

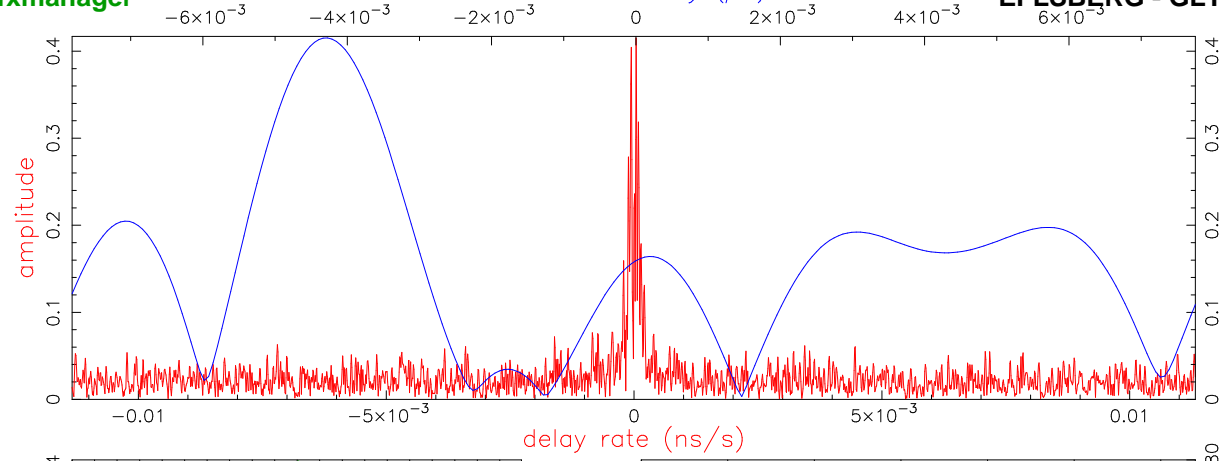
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, Bg

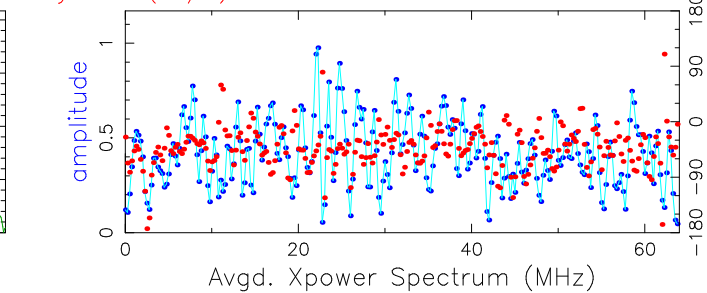
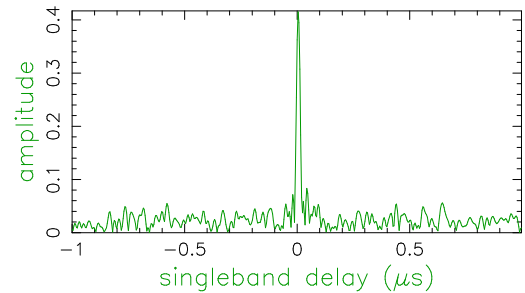
EFLSBERG - GLT, fgroup W, pol LL

multiband delay ( $\mu$ s)



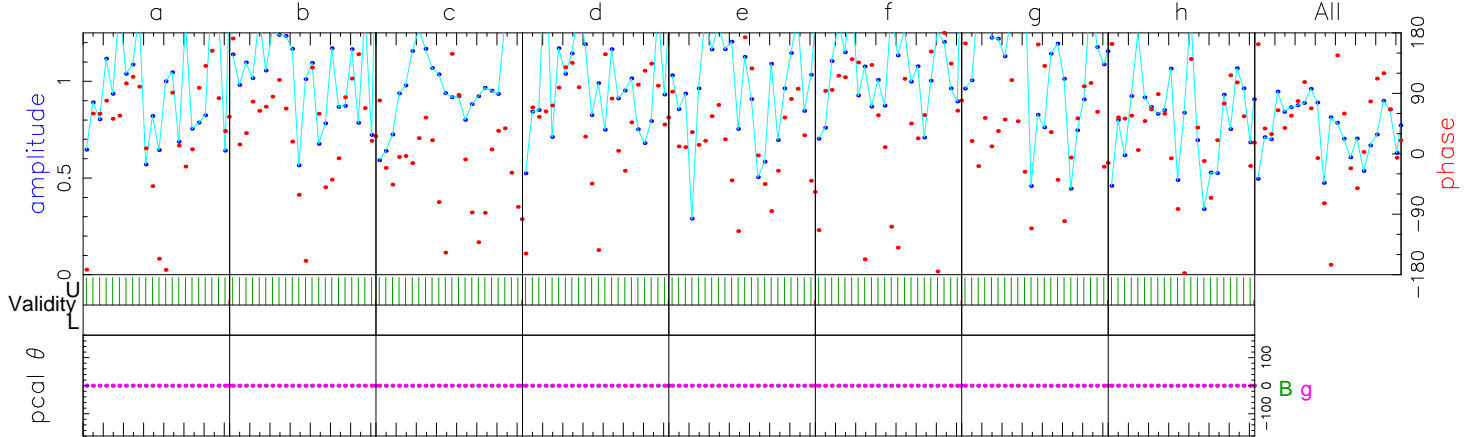
Fringe quality 8

SNR 23.4  
 Int time 419.816  
 Amp 0.417  
 Phase 60.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004779  
 MBD -0.004267  
 Fringe rate (Hz)  
 0.003919  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114520  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	81.0	66.4	-12.4	82.1	29.6	126.0	38.3	58.6	Phase	60.6
B	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5	Ampl.	0.5
g	257.1	258.3	258.7	259.0	258.9	258.8	258.4	257.6	Sbd box	258.2
B:g	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B:g	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:g	0	0	0	0	0	0	0	0	PC freqs	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B:g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B:g	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	2.87908450724E+03		Apriori delay (usec)		2.87907314958E+03		Resid mbdelay (usec)		-4.26734E-03	+/- 4.6E-05
Sband delay (usec)	2.87907792883E+03		Apriori clock (usec)		-2.2499676E+01		Resid sbdelay (usec)		4.77925E-03	+/- 3.7E-04
Phase delay (usec)	2.87907315153E+03		Apriori clockrate (us/s)		-7.2000003E-08		Resid phdelay (usec)		1.95533E-06	+/- 1.6E-07
Delay rate (us/s)	4.02404841613E-01		Apriori rate (us/s)		4.02404796120E-01		Resid rate (us/s)		4.54929E-08	+/- 6.5E-10
Total phase (deg)	98.3		Apriori accel (us/s/s)		-3.30866018878E-05		Resid phase (deg)		60.6	+/- 4.9

ph/seg (deg) 66.1 11.8 Search (2048X32) 0.411 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 87.4 20.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.7 6.9 Inc. seg. avg. 0.738 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 26.3 12.1 Inc. frq. avg. 0.514 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 B: az 63.6 el 51.0 pa -64.9 g: az 32.4 el 40.2 pa -11.6 u,v (fr/asec) -3714.978 -4299.881 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/Bg..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/Bg.W.20.1WZRGR

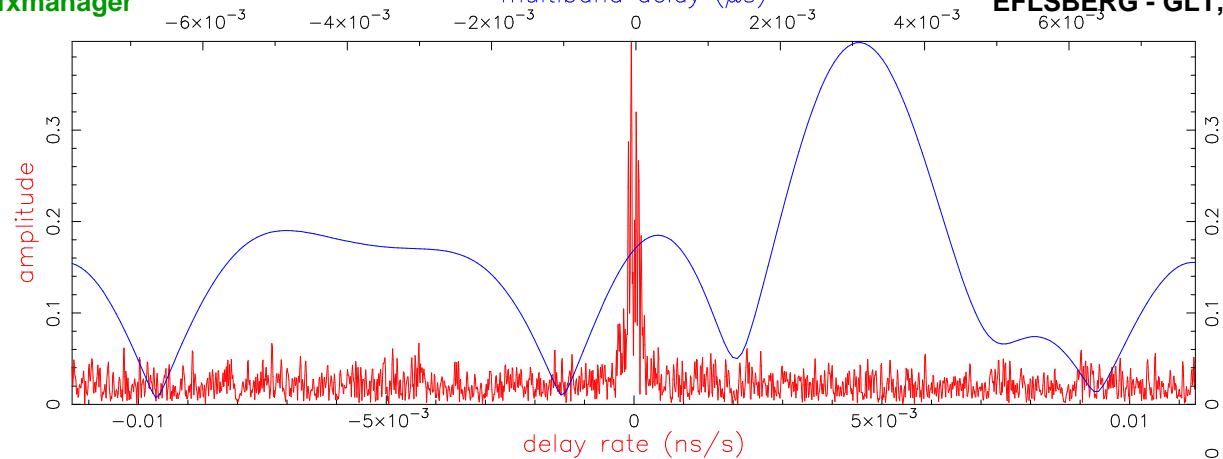
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, Bg

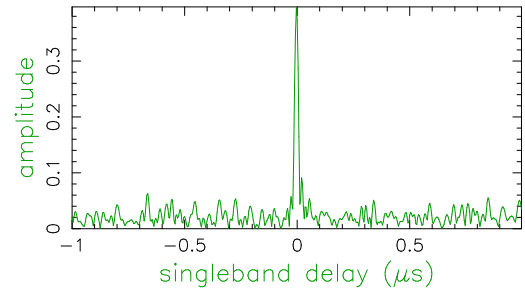
EFLSBERG - GLT, fgroup W, pol RR

multiband delay ( $\mu$ s)

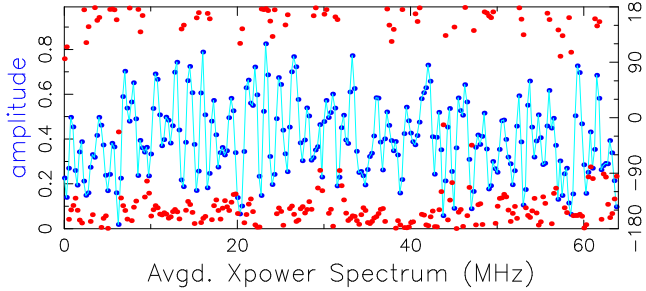


Fringe quality 8

SNR 22.2  
 Int time 419.816  
 Amp 0.397  
 Phase 125.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003158  
 MBD 0.003114  
 Fringe rate (Hz) -0.004900  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

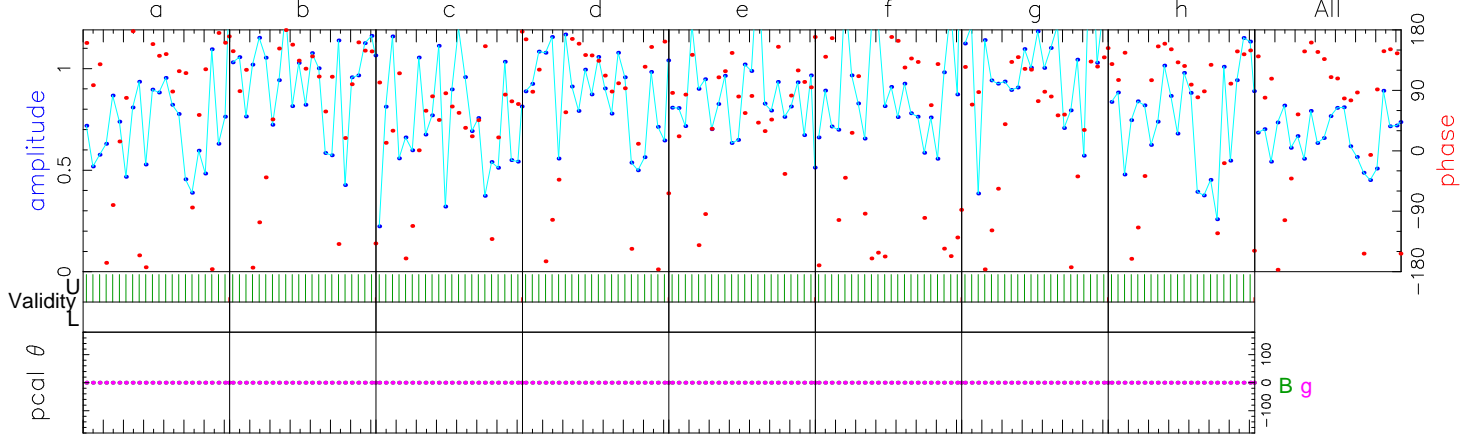


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114524  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

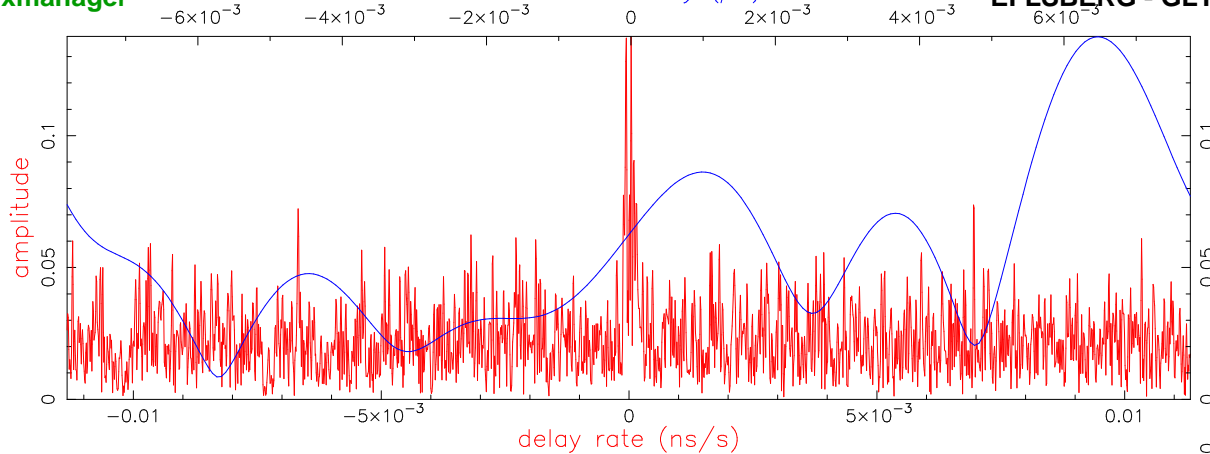
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
g	0	0	0	0	0	0	0	0		
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:g	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		
g	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	2.87907626328E+03		Apriori delay (usec)		2.87907314958E+03		Resid mbdelay (usec)		3.11370E-03	+/- 4.9E-05
Sband delay (usec)	2.87906999183E+03		Apriori clock (usec)		-2.2499676E+01		Resid sbdelay (usec)		-3.15775E-03	+/- 3.9E-04
Phase delay (usec)	2.87907315362E+03		Apriori clockrate (us/s)		-7.2000003E-08		Resid phdelay (usec)		4.04218E-06	+/- 1.7E-07
Delay rate (us/s)	4.02404739237E-01		Apriori rate (us/s)		4.02404796120E-01		Resid rate (us/s)		-5.68830E-08	+/- 6.9E-10
Total phase (deg)	163.0		Apriori accel (us/s/s)		-3.30866018878E-05		Resid phase (deg)		125.3	+/- 5.2

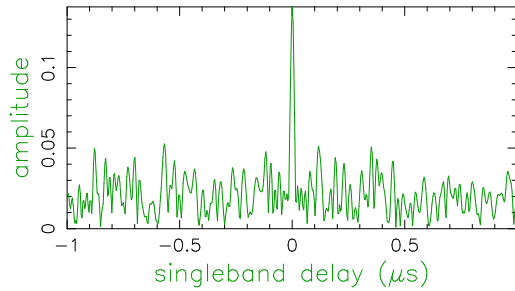
ph/seg (deg) 64.8 12.4 Search (2048X32) 0.387 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 74.8 21.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.6 7.3 Inc. seg. avg. 0.655 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 27.0 12.7 Inc. frq. avg. 0.488 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 B: az 63.6 el 51.0 pa -64.9 g: az 32.4 el 40.2 pa -11.6 u,v (fr/asec) -3714.978 -4299.881 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/Bg..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/Bg.W.38.1WZRGR

multiband delay ( $\mu$ s)

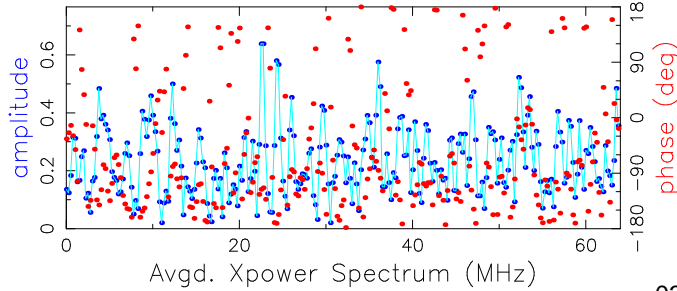


Fringe quality 9

SNR 7.7  
 Int time 419.816  
 Amp 0.138  
 Phase -179.0  
 PFD 4.0e-06  
 Delays (us)  
 SBD 0.000467  
 MBD 0.006483  
 Fringe rate (Hz)  
 0.003643  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

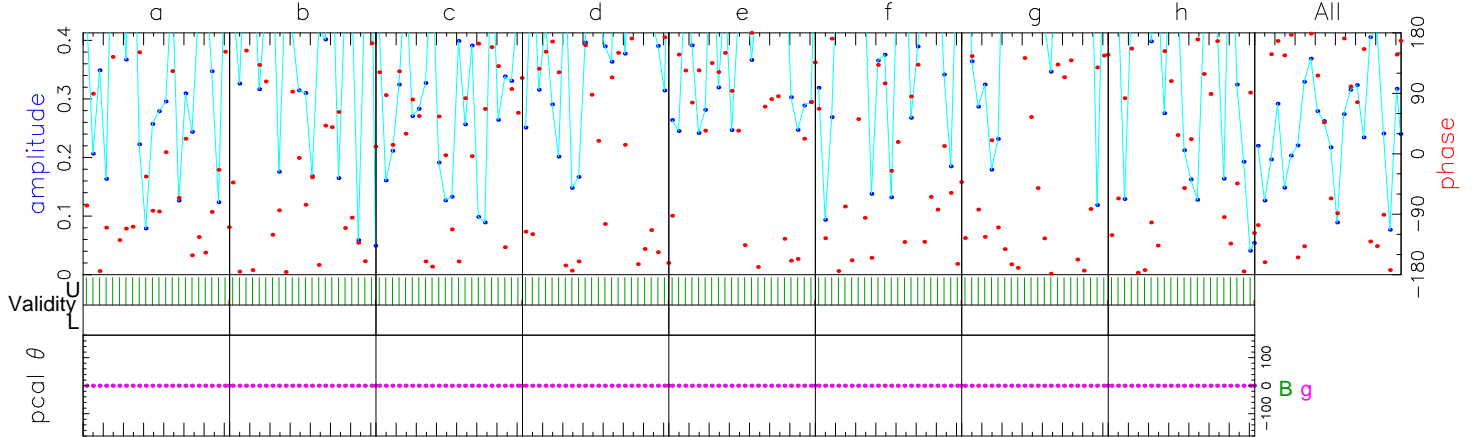


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114527  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-134.9	-169.2	111.5	179.7	123.2	-123.2	-168.5	-171.6	Phase	-179.0
	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.1	Ampl.	0.2
	256.4	60.7	45.0	258.1	258.3	78.7	257.1	305.8	Sbd box	257.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B:g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

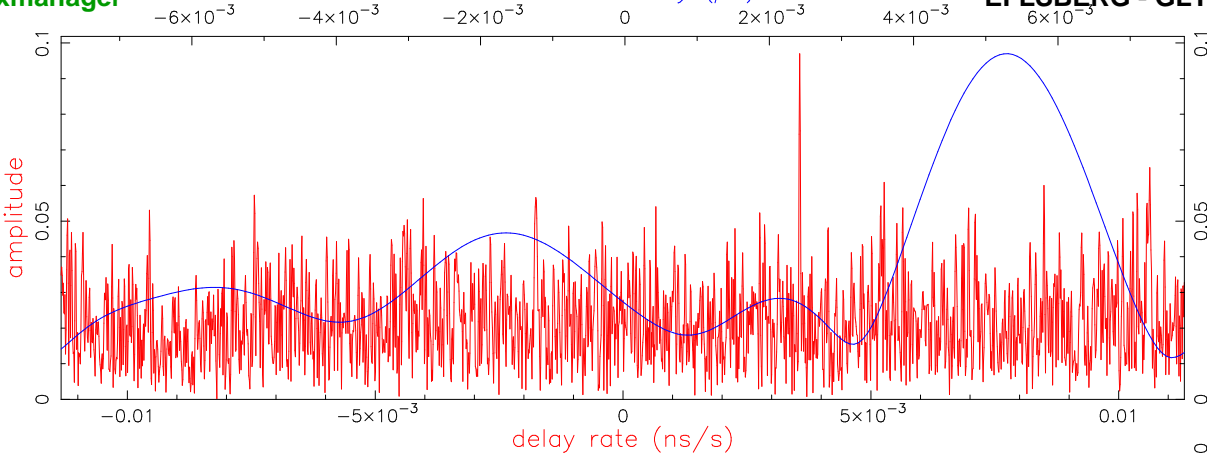
Group delay (usec)(sbd)	2.87907963305E+03	Apriori delay (usec)	2.87907314958E+03	Resid mbdelay (usec)	6.48348E-03	+/-	1.4E-04
Sband delay (usec)	2.87907361608E+03	Apriori clock (usec)	-2.2499676E+01	Resid sbdelay (usec)	4.66500E-04	+/-	1.1E-03
Phase delay (usec)	2.87907314381E+03	Apriori clockrate (us/s)	-7.2000003E-08	Resid phdelay (usec)	-5.77099E-06	+/-	4.8E-07
Delay rate (us/s)	4.02404838410E-01	Apriori rate (us/s)	4.02404796120E-01	Resid rate (us/s)	4.22903E-08	+/-	2.0E-09
Total phase (deg)	-141.3	Apriori accel (us/s/s)	-3.30866018878E-05	Resid phase (deg)	-179.0	+/-	14.9

ph/seg (deg)	61.8	Theor.	35.6	Search (2048X32)	0.135	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	106.1		62.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	47.4		21.0	Inc. seg. avg.	0.212	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	48.6		36.7	Inc. frq. avg.	0.162	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011	
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00	
						nlags: 256	t_cohere infinite	

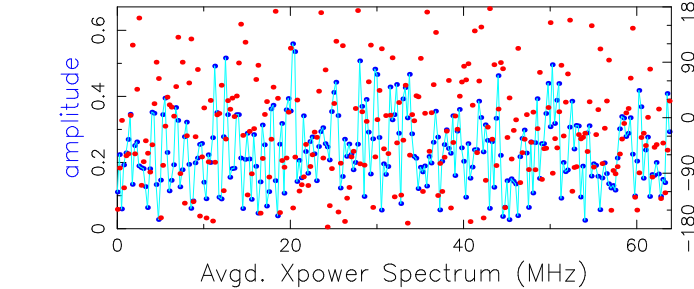
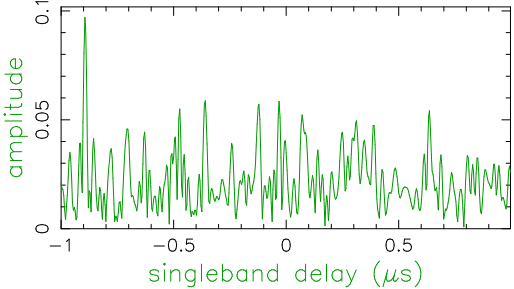
B: az 63.6 el 51.0 pa -64.9      g: az 32.4 el 40.2 pa -11.6      u,v (fr/asec) -3714.978 -4299.881      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c211c/v1/1234/No0037/Bg..1WZRGR      Output file: /Exps/c211c/v1/1234/No0037/Bg.W.54.1WZRGR

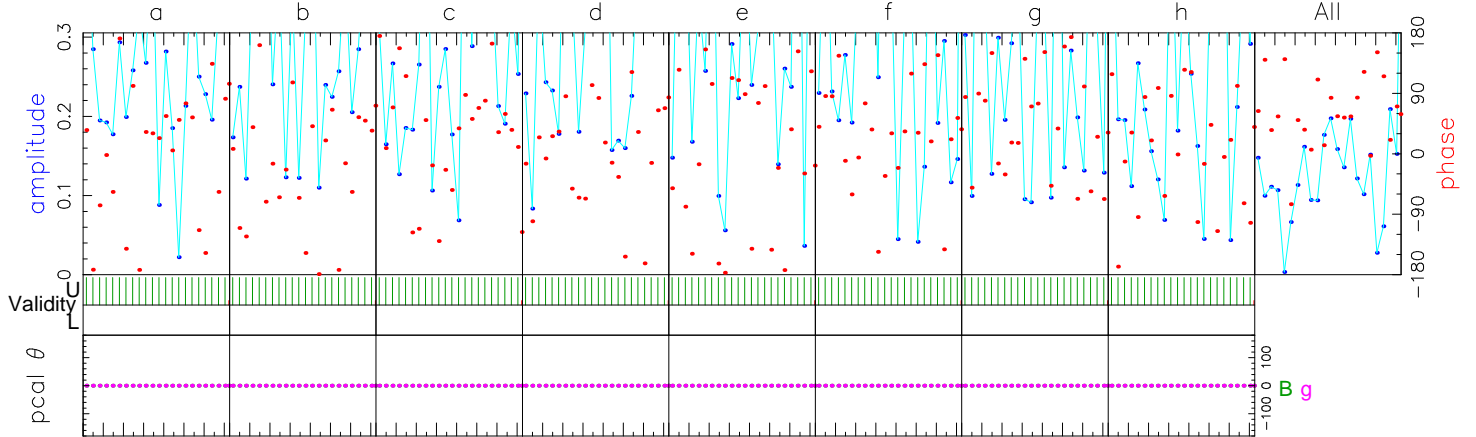
multiband delay ( $\mu$ s)



Fringe quality 0  
SNR 5.5  
Int time 419.816  
Amp 0.102  
Phase 54.7  
PFD 1.0e+00  
Delays (us)  
SBD -0.893503  
MBD 0.005261  
Fringe rate (Hz) 0.307201  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114531  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
g	0	0	0	0	0	0	0	0		
B:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:g	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		
g	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	2.87817216030E+03		Apriori delay (usec)		2.87907314958E+03		Resid mbdelay (usec)		5.26072E-03	+/- 2.0E-04
Sband delay (usec)	2.87817964683E+03		Apriori clock (usec)		-2.2499676E+01		Resid sbdelay (usec)		-8.93503E-01	+/- 1.6E-03
Phase delay (usec)	2.87907315134E+03		Apriori clockrate (us/s)		-7.2000003E-08		Resid phdelay (usec)		1.76380E-06	+/- 6.7E-07
Delay rate (us/s)	4.02408362423E-01		Apriori rate (us/s)		4.02404796120E-01		Resid rate (us/s)		3.56630E-06	+/- 2.8E-09
Total phase (deg)	92.3		Apriori accel (us/s/s)		-3.30866018878E-05		Resid phase (deg)		54.7	+/- 20.9

	RMS	Theor.	Amplitude	0.102 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	53.5	50.2	Search (2048X32)	0.096	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	66.7	87.6	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	36.5	29.6	Inc. seg. avg.	0.094	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	45.4	51.6	Inc. frq. avg.	0.105	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 63.6 el 51.0 pa -64.9 g: az 32.4 el 40.2 pa -11.6 u,v (fr/asec) -3714.978 -4299.881 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/Bg..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/Bg.W.75.1WZRGR

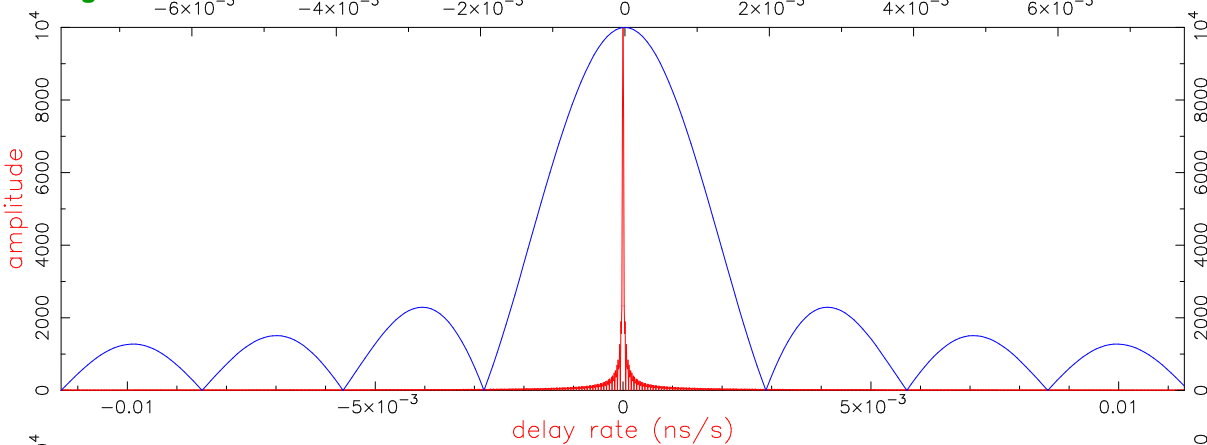
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gg

