

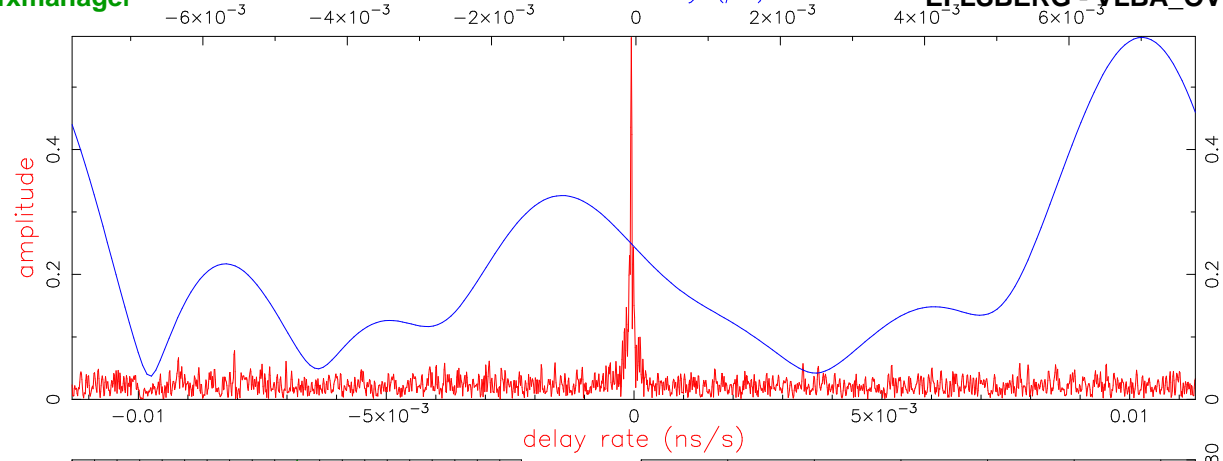
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, Bo

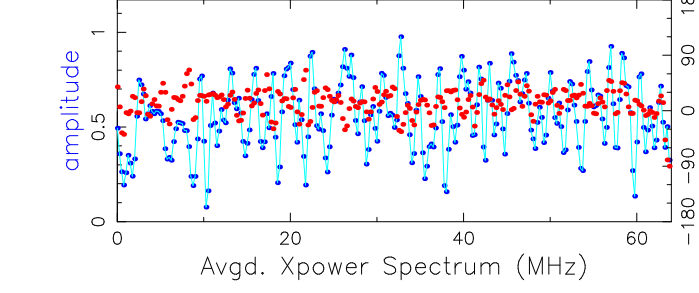
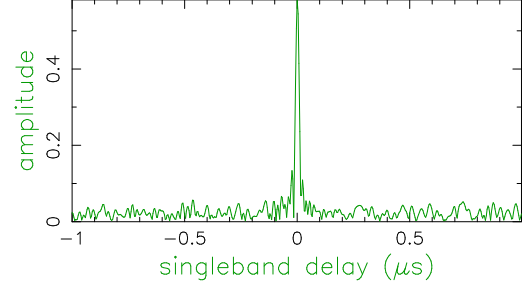
EFLSBERG - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)



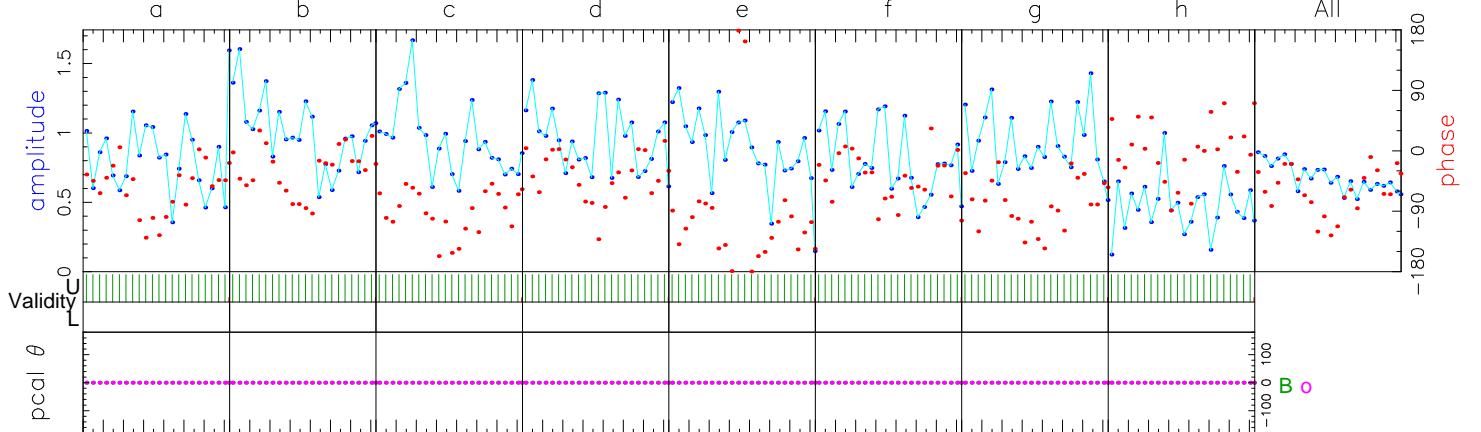
Fringe quality 5

SNR 32.6
 Int time 419.814
 Amp 0.581
 Phase -59.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.000688
 MBD 0.007027
 Fringe rate (Hz)
 -0.005201
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



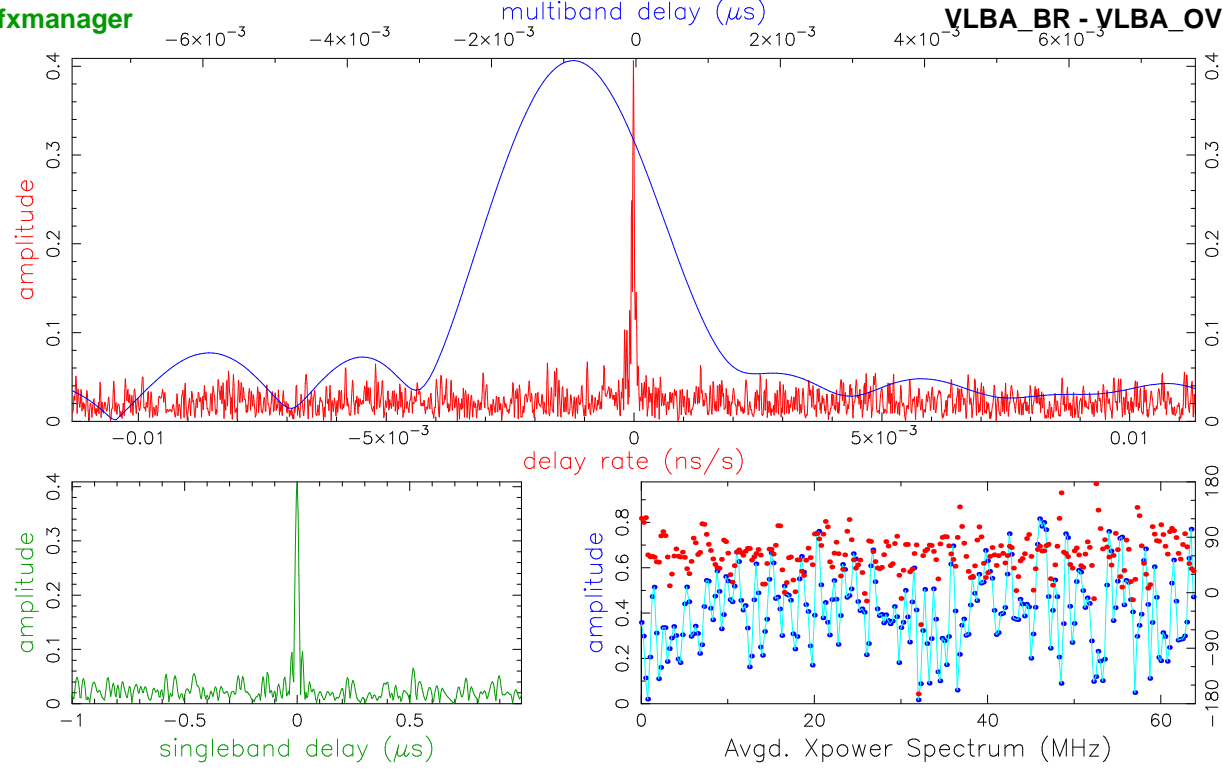
Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130333
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



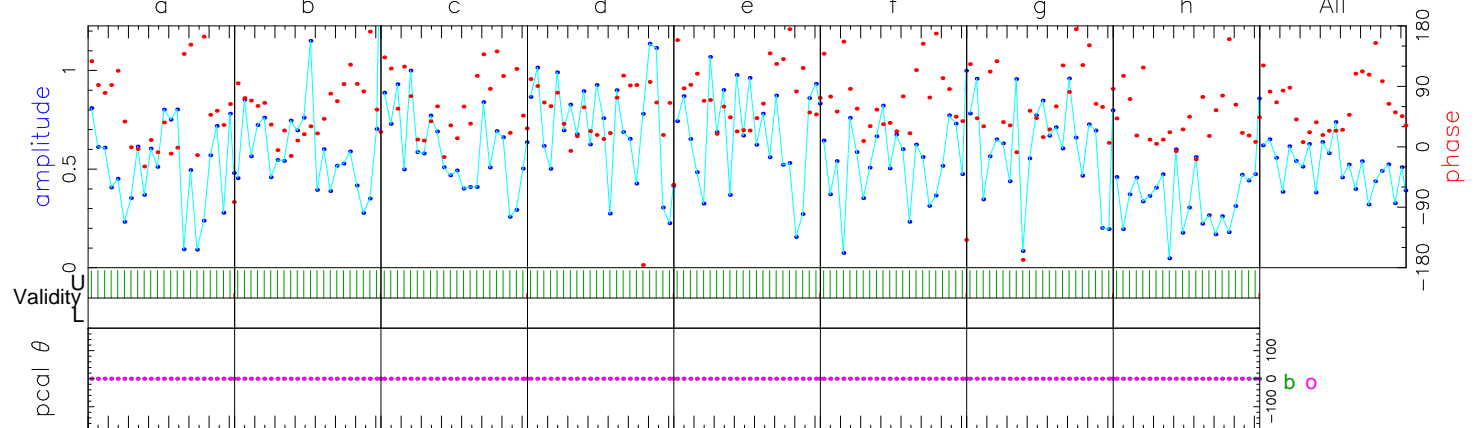
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-58.8	-28.8	-87.1	-36.9	-127.7	-37.7	-77.8	-4.3	Phase	-59.7
	0.6	0.8	0.8	0.8	0.7	0.7	0.8	0.4	Ampl.	0.7
	257.7	257.2	257.5	257.1	258.1	257.9	257.6	258.4	Sbd box	257.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.16717025291E+03		Apriori delay (usec)		-1.16717727958E+03		Resid mbdelay (usec)		7.02667E-03	+/- 3.3E-05
Sband delay (usec)	-1.16717659133E+03		Apriori clock (usec)		-2.5811052E+01		Resid sbdelay (usec)		6.88250E-04	+/- 2.6E-04
Phase delay (usec)	-1.16717728151E+03		Apriori clockrate (us/s)		-3.6000001E-07		Resid phdelay (usec)		-1.92535E-06	+/- 1.1E-07
Delay rate (us/s)	-1.21172840794E+00		Apriori rate (us/s)		-1.21172834756E+00		Resid rate (us/s)		-6.03769E-08	+/- 4.7E-10
Total phase (deg)			Apriori accel (us/s/s)		2.07102945192E-05		Resid phase (deg)		-59.7	+/- 3.5

ph/seg (deg) 32.9 8.4 Search (2048X32) 0.538 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 24.7 14.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 42.3 5.0 Inc. seg. avg. 0.678 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.5 8.7 Inc. frq. avg. 0.698 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 299.7 el 46.6 pa 61.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11063.633 2838.952 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Bo.W.16.1X1592



Fringe quality 9
SNR 22.9
Int time 419.705
Amp 0.409
Phase 60.7
PFD 0.0e+00
Delays (us)
SBD -0.000998
MBD -0.000888
Fringe rate (Hz)
-0.001110
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130333
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	45.8	50.5	72.8	63.1	71.2	68.7	68.3	29.2	Phase	60.7
	0.3	0.5	0.4	0.5	0.5	0.4	0.4	0.3	Ampl.	0.4
	256.9	256.8	257.0	256.8	256.9	256.4	256.9	256.0	Sbd box	256.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.07719369176E+03		Apriori delay (usec)		1.07719458015E+03		Resid mbdelay (usec)		-8.88385E-04	+/- 4.7E-05
Sband delay (usec)	1.07719358265E+03		Apriori clock (usec)		-6.7332344E+00		Resid sbdelay (usec)		-9.97500E-04	+/- 3.8E-04
Phase delay (usec)	1.07719458211E+03		Apriori clockrate (us/s)		-4.5999999E-07		Resid phdelay (usec)		1.95621E-06	+/- 1.6E-07
Delay rate (us/s)	-9.03107299471E-02		Apriori rate (us/s)		-9.03107170656E-02		Resid rate (us/s)		-1.28816E-08	+/- 6.7E-10
Total phase (deg)	108.9		Apriori accel (us/s/s)		6.48349977098E-06		Resid phase (deg)		60.7	+/- 5.0

ph/seg (deg) 39.5 12.0 Search (2048X32) 0.402 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 37.2 20.9 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 7.1 Inc. seg. avg. 0.505 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 20.7 12.3 Inc. frq. avg. 0.414 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 64.1 el 55.1 pa -72.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 830.778 1399.994 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/bo.W.17.1X1592

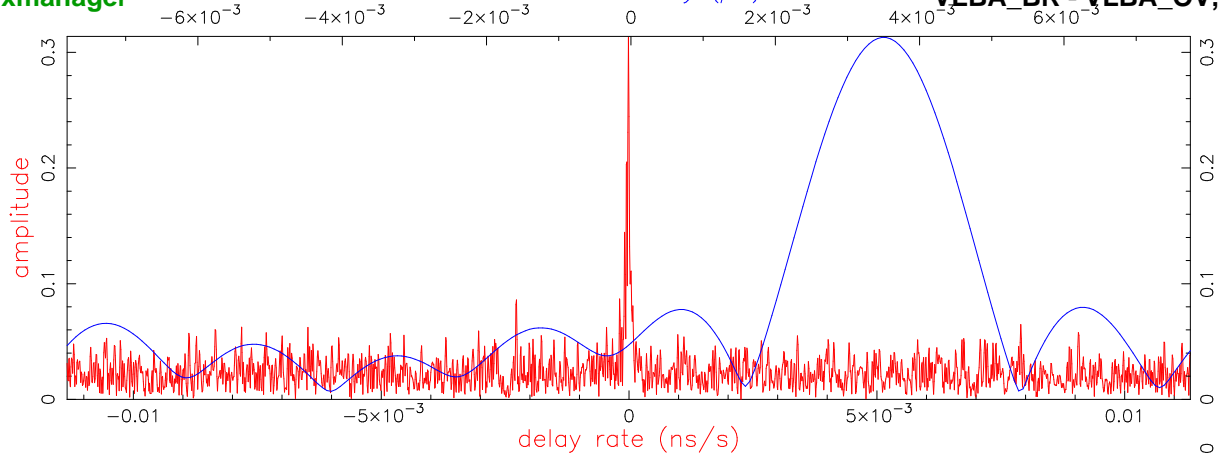
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, bo

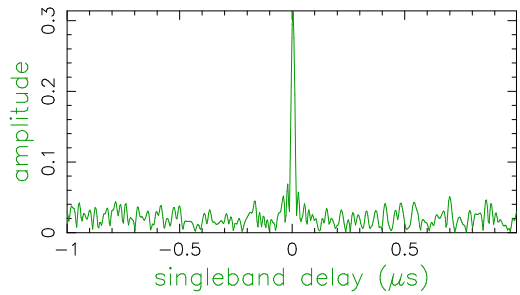
VLBA_BR - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

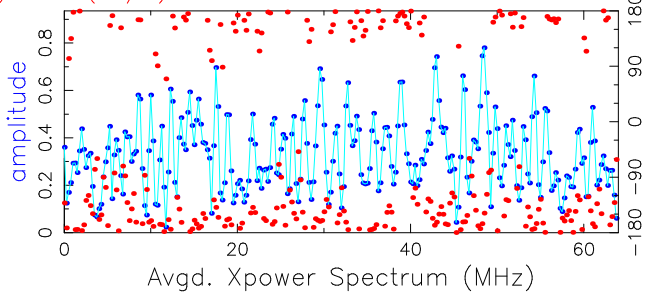


Fringe quality 9

SNR 17.6
 Int time 419.705
 Amp 0.314
 Phase -167.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.003221
 MBD 0.003483
 Fringe rate (Hz) -0.001031
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

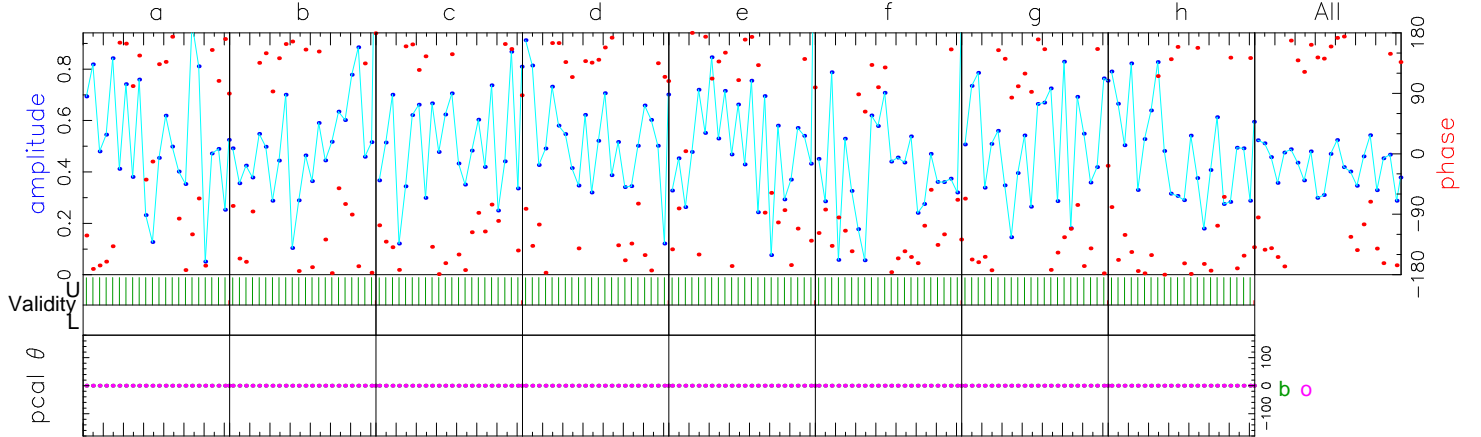


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130337
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

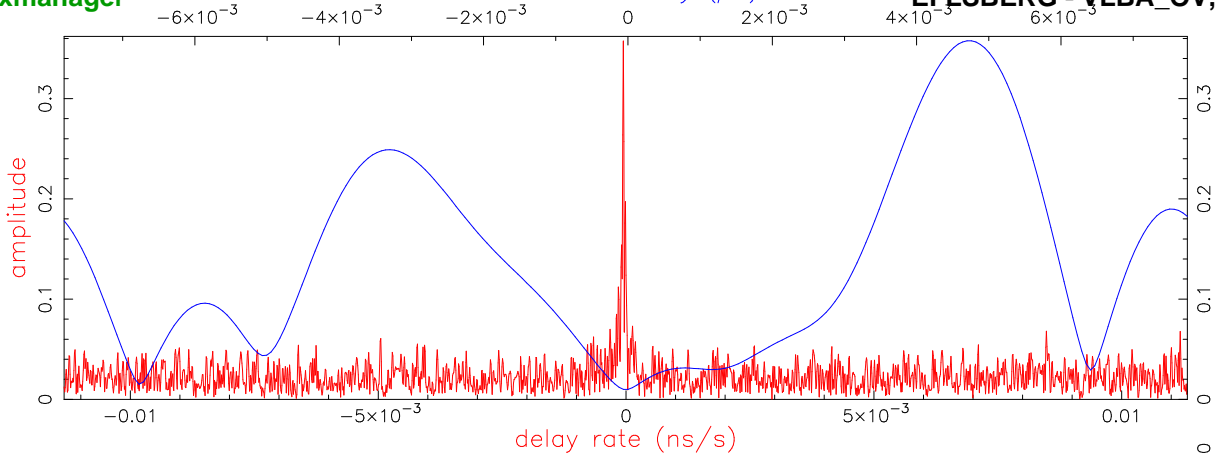
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



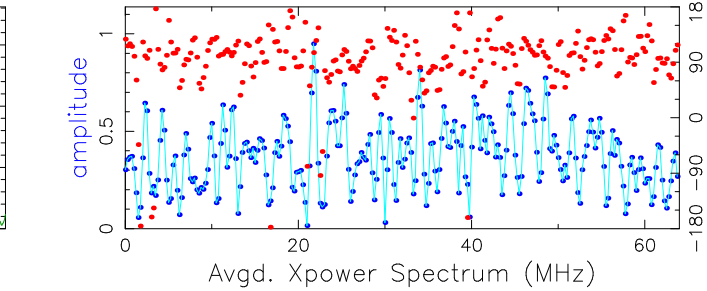
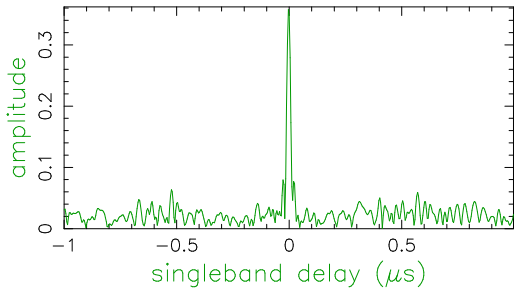
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-171.2	-166.9	-159.7	-174.4	-174.7	-152.8	-171.6	-164.0	Phase	-167.3
	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	Ampl.	0.3
	258.5	258.1	257.6	257.8	257.7	257.8	257.3	258.1	Sbd box	257.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.07719806308E+03		Apriori delay (usec)		1.07719458015E+03		Resid mbdelay (usec)		3.48293E-03	+/- 6.2E-05
Sband delay (usec)	1.07719780140E+03		Apriori clock (usec)		-6.7332344E+00		Resid sbdelay (usec)		3.22125E-03	+/- 4.9E-04
Phase delay (usec)	1.07719457475E+03		Apriori clockrate (us/s)		-4.5999999E-07		Resid phdelay (usec)		-5.39548E-06	+/- 2.1E-07
Delay rate (us/s)	-9.03107290352E-02		Apriori rate (us/s)		-9.03107170656E-02		Resid rate (us/s)		-1.19697E-08	+/- 8.7E-10
Total phase (deg)			Apriori accel (us/s/s)		6.48349977098E-06		Resid phase (deg)		-167.3	+/- 6.5

ph/seg (deg) 43.4 15.6 Search (2048X32) 0.311 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 43.6 27.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 8.3 9.2 Inc. seg. avg. 0.412 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 12.5 16.1 Inc. frq. avg. 0.311 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 64.1 el 55.1 pa -72.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 830.778 1399.994 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/bo.W.36.1X1592

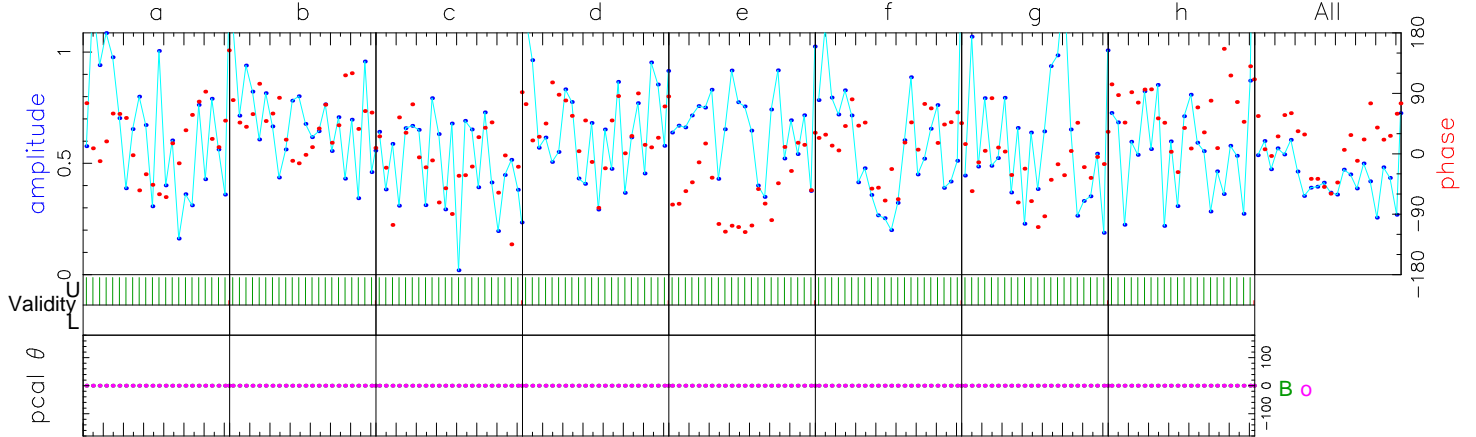
multiband delay (μ s)



Fringe quality 8
SNR 20.3
Int time 419.814
Amp 0.362
Phase 18.0
PFD 0.0e+00
Delays (us)
SBD -0.002477
MBD 0.004767
Fringe rate (Hz)
-0.005239
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130337
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
o	0	0	0	0	0	0	0	0		
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:o	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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.16717251286E+03				-1.16717727958E+03				4.76672E-03	+/- 5.3E-05
Sband delay (usec)	-1.16717975683E+03				-2.5811052E+01				-2.47725E-03	+/- 4.2E-04
Phase delay (usec)	-1.16717727900E+03				-3.6000001E-07				5.79236E-07	+/- 1.8E-07
Delay rate (us/s)	-1.21172840839E+00				-1.21172834756E+00				-6.08247E-08	+/- 7.5E-10
Total phase (deg)			-292.8		2.07102945192E-05				18.0	+/- 5.6
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
PC period (AP's) 5, 5										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00
simultaneous interpolator										

B: az 299.7 el 46.6 pa 61.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11063.633 2838.952
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Bo.W.38.1X1592

Mk4/DiFX fourfit 3.21 rev 2937

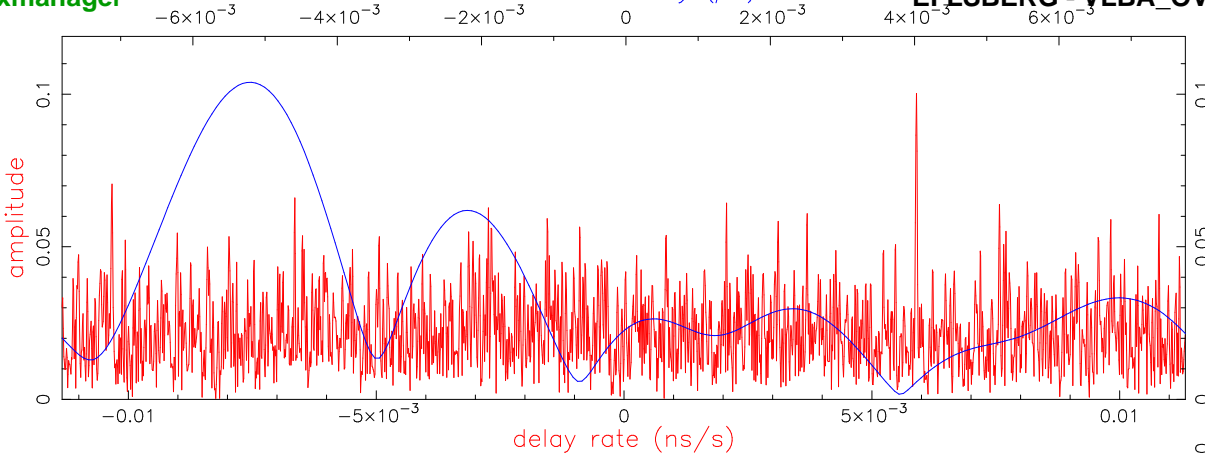
fxmanager

NRAO150.1X1592, No0093, Bo

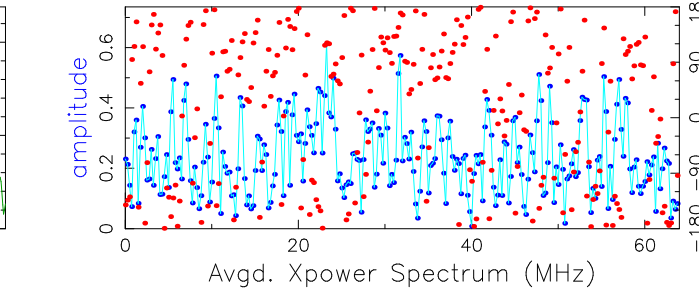
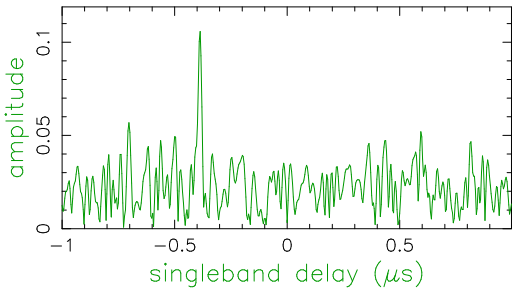
EFLSBERG - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

Fringe quality 0

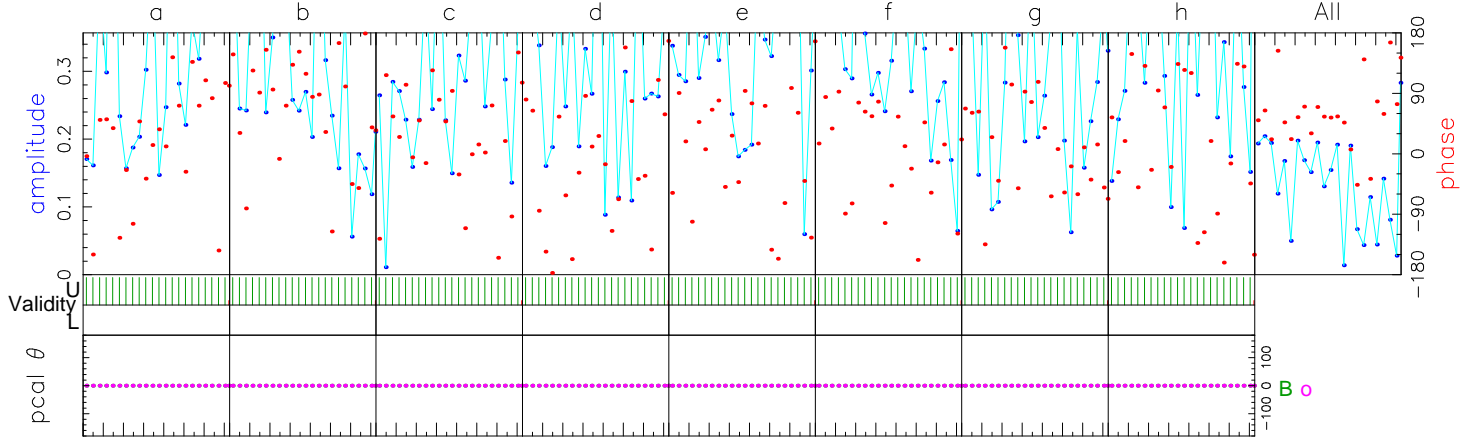


SNR 5.9
Int time 419.814
Amp 0.119
Phase 51.9
PFD 5.1e-01
Delays (us)
SBD -0.387503
MBD -0.004909
Fringe rate (Hz)
0.509435
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130341
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	65.8	98.6	41.7	31.3	15.9	34.2	24.3	104.4	Phase	51.9	
	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1	
	159.9	174.7	272.7	399.7	201.9	157.7	341.9	298.7	Sbd box	157.8	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used		
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
o	0	0	0	0	0	0	0	0	PC freqs		
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
B:o	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		
o	1000	1000	1000	1000	1000	1000	1000	1000			
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec)(sbd)	-1.16755718873E+03					-1.16717727958E+03			Resid mbdelay (usec)	-4.90914E-03	+/- 1.8E-04
Sband delay (usec)	-1.16756478258E+03					-2.5811052E+01			Resid sbdelay (usec)	-3.87503E-01	+/- 1.4E-03
Phase delay (usec)	-1.16717727791E+03					-3.6000001E-07			Resid phdelay (usec)	1.67483E-06	+/- 6.2E-07
Delay rate (us/s)	-1.21172243352E+00					-1.21172834756E+00			Resid rate (us/s)	5.91404E-06	+/- 2.6E-09
Total phase (deg)			-258.9			2.07102945192E-05			Resid phase (deg)	51.9	+/- 19.3

	RMS	Theor.	Amplitude	0.119 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	50.5	46.2	Search (2048X32)	0.103	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	64.2	80.7	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	36.6	27.3	Inc. seg. avg.	0.110	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	43.6	47.6	Inc. frq. avg.	0.117	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 299.7 el 46.6 pa 61.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11063.633 2838.952 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Bo.W.55.1X1592

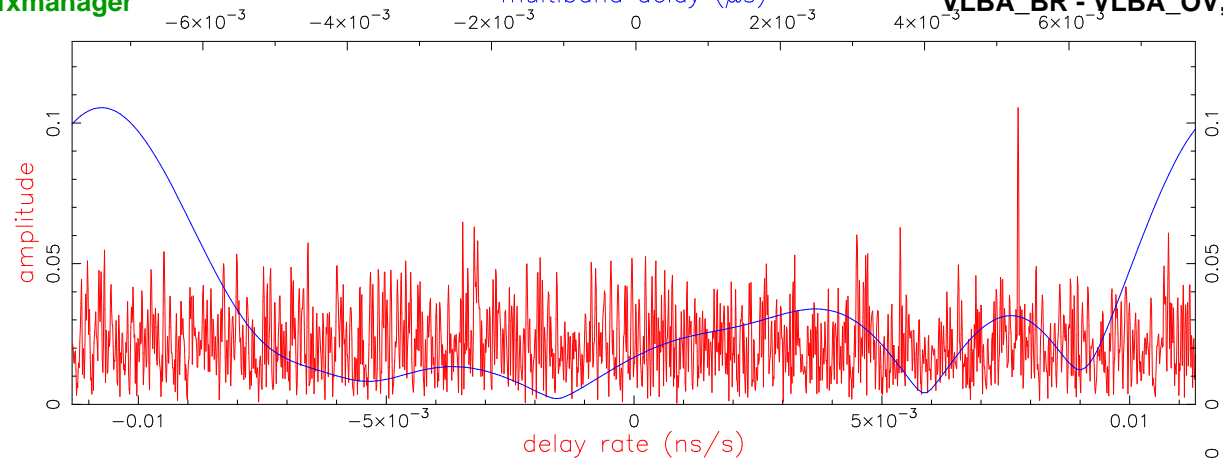
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, bo

VLBA_BR - VLBA_OV, fgroup W, pol LR

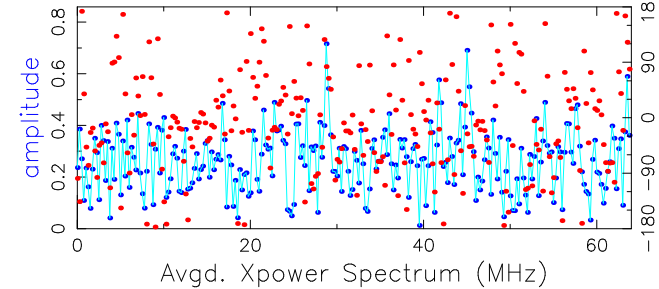
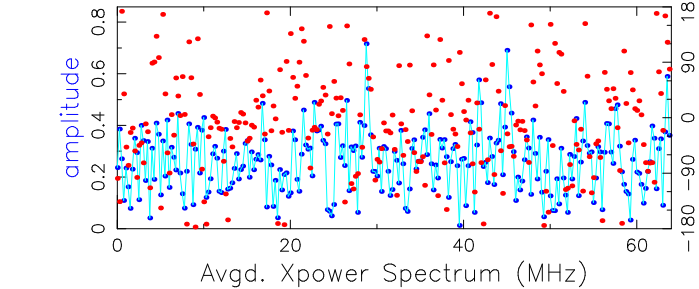
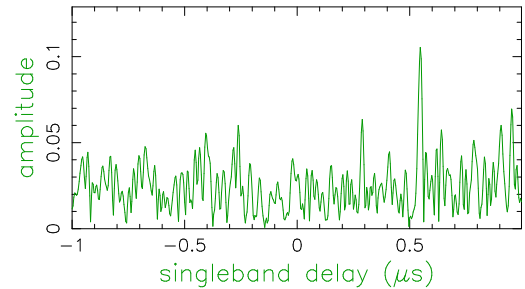
multiband delay (μ s)



Fringe quality 0

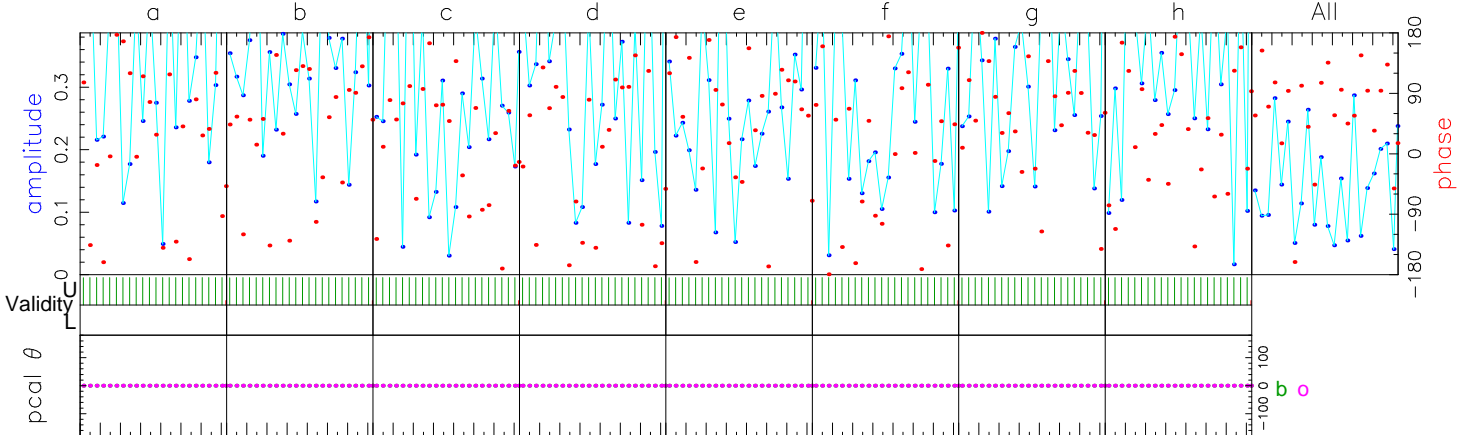
SNR 5.9
 Int time 419.705
 Amp 0.129
 Phase 81.8
 PFD 5.8e-01
 Delays (us)
 SBD 0.547245
 MBD 0.008230
 Fringe rate (Hz) 0.668715
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130341
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	82.3	74.5	59.5	100.7	87.1	123.9	77.2	29.4	Phase	81.8
	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	Ampl.	0.1
	329.9	206.3	193.4	58.1	398.1	362.1	141.0	142.1	Sbd box	397.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 1.0777340602E+03 Apriori delay (usec) 1.07719458015E+03 Resid mbdelay (usec) 8.23047E-03 +/- 1.8E-04
 Sband delay (usec) 1.07774182515E+03 Apriori clock (usec) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) 5.47245E-01 +/- 1.5E-03
 Phase delay (usec) 1.07719458279E+03 Apriori clockrate (us/s) -4.5999999E-07 Resid sbdelay (usec) 2.63765E-06 +/- 6.3E-07
 Delay rate (us/s) -9.03029539460E-02 Apriori rate (us/s) -9.03107170656E-02 Resid phdelay (usec) 7.76312E-06 +/- 2.6E-09
 Total phase (deg) 130.1 Apriori accel (us/s/s) 6.48349977098E-06 Resid phase (deg) 81.8 +/- 19.4

ph/seg (deg) 59.0 46.5 Amplitude 0.129 +/- 0.022 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 81.6 81.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 30.2 27.4 Inc. seg. avg. 0.131 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.5 47.8 Inc. frq. avg. 0.124 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 64.1 el 55.1 pa -72.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 830.778 1399.994 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/bo.W.57.1X1592

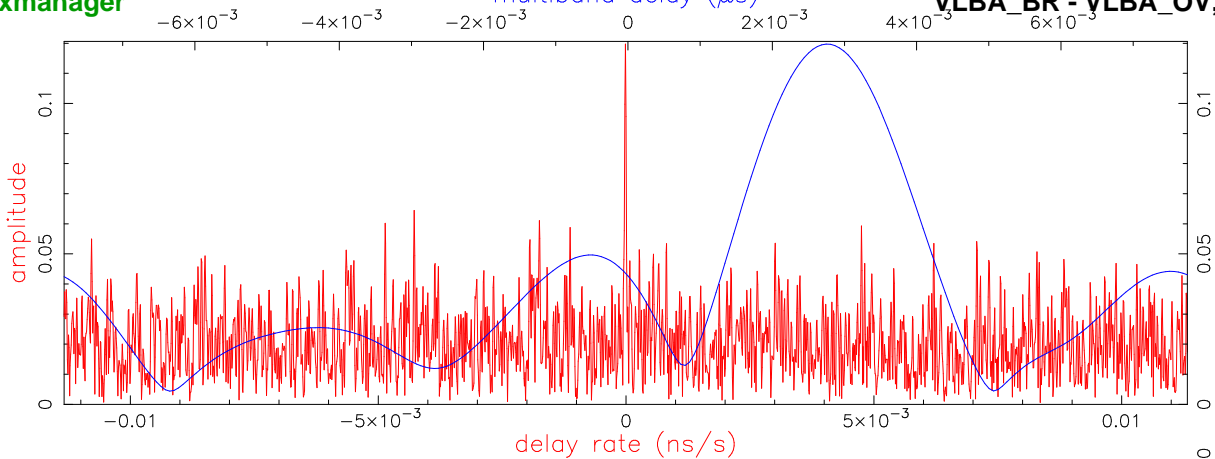
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

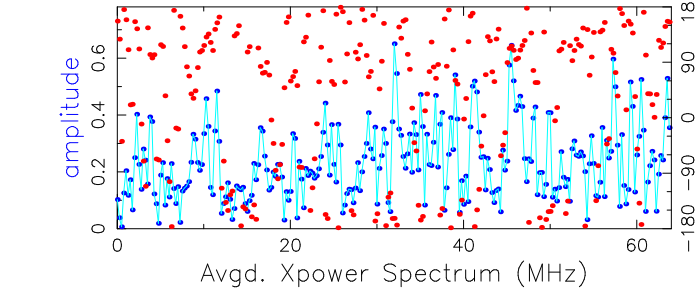
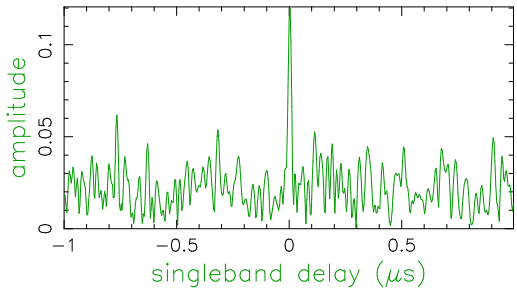
NRAO150.1X1592, No0093, bo

VLBA_BR - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

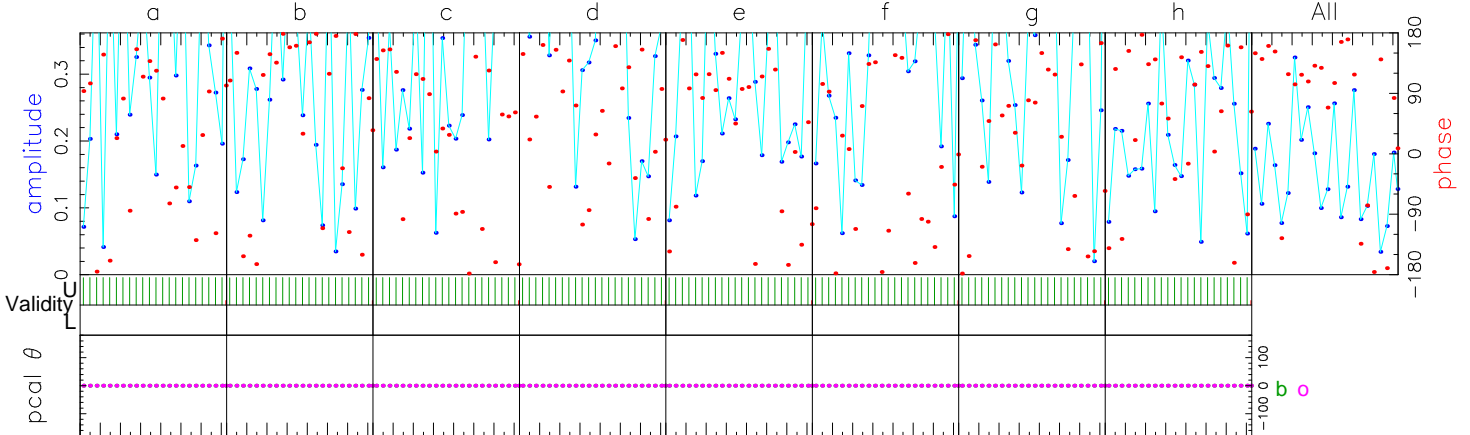


Fringe quality 0
 SNR 6.8
 Int time 419.705
 Amp 0.121
 Phase 131.6
 PFD 4.1e-03
 Delays (us)
 SBD 0.002813
 MBD 0.002732
 Fringe rate (Hz) -0.001134
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130345
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0				
b	0	0	0	0	0	0	0	0				
o	0	0	0	0	0	0	0	0				
b:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
b:0	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				
o	1000	1000	1000	1000	1000	1000	1000	1000				
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks		
Group delay (usec)(sbd)	1.07719731233E+03		Apriori delay (usec)		1.07719458015E+03		Resid mbdelay (usec)		2.73218E-03	+/- 1.6E-04		
Sband delay (usec)	1.07719739290E+03		Apriori clock (usec)		-6.7332344E+00		Resid sbdelay (usec)		2.81275E-03	+/- 1.3E-03		
Phase delay (usec)	1.07719458439E+03		Apriori clockrate (us/s)		-4.5999999E-07		Resid phdelay (usec)		4.24491E-06	+/- 5.5E-07		
Delay rate (us/s)	-9.03107302313E-02		Apriori rate (us/s)		-9.03107170656E-02		Resid rate (us/s)		-1.31657E-08	+/- 2.3E-09		
Total phase (deg)			Apriori accel (us/s/s)		6.48349977098E-06		Resid phase (deg)		131.6	+/- 17.0		
RMS	54.0	40.7	Amplitude		0.121 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	68.6	71.0	Search (2048X32)		0.117		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
amp/seg (%)	31.6	24.0	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	28.4	41.9	Inc. seg. avg.		0.126		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
amp/frq (%)			Inc. frq. avg.		0.123		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 64.1 el 55.1 pa -72.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 830.778 1399.994 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/bo.W.76.1X1592

