

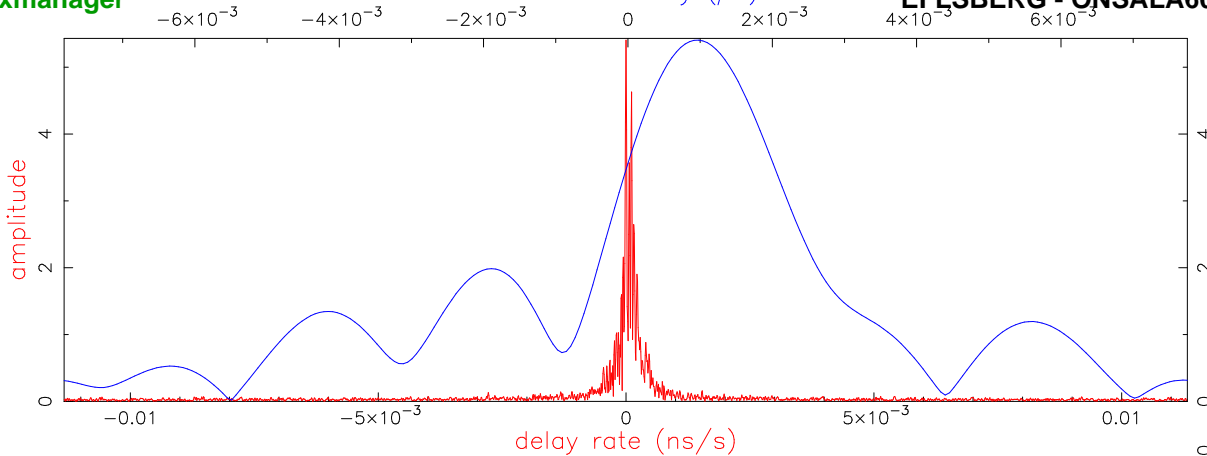
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, BX

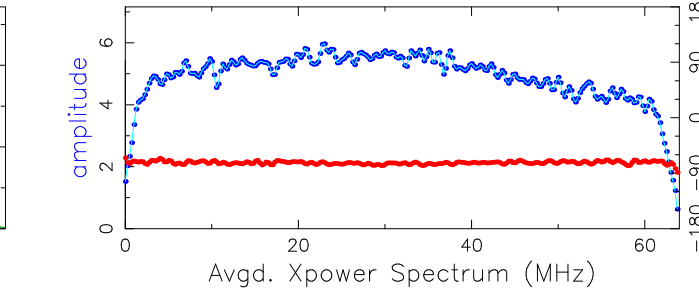
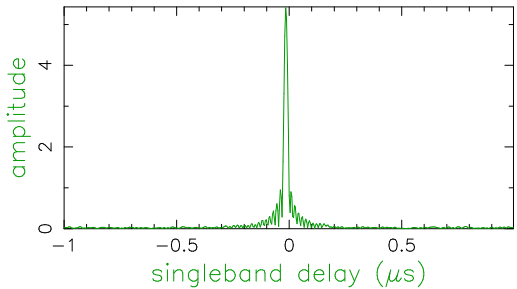
EFLSBERG - ONSALA60, fgroup W, pol LL

multiband delay (μ s)



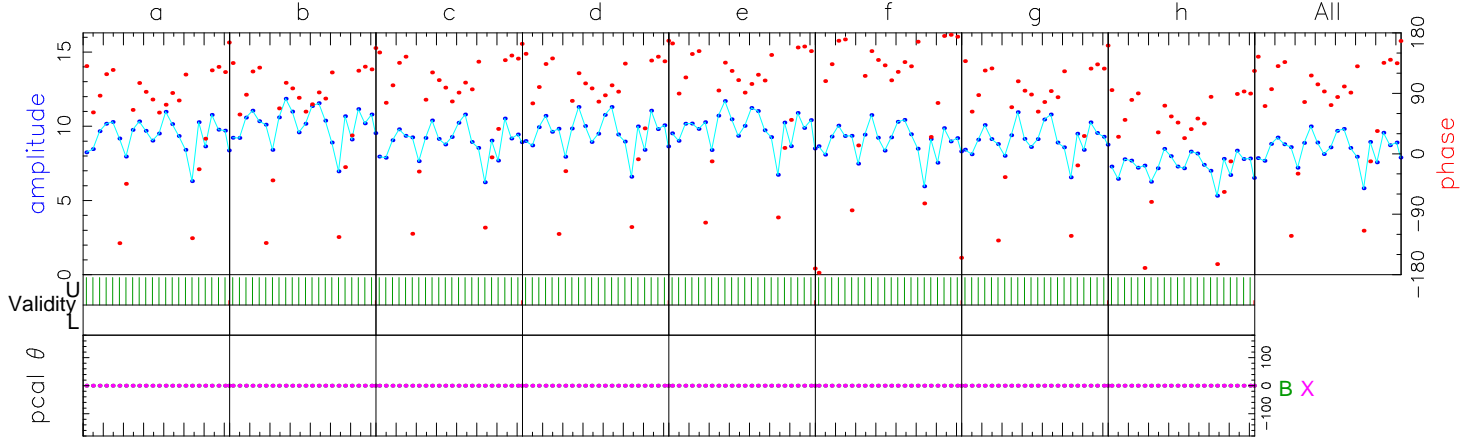
Fringe quality 3

SNR 304.4
 Int time 419.795
 Amp 5.433
 Phase 105.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.014725
 MBD 0.000985
 Fringe rate (Hz) 0.000167
 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		
B	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.20621280942E+03	Apriori delay (usec)	-1.20619816954E+03	Resid mbdelay (usec)	9.85125E-04	+/-	3.6E-06
Sband delay (usec)	-1.20621289454E+03	Apriori clock (usec)	-7.8543968E+01	Resid sbdelay (usec)	-1.47250E-02	+/-	2.8E-05
Phase delay (usec)	-1.20619816614E+03	Apriori clockrate (us/s)	-5.2800001E-07	Resid phdelay (usec)	3.40431E-06	+/-	1.2E-08
Delay rate (us/s)	1.07130038686E-01	Apriori rate (us/s)	1.07130036744E-01	Resid rate (us/s)	1.94216E-09	+/-	5.0E-11
Total phase (deg)		Apriori accel (us/s/s)	-2.00460428142E-07	Resid phase (deg)	105.6	+/-	0.4

ph/seg (deg)	62.1	RMS	62.1	Theor.	0.9	Amplitude	5.433 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	59.9		59.9		1.6	Search (2048X32)	5.364	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	26.7		26.7		0.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	11.4		11.4		0.9	Inc. seg. avg.	8.550	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Inc. frq. avg.	5.819	Data rate(Mb/s):	2048	ion window (TEC)	0.00 0.00	

B: az 63.6 el 51.0 pa -64.9 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -974.639 -404.231 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BX.W.13.1WZRGR

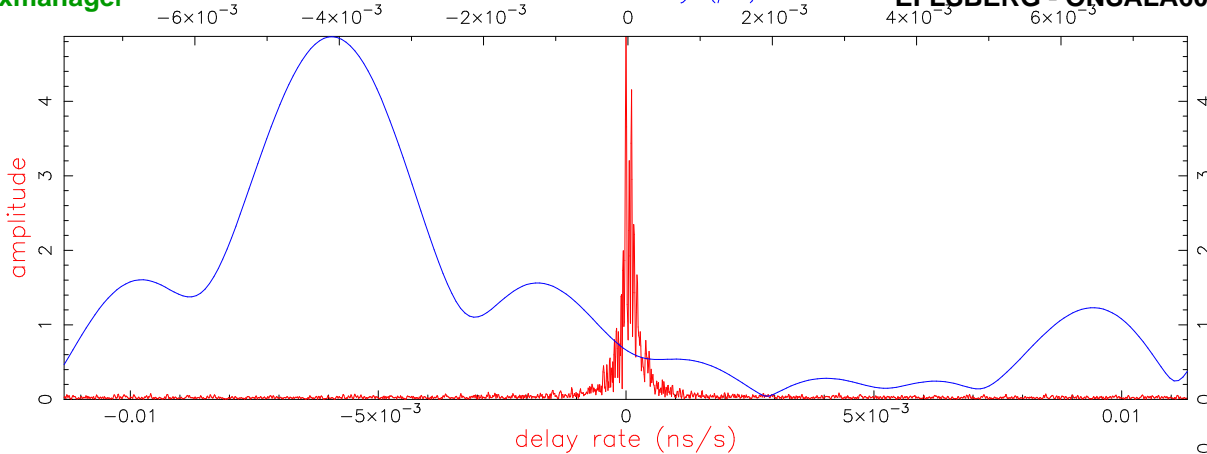
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, BX

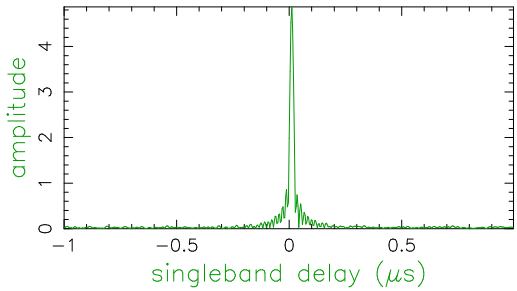
EFLSBERG - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

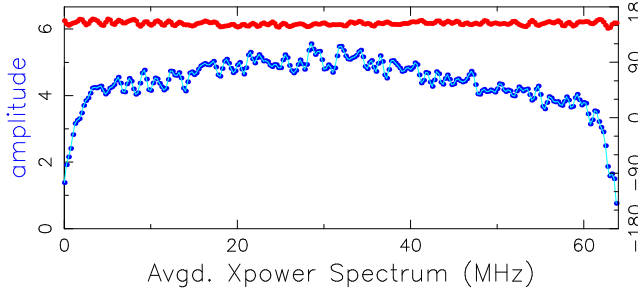


Fringe quality 3

SNR 272.9
 Int time 419.795
 Amp 4.870
 Phase -29.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.011310
 MBD -0.004114
 Fringe rate (Hz)
 0.000183
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

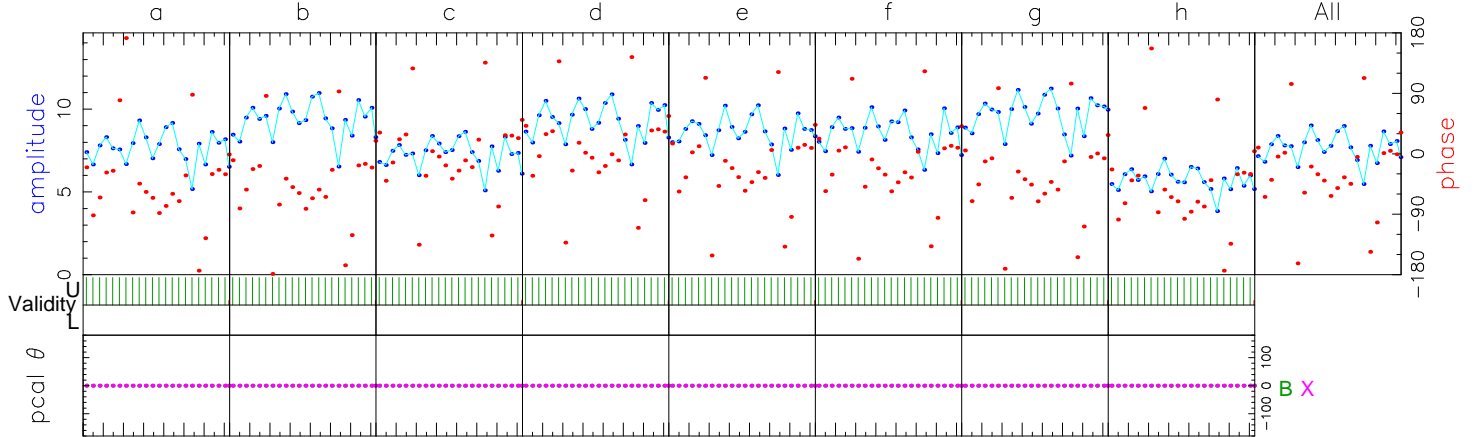


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-56.6	-47.5	-4.8	4.9	-21.6	-20.3	-35.8	-62.7	Phase	-29.2
	4.9	6.0	4.7	5.9	5.5	5.4	6.0	3.6	Ampl.	5.2
	259.8	260.2	260.4	259.9	259.7	260.1	259.8	258.6	Sbd box	259.9
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.20618665870E+03		Apriori delay (usec)		-1.20619816954E+03		Resid mbdelay (usec)		-4.11416E-03	+/- 4.0E-06
Sband delay (usec)	-1.20618685954E+03		Apriori clock (usec)		-7.8543968E+01		Resid sbdelay (usec)		1.13100E-02	+/- 3.2E-05
Phase delay (usec)	-1.20619817049E+03		Apriori clockrate (us/s)		-5.2800001E-07		Resid phdelay (usec)		-9.42731E-07	+/- 1.4E-08
Delay rate (us/s)	1.07130038863E-01		Apriori rate (us/s)		1.07130036744E-01		Resid rate (us/s)		2.11930E-09	+/- 5.6E-11
Total phase (deg)			Apriori accel (us/s/s)		-2.00460428142E-07		Resid phase (deg)		-29.2	+/- 0.4

RMS Theor. Amplitude 4.870 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 62.3 1.0 Search (2048X32) 4.748 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 60.6 1.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 26.3 0.6 Inc. seg. avg. 7.701 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 17.6 1.0 Inc. frq. avg. 5.246 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 63.6 el 51.0 pa -64.9 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -974.639 -404.231 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BX.W.36.1WZRGR

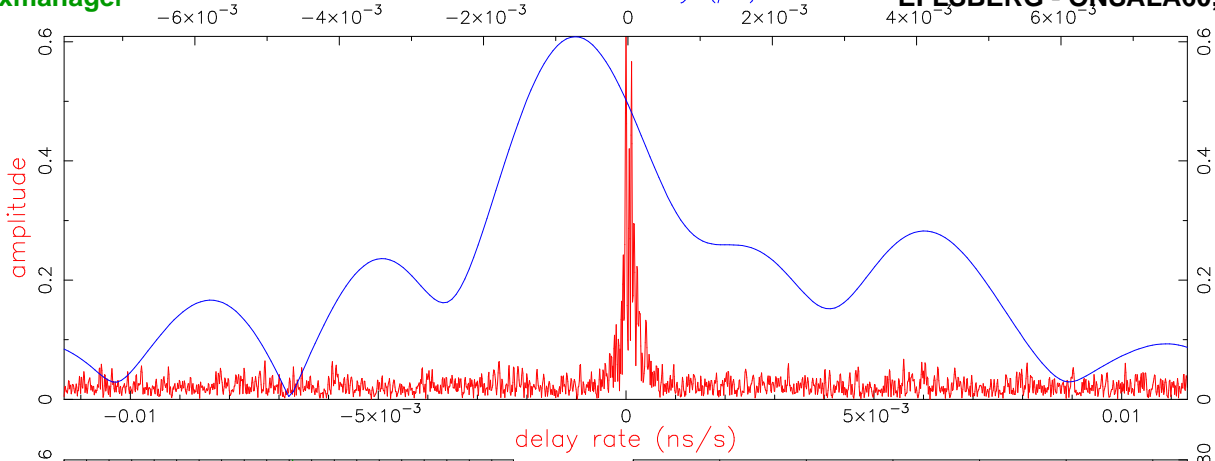
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, BX

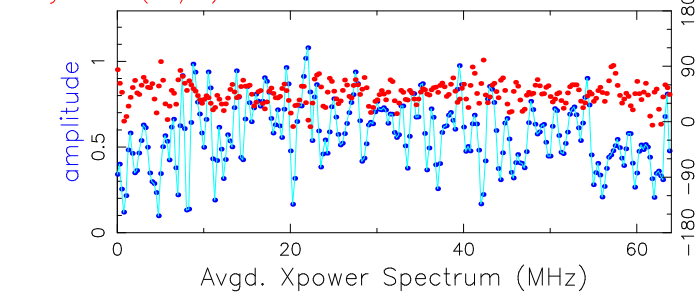
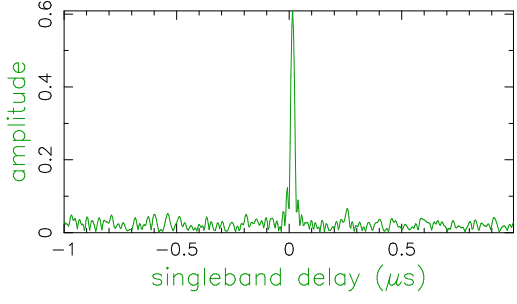
EFLSBERG - ONSALA60, fgroup W, pol LR

multiband delay (μ s)



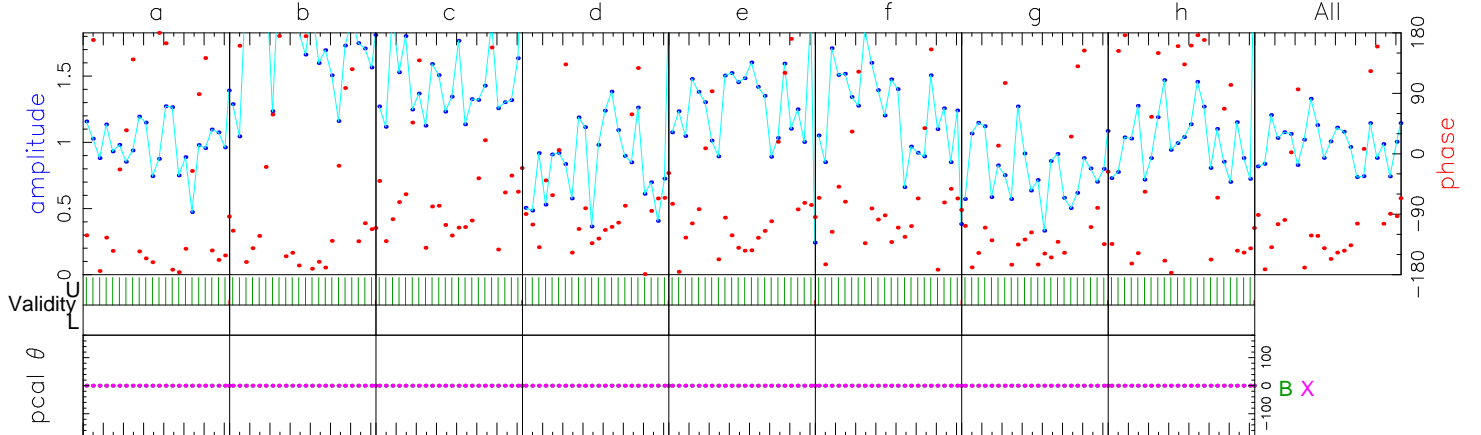
Fringe quality 4

SNR 34.1
 Int time 419.795
 Amp 0.609
 Phase -130.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.015222
 MBD -0.000739
 Fringe rate (Hz) 0.000105
 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
 2021:303:114527
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
Group delay (usec)(sbd)	-164.2	-153.6	-85.3	-102.9	-116.0	-99.2	-141.0	-176.3		-130.2
Sband delay (usec)	0.6	1.1	0.8	0.5	0.8	0.7	0.5	0.7		0.7
Phase delay (usec)	260.7	261.2	261.3	260.7	260.8	260.9	260.0	260.8		260.9
Delay rate (us/s)	U/L 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
Total phase (deg)	B 1000	1000	1000	1000	1000	1000	1000	1000		
	X 1000	1000	1000	1000	1000	1000	1000	1000		
	B:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
	B:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
	B 1000	1000	1000	1000	1000	1000	1000	1000		
	X 1000	1000	1000	1000	1000	1000	1000	1000		
	B W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
	X W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
	Apriori delay (usec) -1.20619816954E+03 Resid mbdelay (usec) -7.38531E-04 +/- 3.2E-05 Apriori clock (usec) -7.8543968E+01 Resid sbdelay (usec) 1.52220E-02 +/- 2.5E-04 Apriori clockrate (us/s) -5.2800001E-07 Resid phdelay (usec) -4.19711E-06 +/- 1.1E-07 Apriori rate (us/s) 1.07130036744E-01 Resid rate (us/s) 1.21801E-09 +/- 4.5E-10 Apriori accel (us/s/s) -2.00460428142E-07 Resid phase (deg) -130.2 +/- 3.4									

ph/seg (deg) 61.5 8.1 Search (2048X32) 0.593 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.7 14.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 36.2 4.8 Inc. seg. avg. 0.975 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.2 8.3 Inc. frq. avg. 0.710 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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -974.639 -404.231 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BX.W.55.1WZRGR

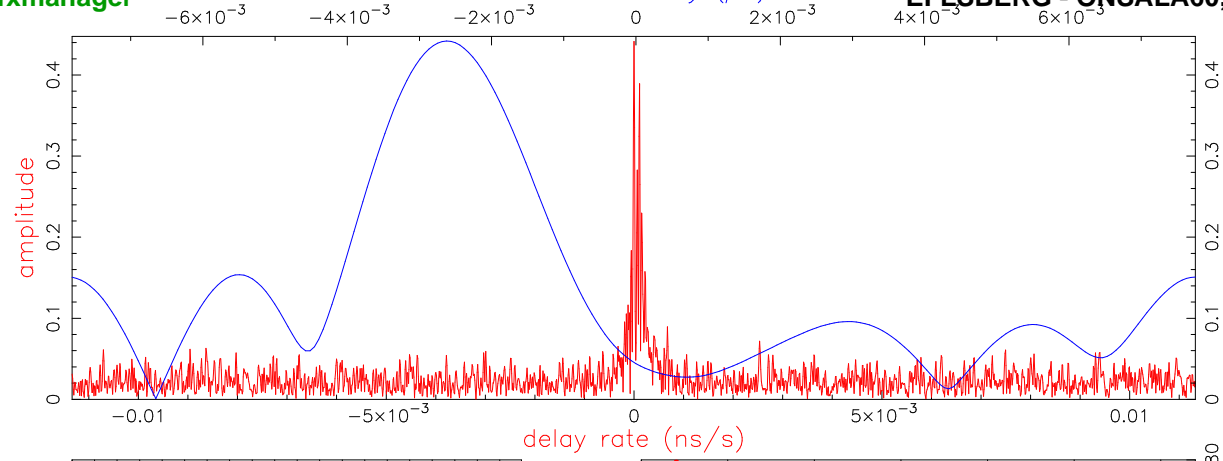
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, BX

EFLSBERG - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

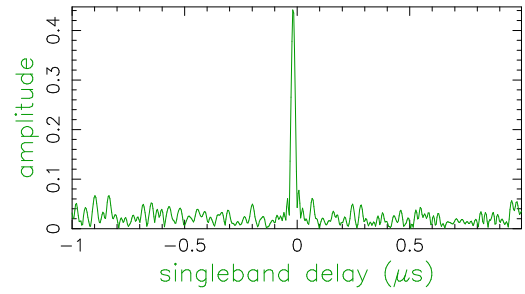


Fringe quality 6

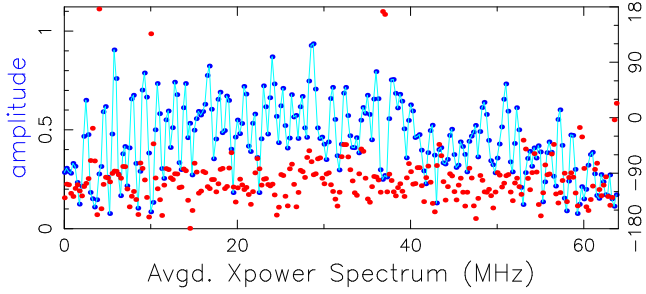
SNR 25.1
 Int time 419.795
 Amp 0.448
 Phase 77.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.017919
 MBD -0.002566
 Fringe rate (Hz) 0.000148
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

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"

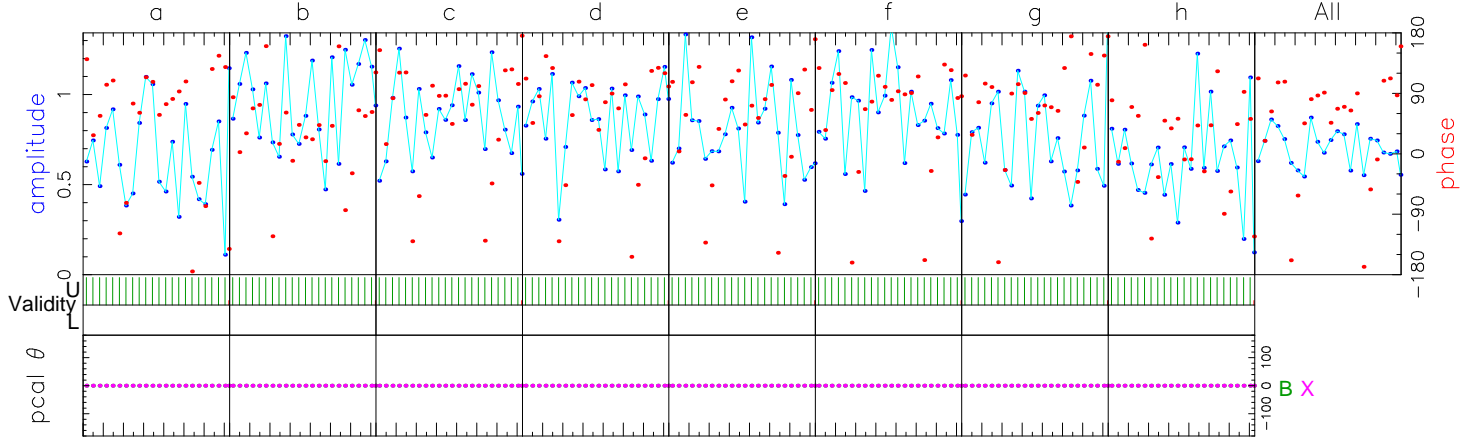
delay rate (ns/s)



singleband delay (μ s)



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

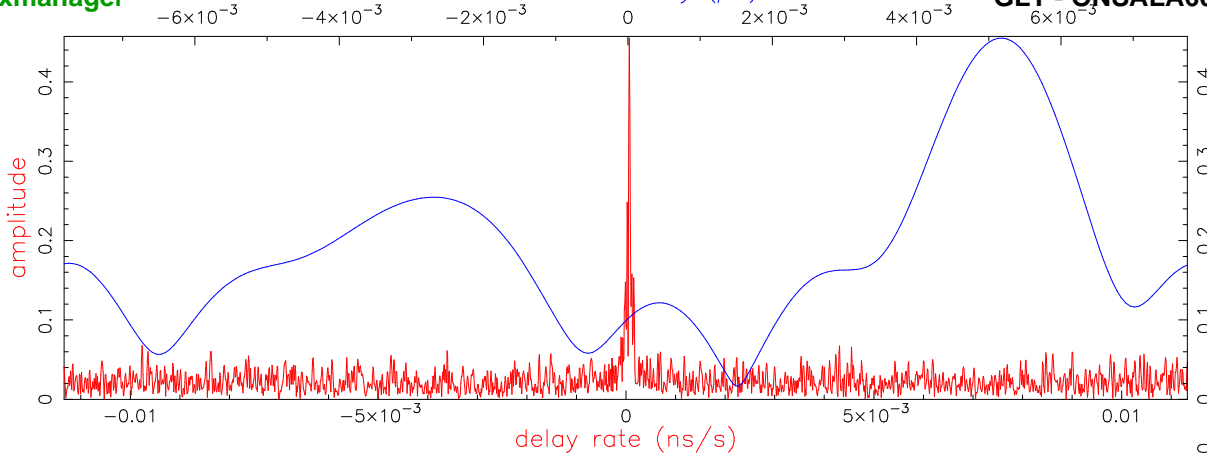


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	101.7	40.1	88.2	90.3	78.4	95.6	89.2	26.0	Phase	77.4
	0.4	0.6	0.5	0.5	0.5	0.6	0.5	0.4	Ampl.	0.5
	252.5	252.3	253.0	251.8	252.3	252.9	251.8	250.7	Sbd box	252.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.20621636020E+03		Apriori delay (usec)		-1.20619816954E+03		Resid mbdelay (usec)		-2.56566E-03	+/- 4.3E-05
Sband delay (usec)	-1.20621608879E+03		Apriori clock (usec)		-7.8543968E+01		Resid sbdelay (usec)		-1.79192E-02	+/- 3.4E-04
Phase delay (usec)	-1.20619816705E+03		Apriori clockrate (us/s)		-5.2800001E-07		Resid phdelay (usec)		2.49755E-06	+/- 1.5E-07
Delay rate (us/s)	1.07130038466E-01		Apriori rate (us/s)		1.07130036744E-01		Resid rate (us/s)		1.72250E-09	+/- 6.1E-10
Total phase (deg)			Apriori accel (us/s/s)		-2.00460428142E-07		Resid phase (deg)		77.4	+/- 4.6

ph/seg (deg) 61.9 11.0 Search (2048X32) 0.434 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 62.8 19.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 30.0 6.5 Inc. seg. avg. 0.698 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 19.8 11.3 Inc. frq. avg. 0.483 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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -974.639 -404.231 simultaneous interpolator

