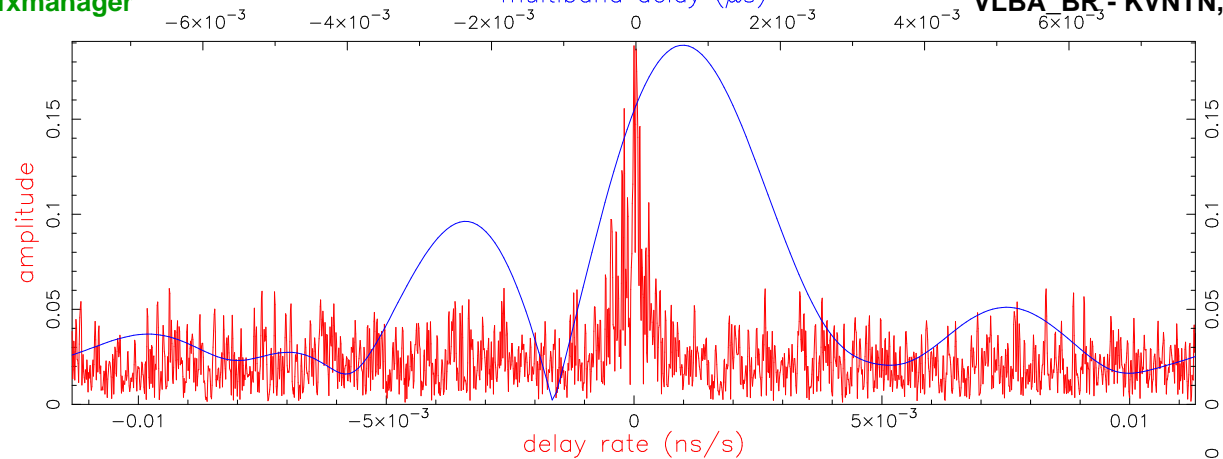
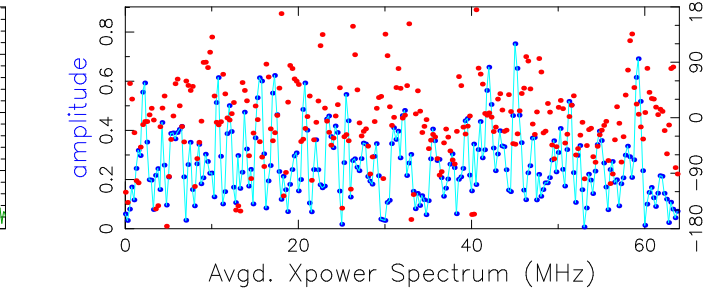
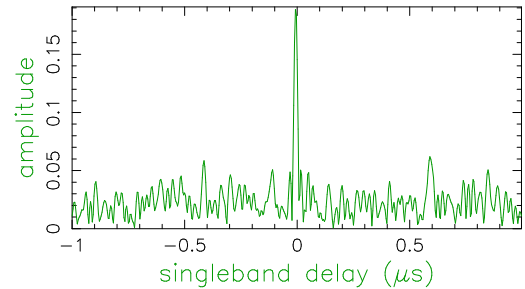


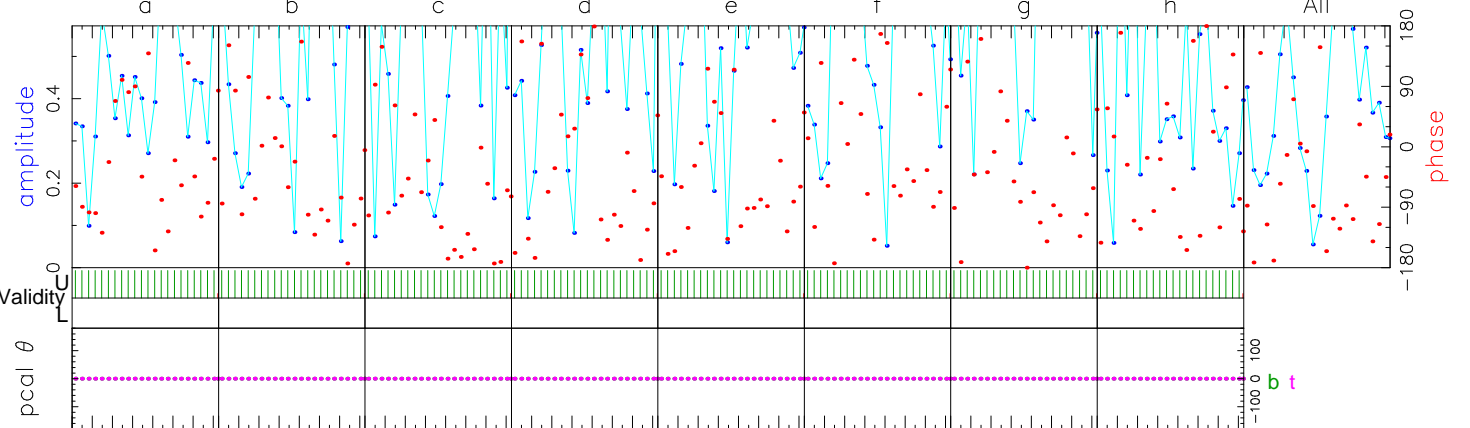
multiband delay ( $\mu$ s)



Fringe quality 9  
SNR 10.7  
Int time 419.819  
Amp 0.191  
Phase -86.2  
PFD 4.9e-18  
Delays (us)  
SBD -0.006406  
MBD 0.000718  
Fringe rate (Hz) 0.000224  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133045  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-67.4	-82.3	-105.1	-112.7	-65.0	-33.5	-89.0	-123.0	Phase	-86.2
	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	Ampl.	0.2
	253.0	255.2	255.5	255.0	255.7	256.3	255.1	256.1	Sbd box	255.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:t	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.21169760075E+04		Apriori delay (usec)		1.21169752895E+04		Resid mbdelay (usec)		7.18031E-04	+/- 1.0E-04
Sband delay (usec)	1.21169688835E+04		Apriori clock (usec)		-2.7194901E+00		Resid sbdelay (usec)		-6.40600E-03	+/- 8.1E-04
Phase delay (usec)	1.21169752867E+04		Apriori clockrate (us/s)		-4.9999999E-08		Resid phdelay (usec)		-2.77965E-06	+/- 3.5E-07
Delay rate (us/s)	-1.05048376860E+00		Apriori rate (us/s)		-1.05048377120E+00		Resid rate (us/s)		2.59899E-09	+/- 1.4E-09
Total phase (deg)	70.6		Apriori accel (us/s/s)		-4.72679143125E-05		Resid phase (deg)		-86.2	+/- 10.7

ph/seg (deg) RMS Theor. Amplitude 0.191 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 75.1 25.7 Search (2048X32) 0.185 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 137.8 44.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 31.7 15.2 Inc. seg. avg. 0.352 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
amp/frq (%) 22.7 26.4 Inc. frq. avg. 0.202 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
b: az 290.0 el 76.6 pa 94.4 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 9483.563 -3584.799 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/bt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/bt.W.25.1X1KZS

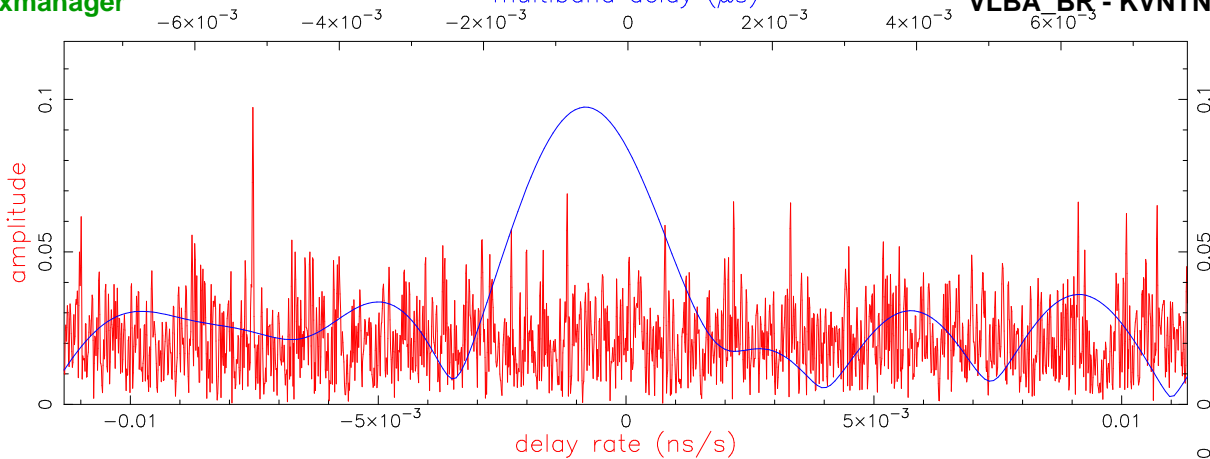
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, bt

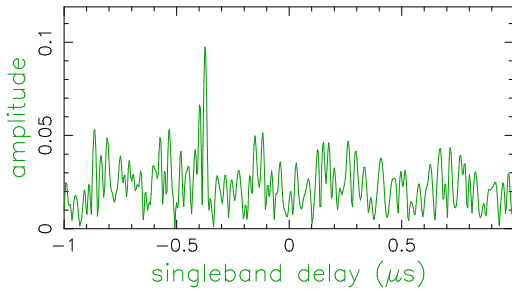
VLBA\_BR - KVNTN, fgroup W, pol LR

multiband delay ( $\mu$ s)

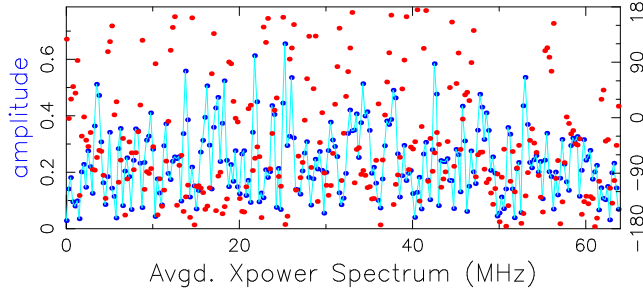


Fringe quality 0

SNR 5.5  
 Int time 419.819  
 Amp 0.119  
 Phase -75.0  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.373736  
 MBD -0.000541  
 Fringe rate (Hz)  
 -0.649398  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

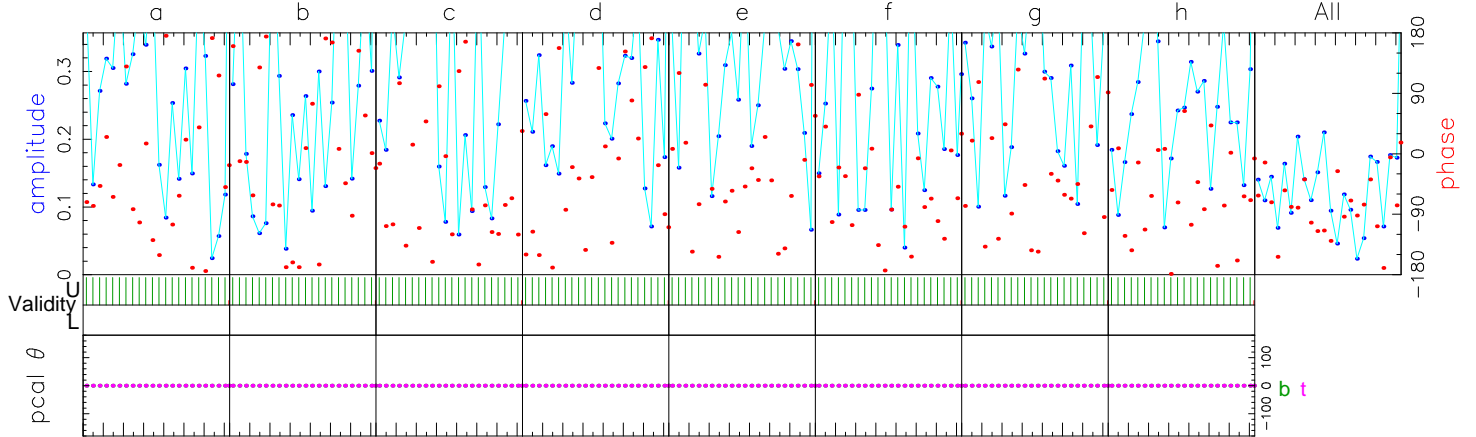


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133049  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'59.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-60.4	-35.0	-112.0	-73.8	-53.3	-80.0	-94.2	-68.8	Phase	-75.0
	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	Ampl.	0.1
	389.9	379.1	306.3	198.8	421.1	454.2	111.0	294.6	Sbd box	161.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:t	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)		1.21165997488E+04		Apriori delay (usec)	1.21169752895E+04		Resid mbdelay (usec)	-5.40677E-04	+/-	2.0E-04
Sband delay (usec)		1.21166015537E+04		Apriori clock (usec)	-2.7194901E+00		Resid sbdelay (usec)	-3.73736E-01	+/-	1.6E-03
Phase delay (usec)		1.21169752871E+04		Apriori clockrate (us/s)	-4.9999999E-08		Resid phdelay (usec)	-2.41741E-06	+/-	6.7E-07
Delay rate (us/s)		-1.05049131007E+00		Apriori rate (us/s)	-1.05048377120E+00		Resid rate (us/s)	-7.53887E-06	+/-	2.8E-09
Total phase (deg)			81.8	Apriori accel (us/s/s)	-4.72679143125E-05		Resid phase (deg)	-75.0	+/-	20.8

	RMS	Theor.	Amplitude	0.119 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	42.3	49.8	Search (2048X32)	0.097	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	64.7	86.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	26.1	29.4	Inc. seg. avg.	0.111	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	34.3	51.2	Inc. frq. avg.	0.112	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

b: az 290.0 el 76.6 pa 94.4 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 9483.563 -3584.799 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/bt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/bt.W.47.1X1KZS

Mk4/DiFX fourfit 3.21 rev 2937

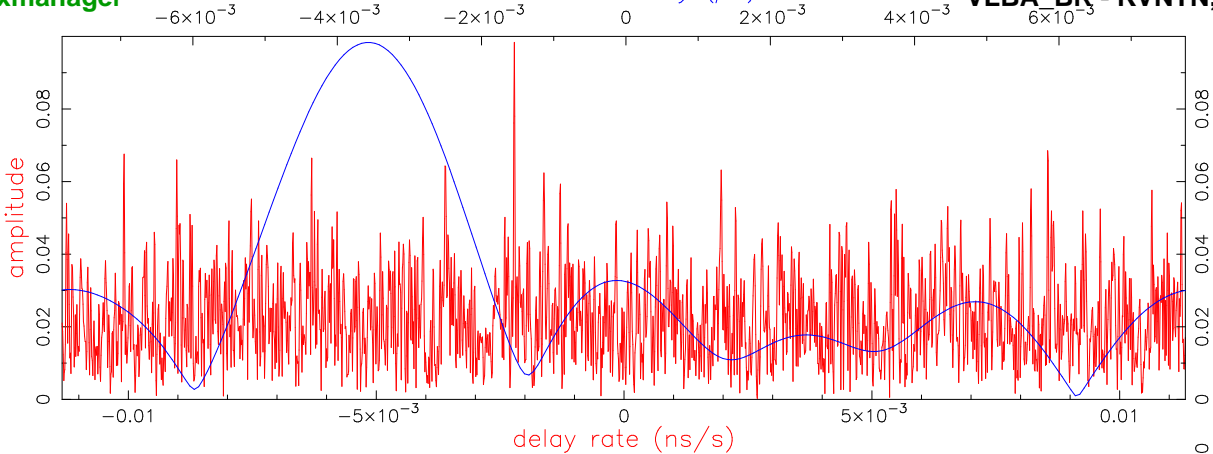
fxmanager

NRAO150.1X1KZS, No0113, bt

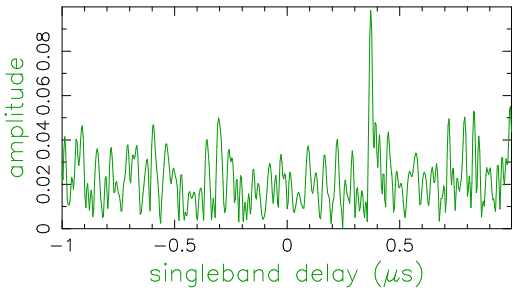
VLBA\_BR - KVNTN, fgroup W, pol RL

multiband delay ( $\mu$ s)

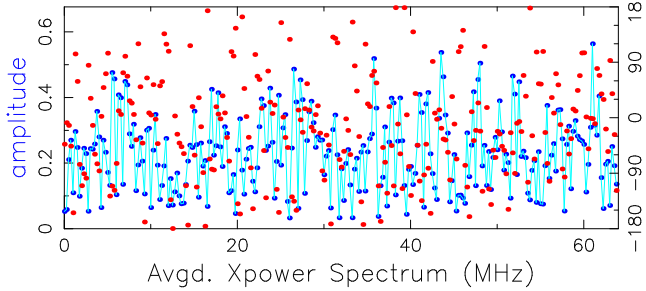
Fringe quality 0



SNR 5.5  
 Int time 419.819  
 Amp 0.100  
 Phase -17.7  
 PFD 1.0e+00  
 Delays (us)  
 SBD 0.371462  
 MBD -0.003566  
 Fringe rate (Hz)  
 -0.190548  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

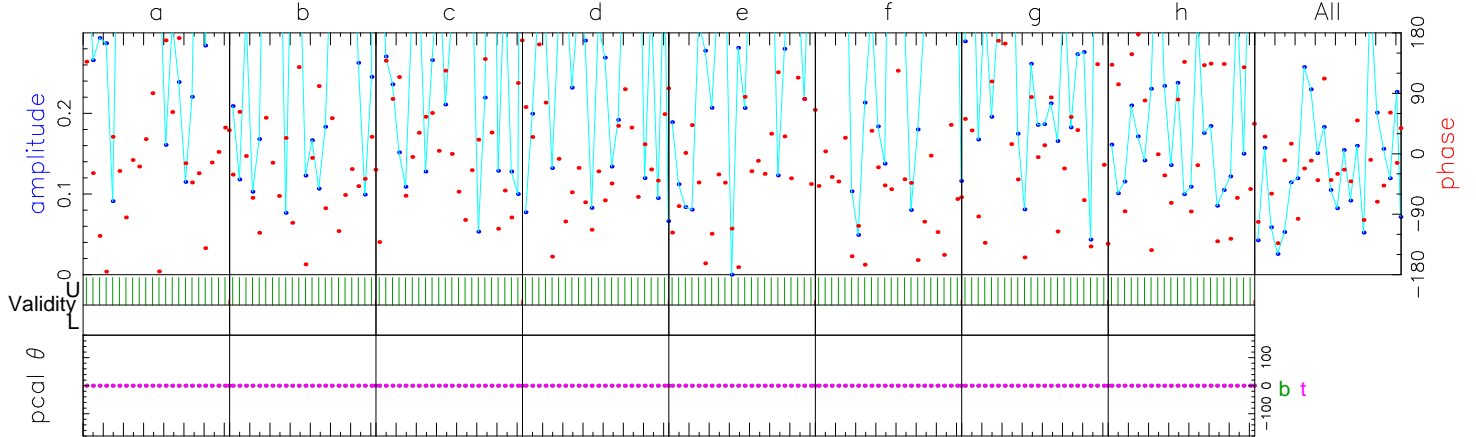


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133054  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-8.8	-29.8	-4.5	-14.5	-20.7	-36.9	40.1	-33.0	Phase	-17.7
	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	Ampl.	0.1
	484.8	264.1	403.8	372.0	251.5	351.9	14.2	401.6	Sbd box	352.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:t	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.21173467233E+04	Apriori delay (usec)	1.21169752895E+04	Resid mbdelay (usec)	-3.56617E-03	+/-	2.0E-04
Sband delay (usec)	1.21173467512E+04	Apriori clock (usec)	-2.7194901E+00	Resid sbdelay (usec)	3.71462E-01	+/-	1.6E-03
Phase delay (usec)	1.21169752889E+04	Apriori clockrate (us/s)	-4.9999999E-08	Resid phdelay (usec)	-5.72169E-07	+/-	6.7E-07
Delay rate (us/s)	-1.05048598328E+00	Apriori rate (us/s)	-1.05048377120E+00	Resid rate (us/s)	-2.21208E-06	+/-	2.8E-09
Total phase (deg)	139.0	Apriori accel (us/s/s)	-4.72679143125E-05	Resid phase (deg)	-17.7	+/-	20.8

ph/seg (deg)	56.8	Theor.	49.8	Search (2048X32)	0.095	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	90.1		87.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	27.0		29.4	Inc. seg. avg.	0.103	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.8		51.3	Inc. frq. avg.	0.093	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

b: az 290.0 el 76.6 pa 94.4 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 9483.563 -3584.799 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/bt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/bt.W.69.1X1KZS

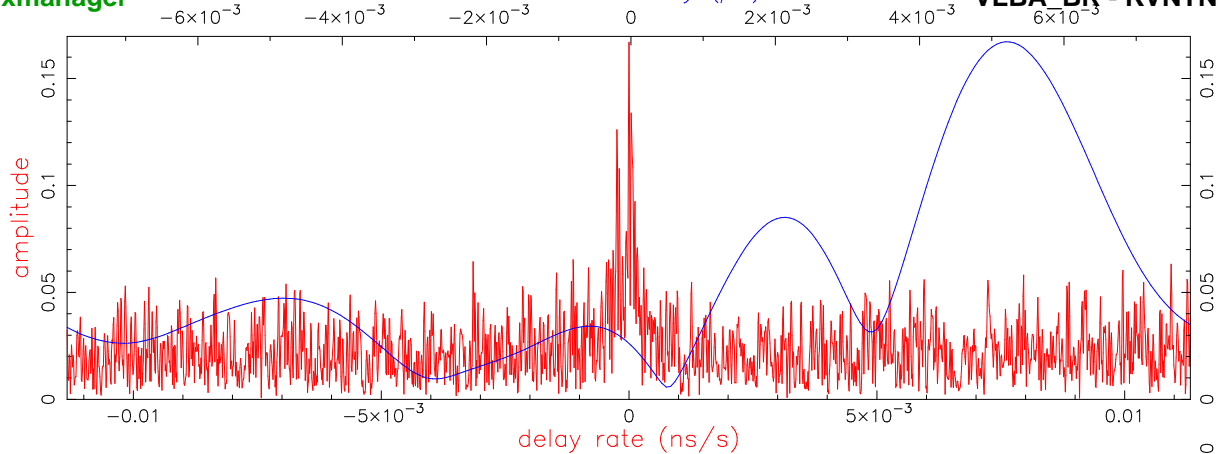
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, bt

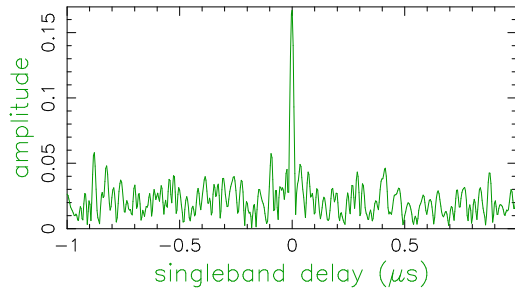
VLBA\_BR - KVNTN, fgroup W, pol LL

multiband delay ( $\mu$ s)

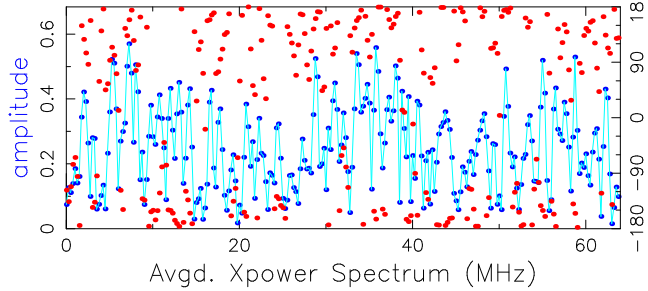


Fringe quality 9

SNR 9.5  
Int time 419.819  
Amp 0.170  
Phase 88.1  
PFD 7.8e-13  
Delays (us)  
SBD -0.001604  
MBD 0.005160  
Fringe rate (Hz) 0.000083  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

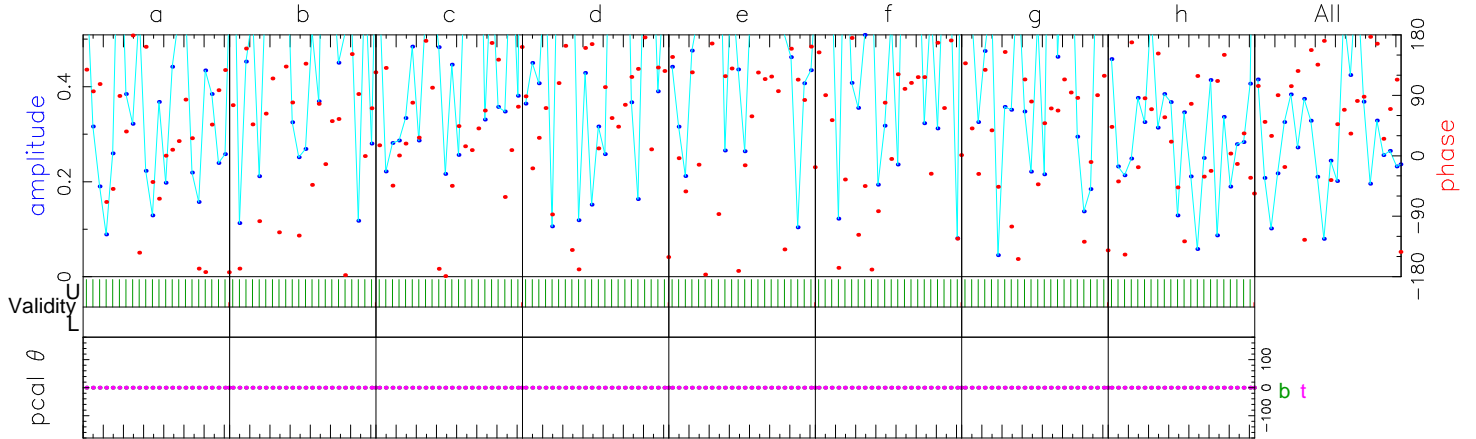


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133042  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
b	0	0	0	0	0	0	0	0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
b:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:t	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		
t	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.21169804496E+04	Apriori delay (usec)	1.21169752895E+04	Resid mbdelay (usec)	5.16012E-03	+/-	1.1E-04
Sband delay (usec)	1.21169736857E+04	Apriori clock (usec)	-2.7194901E+00	Resid sbdelay (usec)	-1.60375E-03	+/-	9.1E-04
Phase delay (usec)	1.21169752923E+04	Apriori clockrate (us/s)	-4.9999999E-08	Resid phdelay (usec)	2.84147E-06	+/-	3.9E-07
Delay rate (us/s)	-1.05048377023E+00	Apriori rate (us/s)	-1.05048377120E+00	Resid rate (us/s)	9.69307E-10	+/-	1.6E-09
Total phase (deg)	244.9	Apriori accel (us/s/s)	-4.72679143125E-05	Resid phase (deg)	88.1	+/-	12.1

ph/seg (deg)	65.7	Theor.	28.9	Amplitude	0.170 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	109.0	Search (2048X32)	0.166	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	37.4	Inc. seg. avg.	0.267	Inc. frq. avg.	0.184	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	32.2	Inc. frq. avg.	0.184	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011 0.011

b: az 290.0 el 76.6 pa 94.4 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 9483.563 -3584.799 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/bt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/bt.W.7.1X1KZS

Mk4/DiFX fourfit 3.21 rev 2937

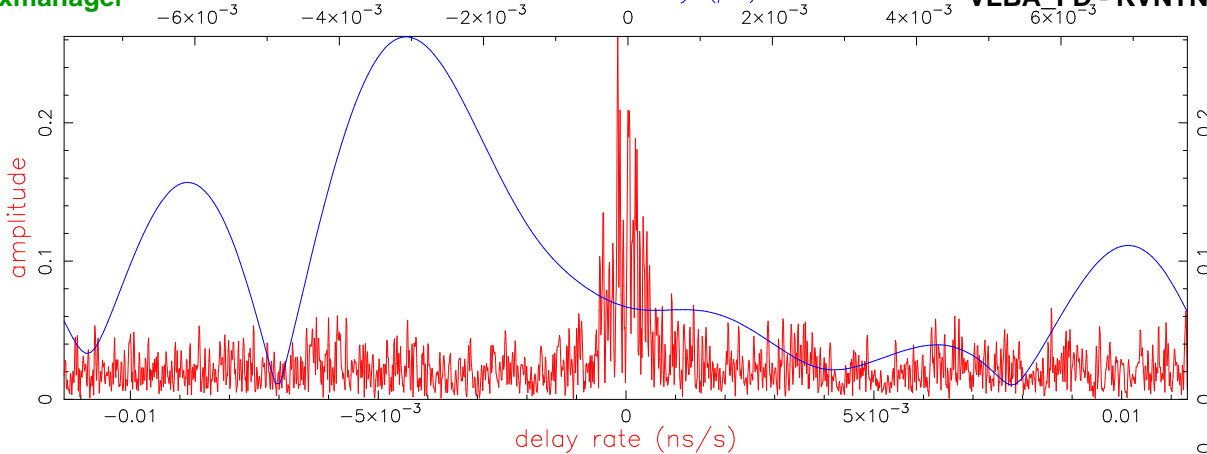
fxmanager

NRAO150.1X1KZS, No0113, ft

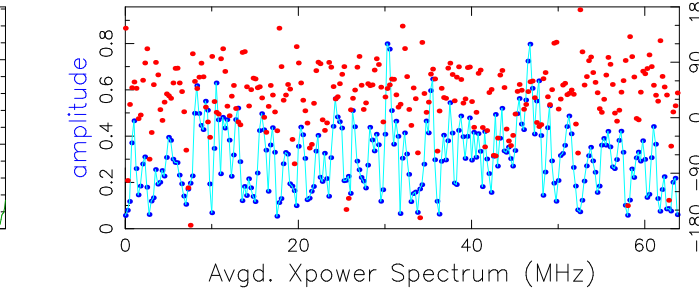
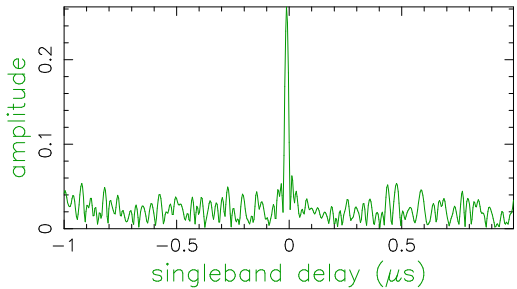
VLBA\_FD - KVNTN, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 8

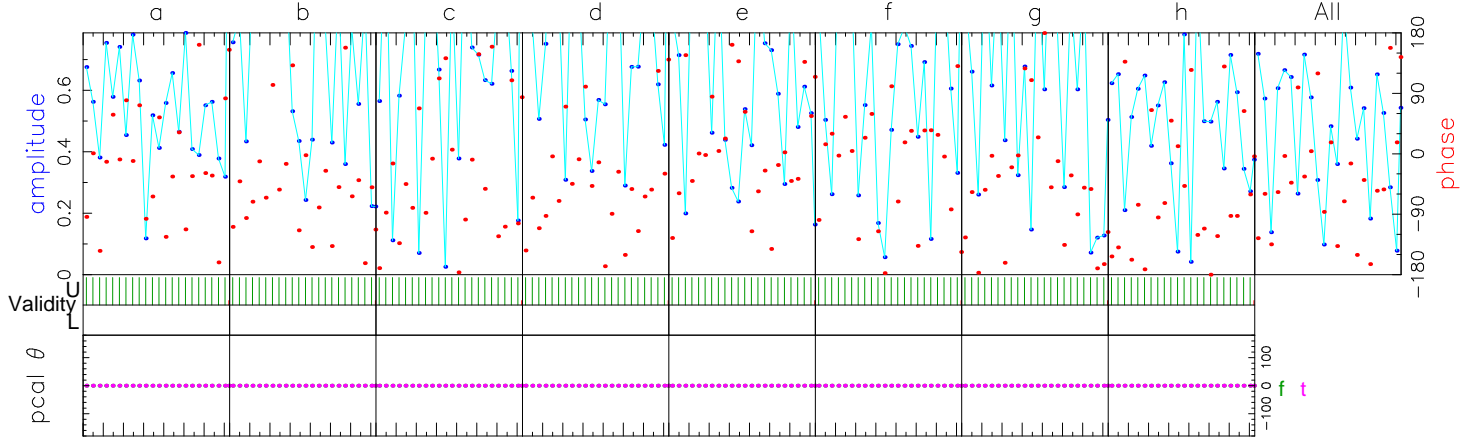


SNR 14.7  
 Int time 419.822  
 Amp 0.262  
 Phase -51.7  
 PFD 3.7e-40  
 Delays (us)  
 SBD -0.011284  
 MBD -0.003056  
 Fringe rate (Hz)  
 -0.014325  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133102  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-21.9	-66.3	-87.9	-61.0	-23.4	9.0	-47.0	-115.2	Phase	-51.7
	0.2	0.4	0.3	0.4	0.3	0.3	0.3	0.3	Ampl.	0.3
	252.3	253.7	255.0	254.3	254.0	254.8	253.9	252.5	Sbd box	254.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
ft	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	9.13140605941E+03		Apriori delay (usec)		9.13142474008E+03		Resid mbdelay (usec)		-3.05568E-03	+/- 7.4E-05
Sband delay (usec)	9.13141345633E+03		Apriori clock (usec)		1.0530083E+01		Resid sbdelay (usec)		-1.12837E-02	+/- 5.9E-04
Phase delay (usec)	9.13142473842E+03		Apriori clockrate (us/s)		1.0999999E-07		Resid phdelay (usec)		-1.66676E-06	+/- 2.5E-07
Delay rate (us/s)	-1.31954698283E+00		Apriori rate (us/s)		-1.31954681653E+00		Resid rate (us/s)		-1.66301E-07	+/- 1.0E-09
Total phase (deg)			Apriori accel (us/s/s)		-5.19342672576E-05		Resid phase (deg)		-51.7	+/- 7.8

	RMS	Theor.	Amplitude	0.262 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	79.3	18.7	Search (2048X32)	0.260	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	115.3	32.6	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	42.9	11.0	Inc. seg. avg.	0.448	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	34.4	19.2	Inc. frq. avg.	0.312	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

f: az 318.0 el 56.5 pa 112.7 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 11929.100 -5370.118 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/ft..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/ft.W.102.1X1KZS



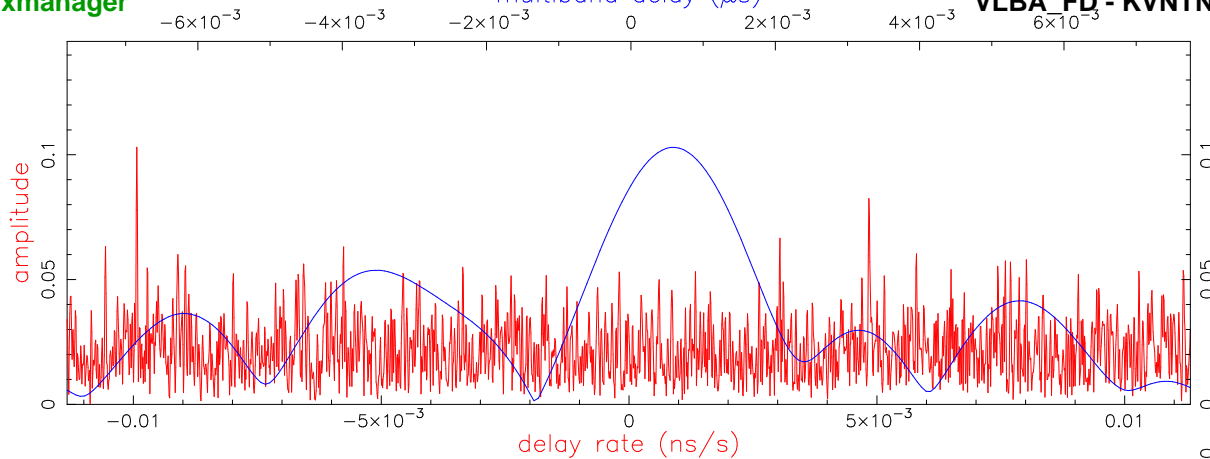
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, ft