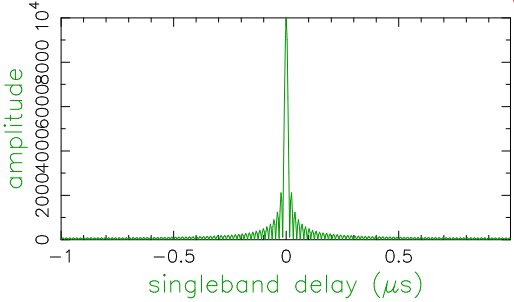
GLT - GLT, fgroup W, pol LL

multiband delay ( $\mu$ s)

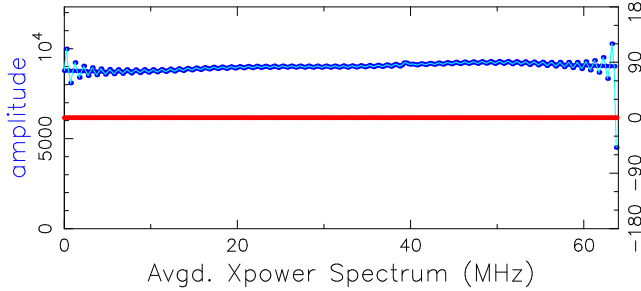


Fringe quality 9

SNR 560315.2  
 Int time 419.826  
 Amp 10000.000  
 Phase 0.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000000  
 MBD 0.000000  
 Fringe rate (Hz)  
 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

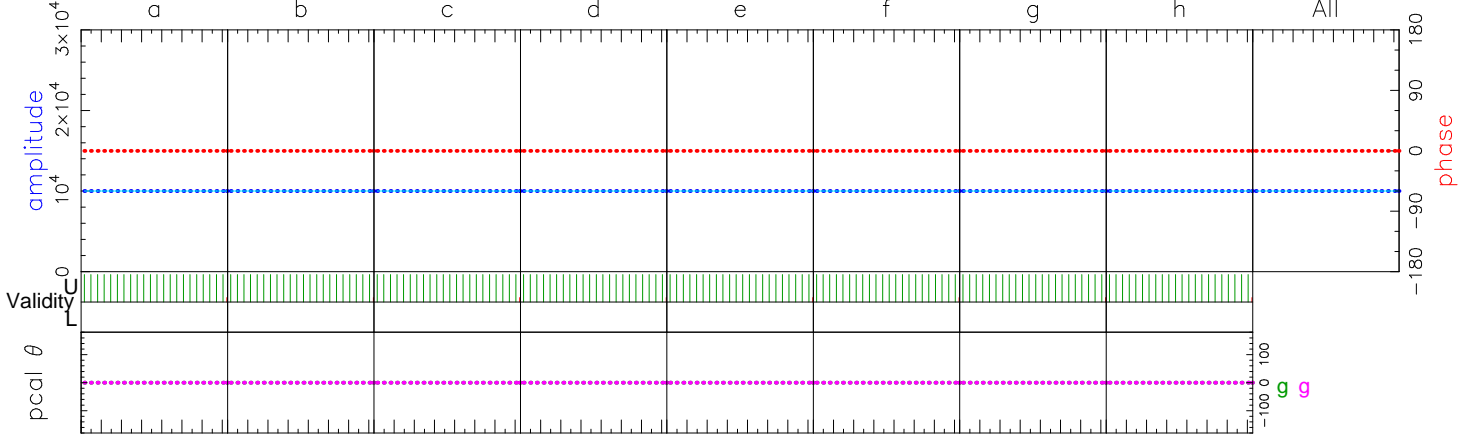


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114517  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



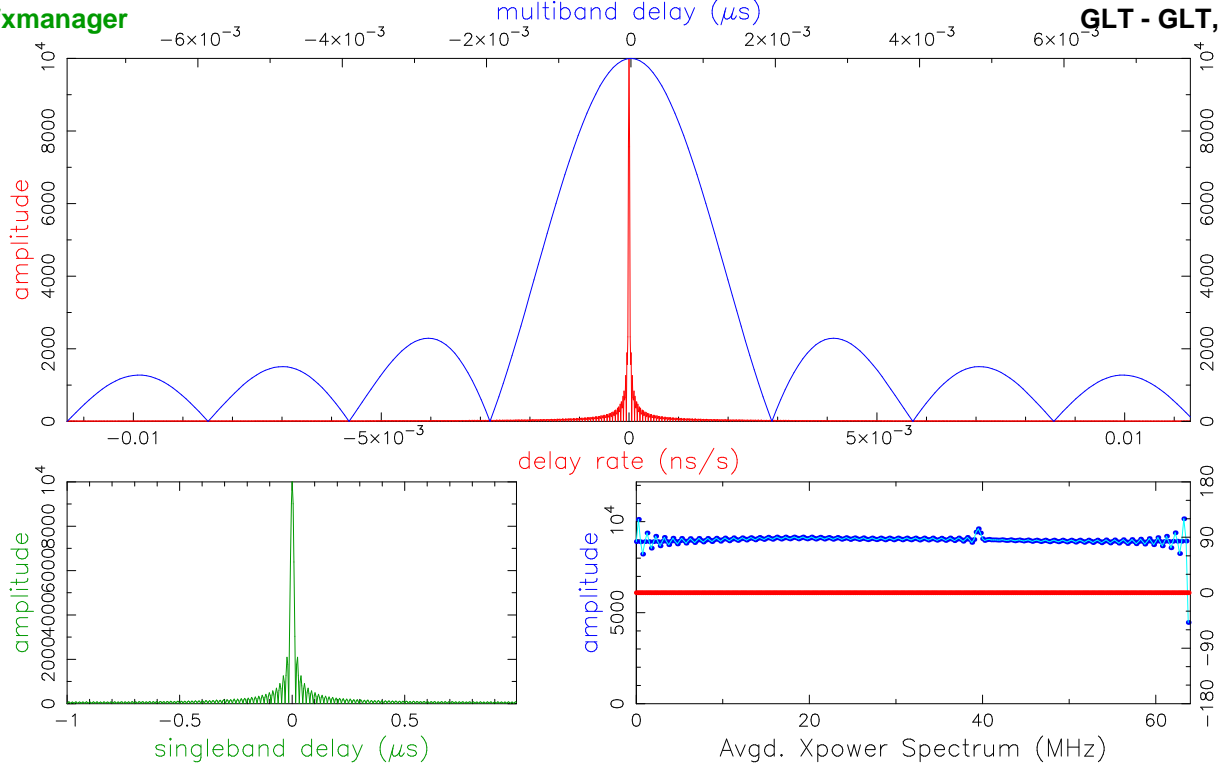
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	10000.0	10000.0
g	0	0	0	0	0	0	0	0	Ampl.	10000.0
g:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
g:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC phase	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Mani PC	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	1.9E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.5E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	6.6E-12
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	2.7E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

	RMS	Theor.	Amplitude	10000.000 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	0.0	0.0	Search (2048X32)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

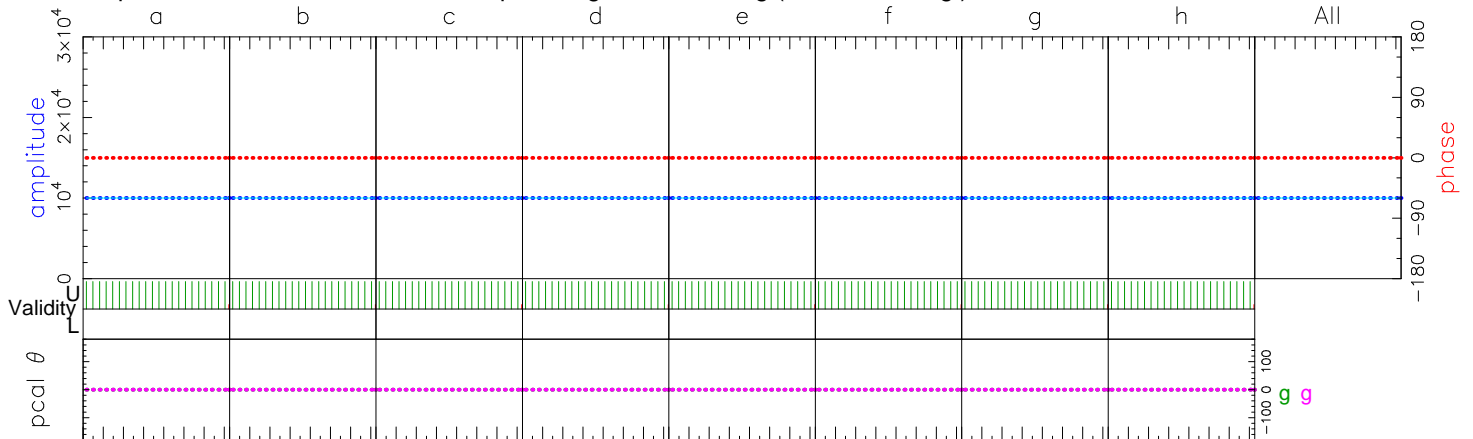
g: az 32.4 el 40.2 pa -11.6      g: az 32.4 el 40.2 pa -11.6      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c211c/v1/1234/No0037/gg..1WZRGR    Output file: /Exps/c211c/v1/1234/No0037/gg.W.2.1WZRGR



Fringe quality 9  
SNR 560315.2  
Int time 419.826  
Amp 10000.000  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz)  
0.000000  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114521  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	10000.0	10000.0	
g	0	0	0	0	0	0	0	0	Ampl.	10000.0	
g:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0	
g:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used		
g	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
g	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC phase		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Mani PC		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp		
									Chan ids		
									Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	1.9E-09	
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	1.5E-08	
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	6.6E-12	
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	+/-	2.7E-14	
Total phase (deg)			0.0							+/-	0.0

ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 0.0 0.0 Search (2048X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
g: az 32.4 el 40.2 pa -11.6 g: az 32.4 el 40.2 pa -11.6 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gg..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gg.W.23.1WZRGR simultaneous interpolator

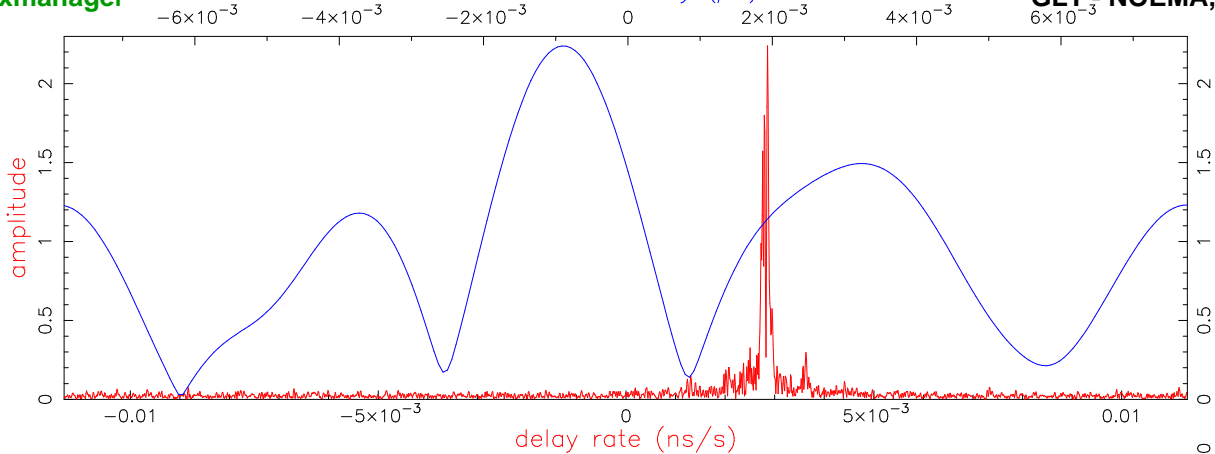
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gN

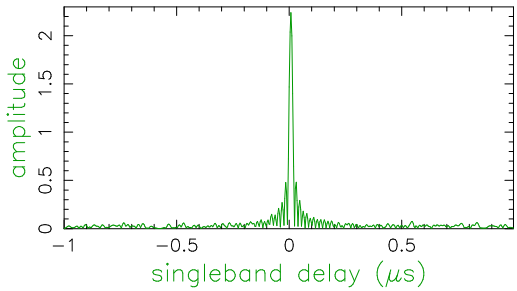
GLT - NOEMA, fgroup W, pol RR

multiband delay ( $\mu\text{s}$ )

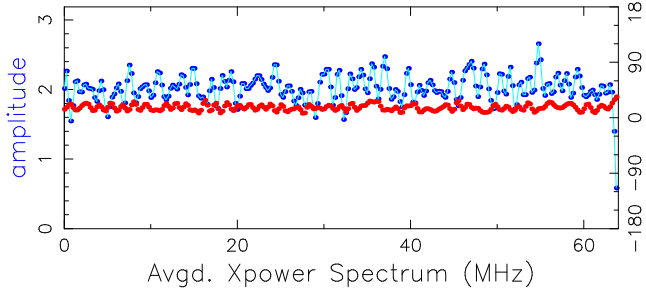


Fringe quality 2

SNR 125.5  
Int time 419.822  
Amp 2.299  
Phase 114.7  
PFD 0.0e+00  
Delays (us)  
SBD 0.007627  
MBD -0.000897  
Fringe rate (Hz)  
0.246251  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

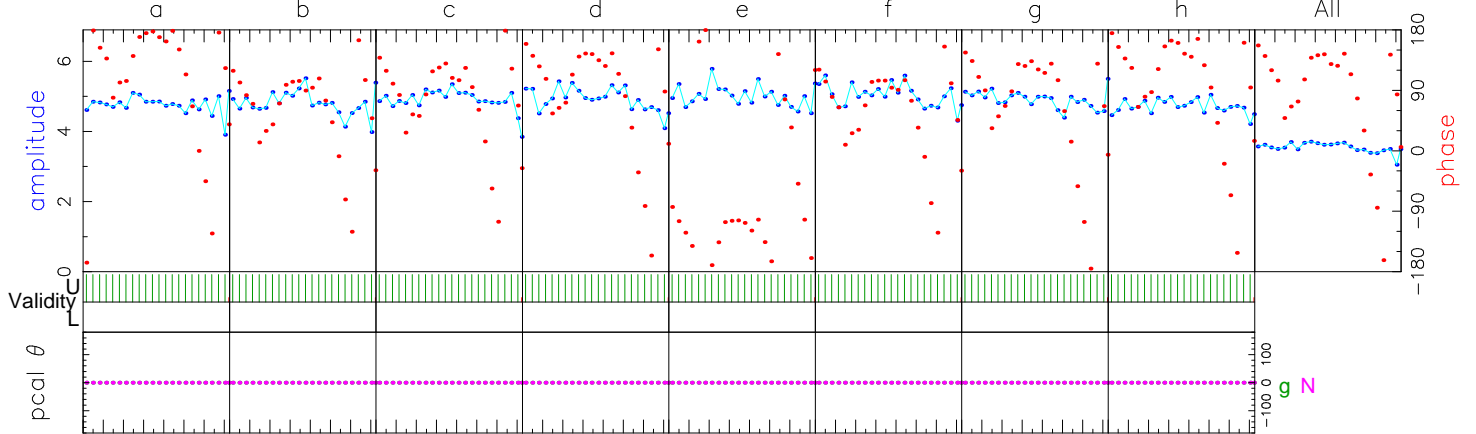


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114521  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	149.1	78.0	95.9	116.9	-130.6	77.1	102.9	130.5	Phase	114.7
g	3.0	3.2	3.2	3.2	3.2	3.3	3.1	3.0	Ampl.	3.1
N	258.8	259.1	258.9	258.9	259.1	259.0	259.1	259.0	Sbd box	259.0
g:N	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
N	0	0	0	0	0	0	0	0	PC freqs	
g:N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Chan ids	
									Tracks	

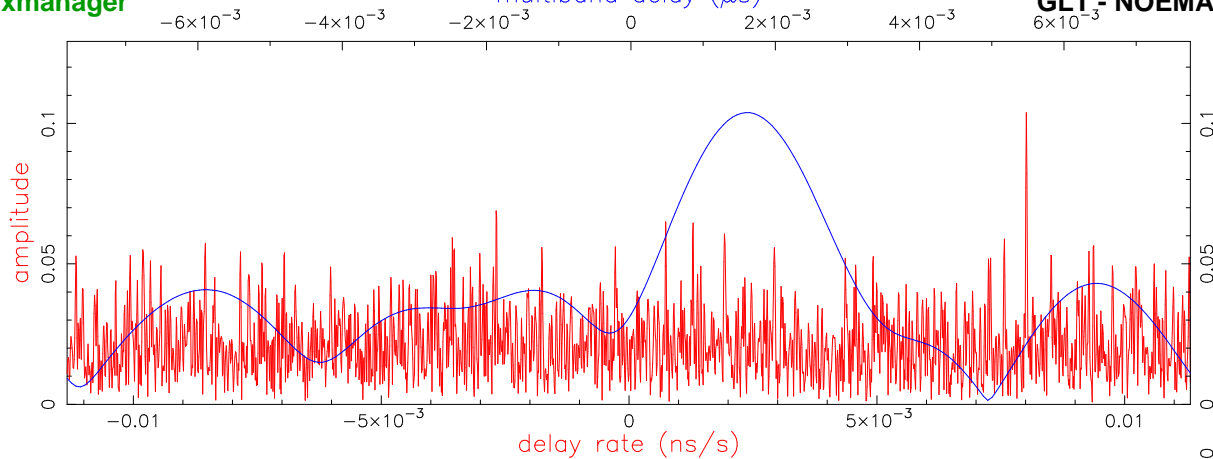
Group delay (usec)(sbd)	-2.06430404041E+03	Apriori delay (usec)	-2.06431876808E+03	Resid mbdelay (usec)	-8.97330E-04	+/-	8.6E-06
Sband delay (usec)	-2.06431114133E+03	Apriori clock (usec)	1.3698226E+01	Resid sbdelay (usec)	7.62675E-03	+/-	6.9E-05
Phase delay (usec)	-2.06431876438E+03	Apriori clockrate (us/s)	4.4610001E-06	Resid phdelay (usec)	3.69984E-06	+/-	2.9E-08
Delay rate (us/s)	-4.73763882268E-01	Apriori rate (us/s)	-4.73766740993E-01	Resid rate (us/s)	2.85872E-06	+/-	1.2E-10
Total phase (deg)	-131.1	Apriori accel (us/s/s)	3.47761488856E-05	Resid phase (deg)	114.7	+/-	0.9

ph/seg (deg)	60.8	RMS	2.2	Theor.	2.299 +/- 0.018	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	58.5	Search (2048X32)	2.208	Amplitude	2.299 +/- 0.018	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	54.5	Interp.	0.000	Search (2048X32)	2.208	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	37.0	Inc. seg. avg.	3.633	Inc. seg. avg.	3.633	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	3.142	Inc. frq. avg.	3.142	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

g: az 32.4 el 40.2 pa -11.6 N: az 57.3 el 47.5 pa -72.8 u,v (fr/asec) 4366.468 4843.527 simultaneous interpolator

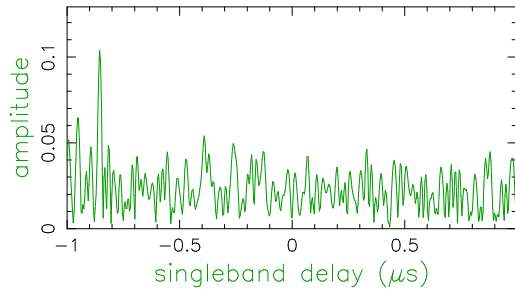
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gN.1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gN.W.24.1WZRGR

multiband delay ( $\mu\text{s}$ )

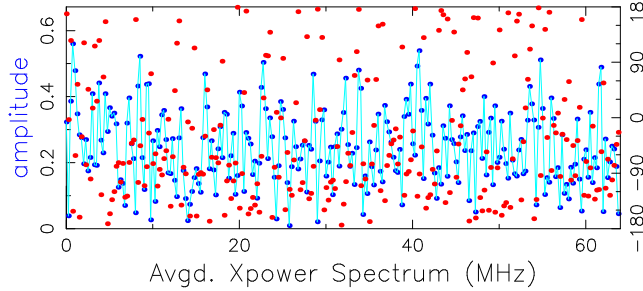


Fringe quality 0

SNR 5.8  
 Int time 419.822  
 Amp 0.129  
 Phase 109.1  
 PFD 7.4e-01  
 Delays (us)  
 SBD -0.854713  
 MBD 0.001645  
 Fringe rate (Hz)  
 0.691153  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

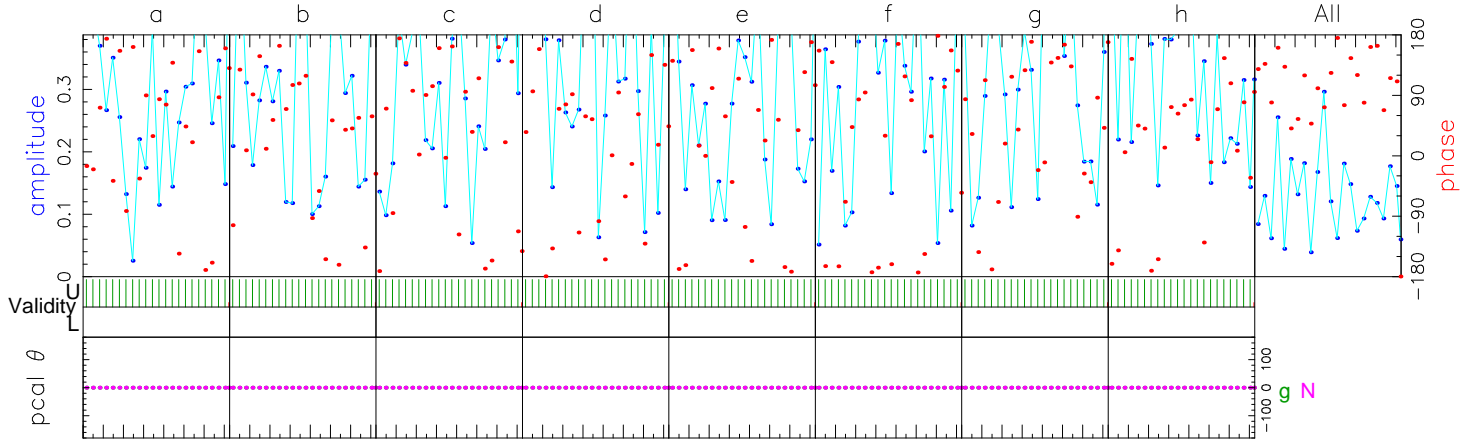


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114525  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
N	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd) -2.06517649842E+03 Apriori delay (usec) -2.06431876808E+03 Resid mbdelay (usec) 1.64466E-03 +/- 1.9E-04  
 Sband delay (usec) -2.06517348083E+03 Apriori clock (usec) 1.3698226E+01 Resid sbdelay (usec) -8.54713E-01 +/- 1.5E-03  
 Phase delay (usec) -2.06431876457E+03 Apriori clockrate (us/s) 4.4610001E-06 Resid phdelay (usec) 3.51872E-06 +/- 6.3E-07  
 Delay rate (us/s) -4.73758717393E-01 Apriori rate (us/s) -4.73766740993E-01 Resid rate (us/s) 8.02360E-06 +/- 2.6E-09  
 Total phase (deg) -136.7 Apriori accel (us/s/s) 3.47761488856E-05 Resid phase (deg) 109.1 +/- 19.6

RMS Theor. Amplitude 0.129 +/- 0.022 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 39.5 47.1 Search (2048X32) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 66.9 82.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 36.4 27.8 Inc. seg. avg. 0.123 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 35.1 48.5 Inc. frq. avg. 0.136 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

g: az 32.4 el 40.2 pa -11.6 N: az 57.3 el 47.5 pa -72.8 u,v (fr/asec) 4366.468 4843.527 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gN..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gN.W.44.1WZRGR



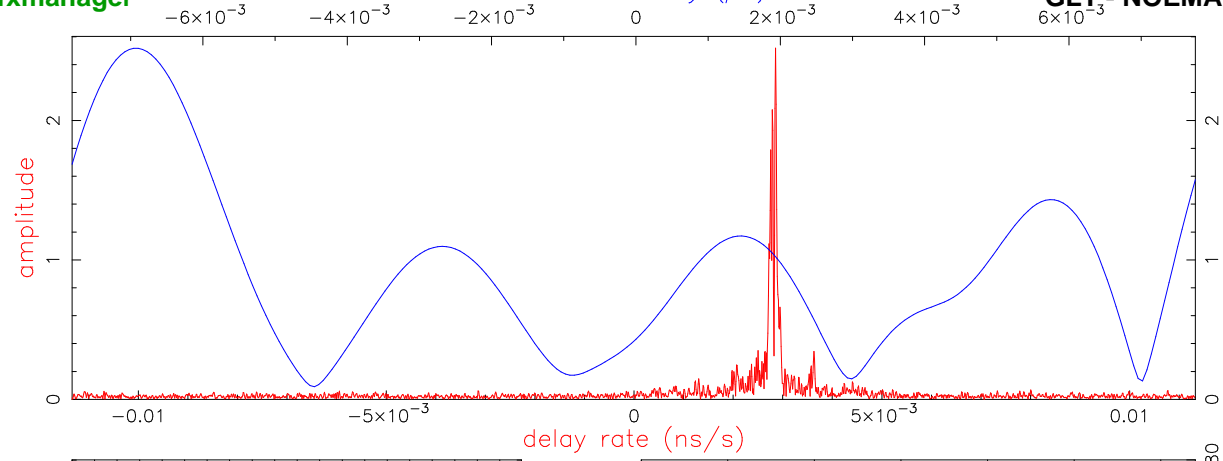
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gN

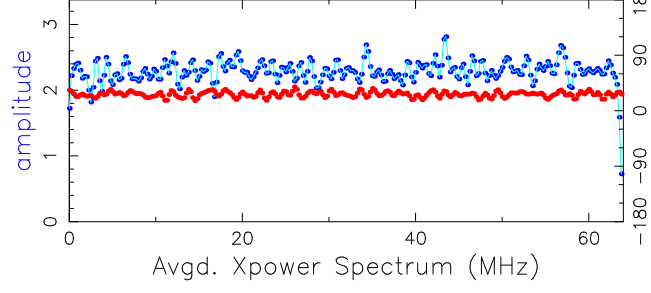
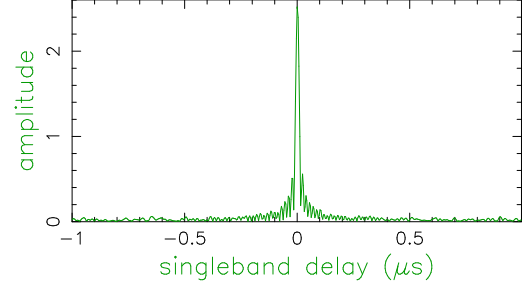
GLT - NOEMA, fgroup W, pol LL

multiband delay ( $\mu$ s)



