

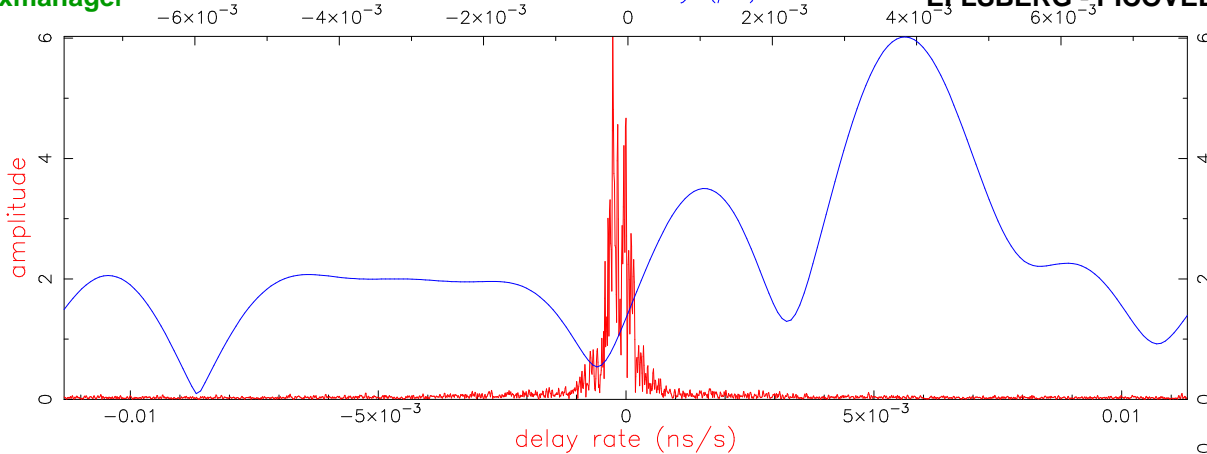
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, BP

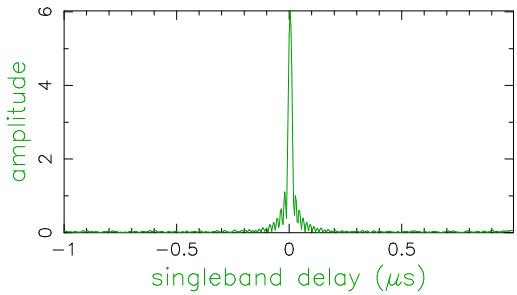
EFLSBERG - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

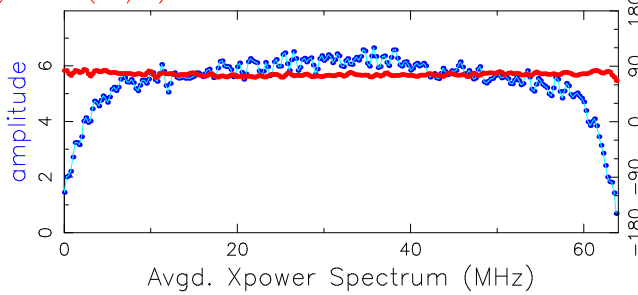


Fringe quality 2

SNR 337.7
 Int time 419.816
 Amp 6.028
 Phase 82.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.004380
 MBD 0.003847
 Fringe rate (Hz)
 -0.023273
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

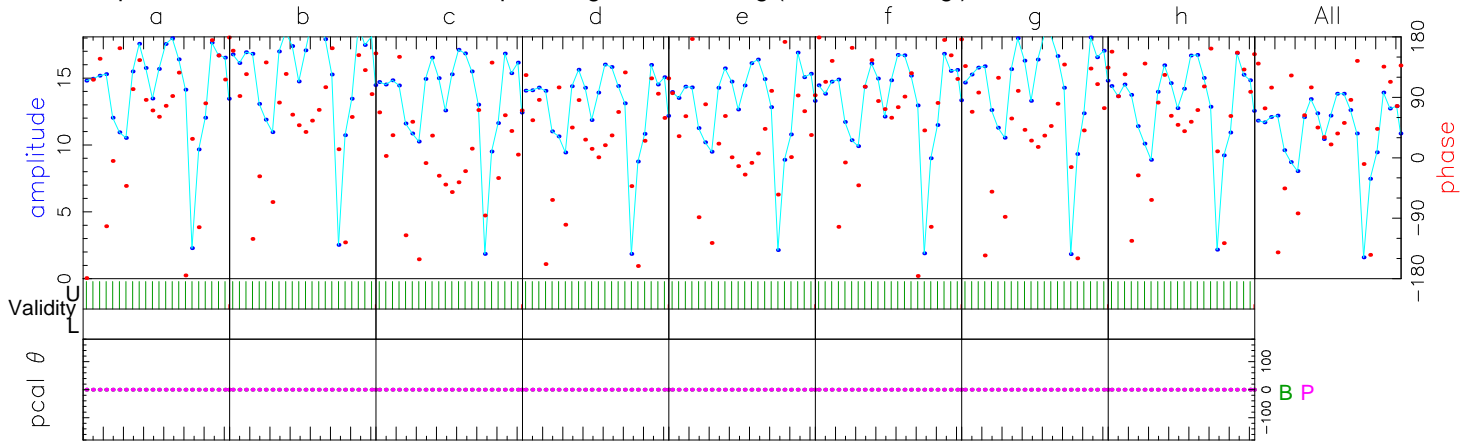


delay rate (ns/s)



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	123.0	101.2	10.4	65.1	39.5	122.8	78.1	101.8	Phase	82.7
B	7.7	8.4	7.4	7.0	7.1	7.2	7.9	7.2	Ampl.	7.5
P	257.1	258.0	258.4	258.9	259.1	258.8	258.8	257.5	Sbd box	258.1
B:P	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	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	3.55626262279E+03	Apriori delay (usec)	3.55625877552E+03	Resid mbdelay (usec)	3.84727E-03	+/-	3.2E-06
Sband delay (usec)	3.55626315552E+03	Apriori clock (usec)	-2.1021355E+01	Resid sbdelay (usec)	4.38000E-03	+/-	2.6E-05
Phase delay (usec)	3.55625877819E+03	Apriori clockrate (us/s)	5.9999998E-07	Resid phdelay (usec)	2.66840E-06	+/-	1.1E-08
Delay rate (us/s)	-1.93154063333E-01	Apriori rate (us/s)	-1.93153793161E-01	Resid rate (us/s)	-2.70172E-07	+/-	4.5E-11
Total phase (deg)	55.1	Apriori accel (us/s/s)	-4.19325128118E-06	Resid phase (deg)	82.7	+/-	0.3

ph/seg (deg)	72.2	0.8	Amplitude	6.028 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	95.5	1.4	Search (2048X32)	5.710	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	43.5	0.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	25.5	0.8	Inc. seg. avg.	11.085	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011	
			Inc. frq. avg.	7.496	Data rate(Mb/s):	2048	ion window (TEC)	0.00 0.00	

B: az 63.6 el 51.0 pa -64.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1749.155 519.039 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BP.W.1.1WZRGR

Mk4/DiFX fourfit 3.21 rev 2937

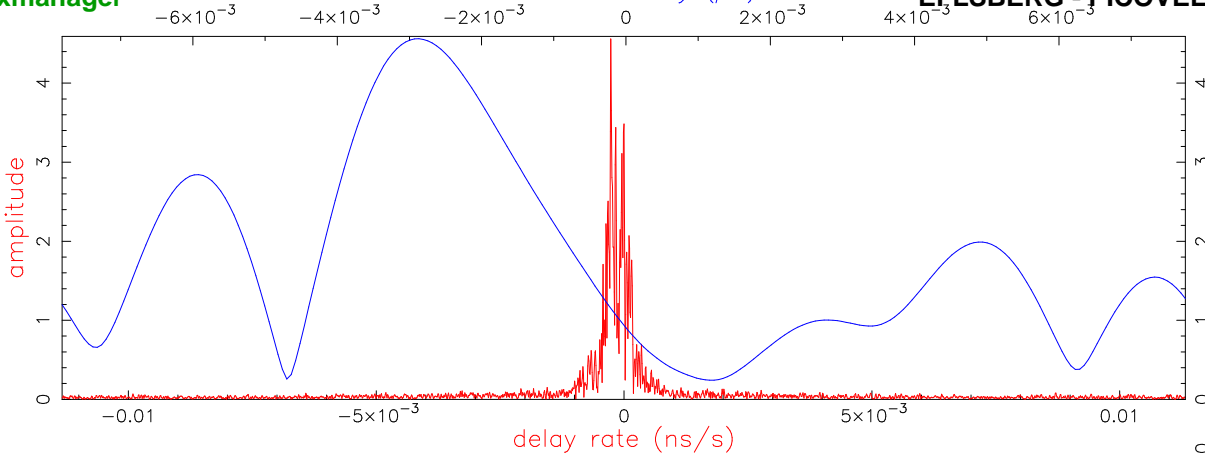
fxmanager

NRAO150.1WZRGR, No0037, BP

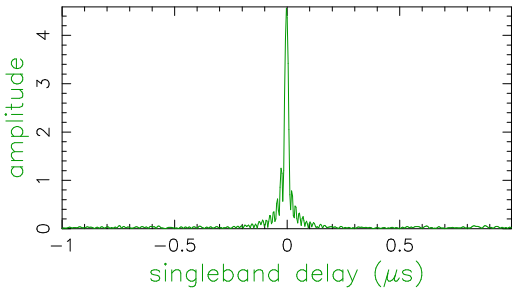
EFLSBERG - PICOVEL, fgroup W, pol RR

multiband delay (μ s)

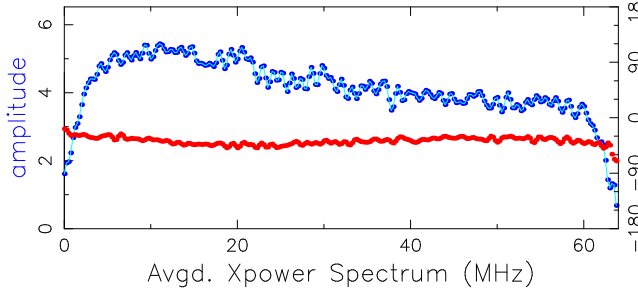
Fringe quality 2



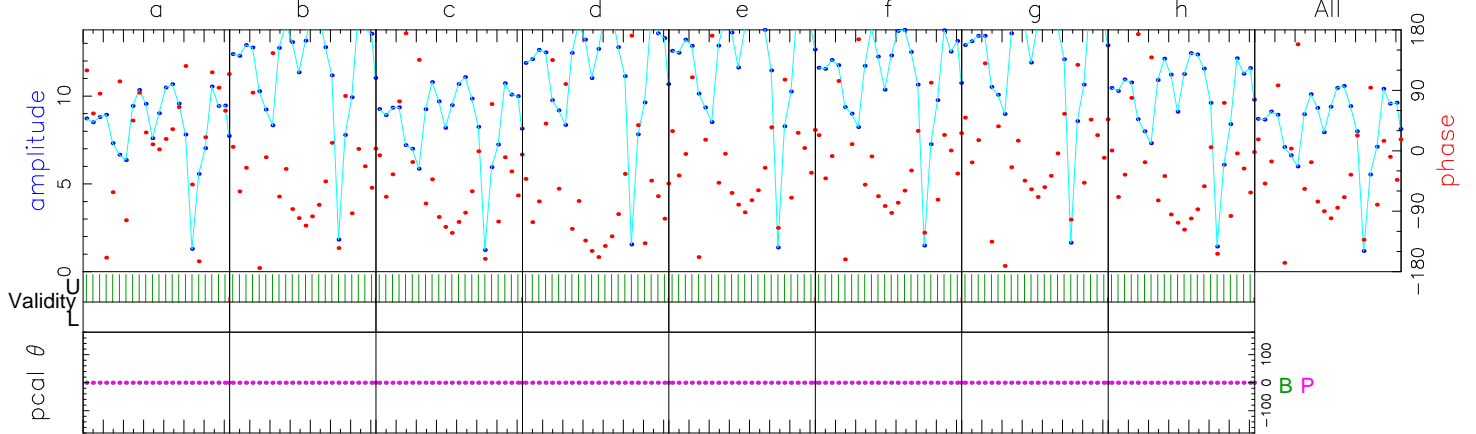
SNR 257.2
 Int time 419.816
 Amp 4.591
 Phase -38.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.002868
 MBD -0.002852
 Fringe rate (Hz)
 -0.023303
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114521
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



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
	63.0	-50.4	-60.8	-97.2	-27.4	-30.5	-6.8	-57.0	Phase	-38.9
	4.5	6.4	4.8	6.4	6.5	6.1	6.8	5.5	Ampl.	5.9
	253.6	255.2	255.7	255.9	256.7	255.9	256.1	254.7	Sbd box	256.3
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	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.55625592329E+03		Apriori delay (usec)		3.55625877552E+03		Resid mbdelay (usec)		-2.85223E-03	+/- 4.2E-06
Sband delay (usec)	3.55625590752E+03		Apriori clock (usec)		-2.1021355E+01		Resid sbdelay (usec)		-2.86800E-03	+/- 3.3E-05
Phase delay (usec)	3.55625877426E+03		Apriori clockrate (us/s)		5.9999998E-07		Resid phdelay (usec)		-1.25348E-06	+/- 1.4E-08
Delay rate (us/s)	-1.93154063682E-01		Apriori rate (us/s)		-1.93153793161E-01		Resid rate (us/s)		-2.70522E-07	+/- 5.9E-11
Total phase (deg)	293.5		Apriori accel (us/s/s)		-4.19325128118E-06		Resid phase (deg)		-38.9	+/- 0.4

ph/seg (deg) 71.9 1.1 Search (2048X32) 4.289 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 92.8 1.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 51.6 0.6 Inc. seg. avg. 8.310 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 32.7 1.1 Inc. frq. avg. 5.864 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 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1749.155 519.039 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BP.W.21.1WZRGR

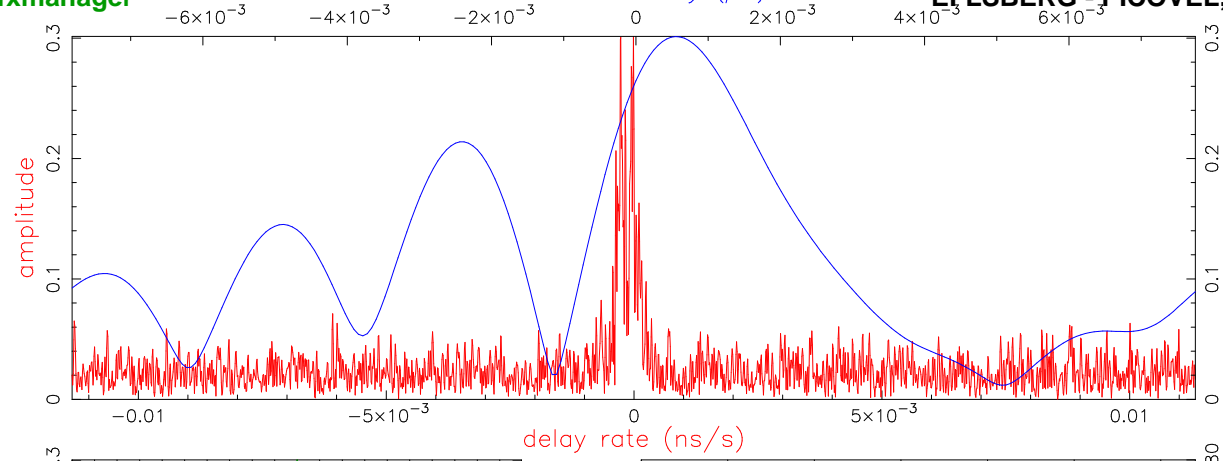
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, BP

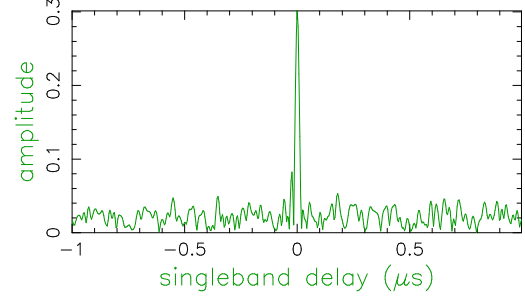
EFLSBERG - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

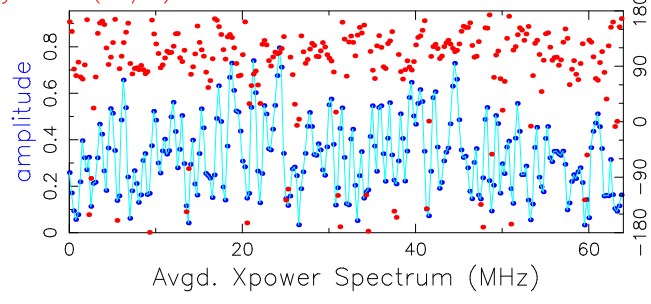


Fringe quality 8

SNR 16.9
Int time 419.816
Amp 0.301
Phase 114.6
PFD 0.0e+00
Delays (us)
SBD 0.000297
MBD 0.000563
Fringe rate (Hz)
-0.001044
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

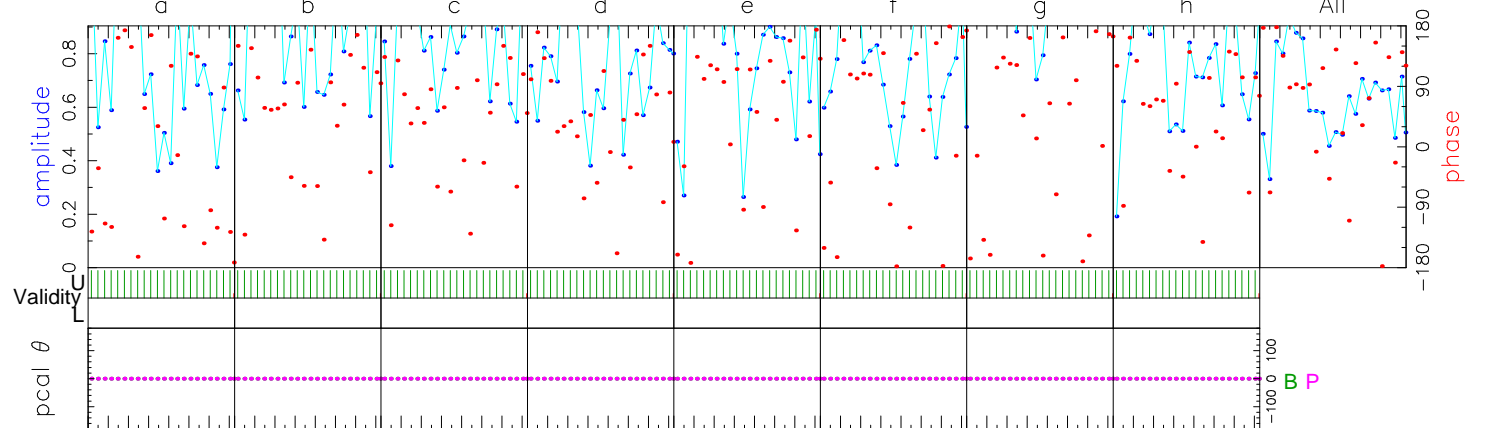


delay rate (ns/s)



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
	-163.9	97.1	72.4	56.2	122.7	136.0	145.6	90.8	Phase	114.6
	0.4	0.5	0.4	0.3	0.5	0.3	0.5	0.3	Ampl.	0.4
	254.8	256.1	256.8	257.1	257.2	256.2	256.4	256.7	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	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	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)	3.55625933863E+03		Apriori delay (usec)		3.55625877552E+03		Resid mbdelay (usec)		5.63115E-04	+/- 6.4E-05
Sband delay (usec)	3.55625907302E+03		Apriori clock (usec)		-2.1021355E+01		Resid sbdelay (usec)		2.97500E-04	+/- 5.1E-04
Phase delay (usec)	3.55625877921E+03		Apriori clockrate (us/s)		5.9999998E-07		Resid phdelay (usec)		3.69533E-06	+/- 2.2E-07
Delay rate (us/s)	-1.93153805285E-01		Apriori rate (us/s)		-1.93153793161E-01		Resid rate (us/s)		-1.21241E-08	+/- 9.0E-10
Total phase (deg)			Apriori accel (us/s/s)		-4.19325128118E-06		Resid phase (deg)		114.6	+/- 6.8

ph/seg (deg) 81.3 16.3 Theor. Amplitude 0.301 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 123.6 28.4 Search (2048X32) 0.300 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 48.6 9.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 36.9 16.7 Inc. seg. avg. 0.617 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 B: az 63.6 el 51.0 pa -64.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1749.155 519.039 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BP.W.41.1WZRGR simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

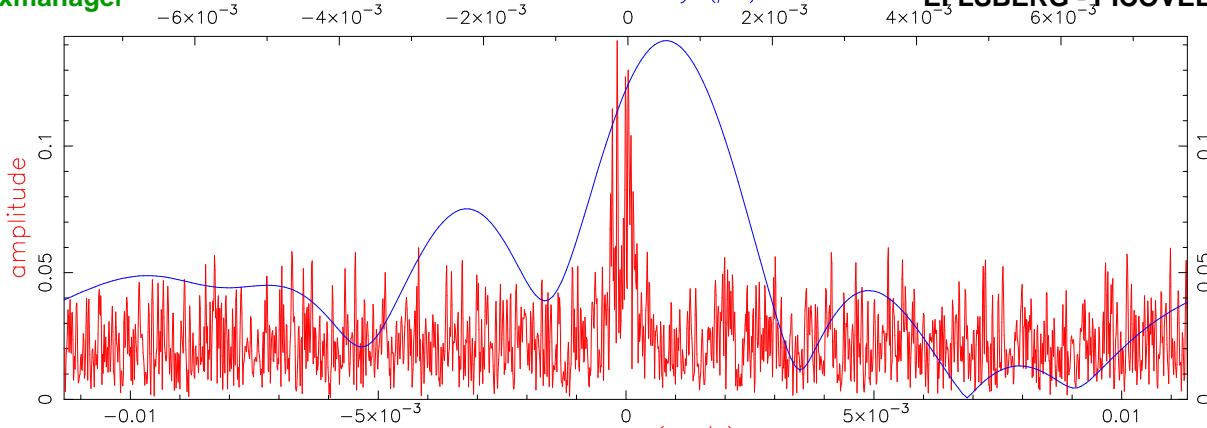
fxmanager

NRAO150.1WZRGR, No0037, BP

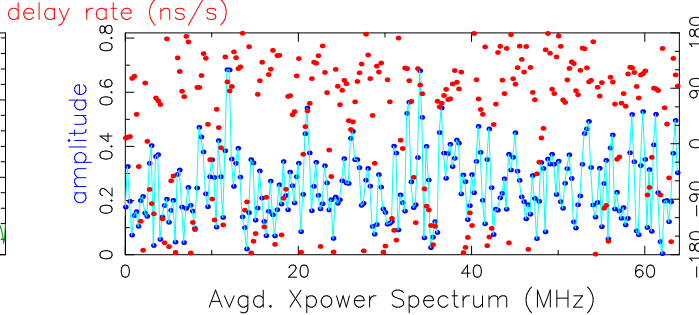
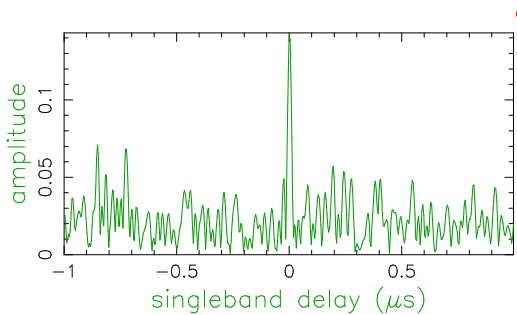
EFLSBERG - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 9

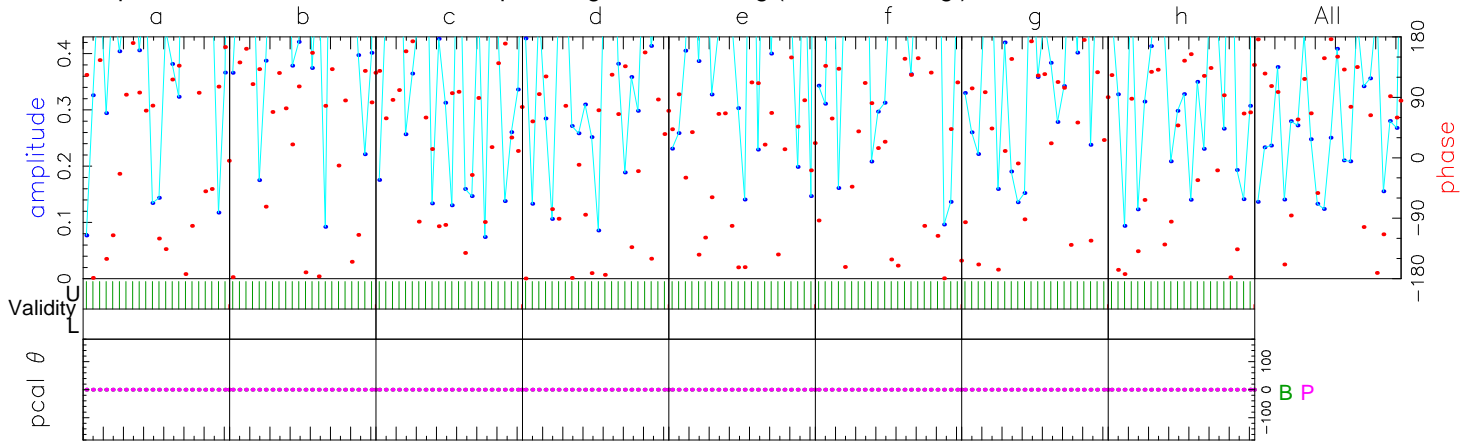


SNR 8.0
 Int time 419.816
 Amp 0.143
 Phase 125.4
 PFD 3.4e-07
 Delays (us)
 SBD 0.001494
 MBD 0.000568
 Fringe rate (Hz)
 -0.014877
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



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"

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
	161.8	130.5	83.7	132.5	67.9	148.4	120.4	139.1	Phase	125.4
	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.2
	39.4	257.3	127.8	71.7	258.9	377.9	259.5	120.8	Sbd box	257.4
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	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	3.55625934361E+03		Apriori delay (usec)		3.55625877552E+03		Resid mbdelay (usec)		5.68096E-04	+/- 1.4E-04
Sband delay (usec)	3.55626026952E+03		Apriori clock (usec)		-2.1021355E+01		Resid sbdelay (usec)		1.49400E-03	+/- 1.1E-03
Phase delay (usec)	3.55625877956E+03		Apriori clockrate (us/s)		5.9999998E-07		Resid phdelay (usec)		4.04394E-06	+/- 4.6E-07
Delay rate (us/s)	-1.93153965867E-01		Apriori rate (us/s)		-1.93153793161E-01		Resid rate (us/s)		-1.72707E-07	+/- 1.9E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.19325128118E-06		Resid phase (deg)		125.4	+/- 14.3

	RMS	Theor.	Amplitude	0.143 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	74.6	34.2	Search (2048X32)	0.133	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	121.1	59.7	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	34.6	20.2	Inc. seg. avg.	0.235	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	34.3	35.2	Inc. frq. avg.	0.150	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 63.6 el 51.0 pa -64.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1749.155 519.039 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BP.W.60.1WZRGR

