

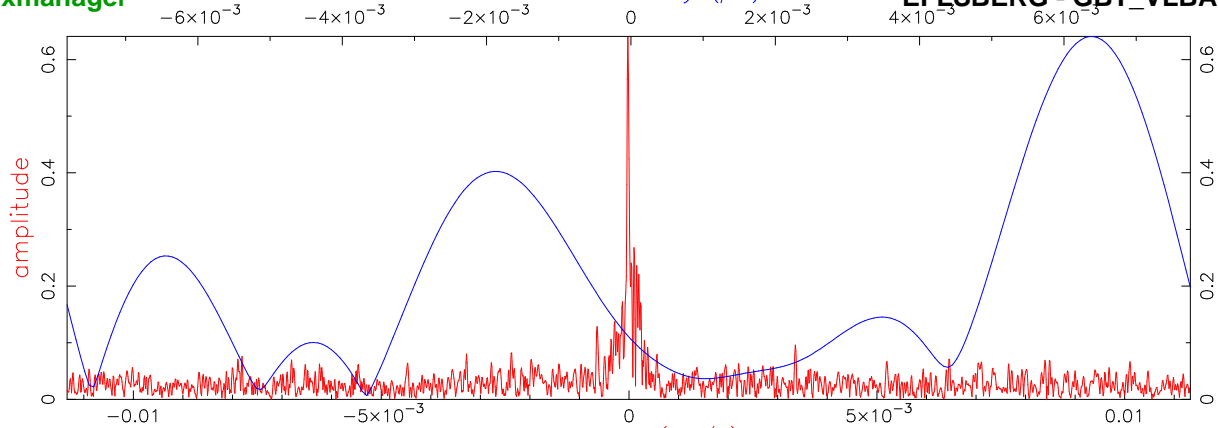
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, BG

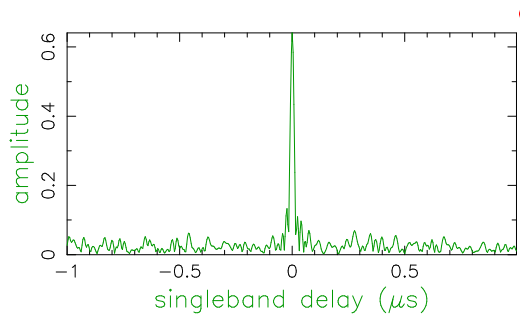
EFLSBERG - GBT_VLBA, fgroup W, pol LL

multiband delay (μ s)

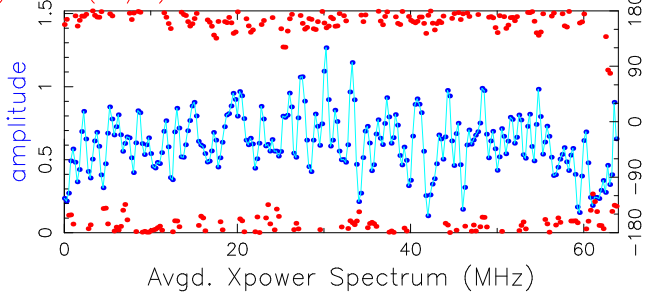


Fringe quality 4

SNR 31.8
Int time 329.973
Amp 0.641
Phase 102.1
PFD 0.0e+00
Delays (us)
SBD -0.000010
MBD 0.006380
Fringe rate (Hz)
-0.001902
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

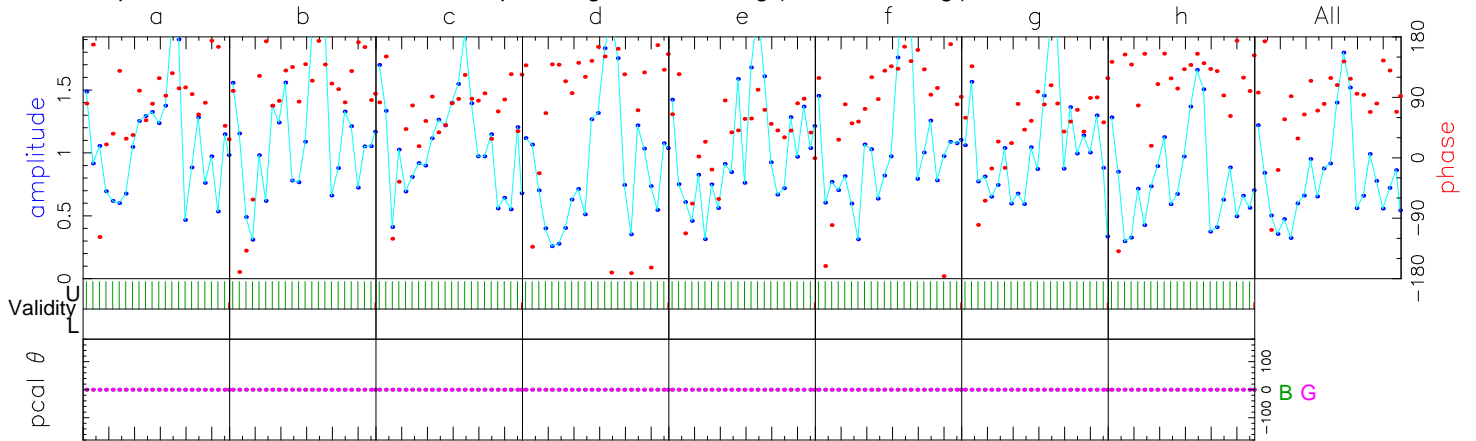


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	91.7	126.2	75.3	148.8	55.4	127.2	66.0	129.9	Phase	102.1
	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.6	Ampl.	0.8
	257.8	257.0	257.6	257.4	257.2	257.3	257.4	257.1	Sbd box	257.0
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.06152235876E+03	Apriori delay (usec)	-2.06152873884E+03	Resid mbdelay (usec)	6.38007E-03	+/-	3.4E-05
Sband delay (usec)	-2.06152874859E+03	Apriori clock (usec)	-7.7827334E+00	Resid sbdelay (usec)	-9.75000E-06	+/-	2.7E-04
Phase delay (usec)	-2.06152873554E+03	Apriori clockrate (us/s)	9.999998E-08	Resid phdelay (usec)	3.29138E-06	+/-	1.2E-07
Delay rate (us/s)	-1.30767112528E+00	Apriori rate (us/s)	-1.30767110319E+00	Resid rate (us/s)	-2.20836E-08	+/-	6.1E-10
Total phase (deg)	-100.7	Apriori accel (us/s/s)	1.91192242989E-05	Resid phase (deg)	102.1	+/-	3.6

ph/seg (deg)	52.2	RMS	8.6	Theor.	8.6	Amplitude	0.641 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	63.9	52.2	8.6	Search (2048X32)	0.640	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	37.6	63.9	15.1	Inc. seg. avg.	0.816	Inc. frq. avg.	0.753	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	21.5	37.6	5.1	Inc. frq. avg.	0.753			Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

B: az 257.0 el 48.5 pa 44.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 8577.977 1939.787 simultaneous interpolator

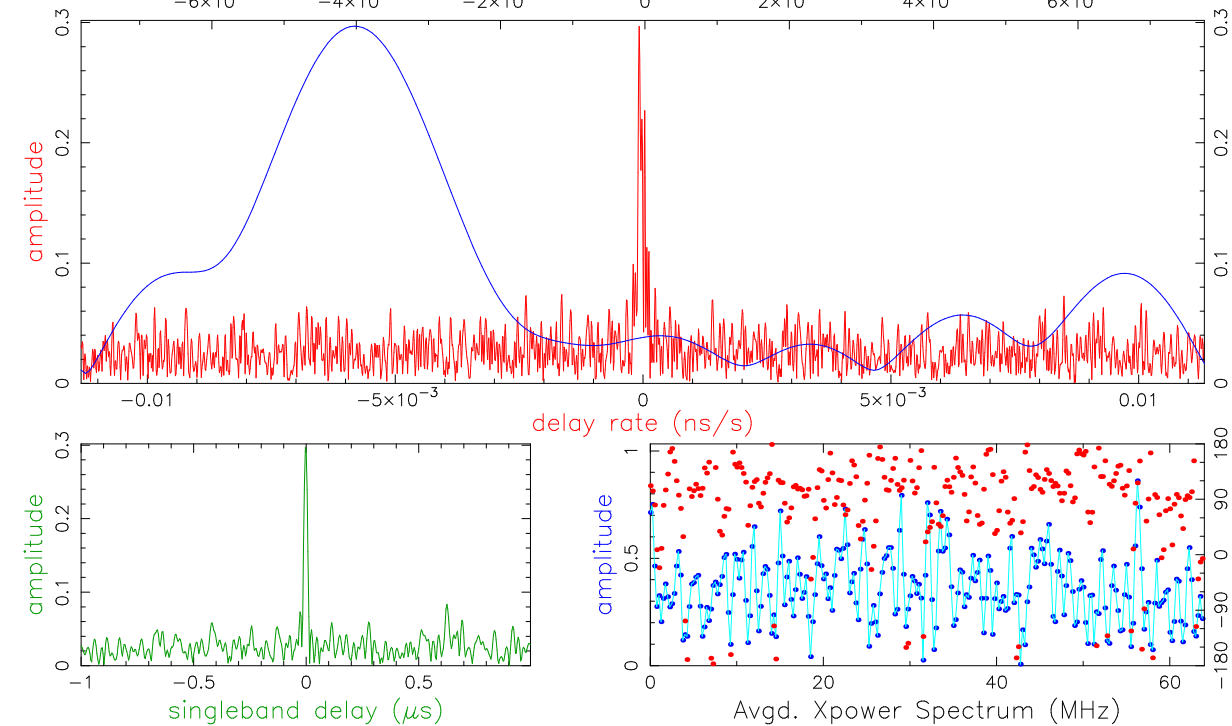
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BG.W.15.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, bG

VLBA_BR - GBT_VLBA, fgroup W, pol LL

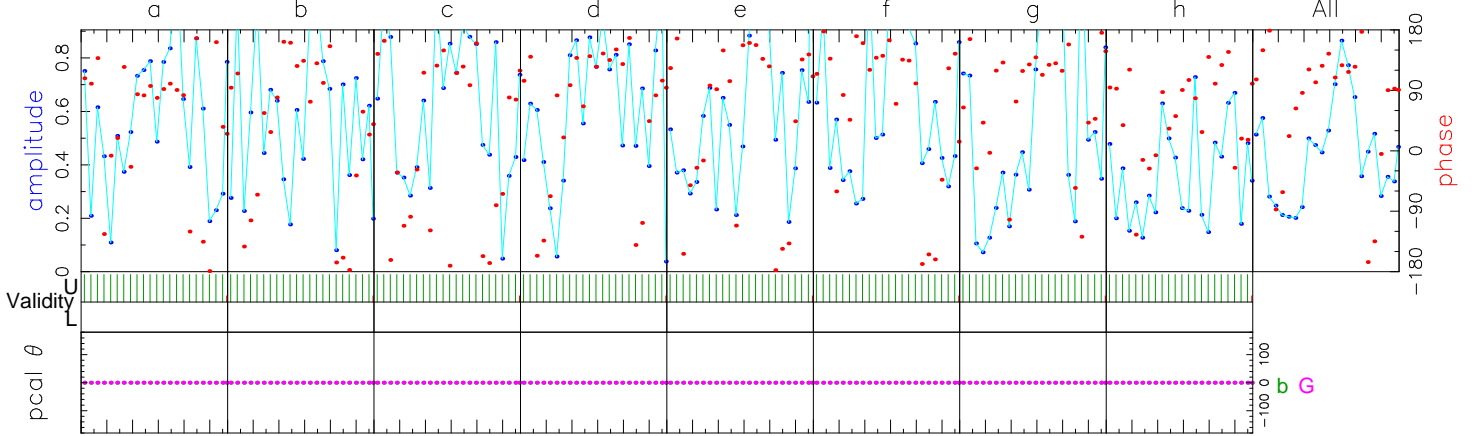


Fringe quality 8

SNR 15.0
 Int time 329.979
 Amp 0.302
 Phase 126.6
 PFD 5.2e-42
 Delays (us)
 SBD -0.002259
 MBD -0.003995
 Fringe rate (Hz)
 -0.006481
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	101.9	107.0	155.2	133.6	144.1	137.2	126.3	67.1	Phase	126.6
	0.3	0.2	0.3	0.4	0.4	0.4	0.3	0.2	Ampl.	0.3
	256.1	494.7	256.5	256.5	256.1	256.0	256.1	255.2	Sbd box	256.4
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-7.63410849642E+03		Apriori delay (usec)		-7.63410450174E+03		Resid mbdelay (usec)		-3.99467E-03	+/- 7.2E-05
Sband delay (usec)	-7.63410676024E+03		Apriori clock (usec)		1.1313000E+01		Resid sbdelay (usec)		-2.25850E-03	+/- 5.7E-04
Phase delay (usec)	-7.63410449766E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		4.08096E-06	+/- 2.5E-07
Delay rate (us/s)	2.28644092629E-01		Apriori rate (us/s)		2.28644167867E-01		Resid rate (us/s)		-7.52375E-08	+/- 1.3E-09
Total phase (deg)			Apriori accel (us/s/s)		4.73649979940E-05		Resid phase (deg)		126.6	+/- 7.6

	RMS	Theor.	Amplitude	0.302 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	70.2	18.3	Search (2048X32)	0.294	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	76.9	32.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	31.1	10.8	Inc. seg. avg.	0.421	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	23.9	18.9	Inc. frq. avg.	0.318	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

b: az 77.0 el 28.1 pa -47.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) -1430.234 3017.640 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bg..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bG.W.20.1W8CZP

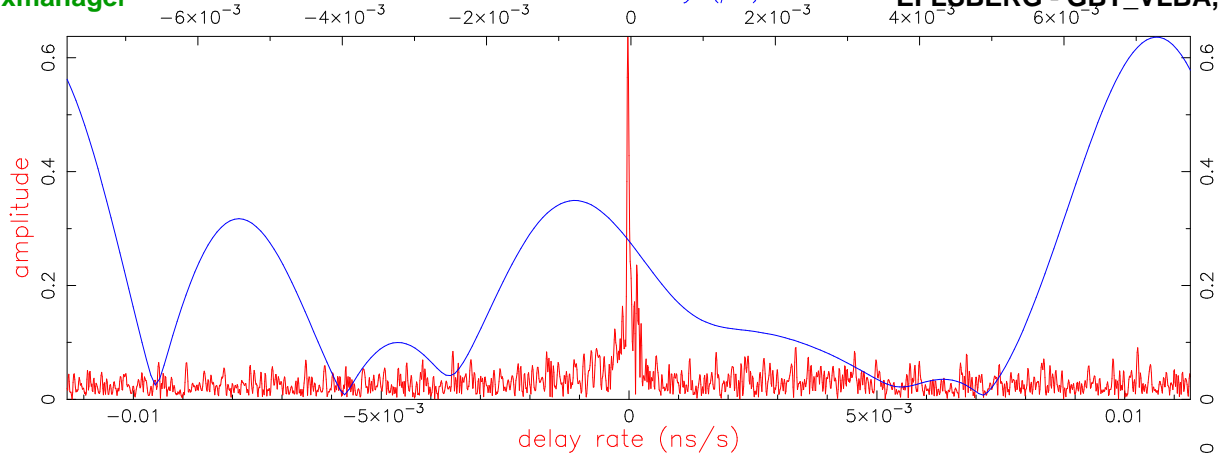
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, BG

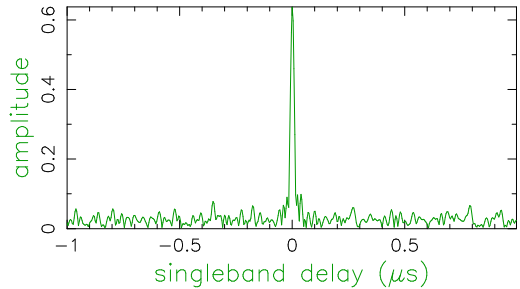
EFLSBERG - GBT_VLBA, fgroup W, pol RR

multiband delay (μ s)

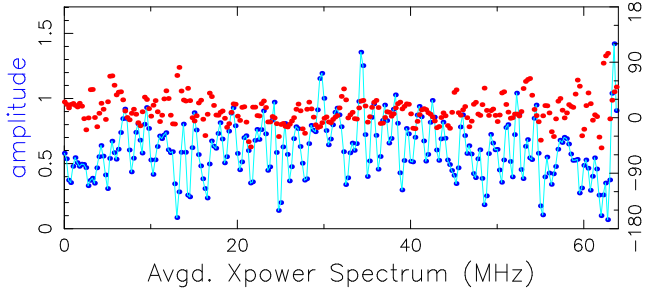


Fringe quality 4

SNR 31.7
Int time 329.973
Amp 0.638
Phase -65.8
PFD 0.0e+00
Delays (us)
SBD 0.000607
MBD 0.007295
Fringe rate (Hz)
-0.001760
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

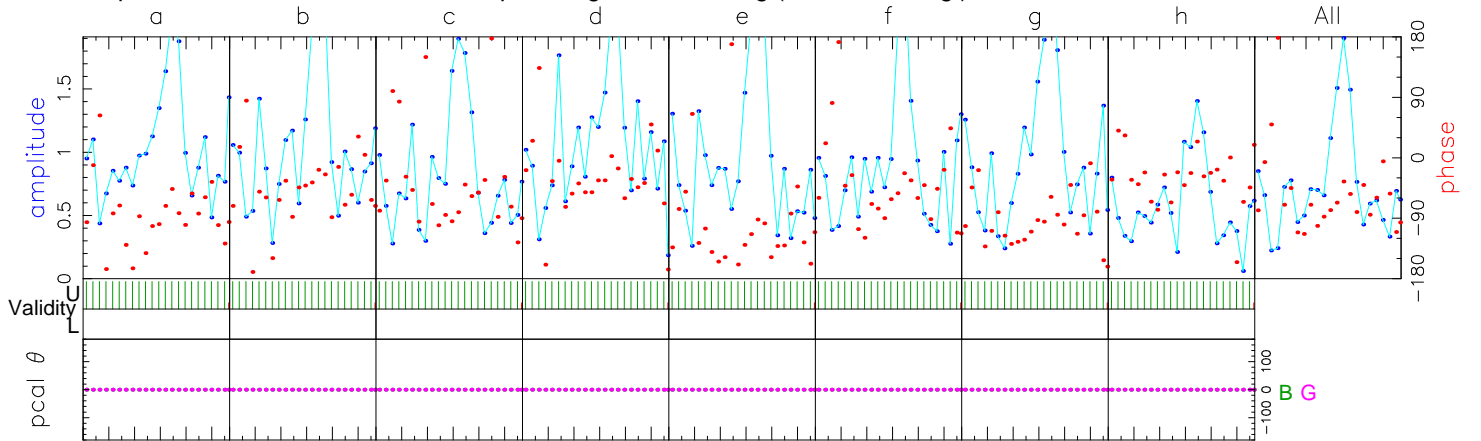


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-85.7	-41.6	-68.0	-27.3	-119.5	-52.8	-93.0	-25.3	Phase	-65.8
	0.8	0.8	0.6	0.9	0.8	0.7	0.9	0.5	Ampl.	0.7
	257.4	257.4	257.7	257.2	257.6	257.5	257.5	257.3	Sbd box	257.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-2.06152144392E+03	Apriori delay (usec)	-2.06152873884E+03	Resid mbdelay (usec)	7.29491E-03	+/-	3.4E-05
Sband delay (usec)	-2.06152813184E+03	Apriori clock (usec)	-7.7827334E+08	Resid sbdelay (usec)	6.07000E-04	+/-	2.7E-04
Phase delay (usec)	-2.06152874096E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-2.12159E-06	+/-	1.2E-07
Delay rate (us/s)	-1.30767112362E+00	Apriori rate (us/s)	-1.30767110319E+00	Resid rate (us/s)	-2.04270E-08	+/-	6.1E-10
Total phase (deg)	-268.6	Apriori accel (us/s/s)	1.91192242989E-05	Resid phase (deg)	-65.8	+/-	3.6

ph/seg (deg)	45.2	RMS	45.2	Theor.	8.7	Amplitude	0.638 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	66.3		66.3		15.1	Search (2048X32)	0.634	Pcal rate:	0.000E+00, 0.000E+00 (us/s)			mb window (us)	-0.008	0.008
ph/frq (deg)	36.3		36.3		5.1	Inc. seg. avg.	0.737	Bits/sample:	2x2	SampCntNorm:	enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	26.6		26.6		8.9	Inc. frq. avg.	0.743	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	ion window (TEC)	0.00	0.00

B: az 257.0 el 48.5 pa 44.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 8577.977 1939.787 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BG.W.35.1W8CZP

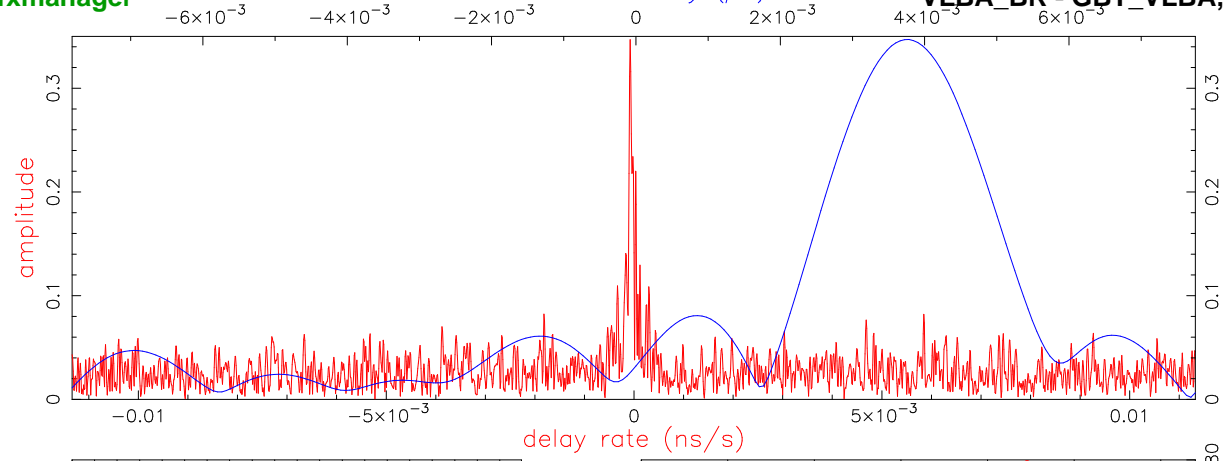
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, bG

VLBA_BR - GBT_VLBA, fgroup W, pol RR

multiband delay (μ s)



Fringe quality 9

SNR 17.4

Int time 329.979

Amp 0.350

Phase -123.9

PFD 0.0e+00

Delays (us)

SBD 0.002746

MBD 0.003729

Fringe rate (Hz)

-0.006522

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c211a

Exper # 16383

Yr:day 2021:113

Start 151500.00

Stop 152030.24

FRT 151745.00

Corr/FF/build

2021:288:021115

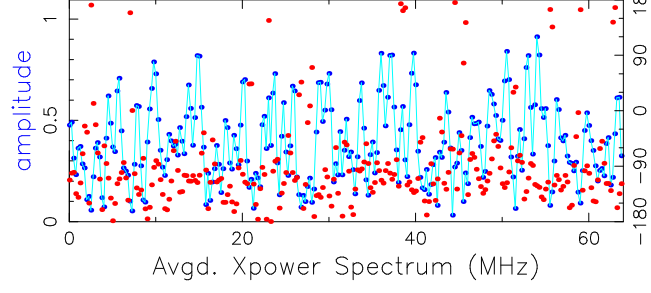
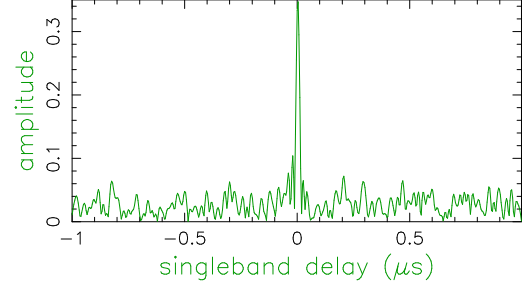
2021:288:044501

2021:252:122852

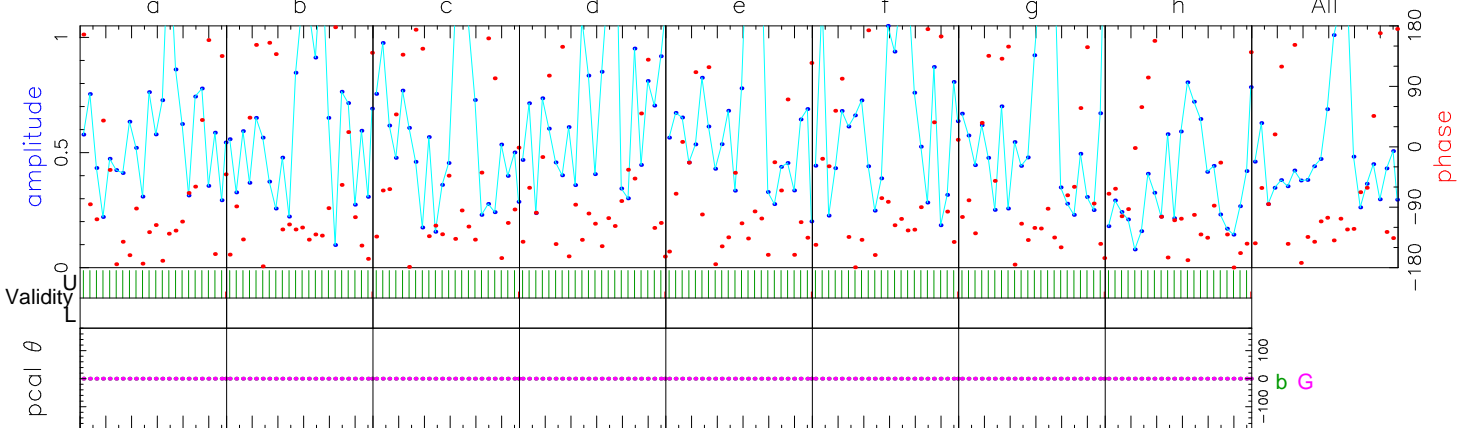
RA & Dec (J2000)

02h37m52.405678s

+28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-127.0	-133.8	-125.3	-116.1	-116.7	-116.2	-127.9	-130.7	Phase	-123.9
	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.2	Ampl.	0.3
	257.5	258.1	257.5	257.9	257.7	257.6	257.7	257.5	Sbd box	257.7
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-7.63410077229E+03		Apriori delay (usec)		-7.63410450174E+03		Resid mbdelay (usec)		3.72945E-03	+/- 6.2E-05
Sband delay (usec)	-7.63410175574E+03		Apriori clock (usec)		1.1313000E+01		Resid sbdelay (usec)		2.74600E-03	+/- 5.0E-04
Phase delay (usec)	-7.63410450574E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-3.99569E-06	+/- 2.1E-07
Delay rate (us/s)	2.28644092157E-01		Apriori rate (us/s)		2.28644167867E-01		Resid rate (us/s)		-7.57094E-08	+/- 1.1E-09
Total phase (deg)			Apriori accel (us/s/s)		4.73649979940E-05		Resid phase (deg)		-123.9	+/- 6.6

ph/seg (deg) 64.5 15.8 Search (2048X32) 0.350 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 87.7 27.6 Interp. 0.344 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 7.6 9.3 Inc. seg. avg. 0.496 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 15.0 16.3 Inc. frq. avg. 0.346 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

b: az 77.0 el 28.1 pa -47.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) -1430.234 3017.640 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bG.W.43.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

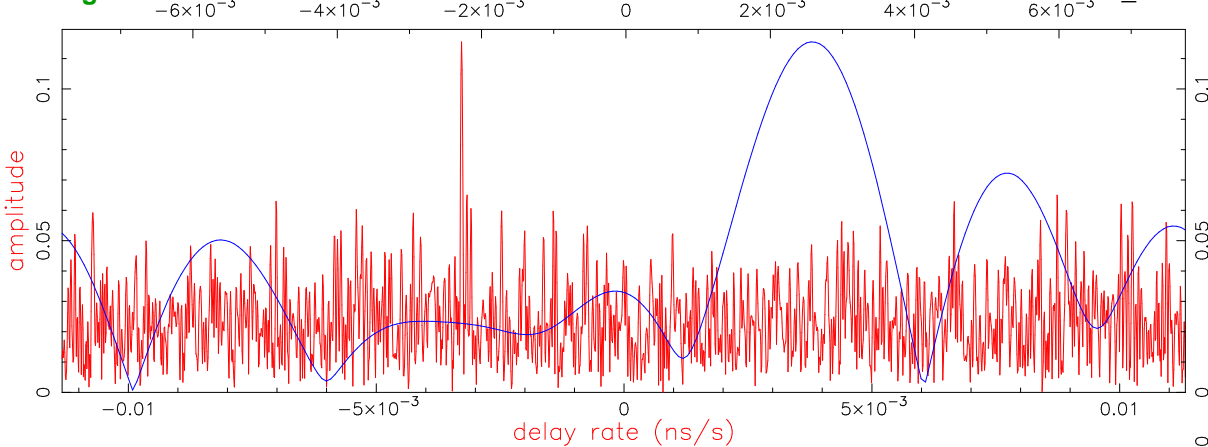
fxmanager

0234+285.1W8CZP, No0029, BG

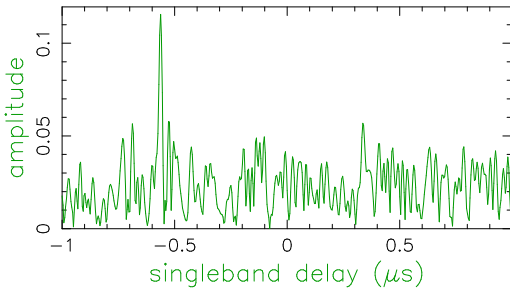
EFLSBERG - GBT_VLBA, fgroup W, pol LR

multiband delay (μ s)

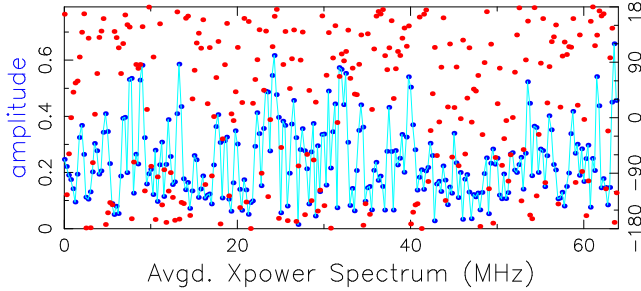
Fringe quality 0



SNR 5.7
 Int time 329.973
 Amp 0.120
 Phase 118.0
 PFD 9.1e-01
 Delays (us)
 SBD -0.562447
 MBD 0.002581
 Fringe rate (Hz)
 -0.283181
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

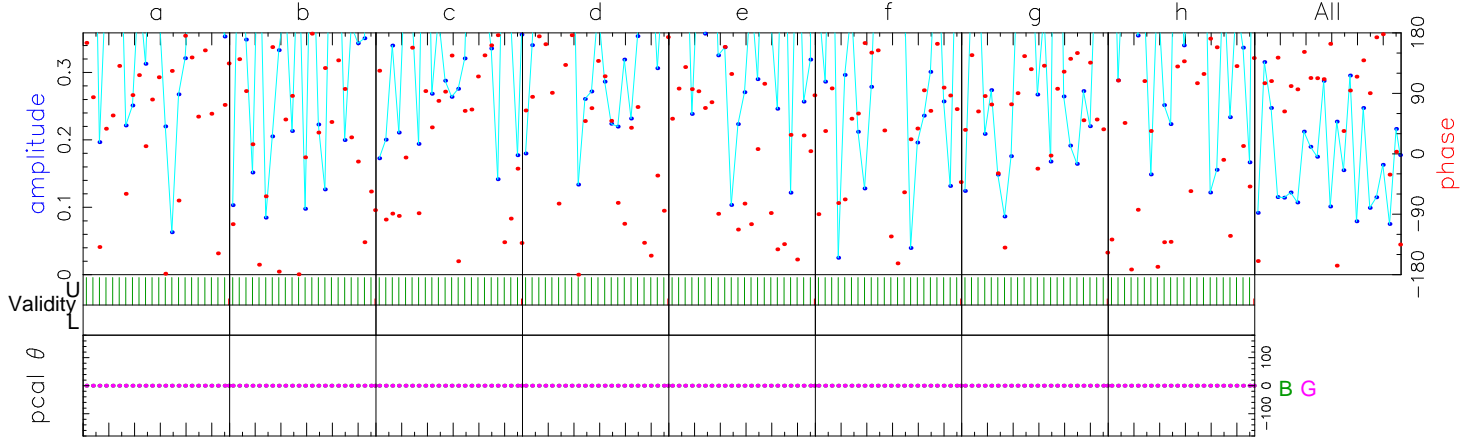


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044503
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	106.6	132.2	126.0	159.0	116.0	91.5	93.4	153.1	Phase	118.0
	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1
	114.2	225.8	243.1	79.3	269.0	49.1	112.2	465.6	Sbd box	113.0
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-2.06208865763E+03	Apriori delay (usec)	-2.06152873884E+03	Resid mbdelay (usec)	2.58120E-03	+/-	1.9E-04
Sband delay (usec)	-2.06209118559E+03	Apriori clock (usec)	-7.7827334E+08	Resid sbdelay (usec)	-5.62447E-01	+/-	1.5E-03
Phase delay (usec)	-2.06152873503E+03	Apriori clockrate (us/s)	9.999998E-08	Resid phdelay (usec)	3.80457E-06	+/-	6.4E-07
Delay rate (us/s)	-1.30767439064E+00	Apriori rate (us/s)	-1.30767110319E+00	Resid rate (us/s)	-3.28745E-06	+/-	3.4E-09
Total phase (deg)	-84.8	Apriori accel (us/s/s)	1.91192242989E-05	Resid phase (deg)	118.0	+/-	20.0

ph/seg (deg)	57.7	Theor.	47.9	Amplitude	0.120 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	79.3		83.6	Search (2048X32)	0.113	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	27.7		28.2	Inc. seg. avg.	0.131	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	49.2		49.3	Inc. frq. avg.	0.116	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

B: az 257.0 el 48.5 pa 44.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 8577.977 1939.787 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BG.W.55.1W8CZP

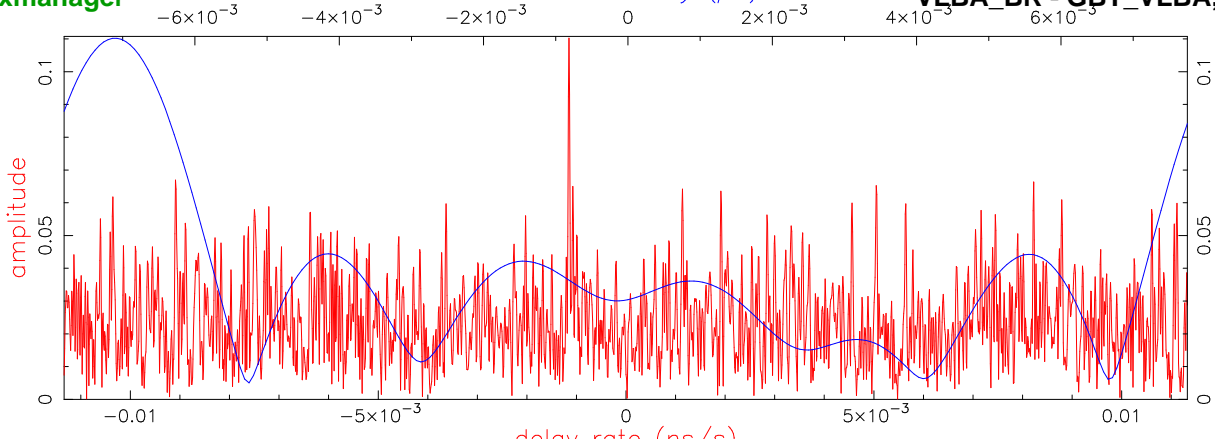
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