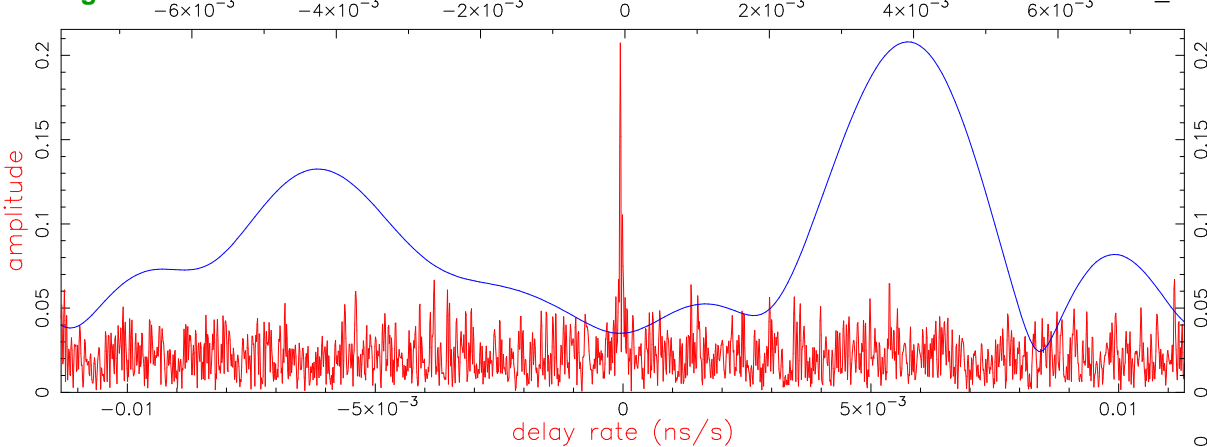
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, Bo

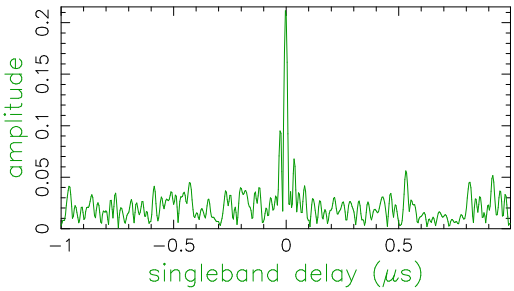
EFLSBERG - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

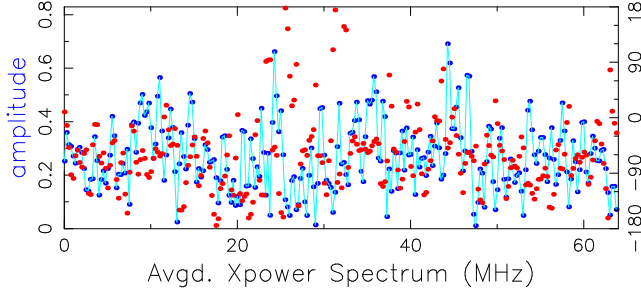


Fringe quality 9

SNR 12.1
 Int time 419.814
 Amp 0.215
 Phase -138.7
 PFD 7.7e-25
 Delays (us)
 SBD -0.002333
 MBD 0.003826
 Fringe rate (Hz)
 -0.005216
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

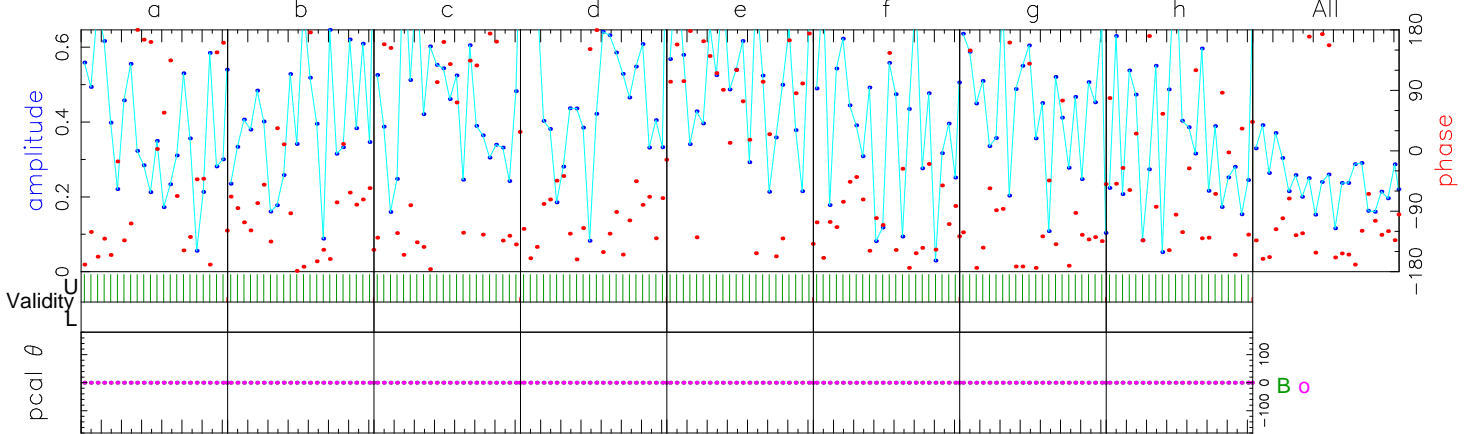


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130345
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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

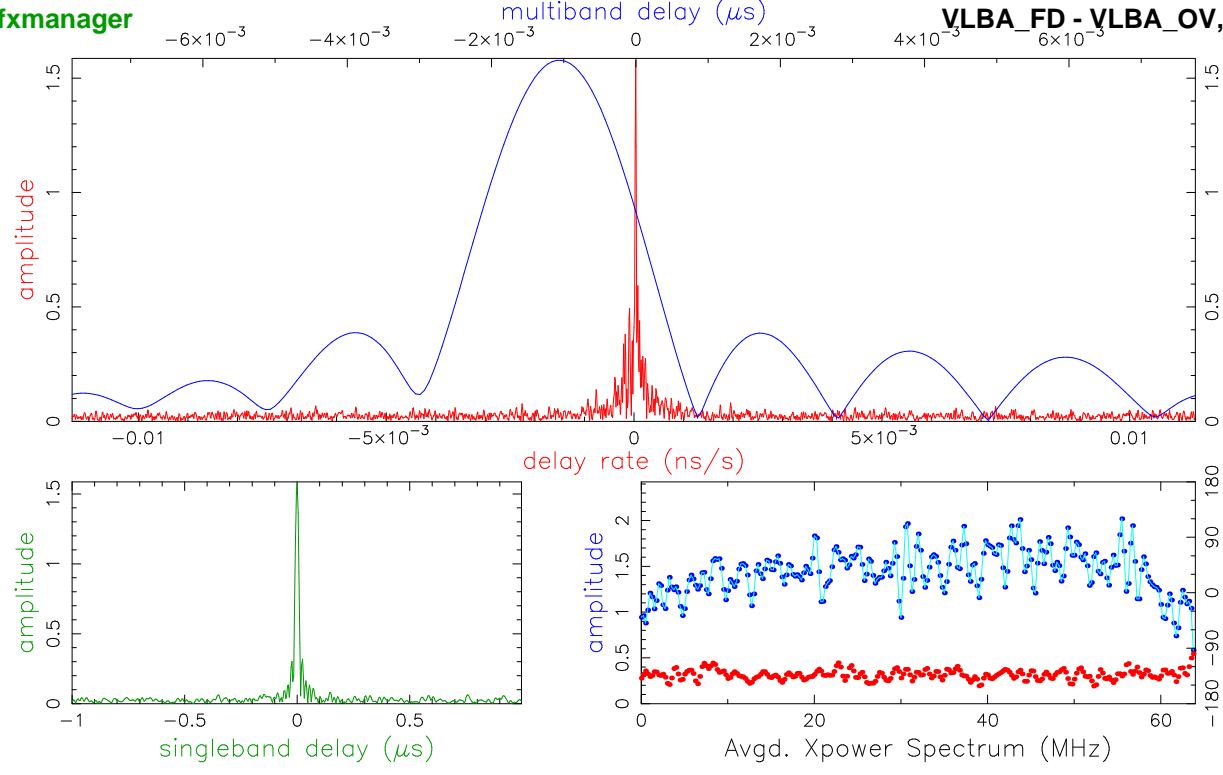


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-147.7	-102.9	-172.0	-114.7	137.0	-115.4	-144.1	-84.4	Phase	-138.7
	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.2	Ampl.	0.3
	255.8	256.3	256.6	257.0	256.7	256.6	256.9	256.8	Sbd box	256.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.16717345394E+03		Apriori delay (usec)		-1.16717727958E+03		Resid mbdelay (usec)		3.82564E-03	+/- 9.0E-05
Sband delay (usec)	-1.16717961233E+03		Apriori clock (usec)		-2.5811052E+01		Resid sbdelay (usec)		-2.33275E-03	+/- 7.1E-04
Phase delay (usec)	-1.16717728406E+03		Apriori clockrate (us/s)		-3.6000001E-07		Resid phdelay (usec)		-4.47251E-06	+/- 3.1E-07
Delay rate (us/s)	-1.21172840812E+00		Apriori rate (us/s)		-1.21172834756E+00		Resid rate (us/s)		-6.05548E-08	+/- 1.3E-09
Total phase (deg)			Apriori accel (us/s/s)		2.07102945192E-05		Resid phase (deg)		-138.7	+/- 9.5

	RMS	Theor.	Amplitude	0.215 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	34.8	22.8	Search (2048X32)	0.196	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	34.3	39.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	47.7	13.4	Inc. seg. avg.	0.228	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	36.9	23.4	Inc. frq. avg.	0.260	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

B: az 299.7 el 46.6 pa 61.7 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11063.633 2838.952 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Bo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Bo.W.77.1X1592

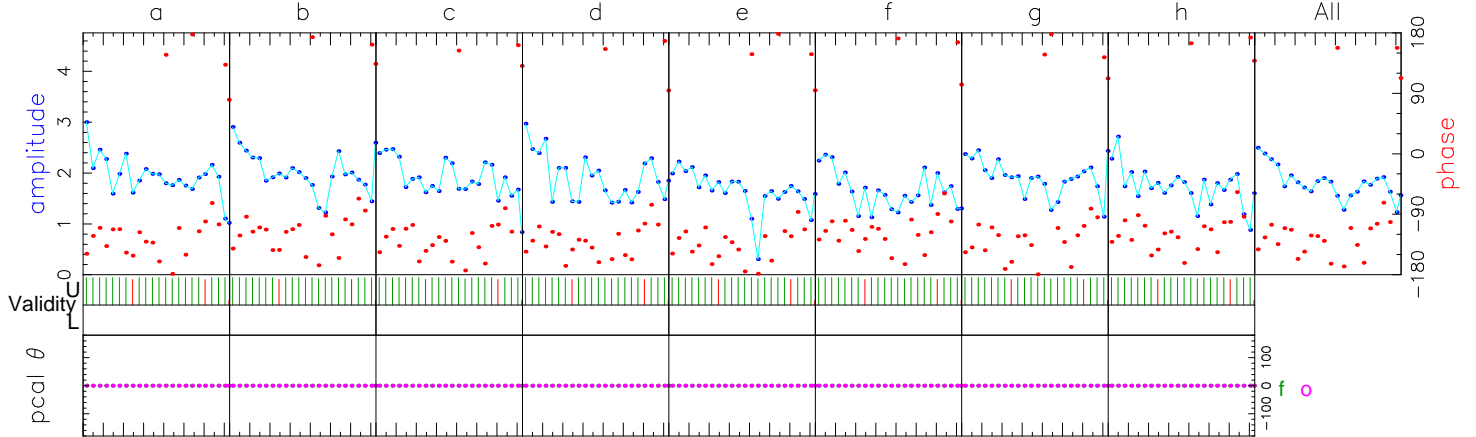


Fringe quality 6

SNR 88.5
Int time 416.324
Amp 1.586
Phase -131.1
PFD 0.0e+00
Delays (us)
SBD -0.000907
MBD -0.001082
Fringe rate (Hz) 0.002943
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130354
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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

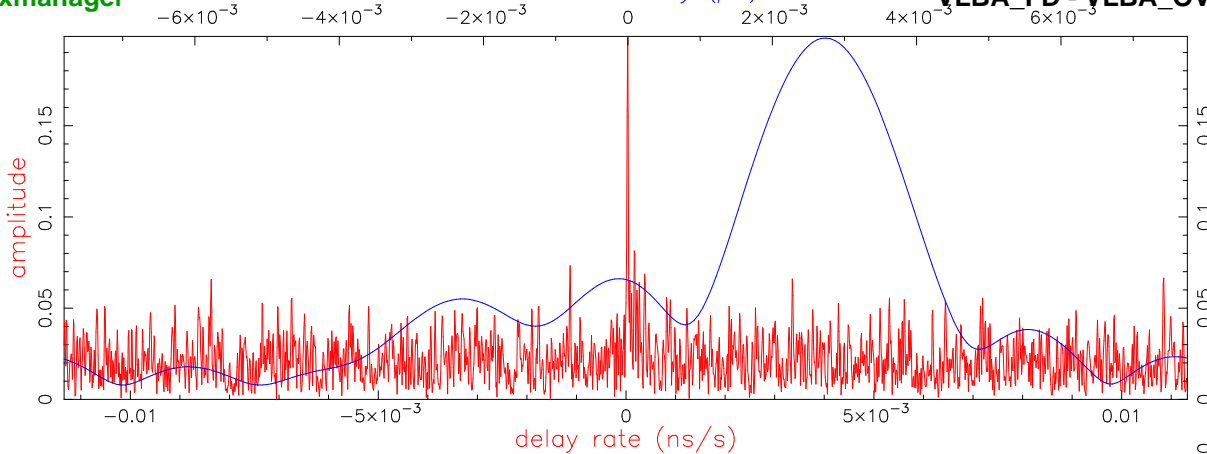


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-134.0	-123.4	-135.2	-134.8	-139.5	-121.7	-137.0	-122.8	Phase	-131.1
	1.6	1.7	1.7	1.7	1.4	1.4	1.6	1.5	Ampl.	1.6
	257.3	256.4	256.6	256.9	256.8	256.8	256.9	256.8	Sbd box	256.8
U/L	816/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.00563482326E+03		Apriori delay (usec)		1.00563590558E+03		Resid mbdelay (usec)		-1.08231E-03	+/- 1.2E-05
Sband delay (usec)	1.00563499833E+03		Apriori clock (usec)		6.5134563E+00		Resid sbdelay (usec)		-9.07250E-04	+/- 9.7E-05
Phase delay (usec)	1.00563590135E+03		Apriori clockrate (us/s)		-3.0000002E-07		Resid phdelay (usec)		-4.22632E-06	+/- 4.2E-08
Delay rate (us/s)	-9.71475800778E-02		Apriori rate (us/s)		-9.71476142438E-02		Resid rate (us/s)		3.41659E-08	+/- 1.7E-10
Total phase (deg)	195.2		Apriori accel (us/s/s)		-1.36779252096E-05		Resid phase (deg)		-131.1	+/- 1.3

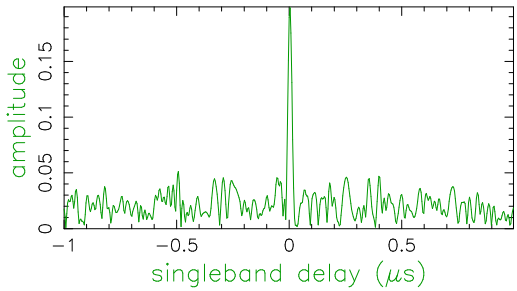
ph/seg (deg) 33.1 3.1 Amplitude 1.586 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 24.3 5.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 7.7 1.8 Inc. seg. avg. 1.819 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 6.7 3.2 Inc. frq. avg. 1.588 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 43.4 el 54.6 pa -109.1 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 863.452 -1867.385 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/fo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/fo.W.114.1X1592

multiband delay (μ s)

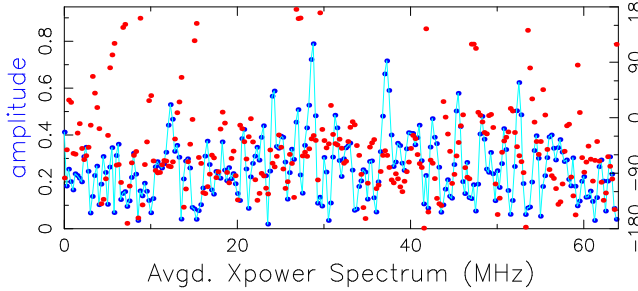
Fringe quality 9



SNR 11.1
Int time 416.324
Amp 0.199
Phase -63.0
PFD 6.1e-20
Delays (us)
SBD 0.002975
MBD 0.002716
Fringe rate (Hz) 0.002801
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

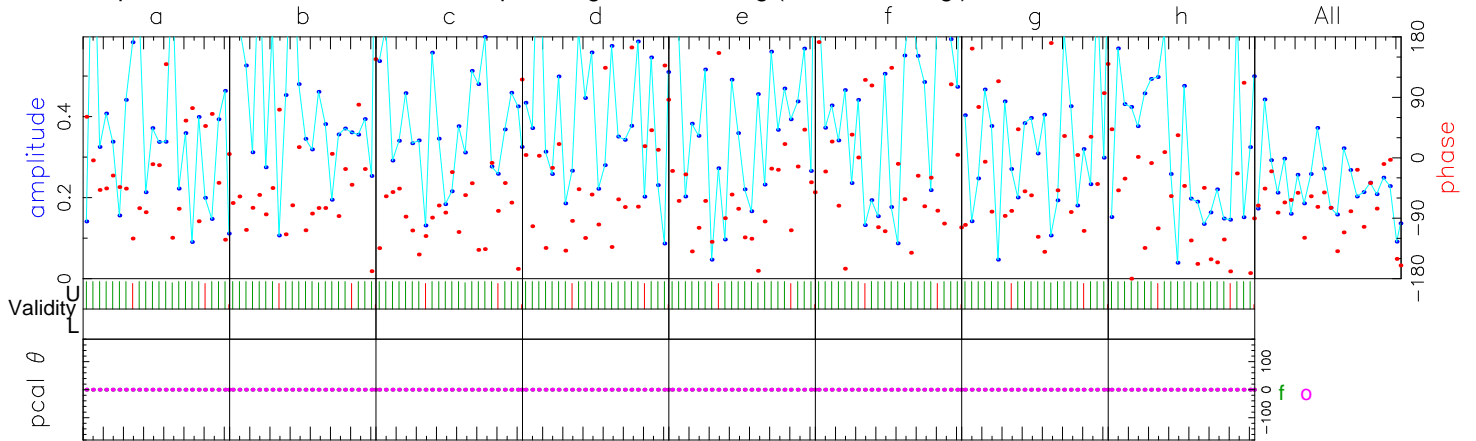


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130358
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-50.5	-63.5	-86.9	-51.1	-53.2	-74.9	-53.7	-61.1	Phase	-63.0
	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	Ampl.	0.2
	257.4	257.3	257.9	258.0	258.2	74.0	26.6	82.4	Sbd box	257.8
U/L	816/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.00563862148E+03	Apriori delay (usec)	1.00563590558E+03	Resid mbdelay (usec)	2.71590E-03	+/-	9.8E-05
Sband delay (usec)	1.00563888108E+03	Apriori clock (usec)	6.5134563E+00	Resid sbdelay (usec)	2.97550E-03	+/-	7.8E-04
Phase delay (usec)	1.00563590354E+03	Apriori clockrate (us/s)	-3.0000002E-07	Resid phdelay (usec)	-2.03263E-06	+/-	3.3E-07
Delay rate (us/s)	-9.71475817266E-02	Apriori rate (us/s)	-9.71476142438E-02	Resid rate (us/s)	3.25171E-08	+/-	1.4E-09
Total phase (deg)	263.3	Apriori accel (us/s/s)	-1.36779252096E-05	Resid phase (deg)	-63.0	+/-	10.3

ph/seg (deg)	RMS 39.5	Theor. 24.7	Amplitude Search (2048X32)	0.199 +/- 0.018	0.194	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	43.0	43.1	Interp.	0.000	0.194	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	14.1	14.6	Inc. seg. avg.	0.219	0.219	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	31.6	25.5	Inc. frq. avg.	0.197	0.197	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

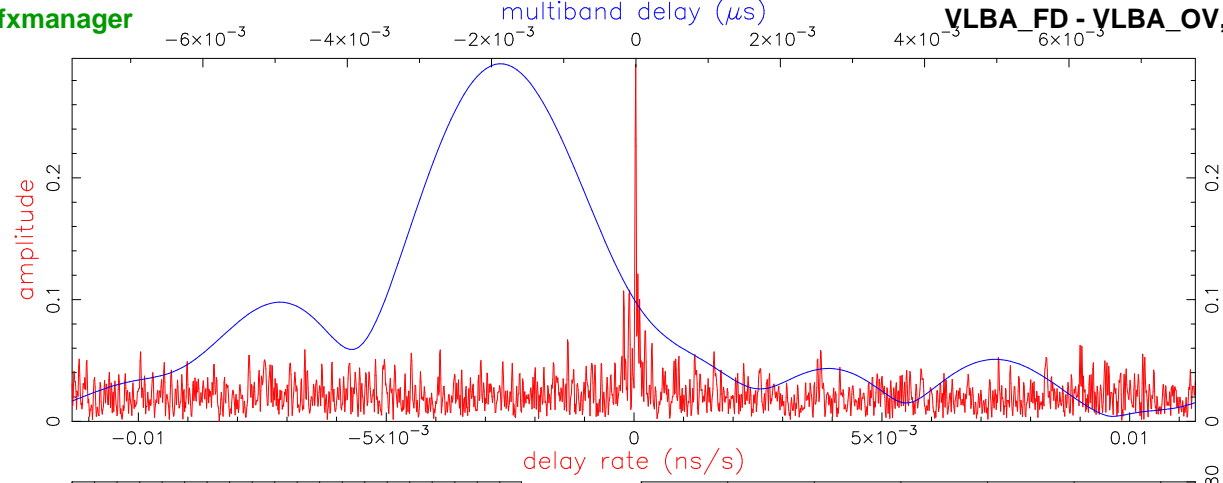
f: az 43.4 el 54.6 pa -109.1 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 863.452 -1867.385 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/fo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/fo.W.132.1X1592

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, fo

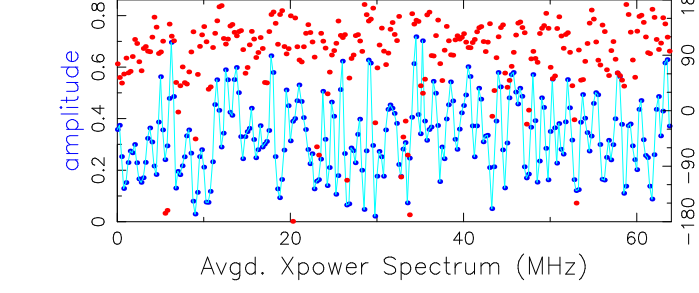
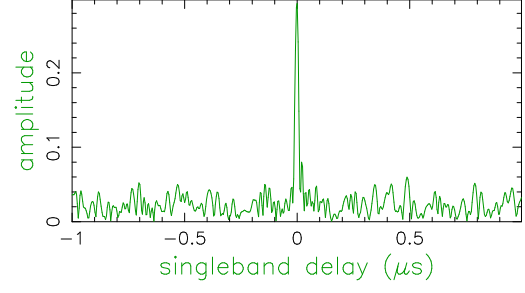
VLBA_FD - VLBA_OV, fgroup W, pol RL



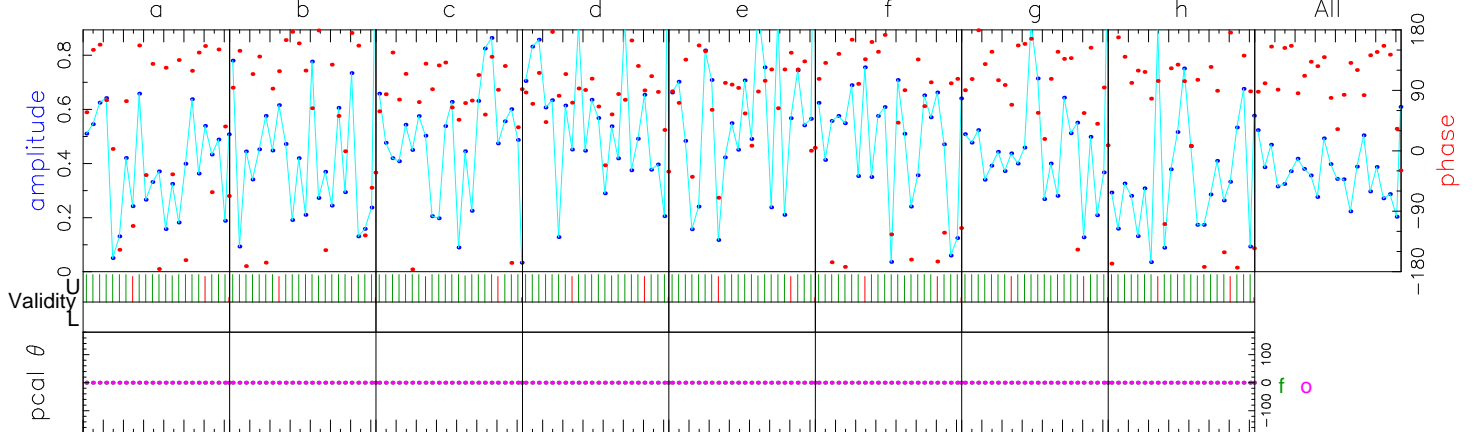
Fringe quality 8

SNR 16.6
 Int time 416.324
 Amp 0.298
 Phase 113.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.001586
 MBD -0.001948
 Fringe rate (Hz) 0.002886
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130401
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



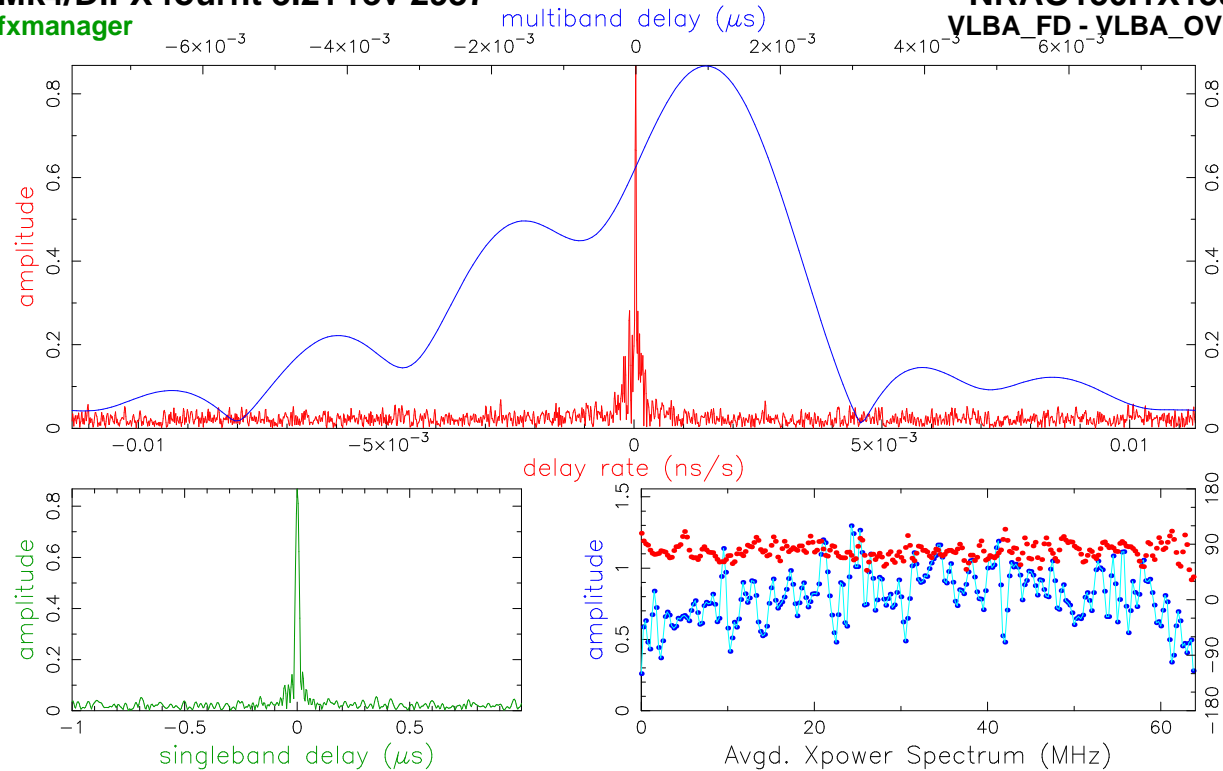
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	816/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0				
f	0	0	0	0	0	0	0	0				
f:0	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				
o	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL				
Group delay (usec)(sbd)		1.00563395764E+03				1.00563590558E+03			Resid mbdelay (usec)	-1.94794E-03 +/- 6.5E-05		
Sband delay (usec)		1.00563431983E+03				6.5134563E+00			Resid sbdelay (usec)	-1.58575E-03 +/- 5.2E-04		
Phase delay (usec)		1.00563590925E+03				-3.0000002E-07			Resid phdelay (usec)	3.67345E-06 +/- 2.2E-07		
Delay rate (us/s)		-9.71475807382E-02				-9.71476142438E-02			Resid rate (us/s)	3.35056E-08 +/- 9.2E-10		
Total phase (deg)			80.2			-1.36779252096E-05			Resid phase (deg)	113.9 +/- 6.9		
ph/seg (deg)	RMS 38.6	Theor. 16.5		Amplitude 0.298 +/- 0.018					Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	36.4	28.8		Search (2048X32) 0.293					Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	23.6	9.7		Interp. 0.000					Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
amp/frq (%)	28.7	17.0		Inc. seg. avg. 0.349					Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011	
				Inc. frq. avg. 0.309					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

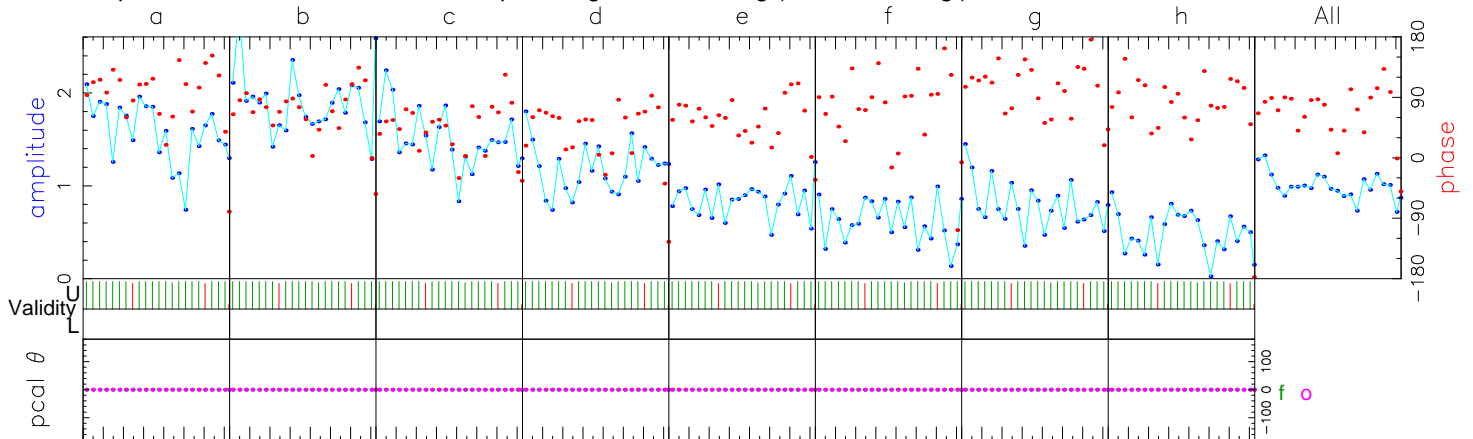
f: az 43.4 el 54.6 pa -109.1 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 863.452 -1867.385 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/fo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/fo.W.150.1X1592



Fringe quality 2
SNR 48.4
Int time 416.324
Amp 0.868
Phase 73.0
PFD 0.0e+00
Delays (us)
SBD 0.000526
MBD 0.000984
Fringe rate (Hz) 0.002936
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130349
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



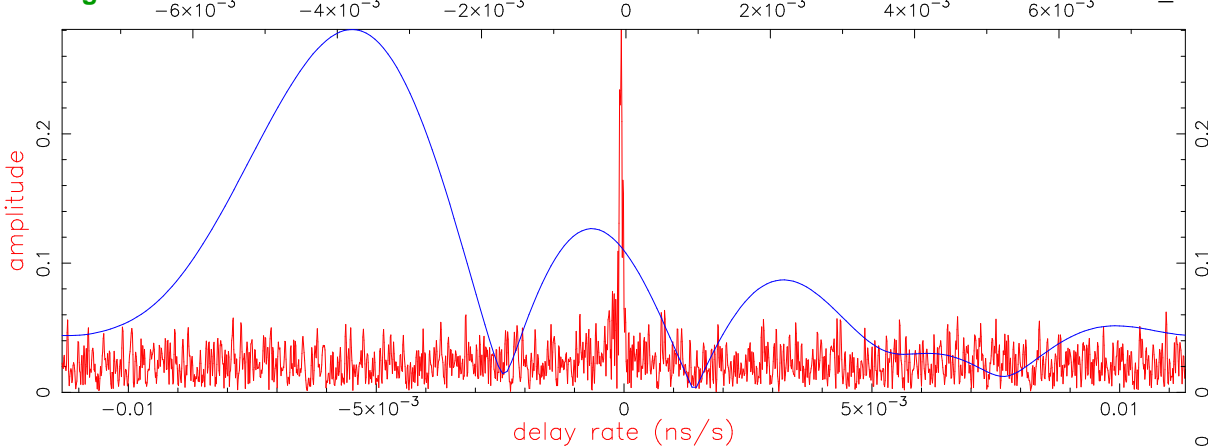
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	816/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0		
f	0	0	0	0	0	0	0	0		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.00563688961E+03	Apriori delay (usec)	1.00563590558E+03	Resid mbdelay (usec)	9.84029E-04	+/-	2.2E-05
Sband delay (usec)	1.00563643158E+03	Apriori clock (usec)	6.5134563E+00	Resid sbdelay (usec)	5.26000E-04	+/-	1.8E-04
Phase delay (usec)	1.00563590793E+03	Apriori clockrate (us/s)	-3.0000002E-07	Resid phdelay (usec)	2.35538E-06	+/-	7.6E-08
Delay rate (us/s)	-9.71475801572E-02	Apriori rate (us/s)	-9.71476142438E-02	Resid rate (us/s)	3.40866E-08	+/-	3.2E-10
Total phase (deg)	39.3	Apriori accel (us/s/s)	-1.36779252096E-05	Resid phase (deg)	73.0	+/-	2.4

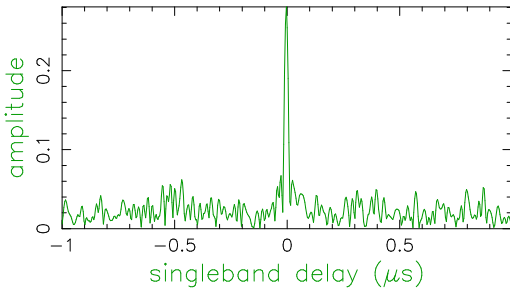
ph/seg (deg) 33.1 5.7 Search (2048X32) 0.865 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 22.7 9.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 24.5 3.3 Inc. seg. avg. 1.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 47.5 5.8 Inc. frq. avg. 0.932 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 43.4 el 54.6 pa -109.1 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 863.452 -1867.385 ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/fo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/fo.W.92.1X1592 simultaneous interpolator

multiband delay (μ s)

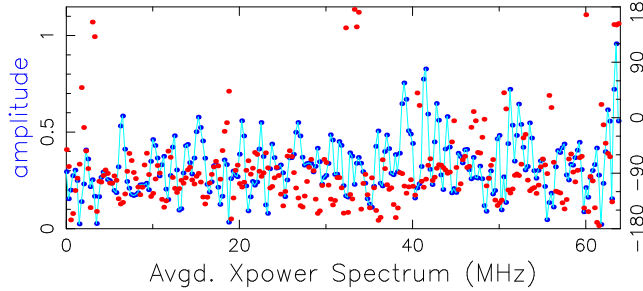
Fringe quality 7



SNR 15.7
 Int time 419.821
 Amp 0.281
 Phase -107.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.004137
 MBD -0.003814
 Fringe rate (Hz)
 -0.005227
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

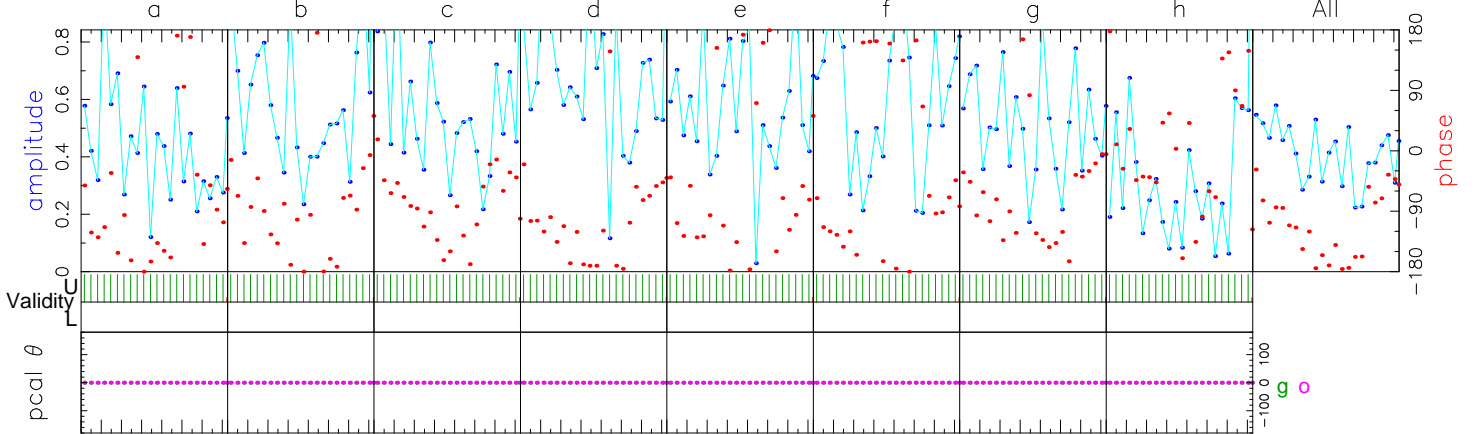


delay rate (ns/s)



Exp. c211c
 Yr:day 16383
 Start 2021:116
 Stop 2021:116
 FRT 180000.00
 Corr/FF/build
 2021:303:151428
 2021:304:130408
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-135.0	-90.8	-70.6	-115.6	-125.3	-137.0	-89.5	21.4	Phase	-107.1
	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.1	Ampl.	0.3
	258.5	256.4	255.5	255.7	255.7	256.1	256.9	258.4	Sbd box	255.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	2.72722084538E+03	Apriori delay (usec)	2.72722465913E+03	Resid mbdelay (usec)	-3.81375E-03	+/-	6.9E-05
Sband delay (usec)	2.72722052213E+03	Apriori clock (usec)	-3.3090420E+00	Resid sbdelay (usec)	-4.13700E-03	+/-	5.5E-04
Phase delay (usec)	2.72722465567E+03	Apriori clockrate (us/s)	-2.8800001E-07	Resid phdelay (usec)	-3.45428E-06	+/-	2.3E-07
Delay rate (us/s)	-6.06594324779E-01	Apriori rate (us/s)	-6.06594264103E-01	Resid rate (us/s)	-6.06759E-08	+/-	9.7E-10
Total phase (deg)	-57.8	Apriori accel (us/s/s)	1.77790846885E-05	Resid phase (deg)	-107.1	+/-	7.3

ph/seg (deg)	48.1	RMS	17.5	Theor.	48.1	Amplitude	0.281 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	59.0	Search (2048X32)	0.263	Inc. seg. avg.	0.394	Inc. frq. avg.	0.320	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	58.4	Interp.	0.000	Inc. seg. avg.	0.394	Inc. frq. avg.	0.320	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	40.3	Sample rate (MSamp/s):	128	Inc. frq. avg.	0.320	Inc. frq. avg.	0.320	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

g: az 174.2 el 64.4 pa -2.3 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 5546.384 3727.236 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/go..1X1592 Output file: /Exps/c211c/v1/1234/No0093/go.W.175.1X1592

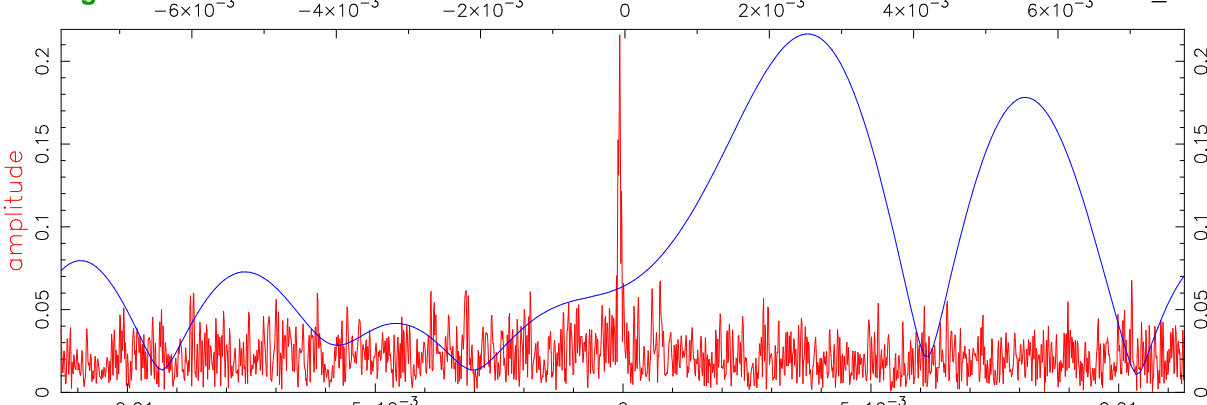
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, go

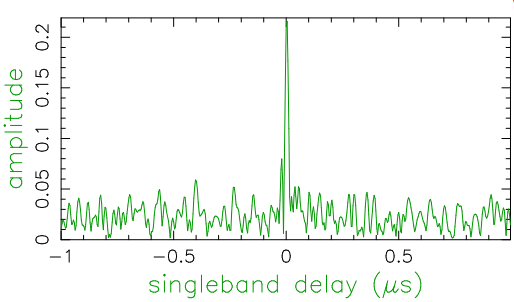
GLT - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

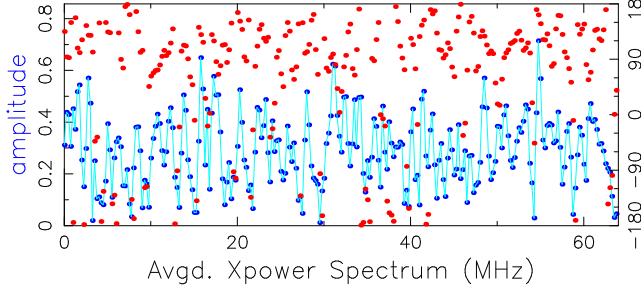


Fringe quality 9

SNR 12.3
 Int time 419.821
 Amp 0.219
 Phase 116.0
 PFD 5.8e-26
 Delays (us)
 SBD 0.002393
 MBD 0.002431
 Fringe rate (Hz)
 -0.005291
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

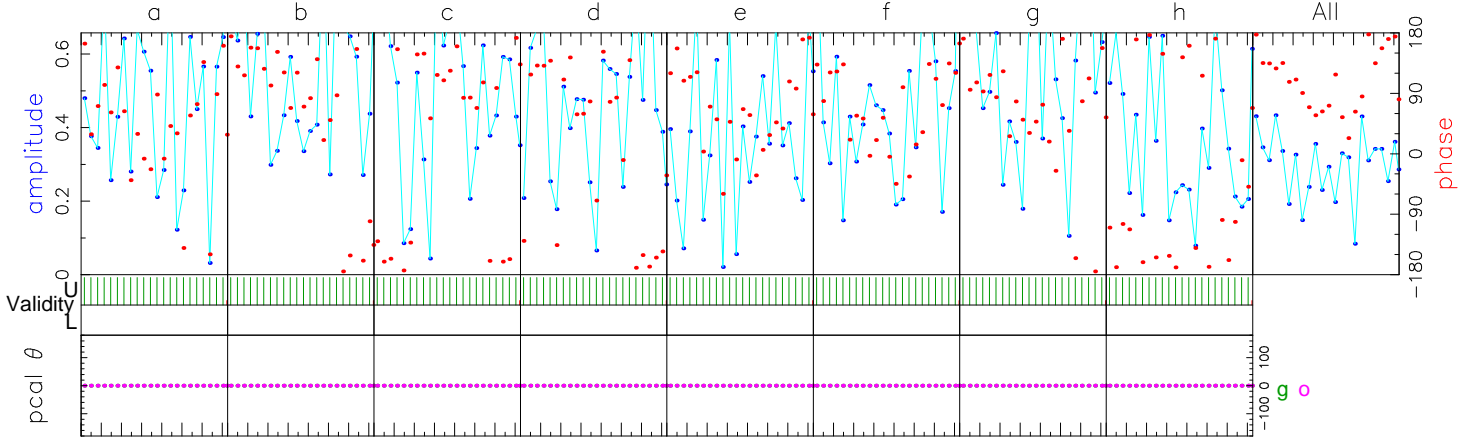


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130412
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	2.72722708979E+03		Apriori delay (usec)		2.72722465913E+03		Resid mbdelay (usec)		2.43066E-03	+/- 8.8E-05
Sband delay (usec)	2.72722705213E+03		Apriori clock (usec)		-3.3090420E+00		Resid sbdelay (usec)		2.39300E-03	+/- 7.0E-04
Phase delay (usec)	2.72722466287E+03		Apriori clockrate (us/s)		-2.8800001E-07		Resid phdelay (usec)		3.73957E-06	+/- 3.0E-07
Delay rate (us/s)	-6.06594325521E-01		Apriori rate (us/s)		-6.06594264103E-01		Resid rate (us/s)		-6.14178E-08	+/- 1.2E-09
Total phase (deg)	165.3		Apriori accel (us/s/s)		1.77790846885E-05		Resid phase (deg)		116.0	+/- 9.3