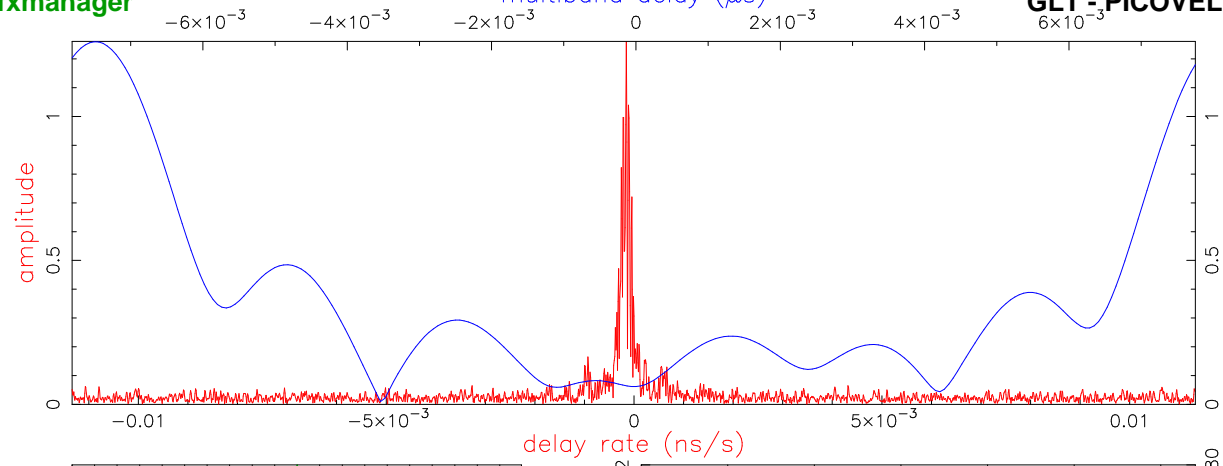
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gP

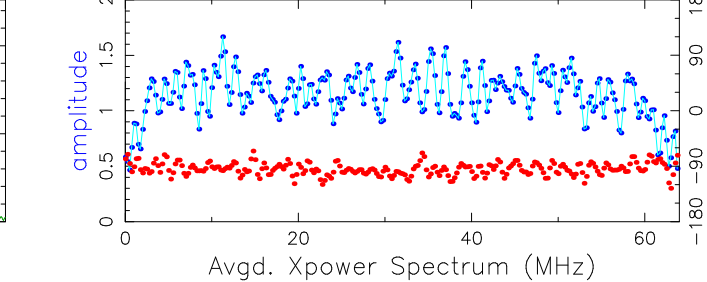
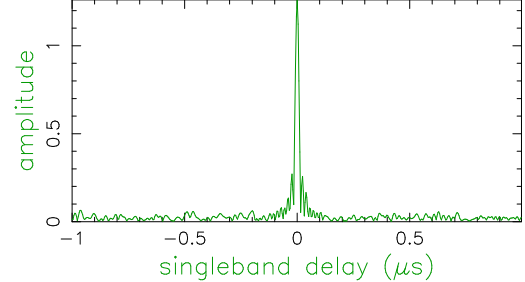
GLT - PICOVEL, fgroup W, pol LL

multiband delay (μ s)



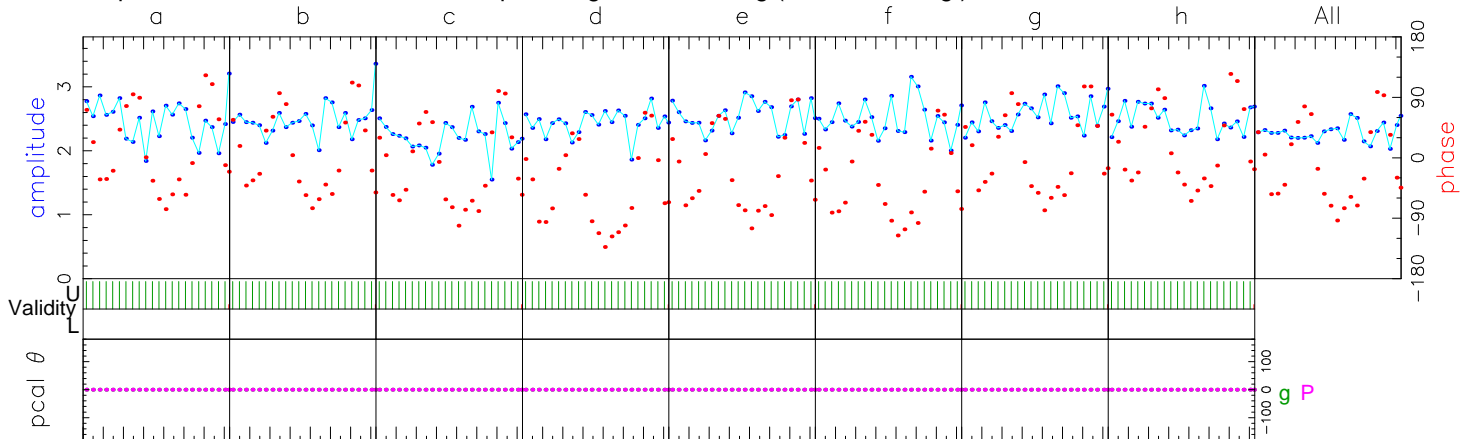
Fringe quality 3

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



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"

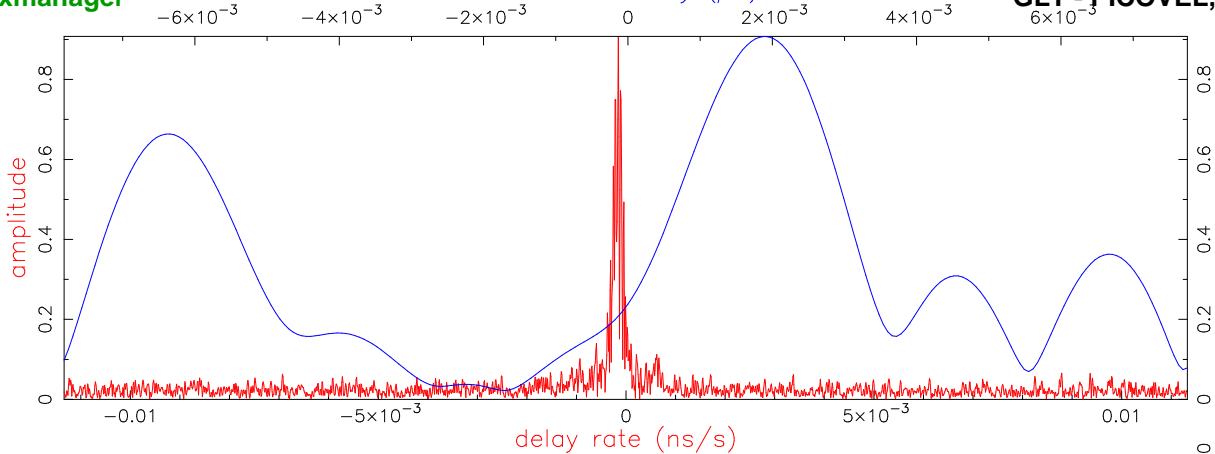
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	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		
P	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:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P	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)	7.6	3.2	-18.1	-51.1	-22.0	-36.5	-1.5	13.7		
Sband delay (usec)	1.3	1.4	1.2	1.3	1.4	1.4	1.5	1.4		
Phase delay (usec)	257.0	257.0	256.3	256.7	257.0	256.8	257.4	257.1		
Delay rate (us/s)	0	0	0	0	0	0	0	0		
Total phase (deg)			282.3							
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										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

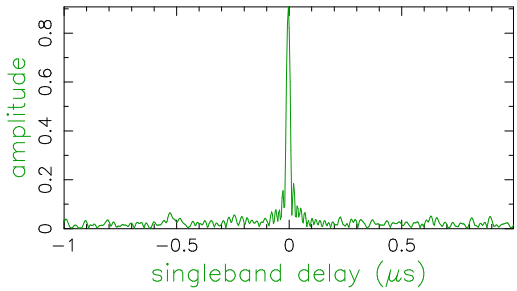
ph/seg (deg) 58.7 3.9 Search (2048X32) 1.243 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 81.5 6.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.7 2.3 Inc. seg. avg. 2.275 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 9.8 4.0 Inc. frq. avg. 1.350 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.19.1WZRGR

multiband delay (μs)

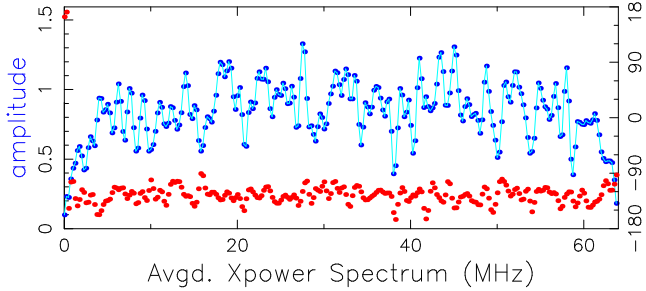


Fringe quality 2

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

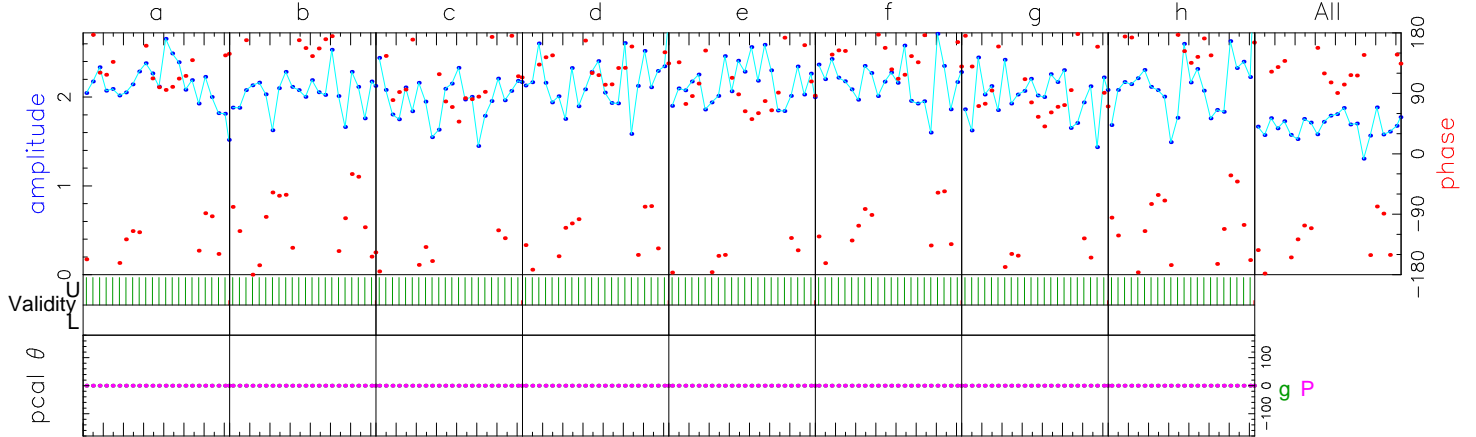


delay rate (ns/s)



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
simultaneous interpolator										

ph/seg (deg) 58.9 5.4 Search (2048X32) 0.908
 amp/seg (%) 85.2 9.4 Interp. 0.000
 ph/frq (deg) 44.4 3.2 Inc. seg. avg. 1.663
 amp/frq (%) 27.0 5.6 Inc. frq. avg. 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

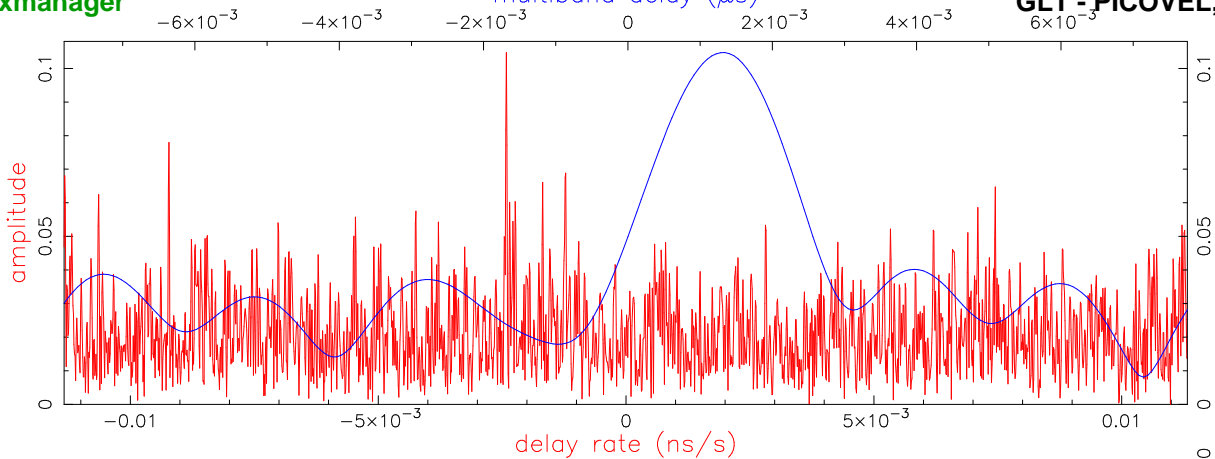
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gP

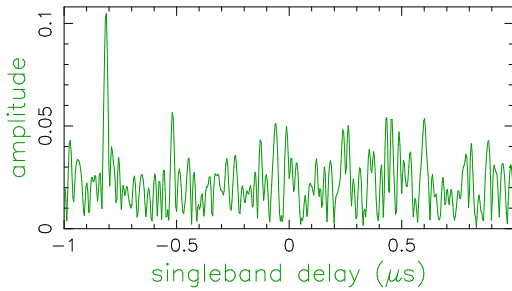
GLT - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

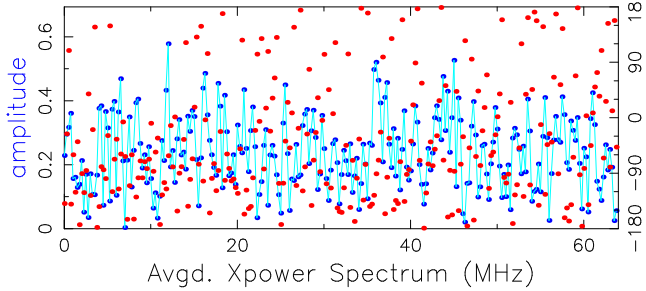


Fringe quality 0

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

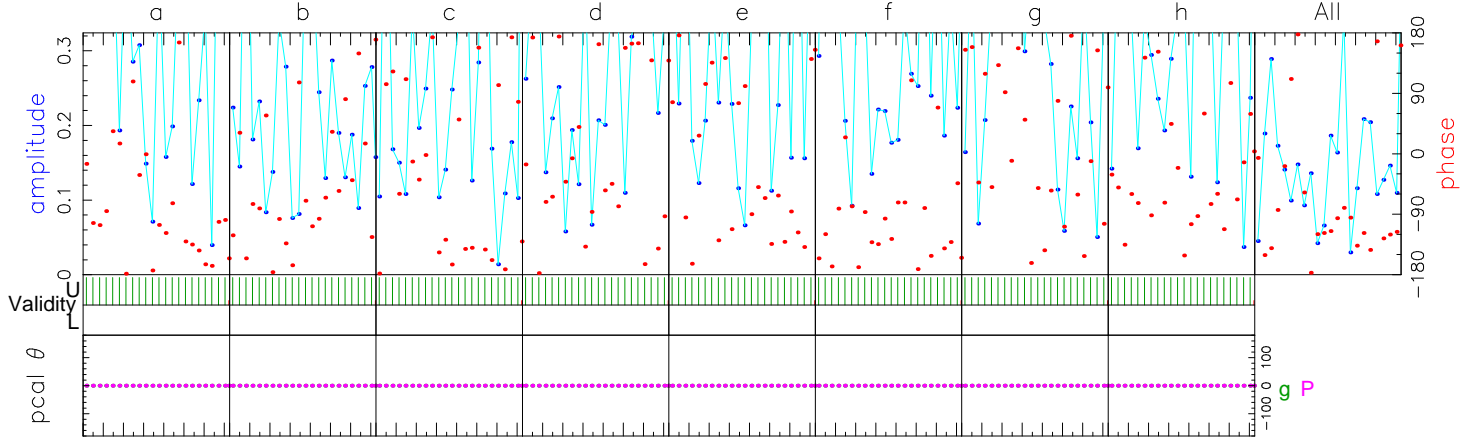


delay rate (ns/s)



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	
	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	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

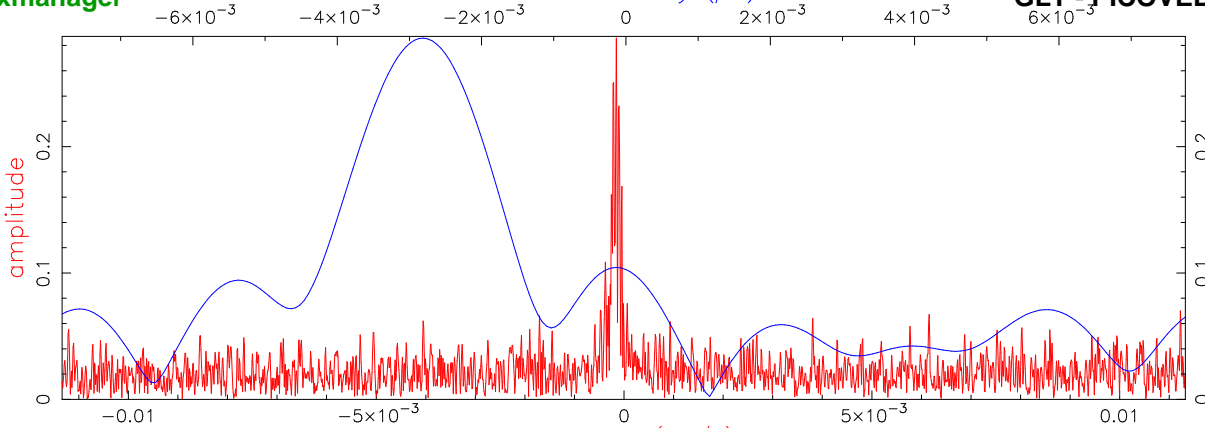
ph/seg (deg)	RMS 53.6	Theor. 46.3	Amplitude Search (2048X32)	0.108 +/- 0.018	0.101	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	81.3	80.7	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	38.6	27.3	Inc. seg. avg.	0.112	0.112	Bits/sample: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

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

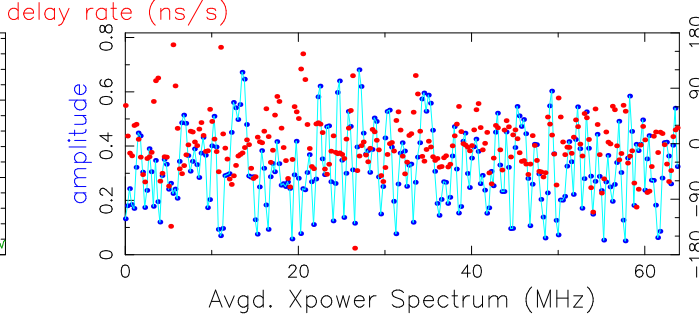
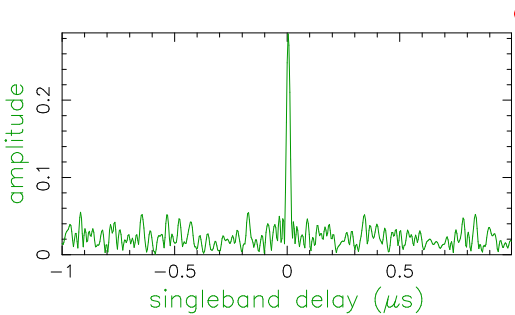
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/gP.1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gP.W.58.1WZRGR

multiband delay (μs)

Fringe quality 8

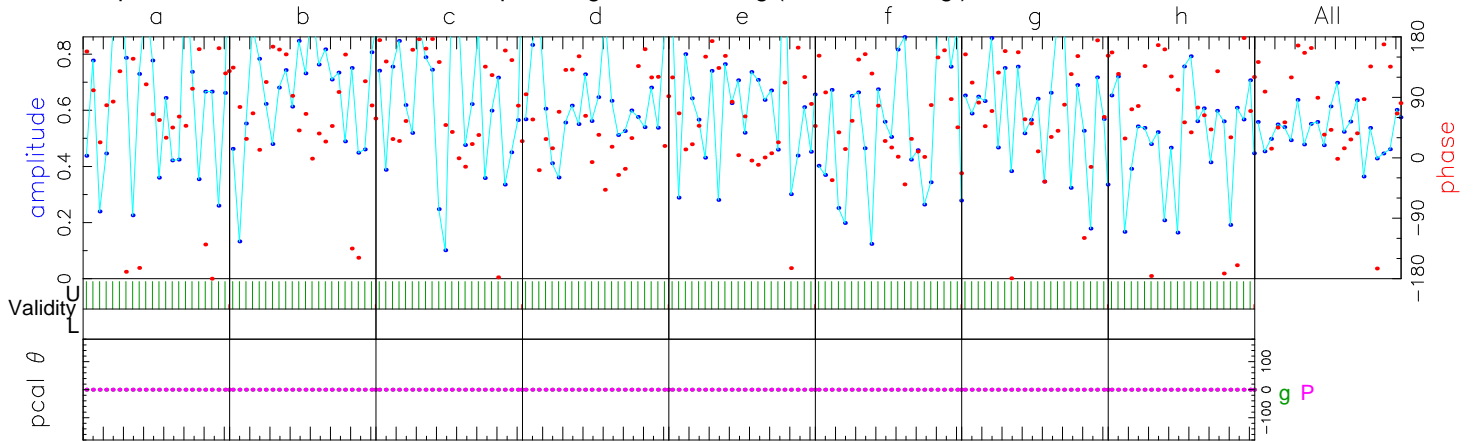


SNR 16.1
Int time 419.826
Amp 0.287
Phase 84.2
PFD 0.0e+00
Delays (us)
SBD 0.004776
MBD -0.002811
Fringe rate (Hz)
-0.013467
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



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
	109.8	77.5	94.8	49.1	70.2	61.7	93.3	110.3	Phase	84.2
	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	Ampl.	0.3
	258.3	258.6	257.1	258.3	258.5	258.2	258.7	257.8	Sbd box	258.2
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/g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	6.77182815182E+02		Apriori delay (usec)		6.77185625942E+02		Resid mbdelay (usec)		-2.81076E-03	+/- 6.7E-05
Sband delay (usec)	6.77190401692E+02		Apriori clock (usec)		1.4783211E+00		Resid sbdelay (usec)		4.77575E-03	+/- 5.4E-04
Phase delay (usec)	6.77185628656E+02		Apriori clockrate (us/s)		6.7200000E-07		Resid phdelay (usec)		2.71376E-06	+/- 2.3E-07
Delay rate (us/s)	-5.95558745624E-01		Apriori rate (us/s)		-5.95558589280E-01		Resid rate (us/s)		-1.56343E-07	+/- 9.5E-10
Total phase (deg)	18.9		Apriori accel (us/s/s)		2.88933506066E-05		Resid phase (deg)		84.2	+/- 7.1

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

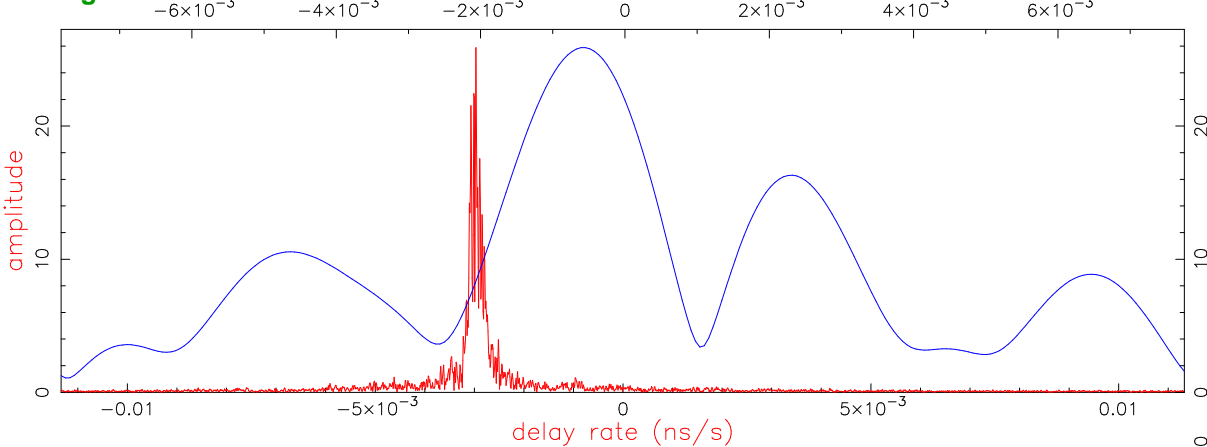
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, NP

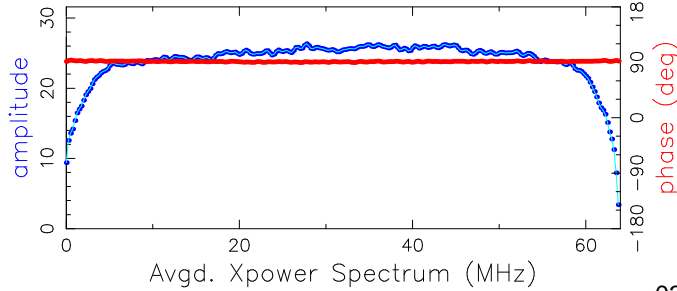
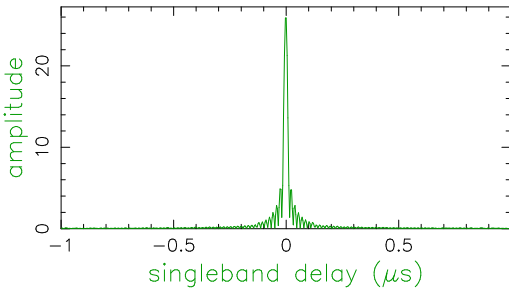
NOEMA - PICOVEL, fgroup W, pol LL

multiband delay (μ s)



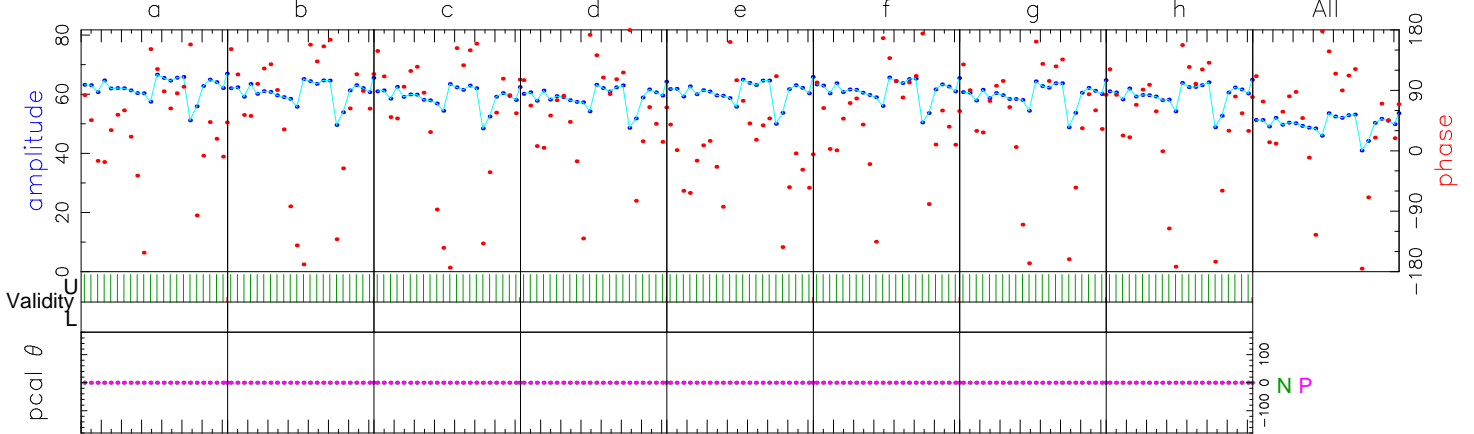
Fringe quality 3

SNR 1484.4
 Int time 419.824
 Amp 27.260
 Phase 74.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.001962
 MBD -0.000551
 Fringe rate (Hz)
 -0.256434
 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
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
N	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	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	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.74150384344E+03	Apriori delay (usec)	2.74150439403E+03	Resid mbdelay (usec)	-5.50588E-04	+/-	7.3E-07
Sband delay (usec)	2.74150243228E+03	Apriori clock (usec)	-1.2219905E+01	Resid sbdelay (usec)	-1.96175E-03	+/-	5.8E-06
Phase delay (usec)	2.74150439644E+03	Apriori clockrate (us/s)	-3.7889999E-06	Resid phdelay (usec)	2.41514E-06	+/-	2.5E-09
Delay rate (us/s)	-1.21794825232E-01	Apriori rate (us/s)	-1.21791848288E-01	Resid rate (us/s)	-2.97694E-06	+/-	1.0E-11
Total phase (deg)	255.4	Apriori accel (us/s/s)	-5.88279827896E-06	Resid phase (deg)	74.9	+/-	0.1

ph/seg (deg)	68.7	RMS	27.260 +/- 0.018	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	89.3	Theor.	0.2	Search (2048X32)	25.538	sb window (us)	-1.000 1.000	
ph/frq (deg)	40.3	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	17.9	Inc. seg. avg.	51.420	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	32.112	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

