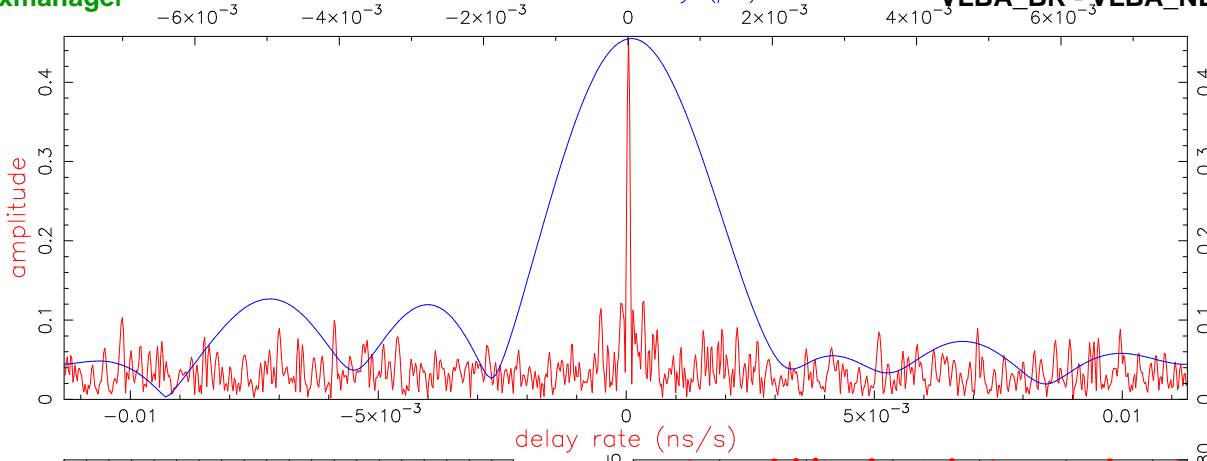
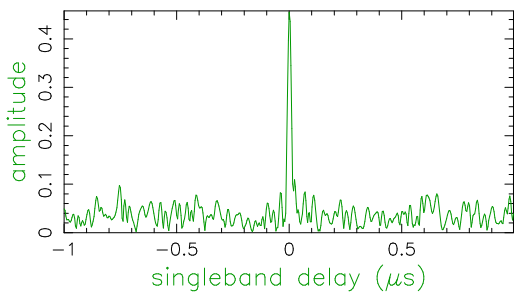


multiband delay (μ s)

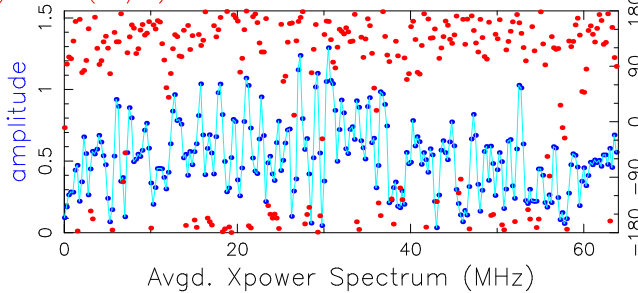


Fringe quality 9

SNR 16.8
Int time 179.974
Amp 0.458
Phase 158.5
PFD 0.0e+00
Delays (us)
SBD 0.001009
MBD 0.000064
Fringe rate (Hz) 0.003595
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

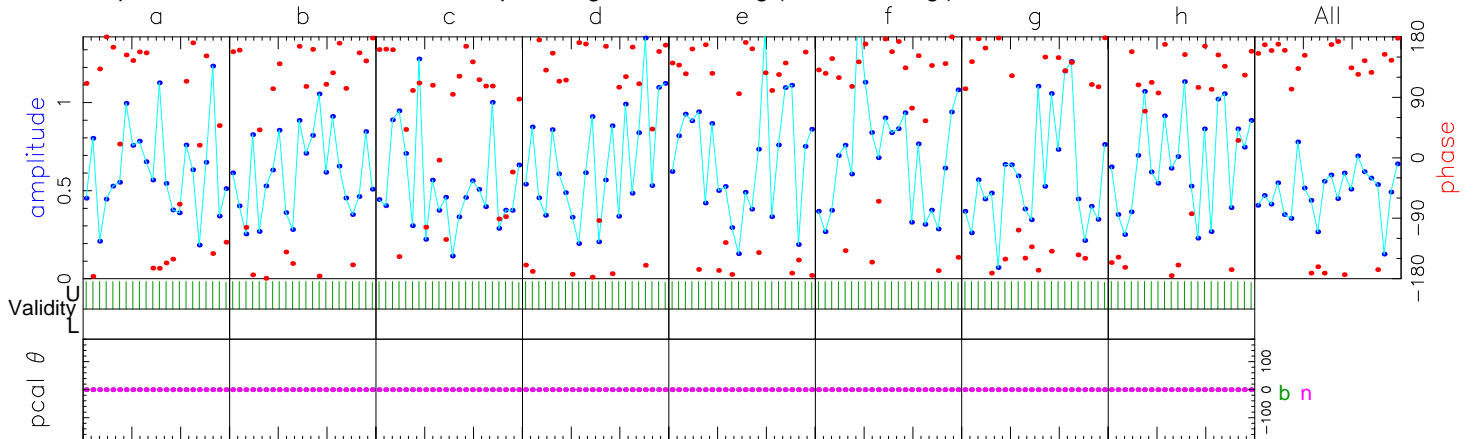


delay rate (ns/s)



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155232
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:n	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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

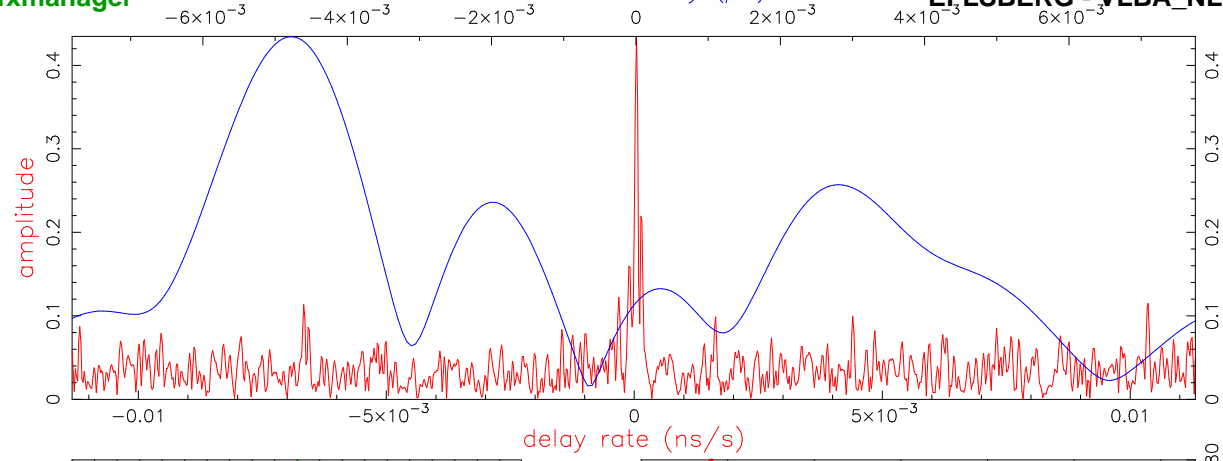
Group delay (usec)(sbd)	-3.73748360765E+03	Apriori delay (usec)	-3.73748367143E+03	Resid mbdelay (usec)	6.37868E-05	+/-	6.5E-05
Sband delay (usec)	-3.73748266243E+03	Apriori clock (usec)	-1.8668451E+00	Resid sbdelay (usec)	1.00900E-03	+/-	5.1E-04
Phase delay (usec)	-3.73748366632E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	5.11001E-06	+/-	2.2E-07
Delay rate (us/s)	2.63234469959E-01	Apriori rate (us/s)	2.63234428219E-01	Resid rate (us/s)	4.17397E-08	+/-	2.1E-09
Total phase (deg)	-6.1	Apriori accel (us/s/s)	2.52319361894E-05	Resid phase (deg)	158.5	+/-	6.8

ph/seg (deg)	24.6	RMS	24.6	Theor.	16.0	Amplitude	0.458 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	31.6		31.6		27.9	Search (1024X32)	0.453	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	14.2		14.2		9.6	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	19.7		19.7		16.8	Inc. seg. avg.	0.480	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011		
						Inc. frq. avg.	0.456	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 84.6 el 49.3 pa -56.5 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -1873.536 2072.824 simultaneous interpolator

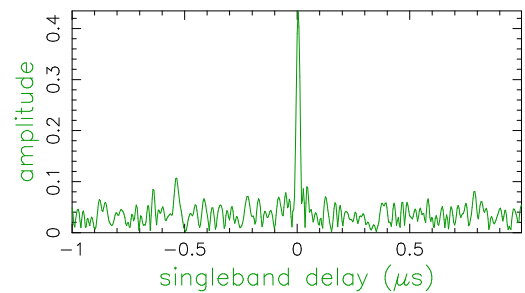
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/bn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/bn.W.10.1HXP48

multiband delay (μ s)

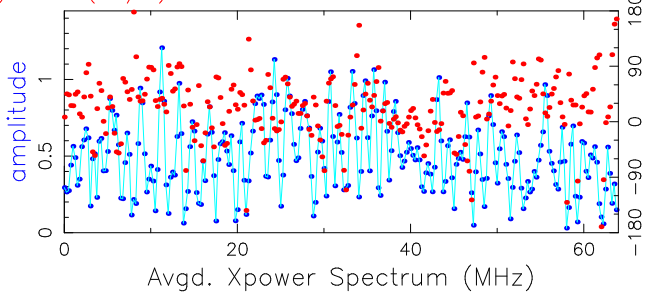


Fringe quality 8

SNR 15.9
 Int time 179.778
 Amp 0.435
 Phase 128.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.004275
 MBD -0.004767
 Fringe rate (Hz)
 0.003764
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

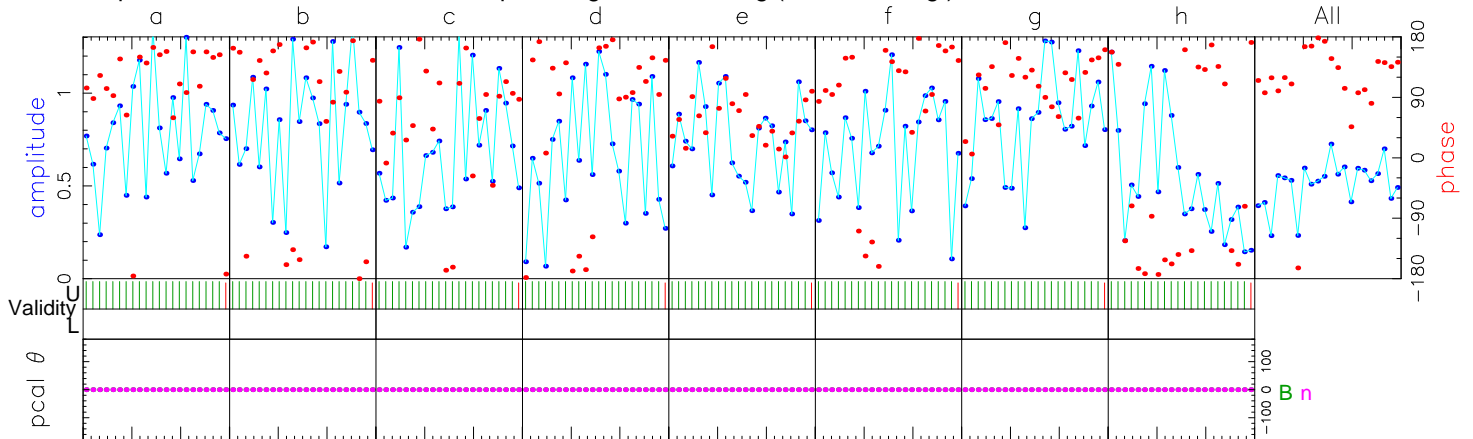


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155233
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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	132.8	157.5	88.4	151.7	59.3	144.8	108.7	-168.8		128.1
B	0.6	0.6	0.4	0.5	0.6	0.5	0.7	0.4		0.5
n	259.1	257.9	258.6	258.8	258.4	258.5	258.6	259.2		258.1
B:n	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B:n	1000	1000	1000	1000	1000	1000	1000	1000		
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:n	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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-6.68330327067E+03		Apriori delay (usec)		-6.68331412877E+03		Resid mbdelay (usec)		-4.76690E-03	+/- 6.8E-05
Sband delay (usec)	-6.68330985402E+03		Apriori clock (usec)		9.9550171E+00		Resid sbdelay (usec)		4.27475E-03	+/- 5.4E-04
Phase delay (usec)	-6.68331412464E+03		Apriori clockrate (us/s)		-7.0000001E-07		Resid phdelay (usec)		4.12926E-06	+/- 2.3E-07
Delay rate (us/s)	-1.15686640817E+00		Apriori rate (us/s)		-1.15686645186E+00		Resid rate (us/s)		4.36925E-08	+/- 2.2E-09
Total phase (deg)			109.3		4.28231270183E-05		Resid phase (deg)		128.1	+/- 7.2

ph/seg (deg) 34.9 16.9 Search (1024X32) 0.432 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 33.0 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) 45.4 10.2 Inc. seg. avg. 0.492 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 34.4 17.7 Inc. frq. avg. 0.537 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 284.3 el 38.7 pa 50.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 8357.801 3254.448 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/Bn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/Bn.W.11.1HXP48

Mk4/DiFX fourfit 3.21 rev 2937

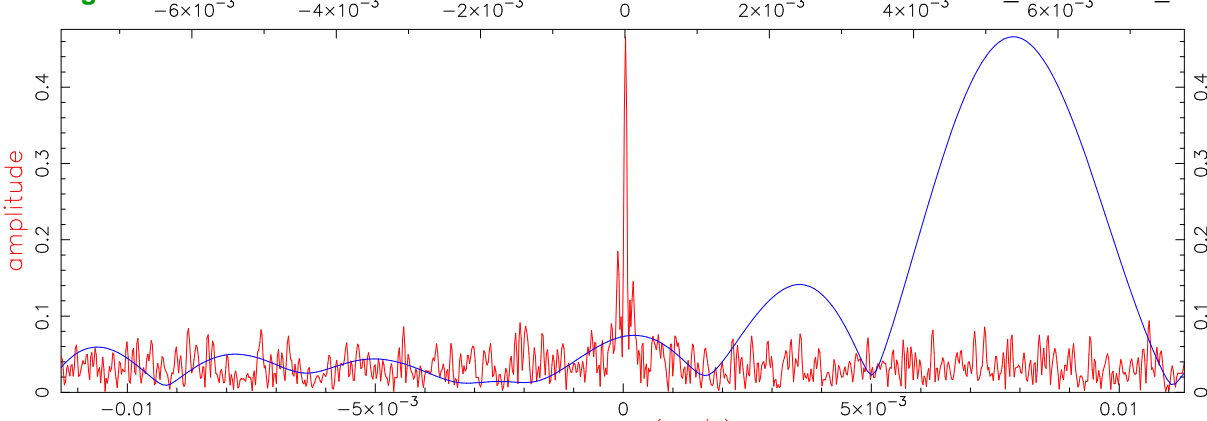
fxmanager

2013+370.1HXP48, No0219, bn

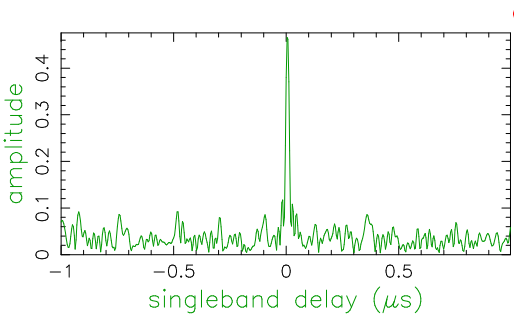
VLBA_BR - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)

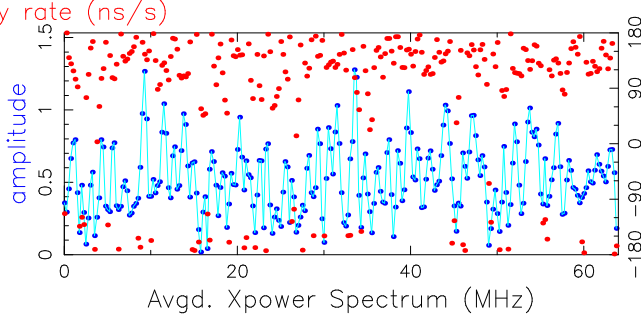
Fringe quality 9



SNR 17.5
 Int time 179.974
 Amp 0.476
 Phase 145.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.005710
 MBD 0.005435
 Fringe rate (Hz) 0.004017
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

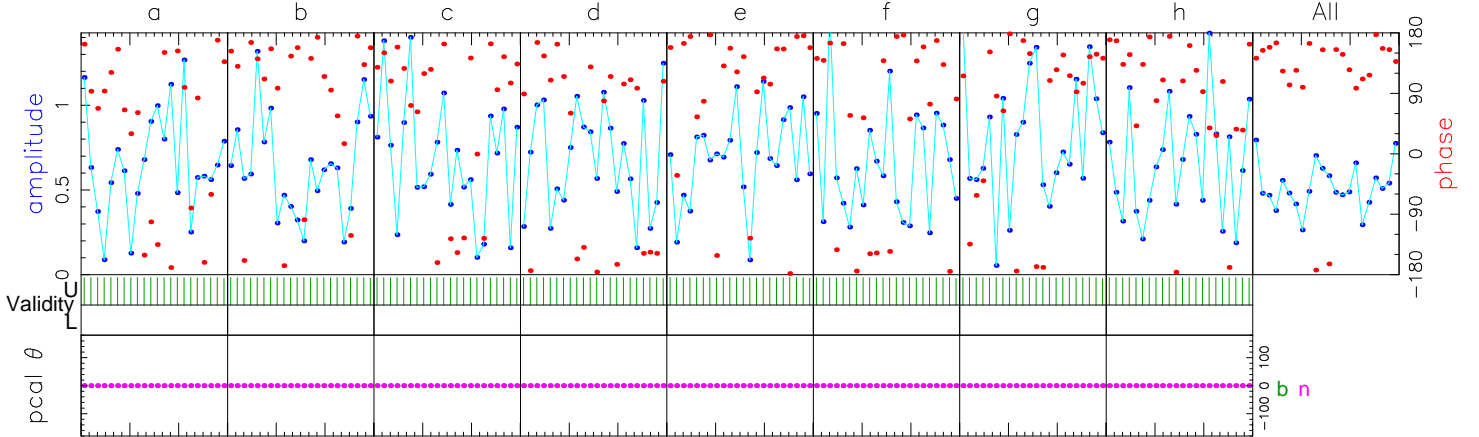


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155234
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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

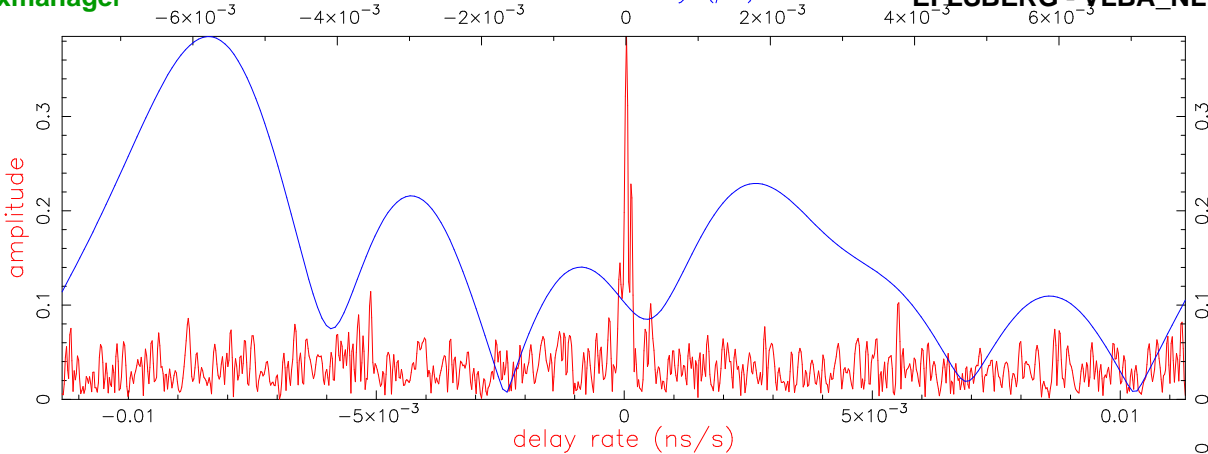


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	153.9	145.0	140.2	147.2	143.8	163.7	143.3	126.4	Phase	145.5
	0.3	0.5	0.5	0.5	0.5	0.5	0.6	0.4	Ampl.	0.5
	258.8	259.0	258.4	257.6	258.6	258.7	258.3	259.0	Sbd box	258.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.73747823646E+03		Apriori delay (usec)		-3.73748367143E+03		Resid mbdelay (usec)		5.43497E-03	+/- 6.2E-05
Sband delay (usec)	-3.73747796118E+03		Apriori clock (usec)		-1.8668451E+00		Resid sbdelay (usec)		5.71025E-03	+/- 4.9E-04
Phase delay (usec)	-3.73748366674E+03		Apriori clockrate (us/s)		-5.0000000E-07		Resid phdelay (usec)		4.69115E-06	+/- 2.1E-07
Delay rate (us/s)	2.63234474856E-01		Apriori rate (us/s)		2.63234428219E-01		Resid rate (us/s)		4.66373E-08	+/- 2.0E-09
Total phase (deg)			Apriori accel (us/s/s)		2.52319361894E-05		Resid phase (deg)		145.5	+/- 6.6

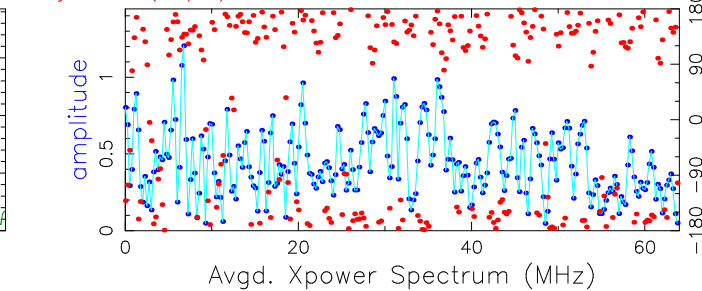
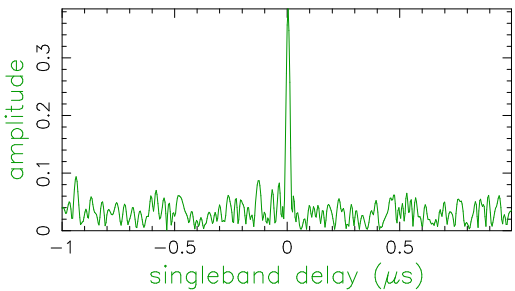
ph/seg (deg) 27.4 15.4 Search (1024X32) 0.465 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 29.1 26.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 11.6 9.3 Inc. seg. avg. 0.503 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 14.1 16.2 Inc. frq. avg. 0.466 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 84.6 el 49.3 pa -56.5 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -1873.536 2072.824 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/bn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/bn.W.24.1HXP48

multiband delay (μ s)

Fringe quality 9

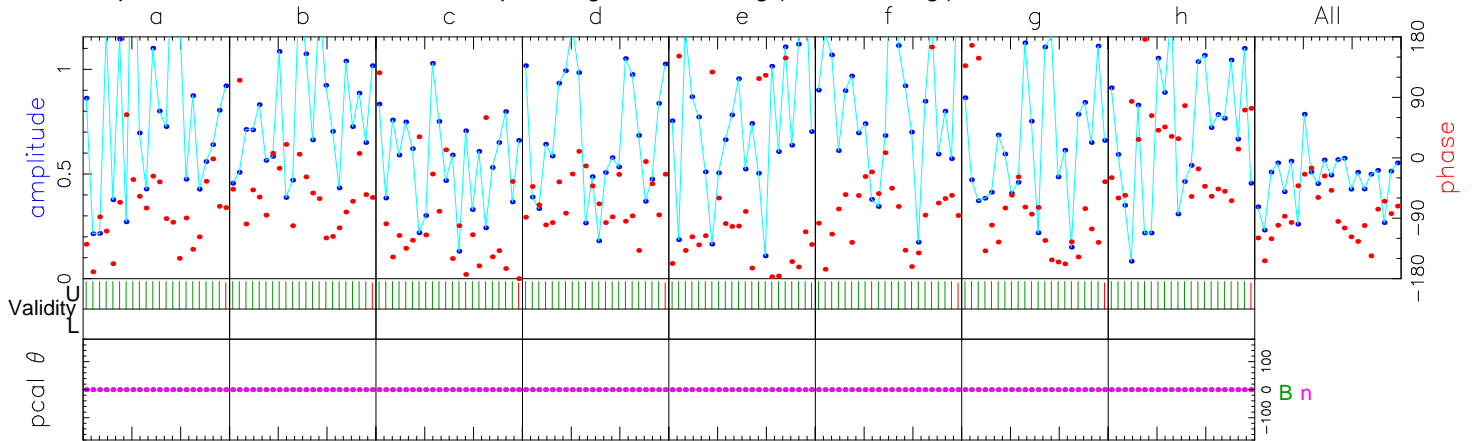


SNR 14.1
 Int time 179.778
 Amp 0.385
 Phase -83.2
 PFD 8.9e-37
 Delays (us)
 SBD 0.003613
 MBD -0.005788
 Fringe rate (Hz)
 0.003872
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155234
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-78.9	-52.1	-133.2	-62.5	-140.1	-86.8	-117.0	-3.1	Phase	-83.2
	0.6	0.6	0.3	0.5	0.5	0.6	0.4	0.5	Ampl.	0.5
	258.7	257.7	258.7	258.0	258.3	258.2	258.9	257.9	Sbd box	257.9
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	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	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)	-6.68330429161E+03		Apriori delay (usec)		-6.68331412877E+03		Resid mbdelay (usec)		-5.78784E-03	+/- 7.7E-05
Sband delay (usec)	-6.68331051552E+03		Apriori clock (usec)		9.9550171E+00		Resid sbdelay (usec)		3.61325E-03	+/- 6.1E-04
Phase delay (usec)	-6.68331413145E+03		Apriori clockrate (us/s)		-7.0000001E-07		Resid phdelay (usec)		-2.68429E-06	+/- 2.6E-07
Delay rate (us/s)	-1.15686640691E+00		Apriori rate (us/s)		-1.15686645186E+00		Resid rate (us/s)		4.49523E-08	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		4.28231270183E-05		Resid phase (deg)		-83.2	+/- 8.1

ph/seg (deg) 37.6 19.0 Search (1024X32) 0.384 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 39.9 33.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 49.5 11.5 Inc. seg. avg. 0.454 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.8 20.0 Inc. frq. avg. 0.490 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 284.3 el 38.7 pa 50.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 8357.801 3254.448 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/Bn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/Bn.W.26.1HXP48

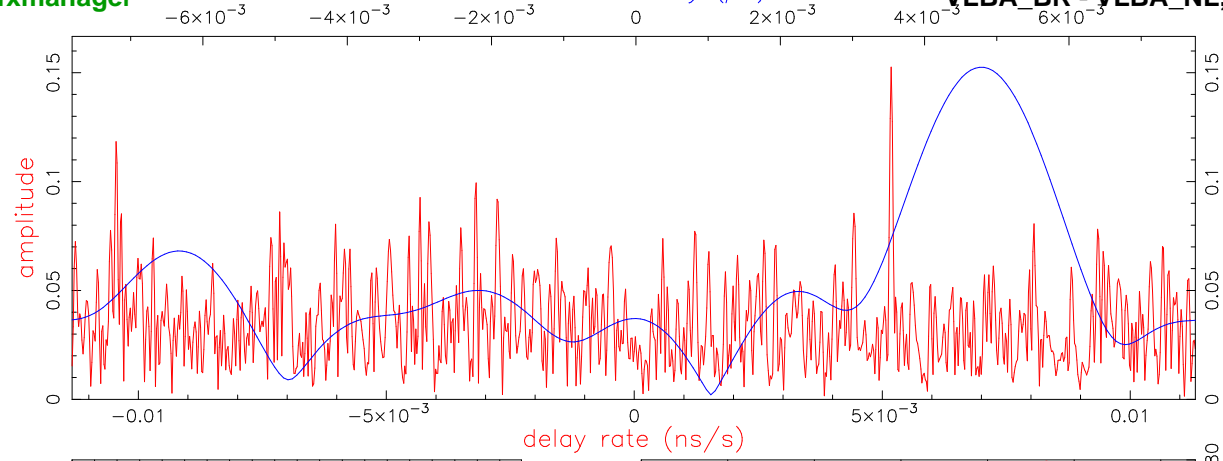
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

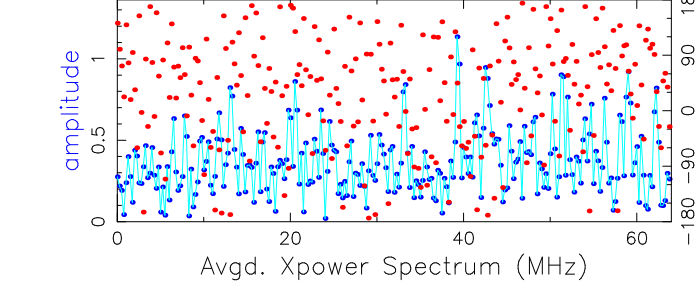
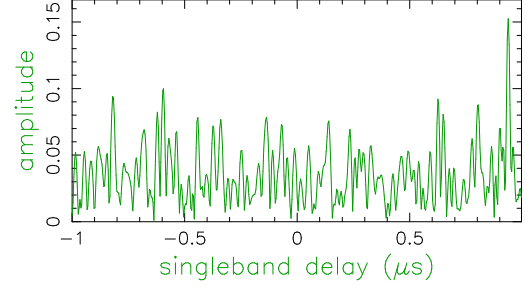
2013+370.1HXP48, No0219, bn

VLBA_BR - VLBA_NL, fgroup W, pol LR

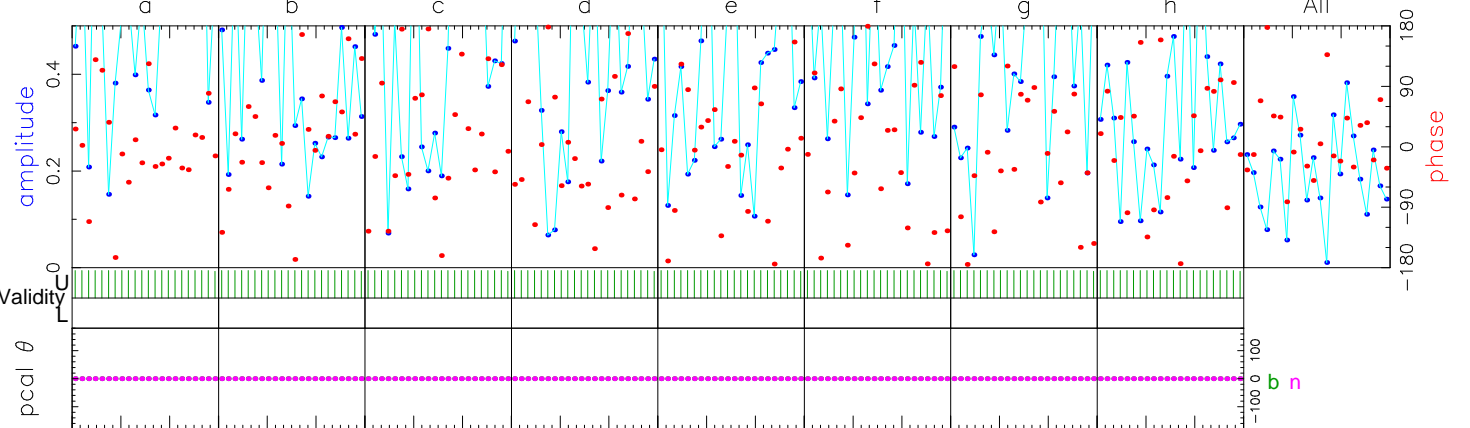
multiband delay (μ s)



Fringe quality 0
 SNR 5.6
 Int time 179.974
 Amp 0.167
 Phase 3.6
 PFD 9.3e-01
 Delays (us)
 SBD 0.937230
 MBD 0.004790
 Fringe rate (Hz) 0.447759
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155236
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

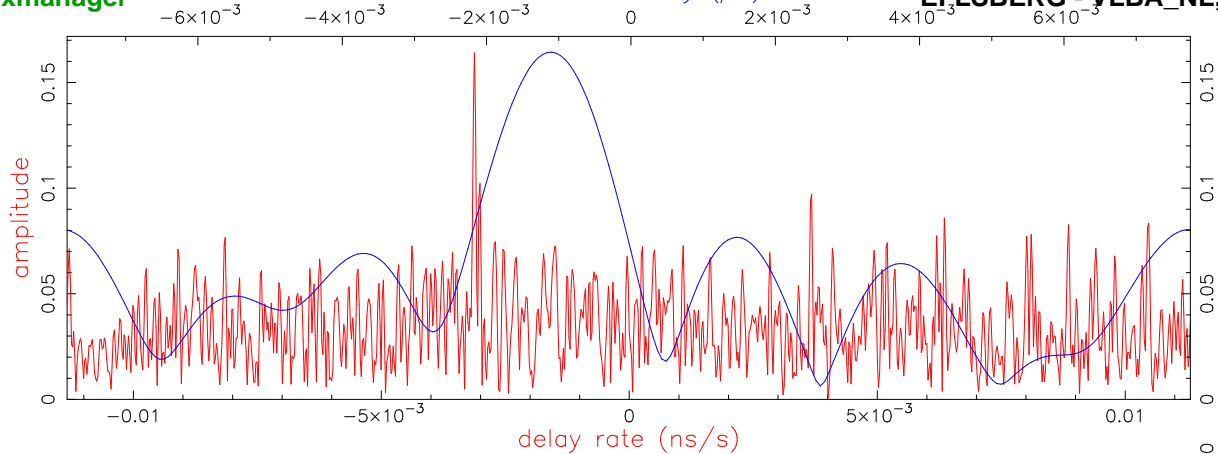


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



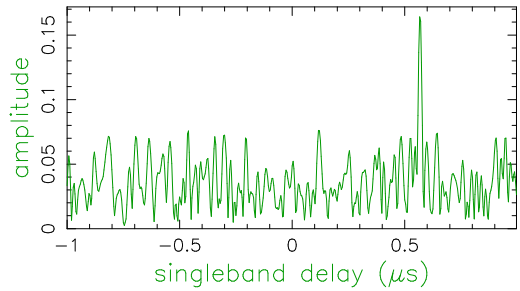
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-3.73654138148E+03									
Sband delay (usec)	-3.73654644143E+03									
Phase delay (usec)	-3.73748367131E+03									
Delay rate (us/s)	2.63239626260E-01									
Total phase (deg)			-160.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
b n										
Amplitude										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
0.167 +/- 0.030										
0.150										
0.000										
0.159										
0.157										
PC period (AP's) 5, 5										
simultaneous interpolator										

multiband delay (μ s)

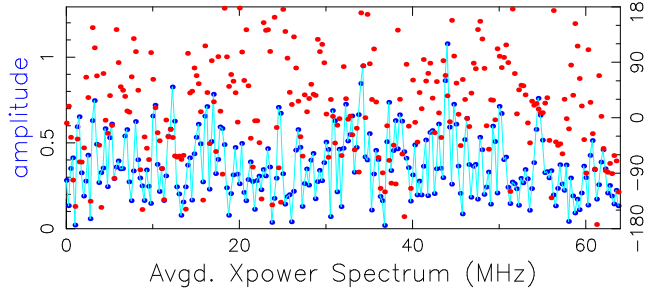


Fringe quality 0

SNR 6.1
 Int time 179.778
 Amp 0.172
 Phase 97.1
 PFD 1.3e-01
 Delays (us)
 SBD 0.567936
 MBD -0.001049
 Fringe rate (Hz)
 -0.269338
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

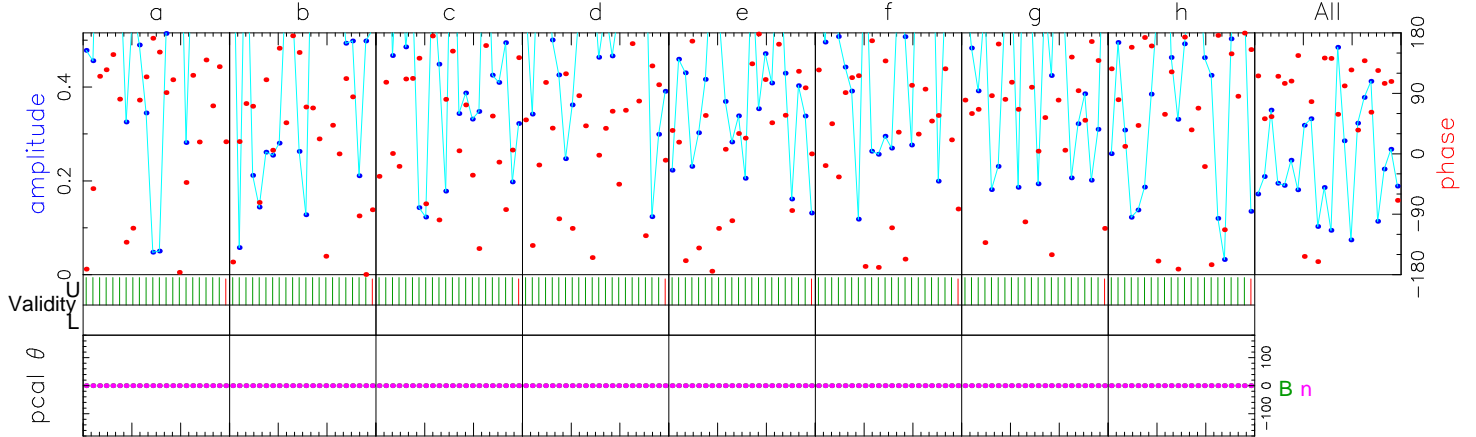


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155237
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:n	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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-6.68275267771E+03									
Sband delay (usec)	-6.68274619302E+03									
Phase delay (usec)	-6.68331412564E+03									
Delay rate (us/s)	-1.15686957861E+00									
Total phase (deg)			78.3							
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)									97.1	+/- 18.8
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										
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

B: az 284.3 el 38.7 pa 50.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 8357.801 3254.448 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/Bn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/Bn.W.48.1HXP48

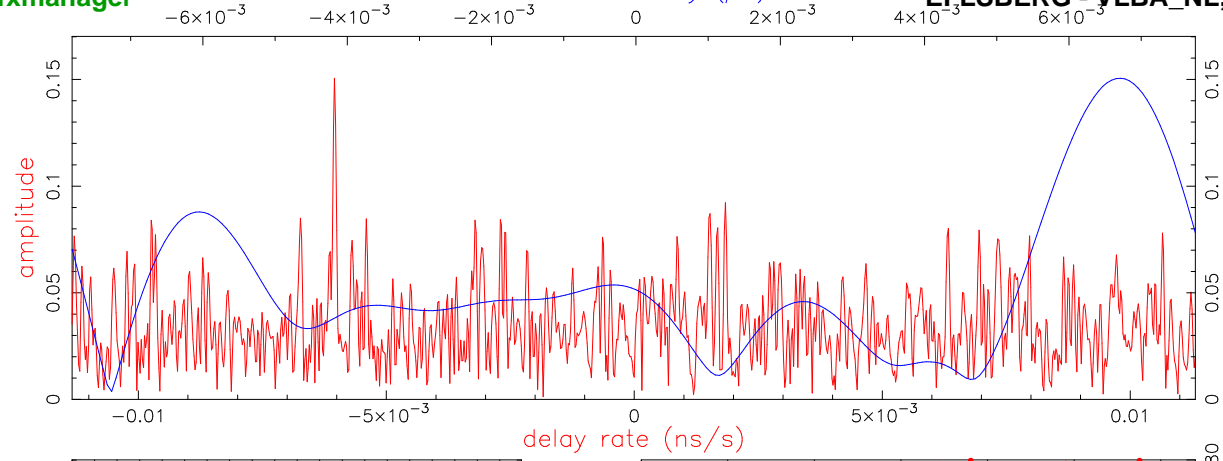
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

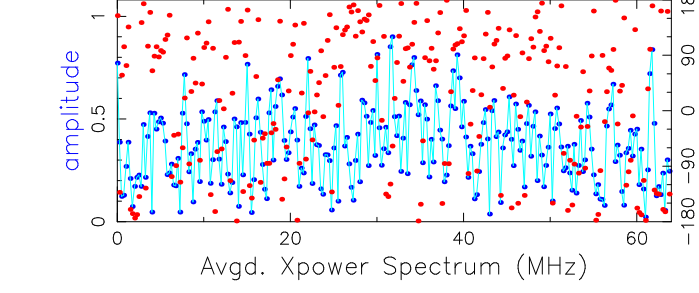
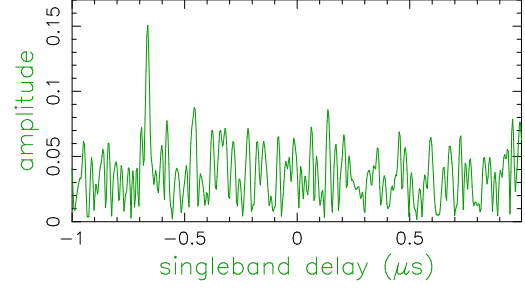
2013+370.1HXP48, No0219, Bn

EFLSBERG - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)

