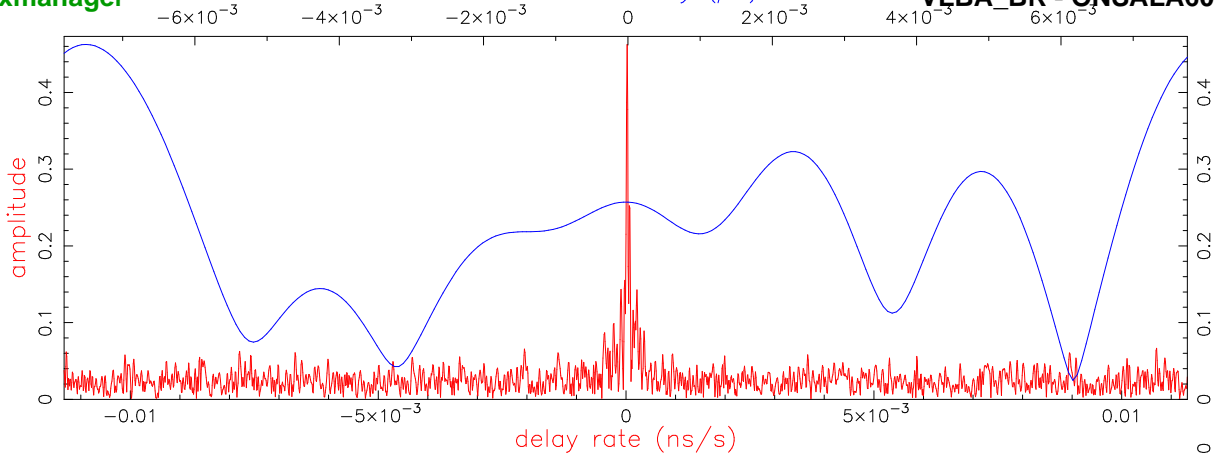
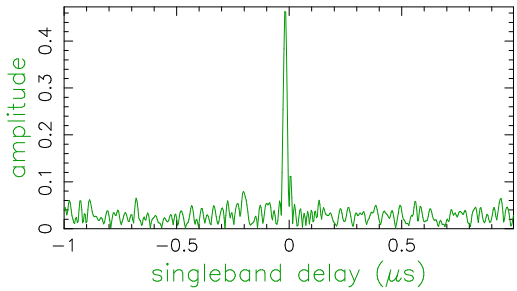


multiband delay (μ s)

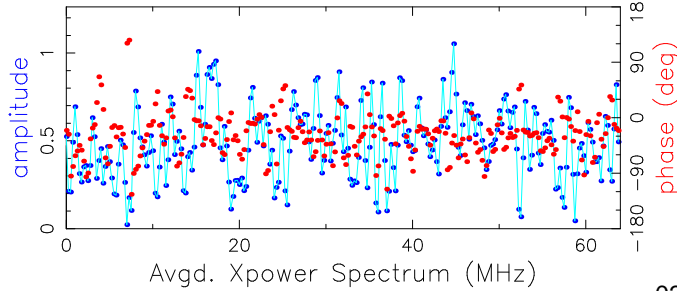


Fringe quality 7

SNR 23.5
 Int time 329.957
 Amp 0.473
 Phase -143.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.017601
 MBD -0.007519
 Fringe rate (Hz)
 0.001772
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

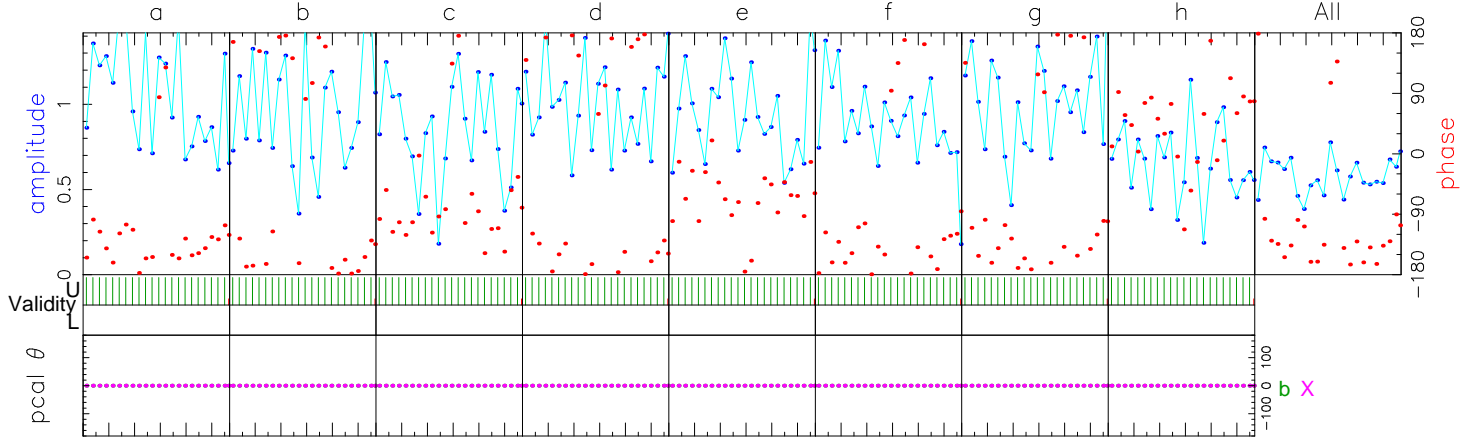


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044456
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-140.1	-175.1	-100.9	-175.9	-61.0	-153.5	-157.1	41.3	Phase	-143.7
	0.8	0.8	0.6	0.8	0.7	0.7	0.7	0.4	Ampl.	0.7
	252.8	251.9	252.3	252.1	252.6	252.0	251.2	249.7	Sbd box	252.5
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-4.48977806621E+03		Apriori delay (usec)		-4.48975492223E+03		Resid mbdelay (usec)		-7.51898E-03	+/- 4.6E-05
Sband delay (usec)	-4.48977252323E+03		Apriori clock (usec)		-5.9333229E+01		Resid sbdelay (usec)		-1.76010E-02	+/- 3.7E-04
Phase delay (usec)	-4.48975492686E+03		Apriori clockrate (us/s)		-6.2799998E-07		Resid phdelay (usec)		-4.63343E-06	+/- 1.6E-07
Delay rate (us/s)	1.47846346030E+00		Apriori rate (us/s)		1.47846343972E+00		Resid rate (us/s)		2.05765E-08	+/- 8.2E-10
Total phase (deg)			Apriori accel (us/s/s)		1.82195591619E-05		Resid phase (deg)		-143.7	+/- 4.9

	RMS	Theor.	Amplitude	0.473 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	37.6	11.7	Search (2048X32)	0.456	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	31.3	20.4	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	83.3	6.9	Inc. seg. avg.	0.568	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	53.4	12.0	Inc. frq. avg.	0.687	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 77.0 el 28.1 pa -47.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -9643.146 92.745 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bX.W.17.1W8CZP

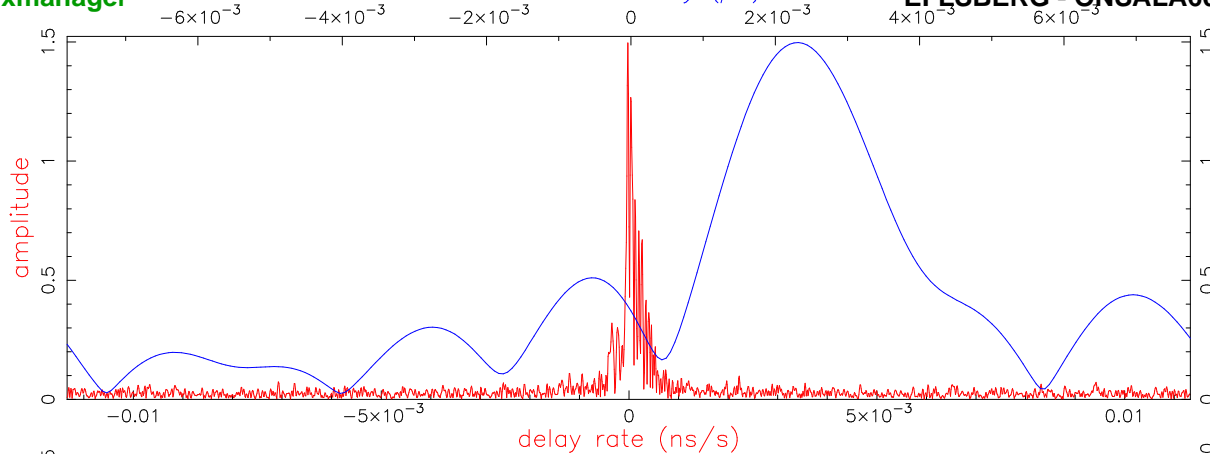
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, BX

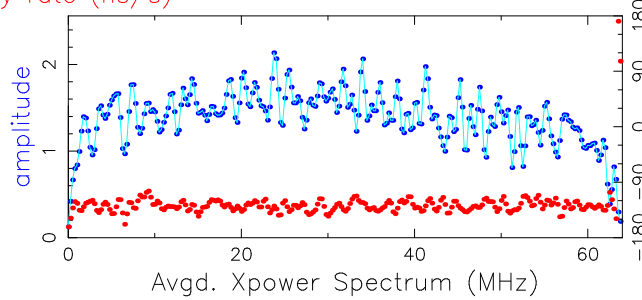
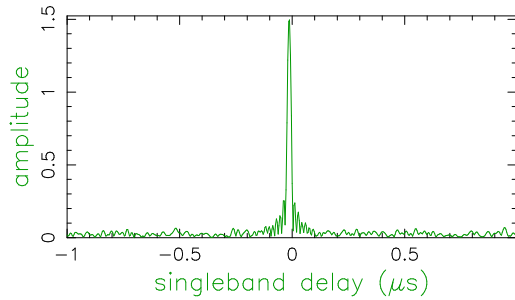
EFLSBERG - ONSALA60, fgroup W, pol LL

multiband delay (μ s)



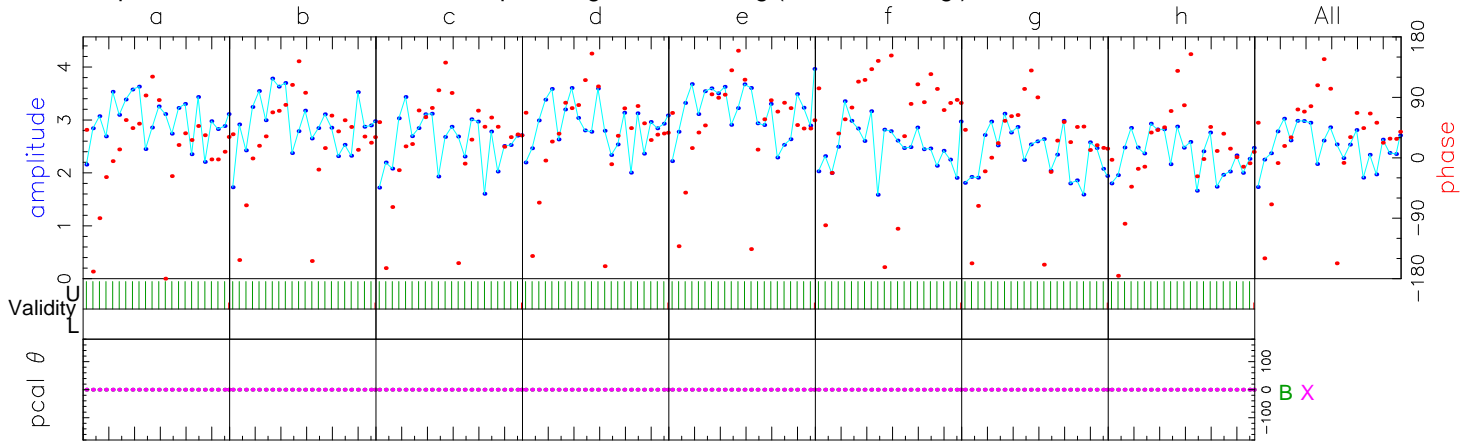
Fringe quality 3

SNR 75.7
 Int time 329.957
 Amp 1.524
 Phase 51.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.013486
 MBD 0.002253
 Fringe rate (Hz)
 -0.002367
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044457
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	31.0	45.3	48.1	57.5	70.5	98.0	38.4	19.6	Phase	51.1
B	1.8	1.8	1.6	1.7	1.9	1.4	1.4	1.3	Ampl.	1.6
X	254.0	253.3	253.6	253.7	253.9	253.4	253.2	252.4	Sbd box	253.5
B	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.08280746847E+03		Apriori delay (usec)		1.08282084068E+03		Resid mbdelay (usec)		2.25279E-03	+/- 1.4E-05
Sband delay (usec)	1.08280735468E+03		Apriori clock (usec)		-7.8428963E+01		Resid sbdelay (usec)		-1.34860E-02	+/- 1.1E-04
Phase delay (usec)	1.08282084233E+03		Apriori clockrate (us/s)		-5.2800001E-07		Resid phdelay (usec)		1.64738E-06	+/- 4.9E-08
Delay rate (us/s)	-5.78518588084E-02		Apriori rate (us/s)		-5.78518313348E-02		Resid rate (us/s)		-2.74736E-08	+/- 2.6E-10
Total phase (deg)	128.9		Apriori accel (us/s/s)		-1.00262145331E-05		Resid phase (deg)		51.1	+/- 1.5

ph/seg (deg) 63.9 3.6 Search (2048X32) 1.438 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.6 6.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.5 2.1 Inc. seg. avg. 2.501 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 12.8 3.7 Inc. frq. avg. 1.612 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 257.0 el 48.5 pa 44.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 365.065 -985.107 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BX.W.19.1W8CZP

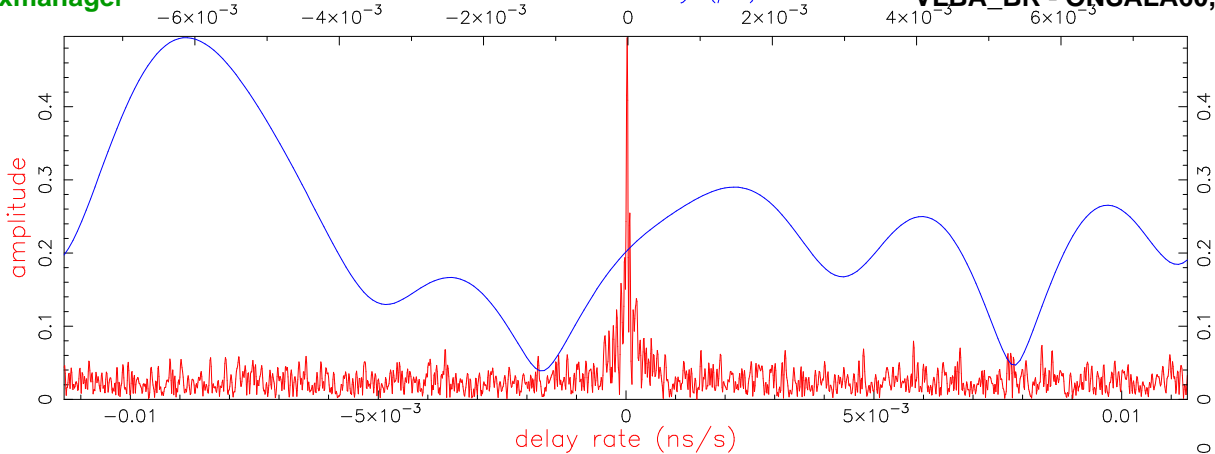
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, bX

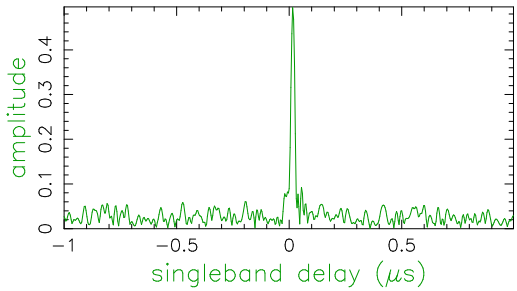
VLBA_BR - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

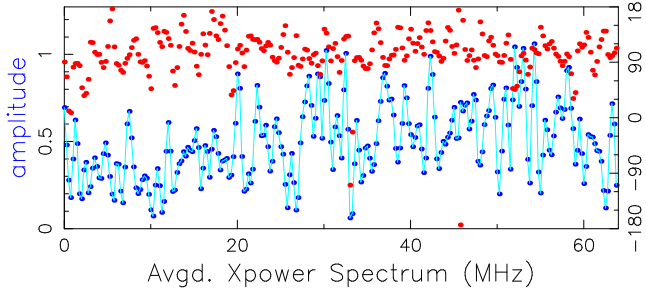


Fringe quality 6

SNR 24.6
Int time 329.957
Amp 0.496
Phase 7.6
PFD 0.0e+00
Delays (us)
SBD 0.016404
MBD -0.006120
Fringe rate (Hz)
0.001681
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

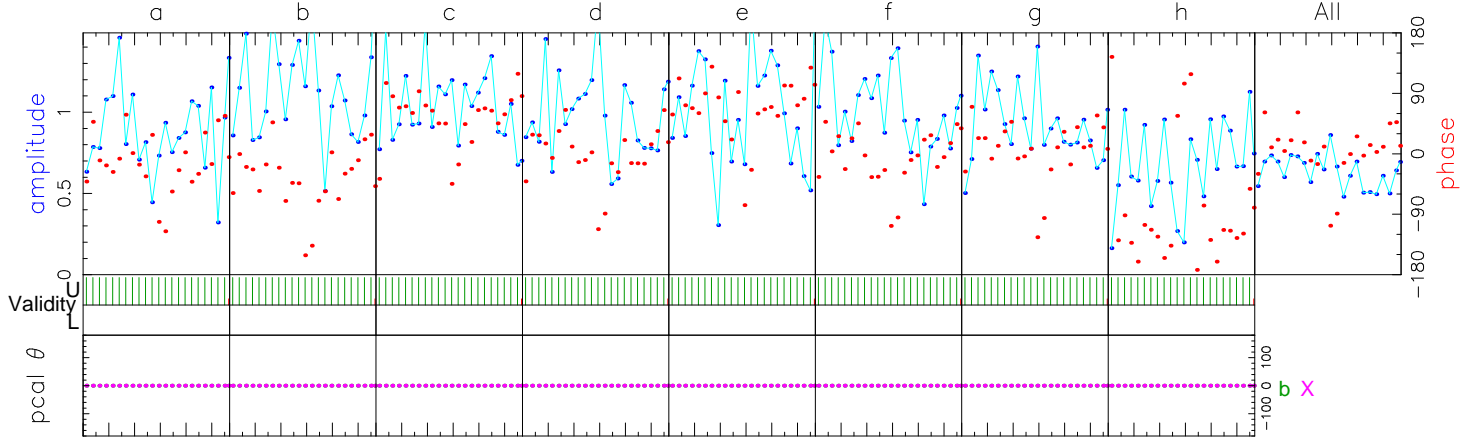


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044500
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-13.2	-32.1	58.6	1.8	69.7	-6.8	8.8	-125.6		7.6
	0.7	0.8	0.8	0.7	0.8	0.8	0.7	0.5		0.7
	260.5	261.3	261.1	260.3	260.5	260.5	260.1	258.4		261.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
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		Manl 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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec)(sbd)	-4.48974541696E+03	Apriori delay (usec)	-4.48975492223E+03	Resid mbdelay (usec)	-6.11973E-03	+/-	4.4E-05
Sband delay (usec)	-4.48973851823E+03	Apriori clock (usec)	-5.9333229E+01	Resid sbdelay (usec)	1.64040E-02	+/-	3.5E-04
Phase delay (usec)	-4.48975492198E+03	Apriori clockrate (us/s)	-6.2799998E-07	Resid phdelay (usec)	2.45911E-07	+/-	1.5E-07
Delay rate (us/s)	1.47846345924E+00	Apriori rate (us/s)	1.47846343972E+00	Resid rate (us/s)	1.95186E-08	+/-	7.9E-10
Total phase (deg)		Apriori accel (us/s/s)	1.82195591619E-05	Resid phase (deg)	7.6	+/-	4.6

ph/seg (deg)	RMS 39.7	Theor. 11.1	Amplitude Search (2048X32)	0.496 +/- 0.020	0.483	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	34.4	19.5	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	sb window (us) -1.000 1.000
ph/frq (deg)	66.4	6.6	Inc. seg. avg.	0.623	Sample rate(MISamp/s): 128	nlags: 256	mb window (us) -0.008 0.008
amp/frq (%)	49.4	11.5	Inc. frq. avg.	0.714	Data rate(Mb/s): 2048	t_cohere infinite	dr window (ns/s) -0.011 0.011
							ion window (TEC) 0.00 0.00

b: az 77.0 el 28.1 pa -47.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -9643.146 92.745 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bX.W.36.1W8CZP

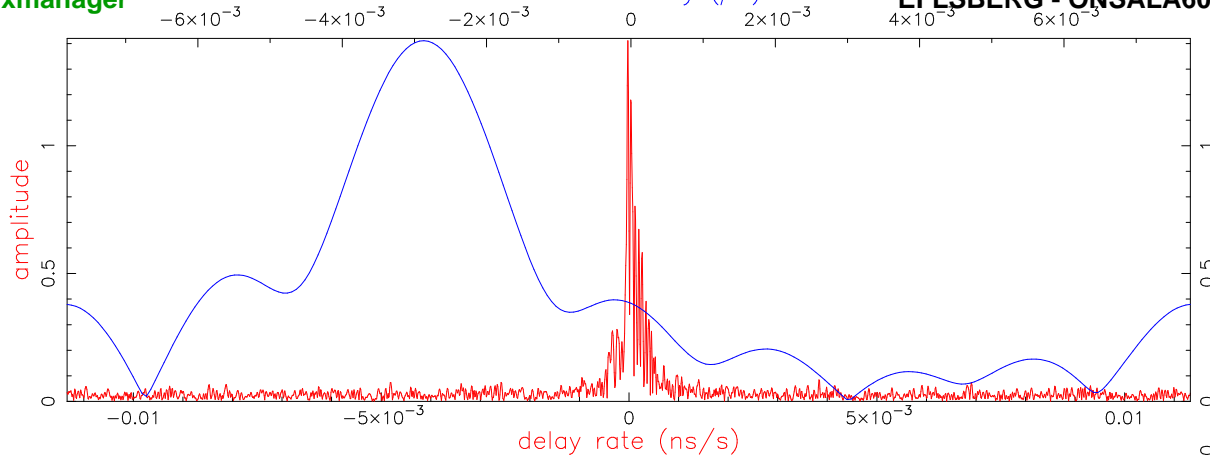
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, BX

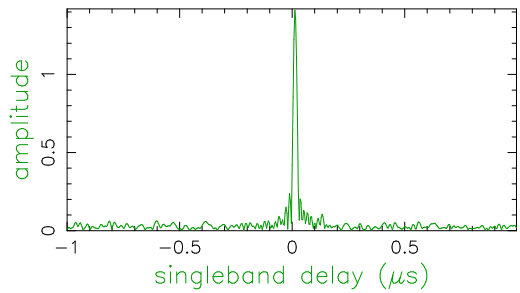
EFLSBERG - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

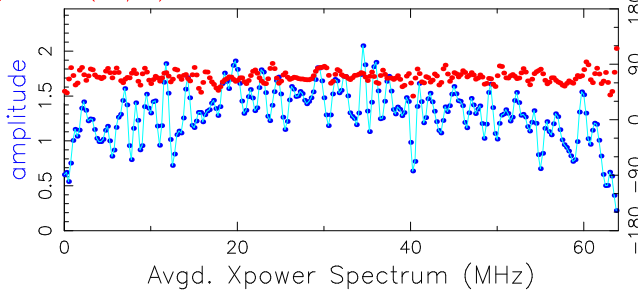


Fringe quality 3

SNR 70.5
 Int time 329.957
 Amp 1.420
 Phase -110.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.012787
 MBD -0.002839
 Fringe rate (Hz)
 -0.002378
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

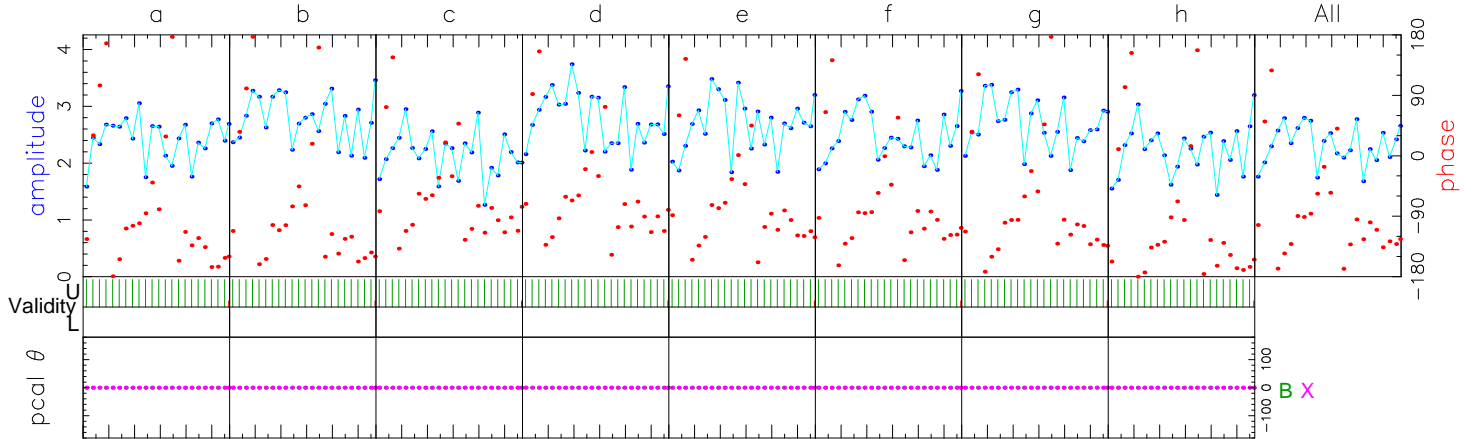


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044500
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0			
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		1.08283362706E+03			1.08282084068E+03				Resid mbdelay (usec)	-2.83862E-03	+/- 1.5E-05
Sband delay (usec)		1.08283362743E+03			-7.8428963E+01				Resid sbdelay (usec)	1.27867E-02	+/- 1.2E-04
Phase delay (usec)		1.08282083710E+03			-5.2800001E-07				Resid phdelay (usec)	-3.57514E-06	+/- 5.2E-08
Delay rate (us/s)		-5.78518589431E-02			-5.78518313348E-02				Resid rate (us/s)	-2.76082E-08	+/- 2.7E-10
Total phase (deg)			-33.1		-1.00262145331E-05				Resid phase (deg)	-110.9	+/- 1.6

	RMS	Theor.	Amplitude	1.420 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	64.0	3.9	Search (2048X32)	1.359	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	67.5	6.8	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	27.0	2.3	Inc. seg. avg.	2.314	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	11.8	4.0	Inc. frq. avg.	1.529	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 257.0 el 48.5 pa 44.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 365.065 -985.107 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BX.W.37.1W8CZP

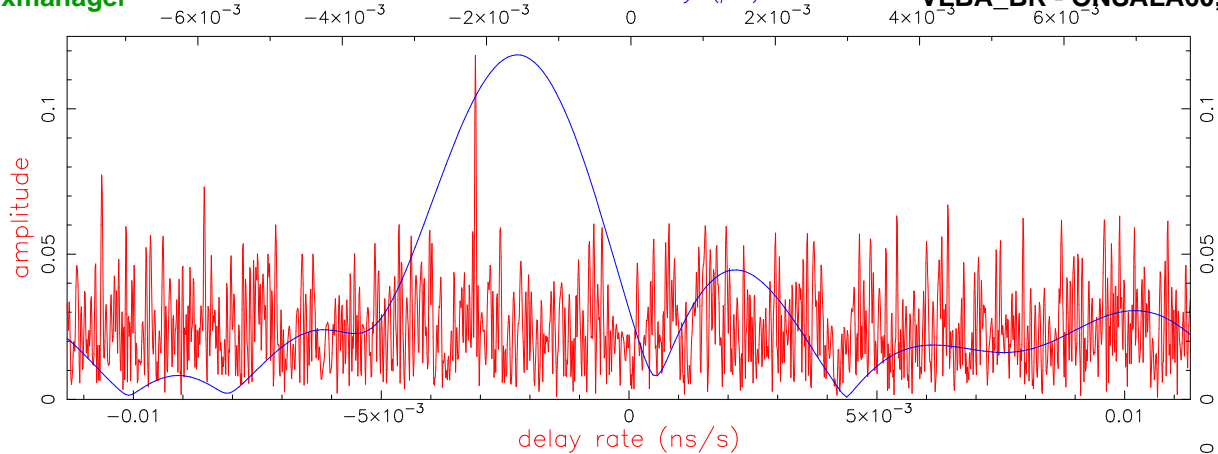
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, bX

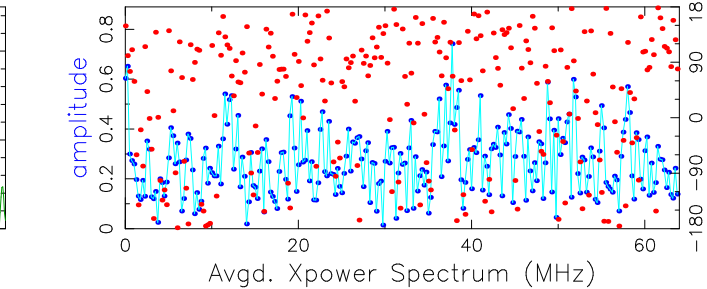
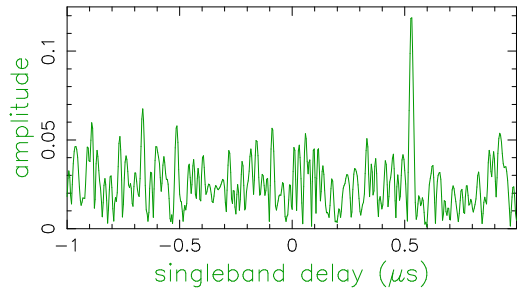
VLBA_BR - ONSALA60, fgroup W, pol LR

multiband delay (μ s)



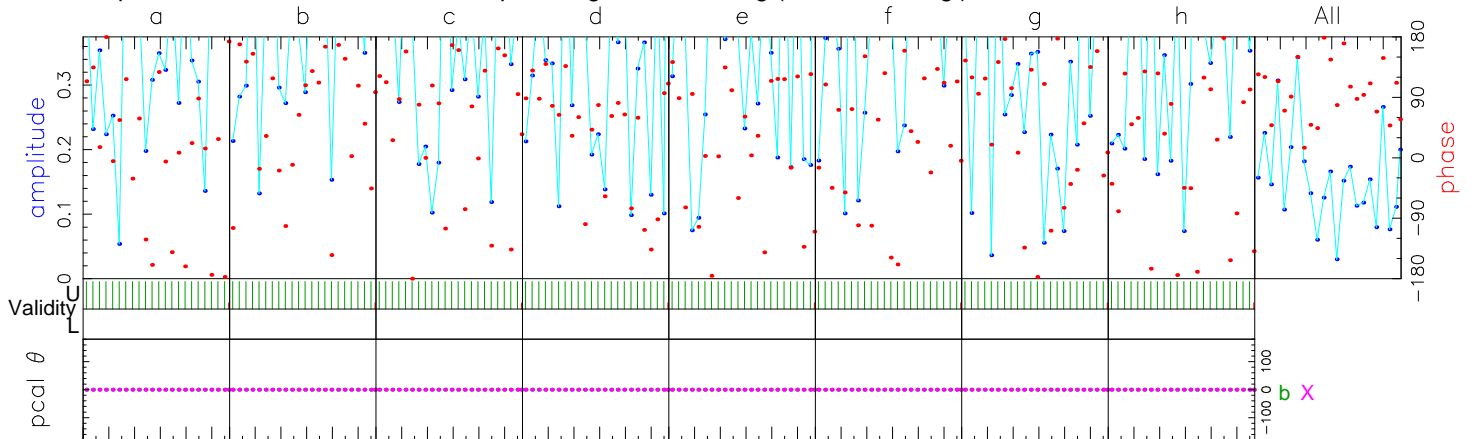
Fringe quality 0

SNR 6.0
 Int time 329.957
 Amp 0.125
 Phase 109.2
 PFD 3.7e-01
 Delays (us)
 SBD 0.529360
 MBD -0.001507
 Fringe rate (Hz)
 -0.267456
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Yr:day 16383
 Start 2021:113
 Stop 2021:113
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044503
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-4.48922517967E+03	Apriori delay (usec)	-4.48975492223E+03	Resid mbdelay (usec)	-1.50745E-03	+/-	1.8E-04
Sband delay (usec)	-4.48922556273E+03	Apriori clock (usec)	-5.9333229E+01	Resid sbdelay (usec)	5.29360E-01	+/-	1.4E-03
Phase delay (usec)	-4.48975491871E+03	Apriori clockrate (us/s)	-6.2799998E-07	Resid phdelay (usec)	3.51982E-06	+/-	6.1E-07
Delay rate (us/s)	1.47846033482E+00	Apriori rate (us/s)	1.47846343972E+00	Resid rate (us/s)	-3.10490E-06	+/-	3.2E-09
Total phase (deg)	108.9	Apriori accel (us/s/s)	1.82195591619E-05	Resid phase (deg)	109.2	+/-	19.0

ph/seg (deg)	44.2	Theor.	45.7	Amplitude	0.125 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	68.5		79.7	Search (2048X32)	0.115	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	21.8		26.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	22.3		47.0	Inc. seg. avg.	0.122	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.117	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

b: az 77.0 el 28.1 pa -47.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -9643.146 92.745 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bX.W.53.1W8CZP

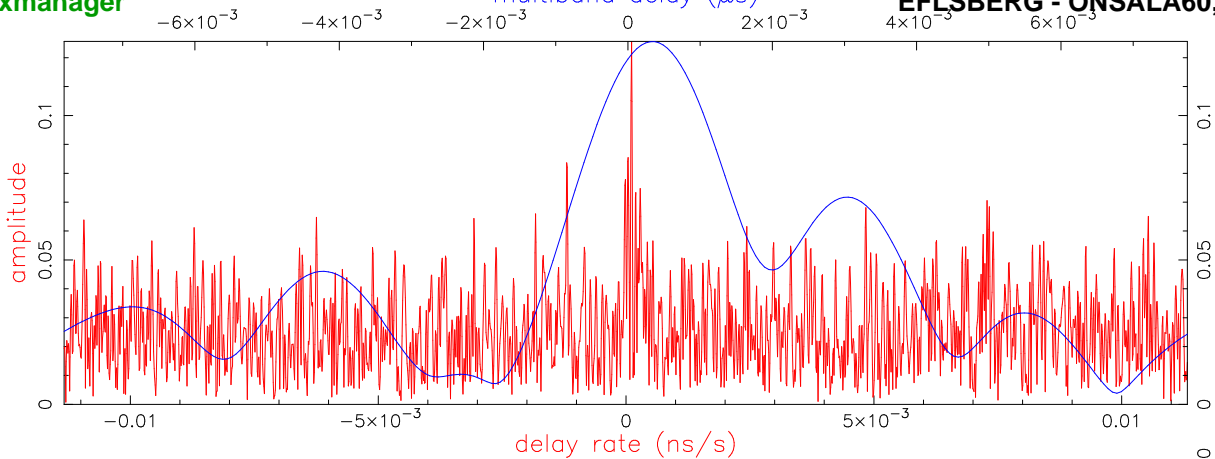
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, BX

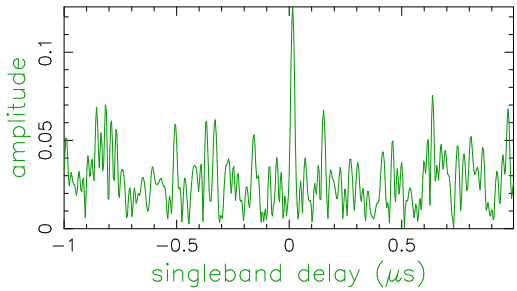
EFLSBERG - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

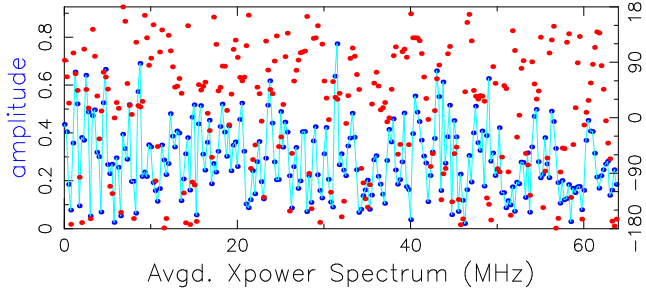


Fringe quality 0

SNR 6.2
 Int time 329.957
 Amp 0.126
 Phase -114.6
 PFD 1.1e-01
 Delays (us)
 SBD 0.015391
 MBD 0.000333
 Fringe rate (Hz)
 0.009540
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