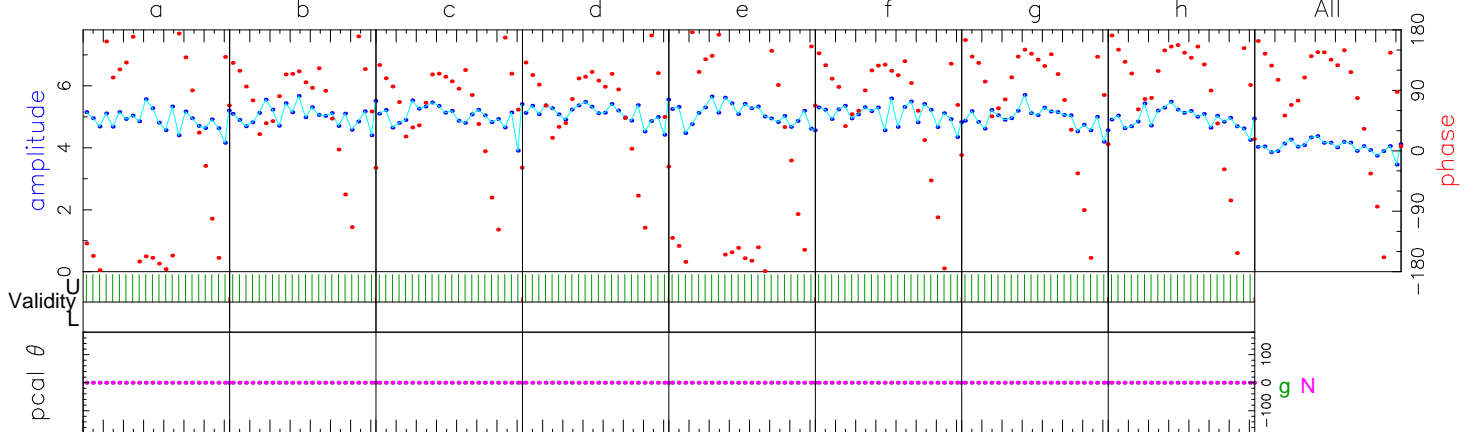
Fringe quality 2

SNR 142.1  
 Int time 419.824  
 Amp 2.603  
 Phase 118.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001011  
 MBD -0.006924  
 Fringe rate (Hz)  
 0.246276  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114518  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	174.3	88.8	84.7	86.0	-174.9	100.2	116.8	127.1	Phase	118.1
	3.1	3.2	3.2	3.3	3.3	3.3	3.2	3.2	Ampl.	3.2
	257.2	257.1	257.2	257.2	257.2	257.3	257.4	257.3	Sbd box	257.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:N	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	
N	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.06431006735E+03		Apriori delay (usec)		-2.06431876808E+03		Resid mbdelay (usec)		-6.92427E-03 +/- 7.6E-06	
Sband delay (usec)	-2.06431775708E+03		Apriori clock (usec)		1.3698226E+01		Resid sbdelay (usec)		1.01100E-03 +/- 6.1E-05	
Phase delay (usec)	-2.06431876428E+03		Apriori clockrate (us/s)		4.4610001E-06		Resid phdelay (usec)		3.80718E-06 +/- 2.6E-08	
Delay rate (us/s)	-4.73763881978E-01		Apriori rate (us/s)		-4.73766740993E-01		Resid rate (us/s)		2.85901E-06 +/- 1.1E-10	
Total phase (deg)	-127.7		Apriori accel (us/s/s)		3.47761488856E-05		Resid phase (deg)		118.1 +/- 0.8	

ph/seg (deg) 61.2 1.9 Search (2048X32) 2.436 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 59.7 3.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 42.9 1.1 Inc. seg. avg. 4.142 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 23.5 2.0 Inc. frq. avg. 3.212 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 32.4 el 40.2 pa -11.6 N: az 57.3 el 47.5 pa -72.8 u,v (fr/asec) 4366.468 4843.527 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gN..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gN.W.5.1WZRGR

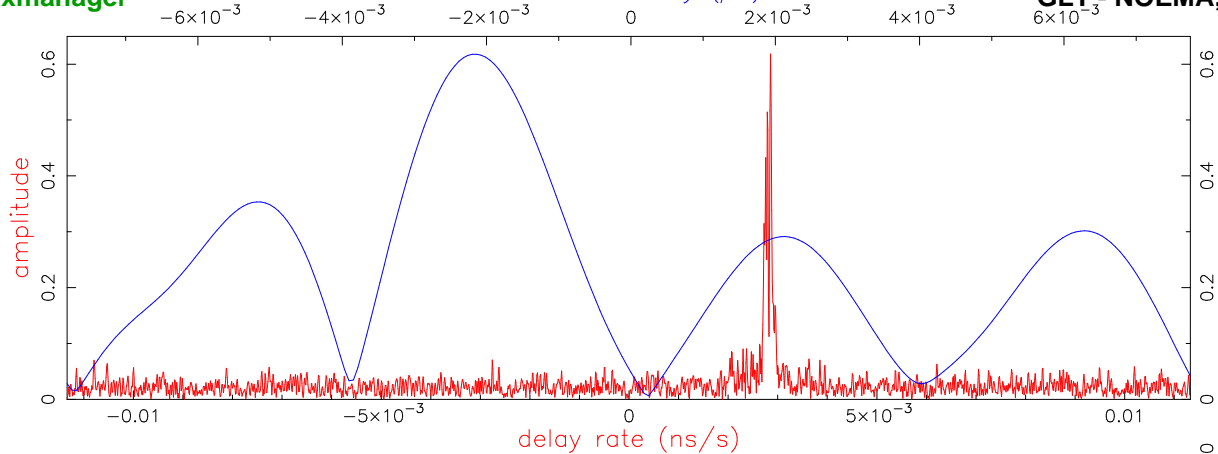
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gN

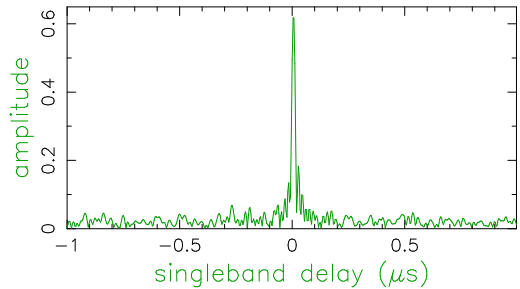
GLT - NOEMA, fgroup W, pol RL

multiband delay ( $\mu$ s)

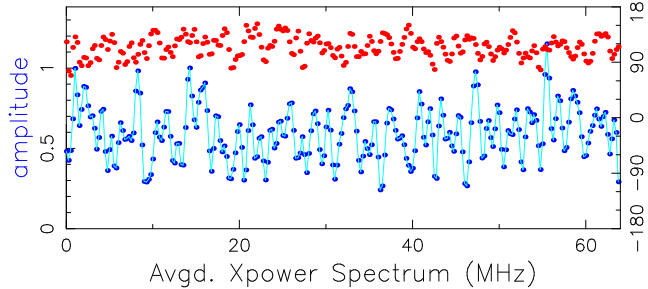


Fringe quality 4

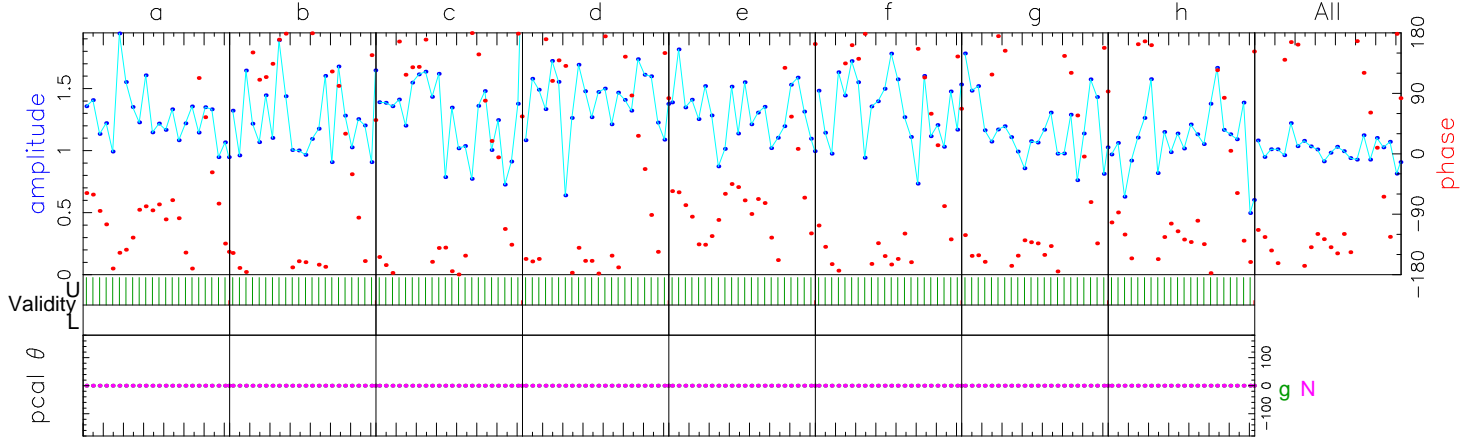
SNR 35.5  
 Int time 419.824  
 Amp 0.650  
 Phase -153.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005747  
 MBD -0.002161  
 Fringe rate (Hz)  
 0.246259  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114529  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



delay rate (ns/s)



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
N	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-2.06430530382E+03	Apriori delay (usec)	-2.06431876808E+03	Resid mbdelay (usec)	-2.16074E-03	+/-	3.1E-05
Sband delay (usec)	-2.06431302133E+03	Apriori clock (usec)	1.3698226E+01	Resid sbdelay (usec)	5.74675E-03	+/-	2.4E-04
Phase delay (usec)	-2.06431877304E+03	Apriori clockrate (us/s)	4.4610001E-06	Resid phdelay (usec)	-4.95766E-06	+/-	1.0E-07
Delay rate (us/s)	-4.73763882175E-01	Apriori rate (us/s)	-4.73766740993E-01	Resid rate (us/s)	2.85882E-06	+/-	4.3E-10
Total phase (deg)	-39.5	Apriori accel (us/s/s)	3.47761488856E-05	Resid phase (deg)	-153.7	+/-	3.2

ph/seg (deg)	61.2	Theor.	7.7	Amplitude	0.650 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	61.2	Search (2048X32)	0.601	Search	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	43.7	Inc. seg. avg.	1.028	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	25.2	Inc. frq. avg.	0.799	Inc. seg. avg.	1.028	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
g: az 32.4 el 40.2 pa -11.6		N: az 57.3 el 47.5 pa -72.8		Inc. frq. avg.	0.799	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
Control file: cf_1234_gmva		Input file: /Exps/c211c/v1/1234/No0037/gN..1WZRGR		u,v (fr/asec)	4366.468 4843.527	Output file: /Exps/c211c/v1/1234/No0037/gN.W.62.1WZRGR				simultaneous interpolator	

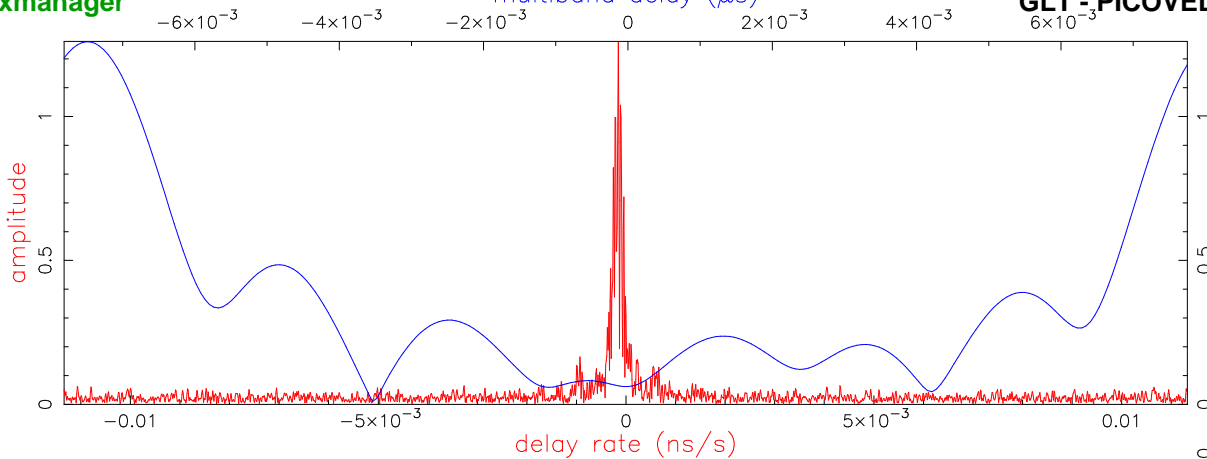
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gP

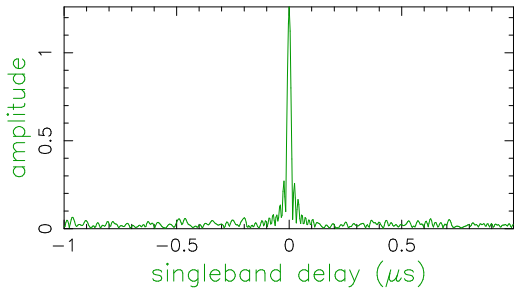
GLT - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)

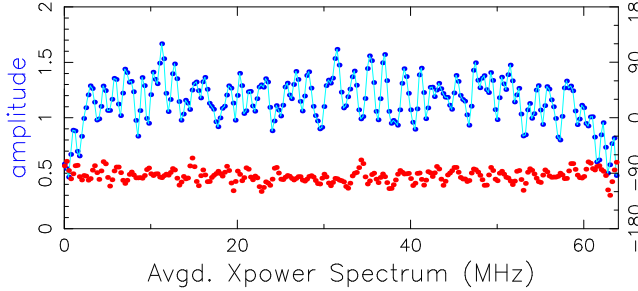


Fringe quality 3

SNR 70.6  
 Int time 419.826  
 Amp 1.261  
 Phase -12.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000366  
 MBD -0.007490  
 Fringe rate (Hz)  
 -0.013415  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

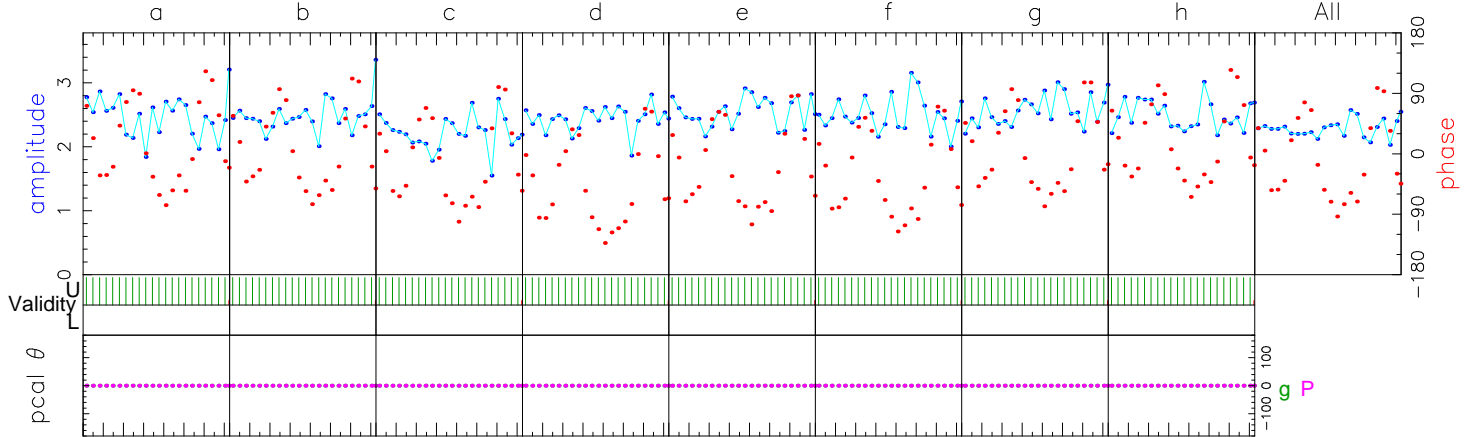


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114520  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P g	1000	1000	1000	1000	1000	1000	1000	1000		
P g	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

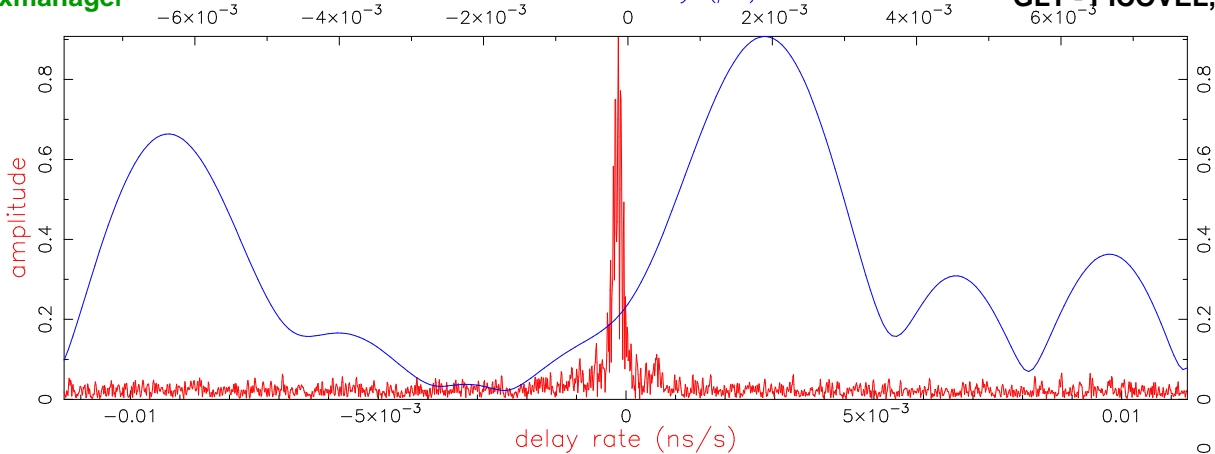
Group delay (usec)(sbd)	6.77178135557E+02	Apriori delay (usec)	6.77185625942E+02	Resid mbdelay (usec)	-7.49038E-03	+/-	1.5E-05
Sband delay (usec)	6.77185259692E+02	Apriori clock (usec)	1.4783211E+00	Resid sbdelay (usec)	-3.66250E-04	+/-	1.2E-04
Phase delay (usec)	6.77185625543E+02	Apriori clockrate (us/s)	6.7200000E-07	Resid phdelay (usec)	-3.99151E-07	+/-	5.2E-08
Delay rate (us/s)	-5.95558745014E-01	Apriori rate (us/s)	-5.95558589280E-01	Resid rate (us/s)	-1.55734E-07	+/-	2.2E-10
Total phase (deg)	282.3	Apriori accel (us/s/s)	2.88933506066E-05	Resid phase (deg)	-12.4	+/-	1.6

ph/seg (deg)	58.7	RMS	3.9	Theor.	1.261 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	81.5	Search (2048X32)	1.243	Amplitude	1.261 +/- 0.018	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	24.7	Interp.	0.000	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	9.8	Inc. seg. avg.	2.275	Inc. seg. avg.	2.275	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
		Inc. frq. avg.	1.350	Inc. frq. avg.	1.350	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

g: az 32.4 el 40.2 pa -11.6 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 5464.132 4818.920 simultaneous interpolator

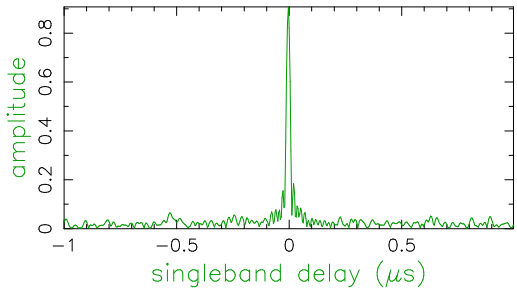
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gP.W.19.1WZRGR

multiband delay ( $\mu\text{s}$ )

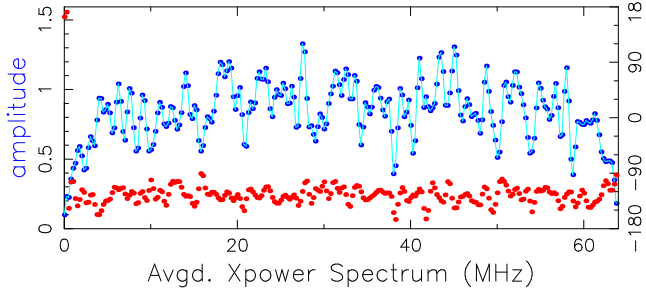


Fringe quality 2

SNR 50.9  
 Int time 419.826  
 Amp 0.908  
 Phase 165.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.004071  
 MBD 0.001896  
 Fringe rate (Hz)  
 -0.013392  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

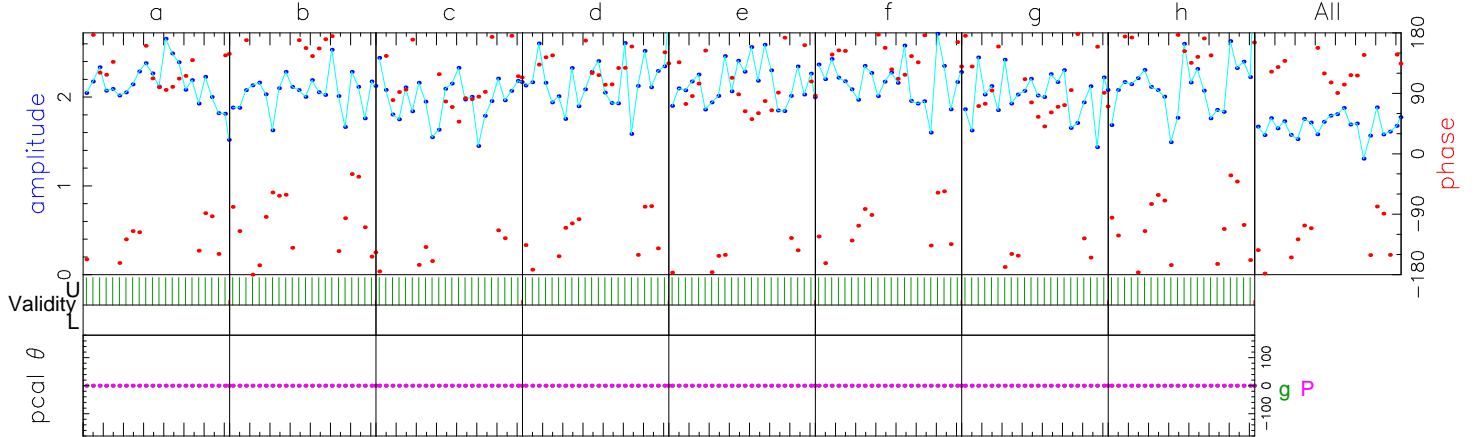


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114524  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

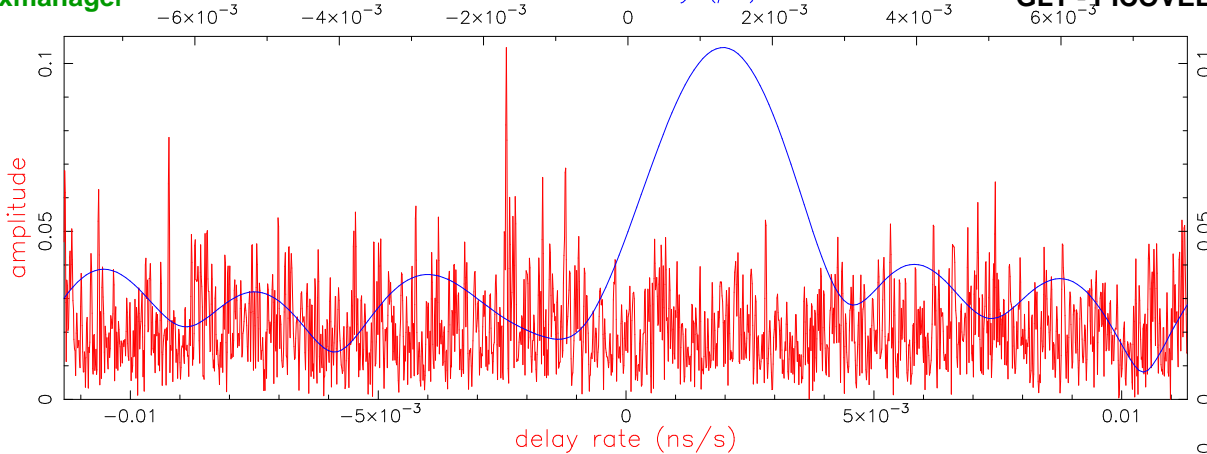
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	6.77187521620E+02					6.77185625942E+02			1.89568E-03	+/- 2.1E-05
Sband delay (usec)	6.77181554942E+02					1.4783211E+00			-4.07100E-03	+/- 1.7E-04
Phase delay (usec)	6.77185631282E+02					6.7200000E-07			5.33938E-06	+/- 7.3E-08
Delay rate (us/s)	-5.95558744745E-01					-5.95558589280E-01			-1.55465E-07	+/- 3.0E-10
Total phase (deg)			100.3			2.88933506066E-05			165.6	+/- 2.3
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)									-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)	58.9	5.4		0.908 +/- 0.018						
amp/seg (%)	85.2	9.4		0.000						
ph/frq (deg)	44.4	3.2		1.663						
amp/frq (%)	27.0	5.6		1.145						
g: az 32.4 el 40.2 pa -11.6										
P: az 49.5 el 37.3 pa -75.4										
u,v (fr/asec) 5464.132 4818.920										
Control file: cf_1234_gmva										
Input file: /Exps/c211c/v1/1234/No0037/gP..1WZRGR										
Output file: /Exps/c211c/v1/1234/No0037/gP.W.39.1WZRGR										

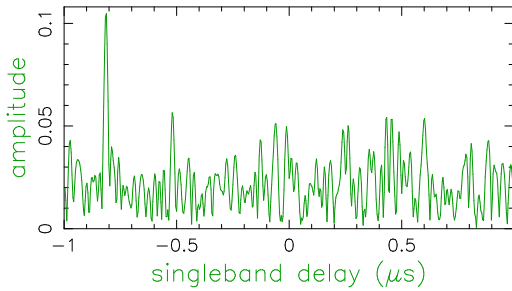
simultaneous interpolator

multiband delay ( $\mu$ s)

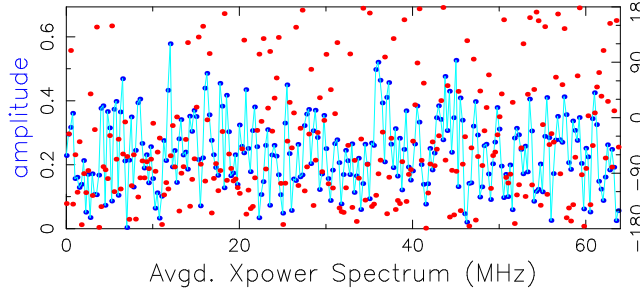


Fringe quality 0

SNR 5.9  
 Int time 419.826  
 Amp 0.108  
 Phase -122.8  
 PFD 5.2e-01  
 Delays (us)  
 SBD -0.814031  
 MBD 0.001291  
 Fringe rate (Hz)  
 -0.208570  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

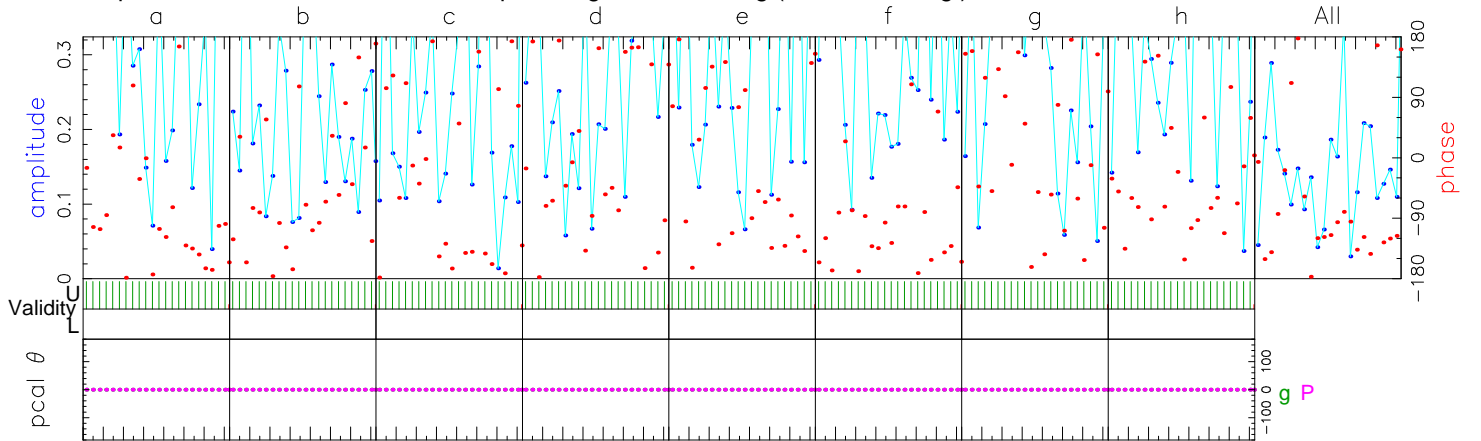


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114528  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-108.0	-98.3	-174.0	-146.5	-131.4	-119.6	-173.6	-75.1	Phase	-122.8
	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	254.3	310.7	322.1	17.7	372.6	49.7	375.4	185.1	Sbd box	48.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
P/g	0	0	0	0	0	0	0	0	PC freqs	
	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	6.76374416929E+02		Apriori delay (usec)		6.77185625942E+02		Resid mbdelay (usec)		1.29099E-03	+/- 1.8E-04
Sband delay (usec)	6.76371594442E+02		Apriori clock (usec)		1.4783211E+00		Resid sbdelay (usec)		-8.14031E-01	+/- 1.4E-03
Phase delay (usec)	6.77185621982E+02		Apriori clockrate (us/s)		6.7200000E-07		Resid phdelay (usec)		-3.96009E-06	+/- 6.2E-07
Delay rate (us/s)	-5.95561010567E-01		Apriori rate (us/s)		-5.95558589280E-01		Resid rate (us/s)		-2.42129E-06	+/- 2.6E-09
Total phase (deg)	171.9		Apriori accel (us/s/s)		2.88933506066E-05		Resid phase (deg)		-122.8	+/- 19.3