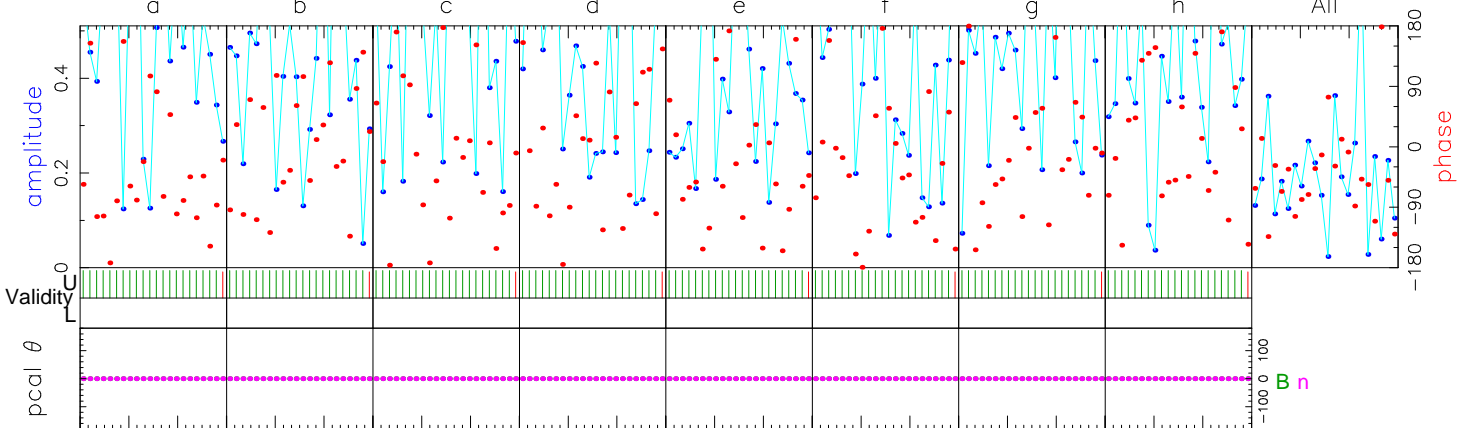


Fringe quality 0
 SNR 5.5
 Int time 179.778
 Amp 0.170
 Phase -57.9
 PFD 9.8e-01
 Delays (us)
 SBD -0.664673
 MBD 0.006690
 Fringe rate (Hz)
 -0.522265
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155238
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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
	-81.1	0.4	-43.6	-65.4	-91.4	-75.2	-40.1	-51.4	Phase	-57.9
	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.1	Ampl.	0.2
	158.9	97.8	270.0	119.3	261.2	495.5	493.2	140.4	Sbd box	86.8
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	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
B	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)	-6.68397931425E+03		Apriori delay (usec)		-6.68331412877E+03		Resid mbdelay (usec)		6.68952E-03	+/- 2.0E-04
Sband delay (usec)	-6.68397880152E+03		Apriori clock (usec)		9.9550171E+00		Resid sbdelay (usec)		-6.64673E-01	+/- 1.6E-03
Phase delay (usec)	-6.68331413064E+03		Apriori clockrate (us/s)		-7.0000001E-07		Resid phdelay (usec)		-1.86714E-06	+/- 6.7E-07
Delay rate (us/s)	-1.15687251483E+00		Apriori rate (us/s)		-1.15686645186E+00		Resid rate (us/s)		-6.06297E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		4.28231270183E-05		Resid phase (deg)		-57.9	+/- 20.7

ph/seg (deg) 55.4 48.6 Amplitude 0.170 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 95.6 84.8 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.6 29.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 38.6 51.1 Inc. seg. avg. 0.168 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 B: az 284.3 el 38.7 pa 50.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 8357.801 3254.448 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/No0219/Bn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/Bn.W.64.1HXP48 simultaneous interpolator

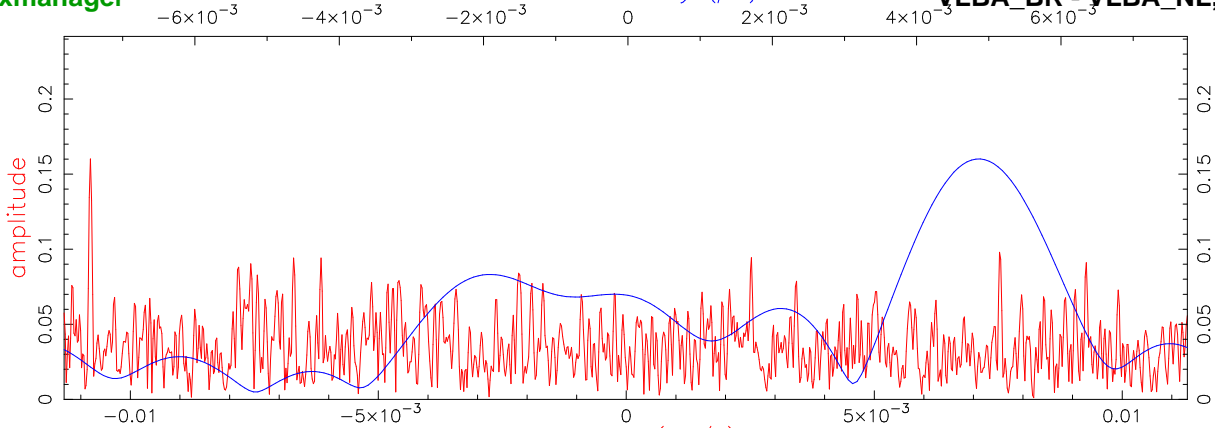
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, bn

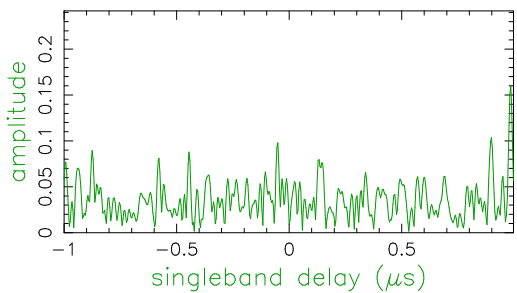
VLBA_BR - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)

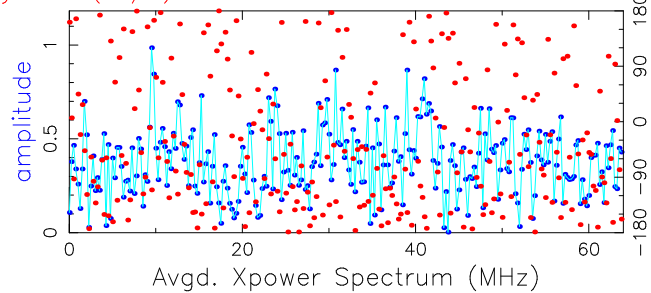


Fringe quality 0

SNR 5.9
Int time 179.974
Amp 0.242
Phase -5.2
PFD 3.8e-01
Delays (us)
SBD 0.983576
MBD 0.004823
Fringe rate (Hz)
-0.932804
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

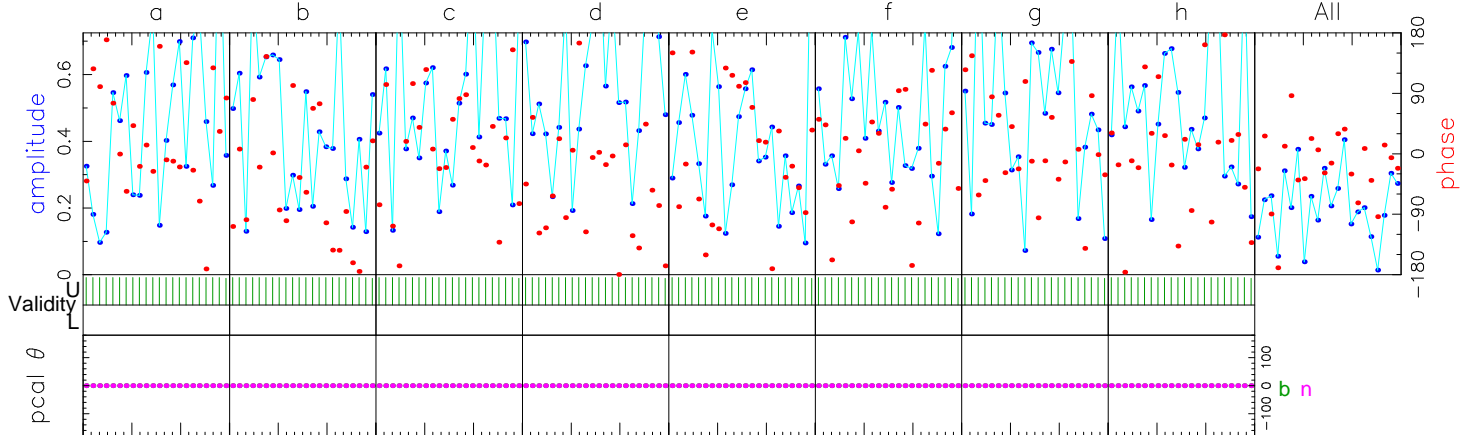


delay rate (ns/s)



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155239
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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

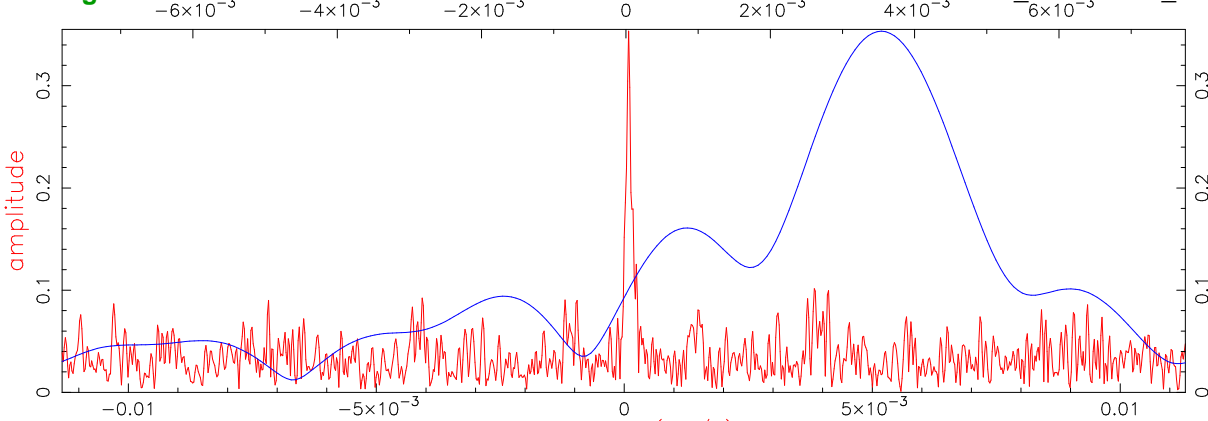


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-1.1	-55.9	27.8	-45.1	17.1	12.6	4.5	-13.6		-5.2
	0.4	0.1	0.3	0.4	0.1	0.3	0.3	0.3		0.2
	242.9	143.2	183.6	195.1	213.4	131.9	241.7	485.3		508.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:n	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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-3.73649447296E+03		Apriori delay (usec)		-3.73748367143E+03		Resid mbdelay (usec)		4.82347E-03	+/- 1.8E-04
Sband delay (usec)	-3.73650009543E+03		Apriori clock (usec)		-1.8668451E+00		Resid sbdelay (usec)		9.83576E-01	+/- 1.5E-03
Phase delay (usec)	-3.73748367160E+03		Apriori clockrate (us/s)		-5.0000000E-07		Resid phdelay (usec)		-1.66220E-07	+/- 6.3E-07
Delay rate (us/s)	2.63223599286E-01		Apriori rate (us/s)		2.63234428219E-01		Resid rate (us/s)		-1.08289E-05	+/- 6.0E-09
Total phase (deg)			Apriori accel (us/s/s)		2.52319361894E-05		Resid phase (deg)		-5.2	+/- 19.4

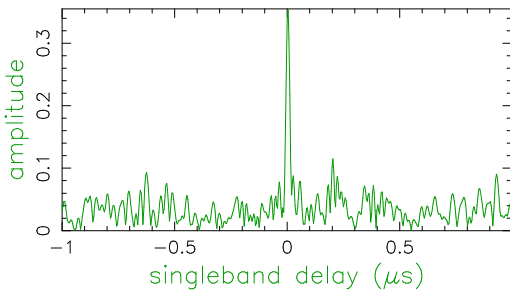
ph/seg (deg) 54.7 45.6 Search (1024X32) 0.159 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 69.0 79.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 32.3 27.5 Inc. seg. avg. 0.237 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 42.9 48.0 Inc. frq. avg. 0.239 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 84.6 el 49.3 pa -56.5 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -1873.536 2072.824 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/bn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/bn.W.69.1HXP48

multiband delay (μ s)

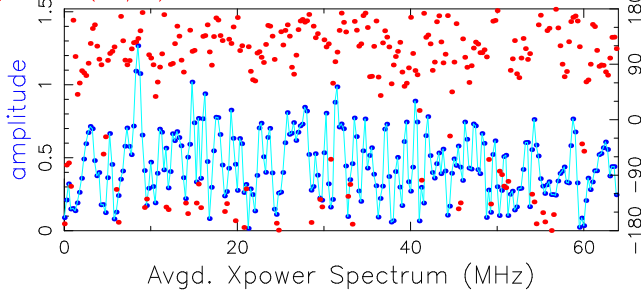
Fringe quality 9



SNR 13.0
 Int time 178.924
 Amp 0.355
 Phase 124.1
 PFD 3.8e-30
 Delays (us)
 SBD 0.002984
 MBD 0.003530
 Fringe rate (Hz)
 0.006750
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

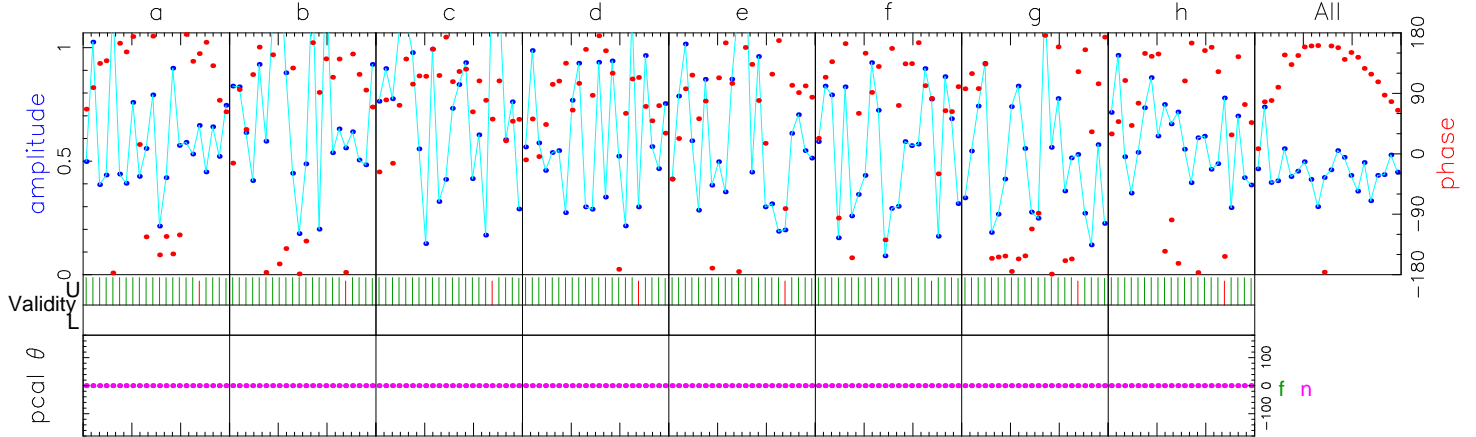


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155244
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		
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)	-1.94762843293E+03	Apriori delay (usec)	-1.94763196288E+03	Resid mbdelay (usec)	3.52995E-03	+/-	8.4E-05
Sband delay (usec)	-1.94762897888E+03	Apriori clock (usec)	7.6994309E+00	Resid sbdelay (usec)	2.98400E-03	+/-	6.6E-04
Phase delay (usec)	-1.94763195888E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	4.00330E-06	+/-	2.8E-07
Delay rate (us/s)	2.55976591038E-01	Apriori rate (us/s)	2.55976512681E-01	Resid rate (us/s)	7.83565E-08	+/-	2.7E-09
Total phase (deg)		Apriori accel (us/s/s)	-2.84162596104E-07	Resid phase (deg)	124.1	+/-	8.8

ph/seg (deg)	41.7	Theor.	20.7	Amplitude	0.355 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	38.5		36.1	Search (1024X32)	0.338	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	32.0		12.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	19.9		21.8	Inc. seg. avg.	0.433	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.390	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 67.7 el 57.2 pa -89.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -1844.213 -1109.048 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/fn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/fn.W.107.1HXP48

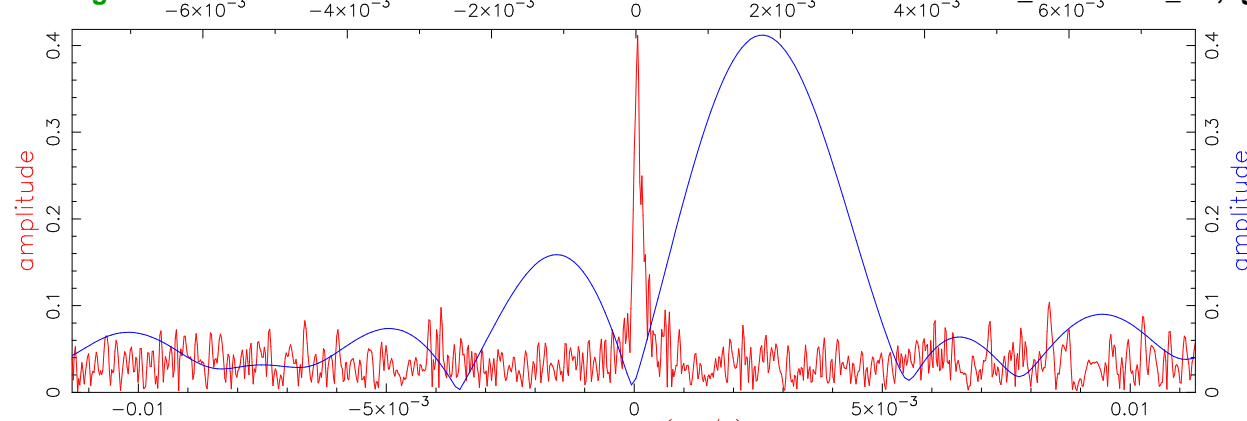
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, fn

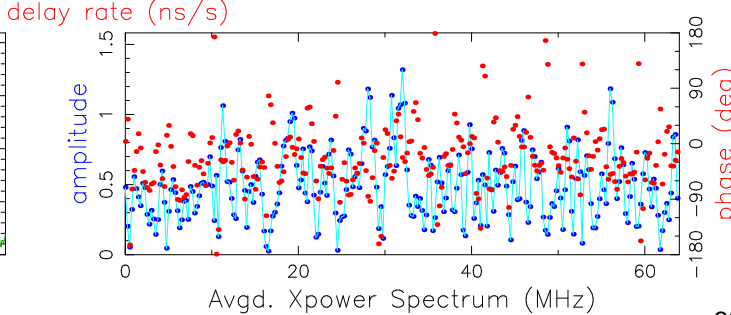
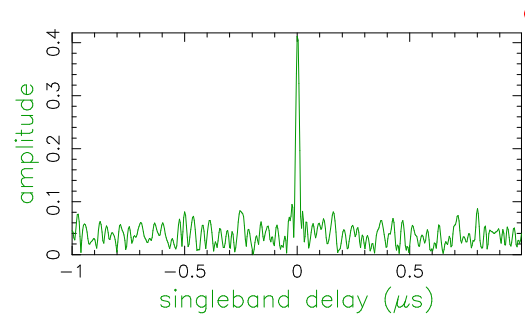
VLBA_FD - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)



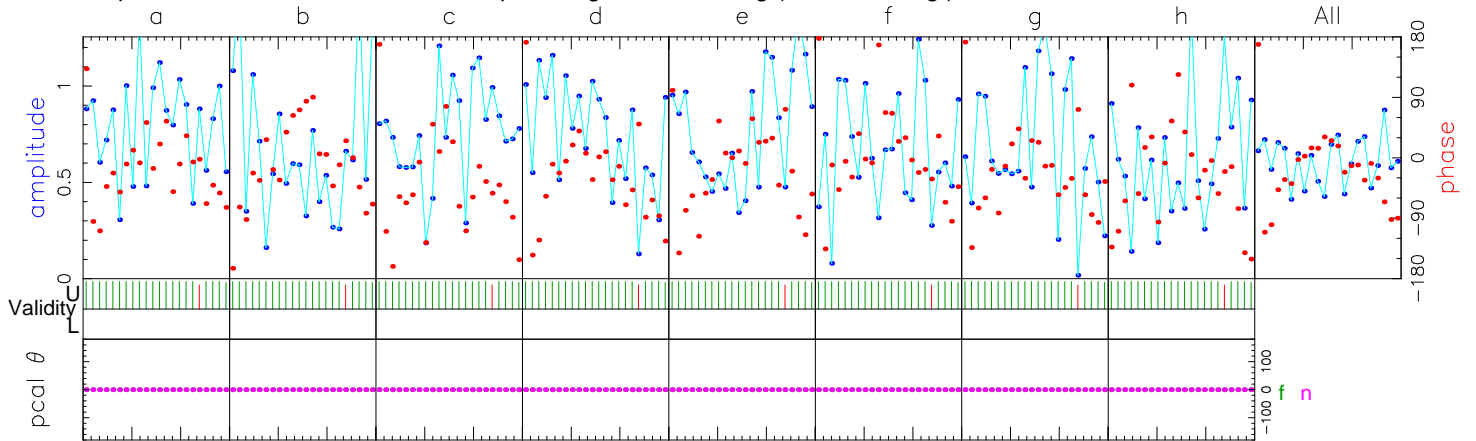
Fringe quality 9

SNR 15.3
 Int time 178.924
 Amp 0.419
 Phase -29.1
 PFD 2.1e-44
 Delays (us)
 SBD 0.001602
 MBD 0.001784
 Fringe rate (Hz) 0.006382
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155246
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-18.0	-26.2	-49.7	-35.7	-25.1	-11.6	-32.7	-38.8	Phase	-29.1
	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.3	Ampl.	0.4
	257.5	257.1	257.9	257.5	257.7	257.4	257.1	257.9	Sbd box	257.4
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0	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	

Group delay (usec)(sbd) -1.94763017936E+03 Apriori delay (usec) -1.94763196288E+03 Resid mbdelay (usec) 1.78352E-03 +/- 7.1E-05
 Sband delay (usec) -1.94763036038E+03 Apriori clock (usec) 7.6994309E+00 Resid sbdelay (usec) 1.60250E-03 +/- 5.6E-04
 Phase delay (usec) -1.94763196382E+03 Apriori clockrate (us/s) -1.0000003E-07 Resid phdelay (usec) -9.37408E-07 +/- 2.4E-07
 Delay rate (us/s) 2.55976586767E-01 Apriori rate (us/s) 2.55976512681E-01 Resid rate (us/s) 7.40854E-08 +/- 2.3E-09
 Total phase (deg) -130.8 Apriori accel (us/s/s) -2.84162596104E-07 Resid phase (deg) -29.1 +/- 7.5

RMS Theor. Amplitude 0.419 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 53.5 17.5 Search (1024X32) 0.398 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 54.6 30.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 13.1 10.6 Inc. seg. avg. 0.586 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 16.0 18.5 Inc. frq. avg. 0.413 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 67.7 el 57.2 pa -89.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -1844.213 -1109.048 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/fn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/fn.W.121.1HXP48

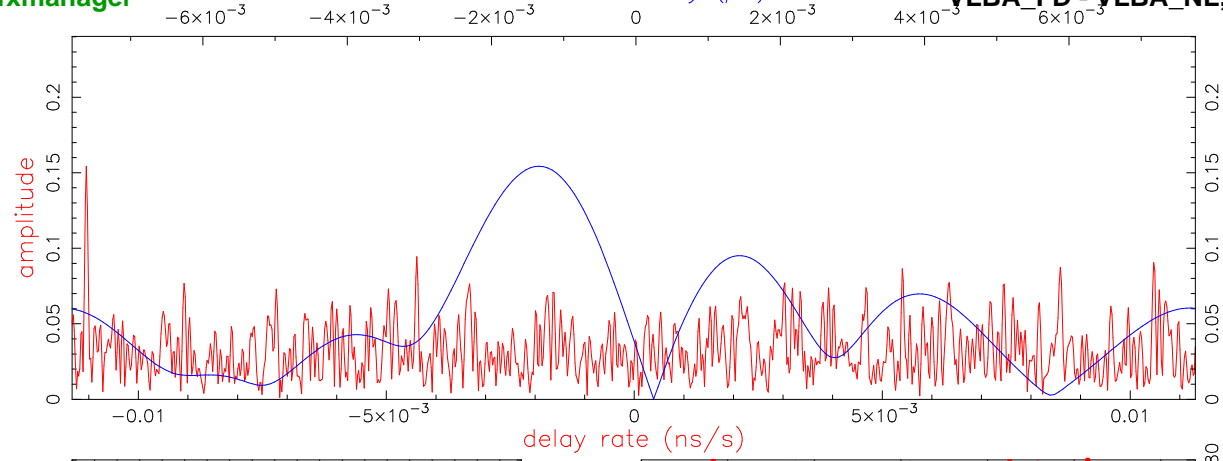
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, fn

VLBA_FD - VLBA_NL, fgroup W, pol LR

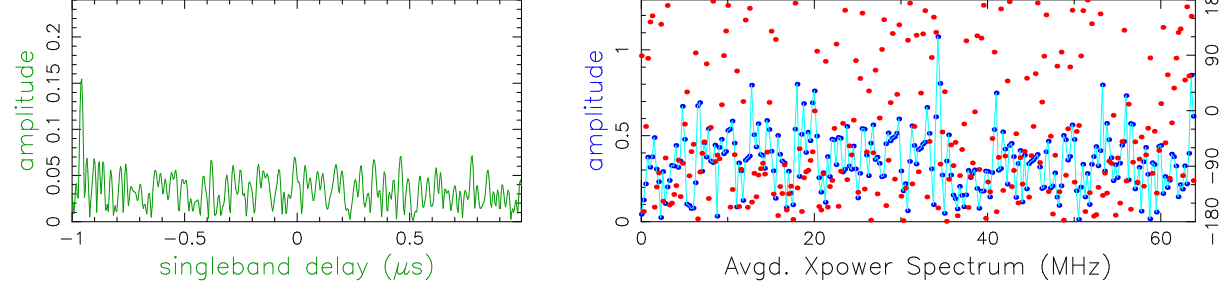
multiband delay (μ s)



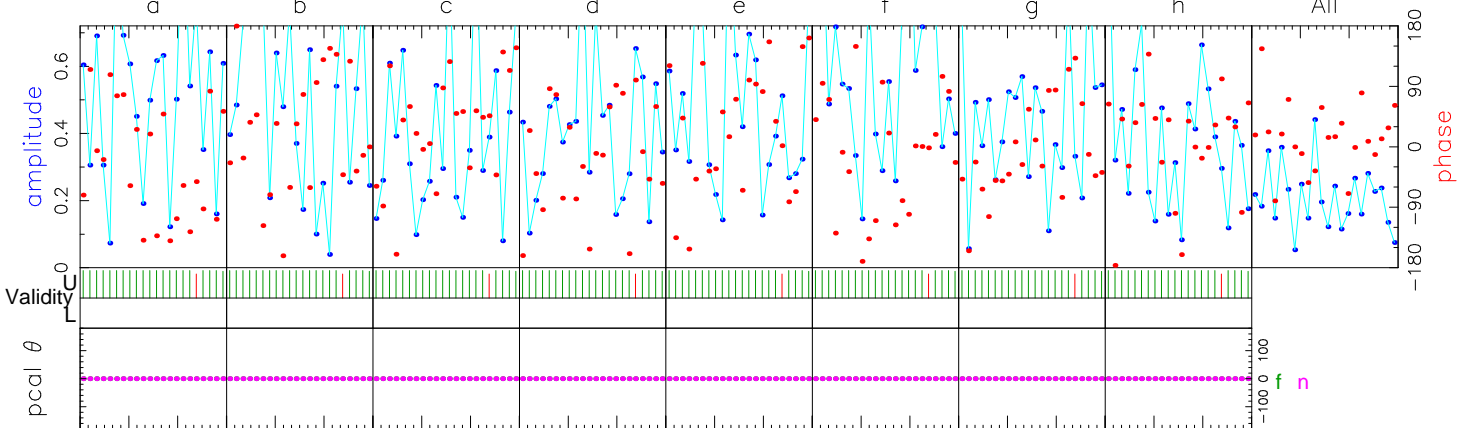
Fringe quality 0

SNR 5.7
 Int time 178.924
 Amp 0.240
 Phase 9.7
 PFD 7.1e-01
 Delays (us)
 SBD -0.958572
 MBD -0.001390
 Fringe rate (Hz)
 -0.953027
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155248
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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



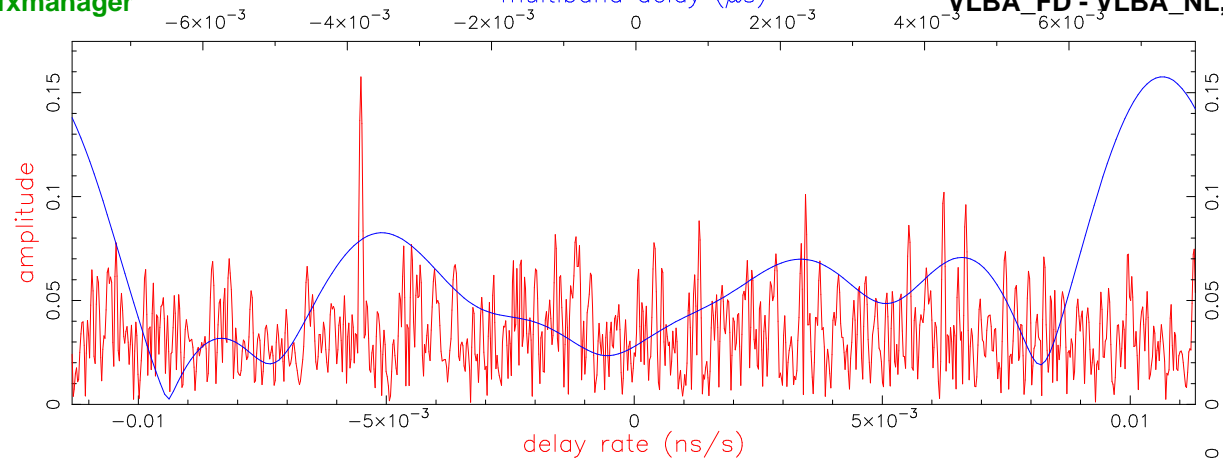
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd) -1.94858647799E+03 Apriori delay (usec) -1.94763196288E+03 Resid mbdelay (usec) -1.39011E-03 +/- 1.9E-04
 Sband delay (usec) -1.94859053488E+03 Apriori clock (usec) 7.6994309E+00 Resid sbdelay (usec) -9.58572E-01 +/- 1.5E-03
 Phase delay (usec) -1.94763196257E+03 Apriori clockrate (us/s) -1.0000003E-07 Resid phdelay (usec) 3.11527E-07 +/- 6.5E-07
 Delay rate (us/s) 2.55965448979E-01 Apriori rate (us/s) 2.55976512681E-01 Resid rate (us/s) -1.10637E-05 +/- 6.2E-09
 Total phase (deg) -92.1 Apriori accel (us/s/s) -2.84162596104E-07 Resid phase (deg) 9.7 +/- 20.0

ph/seg (deg) 50.2 46.8 RMS Theor. Amplitude 0.240 +/- 0.042 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 67.6 81.8 Search (1024X32) 0.150 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 38.7 28.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.5 49.4 Inc. seg. avg. 0.240 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.247 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

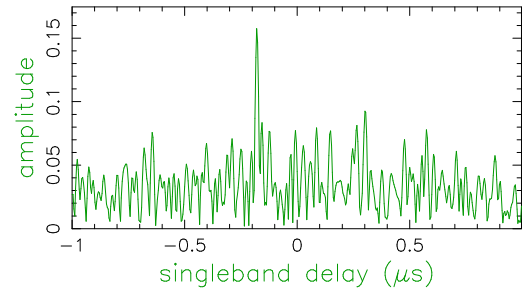
f: az 67.7 el 57.2 pa -89.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -1844.213 -1109.048 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/fn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/fn.W.145.1HXP48

multiband delay (μ s)

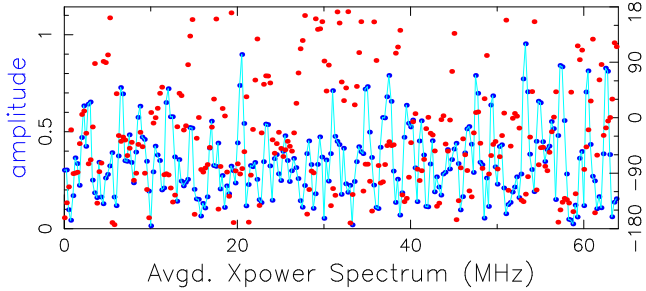


Fringe quality 0

SNR 5.8
Int time 178.924
Amp 0.175
Phase 128.9
PFD 6.0e-01
Delays (us)
SBD -0.178998
MBD -0.008301
Fringe rate (Hz)
-0.475542
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

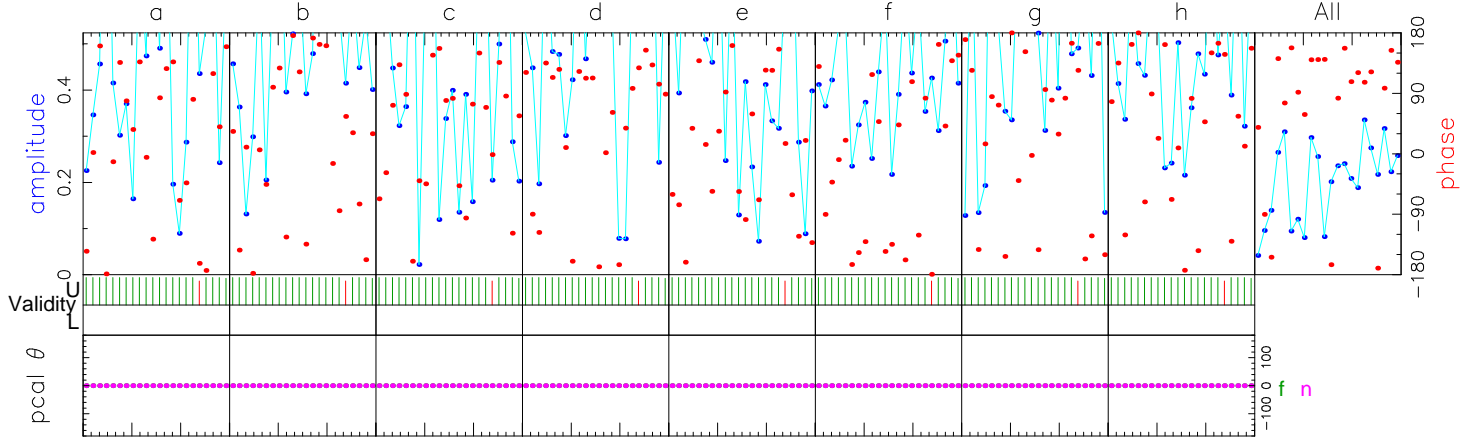


delay rate (ns/s)



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155251
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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	351/0	351/0	351/0	351/0	351/0	351/0	351/0	351/0		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.94781213866E+03				-1.94763196288E+03					
Sband delay (usec)	-1.94781096063E+03				7.6994309E+00					
Phase delay (usec)	-1.94763195872E+03				-1.0000003E-07					
Delay rate (us/s)	2.55970992112E-01				2.55976512681E-01					
Total phase (deg)			27.2		-2.84162596104E-07					
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode:	MANUAL	MANUAL								
Pcal rate:	0.000E+00	0.000E+00								
Bits/sample:	2x2									
Sample rate(MISamp/s):	128									
Data rate(Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
simultaneous interpolator										

Mk4/DiFX fourfit 3.21 rev 2937

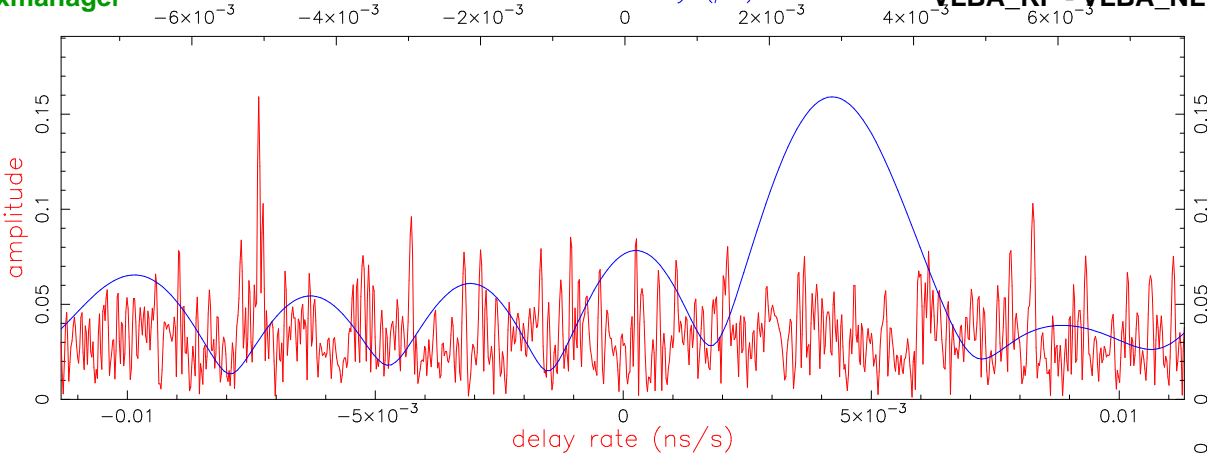
fxmanager

2013+370.1HXP48, No0219, kn

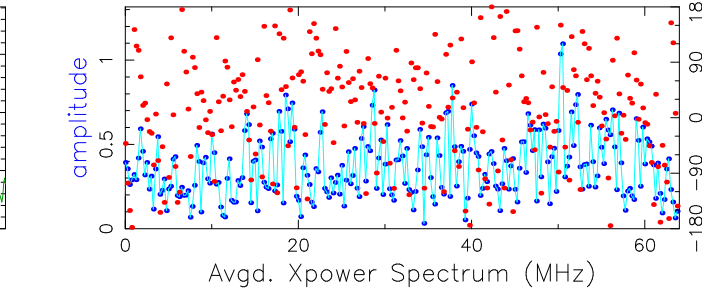
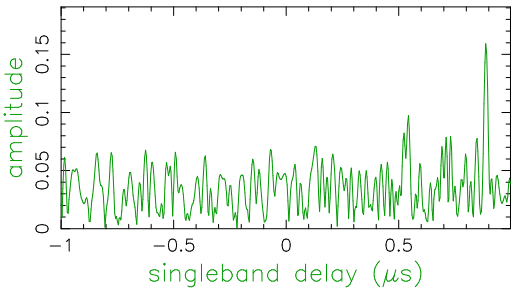
VLBA_KP - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)

Fringe quality 0

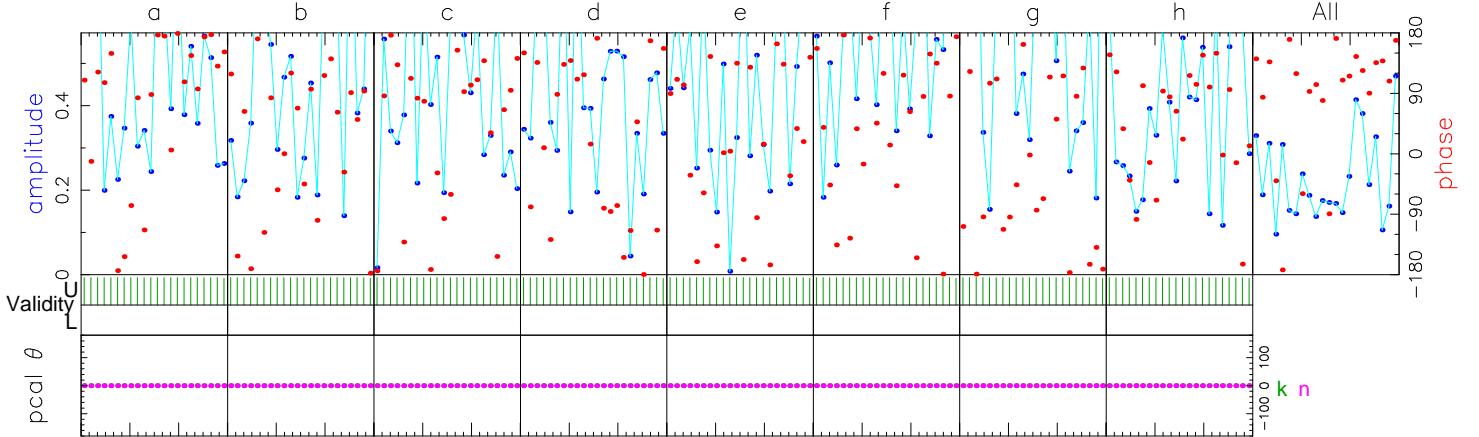


SNR 5.8
 Int time 179.974
 Amp 0.191
 Phase 135.2
 PFD 4.6e-01
 Delays (us)
 SBD 0.887403
 MBD 0.002892
 Fringe rate (Hz)
 -0.634025
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155246
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
k	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-3.15667502543E+03								2.89224E-03	+/- 1.9E-04
Sband delay (usec)	-3.15668113917E+03								8.87403E-01	+/- 1.5E-03
Phase delay (usec)	-3.15756853831E+03								4.36122E-06	+/- 6.3E-07
Delay rate (us/s)	3.50338264890E-01								-7.36040E-06	+/- 6.1E-09
Total phase (deg)			39.7						135.2	+/- 19.6
ph/seg (deg)	66.0	45.9								
amp/seg (%)	77.3	80.2								
ph/frq (deg)	33.2	27.7								
amp/frq (%)	36.0	48.3								
k: az 68.8 el 51.6 pa -83.8										
n: az 93.6 el 69.1 pa -69.0										
u,v (fr/asec)										

