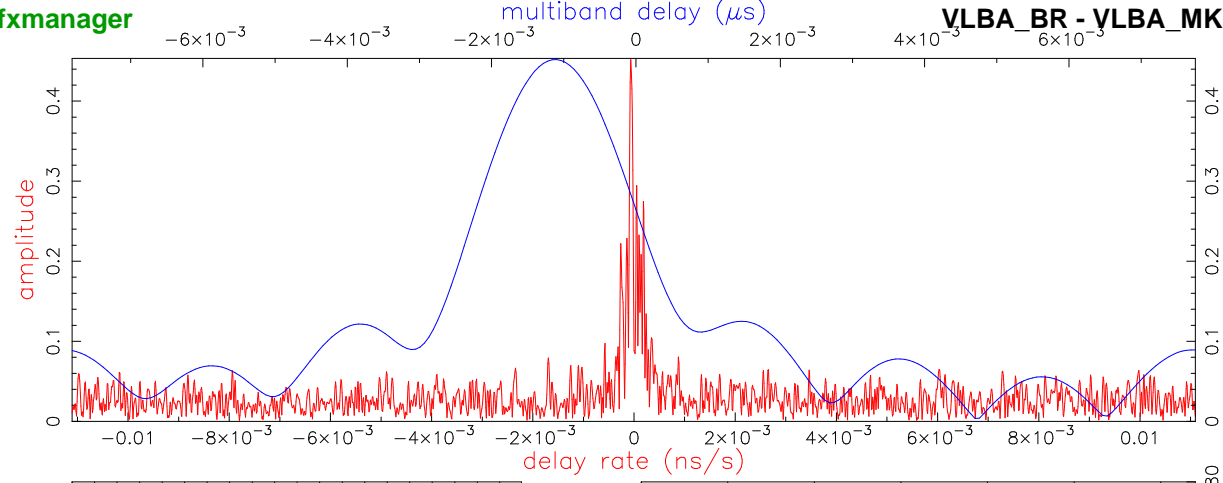


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, bm

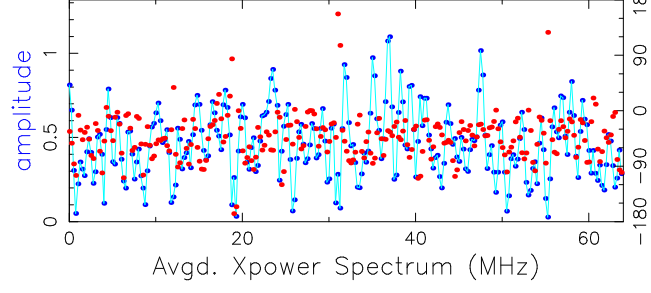
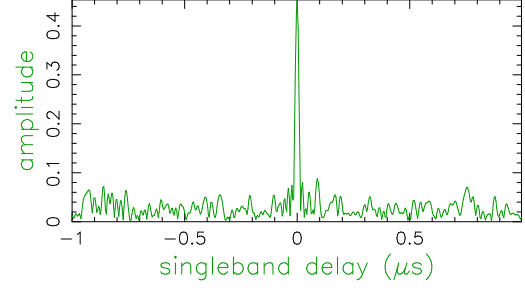
VLBA_BR - VLBA_MK, fgroup W, pol LL



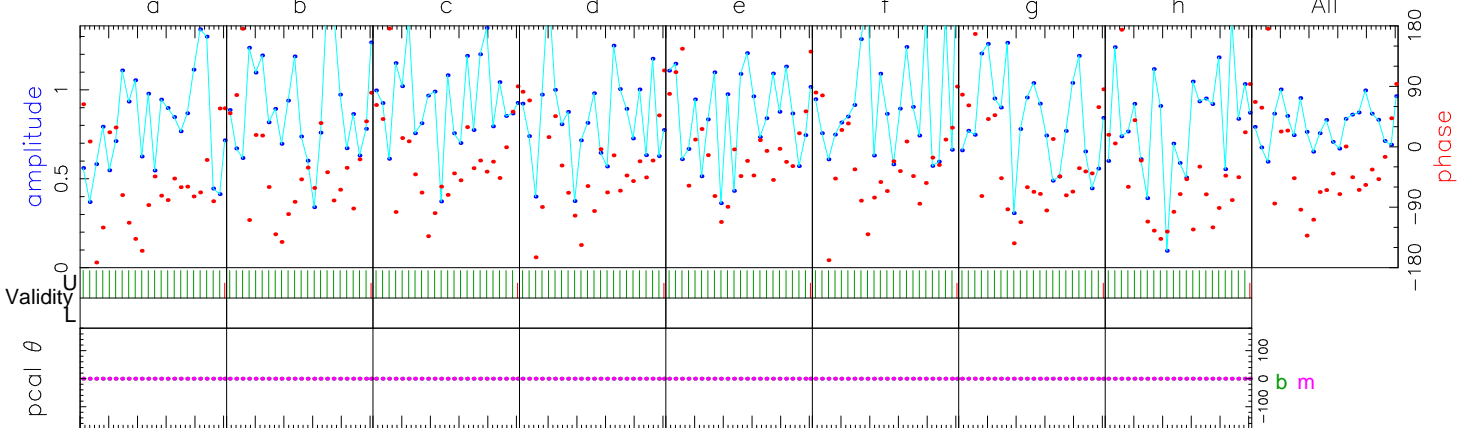
Fringe quality 9

SNR 21.5
Int time 299.953
Amp 0.453
Phase -39.8
PFD 0.0e+00
Delays (us)
SBD -0.000736
MBD -0.001140
Fringe rate (Hz)
-0.005764
Ion TEC 0.000
Ref freq (MHz)
87940.0000
AP (sec) 0.512

Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115500.00
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064331
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-67.5	-47.1	-25.9	-29.8	-13.9	-28.0	-45.5	-66.8	Phase	-39.8
	0.5	0.4	0.6	0.5	0.5	0.5	0.4	0.4	Ampl.	0.5
	256.6	257.3	257.3	256.8	257.3	256.1	256.2	256.0	Sbd box	256.8
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.09906286436E+02		Apriori delay (usec)		-1.09905146912E+02		Resid mbdelay (usec)		-1.13952E-03	+/- 5.1E-05
Sband delay (usec)	-1.09905882662E+02		Apriori clock (usec)		-1.5095385E+01		Resid sbdelay (usec)		-7.35750E-04	+/- 4.0E-04
Phase delay (usec)	-1.09905148169E+02		Apriori clockrate (us/s)		-9.9999991E-08		Resid phdelay (usec)		-1.25742E-06	+/- 1.7E-07
Delay rate (us/s)	-4.91212686089E-01		Apriori rate (us/s)		-4.91212620543E-01		Resid rate (us/s)		-6.55458E-08	+/- 9.7E-10
Total phase (deg)			Apriori accel (us/s/s)		3.08601957380E-05		Resid phase (deg)		-39.8	+/- 5.3

ph/seg (deg) 63.1 12.8 Amplitude 0.453 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 80.4 22.3 Search (2048X32) 0.448 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

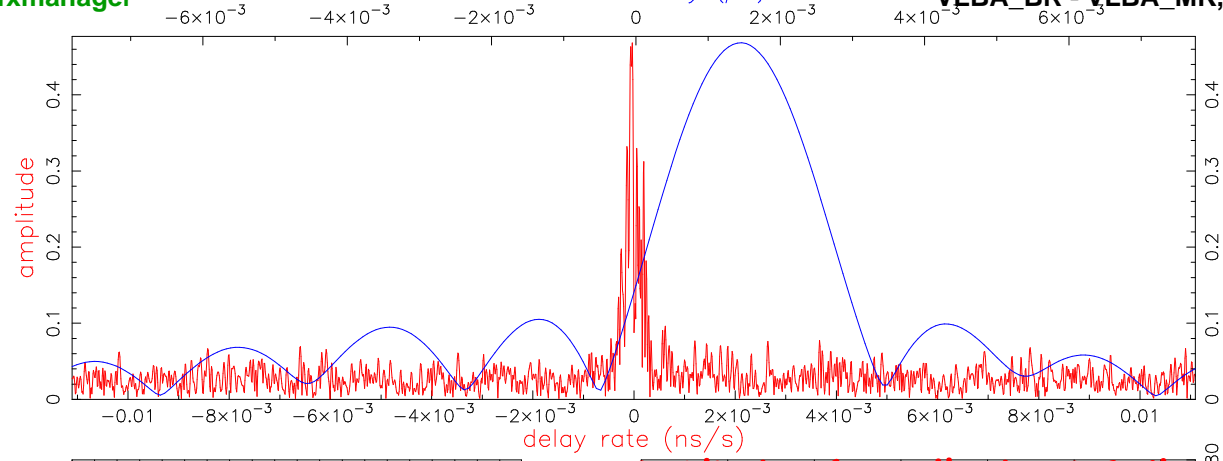
ph/frq (deg) 21.2 7.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 10.0 13.2 Inc. seg. avg. 0.782 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011

b: az 264.0 el 67.9 pa 62.4 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 3879.114 4907.047 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/bm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/bm.W.15.1JFL7R simultaneous interpolator

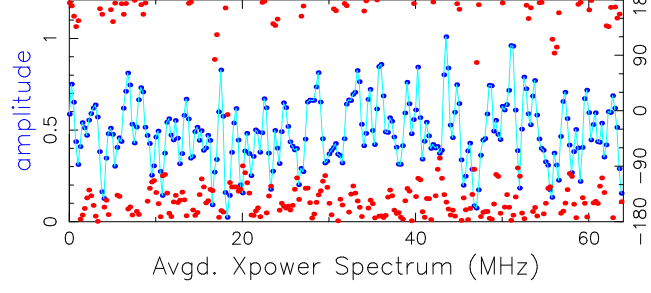
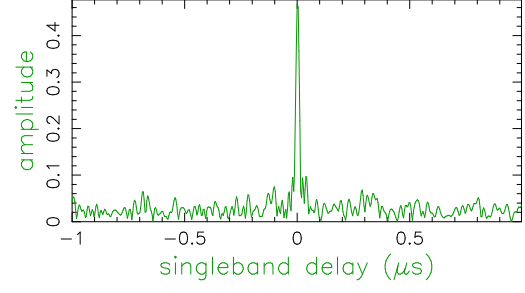
multiband delay (μ s)



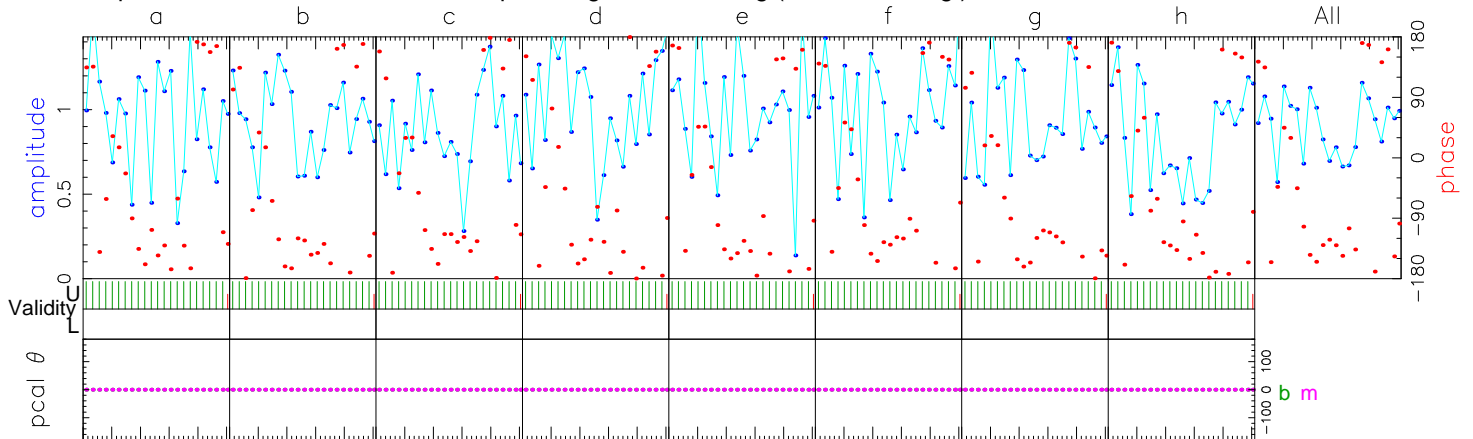
Fringe quality 9

SNR 22.6
Int time 299.953
Amp 0.477
Phase -157.9
PFD 0.0e+00
Delays (us)
SBD 0.001673
MBD 0.001492
Fringe rate (Hz) -0.003244
Ion TEC 0.000
Ref freq (MHz) 87940.0000
AP (sec) 0.512

Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115500.00
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064334
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-152.7	-162.6	-149.5	-157.6	-162.0	-156.9	-154.6	-166.9	Phase	-157.9
	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	Ampl.	0.5
	257.4	257.4	257.2	257.3	257.3	257.3	257.3	258.2	Sbd box	257.4
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.09903655377E+02		Apriori delay (usec)		-1.09905146912E+02		Resid mbdelay (usec)		1.49153E-03	+/- 4.8E-05
Sband delay (usec)	-1.09903474162E+02		Apriori clock (usec)		-1.5095385E+01		Resid sbdelay (usec)		1.67275E-03	+/- 3.8E-04
Phase delay (usec)	-1.09905151898E+02		Apriori clockrate (us/s)		-9.9999991E-08		Resid phdelay (usec)		-4.98655E-06	+/- 1.6E-07
Delay rate (us/s)	-4.91212657435E-01		Apriori rate (us/s)		-4.91212620543E-01		Resid rate (us/s)		-3.68918E-08	+/- 9.3E-10
Total phase (deg)			Apriori accel (us/s/s)		3.08601957380E-05		Resid phase (deg)		-157.9	+/- 5.1

ph/seg (deg) 69.1 12.2 Amplitude 0.477 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 96.4 21.2 Search (2048X32) 0.462 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 6.2 7.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 8.5 12.5 Inc. seg. avg. 0.884 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011

b: az 264.0 el 67.9 pa 62.4 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 3879.114 4907.047 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/bm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/bm.W.35.1JFL7R simultaneous interpolator

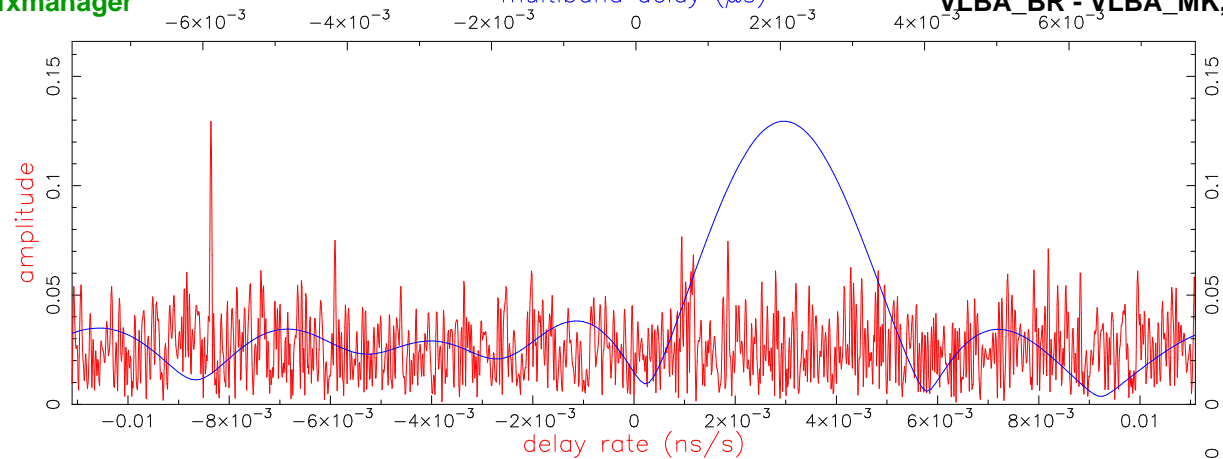
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, bm