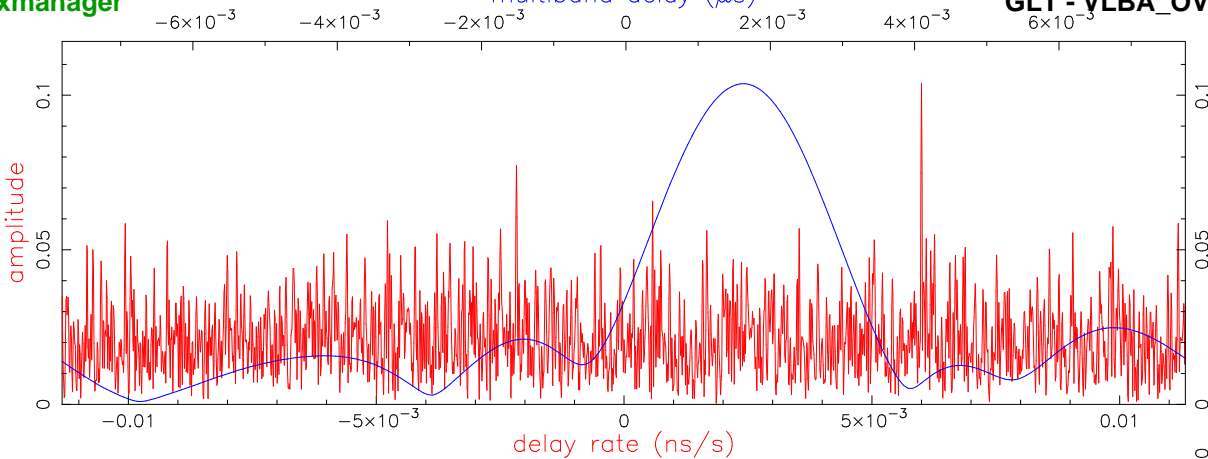
	RMS	Theor.	Amplitude	0.219 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	44.9	22.4	Search (2048X32)	0.202	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	54.6	39.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	50.3	13.2	Inc. seg. avg.	0.279	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	35.5	23.0	Inc. frq. avg.	0.277	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

g: az 174.2 el 64.4 pa -2.3 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 5546.384 3727.236 simultaneous interpolator

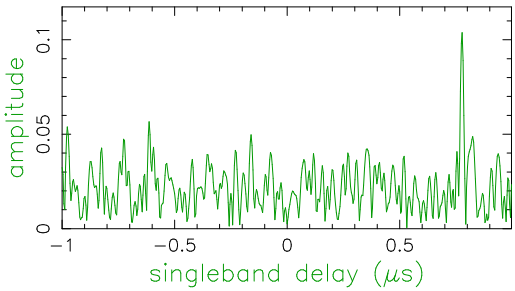
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/go..1X1592 Output file: /Exps/c211c/v1/1234/No0093/go.W.193.1X1592

multiband delay (μ s)

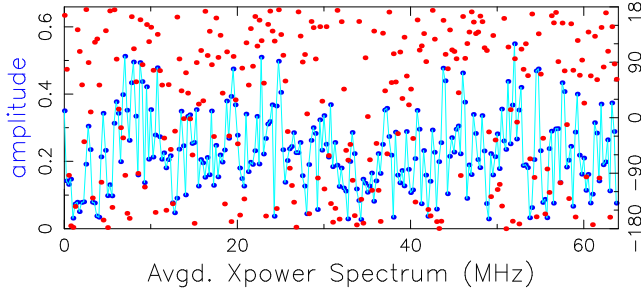
Fringe quality 0



SNR 5.8
Int time 419.821
Amp 0.117
Phase 65.3
PFD 7.2e-01
Delays (us)
SBD 0.776430
MBD 0.001598
Fringe rate (Hz)
0.517723
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

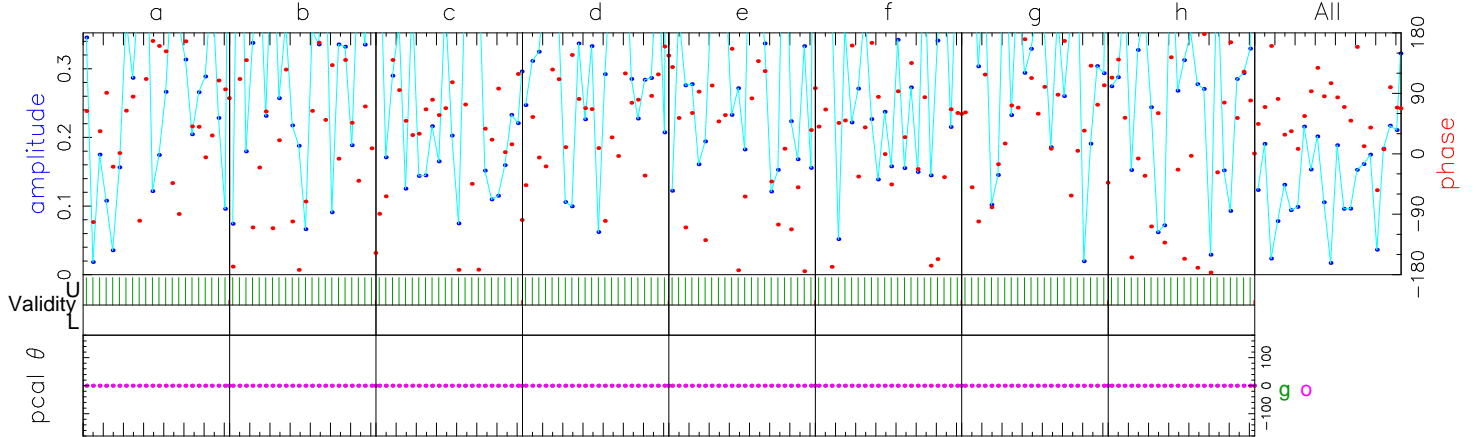


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130415
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	64.3	59.2	60.8	62.5	85.8	61.5	60.0	74.8	Phase	65.3
	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	Ampl.	0.1
	343.9	97.7	63.1	456.1	296.8	109.9	491.5	165.2	Sbd box	455.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

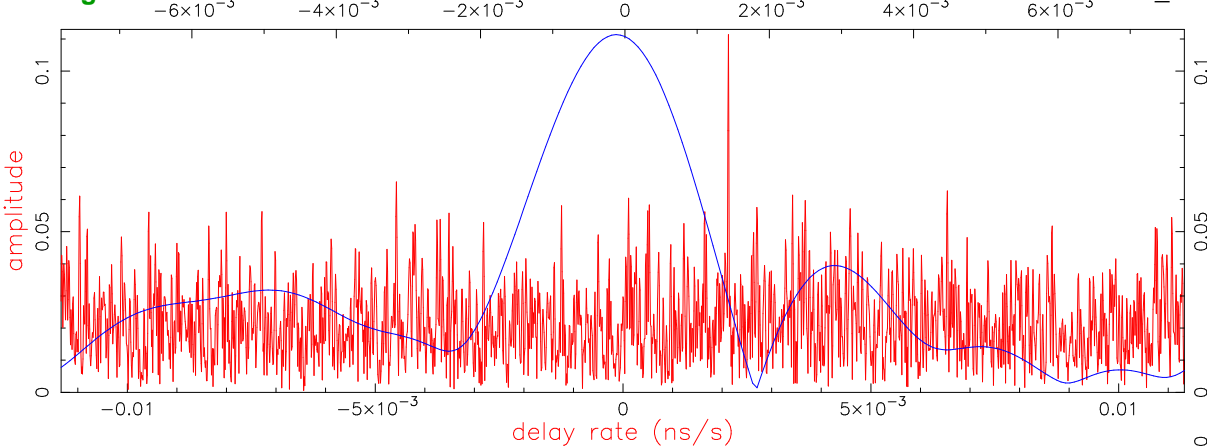
Group delay (usec)(sbd)	2.72800750697E+03	Apriori delay (usec)	2.72722465913E+03	Resid mbdelay (usec)	1.59785E-03	+/-	1.9E-04
Sband delay (usec)	2.72800108913E+03	Apriori clock (usec)	-3.3090420E-07	Resid sbdelay (usec)	7.76430E-01	+/-	1.5E-03
Phase delay (usec)	2.72722466123E+03	Apriori clockrate (us/s)	-2.8800001E-07	Resid phdelay (usec)	2.10565E-06	+/-	6.3E-07
Delay rate (us/s)	-6.06588253851E-01	Apriori rate (us/s)	-6.06594264103E-01	Resid rate (us/s)	6.01025E-06	+/-	2.6E-09
Total phase (deg)	114.7	Apriori accel (us/s/s)	1.77790846885E-05	Resid phase (deg)	65.3	+/-	19.6

ph/seg (deg)	49.4	RMS	47.0	Theor.	49.4	Amplitude	0.117 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	67.0	Search (2048X32)	0.102	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled	sb window (us)	-1.000 1.000
ph/frq (deg)	10.1	Inc. seg. avg.	0.114	Inc. frq. avg.	0.106	Bits/sample: 2x2		Sample rate(MISamp/s): 128	mb window (us)	-0.008 0.008
amp/frq (%)	32.9	Inc. frq. avg.	0.106			Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
g: az 174.2 el 64.4 pa -2.3		o: az 52.2 el 50.1 pa -88.4		u, v (fr/asec)	5546.384 3727.236				ion window (TEC)	0.00 0.00

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/go..1X1592 Output file: /Exps/c211c/v1/1234/No0093/go.W.212.1X1592

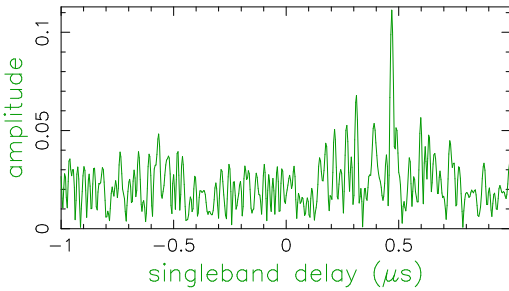
simultaneous interpolator

multiband delay (μ s)

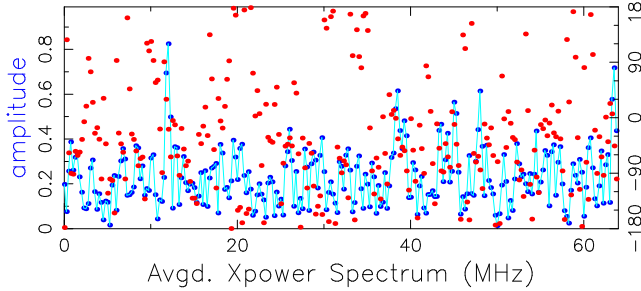


Fringe quality 0

SNR 6.2
 Int time 419.821
 Amp 0.113
 Phase -56.5
 PFD 1.1e-01
 Delays (us)
 SBD 0.468850
 MBD -0.000120
 Fringe rate (Hz)
 0.183730
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

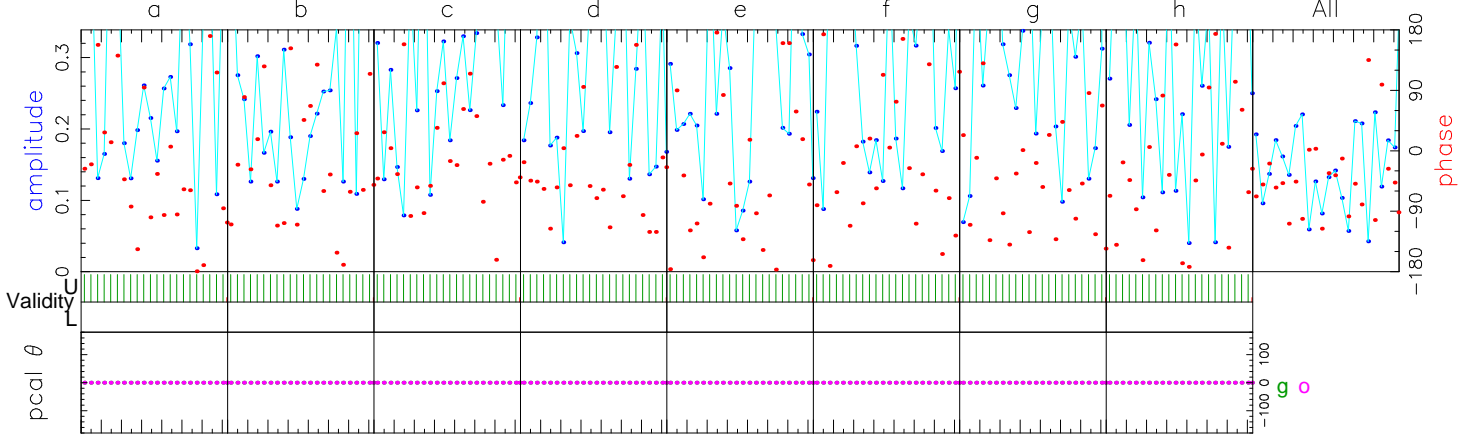


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130419
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-63.1	-62.8	-30.9	-58.5	-97.6	-65.1	-59.8	-37.0	Phase	-56.5
	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	37.0	419.3	336.5	376.4	63.6	441.7	336.5	484.9	Sbd box	377.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.72769328917E+03		Apriori delay (usec)		2.72722465913E+03		Resid mbdelay (usec)		-1.19956E-04	+/- 1.7E-04
Sband delay (usec)	2.72769350938E+03		Apriori clock (usec)		-3.3090420E+00		Resid sbdelay (usec)		4.68850E-01	+/- 1.4E-03
Phase delay (usec)	2.72722465730E+03		Apriori clockrate (us/s)		-2.8800001E-07		Resid phdelay (usec)		-1.82343E-06	+/- 5.9E-07
Delay rate (us/s)	-6.06592131181E-01		Apriori rate (us/s)		-6.06594264103E-01		Resid rate (us/s)		2.13292E-06	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		1.77790846885E-05		Resid phase (deg)		-56.5	+/- 18.4

	RMS	Theor.	Amplitude	0.113 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	59.3	44.0	Search (2048X32)	0.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	60.2	76.9	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	22.0	26.0	Inc. seg. avg.	0.115	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	32.8	45.3	Inc. frq. avg.	0.107	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

g: az 174.2 el 64.4 pa -2.3 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 5546.384 3727.236 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/go..1X1592 Output file: /Exps/c211c/v1/1234/No0093/go.W.232.1X1592

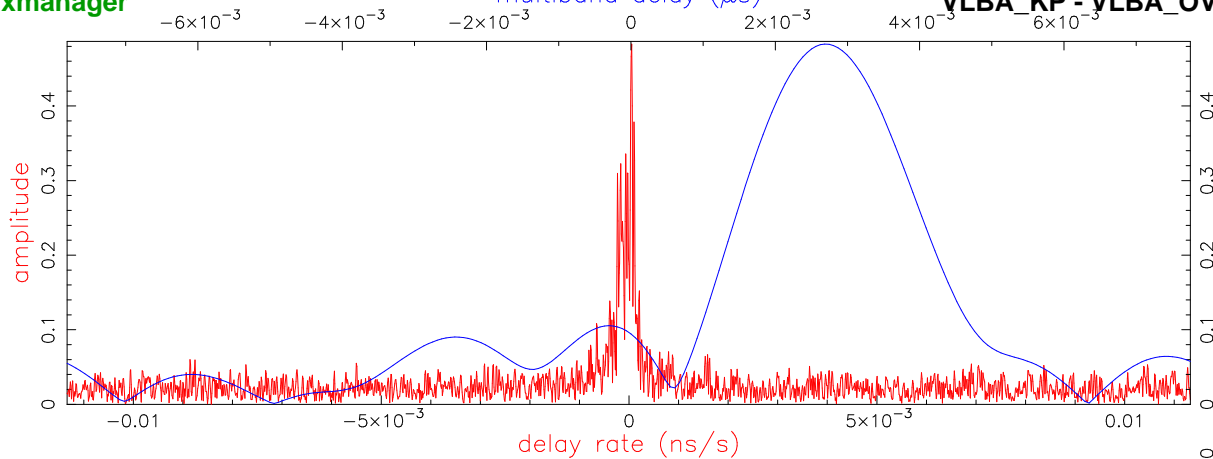
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, ko

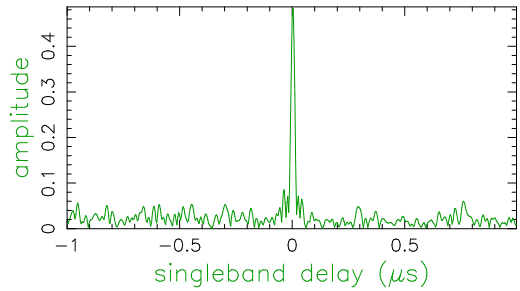
VLBA_KP - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

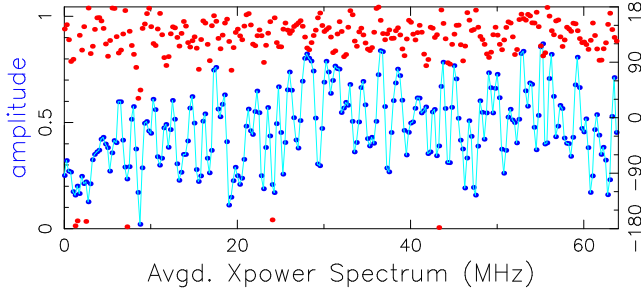


Fringe quality 7

SNR 27.3
 Int time 419.824
 Amp 0.487
 Phase 136.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.002805
 MBD 0.002679
 Fringe rate (Hz) 0.004478
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

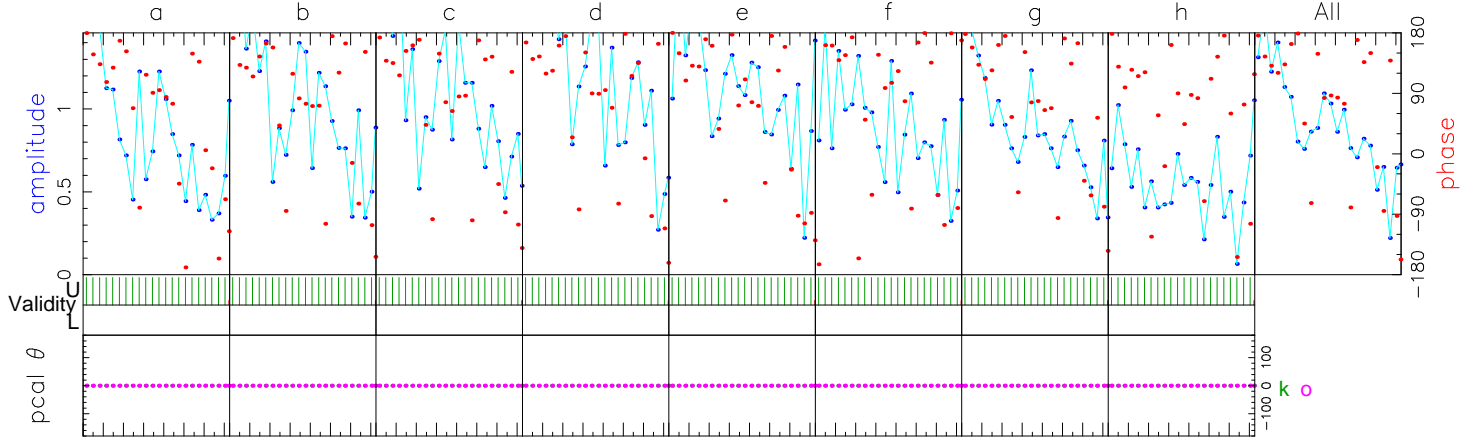


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130408
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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

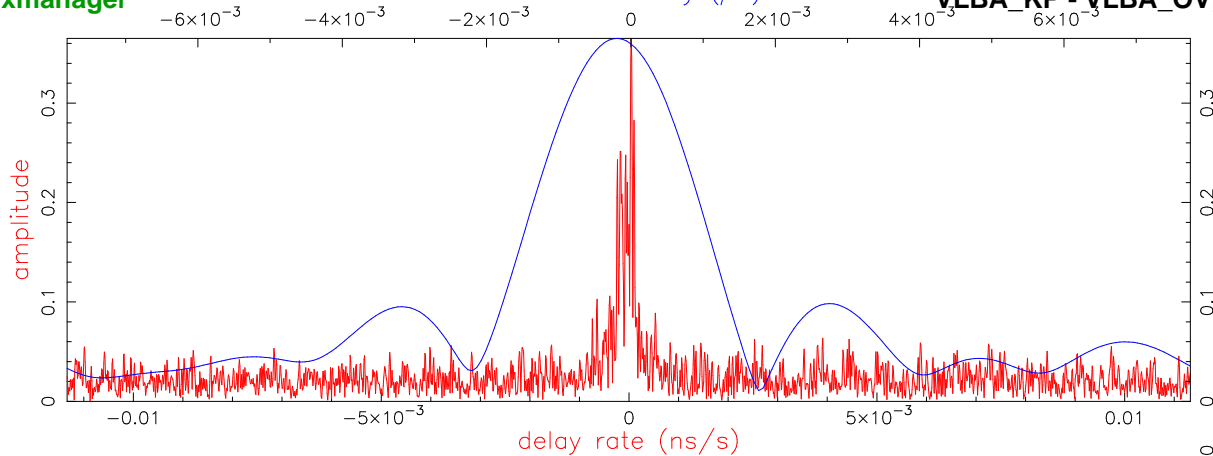


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	131.0	132.1	136.4	135.2	138.5	163.7	134.7	115.3	Phase	136.4
	0.4	0.5	0.6	0.7	0.5	0.4	0.4	0.3	Ampl.	0.5
	257.3	257.6	257.7	257.6	258.0	257.8	257.8	258.2	Sbd box	257.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.74680067410E+02		Apriori delay (usec)		1.74677388674E+02		Resid mbdelay (usec)		2.67874E-03	+/- 4.0E-05
Sband delay (usec)	1.74680193174E+02		Apriori clock (usec)		-3.4270535E+00		Resid sbdelay (usec)		2.80450E-03	+/- 3.2E-04
Phase delay (usec)	1.74677393072E+02		Apriori clockrate (us/s)		-3.6000001E-07		Resid phdelay (usec)		4.39821E-06	+/- 1.4E-07
Delay rate (us/s)	-2.22417906644E-02		Apriori rate (us/s)		-2.22418426449E-02		Resid rate (us/s)		5.19805E-08	+/- 5.6E-10
Total phase (deg)	230.1		Apriori accel (us/s/s)		-7.58351908464E-06		Resid phase (deg)		136.4	+/- 4.2

ph/seg (deg) 76.8 10.1 Search (2048X32) 0.467 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 107.8 17.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 14.4 5.9 Inc. seg. avg. 0.901 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 23.5 10.4 Inc. frq. avg. 0.490 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 46.7 el 50.9 pa -100.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 191.182 -1159.685 simultaneous interpolator

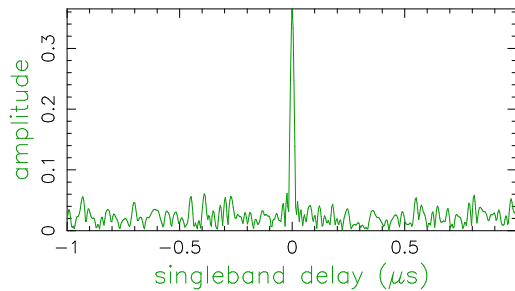
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/ko..1X1592 Output file: /Exps/c211c/v1/1234/No0093/ko.W.179.1X1592

multiband delay (μ s)

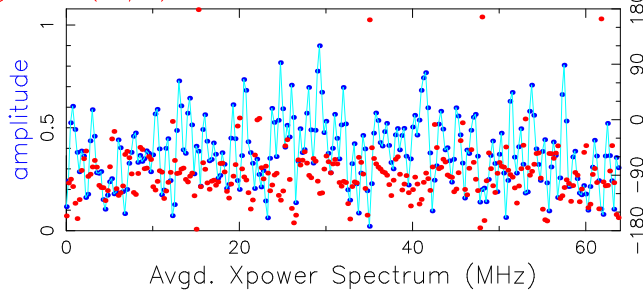


Fringe quality 9

SNR 20.5
Int time 419.824
Amp 0.365
Phase -91.5
PFD 0.0e+00
Delays (us)
SBD -0.000033
MBD -0.000195
Fringe rate (Hz) 0.003902
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

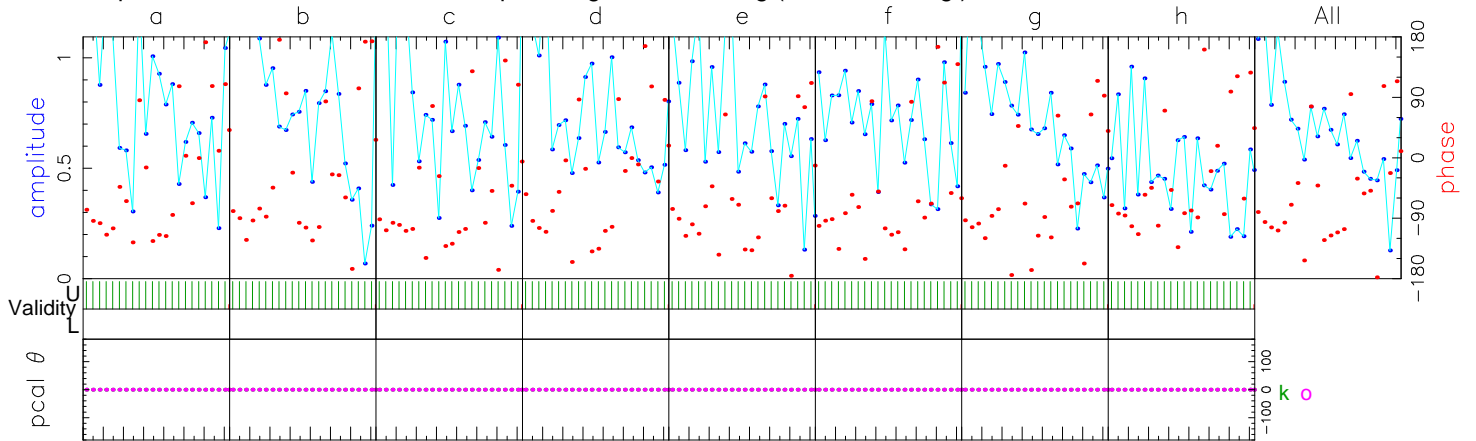


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130412
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-89.2	-82.6	-108.0	-75.9	-92.9	-99.9	-93.2	-80.9	Phase	-91.5
	0.3	0.5	0.5	0.3	0.3	0.4	0.4	0.3	Ampl.	0.4
	257.2	257.1	256.9	257.9	256.3	257.3	256.9	256.3	Sbd box	257.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.74677193338E+02		Apriori delay (usec)		1.74677388674E+02		Resid mbdelay (usec)		-1.95337E-04	+/- 5.3E-05
Sband delay (usec)	1.74677356174E+02		Apriori clock (usec)		-3.4270535E+00		Resid sbdelay (usec)		-3.25000E-05	+/- 4.2E-04
Phase delay (usec)	1.74677385723E+02		Apriori clockrate (us/s)		-3.6000001E-07		Resid phdelay (usec)		-2.95073E-06	+/- 1.8E-07
Delay rate (us/s)	-2.22417973503E-02		Apriori rate (us/s)		-2.22418426449E-02		Resid rate (us/s)		4.52945E-08	+/- 7.5E-10
Total phase (deg)	2.2		Apriori accel (us/s/s)		-7.58351908464E-06		Resid phase (deg)		-91.5	+/- 5.6

ph/seg (deg) 80.0 13.4 Amplitude 0.365 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 107.7 23.4 Search (2048X32) 0.359 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 11.5 7.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 19.5 13.8 Inc. seg. avg. 0.661 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 46.7 el 50.9 pa -100.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 191.182 -1159.685 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/ko..1X1592 Output file: /Exps/c211c/v1/1234/No0093/ko.W.196.1X1592

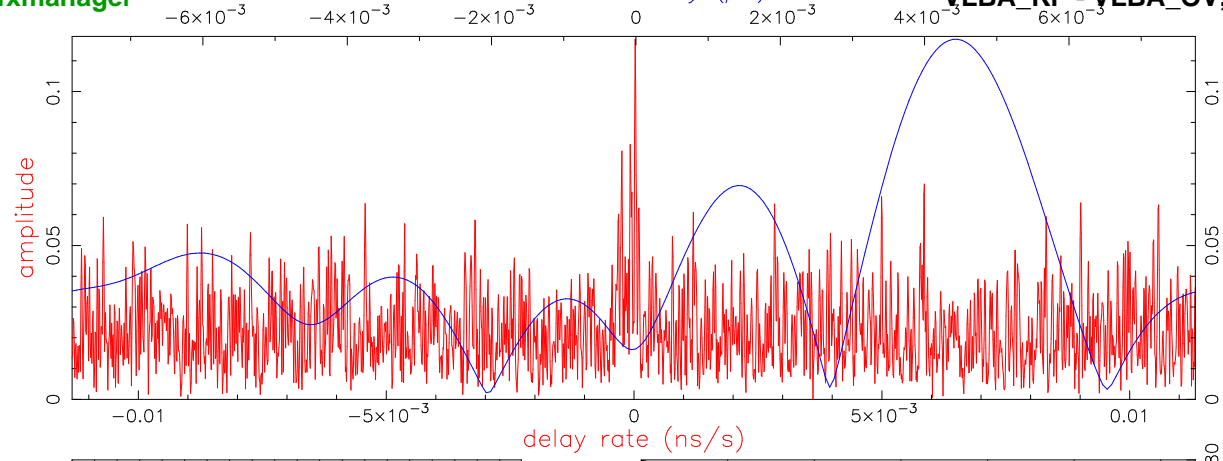
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

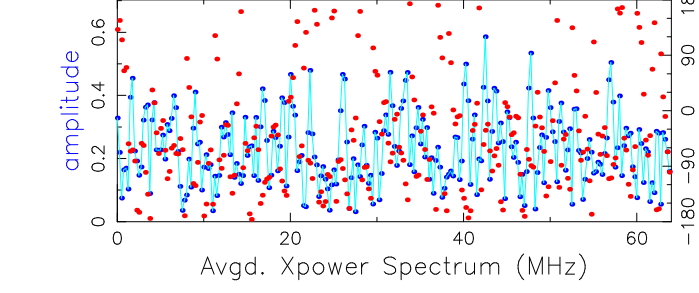
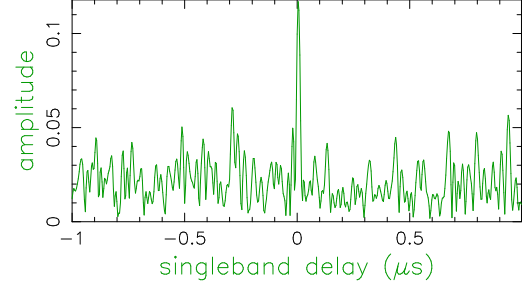
NRAO150.1X1592, No0093, ko

VLBA_KP - VLBA_OV, fgroup W, pol LR

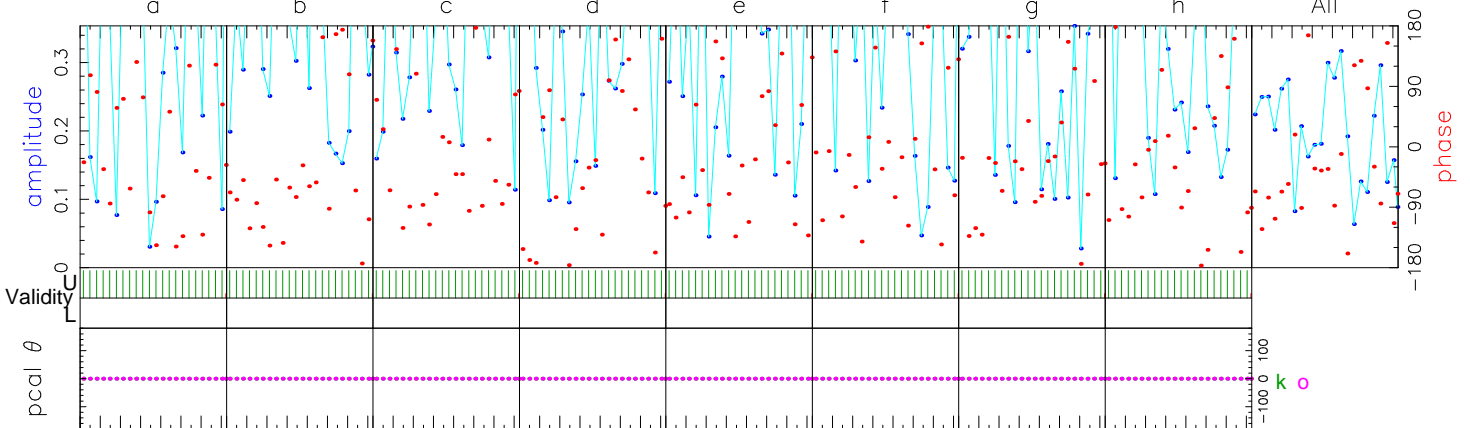
multiband delay (μ s)



Fringe quality 0
 SNR 6.6
 Int time 419.824
 Amp 0.118
 Phase -72.5
 PFD 1.1e-02
 Delays (us)
 SBD 0.005039
 MBD 0.004457
 Fringe rate (Hz) 0.002382
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130416
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-4.4	-90.1	-61.2	-148.4	-69.1	-61.7	-50.2	-98.9	Phase	-72.5
	0.1	0.3	0.2	0.0	0.1	0.2	0.1	0.1	Ampl.	0.1
	186.3	257.3	259.2	43.5	340.1	251.8	307.8	181.9	Sbd box	258.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.74681845703E+02		Apriori delay (usec)		1.74677388674E+02		Resid mbdelay (usec)		4.45703E-03	+/- 1.6E-04
Sband delay (usec)	1.74682427424E+02		Apriori clock (usec)		-3.4270535E+00		Resid sbdelay (usec)		5.03875E-03	+/- 1.3E-03
Phase delay (usec)	1.74677386335E+02		Apriori clockrate (us/s)		-3.6000001E-07		Resid phdelay (usec)		-2.33912E-06	+/- 5.6E-07
Delay rate (us/s)	-2.22418149927E-02		Apriori rate (us/s)		-2.22418426449E-02		Resid rate (us/s)		2.76522E-08	+/- 2.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.58351908464E-06		Resid phase (deg)		-72.5	+/- 17.3

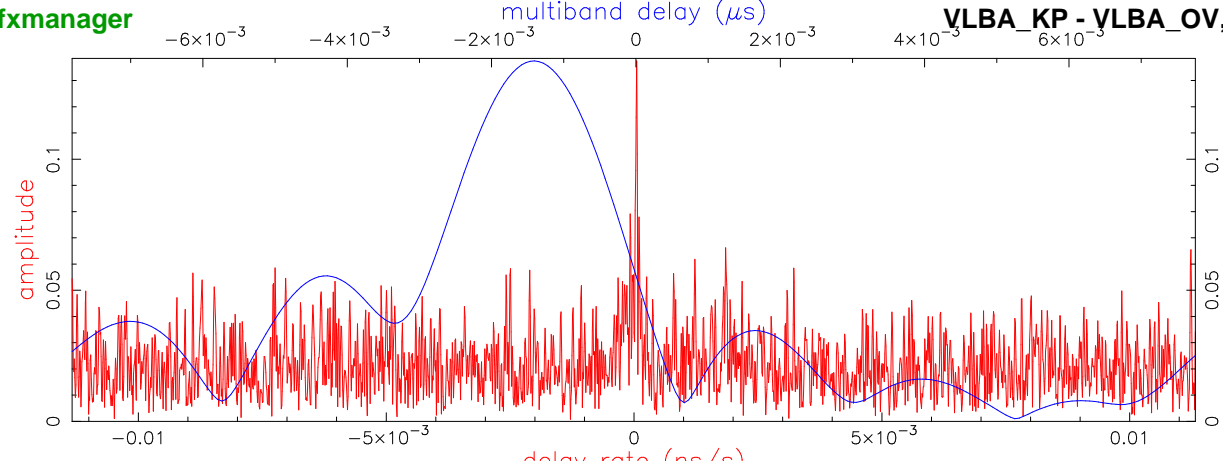
ph/seg (deg) 80.4 41.6 Search (2048X32) 0.111 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 93.4 72.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.0 24.5 Inc. seg. avg. 0.160 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 51.5 42.8 Inc. frq. avg. 0.121 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 46.7 el 50.9 pa -100.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 191.182 -1159.685 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/ko..1X1592 Output file: /Exps/c211c/v1/1234/No0093/ko.W.214.1X1592

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, ko

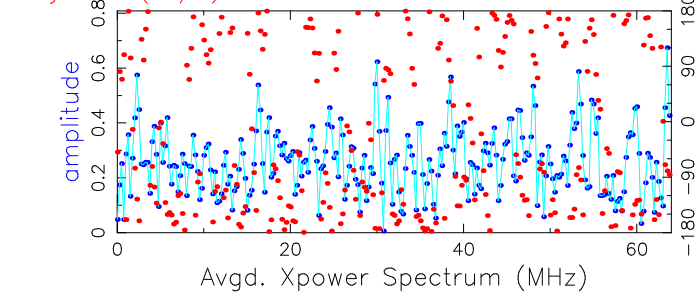
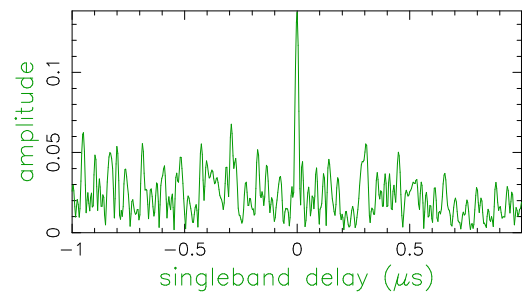
VLBA_KP - VLBA_OV, fgroup W, pol RL



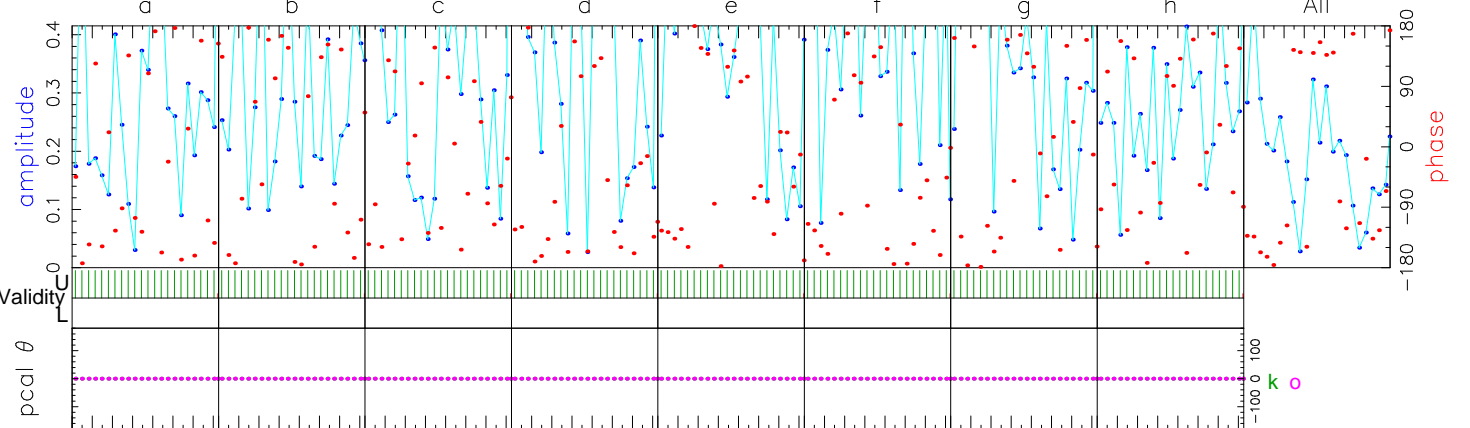
Fringe quality 9

SNR 7.8
 Int time 419.824
 Amp 0.138
 Phase -157.9
 PFD 2.9e-06
 Delays (us)
 SBD -0.001058
 MBD -0.001412
 Fringe rate (Hz) 0.005043
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build 2021:303:151428
 2021:304:130420
 2021:252:122852
 RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"



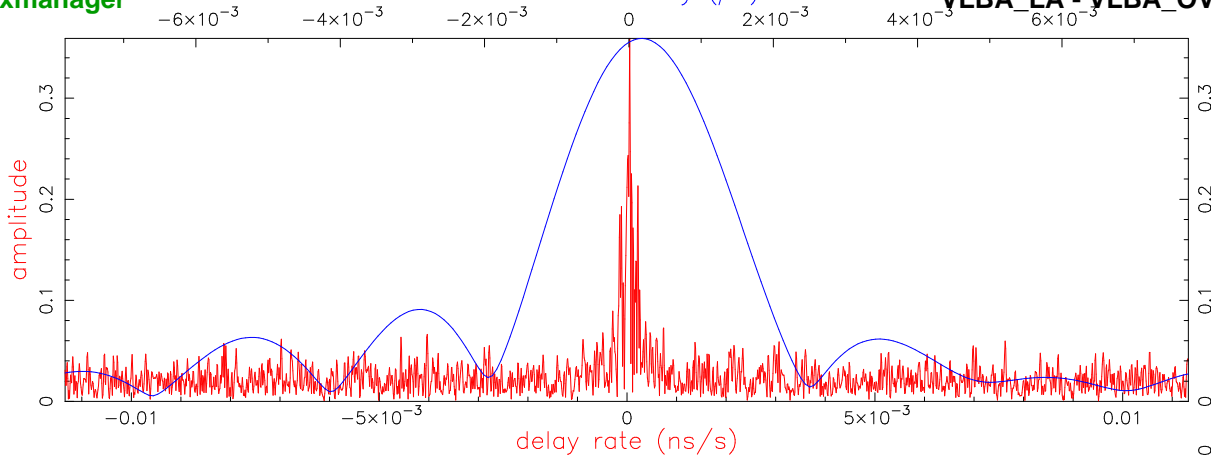
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-161.6	-179.1	-127.2	-148.4	-149.5	-152.0	-168.1	-177.7	Phase	-157.9
	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.0	Ampl.	0.1
	26.9	183.1	210.7	257.2	256.5	257.2	256.6	211.1	Sbd box	256.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.74675977097E+02		Apriori delay (usec)		1.74677388674E+02		Resid mbdelay (usec)		-1.41158E-03	+/- 1.4E-04
Sband delay (usec)	1.74676330424E+02		Apriori clock (usec)		-3.4270535E+00		Resid sbdelay (usec)		-1.05825E-03	+/- 1.1E-03
Phase delay (usec)	1.74677383584E+02		Apriori clockrate (us/s)		-3.6000001E-07		Resid phdelay (usec)		-5.09050E-06	+/- 4.8E-07
Delay rate (us/s)	-2.22417840968E-02		Apriori rate (us/s)		-2.22418426449E-02		Resid rate (us/s)		5.85481E-08	+/- 2.0E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.58351908464E-06		Resid phase (deg)		-157.9	+/- 14.8

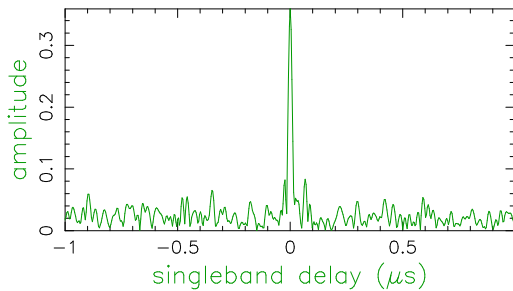
ph/seg (deg) 54.2 35.4 Search (2048X32) 0.135 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 84.1 61.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 18.7 20.9 Inc. seg. avg. 0.163 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 39.3 36.5 Inc. frq. avg. 0.132 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 46.7 el 50.9 pa -100.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 191.182 -1159.685 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/ko..1X1592 Output file: /Exps/c211c/v1/1234/No0093/ko.W.235.1X1592

multiband delay (μ s)

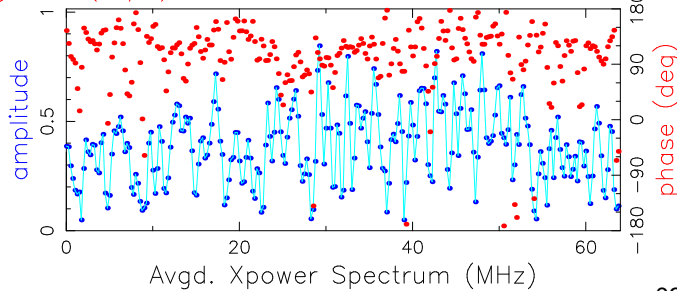


Fringe quality 9

SNR 20.1
Int time 419.822
Amp 0.359
Phase 110.2
PFD 0.0e+00
Delays (us)
SBD -0.000190
MBD 0.000172
Fringe rate (Hz)
0.004725
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

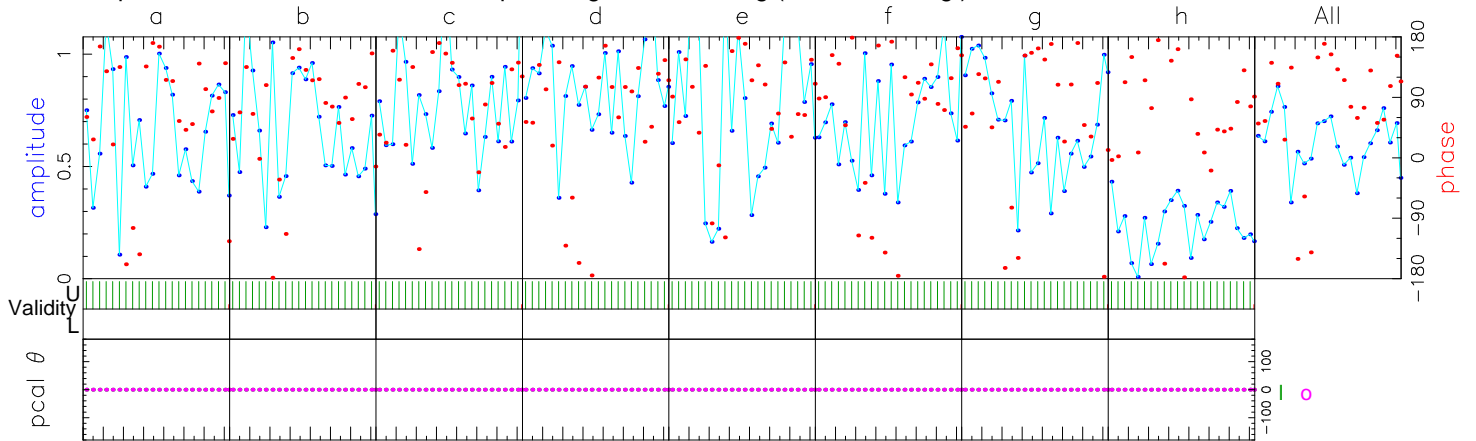


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130423
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	117.2	108.4	107.1	101.3	104.8	123.9	118.2	81.0	Phase	110.2
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.1	Ampl.	0.4
	257.2	256.4	257.0	257.2	257.1	257.2	257.0	256.5	Sbd box	257.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	1.43922518217E+03	Apriori delay (usec)	1.43922501049E+03	Resid mbdelay (usec)	1.71673E-04	+/-	5.4E-05
Sband delay (usec)	1.43922481999E+03	Apriori clock (usec)	-6.3755093E+00	Resid sbdelay (usec)	-1.90500E-04	+/-	4.3E-04
Phase delay (usec)	1.43922501405E+03	Apriori clockrate (us/s)	-6.4600002E-07	Resid phdelay (usec)	3.55462E-06	+/-	1.8E-07
Delay rate (us/s)	-1.02214101460E-01	Apriori rate (us/s)	-1.02214156312E-01	Resid rate (us/s)	5.48516E-08	+/-	7.6E-10
Total phase (deg)	255.6	Apriori accel (us/s/s)	-9.47251601869E-06	Resid phase (deg)	110.2	+/-	5.7

ph/seg (deg)	62.2	RMS	Theor.	Amplitude	0.359 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	79.0	62.2	13.7	Search (2048X32)	0.355	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	14.6	79.0	23.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	27.9	14.6	8.1	Inc. seg. avg.	0.599	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		27.9	14.1	Inc. frq. avg.	0.360	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

l: az 49.6 el 56.8 pa -101.9 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 915.356 -1041.513 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/lo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/lo.W.243.1X1592