N: az 57.3 el 47.5 pa -72.8 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1097.664 -24.606 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NP.W.16.1WZRGR

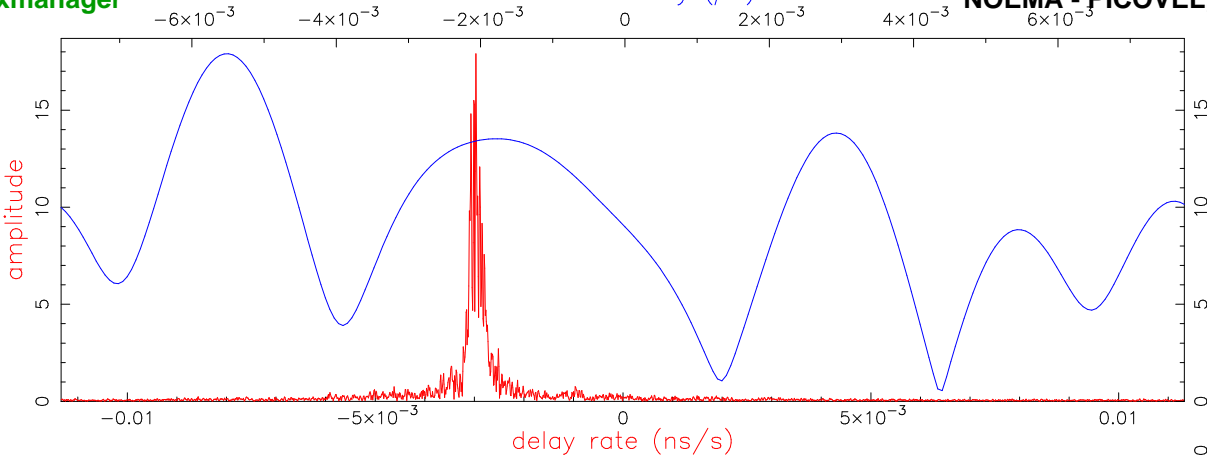
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, NP

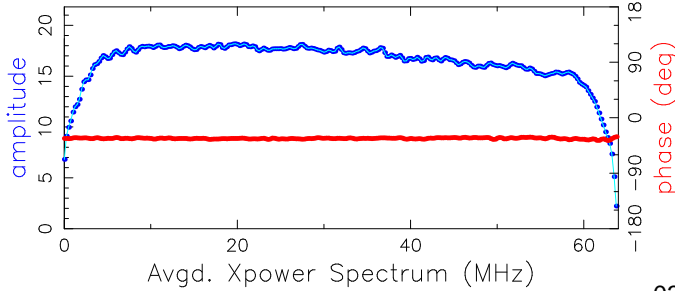
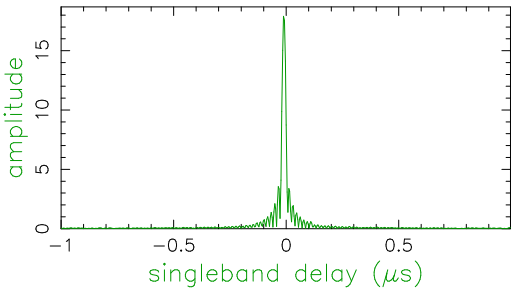
NOEMA - PICOVEL, fgroup W, pol RR

multiband delay (μ s)



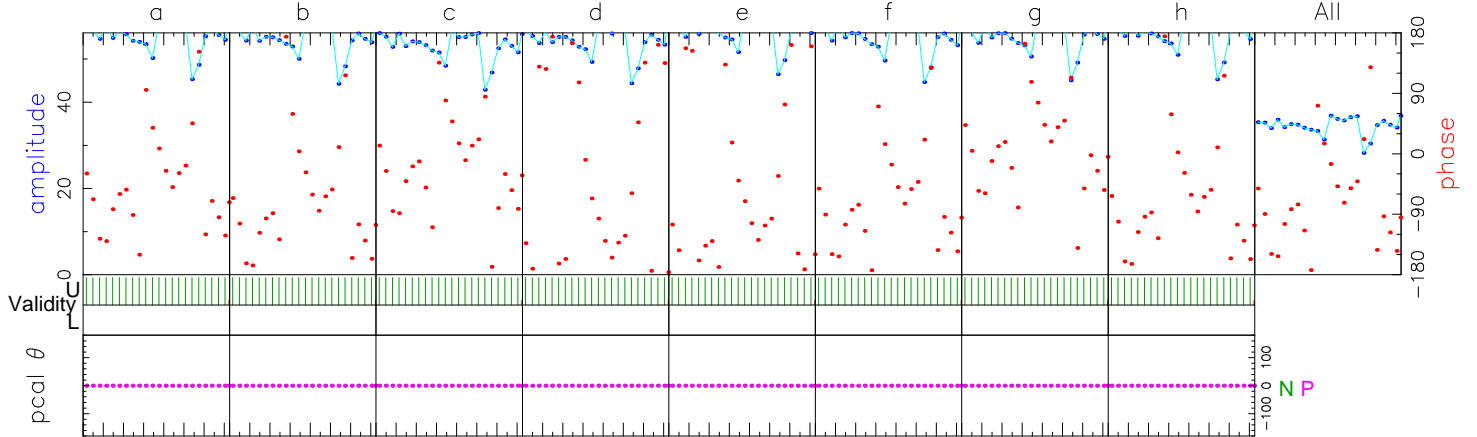
Fringe quality 1

SNR 1018.1
 Int time 419.822
 Amp 18.696
 Phase -88.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.010170
 MBD -0.005495
 Fringe rate (Hz)
 -0.256440
 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
 2021:303:114524
 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
	-65.5	-101.0	-24.5	-169.2	-142.6	-88.6	4.5	-100.1		-88.0
	29.3	29.0	28.4	28.9	30.2	29.5	29.7	29.9	Ampl.	29.4
	254.3	254.1	253.8	254.2	254.4	254.0	254.5	254.4	Sbd box	254.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	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	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 2.74149889903E+03 Apriori delay (usec) 2.74150439403E+03 Resid mbdelay (usec) -5.49499E-03 +/- 1.1E-06
 Sband delay (usec) 2.74149422403E+03 Apriori clock (usec) -1.2219905E+01 Resid sbdelay (usec) -1.01700E-02 +/- 8.5E-06
 Phase delay (usec) 2.74150439119E+03 Apriori clockrate (us/s) -3.7889999E-06 Resid phdelay (usec) -2.83848E-06 +/- 3.6E-09
 Delay rate (us/s) -1.21794825306E-01 Apriori rate (us/s) -1.21791848288E-01 Resid rate (us/s) -2.97702E-06 +/- 1.5E-11
 Total phase (deg) 92.5 Apriori accel (us/s/s) -5.88279827896E-06 Resid phase (deg) -88.0 +/- 0.1

RMS Theor. Amplitude 18.696 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 68.5 0.3 Search (2048X32) 17.681 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 90.2 0.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 61.9 0.2 Inc. seg. avg. 35.421 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 57.1 0.3 Inc. frq. avg. 29.358 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

N: az 57.3 el 47.5 pa -72.8 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1097.664 -24.606 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NP.W.40.1WZRGR

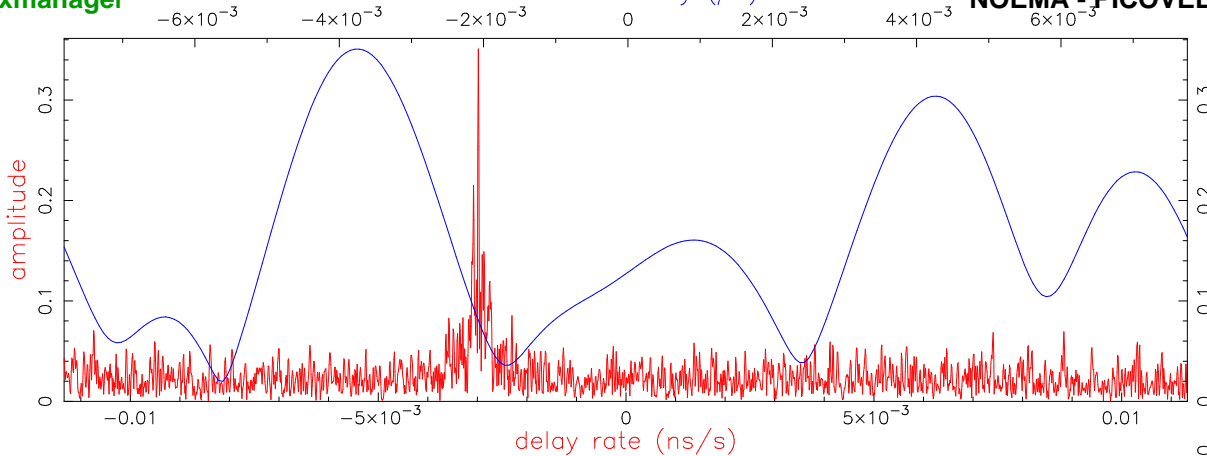
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, NP

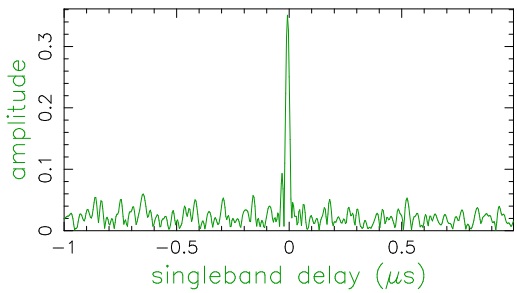
NOEMA - PICOVEL, fgroup W, pol LR

multiband delay (μs)

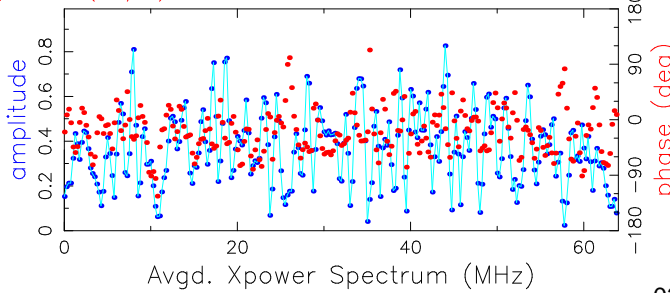


Fringe quality 7

SNR 19.7
 Int time 419.824
 Amp 0.361
 Phase -64.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.007393
 MBD -0.003750
 Fringe rate (Hz)
 -0.256443
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

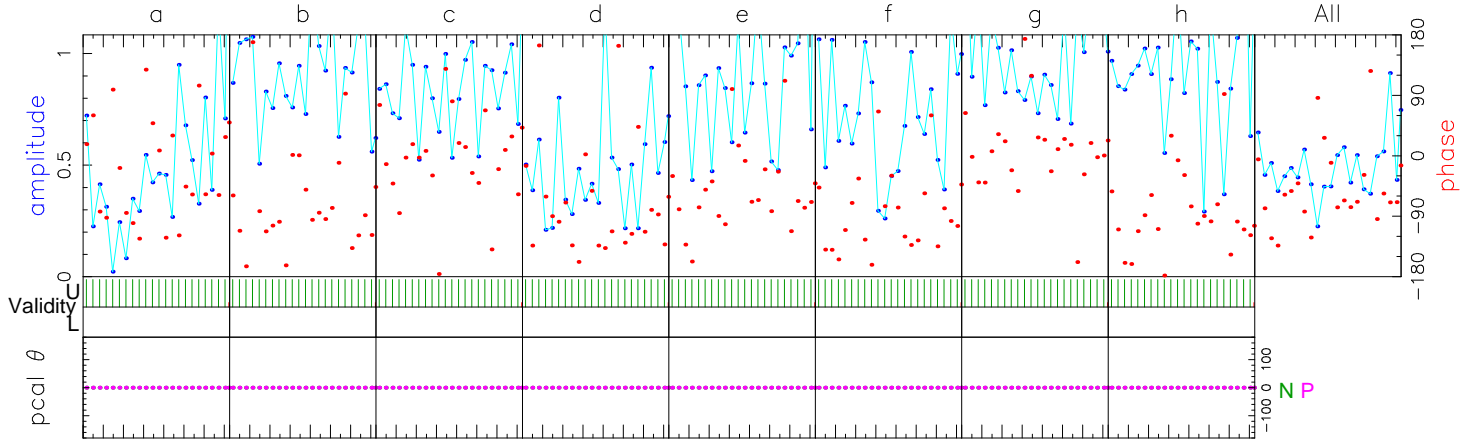


delay rate (ns/s)



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
	-39.0	-98.2	2.8	-111.4	-64.0	-103.4	7.1	-94.1	Phase	-64.5
	0.2	0.6	0.5	0.3	0.6	0.5	0.7	0.7	Ampl.	0.5
	254.9	256.0	254.4	254.1	255.6	254.3	255.2	254.8	Sbd box	255.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	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	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	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)	2.74150064391E+03		Apriori delay (usec)		2.74150439403E+03		Resid mbdelay (usec)		-3.75012E-03	+/- 5.5E-05
Sband delay (usec)	2.74149700153E+03		Apriori clock (usec)		-1.2219905E+01		Resid sbdelay (usec)		-7.39250E-03	+/- 4.4E-04
Phase delay (usec)	2.74150439195E+03		Apriori clockrate (us/s)		-3.7889999E-06		Resid phdelay (usec)		-2.07909E-06	+/- 1.9E-07
Delay rate (us/s)	-1.21794825335E-01		Apriori rate (us/s)		-1.21791848288E-01		Resid rate (us/s)		-2.97705E-06	+/- 7.7E-10
Total phase (deg)			Apriori accel (us/s/s)		-5.88279827896E-06		Resid phase (deg)		-64.5	+/- 5.8

	RMS	Theor.	Amplitude	0.361 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	60.8	14.0	Search (2048X32)	0.340	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	54.0	24.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	51.7	8.2	Inc. seg. avg.	0.488	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	58.7	14.4	Inc. frq. avg.	0.505	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

N: az 57.3 el 47.5 pa -72.8 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1097.664 -24.606 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NP.W.56.1WZRGR

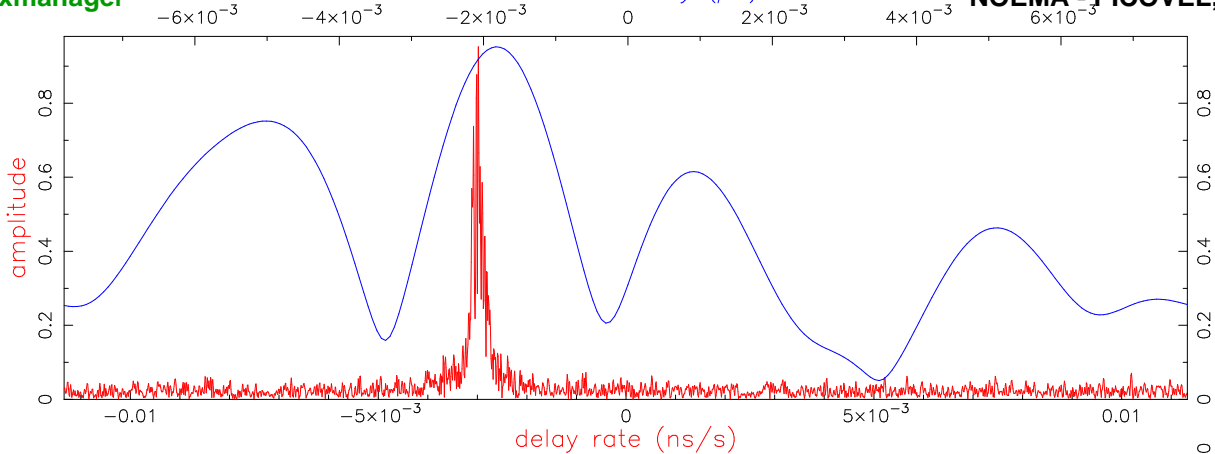
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, NP

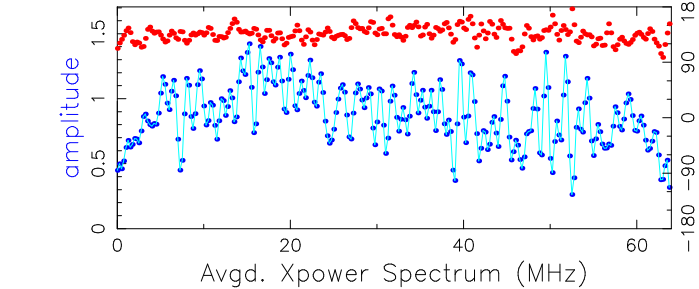
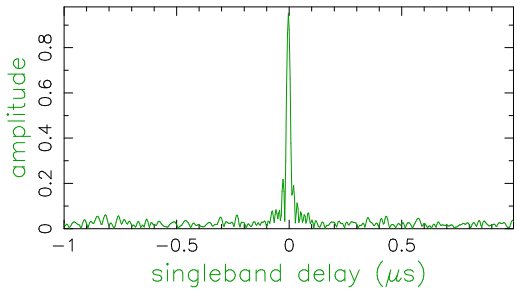
NOEMA - PICOVEL, fgroup W, pol RL

multiband delay (μ s)



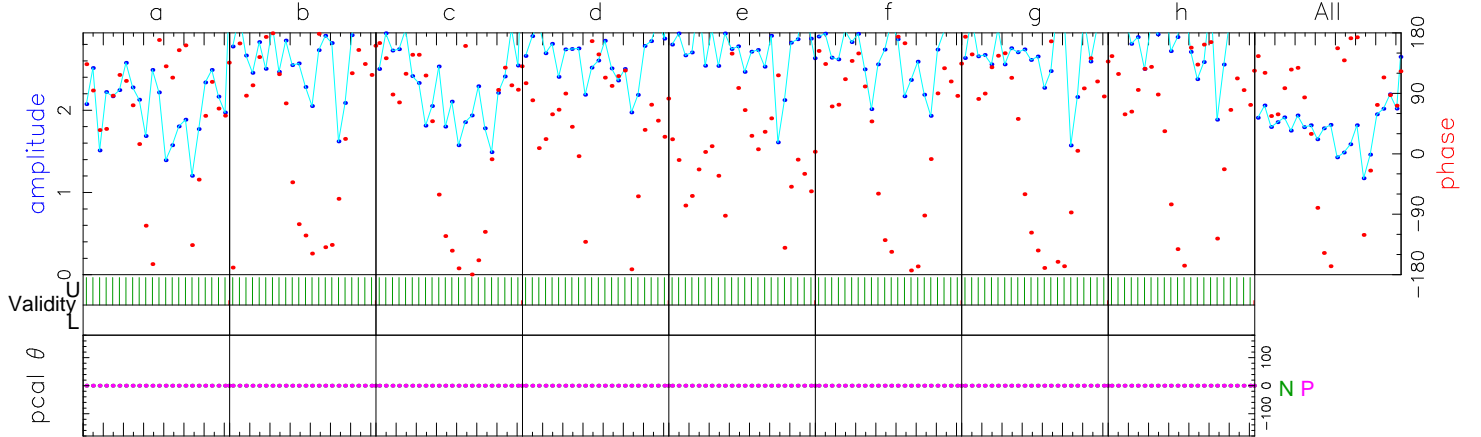
Fringe quality 1

SNR 53.4
 Int time 419.822
 Amp 0.981
 Phase 115.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.003588
 MBD -0.001815
 Fringe rate (Hz)
 -0.256460
 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		
N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.74150257853E+03	Apriori delay (usec)	2.74150439403E+03	Resid mbdelay (usec)	-1.81549E-03	+/-	2.0E-05
Sband delay (usec)	2.74150080628E+03	Apriori clock (usec)	-1.2219905E+01	Resid sbdelay (usec)	-3.58775E-03	+/-	1.6E-04
Phase delay (usec)	2.74150439776E+03	Apriori clockrate (us/s)	-3.7889999E-06	Resid phdelay (usec)	3.72943E-06	+/-	6.9E-08
Delay rate (us/s)	-1.21794825537E-01	Apriori rate (us/s)	-1.21791848288E-01	Resid rate (us/s)	-2.97725E-06	+/-	2.9E-10
Total phase (deg)	296.2	Apriori accel (us/s/s)	-5.88279827896E-06	Resid phase (deg)	115.7	+/-	2.1

ph/seg (deg)	69.6	RMS	5.1	Theor.	0.981 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	91.4	Search (2048X32)	0.918	Amplitude		Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	58.8	Interp.	0.000	Search		Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	47.4	Inc. seg. avg.	1.833	Inc. seg. avg.		Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	1.420	Inc. frq. avg.		Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

N: az 57.3 el 47.5 pa -72.8 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 1097.664 -24.606 simultaneous interpolator

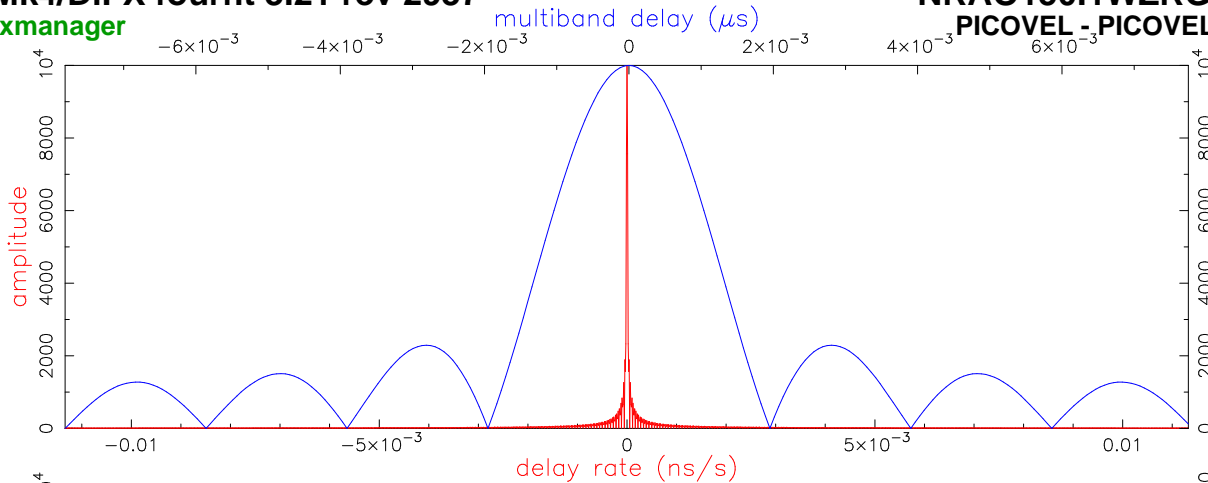
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NP.W.74.1WZRGR

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

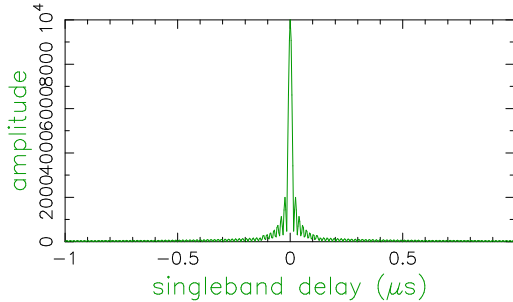
NRAO150.1WZRGR, No0037, PP

PICOVEL - PICOVEL, fgroup W, pol LL

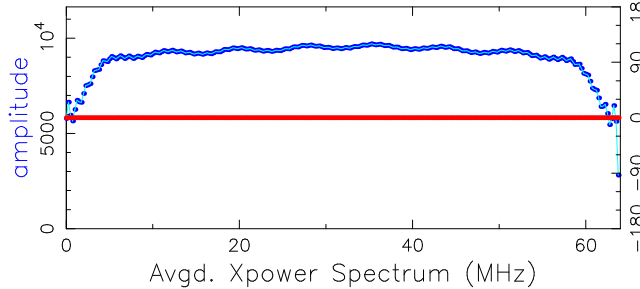


Fringe quality 9

SNR 560315.8
 Int time 419.827
 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

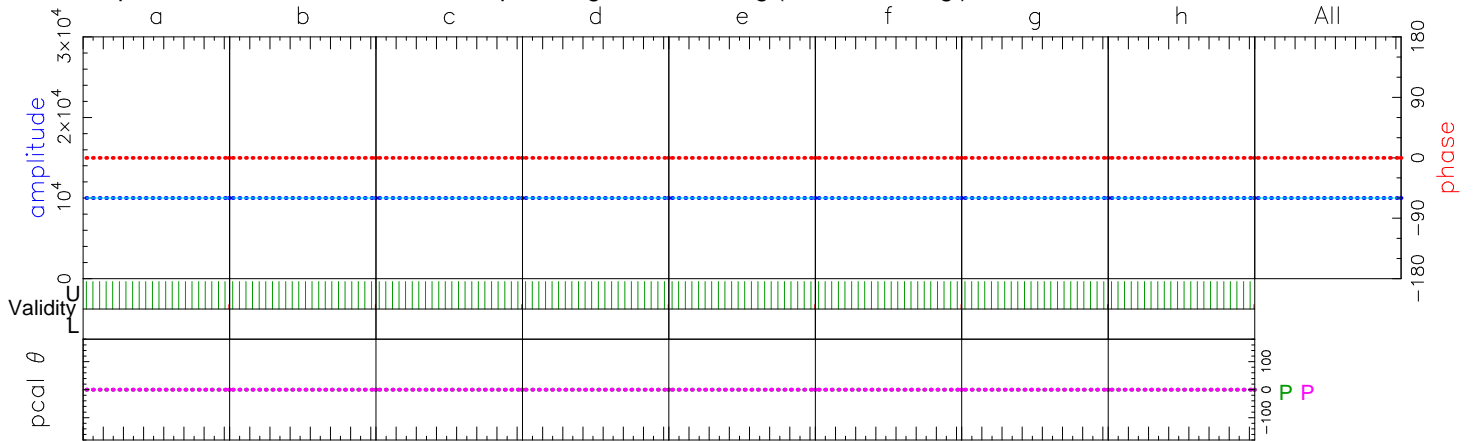


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114530
 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
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	10000.0	10000.0
P	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	10000.0
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Mani PC	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
									Chan ids	
									Tracks	
									Chan ids	
									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

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

P: az 49.5 el 37.3 pa -75.4 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

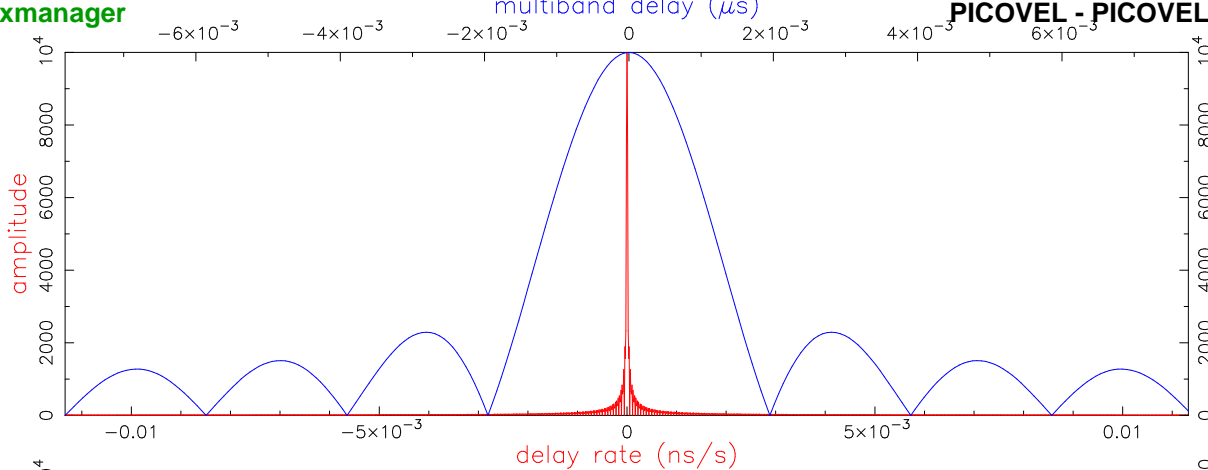
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/PP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/PP.W.67.1WZRGR

