

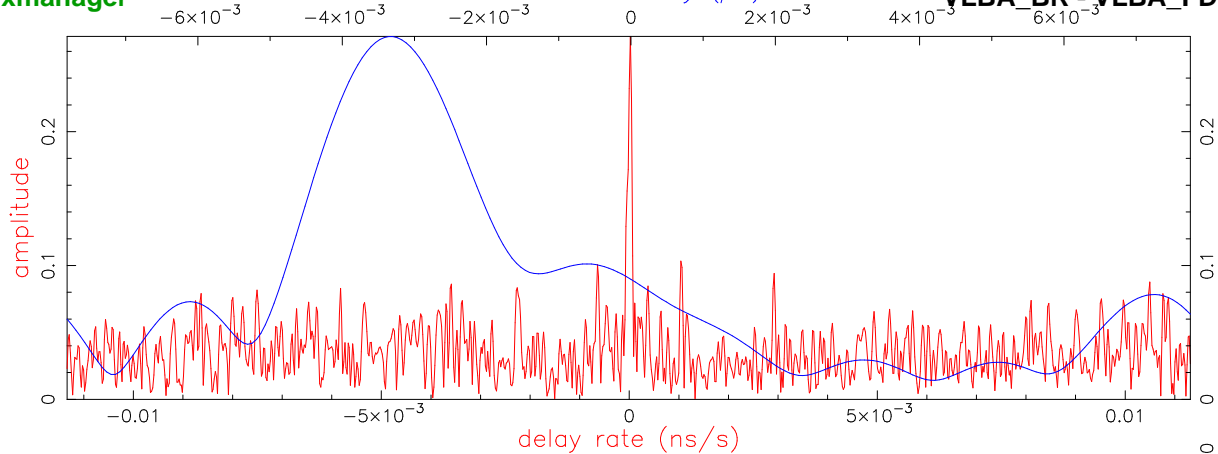
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, bf

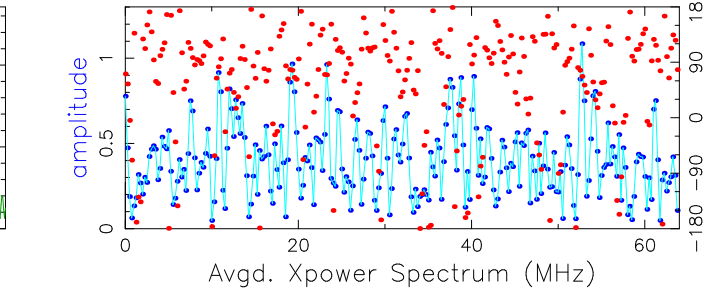
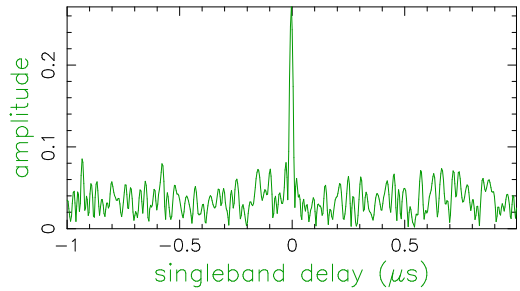
VLBA_BR - VLBA_FD, fgroup W, pol LL

multiband delay (μ s)



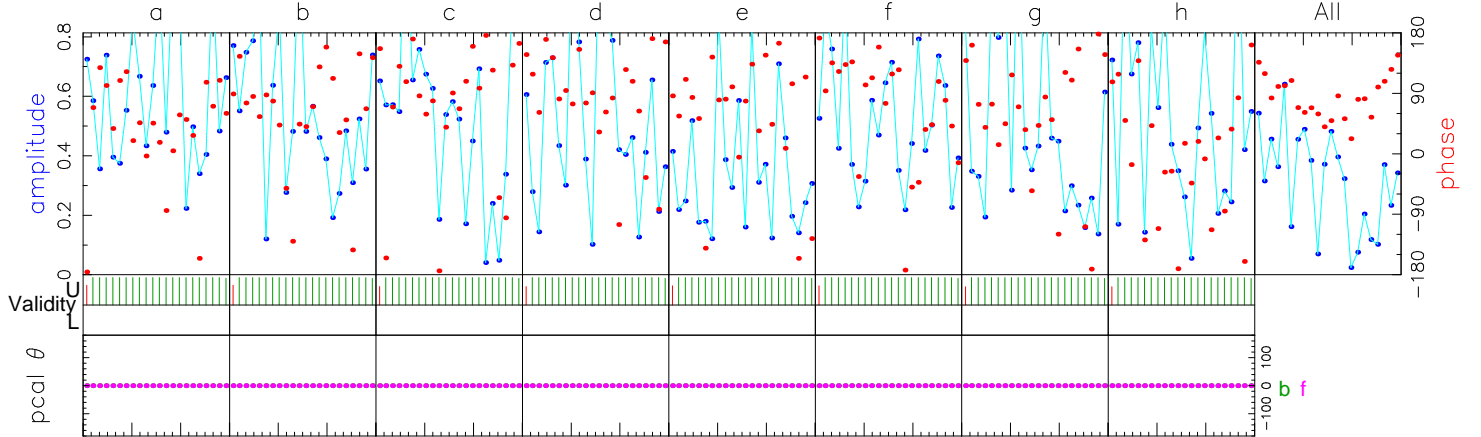
Fringe quality 9

SNR 9.9
 Int time 177.421
 Amp 0.271
 Phase 86.3
 PFD 1.1e-14
 Delays (us)
 SBD -0.004064
 MBD -0.003334
 Fringe rate (Hz) 0.001055
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145417
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:f	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		
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

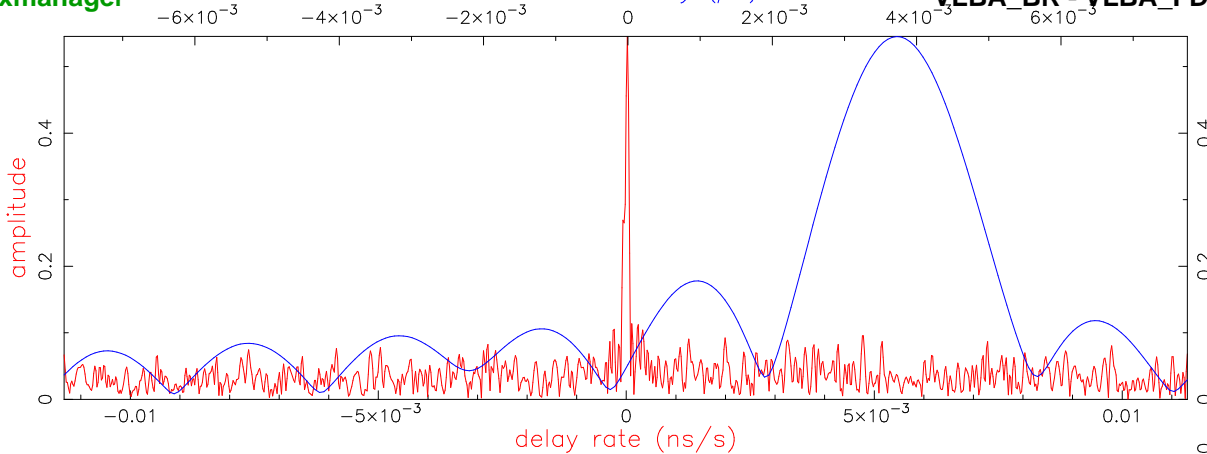
Group delay (usec)(sbd)	5.74264230458E+03	Apriori delay (usec)	5.74264563881E+03	Resid mbdelay (usec)	-3.33423E-03	+/-	1.1E-04
Sband delay (usec)	5.74264157506E+03	Apriori clock (usec)	-9.5542755E+00	Resid sbdelay (usec)	-4.06375E-03	+/-	8.7E-04
Phase delay (usec)	5.74264564159E+03	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	2.78286E-06	+/-	3.7E-07
Delay rate (us/s)	2.40388312076E-01	Apriori rate (us/s)	2.40388299823E-01	Resid rate (us/s)	1.22524E-08	+/-	3.6E-09
Total phase (deg)	204.1	Apriori accel (us/s/s)	-9.97579114102E-06	Resid phase (deg)	86.3	+/-	11.6

ph/seg (deg)	31.3	Theor.	27.2	Amplitude	0.271 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	62.6		47.5	Search (1024X32)	0.260	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	29.2		16.4	Inc. seg. avg.	0.280	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	29.2		28.6	Inc. frq. avg.	0.283	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
						Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

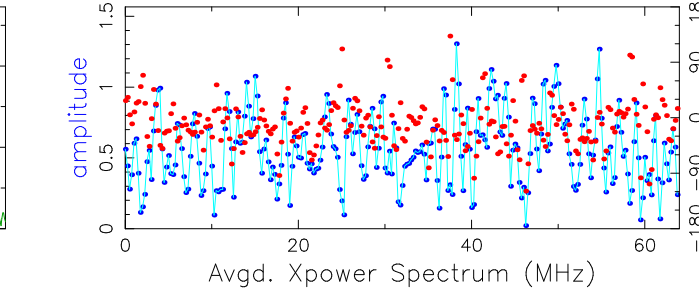
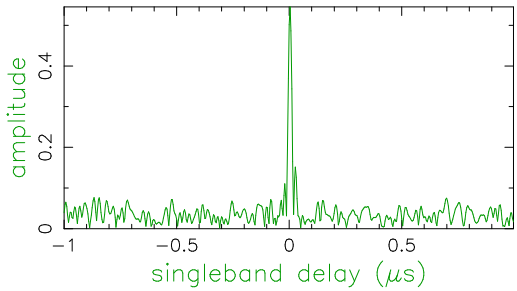
b: az 298.9 el 49.9 pa 68.3 f: az 314.6 el 29.7 pa 76.6 u,v (fr/asec) -2197.390 346.591 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/bf..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/bf.W.11.1HV1N7

multiband delay (μ s)

Fringe quality 9

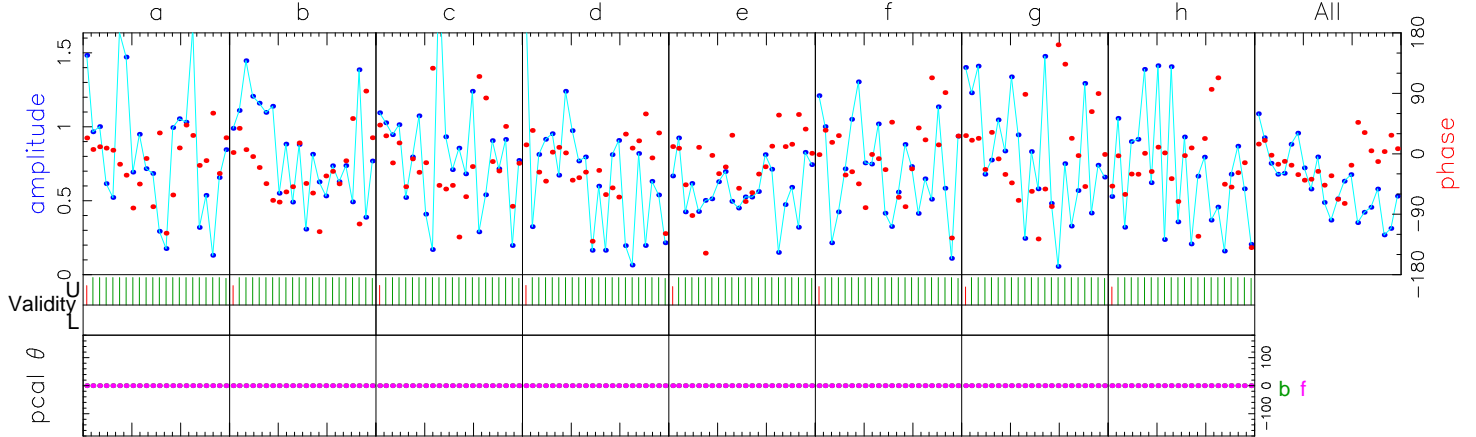


SNR 19.9
Int time 177.421
Amp 0.545
Phase -14.6
PFD 0.0e+00
Delays (us)
SBD 0.003617
MBD 0.003721
Fringe rate (Hz)
0.002105
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145419
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-7.0	-26.5	-17.6	-15.4	-11.2	-6.8	-13.6	-17.8		-14.6
	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.5		0.5
	258.2	257.9	258.3	257.9	258.5	257.2	257.5	257.8		257.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
f	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
b:f	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
f	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Tracks
Group delay (usec)(sbd)	5.74264935974E+03		Apriori delay (usec)		5.74264563881E+03		Resid mbdelay (usec)		3.72092E-03	+/- 5.5E-05
Sband delay (usec)	5.74264925581E+03		Apriori clock (usec)		-9.5542755E+00		Resid sbdelay (usec)		3.61700E-03	+/- 4.3E-04
Phase delay (usec)	5.74264563834E+03		Apriori clockrate (us/s)		-3.9999997E-07		Resid phdelay (usec)		-4.70270E-07	+/- 1.9E-07
Delay rate (us/s)	2.40388324262E-01		Apriori rate (us/s)		2.40388299823E-01		Resid rate (us/s)		2.44382E-08	+/- 1.8E-09
Total phase (deg)	103.2		Apriori accel (us/s/s)		-9.97579114102E-06		Resid phase (deg)		-14.6	+/- 5.8

	RMS	Theor.	Amplitude	0.545 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	30.4	13.5	Search (1024X32)	0.536	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	40.6	23.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	7.0	8.2	Inc. seg. avg.	0.599	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	12.8	14.2	Inc. frq. avg.	0.543	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

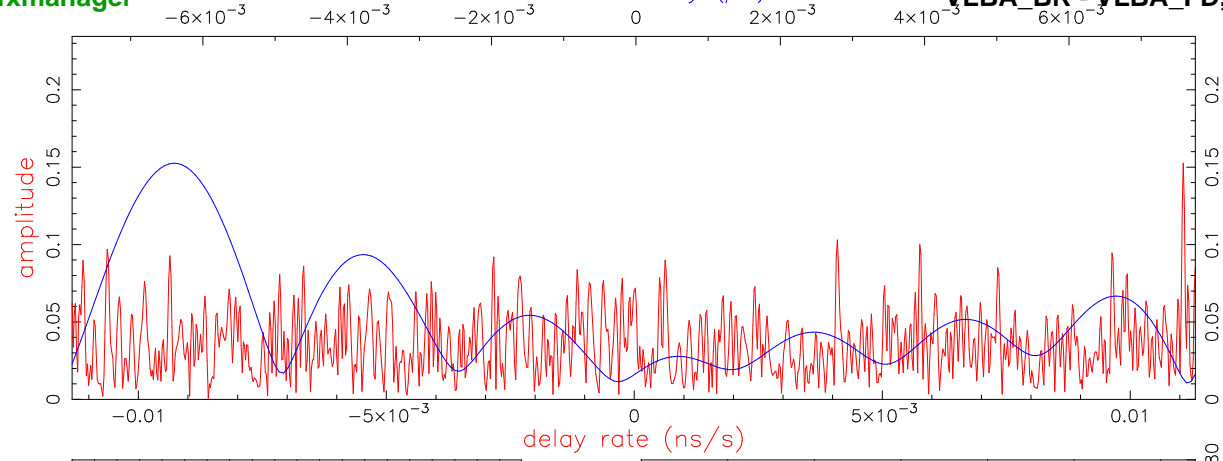
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, bf

VLBA_BR - VLBA_FD, fgroup W, pol LR

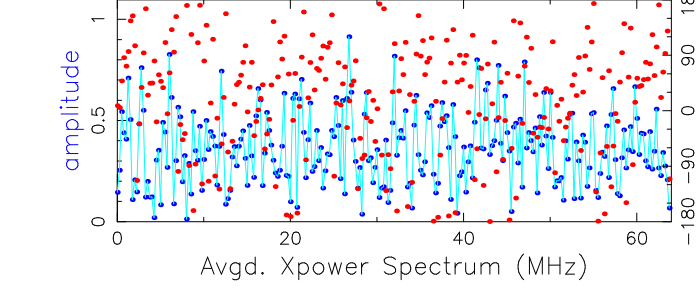
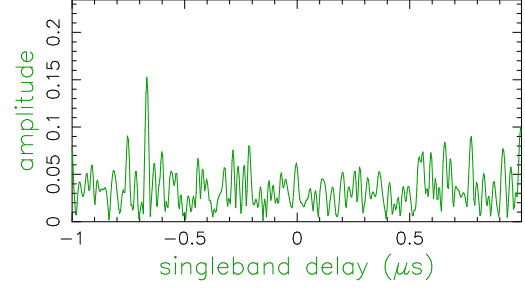
multiband delay (μ s)



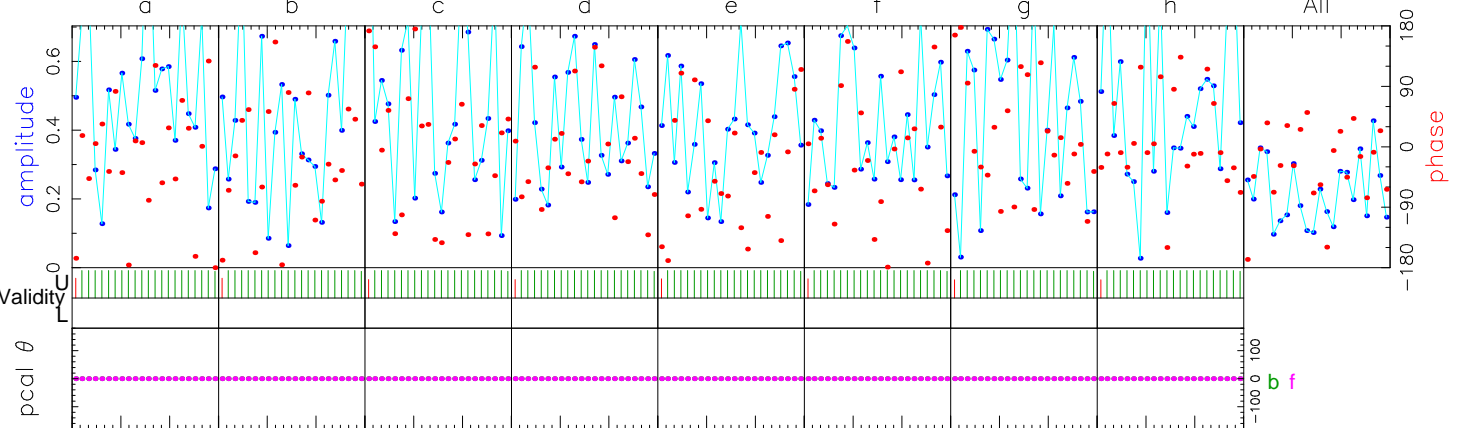
Fringe quality 0

SNR 5.6
 Int time 177.421
 Amp 0.234
 Phase -12.2
 PFD 9.6e-01
 Delays (us)
 SBD -0.667835
 MBD -0.006392
 Fringe rate (Hz) 0.954954
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145421
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-9.7	-11.2	20.1	-26.1	-84.0	-23.1	-20.7	0.7	Phase	-12.2
	0.3	0.3	0.2	0.2	0.1	0.1	0.3	0.4	Ampl.	0.2
	137.9	487.0	136.7	447.3	410.0	427.7	113.8	493.2	Sbd box	86.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.74198299697E+03		Apriori delay (usec)		5.74264563881E+03		Resid mbdelay (usec)		-6.39184E-03	+/- 2.0E-04
Sband delay (usec)	5.74197780431E+03		Apriori clock (usec)		-9.5542755E+00		Resid sbdelay (usec)		-6.67835E-01	+/- 1.6E-03
Phase delay (usec)	5.74264563842E+03		Apriori clockrate (us/s)		-3.9999997E-07		Resid phdelay (usec)		-3.94952E-07	+/- 6.7E-07
Delay rate (us/s)	2.40399385892E-01		Apriori rate (us/s)		2.40388299823E-01		Resid rate (us/s)		1.10861E-05	+/- 6.4E-09
Total phase (deg)	105.6		Apriori accel (us/s/s)		-9.97579114102E-06		Resid phase (deg)		-12.2	+/- 20.6

ph/seg (deg) 56.0 48.4 Search (1024X32) 0.148 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 74.6 84.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 33.5 29.2 Inc. seg. avg. 0.248 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.6 50.9 Inc. frq. avg. 0.221 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 298.9 el 49.9 pa 68.3 f: az 314.6 el 29.7 pa 76.6 u,v (fr/asec) -2197.390 346.591 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/bf..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/bf.W.49.1HV1N7

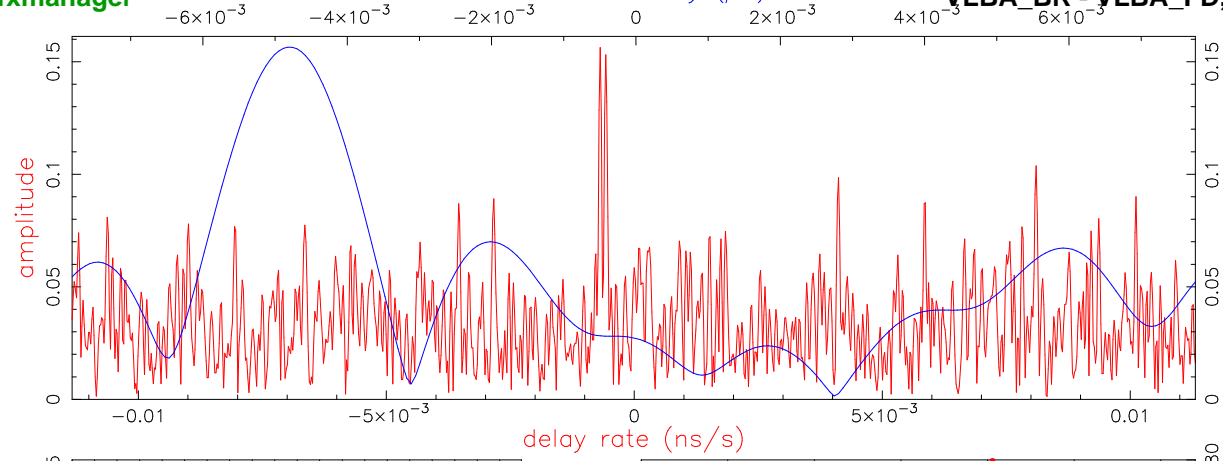
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

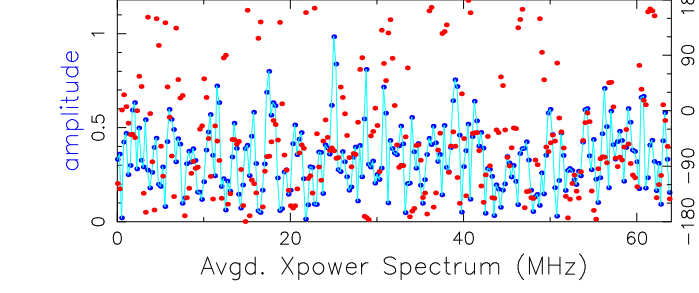
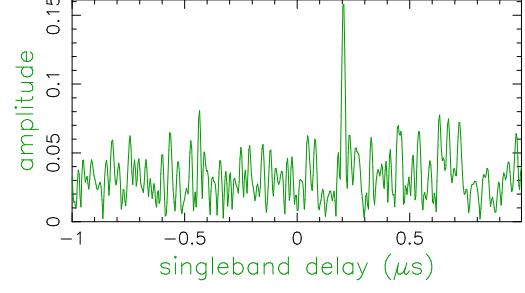
NRAO150.1HV1N7, No0150, bf

VLBA_BR - VLBA_FD, fgroup W, pol RL

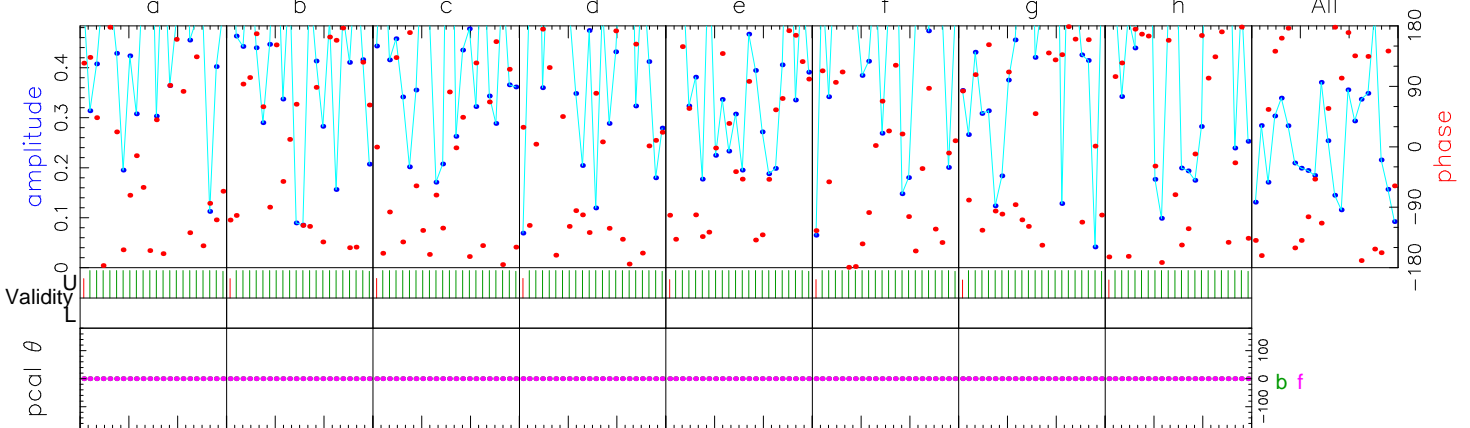
multiband delay (μ s)



Fringe quality 0
 SNR 5.9
 Int time 177.421
 Amp 0.161
 Phase -178.2
 PFD 4.3e-01
 Delays (us)
 SBD 0.205279
 MBD -0.004745
 Fringe rate (Hz)
 -0.059032
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145422
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

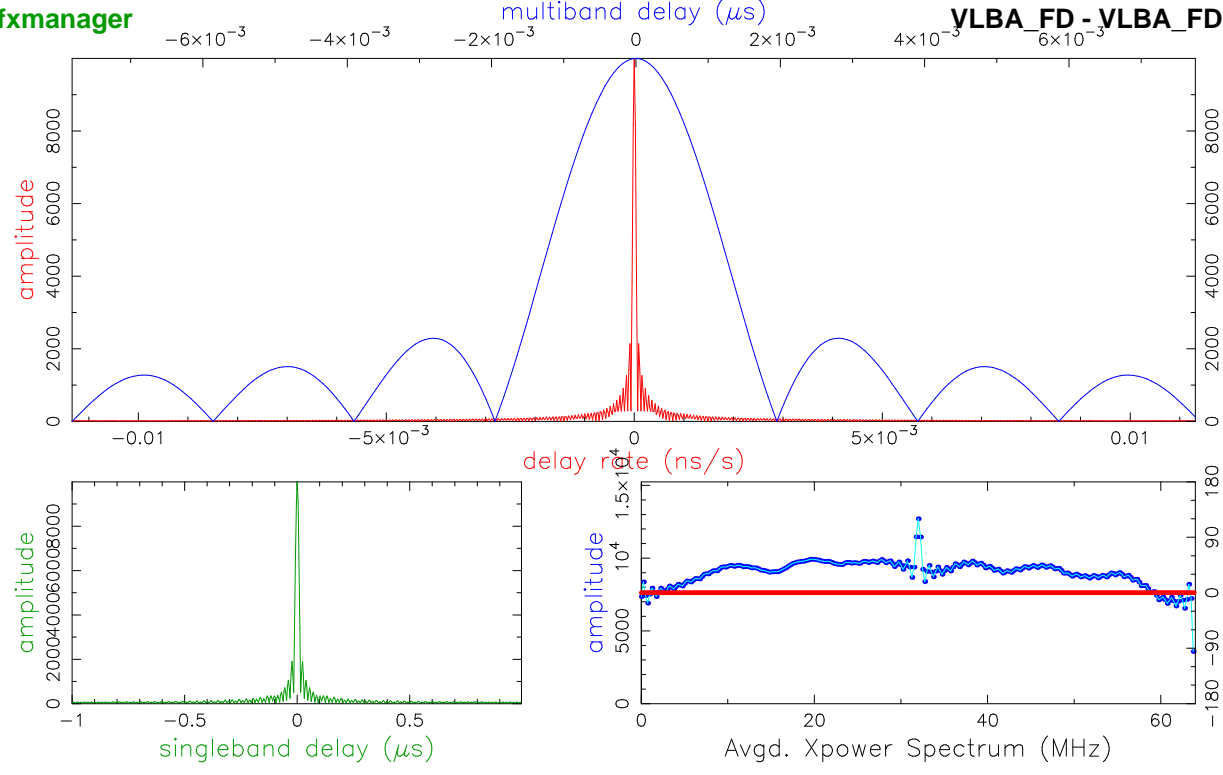


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



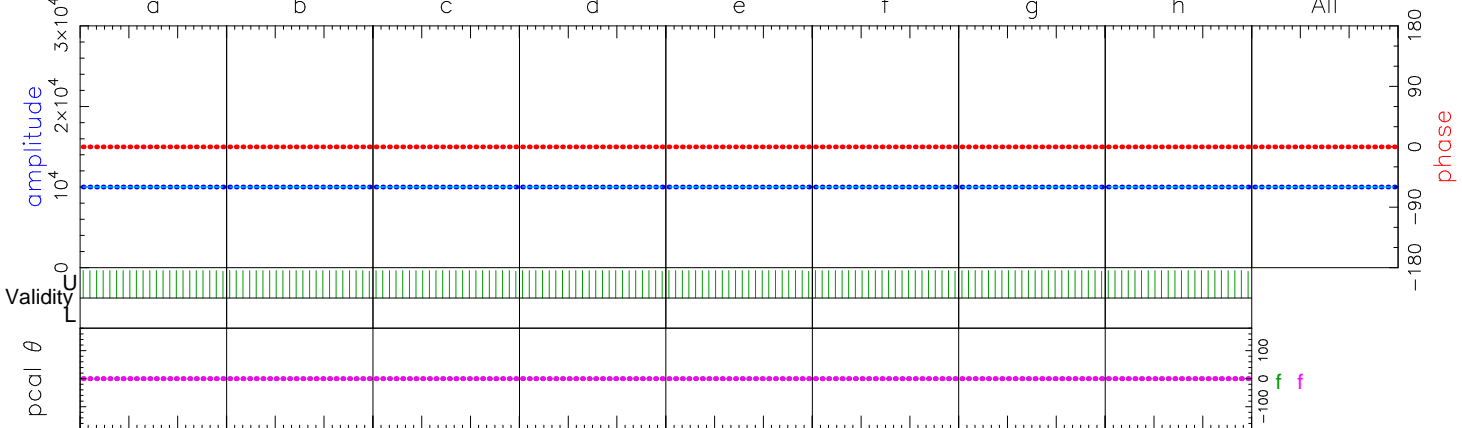
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-174.3	176.6	-178.0	-148.2	178.6	133.6	-165.7	171.7	Phase	-178.2
	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.3	Ampl.	0.1
	33.2	92.1	203.4	295.9	39.3	250.7	436.0	307.1	Sbd box	309.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.74284401834E+03		Apriori delay (usec)		5.74264563881E+03		Resid mbdelay (usec)		-4.74548E-03	+/- 1.9E-04
Sband delay (usec)	5.74285091781E+03		Apriori clock (usec)		-9.5542755E+00		Resid sbdelay (usec)		2.05279E-01	+/- 1.5E-03
Phase delay (usec)	5.74264563307E+03		Apriori clockrate (us/s)		-3.9999997E-07		Resid phdelay (usec)		-5.74507E-06	+/- 6.3E-07
Delay rate (us/s)	2.40387614519E-01		Apriori rate (us/s)		2.40388299823E-01		Resid rate (us/s)		-6.85304E-07	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-9.97579114102E-06		Resid phase (deg)		-178.2	+/- 19.5

ph/seg (deg) 64.9 45.8 Amplitude 0.161 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 83.7 80.0 Search (1024X32) 0.154 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.3 27.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 43.9 48.2 Inc. seg. avg. 0.191 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 b: az 298.9 el 49.9 pa 68.3 f: az 314.6 el 29.7 pa 76.6 u,v (fr/asec) -2197.390 346.591 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/bf..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/bf.W.64.1HV1N7 simultaneous interpolator



Fringe quality 9
SNR 366871.1
Int time 179.983
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c202a
Yr:day 16383
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145417
2020:247:085004
RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"

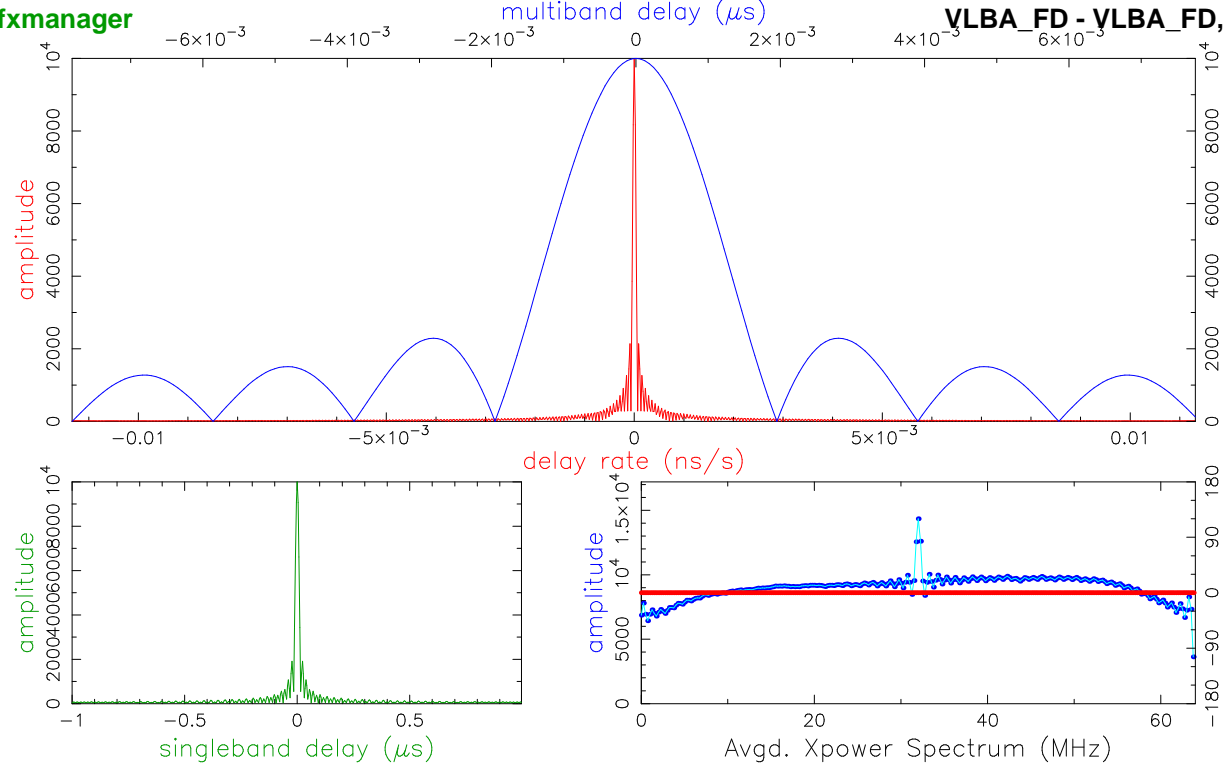
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:f	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		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

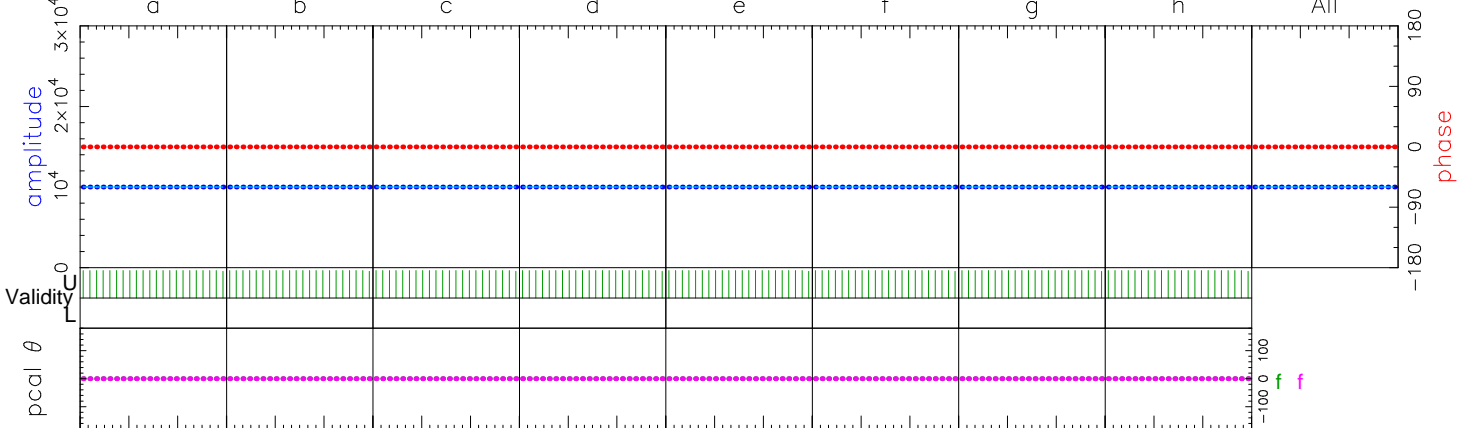
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.0E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.3E-08
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.0E-11
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00



Fringe quality 9
SNR 366871.1
Int time 179.983
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. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145418
2020:247:085004
RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:f	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		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	3.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	2.3E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.0E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	9.7E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	10000.000 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (1024X32)	10000.000	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Inc. frq. avg.	10000.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	0.0	0.0	0.0	Inc. frq. avg.	10000.000	Inc. frq. avg.	10000.000	Sample rate (MSamp/s):	128	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011 0.011
f: az 314.6 el 29.7 pa 76.6		f: az 314.6 el 29.7 pa 76.6		u, v (fr/asec)	0.000 0.000			Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00		simultaneous interpolator

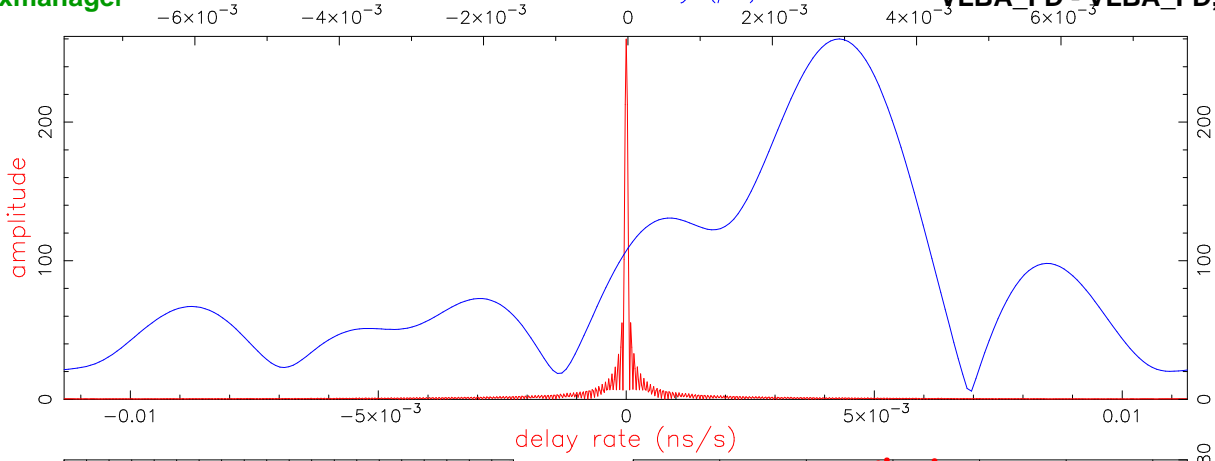
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, ff

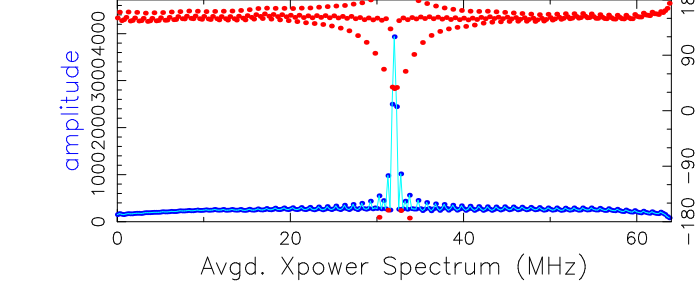
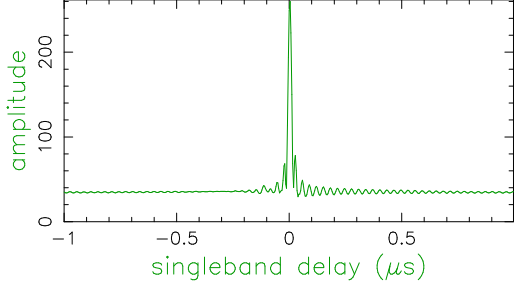
VLBA_FD - VLBA_FD, fgroup W, pol LR

multiband delay (μ s)



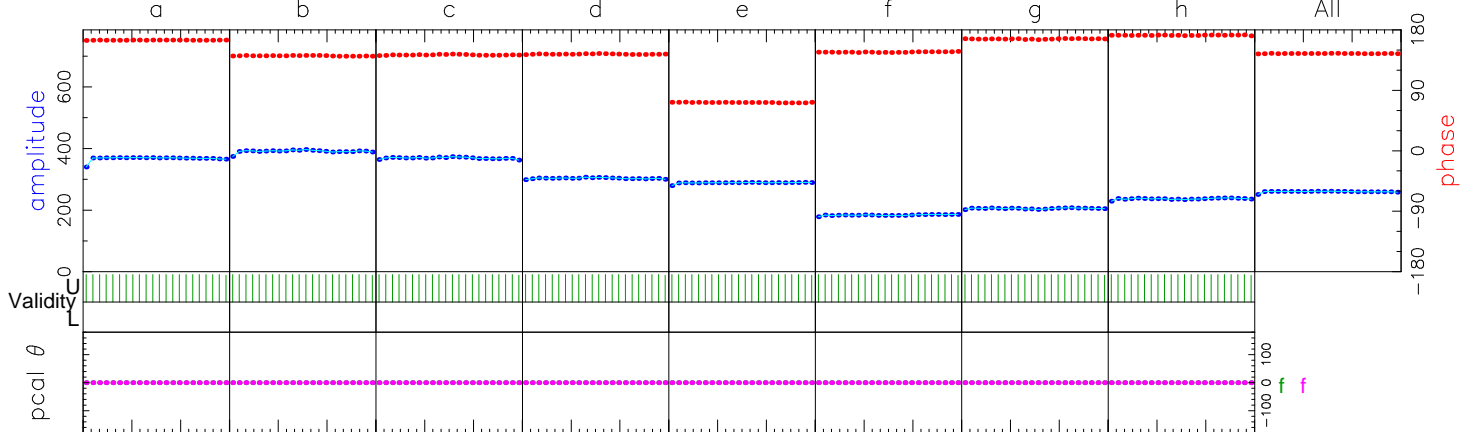
Fringe quality 6

SNR 9606.1
 Int time 179.983
 Amp 261.838
 Phase 144.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.002826
 MBD 0.002906
 Fringe rate (Hz)
 -0.000004
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145420
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	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	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	2.90581250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	2.90581E-03	+/-	1.1E-07
Sband delay (usec)	2.82575000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	2.82575E-03	+/-	9.0E-07
Phase delay (usec)	4.66528195912E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.66528E-06	+/-	3.8E-10
Delay rate (us/s)	-4.81819181317E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-4.81819E-11	+/-	3.7E-12
Total phase (deg)	144.7	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	144.7	+/-	0.0

ph/seg (deg)	0.2	0.0	Amplitude	261.838 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	1.1	0.0	Search (1024X32)	259.963	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	34.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	30.7	0.0	Inc. seg. avg.	259.928	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
			Inc. frq. avg.	293.349	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

f: az 314.6 el 29.7 pa 76.6 f: az 314.6 el 29.7 pa 76.6 u, v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/ff.1.1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/ff.W.41.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