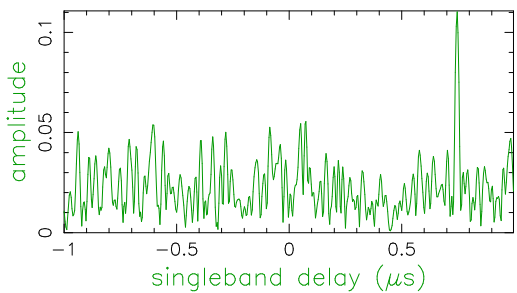
0234+285.1W8CZP, No0029, bG

VLBA_BR - GBT_VLBA, fgroup W, pol LR

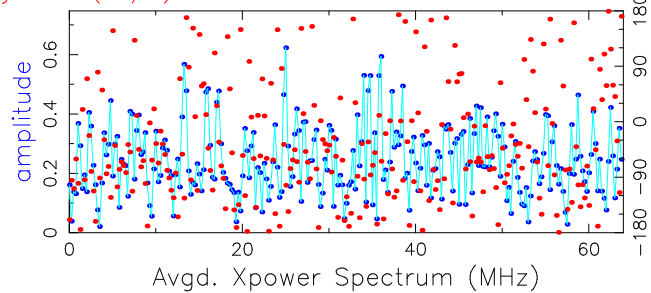
multiband delay (μ s)



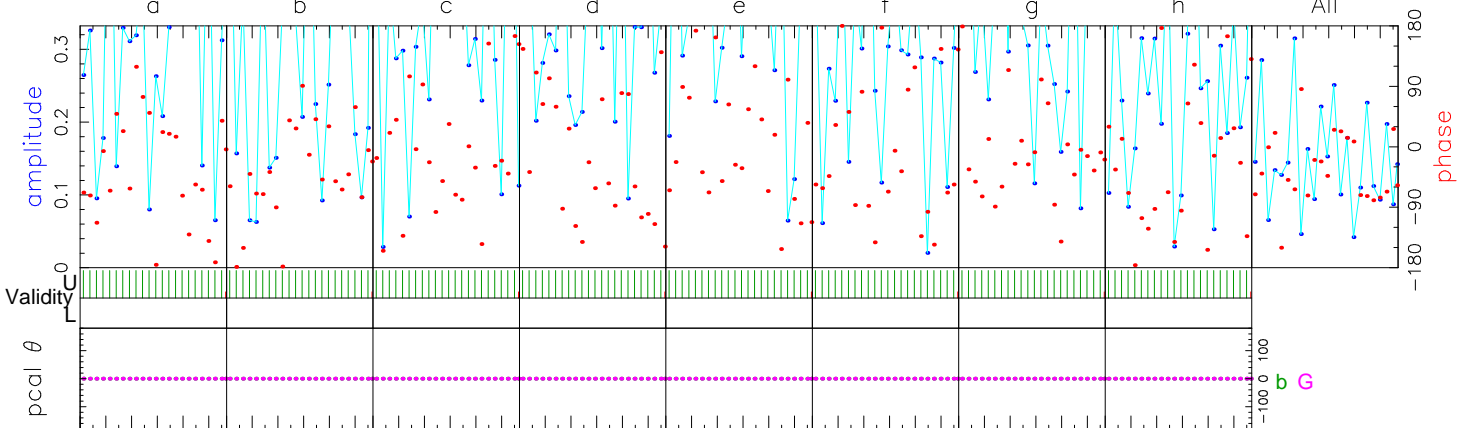
Fringe quality 0
 SNR 5.5
 Int time 329.979
 Amp 0.111
 Phase -39.4
 PFD 1.0e+00
 Delays (us)
 SBD 0.745717
 MBD -0.007105
 Fringe rate (Hz)
 -0.099050
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044504
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



delay rate (ns/s)



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-42.1	-34.8	-39.1	-59.9	-10.6	-86.1	-30.6	-56.2	Phase	-39.4		
	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.0	Ampl.	0.1		
	223.7	215.8	276.4	393.4	40.0	412.2	447.1	409.0	Sbd box	447.9		
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used			
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
G	1000	1000	1000	1000	1000	1000	1000	1000				
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-7.63336160668E+03		Apriori delay (usec)		-7.63410450174E+03		Resid mbdelay (usec)		-7.10494E-03	+/- 2.0E-04		
Sband delay (usec)	-7.63335878499E+03		Apriori clock (usec)		1.1313000E+01		Resid sbdelay (usec)		7.45717E-01	+/- 1.6E-03		
Phase delay (usec)	-7.63410450301E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-1.27145E-06	+/- 6.7E-07		
Delay rate (us/s)	2.28643017999E-01		Apriori rate (us/s)		2.28644167867E-01		Resid rate (us/s)		-1.14987E-06	+/- 3.5E-09		
Total phase (deg)			Apriori accel (us/s/s)		4.73649979940E-05		Resid phase (deg)		-39.4	+/- 20.9		
	RMS	Theor.	Amplitude	0.111 +/- 0.020		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	51.9	50.1	Search (2048X32)	0.109		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	74.6	87.5	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	25.2	29.6	Inc. seg. avg.	0.109		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	49.6	51.6	Inc. frq. avg.	0.103		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
b: az 77.0 el 28.1 pa -47.9	G: az 94.5 el 56.3 pa -62.9		u,v (fr/asec) -1430.234 3017.640						simultaneous interpolator			

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bg..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bG.W.60.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

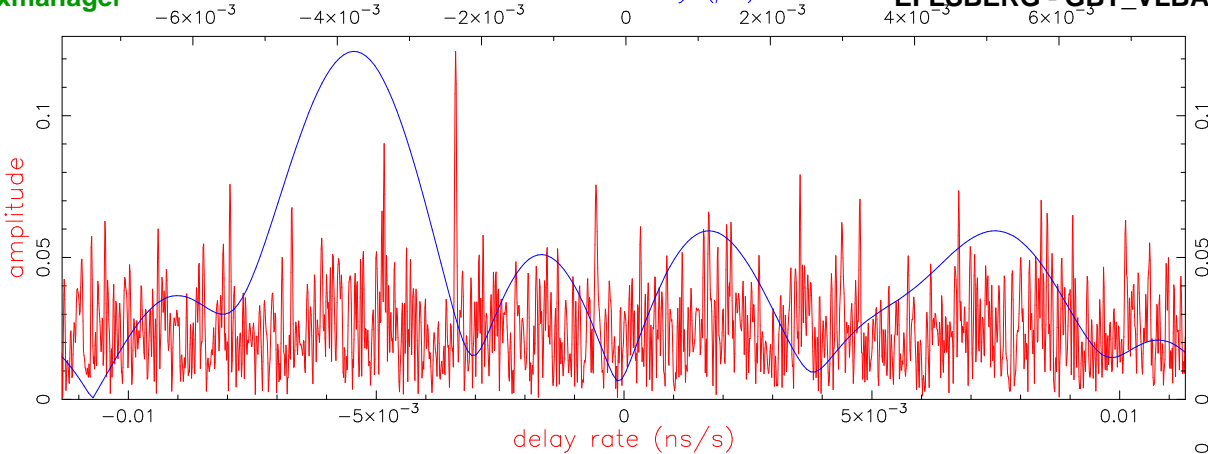
fxmanager

0234+285.1W8CZP, No0029, BG

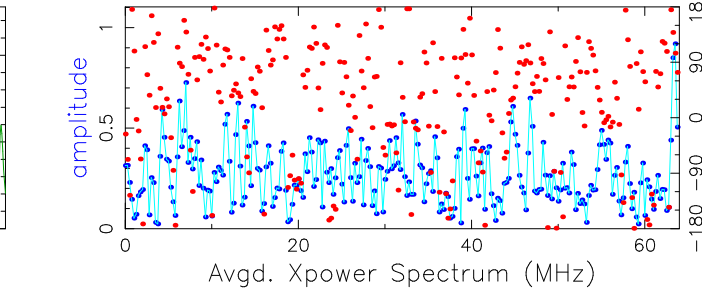
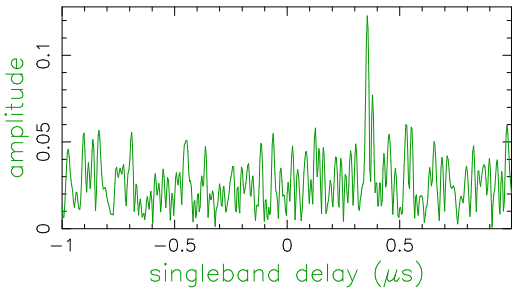
EFLSBERG - GBT_VLBA, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

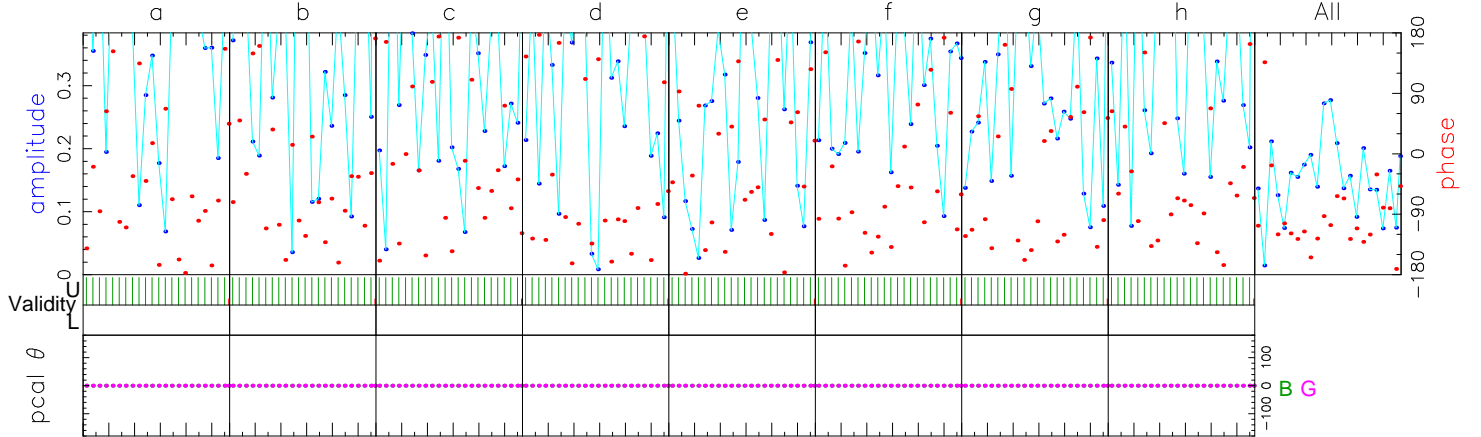


SNR 6.1
 Int time 329.973
 Amp 0.128
 Phase -102.4
 PFD 2.2e-01
 Delays (us)
 SBD 0.356317
 MBD -0.003759
 Fringe rate (Hz)
 -0.293015
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-104.2	-97.2	-58.4	-124.5	-75.4	-106.1	-149.9	-83.8	Phase	-102.4
	0.2	0.2	0.1	0.2	0.0	0.1	0.1	0.2	Ampl.	0.1
	348.0	348.0	4.7	506.9	24.4	139.7	241.2	289.0	Sbd box	348.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.06117312312E+03	Apriori delay (usec)	-2.06152873884E+03	Resid mbdelay (usec)	-3.75929E-03	+/-	1.8E-04
Sband delay (usec)	-2.06117242159E+03	Apriori clock (usec)	-7.7827334E+00	Resid sbdelay (usec)	3.56317E-01	+/-	1.4E-03
Phase delay (usec)	-2.06152874214E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-3.30125E-06	+/-	6.0E-07
Delay rate (us/s)	-1.30767450480E+00	Apriori rate (us/s)	-1.30767110319E+00	Resid rate (us/s)	-3.40161E-06	+/-	3.2E-09
Total phase (deg)	-305.1	Apriori accel (us/s/s)	1.91192242989E-05	Resid phase (deg)	-102.4	+/-	18.7

ph/seg (deg)	43.9	Theor.	44.9	Amplitude	0.128 +/- 0.021	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	54.8		78.3	Search (2048X32)	0.119	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	31.1		26.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	50.2		46.2	Inc. seg. avg.	0.120	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011			
				Inc. frq. avg.	0.124	Data rate (Mb/s):	2048	nlags:	256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 257.0 el 48.5 pa 44.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 8577.977 1939.787 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/BG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/BG.W.76.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

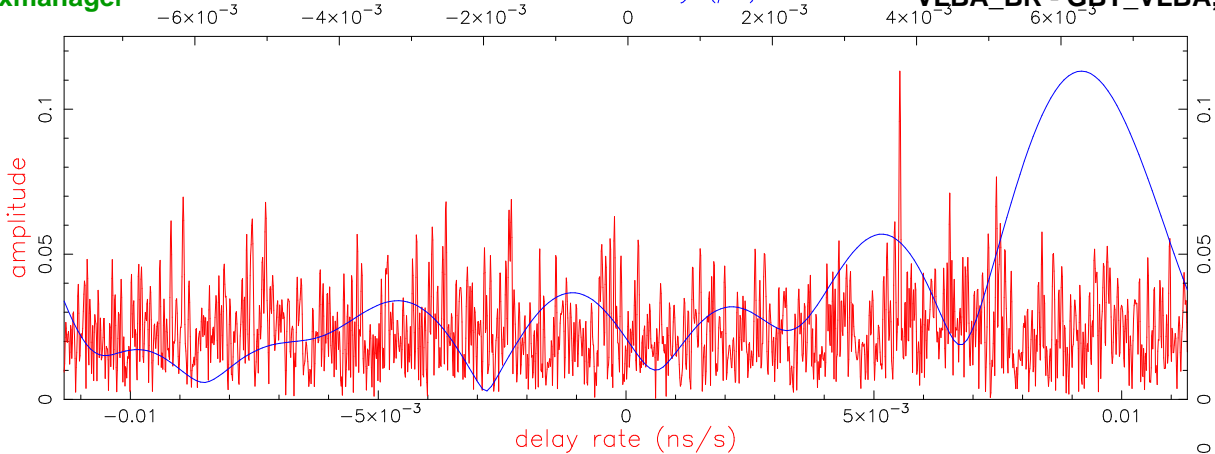
fxmanager

0234+285.1W8CZP, No0029, bG

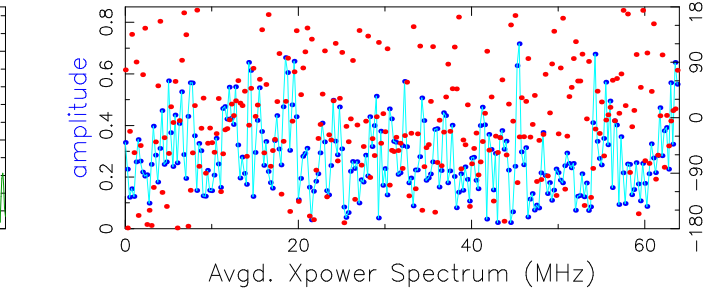
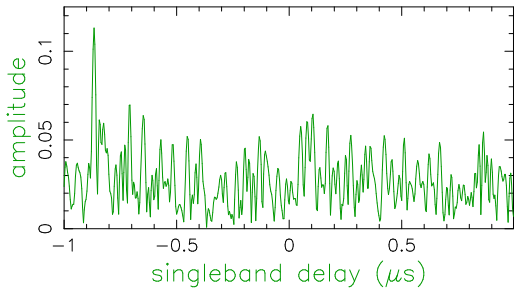
VLBA_BR - GBT_VLBA, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

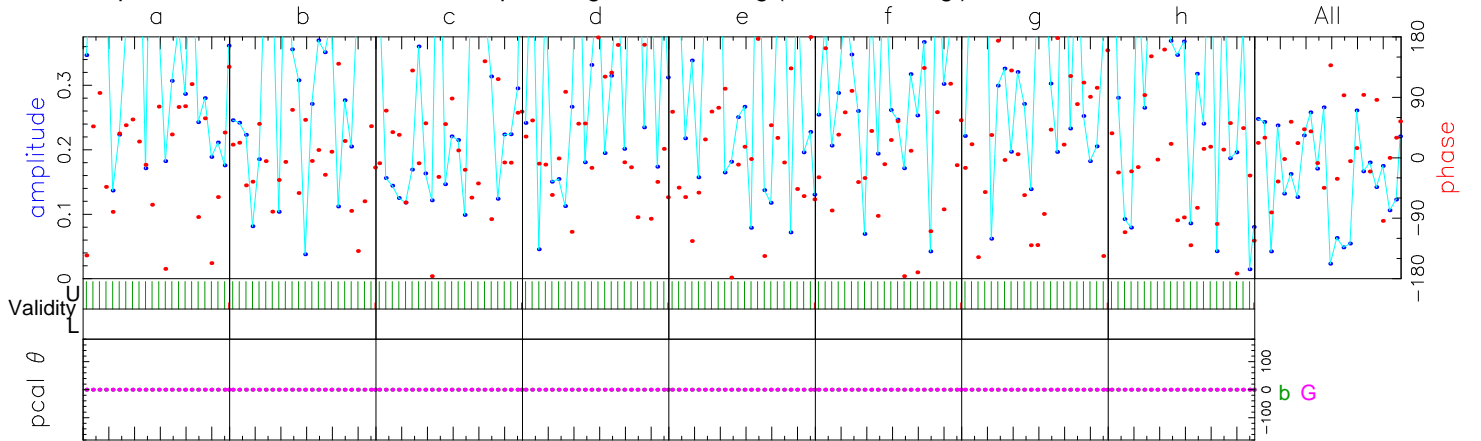


SNR 5.6
 Int time 329.979
 Amp 0.125
 Phase 13.2
 PFD 9.9e-01
 Delays (us)
 SBD -0.866867
 MBD 0.006272
 Fringe rate (Hz)
 0.476738
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Yr:day 16383
 Start 2021:113
 Stop 2021:113
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044508
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
G	1000	1000	1000	1000	1000	1000	1000	1000		
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
G	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-7.63497322947E+03	Apriori delay (usec)	-7.63410450174E+03	Resid mbdelay (usec)	6.27227E-03	+/-	1.9E-04
Sband delay (usec)	-7.63497136874E+03	Apriori clock (usec)	1.1313000E+01	Resid sbdelay (usec)	-8.66867E-01	+/-	1.5E-03
Phase delay (usec)	-7.63410450132E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.27101E-07	+/-	6.6E-07
Delay rate (us/s)	2.28649702326E-01	Apriori rate (us/s)	2.28644167867E-01	Resid rate (us/s)	5.53446E-06	+/-	3.4E-09
Total phase (deg)	-267.6	Apriori accel (us/s/s)	4.73649979940E-05	Resid phase (deg)	13.2	+/-	20.4

ph/seg (deg)	55.4	RMS	55.4	Theor.	48.9	Amplitude	0.125 +/- 0.022	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	77.9	Search (2048X32)	0.112	Search	0.112	Search	0.112	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	21.7	Interp.	0.000	Interp.	0.000	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	37.8	Inc. seg. avg.	0.128	Inc. seg. avg.	0.128	Inc. seg. avg.	0.128	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
		Inc. frq. avg.	0.118	Inc. frq. avg.	0.118	Inc. frq. avg.	0.118	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 77.0 el 28.1 pa -47.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) -1430.234 3017.640 simultaneous interpolator

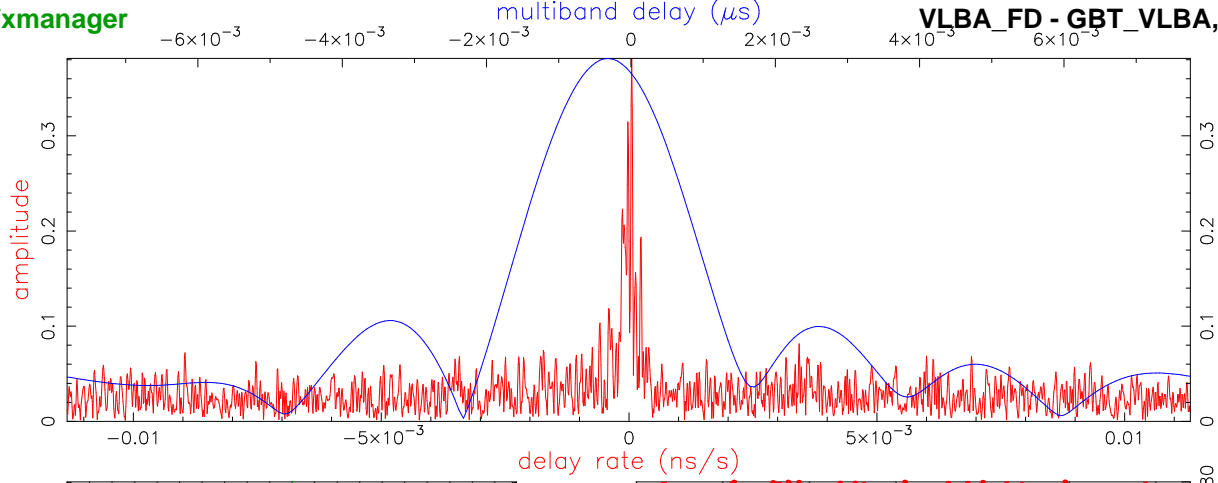
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/bg..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/bG.W.78.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

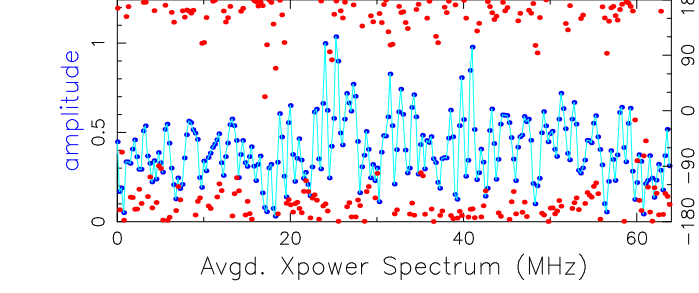
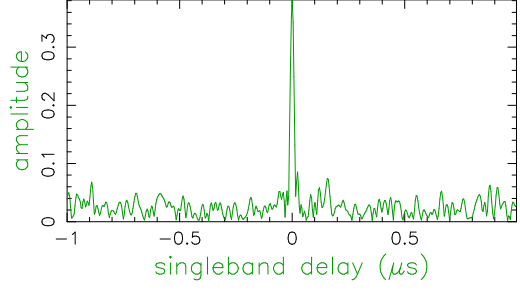
0234+285.1W8CZP, No0029, fG

VLBA_FD - GBT_VLBA, fgroup W, pol RR



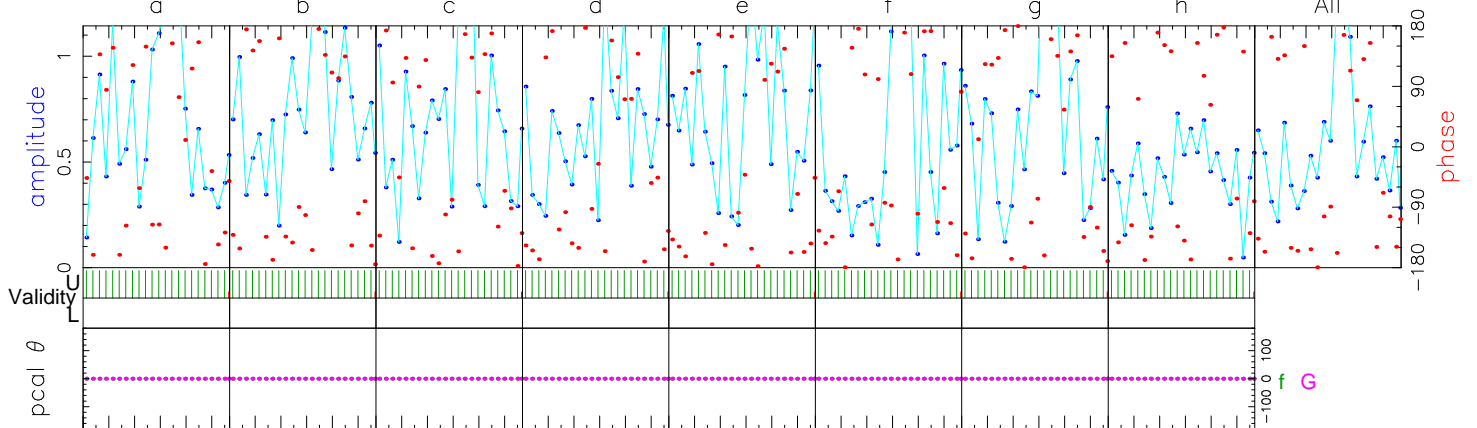
Fringe quality 9

SNR 18.9
 Int time 329.941
 Amp 0.381
 Phase -173.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.000258
 MBD -0.000327
 Fringe rate (Hz) 0.004695
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044514
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	173.5	-166.6	-177.8	-164.4	-177.1	-156.8	-179.6	-178.8	Phase	-173.2		
f	0.3	0.5	0.4	0.3	0.4	0.3	0.5	0.3	Ampl.	0.4		
G	257.9	257.0	256.9	257.1	256.4	257.5	256.4	256.8	Sbd box	256.9		
f:G	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used			
f:G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
f:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:G	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			
G	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
Group delay (usec)(sbd)	-5.15635860516E+03		Apriori delay (usec)		-5.15635827834E+03		Resid mbdelay (usec)		-3.26818E-04	+/- 5.7E-05		
Sband delay (usec)	-5.15635853684E+03		Apriori clock (usec)		2.4505627E+01		Resid sbdelay (usec)		-2.58500E-04	+/- 4.5E-04		
Phase delay (usec)	-5.15635828393E+03		Apriori clockrate (us/s)		1.6000000E-07		Resid phdelay (usec)		-5.58473E-06	+/- 2.0E-07		
Delay rate (us/s)	3.76606780727E-01		Apriori rate (us/s)		3.76606726225E-01		Resid rate (us/s)		5.45015E-08	+/- 1.0E-09		
Total phase (deg)			Apriori accel (us/s/s)		2.14493924821E-05		Resid phase (deg)		-173.2	+/- 6.0		
RMS	53.9	14.5	Amplitude		0.381 +/- 0.020		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	92.3	25.3	Search (2048X32)		0.377		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
amp/seg (%)	10.6	8.6	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	22.2	14.9	Inc. seg. avg.		0.571		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
amp/frq (%)			Inc. frq. avg.		0.382		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 74.6 el 35.8 pa -71.2 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) -2431.806 77.570 simultaneous interpolator												
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fG.W.103.1W8CZP												

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

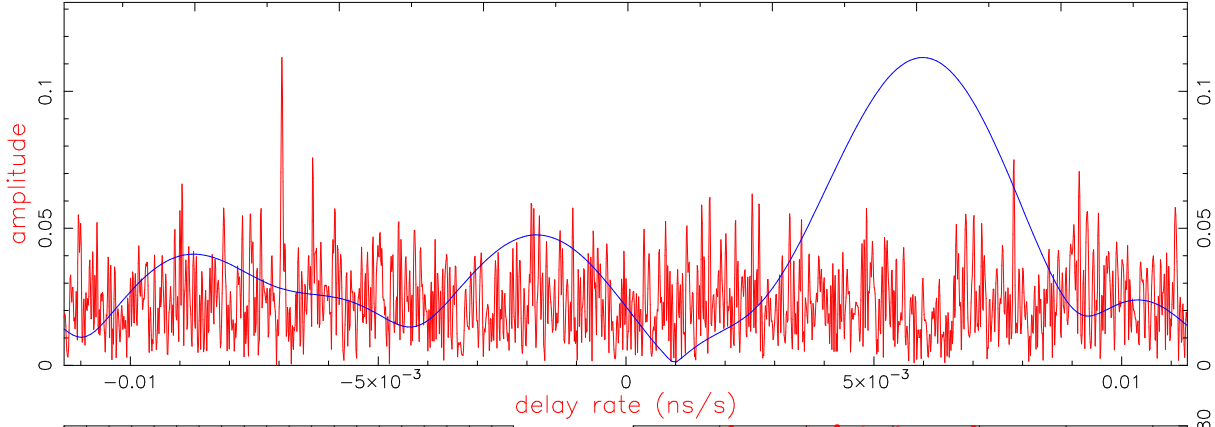
0234+285.1W8CZP, No0029, fG

VLBA_FD - GBT_VLBA, fgroup W, pol LR

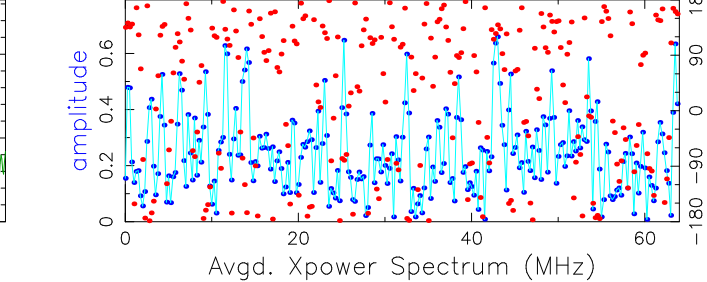
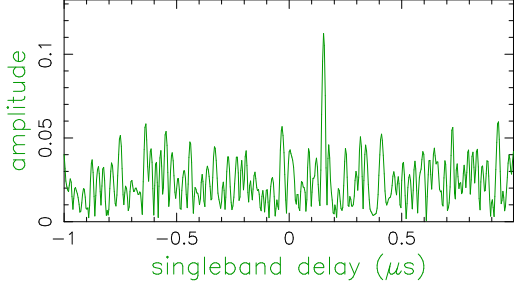
multiband delay (μ s)

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

Fringe quality 0

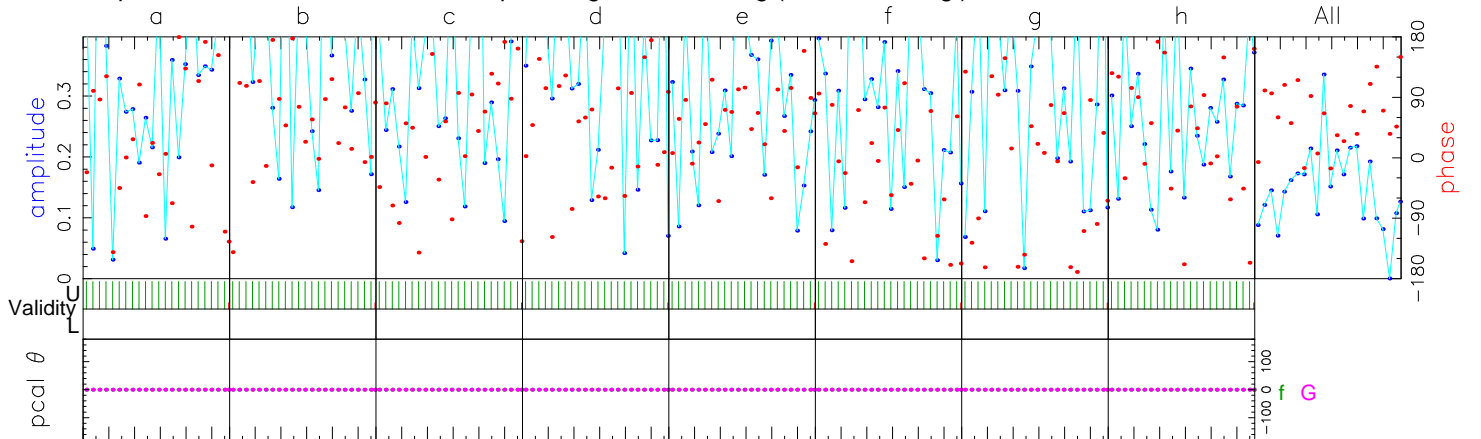


SNR 5.6
Int time 329.941
Amp 0.132
Phase 62.7
PFD 9.9e-01
Delays (us)
SBD 0.153195
MBD 0.004076
Fringe rate (Hz)
-0.598453
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044518
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-11.5	67.1	62.6	68.8	66.5	24.8	71.8	69.7	Phase	62.7
	0.0	0.3	0.1	0.2	0.2	0.1	0.1	0.1	Ampl.	0.1
	286.7	296.6	444.0	6.3	422.6	185.0	332.1	314.7	Sbd box	296.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:G	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	
G	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.15619795251E+03		Apriori delay (usec)		-5.15635827834E+03		Resid mbdelay (usec)		4.07583E-03	+/- 1.9E-04
Sband delay (usec)	-5.15620508334E+03		Apriori clock (usec)		2.4505627E+01		Resid sbdelay (usec)		1.53195E-01	+/- 1.5E-03
Phase delay (usec)	-5.15635827632E+03		Apriori clockrate (us/s)		1.6000000E-07		Resid phdelay (usec)		2.02054E-06	+/- 6.6E-07
Delay rate (us/s)	3.76599778776E-01		Apriori rate (us/s)		3.76606726225E-01		Resid rate (us/s)		-6.94745E-06	+/- 3.5E-09
Total phase (deg)			Apriori accel (us/s/s)		2.14493924821E-05		Resid phase (deg)		62.7	+/- 20.4

ph/seg (deg) 43.5 49.0 Search (2048X32) 0.108 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 67.8 85.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 34.5 28.9 Inc. seg. avg. 0.128 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 61.7 50.4 Inc. frq. avg. 0.122 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 74.6 el 35.8 pa -71.2 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) -2431.806 77.570 ion window (TEC) 0.00 0.00
 simultaneous interpolator

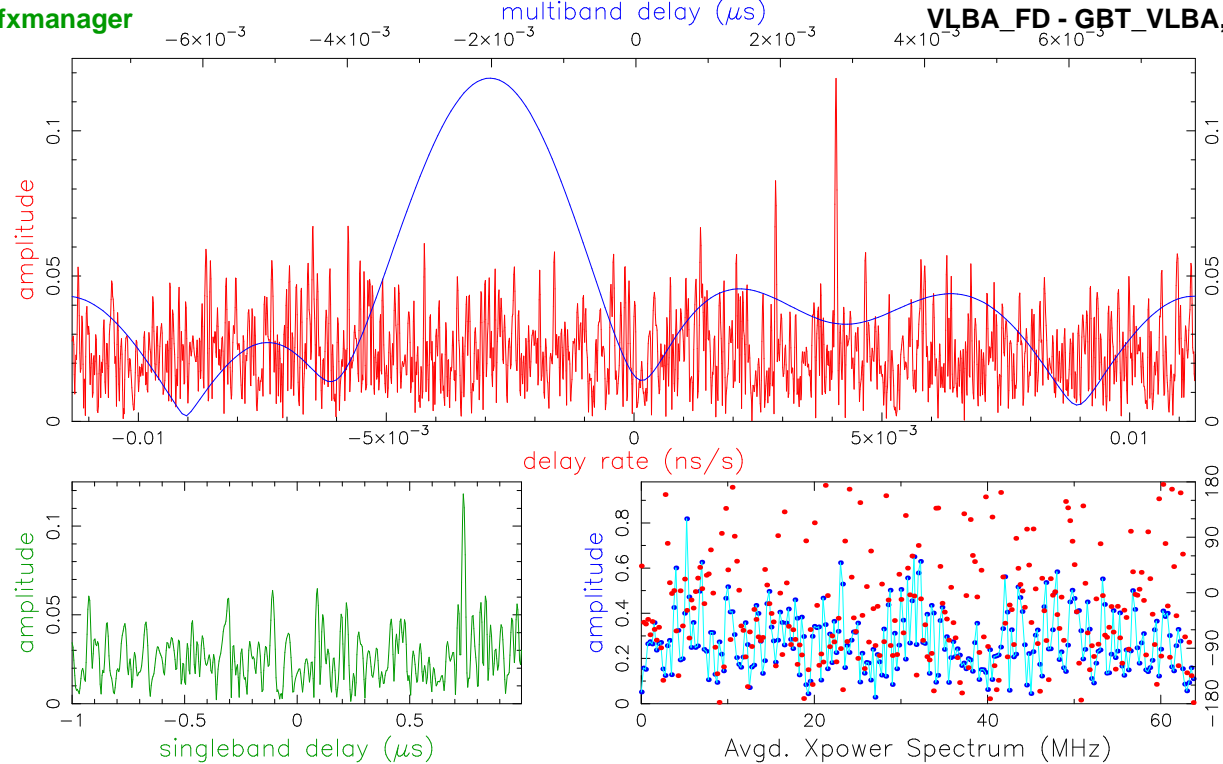
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fG.W.122.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