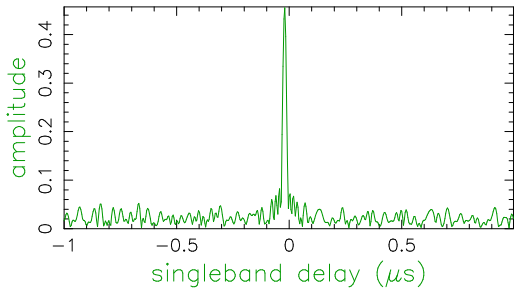
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/BX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/BX.W.73.1WZRGR

multiband delay (μs)

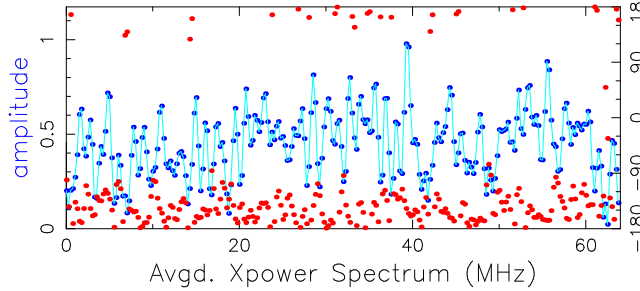


Fringe quality 7

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

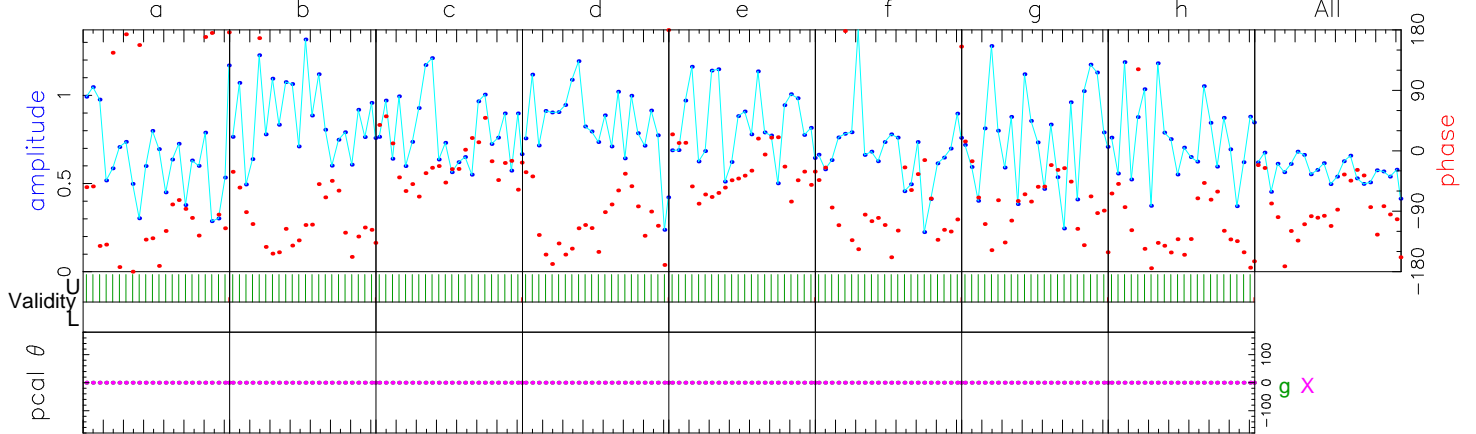


delay rate (ns/s)



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

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



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

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

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

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.10.1WZRGR

simultaneous interpolator

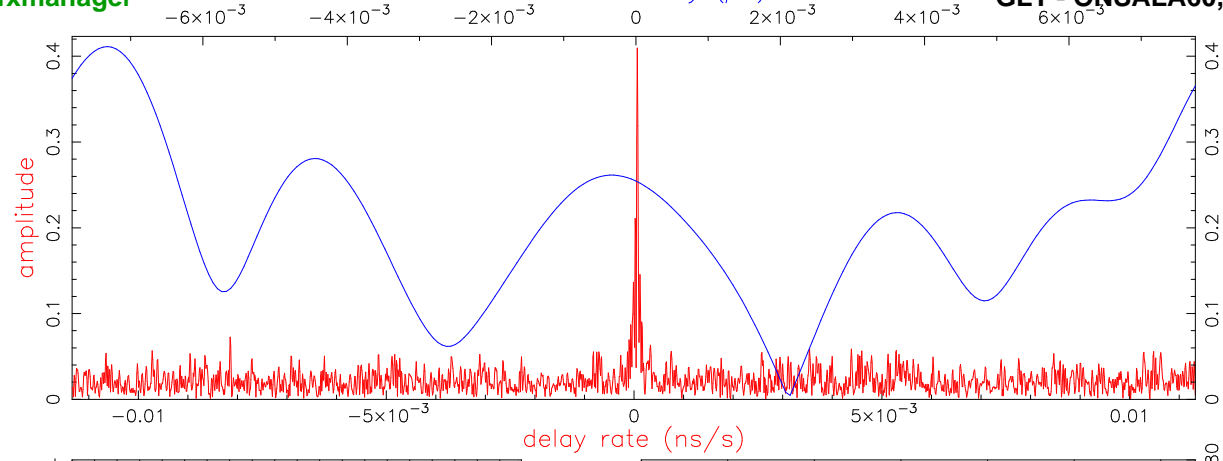
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, gX

GLT - ONSALA60, fgroup W, pol RR

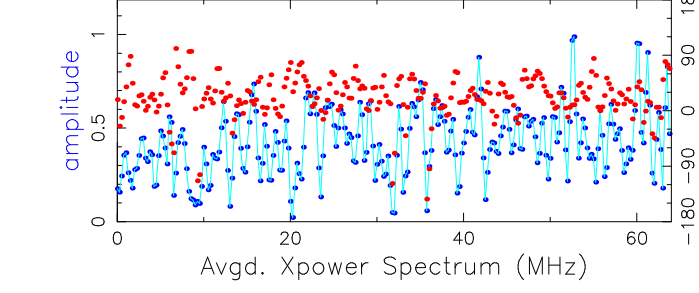
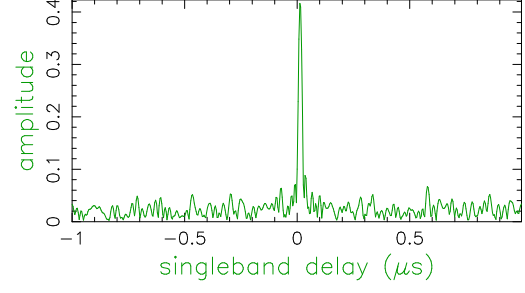
multiband delay (μ s)



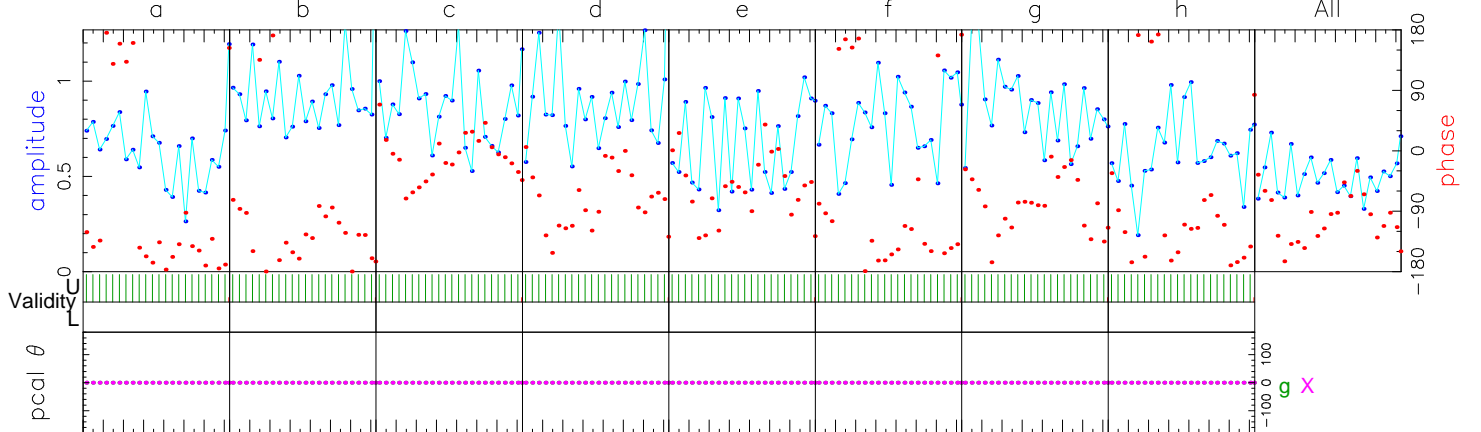
Fringe quality 7

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

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



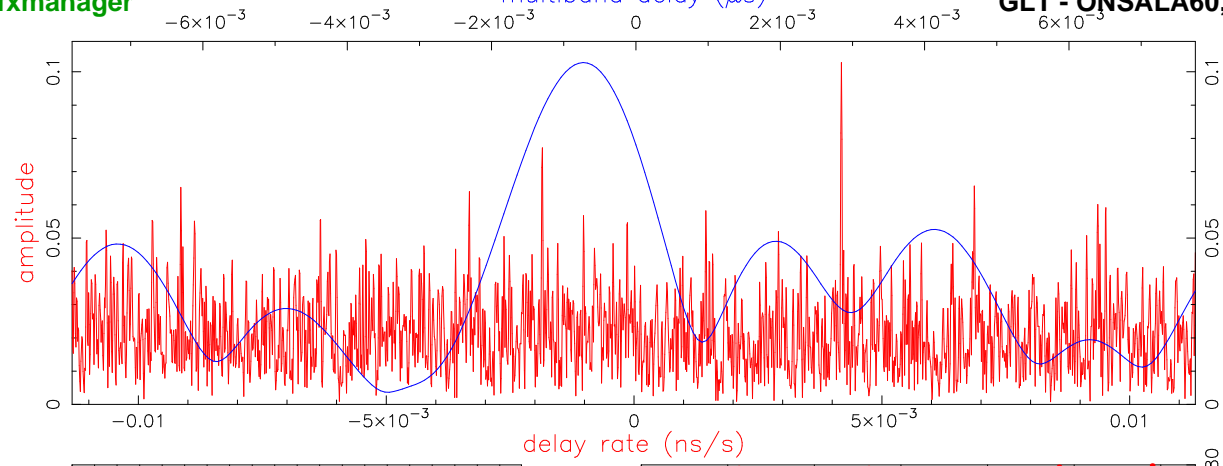
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



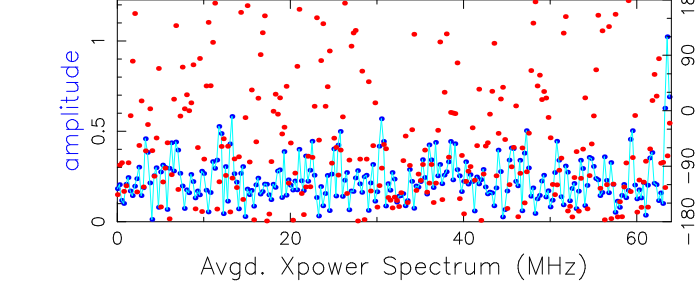
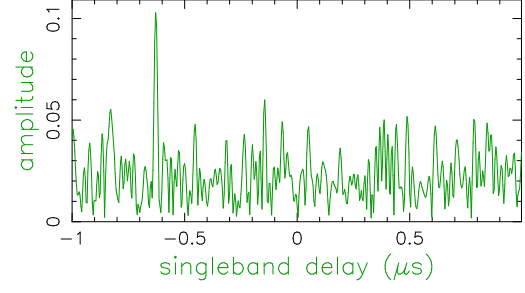
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-163.2	-133.4	-11.9	-72.7	-51.6	-145.7	-77.5	-131.7	Phase	-98.4
	0.5	0.7	0.7	0.7	0.5	0.6	0.7	0.5	Ampl.	0.6
	262.3	261.2	260.2	259.9	259.6	260.4	260.3	260.4	Sbd box	260.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-4.08526312350E+03		Apriori delay (usec)		-4.08527131912E+03		Resid mbdelay (usec)		-7.42938E-03	+/- 4.6E-05
Sband delay (usec)	-4.08525799862E+03		Apriori clock (usec)		-5.6044292E+01		Resid sbdelay (usec)		1.33205E-02	+/- 3.6E-04
Phase delay (usec)	-4.08527132229E+03		Apriori clockrate (us/s)		-4.5599998E-07		Resid phdelay (usec)		-3.17360E-06	+/- 1.6E-07
Delay rate (us/s)	-2.95274696409E-01		Apriori rate (us/s)		-2.95274759376E-01		Resid rate (us/s)		6.29674E-08	+/- 6.4E-10
Total phase (deg)			Apriori accel (us/s/s)		3.28861414597E-05		Resid phase (deg)		-98.4	+/- 4.8

ph/seg (deg) 36.1 11.6 Search (2048X32) 0.400 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 29.6 20.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 57.1 6.8 Inc. seg. avg. 0.488 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 50.5 11.9 Inc. frq. avg. 0.613 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 32.4 el 40.2 pa -11.6 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 2740.339 3895.650 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.33.1WZRGR

multiband delay (μ s)

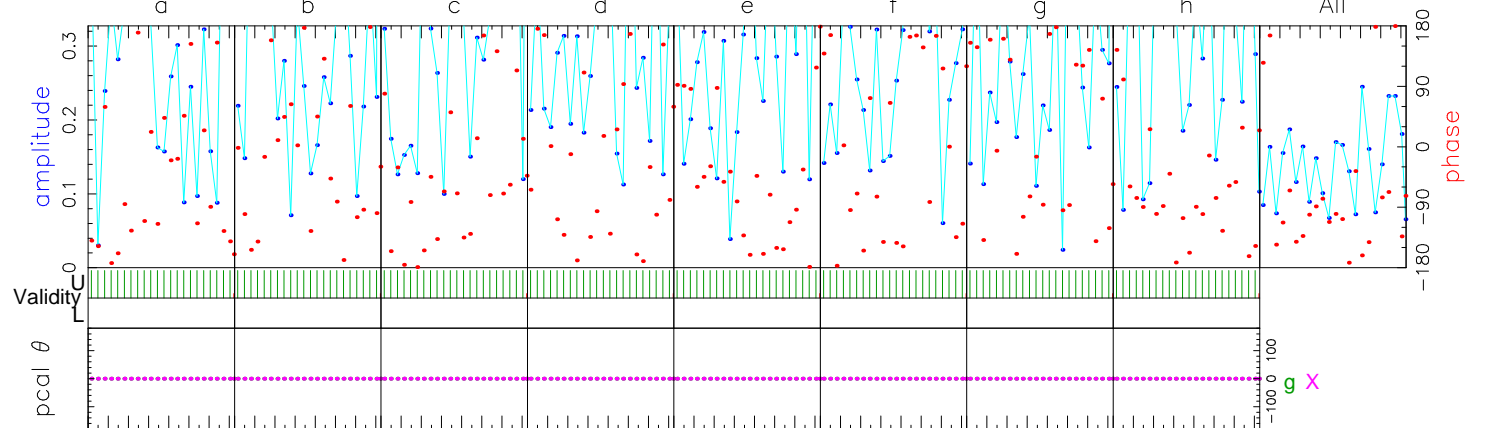


Fringe quality 0
SNR 5.8
Int time 419.795
Amp 0.109
Phase -124.2
PFD 8.5e-01
Delays (us)
SBD -0.628195
MBD -0.000735
Fringe rate (Hz) 0.360561
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build 2021:302:211904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



Avgd. Xpower Spectrum (MHz)

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



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

ph/seg (deg) 48.0 47.5 Search (2048X32) 0.109 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 64.3 83.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 32.3 28.0 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 39.0 48.9 Inc. frq. avg. 0.112 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
g: az 32.4 el 40.2 pa -11.6 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 2740.339 3895.650 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.51.1WZRGR

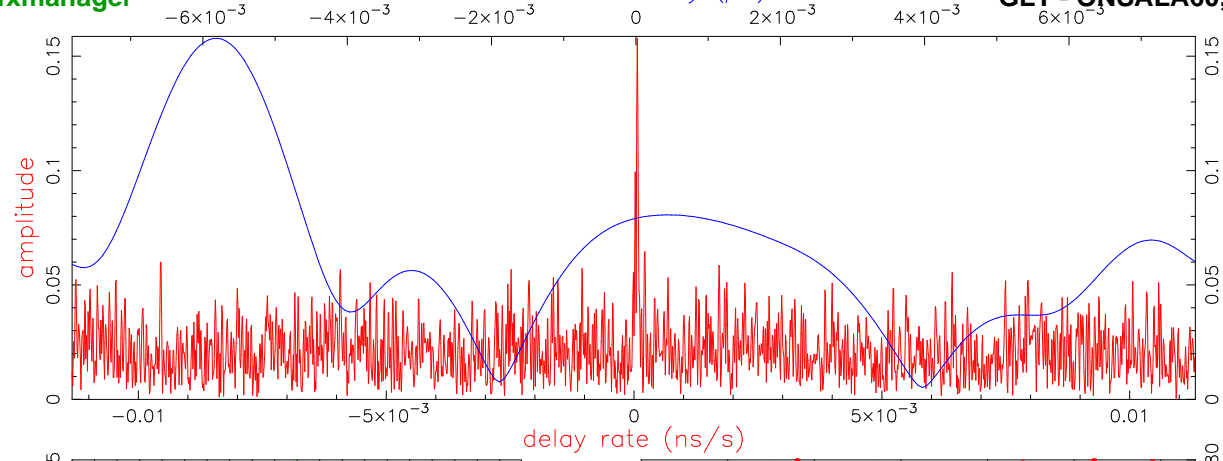
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

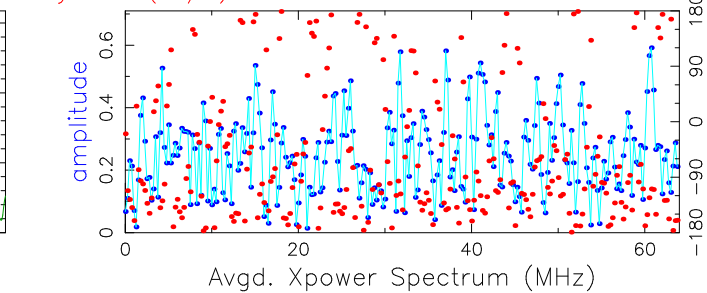
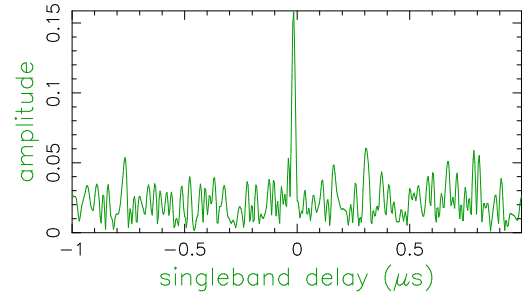
NRAO150.1WZRGR, No0037, gX

GLT - ONSALA60, fgroup W, pol RL

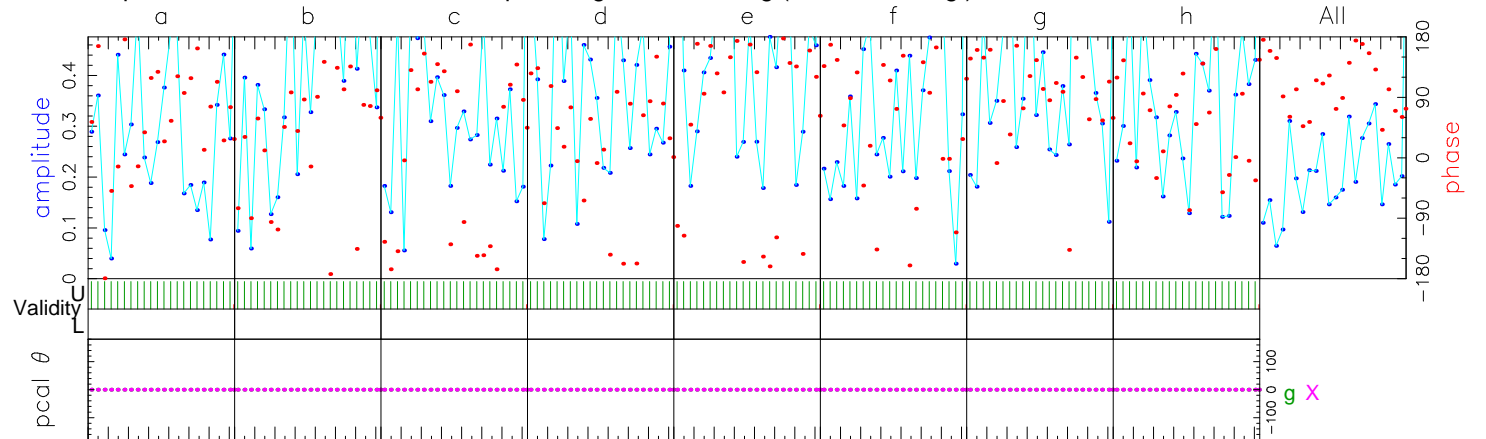
multiband delay (μ s)



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



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



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

ph/seg (deg) 42.7 30.9 Search (2048X32) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 61.4 53.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 42.5 18.2 Inc. seg. avg. 0.181 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.0 31.8 Inc. frq. avg. 0.187 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 32.4 el 40.2 pa -11.6 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 2740.339 3895.650 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/gX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/gX.W.69.1WZRGR

Mk4/DiFX fourfit 3.21 rev 2937

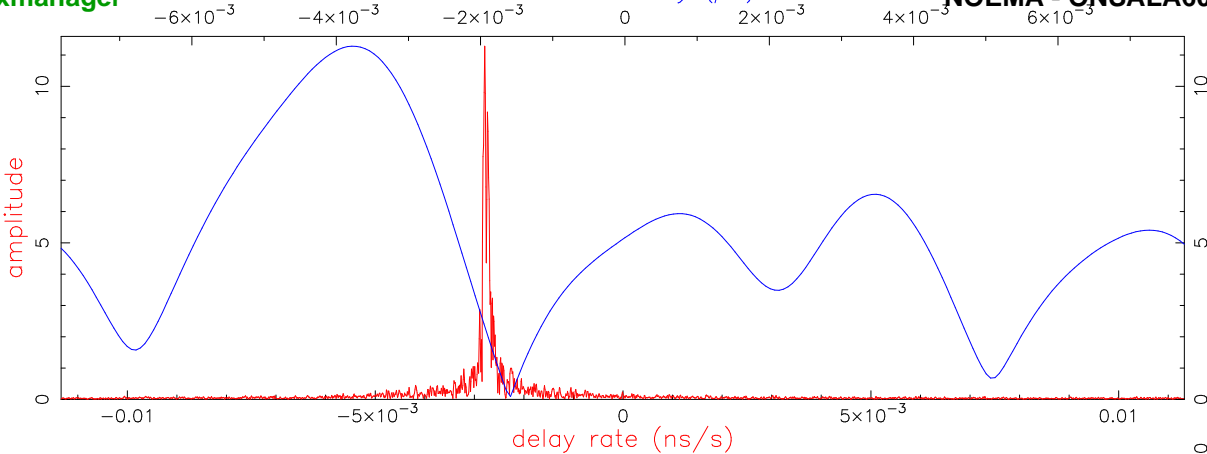
fxmanager

NRAO150.1WZRGR, No0037, NX

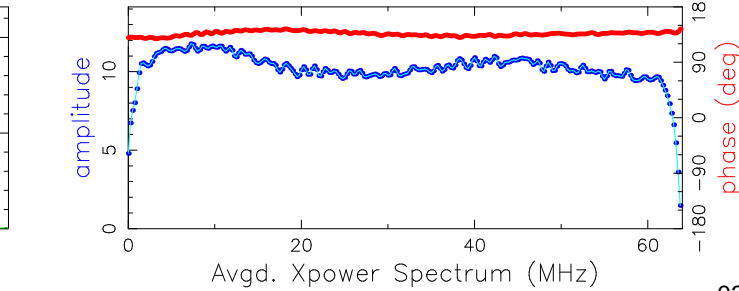
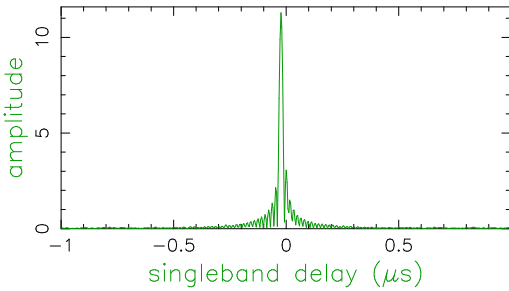
NOEMA - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 1

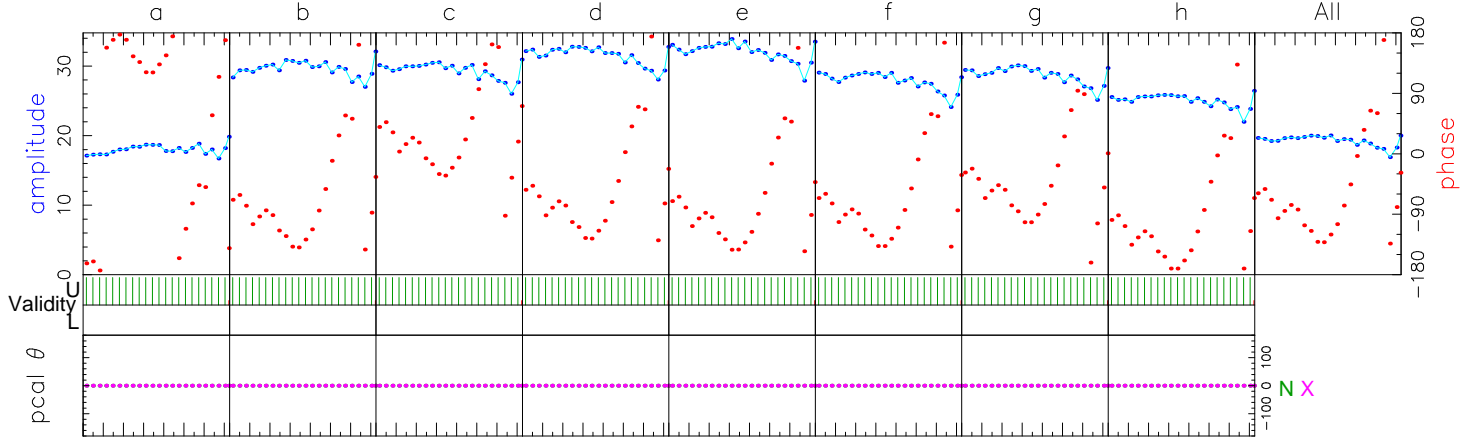


SNR 633.6
 Int time 419.795
 Amp 11.596
 Phase -83.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.022841
 MBD -0.003751
 Fringe rate (Hz)
 -0.240671
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



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	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.02097192743E+03	Apriori delay (usec)	-2.02095255104E+03	Resid mbdelay (usec)	-3.75139E-03	+/-	1.7E-06
Sband delay (usec)	-2.02097539229E+03	Apriori clock (usec)	-6.9742516E+01	Resid sbdelay (usec)	-2.28413E-02	+/-	1.4E-05
Phase delay (usec)	-2.02095255374E+03	Apriori clockrate (us/s)	-4.9170000E-06	Resid phdelay (usec)	-2.70065E-06	+/-	5.8E-09
Delay rate (us/s)	1.78489187664E-01	Apriori rate (us/s)	1.78491981617E-01	Resid rate (us/s)	-2.79395E-06	+/-	2.4E-11
Total phase (deg)	-352.4	Apriori accel (us/s/s)	-1.89000742591E-06	Resid phase (deg)	-83.7	+/-	0.2

ph/seg (deg)	63.4	RMS	11.596 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	70.3	Theor.	10.871	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	63.4	Search (2048X32)	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	49.2	Interp.	19.713	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Inc. seg. avg.	16.664	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	
		Inc. frq. avg.		nlags:	256	t_cohere	infinite	

N: az 57.3 el 47.5 pa -72.8 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -1626.129 -947.876 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NX.W.17.1WZRGR

