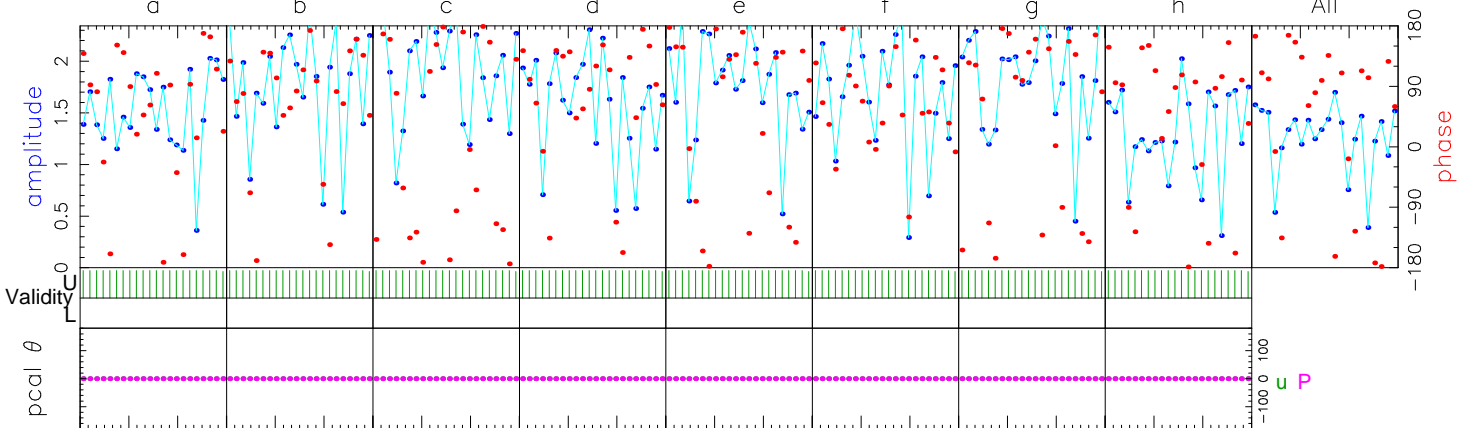
Fringe quality 4

SNR 28.6
Int time 179.753
Amp 0.781
Phase 133.6
PFD 0.0e+00
Delays (us)
SBD 0.002643
MBD 0.003350
Fringe rate (Hz)
0.024696
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
2020:069:185016
2020:071:121829
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



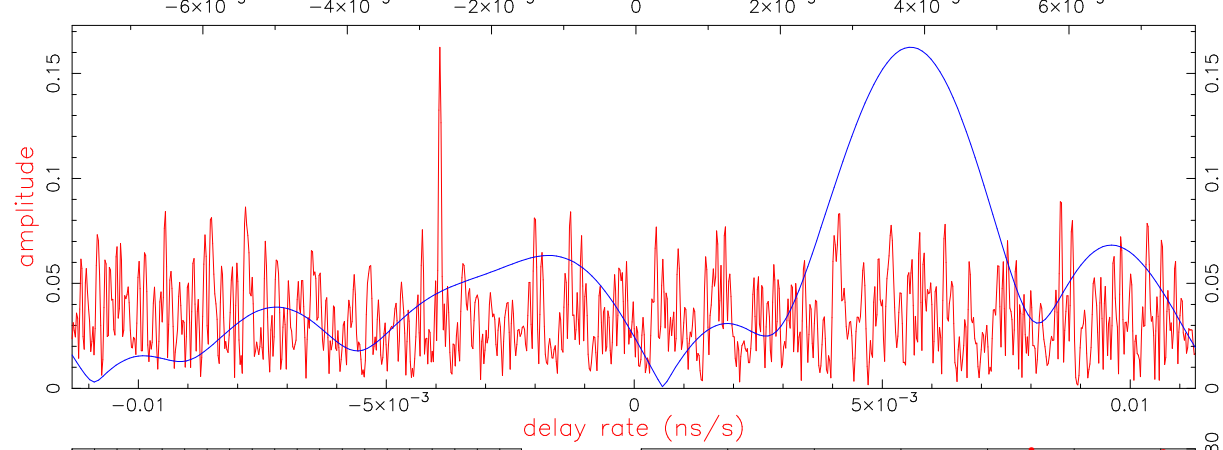
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



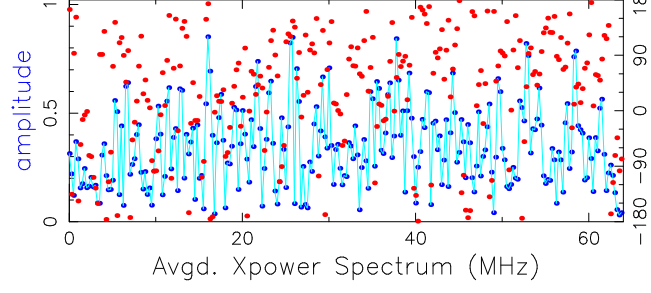
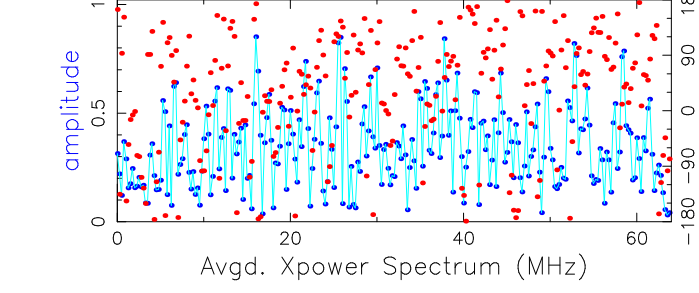
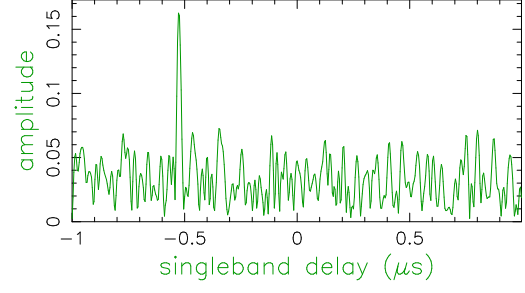
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	105.8	112.3	-163.7	119.6	166.1	73.8	158.4	122.5	Phase	133.6
	0.7	1.1	1.2	1.0	1.0	1.0	1.1	0.7	Ampl.	1.0
	259.5	257.2	257.0	256.8	256.7	256.9	257.4	257.2	Sbd box	257.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	6.00344893818E+02		Apriori delay (usec)		6.00341543642E+02		Resid mbdelay (usec)		3.35018E-03	+/- 3.8E-05
Sband delay (usec)	6.00344186392E+02		Apriori clock (usec)		8.6526985E+00		Resid sbdelay (usec)		2.64275E-03	+/- 3.0E-04
Phase delay (usec)	6.00341547949E+02		Apriori clockrate (us/s)		7.5299998E-07		Resid phdelay (usec)		4.30714E-06	+/- 1.3E-07
Delay rate (us/s)	-1.82417125424E+00		Apriori rate (us/s)		-1.82417154094E+00		Resid rate (us/s)		2.86699E-07	+/- 1.2E-09
Total phase (deg)	338.5		Apriori accel (us/s/s)		-4.62426437311E-06		Resid phase (deg)		133.6	+/- 4.0

ph/seg (deg) 64.3 9.4 Search (1024X32) 0.770 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 74.8 16.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 42.3 5.7 Inc. seg. avg. 1.253 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 31.9 9.9 Inc. frq. avg. 0.968 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
u: az 292.1 el 39.3 pa 71.1 P: az 67.5 el 36.7 pa -68.0 u,v (fr/asec) 13120.502 -506.328 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uP..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uP.W.100.126B8R

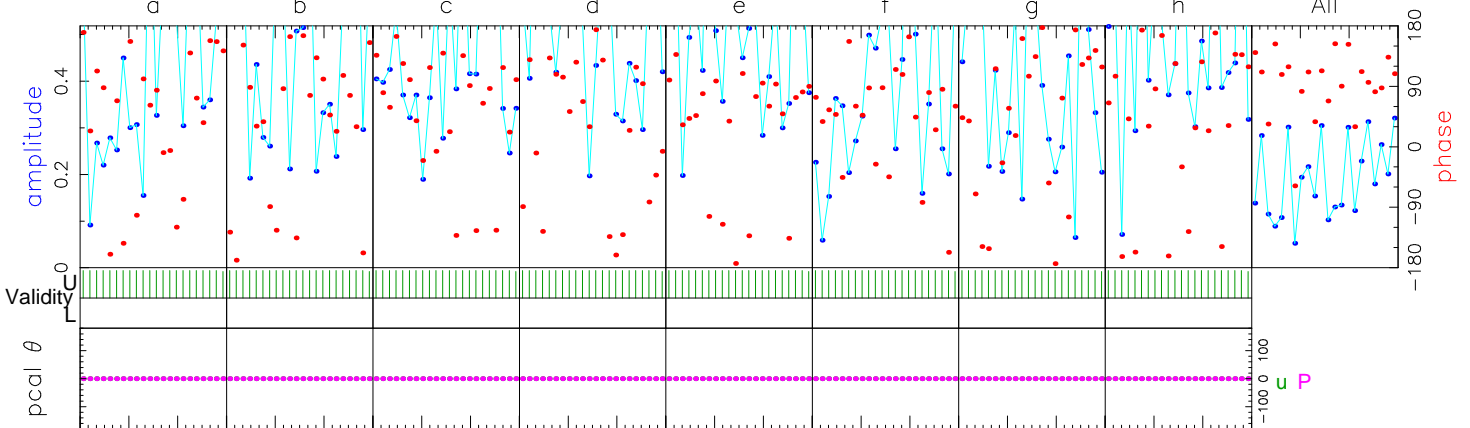
multiband delay (μ s)



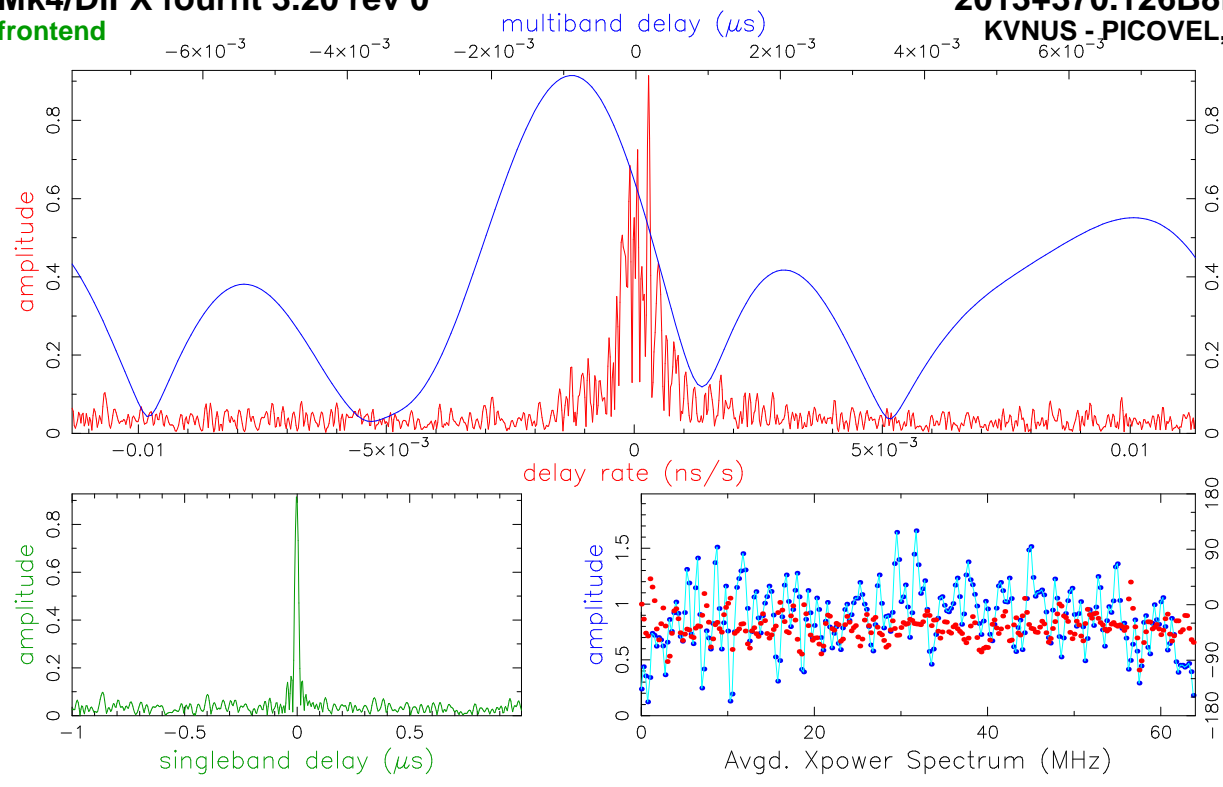
Fringe quality 0
SNR 6.0
Int time 179.753
Amp 0.173
Phase 105.5
PFD 1.9e-01
Delays (us)
SBD -0.525746
MBD 0.003831
Fringe rate (Hz)
-0.337557
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Yr:day 16383
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:069:185016
2020:071:121832
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	5.99814124760E+02		Apriori delay (usec)		6.00341543642E+02		Resid mbdelay (usec)		3.83112E-03	+/- 1.8E-04
Sband delay (usec)	5.99815797642E+02		Apriori clock (usec)		8.6526985E+07		Resid sbdelay (usec)		-5.25746E-01	+/- 1.4E-03
Phase delay (usec)	6.00341547043E+02		Apriori clockrate (us/s)		7.5299998E-07		Resid phdelay (usec)		3.40098E-06	+/- 6.1E-07
Delay rate (us/s)	-1.82417545964E+00		Apriori rate (us/s)		-1.82417154094E+00		Resid rate (us/s)		-3.91870E-06	+/- 5.9E-09
Total phase (deg)	310.4		Apriori accel (us/s/s)		-4.62426437311E-06		Resid phase (deg)		105.5	+/- 19.0
ph/seg (deg)	RMS 49.8	Theor. 44.5	Amplitude 0.173 +/- 0.029	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		sb window (us)		-1.000 1.000
amp/seg (%)	53.2	77.8	Search (1024X32) 0.157	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled		mb window (us)		-0.008 0.008
ph/frq (deg)	24.3	26.9	Interp. 0.000	Bits/sample: 2x2		Sample rate(MISamp/s): 128		dr window (ns/s)		-0.011 0.011
amp/frq (%)	36.0	46.9	Inc. seg. avg. 0.156	Data rate(Mb/s): 2048		nlags: 256		t_cohere infinite		ion window (TEC) 0.00 0.00
u: az 292.1 el 39.3 pa 71.1	P: az 67.5 el 36.7 pa -68.0		u,v (fr/asec) 13120.502 -506.328						simultaneous interpolator	

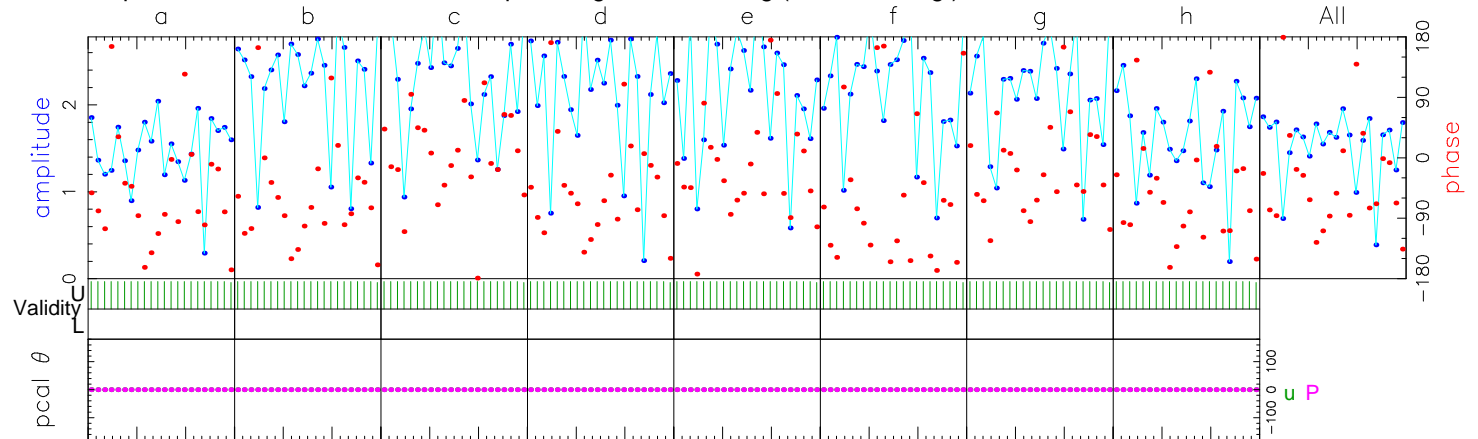


Fringe quality 4

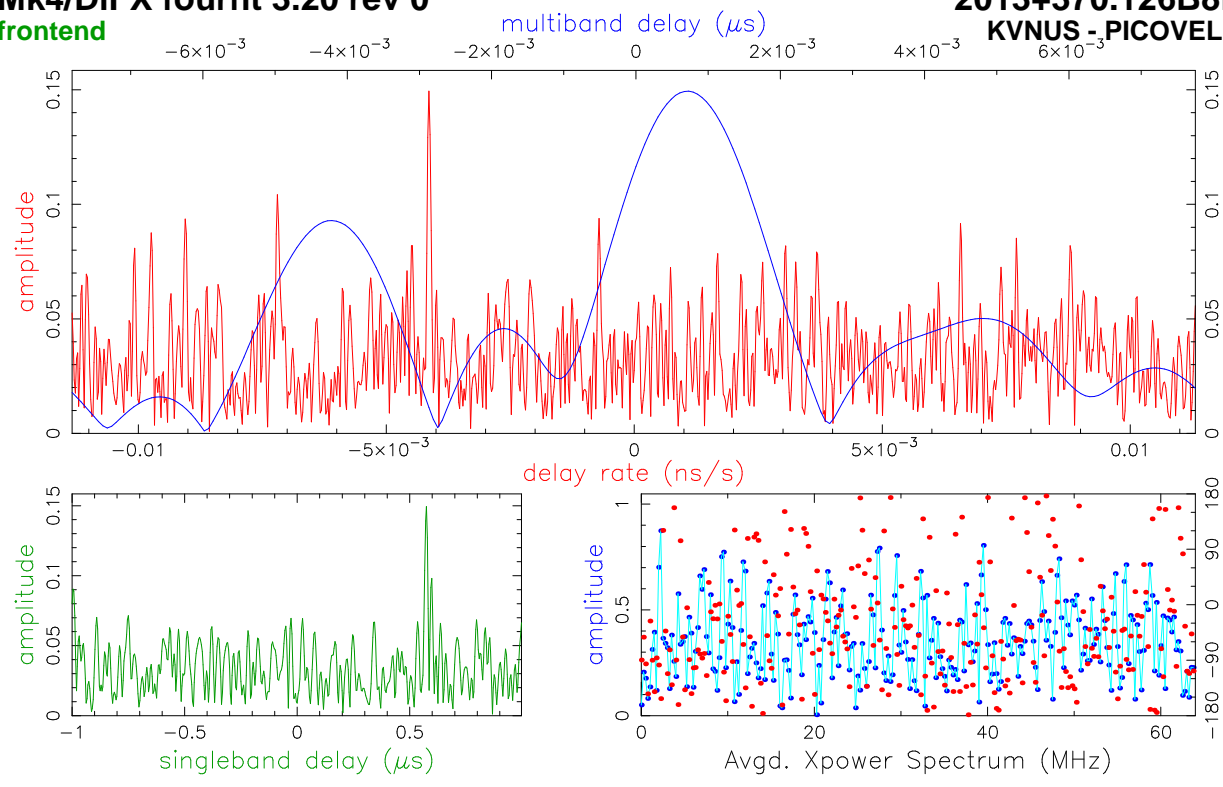
SNR 34.0
 Int time 179.753
 Amp 0.928
 Phase -54.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.002354
 MBD -0.000867
 Fringe rate (Hz)
 0.024781
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121834
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