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn.W.120.1HXP48

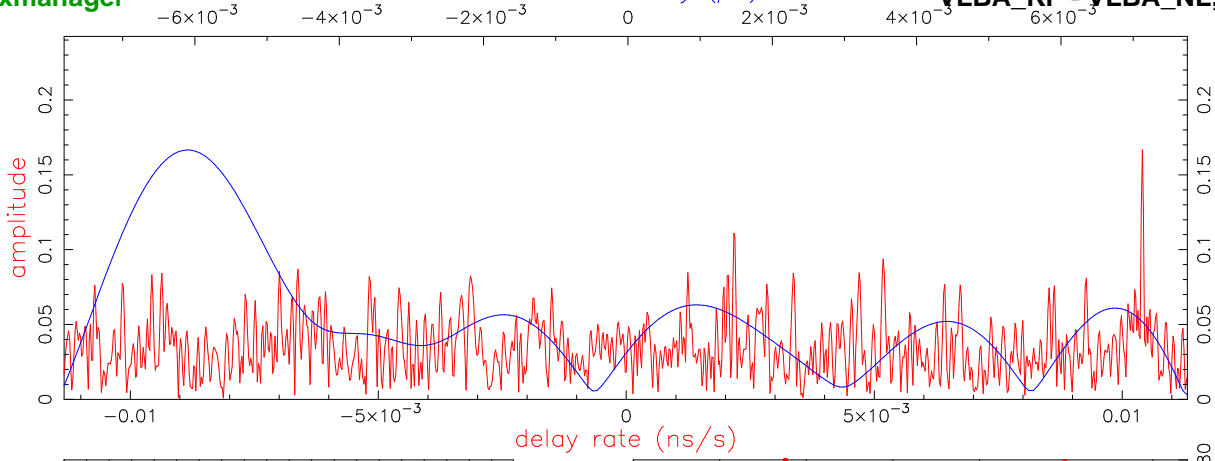
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, kn

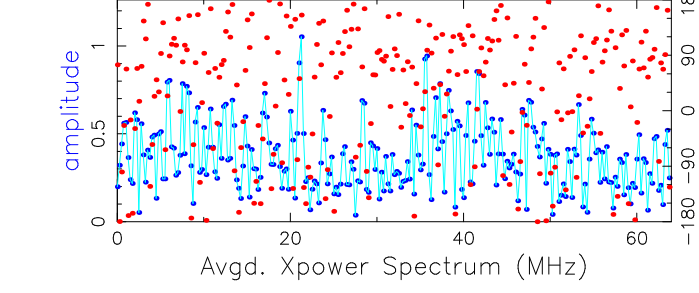
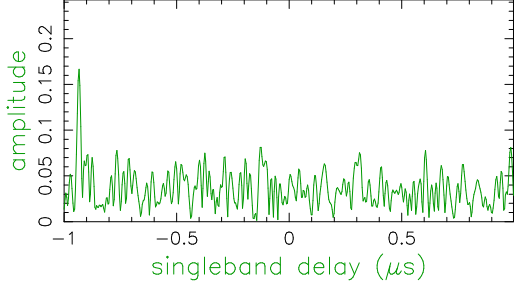
VLBA_KP - VLBA_NL, fgroup W, pol LR

multiband delay (μ s)



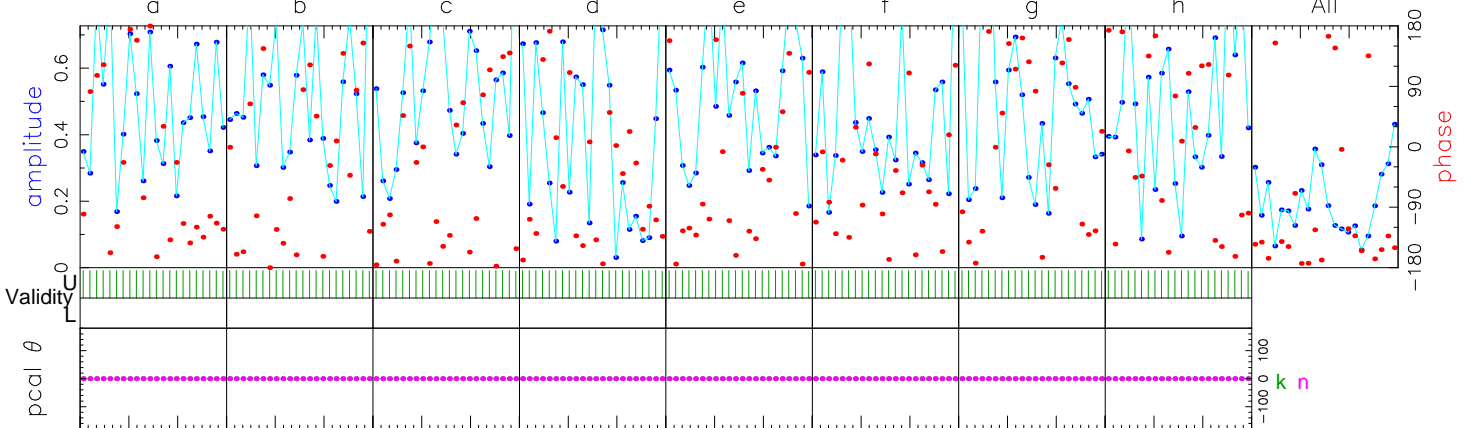
Fringe quality 0

SNR 6.1
 Int time 179.974
 Amp 0.242
 Phase -152.9
 PFD 1.2e-01
 Delays (us)
 SBD -0.933892
 MBD -0.006113
 Fringe rate (Hz) 0.896997
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155247
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-151.0	177.7	-167.1	-137.3	-137.0	-85.3	-175.9	-169.7	Phase	-152.9
	0.4	0.2	0.4	0.3	0.2	0.2	0.3	0.2	Ampl.	0.2
	17.3	185.3	18.8	397.1	415.4	269.2	388.4	159.4	Sbd box	17.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.15849653049E+03		Apriori delay (usec)		-3.15756854267E+03		Resid mbdelay (usec)		-6.11282E-03	+/- 1.8E-04
Sband delay (usec)	-3.15850243467E+03		Apriori clock (usec)		1.7672443E-01		Resid sbdelay (usec)		-9.33892E-01	+/- 1.4E-03
Phase delay (usec)	-3.15756854760E+03		Apriori clockrate (us/s)		-4.0000002E-07		Resid phdelay (usec)		-4.93035E-06	+/- 6.0E-07
Delay rate (us/s)	3.50356038541E-01		Apriori rate (us/s)		3.50345625293E-01		Resid rate (us/s)		1.04132E-05	+/- 5.8E-09
Total phase (deg)			Apriori accel (us/s/s)		7.45564098281E-06		Resid phase (deg)		-152.9	+/- 18.7

ph/seg (deg) 46.2 43.9 Search (1024X32) 0.159 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 61.4 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) 34.0 26.5 Inc. seg. avg. 0.222 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.9 46.3 Inc. frq. avg. 0.242 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 68.8 el 51.6 pa -83.8 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -2516.994 -503.670 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn.W.136.1HXP48

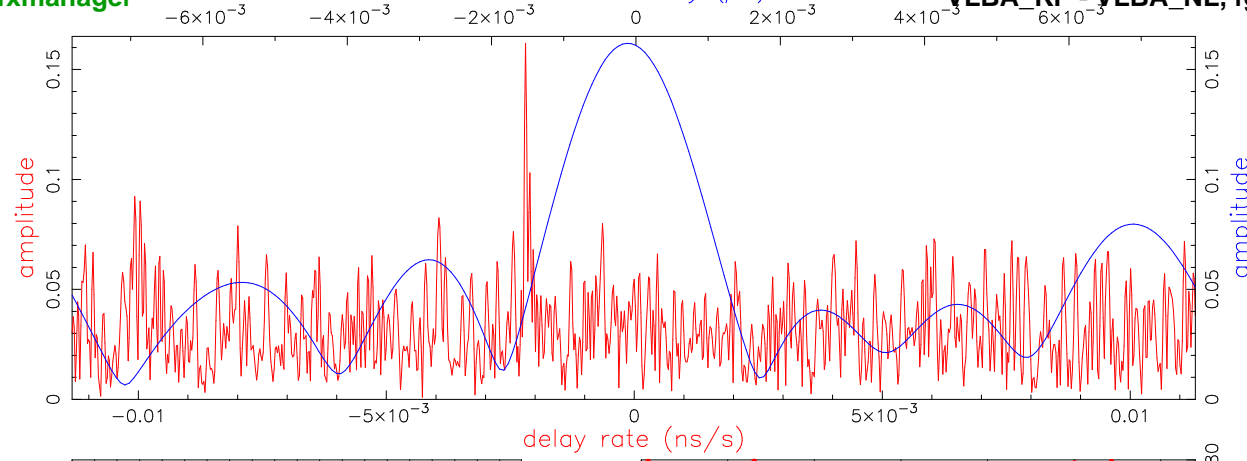
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

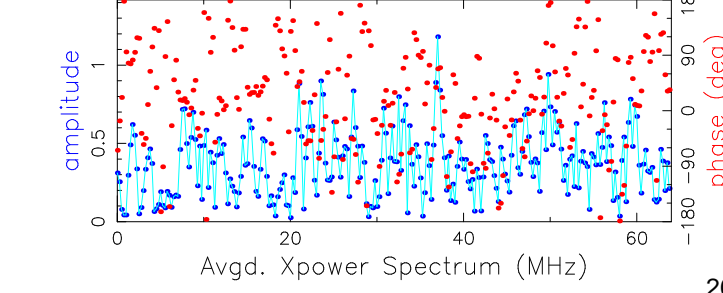
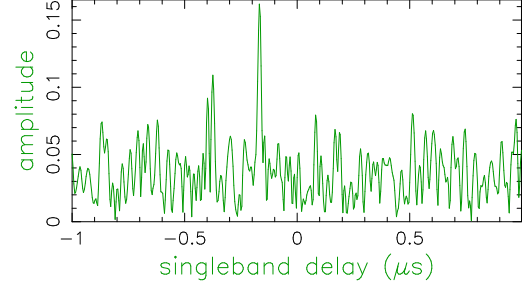
2013+370.1HXP48, No0219, kn

VLBA_KP - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)

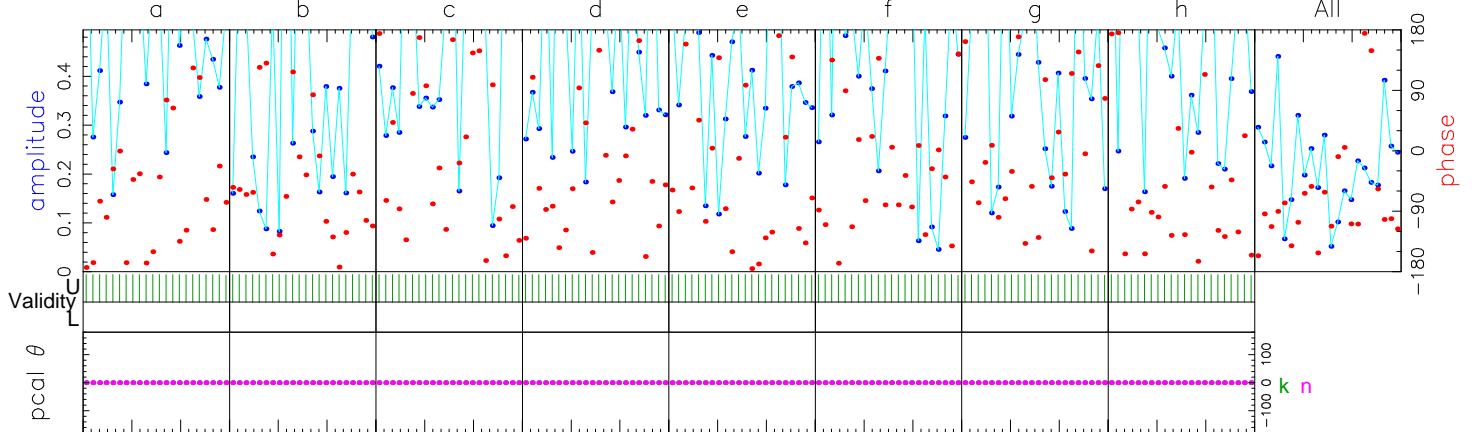


Fringe quality 0
 SNR 6.0
 Int time 179.974
 Amp 0.165
 Phase -101.8
 PFD 2.8e-01
 Delays (us)
 SBD -0.167219
 MBD -0.000108
 Fringe rate (Hz)
 -0.189538
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155250
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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
	-106.4	-72.7	-157.6	-90.8	-117.8	-98.7	-75.3	-106.1	Phase	-101.8
	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.2	Ampl.	0.2
	182.1	214.4	67.2	276.5	351.9	353.1	388.4	11.2	Sbd box	214.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.15774052552E+03		Apriori delay (usec)		-3.15756854267E+03		Resid mbdelay (usec)		-1.07853E-04	+/- 1.8E-04
Sband delay (usec)	-3.15773576142E+03		Apriori clock (usec)		1.7672443E-01		Resid sbdelay (usec)		-1.67219E-01	+/- 1.4E-03
Phase delay (usec)	-3.15756854595E+03		Apriori clockrate (us/s)		-4.0000002E-07		Resid phdelay (usec)		-3.28222E-06	+/- 6.2E-07
Delay rate (us/s)	3.50343424947E-01		Apriori rate (us/s)		3.50345625293E-01		Resid rate (us/s)		-2.20035E-06	+/- 6.0E-09
Total phase (deg)			Apriori accel (us/s/s)		7.45564098281E-06		Resid phase (deg)		-101.8	+/- 19.2

ph/seg (deg) 49.9 45.1 Search (1024X32) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 66.6 78.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.1 27.2 Inc. seg. avg. 0.170 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.1 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
 k: az 68.8 el 51.6 pa -83.8 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -2516.994 -503.670 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn.W.159.1HXP48

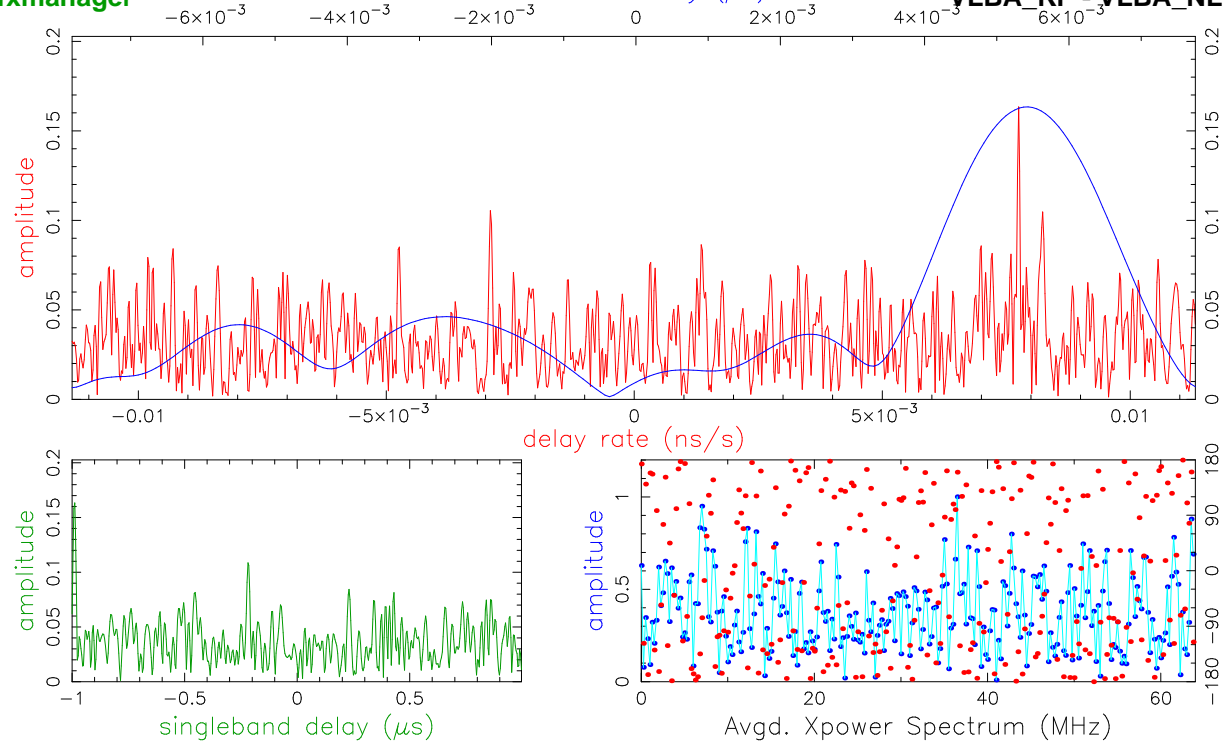
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, kn

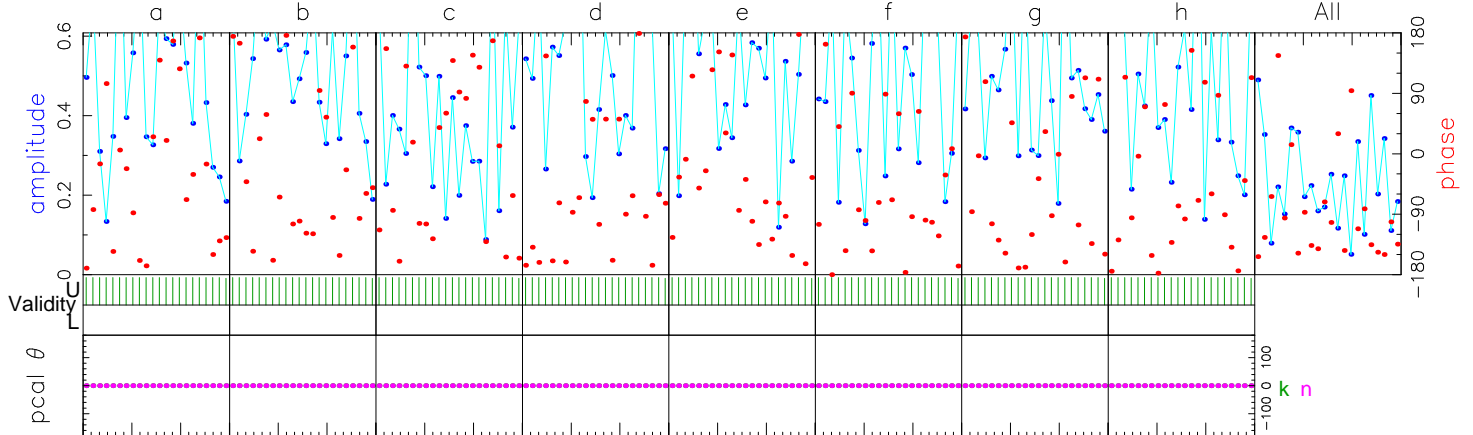
VLBA_KP - VLBA_NL, fgroup W, pol LL

multiband delay (μ s)



Fringe quality 0
 SNR 6.1
 Int time 179.974
 Amp 0.203
 Phase -127.0
 PFD 1.4e-01
 Delays (us)
 SBD -0.989685
 MBD 0.005395
 Fringe rate (Hz) 0.669217
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155244
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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



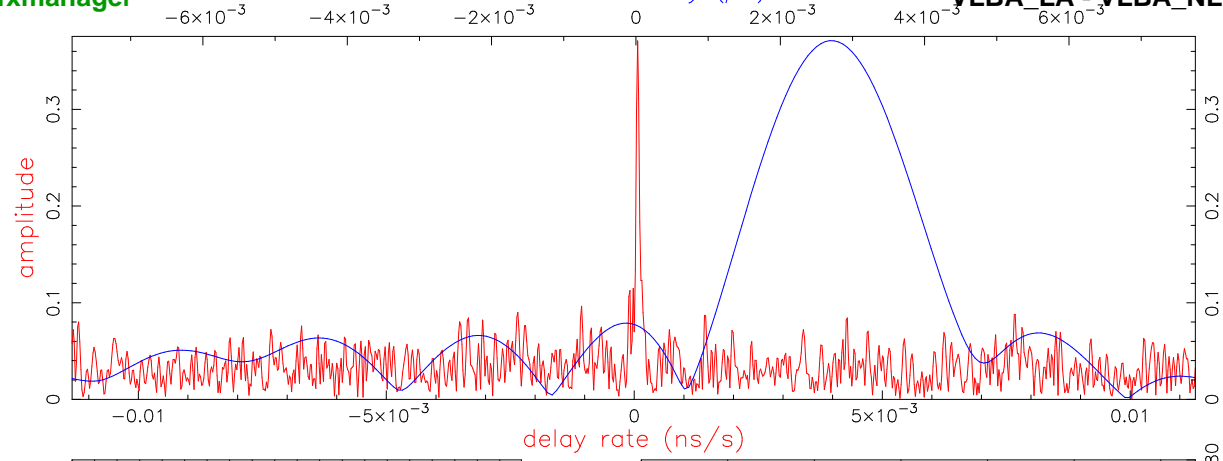
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-129.5	-123.9	-162.2	-127.0	-101.2	-122.2	-144.9	-127.3	Phase	-127.0
	0.1	0.2	0.1	0.3	0.2	0.3	0.2	0.2	Ampl.	0.2
	216.7	478.7	477.3	200.1	83.7	316.9	135.5	177.3	Sbd box	3.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) -3.15856314737E+03 Apriori delay (usec) -3.15756854267E+03 Resid mbdelay (usec) 5.39530E-03 +/- 1.8E-04
 Sband delay (usec) -3.15855822817E+03 Apriori clock (usec) 1.7672443E-01 Resid sbdelay (usec) -9.89685E-01 +/- 1.4E-03
 Phase delay (usec) -3.15756854677E+03 Apriori clockrate (us/s) -4.0000002E-07 Resid phdelay (usec) -4.09640E-06 +/- 6.1E-07
 Delay rate (us/s) 3.50353394237E-01 Apriori rate (us/s) 3.50345625293E-01 Resid rate (us/s) 7.76894E-06 +/- 5.8E-09
 Total phase (deg) -222.6 Apriori accel (us/s/s) 7.45564098281E-06 Resid phase (deg) -127.0 +/- 18.8

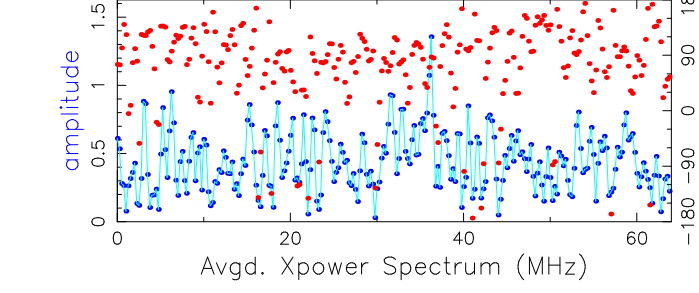
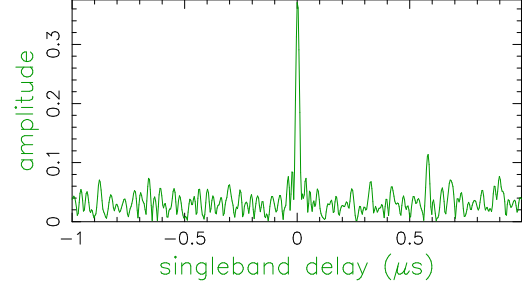
RMS Theor. Amplitude 0.203 +/- 0.033 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 63.0 44.2 Search (1024X32) 0.161 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 82.7 77.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 19.4 26.6 Inc. seg. avg. 0.222 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 32.5 46.5 Inc. frq. avg. 0.187 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 68.8 el 51.6 pa -83.8 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -2516.994 -503.670 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/kn.W.99.1HXP48

multiband delay (μ s)

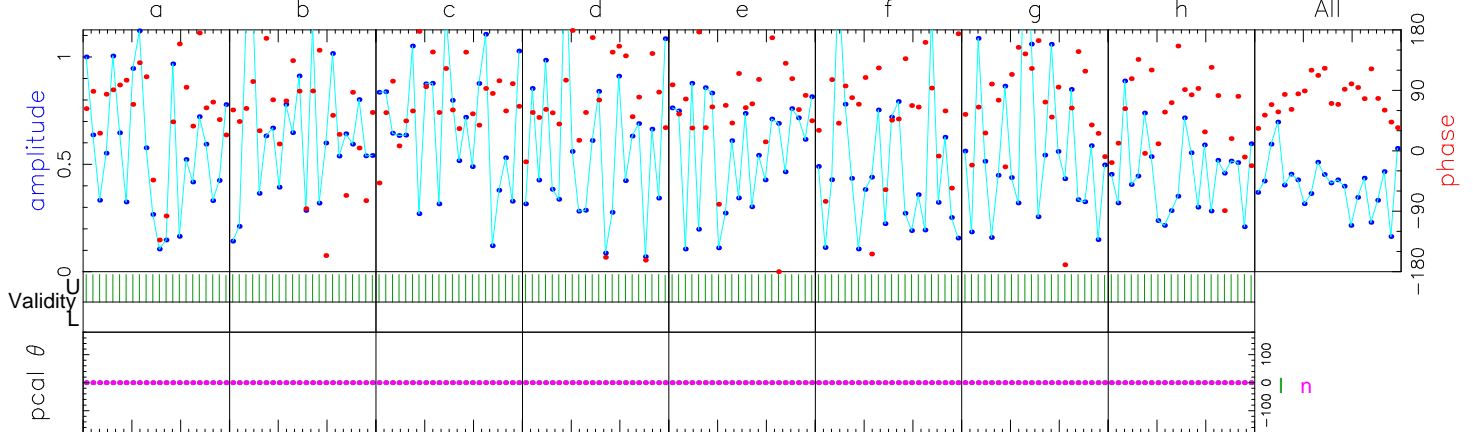


Fringe quality 9
SNR 13.8
Int time 179.974
Amp 0.376
Phase 76.4
PFD 1.0e-34
Delays (us)
SBD 0.001427
MBD 0.002759
Fringe rate (Hz) 0.005572
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155253
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



Amplitude
Phase (deg)
Avgd. Xpower Spectrum (MHz)

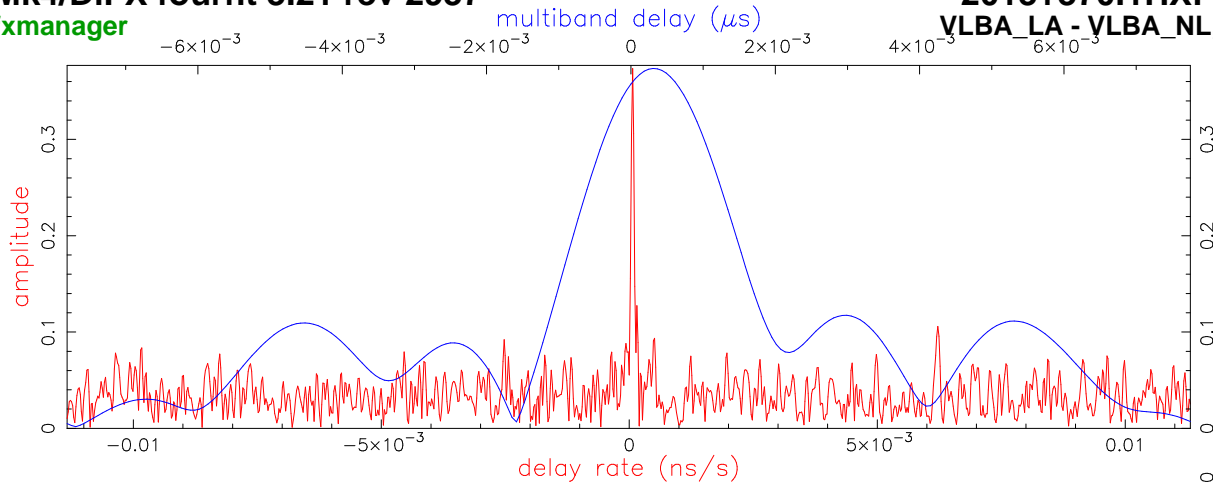
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

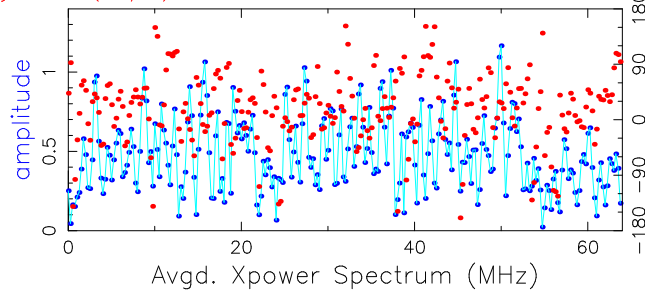
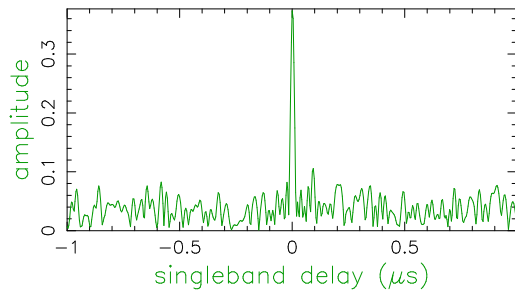
Group delay (usec)(sbd)	-1.99290405902E+03	Apriori delay (usec)	-1.99290681835E+03	Resid mbdelay (usec)	2.75934E-03	+/-	7.9E-05
Sband delay (usec)	-1.99290539185E+03	Apriori clock (usec)	-5.4941368E-01	Resid sbdelay (usec)	1.42650E-03	+/-	6.3E-04
Phase delay (usec)	-1.99290681589E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	2.46506E-06	+/-	2.7E-07
Delay rate (us/s)	2.49274280532E-01	Apriori rate (us/s)	2.49274215852E-01	Resid rate (us/s)	6.46800E-08	+/-	2.6E-09
Total phase (deg)	-43.4	Apriori accel (us/s/s)	5.03577421228E-06	Resid phase (deg)	76.4	+/-	8.3

ph/seg (deg)	26.1	Theor.	19.5	Amplitude	0.376 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	33.1	Search (1024X32)	0.363	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	0.363	sb window (us)	-1.000 1.000	
ph/frq (deg)	9.3	Interp.	0.000	Bits/sample: 2x2	0.000	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	16.5	Inc. seg. avg.	0.387	Sample rate(MISamp/s): 128	0.387	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.366	Data rate(Mb/s): 2048	0.366	ion window (TEC)	0.00 0.00	



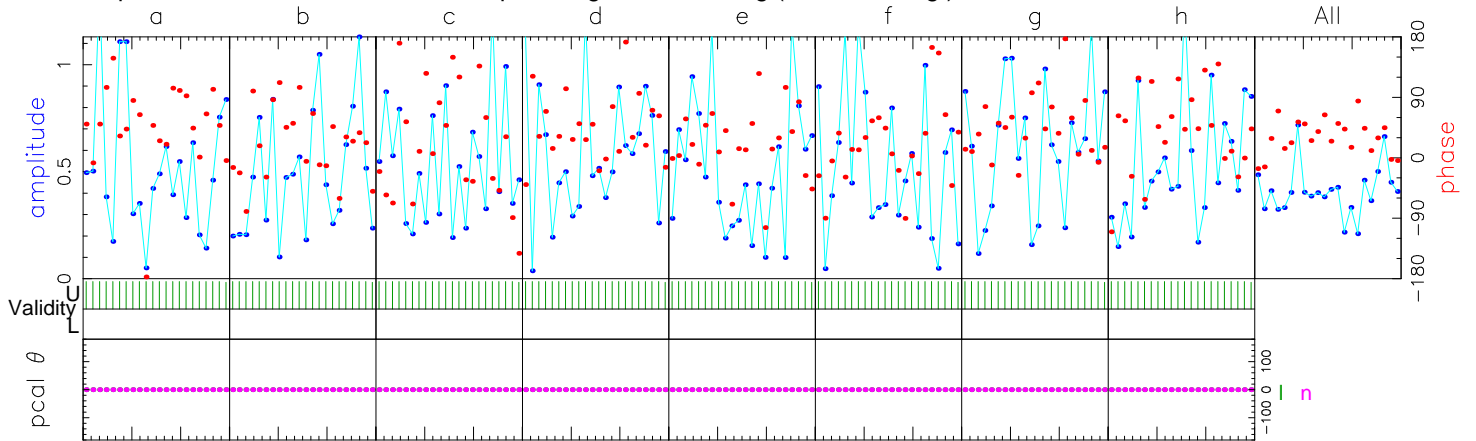
Fringe quality 9

SNR 13.8
Int time 179.974
Amp 0.377
Phase 30.6
PFD 5.3e-35
Delays (us)
SBD 0.001197
MBD 0.000336
Fringe rate (Hz)
0.005477
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155256
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-1.99290648217E+03	Apriori delay (usec)	-1.99290681835E+03	Resid mbdelay (usec)	3.36180E-04	+/-	7.9E-05
Sband delay (usec)	-1.99290562135E+03	Apriori clock (usec)	-5.4941368E-01	Resid sbdelay (usec)	1.19700E-03	+/-	6.2E-04
Phase delay (usec)	-1.99290681737E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	9.88193E-07	+/-	2.7E-07
Delay rate (us/s)	2.49274279433E-01	Apriori rate (us/s)	2.49274215852E-01	Resid rate (us/s)	6.35803E-08	+/-	2.6E-09
Total phase (deg)	-89.2	Apriori accel (us/s/s)	5.03577421228E-06	Resid phase (deg)	30.6	+/-	8.3

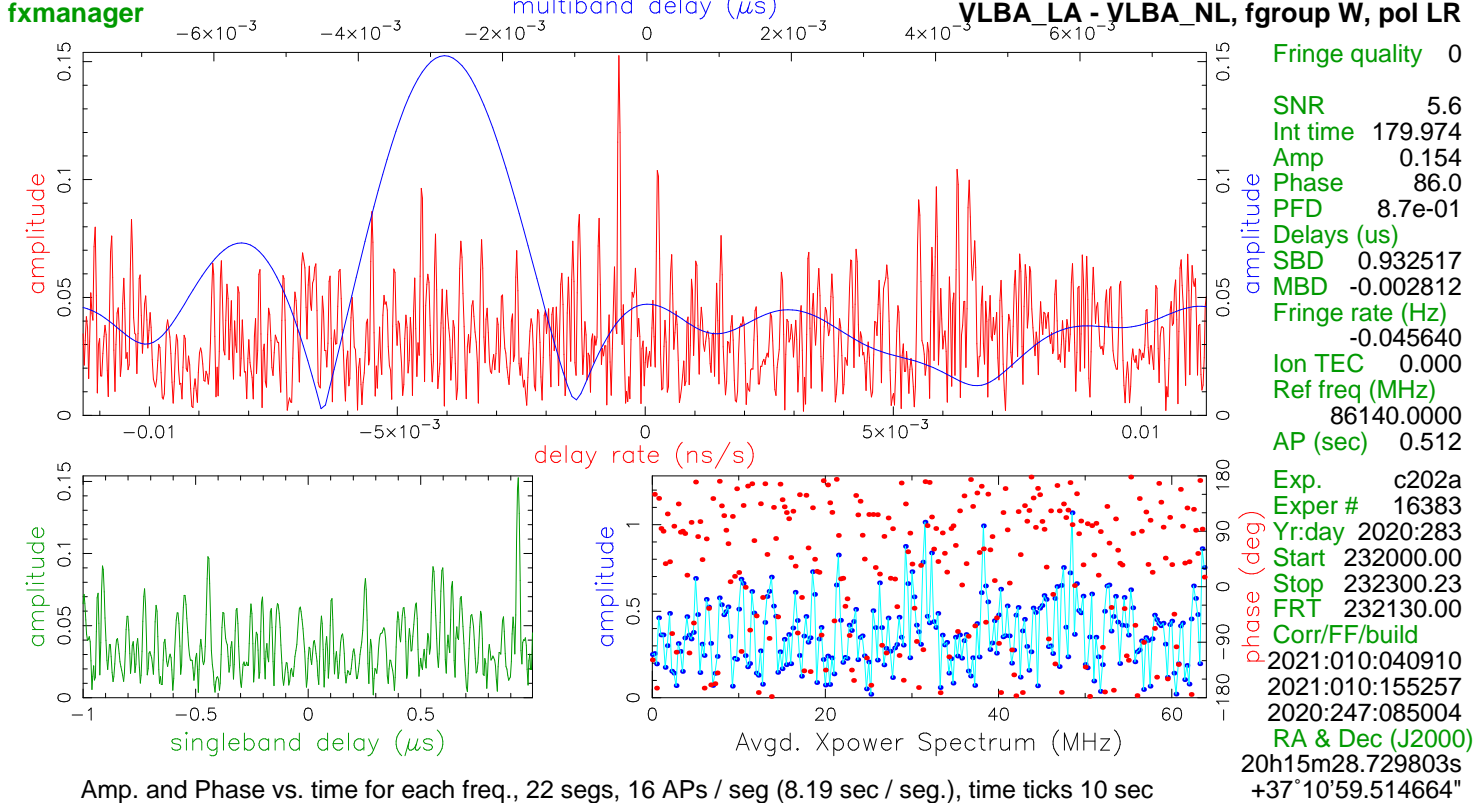
ph/seg (deg)	26.0	RMS	19.4	Theor.	19.4	Amplitude	0.377 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	31.5	Search (1024X32)	0.367	Inc. seg. avg.	0.388	Inc. frq. avg.	0.379	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	20.0	Interp.	0.000	Inc. frq. avg.	0.379	Sample rate (MSamp/s):	128	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	23.0	Inc. frq. avg.	0.379	u,v (fr/asec)	-1790.843 -262.498	Data rate (Mb/s):	2048	nlags:	256	t_cohere infinite	ion window (TEC)	0.00 0.00

Mk4/DiFX fourfit 3.21 rev 2937

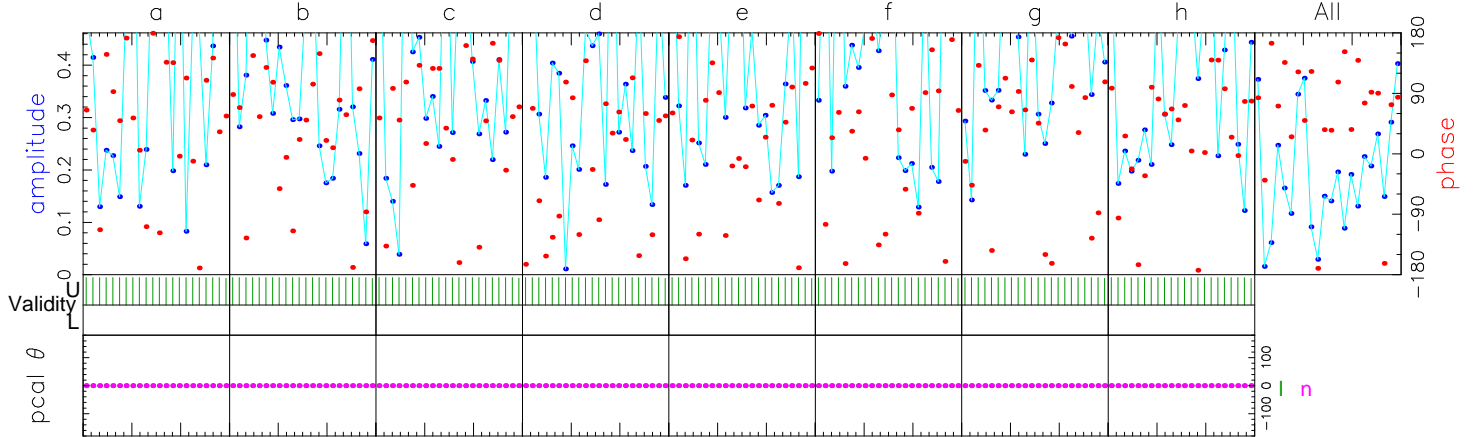
fxmanager

2013+370.1HXP48, No0219, In

VLBA_LA - VLBA_NL, fgroup W, pol LR



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		
l	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-1.99197213026E+03									
Sband delay (usec)	-1.99197430110E+03									
Phase delay (usec)	-1.99290681558E+03									
Delay rate (us/s)	2.49273686013E-01									
Total phase (deg)			-33.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal										
pcal period (AP's)										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

l: az 74.9 el 57.1 pa -79.9 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -1790.843 -262.498

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/In..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/In.W.218.1HXP48

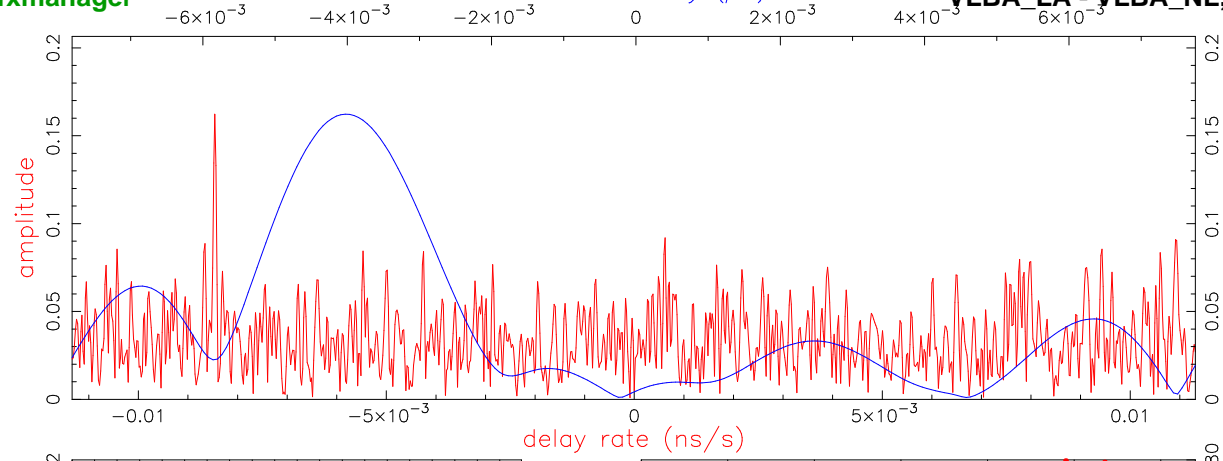
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

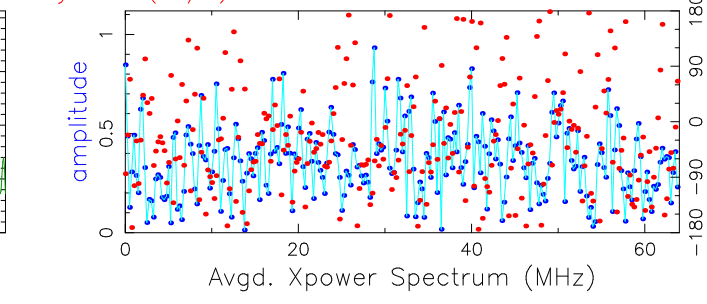
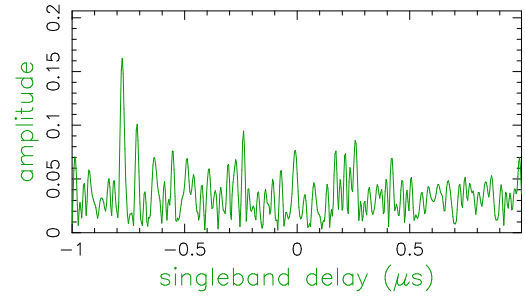
2013+370.1HXP48, No0219, In