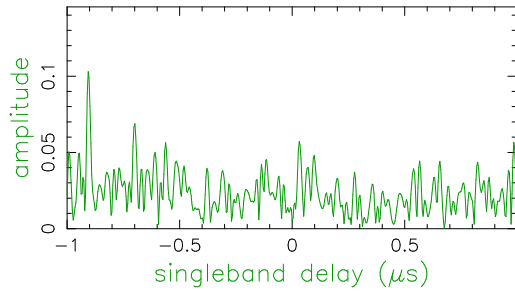
VLBA\_FD - KVNTN, fgroup W, pol LR

multiband delay ( $\mu$ s)

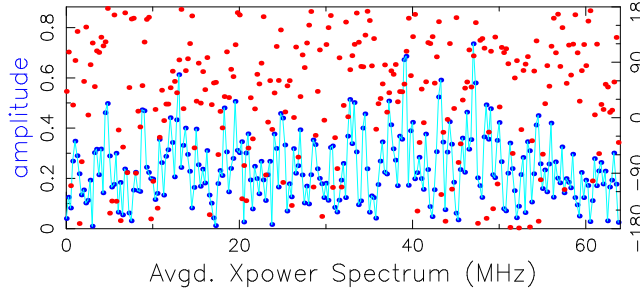


Fringe quality 0

SNR 5.8  
 Int time 419.822  
 Amp 0.145  
 Phase 93.4  
 PFD 8.0e-01  
 Delays (us)  
 SBD -0.905234  
 MBD 0.000590  
 Fringe rate (Hz)  
 -0.856289  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

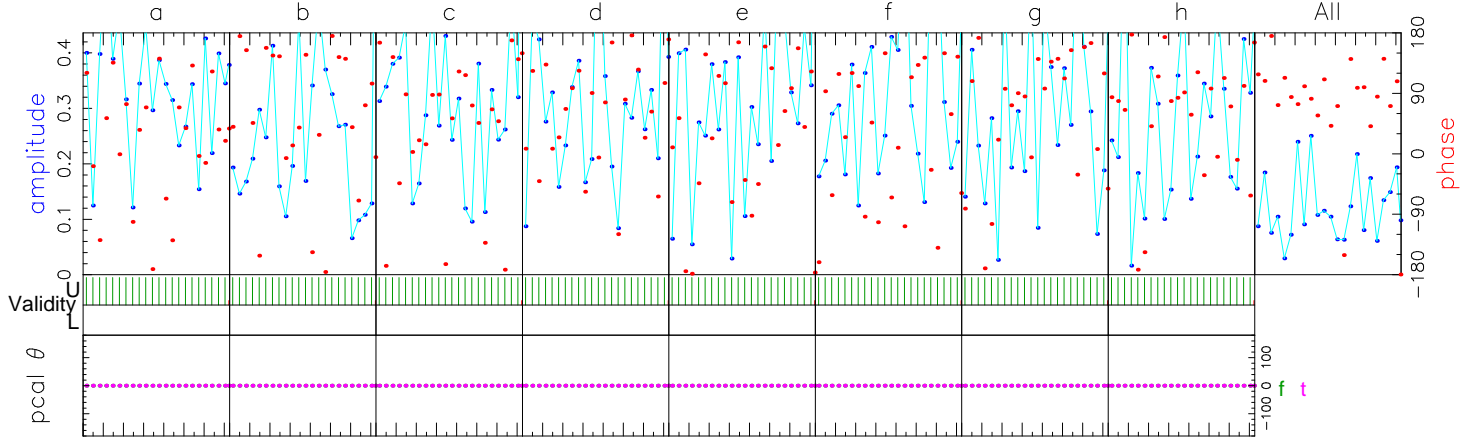


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133105  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

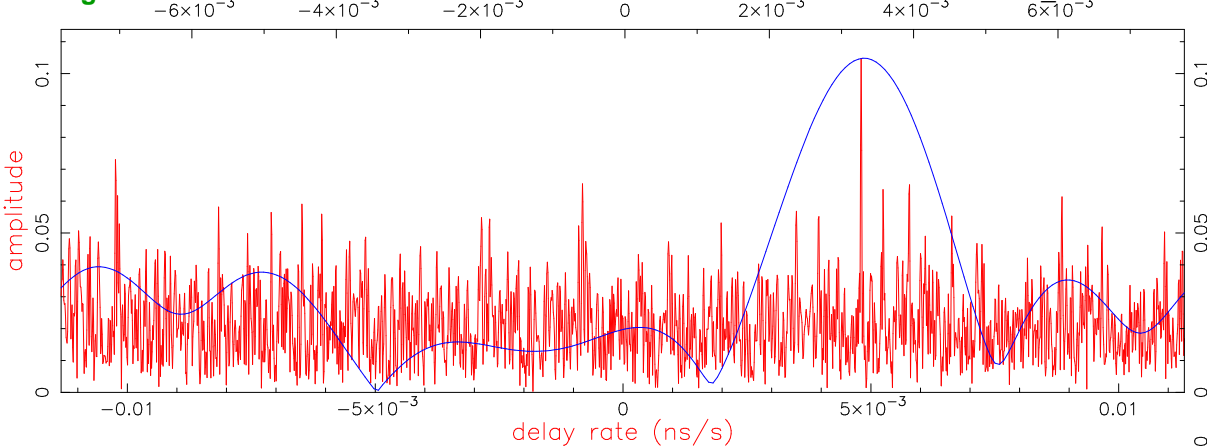
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
f	0	0	0	0	0	0	0	0			
t	1000	1000	1000	1000	1000	1000	1000	1000			
f:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
ft	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			
t	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		9.13051908026E+03				9.13142474008E+03			5.90173E-04	+/- 1.9E-04	
Sband delay (usec)		9.13051950608E+03				1.0530083E+01			-9.05234E-01	+/- 1.5E-03	
Phase delay (usec)		9.13142474309E+03				1.0999999E-07			3.01082E-06	+/- 6.4E-07	
Delay rate (us/s)		-1.31955675719E+00				-1.31954681653E+00			-9.94066E-06	+/- 2.6E-09	
Total phase (deg)			133.3			-5.19342672576E-05			93.4	+/- 19.7	
ph/seg (deg)	RMS 40.7	Theor. 47.3	Amplitude Search (2048X32)	0.145 +/- 0.025	0.099	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		sb window (us)	-1.000	1.000
amp/seg (%)	61.3	82.6	Interp.	0.000		PCal rate: 0.000E+00, 0.000E+00 (us/s)			mb window (us)	-0.008	0.008
ph/frq (deg)	48.6	27.9	Inc. seg. avg.	0.129		Bits/sample: 2x2	SampCntNorm: enabled		dr window (ns/s)	-0.011	0.011
amp/frq (%)	40.9	48.7	Inc. frq. avg.	0.143		Sample rate(MISamp/s): 128			ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite			

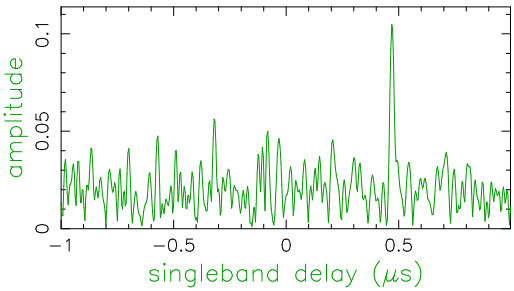
f: az 318.0 el 56.5 pa 112.7 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 11929.100 -5370.118 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/ft..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/ft.W.121.1X1KZS

multiband delay ( $\mu$ s)

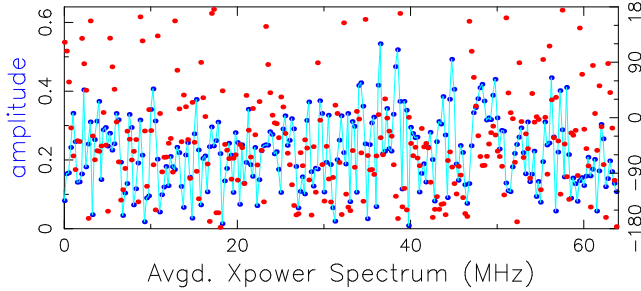


Fringe quality 0

SNR 5.9  
 Int time 419.822  
 Amp 0.114  
 Phase -88.1  
 PFD 5.7e-01  
 Delays (us)  
 SBD 0.470031  
 MBD 0.003348  
 Fringe rate (Hz) 0.414889  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

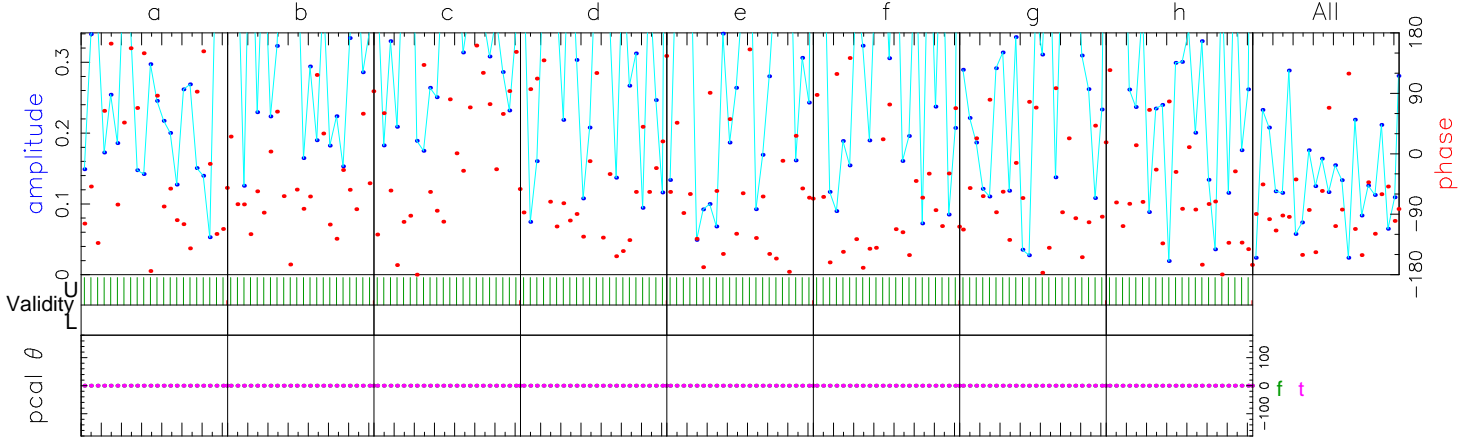


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133109  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-126.9	-58.3	-69.5	-98.0	-99.0	-96.5	-79.5	-89.6	Phase	-88.1
	0.1	0.2	0.0	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	54.4	377.7	303.7	314.0	395.8	443.0	117.8	105.0	Sbd box	377.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
ft	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	9.13189683774E+03		Apriori delay (usec)		9.13142474008E+03		Resid mbdelay (usec)		3.34765E-03	+/- 1.8E-04
Sband delay (usec)	9.13189477158E+03		Apriori clock (usec)		1.0530083E+01		Resid sbdelay (usec)		4.70031E-01	+/- 1.5E-03
Phase delay (usec)	9.13142473724E+03		Apriori clockrate (us/s)		1.0999999E-07		Resid phdelay (usec)		-2.84201E-06	+/- 6.2E-07
Delay rate (us/s)	-1.31954200008E+00		Apriori rate (us/s)		-1.31954681653E+00		Resid rate (us/s)		4.81645E-06	+/- 2.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-5.19342672576E-05		Resid phase (deg)		-88.1	+/- 19.4

	RMS	Theor.	Amplitude	0.114 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	56.9	46.4	Search (2048X32)	0.103	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	69.8	81.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	22.8	27.4	Inc. seg. avg.	0.109	Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011
amp/frq (%)	36.4	47.8	Inc. frq. avg.	0.107	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite
f: az 318.0 el 56.5 pa 112.7	t: az 43.1 el 23.2 pa -64.6		u,v (fr/asec) 11929.100 -5370.118				ion window (TEC) 0.00 0.00

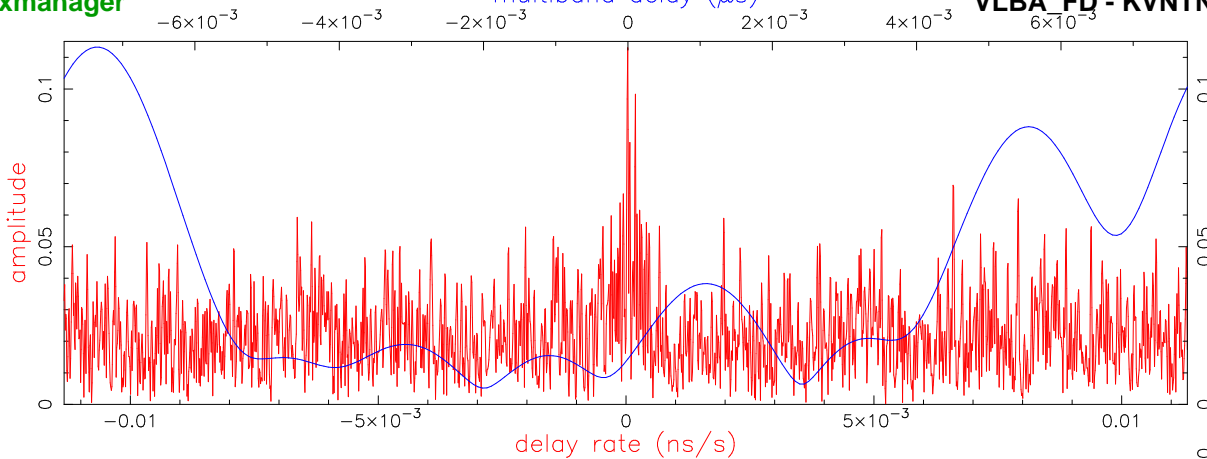
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, ft

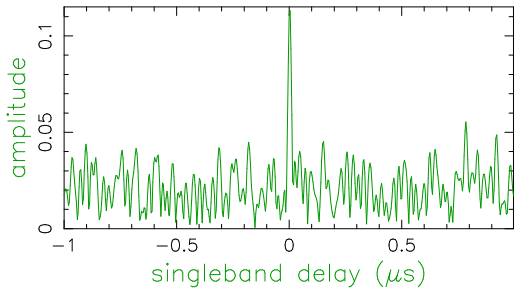
VLBA\_FD - KVNTN, fgroup W, pol LL

multiband delay ( $\mu$ s)

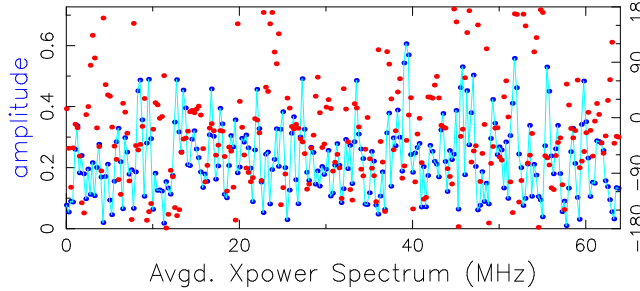


Fringe quality 0

SNR 6.4  
 Int time 419.822  
 Amp 0.115  
 Phase 69.6  
 PFD 3.1e-02  
 Delays (us)  
 SBD 0.002271  
 MBD -0.007421  
 Fringe rate (Hz)  
 0.002759  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

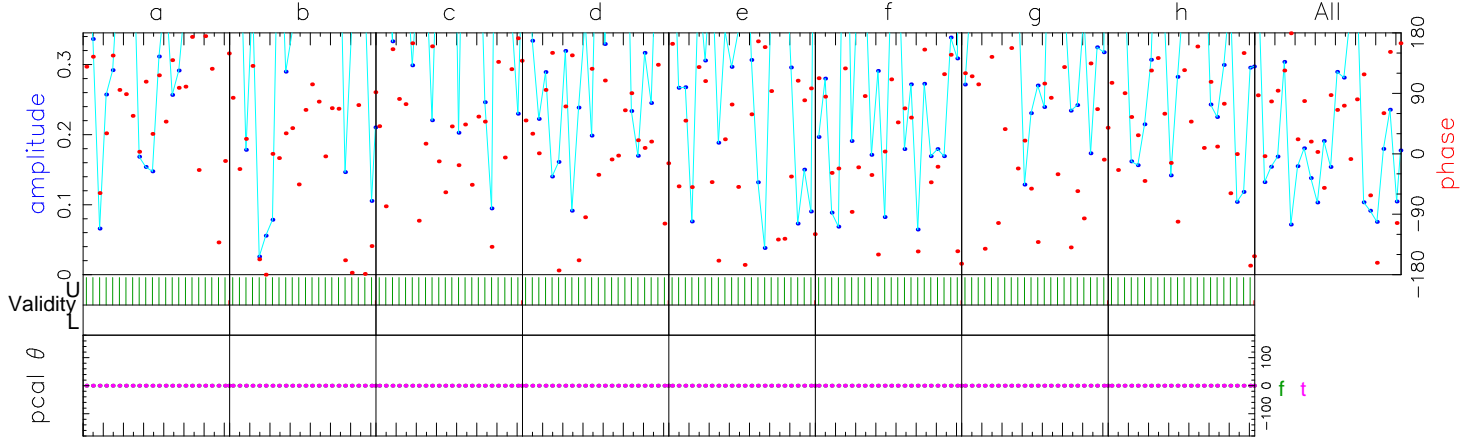


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133058  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



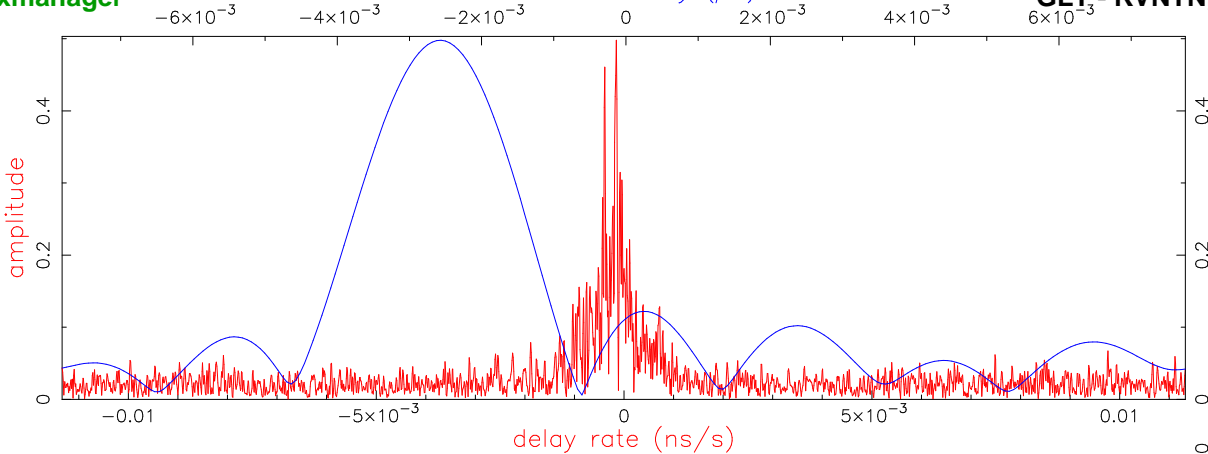
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
f	0	0	0	0	0	0	0	0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
f:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ft	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	105.5	59.2	41.4	36.6	149.0	97.0	100.1	74.8		
Sband delay (usec)	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1		
Phase delay (usec)	255.2	256.8	257.6	220.2	146.4	447.5	490.0	99.6		
Delay rate (us/s)		-1.31954678450E+00								
Total phase (deg)			109.5							
Apriori delay (usec)					9.13142474008E+03					
Apriori clock (usec)					1.0530083E+01					
Apriori clockrate (us/s)					1.0999999E-07					
Apriori rate (us/s)					-1.31954681653E+00					
Apriori accel (us/s/s)					-5.19342672576E-05					
Resid mbdelay (usec)									-7.42103E-03	+/- 1.7E-04
Resid sbdelay (usec)									2.27150E-03	+/- 1.3E-03
Resid phdelay (usec)									2.24354E-06	+/- 5.7E-07
Resid rate (us/s)									3.20282E-08	+/- 2.4E-09
Resid phase (deg)									69.6	+/- 17.8
Pcal mode:	MANUAL, MANUAL		PC period (AP's) 5, 5							
Pcal rate:	0.000E+00, 0.000E+00 (us/s)									
Bits/sample:	2x2		SampCntNorm: enabled							
Sample rate (MSamp/s):	128									
Data rate (Mb/s):	2048		nlags: 256		t_cohere infinite					
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

ph/seg (deg) 75.4 42.6 Search (2048X32) 0.113 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 117.1 74.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 43.4 25.1 Inc. seg. avg. 0.155 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 55.5 43.9 Inc. frq. avg. 0.118 Sample rate (MSamp/s): 128 Data rate (Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 f: az 318.0 el 56.5 pa 112.7 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 11929.100 -5370.118 Data rate (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/ft..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/ft.W.83.1X1KZS simultaneous interpolator

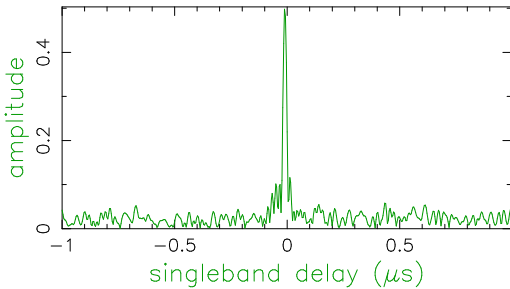


multiband delay ( $\mu$ s)

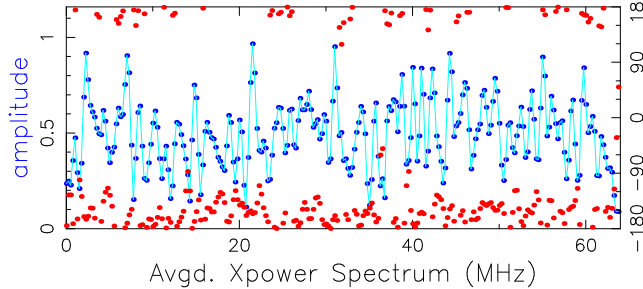
Fringe quality 7



SNR 28.2  
Int time 419.822  
Amp 0.503  
Phase 106.9  
PFD 0.0e+00  
Delays (us)  
SBD -0.010432  
MBD -0.002576  
Fringe rate (Hz)  
-0.013454  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

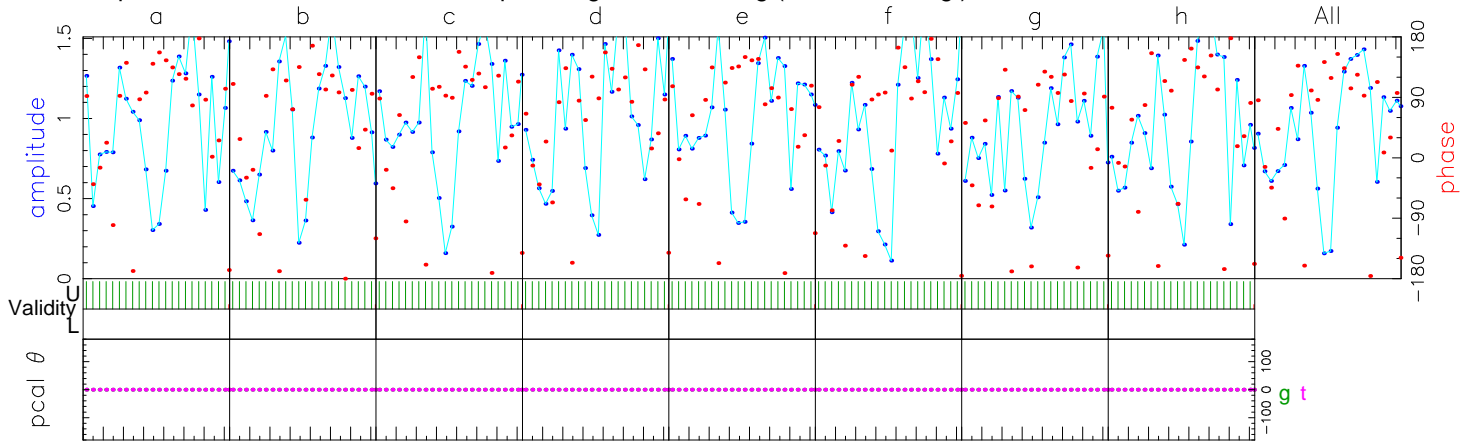


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133103  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0				
g	0	0	0	0	0	0	0	0				
t	1000	1000	1000	1000	1000	1000	1000	1000				
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
g:t	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				
t	1000	1000	1000	1000	1000	1000	1000	1000				
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
Group delay (usec)(sbd)	8.50348012881E+03		Apriori delay (usec)		8.50349833019E+03		Resid mbdelay (usec)		-2.57638E-03	+/- 3.8E-05		
Sband delay (usec)	8.50348789794E+03		Apriori clock (usec)		7.0779610E-01		Resid sbdelay (usec)		-1.04322E-02	+/- 3.1E-04		
Phase delay (usec)	8.50349833364E+03		Apriori clockrate (us/s)		1.2200000E-07		Resid phdelay (usec)		3.44852E-06	+/- 1.3E-07		
Delay rate (us/s)	-1.03255408975E+00		Apriori rate (us/s)		-1.03255393356E+00		Resid rate (us/s)		-1.56192E-07	+/- 5.4E-10		
Total phase (deg)			165.5		Apriori accel (us/s/s)		-7.98357691602E-06		Resid phase (deg)		106.9	+/- 4.1

ph/seg (deg) 69.5 9.7 Search (2048X32) 0.492 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 109.7 17.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 9.4 5.7 Inc. seg. avg. 0.910 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 7.3 10.0 Inc. frq. avg. 0.500 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 268.5 el 53.4 pa 21.7 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 9381.380 1504.069 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/gt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/gt.W.110.1X1KZS

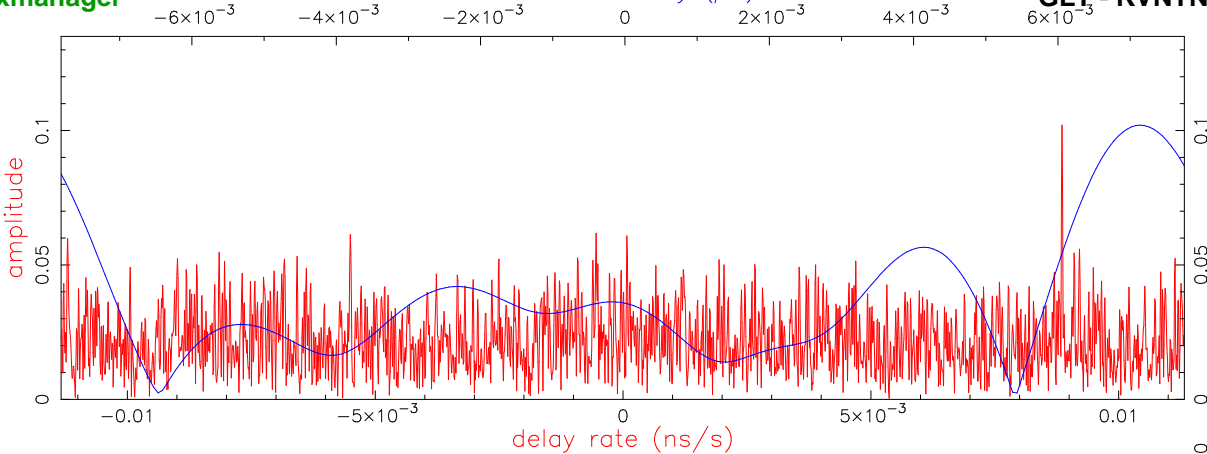
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, gt

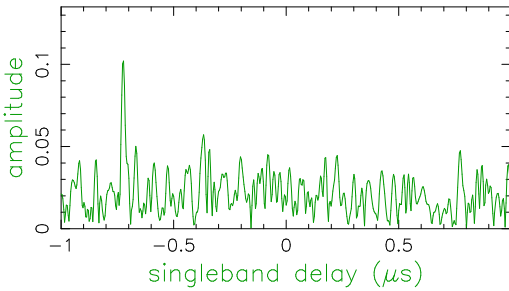
GLT - KVNTN, fgroup W, pol LR

multiband delay ( $\mu\text{s}$ )

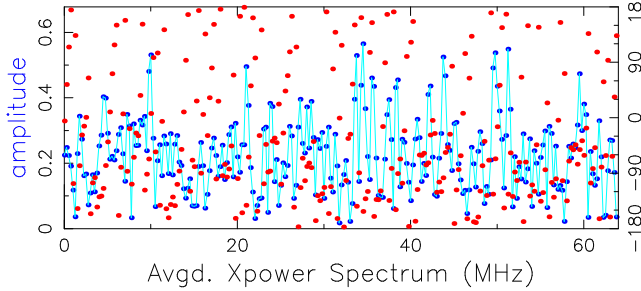


Fringe quality 0

SNR 5.8  
 Int time 419.823  
 Amp 0.135  
 Phase 106.5  
 PFD 8.1e-01  
 Delays (us)  
 SBD -0.724254  
 MBD 0.007142  
 Fringe rate (Hz)  
 0.764013  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

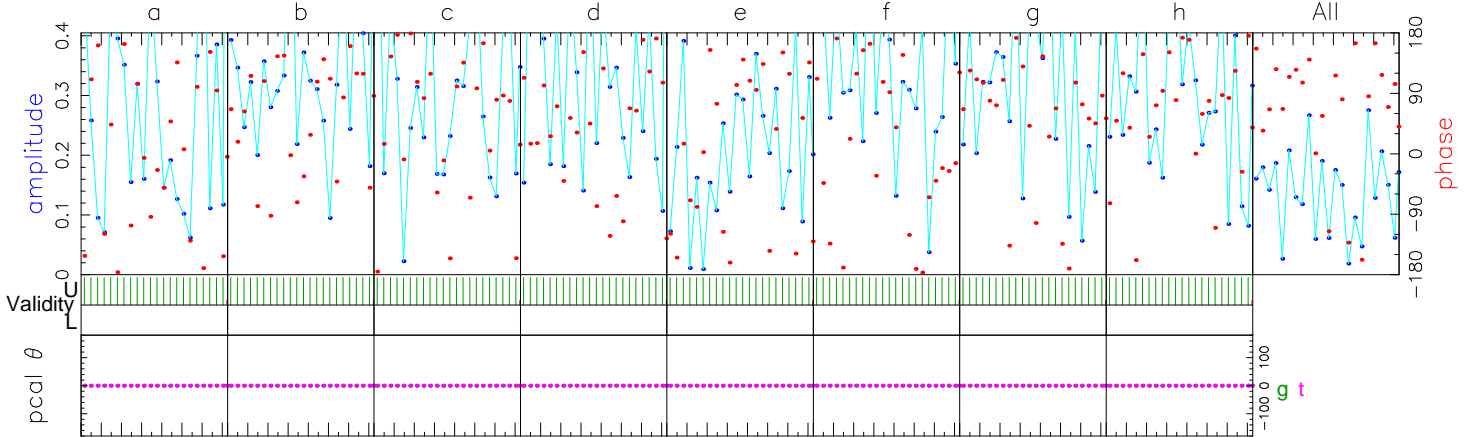


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133108  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g:t	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		
t	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	8.50277109718E+03									
Sband delay (usec)	8.50277407644E+03									
Phase delay (usec)	8.50349833363E+03									
Delay rate (us/s)	-1.03254506412E+00									
Total phase (deg)		165.0								
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
ph/seg (deg)	60.0	47.4								
amp/seg (%)	75.8	82.7								
ph/frq (deg)	38.8	27.9								
amp/frq (%)	40.2	48.8								
Search (2048X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.135 +/- 0.023										
0.100										
0.000										
0.135										
0.138										
PC period (AP's) 5, 5										
simultaneous interpolator										

Mk4/DiFX fourfit 3.21 rev 2937

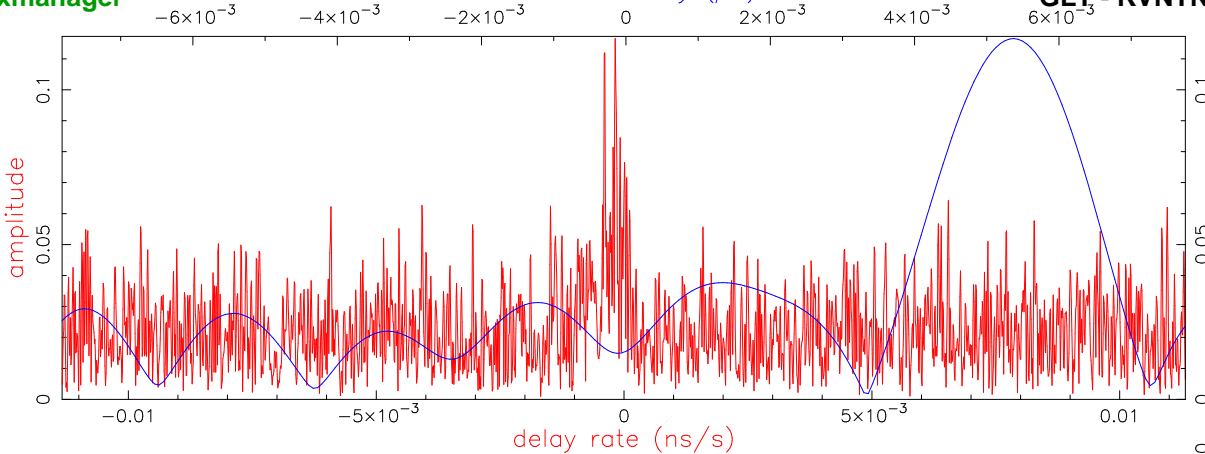
fxmanager

NRAO150.1X1KZS, No0113, gt

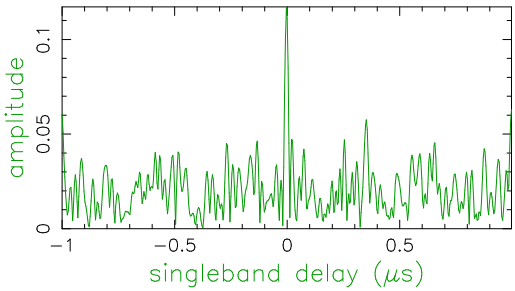
GLT - KVNTN, fgroup W, pol RL

multiband delay ( $\mu$ s)

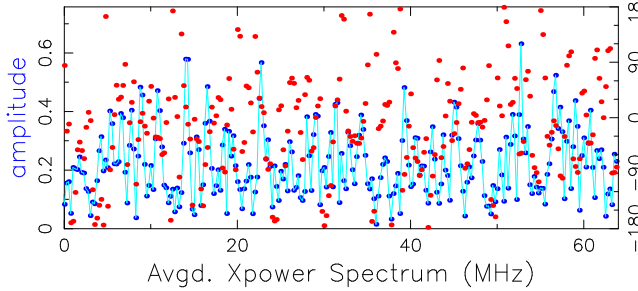
Fringe quality 0



SNR 6.6  
Int time 419.822  
Amp 0.117  
Phase -112.5  
PFD 1.4e-02  
Delays (us)  
SBD -0.002914  
MBD 0.005371  
Fringe rate (Hz)  
-0.015362  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