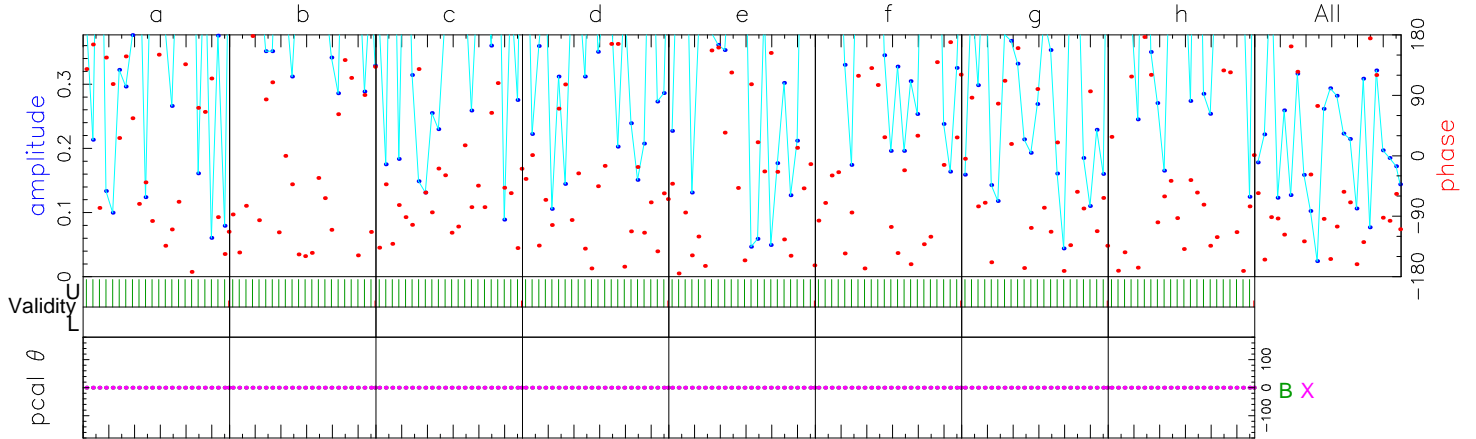


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044504
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-154.3	-135.8	-81.7	-87.7	-104.6	-146.2	-92.4	-132.6	Phase	-114.6
	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	Ampl.	0.1
	95.5	55.1	2.7	445.0	140.9	60.2	295.3	406.0	Sbd box	260.9
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 1.08283679836E+03 Apriori delay (usec) 1.08282084068E+03 Resid mbdelay (usec) 3.32677E-04 +/- 1.7E-04
 Sband delay (usec) 1.08283623118E+03 Apriori clock (usec) -7.8428963E+01 Resid sbdelay (usec) 1.53905E-02 +/- 1.4E-03
 Phase delay (usec) 1.08282083698E+03 Apriori clockrate (us/s) -5.2800001E-07 Resid phdelay (usec) -3.69655E-06 +/- 5.9E-07
 Delay rate (us/s) -5.78517205823E-02 Apriori rate (us/s) -5.78518313348E-02 Resid rate (us/s) 1.10753E-07 +/- 3.1E-09
 Total phase (deg) -36.8 Apriori accel (us/s/s) -1.00262145331E-05 Resid phase (deg) -114.6 +/- 18.4

RMS Theor. Amplitude 0.126 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 66.8 44.0 Search (2048X32) 0.124 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 105.4 76.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 31.0 26.0 Inc. seg. avg. 0.163 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 41.1 45.3 Inc. frq. avg. 0.127 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 257.0 el 48.5 pa 44.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 365.065 -985.107 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BX.W.58.1W8CZP

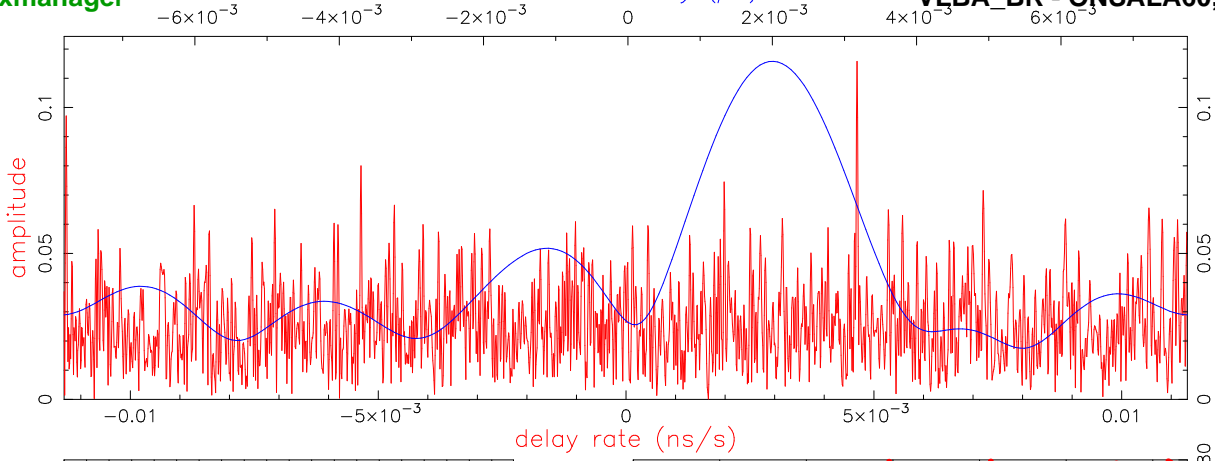
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, bX

VLBA_BR - ONSALA60, fgroup W, pol RL

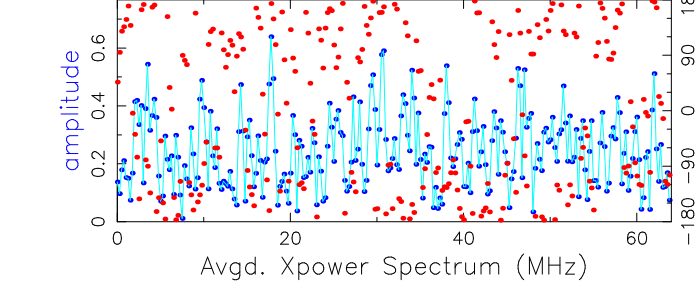
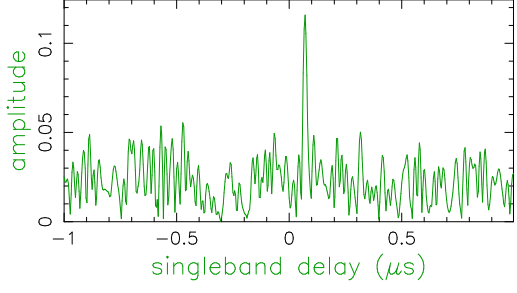
multiband delay (μ s)



Fringe quality 0

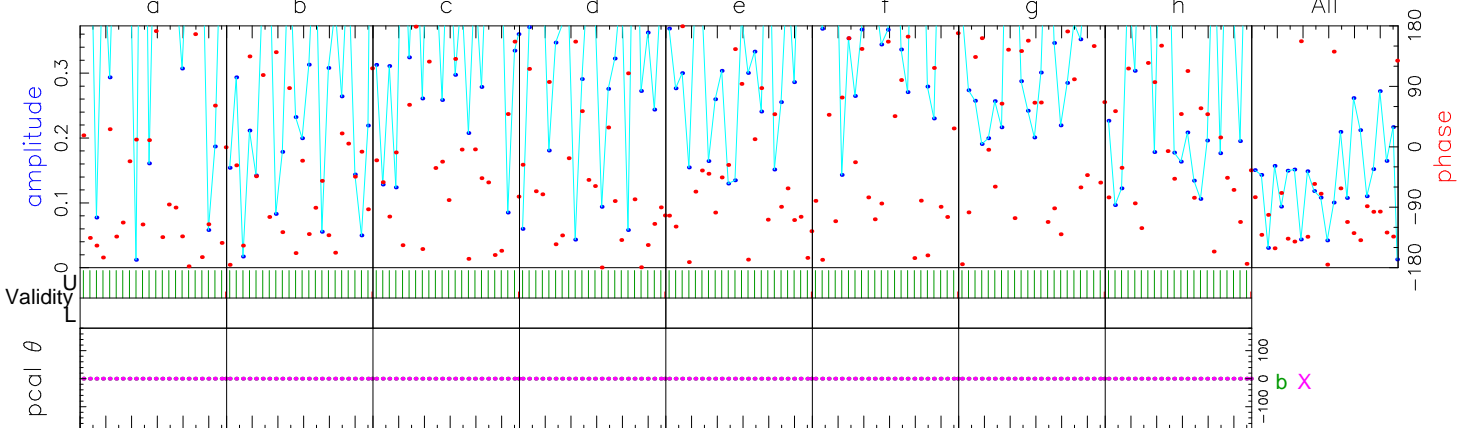
SNR 5.8
Int time 329.957
Amp 0.124
Phase -115.6
PFD 8.8e-01
Delays (us)
SBD 0.070010
MBD 0.001988
Fringe rate (Hz) 0.401872
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build 2021:288:021115
2021:288:044507
2021:252:122852
RA & Dec (J2000) 02h37m52.405678s +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-131.2	-106.7	-105.8	-90.7	-99.0	-120.1	-157.9	-119.2	Phase	-115.6
	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.0	Ampl.	0.1
	274.1	231.9	97.1	76.3	219.3	297.4	451.0	153.0	Sbd box	274.9
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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)	-4.48969043461E+03		Apriori delay (usec)		-4.48975492223E+03		Resid mbdelay (usec)		1.98762E-03	+/- 1.9E-04
Sband delay (usec)	-4.48968491173E+03		Apriori clock (usec)		-5.9333229E+01		Resid sbdelay (usec)		7.00105E-02	+/- 1.5E-03
Phase delay (usec)	-4.48975492596E+03		Apriori clockrate (us/s)		-6.2799998E-07		Resid phdelay (usec)		-3.72790E-06	+/- 6.4E-07
Delay rate (us/s)	1.47846810506E+00		Apriori rate (us/s)		1.47846343972E+00		Resid rate (us/s)		4.66534E-06	+/- 3.4E-09
Total phase (deg)			Apriori accel (us/s/s)		1.82195591619E-05		Resid phase (deg)		-115.6	+/- 19.9

ph/seg (deg) 44.0 47.7 Search (2048X32) 0.110 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 59.6 83.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 22.9 28.2 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 57.2 49.1 Inc. frq. avg. 0.117 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 77.0 el 28.1 pa -47.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -9643.146 92.745 ion window (TEC) 0.00 0.00
 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bX.W.75.1W8CZP

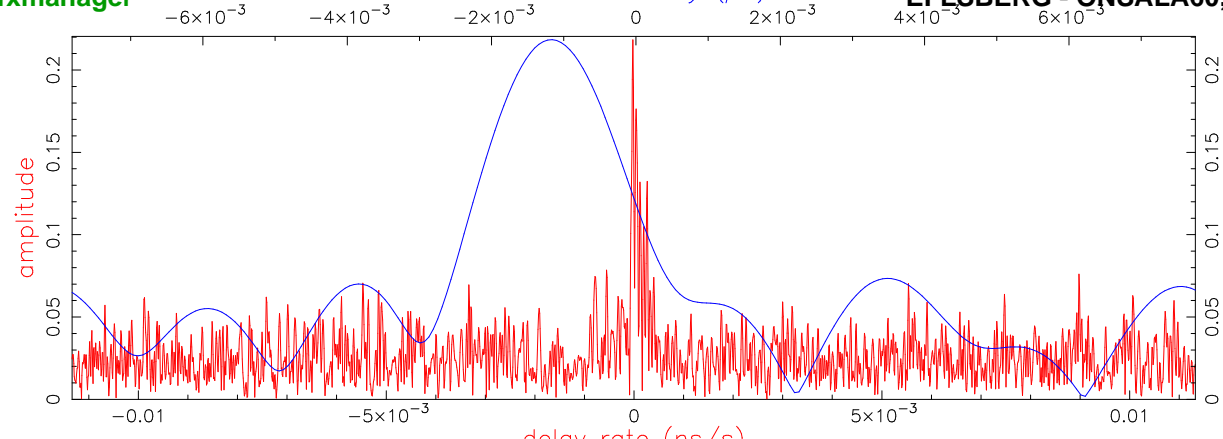
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, BX

EFLSBERG - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

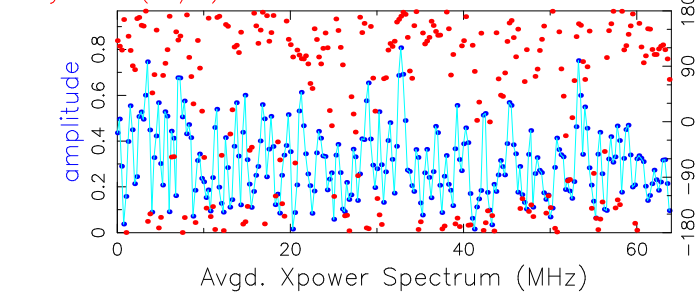
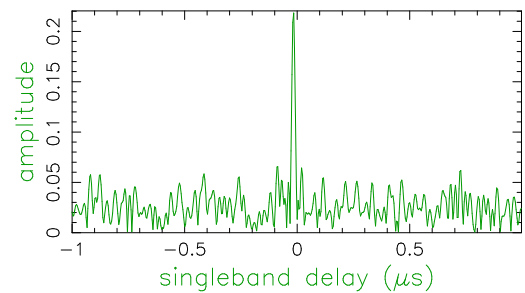


Fringe quality 9

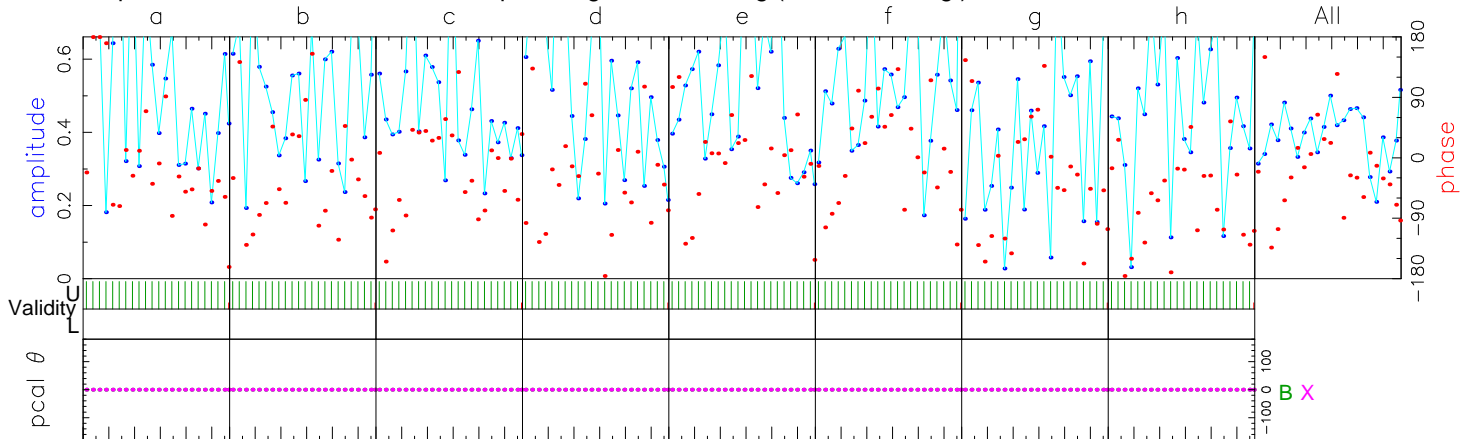
SNR 10.9
 Int time 329.957
 Amp 0.220
 Phase -28.0
 PFD 3.1e-19
 Delays (us)
 SBD -0.016791
 MBD -0.001210
 Fringe rate (Hz)
 -0.002074
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044507
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

delay rate (ns/s)



Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-45.8	-51.1	-4.5	-38.5	-3.9	6.3	-34.7	-53.4	Phase	-28.0
	0.3	0.2	0.3	0.2	0.3	0.2	0.1	0.3	Ampl.	0.2
	252.2	321.3	253.4	252.2	252.6	252.5	56.5	251.6	Sbd box	252.7
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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)	1.08280400600E+03		Apriori delay (usec)		1.08282084068E+03		Resid mbdelay (usec)		-1.20968E-03	+/- 9.9E-05
Sband delay (usec)	1.08280404968E+03		Apriori clock (usec)		-7.8428963E+01		Resid sbdelay (usec)		-1.67910E-02	+/- 7.9E-04
Phase delay (usec)	1.08282083978E+03		Apriori clockrate (us/s)		-5.2800001E-07		Resid phdelay (usec)		-9.03299E-07	+/- 3.4E-07
Delay rate (us/s)	-5.78518554130E-02		Apriori rate (us/s)		-5.78518313348E-02		Resid rate (us/s)		-2.40782E-08	+/- 1.8E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.00262145331E-05		Resid phase (deg)		-28.0	+/- 10.5

ph/seg (deg) 67.1 25.1 Amplitude 0.220 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 83.4 43.8 Search (2048X32) 0.214 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 25.7 14.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 20.9 25.8 Inc. seg. avg. 0.356 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 257.0 el 48.5 pa 44.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 365.065 -985.107 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BX.W.77.1W8CZP

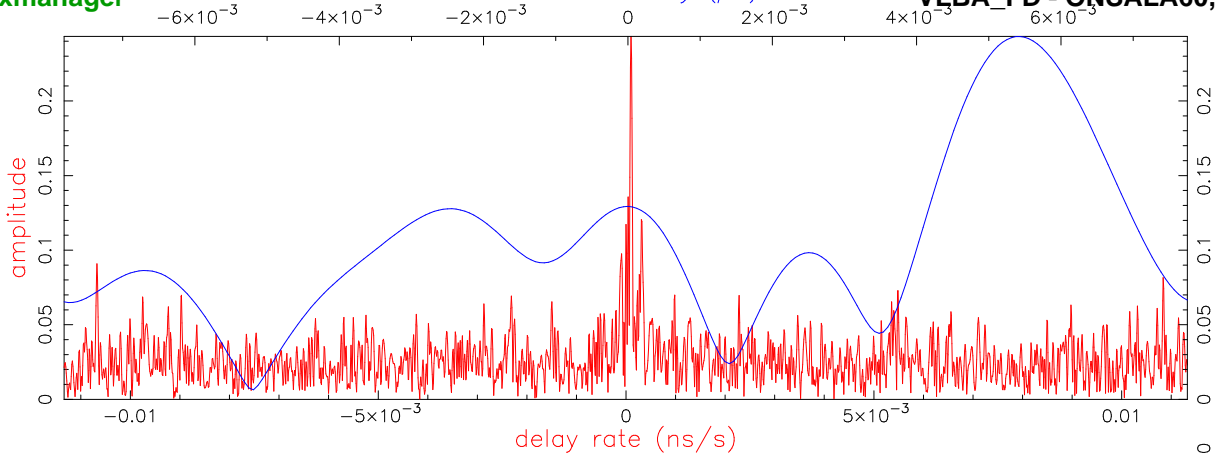
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, fX

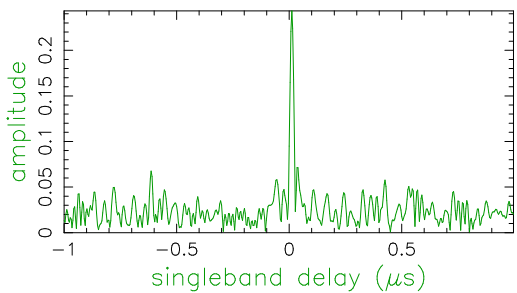
VLBA_FD - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

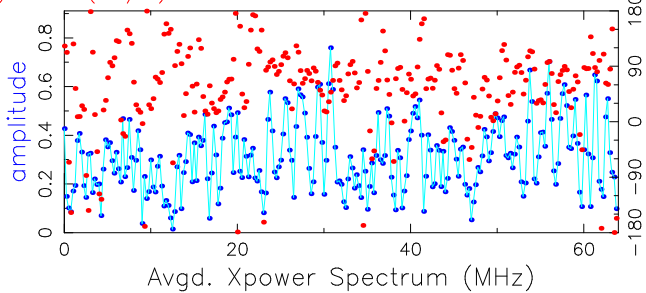


Fringe quality 9

SNR 12.1
 Int time 329.918
 Amp 0.243
 Phase 148.5
 PFD 6.6e-25
 Delays (us)
 SBD 0.011901
 MBD 0.005416
 Fringe rate (Hz)
 0.008618
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

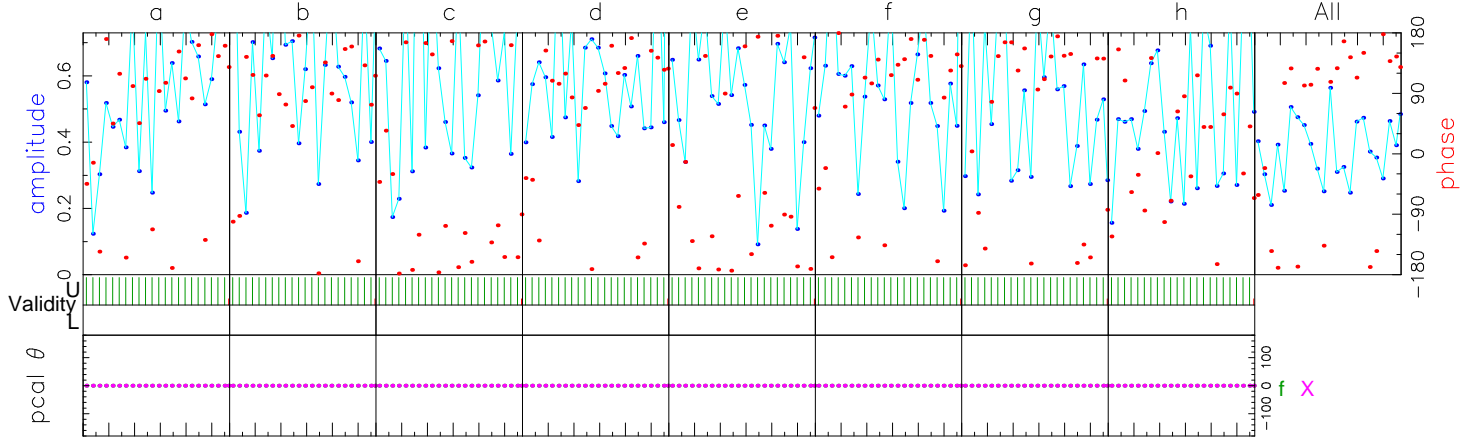


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044516
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-2.01200328282E+03	Apriori delay (usec)	-2.01200869883E+03	Resid mbdelay (usec)	5.41601E-03	+/-	9.0E-05
Sband delay (usec)	-2.01199679733E+03	Apriori clock (usec)	-4.6140602E+01	Resid sbdelay (usec)	1.19015E-02	+/-	7.1E-04
Phase delay (usec)	-2.01200869404E+03	Apriori clockrate (us/s)	-4.6799999E-07	Resid phdelay (usec)	4.78892E-06	+/-	3.1E-07
Delay rate (us/s)	1.62642609813E+00	Apriori rate (us/s)	1.62642599808E+00	Resid rate (us/s)	1.00050E-07	+/-	1.6E-09
Total phase (deg)		Apriori accel (us/s/s)	-7.69604634994E-06	Resid phase (deg)	148.5	+/-	9.5

ph/seg (deg)	61.2	Theor.	22.7	Amplitude	0.243 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	66.2		39.7	Search (2048X32)	0.243	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	61.0		13.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.1		23.4	Inc. seg. avg.	0.347	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.315	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

f: az 74.6 el 35.8 pa -71.2 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10644.719 -2847.325 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fX.W.109.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

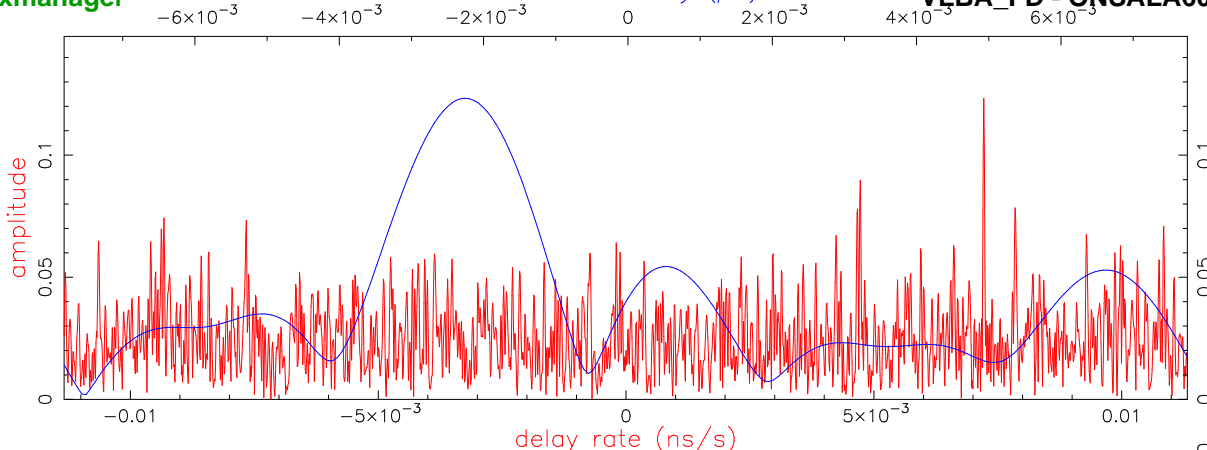
fxmanager

0234+285.1W8CZP, No0029, fX

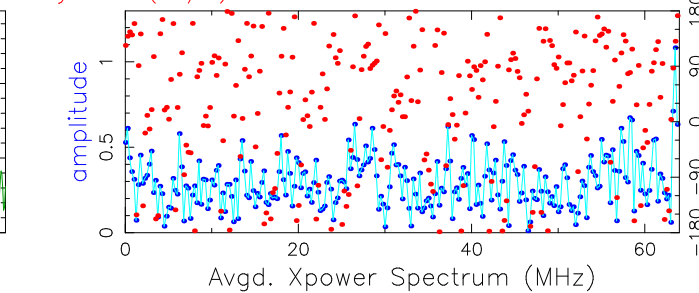
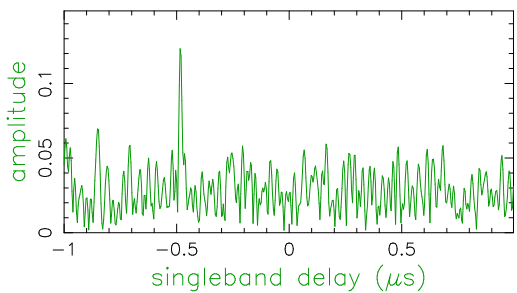
VLBA_FD - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

Fringe quality 0

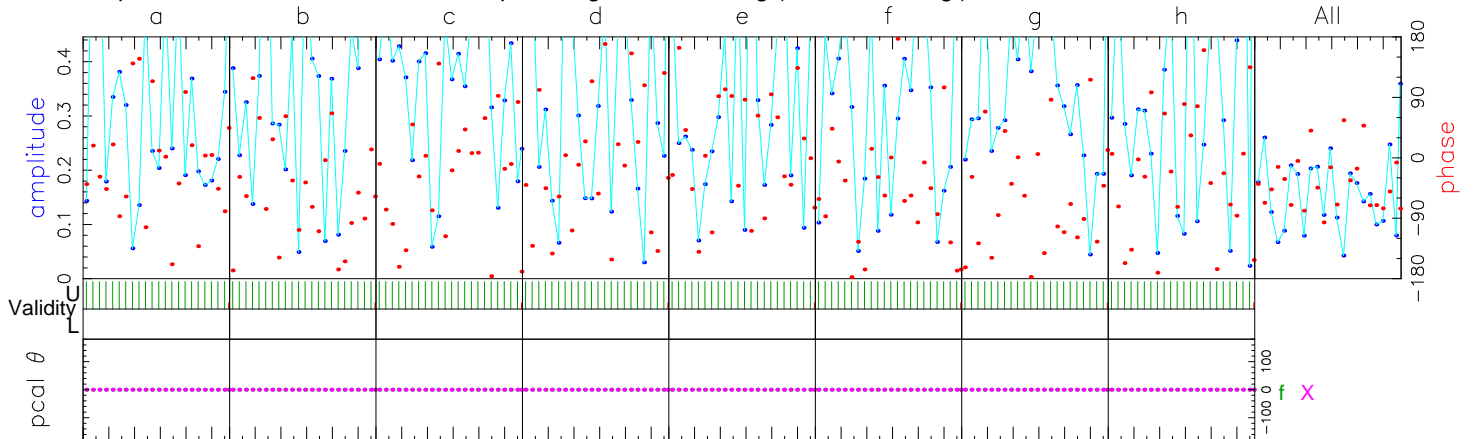


SNR 6.2
 Int time 329.919
 Amp 0.149
 Phase -39.1
 PFD 1.3e-01
 Delays (us)
 SBD -0.483070
 MBD -0.002224
 Fringe rate (Hz)
 0.623056
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044519
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-25.3	-59.1	-12.2	-62.1	-7.7	-62.9	-68.0	-17.4	Phase	-39.1
	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	Ampl.	0.1
	131.8	324.7	135.0	505.6	502.0	480.1	163.2	124.5	Sbd box	133.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	-2.01249529734E+03		Apriori delay (usec)		-2.01200869883E+03		Resid mbdelay (usec)		-2.22351E-03	+/- 1.7E-04
Sband delay (usec)	-2.01249176883E+03		Apriori clock (usec)		-4.6140602E+01		Resid sbdelay (usec)		-4.83070E-01	+/- 1.4E-03
Phase delay (usec)	-2.01200870009E+03		Apriori clockrate (us/s)		-4.6799999E-07		Resid phdelay (usec)		-1.26054E-06	+/- 6.0E-07
Delay rate (us/s)	1.62643323114E+00		Apriori rate (us/s)		1.62642599808E+00		Resid rate (us/s)		7.23306E-06	+/- 3.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.69604634994E-06		Resid phase (deg)		-39.1	+/- 18.5

ph/seg (deg) 41.5 44.3 Search (2048X32) 0.120 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.7 77.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 28.0 26.1 Inc. seg. avg. 0.140 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 27.2 45.6 Inc. frq. avg. 0.145 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 74.6 el 35.8 pa -71.2 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10644.719 -2847.325 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fX.W.128.1W8CZP

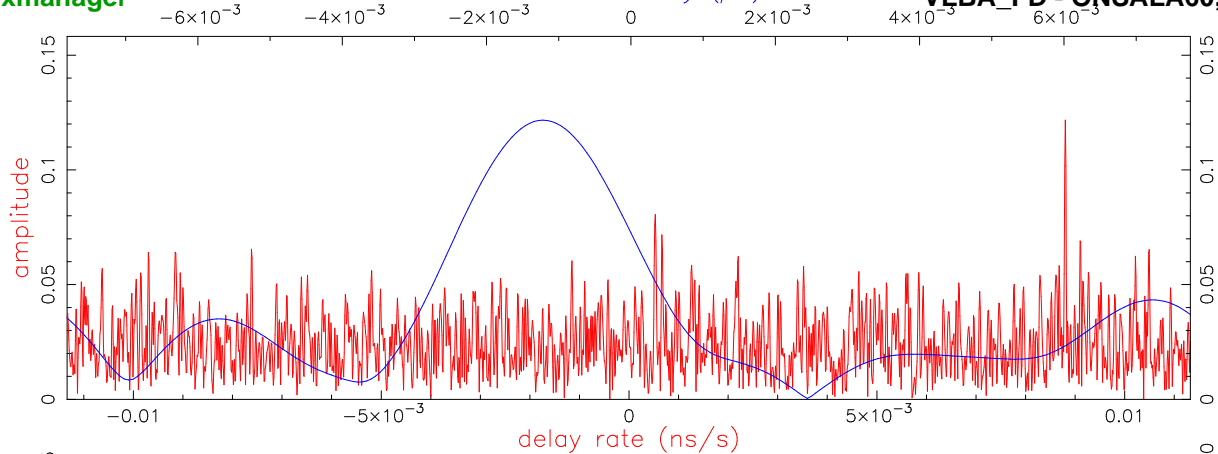
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, fX

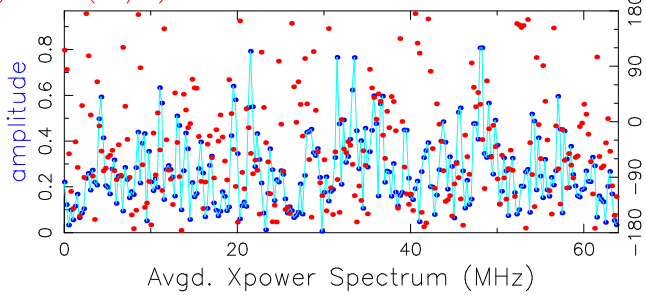
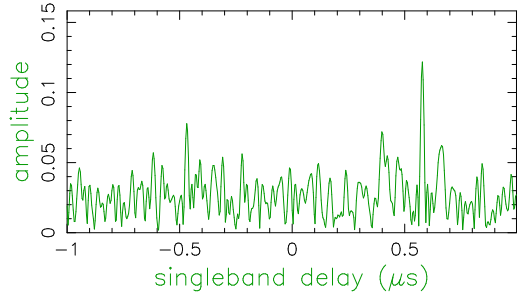
VLBA_FD - ONSALA60, fgroup W, pol RL

multiband delay (μ s)



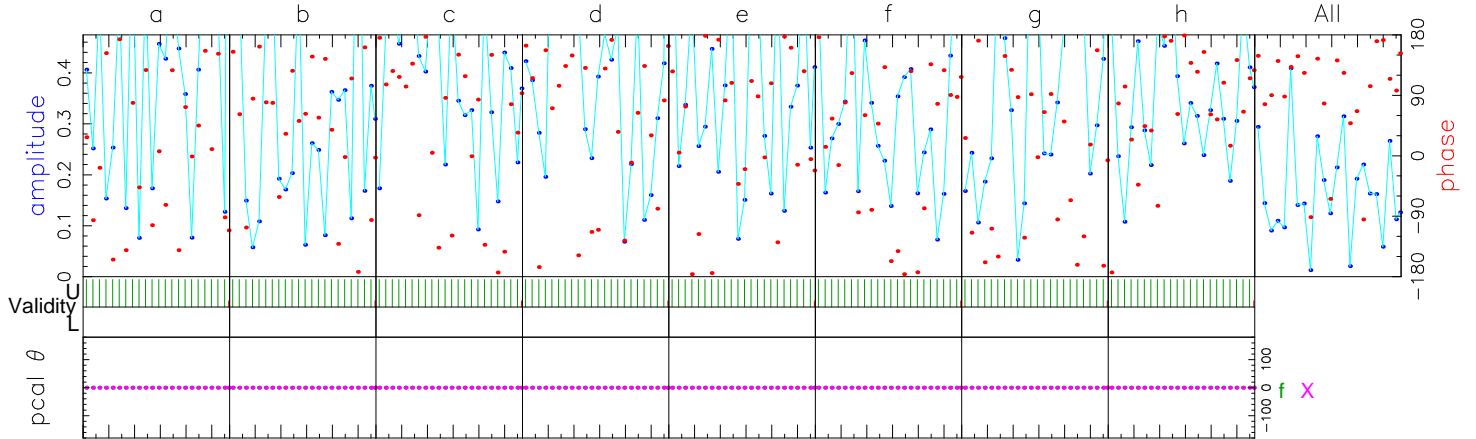
Fringe quality 0

SNR 6.0
 Int time 329.918
 Amp 0.158
 Phase 125.7
 PFD 3.2e-01
 Delays (us)
 SBD 0.577948
 MBD -0.001228
 Fringe rate (Hz)
 0.759171
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044523
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	119.8	100.7	146.4	126.2	127.5	117.1	-165.5	107.4	Phase	125.7
	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.2	Ampl.	0.2
	17.2	367.0	138.4	406.0	396.8	397.2	475.5	437.3	Sbd box	405.0
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	-2.01143180202E+03		Apriori delay (usec)		-2.01200869883E+03		Resid mbdelay (usec)		-1.22819E-03	+/- 1.8E-04
Sband delay (usec)	-2.01143075083E+03		Apriori clock (usec)		-4.6140602E+01		Resid sbdelay (usec)		5.77948E-01	+/- 1.4E-03
Phase delay (usec)	-2.01200869477E+03		Apriori clockrate (us/s)		-4.6799999E-07		Resid phdelay (usec)		4.05426E-06	+/- 6.1E-07
Delay rate (us/s)	1.62643481130E+00		Apriori rate (us/s)		1.62642599808E+00		Resid rate (us/s)		8.81322E-06	+/- 3.2E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.69604634994E-06		Resid phase (deg)		125.7	+/- 19.0