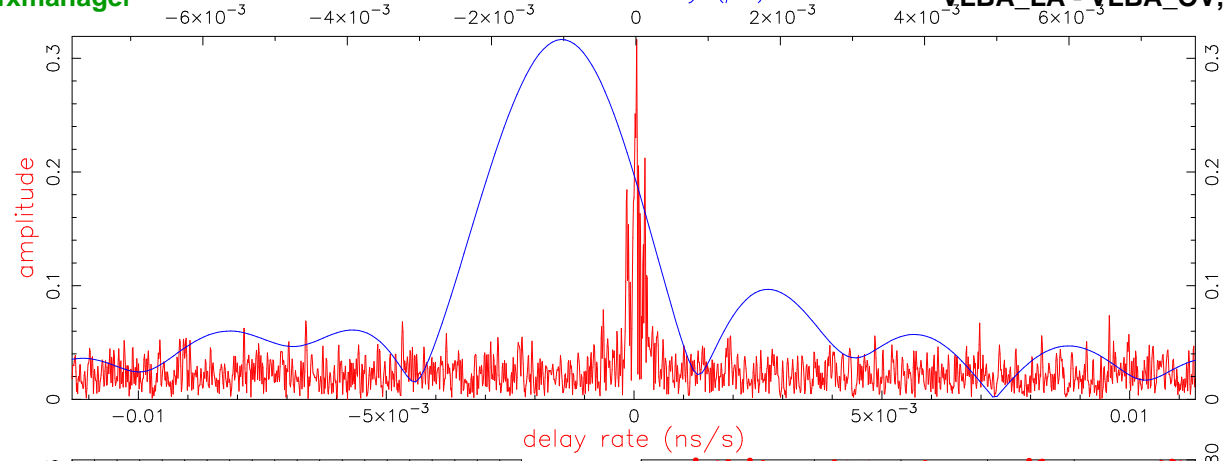
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

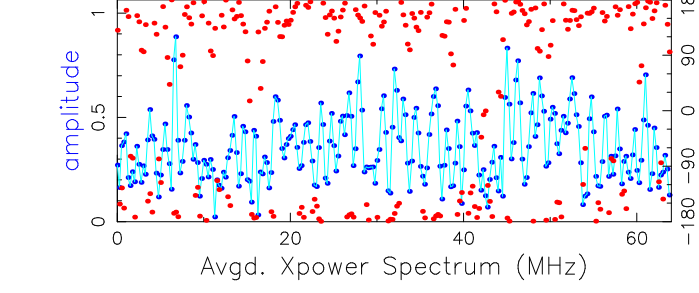
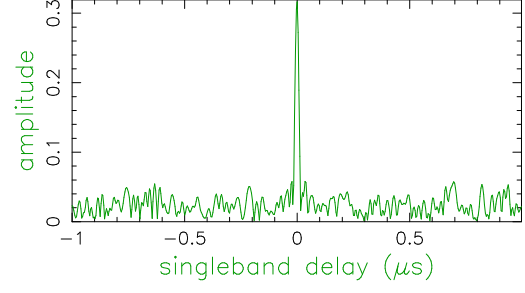
NRAO150.1X1592, No0093, lo

VLBA_LA - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

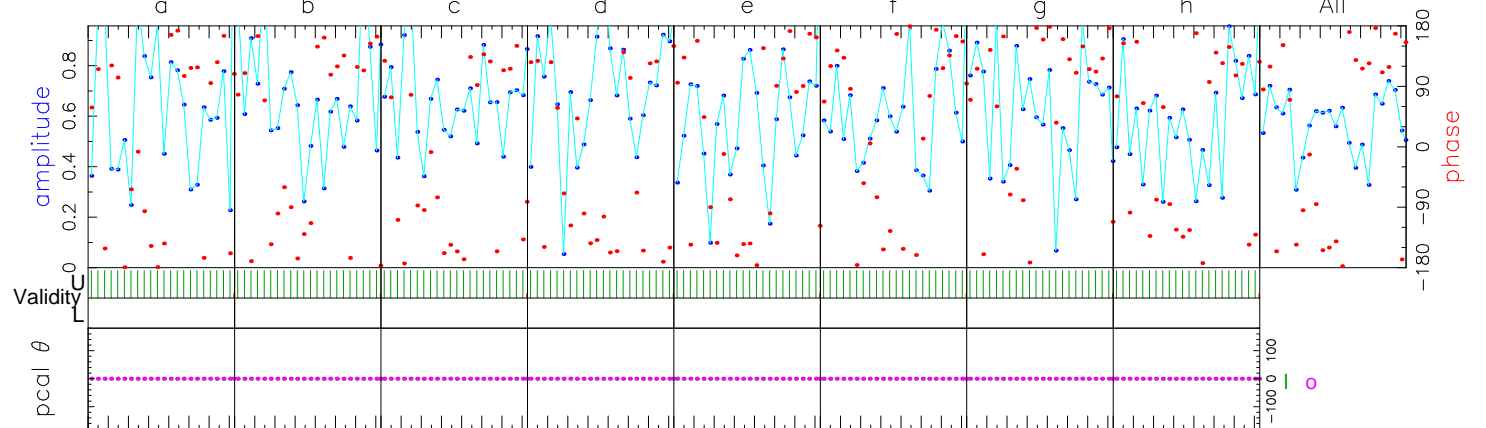


Fringe quality 9
 SNR 17.9
 Int time 419.822
 Amp 0.319
 Phase 163.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.001222
 MBD -0.001046
 Fringe rate (Hz) 0.004710
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130426
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'15.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	161.5	151.6	162.3	-176.0	168.9	154.6	145.4	178.6	Phase	163.4
	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	Ampl.	0.3
	256.1	257.0	256.8	257.0	256.5	256.9	256.7	256.5	Sbd box	256.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.43922396495E+03		Apriori delay (usec)		1.43922501049E+03		Resid mbdelay (usec)		-1.04555E-03	+/- 6.1E-05
Sband delay (usec)	1.43922378874E+03		Apriori clock (usec)		-6.3755093E+00		Resid sbdelay (usec)		-1.22175E-03	+/- 4.8E-04
Phase delay (usec)	1.43922501576E+03		Apriori clockrate (us/s)		-6.4600002E-07		Resid phdelay (usec)		5.27033E-06	+/- 2.1E-07
Delay rate (us/s)	-1.02214101635E-01		Apriori rate (us/s)		-1.02214156312E-01		Resid rate (us/s)		5.46766E-08	+/- 8.5E-10
Total phase (deg)			Apriori accel (us/s/s)		-9.47251601869E-06		Resid phase (deg)		163.4	+/- 6.4

ph/seg (deg) 64.8 15.4 Search (2048X32) 0.315 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 87.4 26.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 14.3 9.1 Inc. seg. avg. 0.552 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 10.1 15.8 Inc. frq. avg. 0.320 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 l: az 49.6 el 56.8 pa -101.9 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 915.356 -1041.513 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/lo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/lo.W.259.1X1592

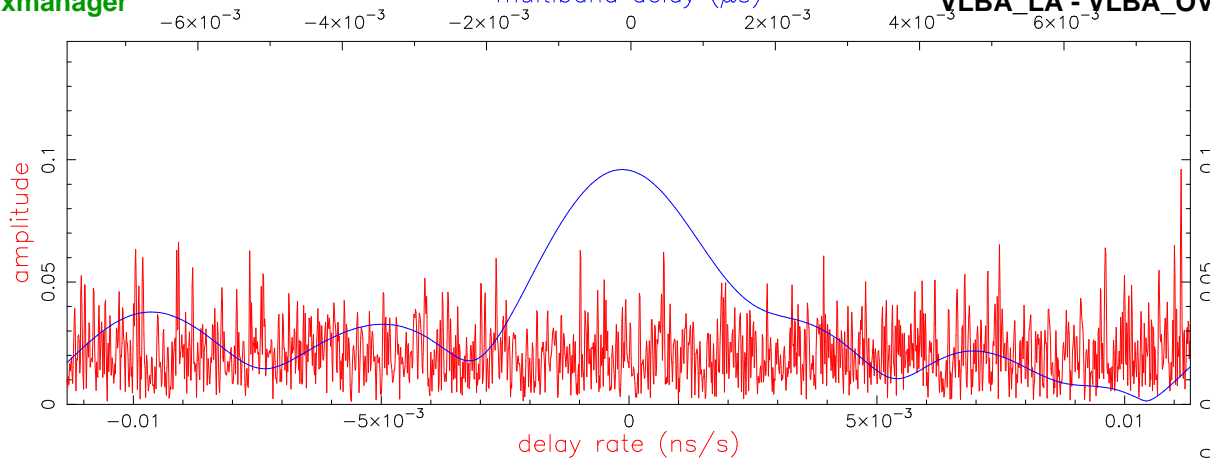
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, lo

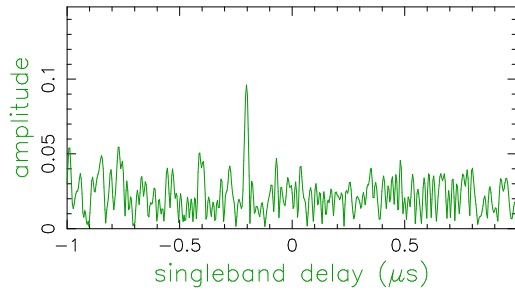
VLBA_LA - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

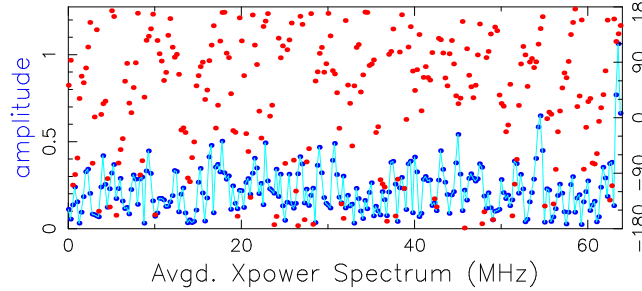


Fringe quality 0

SNR 5.4
 Int time 419.822
 Amp 0.148
 Phase -73.1
 PFD 1.0e+00
 Delays (us)
 SBD -0.202934
 MBD -0.000121
 Fringe rate (Hz)
 0.960390
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

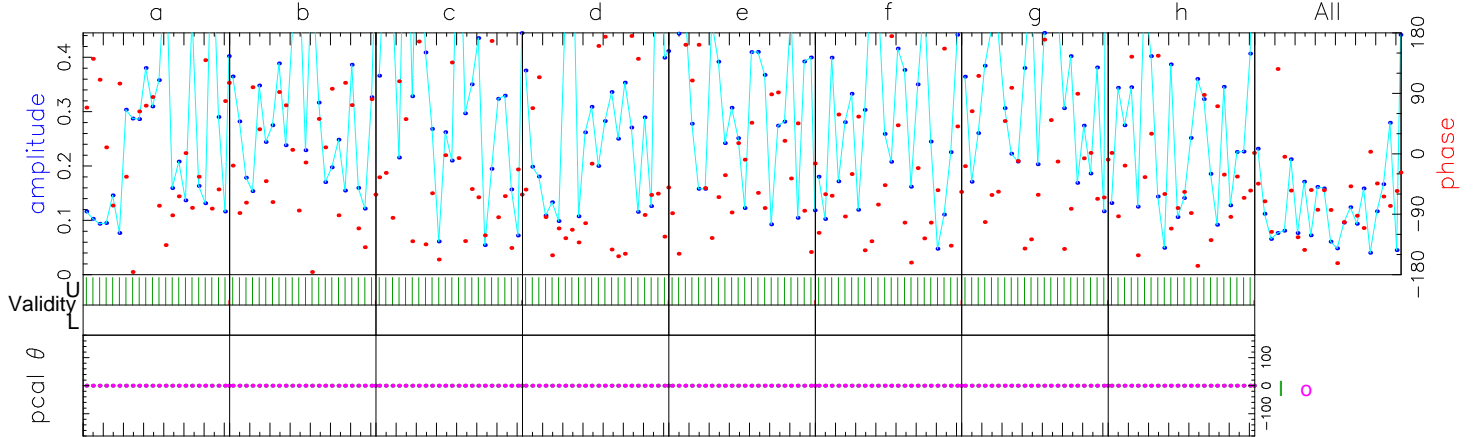


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130430
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'59.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-67.9	4.5	-66.9	-115.8	-77.4	-84.4	-50.3	-59.6	Phase	-73.1
	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	Ampl.	0.1
	362.2	121.4	140.4	205.1	350.4	241.4	50.6	417.0	Sbd box	205.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.43902176402E+03		Apriori delay (usec)		1.43922501049E+03		Resid mbdelay (usec)		-1.21468E-04	+/- 2.0E-04
Sband delay (usec)	1.43902207699E+03		Apriori clock (usec)		-6.3755093E+00		Resid sbdelay (usec)		-2.02934E-01	+/- 1.6E-03
Phase delay (usec)	1.43922500814E+03		Apriori clockrate (us/s)		-6.4600002E-07		Resid phdelay (usec)		-2.35667E-06	+/- 6.9E-07
Delay rate (us/s)	-1.02203007135E-01		Apriori rate (us/s)		-1.02214156312E-01		Resid rate (us/s)		1.11492E-05	+/- 2.8E-09
Total phase (deg)	72.3		Apriori accel (us/s/s)		-9.47251601869E-06		Resid phase (deg)		-73.1	+/- 21.3

ph/seg (deg) 52.3 51.1 Search (2048X32) 0.096 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.9 89.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 38.2 30.1 Inc. seg. avg. 0.136 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.3 52.6 Inc. frq. avg. 0.150 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 l: az 49.6 el 56.8 pa -101.9 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 915.356 -1041.513 simultaneous interpolator

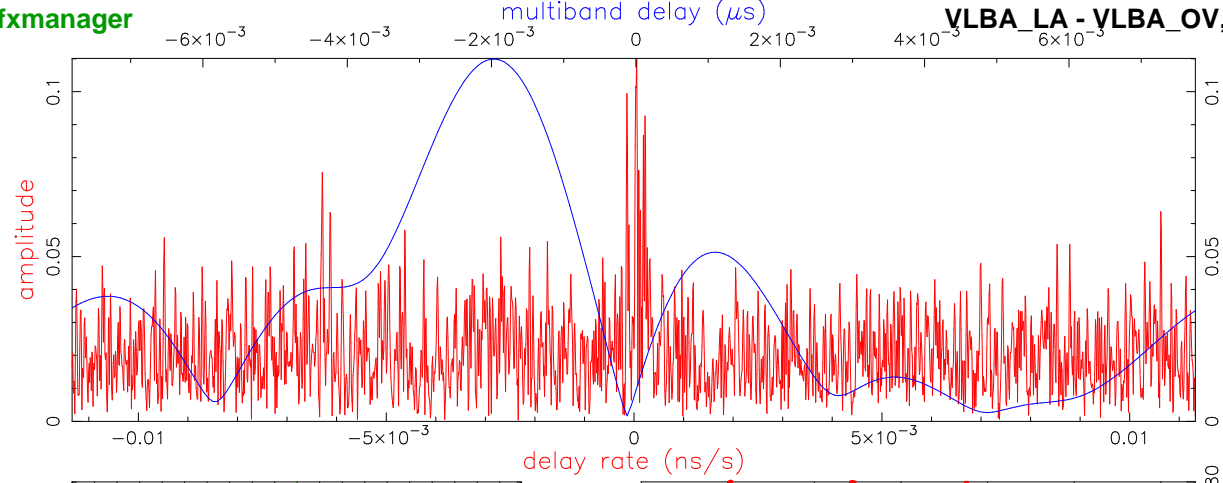
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/lo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/lo.W.279.1X1592

Mk4/DiFX fourfit 3.21 rev 2937

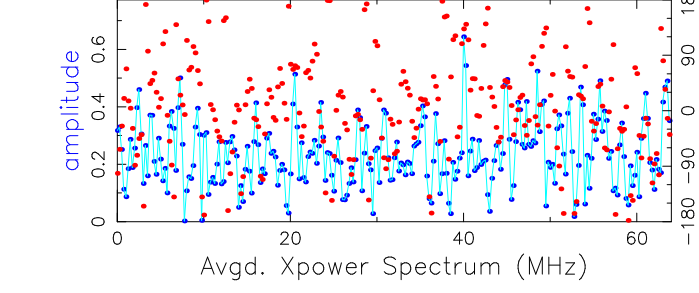
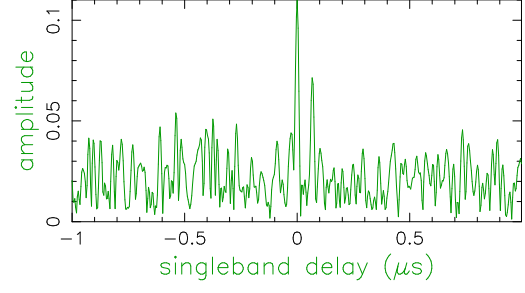
fxmanager

NRAO150.1X1592, No0093, lo

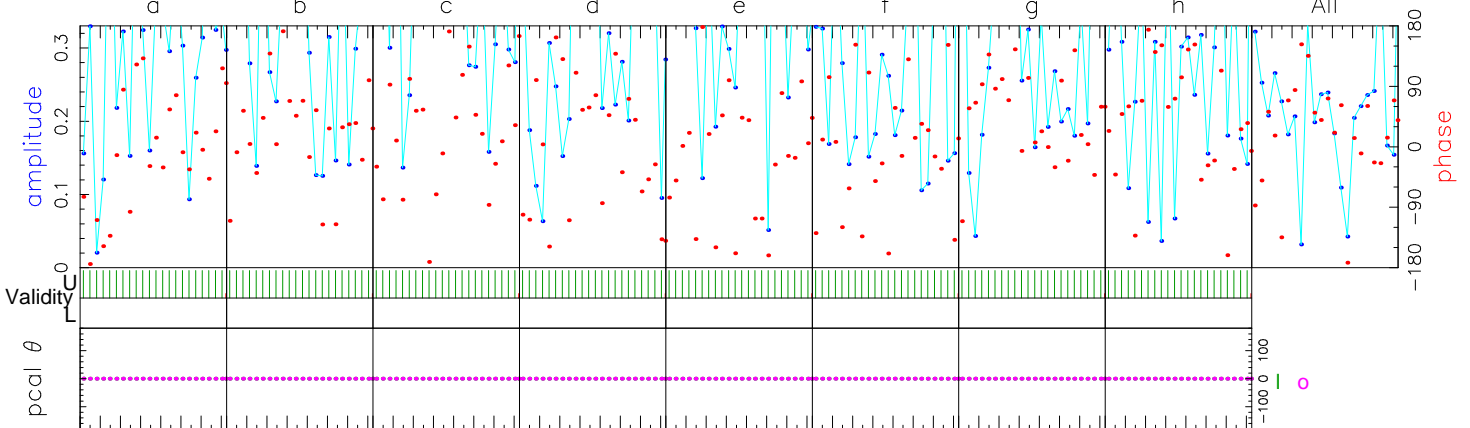
VLBA_LA - VLBA_OV, fgroup W, pol RL



Fringe quality 0
 SNR 6.2
 Int time 419.822
 Amp 0.110
 Phase 25.4
 PFD 1.7e-01
 Delays (us)
 SBD -0.000486
 MBD -0.001980
 Fringe rate (Hz) 0.004454
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130434
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'15.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
l	0	0	0	0	0	0	0	0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)		1.43922303045E+03			1.43922501049E+03				Resid mbdelay (usec)	-1.98005E-03 +/- 1.8E-04
Sband delay (usec)		1.43922452499E+03			-6.3755093E+00				Resid sbdelay (usec)	-4.85500E-04 +/- 1.4E-03
Phase delay (usec)		1.43922501131E+03			-6.4600002E-07				Resid phdelay (usec)	8.18002E-07 +/- 6.0E-07
Delay rate (us/s)		-1.02214104609E-01			-1.02214156312E-01				Resid rate (us/s)	5.17034E-08 +/- 2.5E-09
Total phase (deg)			170.7		-9.47251601869E-06				Resid phase (deg)	25.4 +/- 18.6
ph/seg (deg)	RMS 73.2	Theor. 44.5	Amplitude 0.110 +/- 0.018	Search (2048X32) 0.107	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			sb window (us)	-1.000 1.000
amp/seg (%)	124.1	77.7	Interp. 0.000	0.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled			mb window (us)	-0.008 0.008
ph/frq (deg)	28.7	26.3	Inc. seg. avg. 0.165	0.165	Bits/sample: 2x2	Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011
amp/frq (%)	40.4	45.8	Inc. frq. avg. 0.109	0.109	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			ion window (TEC)	0.00 0.00

l: az 49.6 el 56.8 pa -101.9 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 915.356 -1041.513 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/lo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/lo.W.299.1X1592

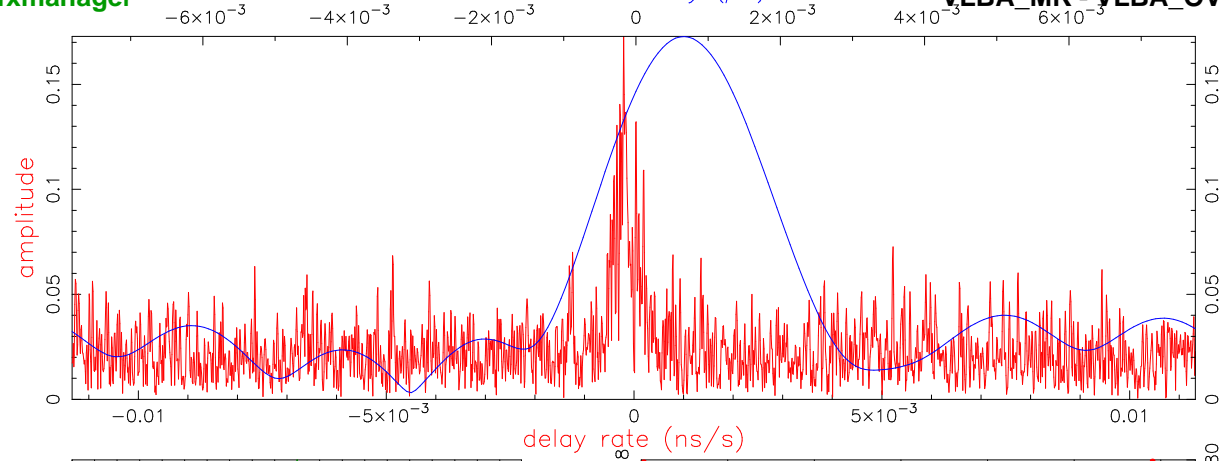
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

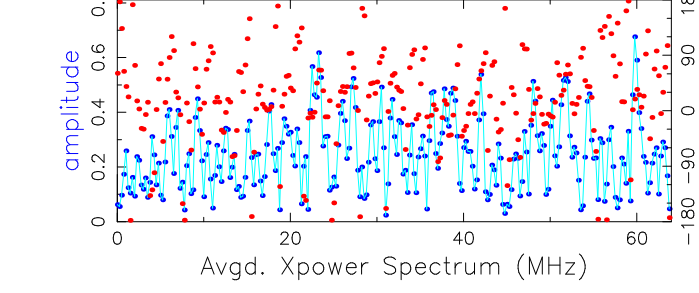
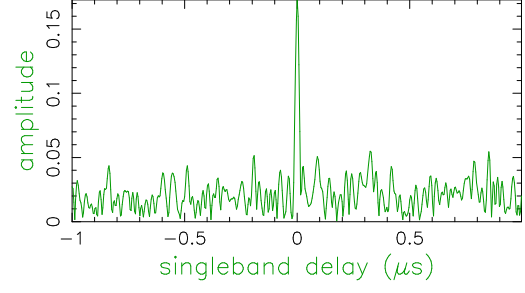
NRAO150.1X1592, No0093, mo

VLBA_MK - VLBA_OV, fgroup W, pol LL

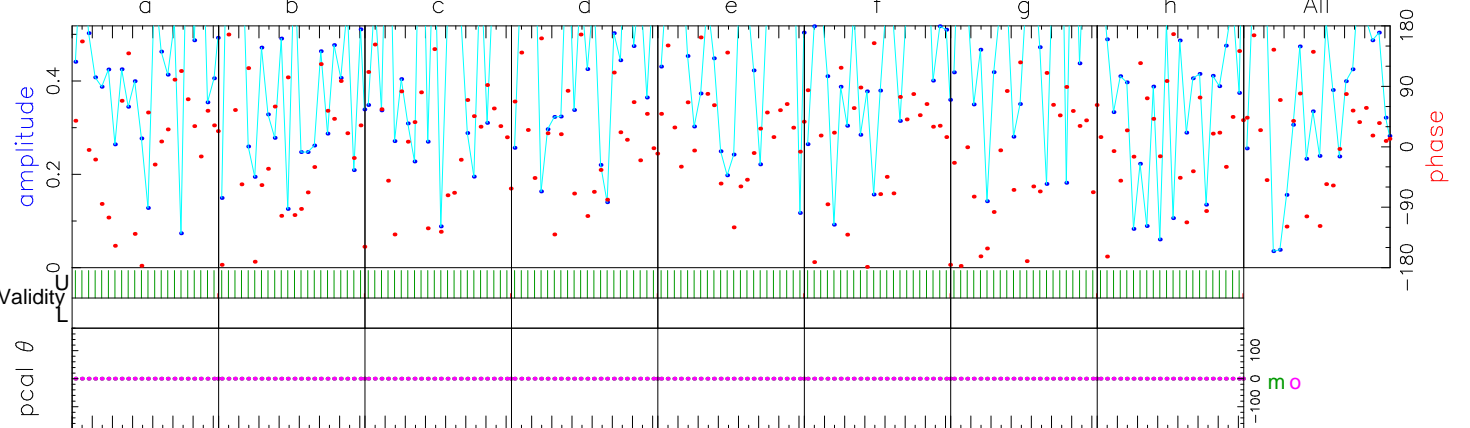
multiband delay (μ s)



Fringe quality 9
 SNR 9.7
 Int time 419.824
 Amp 0.173
 Phase 27.7
 PFD 1.5e-13
 Delays (us)
 SBD 0.000232
 MBD 0.000667
 Fringe rate (Hz) -0.018147
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130425
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
m	0	0	0	0	0	0	0	0		
o	0	0	0	0	0	0	0	0		
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.08108485825E+04								6.67067E-04	+/- 1.1E-04
Sband delay (usec)	-1.08108490170E+04								2.32500E-04	+/- 8.9E-04
Phase delay (usec)	-1.08108492487E+04								8.92301E-07	+/- 3.8E-07
Delay rate (us/s)	3.00056936829E-01								-2.10666E-07	+/- 1.6E-09
Total phase (deg)			-100.4						27.7	+/- 11.8
Apriori delay (usec)					-1.08108492495E+04					
Apriori clock (usec)					1.1961744E+01					
Apriori clockrate (us/s)					-4.2000013E-08					
Apriori rate (us/s)					3.00057147494E-01					
Apriori accel (us/s/s)					3.42414352055E-05					
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

m: az 40.6 el 14.8 pa -76.5 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) -2671.657 1867.931 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/mo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/mo.W.257.1X1592

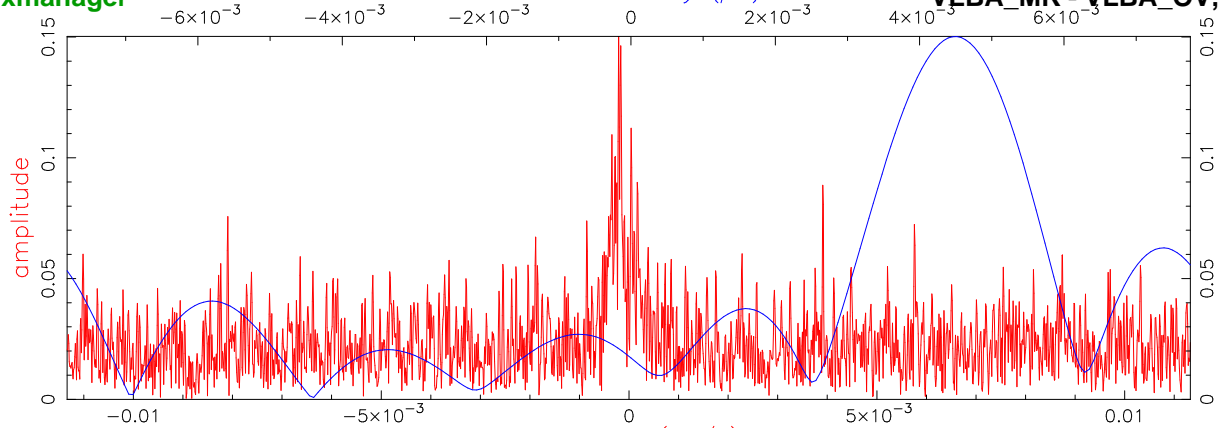
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, mo

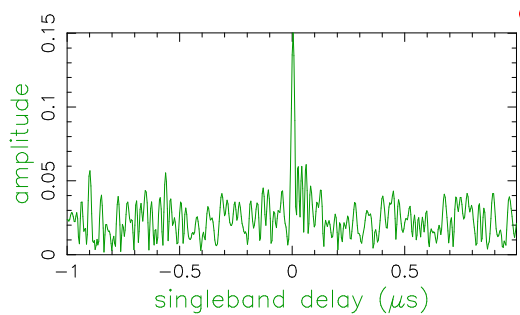
VLBA_MK - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

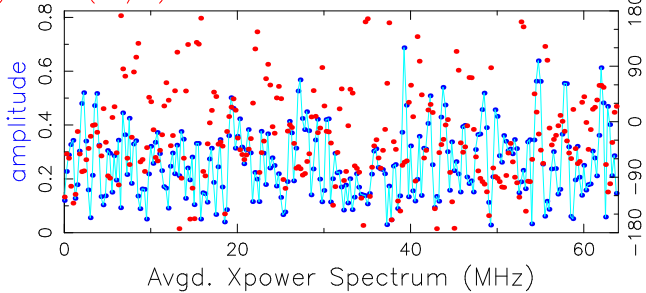


Fringe quality 9

SNR 8.4
 Int time 419.824
 Amp 0.150
 Phase -43.2
 PFD 1.4e-08
 Delays (us)
 SBD 0.003951
 MBD 0.004495
 Fringe rate (Hz)
 -0.018402
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

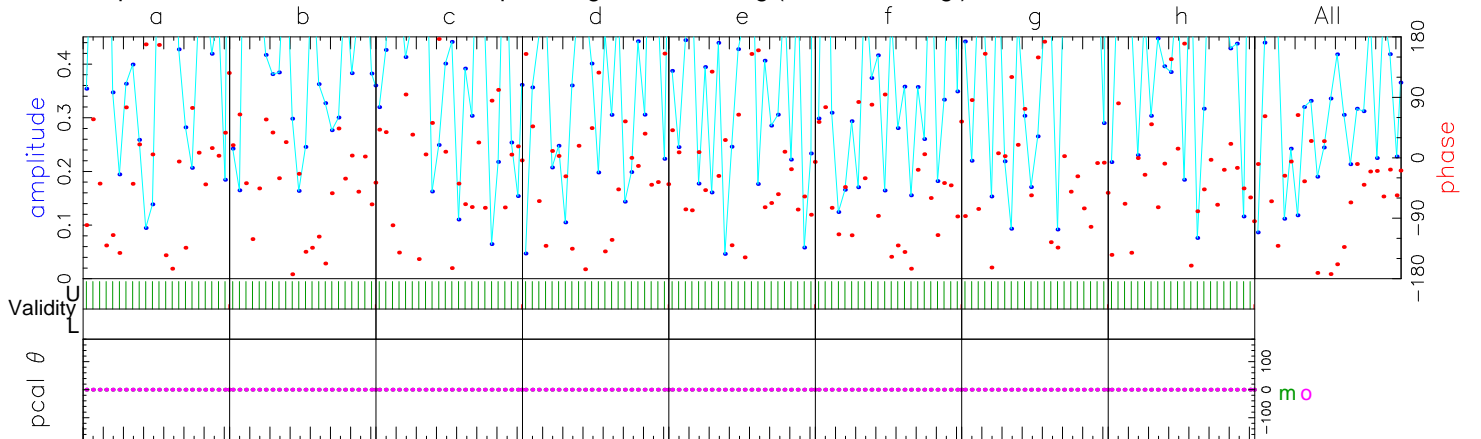


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130429
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-64.0	-38.2	-28.8	-39.3	-52.2	-49.2	-48.3	-36.8	Phase	-43.2
	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1
	196.2	257.9	272.3	242.4	402.0	365.9	258.6	276.2	Sbd box	258.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.08108447544E+04		Apriori delay (usec)		-1.08108492495E+04		Resid mbdelay (usec)		4.49513E-03	+/- 1.3E-04
Sband delay (usec)	-1.08108452988E+04		Apriori clock (usec)		1.1961744E+01		Resid sbdelay (usec)		3.95075E-03	+/- 1.0E-03
Phase delay (usec)	-1.08108492509E+04		Apriori clockrate (us/s)		-4.2000013E-08		Resid phdelay (usec)		-1.39255E-06	+/- 4.4E-07
Delay rate (us/s)	3.00056933863E-01		Apriori rate (us/s)		3.00057147494E-01		Resid rate (us/s)		-2.13632E-07	+/- 1.8E-09
Total phase (deg)			Apriori accel (us/s/s)		3.42414352055E-05		Resid phase (deg)		-43.2	+/- 13.6

ph/seg (deg) 67.6 32.6 Amplitude 0.150 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 137.4 57.0 Search (2048X32) 0.144 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 12.0 19.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.8 33.6 Inc. seg. avg. 0.269 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 m: az 40.6 el 14.8 pa -76.5 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) -2671.657 1867.931 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/mo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/mo.W.275.1X1592

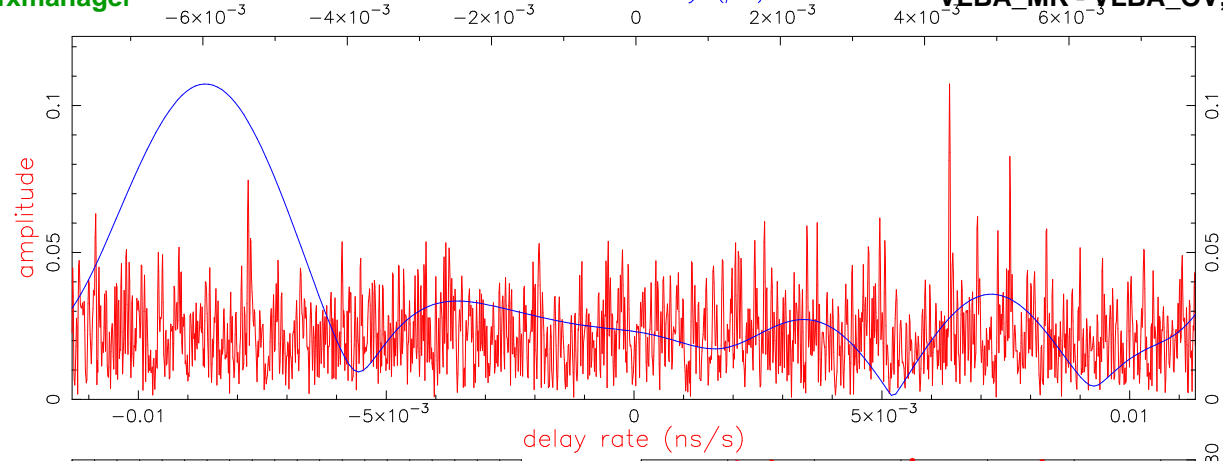
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, mo

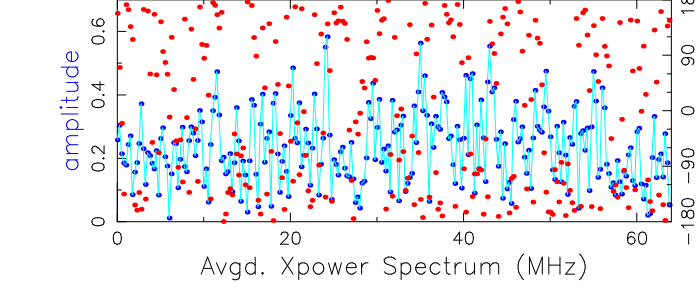
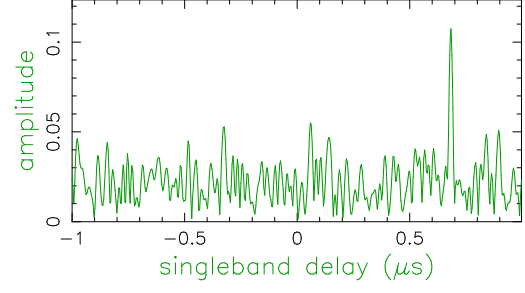
VLBA_MK - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)



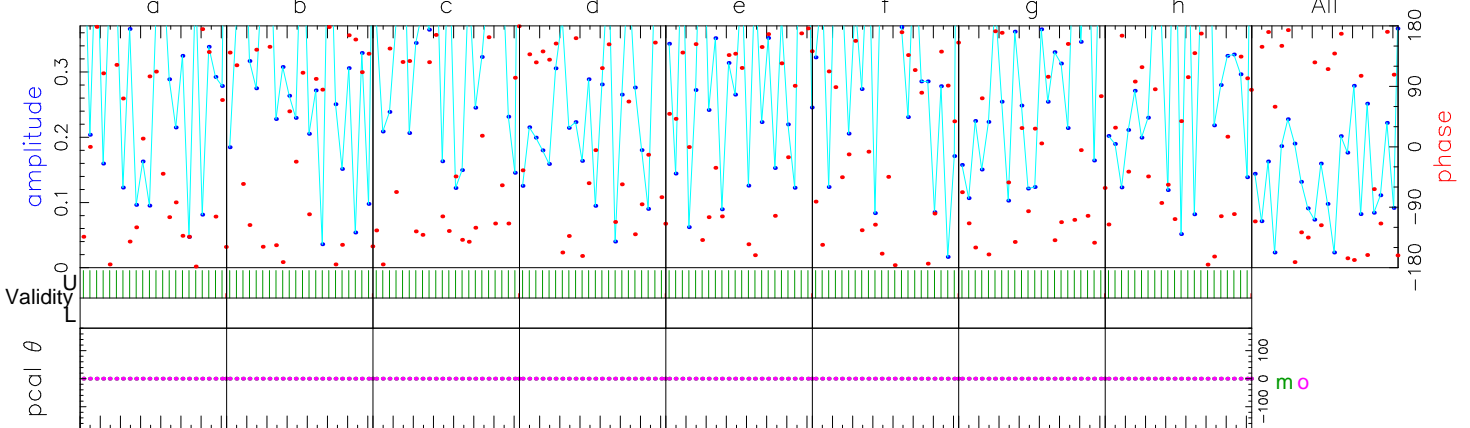
Fringe quality 0

SNR 6.1
 Int time 419.824
 Amp 0.124
 Phase -174.1
 PFD 3.1e-01
 Delays (us)
 SBD 0.682562
 MBD -0.005980
 Fringe rate (Hz)
 0.549575
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130433
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-167.2	165.9	-149.0	-173.7	163.0	173.0	-126.9	179.6	Phase	-174.1
	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	429.6	13.7	432.8	236.4	363.2	133.3	41.6	391.7	Sbd box	431.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.08101677294E+04		Apriori delay (usec)		-1.08108492495E+04		Resid mbdelay (usec)		-5.97986E-03	+/- 1.8E-04
Sband delay (usec)	-1.08101666880E+04		Apriori clock (usec)		1.1961744E+01		Resid sbdelay (usec)		6.82562E-01	+/- 1.4E-03
Phase delay (usec)	-1.08108492552E+04		Apriori clockrate (us/s)		-4.2000013E-08		Resid phdelay (usec)		-5.61485E-06	+/- 6.1E-07
Delay rate (us/s)	3.00063527513E-01		Apriori rate (us/s)		3.00057147494E-01		Resid rate (us/s)		6.38002E-06	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		3.42414352055E-05		Resid phase (deg)		-174.1	+/- 18.9

ph/seg (deg) 56.3 45.4 Search (2048X32) 0.104 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 73.6 79.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.0 26.8 Inc. seg. avg. 0.123 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 39.2 46.7 Inc. frq. avg. 0.119 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 m: az 40.6 el 14.8 pa -76.5 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) -2671.657 1867.931 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/mo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/mo.W.294.1X1592

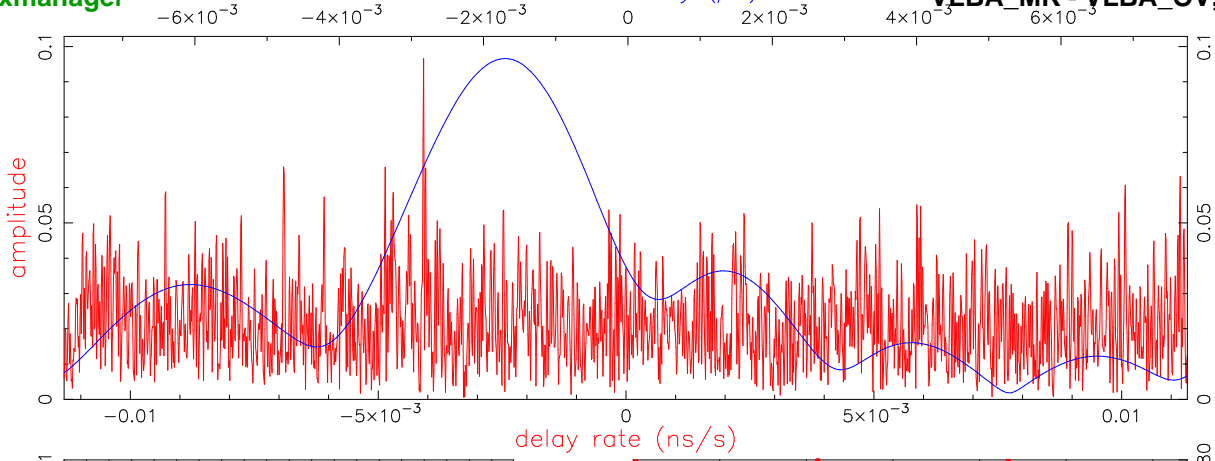
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, mo

VLBA_MK - VLBA_OV, fgroup W, pol RL

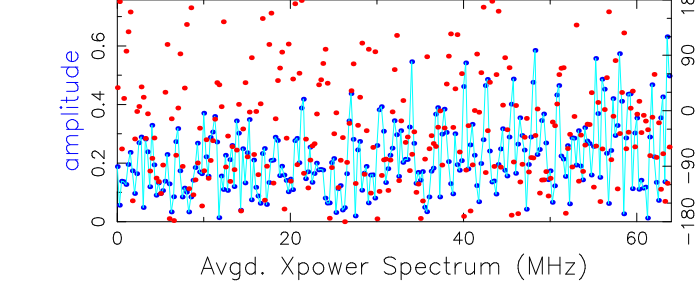
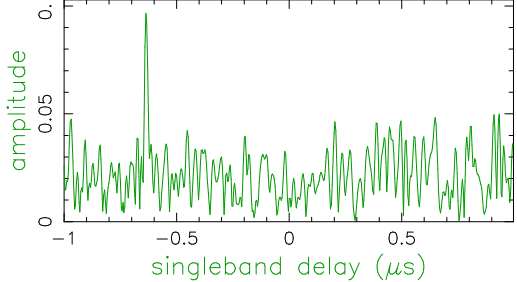
multiband delay (μ s)



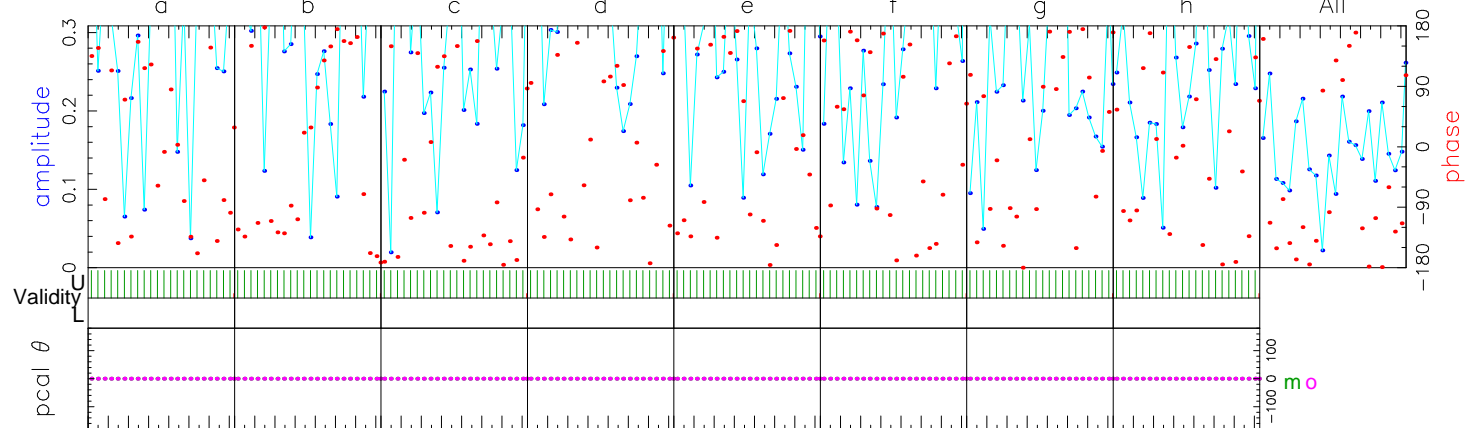
Fringe quality 0

SNR 5.5
 Int time 419.824
 Amp 0.103
 Phase -152.6
 PFD 1.0e+00
 Delays (us)
 SBD -0.635581
 MBD -0.001695
 Fringe rate (Hz)
 -0.351983
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130436
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-152.5	-153.8	-156.2	-131.6	-144.7	-169.2	169.4	-112.9	Phase	-152.6
	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	Ampl.	0.1
	298.6	94.2	355.4	350.6	510.8	338.9	401.8	370.6	Sbd box	94.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.08114915695E+04		Apriori delay (usec)		-1.08108492495E+04		Resid mbdelay (usec)		-1.69499E-03	+/- 2.0E-04
Sband delay (usec)	-1.08114848310E+04		Apriori clock (usec)		1.1961744E+01		Resid sbdelay (usec)		-6.35581E-01	+/- 1.6E-03
Phase delay (usec)	-1.08108492545E+04		Apriori clockrate (us/s)		-4.2000013E-08		Resid phdelay (usec)		-4.92178E-06	+/- 6.8E-07
Delay rate (us/s)	3.00053061321E-01		Apriori rate (us/s)		3.00057147494E-01		Resid rate (us/s)		-4.08617E-06	+/- 2.8E-09
Total phase (deg)			Apriori accel (us/s/s)		3.42414352055E-05		Resid phase (deg)		-152.6	+/- 21.0

ph/seg (deg) 55.9 50.3 Search (2048X32) 0.095 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.1 87.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 25.2 29.7 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 54.8 51.8 Inc. frq. avg. 0.094 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 m: az 40.6 el 14.8 pa -76.5 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) -2671.657 1867.931 ion window (TEC) 0.00 0.00
 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/mo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/mo.W.312.1X1592