	RMS	Theor.	Amplitude	0.108 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	53.6	46.3	Search (2048X32)	0.101	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	81.3	80.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	38.6	27.3	Inc. seg. avg.	0.112	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	35.1	47.6	Inc. frq. avg.	0.110	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

g: az 32.4 el 40.2 pa -11.6 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 5464.132 4818.920 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gP.1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gP.W.58.1WZRGR

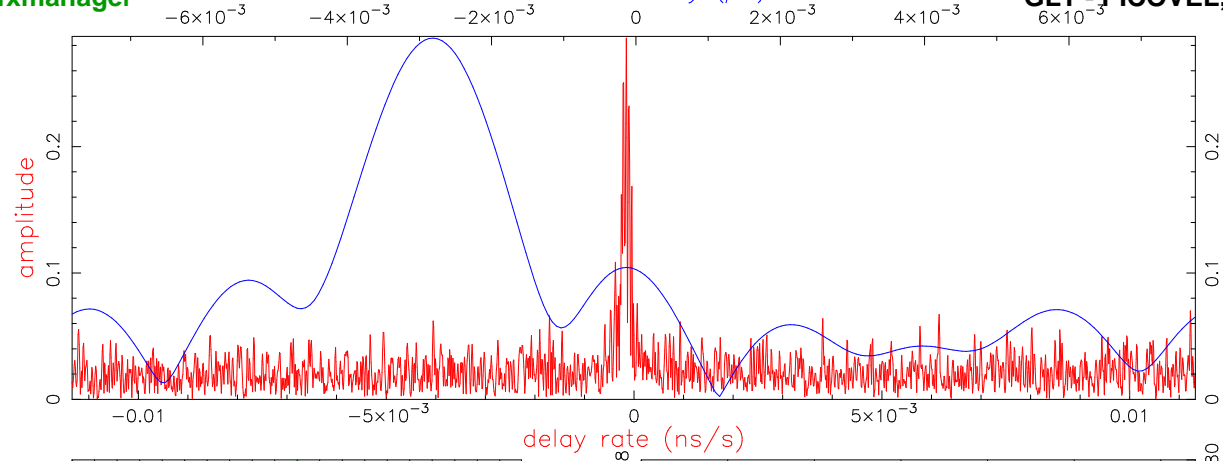
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gP

GLT - PICOVEL, fgroup W, pol RL

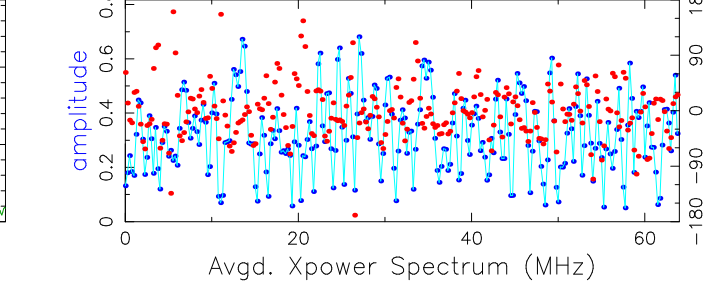
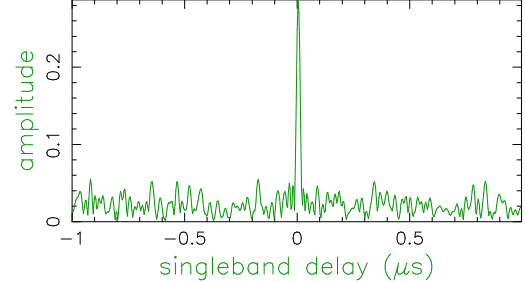
multiband delay ( $\mu\text{s}$ )



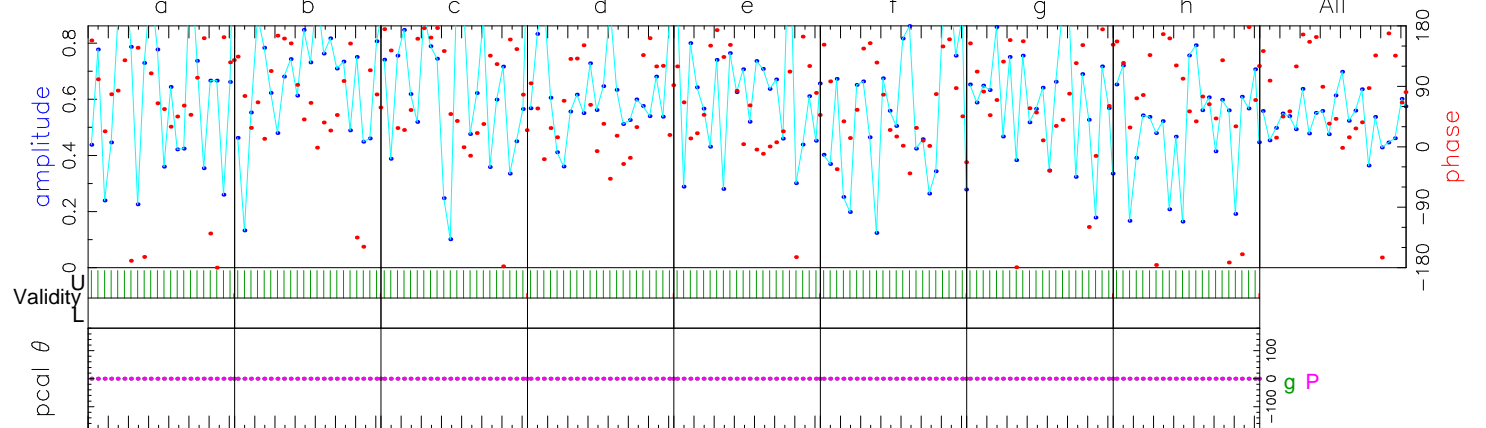
Fringe quality 8

SNR 16.1  
Int time 419.826  
Amp 0.287  
Phase 84.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.004776  
MBD -0.002811  
Fringe rate (Hz) -0.013467  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114532  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"



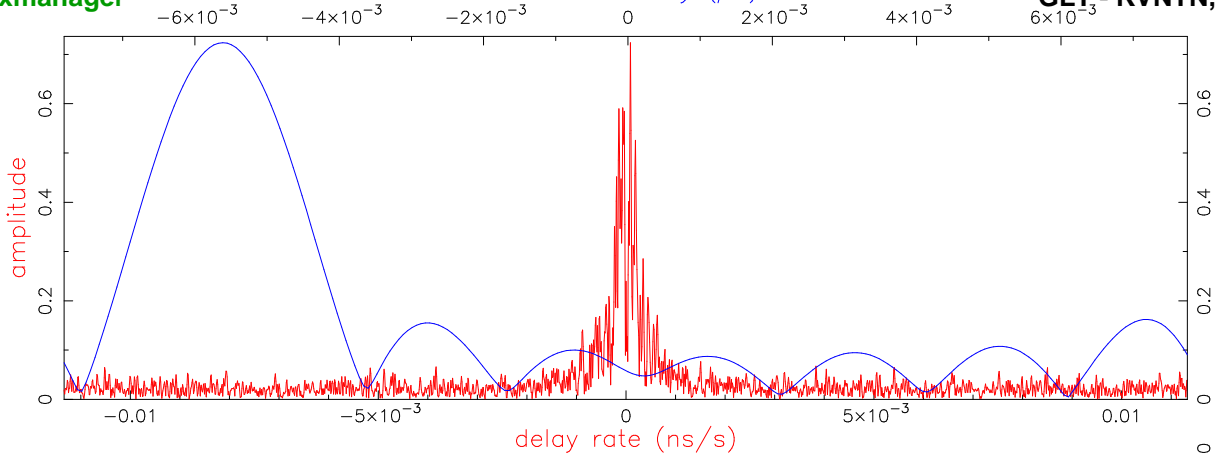
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	6.77182815182E+02				6.77185625942E+02					
Sband delay (usec)	6.77190401692E+02				1.4783211E+00					
Phase delay (usec)	6.77185628656E+02				6.7200000E-07					
Delay rate (us/s)	-5.95558745624E-01				-5.95558589280E-01					
Total phase (deg)		18.9			2.88933506066E-05					
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode:	MANUAL	MANUAL			MANUAL					
Pcal rate:	0.000E+00	0.000E+00			0.000E+00					
Bits/sample:	2x2									
Sample rate(MISamp/s):	128									
Data rate(Mb/s):	2048									
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 theta										

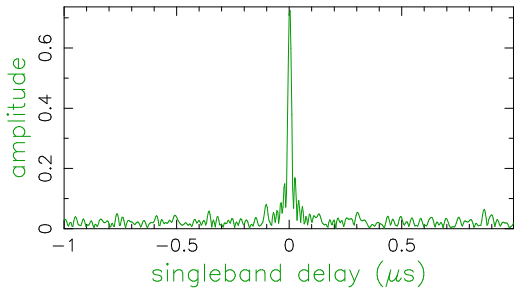
ph/seg (deg) 59.3 17.1 Search (2048X32) 0.280 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 88.8 29.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 24.2 10.1 Inc. seg. avg. 0.508 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 16.5 17.6 Inc. frq. avg. 0.302 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 32.4 el 40.2 pa -11.6 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 5464.132 4818.920 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gP.W.77.1WZRGR

multiband delay ( $\mu$ s)

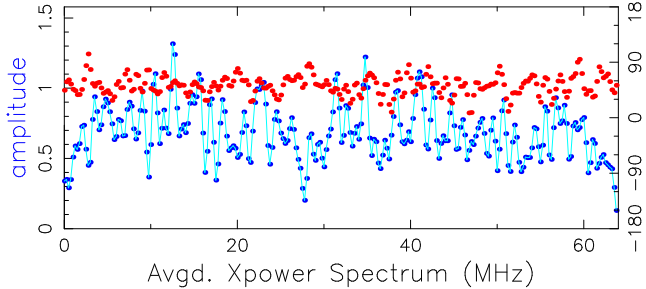


Fringe quality 7

SNR 41.3  
Int time 419.826  
Amp 0.737  
Phase 143.6  
PFD 0.0e+00  
Delays (us)  
SBD 0.002251  
MBD -0.005616  
Fringe rate (Hz) 0.007575  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

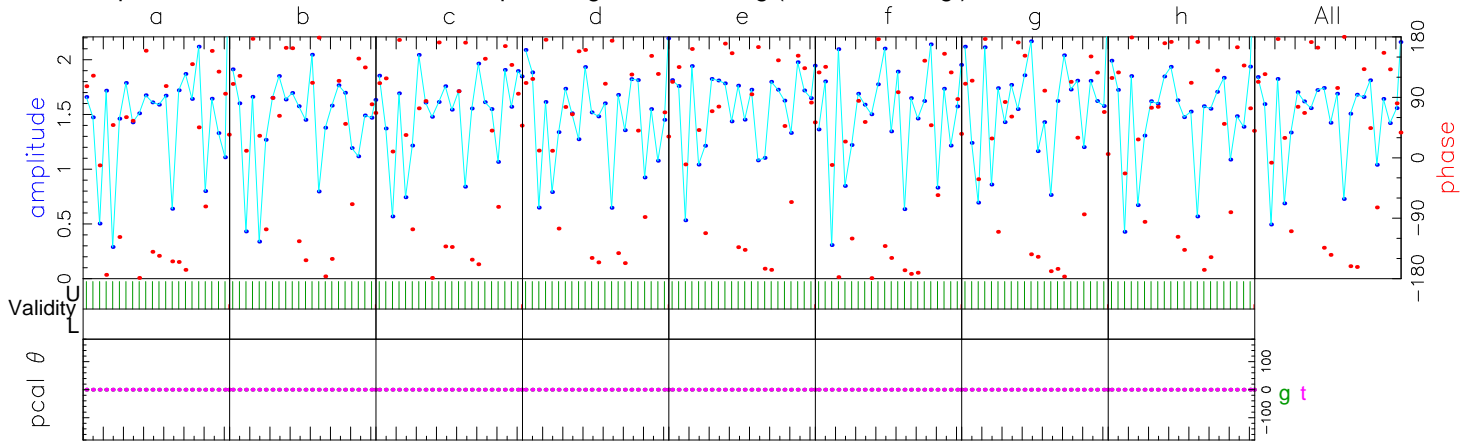


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114522  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

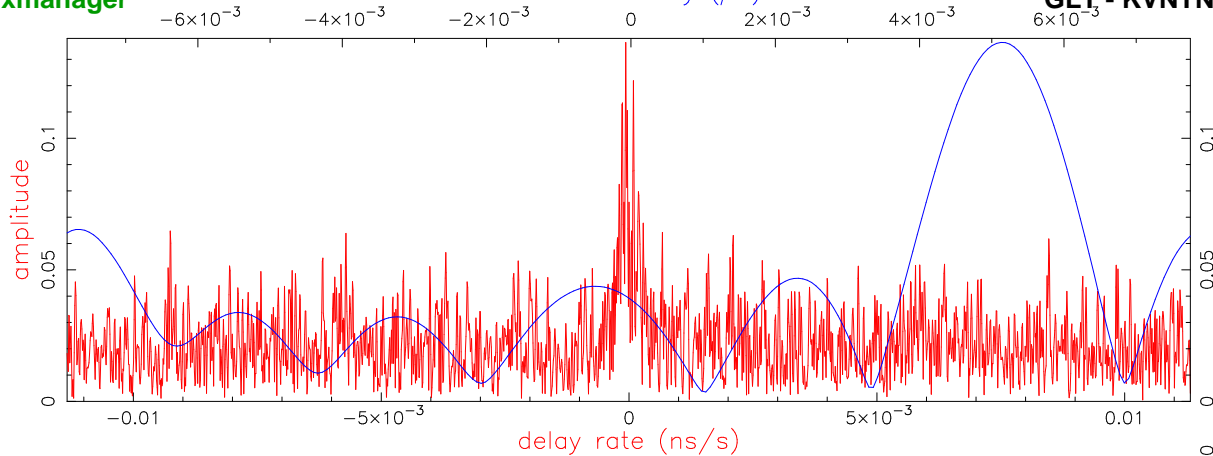
Group delay (usec)(sbd)	-1.49323993746E+03	Apriori delay (usec)	-1.49324994651E+03	Resid mbdelay (usec)	-5.61595E-03	+/-	2.6E-05
Sband delay (usec)	-1.49324769526E+03	Apriori clock (usec)	7.0164680E-01	Resid sbdelay (usec)	2.25125E-03	+/-	2.1E-04
Phase delay (usec)	-1.49324994188E+03	Apriori clockrate (us/s)	1.2200000E-07	Resid phdelay (usec)	4.63134E-06	+/-	9.0E-08
Delay rate (us/s)	8.33299494418E-01	Apriori rate (us/s)	8.33299406485E-01	Resid rate (us/s)	8.79334E-08	+/-	3.7E-10
Total phase (deg)		Apriori accel (us/s/s)	4.51738844016E-05	Resid phase (deg)	143.6	+/-	2.8

ph/seg (deg)	RMS 73.1	Theor. 6.7	Amplitude Search (2048X32)	0.737 +/- 0.018	0.705	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	112.5	11.6	Interp.	0.000		Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	4.9	3.9	Inc. seg. avg.	1.463		Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	4.9	6.9	Inc. frq. avg.	0.724		Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

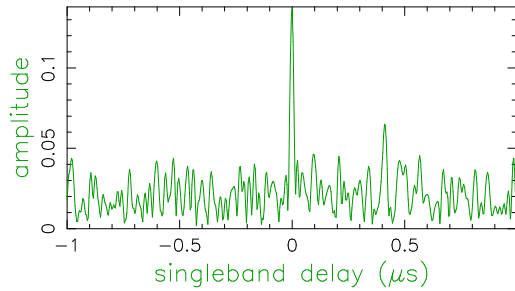
g: az 32.4 el 40.2 pa -11.6 t: az 311.2 el 46.2 pa 91.9 u,v (fr/asec) -7518.965 6820.552 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gt..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gt.W.28.1WZRGR

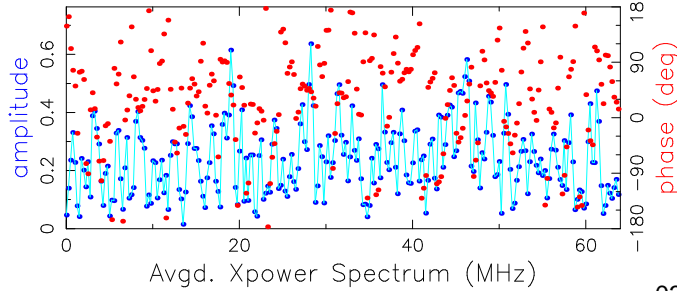
multiband delay ( $\mu\text{s}$ )



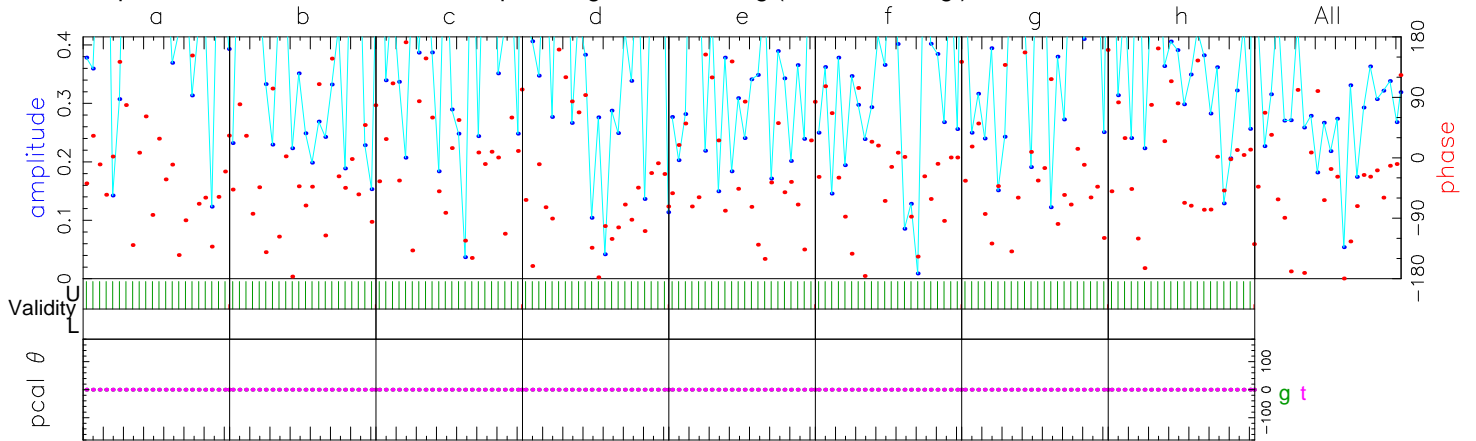
Fringe quality 9  
SNR 7.7  
Int time 419.826  
Amp 0.138  
Phase -33.1  
PFD 3.5e-06  
Delays (us)  
SBD -0.001369  
MBD 0.005149  
Fringe rate (Hz) -0.005501  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114526  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"



delay rate (ns/s)



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

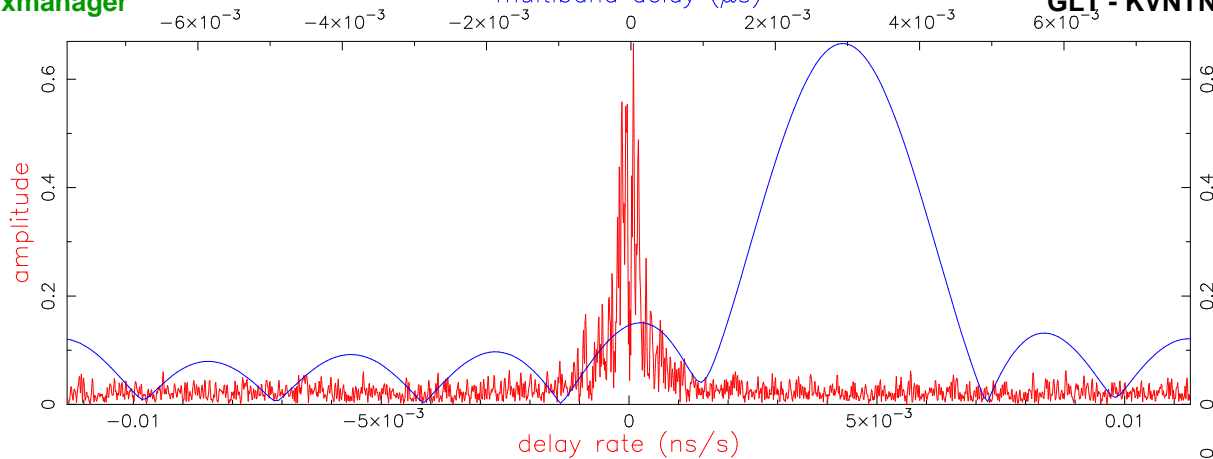


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.49324479763E+03				-1.49324994651E+03				5.14888E-03	+/- 1.4E-04
Sband delay (usec)	-1.49325131576E+03				7.0164680E-01				-1.36925E-03	+/- 1.1E-03
Phase delay (usec)	-1.49324994758E+03				1.2200000E-07				-1.06836E-06	+/- 4.8E-07
Delay rate (us/s)	8.33299342628E-01				8.33299406485E-01				-6.38566E-08	+/- 2.0E-09
Total phase (deg)			-174.3		4.51738844016E-05				-33.1	+/- 14.8
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 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

ph/seg (deg) 77.1 35.5 Search (2048X32) 0.132 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 128.0 62.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 23.3 21.0 Inc. seg. avg. 0.243 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 35.3 36.6 Inc. frq. avg. 0.135 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 32.4 el 40.2 pa -11.6 t: az 311.2 el 46.2 pa 91.9 u,v (fr/asec) -7518.965 6820.552 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gt..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gt.W.46.1WZRGR simultaneous interpolator

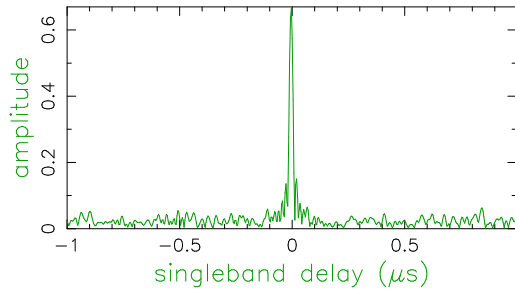


multiband delay ( $\mu$ s)

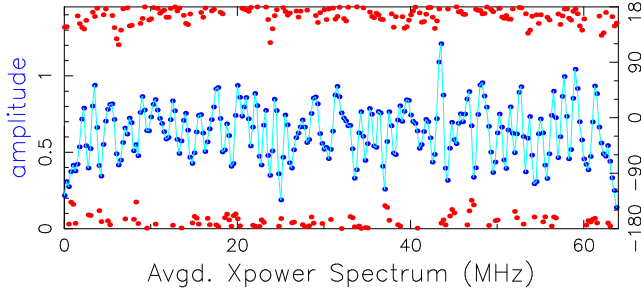


Fringe quality 7

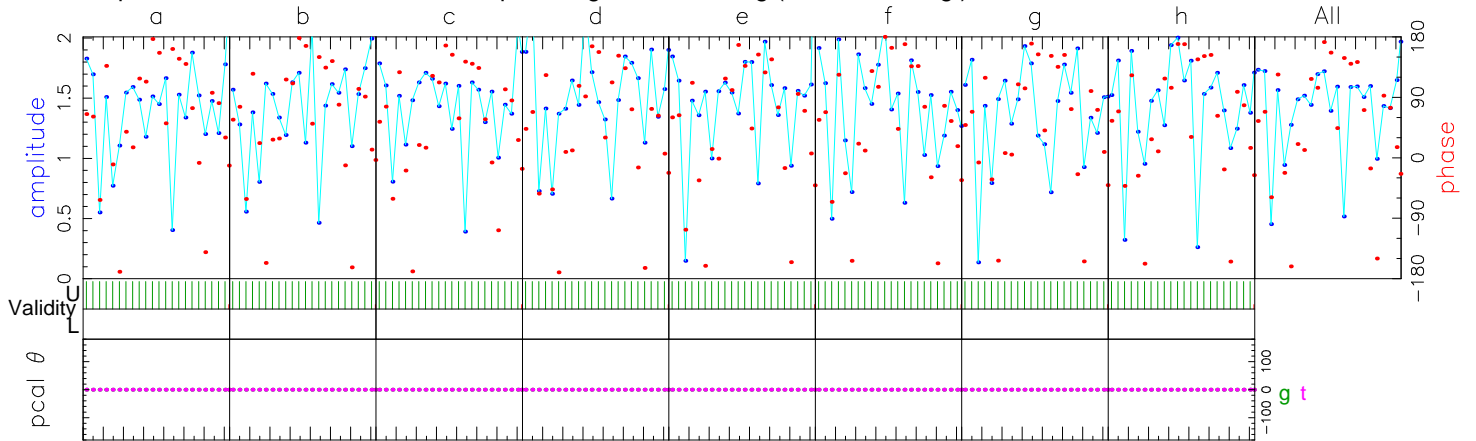
SNR 37.5  
Int time 419.826  
Amp 0.670  
Phase 85.9  
PFD 0.0e+00  
Delays (us)  
SBD -0.004847  
MBD 0.002936  
Fringe rate (Hz) 0.007639  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114518  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"



delay rate (ns/s)



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.49324701049E+03	Apriori delay (usec)	-1.49324994651E+03	Resid mbdelay (usec)	2.93601E-03	+/-	2.9E-05
Sband delay (usec)	-1.49325479351E+03	Apriori clock (usec)	7.0164680E-01	Resid sbdelay (usec)	-4.84700E-03	+/-	2.3E-04
Phase delay (usec)	-1.49324994374E+03	Apriori clockrate (us/s)	1.2200000E-07	Resid phdelay (usec)	2.76943E-06	+/-	9.8E-08
Delay rate (us/s)	8.33299495162E-01	Apriori rate (us/s)	8.33299406485E-01	Resid rate (us/s)	8.86774E-08	+/-	4.1E-10
Total phase (deg)	-55.3	Apriori accel (us/s/s)	4.51738844016E-05	Resid phase (deg)	85.9	+/-	3.1

ph/seg (deg)	RMS 72.4	Theor. 7.3	Amplitude Search (2048X32)	0.670 +/- 0.018	0.664	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	122.4	12.8	Interp.	0.000	0.664	PCal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	3.6	4.3	Inc. seg. avg.	1.397	1.397	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	5.9	7.5	Inc. frq. avg.	0.665	0.665	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

g: az 32.4 el 40.2 pa -11.6 t: az 311.2 el 46.2 pa 91.9 u,v (fr/asec) -7518.965 6820.552 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gt..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gt.W.6.1WZRGR

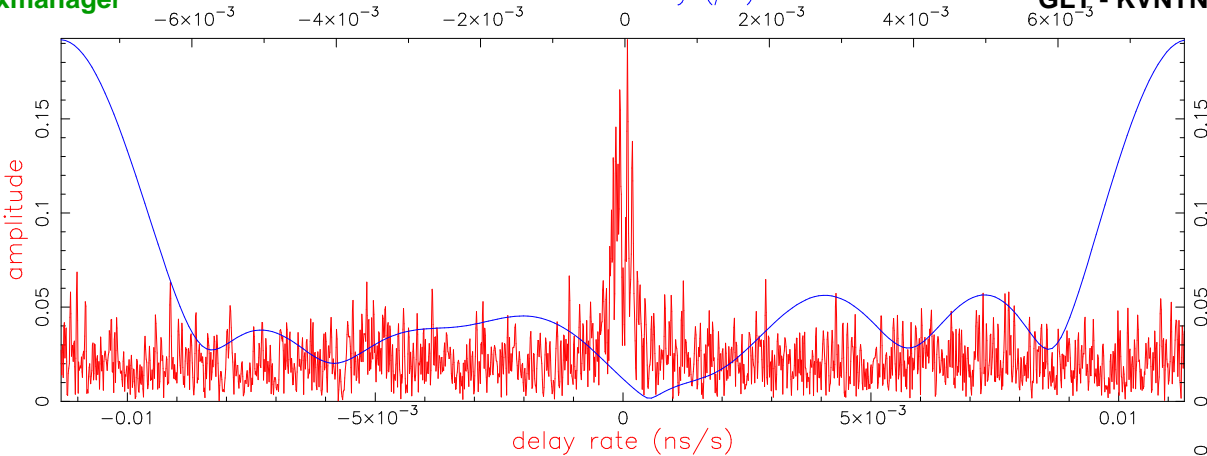
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gt