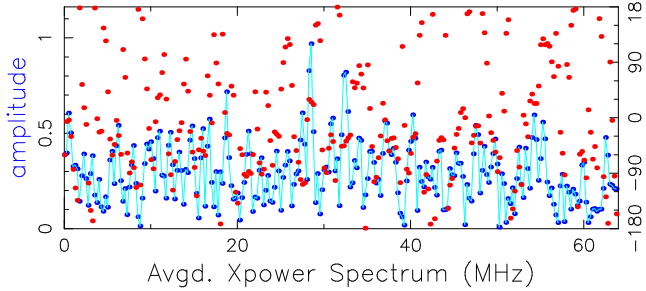
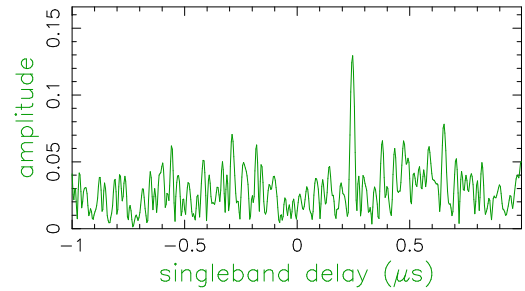
VLBA_BR - VLBA_MK, fgroup W, pol LR

multiband delay (μ s)



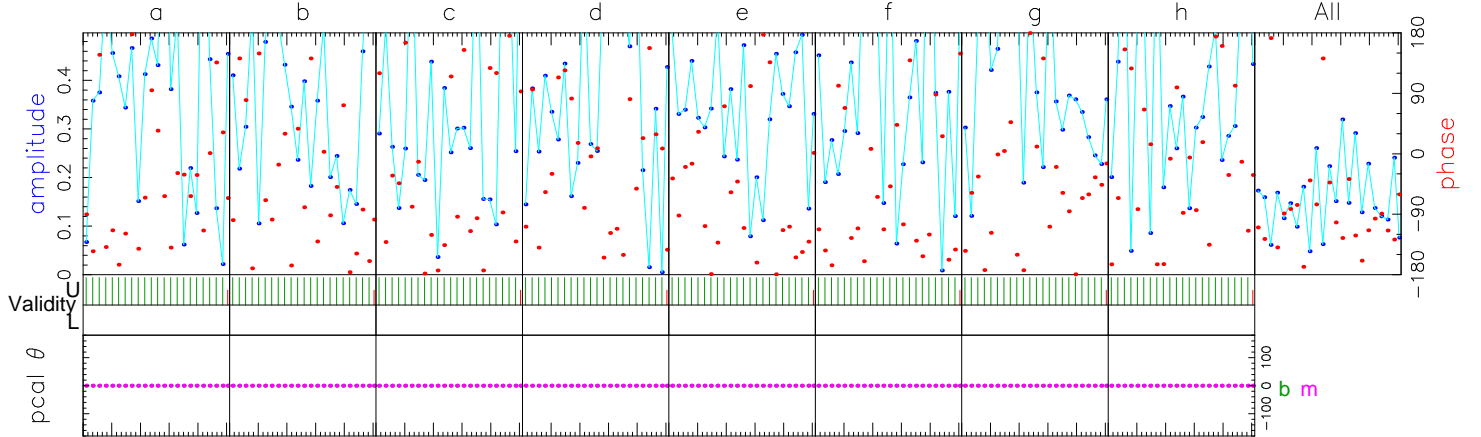
Fringe quality 0

SNR 6.1
 Int time 299.953
 Amp 0.166
 Phase -108.1
 PFD 1.9e-01
 Delays (us)
 SBD 0.245329
 MBD 0.002028
 Fringe rate (Hz)
 -0.736329
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064338
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-103.4	-101.1	-130.5	-86.8	-109.4	-123.8	-75.4	-117.9	Phase	-108.1
	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	Ampl.	0.2
	98.9	372.2	286.5	456.4	351.7	318.0	332.2	151.2	Sbd box	319.8
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.09653118979E+02		Apriori delay (usec)		-1.09905146912E+02		Resid mbdelay (usec)		2.02793E-03	+/- 1.8E-04
Sband delay (usec)	-1.09659817662E+02		Apriori clock (usec)		-1.5095385E+01		Resid sbdelay (usec)		2.45329E-01	+/- 1.4E-03
Phase delay (usec)	-1.09905150326E+02		Apriori clockrate (us/s)		-9.9999991E-08		Resid phdelay (usec)		-3.41489E-06	+/- 5.9E-07
Delay rate (us/s)	-4.91220993621E-01		Apriori rate (us/s)		-4.91212620543E-01		Resid rate (us/s)		-8.37308E-06	+/- 3.4E-09
Total phase (deg)			Apriori accel (us/s/s)		3.08601957380E-05		Resid phase (deg)		-108.1	+/- 18.6

	RMS	Theor.	Amplitude	0.166 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	45.1	44.7	Search (2048X32)	0.128	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	60.1	78.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	20.2	26.4	Inc. seg. avg.	0.158	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	27.0	46.0	Inc. frq. avg.	0.157	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 264.0 el 67.9 pa 62.4 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 3879.114 4907.047 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/bm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/bm.W.56.1JFL7R

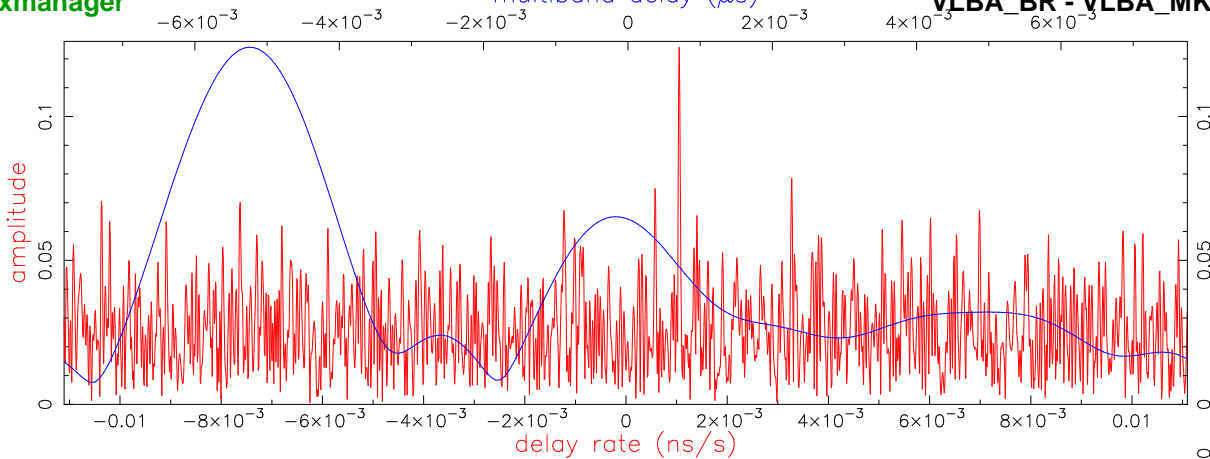
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, bm

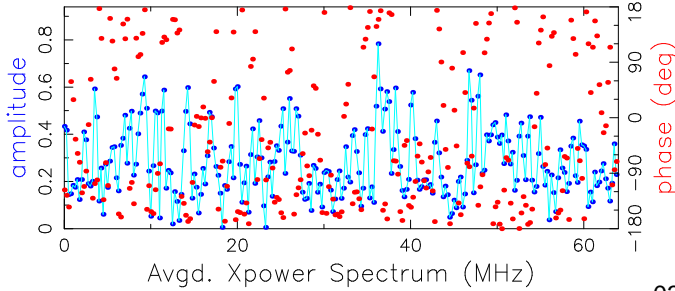
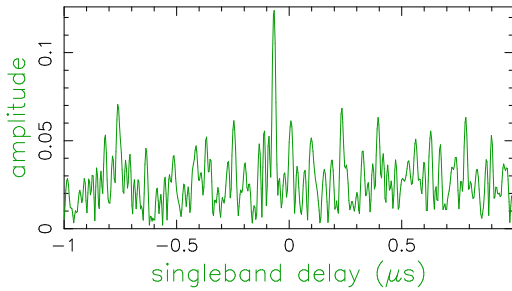
VLBA_BR - VLBA_MK, fgroup W, pol RL

multiband delay (μ s)



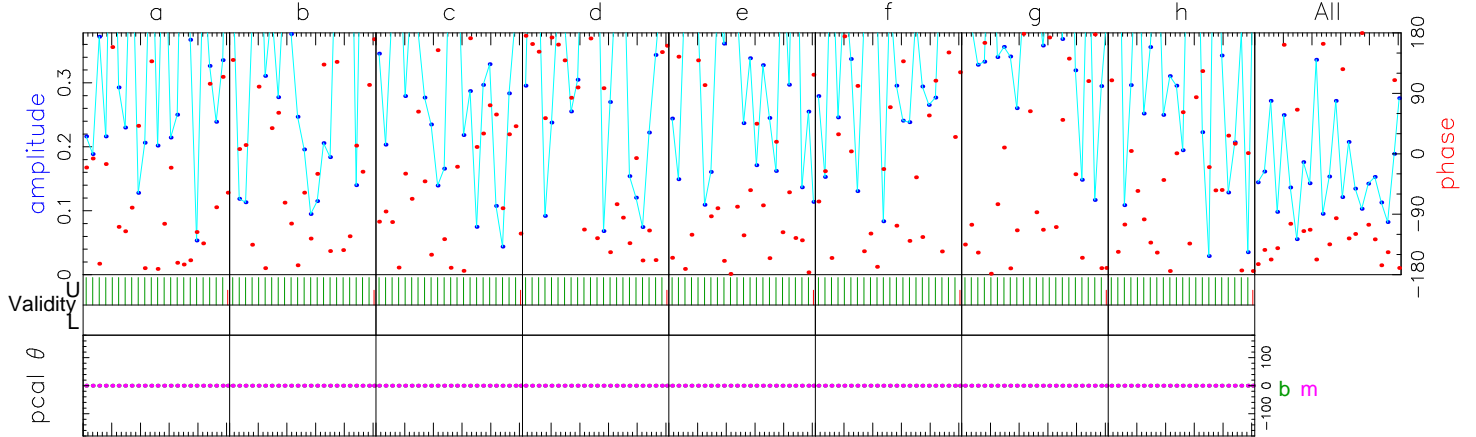
Fringe quality 0

SNR 5.9
 Int time 299.953
 Amp 0.126
 Phase -148.7
 PFD 5.0e-01
 Delays (us)
 SBD -0.067875
 MBD -0.005273
 Fringe rate (Hz)
 0.092311
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064341
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



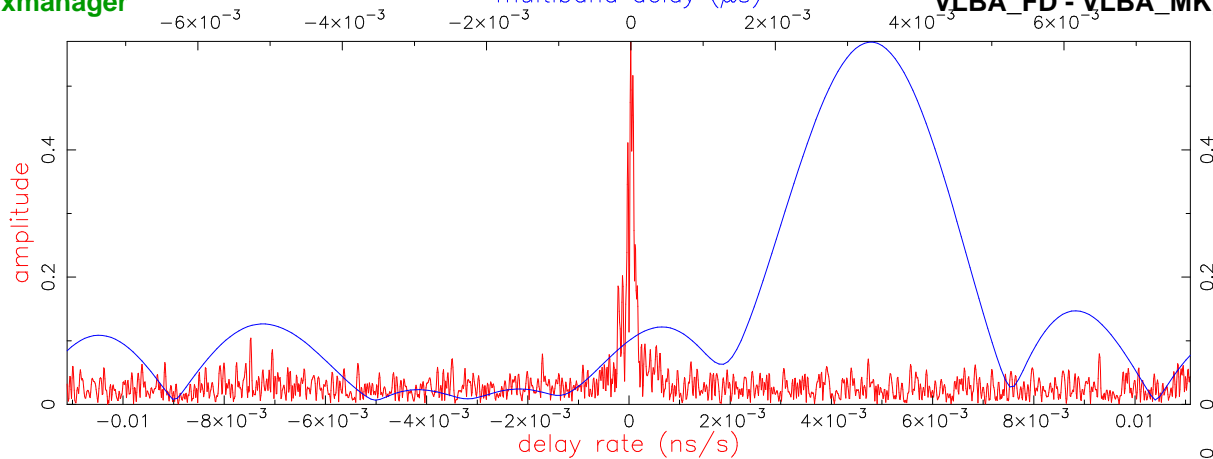
	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-144.7	-162.6	-89.1	-171.3	-130.7	-166.2	-159.8	-113.8	Phase	-148.7
	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	Ampl.	0.1
	237.8	357.3	309.9	240.3	386.0	341.5	53.9	29.7	Sbd box	239.6
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.09972919767E+02		Apriori delay (usec)		-1.09905146912E+02		Resid mbdelay (usec)		-5.27286E-03	+/- 1.8E-04
Sband delay (usec)	-1.09973022162E+02		Apriori clock (usec)		-1.5095385E+01		Resid sbdelay (usec)		-6.78753E-02	+/- 1.4E-03
Phase delay (usec)	-1.09905151610E+02		Apriori clockrate (us/s)		-9.9999991E-08		Resid phdelay (usec)		-4.69836E-06	+/- 6.1E-07
Delay rate (us/s)	-4.91211570839E-01		Apriori rate (us/s)		-4.91212620543E-01		Resid rate (us/s)		1.04970E-06	+/- 3.5E-09
Total phase (deg)			Apriori accel (us/s/s)		3.08601957380E-05		Resid phase (deg)		-148.7	+/- 19.3

	RMS	Theor.	Amplitude	0.126 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	50.2	46.2	Search (2048X32)	0.122	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	62.9	80.6	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	32.3	27.2	Inc. seg. avg.	0.124	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	46.2	47.5	Inc. frq. avg.	0.121	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

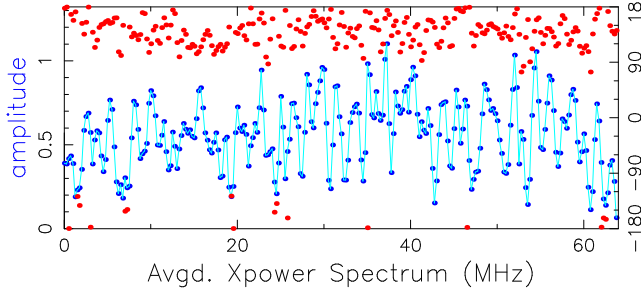
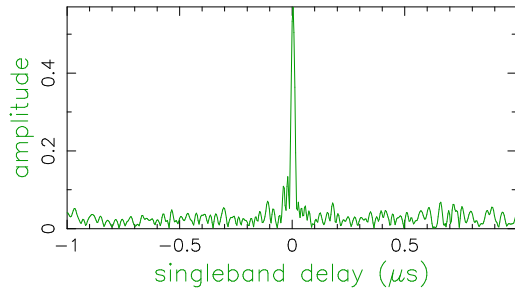
b: az 264.0 el 67.9 pa 62.4 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 3879.114 4907.047 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/bm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/bm.W.76.1JFL7R