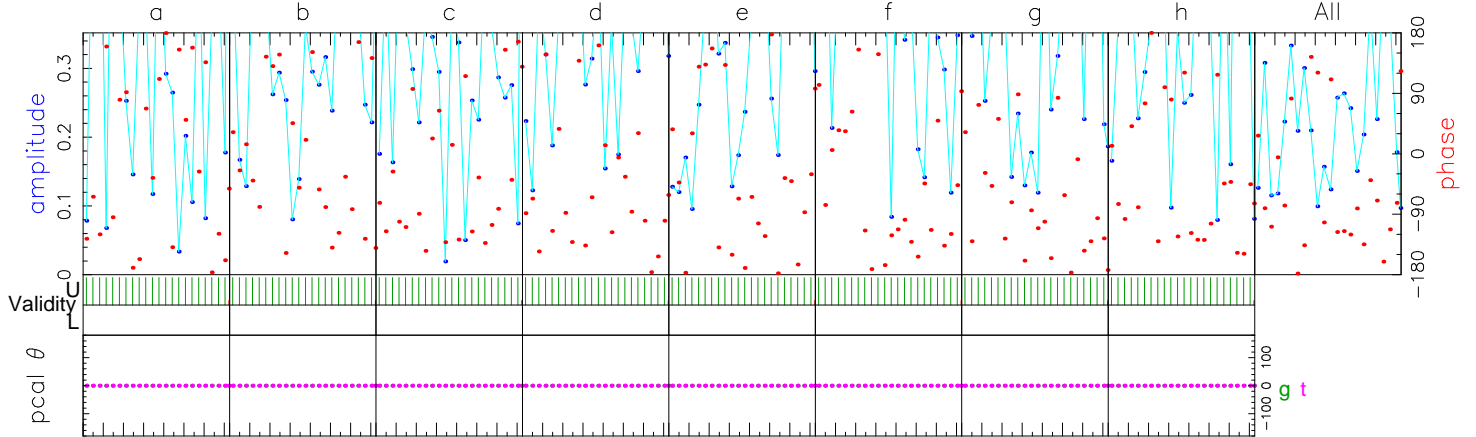


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133112  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

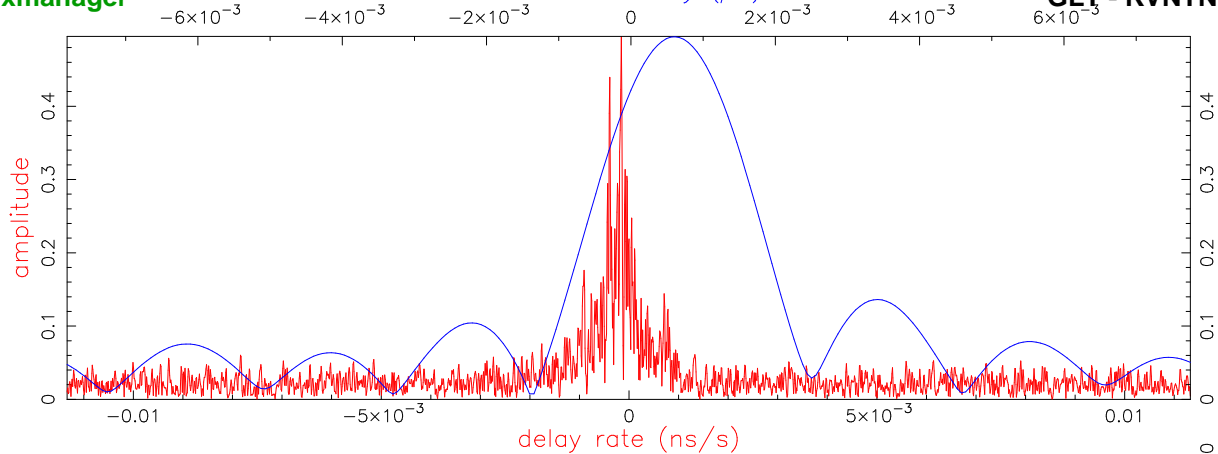
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-137.7	-87.6	-99.3	-120.0	-116.3	-127.6	-91.3	-119.2	Phase	-112.5
	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	Ampl.	0.1
	262.0	36.6	309.2	1.4	201.0	124.9	70.9	256.8	Sbd box	256.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:t	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	8.50348807663E+03		Apriori delay (usec)		8.50349833019E+03		Resid mbdelay (usec)		5.37144E-03	+/- 1.7E-04
Sband delay (usec)	8.50349541569E+03		Apriori clock (usec)		7.0779610E-01		Resid sbdelay (usec)		-2.91450E-03	+/- 1.3E-03
Phase delay (usec)	8.50349832656E+03		Apriori clockrate (us/s)		1.2200000E-07		Resid phdelay (usec)		-3.62924E-06	+/- 5.6E-07
Delay rate (us/s)	-1.03255411189E+00		Apriori rate (us/s)		-1.03255393356E+00		Resid rate (us/s)		-1.78333E-07	+/- 2.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-7.98357691602E-06		Resid phase (deg)		-112.5	+/- 17.4

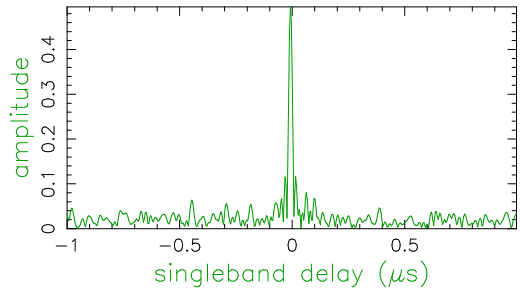
ph/seg (deg) 75.4 41.8 Search (2048X32) 0.115 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 125.3 73.0 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 19.2 24.7 Inc. seg. avg. 0.181 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 28.7 43.1 Inc. frq. avg. 0.111 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 268.5 el 53.4 pa 21.7 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 9381.380 1504.069 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/gt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/gt.W.150.1X1KZS

multiband delay ( $\mu$ s)

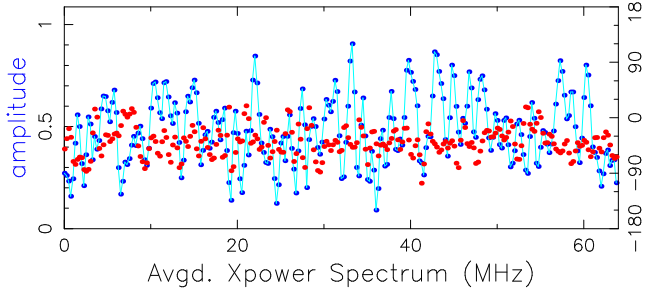


Fringe quality 7

SNR 27.7  
 Int time 419.823  
 Amp 0.495  
 Phase -133.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.007423  
 MBD 0.000607  
 Fringe rate (Hz)  
 -0.013398  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

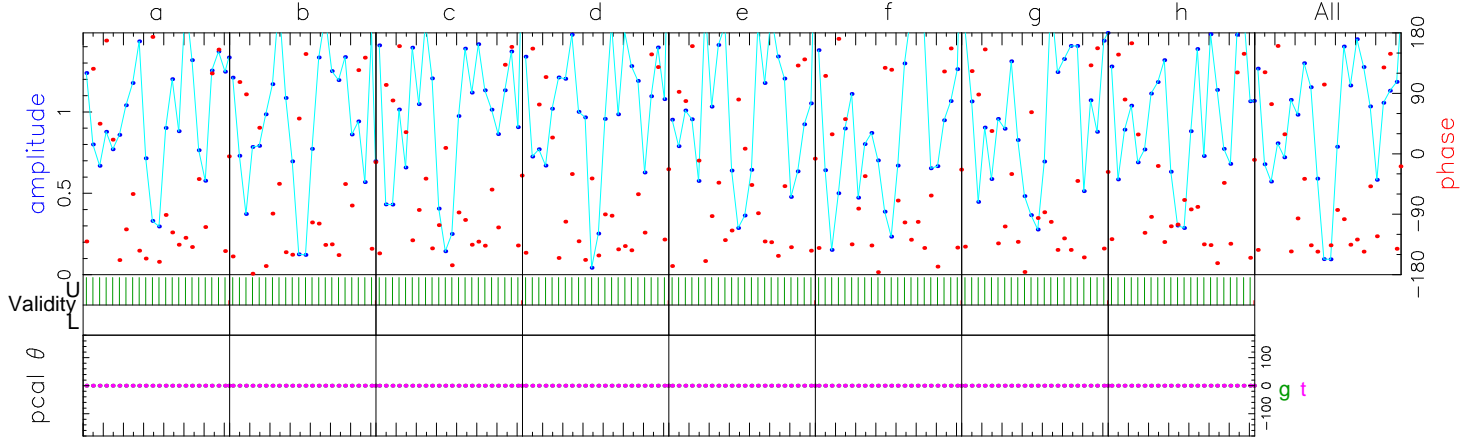


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133059  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-140.2	-129.7	-126.7	-132.6	-128.6	-136.8	-134.5	-134.7	Phase	-133.0
	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.4	Ampl.	0.5
	255.1	255.1	254.8	254.8	255.7	254.9	255.3	255.2	Sbd box	255.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:t	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	
t	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	8.50348331174E+03		Apriori delay (usec)		8.50349833019E+03		Resid mbdelay (usec)		6.06553E-04	+/- 3.9E-05
Sband delay (usec)	8.50349090694E+03		Apriori clock (usec)		7.0779610E-01		Resid sbdelay (usec)		-7.42325E-03	+/- 3.1E-04
Phase delay (usec)	8.50349832590E+03		Apriori clockrate (us/s)		1.2200000E-07		Resid phdelay (usec)		-4.29030E-06	+/- 1.3E-07
Delay rate (us/s)	-1.03255408910E+00		Apriori rate (us/s)		-1.03255393356E+00		Resid rate (us/s)		-1.55535E-07	+/- 5.5E-10
Total phase (deg)			Apriori accel (us/s/s)		-7.98357691602E-06		Resid phase (deg)		-133.0	+/- 4.1

ph/seg (deg) 73.8 9.9 Search (2048X32) 0.487 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 115.9 17.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 4.8 5.8 Inc. seg. avg. 0.918 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 6.9 10.2 Inc. frq. avg. 0.494 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 268.5 el 53.4 pa 21.7 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 9381.380 1504.069 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/gt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/gt.W.88.1X1KZS

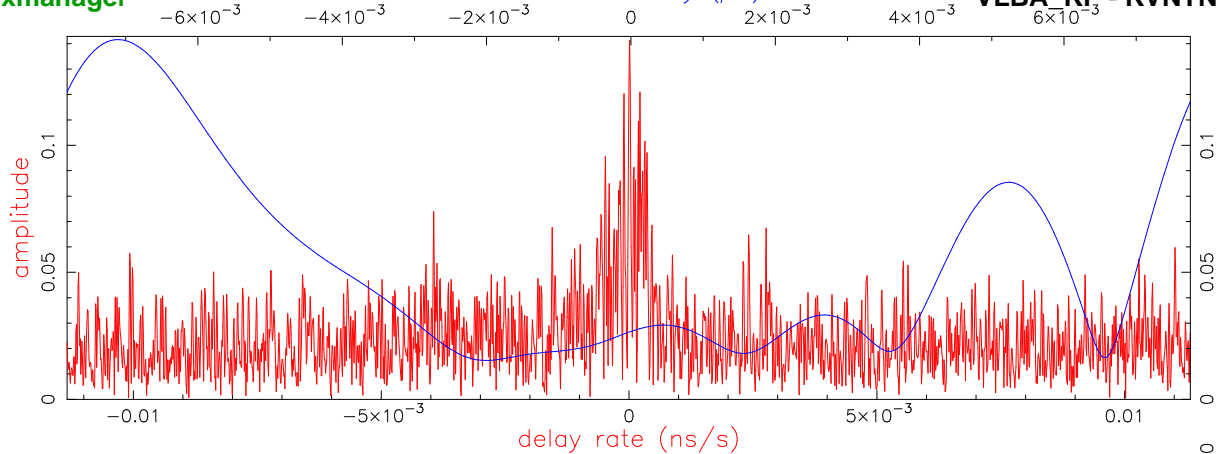
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, kt

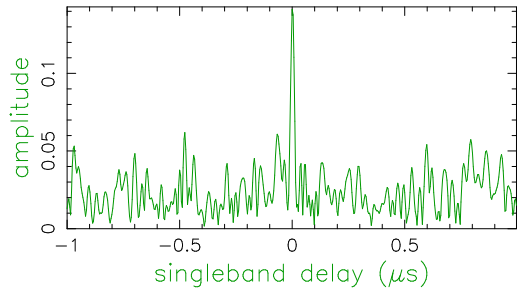
VLBA\_KP - KVNTN, fgroup W, pol LL

multiband delay ( $\mu$ s)

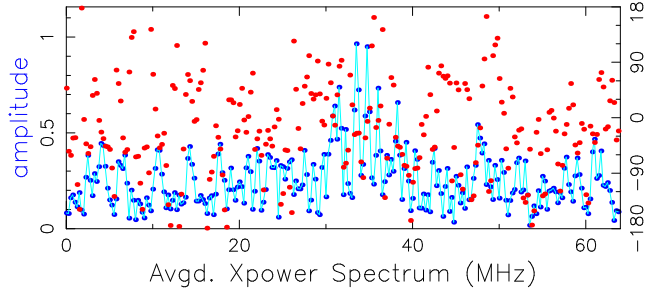


Fringe quality 9

SNR 8.0  
 Int time 419.821  
 Amp 0.143  
 Phase 82.1  
 PFD 4.1e-07  
 Delays (us)  
 SBD 0.001397  
 MBD -0.007007  
 Fringe rate (Hz)  
 0.000854  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

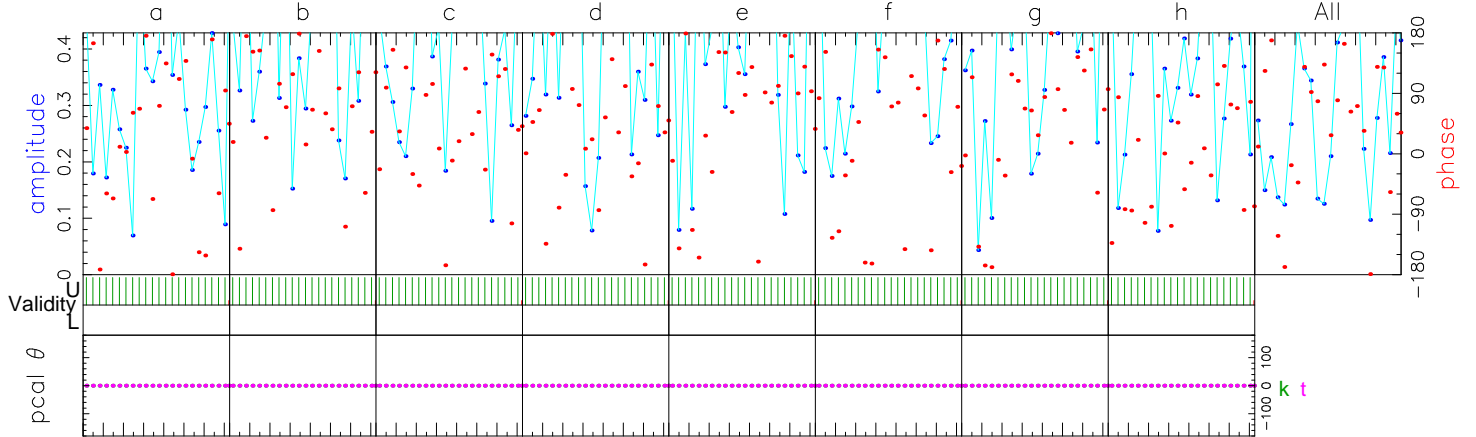


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133101  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
k	0	0	0	0	0	0	0	0			
t	1000	1000	1000	1000	1000	1000	1000	1000			
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
k	1000	1000	1000	1000	1000	1000	1000	1000			
t	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
Group delay (usec)(sbd)		1.01470779297E+04			1.01470693118E+04				Resid mbdelay (usec)	-7.00705E-03	+/- 1.4E-04
Sband delay (usec)		1.01470707091E+04			5.8848953E-01				Resid sbdelay (usec)	1.39725E-03	+/- 1.1E-03
Phase delay (usec)		1.01470693144E+04			4.9999999E-08				Resid phdelay (usec)	2.64629E-06	+/- 4.6E-07
Delay rate (us/s)		-1.21961436668E+00			-1.21961437659E+00				Resid rate (us/s)	9.91060E-09	+/- 1.9E-09
Total phase (deg)			268.8						Resid phase (deg)	82.1	+/- 14.3
RMS	75.9	34.3		0.141					PCal mode: MANUAL, MANUAL		
ph/seg (deg)	75.9	34.3		0.141					PCal rate: 0.000E+00, 0.000E+00 (us/s)		
amp/seg (%)	144.3	59.9		0.000					SampCntNorm: enabled		
ph/frq (deg)	52.1	20.2		0.249					Bits/sample: 2x2		
amp/frq (%)	43.0	35.3		0.169					Sample rate(MISamp/s): 128		
									Data rate(Mb/s): 2048		
									nlags: 256		
									t_cohere infinite		

k: az 320.9 el 61.8 pa 121.8 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 11012.859 -5613.450 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/kt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/kt.W.100.1X1KZS



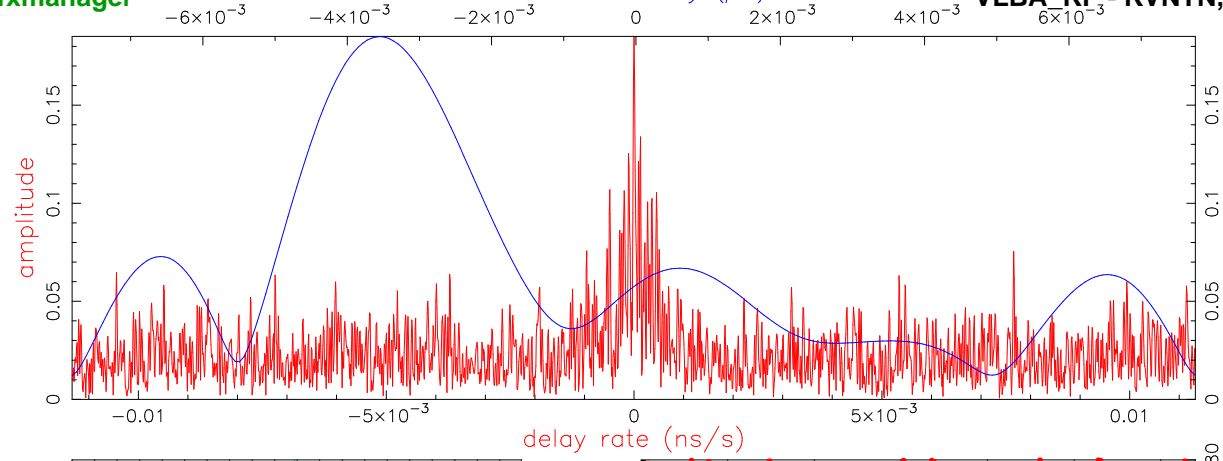
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, kt

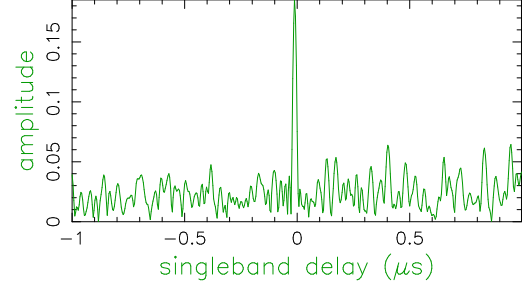
VLBA\_KP - KVNTN, fgroup W, pol RR

multiband delay ( $\mu$ s)

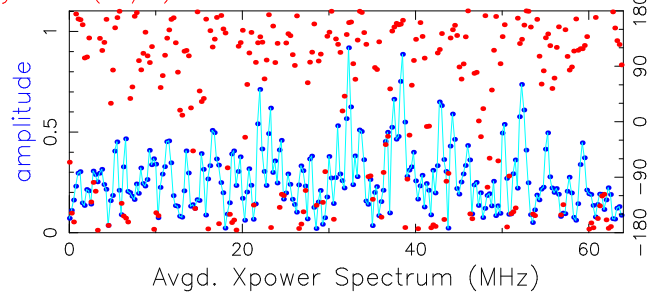


Fringe quality 9

SNR 10.4  
 Int time 419.821  
 Amp 0.185  
 Phase 57.2  
 PFD 1.5e-16  
 Delays (us)  
 SBD -0.011378  
 MBD -0.003544  
 Fringe rate (Hz)  
 0.000093  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

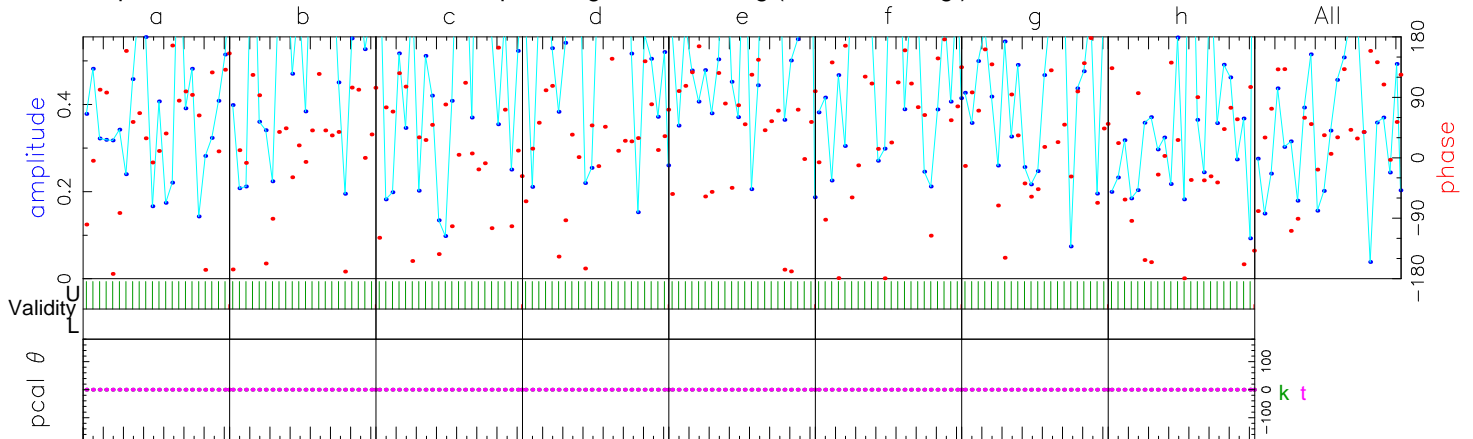


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133105  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
k	0	0	0	0	0	0	0	0			
t	1000	1000	1000	1000	1000	1000	1000	1000			
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
k	1000	1000	1000	1000	1000	1000	1000	1000			
t	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		1.01470501427E+04			1.01470693118E+04				Resid mbdelay (usec)	-3.54406E-03	+/- 1.0E-04
Sband delay (usec)		1.01470579336E+04			5.8848953E-01				Resid sbdelay (usec)	-1.13783E-02	+/- 8.3E-04
Phase delay (usec)		1.01470693136E+04			4.9999999E-08				Resid phdelay (usec)	1.84389E-06	+/- 3.6E-07
Delay rate (us/s)		-1.21961437551E+00			Apriori rate (us/s)				Resid rate (us/s)	1.08268E-09	+/- 1.5E-09
Total phase (deg)			243.9		Apriori accel (us/s/s)				Resid phase (deg)	57.2	+/- 11.1

ph/seg (deg) 74.0 26.5 Search (2048X32) 0.184 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 116.0 46.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 37.4 15.6 Inc. seg. avg. 0.308 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 44.7 27.3 Inc. frq. avg. 0.199 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 k: az 320.9 el 61.8 pa 121.8 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 11012.859 -5613.450 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/kt.1X1KZS Output file: /Exps/c211c/v1/1234/No0113/kt.W.120.1X1KZS

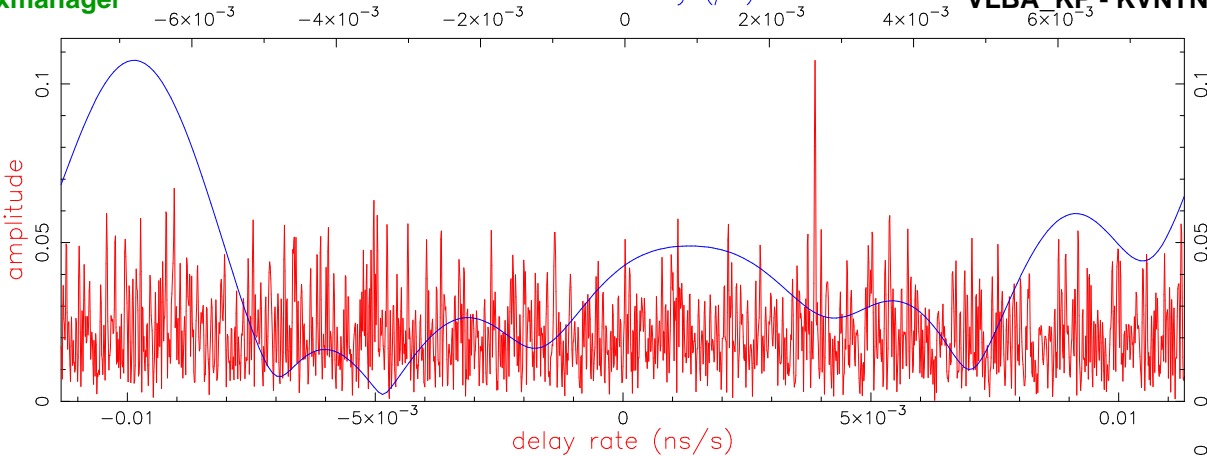
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, kt

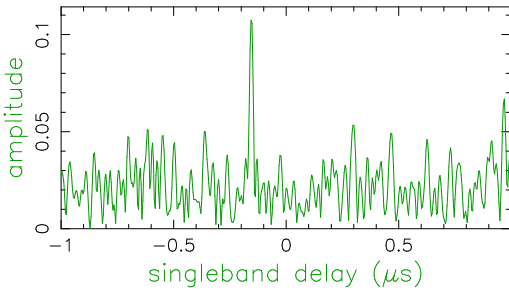
VLBA\_KP - KVNTN, fgroup W, pol LR

multiband delay ( $\mu$ s)

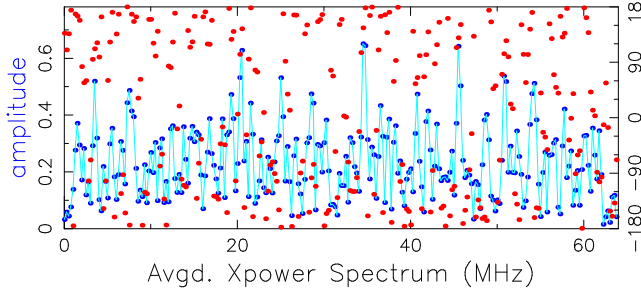


Fringe quality 0

SNR 6.1  
Int time 419.821  
Amp 0.114  
Phase -94.6  
PFD 2.4e-01  
Delays (us)  
SBD -0.154651  
MBD -0.006770  
Fringe rate (Hz)  
0.334190  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

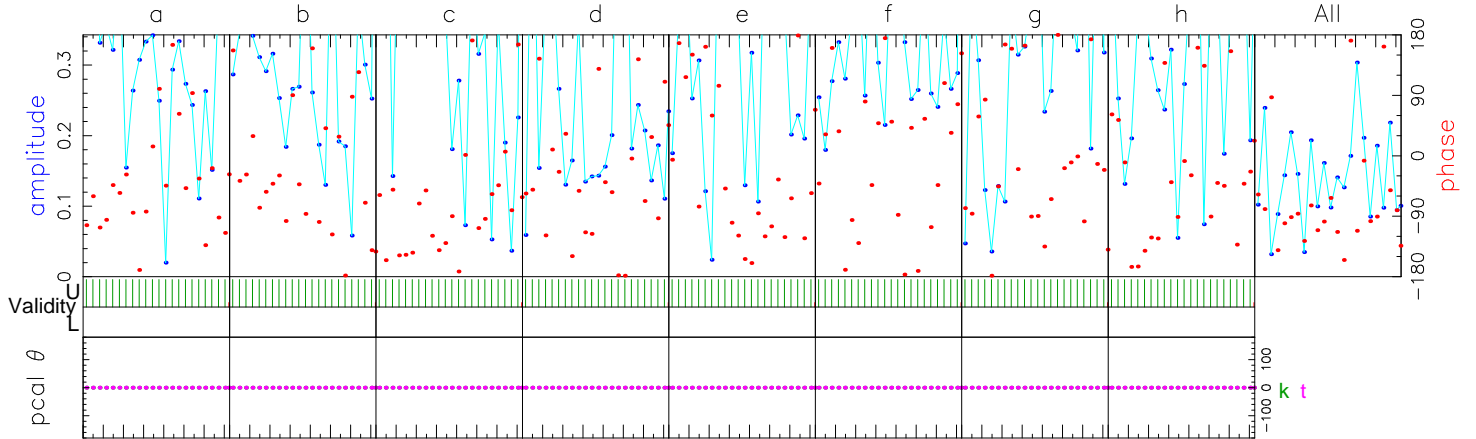


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133109  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-77.9	-72.9	-117.9	-92.1	-120.4	39.1	-74.5	-99.1	Phase	-94.6
	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.1	Ampl.	0.1
	218.5	503.0	216.4	449.0	185.7	164.9	187.5	489.0	Sbd box	217.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)		1.01469219163E+04		Apriori delay (usec)	1.01470693118E+04		Resid mbdelay (usec)	-6.77048E-03	+/-	1.8E-04
Sband delay (usec)		1.01469146611E+04		Apriori clock (usec)	5.8848953E-01		Resid sbdelay (usec)	-1.54651E-01	+/-	1.4E-03
Phase delay (usec)		1.01470693088E+04		Apriori clockrate (us/s)	4.9999999E-08		Resid phdelay (usec)	-3.04974E-06	+/-	6.1E-07
Delay rate (us/s)		-1.21961049697E+00		Apriori rate (us/s)	-1.21961437659E+00		Resid rate (us/s)	3.87962E-06	+/-	2.5E-09
Total phase (deg)			92.1	Apriori accel (us/s/s)	-5.56591397325E-05		Resid phase (deg)	-94.6	+/-	18.8

ph/seg (deg) 57.0 45.0 Search (2048X32) 0.102 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 67.7 78.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 58.1 26.6 Inc. seg. avg. 0.115 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 54.9 46.4 Inc. frq. avg. 0.114 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
k: az 320.9 el 61.8 pa 121.8 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 11012.859 -5613.450 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/kt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/kt.W.138.1X1KZS

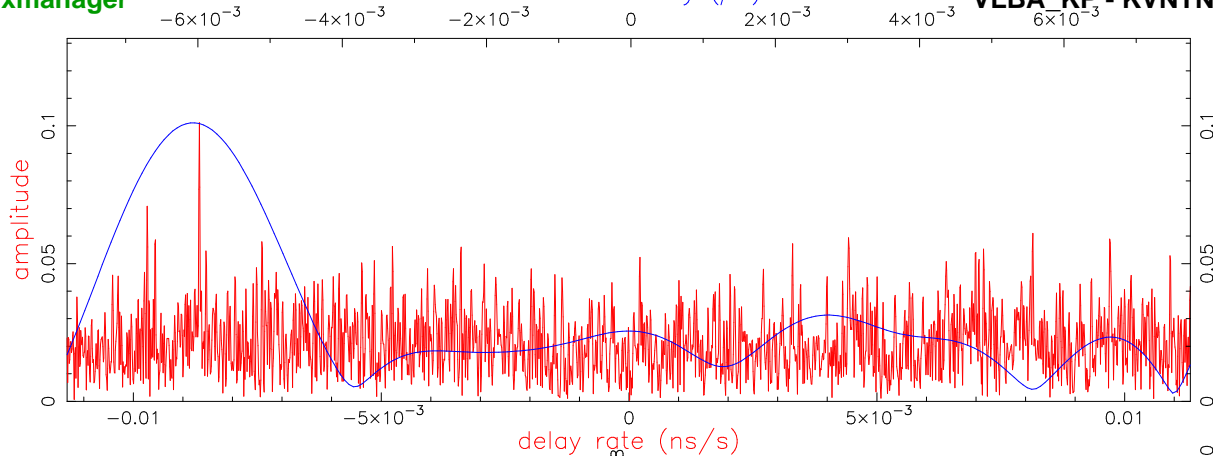
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, kt

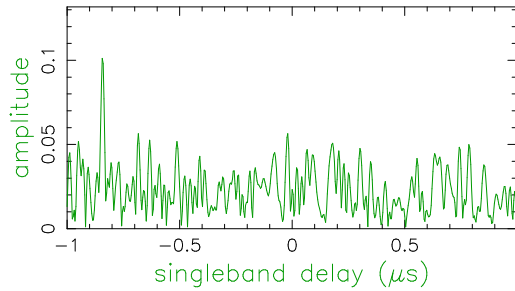
VLBA\_KP - KVNTN, fgroup W, pol RL

multiband delay ( $\mu$ s)

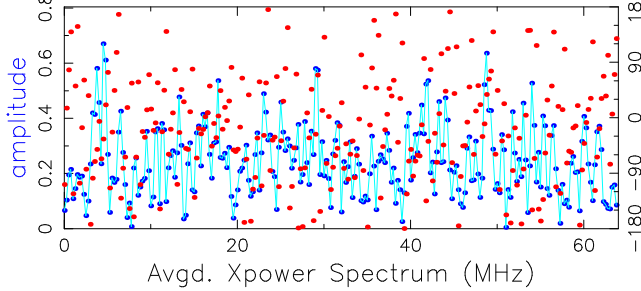


Fringe quality 0

SNR 5.7  
 Int time 419.821  
 Amp 0.132  
 Phase 61.0  
 PFD 9.2e-01  
 Delays (us)  
 SBD -0.842433  
 MBD -0.006054  
 Fringe rate (Hz)  
 -0.747806  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

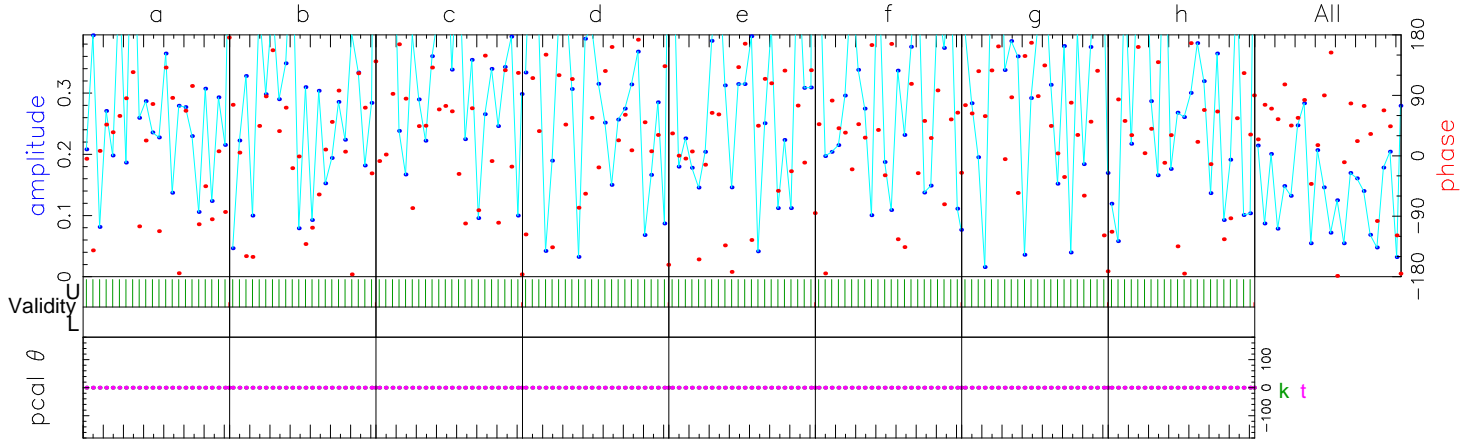


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133112  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0				
k	0	0	0	0	0	0	0	0				
t	1000	1000	1000	1000	1000	1000	1000	1000				
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
k:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
k	1000	1000	1000	1000	1000	1000	1000	1000				
t	1000	1000	1000	1000	1000	1000	1000	1000				
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL				
Group delay (usec)(sbd)		1.01462195078E+04				1.01470693118E+04			Resid mbdelay (usec)	-6.05398E-03 +/- 1.9E-04		
Sband delay (usec)		1.01462268788E+04				5.8848953E-01			Resid sbdelay (usec)	-8.42433E-01 +/- 1.5E-03		
Phase delay (usec)		1.01470693138E+04				4.9999999E-08			Resid phdelay (usec)	1.96655E-06 +/- 6.5E-07		
Delay rate (us/s)		-1.21962305788E+00				-1.21961437659E+00			Resid rate (us/s)	-8.68129E-06 +/- 2.7E-09		
Total phase (deg)			247.7			-5.56591397325E-05			Resid phase (deg)	61.0 +/- 20.0		
	RMS	Theor.	Amplitude	0.132 +/- 0.023		Pcal mode: MANUAL, MANUAL			PC period (AP's)	5, 5		
ph/seg (deg)	70.1	48.0	Search (2048X32)	0.099		Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000 1.000		
amp/seg (%)	77.4	83.7	Interp.	0.000		Bits/sample: 2x2			SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	21.2	28.3	Inc. seg. avg.	0.133		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011		
amp/frq (%)	29.1	49.4	Inc. frq. avg.	0.123		Data rate(Mb/s): 2048			nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 320.9 el 61.8 pa 121.8 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 11012.859 -5613.450 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/kt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/kt.W.158.1X1KZS