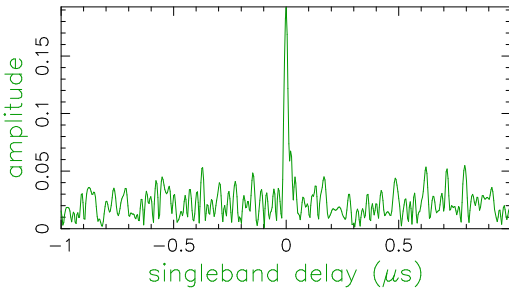
GLT - KVNTN, fgroup W, pol RL

multiband delay ( $\mu$ s)

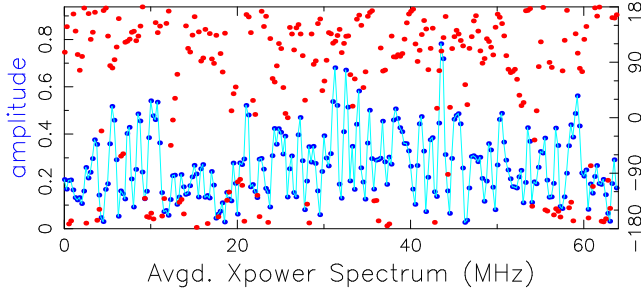


Fringe quality 9

SNR 10.8  
 Int time 419.826  
 Amp 0.193  
 Phase -142.9  
 PFD 1.6e-18  
 Delays (us)  
 SBD -0.000814  
 MBD -0.007835  
 Fringe rate (Hz) 0.007680  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

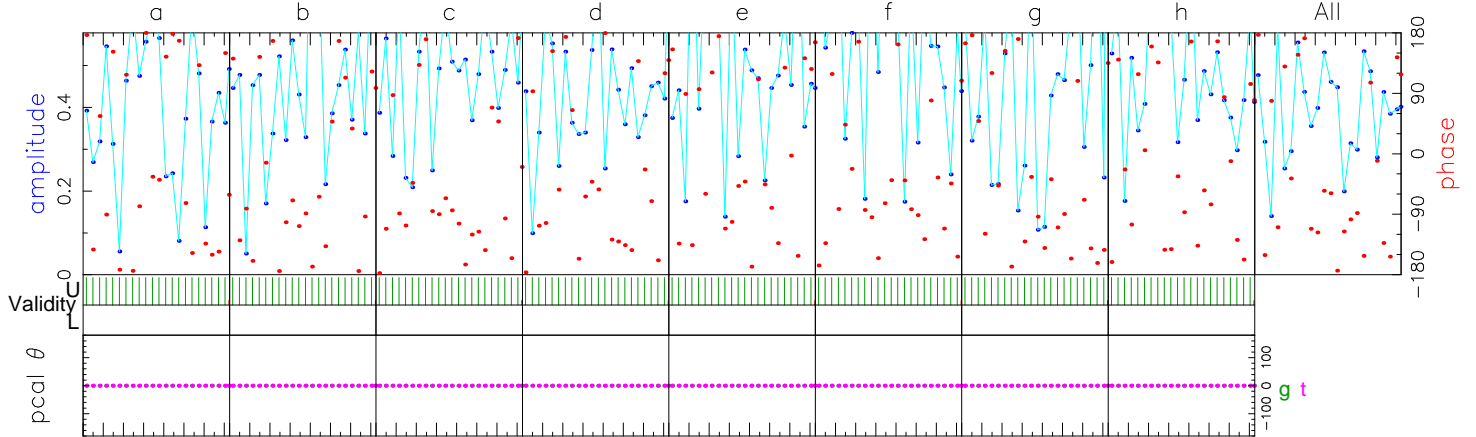


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114530  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-153.6	-164.5	-127.1	-130.1	-158.7	-107.2	-150.1	-168.5	Phase	-142.9
	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	Ampl.	0.2
	69.3	256.5	256.5	256.8	258.1	256.0	258.1	300.0	Sbd box	256.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:t	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.49325778118E+03		Apriori delay (usec)		-1.49324994651E+03		Resid mbdelay (usec)		-7.83467E-03	+/- 1.0E-04
Sband delay (usec)	-1.49325076101E+03		Apriori clock (usec)		7.0164680E-01		Resid sbdelay (usec)		-8.14500E-04	+/- 8.0E-04
Phase delay (usec)	-1.49324995112E+03		Apriori clockrate (us/s)		1.2200000E-07		Resid phdelay (usec)		-4.60912E-06	+/- 3.4E-07
Delay rate (us/s)	8.33299495648E-01		Apriori rate (us/s)		8.33299406485E-01		Resid rate (us/s)		8.91628E-08	+/- 1.4E-09
Total phase (deg)			Apriori accel (us/s/s)		4.51738844016E-05		Resid phase (deg)		-142.9	+/- 10.6

ph/seg (deg) 69.9 25.4 Search (2048X32) 0.191 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 119.2 44.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 23.2 15.0 Inc. seg. avg. 0.356 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 16.4 26.2 Inc. frq. avg. 0.199 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 32.4 el 40.2 pa -11.6 t: az 311.2 el 46.2 pa 91.9 u,v (fr/asec) -7518.965 6820.552 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gt..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gt.W.64.1WZRGR simultaneous interpolator

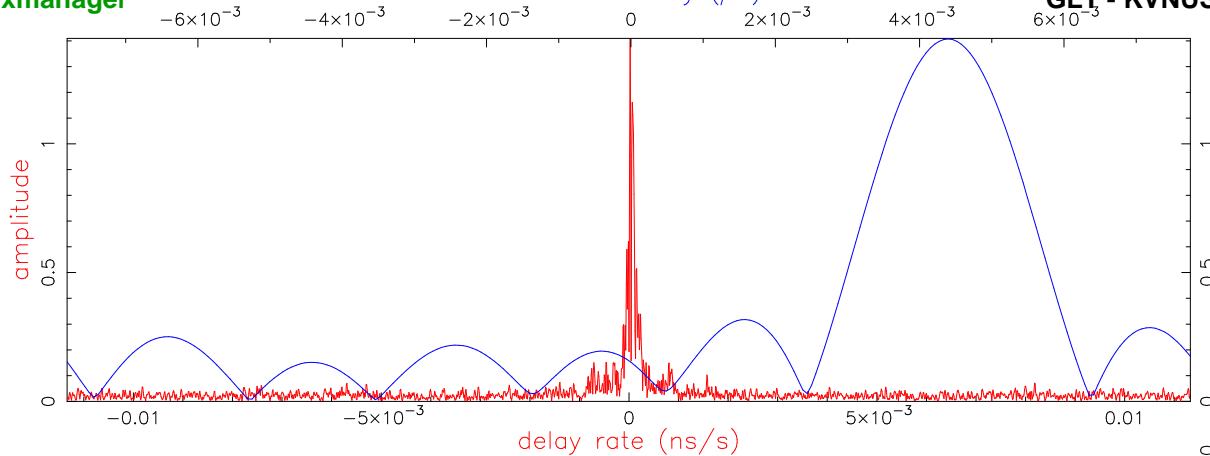
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gu

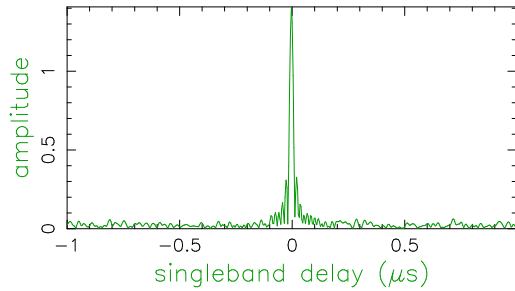
GLT - KVNUS, fgroup W, pol LL

multiband delay ( $\mu$ s)

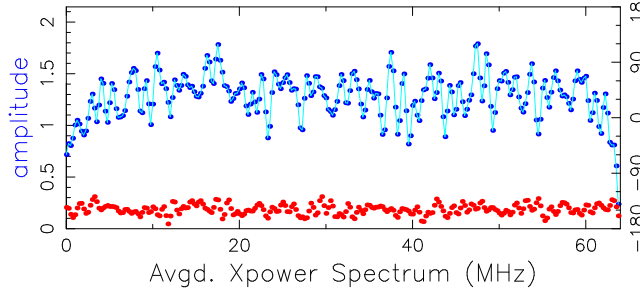


Fringe quality 5

SNR 79.0  
 Int time 419.826  
 Amp 1.409  
 Phase 121.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003388  
 MBD 0.004392  
 Fringe rate (Hz)  
 0.002336  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

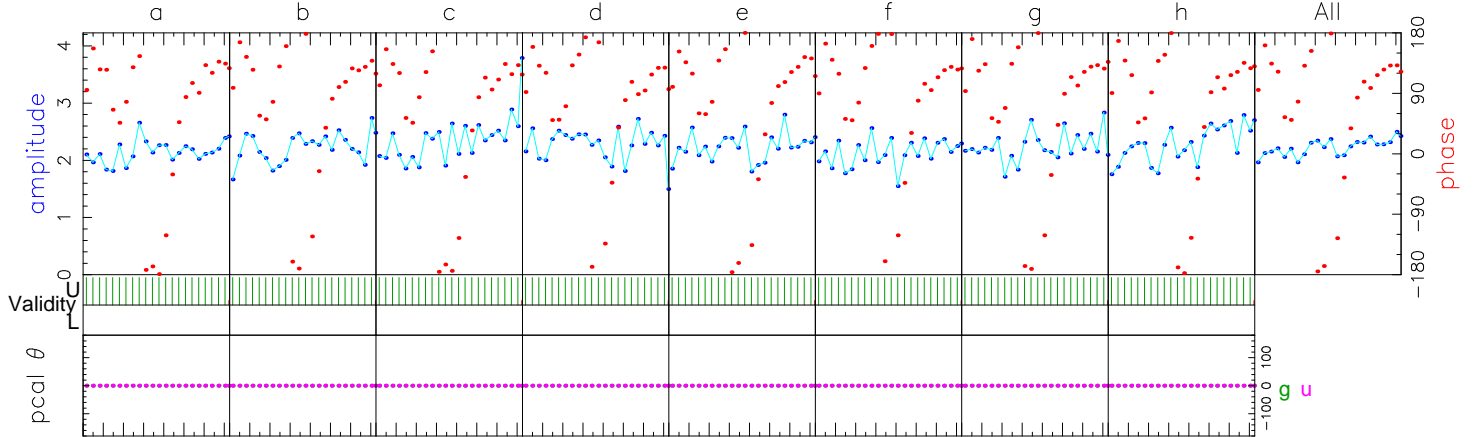


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114519  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	122.2	124.9	121.1	115.2	125.1	119.9	123.8	121.9	Phase	121.7
	1.4	1.3	1.5	1.5	1.5	1.3	1.4	1.5	Ampl.	1.4
	256.1	256.0	256.1	256.0	256.1	256.0	256.3	256.3	Sbd box	256.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	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	Manl 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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.42944662090E+03		Apriori delay (usec)		-1.42945101317E+03		Resid mbdelay (usec)		4.39227E-03	+/- 1.4E-05
Sband delay (usec)	-1.42945440117E+03		Apriori clock (usec)		-1.4264679E+01		Resid sbdelay (usec)		-3.38800E-03	+/- 1.1E-04
Phase delay (usec)	-1.42945100924E+03		Apriori clockrate (us/s)		-1.0549999E-06		Resid phdelay (usec)		3.92489E-06	+/- 4.7E-08
Delay rate (us/s)	8.35664047022E-01		Apriori rate (us/s)		8.35664019906E-01		Resid rate (us/s)		2.71158E-08	+/- 1.9E-10
Total phase (deg)	22.9		Apriori accel (us/s/s)		4.19098057363E-05		Resid phase (deg)		121.7	+/- 1.5

	RMS	Theor.	Amplitude	1.409 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.9	3.5	Search (2048X32)	1.307	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	58.5	6.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	3.5	2.1	Inc. seg. avg.	2.218	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	4.3	3.6	Inc. frq. avg.	1.408	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

g: az 32.4 el 40.2 pa -11.6      u: az 309.5 el 46.0 pa 86.5      u,v (fr/asec) -7545.376 6323.118      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c211c/v1/1234/No0037/gu..1WZRGR      Output file: /Exps/c211c/v1/1234/No0037/gu.W.12.1WZRGR

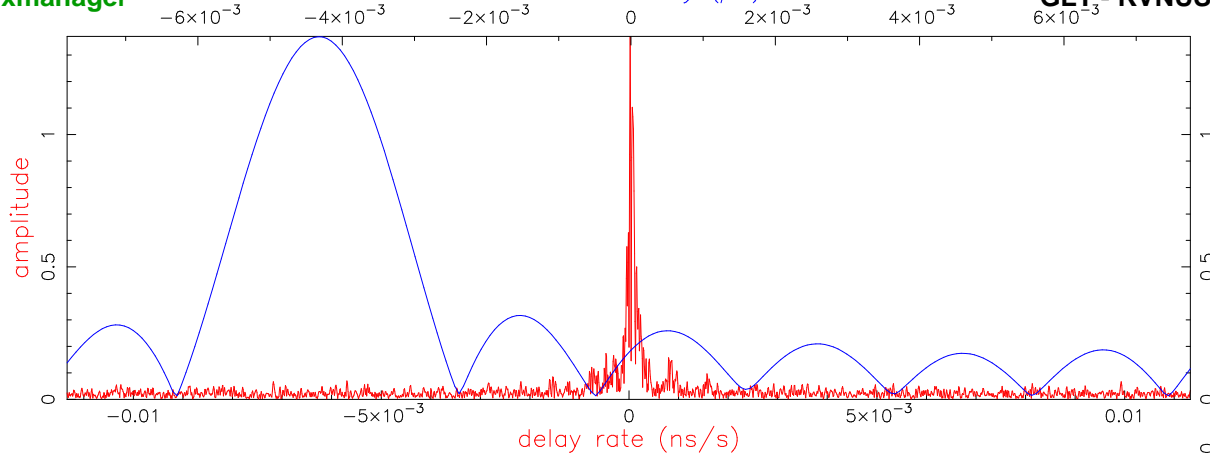
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gu

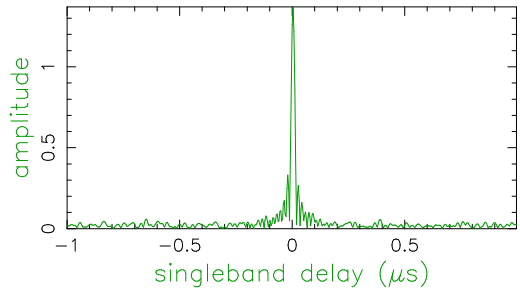
GLT - KVNUS, fgroup W, pol RR

multiband delay ( $\mu\text{s}$ )

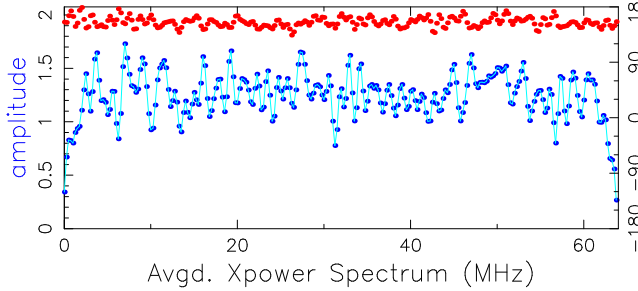


Fringe quality 5

SNR 76.8  
 Int time 419.826  
 Amp 1.371  
 Phase -114.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003552  
 MBD -0.004323  
 Fringe rate (Hz) 0.002317  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

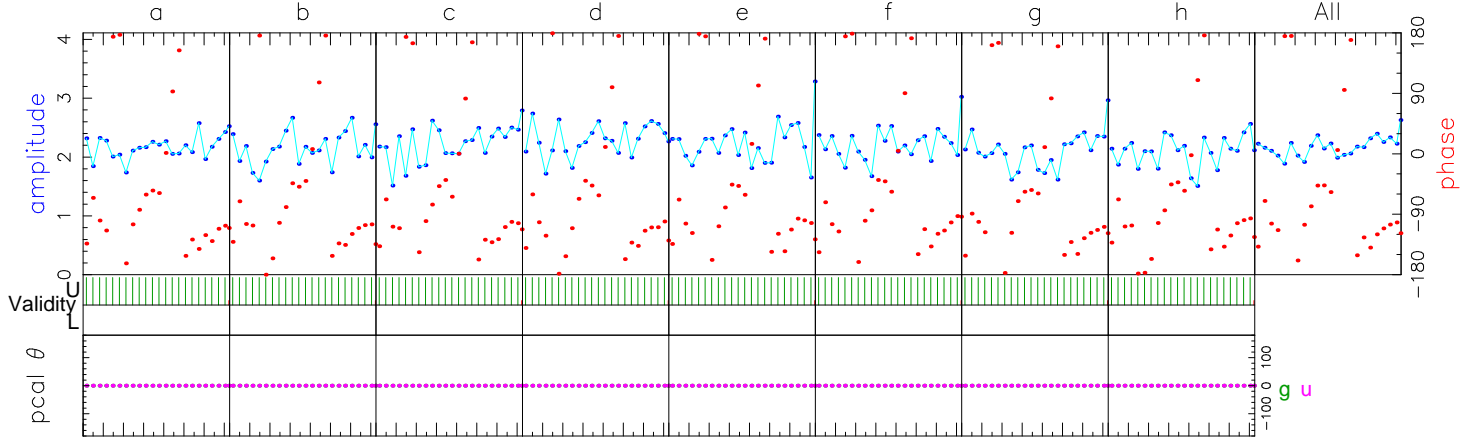


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114523  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-116.6	-113.0	-112.9	-113.4	-113.1	-111.7	-122.3	-110.8	Phase	-114.1
	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.4	Ampl.	1.4
	257.8	258.1	258.0	258.0	257.9	257.7	258.0	257.9	Sbd box	257.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.42943971118E+03		Apriori delay (usec)		-1.42945101317E+03		Resid mbdelay (usec)		-4.32301E-03	+/- 1.4E-05
Sband delay (usec)	-1.42944746067E+03		Apriori clock (usec)		-1.4264679E+01		Resid sbdelay (usec)		3.55250E-03	+/- 1.1E-04
Phase delay (usec)	-1.42945101685E+03		Apriori clockrate (us/s)		-1.0549999E-06		Resid phdelay (usec)		-3.68082E-06	+/- 4.8E-08
Delay rate (us/s)	8.35664046801E-01		Apriori rate (us/s)		8.35664019906E-01		Resid rate (us/s)		2.68954E-08	+/- 2.0E-10
Total phase (deg)			Apriori accel (us/s/s)		4.19098057363E-05		Resid phase (deg)		-114.1	+/- 1.5

ph/seg (deg) 57.6 3.6 Theor. Amplitude 1.371 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 58.7 6.2 Search (2048X32) 1.276 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 4.0 2.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 3.0 3.7 Inc. seg. avg. 2.158 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 g: az 32.4 el 40.2 pa -11.6 u: az 309.5 el 46.0 pa 86.5 u,v (fr/asec) -7545.376 6323.118 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gu..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gu.W.31.1WZRGR simultaneous interpolator

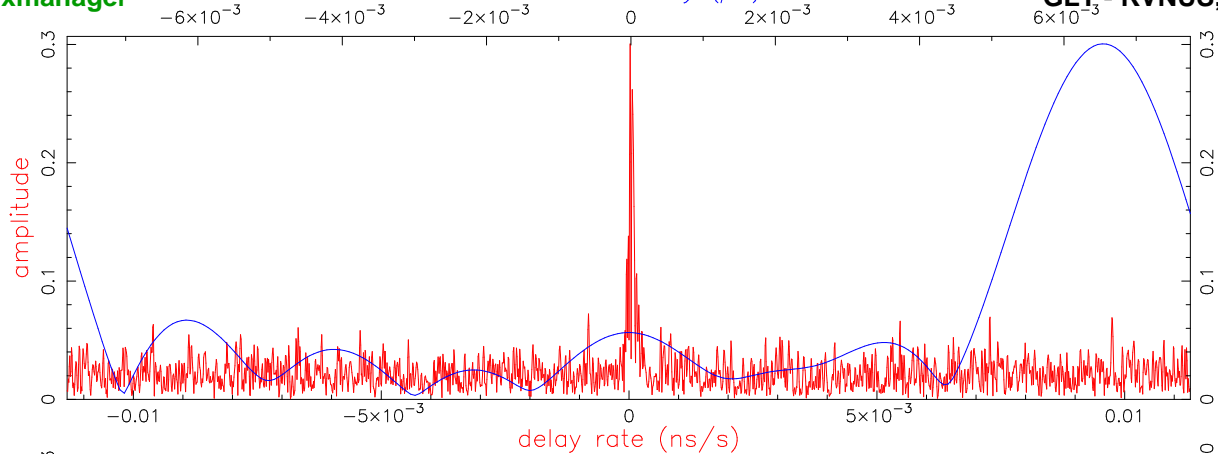
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gu

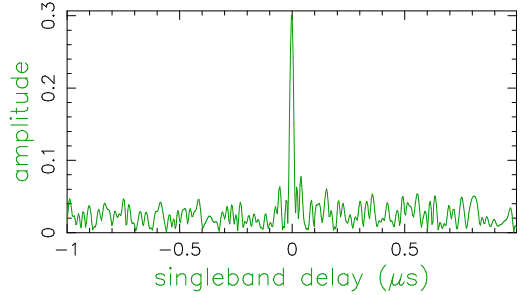
GLT - KVNUS, fgroup W, pol LR

multiband delay ( $\mu$ s)

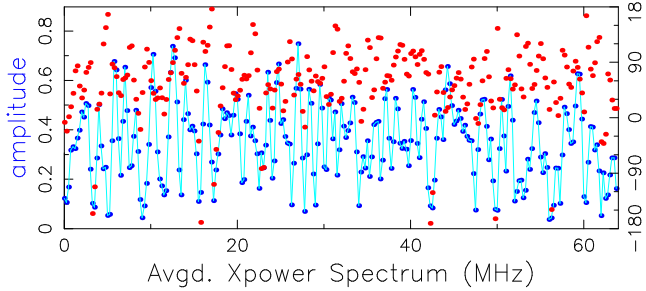


Fringe quality 9

SNR 17.2  
 Int time 419.826  
 Amp 0.307  
 Phase -32.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002070  
 MBD 0.006557  
 Fringe rate (Hz) 0.002338  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

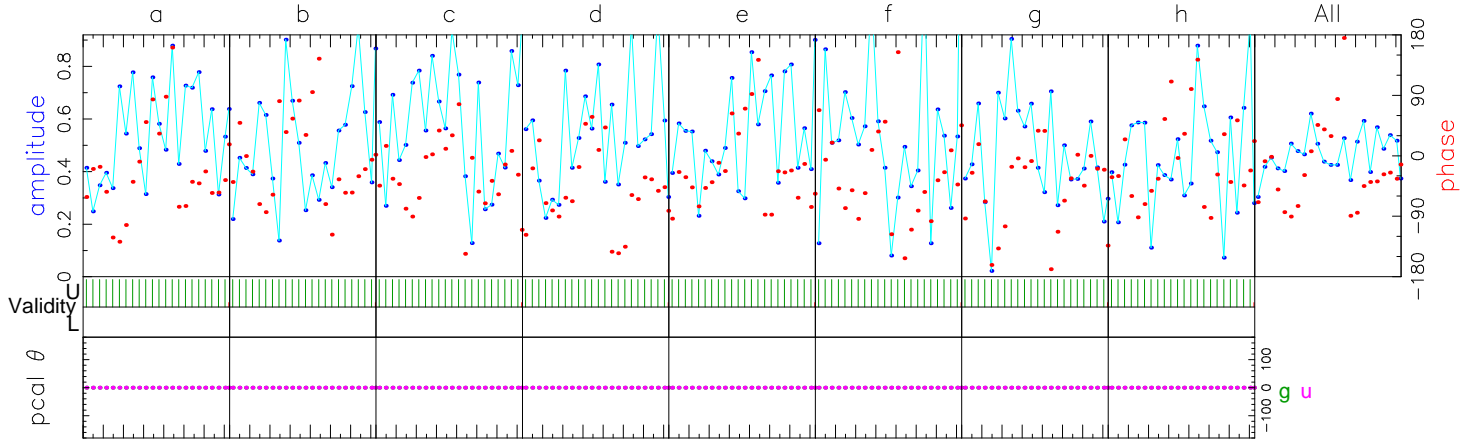


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114526  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-43.6	-18.1	-22.0	-46.2	-29.5	-34.7	-32.9	-31.2	Phase	-32.0
	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	Ampl.	0.3
	256.1	256.5	256.2	256.7	256.1	256.5	257.1	256.6	Sbd box	256.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	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	
									Tracks	
Group delay (usec)(sbd)	-1.42946008106E+03		Apriori delay (usec)		-1.42945101317E+03		Resid mbdelay (usec)		6.55711E-03	+/- 6.3E-05
Sband delay (usec)	-1.42945308267E+03		Apriori clock (usec)		-1.4264679E+01		Resid sbdelay (usec)		-2.06950E-03	+/- 5.0E-04
Phase delay (usec)	-1.42945101420E+03		Apriori clockrate (us/s)		-1.0549999E-06		Resid phdelay (usec)		-1.03294E-06	+/- 2.1E-07
Delay rate (us/s)	8.35664047051E-01		Apriori rate (us/s)		8.35664019906E-01		Resid rate (us/s)		2.71456E-08	+/- 8.9E-10
Total phase (deg)			Apriori accel (us/s/s)		4.19098057363E-05		Resid phase (deg)		-32.0	+/- 6.7

	RMS	Theor.	Amplitude	0.307 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	56.5	16.0	Search (2048X32)	0.277	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	58.6	27.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	10.4	9.4	Inc. seg. avg.	0.453	Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011
amp/frq (%)	15.0	16.5	Inc. frq. avg.	0.300	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00

g: az 32.4 el 40.2 pa -11.6      u: az 309.5 el 46.0 pa 86.5      u,v (fr/asec) -7545.376 6323.118      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c211c/v1/1234/No0037/gu..1WZRGR    Output file: /Exps/c211c/v1/1234/No0037/gu.W.49.1WZRGR

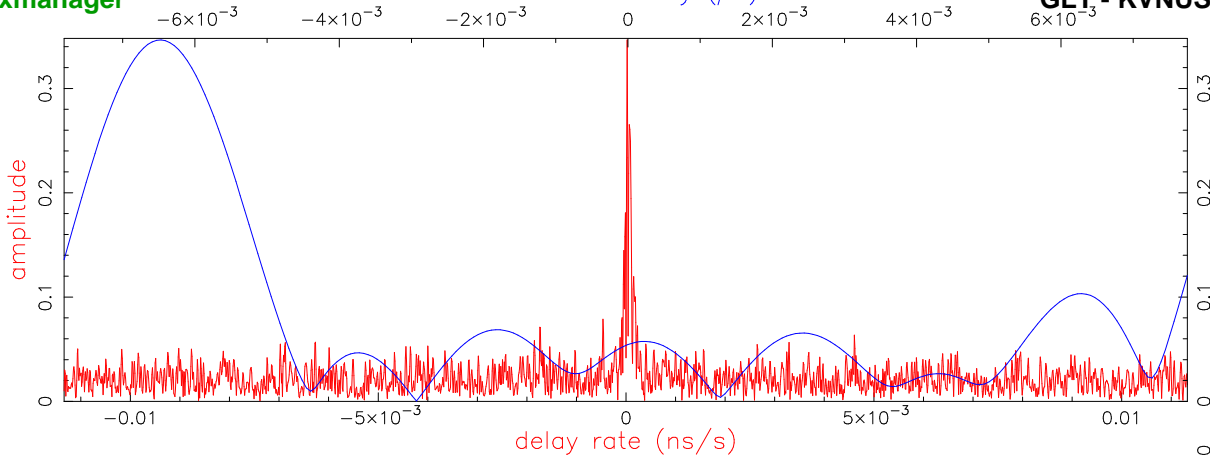
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gu

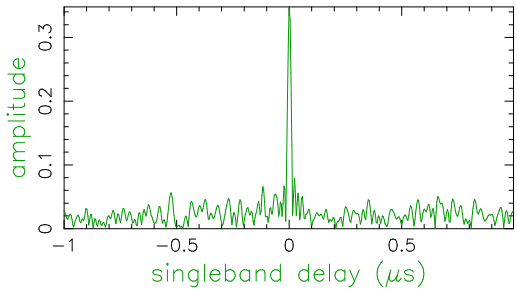
GLT - KVNUS, fgroup W, pol RL

multiband delay ( $\mu$ s)

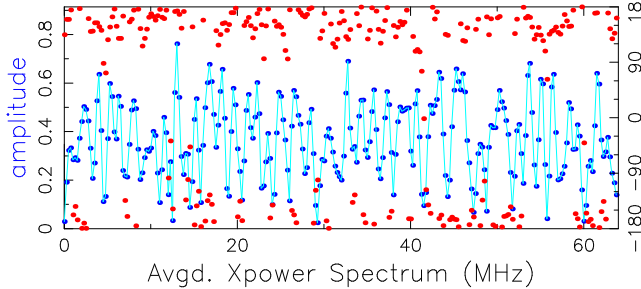


Fringe quality 9

SNR 19.5  
 Int time 419.826  
 Amp 0.348  
 Phase -108.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000803  
 MBD -0.006479  
 Fringe rate (Hz) 0.002372  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