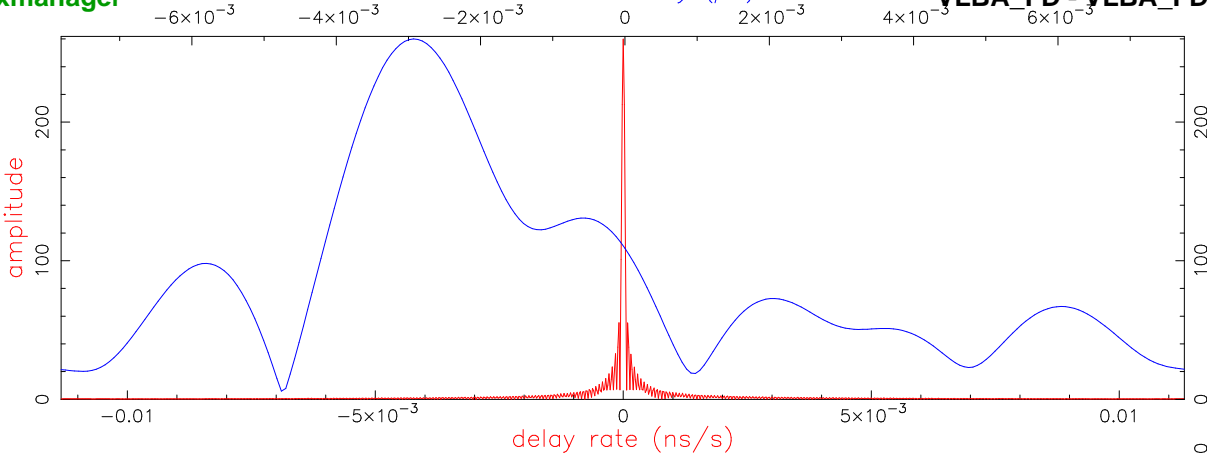
fxmanager

NRAO150.1HV1N7, No0150, ff

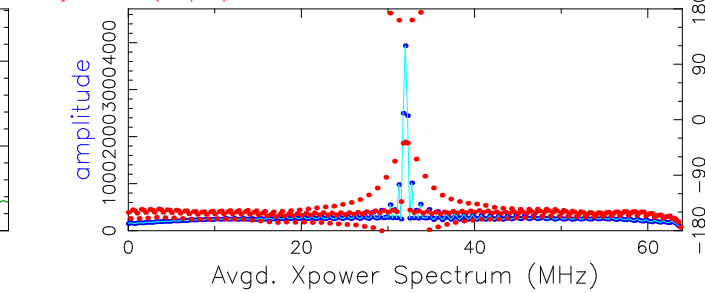
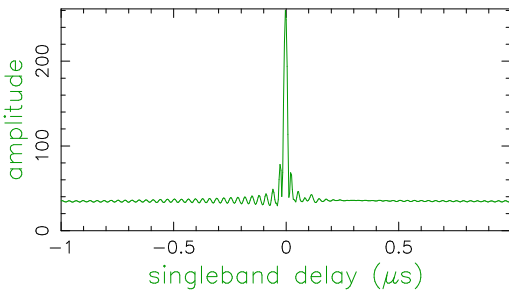
VLBA_FD - VLBA_FD, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 6

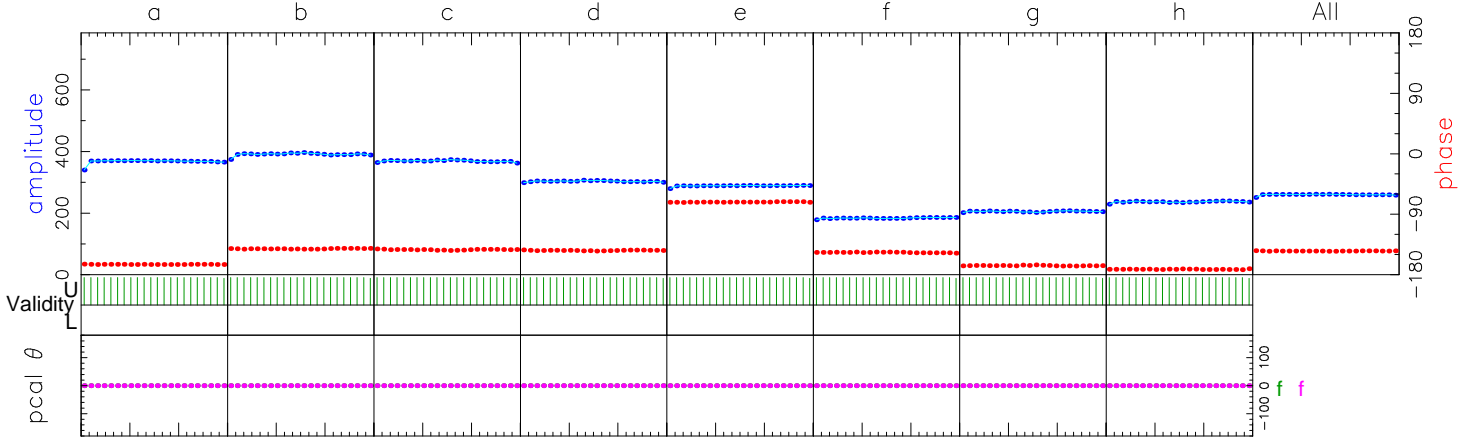


SNR 9606.1
 Int time 179.983
 Amp 261.838
 Phase -144.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.002826
 MBD -0.002906
 Fringe rate (Hz) 0.000004
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



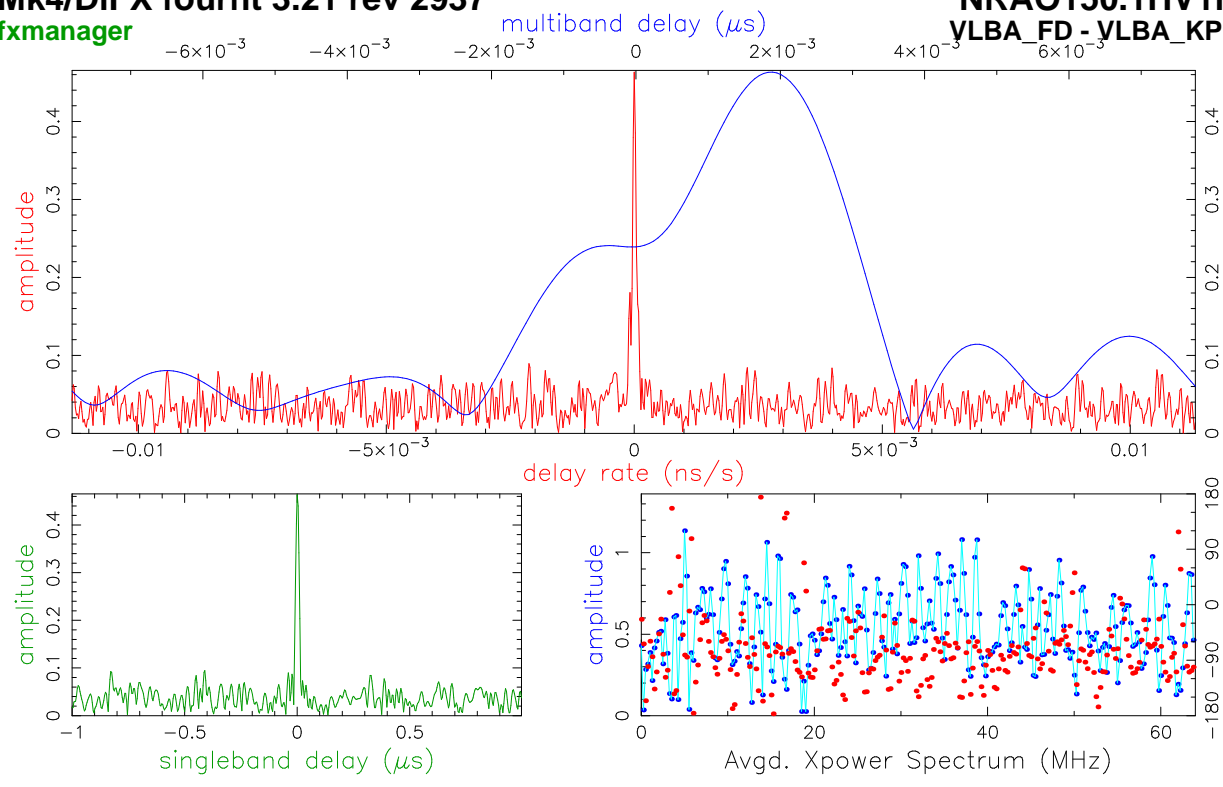
Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145421
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



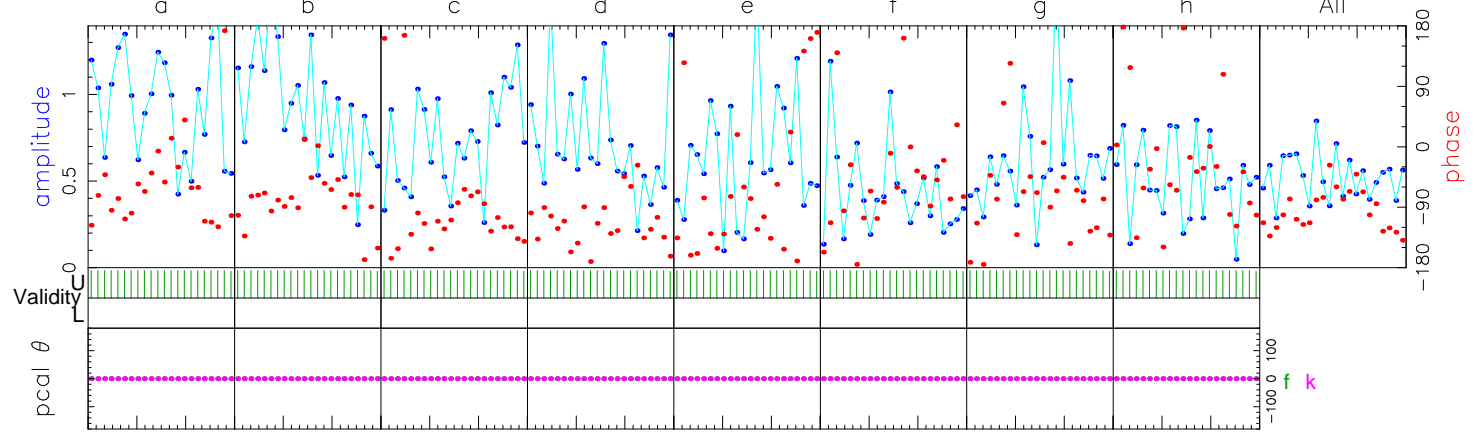
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-164.5	-141.3	-142.7	-143.8	-71.8	-146.9	-166.4	-171.9	Phase	-144.7
	367.9	391.2	369.3	303.4	288.7	184.0	205.4	236.8	Ampl.	293.3
	256.4	256.4	256.4	256.4	249.8	256.1	256.2	256.3	Sbd box	256.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	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	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.90581250000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-2.90581E-03	+/- 1.1E-07
Sband delay (usec)	-2.82575000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-2.82575E-03	+/- 9.0E-07
Phase delay (usec)	-4.66528195922E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-4.66528E-06	+/- 3.8E-10
Delay rate (us/s)	4.81819181317E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		4.81819E-11	+/- 3.7E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-144.7	+/- 0.0

ph/seg (deg) 0.2 0.0 Theor. Amplitude 261.838 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 1.1 0.0 Search (1024X32) 259.963 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 34.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 30.7 0.0 Inc. seg. avg. 259.928 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 f: az 314.6 el 29.7 pa 76.6 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/c202a/v1/v1_3mm/1234/No0150/ff..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/ff.W.56.1HV1N7 simultaneous interpolator



Fringe quality 7
SNR 17.1
Int time 179.963
Amp 0.465
Phase -94.1
PFD 0.0e+00
Delays (us)
SBD 0.000875
MBD 0.001888
Fringe rate (Hz) 0.000840
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145417
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-75.5	-77.9	-118.4	-115.6	-129.6	-75.4	-86.8	-56.9	Phase	-94.1
	0.7	0.8	0.6	0.6	0.4	0.2	0.4	0.3	Ampl.	0.5
	257.5	256.9	257.4	257.2	257.2	53.0	256.9	257.9	Sbd box	257.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.76480715872E+03		Apriori delay (usec)		-1.76480904703E+03		Resid mbdelay (usec)		1.88831E-03	+/- 6.4E-05
Sband delay (usec)	-1.76480817153E+03		Apriori clock (usec)		7.5137062E+00		Resid sbdelay (usec)		8.75500E-04	+/- 5.0E-04
Phase delay (usec)	-1.76480905007E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		-3.03439E-06	+/- 2.2E-07
Delay rate (us/s)	-3.82109060877E-02		Apriori rate (us/s)		-3.82109158446E-02		Resid rate (us/s)		9.75684E-09	+/- 2.1E-09
Total phase (deg)			Apriori accel (us/s/s)		7.69568811699E-06		Resid phase (deg)		-94.1	+/- 6.7

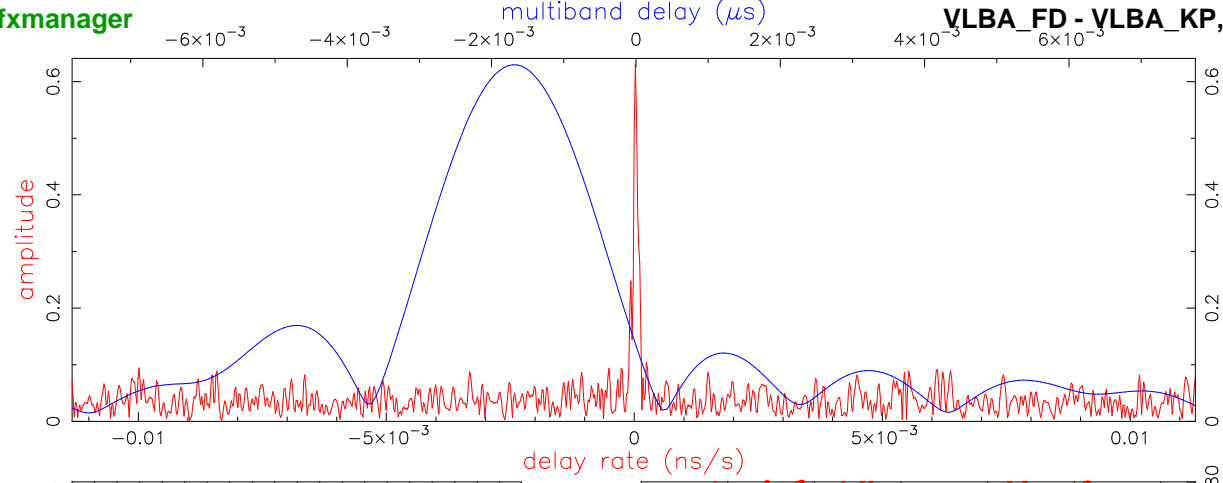
ph/seg (deg) RMS Theor. Amplitude 0.465 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 29.9 15.7 Search (1024X32) 0.446 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.3 27.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 28.0 9.5 Inc. seg. avg. 0.507 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 41.8 16.6 Inc. frq. avg. 0.496 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 f: az 314.6 el 29.7 pa 76.6 k: az 312.9 el 35.3 pa 80.9 u,v (fr/asec) 352.288 636.236 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk.W.18.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fk

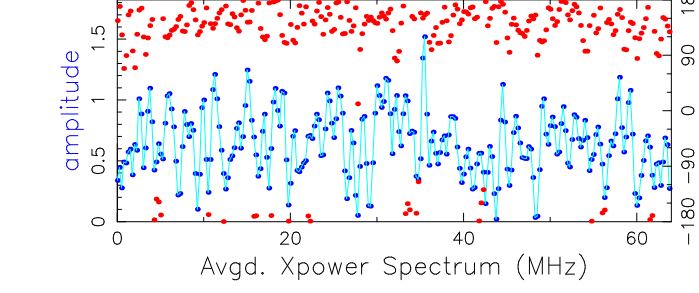
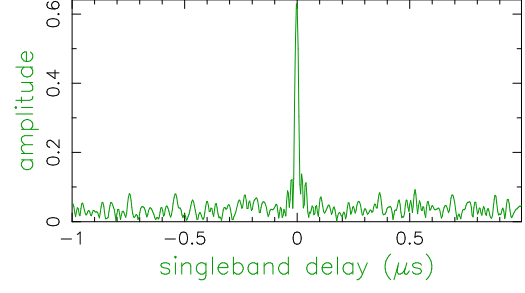
VLBA_FD - VLBA_KP, fgroup W, pol RR



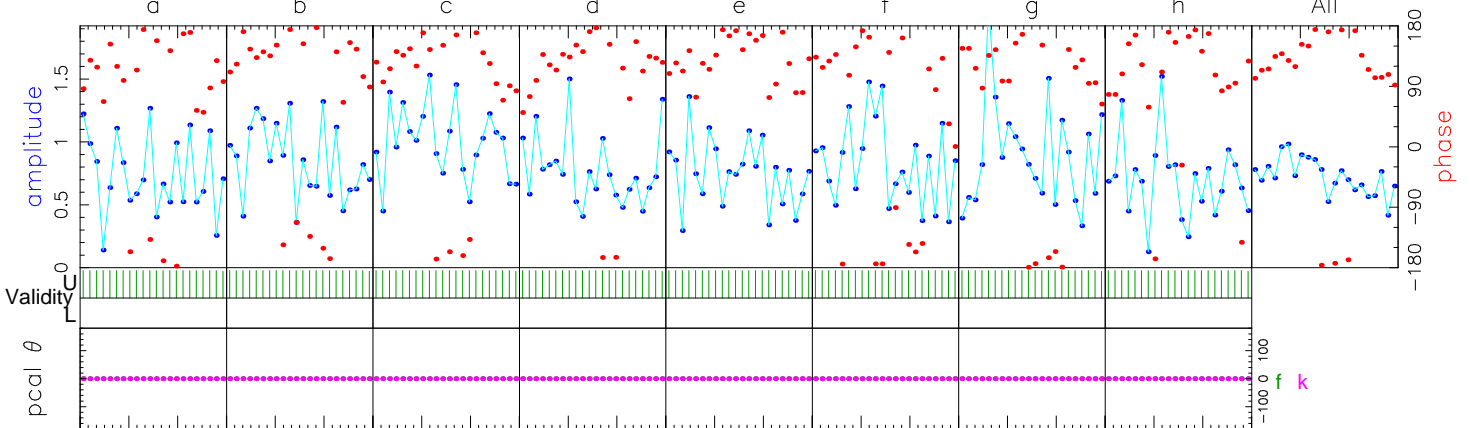
Fringe quality 8

SNR 23.5
 Int time 179.963
 Amp 0.641
 Phase 140.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.002211
 MBD -0.001650
 Fringe rate (Hz) 0.001266
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145419
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.76481069676E+03		Apriori delay (usec)		-1.76480904703E+03		Resid mbdelay (usec)		-1.64973E-03	+/- 4.6E-05
Sband delay (usec)	-1.76481125778E+03		Apriori clock (usec)		7.5137062E+00		Resid sbdelay (usec)		-2.21075E-03	+/- 3.7E-04
Phase delay (usec)	-1.76480904252E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		4.51355E-06	+/- 1.6E-07
Delay rate (us/s)	-3.82109011477E-02		Apriori rate (us/s)		-3.82109158446E-02		Resid rate (us/s)		1.46969E-08	+/- 1.5E-09
Total phase (deg)	27.9		Apriori accel (us/s/s)		7.69568811699E-06		Resid phase (deg)		140.0	+/- 4.9

ph/seg (deg) 31.2 11.4 Amplitude 0.641 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 25.5 19.9 Search (1024X32) 0.607 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 10.2 6.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 14.7 12.0 Inc. seg. avg. 0.714 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 k: az 312.9 el 35.3 pa 80.9 u,v (fr/asec) 352.288 636.236 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk.W.37.1HV1N7 simultaneous interpolator

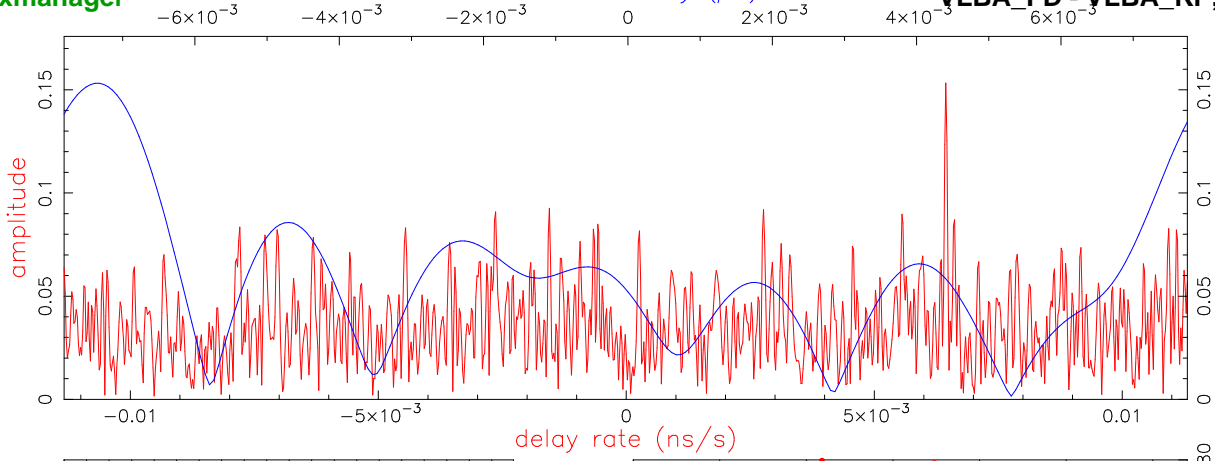
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fk

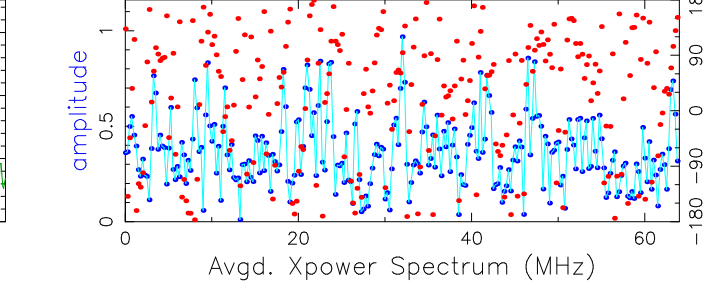
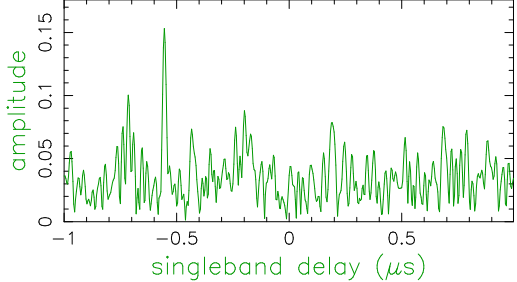
VLBA_FD - VLBA_KP, fgroup W, pol LR

multiband delay (μ s)



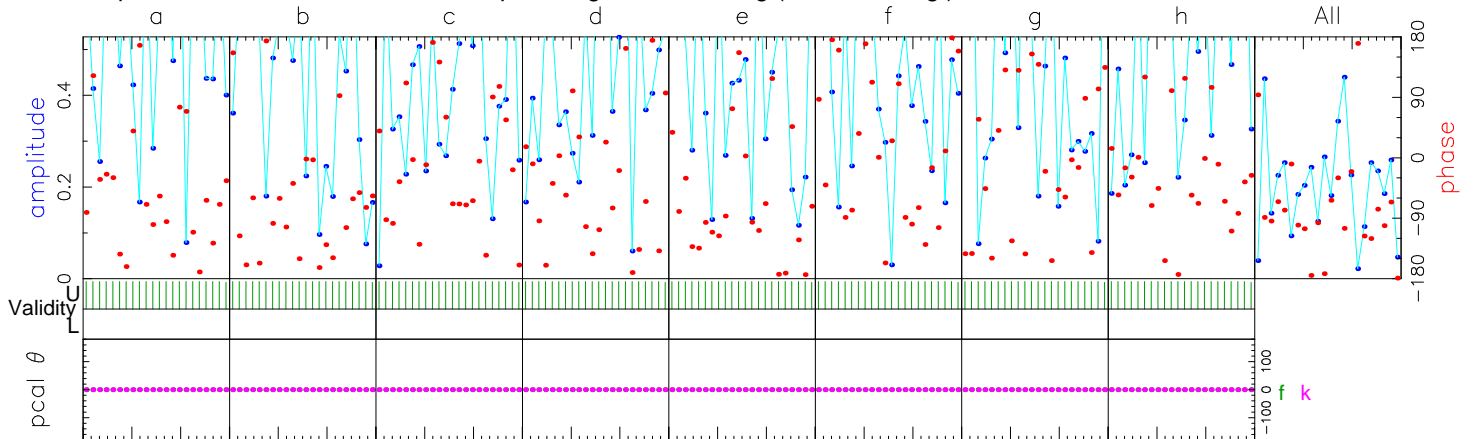
Fringe quality 0

SNR 5.6
Int time 179.963
Amp 0.176
Phase -90.2
PFD 9.0e-01
Delays (us)
SBD -0.554368
MBD -0.007352
Fringe rate (Hz) 0.556613
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145421
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-1.76536327391E+03	Apriori delay (usec)	-1.76480904703E+03	Resid mbdelay (usec)	-7.35188E-03	+/-	1.9E-04
Sband delay (usec)	-1.76536341478E+03	Apriori clock (usec)	7.5137062E+00	Resid sbdelay (usec)	-5.54368E-01	+/-	1.5E-03
Phase delay (usec)	-1.76480904994E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-2.90973E-06	+/-	6.6E-07
Delay rate (us/s)	-3.82044541236E-02	Apriori rate (us/s)	-3.82109158446E-02	Resid rate (us/s)	6.46172E-06	+/-	6.3E-09
Total phase (deg)	-202.3	Apriori accel (us/s/s)	7.69568811699E-06	Resid phase (deg)	-90.2	+/-	20.4

ph/seg (deg)	61.2	Theor.	47.8	Amplitude	0.176 +/- 0.031	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	78.6		83.4	Search (1024X32)	0.150	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	39.2		28.8	Inc. seg. avg.	0.175	Sample rate (MSamp/s):	128	nlags:	256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	44.9		50.3	Inc. frq. avg.	0.186	Data rate (Mb/s):	2048	t_cohere	infinite	ion window (TEC)	0.00	0.00

f: az 314.6 el 29.7 pa 76.6 k: az 312.9 el 35.3 pa 80.9 u,v (fr/asec) 352.288 636.236 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk.W.51.1HV1N7

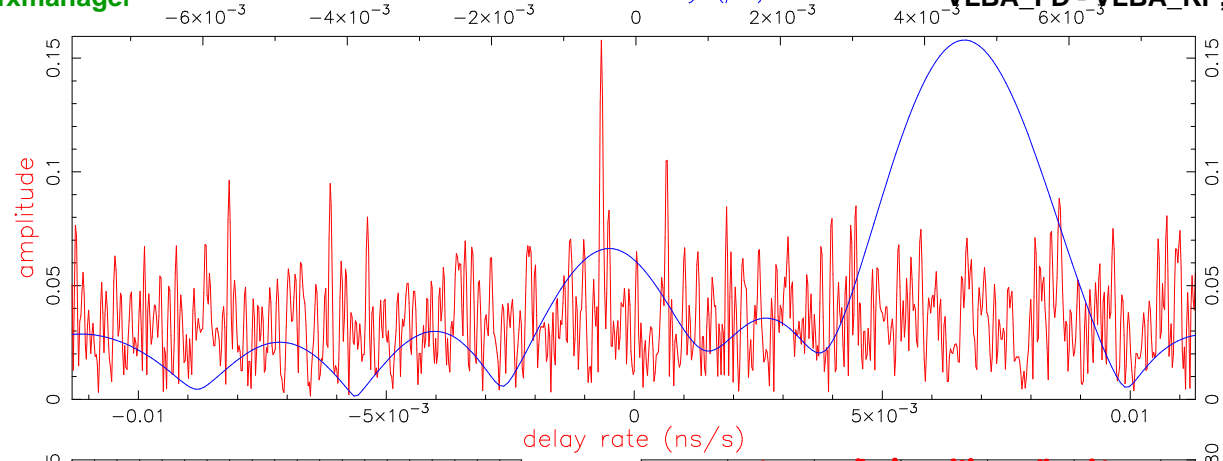
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

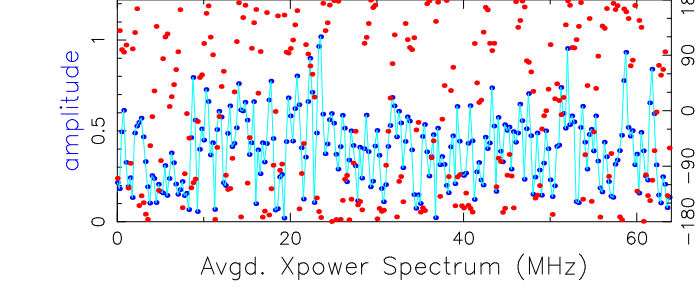
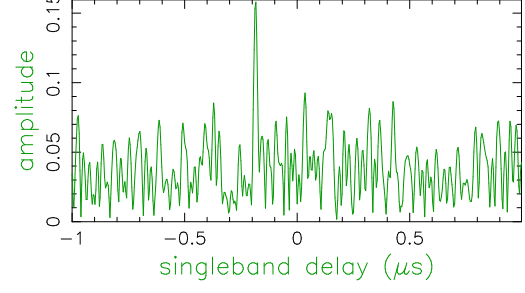
NRAO150.1HV1N7, No0150, fk

VLBA_FD - VLBA_KP, fgroup W, pol RL

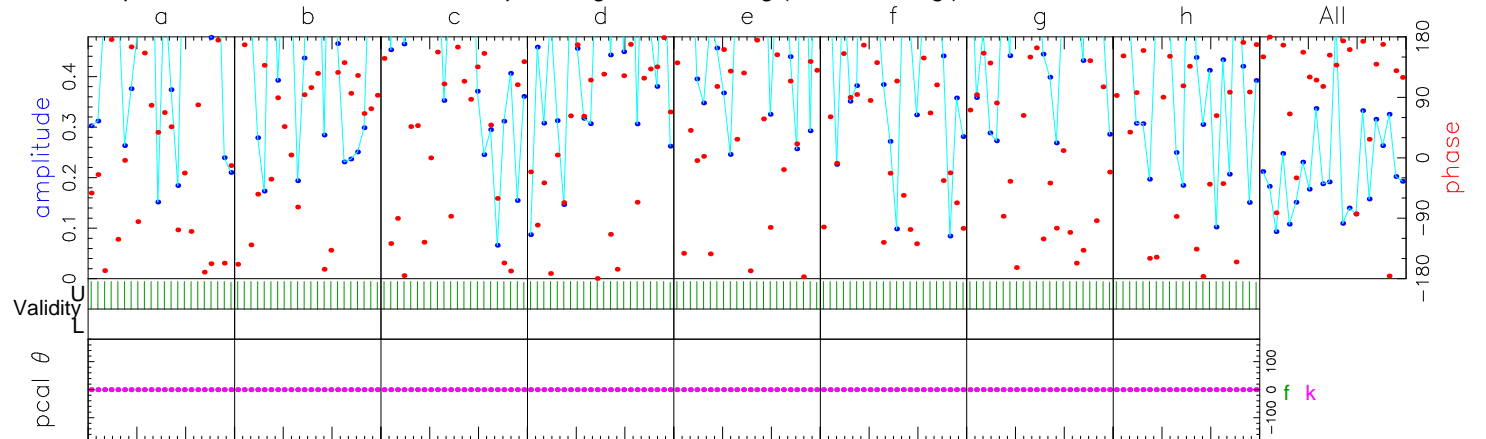
multiband delay (μ s)



Fringe quality 0
 SNR 5.8
 Int time 179.963
 Amp 0.160
 Phase 147.8
 PFD 4.7e-01
 Delays (us)
 SBD -0.184872
 MBD 0.004504
 Fringe rate (Hz)
 -0.057128
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145422
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

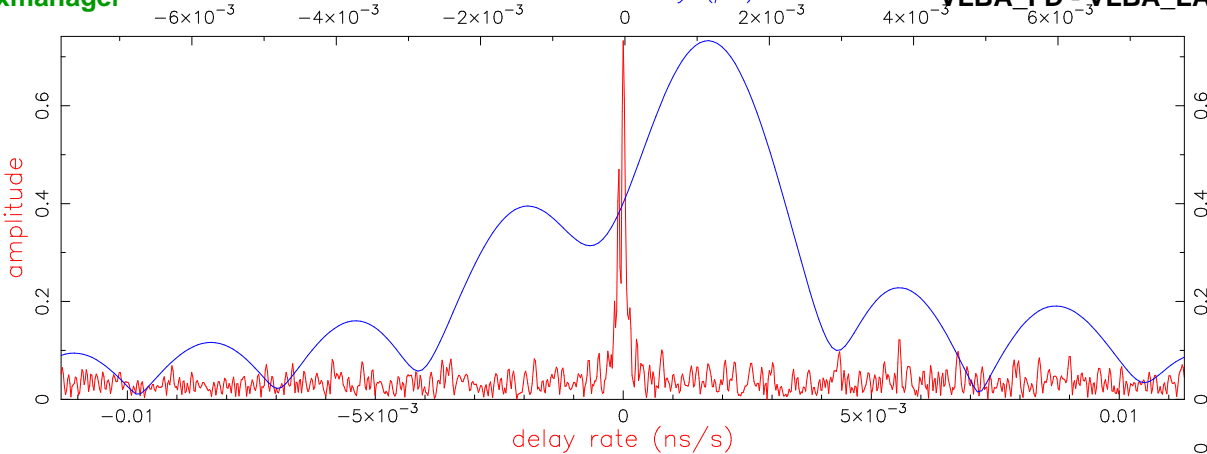


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-177.1	117.4	148.1	153.1	132.9	138.5	171.5	150.7	Phase	147.8
	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	Ampl.	0.1
	469.8	201.1	441.0	450.3	422.2	450.6	506.1	279.5	Sbd box	209.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.76499204299E+03		Apriori delay (usec)		-1.76480904703E+03		Resid mbdelay (usec)		4.50404E-03	+/- 1.9E-04
Sband delay (usec)	-1.76499391903E+03		Apriori clock (usec)		7.5137062E+00		Resid sbdelay (usec)		-1.84872E-01	+/- 1.5E-03
Phase delay (usec)	-1.76480904227E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		4.76522E-06	+/- 6.3E-07
Delay rate (us/s)	-3.82115790403E-02		Apriori rate (us/s)		-3.82109158446E-02		Resid rate (us/s)		-6.63196E-07	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		7.69568811699E-06		Resid phase (deg)		147.8	+/- 19.6

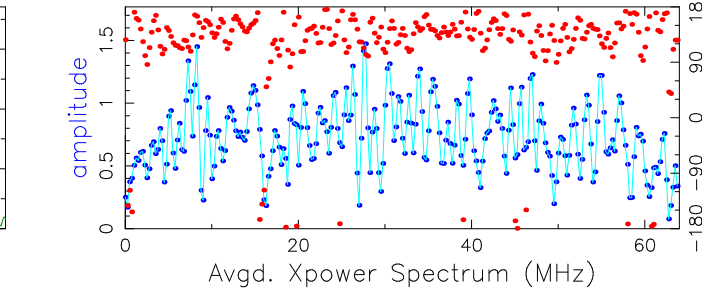
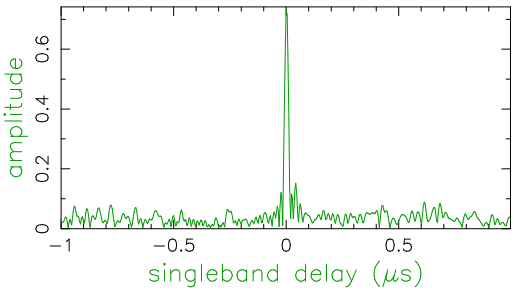
ph/seg (deg) 66.1 46.0 Search (1024X32) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 71.6 80.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 22.6 27.7 Inc. seg. avg. 0.166 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 29.0 48.4 Inc. frq. avg. 0.149 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 k: az 312.9 el 35.3 pa 80.9 u,v (fr/asec) 352.288 636.236 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fk.W.66.1HV1N7

multiband delay (μ s)

Fringe quality 7

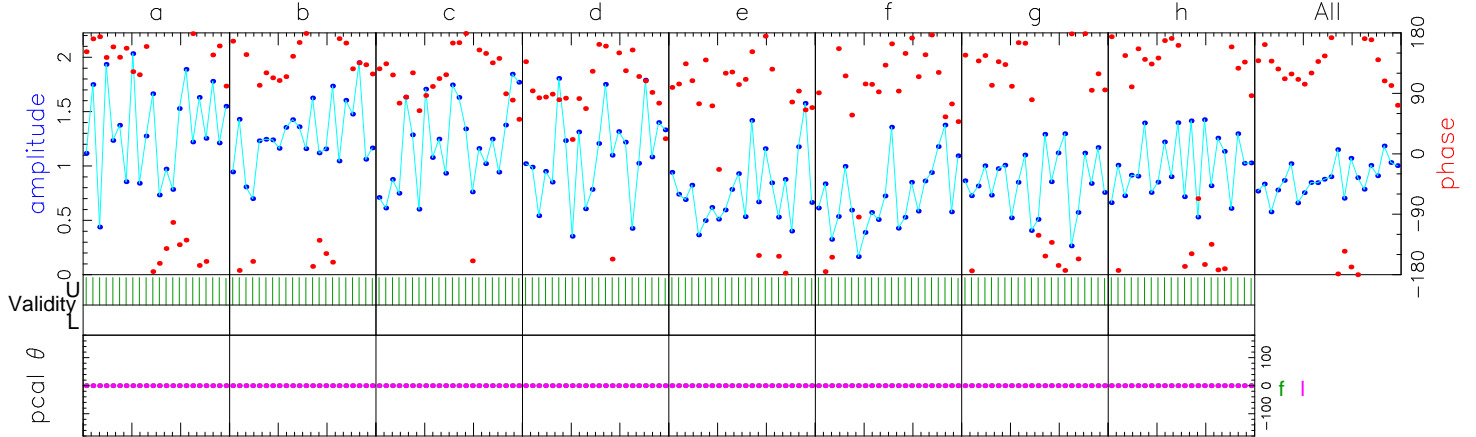


SNR 27.2
Int time 179.982
Amp 0.742
Phase 141.3
PFD 0.0e+00
Delays (us)
SBD 0.001452
MBD 0.001177
Fringe rate (Hz)
-0.000029
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145416
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.54191646579E+03	Apriori delay (usec)	-1.54191764314E+03	Resid mbdelay (usec)	1.17734E-03	+/-	4.0E-05
Sband delay (usec)	-1.54191619089E+03	Apriori clock (usec)	8.2338448E+00	Resid sbdelay (usec)	1.45225E-03	+/-	3.2E-04
Phase delay (usec)	-1.54191763858E+03	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	4.55800E-06	+/-	1.4E-07
Delay rate (us/s)	-5.32125138526E-02	Apriori rate (us/s)	-5.32125135125E-02	Resid rate (us/s)	-3.40108E-10	+/-	1.3E-09
Total phase (deg)	-139.3	Apriori accel (us/s/s)	1.66361915383E-06	Resid phase (deg)	141.3	+/-	4.2

ph/seg (deg)	34.4	Theor.	9.9	Amplitude	0.742 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	28.0		17.2	Search (1024X32)	0.723	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	27.3		6.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	27.5		10.4	Inc. seg. avg.	0.873	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.797	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

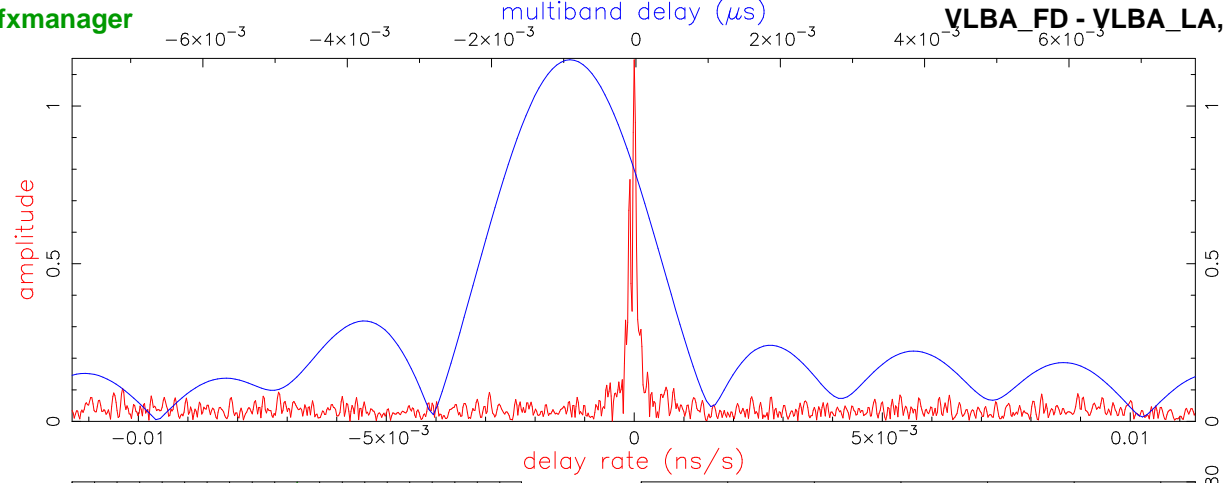
f: az 314.6 el 29.7 pa 76.6 l: az 311.8 el 34.6 pa 74.3 u,v (fr/asec) 486.486 -257.723 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl.1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl.W.10.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fl

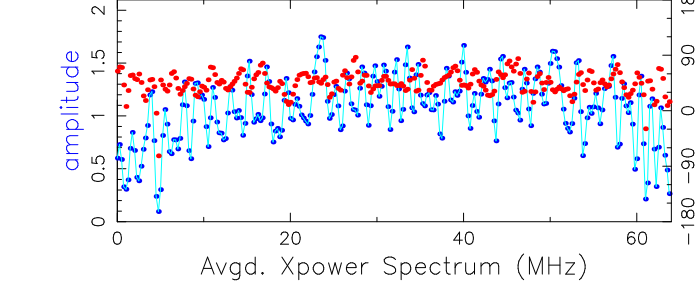
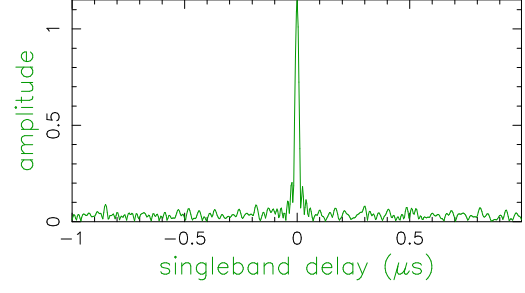
VLBA_FD - VLBA_LA, fgroup W, pol RR