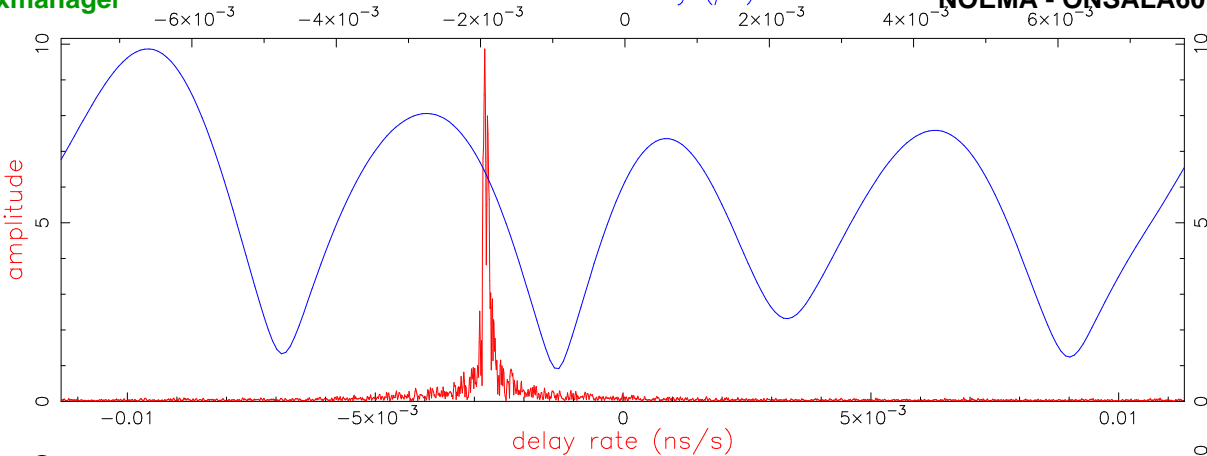
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, NX

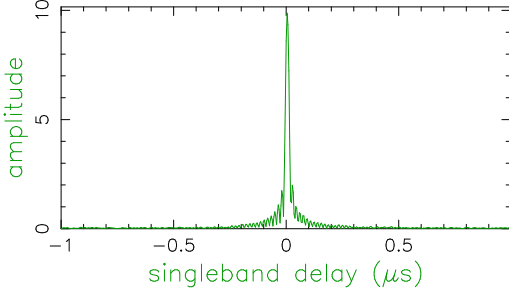
NOEMA - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

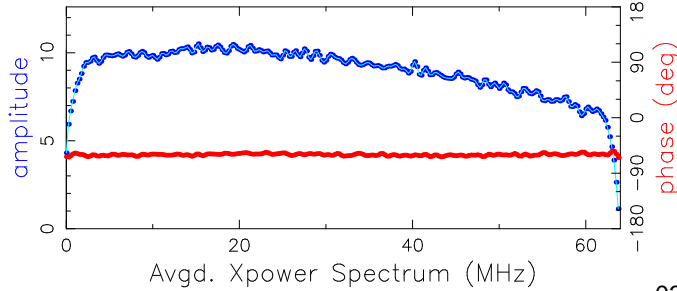


Fringe quality 1

SNR 555.4
 Int time 419.793
 Amp 10.164
 Phase 70.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.004761
 MBD -0.006589
 Fringe rate (Hz)
 -0.240670
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

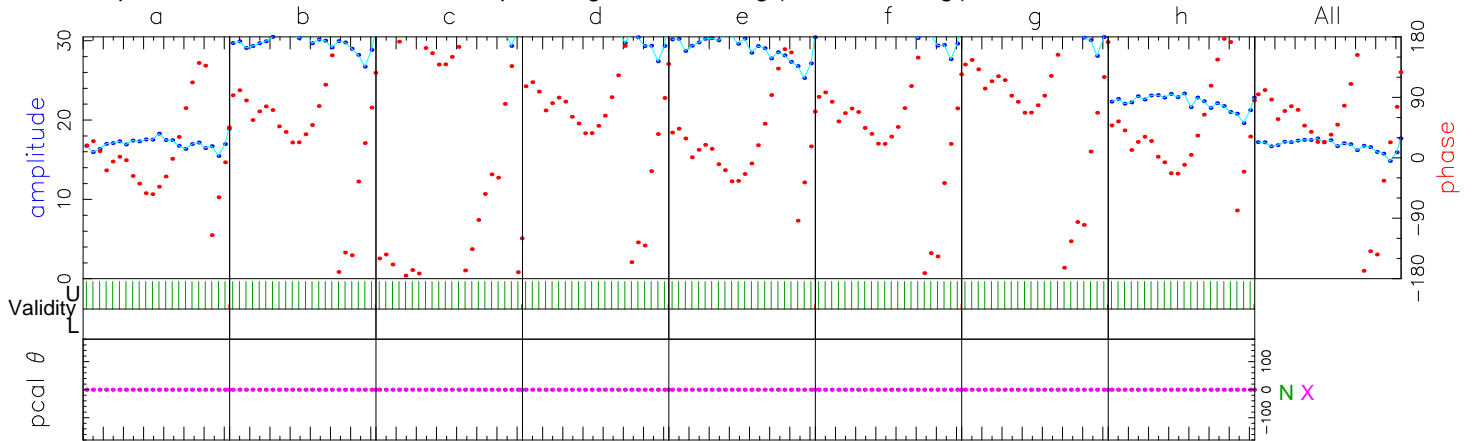


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-7.1	69.7	-174.4	82.5	12.4	67.0	114.6	24.3	Phase	70.2
	10.1	17.8	19.9	18.7	17.6	18.8	19.3	13.4	Ampl.	16.9
	260.2	259.0	258.5	258.1	257.6	258.2	258.2	258.5	Sbd box	258.2
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-2.02094351493E+03	Apriori delay (usec)	-2.02095255104E+03	Resid mbdelay (usec)	-6.58889E-03	+/-	2.0E-06
Sband delay (usec)	-2.02094779029E+03	Apriori clock (usec)	-6.9742516E+01	Resid sbdelay (usec)	4.76075E-03	+/-	1.6E-05
Phase delay (usec)	-2.02095254877E+03	Apriori clockrate (us/s)	-4.9170000E-06	Resid phdelay (usec)	2.26263E-06	+/-	6.7E-09
Delay rate (us/s)	1.78489187674E-01	Apriori rate (us/s)	1.78491981617E-01	Resid rate (us/s)	-2.79394E-06	+/-	2.7E-11
Total phase (deg)	-198.5	Apriori accel (us/s/s)	-1.89000742591E-06	Resid phase (deg)	70.2	+/-	0.2

ph/seg (deg)	63.9	RMS	73.8	Theor.	0.5	Amplitude	10.164 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	70.1	Search (2048X32)	9.540	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	66.9	Inc. seg. avg.	17.252	Inc. frq. avg.	16.949	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	73.8	Inc. frq. avg.	16.949	Sample rate (MSamp/s):	128	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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -1626.129 -947.876 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NX.W.37.1WZRGR

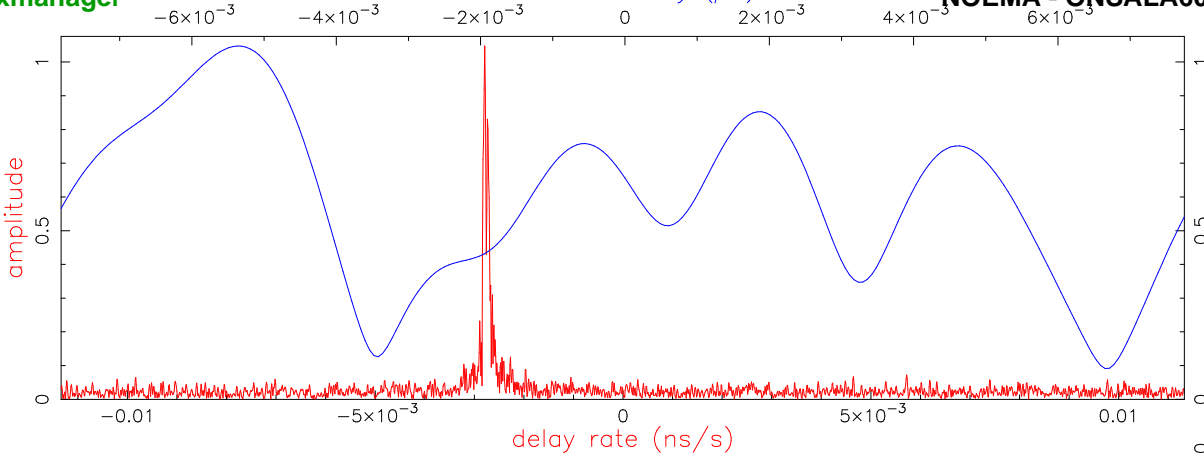
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, NX

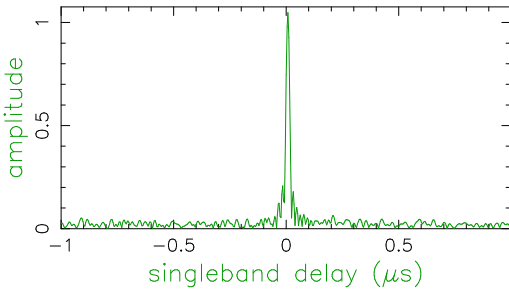
NOEMA - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

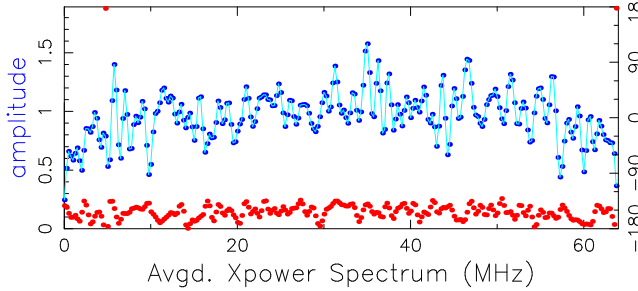


Fringe quality 1

SNR 58.8
 Int time 419.795
 Amp 1.076
 Phase -7.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.007274
 MBD -0.005371
 Fringe rate (Hz)
 -0.240752
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



delay rate (ns/s)



Exp. c211c
 Yr:day 16383
 Start 2021:116
 Stop 090000.00
 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
	-114.7	4.0	160.2	24.1	-6.8	-8.2	13.7	-36.0	Phase	-7.5
	1.3	2.6	1.8	1.4	2.1	1.7	1.6	2.0	Ampl.	1.8
	260.7	260.0	259.0	258.5	258.4	258.7	258.4	259.5	Sbd box	258.9
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) -2.02094229712E+03 Apriori delay (usec) -2.02095255104E+03 Resid mbdelay (usec) -5.37108E-03 +/- 1.8E-05
 Sband delay (usec) -2.02094527704E+03 Apriori clock (usec) -6.9742516E+01 Resid sbdelay (usec) 7.27400E-03 +/- 1.5E-04
 Phase delay (usec) -2.02095255128E+03 Apriori clockrate (us/s) -4.9170000E-06 Resid phdelay (usec) -2.42151E-07 +/- 6.3E-08
 Delay rate (us/s) 1.78489186725E-01 Apriori rate (us/s) 1.78491981617E-01 Resid rate (us/s) -2.79489E-06 +/- 2.6E-10
 Total phase (deg) -276.1 Apriori accel (us/s/s) -1.89000742591E-06 Resid phase (deg) -7.5 +/- 1.9

RMS Theor. Amplitude 1.076 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 66.0 4.7 Search (2048X32) 1.009 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 70.7 8.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 83.7 2.8 Inc. seg. avg. 1.818 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 77.9 4.8 Inc. frq. avg. 1.811 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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -1626.129 -947.876 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NX.W.57.1WZRGR

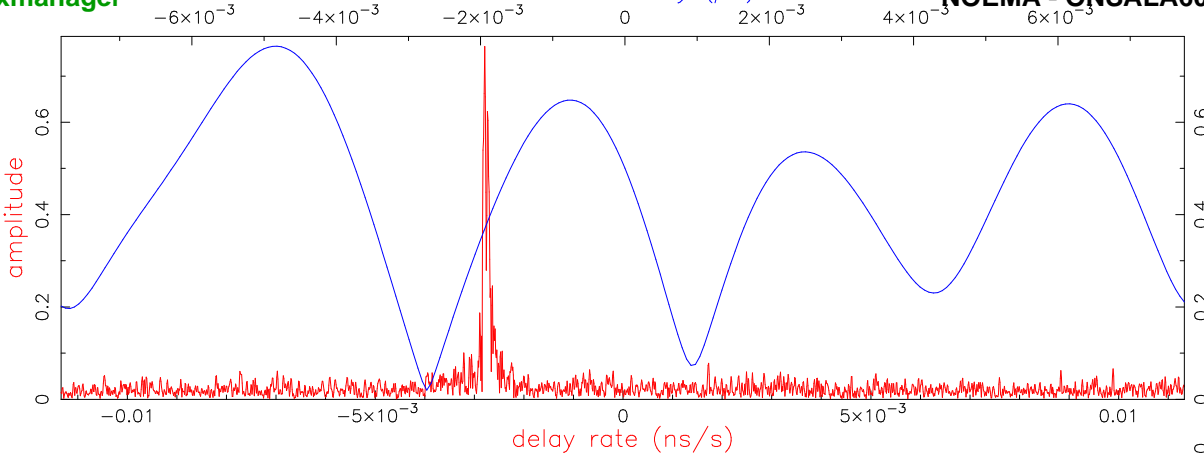
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, NX

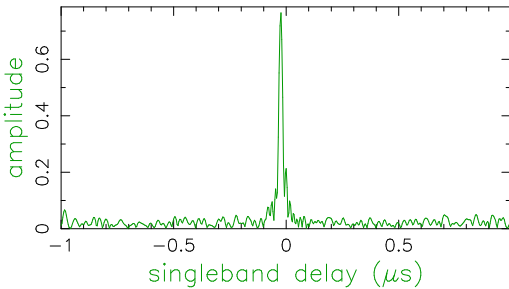
NOEMA - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

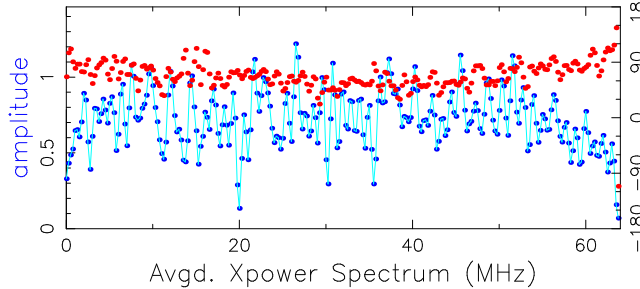


Fringe quality 3

SNR 42.9
 Int time 419.793
 Amp 0.786
 Phase -153.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.024121
 MBD -0.004881
 Fringe rate (Hz)
 -0.240713
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

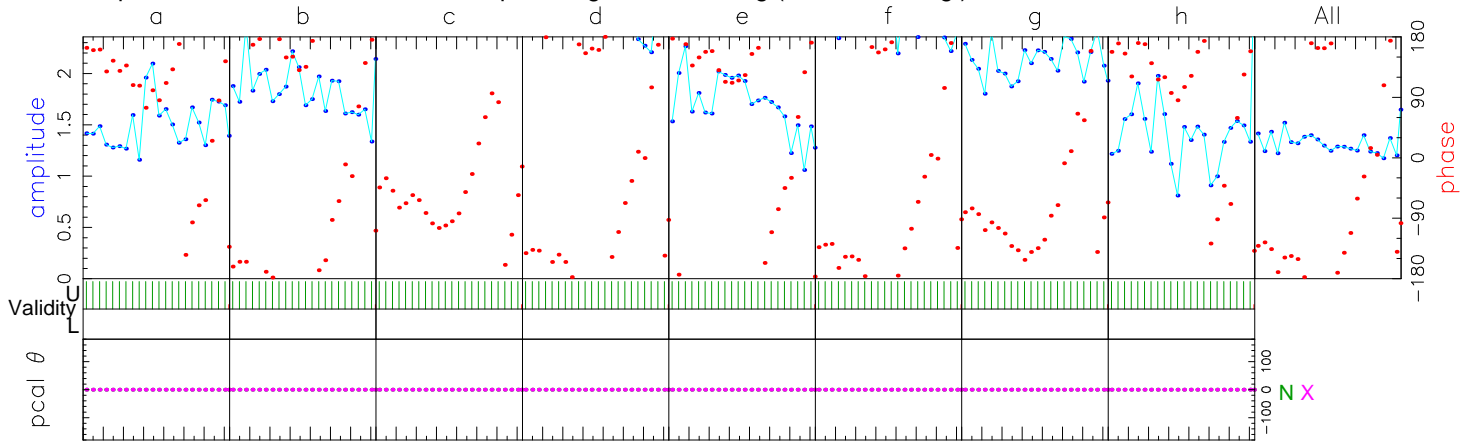


singleband delay (μ s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114532
 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



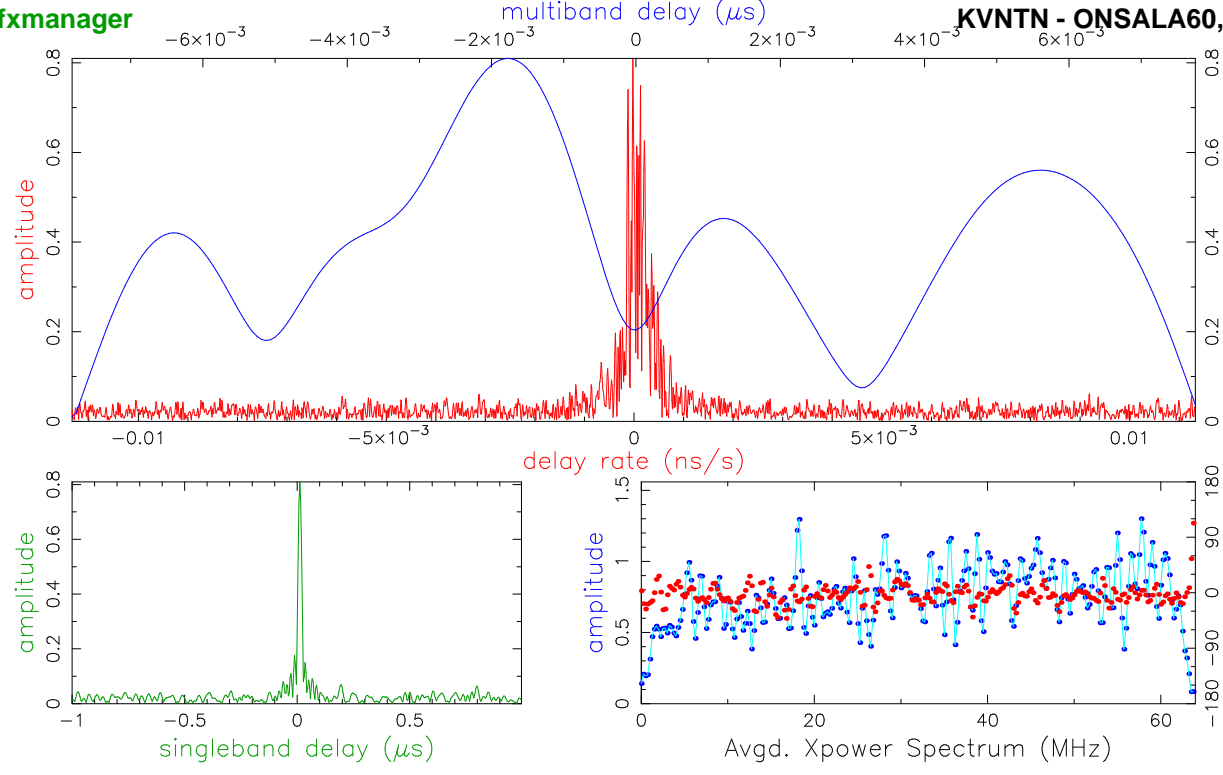
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	128.0	-178.4	-64.1	-159.7	154.1	-151.1	-103.3	143.7	Phase	-153.3
	0.8	1.1	2.1	1.7	1.1	1.5	1.3	0.9	Ampl.	1.3
	253.8	250.6	251.1	250.5	250.2	250.8	250.6	251.1	Sbd box	250.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
N:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.02097305665E+03	Apriori delay (usec)	-2.02095255104E+03	Resid mbdelay (usec)	-4.88061E-03	+/-	2.5E-05
Sband delay (usec)	-2.02097667229E+03	Apriori clock (usec)	-6.9742516E+01	Resid sbdelay (usec)	-2.41212E-02	+/-	2.0E-04
Phase delay (usec)	-2.02095255598E+03	Apriori clockrate (us/s)	-4.9170000E-06	Resid phdelay (usec)	-4.94323E-06	+/-	8.6E-08
Delay rate (us/s)	1.78489187183E-01	Apriori rate (us/s)	1.78491981617E-01	Resid rate (us/s)	-2.79443E-06	+/-	3.6E-10
Total phase (deg)	-61.9	Apriori accel (us/s/s)	-1.89000742591E-06	Resid phase (deg)	-153.3	+/-	2.7

ph/seg (deg)	67.2	Theor.	6.4	Search (2048X32)	0.739	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	72.5		11.2	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)	63.4		3.8	Inc. seg. avg.	1.340	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	84.5		6.6	Inc. frq. avg.	1.308	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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) -1626.129 -947.876 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/NX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/NX.W.76.1WZRGR

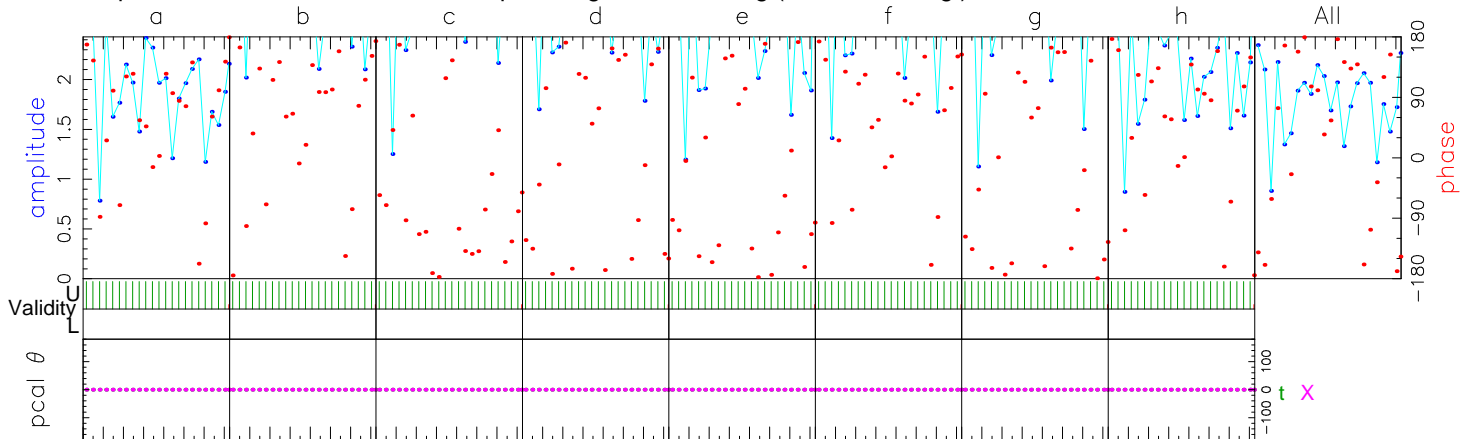


Fringe quality 3

SNR 45.4
Int time 419.795
Amp 0.810
Phase 154.3
PFD 0.0e+00
Delays (us)
SBD 0.011933
MBD -0.001769
Fringe rate (Hz)
-0.002250
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
2021:303:114541
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
100.3	117.3	-124.1	168.4	-161.1	103.9	178.8	110.6	110.6	Phase	154.3
0.8	1.2	1.5	1.3	1.1	1.3	1.4	1.0	1.0	Ampl.	1.2
261.4	260.4	260.0	259.6	259.0	259.8	259.7	260.0	260.0	Sbd box	260.1
U/L 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X 1000	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.59200751635E+03		Apriori delay (usec)	-2.59202137261E+03		Resid mbdelay (usec)	-1.76874E-03		+/-	2.4E-05
Sband delay (usec)	-2.59200943936E+03		Apriori clock (usec)	-5.6745941E+01		Resid sbdelay (usec)	1.19333E-02		+/-	1.9E-04
Phase delay (usec)	-2.59202136764E+03		Apriori clockrate (us/s)	-5.7800000E-07		Resid phdelay (usec)	4.97645E-06		+/-	8.1E-08
Delay rate (us/s)	-1.12857419198E+00		Apriori rate (us/s)	-1.12857416586E+00		Resid rate (us/s)	-2.61217E-08		+/-	3.4E-10
Total phase (deg)		141.1	Apriori accel (us/s/s)	-1.22877429420E-05		Resid phase (deg)	154.3		+/-	2.5

ph/seg (deg) 79.7 6.1 Search (2048X32) 0.775 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 127.5 10.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 55.1 3.6 Inc. seg. avg. 1.769 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 53.2 6.2 Inc. frq. avg. 1.189 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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 10259.304 -2924.902 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/tX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tX.W.111.1WZRGR

Mk4/DiFX fourfit 3.21 rev 2937

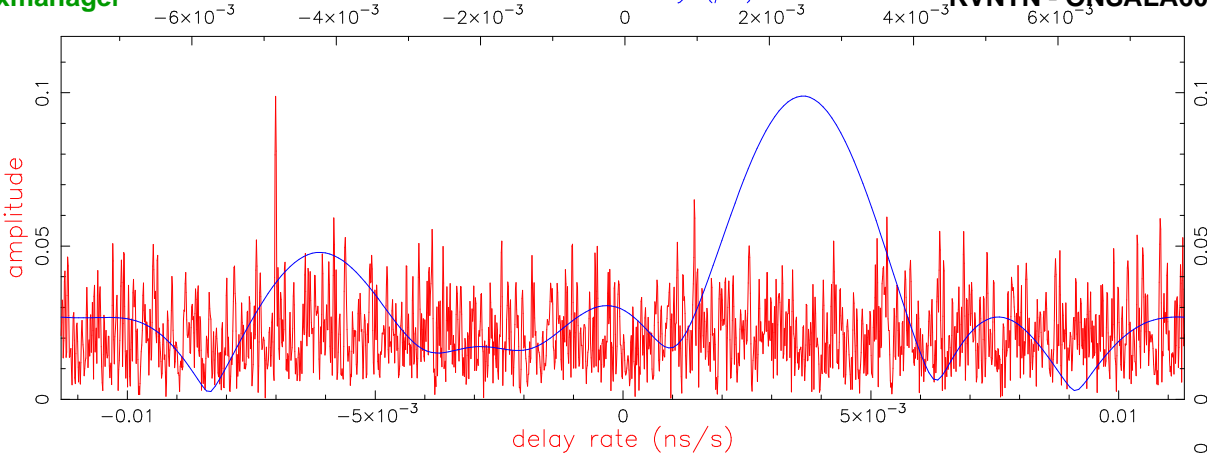
fxmanager

NRAO150.1WZRGR, No0037, tX

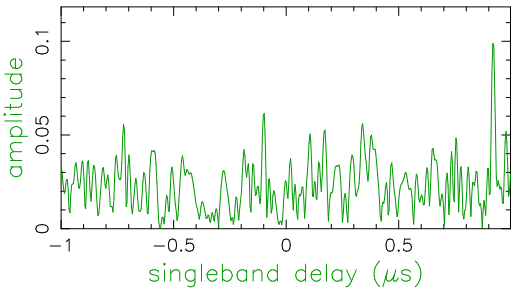
KVNTN - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

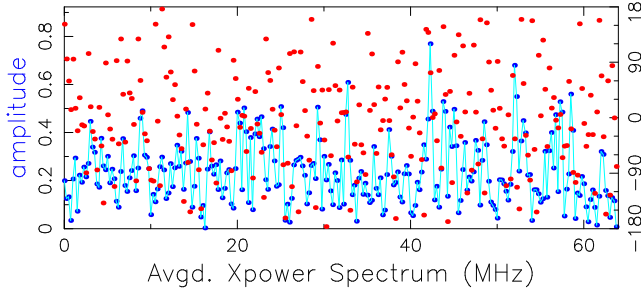
Fringe quality 0



SNR 5.6
 Int time 419.795
 Amp 0.118
 Phase 122.3
 PFD 9.9e-01
 Delays (us)
 SBD 0.919628
 MBD 0.002505
 Fringe rate (Hz)
 -0.604676
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