VLBA_LA - VLBA_NL, fgroup W, pol RL

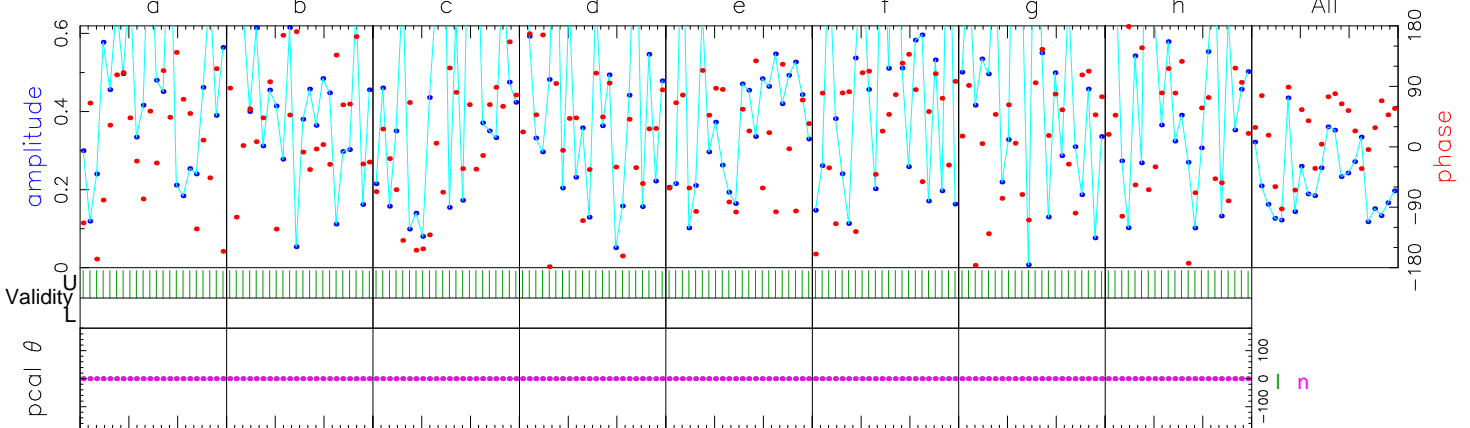
multiband delay (μ s)



Fringe quality 0
 SNR 6.0
 Int time 179.974
 Amp 0.207
 Phase 38.7
 PFD 2.8e-01
 Delays (us)
 SBD -0.777611
 MBD -0.004024
 Fringe rate (Hz)
 -0.728836
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155259
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

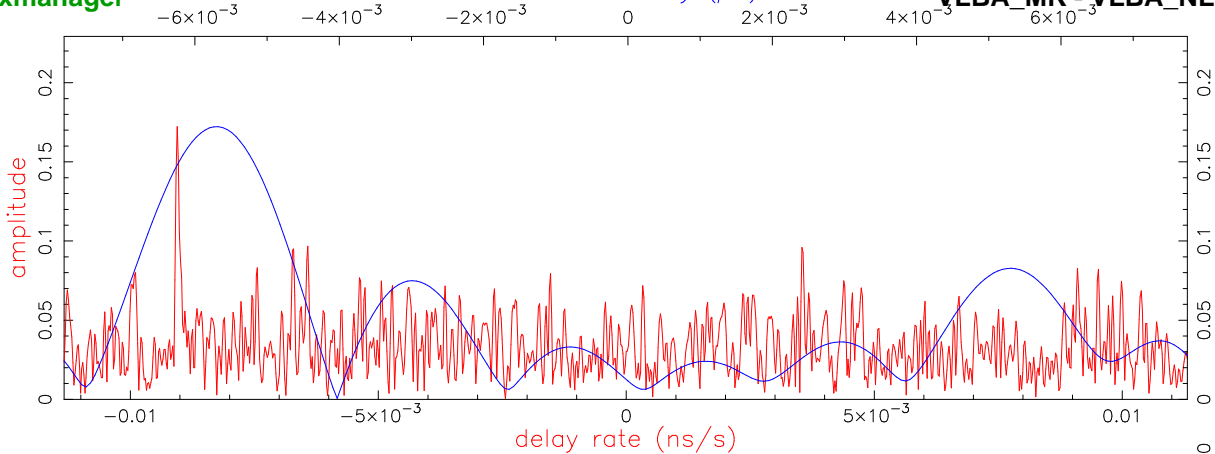


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



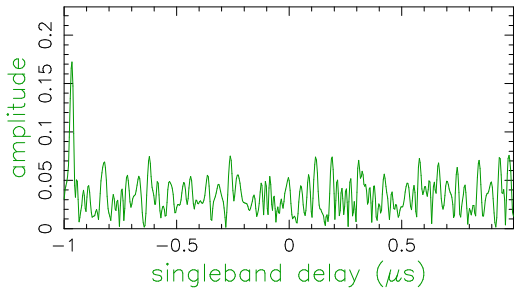
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-1.99369209198E+03								Resid mbdelay (usec)	-4.02362E-03 +/- 1.8E-04
Sband delay (usec)	-1.99368442910E+03								Resid sbdelay (usec)	-7.77611E-01 +/- 1.4E-03
Phase delay (usec)	-1.99290681711E+03								Resid phdelay (usec)	1.24836E-06 +/- 6.2E-07
Delay rate (us/s)	2.49265754790E-01								Resid rate (us/s)	-8.46106E-06 +/- 6.0E-09
Total phase (deg)			-81.2						Resid phase (deg)	38.7 +/- 19.2
ph/seg (deg)	52.6	45.1							PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	66.7	78.7							PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	21.4	27.2							Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	17.0	47.5							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	
l: az 74.9 el 57.1 pa -79.9										simultaneous interpolator
n: az 93.6 el 69.1 pa -69.0										
u,v (fr/asec) -1790.843 -262.498										
Control file: cf_1234_gmva	Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/In..1HXP48								Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/In.W.234.1HXP48	

multiband delay (μ s)

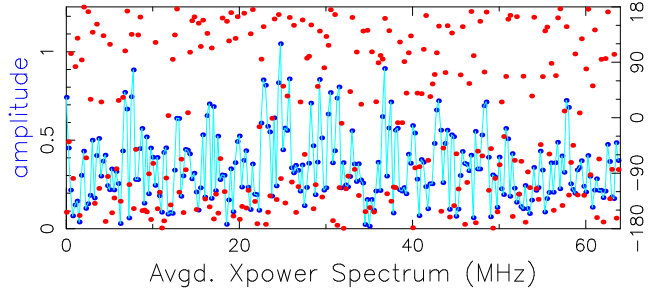


Fringe quality 0

SNR 6.4
 Int time 179.974
 Amp 0.229
 Phase -83.1
 PFD 2.6e-02
 Delays (us)
 SBD -0.965968
 MBD -0.005716
 Fringe rate (Hz)
 -0.780634
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

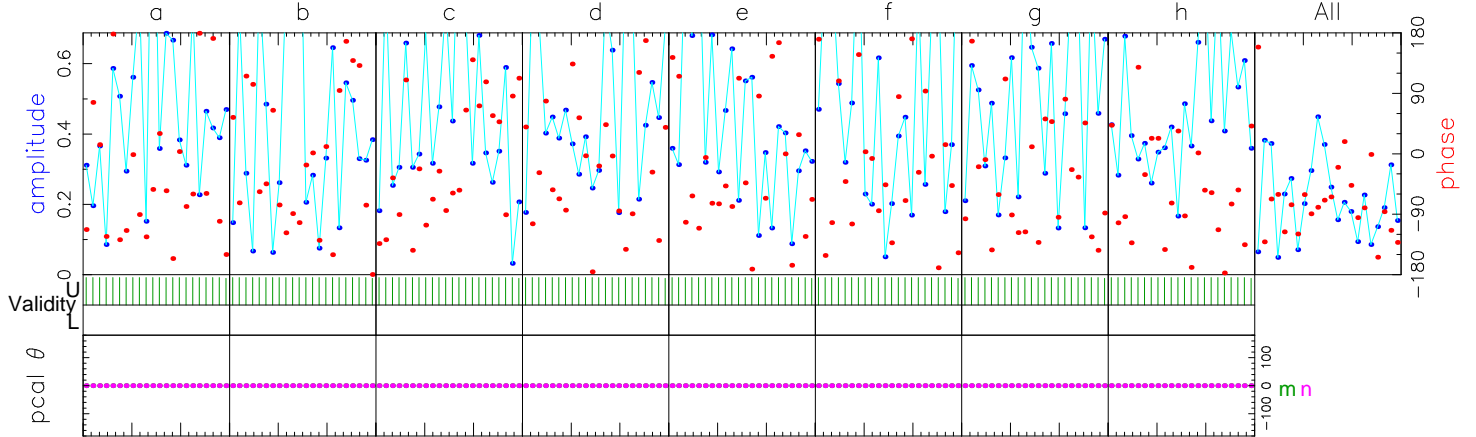


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155255
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-84.1	-101.3	-61.0	-47.6	-86.8	-123.2	-76.9	-76.2	Phase	-83.1
	0.3	0.3	0.1	0.2	0.3	0.2	0.2	0.3	Ampl.	0.2
	496.7	415.3	230.1	14.5	27.1	306.2	191.3	149.6	Sbd box	9.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.55627526844E+04	Apriori delay (usec)	-1.55617938439E+04	Resid mbdelay (usec)	-5.71553E-03	+/-	1.7E-04
Sband delay (usec)	-1.55627598116E+04	Apriori clock (usec)	1.3206724E+01	Resid sbdelay (usec)	-9.65968E-01	+/-	1.4E-03
Phase delay (usec)	-1.55617938466E+04	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-2.67817E-06	+/-	5.8E-07
Delay rate (us/s)	7.55304765288E-01	Apriori rate (us/s)	7.55313827673E-01	Resid rate (us/s)	-9.06239E-06	+/-	5.6E-09
Total phase (deg)	-339.3	Apriori accel (us/s/s)	6.05003351344E-05	Resid phase (deg)	-83.1	+/-	18.0

ph/seg (deg)	48.3	Theor.	42.2	Amplitude	0.229 +/- 0.036	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	68.4		73.6	Search (1024X32)	0.170	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	25.1		25.4	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	24.8		44.4	Inc. seg. avg.	0.225	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.220	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

m: az 54.3 el 11.5 pa -73.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -5392.890 1341.651 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn.W.195.1HXP48

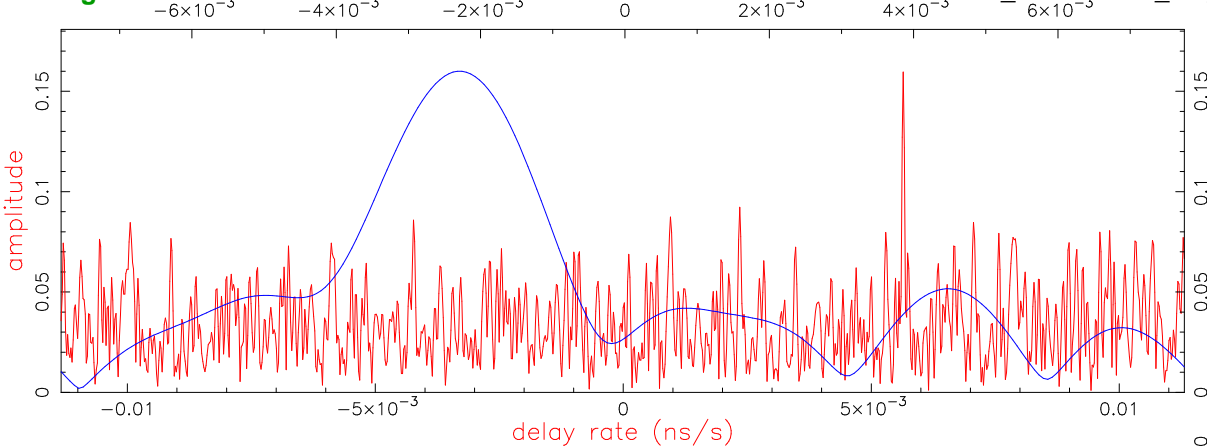
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, mn

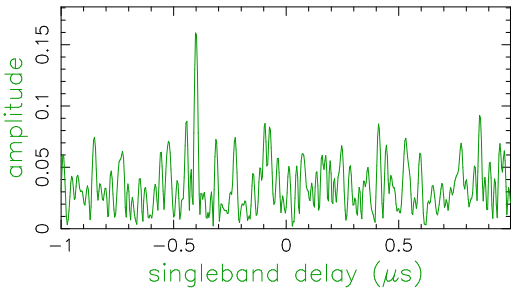
VLBA_MK - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)

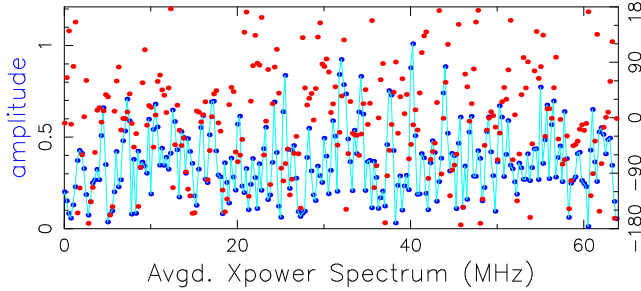


Fringe quality 0

SNR 6.0
 Int time 179.974
 Amp 0.181
 Phase 86.2
 PFD 2.6e-01
 Delays (us)
 SBD -0.400588
 MBD -0.002202
 Fringe rate (Hz)
 0.487646
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

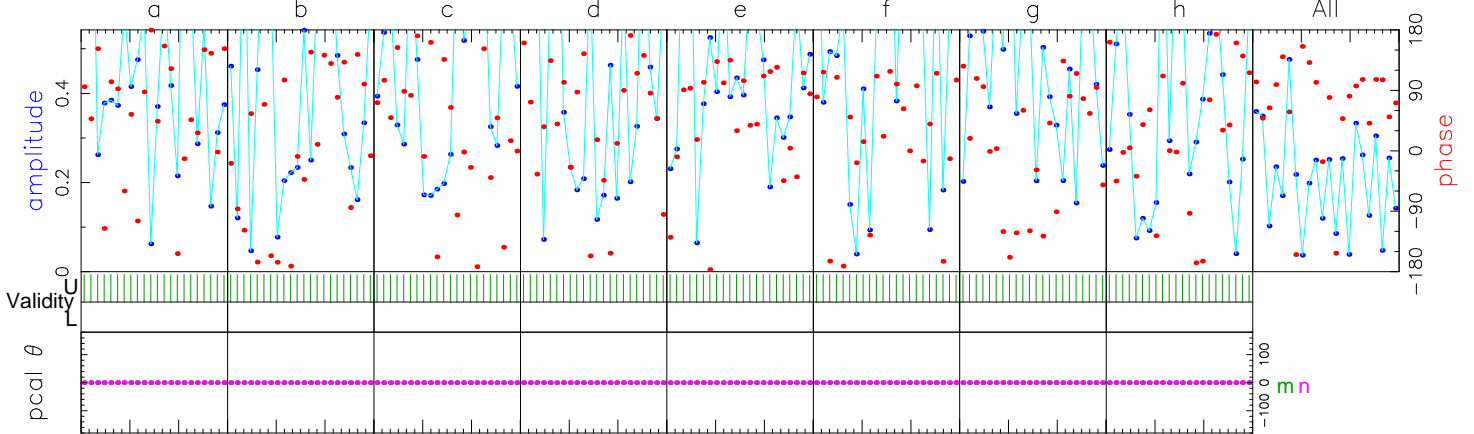


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155257
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-1.55621866709E+04								Resid mbdelay (usec)	-2.20204E-03 +/- 1.8E-04
Sband delay (usec)	-1.55621944321E+04								Resid sbdelay (usec)	-4.00588E-01 +/- 1.4E-03
Phase delay (usec)	-1.55617938411E+04								Resid phdelay (usec)	2.78021E-06 +/- 6.2E-07
Delay rate (us/s)	7.55319488765E-01								Resid rate (us/s)	5.66109E-06 +/- 5.9E-09
Total phase (deg)			-170.1						Resid phase (deg)	86.2 +/- 19.2
	RMS	Theor.	Amplitude	0.181 +/- 0.030					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	51.8	45.0	Search (1024X32)	0.154					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	75.2	78.5	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	18.9	27.1	Inc. seg. avg.	0.178					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	48.3	47.3	Inc. frq. avg.	0.163					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
m: az 54.3 el 11.5 pa -73.7			n: az 93.6 el 69.1 pa -69.0						lags: 256	t_cohere infinite
Control file: cf_1234_gmva			Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn..1HXP48							simultaneous interpolator
										Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn.W.217.1HXP48

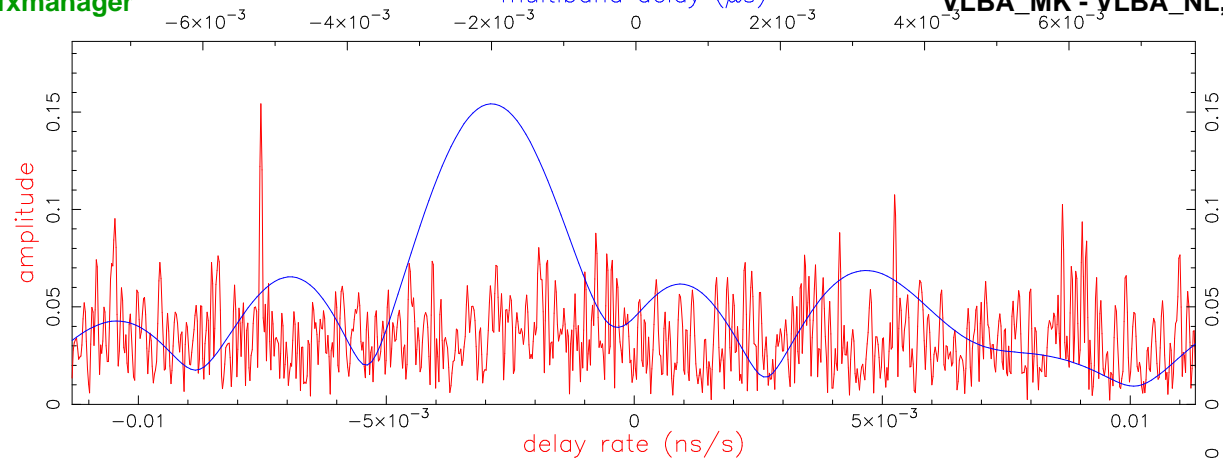
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, mn

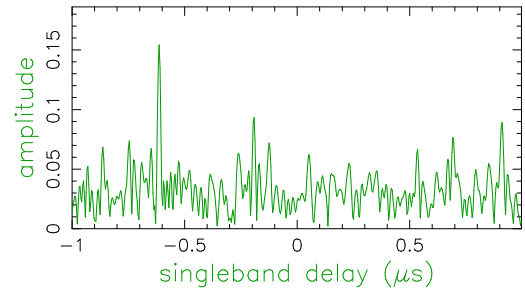
VLBA_MK - VLBA_NL, fgroup W, pol LR

multiband delay (μ s)

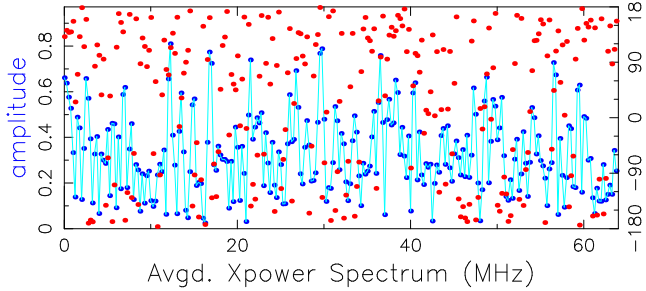


Fringe quality 0

SNR 5.7
 Int time 179.974
 Amp 0.186
 Phase -56.9
 PFD 8.5e-01
 Delays (us)
 SBD -0.613413
 MBD -0.002003
 Fringe rate (Hz)
 -0.648765
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

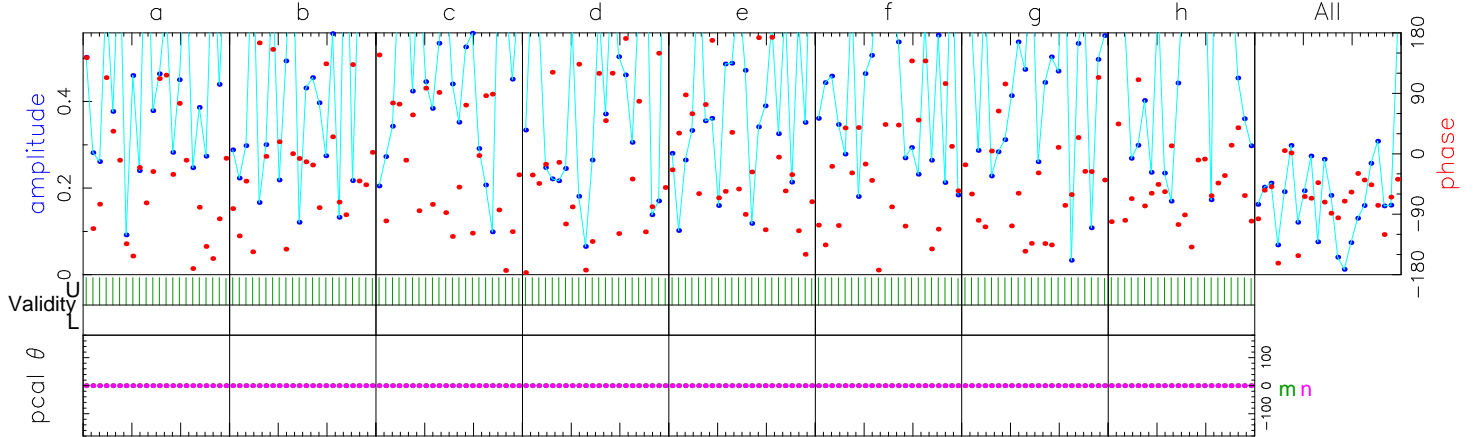


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155259
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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				
	-52.0	-49.0	-55.6	-86.9	-67.7	-35.9	-66.5	-51.0	Phase	-56.9				
	0.1	0.2	0.1	0.1	0.2	0.1	0.3	0.4	Ampl.	0.2				
	367.5	87.8	298.1	207.6	273.5	61.9	194.8	99.6	Sbd box	100.0				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids					
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks					
									Chan ids					
									Tracks					
Group delay (usec)(sbd)	-1.55624052220E+04								Apriori delay (usec)	-1.55617938439E+04	Resid mbdelay (usec)	-2.00316E-03	+/-	1.9E-04
Sband delay (usec)	-1.55624072571E+04								Apriori clock (usec)	1.3206724E+01	Resid sbdelay (usec)	-6.13413E-01	+/-	1.5E-03
Phase delay (usec)	-1.55617938457E+04								Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-1.83629E-06	+/-	6.5E-07
Delay rate (us/s)	7.55306296157E-01								Apriori rate (us/s)	7.55313827673E-01	Resid rate (us/s)	-7.53152E-06	+/-	6.3E-09
Total phase (deg)			-313.2						Apriori accel (us/s/s)	6.05003351344E-05	Resid phase (deg)	-56.9	+/-	20.3

	RMS	Theor.	Amplitude	0.186 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	41.7	47.5	Search (1024X32)	0.151	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	77.2	82.9	Interp.	0.000	Sample rate(MISamp/s): 128	nlags: 256	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	16.7	28.6	Inc. seg. avg.	0.168	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	54.8	50.0	Inc. frq. avg.	0.169					

m: az 54.3 el 11.5 pa -73.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -5392.890 1341.651 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn.W.235.1HXP48

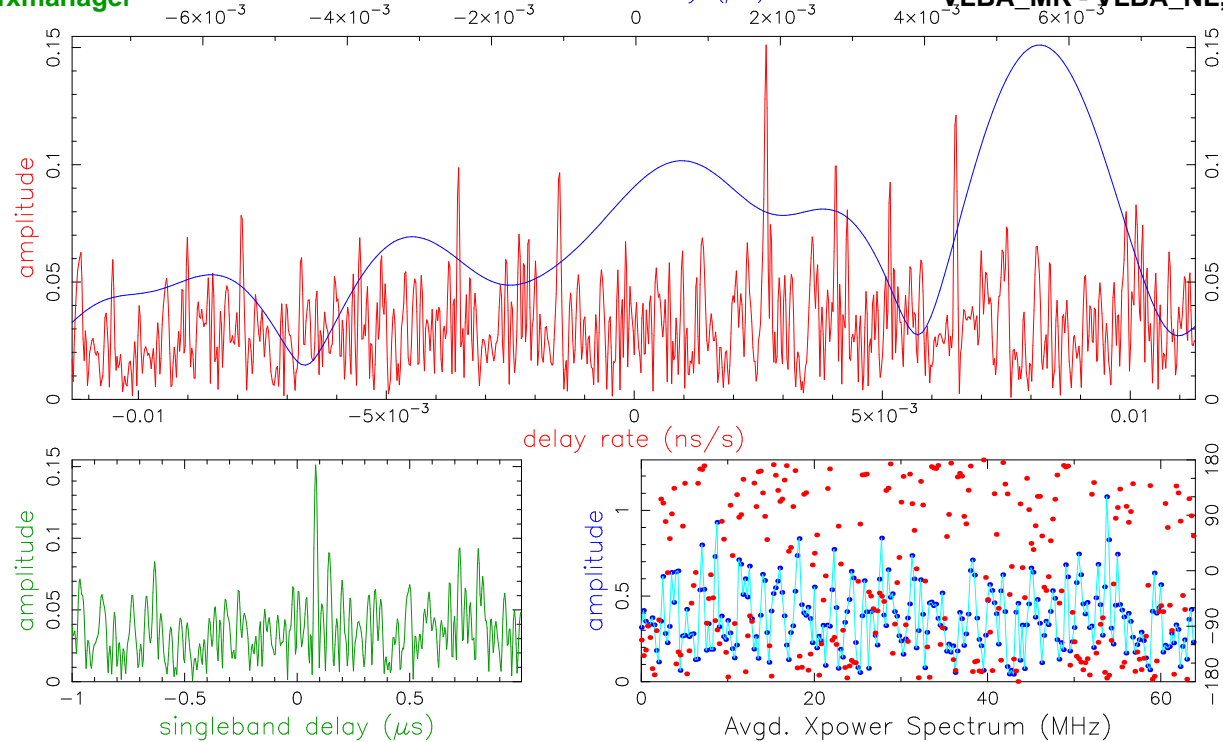
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, mn

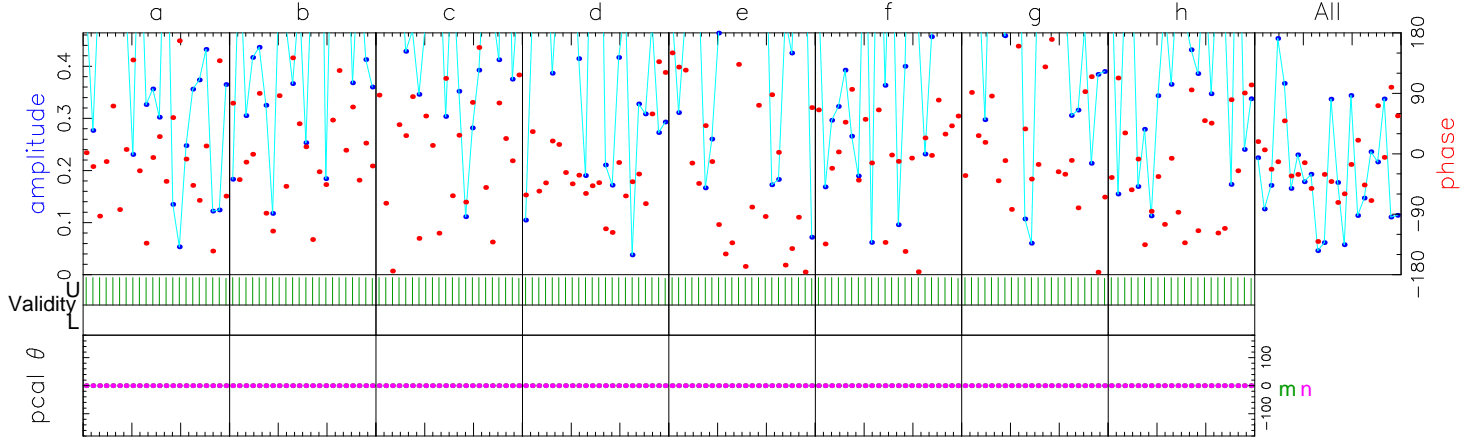
VLBA_MK - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)



Fringe quality 0
 SNR 5.5
 Int time 179.974
 Amp 0.155
 Phase -12.4
 PFD 9.7e-01
 Delays (us)
 SBD 0.082442
 MBD 0.005612
 Fringe rate (Hz) 0.230173
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build 2021:010:040910
 2021:010:155301
 2020:247:085004
 RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

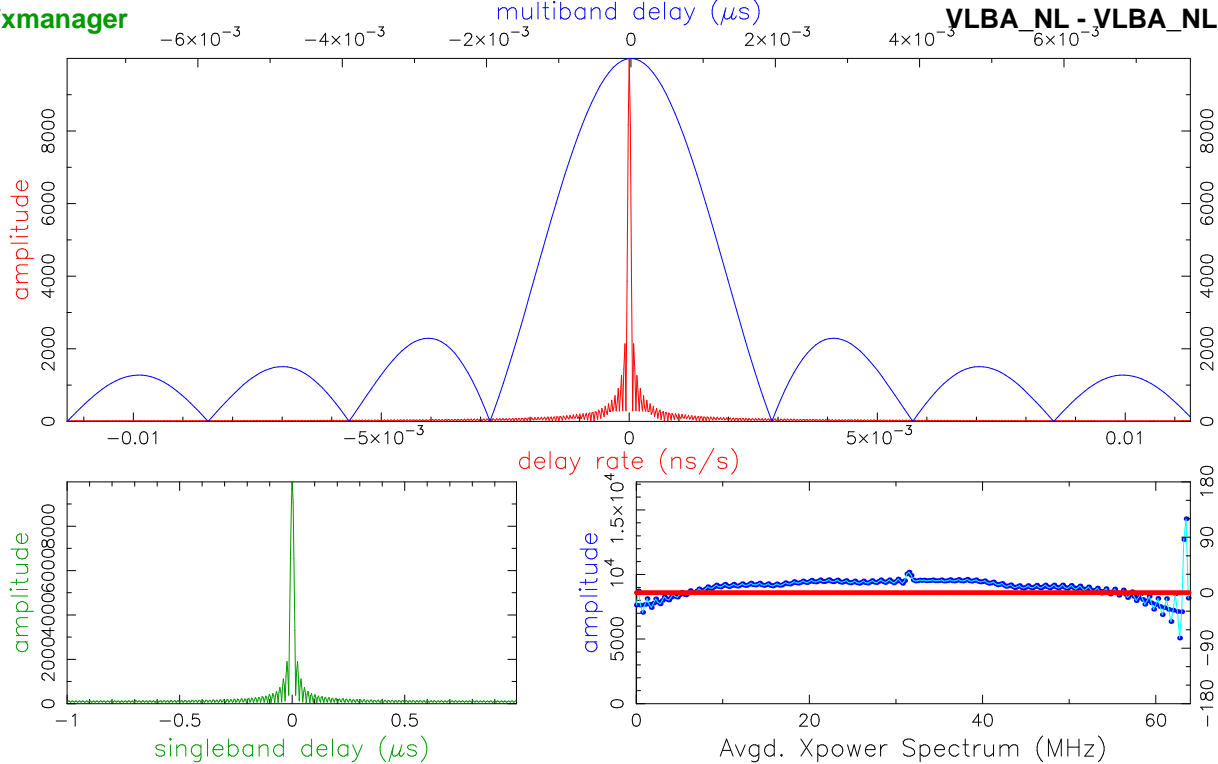
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-25.2	5.4	20.8	-32.1	-139.2	35.6	-2.8	-47.4	Phase	-12.4
	0.2	0.2	0.1	0.3	0.2	0.3	0.1	0.1	Ampl.	0.2
	196.1	127.2	289.8	278.0	483.1	278.7	443.1	241.8	Sbd box	278.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	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)	-1.55617101073E+04		Apriori delay (usec)		-1.55617938439E+04		Resid mbdelay (usec)		5.61157E-03	+/- 2.0E-04
Sband delay (usec)	-1.55617114019E+04		Apriori clock (usec)		1.3206724E+01		Resid sbdelay (usec)		8.24420E-02	+/- 1.6E-03
Phase delay (usec)	-1.55617938443E+04		Apriori clockrate (us/s)		-4.0000002E-07		Resid phdelay (usec)		-4.01400E-07	+/- 6.7E-07
Delay rate (us/s)	7.55316499756E-01		Apriori rate (us/s)		7.55313827673E-01		Resid rate (us/s)		2.67208E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		6.05003351344E-05		Resid phase (deg)		-12.4	+/- 20.7

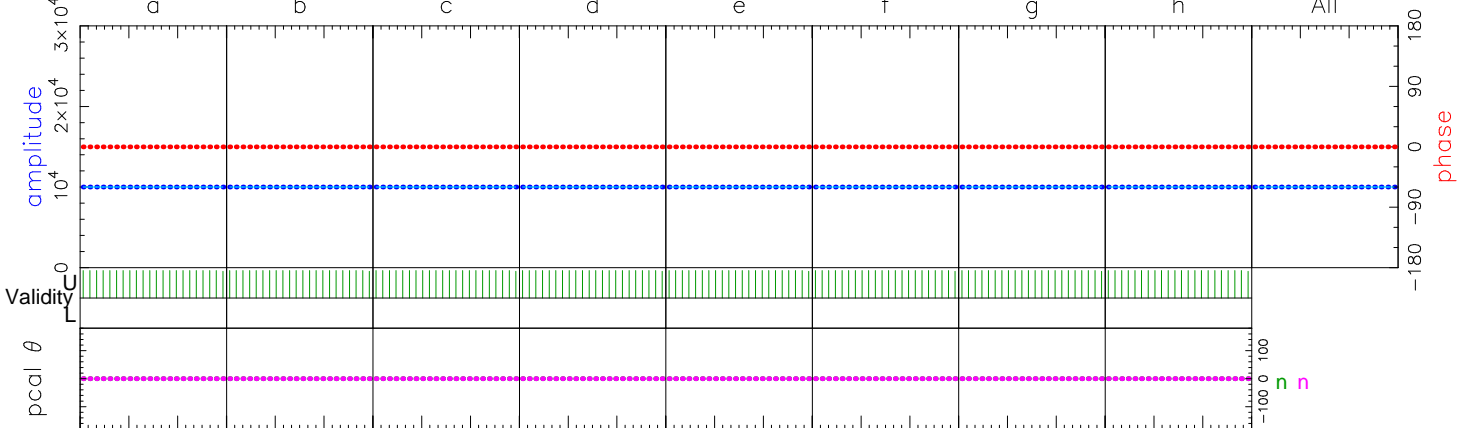
	RMS	Theor.	Amplitude	0.155 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	51.4	48.4	Search (1024X32)	0.147	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	77.8	84.6	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	60.1	29.2	Inc. seg. avg.	0.151	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00
amp/frq (%)	53.9	51.0	Inc. frq. avg.	0.184					

m: az 54.3 el 11.5 pa -73.7 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) -5392.890 1341.651 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/mn.W.250.1HXP48



Fringe quality 9
SNR 366861.6
Int time 179.974
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
Exper # 16383
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155300
2020:247:085004
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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

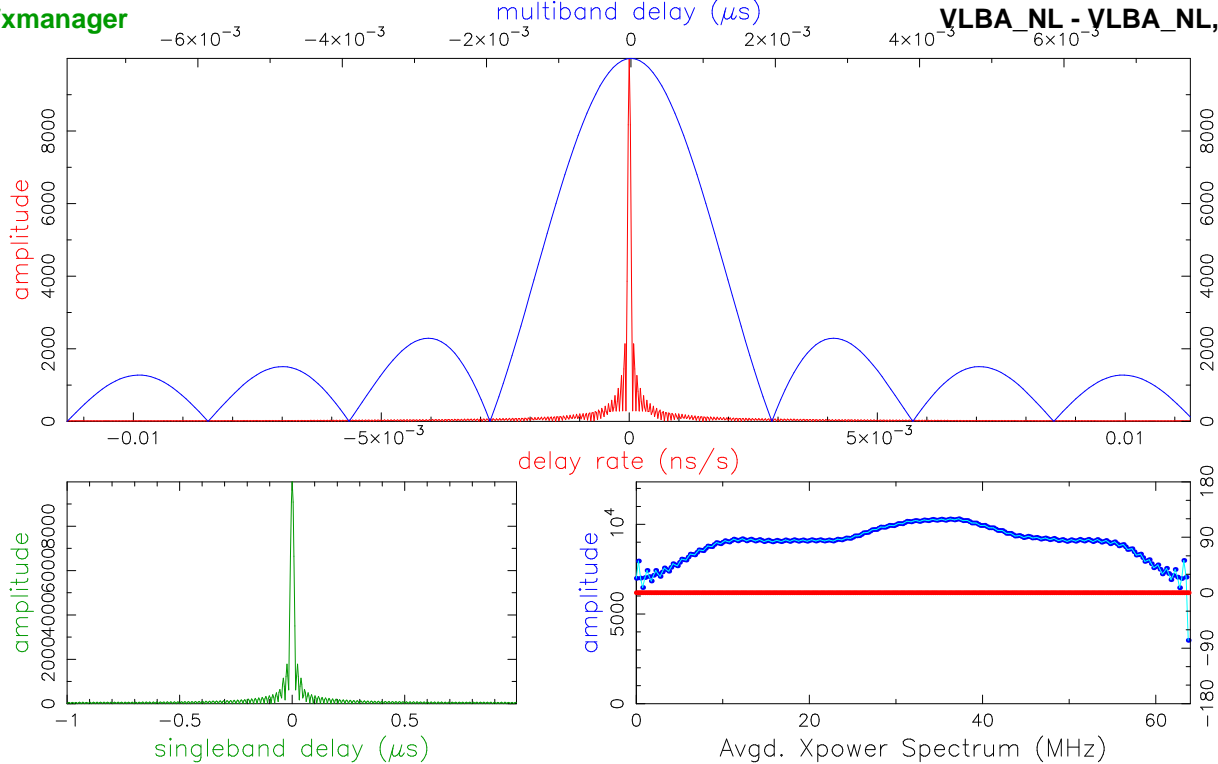


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
n:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000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

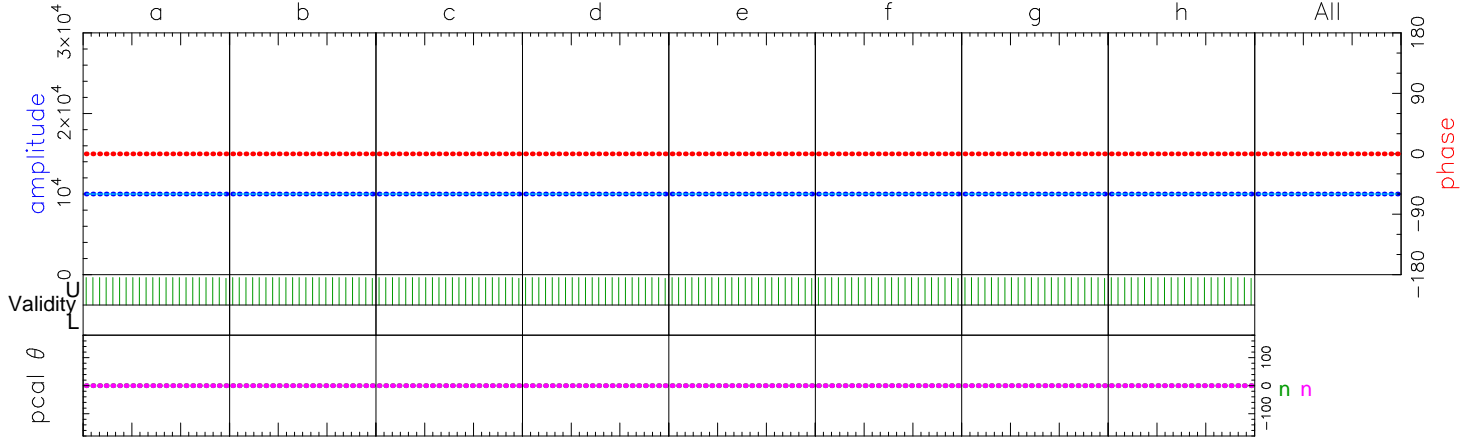
RMS Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 0.0 0.0 Search (1024X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
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

n: az 93.6 el 69.1 pa -69.0 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nn.W.242.1HXP48



Fringe quality 9
SNR 366861.6
Int time 179.974
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
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155302
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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