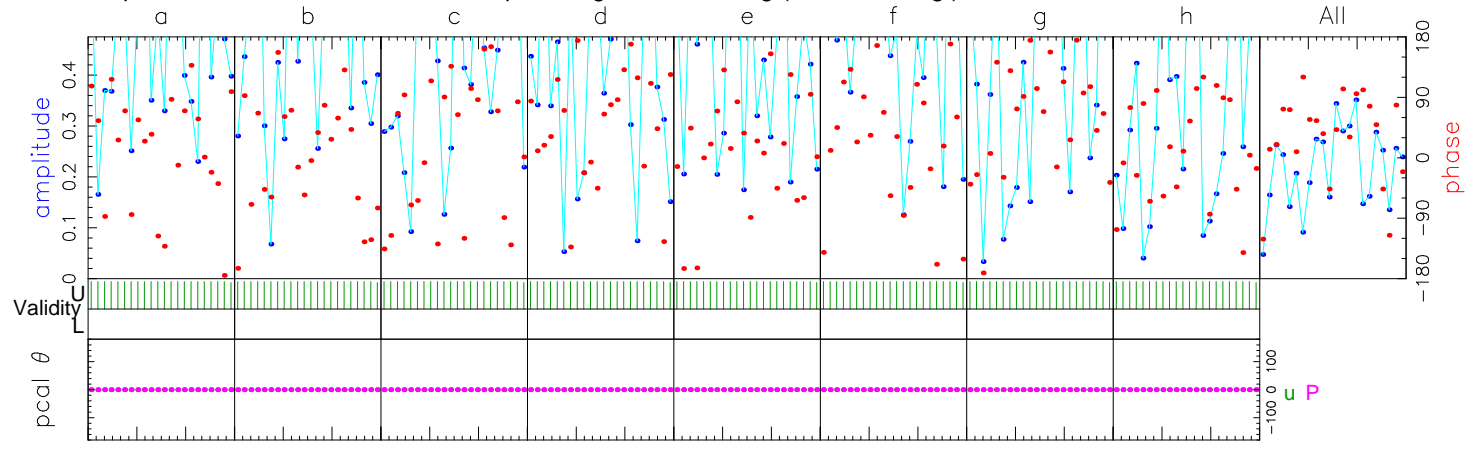


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-74.6	-76.7	12.3	-66.8	-24.2	-123.3	-28.2	-67.4		Phase		
	0.7	1.4	1.4	1.3	1.2	1.3	1.2	0.9		Ampl.		
	257.8	256.2	255.8	255.6	255.6	256.0	256.4	256.4		Sbd box		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used		
u	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs		
P	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs		
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase		
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC		
u	1000	1000	1000	1000	1000	1000	1000	1000		PC amp		
P	1000	1000	1000	1000	1000	1000	1000	1000				
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks		
										Tracks		
Group delay (usec)(sbd)	6.00340676631E+02		Apriori delay (usec)		6.00341543642E+02		Resid mbdelay (usec)		-8.67011E-04	+/- 3.2E-05		
Sband delay (usec)	6.00339189892E+02		Apriori clock (usec)		8.6526985E+00		Resid sbdelay (usec)		-2.35375E-03	+/- 2.5E-04		
Phase delay (usec)	6.00341541901E+02		Apriori clockrate (us/s)		7.5299998E-07		Resid phdelay (usec)		-1.74046E-06	+/- 1.1E-07		
Delay rate (us/s)	-1.82417125325E+00		Apriori rate (us/s)		-1.82417154094E+00		Resid rate (us/s)		2.87687E-07	+/- 1.0E-09		
Total phase (deg)	151.0		Apriori accel (us/s/s)		-4.62426437311E-06		Resid phase (deg)		-54.0	+/- 3.4		
	RMS	Theor.	Amplitude	0.928 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	64.4	7.9	Search (1024X32)	0.911		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	77.3	13.8	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	44.8	4.8	Inc. seg. avg.	1.521		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	36.3	8.3	Inc. frq. avg.	1.180		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
u: az 292.1 el 39.3 pa 71.1	P: az 67.5 el 36.7 pa -68.0		u, v (fr/asec)		13120.502 -506.328				simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c192c/v1_CygA2/1234/No0011/uP..126B8R		Output file: /Exps/c192c/v1_CygA2/1234/No0011/uP.W.144.126B8R									



Fringe quality 0
SNR 5.5
Int time 179.753
Amp 0.158
Phase 46.8
PFD 9.9e-01
Delays (us)
SBD 0.573549
MBD 0.000711
Fringe rate (Hz)
-0.357296
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
2020:069:185016
2020:071:121827
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

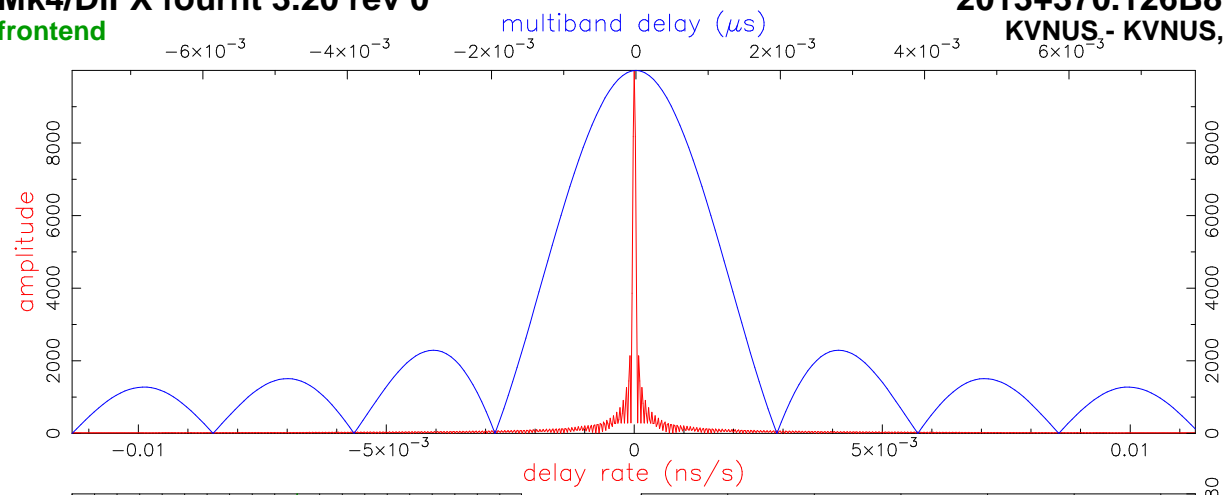


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	39.2	26.5	106.5	63.4	16.6	77.8	74.9	9.6	Phase	46.8
	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	Ampl.	0.2
	277.5	89.6	478.6	426.0	122.0	371.9	509.6	102.6	Sbd box	403.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	6.00920379232E+02		Apriori delay (usec)		6.00341543642E+02		Resid mbdelay (usec)		7.10590E-04	+/- 2.0E-04
Sband delay (usec)	6.00915092392E+02		Apriori clock (usec)		8.6526985E+00		Resid sbdelay (usec)		5.73549E-01	+/- 1.6E-03
Phase delay (usec)	6.00341545150E+02		Apriori clockrate (us/s)		7.5299998E-07		Resid phdelay (usec)		1.50803E-06	+/- 6.7E-07
Delay rate (us/s)	-1.82417568879E+00		Apriori rate (us/s)		-1.82417154094E+00		Resid rate (us/s)		-4.14785E-06	+/- 6.5E-09
Total phase (deg)	251.7		Apriori accel (us/s/s)		-4.62426437311E-06		Resid phase (deg)		46.8	+/- 20.9

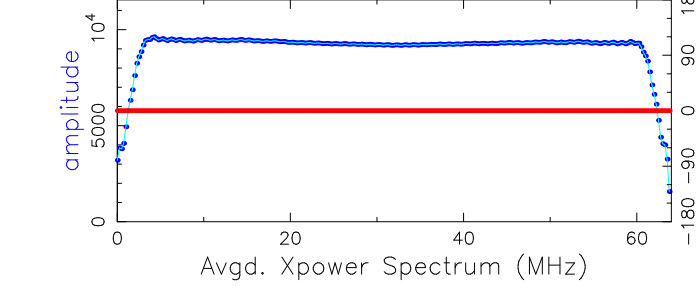
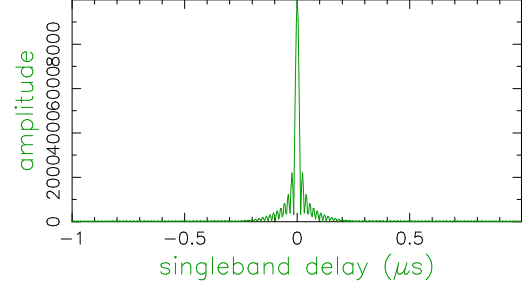
ph/seg (deg) 66.5 48.9 Search (1024X32) 0.146 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 69.7 85.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 37.3 29.5 Inc. seg. avg. 0.170 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 27.9 51.5 Inc. frq. avg. 0.160 Data rate (Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
u: az 292.1 el 39.3 pa 71.1 P: az 67.5 el 36.7 pa -68.0 u,v (fr/asec) 13120.502 -506.328 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uP..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uP.W.84.126B8R

Mk4/DiFX fourfit 3.20 rev 0
 frontend

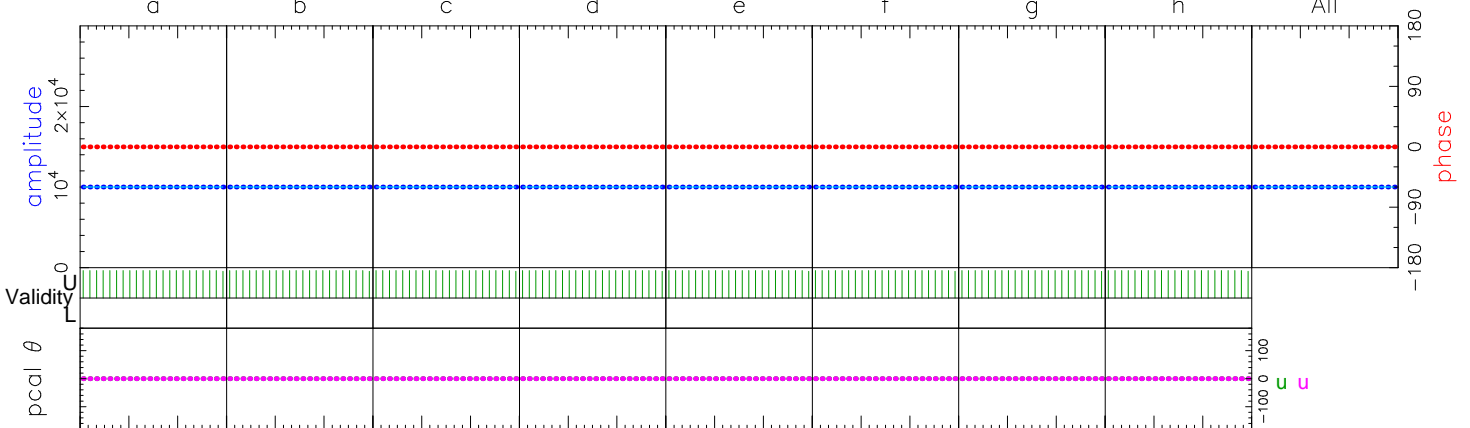
2013+370.126B8R, No0011, uu
 KVNUS- KVNUS, fgroup W, pol RR



Fringe quality 9
 SNR 366843.8
 Int time 179.956
 Amp 9999.999
 Phase -0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Yr:day 16383
 Start 2019:278
 Stop 2019:278
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121829
 2019:280:115849
 RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

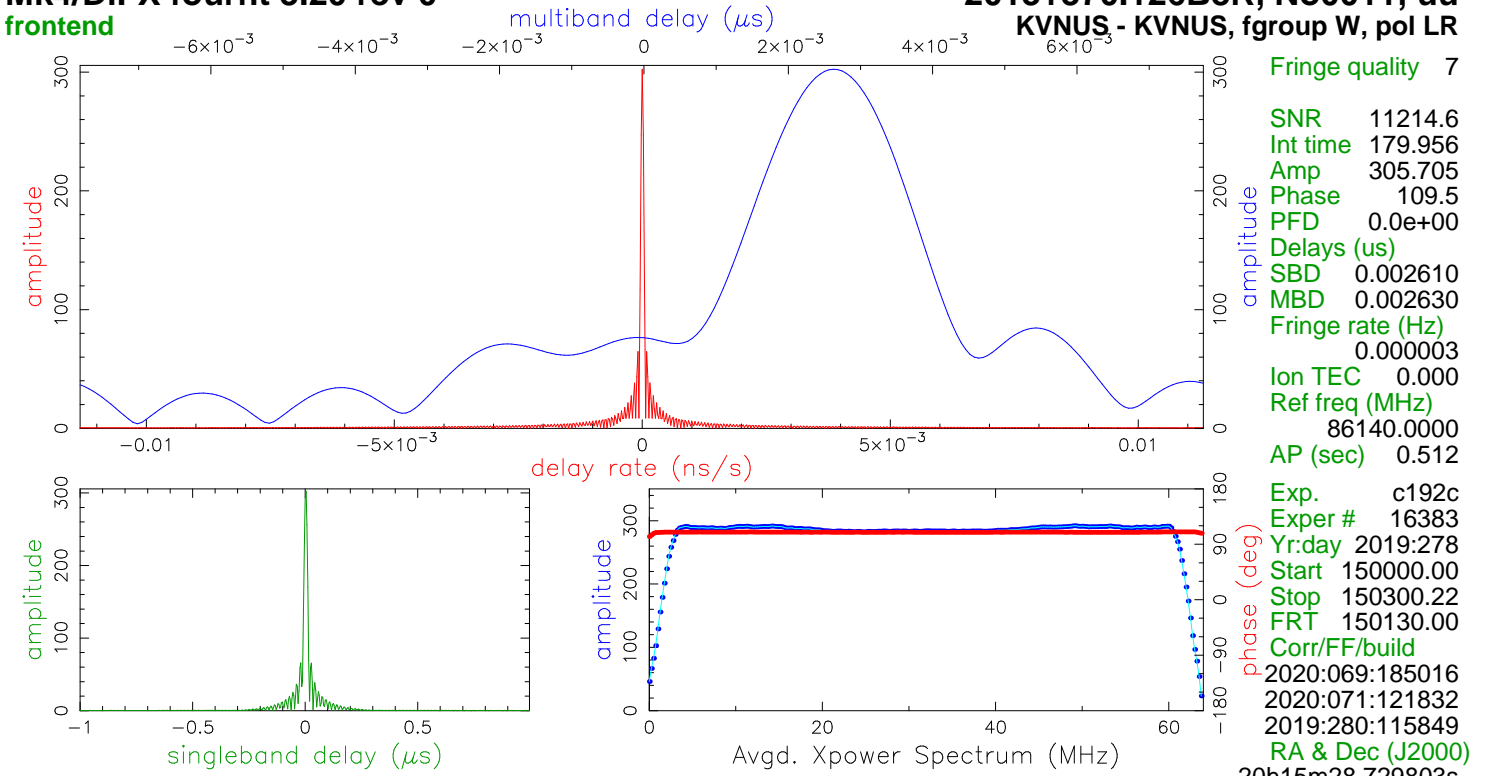


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Phase delay (usec)	-2.53214395926E-20	-2.53214395926E-20	-2.53214395926E-20	-2.53214395926E-20	-2.53214395926E-20	-2.53214395926E-20	-2.53214395926E-20	-2.53214395926E-20		
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Total phase (deg)			-0.0							
RMS										
Theor.										
Amplitude										
Search (1024X32)										
9999.999										
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
ph/seg (deg)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
amp/seg (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
ph/frq (deg)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
amp/frq (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
u: az 292.1 el 39.3 pa 71.1										
u: az 292.1 el 39.3 pa 71.1										
u,v (fr/asec) 0.000 0.000										
Control file: cf_1234_gmva										
Input file: /Exps/c192c/v1_CygA2/1234/No0011/uu..126B8R										
Output file: /Exps/c192c/v1_CygA2/1234/No0011/uu.W.102.126B8R										

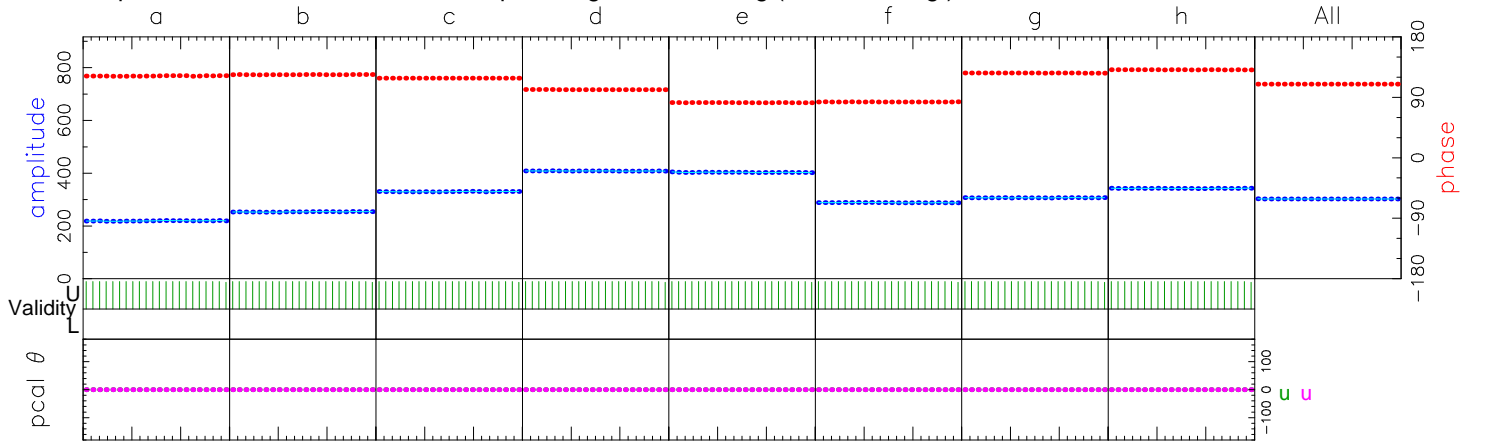
simultaneous interpolator

Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.126B8R, No0011, uu
 KVNUS - KVNUS, fgroup W, pol LR



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
121.7	123.7	118.4	101.4	82.0	83.1	126.1	130.9	130.9	Phase	109.5
219.4	253.7	330.3	408.5	403.3	288.4	306.9	342.6	342.6	Ampl.	319.1
257.7	257.7	257.5	257.4	257.5	258.0	257.9	257.5	257.5	Sbd box	257.7
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:u 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:u 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids	
u W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks	
									Tracks	
Group delay (usec)(sbd)	2.62959375000E-03		Apriori delay (usec)	0.00000000000E+00		Resid mbdelay (usec)	2.62959E-03	+/-	9.7E-08	
Sband delay (usec)	2.61050000000E-03		Apriori clock (usec)	0.0000000E+00		Resid sbdelay (usec)	2.61050E-03	+/-	7.7E-07	
Phase delay (usec)	3.53116609162E-06		Apriori clockrate (us/s)	0.0000000E+00		Resid phdelay (usec)	3.53117E-06	+/-	3.3E-10	
Delay rate (us/s)	3.11765352617E-11		Apriori rate (us/s)	0.00000000000E+00		Resid rate (us/s)	3.11765E-11	+/-	3.2E-12	
Total phase (deg)		109.5	Apriori accel (us/s/s)	0.00000000000E+00		Resid phase (deg)	109.5	+/-	0.0	

ph/seg (deg) 0.0 0.0 Search (1024X32) 298.447 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 1.0 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 21.1 0.0 Inc. seg. avg. 302.524 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 20.9 0.0 Inc. frq. avg. 319.122 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 u: az 292.1 el 39.3 pa 71.1 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uu.W.124.126B8R