Mk4/DiFX fourfit 3.21 rev 2937

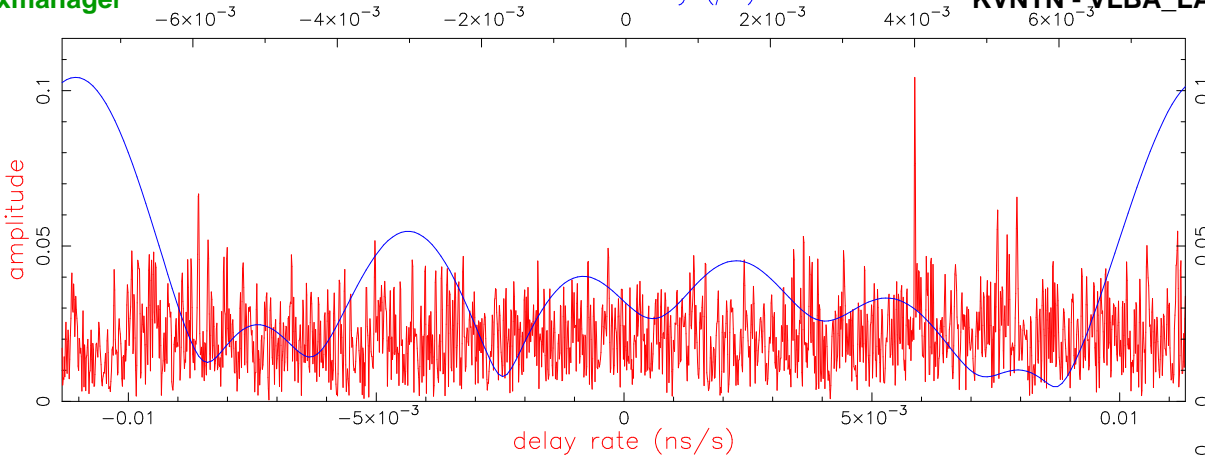
fxmanager

NRAO150.1X1KZS, No0113, tl

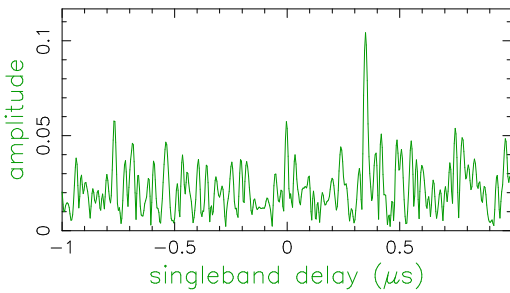
KVNTN - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)

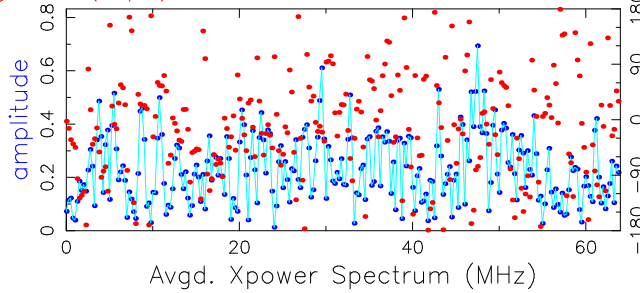
Fringe quality 0



SNR 5.8  
 Int time 419.821  
 Amp 0.117  
 Phase -56.4  
 PFD 7.2e-01  
 Delays (us)  
 SBD 0.347976  
 MBD 0.007996  
 Fringe rate (Hz)  
 0.506372  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

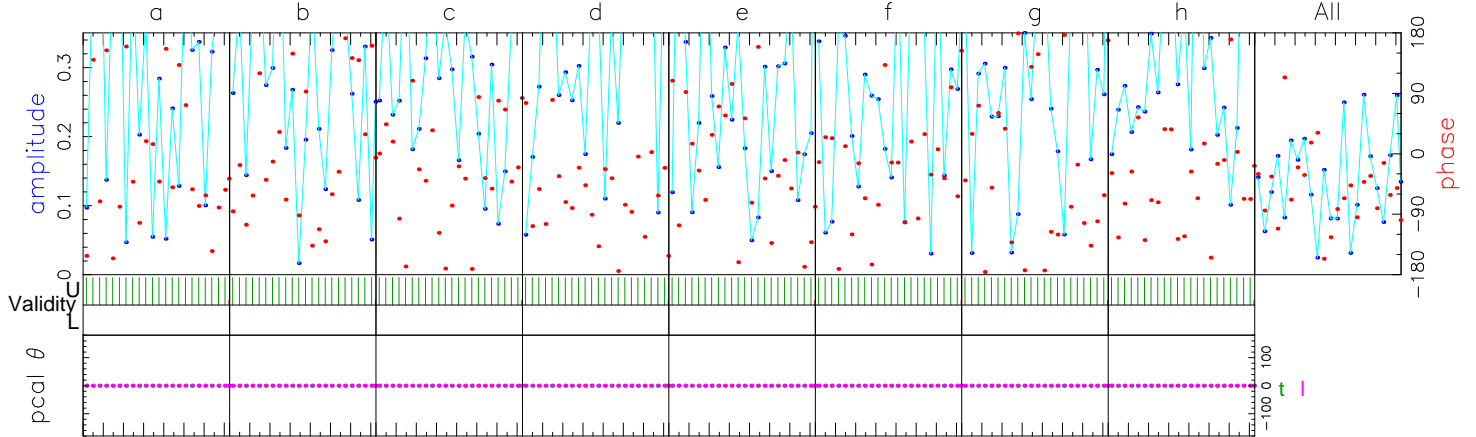


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133118  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-72.2	-44.2	-27.5	-64.0	-46.7	-23.5	-121.0	-53.0	Phase	-56.4
	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	Ampl.	0.1
	463.4	273.8	195.4	346.2	88.4	254.9	233.5	346.6	Sbd box	346.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.00863970755E+04	Apriori delay (usec)	-1.00867488211E+04	Resid mbdelay (usec)	7.99563E-03	+/-	1.9E-04
Sband delay (usec)	-1.00864008454E+04	Apriori clock (usec)	2.3651142E+00	Resid sbdelay (usec)	3.47976E-01	+/-	1.5E-03
Phase delay (usec)	-1.00867488230E+04	Apriori clockrate (us/s)	2.3600002E-07	Resid phdelay (usec)	-1.82013E-06	+/-	6.3E-07
Delay rate (us/s)	1.26508781141E+00	Apriori rate (us/s)	1.26508193293E+00	Resid rate (us/s)	5.87848E-06	+/-	2.6E-09
Total phase (deg)	-219.5	Apriori accel (us/s/s)	5.05031933921E-05	Resid phase (deg)	-56.4	+/-	19.6

ph/seg (deg)	56.0	Theor.	47.0	Search (2048X32)	0.103	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	71.9		82.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	33.3		27.7	Inc. seg. avg.	0.116	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	47.3		48.4	Inc. frq. avg.	0.115	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

t: az 43.1 el 23.2 pa -64.6 l: az 313.0 el 61.6 pa 110.3 u,v (fr/asec) -11434.449 4808.548 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tl..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tl.W.178.1X1KZS

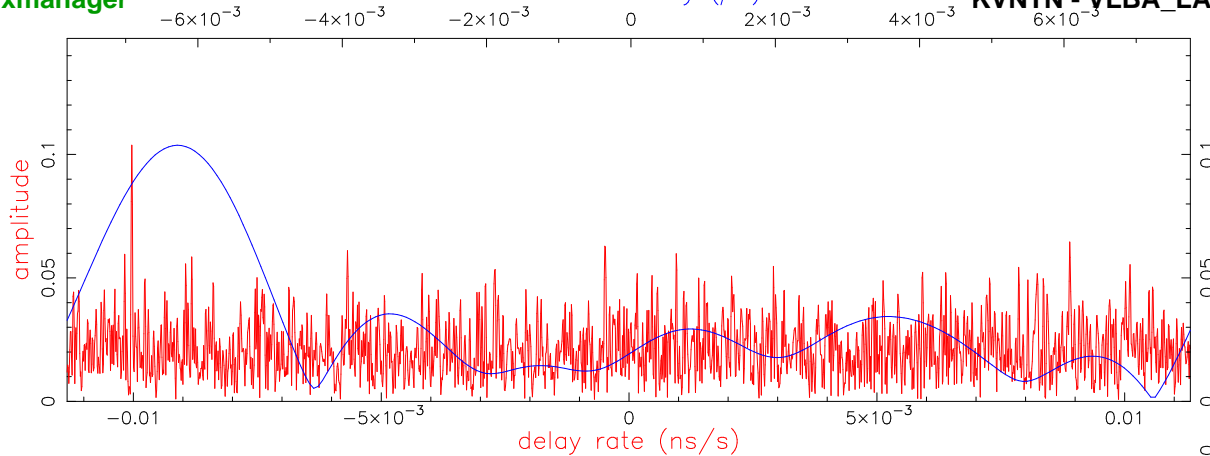
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tl

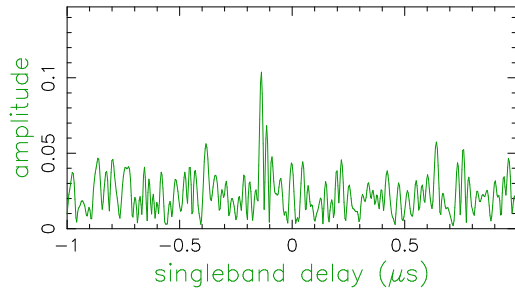
KVNTN - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu$ s)

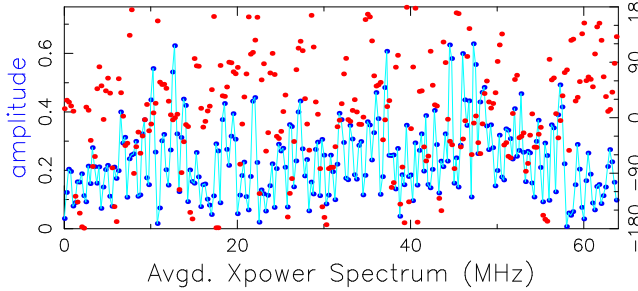


Fringe quality 0

SNR 5.8  
 Int time 419.821  
 Amp 0.147  
 Phase -52.8  
 PFD 7.6e-01  
 Delays (us)  
 SBD -0.137290  
 MBD -0.006296  
 Fringe rate (Hz)  
 -0.865019  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

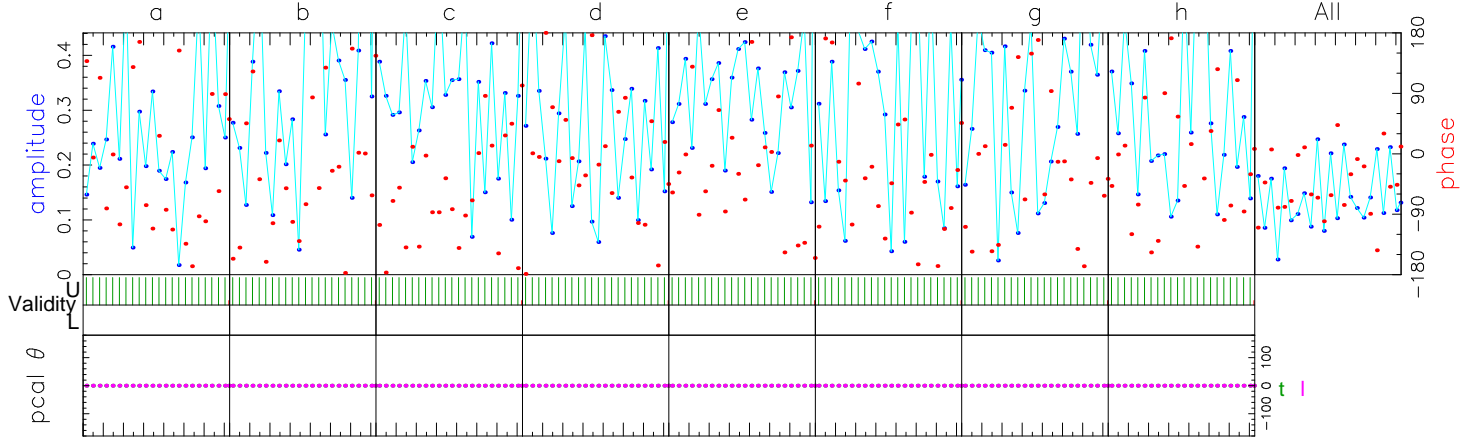


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133122  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-78.5	-31.1	-79.6	-10.9	-52.3	-75.5	-50.5	-48.3	Phase	-52.8
	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Ampl.	0.1
	310.1	455.4	288.9	314.3	446.0	306.6	171.1	347.6	Sbd box	221.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.00868801170E+04		Apriori delay (usec)		-1.00867488211E+04		Resid mbdelay (usec)		-6.29582E-03	+/- 1.9E-04
Sband delay (usec)	-1.00868861111E+04		Apriori clock (usec)		2.3651142E+00		Resid sbdelay (usec)		-1.37290E-01	+/- 1.5E-03
Phase delay (usec)	-1.00867488228E+04		Apriori clockrate (us/s)		2.3600002E-07		Resid phdelay (usec)		-1.70185E-06	+/- 6.3E-07
Delay rate (us/s)	1.26507189091E+00		Apriori rate (us/s)		1.26508193293E+00		Resid rate (us/s)		-1.00420E-05	+/- 2.6E-09
Total phase (deg)			Apriori accel (us/s/s)		5.05031933921E-05		Resid phase (deg)		-52.8	+/- 19.7

ph/seg (deg) 46.6 47.2 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 69.5 82.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 26.3 27.8 Inc. seg. avg. 0.153 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 21.5 48.5 Inc. frq. avg. 0.142 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 43.1 el 23.2 pa -64.6 l: az 313.0 el 61.6 pa 110.3 u,v (fr/asec) -11434.449 4808.548 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tl..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tl.W.197.1X1KZS simultaneous interpolator



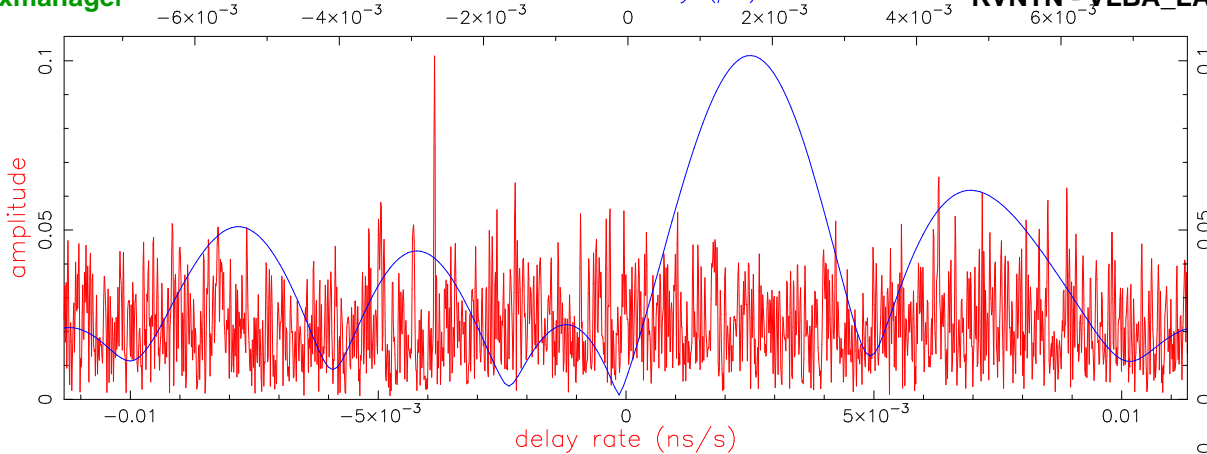
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tl

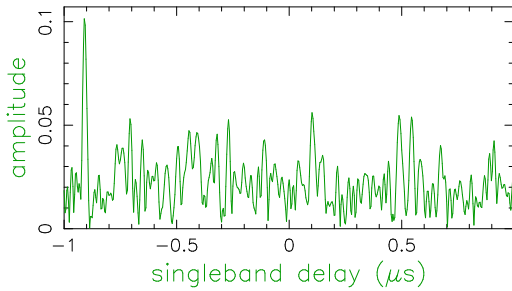
KVNTN - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

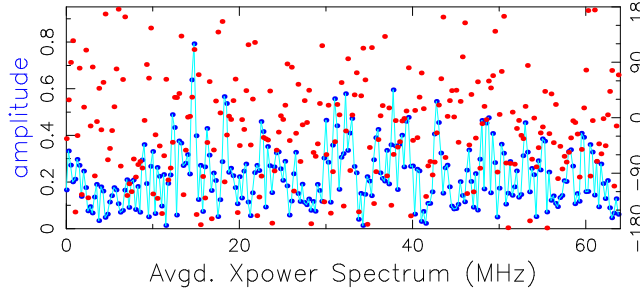


Fringe quality 0

SNR 5.7  
 Int time 419.821  
 Amp 0.107  
 Phase -68.8  
 PFD 9.3e-01  
 Delays (us)  
 SBD -0.908964  
 MBD 0.001753  
 Fringe rate (Hz)  
 -0.333467  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

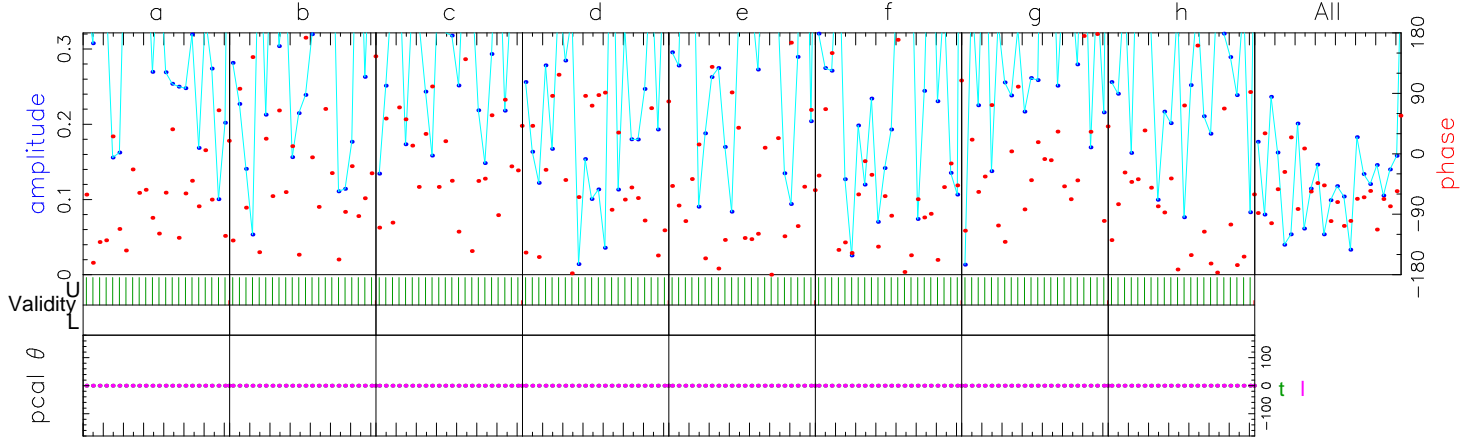


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133125  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-80.4	-60.8	-16.2	-84.8	-80.7	-112.1	-29.9	-104.9	Phase	-68.8
	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.1	Ampl.	0.1
	25.2	106.9	350.6	511.6	474.6	494.6	65.4	467.3	Sbd box	24.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) -1.00876533183E+04 Apriori delay (usec) -1.00867488211E+04 Resid mbdelay (usec) 1.75279E-03 +/- 1.9E-04  
 Sband delay (usec) -1.00876577854E+04 Apriori clock (usec) 2.3651142E+00 Resid sbdelay (usec) -9.08964E-01 +/- 1.5E-03  
 Phase delay (usec) -1.00867488234E+04 Apriori clockrate (us/s) 2.3600002E-07 Resid phdelay (usec) -2.21807E-06 +/- 6.5E-07  
 Delay rate (us/s) 1.26507806171E+00 Apriori rate (us/s) 1.26508193293E+00 Resid rate (us/s) -3.87122E-06 +/- 2.7E-09  
 Total phase (deg) -231.8 Apriori accel (us/s/s) 5.05031933921E-05 Resid phase (deg) -68.8 +/- 20.0

RMS Theor. Amplitude 0.107 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 41.3 48.0 Search (2048X32) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 59.4 83.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 36.7 28.3 Inc. seg. avg. 0.096 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 43.7 49.4 Inc. frq. avg. 0.111 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

t: az 43.1 el 23.2 pa -64.6 l: az 313.0 el 61.6 pa 110.3 u,v (fr/asec) -11434.449 4808.548 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tl..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tl.W.215.1X1KZS

Mk4/DiFX fourfit 3.21 rev 2937

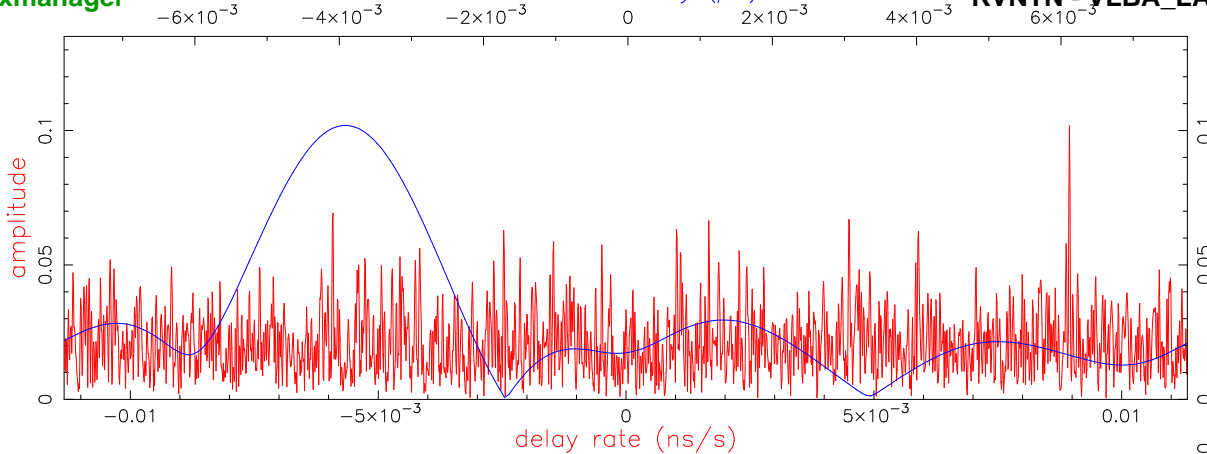
fxmanager

NRAO150.1X1KZS, No0113, tl

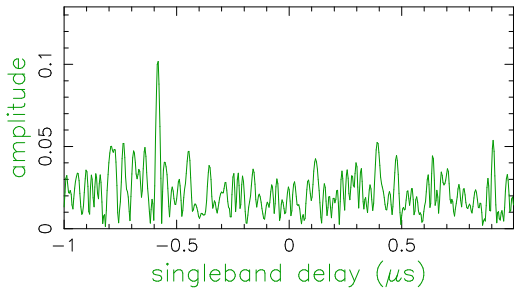
KVNTN - VLBA\_LA, fgroup W, pol RL

multiband delay ( $\mu$ s)

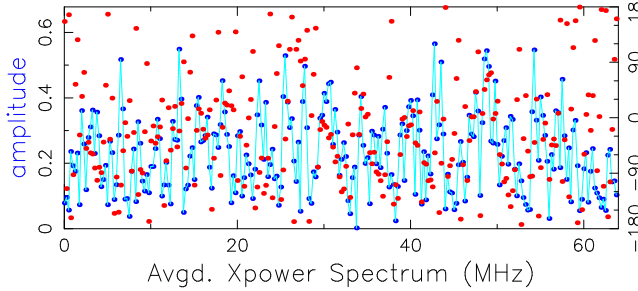
Fringe quality 0



SNR 5.8  
 Int time 419.821  
 Amp 0.135  
 Phase 126.2  
 PFD 8.7e-01  
 Delays (us)  
 SBD -0.583526  
 MBD -0.003982  
 Fringe rate (Hz)  
 0.771392  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

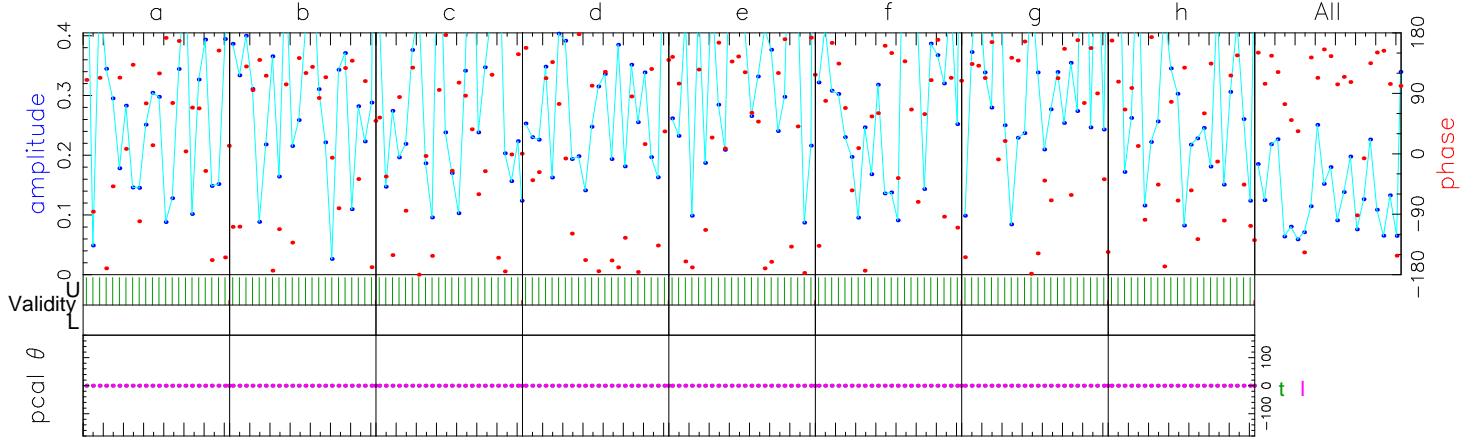


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133129  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



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

Group delay (usec)(sbd)	-1.00873309285E+04	Apriori delay (usec)	-1.00867488211E+04	Resid mbdelay (usec)	-3.98234E-03	+/-	1.9E-04
Sband delay (usec)	-1.00873323471E+04	Apriori clock (usec)	2.3651142E+00	Resid sbdelay (usec)	-5.83526E-01	+/-	1.5E-03
Phase delay (usec)	-1.00867488171E+04	Apriori clockrate (us/s)	2.3600002E-07	Resid phdelay (usec)	4.07098E-06	+/-	6.4E-07
Delay rate (us/s)	1.26509088803E+00	Apriori rate (us/s)	1.26508193293E+00	Resid rate (us/s)	8.95510E-06	+/-	2.6E-09
Total phase (deg)	-36.8	Apriori accel (us/s/s)	5.05031933921E-05	Resid phase (deg)	126.2	+/-	19.9

ph/seg (deg)	58.4	Theor.	47.6	Amplitude	0.135 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	68.7			Search (2048X32)	0.100	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	19.1			Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	39.0			Inc. seg. avg.	0.132	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.124	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

t: az 43.1 el 23.2 pa -64.6 l: az 313.0 el 61.6 pa 110.3 u,v (fr/asec) -11434.449 4808.548 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tl.1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tl.W.235.1X1KZS

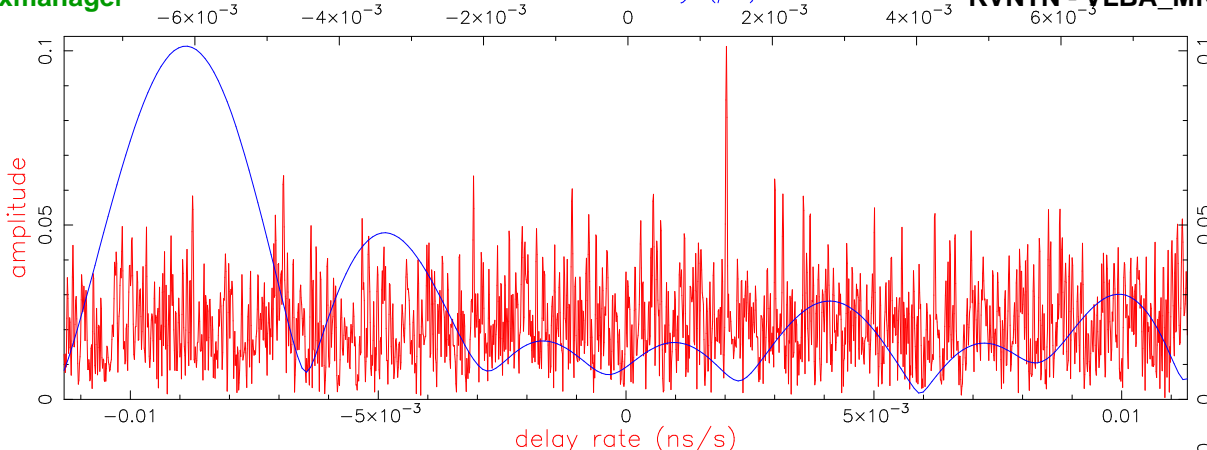
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tm

KVNTN - VLBA\_MK, fgroup W, pol LL

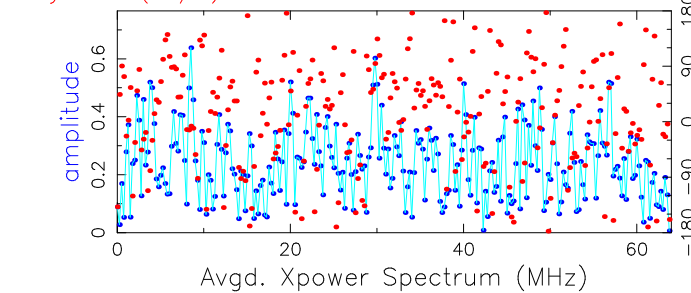
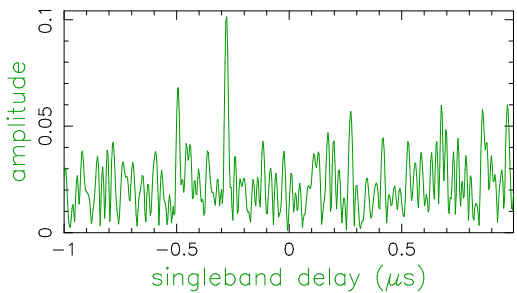
multiband delay ( $\mu$ s)



Fringe quality 0

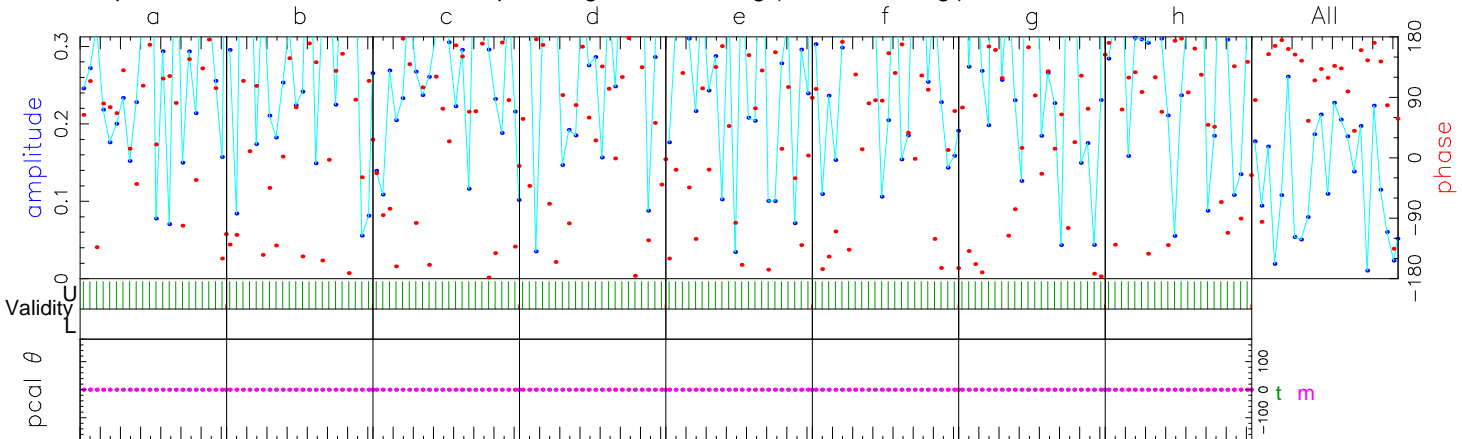
SNR 5.8  
 Int time 419.822  
 Amp 0.104  
 Phase 134.7  
 PFD 8.8e-01  
 Delays (us)  
 SBD -0.278881  
 MBD -0.006162  
 Fringe rate (Hz) 0.175008  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133118  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
m	0	0	0	0	0	0	0	0		
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-9.29225183020E+03	Apriori delay (usec)	-9.29198004346E+03	Resid mbdelay (usec)	-6.16174E-03	+/-	1.9E-04
Sband delay (usec)	-9.29225892446E+03	Apriori clock (usec)	-1.5983013E+01	Resid sbdelay (usec)	-2.78881E-01	+/-	1.5E-03
Phase delay (usec)	-9.29198003912E+03	Apriori clockrate (us/s)	-3.6799998E-07	Resid phdelay (usec)	4.34322E-06	+/-	6.4E-07
Delay rate (us/s)	5.82753839118E-01	Apriori rate (us/s)	5.82751807447E-01	Resid rate (us/s)	2.03167E-06	+/-	2.6E-09
Total phase (deg)	-205.0	Apriori accel (us/s/s)	6.77015873179E-05	Resid phase (deg)	134.7	+/-	19.9

ph/seg (deg)	49.8	Theor.	47.7	Amplitude	0.104 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	77.8	Search (2048X32)	0.096	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	18.3	Inc. seg. avg.	0.099	Inc. frq. avg.	0.095	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	22.2	Inc. frq. avg.	0.095			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	

t: az 43.1 el 23.2 pa -64.6 m: az 17.8 el 56.5 pa -152.6 u,v (fr/asec) -5197.648 7788.292 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tm..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tm.W.177.1X1KZS

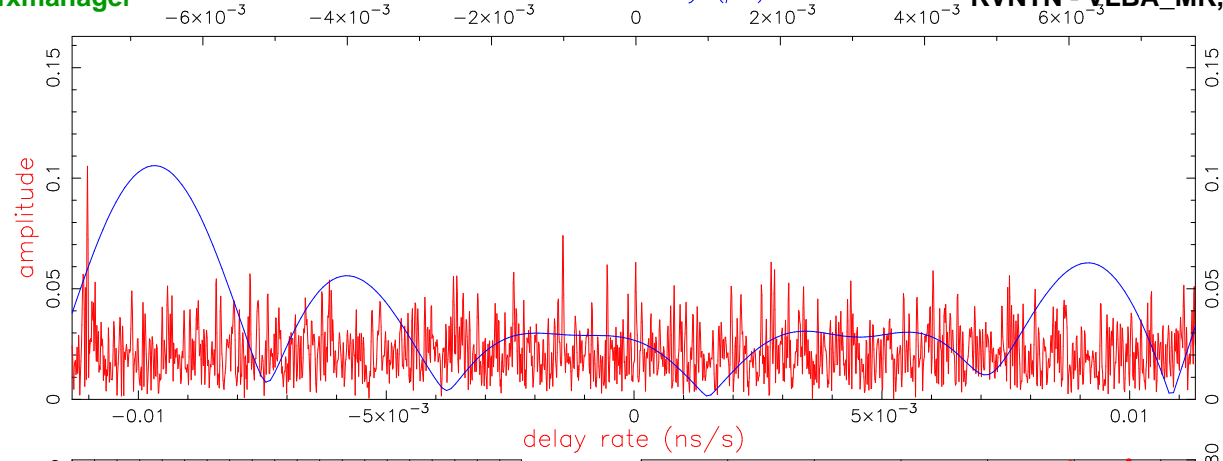
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