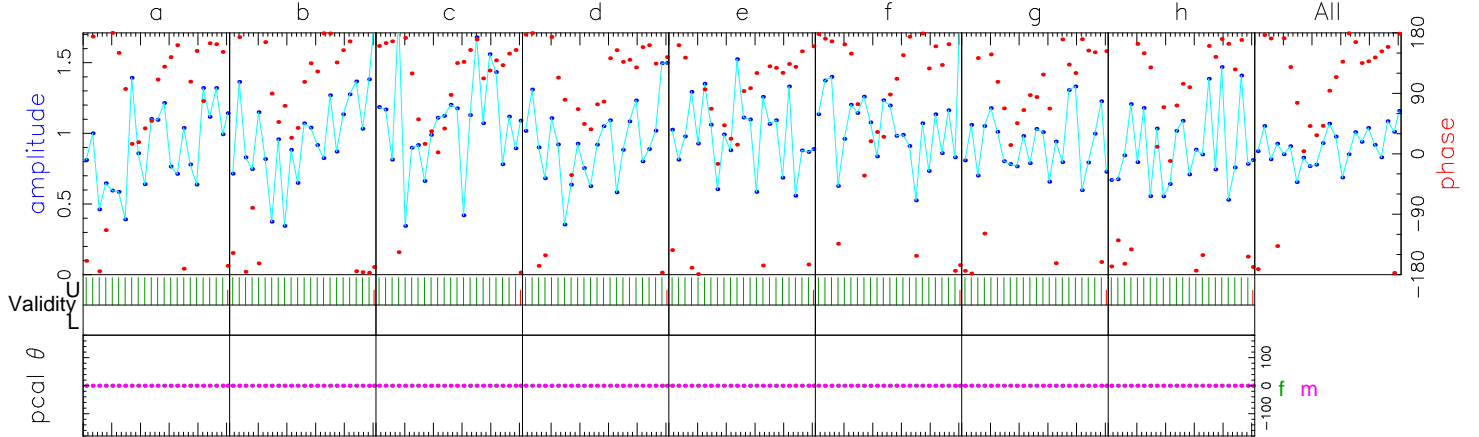
multiband delay (μ s)



Fringe quality 7
SNR 27.0
Int time 299.974
Amp 0.570
Phase 142.8
PFD 0.0e+00
Delays (us)
SBD 0.003315
MBD 0.003305
Fringe rate (Hz) 0.003232
Ion TEC 0.000
Ref freq (MHz) 87940.0000
AP (sec) 0.512
Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115500.00
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064334
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	137.0	161.9	134.0	140.2	126.9	147.0	134.6	160.4	Phase	142.8
	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.5	Ampl.	0.6
	258.0	257.4	257.9	257.9	258.0	257.3	258.2	258.3	Sbd box	257.8
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.12994499918E+03		Apriori delay (usec)		-3.12994830421E+03		Resid mbdelay (usec)		3.30503E-03	+/- 4.0E-05
Sband delay (usec)	-3.12994498896E+03		Apriori clock (usec)		-5.4458451E+00		Resid sbdelay (usec)		3.31525E-03	+/- 3.2E-04
Phase delay (usec)	-3.12994829970E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		4.51189E-06	+/- 1.3E-07
Delay rate (us/s)	-8.19456183627E-01		Apriori rate (us/s)		-8.19456220376E-01		Resid rate (us/s)		3.67488E-08	+/- 7.7E-10
Total phase (deg)			Apriori accel (us/s/s)		2.93720595584E-05		Resid phase (deg)		142.8	+/- 4.2

ph/seg (deg) 58.5 10.2 Search (2048X32) 0.552 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 62.7 17.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 13.7 6.0 Inc. seg. avg. 0.893 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 9.5 10.5 Inc. frq. avg. 0.579 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 299.7 el 51.9 pa 91.2 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 6445.622 3190.563 simultaneous interpolator
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/fm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/fm.W.28.1JFL7R

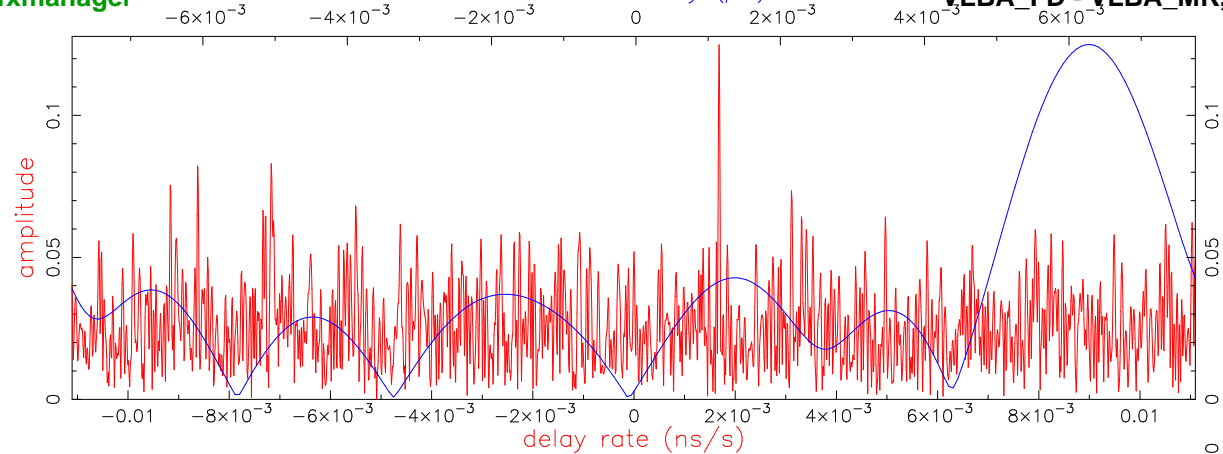
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, fm

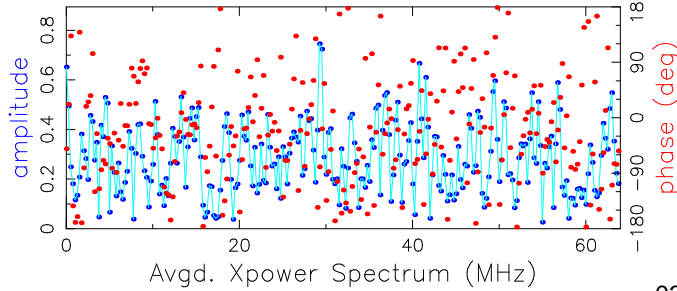
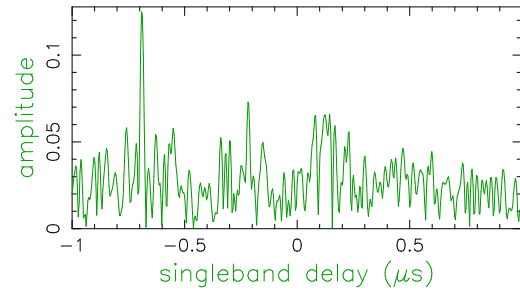
VLBA_FD - VLBA_MK, fgroup W, pol LR

multiband delay (μ s)



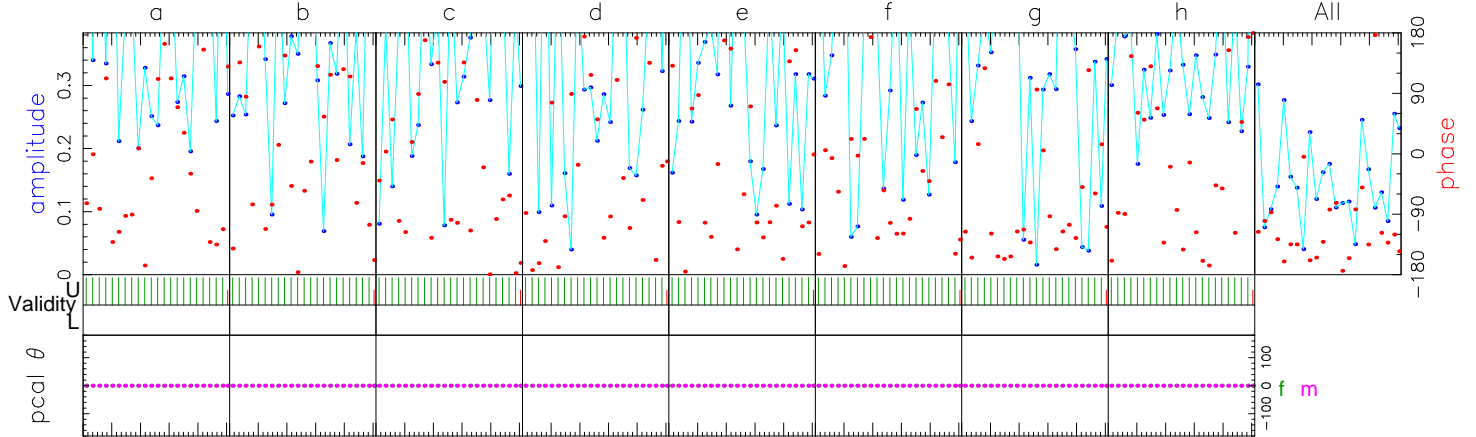
Fringe quality 0

SNR 6.0
 Int time 299.974
 Amp 0.128
 Phase -125.9
 PFD 4.1e-01
 Delays (us)
 SBD -0.689898
 MBD 0.006319
 Fringe rate (Hz)
 0.148450
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064337
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-115.4	-113.5	-121.2	-137.9	-146.5	-112.6	-123.7	-124.0	Phase	-125.9
	0.2	0.0	0.1	0.1	0.2	0.1	0.2	0.1	Ampl.	0.1
	278.0	375.6	64.9	221.4	343.9	315.0	6.3	281.3	Sbd box	80.4
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.13064511035E+03		Apriori delay (usec)		-3.12994830421E+03		Resid mbdelay (usec)		6.31886E-03	+/- 1.8E-04
Sband delay (usec)	-3.13063820221E+03		Apriori clock (usec)		-5.4458451E+00		Resid sbdelay (usec)		-6.89898E-01	+/- 1.4E-03
Phase delay (usec)	-3.12994830819E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		-3.97691E-06	+/- 6.0E-07
Delay rate (us/s)	-8.19454532290E-01		Apriori rate (us/s)		-8.19456220376E-01		Resid rate (us/s)		1.68809E-06	+/- 3.5E-09
Total phase (deg)			Apriori accel (us/s/s)		2.93720595584E-05		Resid phase (deg)		-125.9	+/- 19.1

ph/seg (deg) 41.8 45.8 Search (2048X32) 0.121 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 59.0 80.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 13.2 27.0 Inc. seg. avg. 0.116 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 39.3 47.2 Inc. frq. avg. 0.116 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 299.7 el 51.9 pa 91.2 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 6445.622 3190.563 simultaneous interpolator
 Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/fm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/fm.W.48.1JFL7R

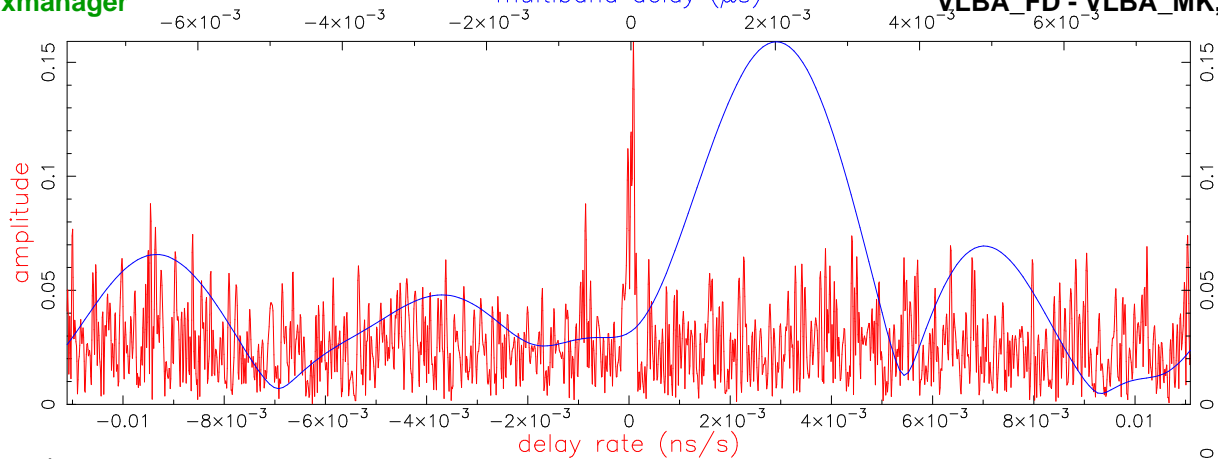
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, fm

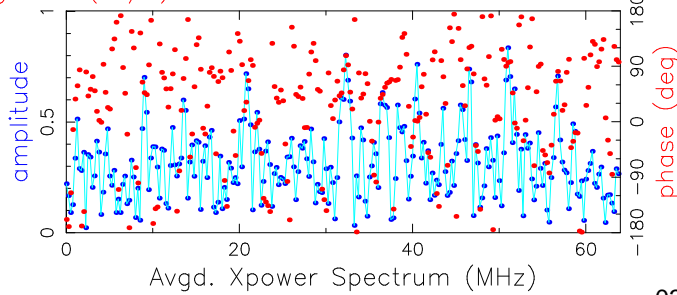
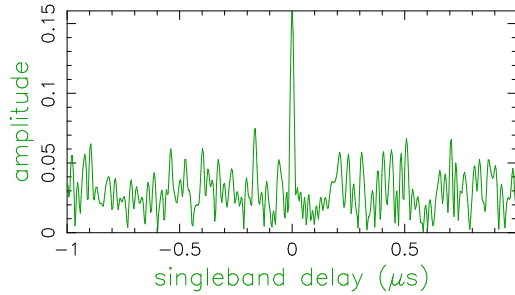
VLBA_FD - VLBA_MK, fgroup W, pol RL

multiband delay (μ s)



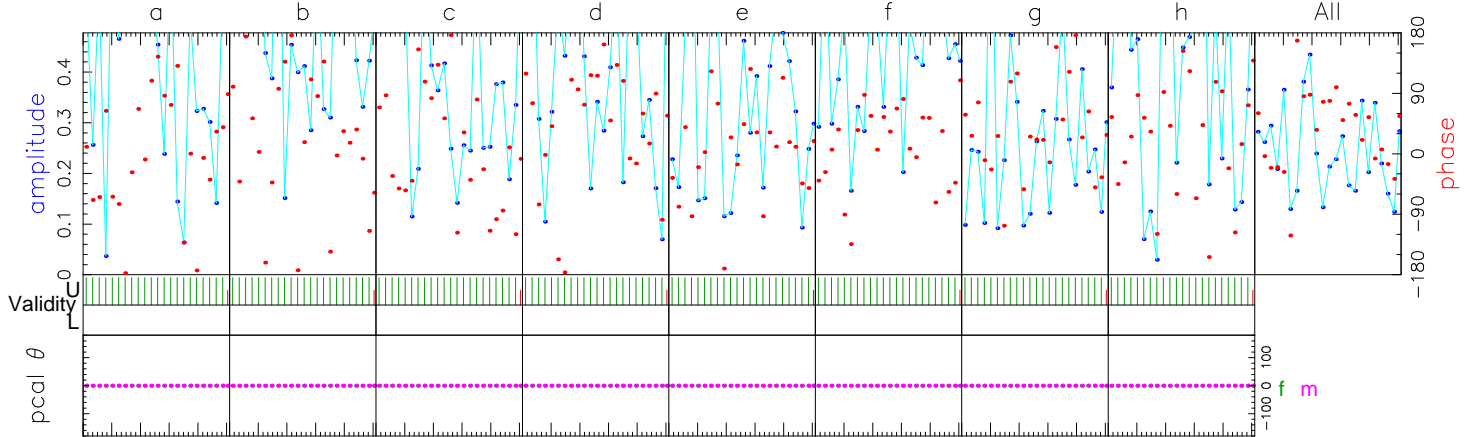
Fringe quality 9

SNR 7.5
 Int time 299.974
 Amp 0.159
 Phase 36.4
 PFD 1.5e-05
 Delays (us)
 SBD -0.000429
 MBD 0.002006
 Fringe rate (Hz)
 0.007403
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512