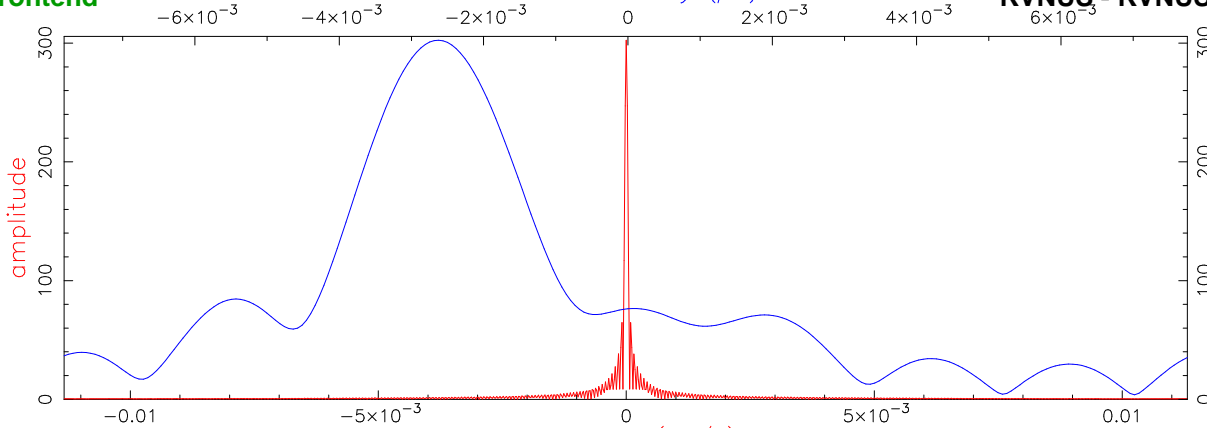
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, uu

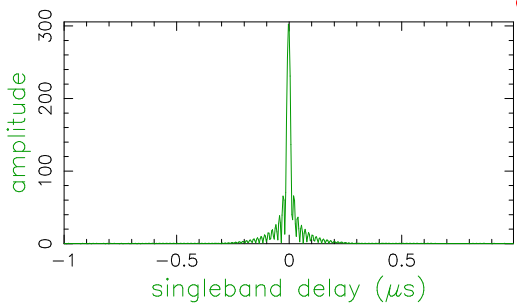
KVNUS - KVNUS, fgroup W, pol RL

multiband delay (μ s)

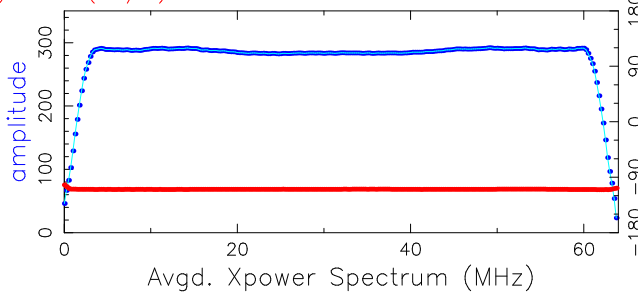


Fringe quality 7

SNR 11214.6
 Int time 179.956
 Amp 305.705
 Phase -109.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.002610
 MBD -0.002630
 Fringe rate (Hz)
 -0.000003
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

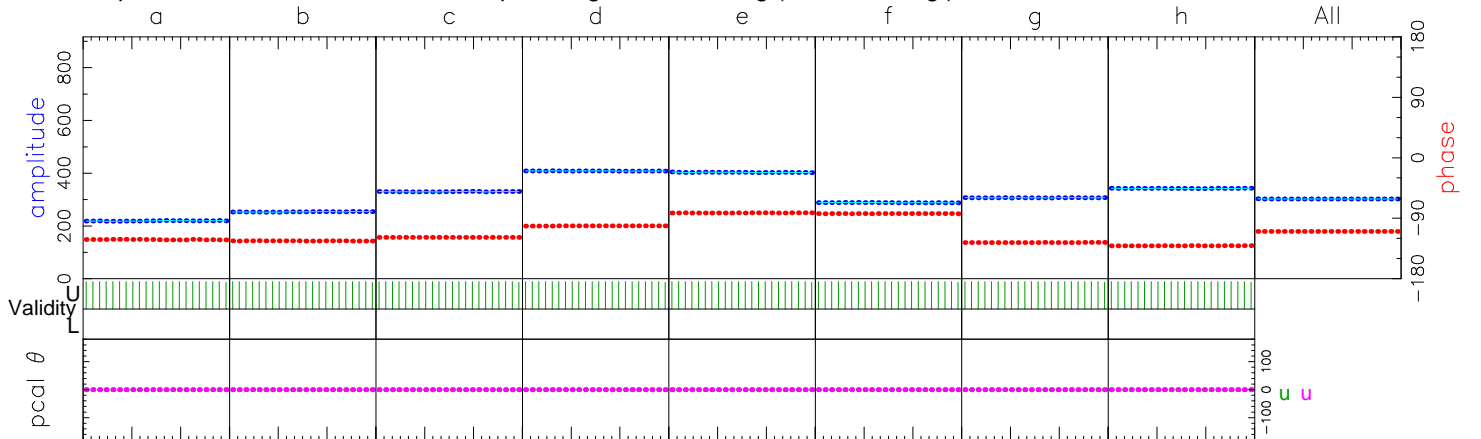


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121835
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

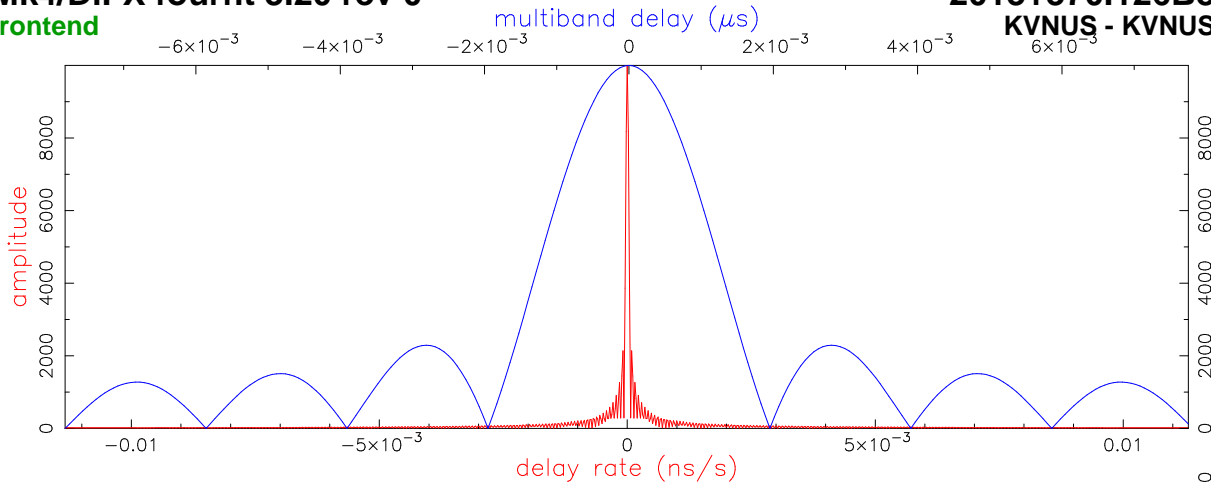


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All				
	-121.7	-123.7	-118.4	-101.4	-82.0	-83.1	-126.1	-130.9	Phase	-109.5				
	219.4	253.7	330.3	408.5	403.3	288.4	306.9	342.6	Ampl.	319.1				
	256.3	256.3	256.5	256.6	256.5	256.0	256.1	256.5	Sbd box	256.3				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids					
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks					
									Tracks					
Group delay (usec)(sbd)	-2.62959375000E-03								Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	-2.62959E-03	+/-	9.7E-08
Sband delay (usec)	-2.61050000000E-03								Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-2.61050E-03	+/-	7.7E-07
Phase delay (usec)	-3.53116609158E-06								Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-3.53117E-06	+/-	3.3E-10
Delay rate (us/s)	-3.11765352617E-11								Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	-3.11765E-11	+/-	3.2E-12
Total phase (deg)			-109.5						Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	-109.5	+/-	0.0

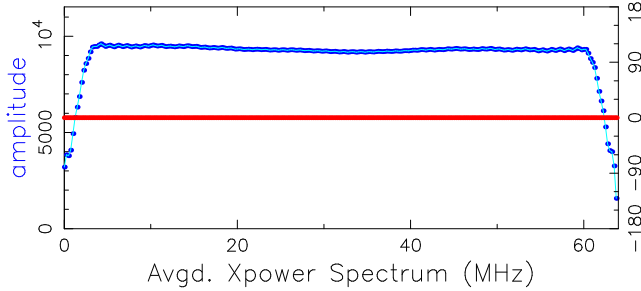
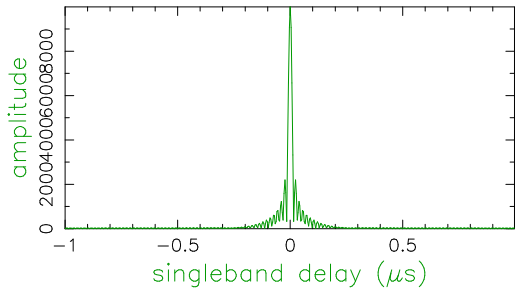
RMS Theor. Amplitude 305.705 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 298.447 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 1.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 21.1 0.0 Inc. seg. avg. 302.524 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 20.9 0.0 Inc. frq. avg. 319.122 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 u: az 292.1 el 39.3 pa 71.1 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uu.W.146.126B8R

Mk4/DiFX fourfit 3.20 rev 0
frontend

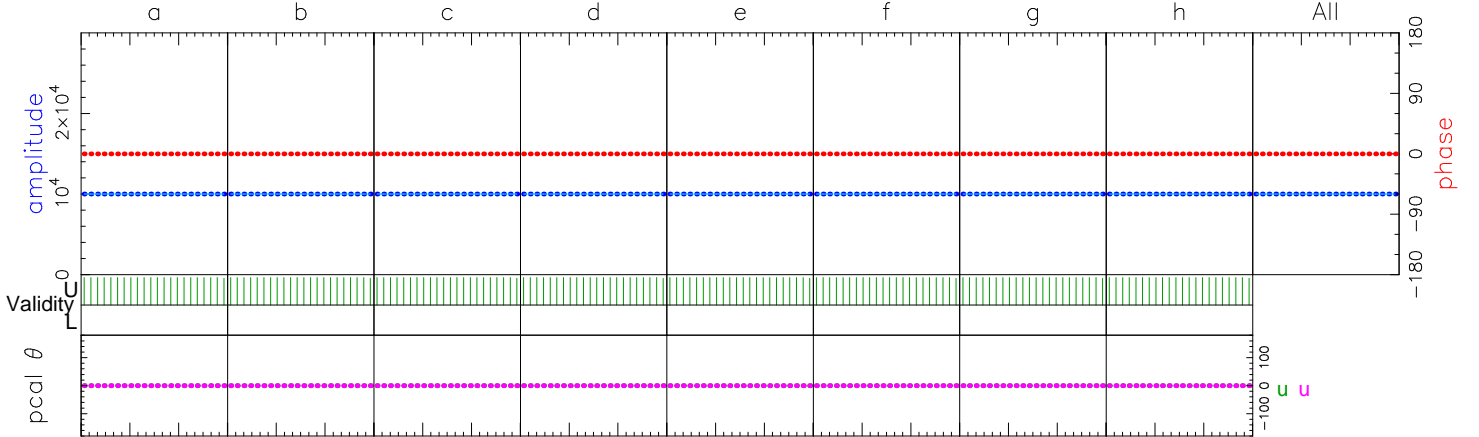
2013+370.126B8R, No0011, uu
KVNUS - KVNUS, fgroup W, pol LL



Fringe quality 9
SNR 366843.8
Int time 179.956
Amp 9999.999
Phase -0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Yr:day 16383
Start 2019:278
Stop 2019:278
FRT 150130.00
Corr/FF/build
2020:069:185016
2020:071:121827
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

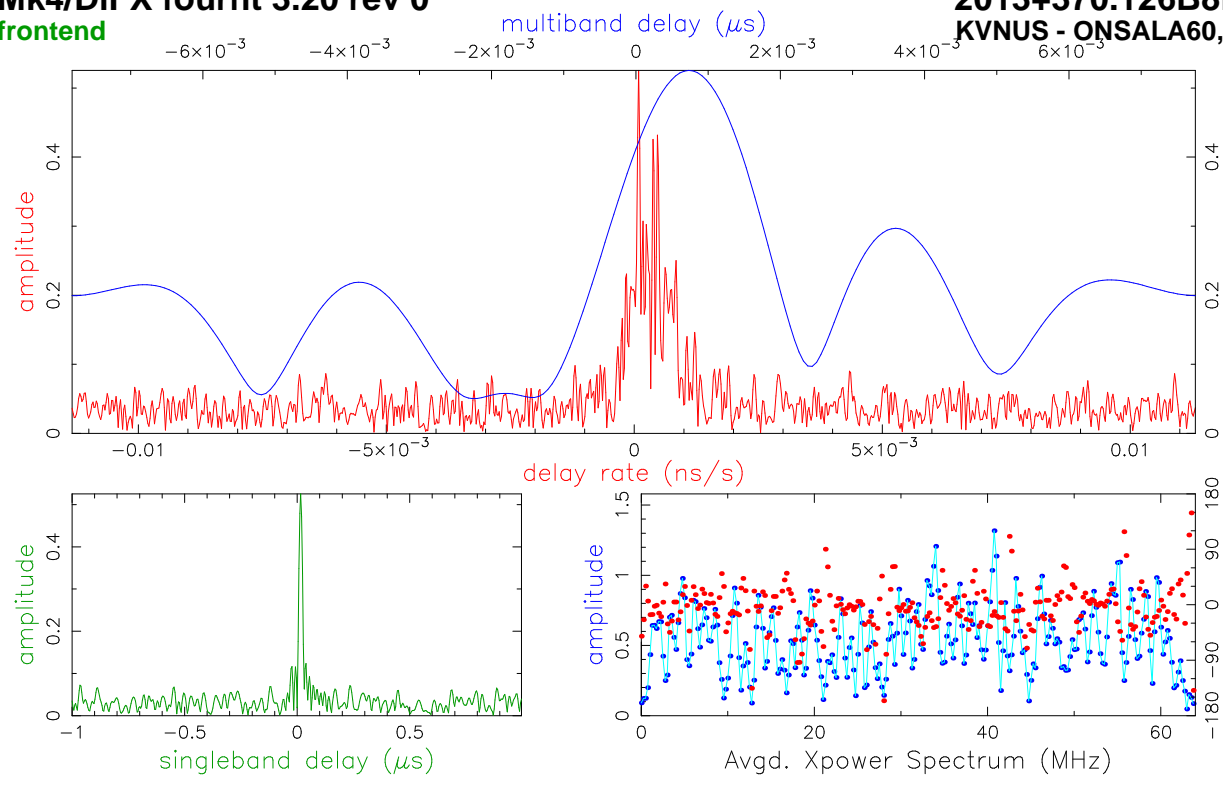


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 3.0E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 2.3E-08
Phase delay (usec)	-1.11657048545E-20	-1.11657048545E-20	-1.11657048545E-20	-1.11657048545E-20	-1.11657048545E-20	-1.11657048545E-20	-1.11657048545E-20	-1.11657048545E-20	-1.11657E-20	+/- 1.0E-11
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 9.7E-14
Total phase (deg)			-0.0						-0.0	+/- 0.0
RMS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Theor.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Amplitude	9999.999 +/- 0.027	9999.999	9999.999	9999.999	9999.999	9999.999	9999.999	9999.999		
Search (1024X32)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Interp.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Inc. seg. avg.	10000.000	10000.000	10000.000	10000.000	10000.000	10000.000	10000.000	10000.000		
Inc. frq. avg.	9999.999	9999.999	9999.999	9999.999	9999.999	9999.999	9999.999	9999.999		
PCal mode:	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL		
PCal rate:	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00		
Bits/sample:	2x2	2x2	2x2	2x2	2x2	2x2	2x2	2x2		
Sample rate (MSamp/s):	128	128	128	128	128	128	128	128		
Data rate (Mb/s):	2048	2048	2048	2048	2048	2048	2048	2048		
PC period (AP's)	5	5	5	5	5	5	5	5		
sb window (us)	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000		
mb window (us)	-0.008	0.008	-0.008	0.008	-0.008	0.008	-0.008	0.008		
dr window (ns/s)	-0.011	0.011	-0.011	0.011	-0.011	0.011	-0.011	0.011		
ion window (TEC)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

u: az 292.1 el 39.3 pa 71.1 u: az 292.1 el 39.3 pa 71.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uu..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uu.W.85.126B8R

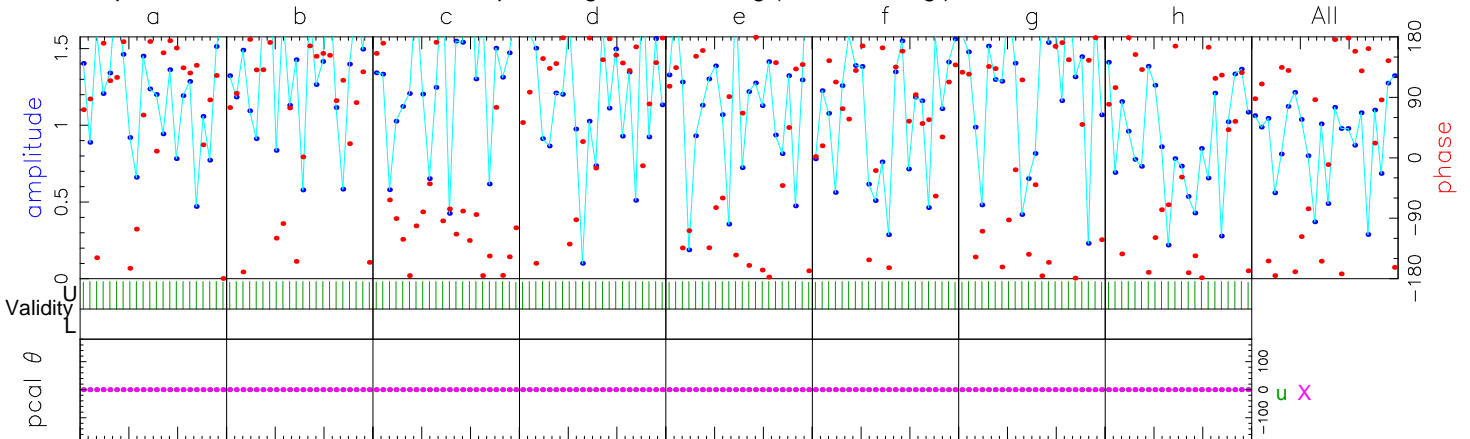


Fringe quality 8

SNR 19.3
Int time 179.778
Amp 0.526
Phase 162.3
PFD 0.0e+00
Delays (us)
SBD 0.015457
MBD 0.000731
Fringe rate (Hz) 0.007682
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

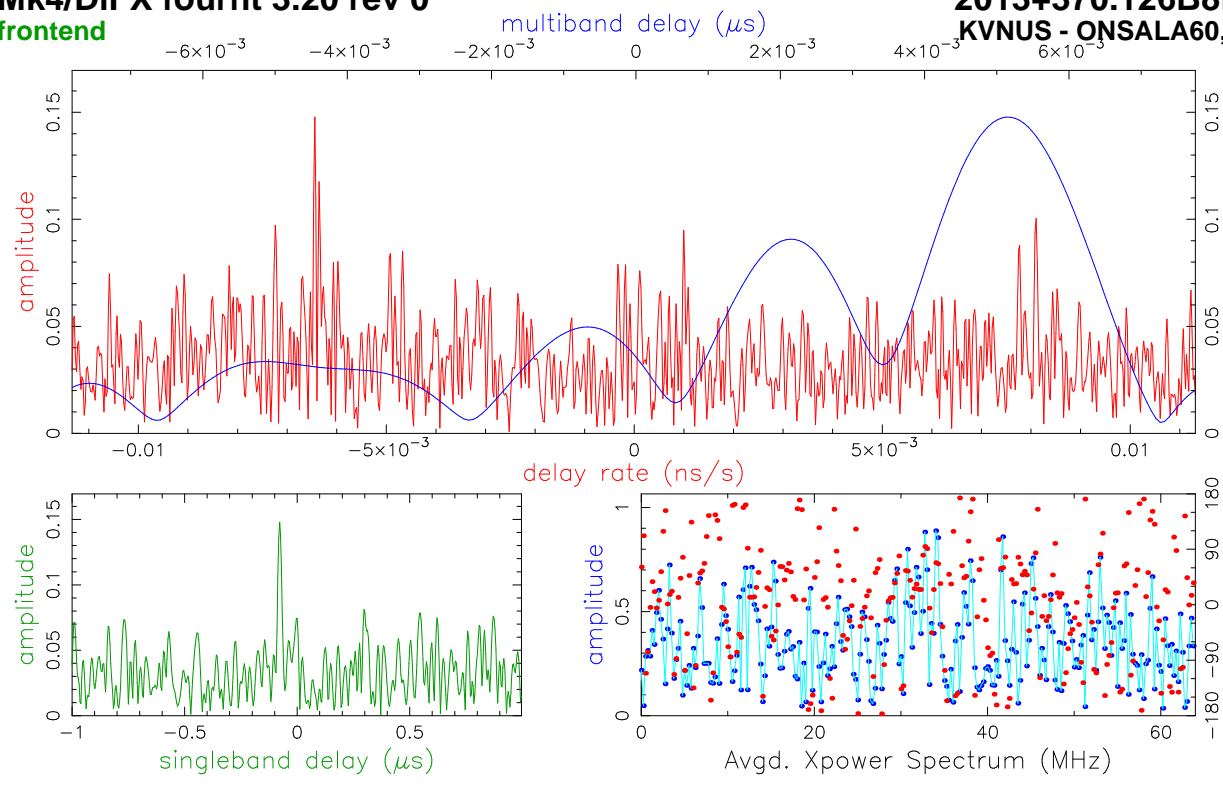
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:069:185016
2020:071:121830
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