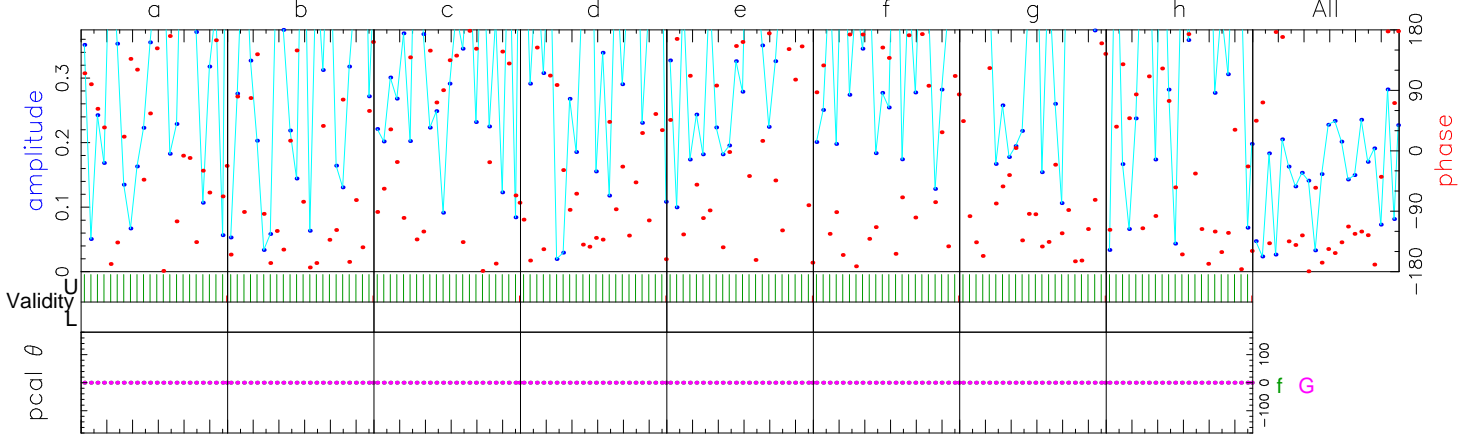
0234+285.1W8CZP, No0029, fG

VLBA_FD - GBT_VLBA, fgroup W, pol RL



Fringe quality 0
 SNR 5.9
 Int time 329.941
 Amp 0.125
 Phase -148.2
 PFD 6.5e-01
 Delays (us)
 SBD 0.738886
 MBD -0.001986
 Fringe rate (Hz)
 0.351949
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044522
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-176.1	-131.7	-171.1	-111.7	-153.7	-175.4	-119.5	-173.6	Phase	-148.2
	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	Ampl.	0.1
	222.0	84.0	138.2	490.6	149.0	445.8	446.0	504.7	Sbd box	446.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:G	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	
G	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-5.15562588901E+03		Apriori delay (usec)		-5.15635827834E+03		Resid mbdelay (usec)		-1.98566E-03	+/- 1.8E-04
Sband delay (usec)	-5.15561939234E+03		Apriori clock (usec)		2.4505627E+01		Resid sbdelay (usec)		7.38886E-01	+/- 1.5E-03
Phase delay (usec)	-5.15635828312E+03		Apriori clockrate (us/s)		1.6000000E-07		Resid phdelay (usec)		-4.77887E-06	+/- 6.3E-07
Delay rate (us/s)	3.76610812000E-01		Apriori rate (us/s)		3.76606726225E-01		Resid rate (us/s)		4.08577E-06	+/- 3.3E-09
Total phase (deg)			Apriori accel (us/s/s)		2.14493924821E-05		Resid phase (deg)		-148.2	+/- 19.5

ph/seg (deg) 66.5 46.7 Search (2048X32) 0.115 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 65.8 81.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.3 27.6 Inc. seg. avg. 0.118 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 48.4 48.1 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
 f: az 74.6 el 35.8 pa -71.2 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) -2431.806 77.570 ion window (TEC) 0.00 0.00
 simultaneous interpolator

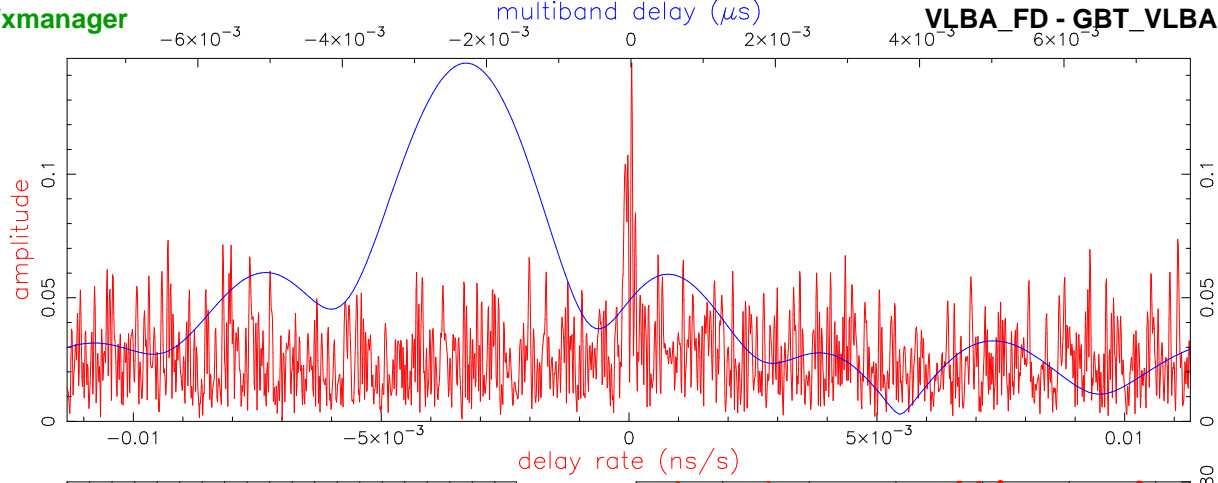
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fG.W.144.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, fG

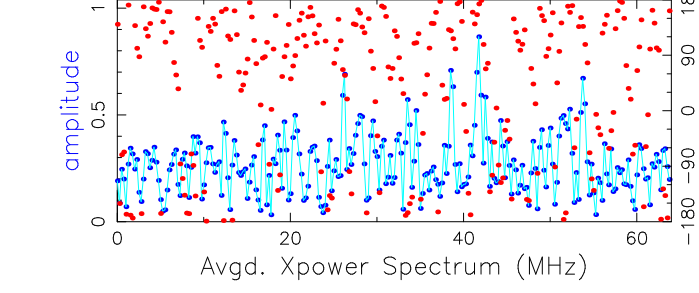
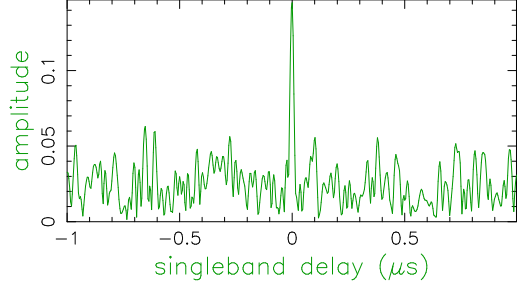
VLBA_FD - GBT_VLBA, fgroup W, pol LL



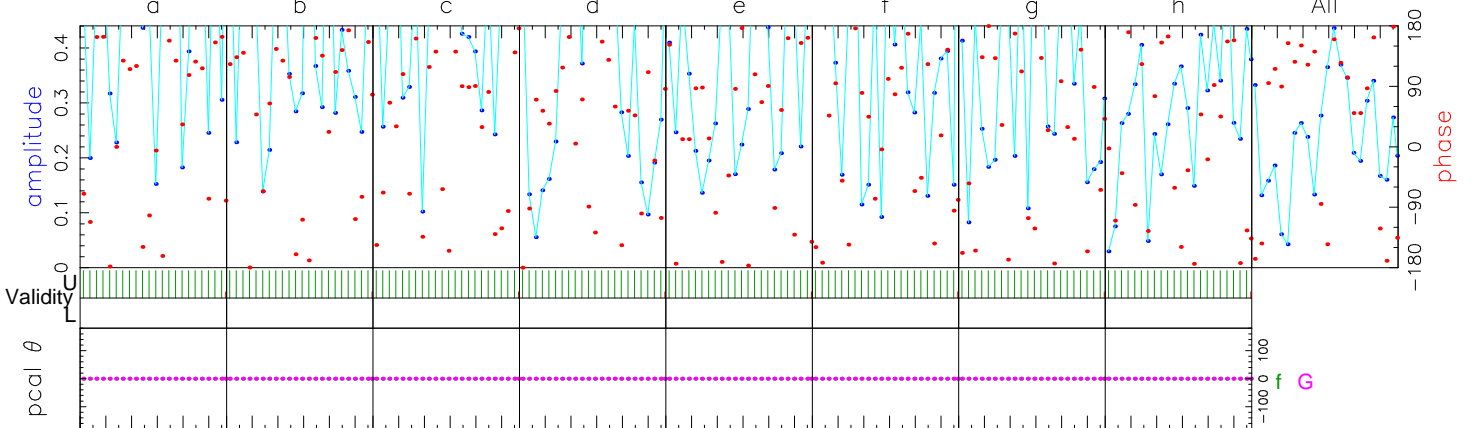
Fringe quality 9

SNR 7.3
 Int time 329.941
 Amp 0.147
 Phase 148.5
 PFD 9.4e-05
 Delays (us)
 SBD -0.001473
 MBD -0.002298
 Fringe rate (Hz) 0.004629
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044511
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
G	1000	1000	1000	1000	1000	1000	1000	1000		
f:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:G	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		
G	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-5.15636057585E+03	Apriori delay (usec)	-5.15635827834E+03	Resid mbdelay (usec)	-2.29751E-03	+/-	1.5E-04
Sband delay (usec)	-5.15635975159E+03	Apriori clock (usec)	2.4505627E+01	Resid sbdelay (usec)	-1.47325E-03	+/-	1.2E-03
Phase delay (usec)	-5.15635827355E+03	Apriori clockrate (us/s)	1.6000000E-07	Resid phdelay (usec)	4.78971E-06	+/-	5.1E-07
Delay rate (us/s)	3.76606779967E-01	Apriori rate (us/s)	3.76606726225E-01	Resid rate (us/s)	5.37413E-08	+/-	2.7E-09
Total phase (deg)	113.8	Apriori accel (us/s/s)	2.14493924821E-05	Resid phase (deg)	148.5	+/-	15.7

ph/seg (deg)	57.6	Theor.	37.7	Amplitude	0.147 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	92.4		65.8	Search (2048X32)	0.143	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	11.0		22.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	55.4		38.8	Inc. seg. avg.	0.195	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.136	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 74.6 el 35.8 pa -71.2 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) -2431.806 77.570 simultaneous interpolator

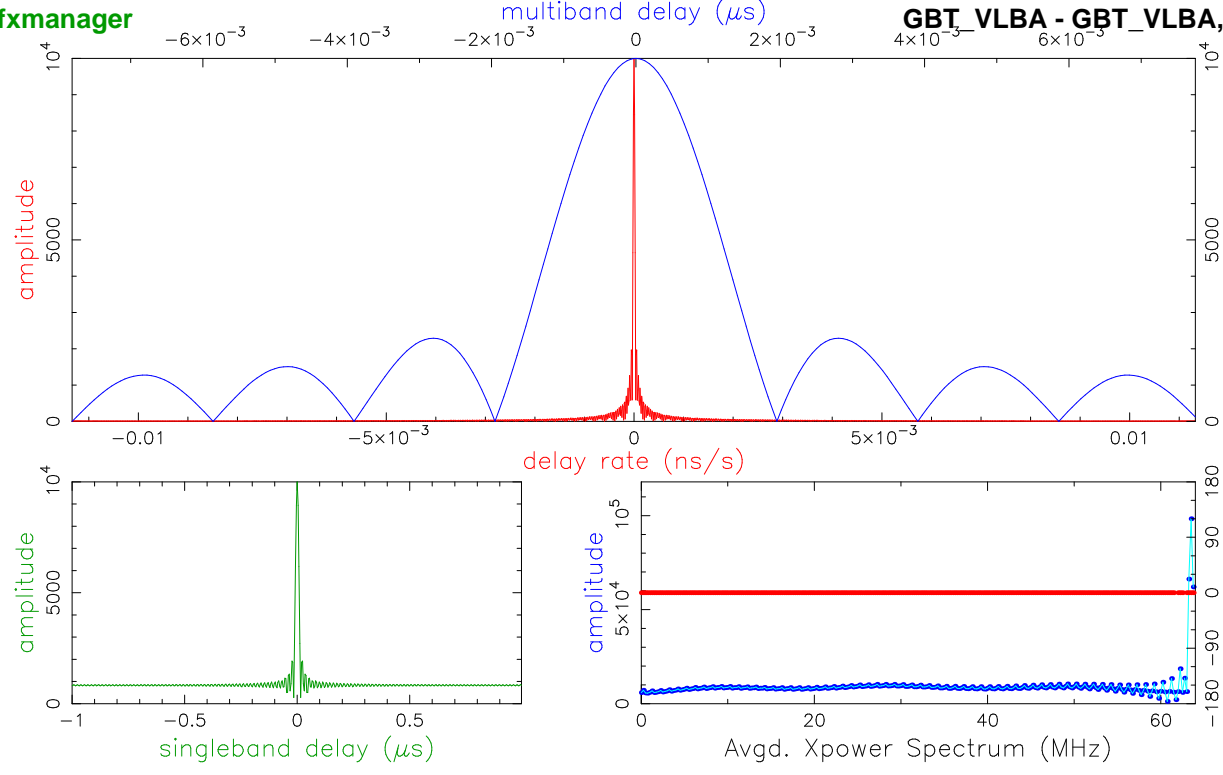
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/fG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/fG.W.83.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GG

GBT_VLBA - GBT_VLBA, fgroup W, pol RR

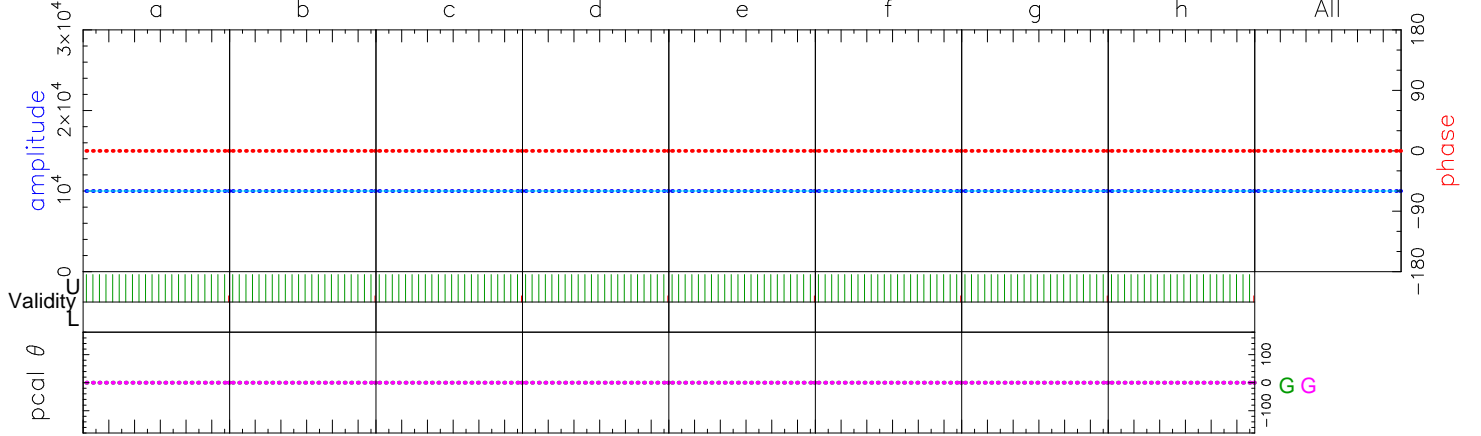


Fringe quality 9

SNR 496753.4
 Int time 329.979
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044515
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	Ampl.	10000.0
G	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
G:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
G:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
G	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Chan ids	
									Tracks	

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

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

G: az 94.5 el 56.3 pa -62.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GG.W.105.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

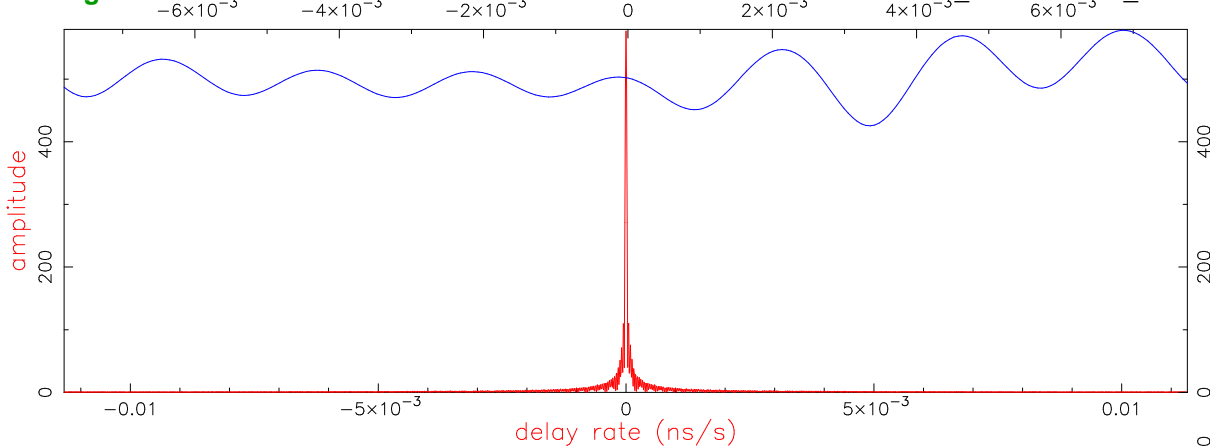
fxmanager

0234+285.1W8CZP, No0029, GG

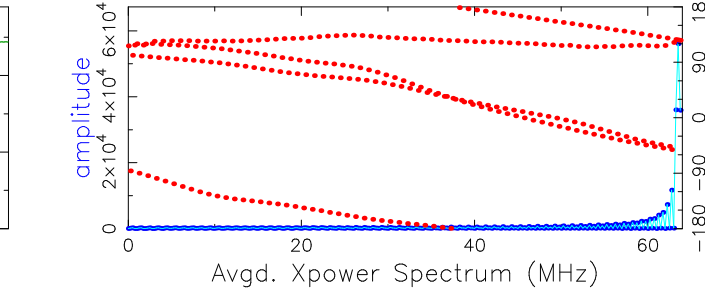
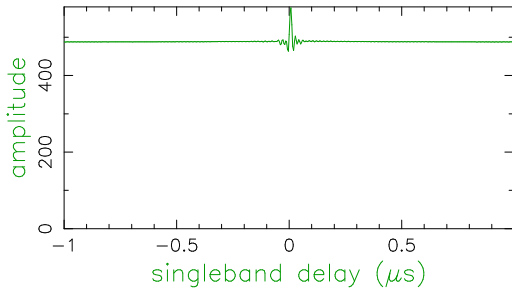
GBT_VLBA - GBT_VLBA, fgroup W, pol LR

multiband delay (μ s)

Fringe quality 5

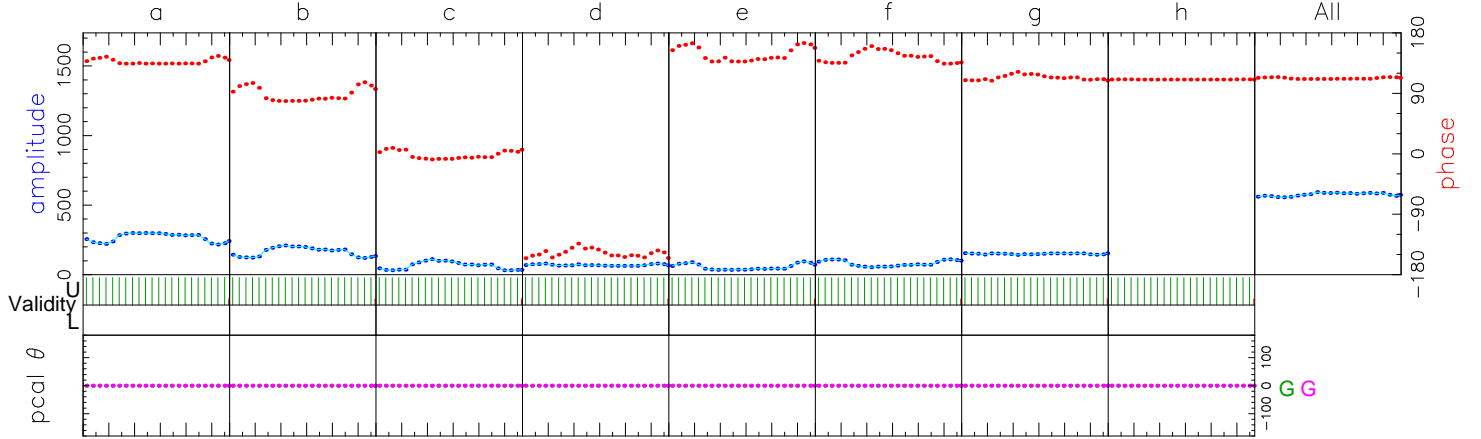


SNR 28777.1
 Int time 329.979
 Amp 579.304
 Phase 112.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.00686
 MBD 0.006951
 Fringe rate (Hz)
 0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	137.0	86.8	-3.9	-147.5	152.4	142.4	113.4	110.5	Phase	112.4
	267.1	163.2	65.6	69.9	55.4	81.0	149.9	4004.0	Ampl.	607.0
	258.1	258.2	257.2	257.7	259.0	258.4	258.5	259.0	Sbd box	258.7
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:G	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	
G	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	6.95081250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	6.95081E-03	+/-	3.8E-08
Sband delay (usec)	6.68600000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	6.68600E-03	+/-	3.0E-07
Phase delay (usec)	3.62313655748E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	3.62314E-06	+/-	1.3E-10
Delay rate (us/s)	7.79413381543E-12	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	7.79413E-12	+/-	6.7E-13
Total phase (deg)	112.4	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	112.4	+/-	0.0

ph/seg (deg)	1.1	0.0	Search (2048X32)	577.631	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	2.1	0.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	67.5	0.0	Inc. seg. avg.	576.756	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	222.0	0.0	Inc. frq. avg.	607.029	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

G: az 94.5 el 56.3 pa -62.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GG.W.125.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

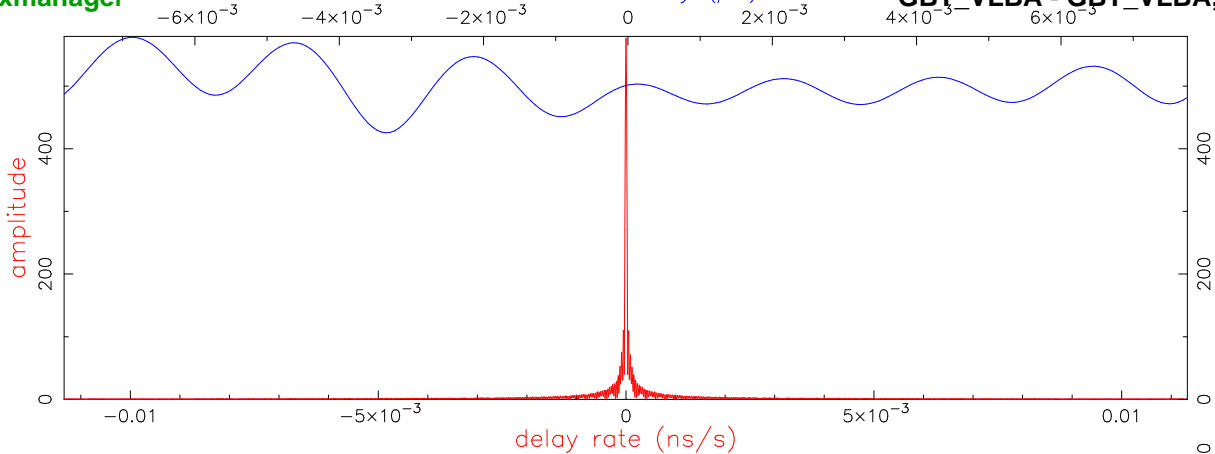
fxmanager

0234+285.1W8CZP, No0029, GG

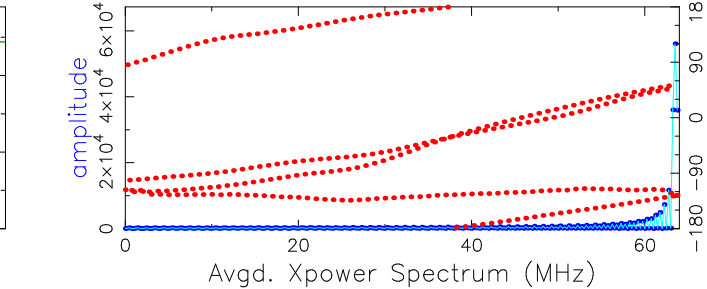
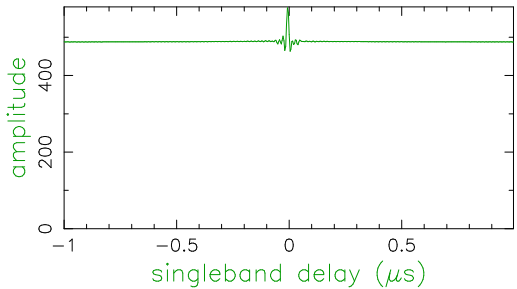
GBT_VLBA - GBT_VLBA, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 5

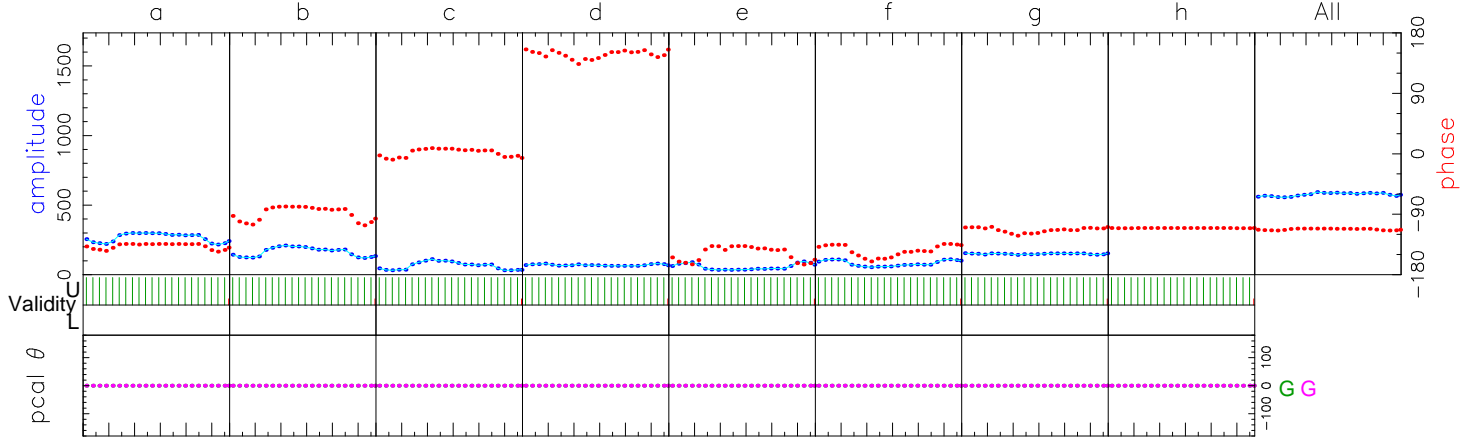


SNR 28777.1
 Int time 329.979
 Amp 579.304
 Phase -112.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.00686
 MBD -0.006951
 Fringe rate (Hz)
 -0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044522
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-137.0	-86.8	3.9	147.5	-152.4	-142.4	-113.4	-110.5	Phase	-112.4
	267.1	163.2	65.6	69.9	55.4	81.0	149.9	4004.0	Ampl.	607.0
	255.9	255.8	256.8	256.3	255.0	255.6	255.5	255.0	Sbd box	255.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:G	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	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.95081250000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-6.95081E-03	+/- 3.8E-08
Sband delay (usec)	-6.68600000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-6.68600E-03	+/- 3.0E-07
Phase delay (usec)	-3.62313655747E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-3.62314E-06	+/- 1.3E-10
Delay rate (us/s)	-7.79413381543E-12		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-7.79413E-12	+/- 6.7E-13
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-112.4	+/- 0.0

ph/seg (deg) 1.1 0.0 Search (2048X32) 577.631 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 2.1 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) 67.5 0.0 Inc. seg. avg. 576.756 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 222.0 0.0 Inc. frq. avg. 607.029 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 G: az 94.5 el 56.3 pa -62.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 0.000 0.000 ion window (TEC) 0.00 0.00
 simultaneous interpolator

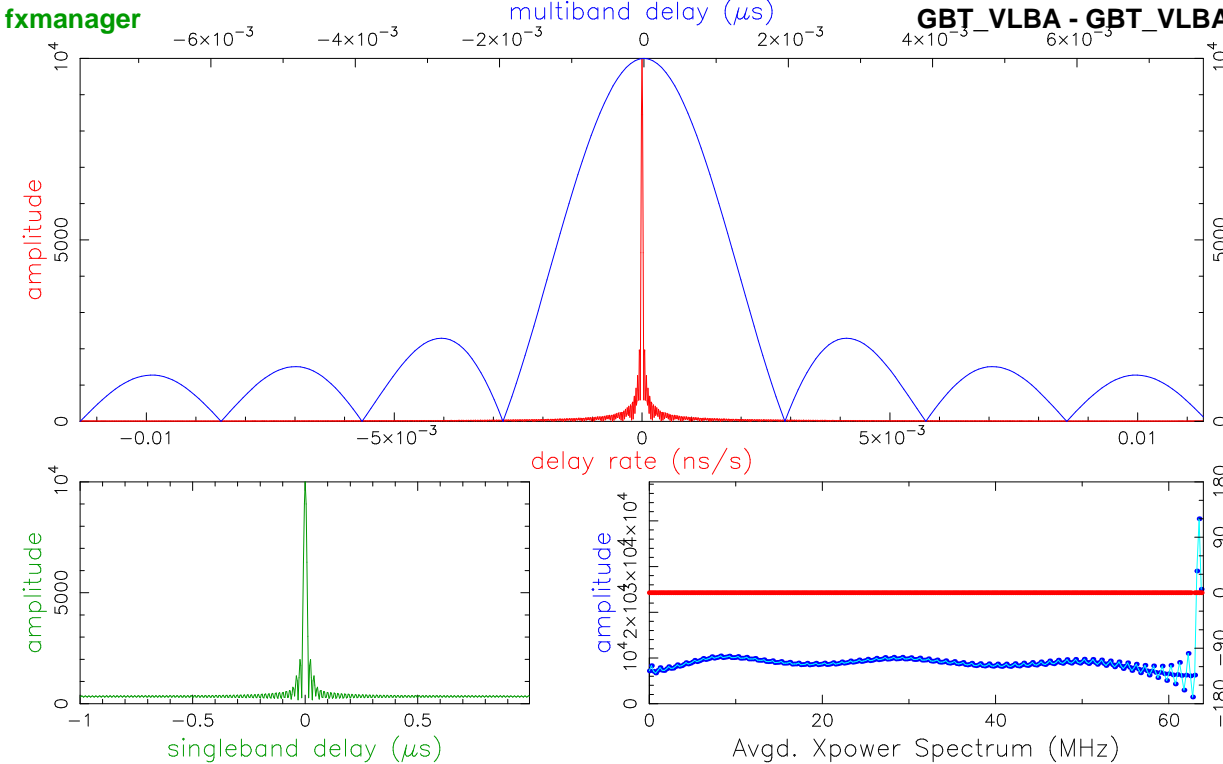
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GG.W.142.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GG

GBT_VLBA - GBT_VLBA, fgroup W, pol LL

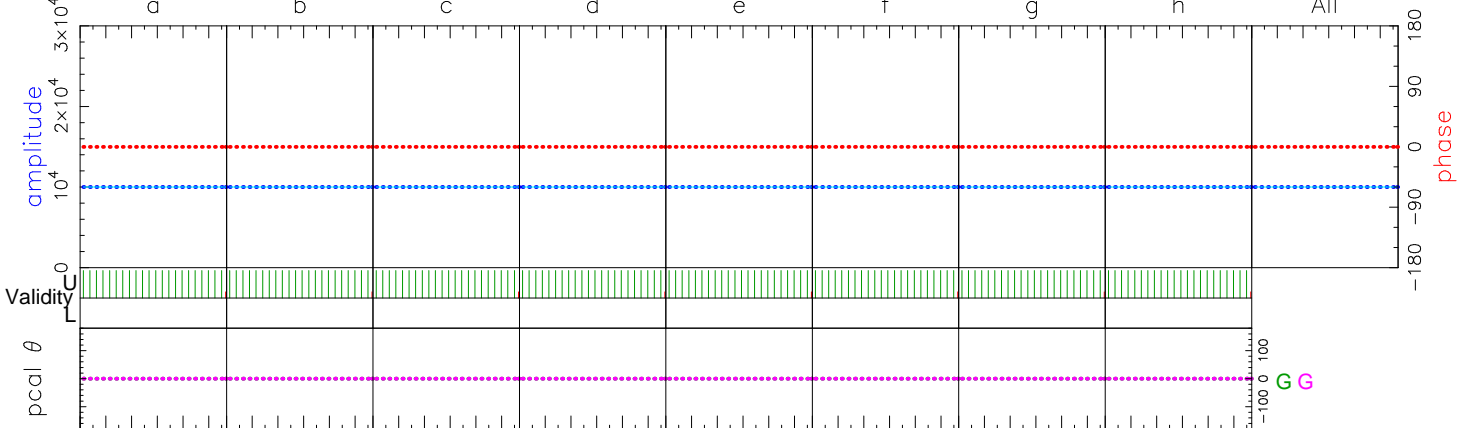


Fringe quality 9

SNR 496753.4
 Int time 329.979
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044512
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	Ampl.	10000.0
G	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
G	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
G:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
G:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

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

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

G: az 94.5 el 56.3 pa -62.9 G: az 94.5 el 56.3 pa -62.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GG..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GG.W.89.1W8CZP

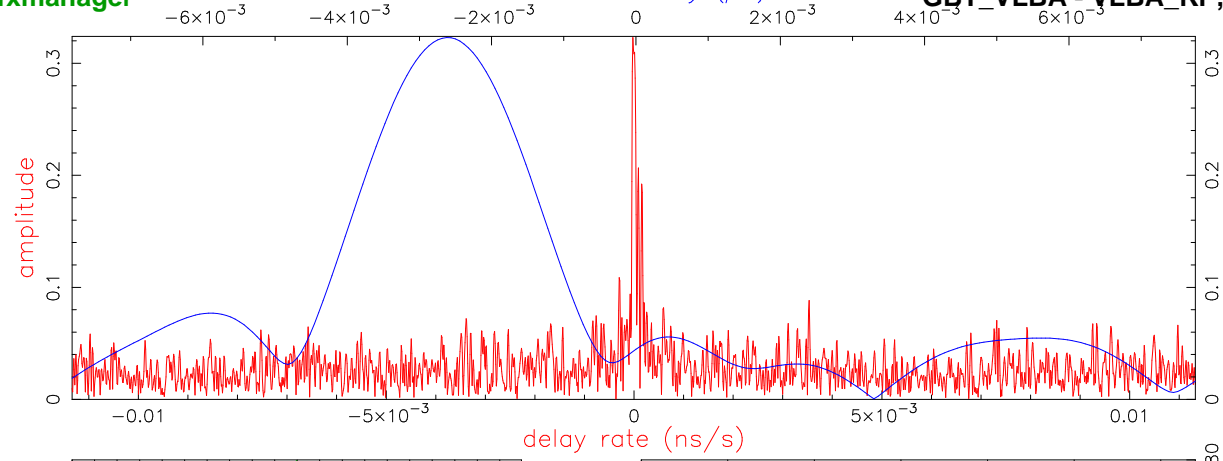
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gk

GBT_VLBA - VLBA_KP, fgroup W, pol RR

multiband delay (μ s)

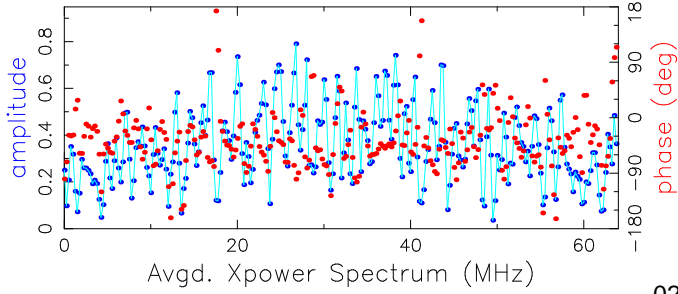
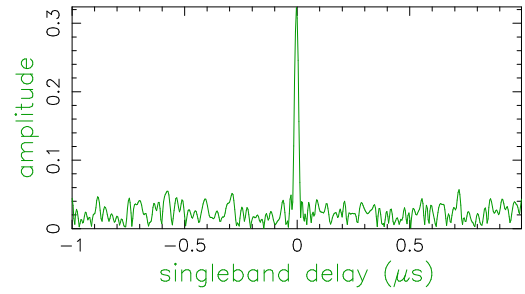