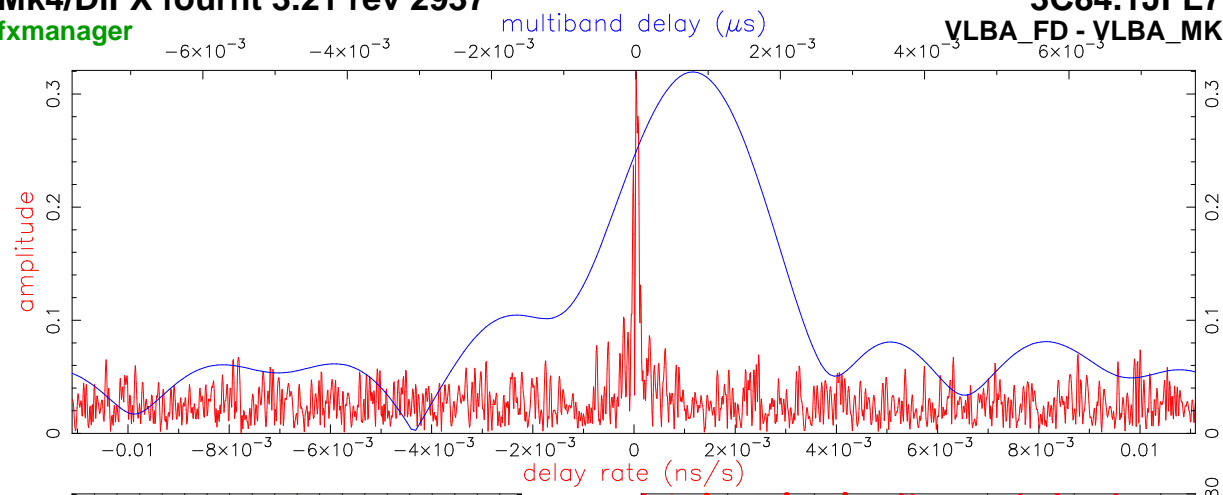


Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064340
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

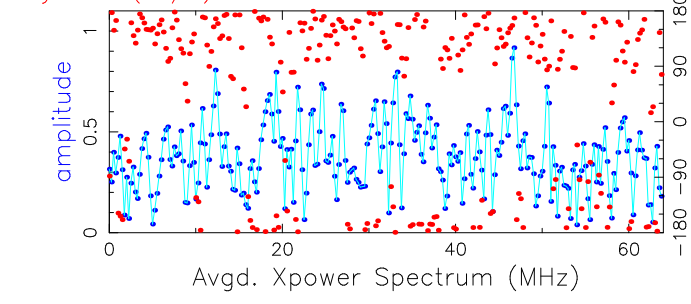
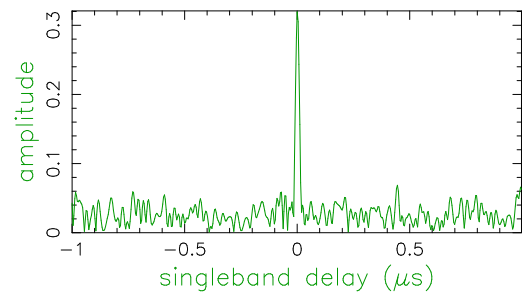
Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



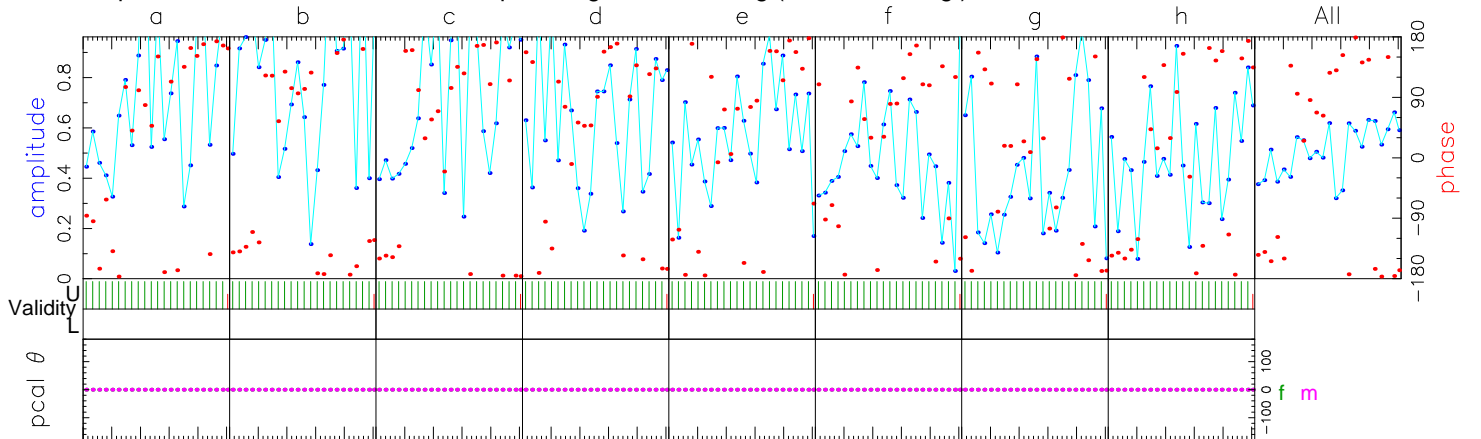
	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All	
	11.7	49.0	17.9	84.7	22.7	16.4	36.5	44.2	Phase	36.4	
	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.2	Ampl.	0.2	
	214.6	498.9	117.2	256.6	370.7	257.8	404.5	256.7	Sbd box	256.9	
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
m	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks		
									Tracks		
Group delay (usec)(sbd)	-3.12994629844E+03		Apriori delay (usec)		-3.12994830421E+03		Resid mbdelay (usec)		2.00577E-03 +/- 1.4E-04		
Sband delay (usec)	-3.12994873296E+03		Apriori clock (usec)		-5.4458451E+00		Resid sbdelay (usec)		-4.28750E-04 +/- 1.1E-03		
Phase delay (usec)	-3.12994830306E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		1.14847E-06 +/- 4.8E-07		
Delay rate (us/s)	-8.19456136194E-01		Apriori rate (us/s)		-8.19456220376E-01		Resid rate (us/s)		8.41826E-08 +/- 2.8E-09		
Total phase (deg)			Apriori accel (us/s/s)		2.93720595584E-05		Resid phase (deg)		36.4 +/- 15.2		
RMS	Theor.		Amplitude		0.159 +/- 0.021		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		
ph/seg (deg)	60.1	36.4	Search (2048X32)		0.157		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us) -1.000 1.000		
amp/seg (%)	75.4	63.6	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled		
ph/frq (deg)	26.1	21.5	Inc. seg. avg.		0.203		Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011		
amp/frq (%)	35.3	37.5	Inc. frq. avg.		0.162		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		
f: az 299.7 el 51.9 pa 91.2		m: az 11.4 el 67.7 pa -165.2		u,v (fr/asec) 6445.622 3190.563						ion window (TEC) 0.00 0.00	
Control file: cf_1234_88GHz_gmva		Input file: /Exps/c202c/v1/1234/No0089/fm..1JFL7R		Output file: /Exps/c202c/v1/1234/No0089/fm.W.68.1JFL7R						simultaneous interpolator	



Fringe quality 9
SNR 15.2
Int time 299.974
Amp 0.321
Phase 158.0
PFD 2.4e-43
Delays (us)
SBD 0.000871
MBD 0.000804
Fringe rate (Hz) 0.003531
Ion TEC 0.000
Ref freq (MHz) 87940.0000
AP (sec) 0.512
Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115500.00
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064330
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	APs used	1000
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	1000
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	0:0
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	0:0
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	1000
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.12994750027E+03		Apriori delay (usec)		-3.12994830421E+03		Resid mbdelay (usec)		8.03933E-04	+/- 7.1E-05
Sband delay (usec)	-3.12994743296E+03		Apriori clock (usec)		-5.4458451E+00		Resid sbdelay (usec)		8.71250E-04	+/- 5.7E-04
Phase delay (usec)	-3.12994829922E+03		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		4.98947E-06	+/- 2.4E-07
Delay rate (us/s)	-8.19456180229E-01		Apriori rate (us/s)		-8.19456220376E-01		Resid rate (us/s)		4.01476E-08	+/- 1.4E-09
Total phase (deg)			Apriori accel (us/s/s)		2.93720595584E-05		Resid phase (deg)		158.0	+/- 7.5

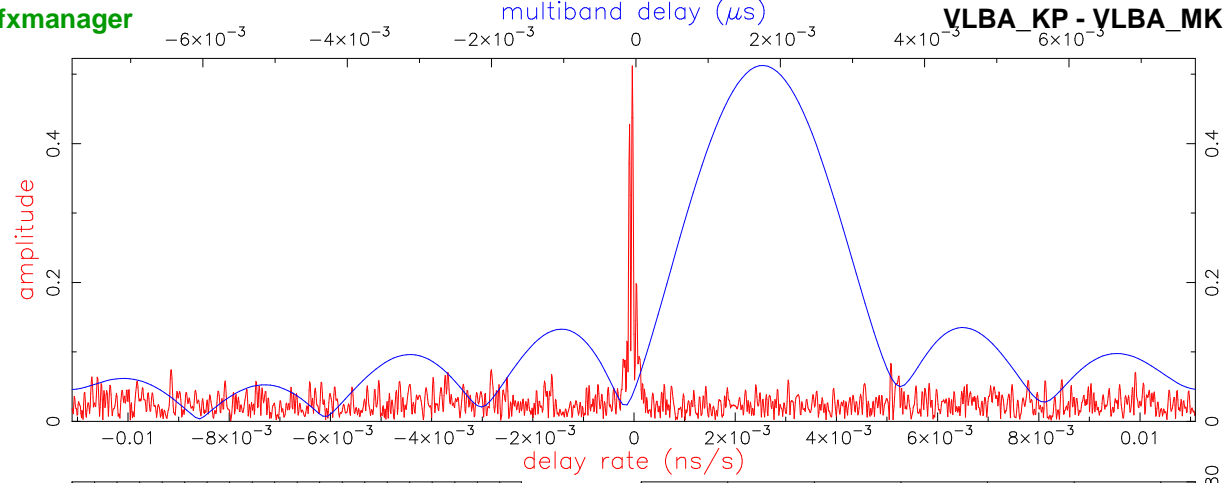
ph/seg (deg) 56.0 18.1 Search (2048X32) 0.311 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 66.5 31.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 19.5 10.7 Inc. seg. avg. 0.485 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 35.2 18.6 Inc. frq. avg. 0.325 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 299.7 el 51.9 pa 91.2 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 6445.622 3190.563 simultaneous interpolator
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/fm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/fm.W.9.1JFL7R

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, km

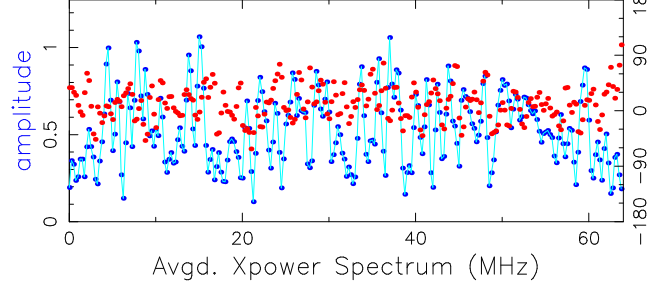
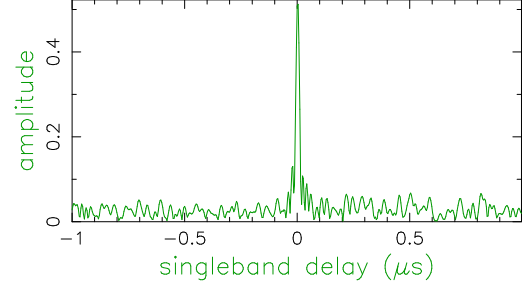
VLBA_KP - VLBA_MK, fgroup W, pol LL



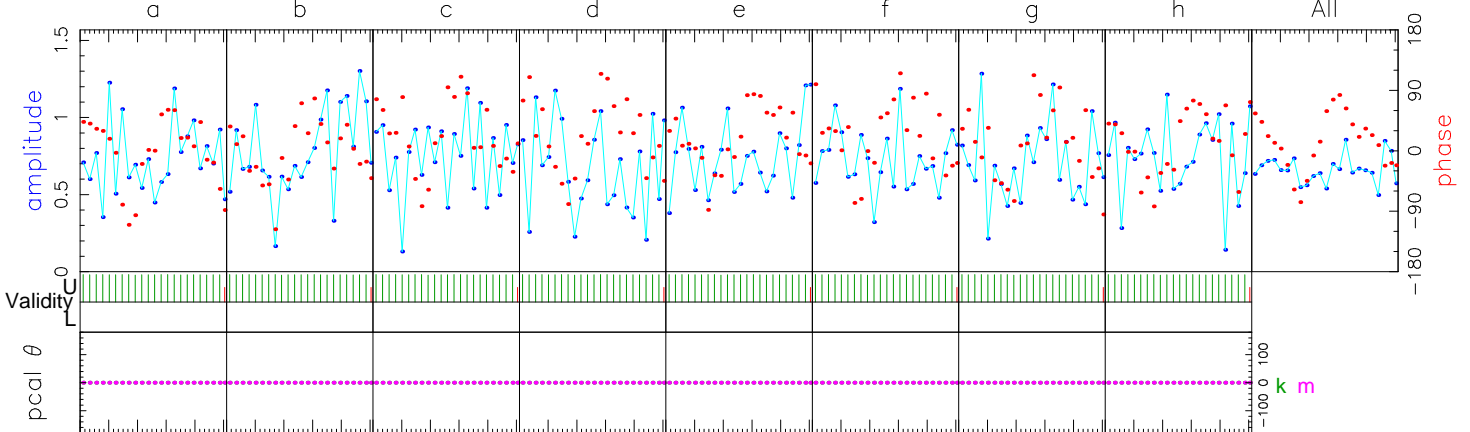
Fringe quality 8

SNR 24.7
 Int time 297.382
 Amp 0.523
 Phase 14.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.002105
 MBD 0.001706
 Fringe rate (Hz)
 -0.002580
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512

Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064332
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:m	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		
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.76124879573E+03	Apriori delay (usec)	-1.76125050195E+03	Resid mbdelay (usec)	1.70622E-03	+/-	4.4E-05
Sband delay (usec)	-1.76124839720E+03	Apriori clock (usec)	-1.3039001E+01	Resid sbdelay (usec)	2.10475E-03	+/-	3.5E-04
Phase delay (usec)	-1.76125050148E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.69722E-07	+/-	1.5E-07
Delay rate (us/s)	-7.12724735391E-01	Apriori rate (us/s)	-7.12724706048E-01	Resid rate (us/s)	-2.93432E-08	+/-	8.5E-10
Total phase (deg)	-36.2	Apriori accel (us/s/s)	2.35295506584E-05	Resid phase (deg)	14.9	+/-	4.6

ph/seg (deg)	41.3	11.1	Search (2048X32)	0.498	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	32.1	19.5	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)	8.6	6.6	Inc. seg. avg.	0.653	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	11.6	11.5	Inc. frq. avg.	0.513	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 298.6 el 58.3 pa 94.6 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 5602.509 2914.978 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/km..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/km.W.20.1JFL7R

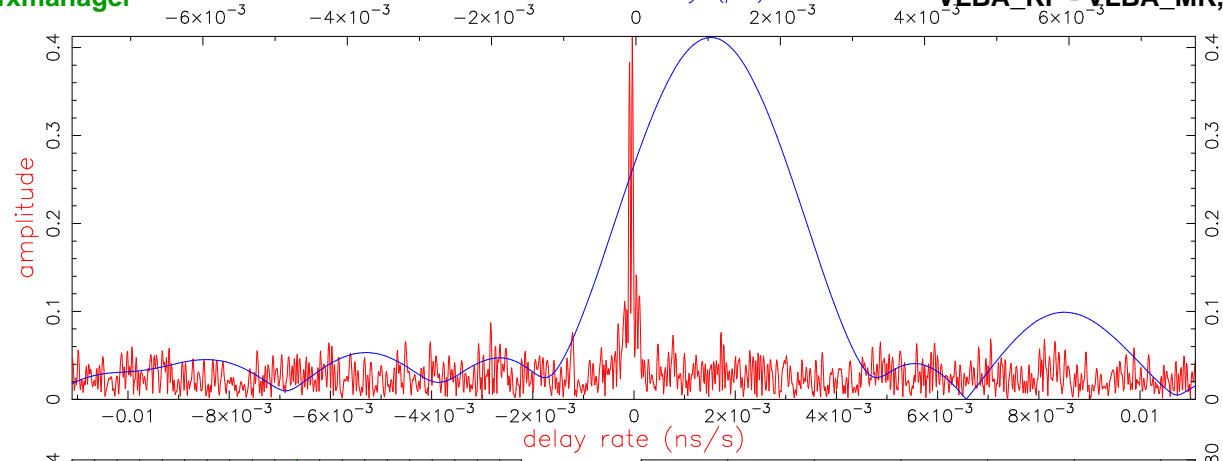
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, km

VLBA_KP - VLBA_MK, fgroup W, pol RR

multiband delay (μ s)



Fringe quality 9

SNR 19.5

Int time 297.382

Amp 0.413

Phase -49.2

PFD 0.0e+00

Delays (us)

SBD 0.000697

MBD 0.001054

Fringe rate (Hz)

-0.002598

Ion TEC 0.000

Ref freq (MHz)

87940.0000

AP (sec) 0.512

Exp. c202c

Exper # 16383

Yr:day 2020:286

Start 115500.00

Stop 120000.03

FRT 115730.00

Corr/FF/build

2021:039:063420

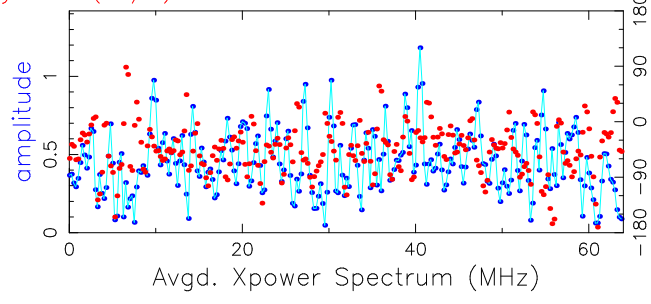
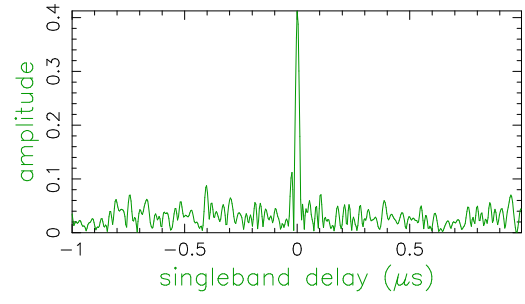
2021:039:064335

2020:247:085004

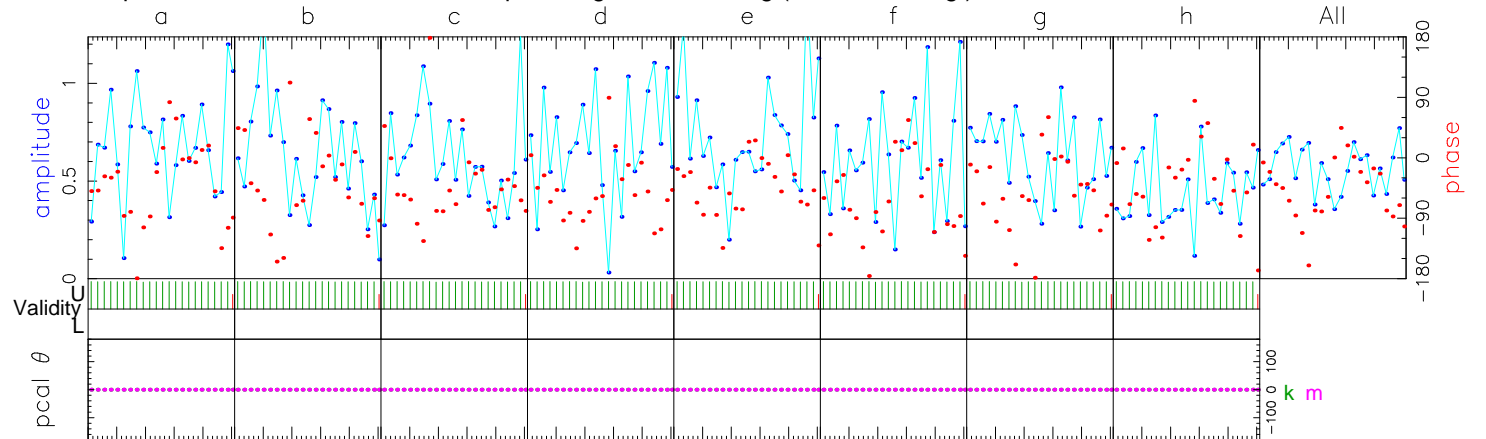
RA & Dec (J2000)

03h19m48.160095s

+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-39.7	-41.2	-58.0	-57.7	-43.3	-62.5	-50.2	-36.7	Phase	-49.2
	0.4	0.4	0.4	0.5	0.6	0.4	0.4	0.3	Ampl.	0.4
	257.2	256.9	256.8	257.8	256.7	256.9	258.1	256.8	Sbd box	257.2
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.76124944761E+03		Apriori delay (usec)		-1.76125050195E+03		Resid mbdelay (usec)		1.05435E-03	+/- 5.6E-05
Sband delay (usec)	-1.76124980495E+03		Apriori clock (usec)		-1.3039001E+01		Resid sbdelay (usec)		6.97000E-04	+/- 4.4E-04
Phase delay (usec)	-1.76125050351E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-1.55511E-06	+/- 1.9E-07
Delay rate (us/s)	-7.12724735594E-01		Apriori rate (us/s)		-7.12724706048E-01		Resid rate (us/s)		-2.95459E-08	+/- 1.1E-09
Total phase (deg)			Apriori accel (us/s/s)		2.35295506584E-05		Resid phase (deg)		-49.2	+/- 5.9

ph/seg (deg) 46.1 14.1 Search (2048X32) 0.406 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 46.6 24.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 10.6 8.3 Inc. seg. avg. 0.550 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 22.8 14.5 Inc. frq. avg. 0.412 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 298.6 el 58.3 pa 94.6 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 5602.509 2914.978 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/km..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/km.W.37.1JFL7R

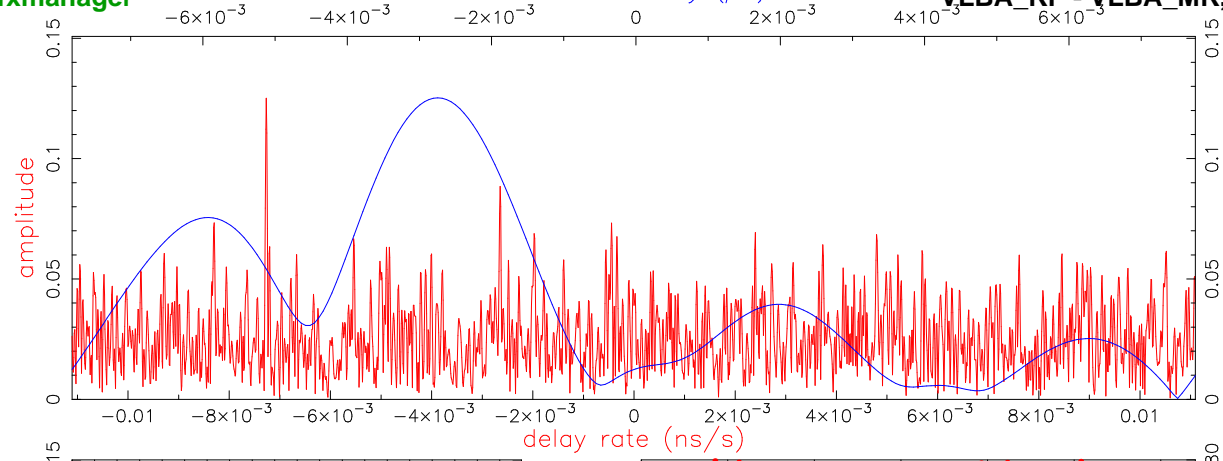
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

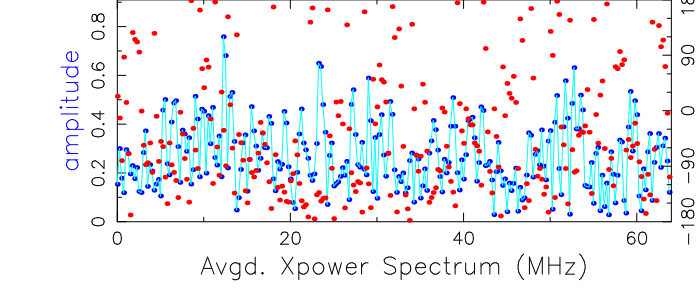
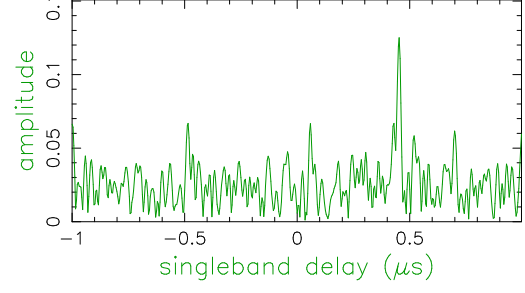
3C84.1JFL7R, No0089, km

VLBA_KP - VLBA_MK, fgroup W, pol LR

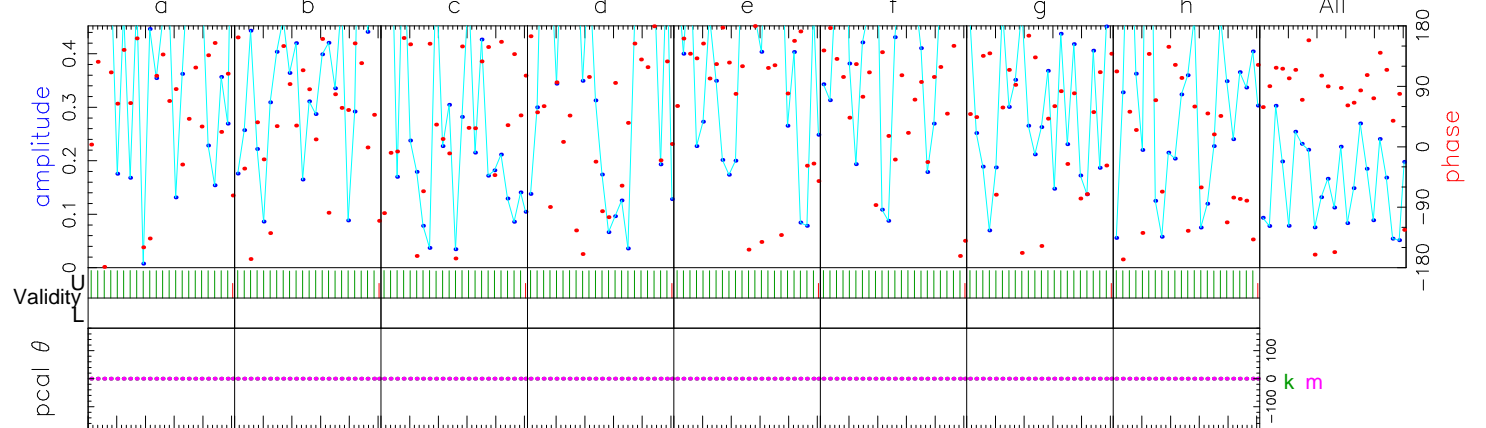
multiband delay (μ s)



Fringe quality 0
 SNR 5.9
 Int time 297.382
 Amp 0.151
 Phase 106.1
 PFD 5.6e-01
 Delays (us)
 SBD 0.452318
 MBD -0.002813
 Fringe rate (Hz)
 -0.640203
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512
 Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064338
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:m	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		
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.76080019010E+03									
Sband delay (usec)	-1.76079818345E+03									
Phase delay (usec)	-1.76125049860E+03									
Delay rate (us/s)	-7.12731986049E-01									
Total phase (deg)			55.1							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									106.1	+/- 19.4
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

ph/seg (deg) 45.4 46.4
 amp/seg (%) 65.1 81.0
 ph/frq (deg) 30.5 27.4
 amp/frq (%) 49.5 47.8

k: az 298.6 el 58.3 pa 94.6
 m: az 11.4 el 67.7 pa -165.2
 u,v (fr/asec) 5602.509 2914.978

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/km..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/km.W.58.1JFL7R simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

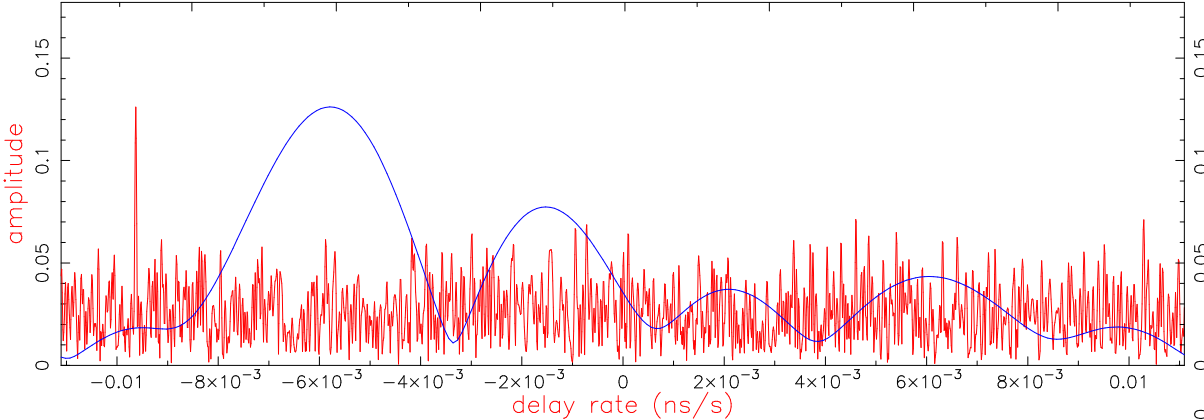
3C84.1JFL7R, No0089, km

VLBA_KP - VLBA_MK, fgroup W, pol RL

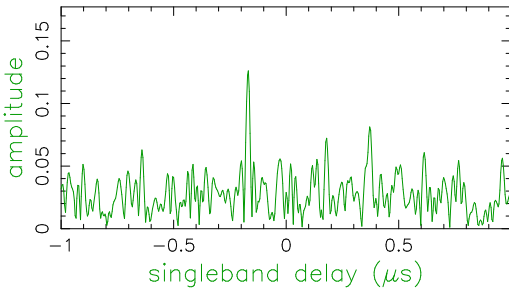
multiband delay (μ s)