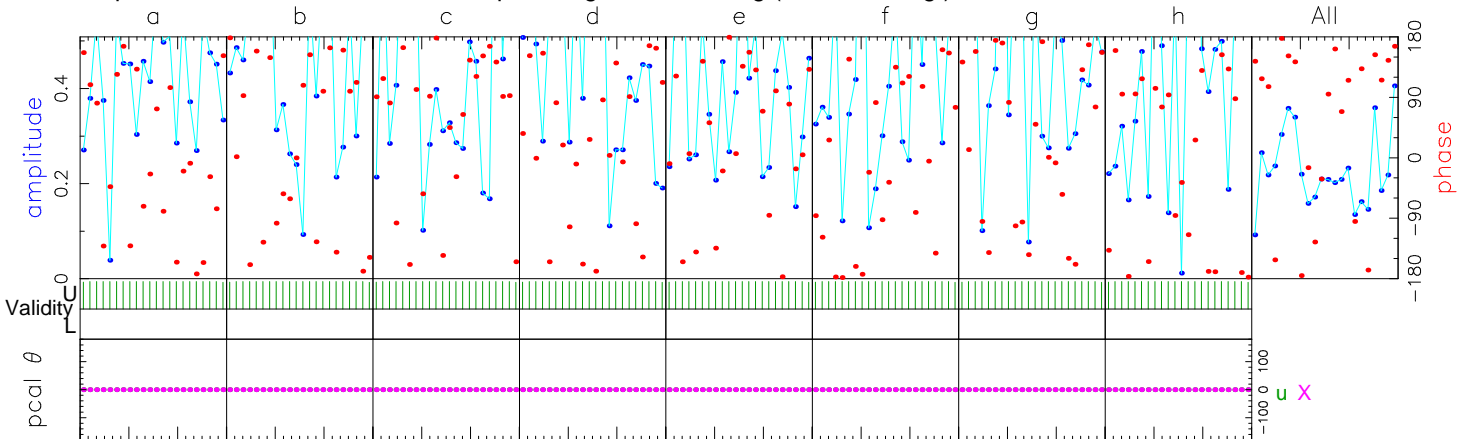
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	137.7	146.8	-126.4	149.4	179.9	100.9	173.8	157.0	Phase	162.3
	0.7	0.8	0.9	0.6	0.6	0.5	0.7	0.4	Ampl.	0.6
	261.5	260.7	260.4	260.1	260.3	260.2	260.9	262.0	Sbd box	261.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.99231385017E+03		Apriori delay (usec)		-2.99233020659E+03		Resid mbdelay (usec)		7.31417E-04	+/- 5.6E-05
Sband delay (usec)	-2.99231474984E+03		Apriori clock (usec)		-2.3883551E+01		Resid sbdelay (usec)		1.54568E-02	+/- 4.5E-04
Phase delay (usec)	-2.99233020135E+03		Apriori clockrate (us/s)		-1.2800004E-07		Resid phdelay (usec)		5.23358E-06	+/- 1.9E-07
Delay rate (us/s)	-1.43948962165E+00		Apriori rate (us/s)		-1.43948971082E+00		Resid rate (us/s)		8.91776E-08	+/- 1.8E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.06360344387E-06		Resid phase (deg)		162.3	+/- 5.9

ph/seg (deg) 67.9 13.9 Search (1024X32) 0.512 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 91.3 24.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 41.5 8.4 Inc. seg. avg. 0.892 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 35.8 14.7 Inc. frq. avg. 0.642 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
u: az 292.1 el 39.3 pa 71.1 X: az 96.8 el 50.1 pa -42.1 u,v (fr/asec) 10351.507 -2027.879 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uX..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uX.W.107.126B8R



Fringe quality 0
 SNR 5.4
 Int time 179.778
 Amp 0.170
 Phase 149.5
 PFD 1.0e+00
 Delays (us)
 SBD -0.077881
 MBD 0.005153
 Fringe rate (Hz)
 -0.556542
 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
 2020:069:185016
 2020:071:121833
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-2.99240317865E+03									
Sband delay (usec)	-2.99240808784E+03									
Phase delay (usec)	-2.99233020177E+03									
Delay rate (us/s)	-1.43949617173E+00									
Total phase (deg)			-208.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									149.5	+/- 21.1
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

ph/seg (deg) 68.4 49.6 Search (1024X32) 0.144 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.2 86.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.8 29.9 Inc. seg. avg. 0.191 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 47.3 52.2 Inc. frq. avg. 0.162 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 u: az 292.1 el 39.3 pa 71.1 X: az 96.8 el 50.1 pa -42.1 u,v (fr/asec) 10351.507 -2027.879 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uX..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uX.W.129.126B8R

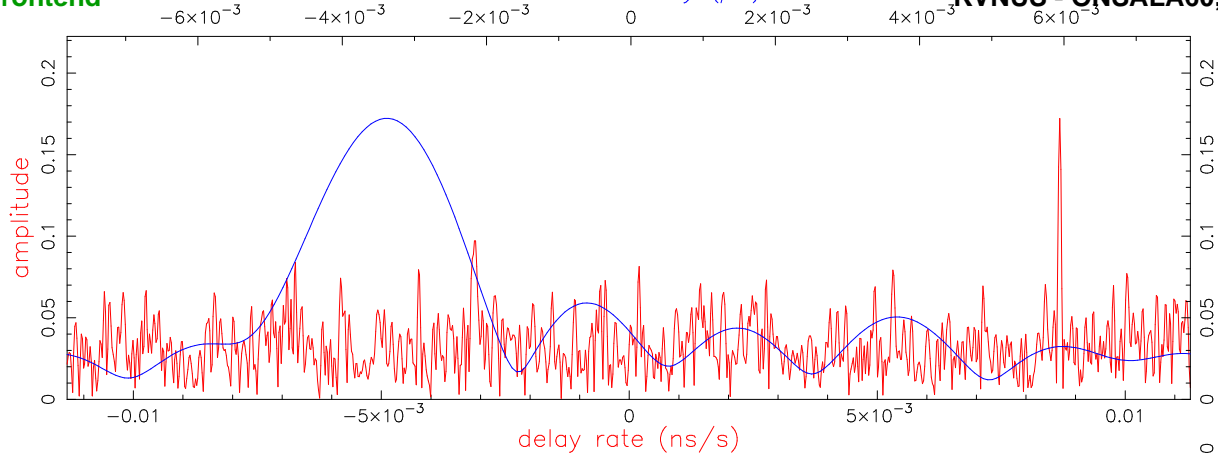
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, uX

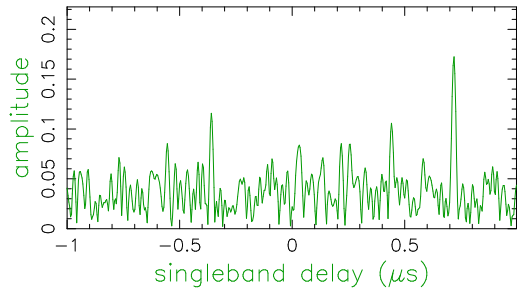
KVNUS - ONSALA60, fgroup W, pol RL

multiband delay (μs)

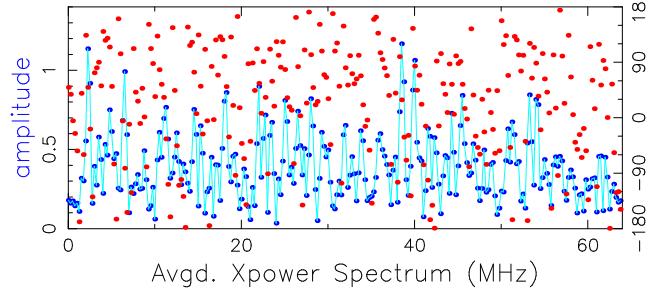


Fringe quality 0

SNR 6.3
Int time 179.778
Amp 0.223
Phase 97.3
PFD 3.3e-02
Delays (us)
SBD 0.718137
MBD -0.003377
Fringe rate (Hz)
0.747883
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

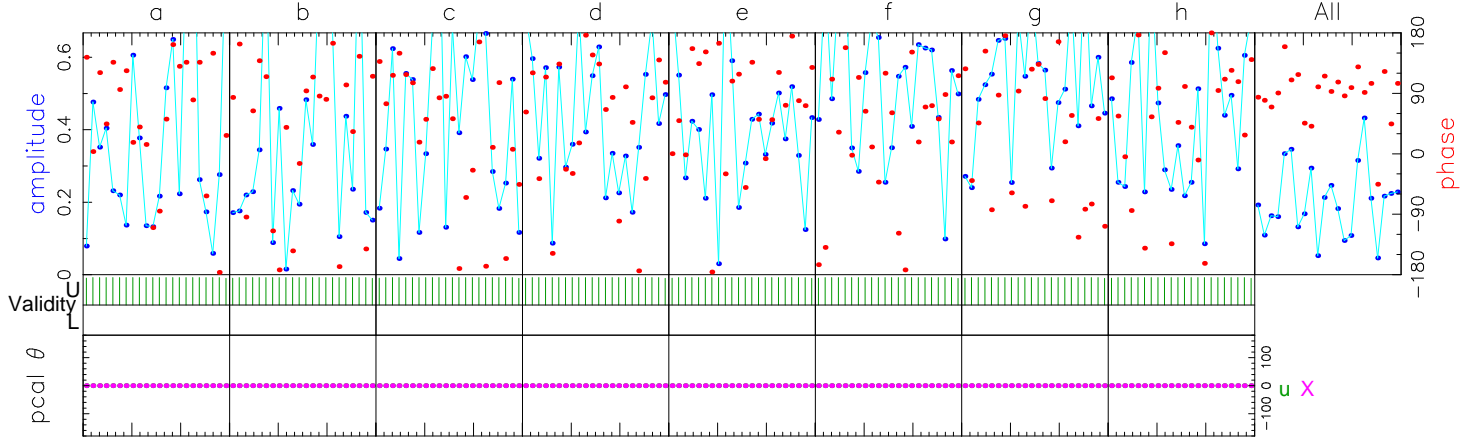


delay rate (ns/s)

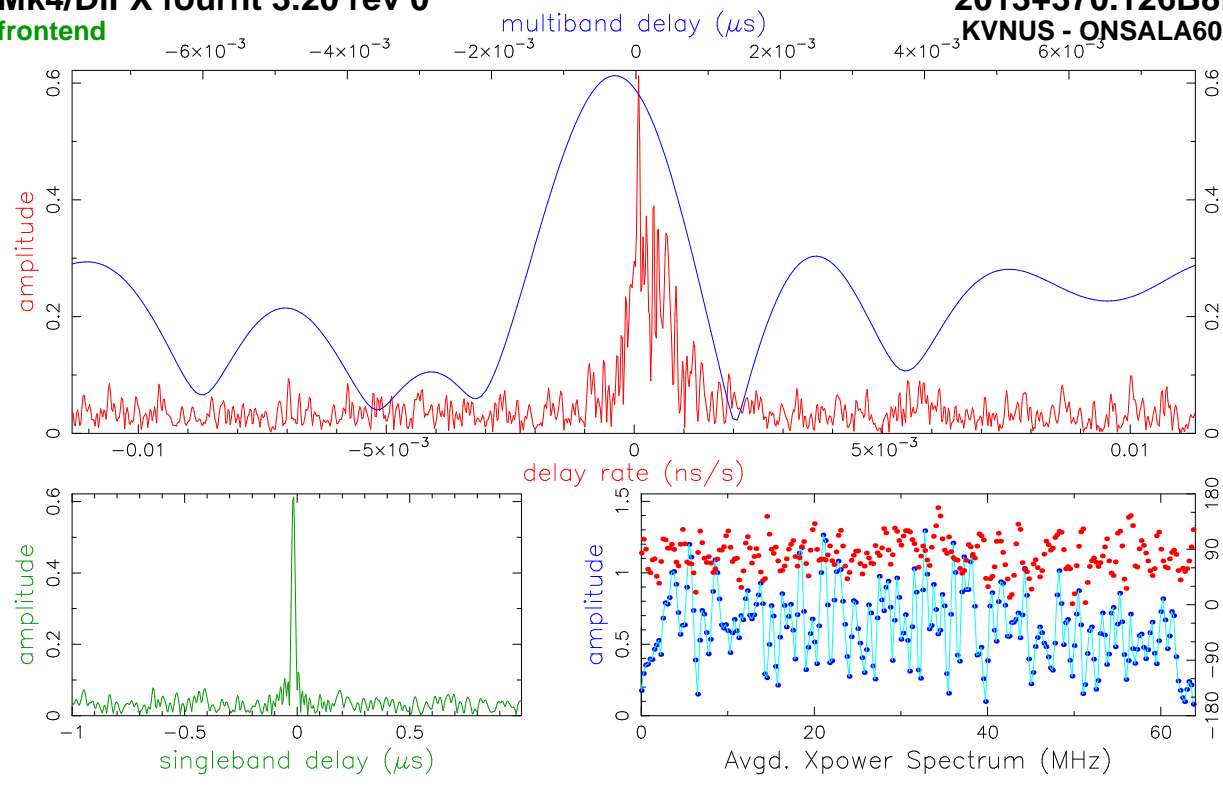


Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:069:185016
2020:071:121835
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-2.99161483391E+03								Resid mbdelay (usec)	-3.37732E-03 +/- 1.7E-04
Sband delay (usec)	-2.99161206934E+03								Resid sbdelay (usec)	7.18137E-01 +/- 1.4E-03
Phase delay (usec)	-2.99233020345E+03								Resid phdelay (usec)	3.13641E-06 +/- 5.8E-07
Delay rate (us/s)	-1.43948102864E+00								Resid rate (us/s)	8.68218E-06 +/- 5.6E-09
Total phase (deg)		-261.1							Resid phase (deg)	97.3 +/- 18.1
	RMS	Theor.	Amplitude	0.223 +/- 0.035					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	41.1	42.5	Search (1024X32)	0.166					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	58.3	74.1	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	16.5	25.6	Inc. seg. avg.	0.206					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	29.2	44.7	Inc. frq. avg.	0.209					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
u: az 292.1 el 39.3 pa 71.1			X: az 96.8 el 50.1 pa -42.1						nlags: 256	t_cohere infinite
Control file: cf_1234_gmva			Input file: /Exps/c192c/v1_CygA2/1234/No0011/uX..126B8R							simultaneous interpolator
			Output file: /Exps/c192c/v1_CygA2/1234/No0011/uX.W.147.126B8R							

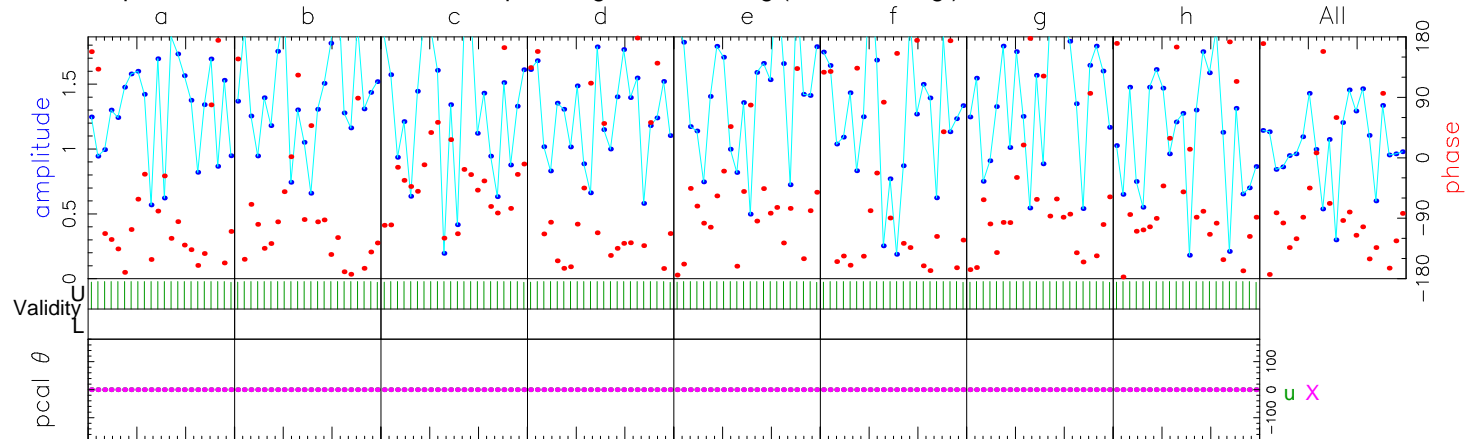


Fringe quality 8

SNR 22.8
 Int time 179.778
 Amp 0.622
 Phase -111.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.017220
 MBD -0.000337
 Fringe rate (Hz)
 0.007574
 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
 2020:069:185016
 2020:071:121828
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

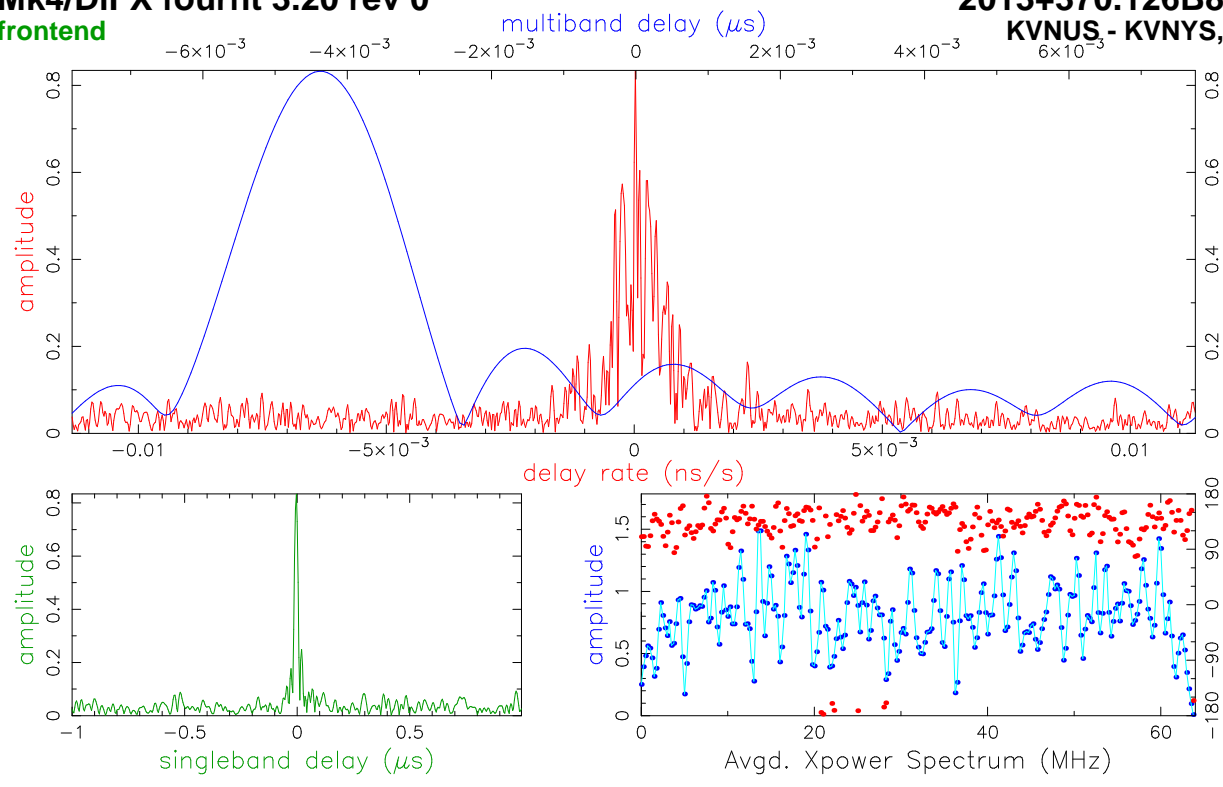
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-126.4	-128.5	-31.2	-151.4	-88.9	-154.9	-98.8	-104.7	Phase	-111.1		
	0.8	0.8	0.8	0.7	0.8	0.6	0.8	0.7	Ampl.	0.8		
	253.6	252.3	252.1	251.9	252.0	251.6	252.7	252.9	Sbd box	252.6		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
X	1000	1000	1000	1000	1000	1000	1000	1000				
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-2.99234616820E+03		Apriori delay (usec)		-2.99233020659E+03		Resid mbdelay (usec)		-3.36614E-04	+/- 4.8E-05		
Sband delay (usec)	-2.99234742659E+03		Apriori clock (usec)		-2.3883551E+01		Resid sbdelay (usec)		-1.72200E-02	+/- 3.8E-04		
Phase delay (usec)	-2.99233021017E+03		Apriori clockrate (us/s)		-1.2800004E-07		Resid phdelay (usec)		-3.58129E-06	+/- 1.6E-07		
Delay rate (us/s)	-1.43948962290E+00		Apriori rate (us/s)		-1.43948971082E+00		Resid rate (us/s)		8.79235E-08	+/- 1.6E-09		
Total phase (deg)			Apriori accel (us/s/s)		-2.06360344387E-06		Resid phase (deg)		-111.1	+/- 5.0		
	RMS	Theor.	Amplitude	0.622 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	67.7	11.8	Search (1024X32)	0.602		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	80.4	20.6	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	43.1	7.1	Inc. seg. avg.	1.009		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	25.0	12.4	Inc. frq. avg.	0.755		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
u: az 292.1 el 39.3 pa 71.1	X: az 96.8 el 50.1 pa -42.1		u, v (fr/asec)		10351.507 -2027.879				simultaneous interpolator			
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uX..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uX.W.90.126B8R												

Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.126B8R, No0011, uy
 KVNUS - KVNYS, fgroup W, pol RR

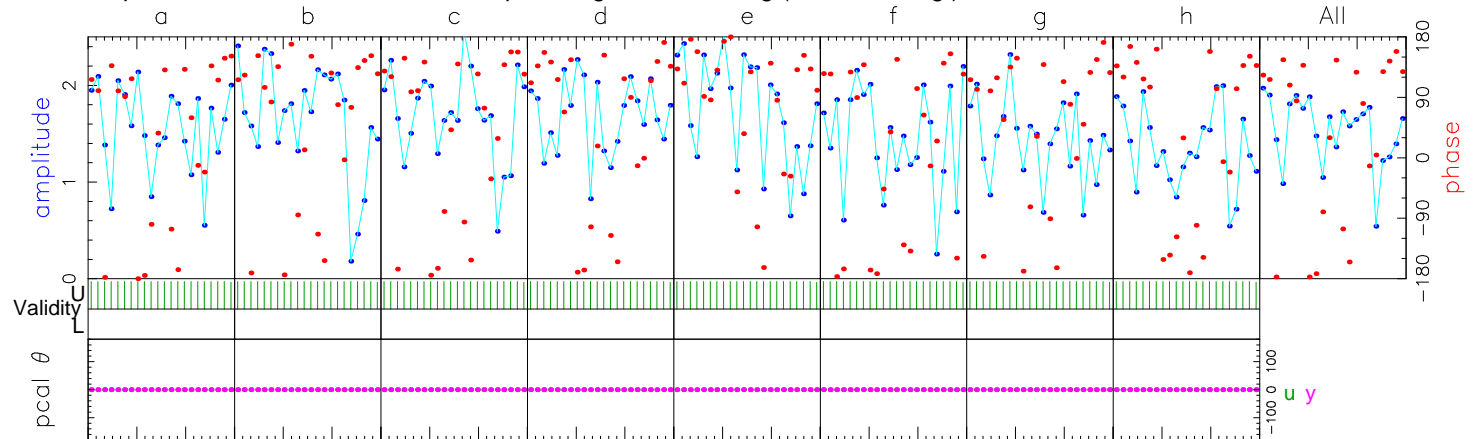


Fringe quality 7

SNR 30.6
 Int time 179.956
 Amp 0.834
 Phase 135.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.004485
 MBD -0.004374
 Fringe rate (Hz) 0.001247
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

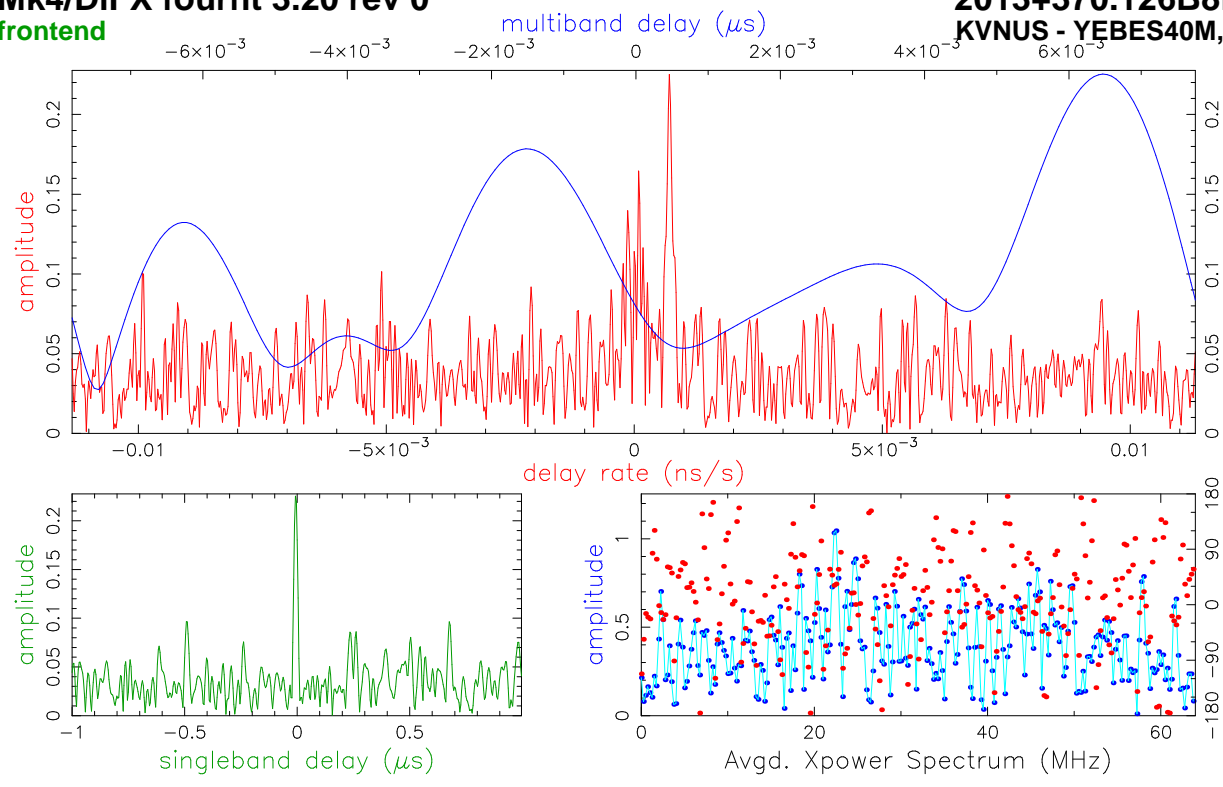
Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121830
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



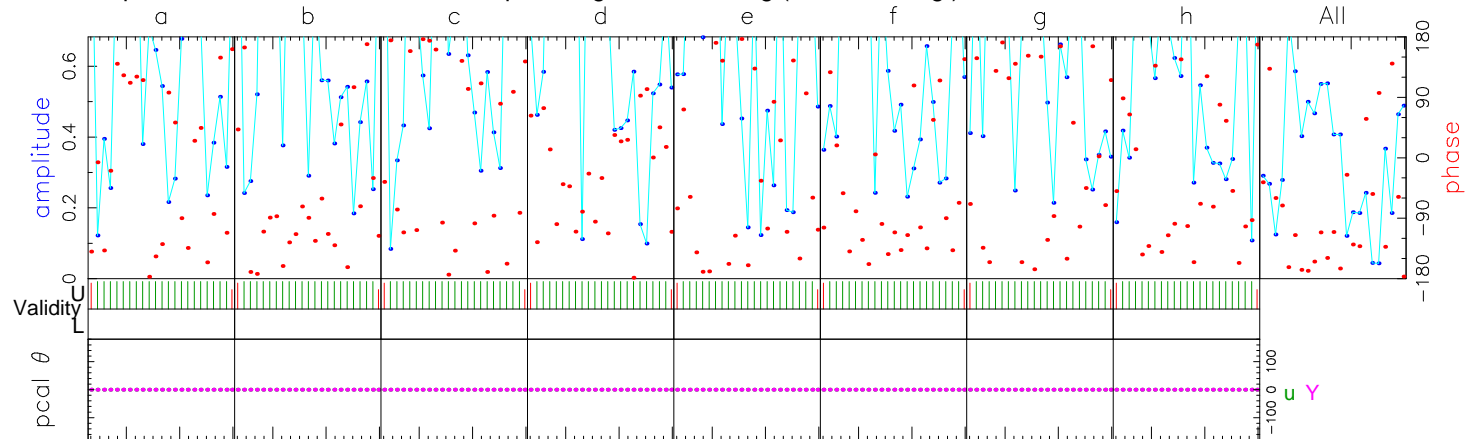
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	133.3	136.4	146.1	133.5	128.2	138.8	123.9	146.7	Phase	135.8	
u	0.9	0.9	0.9	0.9	1.0	0.8	0.7	0.7	Ampl.	0.8	
y	256.1	256.1	255.9	255.7	255.9	255.5	255.7	255.9	Sbd box	255.9	
u	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	-7.16214047639E+02				-7.16209673657E+02				Resid mbdelay (usec)	-4.37398E-03	+/- 3.5E-05
Sband delay (usec)	-7.16214158657E+02				-2.0722914E+01				Resid sbdelay (usec)	-4.48500E-03	+/- 2.8E-04
Phase delay (usec)	-7.16209669279E+02				2.9999999E-07				Resid phdelay (usec)	4.37870E-06	+/- 1.2E-07
Delay rate (us/s)	-4.10191352688E-02				-4.10191497446E-02				Resid rate (us/s)	1.44758E-08	+/- 1.2E-09
Total phase (deg)			31.8		1.76581372054E-06				Resid phase (deg)	135.8	+/- 3.7

ph/seg (deg) 69.1 8.8 Search (1024X32) 0.805 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 93.4 15.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 8.6 5.3 Inc. seg. avg. 1.515 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 10.1 9.2 Inc. frq. avg. 0.836 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 u: az 292.1 el 39.3 pa 71.1 y: az 289.7 el 41.8 pa 69.5 u,v (fr/asec) 296.071 -95.876 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uy..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uy.W.104.126B8R



Fringe quality 9
SNR 7.9
Int time 162.348
Amp 0.228
Phase -137.2
PFD 4.0e-07
Delays (us)
SBD -0.006481
MBD 0.006516
Fringe rate (Hz) 0.061569
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150016.89
Stop 150259.71
FRT 150130.00
Corr/FF/build
2020:069:185016
2020:071:121830
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec

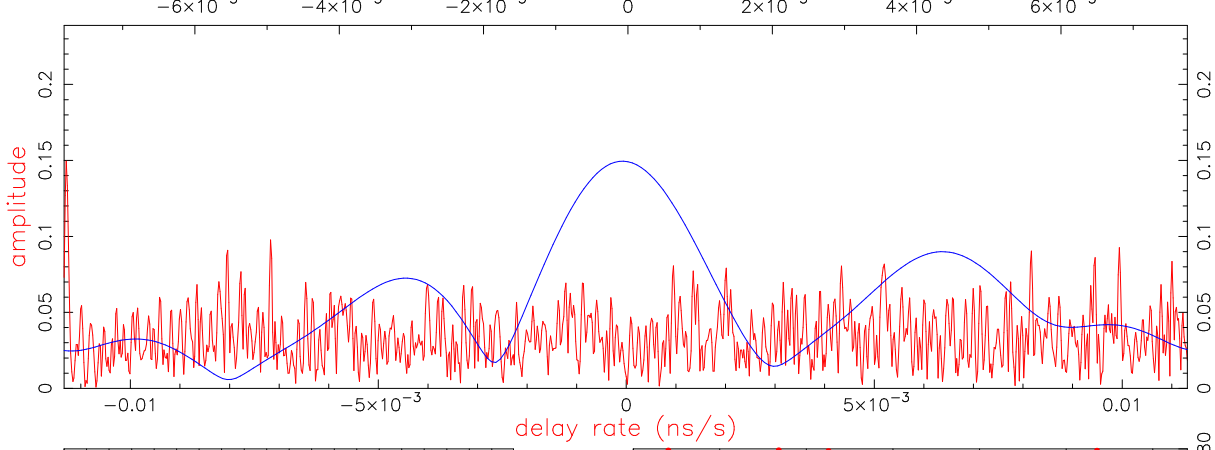


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	166.5	-110.1	-161.3	-31.6	-154.3	-113.3	176.6	-130.3	Phase	-137.2
	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.2	Ampl.	0.3
	257.2	255.3	256.1	255.6	122.2	255.6	255.7	275.0	Sbd box	255.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.64992038323E+02		Apriori delay (usec)		1.65001147206E+02		Resid mbdelay (usec)		6.51612E-03	+/- 1.4E-04
Sband delay (usec)	1.64994665956E+02		Apriori clock (usec)		-1.1619759E+00		Resid sbdelay (usec)		-6.48125E-03	+/- 1.1E-03
Phase delay (usec)	1.65001142780E+02		Apriori clockrate (us/s)		1.7999998E-07		Resid phdelay (usec)		-4.42583E-06	+/- 4.7E-07
Delay rate (us/s)	-1.77880128551E+00		Apriori rate (us/s)		-1.77880200027E+00		Resid rate (us/s)		7.14759E-07	+/- 5.0E-09
Total phase (deg)	158.1		Apriori accel (us/s/s)		-5.56160368838E-06		Resid phase (deg)		-137.2	+/- 14.5

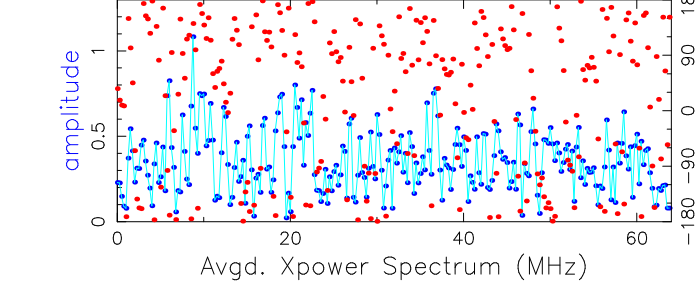
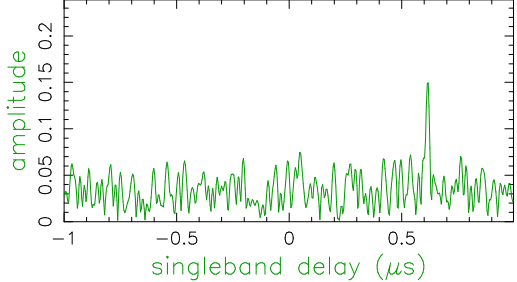
ph/seg (deg) 69.9 34.7 Search (1024X32) 0.222 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 95.2 60.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 55.8 20.5 Inc. seg. avg. 0.290 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 52.8 35.7 Inc. frq. avg. 0.305 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
u: az 292.1 el 39.3 pa 71.1 Y: az 70.1 el 38.2 pa -64.0 u,v (fr/asec) 12792.730 -890.905 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uY..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uY.W.106.126B8R

multiband delay (μs)

Fringe quality 0

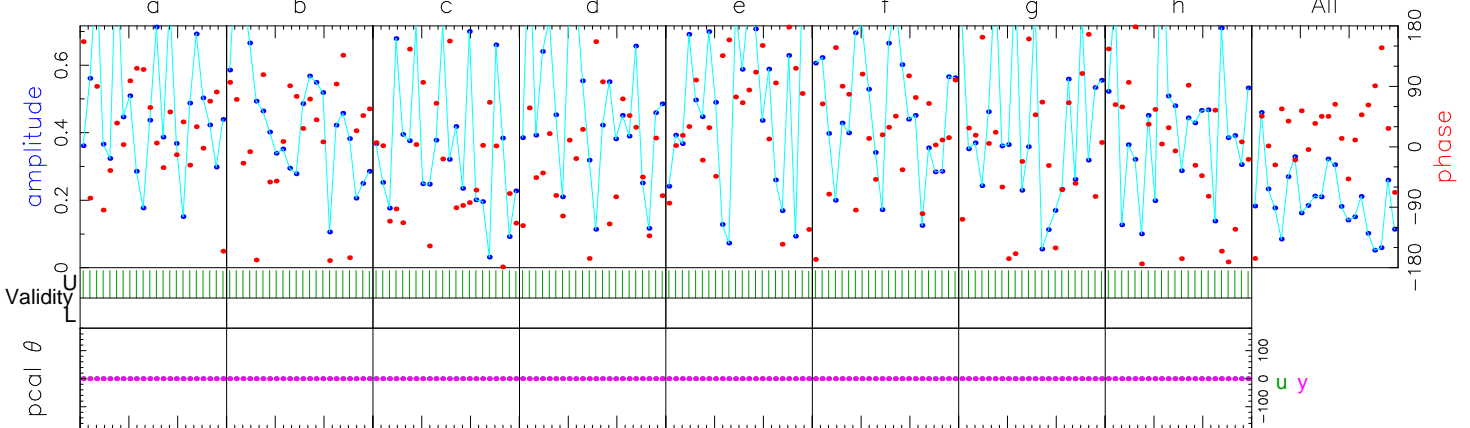


SNR 5.6
 Int time 179.956
 Amp 0.239
 Phase 27.9
 PFD 9.4e-01
 Delays (us)
 SBD 0.615411
 MBD -0.000094
 Fringe rate (Hz)
 -0.974647
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121832
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All			
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0					
u	1000	1000	1000	1000	1000	1000	1000	1000					
y	1000	1000	1000	1000	1000	1000	1000	1000					
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
u	1000	1000	1000	1000	1000	1000	1000	1000					
y	1000	1000	1000	1000	1000	1000	1000	1000					
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL					
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR					
Group delay (usec)(sbd)	-7.15600392216E+02												
Sband delay (usec)	-7.15594263157E+02												
Phase delay (usec)	-7.16209672759E+02												
Delay rate (us/s)	-4.10304644334E-02												
Total phase (deg)			-76.1										
				Apriori delay (usec)	-7.16209673657E+02				Resid mbdelay (usec)	-9.35586E-05	+/- 1.9E-04		
				Apriori clock (usec)	-2.0722914E+01				Resid sbdelay (usec)	6.15411E-01	+/- 1.5E-03		
				Apriori clockrate (us/s)	2.9999999E-07				Resid phdelay (usec)	8.98350E-07	+/- 6.6E-07		
				Apriori rate (us/s)	-4.10191497446E-02				Resid rate (us/s)	-1.13147E-05	+/- 6.4E-09		
				Apriori accel (us/s/s)	1.76581372054E-06				Resid phase (deg)	27.9	+/- 20.5		
ph/seg (deg)	57.7	48.1		Search (1024X32)	0.148				PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	70.2	83.9		Interp.	0.000				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	41.6	29.0		Inc. seg. avg.	0.232				Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	43.4	50.6		Inc. frq. avg.	0.247				Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
									Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