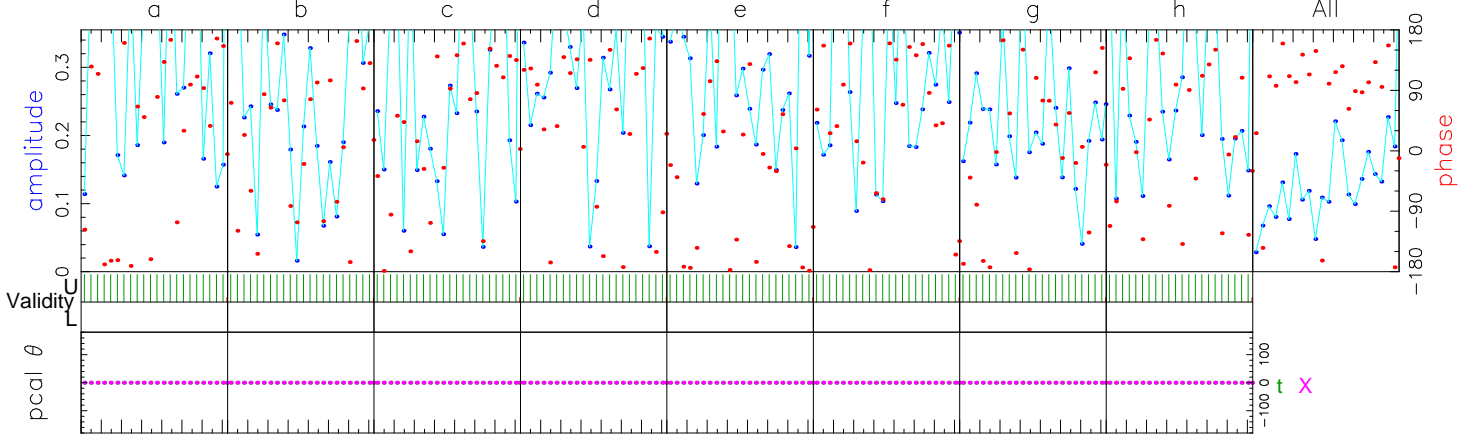


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114545
 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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
t:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:X	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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-2.59109699262E+03	Apriori delay (usec)	-2.59202137261E+03	Resid mbdelay (usec)	2.50499E-03	+/-	1.9E-04
Sband delay (usec)	-2.59110174461E+03	Apriori clock (usec)	-5.6745941E+01	Resid sbdelay (usec)	9.19628E-01	+/-	1.5E-03
Phase delay (usec)	-2.59202136867E+03	Apriori clockrate (us/s)	-5.7800000E-07	Resid phdelay (usec)	3.94368E-06	+/-	6.6E-07
Delay rate (us/s)	-1.12858118555E+00	Apriori rate (us/s)	-1.12857416586E+00	Resid rate (us/s)	-7.01968E-06	+/-	2.7E-09
Total phase (deg)	109.1	Apriori accel (us/s/s)	-1.22877429420E-05	Resid phase (deg)	122.3	+/-	20.3

ph/seg (deg)	44.2	Theor.	48.8	Amplitude	0.118 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	64.1	Search (2048X32)	0.098	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	23.2	Inc. seg. avg.	0.111	Inc. frq. avg.	0.107	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	44.4	Inc. frq. avg.	0.107			Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00	

t: az 311.2 el 46.2 pa 91.9 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 10259.304 -2924.902 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/tX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tX.W.135.1WZRGR

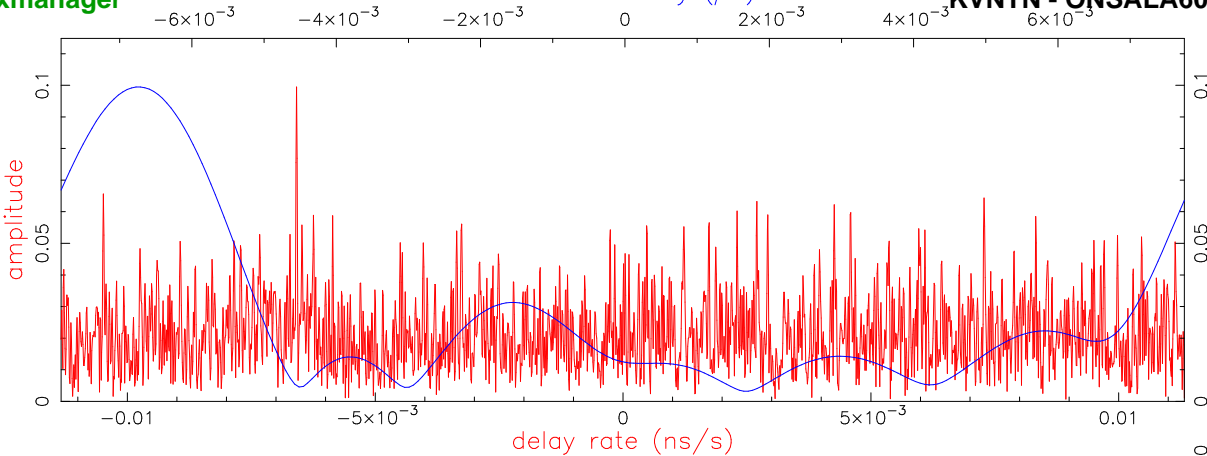
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, tX

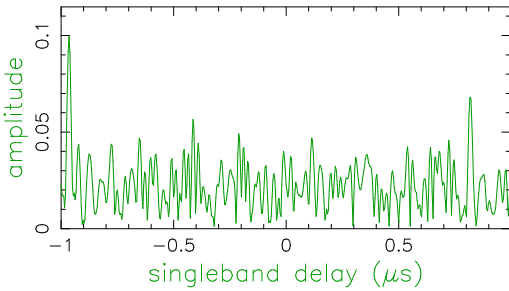
KVNTN - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

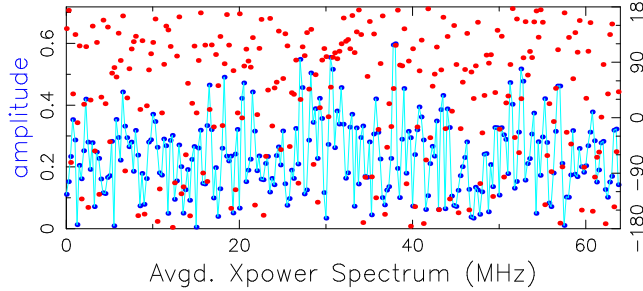


Fringe quality 0

SNR 5.6
 Int time 419.795
 Amp 0.115
 Phase -127.5
 PFD 1.0e+00
 Delays (us)
 SBD -0.964952
 MBD -0.006738
 Fringe rate (Hz)
 -0.568525
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

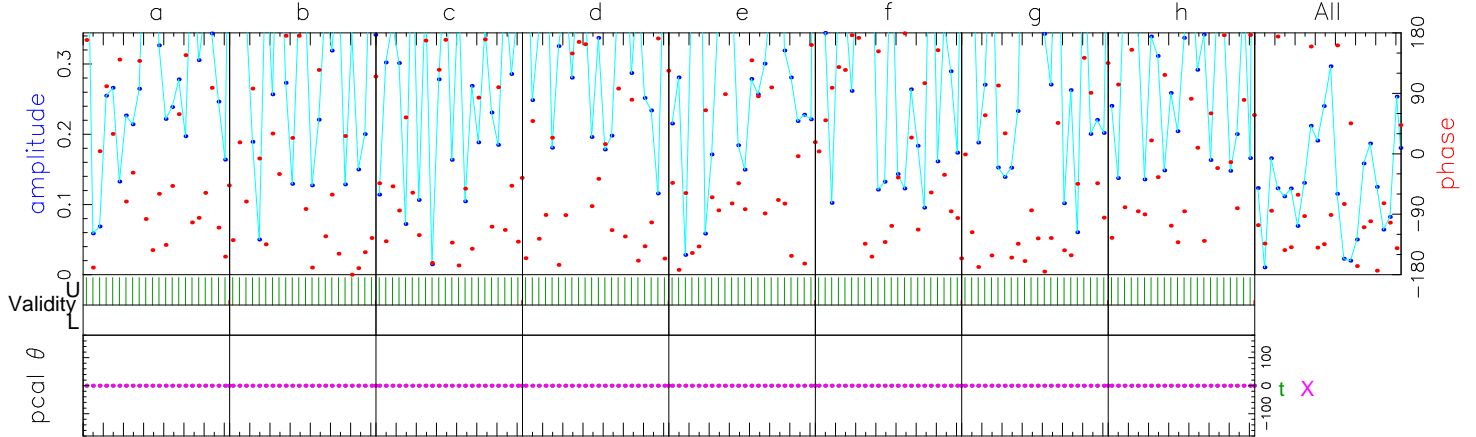


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114549
 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
	-119.0	-121.8	-129.7	-147.0	-112.4	-128.2	-141.3	-79.4	Phase	-127.5
	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	Ampl.	0.1
	124.4	168.0	204.3	91.2	469.0	373.1	152.3	380.7	Sbd box	10.0
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.59298123516E+03	Apriori delay (usec)	-2.59202137261E+03	Resid mbdelay (usec)	-6.73755E-03	+/-	1.9E-04
Sband delay (usec)	-2.59298632486E+03	Apriori clock (usec)	-5.6745941E+01	Resid sbdelay (usec)	-9.64952E-01	+/-	1.5E-03
Phase delay (usec)	-2.59202137672E+03	Apriori clockrate (us/s)	-5.7800000E-07	Resid phdelay (usec)	-4.11199E-06	+/-	6.6E-07
Delay rate (us/s)	-1.12858076587E+00	Apriori rate (us/s)	-1.12857416586E+00	Resid rate (us/s)	-6.60001E-06	+/-	2.7E-09
Total phase (deg)	-140.8	Apriori accel (us/s/s)	-1.22877429420E-05	Resid phase (deg)	-127.5	+/-	20.6

ph/seg (deg)	RMS 56.0	Theor. 49.3	Amplitude 56.0	0.115 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	82.4	86.0	Search (2048X32)	0.098	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	23.2	29.1	Inc. seg. avg.	0.110	Sample rate(MISamp/s): 128	nlags: 256	t_cohere infinite	-0.011	0.011
amp/frq (%)	34.7	50.7	Inc. frq. avg.	0.106	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

t: az 311.2 el 46.2 pa 91.9 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 10259.304 -2924.902 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/tX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tX.W.154.1WZRGR

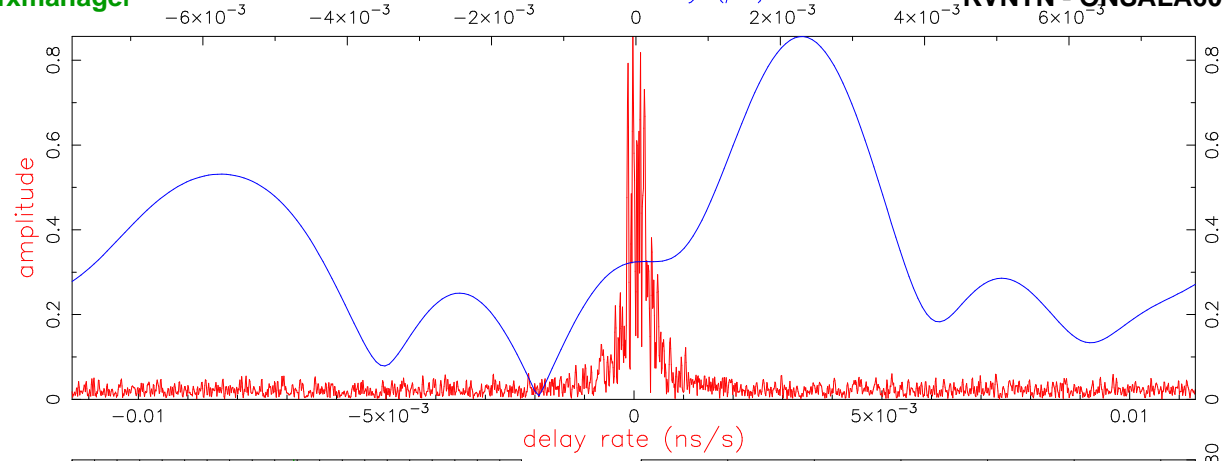
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

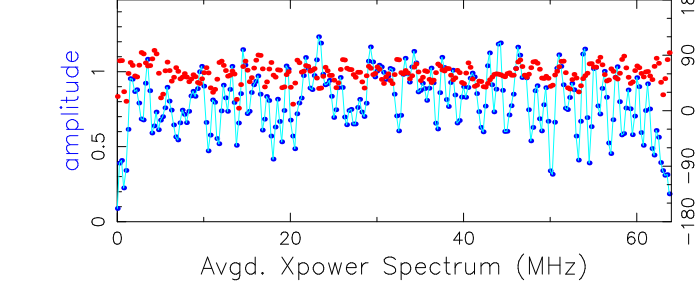
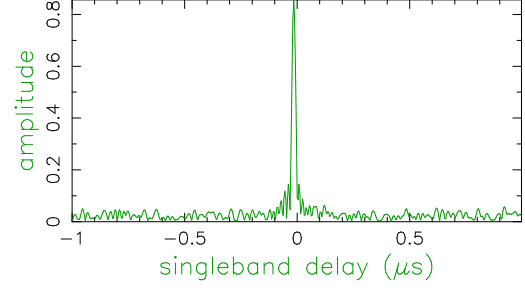
NRAO150.1WZRGR, No0037, tX

KVNTN - ONSALA60, fgroup W, pol LL

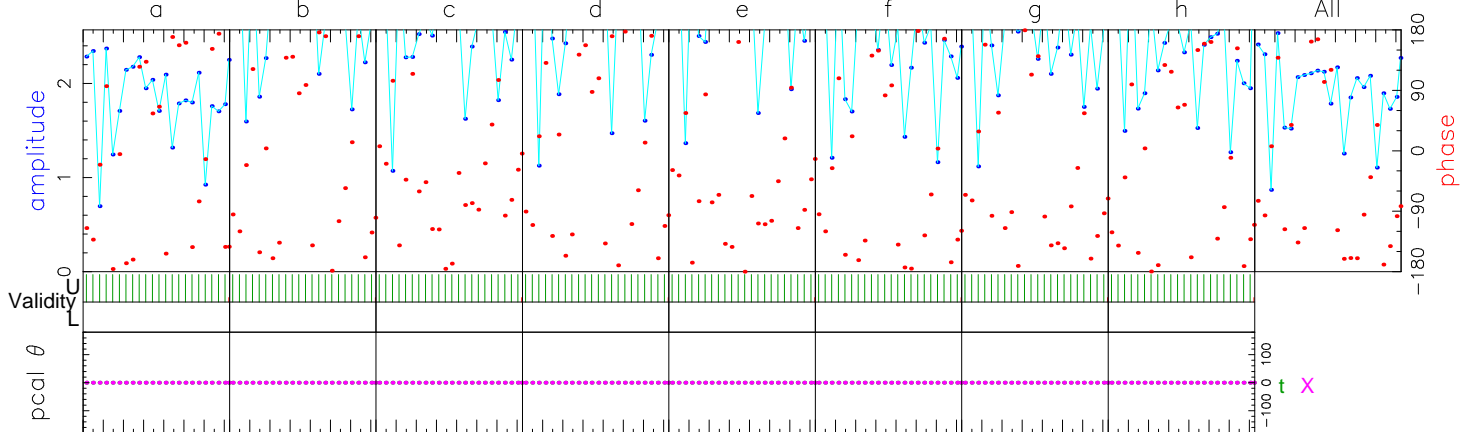
multiband delay (μ s)



Fringe quality 2
 SNR 48.0
 Int time 419.795
 Amp 0.856
 Phase -142.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.015271
 MBD 0.002308
 Fringe rate (Hz)
 -0.002290
 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
 2021:303:114536
 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
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	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-2.59203468963E+03								Resid mbdelay (usec)	2.30798E-03 +/- 2.3E-05
Sband delay (usec)	-2.59203664311E+03								Resid sbdelay (usec)	-1.52705E-02 +/- 1.8E-04
Phase delay (usec)	-2.59202137719E+03								Resid phdelay (usec)	-4.57757E-06 +/- 7.7E-08
Delay rate (us/s)	-1.12857419245E+00								Resid rate (us/s)	-2.65844E-08 +/- 3.2E-10
Total phase (deg)			-155.2						Resid phase (deg)	-142.0 +/- 2.4
	RMS	Theor.	Amplitude	0.856 +/- 0.018					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	81.5	5.7	Search (2048X32)	0.815					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	129.3	10.0	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	48.2	3.4	Inc. seg. avg.	1.877					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	35.7	5.9	Inc. frq. avg.	1.125					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
t: az 311.2 el 46.2 pa 91.9			X: az 75.0 el 56.2 pa -56.0						u,v (fr/asec) 10259.304 -2924.902	simultaneous interpolator

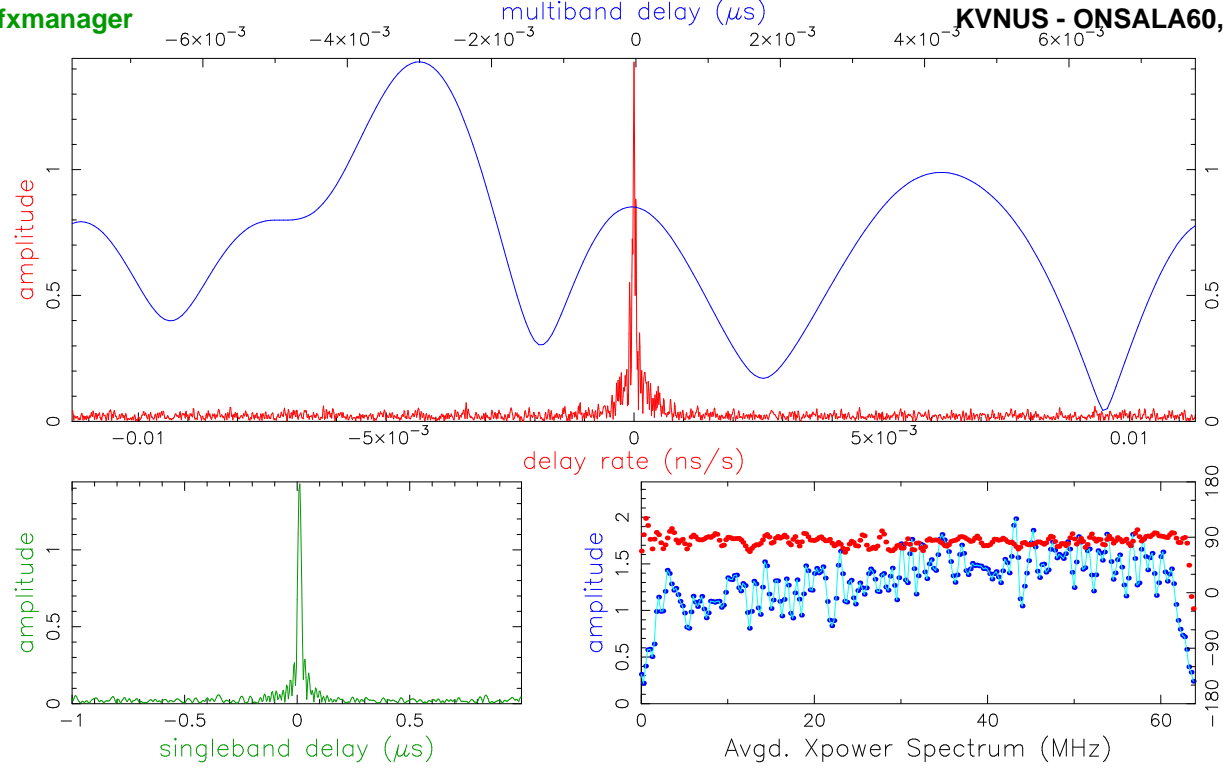
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/tX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/tX.W.89.1WZRGR

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, uX

KVNUS - ONSALA60, fgroup W, pol RR

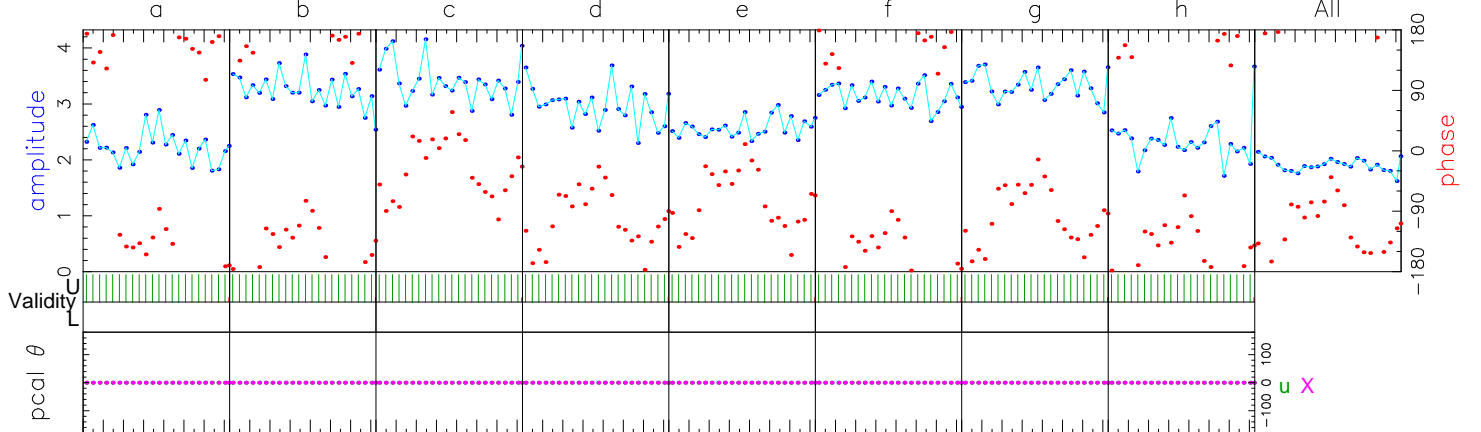


Fringe quality 2

SNR 80.8
 Int time 419.795
 Amp 1.442
 Phase -121.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.010426
 MBD -0.003043
 Fringe rate (Hz)
 -0.000341
 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
 2021:303:114541
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-174.3	-158.2	-28.2	-103.1	-76.2	-168.8	-98.3	-159.1	Phase	-121.8
	1.6	2.4	2.5	2.2	1.9	2.4	2.4	1.7	Ampl.	2.1
	261.1	260.1	259.6	259.1	258.6	259.4	259.3	259.5	Sbd box	259.7
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.65580772370E+03		Apriori delay (usec)		-2.65582030595E+03		Resid mbdelay (usec)		-3.04275E-03	+/- 1.3E-05
Sband delay (usec)	-2.65580988020E+03		Apriori clock (usec)		-4.1779613E+01		Resid sbdelay (usec)		1.04258E-02	+/- 1.1E-04
Phase delay (usec)	-2.65582030988E+03		Apriori clockrate (us/s)		5.9899996E-07		Resid phdelay (usec)		-3.92742E-06	+/- 4.6E-08
Delay rate (us/s)	-1.13093878324E+00		Apriori rate (us/s)		-1.13093877928E+00		Resid rate (us/s)		-3.96225E-09	+/- 1.9E-10
Total phase (deg)			Apriori accel (us/s/s)		-9.02366427661E-06		Resid phase (deg)		-121.8	+/- 1.4

ph/seg (deg) 42.0 3.4 Search (2048X32) 1.373 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 33.1 5.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 56.9 2.0 Inc. seg. avg. 1.902 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 53.9 3.5 Inc. frq. avg. 2.145 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 u: az 309.5 el 46.0 pa 86.5 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 10285.715 -2427.468 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/uX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/uX.W.109.1WZRGR

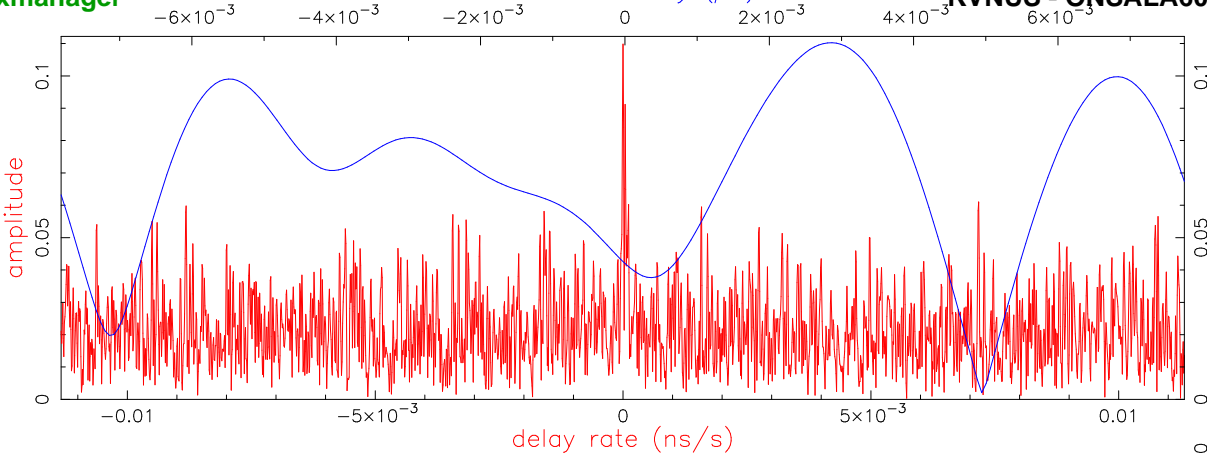
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, uX

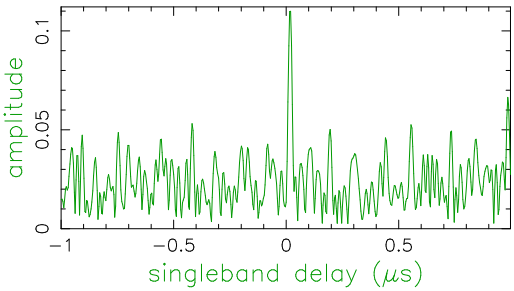
KVNUS - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

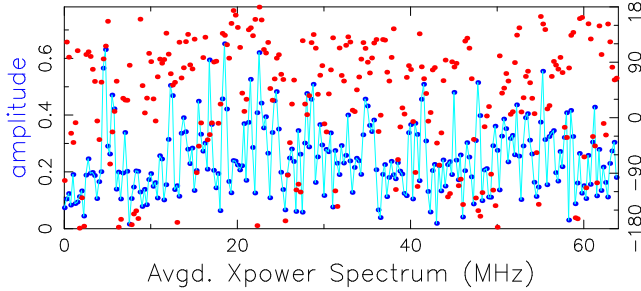


Fringe quality 0

SNR 6.3
Int time 419.795
Amp 0.112
Phase -104.1
PFD 8.4e-02
Delays (us)
SBD 0.017610
MBD 0.002982
Fringe rate (Hz)
-0.000232
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

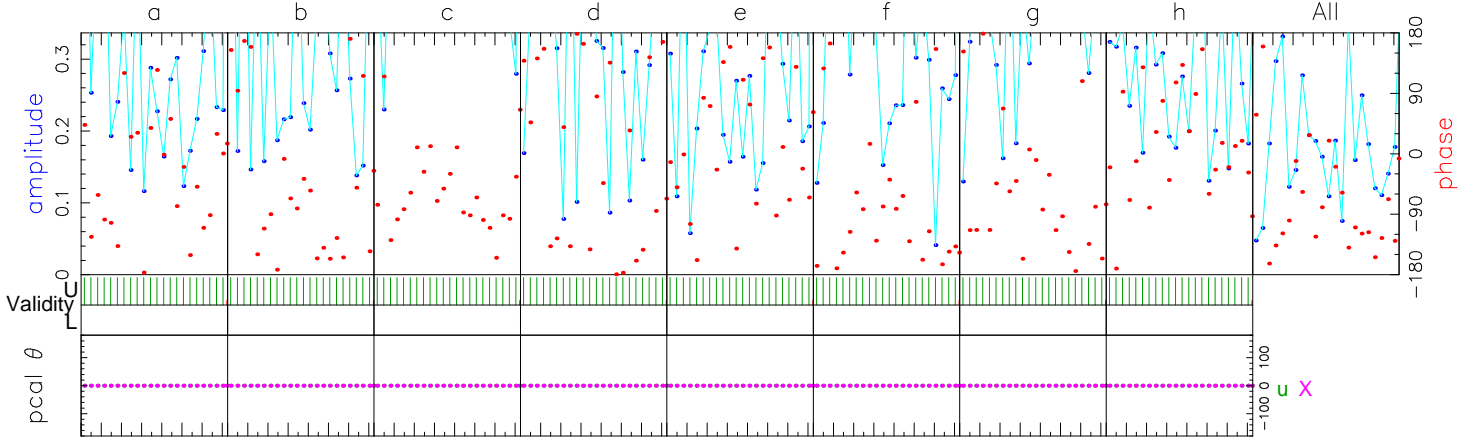


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114544
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
	-30.9	-145.3	-68.6	-173.1	45.8	-129.9	-107.4	27.4	Phase	-104.1
	0.1	0.2	0.4	0.2	0.0	0.2	0.2	0.1	Ampl.	0.2
	303.0	261.4	260.8	259.1	258.0	260.6	259.6	120.7	Sbd box	261.5
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