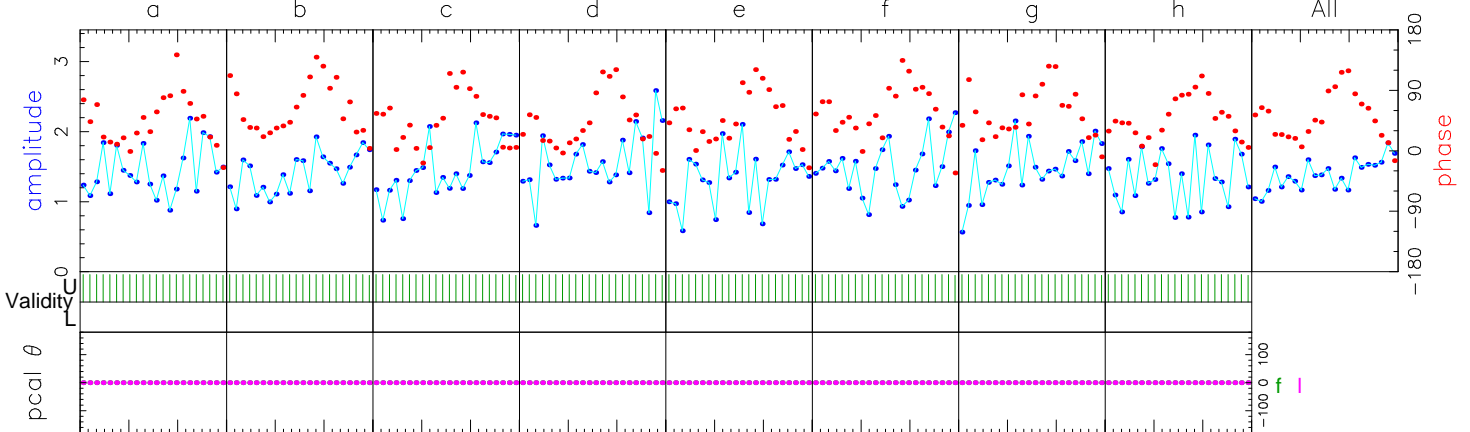
Fringe quality 8

SNR 42.2
 Int time 179.982
 Amp 1.151
 Phase 47.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.000819
 MBD -0.000929
 Fringe rate (Hz)
 -0.000066
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145419
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	1.2
l	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	256.8
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f	1000	1000	1000	1000	1000	1000	1000	1000	ManI PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-1.54191857248E+03								Resid mbdelay (usec)	-9.29344E-04 +/- 2.6E-05
Sband delay (usec)	-1.54191846189E+03								Resid sbdelay (usec)	-8.18750E-04 +/- 2.0E-04
Phase delay (usec)	-1.54191764162E+03								Resid phdelay (usec)	1.51594E-06 +/- 8.7E-08
Delay rate (us/s)	-5.32125142806E-02								Resid rate (us/s)	-7.68076E-10 +/- 8.4E-10
Total phase (deg)			-233.7						Resid phase (deg)	47.0 +/- 2.7
ph/seg (deg)	35.0	6.4							PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	27.5	11.1							PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	9.8	3.8							Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	4.4	6.7							SampCntNorm: enabled	dr window (ns/s) -0.011 0.011
									Sample rate(MISamp/s): 128	ion window (TEC) 0.00 0.00
									Data rate(Mb/s): 2048	
									nlags: 256	
									t_cohere infinite	
f: az 314.6 el 29.7 pa 76.6										simultaneous interpolator
l: az 311.8 el 34.6 pa 74.3										
u,v (fr/asec) 486.486 -257.723										

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl.W.30.1HV1N7

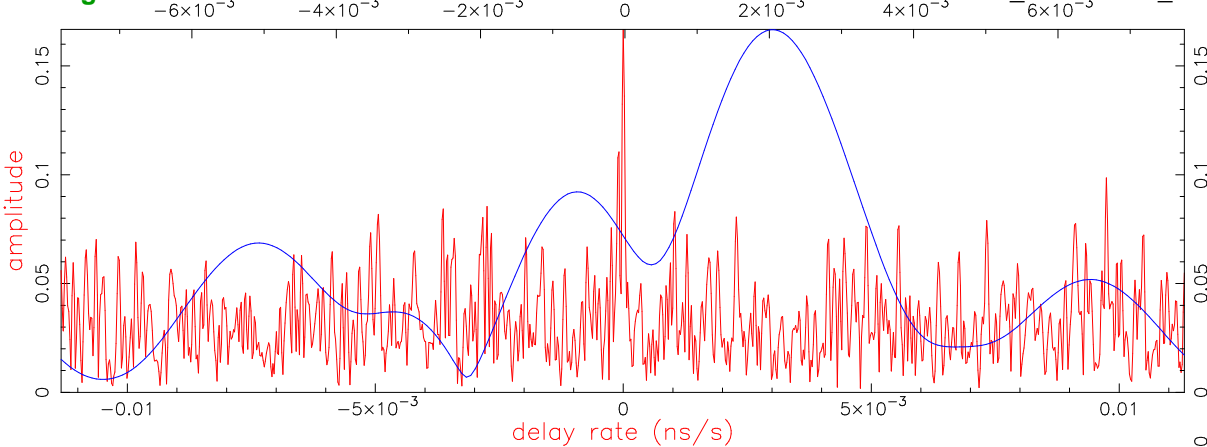
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fl

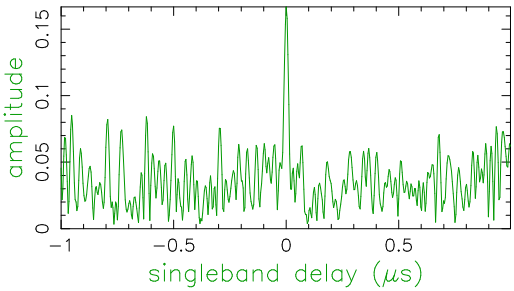
VLBA_FD - VLBA_LA, fgroup W, pol LR

multiband delay (μ s)

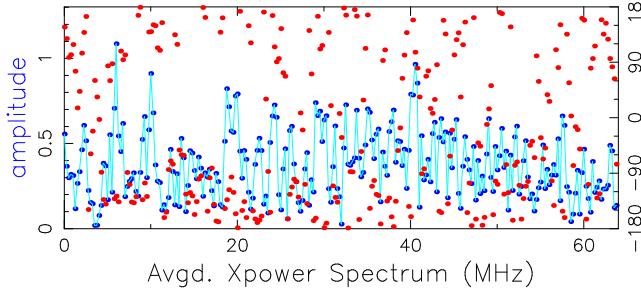


Fringe quality 0

SNR 6.1
 Int time 179.982
 Amp 0.167
 Phase 172.3
 PFD 1.2e-01
 Delays (us)
 SBD 0.000418
 MBD 0.002035
 Fringe rate (Hz)
 -0.000017
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

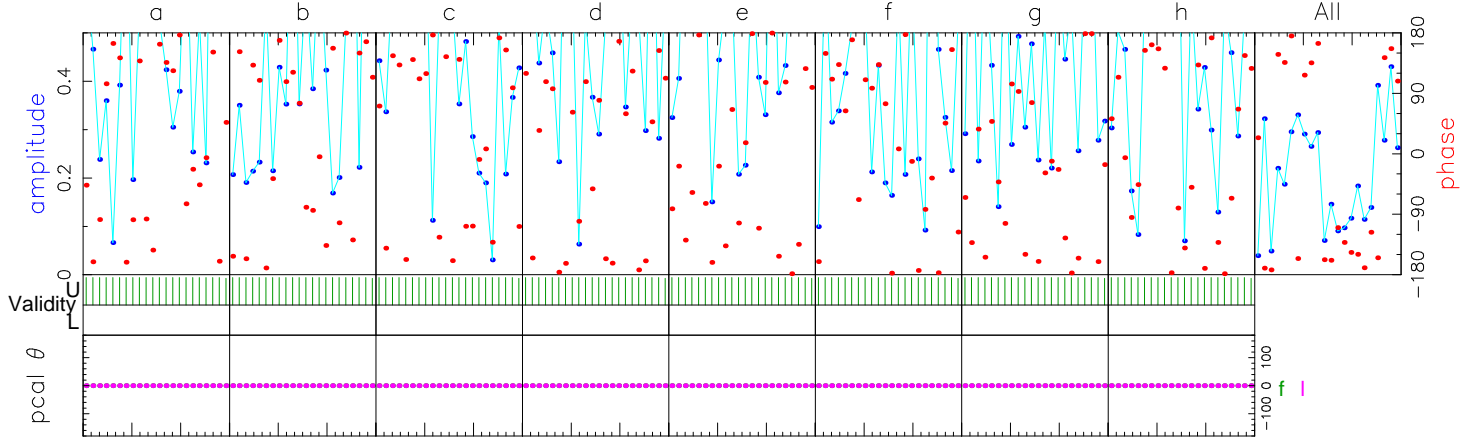


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145421
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-161.5	174.5	159.0	134.4	-157.2	121.0	-141.5	164.2	Phase	172.3
	0.2	0.2	0.3	0.3	0.2	0.0	0.1	0.2	Ampl.	0.2
	232.2	279.2	256.7	256.8	256.2	505.7	387.1	381.1	Sbd box	257.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	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	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.54191560785E+03		Apriori delay (usec)		-1.54191764314E+03		Resid mbdelay (usec)		2.03528E-03	+/- 1.8E-04
Sband delay (usec)	-1.54191722514E+03		Apriori clock (usec)		8.2338448E+00		Resid sbdelay (usec)		4.18000E-04	+/- 1.4E-03
Phase delay (usec)	-1.54191763758E+03		Apriori clockrate (us/s)		5.0000000E-07		Resid phdelay (usec)		5.55557E-06	+/- 6.0E-07
Delay rate (us/s)	-5.32125137081E-02		Apriori rate (us/s)		-5.32125135125E-02		Resid rate (us/s)		-1.95562E-10	+/- 5.8E-09
Total phase (deg)			Apriori accel (us/s/s)		1.66361915383E-06		Resid phase (deg)		172.3	+/- 18.7

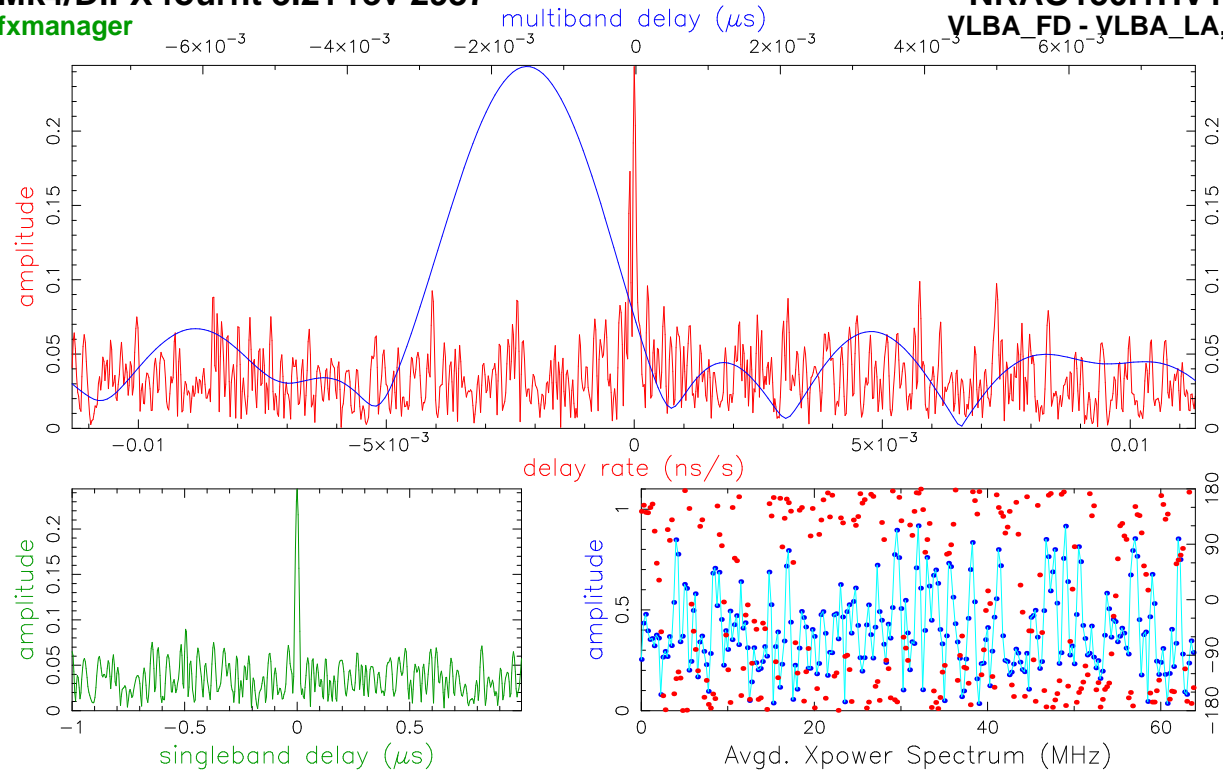
ph/seg (deg) 50.3 43.9 Search (1024X32) 0.166 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 71.3 76.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 36.7 26.5 Inc. seg. avg. 0.162 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 44.8 46.2 Inc. frq. avg. 0.169 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 l: az 311.8 el 34.6 pa 74.3 u,v (fr/asec) 486.486 -257.723 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl.1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl.W.50.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fl

VLBA_FD - VLBA_LA, fgroup W, pol RL

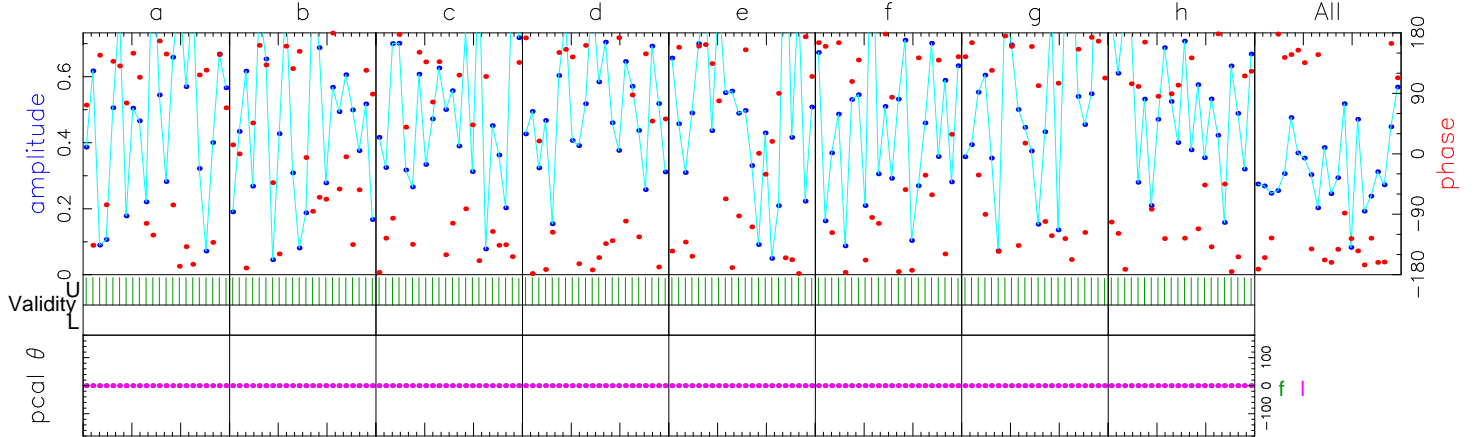


Fringe quality 9

SNR 9.0
 Int time 179.982
 Amp 0.244
 Phase -173.1
 PFD 6.1e-11
 Delays (us)
 SBD -0.000717
 MBD -0.001522
 Fringe rate (Hz)
 -0.000026
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145423
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

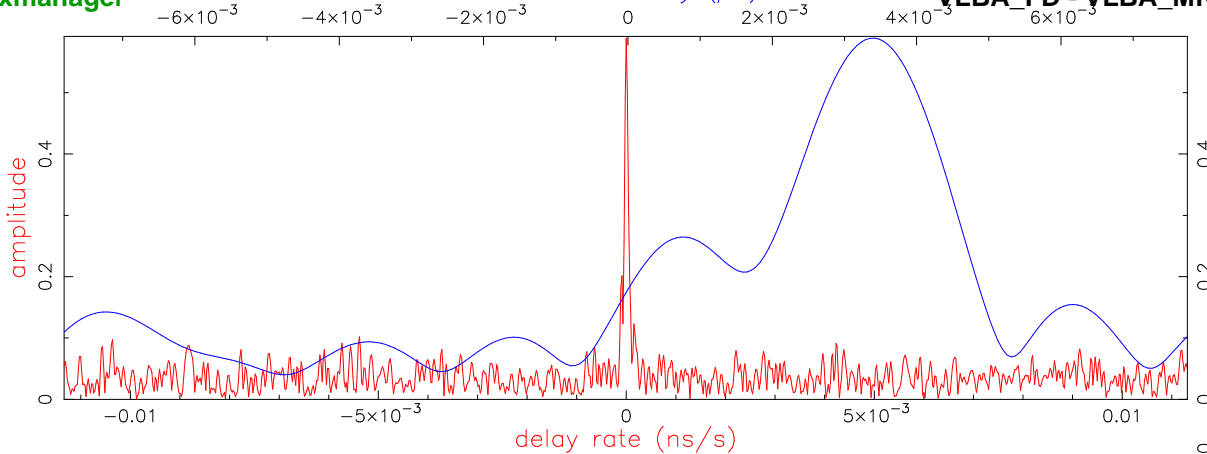
Group delay (usec)(sbd)	-1.54191916470E+03	Apriori delay (usec)	-1.54191764314E+03	Resid mbdelay (usec)	-1.52156E-03	+/-	1.2E-04
Sband delay (usec)	-1.54191835989E+03	Apriori clock (usec)	8.2338448E+00	Resid sbdelay (usec)	-7.16750E-04	+/-	9.6E-04
Phase delay (usec)	-1.54191764872E+03	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-5.58154E-06	+/-	4.1E-07
Delay rate (us/s)	-5.32125138087E-02	Apriori rate (us/s)	-5.32125135125E-02	Resid rate (us/s)	-2.96177E-10	+/-	4.0E-09
Total phase (deg)	-93.8	Apriori accel (us/s/s)	1.66361915383E-06	Resid phase (deg)	-173.1	+/-	12.8

ph/seg (deg)	38.4	Theor.	30.0	Amplitude	0.244 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	56.5	Search (1024X32)	0.243	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	12.5	Inc. seg. avg.	0.283	Inc. frq. avg.	0.235	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	28.7	Inc. frq. avg.	0.235	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 314.6 el 29.7 pa 76.6		l: az 311.8 el 34.6 pa 74.3		u, v (fr/asec)	486.486 -257.723	ion window (TEC)	0.00	0.00		simultaneous interpolator	

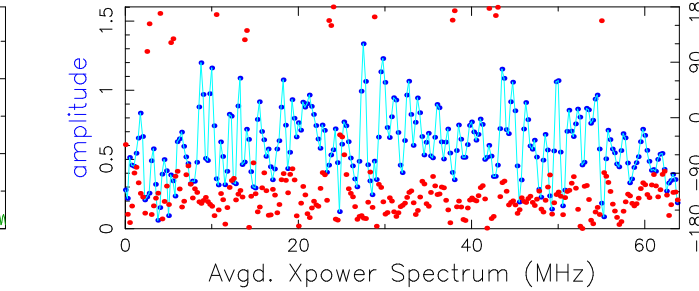
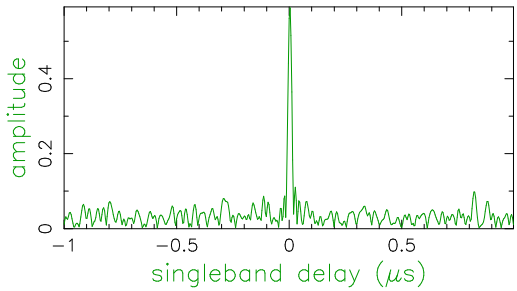
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl.1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fl.W.67.1HV1N7

multiband delay (μ s)

Fringe quality 8

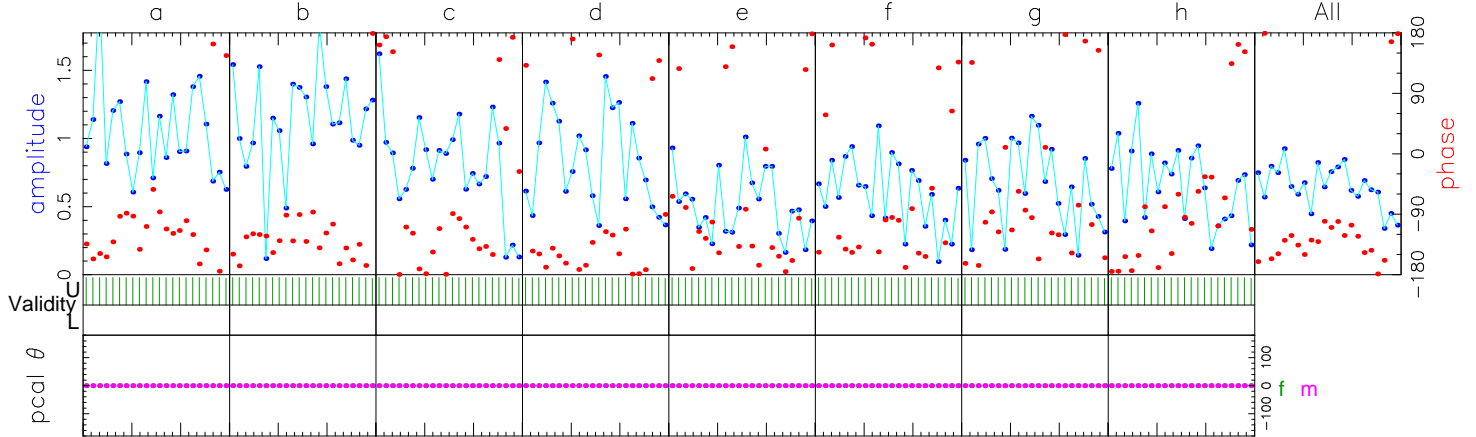


SNR 21.7
Int time 179.977
Amp 0.592
Phase -138.1
PFD 0.0e+00
Delays (us)
SBD 0.003020
MBD 0.003382
Fringe rate (Hz)
0.000520
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145418
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-128.2	-134.3	-153.6	-158.2	-131.6	-141.3	-123.2	-129.6	Phase	-138.1
	0.9	1.0	0.6	0.7	0.3	0.4	0.5	0.4	Ampl.	0.6
	258.1	257.9	257.4	257.6	257.8	257.9	258.0	257.2	Sbd box	257.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.25785665539E+03	Apriori delay (usec)	-6.25786003717E+03	Resid mbdelay (usec)	3.38178E-03	+/-	5.0E-05
Sband delay (usec)	-6.25785701692E+03	Apriori clock (usec)	-5.5162930E+00	Resid sbdelay (usec)	3.02025E-03	+/-	4.0E-04
Phase delay (usec)	-6.25786004162E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-4.45174E-06	+/-	1.7E-07
Delay rate (us/s)	-3.91167782935E-01	Apriori rate (us/s)	-3.91167788966E-01	Resid rate (us/s)	6.03124E-09	+/-	1.6E-09
Total phase (deg)	-354.7	Apriori accel (us/s/s)	4.81886040093E-05	Resid phase (deg)	-138.1	+/-	5.3

ph/seg (deg)	RMS 26.6	Theor. 12.4	Amplitude Search (1024X32)	0.592 +/- 0.027	0.581	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	27.2	21.6	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	13.6	7.5	Inc. seg. avg.	0.635	0.635	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	41.1	13.0	Inc. frq. avg.	0.597	0.597	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

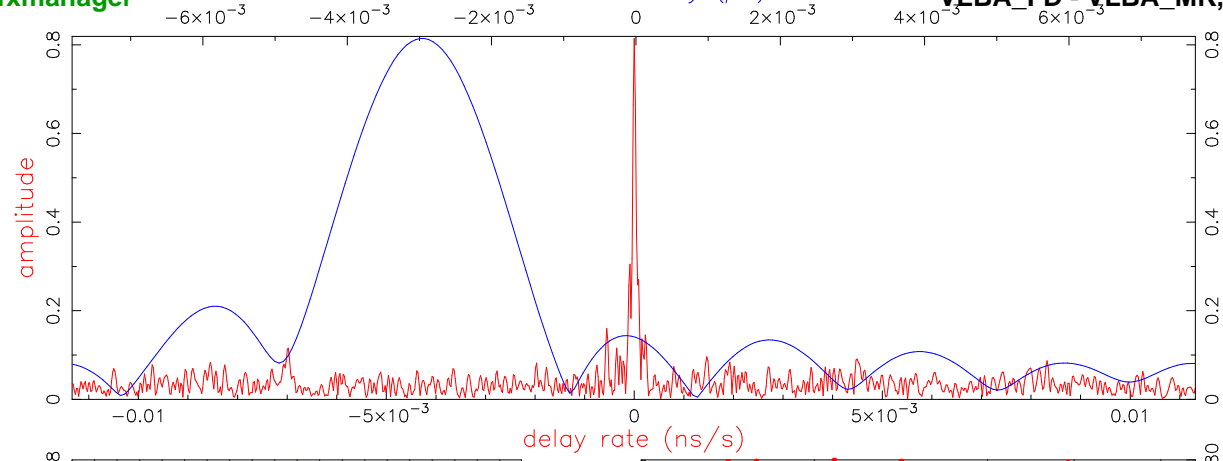
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fm

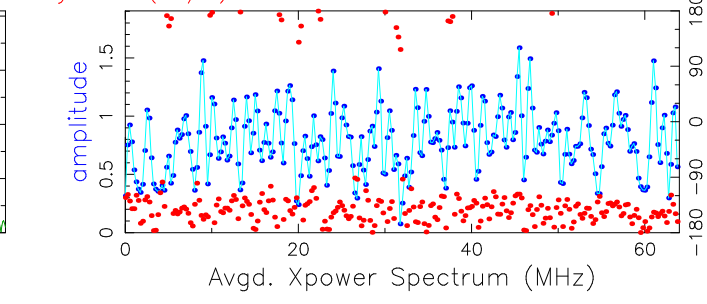
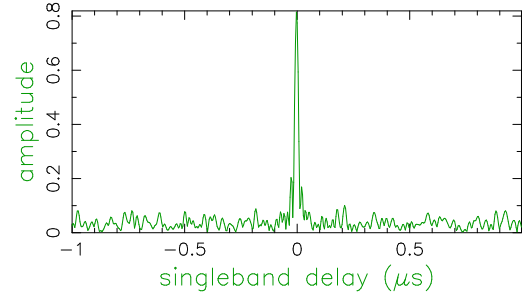
VLBA_FD - VLBA_MK, fgroup W, pol RR

multiband delay (μ s)



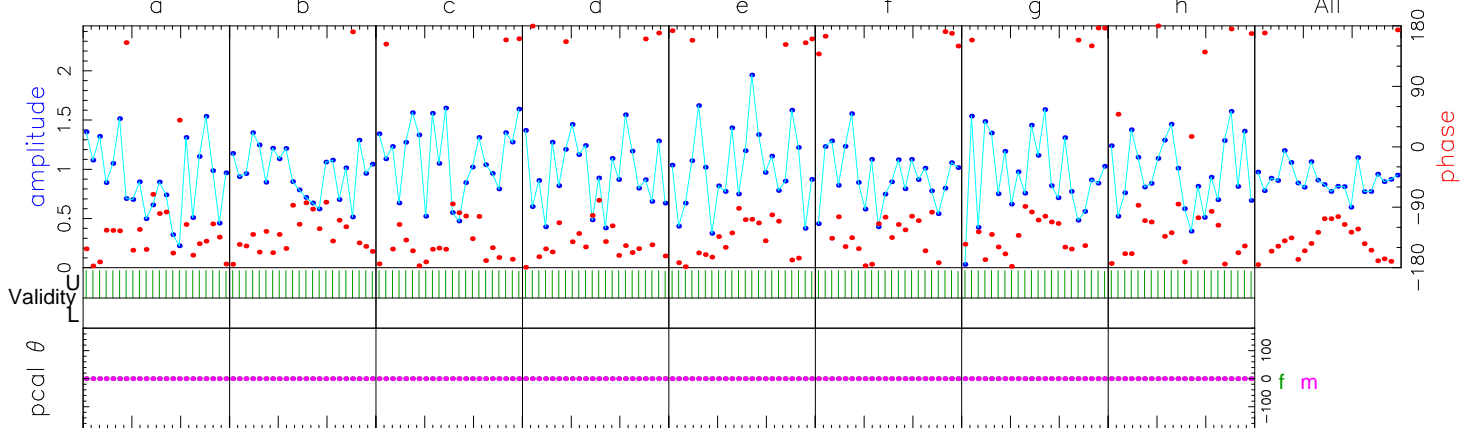
Fringe quality 8

SNR 30.0
 Int time 179.977
 Amp 0.819
 Phase -146.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.002946
 MBD -0.002931
 Fringe rate (Hz) 0.000238
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145420
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-138.7	-134.5	-156.6	-153.6	-147.5	-146.9	-145.6	-144.6	Phase	-146.3
	0.8	0.9	1.0	0.9	0.8	0.8	0.8	0.7	Ampl.	0.8
	256.1	256.2	256.4	256.5	256.0	256.3	256.4	256.2	Sbd box	256.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-6.25786296839E+03	Apriori delay (usec)	-6.25786003717E+03	Resid mbdelay (usec)	-2.93122E-03	+/-	3.6E-05
Sband delay (usec)	-6.25786298367E+03	Apriori clock (usec)	-5.5162930E+00	Resid sbdelay (usec)	-2.94650E-03	+/-	2.9E-04
Phase delay (usec)	-6.25786004189E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-4.71715E-06	+/-	1.2E-07
Delay rate (us/s)	-3.91167786199E-01	Apriori rate (us/s)	-3.91167788966E-01	Resid rate (us/s)	2.76763E-09	+/-	1.2E-09
Total phase (deg)	-2.9	Apriori accel (us/s/s)	4.81886040093E-05	Resid phase (deg)	-146.3	+/-	3.8

ph/seg (deg)	25.1	RMS	8.9	Theor.	0.819 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	18.3	Search (1024X32)	0.812	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	7.8	Inc. seg. avg.	0.884	Inc. frq. avg.	0.817	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	9.2	Inc. frq. avg.	0.817	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 314.6 el 29.7 pa 76.6		m: az 331.5 el 51.8 pa 134.8		u,v (fr/asec)	3584.153 5618.049	ion window (TEC)	0.00	0.00		simultaneous interpolator	

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fm..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fm.W.39.1HV1N7

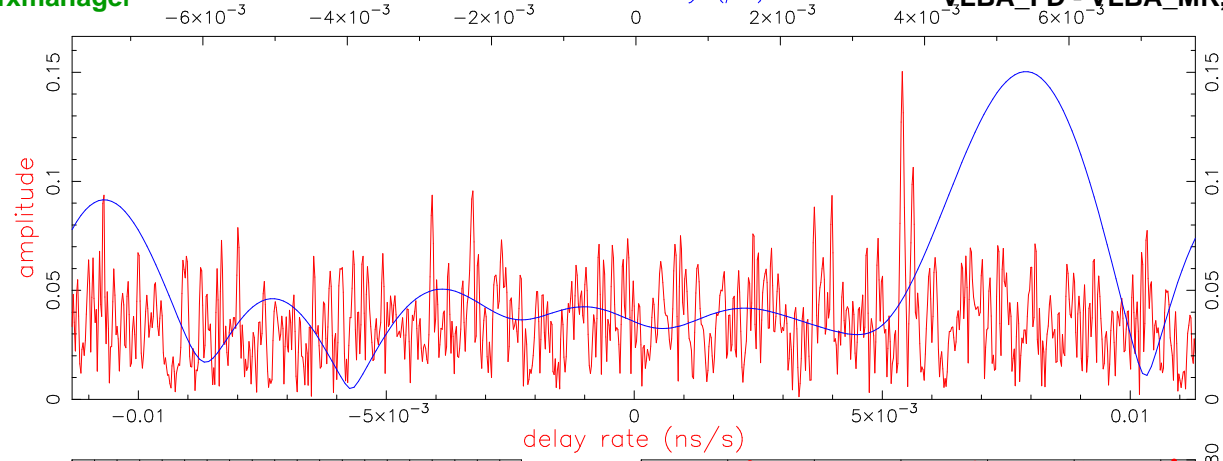
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fm

VLBA_FD - VLBA_MK, fgroup W, pol LR

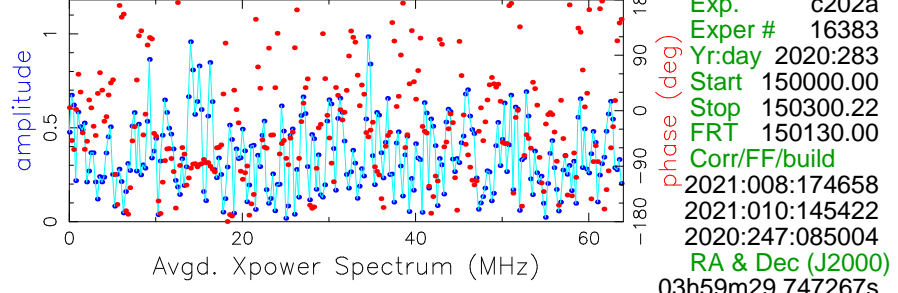
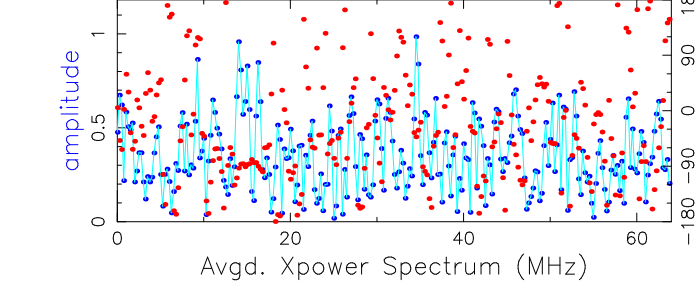
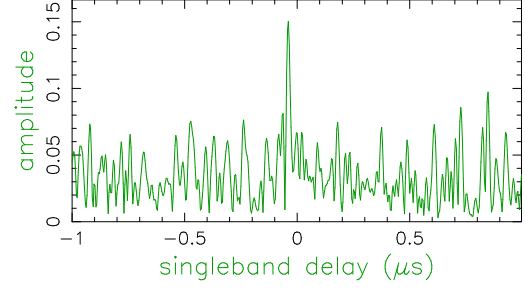
multiband delay (μ s)



Fringe quality 0

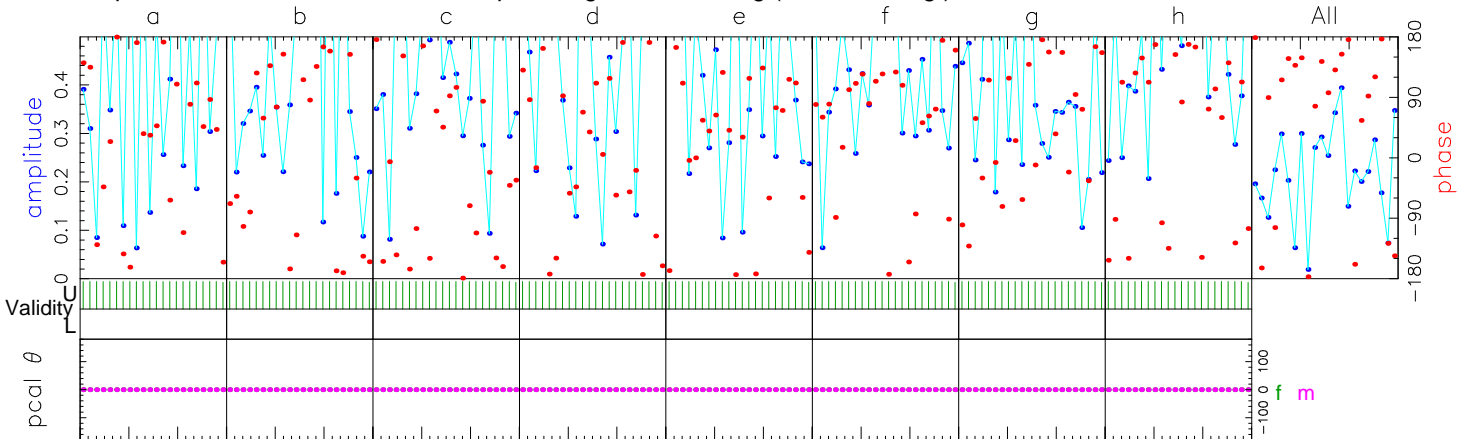
SNR 5.6
 Int time 179.977
 Amp 0.166
 Phase 145.1
 PFD 9.7e-01
 Delays (us)
 SBD -0.040146
 MBD 0.005388
 Fringe rate (Hz) 0.466035
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build 2021:008:174658
 2021:010:145422
 2020:247:085004
 RA & Dec (J2000) 03h59m29.747267s +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



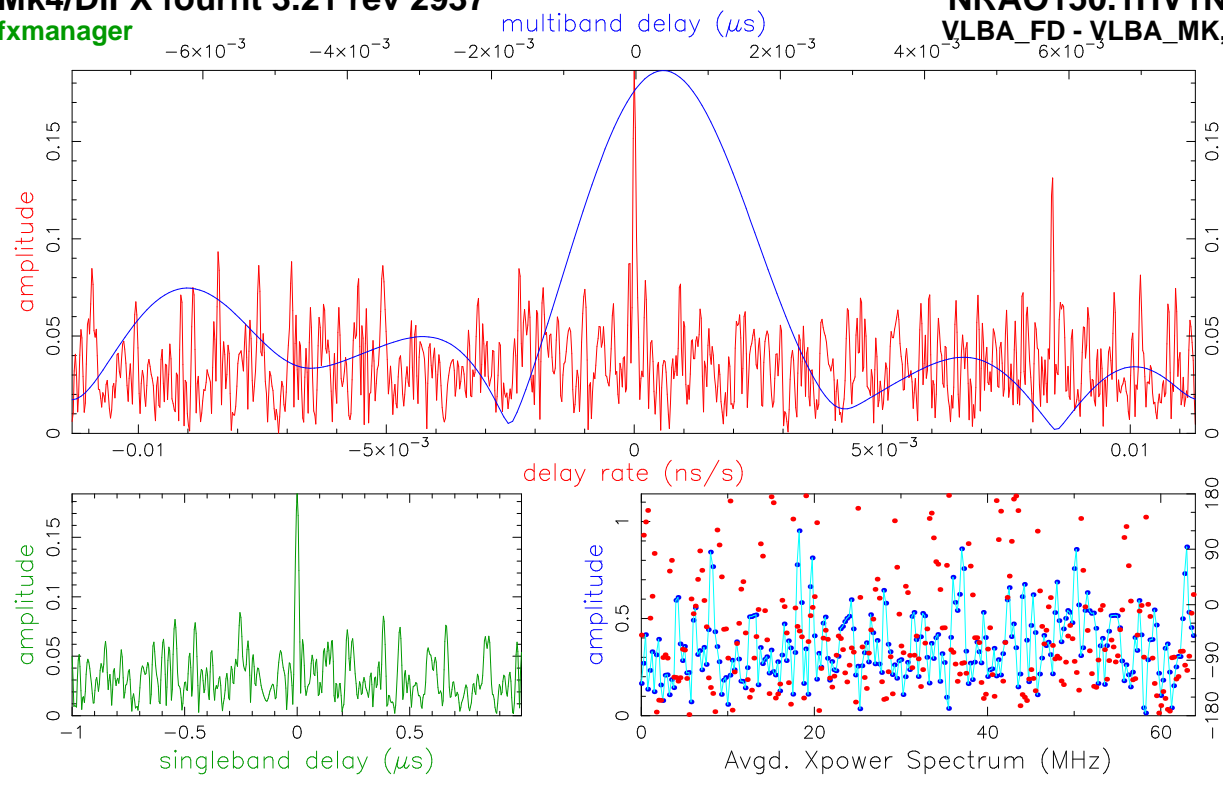
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-6.25790152412E+03	Apriori delay (usec)	-6.25786003717E+03	Resid mbdelay (usec)	5.38805E-03	+/-	2.0E-04
Sband delay (usec)	-6.25790018367E+03	Apriori clock (usec)	-5.5162930E+00	Resid sbdelay (usec)	-4.01465E-02	+/-	1.6E-03
Phase delay (usec)	-6.25786003249E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	4.68003E-06	+/-	6.7E-07
Delay rate (us/s)	-3.91162378759E-01	Apriori rate (us/s)	-3.91167788966E-01	Resid rate (us/s)	5.41021E-06	+/-	6.4E-09
Total phase (deg)	-71.5	Apriori accel (us/s/s)	4.81886040093E-05	Resid phase (deg)	145.1	+/-	20.6

ph/seg (deg)	51.3	Theor.	48.4	Amplitude	0.166 +/- 0.030	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	76.6		84.5	Search (1024X32)	0.146	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	34.4		29.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	41.0		51.0	Inc. seg. avg.	0.178	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.168	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

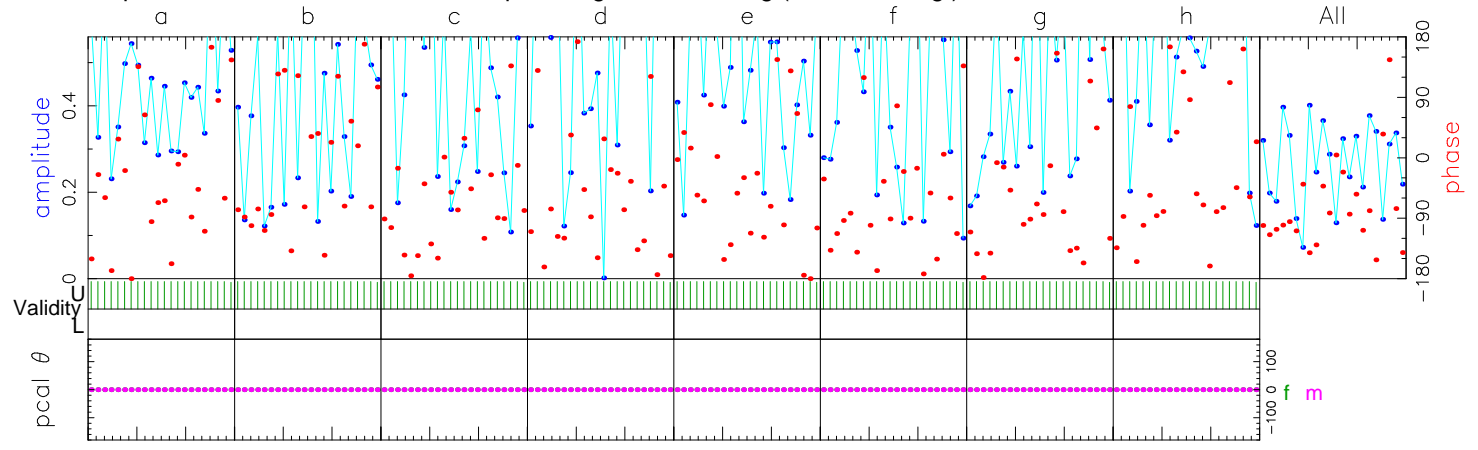
f: az 314.6 el 29.7 pa 76.6 m: az 331.5 el 51.8 pa 134.8 u,v (fr/asec) 3584.153 5618.049 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fm..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fm.W.60.1HV1N7