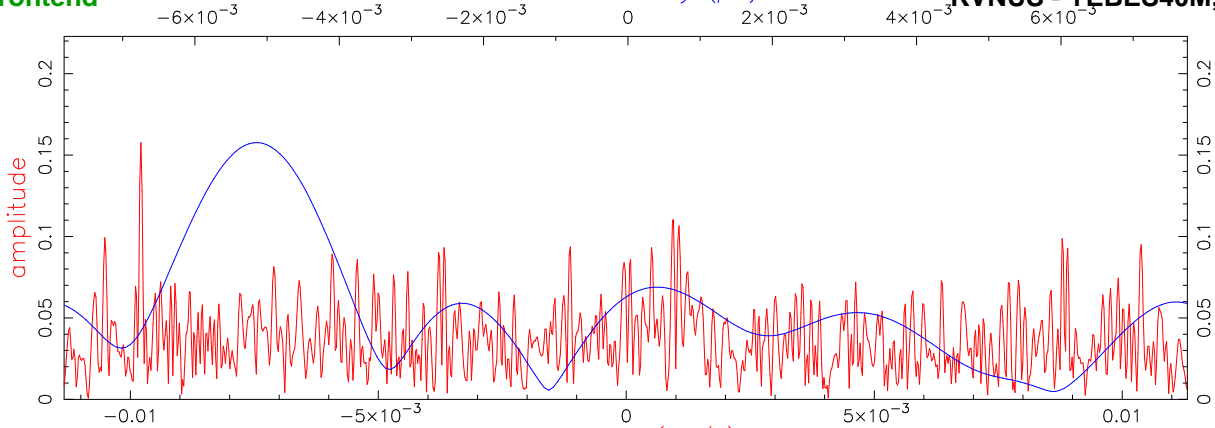
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, uY

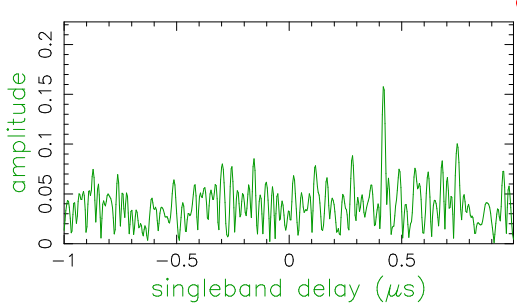
KVNUS - YEBES40M, fgroup W, pol LR

multiband delay (μs)

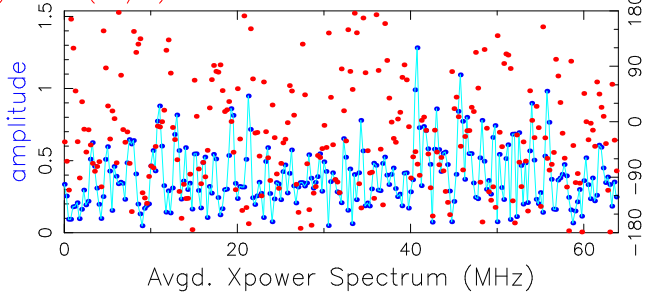


Fringe quality 0

SNR 5.6
 Int time 162.348
 Amp 0.223
 Phase 169.5
 PFD 9.4e-01
 Delays (us)
 SBD 0.419534
 MBD -0.005164
 Fringe rate (Hz)
 -0.844789
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

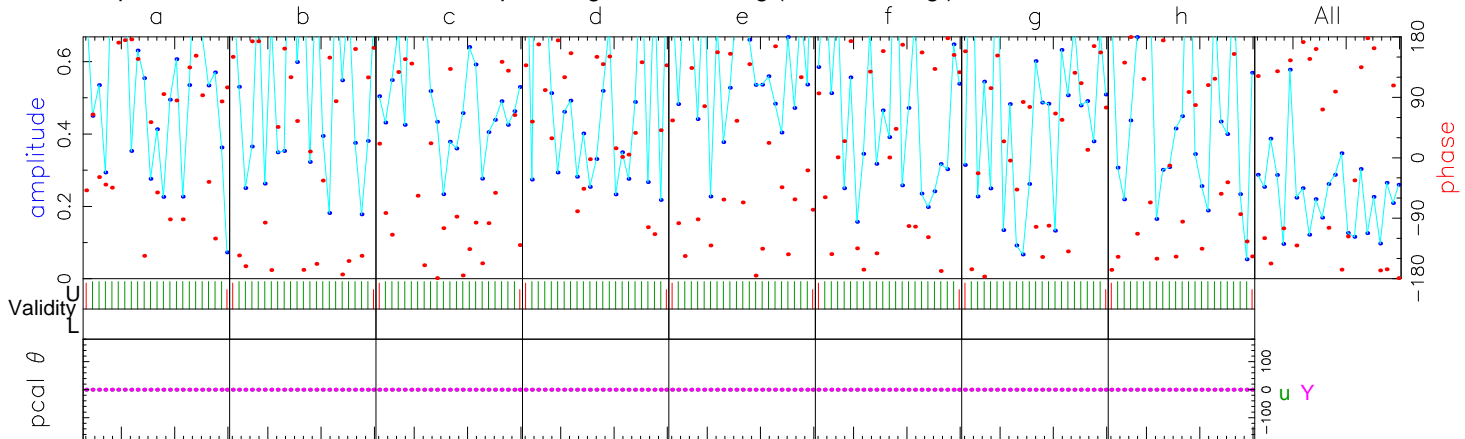


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150016.89
 Stop 150259.71
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121832
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



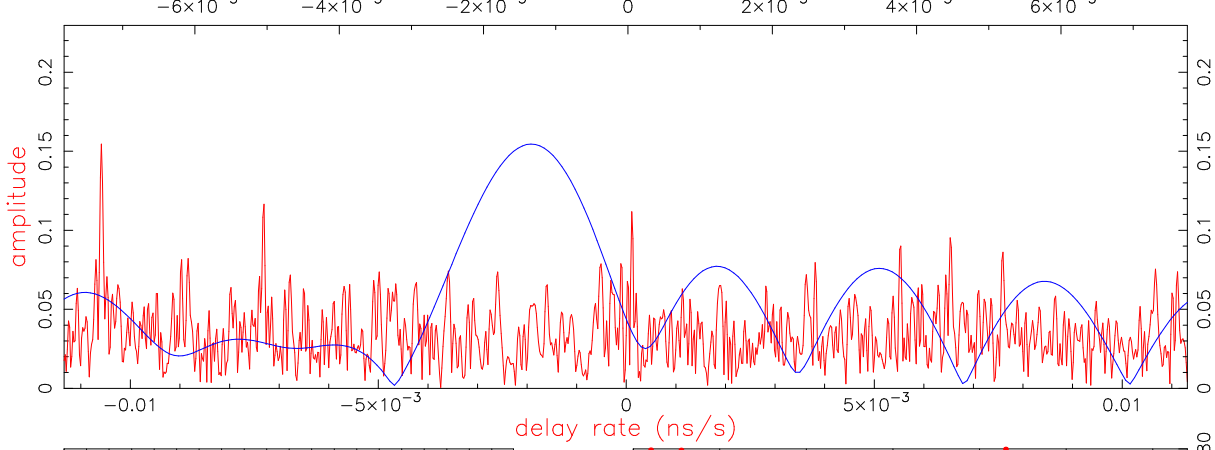
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	173.7	164.3	-155.8	136.5	-160.2	173.3	156.9	-176.5	Phase	169.5
	0.1	0.5	0.2	0.3	0.1	0.1	0.2	0.2	Ampl.	0.2
	34.5	363.5	82.1	203.3	262.1	333.8	444.5	27.5	Sbd box	364.4
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.65417858508E+02		Apriori delay (usec)		1.65001147206E+02		Resid mbdelay (usec)		-5.16370E-03	+/- 1.9E-04
Sband delay (usec)	1.65420681456E+02		Apriori clock (usec)		-1.1619759E+00		Resid sbdelay (usec)		4.19534E-01	+/- 1.5E-03
Phase delay (usec)	1.65001152671E+02		Apriori clockrate (us/s)		1.7999998E-07		Resid phdelay (usec)		5.46516E-06	+/- 6.6E-07
Delay rate (us/s)	-1.77881180743E+00		Apriori rate (us/s)		-1.77880200027E+00		Resid rate (us/s)		-9.80716E-06	+/- 7.0E-09
Total phase (deg)	104.8		Apriori accel (us/s/s)		-5.56160368838E-06		Resid phase (deg)		169.5	+/- 20.5

	RMS	Theor.	Amplitude	0.223 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	59.9	49.2	Search (1024X32)	0.157	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	83.0	85.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	24.6	29.0	Inc. seg. avg.	0.243	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	48.2	50.6	Inc. frq. avg.	0.209	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
						ion window (TEC) 0.00 0.00

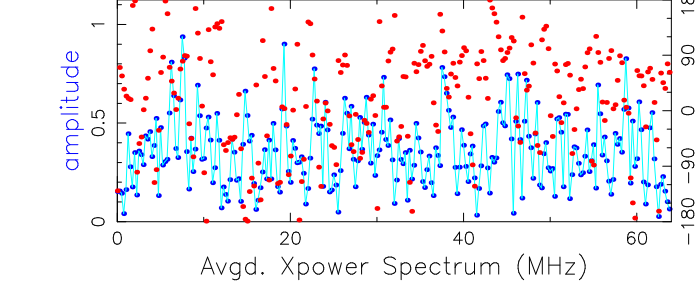
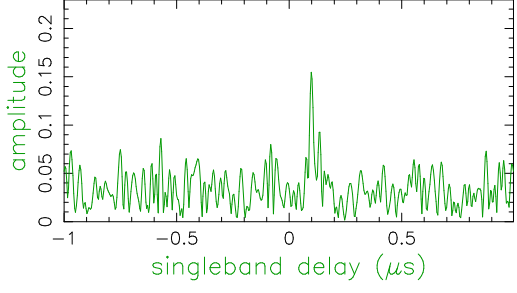
u: az 292.1 el 39.3 pa 71.1 Y: az 70.1 el 38.2 pa -64.0 u,v (fr/asec) 12792.730 -890.905 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uY..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uY.W.123.126B8R

multiband delay (μ s)

Fringe quality 0

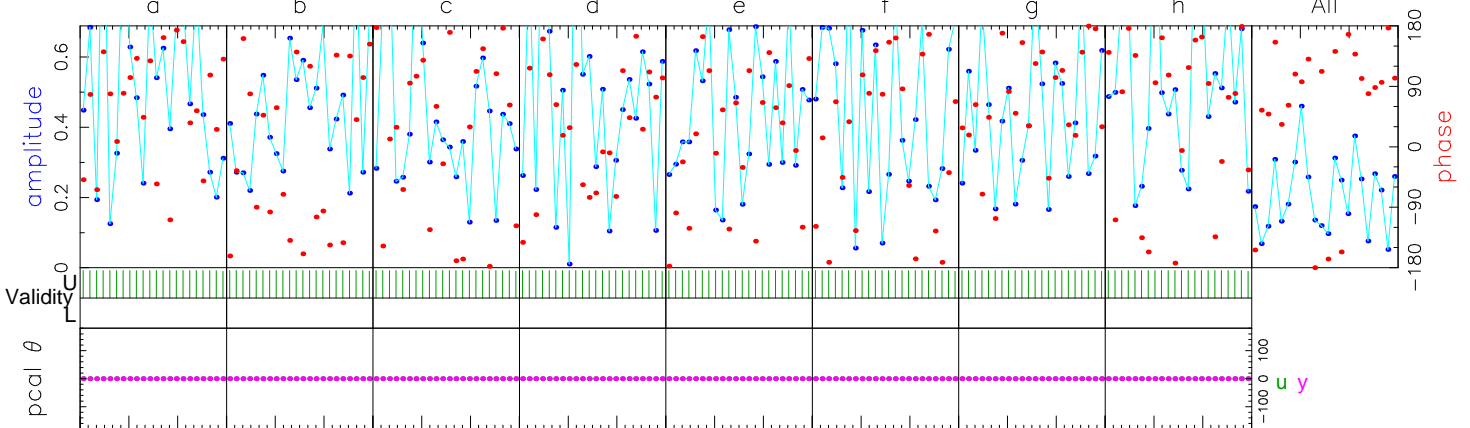


SNR 5.7
 Int time 179.956
 Amp 0.230
 Phase 121.5
 PFD 7.6e-01
 Delays (us)
 SBD 0.098658
 MBD -0.001319
 Fringe rate (Hz)
 -0.913144
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121834
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-7.16117242877E+02									
Sband delay (usec)	-7.16111015407E+02									
Phase delay (usec)	-7.16209669740E+02									
Delay rate (us/s)	-4.10297504412E-02									
Total phase (deg)			17.5							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
u,v										
u										
y										
Chans										
Tracks										
Chans										
Tracks										
RMS	50.4	47.1								
Theor.										
Amplitude										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.230 +/- 0.040										
0.152										
2.9999999E-07										
-4.10191497446E-02										
1.76581372054E-06										
-1.31922E-03										
9.86582E-02										
3.91773E-06										
-1.06007E-05										
121.5										
+/- 1.9E-04										
+/- 1.5E-03										
+/- 6.5E-07										
+/- 6.2E-09										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
-1.000										
1.000										
-0.008										
0.008										
-0.011										
0.011										
0.00										
0.00										

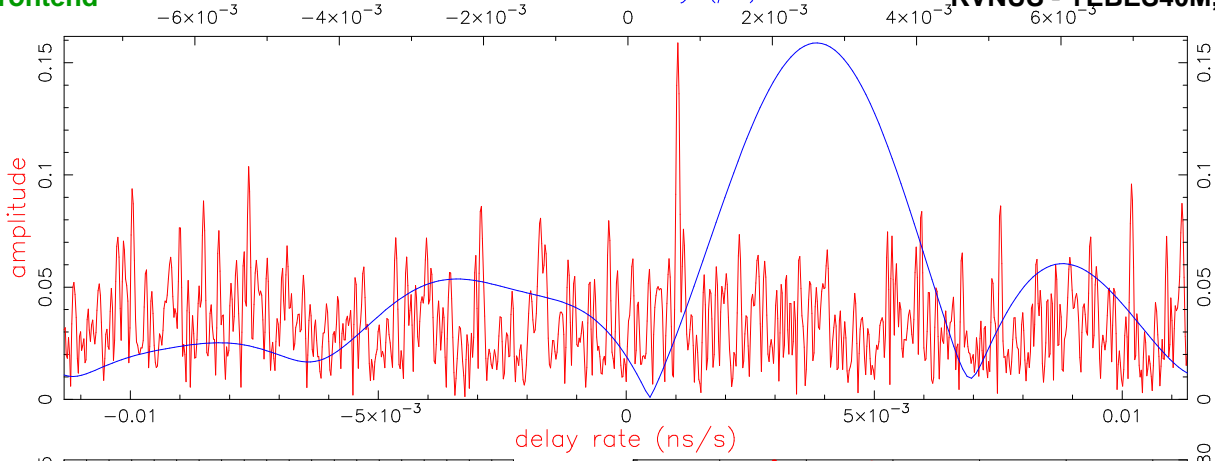
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, uY

KVNUS - YEBES40M, fgroup W, pol RL

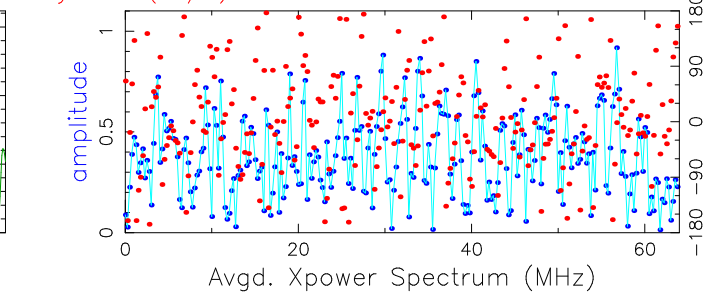
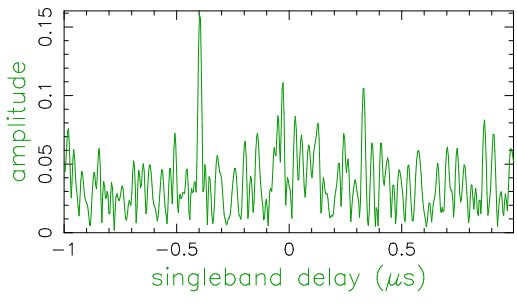
multiband delay (μs)



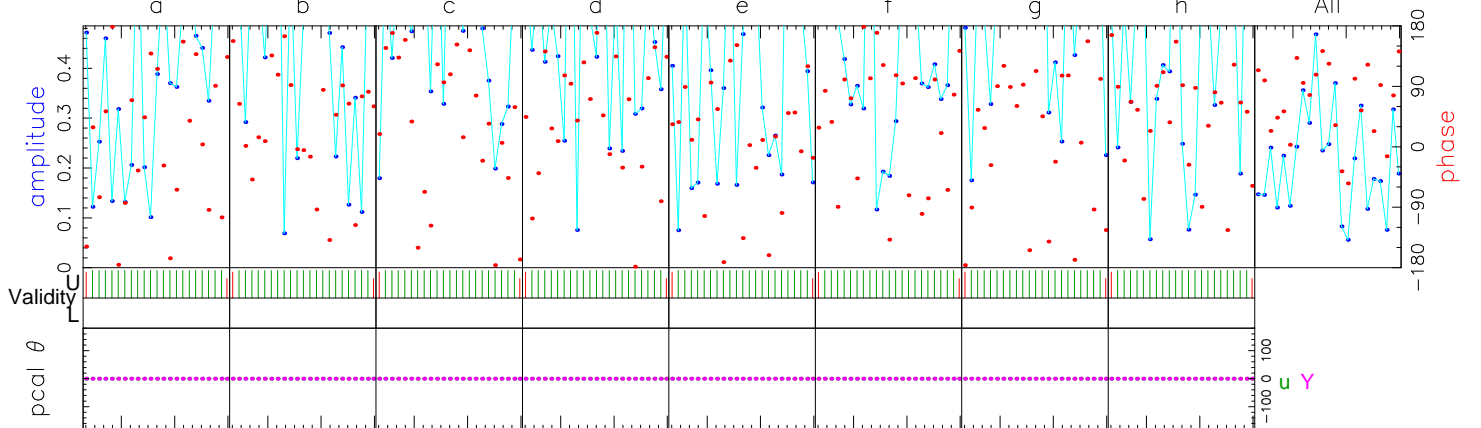
Fringe quality 0

SNR 5.6
 Int time 162.348
 Amp 0.162
 Phase 80.4
 PFD 9.1e-01
 Delays (us)
 SBD -0.396877
 MBD 0.002629
 Fringe rate (Hz) 0.089796
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150016.89
 Stop 150259.71
 FRT 150130.00
 Corr/FF/build 2020:069:185016
 2020:071:121834
 2019:280:115849
 RA & Dec (J2000) 20h15m28.729803s
 +37°10'59.514664"



Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec

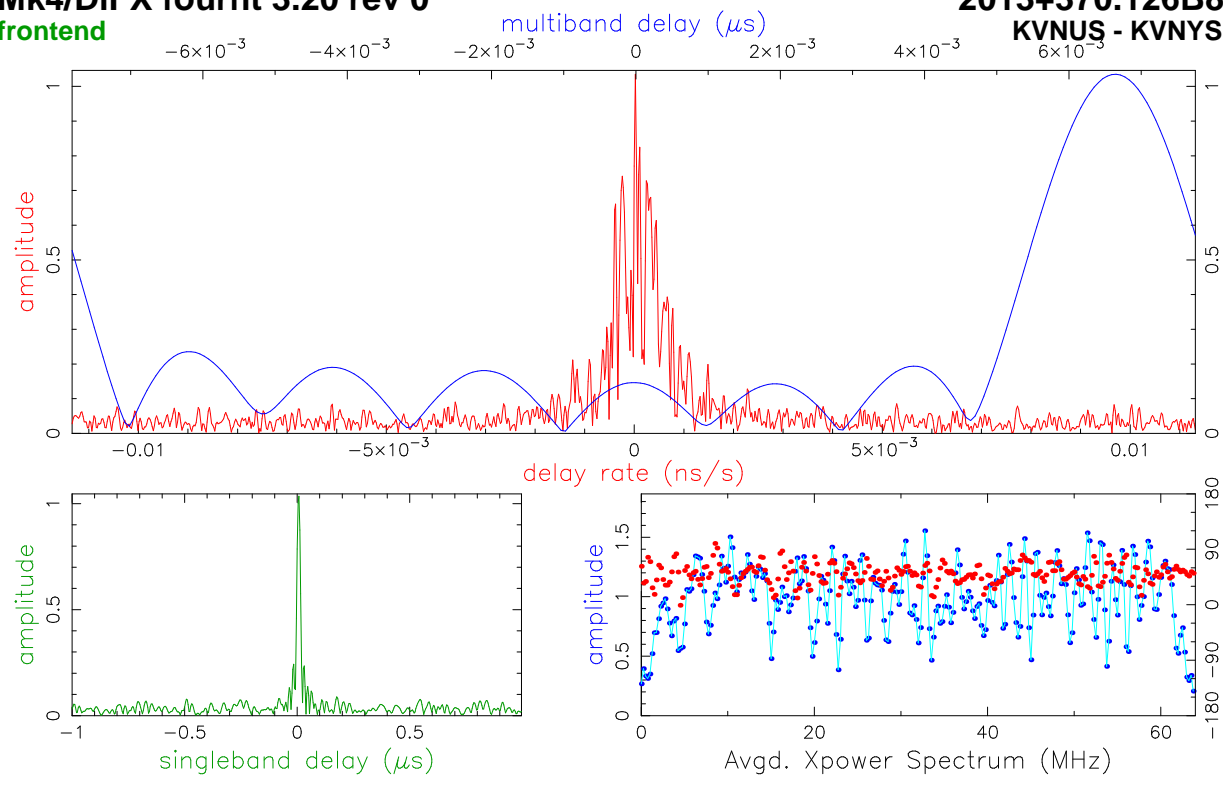


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd) 1.64597526050E+02 Apriori delay (usec) 1.65001147206E+02 Resid mbdelay (usec) 2.62884E-03 +/- 1.9E-04
 Sband delay (usec) 1.64604270706E+02 Apriori clock (usec) -1.1619759E+00 Resid sbdelay (usec) -3.96877E-01 +/- 1.5E-03
 Phase delay (usec) 1.65001149800E+02 Apriori clockrate (us/s) 1.7999998E-07 Resid phdelay (usec) 2.59408E-06 +/- 6.6E-07
 Delay rate (us/s) -1.77880095784E+00 Apriori rate (us/s) -1.77880200027E+00 Resid rate (us/s) 1.04244E-06 +/- 7.0E-09
 Total phase (deg) 15.8 Apriori accel (us/s/s) -5.56160368838E-06 Resid phase (deg) 80.4 +/- 20.4

ph/seg (deg) 57.3 48.9 Amplitude 0.162 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 72.4 85.4 Search (1024X32) 0.158 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 22.3 28.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.6 50.4 Inc. seg. avg. 0.159 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 292.1 el 39.3 pa 71.1 Y: az 70.1 el 38.2 pa -64.0 u,v (fr/asec) 12792.730 -890.905 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uY..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uY.W.140.126B8R

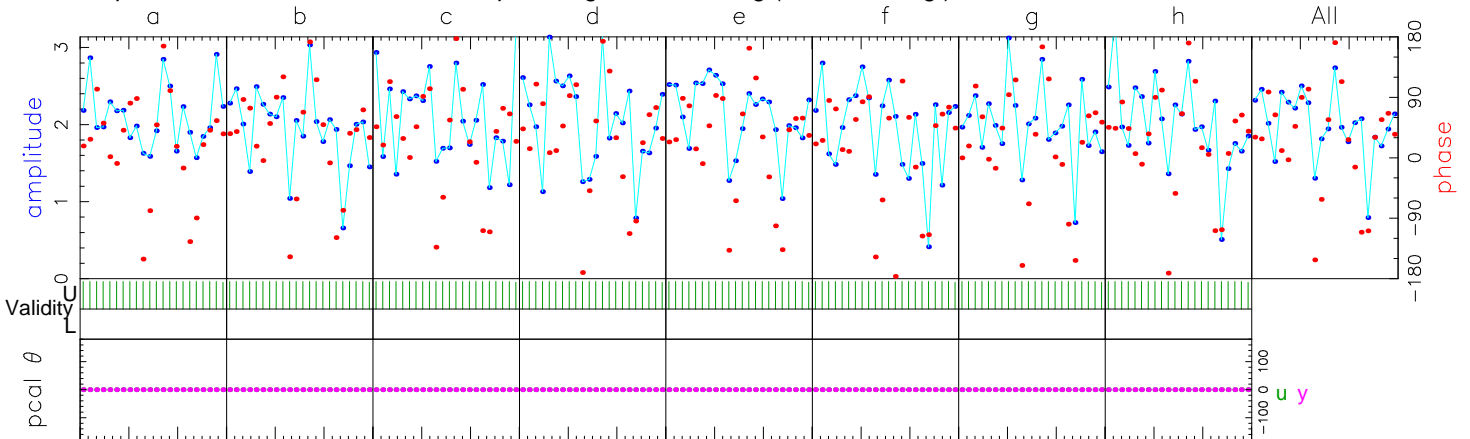


Fringe quality 7

SNR 38.4
 Int time 179.956
 Amp 1.046
 Phase 48.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.006519
 MBD 0.006636
 Fringe rate (Hz) 0.001263
 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
 2020:069:185016
 2020:071:121828
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-7.16203037639E+02									
Sband delay (usec)	-7.16203154907E+02									
Phase delay (usec)	-7.16209672101E+02									
Delay rate (us/s)	-4.10191350817E-02									
Total phase (deg)			-55.7							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									48.3	+/- 3.0

ph/seg (deg) 75.2 7.0
 amp/seg (%) 100.0 12.2
 ph/frq (deg) 4.8 4.2
 amp/frq (%) 7.3 7.4

RMS Theor. Amplitude 1.046 +/- 0.027
 Search (1024X32) 0.985
 Interp. 0.000
 Inc. seg. avg. 1.989
 Inc. frq. avg. 1.035

Group delay (usec)(sbd) -7.16209673657E+02
 Sband delay (usec) -2.0722914E+01
 Phase delay (usec) 2.9999999E-07
 Delay rate (us/s) -4.10191497446E-02
 Total phase (deg) 1.76581372054E-06

Resid mbdelay (usec) 6.63602E-03 +/- 2.8E-05
 Resid sbdelay (usec) 6.51875E-03 +/- 2.2E-04
 Resid phdelay (usec) 1.55665E-06 +/- 9.6E-08
 Resid rate (us/s) 1.46629E-08 +/- 9.3E-10
 Resid phase (deg) 48.3 +/- 3.0

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 PCal rate: 0.000E+00, 0.000E+00 (us/s)
 Bits/sample: 2x2 SampCntNorm: enabled
 Sample rate(MISamp/s): 128
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite

sb window (us) -1.000 1.000
 mb window (us) -0.008 0.008
 dr window (ns/s) -0.011 0.011
 ion window (TEC) 0.00 0.00

u: az 292.1 el 39.3 pa 71.1 y: az 289.7 el 41.8 pa 69.5 u,v (fr/asec) 296.071 -95.876 simultaneous interpolator

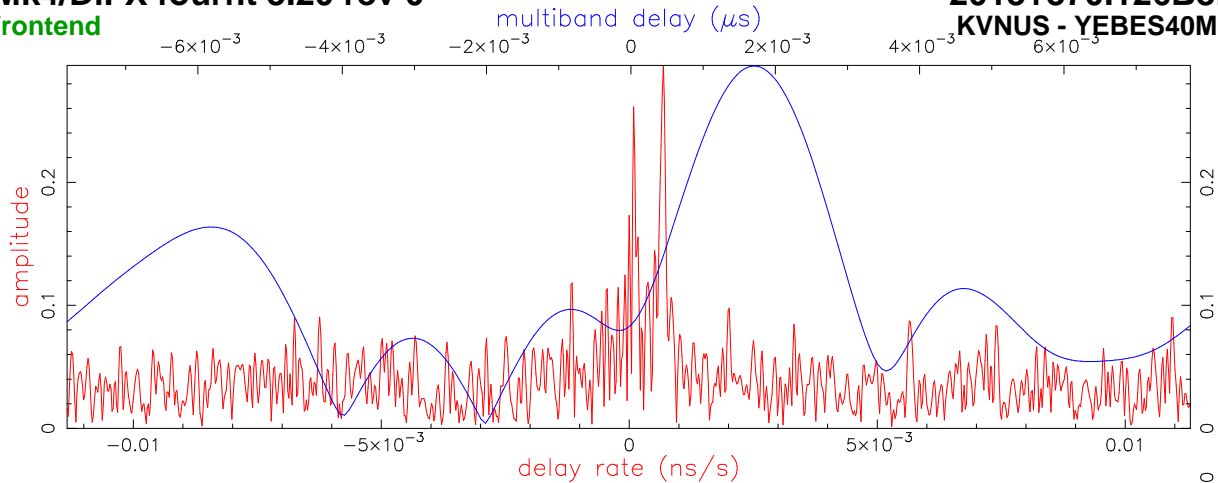
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uy..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uy.W.88.126B8R

Mk4/DiFX fourfit 3.20 rev 0

frontend

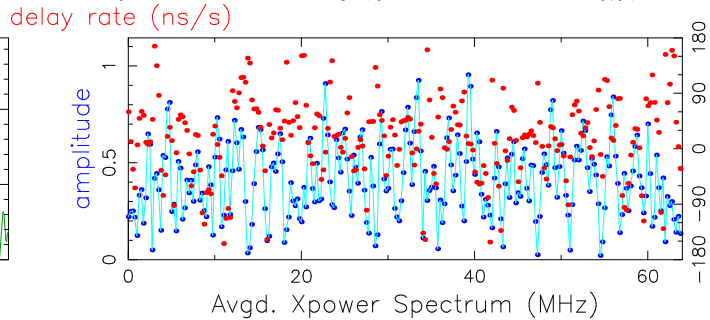
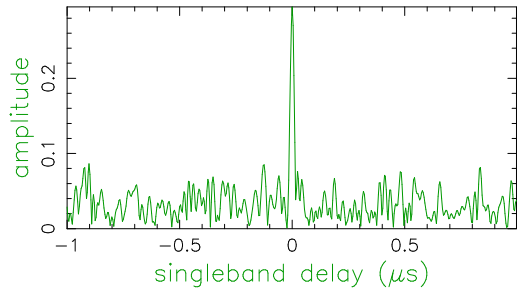
2013+370.126B8R, No0011, uY

KVNUS - YEBES40M, fgroup W, pol LL



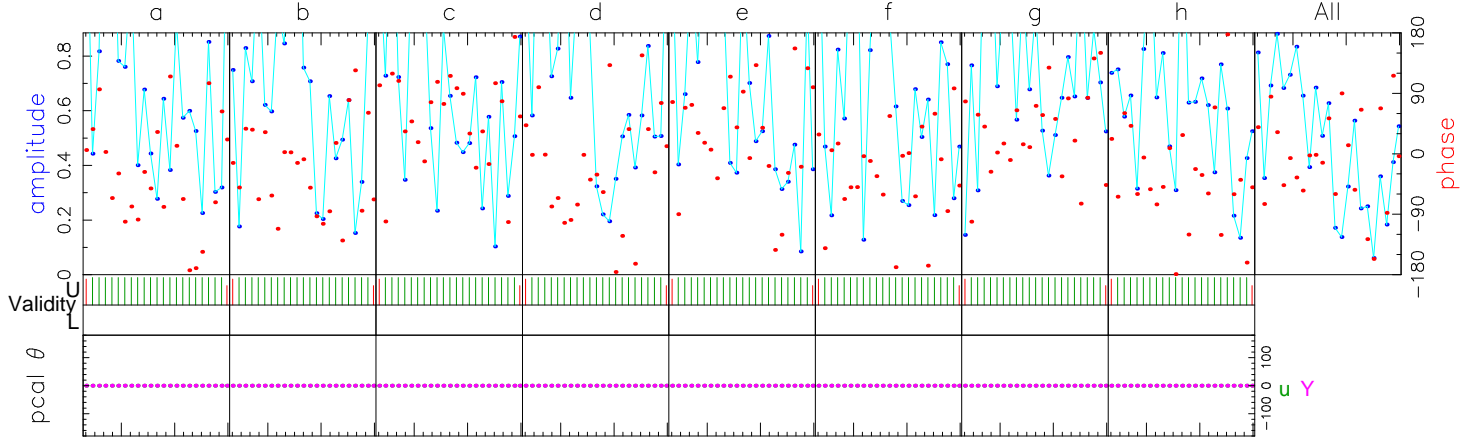
Fringe quality 9

SNR 10.3
 Int time 162.348
 Amp 0.295
 Phase 1.3
 PFD 2.2e-16
 Delays (us)
 SBD -0.000028
 MBD 0.001707
 Fringe rate (Hz)
 0.059733
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150016.89
 Stop 150259.71
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121828
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec

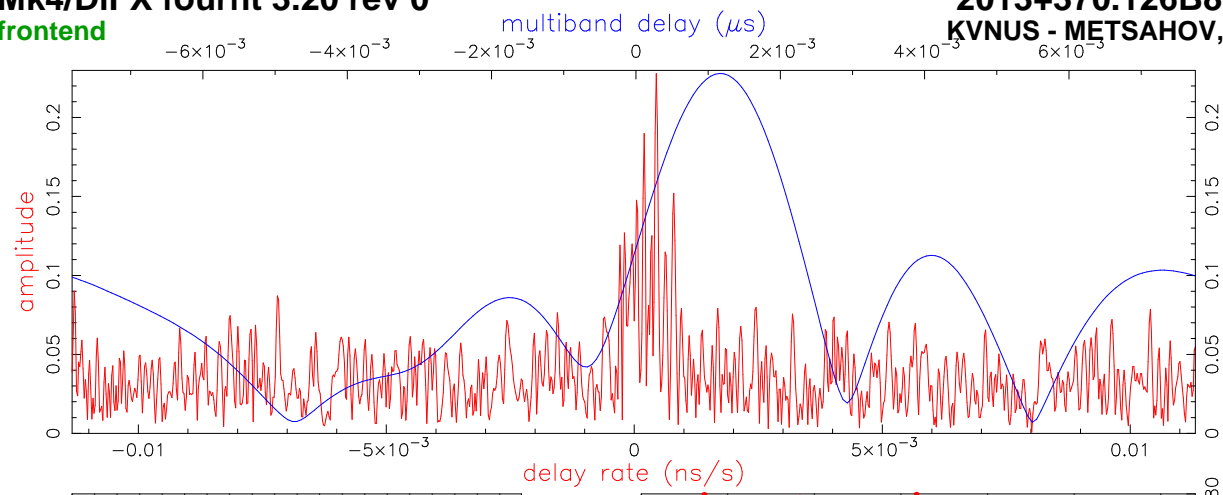


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-24.4	-21.0	63.3	-20.1	46.8	-27.5	24.4	-33.9	Phase	1.3
	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.3	Ampl.	0.3
	257.4	257.1	257.2	255.2	256.3	256.3	256.8	256.7	Sbd box	257.0
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

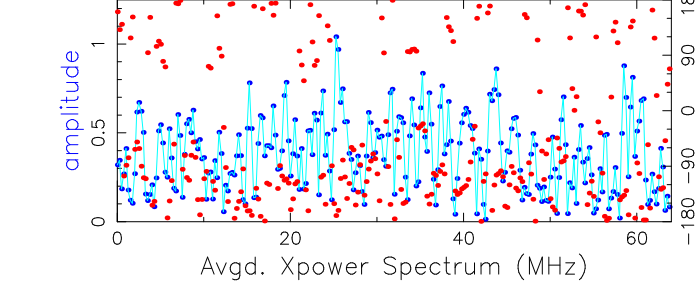
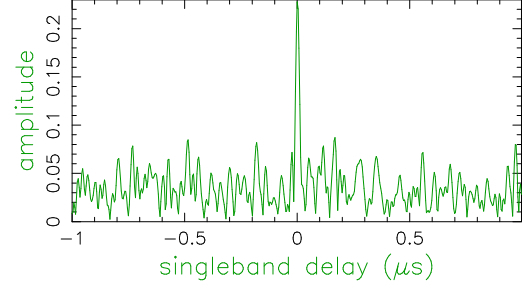
Group delay (usec)(sbd) 1.65002854054E+02 Apriori delay (usec) 1.65001147206E+02 Resid mbdelay (usec) 1.70685E-03 +/- 1.1E-04
 Sband delay (usec) 1.65001119706E+02 Apriori clock (usec) -1.1619759E+00 Resid sbdelay (usec) -2.75000E-05 +/- 8.4E-04
 Phase delay (usec) 1.65001147248E+02 Apriori clockrate (us/s) 1.7999998E-07 Resid phdelay (usec) 4.25207E-08 +/- 3.6E-07
 Delay rate (us/s) -1.77880130684E+00 Apriori rate (us/s) -1.77880200027E+00 Resid rate (us/s) 6.93437E-07 +/- 3.8E-09
 Total phase (deg) 296.6 Apriori accel (us/s/s) -5.56160368838E-06 Resid phase (deg) 1.3 +/- 11.2

RMS Theor. Amplitude 0.295 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 69.9 26.8 Search (1024X32) 0.287 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 103.0 46.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 41.1 15.8 Inc. seg. avg. 0.435 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 27.6 27.6 Inc. frq. avg. 0.349 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 292.1 el 39.3 pa 71.1 Y: az 70.1 el 38.2 pa -64.0 u,v (fr/asec) 12792.730 -890.905 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uY..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uY.W.89.126B8R

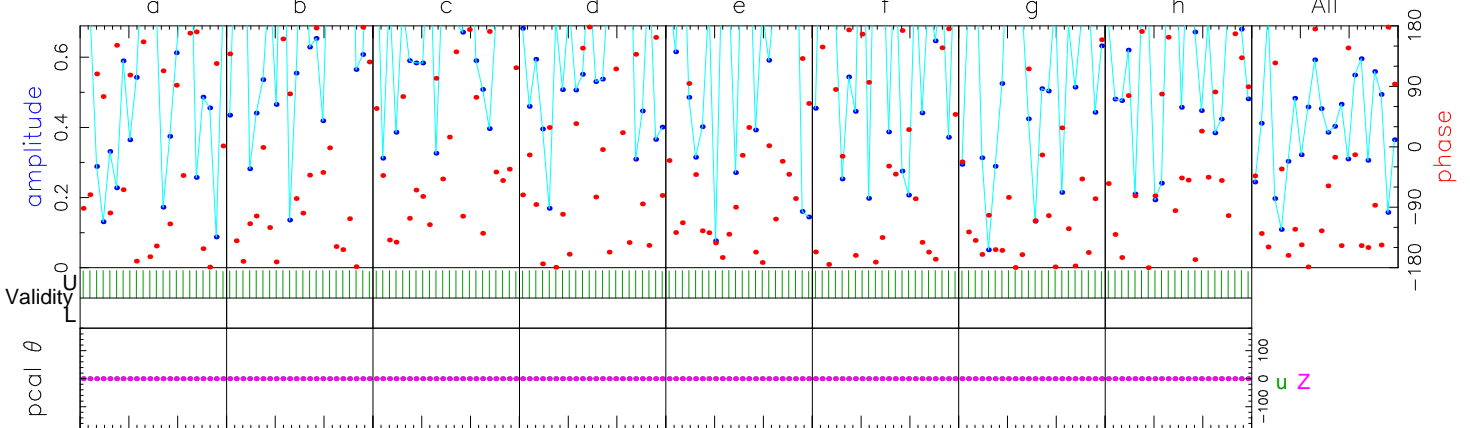


Fringe quality 9
SNR 8.4
Int time 179.729
Amp 0.230
Phase -137.7
PFD 6.7e-09
Delays (us)
SBD 0.001185
MBD 0.001179
Fringe rate (Hz) 0.037319
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2020:069:185016
2020:071:121830
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-4.18563169816E+03	-4.18563169168E+03	-4.18563288162E+03	-4.18563288171E+07	-4.18563287718E+03	-4.18563287718E+03	-4.18563287718E+03	-4.18563287718E+03		
Sband delay (usec)	-4.18563169168E+03	-4.18563288162E+03	-4.18563288162E+03	-4.18563288162E+03	-4.18563287718E+03	-4.18563287718E+03	-4.18563287718E+03	-4.18563287718E+03		
Phase delay (usec)	-4.18563288162E+03	-4.18563288162E+03	-4.18563288162E+03	-4.18563288162E+03	-4.18563287718E+03	-4.18563287718E+03	-4.18563287718E+03	-4.18563287718E+03		
Delay rate (us/s)	-1.30615856967E+00	-1.30615856967E+00	-1.30615856967E+00	-1.30615856967E+00	-1.30615856967E+00	-1.30615856967E+00	-1.30615856967E+00	-1.30615856967E+00		
Total phase (deg)			-152.3							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
u, v (fr/asec)										
simultaneous interpolator										

u: az 292.1 el 39.3 pa 71.1 Z: az 113.3 el 55.6 pa -34.9 u, v (fr/asec) 9395.502 -1917.946
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uZ.126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uZ.W.111.126B8R