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

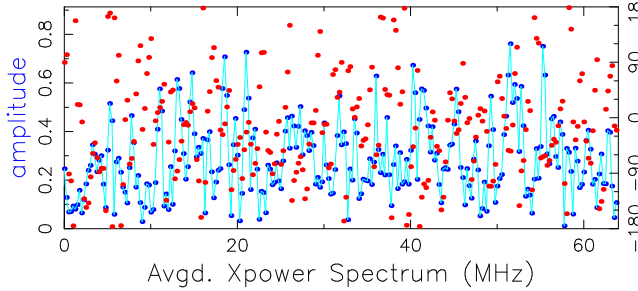
Fringe quality 0



SNR 6.0
Int time 297.382
Amp 0.177
Phase -135.6
PFD 4.0e-01
Delays (us)
SBD -0.169228
MBD -0.004110
Fringe rate (Hz)
-0.847792
Ion TEC 0.000
Ref freq (MHz)
87940.0000
AP (sec) 0.512



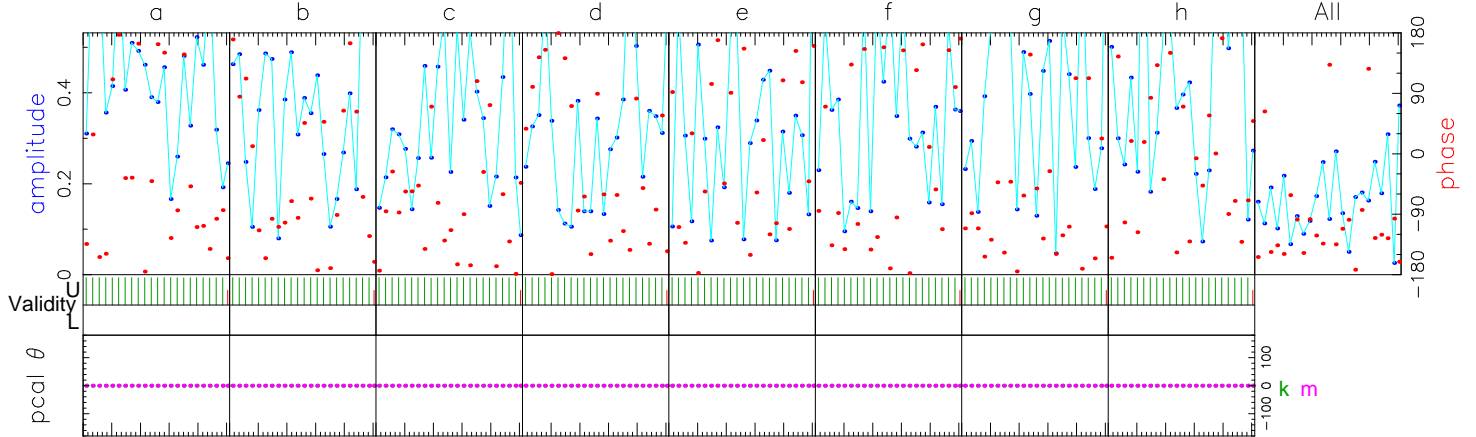
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115500.00
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064341
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-141.1	-123.9	-112.4	-161.0	-155.3	-176.5	-114.0	-88.0	Phase	-135.6
	0.3	0.2	0.2	0.1	0.1	0.3	0.3	0.1	Ampl.	0.2
	199.4	329.6	383.6	257.9	413.0	40.1	213.5	165.0	Sbd box	213.7
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

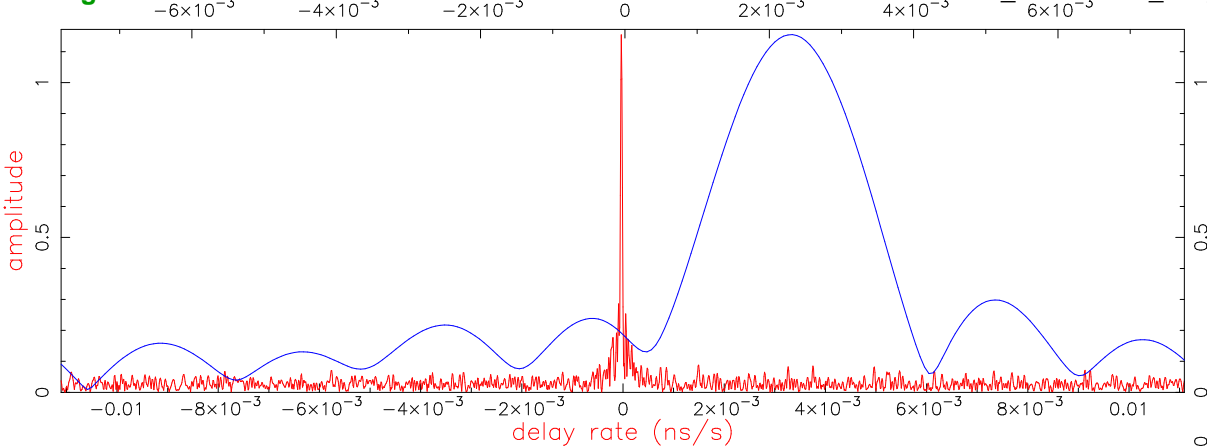
Group delay (usec)(sbd)	-1.76142648652E+03	Apriori delay (usec)	-1.76125050195E+03	Resid mbdelay (usec)	-4.10957E-03	+/-	1.8E-04
Sband delay (usec)	-1.76141973020E+03	Apriori clock (usec)	-1.3039001E+01	Resid sbdelay (usec)	-1.69228E-01	+/-	1.4E-03
Phase delay (usec)	-1.76125050624E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.28382E-06	+/-	6.0E-07
Delay rate (us/s)	-7.12734346623E-01	Apriori rate (us/s)	-7.12724706048E-01	Resid rate (us/s)	-9.64057E-06	+/-	3.5E-09
Total phase (deg)	-186.7	Apriori accel (us/s/s)	2.35295506584E-05	Resid phase (deg)	-135.6	+/-	19.1

ph/seg (deg)	52.3	Theor.	45.8	Amplitude	0.177 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	66.5		80.0	Search (2048X32)	0.123	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	32.0		27.0	Inc. seg. avg.	0.172	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	40.6		47.2	Inc. frq. avg.	0.175	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

k: az 298.6 el 58.3 pa 94.6 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 5602.509 2914.978 simultaneous interpolator

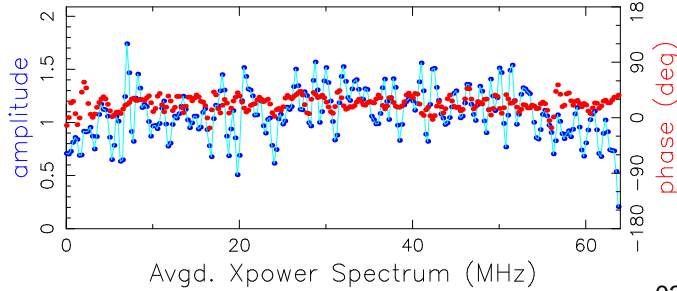
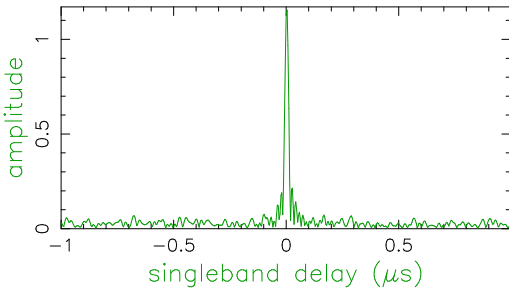
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/km..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/km.W.77.1JFL7R

multiband delay (μ s)



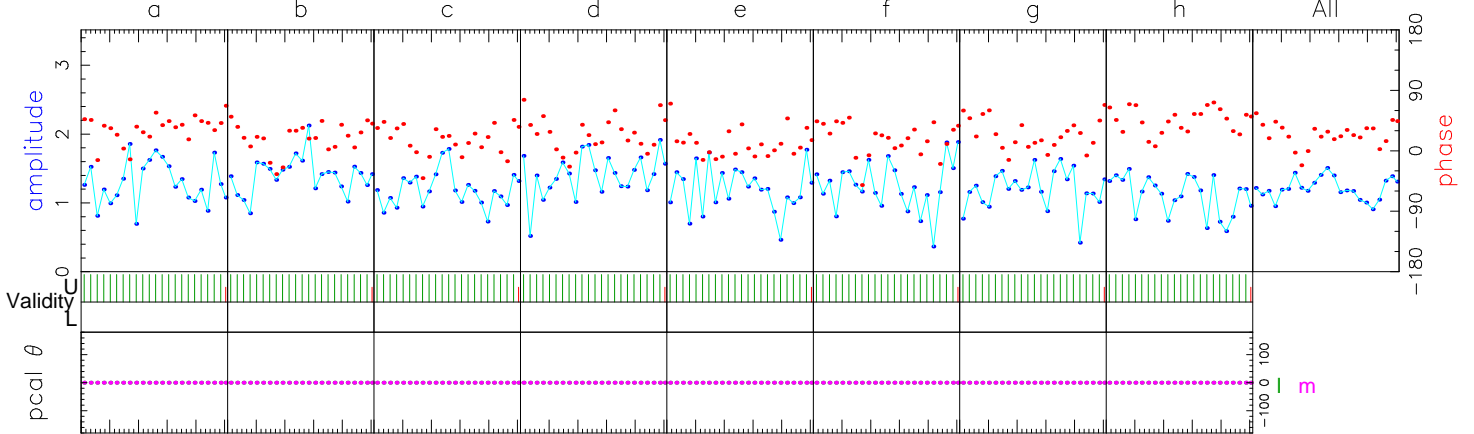
Fringe quality 8

SNR 55.5
 Int time 299.974
 Amp 1.172
 Phase 23.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.002329
 MBD 0.002261
 Fringe rate (Hz)
 -0.002550
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064347
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All	
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	257.6	257.6	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	
l:m	0:0	0:0	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	1000	1000	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)	-2.24573488409E+03					-2.24573714462E+03			2.26053E-03	+/- 2.0E-05	
Sband delay (usec)	-2.24573481537E+03					-1.3807770E+01			2.32925E-03	+/- 1.6E-04	
Phase delay (usec)	-2.24573714388E+03					-1.9999998E-07			7.45625E-07	+/- 6.5E-08	
Delay rate (us/s)	-7.51658698614E-01					-7.51658669613E-01			Resid rate (us/s)	-2.90018E-08	+/- 3.8E-10
Total phase (deg)		-155.8				3.02433172320E-05			Resid phase (deg)	23.6	+/- 2.1

RMS Theor. Amplitude 1.172 +/- 0.021
 ph/seg (deg) 17.4 5.0 Search (2048X32) 1.129
 amp/seg (%) 13.6 8.6 Interp. 0.000
 ph/frq (deg) 11.3 2.9 Inc. seg. avg. 1.204
 amp/frq (%) 6.9 5.1 Inc. frq. avg. 1.169

Group delay (usec)(sbd) -2.24573488409E+03 Apriori delay (usec) -2.24573714462E+03 Resid mbdelay (usec) 2.26053E-03 +/- 2.0E-05
 Sband delay (usec) -2.24573481537E+03 Apriori clock (usec) -1.3807770E+01 Resid sbdelay (usec) 2.32925E-03 +/- 1.6E-04
 Phase delay (usec) -2.24573714388E+03 Apriori clockrate (us/s) -1.9999998E-07 Resid phdelay (usec) 7.45625E-07 +/- 6.5E-08
 Delay rate (us/s) -7.51658698614E-01 Apriori rate (us/s) -7.51658669613E-01 Resid rate (us/s) -2.90018E-08 +/- 3.8E-10
 Total phase (deg) -155.8 Apriori accel (us/s/s) 3.02433172320E-05 Resid phase (deg) 23.6 +/- 2.1

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(MSamp/s): 128 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 293.3 el 55.9 pa 84.8 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 5915.976 3764.330 simultaneous interpolator

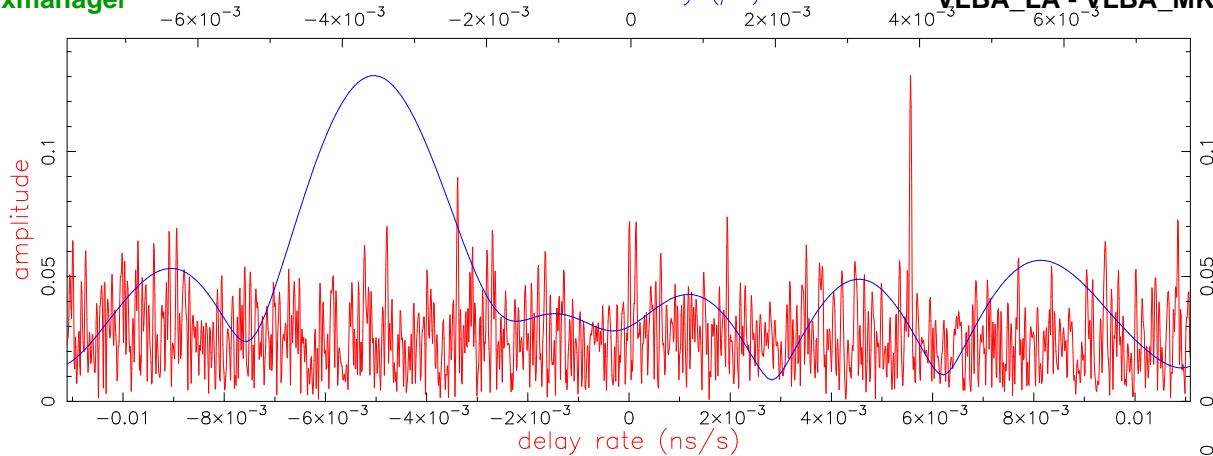
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, Im

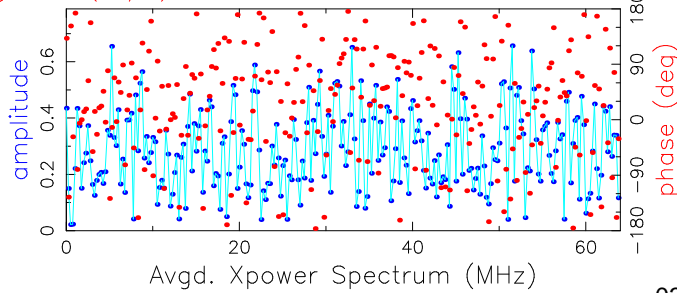
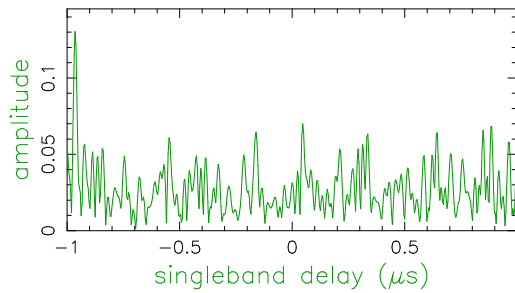
VLBA_LA - VLBA_MK, fgroup W, pol LR

multiband delay (μ s)