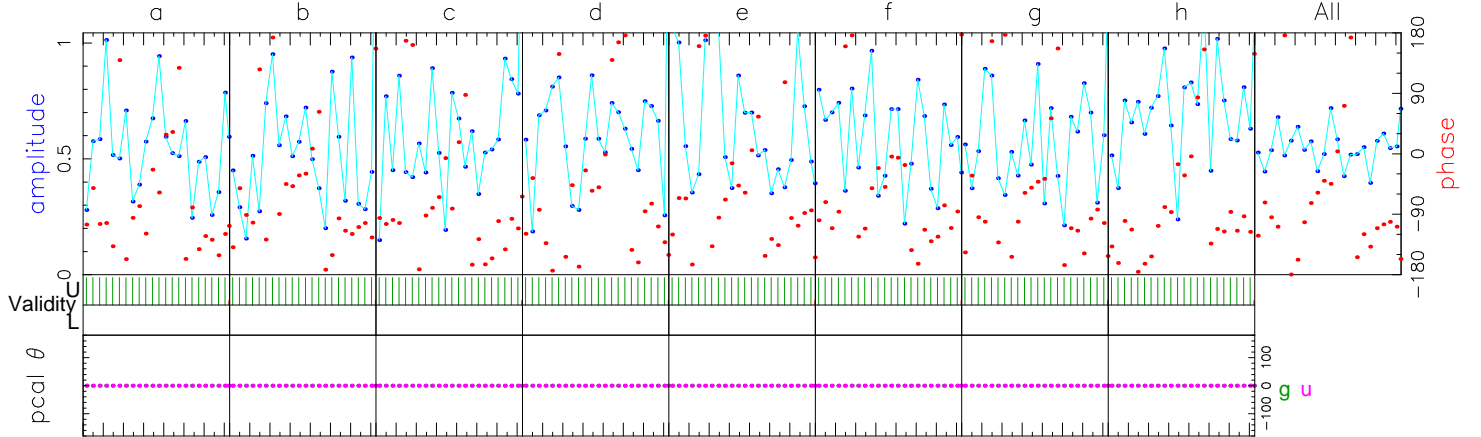


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114531  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



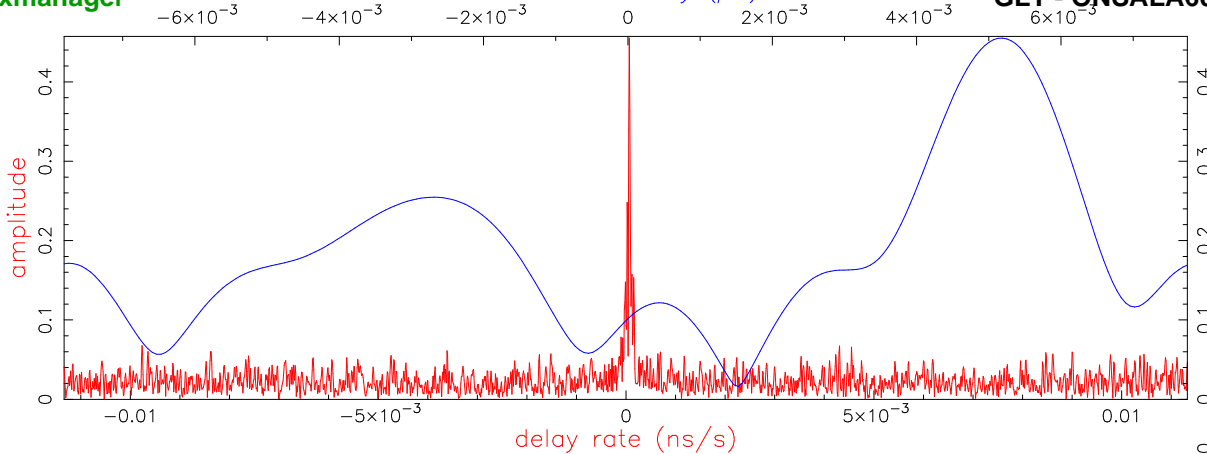
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-108.1	-103.9	-114.0	-124.2	-100.2	-95.6	-109.7	-115.7	Phase	-108.7
	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4	Ampl.	0.3
	257.0	257.1	256.9	257.9	257.3	257.2	257.2	256.9	Sbd box	257.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	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	
									Tracks	
Group delay (usec)(sbd)	-1.42945749181E+03		Apriori delay (usec)		-1.42945101317E+03		Resid mbdelay (usec)		-6.47864E-03	+/- 5.6E-05
Sband delay (usec)	-1.42945020992E+03		Apriori clock (usec)		-1.4264679E+01		Resid sbdelay (usec)		8.03250E-04	+/- 4.4E-04
Phase delay (usec)	-1.42945101667E+03		Apriori clockrate (us/s)		-1.0549999E-06		Resid phdelay (usec)		-3.50555E-06	+/- 1.9E-07
Delay rate (us/s)	8.35664047447E-01		Apriori rate (us/s)		8.35664019906E-01		Resid rate (us/s)		2.75416E-08	+/- 7.8E-10
Total phase (deg)			Apriori accel (us/s/s)		4.19098057363E-05		Resid phase (deg)		-108.7	+/- 5.9

	RMS	Theor.	Amplitude	0.348 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	60.8	14.1	Search (2048X32)	0.314	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	61.3	24.6	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	9.9	8.3	Inc. seg. avg.	0.531	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	13.9	14.5	Inc. frq. avg.	0.347	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

g: az 32.4 el 40.2 pa -11.6      u: az 309.5 el 46.0 pa 86.5      u,v (fr/asec) -7545.376 6323.118      simultaneous interpolator

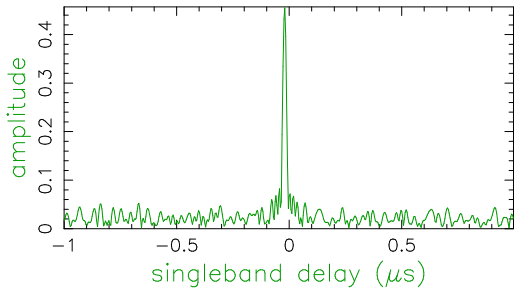
Control file: cf\_1234\_gmva      Input file: /Exps/c211c/v1/1234/No0037/gu..1WZRGR      Output file: /Exps/c211c/v1/1234/No0037/gu.W.72.1WZRGR

multiband delay ( $\mu\text{s}$ )

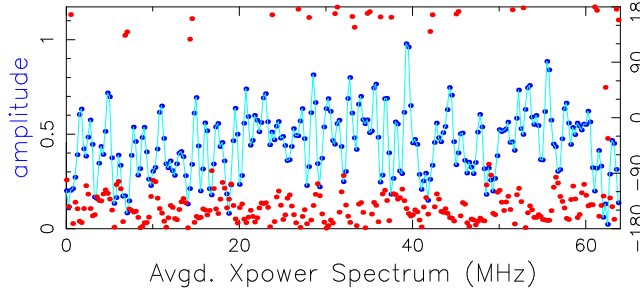


Fringe quality 7

SNR 25.6  
 Int time 419.795  
 Amp 0.457  
 Phase -86.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.020418  
 MBD 0.005153  
 Fringe rate (Hz)  
 0.005469  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

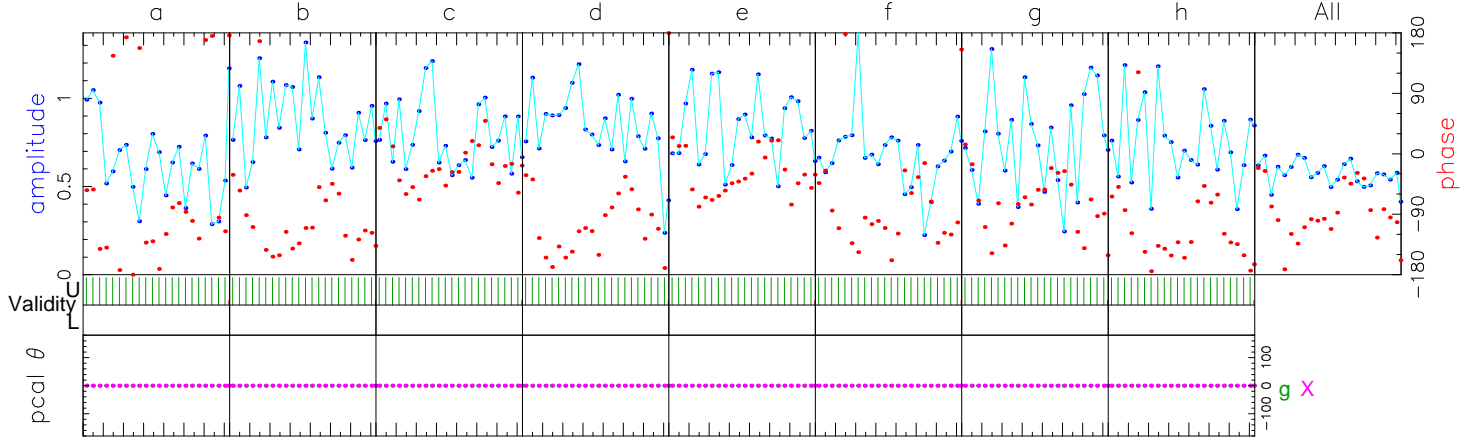


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114518  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-130.6	-112.3	-17.8	-106.4	-32.3	-105.9	-78.0	-120.3	Phase	-86.3
	0.4	0.7	0.7	0.6	0.7	0.5	0.6	0.5	Ampl.	0.6
	253.8	251.6	251.5	251.1	251.3	250.6	251.5	251.8	Sbd box	251.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-4.08529741619E+03	Apriori delay (usec)	-4.08527131912E+03	Resid mbdelay (usec)	5.15293E-03	+/-	4.2E-05
Sband delay (usec)	-4.08529173737E+03	Apriori clock (usec)	-5.6044292E+01	Resid sbdelay (usec)	-2.04182E-02	+/-	3.4E-04
Phase delay (usec)	-4.08527132190E+03	Apriori clockrate (us/s)	-4.5599998E-07	Resid phdelay (usec)	-2.78261E-06	+/-	1.4E-07
Delay rate (us/s)	-2.95274695891E-01	Apriori rate (us/s)	-2.95274759376E-01	Resid rate (us/s)	6.34853E-08	+/-	6.0E-10
Total phase (deg)	-240.7	Apriori accel (us/s/s)	3.28861414597E-05	Resid phase (deg)	-86.3	+/-	4.5

ph/seg (deg)	38.7	Theor.	10.7	Amplitude	0.457 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	29.7		18.7	Search (2048X32)	0.438	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	45.2		6.3	Inc. seg. avg.	0.568	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	34.7		11.0	Inc. frq. avg.	0.584	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
g: az 32.4 el 40.2 pa -11.6		X: az 75.0 el 56.2 pa -56.0		u, v (fr/asec)	2740.339 3895.650	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.10.1WZRGR

simultaneous interpolator

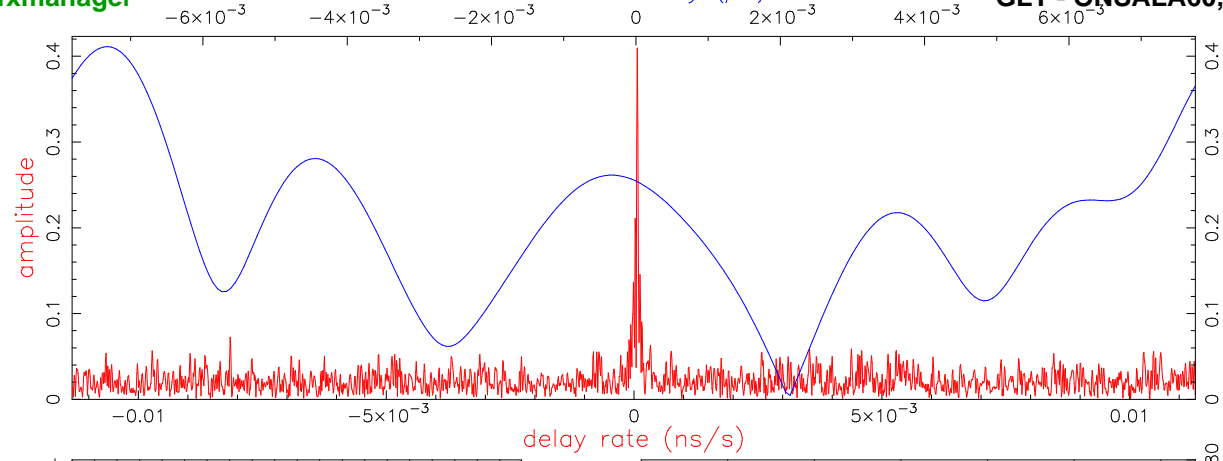
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gX

GLT - ONSALA60, fgroup W, pol RR

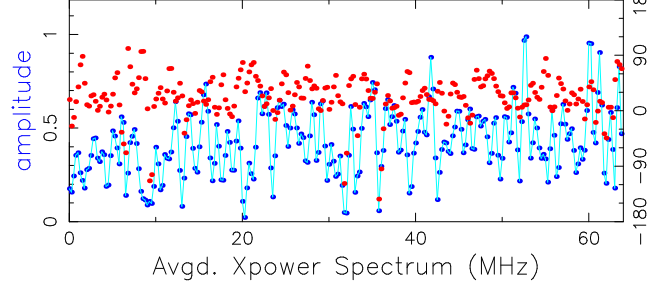
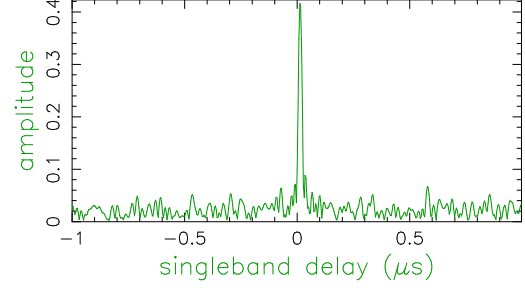
multiband delay ( $\mu$ s)



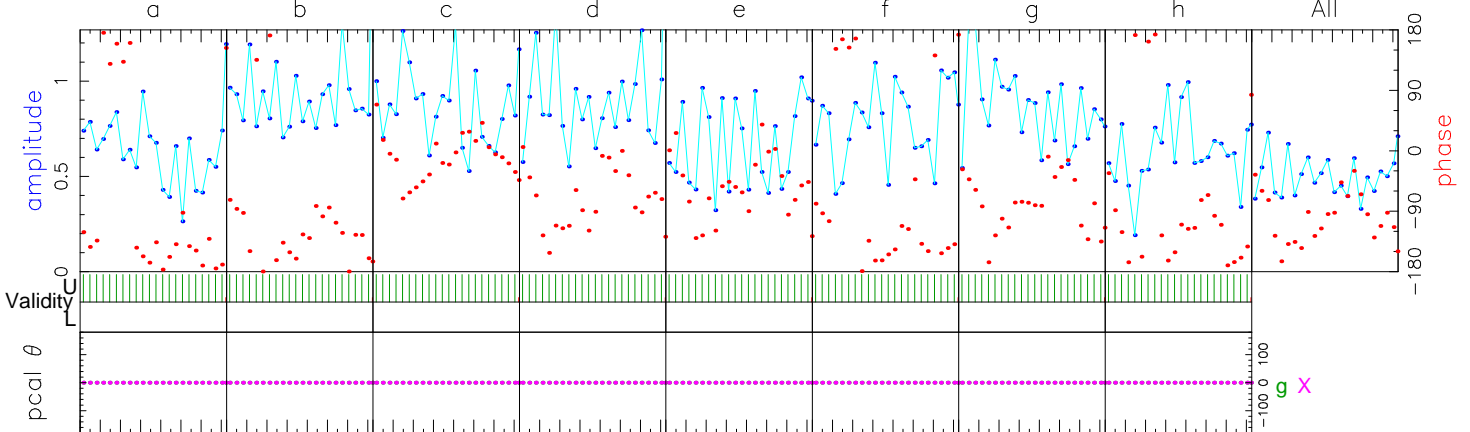
Fringe quality 7

SNR 23.7  
 Int time 419.795  
 Amp 0.423  
 Phase -98.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.013321  
 MBD -0.007429  
 Fringe rate (Hz) 0.005424  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114523  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

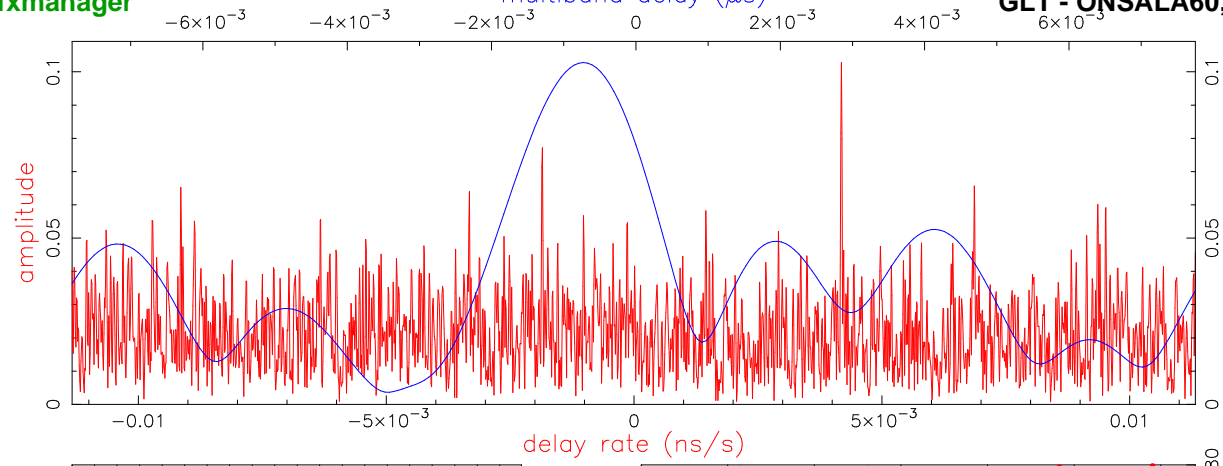


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-163.2	-133.4	-11.9	-72.7	-51.6	-145.7	-77.5	-131.7	Phase	-98.4
	0.5	0.7	0.7	0.7	0.5	0.6	0.7	0.5	Ampl.	0.6
	262.3	261.2	260.2	259.9	259.6	260.4	260.3	260.4	Sbd box	260.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
g	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)	-4.08526312350E+03		Apriori delay (usec)		-4.08527131912E+03		Resid mbdelay (usec)		-7.42938E-03	+/- 4.6E-05
Sband delay (usec)	-4.08525799862E+03		Apriori clock (usec)		-5.6044292E+01		Resid sbdelay (usec)		1.33205E-02	+/- 3.6E-04
Phase delay (usec)	-4.08527132229E+03		Apriori clockrate (us/s)		-4.5599998E-07		Resid phdelay (usec)		-3.17360E-06	+/- 1.6E-07
Delay rate (us/s)	-2.95274696409E-01		Apriori rate (us/s)		-2.95274759376E-01		Resid rate (us/s)		6.29674E-08	+/- 6.4E-10
Total phase (deg)			Apriori accel (us/s/s)		3.28861414597E-05		Resid phase (deg)		-98.4	+/- 4.8

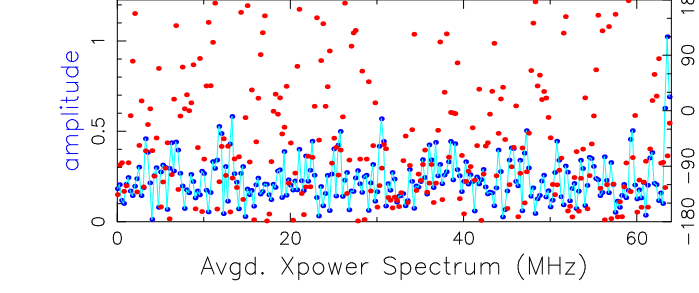
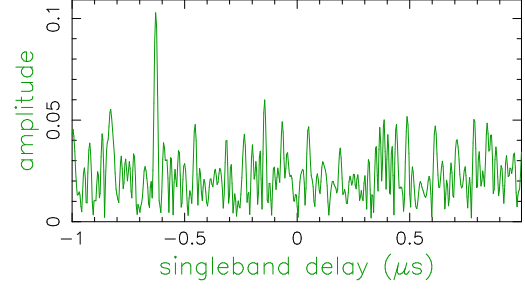
ph/seg (deg) 36.1 11.6 Search (2048X32) 0.400 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 29.6 20.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 57.1 6.8 Inc. seg. avg. 0.488 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 50.5 11.9 Inc. frq. avg. 0.613 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 32.4 el 40.2 pa -11.6 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 2740.339 3895.650 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.33.1WZRGR



multiband delay ( $\mu\text{s}$ )

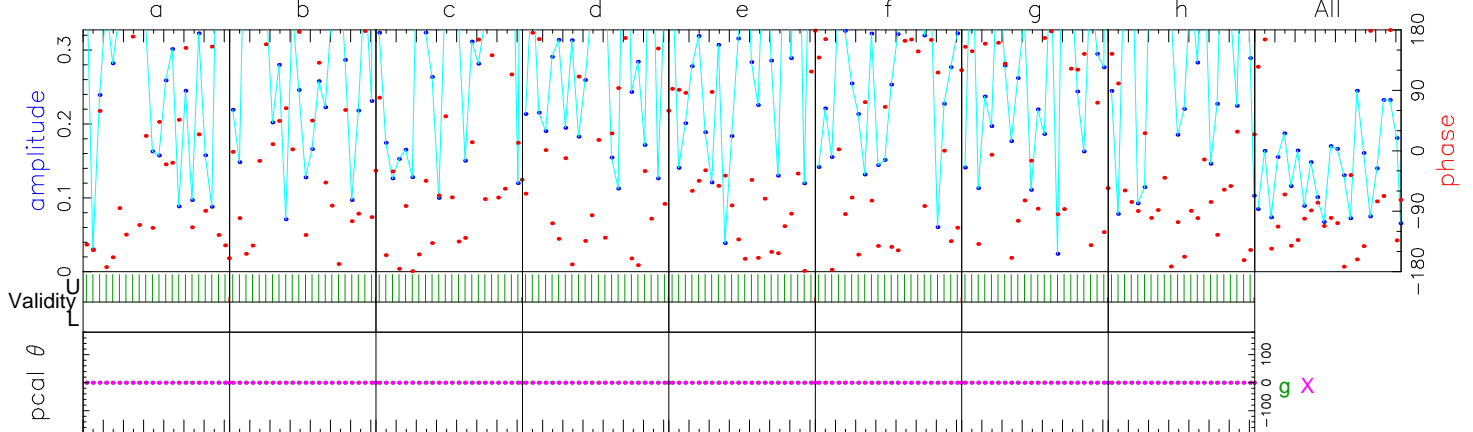


Fringe quality 0  
SNR 5.8  
Int time 419.795  
Amp 0.109  
Phase -124.2  
PFD 8.5e-01  
Delays (us)  
SBD -0.628195  
MBD -0.000735  
Fringe rate (Hz) 0.360561  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Yr:day 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114526  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-124.6	-114.7	-99.8	-133.7	-102.5	-165.5	-168.9	-88.0	Phase	-124.2
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	Ampl.	0.1
	305.2	46.8	458.9	46.3	107.9	78.0	287.7	96.1	Sbd box	96.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-4.08589705414E+03		Apriori delay (usec)		-4.08527131912E+03		Resid mbdelay (usec)		-7.35020E-04	+/- 1.9E-04
Sband delay (usec)	-4.08589951412E+03		Apriori clock (usec)		-5.6044292E+01		Resid sbdelay (usec)		-6.28195E-01	+/- 1.5E-03
Phase delay (usec)	-4.08527132312E+03		Apriori clockrate (us/s)		-4.5599998E-07		Resid phdelay (usec)		-4.00396E-06	+/- 6.4E-07
Delay rate (us/s)	-2.95270573620E-01		Apriori rate (us/s)		-2.95274759376E-01		Resid rate (us/s)		4.18576E-06	+/- 2.6E-09
Total phase (deg)			Apriori accel (us/s/s)		3.28861414597E-05		Resid phase (deg)		-124.2	+/- 19.8

ph/seg (deg) 48.0 47.5 Search (2048X32) 0.109 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 64.3 83.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 32.3 28.0 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 39.0 48.9 Inc. frq. avg. 0.112 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 32.4 el 40.2 pa -11.6 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 2740.339 3895.650 ion window (TEC) 0.00 0.00 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.51.1WZRGR

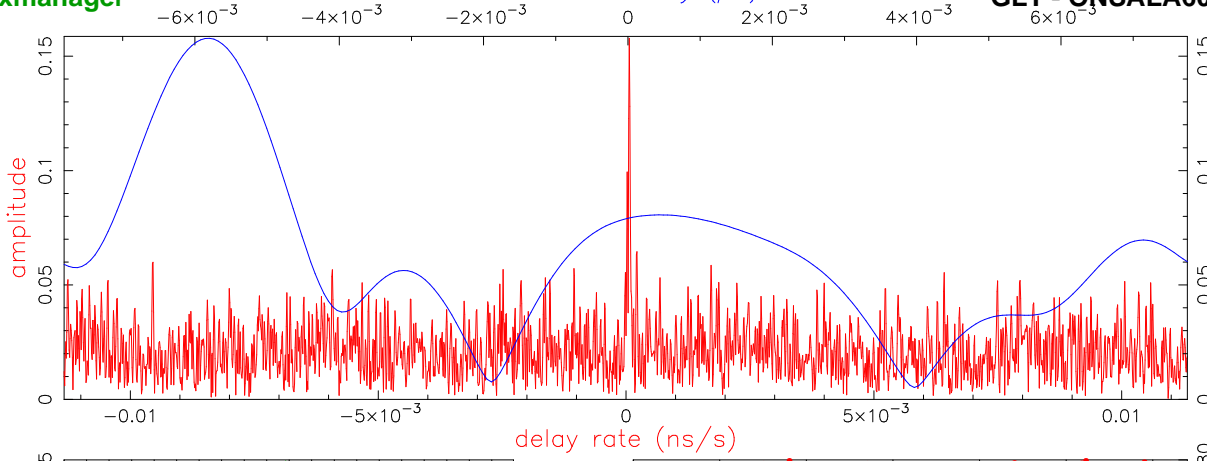
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

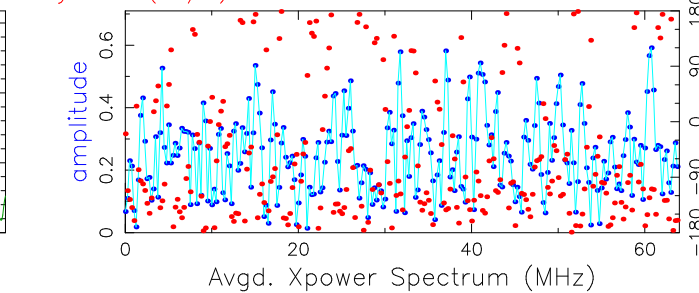
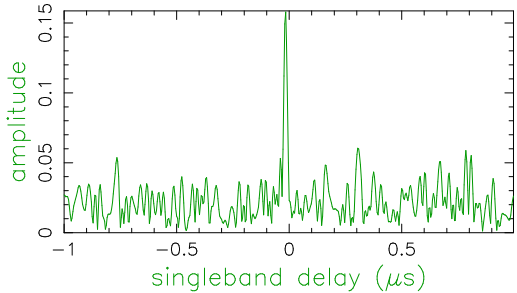
NRAO150.1WZRGR, No0037, gX