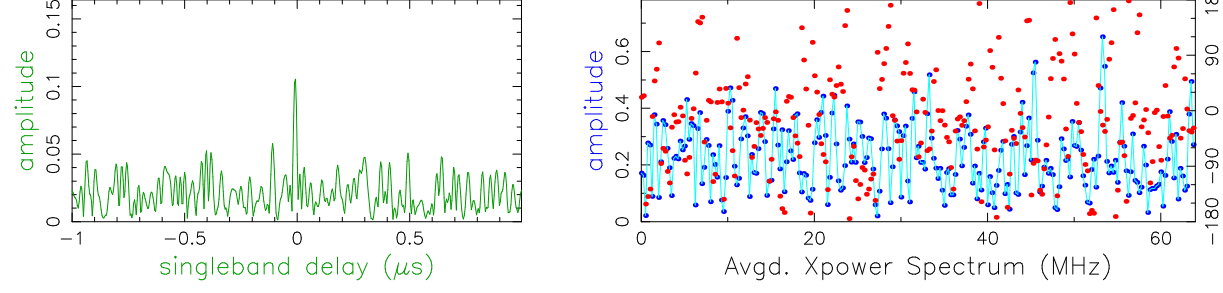
NRAO150.1X1KZS, No0113, tm

KVNTN - VLBA\_MK, fgroup W, pol RR

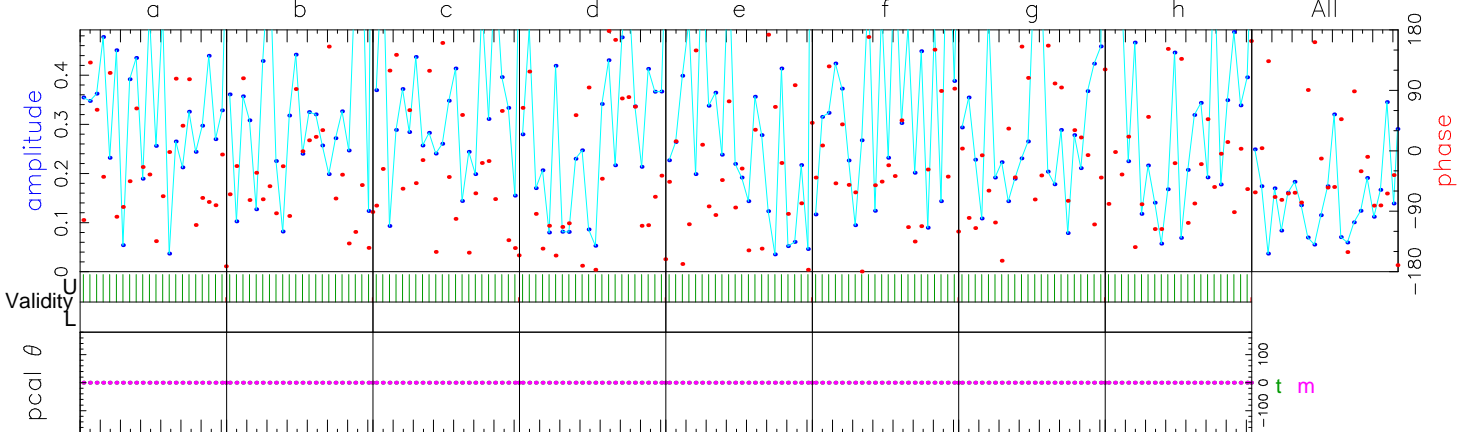
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 6.0  
 Int time 419.822  
 Amp 0.164  
 Phase -51.8  
 PFD 3.9e-01  
 Delays (us)  
 SBD -0.009307  
 MBD -0.006733  
 Fringe rate (Hz) -0.950999  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133121  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-49.2	-56.5	-55.7	163.6	-44.0	-53.1	-48.8	-44.6	Phase	-51.8
	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	Ampl.	0.2
	273.1	300.3	124.9	55.8	242.9	473.7	170.2	254.7	Sbd box	254.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-9.29198677621E+03		Apriori delay (usec)		-9.29198004346E+03		Resid mbdelay (usec)		-6.73275E-03	+/- 1.8E-04
Sband delay (usec)	-9.29198935096E+03		Apriori clock (usec)		-1.5983013E+01		Resid sbdelay (usec)		-9.30750E-03	+/- 1.4E-03
Phase delay (usec)	-9.29198004513E+03		Apriori clockrate (us/s)		-3.6799998E-07		Resid phdelay (usec)		-1.67153E-06	+/- 6.2E-07
Delay rate (us/s)	5.82740767286E-01		Apriori rate (us/s)		5.82751807447E-01		Resid rate (us/s)		-1.10402E-05	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		6.77015873179E-05		Resid phase (deg)		-51.8	+/- 19.1

ph/seg (deg) 75.0 45.7 Search (2048X32) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 82.9 79.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 59.2 27.0 Inc. seg. avg. 0.172 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 44.0 47.1 Inc. frq. avg. 0.159 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 43.1 el 23.2 pa -64.6 m: az 17.8 el 56.5 pa -152.6 u,v (fr/asec) -5197.648 7788.292 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tm..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tm.W.196.1X1KZS simultaneous interpolator

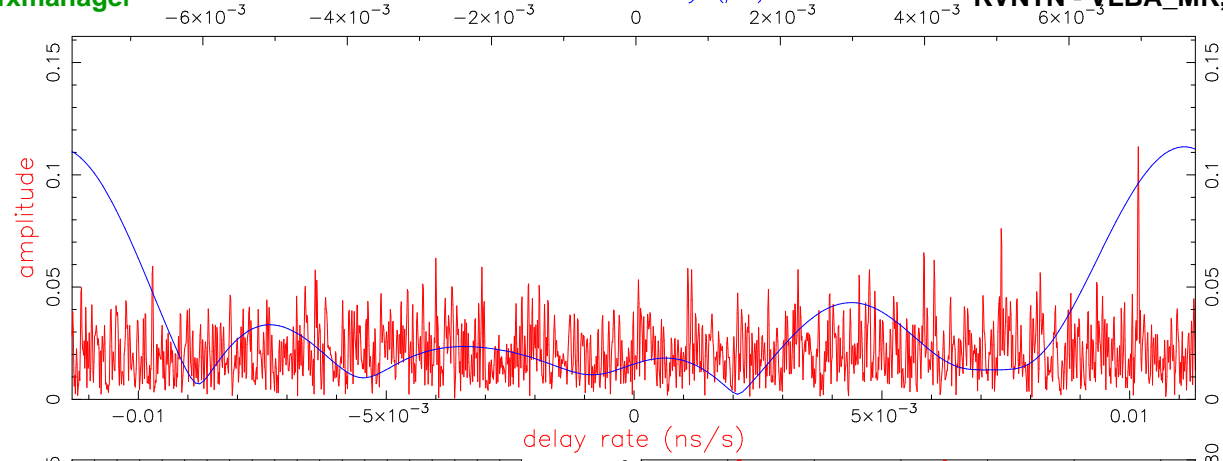
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tm

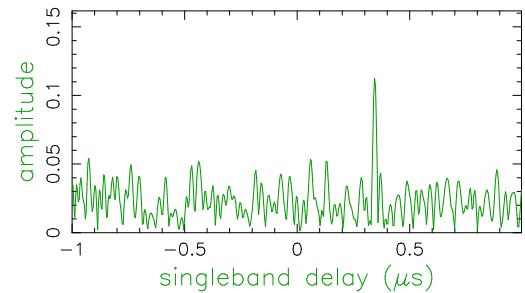
KVNTN - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)

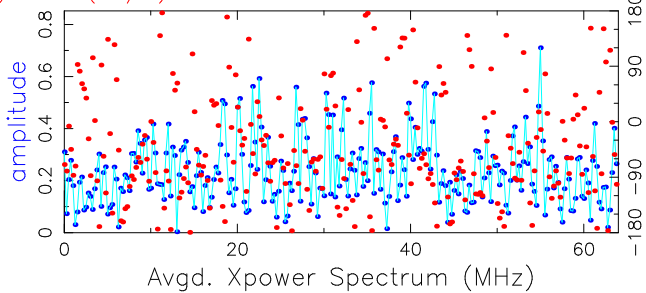


Fringe quality 0

SNR 6.3  
 Int time 419.822  
 Amp 0.162  
 Phase -144.1  
 PFD 6.3e-02  
 Delays (us)  
 SBD 0.344635  
 MBD 0.007578  
 Fringe rate (Hz) 0.878011  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

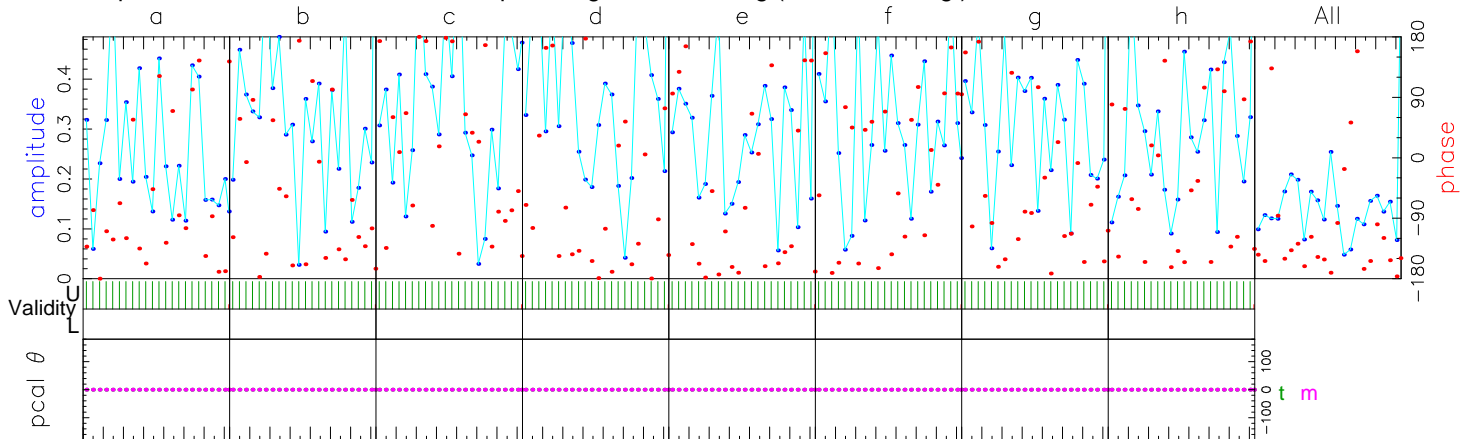


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133125  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-147.1	-138.9	-133.9	-132.7	-176.7	-173.9	-117.0	-138.4	Phase	-144.1
	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	Ampl.	0.2
	507.3	480.0	309.1	344.4	401.6	306.0	210.9	152.1	Sbd box	345.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-9.29162871529E+03		Apriori delay (usec)		-9.29198004346E+03		Resid mbdelay (usec)		7.57817E-03	+/- 1.7E-04
Sband delay (usec)	-9.29163540821E+03		Apriori clock (usec)		-1.5983013E+01		Resid sbdelay (usec)		3.44635E-01	+/- 1.4E-03
Phase delay (usec)	-9.29198004811E+03		Apriori clockrate (us/s)		-3.6799998E-07		Resid phdelay (usec)		-4.64712E-06	+/- 5.8E-07
Delay rate (us/s)	5.82762000289E-01		Apriori rate (us/s)		5.82751807447E-01		Resid rate (us/s)		1.01928E-05	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		6.77015873179E-05		Resid phase (deg)		-144.1	+/- 18.1

	RMS	Theor.	Amplitude	0.162 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	54.3	43.4	Search (2048X32)	0.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	58.9	75.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	22.3	25.6	Inc. seg. avg.	0.155	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	28.4	44.7	Inc. frq. avg.	0.156	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

t: az 43.1 el 23.2 pa -64.6 m: az 17.8 el 56.5 pa -152.6 u,v (fr/asec) -5197.648 7788.292 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tm..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tm.W.214.1X1KZS



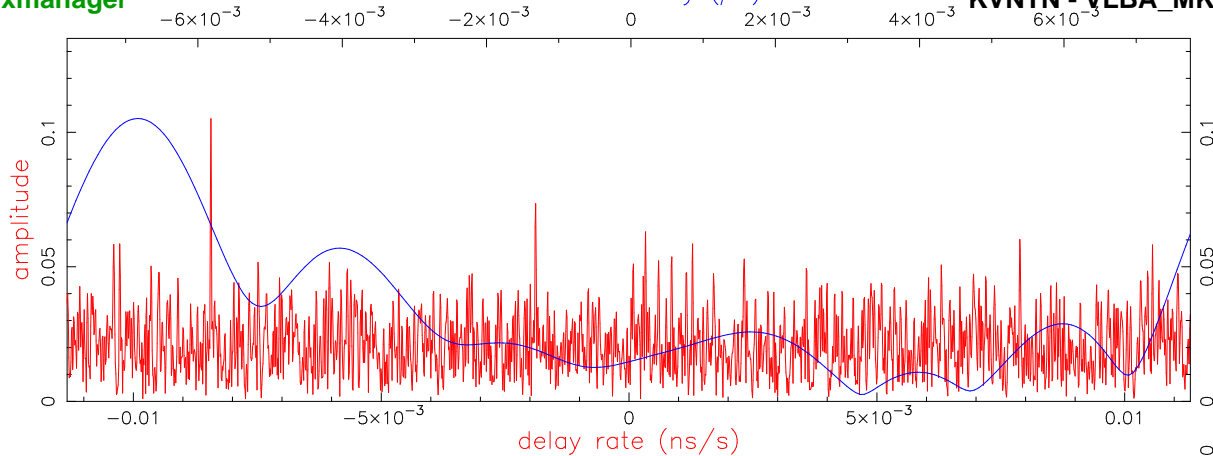
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tm

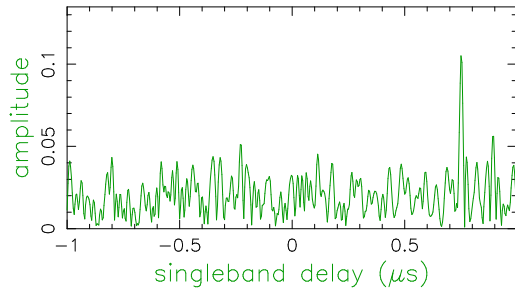
KVNTN - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

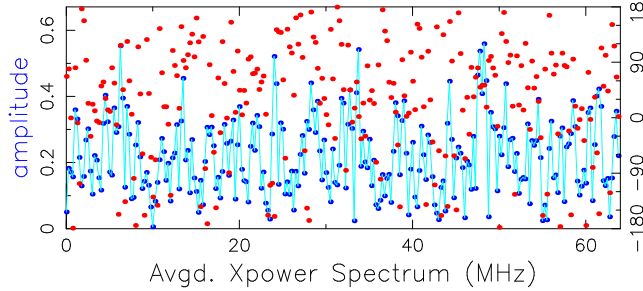


Fringe quality 0

SNR 5.9  
 Int time 419.822  
 Amp 0.135  
 Phase 165.7  
 PFD 5.1e-01  
 Delays (us)  
 SBD 0.751242  
 MBD -0.006788  
 Fringe rate (Hz)  
 -0.727680  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

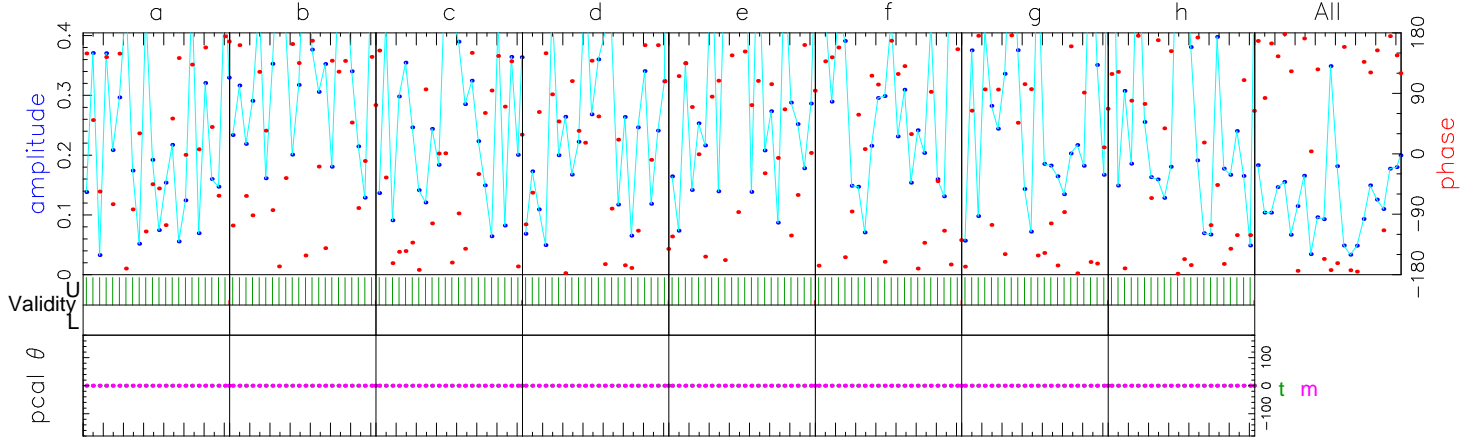


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133129  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'59.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
m	0	0	0	0	0	0	0	0		
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-9.29122120646E+03									
Sband delay (usec)	-9.29122880121E+03									
Phase delay (usec)	-9.29198003812E+03									
Delay rate (us/s)	5.82743359808E-01									
Total phase (deg)		-174.0								
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)										
Amplitude	0.135 +/- 0.023									
Search (2048X32)	0.103									
Interp.	0.000									
Inc. seg. avg.	0.121									
Inc. frq. avg.	0.128									
PC period (AP's) 5, 5										
SampCntNorm: enabled										
simultaneous interpolator										

ph/seg (deg) 48.2 46.2  
 amp/seg (%) 66.8 80.7  
 ph/frq (deg) 28.4 27.3  
 amp/frq (%) 41.4 47.6  
 t: az 43.1 el 23.2 pa -64.6  
 m: az 17.8 el 56.5 pa -152.6  
 u,v (fr/asec) -5197.648 7788.292  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tm..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tm.W.233.1X1KZS

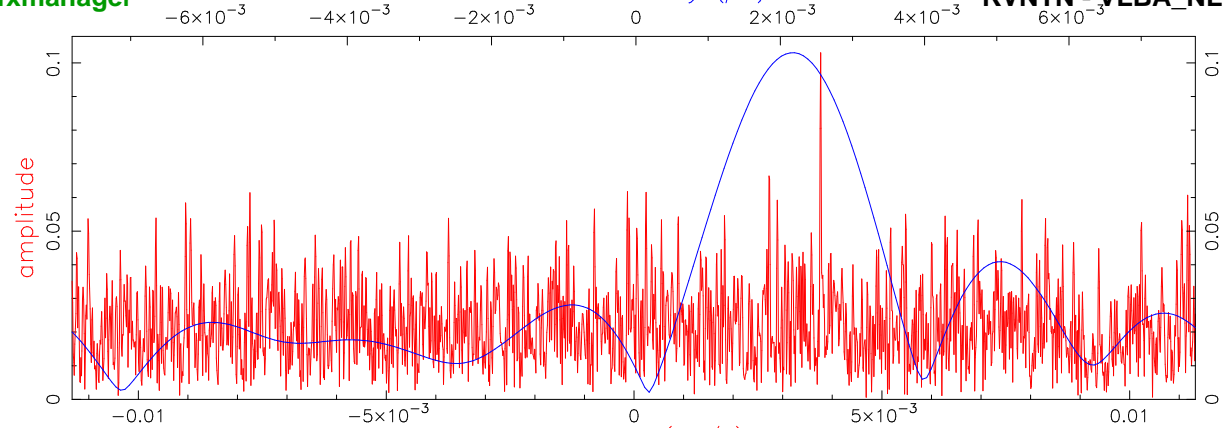
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

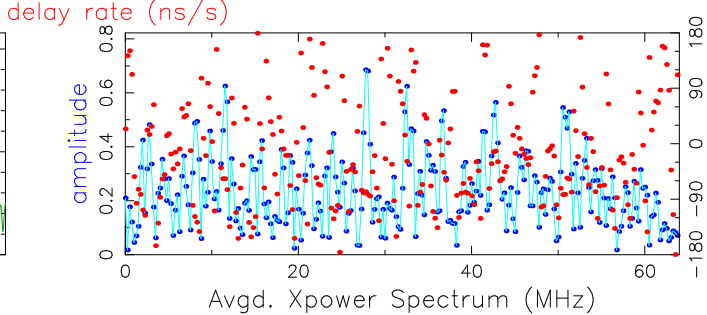
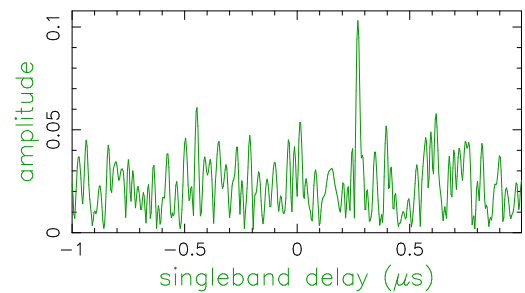
NRAO150.1X1KZS, No0113, tn

KVNTN - VLBA\_NL, fgroup W, pol LL

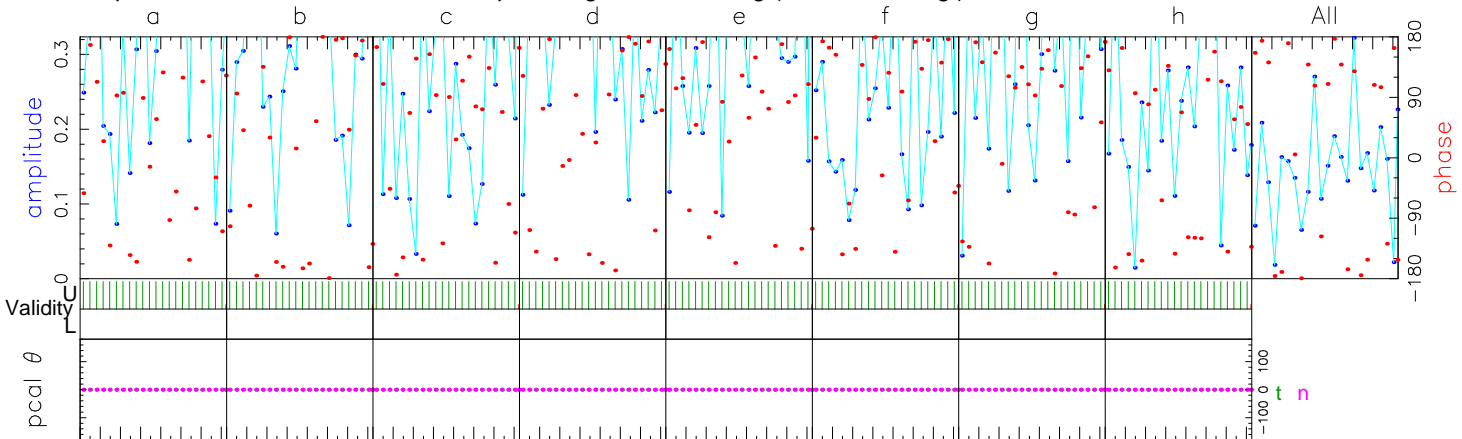
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 5.8  
 Int time 419.822  
 Amp 0.108  
 Phase 155.9  
 PFD 8.6e-01  
 Delays (us)  
 SBD 0.269561  
 MBD 0.002172  
 Fringe rate (Hz) 0.324640  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133118  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
t:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-9.01087809454E+03	Apriori delay (usec)	-9.01114589156E+03	Resid mbdelay (usec)	2.17202E-03	+/-	1.9E-04
Sband delay (usec)	-9.01087633006E+03	Apriori clock (usec)	-5.7514343E+00	Resid sbdelay (usec)	2.69561E-01	+/-	1.5E-03
Phase delay (usec)	-9.01114588653E+03	Apriori clockrate (us/s)	-3.4999998E-07	Resid phdelay (usec)	5.02785E-06	+/-	6.4E-07
Delay rate (us/s)	1.36744278463E+00	Apriori rate (us/s)	1.36743901588E+00	Resid rate (us/s)	3.76875E-06	+/-	2.6E-09
Total phase (deg)	120.2	Apriori accel (us/s/s)	3.76016166834E-05	Resid phase (deg)	155.9	+/-	19.9

ph/seg (deg)	50.3	Theor.	47.6	Amplitude	0.108 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	79.4	Search (2048X32)	0.098	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	20.2	Inc. seg. avg.	0.114	Inc. frq. avg.	0.100	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	27.2	Inc. frq. avg.	0.100			Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

t: az 43.1 el 23.2 pa -64.6 n: az 302.7 el 56.1 pa 86.9 u,v (fr/asec) -12386.317 3111.184 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tn..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tn.W.179.1X1KZS

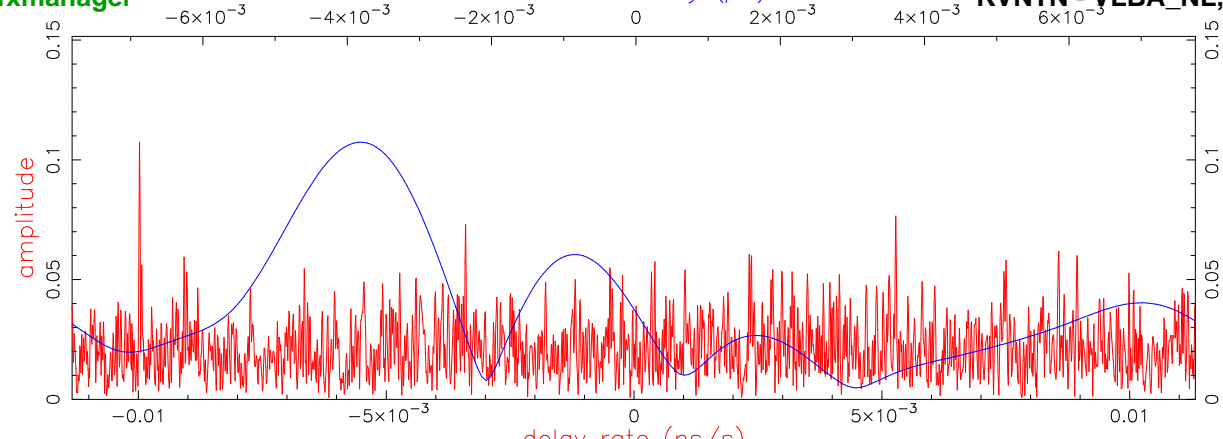
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

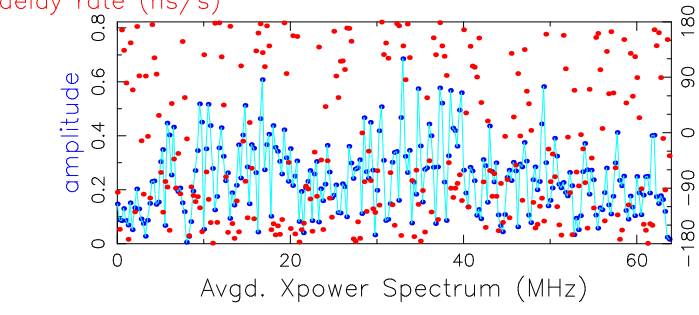
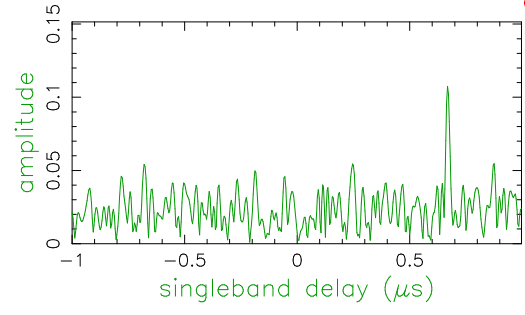
NRAO150.1X1KZS, No0113, tn

KVNTN - VLBA\_NL, fgroup W, pol RR

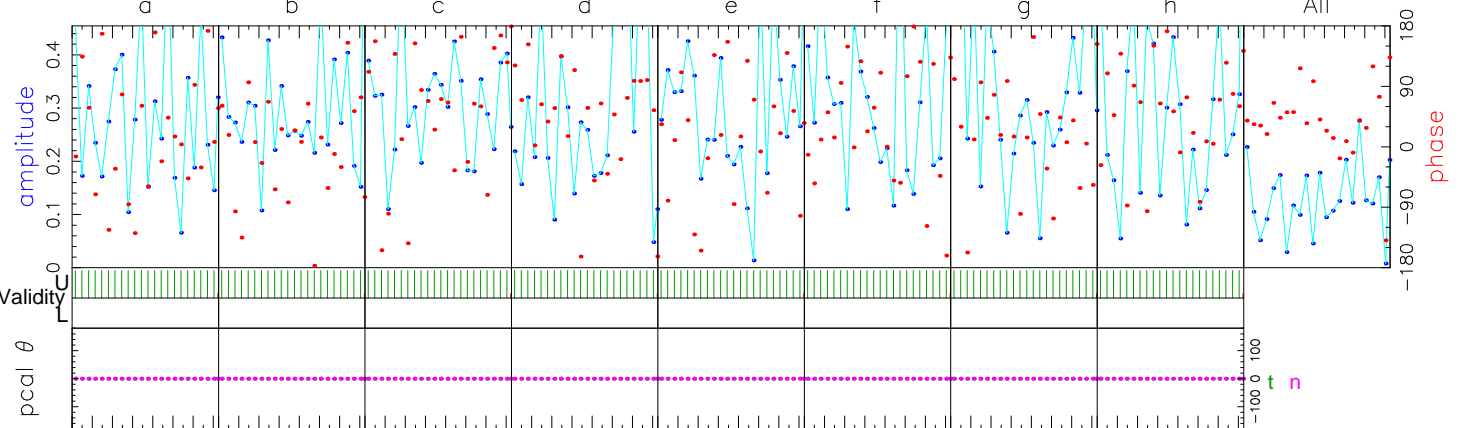
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 6.0  
 Int time 419.822  
 Amp 0.152  
 Phase 40.1  
 PFD 3.5e-01  
 Delays (us)  
 SBD 0.668559  
 MBD -0.003809  
 Fringe rate (Hz)  
 -0.860327  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133122  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



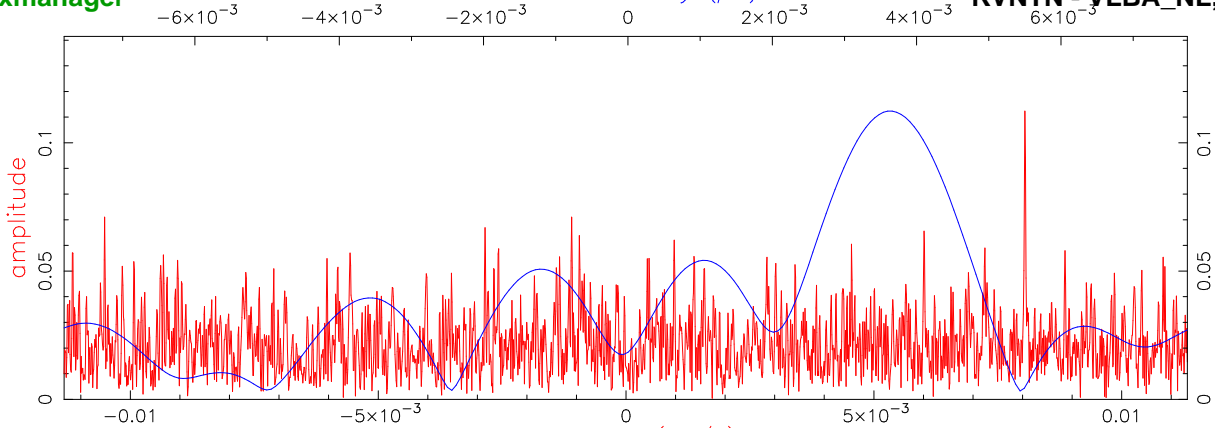
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



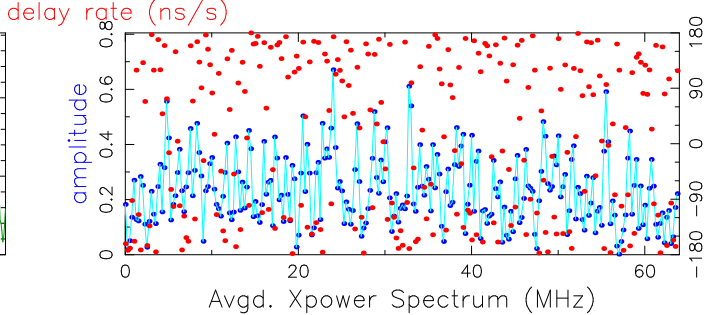
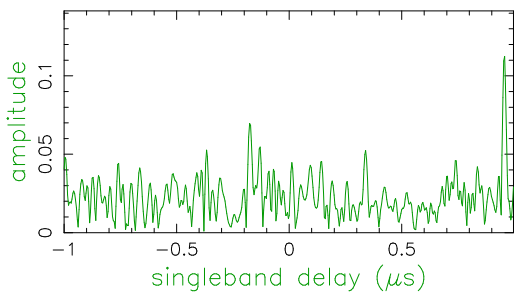
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
n	0	0	0	0	0	0	0	0		
t:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
tn	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-9.01047782524E+03									
Sband delay (usec)	-9.01047733231E+03									
Phase delay (usec)	-9.01114589027E+03									
Delay rate (us/s)	1.36742902834E+00									
Total phase (deg)			4.5							
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										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal $\theta$										
t n										
Validity										
Chan ids										
Tracks										
Chan ids										
Tracks										
Amplitude										
Search (2048X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.152 +/- 0.025										
0.103										
0.000										
0.137										
0.157										
PC period (AP's) 5, 5										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
SampCntNorm: enabled										
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)										
simultaneous interpolator										

multiband delay ( $\mu$ s)