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

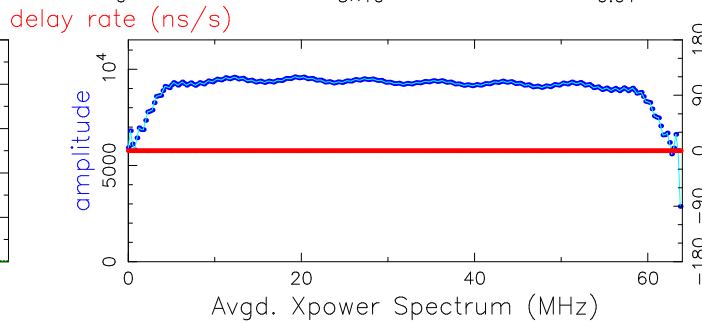
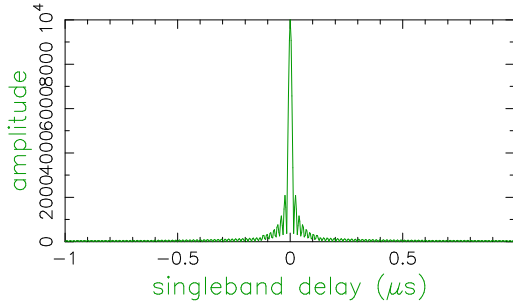
NRAO150.1WZRGR, No0037, PP

PICOVEL - PICOVEL, fgroup W, pol RR



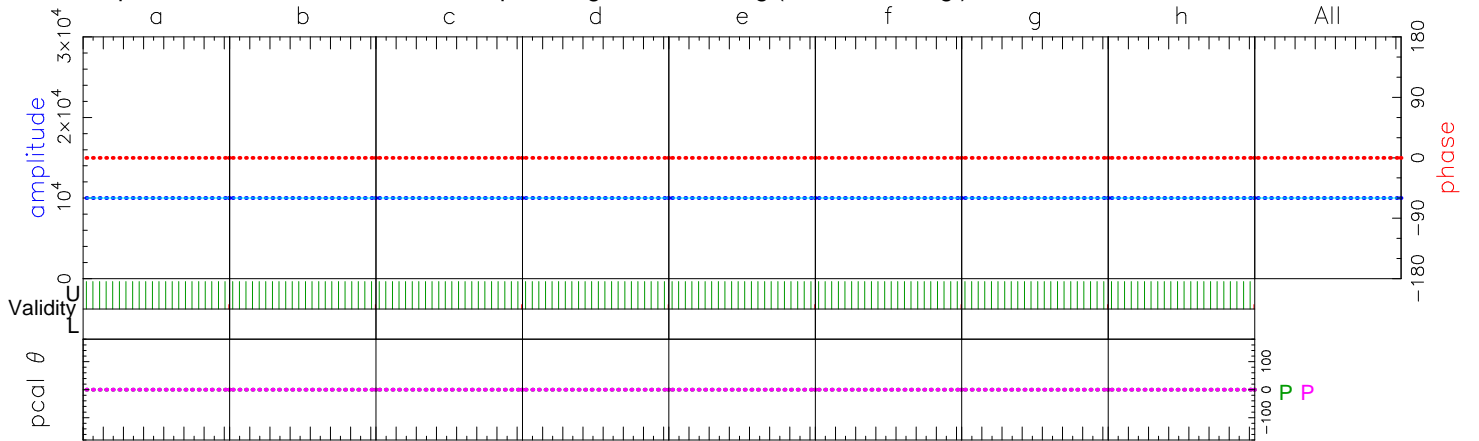
Fringe quality 9

SNR 560315.8
 Int time 419.827
 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
 Yr:day 16383
 Start 2021:116
 Stop 2021:116
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114534
 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	Ampl.	10000.0
P	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
P	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	

Group delay (usec)(sbd)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	1.9E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	1.5E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	6.6E-12
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	2.7E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/-	0.0

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

P: az 49.5 el 37.3 pa -75.4 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/PP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/PP.W.79.1WZRGR

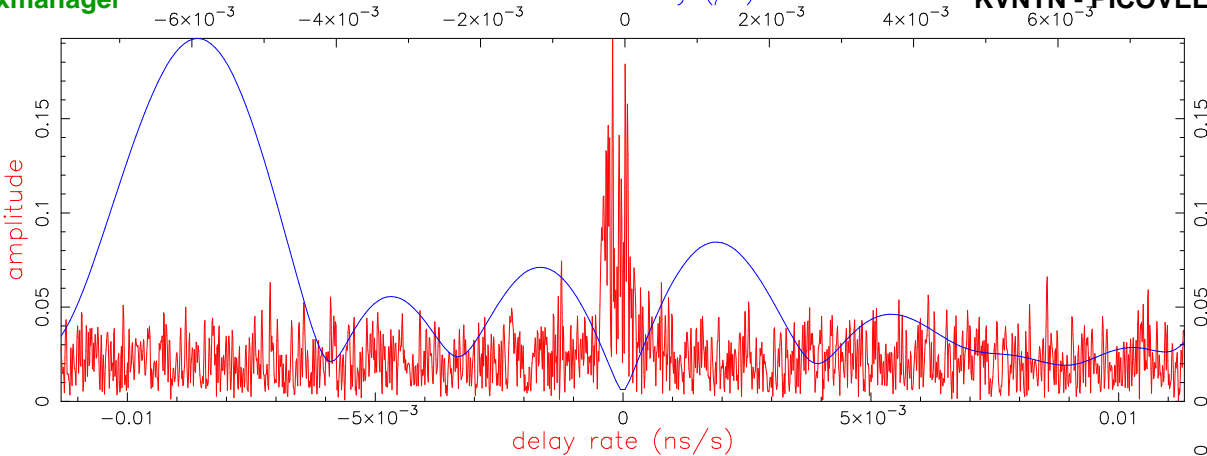
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, tP

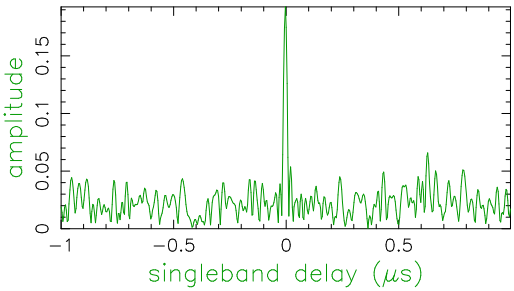
KVNTN - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

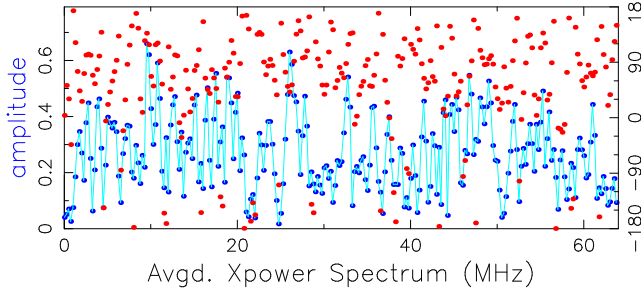


Fringe quality 9

SNR 10.8
Int time 419.827
Amp 0.193
Phase 107.9
PFD 1.8e-18
Delays (us)
SBD -0.003838
MBD -0.005921
Fringe rate (Hz)
-0.018379
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

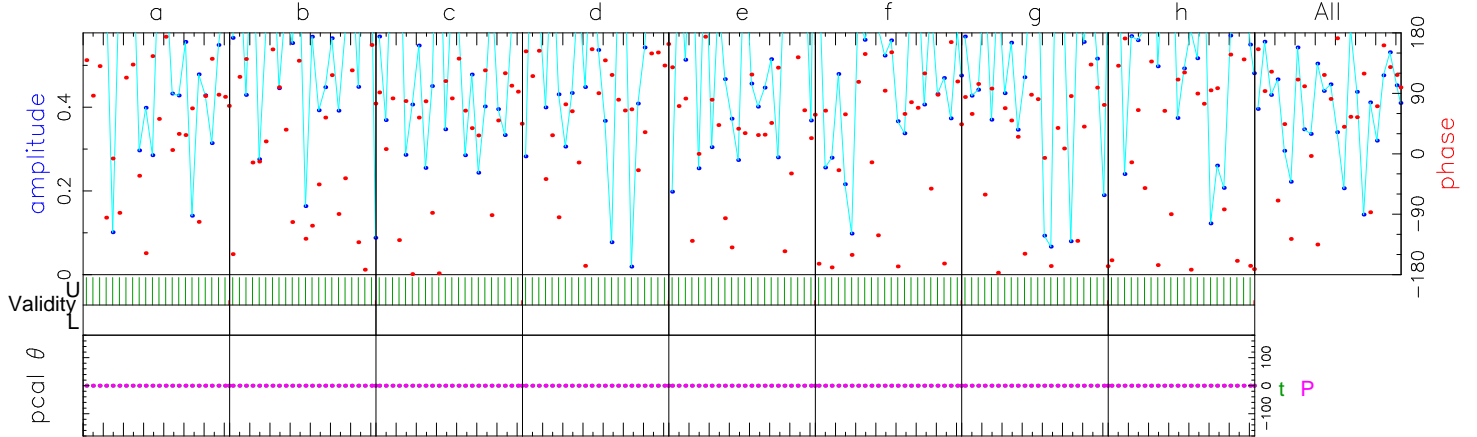


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114543
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



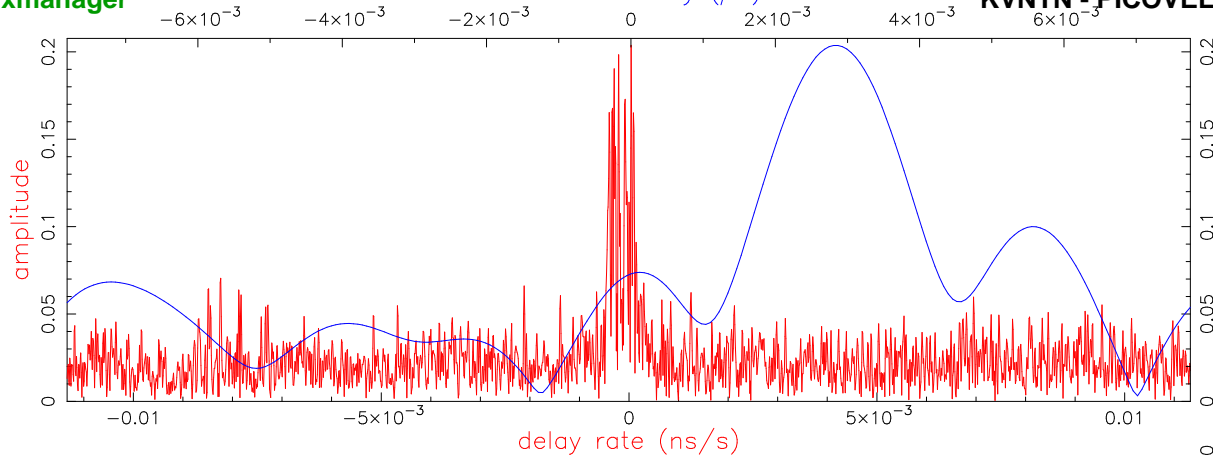
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0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

Group delay (usec)(sbd) 2.17042965155E+03 Apriori delay (usec) 2.17043557245E+03 Resid mbdelay (usec) -5.92090E-03 +/- 1.0E-04
 Sband delay (usec) 2.17043173470E+03 Apriori clock (usec) 7.7667427E-01 Resid sbdelay (usec) -3.83775E-03 +/- 8.0E-04
 Phase delay (usec) 2.17043557593E+03 Apriori clockrate (us/s) 5.4999999E-07 Resid phdelay (usec) 3.48060E-06 +/- 3.4E-07
 Delay rate (us/s) -1.42885820913E+00 Apriori rate (us/s) -1.42885799577E+00 Resid rate (us/s) -2.13366E-07 +/- 1.4E-09
 Total phase (deg) 183.8 Apriori accel (us/s/s) -1.62805337950E-05 Resid phase (deg) 107.9 +/- 10.6

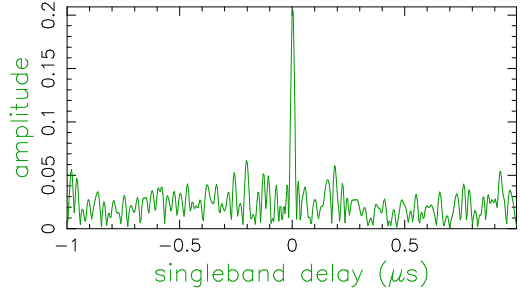
RMS Theor. Amplitude 0.193 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 75.8 25.5 Search (2048X32) 0.186 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 125.3 44.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 29.6 15.0 Inc. seg. avg. 0.368 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 26.1 26.2 Inc. frq. avg. 0.203 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

t: az 311.2 el 46.2 pa 91.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12983.098 -2001.632 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/tP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tP.W.120.1WZRGR

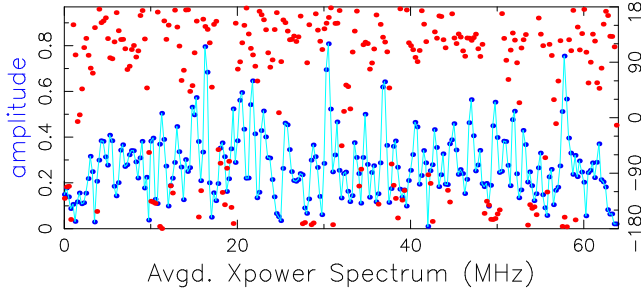
multiband delay (μ s)



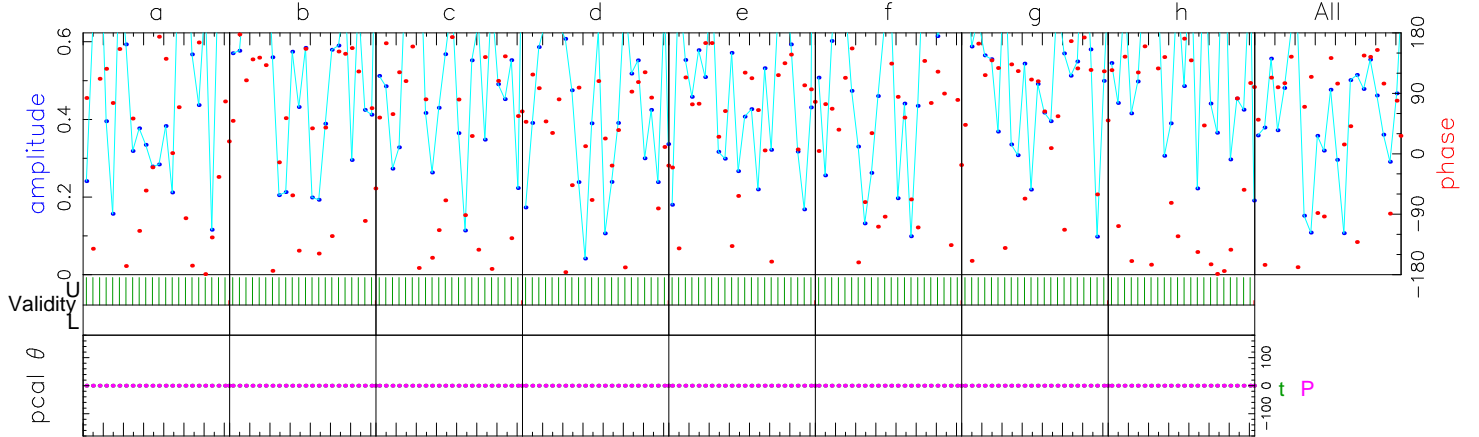
Fringe quality 9
SNR 11.6
Int time 419.827
Amp 0.208
Phase 134.4
PFD 1.3e-22
Delays (us)
SBD 0.002077
MBD 0.002838
Fringe rate (Hz) 0.003624
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114547
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		
t	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	2.17043841055E+03				2.17043557245E+03				2.83810E-03	+/- 9.3E-05
Sband delay (usec)	2.17043764970E+03				7.7667427E-01				2.07725E-03	+/- 7.4E-04
Phase delay (usec)	2.17043557678E+03				5.4999999E-07				4.33278E-06	+/- 3.2E-07
Delay rate (us/s)	-1.42885795369E+00				-1.42885799577E+00				4.20720E-08	+/- 1.3E-09
Total phase (deg)			210.3		-1.62805337950E-05				134.4	+/- 9.8
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) 72.3 23.6 Search (2048X32) 0.200 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 118.7 41.2 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 33.0 13.9 Inc. seg. avg. 0.373 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 26.7 24.3 Inc. frq. avg. 0.222 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
t: az 311.2 el 46.2 pa 91.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12983.098 -2001.632 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/tP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tP.W.142.1WZRGR simultaneous interpolator

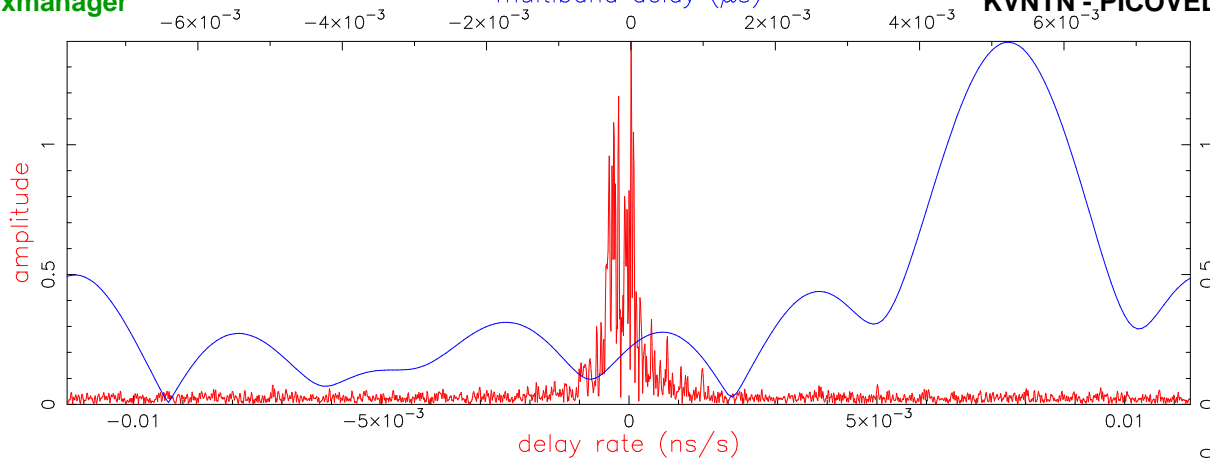
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, tP

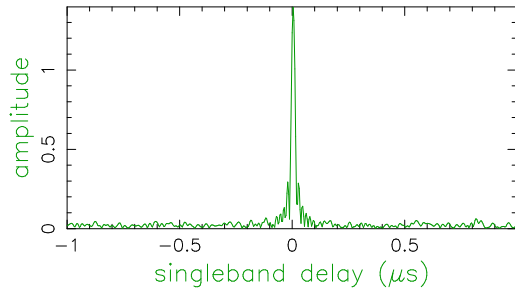
KVNTN - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

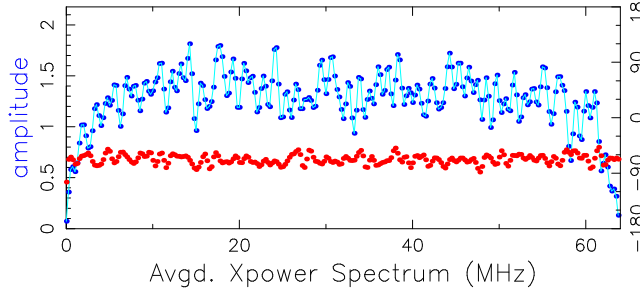


Fringe quality 3

SNR 78.3
 Int time 419.827
 Amp 1.398
 Phase -75.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.004528
 MBD 0.005230
 Fringe rate (Hz) 0.003746
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

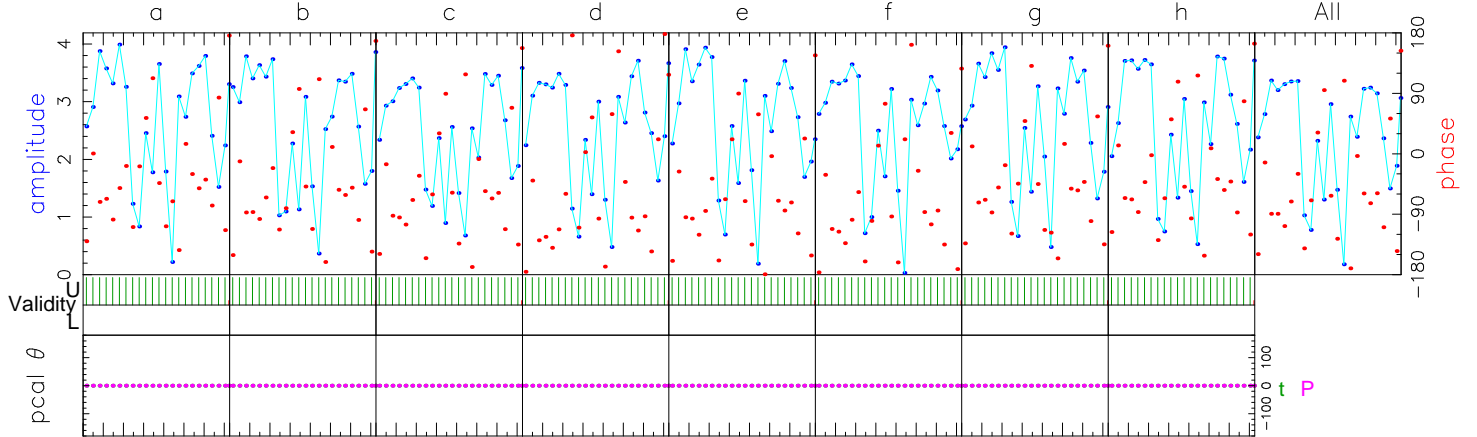


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114535
 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
	-55.7	-68.7	-76.4	-112.2	-85.2	-102.8	-60.7	-54.2	Phase	-75.8
	1.6	1.5	1.4	1.4	1.5	1.4	1.5	1.5	Ampl.	1.5
	258.2	258.0	257.6	258.1	258.1	258.3	258.4	258.4	Sbd box	258.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.17044080283E+03	Apriori delay (usec)		2.17043557245E+03	Resid mbdelay (usec)		5.23038E-03	+/-	1.4E-05
Sband delay (usec)	2.17044010020E+03	Apriori clock (usec)		7.7667427E-01	Resid sbdelay (usec)		4.52775E-03	+/-	1.1E-04
Phase delay (usec)	2.17043557000E+03	Apriori clockrate (us/s)		5.4999999E-07	Resid phdelay (usec)		-2.44507E-06	+/-	4.7E-08
Delay rate (us/s)	-1.42885795228E+00	Apriori rate (us/s)		-1.42885799577E+00	Resid rate (us/s)		4.3849E-08	+/-	1.9E-10
Total phase (deg)	0.1	Apriori accel (us/s/s)		-1.62805337950E-05	Resid phase (deg)		-75.8	+/-	1.5

ph/seg (deg)	RMS 76.9	Theor. 3.5	Amplitude Search (2048X32)	1.376	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	97.1	6.1	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)	23.4	2.1	Inc. seg. avg.	2.378	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	8.6	3.6	Inc. frq. avg.	1.482	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

t: az 311.2 el 46.2 pa 91.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12983.098 -2001.632 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/tP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tP.W.81.1WZRGR

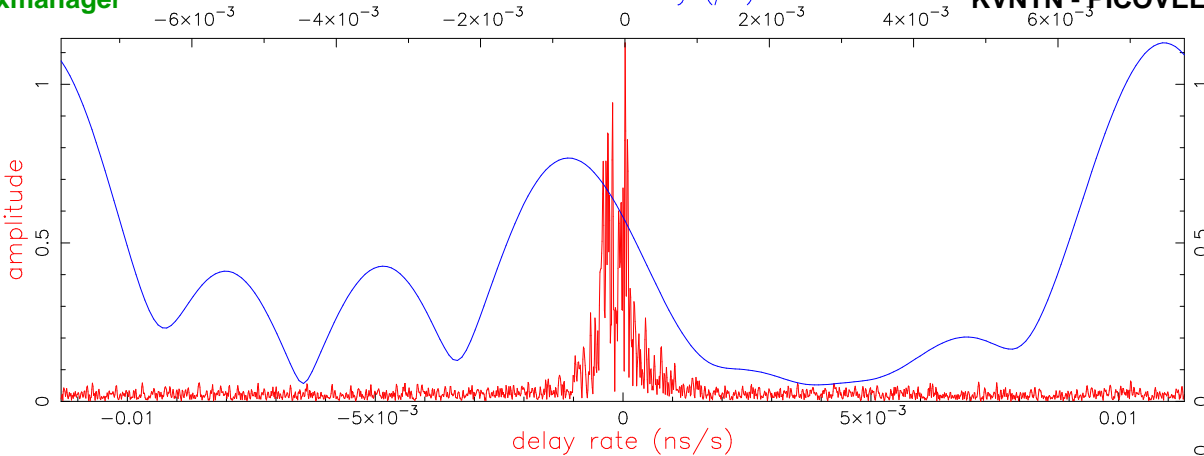
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, tP

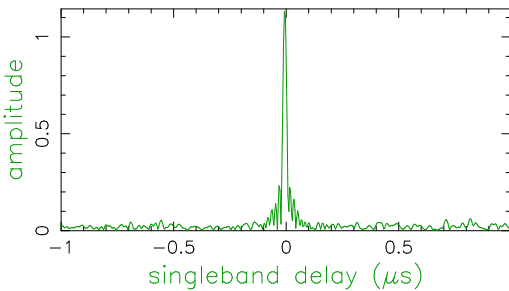
KVNTN - PICOVEL, fgroup W, pol RR

multiband delay (μ s)

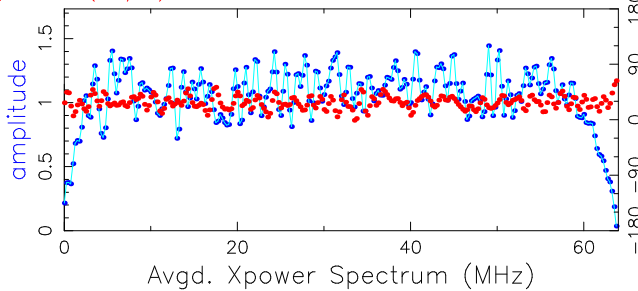


Fringe quality 2

SNR 64.2
Int time 419.827
Amp 1.145
Phase -132.1
PFD 0.0e+00
Delays (us)
SBD -0.006393
MBD 0.007479
Fringe rate (Hz)
0.003691
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