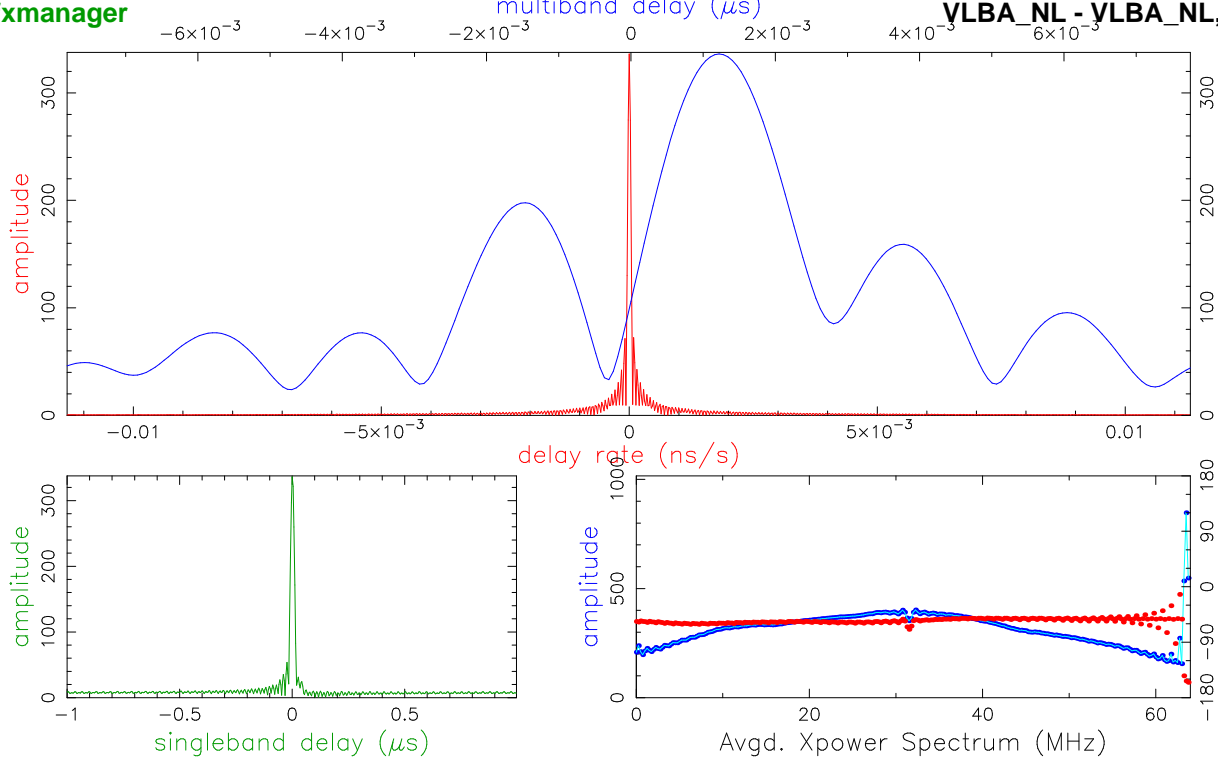
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
n:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Phase delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Total phase (deg)			0.0							
RMS										
Theor.										
Amplitude										
Search (1024X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
n: az 93.6 el 69.1 pa -69.0										
n: az 93.6 el 69.1 pa -69.0										
u,v (fr/asec) 0.000 0.000										
simultaneous interpolator										

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

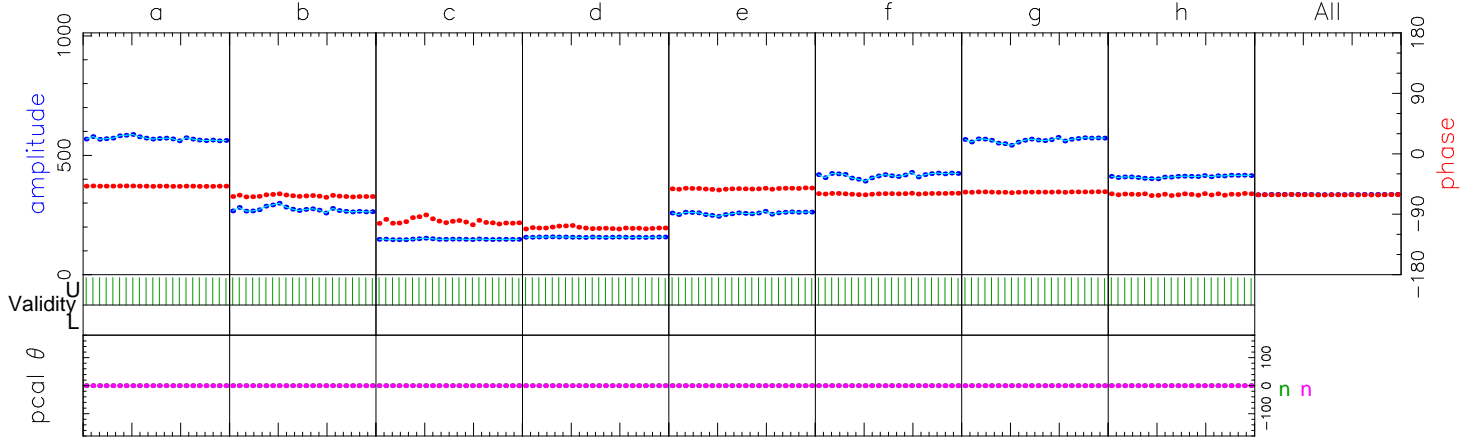
2013+370.1HXP48, No0219, nn

VLBA_NL - VLBA_NL, fgroup W, pol LR



Fringe quality 5
 SNR 12387.7
 Int time 179.974
 Amp 337.666
 Phase -61.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000902
 MBD 0.001232
 Fringe rate (Hz) -0.000008
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155303
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-48.2	-62.7	-100.5	-110.2	-51.9	-59.5	-57.0	-60.4	Phase	-61.0
	570.6	273.0	148.3	157.2	257.5	415.9	563.9	410.8	Ampl.	349.6
	257.8	256.9	256.1	257.9	257.8	257.3	257.6	256.3	Sbd box	257.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.23171875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.23172E-03	+/-	8.8E-08
Sband delay (usec)	9.02000000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	9.02000E-04	+/-	7.0E-07
Phase delay (usec)	-1.96698613270E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.96699E-06	+/-	3.0E-10
Delay rate (us/s)	-8.78611448284E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-8.78611E-11	+/-	2.9E-12
Total phase (deg)	-61.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-61.0	+/-	0.0

ph/seg (deg) 0.2 0.0 RMS Theor. Amplitude 337.666 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.5 0.0 Search (1024X32) 325.548 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.6 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.3 0.0 Inc. seg. avg. 336.188 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 n: az 93.6 el 69.1 pa -69.0 n: az 93.6 el 69.1 pa -69.0 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
 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nn.1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nn.W.267.1HXP48

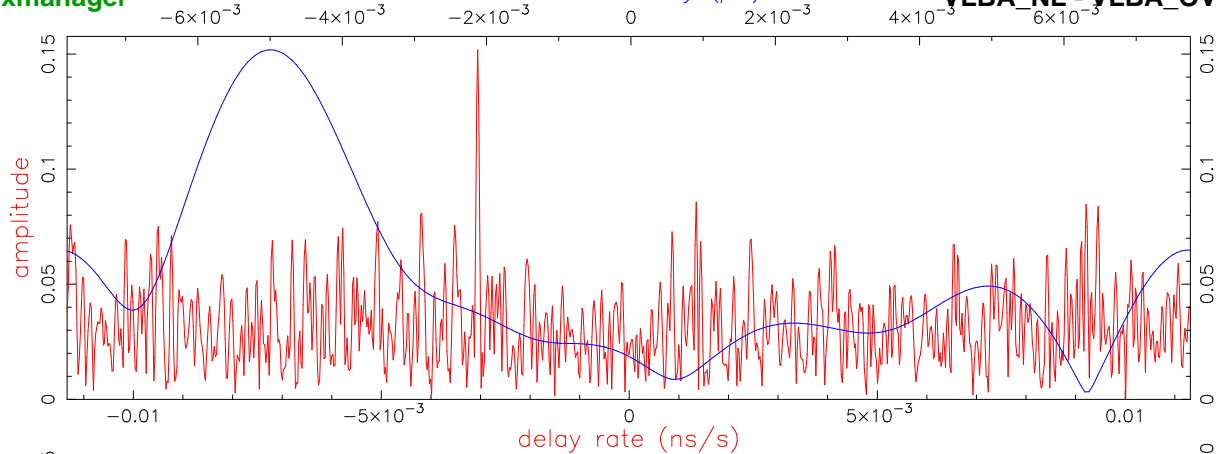
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, no

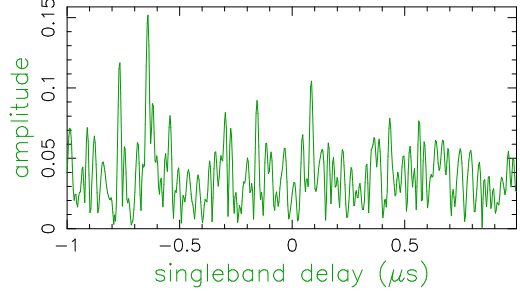
VLBA_NL - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

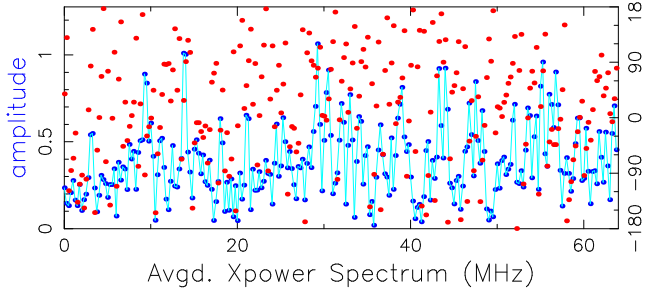


Fringe quality 0

SNR 5.6
 Int time 178.265
 Amp 0.158
 Phase -99.6
 PFD 9.4e-01
 Delays (us)
 SBD -0.641746
 MBD -0.005012
 Fringe rate (Hz)
 -0.262804
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

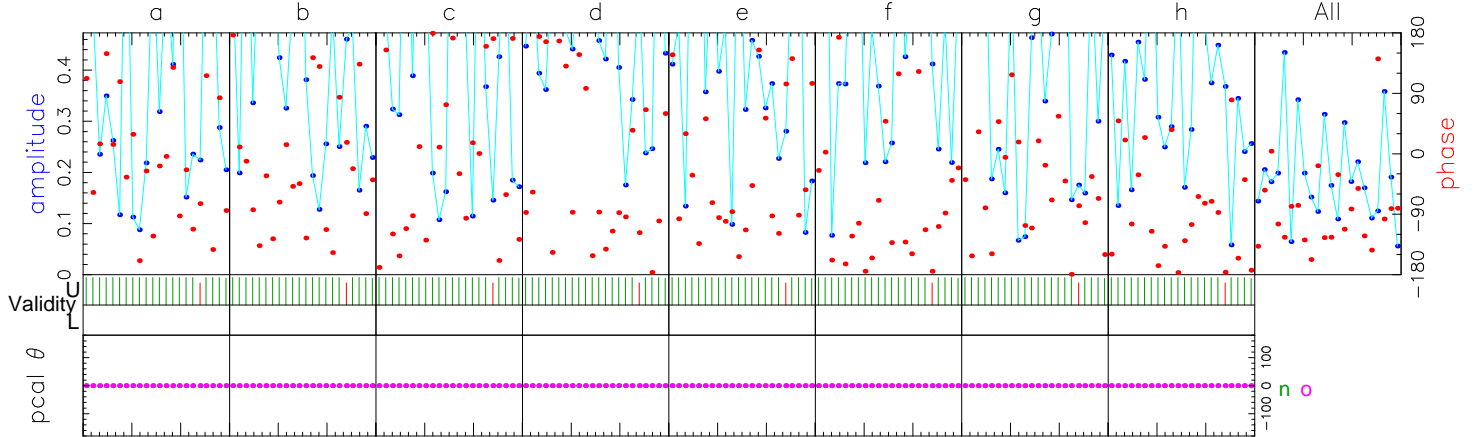


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155300
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-63.0	-68.6	-123.4	-137.7	-107.7	-111.0	-46.3	-99.1	Phase	-99.6
	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Ampl.	0.2
	81.6	38.6	459.9	505.0	141.2	503.8	181.2	41.0	Sbd box	92.7
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.97036852663E+03		Apriori delay (usec)		3.97101416342E+03		Resid mbdelay (usec)		-5.01179E-03	+/- 1.9E-04
Sband delay (usec)	3.97037241767E+03		Apriori clock (usec)		-2.1243586E+01		Resid sbdelay (usec)		-6.41746E-01	+/- 1.5E-03
Phase delay (usec)	3.97101416020E+03		Apriori clockrate (us/s)		6.0000003E-07		Resid phdelay (usec)		-3.21203E-06	+/- 6.6E-07
Delay rate (us/s)	-3.77970056902E-01		Apriori rate (us/s)		-3.77967006013E-01		Resid rate (us/s)		-3.05089E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.70604949704E-05		Resid phase (deg)		-99.6	+/- 20.5

	RMS	Theor.	Amplitude	0.158 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	49.0	48.0	Search (1024X32)	0.149	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	68.8	83.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	35.0	29.0	Inc. seg. avg.	0.152	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	31.2	50.6	Inc. frq. avg.	0.159	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

n: az 93.6 el 69.1 pa -69.0 o: az 73.1 el 48.1 pa -73.0 u,v (fr/asec) 2707.294 -604.873 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/no..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/no.W.243.1HXP48

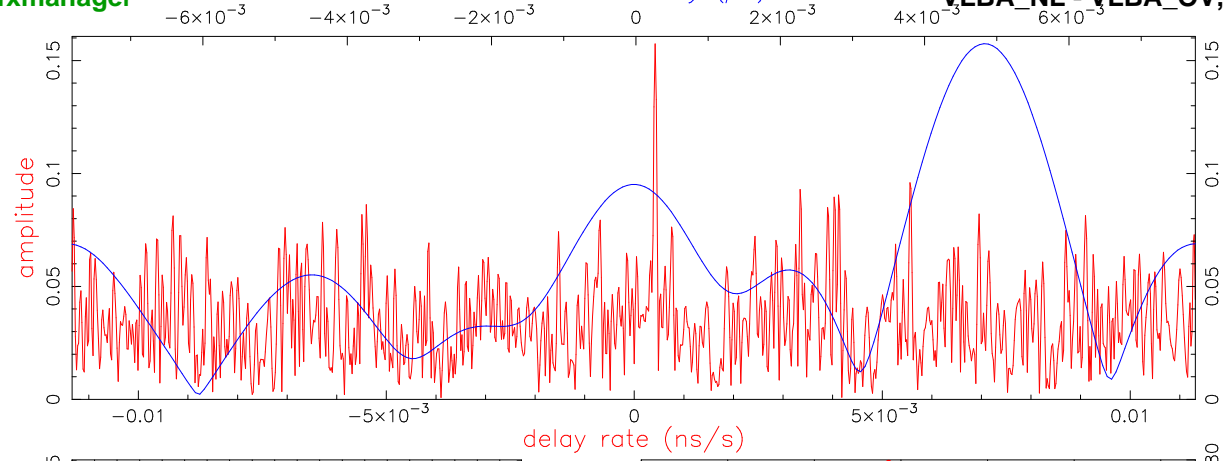
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

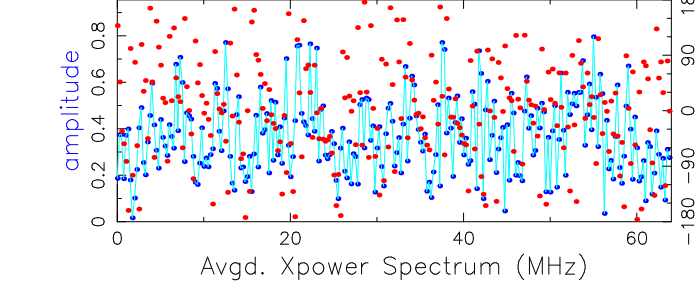
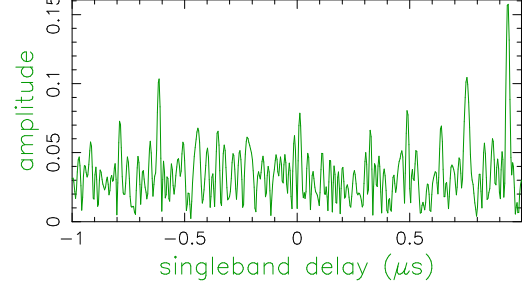
2013+370.1HXP48, No0219, no

VLBA_NL - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

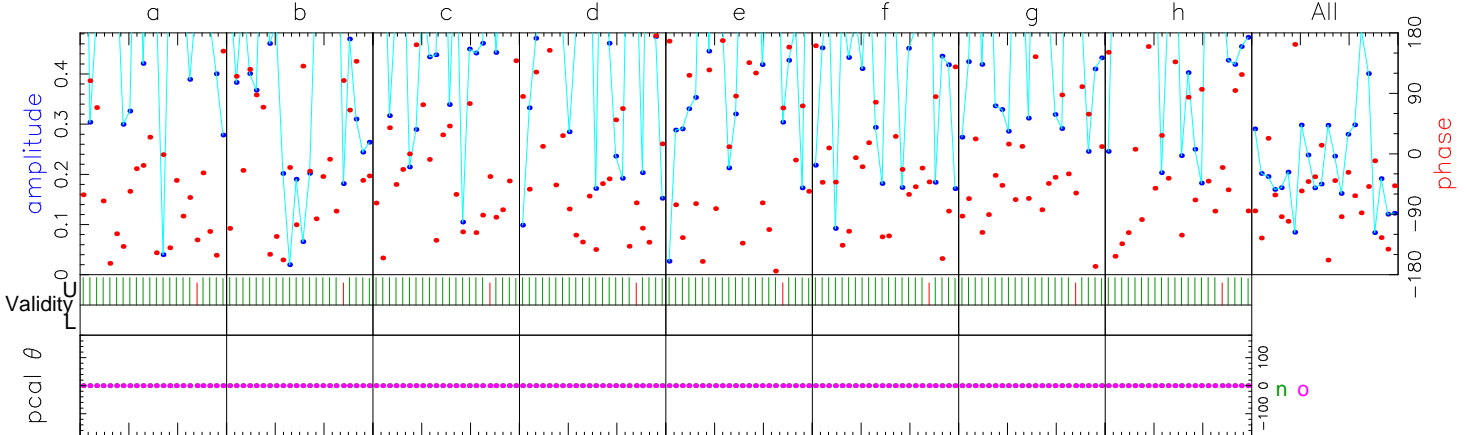


Fringe quality 0
 SNR 5.9
 Int time 178.265
 Amp 0.161
 Phase -69.9
 PFD 4.4e-01
 Delays (us)
 SBD 0.935649
 MBD 0.004806
 Fringe rate (Hz)
 0.035438
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155302
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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
	-74.1	-61.7	-45.3	-85.0	-150.2	-44.3	-44.5	-91.8	Phase	-69.9
	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2
	496.0	458.2	104.7	118.3	51.3	494.9	496.4	266.9	Sbd box	496.5
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.97195646948E+03		Apriori delay (usec)		3.97101416342E+03		Resid mbdelay (usec)		4.80607E-03	+/- 1.9E-04
Sband delay (usec)	3.97194981192E+03		Apriori clock (usec)		-2.1243586E+01		Resid sbdelay (usec)		9.35649E-01	+/- 1.5E-03
Phase delay (usec)	3.97101416116E+03		Apriori clockrate (us/s)		6.0000003E-07		Resid phdelay (usec)		-2.25286E-06	+/- 6.3E-07
Delay rate (us/s)	-3.77966594611E-01		Apriori rate (us/s)		-3.77967006013E-01		Resid rate (us/s)		4.11401E-07	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.70604949704E-05		Resid phase (deg)		-69.9	+/- 19.5

ph/seg (deg) 53.7 45.7 Search (1024X32) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 69.9 79.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.0 27.6 Inc. seg. avg. 0.167 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 39.9 48.2 Inc. frq. avg. 0.165 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 93.6 el 69.1 pa -69.0 o: az 73.1 el 48.1 pa -73.0 u,v (fr/asec) 2707.294 -604.873 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/no..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/no.W.260.1HXP48

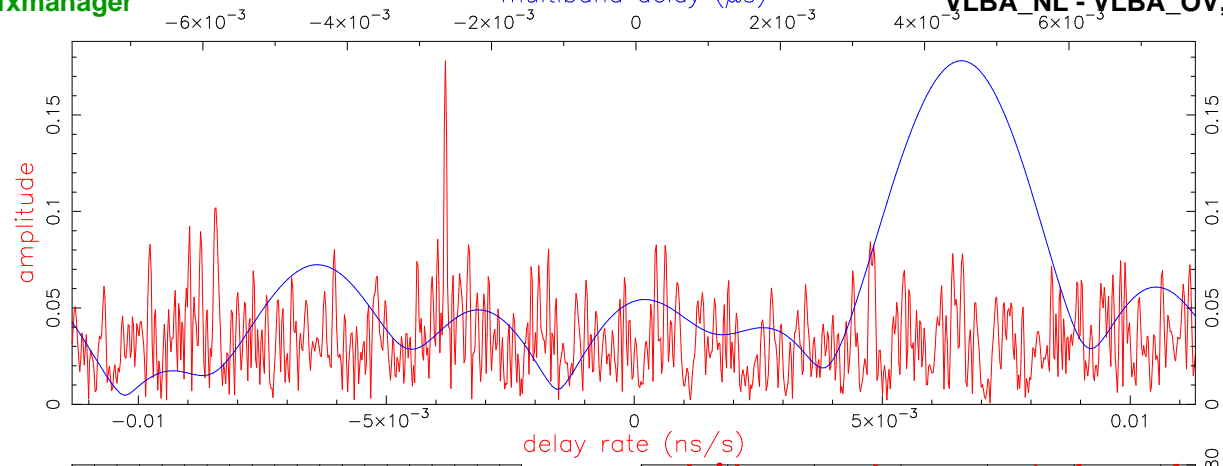
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, no

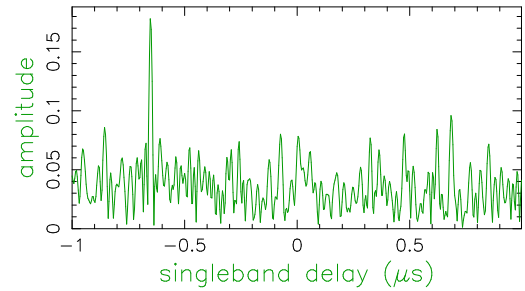
VLBA_NL - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

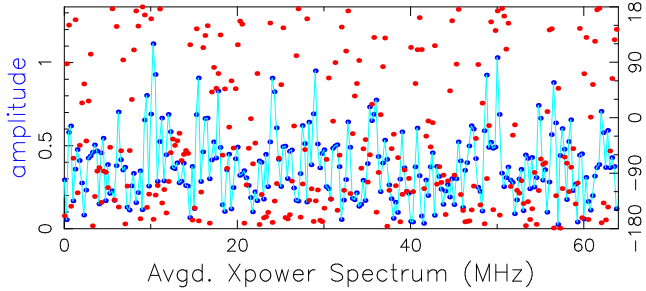


Fringe quality 0

SNR 6.6
 Int time 178.265
 Amp 0.188
 Phase -141.5
 PFD 7.9e-03
 Delays (us)
 SBD -0.651272
 MBD 0.004561
 Fringe rate (Hz)
 -0.328855
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

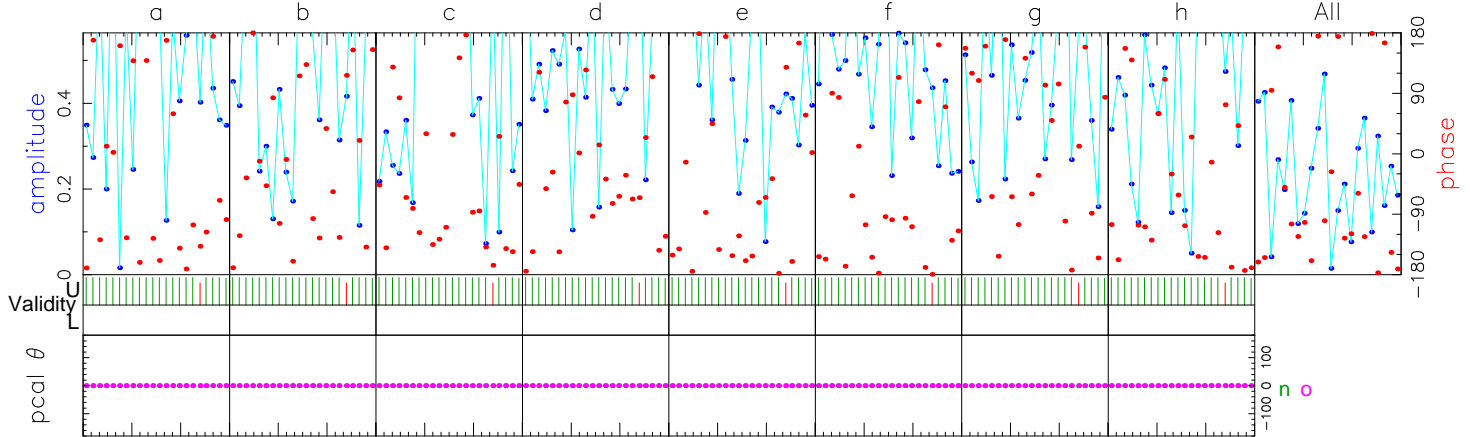


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155305
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-145.5	-163.1	-131.1	-85.5	-145.5	-149.6	-166.1	-147.3		-141.5
	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.2		0.2
	432.1	200.9	481.8	498.1	273.9	473.3	377.9	503.6		90.3
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
o	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
n	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Chan ids
										Tracks
Group delay (usec)(sbd)	3.97036247475E+03		Apriori delay (usec)		3.97101416342E+03		Resid mbdelay (usec)		4.56134E-03	+/- 1.7E-04
Sband delay (usec)	3.97036289192E+03		Apriori clock (usec)		-2.1243586E+01		Resid sbdelay (usec)		-6.51272E-01	+/- 1.3E-03
Phase delay (usec)	3.97101415885E+03		Apriori clockrate (us/s)		6.0000003E-07		Resid phdelay (usec)		-4.56170E-06	+/- 5.6E-07
Delay rate (us/s)	-3.77970823689E-01		Apriori rate (us/s)		-3.77967006013E-01		Resid rate (us/s)		-3.81768E-06	+/- 5.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.70604949704E-05		Resid phase (deg)		-141.5	+/- 17.5

ph/seg (deg) 54.4 40.9 Search (1024X32) 0.169 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 78.1 71.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.2 24.7 Inc. seg. avg. 0.198 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 29.6 43.2 Inc. frq. avg. 0.182 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 93.6 el 69.1 pa -69.0 o: az 73.1 el 48.1 pa -73.0 u,v (fr/asec) 2707.294 -604.873 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/no..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/no.W.283.1HXP48

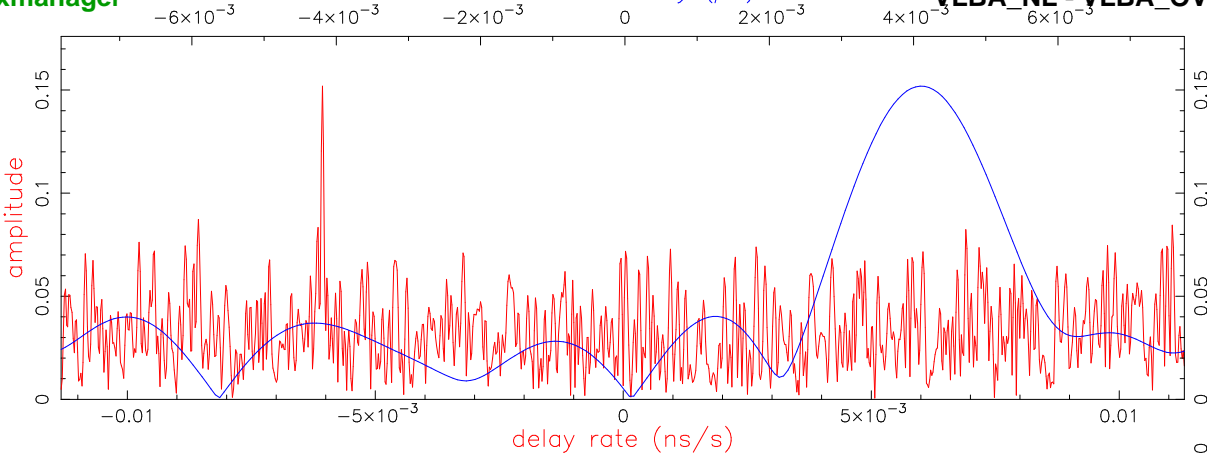
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, no

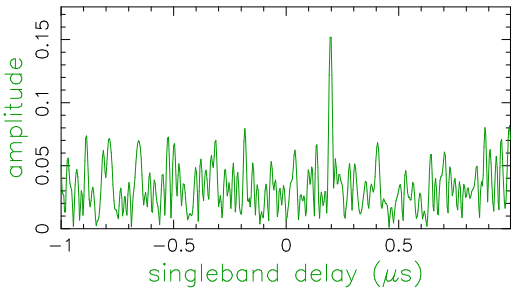
VLBA_NL - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

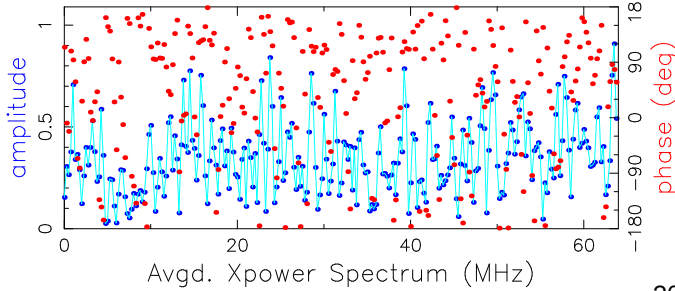


Fringe quality 0

SNR 5.7
 Int time 178.265
 Amp 0.176
 Phase 164.7
 PFD 7.9e-01
 Delays (us)
 SBD 0.197282
 MBD 0.004079
 Fringe rate (Hz) -0.524168
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

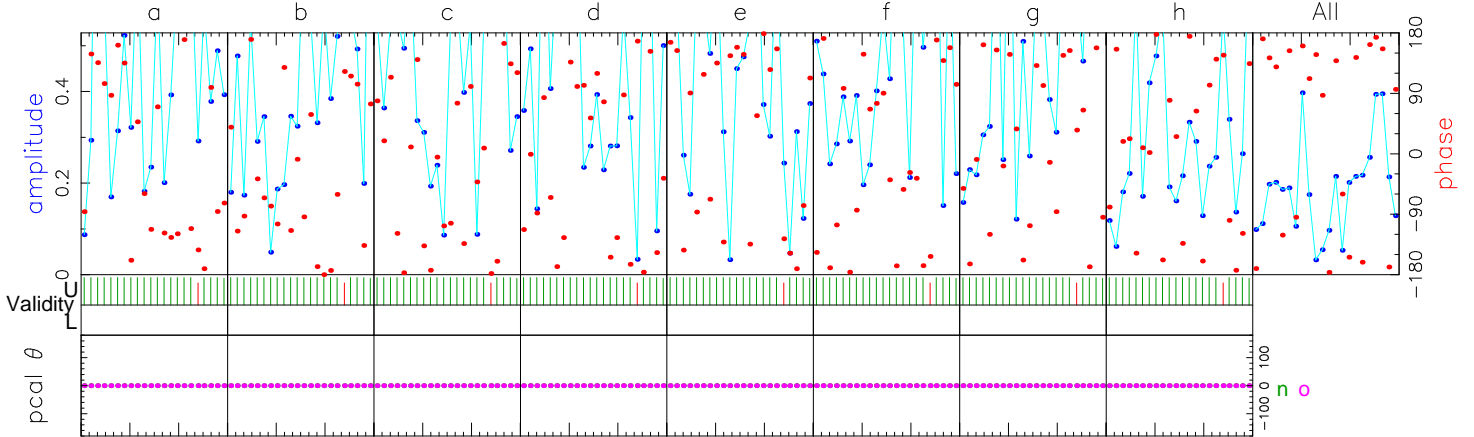


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155307
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

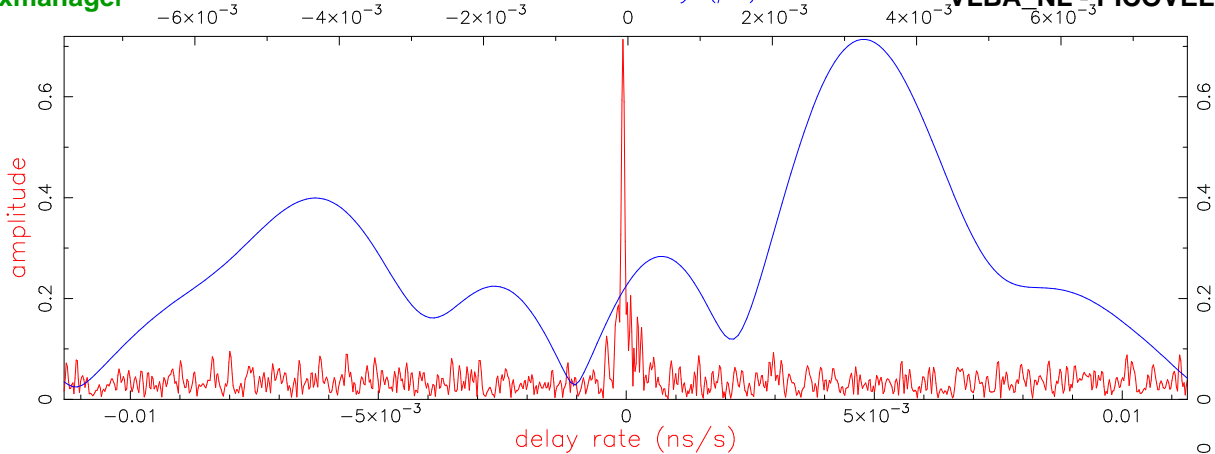
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	171.6	170.7	148.4	147.0	163.1	-174.6	162.3	168.2	Phase	164.7
	0.2	0.1	0.1	0.2	0.3	0.2	0.2	0.1	Ampl.	0.2
	98.5	161.3	329.6	11.1	500.4	266.9	368.9	352.3	Sbd box	307.5
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.97120574226E+03		Apriori delay (usec)		3.97101416342E+03		Resid mbdelay (usec)		4.07885E-03	+/- 1.9E-04
Sband delay (usec)	3.97121144567E+03		Apriori clock (usec)		-2.1243586E+01		Resid sbdelay (usec)		1.97282E-01	+/- 1.5E-03
Phase delay (usec)	3.97101416873E+03		Apriori clockrate (us/s)		6.0000003E-07		Resid phdelay (usec)		5.31028E-06	+/- 6.5E-07
Delay rate (us/s)	-3.77973091089E-01		Apriori rate (us/s)		-3.77967006013E-01		Resid rate (us/s)		-6.08508E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.70604949704E-05		Resid phase (deg)		164.7	+/- 20.1

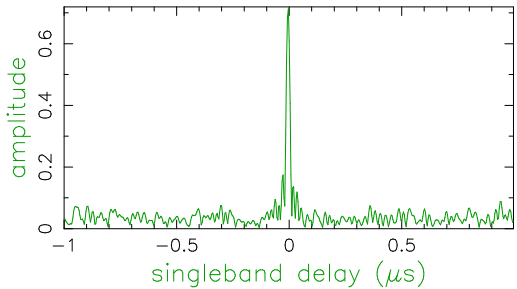
ph/seg (deg) 50.5 47.1 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.7 82.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 13.6 28.5 Inc. seg. avg. 0.158 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.0 49.7 Inc. frq. avg. 0.156 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 93.6 el 69.1 pa -69.0 o: az 73.1 el 48.1 pa -73.0 u,v (fr/asec) 2707.294 -604.873 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/no..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/no.W.300.1HXP48

multiband delay (μ s)

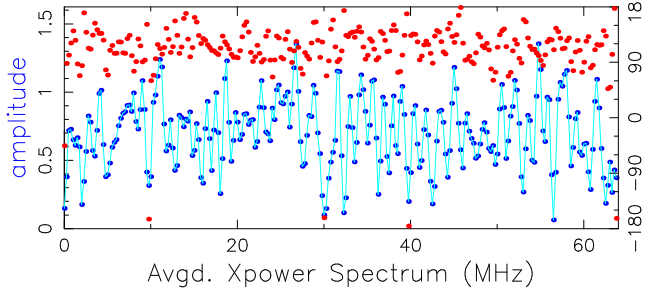


Fringe quality 7

SNR 26.4
Int time 179.783
Amp 0.720
Phase 21.0
PFD 0.0e+00
Delays (us)
SBD -0.005079
MBD 0.003227
Fringe rate (Hz)
-0.006205
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

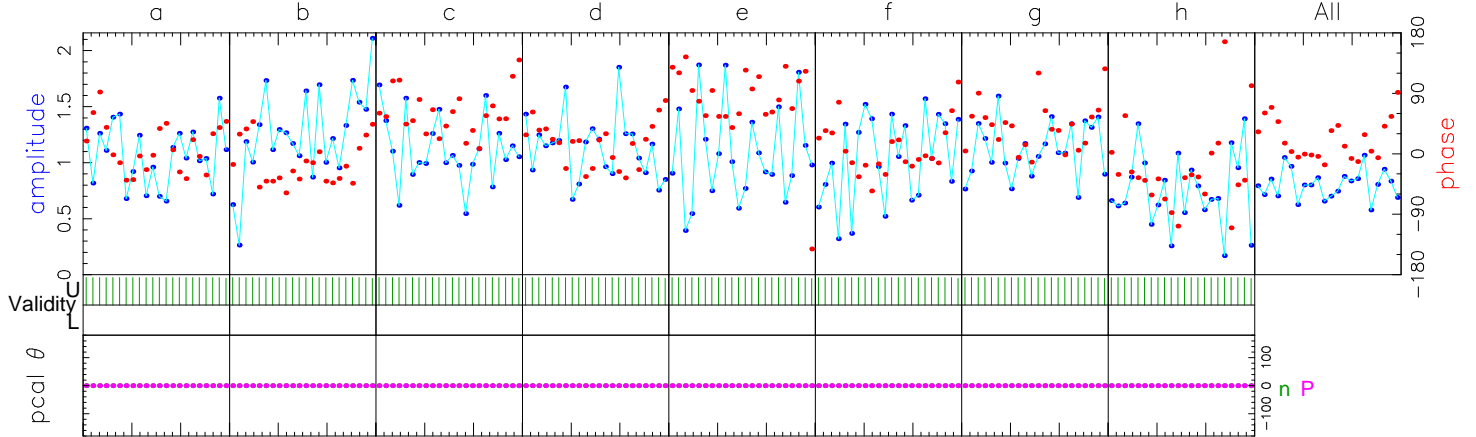


delay rate (ns/s)



Exp. c202a
Yr:day 16383
Exp:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155300
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.79321815455E+03	Apriori delay (usec)	5.79323055255E+03	Resid mbdelay (usec)	3.22701E-03	+/-	4.1E-05
Sband delay (usec)	5.79322547330E+03	Apriori clock (usec)	3.5544109E-01	Resid sbdelay (usec)	-5.07925E-03	+/-	3.3E-04
Phase delay (usec)	5.79323055322E+03	Apriori clockrate (us/s)	9.0000002E-07	Resid phdelay (usec)	6.77167E-07	+/-	1.4E-07
Delay rate (us/s)	1.27880303338E+00	Apriori rate (us/s)	1.27880310542E+00	Resid rate (us/s)	-7.20391E-08	+/-	1.3E-09
Total phase (deg)	307.7	Apriori accel (us/s/s)	-2.64890097763E-05	Resid phase (deg)	21.0	+/-	4.3

ph/seg (deg)	29.3	Theor.	10.2	Amplitude	0.720 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	21.2	Search (1024X32)	0.700	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	45.3	Inc. seg. avg.	0.795	Inc. frq. avg.	0.885	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	30.1	Inc. frq. avg.	0.885	Sample rate(MISamp/s): 128		Data rate(Mb/s): 2048	nlags: 256	dr window (ns/s) -0.011 0.011
n: az 93.6 el 69.1 pa -69.0		P: az 290.0 el 41.9 pa 70.5		u, v (fr/asec) -9220.196 -1081.102		ion window (TEC) 0.00 0.00		simultaneous interpolator

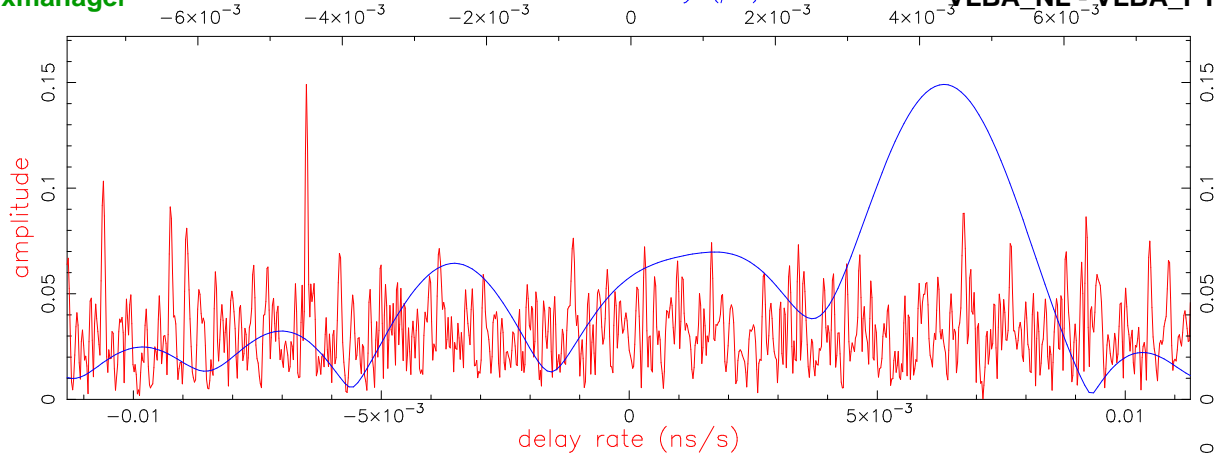
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, np

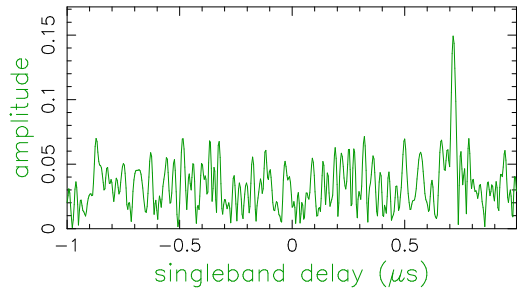
VLBA_NL - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)

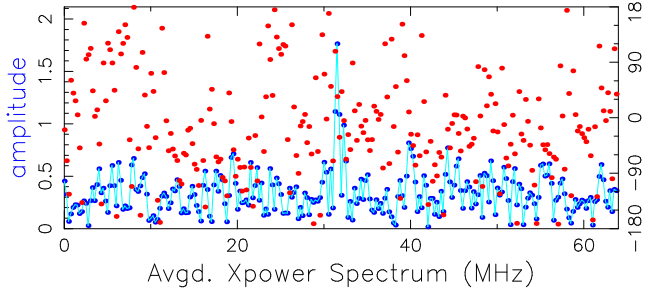


Fringe quality 0

SNR 5.5
 Int time 179.974
 Amp 0.172
 Phase -100.4
 PFD 9.9e-01
 Delays (us)
 SBD 0.715592
 MBD 0.004340
 Fringe rate (Hz)
 -0.560690
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