GLT - ONSALA60, fgroup W, pol RL

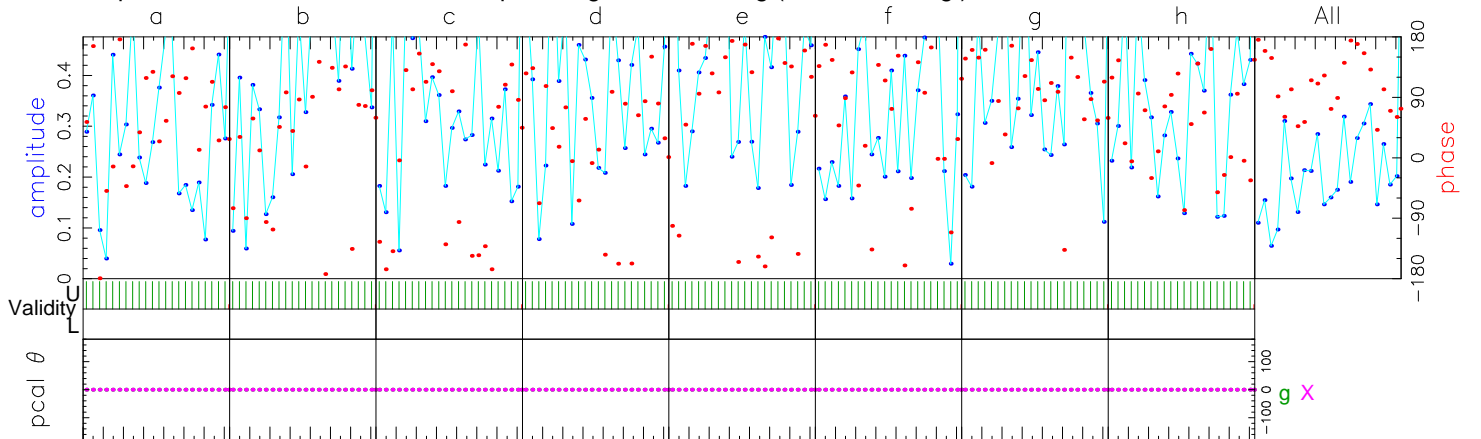
multiband delay ( $\mu$ s)



Fringe quality 9  
 SNR 8.9  
 Int time 419.795  
 Amp 0.159  
 Phase 109.5  
 PFD 2.3e-10  
 Delays (us)  
 SBD -0.016523  
 MBD -0.005832  
 Fringe rate (Hz) 0.005517  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114530  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

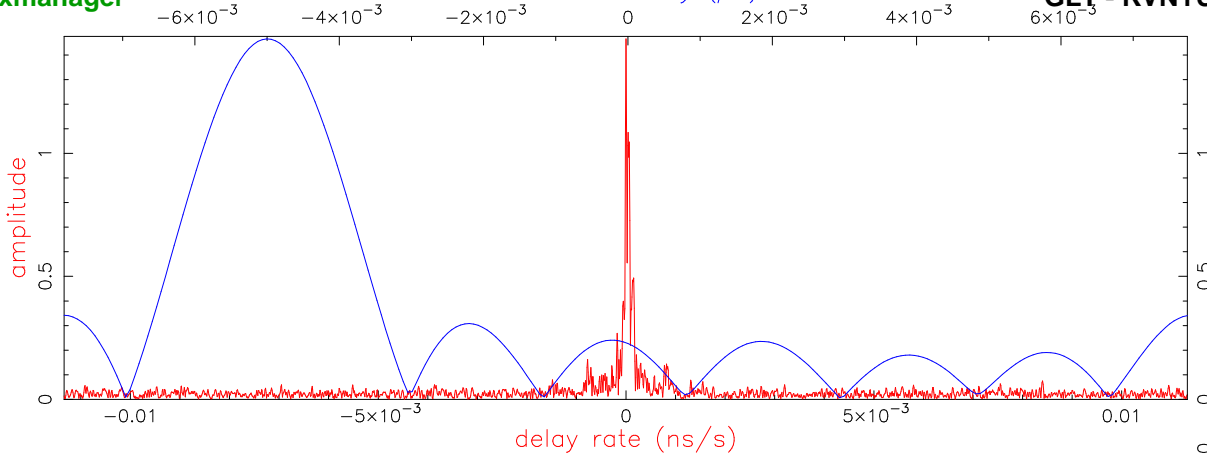


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	62.7	96.1	158.2	73.8	164.6	105.4	109.3	67.5	Phase	109.5
	0.1	0.2	0.2	0.2	0.3	0.1	0.3	0.2	Ampl.	0.2
	257.0	252.3	252.8	284.9	252.4	335.0	253.2	298.8	Sbd box	252.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-4.08529277647E+03		Apriori delay (usec)		-4.08527131912E+03		Resid mbdelay (usec)		-5.83235E-03	+/- 1.2E-04
Sband delay (usec)	-4.08528784237E+03		Apriori clock (usec)		-5.6044292E+01		Resid sbdelay (usec)		-1.65232E-02	+/- 9.7E-04
Phase delay (usec)	-4.08527131559E+03		Apriori clockrate (us/s)		-4.5599998E-07		Resid phdelay (usec)		3.53264E-06	+/- 4.2E-07
Delay rate (us/s)	-2.95274695333E-01		Apriori rate (us/s)		-2.95274759376E-01		Resid rate (us/s)		6.40430E-08	+/- 1.7E-09
Total phase (deg)			Apriori accel (us/s/s)		3.28861414597E-05		Resid phase (deg)		109.5	+/- 12.9

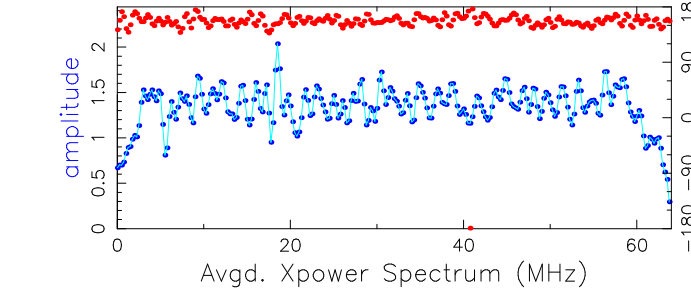
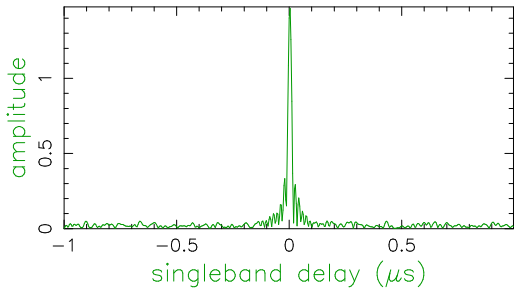
ph/seg (deg) 42.7 30.9 Search (2048X32) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 61.4 53.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 42.5 18.2 Inc. seg. avg. 0.181 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 46.0 31.8 Inc. frq. avg. 0.187 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 32.4 el 40.2 pa -11.6 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 2740.339 3895.650 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.69.1WZRGR

multiband delay ( $\mu$ s)

Fringe quality 5

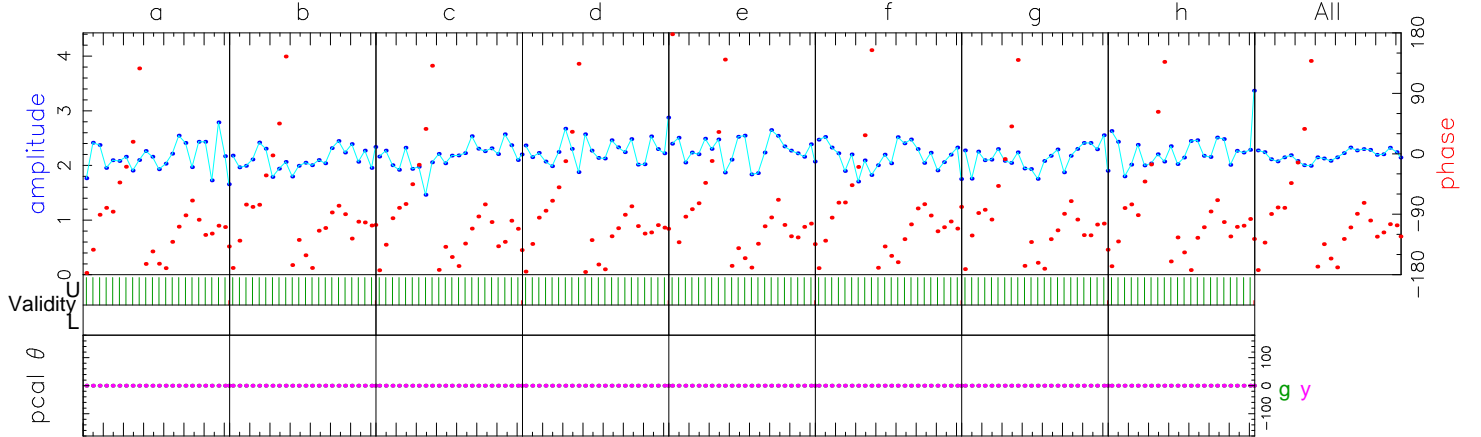


SNR 82.7  
 Int time 419.826  
 Amp 1.476  
 Phase -112.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.002864  
 MBD -0.004995  
 Fringe rate (Hz)  
 0.000130  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114519  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



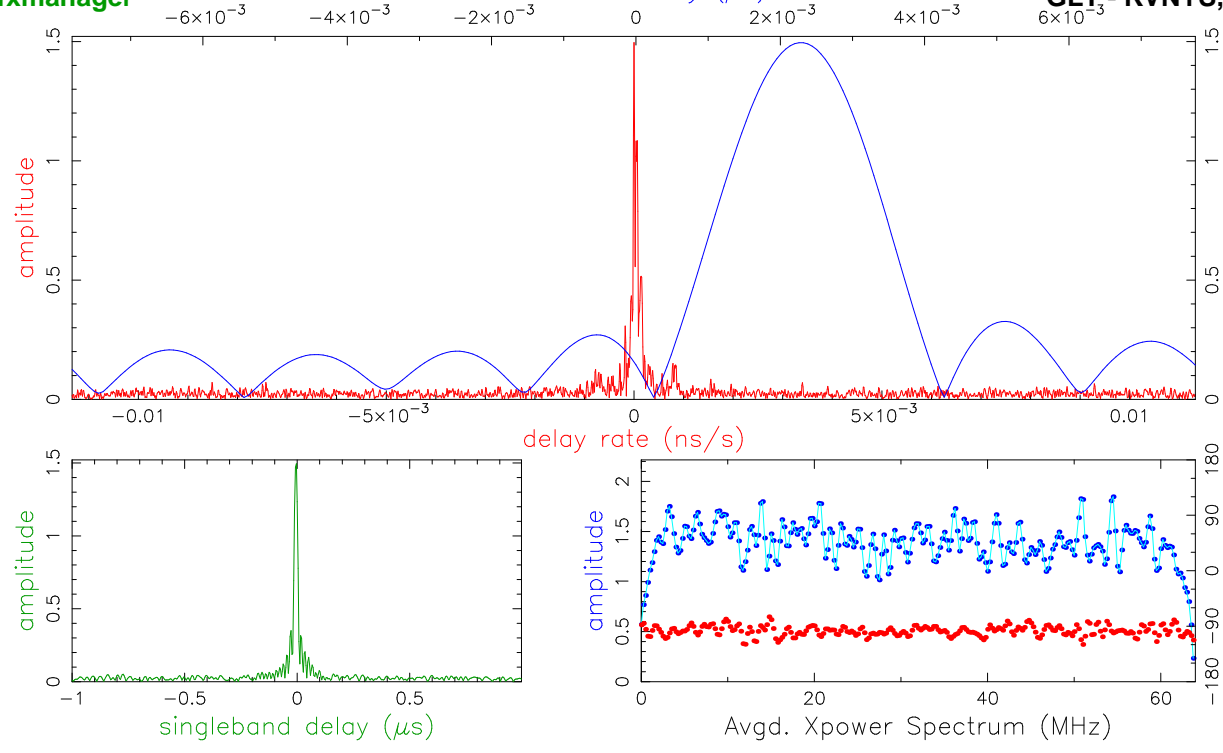
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-113.1	-107.1	-117.1	-112.8	-112.5	-109.8	-112.9	-112.4	Phase	-112.2
	1.5	1.4	1.5	1.5	1.5	1.5	1.4	1.5	Ampl.	1.5
	257.8	257.8	257.6	257.9	257.7	257.6	258.0	257.6	Sbd box	257.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:y	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	
y	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.10390072377E+03		Apriori delay (usec)		-2.10391135371E+03		Resid mbdelay (usec)		-4.99506E-03	+/- 1.3E-05
Sband delay (usec)	-2.10390848996E+03		Apriori clock (usec)		-2.6732445E-01		Resid sbdelay (usec)		2.86375E-03	+/- 1.0E-04
Phase delay (usec)	-2.10391135733E+03		Apriori clockrate (us/s)		7.2000003E-08		Resid phdelay (usec)		-3.61951E-06	+/- 4.5E-08
Delay rate (us/s)	8.01674253439E-01		Apriori rate (us/s)		8.01674251935E-01		Resid rate (us/s)		1.50356E-09	+/- 1.8E-10
Total phase (deg)			Apriori accel (us/s/s)		4.30887228274E-05		Resid phase (deg)		-112.2	+/- 1.4

	RMS	Theor.	Amplitude	1.476 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	55.0	3.3	Search (2048X32)	1.450	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	48.3	5.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	3.1	2.0	Inc. seg. avg.	2.178	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	2.6	3.4	Inc. frq. avg.	1.467	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

g: az 32.4 el 40.2 pa -11.6 y: az 307.6 el 48.7 pa 85.9 u,v (fr/asec) -7233.548 6276.989 simultaneous interpolator

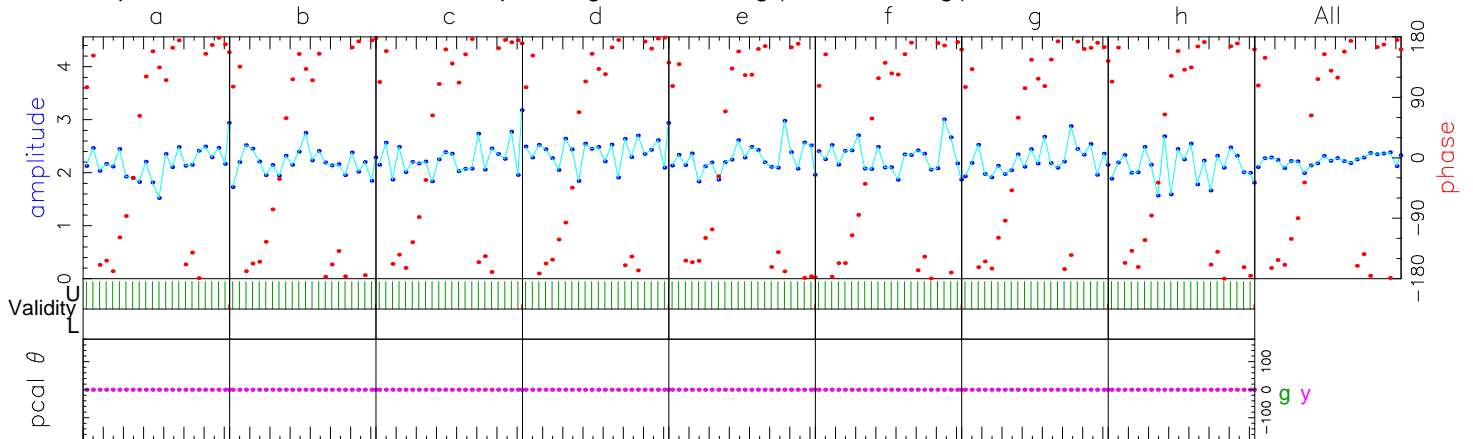
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gy..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gy.W.15.1WZRGR

multiband delay ( $\mu$ s)



Fringe quality 5  
SNR 85.3  
Int time 419.826  
Amp 1.522  
Phase 172.9  
PFD 0.0e+00  
Delays (us)  
SBD -0.005541  
MBD 0.002288  
Fringe rate (Hz) 0.000078  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090000.00  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114523  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

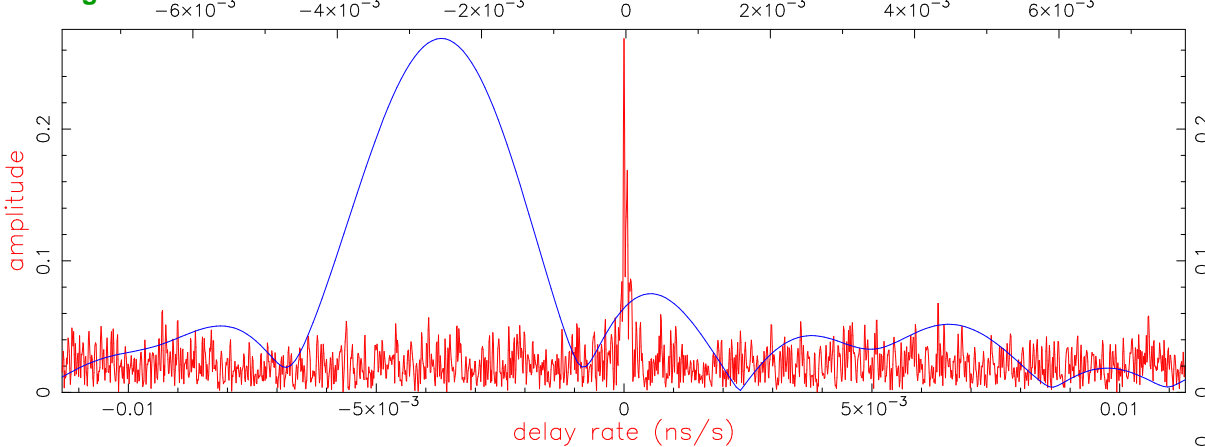


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
172.3	171.6	175.3	174.6	173.1	172.8	172.8	165.4	177.4	Phase	172.9
1.5	1.4	1.5	1.6	1.6	1.5	1.4	1.4	1.4	Ampl.	1.5
255.5	255.7	255.4	255.6	255.6	255.6	255.7	255.7	255.6	Sbd box	255.6
U/L 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g 0	0	0	0	0	0	0	0	0	PC freqs	
y 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:y 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:y 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	
y 1000	1000	1000	1000	1000	1000	1000	1000	1000		
g W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W07UR	Chan ids	
y W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.10392469033E+03		Apriori delay (usec)	-2.10391135371E+03	Resid mbdelay (usec)	2.28838E-03	+/-	1.3E-05		
Sband delay (usec)	-2.10391689446E+03		Apriori clock (usec)	-2.6732445E-01	Resid sbdelay (usec)	-5.54075E-03	+/-	1.0E-04		
Phase delay (usec)	-2.10391134813E+03		Apriori clockrate (us/s)	7.2000003E-08	Resid phdelay (usec)	5.57465E-06	+/-	4.3E-08		
Delay rate (us/s)	8.01674252843E-01		Apriori rate (us/s)	8.01674251935E-01	Resid rate (us/s)	9.07662E-10	+/-	1.8E-10		
Total phase (deg)		169.9	Apriori accel (us/s/s)	4.30887228274E-05	Resid phase (deg)	172.9	+/-	1.3		

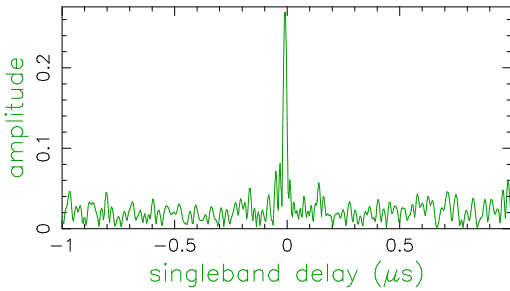
ph/seg (deg) 55.1 3.2 Search (2048X32) 1.478 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 47.2 5.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 3.8 1.9 Inc. seg. avg. 2.230 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 4.6 3.3 Inc. frq. avg. 1.497 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 32.4 el 40.2 pa -11.6 y: az 307.6 el 48.7 pa 85.9 u,v (fr/asec) -7233.548 6276.989 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gy..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gy.W.35.1WZRGR

multiband delay ( $\mu$ s)

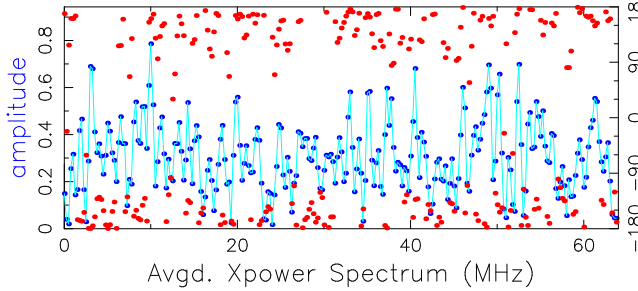
Fringe quality 9



SNR 15.5  
 Int time 419.826  
 Amp 0.276  
 Phase 91.5  
 PFD 4.2e-45  
 Delays (us)  
 SBD -0.009780  
 MBD -0.002603  
 Fringe rate (Hz)  
 0.000137  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

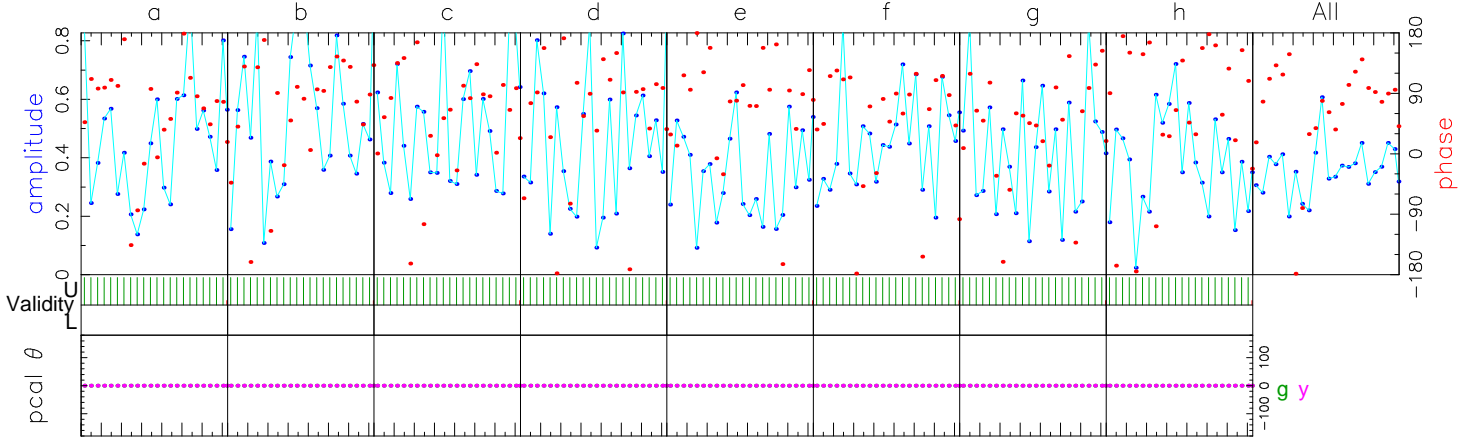


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114527  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
g:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		-2.10391395674E+03		Apriori delay (usec)	-2.10391135371E+03		Resid mbdelay (usec)	-2.60303E-03		+/- 7.0E-05
Sband delay (usec)		-2.10392113371E+03		Apriori clock (usec)	-2.67324445E-01		Resid sbdelay (usec)	-9.78000E-03		+/- 5.6E-04
Phase delay (usec)		-2.10391135076E+03		Apriori clockrate (us/s)	7.2000003E-08		Resid phdelay (usec)	2.95079E-06		+/- 2.4E-07
Delay rate (us/s)		8.01674253531E-01		Apriori rate (us/s)	8.01674251935E-01		Resid rate (us/s)	1.59567E-09		+/- 9.9E-10
Total phase (deg)			88.5	Apriori accel (us/s/s)	4.30887228274E-05		Resid phase (deg)	91.5		+/- 7.4
RMS	54.0	17.8		Amplitude	0.276 +/- 0.018		Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5
ph/seg (deg)	54.0	17.8		Search (2048X32)	0.266		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	44.2	31.0		Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	12.7	10.5		Inc. seg. avg.	0.345		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	20.1	18.3		Inc. frq. avg.	0.268		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite
g: az 32.4 el 40.2 pa -11.6		y: az 307.6 el 48.7 pa 85.9		u, v (fr/asec)	-7233.548 6276.989				ion window (TEC)	0.00 0.00

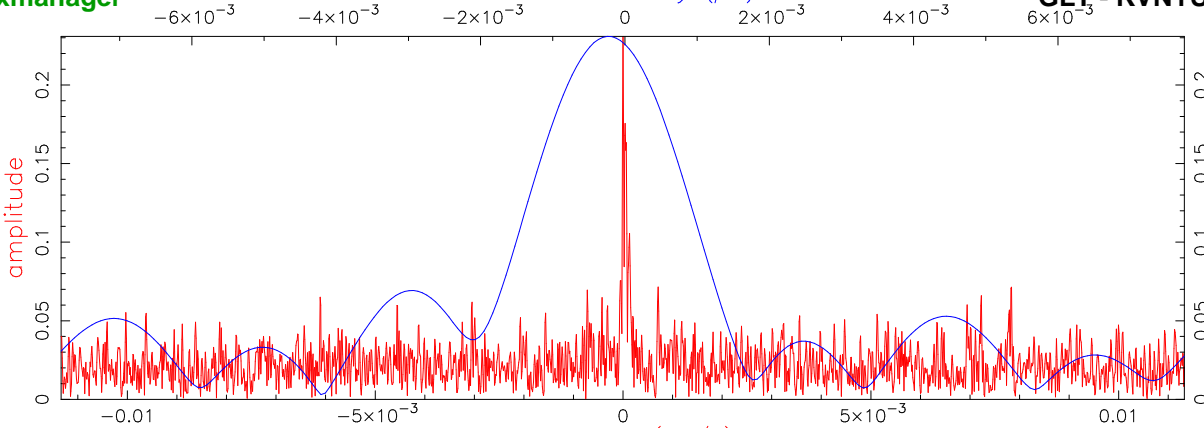
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gy

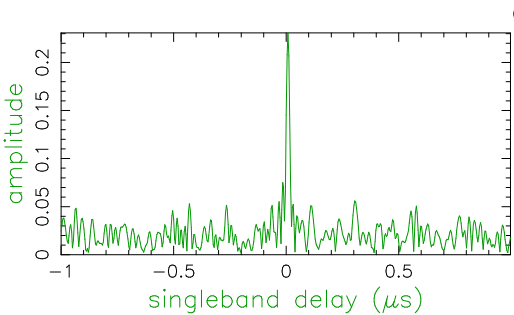
GLT - KVNYS, fgroup W, pol RL

multiband delay ( $\mu\text{s}$ )

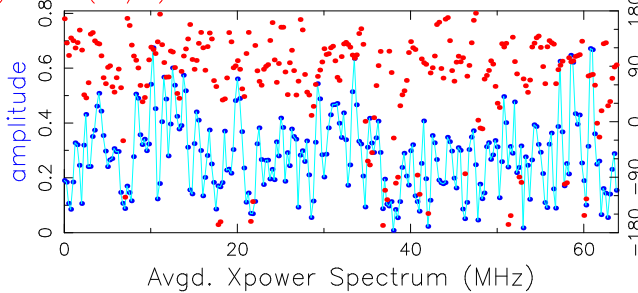


Fringe quality 9

SNR 12.9  
 Int time 419.826  
 Amp 0.231  
 Phase -168.6  
 PFD 1.5e-29  
 Delays (us)  
 SBD 0.007735  
 MBD -0.000227  
 Fringe rate (Hz) 0.000132  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

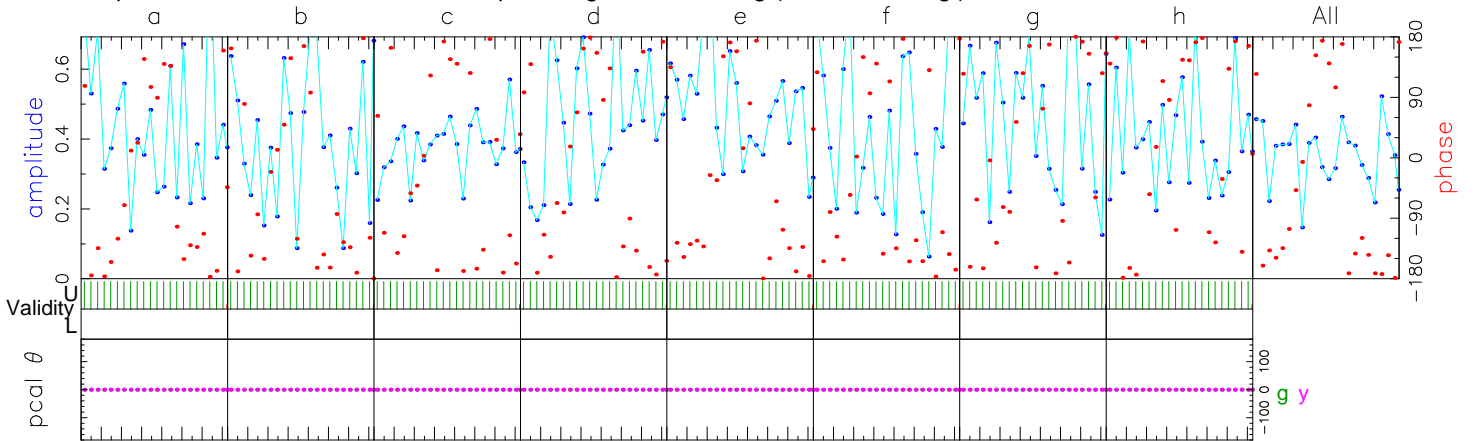


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090000.00  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114531  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-174.7	-177.0	-167.4	-170.8	-143.6	-163.0	-173.6	178.9	Phase	-168.6
	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	Ampl.	0.2
	258.8	259.4	258.3	258.9	258.7	259.2	259.6	258.9	Sbd box	259.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:y	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	
y	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.10389595549E+03		Apriori delay (usec)		-2.10391135371E+03		Resid mbdelay (usec)		-2.26781E-04	+/- 8.4E-05
Sband delay (usec)	-2.10390361871E+03		Apriori clock (usec)		-2.6732445E-01		Resid sbdelay (usec)		7.73500E-03	+/- 6.7E-04
Phase delay (usec)	-2.10391135914E+03		Apriori clockrate (us/s)		7.2000003E-08		Resid phdelay (usec)		-5.43731E-06	+/- 2.9E-07
Delay rate (us/s)	8.01674253468E-01		Apriori rate (us/s)		8.01674251935E-01		Resid rate (us/s)		1.53261E-09	+/- 1.2E-09
Total phase (deg)			Apriori accel (us/s/s)		4.30887228274E-05		Resid phase (deg)		-168.6	+/- 8.9

ph/seg (deg) 60.7 21.2 Search (2048X32) 0.224 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 67.8 37.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 12.6 12.5 Inc. seg. avg. 0.337 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 13.4 21.9 Inc. frq. avg. 0.230 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 32.4 el 40.2 pa -11.6 y: az 307.6 el 48.7 pa 85.9 u,v (fr/asec) -7233.548 6276.989 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gy..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gy.W.70.1WZRGR