Fringe quality 9

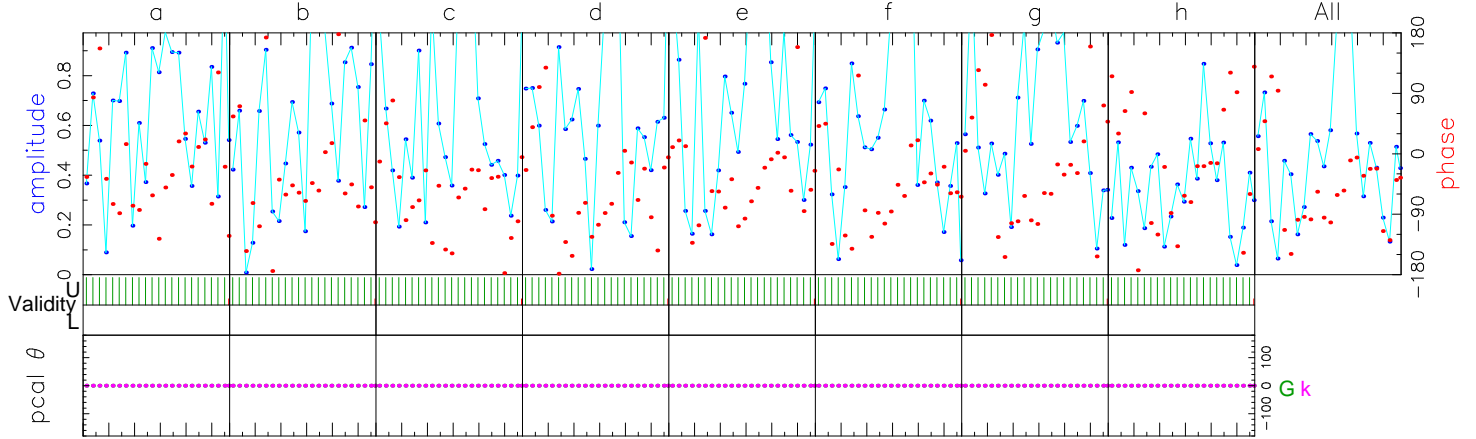
SNR 16.1
Int time 329.979
Amp 0.324
Phase -49.3
PFD 0.0e+00
Delays (us)
SBD -0.003118
MBD -0.002587
Fringe rate (Hz) -0.001798
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

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

delay rate (ns/s)



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-32.5	-48.6	-57.5	-71.5	-44.3	-52.7	-47.0	-32.1	Phase	-49.3
	0.4	0.3	0.4	0.3	0.5	0.4	0.3	0.1	Ampl.	0.3
	255.7	256.0	256.0	255.7	256.6	256.1	256.9	253.4	Sbd box	256.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.00340464688E+03					7.00340723356E+03			Resid mbdelay (usec)	-2.58668E-03 +/- 6.7E-05
Sband delay (usec)	7.00340411556E+03					-1.4599266E+01			Resid sbdelay (usec)	-3.11800E-03 +/- 5.4E-04
Phase delay (usec)	7.00340723197E+03					-9.9999998E-08			Resid phdelay (usec)	-1.58918E-06 +/- 2.3E-07
Delay rate (us/s)	-4.24488294841E-01					-4.24488273972E-01			Resid rate (us/s)	-2.08684E-08 +/- 1.2E-09
Total phase (deg)			-13.6			-3.22926095839E-05			Resid phase (deg)	-49.3 +/- 7.1
	RMS	Theor.	Amplitude	0.324 +/- 0.020					Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	67.8	17.1	Search (2048X32)	0.319					Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	102.2	29.8	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	14.0	10.1	Inc. seg. avg.	0.475					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	31.2	17.6	Inc. frq. avg.	0.324					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
									nlags: 256	t_cohere infinite

G: az 94.5 el 56.3 pa -62.9 k: az 72.6 el 29.8 pa -67.8 u,v (fr/asec) 2729.953 -702.463 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gk..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gk.W.110.1W8CZP

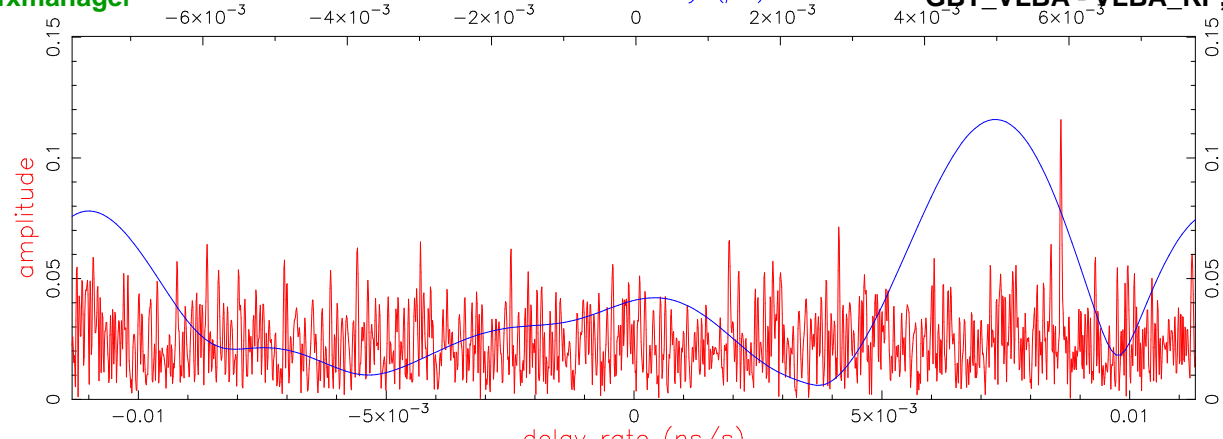
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gk

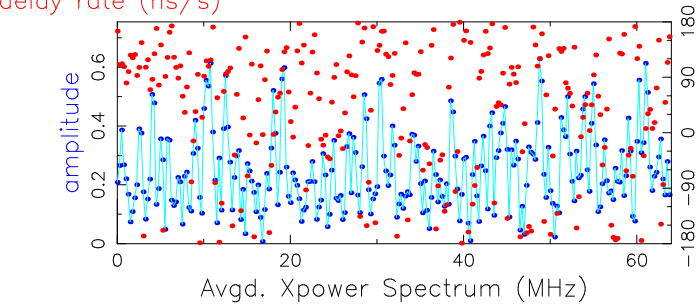
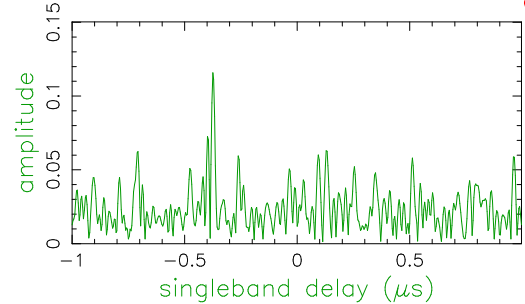
GBT_VLBA - VLBA_KP, fgroup W, pol LR

multiband delay (μ s)



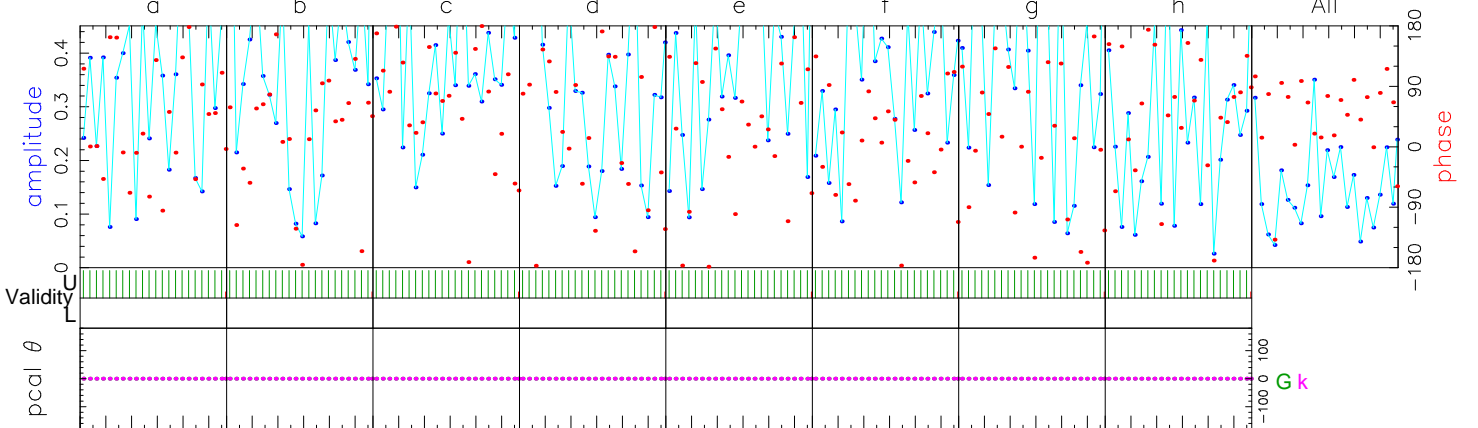
Fringe quality 0

SNR 5.8
 Int time 329.979
 Amp 0.150
 Phase 64.4
 PFD 7.9e-01
 Delays (us)
 SBD -0.373812
 MBD 0.005025
 Fringe rate (Hz)
 0.743007
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	38.6	54.2	96.3	133.3	65.6	13.9	72.6	72.6	Phase	64.4
	0.1	0.3	0.2	0.1	0.2	0.2	0.1	0.2	Ampl.	0.2
	343.1	161.1	133.2	65.7	441.9	453.1	55.8	296.0	Sbd box	161.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.00303725902E+03		Apriori delay (usec)		7.00340723356E+03		Resid mbdelay (usec)		5.02546E-03	+/- 1.9E-04
Sband delay (usec)	7.00303342131E+03		Apriori clock (usec)		-1.4599266E+01		Resid sbdelay (usec)		-3.73812E-01	+/- 1.5E-03
Phase delay (usec)	7.00340723564E+03		Apriori clockrate (us/s)		-9.9999998E-08		Resid phdelay (usec)		2.07536E-06	+/- 6.4E-07
Delay rate (us/s)	-4.24479648397E-01		Apriori rate (us/s)		-4.24488273972E-01		Resid rate (us/s)		8.62557E-06	+/- 3.3E-09
Total phase (deg)	100.1		Apriori accel (us/s/s)		-3.22926095839E-05		Resid phase (deg)		64.4	+/- 19.7

	RMS	Theor.	Amplitude	0.150 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	49.7	47.3	Search (2048X32)	0.114	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	72.5	82.5	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	39.2	27.9	Inc. seg. avg.	0.144	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	41.8	48.7	Inc. frq. avg.	0.156	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

G: az 94.5 el 56.3 pa -62.9 k: az 72.6 el 29.8 pa -67.8 u,v (fr/asec) 2729.953 -702.463 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gk..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gk.W.130.1W8CZP

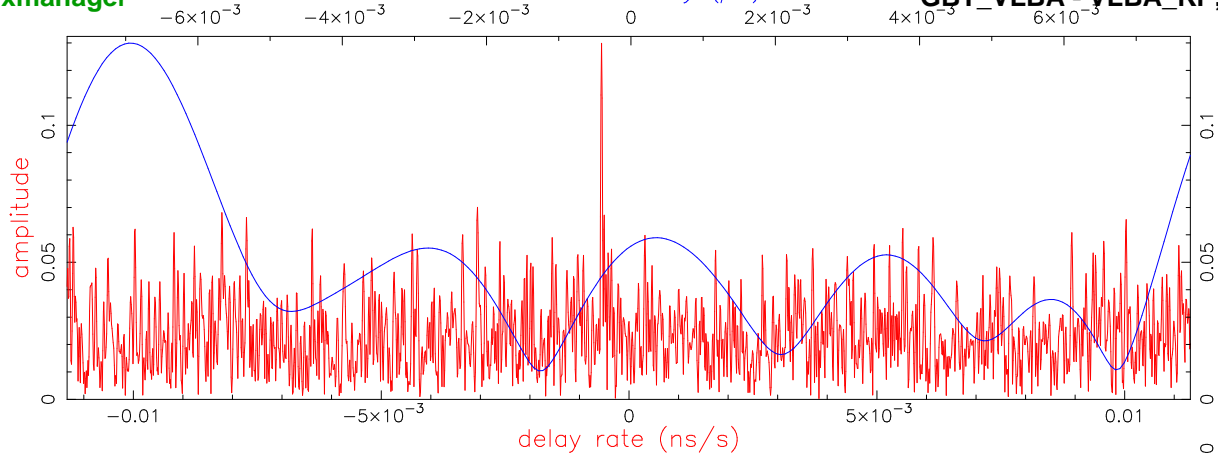
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gk

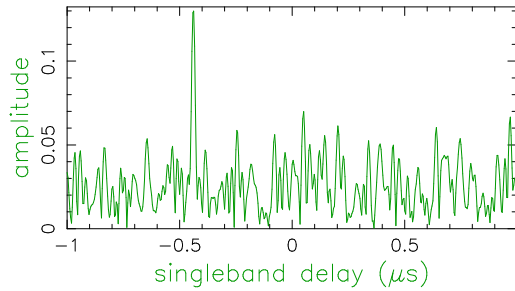
GBT_VLBA - VLBA_KP, fgroup W, pol RL

multiband delay (μ s)

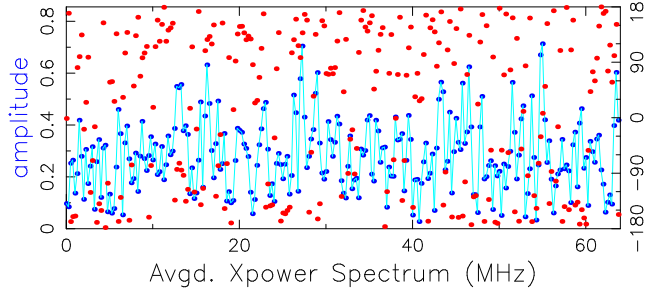


Fringe quality 0

SNR 6.6
 Int time 329.979
 Amp 0.132
 Phase -142.9
 PFD 1.4e-02
 Delays (us)
 SBD -0.439265
 MBD -0.006977
 Fringe rate (Hz)
 -0.048086
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

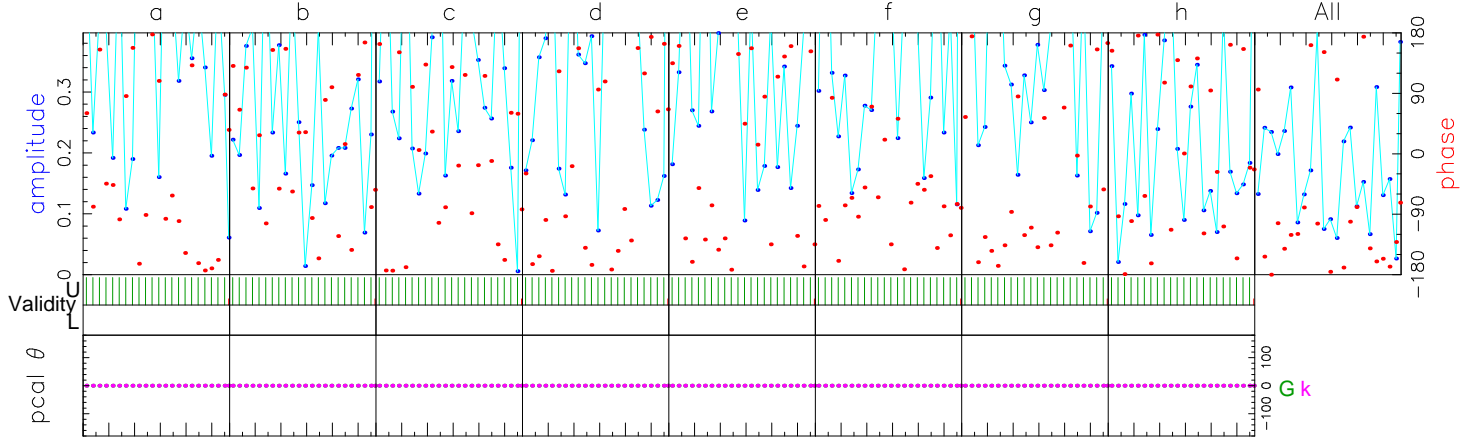


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-143.5	-103.3	-164.2	-160.7	-160.9	-81.5	-152.1	-163.9	Phase	-142.9
	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	Ampl.	0.1
	505.1	62.3	269.8	126.6	143.0	144.9	277.1	398.9	Sbd box	144.5
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	7.00296275668E+03	Apriori delay (usec)	7.00340723356E+03	Resid mbdelay (usec)	-6.97688E-03	+/-	1.7E-04
Sband delay (usec)	7.00296796806E+03	Apriori clock (usec)	-1.4599266E+01	Resid sbdelay (usec)	-4.39265E-01	+/-	1.3E-03
Phase delay (usec)	7.00340722896E+03	Apriori clockrate (us/s)	-9.9999998E-08	Resid phdelay (usec)	-4.60790E-06	+/-	5.6E-07
Delay rate (us/s)	-4.24488832201E-01	Apriori rate (us/s)	-4.24488273972E-01	Resid rate (us/s)	-5.58229E-07	+/-	2.9E-09
Total phase (deg)	-107.2	Apriori accel (us/s/s)	-3.22926095839E-05	Resid phase (deg)	-142.9	+/-	17.4

ph/seg (deg)	49.7	Theor.	41.8	Amplitude	0.132 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	77.5		73.0	Search (2048X32)	0.126	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	34.0		24.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	48.9		43.0	Inc. seg. avg.	0.137	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.137	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

G: az 94.5 el 56.3 pa -62.9 k: az 72.6 el 29.8 pa -67.8 u,v (fr/asec) 2729.953 -702.463 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gk..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gk.W.146.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

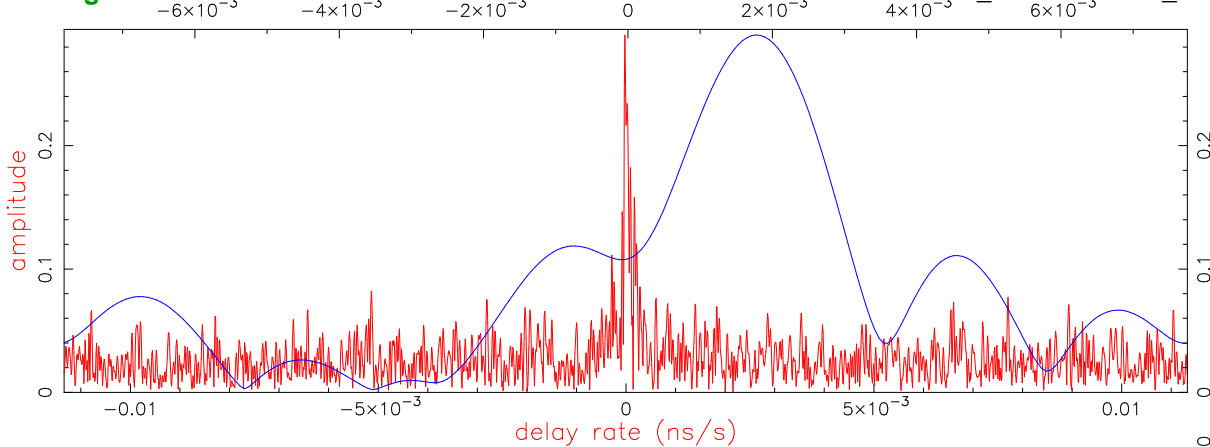
fxmanager

0234+285.1W8CZP, No0029, Gk

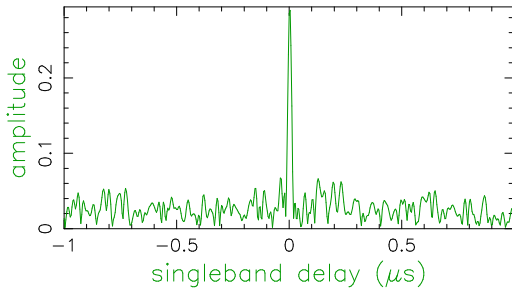
GBT_VLBA - VLBA_KP, fgroup W, pol LL

multiband delay (μ s)

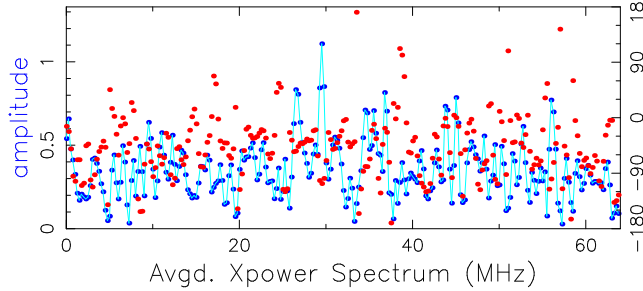
Fringe quality 8



SNR 14.6
 Int time 329.979
 Amp 0.294
 Phase -44.6
 PFD 1.3e-39
 Delays (us)
 SBD 0.002265
 MBD 0.001745
 Fringe rate (Hz)
 -0.002299
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

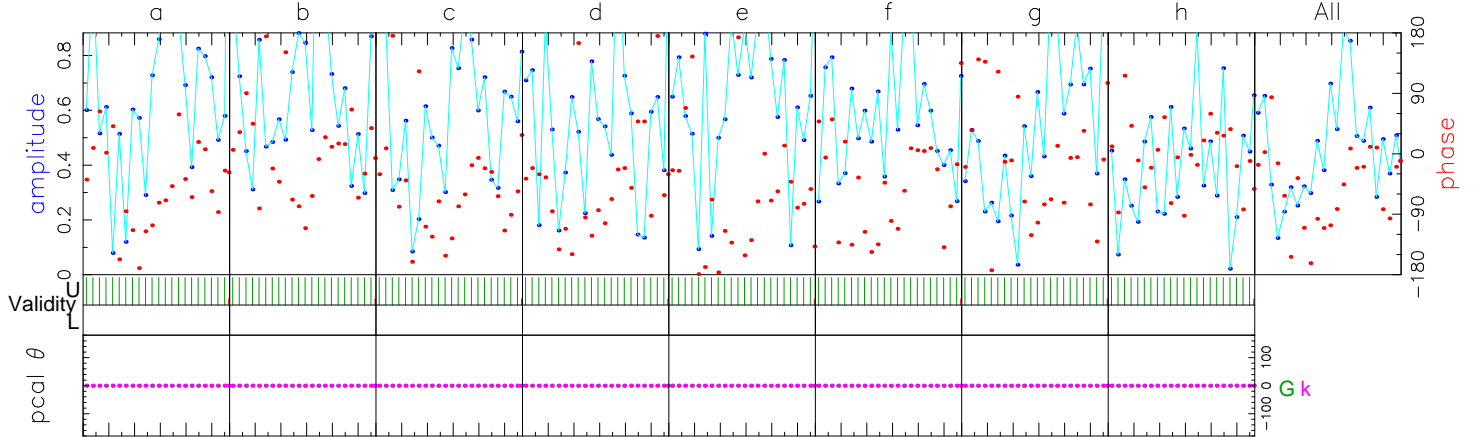


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044512
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-40.2	-12.9	-60.9	-68.3	-89.0	-47.1	-32.3	-10.1	Phase	-44.6
	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	Ampl.	0.3
	258.2	257.7	257.3	257.3	257.2	258.3	257.8	259.2	Sbd box	257.6
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	7.00340897873E+03	Apriori delay (usec)	7.00340723356E+03	Resid mbdelay (usec)	1.74516E-03	+/-	7.4E-05
Sband delay (usec)	7.00340949831E+03	Apriori clock (usec)	-1.4599266E+01	Resid sbdelay (usec)	2.26475E-03	+/-	5.9E-04
Phase delay (usec)	7.00340723213E+03	Apriori clockrate (us/s)	-9.9999998E-08	Resid phdelay (usec)	-1.43848E-06	+/-	2.5E-07
Delay rate (us/s)	-4.24488300660E-01	Apriori rate (us/s)	-4.24488273972E-01	Resid rate (us/s)	-2.66878E-08	+/-	1.3E-09
Total phase (deg)	-8.9	Apriori accel (us/s/s)	-3.22926095839E-05	Resid phase (deg)	-44.6	+/-	7.8

ph/seg (deg)	59.3	RMS	18.8	Theor.	0.294 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	87.4	Search (2048X32)	0.279	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	29.3	Inc. seg. avg.	0.441	Inc. frq. avg.	0.313	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	19.6	Inc. frq. avg.	0.313			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

G: az 94.5 el 56.3 pa -62.9 k: az 72.6 el 29.8 pa -67.8 u,v (fr/asec) 2729.953 -702.463 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gk..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gk.W.91.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

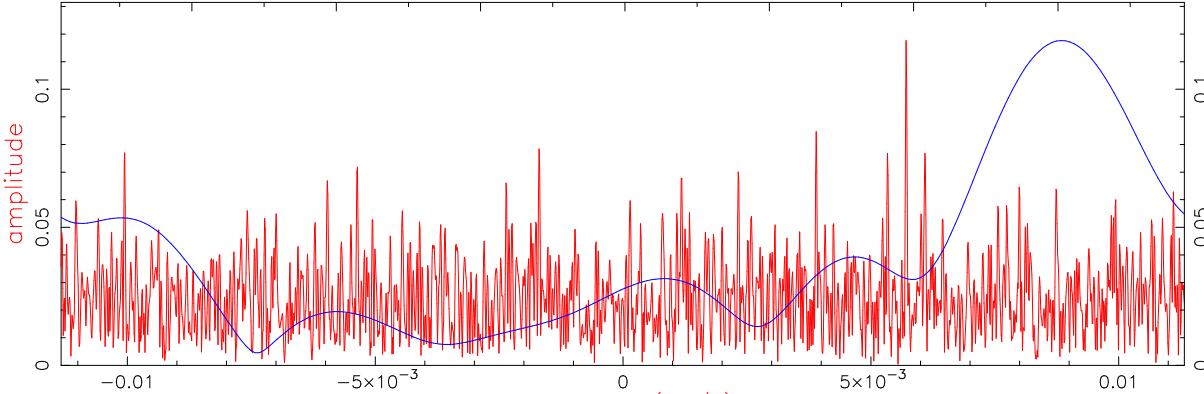
0234+285.1W8CZP, No0029, GI

GBT_VLBA - VLBA_LA, fgroup W, pol LR

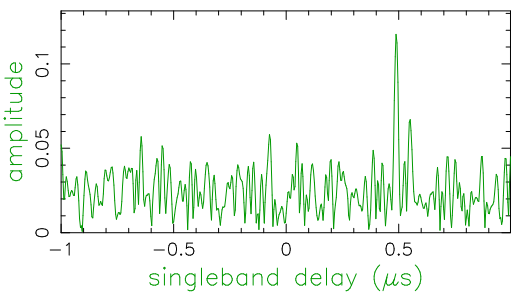
multiband delay (μs)

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

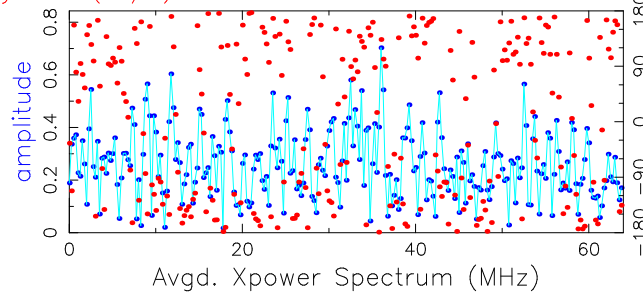
Fringe quality 0



SNR 5.9
Int time 329.979
Amp 0.131
Phase -28.7
PFD 6.7e-01
Delays (us)
SBD 0.489197
MBD 0.006078
Fringe rate (Hz)
0.492651
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

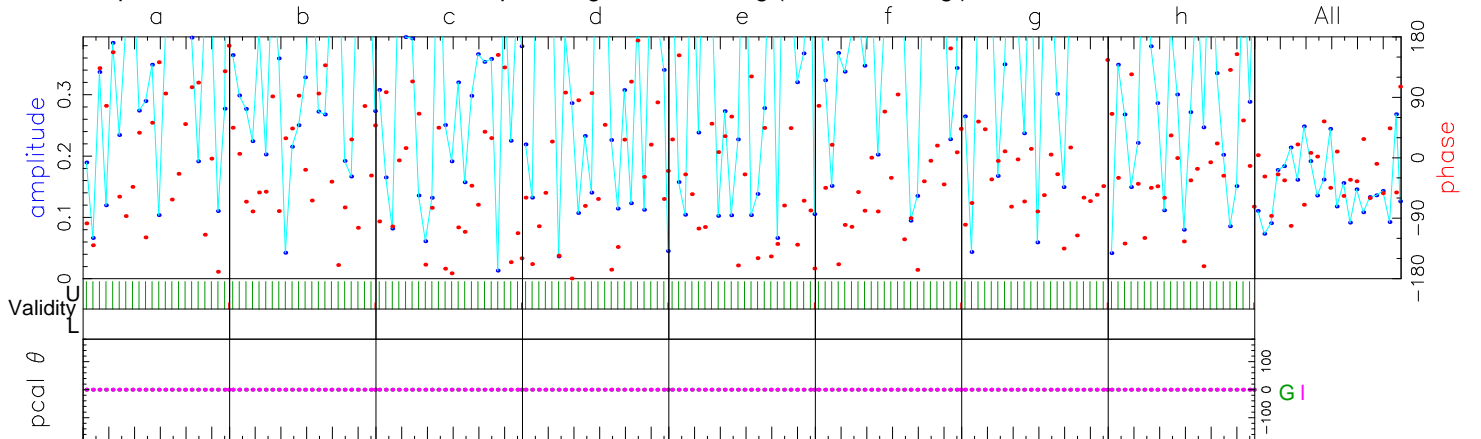


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044522
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-7.0	-22.7	-20.9	-23.7	-55.3	-23.1	-28.6	-23.7	Phase	-28.7		
	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.2	Ampl.	0.1		
	62.6	459.9	346.4	434.4	481.4	22.0	382.1	231.5	Sbd box	382.2		
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used			
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
G:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
G:I	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			
I	1000	1000	1000	1000	1000	1000	1000	1000				
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	5.36678578532E+03		Apriori delay (usec)		5.36629533198E+03		Resid mbdelay (usec)		6.07834E-03 +/- 1.8E-04			
Sband delay (usec)	5.36678452898E+03		Apriori clock (usec)		-1.1704784E+01		Resid sbdelay (usec)		4.89197E-01 +/- 1.5E-03			
Phase delay (usec)	5.36629533105E+03		Apriori clockrate (us/s)		1.8600001E-07		Resid phdelay (usec)		-9.25586E-07 +/- 6.3E-07			
Delay rate (us/s)	-3.37483230986E-01		Apriori rate (us/s)		-3.37488950172E-01		Resid rate (us/s)		5.71919E-06 +/- 3.3E-09			
Total phase (deg)	294.1		Apriori accel (us/s/s)		-2.65868328723E-05		Resid phase (deg)		-28.7 +/- 19.5			
	RMS	Theor.	Amplitude	0.131 +/- 0.022		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	42.6	46.8	Search (2048X32)	0.113		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	53.7	81.7	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	15.0	27.6	Inc. seg. avg.	0.128		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011	0.011	
amp/frq (%)	61.6	48.2	Inc. frq. avg.	0.120		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

G: az 94.5 el 56.3 pa -62.9 I: az 77.2 el 35.1 pa -64.8 u,v (fr/asec) 2169.568 -880.525 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GI..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GI.W.139.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

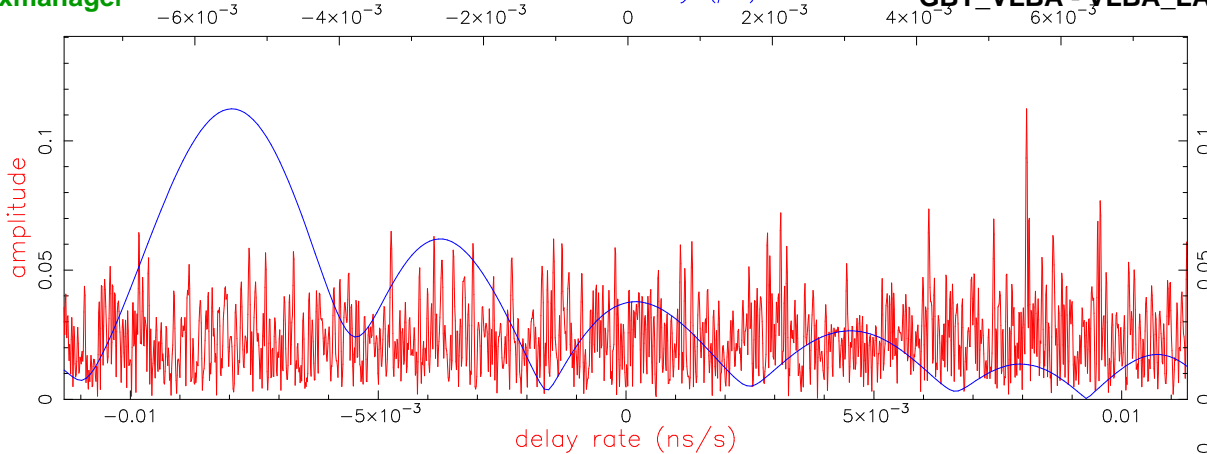
fxmanager

0234+285.1W8CZP, No0029, GI

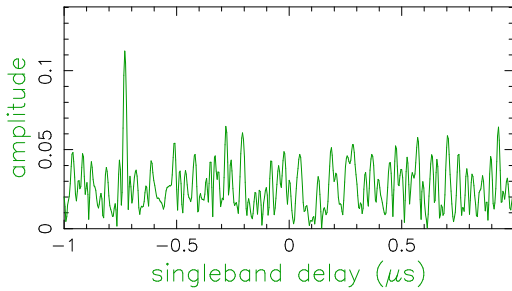
GBT_VLBA - VLBA_LA, fgroup W, pol RL

multiband delay (μ s)

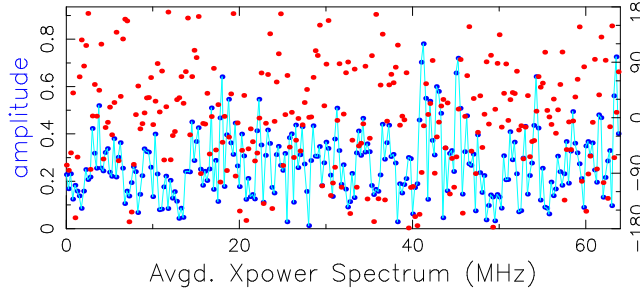
Fringe quality 0



SNR 5.6
Int time 329.979
Amp 0.140
Phase -60.3
PFD 9.9e-01
Delays (us)
SBD -0.729798
MBD -0.005491
Fringe rate (Hz)
0.697438
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