	RMS	Theor.	Amplitude	0.158 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	64.8	45.5	Search (2048X32)	0.119	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	87.9	79.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	32.2	26.8	Inc. seg. avg.	0.168	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011	
amp/frq (%)	36.7	46.8	Inc. frq. avg.	0.153	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00	

f: az 74.6 el 35.8 pa -71.2 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10644.719 -2847.325 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fX.W.151.1W8CZP

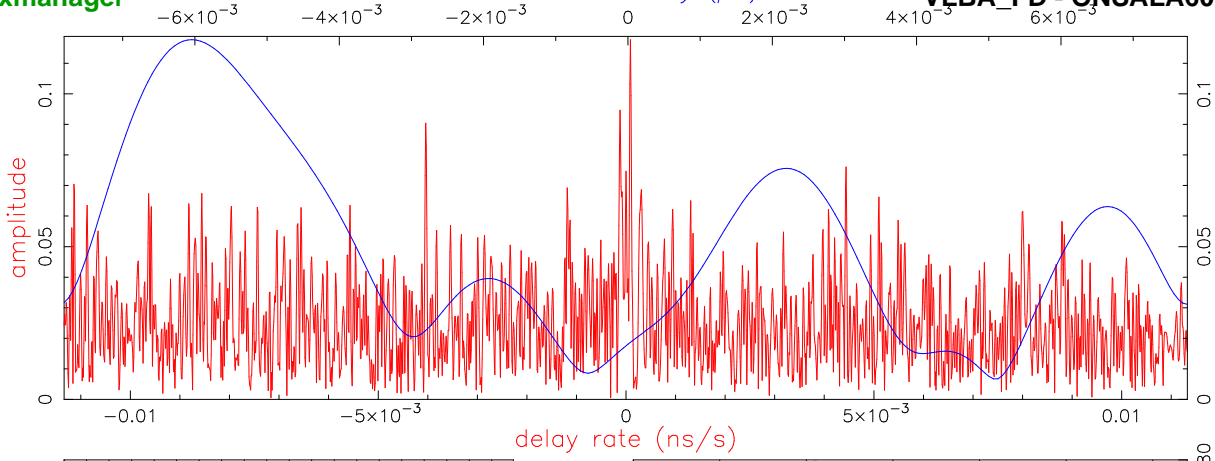
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

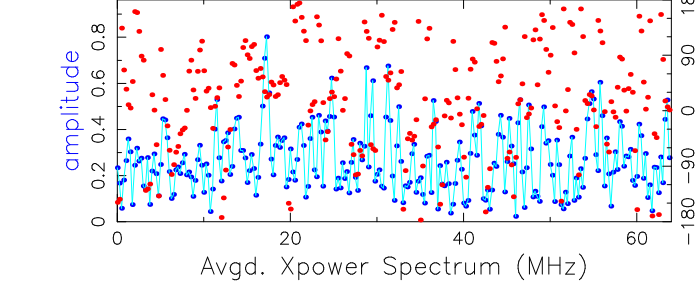
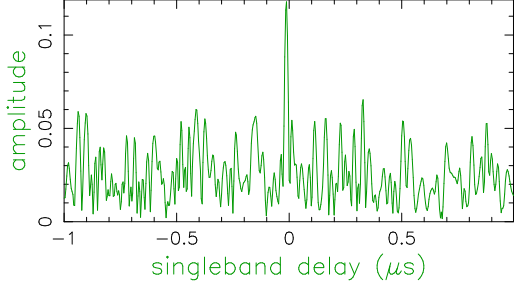
0234+285.1W8CZP, No0029, fX

VLBA_FD - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

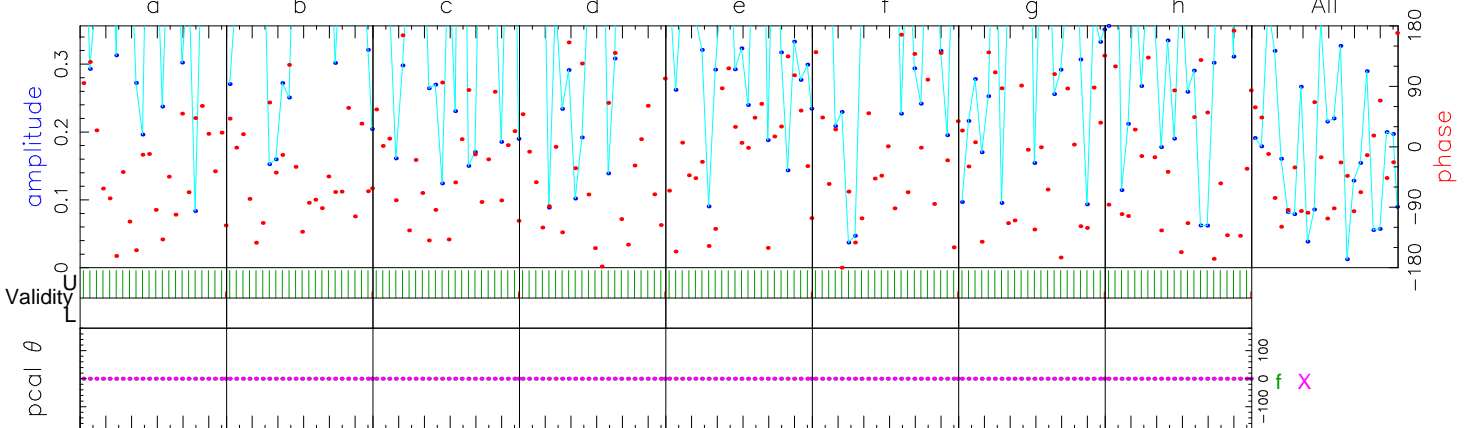


Fringe quality 0
 SNR 5.9
 Int time 329.919
 Amp 0.119
 Phase -41.3
 PFD 6.0e-01
 Delays (us)
 SBD -0.012916
 MBD -0.006061
 Fringe rate (Hz)
 0.007771
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044512
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-42.2	-59.2	-18.4	-89.0	21.7	-46.9	22.6	-120.2	Phase	-41.3
	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	253.6	252.1	371.0	142.6	102.1	206.8	438.6	235.8	Sbd box	253.7
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.01201475958E+03	Apriori delay (usec)	-2.01200869883E+03	Resid mbdelay (usec)	-6.06075E-03	+/-	1.8E-04
Sband delay (usec)	-2.01202161483E+03	Apriori clock (usec)	-4.6140602E+01	Resid sbdelay (usec)	-1.29160E-02	+/-	1.5E-03
Phase delay (usec)	-2.01200870016E+03	Apriori clockrate (us/s)	-4.6799999E-07	Resid phdelay (usec)	-1.33225E-06	+/-	6.3E-07
Delay rate (us/s)	1.62642608829E+00	Apriori rate (us/s)	1.62642599808E+00	Resid rate (us/s)	9.02114E-08	+/-	3.3E-09
Total phase (deg)	-155.5	Apriori accel (us/s/s)	-7.69604634994E-06	Resid phase (deg)	-41.3	+/-	19.4

ph/seg (deg)	59.7	Theor.	46.6	Amplitude	0.119 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	104.1	Search (2048X32)	0.116	Search	0.116	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	53.9	Interp.	0.000	Inc. seg. avg.	0.136	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	59.2	Inc. frq. avg.	0.136	Inc. frq. avg.	0.136	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	

f: az 74.6 el 35.8 pa -71.2 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10644.719 -2847.325 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fx..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fx.W.85.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

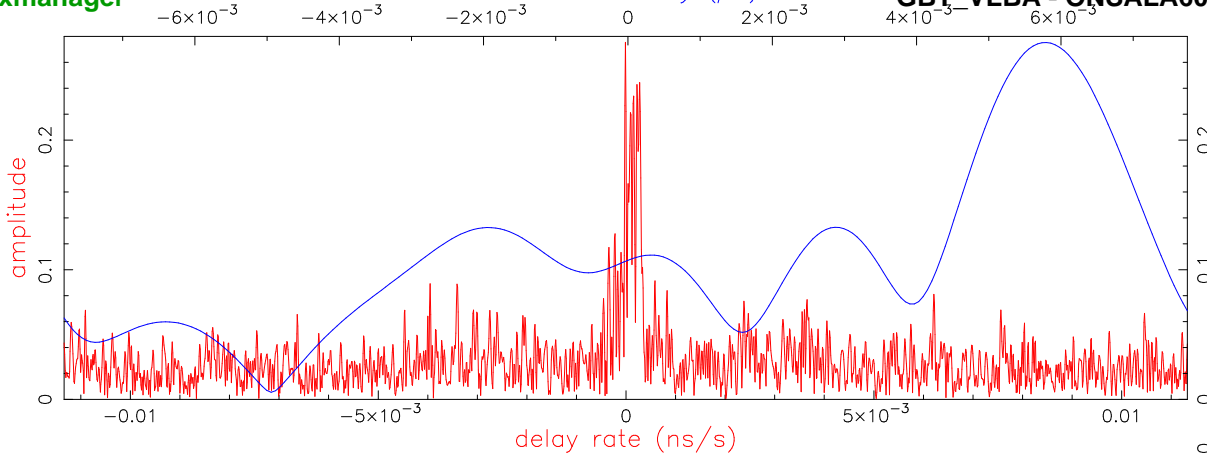
fxmanager

0234+285.1W8CZP, No0029, GX

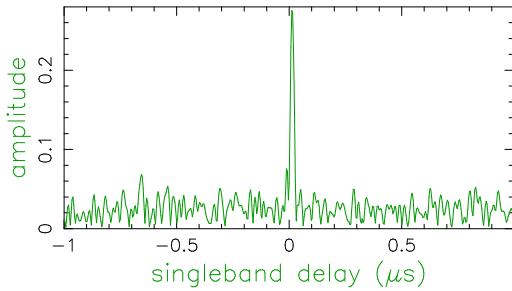
GBT_VLBA - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

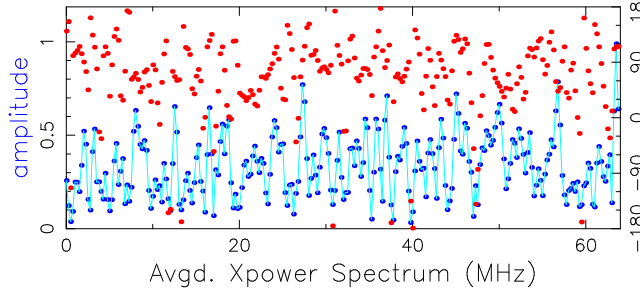
Fringe quality 9



SNR 13.9
Int time 329.957
Amp 0.280
Phase 170.3
PFD 3.3e-35
Delays (us)
SBD 0.013368
MBD 0.005791
Fringe rate (Hz)
-0.001190
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

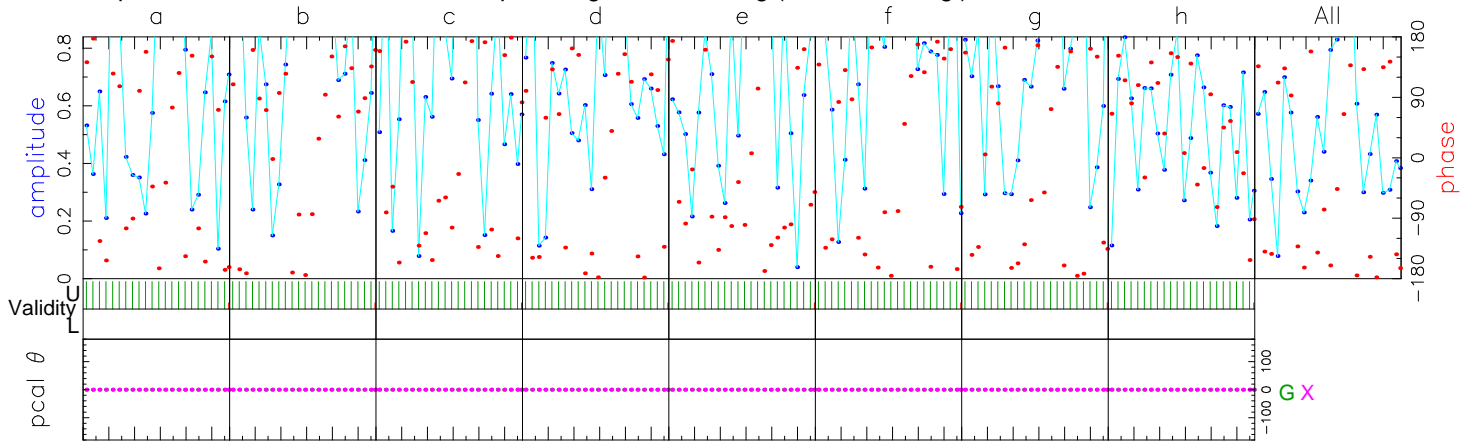


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044516
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	162.0	135.8	-147.1	149.6	-123.0	170.1	173.7	82.2	Phase	170.3
	0.3	0.4	0.4	0.4	0.3	0.5	0.4	0.2	Ampl.	0.3
	260.4	259.8	260.3	259.8	259.2	259.9	259.8	257.6	Sbd box	260.4
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	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	

Group delay (usec)(sbd)	3.14435537038E+03	Apriori delay (usec)	3.14434957951E+03	Resid mbdelay (usec)	5.79086E-03	+/-	7.8E-05
Sband delay (usec)	3.14436294751E+03	Apriori clock (usec)	-7.0646233E+01	Resid sbdelay (usec)	1.33680E-02	+/-	6.2E-04
Phase delay (usec)	3.14434958501E+03	Apriori clockrate (us/s)	-6.2799998E-07	Resid phdelay (usec)	5.49248E-06	+/-	2.7E-07
Delay rate (us/s)	1.24981925805E+00	Apriori rate (us/s)	1.24981927186E+00	Resid rate (us/s)	-1.38126E-08	+/-	1.4E-09
Total phase (deg)	90.9	Apriori accel (us/s/s)	-2.91454388320E-05	Resid phase (deg)	170.3	+/-	8.2

ph/seg (deg)	59.1	RMS	19.8	Theor.	0.280 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	134.1	Search (2048X32)	0.271	Amplitude		Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	51.2	Interp.	0.000	Search		Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	36.1	Inc. seg. avg.	0.502	Inc. seg. avg.		Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.339	Inc. frq. avg.		Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

G: az 94.5 el 56.3 pa -62.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8212.913 -2924.895 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GX.W.112.1W8CZP

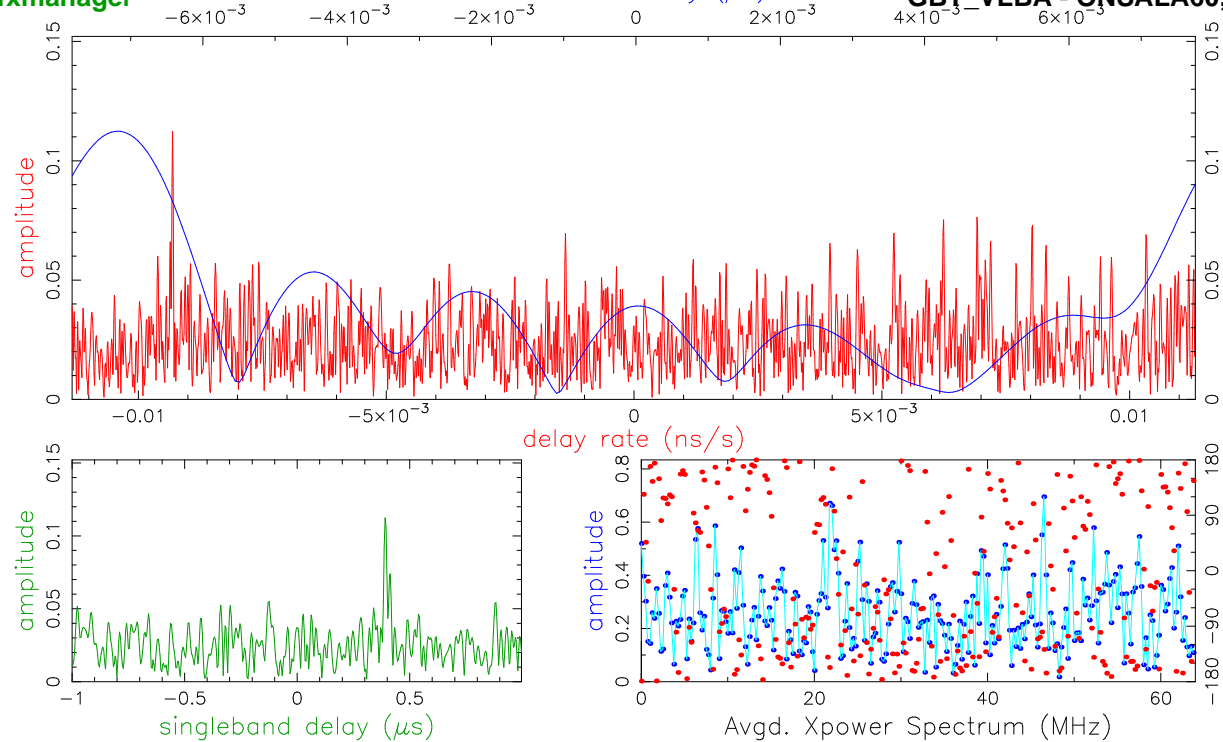
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GX

GBT_VLBA - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

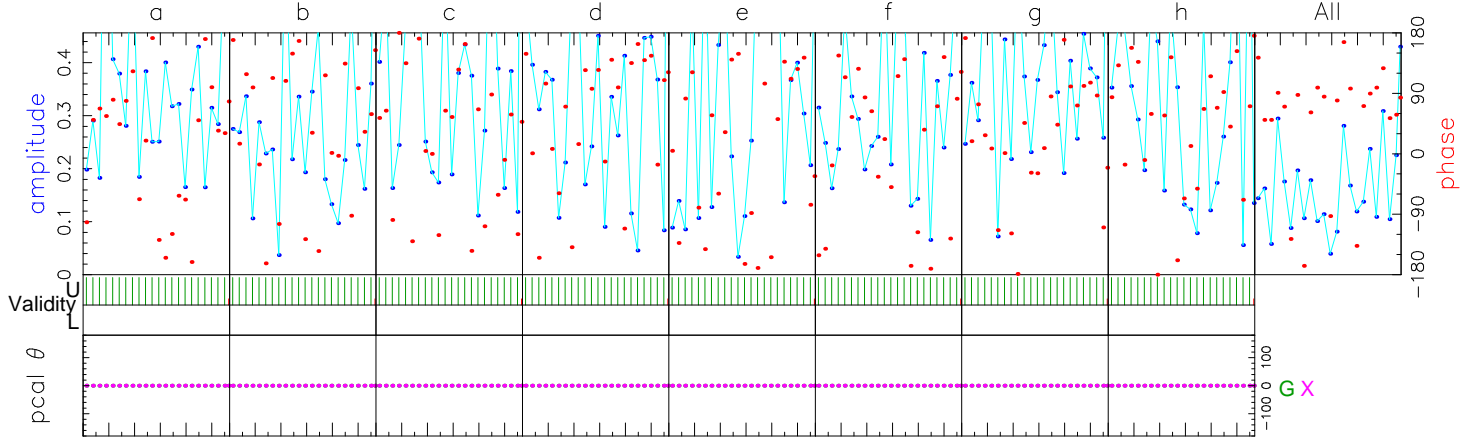


Fringe quality 0

SNR 5.6
 Int time 329.957
 Amp 0.152
 Phase 97.3
 PFD 9.9e-01
 Delays (us)
 SBD 0.391643
 MBD -0.007125
 Fringe rate (Hz)
 -0.802850
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044520
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	67.9	122.5	106.3	119.7	139.4	100.4	53.6	100.4	Phase	97.3
	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	Ampl.	0.1
	313.7	82.5	132.8	495.7	168.6	391.5	137.4	357.0	Sbd box	357.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	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	
									Tracks	
Group delay (usec)(sbd)	3.14474870462E+03		Apriori delay (usec)		3.14434957951E+03		Resid mbdelay (usec)		-7.12489E-03	+/- 1.9E-04
Sband delay (usec)	3.14474122201E+03		Apriori clock (usec)		-7.0646233E+01		Resid sbdelay (usec)		3.91643E-01	+/- 1.5E-03
Phase delay (usec)	3.14434958265E+03		Apriori clockrate (us/s)		-6.2799998E-07		Resid phdelay (usec)		3.13871E-06	+/- 6.6E-07
Delay rate (us/s)	1.24980995156E+00		Apriori rate (us/s)		1.24981927186E+00		Resid rate (us/s)		-9.32029E-06	+/- 3.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.91454388320E-05		Resid phase (deg)		97.3	+/- 20.4

	RMS	Theor.	Amplitude	0.152 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	64.1	48.8	Search (2048X32)	0.108	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	80.0	85.3	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	31.1	28.8	Inc. seg. avg.	0.157	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	28.0	50.3	Inc. frq. avg.	0.150	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

G: az 94.5 el 56.3 pa -62.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8212.913 -2924.895 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GX.W.134.1W8CZP

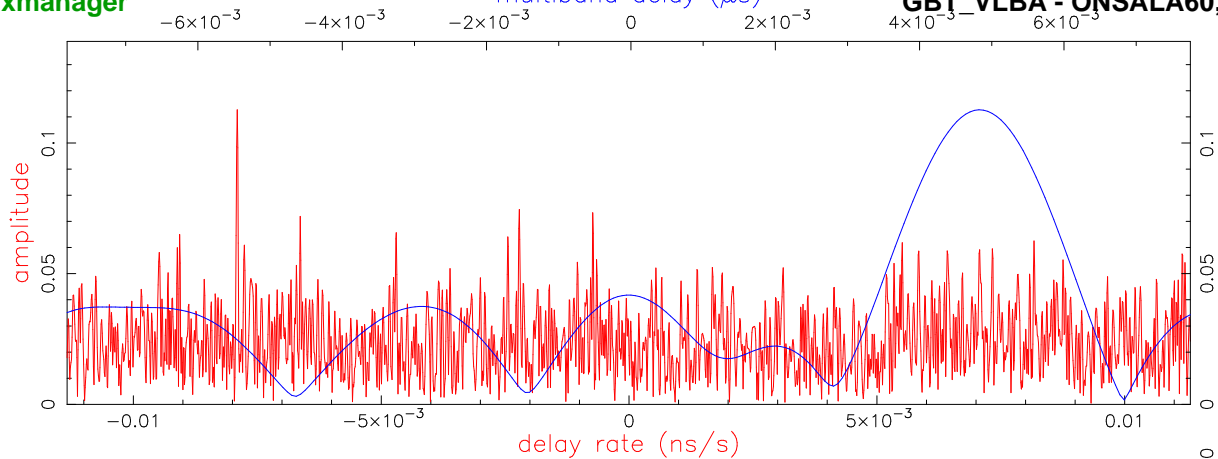
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GX

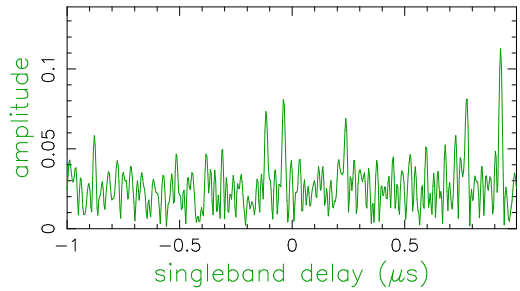
GBT_VLBA - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

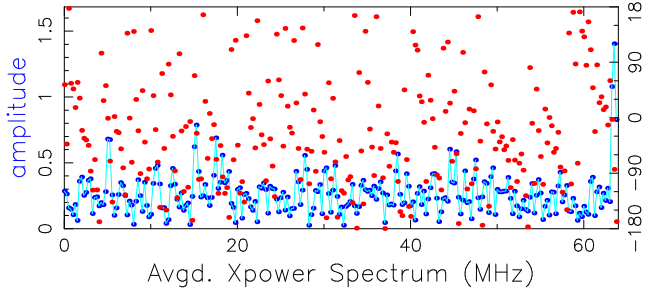


Fringe quality 0

SNR 5.6
 Int time 329.957
 Amp 0.139
 Phase 123.5
 PFD 9.9e-01
 Delays (us)
 SBD 0.925718
 MBD 0.004834
 Fringe rate (Hz)
 -0.681491
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

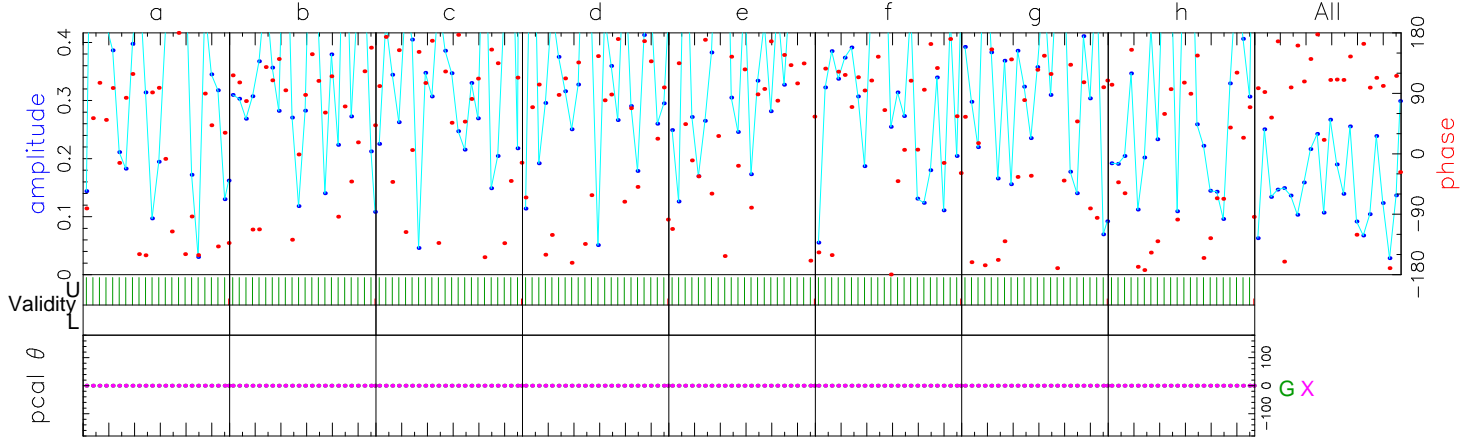


delay rate (ns/s)



Exp. c211a
 Yr:day 16383
 Start 2021:113
 Stop 2021:113
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044524
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	122.7	111.4	166.4	136.2	117.3	112.1	169.7	107.8	Phase	123.5
	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	371.4	493.3	332.3	31.3	456.5	494.1	337.5	488.1	Sbd box	494.0
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	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	

Group delay (usec)(sbd)	3.14527628829E+03	Apriori delay (usec)	3.14434957951E+03	Resid mbdelay (usec)	4.83378E-03	+/-	1.9E-04
Sband delay (usec)	3.14527529776E+03	Apriori clock (usec)	-7.0646233E+01	Resid sbdelay (usec)	9.25718E-01	+/-	1.5E-03
Phase delay (usec)	3.14434958350E+03	Apriori clockrate (us/s)	-6.2799998E-07	Resid phdelay (usec)	3.98346E-06	+/-	6.6E-07
Delay rate (us/s)	1.24981136042E+00	Apriori rate (us/s)	1.24981927186E+00	Resid rate (us/s)	-7.91144E-06	+/-	3.5E-09
Total phase (deg)	44.1	Apriori accel (us/s/s)	-2.91454388320E-05	Resid phase (deg)	123.5	+/-	20.5

ph/seg (deg)	50.7	Theor.	49.1	Amplitude	0.139 +/- 0.025	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	70.4	Search (2048X32)	0.108	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	28.0	Inc. seg. avg.	0.139	Inc. frq. avg.	0.131	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	41.4	Inc. frq. avg.	0.131	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011 0.011
										ion window (TEC)	0.00 0.00

G: az 94.5 el 56.3 pa -62.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8212.913 -2924.895 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GX.W.154.1W8CZP

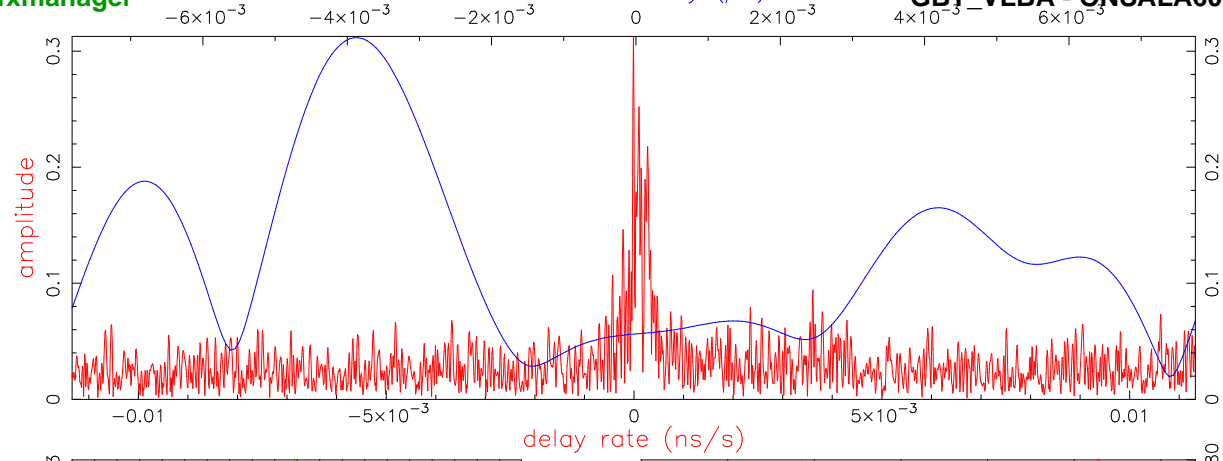
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

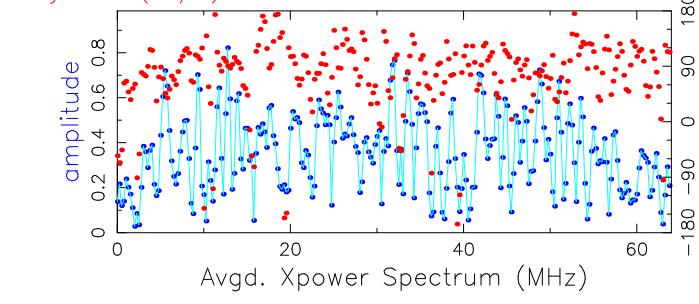
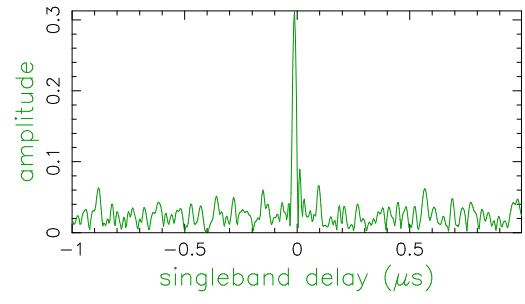
0234+285.1W8CZP, No0029, GX

GBT_VLBA - ONSALA60, fgroup W, pol LL

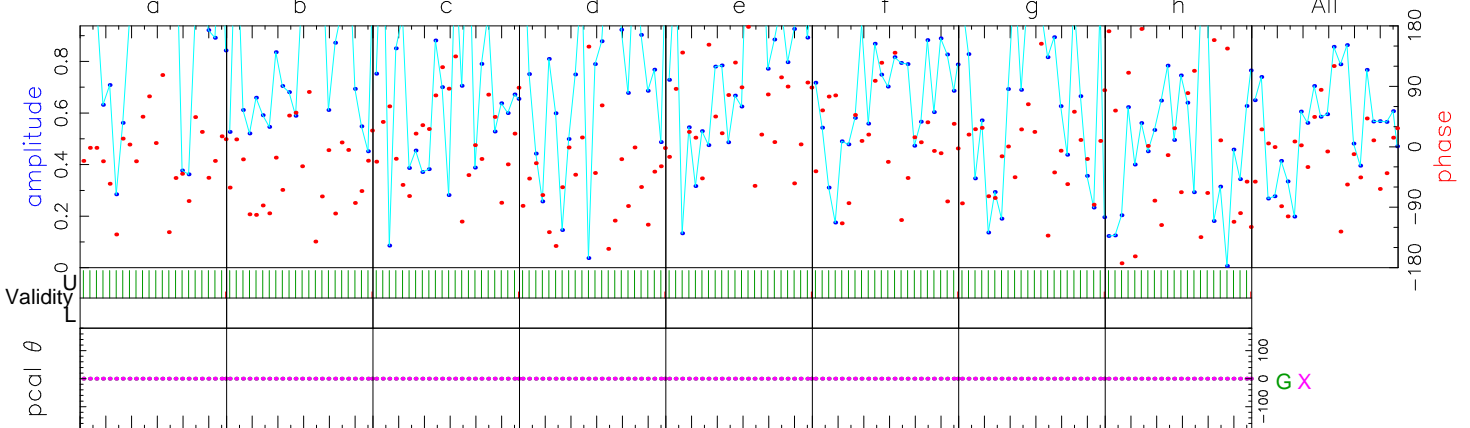
multiband delay (μ s)



Fringe quality 7
 SNR 15.5
 Int time 329.957
 Amp 0.313
 Phase -9.8
 PFD 1.4e-45
 Delays (us)
 SBD -0.012480
 MBD -0.003892
 Fringe rate (Hz) -0.001293
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044513
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
G	1000	1000	1000	1000	1000	1000	1000	1000	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)	3.14433006210E+03	Apriori delay (usec)		3.14434957951E+03	Resid mbdelay (usec)		-3.89242E-03	+/-	7.0E-05
Sband delay (usec)	3.14433709926E+03	Apriori clock (usec)		-7.0646233E+01	Resid sbdelay (usec)		-1.24802E-02	+/-	5.5E-04
Phase delay (usec)	3.14434957920E+03	Apriori clockrate (us/s)		-6.2799998E-07	Resid phdelay (usec)		-3.17432E-07	+/-	2.4E-07
Delay rate (us/s)	1.24981925685E+00	Apriori rate (us/s)		1.24981927186E+00	Resid rate (us/s)		-1.50087E-08	+/-	1.2E-09
Total phase (deg)	270.7	Apriori accel (us/s/s)		-2.91454388320E-05	Resid phase (deg)		-9.8	+/-	7.4

ph/seg (deg)	57.1	Theor.	17.7	Amplitude	0.313 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	99.1	Search (2048X32)	0.304	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	47.0	Inc. seg. avg.	0.537	Inc. frq. avg.	0.373	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	46.1	Inc. frq. avg.	0.373			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	

G: az 94.5 el 56.3 pa -62.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8212.913 -2924.895 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GX.W.93.1W8CZP

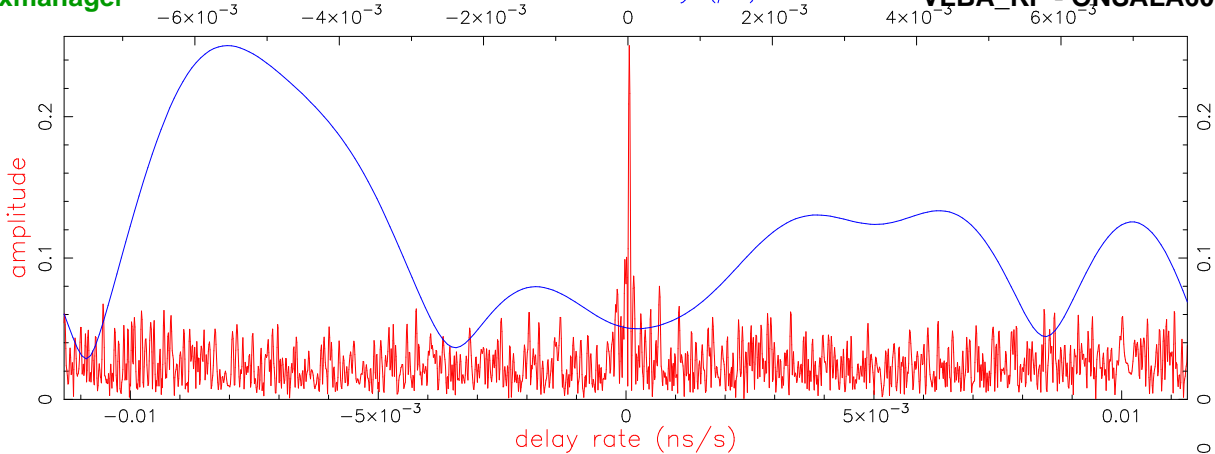
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, kX