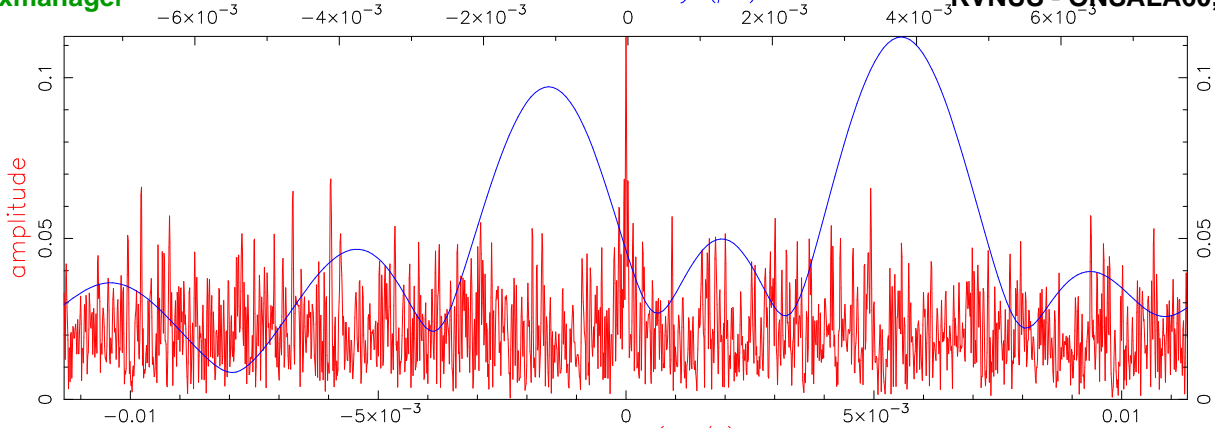
Group delay (usec)(sbd)	-2.65580169851E+03	Apriori delay (usec)	-2.65582030595E+03	Resid mbdelay (usec)	2.98244E-03	+/-	1.7E-04
Sband delay (usec)	-2.65580269595E+03	Apriori clock (usec)	-4.1779613E+01	Resid sbdelay (usec)	1.76100E-02	+/-	1.4E-03
Phase delay (usec)	-2.65582030931E+03	Apriori clockrate (us/s)	5.9899996E-07	Resid phdelay (usec)	-3.35728E-06	+/-	5.9E-07
Delay rate (us/s)	-1.13093878197E+00	Apriori rate (us/s)	-1.13093877928E+00	Resid rate (us/s)	-2.68827E-09	+/-	2.4E-09
Total phase (deg)	-159.7	Apriori accel (us/s/s)	-9.02366427661E-06	Resid phase (deg)	-104.1	+/-	18.2

ph/seg (deg)	68.0	Theor.	43.7	Amplitude	0.112 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	93.2		76.3	Search (2048X32)	0.109	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	94.4		25.8	Inc. seg. avg.	0.138	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	113.3		45.0	Inc. frq. avg.	0.163	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

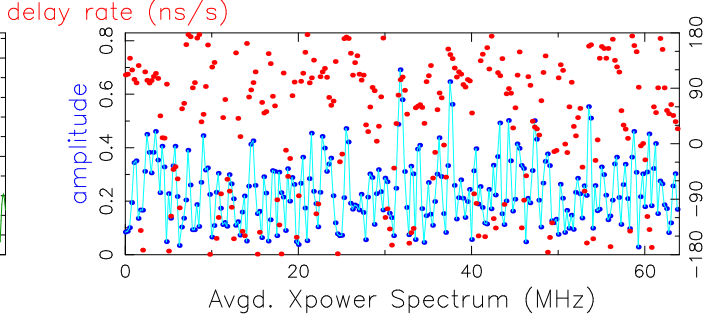
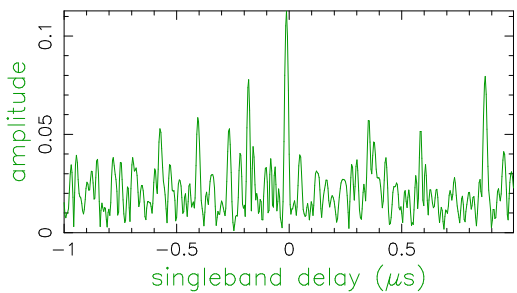
u: az 309.5 el 46.0 pa 86.5 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 10285.715 -2427.468 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/uX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/uX.W.129.1WZRGR

multiband delay (μ s)

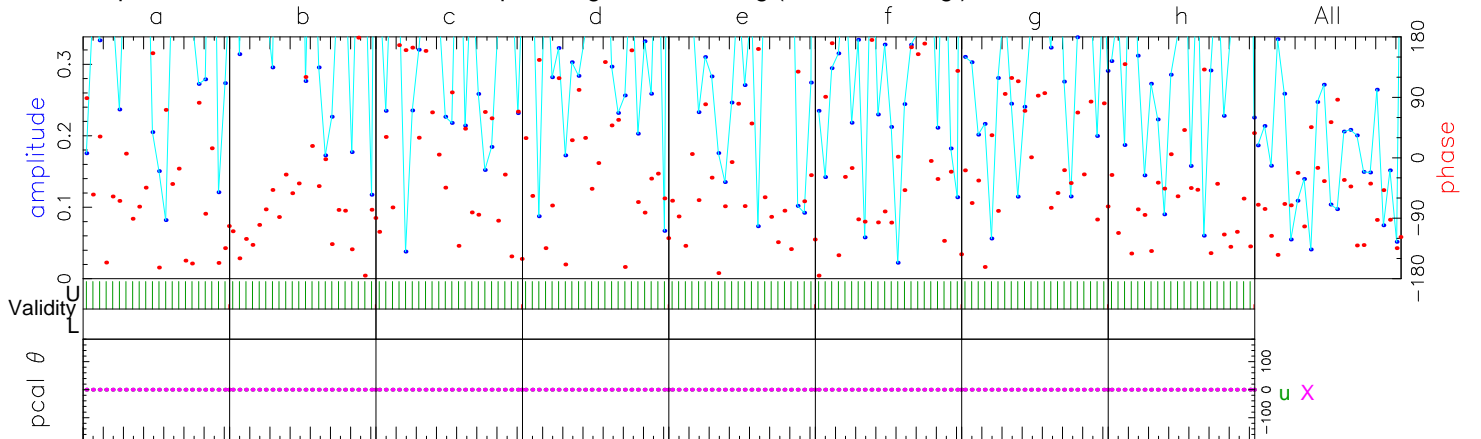


Fringe quality 0
 SNR 6.3
 Int time 419.795
 Amp 0.113
 Phase -74.0
 PFD 6.8e-02
 Delays (us)
 SBD -0.012262
 MBD 0.003779
 Fringe rate (Hz)
 -0.000052
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114548
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-56.9	-88.6	-82.1	-23.1	-73.7	-121.0	17.7	-86.2	Phase	-74.0
	0.2	0.3	0.0	0.1	0.2	0.1	0.1	0.2	Ampl.	0.1
	253.7	253.7	502.6	223.7	251.5	209.9	380.0	252.8	Sbd box	253.9
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.65583215245E+03		Apriori delay (usec)		-2.65582030595E+03		Resid mbdelay (usec)		3.77850E-03	+/- 1.7E-04
Sband delay (usec)	-2.65583256820E+03		Apriori clock (usec)		-4.1779613E+01		Resid sbdelay (usec)		-1.22623E-02	+/- 1.4E-03
Phase delay (usec)	-2.65582030834E+03		Apriori clockrate (us/s)		5.9899996E-07		Resid phdelay (usec)		-2.38566E-06	+/- 5.8E-07
Delay rate (us/s)	-1.13093877989E+00		Apriori rate (us/s)		-1.13093877928E+00		Resid rate (us/s)		-6.04400E-10	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-9.02366427661E-06		Resid phase (deg)		-74.0	+/- 18.1

ph/seg (deg) 62.6 43.5 Search (2048X32) 0.112 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 89.9 75.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 48.2 25.6 Inc. seg. avg. 0.132 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 67.3 44.7 Inc. frq. avg. 0.123 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 u: az 309.5 el 46.0 pa 86.5 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 10285.715 -2427.468 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/uX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/uX.W.149.1WZRGR

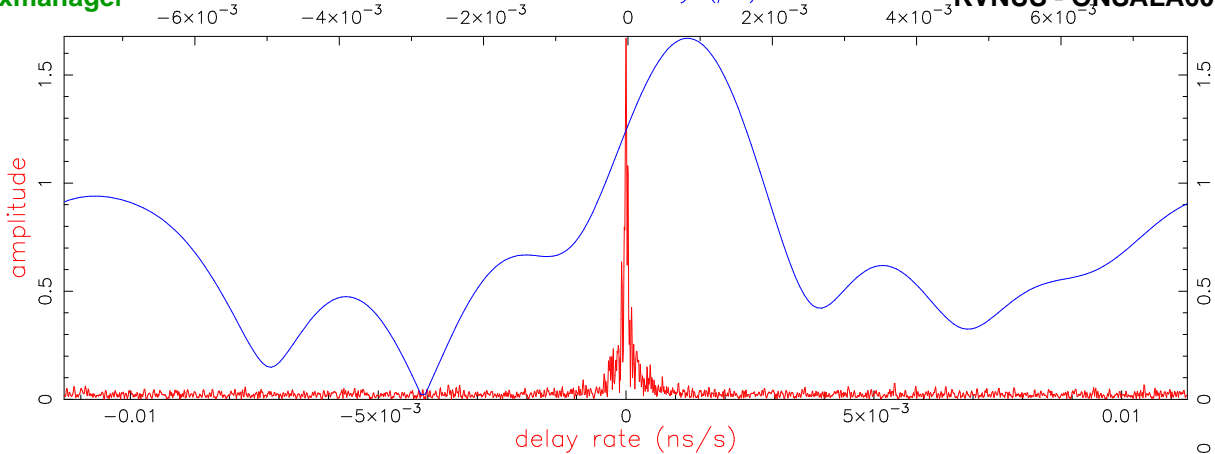
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, uX

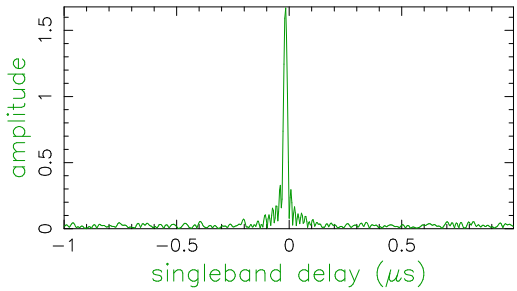
KVNUS - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

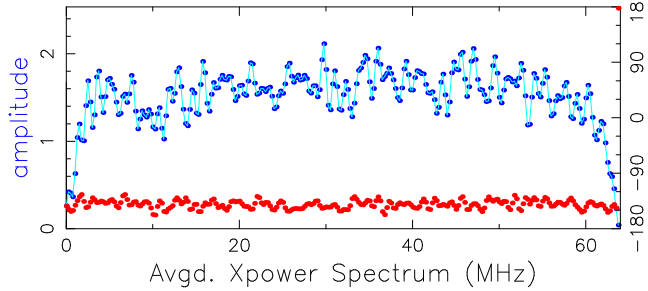


Fringe quality 3

SNR 94.0
 Int time 419.795
 Amp 1.678
 Phase 19.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.016559
 MBD 0.000799
 Fringe rate (Hz)
 -0.000364
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

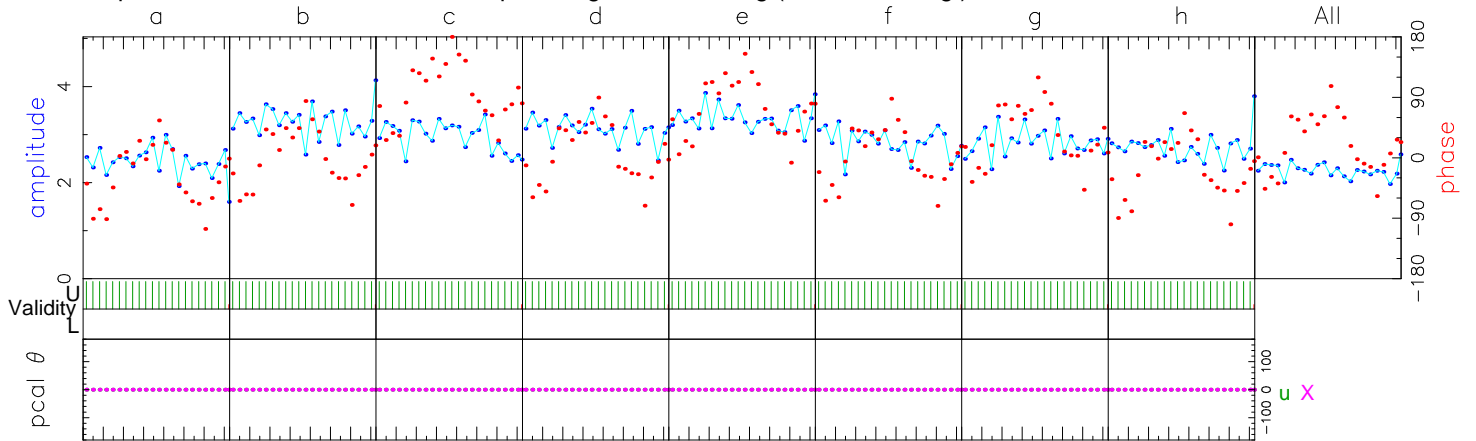


delay rate (ns/s)



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

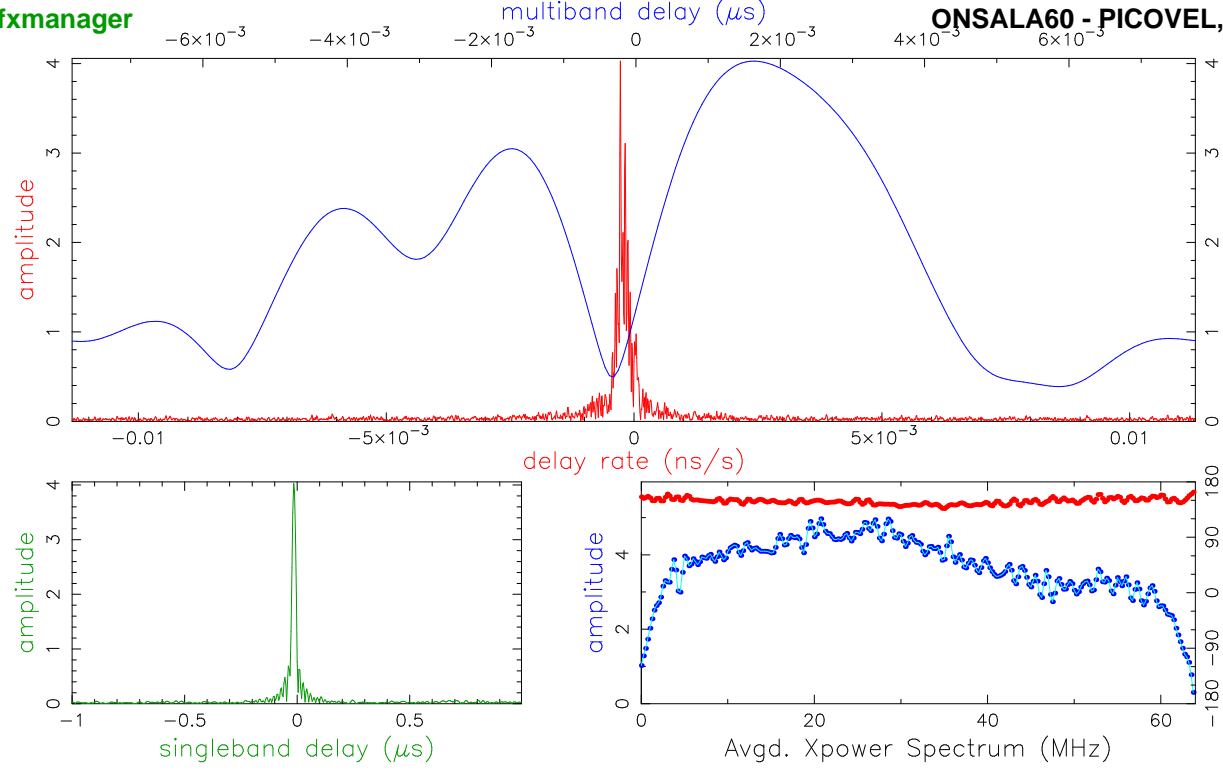


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-26.9	-0.3	96.4	5.6	73.6	-0.5	35.6	-18.8		19.5
	1.8	2.5	2.2	2.3	2.5	2.1	2.1	2.0	Ampl.	2.2
	254.6	252.7	252.2	252.2	252.3	252.2	252.3	252.6	Sbd box	252.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.65583513217E+03	Apriori delay (usec)	-2.65582030595E+03	Resid mbdelay (usec)	7.98781E-04	+/-	1.2E-05
Sband delay (usec)	-2.65583686445E+03	Apriori clock (usec)	-4.1779613E+01	Resid sbdelay (usec)	-1.65585E-02	+/-	9.2E-05
Phase delay (usec)	-2.65582030532E+03	Apriori clockrate (us/s)	5.9899996E-07	Resid phdelay (usec)	6.28161E-07	+/-	3.9E-08
Delay rate (us/s)	-1.13093878351E+00	Apriori rate (us/s)	-1.13093877928E+00	Resid rate (us/s)	-4.23080E-09	+/-	1.6E-10
Total phase (deg)	-36.2	Apriori accel (us/s/s)	-9.02366427661E-06	Resid phase (deg)	19.5	+/-	1.2

ph/seg (deg)	42.7	RMS	42.7	Theor.	2.9	Amplitude	1.678 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	34.6		34.6		5.1	Search (2048X32)	1.586	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	47.8		47.8		1.7	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	32.7		32.7		3.0	Inc. seg. avg.	2.240	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Inc. frq. avg.	2.186	Data rate(Mb/s):	2048	ion window (TEC)	0.00 0.00	
u:	az 309.5 el 46.0 pa 86.5											
X:	az 75.0 el 56.2 pa -56.0											
u,v	(fr/asec)	10285.715	-2427.468								simultaneous interpolator	

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/uX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/uX.W.90.1WZRGR

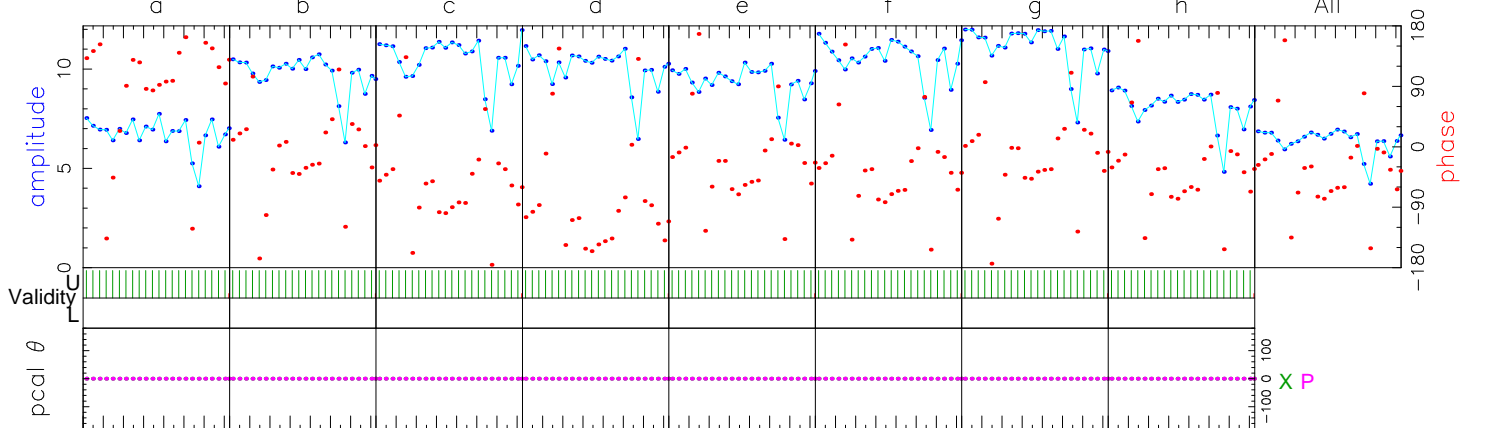


Fringe quality 1

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



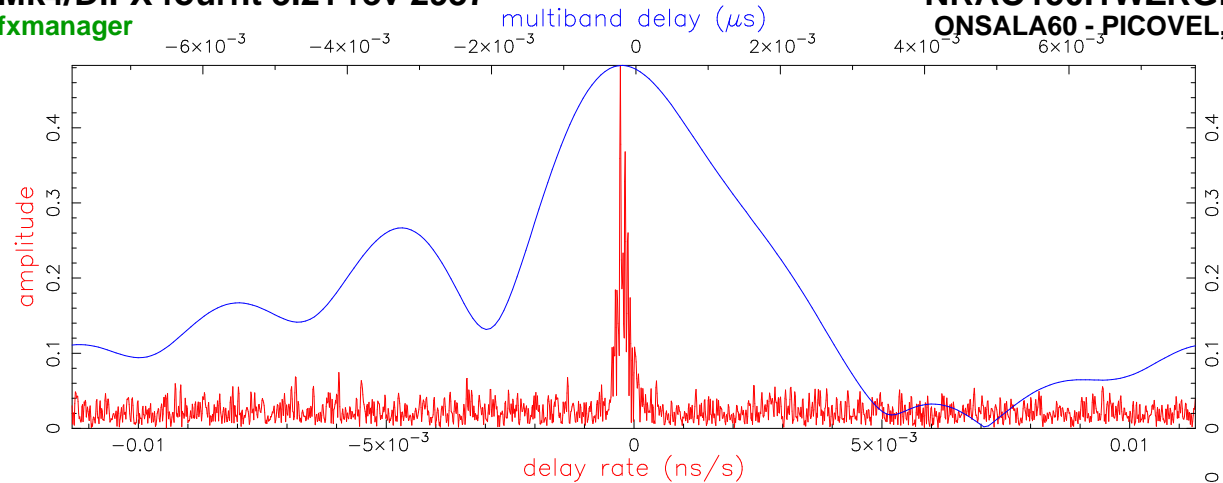
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All						
Group delay (usec)(sbd)	120.3	-2.8	-61.0	-115.9	-29.2	-43.0	-11.2	-40.2	Phase	-38.7						
Sband delay (usec)	4.3	6.1	6.6	6.3	5.9	6.6	7.0	5.2	Ampl.	6.0						
Phase delay (usec)	251.1	252.1	252.4	253.1	253.9	252.8	253.3	253.0	Sbd box	253.3						
Delay rate (us/s)	U/L 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used							
Total phase (deg)	X 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs							
	P 1000	1000	1000	1000	1000	1000	1000	1000	PC phase							
	X:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC							
	X:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp							
	X 1000	1000	1000	1000	1000	1000	1000	1000	Chan ids							
	P 1000	1000	1000	1000	1000	1000	1000	1000	Tracks							
	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					
	RMS	Theor.	Amplitude		4.058 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5							
	62.1	1.2	Search (2048X32)		3.865		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000					
	59.0	2.1	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.008 0.008			
	75.2	0.7	Inc. seg. avg.		6.367		Sample rate(MISamp/s): 128		dr window (ns/s)		-0.011 0.011					
	51.8	1.2	Inc. frq. avg.		5.990		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.107.1WZRGR											

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

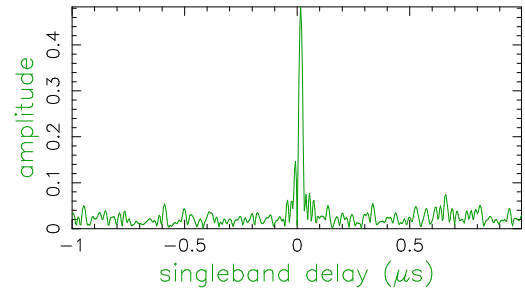
NRAO150.1WZRGR, No0037, XP

ONSALA60 - PICOVEL, fgroup W, pol LR

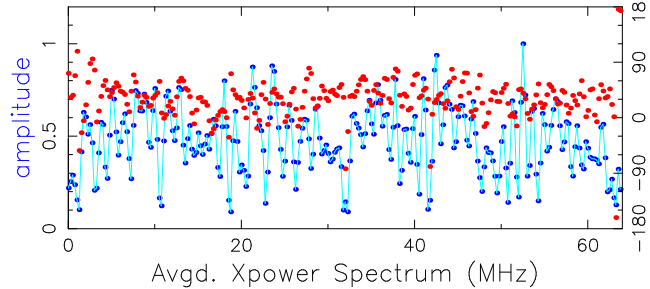


Fringe quality 6

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

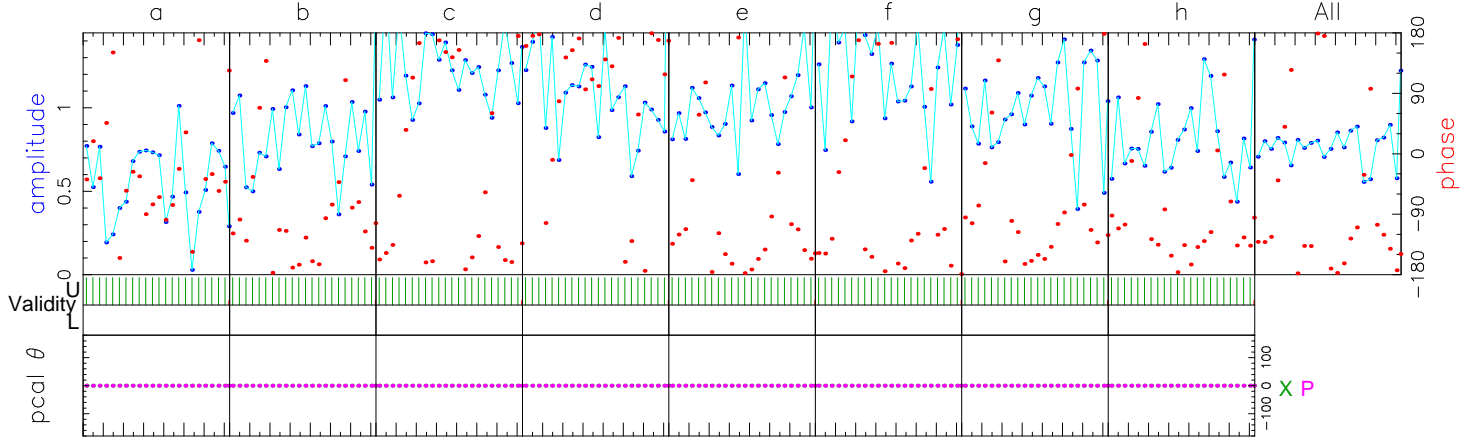


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114544
 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

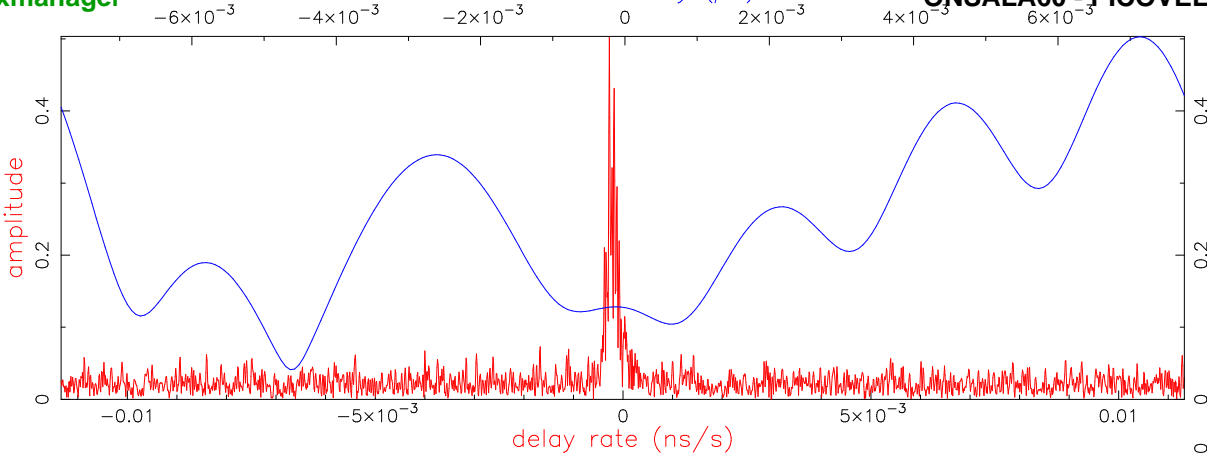
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, XP

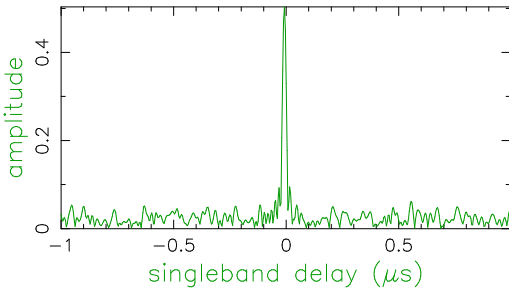
ONSALA60 - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