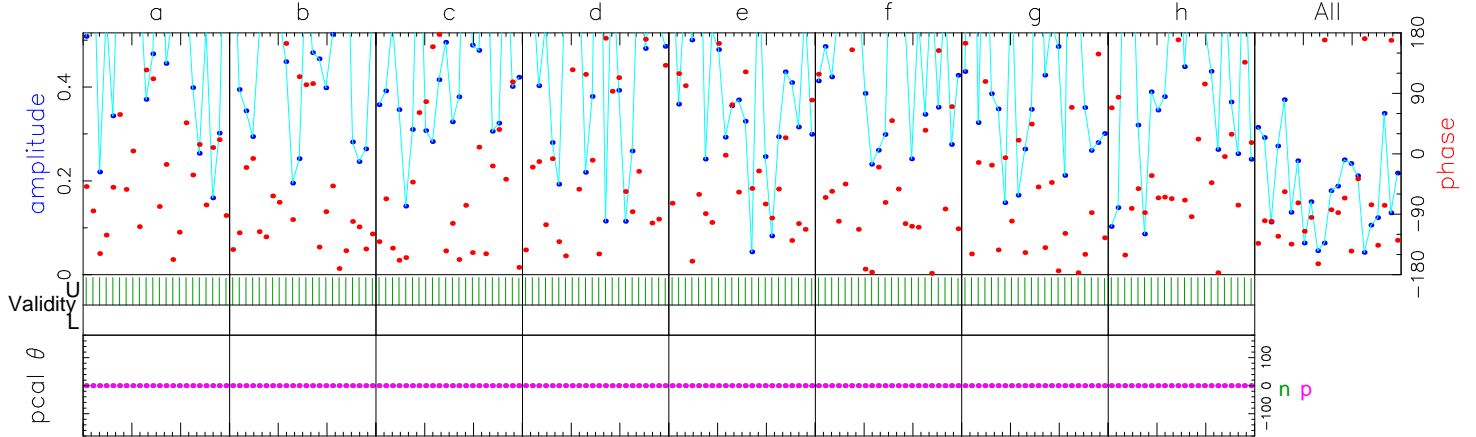


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155301
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-62.8	-123.4	-120.6	-122.0	-78.1	-94.9	-139.0	-68.7	Phase	-100.4
	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.2	Ampl.	0.2
	172.6	202.4	135.1	488.1	341.0	486.7	323.3	138.5	Sbd box	440.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 2.37958746237E+03 Apriori delay (usec) 2.37886437228E+03 Resid mbdelay (usec) 4.34009E-03 +/- 2.0E-04
 Sband delay (usec) 2.37957996453E+03 Apriori clock (usec) 8.9569092E-02 Resid sbdelay (usec) 7.15592E-01 +/- 1.6E-03
 Phase delay (usec) 2.37886436905E+03 Apriori clockrate (us/s) 1.0000003E-07 Resid phdelay (usec) -3.23875E-06 +/- 6.7E-07
 Delay rate (us/s) -2.86117189562E-01 Apriori rate (us/s) -2.86110680511E-01 Resid rate (us/s) -6.50905E-06 +/- 6.5E-09
 Total phase (deg) -90.2 Apriori accel (us/s/s) -5.65494578063E-06 Resid phase (deg) -100.4 +/- 20.9

RMS Theor. Amplitude 0.172 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 45.1 49.0 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 67.7 85.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 31.2 29.5 Inc. seg. avg. 0.157 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 36.6 51.6 Inc. frq. avg. 0.169 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 93.6 el 69.1 pa -69.0 p: az 72.4 el 55.2 pa -81.7 u,v (fr/asec) 2055.706 372.185 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/np..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/np.W.247.1HXP48

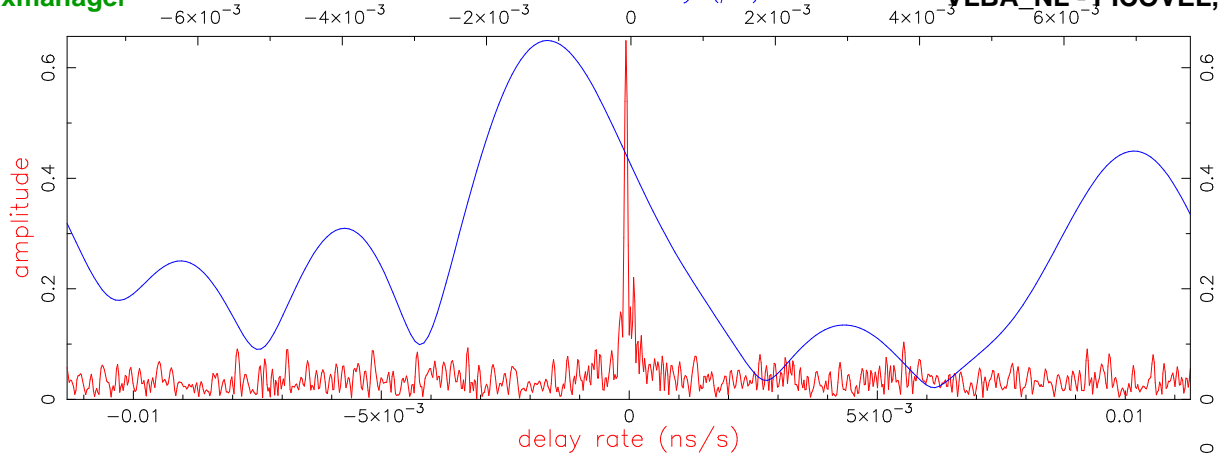
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nP

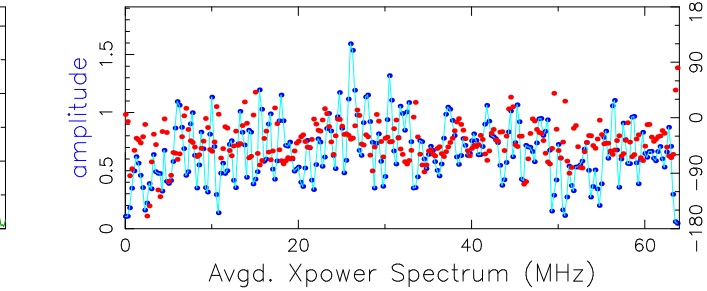
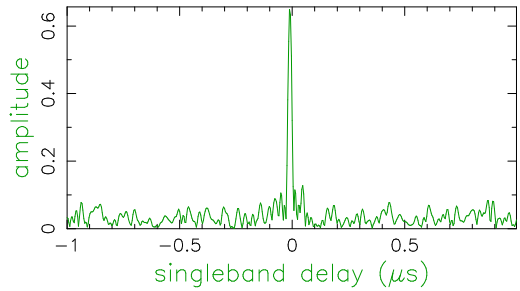
VLBA_NL - PICOVEL, fgroup W, pol RR

multiband delay (μ s)



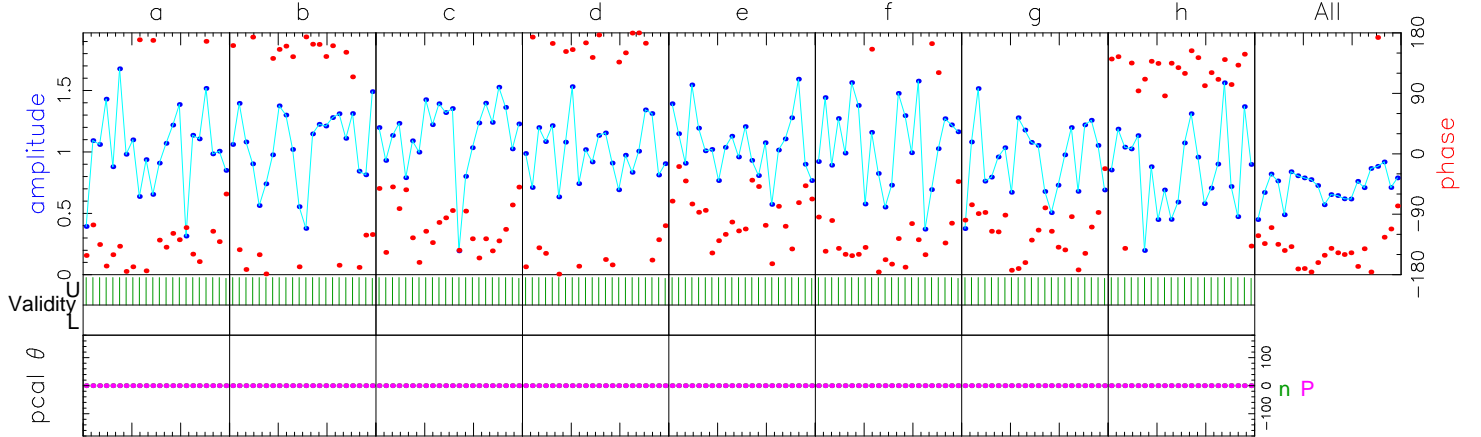
Fringe quality 7

SNR 24.1
 Int time 179.783
 Amp 0.657
 Phase -146.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.010294
 MBD -0.001124
 Fringe rate (Hz)
 -0.006090
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155302
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-145.9	173.0	-106.9	-178.3	-88.5	-141.9	-116.4	135.8	Phase	-146.0
	0.9	0.9	1.0	0.9	0.9	0.8	0.8	0.7	Ampl.	0.9
	253.7	254.1	254.1	254.2	253.9	253.8	253.2	253.2	Sbd box	254.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.79321380374E+03		Apriori delay (usec)		5.79323055255E+03		Resid mbdelay (usec)		-1.12381E-03	+/- 4.5E-05
Sband delay (usec)	5.79322025855E+03		Apriori clock (usec)		3.5544109E-01		Resid sbdelay (usec)		-1.02940E-02	+/- 3.6E-04
Phase delay (usec)	5.79323054784E+03		Apriori clockrate (us/s)		9.0000002E-07		Resid phdelay (usec)		-4.70847E-06	+/- 1.5E-07
Delay rate (us/s)	1.27880303472E+00		Apriori rate (us/s)		1.27880310542E+00		Resid rate (us/s)		-7.07013E-08	+/- 1.5E-09
Total phase (deg)	140.7		Apriori accel (us/s/s)		-2.64890097763E-05		Resid phase (deg)		-146.0	+/- 4.8

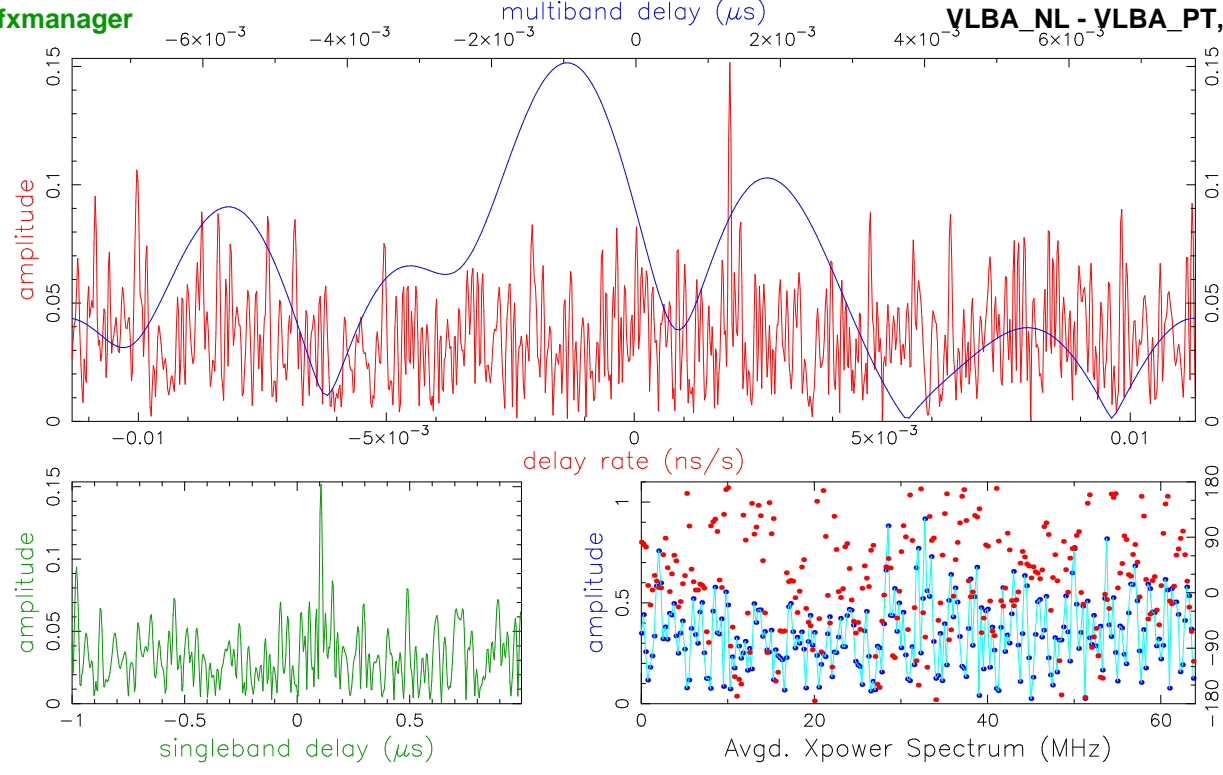
ph/seg (deg) 25.2 11.2 Amplitude 0.657 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 20.8 19.5 Search (1024X32) 0.638 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 49.3 6.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 32.1 11.7 Inc. seg. avg. 0.708 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 n: az 93.6 el 69.1 pa -69.0 P: az 290.0 el 41.9 pa 70.5 u,v (fr/asec) -9220.196 -1081.102 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nP..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nP.W.257.1HXP48

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

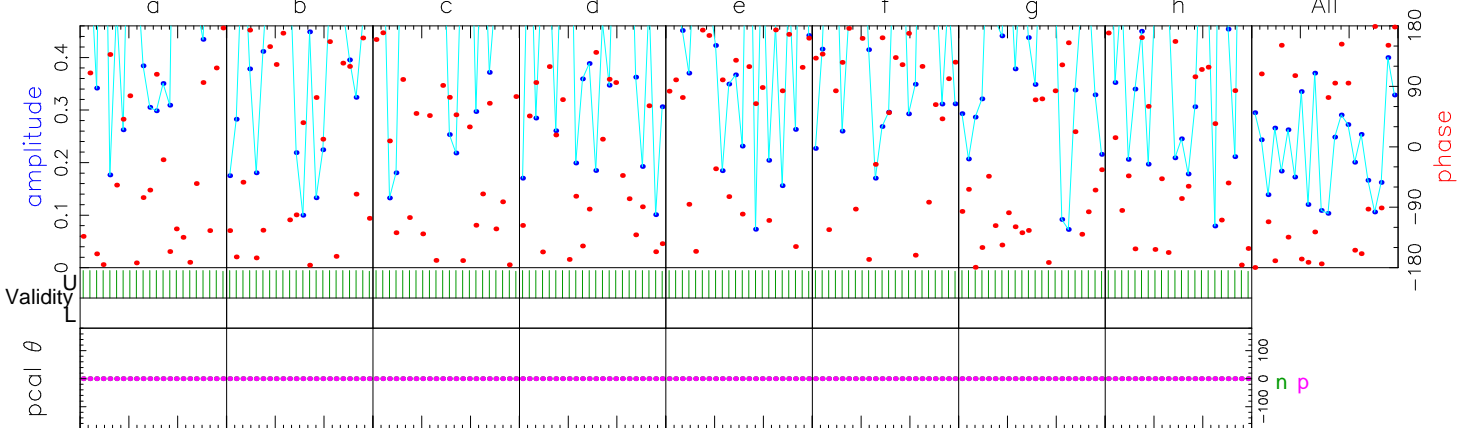
2013+370.1HXP48, No0219, np

VLBA_NL - VLBA_PT, fgroup W, pol RR



Fringe quality 0
 SNR 5.6
 Int time 179.974
 Amp 0.153
 Phase 177.1
 PFD 9.6e-01
 Delays (us)
 SBD 0.105416
 MBD -0.000956
 Fringe rate (Hz)
 0.165845
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155302
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-162.3	-172.2	151.6	138.2	139.0	138.7	-116.9	-156.6	Phase	177.1
	0.3	0.2	0.1	0.0	0.2	0.3	0.2	0.2	Ampl.	0.2
	283.8	285.1	368.8	381.8	269.4	441.3	428.4	103.7	Sbd box	284.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.37897279129E+03		Apriori delay (usec)		2.37886437228E+03		Resid mbdelay (usec)		-9.55993E-04	+/- 2.0E-04
Sband delay (usec)	2.37896978828E+03		Apriori clock (usec)		8.9569092E-02		Resid sbdelay (usec)		1.05416E-01	+/- 1.5E-03
Phase delay (usec)	2.37886437800E+03		Apriori clockrate (us/s)		1.0000003E-07		Resid phdelay (usec)		5.71125E-06	+/- 6.6E-07
Delay rate (us/s)	-2.86108755214E-01		Apriori rate (us/s)		-2.86110680511E-01		Resid rate (us/s)		1.92530E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		-5.65494578063E-06		Resid phase (deg)		177.1	+/- 20.6

ph/seg (deg) 54.5 48.3 Search (1024X32) 0.148 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.2 84.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 42.2 29.1 Inc. seg. avg. 0.171 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 52.5 50.9 Inc. frq. avg. 0.165 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 93.6 el 69.1 pa -69.0 p: az 72.4 el 55.2 pa -81.7 u,v (fr/asec) 2055.706 372.185 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/np..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/np.W.261.1HXP48

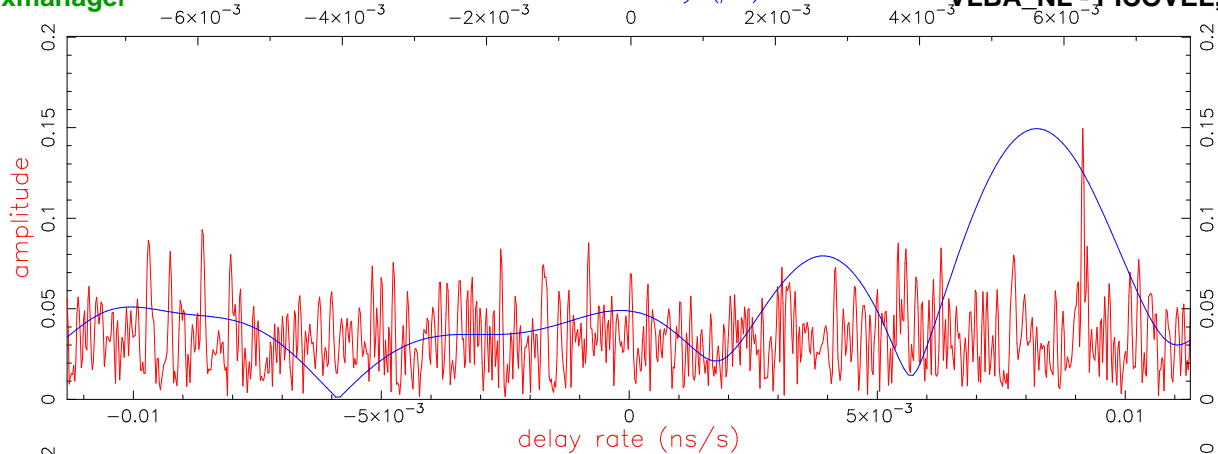
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nP

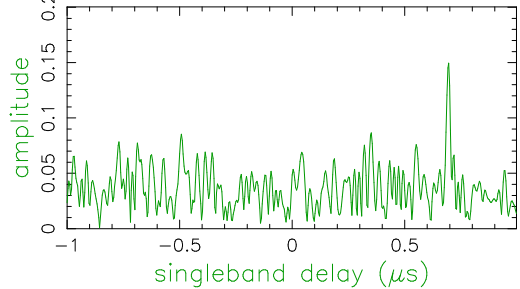
VLBA_NL - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

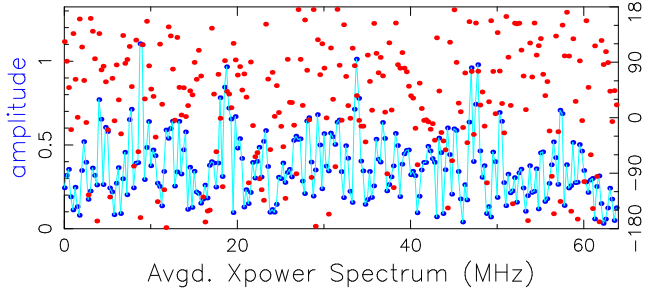


Fringe quality 0

SNR 5.5
 Int time 179.783
 Amp 0.200
 Phase 83.7
 PFD 9.8e-01
 Delays (us)
 SBD 0.694062
 MBD 0.005611
 Fringe rate (Hz)
 0.789157
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

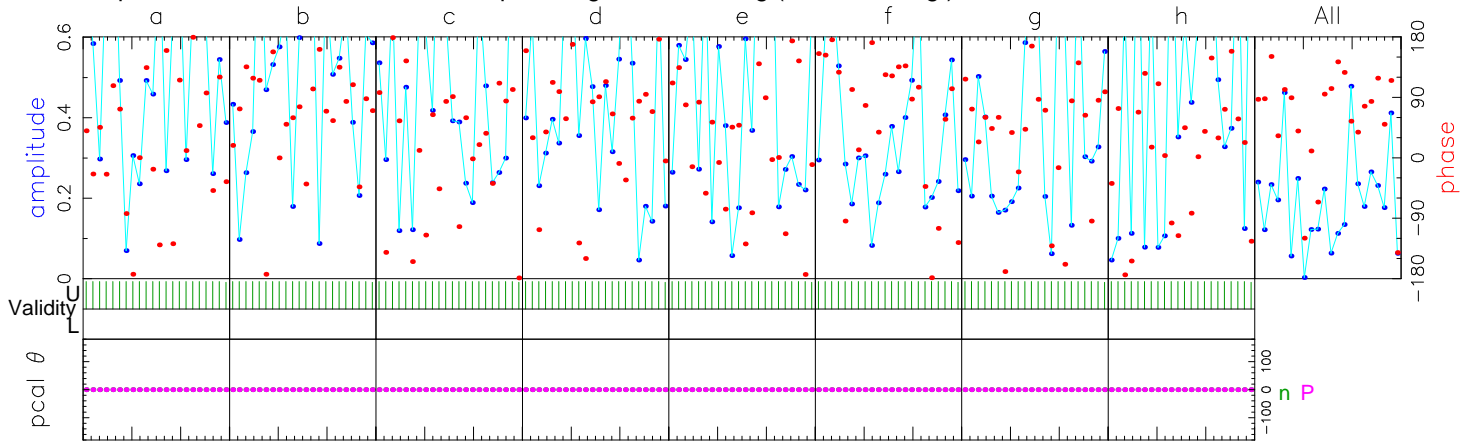


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155304
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	5.79392366310E+03	Apriori delay (usec)	5.79323055255E+03	Resid mbdelay (usec)	5.61055E-03	+/-	2.0E-04
Sband delay (usec)	5.79392461430E+03	Apriori clock (usec)	3.5544109E-01	Resid sbdelay (usec)	6.94062E-01	+/-	1.6E-03
Phase delay (usec)	5.79323055252E+03	Apriori clockrate (us/s)	9.0000002E-07	Resid phdelay (usec)	2.69924E-06	+/-	6.7E-07
Delay rate (us/s)	1.27881226676E+00	Apriori rate (us/s)	1.27880310542E+00	Resid rate (us/s)	9.16133E-06	+/-	6.4E-09
Total phase (deg)	10.4	Apriori accel (us/s/s)	-2.64890097763E-05	Resid phase (deg)	83.7	+/-	20.7

ph/seg (deg)	64.6	Theor.	48.6	Search (1024X32)	0.146	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	87.6		84.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	32.2		29.3	Inc. seg. avg.	0.195	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	47.3		51.2	Inc. frq. avg.	0.192	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

n: az 93.6 el 69.1 pa -69.0 P: az 290.0 el 41.9 pa 70.5 u,v (fr/asec) -9220.196 -1081.102 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nP..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nP.W.268.1HXP48

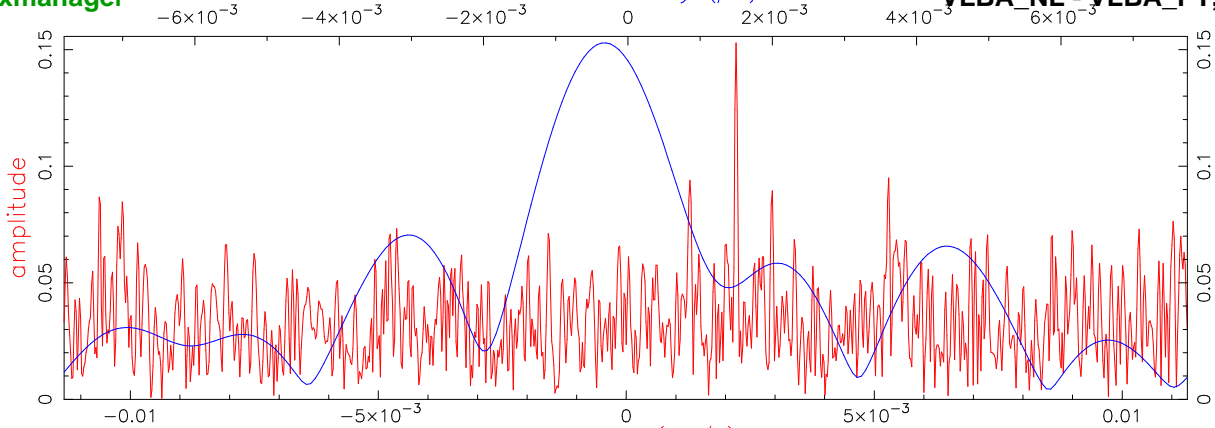
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, np

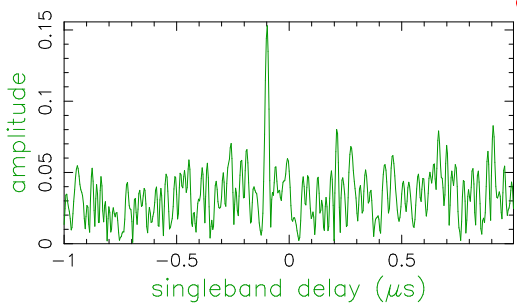
VLBA_NL - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

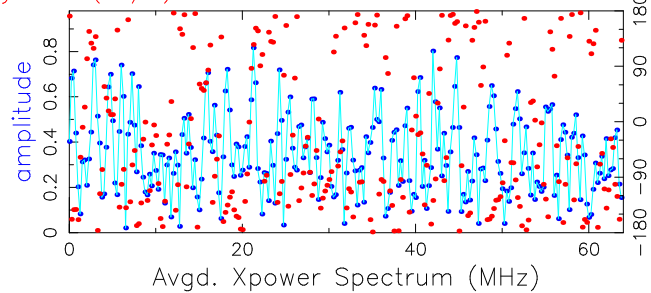


Fringe quality 0

SNR 5.6
 Int time 179.974
 Amp 0.156
 Phase 171.5
 PFD 9.0e-01
 Delays (us)
 SBD -0.098269
 MBD -0.000340
 Fringe rate (Hz)
 0.191103
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

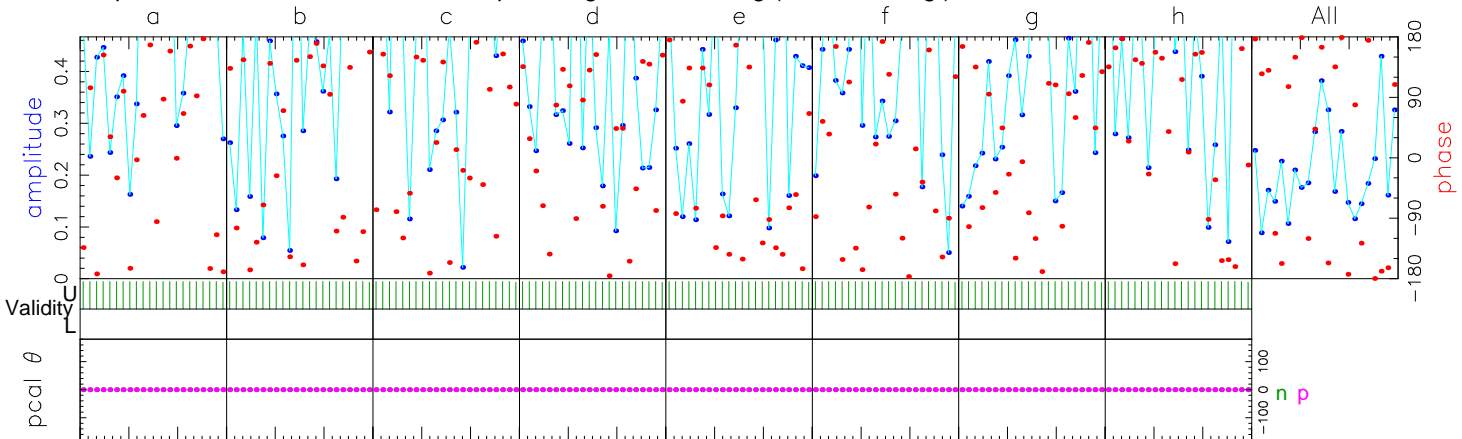


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155304
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	2.37877028222E+03		Apriori delay (usec)		2.37886437228E+03		Resid mbdelay (usec)		-3.40066E-04	+/- 1.9E-04
Sband delay (usec)	2.37876610278E+03		Apriori clock (usec)		8.9569092E-02		Resid sbdelay (usec)		-9.82695E-02	+/- 1.5E-03
Phase delay (usec)	2.37886437781E+03		Apriori clockrate (us/s)		1.0000003E-07		Resid phdelay (usec)		5.53027E-06	+/- 6.6E-07
Delay rate (us/s)	-2.86108461995E-01		Apriori rate (us/s)		-2.86110680511E-01		Resid rate (us/s)		2.21852E-06	+/- 6.3E-09
Total phase (deg)	181.8		Apriori accel (us/s/s)		-5.65494578063E-06		Resid phase (deg)		171.5	+/- 20.4
ph/seg (deg)	RMS 50.8	Theor. 47.8	Amplitude Search (1024X32)	0.156 +/- 0.028	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		sb window (us)	-1.000 1.000
amp/seg (%)	70.5	83.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	25.4	28.8	Inc. seg. avg.	0.162	Bits/sample: 2x2		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	33.1	50.3	Inc. frq. avg.	0.149	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
n: az 93.6 el 69.1 pa -69.0	p: az 72.4 el 55.2 pa -81.7		u, v (fr/asec) 2055.706 372.185						simultaneous interpolator	

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/np..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/np.W.273.1HXP48

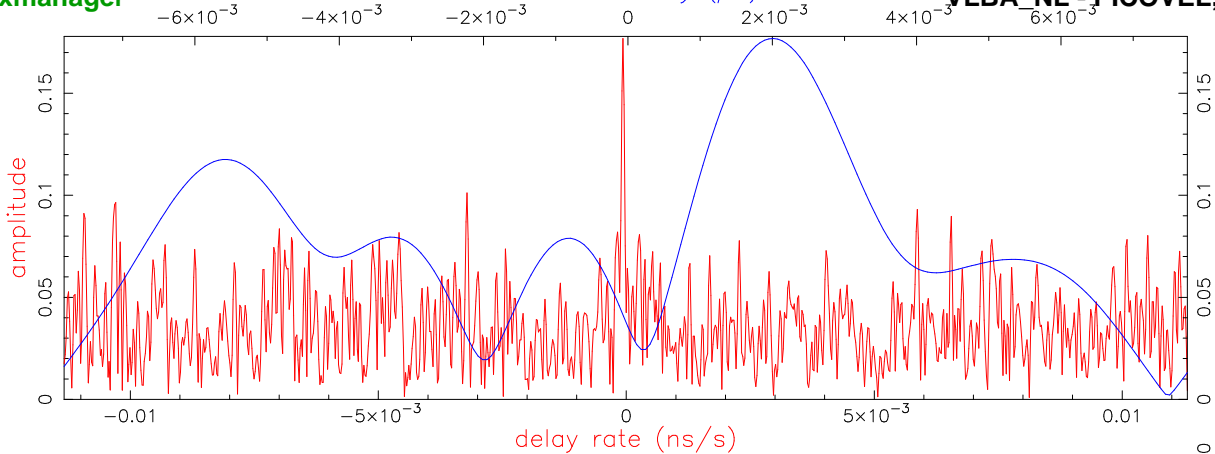
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nP

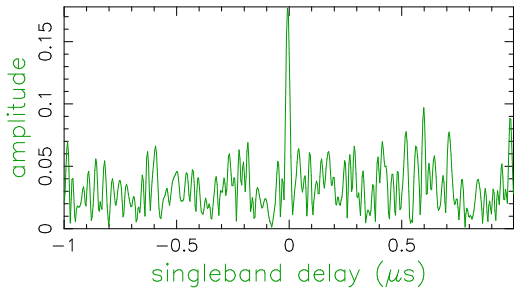
VLBA_NL - PICOVEL, fgroup W, pol RL

multiband delay (μ s)

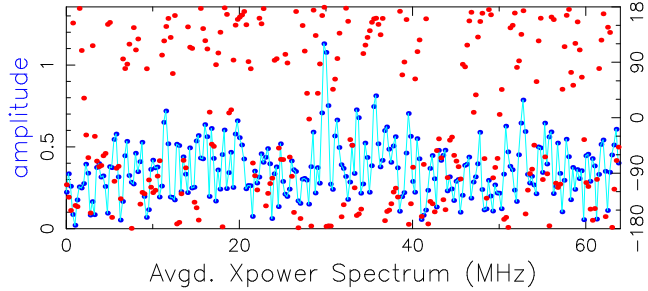


Fringe quality 0

SNR 6.5
 Int time 179.783
 Amp 0.178
 Phase 83.1
 PFD 9.7e-03
 Delays (us)
 SBD -0.006755
 MBD 0.002029
 Fringe rate (Hz)
 -0.005967
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

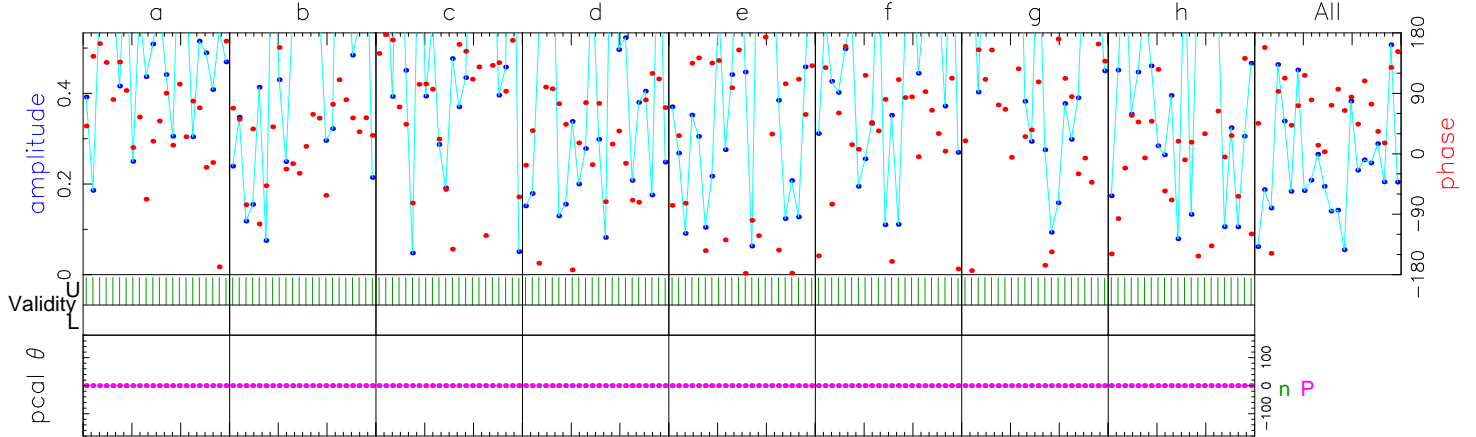


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155306
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.79321695615E+03	Apriori delay (usec)	5.79323055255E+03	Resid mbdelay (usec)	2.02860E-03	+/-	1.7E-04
Sband delay (usec)	5.79322379755E+03	Apriori clock (usec)	3.5544109E-01	Resid sbdelay (usec)	-6.75500E-03	+/-	1.3E-03
Phase delay (usec)	5.79323055523E+03	Apriori clockrate (us/s)	9.0000002E-07	Resid phdelay (usec)	2.68039E-06	+/-	5.7E-07
Delay rate (us/s)	1.27880303615E+00	Apriori rate (us/s)	1.27880310542E+00	Resid rate (us/s)	-6.92686E-08	+/-	5.4E-09
Total phase (deg)	9.8	Apriori accel (us/s/s)	-2.64890097763E-05	Resid phase (deg)	83.1	+/-	17.6

ph/seg (deg)	50.2	Theor.	41.2	Amplitude	0.178 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	76.0		71.9	Search (1024X32)	0.176	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	53.6		24.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	48.8		43.4	Inc. seg. avg.	0.193	Sample rate(MISamp/s): 128	mb window (us) -0.008 0.008
				Inc. frq. avg.	0.215	Data rate(Mb/s): 2048	dr window (ns/s) -0.011 0.011
						nlags: 256	t_cohere infinite
							ion window (TEC) 0.00 0.00

n: az 93.6 el 69.1 pa -69.0 P: az 290.0 el 41.9 pa 70.5 u,v (fr/asec) -9220.196 -1081.102 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nP..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nP.W.289.1HXP48

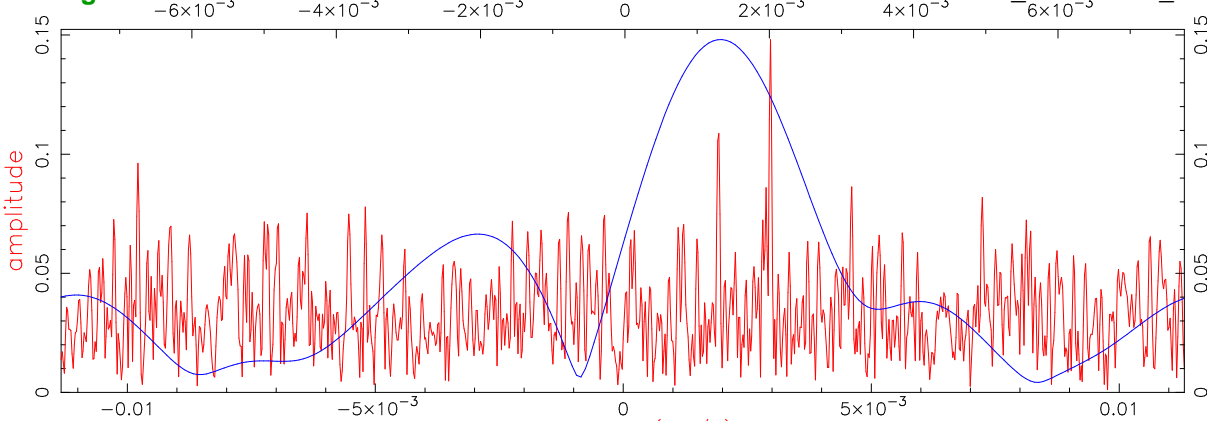
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, np

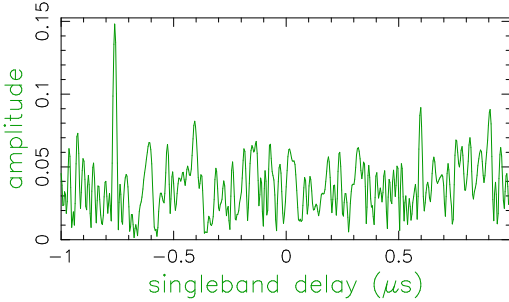
VLBA_NL - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

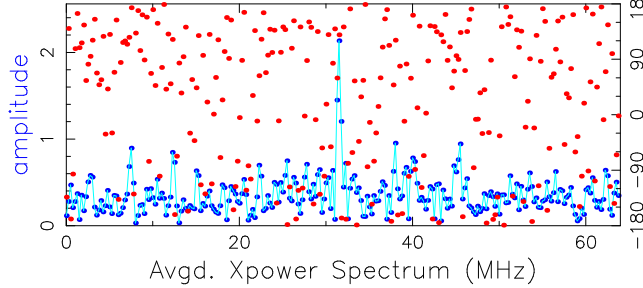


Fringe quality 0

SNR 5.4
 Int time 179.974
 Amp 0.152
 Phase -22.4
 PFD 1.0e+00
 Delays (us)
 SBD -0.761621
 MBD 0.001329
 Fringe rate (Hz)
 0.255682
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