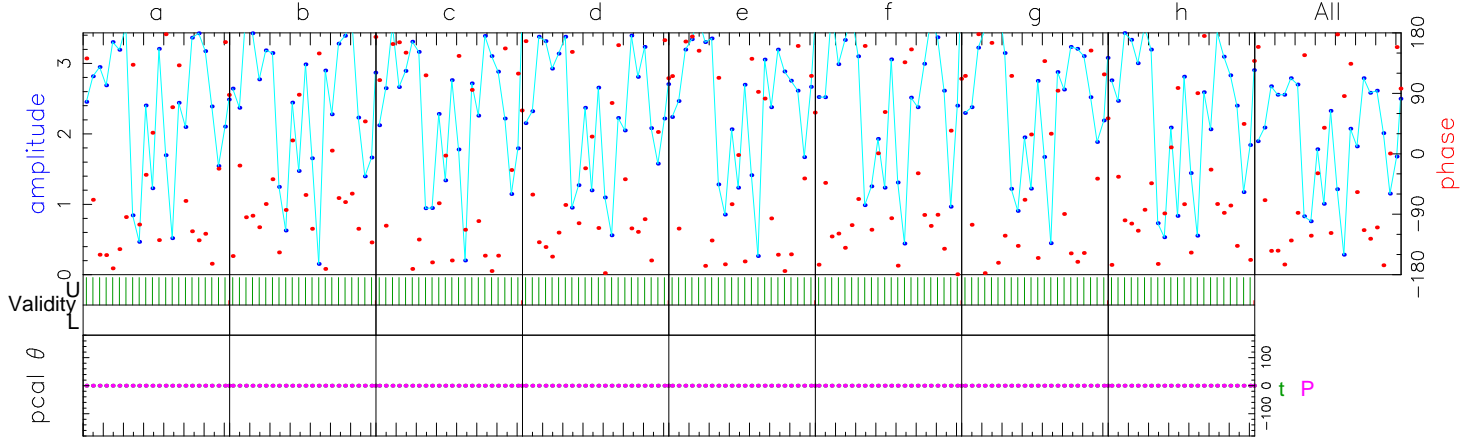


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114538
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



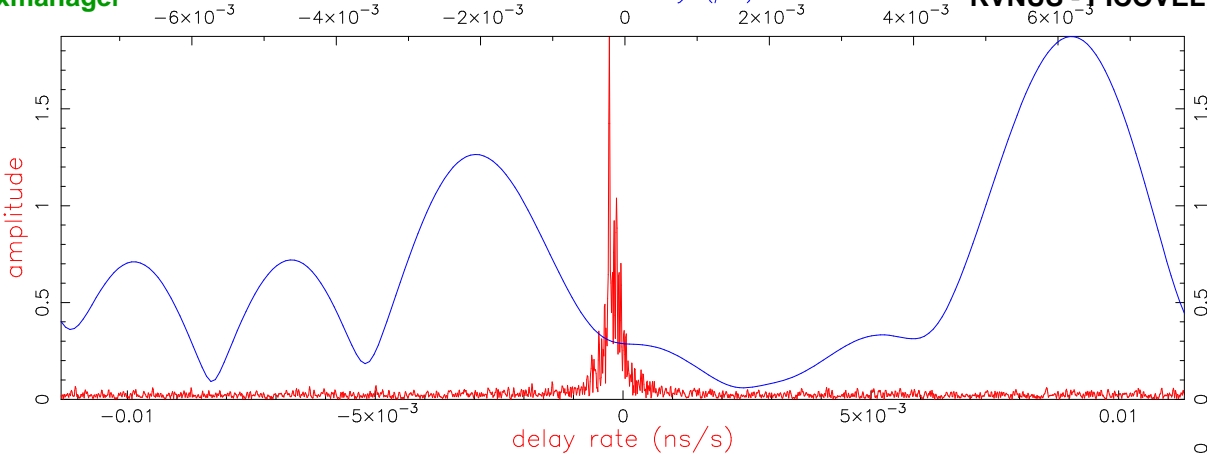
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-135.7	-78.9	-174.9	-120.6	-176.9	-112.8	-169.2	-93.2	Phase	-132.1
	1.4	1.5	1.3	1.3	1.4	1.5	1.4	1.4	Ampl.	1.4
	255.6	255.5	255.3	255.6	256.0	255.5	256.0	255.9	Sbd box	255.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 2.17042742671E+03 Apriori delay (usec) 2.17043557245E+03 Resid mbdelay (usec) 7.47926E-03 +/- 1.7E-05
 Sband delay (usec) 2.17042917945E+03 Apriori clock (usec) 7.7667427E-01 Resid sbdelay (usec) -6.39300E-03 +/- 1.3E-04
 Phase delay (usec) 2.17043556819E+03 Apriori clockrate (us/s) 5.4999999E-07 Resid phdelay (usec) -4.25878E-06 +/- 5.8E-08
 Delay rate (us/s) -1.42885795292E+00 Apriori rate (us/s) -1.42885799577E+00 Resid rate (us/s) 4.28451E-08 +/- 2.4E-10
 Total phase (deg) -56.2 Apriori accel (us/s/s) -1.62805337950E-05 Resid phase (deg) -132.1 +/- 1.8

RMS Theor. Amplitude 1.145 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 74.5 4.3 Search (2048X32) 1.115 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 93.3 7.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 41.0 2.5 Inc. seg. avg. 1.916 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 21.3 4.4 Inc. frq. avg. 1.383 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 t: az 311.2 el 46.2 pa 91.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12983.098 -2001.632 simultaneous interpolator

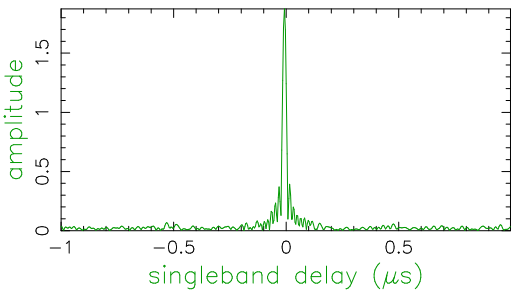
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/tP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tP.W.99.1WZRGR

multiband delay (μ s)

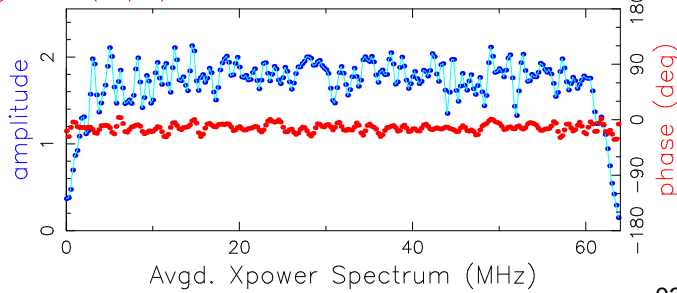


Fringe quality 2

SNR 105.0
Int time 419.827
Amp 1.874
Phase -175.4
PFD 0.0e+00
Delays (us)
SBD -0.007908
MBD 0.006186
Fringe rate (Hz)
-0.023940
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

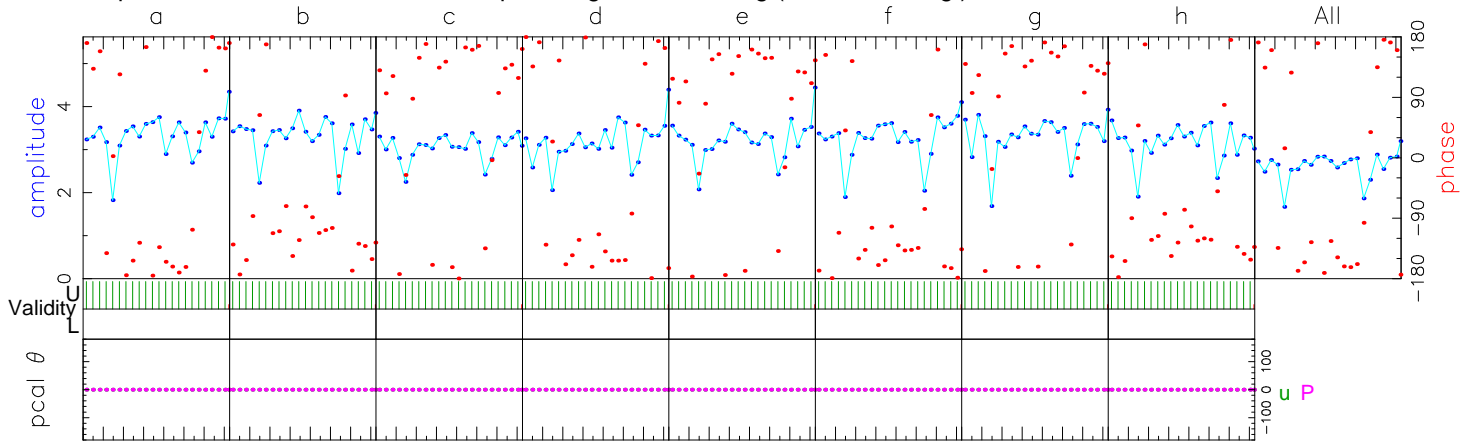


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114539
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
	-178.6	-123.8	146.5	-167.0	136.9	-153.9	146.2	-131.4	Phase	-175.4
	2.4	2.3	2.1	2.2	2.3	2.4	2.4	2.3	Ampl.	2.3
	255.3	255.1	254.9	255.1	255.7	255.1	255.5	255.5	Sbd box	255.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.10662720034E+03		Apriori delay (usec)		2.10663663911E+03		Resid mbdelay (usec)		6.18623E-03	+/- 1.0E-05
Sband delay (usec)	2.10662873086E+03		Apriori clock (usec)		1.5743000E+01		Resid sbdelay (usec)		-7.90825E-03	+/- 8.2E-05
Phase delay (usec)	2.10663663346E+03		Apriori clockrate (us/s)		1.7269999E-06		Resid phdelay (usec)		-5.65632E-06	+/- 3.5E-08
Delay rate (us/s)	-1.43122288710E+00		Apriori rate (us/s)		-1.43122260919E+00		Resid rate (us/s)		-2.77914E-07	+/- 1.5E-10
Total phase (deg)			Apriori accel (us/s/s)		-1.30164551297E-05		Resid phase (deg)		-175.4	+/- 1.1

	RMS	Theor.	Amplitude	1.874 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	58.4	2.6	Search (2048X32)	1.844	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	42.4	4.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	41.5	1.5	Inc. seg. avg.	2.606	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	23.3	2.7	Inc. frq. avg.	2.301	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

u: az 309.5 el 46.0 pa 86.5 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 13009.508 -1504.198 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/uP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/uP.W.103.1WZRGR

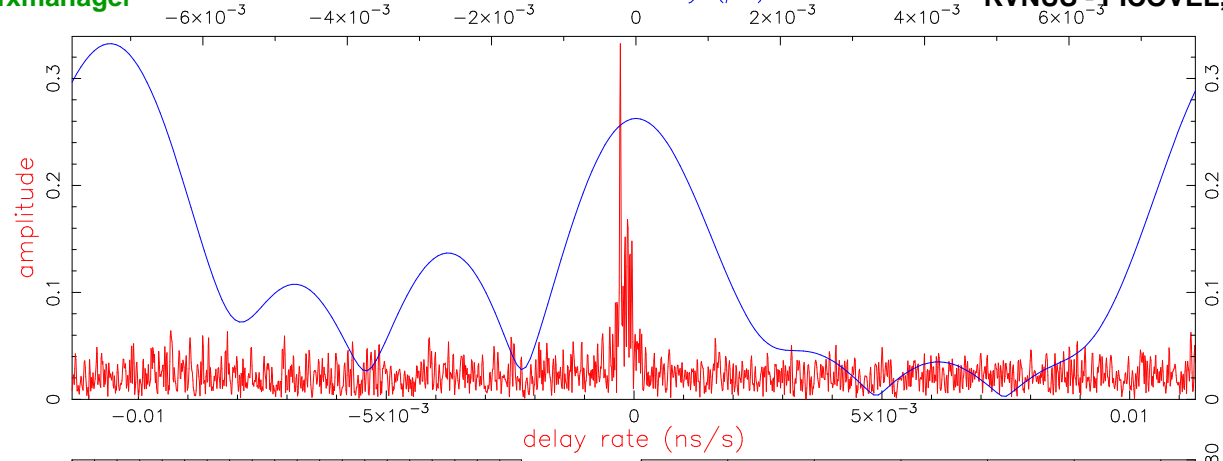
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, uP

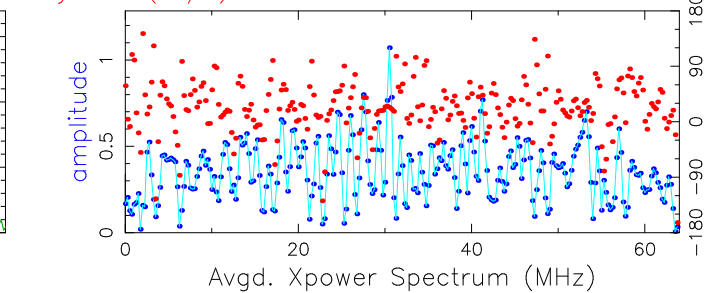
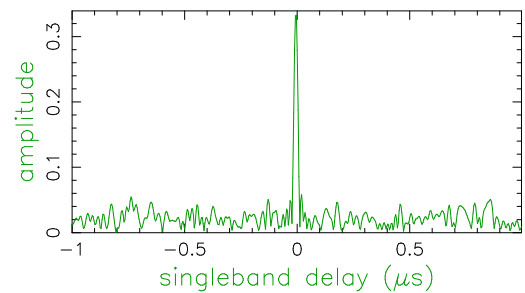
KVNUS - PICOVEL, fgroup W, pol LR

multiband delay (μ s)



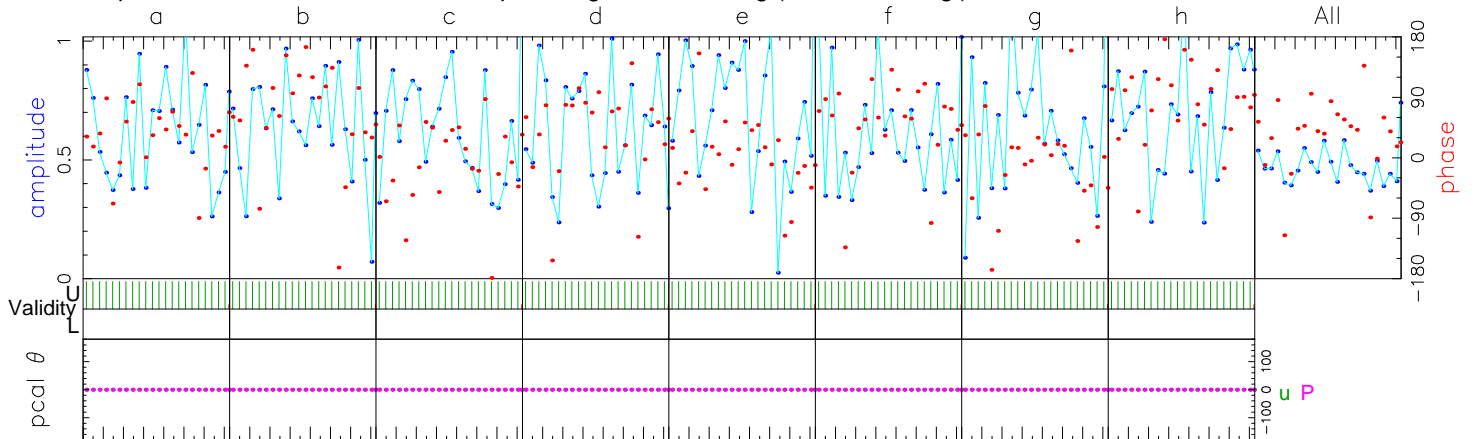
Fringe quality 8

SNR 19.0
Int time 419.827
Amp 0.339
Phase 44.0
PFD 0.0e+00
Delays (us)
SBD -0.005789
MBD -0.007300
Fringe rate (Hz)
-0.023888
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
2021:303:114543
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					
u	1000	1000	1000	1000	1000	1000	1000	1000					
P	1000	1000	1000	1000	1000	1000	1000	1000					
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0					
u	1000	1000	1000	1000	1000	1000	1000	1000					
P	1000	1000	1000	1000	1000	1000	1000	1000					
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL					
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR					
Group delay (usec)(sbd)		2.10662933921E+03			2.10663663911E+03				Resid mbdelay (usec)	-7.29990E-03	+/- 5.7E-05		
Sband delay (usec)		2.10663085011E+03			1.5743000E+01				Resid sbdelay (usec)	-5.78900E-03	+/- 4.5E-04		
Phase delay (usec)		2.10663664053E+03			1.7269999E-06				Resid phdelay (usec)	1.41735E-06	+/- 1.9E-07		
Delay rate (us/s)		-1.43122288651E+00			-1.43122260919E+00				Resid rate (us/s)	-2.77321E-07	+/- 8.0E-10		
Total phase (deg)			77.5		-1.30164551297E-05				Resid phase (deg)	44.0	+/- 6.0		
	RMS	Theor.	Amplitude	0.339 +/- 0.018					PCal mode: MANUAL, MANUAL				
ph/seg (deg)	55.9	14.5	Search (2048X32)	0.328					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
amp/seg (%)	42.8	25.2	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	46.1	8.5	Inc. seg. avg.	0.455					Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
amp/frq (%)	28.9	14.9	Inc. frq. avg.	0.420					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
u: az 309.5 el 46.0 pa 86.5			P: az 49.5 el 37.3 pa -75.4										simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c211c/v1/1234/No0037/uP..1WZRGR										Output file: /Exps/c211c/v1/1234/No0037/uP.W.123.1WZRGR

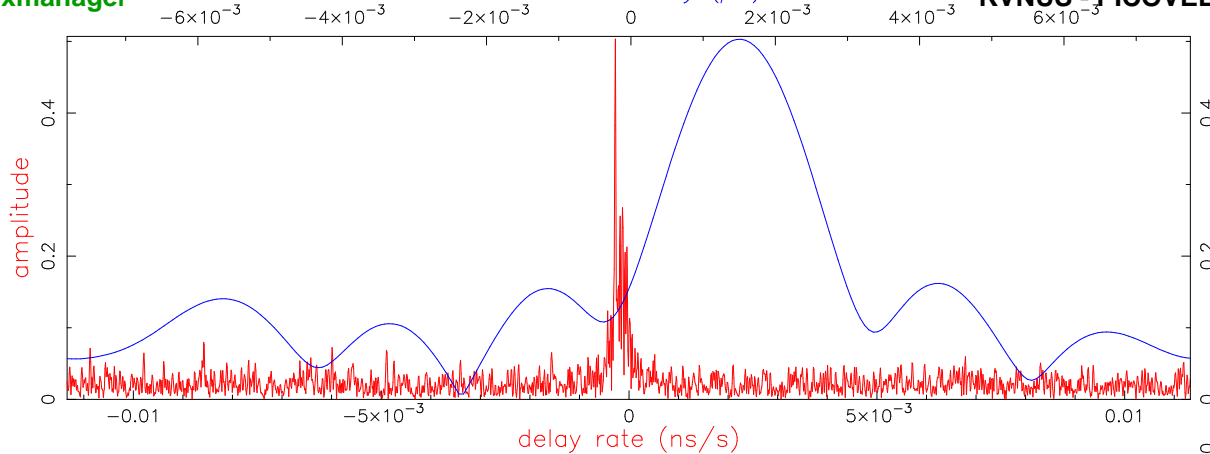
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, uP

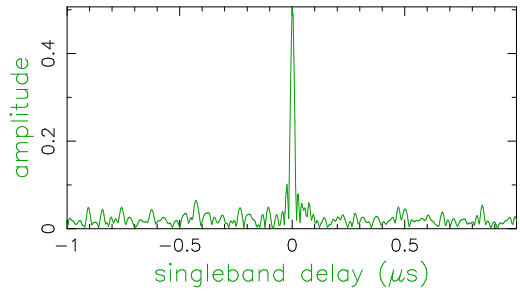
KVNUS - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

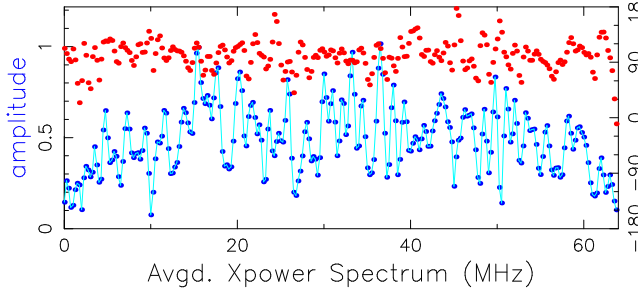


Fringe quality 5

SNR 28.4
 Int time 419.827
 Amp 0.507
 Phase 97.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.001151
 MBD 0.001512
 Fringe rate (Hz)
 -0.023936
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

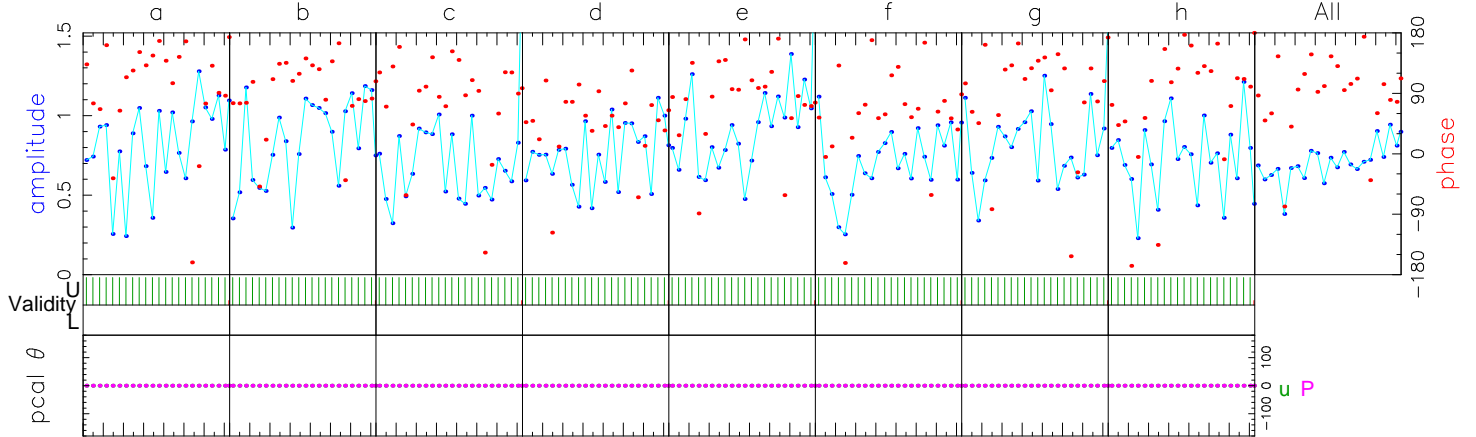


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114548
 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		
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.10663815128E+03	Apriori delay (usec)	2.10663663911E+03	Resid mbdelay (usec)	1.51217E-03	+/-	3.8E-05
Sband delay (usec)	2.10663778986E+03	Apriori clock (usec)	1.5743000E+01	Resid sbdelay (usec)	1.15075E-03	+/-	3.0E-04
Phase delay (usec)	2.10663664226E+03	Apriori clockrate (us/s)	1.7269999E-06	Resid phdelay (usec)	3.14888E-06	+/-	1.3E-07
Delay rate (us/s)	-1.43122288706E+00	Apriori rate (us/s)	-1.43122260919E+00	Resid rate (us/s)	-2.77870E-07	+/-	5.4E-10
Total phase (deg)	131.2	Apriori accel (us/s/s)	-1.30164551297E-05	Resid phase (deg)	97.6	+/-	4.0

ph/seg (deg)	57.7	RMS	9.7	Theor.	57.7	Amplitude	0.507 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	44.5	Search (2048X32)	0.495	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	25.6	Inc. seg. avg.	0.692	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
amp/frq (%)	11.2	Inc. frq. avg.	0.539										

u: az 309.5 el 46.0 pa 86.5 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 13009.508 -1504.198 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/uP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/uP.W.146.1WZRGR

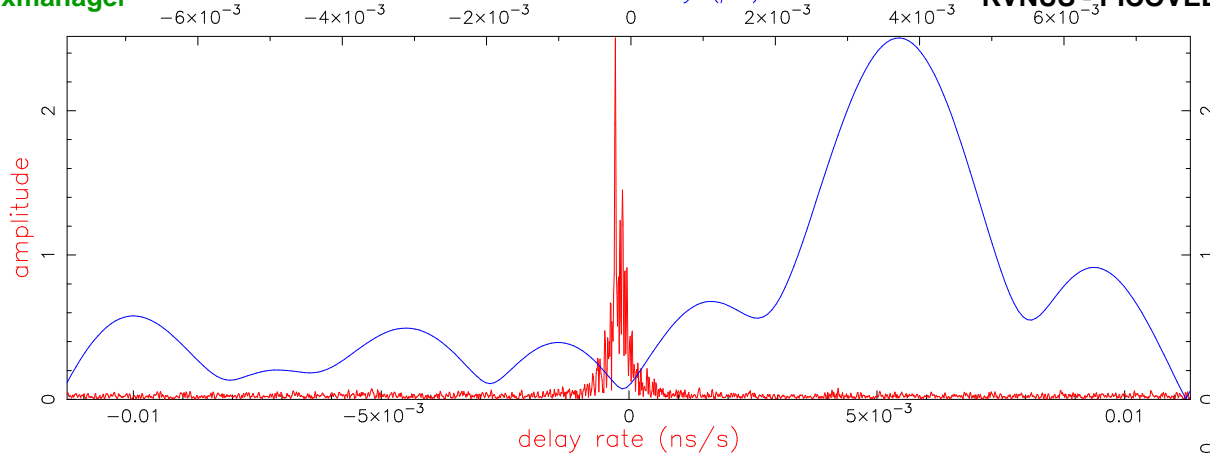
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, uP

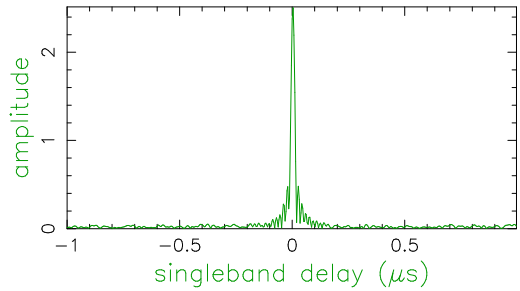
KVNUS - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

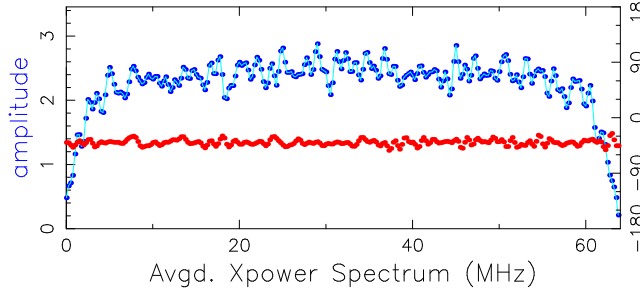


Fringe quality 3

SNR 140.9
 Int time 419.827
 Amp 2.515
 Phase -47.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.003076
 MBD 0.003705
 Fringe rate (Hz)
 -0.023914
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

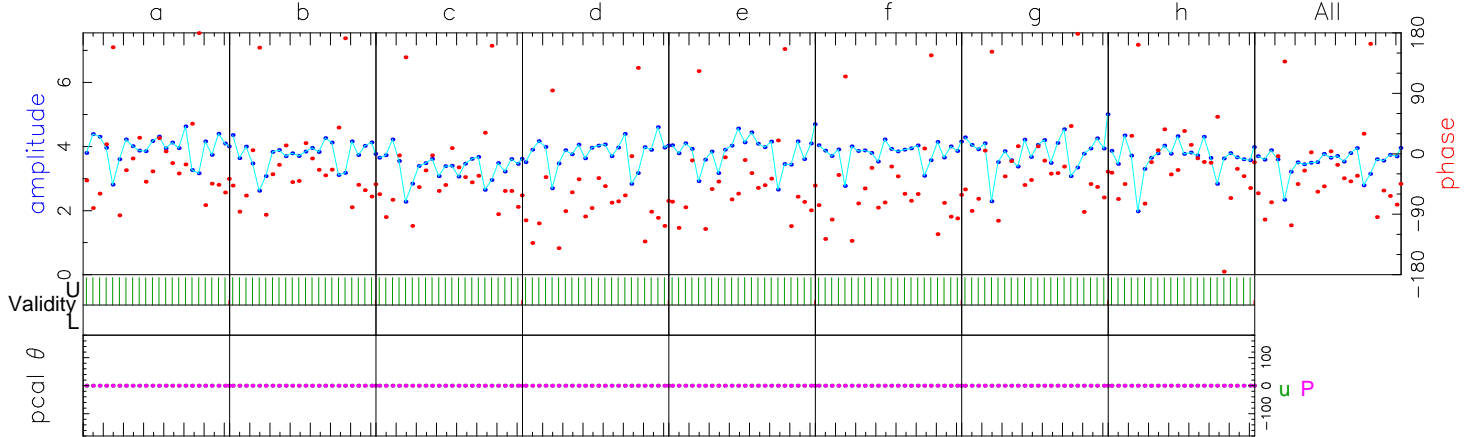


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114535
 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