Fringe quality 0

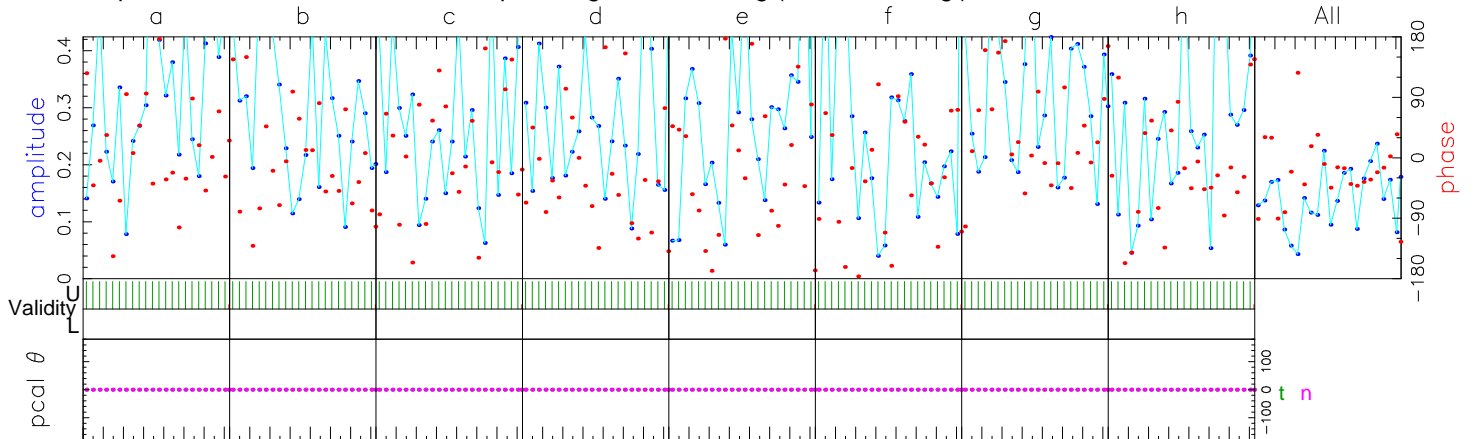


SNR 6.4  
Int time 419.822  
Amp 0.141  
Phase -20.8  
PFD 4.8e-02  
Delays (us)  
SBD 0.955597  
MBD 0.003627  
Fringe rate (Hz)  
0.694733  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133126  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'59.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-11.3	-25.4	-7.7	-51.2	-35.5	-15.4	20.1	-35.1	Phase	-20.8
	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	Ampl.	0.1
	502.1	308.7	450.0	238.0	459.1	33.0	287.7	211.2	Sbd box	501.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
t:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-9.01018913924E+03		Apriori delay (usec)		-9.01114589156E+03		Resid mbdelay (usec)		3.62733E-03	+/- 1.7E-04
Sband delay (usec)	-9.01019029431E+03		Apriori clock (usec)		-5.7514343E+00		Resid sbdelay (usec)		9.55597E-01	+/- 1.4E-03
Phase delay (usec)	-9.01114589223E+03		Apriori clockrate (us/s)		-3.4999998E-07		Resid phdelay (usec)		-6.69477E-07	+/- 5.8E-07
Delay rate (us/s)	1.36744708104E+00		Apriori rate (us/s)		1.36743901588E+00		Resid rate (us/s)		8.06516E-06	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		3.76016166834E-05		Resid phase (deg)		-20.8	+/- 18.0

	RMS	Theor.	Amplitude	0.141 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	48.6	43.1	Search (2048X32)	0.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	51.4	75.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	23.6	25.4	Inc. seg. avg.	0.137	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	36.8	44.4	Inc. frq. avg.	0.136	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

t: az 43.1 el 23.2 pa -64.6 n: az 302.7 el 56.1 pa 86.9 u,v (fr/asec) -12386.317 3111.184 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tn..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tn.W.217.1X1KZS

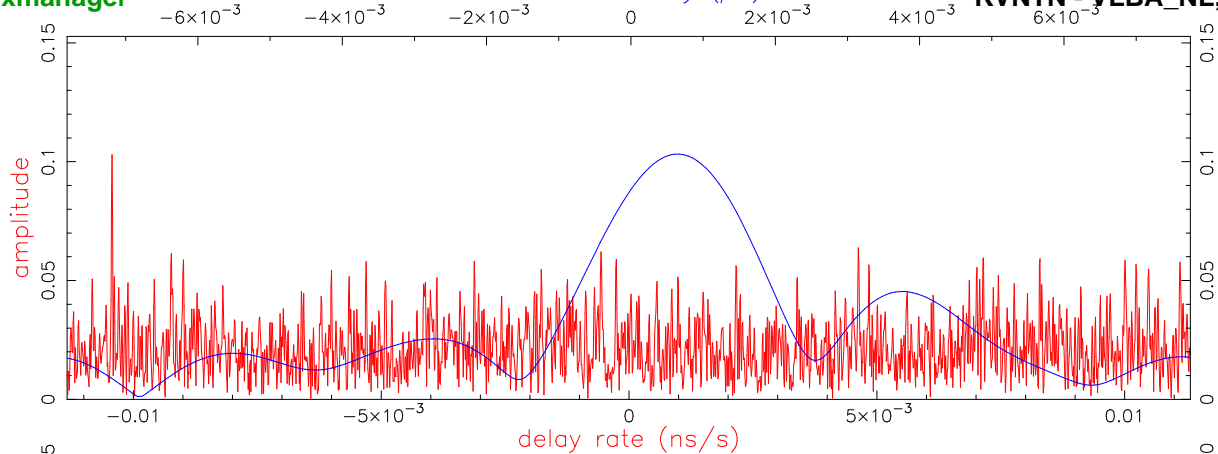
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tn

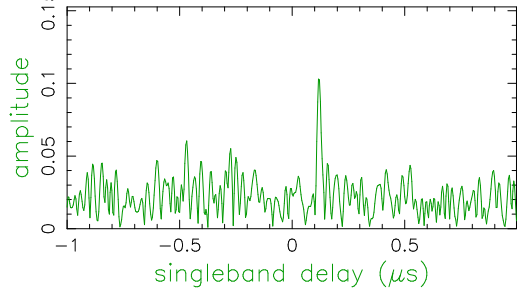
KVNTN - VLBA\_NL, fgroup W, pol RL

multiband delay ( $\mu$ s)

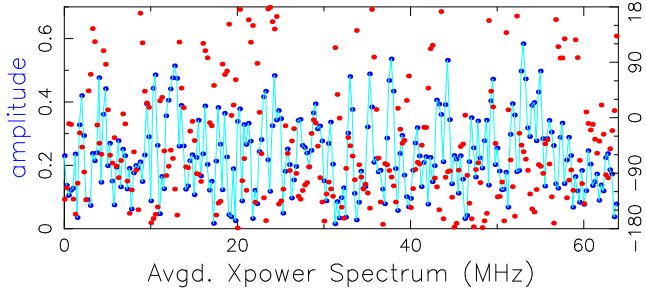


Fringe quality 0

SNR 5.9  
Int time 419.822  
Amp 0.153  
Phase -173.4  
PFD 6.7e-01  
Delays (us)  
SBD 0.119009  
MBD 0.000736  
Fringe rate (Hz)  
-0.899707  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

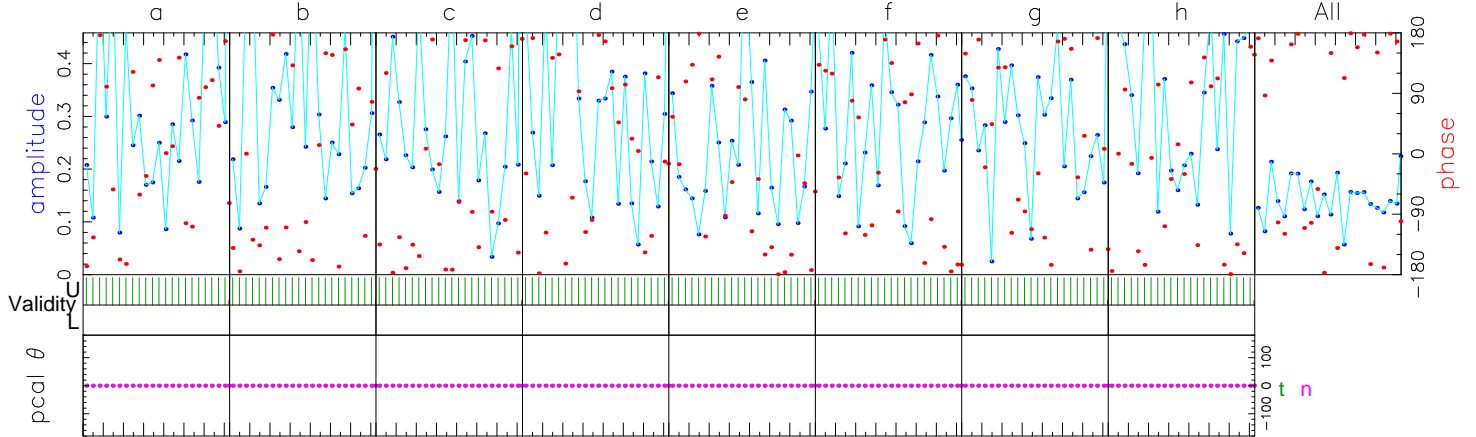


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133129  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'59.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
n	0	0	0	0	0	0	0	0		
t:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
tn	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-9.01102015602E+03									
Sband delay (usec)	-9.01102688231E+03									
Phase delay (usec)	-9.01114589715E+03									
Delay rate (us/s)	1.36742857118E+00									
Total phase (deg)			-209.1							
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								
Bits/sample:	2x2									
Sample rate(MISamp/s):	128									
Data rate(Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
pcal $\theta$										
t n										
RMS	50.4	46.8								
Theor.	46.8									
Amplitude	0.153 +/- 0.026									
Search (2048X32)	0.098									
Interp.	0.000									
Inc. seg. avg.	0.155									
Inc. frq. avg.	0.140									
PCal mode:	MANUAL	MANUAL								
PCal rate:	0.000E+00	0.000E+00								
SampCntNorm:	enabled									
Sample rate(MISamp/s):	128									
Data rate(Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
simultaneous interpolator										

t: az 43.1 el 23.2 pa -64.6 n: az 302.7 el 56.1 pa 86.9 u,v (fr/asec) -12386.317 3111.184 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tn..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tn.W.236.1X1KZS



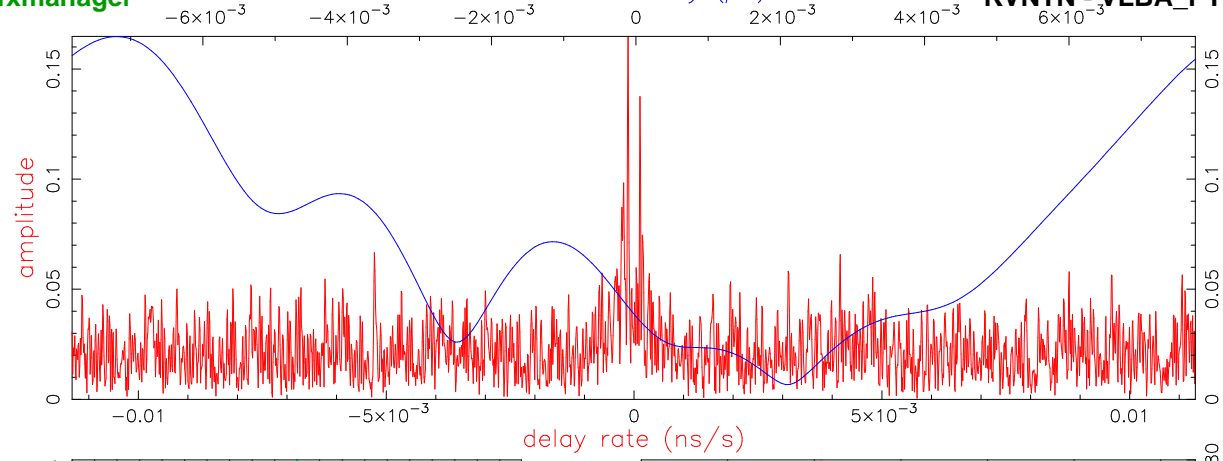
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

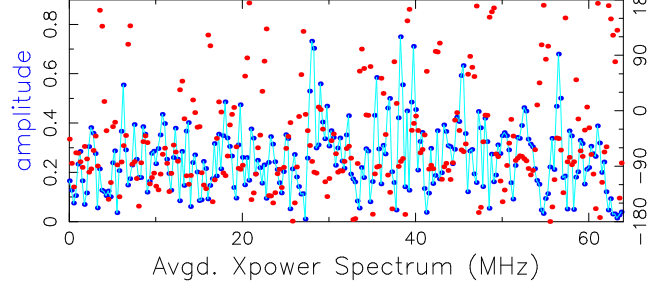
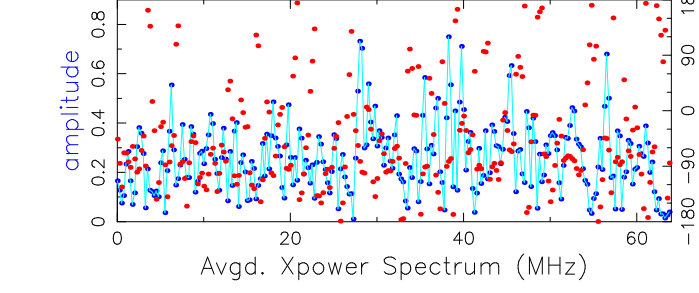
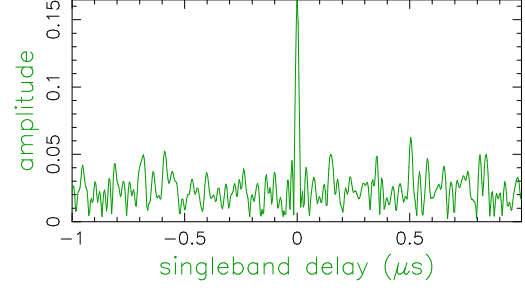
NRAO150.1X1KZS, No0113, tp

KVNTN - VLBA\_PT, fgroup W, pol LL

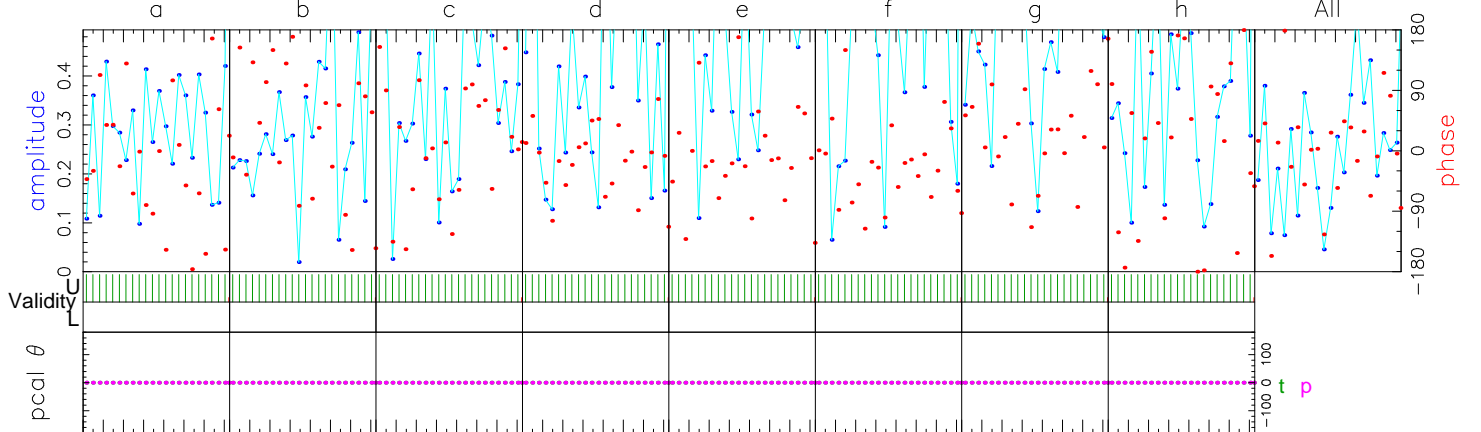
multiband delay ( $\mu$ s)



Fringe quality 9  
 SNR 9.2  
 Int time 419.821  
 Amp 0.165  
 Phase 2.1  
 PFD 1.0e-11  
 Delays (us)  
 SBD -0.000235  
 MBD -0.007196  
 Fringe rate (Hz) -0.010978  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133129  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
p	0	0	0	0	0	0	0	0		
tp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
tp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.01113943414E+04				-1.01113871452E+04					
Sband delay (usec)	-1.01113873804E+04				-5.8013134E+00					
Phase delay (usec)	-1.01113871451E+04				6.9999995E-08					
Delay rate (us/s)	1.25126679195E+00				1.25126691940E+00					
Total phase (deg)		-245.4			5.24345297187E-05					
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										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

ph/seg (deg) 71.0 29.8 Search (2048X32) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 92.0 51.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 74.1 17.6 Inc. seg. avg. 0.222 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 74.8 30.6 Inc. frq. avg. 0.208 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 43.1 el 23.2 pa -64.6 p: az 315.8 el 61.6 pa 112.7 u,v (fr/asec) -11305.817 5112.017 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tp..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tp.W.231.1X1KZS simultaneous interpolator



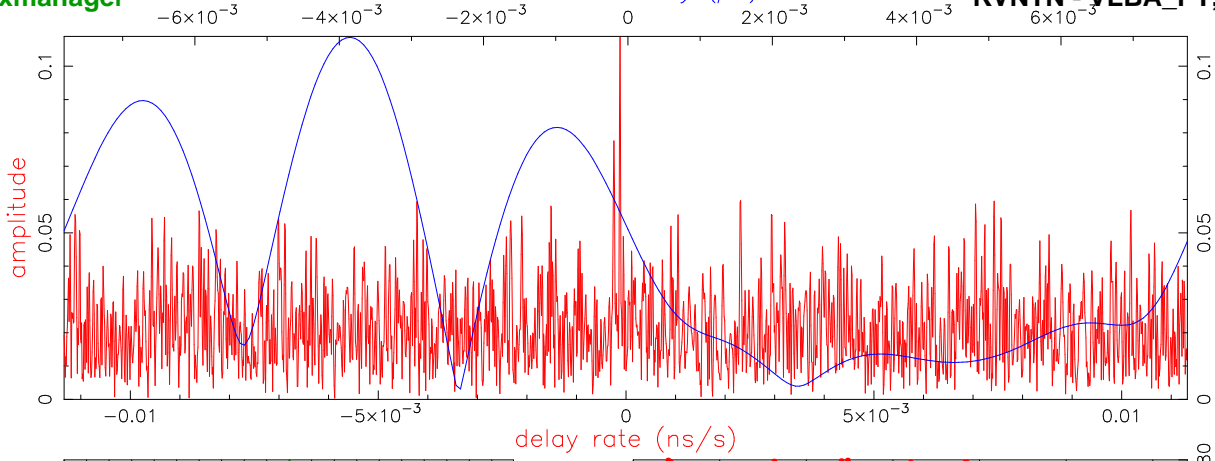
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

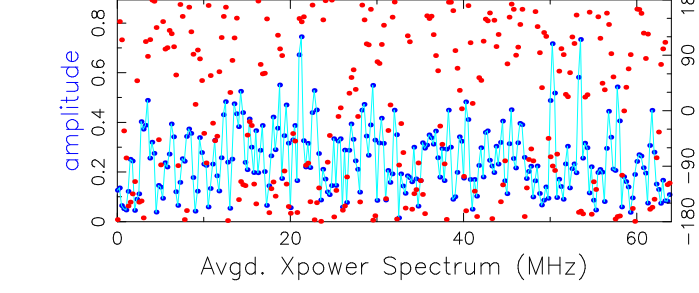
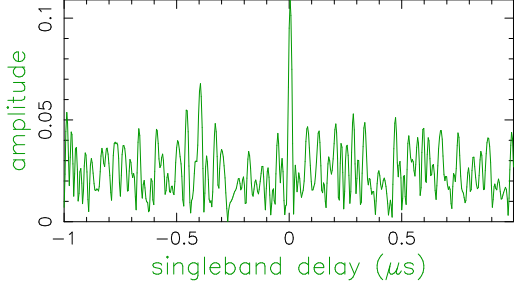
NRAO150.1X1KZS, No0113, tp

KVNTN - VLBA\_PT, fgroup W, pol LR

multiband delay ( $\mu$ s)

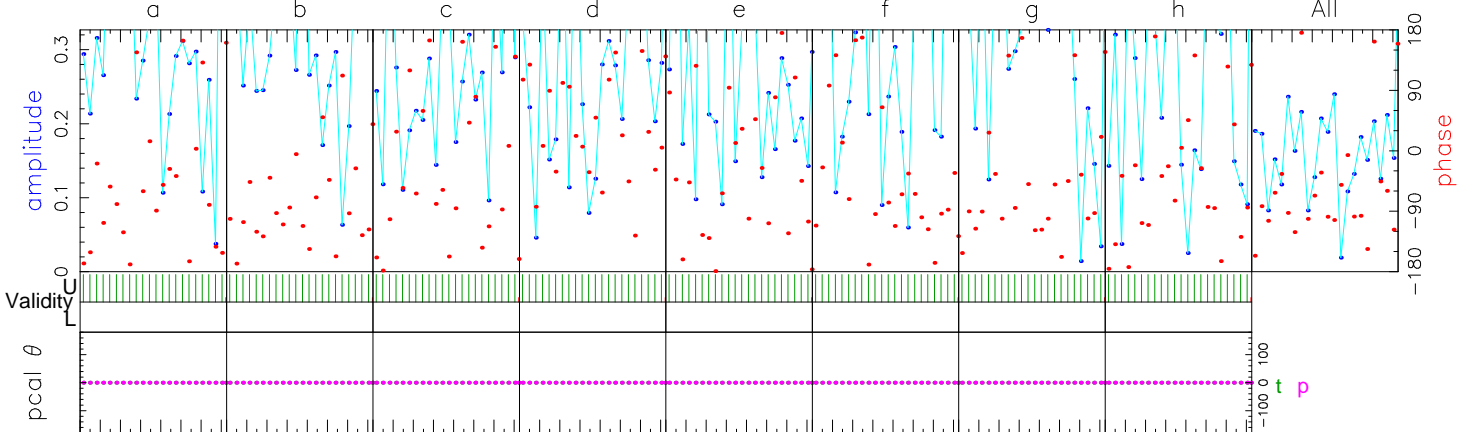


Fringe quality 0  
 SNR 6.1  
 Int time 419.821  
 Amp 0.109  
 Phase -98.5  
 PFD 2.4e-01  
 Delays (us)  
 SBD 0.004522  
 MBD -0.003840  
 Fringe rate (Hz)  
 -0.010782  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133135  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
p	0	0	0	0	0	0	0	0		
t:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
tp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.01113753600E+04	-1.01113826234E+04	-1.01113871484E+04	-1.01113871452E+04	-1.01113871452E+04	-1.01113871452E+04	-1.01113871452E+04	-1.01113871452E+04		
Sband delay (usec)	-1.01113826234E+04	-1.01113826234E+04	-1.01113826234E+04	-1.01113826234E+04	-1.01113826234E+04	-1.01113826234E+04	-1.01113826234E+04	-1.01113826234E+04		
Phase delay (usec)	-1.01113871484E+04	-1.01113871484E+04	-1.01113871484E+04	-1.01113871484E+04	-1.01113871484E+04	-1.01113871484E+04	-1.01113871484E+04	-1.01113871484E+04		
Delay rate (us/s)	1.25126679424E+00	1.25126679424E+00	1.25126679424E+00	1.25126679424E+00	1.25126679424E+00	1.25126679424E+00	1.25126679424E+00	1.25126679424E+00		
Total phase (deg)			-346.0							
Apriori delay (usec)				0.109 +/- 0.018						
Apriori clock (usec)				0.105						
Apriori clockrate (us/s)				0.000						
Apriori rate (us/s)				0.122						
Apriori accel (us/s/s)				0.120						
Resid mbdelay (usec)									-3.83982E-03	+/- 1.8E-04
Resid sbdelay (usec)									4.52175E-03	+/- 1.4E-03
Resid phdelay (usec)									-3.17595E-06	+/- 6.1E-07
Resid rate (us/s)									-1.25163E-07	+/- 2.5E-09
Resid phase (deg)									-98.5	+/- 18.8
Pcal mode:	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL
Pcal rate:	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Bits/sample:	2x2	2x2	2x2	2x2	2x2	2x2	2x2	2x2	2x2	2x2
Sample rate (MSamp/s):	128	128	128	128	128	128	128	128	128	128
Data rate (Mb/s):	2048	2048	2048	2048	2048	2048	2048	2048	2048	2048
nlags:	256	256	256	256	256	256	256	256	256	256
t_cohere:	infinite	infinite	infinite	infinite	infinite	infinite	infinite	infinite	infinite	infinite
sb window (us)	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000
mb window (us)	-0.008	0.008	-0.008	0.008	-0.008	0.008	-0.008	0.008	-0.008	0.008
dr window (ns/s)	-0.011	0.011	-0.011	0.011	-0.011	0.011	-0.011	0.011	-0.011	0.011
ion window (TEC)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

t: az 43.1 el 23.2 pa -64.6 p: az 315.8 el 61.6 pa 112.7 u,v (fr/asec) -11305.817 5112.017 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tp..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tp.W.257.1X1KZS

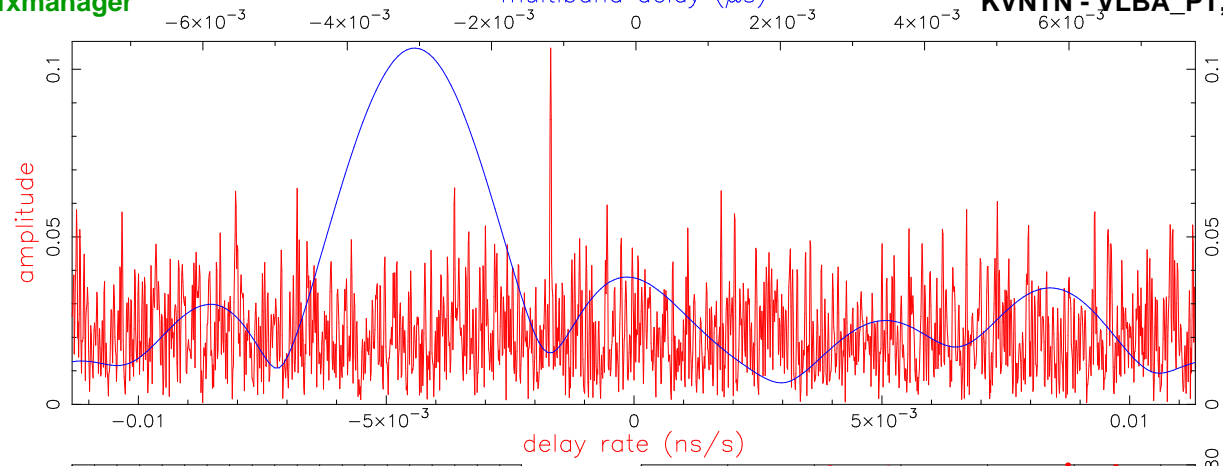
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tp

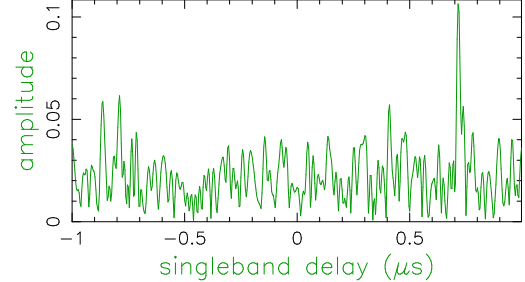
KVNTN - VLBA\_PT, fgroup W, pol RL

multiband delay ( $\mu$ s)

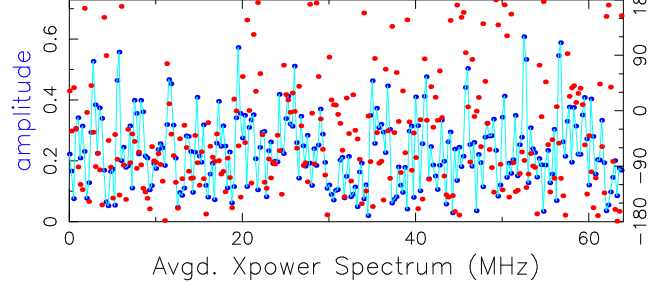


Fringe quality 0

SNR 6.0  
 Int time 419.821  
 Amp 0.108  
 Phase -73.9  
 PFD 3.7e-01  
 Delays (us)  
 SBD 0.716049  
 MBD -0.003032  
 Fringe rate (Hz)  
 -0.145164  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

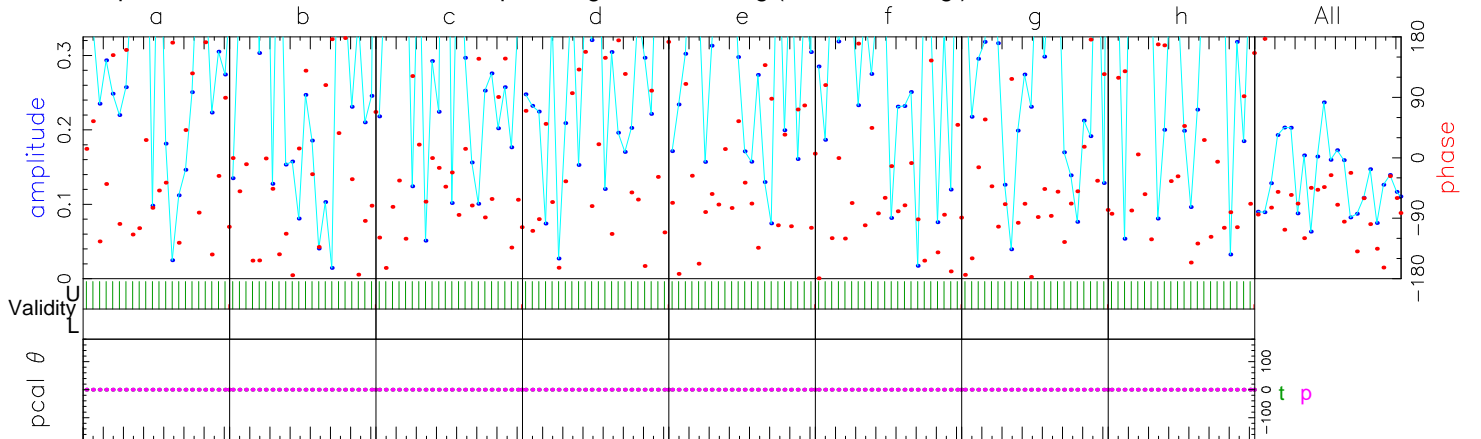


delay rate (ns/s)



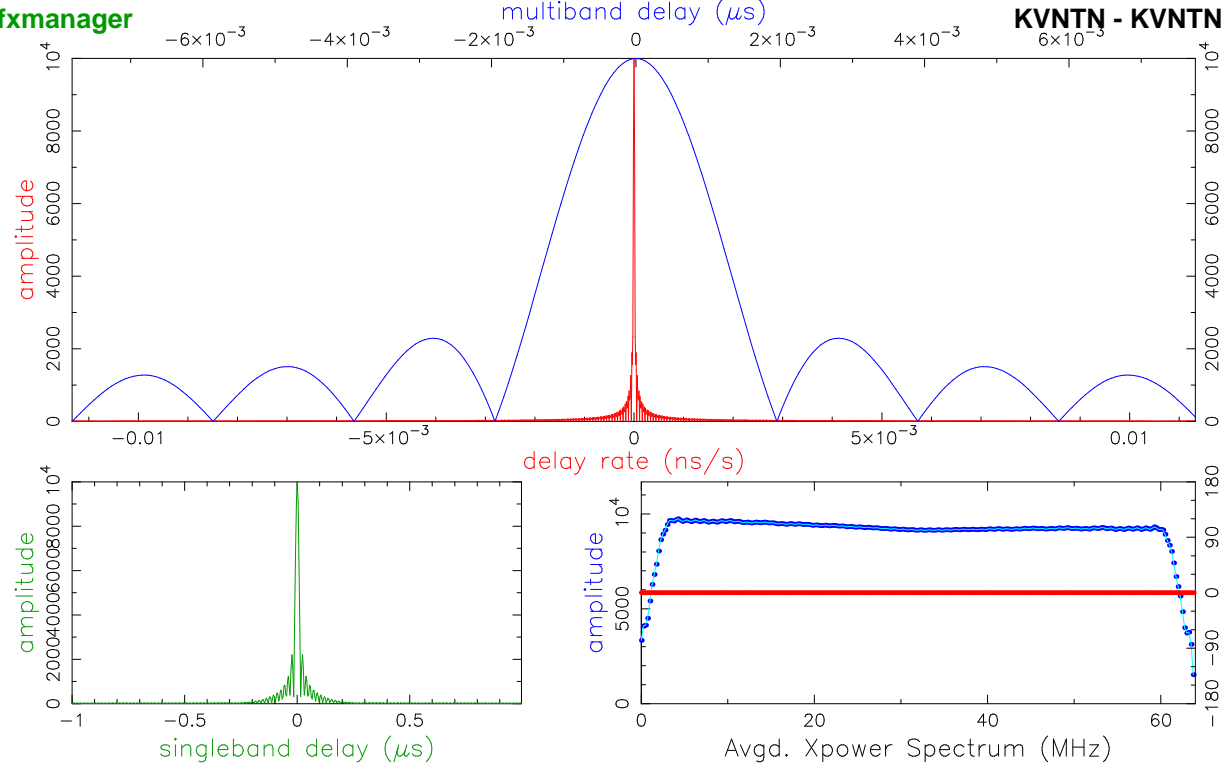
Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133139  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'59.161694"

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



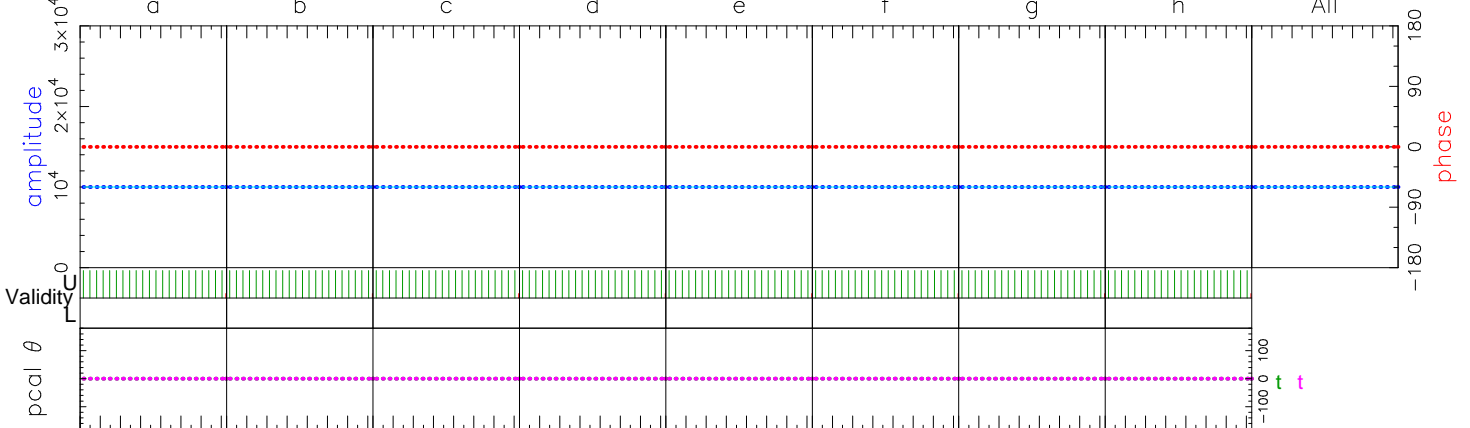
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-62.0	-93.7	-63.3	-87.0	-66.9	-92.0	-72.7	-72.6	Phase	-73.9
	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1
	25.4	346.9	501.7	426.1	268.7	296.1	61.0	442.4	Sbd box	440.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
t:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
tp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.01106714274E+04		Apriori delay (usec)		-1.01113871452E+04		Resid mbdelay (usec)		-3.03224E-03	+/- 1.8E-04
Sband delay (usec)	-1.01106710962E+04		Apriori clock (usec)		-5.8013134E+00		Resid sbdelay (usec)		7.16049E-01	+/- 1.4E-03
Phase delay (usec)	-1.01113871476E+04		Apriori clockrate (us/s)		6.9999995E-08		Resid phdelay (usec)		-2.38287E-06	+/- 6.1E-07
Delay rate (us/s)	1.25126523420E+00		Apriori rate (us/s)		1.25126691940E+00		Resid rate (us/s)		-1.68520E-06	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		5.24345297187E-05		Resid phase (deg)		-73.9	+/- 19.0

ph/seg (deg) 44.2 45.7 Search (2048X32) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 51.3 79.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 14.1 26.9 Inc. seg. avg. 0.104 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 39.4 47.0 Inc. frq. avg. 0.098 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 43.1 el 23.2 pa -64.6 p: az 315.8 el 61.6 pa 112.7 u,v (fr/asec) -11305.817 5112.017 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tp..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tp.W.274.1X1KZS simultaneous interpolator



Fringe quality 9  
SNR 560324.4  
Int time 419.840  
Amp 10000.000  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Yr:day 16383  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133133  
2021:252:122852  
RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"