Fringe quality 0
SNR 6.8
Int time 179.977
Amp 0.187
Phase -94.3
PFD 1.1e-03
Delays (us)
SBD -0.000258
MBD 0.000376
Fringe rate (Hz)
-0.000153
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145424
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-88.4	-89.0	-94.7	-117.2	-60.2	-85.3	-100.1	-100.0	Phase	-94.3		
	0.1	0.0	0.3	0.3	0.2	0.3	0.2	0.2	Ampl.	0.2		
	171.2	104.7	256.5	256.1	317.6	256.6	111.1	256.3	Sbd box	256.9		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
m	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Tracks			
Group delay (usec)(sbd)	-6.25785966104E+03		Apriori delay (usec)		-6.25786003717E+03		Resid mbdelay (usec)		3.76125E-04	+/- 1.6E-04		
Sband delay (usec)	-6.25786029542E+03		Apriori clock (usec)		-5.5162930E+00		Resid sbdelay (usec)		-2.58250E-04	+/- 1.3E-03		
Phase delay (usec)	-6.25786004021E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		-3.04195E-06	+/- 5.4E-07		
Delay rate (us/s)	-3.91167790745E-01		Apriori rate (us/s)		-3.91167788966E-01		Resid rate (us/s)		-1.77848E-09	+/- 5.2E-09		
Total phase (deg)			Apriori accel (us/s/s)		4.81886040093E-05		Resid phase (deg)		-94.3	+/- 16.7		
	RMS	Theor.	Amplitude	0.187 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	54.1	39.3	Search (1024X32)	0.186		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	66.6	68.5	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	17.8	23.7	Inc. seg. avg.	0.217		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	45.4	41.3	Inc. frq. avg.	0.179		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 314.6 el 29.7 pa 76.6		m: az 331.5 el 51.8 pa 134.8		u,v (fr/asec) 3584.153 5618.049						simultaneous interpolator		
Control file: cf_1234_gmva		Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fm..1HV1N7		Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fm.W.77.1HV1N7								

Mk4/DiFX fourfit 3.21 rev 2937

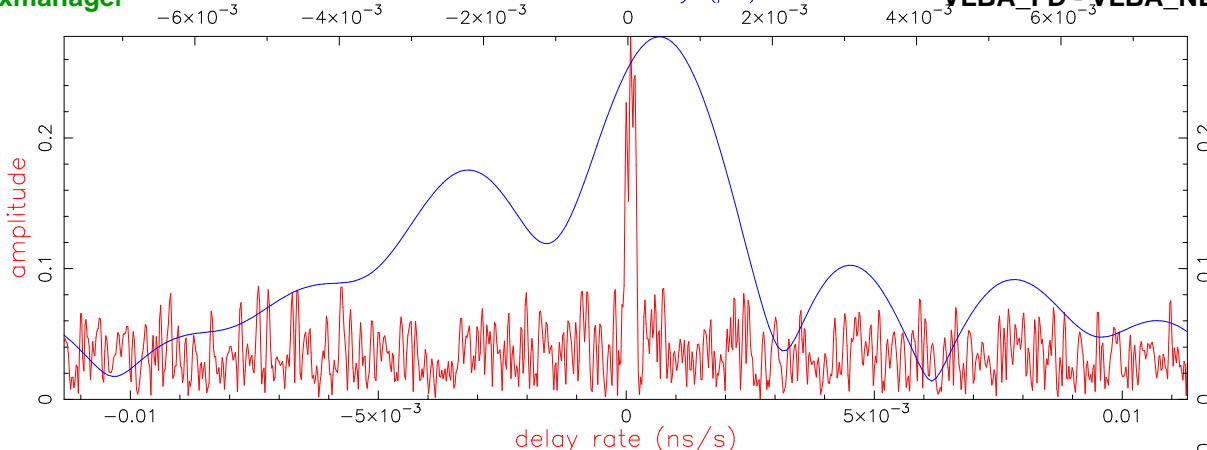
fxmanager

NRAO150.1HV1N7, No0150, fn

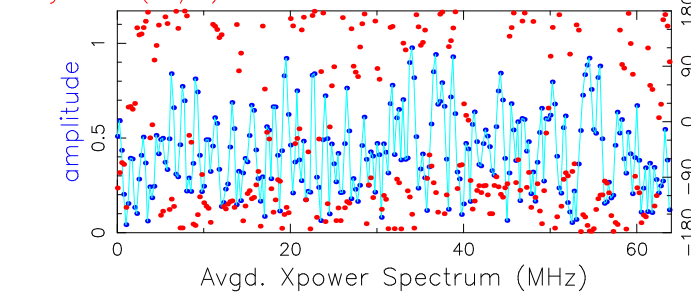
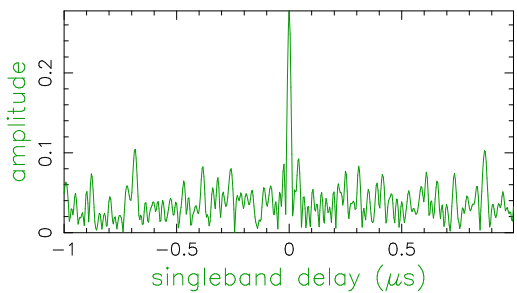
VLBA_FD - VLBA_NL, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 9

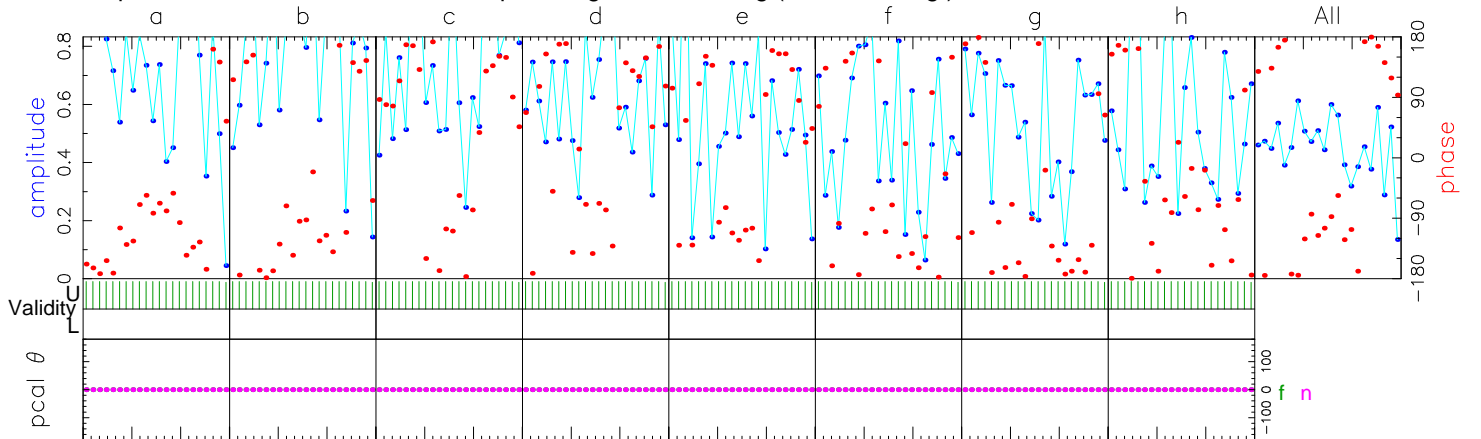


SNR 10.2
 Int time 179.983
 Amp 0.278
 Phase -161.9
 PFD 4.9e-16
 Delays (us)
 SBD -0.000398
 MBD 0.000439
 Fringe rate (Hz) 0.006862
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145417
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.53191187652E+02	Apriori delay (usec)	-1.53191626726E+02	Resid mbdelay (usec)	4.39074E-04	+/-	1.1E-04
Sband delay (usec)	-1.53192024976E+02	Apriori clock (usec)	7.7024307E+00	Resid sbdelay (usec)	-3.98250E-04	+/-	8.5E-04
Phase delay (usec)	-1.53191631947E+02	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-5.22135E-06	+/-	3.6E-07
Delay rate (us/s)	-9.90965212693E-02	Apriori rate (us/s)	-9.90966009296E-02	Resid rate (us/s)	7.96603E-08	+/-	3.5E-09
Total phase (deg)	-63.3	Apriori accel (us/s/s)	-1.28622826139E-05	Resid phase (deg)	-161.9	+/-	11.2

ph/seg (deg)	55.6	Theor.	26.4	Amplitude	0.278 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	73.9		46.0	Search (1024X32)	0.270	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	33.6		15.9	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	47.6		27.8	Inc. seg. avg.	0.409	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.306	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 314.6 el 29.7 pa 76.6 n: az 313.3 el 30.2 pa 59.7 u,v (fr/asec) 897.666 -2122.041 simultaneous interpolator

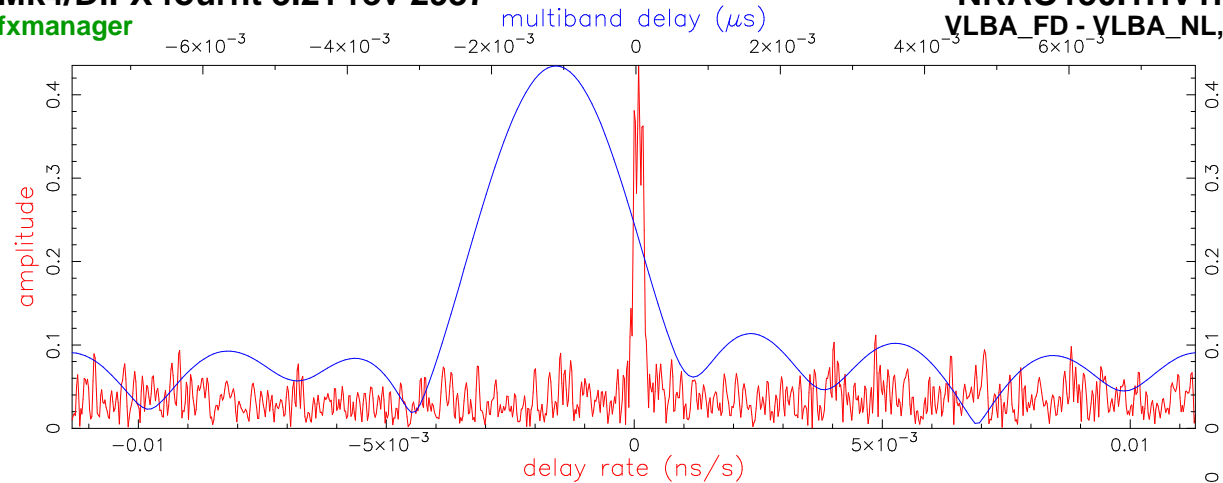
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fn..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fn.W.17.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fn

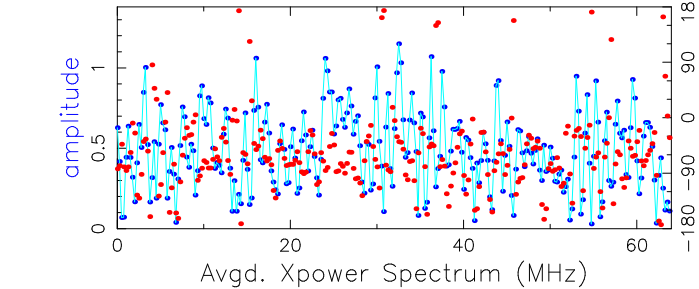
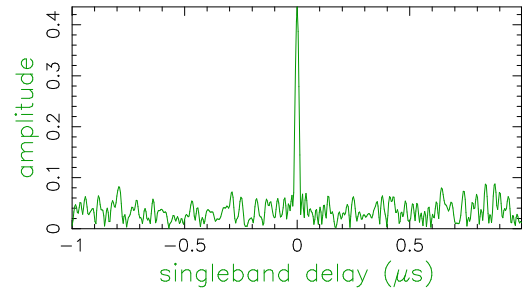
VLBA_FD - VLBA_NL, fgroup W, pol RR



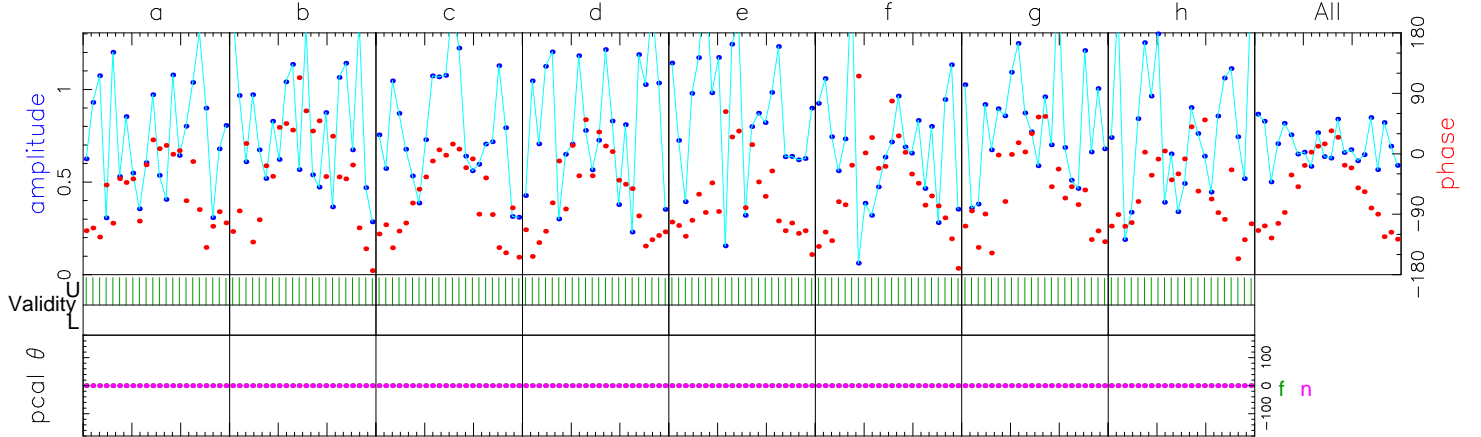
Fringe quality 9

SNR 16.0
 Int time 179.983
 Amp 0.435
 Phase -58.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.000495
 MBD -0.001113
 Fringe rate (Hz) 0.006862
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145420
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

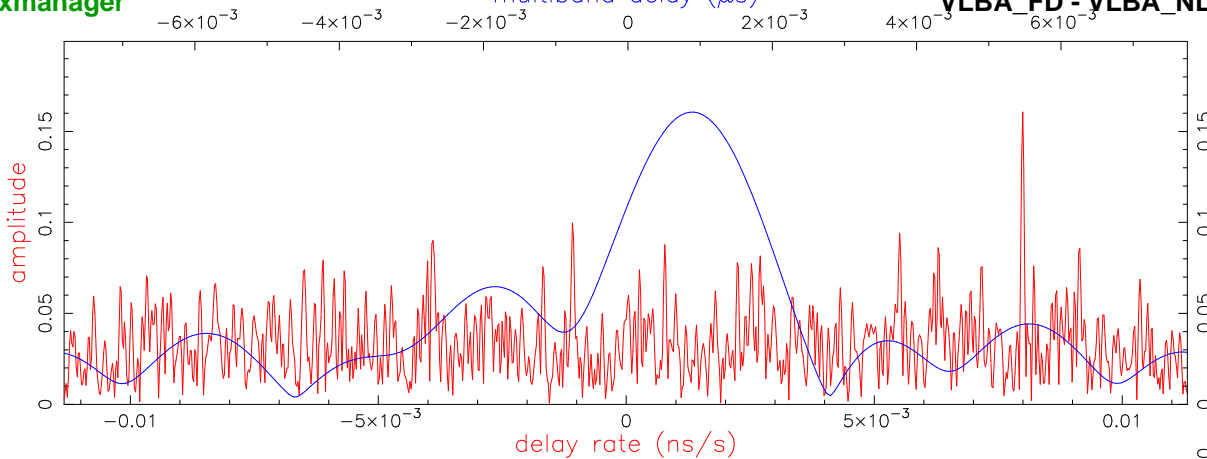


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All				
	-62.9	-28.6	-57.7	-74.0	-72.5	-59.1	-46.2	-56.0	Phase	-58.7				
	0.5	0.3	0.4	0.4	0.6	0.4	0.5	0.5	Ampl.	0.4				
	256.5	257.0	256.7	256.6	256.5	257.7	256.7	257.1	Sbd box	256.9				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
f:n	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					
n	1000	1000	1000	1000	1000	1000	1000	1000						
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids					
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks					
									Chan ids					
									Tracks					
Group delay (usec)(sbd)	-1.53192739465E+02								Apriori delay (usec)	-1.53191626726E+02	Resid mbdelay (usec)	-1.11274E-03	+/-	6.8E-05
Sband delay (usec)	-1.53192121476E+02								Apriori clock (usec)	7.7024307E+00	Resid sbdelay (usec)	-4.94750E-04	+/-	5.4E-04
Phase delay (usec)	-1.53191628619E+02								Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-1.89268E-06	+/-	2.3E-07
Delay rate (us/s)	-9.90965212707E-02								Apriori rate (us/s)	-9.90966009296E-02	Resid rate (us/s)	7.96589E-08	+/-	2.2E-09
Total phase (deg)			-320.1						Apriori accel (us/s/s)	-1.28622826139E-05	Resid phase (deg)	-58.7	+/-	7.2

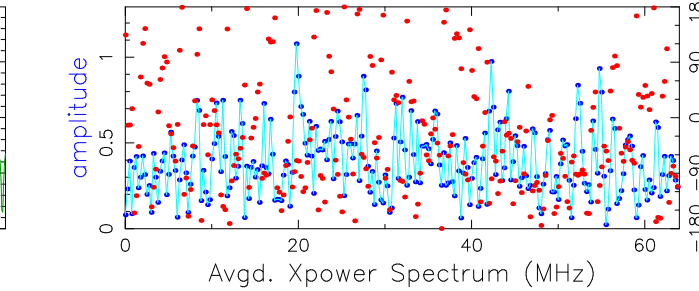
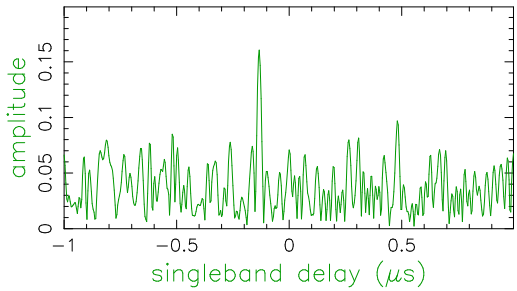
ph/seg (deg) 52.9 16.8 Search (1024X32) 0.417 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 64.9 29.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 15.9 10.1 Inc. seg. avg. 0.670 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 17.1 17.7 Inc. frq. avg. 0.439 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 n: az 313.3 el 30.2 pa 59.7 u,v (fr/asec) 897.666 -2122.041 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fn..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fn.W.40.1HV1N7

multiband delay (μ s)

Fringe quality 0

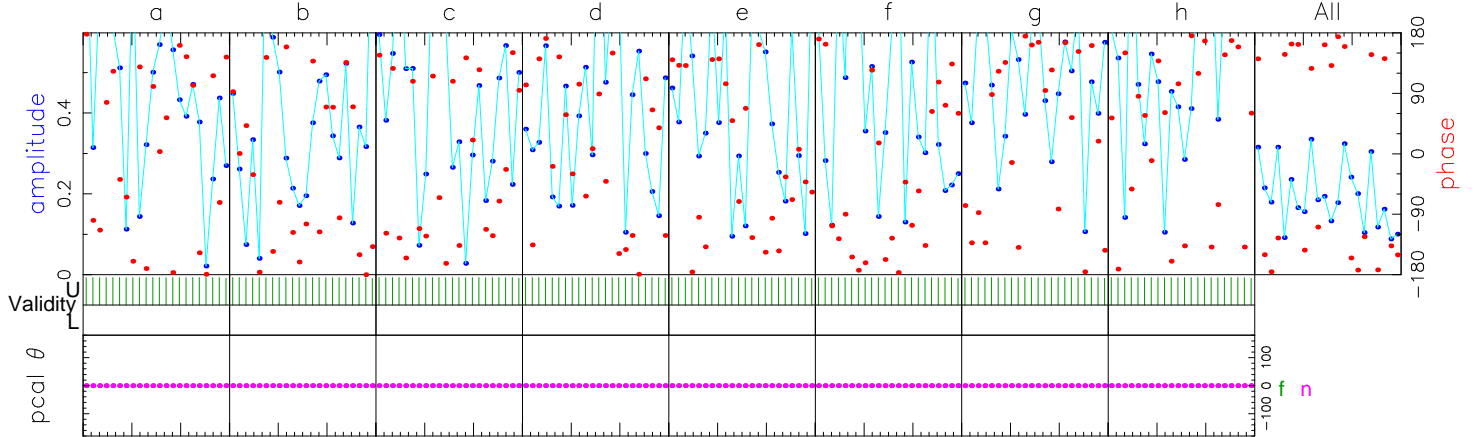


SNR 5.9
Int time 179.983
Amp 0.199
Phase 176.7
PFD 3.6e-01
Delays (us)
SBD -0.133565
MBD 0.000888
Fringe rate (Hz)
0.689425
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

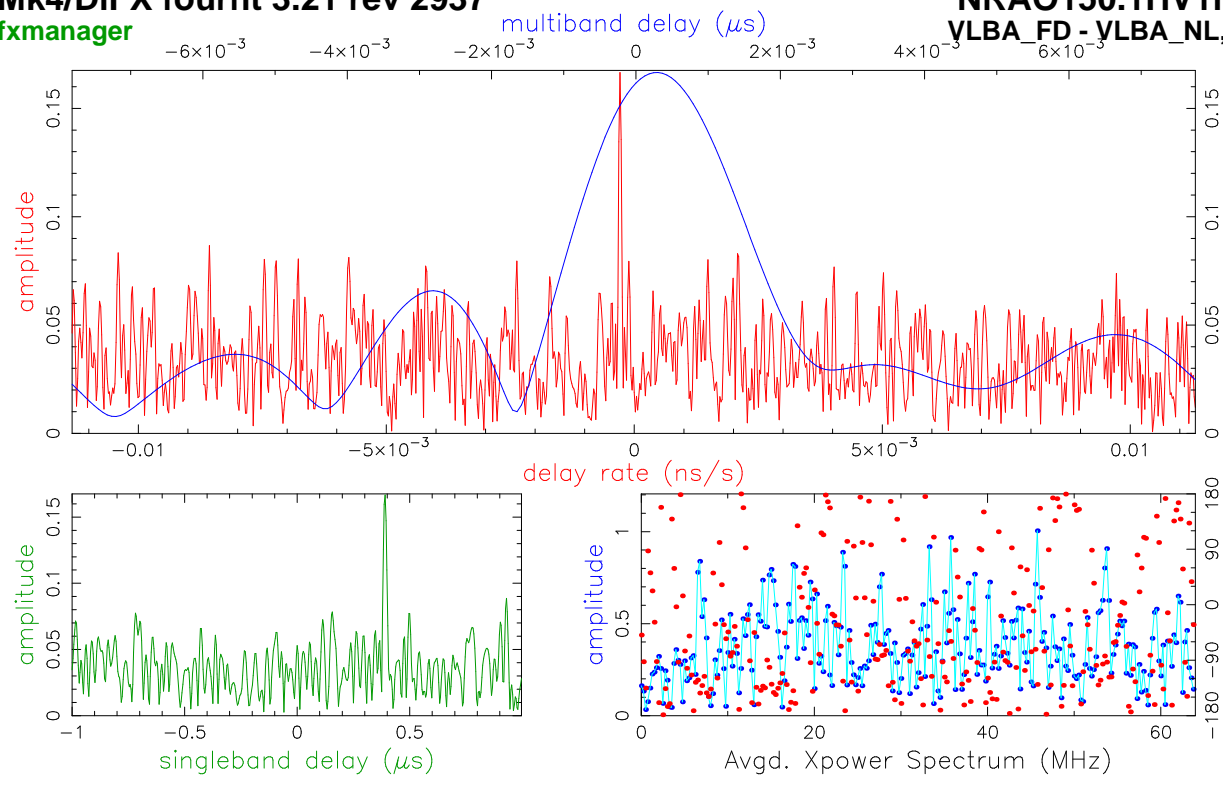


Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145422
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.53331363709E+02				-1.53191626726E+02				8.88017E-04	+/- 1.8E-04
Sband delay (usec)	-1.53325191726E+02				7.7024307E+00				-1.33565E-01	+/- 1.5E-03
Phase delay (usec)	-1.53191621027E+02				-1.0000003E-07				5.69916E-06	+/- 6.3E-07
Delay rate (us/s)	-9.90885973915E-02				-9.90966009296E-02				8.00354E-06	+/- 6.0E-09
Total phase (deg)			-84.7		-1.28622826139E-05				176.7	+/- 19.4
	RMS	Theor.	Amplitude	0.199 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	36.3	45.5	Search (1024X32)	0.151	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	53.6	79.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	19.2	27.4	Inc. seg. avg.	0.186	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	26.9	47.9	Inc. frq. avg.	0.186	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 314.6 el 29.7 pa 76.6		n: az 313.3 el 30.2 pa 59.7		u,v (fr/asec) 897.666 -2122.041						simultaneous interpolator

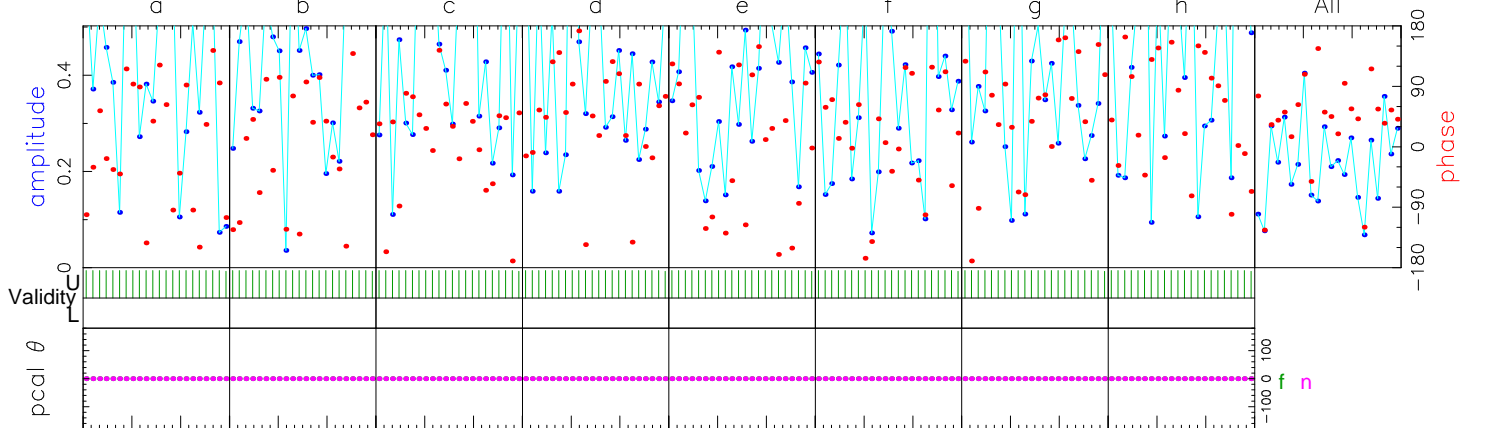


Fringe quality 0

SNR 6.1
Int time 179.983
Amp 0.168
Phase 55.5
PFD 1.0e-01
Delays (us)
SBD 0.389632
MBD 0.000287
Fringe rate (Hz)
-0.025085
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145424
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.52800715122E+02				-1.53191626726E+02				2.86605E-04	+/- 1.8E-04
Sband delay (usec)	-1.52801995226E+02				7.7024307E+00				3.89632E-01	+/- 1.4E-03
Phase delay (usec)	-1.53191624935E+02				-1.0000003E-07				1.79079E-06	+/- 6.0E-07
Delay rate (us/s)	-9.90968921439E-02				-9.90966009296E-02				-2.91214E-07	+/- 5.8E-09
Total phase (deg)			-205.9		-1.28622826139E-05				55.5	+/- 18.6
	RMS	Theor.	Amplitude	0.168 +/- 0.027					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	65.9	43.7	Search (1024X32)	0.164					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	59.4	76.3	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	20.7	26.4	Inc. seg. avg.	0.169					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	38.1	46.0	Inc. frq. avg.	0.159					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 314.6 el 29.7 pa 76.6			n: az 313.3 el 30.2 pa 59.7						nlags: 256	t_cohere infinite
Control file: cf_1234_gmva			Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fn..1HV1N7						u,v (fr/asec) 897.666 -2122.041	simultaneous interpolator
									Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fn.W.78.1HV1N7	

Mk4/DiFX fourfit 3.21 rev 2937

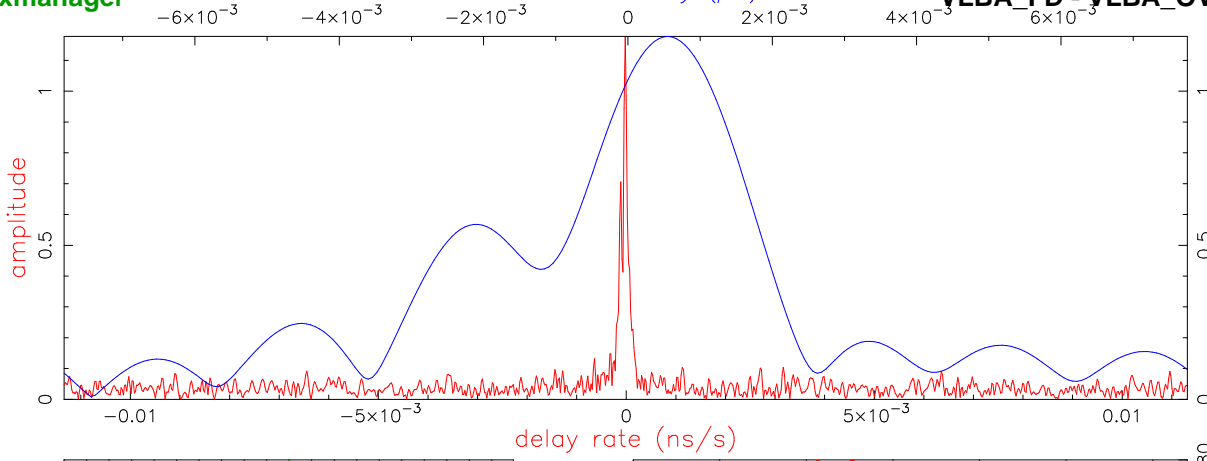
fxmanager

NRAO150.1HV1N7, No0150, fo

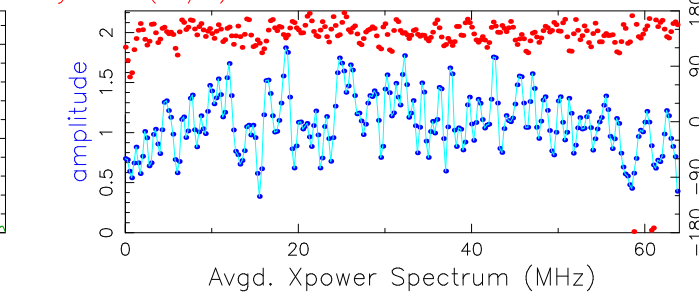
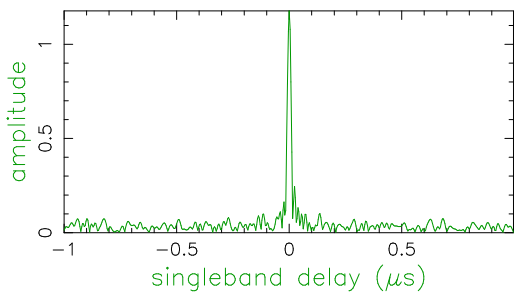
VLBA_FD - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 6

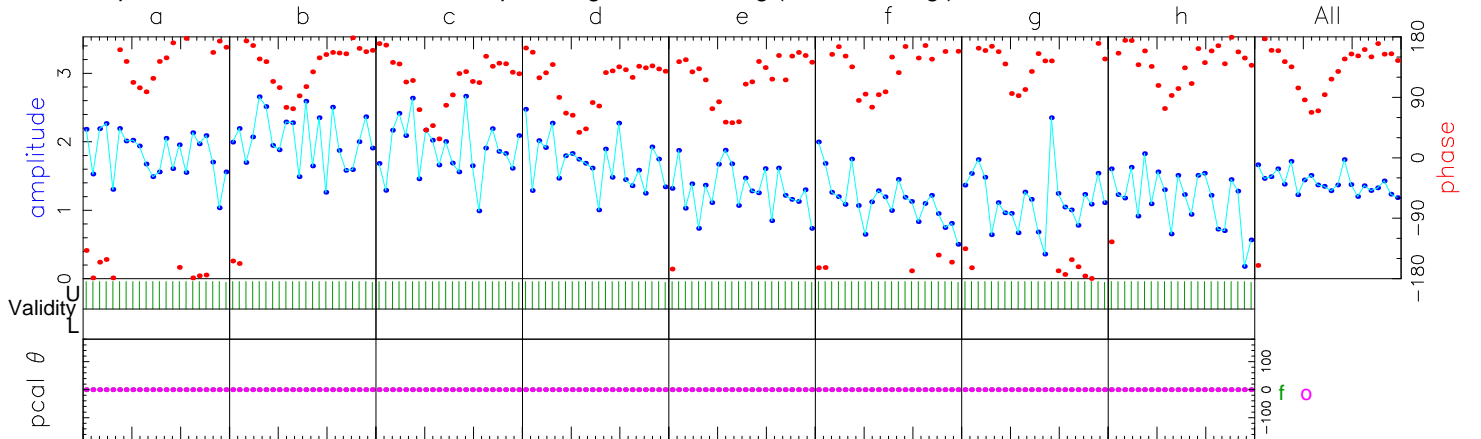


SNR 43.2
 Int time 179.979
 Amp 1.178
 Phase 139.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.000129
 MBD 0.000552
 Fringe rate (Hz)
 -0.001146
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145417
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All			
Validity	166.8	143.9	116.5	115.9	120.2	151.4	163.2	147.1	Phase	139.7			
pcal θ	1.5	1.7	1.5	1.4	1.0	0.9	1.0	1.0	Ampl.	1.2			
	257.1	256.6	256.9	257.1	257.2	257.3	257.2	257.1	Sbd box	257.0			
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used				
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs				
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs				
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase				
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC				
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp				
o	1000	1000	1000	1000	1000	1000	1000	1000					
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids				
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks				
									Chan ids				
									Tracks				
Group delay (usec)(sbd)	-3.97720286791E+03				-3.97720341974E+03				Resid mbdelay (usec)	5.51825E-04	+/- 2.5E-05		
Sband delay (usec)	-3.97720329049E+03				-1.3559155E+01				Resid sbdelay (usec)	1.29250E-04	+/- 2.0E-04		
Phase delay (usec)	-3.97720341523E+03				5.0000000E-07				Resid phdelay (usec)	4.50369E-06	+/- 8.6E-08		
Delay rate (us/s)	-1.19326543037E-01				-1.19326529728E-01				Resid rate (us/s)	-1.33095E-08	+/- 8.2E-10		
Total phase (deg)			-67.8		1.27118615771E-05				Resid phase (deg)	139.7	+/- 2.7		
	RMS	Theor.	Amplitude	1.178 +/- 0.027					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	33.9	6.2	Search (1024X32)	1.138					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
amp/seg (%)	23.7	10.9	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	22.3	3.8	Inc. seg. avg.	1.402					Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
amp/frq (%)	25.3	6.5	Inc. frq. avg.	1.248					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 314.6 el 29.7 pa 76.6			o: az 308.8 el 42.9 pa 80.6						u,v (fr/asec) 1094.596 699.677			simultaneous interpolator	
Control file: cf_1234_gmva			Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo..1HV1N7						Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo.W.16.1HV1N7				

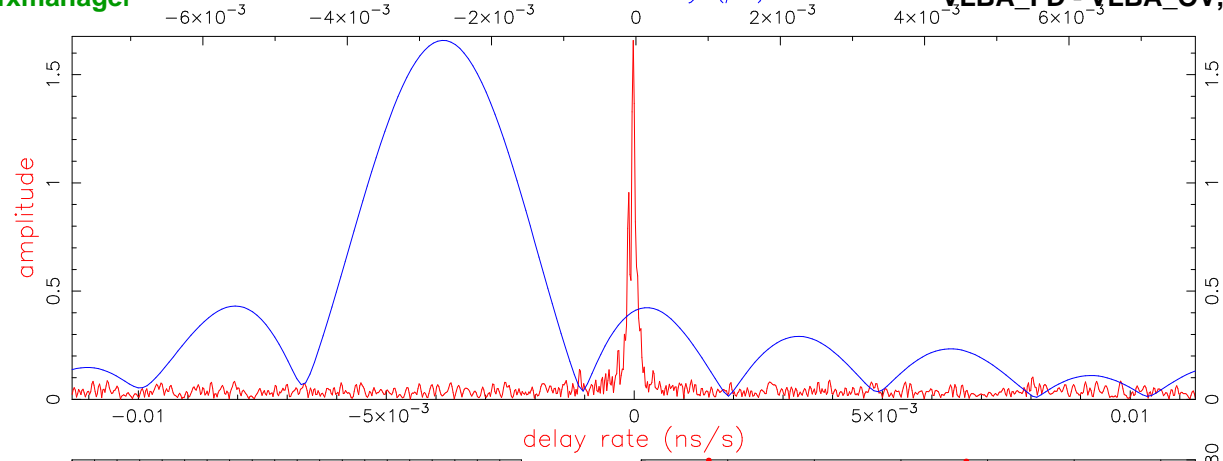
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fo

VLBA_FD - VLBA_OV, fgroup W, pol RR

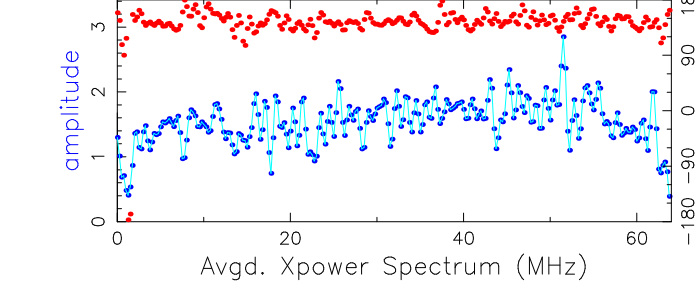
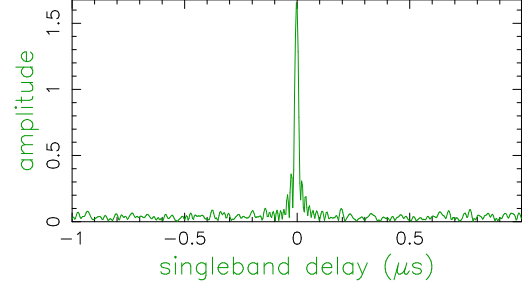
multiband delay (μ s)



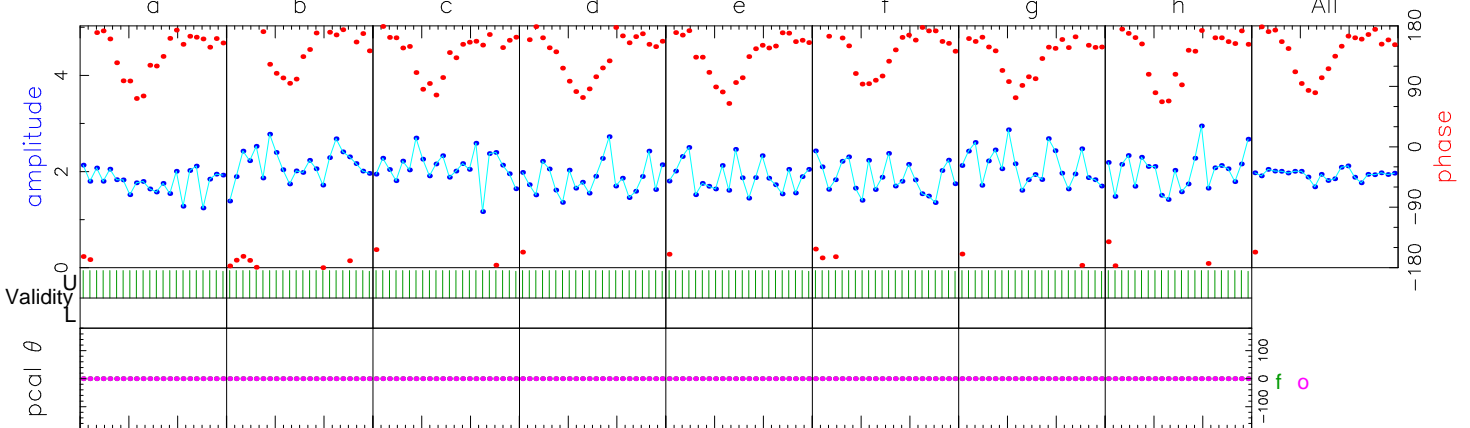
Fringe quality 7

SNR 61.5
 Int time 179.979
 Amp 1.677
 Phase 146.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.002545
 MBD -0.002644
 Fringe rate (Hz)
 -0.001164
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202a
 Yr:day 16383
 Exp# 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145420
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
o	1000	1000	1000	1000	1000	1000	1000	1000	PC phase		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp		
f	1000	1000	1000	1000	1000	1000	1000	1000			
o	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
Group delay (usec)(sbd)	-3.97720606341E+03				-3.97720341974E+03				Resid mbdelay (usec)	-2.64367E-03	+/- 1.8E-05
Sband delay (usec)	-3.97720596449E+03				-1.3559155E+01				Resid sbdelay (usec)	-2.54475E-03	+/- 1.4E-04
Phase delay (usec)	-3.97720341500E+03				5.0000000E-07				Resid phdelay (usec)	4.73859E-06	+/- 6.0E-08
Delay rate (us/s)	-1.19326543243E-01				-1.19326529728E-01				Resid rate (us/s)	-1.35150E-08	+/- 5.8E-10
Total phase (deg)			-60.5		1.27118615771E-05				Resid phase (deg)	146.9	+/- 1.9

ph/seg (deg) 32.4 4.4 Search (1024X32) 1.572 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 16.9 7.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 6.5 2.6 Inc. seg. avg. 1.936 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 7.2 4.6 Inc. frq. avg. 1.664 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 o: az 308.8 el 42.9 pa 80.6 u,v (fr/asec) 1094.596 699.677 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo.W.43.1HV1N7