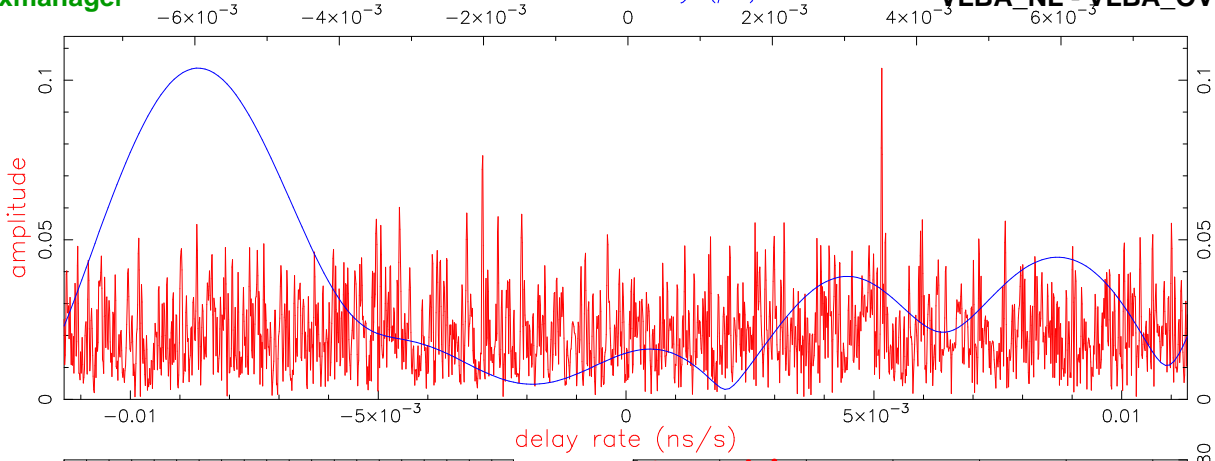
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

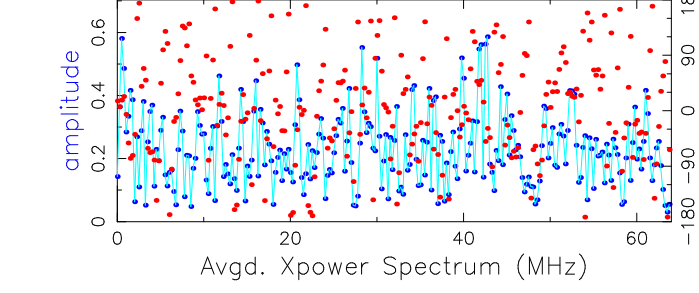
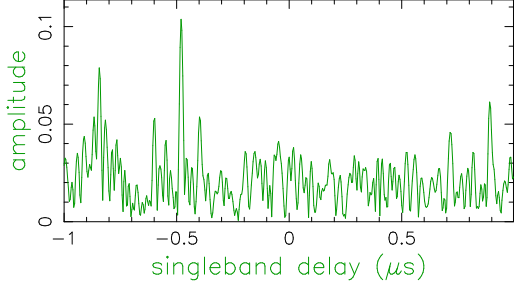
NRAO150.1X1592, No0093, no

VLBA_NL - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

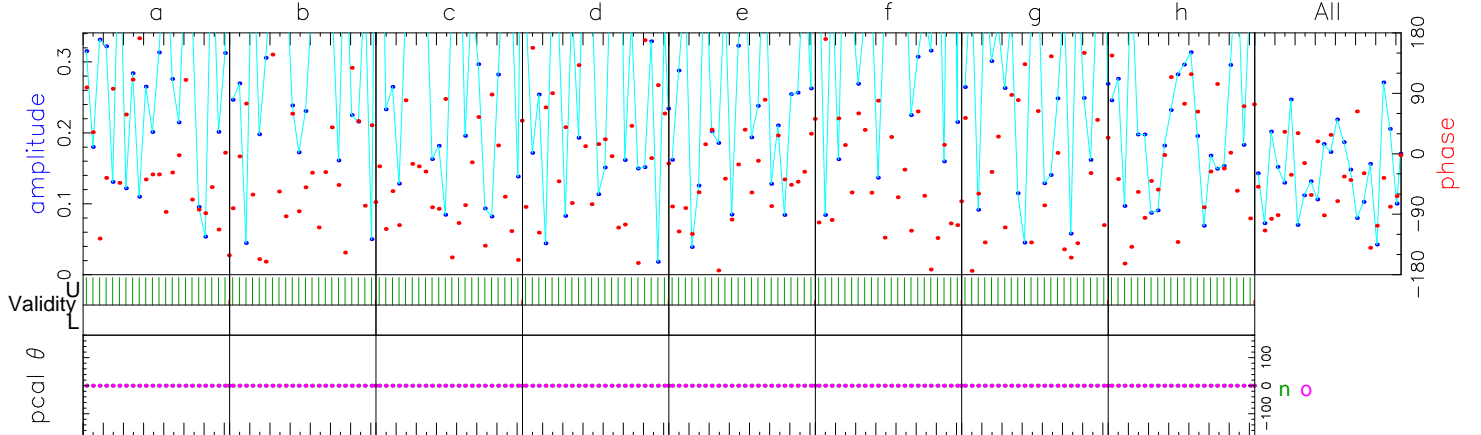


Fringe quality 0
 SNR 5.8
 Int time 419.820
 Amp 0.114
 Phase -49.0
 PFD 7.3e-01
 Delays (us)
 SBD -0.479580
 MBD -0.005904
 Fringe rate (Hz)
 0.445190
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130428
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-41.0	-71.6	-46.7	-31.4	-16.9	-65.5	-128.1	-44.1	Phase	-49.0		
	0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.0	Ampl.	0.1		
	262.8	242.3	82.6	501.6	132.7	133.1	359.1	338.3	Sbd box	134.2		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used			
n	0	0	0	0	0	0	0	0	PC freqs			
o	0	0	0	0	0	0	0	0	PC freqs			
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
n:o	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			
o	1000	1000	1000	1000	1000	1000	1000	1000				
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Tracks			
Group delay (usec)(sbd)	3.52696836317E+03		Apriori delay (usec)		3.52744301715E+03		Resid mbdelay (usec)		-5.90398E-03	+/- 1.9E-04		
Sband delay (usec)	3.52696343665E+03		Apriori clock (usec)		1.7304897E+00		Resid sbdelay (usec)		-4.79580E-01	+/- 1.5E-03		
Phase delay (usec)	3.52744301557E+03		Apriori clockrate (us/s)		-6.0000019E-08		Resid phdelay (usec)		-1.57890E-06	+/- 6.3E-07		
Delay rate (us/s)	-2.99405383601E-01		Apriori rate (us/s)		-2.99410551819E-01		Resid rate (us/s)		5.16822E-06	+/- 2.6E-09		
Total phase (deg)	130.0		Apriori accel (us/s/s)		-1.33945988531E-05		Resid phase (deg)		-49.0	+/- 19.6		
	RMS	Theor.	Amplitude	0.114 +/- 0.019		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	53.0	47.0	Search (2048X32)	0.100		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	69.5	82.1	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	37.6	27.7	Inc. seg. avg.	0.120		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	49.6	48.4	Inc. frq. avg.	0.110		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 54.1 el 69.4 pa -107.2 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 2703.074 -985.136 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/no..1X1592 Output file: /Exps/c211c/v1/1234/No0093/no.W.268.1X1592

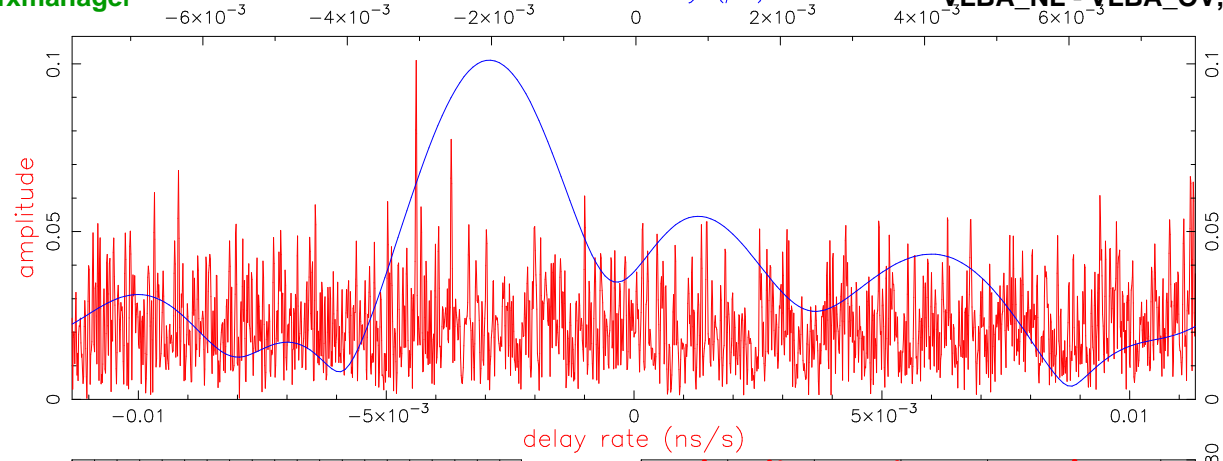
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

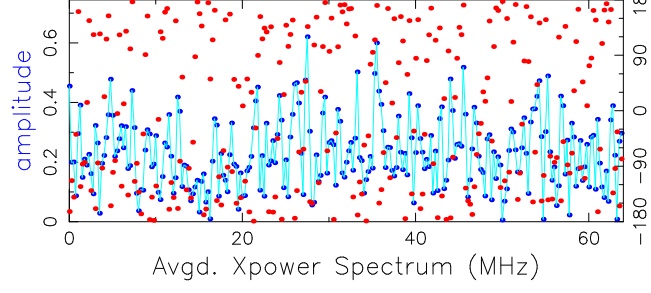
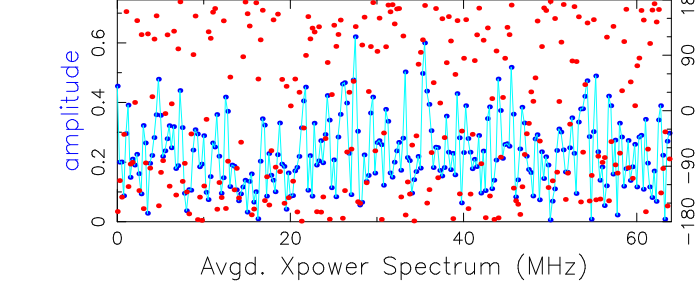
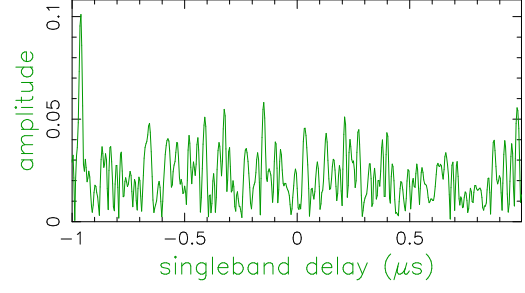
NRAO150.1X1592, No0093, no

VLBA_NL - VLBA_OV, fgroup W, pol RR

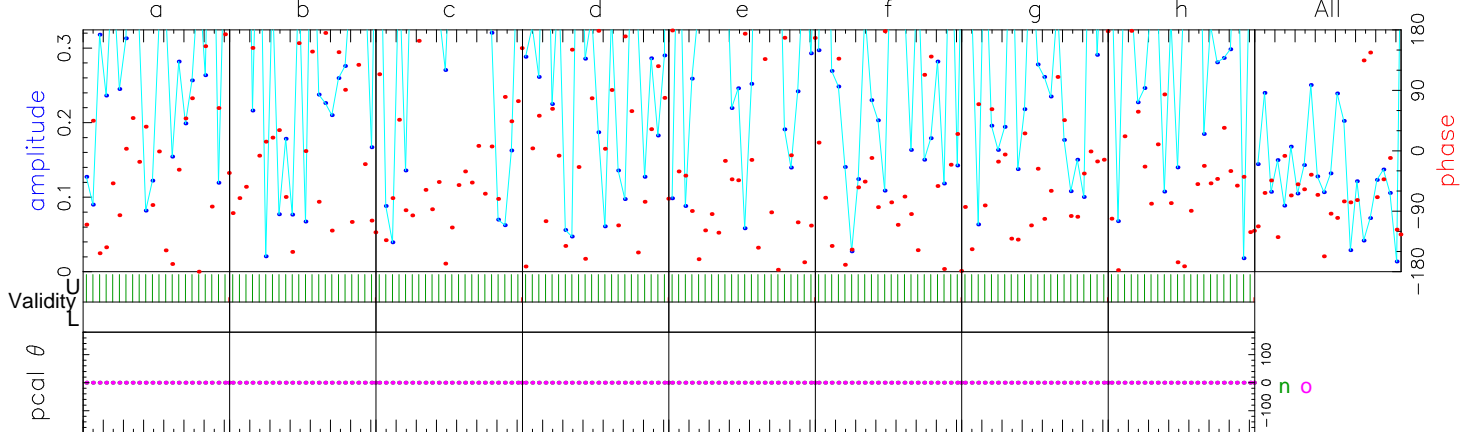
multiband delay (μ s)



Fringe quality 0
 SNR 5.7
 Int time 419.820
 Amp 0.108
 Phase -72.9
 PFD 9.5e-01
 Delays (us)
 SBD -0.961826
 MBD -0.002074
 Fringe rate (Hz)
 -0.379454
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130432
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-69.8	-88.1	-51.6	27.0	-112.5	-80.6	-57.1	-62.2	Phase	-72.9		
	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.2	Ampl.	0.1		
	366.9	359.6	271.0	101.7	11.5	407.2	8.1	10.6	Sbd box	10.8		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used			
n	0	0	0	0	0	0	0	0	PC freqs			
o	0	0	0	0	0	0	0	0	PC freqs			
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
n:o	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			
o	1000	1000	1000	1000	1000	1000	1000	1000				
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Tracks			
Group delay (usec)(sbd)	3.52648781804E+03		Apriori delay (usec)		3.52744301715E+03		Resid mbdelay (usec)		-2.07411E-03	+/- 1.9E-04		
Sband delay (usec)	3.52648119140E+03		Apriori clock (usec)		1.7304897E+00		Resid sbdelay (usec)		-9.61826E-01	+/- 1.5E-03		
Phase delay (usec)	3.52744301480E+03		Apriori clockrate (us/s)		-6.0000019E-08		Resid phdelay (usec)		-2.35191E-06	+/- 6.5E-07		
Delay rate (us/s)	-2.99414956901E-01		Apriori rate (us/s)		-2.99410551819E-01		Resid rate (us/s)		-4.40508E-06	+/- 2.7E-09		
Total phase (deg)			Apriori accel (us/s/s)		-1.33945988531E-05		Resid phase (deg)		-72.9	+/- 20.1		
	RMS	Theor.	Amplitude	0.108 +/- 0.019		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	56.5	48.3	Search (2048X32)	0.100		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	71.7	84.3	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	46.0	28.5	Inc. seg. avg.	0.103		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	50.7	49.7	Inc. frq. avg.	0.109		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
n: az 54.1 el 69.4 pa -107.2	o: az 52.2 el 50.1 pa -88.4		u,v (fr/asec) 2703.074 -985.136						simultaneous interpolator			

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/no..1X1592 Output file: /Exps/c211c/v1/1234/No0093/no.W.290.1X1592

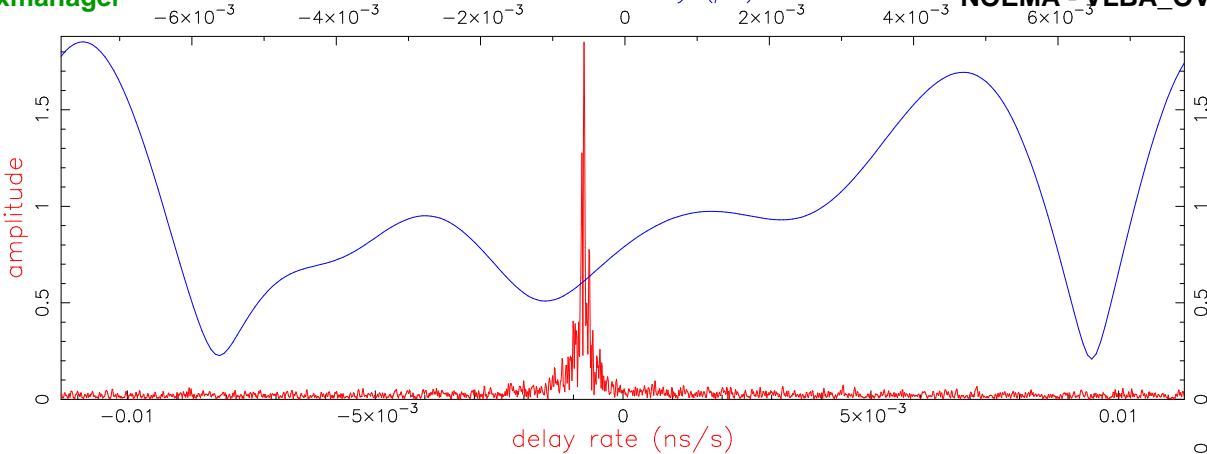
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, No

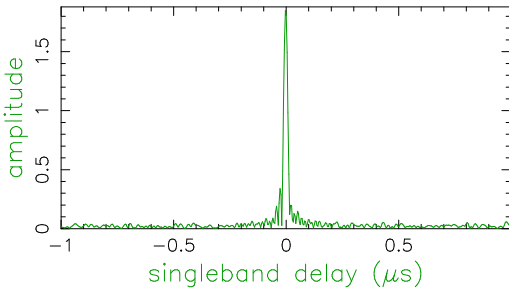
NOEMA - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

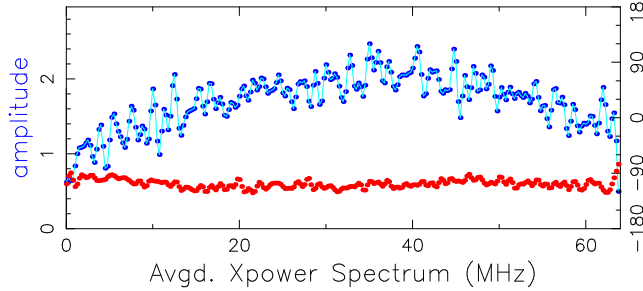


Fringe quality 2

SNR 105.1
Int time 419.824
Amp 1.880
Phase -48.0
PFD 0.0e+00
Delays (us)
SBD -0.002345
MBD -0.007472
Fringe rate (Hz)
-0.067680
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

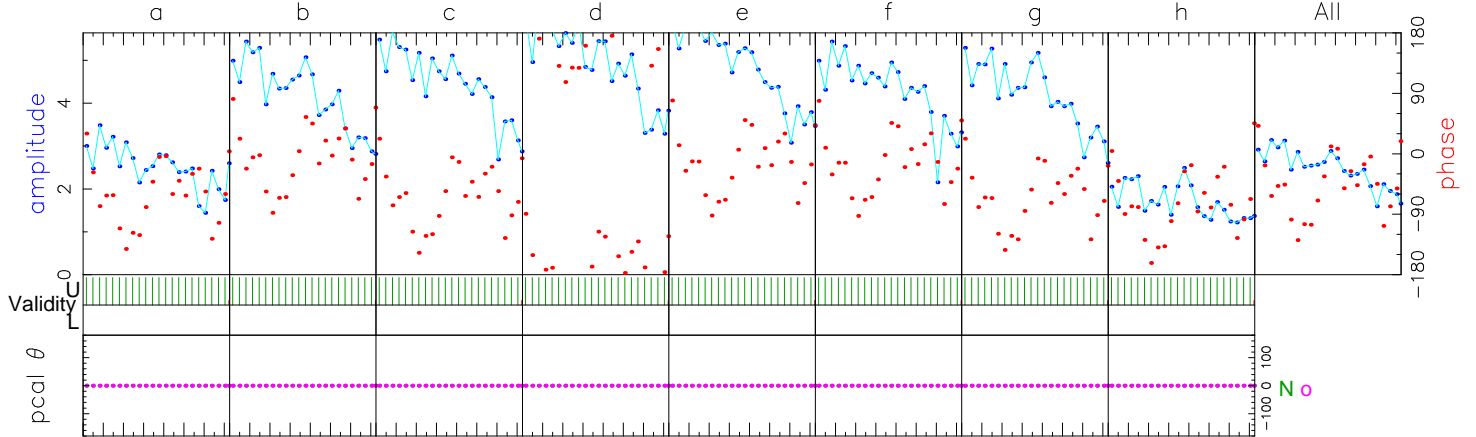


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130435
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-62.3	-6.9	-64.2	-176.3	-14.2	-15.7	-64.7	-74.6	Phase	-48.0
	1.8	3.1	3.3	3.7	3.6	3.2	3.1	1.3	Ampl.	2.9
	258.1	256.4	255.6	255.9	256.1	255.9	256.5	258.2	Sbd box	256.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
N:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.83822675150E+03		Apriori delay (usec)		-1.83821927928E+03		Resid mbdelay (usec)		-7.47221E-03	+/- 1.0E-05
Sband delay (usec)	-1.83822162453E+03		Apriori clock (usec)		-1.6997192E+01		Resid sbdelay (usec)		-2.34525E-03	+/- 8.2E-05
Phase delay (usec)	-1.83821928083E+03		Apriori clockrate (us/s)		7.9599998E-06		Resid phdelay (usec)		-1.54709E-06	+/- 3.5E-08
Delay rate (us/s)	-1.27878641318E+00		Apriori rate (us/s)		-1.27878562749E+00		Resid rate (us/s)		-7.85694E-07	+/- 1.4E-10
Total phase (deg)			Apriori accel (us/s/s)		1.82566066998E-05		Resid phase (deg)		-48.0	+/- 1.1

ph/seg (deg) 42.8 2.6 Search (2048X32) 1.833 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 39.5 4.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 60.3 1.5 Inc. seg. avg. 2.501 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 69.4 2.7 Inc. frq. avg. 2.896 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
N: az 304.4 el 44.0 pa 69.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11671.239 2209.515 simultaneous interpolator

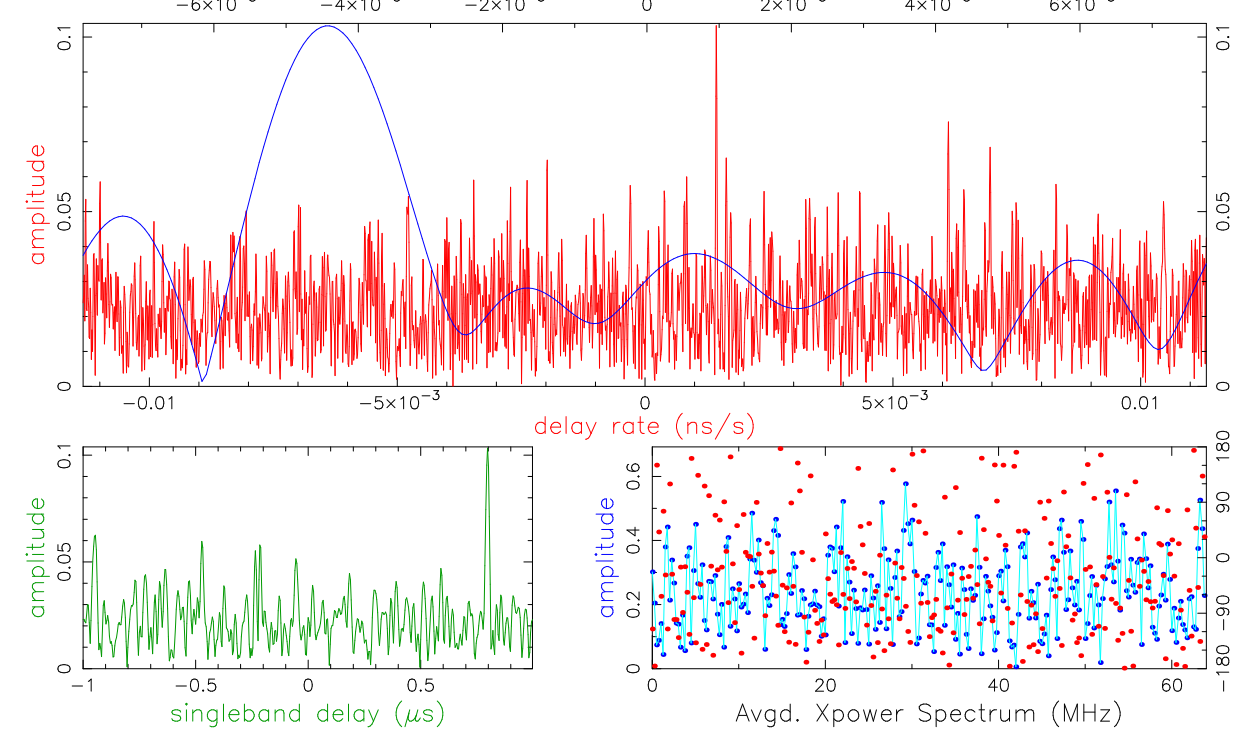
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/No..1X1592 Output file: /Exps/c211c/v1/1234/No0093/No.W.302.1X1592

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, no

VLBA_NL - VLBA_OV, fgroup W, pol LR

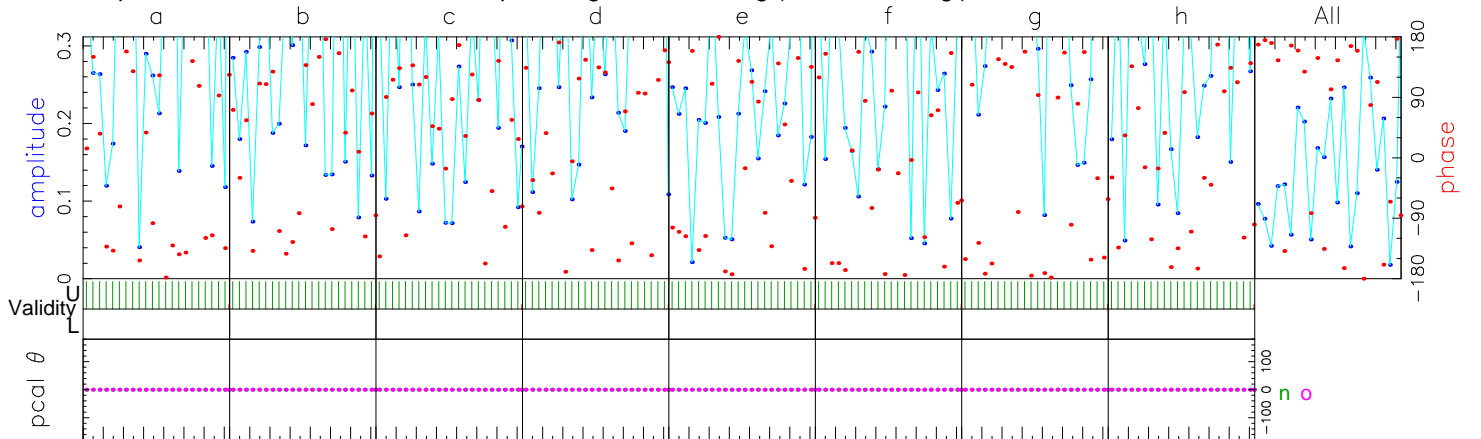


Fringe quality 0

SNR 5.8
 Int time 419.820
 Amp 0.104
 Phase 162.1
 PFD 8.4e-01
 Delays (us)
 SBD 0.796820
 MBD -0.004425
 Fringe rate (Hz)
 0.124149
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130436
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-175.8	143.6	155.3	142.4	-166.8	137.8	172.7	154.4	Phase	162.1
	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1
	203.0	135.9	185.7	83.2	310.6	356.7	460.9	448.3	Sbd box	461.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
n	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.52823546746E+03		Apriori delay (usec)		3.52744301715E+03		Resid mbdelay (usec)		-4.42469E-03	+/- 1.9E-04
Sband delay (usec)	3.52823983665E+03		Apriori clock (usec)		1.7304897E+00		Resid sbdelay (usec)		7.96820E-01	+/- 1.5E-03
Phase delay (usec)	3.52744302237E+03		Apriori clockrate (us/s)		-6.0000019E-08		Resid phdelay (usec)		5.22724E-06	+/- 6.4E-07
Delay rate (us/s)	-2.99409110577E-01		Apriori rate (us/s)		-2.99410551819E-01		Resid rate (us/s)		1.44124E-06	+/- 2.6E-09
Total phase (deg)	341.1		Apriori accel (us/s/s)		-1.33945988531E-05		Resid phase (deg)		162.1	+/- 19.8

ph/seg (deg) 51.6 47.5 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 88.3 82.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 22.3 28.0 Inc. seg. avg. 0.107 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 49.6 48.9 Inc. frq. avg. 0.098 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 54.1 el 69.4 pa -107.2 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 2703.074 -985.136 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/no..1X1592 Output file: /Exps/c211c/v1/1234/No0093/no.W.310.1X1592

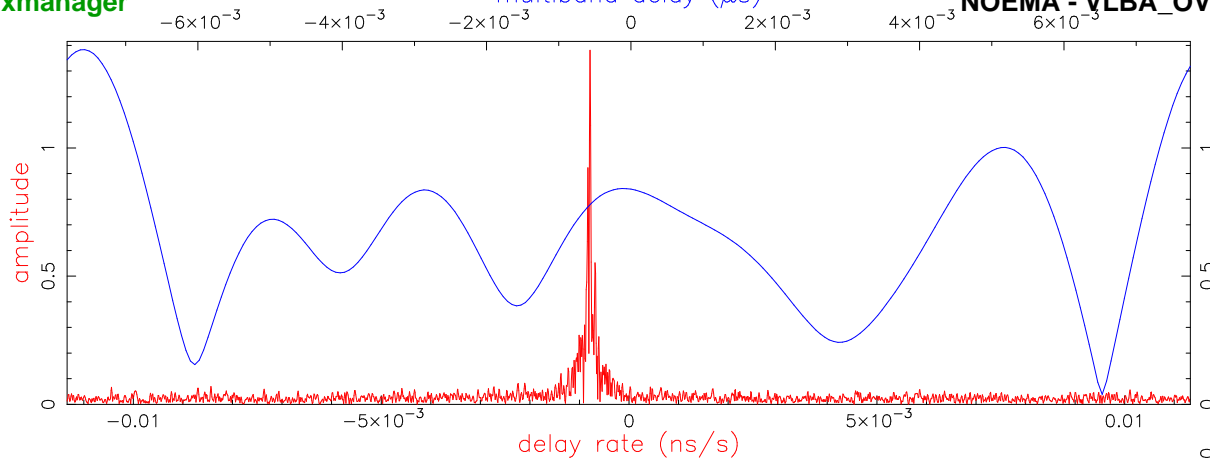
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, No

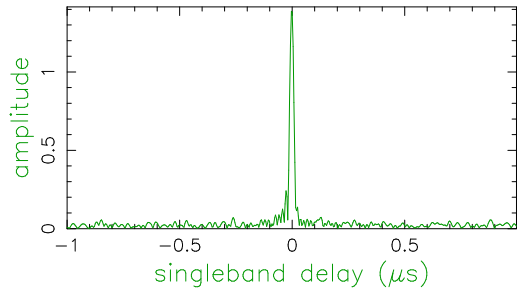
NOEMA - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

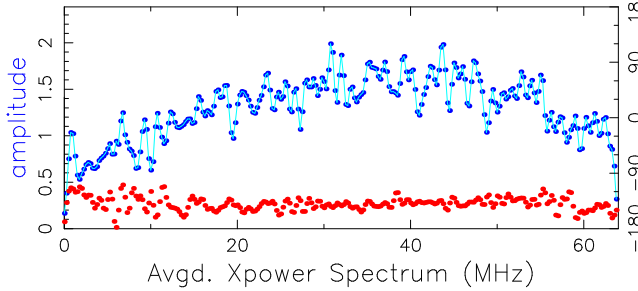


Fringe quality 2

SNR 79.2
 Int time 419.824
 Amp 1.416
 Phase -76.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.002061
 MBD -0.007646
 Fringe rate (Hz)
 -0.067723
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

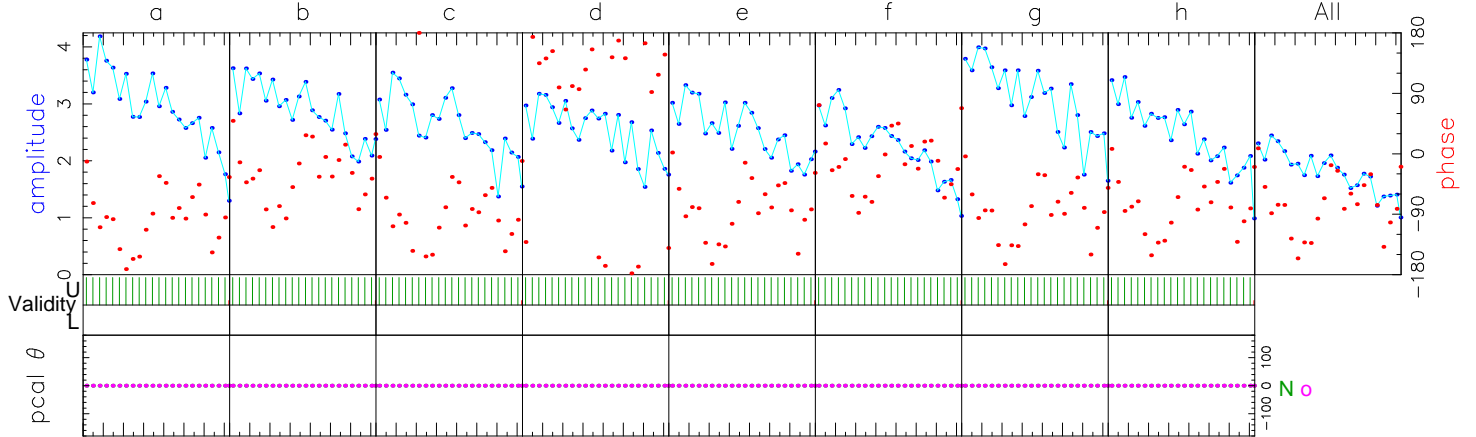


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130439
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-95.9	-31.3	-94.9	146.5	-81.0	-13.5	-86.2	-74.4	Phase	-76.7
	2.3	2.2	2.0	1.9	1.9	1.8	2.4	1.9	Ampl.	2.0
	258.2	255.9	255.5	255.7	255.7	255.5	256.5	258.3	Sbd box	256.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
N:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.83822692522E+03		Apriori delay (usec)		-1.83821927928E+03		Resid mbdelay (usec)		-7.64593E-03	+/- 1.4E-05
Sband delay (usec)	-1.83822134078E+03		Apriori clock (usec)		-1.6997192E+01		Resid sbdelay (usec)		-2.06150E-03	+/- 1.1E-04
Phase delay (usec)	-1.83821928176E+03		Apriori clockrate (us/s)		7.9599998E-06		Resid phdelay (usec)		-2.47486E-06	+/- 4.7E-08
Delay rate (us/s)	-1.27878641369E+00		Apriori rate (us/s)		-1.27878562749E+00		Resid rate (us/s)		-7.86197E-07	+/- 1.9E-10
Total phase (deg)			Apriori accel (us/s/s)		1.82566066998E-05		Resid phase (deg)		-76.7	+/- 1.4

RMS Theor. Amplitude 1.416 +/- 0.018
 ph/seg (deg) 41.4 3.5 Search (2048X32) 1.363 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 37.8 6.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 65.3 2.0 Inc. seg. avg. 1.831 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.2 3.6 Inc. frq. avg. 2.038 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 N: az 304.4 el 44.0 pa 69.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11671.239 2209.515 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/No..1X1592 Output file: /Exps/c211c/v1/1234/No0093/No.W.319.1X1592

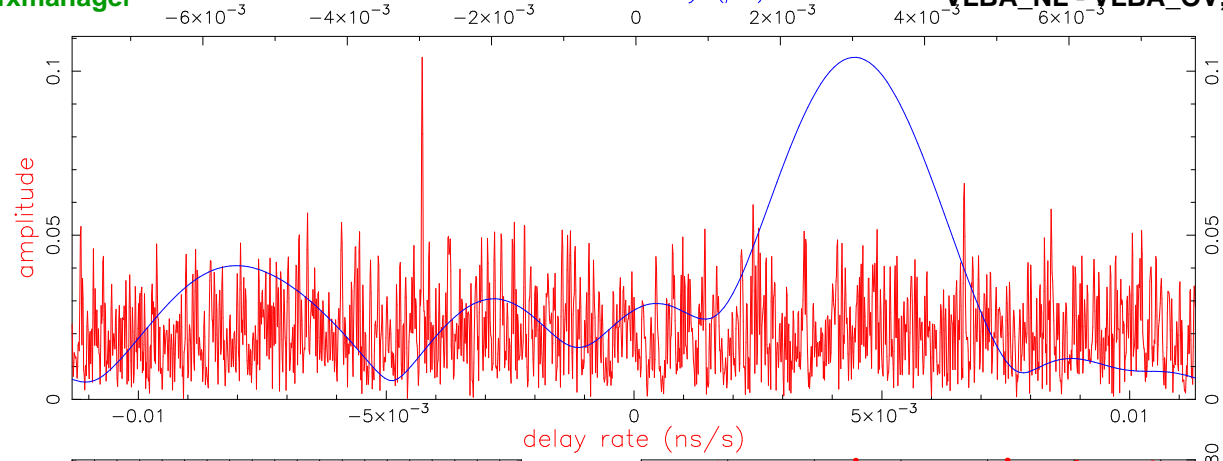
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

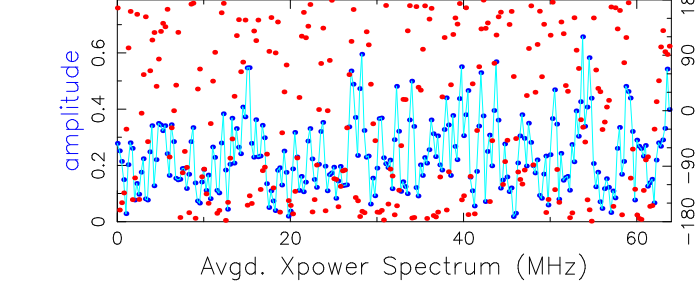
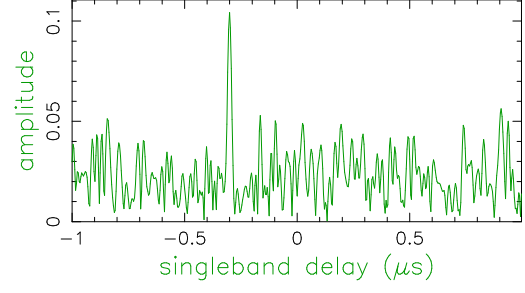
NRAO150.1X1592, No0093, no

VLBA_NL - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

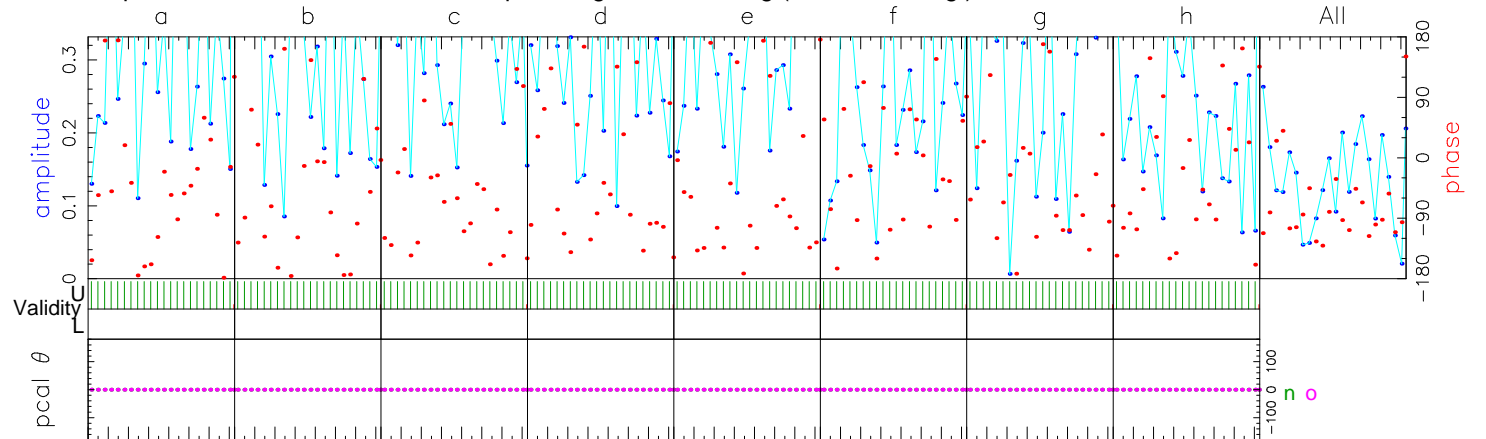


Fringe quality 0
 SNR 5.8
 Int time 419.820
 Amp 0.111
 Phase -85.6
 PFD 7.3e-01
 Delays (us)
 SBD -0.300712
 MBD 0.003027
 Fringe rate (Hz)
 -0.368750
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130440
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-68.1	-93.5	-86.1	-96.1	-113.2	-34.3	-74.5	-86.2	Phase	-85.6
	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	274.3	304.6	493.5	497.0	190.2	396.5	489.1	167.2	Sbd box	180.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
n	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.52714916961E+03		Apriori delay (usec)		3.52744301715E+03		Resid mbdelay (usec)		3.02746E-03	+/- 1.9E-04
Sband delay (usec)	3.52714230565E+03		Apriori clock (usec)		1.7304897E+00		Resid sbdelay (usec)		-3.00712E-01	+/- 1.5E-03
Phase delay (usec)	3.52744301439E+03		Apriori clockrate (us/s)		-6.0000019E-08		Resid phdelay (usec)		-2.76036E-06	+/- 6.3E-07
Delay rate (us/s)	-2.99414832640E-01		Apriori rate (us/s)		-2.99410551819E-01		Resid rate (us/s)		-4.28082E-06	+/- 2.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.33945988531E-05		Resid phase (deg)		-85.6	+/- 19.6

ph/seg (deg) 45.4 47.1 Search (2048X32) 0.100 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 65.6 82.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 25.8 27.8 Inc. seg. avg. 0.107 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 40.3 48.4 Inc. frq. avg. 0.106 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 54.1 el 69.4 pa -107.2 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 2703.074 -985.136 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/no..1X1592 Output file: /Exps/c211c/v1/1234/No0093/no.W.323.1X1592

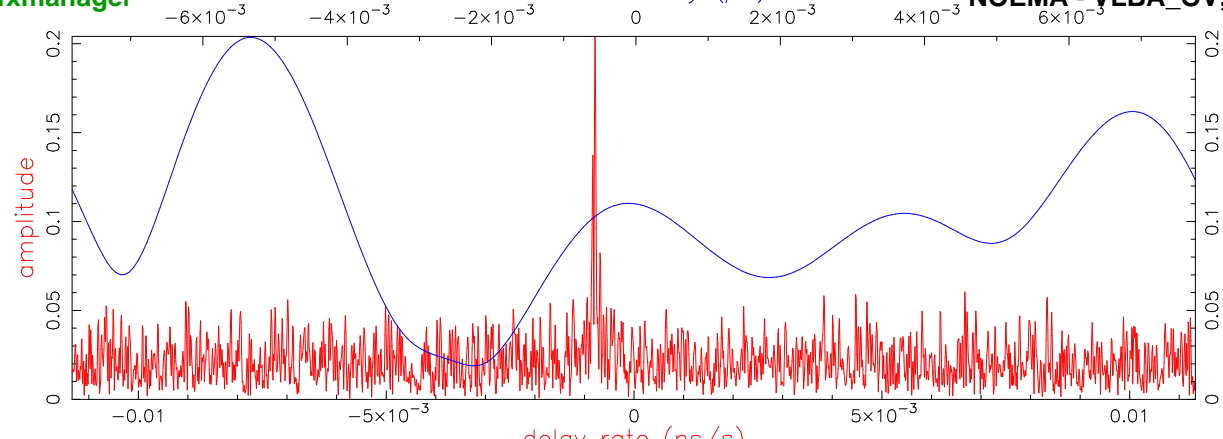
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

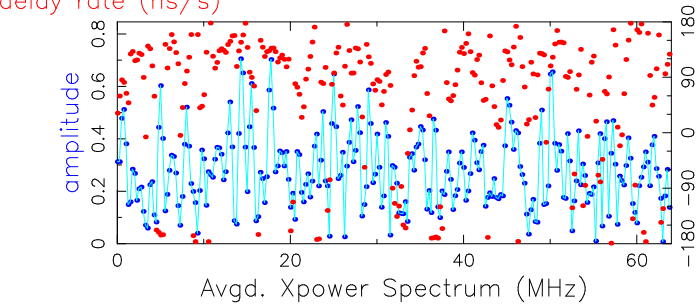
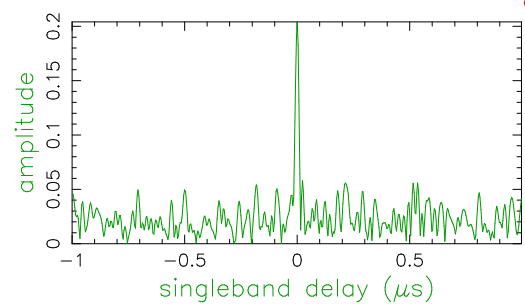
NRAO150.1X1592, No0093, No

NOEMA - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

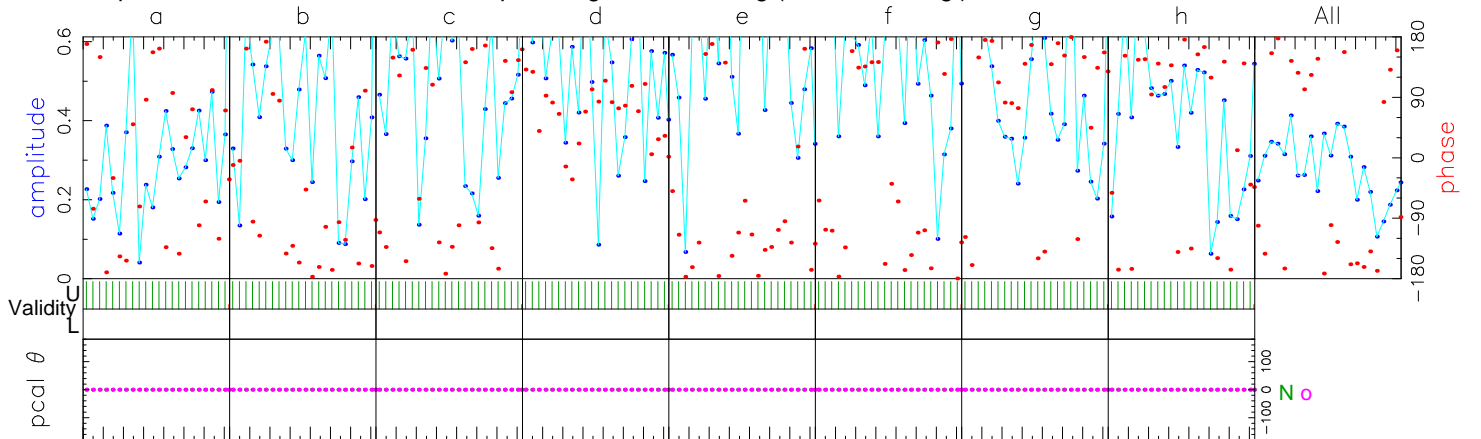


Fringe quality 9
 SNR 11.4
 Int time 419.824
 Amp 0.204
 Phase 178.4
 PFD 1.7e-21
 Delays (us)
 SBD -0.000264
 MBD -0.005342
 Fringe rate (Hz)
 -0.067640
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130443
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
N	1000	1000	1000	1000	1000	1000	1000	1000		
N:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
N:0	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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.83822462162E+03									
Sband delay (usec)	-1.83821954353E+03									
Phase delay (usec)	-1.83821927353E+03									
Delay rate (us/s)	-1.27878641273E+00									
Total phase (deg)			-79.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									178.4	+/- 10.0
Pcal mode:	MANUAL	MANUAL								
Pcal rate:	0.000E+00	0.000E+00								
Bits/sample:	2x2									
Sample rate(MISamp/s):	128									
Data rate(Mb/s):	2048									
PC period (AP's)	5	5								
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

ph/seg (deg) 47.3 24.1 Search (2048X32) 0.199 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 55.1 42.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 52.6 14.2 Inc. seg. avg. 0.260 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 72.1 24.8 Inc. frq. avg. 0.286 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 N: az 304.4 el 44.0 pa 69.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11671.239 2209.515 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/No..1X1592 Output file: /Exps/c211c/v1/1234/No0093/No.W.334.1X1592