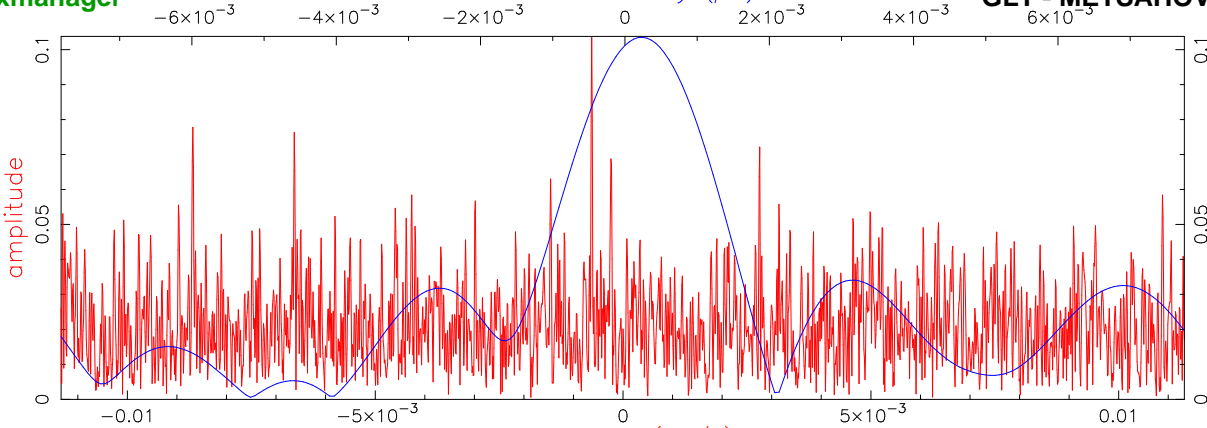
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gZ

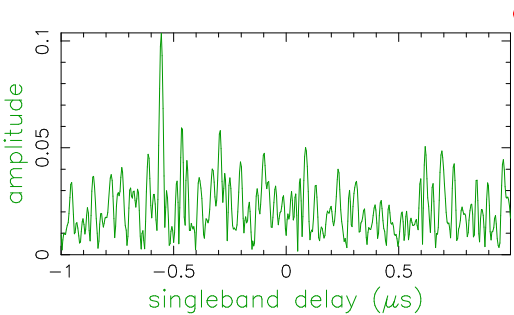
GLT - METSAHOV, fgroup W, pol LL

multiband delay ( $\mu$ s)

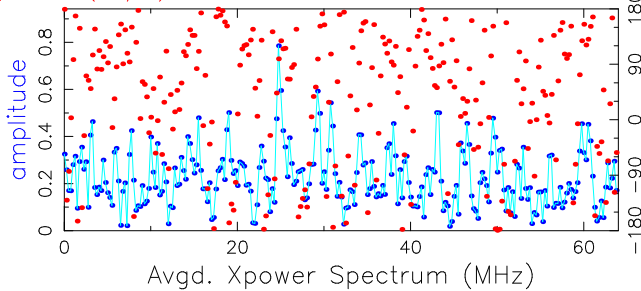


Fringe quality 0

SNR 5.7  
Int time 405.840  
Amp 0.104  
Phase -168.0  
PFD 9.4e-01  
Delays (us)  
SBD -0.555167  
MBD 0.000239  
Fringe rate (Hz)  
-0.054444  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

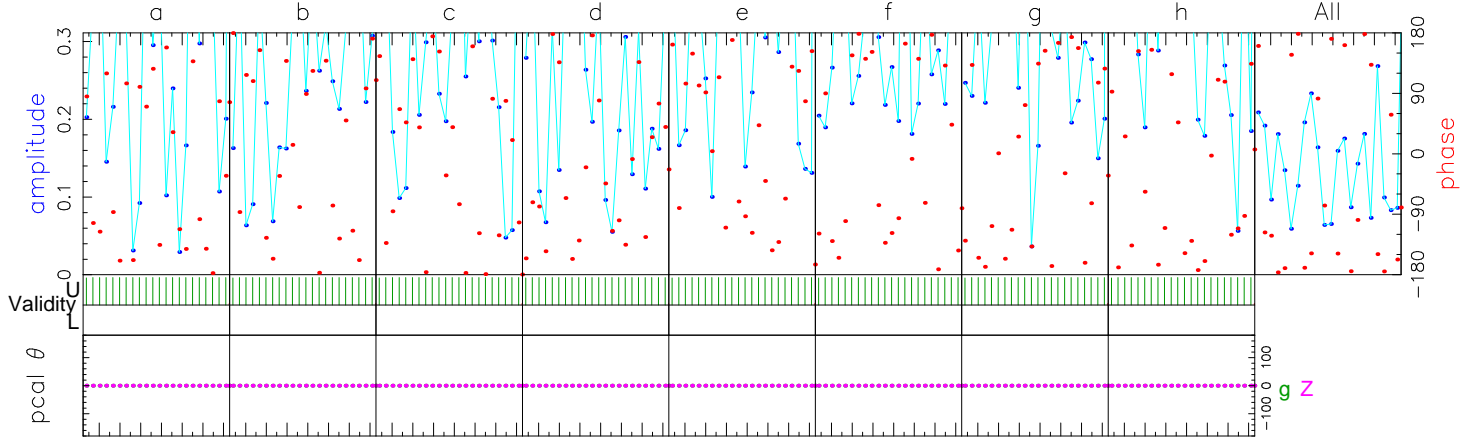


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 090013.31  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:302:211904  
2021:303:114519  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'59.161694"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



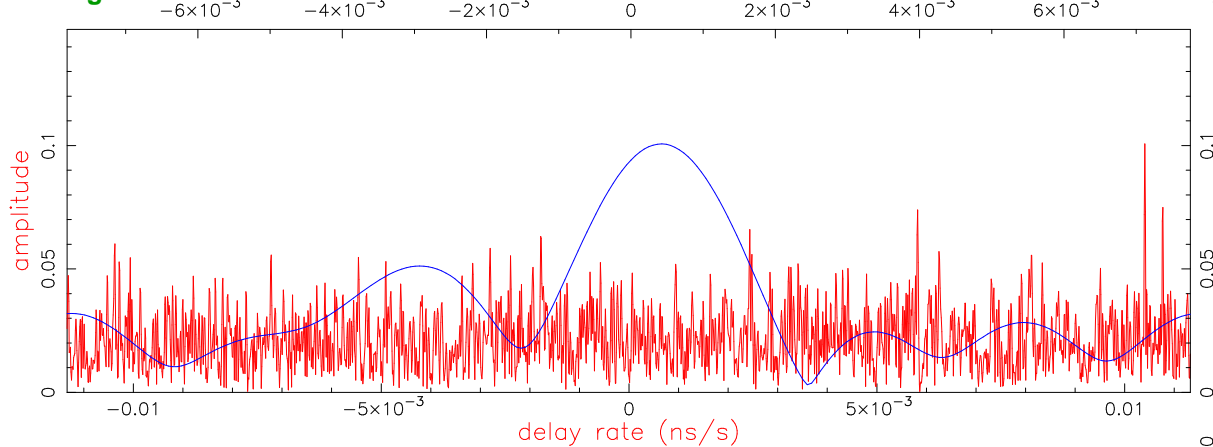
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-178.9	-166.7	-169.6	-125.1	-178.1	-164.0	-170.3	-177.9	Phase	-168.0
	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	87.7	191.9	12.0	231.6	273.4	115.0	27.2	305.3	Sbd box	114.9
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:Z	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	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.28553430352E+03	Apriori delay (usec)	-5.28497204290E+03	Resid mbdelay (usec)	2.39384E-04	+/-	1.9E-04
Sband delay (usec)	-5.28552720990E+03	Apriori clock (usec)	1.1525249E+00	Resid sbdelay (usec)	-5.55167E-01	+/-	1.5E-03
Phase delay (usec)	-5.28497204832E+03	Apriori clockrate (us/s)	5.6000004E-08	Resid phdelay (usec)	-5.41694E-06	+/-	6.5E-07
Delay rate (us/s)	-1.94948789581E-01	Apriori rate (us/s)	-1.94948157540E-01	Resid rate (us/s)	-6.32041E-07	+/-	2.8E-09
Total phase (deg)	-87.2	Apriori accel (us/s/s)	3.73247320820E-05	Resid phase (deg)	-168.0	+/-	20.1

ph/seg (deg)	51.2	Theor.	48.1	Amplitude	0.104 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	67.4	Search (2048X32)	0.102	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	19.1	Inc. seg. avg.	0.103	Inc. frq. avg.	0.095	Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	26.5	Inc. frq. avg.	0.095			Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
g: az 32.4 el 40.2 pa -11.6	Z: az 88.9 el 63.0 pa -52.0	u, v (fr/asec)	1834.591 4192.261			nlags: 256 t_cohere infinite	simultaneous interpolator

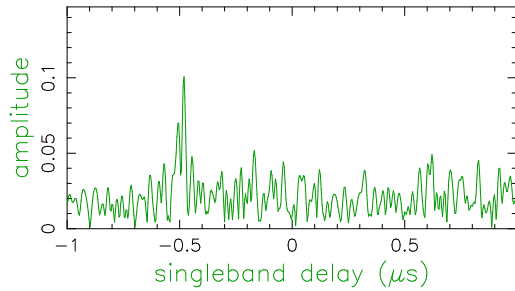
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gZ..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gZ.W.14.1WZRGR

multiband delay ( $\mu$ s)

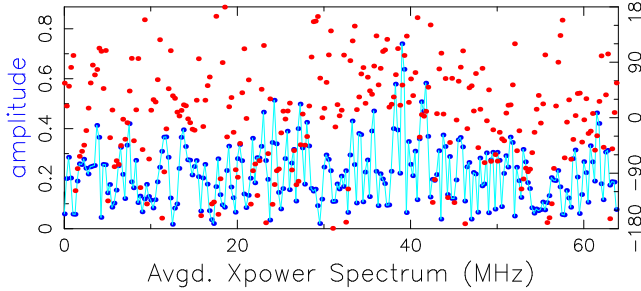


Fringe quality 0

SNR 5.6  
 Int time 405.840  
 Amp 0.147  
 Phase -132.3  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.481225  
 MBD 0.000411  
 Fringe rate (Hz)  
 0.897336  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

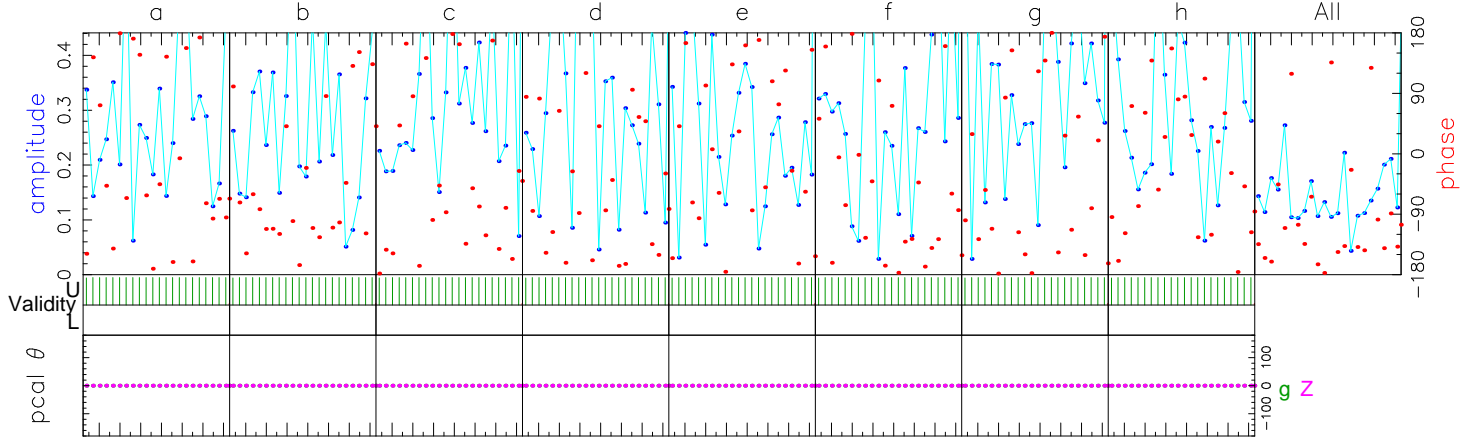


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090013.31  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114523  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-121.5	-113.1	-154.9	-143.5	-136.8	-112.6	-149.7	-65.3	Phase	-132.3
	0.2	0.2	0.3	0.1	0.0	0.2	0.2	0.1	Ampl.	0.1
	85.9	335.5	436.7	247.2	96.8	150.7	448.8	331.3	Sbd box	133.8
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:Z	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	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.28545600641E+03		Apriori delay (usec)		-5.28497204290E+03		Resid mbdelay (usec)		4.11493E-04	+/- 1.9E-04
Sband delay (usec)	-5.28545326740E+03		Apriori clock (usec)		1.1525249E+00		Resid sbdelay (usec)		-4.81225E-01	+/- 1.5E-03
Phase delay (usec)	-5.28497204717E+03		Apriori clockrate (us/s)		5.6000004E-08		Resid phdelay (usec)		-4.26547E-06	+/- 6.6E-07
Delay rate (us/s)	-1.94937740356E-01		Apriori rate (us/s)		-1.94948157540E-01		Resid rate (us/s)		1.04172E-05	+/- 2.8E-09
Total phase (deg)			Apriori accel (us/s/s)		3.73247320820E-05		Resid phase (deg)		-132.3	+/- 20.6

	RMS	Theor.	Amplitude	0.147 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	53.6	49.4	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	66.0	86.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	32.5	29.1	Inc. seg. avg.	0.152	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011	
amp/frq (%)	50.7	50.8	Inc. frq. avg.	0.140	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00



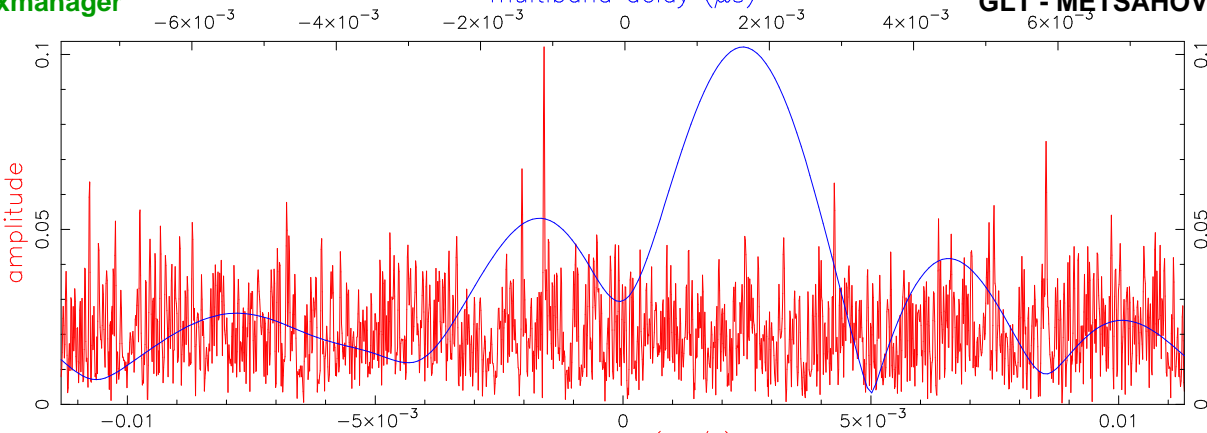
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gZ

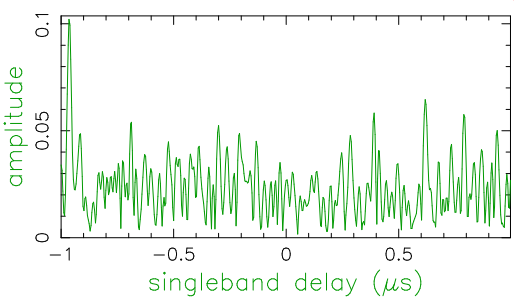
GLT - METSAHOV, fgroup W, pol LR

multiband delay ( $\mu\text{s}$ )

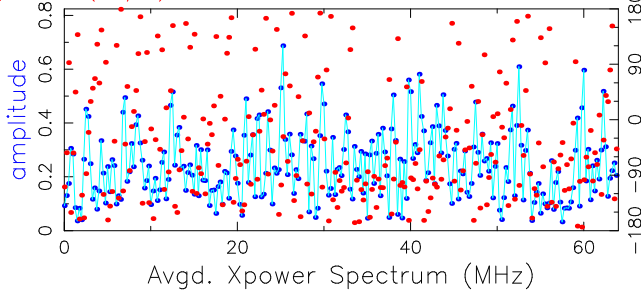


Fringe quality 0

SNR 5.7  
 Int time 405.840  
 Amp 0.104  
 Phase -48.3  
 PFD 9.7e-01  
 Delays (us)  
 SBD -0.963606  
 MBD 0.001611  
 Fringe rate (Hz)  
 -0.138007  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

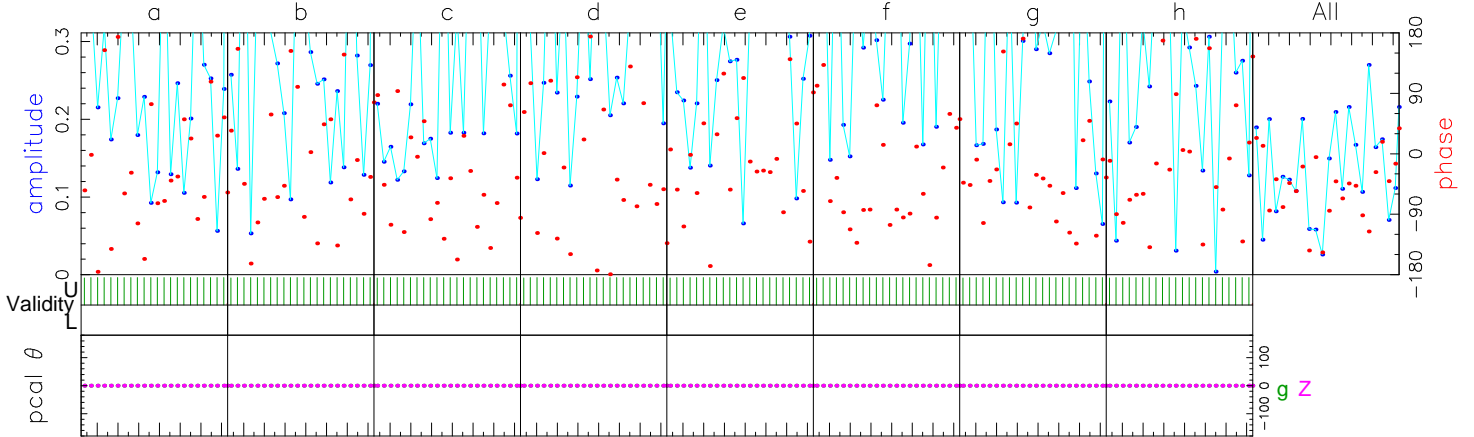


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090013.31  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114527  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-63.3	-49.6	-66.7	22.3	-15.6	-63.0	-52.2	-55.3	Phase	-48.3
	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	Ampl.	0.1
	508.3	223.2	333.2	301.3	501.6	129.3	9.9	370.5	Sbd box	10.3
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:Z	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	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-5.28593918196E+03	Apriori delay (usec)	-5.28497204290E+03	Resid mbdelay (usec)	1.61094E-03	+/-	1.9E-04
Sband delay (usec)	-5.28593564840E+03	Apriori clock (usec)	1.1525249E+00	Resid sbdelay (usec)	-9.63606E-01	+/-	1.5E-03
Phase delay (usec)	-5.28497204446E+03	Apriori clockrate (us/s)	5.6000004E-08	Resid phdelay (usec)	-1.55891E-06	+/-	6.5E-07
Delay rate (us/s)	-1.94949759666E-01	Apriori rate (us/s)	-1.94948157540E-01	Resid rate (us/s)	-1.60213E-06	+/-	2.8E-09
Total phase (deg)	-327.6	Apriori accel (us/s/s)	3.73247320820E-05	Resid phase (deg)	-48.3	+/-	20.2

ph/seg (deg)	RMS 46.3	Theor. 48.5	Amplitude Search (2048X32)	0.104 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	68.7	84.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	33.9	28.6	Inc. seg. avg.	0.100	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	42.4	49.9	Inc. frq. avg.	0.098	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

g: az 32.4 el 40.2 pa -11.6      Z: az 88.9 el 63.0 pa -52.0      u,v (fr/asec) 1834.591 4192.261      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c211c/v1/1234/No0037/gZ..1WZRGR    Output file: /Exps/c211c/v1/1234/No0037/gZ.W.52.1WZRGR

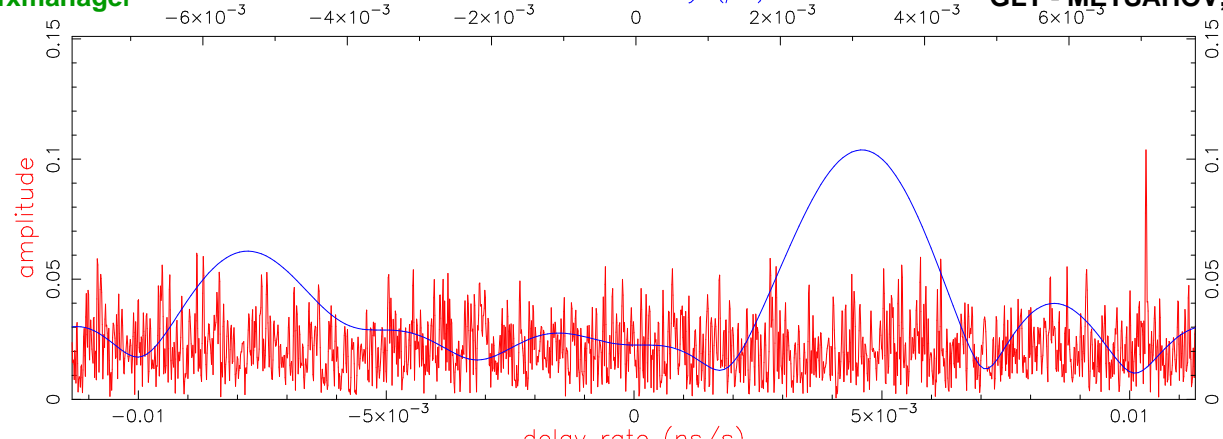
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gZ

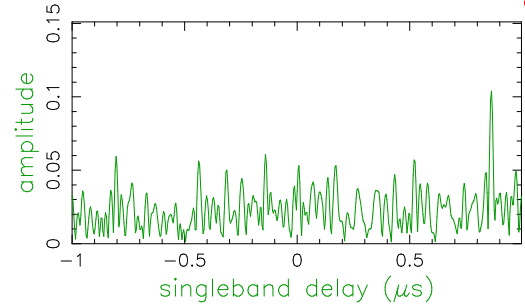
GLT - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu\text{s}$ )

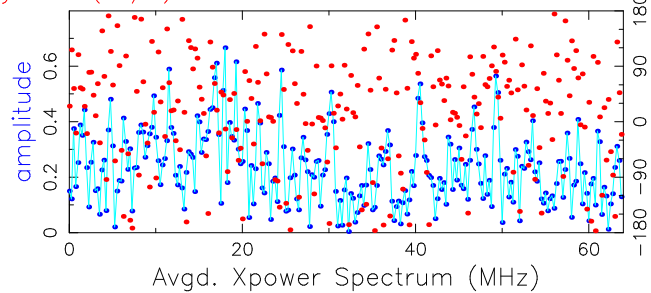


Fringe quality 0

SNR 5.8  
 Int time 405.840  
 Amp 0.151  
 Phase -131.3  
 PFD 8.9e-01  
 Delays (us)  
 SBD 0.862359  
 MBD 0.003115  
 Fringe rate (Hz) 0.890826  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

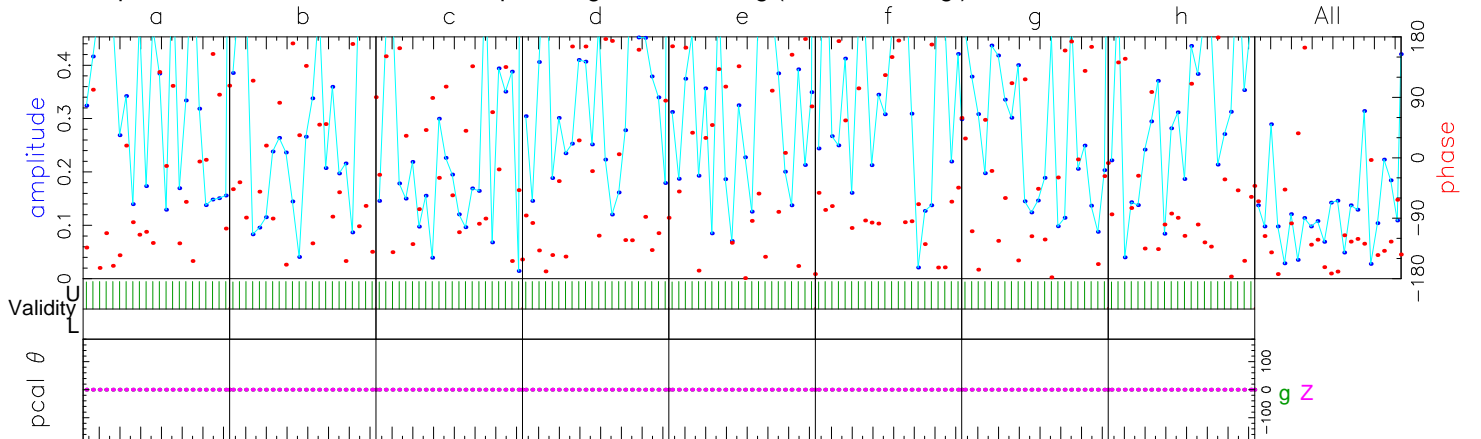


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 090013.31  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:302:211904  
 2021:303:114531  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0		
g:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-5.28410955335E+03	Apriori delay (usec)	-5.28497204290E+03	Resid mbdelay (usec)	3.11455E-03	+/-	1.9E-04
Sband delay (usec)	-5.28410968415E+03	Apriori clock (usec)	1.1525249E+00	Resid sbdelay (usec)	8.62359E-01	+/-	1.5E-03
Phase delay (usec)	-5.28497204714E+03	Apriori clockrate (us/s)	5.6000004E-08	Resid phdelay (usec)	-4.23520E-06	+/-	6.4E-07
Delay rate (us/s)	-1.94937815930E-01	Apriori rate (us/s)	-1.94948157540E-01	Resid rate (us/s)	1.03416E-05	+/-	2.7E-09
Total phase (deg)	-50.6	Apriori accel (us/s/s)	3.73247320820E-05	Resid phase (deg)	-131.3	+/-	19.9

ph/seg (deg)	57.6	Theor.	47.8	Amplitude	0.151 +/- 0.026	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	74.0		83.4	Search (2048X32)	0.102	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	37.4		28.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	42.5		49.2	Inc. seg. avg.	0.136	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.152	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

g: az 32.4 el 40.2 pa -11.6 Z: az 88.9 el 63.0 pa -52.0 u,v (fr/asec) 1834.591 4192.261 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0037/gZ..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gZ.W.71.1WZRGR