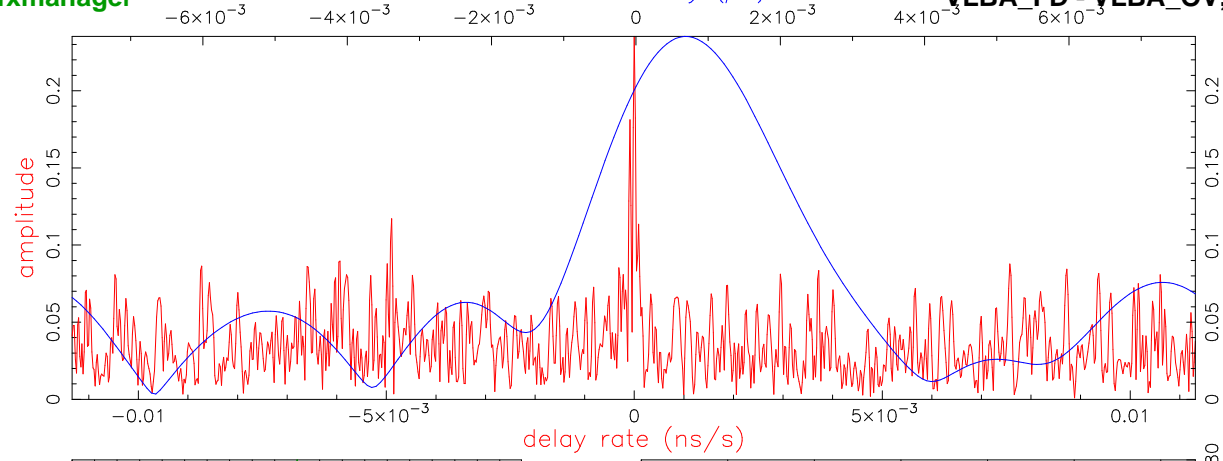
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fo

VLBA_FD - VLBA_OV, fgroup W, pol LR

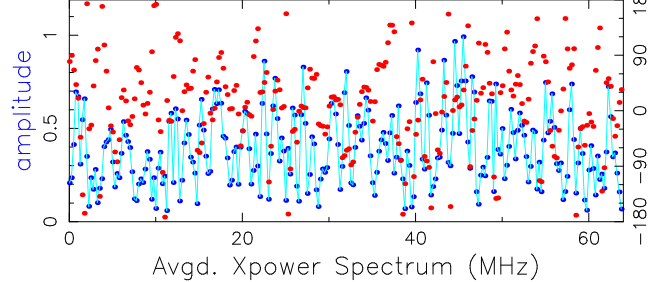
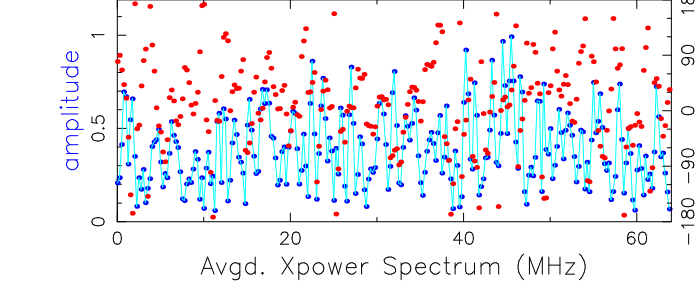
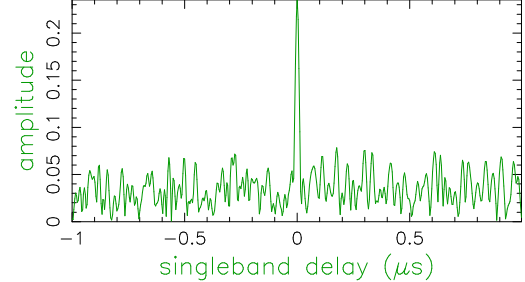
multiband delay (μ s)



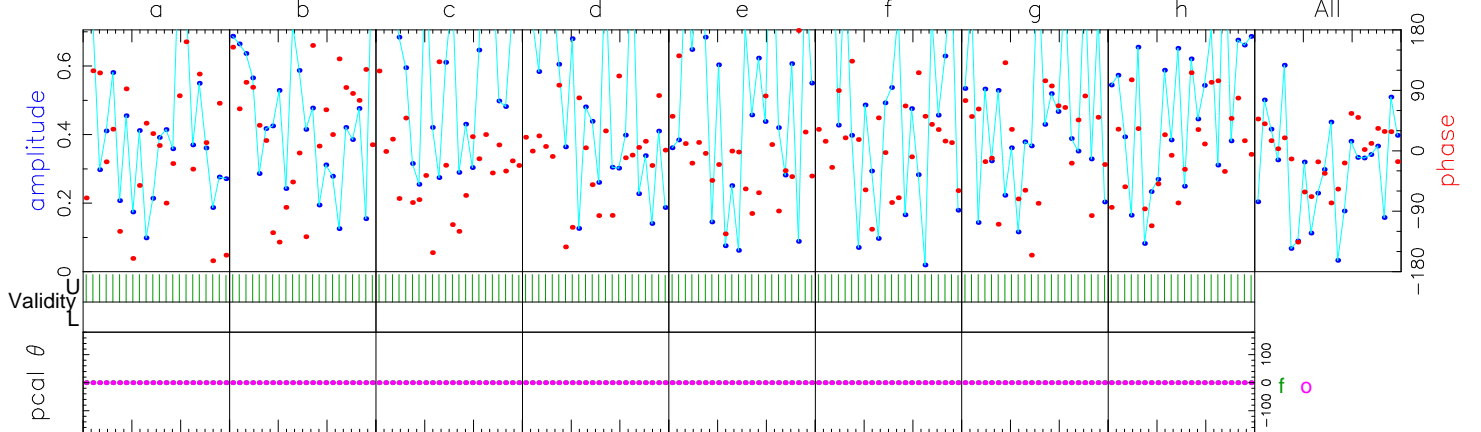
Fringe quality 9

SNR 8.6
 Int time 179.979
 Amp 0.235
 Phase 7.3
 PFD 1.1e-09
 Delays (us)
 SBD -0.000181
 MBD 0.000684
 Fringe rate (Hz)
 -0.000869
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145423
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-3.97720273561E+03				-3.97720341974E+03				6.84125E-04	+/- 1.3E-04
Sband delay (usec)	-3.97720360049E+03				-1.3559155E+01				-1.80750E-04	+/- 1.0E-03
Phase delay (usec)	-3.97720341950E+03				5.0000000E-07				2.34977E-07	+/- 4.3E-07
Delay rate (us/s)	-1.19326539820E-01				-1.19326529728E-01				-1.00927E-08	+/- 4.1E-09
Total phase (deg)			-200.2		1.27118615771E-05				7.3	+/- 13.3
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00
ph/seg (deg)	49.9	31.1			0.235 +/- 0.027					
amp/seg (%)	69.3	54.3			0.000					
ph/frq (deg)	34.5	18.8			0.263					
amp/frq (%)	42.0	32.8			0.244					
f: az 314.6 el 29.7 pa 76.6										
o: az 308.8 el 42.9 pa 80.6										
u,v (fr/asec) 1094.596 699.677										
Control file: cf_1234_gmva										
Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo..1HV1N7										
Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo.W.72.1HV1N7										

simultaneous interpolator

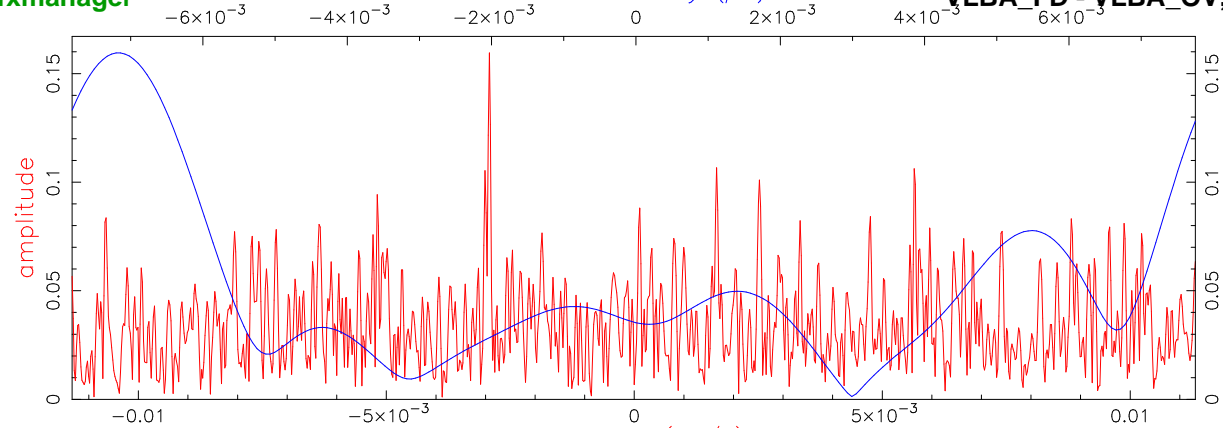
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fo

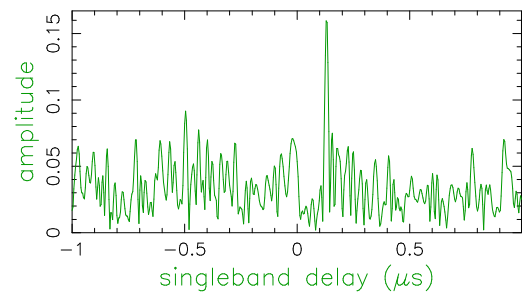
VLBA_FD - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

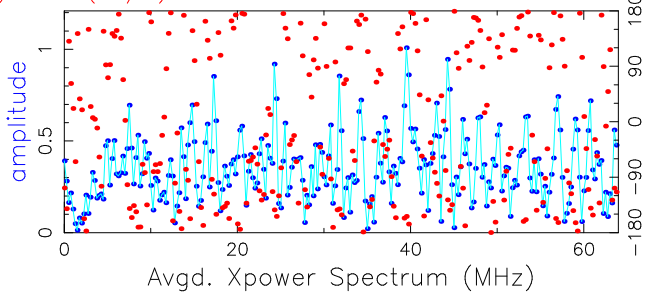


Fringe quality 0

SNR 6.0
Int time 179.979
Amp 0.167
Phase -9.1
PFD 2.7e-01
Delays (us)
SBD 0.130709
MBD -0.007137
Fringe rate (Hz)
-0.252323
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

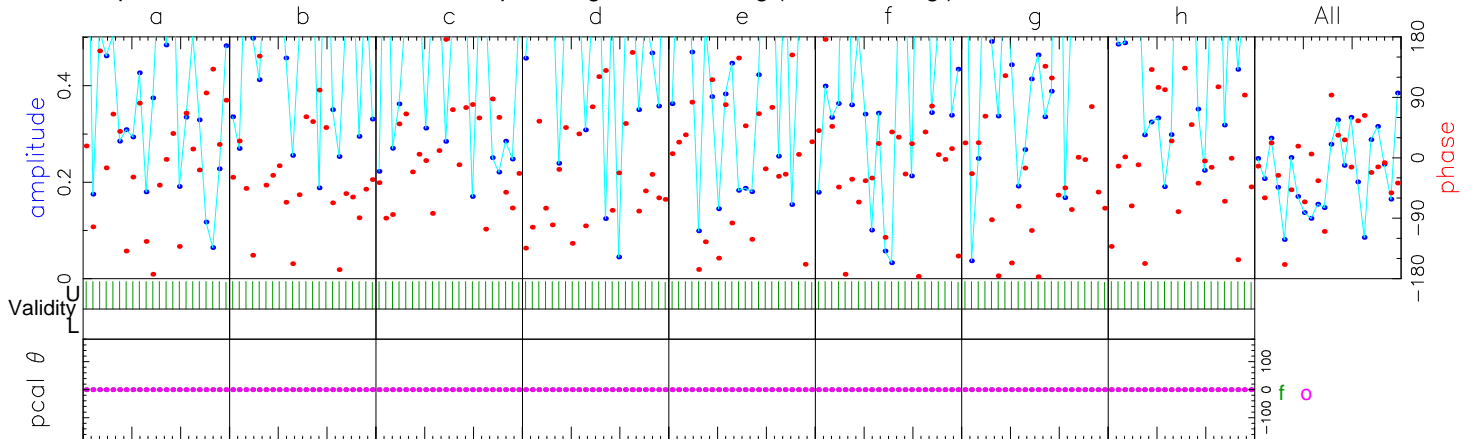


delay rate (ns/s)



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145425
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		290.5
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		-3.97706993167E+03			-3.97720341974E+03					
Sband delay (usec)		-3.97707271074E+03			-1.3559155E+01					
Phase delay (usec)		-3.97720342003E+03			5.0000000E-07					
Delay rate (us/s)		-1.19329458943E-01			-1.19326529728E-01					
Total phase (deg)			-216.5		1.27118615771E-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)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

ph/seg (deg) 55.7 45.1 Search (1024X32) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 61.5 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) 30.2 27.2 Inc. seg. avg. 0.173 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 31.5 47.4 Inc. frq. avg. 0.163 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 314.6 el 29.7 pa 76.6 o: az 308.8 el 42.9 pa 80.6 u,v (fr/asec) 1094.596 699.677 ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fo.W.80.1HV1N7

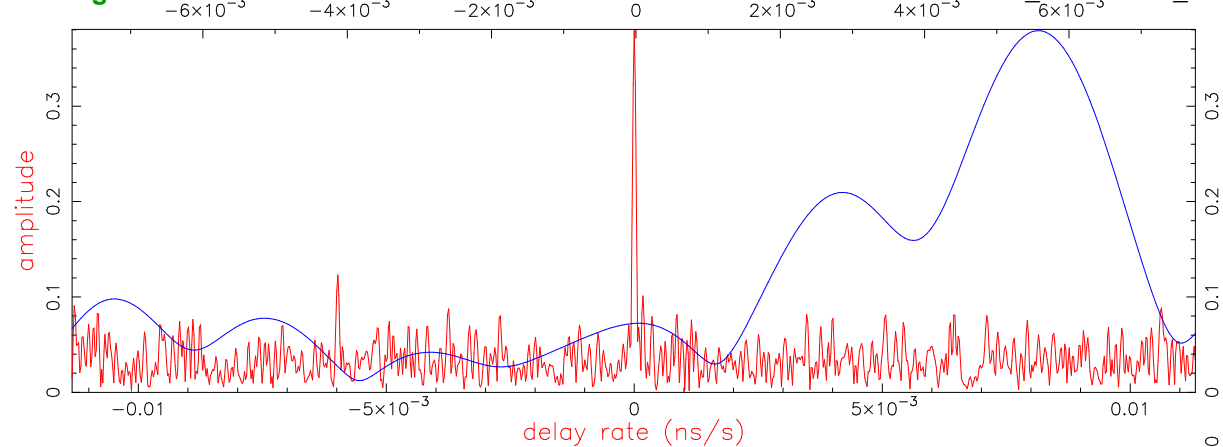
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fp

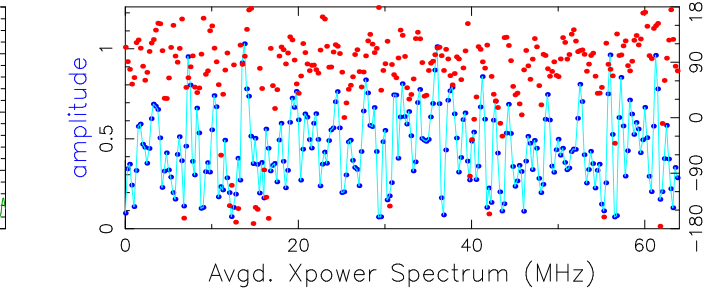
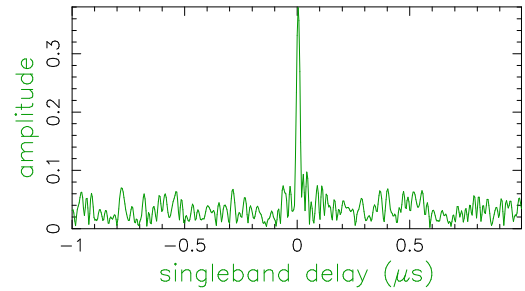
VLBA_FD - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)



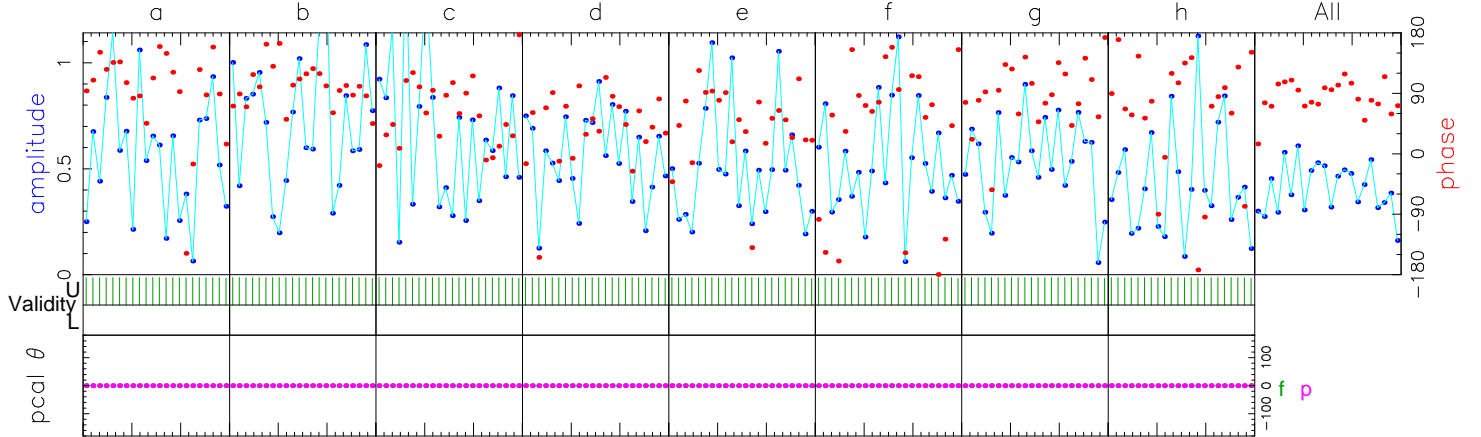
Fringe quality 9

SNR 14.0
 Int time 179.982
 Amp 0.380
 Phase 86.6
 PFD 8.2e-36
 Delays (us)
 SBD 0.004642
 MBD 0.005590
 Fringe rate (Hz)
 0.000921
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Yr:day 16383
 Start 2020:283
 Stop 2020:283
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145419
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	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		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.59046519007E+03									
Sband delay (usec)	-1.59046613828E+03									
Phase delay (usec)	-1.59047077749E+03									
Delay rate (us/s)	-4.52418683071E-02									
Total phase (deg)			81.8							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									86.6	+/- 8.2
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) 23.8 19.3
 amp/seg (%) 30.4 33.6
 ph/frq (deg) 30.3 11.6
 amp/frq (%) 33.5 20.3

f: az 314.6 el 29.7 pa 76.6
 p: az 312.2 el 34.7 pa 76.4
 u,v (fr/asec) 414.718 63.352

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fp..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fp.W.33.1HV1N7 simultaneous interpolator

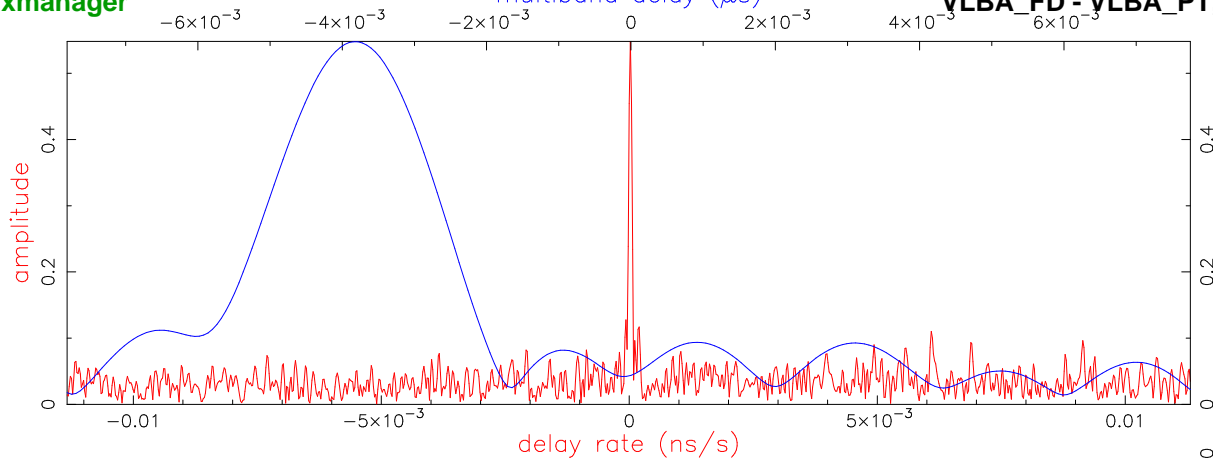
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fp

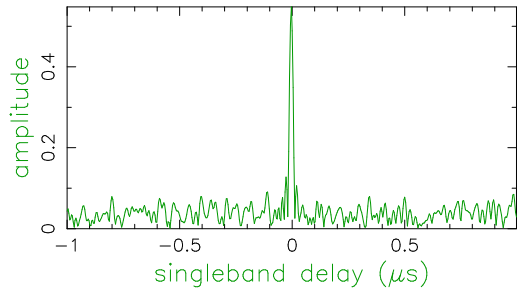
VLBA_FD - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)

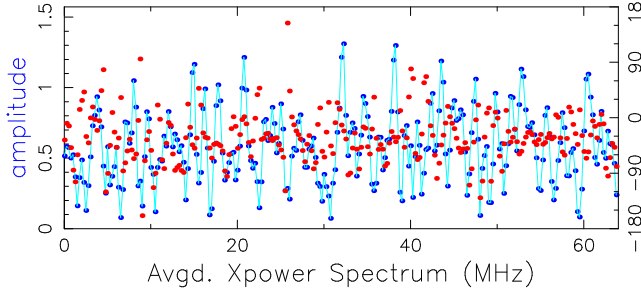


Fringe quality 9

SNR 20.1
 Int time 179.982
 Amp 0.548
 Phase -38.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.004214
 MBD -0.003826
 Fringe rate (Hz) 0.000974
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

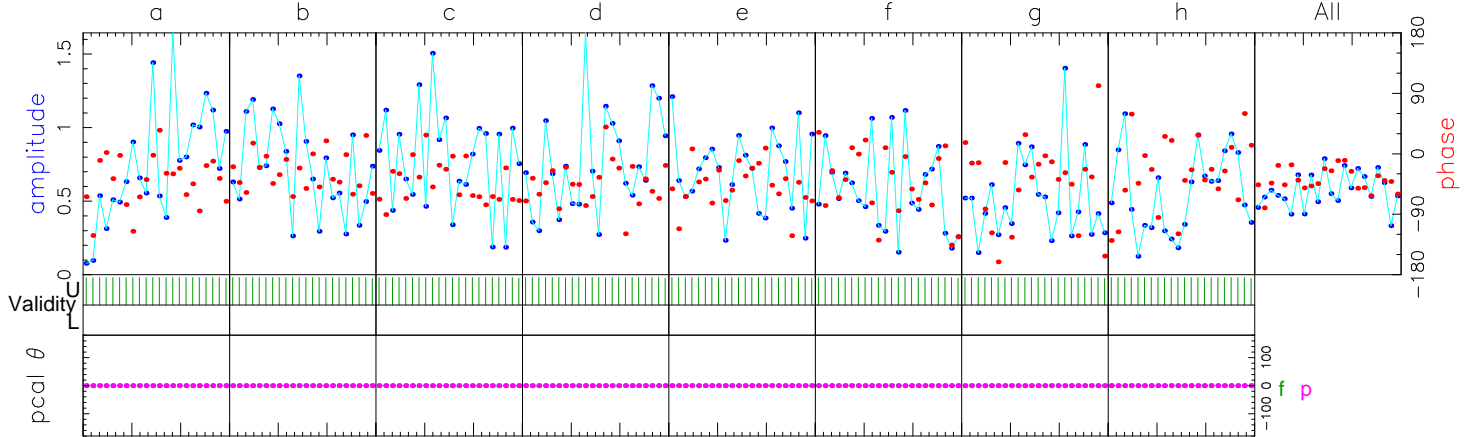


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145421
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-37.1	-26.8	-48.1	-44.1	-45.6	-36.3	-33.7	-30.7	Phase	-38.7
	0.6	0.7	0.7	0.6	0.6	0.5	0.3	0.4	Ampl.	0.5
	256.0	255.8	255.9	255.8	255.9	256.6	255.3	255.6	Sbd box	255.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.59047460661E+03		Apriori delay (usec)		-1.59047078028E+03		Resid mbdelay (usec)		-3.82633E-03	+/- 5.4E-05
Sband delay (usec)	-1.59047499428E+03		Apriori clock (usec)		7.7890005E+00		Resid sbdelay (usec)		-4.21400E-03	+/- 4.3E-04
Phase delay (usec)	-1.59047078153E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-1.24683E-06	+/- 1.8E-07
Delay rate (us/s)	-4.52418676864E-02		Apriori rate (us/s)		-4.52418789950E-02		Resid rate (us/s)		1.13086E-08	+/- 1.8E-09
Total phase (deg)			Apriori accel (us/s/s)		3.76309165108E-06		Resid phase (deg)		-38.7	+/- 5.7

ph/seg (deg) 17.4 13.4 Amplitude 0.548 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 21.7 23.3 Search (1024X32) 0.523 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 8.2 8.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 23.7 14.1 Inc. seg. avg. 0.558 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 p: az 312.2 el 34.7 pa 76.4 u,v (fr/asec) 414.718 63.352 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/c202a/v1/v1_3mm/1234/No0150/fp..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fp.W.54.1HV1N7 simultaneous interpolator

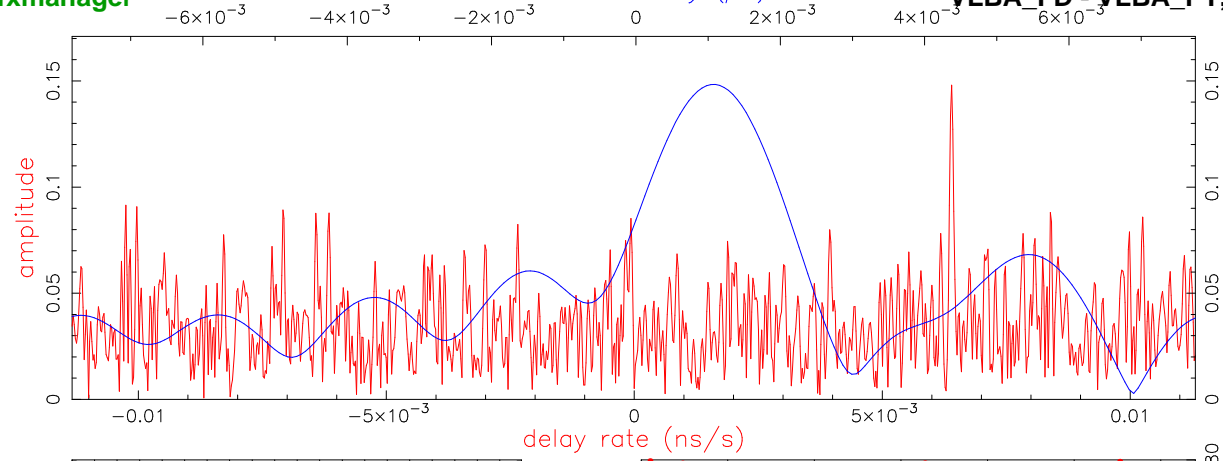
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fp

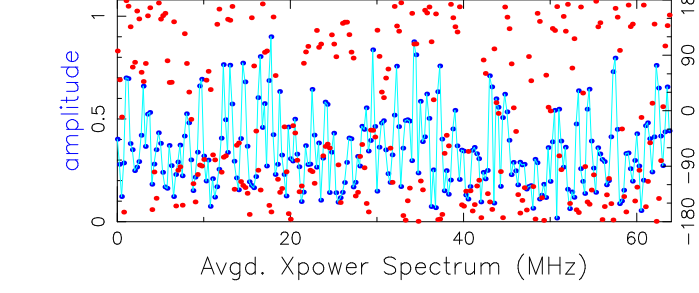
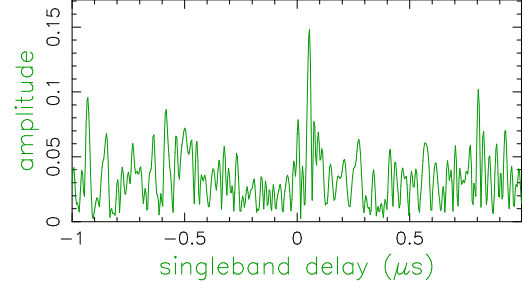
VLBA_FD - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)



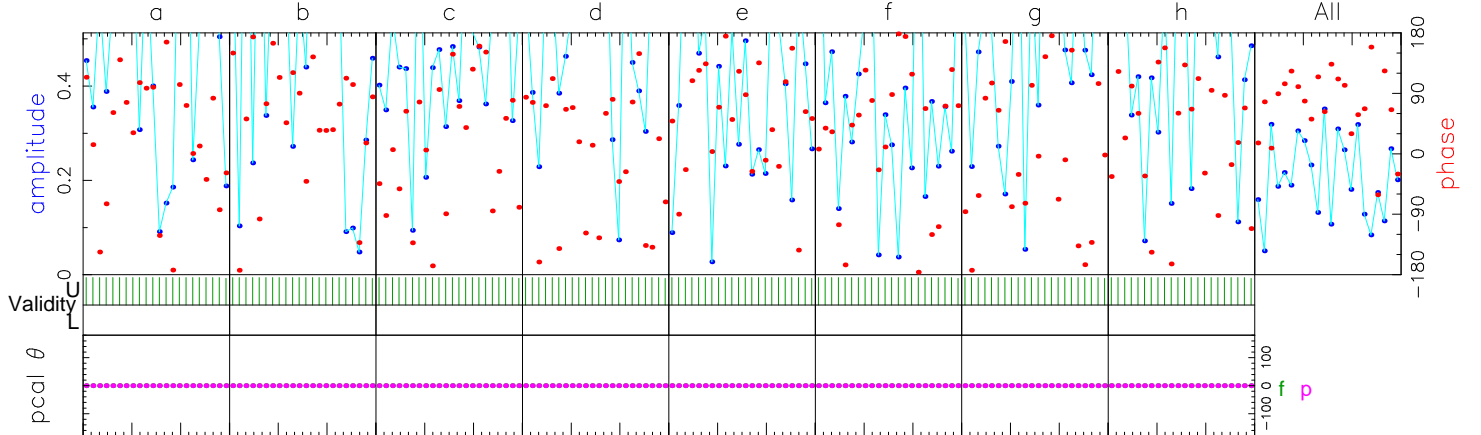
Fringe quality 0

SNR 5.5
 Int time 179.982
 Amp 0.171
 Phase 73.2
 PFD 9.9e-01
 Delays (us)
 SBD 0.053530
 MBD 0.001005
 Fringe rate (Hz) 0.551512
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145423
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	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		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.59042290034E+03				-1.59047078028E+03				1.00494E-03	+/- 2.0E-04
Sband delay (usec)	-1.59041725078E+03				7.7890005E+00				5.35295E-02	+/- 1.6E-03
Phase delay (usec)	-1.59047077792E+03				0.0000000E+00				2.36019E-02	+/- 6.7E-07
Delay rate (us/s)	-4.52354764925E-02				-4.52418789950E-02				6.40250E-06	+/- 6.5E-09
Total phase (deg)			68.4		3.76309165108E-06				73.2	+/- 20.9
Apriori delay (usec)					0.171 +/- 0.031					
Apriori clock (usec)					0.147					
Apriori clockrate (us/s)					0.0000000E+00					
Apriori rate (us/s)					-4.52418789950E-02					
Apriori accel (us/s/s)					3.76309165108E-06					
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 θ										
Chan ids										
Tracks										
Chan ids										
Tracks										
ph/seg (deg)	52.5	49.0			0.171 +/- 0.031					
amp/seg (%)	68.5	85.6			0.000					
ph/frq (deg)	51.1	29.6			0.174					
amp/frq (%)	45.5	51.6			0.162					
f: az 314.6 el 29.7 pa 76.6										
p: az 312.2 el 34.7 pa 76.4										
u,v (fr/asec)					414.718 63.352					
Control file: cf_1234_gmva										
Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fp..1HV1N7										
Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fp.W.68.1HV1N7										

simultaneous interpolator

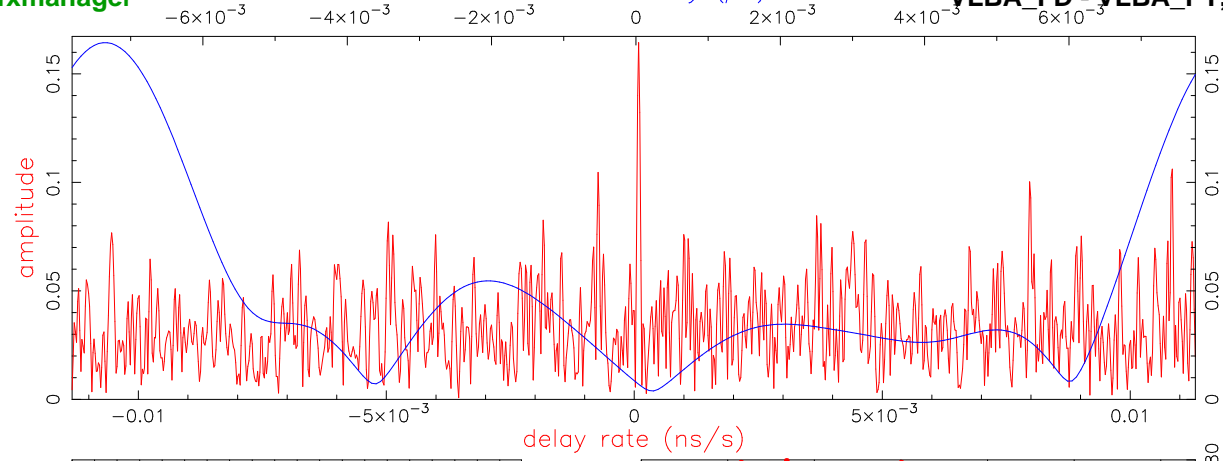
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

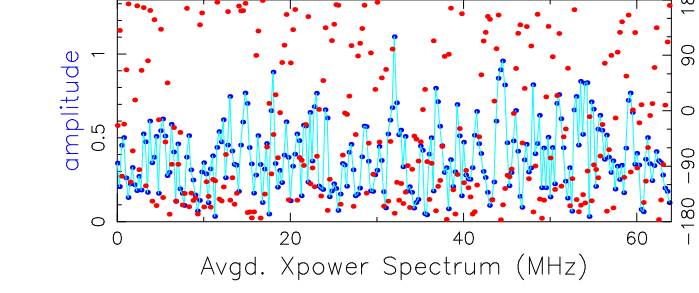
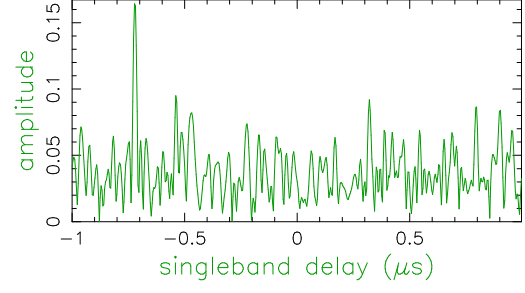
NRAO150.1HV1N7, No0150, fp

VLBA_FD - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

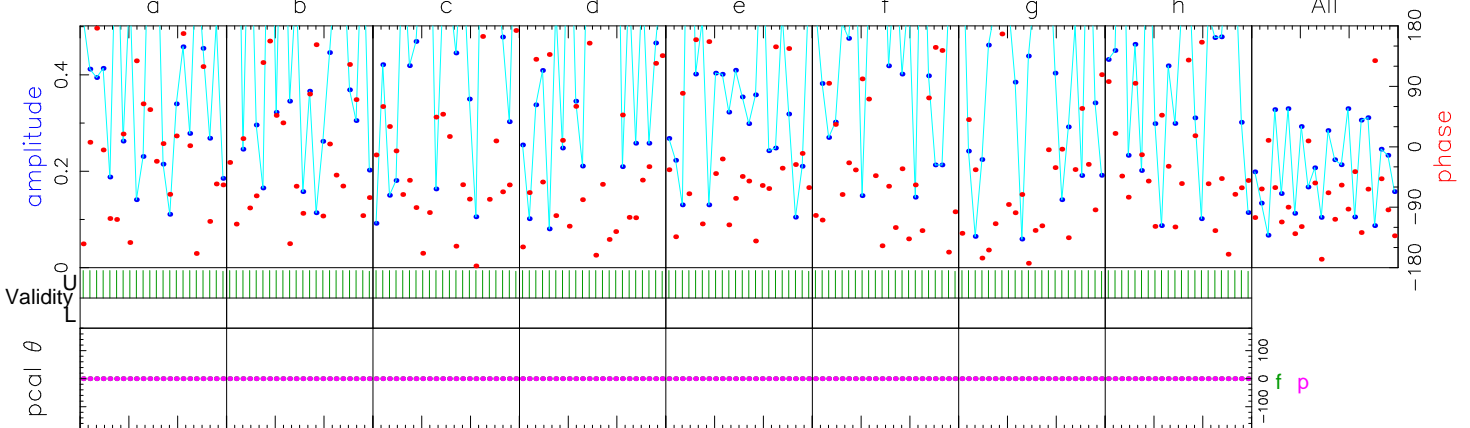


Fringe quality 0
 SNR 6.1
 Int time 179.982
 Amp 0.167
 Phase -84.9
 PFD 1.0e-01
 Delays (us)
 SBD -0.720940
 MBD -0.007332
 Fringe rate (Hz) 0.007441
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145425
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-65.2	-65.9	-77.0	-125.1	-70.7	-90.5	-105.0	-57.3	Phase	-84.9
	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Ampl.	0.2
	338.7	360.9	486.2	192.6	188.8	396.4	180.0	438.7	Sbd box	72.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	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	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	-1.59119686214E+03		Apriori delay (usec)		-1.59047078028E+03		Resid mbdelay (usec)		-7.33186E-03	+/- 1.8E-04
Sband delay (usec)	-1.59119172078E+03		Apriori clock (usec)		7.7890005E+00		Resid sbdelay (usec)		-7.20940E-01	+/- 1.4E-03
Phase delay (usec)	-1.59047078302E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-2.73736E-06	+/- 6.0E-07
Delay rate (us/s)	-4.52417926148E-02		Apriori rate (us/s)		-4.52418789950E-02		Resid rate (us/s)		8.63803E-08	+/- 5.8E-09
Total phase (deg)			Apriori accel (us/s/s)		3.76309165108E-06		Resid phase (deg)		-84.9	+/- 18.7

ph/seg (deg) 53.2 43.8 Search (1024X32) 0.163 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.4 76.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 25.2 26.4 Inc. seg. avg. 0.162 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 30.1 46.1 Inc. frq. avg. 0.161 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 p: az 312.2 el 34.7 pa 76.4 u,v (fr/asec) 414.718 63.352 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fp..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fp.W.79.1HV1N7

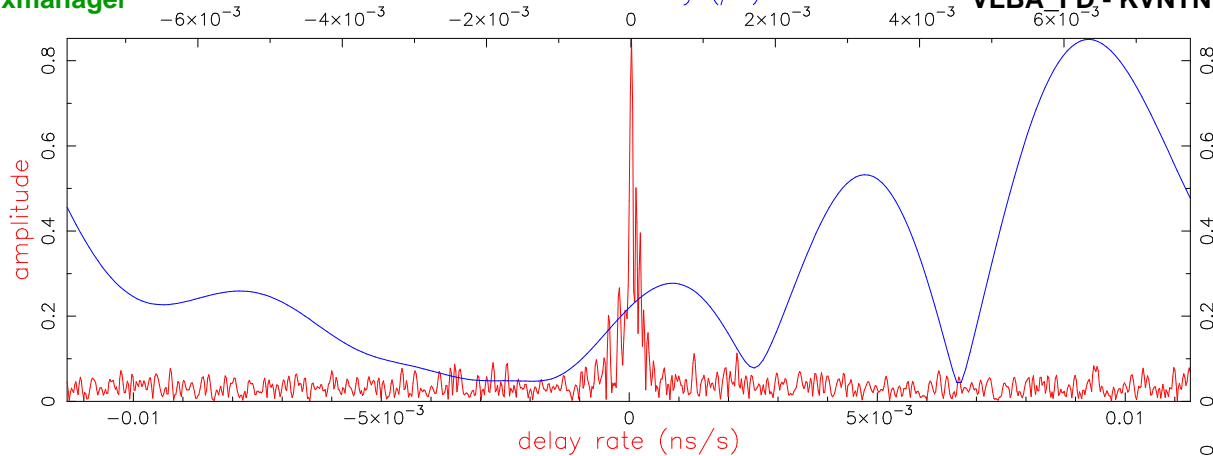
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, ft

VLBA_FD - KVNTN, fgroup W, pol RR

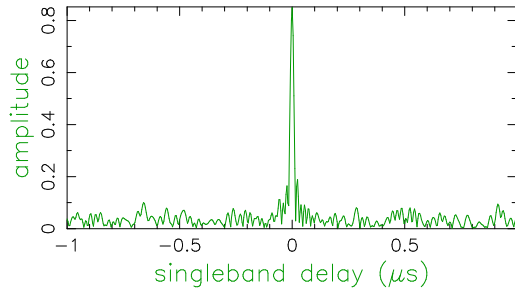
multiband delay (μ s)



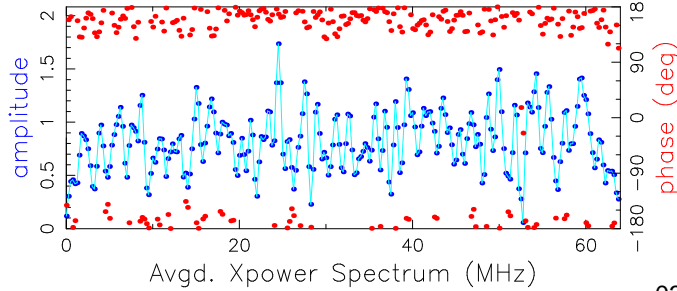
Fringe quality 5

SNR 31.3
 Int time 179.977
 Amp 0.853
 Phase 85.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.000743
 MBD 0.006305
 Fringe rate (Hz)
 0.004420
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

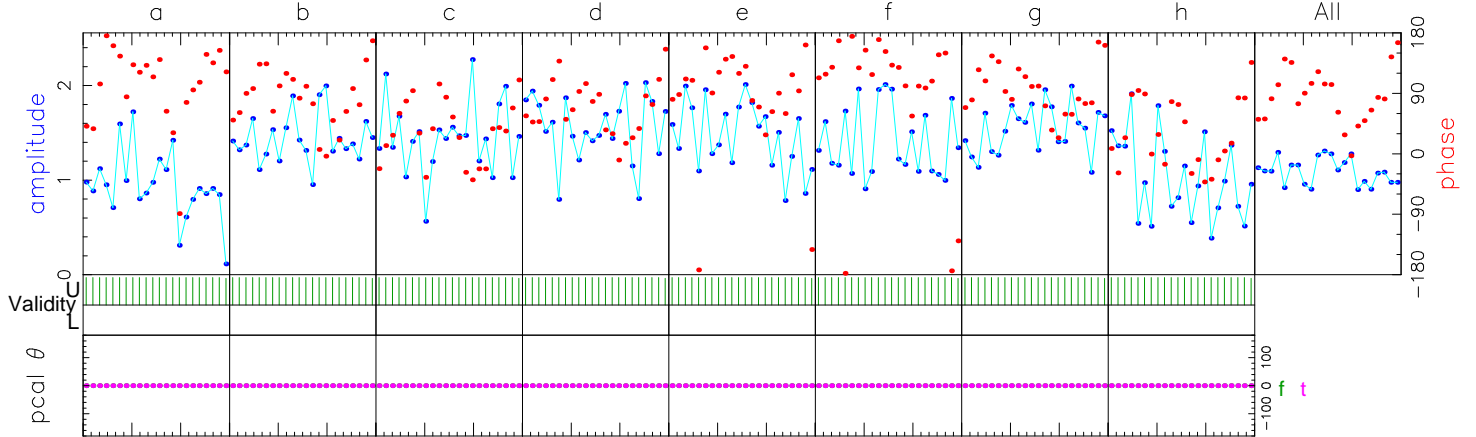
Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145428
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



delay rate (ns/s)