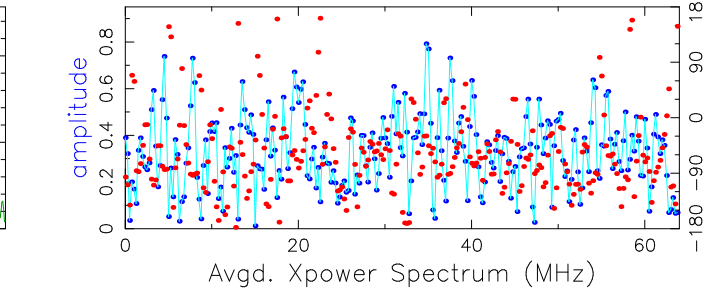
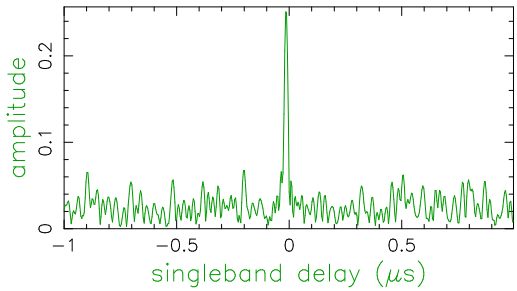
VLBA_KP - ONSALA60, fgroup W, pol LL

multiband delay (μ s)



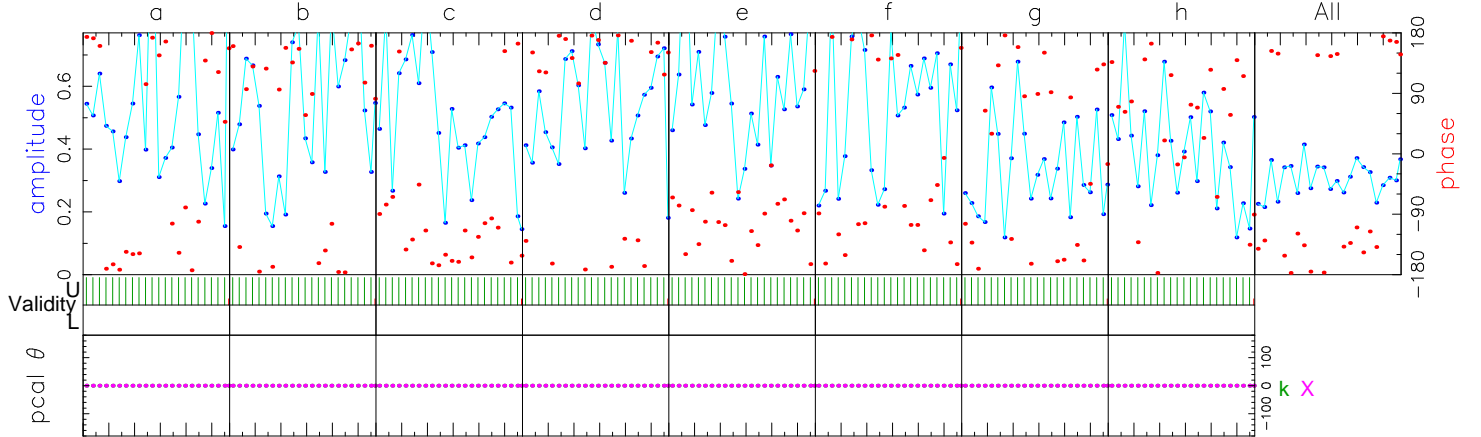
Fringe quality 9

SNR 12.8
 Int time 329.957
 Amp 0.257
 Phase -164.9
 PFD 1.6e-28
 Delays (us)
 SBD -0.013728
 MBD -0.005571
 Fringe rate (Hz)
 0.005282
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044529
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-3.85907885045E+03				-3.85905765405E+03					
Sband delay (usec)	-3.85907138205E+03				-5.6046963E-01					
Phase delay (usec)	-3.85905765937E+03				-5.2800001E-07					
Delay rate (us/s)	1.67430760715E+00				1.67430754583E+00					
Total phase (deg)			-280.1		3.14717075182E-06					
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode:	MANUAL	MANUAL			MANUAL					
Pcal rate:	0.000E+00	0.000E+00			0.000E+00					
Bits/sample:	2x2									
Sample rate (MSamp/s):	128									
Data rate (Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

ph/seg (deg) 34.8 21.5 Search (2048X32) 0.241 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 27.4 37.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 59.9 12.7 Inc. seg. avg. 0.284 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 55.6 22.2 Inc. frq. avg. 0.341 Sample rate (MSamp/s): 128 Data rate (Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 72.6 el 29.8 pa -67.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10942.866 -2222.432 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/c211a/v2/1234/No0029/kX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/kX.W.164.1W8CZP simultaneous interpolator

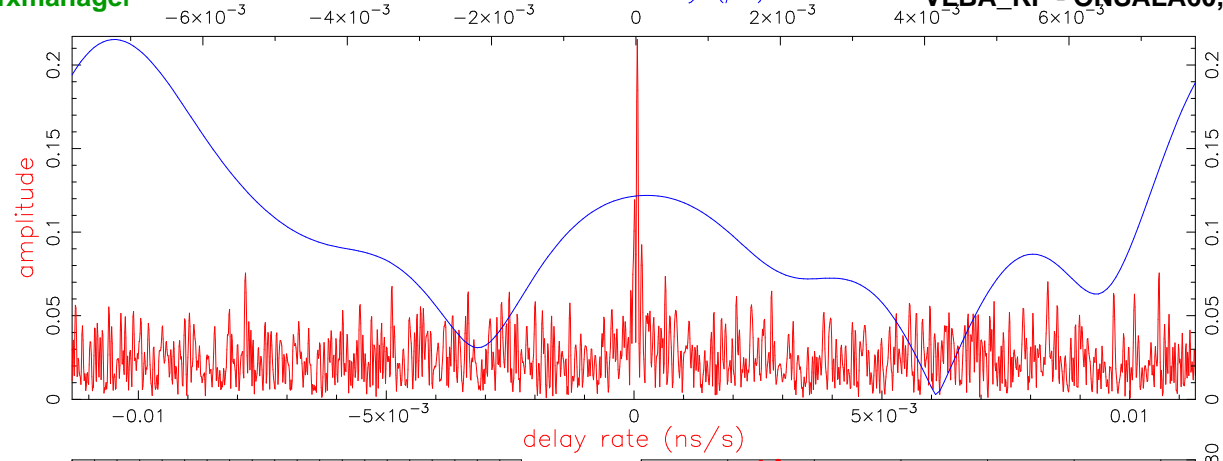
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

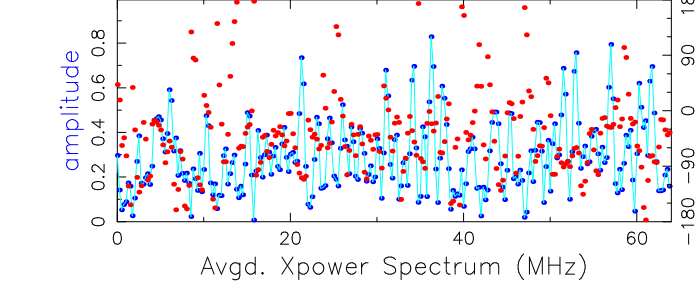
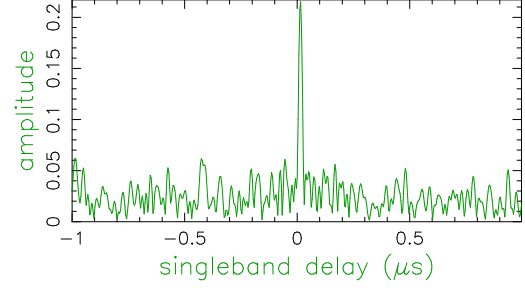
0234+285.1W8CZP, No0029, kX

VLBA_KP - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

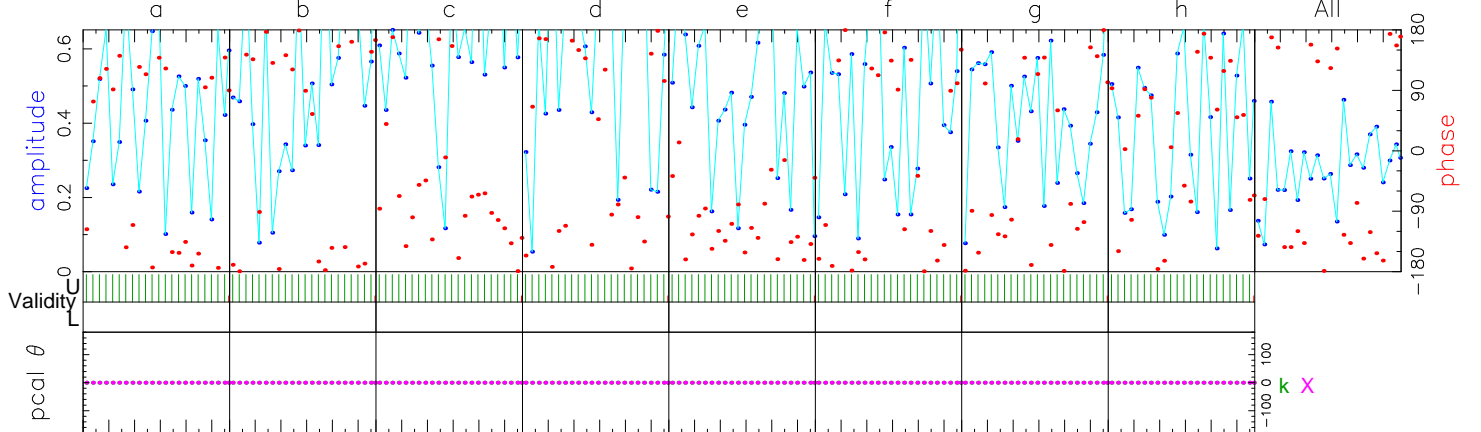


Fringe quality 9
 SNR 10.8
 Int time 329.957
 Amp 0.217
 Phase -162.2
 PFD 1.9e-18
 Delays (us)
 SBD 0.014444
 MBD -0.007231
 Fringe rate (Hz) 0.005602
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044533
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	165.5	170.2	-105.6	-167.4	-102.7	173.1	-164.8	85.7	Phase	-162.2
k	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.1	Ampl.	0.3
X	260.9	261.0	260.4	260.1	259.9	259.9	259.0	257.9	Sbd box	260.7
k:1000	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
k:X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-3.85904926054E+03		Apriori delay (usec)		-3.85905765405E+03		Resid mbdelay (usec)		-7.23149E-03	+/- 1.0E-04
Sband delay (usec)	-3.85904321030E+03		Apriori clock (usec)		-5.6046963E+01		Resid sbdelay (usec)		1.44437E-02	+/- 8.0E-04
Phase delay (usec)	-3.85905765928E+03		Apriori clockrate (us/s)		-5.2800001E-07		Resid phdelay (usec)		-5.22995E-06	+/- 3.4E-07
Delay rate (us/s)	1.67430761087E+00		Apriori rate (us/s)		1.67430754583E+00		Resid rate (us/s)		6.50371E-08	+/- 1.8E-09
Total phase (deg)			Apriori accel (us/s/s)		3.14717075182E-06		Resid phase (deg)		-162.2	+/- 10.6

	RMS	Theor.	Amplitude	0.217 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	43.8	25.5	Search (2048X32)	0.214	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	52.3	44.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	60.2	15.0	Inc. seg. avg.	0.255	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s) -0.011 0.011
amp/frq (%)	57.0	26.2	Inc. frq. avg.	0.287	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC) 0.00 0.00

k: az 72.6 el 29.8 pa -67.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10942.866 -2222.432 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/kX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/kX.W.180.1W8CZP

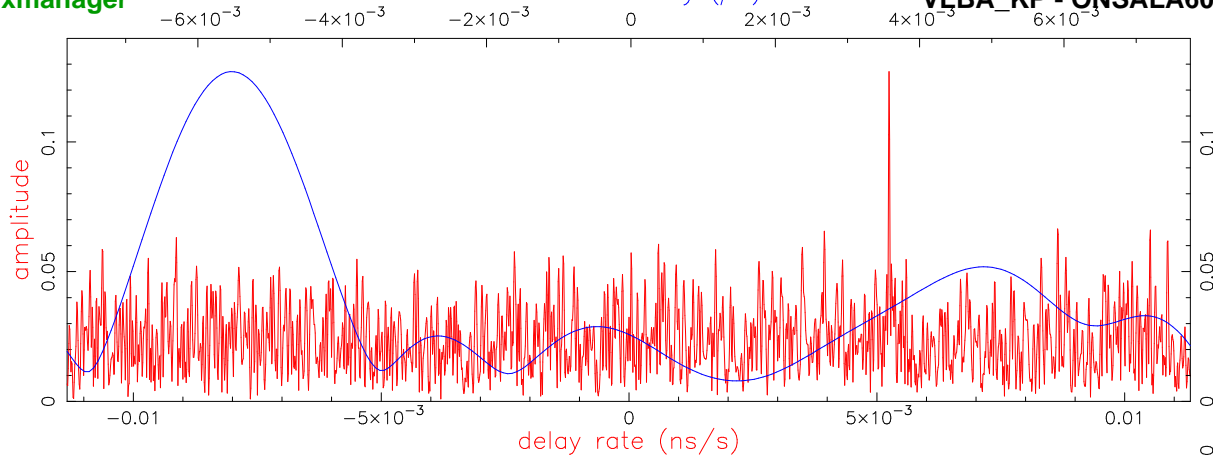
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, kX

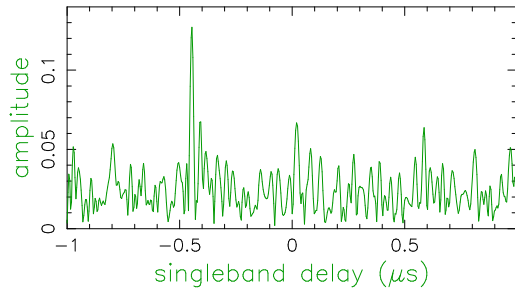
VLBA_KP - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

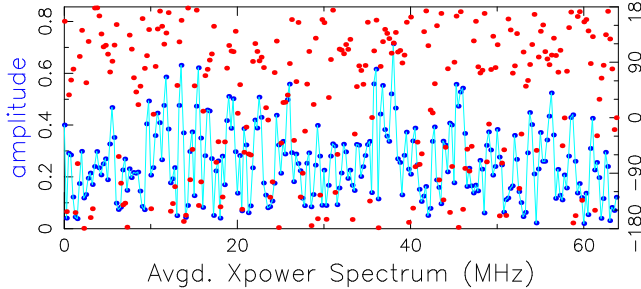


Fringe quality 0

SNR 6.4
 Int time 329.957
 Amp 0.140
 Phase 90.9
 PFD 5.6e-02
 Delays (us)
 SBD -0.446279
 MBD -0.005566
 Fringe rate (Hz)
 0.452413
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

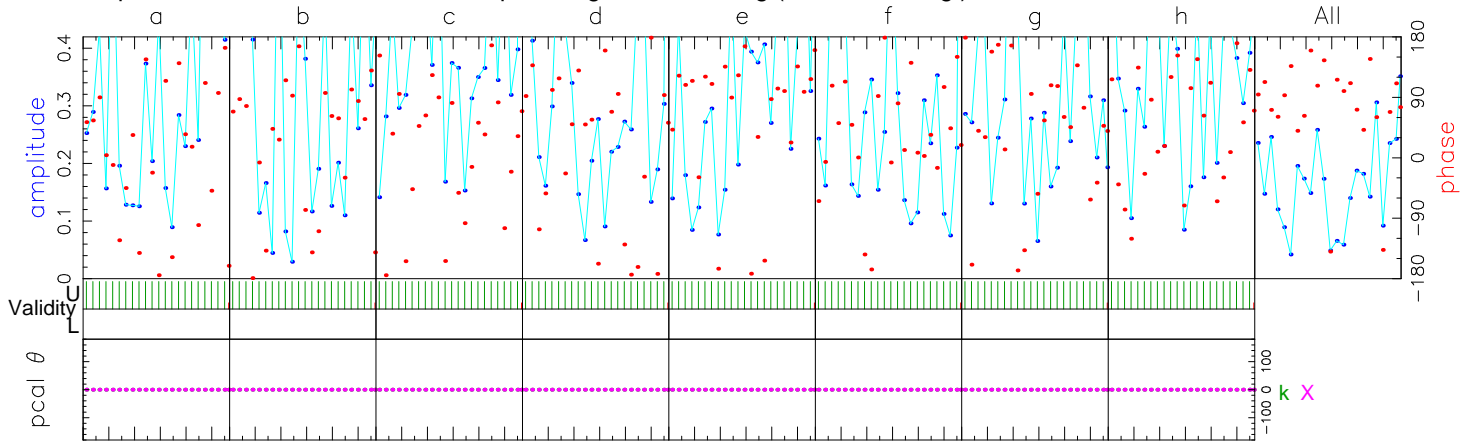


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044536
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-3.85950071973E+03	Apriori delay (usec)	-3.85905765405E+03	Resid mbdelay (usec)	-5.56568E-03	+/-	1.7E-04
Sband delay (usec)	-3.8595039330E+03	Apriori clock (usec)	-5.6046963E-01	Resid sbdelay (usec)	-4.46279E-01	+/-	1.4E-03
Phase delay (usec)	-3.85905765112E+03	Apriori clockrate (us/s)	-5.2800001E-07	Resid phdelay (usec)	2.93214E-06	+/-	5.8E-07
Delay rate (us/s)	1.67431279790E+00	Apriori rate (us/s)	1.67430754583E+00	Resid rate (us/s)	5.25207E-06	+/-	3.1E-09
Total phase (deg)		Apriori accel (us/s/s)	3.14717075182E-06	Resid phase (deg)	90.9	+/-	18.0

ph/seg (deg)	51.2	Theor.	43.3	Amplitude	0.140 +/- 0.022	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	64.6		75.5	Search (2048X32)	0.123	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	23.1		25.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	36.2		44.5	Inc. seg. avg.	0.138	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.134	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 72.6 el 29.8 pa -67.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10942.866 -2222.432 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/kX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/kX.W.196.1W8CZP

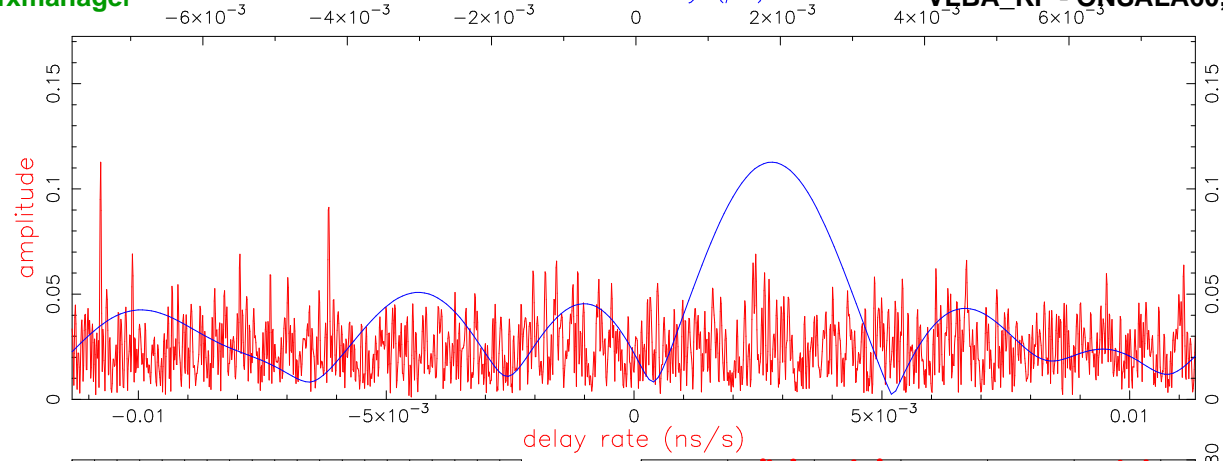
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, kX

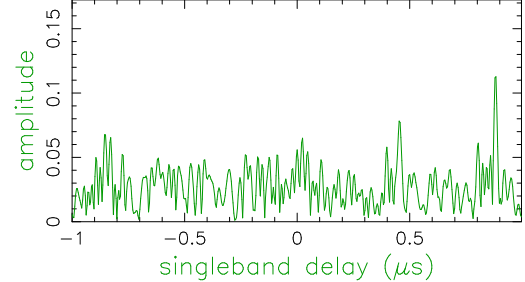
VLBA_KP - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

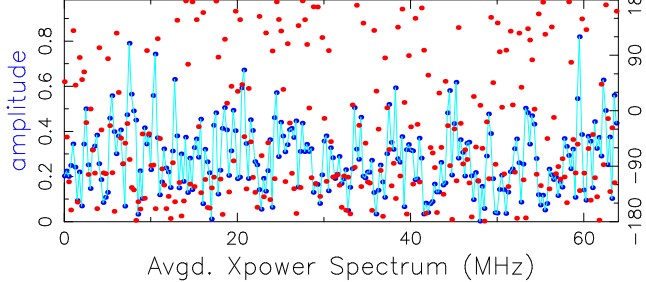


Fringe quality 0

SNR 5.7
Int time 329.957
Amp 0.172
Phase -76.8
PFD 9.3e-01
Delays (us)
SBD 0.881000
MBD 0.001857
Fringe rate (Hz)
-0.927891
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

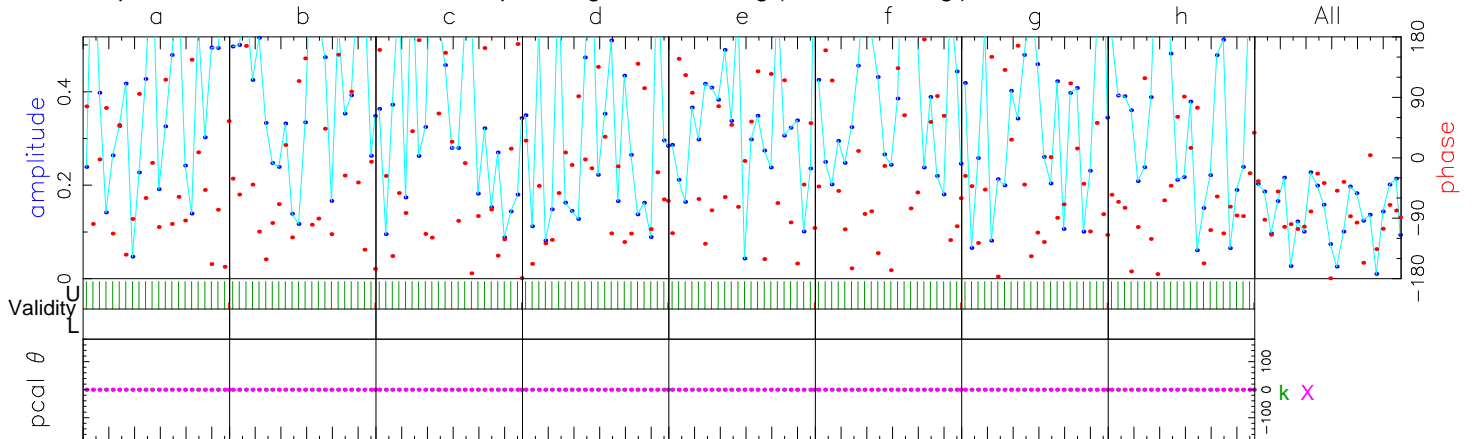


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044540
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-72.9	-87.9	-127.1	-39.0	-96.9	-80.0	-74.5	-77.9	Phase	-76.8
	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.3	Ampl.	0.2
	46.1	125.7	39.7	449.9	13.2	426.9	135.3	33.3	Sbd box	482.5
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-3.85818079741E+03	Apriori delay (usec)	-3.85905765405E+03	Resid mbdelay (usec)	1.85664E-03	+/-	1.9E-04
Sband delay (usec)	-3.85817665405E+03	Apriori clock (usec)	-5.6046963E+01	Resid sbdelay (usec)	8.81000E-01	+/-	1.5E-03
Phase delay (usec)	-3.85905765653E+03	Apriori clockrate (us/s)	-5.2800001E-07	Resid phdelay (usec)	-2.47681E-06	+/-	6.5E-07
Delay rate (us/s)	1.67429677394E+00	Apriori rate (us/s)	1.67430754583E+00	Resid rate (us/s)	-1.07719E-05	+/-	3.4E-09
Total phase (deg)	-191.9	Apriori accel (us/s/s)	3.14717075182E-06	Resid phase (deg)	-76.8	+/-	20.0

ph/seg (deg)	43.4	Theor.	48.0	Amplitude	0.172 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	60.0		83.8	Search (2048X32)	0.109	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	27.4		28.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	35.7		49.4	Inc. seg. avg.	0.156	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.161	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

k: az 72.6 el 29.8 pa -67.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10942.866 -2222.432 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/kX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/kX.W.212.1W8CZP

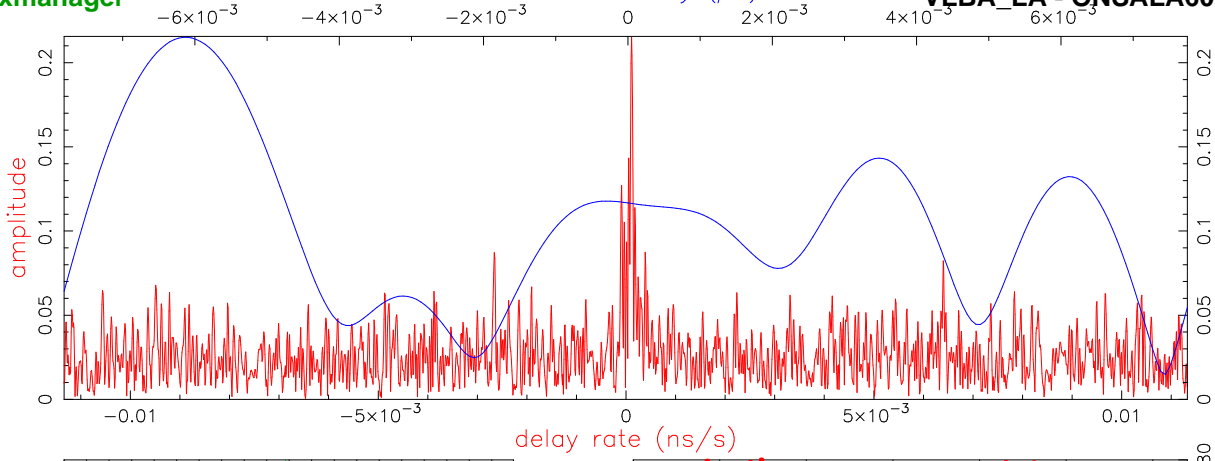
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, IX

VLBA_LA - ONSALA60, fgroup W, pol LL

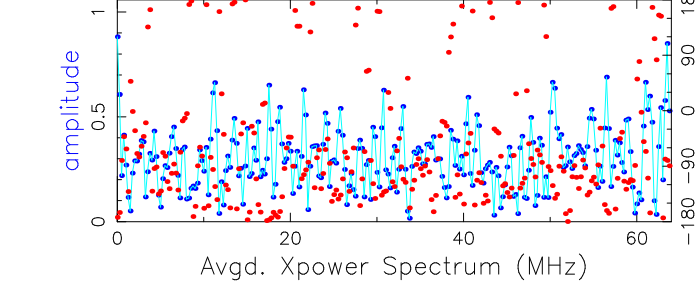
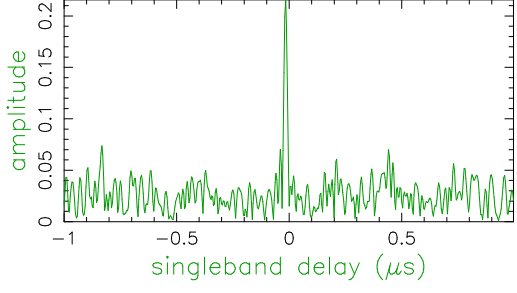
multiband delay (μ s)



Fringe quality 9

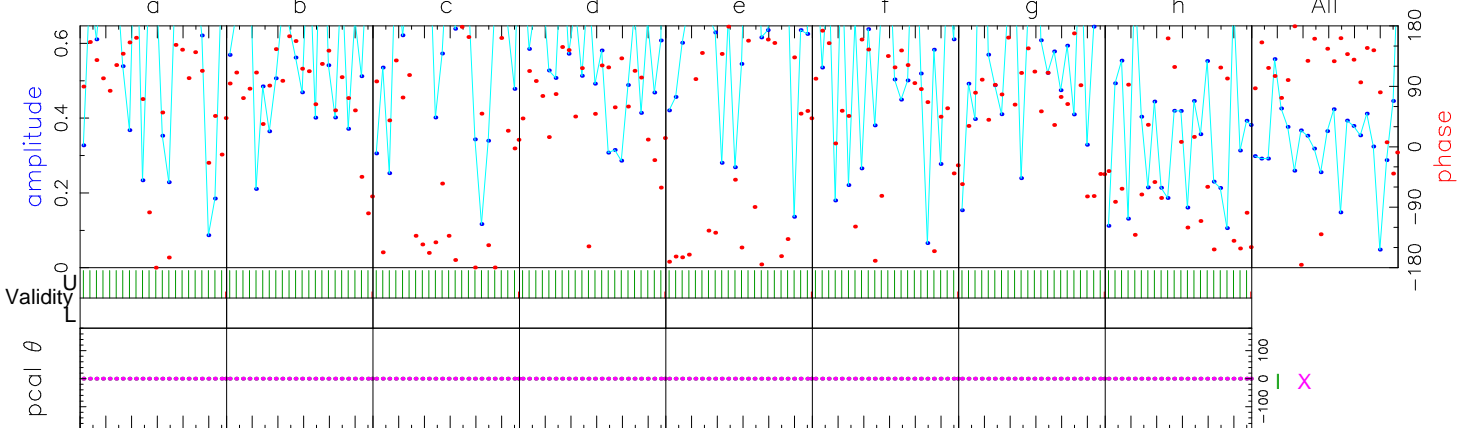
SNR 10.7
 Int time 329.957
 Amp 0.216
 Phase 126.6
 PFD 4.1e-18
 Delays (us)
 SBD -0.016220
 MBD -0.006119
 Fringe rate (Hz)
 0.009472
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044530
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-2.22196749679E+03	Apriori delay (usec)	-2.22194575247E+03	Resid mbdelay (usec)	-6.11932E-03	+/-	1.0E-04
Sband delay (usec)	-2.22196197272E+03	Apriori clock (usec)	-5.8941444E+01	Resid sbdelay (usec)	-1.62202E-02	+/-	8.0E-04
Phase delay (usec)	-2.22194574838E+03	Apriori clockrate (us/s)	-8.1400002E-07	Resid phdelay (usec)	4.08094E-06	+/-	3.4E-07
Delay rate (us/s)	1.58730833199E+00	Apriori rate (us/s)	1.58730822203E+00	Resid rate (us/s)	1.09960E-07	+/-	1.8E-09
Total phase (deg)		Apriori accel (us/s/s)	-2.55860595972E-06	Resid phase (deg)	126.6	+/-	10.7

ph/seg (deg)	58.6	Theor.	25.7	Amplitude	0.216 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	77.0		44.8	Search (2048X32)	0.212	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	71.0		15.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	57.1		26.4	Inc. seg. avg.	0.309	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.303	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

I: az 77.2 el 35.1 pa -64.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10382.480 -2044.369 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/IX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/IX.W.167.1W8CZP

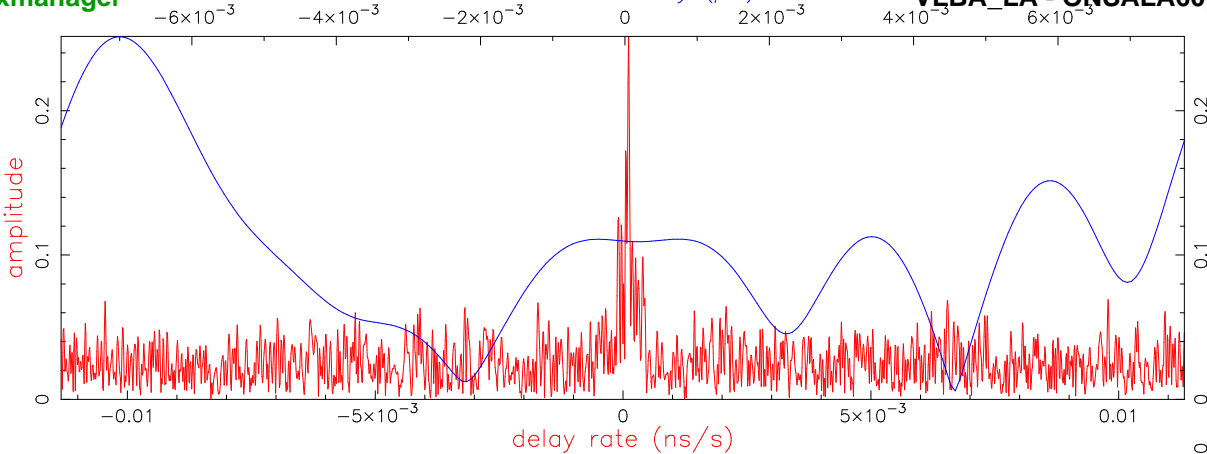
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, IX

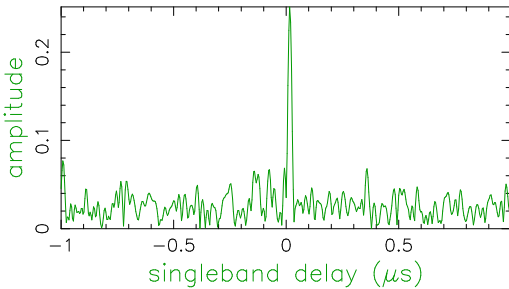
VLBA_LA - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

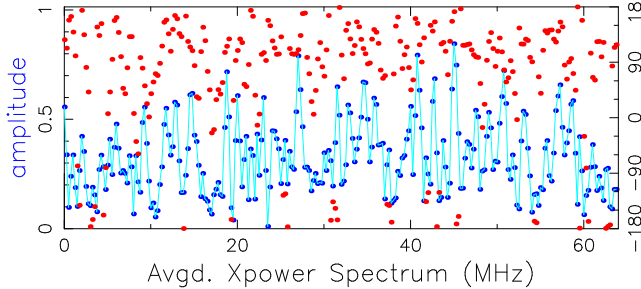


Fringe quality 9

SNR 12.5
 Int time 329.957
 Amp 0.251
 Phase 25.2
 PFD 4.5e-27
 Delays (us)
 SBD 0.016032
 MBD -0.006990
 Fringe rate (Hz)
 0.009384
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

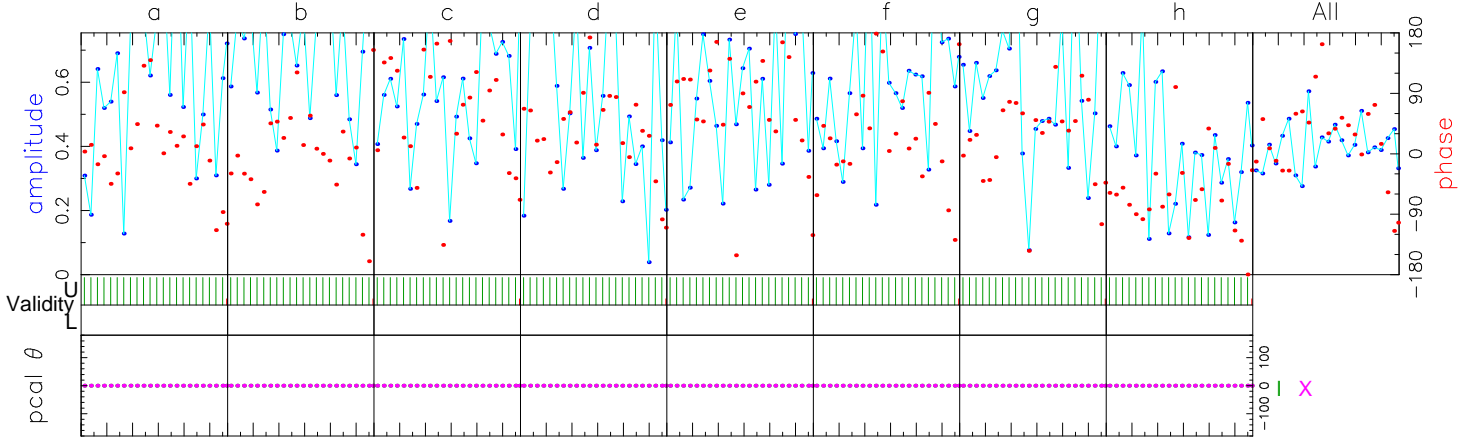


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044533
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-2.22193711773E+03				-2.22194575247E+03				-6.99026E-03	+/- 8.7E-05
Sband delay (usec)	-2.22192972047E+03				-5.8941444E+01				1.60320E-02	+/- 6.9E-04
Phase delay (usec)	-2.22194575165E+03				-8.1400002E-07				8.12984E-07	+/- 3.0E-07
Delay rate (us/s)	1.58730833097E+00				1.58730822203E+00				1.08943E-07	+/- 1.6E-09
Total phase (deg)			-17.0		-2.55860595972E-06				25.2	+/- 9.2
	RMS	Theor.	Amplitude	0.251 +/- 0.020	Pcal mode: MANUAL, MANUAL				PC period (AP's) 5, 5	
ph/seg (deg)	57.8	22.0	Search (2048X32)	0.247	Pcal rate: 0.000E+00, 0.000E+00 (us/s)				sb window (us)	-1.000 1.000
amp/seg (%)	66.1	38.4	Interp.	0.000	Bits/sample: 2x2				mb window (us)	-0.008 0.008
ph/frq (deg)	53.6	13.0	Inc. seg. avg.	0.375	Sample rate(MISamp/s): 128				dr window (ns/s)	-0.011 0.011
amp/frq (%)	38.9	22.6	Inc. frq. avg.	0.327	Data rate(Mb/s): 2048				ion window (TEC)	0.00 0.00
					nlags: 256				t_cohere infinite	