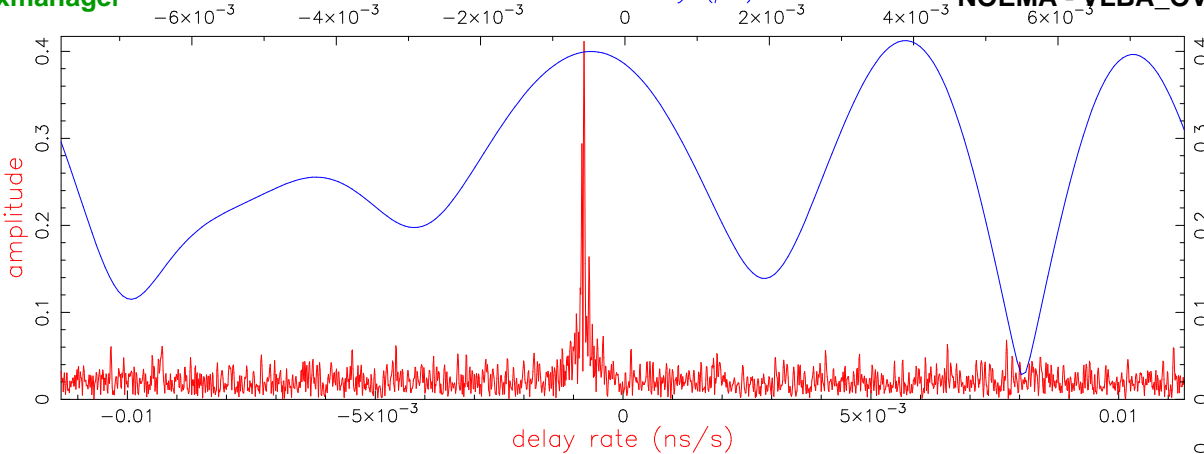
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, No

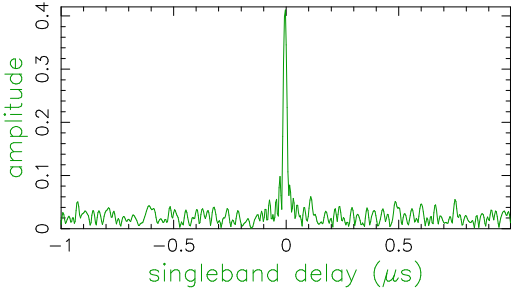
NOEMA - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

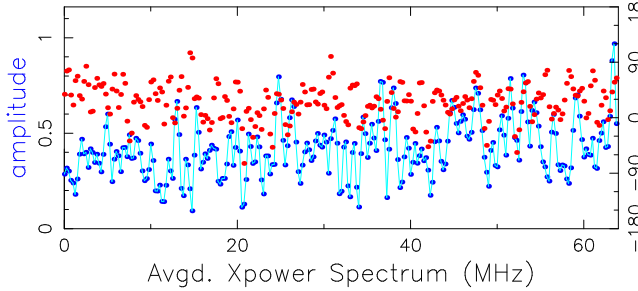


Fringe quality 7

SNR 23.3
 Int time 419.824
 Amp 0.417
 Phase -79.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.005256
 MBD 0.003807
 Fringe rate (Hz)
 -0.067540
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

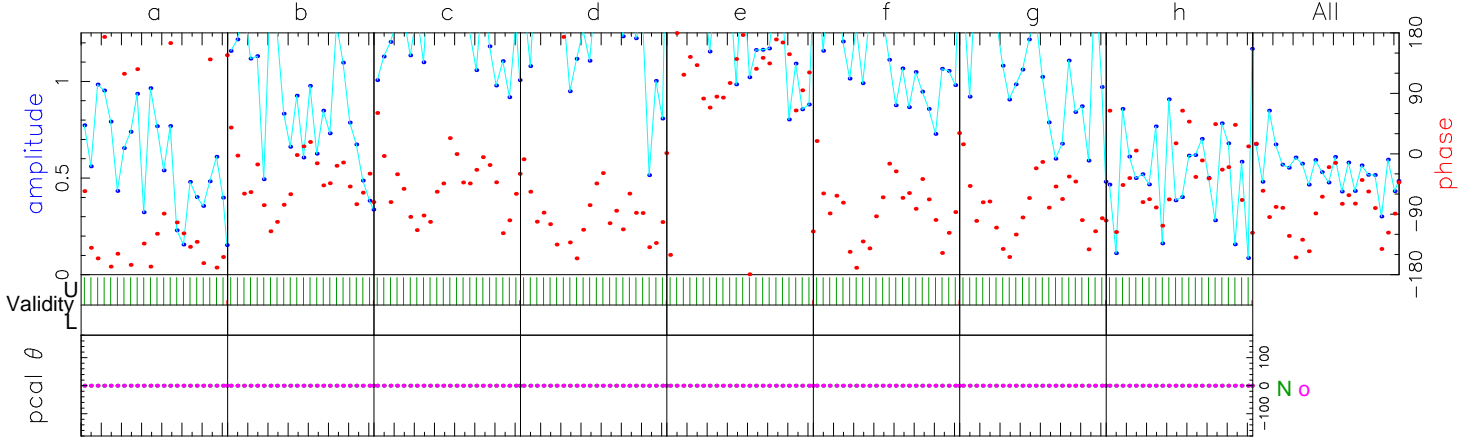


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130447
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



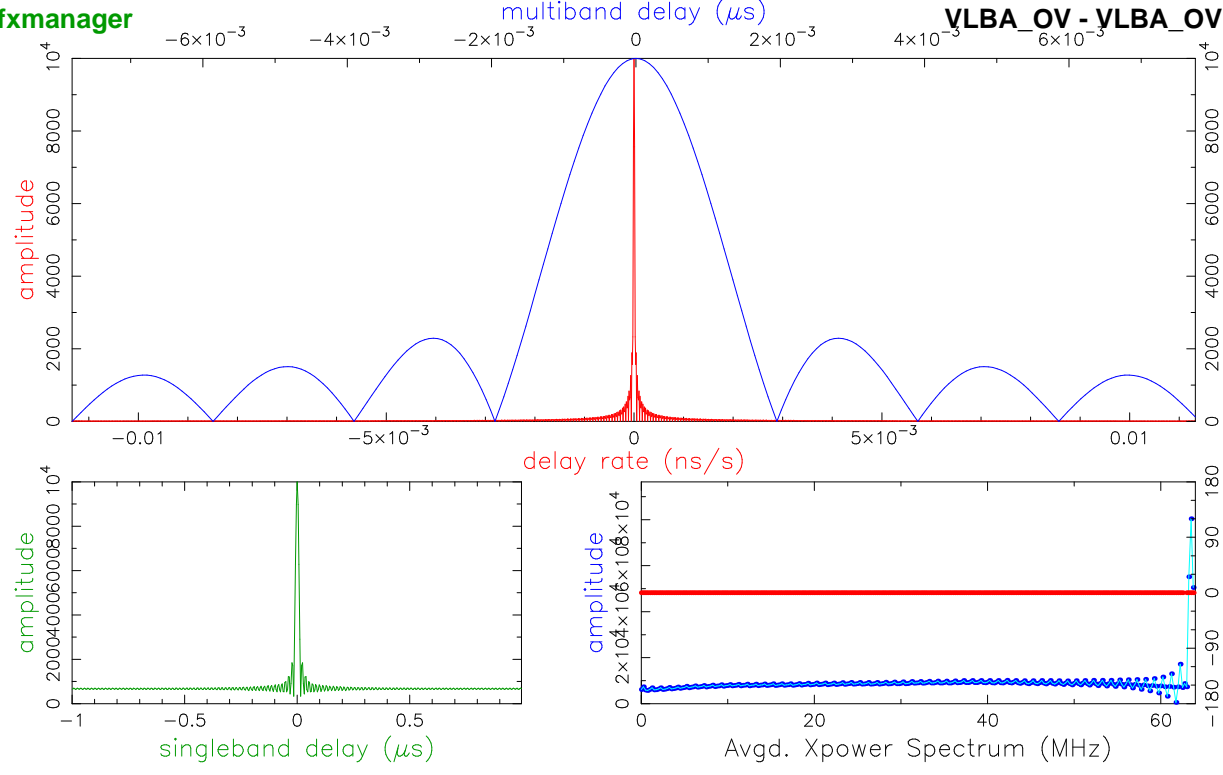
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-161.7	-38.6	-47.6	-93.4	131.1	-81.2	-78.0	-30.5		Phase
	0.4	0.7	0.9	1.0	1.0	0.8	0.8	0.4		Ampl.
	257.6	255.5	255.2	255.5	255.6	255.6	255.8	257.2		Sbd box
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
N	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
o	0	0	0	0	0	0	0	0		PC freqs
N:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
N:o	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
o	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec)(sbd)	-1.83823109715E+03	Apriori delay (usec)	-1.83821927928E+03	Resid mbdelay (usec)	3.80713E-03	+/-	4.7E-05
Sband delay (usec)	-1.83822453503E+03	Apriori clock (usec)	-1.6997192E+01	Resid sbdelay (usec)	-5.25575E-03	+/-	3.7E-04
Phase delay (usec)	-1.83821928184E+03	Apriori clockrate (us/s)	7.9599998E-06	Resid phdelay (usec)	-2.55991E-06	+/-	1.6E-07
Delay rate (us/s)	-1.27878641156E+00	Apriori rate (us/s)	-1.27878562749E+00	Resid rate (us/s)	-7.84070E-07	+/-	6.5E-10
Total phase (deg)	-337.7	Apriori accel (us/s/s)	1.82566066998E-05	Resid phase (deg)	-79.4	+/-	4.9

ph/seg (deg)	42.6	Theor.	11.8	Amplitude	0.417 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	40.6	Search (2048X32)	0.403	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	75.7	Inc. seg. avg.	0.536	Inc. frq. avg.	0.753	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	98.8	Inc. frq. avg.	0.753	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011 0.011

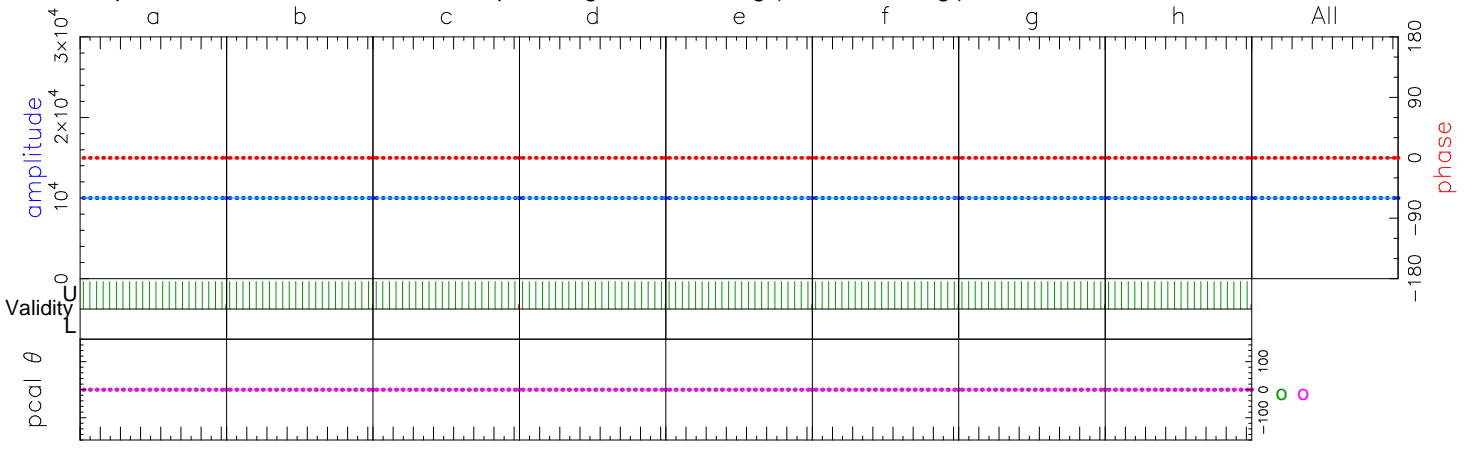
N: az 304.4 el 44.0 pa 69.6 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 11671.239 2209.515 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/No..1X1592 Output file: /Exps/c211c/v1/1234/No0093/No.W.354.1X1592



Fringe quality 9
SNR 560313.5
Int time 419.824
Amp 10000.000
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130441
2021:252:122852
RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"

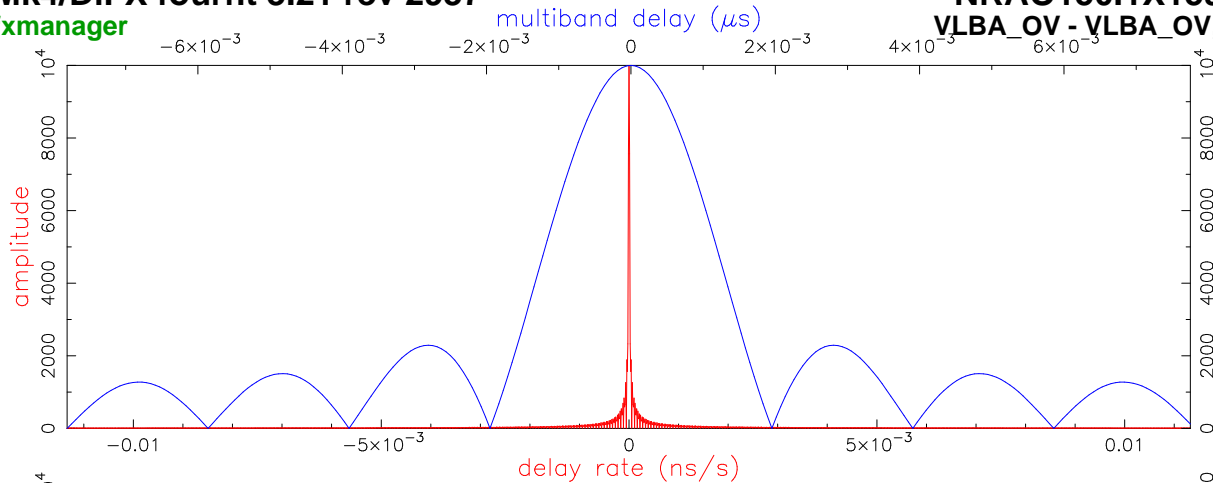
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



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

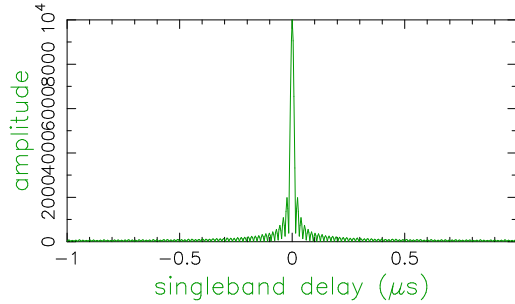
Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	1.9E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.5E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate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

ph/seg (deg) 0.0 0.0 Search (2048X32) 10000.000 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Data rate (Mbit/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
o: az 52.2 el 50.1 pa -88.4 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

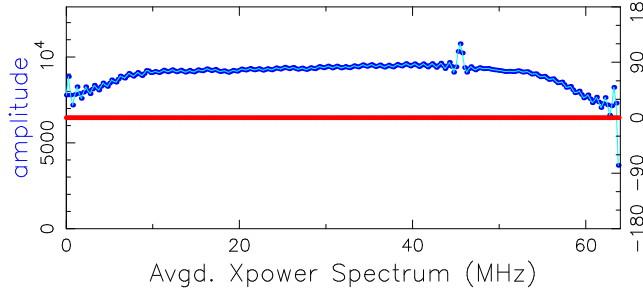


Fringe quality 9

SNR 560313.5
Int time 419.824
Amp 10000.000
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

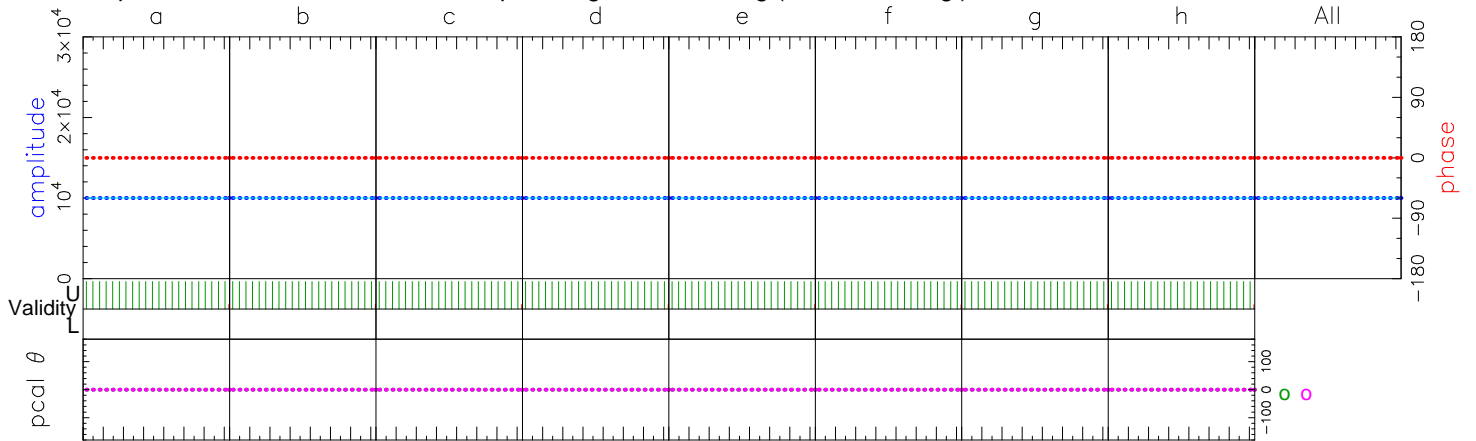


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130444
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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

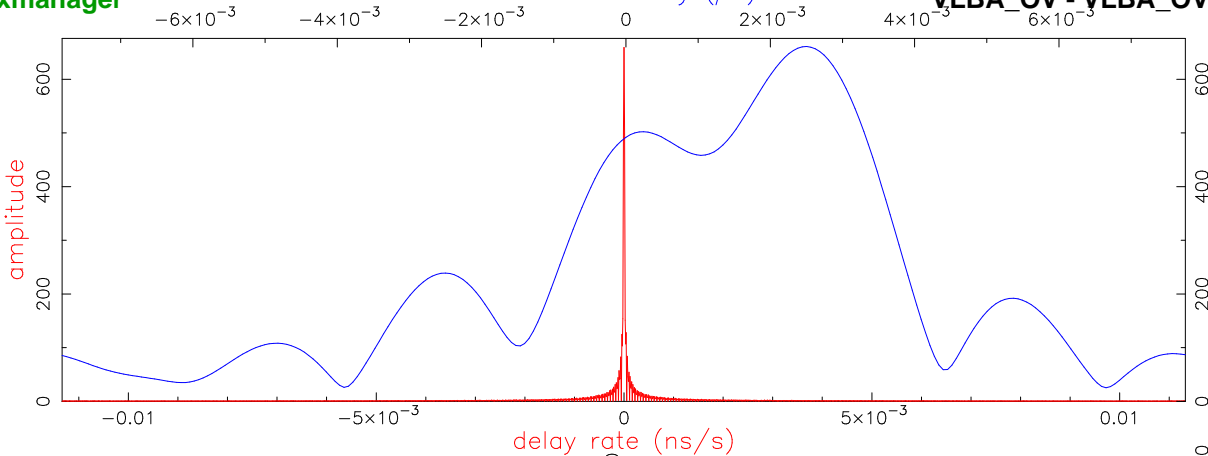


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000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

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

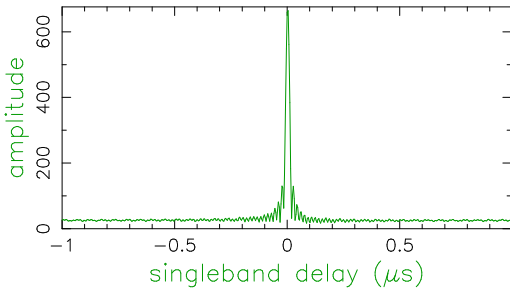
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 0.0 Search (2048X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window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

multiband delay (μ s)

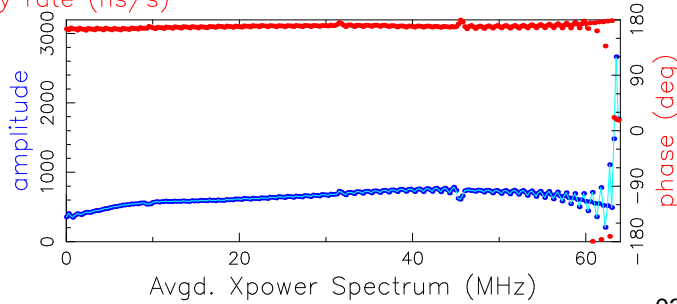


Fringe quality 5

SNR 37887.6
Int time 419.824
Amp 676.186
Phase 163.6
PFD 0.0e+00
Delays (us)
SBD 0.002118
MBD 0.002572
Fringe rate (Hz)
-0.000005
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

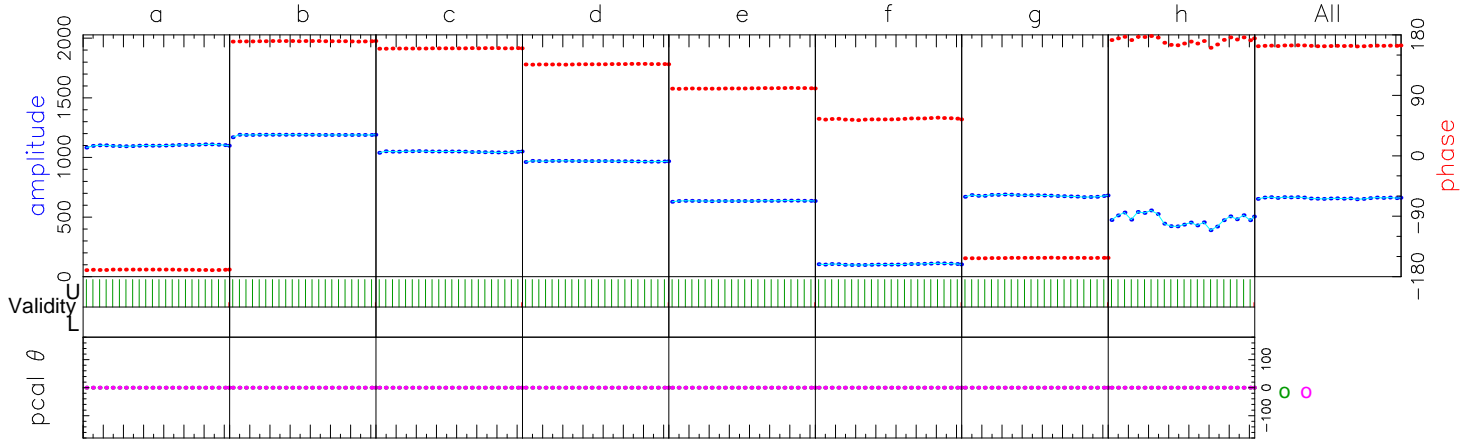


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130448
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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

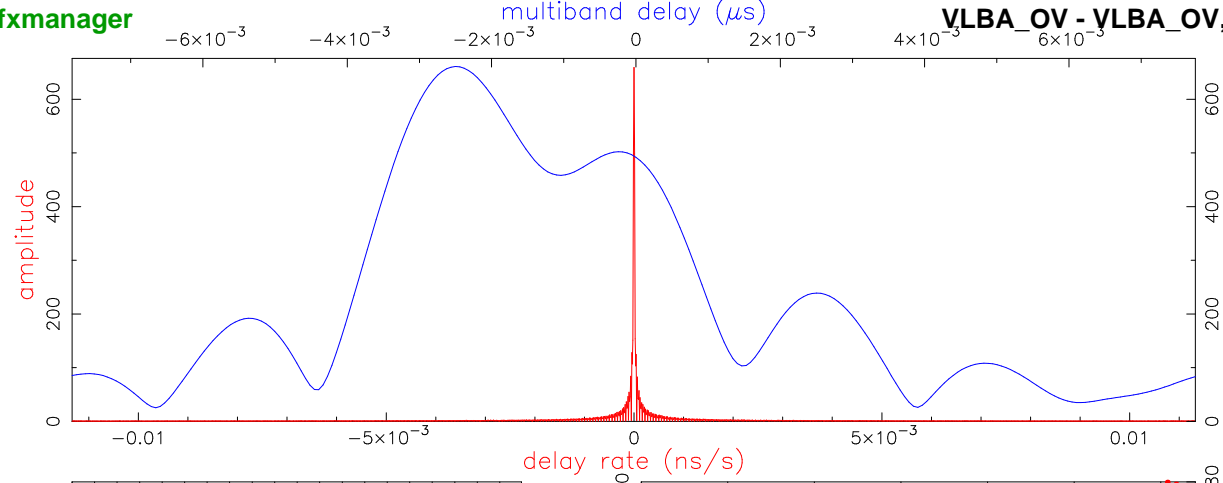


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-169.6	170.4	159.8	136.2	100.3	54.8	-152.0	171.9	Phase	163.6
	1100.9	1188.7	1048.1	968.8	635.5	104.8	679.2	475.9	Ampl.	775.2
	257.5	257.2	257.5	257.4	257.3	259.9	257.5	255.5	Sbd box	257.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

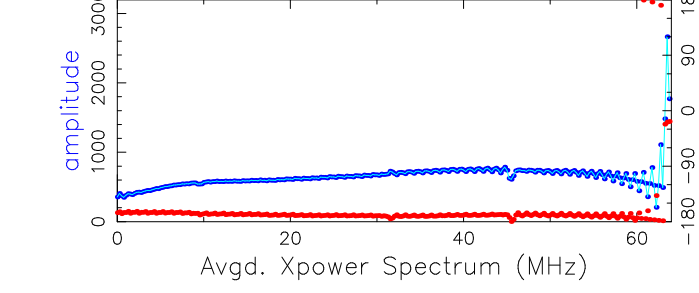
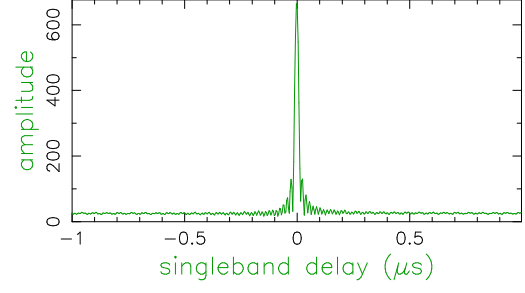
Group delay (usec)(sbd) 2.57209375000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 2.57209E-03 +/- 2.9E-08
 Sband delay (usec) 2.11775000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 2.11775E-03 +/- 2.3E-07
 Phase delay (usec) 5.27548882837E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 5.27549E-06 +/- 9.8E-11
 Delay rate (us/s) -6.16445129038E-11 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -6.16445E-11 +/- 4.0E-13
 Total phase (deg) 163.6 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 163.6 +/- 0.0

RMS Theor. Amplitude 676.186 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.5 0.0 Search (2048X32) 660.269 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 2.6 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 56.9 0.0 Inc. seg. avg. 659.534 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 53.2 0.0 Inc. frq. avg. 775.246 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

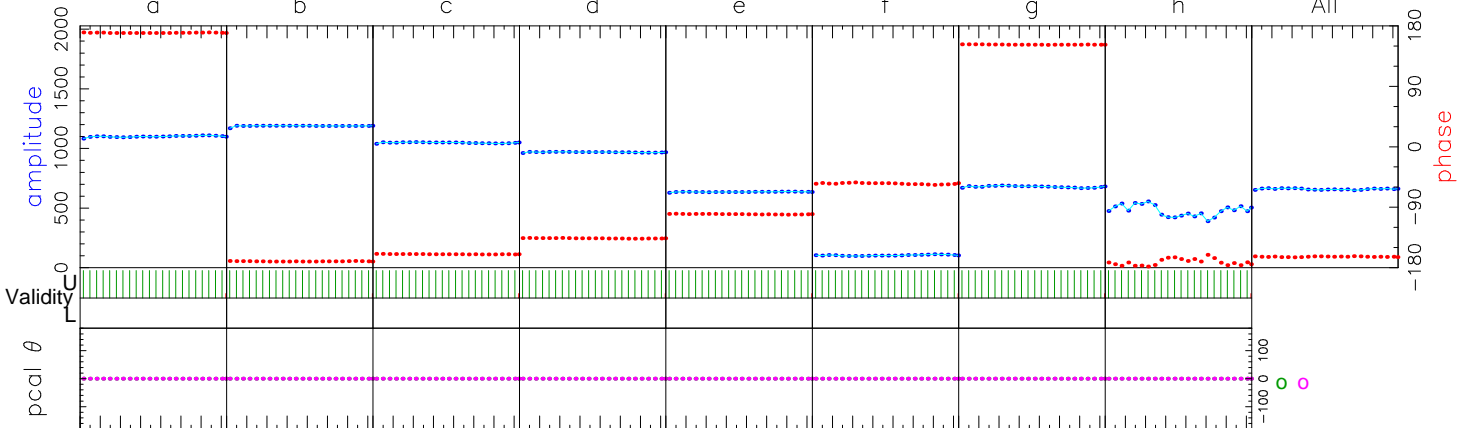
o: az 52.2 el 50.1 pa -88.4 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/oo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/oo.W.359.1X1592



Fringe quality 5
SNR 37887.6
Int time 419.824
Amp 676.186
Phase -163.6
PFD 0.0e+00
Delays (us)
SBD -0.002118
MBD -0.002572
Fringe rate (Hz) 0.000005
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130452
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	169.6	-170.4	-159.8	-136.2	-100.3	-54.8	152.0	-171.9	Phase	-163.6
	1100.9	1188.7	1048.1	968.8	635.5	104.8	679.2	475.9	Ampl.	775.2
	256.5	256.8	256.5	256.6	256.7	254.1	256.5	258.5	Sbd box	256.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.57209375000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-2.57209E-03	+/- 2.9E-08
Sband delay (usec)	-2.11775000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-2.11775E-03	+/- 2.3E-07
Phase delay (usec)	-5.27548882838E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-5.27549E-06	+/- 9.8E-11
Delay rate (us/s)	6.16445129038E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		6.16445E-11	+/- 4.0E-13
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-163.6	+/- 0.0

ph/seg (deg) 0.5 0.0 Amplitude 676.186 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 2.6 0.0 Search (2048X32) 660.269 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 56.9 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 53.2 0.0 Inc. seg. avg. 659.534 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
o: az 52.2 el 50.1 pa -88.4 o: az 52.2 el 50.1 pa -88.4 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/c211c/v1/1234/No0093/oo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/oo.W.381.1X1592 simultaneous interpolator

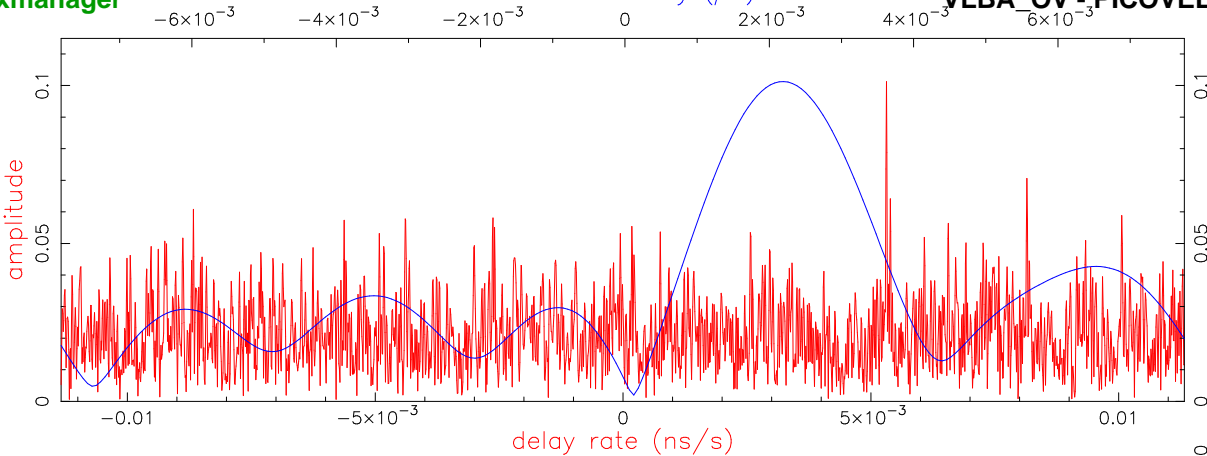
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, oP

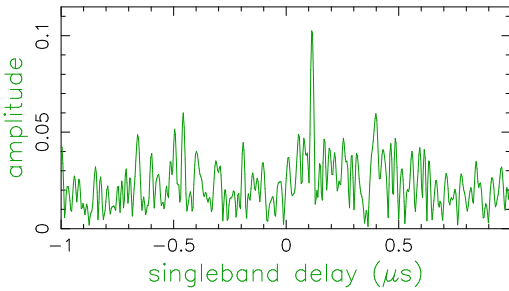
VLBA_OV - PICOVEL, fgroup W, pol LL

multiband delay (μ s)

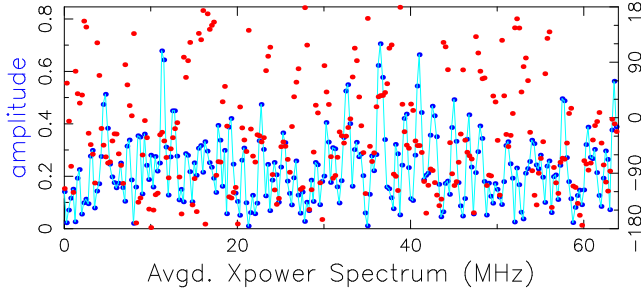


Fringe quality 0

SNR 5.9
 Int time 419.824
 Amp 0.115
 Phase 169.8
 PFD 6.7e-01
 Delays (us)
 SBD 0.115022
 MBD 0.002202
 Fringe rate (Hz)
 0.458548
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

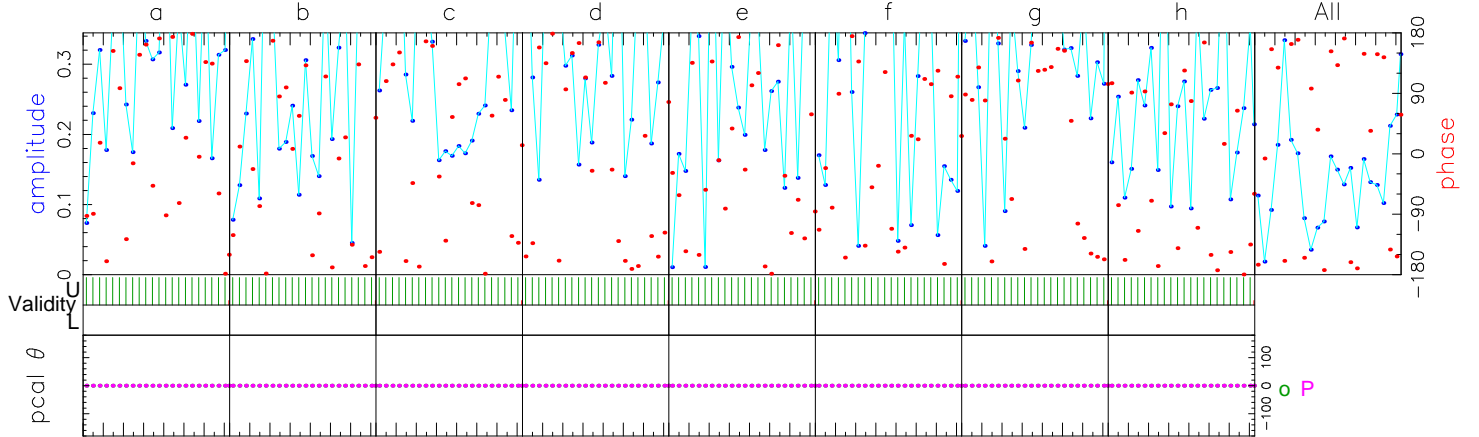


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130442
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-167.6	145.8	155.7	-178.6	179.8	-153.8	151.9	-161.0	Phase	169.8
	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.0	Ampl.	0.1
	111.7	266.8	285.9	286.2	15.2	346.8	411.9	322.2	Sbd box	286.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.51291277060E+03	Apriori delay (usec)	1.51280119341E+03	Resid mbdelay (usec)	2.20219E-03	+/-	1.8E-04
Sband delay (usec)	1.51291621566E+03	Apriori clock (usec)	4.8091373E+00	Resid sbdelay (usec)	1.15022E-01	+/-	1.5E-03
Phase delay (usec)	1.51280119889E+03	Apriori clockrate (us/s)	9.5999998E-07	Resid phdelay (usec)	5.47600E-06	+/-	6.3E-07
Delay rate (us/s)	1.30879485570E+00	Apriori rate (us/s)	1.30878953241E+00	Resid rate (us/s)	5.32329E-06	+/-	2.6E-09
Total phase (deg)	98.0	Apriori accel (us/s/s)	-7.83090767766E-06	Resid phase (deg)	169.8	+/-	19.5

ph/seg (deg)	63.2	Theor.	46.8	Amplitude	0.115 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	74.7	Search (2048X32)	0.100	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	25.9	Inc. seg. avg.	0.113	Inc. frq. avg.	0.105	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	51.5	Inc. frq. avg.	0.105	u,v (fr/asec)	-11928.711 -638.357	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

o: az 52.2 el 50.1 pa -88.4 P: az 308.5 el 45.2 pa 84.1 u,v (fr/asec) -11928.711 -638.357 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/oP..1X1592 Output file: /Exps/c211c/v1/1234/No0093/oP.W.325.1X1592

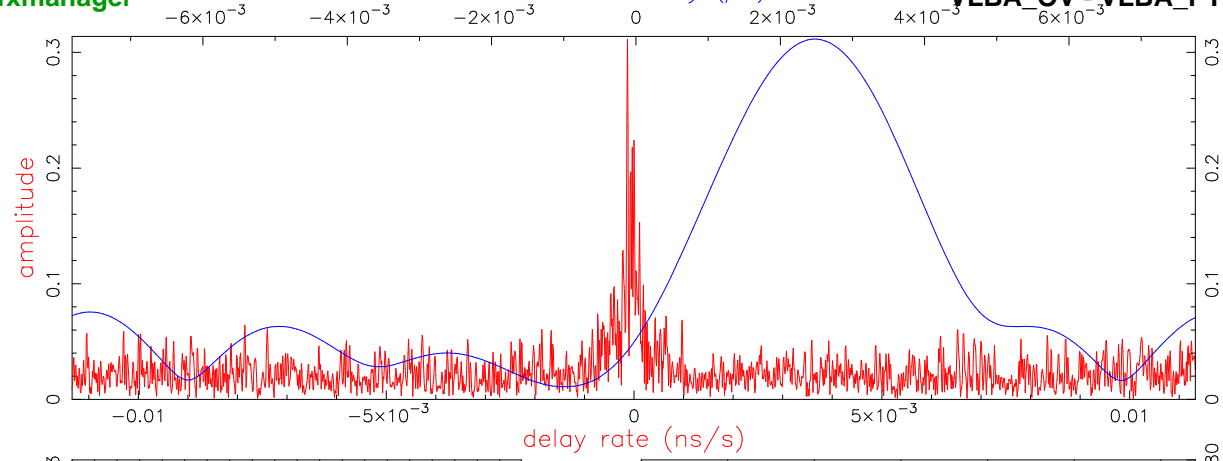
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, op

VLBA_OV - VLBA_PT, fgroup W, pol LL

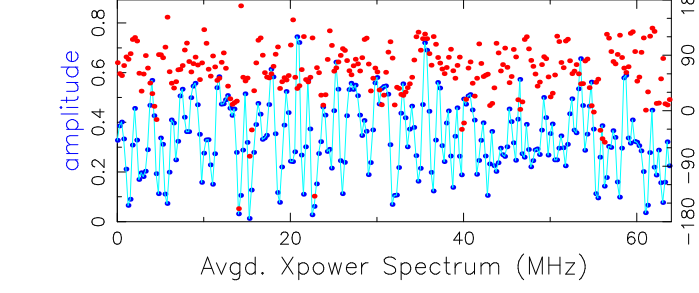
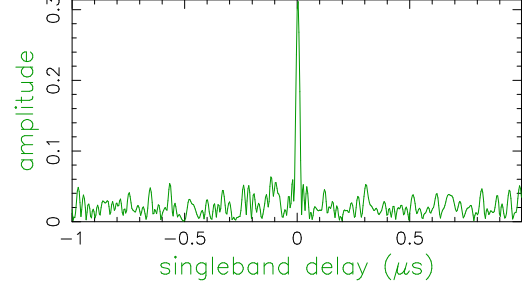
multiband delay (μ s)



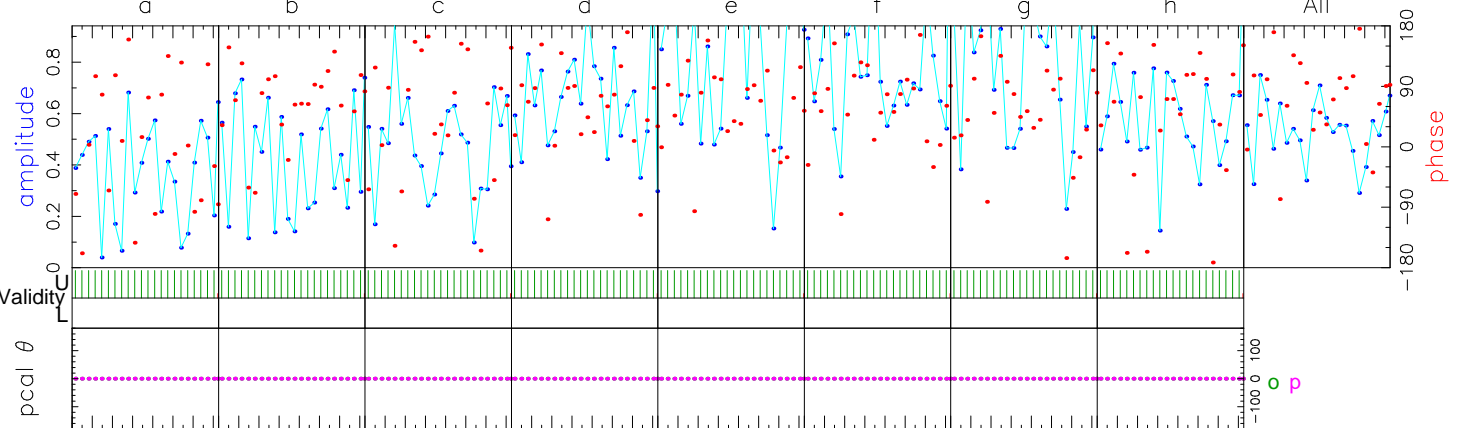
Fringe quality 7

SNR 17.6
 Int time 419.823
 Amp 0.314
 Phase 70.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.002770
 MBD 0.002437
 Fringe rate (Hz) -0.011846
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130442
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-84.5	74.7	82.2	71.3	65.8	62.4	61.8	98.1	Phase	70.6
	0.0	0.3	0.1	0.4	0.5	0.4	0.4	0.3	Ampl.	0.3
	48.2	257.3	355.0	257.5	258.0	257.8	257.5	258.8	Sbd box	257.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.01023177900E+03		Apriori delay (usec)		-1.01023421561E+03		Resid mbdelay (usec)		2.43660E-03	+/- 6.2E-05
Sband delay (usec)	-1.01023144536E+03		Apriori clock (usec)		-1.7879295E+00		Resid sbdelay (usec)		2.77025E-03	+/- 4.9E-04
Phase delay (usec)	-1.01023421333E+03		Apriori clockrate (us/s)		4.7999999E-07		Resid phdelay (usec)		2.27729E-06	+/- 2.1E-07
Delay rate (us/s)	7.30789471315E-02		Apriori rate (us/s)		7.30790846575E-02		Resid rate (us/s)		-1.37526E-07	+/- 8.7E-10
Total phase (deg)			Apriori accel (us/s/s)		8.99169815026E-06		Resid phase (deg)		70.6	+/- 6.5

ph/seg (deg) 60.9 15.6 Search (2048X32) 0.295 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 78.0 27.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 64.7 9.2 Inc. seg. avg. 0.510 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 52.8 16.1 Inc. frq. avg. 0.318 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 52.2 el 50.1 pa -88.4 p: az 48.3 el 54.6 pa -102.0 u,v (fr/asec) -651.202 1109.555 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/op..1X1592 Output file: /Exps/c211c/v1/1234/No0093/op.W.327.1X1592

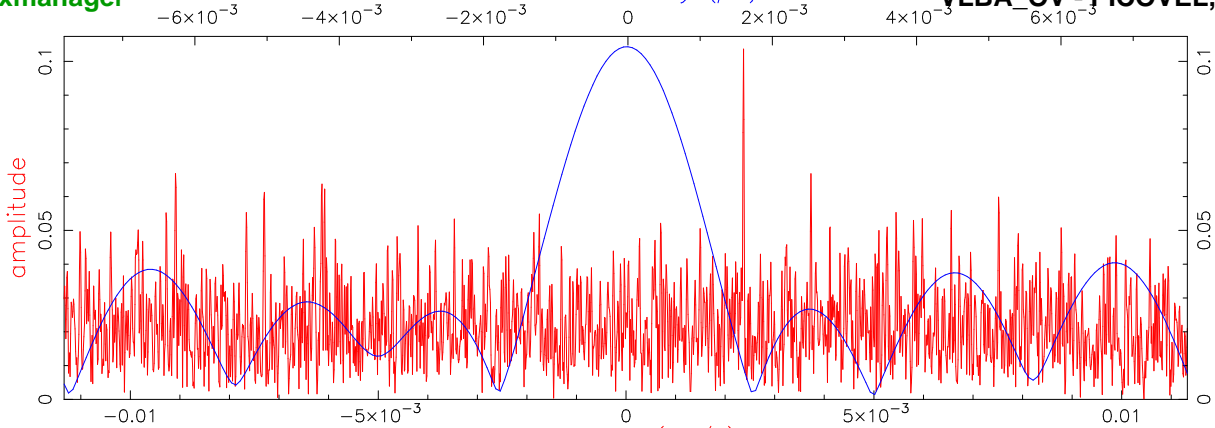
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