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-5.84560914560E+03	Apriori delay (usec)	-5.84561545052E+03	Resid mbdelay (usec)	6.30491E-03	+/-	3.5E-05
Sband delay (usec)	-5.84561619352E+03	Apriori clock (usec)	6.4687061E+00	Resid sbdelay (usec)	-7.43000E-04	+/-	2.8E-04
Phase delay (usec)	-5.84561544777E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	2.74192E-06	+/-	1.2E-07
Delay rate (us/s)	-1.45074169827E+00	Apriori rate (us/s)	-1.45074174958E+00	Resid rate (us/s)	5.13095E-08	+/-	1.1E-09
Total phase (deg)	-241.6	Apriori accel (us/s/s)	2.76841193732E-05	Resid phase (deg)	85.0	+/-	3.7

ph/seg (deg)	40.3	RMS	8.6	Theor.	8.6	Amplitude	0.853 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	32.4	Search (1024X32)	0.835	Inc. seg. avg.	1.081	Inc. frq. avg.	1.029	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	42.5	Interp.	0.000	Inc. seg. avg.	1.081	Inc. frq. avg.	1.029	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	32.1	Search (1024X32)	0.835	Inc. seg. avg.	1.081	Inc. frq. avg.	1.029	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Search (1024X32)	0.835	Inc. seg. avg.	1.081	Inc. frq. avg.	1.029	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

f: az 314.6 el 29.7 pa 76.6 t: az 48.4 el 49.8 pa -96.1 u,v (fr/asec) 13222.181 2438.293 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft.W.100.1HV1N7

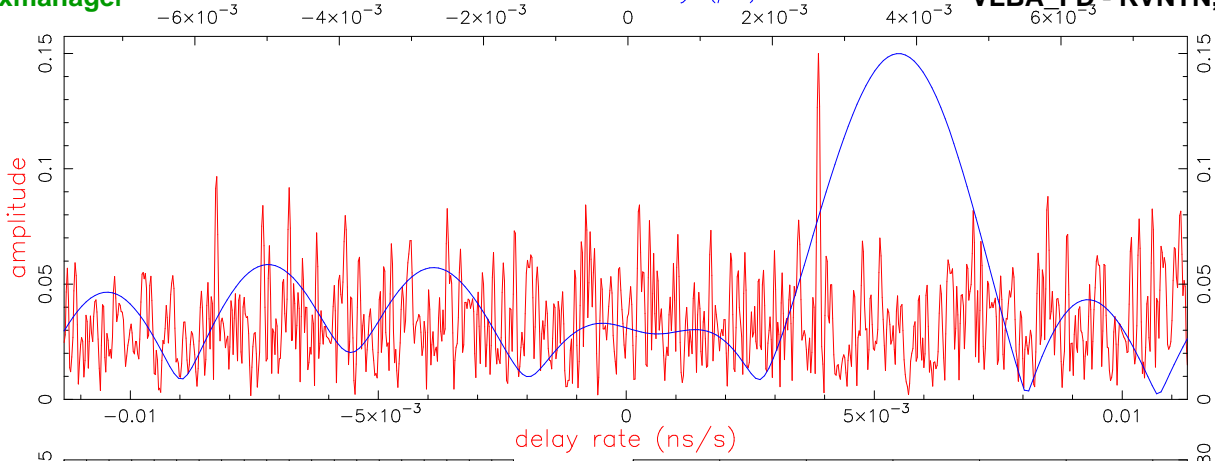
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

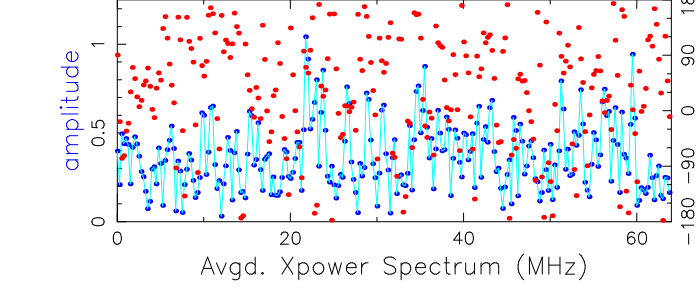
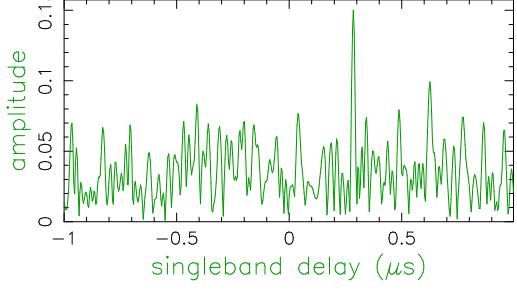
NRAO150.1HV1N7, No0150, ft

VLBA_FD - KVNTN, fgroup W, pol LR

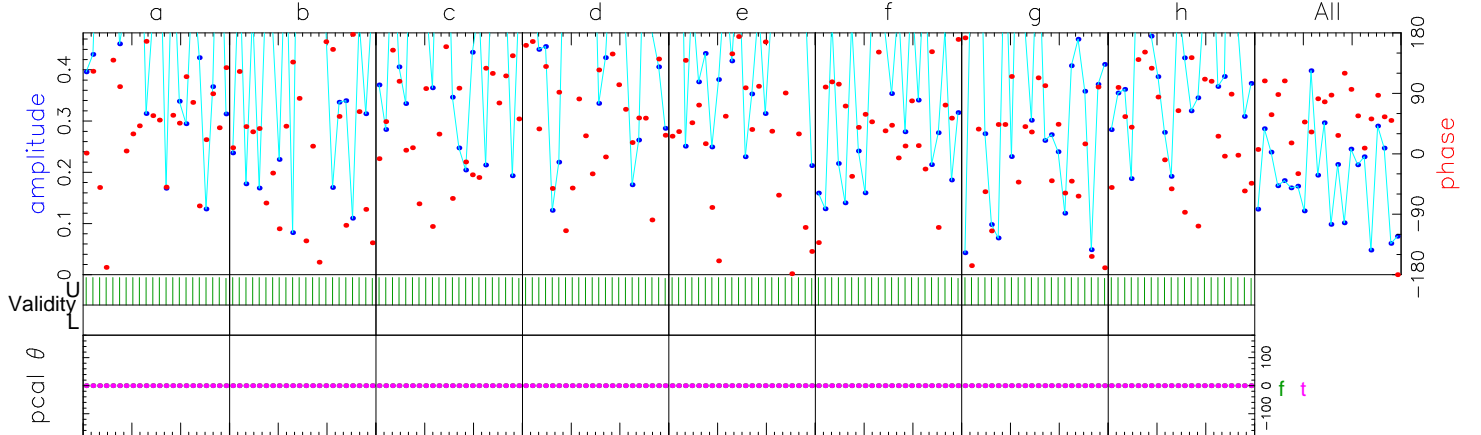
multiband delay (μ s)



Fringe quality 0
 SNR 5.5
 Int time 179.977
 Amp 0.157
 Phase 61.8
 PFD 9.9e-01
 Delays (us)
 SBD 0.285073
 MBD 0.003749
 Fringe rate (Hz) 0.333552
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145430
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
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)	-5.84533045139E+03									
Sband delay (usec)	-5.84533037777E+03									
Phase delay (usec)	-5.84561544852E+03									
Delay rate (us/s)	-1.45073787737E+00									
Total phase (deg)			-264.9							
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)									61.8	+/- 20.8
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)										

ph/seg (deg) 44.8 48.8
 amp/seg (%) 63.1 85.2
 ph/frq (deg) 16.7 29.5
 amp/frq (%) 38.1 51.4
 f: az 314.6 el 29.7 pa 76.6 t: az 48.4 el 49.8 pa -96.1 u,v (fr/asec) 13222.181 2438.293
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft.W.124.1HV1N7 simultaneous interpolator

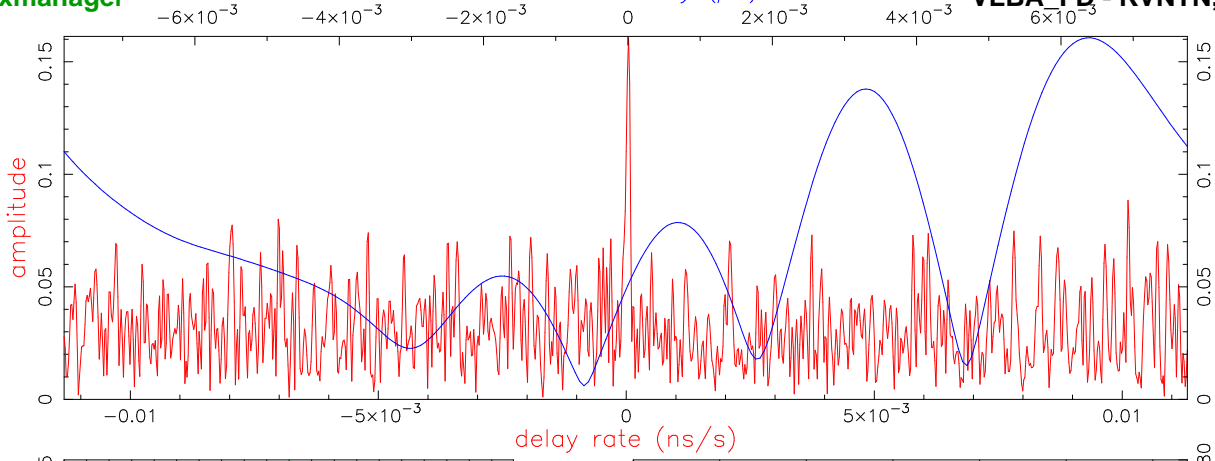
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

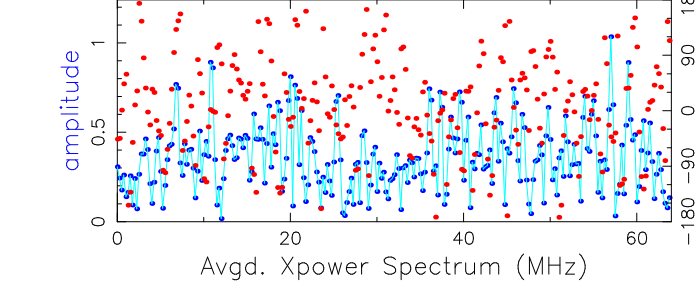
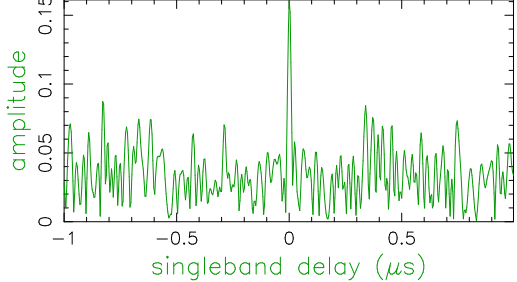
NRAO150.1HV1N7, No0150, ft

VLBA_FD - KVNTN, fgroup W, pol RL

multiband delay (μ s)

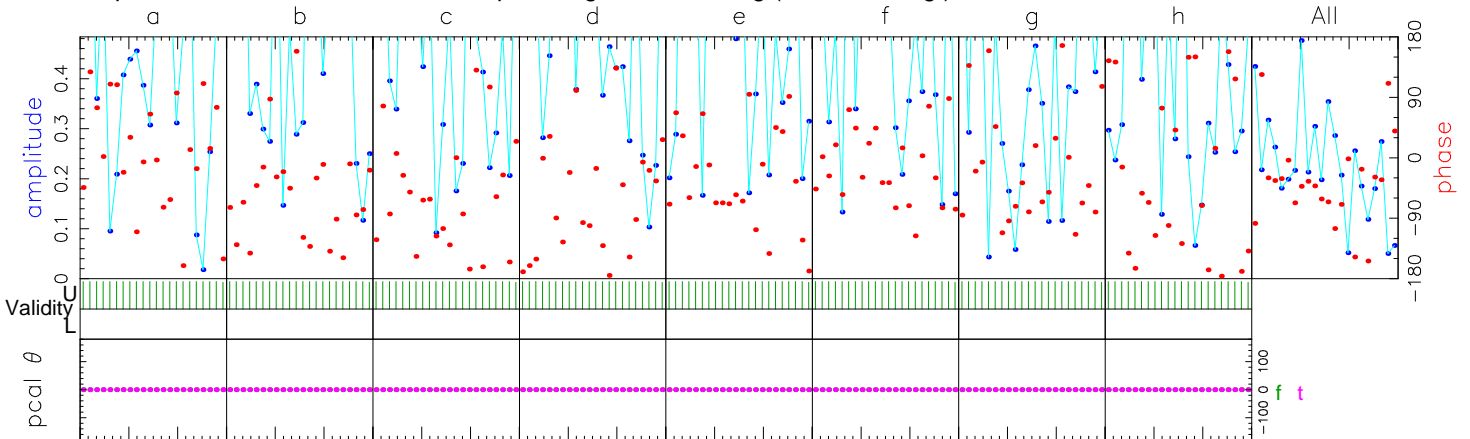


Fringe quality 0
 SNR 5.9
 Int time 179.977
 Amp 0.161
 Phase -54.0
 PFD 3.4e-01
 Delays (us)
 SBD 0.000829
 MBD 0.006434
 Fringe rate (Hz) 0.003239
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145432
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-5.84560901613E+03	Apriori delay (usec)	-5.84561545052E+03	Resid mbdelay (usec)	6.43438E-03	+/-	1.8E-04
Sband delay (usec)	-5.84561462177E+03	Apriori clock (usec)	6.4687061E+00	Resid sbdelay (usec)	8.28750E-04	+/-	1.5E-03
Phase delay (usec)	-5.84561545226E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-1.74040E-06	+/-	6.2E-07
Delay rate (us/s)	-1.45074171197E+00	Apriori rate (us/s)	-1.45074174958E+00	Resid rate (us/s)	3.76017E-08	+/-	6.0E-09
Total phase (deg)	-20.6	Apriori accel (us/s/s)	2.76841193732E-05	Resid phase (deg)	-54.0	+/-	19.4

ph/seg (deg)	67.8	Theor.	45.4	Amplitude	0.161 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	78.1		79.3	Search (1024X32)	0.159	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	55.0		27.4	Inc. seg. avg.	0.175	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	57.0		47.8	Inc. frq. avg.	0.208	Sample rate (MSamp/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

f: az 314.6 el 29.7 pa 76.6 t: az 48.4 el 49.8 pa -96.1 u,v (fr/asec) 13222.181 2438.293 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft.1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft.W.137.1HV1N7

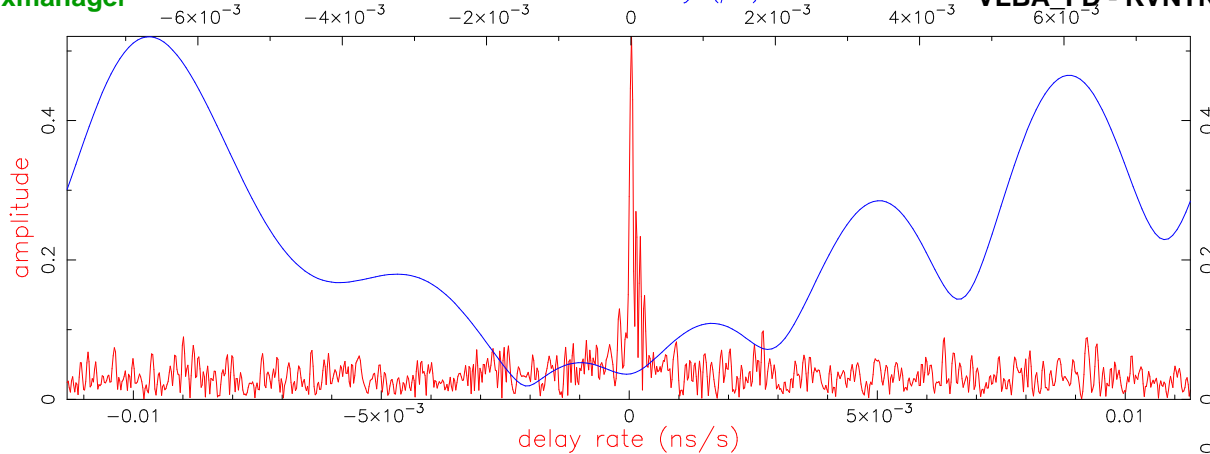
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, ft

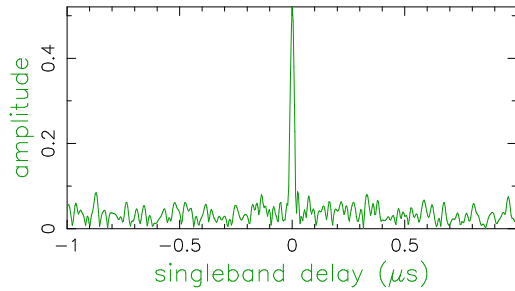
VLBA_FD - KVNTN, fgroup W, pol LL

multiband delay (μ s)

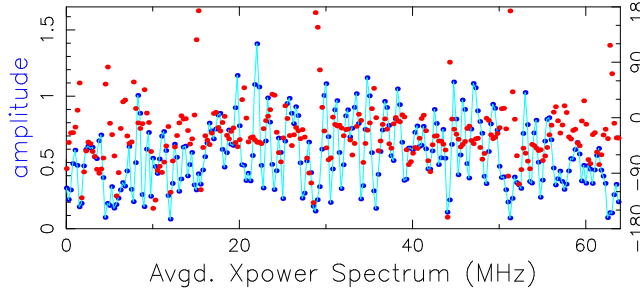


Fringe quality 7

SNR 19.1
 Int time 179.977
 Amp 0.521
 Phase 51.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.000468
 MBD -0.006654
 Fringe rate (Hz)
 0.004183
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

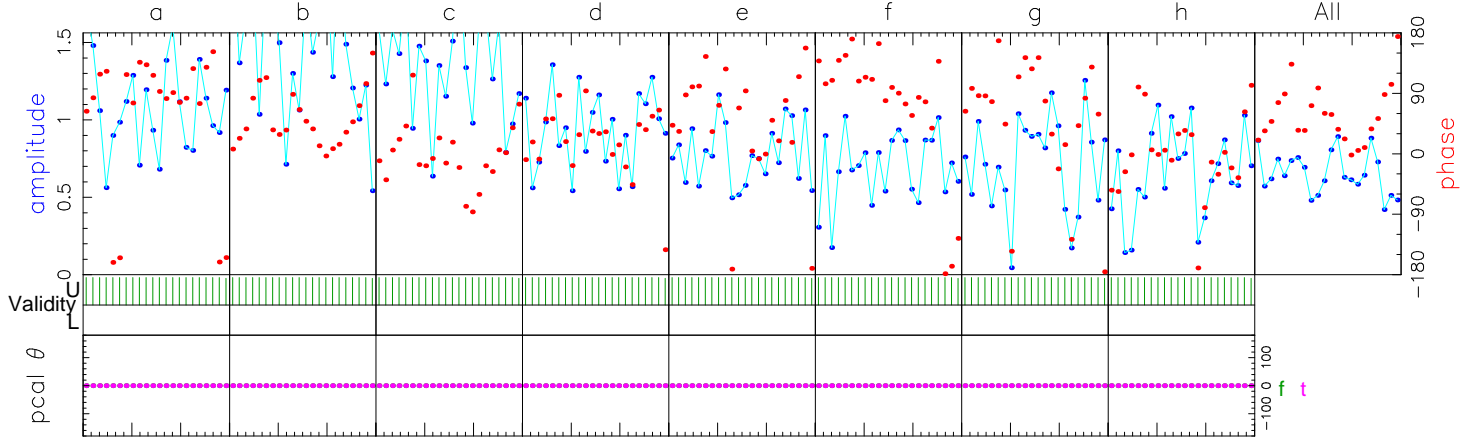


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145426
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.84562210463E+03	Apriori delay (usec)	-5.84561545052E+03	Resid mbdelay (usec)	-6.65412E-03	+/-	5.7E-05
Sband delay (usec)	-5.84561498202E+03	Apriori clock (usec)	6.4687061E+00	Resid sbdelay (usec)	4.68500E-04	+/-	4.5E-04
Phase delay (usec)	-5.84561544885E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	1.66601E-06	+/-	1.9E-07
Delay rate (us/s)	-1.45074170102E+00	Apriori rate (us/s)	-1.45074174958E+00	Resid rate (us/s)	4.85589E-08	+/-	1.9E-09
Total phase (deg)	-275.0	Apriori accel (us/s/s)	2.76841193732E-05	Resid phase (deg)	51.7	+/-	6.0

ph/seg (deg)	42.7	RMS	14.1	Theor.	14.1	Amplitude	0.521 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	36.3	Search (1024X32)	0.512	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	51.1	Inc. seg. avg.	0.637	Inc. frq. avg.	0.700	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	62.8	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	Sample rate (Mb/s):	2048	nlags:	256	t_cohere	infinite
f: az 314.6 el 29.7 pa 76.6		t: az 48.4 el 49.8 pa -96.1		u, v (fr/asec)	13222.181 2438.293	ion window (TEC)	0.00	0.00			

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft.1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/ft.W.81.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

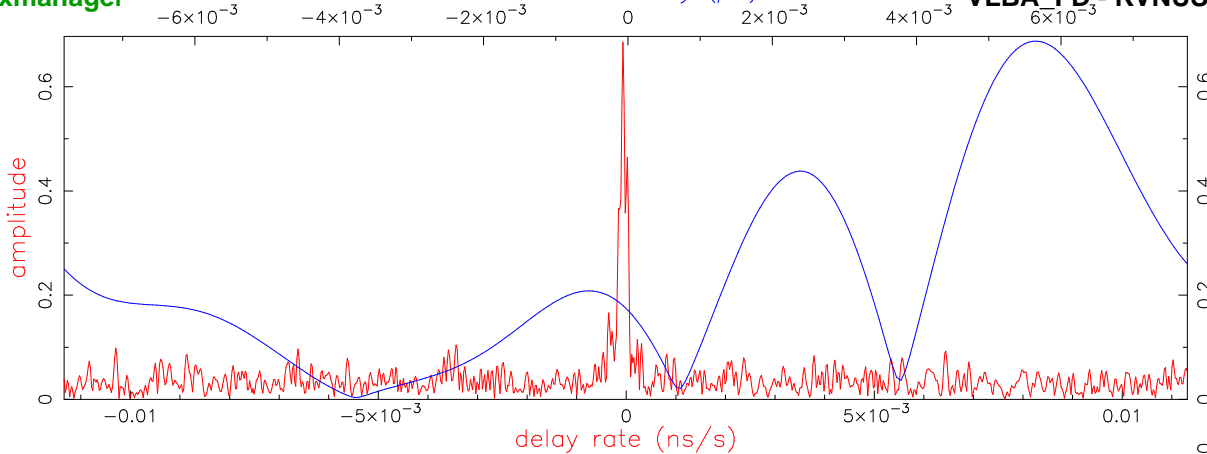
fxmanager

NRAO150.1HV1N7, No0150, fu

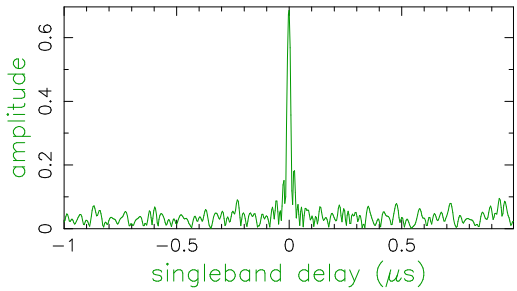
VLBA_FD- KVNUS, fgroup W, pol RR

multiband delay (μ s)

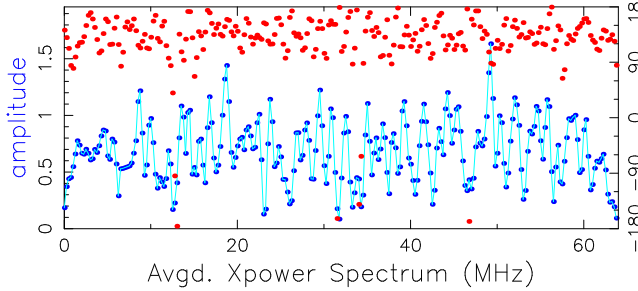
Fringe quality 6



SNR 25.6
 Int time 179.977
 Amp 0.697
 Phase 52.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.001564
 MBD 0.005553
 Fringe rate (Hz)
 -0.005383
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

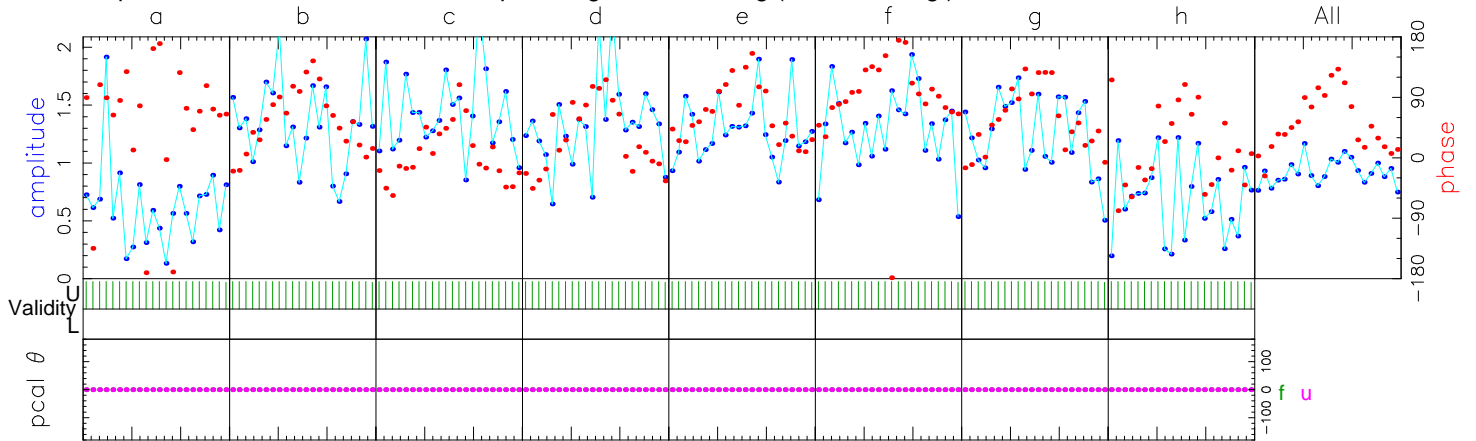


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145428
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:u	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	
u	1000	1000	1000	1000	1000	1000	1000	1000		
f	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)	-6.58628803025E+03								5.55323E-03	+/- 4.2E-05
Sband delay (usec)	-6.58629514773E+03								-1.56425E-03	+/- 3.4E-04
Phase delay (usec)	-6.58629358179E+03								1.68438E-06	+/- 1.4E-07
Delay rate (us/s)	-1.40846703366E+00								-6.24877E-08	+/- 1.4E-09
Total phase (deg)			-48.8						52.2	+/- 4.5
				Apriori delay (usec)	-6.58629358348E+03				Resid mbdelay (usec)	
				Apriori clock (usec)	5.3140001E+00				Resid sbdelay (usec)	
				Apriori clockrate (us/s)	0.0000000E+00				Resid phdelay (usec)	
				Apriori rate (us/s)	-1.40846697117E+00				Resid rate (us/s)	
				Apriori accel (us/s/s)	2.87714328705E-05				Resid phase (deg)	
ph/seg (deg)	42.6	10.5		Search (1024X32)	0.674				PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	35.8	18.4		Interp.	0.000				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	41.1	6.3		Inc. seg. avg.	0.907				Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	40.6	11.1		Inc. frq. avg.	0.825				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
									nlags: 256	t_cohere infinite
f: az 314.6 el 29.7 pa 76.6				u: az 50.3 el 53.0 pa -96.4						
				u,v (fr/asec) 12838.425 2363.909						
Control file: cf_1234_gmva				Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu..1HV1N7						simultaneous interpolator
				Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu.W.103.1HV1N7						

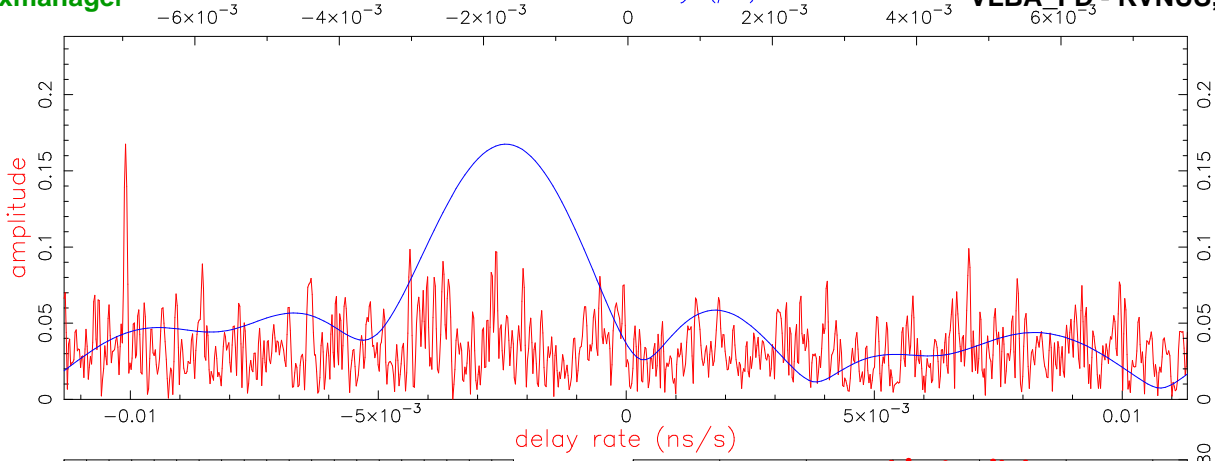
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fu

VLBA_FD - KVNUS, fgroup W, pol LR

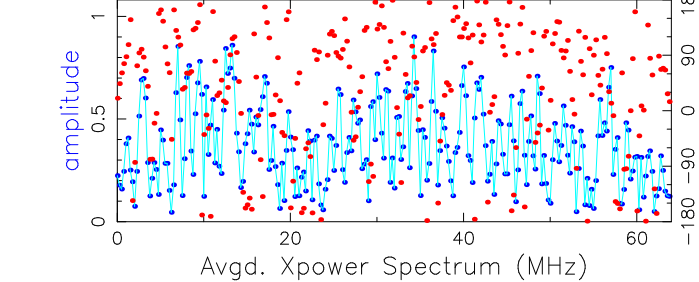
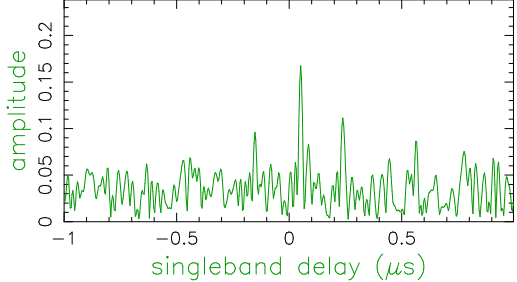
multiband delay (μ s)



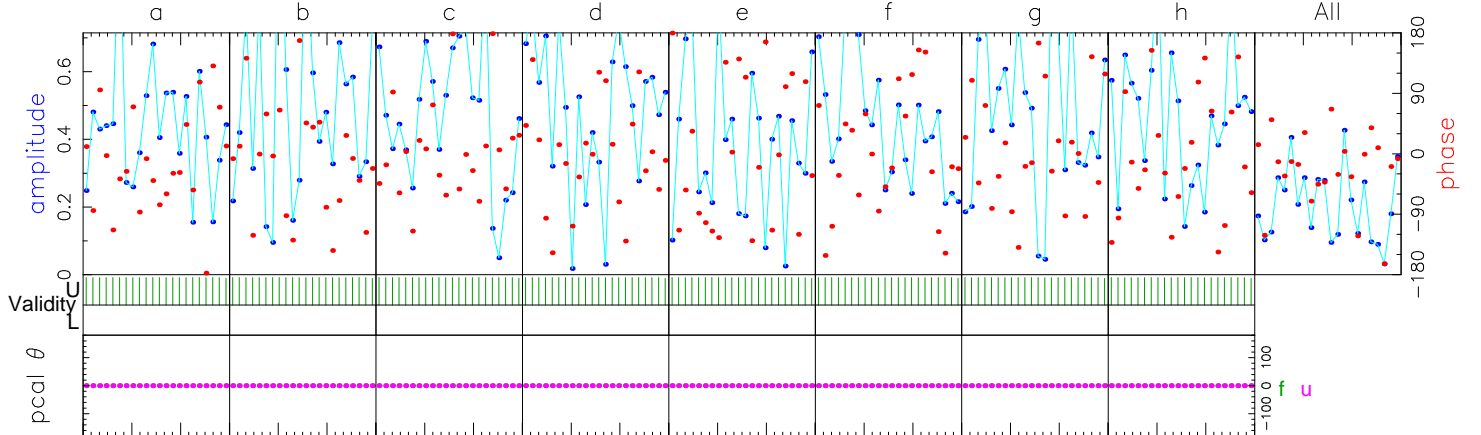
Fringe quality 0

SNR 6.1
 Int time 179.977
 Amp 0.238
 Phase -13.6
 PFD 9.8e-02
 Delays (us)
 SBD 0.051060
 MBD -0.001691
 Fringe rate (Hz) -0.871016
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145430
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-22.8	5.8	-14.9	-8.8	-78.7	10.9	-13.9	-9.3	Phase	-13.6		
	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.1	Ampl.	0.2		
	476.0	453.8	156.0	81.5	200.6	482.1	438.1	167.4	Sbd box	270.1		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:u	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			
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
f	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)	-6.58624839985E+03		Apriori delay (usec)		-6.58629358348E+03		Resid mbdelay (usec)		-1.69138E-03	+/- 1.8E-04		
Sband delay (usec)	-6.58624252348E+03		Apriori clock (usec)		5.3140001E+00		Resid sbdelay (usec)		5.10600E-02	+/- 1.4E-03		
Phase delay (usec)	-6.58629358391E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-4.38781E-07	+/- 6.0E-07		
Delay rate (us/s)	-1.40847708280E+00		Apriori rate (us/s)		-1.40846697117E+00		Resid rate (us/s)		-1.01116E-05	+/- 5.8E-09		
Total phase (deg)			Apriori accel (us/s/s)		2.87714328705E-05		Resid phase (deg)		-13.6	+/- 18.6		
RMS	56.1	43.7	Amplitude		0.238 +/- 0.039		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	67.1	76.3	Search (1024X32)		0.161		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
amp/seg (%)	67.1	76.3	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	29.8	26.4	Inc. seg. avg.		0.227		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
amp/frq (%)	39.2	46.0	Inc. frq. avg.		0.229		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 314.6 el 29.7 pa 76.6	u: az 50.3 el 53.0 pa -96.4		u, v (fr/asec)		12838.425 2363.909				simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu..1HV1N7		Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu.W.125.1HV1N7									

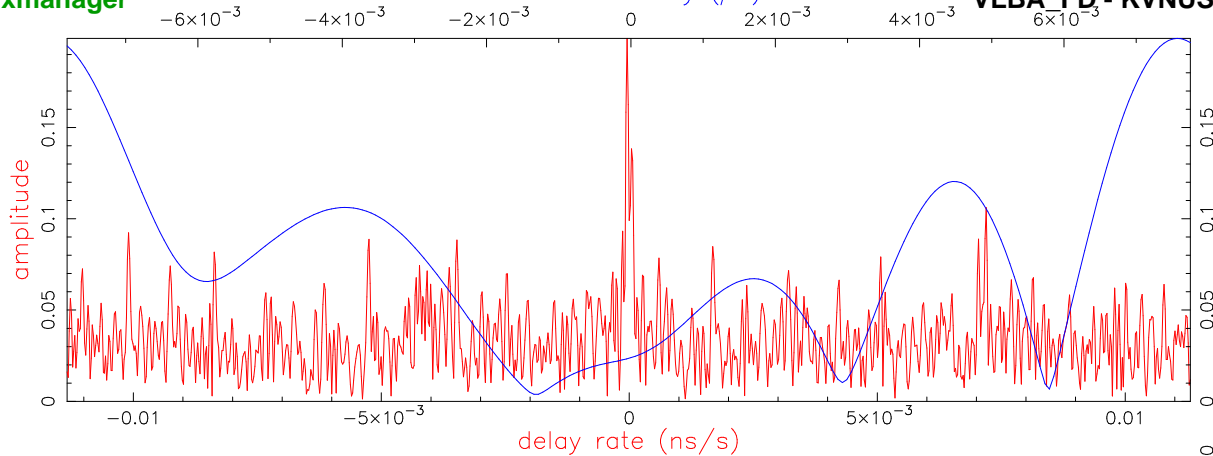
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fu

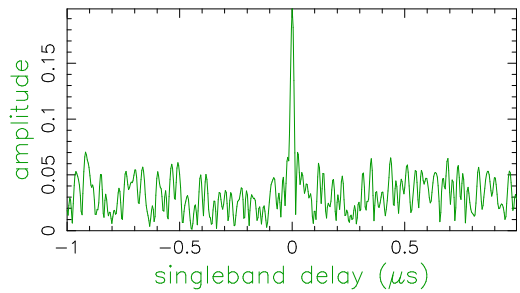
VLBA_FD - KVNUS, fgroup W, pol RL

multiband delay (μ s)

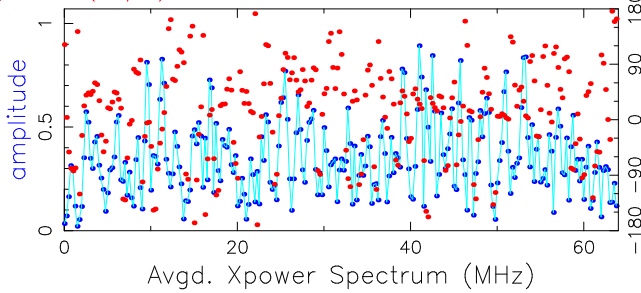


Fringe quality 9

SNR 7.3
 Int time 179.977
 Amp 0.199
 Phase 122.8
 PFD 4.7e-05
 Delays (us)
 SBD 0.000137
 MBD -0.008048
 Fringe rate (Hz)
 -0.004733
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

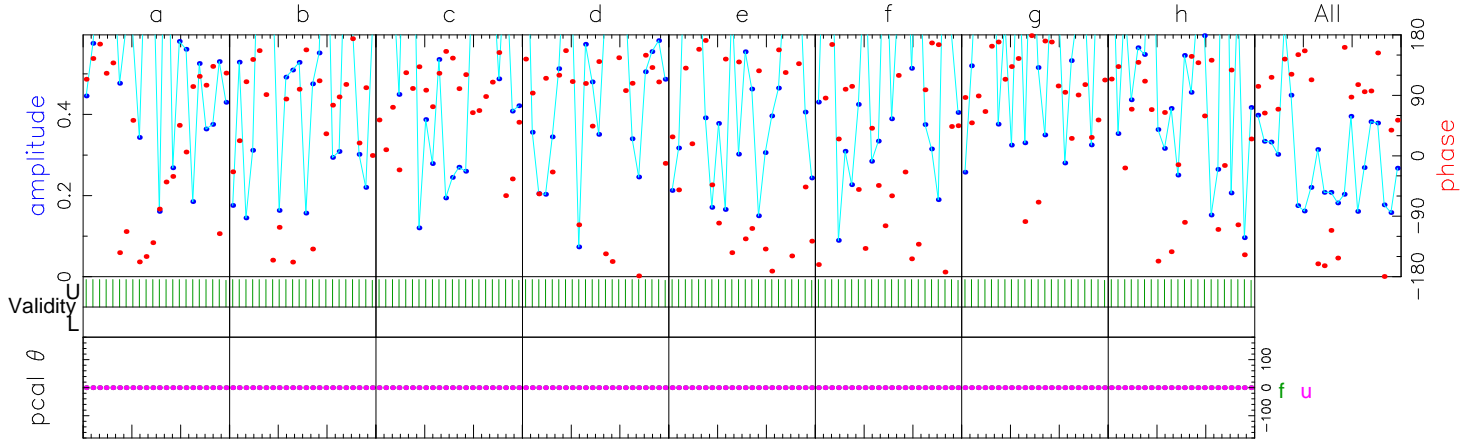


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145432
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	161.5	106.7	79.4	135.5	-179.1	-175.5	113.0	86.8	Phase	122.8
	0.2	0.2	0.4	0.3	0.2	0.1	0.4	0.1	Ampl.	0.2
	254.4	255.9	257.5	257.3	409.1	220.8	256.8	63.1	Sbd box	257.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:u	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	
u	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.58628600685E+03	Apriori delay (usec)	-6.58629358348E+03	Resid mbdelay (usec)	-8.04838E-03	+/-	1.5E-04
Sband delay (usec)	-6.58629344623E+03	Apriori clock (usec)	5.3140001E+00	Resid sbdelay (usec)	1.37250E-04	+/-	1.2E-03
Phase delay (usec)	-6.58629357952E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	3.96025E-06	+/-	5.1E-07
Delay rate (us/s)	-1.40846702612E+00	Apriori rate (us/s)	-1.40846697117E+00	Resid rate (us/s)	-5.49472E-08	+/-	4.9E-09
Total phase (deg)	21.8	Apriori accel (us/s/s)	2.87714328705E-05	Resid phase (deg)	122.8	+/-	15.7

ph/seg (deg)	54.1	Theor.	36.8	Amplitude	0.199 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	73.5		64.3	Search (1024X32)	0.187	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	45.4		22.2	Inc. seg. avg.	0.238	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	55.4		38.8	Inc. frq. avg.	0.225	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

f: az 314.6 el 29.7 pa 76.6 u: az 50.3 el 53.0 pa -96.4 u,v (fr/asec) 12838.425 2363.909 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu.W.141.1HV1N7

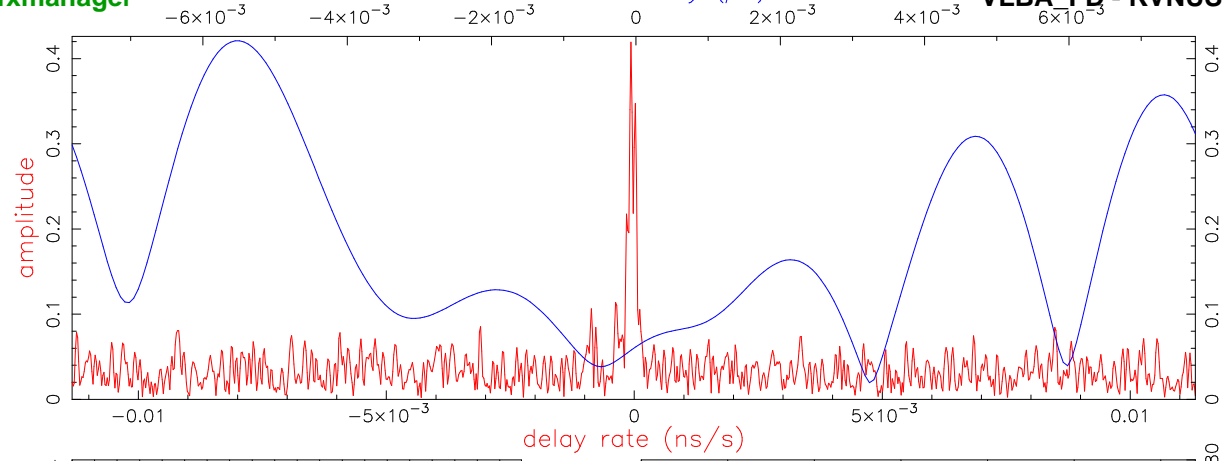
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fu