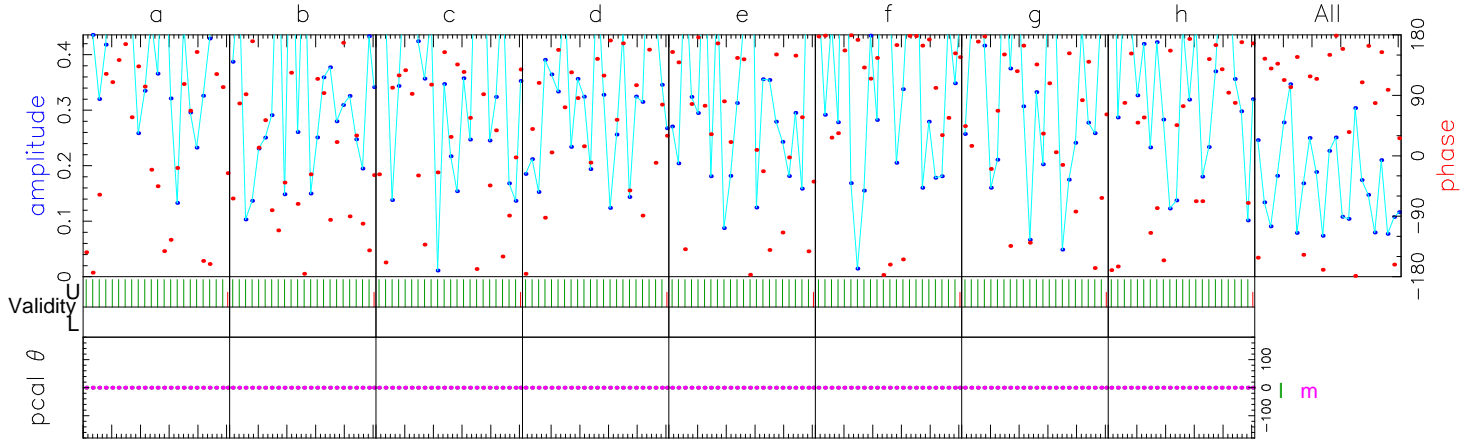
Fringe quality 0

SNR 6.2
 Int time 299.974
 Amp 0.145
 Phase 143.7
 PFD 1.5e-01
 Delays (us)
 SBD -0.964221
 MBD -0.003547
 Fringe rate (Hz)
 0.489866
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064350
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

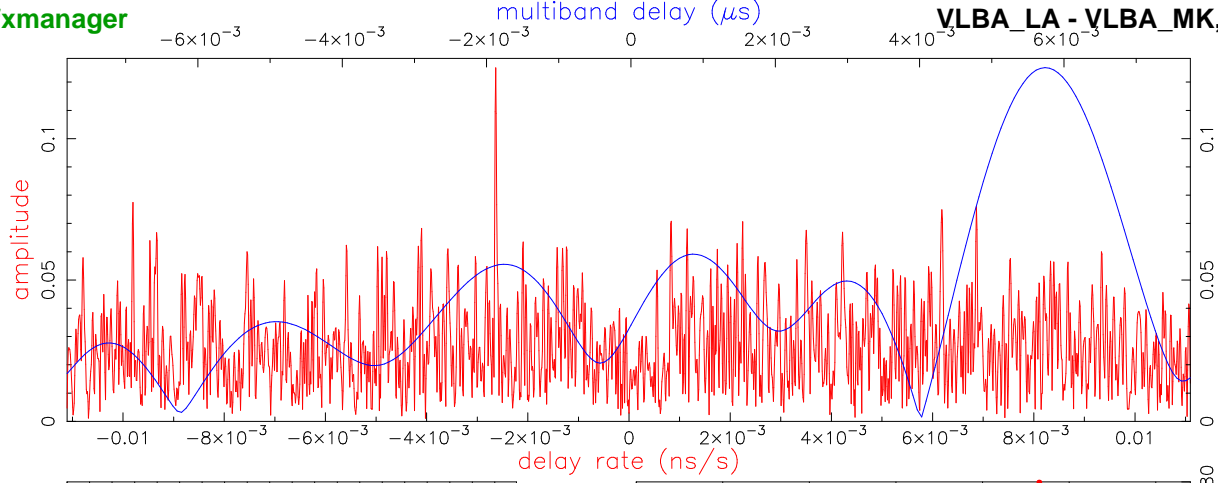
Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



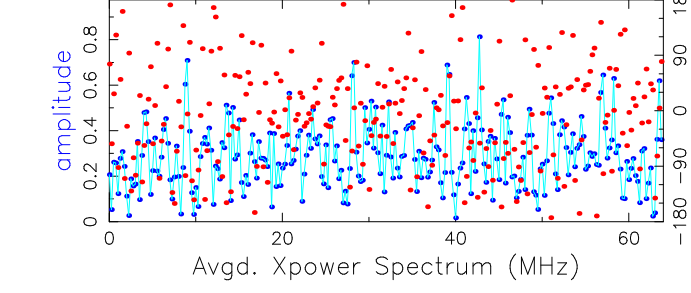
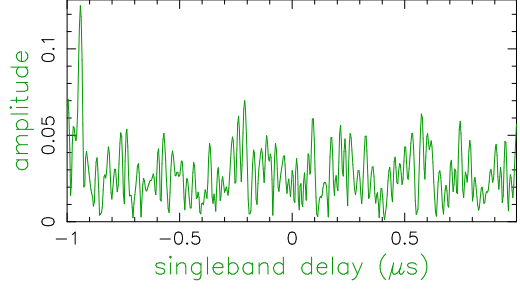
	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	148.3	-134.9	124.4	99.0	165.3	157.3	125.2	142.2	Phase	143.7
	0.2	0.0	0.1	0.1	0.2	0.3	0.1	0.2	Ampl.	0.1
	71.9	32.8	19.9	75.6	362.6	10.0	103.1	452.4	Sbd box	10.2
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.24669381687E+03		Apriori delay (usec)		-2.24573714462E+03		Resid mbdelay (usec)		-3.54725E-03	+/- 1.8E-04
Sband delay (usec)	-2.24670136612E+03		Apriori clock (usec)		-1.3807770E+01		Resid sbdelay (usec)		-9.64221E-01	+/- 1.4E-03
Phase delay (usec)	-2.24573714008E+03		Apriori clockrate (us/s)		-1.9999998E-07		Resid phdelay (usec)		4.54022E-06	+/- 5.8E-07
Delay rate (us/s)	-7.51653099154E-01		Apriori rate (us/s)		-7.51658669613E-01		Resid rate (us/s)		5.57046E-06	+/- 3.4E-09
Total phase (deg)			Apriori accel (us/s/s)		3.02433172320E-05		Resid phase (deg)		143.7	+/- 18.5

ph/seg (deg) 46.5 44.4 Search (2048X32) 0.129 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.4 77.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 40.8 26.2 Inc. seg. avg. 0.148 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.5 45.7 Inc. frq. avg. 0.143 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 l: az 293.3 el 55.9 pa 84.8 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 5915.976 3764.330 ion window (TEC) 0.00 0.00
 simultaneous interpolator

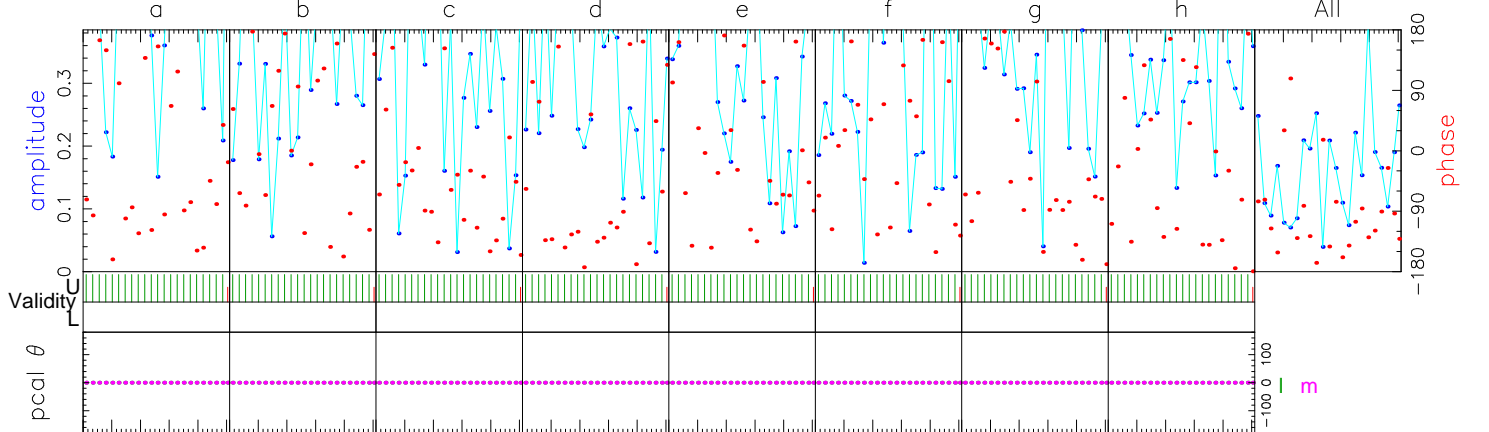
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/lm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/lm.W.118.1JFL7R



Fringe quality 0
SNR 5.9
Int time 299.974
Amp 0.128
Phase -112.6
PFD 5.2e-01
Delays (us)
SBD -0.940679
MBD 0.005768
Fringe rate (Hz)
-0.232214
Ion TEC 0.000
Ref freq (MHz)
87940.0000
AP (sec) 0.512
Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115500.00
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064352
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All		
	-112.1	-133.0	-81.4	-146.8	-82.0	-74.2	-104.5	-145.4	Phase	-112.6		
	0.2	0.1	0.2	0.2	0.1	0.0	0.2	0.1	Ampl.	0.1		
	380.8	280.0	504.9	338.6	2.4	240.0	16.4	282.6	Sbd box	16.2		
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used			
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
l:m	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			
m	1000	1000	1000	1000	1000	1000	1000	1000				
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-2.24668450183E+03		Apriori delay (usec)		-2.24573714462E+03		Resid mbdelay (usec)		5.76780E-03	+/- 1.8E-04		
Sband delay (usec)	-2.24667782387E+03		Apriori clock (usec)		-1.3807770E+01		Resid sbdelay (usec)		-9.40679E-01	+/- 1.5E-03		
Phase delay (usec)	-2.24573714818E+03		Apriori clockrate (us/s)		-1.9999998E-07		Resid phdelay (usec)		-3.55592E-06	+/- 6.1E-07		
Delay rate (us/s)	-7.51661310212E-01		Apriori rate (us/s)		-7.51658669613E-01		Resid rate (us/s)		-2.64060E-06	+/- 3.5E-09		
Total phase (deg)			Apriori accel (us/s/s)		3.02433172320E-05		Resid phase (deg)		-112.6	+/- 19.3		
	RMS	Theor.	Amplitude	0.128 +/- 0.022		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	59.7	46.3	Search (2048X32)	0.119		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	70.9	80.7	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	31.9	27.3	Inc. seg. avg.	0.126		Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	42.5	47.6	Inc. frq. avg.	0.127		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

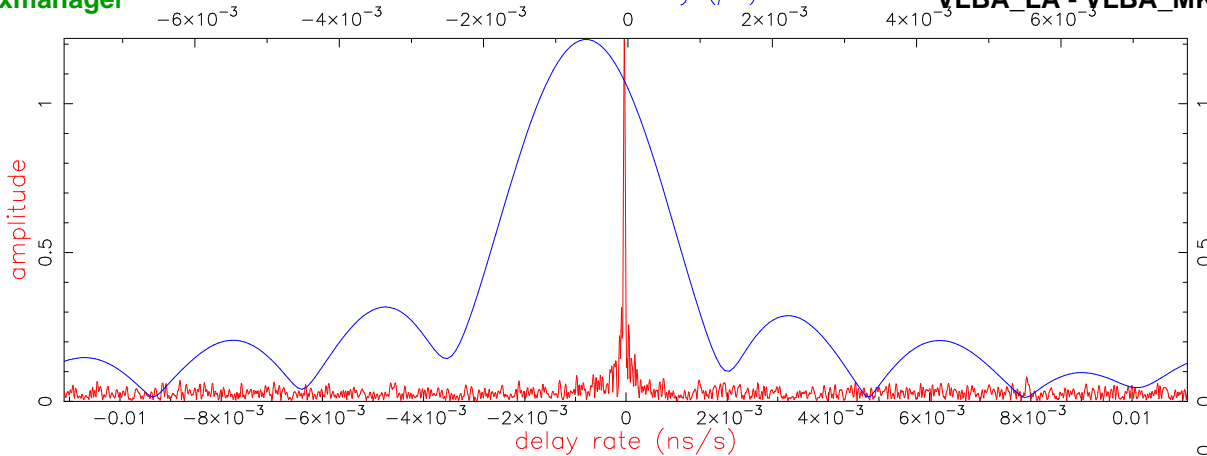
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, Im

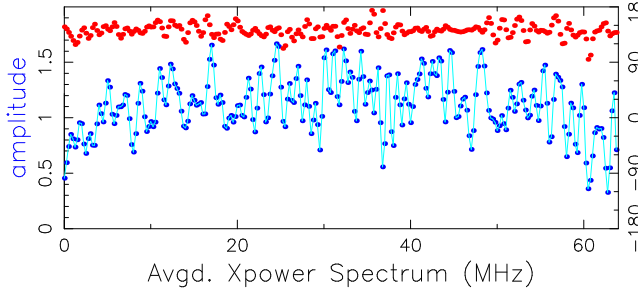
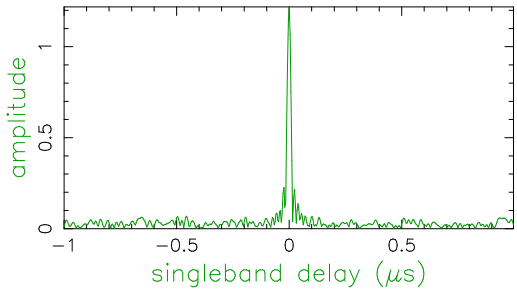
VLBA_LA - VLBA_MK, fgroup W, pol LL

multiband delay (μ s)