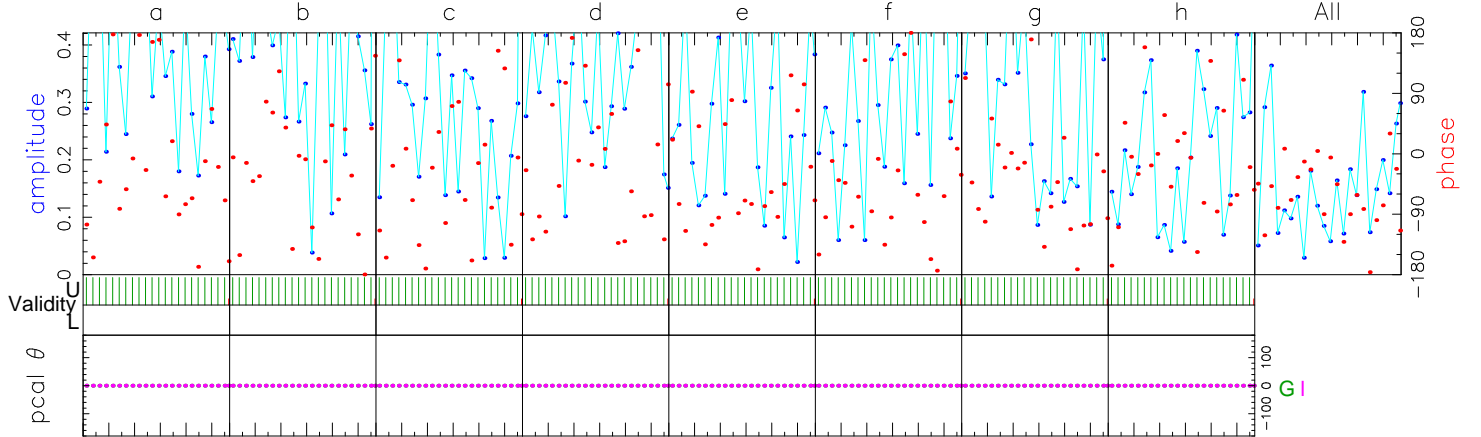


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 151500.00
Stop 152030.24
FRT 151745.00
Corr/FF/build
2021:288:021115
2021:288:044525
2021:252:122852
RA & Dec (J2000)
02h37m52.405678s
+28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-74.0	-24.0	-54.8	-62.4	-73.6	-87.6	-45.8	-43.5	Phase	-60.3
	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	Ampl.	0.1
	223.1	191.0	52.4	54.9	474.0	437.0	70.0	419.9	Sbd box	70.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:I	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	
I	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.36557109111E+03	Apriori delay (usec)	5.36629533198E+03	Resid mbdelay (usec)	-5.49087E-03	+/-	1.9E-04
Sband delay (usec)	5.36556553423E+03	Apriori clock (usec)	-1.1704784E+01	Resid sbdelay (usec)	-7.29798E-01	+/-	1.5E-03
Phase delay (usec)	5.36629533004E+03	Apriori clockrate (us/s)	1.8600001E-07	Resid phdelay (usec)	-1.94369E-06	+/-	6.6E-07
Delay rate (us/s)	-3.37480853606E-01	Apriori rate (us/s)	-3.37488950172E-01	Resid rate (us/s)	8.09657E-06	+/-	3.5E-09
Total phase (deg)	262.6	Apriori accel (us/s/s)	-2.65868328723E-05	Resid phase (deg)	-60.3	+/-	20.5

ph/seg (deg)	49.1	Theor.	49.1	Amplitude	0.140 +/- 0.025	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	86.4		85.6	Search (2048X32)	0.109	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	22.2		28.9	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	38.5		50.5	Inc. seg. avg.	0.138	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.132	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

G: az 94.5 el 56.3 pa -62.9 I: az 77.2 el 35.1 pa -64.8 u,v (fr/asec) 2169.568 -880.525 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GI.1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GI.W.158.1W8CZP

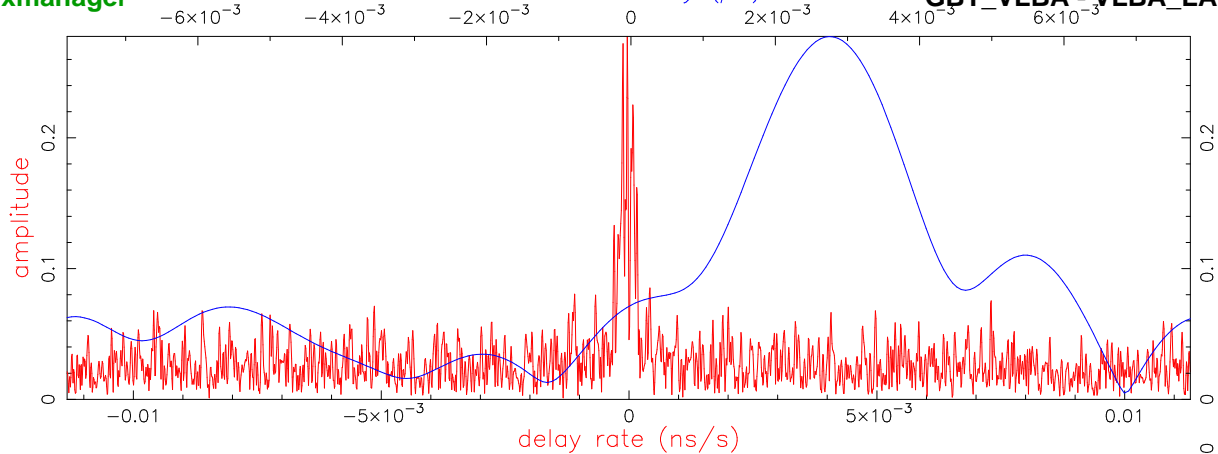
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GI

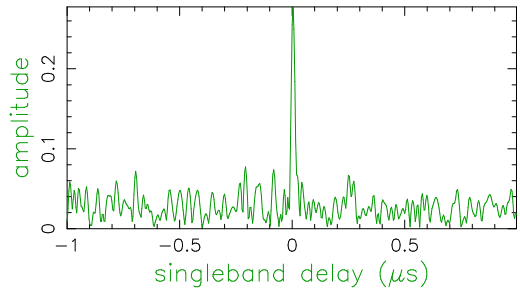
GBT_VLBA - VLBA_LA, fgroup W, pol LL

multiband delay (μ s)

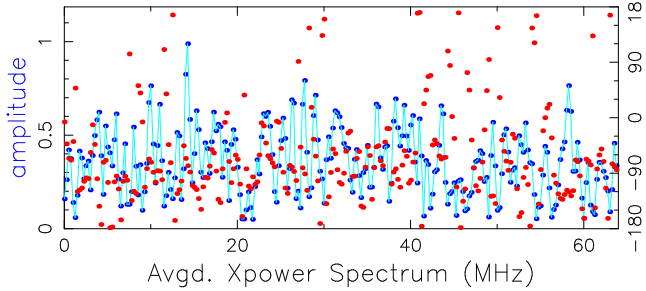


Fringe quality 9

SNR 13.8
 Int time 329.979
 Amp 0.278
 Phase -75.0
 PFD 1.7e-34
 Delays (us)
 SBD 0.003637
 MBD 0.002749
 Fringe rate (Hz)
 -0.002583
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

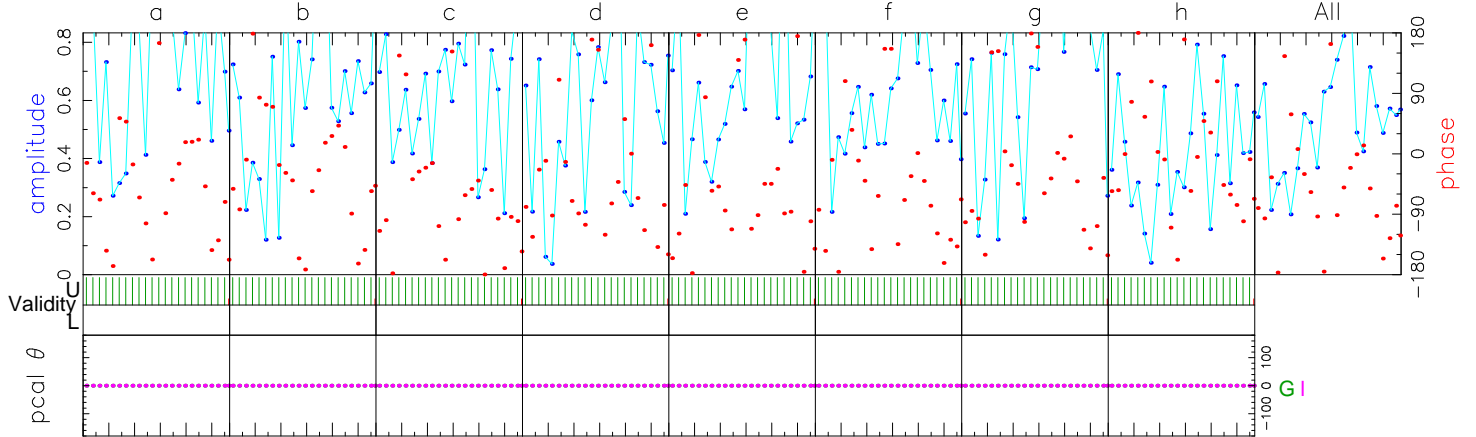


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044513
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-60.4	-34.7	-93.0	-87.9	-108.5	-91.7	-55.5	-32.9	Phase	-75.0
	0.3	0.2	0.4	0.3	0.4	0.3	0.3	0.2	Ampl.	0.3
	256.7	259.2	258.2	257.7	257.6	258.4	258.0	258.3	Sbd box	257.9
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:I	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	
I	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.36629808141E+03	Apriori delay (usec)	5.36629533198E+03	Resid mbdelay (usec)	2.74943E-03	+/-	7.9E-05
Sband delay (usec)	5.36629896848E+03	Apriori clock (usec)	-1.1704784E+01	Resid sbdelay (usec)	3.63650E-03	+/-	6.2E-04
Phase delay (usec)	5.36629532956E+03	Apriori clockrate (us/s)	1.8600001E-07	Resid phdelay (usec)	-2.41851E-06	+/-	2.7E-07
Delay rate (us/s)	-3.37488980161E-01	Apriori rate (us/s)	-3.37488950172E-01	Resid rate (us/s)	-2.99883E-08	+/-	1.4E-09
Total phase (deg)	247.8	Apriori accel (us/s/s)	-2.65868328723E-05	Resid phase (deg)	-75.0	+/-	8.3

ph/seg (deg)	70.8	RMS	70.8	Theor.	19.9	Amplitude	0.278 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	114.1	Search (2048X32)	0.270	sb window (us)	-1.000	1.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	31.3	Inc. seg. avg.	0.504	dr window (ns/s)	-0.011	0.011	Bits/sample:	2x2	nlags:	256	t_cohere infinite
amp/frq (%)	24.5	Inc. frq. avg.	0.302	ion window (TEC)	0.00	0.00	Sample rate (MSamp/s):	128			

G: az 94.5 el 56.3 pa -62.9 I: az 77.2 el 35.1 pa -64.8 u,v (fr/asec) 2169.568 -880.525 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GI.1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GI.W.98.1W8CZP

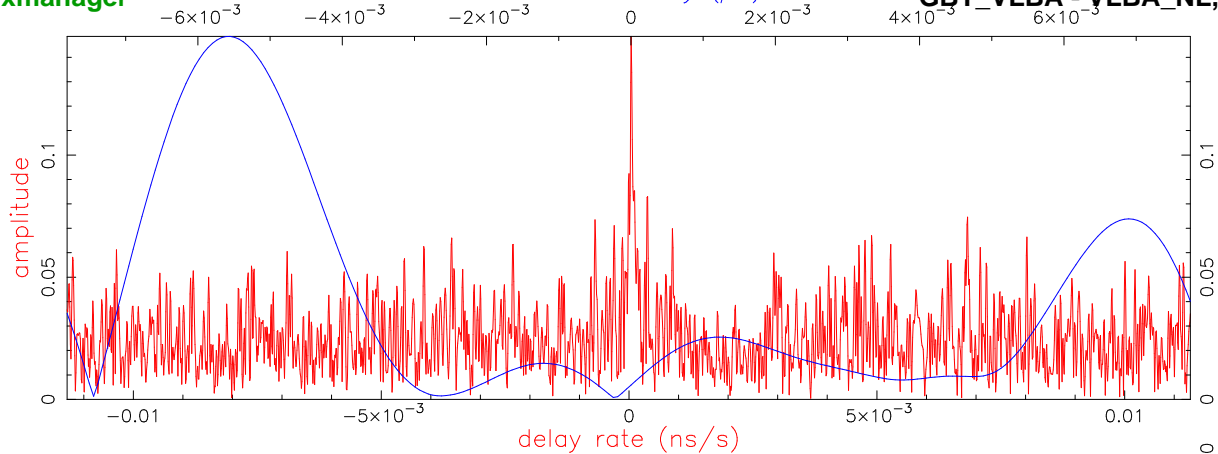
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gn

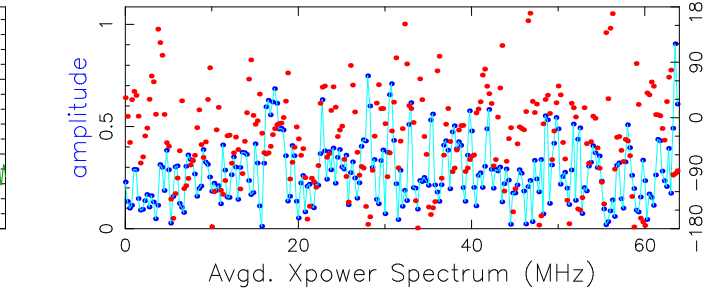
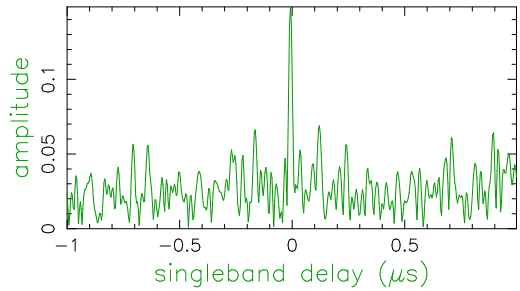
GBT_VLBA - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)



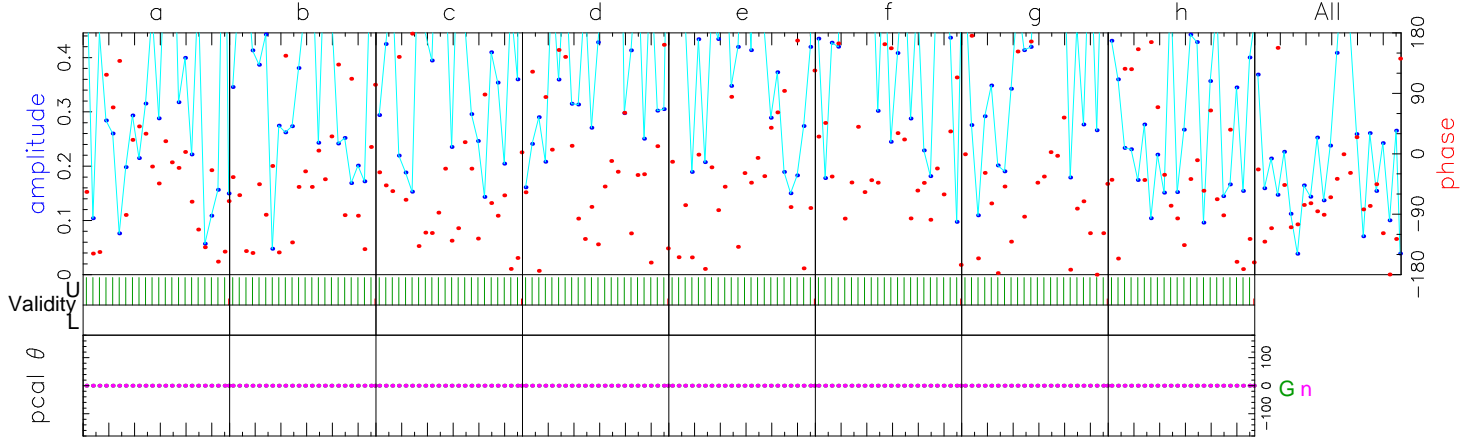
Fringe quality 9

SNR 7.4
 Int time 329.979
 Amp 0.149
 Phase -59.2
 PFD 5.0e-05
 Delays (us)
 SBD -0.007855
 MBD -0.005575
 Fringe rate (Hz)
 0.003811
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044517
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-39.5	-60.1	-88.1	-66.8	-42.2	-35.1	-66.7	-81.4	Phase	-59.2
	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	288.7	412.6	255.8	509.5	232.7	256.6	398.8	428.4	Sbd box	255.0
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.05394839584E+03		Apriori delay (usec)		2.05395397110E+03		Resid mbdelay (usec)		-5.57527E-03	+/- 1.5E-04
Sband delay (usec)	2.05394611610E+03		Apriori clock (usec)		-1.9675066E+01		Resid sbdelay (usec)		-7.85500E-03	+/- 1.2E-03
Phase delay (usec)	2.05395396919E+03		Apriori clockrate (us/s)		-3.9999999E-07		Resid phdelay (usec)		-1.90964E-06	+/- 5.0E-07
Delay rate (us/s)	-1.17247890940E-01		Apriori rate (us/s)		-1.17247935176E-01		Resid rate (us/s)		4.42367E-08	+/- 2.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.34527637283E-05		Resid phase (deg)		-59.2	+/- 15.5

ph/seg (deg) 59.1 37.2 Search (2048X32) 0.146 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 103.0 65.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 21.2 22.0 Inc. seg. avg. 0.187 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 30.5 38.3 Inc. frq. avg. 0.147 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 G: az 94.5 el 56.3 pa -62.9 n: az 90.6 el 47.1 pa -58.3 u,v (fr/asec) 748.439 -933.346 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gn..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gn.W.116.1W8CZP

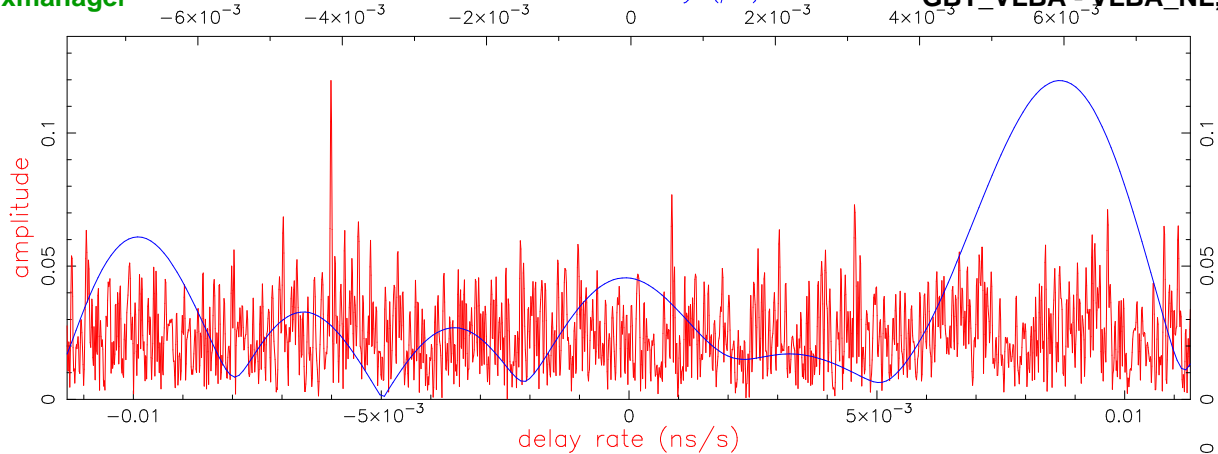
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gn

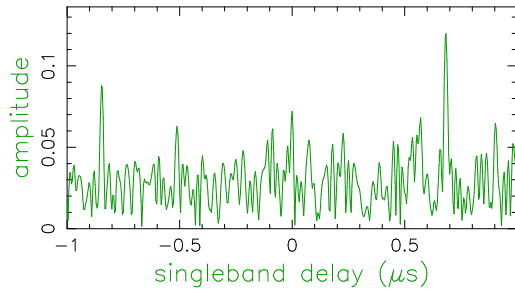
GBT_VLBA - VLBA_NL, fgroup W, pol LR

multiband delay (μ s)

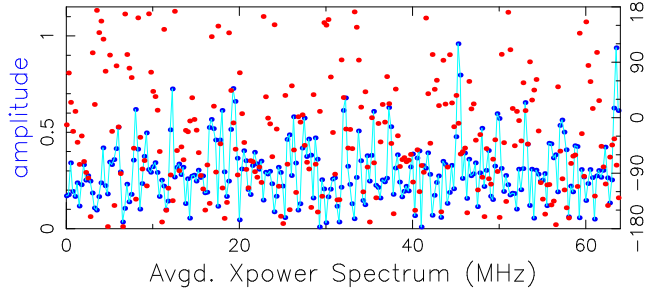


Fringe quality 0

SNR 6.0
 Int time 329.979
 Amp 0.136
 Phase 169.7
 PFD 3.8e-01
 Delays (us)
 SBD 0.682216
 MBD 0.005931
 Fringe rate (Hz)
 -0.518649
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

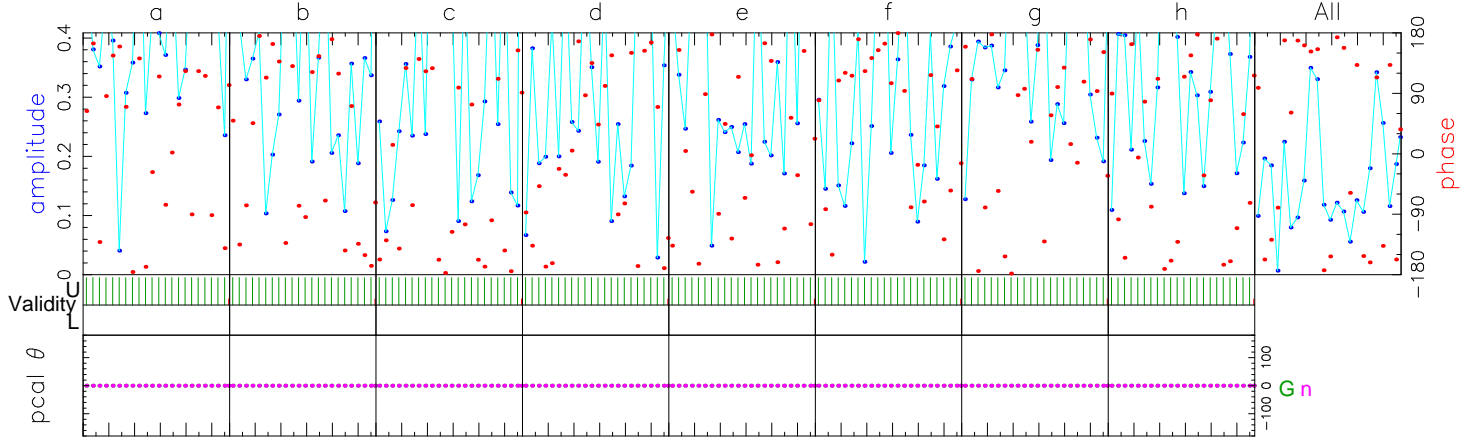


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044521
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	124.2	-161.2	-170.9	168.0	-168.4	150.8	136.8	-171.4	Phase	169.7
	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	Ampl.	0.1
	108.1	402.9	236.2	391.7	238.2	401.9	39.2	105.9	Sbd box	431.6
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	2.05463177739E+03	Apriori delay (usec)	2.05395397110E+03	Resid mbdelay (usec)	5.93129E-03	+/-	1.8E-04
Sband delay (usec)	2.05463618685E+03	Apriori clock (usec)	-1.9675066E+01	Resid sbdelay (usec)	6.82216E-01	+/-	1.4E-03
Phase delay (usec)	2.05395397658E+03	Apriori clockrate (us/s)	-3.9999999E-07	Resid phdelay (usec)	5.47305E-06	+/-	6.1E-07
Delay rate (us/s)	-1.17253956174E-01	Apriori rate (us/s)	-1.17247935176E-01	Resid rate (us/s)	-6.02100E-06	+/-	3.2E-09
Total phase (deg)	195.3	Apriori accel (us/s/s)	-1.34527637283E-05	Resid phase (deg)	169.7	+/-	19.1

ph/seg (deg)	56.2	Theor.	45.7	Amplitude	0.136 +/- 0.023	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	81.7		79.8	Search (2048X32)	0.118	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	30.5		27.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	27.5		47.1	Inc. seg. avg.	0.138	Sample rate(MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.134	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

G: az 94.5 el 56.3 pa -62.9 n: az 90.6 el 47.1 pa -58.3 u,v (fr/asec) 748.439 -933.346 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gn..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gn.W.136.1W8CZP

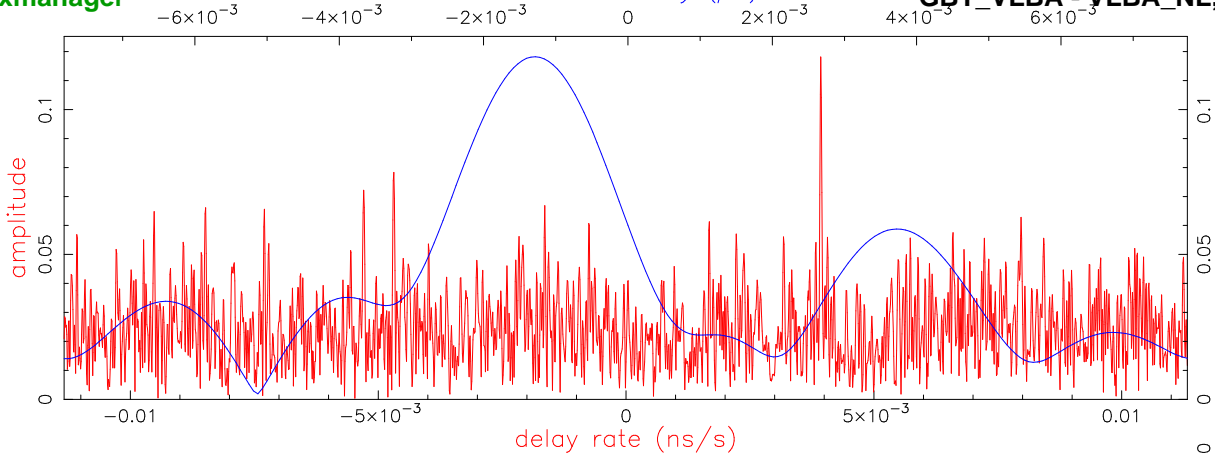
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gn

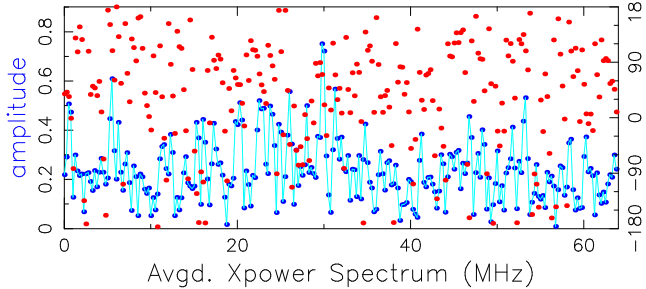
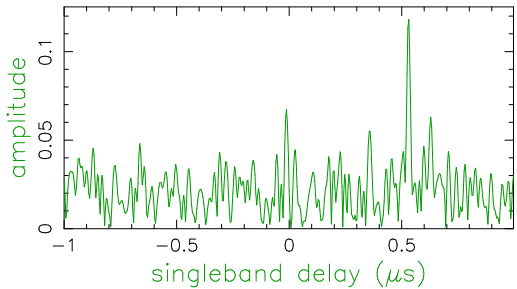
GBT_VLBA - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)



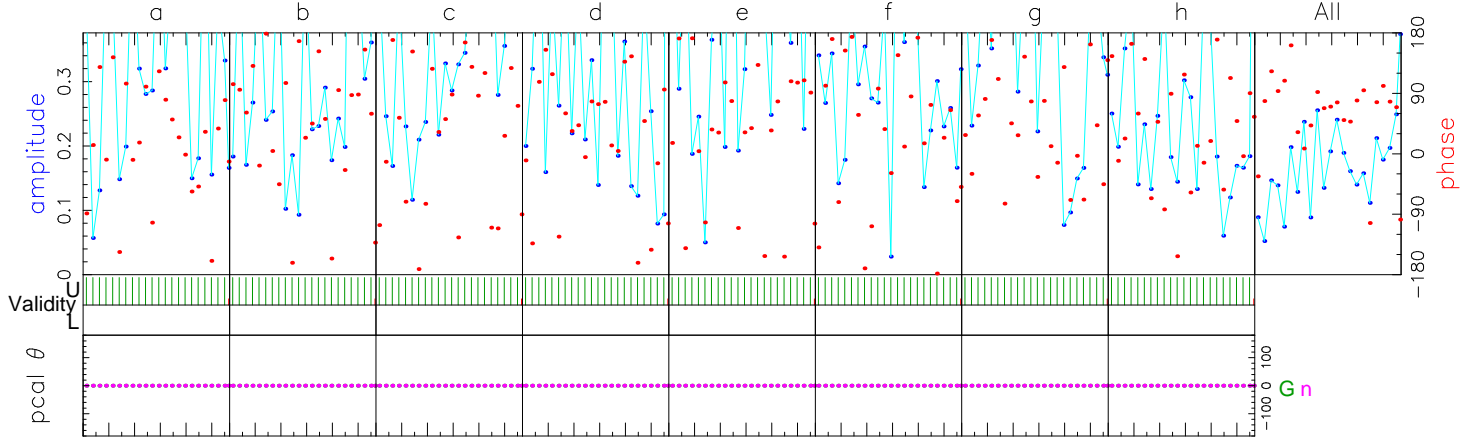
Fringe quality 0

SNR 5.9
 Int time 329.979
 Amp 0.125
 Phase 74.3
 PFD 5.7e-01
 Delays (us)
 SBD 0.530123
 MBD -0.001332
 Fringe rate (Hz)
 0.339232
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044524
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	37.6	74.9	118.9	74.3	83.7	126.5	52.9	44.2	Phase	74.3
	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	Ampl.	0.1
	308.1	282.1	486.9	331.8	68.0	440.0	341.7	417.9	Sbd box	392.7
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.05448388870E+03		Apriori delay (usec)		2.05395397110E+03		Resid mbdelay (usec)		-1.33240E-03	+/- 1.8E-04
Sband delay (usec)	2.05448409410E+03		Apriori clock (usec)		-1.9675066E+01		Resid sbdelay (usec)		5.30123E-01	+/- 1.5E-03
Phase delay (usec)	2.05395397350E+03		Apriori clockrate (us/s)		-3.9999999E-07		Resid phdelay (usec)		2.39541E-06	+/- 6.2E-07
Delay rate (us/s)	-1.17243997029E-01		Apriori rate (us/s)		-1.17247935176E-01		Resid rate (us/s)		3.93815E-06	+/- 3.3E-09
Total phase (deg)	99.8		Apriori accel (us/s/s)		-1.34527637283E-05		Resid phase (deg)		74.3	+/- 19.4

ph/seg (deg) 56.6 46.4 Amplitude 0.125 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 63.4 81.0 Search (2048X32) 0.116 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 35.4 27.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.7 47.8 Inc. seg. avg. 0.130 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.126 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

G: az 94.5 el 56.3 pa -62.9 n: az 90.6 el 47.1 pa -58.3 u,v (fr/asec) 748.439 -933.346 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gn..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gn.W.156.1W8CZP

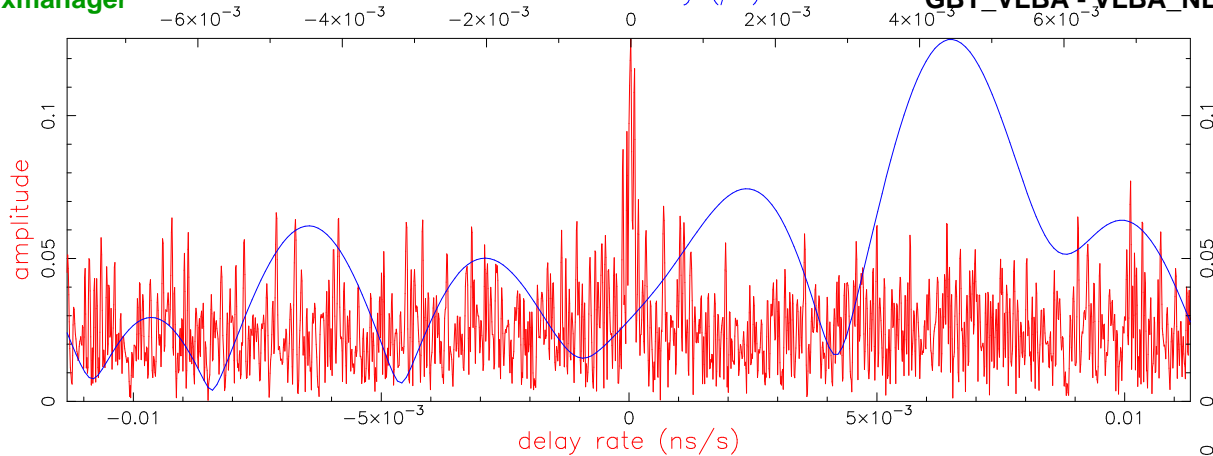
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gn

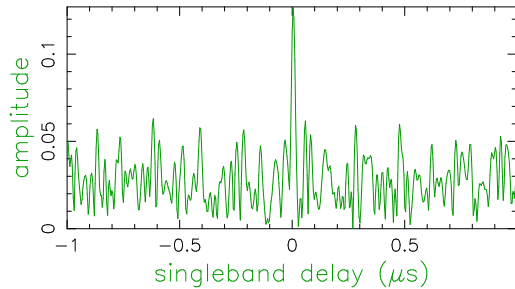
GBT_VLBA - VLBA_NL, fgroup W, pol LL

multiband delay (μ s)

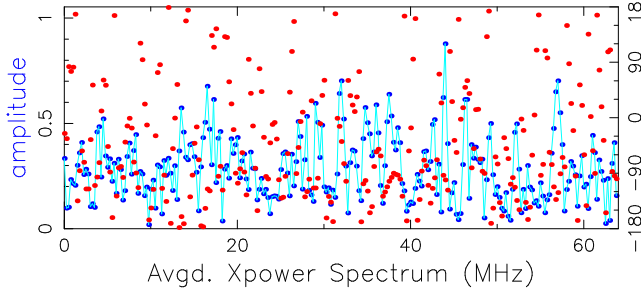


Fringe quality 0

SNR 6.3
 Int time 329.979
 Amp 0.127
 Phase -85.9
 PFD 7.3e-02
 Delays (us)
 SBD 0.004627
 MBD 0.004443
 Fringe rate (Hz)
 0.003035
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

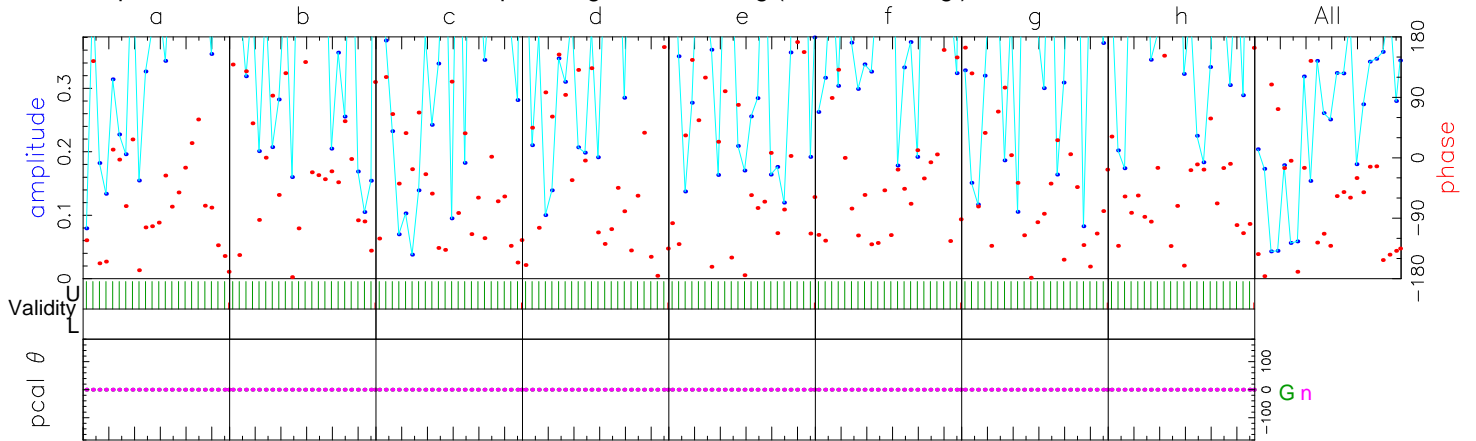


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044513
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-66.9	-18.6	-90.5	-136.1	-167.3	-75.5	-81.9	-71.0	Phase	-85.9
	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.3	Ampl.	0.1
	326.8	499.4	410.9	315.0	144.6	138.0	443.3	257.9	Sbd box	258.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.05395841417E+03	Apriori delay (usec)	2.05395397110E+03	Resid mbdelay (usec)	4.44307E-03	+/-	1.7E-04
Sband delay (usec)	2.05395859785E+03	Apriori clock (usec)	-1.9675066E+01	Resid sbdelay (usec)	4.62675E-03	+/-	1.4E-03
Phase delay (usec)	2.05395396834E+03	Apriori clockrate (us/s)	-3.9999999E-07	Resid phdelay (usec)	-2.76861E-06	+/-	5.9E-07
Delay rate (us/s)	-1.17247899945E-01	Apriori rate (us/s)	-1.17247935176E-01	Resid rate (us/s)	3.52316E-08	+/-	3.1E-09
Total phase (deg)	-60.3	Apriori accel (us/s/s)	-1.34527637283E-05	Resid phase (deg)	-85.9	+/-	18.2

ph/seg (deg)	RMS 78.7	Theor. 43.5	Amplitude Search (2048X32)	0.127 +/- 0.020	0.126	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	130.5	76.0	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	sb window (us) -1.000 1.000
ph/frq (deg)	49.0	25.7	Inc. seg. avg.	0.190	Bits/sample: 2x2	Sample rate(MISamp/s): 128	mb window (us) -0.008 0.008
amp/frq (%)	44.3	44.8	Inc. frq. avg.	0.138	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	dr window (ns/s) -0.011 0.011