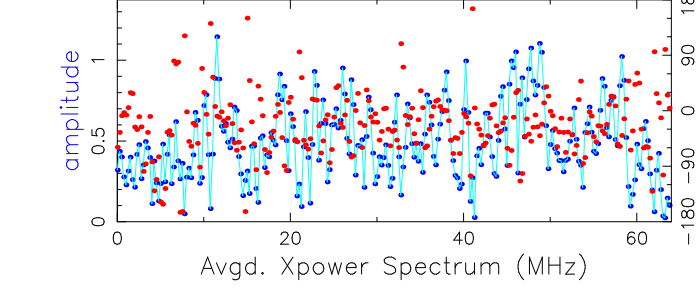
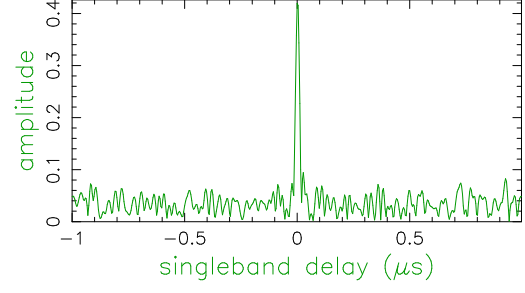
VLBA_FD - KVNUS, fgroup W, pol LL

multiband delay (μ s)



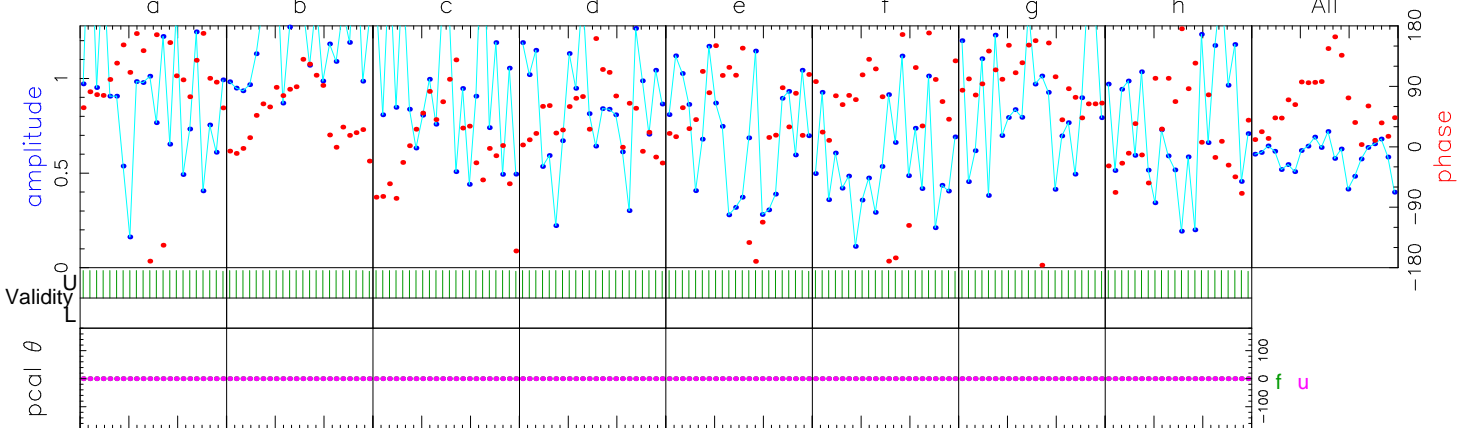
Fringe quality 7

SNR 15.6
 Int time 179.977
 Amp 0.426
 Phase 60.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.001701
 MBD -0.005427
 Fringe rate (Hz)
 -0.005198
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145426
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.58629901016E+03	Apriori delay (usec)	-6.58629358348E+03	Resid mbdelay (usec)	-5.42668E-03	+/-	6.9E-05
Sband delay (usec)	-6.58629188223E+03	Apriori clock (usec)	5.3140001E+00	Resid sbdelay (usec)	1.70125E-03	+/-	5.5E-04
Phase delay (usec)	-6.58629358154E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.93876E-06	+/-	2.4E-07
Delay rate (us/s)	-1.40846703151E+00	Apriori rate (us/s)	-1.40846697117E+00	Resid rate (us/s)	-6.03379E-08	+/-	2.3E-09
Total phase (deg)	-40.9	Apriori accel (us/s/s)	2.87714328705E-05	Resid phase (deg)	60.1	+/-	7.3

ph/seg (deg)	45.4	Theor.	17.2	Amplitude	0.426 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	43.0	Search (1024X32)	0.411	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	52.7	Inc. seg. avg.	0.565	Bits/sample: 2x2		mb window (us)	-0.008 0.008
amp/frq (%)	53.9	Inc. frq. avg.	0.566	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011
				Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00

f: az 314.6 el 29.7 pa 76.6 u: az 50.3 el 53.0 pa -96.4 u,v (fr/asec) 12838.425 2363.909 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fu.W.87.1HV1N7

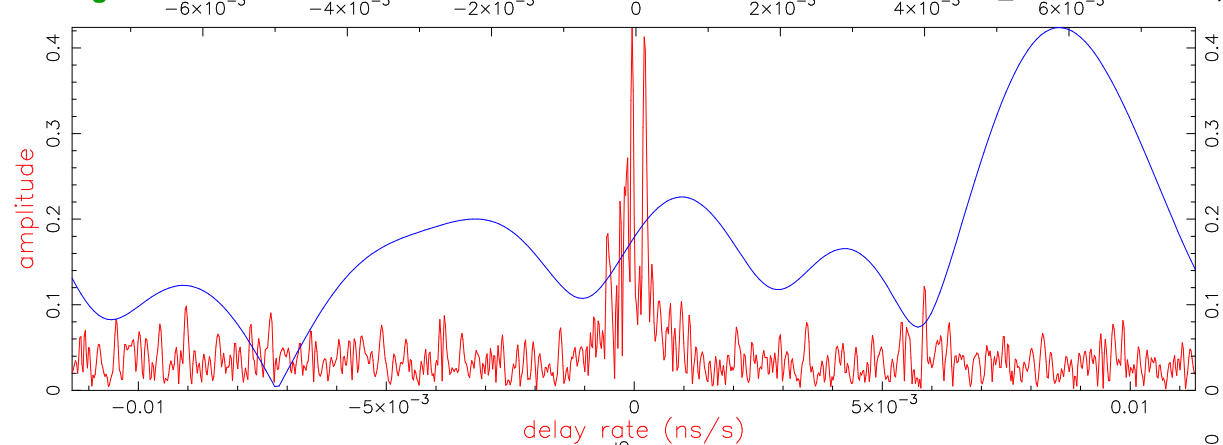
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fX

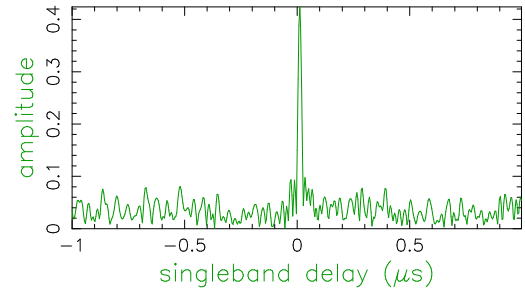
VLBA_FD - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

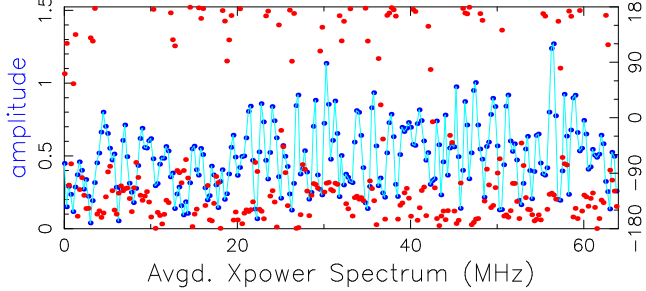


Fringe quality 7

SNR 15.6
 Int time 179.970
 Amp 0.424
 Phase -81.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.011476
 MBD 0.005862
 Fringe rate (Hz)
 -0.003451
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

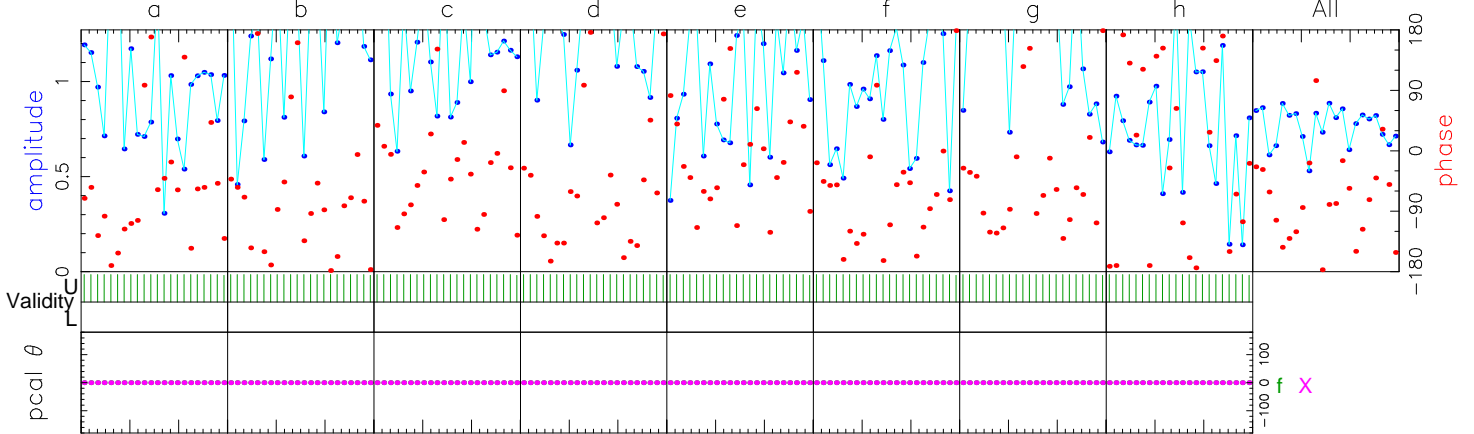


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145428
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



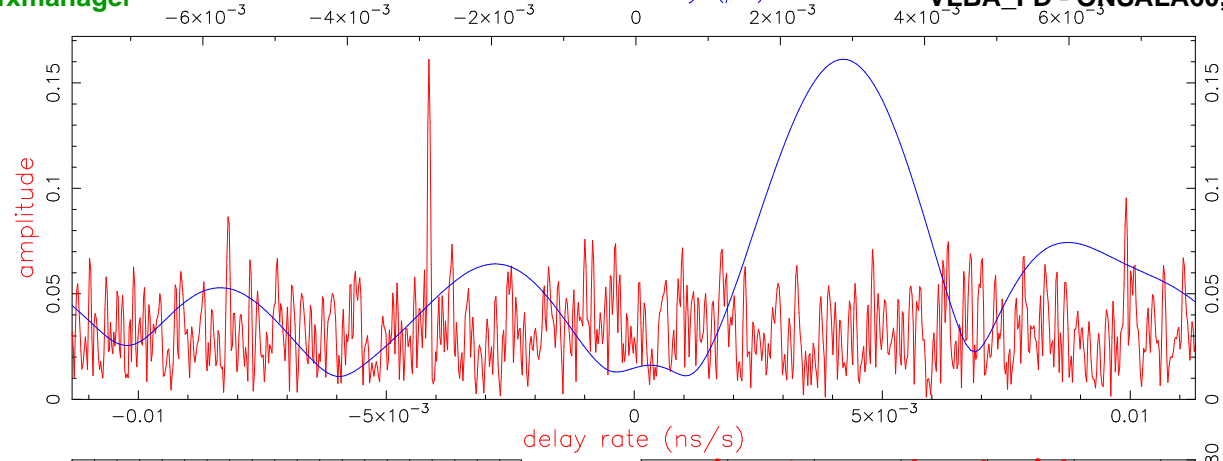
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-98.4	-105.6	-39.0	-106.0	-16.4	-77.5	-75.7	162.3	Phase	-81.3
	0.5	0.6	0.7	0.7	0.4	0.5	0.7	0.3	Ampl.	0.5
	260.3	260.1	260.0	259.4	258.7	259.5	259.6	258.9	Sbd box	259.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.45695173315E+03		Apriori delay (usec)		3.45694587096E+03		Resid mbdelay (usec)		5.86218E-03	+/- 7.0E-05
Sband delay (usec)	3.45695734721E+03		Apriori clock (usec)		-4.0458477E+01		Resid sbdelay (usec)		1.14763E-02	+/- 5.5E-04
Phase delay (usec)	3.45694586834E+03		Apriori clockrate (us/s)		-1.2800004E-07		Resid phdelay (usec)		-2.62330E-06	+/- 2.4E-07
Delay rate (us/s)	-9.70360627264E-01		Apriori rate (us/s)		-9.70360587198E-01		Resid rate (us/s)		-4.00661E-08	+/- 2.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.77992470110E-05		Resid phase (deg)		-81.3	+/- 7.4

	RMS	Theor.	Amplitude	0.424 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	63.9	17.3	Search (1024X32)	0.421	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	83.8	30.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	59.3	10.4	Inc. seg. avg.	0.733	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	42.2	18.2	Inc. frq. avg.	0.542	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00

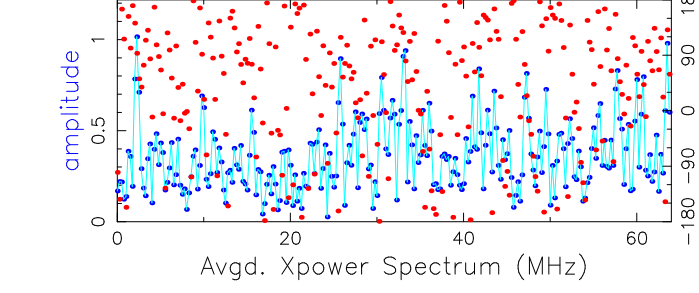
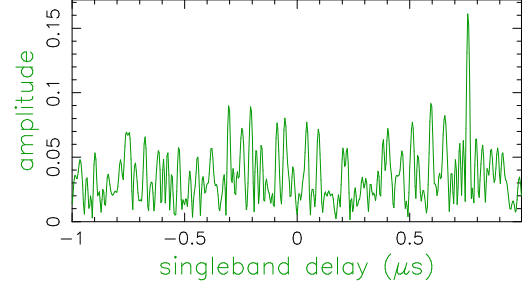
f: az 314.6 el 29.7 pa 76.6 X: az 10.2 el 19.1 pa -8.8 u,v (fr/asec) 8813.157 -6514.745 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX.W.105.1HV1N7

multiband delay (μ s)

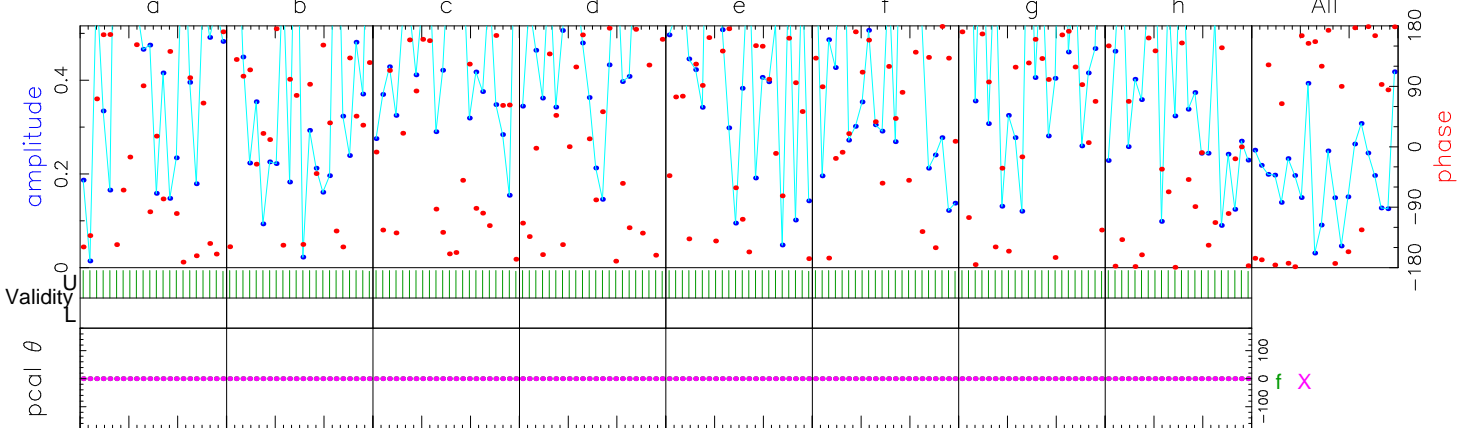


Fringe quality 0
SNR 6.0
Int time 179.970
Amp 0.172
Phase 171.6
PFD 2.6e-01
Delays (us)
SBD 0.758916
MBD 0.002903
Fringe rate (Hz) -0.357142
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145430
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-166.2	133.3	-160.3	-175.8	147.8	106.5	165.5	-158.2	Phase	171.6		
	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	Ampl.	0.2		
	142.1	332.7	132.6	132.5	193.7	466.5	450.5	195.1	Sbd box	451.3		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
X	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Tracks			
Group delay (usec)(sbd)	3.45769877418E+03		Apriori delay (usec)		3.45694587096E+03		Resid mbdelay (usec)		2.90322E-03	+/- 1.8E-04		
Sband delay (usec)	3.45770478671E+03		Apriori clock (usec)		-4.0458477E+01		Resid sbdelay (usec)		7.58916E-01	+/- 1.4E-03		
Phase delay (usec)	3.45694587650E+03		Apriori clockrate (us/s)		-1.2800004E-07		Resid phdelay (usec)		5.53308E-06	+/- 6.2E-07		
Delay rate (us/s)	-9.70364733264E-01		Apriori rate (us/s)		-9.70360587198E-01		Resid rate (us/s)		-4.14607E-06	+/- 5.9E-09		
Total phase (deg)			Apriori accel (us/s/s)		-4.77992470110E-05		Resid phase (deg)		171.6	+/- 19.2		
	RMS	Theor.	Amplitude		0.172 +/- 0.029		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	45.2	45.0	Search (1024X32)		0.157		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
amp/seg (%)	61.8	78.6	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	38.0	27.1	Inc. seg. avg.		0.161		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
amp/frq (%)	36.3	47.4	Inc. frq. avg.		0.173		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 314.6 el 29.7 pa 76.6	X: az 10.2 el 19.1 pa -8.8		u,v (fr/asec)		8813.157 -6514.745						simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX..1HV1N7		Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX.W.120.1HV1N7									

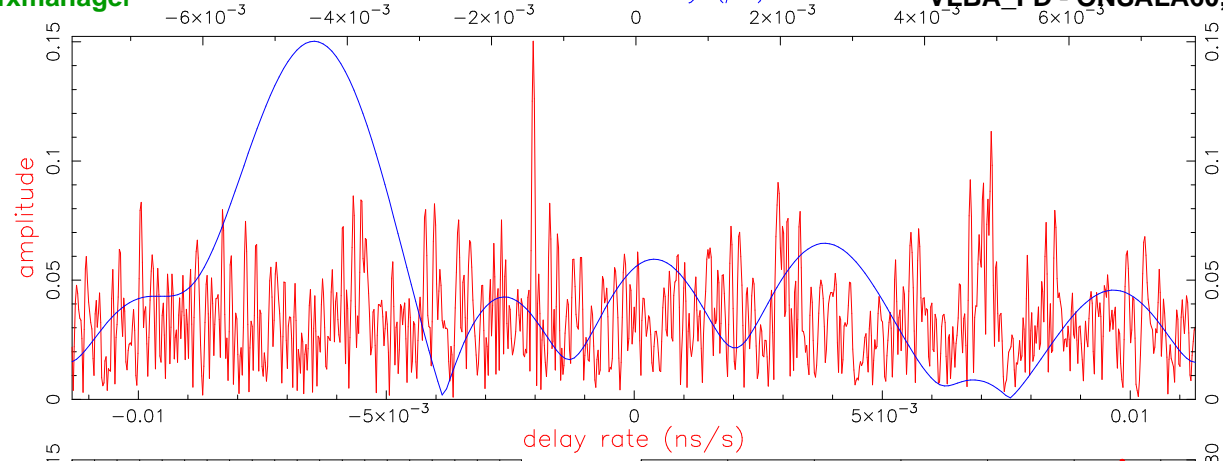
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

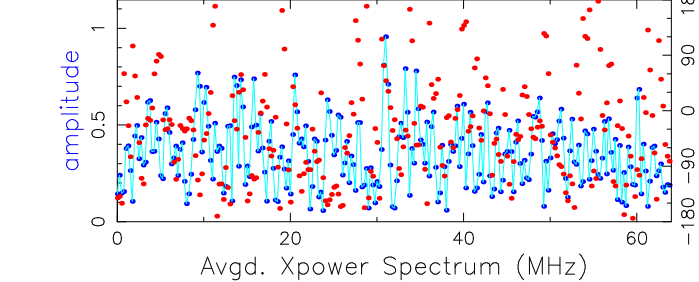
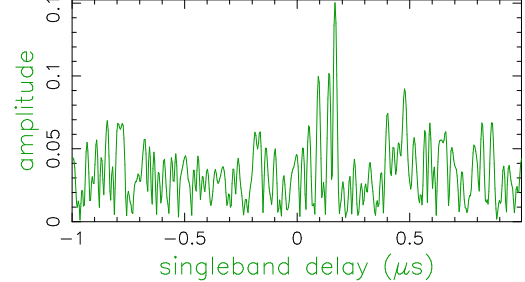
NRAO150.1HV1N7, No0150, fX

VLBA_FD - ONSALA60, fgroup W, pol RL

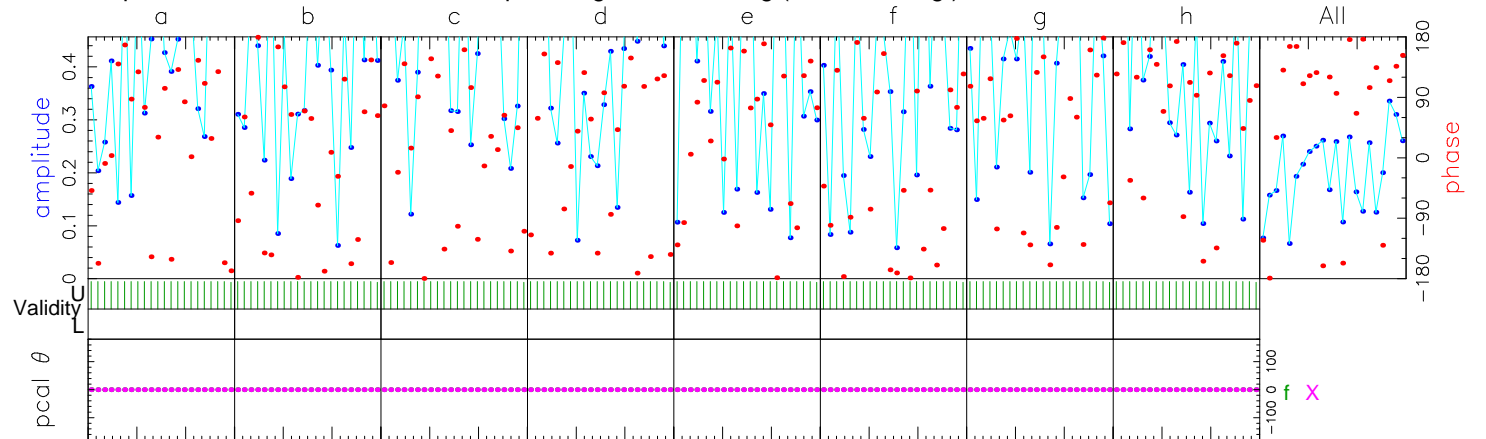
multiband delay (μ s)



Fringe quality 0
 SNR 5.5
 Int time 179.970
 Amp 0.152
 Phase 139.0
 PFD 9.9e-01
 Delays (us)
 SBD 0.168006
 MBD -0.004459
 Fringe rate (Hz)
 -0.175232
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145432
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	111.7	154.9	140.9	160.5	130.3	176.9	113.0	132.5	Phase	139.0
	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	Ampl.	0.1
	294.8	463.1	267.0	358.6	444.9	125.9	493.8	293.8	Sbd box	300.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.45711328736E+03		Apriori delay (usec)		3.45694587096E+03		Resid mbdelay (usec)		-4.45860E-03	+/- 2.0E-04
Sband delay (usec)	3.45711387746E+03		Apriori clock (usec)		-4.0458477E+01		Resid sbdelay (usec)		1.68006E-01	+/- 1.6E-03
Phase delay (usec)	3.45694587544E+03		Apriori clockrate (us/s)		-1.2800004E-07		Resid phdelay (usec)		4.48103E-06	+/- 6.7E-07
Delay rate (us/s)	-9.70362621473E-01		Apriori rate (us/s)		-9.70360587198E-01		Resid rate (us/s)		-2.03427E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.77992470110E-05		Resid phase (deg)		139.0	+/- 20.8

ph/seg (deg) 49.7 48.7 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 60.0 85.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.8 29.4 Inc. seg. avg. 0.152 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.5 51.3 Inc. frq. avg. 0.145 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 X: az 10.2 el 19.1 pa -8.8 u,v (fr/asec) 8813.157 -6514.745 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX.W.139.1HV1N7

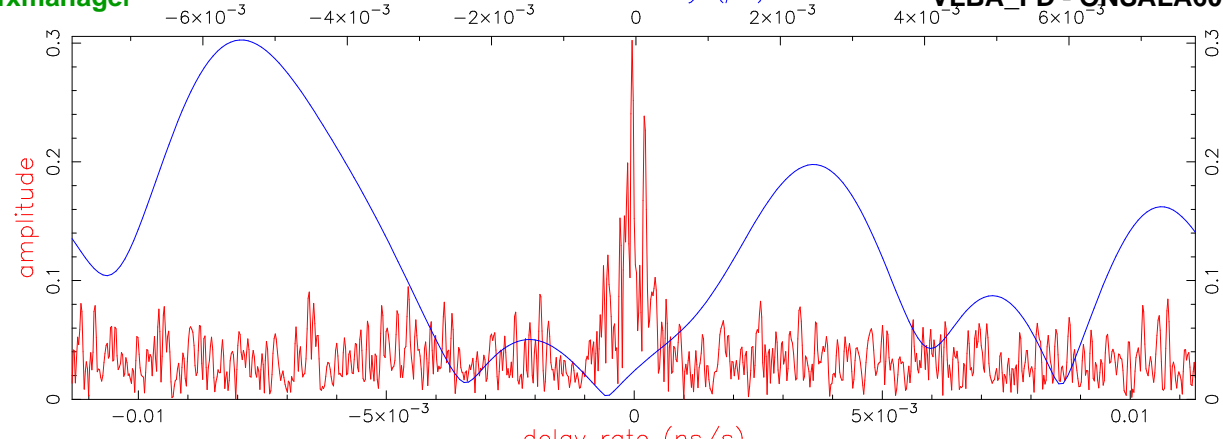
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fX

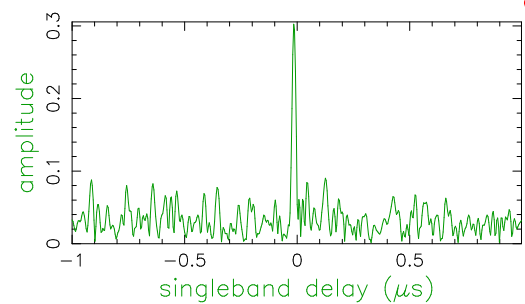
VLBA_FD - ONSALA60, fgroup W, pol LL

multiband delay (μ s)

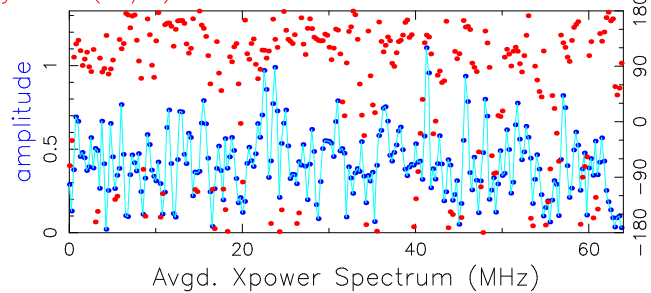


Fringe quality 9

SNR 11.2
 Int time 179.970
 Amp 0.306
 Phase 29.7
 PFD 8.3e-21
 Delays (us)
 SBD -0.014222
 MBD -0.005402
 Fringe rate (Hz)
 -0.003620
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

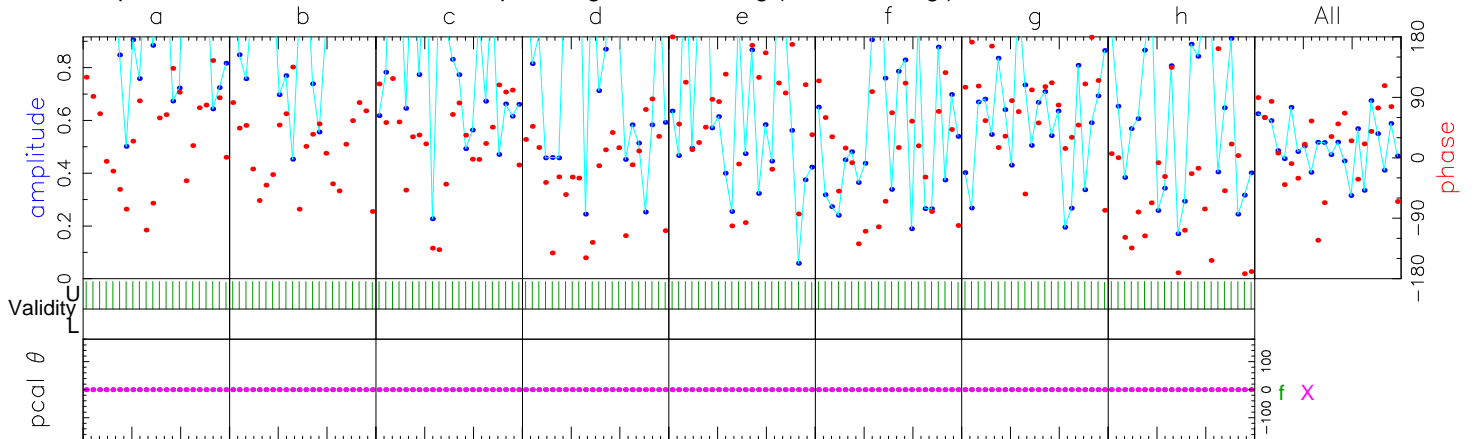


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145426
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)		3.45692484377E+03				3.45694587096E+03			Resid mbdelay (usec)	-5.40219E-03 +/- 9.7E-05
Sband delay (usec)		3.45693164896E+03				-4.0458477E+01			Resid sbdelay (usec)	-1.42220E-02 +/- 7.7E-04
Phase delay (usec)		3.45694587192E+03				-1.2800004E-07			Resid phdelay (usec)	9.56807E-07 +/- 3.3E-07
Delay rate (us/s)		-9.70360629226E-01				-9.70360587198E-01			Resid rate (us/s)	-4.20274E-08 +/- 3.2E-09
Total phase (deg)			146.6						Resid phase (deg)	29.7 +/- 10.2
	RMS	Theor.	Amplitude	0.306 +/- 0.027					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	58.7	24.0	Search (1024X32)	0.301					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	73.1	41.8	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	53.0	14.5	Inc. seg. avg.	0.468					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	54.4	25.2	Inc. frq. avg.	0.378					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 314.6 el 29.7 pa 76.6 X: az 10.2 el 19.1 pa -8.8 u,v (fr/asec) 8813.157 -6514.745 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fX.W.84.1HV1N7

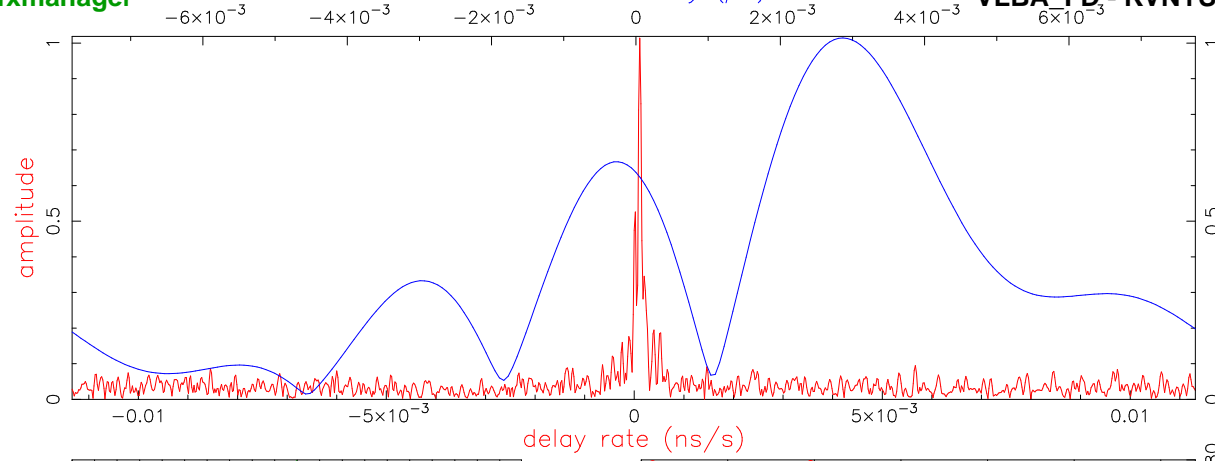
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fy

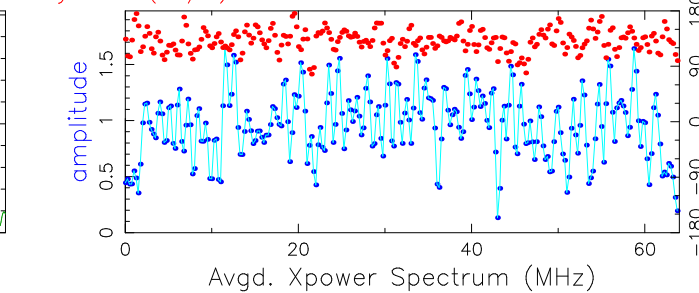
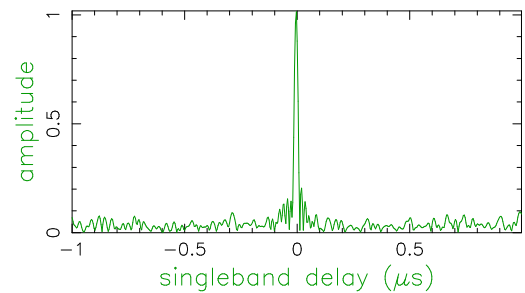
VLBA_FD - KVNYS, fgroup W, pol RR

multiband delay (μ s)



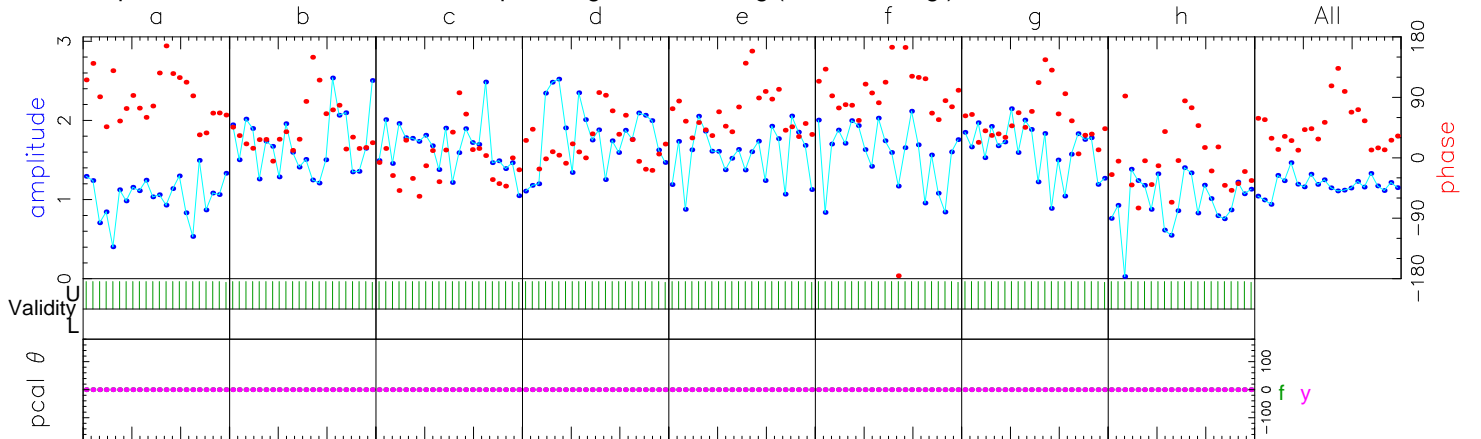
Fringe quality 5

SNR 37.4
 Int time 179.956
 Amp 1.019
 Phase 43.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.004795
 MBD 0.002828
 Fringe rate (Hz)
 0.010224
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145429
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		255.8
f	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	1.2
y	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	255.8
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
y	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.54192109280E+03				-6.54192392080E+03				Resid mbdelay (usec)	2.82800E-03 +/- 2.9E-05
Sband delay (usec)	-6.54192871605E+03				6.6027069E+00				Resid sbdelay (usec)	-4.79525E-03 +/- 2.3E-04
Phase delay (usec)	-6.54192391940E+03				2.9999999E-07				Resid phdelay (usec)	1.40304E-06 +/- 9.9E-08
Delay rate (us/s)	-1.41437745757E+00				-1.41437757626E+00				Resid rate (us/s)	1.18685E-07 +/- 9.5E-10
Total phase (deg)		-150.0			2.60605439201E-05				Resid phase (deg)	43.5 +/- 3.1
	RMS	Theor.	Amplitude	1.019 +/- 0.027					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	32.6	7.2	Search (1024X32)	0.983					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	19.5	12.6	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	43.8	4.3	Inc. seg. avg.	1.173					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	34.8	7.6	Inc. frq. avg.	1.241					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 314.6 el 29.7 pa 76.6			y: az 52.5 el 52.8 pa -91.8						nlags: 256	t_cohere infinite
Control file: cf_1234_gmva			Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy..1HV1N7							simultaneous interpolator
			Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy.W.110.1HV1N7							

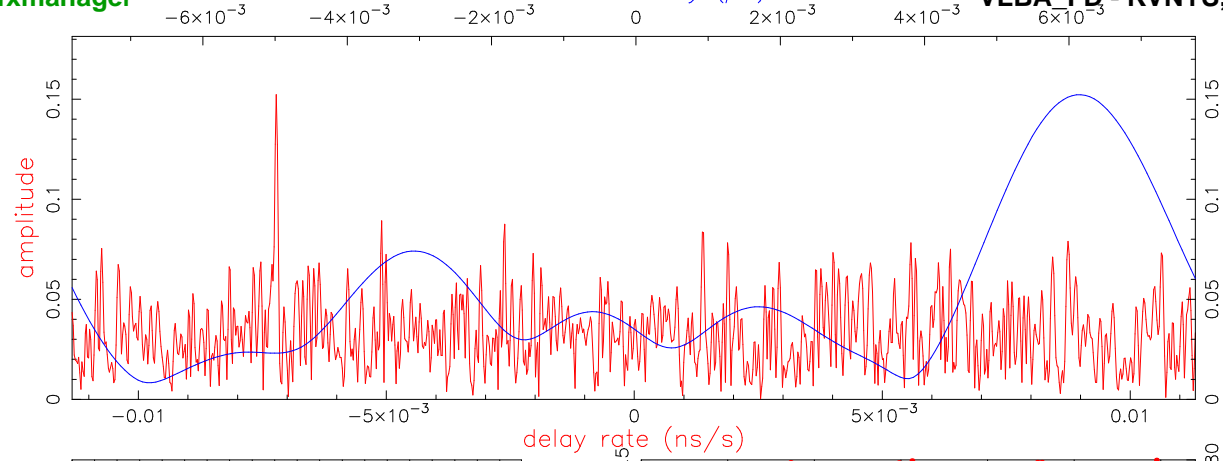
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fy

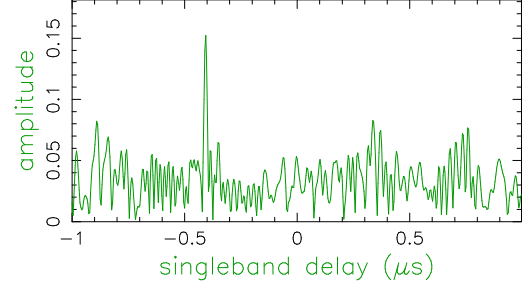
VLBA_FD - KVNYS, fgroup W, pol LR

multiband delay (μs)

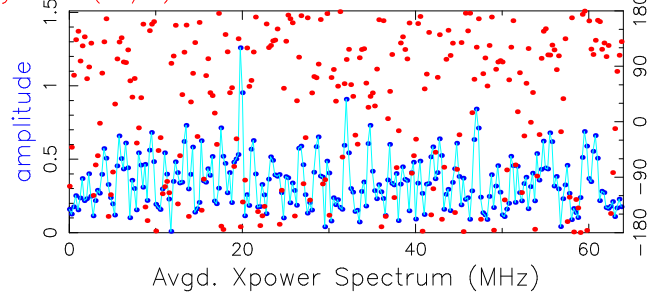


Fringe quality 0

SNR 5.6
 Int time 179.956
 Amp 0.181
 Phase 58.2
 PFD 9.3e-01
 Delays (us)
 SBD -0.406680
 MBD 0.006143
 Fringe rate (Hz)
 -0.623506
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