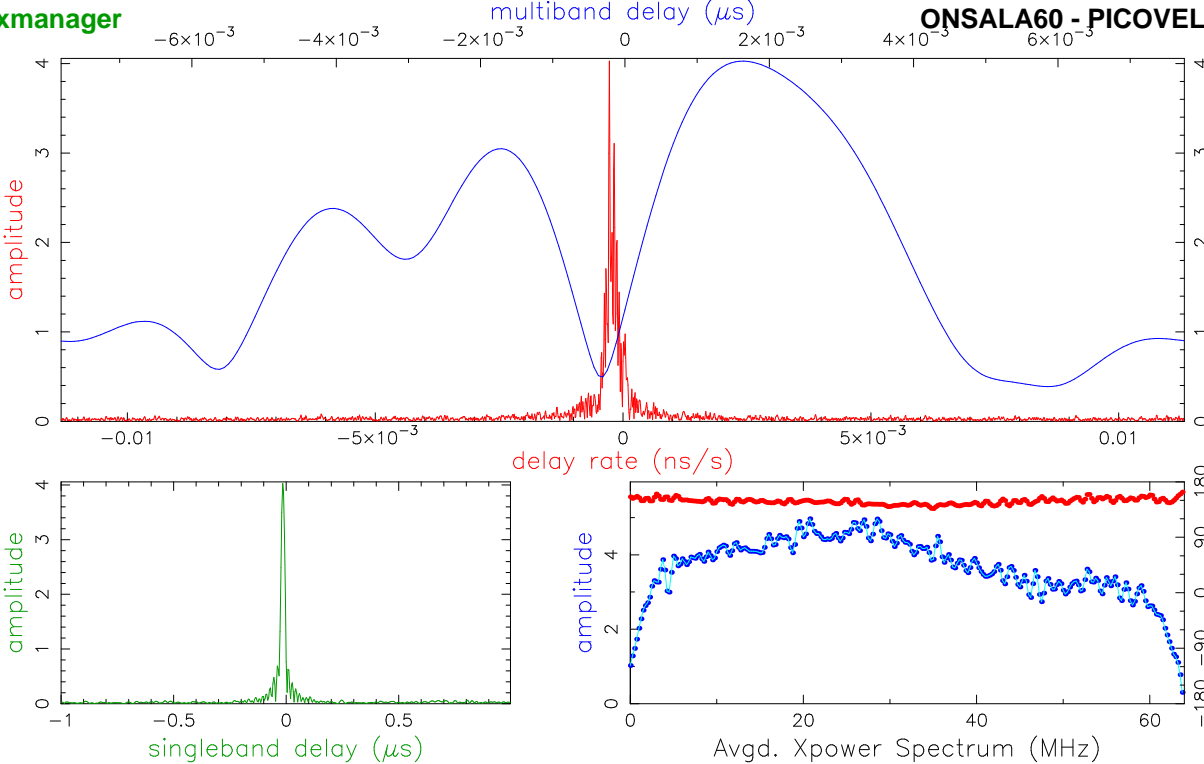


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-29.9	-36.8	-47.2	-80.6	-56.8	-72.5	-38.0	-17.8	Phase	-47.3
	2.8	2.7	2.4	2.7	2.7	2.7	2.7	2.6	Ampl.	2.7
	257.8	257.8	257.3	257.8	257.8	257.8	258.2	257.9	Sbd box	257.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 2.10664034431E+03 Apriori delay (usec) 2.10663663911E+03 Resid mbdelay (usec) 3.70520E-03 +/- 7.7E-06
 Sband delay (usec) 2.10663971486E+03 Apriori clock (usec) 1.5743000E+01 Resid sbdelay (usec) 3.07575E-03 +/- 6.1E-05
 Phase delay (usec) 2.10663663759E+03 Apriori clockrate (us/s) 1.7269999E-06 Resid phdelay (usec) -1.52627E-06 +/- 2.6E-08
 Delay rate (us/s) -1.43122288681E+00 Apriori rate (us/s) -1.43122260919E+00 Resid rate (us/s) -2.77621E-07 +/- 1.1E-10
 Total phase (deg) -13.8 Apriori accel (us/s/s) -1.30164551297E-05 Resid phase (deg) -47.3 +/- 0.8

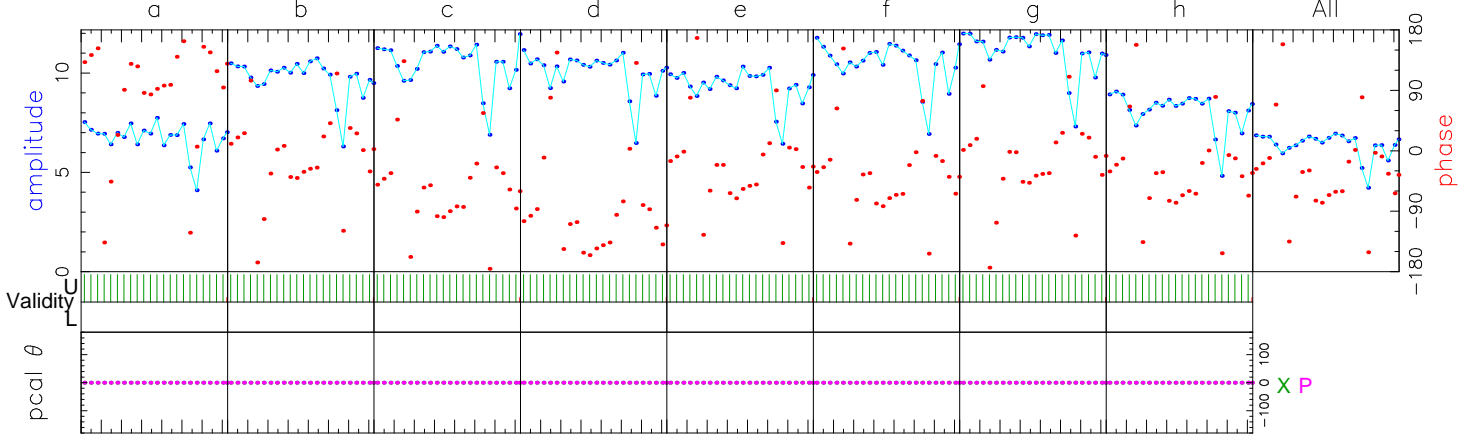
RMS Theor. Amplitude 2.515 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 59.3 2.0 Search (2048X32) 2.460 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 42.2 3.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 23.1 1.2 Inc. seg. avg. 3.512 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 7.4 2.0 Inc. frq. avg. 2.665 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 309.5 el 46.0 pa 86.5 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 13009.508 -1504.198 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/uP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/uP.W.84.1WZRGR



Fringe quality 1
SNR 227.3
Int time 419.795
Amp 4.058
Phase -38.7
PFD 0.0e+00
Delays (us)
SBD -0.014488
MBD 0.001636
Fringe rate (Hz)
-0.023565
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
2021:303:114540
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	120.3	-2.8	-61.0	-115.9	-29.2	-43.0	-11.2	-40.2	Phase	-38.7
X	4.3	6.1	6.6	6.3	5.9	6.6	7.0	5.2	Ampl.	6.0
P	251.1	252.1	252.4	253.1	253.9	252.8	253.3	253.0	Sbd box	253.3
X:P	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X:P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	4.76244295654E+03	Apriori delay (usec)	4.76245694506E+03	Resid mbdelay (usec)	1.63648E-03	+/-	4.8E-06
Sband delay (usec)	4.76244245756E+03	Apriori clock (usec)	5.7522614E+01	Resid sbdelay (usec)	-1.44875E-02	+/-	3.8E-05
Phase delay (usec)	4.76245694381E+03	Apriori clockrate (us/s)	1.1280000E-06	Resid phdelay (usec)	-1.24957E-06	+/-	1.6E-08
Delay rate (us/s)	-3.00284103474E-01	Apriori rate (us/s)	-3.00283829904E-01	Resid rate (us/s)	-2.73570E-07	+/-	6.7E-11
Total phase (deg)	50.4	Apriori accel (us/s/s)	-3.99279085304E-06	Resid phase (deg)	-38.7	+/-	0.5

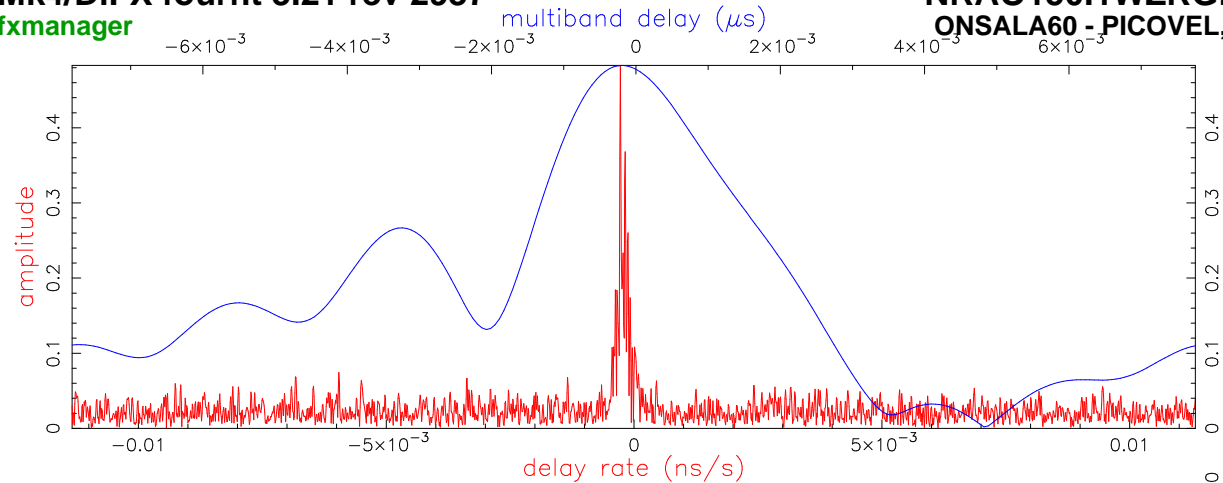
ph/seg (deg)	62.1	RMS	1.2	Theor.	3.865	Amplitude	4.058 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	59.0	Search (2048X32)	6.367	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	75.2	Inc. seg. avg.	6.367	Inc. frq. avg.	5.990	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	51.8	Inc. frq. avg.	5.990	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags:	256	t_cohere	infinite
X: az 75.0 el 56.2 pa -56.0	P: az 49.5 el 37.3 pa -75.4	u, v (fr/asec)	2723.793	923.270	ion window (TEC)	0.00	0.00	simultaneous interpolator			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

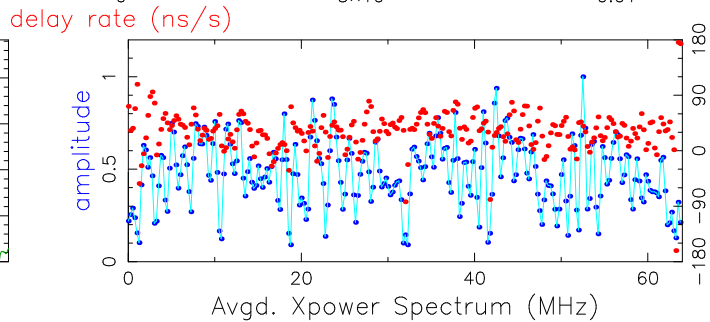
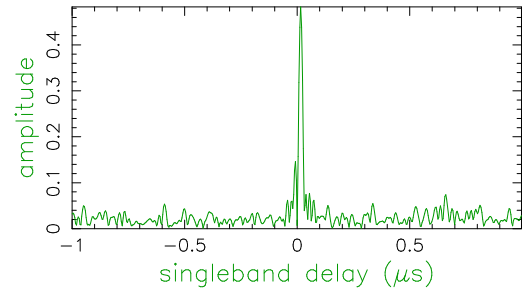
NRAO150.1WZRGR, No0037, XP

ONSALA60 - PICOVEL, fgroup W, pol LR



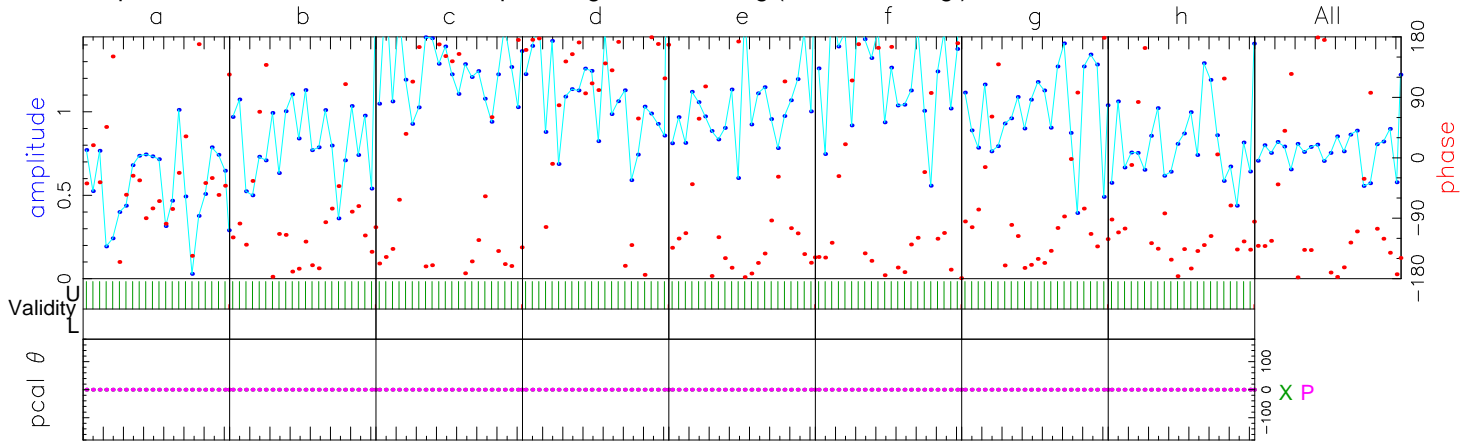
Fringe quality 6

SNR 27.1
 Int time 419.795
 Amp 0.483
 Phase -145.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.015612
 MBD -0.000194
 Fringe rate (Hz)
 -0.023527
 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
 2021:303:114544
 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
	-45.7	-126.1	-165.9	152.7	-144.9	-153.6	-117.8	-127.7	Phase	-145.3
	0.4	0.5	0.8	0.7	0.6	0.7	0.6	0.5	Ampl.	0.6
	257.8	260.5	260.1	260.6	261.5	260.1	261.2	261.0	Sbd box	261.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	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)	4.76247237607E+03		Apriori delay (usec)		4.76245694506E+03		Resid mbdelay (usec)		-1.93991E-04	+/- 4.0E-05
Sband delay (usec)	4.76247255756E+03		Apriori clock (usec)		5.7522614E+01		Resid sbdelay (usec)		1.56125E-02	+/- 3.2E-04
Phase delay (usec)	4.76245694038E+03		Apriori clockrate (us/s)		1.1280000E-06		Resid phdelay (usec)		-4.68435E-06	+/- 1.4E-07
Delay rate (us/s)	-3.00284103032E-01		Apriori rate (us/s)		-3.00283829904E-01		Resid rate (us/s)		-2.73128E-07	+/- 5.6E-10
Total phase (deg)			Apriori accel (us/s/s)		-3.99279085304E-06		Resid phase (deg)		-145.3	+/- 4.2

ph/seg (deg) 63.1 10.2 Search (2048X32) 0.463 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 62.0 17.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 51.1 6.0 Inc. seg. avg. 0.753 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 36.4 10.5 Inc. frq. avg. 0.609 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 X: az 75.0 el 56.2 pa -56.0 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 2723.793 923.270 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/XP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/XP.W.127.1WZRGR

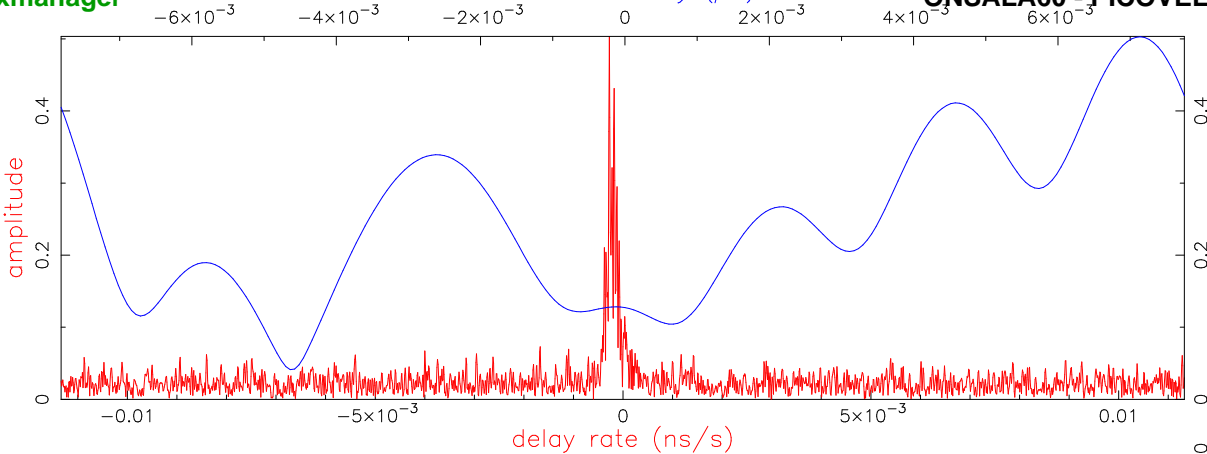
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, XP

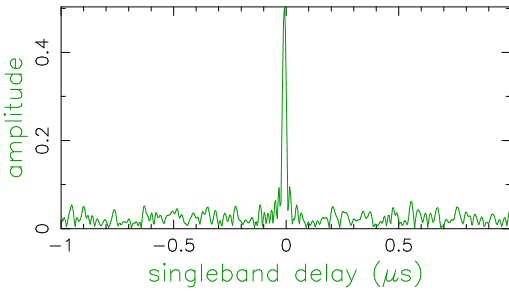
ONSALA60 - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

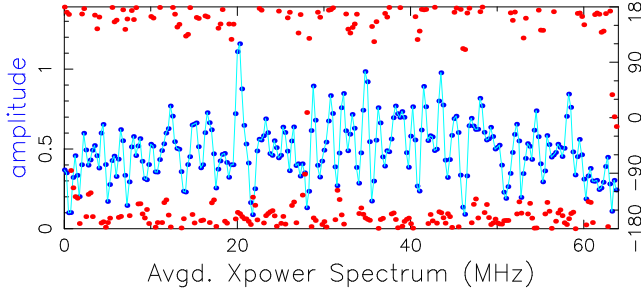


Fringe quality 5

SNR 28.2
 Int time 419.795
 Amp 0.503
 Phase 9.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.008247
 MBD 0.007126
 Fringe rate (Hz)
 -0.023573
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

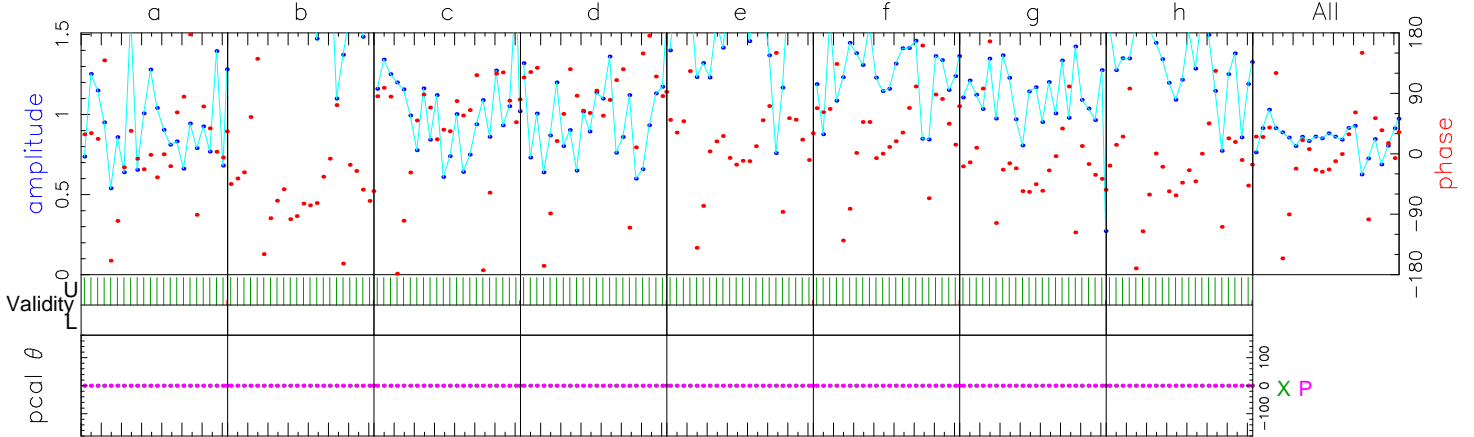


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114547
 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
	12.1	-57.2	77.9	98.6	21.3	44.4	-23.4	-17.1	Phase	9.8
	0.5	1.1	0.6	0.6	1.0	0.7	0.7	0.7	Ampl.	0.7
	253.1	253.7	253.9	255.4	255.3	254.5	255.8	254.3	Sbd box	254.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 4.76244844595E+03 Apriori delay (usec) 4.76245694506E+03 Resid mbdelay (usec) 7.12588E-03 +/- 3.8E-05
 Sband delay (usec) 4.76244869806E+03 Apriori clock (usec) 5.7522614E+01 Resid sbdelay (usec) -8.24700E-03 +/- 3.1E-04
 Phase delay (usec) 4.76245694538E+03 Apriori clockrate (us/s) 1.1280000E-06 Resid phdelay (usec) 3.16360E-07 +/- 1.3E-07
 Delay rate (us/s) -3.00284103561E-01 Apriori rate (us/s) -3.00283829904E-01 Resid rate (us/s) -2.73657E-07 +/- 5.4E-10
 Total phase (deg) 98.9 Apriori accel (us/s/s) -3.99279085304E-06 Resid phase (deg) 9.8 +/- 4.1

RMS Theor. Amplitude 0.503 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 64.9 9.7 Search (2048X32) 0.483 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 70.5 17.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 58.0 5.7 Inc. seg. avg. 0.836 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 63.1 10.0 Inc. frq. avg. 0.742 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

X: az 75.0 el 56.2 pa -56.0 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 2723.793 923.270 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/XP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/XP.W.143.1WZRGR

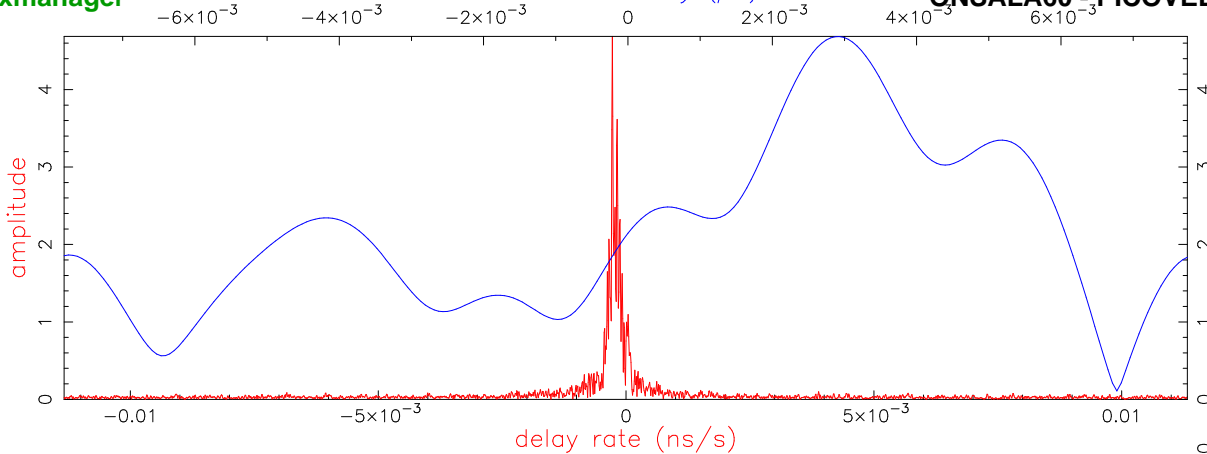
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, XP

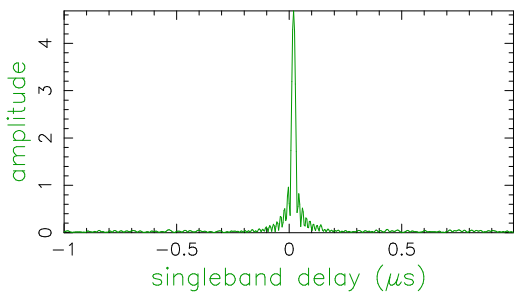
ONSALA60 - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

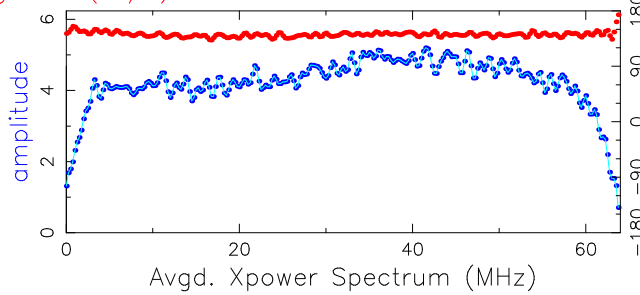


Fringe quality 1

SNR 262.5
Int time 419.795
Amp 4.687
Phase -28.2
PFD 0.0e+00
Delays (us)
SBD 0.019432
MBD 0.002905
Fringe rate (Hz)
-0.023542
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

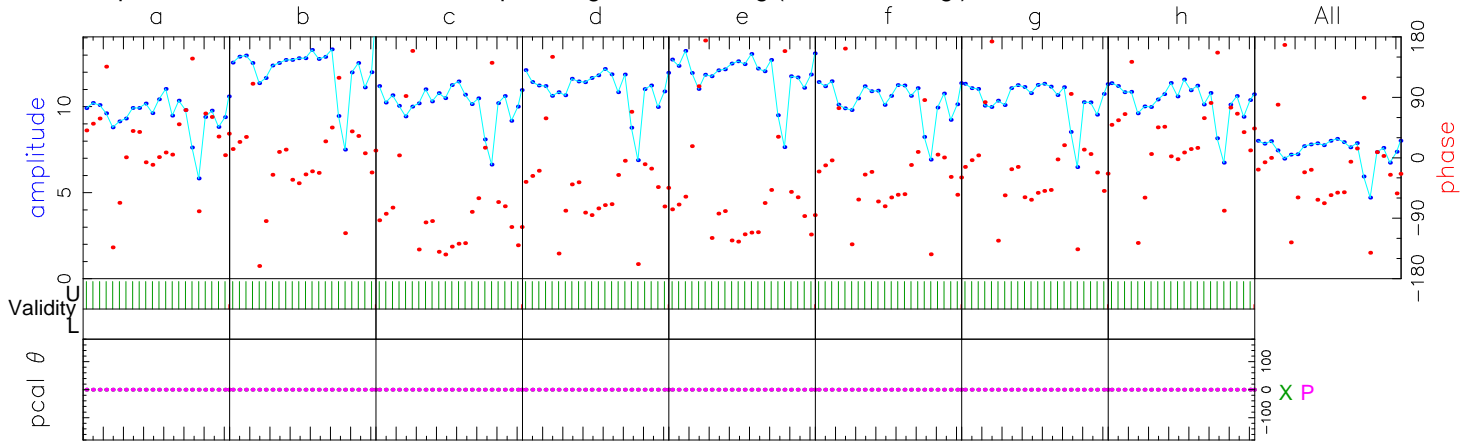


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114536
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
	29.6	2.9	-104.5	-47.1	-88.5	-31.3	-24.9	36.5	Phase	-28.2
	6.0	7.7	6.3	7.0	7.5	6.6	6.6	6.5	Ampl.	6.8
	260.3	261.9	262.0	262.6	262.6	262.8	263.0	262.3	Sbd box	262.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	4.76247547470E+03	Apriori delay (usec)	4.76245694506E+03	Resid mbdelay (usec)	2.90463E-03	+/-	4.1E-06
Sband delay (usec)	4.76247637731E+03	Apriori clock (usec)	5.7522614E+01	Resid sbdelay (usec)	1.94323E-02	+/-	3.3E-05
Phase delay (usec)	4.76245694415E+03	Apriori clockrate (us/s)	1.1280000E-06	Resid phdelay (usec)	-9.08074E-07	+/-	1.4E-08
Delay rate (us/s)	-3.00284103200E-01	Apriori rate (us/s)	-3.00283829904E-01	Resid rate (us/s)	-2.73296E-07	+/-	5.8E-11
Total phase (deg)		Apriori accel (us/s/s)	-3.99279085304E-06	Resid phase (deg)	-28.2	+/-	0.4

ph/seg (deg)	62.5	1.0	Search (2048X32)	4.520	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	60.7	1.8	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	55.3	0.6	Inc. seg. avg.	7.426	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.9	1.1	Inc. frq. avg.	6.767	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