G: az 94.5 el 56.3 pa -62.9 n: az 90.6 el 47.1 pa -58.3 u,v (fr/asec) 748.439 -933.346 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gn..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gn.W.92.1W8CZP

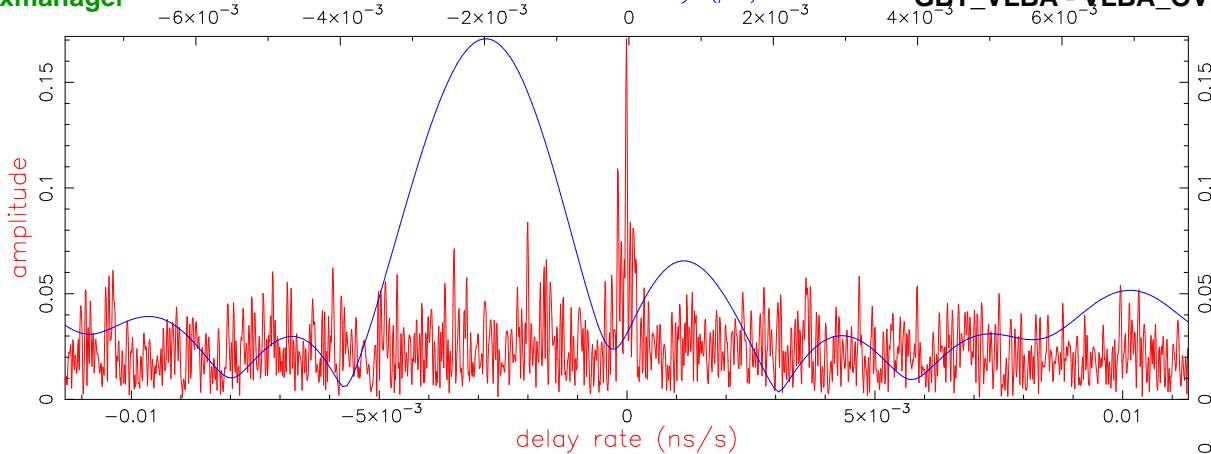
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Go

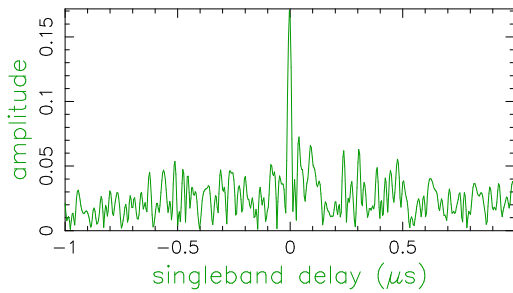
GBT_VLBA - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

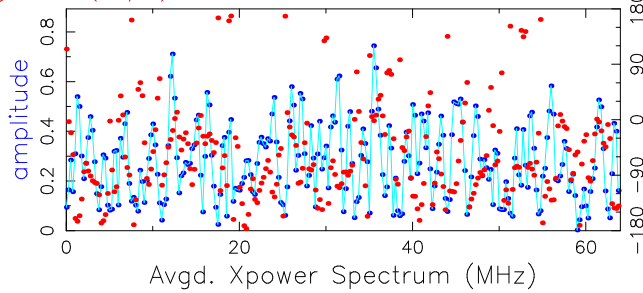


Fringe quality 9

SNR 8.5
 Int time 329.959
 Amp 0.172
 Phase -84.9
 PFD 5.3e-09
 Delays (us)
 SBD -0.002834
 MBD -0.001951
 Fringe rate (Hz)
 -0.001107
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

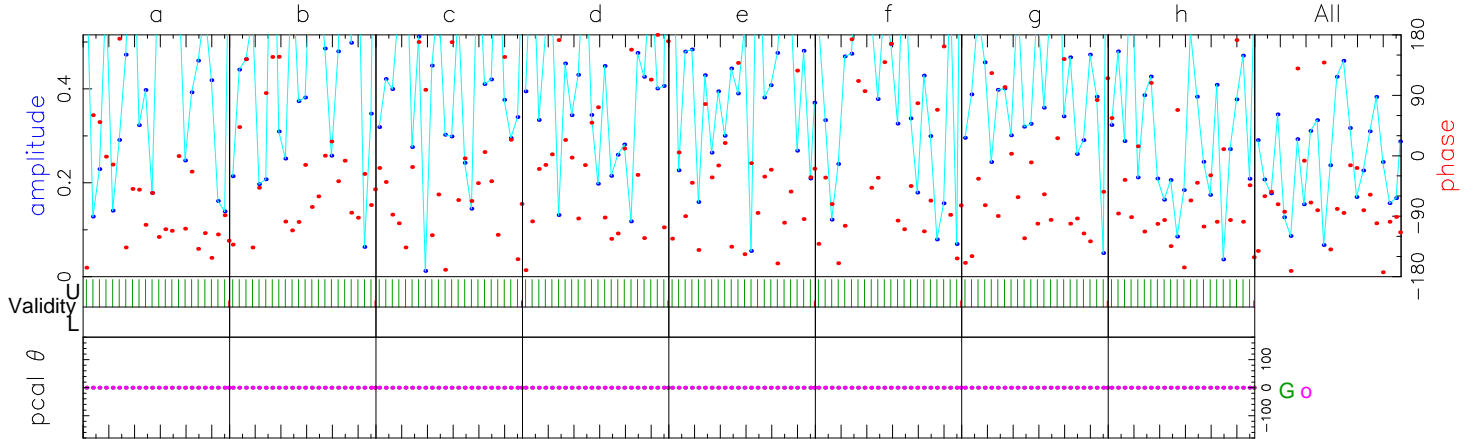


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044517
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-95.6	-71.7	-85.2	-52.2	-81.9	-121.7	-79.9	-87.8	Phase	-84.9
	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	Ampl.	0.2
	255.9	317.3	255.7	208.4	255.4	267.7	262.4	255.4	Sbd box	256.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	8.21046205020E+03		Apriori delay (usec)		8.21046400115E+03		Resid mbdelay (usec)		-1.95095E-03	+/- 1.3E-04
Sband delay (usec)	8.21046116740E+03		Apriori clock (usec)		-1.7912426E+01		Resid sbdelay (usec)		-2.83375E-03	+/- 1.0E-03
Phase delay (usec)	8.21046399842E+03		Apriori clockrate (us/s)		-4.5999999E-07		Resid phdelay (usec)		-2.73843E-06	+/- 4.3E-07
Delay rate (us/s)	-3.93842410786E-01		Apriori rate (us/s)		-3.93842397930E-01		Resid rate (us/s)		-1.28561E-08	+/- 2.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.28531302430E-05		Resid phase (deg)		-84.9	+/- 13.4

RMS Theor. Amplitude 0.172 +/- 0.020
 ph/seg (deg) 60.0 32.2 Search (2048X32) 0.170 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 75.6 56.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 21.4 19.0 Inc. seg. avg. 0.216 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 22.4 33.2 Inc. frq. avg. 0.168 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 G: az 94.5 el 56.3 pa -62.9 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 2515.504 -1745.858 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Go..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Go.W.118.1W8CZP

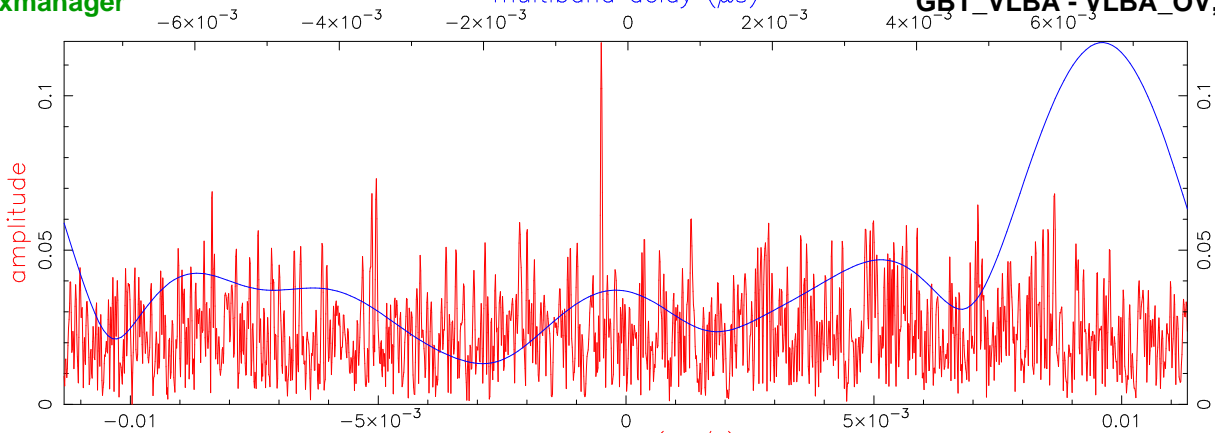
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

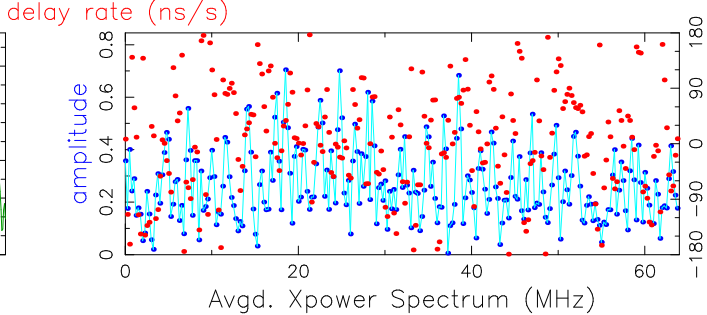
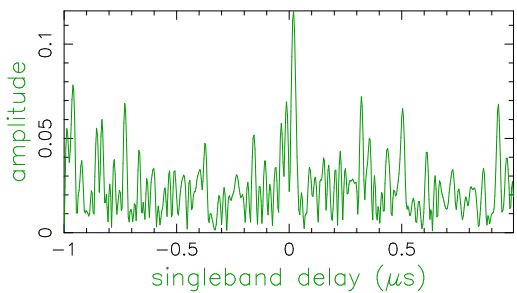
0234+285.1W8CZP, No0029, Go

GBT_VLBA - VLBA_OV, fgroup W, pol LR

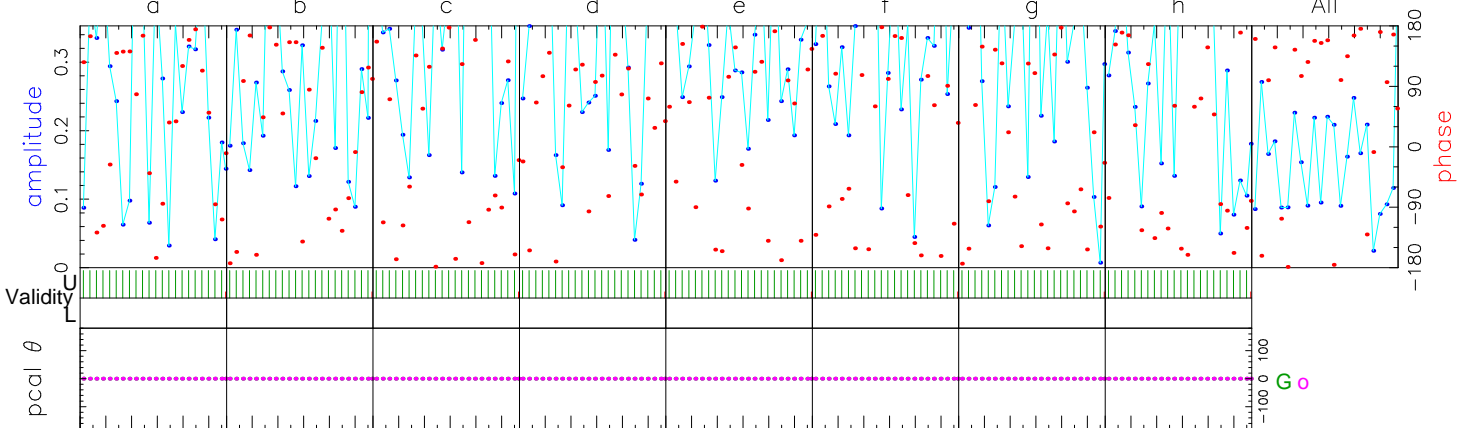
multiband delay (μ s)



Fringe quality 0
 SNR 5.8
 Int time 329.959
 Amp 0.118
 Phase 157.7
 PFD 7.3e-01
 Delays (us)
 SBD 0.018729
 MBD 0.006544
 Fringe rate (Hz)
 -0.042646
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044521
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
G	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	156.0	175.1	-170.7	99.6	136.8	173.7	179.2	167.6		
Sband delay (usec)	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1		
Phase delay (usec)	504.9	427.4	86.2	261.5	216.2	114.3	283.7	3.0		
Delay rate (us/s)										
Total phase (deg)			179.1							
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)										

ph/seg (deg) 53.1 47.1 Search (2048X32) 0.114 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.7 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) 31.4 27.8 Inc. seg. avg. 0.114 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.4 48.4 Inc. frq. avg. 0.122 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 G: az 94.5 el 56.3 pa -62.9 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 2515.504 -1745.858 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Go..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Go.W.137.1W8CZP

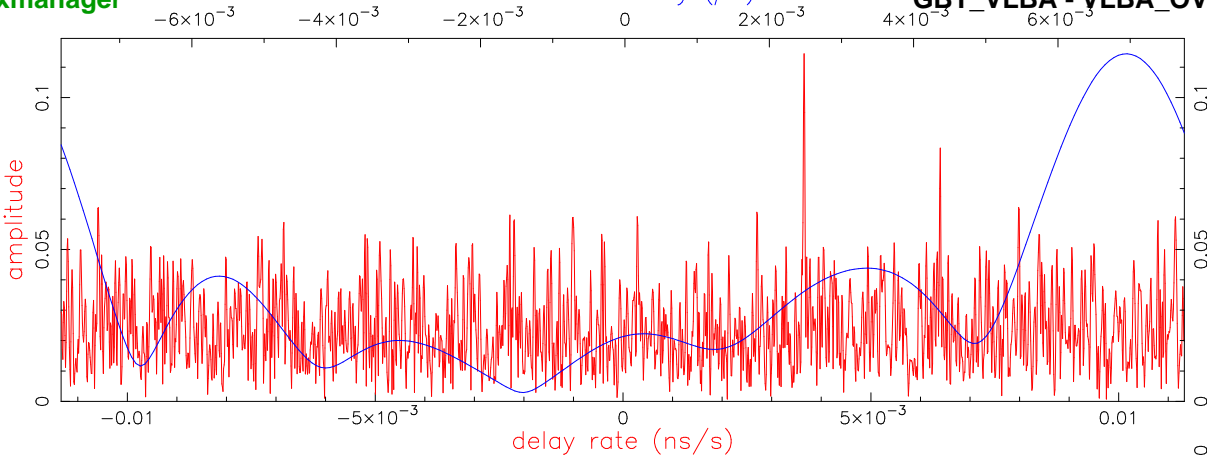
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Go

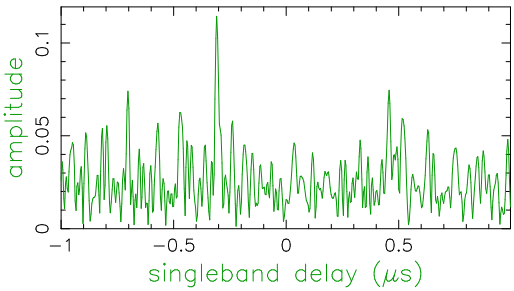
GBT_VLBA - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

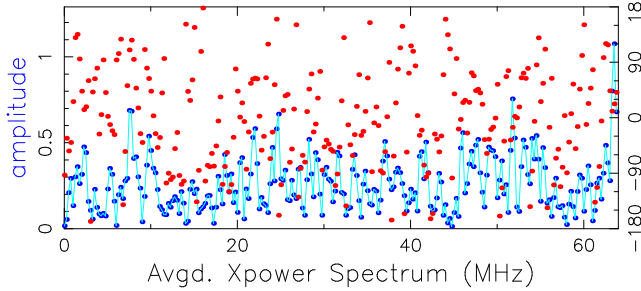


Fringe quality 0

SNR 5.7
 Int time 329.959
 Amp 0.119
 Phase -25.6
 PFD 9.6e-01
 Delays (us)
 SBD -0.308636
 MBD 0.006947
 Fringe rate (Hz)
 0.315603
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

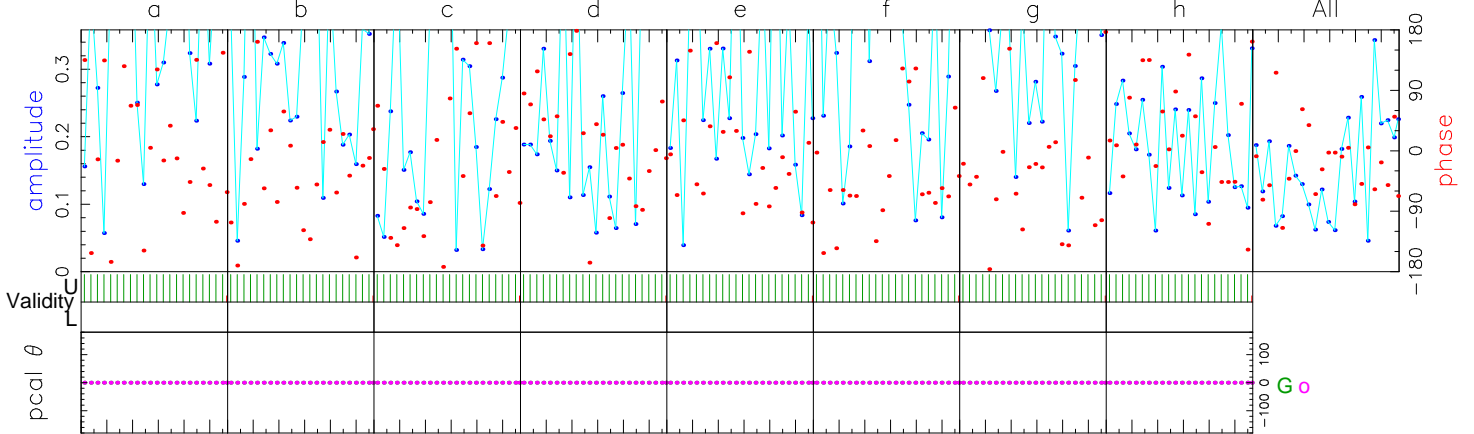


singleband delay (μ s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044524
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-12.5	-38.0	-34.8	5.6	-20.7	-41.5	-44.1	17.6	Phase	-25.6
	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	Ampl.	0.1
	149.9	42.1	29.7	423.8	14.6	77.7	118.1	24.6	Sbd box	178.0
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl 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)	8.21015844787E+03		Apriori delay (usec)		8.21046400115E+03		Resid mbdelay (usec)		6.94672E-03	+/- 1.9E-04
Sband delay (usec)	8.21015536490E+03		Apriori clock (usec)		-1.7912426E+01		Resid sbdelay (usec)		-3.08636E-01	+/- 1.5E-03
Phase delay (usec)	8.21046400033E+03		Apriori clockrate (us/s)		-4.5999999E-07		Resid phdelay (usec)		-8.25967E-07	+/- 6.5E-07
Delay rate (us/s)	-3.93838734097E-01		Apriori rate (us/s)		-3.93842397930E-01		Resid rate (us/s)		3.66383E-06	+/- 3.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.28531302430E-05		Resid phase (deg)		-25.6	+/- 20.2

	RMS	Theor.	Amplitude	0.119 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	51.9	48.4	Search (2048X32)	0.114	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	73.5	84.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	25.4	28.5	Inc. seg. avg.	0.117	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	39.7	49.8	Inc. frq. avg.	0.113	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

G: az 94.5 el 56.3 pa -62.9 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 2515.504 -1745.858 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Go..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Go.W.157.1W8CZP

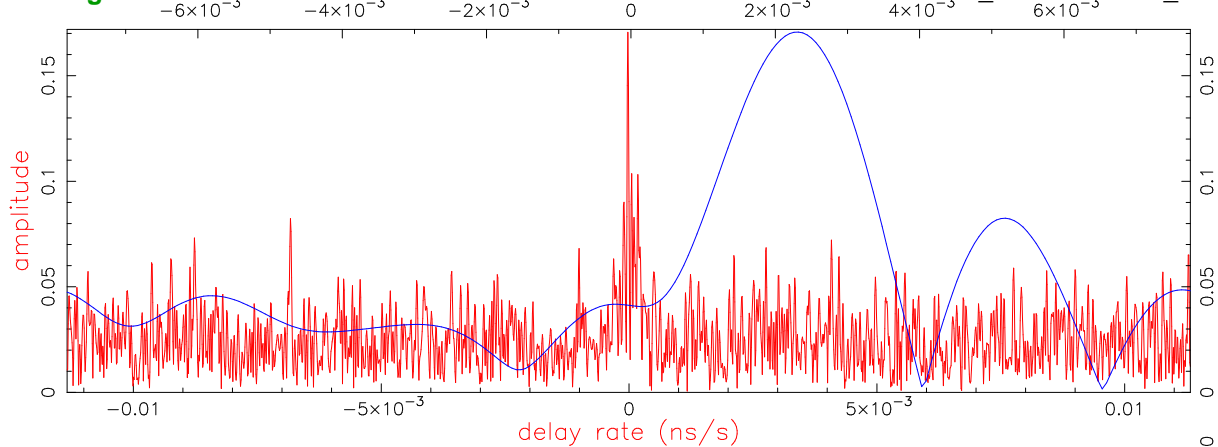
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Go

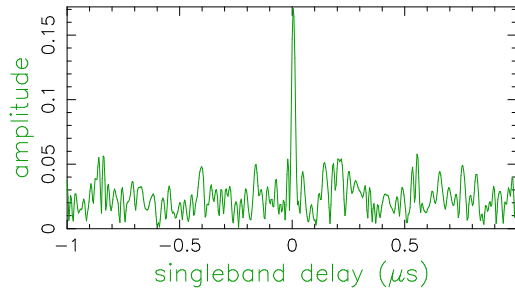
GBT_VLBA - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

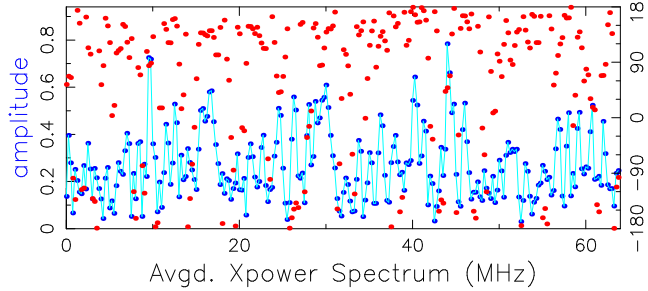


Fringe quality 9

SNR 8.5
 Int time 329.959
 Amp 0.172
 Phase 163.5
 PFD 4.8e-09
 Delays (us)
 SBD 0.005065
 MBD 0.002340
 Fringe rate (Hz)
 -0.001510
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

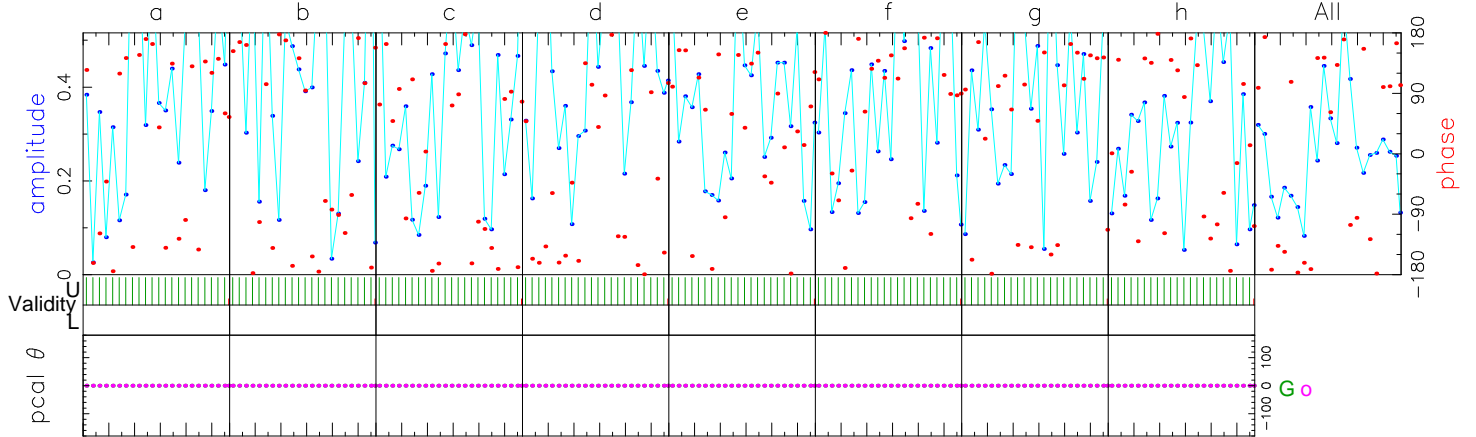


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044514
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	164.7	-177.3	146.0	176.3	111.2	149.5	159.2	-157.9	Phase	163.5
	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2
	258.3	400.1	198.6	257.9	83.0	155.4	258.6	216.3	Sbd box	258.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	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)	8.21046634151E+03		Apriori delay (usec)		8.21046400115E+03		Resid mbdelay (usec)		2.34035E-03	+/- 1.3E-04
Sband delay (usec)	8.21046906640E+03		Apriori clock (usec)		-1.7912426E+01		Resid sbdelay (usec)		5.06525E-03	+/- 1.0E-03
Phase delay (usec)	8.21046400643E+03		Apriori clockrate (us/s)		-4.5999999E-07		Resid phdelay (usec)		5.27205E-06	+/- 4.3E-07
Delay rate (us/s)	-3.93842415462E-01		Apriori rate (us/s)		-3.93842397930E-01		Resid rate (us/s)		-1.75325E-08	+/- 2.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.28531302430E-05		Resid phase (deg)		163.5	+/- 13.4

	RMS	Theor.	Amplitude	0.172 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	52.5	32.2	Search (2048X32)	0.165	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	86.6	56.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	29.7	19.0	Inc. seg. avg.	0.233	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	31.0	33.1	Inc. frq. avg.	0.176	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

G: az 94.5 el 56.3 pa -62.9 o: az 72.4 el 26.2 pa -60.1 u,v (fr/asec) 2515.504 -1745.858 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Go..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Go.W.99.1W8CZP

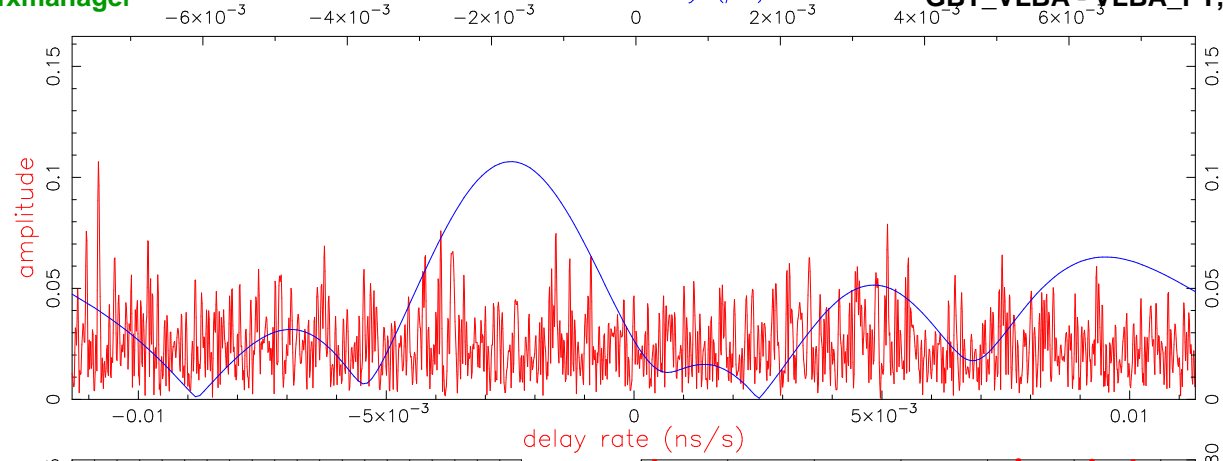
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

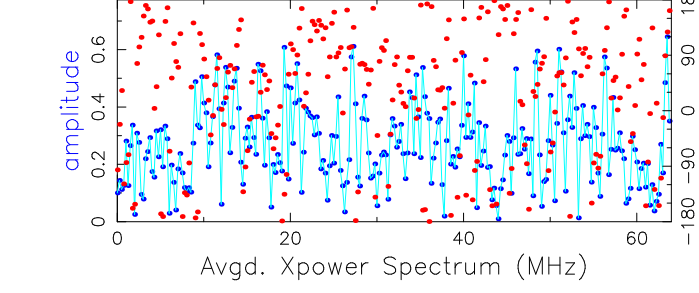
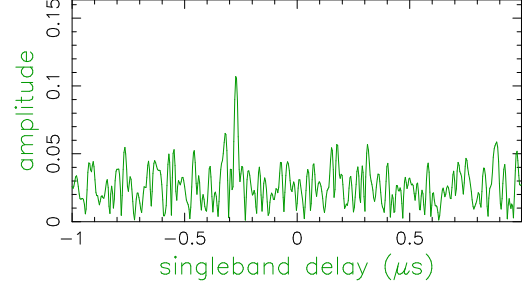
0234+285.1W8CZP, No0029, Gp

GBT_VLBA - VLBA_PT, fgroup W, pol RR

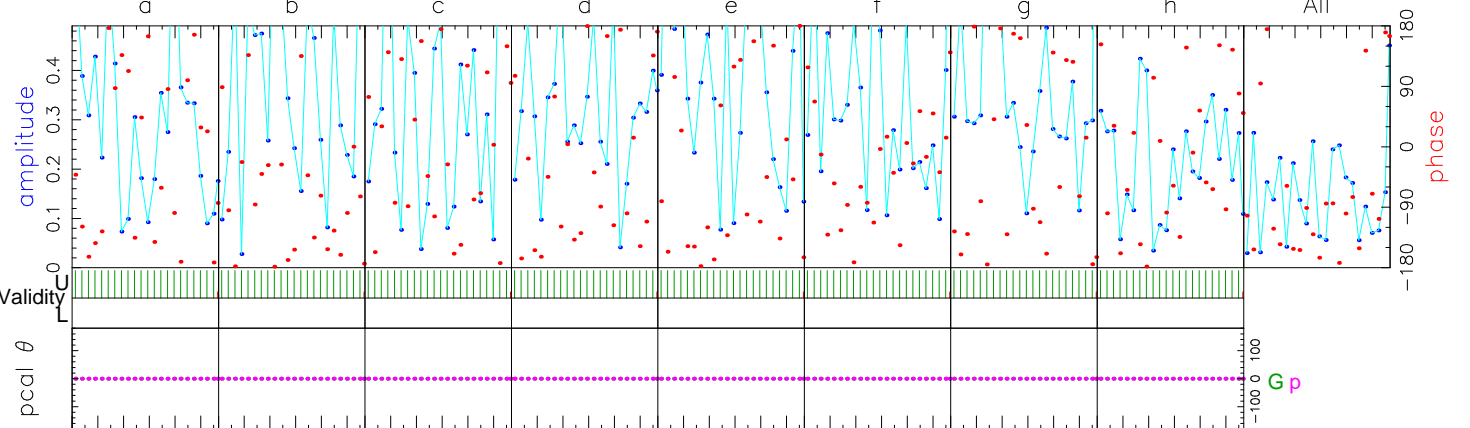
multiband delay (μ s)



Fringe quality 0
 SNR 5.4
 Int time 329.979
 Amp 0.164
 Phase -138.9
 PFD 1.0e+00
 Delays (us)
 SBD -0.271765
 MBD -0.001689
 Fringe rate (Hz)
 -0.932584
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044516
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-147.0	-115.7	-178.8	-118.5	-148.0	-39.6	-164.8	-122.5	Phase	-138.9
	0.2	0.3	0.2	0.2	0.3	0.1	0.3	0.1	Ampl.	0.2
	110.1	332.0	439.3	200.9	187.8	492.7	186.7	121.2	Sbd box	187.4
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.91474344784E+03		Apriori delay (usec)		5.91501076232E+03		Resid mbdelay (usec)		-1.68948E-03	+/- 2.0E-04
Sband delay (usec)	5.91473899707E+03		Apriori clock (usec)		-1.9824547E+01		Resid sbdelay (usec)		-2.71765E-01	+/- 1.6E-03
Phase delay (usec)	5.91501075784E+03		Apriori clockrate (us/s)		2.0000000E-08		Resid phdelay (usec)		-4.47923E-06	+/- 6.8E-07
Delay rate (us/s)	-3.70806121808E-01		Apriori rate (us/s)		-3.70795295436E-01		Resid rate (us/s)		-1.08264E-05	+/- 3.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.84018934453E-05		Resid phase (deg)		-138.9	+/- 21.2

ph/seg (deg) 51.1 50.9 Search (2048X32) 0.106 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 82.8 88.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.4 30.0 Inc. seg. avg. 0.153 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 49.2 52.4 Inc. frq. avg. 0.171 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 G: az 94.5 el 56.3 pa -62.9 p: az 75.4 el 33.3 pa -66.1 u,v (fr/asec) 2384.623 -797.530 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gp..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gp.W.113.1W8CZP

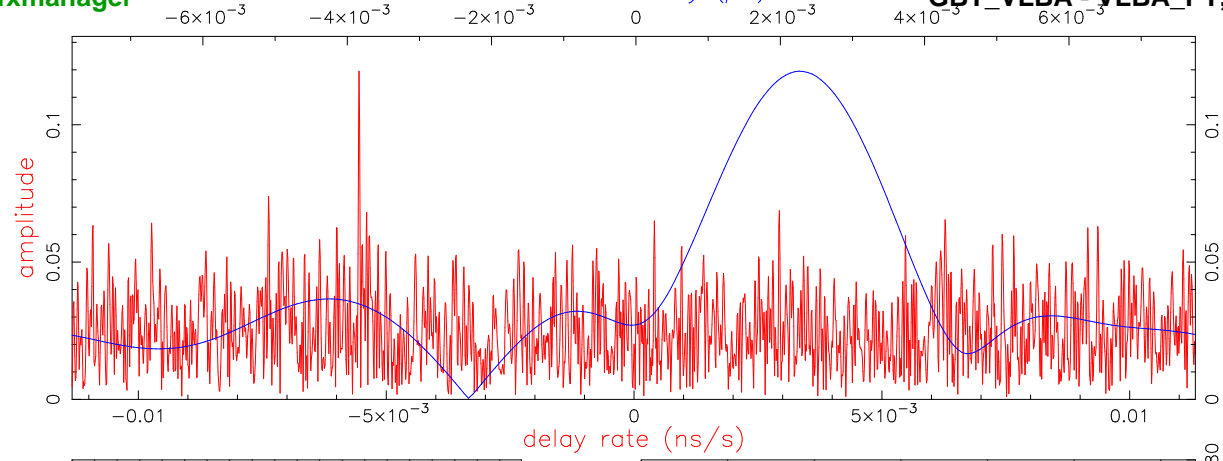
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