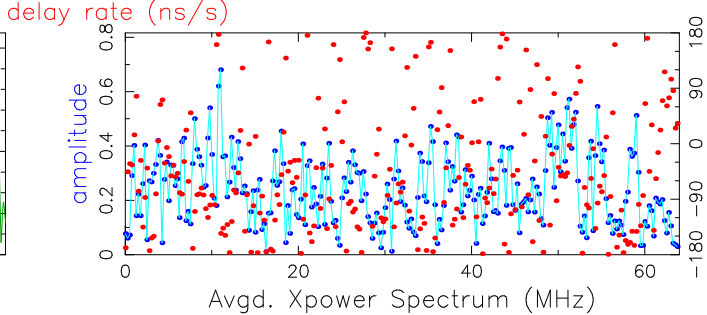
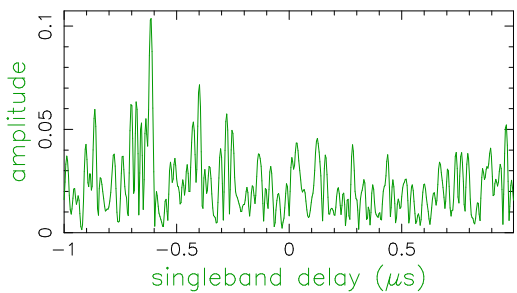
NRAO150.1X1592, No0093, oP

VLBA_OV - PICOVEL, fgroup W, pol RR

multiband delay (μ s)

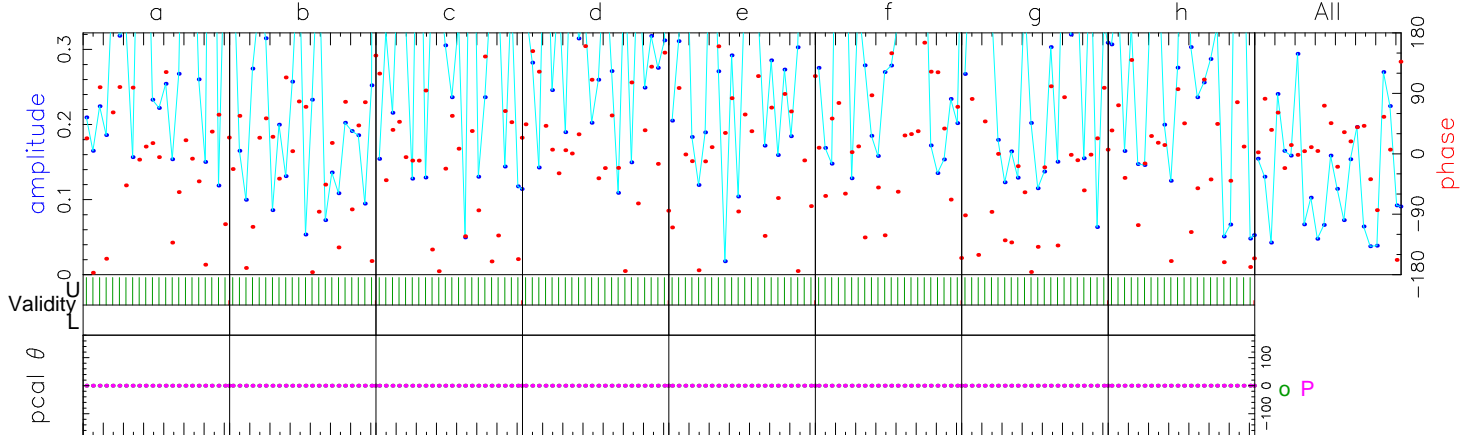


Fringe quality 0
 SNR 5.9
 Int time 419.824
 Amp 0.107
 Phase 23.6
 PFD 5.8e-01
 Delays (us)
 SBD -0.615079
 MBD -0.000135
 Fringe rate (Hz)
 0.204092
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130445
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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

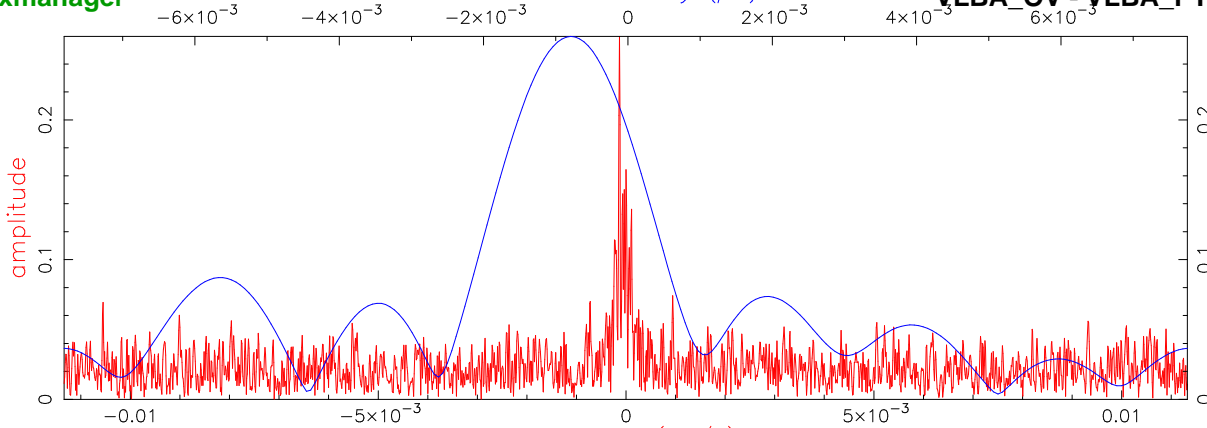


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	13.8	18.3	13.5	26.9	34.2	27.1	6.2	38.3	Phase	23.6
	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	Ampl.	0.1
	99.4	30.2	433.9	62.1	210.4	7.2	124.2	445.9	Sbd box	99.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.51219168350E+03		Apriori delay (usec)		1.51280119341E+03		Resid mbdelay (usec)		-1.34910E-04	+/- 1.8E-04
Sband delay (usec)	1.51218611466E+03		Apriori clock (usec)		4.8091373E+00		Resid sbdelay (usec)		-6.15079E-01	+/- 1.5E-03
Phase delay (usec)	1.51280119417E+03		Apriori clockrate (us/s)		9.5999998E-07		Resid phdelay (usec)		7.61597E-07	+/- 6.3E-07
Delay rate (us/s)	1.30879190172E+00		Apriori rate (us/s)		1.30878953241E+00		Resid rate (us/s)		2.36931E-06	+/- 2.6E-09
Total phase (deg)	311.8		Apriori accel (us/s/s)		-7.83090767766E-06		Resid phase (deg)		23.6	+/- 19.4

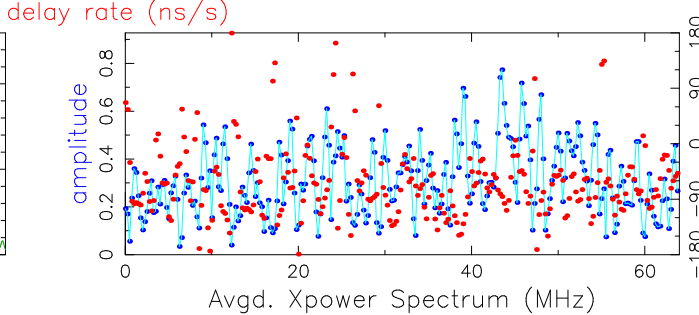
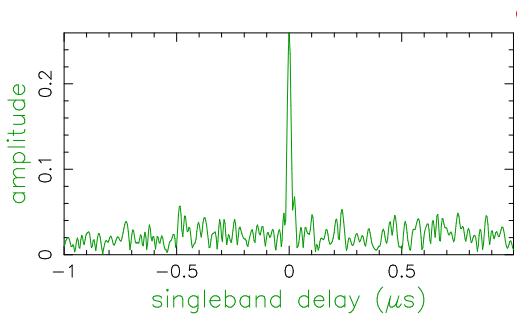
ph/seg (deg) 54.1 46.5 Search (2048X32) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 75.5 81.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 12.1 27.4 Inc. seg. avg. 0.101 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.9 47.9 Inc. frq. avg. 0.096 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 52.2 el 50.1 pa -88.4 P: az 308.5 el 45.2 pa 84.1 u,v (fr/asec) -11928.711 -638.357 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/oP..1X1592 Output file: /Exps/c211c/v1/1234/No0093/oP.W.344.1X1592

multiband delay (μ s)

Fringe quality 9

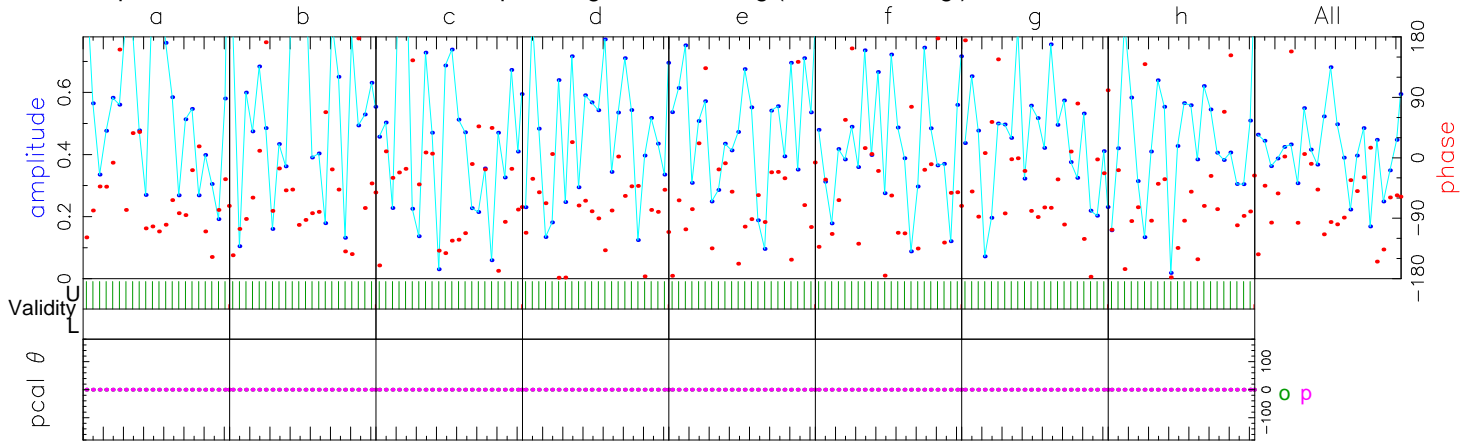


SNR 14.6
Int time 419.823
Amp 0.260
Phase -70.5
PFD 3.4e-39
Delays (us)
SBD -0.000197
MBD -0.000795
Fringe rate (Hz)
-0.011841
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130445
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



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

Group delay (usec)(sbd)	-1.01023501091E+03	Apriori delay (usec)	-1.01023421561E+03	Resid mbdelay (usec)	-7.95303E-04	+/-	7.5E-05
Sband delay (usec)	-1.01023441236E+03	Apriori clock (usec)	-1.7879295E+00	Resid sbdelay (usec)	-1.96750E-04	+/-	5.9E-04
Phase delay (usec)	-1.01023421788E+03	Apriori clockrate (us/s)	4.7999999E-07	Resid phdelay (usec)	-2.27340E-06	+/-	2.5E-07
Delay rate (us/s)	7.30789471910E-02	Apriori rate (us/s)	7.30790846575E-02	Resid rate (us/s)	-1.37467E-07	+/-	1.0E-09
Total phase (deg)	-190.2	Apriori accel (us/s/s)	8.99169815026E-06	Resid phase (deg)	-70.5	+/-	7.9

ph/seg (deg)	54.9	RMS	21.0	Theor.	18.9	Amplitude	0.260 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	72.2	Search (2048X32)	0.242	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	12.5	Inc. seg. avg.	0.390	Inc. frq. avg.	0.259	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	21.0	Inc. frq. avg.	0.259	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags:	256	t_cohere	infinite

o: az 52.2 el 50.1 pa -88.4 p: az 48.3 el 54.6 pa -102.0 u,v (fr/asec) -651.202 1109.555 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/op..1X1592 Output file: /Exps/c211c/v1/1234/No0093/op.W.346.1X1592

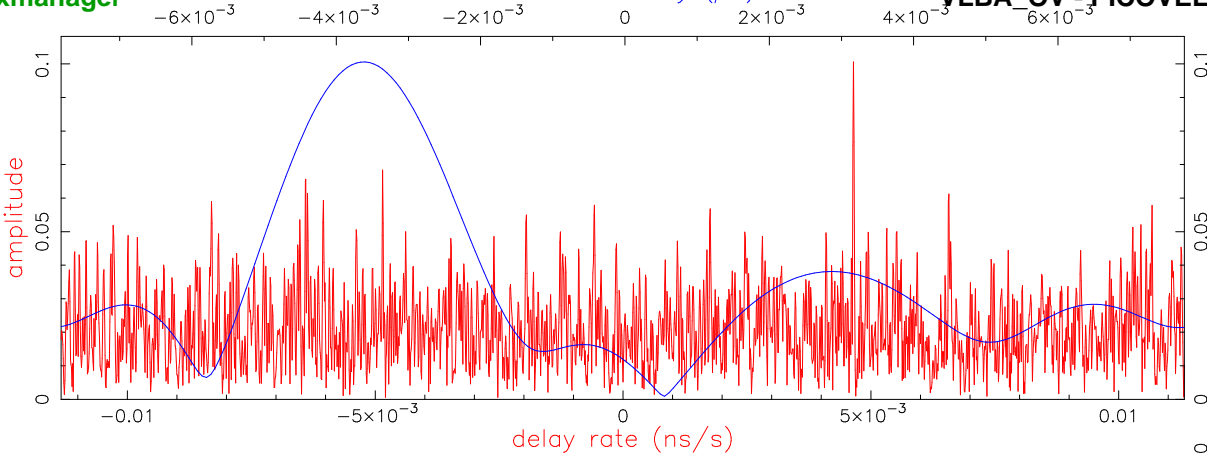
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, oP

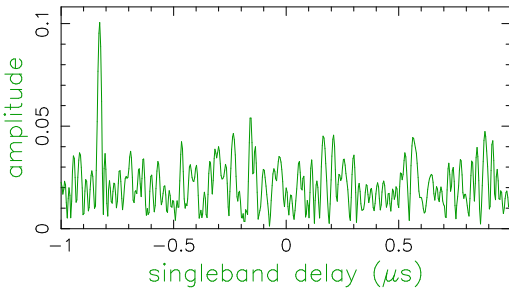
VLBA_OV - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

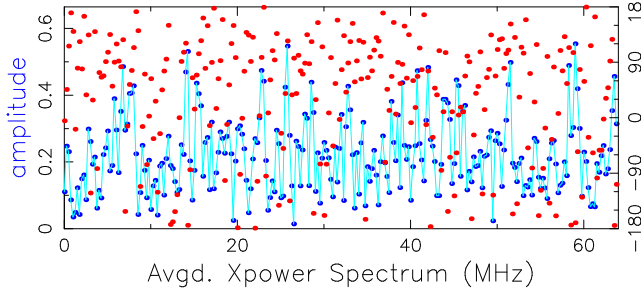


Fringe quality 0

SNR 5.7
 Int time 419.824
 Amp 0.108
 Phase -48.4
 PFD 9.8e-01
 Delays (us)
 SBD -0.828809
 MBD -0.003628
 Fringe rate (Hz)
 0.400714
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

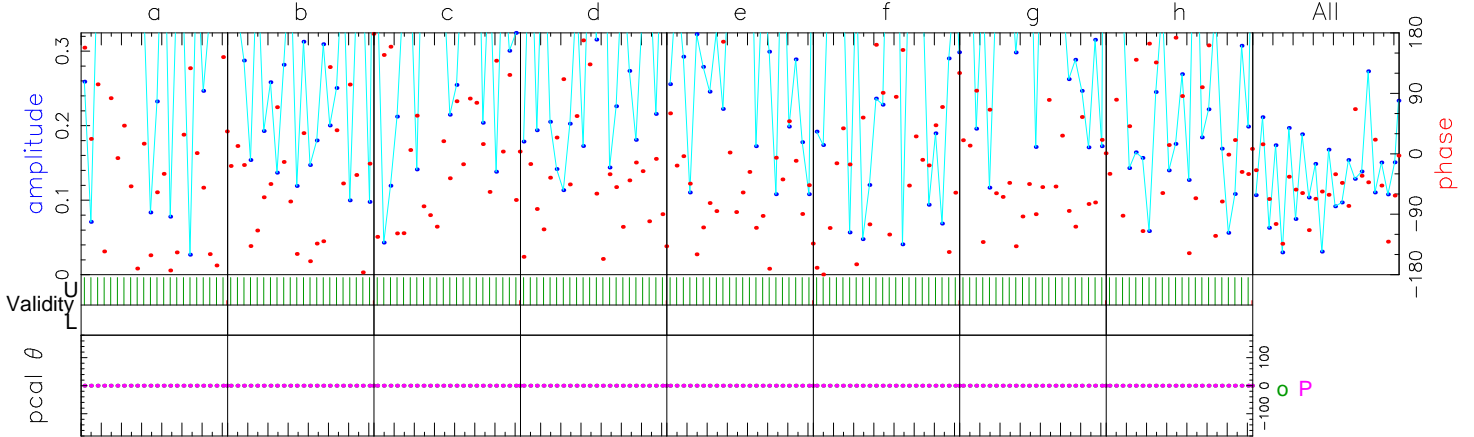


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130448
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

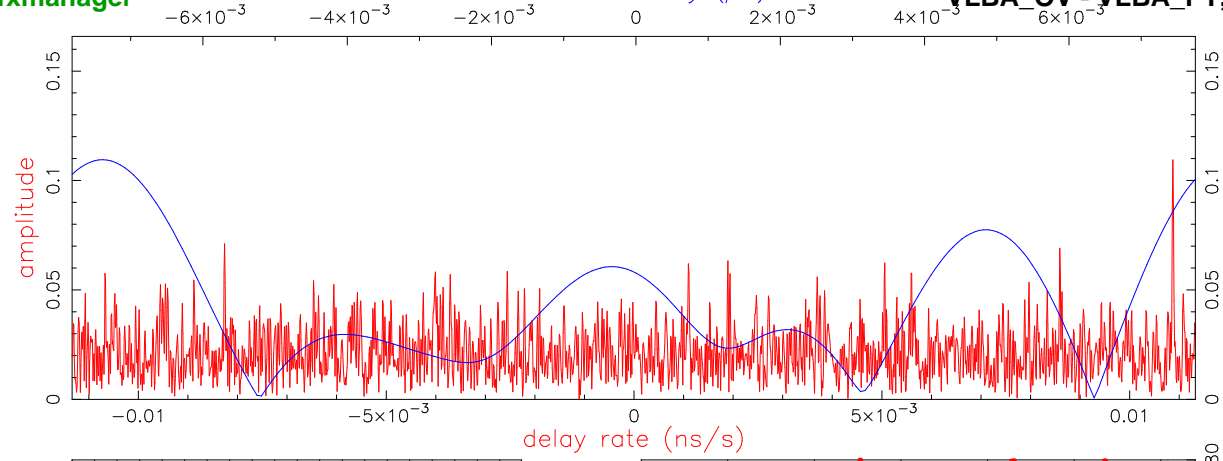
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



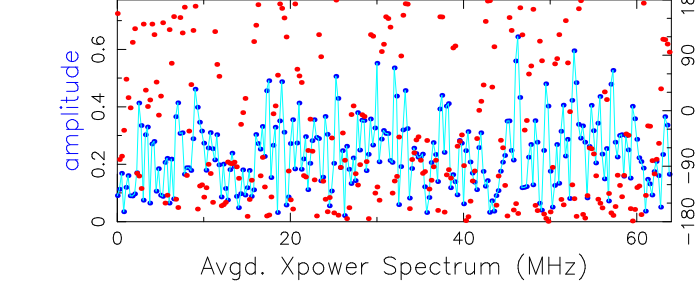
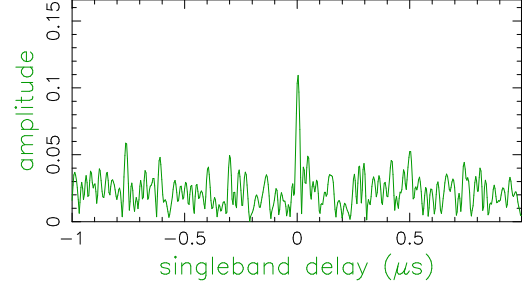
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-16.6	-51.1	-30.0	-75.4	-54.7	-37.6	-40.0	-49.1	Phase	-48.4
	0.0	0.1	0.1	0.1	0.2	0.0	0.2	0.1	Ampl.	0.1
	400.1	483.9	340.9	216.9	44.5	111.3	44.8	88.8	Sbd box	44.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	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)		1.51196944055E+03		Apriori delay (usec)	1.51280119341E+03		Resid mbdelay (usec)	-3.62787E-03	+/-	1.9E-04
Sband delay (usec)		1.51197238391E+03		Apriori clock (usec)	4.8091373E+00		Resid sbdelay (usec)	-8.28809E-01	+/-	1.5E-03
Phase delay (usec)		1.51280119185E+03		Apriori clockrate (us/s)	9.5999998E-07		Resid phdelay (usec)	-1.56118E-06	+/-	6.5E-07
Delay rate (us/s)		1.30879418430E+00		Apriori rate (us/s)	1.30878953241E+00		Resid rate (us/s)	4.65189E-06	+/-	2.7E-09
Total phase (deg)		239.8		Apriori accel (us/s/s)	-7.83090767766E-06		Resid phase (deg)	-48.4	+/-	20.3

ph/seg (deg) 46.2 48.6 Search (2048X32) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 65.2 84.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 19.6 28.7 Inc. seg. avg. 0.105 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 57.6 50.0 Inc. frq. avg. 0.099 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 52.2 el 50.1 pa -88.4 P: az 308.5 el 45.2 pa 84.1 u,v (fr/asec) -11928.711 -638.357 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/oP..1X1592 Output file: /Exps/c211c/v1/1234/No0093/oP.W.364.1X1592

multiband delay (μ s)

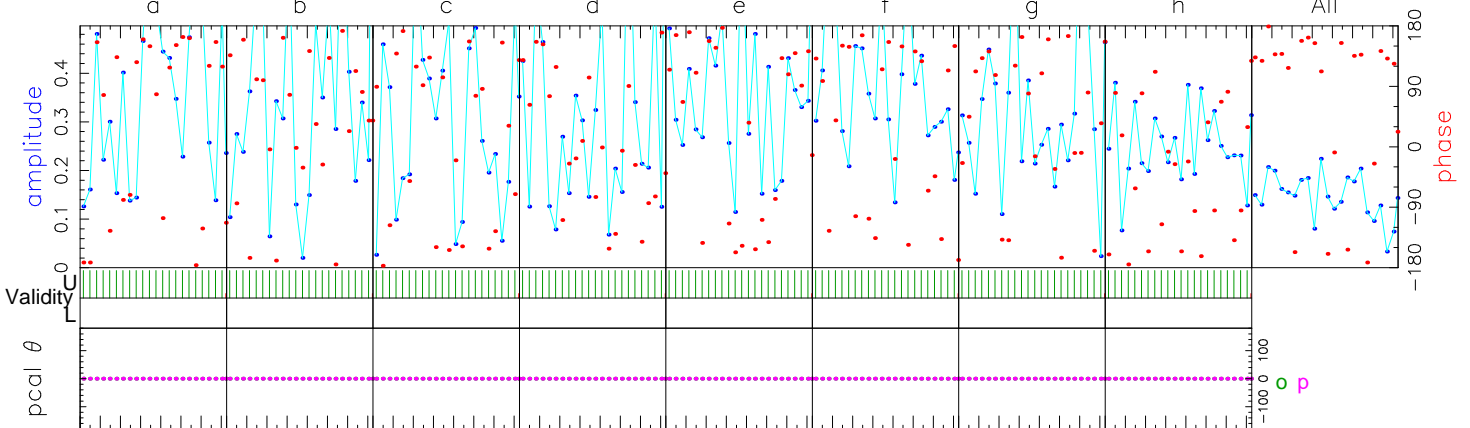


Fringe quality 0
SNR 6.1
Int time 419.823
Amp 0.166
Phase 150.6
PFD 1.9e-01
Delays (us)
SBD 0.003212
MBD 0.008191
Fringe rate (Hz) 0.937826
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build 2021:303:151428
2021:304:130450
2021:252:122852
RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



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

Group delay (usec)(sbd) -1.01022602426E+03 Apriori delay (usec) -1.01023421561E+03 Resid mbdelay (usec) 8.19134E-03 +/- 1.8E-04
 Sband delay (usec) -1.01023100336E+03 Apriori clock (usec) -1.7879295E+00 Resid sbdelay (usec) 3.21225E-03 +/- 1.4E-03
 Phase delay (usec) -1.01023421075E+03 Apriori clockrate (us/s) 4.7999999E-07 Resid phdelay (usec) 4.85636E-06 +/- 6.0E-07
 Delay rate (us/s) 7.30899718820E-02 Apriori rate (us/s) 7.30790846575E-02 Resid rate (us/s) 1.08872E-05 +/- 2.5E-09
 Total phase (deg) 30.9 Apriori accel (us/s/s) 8.99169815026E-06 Resid phase (deg) 150.6 +/- 18.6

ph/seg (deg) 58.2 44.7 RMS Theor. Amplitude 0.166 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 54.6 78.0 Search (2048X32) 0.105 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 81.7 26.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 67.6 46.0 Inc. seg. avg. 0.170 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.175 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 52.2 el 50.1 pa -88.4 p: az 48.3 el 54.6 pa -102.0 u,v (fr/asec) -651.202 1109.555 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/op..1X1592 Output file: /Exps/c211c/v1/1234/No0093/op.W.367.1X1592

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

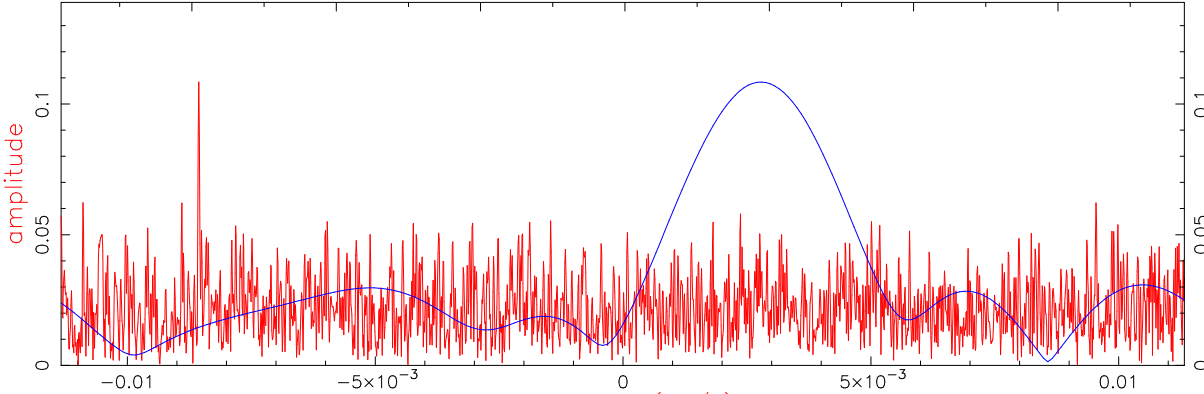
NRAO150.1X1592, No0093, oP

VLBA_OV - PICOVEL, fgroup W, pol RL

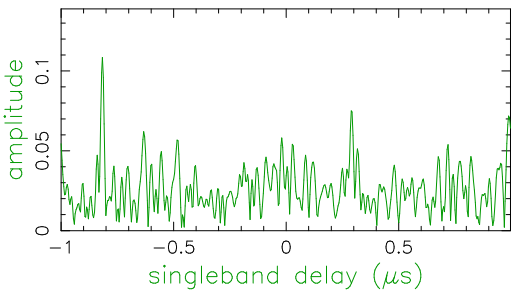
multiband delay (μ s)

-6×10^{-3} -4×10^{-3} -2×10^{-3} 0 2×10^{-3} 4×10^{-3} 6×10^{-3}

Fringe quality 0

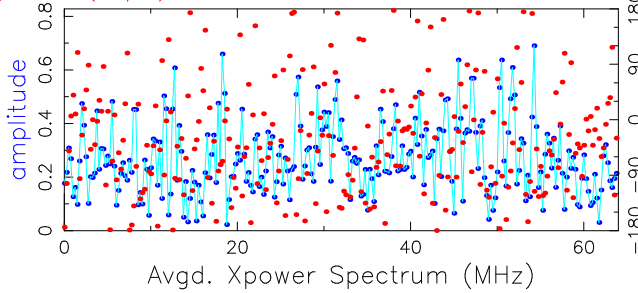


SNR 6.1
Int time 419.824
Amp 0.139
Phase -131.4
PFD 2.7e-01
Delays (us)
SBD -0.816699
MBD 0.001876
Fringe rate (Hz)
-0.738383
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



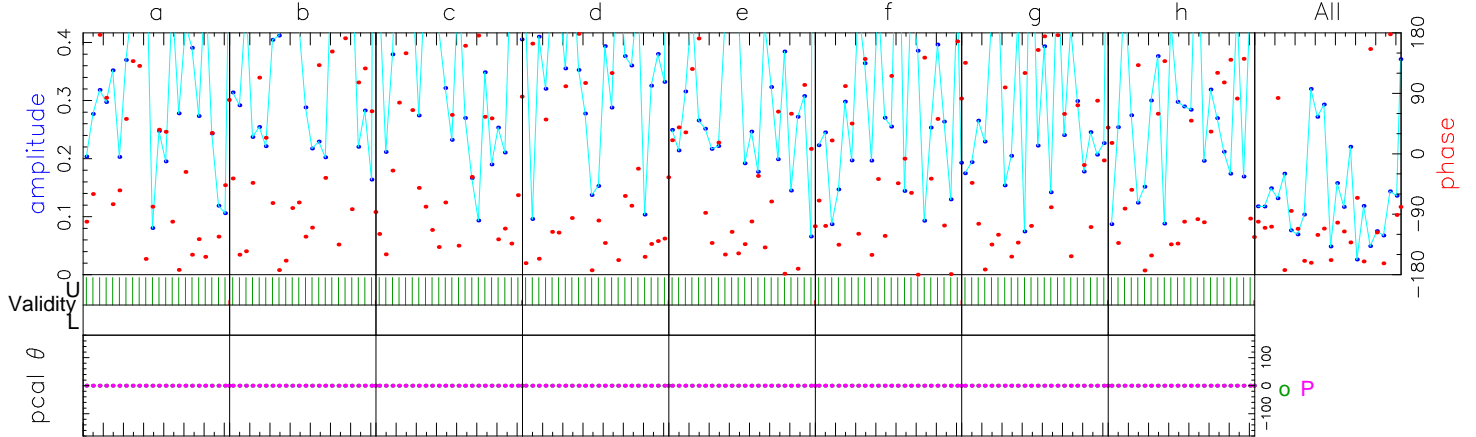
singleband delay (μ s)

delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130452
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-146.5	-133.5	-110.6	-131.5	-141.6	-99.7	-145.6	-127.8	Phase	-131.4
	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.1	Ampl.	0.1
	56.9	159.4	441.7	47.5	332.1	300.0	263.8	452.0	Sbd box	47.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.51199056962E+03		Apriori delay (usec)		1.51280119341E+03		Resid mbdelay (usec)		1.87621E-03	+/- 1.8E-04
Sband delay (usec)	1.51198449441E+03		Apriori clock (usec)		4.8091373E+00		Resid sbdelay (usec)		-8.16699E-01	+/- 1.4E-03
Phase delay (usec)	1.51280118918E+03		Apriori clockrate (us/s)		9.5999998E-07		Resid phdelay (usec)		-4.23661E-06	+/- 6.1E-07
Delay rate (us/s)	1.30878096052E+00		Apriori rate (us/s)		1.30878953241E+00		Resid rate (us/s)		-8.57190E-06	+/- 2.5E-09
Total phase (deg)	156.8		Apriori accel (us/s/s)		-7.83090767766E-06		Resid phase (deg)		-131.4	+/- 18.9

ph/seg (deg) 46.4 45.2 Search (2048X32) 0.105 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 78.3 78.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 18.2 26.7 Inc. seg. avg. 0.134 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.7 46.5 Inc. frq. avg. 0.129 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 52.2 el 50.1 pa -88.4 P: az 308.5 el 45.2 pa 84.1 u,v (fr/asec) -11928.711 -638.357 ion window (TEC) 0.00 0.00
 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/oP..1X1592 Output file: /Exps/c211c/v1/1234/No0093/oP.W.382.1X1592

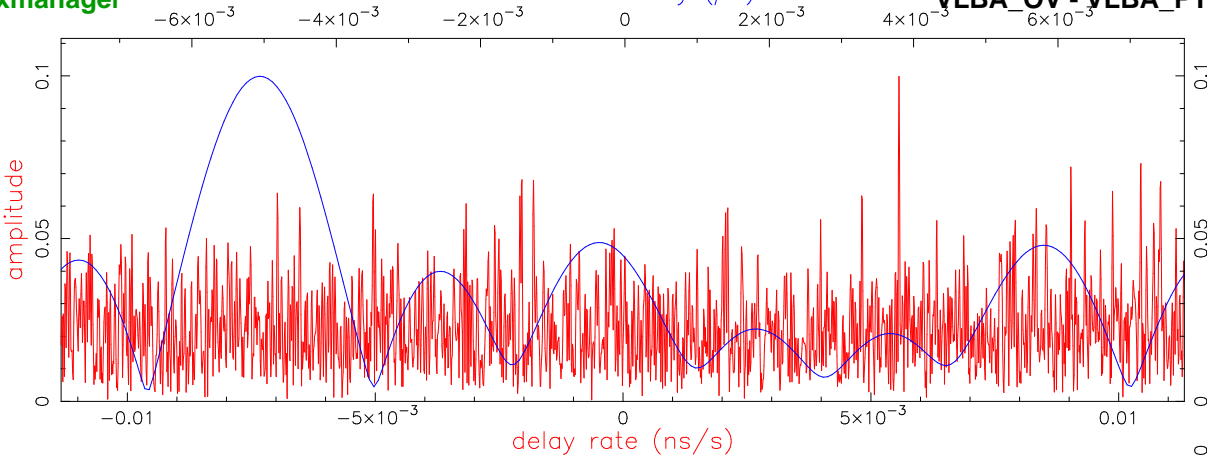
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, op

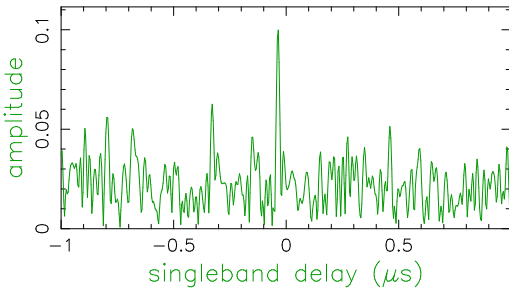
VLBA_OV - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

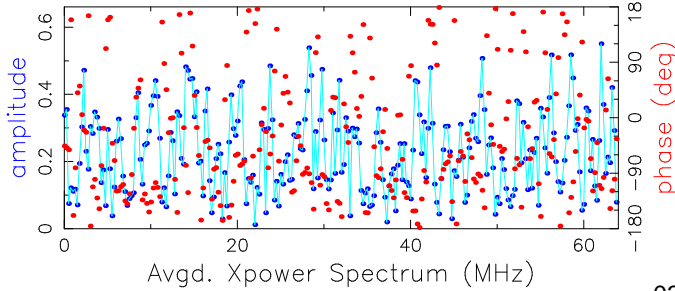


Fringe quality 0

SNR 5.6
Int time 419.823
Amp 0.112
Phase -89.4
PFD 9.8e-01
Delays (us)
SBD -0.036291
MBD -0.005086
Fringe rate (Hz) 0.480620
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

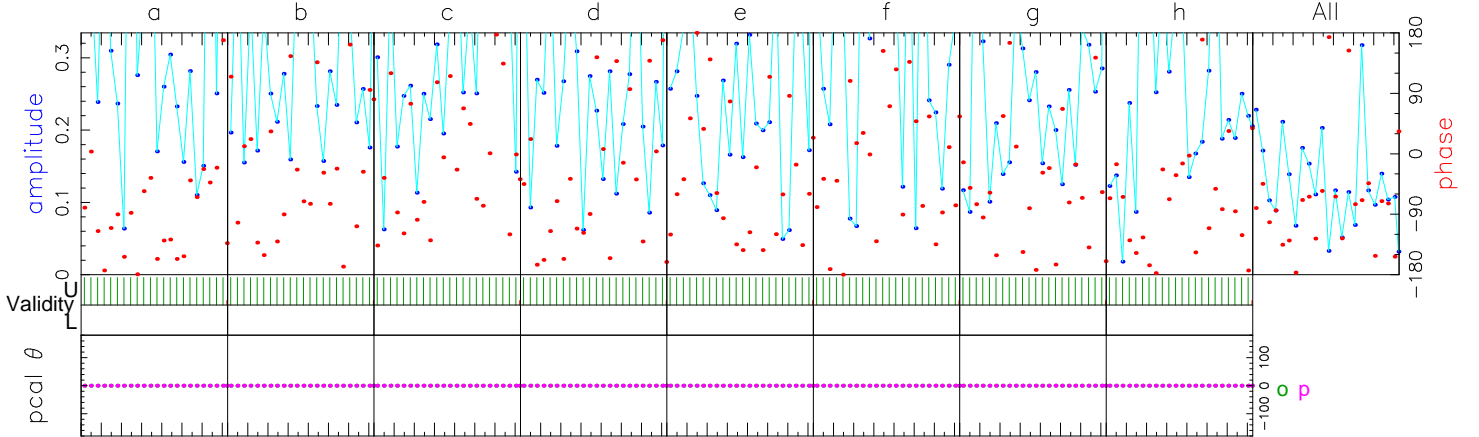


delay rate (ns/s)



Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180000.00
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130453
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-92.6	-88.2	-84.2	-94.0	-90.8	-68.2	-86.8	-90.4	Phase	-89.4
	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.2	Ampl.	0.1
	247.0	398.0	473.3	171.5	327.4	295.4	381.2	168.9	Sbd box	247.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.01027055154E+03			Apriori delay (usec)	-1.01023421561E+03			Resid mbdelay (usec)	-5.08593E-03	+/- 1.9E-04
Sband delay (usec)	-1.01027050686E+03			Apriori clock (usec)	-1.7879295E+00			Resid sbdelay (usec)	-3.62912E-02	+/- 1.5E-03
Phase delay (usec)	-1.01023421849E+03			Apriori clockrate (us/s)	4.7999999E-07			Resid phdelay (usec)	-2.88316E-06	+/- 6.5E-07
Delay rate (us/s)	7.30846641803E-02			Apriori rate (us/s)	7.30790846575E-02			Resid rate (us/s)	5.57952E-06	+/- 2.7E-09
Total phase (deg)		-209.1		Apriori accel (us/s/s)	8.99169815026E-06			Resid phase (deg)	-89.4	+/- 20.3

ph/seg (deg) 50.2 48.7 Search (2048X32) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 70.9 85.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 9.3 28.7 Inc. seg. avg. 0.107 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 54.3 50.1 Inc. frq. avg. 0.099 Data rate (Mbit/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 o: az 52.2 el 50.1 pa -88.4 p: az 48.3 el 54.6 pa -102.0 u,v (fr/asec) -651.202 1109.555 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/op..1X1592 Output file: /Exps/c211c/v1/1234/No0093/op.W.386.1X1592

Mk4/DiFX fourfit 3.21 rev 2937

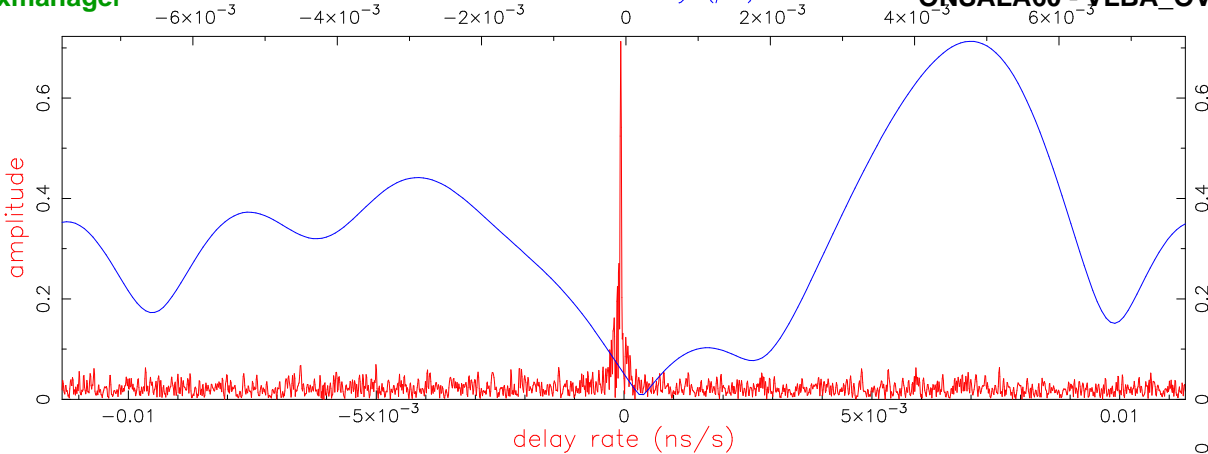
fxmanager

NRAO150.1X1592, No0093, Xo

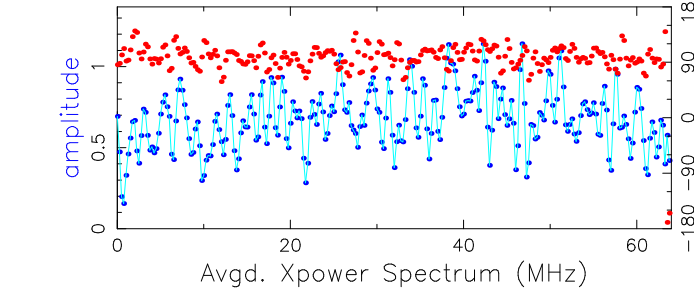
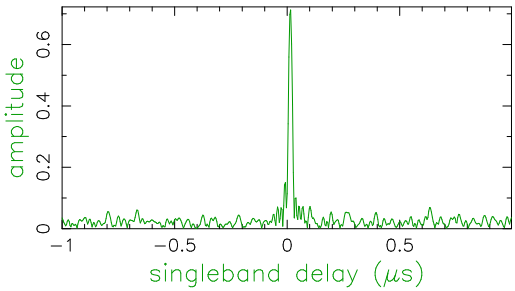
ONSALA60 - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 4

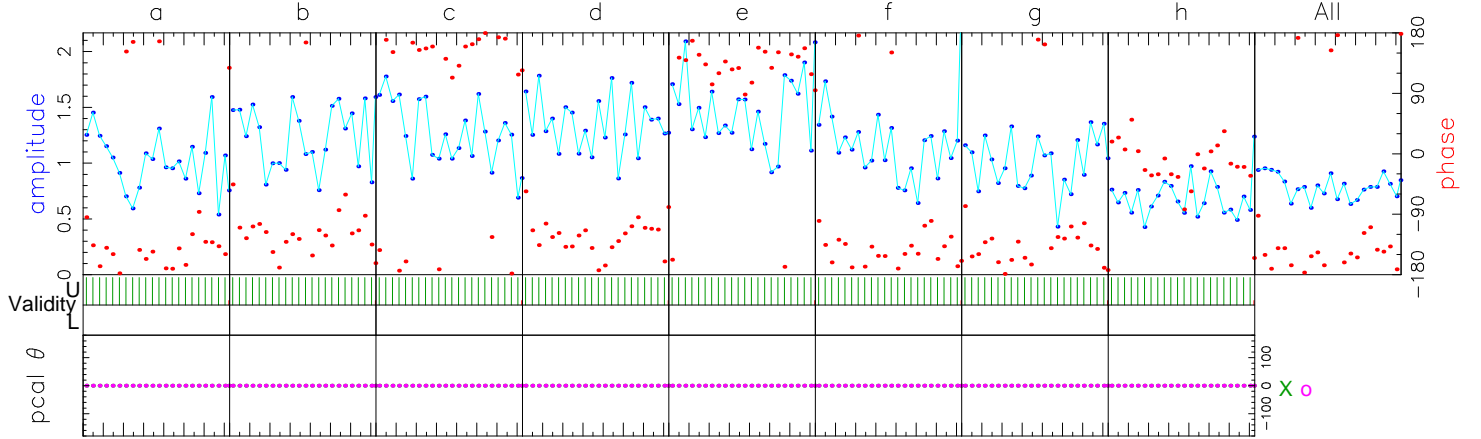


SNR 40.5
 Int time 419.789
 Amp 0.723
 Phase -153.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.014123
 MBD 0.004749
 Fringe rate (Hz)
 -0.005629
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130443
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-149.1	-116.8	168.2	-123.8	141.2	-146.2	-144.8	-12.0	Phase	-153.0
	0.9	1.1	1.2	1.2	1.3	1.0	0.9	0.6	Ampl.	1.0
	260.5	260.8	260.7	261.0	261.1	261.2	261.4	262.0	Sbd box	260.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-9.28524420036E+02		Apriori delay (usec)		-9.28544794260E+02		Resid mbdelay (usec)		4.74922E-03	+/- 2.7E-05
Sband delay (usec)	-9.28530671760E+02		Apriori clock (usec)		5.2750023E+01		Resid sbdelay (usec)		1.41225E-02	+/- 2.1E-04
Phase delay (usec)	-9.28544799195E+02		Apriori clockrate (us/s)		1.6800000E-07		Resid phdelay (usec)		-4.93505E-06	+/- 9.1E-08
Delay rate (us/s)	-1.13355662510E+00		Apriori rate (us/s)		-1.13355655976E+00		Resid rate (us/s)		-6.53446E-08	+/- 3.8E-10
Total phase (deg)			Apriori accel (us/s/s)		2.60558912676E-05		Resid phase (deg)		-153.0	+/- 2.8

RMS Theor. Amplitude 0.723 +/- 0.018
 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 Pcal rate: 0.000E+00, 0.000E+00 (us/s)
 Pcal rate: 0.000E+00, 0.000E+00 (us/s)
 Search (2048X32) 0.708
 Interp. 0.000
 Bits/sample: 2x2 SampCntNorm: enabled
 Sample rate(MISamp/s): 128
 Data rate(Mb/s): 2048
 nlags: 256 t_cohere infinite
 sb window (us) -1.000 1.000
 mb window (us) -0.008 0.008
 dr window (ns/s) -0.011 0.011
 ion window (TEC) 0.00 0.00

ph/seg (deg) 25.4 6.8
 amp/seg (%) 17.5 11.8
 ph/frq (deg) 68.3 4.0
 amp/frq (%) 50.1 7.0

Inc. seg. avg. 0.786
 Inc. frq. avg. 1.014

X: az 295.8 el 47.2 pa 50.2 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 10359.641 3758.159 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Xo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Xo.W.336.1X1592