I: az 77.2 el 35.1 pa -64.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10382.480 -2044.369 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/IX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/IX.W.179.1W8CZP

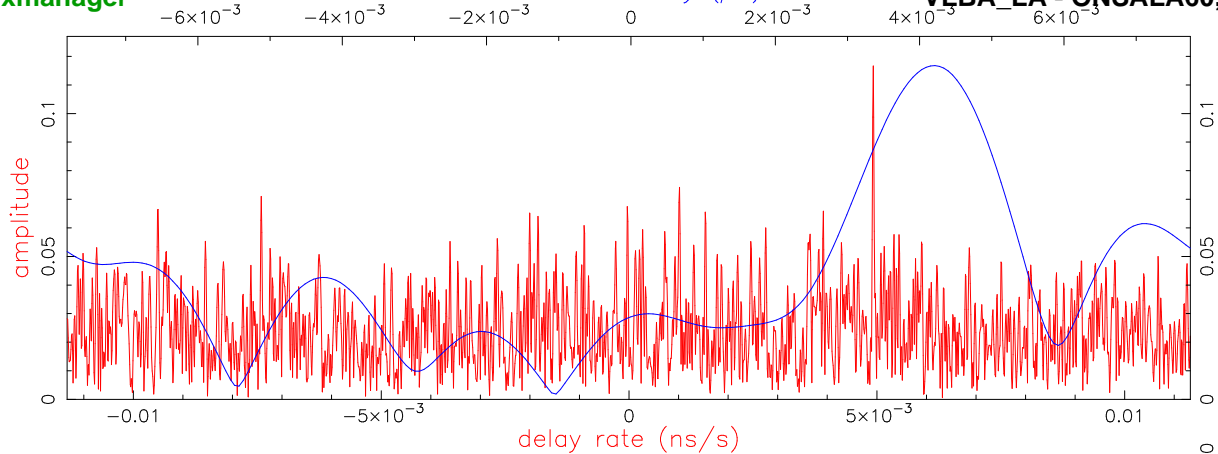
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, IX

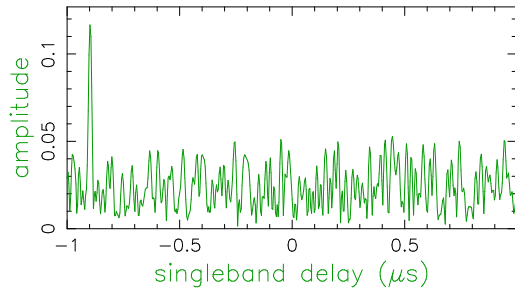
VLBA_LA - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

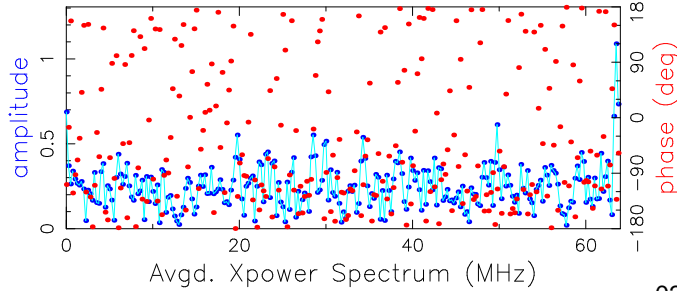


Fringe quality 0

SNR 5.8
 Int time 329.957
 Amp 0.127
 Phase -76.3
 PFD 7.5e-01
 Delays (us)
 SBD -0.897534
 MBD 0.004243
 Fringe rate (Hz)
 0.424732
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

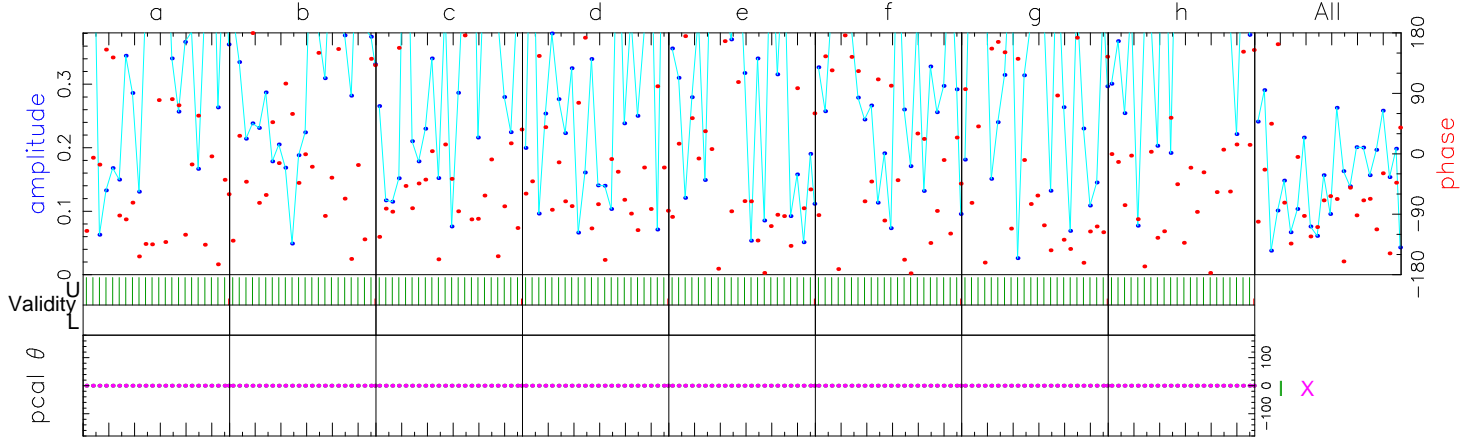


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044537
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-87.2	-60.8	-71.8	-57.5	-84.6	-139.4	-128.5	-50.7	Phase	-76.3
	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	Ampl.	0.1
	396.0	315.9	67.9	27.1	7.5	48.6	334.9	240.9	Sbd box	27.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-2.22284775979E+03	Apriori delay (usec)	-2.22194575247E+03	Resid mbdelay (usec)	4.24267E-03	+/-	1.9E-04
Sband delay (usec)	-2.22284328697E+03	Apriori clock (usec)	-5.8941444E+01	Resid sbdelay (usec)	-8.97534E-01	+/-	1.5E-03
Phase delay (usec)	-2.22194575492E+03	Apriori clockrate (us/s)	-8.1400002E-07	Resid phdelay (usec)	-2.45888E-06	+/-	6.3E-07
Delay rate (us/s)	1.58731315274E+00	Apriori rate (us/s)	1.58730822203E+00	Resid rate (us/s)	4.93071E-06	+/-	3.3E-09
Total phase (deg)	-118.5	Apriori accel (us/s/s)	-2.55860595972E-06	Resid phase (deg)	-76.3	+/-	19.7

ph/seg (deg)	54.4	Theor.	47.1	Amplitude	0.127 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	69.2	Search (2048X32)	0.113	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	36.9	Inc. seg. avg.	0.129	Inc. frq. avg.	0.127	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	45.3	Inc. frq. avg.	0.127	Sample rate (MSamp/s): 128		Data rate (Mb/s): 2048	mb window (us) -0.008 0.008
				nlags: 256	t_cohere infinite		dr window (ns/s) -0.011 0.011
							ion window (TEC) 0.00 0.00

I: az 77.2 el 35.1 pa -64.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10382.480 -2044.369 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/IX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/IX.W.198.1W8CZP

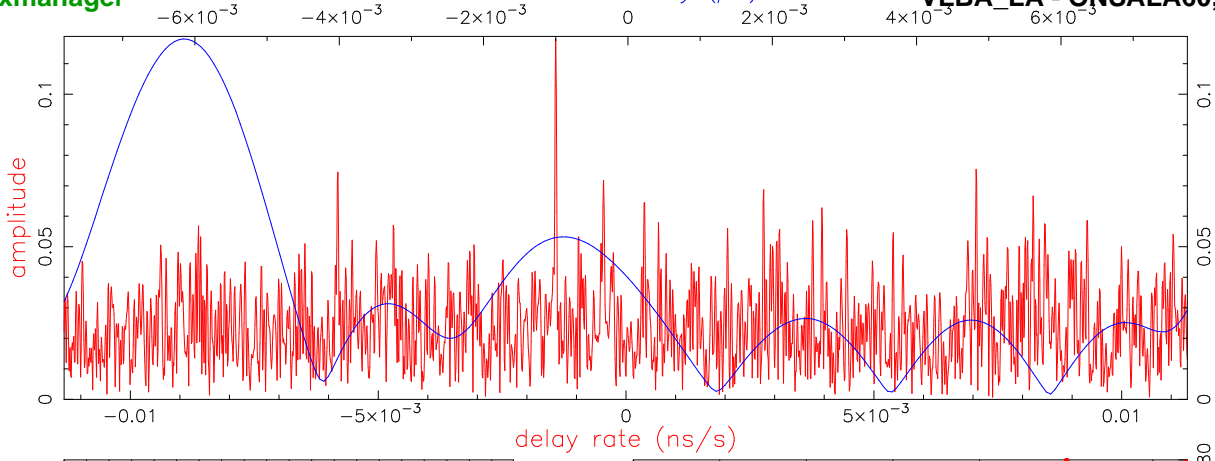
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, IX

VLBA_LA - ONSALA60, fgroup W, pol RL

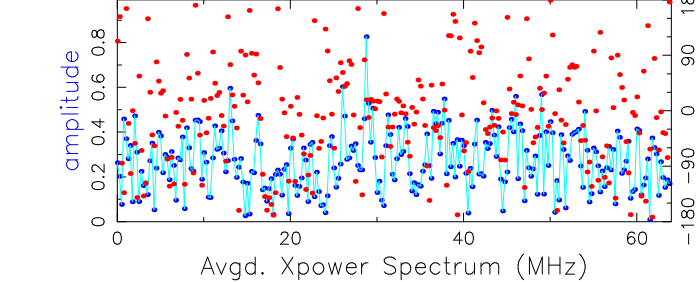
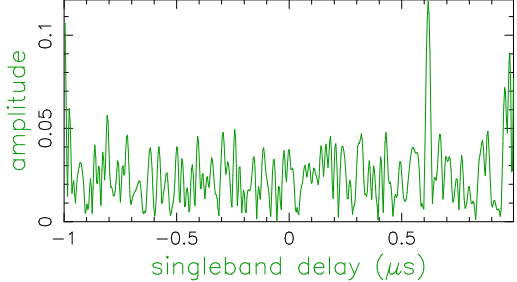
multiband delay (μ s)



Fringe quality 0

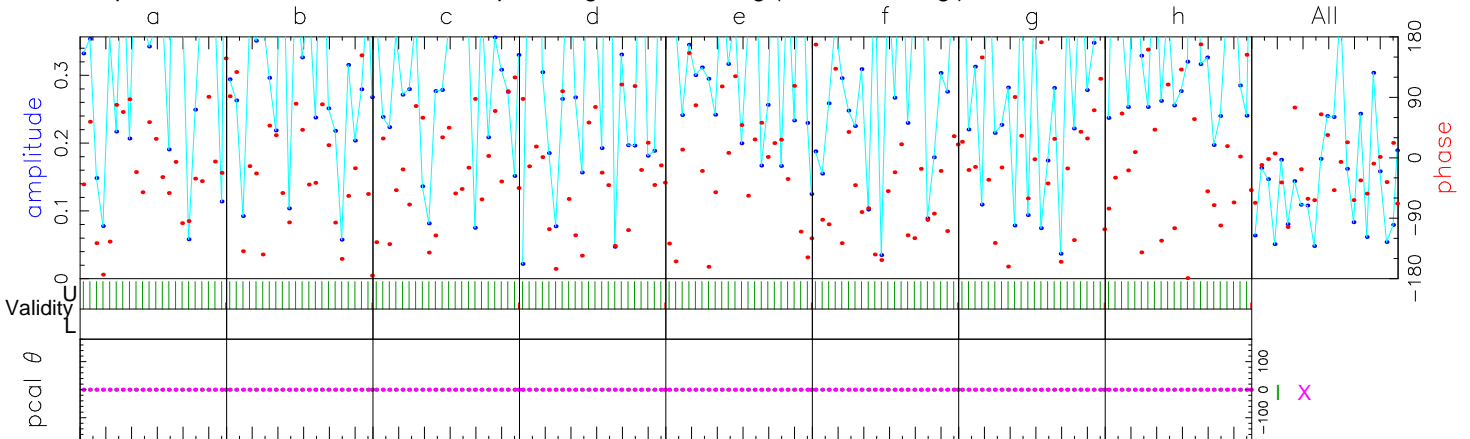
SNR 5.9
 Int time 329.957
 Amp 0.119
 Phase -11.1
 PFD 6.7e-01
 Delays (us)
 SBD 0.617504
 MBD -0.006148
 Fringe rate (Hz)
 -0.122674
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044541
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-6.3	-2.0	-24.8	-7.7	9.4	-59.7	8.9	-0.3		-11.1
	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	222.3	155.6	423.6	303.7	2.6	211.9	113.6	286.5	Sbd box	415.1
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.22132690041E+03		Apriori delay (usec)		-2.22194575247E+03		Resid mbdelay (usec)		-6.14794E-03	+/- 1.8E-04
Sband delay (usec)	-2.22132824822E+03		Apriori clock (usec)		-5.8941444E+01		Resid sbdelay (usec)		6.17504E-01	+/- 1.5E-03
Phase delay (usec)	-2.22194575282E+03		Apriori clockrate (us/s)		-8.1400002E-07		Resid phdelay (usec)		-3.59103E-07	+/- 6.3E-07
Delay rate (us/s)	1.58730679790E+00		Apriori rate (us/s)		1.58730822203E+00		Resid rate (us/s)		-1.42413E-06	+/- 3.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.55860595972E-06		Resid phase (deg)		-11.1	+/- 19.5

ph/seg (deg) 44.0 46.8 Search (2048X32) 0.115 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 80.2 81.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.5 27.6 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.2 48.2 Inc. frq. avg. 0.113 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 I: az 77.2 el 35.1 pa -64.8 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -10382.480 -2044.369 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/IX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/IX.W.218.1W8CZP

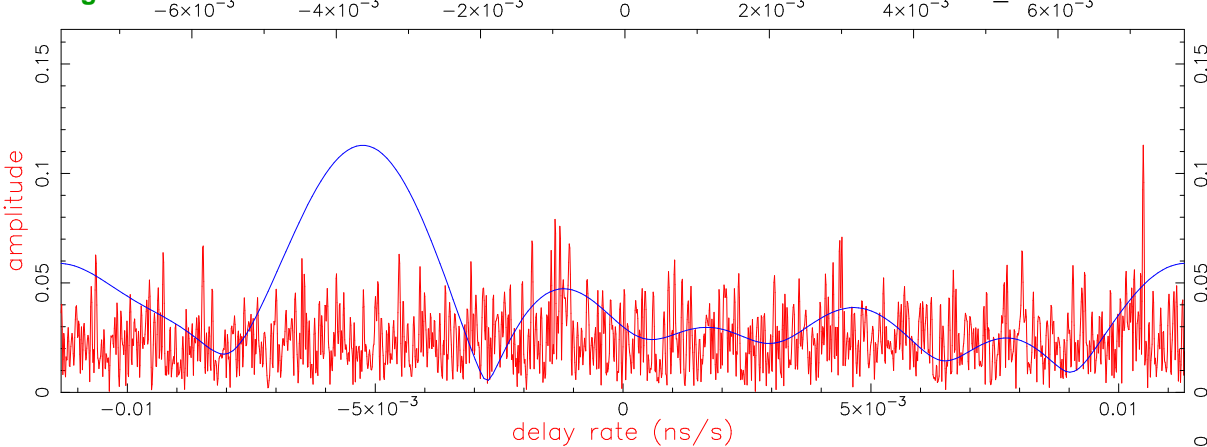
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, nX

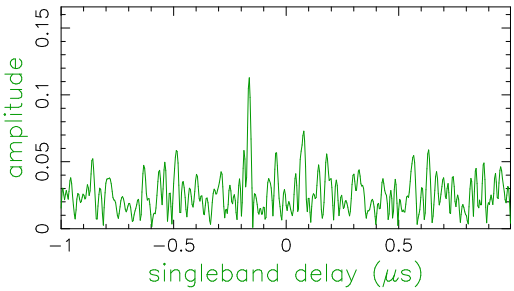
VLBA_NL - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

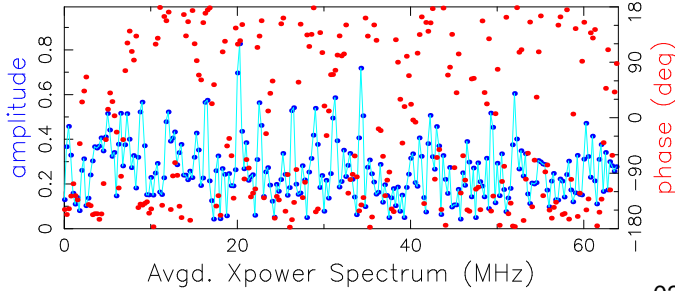


Fringe quality 0

SNR 5.6
Int time 329.957
Amp 0.166
Phase 131.3
PFD 9.9e-01
Delays (us)
SBD -0.164660
MBD -0.003647
Fringe rate (Hz) 0.905134
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

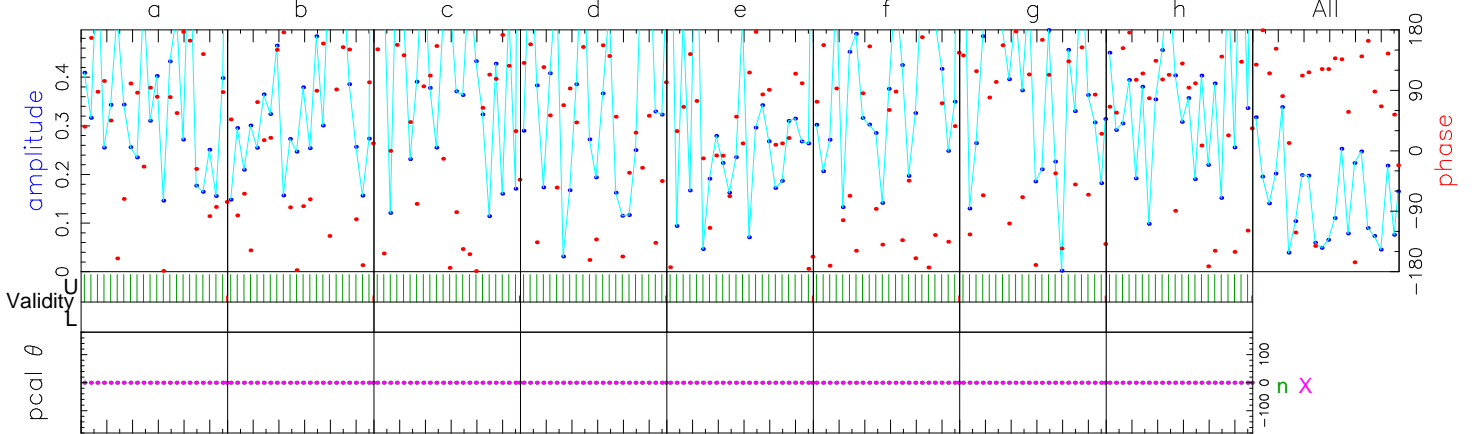


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044531
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.09023571131E+03	Apriori delay (usec)	1.09039560841E+03	Resid mbdelay (usec)	-3.64710E-03	+/-	1.9E-04
Sband delay (usec)	1.09023094816E+03	Apriori clock (usec)	-5.0971161E+01	Resid sbdelay (usec)	-1.64660E-01	+/-	1.5E-03
Phase delay (usec)	1.09039561265E+03	Apriori clockrate (us/s)	-2.2800002E-07	Resid phdelay (usec)	4.23513E-06	+/-	6.6E-07
Delay rate (us/s)	1.36707771474E+00	Apriori rate (us/s)	1.36706720703E+00	Resid rate (us/s)	1.05077E-05	+/-	3.4E-09
Total phase (deg)	26.4	Apriori accel (us/s/s)	-1.56926751037E-05	Resid phase (deg)	131.3	+/-	20.4

ph/seg (deg)	55.2	RMS	48.9	Theor.	55.2	Amplitude	0.166 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	85.5	Search (2048X32)	0.112	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	34.8	Inc. seg. avg.	0.163	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
amp/frq (%)	37.9	Inc. frq. avg.	0.168	nlags: 256	t_cohere infinite						

n: az 90.6 el 47.1 pa -58.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8961.352 -1991.548 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/nX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/nX.W.176.1W8CZP

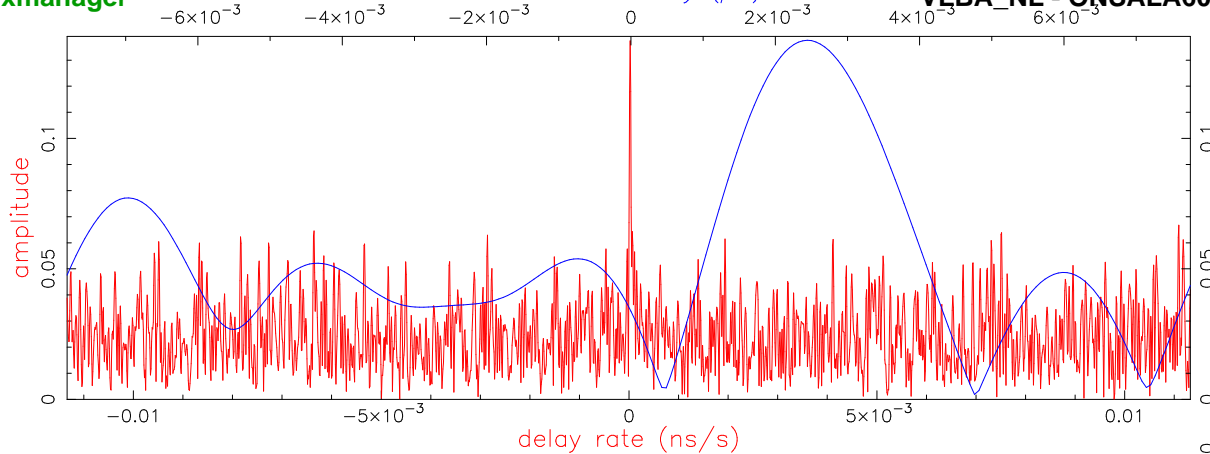
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, nX

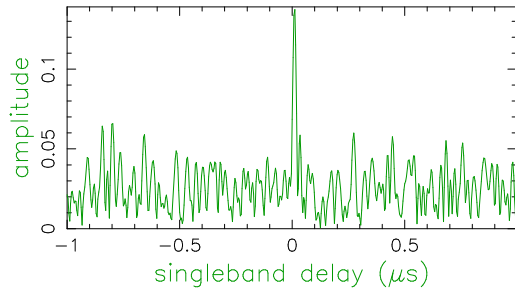
VLBA_NL - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

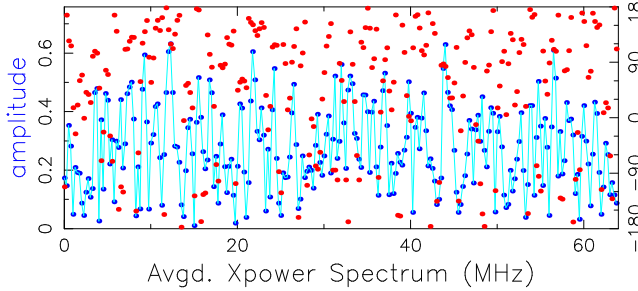


Fringe quality 0

SNR 6.9
 Int time 329.957
 Amp 0.139
 Phase -150.3
 PFD 1.4e-03
 Delays (us)
 SBD 0.010338
 MBD 0.002383
 Fringe rate (Hz) 0.001994
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

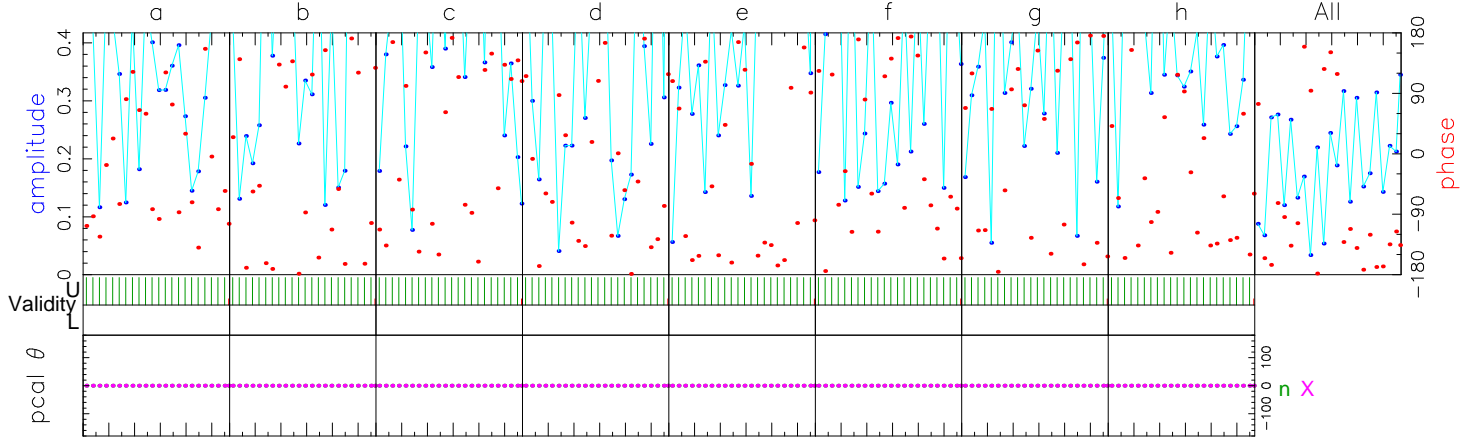


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044536
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-57.0	178.3	-173.1	-122.3	-164.2	-114.1	-180.0	-120.6	Phase	-150.3
	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	Ampl.	0.2
	286.3	260.3	261.3	174.7	260.5	77.1	329.2	15.1	Sbd box	259.6
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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	Manl 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	
									Tracks	
Group delay (usec)(sbd)	1.09041361612E+03		Apriori delay (usec)		1.09039560841E+03		Resid mbdelay (usec)		2.38271E-03	+/- 1.6E-04
Sband delay (usec)	1.09040594616E+03		Apriori clock (usec)		-5.0971161E+01		Resid sbdelay (usec)		1.03378E-02	+/- 1.2E-03
Phase delay (usec)	1.09039560356E+03		Apriori clockrate (us/s)		-2.2800002E-07		Resid phdelay (usec)		-4.84701E-06	+/- 5.3E-07
Delay rate (us/s)	1.36706723018E+00		Apriori rate (us/s)		1.36706720703E+00		Resid rate (us/s)		2.31486E-08	+/- 2.8E-09
Total phase (deg)	104.7		Apriori accel (us/s/s)		-1.56926751037E-05		Resid phase (deg)		-150.3	+/- 16.6

	RMS	Theor.	Amplitude	0.139 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	56.5	39.8	Search (2048X32)	0.137	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	70.5	69.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	48.7	23.5	Inc. seg. avg.	0.152	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	37.6	40.9	Inc. frq. avg.	0.158	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

n: az 90.6 el 47.1 pa -58.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8961.352 -1991.548 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/nX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/nX.W.191.1W8CZP

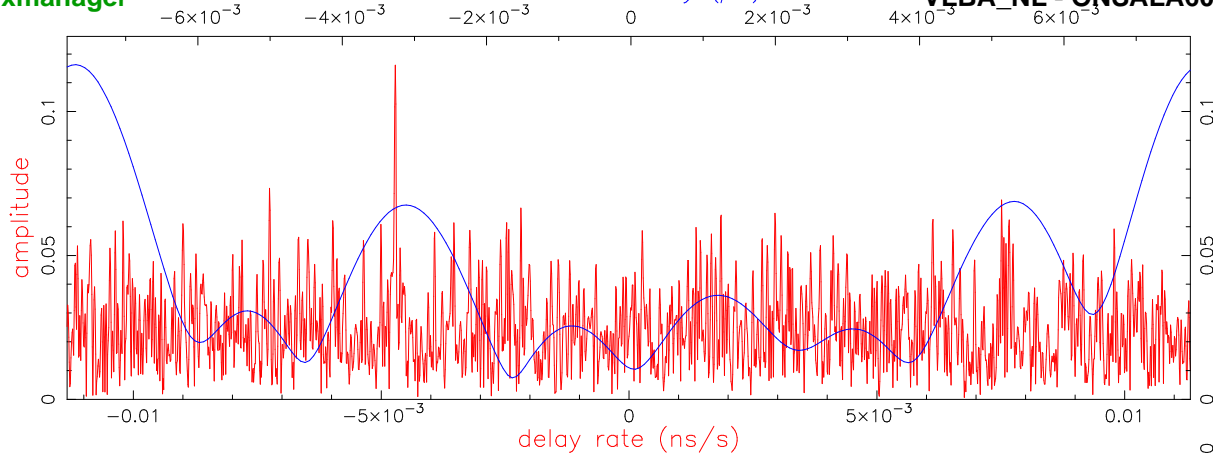
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, nX

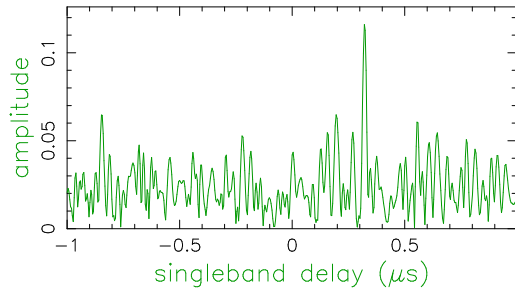
VLBA_NL - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

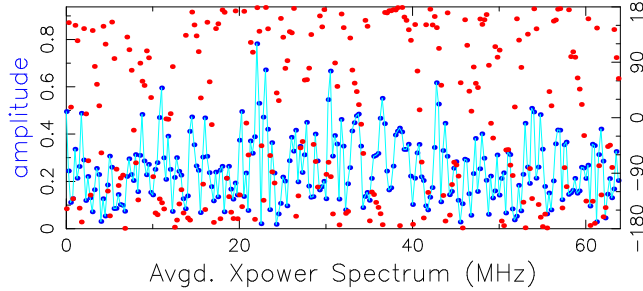


Fringe quality 0

SNR 5.8
 Int time 329.957
 Amp 0.126
 Phase 12.1
 PFD 7.6e-01
 Delays (us)
 SBD 0.321646
 MBD -0.007642
 Fringe rate (Hz)
 -0.407281
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

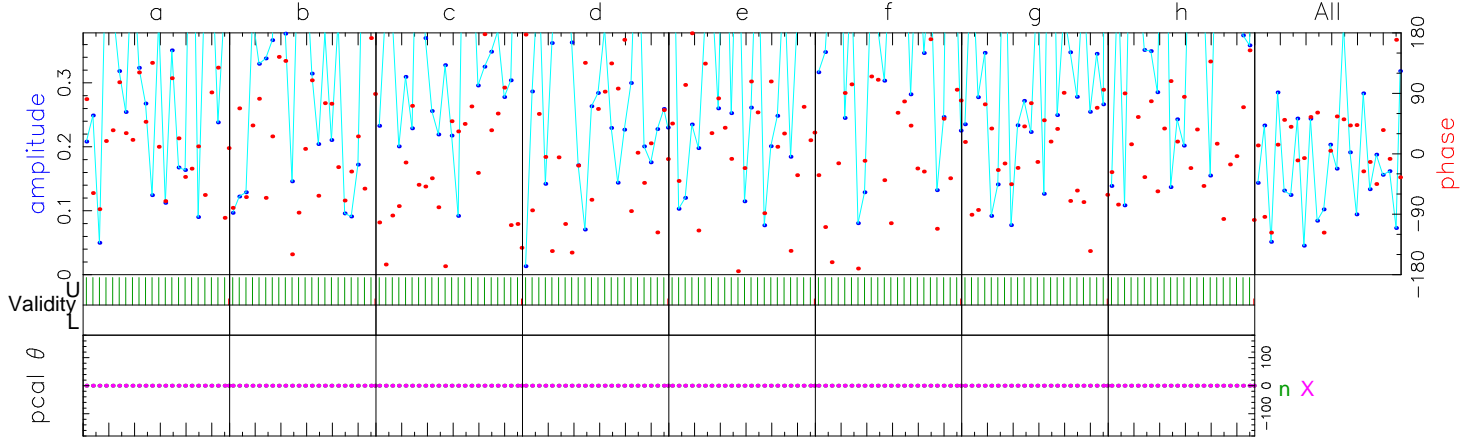


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044540
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	23.8	23.4	-39.8	-20.4	52.2	21.0	-5.1	7.1	Phase	12.1
	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	Ampl.	0.1
	298.5	294.4	312.8	346.0	325.6	158.8	289.4	339.3	Sbd box	339.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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	
									Tracks	
Group delay (usec)(sbd)	1.09071609094E+03		Apriori delay (usec)		1.09039560841E+03		Resid mbdelay (usec)		-7.64247E-03	+/- 1.9E-04
Sband delay (usec)	1.09071725441E+03		Apriori clock (usec)		-5.0971161E+01		Resid sbdelay (usec)		3.21646E-01	+/- 1.5E-03
Phase delay (usec)	1.09039560880E+03		Apriori clockrate (us/s)		-2.2800002E-07		Resid phdelay (usec)		3.89747E-07	+/- 6.3E-07
Delay rate (us/s)	1.36706247891E+00		Apriori rate (us/s)		1.36706720703E+00		Resid rate (us/s)		-4.72812E-06	+/- 3.3E-09
Total phase (deg)	267.1		Apriori accel (us/s/s)		-1.56926751037E-05		Resid phase (deg)		12.1	+/- 19.7

RMS Theor. Amplitude 0.126 +/- 0.022 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 63.3 47.2 Search (2048X32) 0.115 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 85.4 82.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 31.7 27.8 Inc. seg. avg. 0.137 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 49.0 48.5 Inc. frq. avg. 0.123 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 n: az 90.6 el 47.1 pa -58.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8961.352 -1991.548 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/nX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/nX.W.211.1W8CZP

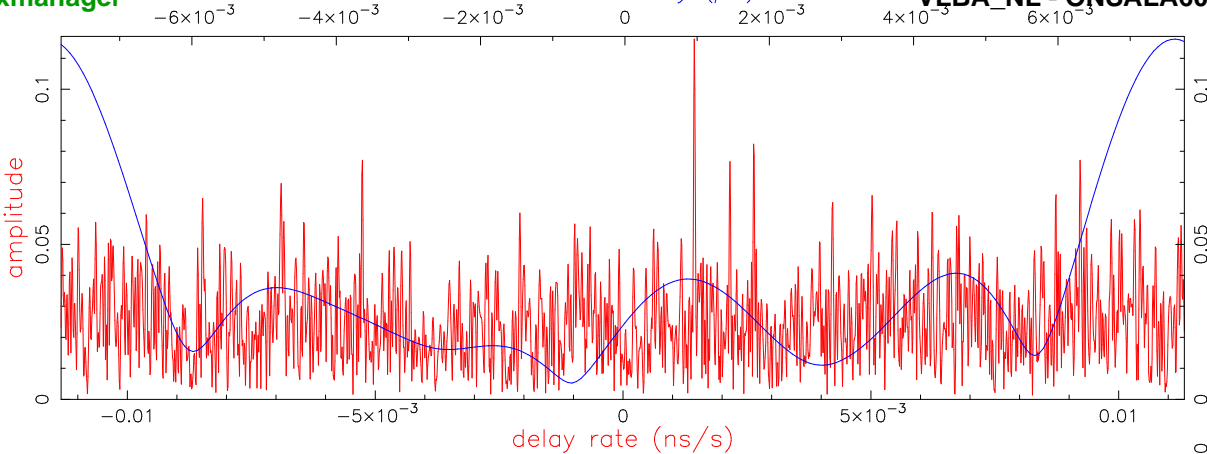
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, nX