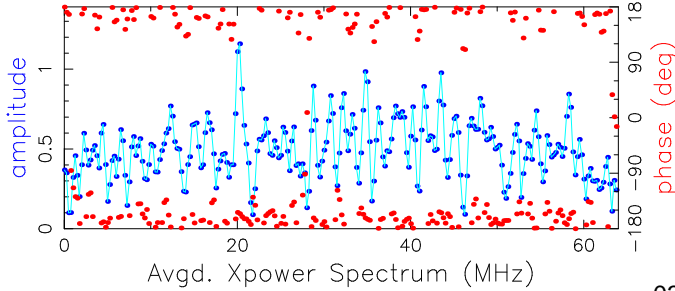


Fringe quality 5

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

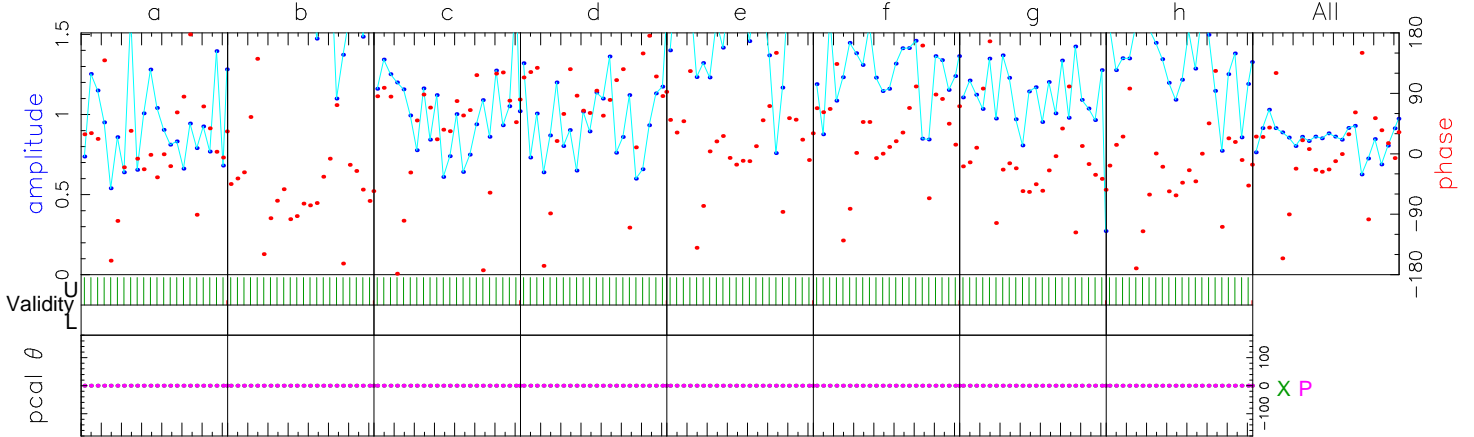


delay rate (ns/s)



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
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

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

ph/seg (deg)	64.9	RMS	9.7	Theor.	9.7	Amplitude	0.503 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	70.5	Search (2048X32)	0.483	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	58.0	Inc. seg. avg.	0.836	Inc. frq. avg.	0.742	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	63.1	Inc. frq. avg.	0.742	Sample rate (MSamp/s):	128	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

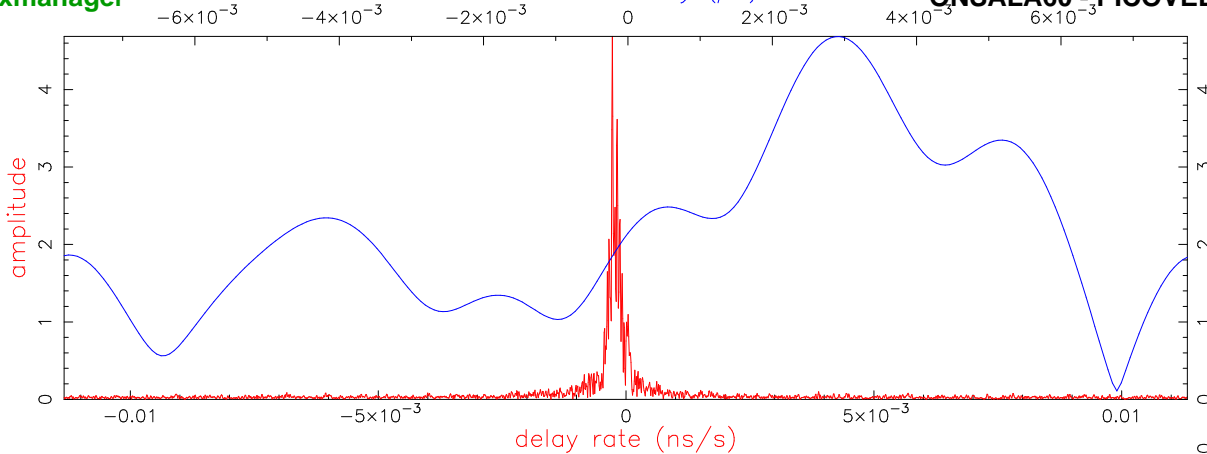
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, XP

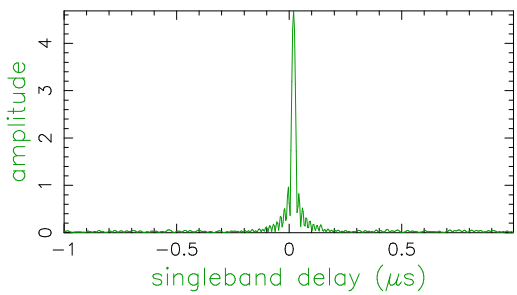
ONSALA60 - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

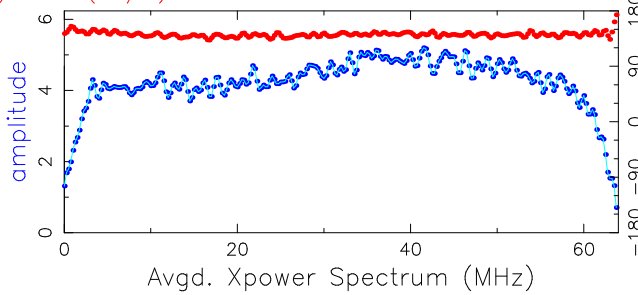


Fringe quality 1

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

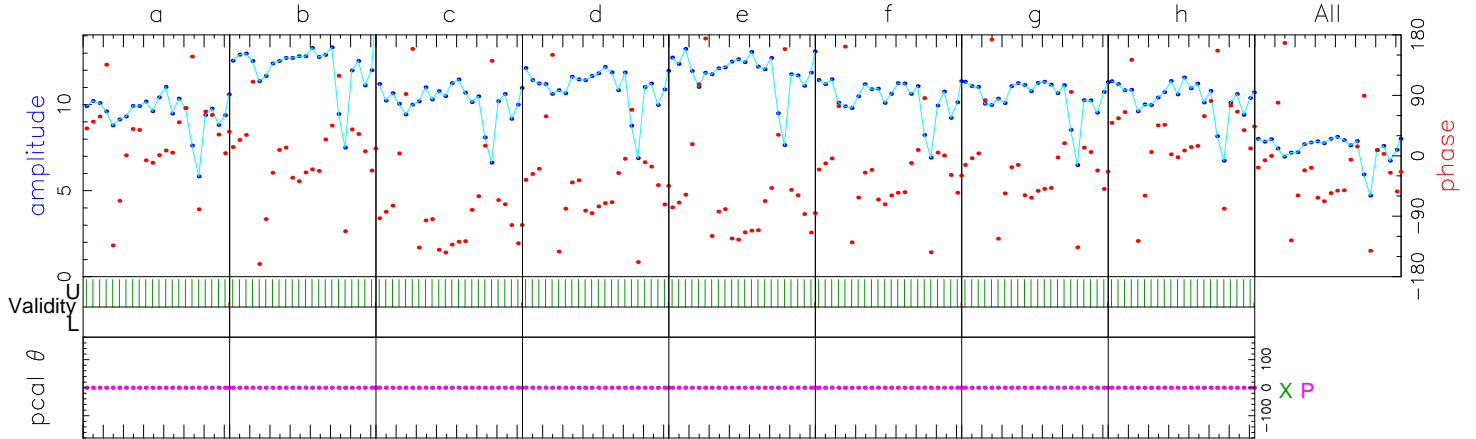


delay rate (ns/s)



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	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	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	RMS	1.0	Theor.	4.687 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	60.7	Search (2048X32)	4.520	Amplitude		Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	55.3	Interp.	0.000	Inc. seg. avg.	7.426	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	45.9	Inc. frq. avg.	6.767	Inc. frq. avg.	6.767	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	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.88.1WZRGR

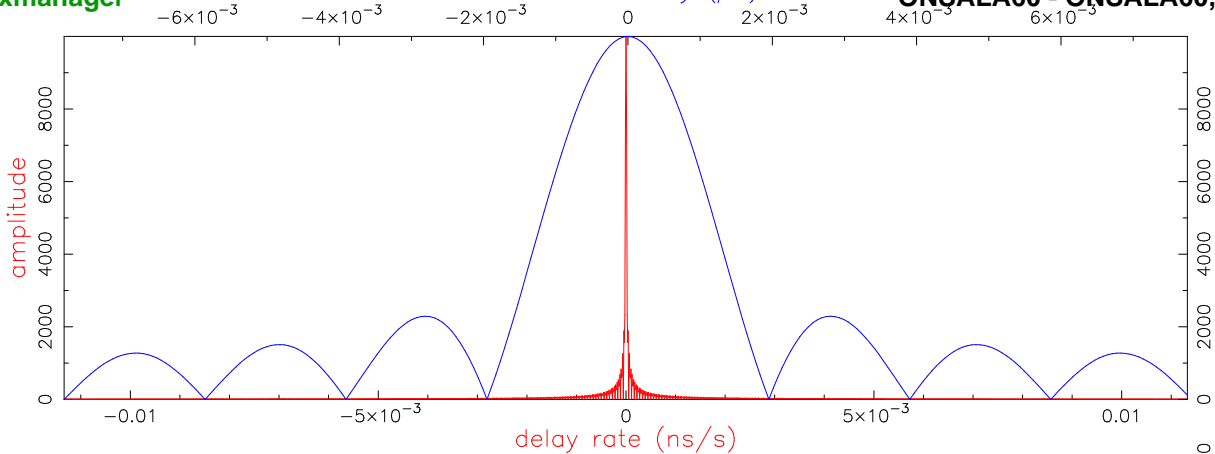
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, XX

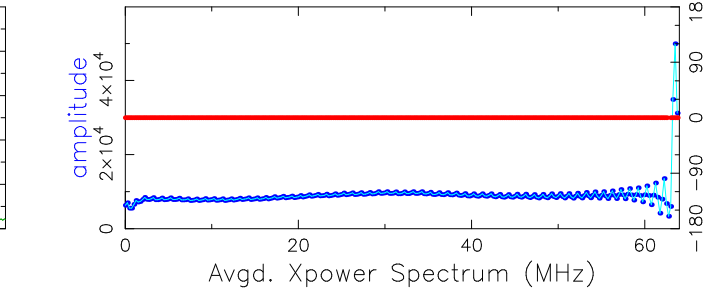
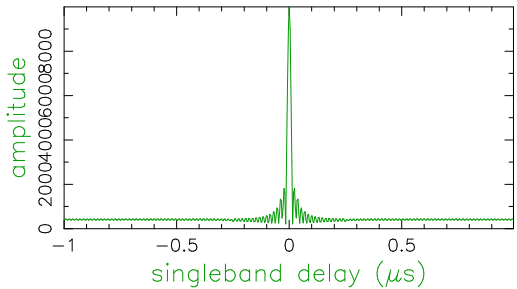
ONSALA60 - ONSALA60, fgroup W, pol RR

multiband delay (μ s)



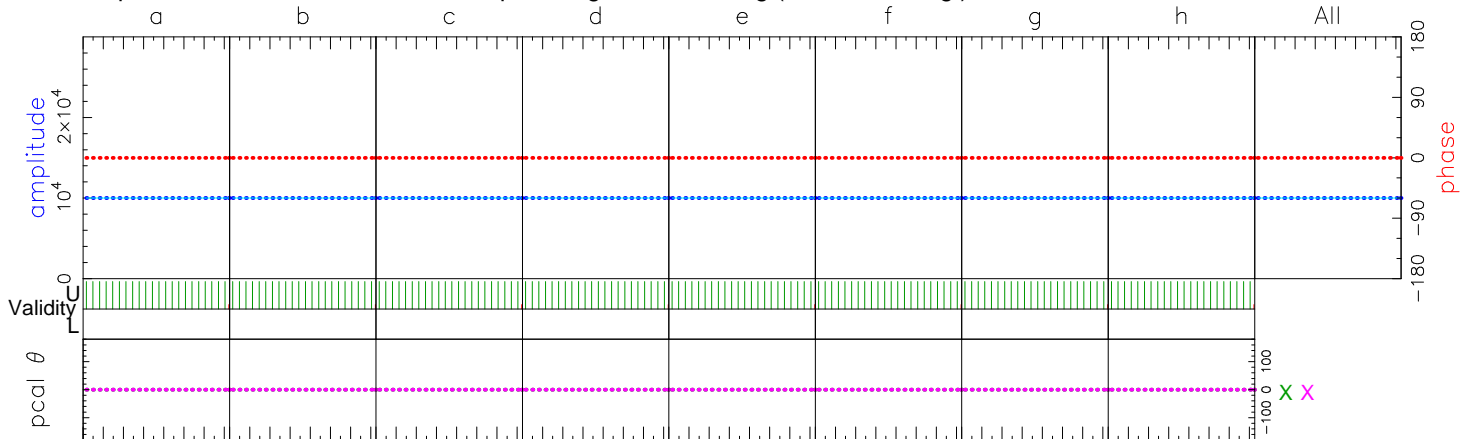
Fringe quality 9

SNR 560294.1
 Int time 419.795
 Amp 9999.999
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. 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	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	10000.0
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	10000.0
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	257.0
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	257.0
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	10000.0
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	10000.0
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		257.0
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		257.0

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	9999.999 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (2048X32)	9999.999	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.	9999.999	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 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/XX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/XX.W.108.1WZRGR

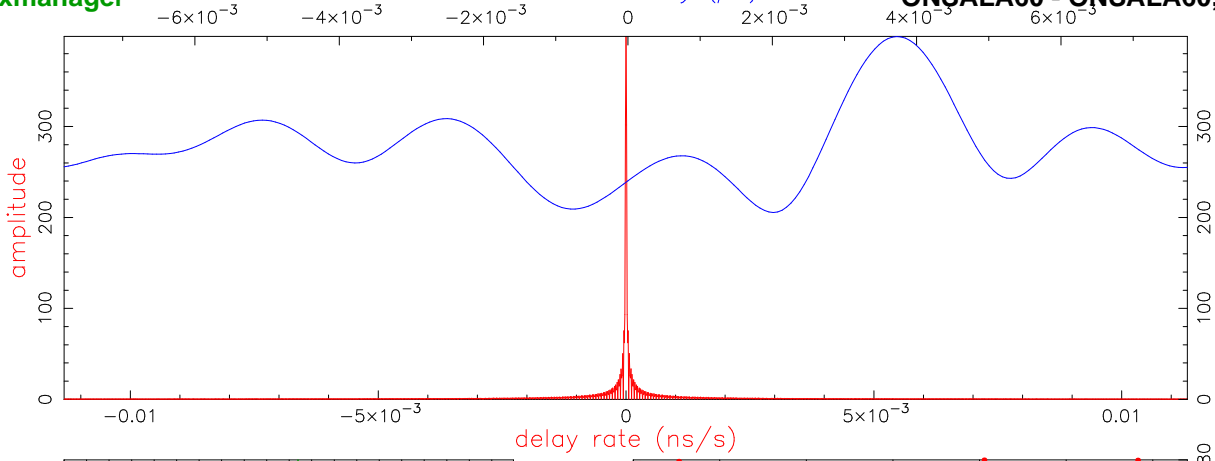
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

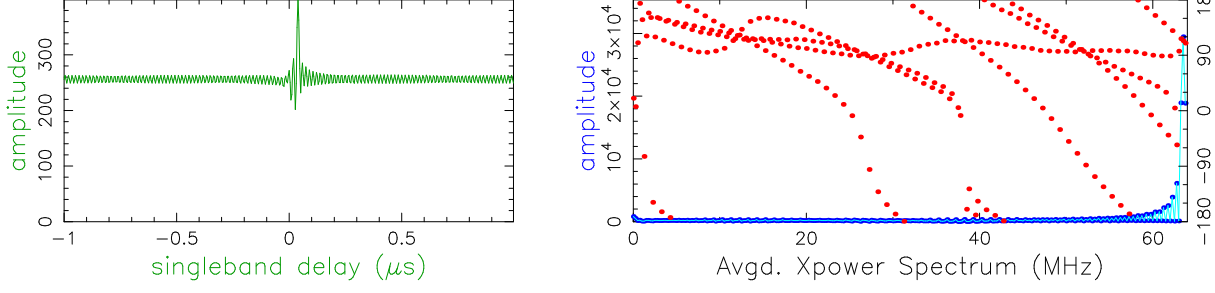
NRAO150.1WZRGR, No0037, XX

ONSALA60 - ONSALA60, fgroup W, pol LR

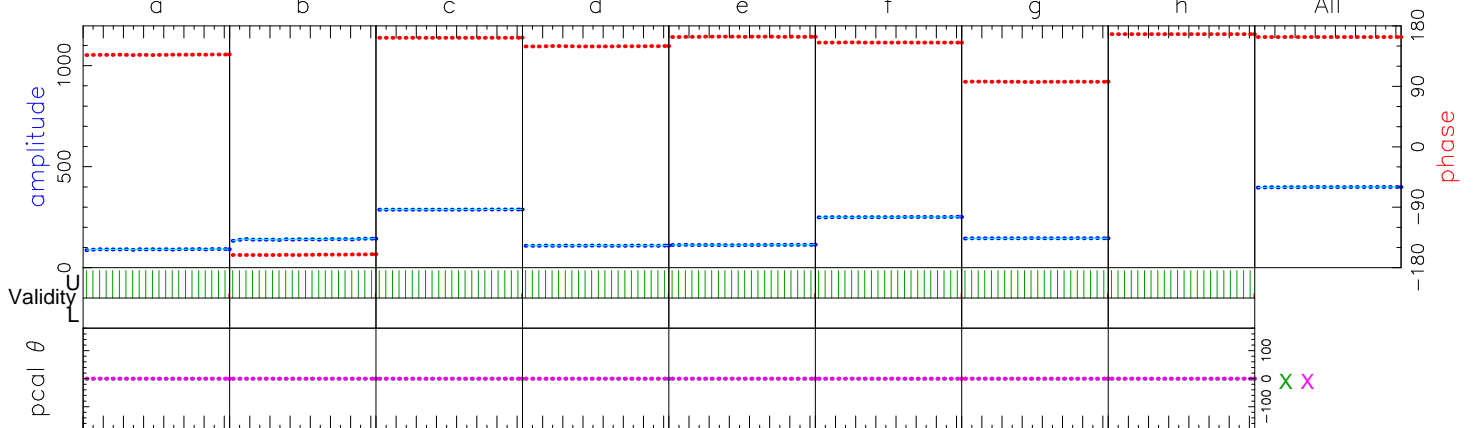
multiband delay (μ s)



Fringe quality 5
 SNR 22359.7
 Int time 419.795
 Amp 399.070
 Phase 163.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.039348
 MBD 0.003709
 Fringe rate (Hz) 0.000001
 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
	136.9	-160.7	162.2	149.5	163.7	155.1	96.7	167.6	Phase	163.4
	91.1	140.3	287.7	109.1	112.8	250.6	145.9	2189.3	Ampl.	415.8
	268.1	267.3	264.9	261.2	266.8	264.7	268.0	262.2	Sbd box	267.1
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.49587812500E-02		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		3.70878E-03	+/- 4.9E-08
Sband delay (usec)	3.93480000000E-02		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		3.93480E-02	+/- 3.9E-07
Phase delay (usec)	5.26911386809E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		5.26911E-06	+/- 1.7E-10
Delay rate (us/s)	1.13369219133E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		1.13369E-11	+/- 6.8E-13
Total phase (deg)			163.4		Apriori accel (us/s/s)		0.00000000000E+00		163.4	+/- 0.0

ph/seg (deg) 0.0 0.0 Search (2048X32) 394.651 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.2 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 33.5 0.0 Inc. seg. avg. 398.826 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 168.8 0.0 Inc. frq. avg. 415.839 Data rate (M/Samp/s): 128 Sample rate (M/Samp/s): 128 dr window (ns/s) -0.011 0.011
 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 0.000 0.000 Data rate (Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/XX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/XX.W.128.1WZRGR simultaneous interpolator

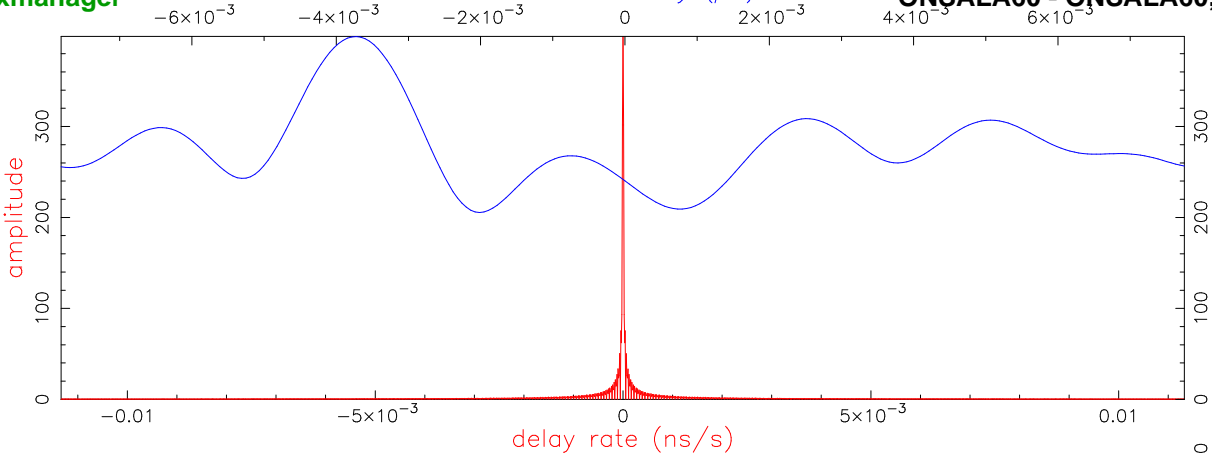
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, XX

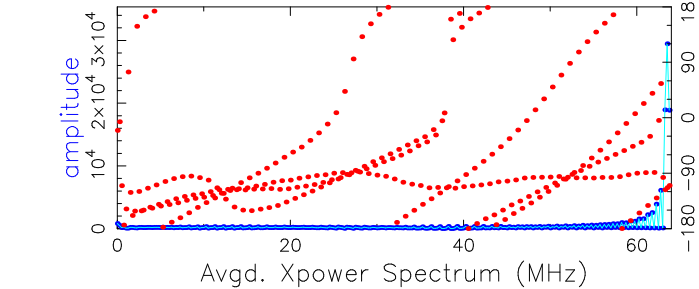
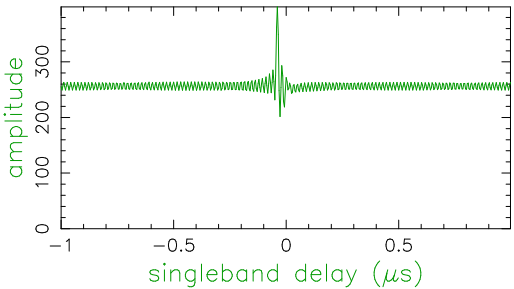
ONSALA60 - ONSALA60, fgroup W, pol RL

multiband delay (μ s)



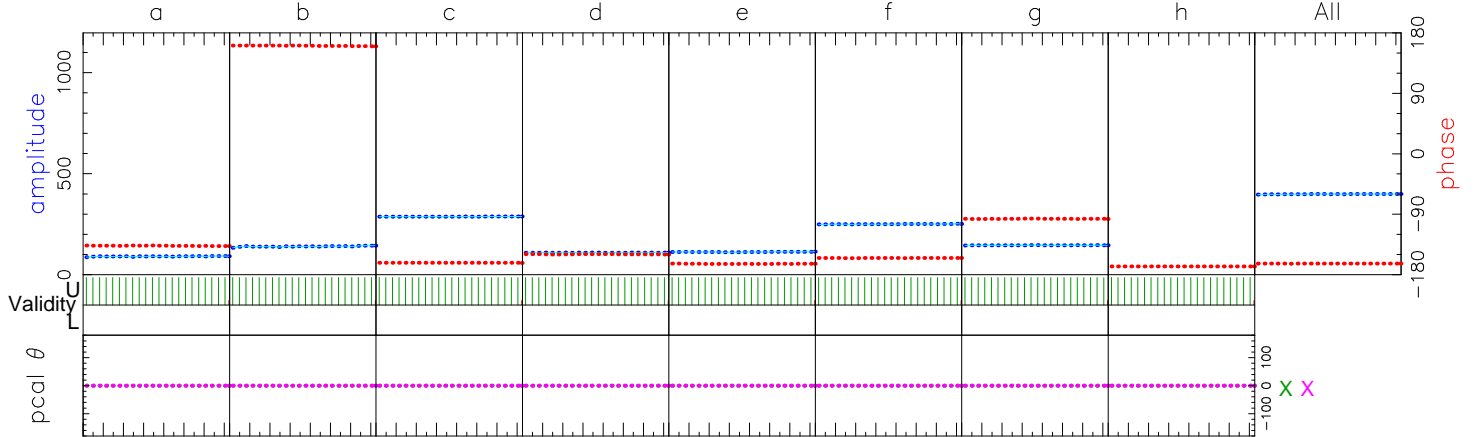
Fringe quality 5

SNR 22359.7
 Int time 419.795
 Amp 399.070
 Phase -163.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.039348
 MBD -0.003709
 Fringe rate (Hz)
 -0.000001
 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
 2021:303:114548
 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
	-136.9	160.7	-162.2	-149.5	-163.7	-155.1	-96.7	-167.6	Phase	-163.4
	91.1	140.3	287.7	109.1	112.8	250.6	145.9	2189.3	Ampl.	415.8
	245.9	246.7	249.1	252.8	247.2	249.3	246.0	251.8	Sbd box	246.9
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) -3.49587812500E-02 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -3.70878E-03 +/- 4.9E-08
 Sband delay (usec) -3.93480000000E-02 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) -3.93480E-02 +/- 3.9E-07
 Phase delay (usec) -5.26911386808E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -5.26911E-06 +/- 1.7E-10
 Delay rate (us/s) -1.13369219133E-11 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -1.13369E-11 +/- 6.8E-13
 Total phase (deg) -163.4 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) -163.4 +/- 0.0

RMS Theor. Amplitude 399.070 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (2048X32) 394.651 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.2 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 33.5 0.0 Inc. seg. avg. 398.826 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 168.8 0.0 Inc. frq. avg. 415.839 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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/XX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/XX.W.148.1WZRGR

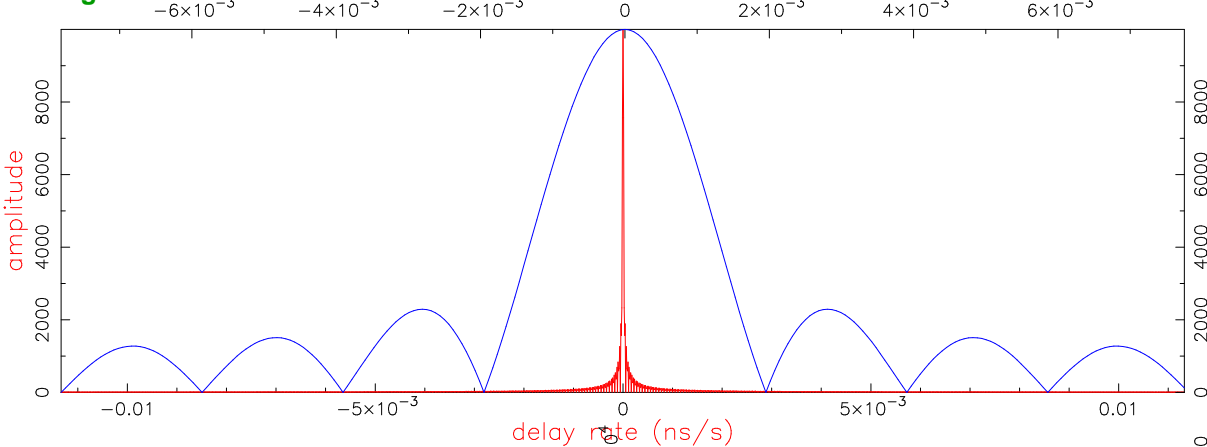
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, XX

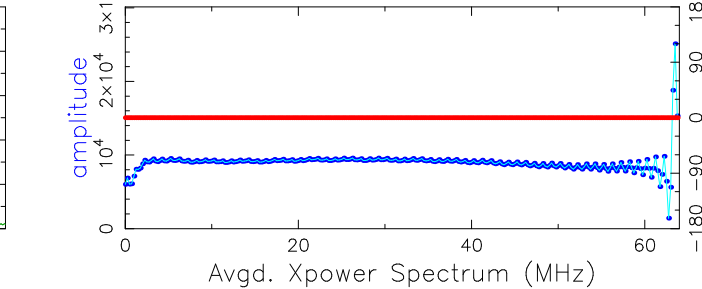
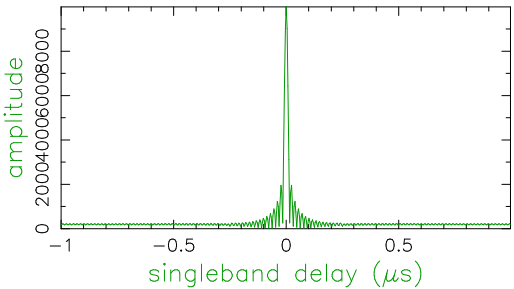
ONSALA60 - ONSALA60, fgroup W, pol LL

multiband delay (μ s)