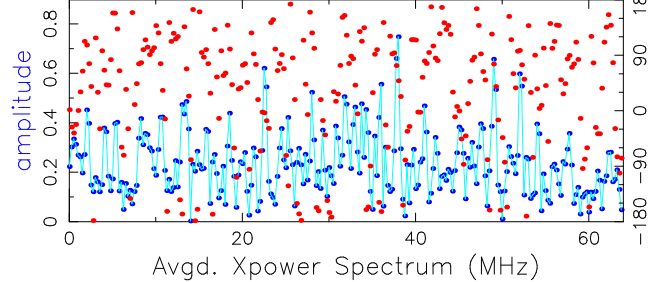
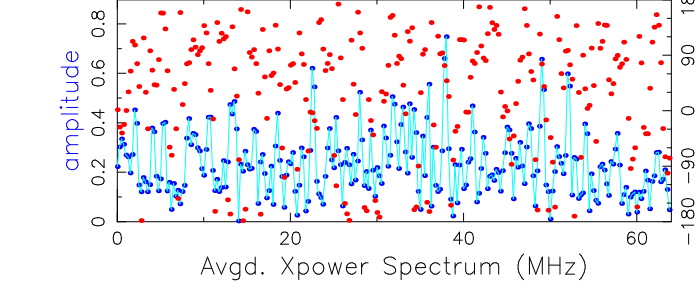
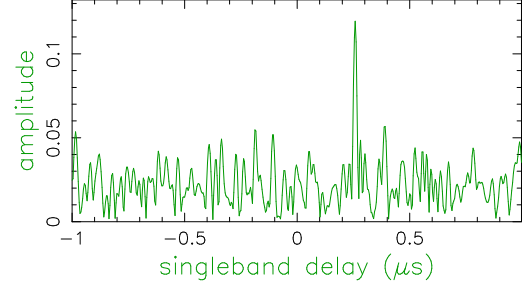
0234+285.1W8CZP, No0029, Gp

GBT_VLBA - VLBA_PT, fgroup W, pol LR

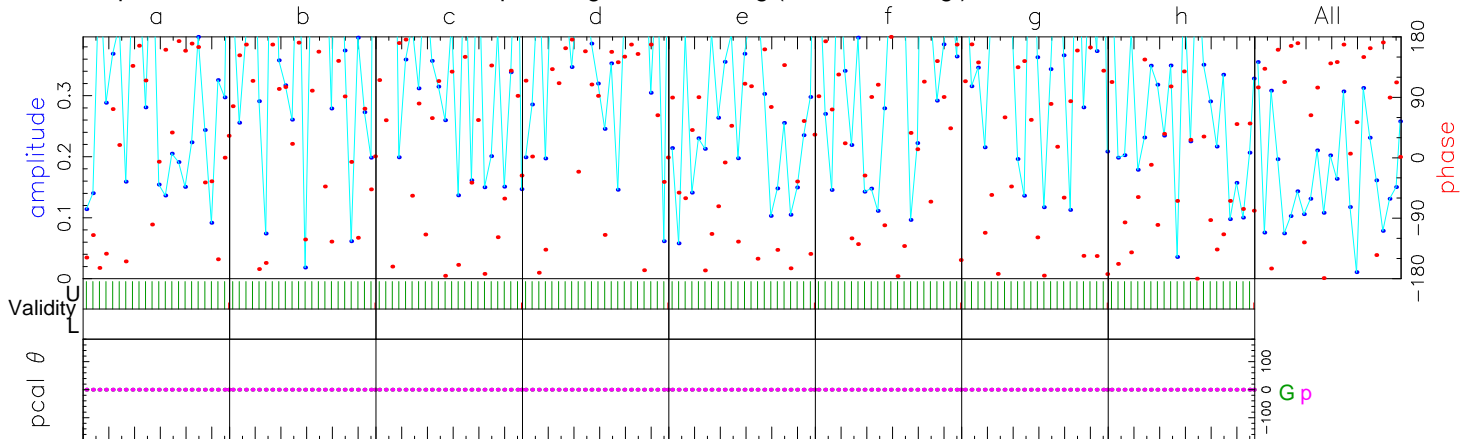
multiband delay (μ s)



Fringe quality 0
 SNR 5.9
 Int time 329.979
 Amp 0.132
 Phase 146.7
 PFD 5.3e-01
 Delays (us)
 SBD 0.257621
 MBD 0.002268
 Fringe rate (Hz)
 -0.478376
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044520
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
G	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
G	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	176.2	137.4	138.7	147.8	150.6	141.9	143.9	-175.5		
Sband delay (usec)	0.1	0.2	0.2	0.3	0.0	0.1	0.1	0.0		
Phase delay (usec)	174.6	323.6	169.2	81.8	414.4	423.9	93.9	35.6		
Delay rate (us/s)										
Total phase (deg)			170.4							
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										
RMS	55.3	46.3								
Theor.										
Amplitude										
Search (2048X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
ph/seg (deg)										
amp/seg (%)										
ph/frq (deg)										
amp/frq (%)										
G: az 94.5 el 56.3 pa -62.9										
p: az 75.4 el 33.3 pa -66.1										
u,v (fr/asec) 2384.623 -797.530										
Control file: cf_1234_gmva										
Input file: /Exps/c211a/v2/1234/No0029/Gp..1W8CZP										
Output file: /Exps/c211a/v2/1234/No0029/Gp.W.131.1W8CZP										

simultaneous interpolator

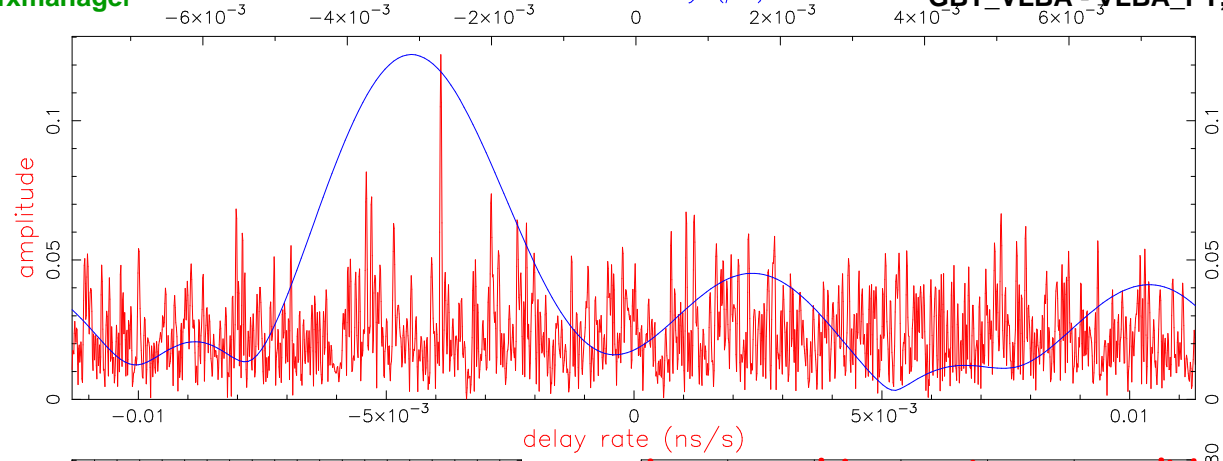
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gp

GBT_VLBA - VLBA_PT, fgroup W, pol RL

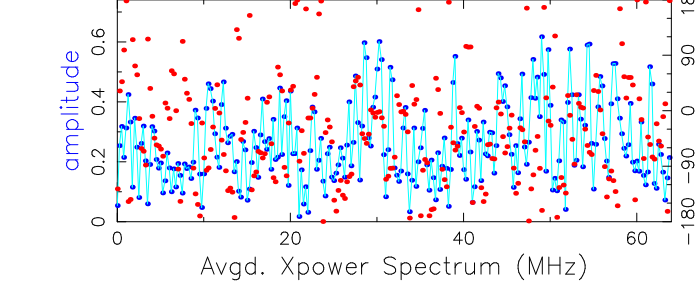
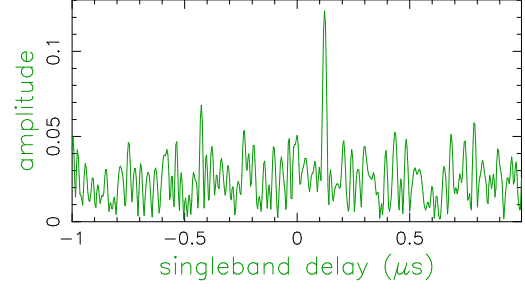
multiband delay (μ s)



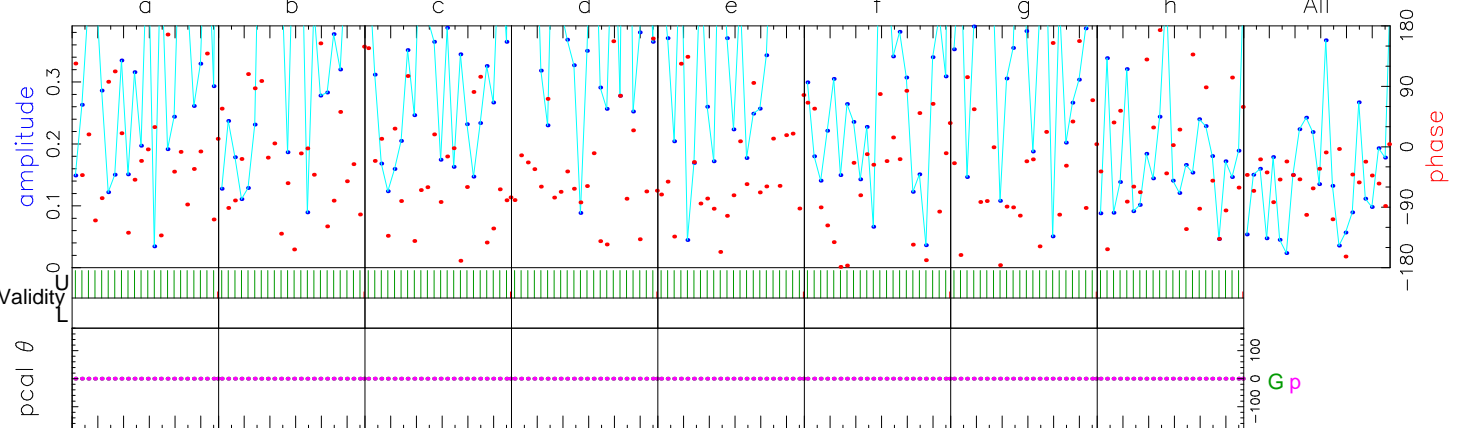
Fringe quality 0

SNR 6.2
 Int time 329.979
 Amp 0.130
 Phase -51.6
 PFD 1.8e-01
 Delays (us)
 SBD 0.121735
 MBD -0.003083
 Fringe rate (Hz)
 -0.336575
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044524
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-41.0	-45.7	-67.7	-59.6	-52.0	6.7	-63.5	-65.5	Phase	-51.6
	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.0	Ampl.	0.1
	479.5	373.0	457.9	288.2	289.2	332.5	215.8	37.2	Sbd box	288.2
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.91513267966E+03		Apriori delay (usec)		5.91501076232E+03		Resid mbdelay (usec)		-3.08265E-03	+/- 1.8E-04
Sband delay (usec)	5.91513249757E+03		Apriori clock (usec)		-1.9824547E+01		Resid sbdelay (usec)		1.21735E-01	+/- 1.4E-03
Phase delay (usec)	5.91501076065E+03		Apriori clockrate (us/s)		2.0000000E-08		Resid phdelay (usec)		-1.66272E-06	+/- 6.0E-07
Delay rate (us/s)	-3.70799202738E-01		Apriori rate (us/s)		-3.70795295436E-01		Resid rate (us/s)		-3.90730E-06	+/- 3.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.84018934453E-05		Resid phase (deg)		-51.6	+/- 18.6

ph/seg (deg) 36.3 44.6 Search (2048X32) 0.123 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 73.5 77.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.5 26.3 Inc. seg. avg. 0.118 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 49.4 45.9 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
 G: az 94.5 el 56.3 pa -62.9 p: az 75.4 el 33.3 pa -66.1 u,v (fr/asec) 2384.623 -797.530 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gp..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gp.W.153.1W8CZP

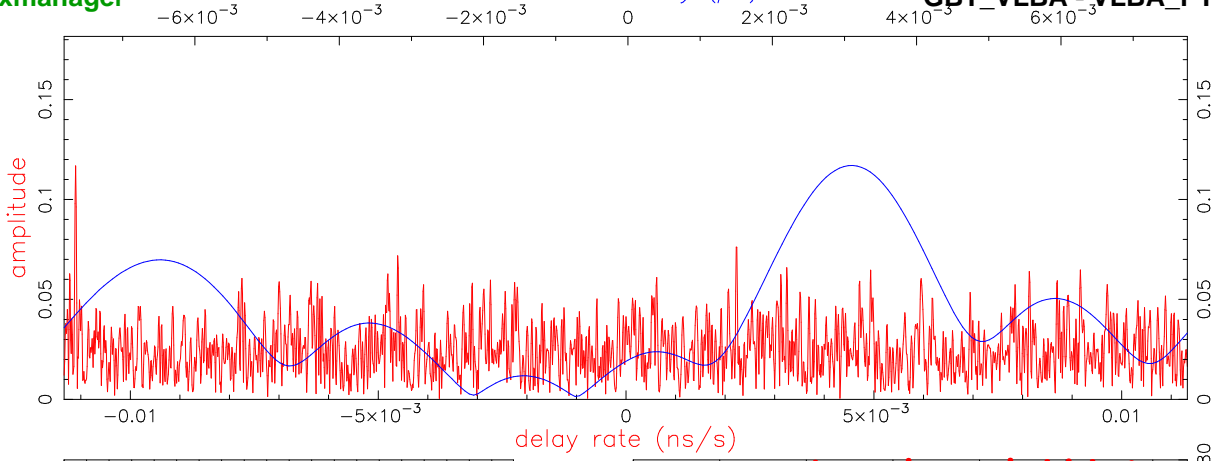
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, Gp

GBT_VLBA - VLBA_PT, fgroup W, pol LL

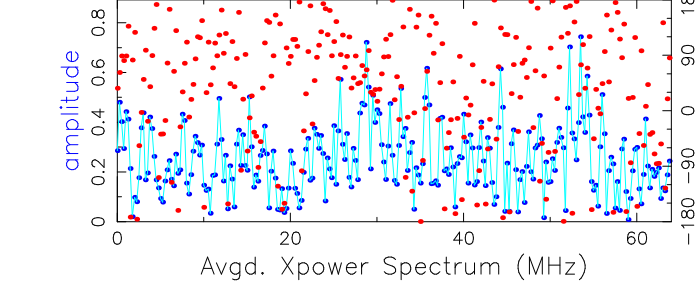
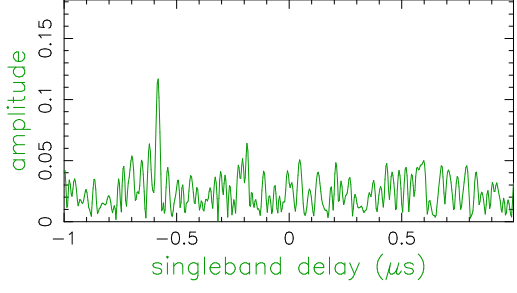
multiband delay (μ s)



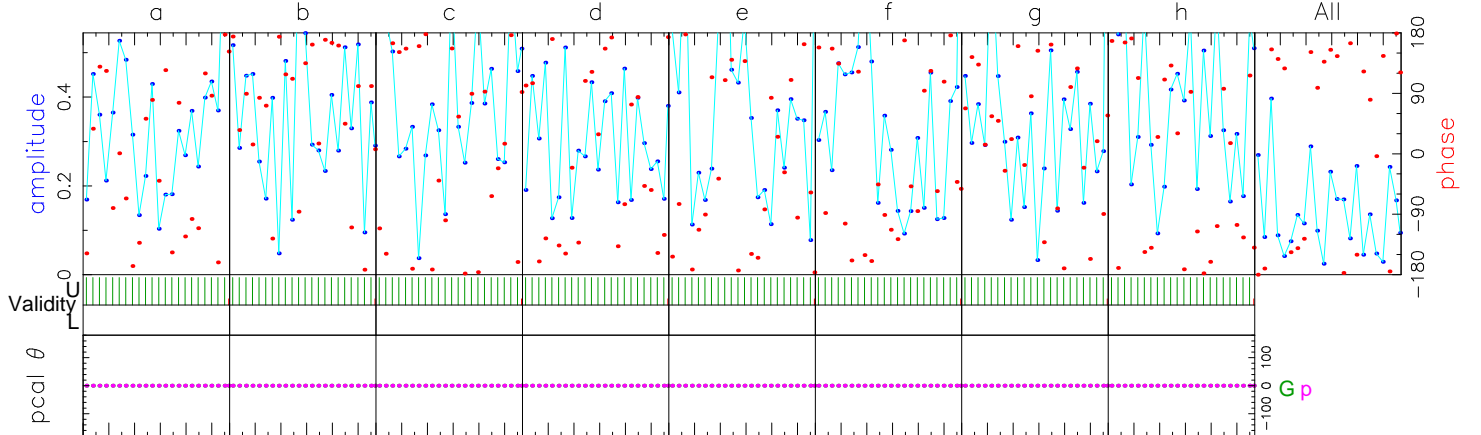
Fringe quality 0

SNR 5.9
 Int time 329.979
 Amp 0.182
 Phase 167.8
 PFD 7.1e-01
 Delays (us)
 SBD -0.583264
 MBD 0.003040
 Fringe rate (Hz)
 -0.957969
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044513
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
G	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
G:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
G	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	5.91442005191E+03	Apriori delay (usec)	5.91501076232E+03	Resid mbdelay (usec)	3.03959E-03	+/-	1.9E-04
Sband delay (usec)	5.91442749832E+03	Apriori clock (usec)	-1.9824547E+01	Resid sbdelay (usec)	-5.83264E-01	+/-	1.5E-03
Phase delay (usec)	5.91501076773E+03	Apriori clockrate (us/s)	2.0000000E-08	Resid phdelay (usec)	5.41051E-06	+/-	6.3E-07
Delay rate (us/s)	-3.70806416513E-01	Apriori rate (us/s)	-3.70795295436E-01	Resid rate (us/s)	-1.11211E-05	+/-	3.3E-09
Total phase (deg)	191.5	Apriori accel (us/s/s)	-2.84018934453E-05	Resid phase (deg)	167.8	+/-	19.6

ph/seg (deg)	52.6	Theor.	47.0	Amplitude	0.182 +/- 0.031	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	84.7		82.0	Search (2048X32)	0.112	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	40.2		27.7	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	40.6		48.3	Inc. seg. avg.	0.167	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.191	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

G: az 94.5 el 56.3 pa -62.9 p: az 75.4 el 33.3 pa -66.1 u,v (fr/asec) 2384.623 -797.530 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/Gp..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/Gp.W.94.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

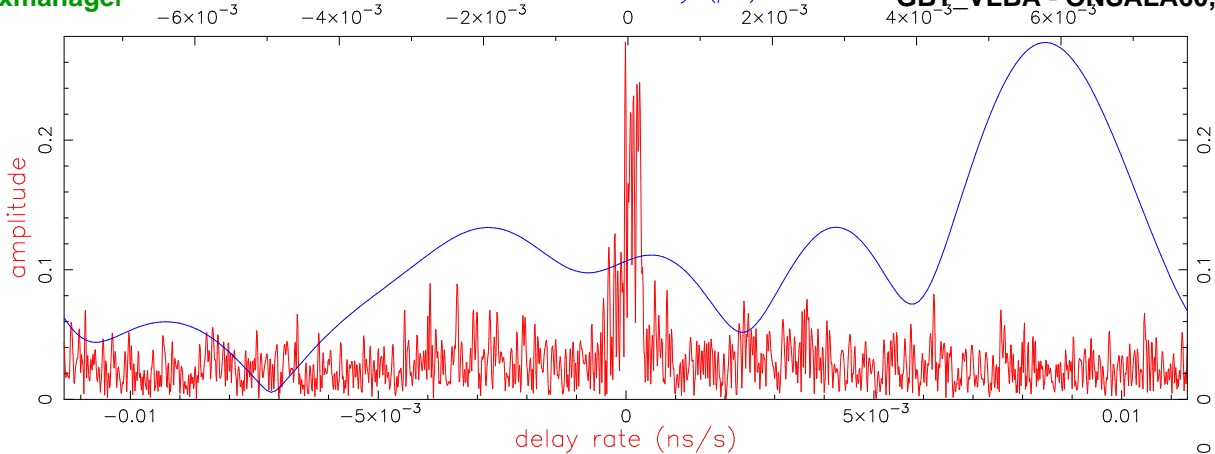
fxmanager

0234+285.1W8CZP, No0029, GX

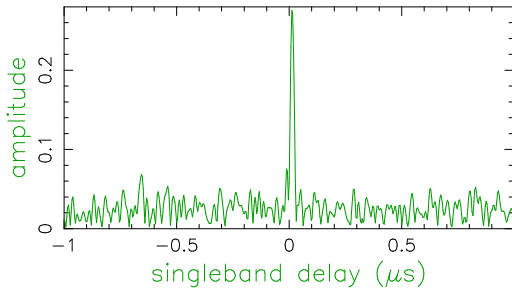
GBT_VLBA - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

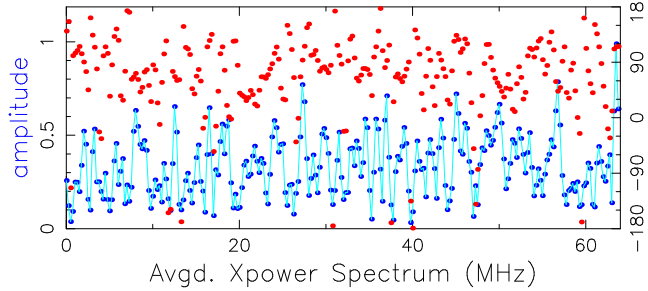
Fringe quality 9



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

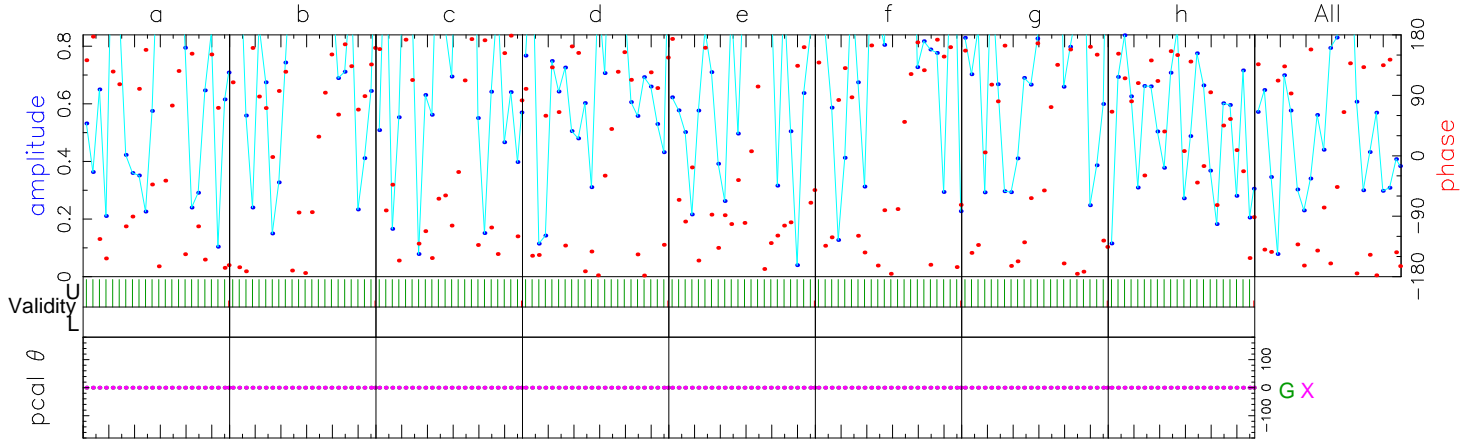


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	162.0	135.8	-147.1	149.6	-123.0	170.1	173.7	82.2	Phase	170.3
	0.3	0.4	0.4	0.4	0.3	0.5	0.4	0.2	Ampl.	0.3
	260.4	259.8	260.3	259.8	259.2	259.9	259.8	257.6	Sbd box	260.4
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.14435537038E+03		Apriori delay (usec)		3.14434957951E+03		Resid mbdelay (usec)		5.79086E-03	+/- 7.8E-05
Sband delay (usec)	3.14436294751E+03		Apriori clock (usec)		-7.0646233E+01		Resid sbdelay (usec)		1.33680E-02	+/- 6.2E-04
Phase delay (usec)	3.14434958501E+03		Apriori clockrate (us/s)		-6.2799998E-07		Resid phdelay (usec)		5.49248E-06	+/- 2.7E-07
Delay rate (us/s)	1.24981925805E+00		Apriori rate (us/s)		1.24981927186E+00		Resid rate (us/s)		-1.38126E-08	+/- 1.4E-09
Total phase (deg)	90.9		Apriori accel (us/s/s)		-2.91454388320E-05		Resid phase (deg)		170.3	+/- 8.2

ph/seg (deg) 59.1 19.8 Search (2048X32) 0.271 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 134.1 34.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 51.2 11.7 Inc. seg. avg. 0.502 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 36.1 20.3 Inc. frq. avg. 0.339 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 G: az 94.5 el 56.3 pa -62.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8212.913 -2924.895 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GX.W.112.1W8CZP

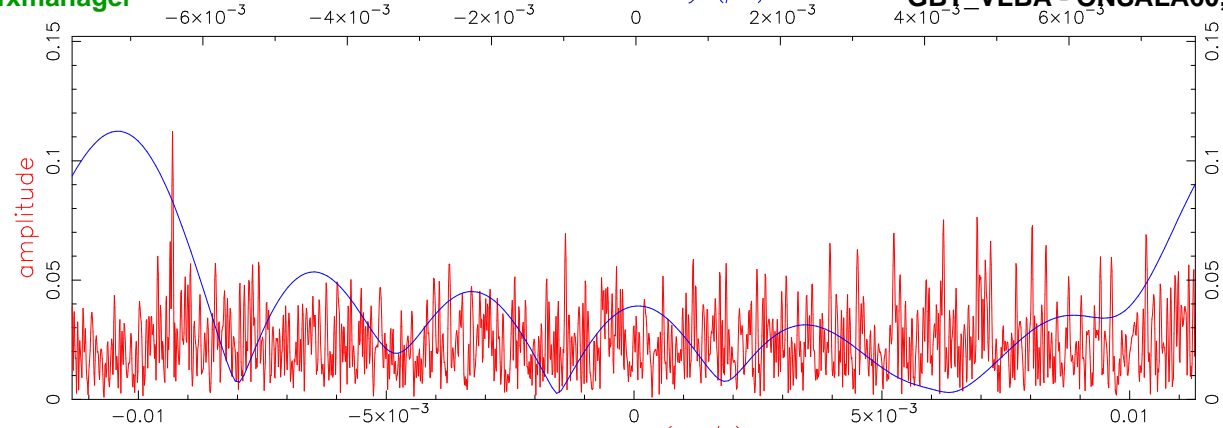
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GX

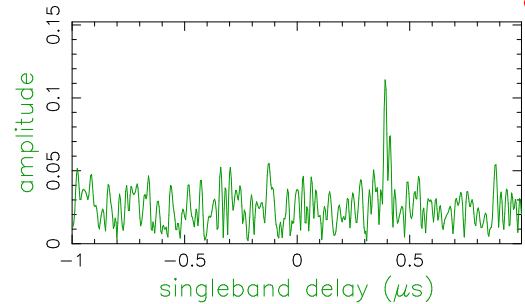
GBT_VLBA - ONSALA60, fgroup W, pol LR

multiband delay (μ s)

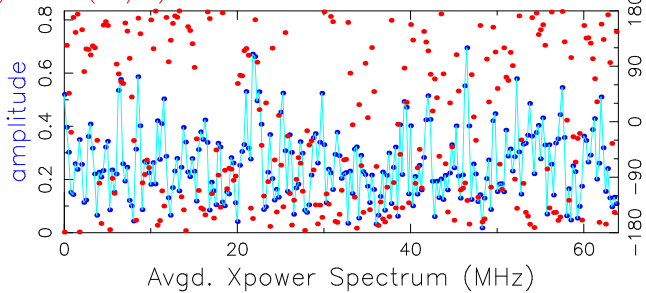


Fringe quality 0

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

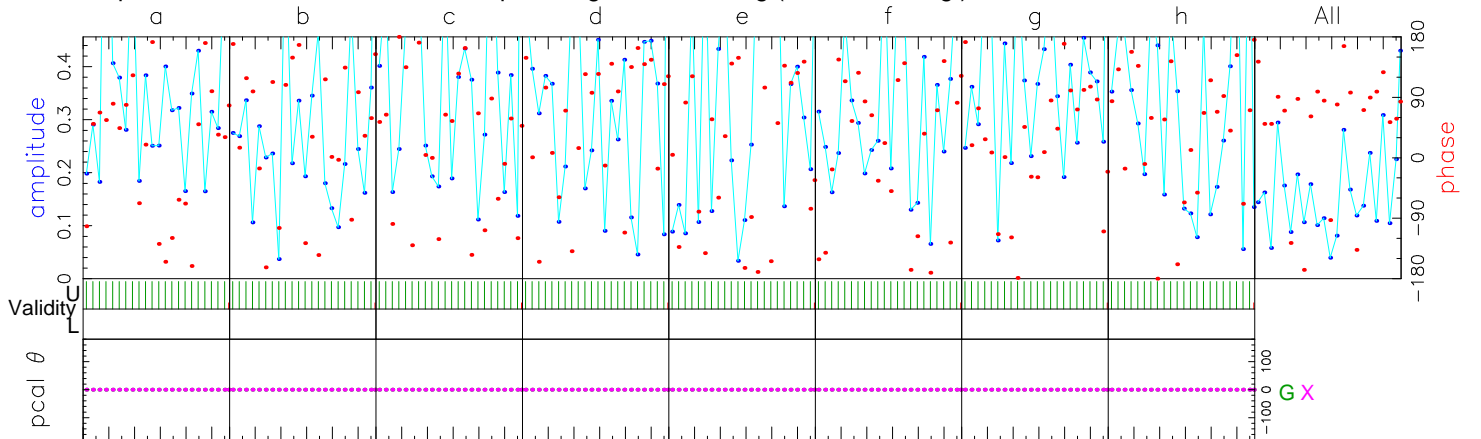


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	67.9	122.5	106.3	119.7	139.4	100.4	53.6	100.4	Phase	97.3
	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	Ampl.	0.1
	313.7	82.5	132.8	495.7	168.6	391.5	137.4	357.0	Sbd box	357.3
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	3.14474870462E+03	Apriori delay (usec)	3.14434957951E+03	Resid mbdelay (usec)	-7.12489E-03	+/-	1.9E-04
Sband delay (usec)	3.14474122201E+03	Apriori clock (usec)	-7.0646233E+01	Resid sbdelay (usec)	3.91643E-01	+/-	1.5E-03
Phase delay (usec)	3.14434958265E+03	Apriori clockrate (us/s)	-6.2799998E-07	Resid phdelay (usec)	3.13871E-06	+/-	6.6E-07
Delay rate (us/s)	1.24980995156E+00	Apriori rate (us/s)	1.24981927186E+00	Resid rate (us/s)	-9.32029E-06	+/-	3.4E-09
Total phase (deg)	17.9	Apriori accel (us/s/s)	-2.91454388320E-05	Resid phase (deg)	97.3	+/-	20.4

ph/seg (deg)	RMS 64.1	Theor. 48.8	Amplitude Search (2048X32)	0.152 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	80.0	85.3	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	31.1	28.8	Inc. seg. avg.	0.157	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	28.0	50.3	Inc. frq. avg.	0.150	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

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

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

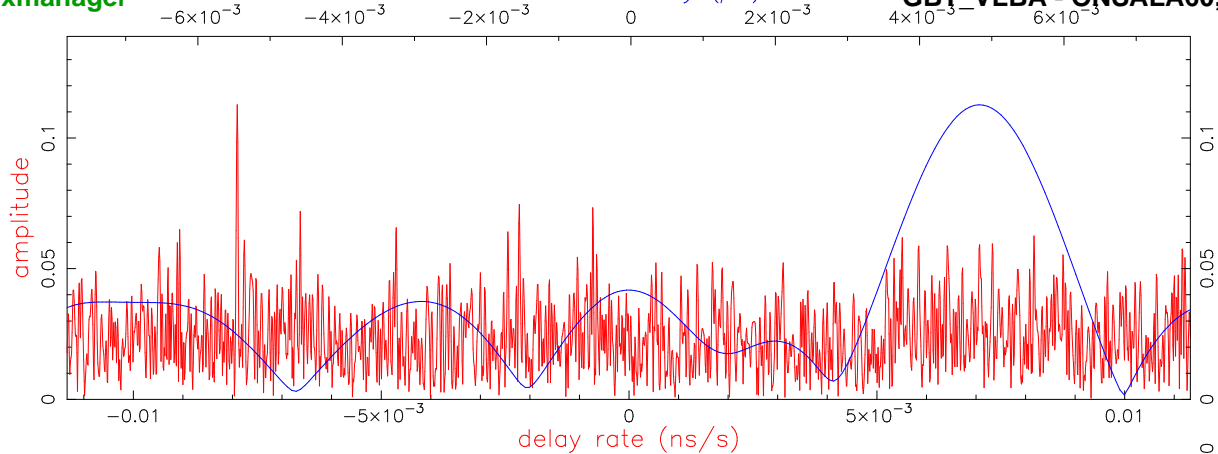
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GX

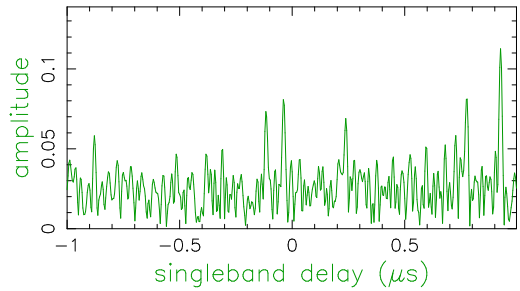
GBT_VLBA - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

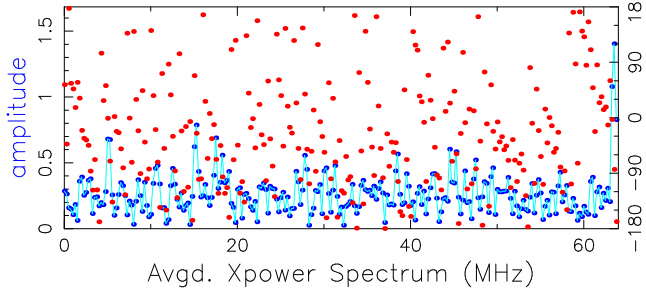


Fringe quality 0

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

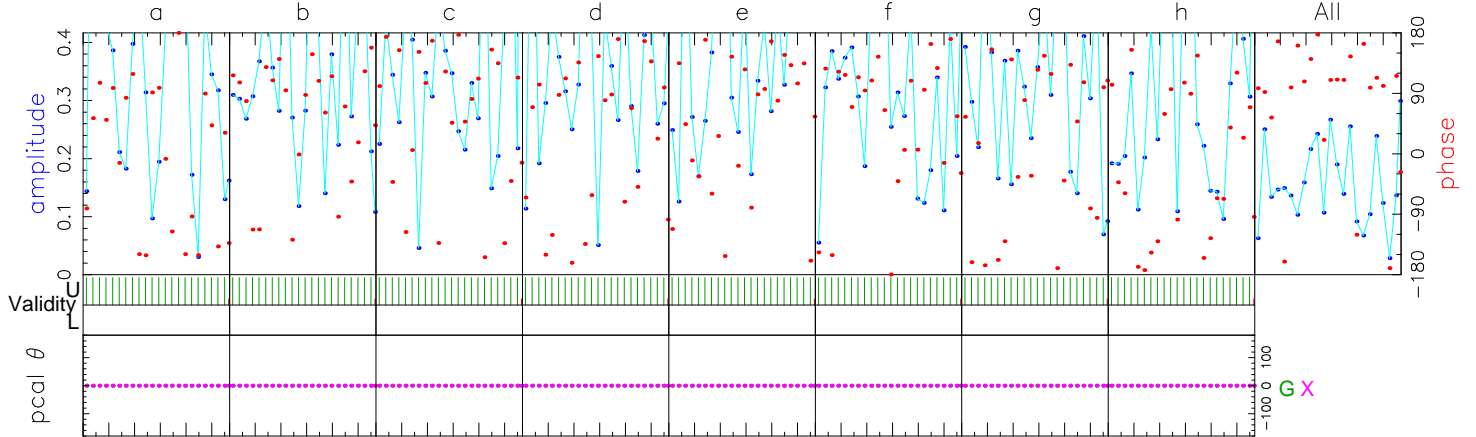


delay rate (ns/s)



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

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0		
G	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
G:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
G:X	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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

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

ph/seg (deg)	50.7	Theor.	49.1	Amplitude	0.139 +/- 0.025	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	70.4		85.7	Search (2048X32)	0.108	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	28.0		29.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	41.4		50.5	Inc. seg. avg.	0.139	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.131	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