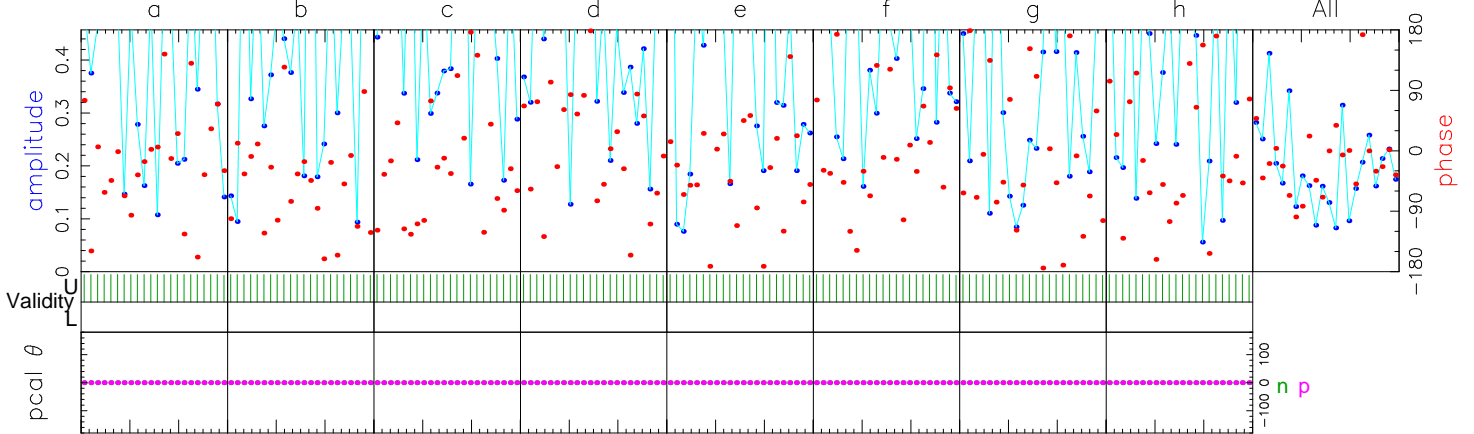


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155307
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-12.4	-43.3	-34.7	30.7	-13.0	-11.0	-64.7	-18.1	Phase	-22.4
	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	262.1	473.2	459.1	40.6	57.3	443.7	306.1	511.6	Sbd box	62.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.37810007637E+03	Apriori delay (usec)	2.37886437228E+03	Resid mbdelay (usec)	1.32909E-03	+/-	2.0E-04
Sband delay (usec)	2.37810275128E+03	Apriori clock (usec)	8.9569092E-02	Resid sbdelay (usec)	-7.61621E-01	+/-	1.6E-03
Phase delay (usec)	2.37886437156E+03	Apriori clockrate (us/s)	1.0000003E-07	Resid phdelay (usec)	-7.23705E-07	+/-	6.8E-07
Delay rate (us/s)	-2.86107712301E-01	Apriori rate (us/s)	-2.86110680511E-01	Resid rate (us/s)	2.96821E-06	+/-	6.5E-09
Total phase (deg)	-12.2	Apriori accel (us/s/s)	-5.65494578063E-06	Resid phase (deg)	-22.4	+/-	21.1

ph/seg (deg)	RMS 50.5	Theor. 49.5	Amplitude Search (1024X32)	0.152 +/- 0.028	0.147	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	65.7	86.3	Interp.	0.000	0.147	PCal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	30.4	29.8	Inc. seg. avg.	0.150	0.148	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	32.5	52.1	Inc. frq. avg.	0.148	0.148	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
n: az 93.6 el 69.1 pa -69.0	p: az 72.4 el 55.2 pa -81.7		u, v (fr/asec) 2055.706 372.185		simultaneous interpolator						

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/np..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/np.W.298.1HXP48

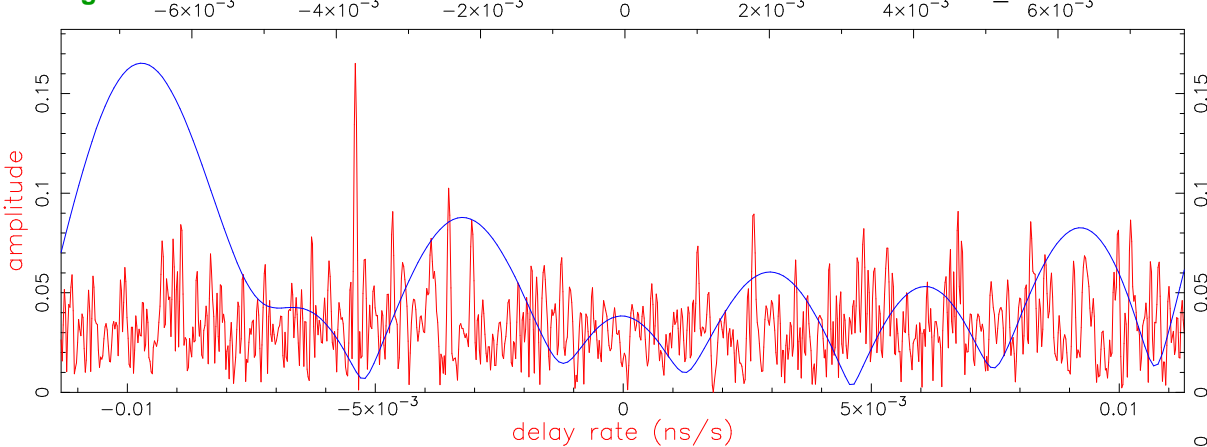
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nX

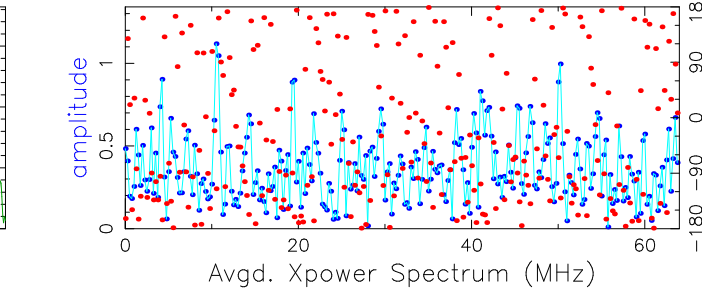
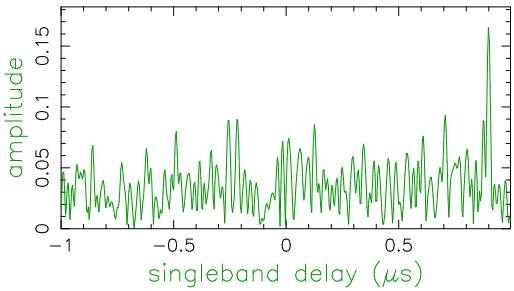
VLBA_NL - ONSALA60, fgroup W, pol LL

multiband delay (μ s)



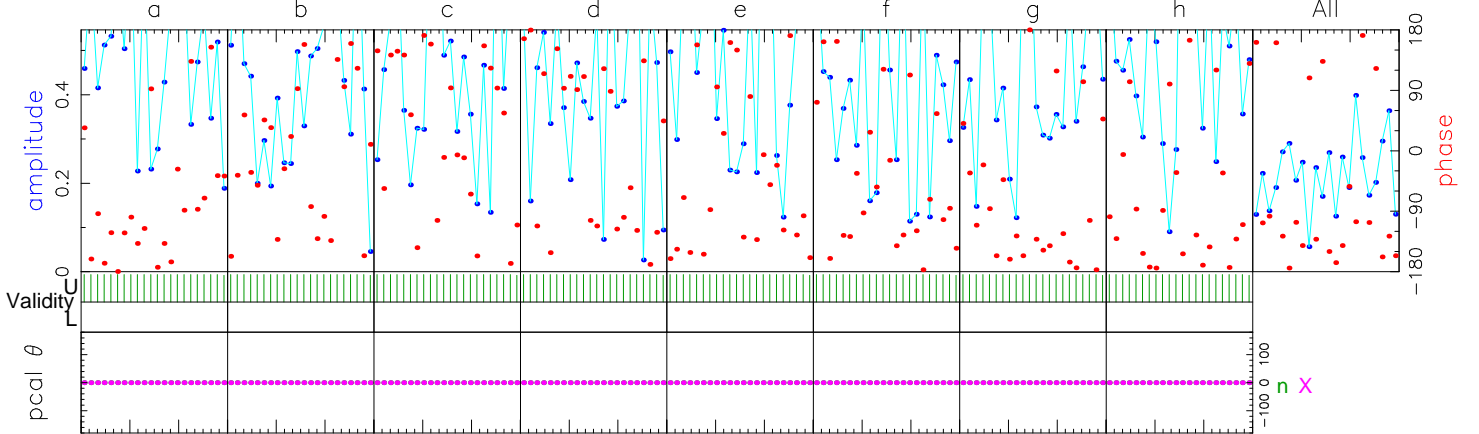
Fringe quality 0

SNR 6.1
 Int time 179.962
 Amp 0.182
 Phase -144.4
 PFD 1.5e-01
 Delays (us)
 SBD 0.899090
 MBD -0.006668
 Fringe rate (Hz)
 -0.465676
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155301
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-120.3	-163.2	160.7	-168.5	-117.7	-145.7	-141.7	-145.5	Phase	-144.4
	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.3	Ampl.	0.2
	486.2	447.8	411.8	413.7	439.6	110.8	67.1	487.9	Sbd box	487.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	7.01618148109E+03	Apriori delay (usec)	7.01528189940E+03	Resid mbdelay (usec)	-6.66830E-03	+/-	1.8E-04
Sband delay (usec)	7.01618098965E+03	Apriori clock (usec)	-4.8161751E+01	Resid sbdelay (usec)	8.99090E-01	+/-	1.4E-03
Phase delay (usec)	7.01528189474E+03	Apriori clockrate (us/s)	-2.8000009E-08	Resid phdelay (usec)	-4.65526E-06	+/-	6.1E-07
Delay rate (us/s)	1.05830673682E+00	Apriori rate (us/s)	1.05831214286E+00	Resid rate (us/s)	-5.40604E-06	+/-	5.8E-09
Total phase (deg)	148.7	Apriori accel (us/s/s)	-4.96165497303E-05	Resid phase (deg)	-144.4	+/-	18.9

ph/seg (deg)	49.4	Theor.	44.2	Amplitude	0.182 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	57.7		77.2	Search (1024X32)	0.162	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	29.6		26.7	Inc. seg. avg.	0.186	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	43.4		46.5	Inc. frq. avg.	0.179	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

n: az 93.6 el 69.1 pa -69.0 X: az 282.7 el 37.4 pa 41.3 u,v (fr/asec) -7654.930 -4162.785 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX.W.248.1HXP48

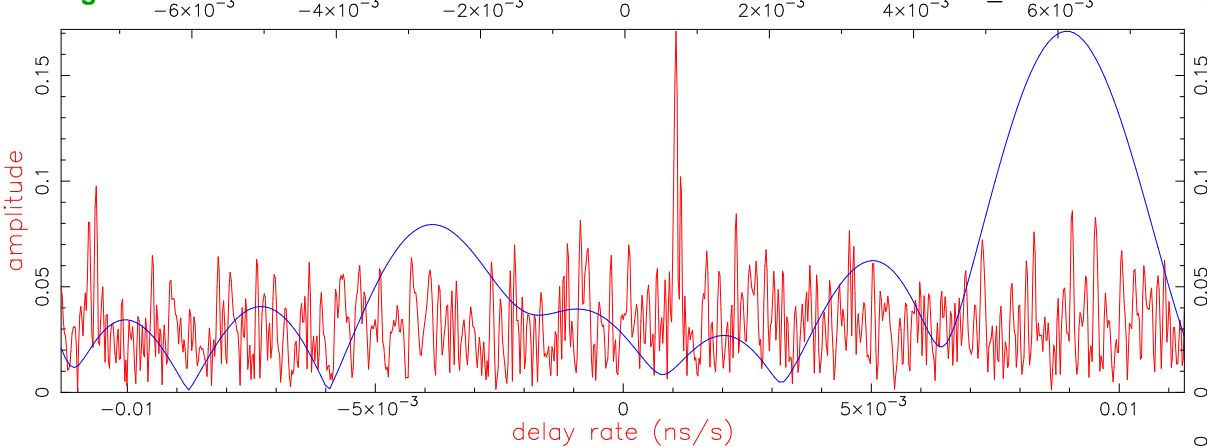
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nX

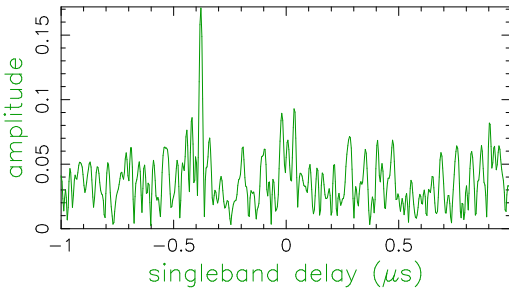
VLBA_NL - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

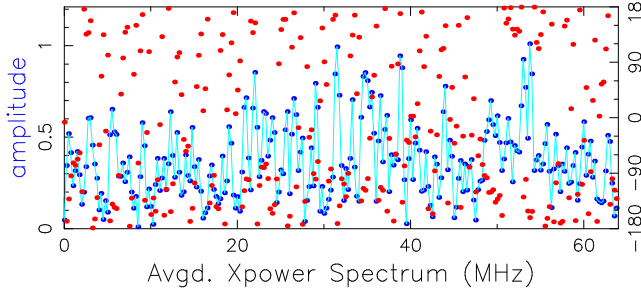


Fringe quality 0

SNR 6.3
 Int time 179.962
 Amp 0.172
 Phase 83.4
 PFD 4.4e-02
 Delays (us)
 SBD -0.379437
 MBD 0.006088
 Fringe rate (Hz)
 0.091899
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

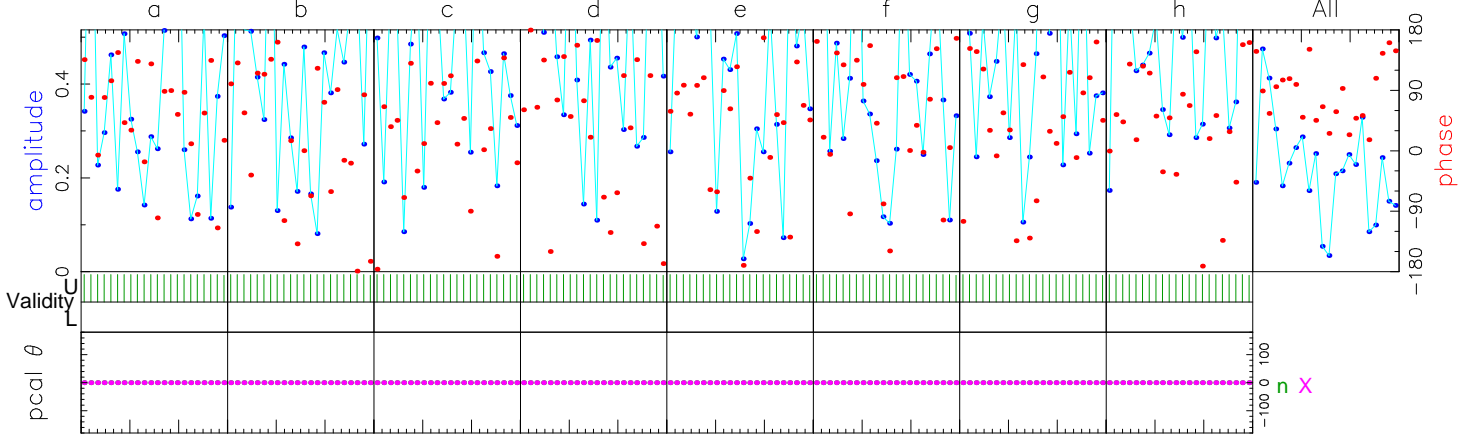


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155303
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec)(sbd)	7.01489736215E+03	Apriori delay (usec)	7.01528189940E+03	Resid mbdelay (usec)	6.08776E-03	+/-	1.7E-04
Sband delay (usec)	7.01490246215E+03	Apriori clock (usec)	-4.8161751E+01	Resid sbdelay (usec)	-3.79437E-01	+/-	1.4E-03
Phase delay (usec)	7.01528190208E+03	Apriori clockrate (us/s)	-2.8000009E-08	Resid phdelay (usec)	2.68847E-06	+/-	5.9E-07
Delay rate (us/s)	1.05831320972E+00	Apriori rate (us/s)	1.05831214286E+00	Resid rate (us/s)	1.06686E-06	+/-	5.7E-09
Total phase (deg)	16.4	Apriori accel (us/s/s)	-4.96165497303E-05	Resid phase (deg)	83.4	+/-	18.2

ph/seg (deg)	44.0	Theor.	42.8	Amplitude	0.172 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	67.1	Search (1024X32)	0.167	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	23.5	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	28.8	Inc. seg. avg.	0.172	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.165	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00	

n: az 93.6 el 69.1 pa -69.0 X: az 282.7 el 37.4 pa 41.3 u,v (fr/asec) -7654.930 -4162.785 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX.W.262.1HXP48

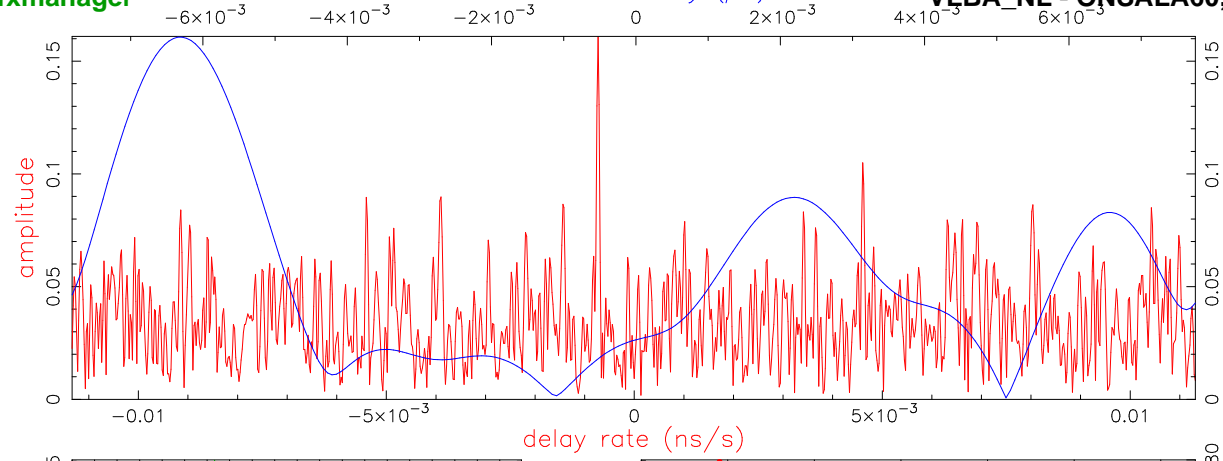
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nX

VLBA_NL - ONSALA60, fgroup W, pol LR

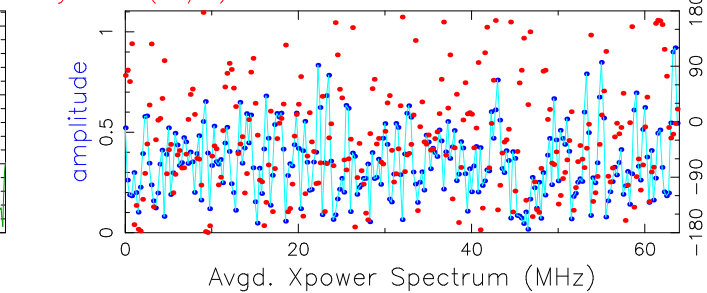
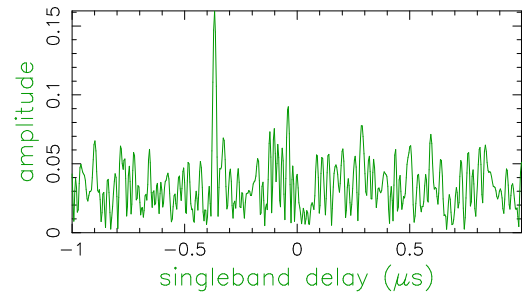
multiband delay (μ s)



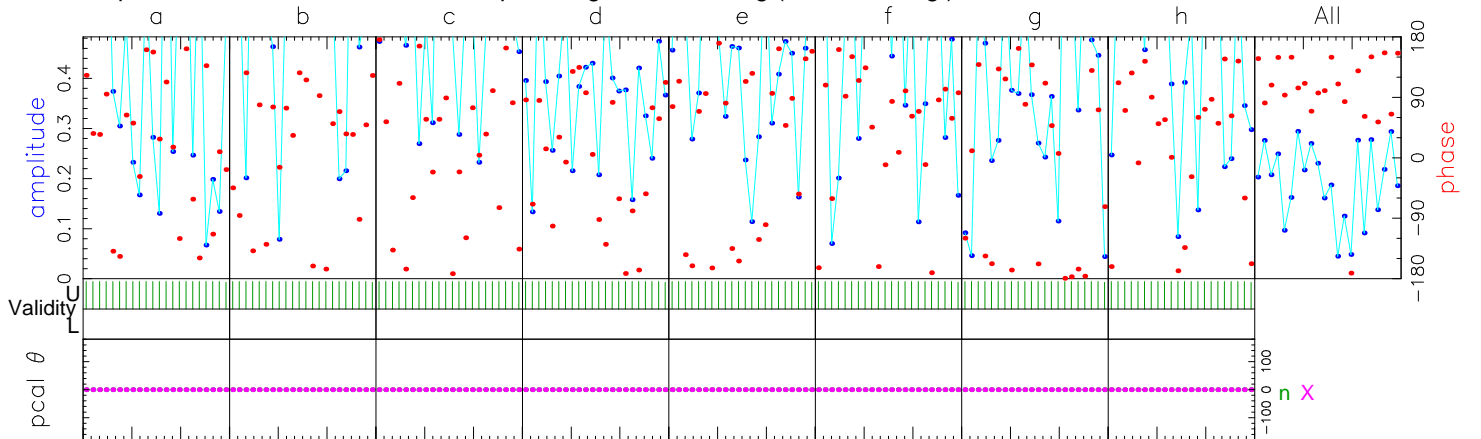
Fringe quality 0

SNR 5.9
 Int time 179.962
 Amp 0.161
 Phase 113.4
 PFD 3.8e-01
 Delays (us)
 SBD -0.367276
 MBD -0.006314
 Fringe rate (Hz)
 -0.062929
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155305
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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
	117.3	101.8	104.7	62.9	149.6	99.1	152.8	78.9	Phase	113.4
	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	Ampl.	0.2
	418.8	426.9	44.3	43.7	163.8	224.4	111.1	56.5	Sbd box	163.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	7.01491621035E+03	Apriori delay (usec)	7.01528189940E+03	Resid mbdelay (usec)	-6.31404E-03	+/-	1.8E-04
Sband delay (usec)	7.01491462390E+03	Apriori clock (usec)	-4.8161751E+01	Resid sbdelay (usec)	-3.67276E-01	+/-	1.5E-03
Phase delay (usec)	7.01528190305E+03	Apriori clockrate (us/s)	-2.8000009E-08	Resid phdelay (usec)	3.65751E-06	+/-	6.3E-07
Delay rate (us/s)	1.05831141232E+00	Apriori rate (us/s)	1.05831214286E+00	Resid rate (us/s)	-7.30543E-07	+/-	6.0E-09
Total phase (deg)	46.5	Apriori accel (us/s/s)	-4.96165497303E-05	Resid phase (deg)	113.4	+/-	19.4

ph/seg (deg)	RMS 36.6	Theor. 45.6	Amplitude Search (1024X32)	0.161 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	51.3	79.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	34.3	27.5	Inc. seg. avg.	0.147	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	40.0	48.0	Inc. frq. avg.	0.166	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 93.6 el 69.1 pa -69.0 X: az 282.7 el 37.4 pa 41.3 u,v (fr/asec) -7654.930 -4162.785 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX.W.279.1HXP48

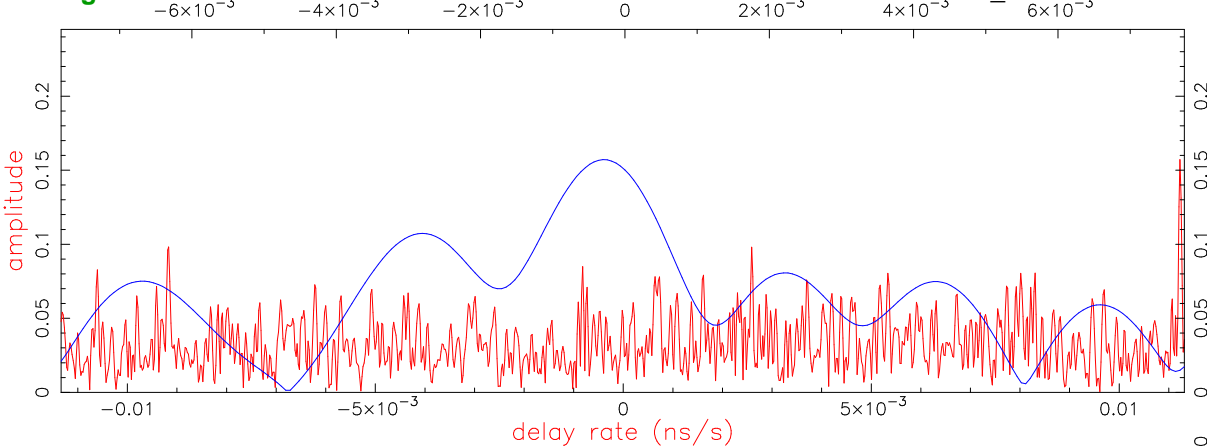
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nX

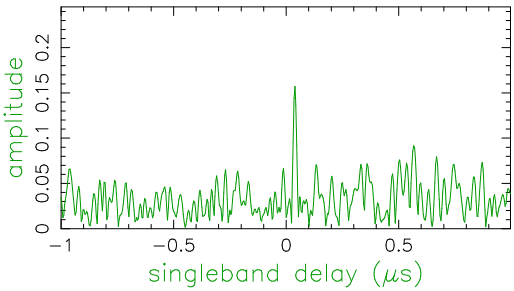
VLBA_NL - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

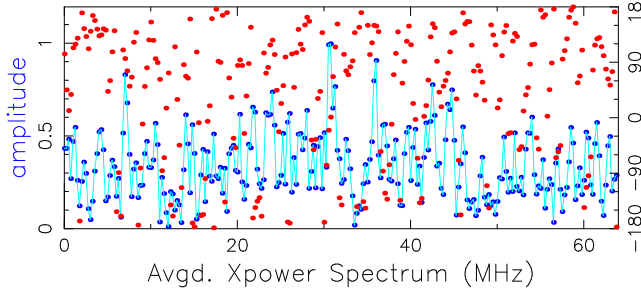


Fringe quality 0

SNR 5.8
 Int time 179.962
 Amp 0.245
 Phase -157.5
 PFD 6.3e-01
 Delays (us)
 SBD 0.038658
 MBD -0.000308
 Fringe rate (Hz)
 0.968580
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

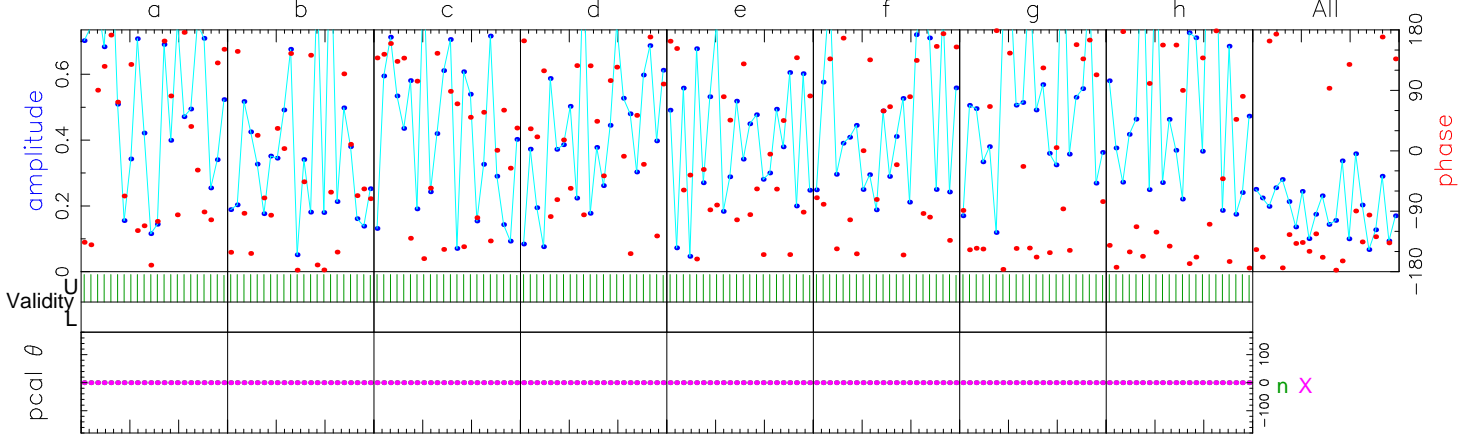


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155307
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	7.01531284134E+03	Apriori delay (usec)	7.01528189940E+03	Resid mbdelay (usec)	-3.08059E-04	+/-	1.9E-04
Sband delay (usec)	7.01532055715E+03	Apriori clock (usec)	-4.8161751E+01	Resid sbdelay (usec)	3.86578E-02	+/-	1.5E-03
Phase delay (usec)	7.01528189432E+03	Apriori clockrate (us/s)	-2.8000009E-08	Resid phdelay (usec)	-5.07799E-06	+/-	6.4E-07
Delay rate (us/s)	1.05832338711E+00	Apriori rate (us/s)	1.05831214286E+00	Resid rate (us/s)	1.12442E-05	+/-	6.2E-09
Total phase (deg)	135.6	Apriori accel (us/s/s)	-4.96165497303E-05	Resid phase (deg)	-157.5	+/-	19.9

ph/seg (deg)	42.3	Theor.	46.6	Amplitude	0.245 +/- 0.042	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	55.7		81.3	Search (1024X32)	0.154	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	66.5		28.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	68.9		49.0	Inc. seg. avg.	0.232	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011			
				Inc. frq. avg.	0.255	Data rate (Mb/s):	2048	nlags:	256	t_cohere infinite	ion window (TEC)	0.00 0.00

n: az 93.6 el 69.1 pa -69.0 X: az 282.7 el 37.4 pa 41.3 u,v (fr/asec) -7654.930 -4162.785 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nX.W.302.1HXP48

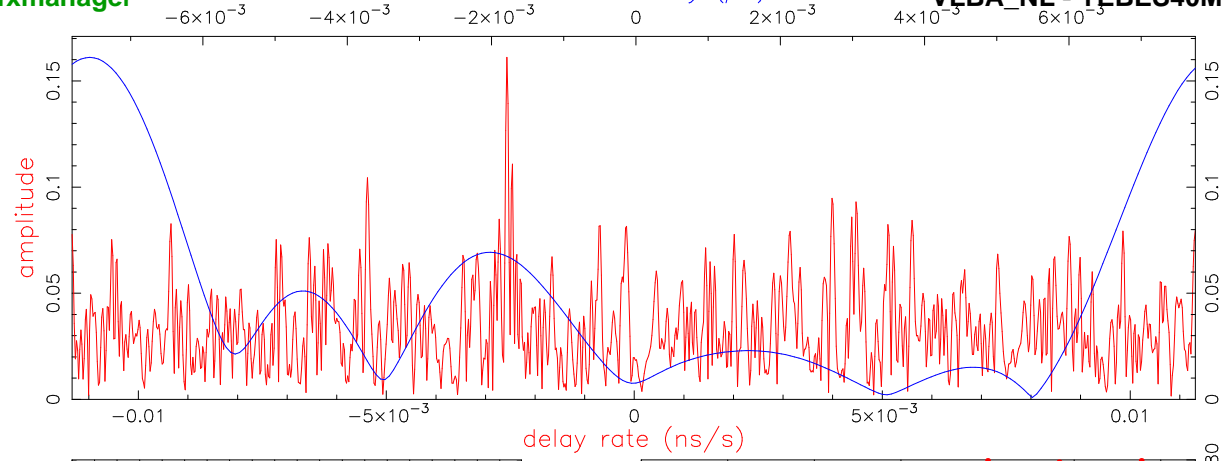
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

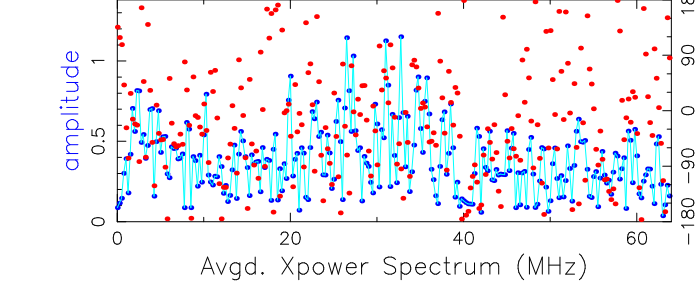
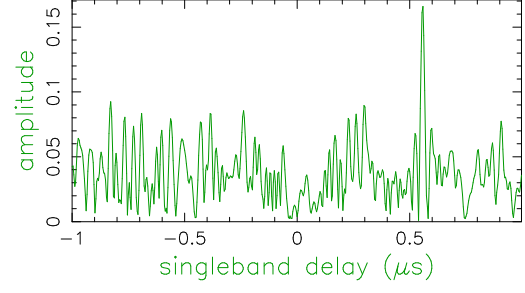
2013+370.1HXP48, No0219, nY

VLBA_NL - YEBES40M, fgroup W, pol LL

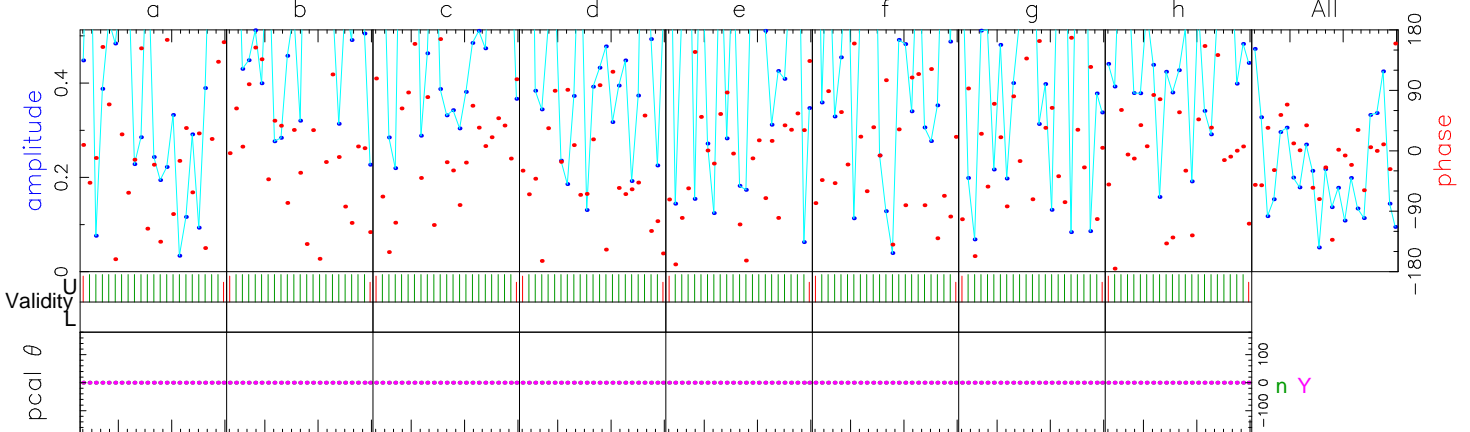
multiband delay (μ s)



Fringe quality 0
 SNR 5.8
 Int time 162.107
 Amp 0.171
 Phase -5.4
 PFD 5.1e-01
 Delays (us)
 SBD 0.557330
 MBD -0.007566
 Fringe rate (Hz)
 -0.221999
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232016.90
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155301
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	5.54314185607E+03	Apriori delay (usec)		5.54258692236E+03	Resid mbdelay (usec)		-7.56630E-03	+/-	1.9E-04	
Sband delay (usec)	5.54314425286E+03	Apriori clock (usec)		-1.1526613E+01	Resid sbdelay (usec)		5.57330E-01	+/-	1.5E-03	
Phase delay (usec)	5.54258692219E+03	Apriori clockrate (us/s)		3.8000001E-07	Resid phdelay (usec)		-1.74667E-07	+/-	6.3E-07	
Delay rate (us/s)	1.23977988904E+00	Apriori rate (us/s)		1.23978246622E+00	Resid rate (us/s)		-2.57718E-06	+/-	6.7E-09	
Total phase (deg)		171.9	Apriori accel (us/s/s)		-2.84196610324E-05	Resid phase (deg)		-5.4	+/-	19.7

ph/seg (deg)	53.8	Theor. 47.1	Amplitude	0.171 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		sb window (us)	-1.000	1.000
amp/seg (%)	70.7	82.3	Search (1024X32)	0.159	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled		mb window (us)	-0.008	0.008
ph/frq (deg)	30.0	27.8	Inc. seg. avg.	0.167	Bits/sample: 2x2	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	30.7	48.5	Inc. frq. avg.	0.159	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00

n: az 93.6 el 69.1 pa -69.0 Y: az 287.1 el 42.7 pa 65.7 u,v (fr/asec) -8941.603 -1528.623 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY.W.249.1HXP48

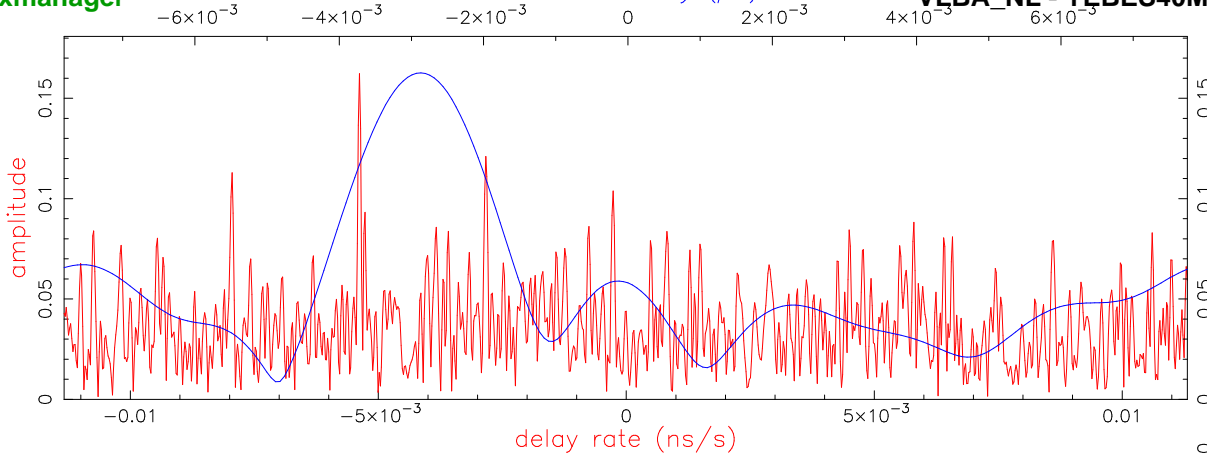
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nY

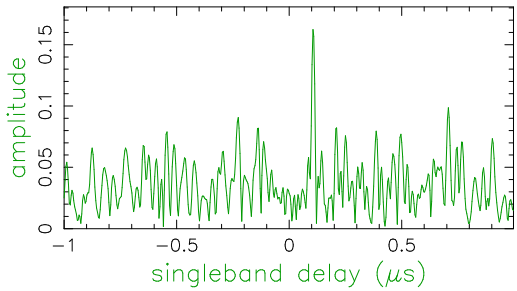
VLBA_NL - YEBES40M, fgroup W, pol RR

multiband delay (μ s)

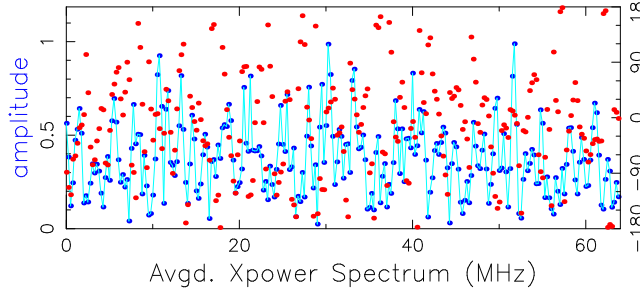


Fringe quality 0

SNR 5.7
 Int time 162.107
 Amp 0.181
 Phase 173.2
 PFD 7.2e-01
 Delays (us)
 SBD 0.106818
 MBD -0.002802
 Fringe rate (Hz)
 -0.464916
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

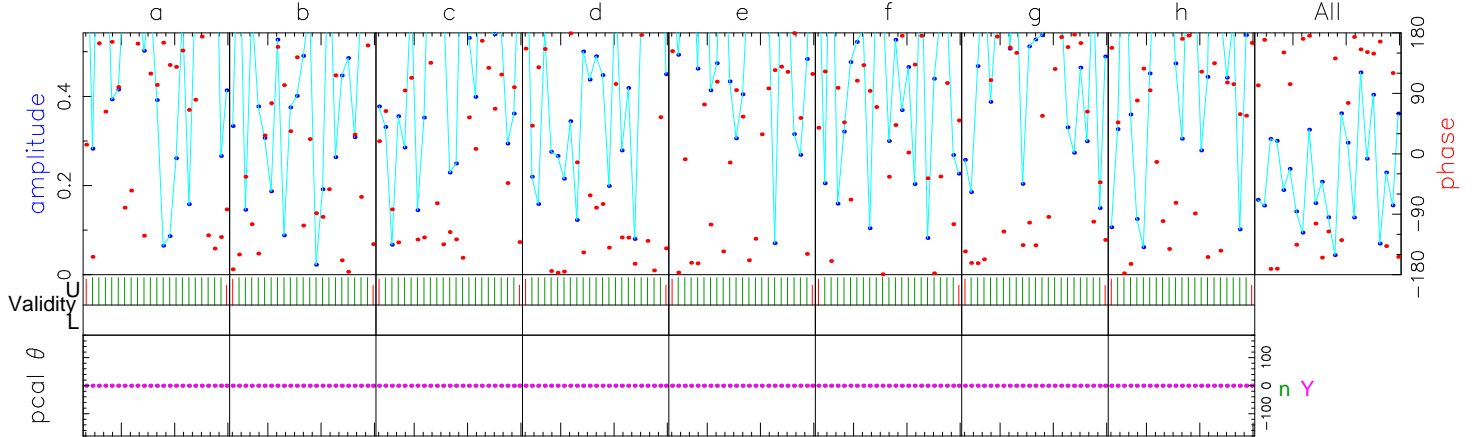


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232016.90
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155303
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0			
n	1000	1000	1000	1000	1000	1000	1000	1000			
Y	1000	1000	1000	1000	1000	1000	1000	1000			
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
n	1000	1000	1000	1000	1000	1000	1000	1000			
Y	1000	1000	1000	1000	1000	1000	1000	1000			
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		5.54269349557E+03			5.54258692236E+03				Resid mbdelay (usec)	-2.80180E-03	+/- 1.9E-04
Sband delay (usec)		5.54269374086E+03			-1.1526613E+01				Resid sbdelay (usec)	1.06818E-01	+/- 1.5E-03
Phase delay (usec)		5.54258692795E+03			3.8000001E-07				Resid phdelay (usec)	5.58655E-06	+/- 6.5E-07
Delay rate (us/s)		1.23977706901E+00			1.23978246622E+00				Resid rate (us/s)	-5.39721E-06	+/- 6.8E-09
Total phase (deg)			350.5		-2.84196610324E-05				Resid phase (deg)	173.2	+/- 20.0
RMS		Theor.		Amplitude	0.181 +/- 0.032				PCal mode: MANUAL, MANUAL		
ph/seg (deg)	45.9	48.0		Search (1024X32)	0.160				PCal rate: 0.000E+00, 0.000E+00 (us/s)		
amp/seg (%)	74.7	83.8		Interp.	0.000				SampCntNorm: enabled	sb window (us)	-1.000 1.000
ph/frq (deg)	33.9	28.3		Inc. seg. avg.	0.182				Sample rate(MISamp/s): 128	mb window (us)	-0.008 0.008
amp/frq (%)	31.8	49.4		Inc. frq. avg.	0.177				Data rate(Mb/s): 2048	dr window (ns/s)	-0.011 0.011
n: az 93.6 el 69.1 pa -69.0				Y: az 287.1 el 42.7 pa 65.7					Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00
Control file: cf_1234_gmva				Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY..1HXP48					nlags: 256	t_cohere infinite	
											simultaneous interpolator
											Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY.W.263.1HXP48