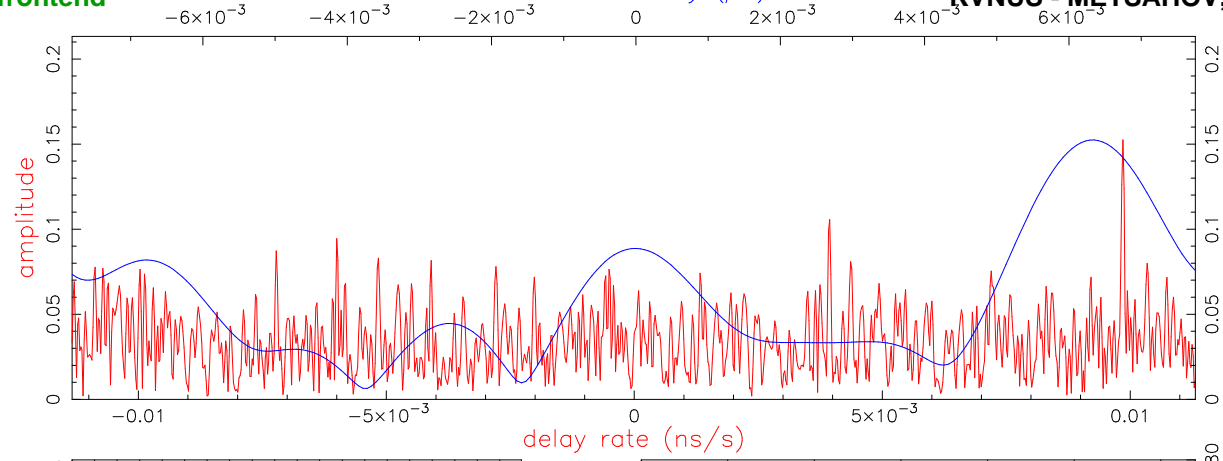
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.126B8R, No0011, uZ

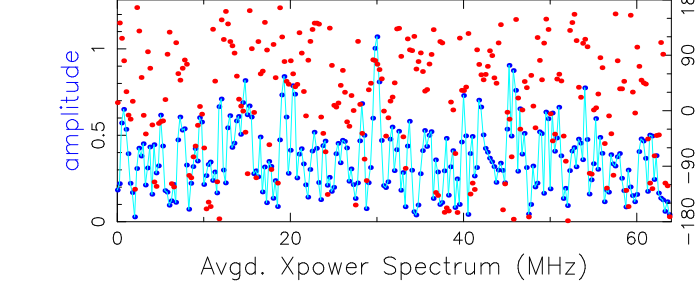
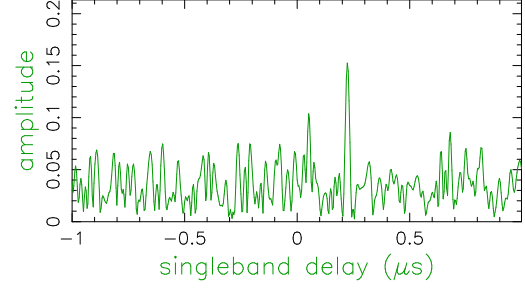
KVNUS - METSAHOV, fgroup W, pol LR

multiband delay (μ s)



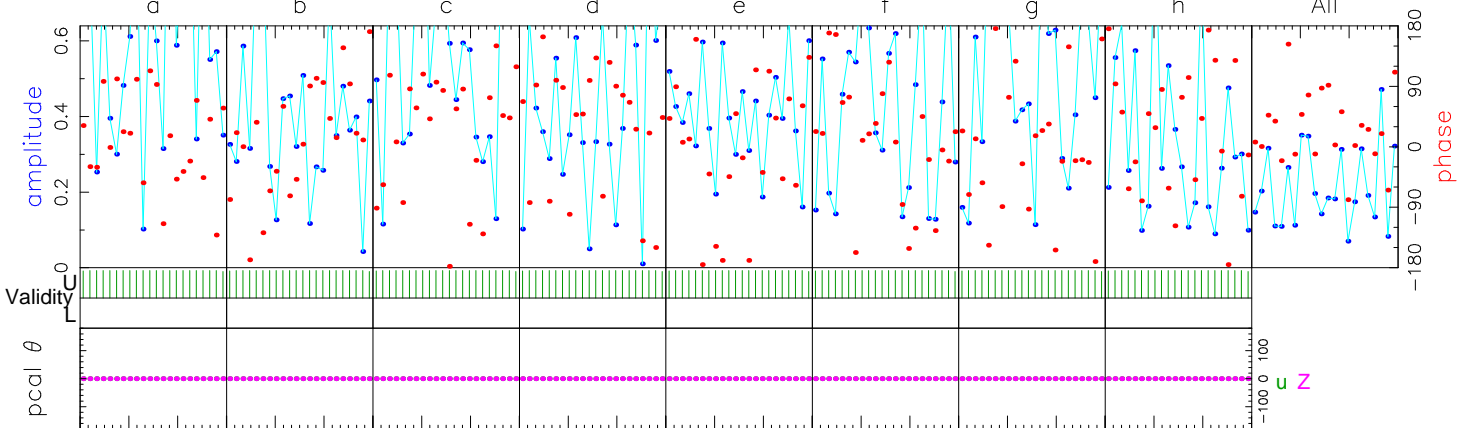
Fringe quality 0

SNR 5.6
 Int time 179.729
 Amp 0.213
 Phase 38.0
 PFD 9.3e-01
 Delays (us)
 SBD 0.223300
 MBD 0.006353
 Fringe rate (Hz) 0.850455
 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
 2020:069:185016
 2020:071:121833
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-4.18540777423E+03								6.35296E-03	+/- 1.9E-04
Sband delay (usec)	-4.18540957768E+03								2.23300E-01	+/- 1.5E-03
Phase delay (usec)	-4.18563287596E+03								1.22580E-06	+/- 6.6E-07
Delay rate (us/s)	-1.30614912996E+00								9.87294E-06	+/- 6.3E-09
Total phase (deg)			23.5						38.0	+/- 20.5
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
nlags: 256										
t_cohere infinite										

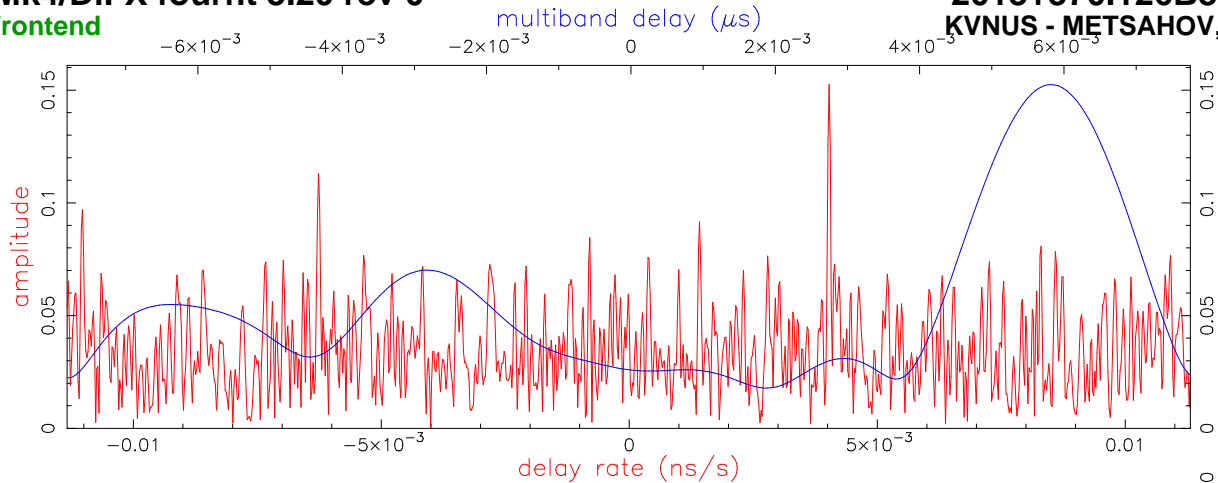
ph/seg (deg) 54.7 48.0 Search (1024X32) 0.151 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 79.5 83.8 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 38.1 28.9 Inc. seg. avg. 0.223 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 60.0 50.5 Inc. frq. avg. 0.214 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 u: az 292.1 el 39.3 pa 71.1 Z: az 113.3 el 55.6 pa -34.9 u,v (fr/asec) 9395.502 -1917.946 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uZ..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uZ.W.130.126B8R

Mk4/DiFX fourfit 3.20 rev 0

frontend

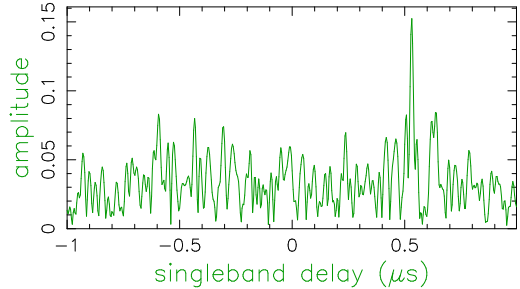
2013+370.126B8R, No0011, uZ

KVNUS - METSAHOV, fgroup W, pol RL

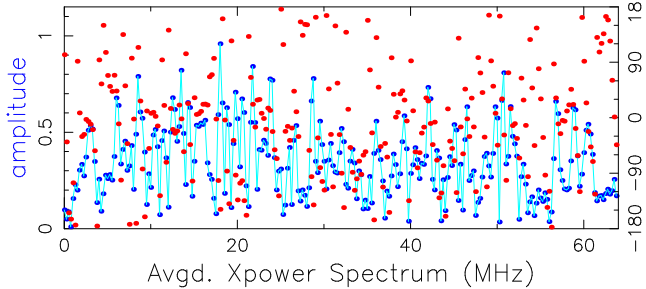


Fringe quality 0

SNR 5.6
 Int time 179.729
 Amp 0.161
 Phase -83.2
 PFD 9.3e-01
 Delays (us)
 SBD 0.530792
 MBD 0.005829
 Fringe rate (Hz)
 0.348230
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

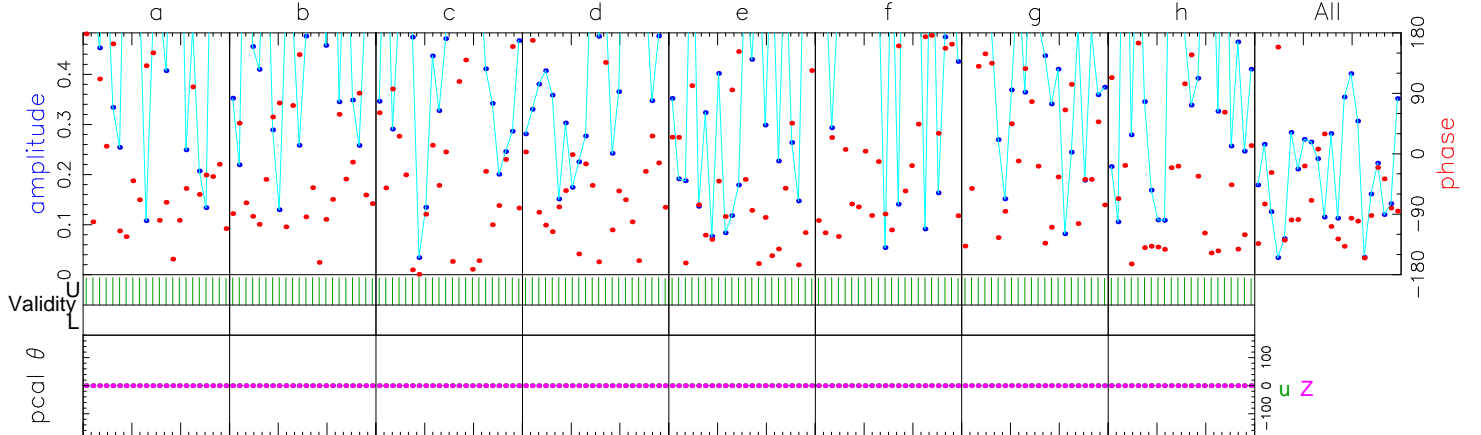


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121835
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-4.18509579863E+03				-4.18563287718E+03				5.82855E-03	+/- 1.9E-04
Sband delay (usec)	-4.18510208468E+03				8.3304033E+00				5.30792E-01	+/- 1.5E-03
Phase delay (usec)	-4.18563287986E+03				3.8370717E-07				-2.68250E-06	+/- 6.6E-07
Delay rate (us/s)	-1.30615496029E+00				-1.30615900290E+00				4.04261E-06	+/- 6.3E-09
Total phase (deg)			-97.7		2.70517219807E-06				-83.2	+/- 20.5
	RMS	Theor.	Amplitude	0.161 +/- 0.029						
ph/seg (deg)	54.2	48.0	Search (1024X32)	0.145						
amp/seg (%)	75.5	83.8	Interp.	0.000						
ph/frq (deg)	18.4	29.0	Inc. seg. avg.	0.161						
amp/frq (%)	59.7	50.5	Inc. frq. avg.	0.147						
u: az 292.1 el 39.3 pa 71.1		Z: az 113.3 el 55.6 pa -34.9		u,v (fr/asec) 9395.502 -1917.946						simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uZ..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uZ.W.150.126B8R

Mk4/DiFX fourfit 3.20 rev 0

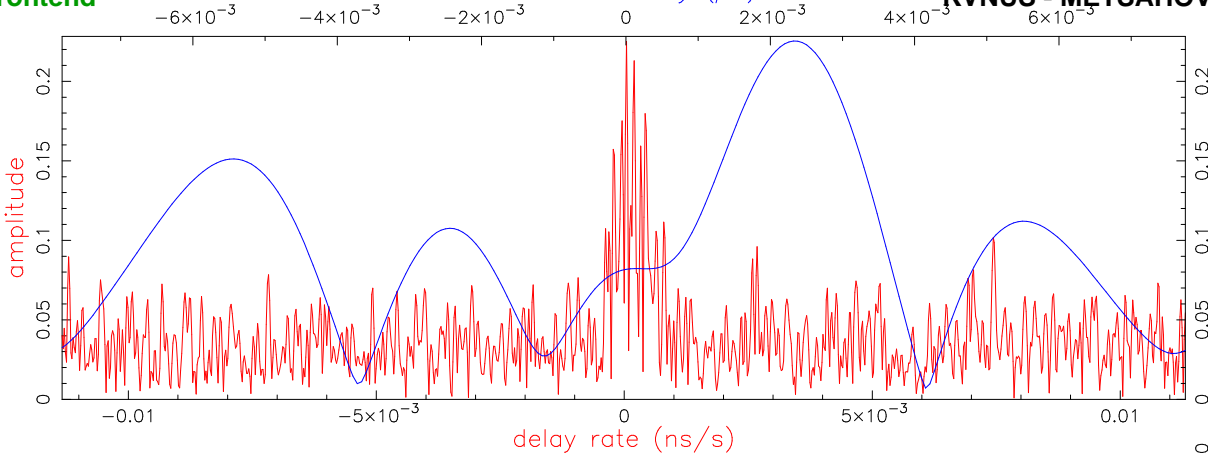
frontend

2013+370.126B8R, No0011, uZ

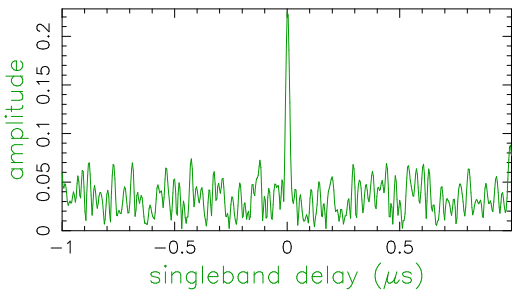
KVNUS - METSAHOV, fgroup W, pol LL

multiband delay (μ s)

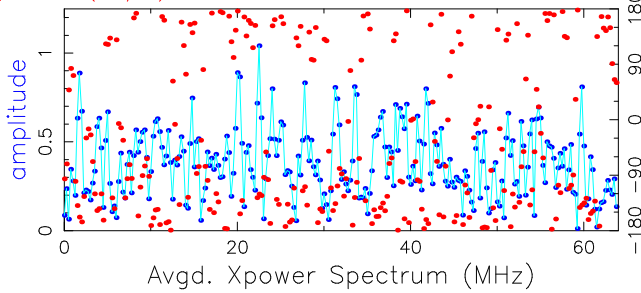
Fringe quality 9



SNR 8.4
 Int time 179.729
 Amp 0.228
 Phase -163.0
 PFD 1.0e-08
 Delays (us)
 SBD 0.001602
 MBD 0.002395
 Fringe rate (Hz) 0.003857
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

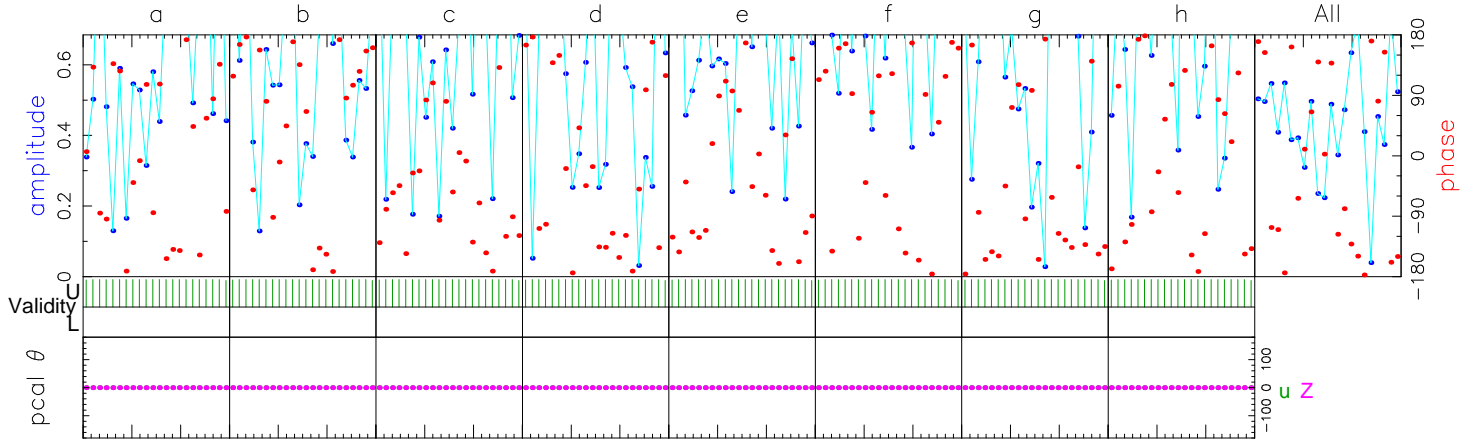


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2020:069:185016
 2020:071:121828
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-168.2	158.6	-86.1	-145.1	-122.0	153.4	-131.8	164.4	Phase	-163.0
	0.2	0.3	0.2	0.3	0.2	0.4	0.4	0.3	Ampl.	0.3
	259.5	257.2	491.2	105.3	511.2	256.5	256.7	256.0	Sbd box	257.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-4.18563048227E+03		Apriori delay (usec)		-4.18563287718E+03		Resid mbdelay (usec)		2.39491E-03	+/- 1.3E-04
Sband delay (usec)	-4.18563127543E+03		Apriori clock (usec)		8.3304033E-07		Resid sbdelay (usec)		1.60175E-03	+/- 1.0E-03
Phase delay (usec)	-4.18563288244E+03		Apriori clockrate (us/s)		3.8370717E-07		Resid phdelay (usec)		-5.25770E-06	+/- 4.4E-07
Delay rate (us/s)	-1.30615895813E+00		Apriori rate (us/s)		-1.30615900290E+00		Resid rate (us/s)		4.47766E-08	+/- 4.2E-09
Total phase (deg)			Apriori accel (us/s/s)		2.70517219807E-06		Resid phase (deg)		-163.0	+/- 13.7

ph/seg (deg) RMS Theor. Amplitude 0.228 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.4 32.1 Search (1024X32) 0.224 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 116.8 56.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 47.2 19.4 Inc. seg. avg. 0.383 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 50.3 33.8 Inc. frq. avg. 0.278 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 292.1 el 39.3 pa 71.1 Z: az 113.3 el 55.6 pa -34.9 u,v (fr/asec) 9395.502 -1917.946 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0011/uZ..126B8R Output file: /Exps/c192c/v1_CygA2/1234/No0011/uZ.W.91.126B8R