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

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

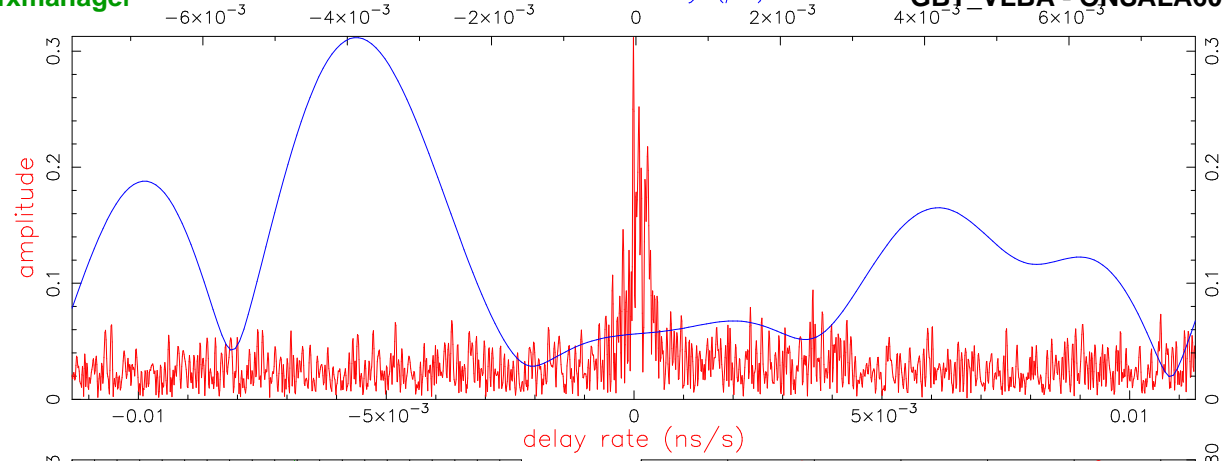
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GX

GBT_VLBA - ONSALA60, fgroup W, pol LL

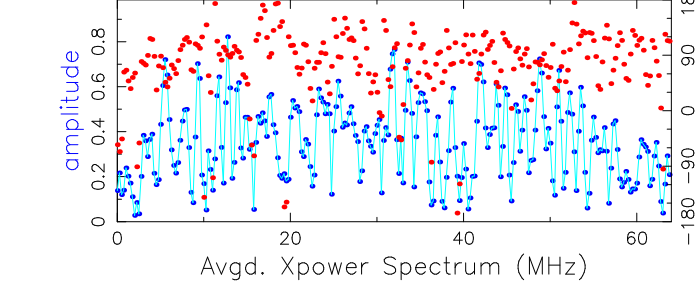
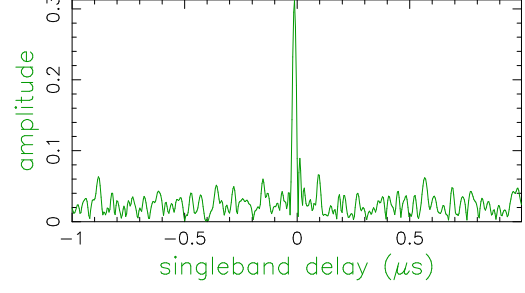
multiband delay (μ s)



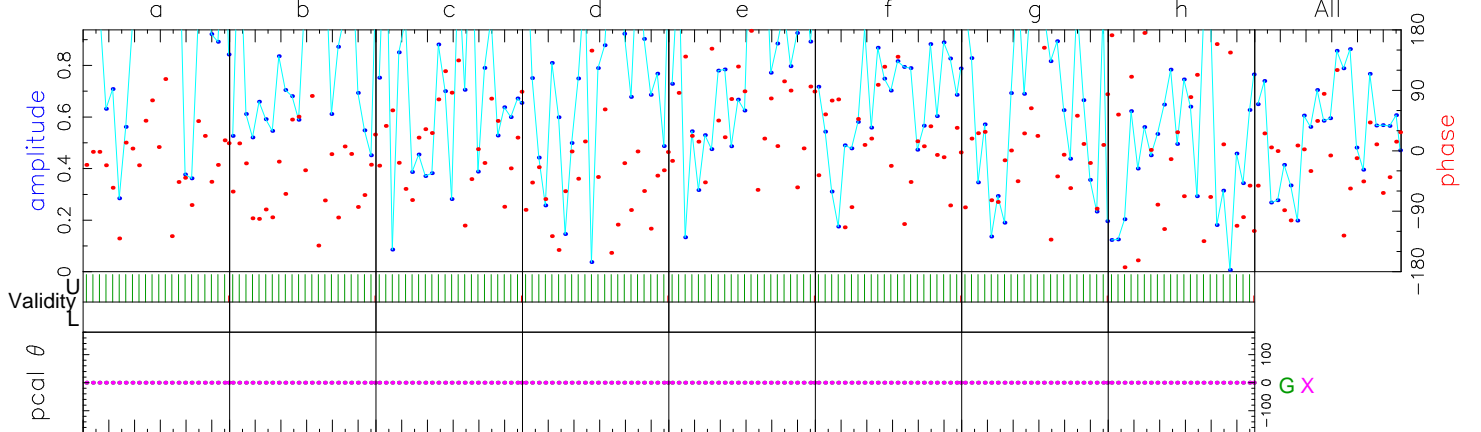
Fringe quality 7

SNR 15.5
 Int time 329.957
 Amp 0.313
 Phase -9.8
 PFD 1.4e-45
 Delays (us)
 SBD -0.012480
 MBD -0.003892
 Fringe rate (Hz)
 -0.001293
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151500.00
 Stop 152030.24
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044513
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	0.2	-39.0	10.1	-57.0	49.9	6.7	-2.2	-85.9	Phase	-9.8
	0.6	0.4	0.3	0.4	0.4	0.3	0.4	0.1	Ampl.	0.4
	253.5	253.6	253.0	253.9	253.4	252.7	252.9	250.9	Sbd box	253.8
U/L	645/0	645/0	645/0	645/0	645/0	645/0	645/0	645/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.14433006210E+03		Apriori delay (usec)		3.14434957951E+03		Resid mbdelay (usec)		-3.89242E-03	+/- 7.0E-05
Sband delay (usec)	3.14433709926E+03		Apriori clock (usec)		-7.0646233E+01		Resid sbdelay (usec)		-1.24802E-02	+/- 5.5E-04
Phase delay (usec)	3.14434957920E+03		Apriori clockrate (us/s)		-6.2799998E-07		Resid phdelay (usec)		-3.17432E-07	+/- 2.4E-07
Delay rate (us/s)	1.24981925685E+00		Apriori rate (us/s)		1.24981927186E+00		Resid rate (us/s)		-1.50087E-08	+/- 1.2E-09
Total phase (deg)	270.7		Apriori accel (us/s/s)		-2.91454388320E-05		Resid phase (deg)		-9.8	+/- 7.4

ph/seg (deg) 57.1 17.7 Search (2048X32) 0.304 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 99.1 30.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.0 10.4 Inc. seg. avg. 0.537 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.1 18.2 Inc. frq. avg. 0.373 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 G: az 94.5 el 56.3 pa -62.9 X: az 254.8 el 43.9 pa 36.4 u,v (fr/asec) -8212.913 -2924.895 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GX..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GX.W.93.1W8CZP simultaneous interpolator

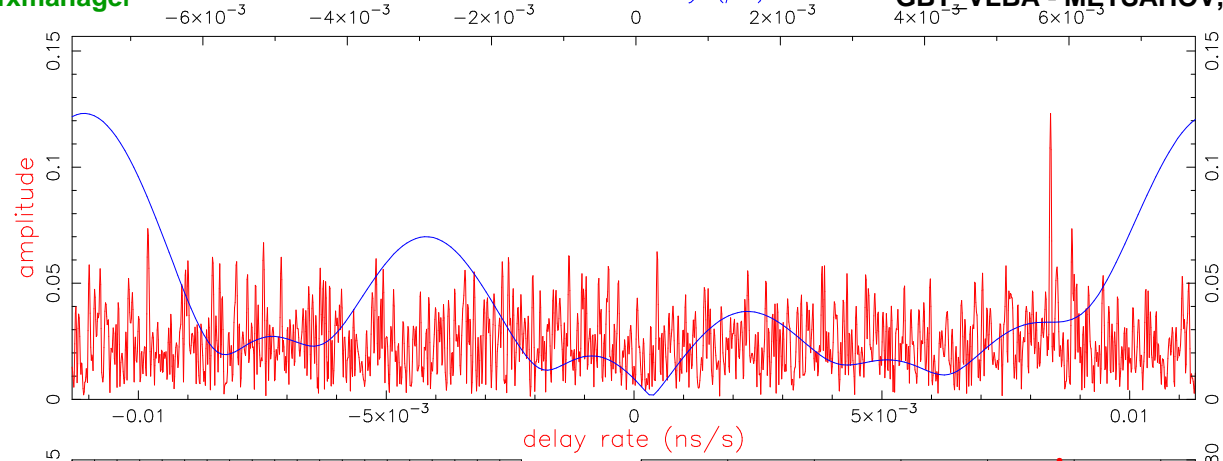
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

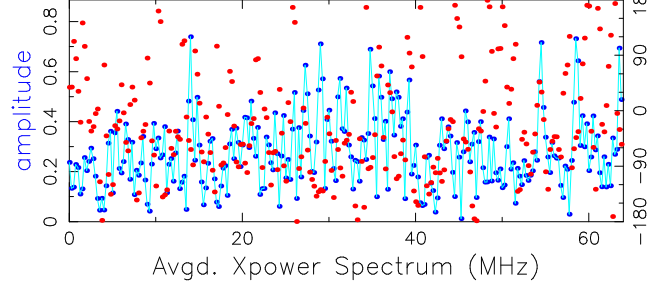
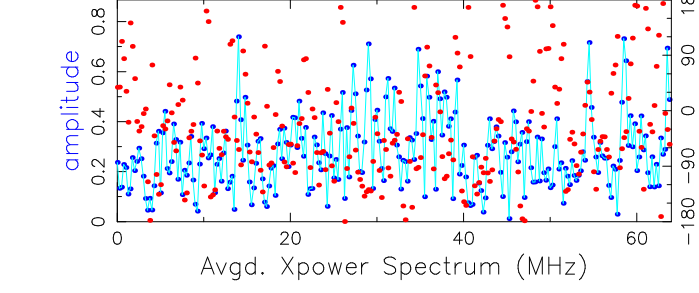
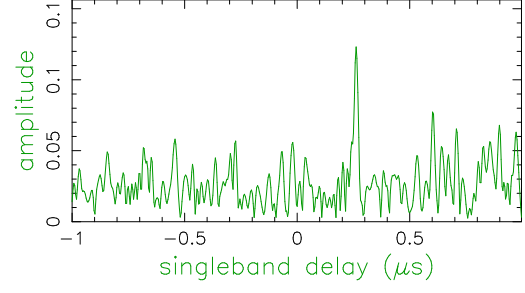
0234+285.1W8CZP, No0029, GZ

GBT VLBA - METSAHOV, fgroup W, pol RR

multiband delay (μ s)

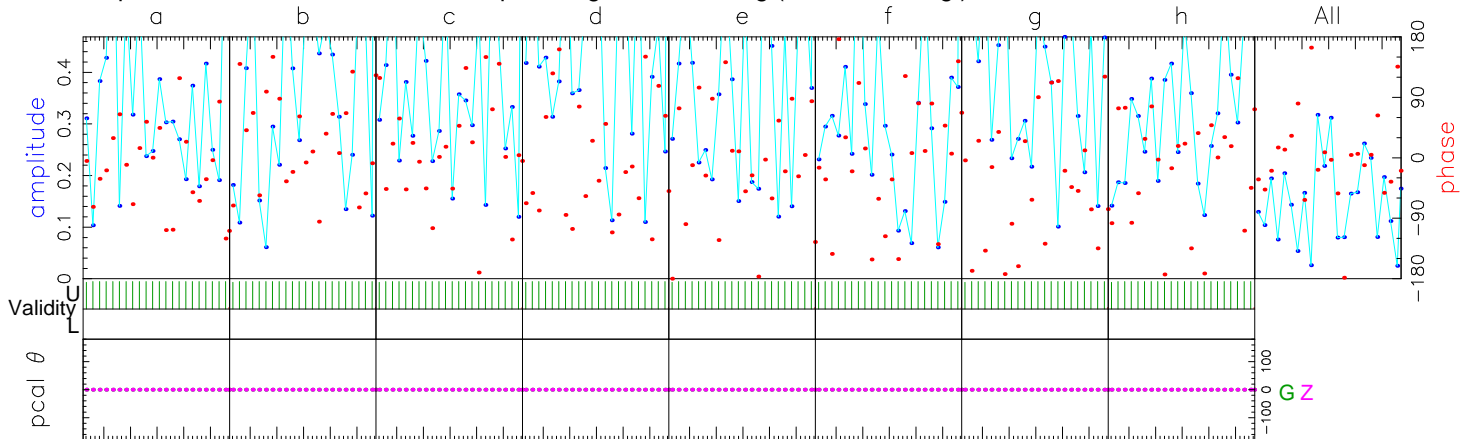


Fringe quality 0
 SNR 6.0
 Int time 315.492
 Amp 0.156
 Phase -9.3
 PFD 4.3e-01
 Delays (us)
 SBD 0.262072
 MBD 0.007980
 Fringe rate (Hz) 0.724805
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151513.31
 Stop 152029.73
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044518
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-18.1	7.3	18.5	-47.9	-10.4	30.0	-63.2	2.4	Phase	-9.3
	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	Ampl.	0.2
	411.3	119.1	186.6	65.3	115.9	435.6	361.9	443.2	Sbd box	324.1
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	5.14593309801E+03	Apriori delay (usec)	5.14567511835E+03	Resid mbdelay (usec)	7.97966E-03	+/-	1.8E-04
Sband delay (usec)	5.14593719060E+03	Apriori clock (usec)	-1.3563629E+01	Resid sbdelay (usec)	2.62072E-01	+/-	1.4E-03
Phase delay (usec)	5.14567511805E+03	Apriori clockrate (us/s)	-1.1600000E-07	Resid phdelay (usec)	-3.01413E-07	+/-	6.2E-07
Delay rate (us/s)	1.27790022140E+00	Apriori rate (us/s)	1.27789180713E+00	Resid rate (us/s)	8.41427E-06	+/-	3.4E-09
Total phase (deg)	240.9	Apriori accel (us/s/s)	-4.08791584564E-05	Resid phase (deg)	-9.3	+/-	19.1

ph/seg (deg)	69.4	RMS	45.9	Theor.	45.9	Amplitude	0.156 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	71.3	Search (2048X32)	0.121	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	34.7	Inc. seg. avg.	0.146	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
amp/frq (%)	39.6	Inc. frq. avg.	0.156									

G: az 94.5 el 56.3 pa -62.9 Z: az 264.2 el 37.1 pa 34.3 u,v (fr/asec) -8412.721 -3630.812 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GZ..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GZ.W.121.1W8CZP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

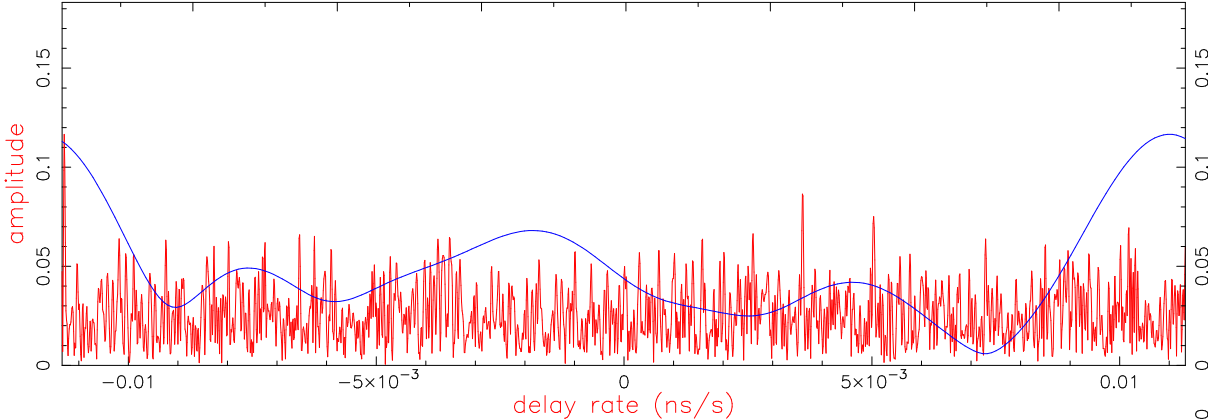
0234+285.1W8CZP, No0029, GZ

GBT VLBA - METSAHOV, fgroup W, pol LR

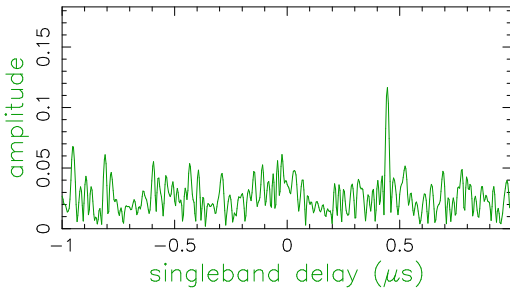
multiband delay (μ s)

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

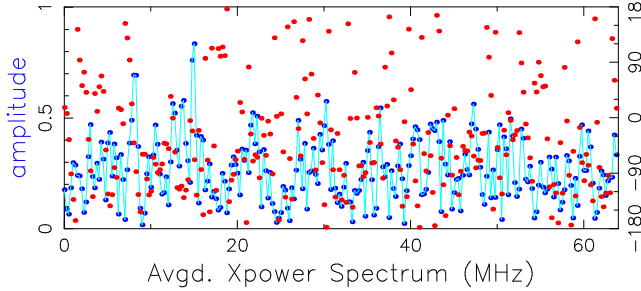
Fringe quality 0



SNR 5.7
 Int time 315.492
 Amp 0.183
 Phase 108.0
 PFD 9.7e-01
 Delays (us)
 SBD 0.444714
 MBD -0.008097
 Fringe rate (Hz)
 -0.974595
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



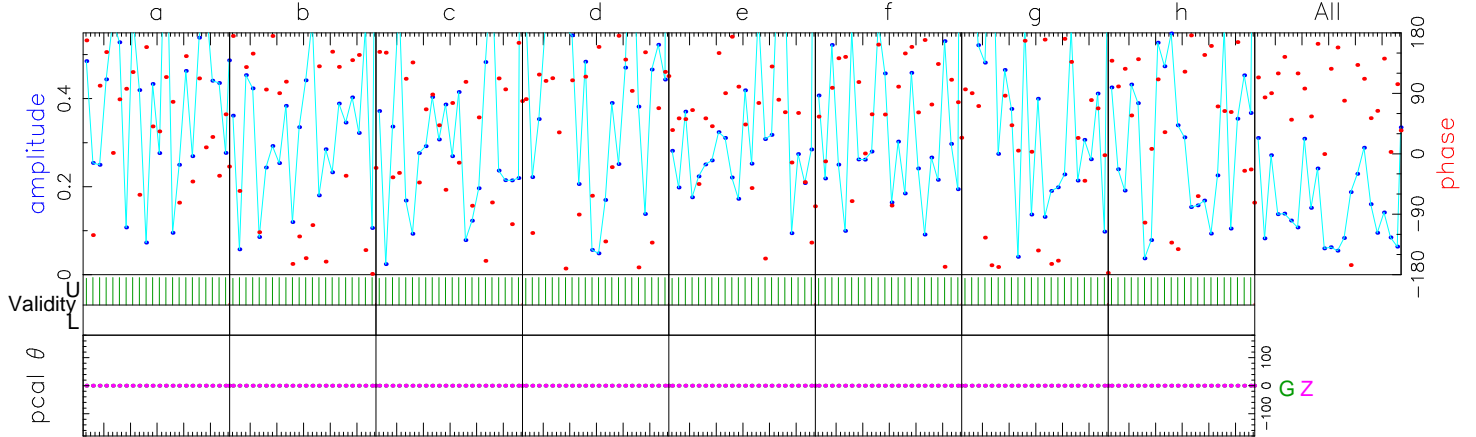
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151513.31
 Stop 152029.73
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044522
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	73.7	170.5	6.0	117.7	68.3	105.7	129.7	104.7	Phase	108.0
	0.2	0.3	0.1	0.4	0.3	0.2	0.2	0.2	Ampl.	0.2
	387.5	11.1	219.2	371.1	114.9	29.7	23.8	229.7	Sbd box	370.8
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	5.14612014585E+03	Apriori delay (usec)	5.14567511835E+03	Resid mbdelay (usec)	-8.09750E-03	+/-	1.9E-04
Sband delay (usec)	5.14611983185E+03	Apriori clock (usec)	-1.3563629E+01	Resid sbdelay (usec)	4.44714E-01	+/-	1.5E-03
Phase delay (usec)	5.14567512184E+03	Apriori clockrate (us/s)	-1.1600000E-07	Resid phdelay (usec)	3.48331E-06	+/-	6.5E-07
Delay rate (us/s)	1.27788049304E+00	Apriori rate (us/s)	1.27789180713E+00	Resid rate (us/s)	-1.13141E-05	+/-	3.6E-09
Total phase (deg)	358.2	Apriori accel (us/s/s)	-4.08791584564E-05	Resid phase (deg)	108.0	+/-	20.2

ph/seg (deg)	RMS 48.9	Theor. 48.4	Amplitude Search (2048X32)	0.183 +/- 0.032	0.116	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	78.2	84.5	Interp.	0.000	0.116	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	54.3	28.5	Inc. seg. avg.	0.178	0.116	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	49.3	49.8	Inc. frq. avg.	0.204	0.116	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

G: az 94.5 el 56.3 pa -62.9 Z: az 264.2 el 37.1 pa 34.3 u,v (fr/asec) -8412.721 -3630.812 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GZ..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GZ.W.140.1W8CZP

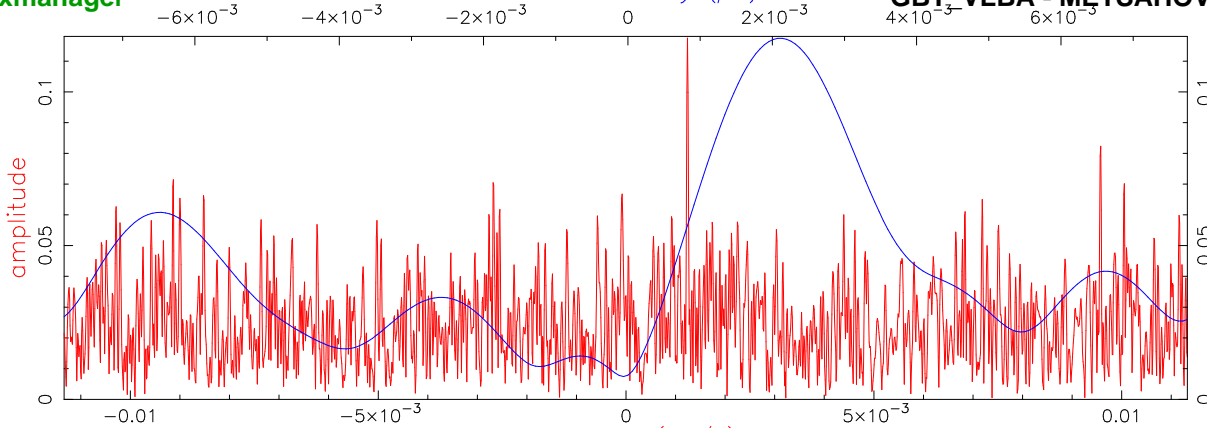
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GZ

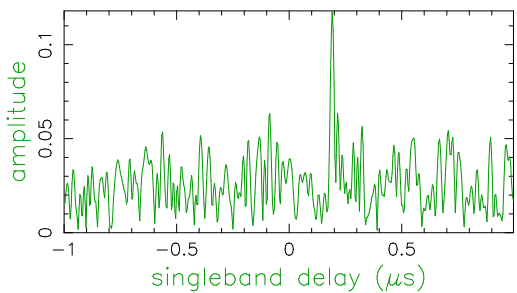
GBT VLBA - METSAHOV, fgroup W, pol RL

multiband delay (μ s)



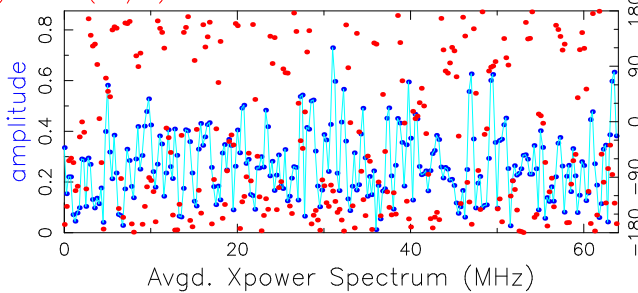
Fringe quality 0

SNR 5.7
 Int time 315.492
 Amp 0.118
 Phase -141.0
 PFD 9.4e-01
 Delays (us)
 SBD 0.191485
 MBD 0.002112
 Fringe rate (Hz)
 0.106892
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



singleband delay (μ s)

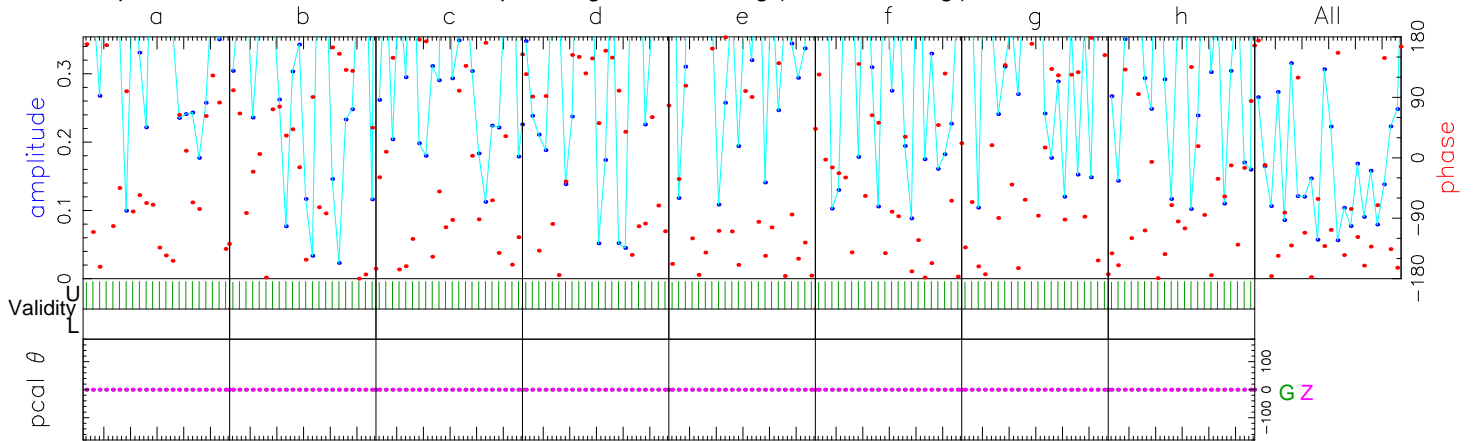
delay rate (ns/s)



Avgd. Xpower Spectrum (MHz)

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151513.31
 Stop 152029.73
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044525
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-119.7	105.6	-128.6	-179.7	-151.2	-103.3	-148.9	-119.5	Phase	-141.0
	0.2	0.0	0.1	0.1	0.3	0.1	0.2	0.1	Ampl.	0.1
	222.9	197.4	424.3	202.0	306.0	397.0	440.5	330.7	Sbd box	306.0
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.14586473038E+03	Apriori delay (usec)	5.14567511835E+03	Resid mbdelay (usec)	2.11202E-03	+/-	1.9E-04
Sband delay (usec)	5.14586660360E+03	Apriori clock (usec)	-1.3563629E+01	Resid sbdelay (usec)	1.91485E-01	+/-	1.5E-03
Phase delay (usec)	5.14567511381E+03	Apriori clockrate (us/s)	-1.1600000E-07	Resid phdelay (usec)	-4.54797E-06	+/-	6.5E-07
Delay rate (us/s)	1.27789304804E+00	Apriori rate (us/s)	1.27789180713E+00	Resid rate (us/s)	1.24092E-06	+/-	3.5E-09
Total phase (deg)	109.2	Apriori accel (us/s/s)	-4.08791584564E-05	Resid phase (deg)	-141.0	+/-	20.1

ph/seg (deg)	53.6	RMS	48.2	Theor.	0.118 +/- 0.021	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	78.0	Search (2048X32)	0.116	Amplitude	0.118 +/- 0.021	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	53.3	Interp.	0.000	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	54.7	Inc. seg. avg.	0.120	Inc. seg. avg.	0.120	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
		Inc. frq. avg.	0.116	Inc. frq. avg.	0.116	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

G: az 94.5 el 56.3 pa -62.9 Z: az 264.2 el 37.1 pa 34.3 u,v (fr/asec) -8412.721 -3630.812 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GZ..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GZ.W.159.1W8CZP

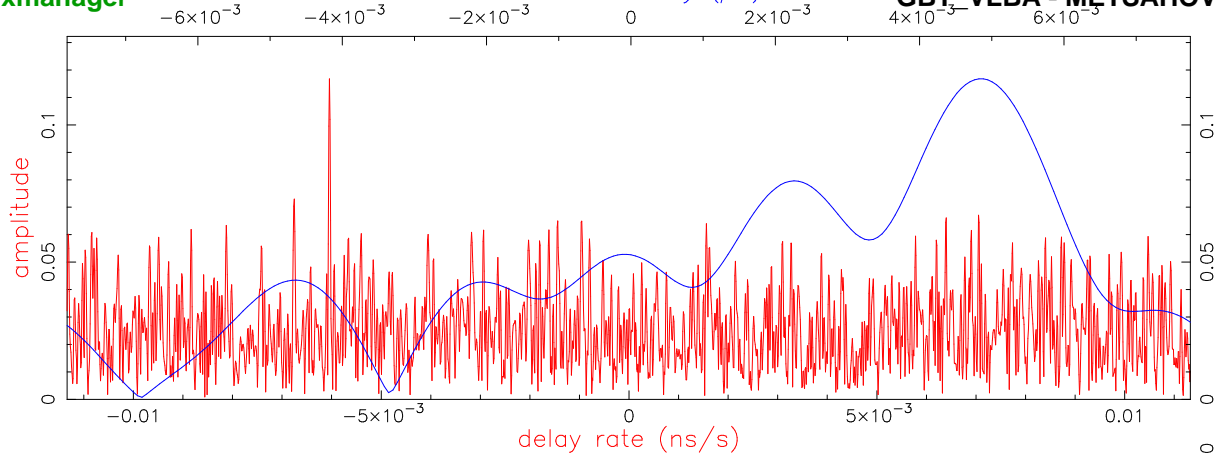
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0234+285.1W8CZP, No0029, GZ

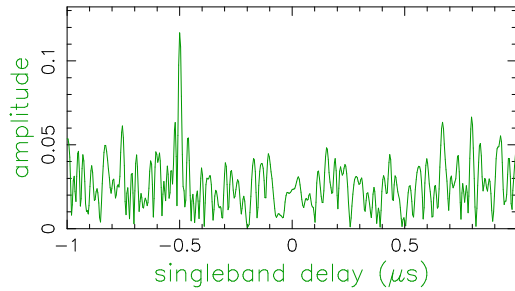
GBT_VLBA - METSAHOV, fgroup W, pol LL

multiband delay (μ s)

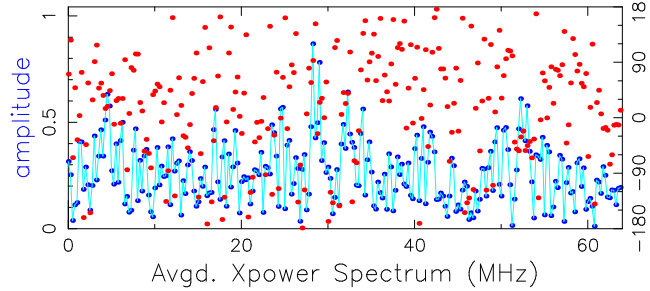


Fringe quality 0

SNR 5.7
 Int time 315.492
 Amp 0.132
 Phase -8.8
 PFD 9.5e-01
 Delays (us)
 SBD -0.499269
 MBD 0.004878
 Fringe rate (Hz)
 -0.521301
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

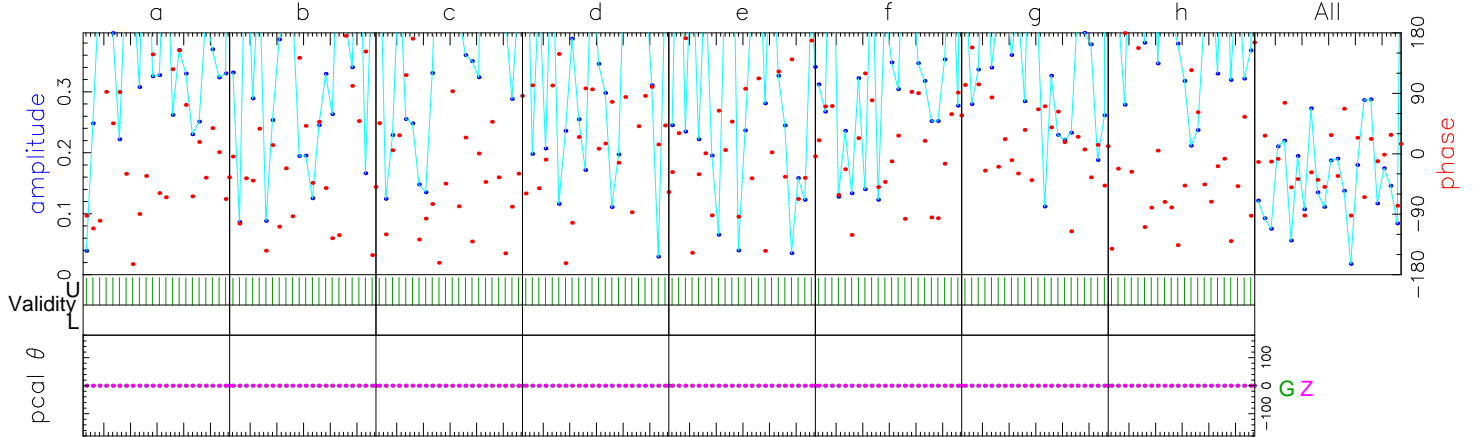


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 151513.31
 Stop 152029.73
 FRT 151745.00
 Corr/FF/build
 2021:288:021115
 2021:288:044513
 2021:252:122852
 RA & Dec (J2000)
 02h37m52.405678s
 +28°48'08.989988"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-27.6	-45.5	-26.5	36.7	19.7	31.0	12.6	-66.5	Phase	-8.8
	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.3	Ampl.	0.1
	487.2	399.7	503.3	379.1	493.7	458.8	129.0	128.2	Sbd box	129.2
U/L	618/0	618/0	618/0	618/0	618/0	618/0	618/0	618/0	APs used	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
G:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
G	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
G	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.14517999685E+03	Apriori delay (usec)	5.14567511835E+03	Resid mbdelay (usec)	4.87850E-03	+/-	1.9E-04
Sband delay (usec)	5.14517584935E+03	Apriori clock (usec)	-1.3563629E+01	Resid sbdelay (usec)	-4.99269E-01	+/-	1.5E-03
Phase delay (usec)	5.14567511807E+03	Apriori clockrate (us/s)	-1.1600000E-07	Resid phdelay (usec)	-2.83306E-07	+/-	6.5E-07
Delay rate (us/s)	1.27788575534E+00	Apriori rate (us/s)	1.27789180713E+00	Resid rate (us/s)	-6.05179E-06	+/-	3.6E-09
Total phase (deg)	241.4	Apriori accel (us/s/s)	-4.08791584564E-05	Resid phase (deg)	-8.8	+/-	20.1

ph/seg (deg)	46.0	RMS	48.2	Theor.	Amplitude	0.132 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	71.5		84.2		Search (2048X32)	0.113	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	41.4		28.4		Inc. seg. avg.	0.130	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	52.3		49.6		Inc. frq. avg.	0.147	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

G: az 94.5 el 56.3 pa -62.9 Z: az 264.2 el 37.1 pa 34.3 u,v (fr/asec) -8412.721 -3630.812 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0029/GZ..1W8CZP Output file: /Exps/c211a/v2/1234/No0029/GZ.W.97.1W8CZP