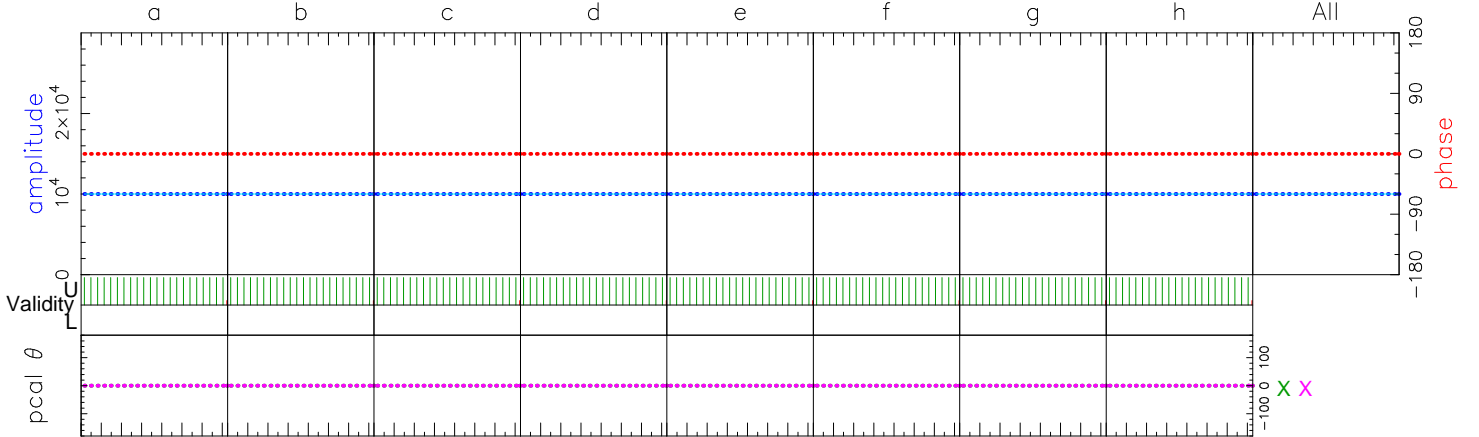
Fringe quality 9

SNR 560294.1
 Int time 419.795
 Amp 9999.999
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114537
 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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

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	9999.999 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	0.0	0.0	0.0	Search (2048X32)	9999.999	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(MISamp/s): 128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	9999.999	Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00	

X: az 75.0 el 56.2 pa -56.0 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/XX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/XX.W.94.1WZRGR

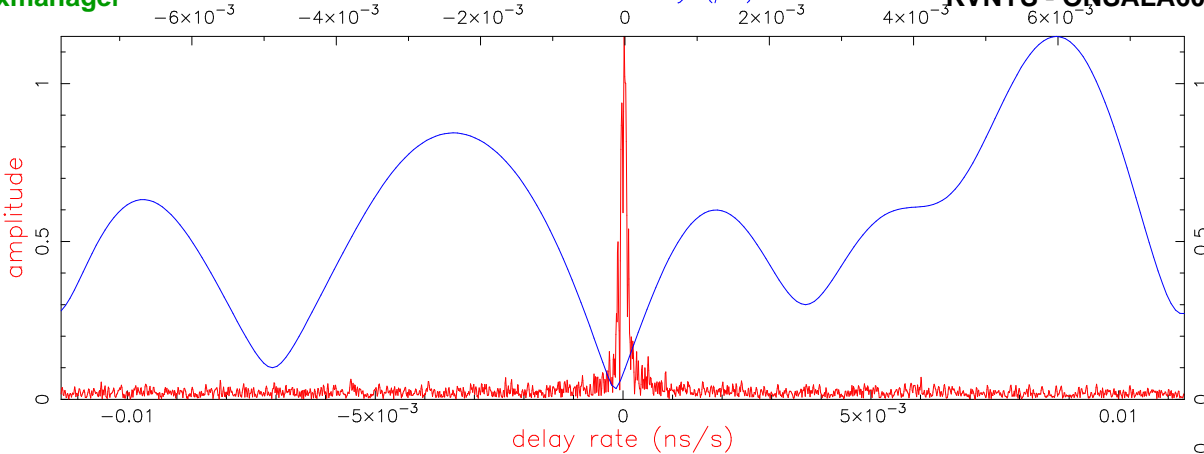
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, yX

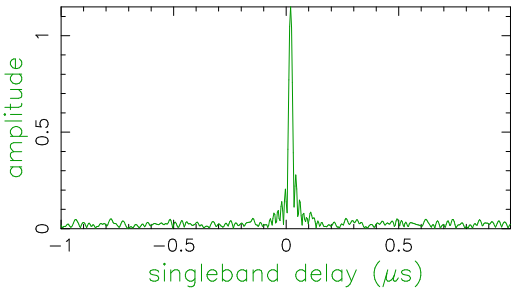
KVNYS - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

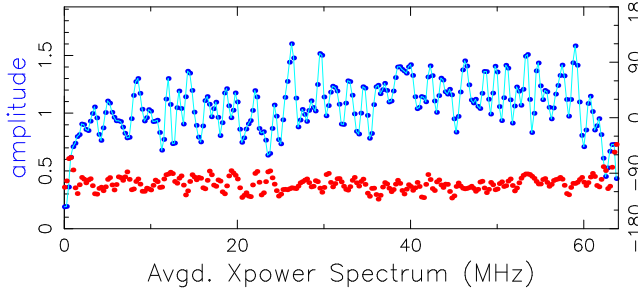


Fringe quality 1

SNR 64.4
Int time 419.795
Amp 1.150
Phase 47.9
PFD 0.0e+00
Delays (us)
SBD 0.019481
MBD 0.005976
Fringe rate (Hz)
0.002219
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

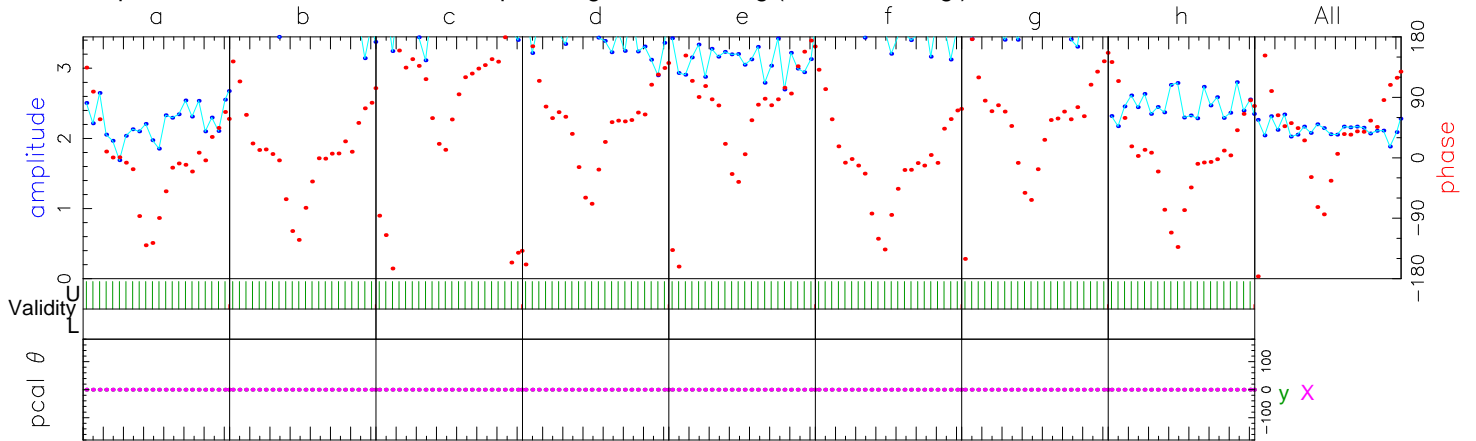


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114541
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

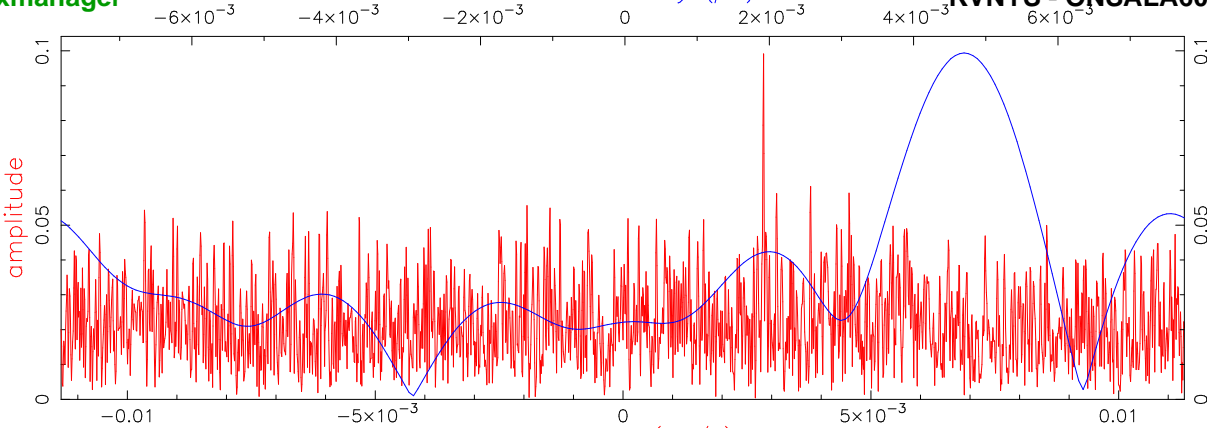
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



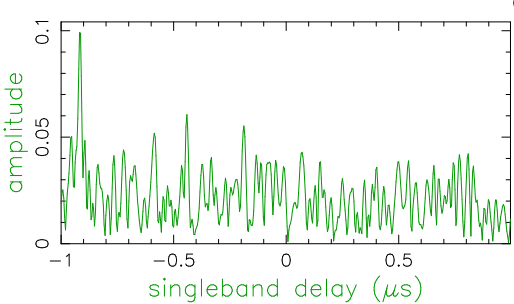
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
y:X	0:0	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		
X	1000	1000	1000	1000	1000	1000	1000	1000			
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
Group delay (usec)(sbd)	-1.98133836449E+03				-1.98135996541E+03				5.97593E-03	+/- 1.7E-05	
Sband delay (usec)	-1.98134048416E+03				-5.5776970E+01				1.94812E-02	+/- 1.3E-04	
Phase delay (usec)	-1.98135996387E+03				-5.2800001E-07				1.54540E-06	+/- 5.7E-08	
Delay rate (us/s)	-1.09694898555E+00				-1.09694901131E+00				2.57660E-08	+/- 2.4E-10	
Total phase (deg)			-103.5		-1.02025813677E-05				47.9	+/- 1.8	
	RMS	Theor.	Amplitude	1.150 +/- 0.018	Pcal mode: MANUAL, MANUAL				PC period (AP's) 5, 5		
ph/seg (deg)	64.1	4.3	Search (2048X32)	1.117	Pcal rate: 0.000E+00, 0.000E+00 (us/s)				sb window (us)	-1.000 1.000	
amp/seg (%)	85.6	7.4	Interp.	0.000	Bits/sample: 2x2				SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	56.9	2.5	Inc. seg. avg.	2.122	Sample rate(MISamp/s): 128					dr window (ns/s)	-0.011 0.011
amp/frq (%)	55.7	4.4	Inc. frq. avg.	1.717	Data rate(Mb/s): 2048					ion window (TEC)	0.00 0.00
y: az 307.6 el 48.7 pa 85.9			X: az 75.0 el 56.2 pa -56.0		u,v (fr/asec) 9973.887 -2381.339						simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/yX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/yX.W.113.1WZRGR

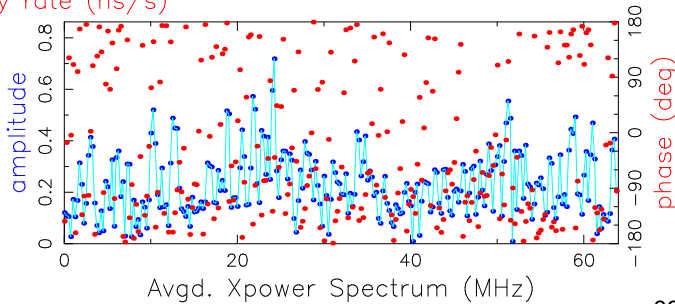
multiband delay (μ s)



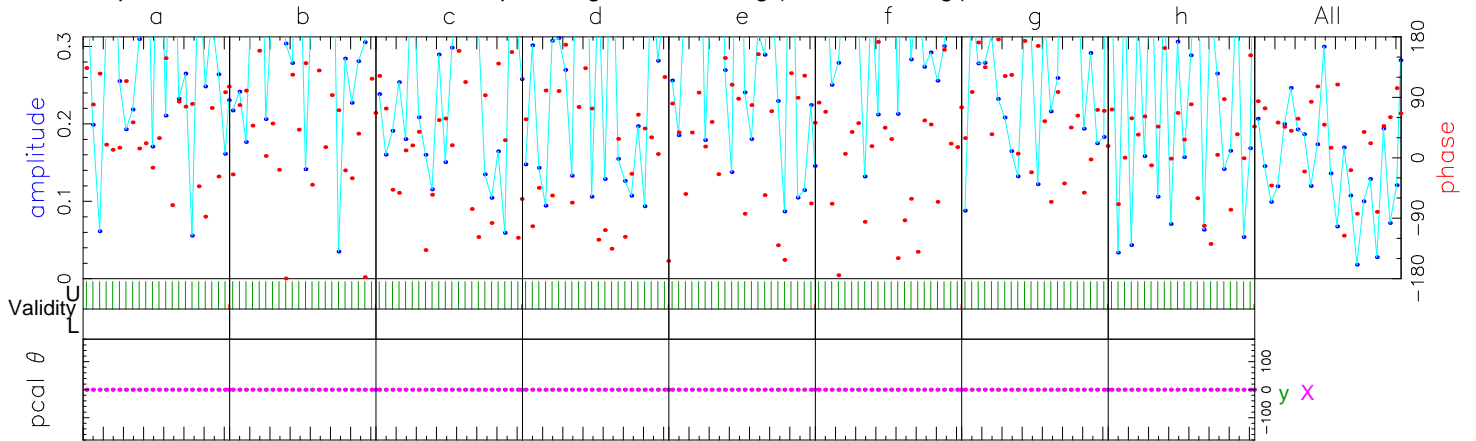
Fringe quality 0
SNR 5.7
Int time 419.795
Amp 0.104
Phase 47.8
PFD 9.6e-01
Delays (us)
SBD -0.916063
MBD 0.004775
Fringe rate (Hz)
0.244270
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114545
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			
y	1000	1000	1000	1000	1000	1000	1000	1000			
X	1000	1000	1000	1000	1000	1000	1000	1000			
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
y:X	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			
X	1000	1000	1000	1000	1000	1000	1000	1000			
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks	
Group delay (usec)(sbd)	-1.98227706526E+03								4.77515E-03	+/- 1.9E-04	
Sband delay (usec)	-1.98227602866E+03								-9.16063E-01	+/- 1.5E-03	
Phase delay (usec)	-1.98135996387E+03								1.54183E-06	+/- 6.5E-07	
Delay rate (us/s)	-1.09694617558E+00								2.83573E-06	+/- 2.7E-09	
Total phase (deg)			-103.6						47.8	+/- 20.1	
				Apriori delay (usec)	-1.98135996541E+03				Resid mbdelay (usec)		
				Apriori clock (usec)	-5.5776970E+01				Resid sbdelay (usec)		
				Apriori clockrate (us/s)	-5.2800001E-07				Resid phdelay (usec)		
				Apriori rate (us/s)	-1.09694901131E+00				Resid rate (us/s)		
				Apriori accel (us/s/s)	-1.02025813677E-05				Resid phase (deg)		
ph/seg (deg)	64.9	48.3		Search (2048X32)	0.096				PCal mode: MANUAL, MANUAL		
amp/seg (%)	78.2	84.3		Interp.	0.000				PCal rate: 0.000E+00, 0.000E+00 (us/s)		
ph/frq (deg)	31.4	28.5		Inc. seg. avg.	0.109				SampCntNorm: enabled		
amp/frq (%)	49.9	49.7		Inc. frq. avg.	0.098				Sample rate(MISamp/s): 128		
									Data rate(Mb/s): 2048		
									nlags: 256		
									t_cohere infinite		
y: az 307.6 el 48.7 pa 85.9				X: az 75.0 el 56.2 pa -56.0					ion window (TEC)	0.00	0.00
				u,v (fr/asec) 9973.887 -2381.339							
Control file: cf_1234_gmva	Input file: /Exps/c211c/v1/1234/No0037/yX..1WZRGR			Output file: /Exps/c211c/v1/1234/No0037/yX.W.134.1WZRGR							

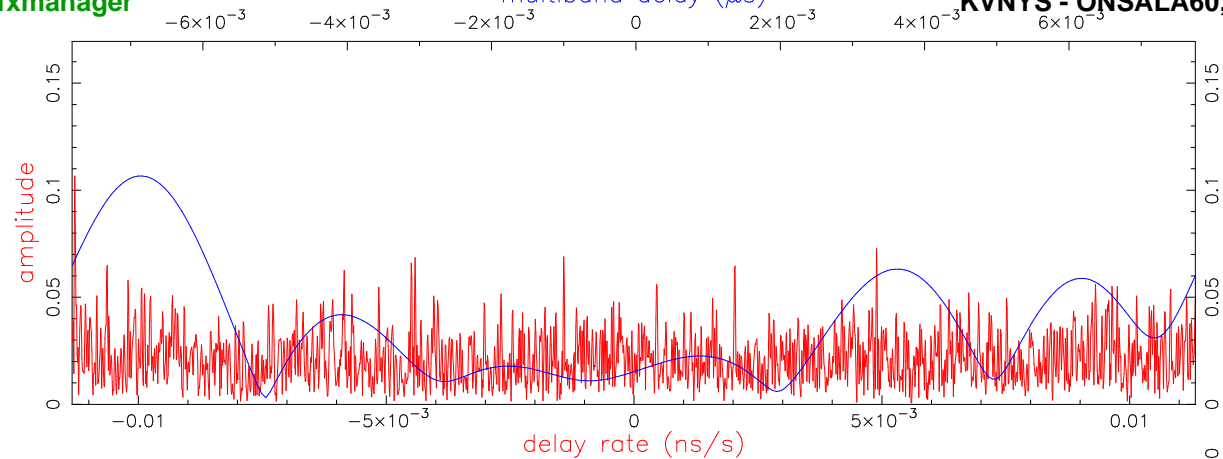
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, yX

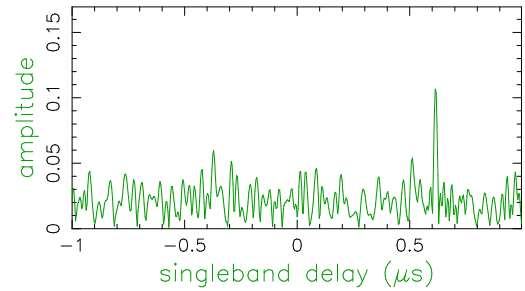
KVNYS - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

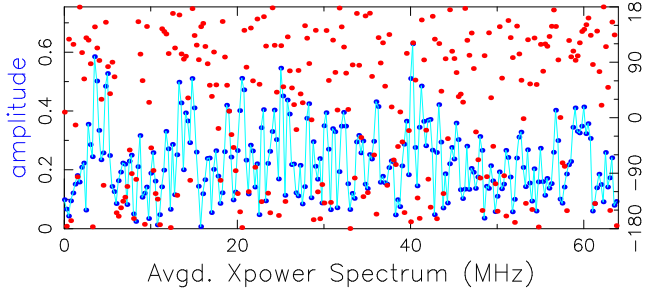


Fringe quality 0

SNR 6.1
Int time 419.795
Amp 0.170
Phase 92.6
PFD 2.9e-01
Delays (us)
SBD 0.614737
MBD -0.006833
Fringe rate (Hz)
-0.972805
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

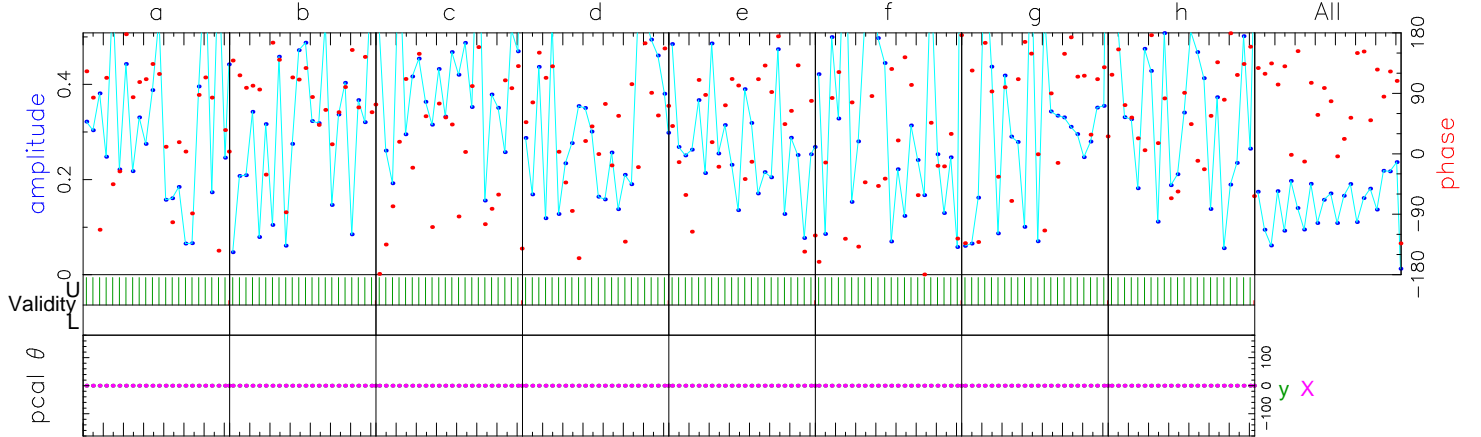


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 090000.00
Stop 090659.84
FRT 090330.00
Corr/FF/build
2021:302:211904
2021:303:114549
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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:X	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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks
Group delay (usec)(sbd)	-1.98074179879E+03									
Sband delay (usec)	-1.98074522866E+03									
Phase delay (usec)	-1.98135996243E+03									
Delay rate (us/s)	-1.09696030461E+00									
Total phase (deg)			-58.8							
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)									92.6	+/- 18.9
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
SampCntNorm: enabled										
mb window (us)										-0.008 0.008
dr window (ns/s)										-0.011 0.011
ion window (TEC)										0.00 0.00
pcal θ										-100 0 100
y X										
RMS	51.9	45.3								
Theor.										
Amplitude										0.170 +/- 0.028
Search (2048X32)										0.105
Interp.										0.000
Inc. seg. avg.										0.182
Inc. frq. avg.										0.166
ph/seg (deg)										
amp/seg (%)										
ph/frq (deg)										
amp/frq (%)										
y: az 307.6 el 48.7 pa 85.9										
X: az 75.0 el 56.2 pa -56.0										
u,v (fr/asec) 9973.887 -2381.339										
Control file: cf_1234_gmva										
Input file: /Exps/c211c/v1/1234/No0037/yX..1WZRGR										
Output file: /Exps/c211c/v1/1234/No0037/yX.W.153.1WZRGR										

simultaneous interpolator

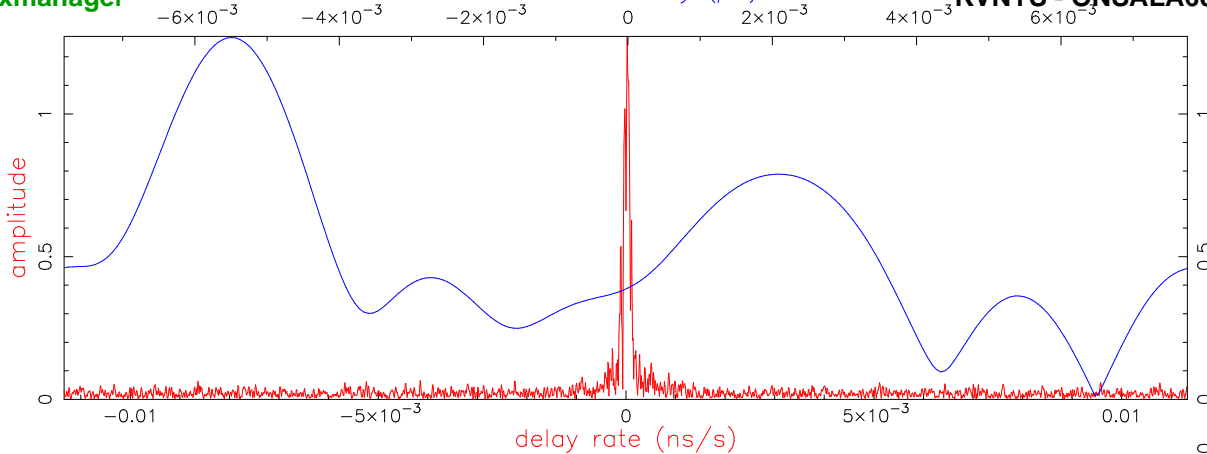
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, yX

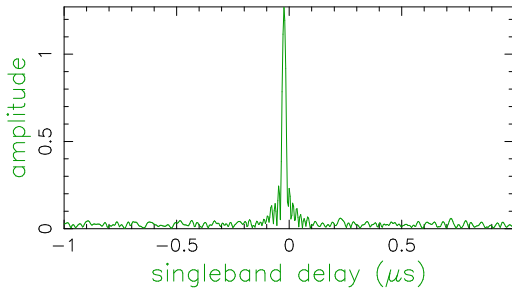
KVNYS - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

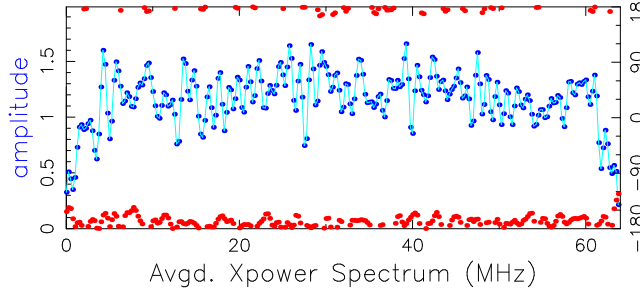


Fringe quality 2

SNR 71.2
 Int time 419.795
 Amp 1.272
 Phase -10.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.022742
 MBD -0.005478
 Fringe rate (Hz)
 0.002243
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

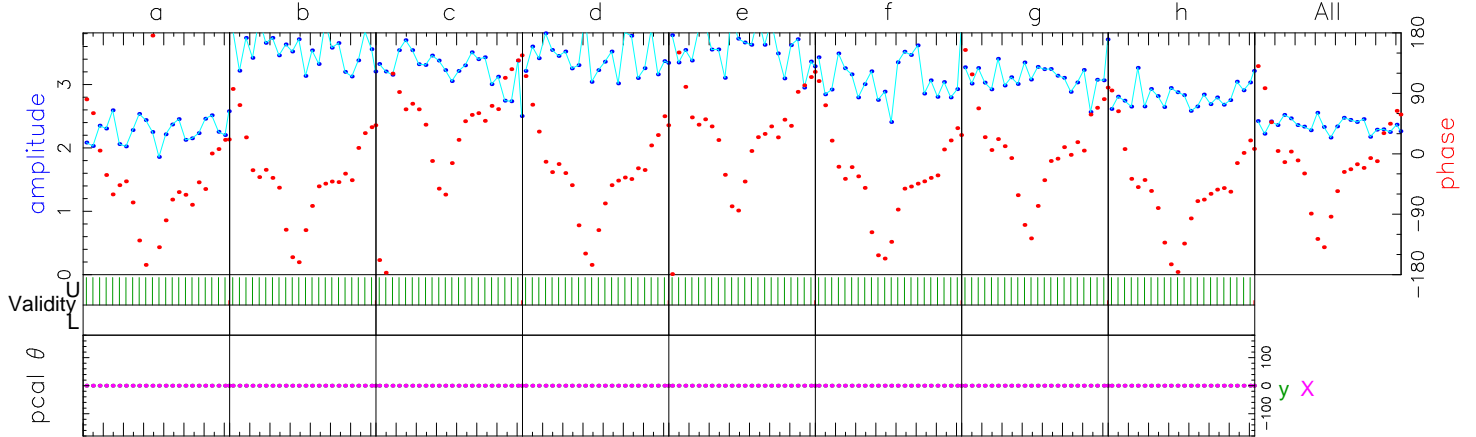


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090000.00
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114537
 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
	-51.1	-32.2	65.7	-25.9	41.7	-35.0	9.5	-53.3		-10.2
	1.2	1.9	1.7	1.8	1.9	1.7	1.6	1.5	Ampl.	1.7
	253.0	251.0	250.8	250.5	250.7	250.6	250.5	251.2	Sbd box	251.2
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.98138106868E+03	Apriori delay (usec)	-1.98135996541E+03	Resid mbdelay (usec)	-5.47826E-03	+/-	1.5E-05
Sband delay (usec)	-1.98138270766E+03	Apriori clock (usec)	-5.5776970E+01	Resid sbdelay (usec)	-2.27422E-02	+/-	1.2E-04
Phase delay (usec)	-1.98135996574E+03	Apriori clockrate (us/s)	-5.2800001E-07	Resid phdelay (usec)	-3.28854E-07	+/-	5.2E-08
Delay rate (us/s)	-1.09694898527E+00	Apriori rate (us/s)	-1.09694901131E+00	Resid rate (us/s)	2.60430E-08	+/-	2.1E-10
Total phase (deg)	-161.6	Apriori accel (us/s/s)	-1.02025813677E-05	Resid phase (deg)	-10.2	+/-	1.6

ph/seg (deg)	64.6	RMS	3.9	Theor.	1.272 +/- 0.018	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	85.9	Search (2048X32)	1.228	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)	47.8	Inc. seg. avg.	2.354	Inc. frq. avg.	1.666	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	35.6	Inc. frq. avg.	1.666			Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

y: az 307.6 el 48.7 pa 85.9 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 9973.887 -2381.339 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/yX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/yX.W.93.1WZRGR