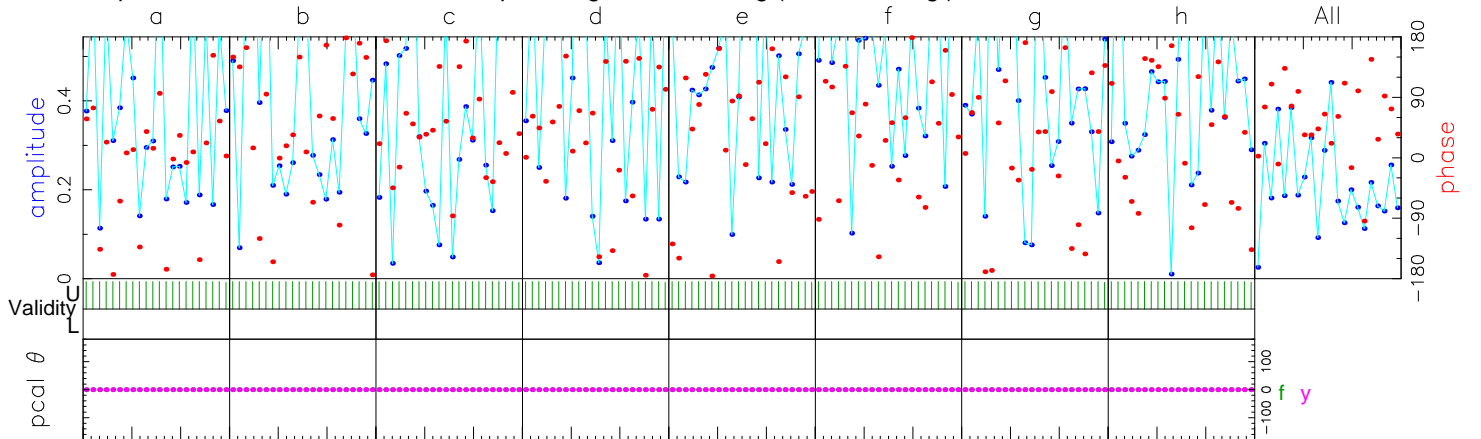


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145431
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:y	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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-6.54232402772E+03								6.14308E-03	+/- 1.9E-04
Sband delay (usec)	-6.54233060030E+03								-4.06680E-01	+/- 1.5E-03
Phase delay (usec)	-6.54192391892E+03								1.87802E-06	+/- 6.6E-07
Delay rate (us/s)	-1.41438481455E+00								-7.23829E-06	+/- 6.3E-09
Total phase (deg)			-135.3						58.2	+/- 20.5
Apriori delay (usec)					-6.54192392080E+03					
Apriori clock (usec)					6.6027069E+00					
Apriori clockrate (us/s)					2.9999999E-07					
Apriori rate (us/s)					-1.41437757626E+00					
Apriori accel (us/s/s)					2.60605439201E-05					
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
PC period (AP's) 5, 5										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00
ph/seg (deg)	54.2	48.0		0.181 +/- 0.032						
amp/seg (%)	77.7	83.8		0.000						
ph/frq (deg)	36.0	29.0		0.190						
amp/frq (%)	43.2	50.6		0.180						
f: az 314.6 el 29.7 pa 76.6										
y: az 52.5 el 52.8 pa -91.8										
u,v (fr/asec) 12891.223 1942.987										
Control file: cf_1234_gmva										
Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy..1HV1N7										
Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy.W.127.1HV1N7										

simultaneous interpolator

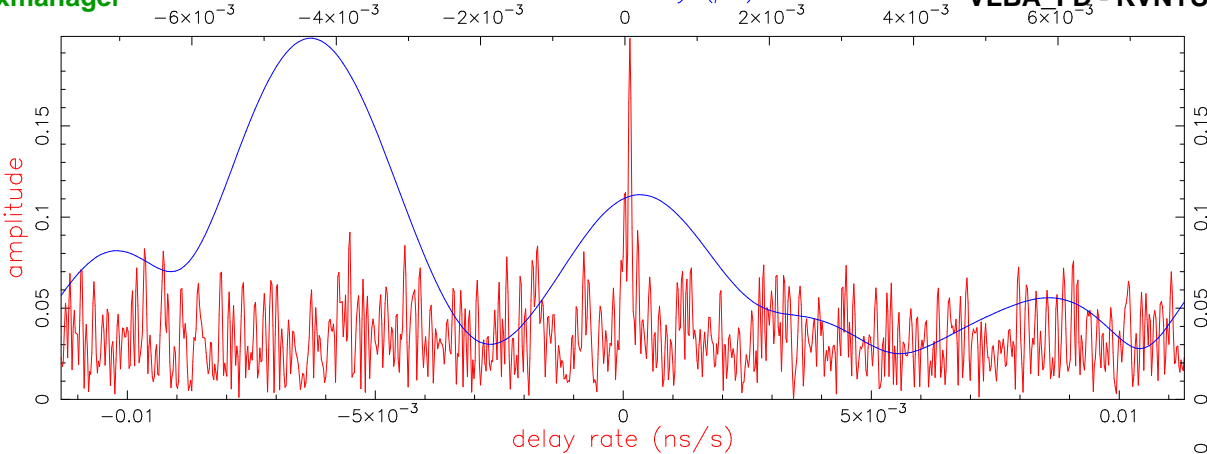
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fy

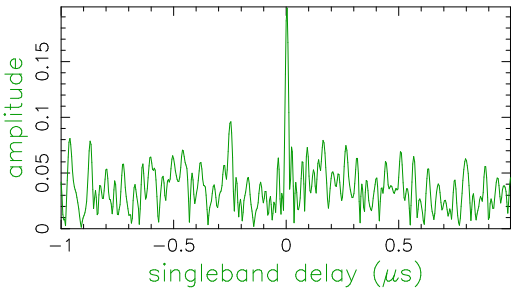
VLBA_FD - KVNYS, fgroup W, pol RL

multiband delay (μ s)

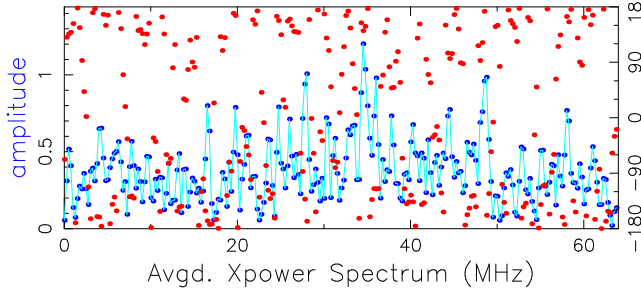


Fringe quality 9

SNR 7.3
 Int time 179.956
 Amp 0.199
 Phase -96.7
 PFD 4.4e-05
 Delays (us)
 SBD 0.003010
 MBD -0.004407
 Fringe rate (Hz)
 0.010652
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

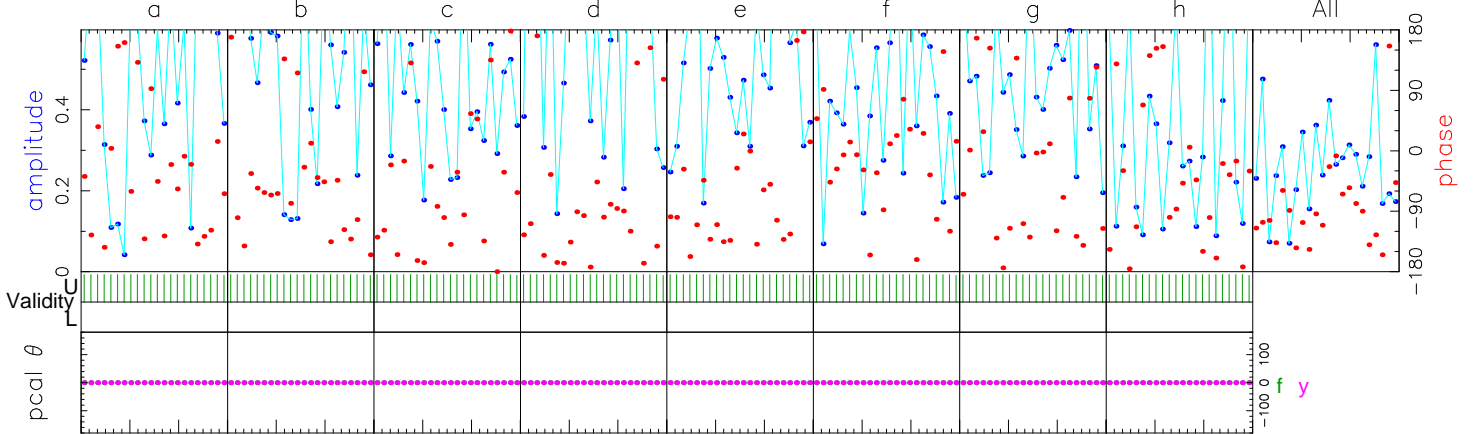


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145433
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-79.6	-89.1	-112.3	-125.9	-108.9	-4.5	-120.2	-86.2	Phase	-96.7
	0.2	0.3	0.2	0.4	0.3	0.2	0.1	0.2	Ampl.	0.2
	255.8	258.6	100.4	258.2	258.3	212.1	193.7	243.3	Sbd box	257.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.54192832775E+03	Apriori delay (usec)	-6.54192392080E+03	Resid mbdelay (usec)	-4.40695E-03	+/-	1.5E-04
Sband delay (usec)	-6.54192091105E+03	Apriori clock (usec)	6.6027069E+00	Resid sbdelay (usec)	3.00975E-03	+/-	1.2E-03
Phase delay (usec)	-6.54192392392E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-3.11799E-06	+/-	5.1E-07
Delay rate (us/s)	-1.41437745260E+00	Apriori rate (us/s)	-1.41437757626E+00	Resid rate (us/s)	1.23660E-07	+/-	4.9E-09
Total phase (deg)	-290.2	Apriori accel (us/s/s)	2.60605439201E-05	Resid phase (deg)	-96.7	+/-	15.7

ph/seg (deg)	45.3	Theor.	36.8	Amplitude	0.199 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	67.5		64.2	Search (1024X32)	0.192	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	42.4		22.2	Inc. seg. avg.	0.221	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.7		38.7	Inc. frq. avg.	0.223	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

f: az 314.6 el 29.7 pa 76.6 y: az 52.5 el 52.8 pa -91.8 u,v (fr/asec) 12891.223 1942.987 simultaneous interpolator

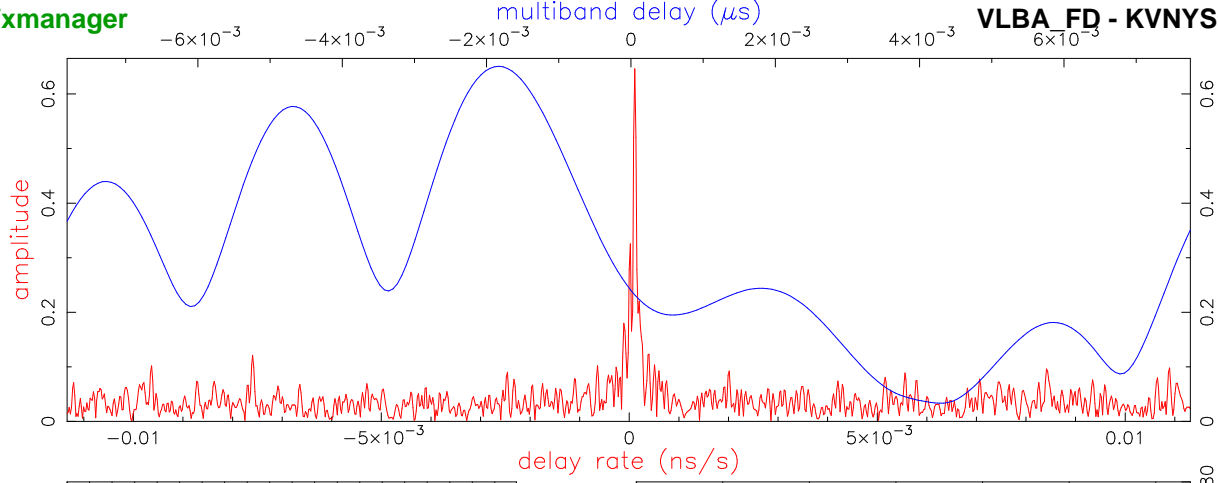
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy.W.152.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fy

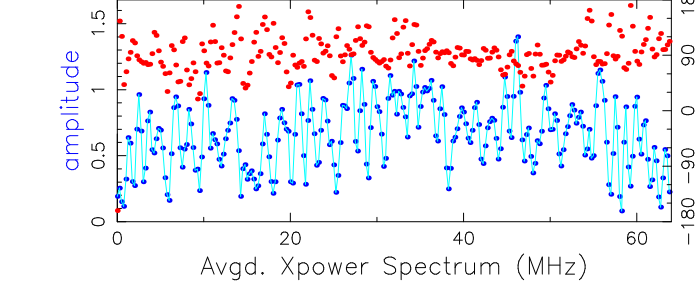
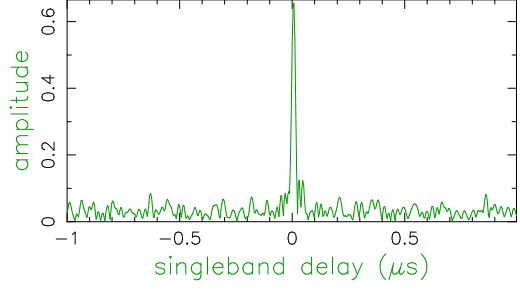
VLBA_FD - KVNYS, fgroup W, pol LL



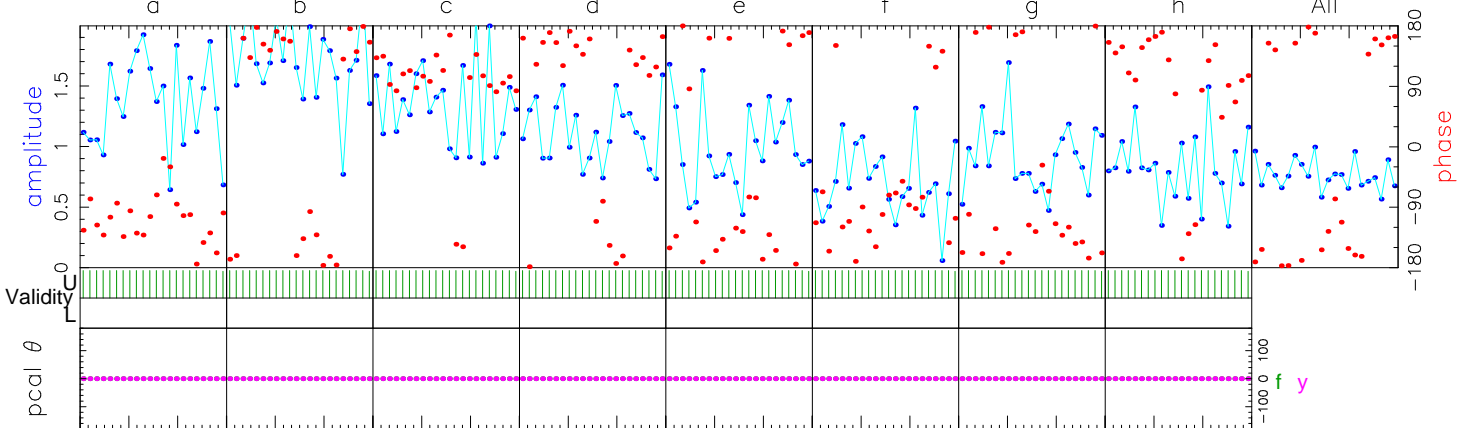
Fringe quality 6

SNR 24.4
 Int time 179.956
 Amp 0.665
 Phase -176.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.006157
 MBD -0.001704
 Fringe rate (Hz) 0.010138
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145427
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-109.3	176.5	114.2	159.5	-158.5	-118.2	-146.9	132.6	Phase	-176.2
	1.1	1.5	1.1	0.9	0.8	0.5	0.8	0.6	Ampl.	0.9
	256.6	258.1	259.1	258.8	259.1	259.7	258.4	256.1	Sbd box	258.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.54191000014E+03		Apriori delay (usec)		-6.54192392080E+03		Resid mbdelay (usec)		-1.70435E-03	+/- 4.4E-05
Sband delay (usec)	-6.54191776355E+03		Apriori clock (usec)		6.6027069E+00		Resid sbdelay (usec)		6.15725E-03	+/- 3.5E-04
Phase delay (usec)	-6.54192392648E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		-5.68047E-06	+/- 1.5E-07
Delay rate (us/s)	-1.41437745857E+00		Apriori rate (us/s)		-1.41437757626E+00		Resid rate (us/s)		1.17689E-07	+/- 1.5E-09
Total phase (deg)			Apriori accel (us/s/s)		2.60605439201E-05		Resid phase (deg)		-176.2	+/- 4.7

ph/seg (deg) 34.8 11.0 Search (1024X32) 0.638 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 23.8 19.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 53.4 6.6 Inc. seg. avg. 0.756 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 59.1 11.6 Inc. frq. avg. 0.904 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 314.6 el 29.7 pa 76.6 y: az 52.5 el 52.8 pa -91.8 u,v (fr/asec) 12891.223 1942.987 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fy.W.96.1HV1N7

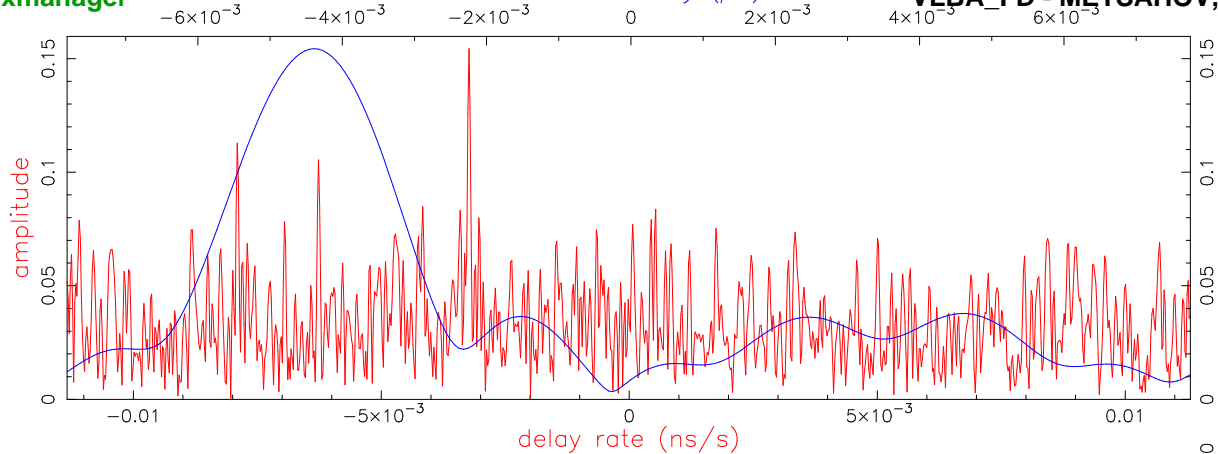
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

NRAO150.1HV1N7, No0150, fZ

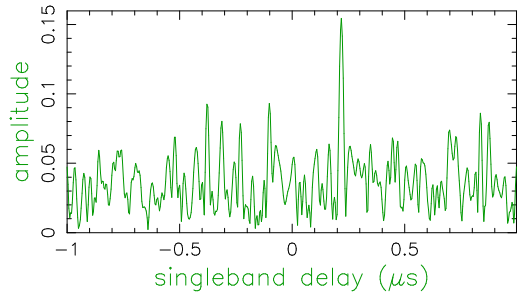
VLBA_FD - METSAHOV, fgroup W, pol RR

multiband delay (μ s)

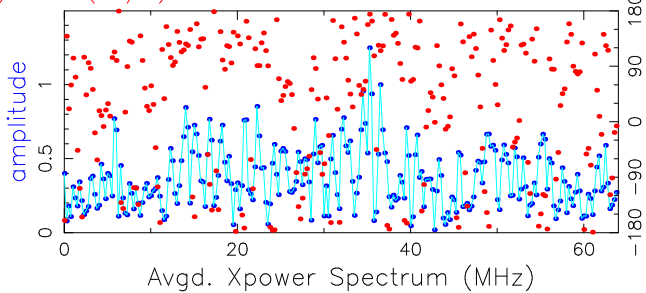


Fringe quality 0

SNR 5.7
 Int time 179.702
 Amp 0.160
 Phase 169.3
 PFD 8.4e-01
 Delays (us)
 SBD 0.218313
 MBD -0.004410
 Fringe rate (Hz)
 -0.279296
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

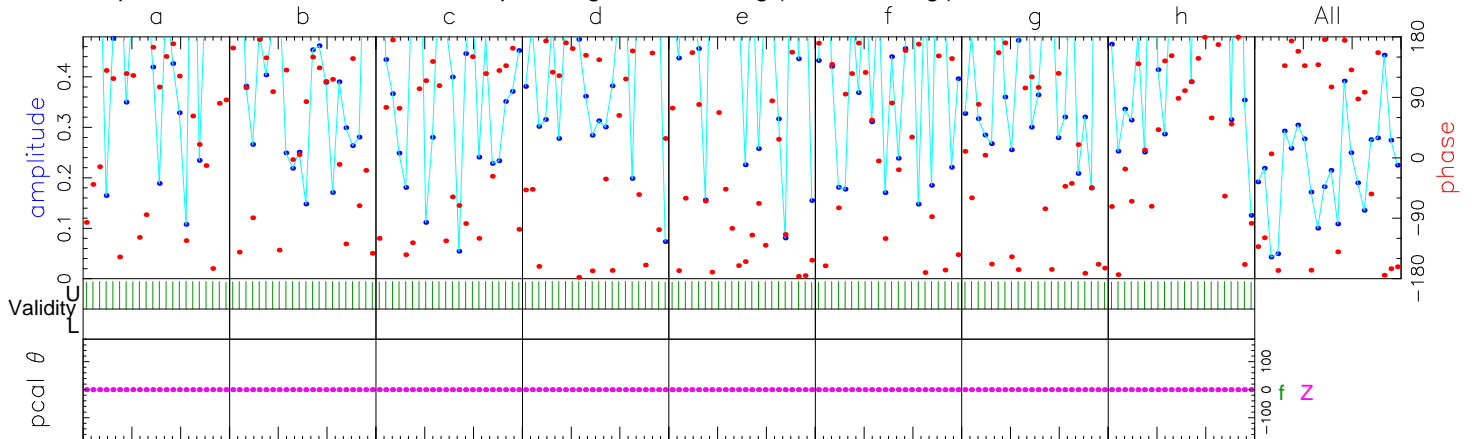


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145428
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Z	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		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec)(sbd)	1.99895969102E+03	Apriori delay (usec)	1.99874535111E+03	Resid mbdelay (usec)	-4.41009E-03	+/-	1.9E-04
Sband delay (usec)	1.99896366386E+03	Apriori clock (usec)	7.6971159E+00	Resid sbdelay (usec)	2.18313E-01	+/-	1.5E-03
Phase delay (usec)	1.99874535657E+03	Apriori clockrate (us/s)	3.8399996E-07	Resid phdelay (usec)	5.45873E-06	+/-	6.5E-07
Delay rate (us/s)	-1.05709213389E+00	Apriori rate (us/s)	-1.05708889154E+00	Resid rate (us/s)	-3.24234E-06	+/-	6.3E-09
Total phase (deg)	5.3	Apriori accel (us/s/s)	-4.20340024380E-05	Resid phase (deg)	169.3	+/-	20.2

ph/seg (deg)	RMS 60.4	Theor. 47.5	Amplitude Search (1024X32)	0.160 +/- 0.028	0.147	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	76.4	82.8	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	23.5	28.6	Inc. seg. avg.	0.171	0.171	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	17.2	49.9	Inc. frq. avg.	0.150	0.150	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 314.6 el 29.7 pa 76.6 Z: az 18.7 el 23.5 pa -14.7 u,v (fr/asec) 9606.181 -6099.690 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ.W.106.1HV1N7

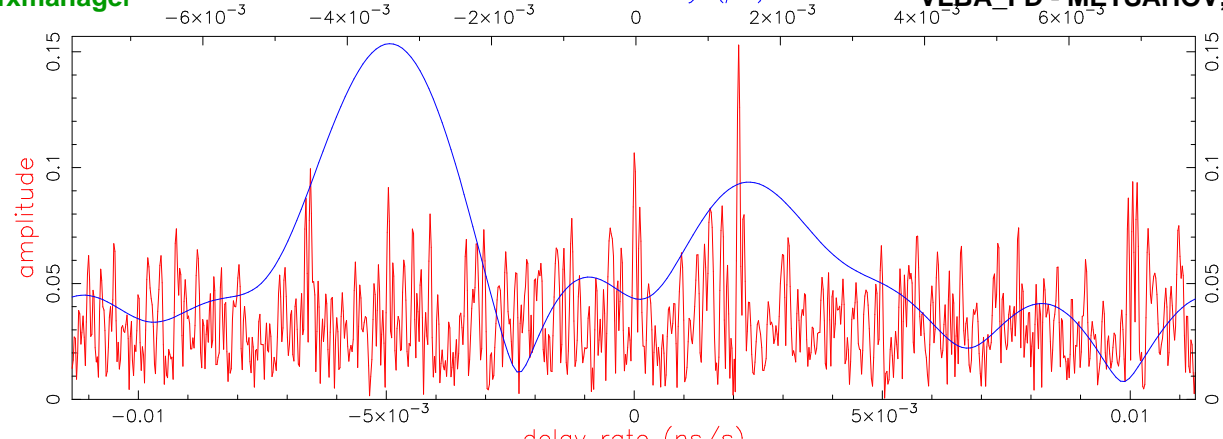
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

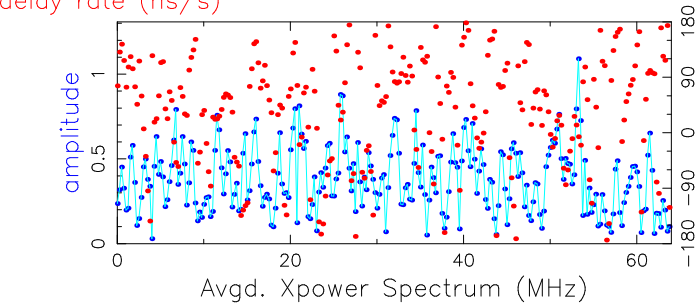
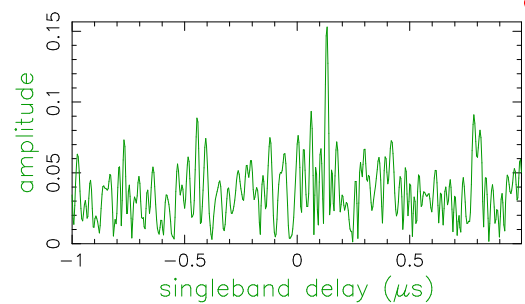
NRAO150.1HV1N7, No0150, fZ

VLBA_FD - METSAHOV, fgroup W, pol LR

multiband delay (μ s)

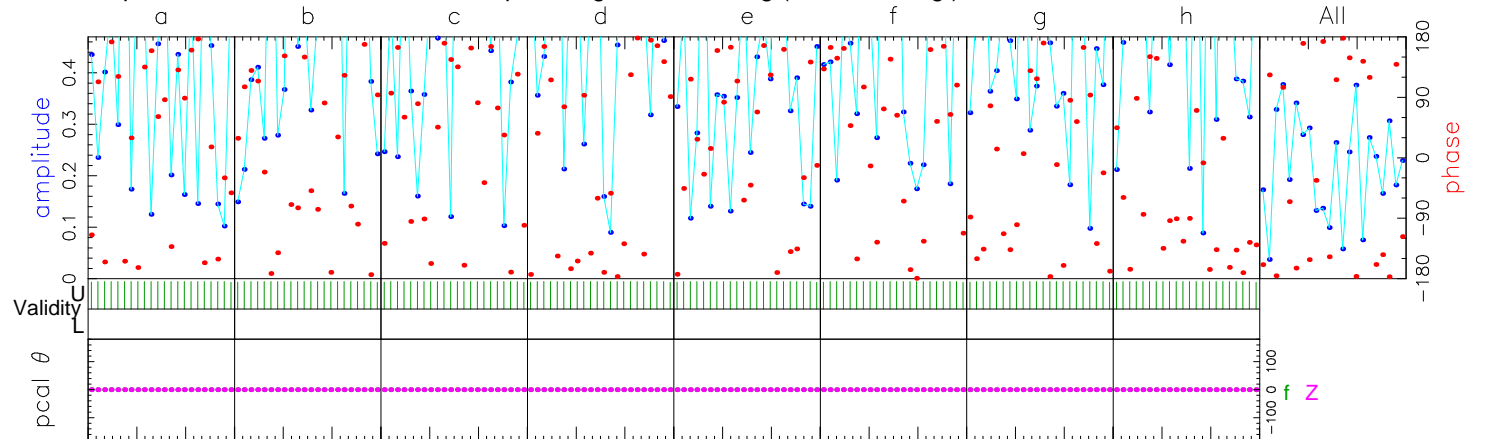


Fringe quality 0
 SNR 5.7
 Int time 179.702
 Amp 0.157
 Phase 176.8
 PFD 8.4e-01
 Delays (us)
 SBD 0.131626
 MBD -0.003506
 Fringe rate (Hz)
 0.180944
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145430
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Z	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		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	1.99888247017E+03	Apriori delay (usec)	1.99874535111E+03	Resid mbdelay (usec)	-3.50594E-03	+/-	1.9E-04
Sband delay (usec)	1.99887697661E+03	Apriori clock (usec)	7.6971159E+00	Resid sbdelay (usec)	1.31626E-01	+/-	1.5E-03
Phase delay (usec)	1.99874535681E+03	Apriori clockrate (us/s)	3.8399996E-07	Resid phdelay (usec)	5.70166E-06	+/-	6.5E-07
Delay rate (us/s)	-1.05708679097E+00	Apriori rate (us/s)	-1.05708889154E+00	Resid rate (us/s)	2.10058E-06	+/-	6.3E-09
Total phase (deg)	12.8	Apriori accel (us/s/s)	-4.20340024380E-05	Resid phase (deg)	176.8	+/-	20.2

ph/seg (deg)	54.1	Theor.	47.5	Amplitude	0.157 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	76.4	Search (1024X32)	0.149	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	33.7	Inc. seg. avg.	0.165	Inc. frq. avg.	0.159	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	52.6	Inc. frq. avg.	0.159			Sample rate (MSamp/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

f: az 314.6 el 29.7 pa 76.6 Z: az 18.7 el 23.5 pa -14.7 u,v (fr/asec) 9606.181 -6099.690 simultaneous interpolator

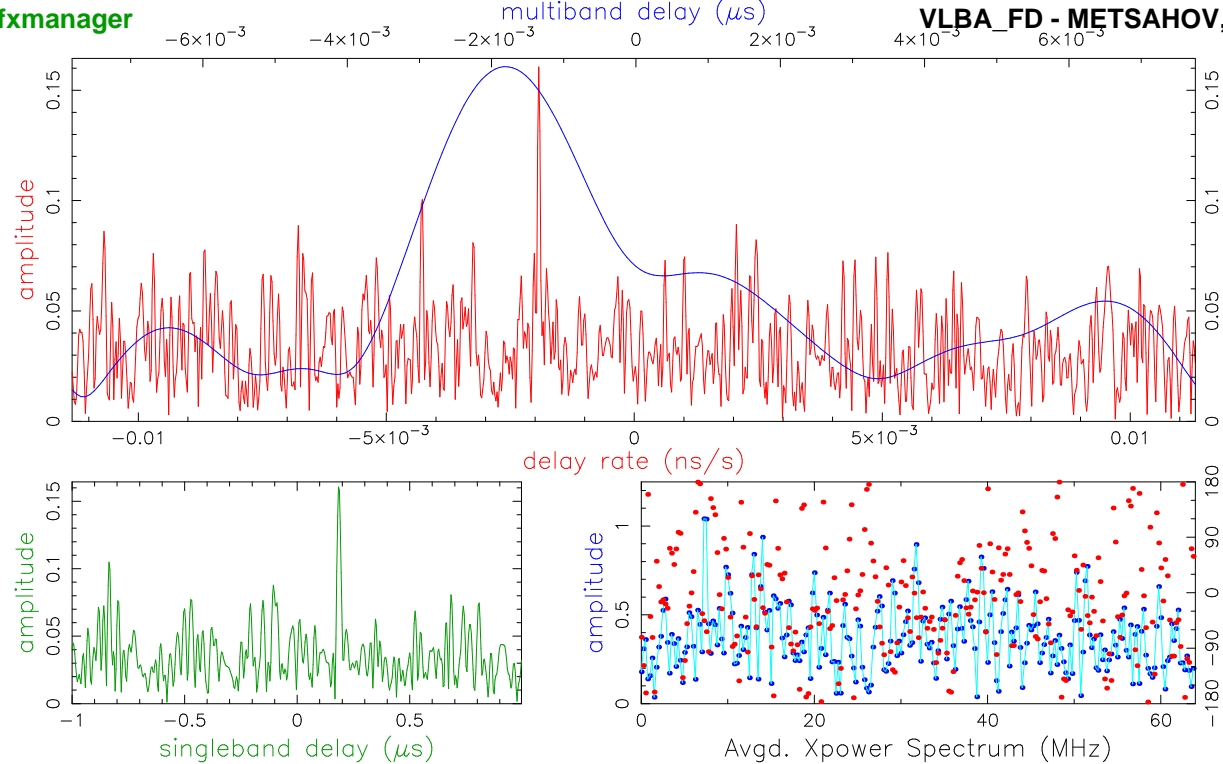
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ.W.123.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

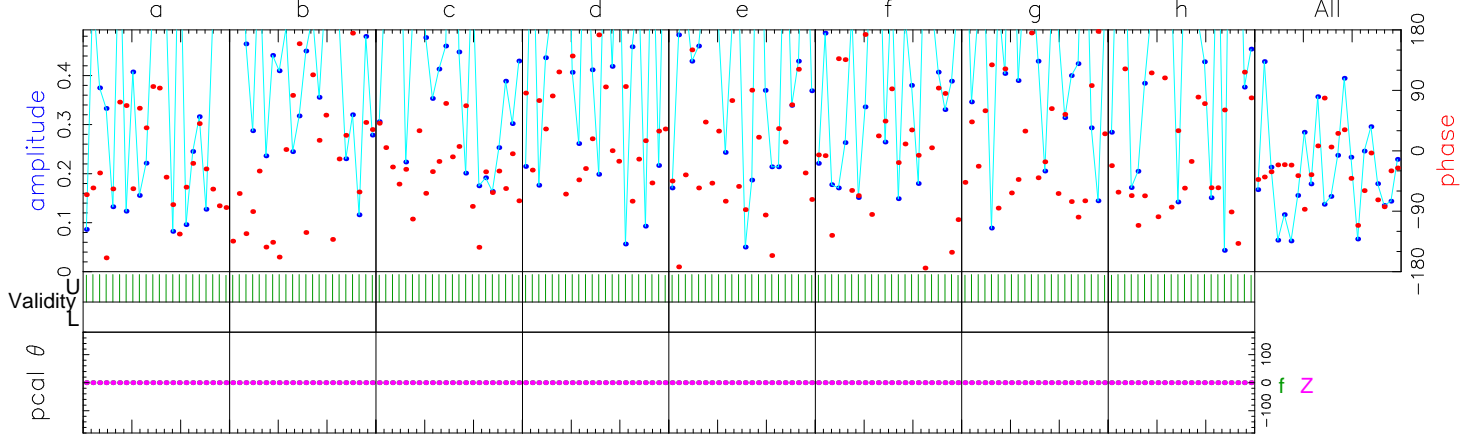
NRAO150.1HV1N7, No0150, fZ

VLBA_FD - METSAHOV, fgroup W, pol RL



Fringe quality 0
 SNR 6.0
 Int time 179.702
 Amp 0.164
 Phase -24.8
 PFD 2.8e-01
 Delays (us)
 SBD 0.185134
 MBD -0.001750
 Fringe rate (Hz)
 -0.166878
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 150000.00
 Stop 150300.22
 FRT 150130.00
 Corr/FF/build
 2021:008:174658
 2021:010:145432
 2020:247:085004
 RA & Dec (J2000)
 03h59m29.747267s
 +50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-37.4	-72.6	-25.2	4.5	-8.5	3.6	-30.1	-69.7	Phase	-24.8
	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.1	Ampl.	0.2
	337.4	444.9	305.1	304.0	129.9	1.7	31.6	230.9	Sbd box	304.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	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	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 1.99893110123E+03 Apriori delay (usec) 1.99874535111E+03 Resid mbdelay (usec) -1.74988E-03 +/- 1.8E-04
 Sband delay (usec) 1.99893048486E+03 Apriori clock (usec) 7.6971159E+00 Resid sbdelay (usec) 1.85134E-01 +/- 1.4E-03
 Phase delay (usec) 1.99874535031E+03 Apriori clockrate (us/s) 3.8399996E-07 Resid phdelay (usec) -7.99452E-07 +/- 6.2E-07
 Delay rate (us/s) -1.05709082884E+00 Apriori rate (us/s) -1.05708889154E+00 Resid rate (us/s) -1.93729E-06 +/- 6.0E-09
 Total phase (deg) 171.2 Apriori accel (us/s/s) -4.20340024380E-05 Resid phase (deg) -24.8 +/- 19.2

RMS Theor. Amplitude 0.164 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 41.7 45.1 Search (1024X32) 0.152 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 66.1 78.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 32.7 27.2 Inc. seg. avg. 0.157 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 51.0 47.5 Inc. frq. avg. 0.160 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 314.6 el 29.7 pa 76.6 Z: az 18.7 el 23.5 pa -14.7 u,v (fr/asec) 9606.181 -6099.690 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ.W.143.1HV1N7

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

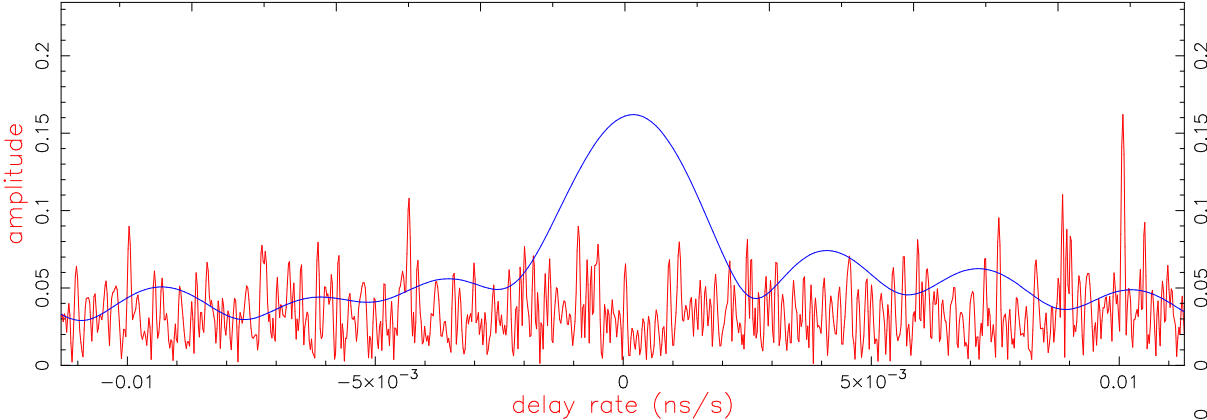
NRAO150.1HV1N7, No0150, fZ

VLBA_FD - METSAHOV, fgroup W, pol LL

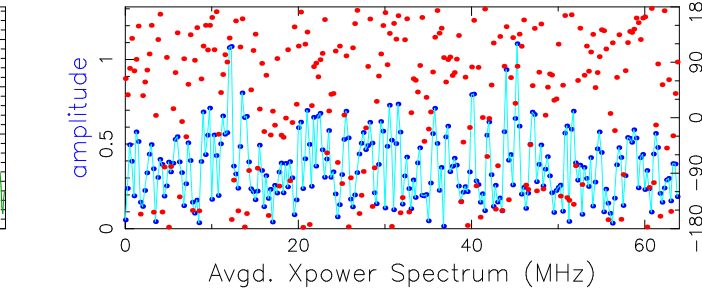
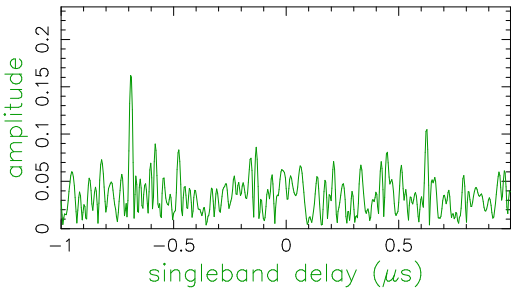
multiband delay (μ s)

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

Fringe quality 0

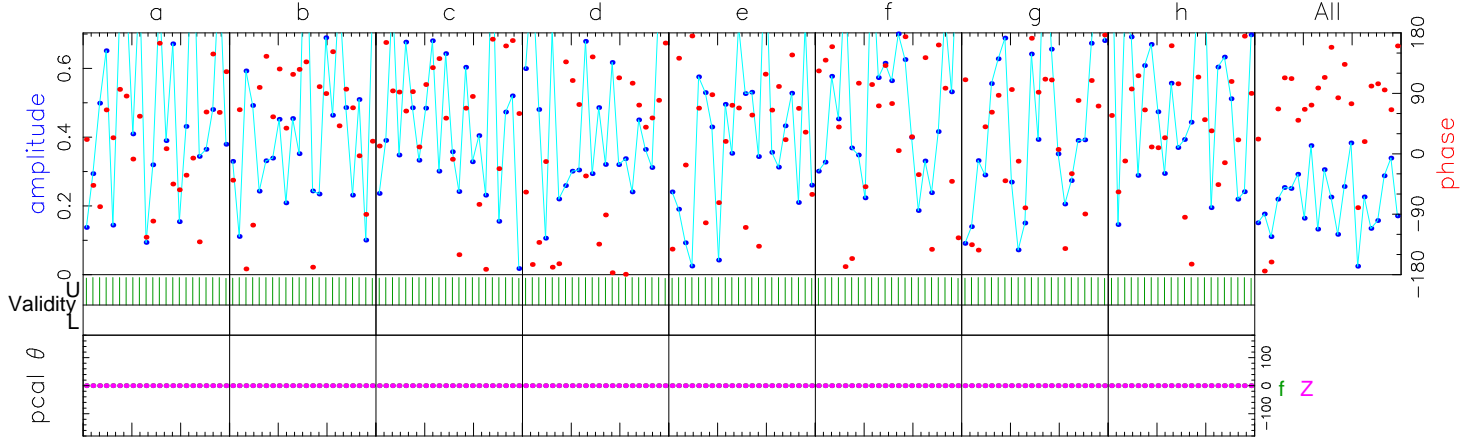


SNR 6.1
Int time 179.702
Amp 0.234
Phase 92.8
PFD 1.6e-01
Delays (us)
SBD -0.689671
MBD 0.000130
Fringe rate (Hz) 0.868616
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 150000.00
Stop 150300.22
FRT 150130.00
Corr/FF/build
2021:008:174658
2021:010:145426
2020:247:085004
RA & Dec (J2000)
03h59m29.747267s
+50°57'50.161694"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Z	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		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.99805798086E+03	Apriori delay (usec)	1.99874535111E+03	Resid mbdelay (usec)	1.29747E-04	+/-	1.8E-04
Sband delay (usec)	1.99805568036E+03	Apriori clock (usec)	7.6971159E+00	Resid sbdelay (usec)	-6.89671E-01	+/-	1.4E-03
Phase delay (usec)	1.99874535410E+03	Apriori clockrate (us/s)	3.8399996E-07	Resid phdelay (usec)	2.99214E-06	+/-	6.1E-07
Delay rate (us/s)	-1.05707880777E+00	Apriori rate (us/s)	-1.05708889154E+00	Resid rate (us/s)	1.00838E-05	+/-	5.9E-09
Total phase (deg)	288.8	Apriori accel (us/s/s)	-4.20340024380E-05	Resid phase (deg)	92.8	+/-	18.9

ph/seg (deg)	59.2	Theor.	44.4	Amplitude	0.234 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	62.4		77.4	Search (1024X32)	0.156	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	42.0		26.7	Inc. seg. avg.	0.236	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	26.7		46.7	Inc. frq. avg.	0.248	Sample rate (MSamp/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

f: az 314.6 el 29.7 pa 76.6 Z: az 18.7 el 23.5 pa -14.7 u,v (fr/asec) 9606.181 -6099.690 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ..1HV1N7 Output file: /Exps/c202a/v1/v1_3mm/1234/No0150/fZ.W.86.1HV1N7