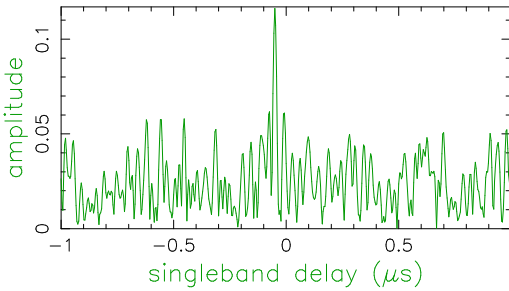
VLBA_NL - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

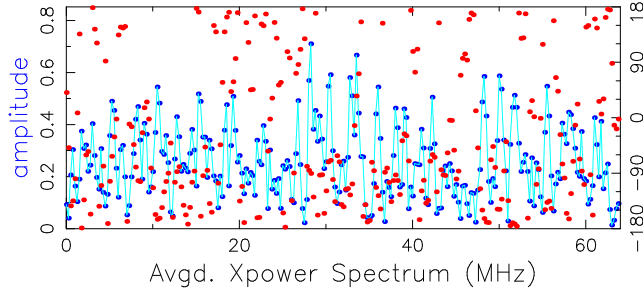


Fringe quality 0

SNR 5.8
Int time 329.957
Amp 0.117
Phase -77.6
PFD 8.5e-01
Delays (us)
SBD -0.050437
MBD 0.007624
Fringe rate (Hz)
0.123797
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

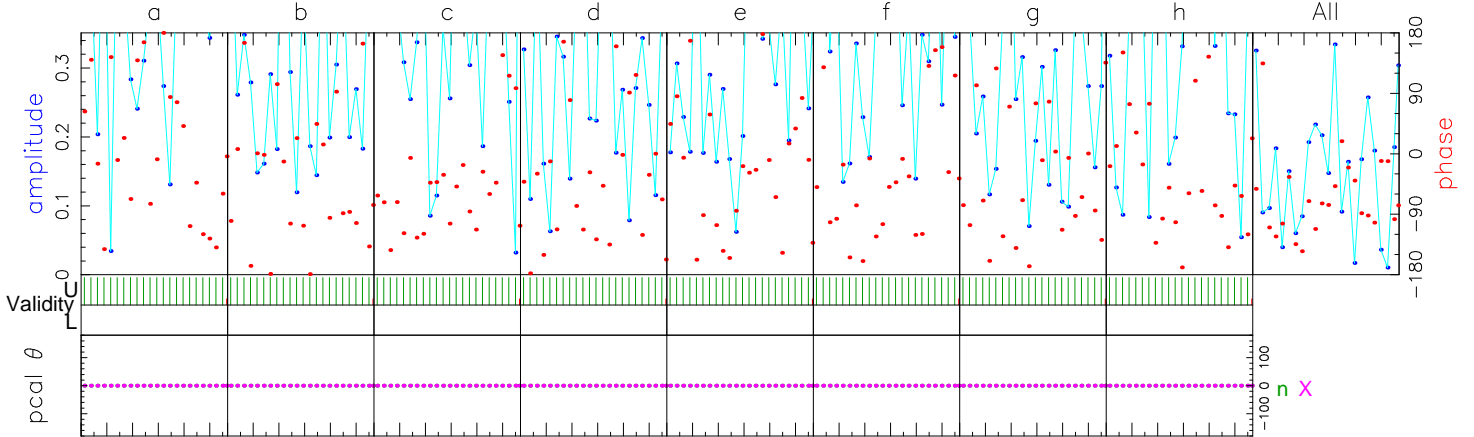


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044543
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.09034073233E+03	Apriori delay (usec)	1.09039560841E+03	Resid mbdelay (usec)	7.62392E-03	+/-	1.9E-04
Sband delay (usec)	1.09034517191E+03	Apriori clock (usec)	-5.0971161E+01	Resid sbdelay (usec)	-5.04365E-02	+/-	1.5E-03
Phase delay (usec)	1.09039560591E+03	Apriori clockrate (us/s)	-2.2800002E-07	Resid phdelay (usec)	-2.50332E-06	+/-	6.4E-07
Delay rate (us/s)	1.36706864420E+00	Apriori rate (us/s)	1.36706720703E+00	Resid rate (us/s)	1.43716E-06	+/-	3.4E-09
Total phase (deg)	177.4	Apriori accel (us/s/s)	-1.56926751037E-05	Resid phase (deg)	-77.6	+/-	19.8

ph/seg (deg)	52.9	Theor.	47.6	Amplitude	0.117 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	82.0		83.0	Search (2048X32)	0.115	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	26.2		28.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	41.1		49.0	Inc. seg. avg.	0.111	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
				Inc. frq. avg.	0.109	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

n: az 90.6 el 47.1 pa -58.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8961.352 -1991.548 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/nX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/nX.W.232.1W8CZP

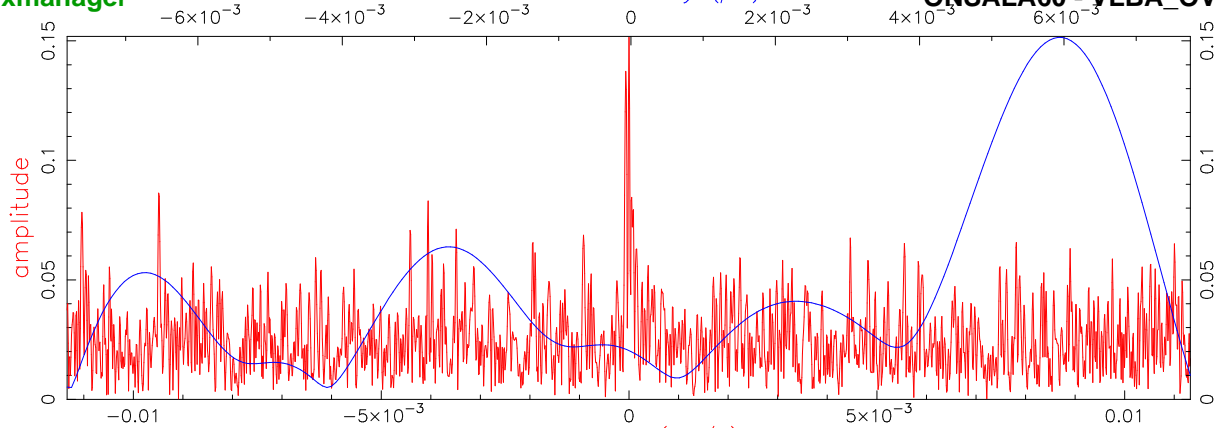
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Xo

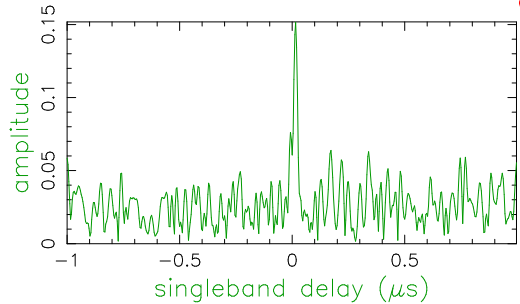
ONSALA60 - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

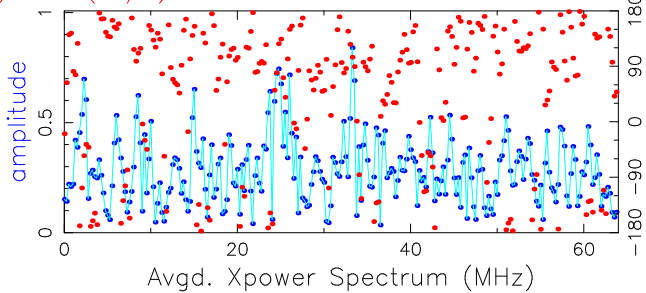


Fringe quality 9

SNR 7.5
 Int time 329.936
 Amp 0.152
 Phase -130.0
 PFD 1.5e-05
 Delays (us)
 SBD 0.014950
 MBD 0.005922
 Fringe rate (Hz)
 -0.000463
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

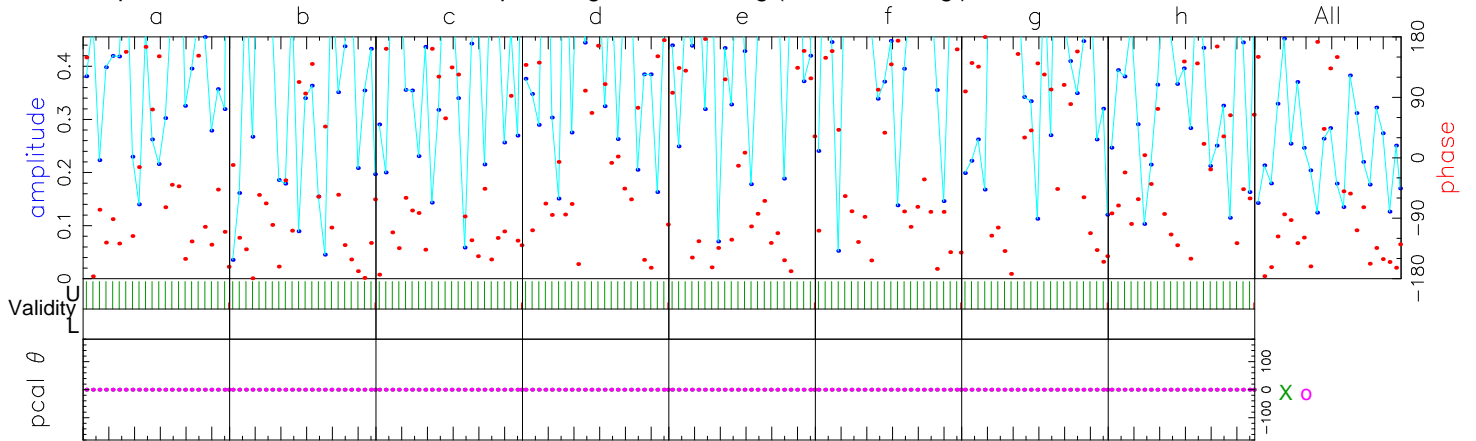


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044532
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-127.0	-118.1	-145.1	-114.5	-160.1	-116.7	-169.7	-79.7	Phase	-130.0
	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	Ampl.	0.2
	363.2	261.7	264.3	497.8	263.1	414.6	52.7	14.0	Sbd box	260.8
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.06613596869E+03	Apriori delay (usec)	5.06611442164E+03	Resid mbdelay (usec)	5.92205E-03	+/-	1.4E-04
Sband delay (usec)	5.06612937214E+03	Apriori clock (usec)	0.144	Resid sbdelay (usec)	1.49505E-02	+/-	1.1E-03
Phase delay (usec)	5.06611441745E+03	Apriori clockrate (us/s)	1.6800000E-07	Resid phdelay (usec)	-4.19217E-06	+/-	4.9E-07
Delay rate (us/s)	-1.64366167516E+00	Apriori rate (us/s)	-1.64366166979E+00	Resid rate (us/s)	-5.37370E-09	+/-	2.6E-09
Total phase (deg)	-29.2	Apriori accel (us/s/s)	-1.37076914110E-05	Resid phase (deg)	-130.0	+/-	15.2

ph/seg (deg)	60.9	Theor.	36.4	Amplitude	0.152 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	84.6		63.6	Search (2048X32)	0.144	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	31.1		21.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	30.6		37.5	Inc. seg. avg.	0.205	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.155	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

X: az 254.8 el 43.9 pa 36.4 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 10728.417 1179.037 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xo..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xo.W.178.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

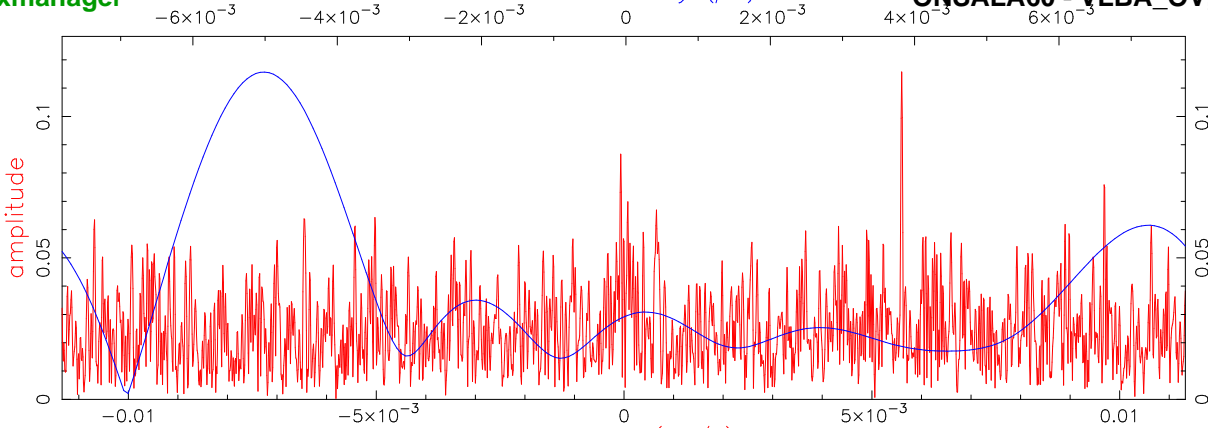
fxmanager

0234+285.1W8CZP, No0029, Xo

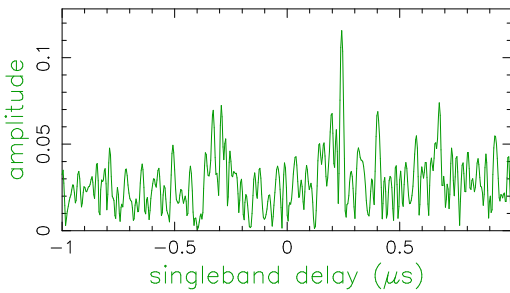
ONSALA60 - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

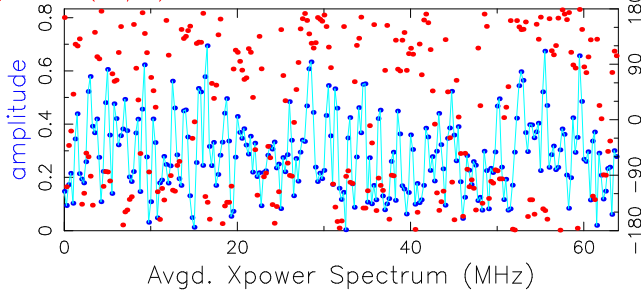
Fringe quality 0



SNR 5.7
 Int time 329.936
 Amp 0.128
 Phase 141.4
 PFD 8.9e-01
 Delays (us)
 SBD 0.241940
 MBD -0.005024
 Fringe rate (Hz)
 0.483530
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

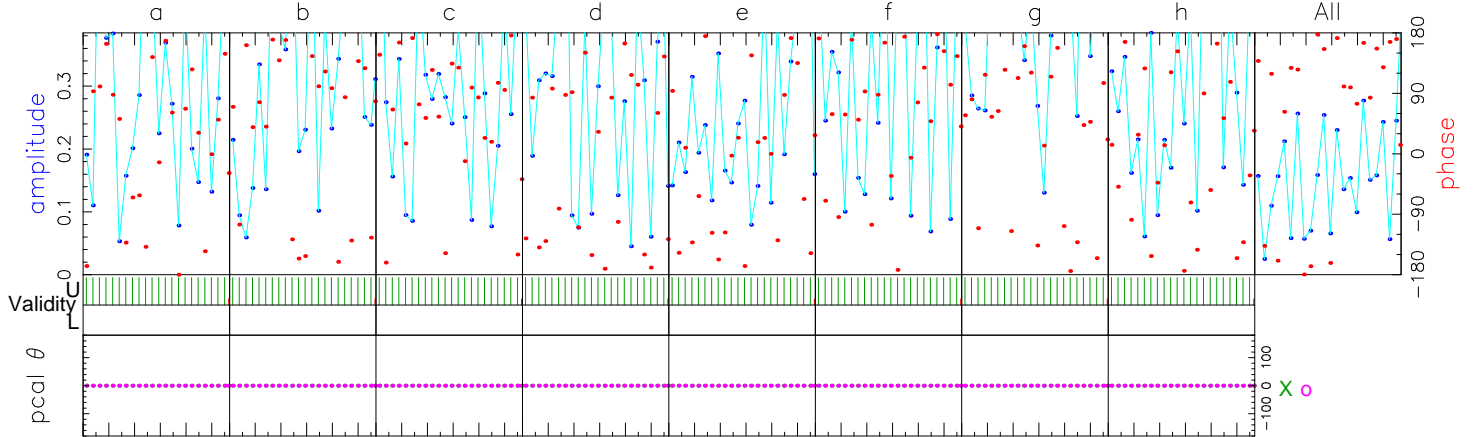


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044536
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	134.4	152.4	115.2	144.5	-145.1	151.4	115.7	165.7	Phase	141.4
	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.0	Ampl.	0.1
	331.0	421.3	299.1	456.2	360.0	171.3	438.3	422.8	Sbd box	318.9
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	5.06635939740E+03	Apriori delay (usec)	5.06611442164E+03	Resid mbdelay (usec)	-5.02424E-03	+/-	1.9E-04
Sband delay (usec)	5.06635636164E+03	Apriori clock (usec)	5.2733803E+01	Resid sbdelay (usec)	2.41940E-01	+/-	1.5E-03
Phase delay (usec)	5.06611442620E+03	Apriori clockrate (us/s)	1.6800000E-07	Resid phdelay (usec)	4.55925E-06	+/-	6.4E-07
Delay rate (us/s)	-1.64365605649E+00	Apriori rate (us/s)	-1.64366166979E+00	Resid rate (us/s)	5.61330E-06	+/-	3.4E-09
Total phase (deg)	242.2	Apriori accel (us/s/s)	-1.37076914110E-05	Resid phase (deg)	141.4	+/-	19.9

ph/seg (deg)	44.8	Theor.	47.8	Amplitude	0.128 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	75.6	Search (2048X32)	0.115	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	35.6	Inc. seg. avg.	0.126	Inc. frq. avg.	0.126	Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	43.2	Inc. frq. avg.	0.126			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

X: az 254.8 el 43.9 pa 36.4 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 10728.417 1179.037 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xo..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xo.W.194.1W8CZP

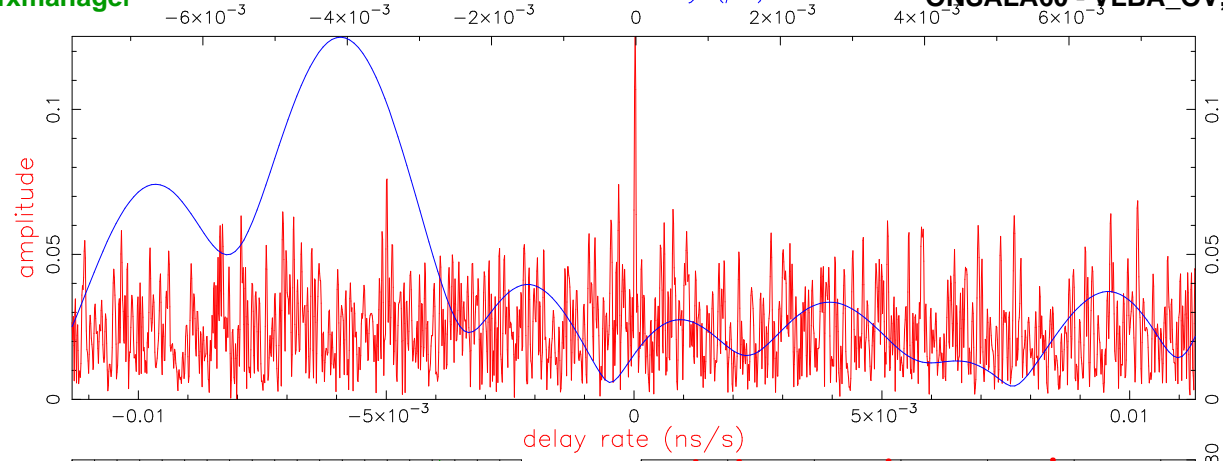
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Xo

ONSALA60 - VLBA_OV, fgroup W, pol LR

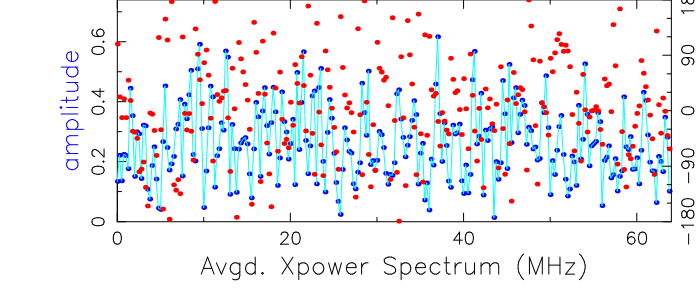
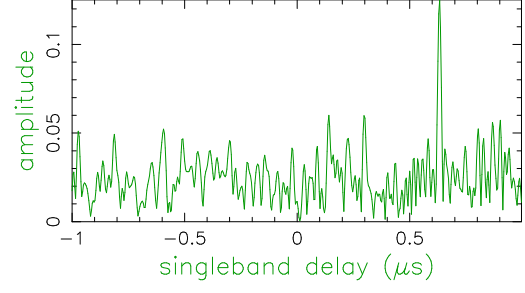
multiband delay (μ s)



Fringe quality 0

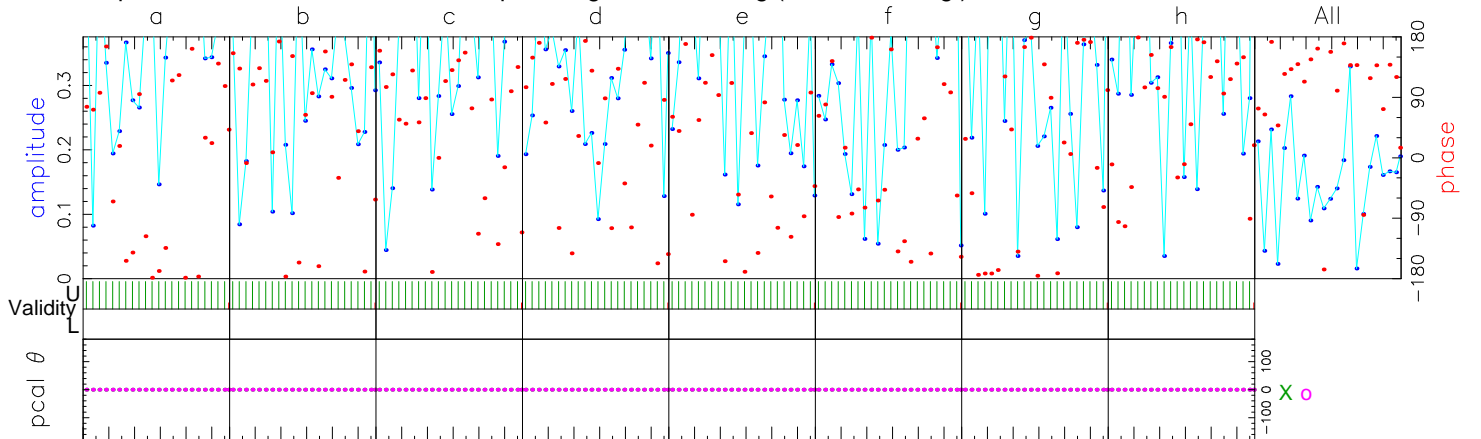
SNR 6.2
 Int time 329.936
 Amp 0.125
 Phase 132.0
 PFD 1.3e-01
 Delays (us)
 SBD 0.632186
 MBD -0.004121
 Fringe rate (Hz) 0.002130
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build 2021:288:021115
 2021:288:044540
 2021:252:122852
 RA & Dec (J2000) 02h37m52.405678s +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0			
X	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000			
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
X:o	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			
o	1000	1000	1000	1000	1000	1000	1000	1000			
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		5.06675092566E+03			5.06611442164E+03				Resid mbdelay (usec)	-4.12098E-03	+/- 1.7E-04
Sband delay (usec)		5.06674660789E+03			5.2733803E+01				Resid sbdelay (usec)	6.32186E-01	+/- 1.4E-03
Phase delay (usec)		5.06611442590E+03			1.6800000E-07				Resid phdelay (usec)	4.25731E-06	+/- 5.9E-07
Delay rate (us/s)		-1.64366164506E+00			-1.64366166979E+00				Resid rate (us/s)	2.47265E-08	+/- 3.1E-09
Total phase (deg)			232.8		-1.37076914110E-05				Resid phase (deg)	132.0	+/- 18.4

ph/seg (deg) 48.7 44.2 Search (2048X32) 0.122 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 65.3 77.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 19.2 26.1 Inc. seg. avg. 0.121 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 51.9 45.5 Inc. frq. avg. 0.118 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 254.8 el 43.9 pa 36.4 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 10728.417 1179.037 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xo..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xo.W.214.1W8CZP simultaneous interpolator

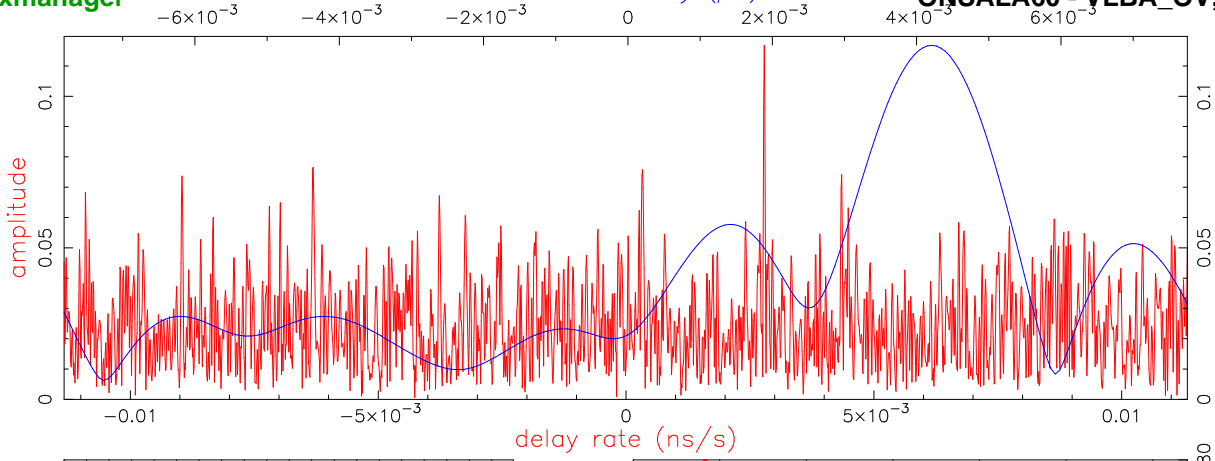
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Xo

ONSALA60 - VLBA_OV, fgroup W, pol RL

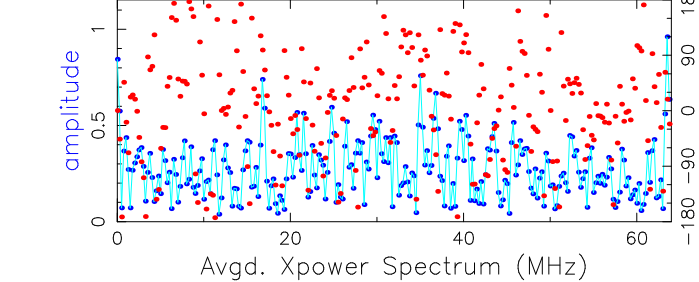
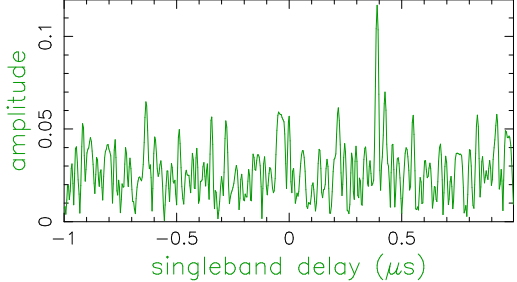
multiband delay (μ s)



Fringe quality 0

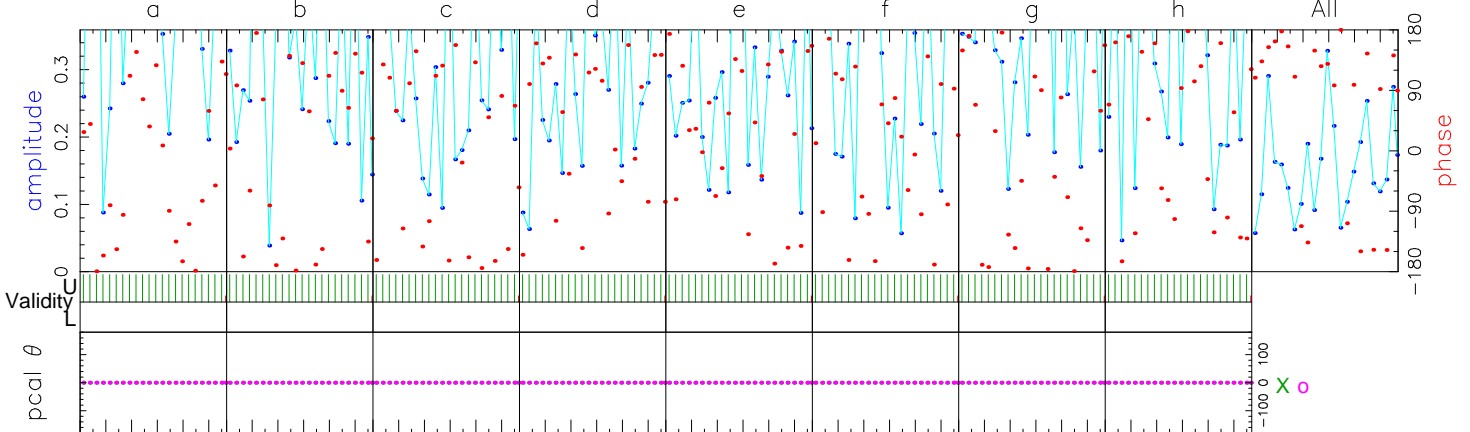
SNR 5.8
 Int time 329.936
 Amp 0.120
 Phase 154.0
 PFD 8.1e-01
 Delays (us)
 SBD 0.390616
 MBD 0.004207
 Fringe rate (Hz)
 0.240239
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044543
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X:o	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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		5.06650925327E+03			5.06611442164E+03				4.20663E-03	+/- 1.9E-04
Sband delay (usec)		5.06650503739E+03			5.2733803E+01				3.90616E-01	+/- 1.5E-03
Phase delay (usec)		5.06611442661E+03			1.6800000E-07				4.96635E-06	+/- 6.4E-07
Delay rate (us/s)		-1.64365888086E+00			-1.64366166979E+00				2.78893E-06	+/- 3.3E-09
Total phase (deg)			254.8		-1.37076914110E-05				154.0	+/- 19.8
	RMS	Theor.	Amplitude	0.120 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	48.3	47.4	Search (2048X32)	0.115	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	72.3	82.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	37.1	27.9	Inc. seg. avg.	0.121	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	42.6	48.8	Inc. frq. avg.	0.113	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

X: az 254.8 el 43.9 pa 36.4 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 10728.417 1179.037 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xo..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xo.W.234.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

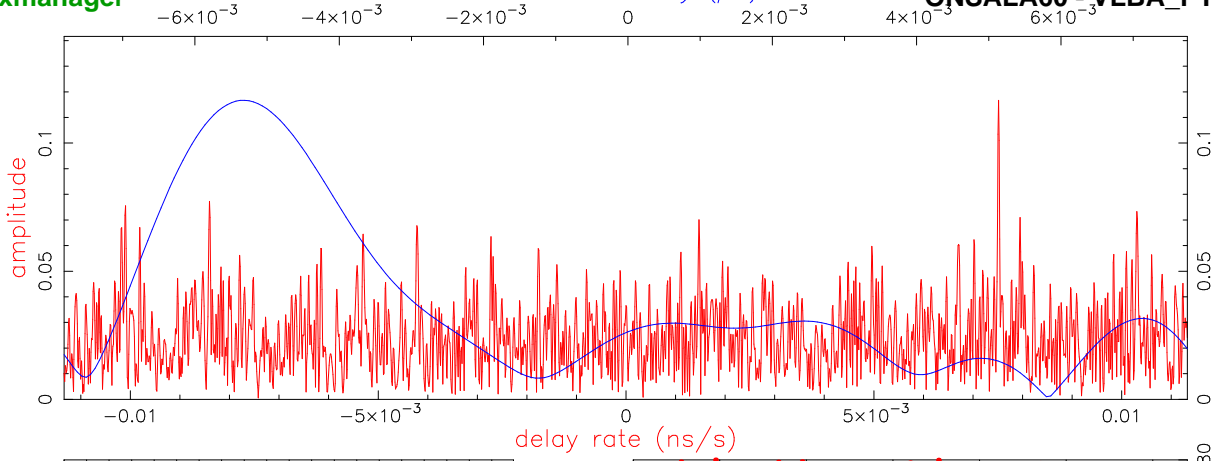
fxmanager

0234+285.1W8CZP, No0029, Xp

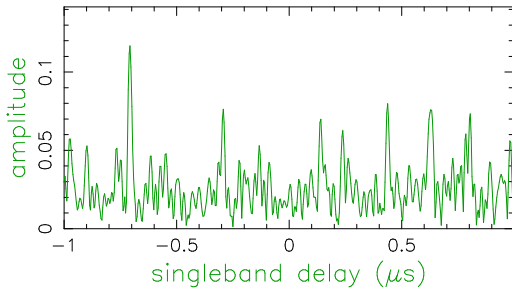
ONSALA60 - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)

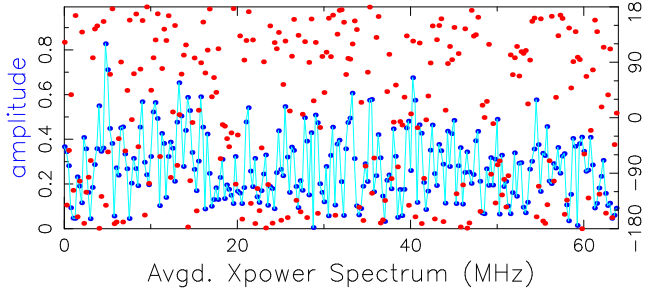
Fringe quality 0



SNR 5.8
 Int time 329.957
 Amp 0.142
 Phase -23.9
 PFD 7.6e-01
 Delays (us)
 SBD -0.708031
 MBD -0.005357
 Fringe rate (Hz)
 0.648614
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