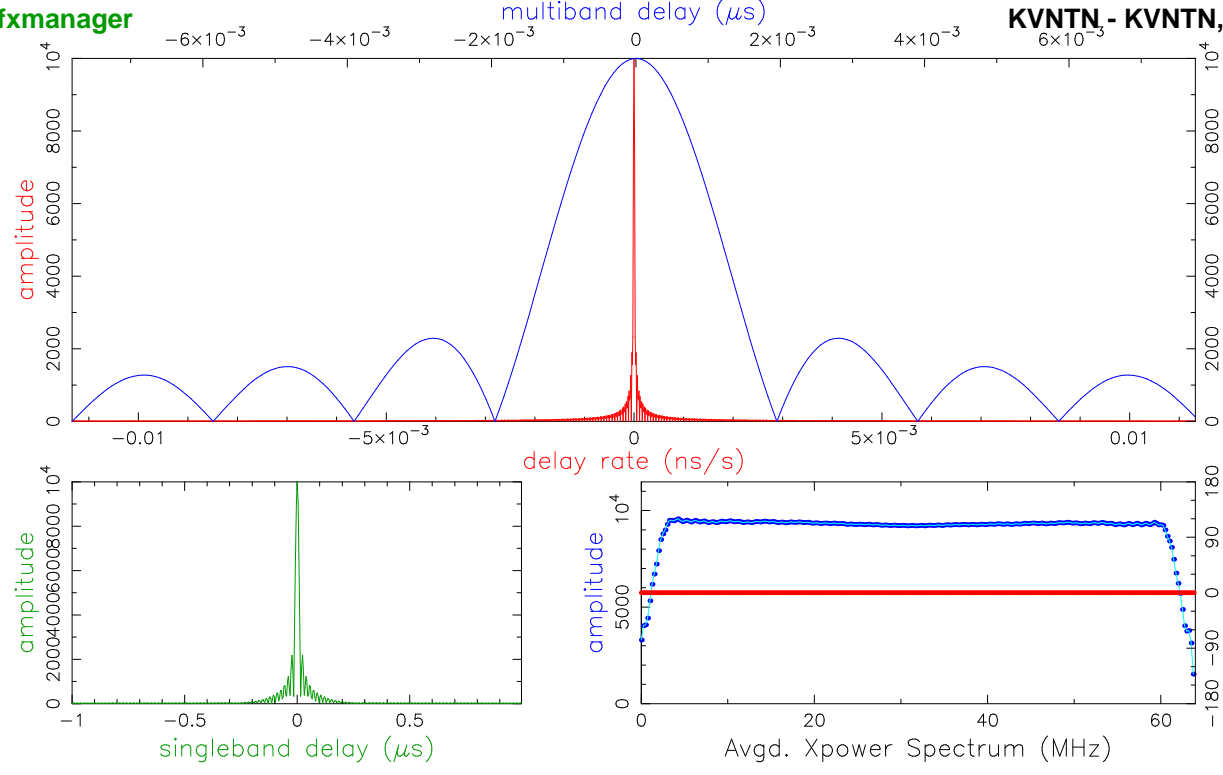
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	10000.0	10000.0
t	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
t	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
t	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 1.9E-09
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 1.5E-08
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 6.6E-12
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 2.7E-14
Total phase (deg)			0.0						0.0	+/- 0.0

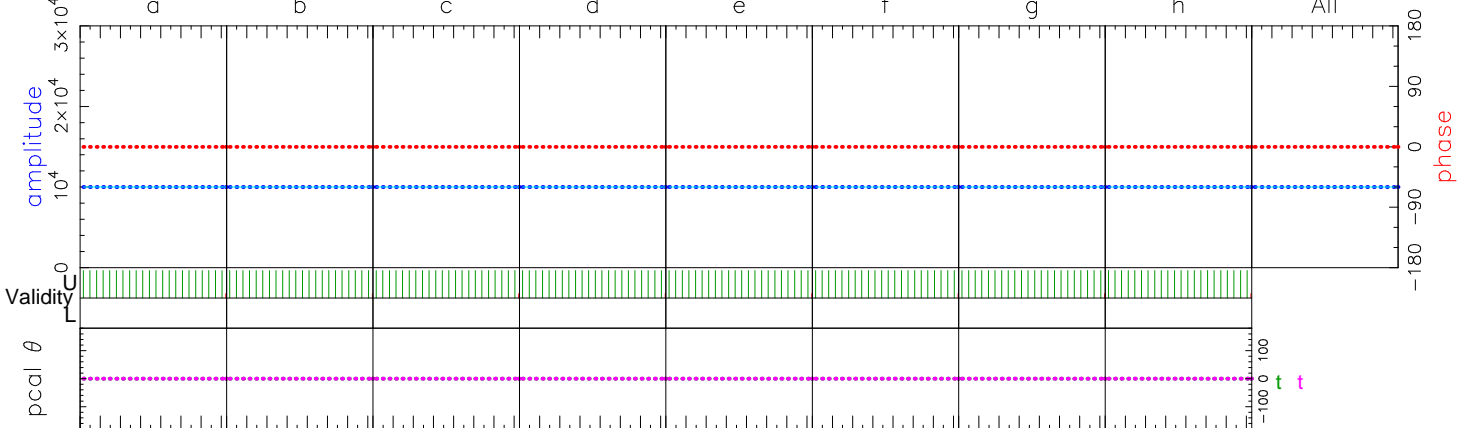
ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 0.0 0.0 Search (2048X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
t: az 43.1 el 23.2 pa -64.6 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tt.W.241.1X1KZS simultaneous interpolator





Fringe quality 9  
SNR 560324.4  
Int time 419.840  
Amp 10000.000  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Yr:day 16383  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133136  
2021:252:122852  
RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"

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

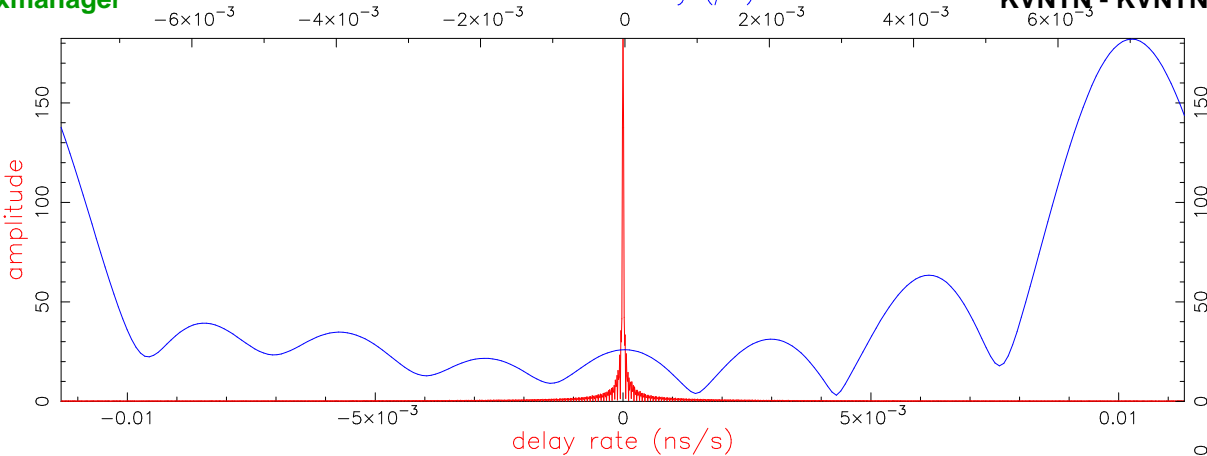


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	10000.0	10000.0
t	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
t	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
t	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 1.9E-09
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 1.5E-08
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 6.6E-12
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.00000E+00	+/- 2.7E-14
Total phase (deg)			0.0						0.0	+/- 0.0

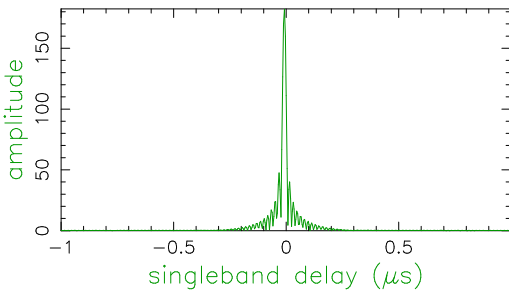
ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 0.0 0.0 Search (2048X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
t: az 43.1 el 23.2 pa -64.6 t: az 43.1 el 23.2 pa -64.6 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tt.W.258.1X1KZS simultaneous interpolator

multiband delay ( $\mu$ s)

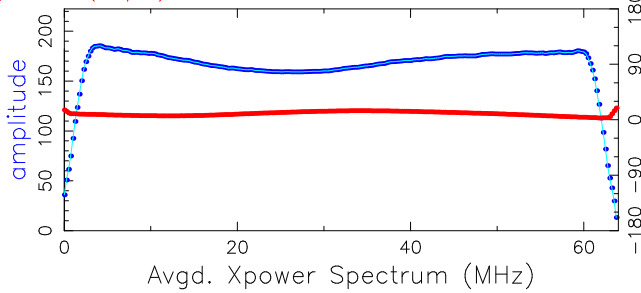
Fringe quality 8



SNR 10221.7  
Int time 419.840  
Amp 182.425  
Phase -167.6  
PFD 0.0e+00  
Delays (us)  
SBD -0.008372  
MBD 0.007017  
Fringe rate (Hz)  
-0.000020  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

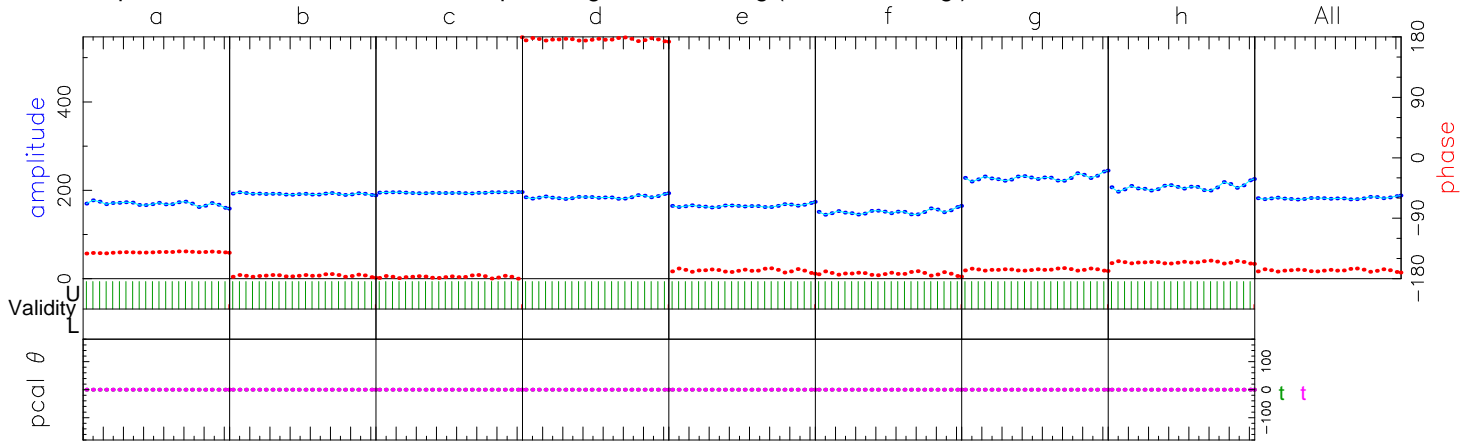


delay rate (ns/s)



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133139  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-8.60784375000E-03								7.01716E-03	+/- 1.1E-07
Sband delay (usec)	-8.37150000000E-03								-8.37150E-03	+/- 8.4E-07
Phase delay (usec)	-5.40345670385E-06								-5.40346E-06	+/- 3.6E-10
Delay rate (us/s)	-2.33115456843E-10								-2.33115E-10	+/- 1.5E-12
Total phase (deg)			-167.6						-167.6	+/- 0.0
	RMS	Theor.	Amplitude	182.425 +/- 0.018					Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	1.4	0.0	Search (2048X32)	179.336					Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	1.1	0.0	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	14.8	0.0	Inc. seg. avg.	182.113					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	12.9	0.0	Inc. frq. avg.	186.516					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
t: az 43.1 el 23.2 pa -64.6			t: az 43.1 el 23.2 pa -64.6						nlags: 256	t_cohere infinite
Control file: cf_1234_gmva			Input file: /Exps/c211c/v1/1234/No0113/tt..1X1KZS						u,v (fr/asec) 0.000 0.000	simultaneous interpolator
			Output file: /Exps/c211c/v1/1234/No0113/tt.W.275.1X1KZS							

Mk4/DiFX fourfit 3.21 rev 2937

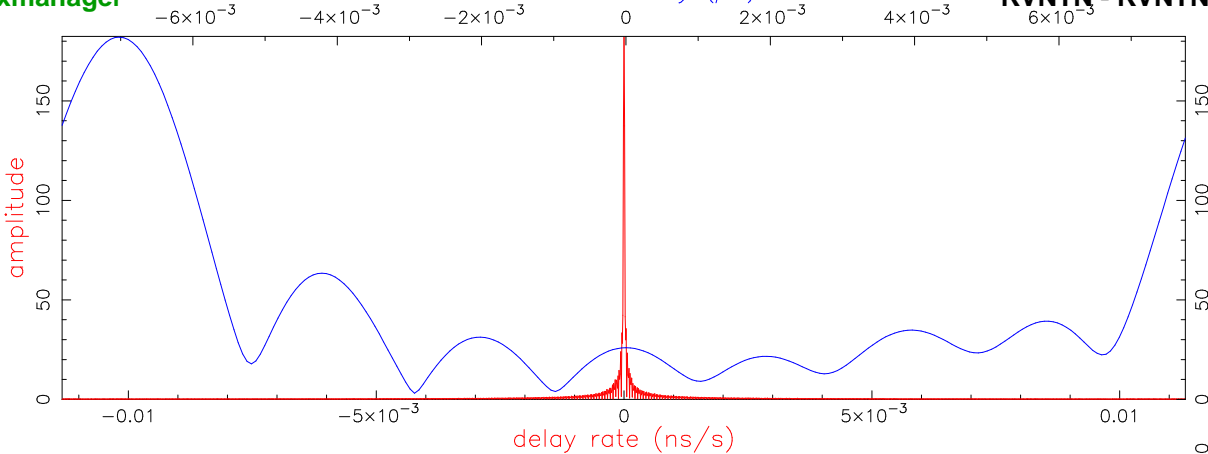
fxmanager

NRAO150.1X1KZS, No0113, tt

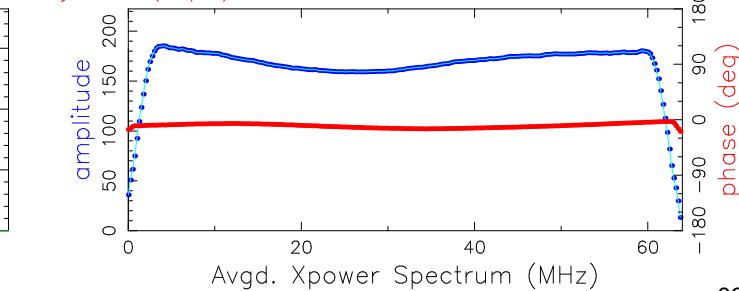
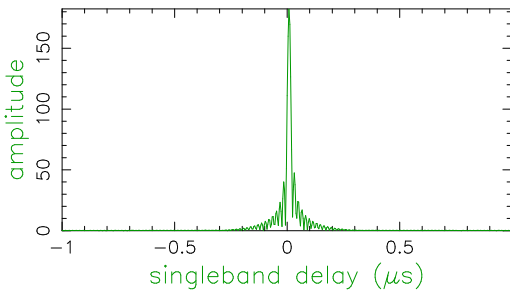
KVNTN - KVNTN, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 8

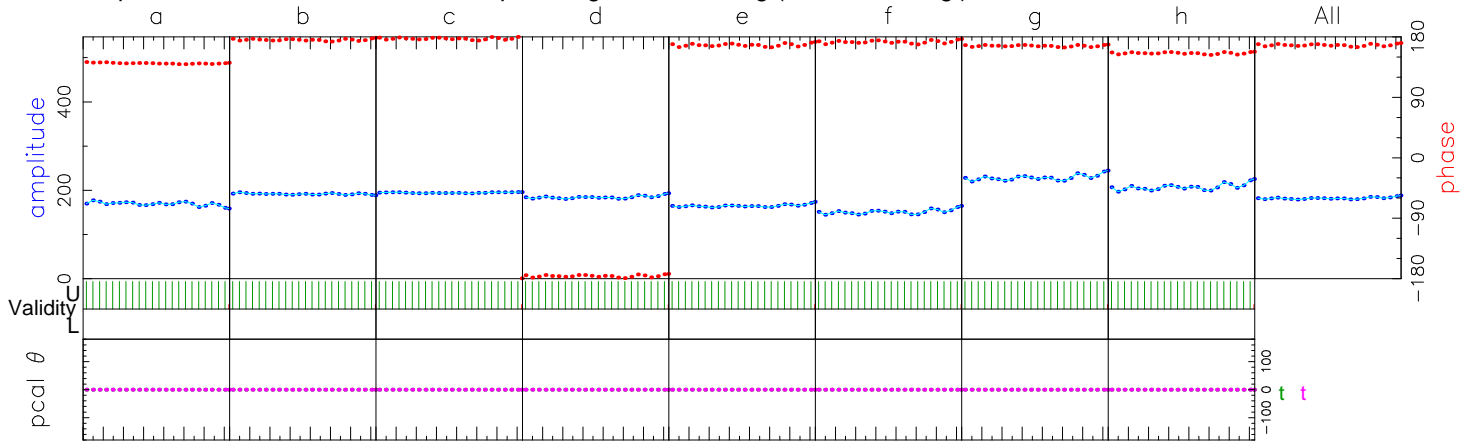


SNR 10221.7  
 Int time 419.840  
 Amp 182.425  
 Phase 167.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.008372  
 MBD -0.007017  
 Fringe rate (Hz)  
 0.000020  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133142  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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

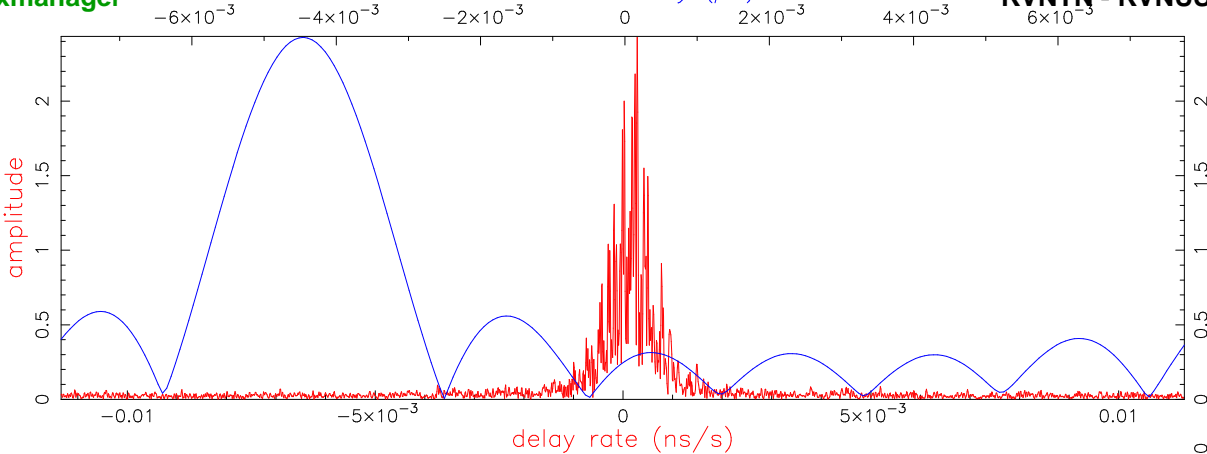


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:t	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
t	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	8.60784375000E-03									
Sband delay (usec)	8.37150000000E-03									
Phase delay (usec)	5.40345670385E-06									
Delay rate (us/s)	2.33115456843E-10									
Total phase (deg)			167.6							
			Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-7.01716E-03	+/- 1.1E-07
			Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		8.37150E-03	+/- 8.4E-07
			Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		5.40346E-06	+/- 3.6E-10
			Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		2.33115E-10	+/- 1.5E-12
			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		167.6	+/- 0.0
ph/seg (deg)	1.4	0.0	Amplitude	182.425 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	1.1	0.0	Search (2048X32)	179.336	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	14.8	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	12.9	0.0	Inc. seg. avg.	182.113	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
			Inc. frq. avg.	186.516	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
t: az 43.1 el 23.2 pa -64.6			t: az 43.1 el 23.2 pa -64.6		u,v (fr/asec) 0.000 0.000					simultaneous interpolator

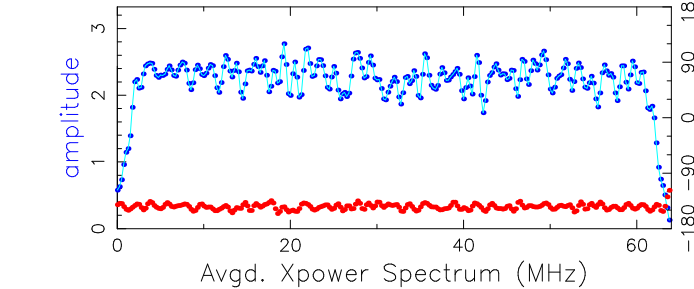
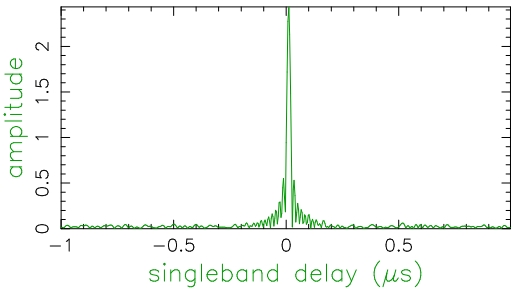
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tt..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tt.W.291.1X1KZS

multiband delay ( $\mu$ s)

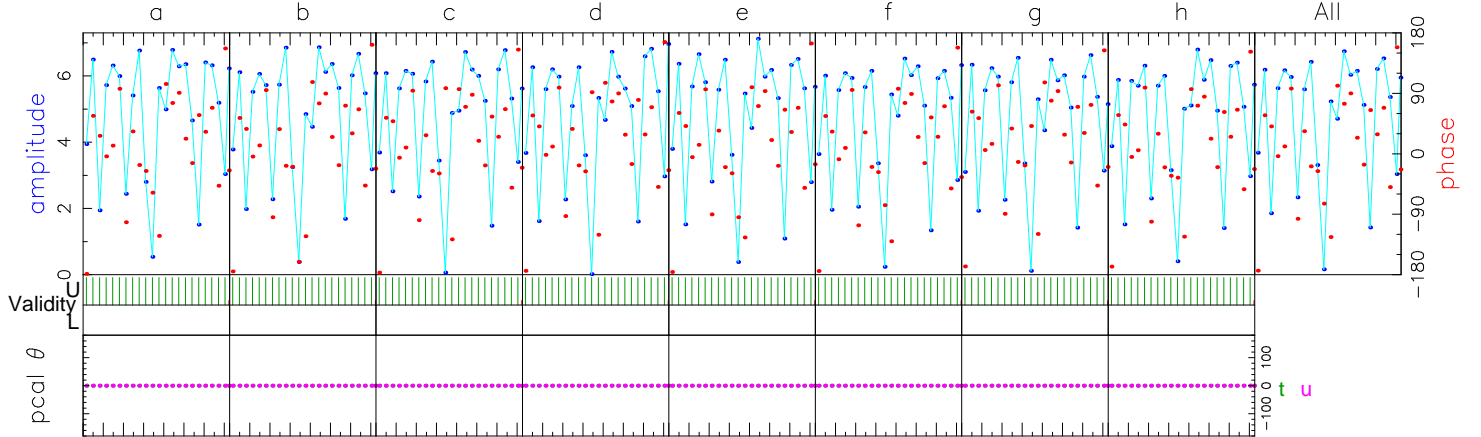
Fringe quality 5



SNR 136.3  
Int time 419.804  
Amp 2.434  
Phase 34.9  
PFD 0.0e+00  
Delays (us)  
SBD 0.011095  
MBD -0.004462  
Fringe rate (Hz)  
0.024792  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133133  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	36.0	34.9	32.9	36.3	32.7	33.8	39.6	33.0	Phase	34.9
	2.4	2.5	2.5	2.4	2.4	2.4	2.5	2.4	Ampl.	2.4
	259.9	259.8	259.8	259.9	259.7	259.9	259.9	259.7	Sbd box	259.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.09508085252E+03			Apriori delay (usec)	-1.09509201542E+03			Resid mbdelay (usec)	-4.46209E-03	+/- 8.0E-06
Sband delay (usec)	-1.09508092042E+03			Apriori clock (usec)	-1.5025646E+01			Resid sbdelay (usec)	1.10950E-02	+/- 6.3E-05
Phase delay (usec)	-1.09509201430E+03			Apriori clockrate (us/s)	-1.1770000E-06			Resid phdelay (usec)	1.12618E-02	+/- 2.7E-08
Delay rate (us/s)	2.07313327405E-02			Apriori rate (us/s)	2.07310449244E-02			Resid rate (us/s)	2.87816E-07	+/- 1.1E-10
Total phase (deg)		-40.1		Apriori accel (us/s/s)	2.89789751354E-06			Resid phase (deg)	34.9	+/- 0.8

ph/seg (deg) 75.7 2.0 Search (2048X32) 2.391 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 121.3 3.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 2.6 1.2 Inc. seg. avg. 4.729 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 2.1 2.1 Inc. frq. avg. 2.429 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
t: az 43.1 el 23.2 pa -64.6 u: az 44.6 el 26.4 pa -65.9 u,v (fr/asec) -183.510 102.244 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tu..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tu.W.242.1X1KZS simultaneous interpolator

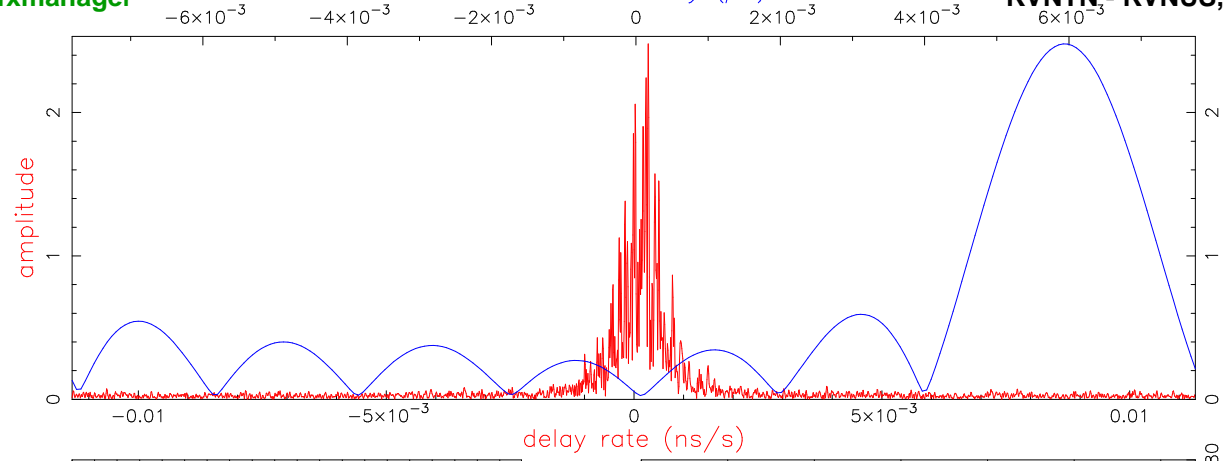
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tu

KVNTN- KVNUS, fgroup W, pol RR

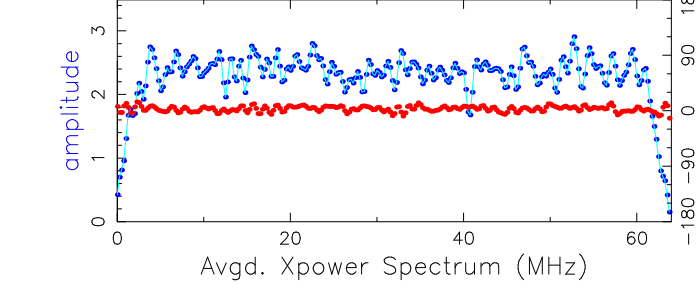
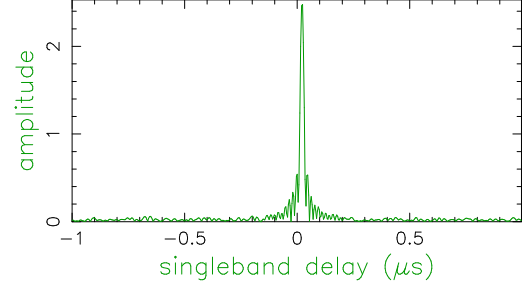
multiband delay ( $\mu$ s)



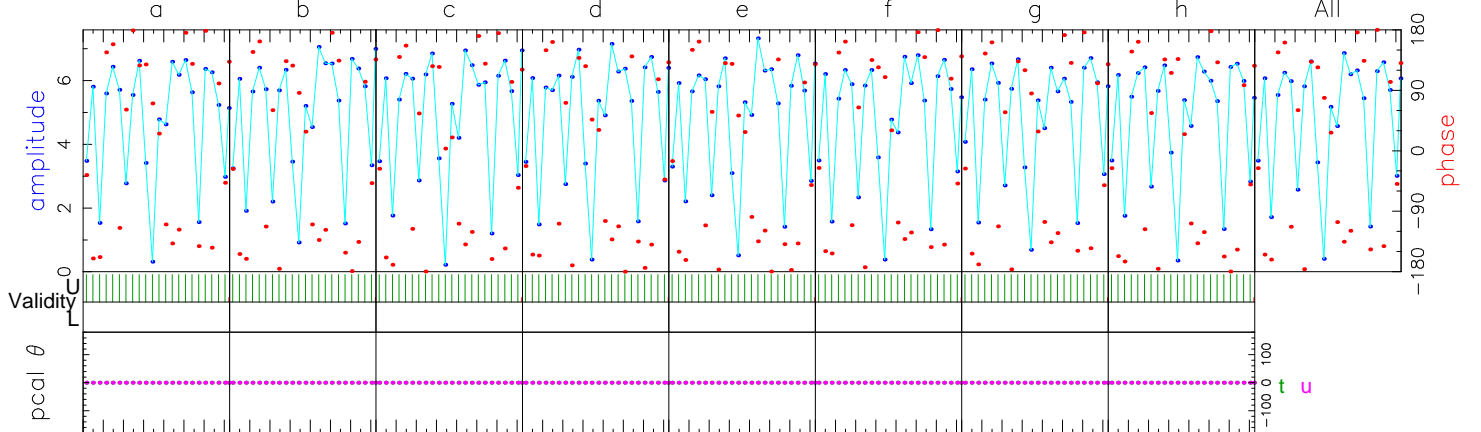
Fringe quality 5

SNR 141.8  
Int time 419.804  
Amp 2.531  
Phase -176.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.021618  
MBD 0.005935  
Fringe rate (Hz) 0.024778  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133136  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

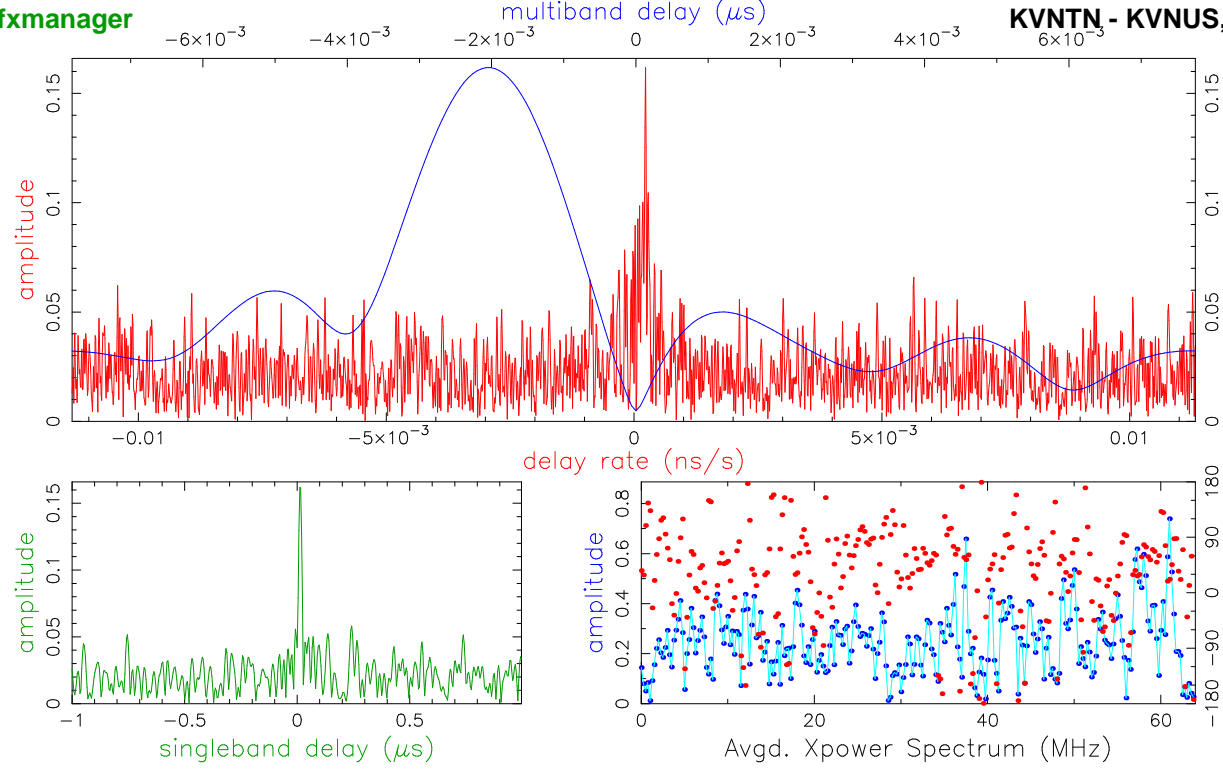


Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



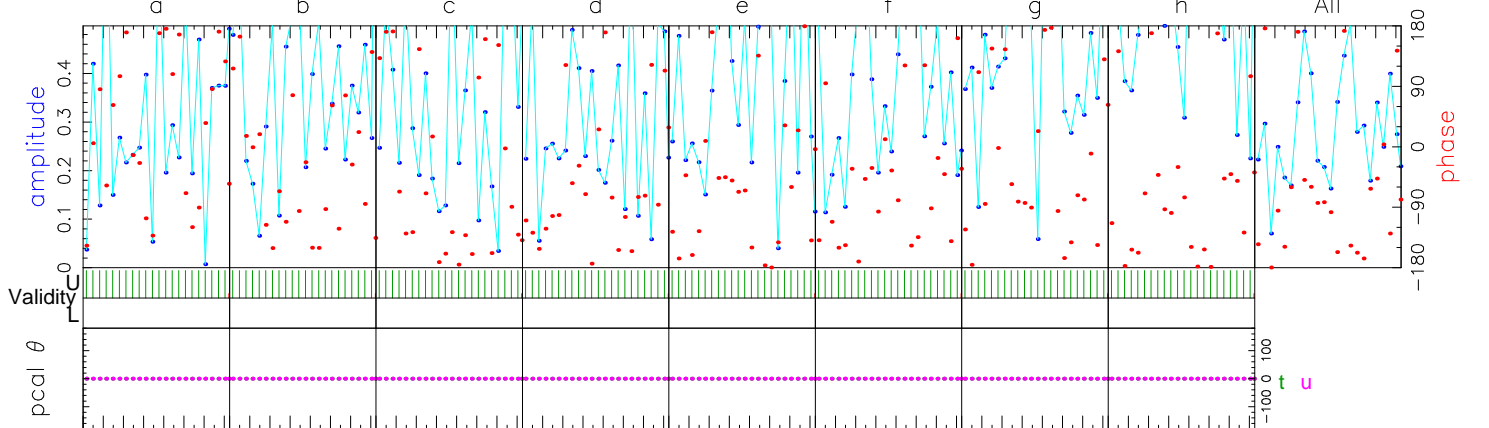
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-178.2	-174.8	179.0	-171.7	-172.7	-173.8	-178.9	-177.1	Phase	-176.0	
	2.5	2.5	2.5	2.5	2.5	2.4	2.5	2.5	Ampl.	2.5	
	262.5	262.5	262.5	262.7	262.5	262.6	262.5	262.5	Sbd box	262.5	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
t:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
u	1000	1000	1000	1000	1000	1000	1000	1000			
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	-1.09507045502E+03		Apriori delay (usec)		-1.09509201542E+03		Resid mbdelay (usec)		5.93541E-03	+/- 7.7E-06	
Sband delay (usec)	-1.09507039742E+03		Apriori clock (usec)		-1.5025646E+01		Resid sbdelay (usec)		2.16180E-02	+/- 6.1E-05	
Phase delay (usec)	-1.09509202110E+03		Apriori clockrate (us/s)		-1.1770000E-06		Resid phdelay (usec)		-5.67502E-06	+/- 2.6E-08	
Delay rate (us/s)	2.07313325718E-02		Apriori rate (us/s)		2.07310449244E-02		Resid rate (us/s)		2.87647E-07	+/- 1.1E-10	
Total phase (deg)			Apriori accel (us/s/s)		2.89789751354E-06		Resid phase (deg)		-176.0	+/- 0.8	
	RMS	Theor.	Amplitude	2.531 +/- 0.018	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	74.8	1.9	Search (2048X32)	2.457	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000	
amp/seg (%)	116.3	3.4	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008	0.008
ph/frq (deg)	3.5	1.1	Inc. seg. avg.	4.801	Sample rate(MISamp/s): 128		dr window (ns/s)		-0.011	0.011	
amp/frq (%)	2.5	2.0	Inc. frq. avg.	2.482	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00
t: az 43.1 el 23.2 pa -64.6	u: az 44.6 el 26.4 pa -65.9		u,v (fr/asec) -183.510 102.244						simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c211c/v1/1234/No0113/tu..1X1KZS		Output file: /Exps/c211c/v1/1234/No0113/tu.W.259.1X1KZS								