X: az 75.0 el 56.2 pa -56.0 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 2723.793 923.270 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/XP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/XP.W.88.1WZRGR

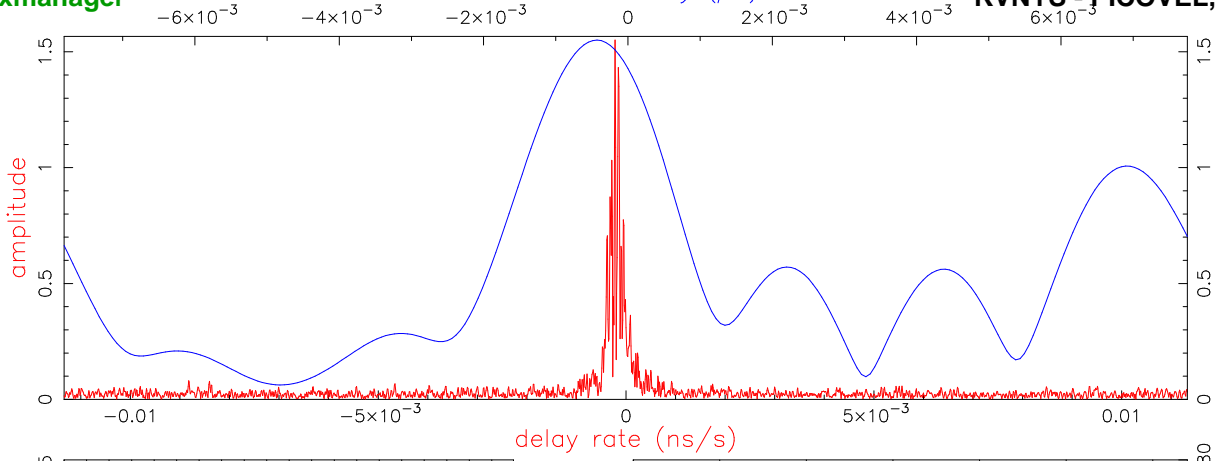
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, yP

KVNS - PICOVEL, fgroup W, pol RR

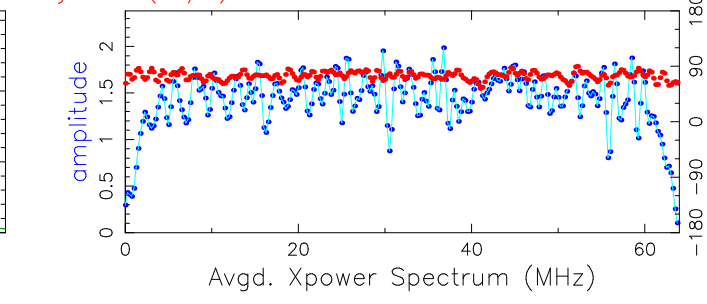
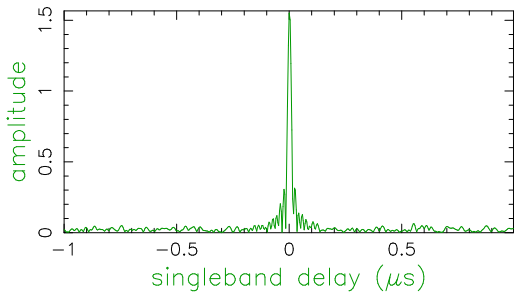
multiband delay (μ s)



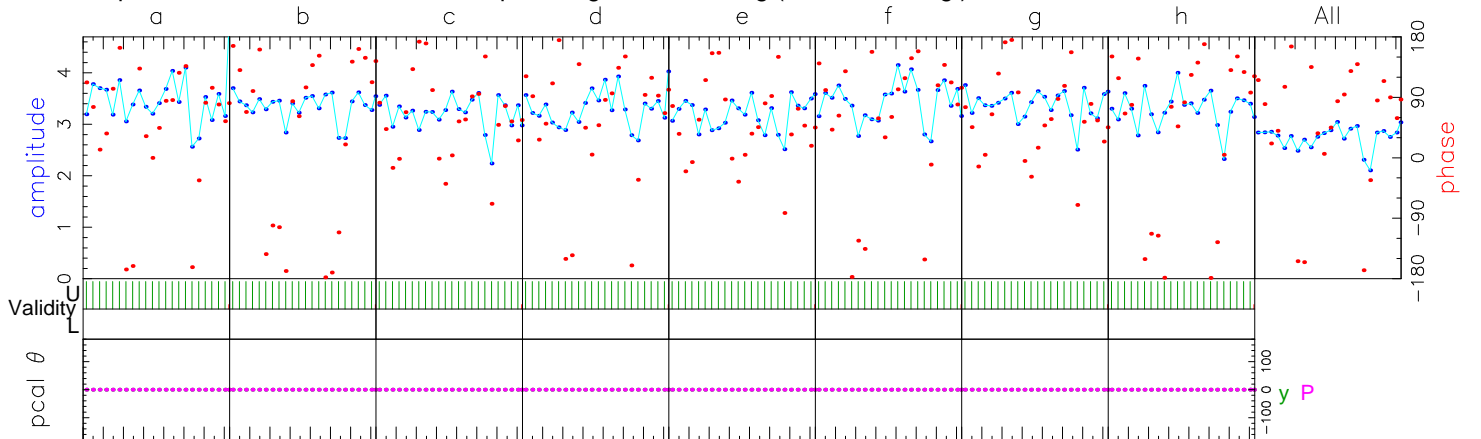
Fringe quality 2

SNR 87.8
 Int time 419.827
 Amp 1.567
 Phase 94.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.001290
 MBD -0.000427
 Fringe rate (Hz)
 -0.019159
 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
 2021:303:114542
 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		
y	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	1.9
P	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.3
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.78109655308E+03		Apriori delay (usec)		2.78109697965E+03		Resid mbdelay (usec)		-4.26567E-04	+/- 1.2E-05
Sband delay (usec)	2.78109826965E+03		Apriori clock (usec)		1.7456455E+00		Resid sbdelay (usec)		1.29000E-03	+/- 9.8E-05
Phase delay (usec)	2.78109698269E+03		Apriori clockrate (us/s)		5.9999998E-07		Resid phdelay (usec)		3.04406E-06	+/- 4.2E-08
Delay rate (us/s)	-1.39723306363E+00		Apriori rate (us/s)		-1.39723284122E+00		Resid rate (us/s)		-2.22412E-07	+/- 1.7E-10
Total phase (deg)	32.1		Apriori accel (us/s/s)		-1.41953722207E-05		Resid phase (deg)		94.4	+/- 1.3

ph/seg (deg) 62.0 3.1 Search (2048X32) 1.527 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.1 5.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 40.3 1.8 Inc. seg. avg. 2.735 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 20.4 3.2 Inc. frq. avg. 1.879 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 y: az 307.6 el 48.7 pa 85.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12697.681 -1458.069 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/yP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/yP.W.117.1WZRGR

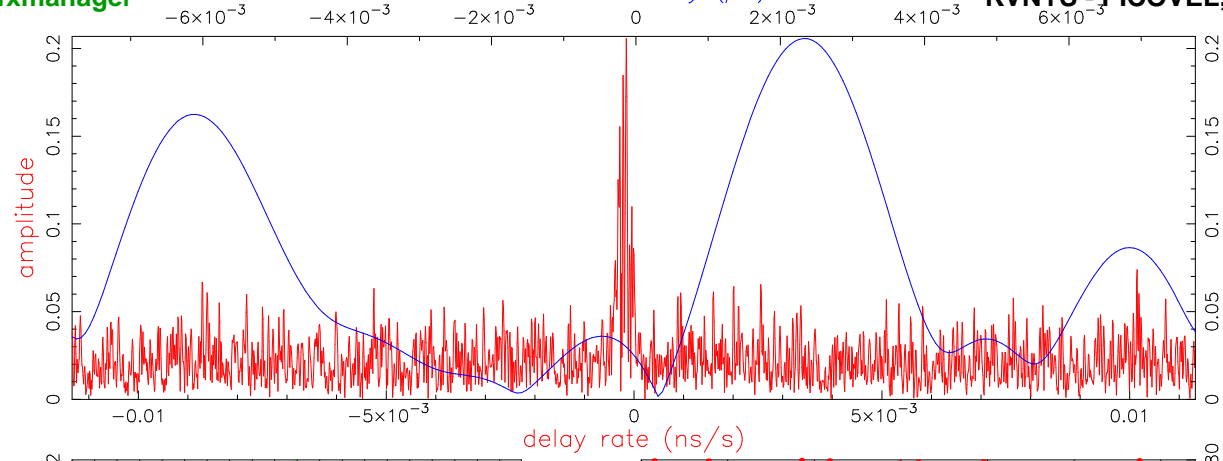
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

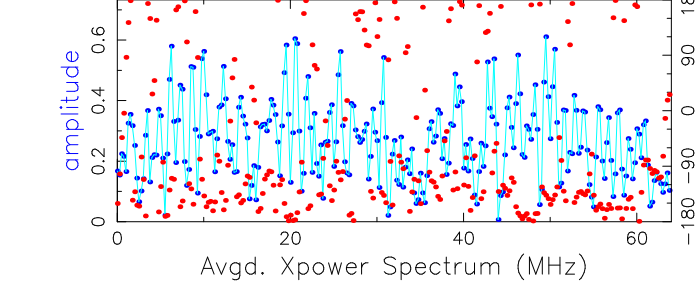
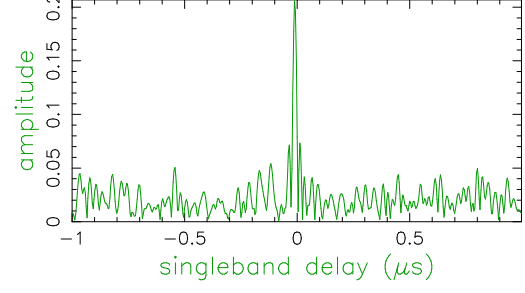
NRAO150.1WZRGR, No0037, yP

KVNYS - PICOVEL, fgroup W, pol LR

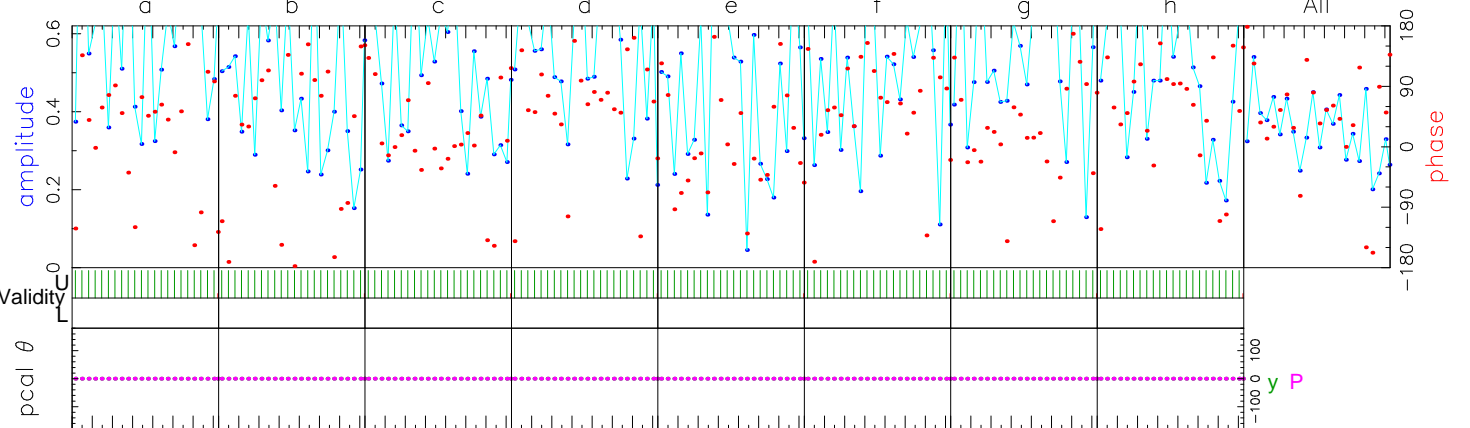
multiband delay (μ s)



Fringe quality 9
 SNR 11.6
 Int time 419.827
 Amp 0.207
 Phase 63.9
 PFD 2.3e-22
 Delays (us)
 SBD -0.010774
 MBD 0.002330
 Fringe rate (Hz)
 -0.013484
 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
 2021:303:114546
 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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	2.78108368489E+03		Apriori delay (usec)		2.78109697965E+03		Resid mbdelay (usec)		2.33024E-03	+/- 9.4E-05
Sband delay (usec)	2.78108620540E+03		Apriori clock (usec)		1.7456455E+00		Resid sbdelay (usec)		-1.07743E-02	+/- 7.4E-04
Phase delay (usec)	2.78109698171E+03		Apriori clockrate (us/s)		5.9999998E-07		Resid phdelay (usec)		2.05903E-06	+/- 3.2E-07
Delay rate (us/s)	-1.39723299775E+00		Apriori rate (us/s)		-1.39723284122E+00		Resid rate (us/s)		-1.56537E-07	+/- 1.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.41953722207E-05		Resid phase (deg)		63.9	+/- 9.9

ph/seg (deg) 66.5 23.7 Search (2048X32) 0.204 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 82.9 41.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 46.1 14.0 Inc. seg. avg. 0.330 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.9 24.4 Inc. frq. avg. 0.249 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 y: az 307.6 el 48.7 pa 85.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12697.681 -1458.069 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/yP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/yP.W.138.1WZRGR

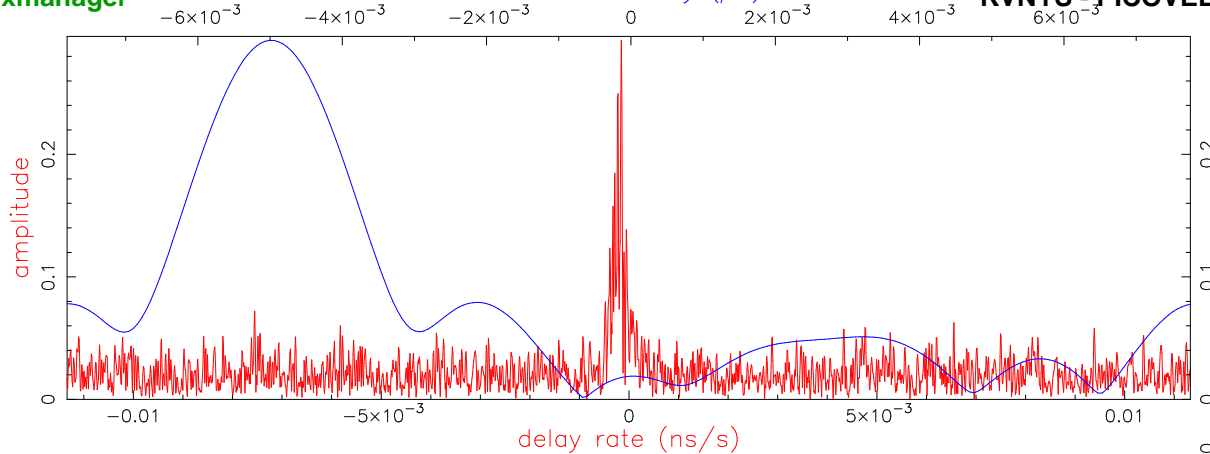
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, yP

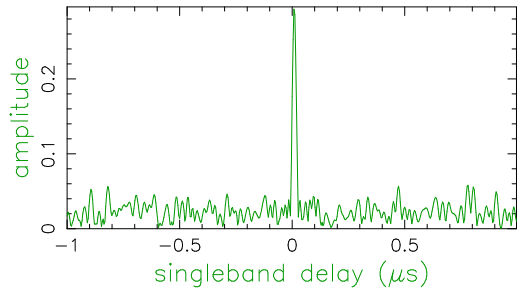
KVNYS - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

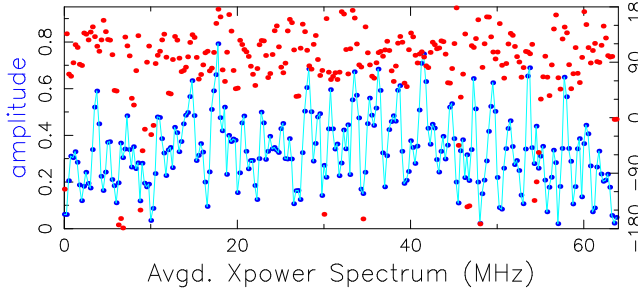


Fringe quality 9

SNR 16.6
Int time 419.827
Amp 0.296
Phase -89.4
PFD 0.0e+00
Delays (us)
SBD 0.009206
MBD -0.004987
Fringe rate (Hz)
-0.012926
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

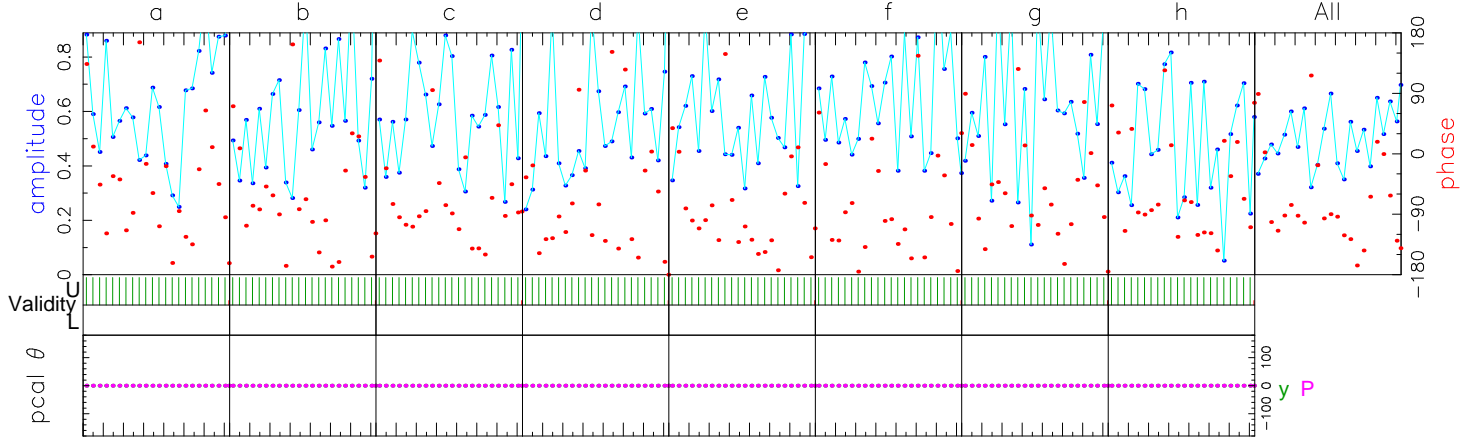


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114550
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
	-67.9	-87.2	-87.2	-120.3	-103.5	-98.9	-74.4	-71.2	Phase	-89.4
	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.2	Ampl.	0.3
	259.2	259.5	259.1	258.7	259.6	259.9	259.2	260.0	Sbd box	259.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.78110761717E+03		Apriori delay (usec)		2.78109697965E+03		Resid mbdelay (usec)		-4.98748E-03	+/- 6.5E-05
Sband delay (usec)	2.78110618615E+03		Apriori clock (usec)		1.7456455E+00		Resid sbdelay (usec)		9.20650E-03	+/- 5.2E-04
Phase delay (usec)	2.78109697676E+03		Apriori clockrate (us/s)		5.9999998E-07		Resid phdelay (usec)		-2.88358E-06	+/- 2.2E-07
Delay rate (us/s)	-1.39723299127E+00		Apriori rate (us/s)		-1.39723284122E+00		Resid rate (us/s)		-1.50055E-07	+/- 9.2E-10
Total phase (deg)	208.3		Apriori accel (us/s/s)		-1.41953722207E-05		Resid phase (deg)		-89.4	+/- 6.9

	RMS	Theor.	Amplitude	0.296 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	68.6	16.5	Search (2048X32)	0.280	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	75.9	28.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	19.5	9.8	Inc. seg. avg.	0.478	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	18.4	17.0	Inc. frq. avg.	0.301	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

y: az 307.6 el 48.7 pa 85.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12697.681 -1458.069 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/yP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/yP.W.157.1WZRGR

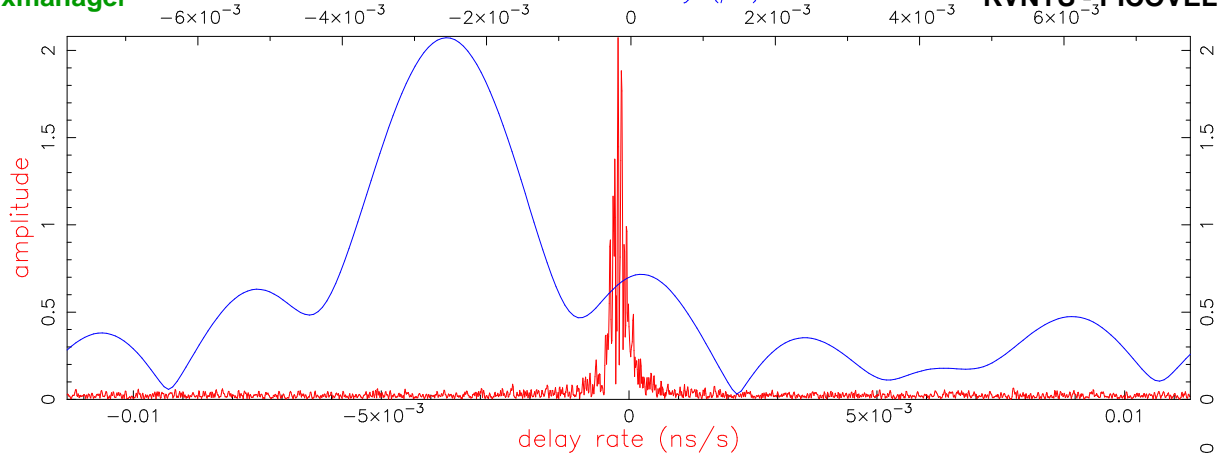
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, yP

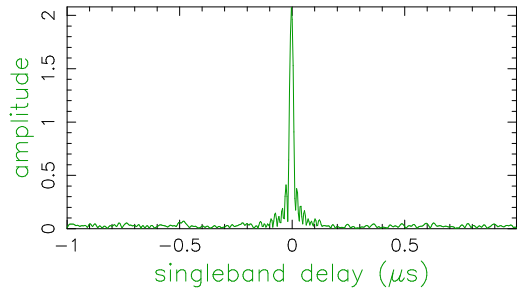
KVNYS - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

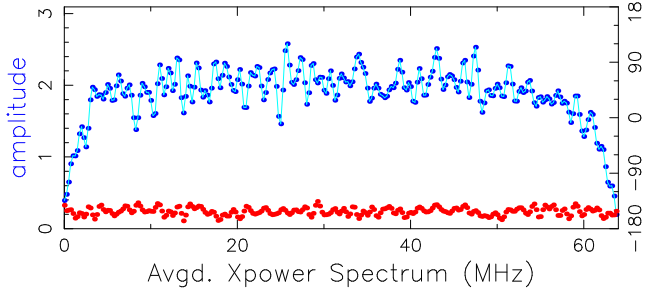


Fringe quality 3

SNR 116.6
 Int time 419.827
 Amp 2.080
 Phase -158.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.003133
 MBD -0.002549
 Fringe rate (Hz)
 -0.019131
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

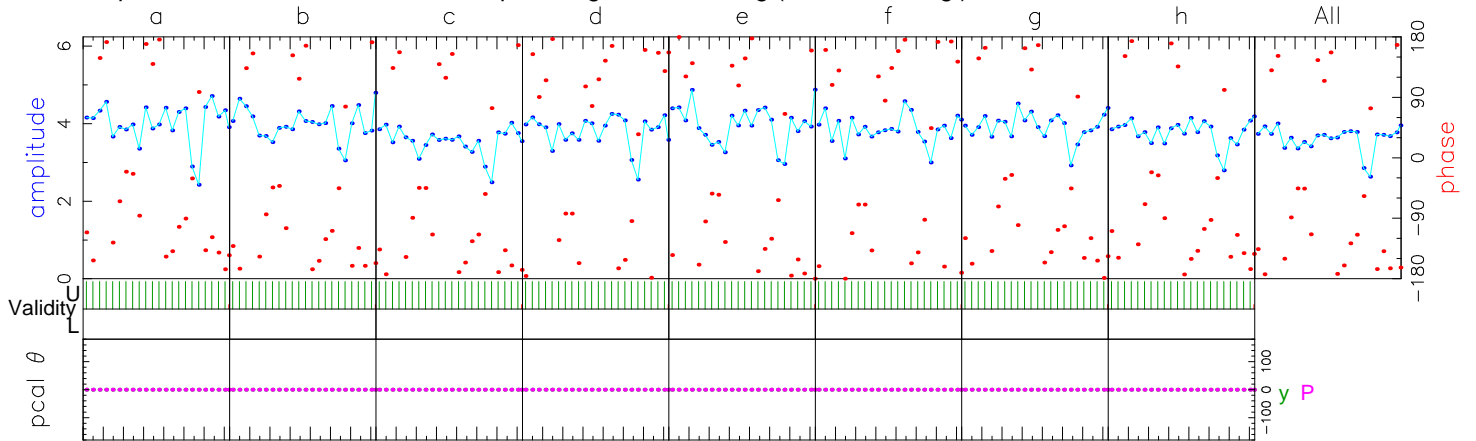


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114538
 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
	-135.6	-153.1	-157.8	164.2	-169.8	178.4	-143.3	-135.9		-158.8
	2.3	2.3	2.1	2.2	2.3	2.2	2.2	2.2	Ampl.	2.2
	256.2	256.0	255.6	256.1	256.3	256.2	256.6	256.4	Sbd box	256.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.78109443092E+03		Apriori delay (usec)		2.78109697965E+03		Resid mbdelay (usec)		-2.54872E-03	+/- 9.3E-06
Sband delay (usec)	2.78109384615E+03		Apriori clock (usec)		1.7456455E+00		Resid sbdelay (usec)		-3.13350E-03	+/- 7.4E-05
Phase delay (usec)	2.78109697453E+03		Apriori clockrate (us/s)		5.9999998E-07		Resid phdelay (usec)		-5.12238E-06	+/- 3.2E-08
Delay rate (us/s)	-1.39723306331E+00		Apriori rate (us/s)		-1.39723284122E+00		Resid rate (us/s)		-2.22090E-07	+/- 1.3E-10
Total phase (deg)	138.8		Apriori accel (us/s/s)		-1.41953722207E-05		Resid phase (deg)		-158.8	+/- 1.0

ph/seg (deg) 61.9 2.4 Search (2048X32) 2.049 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.6 4.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 23.6 1.4 Inc. seg. avg. 3.599 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 7.3 2.4 Inc. frq. avg. 2.211 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 y: az 307.6 el 48.7 pa 85.9 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 12697.681 -1458.069 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/yP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/yP.W.98.1WZRGR