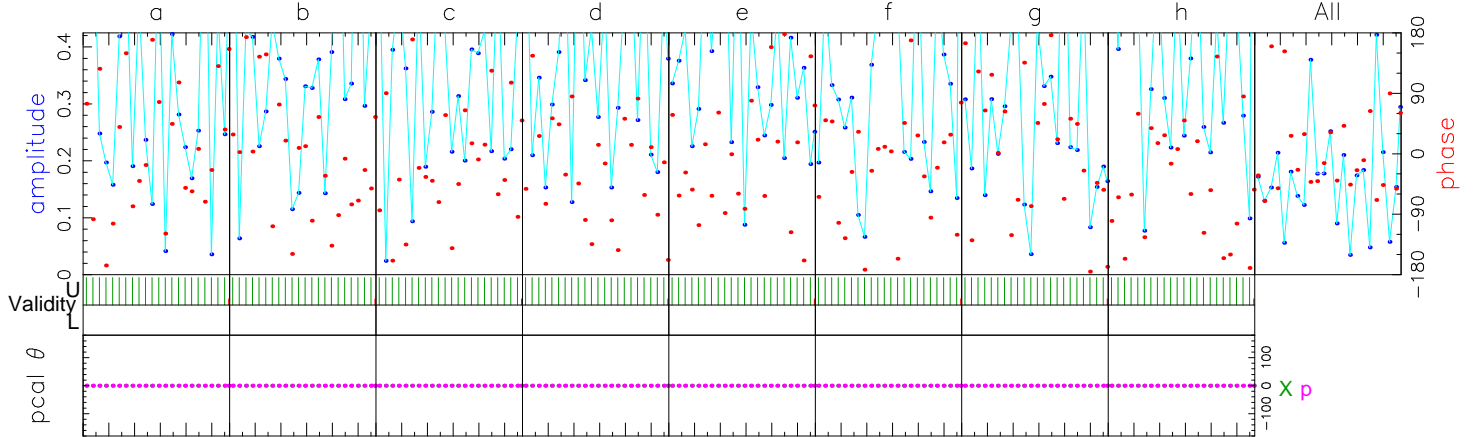


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044537
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	25.9	-37.5	-42.8	-22.2	-27.9	2.2	12.0	-53.2	Phase	-23.9
	0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.1	Ampl.	0.1
	57.5	278.9	115.9	74.6	471.8	324.3	90.6	483.3	Sbd box	75.7
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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)	2.76995270091E+03	Apriori delay (usec)	2.77066118280E+03	Resid mbdelay (usec)	-5.35689E-03	+/-	1.9E-04
Sband delay (usec)	2.76995315180E+03	Apriori clock (usec)	5.0821682E+01	Resid sbdelay (usec)	-7.08031E-01	+/-	1.5E-03
Phase delay (usec)	2.77066118203E+03	Apriori clockrate (us/s)	6.4799999E-07	Resid phdelay (usec)	-7.71316E-07	+/-	6.3E-07
Delay rate (us/s)	-1.62060703753E+00	Apriori rate (us/s)	-1.62061456729E+00	Resid rate (us/s)	7.52976E-06	+/-	3.3E-09
Total phase (deg)	79.2	Apriori accel (us/s/s)	7.43545386710E-07	Resid phase (deg)	-23.9	+/-	19.7

ph/seg (deg)	68.8	Theor.	47.2	Amplitude	0.142 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	91.9		82.3	Search (2048X32)	0.115	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	31.3		27.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	48.1		48.5	Inc. seg. avg.	0.155	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.135	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

X: az 254.8 el 43.9 pa 36.4 p: az 75.4 el 33.3 pa -66.1 u,v (fr/asec) 10597.536 2127.365 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xp..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xp.W.200.1W8CZP

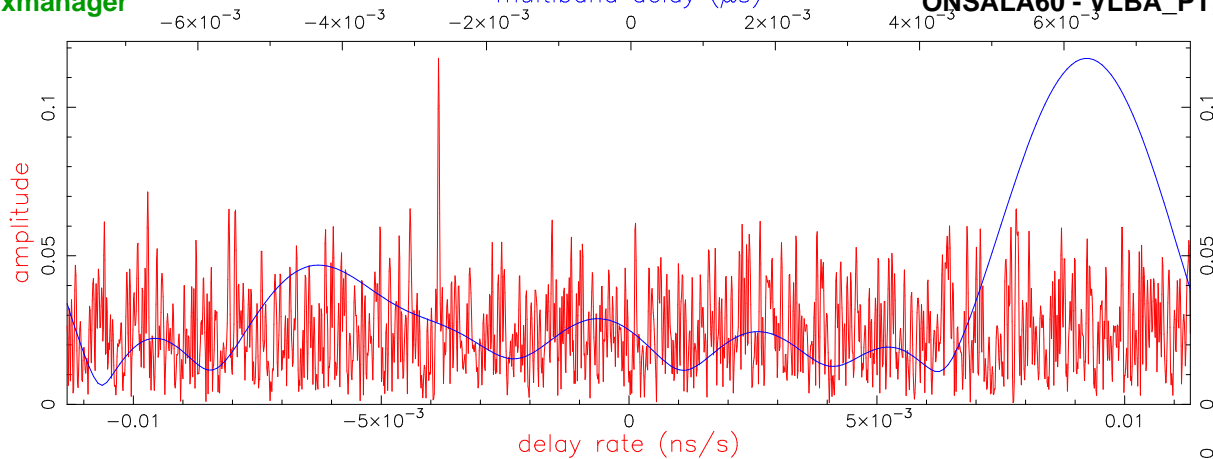
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Xp

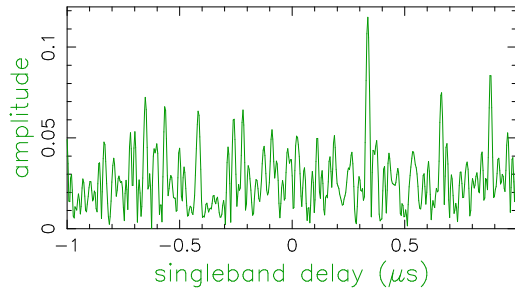
ONSALA60 - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)

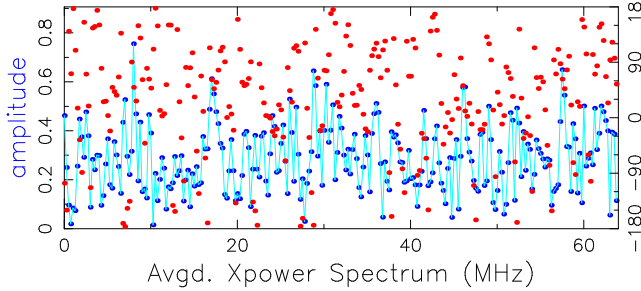


Fringe quality 0

SNR 5.8
 Int time 329.957
 Amp 0.122
 Phase -104.1
 PFD 8.3e-01
 Delays (us)
 SBD 0.335738
 MBD 0.006309
 Fringe rate (Hz)
 -0.331157
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

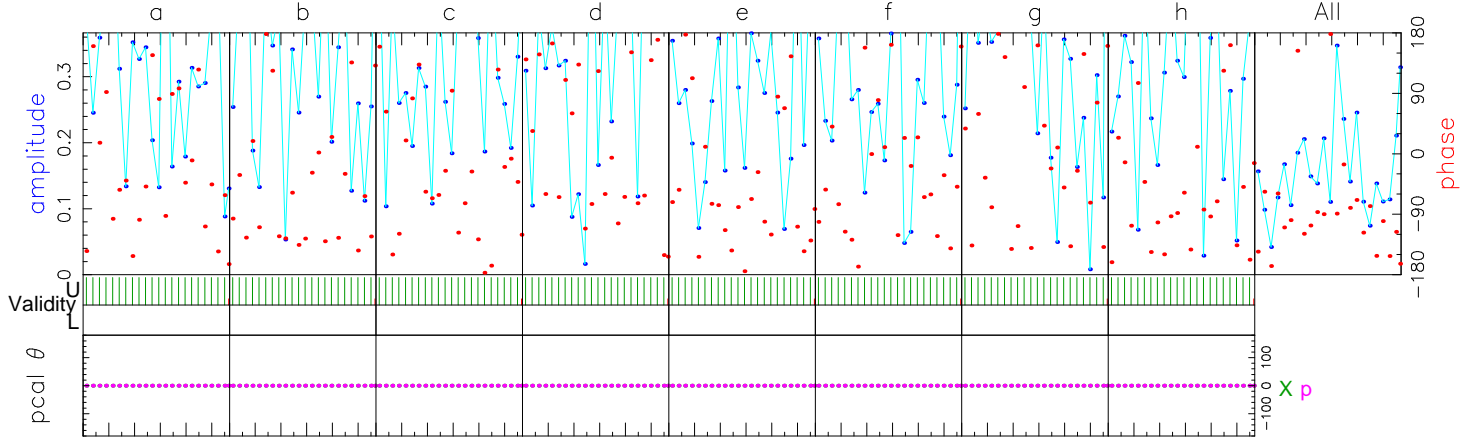


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044541
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-96.2	-103.6	-92.3	-133.3	-106.2	-91.5	-158.2	-86.4	Phase	-104.1
	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	Ampl.	0.1
	112.7	171.4	96.2	77.0	339.0	206.7	481.3	427.2	Sbd box	342.9
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.77099561690E+03		Apriori delay (usec)		2.77066118280E+03		Resid mbdelay (usec)		6.30910E-03	+/- 1.9E-04
Sband delay (usec)	2.77099692080E+03		Apriori clock (usec)		5.0821682E+01		Resid sbdelay (usec)		3.35738E-01	+/- 1.5E-03
Phase delay (usec)	2.77066117944E+03		Apriori clockrate (us/s)		6.4799999E-07		Resid phdelay (usec)		-3.35625E-06	+/- 6.4E-07
Delay rate (us/s)	-1.62061841170E+00		Apriori rate (us/s)		-1.62061456729E+00		Resid rate (us/s)		-3.84441E-06	+/- 3.3E-09
Total phase (deg)			Apriori accel (us/s/s)		7.43545386710E-07		Resid phase (deg)		-104.1	+/- 19.8

	RMS	Theor.	Amplitude	0.122 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	44.3	47.5	Search (2048X32)	0.114	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	67.5	82.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	27.3	28.0	Inc. seg. avg.	0.122	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	29.3	48.9	Inc. frq. avg.	0.116	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

X: az 254.8 el 43.9 pa 36.4 p: az 75.4 el 33.3 pa -66.1 u,v (fr/asec) 10597.536 2127.365 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xp..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xp.W.221.1W8CZP

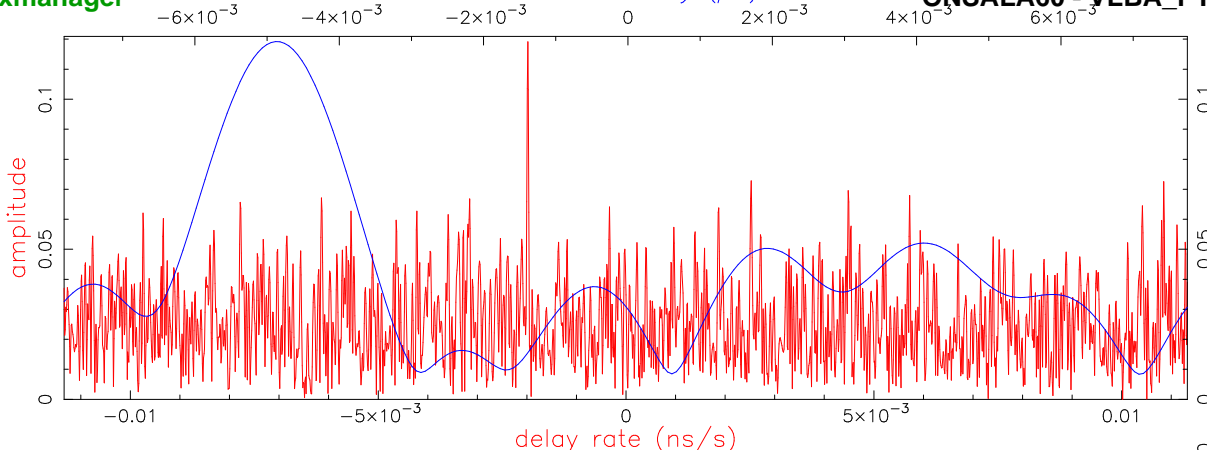
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Xp

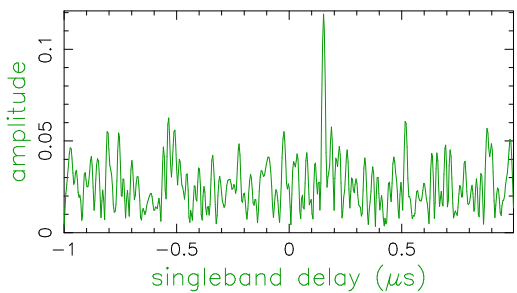
ONSALA60 - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

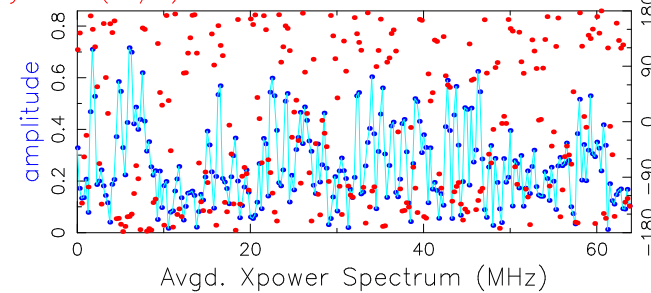


Fringe quality 0

SNR 5.9
 Int time 329.957
 Amp 0.121
 Phase -152.6
 PFD 5.4e-01
 Delays (us)
 SBD 0.152884
 MBD -0.004832
 Fringe rate (Hz)
 -0.170894
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

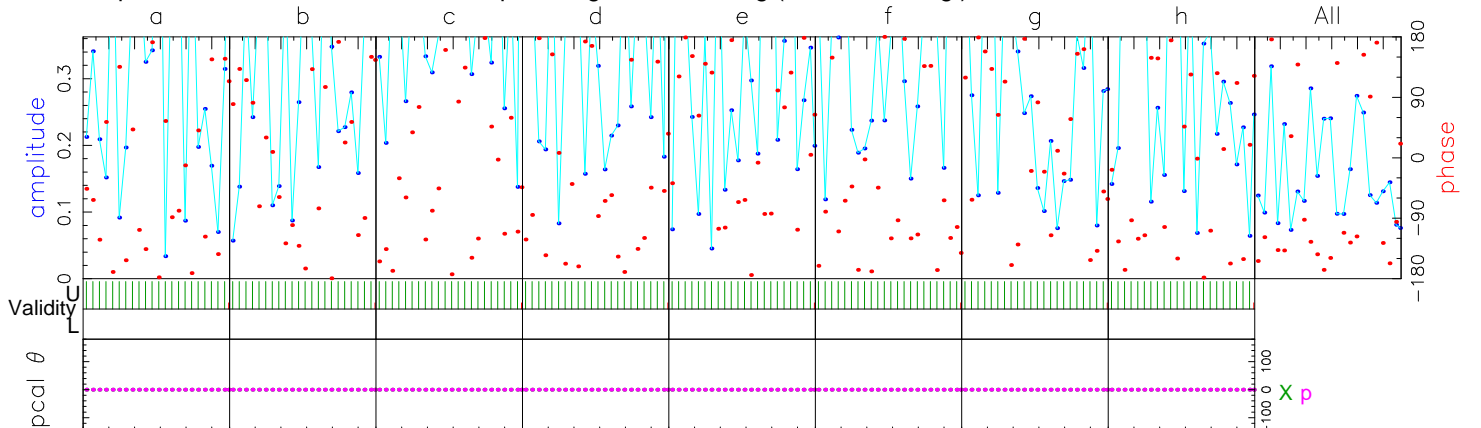


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044544
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-142.7	164.9	-148.1	-143.0	-161.4	-128.6	166.0	-153.3	Phase	-152.6
	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.2	Ampl.	0.1
	427.2	389.2	63.3	295.3	441.5	296.9	167.7	297.4	Sbd box	296.1
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.77081260129E+03		Apriori delay (usec)		2.77066118280E+03		Resid mbdelay (usec)		-4.83151E-03	+/- 1.8E-04
Sband delay (usec)	2.77081406705E+03		Apriori clock (usec)		5.0821682E+01		Resid sbdelay (usec)		1.52884E-01	+/- 1.5E-03
Phase delay (usec)	2.77066117788E+03		Apriori clockrate (us/s)		6.4799999E-07		Resid phdelay (usec)		-4.92183E-06	+/- 6.2E-07
Delay rate (us/s)	-1.62061655120E+00		Apriori rate (us/s)		-1.62061456729E+00		Resid rate (us/s)		-1.98391E-06	+/- 3.3E-09
Total phase (deg)			Apriori accel (us/s/s)		7.43545386710E-07		Resid phase (deg)		-152.6	+/- 19.3

ph/seg (deg) 59.7 46.3 Amplitude 0.121 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 71.3 80.9 Search (2048X32) 0.117 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.0 27.3 Inc. seg. avg. 0.123 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 48.4 47.7 Inc. frq. avg. 0.116 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 254.8 el 43.9 pa 36.4 p: az 75.4 el 33.3 pa -66.1 u,v (fr/asec) 10597.536 2127.365 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xp..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xp.W.238.1W8CZP

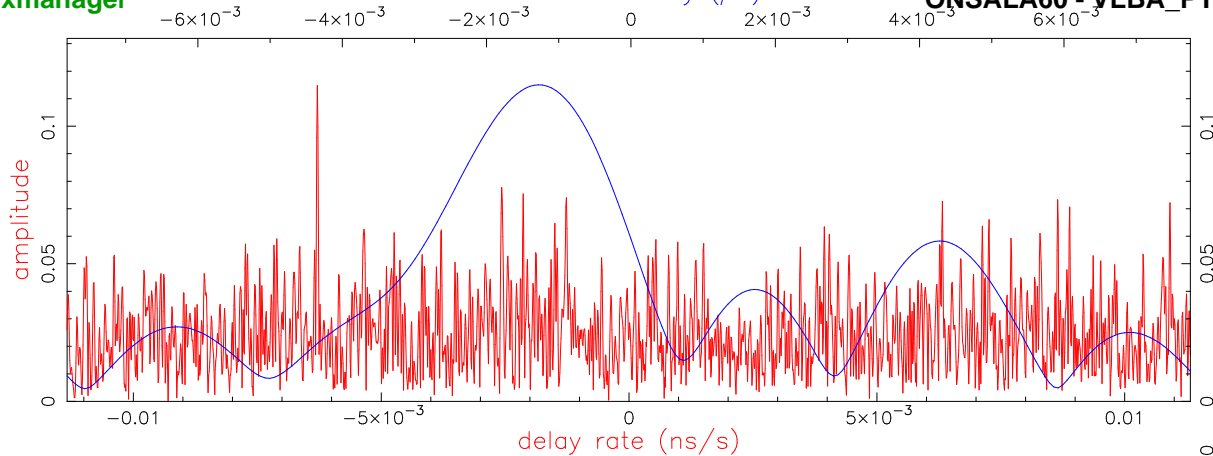
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Xp

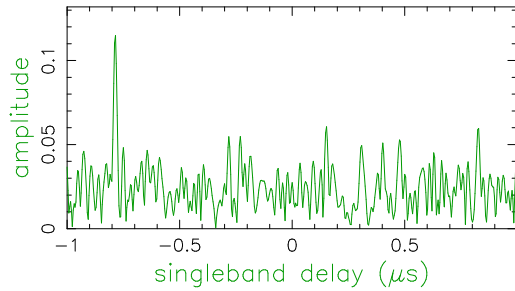
ONSALA60 - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

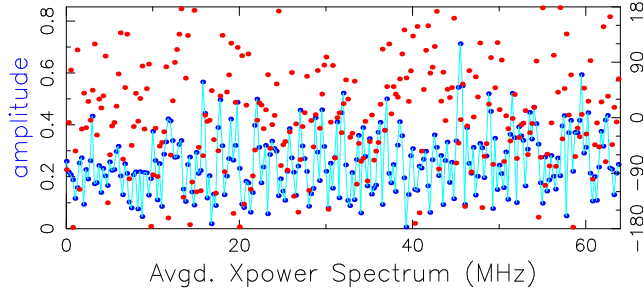


Fringe quality 0

SNR 5.8
 Int time 329.957
 Amp 0.132
 Phase -38.3
 PFD 8.9e-01
 Delays (us)
 SBD -0.786311
 MBD -0.001356
 Fringe rate (Hz)
 -0.542859
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

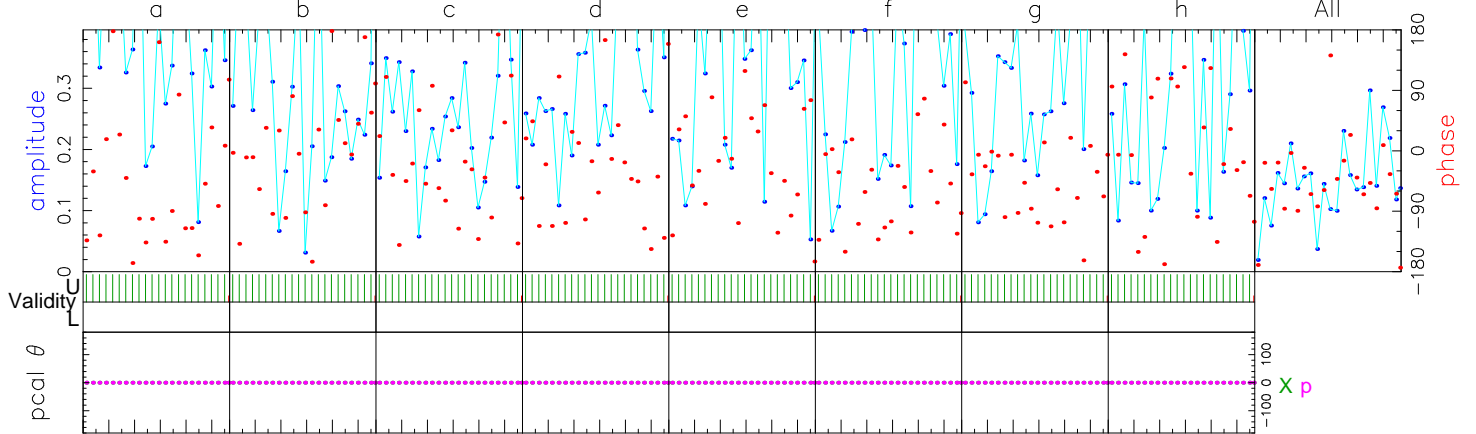


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044547
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
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		
									Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	2.76987857687E+03	Apriori delay (usec)	2.77066118280E+03	Resid mbdelay (usec)	-1.35593E-03	+/-	1.9E-04
Sband delay (usec)	2.76987487205E+03	Apriori clock (usec)	5.0821682E+01	Resid sbdelay (usec)	-7.86311E-01	+/-	1.5E-03
Phase delay (usec)	2.77066118157E+03	Apriori clockrate (us/s)	6.4799999E-07	Resid phdelay (usec)	-1.23359E-06	+/-	6.4E-07
Delay rate (us/s)	-1.62062086935E+00	Apriori rate (us/s)	-1.62061456729E+00	Resid rate (us/s)	-6.30206E-06	+/-	3.4E-09
Total phase (deg)	64.9	Apriori accel (us/s/s)	7.43545386710E-07	Resid phase (deg)	-38.3	+/-	19.9

ph/seg (deg)	57.9	Theor.	47.8	Amplitude	0.132 +/- 0.023	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	62.8		83.4	Search (2048X32)	0.112	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	40.6		28.2	Inc. seg. avg.	0.126	Sample rate (MSamp/s):	128	nlags:	256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	48.1		49.2	Inc. frq. avg.	0.130	Data rate (Mb/s):	2048	t_cohere	infinite	ion window (TEC)	0.00	0.00

X: az 254.8 el 43.9 pa 36.4 p: az 75.4 el 33.3 pa -66.1 u,v (fr/asec) 10597.536 2127.365 simultaneous interpolator

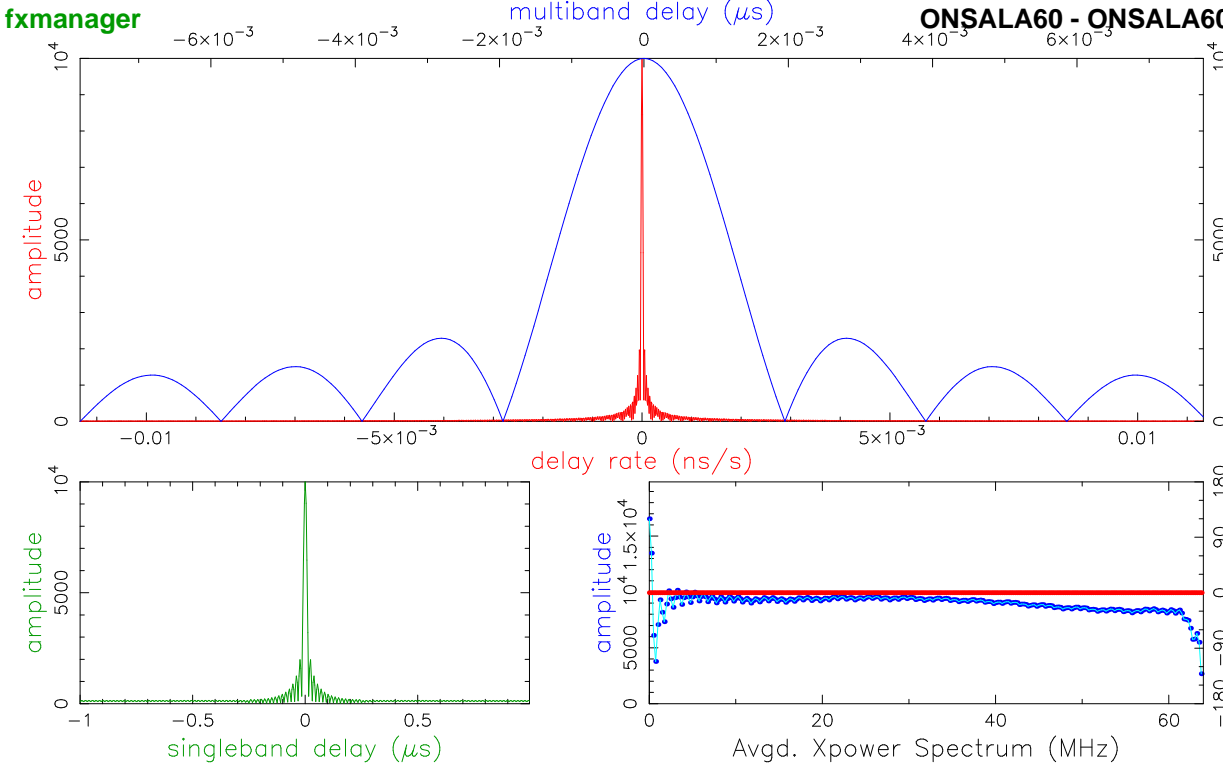
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Xp..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Xp.W.246.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, XX

ONSALA60 - ONSALA60, fgroup W, pol LL

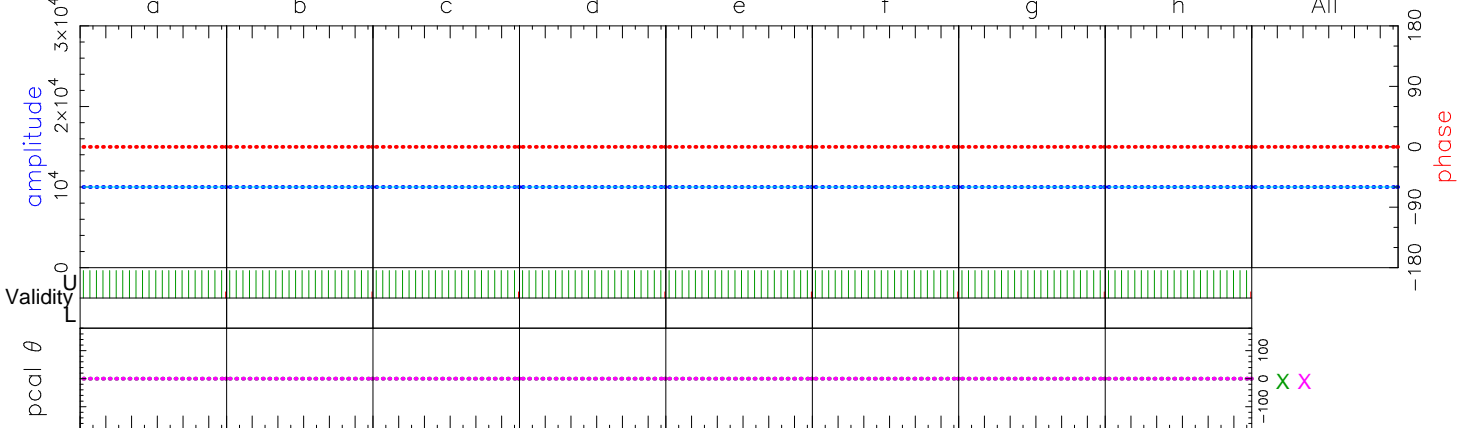


Fringe quality 9

SNR 496736.5
 Int time 329.957
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044545
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	Ampl.	10000.0
X	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
X	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 2.2E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 1.7E-08
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 7.4E-12
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 3.9E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 10000.001 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (2048X32) 10000.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.001 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

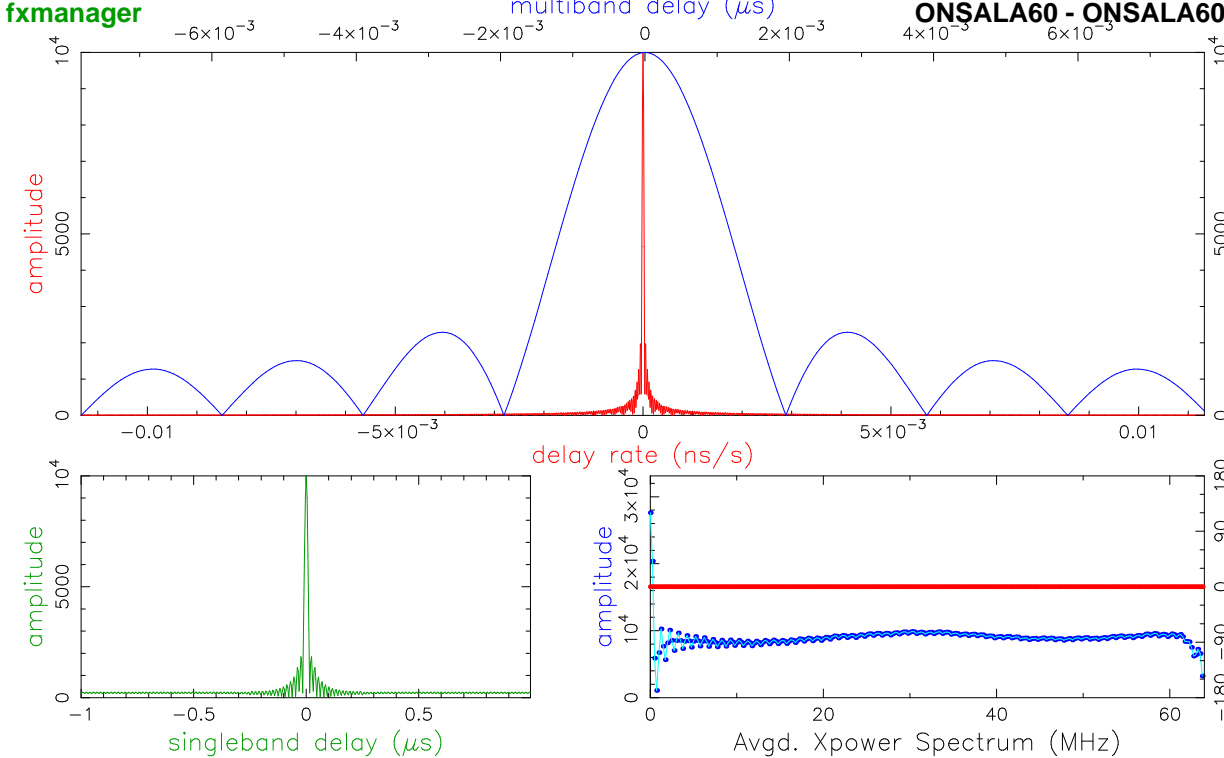
X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/XX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/XX.W.239.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

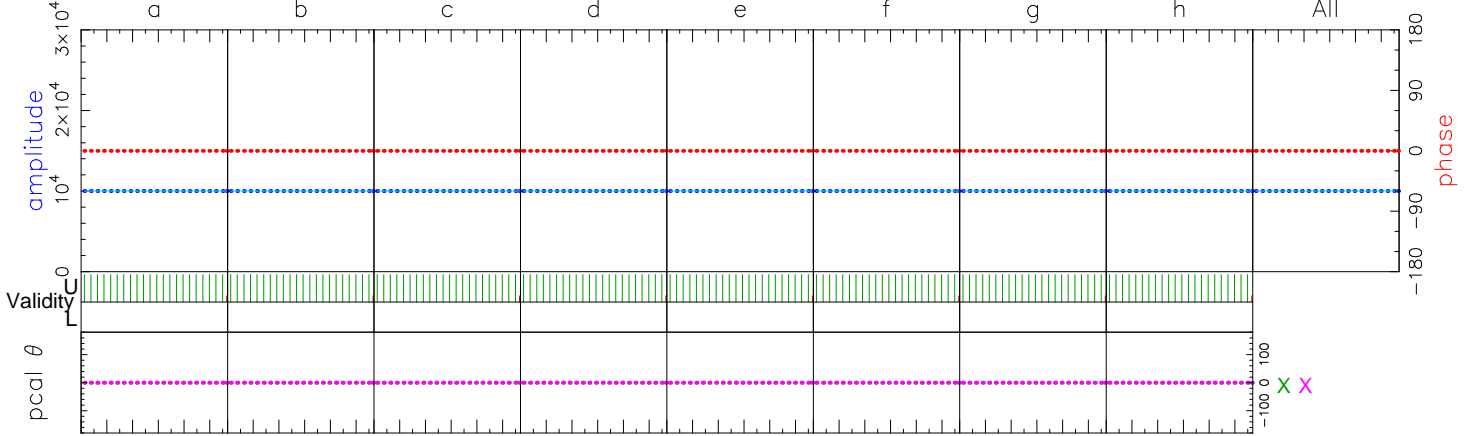
0234+285.1W8CZP, No0029, XX

ONSALA60 - ONSALA60, fgroup W, pol RR



Fringe quality 9
 SNR 496736.5
 Int time 329.957
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044548
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	Ampl.	10000.0
X	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
X:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
X	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.2E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.7E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	7.4E-12
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	3.9E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	RMS	Theor.	Amplitude	10000.001 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (2048X32)	10000.001	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	10000.001	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 254.8 el 43.9 pa 36.4 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

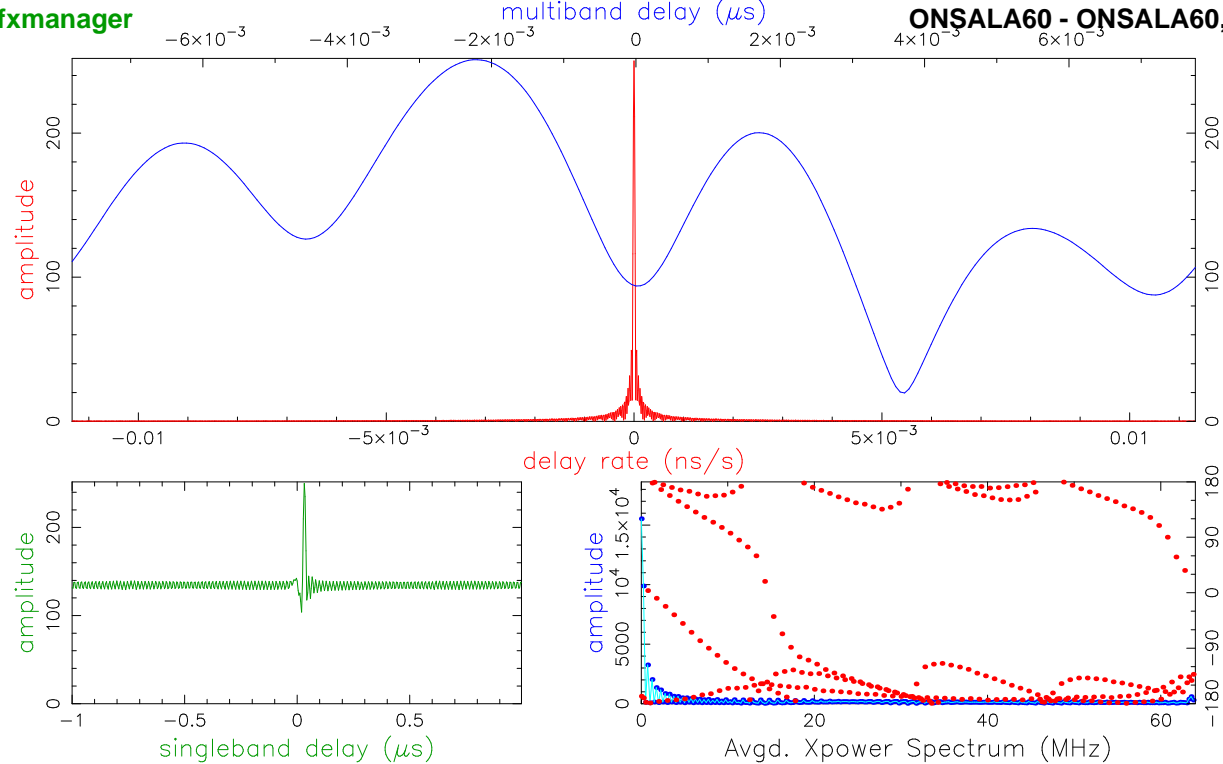
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/XX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/XX.W.247.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, XX