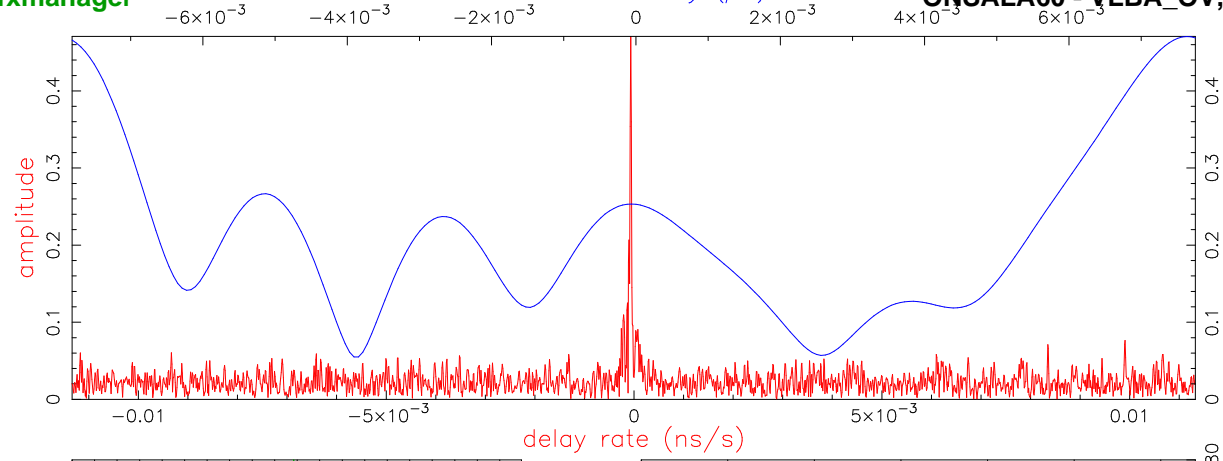
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

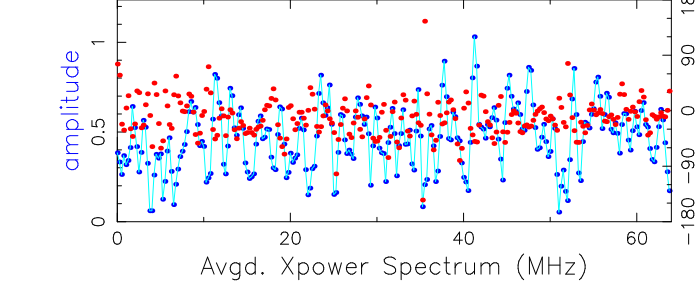
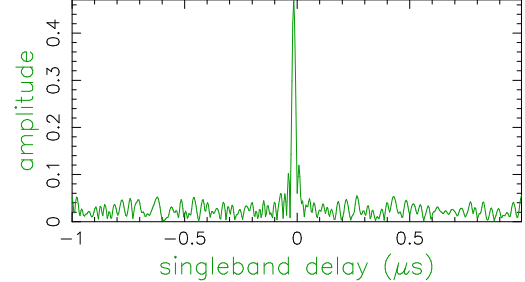
NRAO150.1X1592, No0093, Xo

ONSALA60 - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

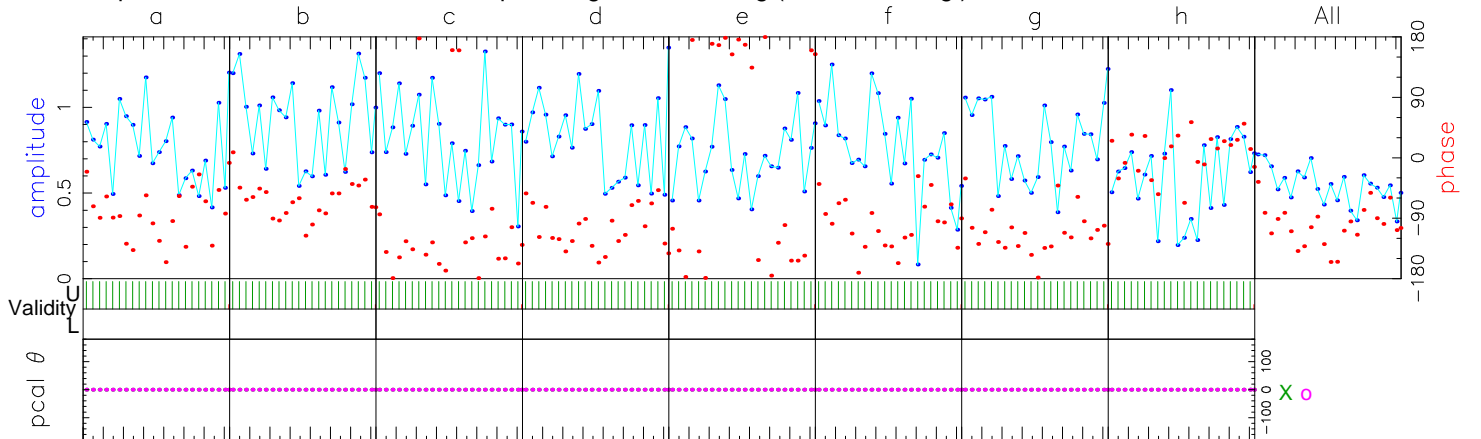


Fringe quality 6
 SNR 26.4
 Int time 419.789
 Amp 0.471
 Phase -99.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.015420
 MBD -0.007984
 Fringe rate (Hz)
 -0.005721
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130447
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-83.4	-58.2	-141.2	-102.5	-169.2	-98.3	-108.6	10.5	Phase	-99.0
	0.6	0.8	0.7	0.7	0.6	0.6	0.7	0.5	Ampl.	0.7
	253.5	253.0	253.0	253.3	254.2	253.6	254.5	255.4	Sbd box	253.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-9.28552778729E+02		Apriori delay (usec)		-9.28544794260E+02		Resid mbdelay (usec)		-7.98447E-03	+/- 4.1E-05
Sband delay (usec)	-9.28560214010E+02		Apriori clock (usec)		5.2750023E+01		Resid sbdelay (usec)		-1.54197E-02	+/- 3.3E-04
Phase delay (usec)	-9.28544797453E+02		Apriori clockrate (us/s)		1.6800000E-07		Resid phdelay (usec)		-3.19345E-06	+/- 1.4E-07
Delay rate (us/s)	-1.13355662618E+00		Apriori rate (us/s)		-1.13355655976E+00		Resid rate (us/s)		-6.64188E-08	+/- 5.8E-10
Total phase (deg)			Apriori accel (us/s/s)		2.60558912676E-05		Resid phase (deg)		-99.0	+/- 4.3

ph/seg (deg) 29.7 10.4 Search (2048X32) 0.466 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 27.6 18.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 58.8 6.1 Inc. seg. avg. 0.534 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 44.1 10.7 Inc. frq. avg. 0.659 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 295.8 el 47.2 pa 50.2 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 10359.641 3758.159 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Xo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Xo.W.356.1X1592

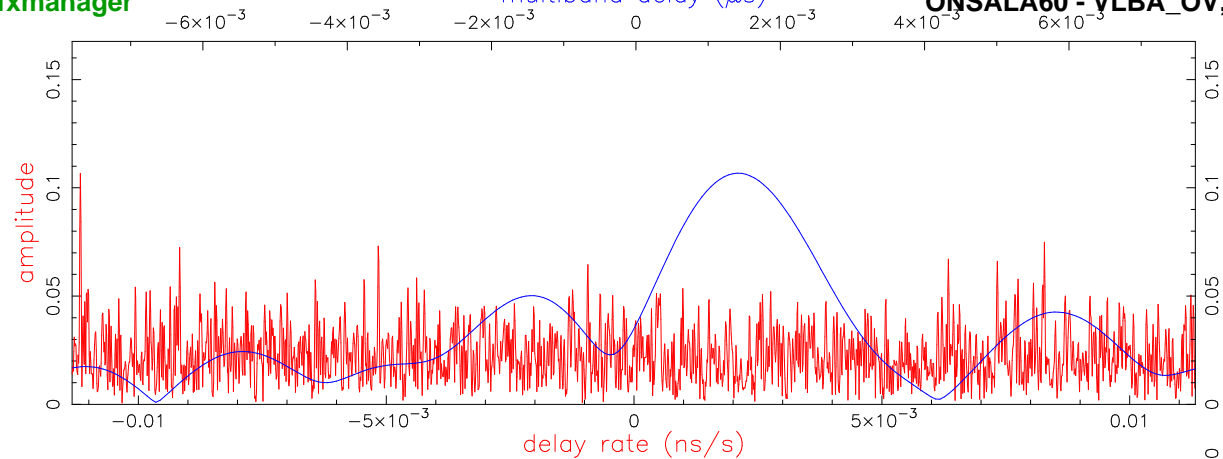
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, Xo

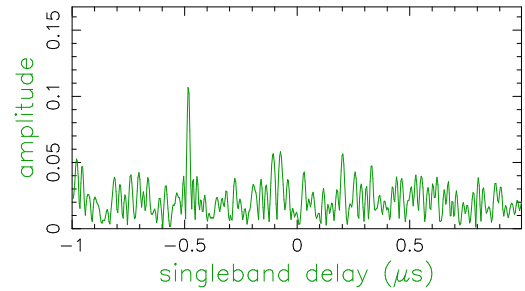
ONSALA60 - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

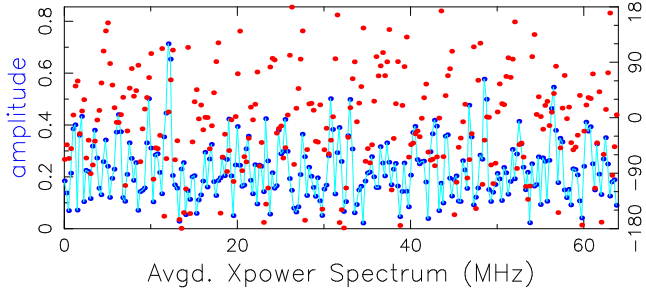


Fringe quality 0

SNR 6.1
 Int time 419.789
 Amp 0.168
 Phase 173.3
 PFD 3.0e-01
 Delays (us)
 SBD -0.483083
 MBD 0.001465
 Fringe rate (Hz)
 -0.963845
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

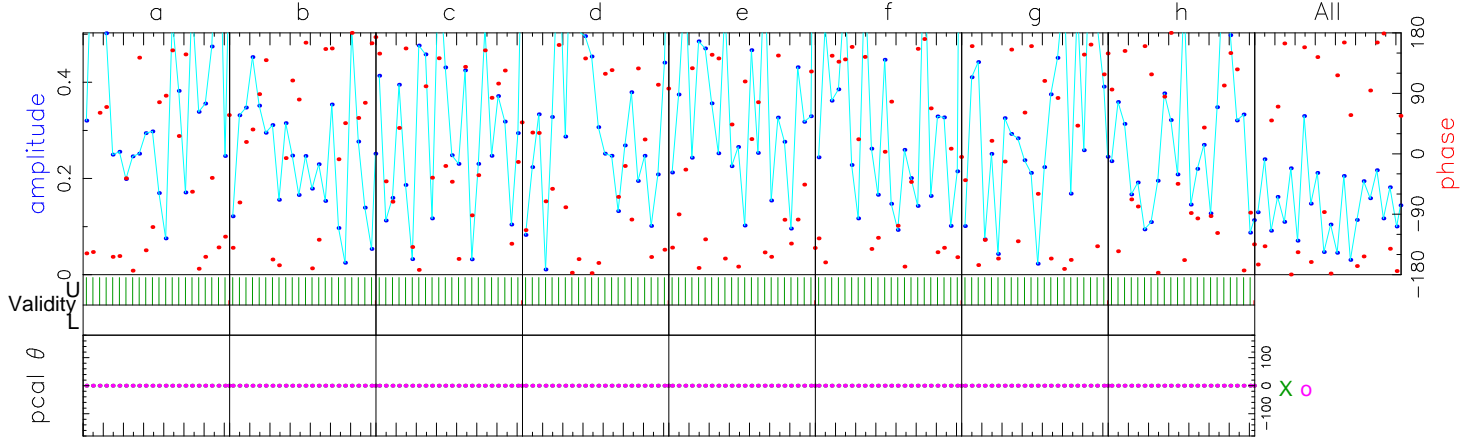


delay rate (ns/s)



Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130451
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-152.8	130.9	122.7	-178.6	-149.8	173.5	158.5	172.3	Phase	173.3
	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	Ampl.	0.2
	385.9	86.4	409.4	395.7	498.8	1.4	232.1	335.2	Sbd box	133.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-9.29027704580E+02		Apriori delay (usec)		-9.28544794260E+02		Resid mbdelay (usec)		1.46468E-03	+/- 1.8E-04
Sband delay (usec)	-9.29027877760E+02		Apriori clock (usec)		5.2750023E+01		Resid sbdelay (usec)		-4.83083E-01	+/- 1.4E-03
Phase delay (usec)	-9.28544788672E+02		Apriori clockrate (us/s)		1.6800000E-07		Resid phdelay (usec)		5.58775E-06	+/- 6.1E-07
Delay rate (us/s)	-1.13356774904E+00		Apriori rate (us/s)		-1.1335655976E+00		Resid rate (us/s)		-1.11893E-05	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		2.60558912676E-05		Resid phase (deg)		173.3	+/- 18.9

	RMS	Theor.	Amplitude	0.168 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	56.8	45.4	Search (2048X32)	0.103	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	75.5	79.2	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	34.5	26.8	Inc. seg. avg.	0.173	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	25.4	46.7	Inc. frq. avg.	0.168					

X: az 295.8 el 47.2 pa 50.2 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 10359.641 3758.159 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Xo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Xo.W.376.1X1592

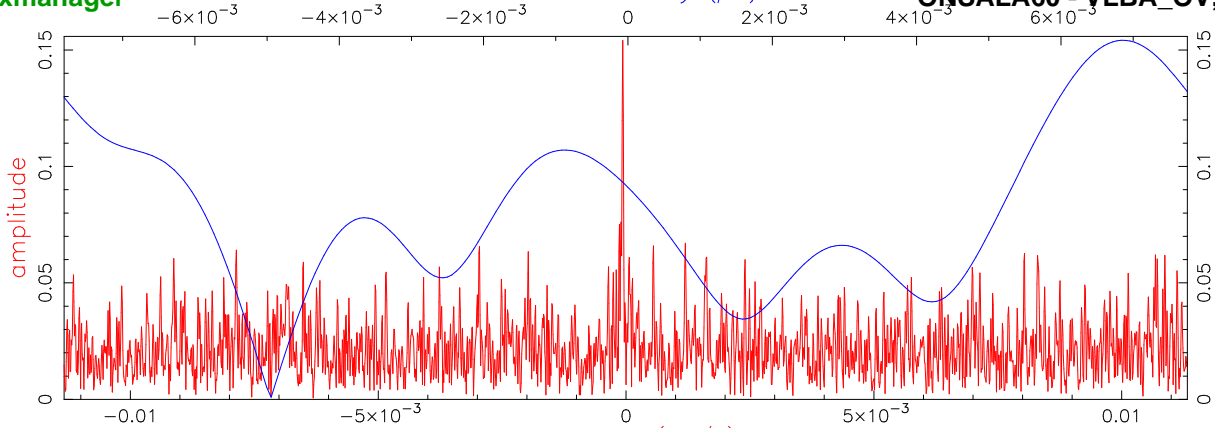
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, Xo

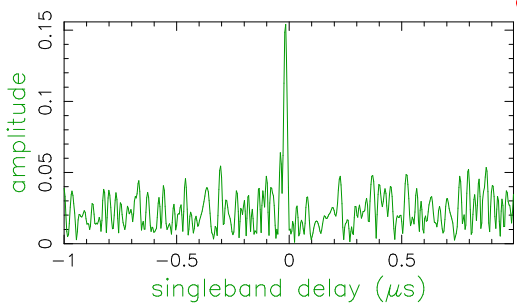
ONSALA60 - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

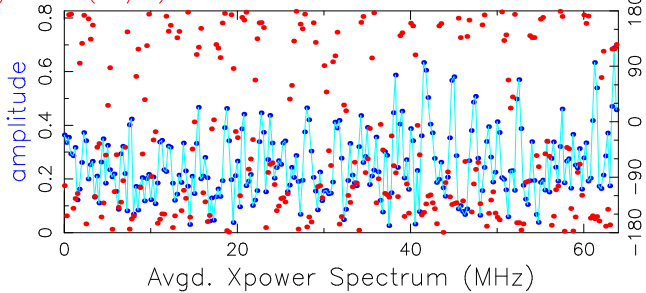


Fringe quality 9

SNR 8.7
 Int time 419.789
 Amp 0.156
 Phase -70.7
 PFD 9.3e-10
 Delays (us)
 SBD -0.016903
 MBD 0.006815
 Fringe rate (Hz)
 -0.005620
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

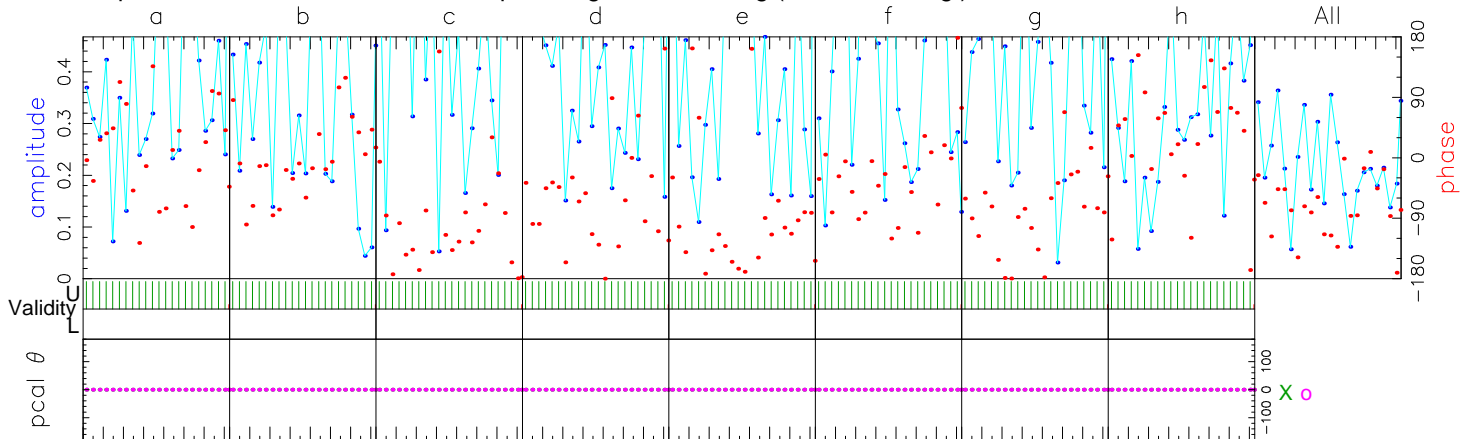


delay rate (ns/s)



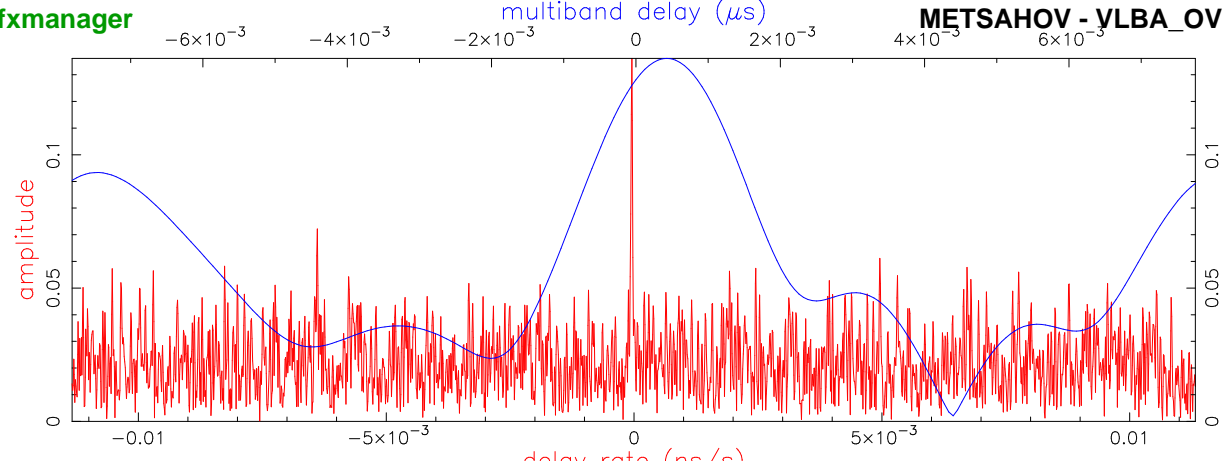
Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180000.00
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130455
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

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

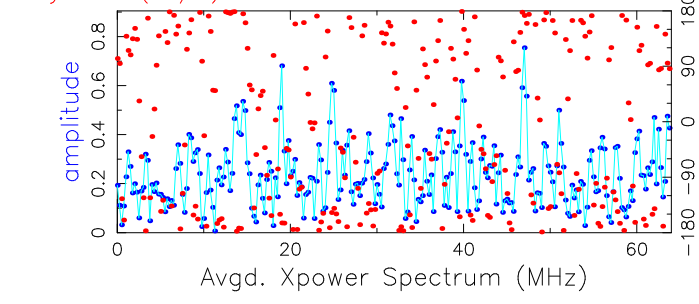
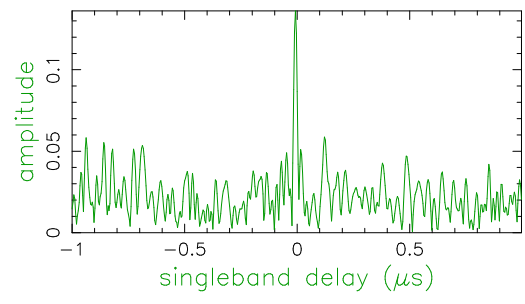


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-23.9	-1.7	-122.4	-74.2	-126.5	-43.7	-78.9	53.3	Phase	-70.7
	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2	Ampl.	0.2
	248.9	252.7	252.8	253.2	254.3	253.8	254.3	254.9	Sbd box	252.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-9.28569229286E+02		Apriori delay (usec)		-9.28544794260E+02		Resid mbdelay (usec)		6.81497E-03	+/- 1.2E-04
Sband delay (usec)	-9.28561696760E+02		Apriori clock (usec)		5.2750023E+01		Resid sbdelay (usec)		-1.69025E-02	+/- 9.9E-04
Phase delay (usec)	-9.28544796541E+02		Apriori clockrate (us/s)		1.6800000E-07		Resid phdelay (usec)		-2.28065E-06	+/- 4.2E-07
Delay rate (us/s)	-1.13355662500E+00		Apriori rate (us/s)		-1.13355655976E+00		Resid rate (us/s)		-6.52412E-08	+/- 1.7E-09
Total phase (deg)			Apriori accel (us/s/s)		2.60558912676E-05		Resid phase (deg)		-70.7	+/- 13.1

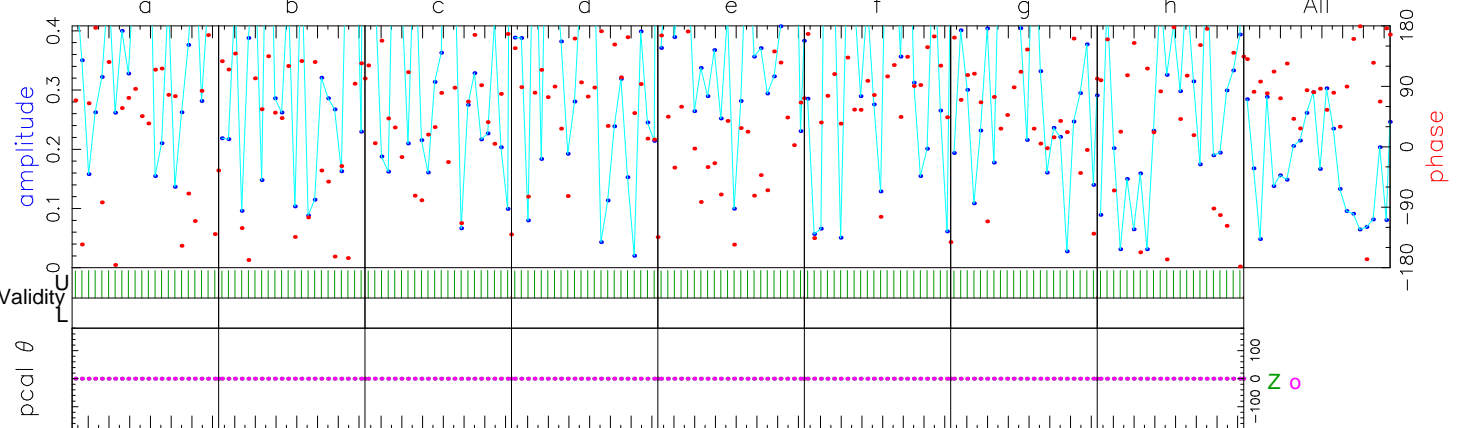
ph/seg (deg) 46.5 31.5 Search (2048X32) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.9 54.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 69.4 18.6 Inc. seg. avg. 0.189 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 68.1 32.4 Inc. frq. avg. 0.227 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 295.8 el 47.2 pa 50.2 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 10359.641 3758.159 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Xo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Xo.W.393.1X1592



Fringe quality 9
SNR 7.5
Int time 405.845
Amp 0.136
Phase 84.7
PFD 2.0e-05
Delays (us)
SBD -0.007856
MBD 0.000426
Fringe rate (Hz)
-0.003512
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180013.31
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130453
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"



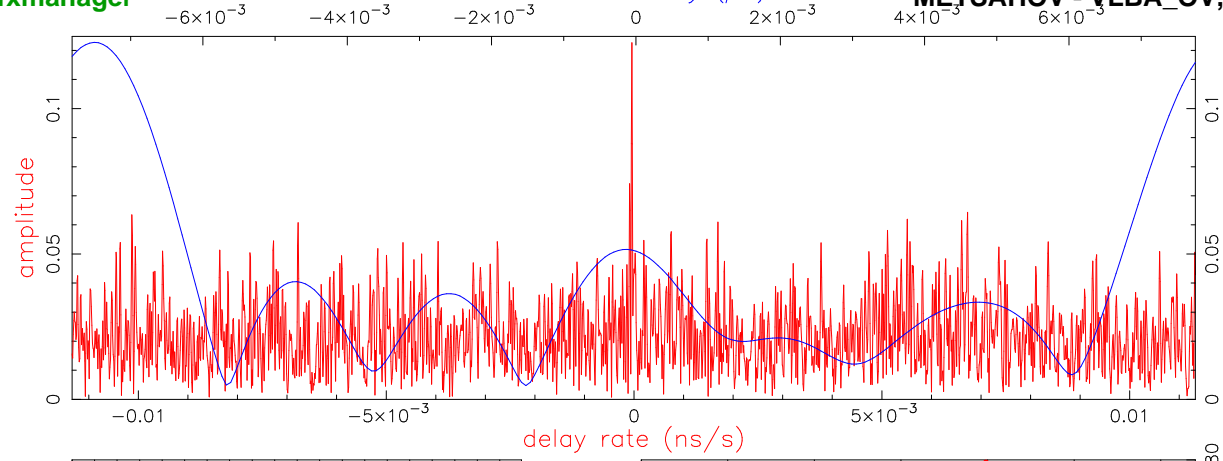
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



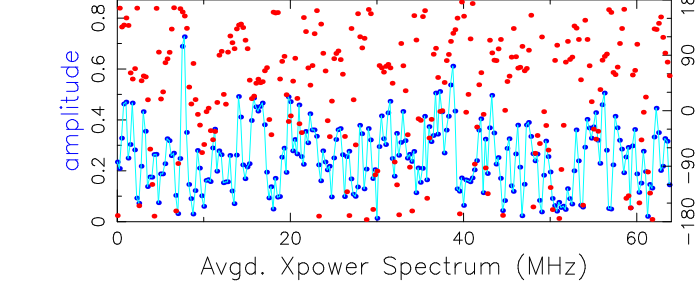
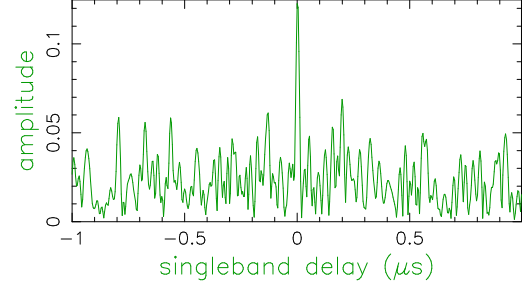
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
o	0	0	0	0	0	0	0	0		
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-2.12417392277E+03									
Sband delay (usec)	-2.12416658026E+03									
Phase delay (usec)	-2.12415872128E+03									
Delay rate (us/s)	-1.10492155114E+00									
Total phase (deg)			-90.3							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
Chan ids										
Tracks										
Chan ids										
Tracks										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

Z: az 301.0 el 42.8 pa 42.9 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 10112.166 4708.718
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Zo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Zo.W.385.1X1592

multiband delay (μ s)

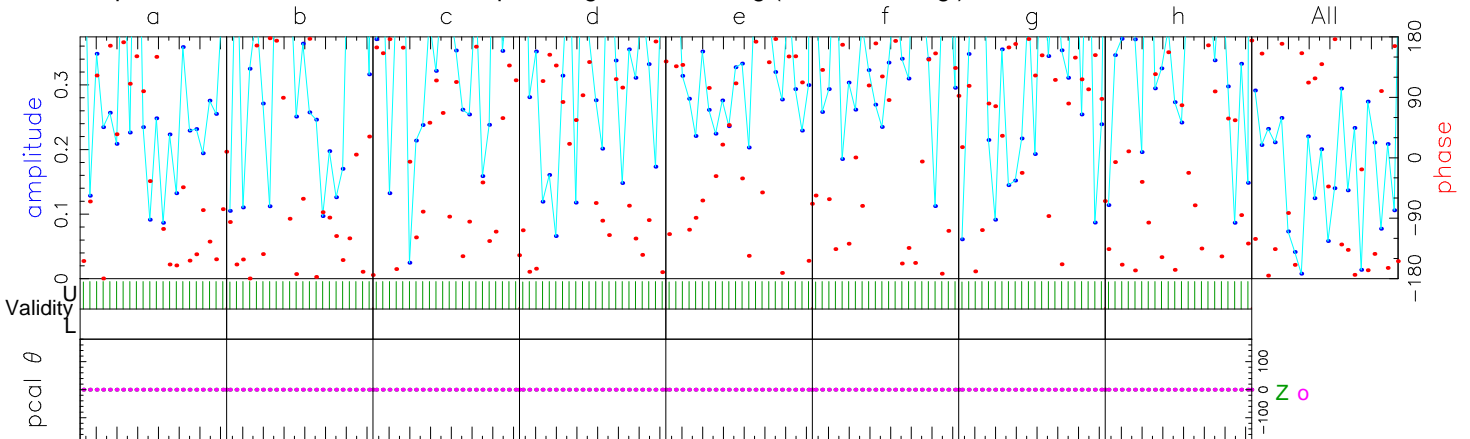


Fringe quality 0
SNR 6.9
Int time 405.845
Amp 0.125
Phase -170.4
PFD 1.8e-03
Delays (us)
SBD 0.001612
MBD -0.007453
Fringe rate (Hz)
-0.003709
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180013.31
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130456
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"



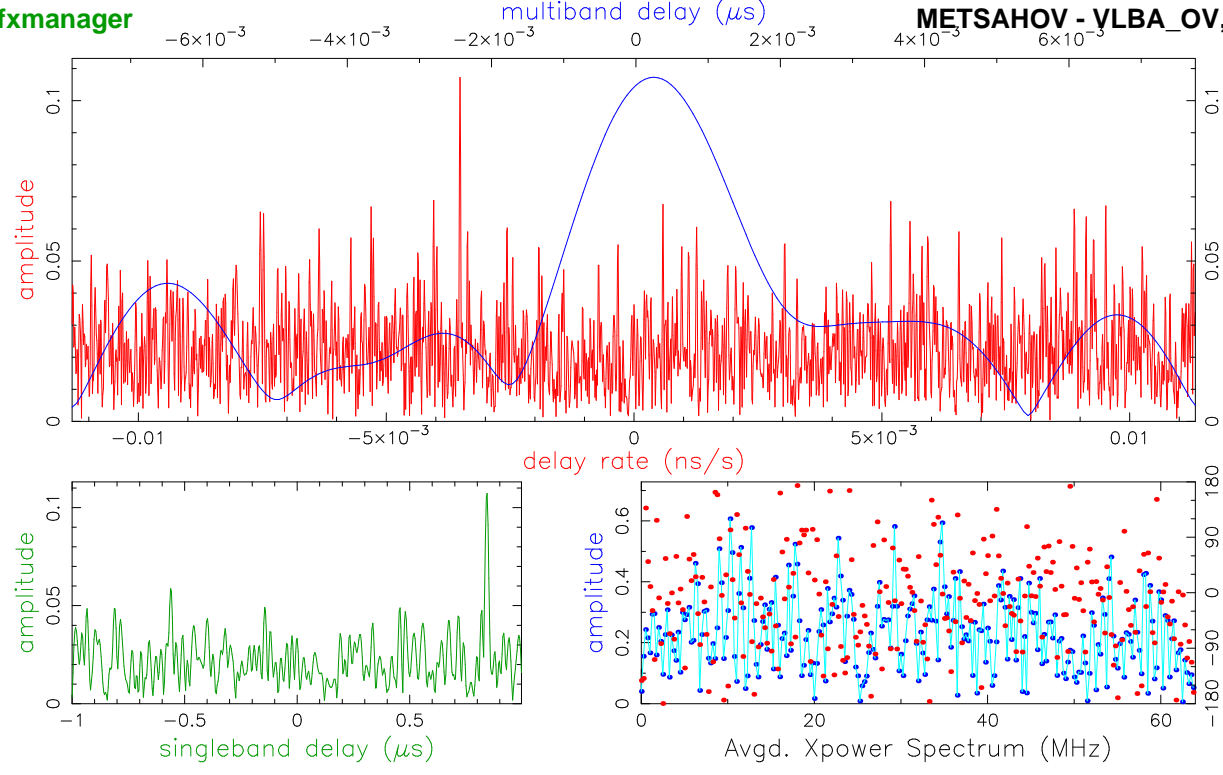
Avgd. Xpower Spectrum (MHz)

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



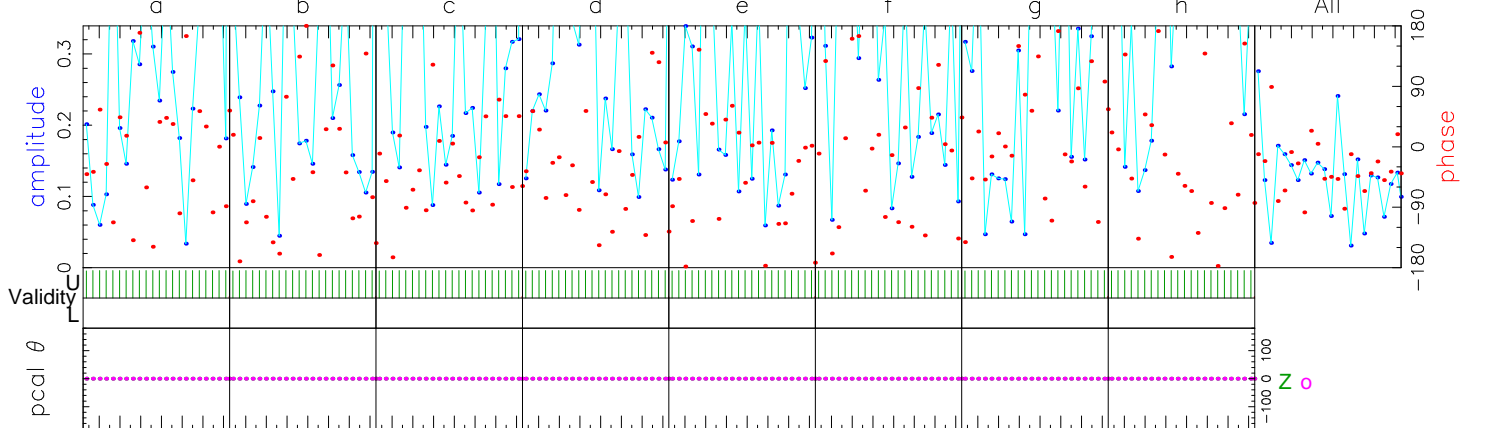
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-169.2	-152.5	172.1	-154.9	-177.2	-158.8	142.5	-130.2	Phase	-170.4
	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1
	169.1	254.5	54.6	15.1	328.8	63.4	258.4	186.4	Sbd box	257.4
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.12415055217E+03		Apriori delay (usec)		-2.12415872401E+03		Resid mbdelay (usec)		-7.45317E-03	+/- 1.6E-04
Sband delay (usec)	-2.12415711201E+03		Apriori clock (usec)		-4.4633846E+00		Resid sbdelay (usec)		1.61200E-03	+/- 1.3E-03
Phase delay (usec)	-2.12415872950E+03		Apriori clockrate (us/s)		-3.4400000E-07		Resid phdelay (usec)		-5.49381E-06	+/- 5.4E-07
Delay rate (us/s)	-1.10492155343E+00		Apriori rate (us/s)		-1.10492151037E+00		Resid rate (us/s)		-4.30612E-08	+/- 2.3E-09
Total phase (deg)			Apriori accel (us/s/s)		3.43542946579E-05		Resid phase (deg)		-170.4	+/- 16.7

ph/seg (deg) 60.3 40.0 Search (2048X32) 0.121 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 77.9 69.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 28.5 23.6 Inc. seg. avg. 0.133 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 19.9 41.1 Inc. frq. avg. 0.125 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
Z: az 301.0 el 42.8 pa 42.9 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 10112.166 4708.718 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Zo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Zo.W.399.1X1592



Fringe quality 0
SNR 6.0
Int time 405.845
Amp 0.113
Phase -35.3
PFD 4.2e-01
Delays (us)
SBD 0.842225
MBD 0.000270
Fringe rate (Hz)
-0.303144
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c211c
Exper # 16383
Yr:day 2021:116
Start 180013.31
Stop 180659.84
FRT 180330.00
Corr/FF/build
2021:303:151428
2021:304:130459
2021:252:122852
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-28.5	-45.0	-42.8	-38.7	-14.6	-26.6	-2.0	-53.1		Phase	-35.3	
	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.2		Ampl.	0.1	
	18.7	184.2	472.6	327.1	171.9	479.6	214.6	142.9		Sbd box	472.6	
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0		APs used		
Z	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs		
o	0	0	0	0	0	0	0	0		PC freqs		
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase		
Z:o	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		
o	1000	1000	1000	1000	1000	1000	1000	1000				
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks		
										Chan ids		
										Tracks		
Group delay (usec)(sbd)	-2.12331470414E+03		Apriori delay (usec)		-2.12415872401E+03		Resid mbdelay (usec)		2.69870E-04	+/-	1.8E-04	
Sband delay (usec)	-2.12331649851E+03		Apriori clock (usec)		-4.4633846E+00		Resid sbdelay (usec)		8.42225E-01	+/-	1.4E-03	
Phase delay (usec)	-2.12415872514E+03		Apriori clockrate (us/s)		-3.4400000E-07		Resid phdelay (usec)		-1.13765E-06	+/-	6.2E-07	
Delay rate (us/s)	-1.10492502957E+00		Apriori rate (us/s)		-1.10492151037E+00		Resid rate (us/s)		-3.51920E-06	+/-	2.6E-09	
Total phase (deg)			Apriori accel (us/s/s)		3.43542946579E-05		Resid phase (deg)		-35.3	+/-	19.1	
	RMS	Theor.	Amplitude	0.113 +/- 0.019		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	41.2	45.9	Search (2048X32)	0.106		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	55.2	80.0	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	18.9	27.0	Inc. seg. avg.	0.102		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	51.3	47.2	Inc. frq. avg.	0.103		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
Z: az 301.0 el 42.8 pa 42.9	o: az 52.2 el 50.1 pa -88.4		u,v (fr/asec) 10112.166 4708.718								simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c211c/v1/1234/No0093/Zo..1X1592		Output file: /Exps/c211c/v1/1234/No0093/Zo.W.405.1X1592									

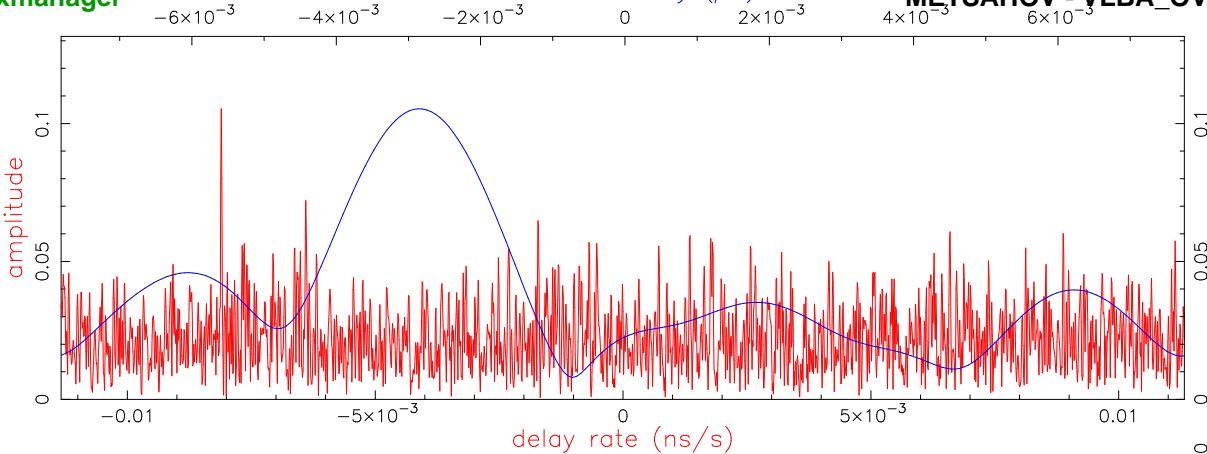
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1592, No0093, Zo

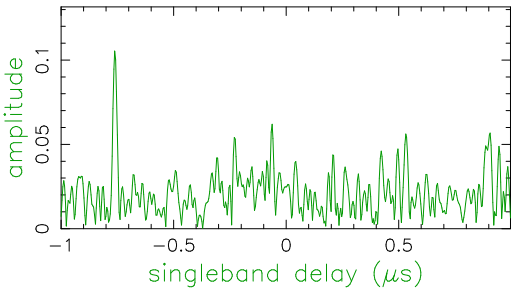
METSAHOV - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

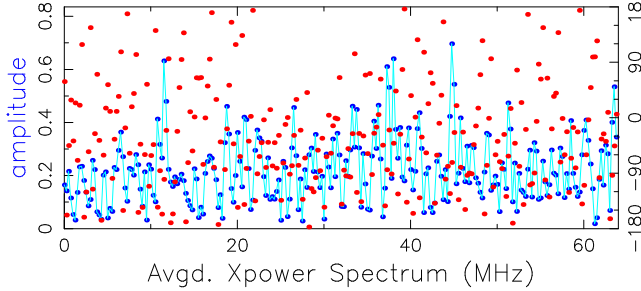


Fringe quality 0

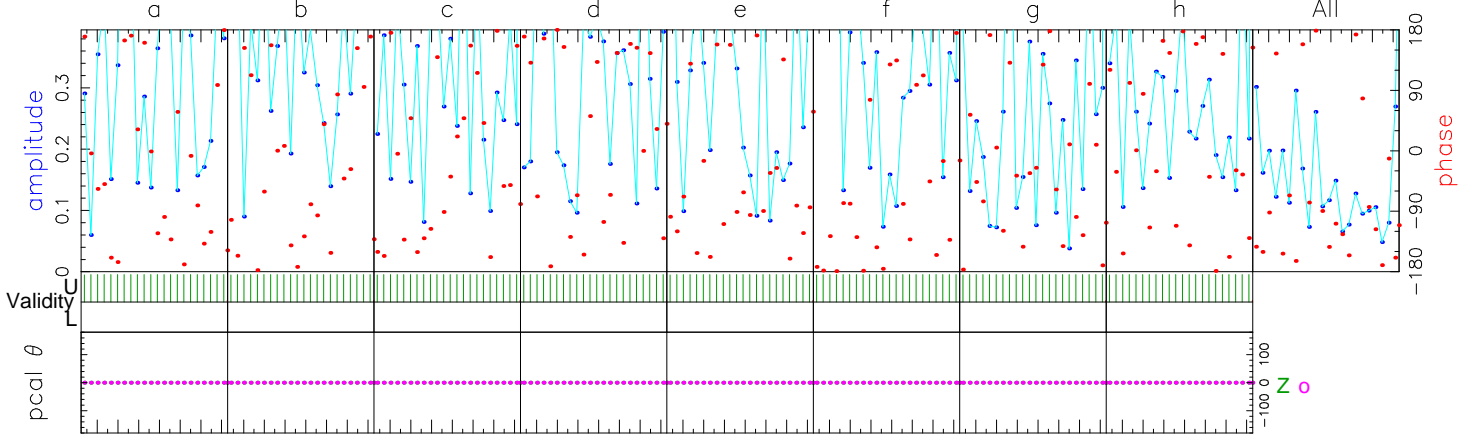
SNR 5.8
 Int time 405.845
 Amp 0.132
 Phase -145.9
 PFD 7.8e-01
 Delays (us)
 SBD -0.761053
 MBD -0.002828
 Fringe rate (Hz)
 -0.698966
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211c
 Exper # 16383
 Yr:day 2021:116
 Start 180013.31
 Stop 180659.84
 FRT 180330.00
 Corr/FF/build
 2021:303:151428
 2021:304:130502
 2021:252:122852
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



delay rate (ns/s)



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-153.8	-134.4	-142.8	-168.5	-112.7	-156.9	-170.5	-148.6	Phase	-145.9
	0.2	0.1	0.0	0.1	0.2	0.3	0.1	0.1	Ampl.	0.1
	198.0	365.8	367.8	152.1	61.2	61.6	501.3	22.1	Sbd box	62.2
U/L	794/0	794/0	794/0	794/0	794/0	794/0	794/0	794/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.12492717665E+03		Apriori delay (usec)		-2.12415872401E+03		Resid mbdelay (usec)		-2.82765E-03	+/- 1.9E-04
Sband delay (usec)	-2.12491977701E+03		Apriori clock (usec)		-4.4633846E+00		Resid sbdelay (usec)		-7.61053E-01	+/- 1.5E-03
Phase delay (usec)	-2.12415872871E+03		Apriori clockrate (us/s)		-3.4400000E-07		Resid phdelay (usec)		-4.70382E-06	+/- 6.4E-07
Delay rate (us/s)	-1.10492962466E+00		Apriori rate (us/s)		-1.10492151037E+00		Resid rate (us/s)		-8.11430E-06	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		3.43542946579E-05		Resid phase (deg)		-145.9	+/- 19.7

	RMS	Theor.	Amplitude	0.132 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	57.4	47.3	Search (2048X32)	0.102	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	83.4	82.5	Inc. seg. avg.	0.138	Sample rate(MISamp/s): 128	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	20.6	27.9	Inc. frq. avg.	0.125	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00
amp/frq (%)	56.4	48.6							

Z: az 301.0 el 42.8 pa 42.9 o: az 52.2 el 50.1 pa -88.4 u,v (fr/asec) 10112.166 4708.718 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211c/v1/1234/No0093/Zo..1X1592 Output file: /Exps/c211c/v1/1234/No0093/Zo.W.410.1X1592