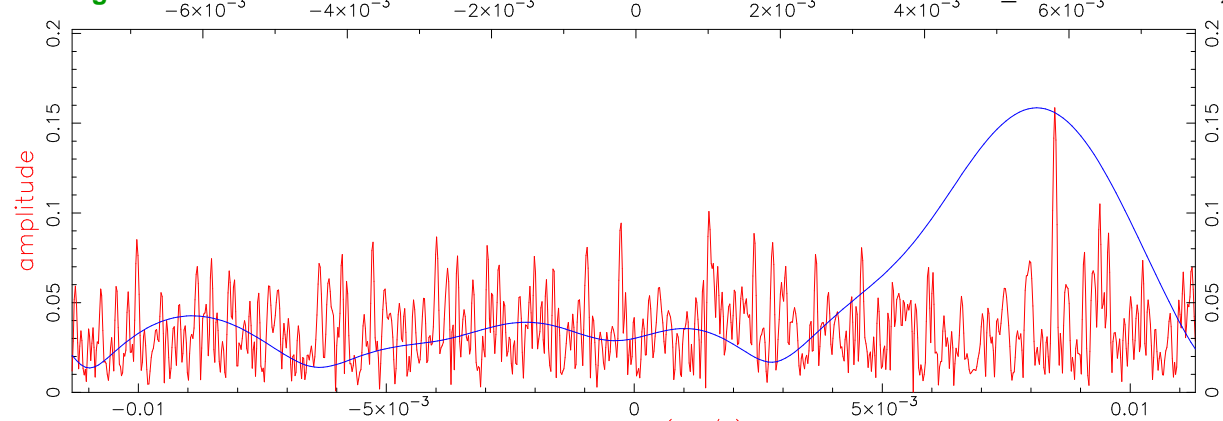
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, nY

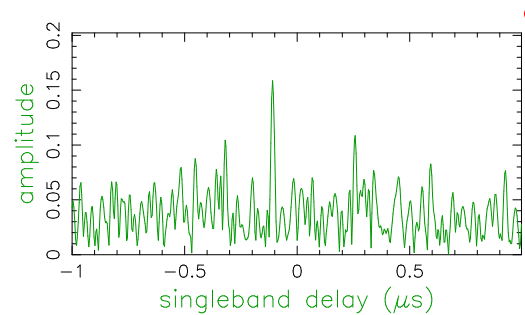
VLBA_NL - YESES40M, fgroup W, pol LR

multiband delay (μ s)

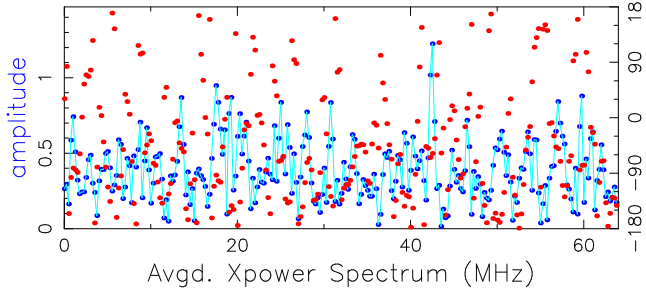


Fringe quality 0

SNR 5.5
 Int time 162.107
 Amp 0.202
 Phase 36.7
 PFD 9.8e-01
 Delays (us)
 SBD -0.109104
 MBD 0.005563
 Fringe rate (Hz)
 0.732393
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

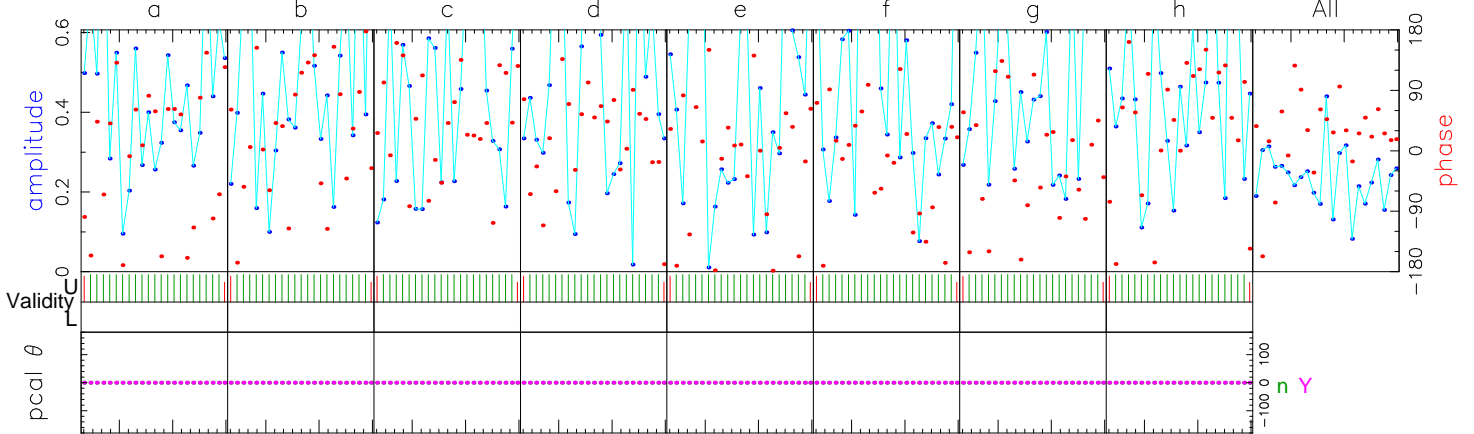


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232016.90
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155305
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	5.54248311005E+03	Apriori delay (usec)	5.54258692236E+03	Resid mbdelay (usec)	5.56269E-03	+/-	2.0E-04
Sband delay (usec)	5.54247781786E+03	Apriori clock (usec)	-1.1526613E+01	Resid sbdelay (usec)	-1.09104E-01	+/-	1.6E-03
Phase delay (usec)	5.54258692355E+03	Apriori clockrate (us/s)	3.8000001E-07	Resid phdelay (usec)	1.18435E-06	+/-	6.7E-07
Delay rate (us/s)	1.23979096858E+00	Apriori rate (us/s)	1.23978246622E+00	Resid rate (us/s)	8.50236E-06	+/-	7.1E-09
Total phase (deg)	214.0	Apriori accel (us/s/s)	-2.84196610324E-05	Resid phase (deg)	36.7	+/-	20.7

ph/seg (deg)	54.9	RMS	54.9	Theor.	49.7	Amplitude	0.202 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	68.1	Search (1024X32)	0.157	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	Interp.	0.000	sb window (us)	-1.000	1.000		
ph/frq (deg)	38.2	Inc. seg. avg.	0.220	Bits/sample:	2x2	Inc. frq. avg.	0.200	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	45.4	Inc. frq. avg.	0.200	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011	0.011
n: az 93.6 el 69.1 pa -69.0	Y: az 287.1 el 42.7 pa 65.7	u, v (fr/asec)	-8941.603 -1528.623			ion window (TEC)	0.00	0.00				simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY.W.278.1HXP48

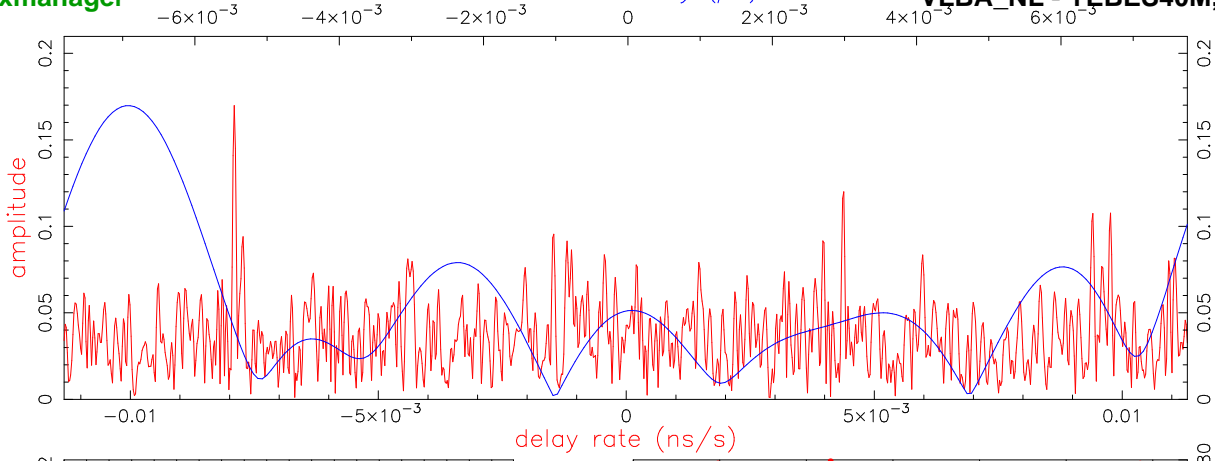
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

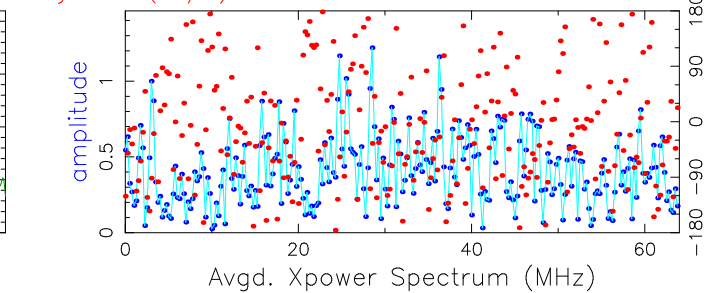
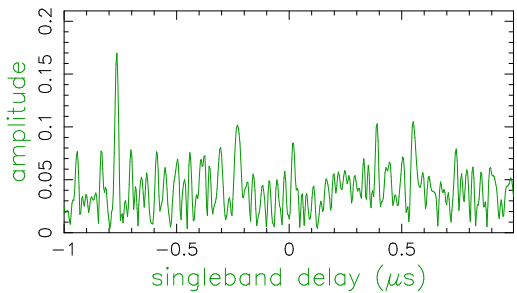
2013+370.1HXP48, No0219, nY

VLBA_NL - YEYES40M, fgroup W, pol RL

multiband delay (μ s)

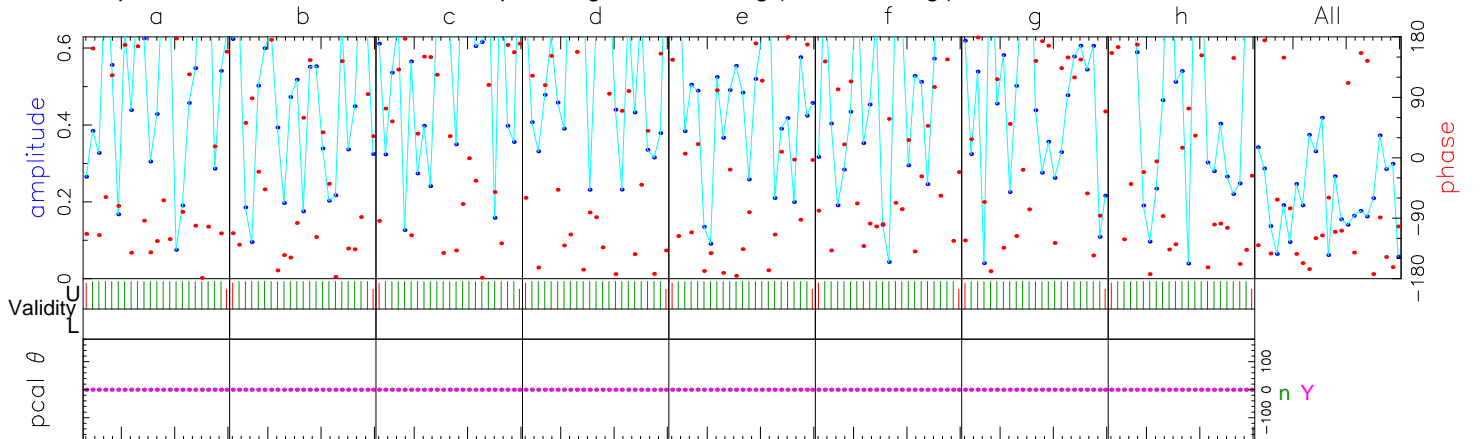


Fringe quality 0
 SNR 5.9
 Int time 162.107
 Amp 0.210
 Phase -143.8
 PFD 3.3e-01
 Delays (us)
 SBD -0.766247
 MBD -0.006930
 Fringe rate (Hz)
 -0.681792
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232016.90
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155306
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

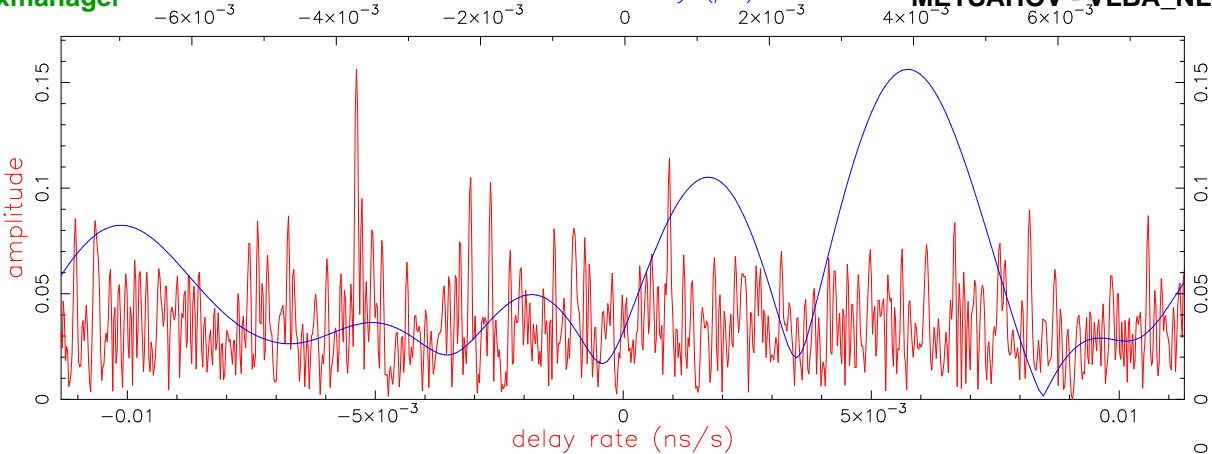
Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-132.8	-135.8	178.7	-164.6	-158.2	-93.7	-159.7	-136.6	Phase	-143.8
	0.4	0.2	0.1	0.3	0.2	0.2	0.2	0.2	Ampl.	0.2
	59.7	418.3	145.3	464.1	156.6	384.1	467.4	344.4	Sbd box	60.8
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.54181436736E+03		Apriori delay (usec)		5.54258692236E+03		Resid mbdelay (usec)		-6.93001E-03	+/- 1.8E-04
Sband delay (usec)	5.54182067511E+03		Apriori clock (usec)		-1.1526613E+01		Resid sbdelay (usec)		-7.66247E-01	+/- 1.5E-03
Phase delay (usec)	5.54258691773E+03		Apriori clockrate (us/s)		3.8000001E-07		Resid phdelay (usec)		-4.63782E-06	+/- 6.2E-07
Delay rate (us/s)	1.23977455129E+00		Apriori rate (us/s)		1.23978246622E+00		Resid rate (us/s)		-7.91493E-06	+/- 6.6E-09
Total phase (deg)	33.5		Apriori accel (us/s/s)		-2.84196610324E-05		Resid phase (deg)		-143.8	+/- 19.3

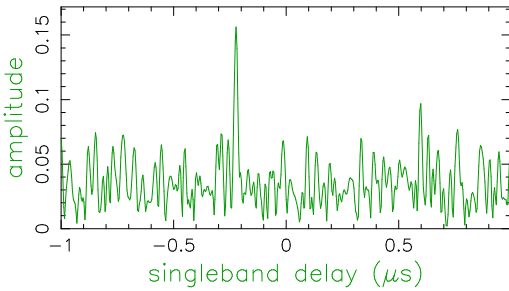
ph/seg (deg) 49.1 46.4 Search (1024X32) 0.164 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 67.5 80.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 29.0 27.3 Inc. seg. avg. 0.205 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.3 47.7 Inc. frq. avg. 0.204 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 93.6 el 69.1 pa -69.0 Y: az 287.1 el 42.7 pa 65.7 u,v (fr/asec) -8941.603 -1528.623 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/nY.W.294.1HXP48

multiband delay (μ s)

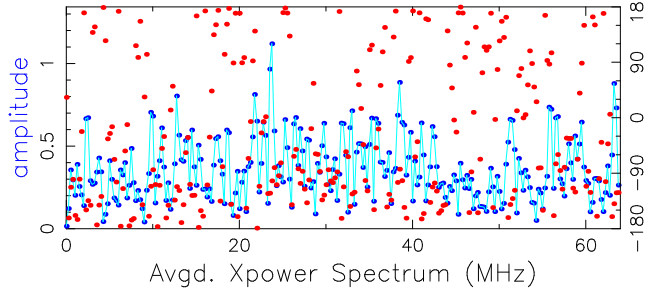


Fringe quality 0

SNR 5.7
 Int time 179.751
 Amp 0.172
 Phase 136.1
 PFD 7.1e-01
 Delays (us)
 SBD -0.223018
 MBD 0.003929
 Fringe rate (Hz)
 -0.463236
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

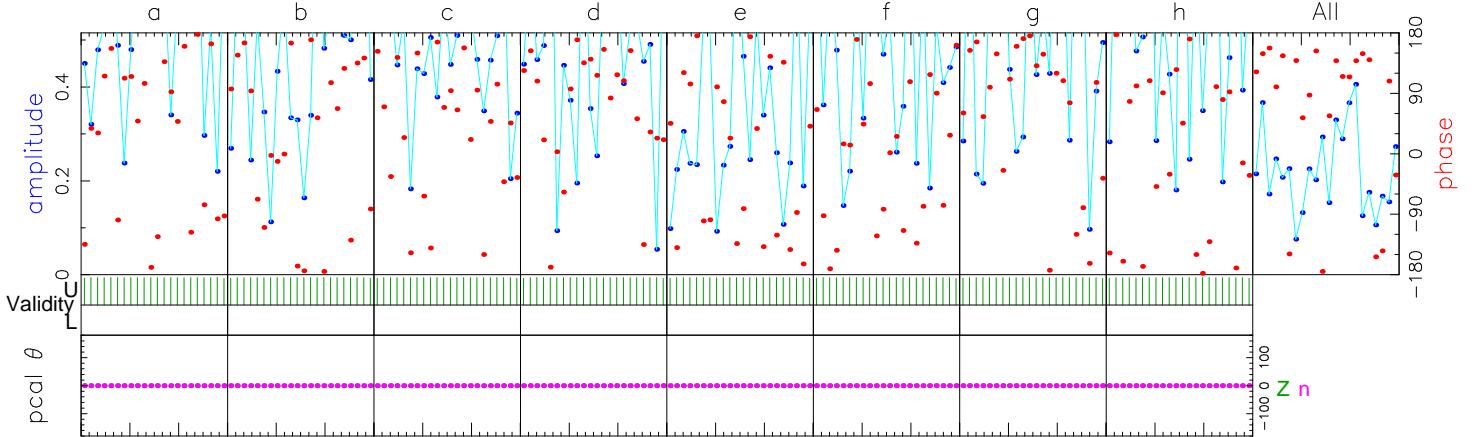


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155309
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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		
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-8.71180441596E+03								3.92881E-03	+/- 1.9E-04
Sband delay (usec)	-8.71179698827E+03								-2.23018E-01	+/- 1.5E-03
Phase delay (usec)	-8.71157396538E+03								4.38725E-06	+/- 6.4E-07
Delay rate (us/s)	-1.02265454218E+00								-5.37771E-06	+/- 6.2E-09
Total phase (deg)			-136.1						136.1	+/- 20.0
	RMS	Theor.	Amplitude	0.172 +/- 0.030					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	55.0	46.9	Search (1024X32)	0.155					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	70.6	81.8	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	44.3	28.3	Inc. seg. avg.	0.184					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	48.9	49.3	Inc. frq. avg.	0.176					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
Z: az 290.2 el 32.0 pa 35.9		n: az 93.6 el 69.1 pa -69.0			u,v (fr/asec) 7406.735 4972.704					simultaneous interpolator

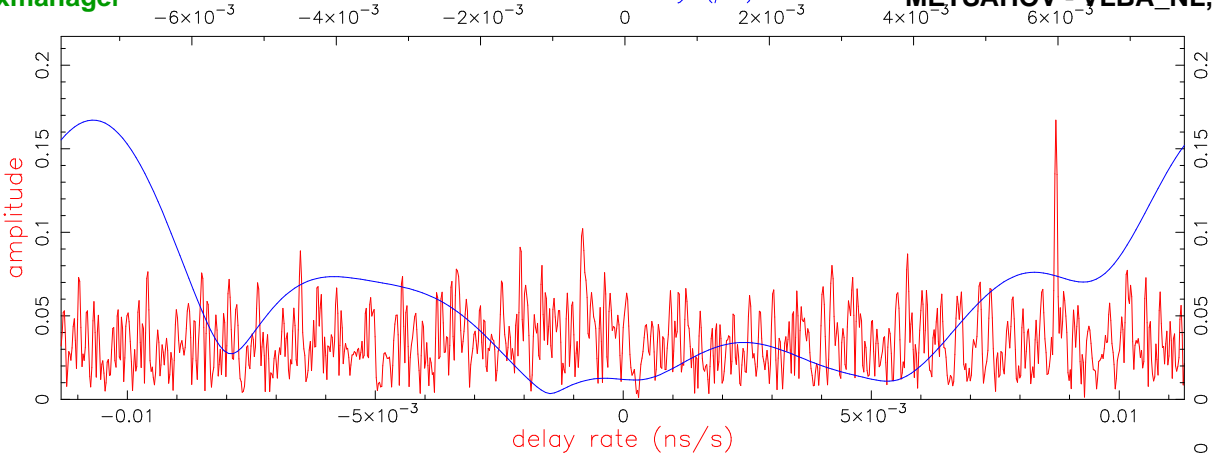
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

2013+370.1HXP48, No0219, Zn

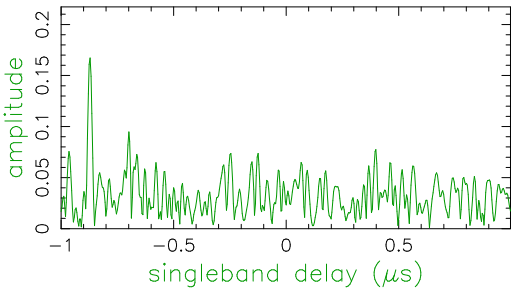
METSAHOV - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)

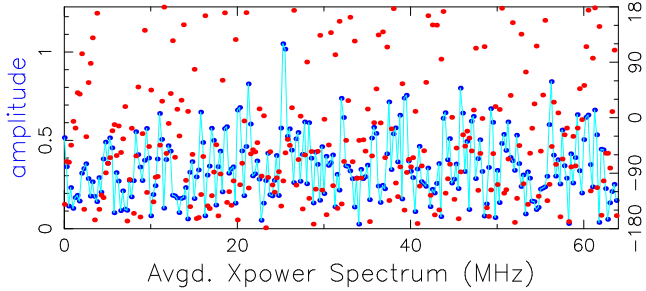


Fringe quality 0

SNR 6.2
 Int time 179.751
 Amp 0.217
 Phase -154.3
 PFD 9.2e-02
 Delays (us)
 SBD -0.872081
 MBD 0.008268
 Fringe rate (Hz)
 0.752412
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

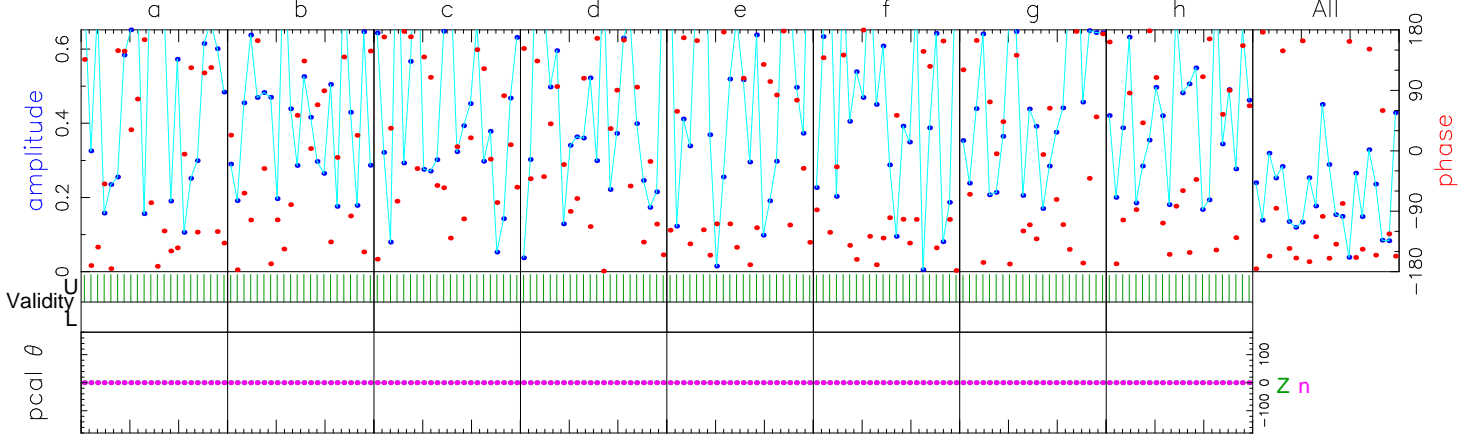


delay rate (ns/s)



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155311
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

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
	-176.1	-147.1	-82.1	-176.7	-149.3	-150.0	-165.1	-170.4	Phase	-154.3
	0.3	0.2	0.1	0.1	0.4	0.4	0.2	0.1	Ampl.	0.2
	260.8	415.5	77.1	314.0	33.8	34.6	217.8	87.0	Sbd box	33.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
Z	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)	-8.71244070188E+03		Apriori delay (usec)		-8.71157396977E+03		Resid mbdelay (usec)		8.26789E-03	+/- 1.8E-04
Sband delay (usec)	-8.71244605052E+03		Apriori clock (usec)		-9.2048645E-03		Resid sbdelay (usec)		-8.72081E-01	+/- 1.4E-03
Phase delay (usec)	-8.71157397474E+03		Apriori clockrate (us/s)		-4.8399999E-07		Resid phdelay (usec)		-4.97606E-06	+/- 6.0E-07
Delay rate (us/s)	-1.02264042971E+00		Apriori rate (us/s)		-1.02264916447E+00		Resid rate (us/s)		8.73476E-06	+/- 5.8E-09
Total phase (deg)			Apriori accel (us/s/s)		6.01284239001E-05		Resid phase (deg)		-154.3	+/- 18.6

ph/seg (deg) 46.9 43.6 Search (1024X32) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.8 76.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 33.3 26.3 Inc. seg. avg. 0.214 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 54.3 45.9 Inc. frq. avg. 0.214 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 290.2 el 32.0 pa 35.9 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 7406.735 4972.704 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/Zn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/Zn.W.332.1HXP48

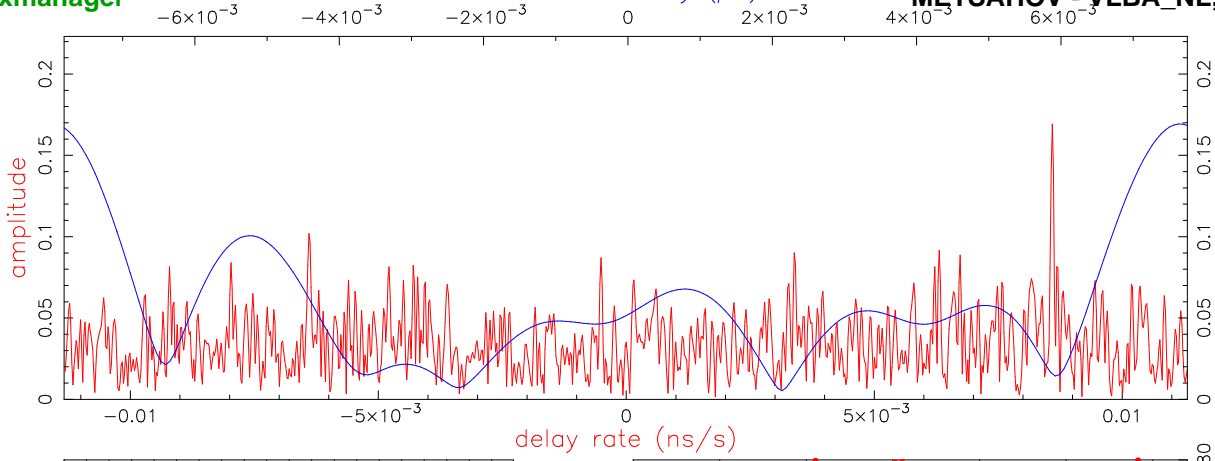
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

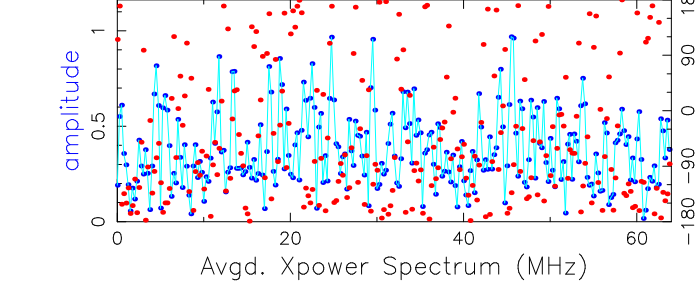
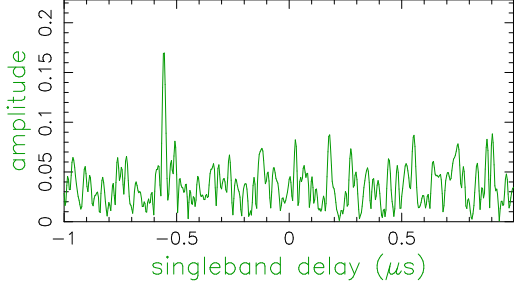
2013+370.1HXP48, No0219, Zn

MEṬSAHOV - VLBA_NL, fgroup W, pol LR

multiband delay (μ s)

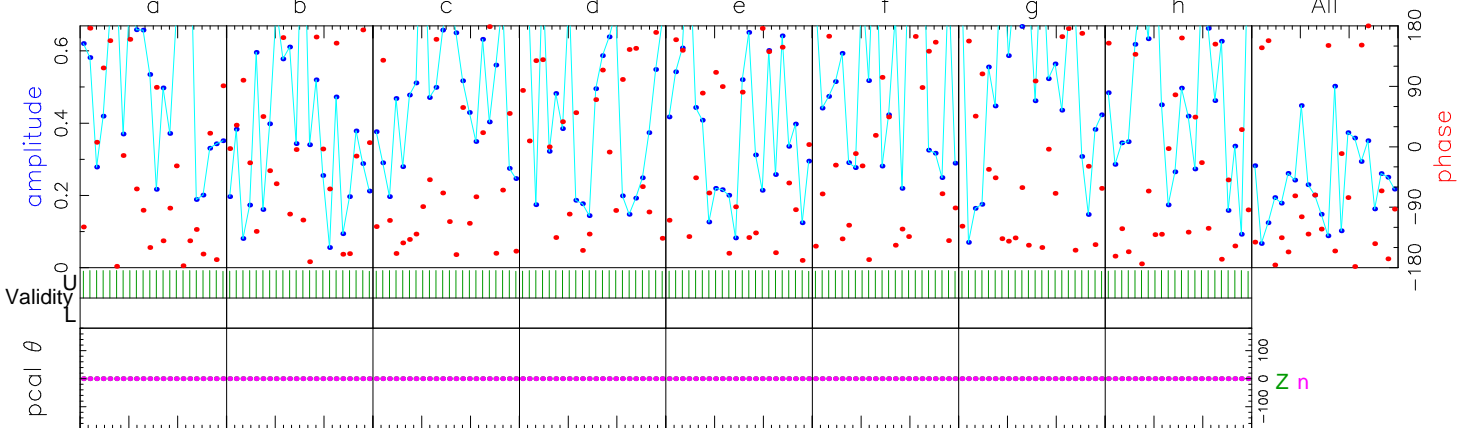


Fringe quality 0
 SNR 6.4
 Int time 179.751
 Amp 0.223
 Phase -137.5
 PFD 2.5e-02
 Delays (us)
 SBD -0.556619
 MBD 0.007680
 Fringe rate (Hz) 0.742072
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 232000.00
 Stop 232300.23
 FRT 232130.00
 Corr/FF/build
 2021:010:040910
 2021:010:155312
 2020:247:085004
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



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
	-150.9	-101.3	-115.8	149.5	-171.2	-144.0	-127.9	-141.8	Phase	-137.5
	0.3	0.1	0.3	0.0	0.2	0.2	0.4	0.3	Ampl.	0.2
	115.6	469.1	152.8	216.2	188.6	457.1	113.5	33.5	Sbd box	114.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-8.71212878989E+03		Apriori delay (usec)		-8.71157396977E+03		Resid mbdelay (usec)		7.67988E-03	+/- 1.7E-04
Sband delay (usec)	-8.71213058852E+03		Apriori clock (usec)		-9.2048645E-03		Resid sbdelay (usec)		-5.56619E-01	+/- 1.4E-03
Phase delay (usec)	-8.71157397420E+03		Apriori clockrate (us/s)		-4.8399999E-07		Resid phdelay (usec)		-4.43387E-06	+/- 5.8E-07
Delay rate (us/s)	-1.02264054974E+00		Apriori rate (us/s)		-1.02264916447E+00		Resid rate (us/s)		8.61472E-06	+/- 5.6E-09
Total phase (deg)			Apriori accel (us/s/s)		6.01284239001E-05		Resid phase (deg)		-137.5	+/- 18.0

ph/seg (deg) 53.8 42.2 Search (1024X32) 0.168 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 75.1 73.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 37.8 25.4 Inc. seg. avg. 0.245 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.8 44.4 Inc. frq. avg. 0.212 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 290.2 el 32.0 pa 35.9 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 7406.735 4972.704 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/Zn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/Zn.W.343.1HXP48

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

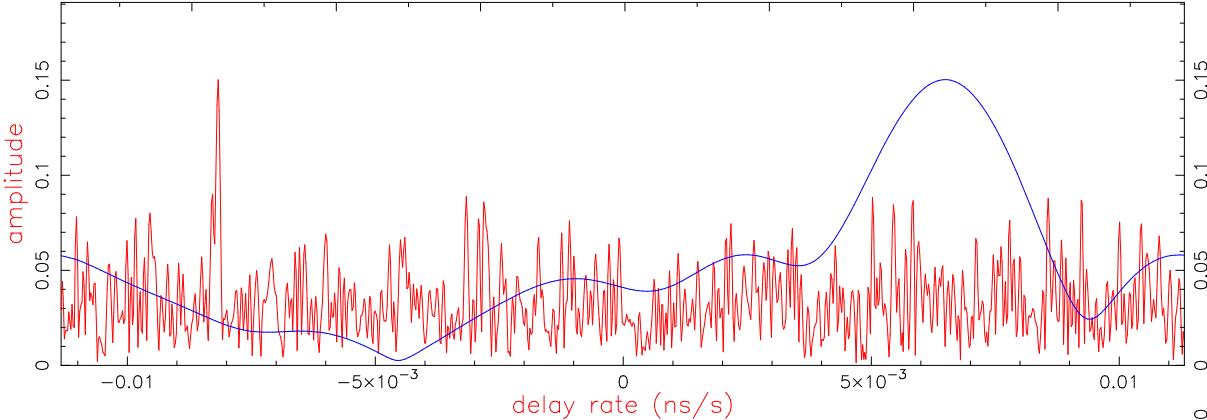
2013+370.1HXP48, No0219, Zn

MEṬSAHOV - VLBA_NL, fgroup W, pol RL

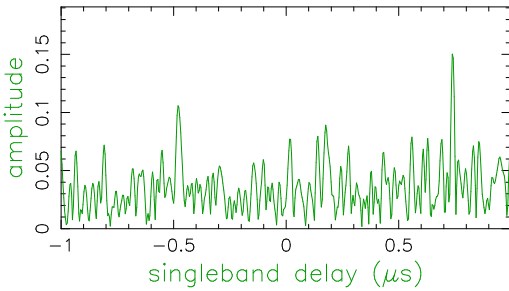
multiband delay (μ s)

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

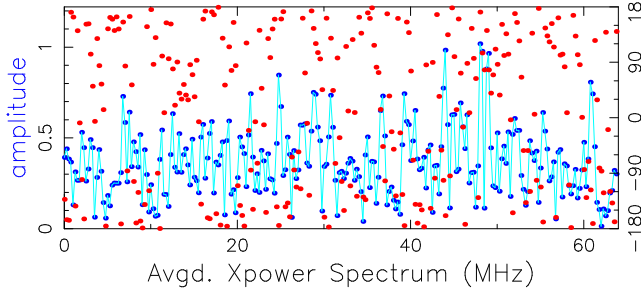
Fringe quality 0



SNR 5.6
Int time 179.751
Amp 0.191
Phase -9.3
PFD 9.4e-01
Delays (us)
SBD 0.739799
MBD 0.004486
Fringe rate (Hz)
-0.705230
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

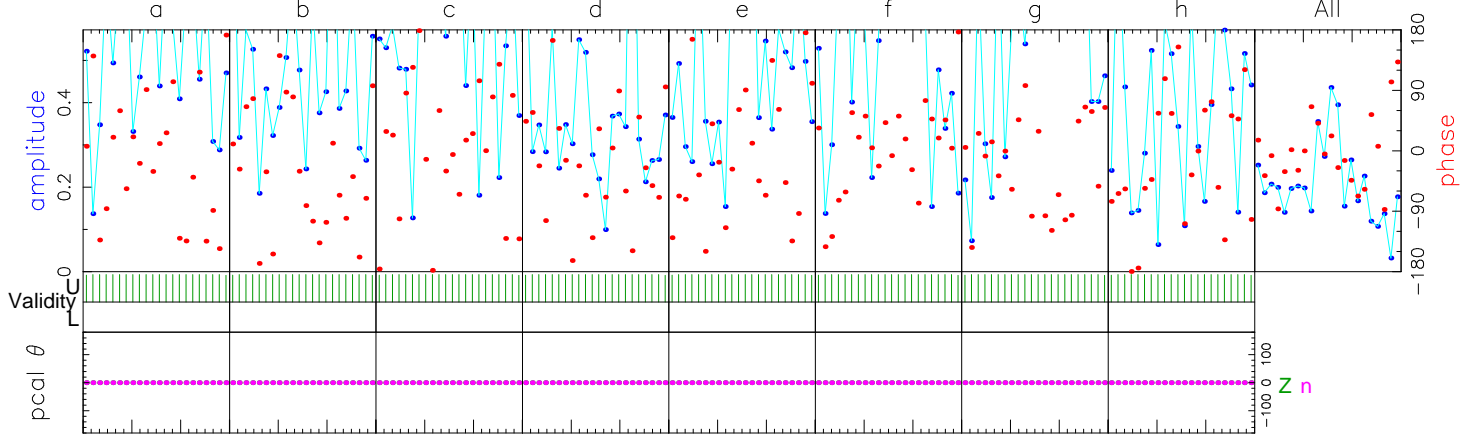


delay rate (ns/s)



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 232000.00
Stop 232300.23
FRT 232130.00
Corr/FF/build
2021:010:040910
2021:010:155314
2020:247:085004
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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
	-28.9	-11.6	26.9	-32.1	-20.9	7.2	-20.5	-34.6	Phase	-9.3
	0.1	0.1	0.2	0.1	0.2	0.4	0.3	0.1	Ampl.	0.2
	294.7	490.1	137.3	260.5	309.9	446.9	96.0	292.0	Sbd box	446.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
Z	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)	-8.71083510873E+03		Apriori delay (usec)		-8.71157396977E+03		Resid mbdelay (usec)		4.48604E-03	+/- 1.9E-04
Sband delay (usec)	-8.71083417102E+03		Apriori clock (usec)		-9.2048645E-03		Resid sbdelay (usec)		7.39799E-01	+/- 1.5E-03
Phase delay (usec)	-8.71157397007E+03		Apriori clockrate (us/s)		-4.8399999E-07		Resid phdelay (usec)		-3.00982E-07	+/- 6.6E-07
Delay rate (us/s)	-1.02265735149E+00		Apriori rate (us/s)		-1.02264916447E+00		Resid rate (us/s)		-8.18702E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		6.01284239001E-05		Resid phase (deg)		-9.3	+/- 20.5

ph/seg (deg) 55.2 48.1 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 70.7 83.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 23.8 29.0 Inc. seg. avg. 0.193 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 53.4 50.6 Inc. frq. avg. 0.177 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 Z: az 290.2 el 32.0 pa 35.9 n: az 93.6 el 69.1 pa -69.0 u,v (fr/asec) 7406.735 4972.704 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202a/v1/v1_3mm/1234/No0219/Zn..1HXP48 Output file: /Exps/c202a/v1/v1_3mm/1234/No0219/Zn.W.352.1HXP48