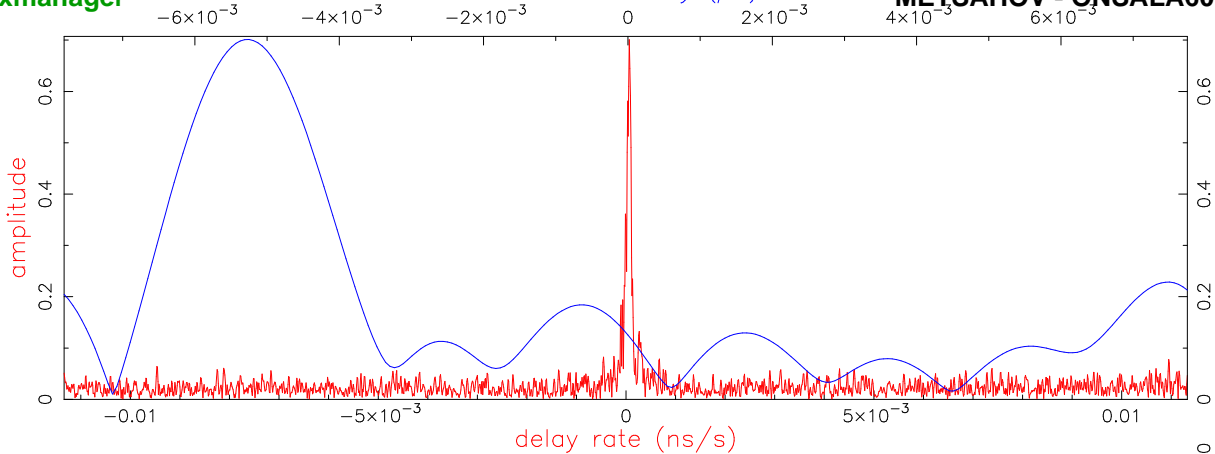
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, ZX

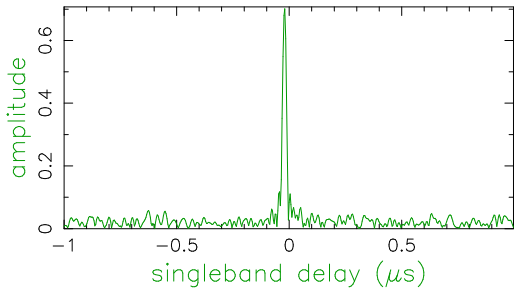
METSAHOV - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

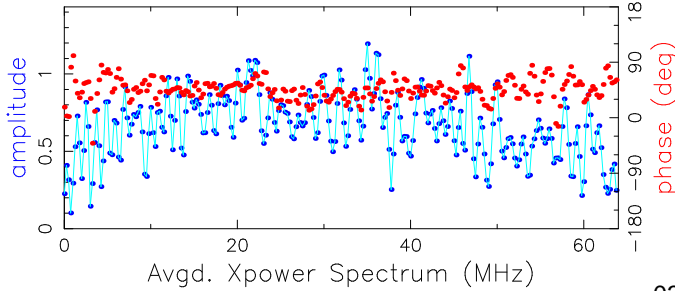


Fringe quality 6

SNR 39.0
 Int time 405.840
 Amp 0.707
 Phase -132.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.020784
 MBD -0.005299
 Fringe rate (Hz)
 0.005262
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

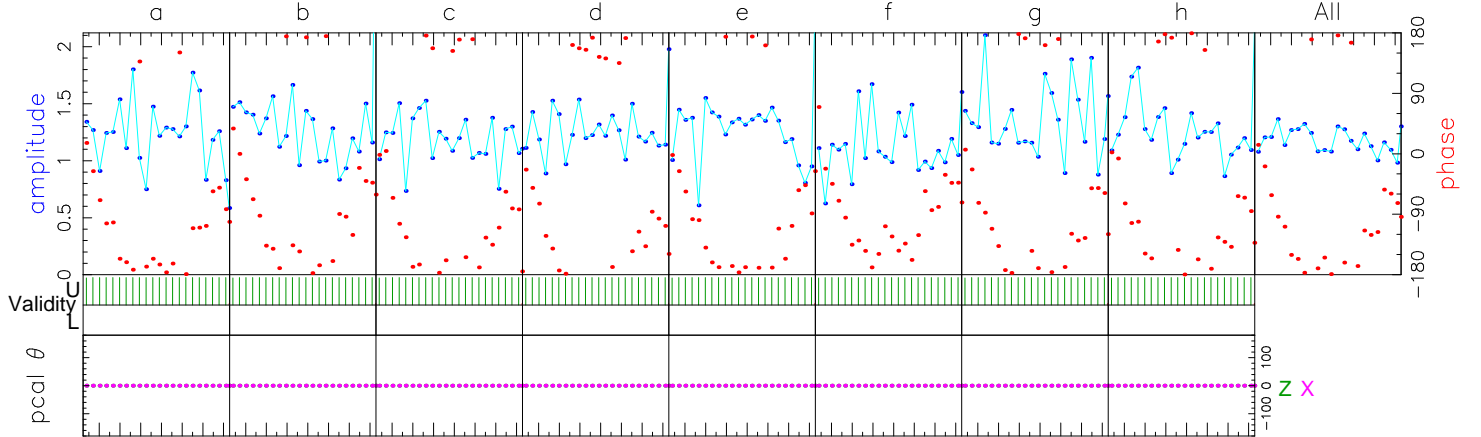


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 090013.31
 Stop 090659.84
 FRT 090330.00
 Corr/FF/build
 2021:302:211904
 2021:303:114552
 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



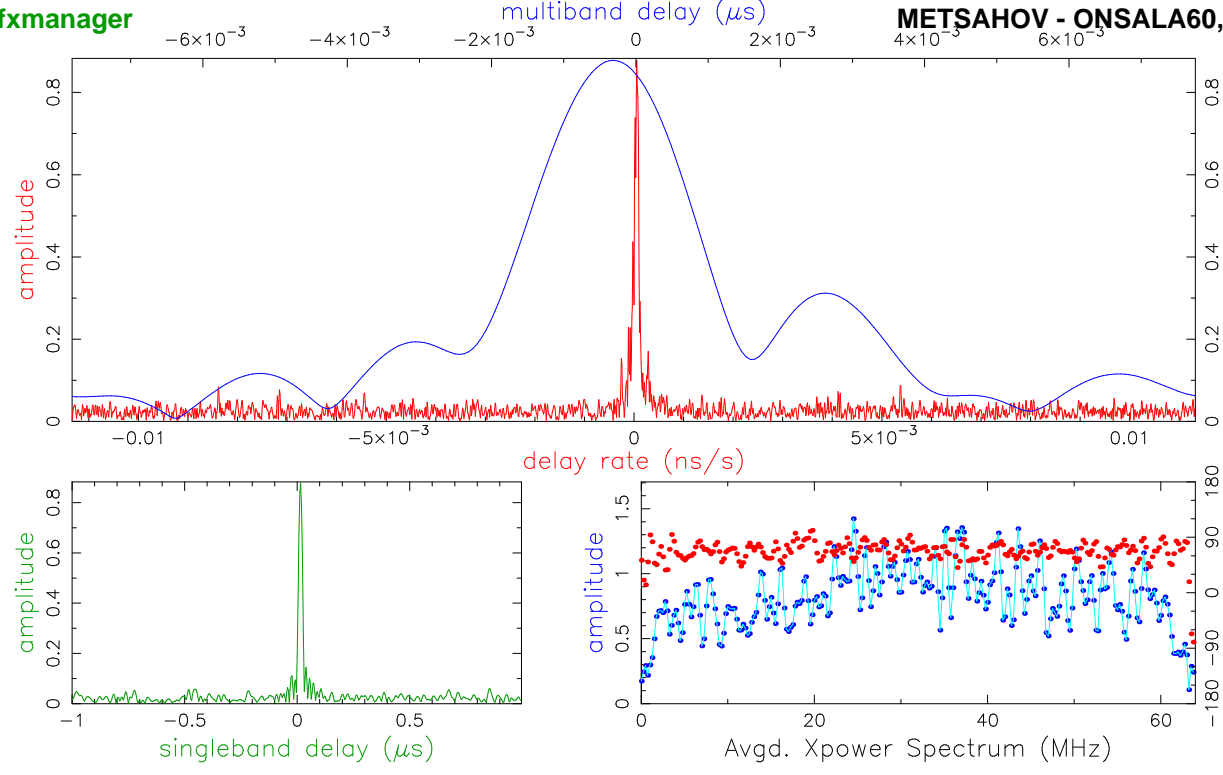
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-132.7	-116.0	-140.9	-155.4	-138.0	-105.6	-129.9	-134.6	Phase	-132.2
	0.7	0.6	0.7	0.8	0.8	0.7	0.8	0.8	Ampl.	0.7
	252.2	251.1	251.3	251.6	252.1	251.6	251.6	251.6	Sbd box	251.7
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.19967979936E+03	Apriori delay (usec)	1.19970072378E+03	Resid mbdelay (usec)	-5.29942E-03	+/-	2.8E-05
Sband delay (usec)	1.19967994028E+03	Apriori clock (usec)	-5.7196815E+01	Resid sbdelay (usec)	-2.07835E-02	+/-	2.2E-04
Phase delay (usec)	1.19970071952E+03	Apriori clockrate (us/s)	-5.1200000E-07	Resid phdelay (usec)	-4.26189E-06	+/-	9.5E-08
Delay rate (us/s)	-1.00326540748E-01	Apriori rate (us/s)	-1.00326601836E-01	Resid rate (us/s)	6.10876E-08	+/-	4.0E-10
Total phase (deg)	-7.3	Apriori accel (us/s/s)	-4.43859062237E-06	Resid phase (deg)	-132.2	+/-	2.9

ph/seg (deg)	RMS 58.6	Theor. 7.1	Amplitude Search (2048X32)	0.707 +/- 0.018	0.679	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	67.6	12.3	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	16.5	4.2	Inc. seg. avg.	1.165	1.165	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	7.8	7.3	Inc. frq. avg.	0.721	0.721	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

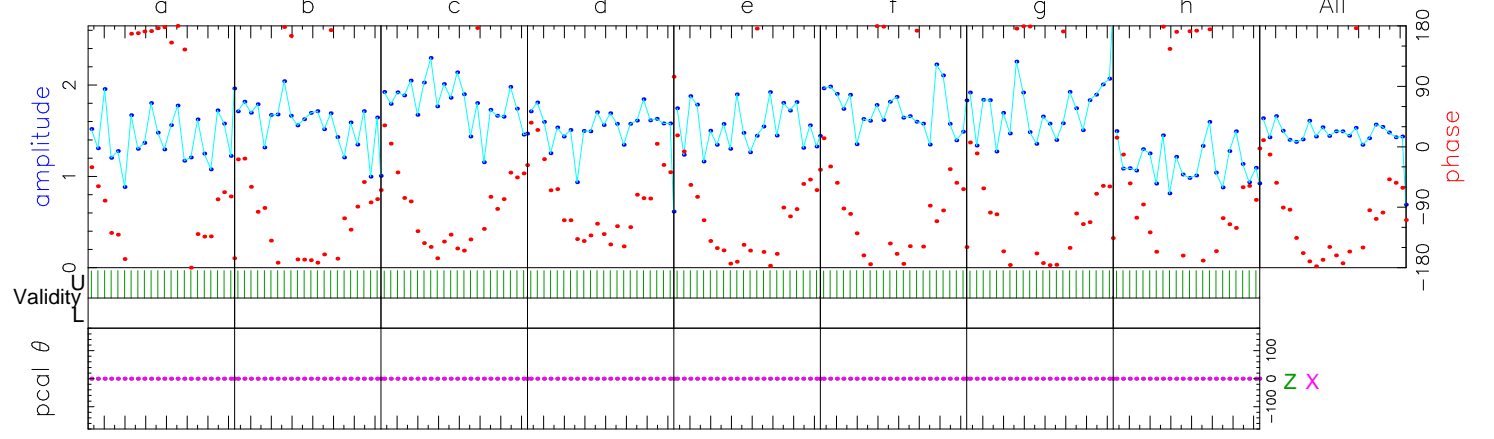
Z: az 88.9 el 63.0 pa -52.0 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 905.748 -296.611 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZX.W.161.1WZRGR



Fringe quality 4
SNR 48.6
Int time 405.840
Amp 0.883
Phase -119.0
PFD 0.0e+00
Delays (us)
SBD 0.014655
MBD -0.000341
Fringe rate (Hz) 0.005181
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
2021:303:114555
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'59.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-145.9	-129.3	-104.2	-85.1	-117.8	-117.9	-127.6	-130.6	Phase	-119.0
	0.9	1.0	1.1	0.9	0.9	1.0	1.0	0.6	Ampl.	0.9
	261.1	261.0	260.8	261.0	260.6	261.2	260.7	260.1	Sbd box	260.8
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.19971600774E+03		Apriori delay (usec)		1.19970072378E+03		Resid mbdelay (usec)		-3.41045E-04	+/- 2.2E-05
Sband delay (usec)	1.19971537878E+03		Apriori clock (usec)		-5.7196815E+01		Resid sbdelay (usec)		1.46550E-02	+/- 1.8E-04
Phase delay (usec)	1.19970071995E+03		Apriori clockrate (us/s)		-5.1200000E-07		Resid phdelay (usec)		-3.83842E-06	+/- 7.6E-08
Delay rate (us/s)	-1.00326541694E-01		Apriori rate (us/s)		-1.00326601836E-01		Resid rate (us/s)		6.01417E-08	+/- 3.2E-10
Total phase (deg)	5.8		Apriori accel (us/s/s)		-4.43859062237E-06		Resid phase (deg)		-119.0	+/- 2.4

ph/seg (deg) 56.3 5.6 Search (2048X32) 0.841 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 68.5 9.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 20.0 3.3 Inc. seg. avg. 1.474 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 14.6 5.8 Inc. frq. avg. 0.917 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
Z: az 88.9 el 63.0 pa -52.0 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 905.748 -296.611 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZX.W.166.1WZRGR

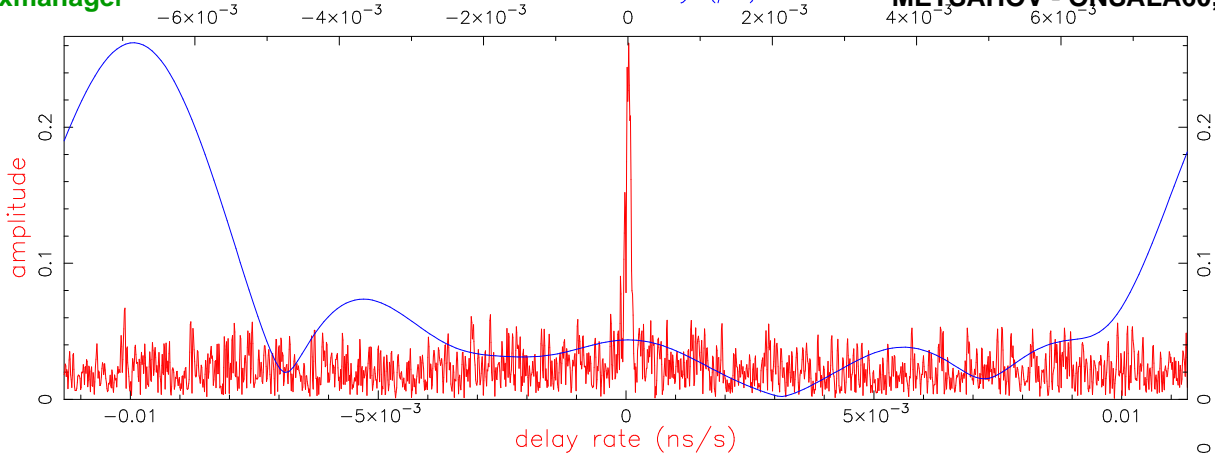
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1WZRGR, No0037, ZX

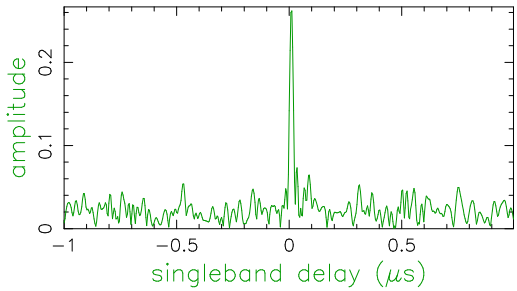
METSAHOV - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

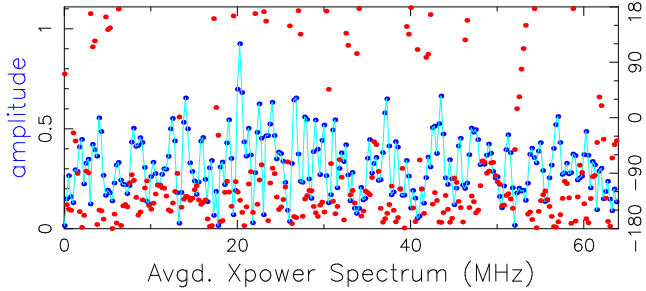


Fringe quality 9

SNR 14.7
 Int time 405.840
 Amp 0.267
 Phase 54.7
 PFD 4.1e-40
 Delays (us)
 SBD 0.009940
 MBD -0.006907
 Fringe rate (Hz)
 0.005044
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

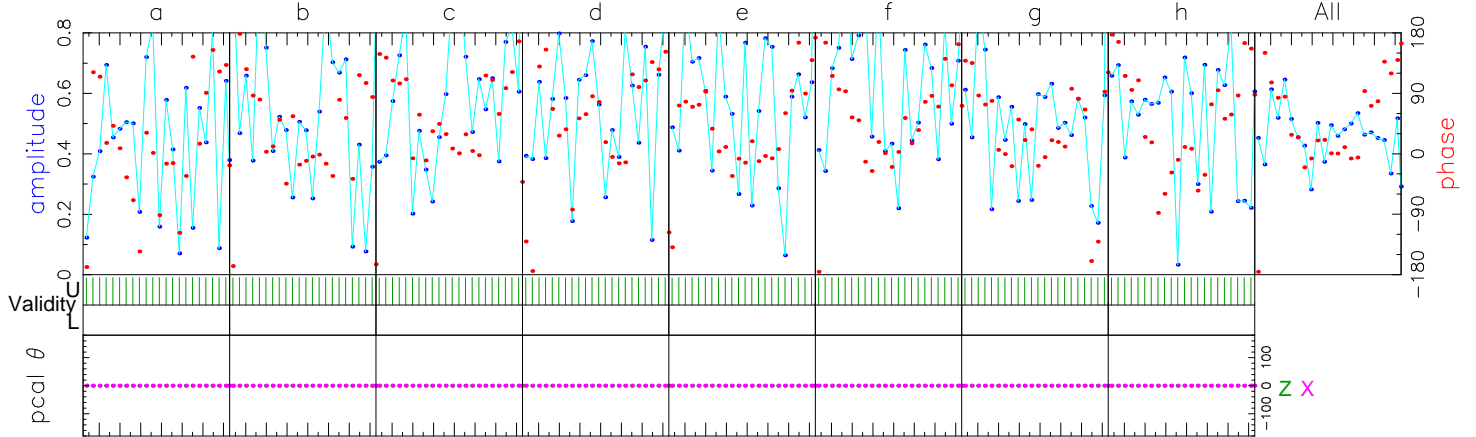


delay rate (ns/s)



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
	22.4	39.5	67.7	81.3	42.0	66.7	49.1	44.7	Phase	54.7
	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.2	Ampl.	0.3
	260.2	259.5	259.5	258.7	259.8	260.4	259.6	258.3	Sbd box	259.5
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 1.19970944203E+03 Apriori delay (usec) 1.19970072378E+03 Resid mbdelay (usec) -6.90675E-03 +/- 7.4E-05
 Sband delay (usec) 1.19971066403E+03 Apriori clock (usec) -5.7196815E+01 Resid sbdelay (usec) 9.94025E-03 +/- 5.9E-04
 Phase delay (usec) 1.19970072555E+03 Apriori clockrate (us/s) -5.1200000E-07 Resid phdelay (usec) 1.76508E-06 +/- 2.5E-07
 Delay rate (us/s) -1.00326543279E-01 Apriori rate (us/s) -1.00326601836E-01 Resid rate (us/s) 5.85573E-08 +/- 1.1E-09
 Total phase (deg) 179.6 Apriori accel (us/s/s) -4.43859062237E-06 Resid phase (deg) 54.7 +/- 7.8

RMS Theor. Amplitude 0.267 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 60.2 18.7 Search (2048X32) 0.257 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 81.3 32.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 20.8 11.0 Inc. seg. avg. 0.444 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 26.0 19.2 Inc. frq. avg. 0.269 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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 905.748 -296.611 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZX.W.170.1WZRGR

Mk4/DiFX fourfit 3.21 rev 2937

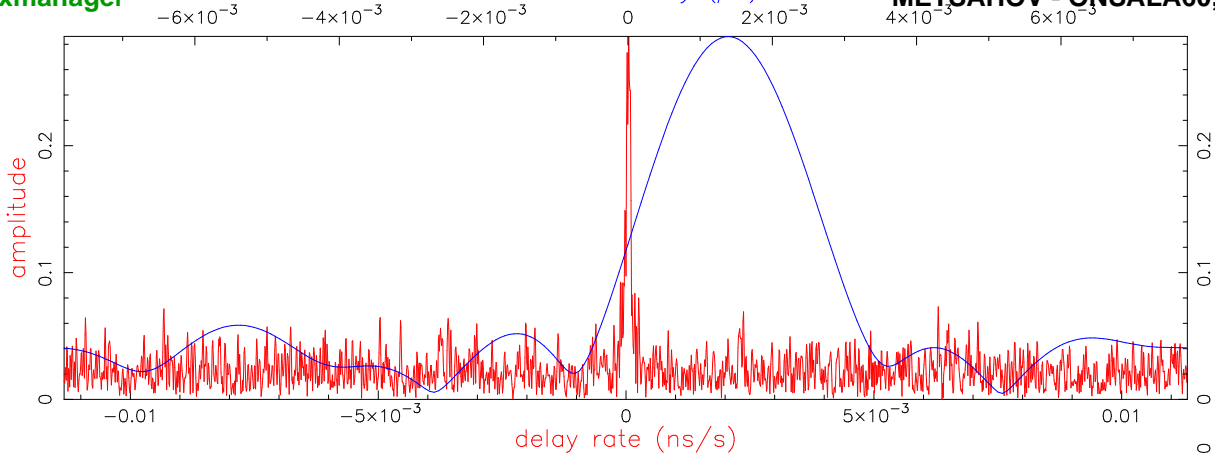
fxmanager

NRAO150.1WZRGR, No0037, ZX

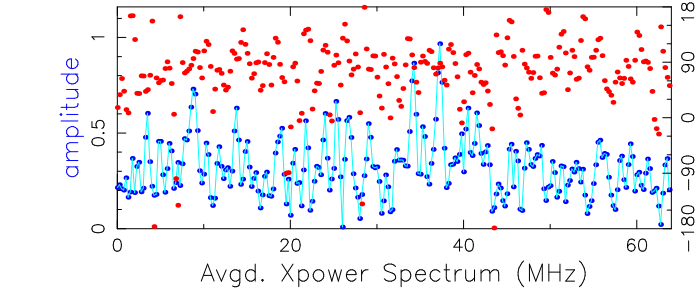
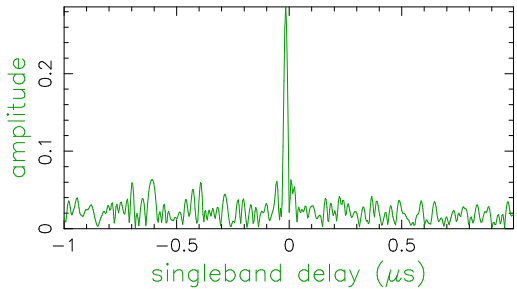
METSAHOV - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 9

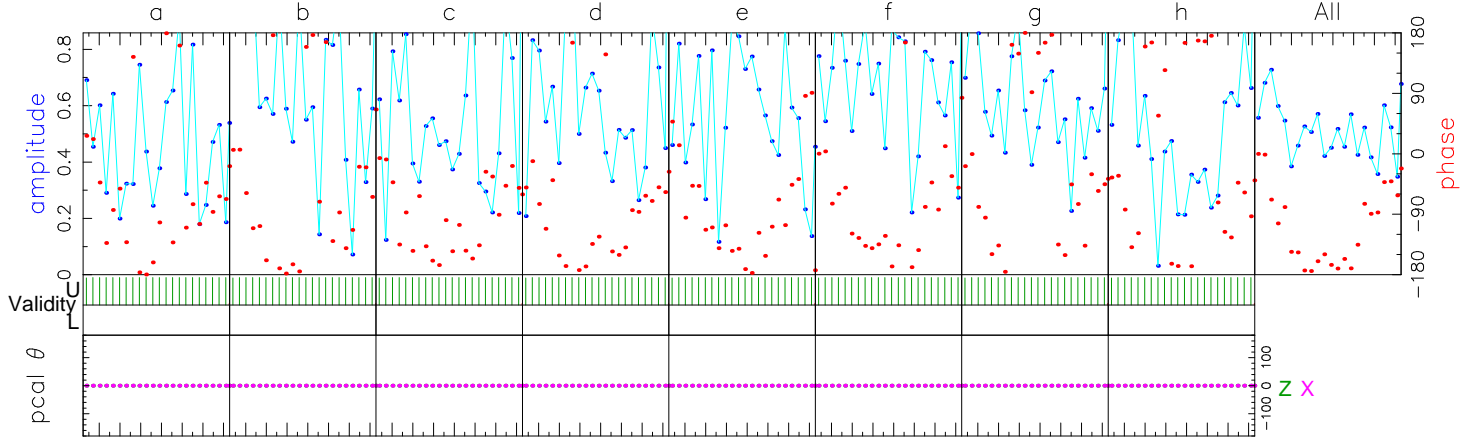


SNR 15.8
 Int time 405.840
 Amp 0.286
 Phase -110.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.015405
 MBD 0.001390
 Fringe rate (Hz) 0.005015
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



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
	-113.2	-125.7	-96.4	-113.3	-104.9	-95.2	-129.6	-117.0	Phase	-110.3
	0.2	0.3	0.3	0.3	0.3	0.4	0.2	0.3	Ampl.	0.3
	251.8	253.4	253.5	252.7	253.8	252.7	252.5	253.0	Sbd box	253.1
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	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 1.19968648844E+03 Apriori delay (usec) 1.19970072378E+03 Resid mbdelay (usec) 1.38965E-03 +/- 6.9E-05
 Sband delay (usec) 1.19968531903E+03 Apriori clock (usec) -5.7196815E+01 Resid sbdelay (usec) -1.54047E-02 +/- 5.5E-04
 Phase delay (usec) 1.19970072023E+03 Apriori clockrate (us/s) -5.1200000E-07 Resid phdelay (usec) -3.55835E-06 +/- 2.3E-07
 Delay rate (us/s) -1.00326543612E-01 Apriori rate (us/s) -1.00326601836E-01 Resid rate (us/s) 5.82236E-08 +/- 1.0E-09
 Total phase (deg) 14.5 Apriori accel (us/s/s) -4.43859062237E-06 Resid phase (deg) -110.3 +/- 7.3

RMS Theor. Amplitude 0.286 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 55.9 17.4 Search (2048X32) 0.281 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 84.4 30.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 13.7 10.3 Inc. seg. avg. 0.485 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 19.6 17.9 Inc. frq. avg. 0.288 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 X: az 75.0 el 56.2 pa -56.0 u,v (fr/asec) 905.748 -296.611 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0037/ZX..1WZRGR Output file: /Exps/c211c/v1/1234/No0037/ZX.W.174.1WZRGR