Fringe quality 9  
SNR 9.3  
Int time 419.804  
Amp 0.166  
Phase -124.8  
PFD 5.5e-12  
Delays (us)  
SBD 0.013609  
MBD -0.002047  
Fringe rate (Hz) 0.020262  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133139  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-131.5	-129.6	-139.1	-114.8	-113.1	-105.8	-124.3	-133.7	Phase	-124.8
	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.3	Ampl.	0.2
	277.8	439.5	260.8	14.2	278.7	267.1	259.4	260.5	Sbd box	260.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.09507843772E+03		Apriori delay (usec)		-1.09509201542E+03		Resid mbdelay (usec)		-2.04730E-03	+/- 1.2E-04
Sband delay (usec)	-1.09507840592E+03		Apriori clock (usec)		-1.5025646E+01		Resid sbdelay (usec)		1.36095E-02	+/- 9.3E-04
Phase delay (usec)	-1.09509201945E+03		Apriori clockrate (us/s)		-1.1770000E-06		Resid phdelay (usec)		-4.02469E-06	+/- 4.0E-07
Delay rate (us/s)	2.07312801407E-02		Apriori rate (us/s)		2.07310449244E-02		Resid rate (us/s)		2.35216E-07	+/- 1.6E-09
Total phase (deg)			Apriori accel (us/s/s)		2.89789751354E-06		Resid phase (deg)		-124.8	+/- 12.3

ph/seg (deg) 57.9 29.5 Search (2048X32) 0.158 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 97.6 51.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 12.6 17.4 Inc. seg. avg. 0.253 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 47.6 30.4 Inc. frq. avg. 0.158 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
t: az 43.1 el 23.2 pa -64.6 u: az 44.6 el 26.4 pa -65.9 u,v (fr/asec) -183.510 102.244 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tu..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tu.W.276.1X1KZS simultaneous interpolator

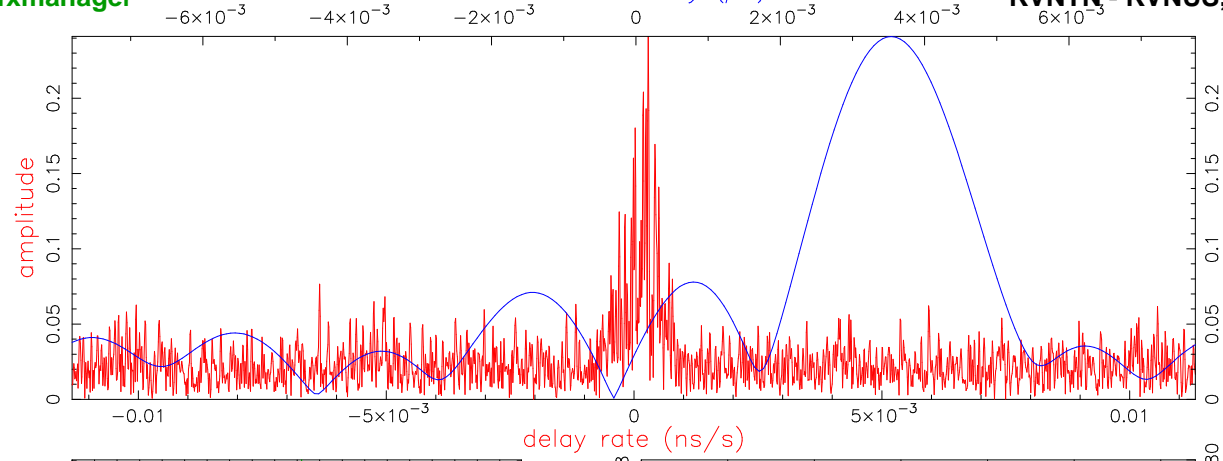
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, tu

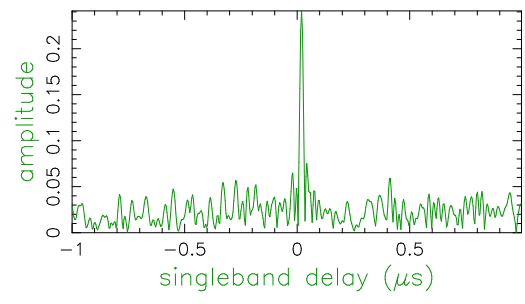
KVNTN - KVNUS, fgroup W, pol RL

multiband delay ( $\mu$ s)

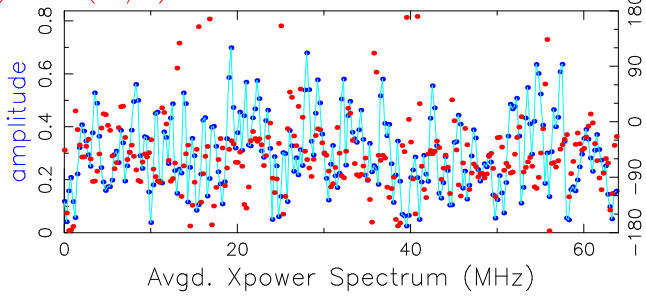


Fringe quality 9

SNR 13.5  
 Int time 419.804  
 Amp 0.241  
 Phase 121.2  
 PFD 8.4e-33  
 Delays (us)  
 SBD 0.019417  
 MBD 0.003535  
 Fringe rate (Hz) 0.024807  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

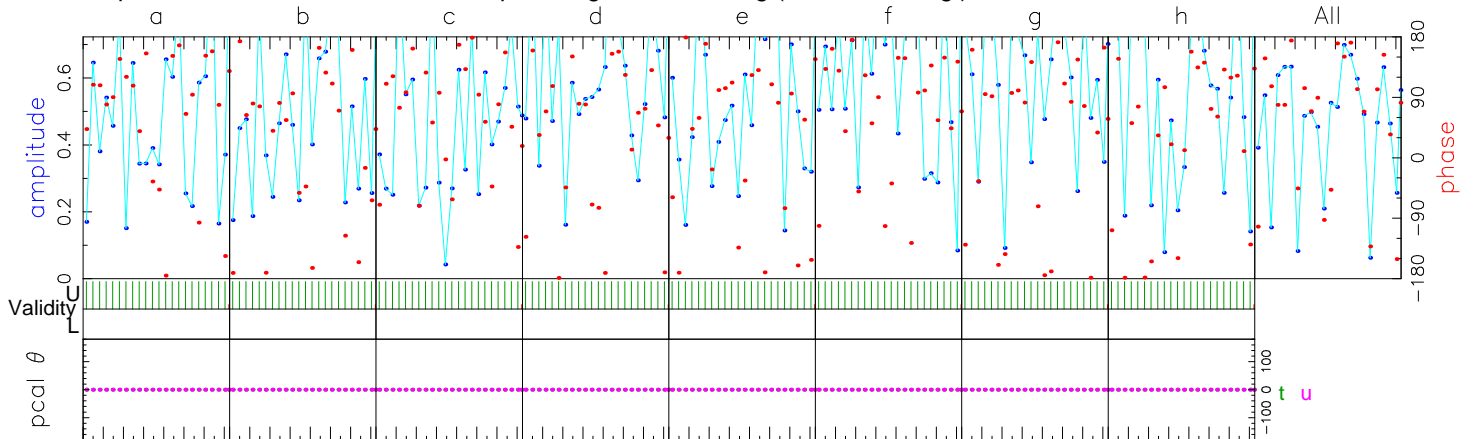


delay rate (ns/s)



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133143  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



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

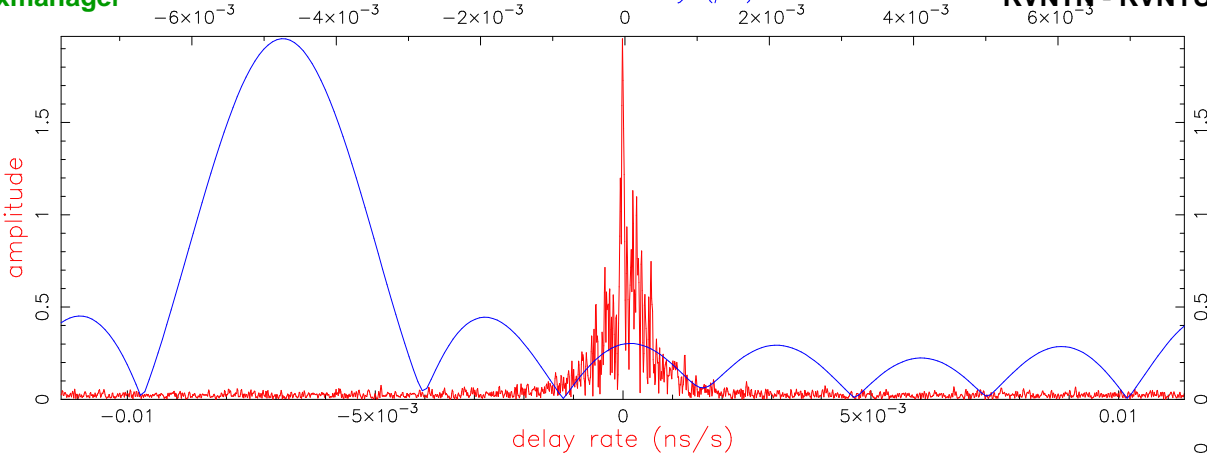
Group delay (usec)(sbd)	-1.09507285527E+03	Apriori delay (usec)	-1.09509201542E+03	Resid mbdelay (usec)	3.53516E-03	+/-	8.0E-05
Sband delay (usec)	-1.09507259842E+03	Apriori clock (usec)	-1.5025646E+01	Resid sbdelay (usec)	1.94170E-02	+/-	6.4E-04
Phase delay (usec)	-1.09509201151E+03	Apriori clockrate (us/s)	-1.1770000E-06	Resid phdelay (usec)	3.90734E-06	+/-	2.7E-07
Delay rate (us/s)	2.07313329112E-02	Apriori rate (us/s)	2.07310449244E-02	Resid rate (us/s)	2.87987E-07	+/-	1.1E-09
Total phase (deg)	46.1	Apriori accel (us/s/s)	2.89789751354E-06	Resid phase (deg)	121.2	+/-	8.5

ph/seg (deg)	80.9	Theor.	20.3	Amplitude	0.241 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	118.5	Search (2048X32)	0.238	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	14.2	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	16.7	Inc. seg. avg.	0.432	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.241	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00	

t: az 43.1 el 23.2 pa -64.6 u: az 44.6 el 26.4 pa -65.9 u,v (fr/asec) -183.510 102.244 simultaneous interpolator

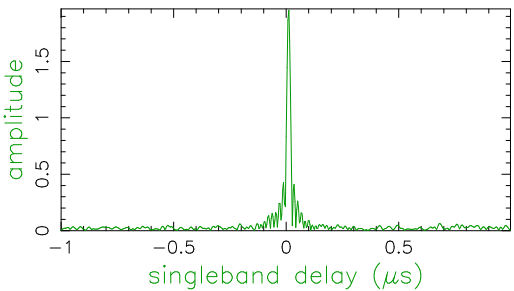
Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/tu..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/tu.W.292.1X1KZS

multiband delay ( $\mu$ s)

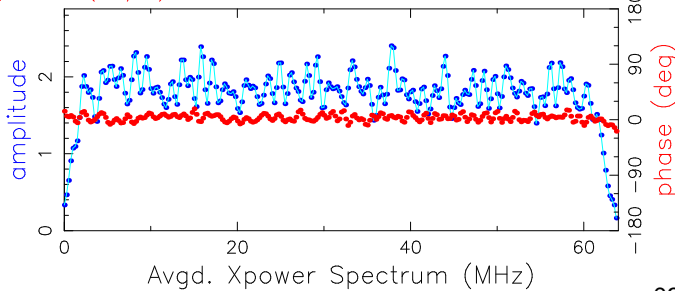


Fringe quality 5

SNR 110.1  
Int time 418.937  
Amp 1.967  
Phase -178.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.010715  
MBD -0.004740  
Fringe rate (Hz)  
-0.000904  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

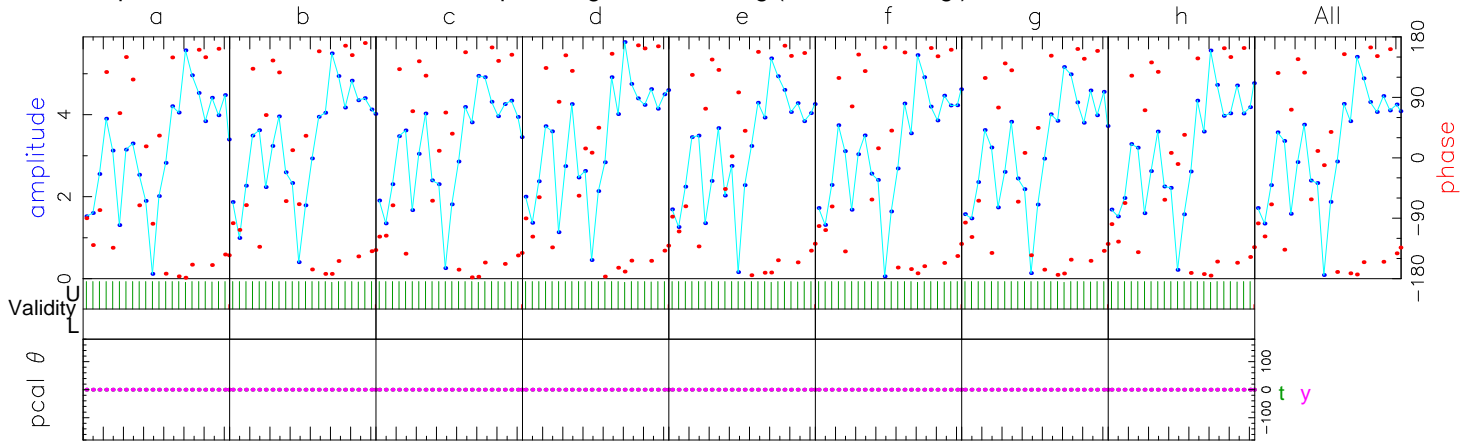


delay rate (ns/s)



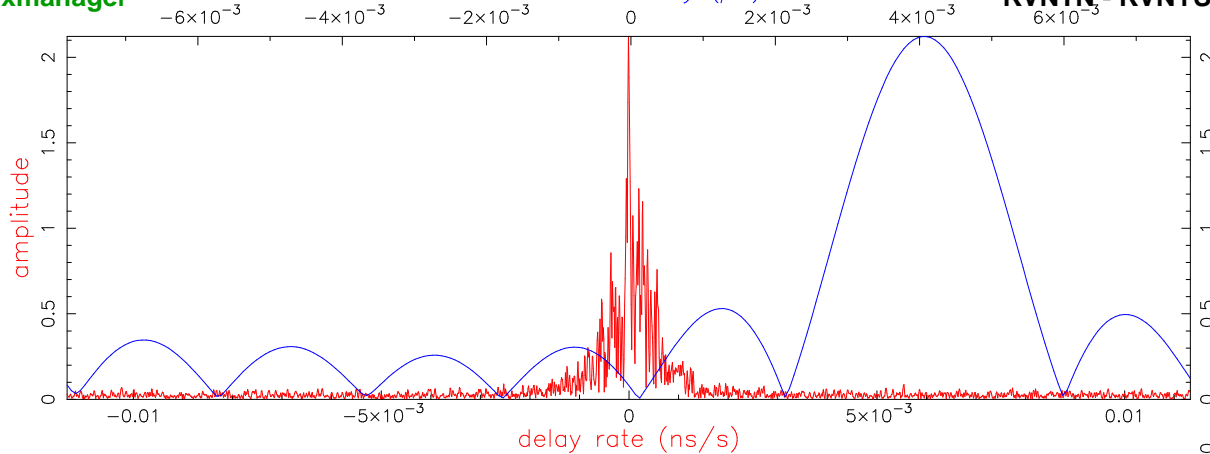
Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133134  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



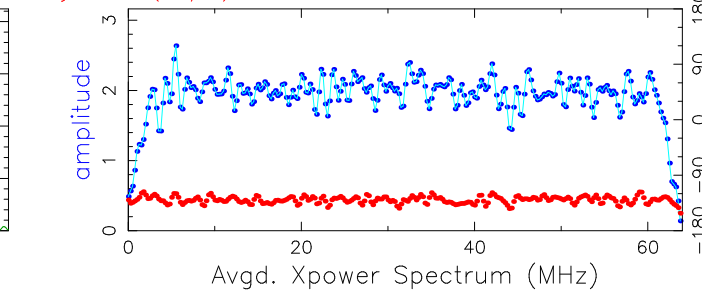
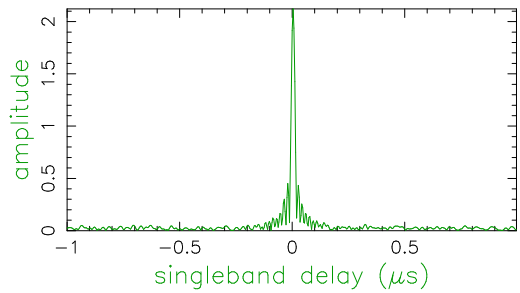
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.11978974872E+03									
Sband delay (usec)	-1.11978991862E+03									
Phase delay (usec)	-1.11980063962E+03									
Delay rate (us/s)	4.17733829009E-02									
Total phase (deg)			-34.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
Amplitude	1.967 +/- 0.018									
Search (2048X32)	1.935									
Interp.	0.000									
Inc. seg. avg.	3.164									
Inc. frq. avg.	1.955									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
u,v (fr/asec)	-378.391	-274.609								
simultaneous interpolator										

multiband delay ( $\mu$ s)



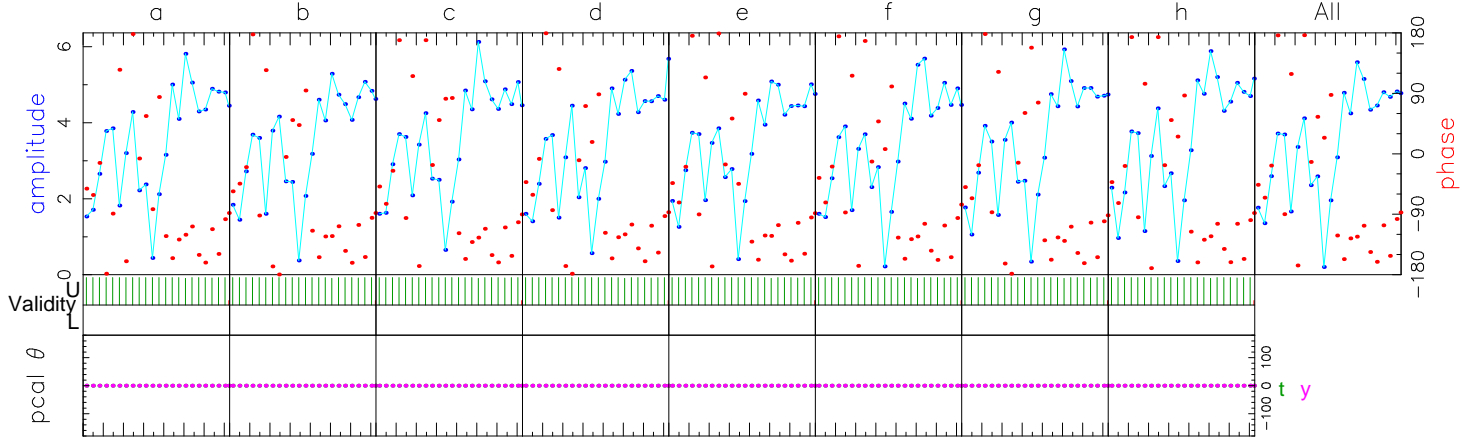
Fringe quality 5

SNR 118.8  
Int time 418.937  
Amp 2.122  
Phase -130.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.004020  
MBD 0.004064  
Fringe rate (Hz)  
-0.000892  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133137  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.11979657001E+03	-1.11979661362E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03		
Sband delay (usec)	-1.11979661362E+03	-1.11979661362E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03		
Phase delay (usec)	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03	-1.11980063807E+03		
Delay rate (us/s)	4.17733830334E-02	4.17733830334E-02	4.17733830334E-02	4.17733830334E-02	4.17733830334E-02	4.17733830334E-02	4.17733830334E-02	4.17733830334E-02		
Total phase (deg)			-346.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
pcal $\theta$										
Tracks										
Chan ids										
Tracks										
Chan ids										
Tracks										
RMS	79.1	2.3								
Theor.										
Amplitude	2.122	+/- 0.018								
Search (2048X32)	2.096									
Interp.	0.000									
Inc. seg. avg.	3.428									
Inc. frq. avg.	2.122									
PCal mode: MANUAL, MANUAL										
PCal period (AP's) 5, 5										
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
simultaneous interpolator										

Mk4/DiFX fourfit 3.21 rev 2937

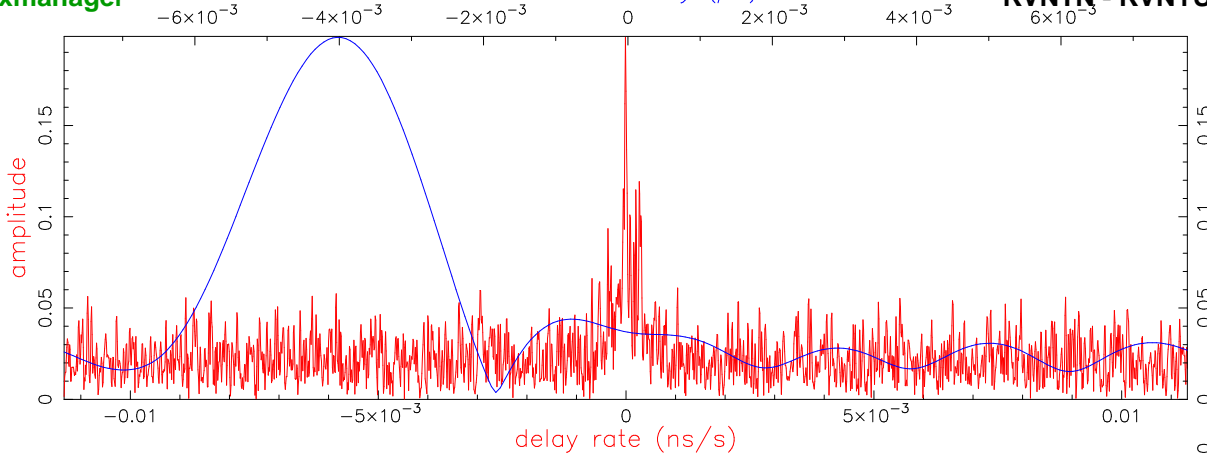
fxmanager

NRAO150.1X1KZS, No0113, ty

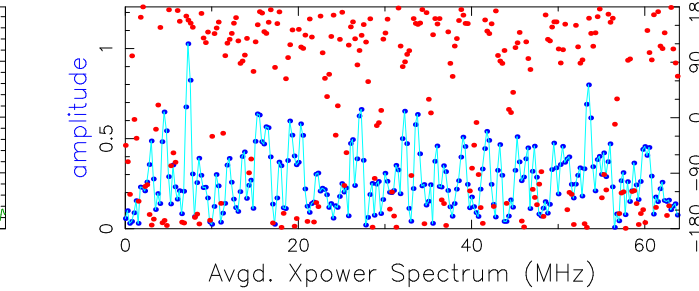
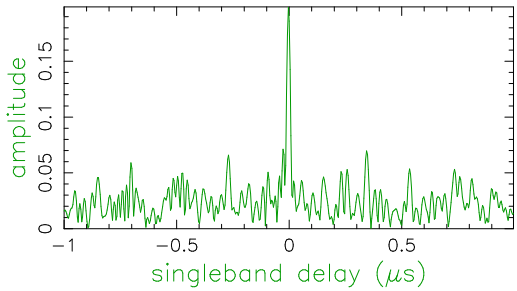
KVNTN - KVNYS, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 9

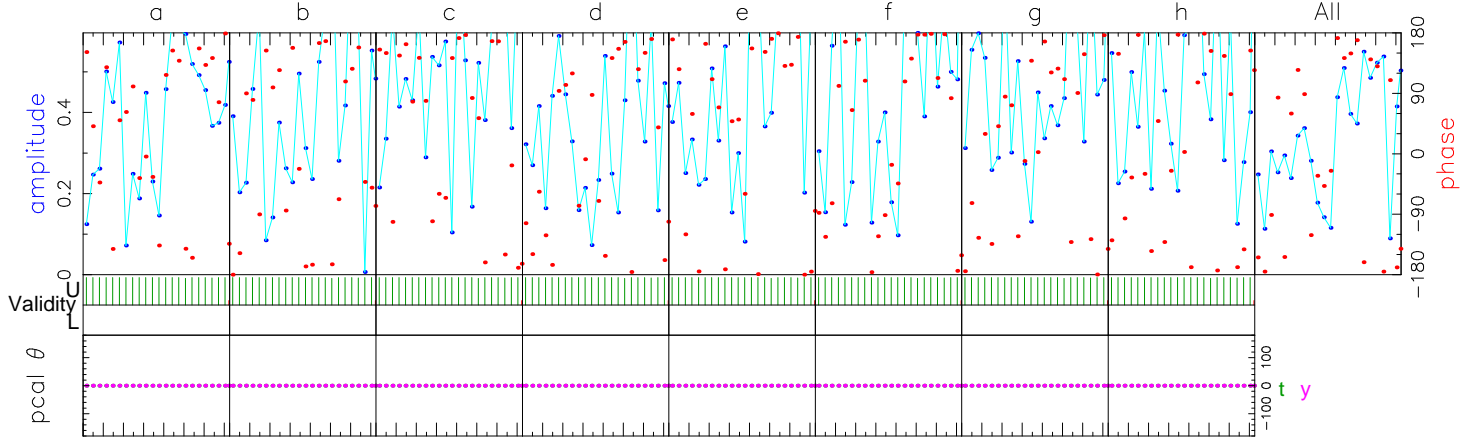


SNR 11.1  
 Int time 418.937  
 Amp 0.199  
 Phase 164.9  
 PFD 4.4e-20  
 Delays (us)  
 SBD -0.003254  
 MBD -0.004024  
 Fringe rate (Hz)  
 -0.000981  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c211c  
 Exper # 16383  
 Yr:day 2021:116  
 Start 230000.00  
 Stop 230659.84  
 FRT 230330.00  
 Corr/FF/build  
 2021:303:205431  
 2021:304:133140  
 2021:252:122852  
 RA & Dec (J2000)  
 03h59m29.747267s  
 +50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.11980465754E+03									
Sband delay (usec)	-1.11980388787E+03									
Phase delay (usec)	-1.11980062855E+03									
Delay rate (us/s)	4.17733820059E-02									
Total phase (deg)			-51.7							
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)									164.9	+/- 10.3
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)									-1.000	1.000
SampCntNorm: enabled									-0.008	0.008
mb window (us)									-0.011	0.011
dr window (ns/s)									0.00	0.00
ion window (TEC)									0.00	0.00

ph/seg (deg) 76.8 24.7 Search (2048X32) 0.197 +/- 0.018  
 amp/seg (%) 96.7 43.1 Interp. 0.000  
 ph/frq (deg) 13.1 14.6 Inc. seg. avg. 0.300  
 amp/frq (%) 34.9 25.4 Inc. frq. avg. 0.196  
 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 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  
 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  
 t: az 43.1 el 23.2 pa -64.6 y: az 44.6 el 26.5 pa -62.9 u,v (fr/asec) -378.391 -274.609 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/ty..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/ty.W.280.1X1KZS



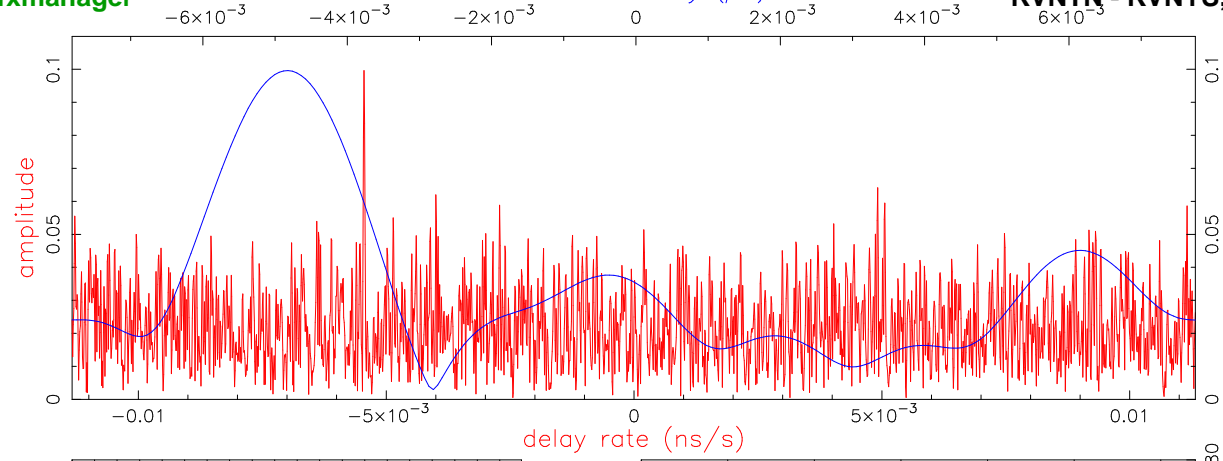
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1X1KZS, No0113, ty

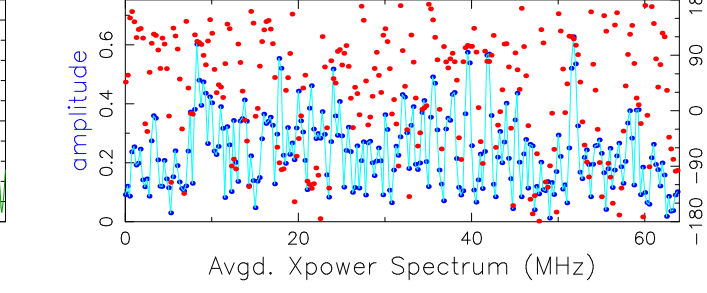
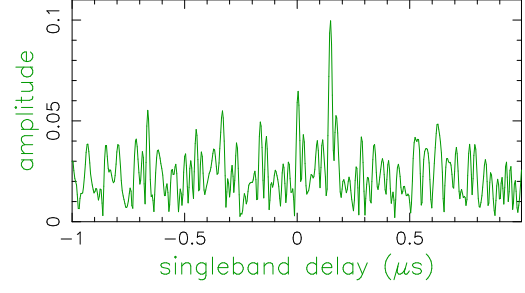
KVNTN - KVNYS, fgroup W, pol RL

multiband delay ( $\mu$ s)



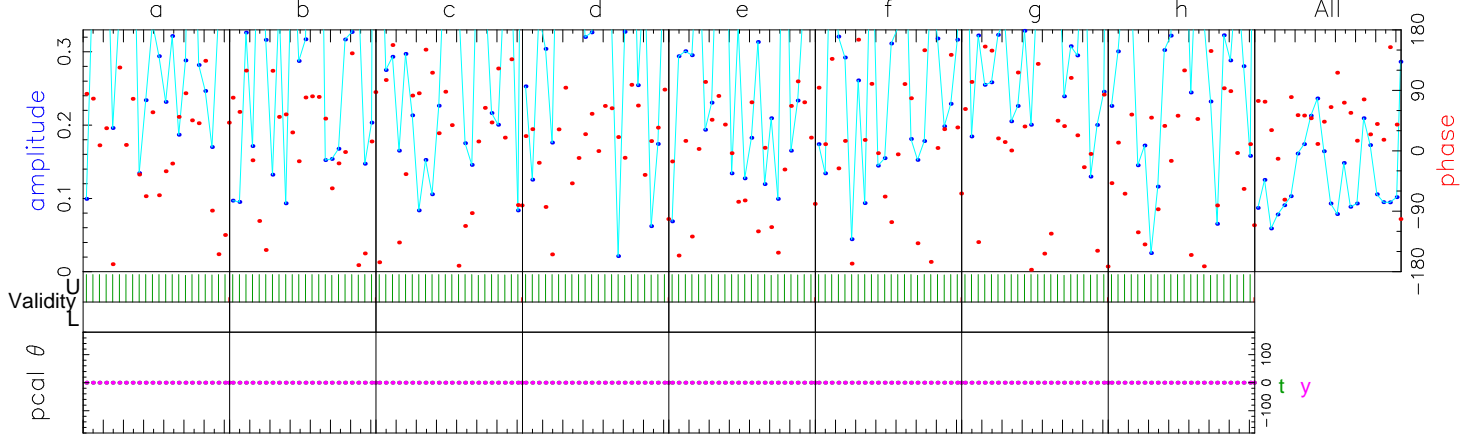
Fringe quality 0

SNR 5.6  
Int time 418.937  
Amp 0.110  
Phase 47.9  
PFD 1.0e+00  
Delays (us)  
SBD 0.147826  
MBD -0.004848  
Fringe rate (Hz)  
-0.469579  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c211c  
Exper # 16383  
Yr:day 2021:116  
Start 230000.00  
Stop 230659.84  
FRT 230330.00  
Corr/FF/build  
2021:303:205431  
2021:304:133144  
2021:252:122852  
RA & Dec (J2000)  
03h59m29.747267s  
+50°57'50.161694"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.11964923142E+03									
Sband delay (usec)	-1.11965280737E+03									
Phase delay (usec)	-1.11980063233E+03									
Delay rate (us/s)	4.17679420463E-02									
Total phase (deg)			-168.7							
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)									47.9	+/- 20.5
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

ph/seg (deg) 45.8 49.2  
amp/seg (%) 57.9 85.8  
ph/frq (deg) 30.7 29.0  
amp/frq (%) 39.6 50.6

RMS Theor. Amplitude 0.110 +/- 0.020  
Search (2048X32) 0.095  
Interp. 0.000  
Inc. seg. avg. 0.102  
Inc. frq. avg. 0.107

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
Sb window (us) -1.000 1.000  
Mb window (us) -0.008 0.008  
Dr window (ns/s) -0.011 0.011  
Ion window (TEC) 0.00 0.00

t: az 43.1 el 23.2 pa -64.6 y: az 44.6 el 26.5 pa -62.9 u,v (fr/asec) -378.391 -274.609 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c211c/v1/1234/No0113/ty..1X1KZS Output file: /Exps/c211c/v1/1234/No0113/ty.W.297.1X1KZS