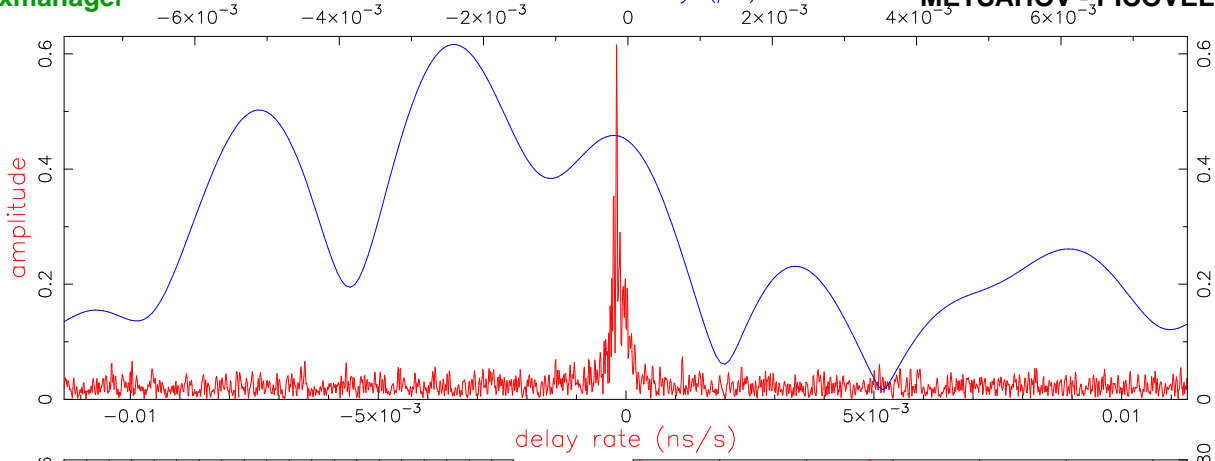
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, ZP

MEṬSAHOV - PICOVEL, fgroup W, pol LL

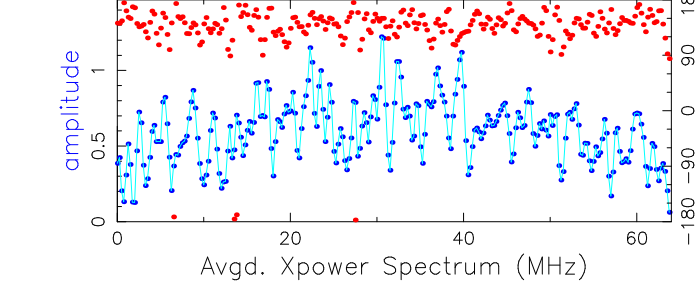
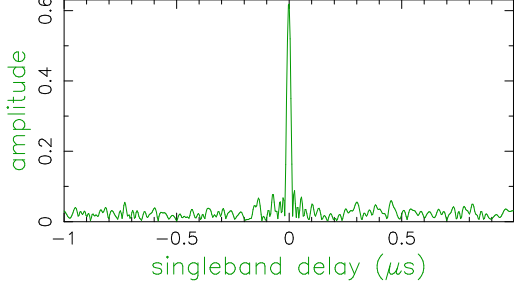
multiband delay (μ s)



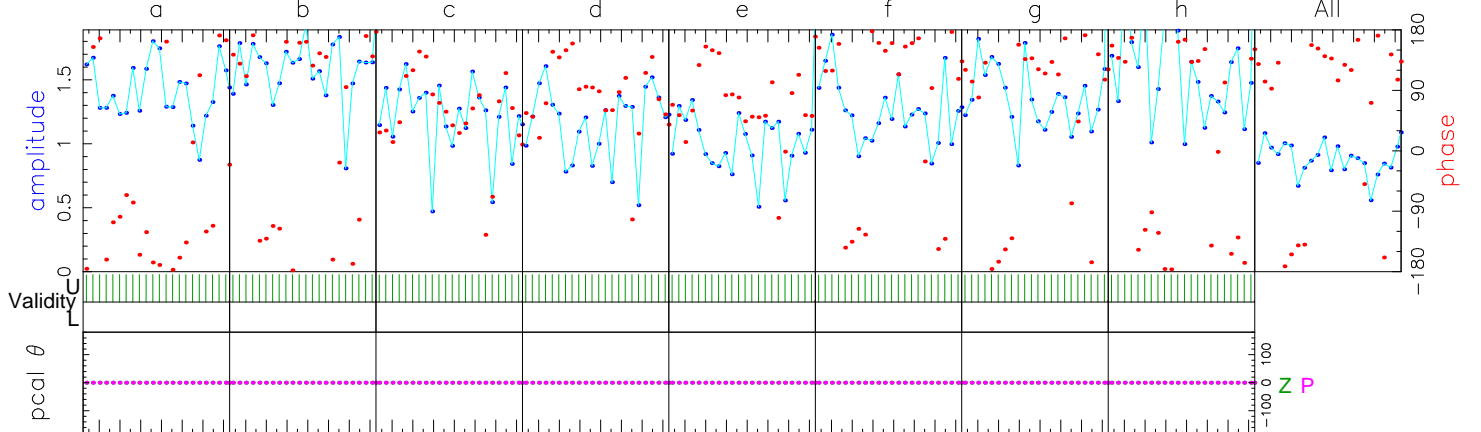
Fringe quality 3

SNR 34.7
 Int time 405.840
 Amp 0.630
 Phase 146.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.001861
 MBD -0.002361
 Fringe rate (Hz)
 -0.016430
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090013.31
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114552
 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
	-154.4	173.6	68.5	91.0	75.5	164.2	143.6	177.5	Phase	146.1
	1.0	1.0	0.8	0.8	0.7	0.8	0.9	1.1	Ampl.	0.9
	255.0	256.1	256.1	257.2	257.6	257.2	257.4	256.8	Sbd box	256.5
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 5.96215530828E+03 Apriori delay (usec) 5.96215766885E+03 Resid mbdelay (usec) -2.36056E-03 +/- 3.1E-05
 Sband delay (usec) 5.96215580760E+03 Apriori clock (usec) 3.2579613E-01 Resid sbdelay (usec) -1.86125E-03 +/- 2.5E-04
 Phase delay (usec) 5.96215767356E+03 Apriori clockrate (us/s) 6.159998E-07 Resid phdelay (usec) 4.71198E-06 +/- 1.1E-07
 Delay rate (us/s) -4.00610622478E-01 Apriori rate (us/s) -4.00610431740E-01 Resid rate (us/s) -1.90738E-07 +/- 4.5E-10
 Total phase (deg) 0.1 Apriori accel (us/s/s) -8.43138147541E-06 Resid phase (deg) 146.1 +/- 3.3

RMS Theor. Amplitude 0.630 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 53.3 7.9 Search (2048X32) 0.603 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 43.7 13.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 57.2 4.7 Inc. seg. avg. 0.870 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 46.1 8.1 Inc. frq. avg. 0.890 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 88.9 el 63.0 pa -52.0 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 3629.541 626.659 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZP.W.160.1WZRGR

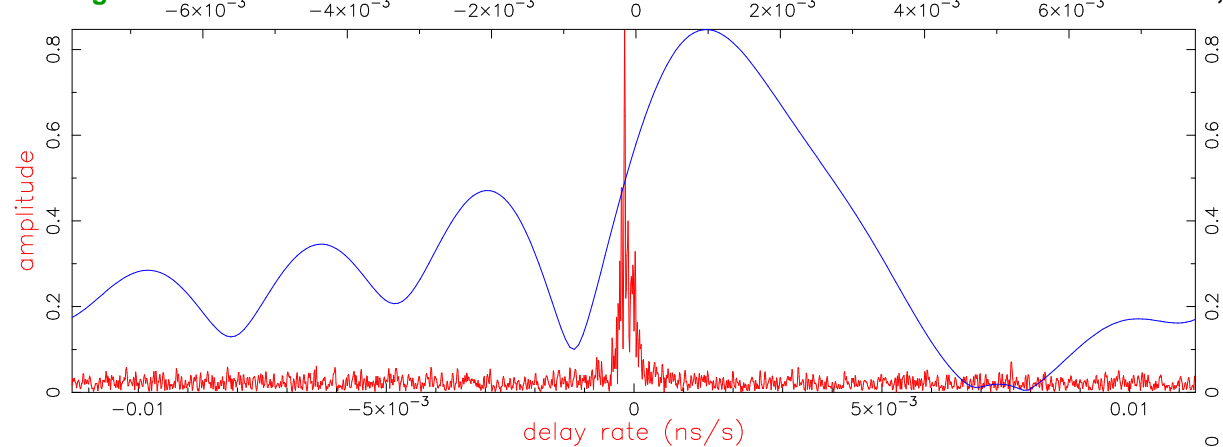
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, ZP

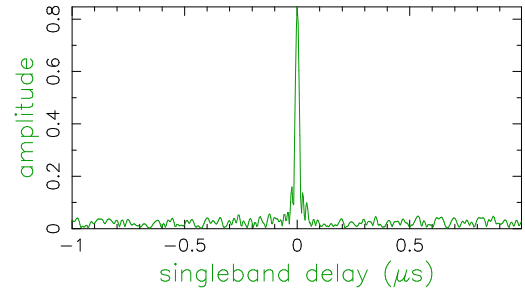
MEṬSAHOV - PICOVEL, fgroup W, pol RR

multiband delay (μ s)



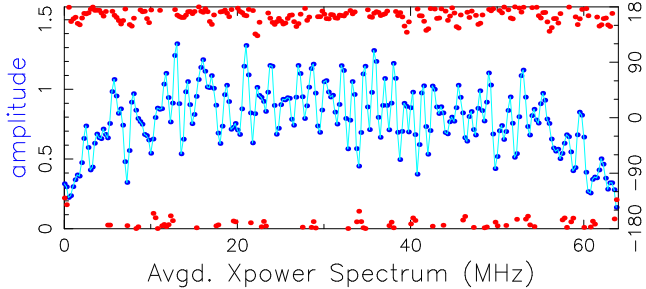
Fringe quality 4

SNR 46.7
Int time 405.840
Amp 0.847
Phase 162.6
PFD 0.0e+00
Delays (us)
SBD 0.000257
MBD 0.000978
Fringe rate (Hz)
-0.016447
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



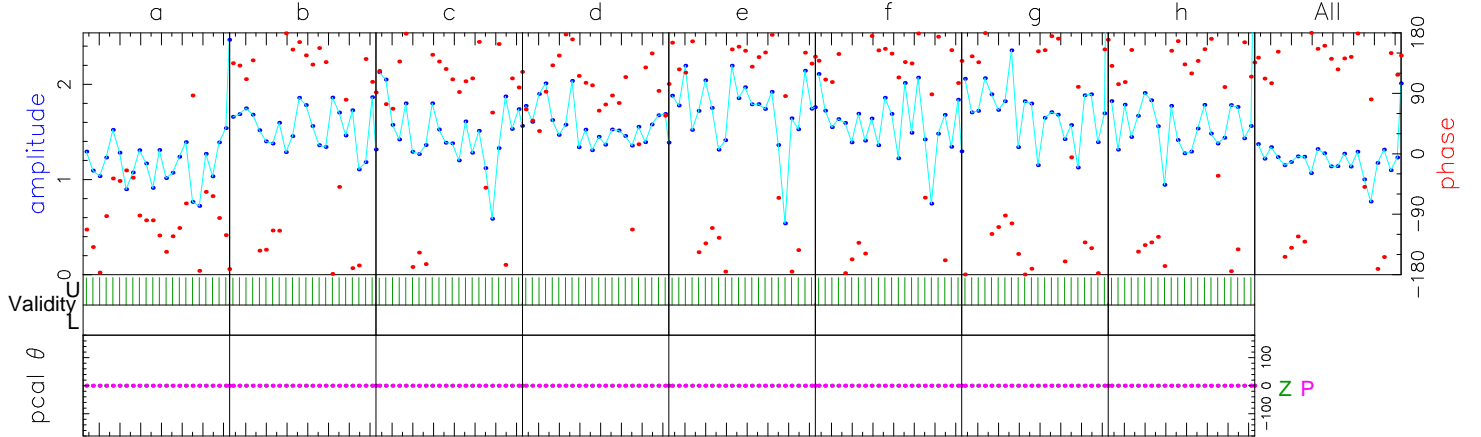
singleband delay (μ s)

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
2021:303:114555
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
	-95.0	160.8	134.2	98.3	169.2	157.5	-166.7	164.1	Phase	162.6
	0.8	1.0	1.0	1.1	1.3	1.2	1.2	1.0	Ampl.	1.1
	255.1	255.8	256.4	257.0	257.4	256.8	257.3	256.3	Sbd box	257.1
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 5.96215864688E+03 Apriori delay (usec) 5.96215766885E+03 Resid mbdelay (usec) 9.78029E-04 +/- 2.3E-05
 Sband delay (usec) 5.96215792585E+03 Apriori clock (usec) 3.2579613E-01 Resid sbdelay (usec) 2.57000E-04 +/- 1.8E-04
 Phase delay (usec) 5.96215767409E+03 Apriori clockrate (us/s) 6.1599998E-07 Resid phdelay (usec) 5.24393E-06 +/- 7.9E-08
 Delay rate (us/s) -4.00610622679E-01 Apriori rate (us/s) -4.00610431740E-01 Resid rate (us/s) -1.90939E-07 +/- 3.4E-10
 Total phase (deg) 16.6 Apriori accel (us/s/s) -8.43138147541E-06 Resid phase (deg) 162.6 +/- 2.5

RMS Theor. Amplitude 0.847 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 51.4 5.9 Search (2048X32) 0.828 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 43.9 10.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 52.3 3.5 Inc. seg. avg. 1.187 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 32.2 6.1 Inc. frq. avg. 1.086 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 88.9 el 63.0 pa -52.0 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 3629.541 626.659 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZP.W.165.1WZRGR

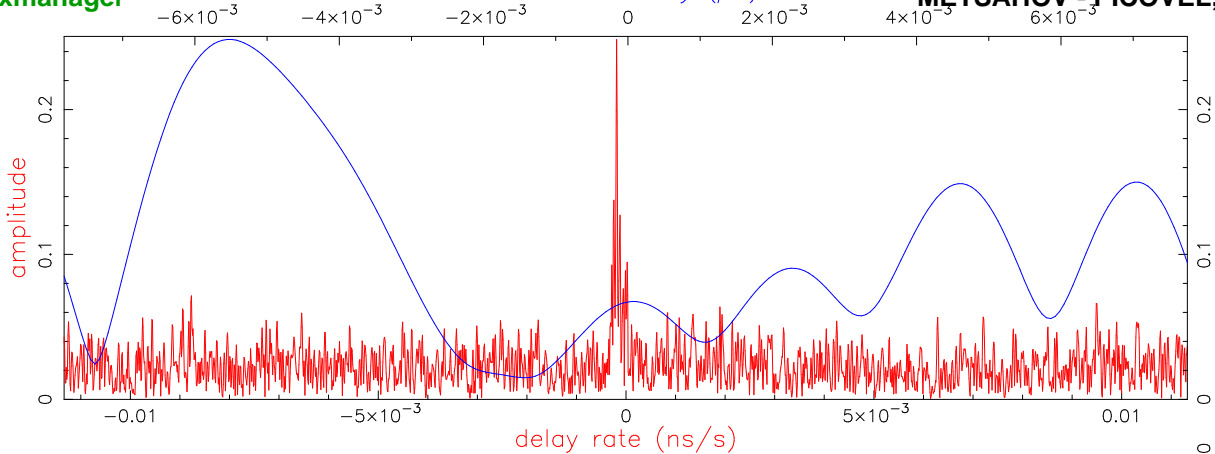
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, ZP

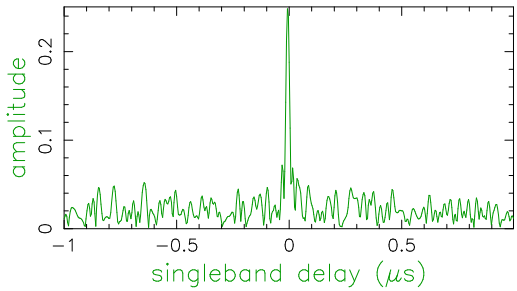
MEṬSAHOV - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

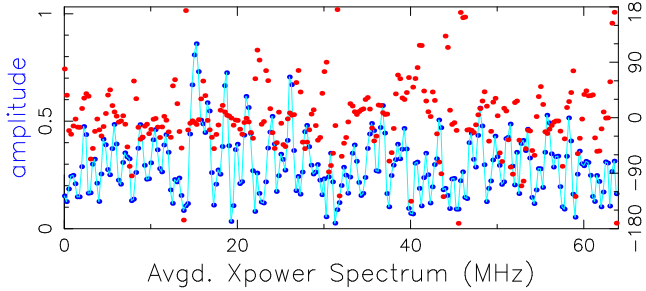


Fringe quality 9

SNR 13.8
 Int time 405.840
 Amp 0.251
 Phase -17.5
 PFD 1.5e-34
 Delays (us)
 SBD -0.006646
 MBD -0.005499
 Fringe rate (Hz)
 -0.016576
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

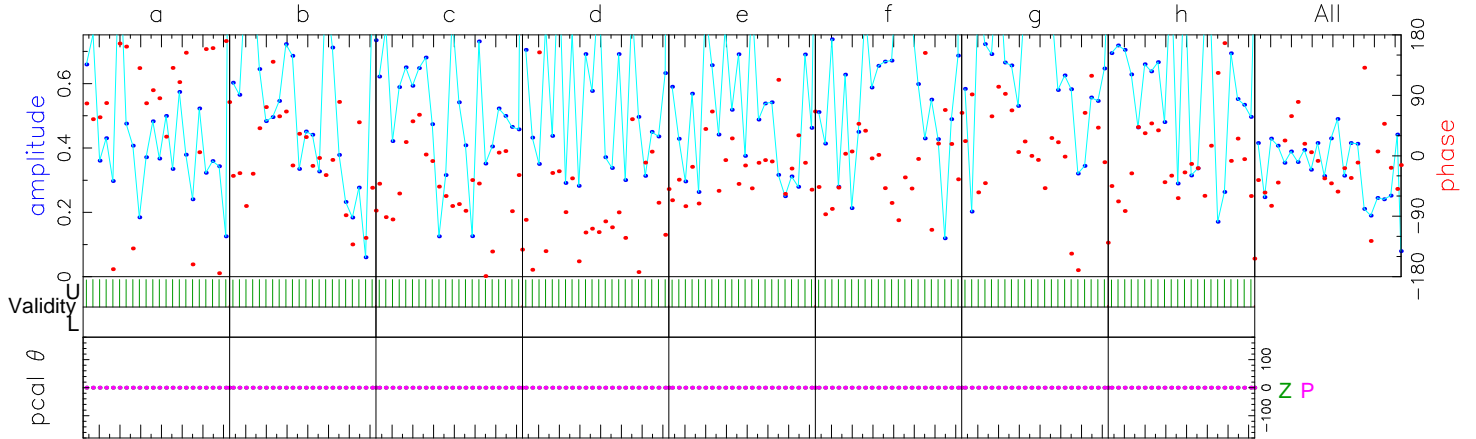


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090013.31
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114558
 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
	116.2	-3.8	-40.1	-90.6	-15.4	-31.2	20.9	-17.7	Phase	-17.5
	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	Ampl.	0.3
	253.2	254.7	254.6	255.3	255.8	255.5	254.7	254.9	Sbd box	255.3
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

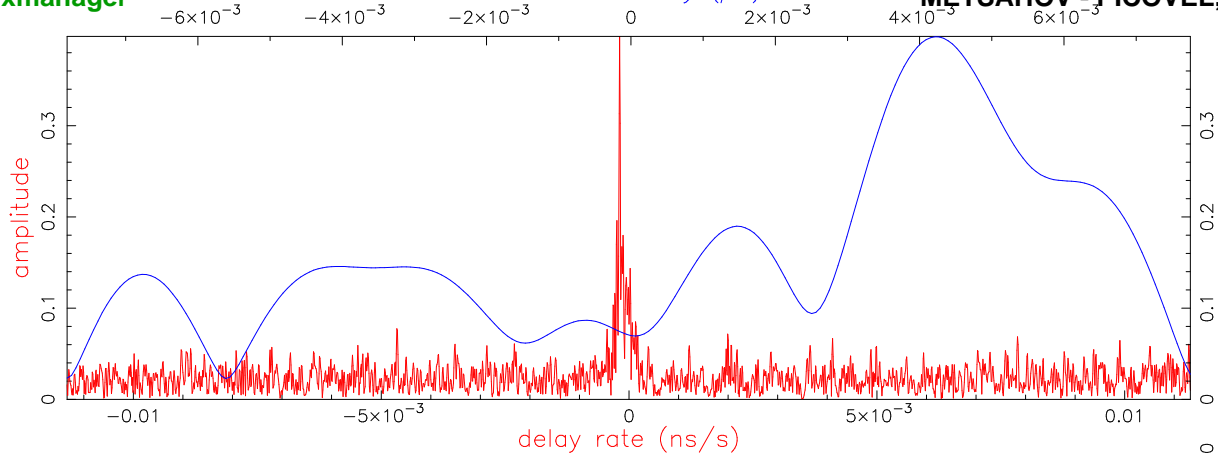
Group delay (usec)(sbd)	5.96215217006E+03	Apriori delay (usec)	5.96215766885E+03	Resid mbdelay (usec)	-5.49878E-03	+/-	7.9E-05
Sband delay (usec)	5.96215102235E+03	Apriori clock (usec)	3.2579613E-01	Resid sbdelay (usec)	-6.64650E-03	+/-	6.2E-04
Phase delay (usec)	5.96215766828E+03	Apriori clockrate (us/s)	6.159998E-07	Resid phdelay (usec)	-5.64441E-07	+/-	2.7E-07
Delay rate (us/s)	-4.00610624169E-01	Apriori rate (us/s)	-4.00610431740E-01	Resid rate (us/s)	-1.92429E-07	+/-	1.1E-09
Total phase (deg)	196.5	Apriori accel (us/s/s)	-8.43138147541E-06	Resid phase (deg)	-17.5	+/-	8.3

ph/seg (deg)	55.0	RMS	19.9	Theor.	0.251 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	51.9	Search (2048X32)	0.237	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	65.3	Inc. seg. avg.	0.329	Inc. frq. avg.	0.335	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	42.3	Inc. frq. avg.	0.335			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011			
						Data rate (Mb/s):	2048	nlags:	256	t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 88.9 el 63.0 pa -52.0 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 3629.541 626.659 simultaneous interpolator

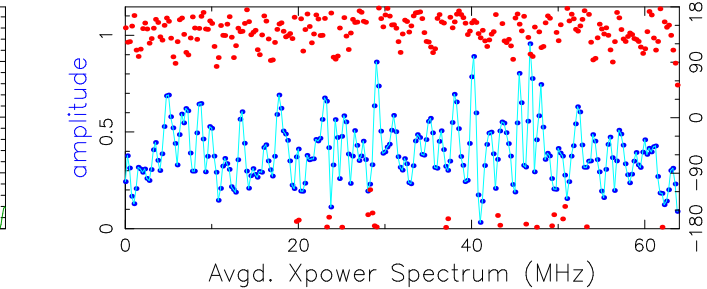
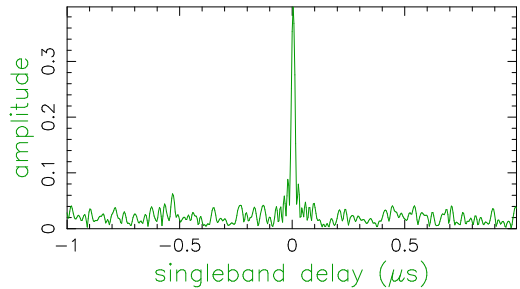
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZP.W.169.1WZRGR

multiband delay (μ s)



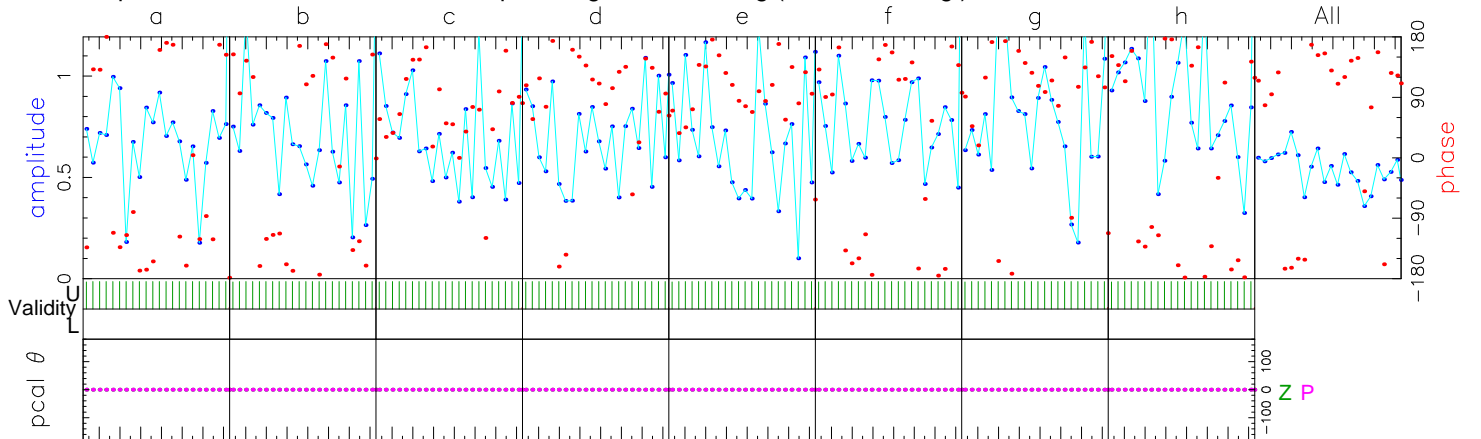
Fringe quality 8

SNR 21.9
 Int time 405.840
 Amp 0.398
 Phase 145.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.004301
 MBD 0.004236
 Fringe rate (Hz)
 -0.016495
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090013.31
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114601
 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
	-158.4	173.6	78.6	117.0	102.1	162.8	133.0	-177.3	Phase	145.3
	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	Ampl.	0.5
	256.7	258.2	258.2	258.9	258.6	258.9	259.0	258.4	Sbd box	258.1
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.96216190497E+03	Apriori delay (usec)	5.96215766885E+03	Resid mbdelay (usec)	4.23612E-03	+/-	5.0E-05
Sband delay (usec)	5.96216196960E+03	Apriori clock (usec)	3.2579613E-01	Resid sbdelay (usec)	4.30075E-03	+/-	3.9E-04
Phase delay (usec)	5.96215767353E+03	Apriori clockrate (us/s)	6.1599998E-07	Resid phdelay (usec)	4.68491E-06	+/-	1.7E-07
Delay rate (us/s)	-4.00610623225E-01	Apriori rate (us/s)	-4.00610431740E-01	Resid rate (us/s)	-1.91485E-07	+/-	7.2E-10
Total phase (deg)		Apriori accel (us/s/s)	-8.43138147541E-06	Resid phase (deg)	145.3	+/-	5.2

ph/seg (deg)	52.5	RMS	12.5	Theor.	0.398 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	42.8	Search (2048X32)	0.383	Amplitude		Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	46.5	Inc. seg. avg.	0.532	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	31.9	Inc. frq. avg.	0.507	Inc. seg. avg.	0.532	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.507	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 88.9 el 63.0 pa -52.0 P: az 49.5 el 37.3 pa -75.4 u,v (fr/asec) 3629.541 626.659 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZP..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZP.W.173.1WZRGR