ONSALA60 - ONSALA60, fgroup W, pol LR

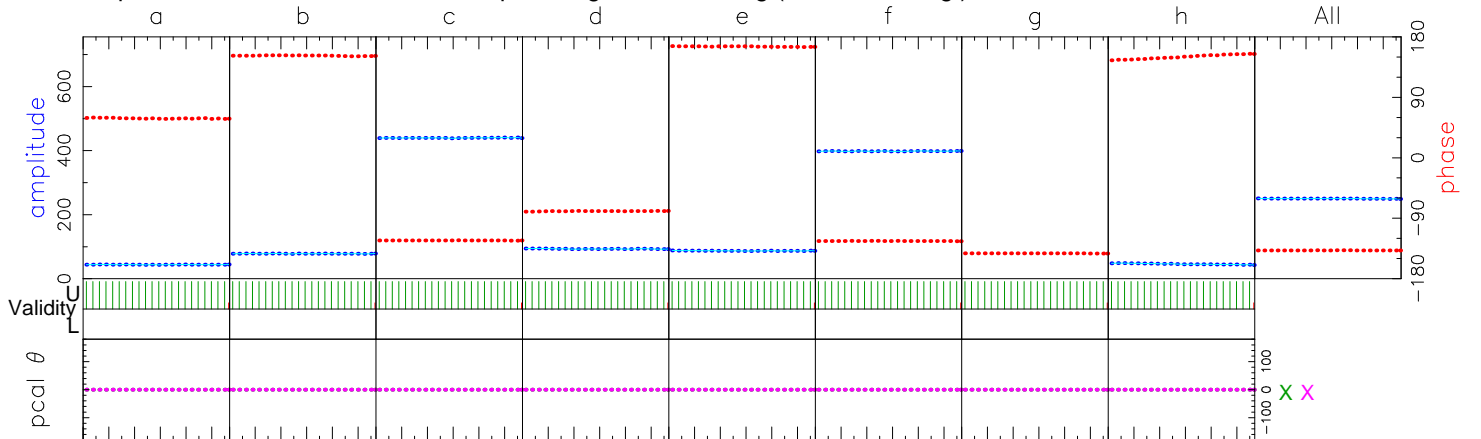


Fringe quality 5

SNR 12508.2
 Int time 329.957
 Amp 251.807
 Phase -137.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.032181
 MBD -0.002083
 Fringe rate (Hz) 0.000002
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044551
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	2.91670000000E-02									
Sband delay (usec)	3.21810000000E-02									
Phase delay (usec)	-4.44323234000E-06									
Delay rate (us/s)	1.77139404896E-11									
Total phase (deg)			-137.8							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
ion window (TEC)										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

ph/seg (deg) 0.1 0.0 Search (2048X32) 248.653 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.7 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) 85.6 0.0 Inc. seg. avg. 250.111 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 136.1 0.0 Inc. frq. avg. 285.595 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 X: az 254.8 el 43.9 pa 36.4 X: az 254.8 el 43.9 pa 36.4 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/c211a/v2/1234/No0029/XX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/XX.W.253.1W8CZP simultaneous interpolator

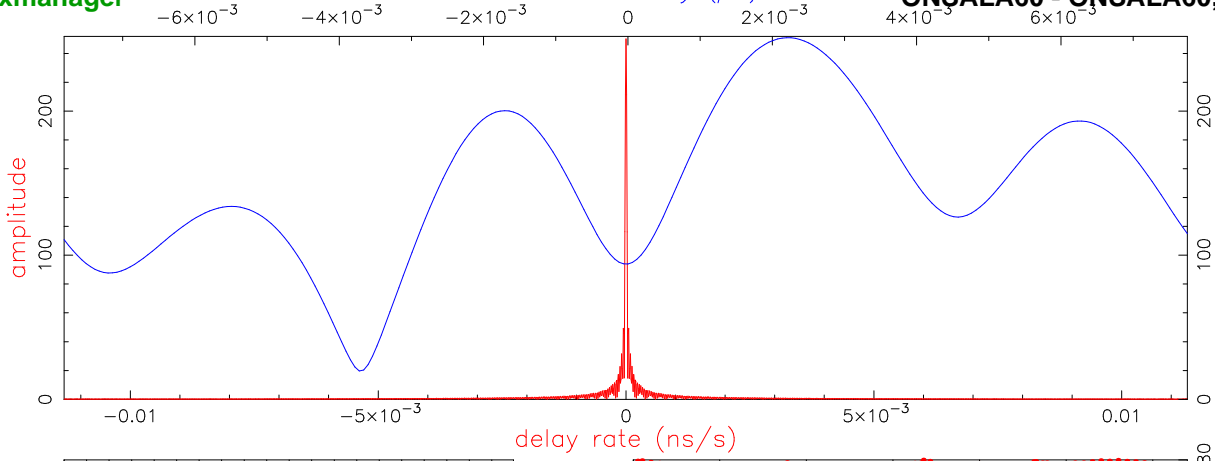
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, XX

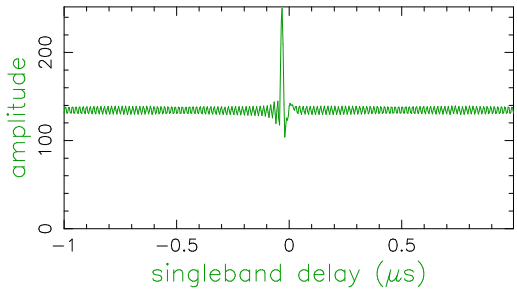
ONSALA60 - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

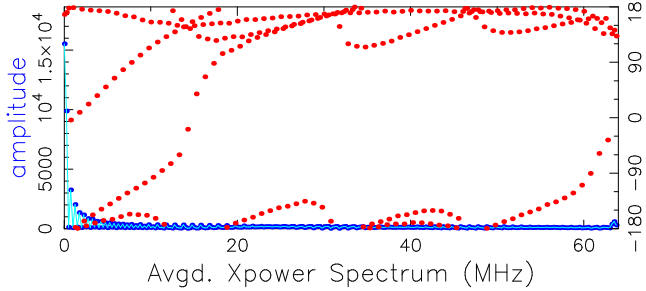


Fringe quality 5

SNR 12508.2
 Int time 329.957
 Amp 251.807
 Phase 137.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.032181
 MBD 0.002083
 Fringe rate (Hz)
 -0.000002
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

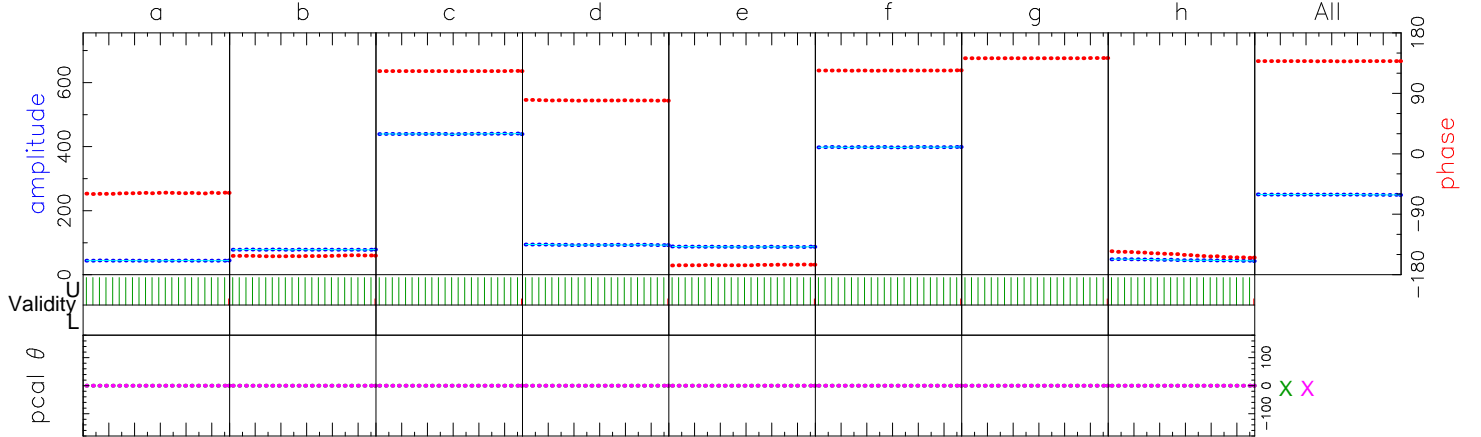


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044554
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 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
	-58.7	-151.9	123.0	79.4	-165.5	123.8	142.2	-150.0	Phase	137.8
	44.1	78.3	439.8	93.4	87.3	398.4	1097.3	46.1	Ampl.	285.6
	245.8	246.8	249.2	252.7	247.3	249.2	246.1	251.7	Sbd box	248.8
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	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	
									Tracks	
Group delay (usec)(sbd)	-2.91670000000E-02		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		2.08300E-03	+/- 8.7E-08
Sband delay (usec)	-3.21810000000E-02		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-3.21810E-02	+/- 6.9E-07
Phase delay (usec)	4.44323233987E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		4.44323E-06	+/- 3.0E-10
Delay rate (us/s)	-1.77139404896E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-1.77139E-11	+/- 1.5E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		137.8	+/- 0.0

ph/seg (deg) 0.1 0.0 Search (2048X32) 248.653 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.7 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) 85.6 0.0 Inc. seg. avg. 250.111 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 136.1 0.0 Inc. frq. avg. 285.595 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 254.8 el 43.9 pa 36.4 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/XX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/XX.W.259.1W8CZP

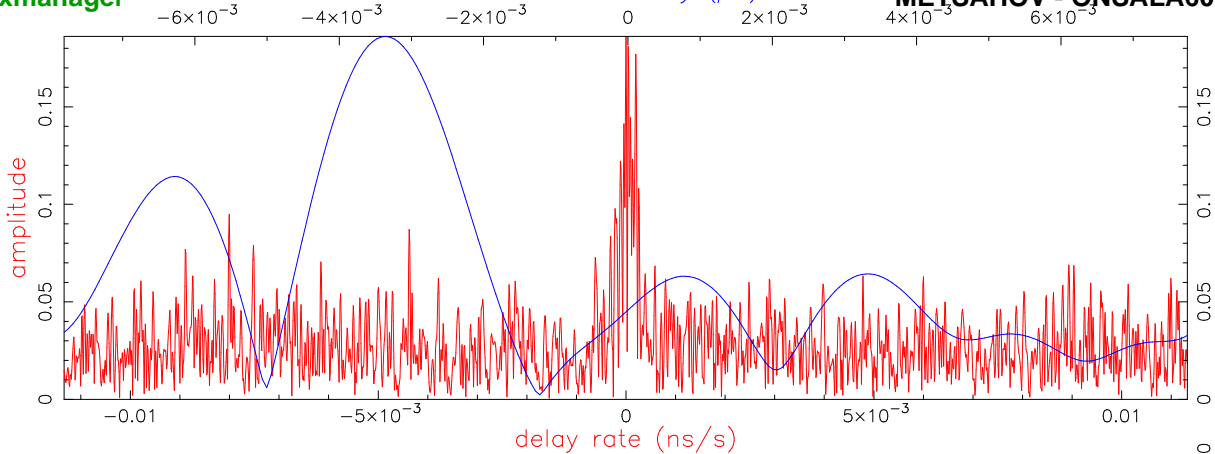
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, ZX

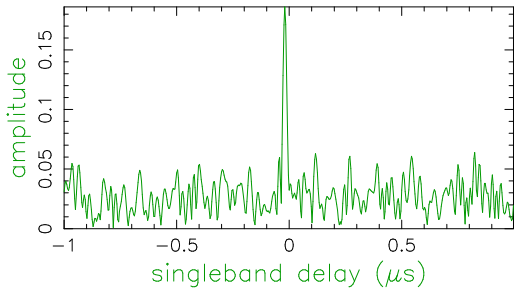
METSAHOV - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

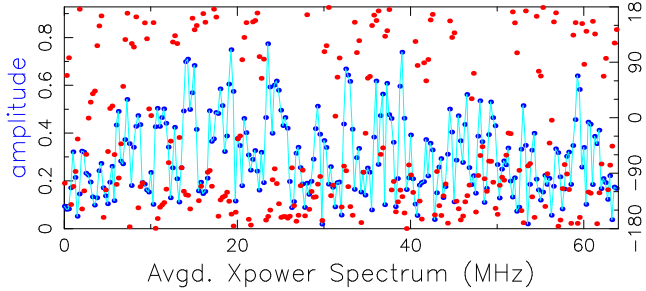


Fringe quality 9

SNR 9.0
 Int time 315.492
 Amp 0.186
 Phase 24.9
 PFD 6.0e-11
 Delays (us)
 SBD -0.019538
 MBD -0.003362
 Fringe rate (Hz) 0.000062
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

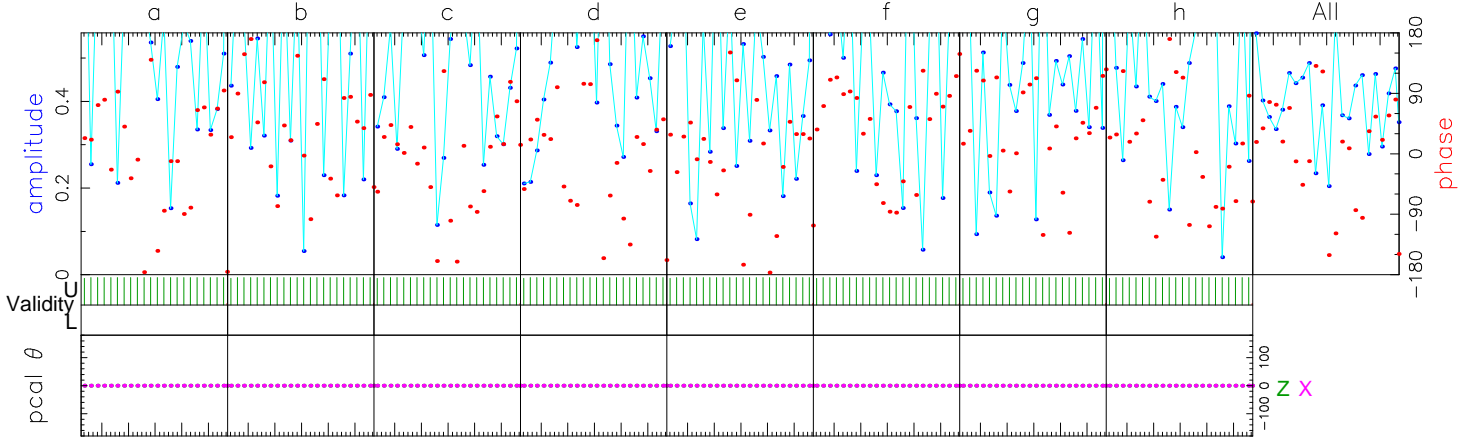


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151513.31
 Stop 152029.73
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044546
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	22.1	46.7	-3.4	-5.0	11.6	70.1	38.8	-12.6	Phase	24.9
	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.2	Ampl.	0.2
	252.2	251.1	252.1	226.5	50.9	251.5	252.4	252.6	Sbd box	252.0
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	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)	-2.00134452615E+03	Apriori delay (usec)	-2.00132553884E+03	Resid mbdelay (usec)	-3.36231E-03	+/-	1.2E-04
Sband delay (usec)	-2.00134507659E+03	Apriori clock (usec)	-5.7082600E+01	Resid sbdelay (usec)	-1.95378E-02	+/-	9.5E-04
Phase delay (usec)	-2.00132553804E+03	Apriori clockrate (us/s)	-5.1200000E-07	Resid phdelay (usec)	8.03654E-07	+/-	4.1E-07
Delay rate (us/s)	-2.80725345459E-02	Apriori rate (us/s)	-2.80725352714E-02	Resid rate (us/s)	7.25563E-10	+/-	2.2E-09
Total phase (deg)	-304.7	Apriori accel (us/s/s)	1.17337196244E-05	Resid phase (deg)	24.9	+/-	12.7

ph/seg (deg)	73.9	Theor.	30.4	Amplitude	0.186 +/- 0.021	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	127.4	Search (2048X32)	0.186	Search	0.186	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	31.6	Interp.	0.000	Inc. seg. avg.	0.354	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	32.1	Inc. frq. avg.	0.202	Inc. frq. avg.	0.202	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	

Z: az 264.2 el 37.1 pa 34.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 199.808 705.917 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/ZX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/ZX.W.242.1W8CZP

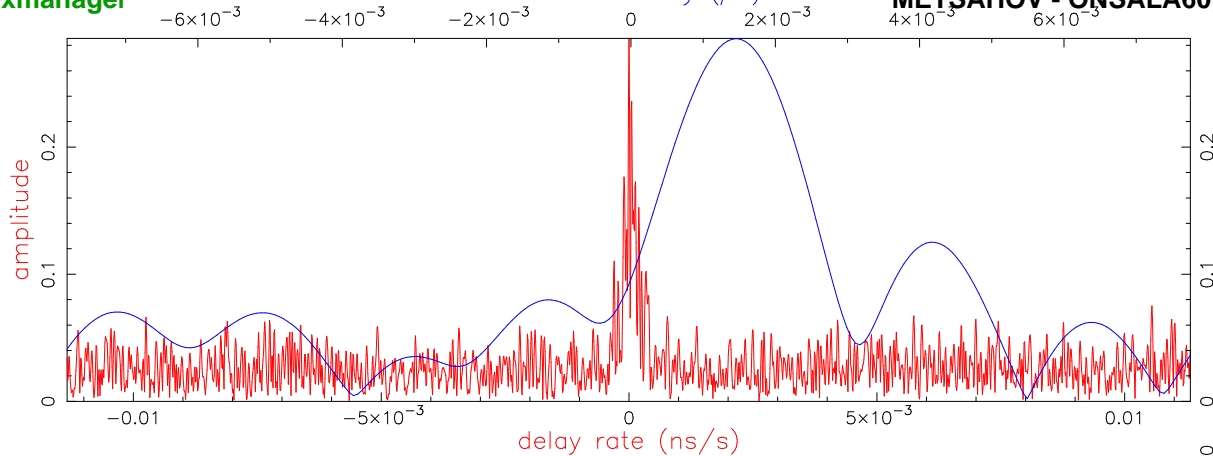
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, ZX

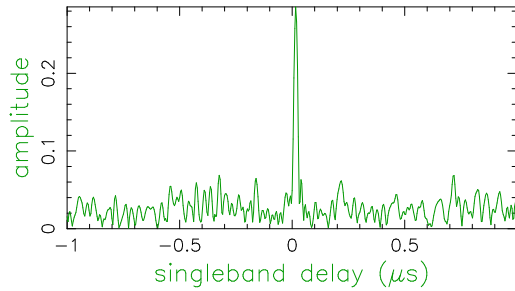
METSÁHOV - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

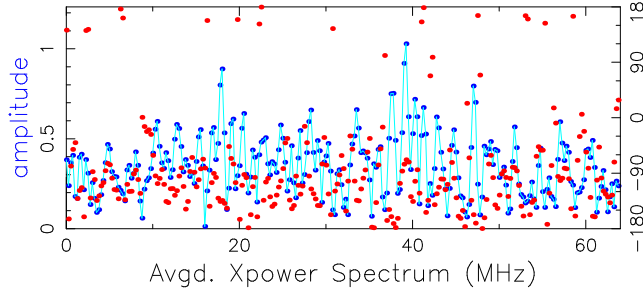


Fringe quality 9

SNR 13.9
Int time 315.492
Amp 0.285
Phase 56.2
PFD 5.9e-35
Delays (us)
SBD 0.016013
MBD 0.001468
Fringe rate (Hz)
-0.000135
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

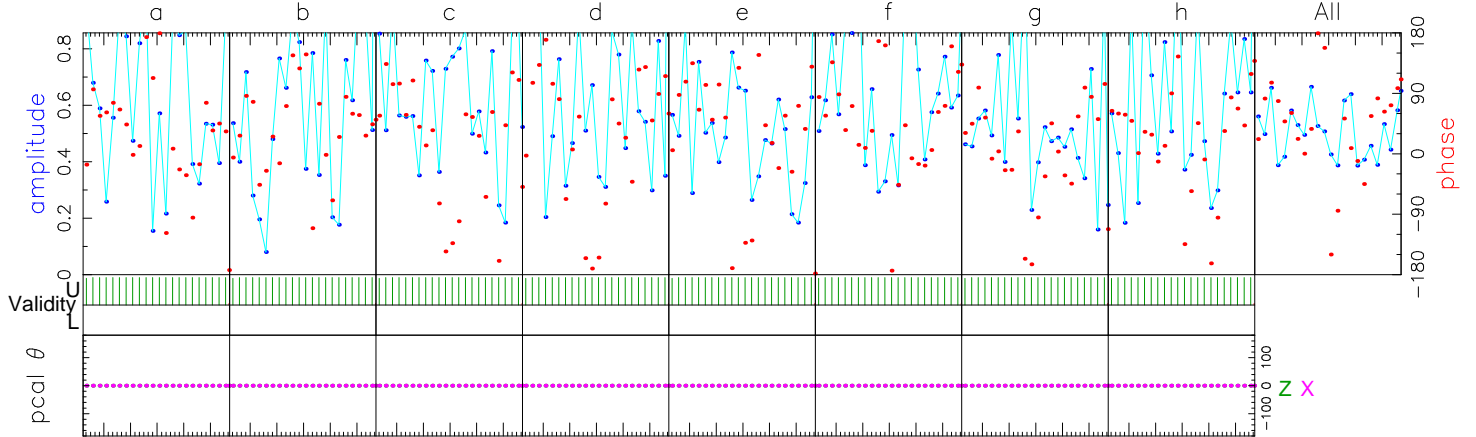


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151513.31
Stop 152029.73
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044549
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	31.6	52.3	77.3	83.3	85.2	51.0	26.9	51.9	Phase	56.2
	0.3	0.3	0.3	0.3	0.2	0.4	0.2	0.4	Ampl.	0.3
	262.0	261.3	261.7	260.2	260.3	261.4	262.2	261.1	Sbd box	261.1
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	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	

Group delay (usec)(sbd)	-2.00130844571E+03	Apriori delay (usec)	-2.00132553884E+03	Resid mbdelay (usec)	1.46813E-03	+/-	7.8E-05
Sband delay (usec)	-2.00130952584E+03	Apriori clock (usec)	-5.7082600E+01	Resid sbdelay (usec)	1.60130E-02	+/-	6.2E-04
Phase delay (usec)	-2.00132553703E+03	Apriori clockrate (us/s)	-5.1200000E-07	Resid phdelay (usec)	1.81284E-06	+/-	2.7E-07
Delay rate (us/s)	-2.80725368387E-02	Apriori rate (us/s)	-2.80725352714E-02	Resid rate (us/s)	-1.56733E-09	+/-	1.5E-09
Total phase (deg)	-273.4	Apriori accel (us/s/s)	1.17337196244E-05	Resid phase (deg)	56.2	+/-	8.3

ph/seg (deg)	66.9	Theor.	19.8	Search (2048X32)	0.284	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	83.2		34.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	24.3		11.7	Inc. seg. avg.	0.476	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	19.5		20.4	Inc. frq. avg.	0.297	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

Z: az 264.2 el 37.1 pa 34.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 199.808 705.917 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/ZX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/ZX.W.251.1W8CZP

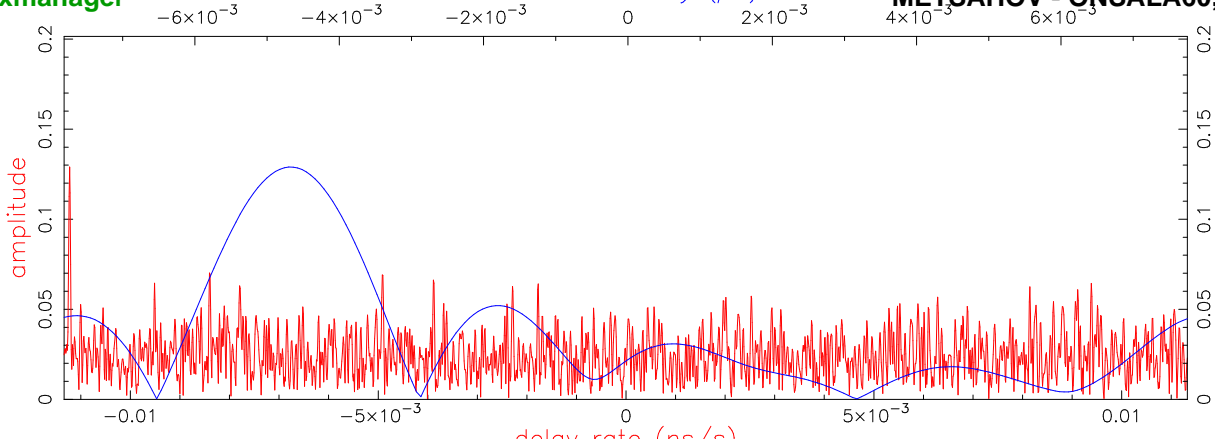
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, ZX

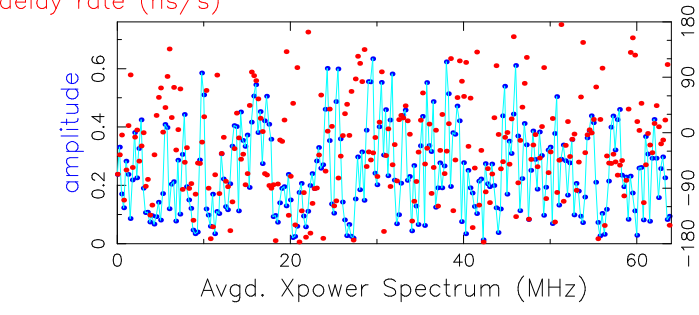
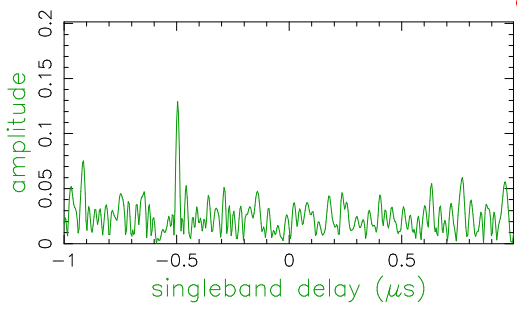
METSAHOV - ONSALA60, fgroup W, pol LR

multiband delay (μ s)



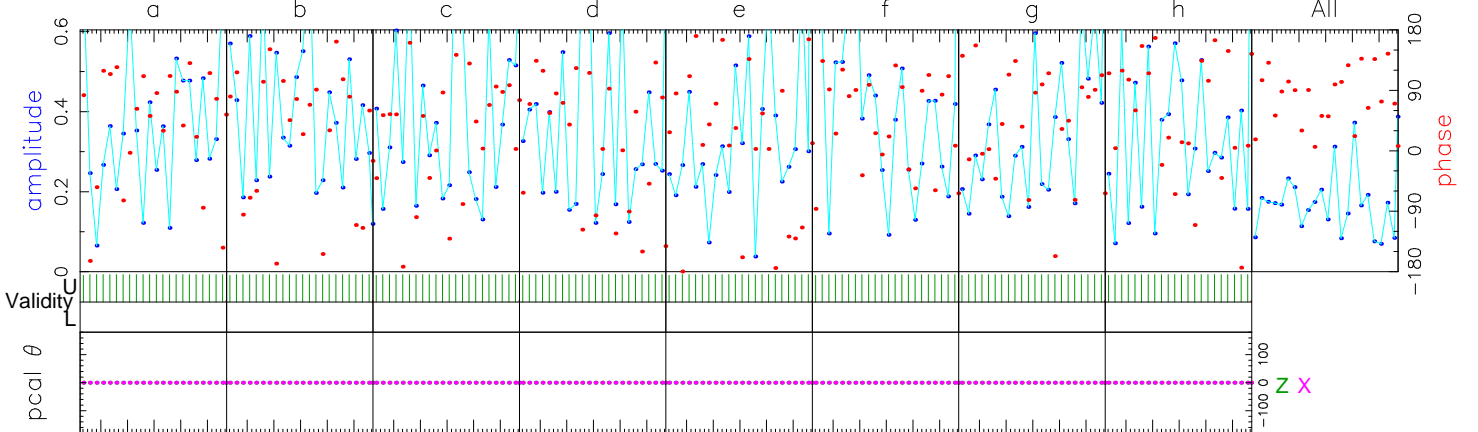
Fringe quality 0

SNR 6.3
 Int time 315.492
 Amp 0.201
 Phase 80.2
 PFD 8.6e-02
 Delays (us)
 SBD -0.495449
 MBD -0.004665
 Fringe rate (Hz)
 -0.968144
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151513.31
 Stop 152029.73
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044552
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	77.4	88.6	73.7	78.0	115.5	68.1	74.7	91.9	Phase	80.2
	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.1	Ampl.	0.2
	372.8	156.7	454.2	490.5	26.5	395.3	130.1	157.8	Sbd box	130.2
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	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	
									Tracks	
Group delay (usec)(sbd)	-2.00181457899E+03			Apriori delay (usec)	-2.00132553884E+03			Resid mbdelay (usec)	-4.66515E-03	+/- 1.7E-04
Sband delay (usec)	-2.00182098784E+03			Apriori clock (usec)	-5.7082600E+01			Resid sbdelay (usec)	-4.95449E-01	+/- 1.4E-03
Phase delay (usec)	-2.00132553625E+03			Apriori clockrate (us/s)	-5.1200000E-07			Resid phdelay (usec)	2.58475E-06	+/- 5.9E-07
Delay rate (us/s)	-2.80837744584E-02			Apriori rate (us/s)	-2.80725352714E-02			Resid rate (us/s)	-1.12392E-05	+/- 3.2E-09
Total phase (deg)		-249.5		Apriori accel (us/s/s)	1.17337196244E-05			Resid phase (deg)	80.2	+/- 18.2

ph/seg (deg) 40.4 43.7 Search (2048X32) 0.128 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 63.9 76.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 16.8 25.8 Inc. seg. avg. 0.203 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 29.7 45.0 Inc. frq. avg. 0.186 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 264.2 el 37.1 pa 34.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 199.808 705.917 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/ZX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/ZX.W.257.1W8CZP simultaneous interpolator

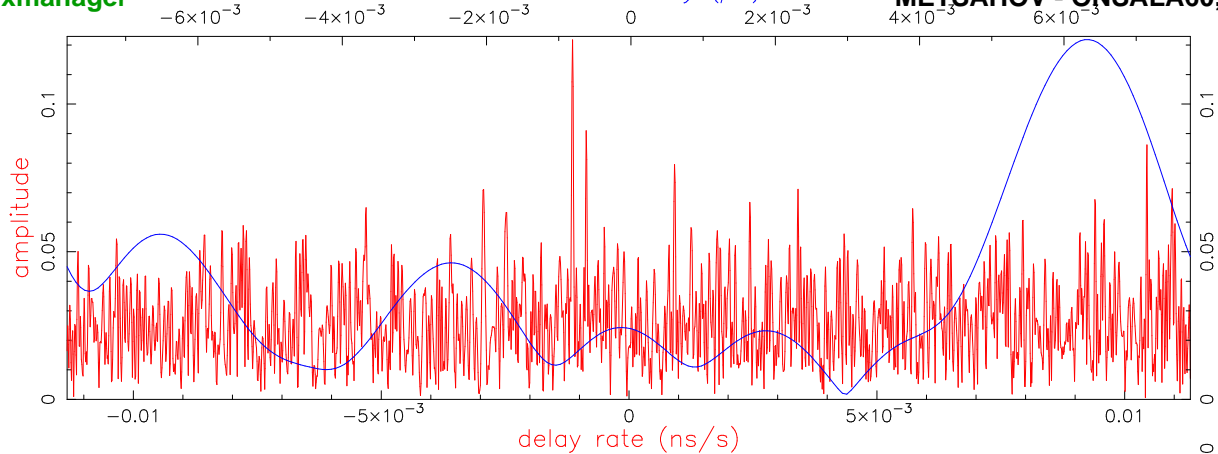
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, ZX

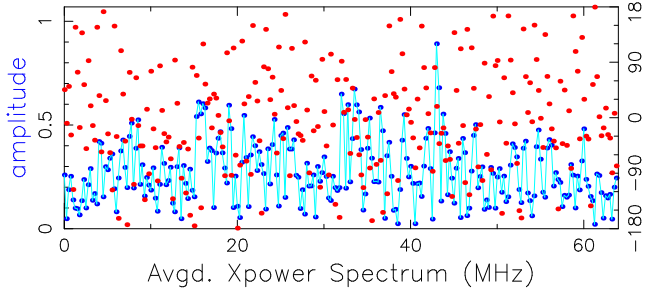
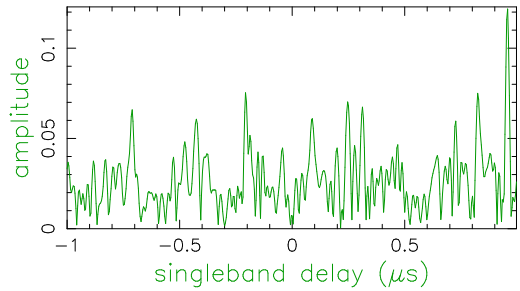
METSAHOV - ONSALA60, fgroup W, pol RL

multiband delay (μ s)



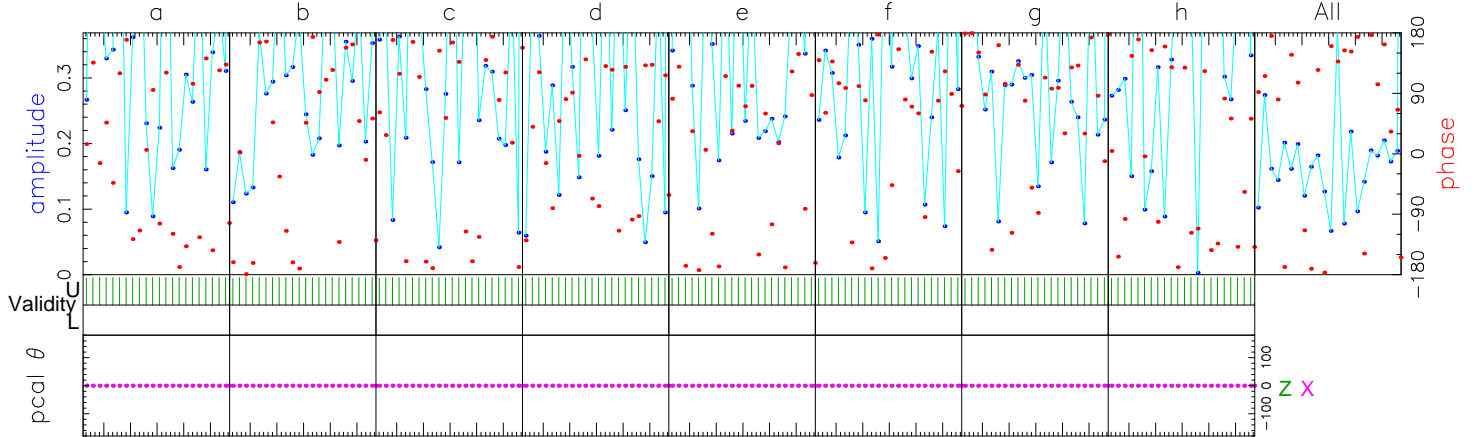
Fringe quality 0

SNR 5.9
 Int time 315.492
 Amp 0.123
 Phase 143.6
 PFD 5.1e-01
 Delays (us)
 SBD 0.956082
 MBD 0.006271
 Fringe rate (Hz)
 -0.098451
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151513.31
 Stop 152029.73
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044555
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

Amp. and Phase vs. time for each freq., 23 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	162.9	136.9	155.2	118.8	121.4	118.3	134.1	-167.0	Phase	143.6
	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	Ampl.	0.1
	76.1	148.8	45.2	318.9	273.9	432.8	281.0	469.5	Sbd box	501.8
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	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	
									Tracks	
Group delay (usec)(sbd)	-2.00036614280E+03		Apriori delay (usec)		-2.00132553884E+03		Resid mbdelay (usec)		6.27104E-03	+/- 1.8E-04
Sband delay (usec)	-2.00036945734E+03		Apriori clock (usec)		-5.7082600E+01		Resid sbdelay (usec)		9.56082E-01	+/- 1.4E-03
Phase delay (usec)	-2.00132553421E+03		Apriori clockrate (us/s)		-5.1200000E-07		Resid phdelay (usec)		4.63147E-06	+/- 6.2E-07
Delay rate (us/s)	-2.80736781912E-02		Apriori rate (us/s)		-2.80725352714E-02		Resid rate (us/s)		-1.14292E-06	+/- 3.4E-09
Total phase (deg)			Apriori accel (us/s/s)		1.17337196244E-05		Resid phase (deg)		143.6	+/- 19.3

	RMS	Theor.	Amplitude	0.123 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	49.6	46.2	Search (2048X32)	0.119	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	74.1	80.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	28.4	27.3	Inc. seg. avg.	0.131	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	33.1	47.6	Inc. frq. avg.	0.121	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

Z: az 264.2 el 37.1 pa 34.3 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) 199.808 705.917 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/ZX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/ZX.W.263.1W8CZP