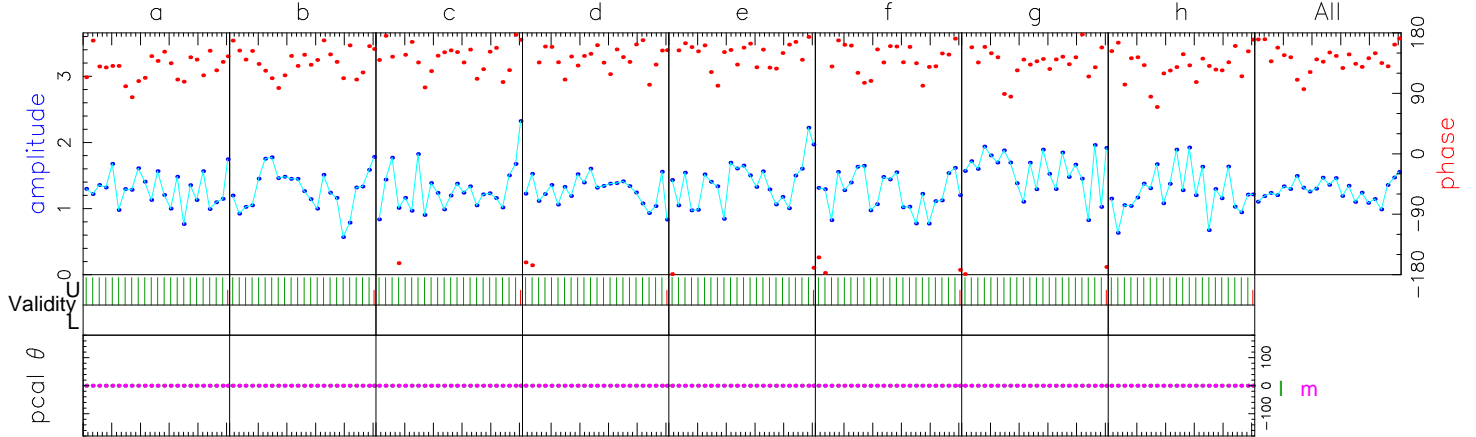
Fringe quality 8

SNR 57.7
 Int time 299.974
 Amp 1.219
 Phase 141.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.000698
 MBD -0.000599
 Fringe rate (Hz)
 -0.002520
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064344
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) -2.24573774409E+03 Apriori delay (usec) -2.24573714462E+03 Resid mbdelay (usec) -5.99466E-04 +/- 1.9E-05
 Sband delay (usec) -2.24573784287E+03 Apriori clock (usec) -1.3807770E+01 Resid sbdelay (usec) -6.98250E-04 +/- 1.5E-04
 Phase delay (usec) -2.24573714017E+03 Apriori clockrate (us/s) -1.9999998E-07 Resid phdelay (usec) 4.45409E-06 +/- 6.3E-08
 Delay rate (us/s) -7.51658698265E-01 Apriori rate (us/s) -7.51658669613E-01 Resid rate (us/s) -2.86527E-08 +/- 3.6E-10
 Total phase (deg) -38.4 Apriori accel (us/s/s) 3.02433172320E-05 Resid phase (deg) 141.0 +/- 2.0

RMS Theor. Amplitude 1.219 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 17.8 4.8 Search (2048X32) 1.191 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 12.4 8.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 9.8 2.8 Inc. seg. avg. 1.273 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 7.6 4.9 Inc. frq. avg. 1.228 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

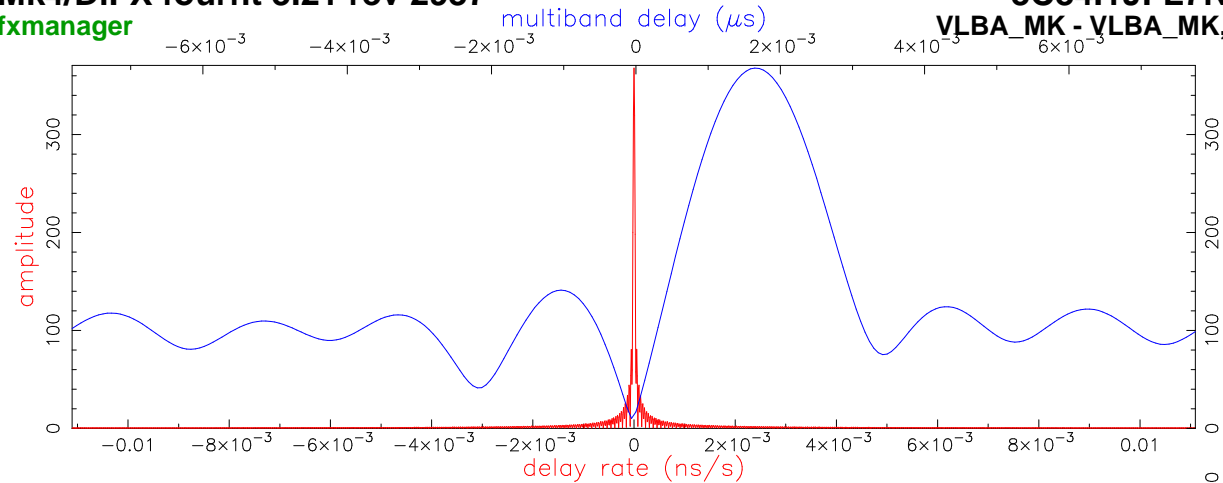
l: az 293.3 el 55.9 pa 84.8 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 5915.976 3764.330 simultaneous interpolator
 Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/lm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/lm.W.86.1JFL7R

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

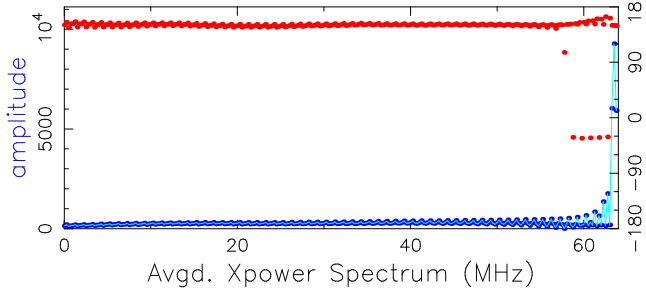
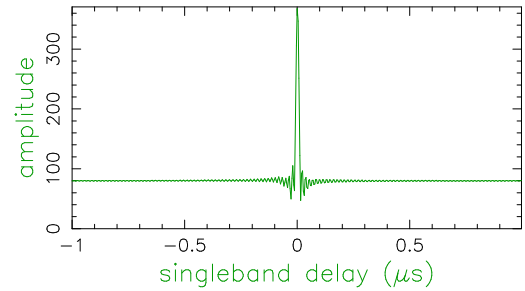
3C84.1JFL7R, No0089, mm

VLBA_MK - VLBA_MK, fgroup W, pol LR



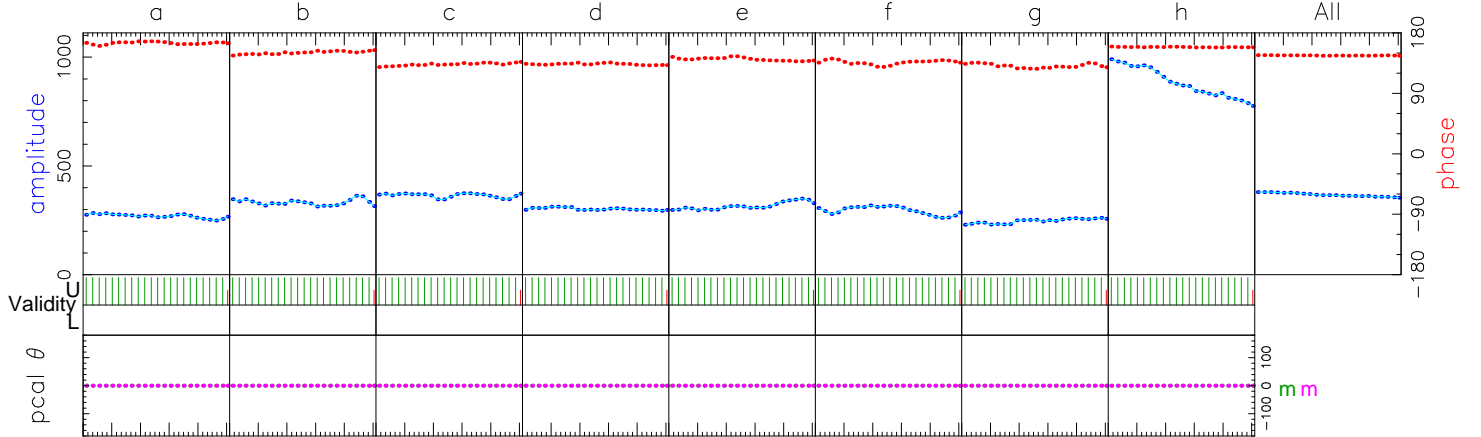
Fringe quality 6

SNR 17553.9
 Int time 299.974
 Amp 370.625
 Phase 146.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.000998
 MBD 0.001629
 Fringe rate (Hz) 0.000002
 Ion TEC 0.000
 Ref freq (MHz) 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064349
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



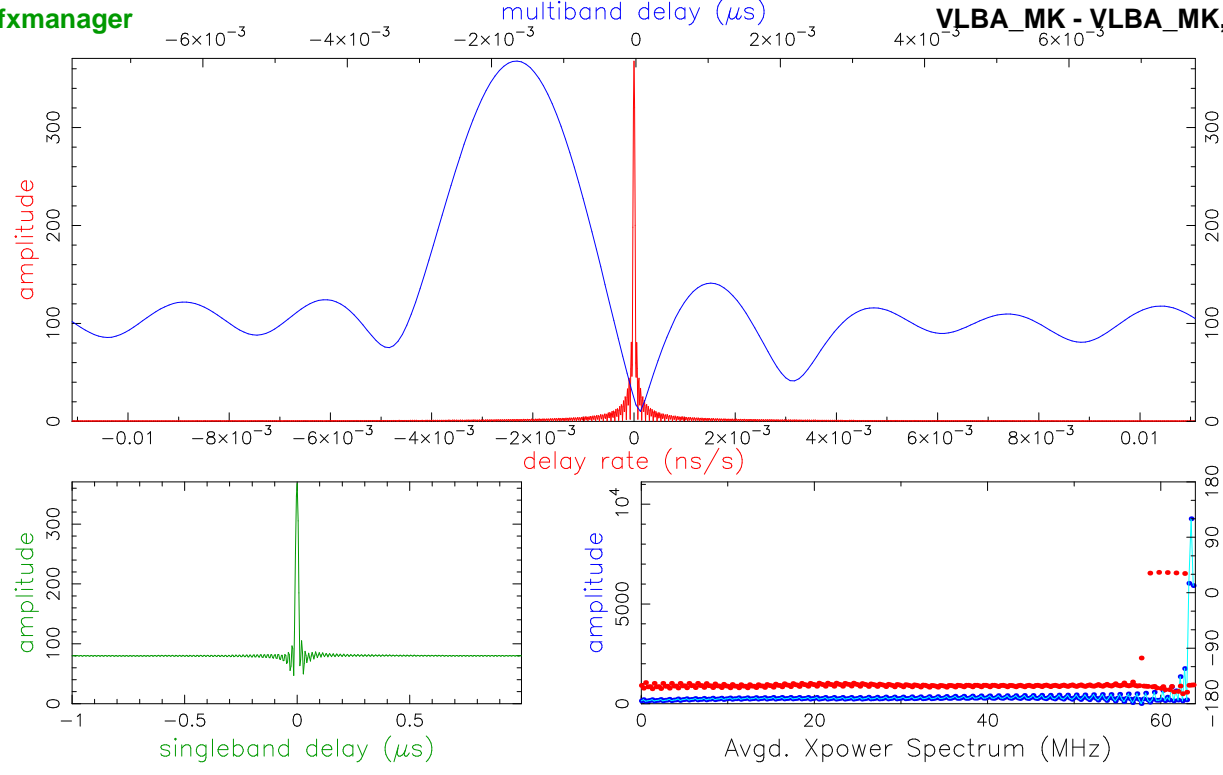
	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	164.7	150.4	133.0	133.5	140.8	135.9	130.8	158.8	Phase	146.3
	269.7	332.7	364.2	302.6	315.7	294.7	246.6	884.1	Ampl.	376.3
	257.6	256.9	256.9	257.6	257.3	257.4	258.3	256.8	Sbd box	257.3
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.62871875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.62872E-03	+/-	6.2E-08
Sband delay (usec)	9.97750000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	9.97750E-04	+/-	4.9E-07
Phase delay (usec)	4.62087249185E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.62087E-06	+/-	2.1E-10
Delay rate (us/s)	2.15156897189E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	2.15157E-11	+/-	1.2E-12
Total phase (deg)	146.3	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	146.3	+/-	0.0

ph/seg (deg)	0.3	Theor.	Amplitude	370.625 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	2.3	0.0	Search (2048X32)	361.244	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	14.3	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	52.6	0.0	Inc. seg. avg.	367.791	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011 0.011		
			Inc. frq. avg.	376.308	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

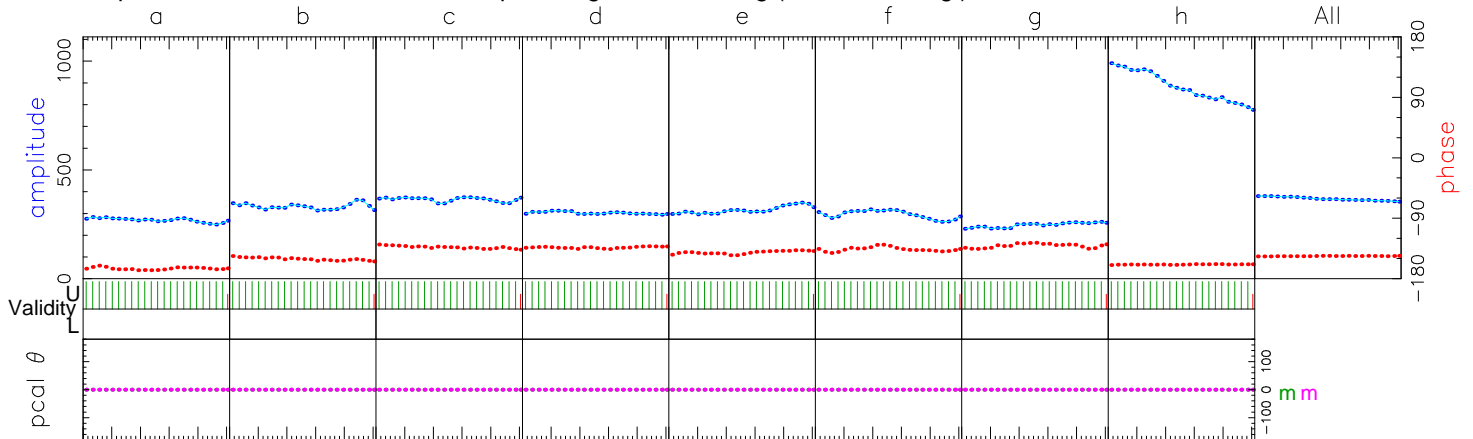
m: az 11.4 el 67.7 pa -165.2 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mm.W.115.1JFL7R



Fringe quality 6
SNR 17553.9
Int time 299.974
Amp 370.625
Phase -146.3
PFD 0.0e+00
Delays (us)
SBD -0.000998
MBD -0.001629
Fringe rate (Hz)
-0.000002
Ion TEC 0.000
Ref freq (MHz)
87940.0000
AP (sec) 0.512
Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115500.00
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064352
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-164.7	-150.4	-133.0	-133.5	-140.8	-135.9	-130.8	-158.8	Phase	-146.3
	269.7	332.7	364.2	302.6	315.7	294.7	246.6	884.1	Ampl.	376.3
	256.4	257.1	257.1	256.4	256.7	256.6	255.7	257.2	Sbd box	256.7
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.62871875000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-1.62872E-03	+/- 6.2E-08
Sband delay (usec)	-9.97750000000E-04		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-9.97750E-04	+/- 4.9E-07
Phase delay (usec)	-4.62087249191E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-4.62087E-06	+/- 2.1E-10
Delay rate (us/s)	-2.15156897189E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-2.15157E-11	+/- 1.2E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-146.3	+/- 0.0

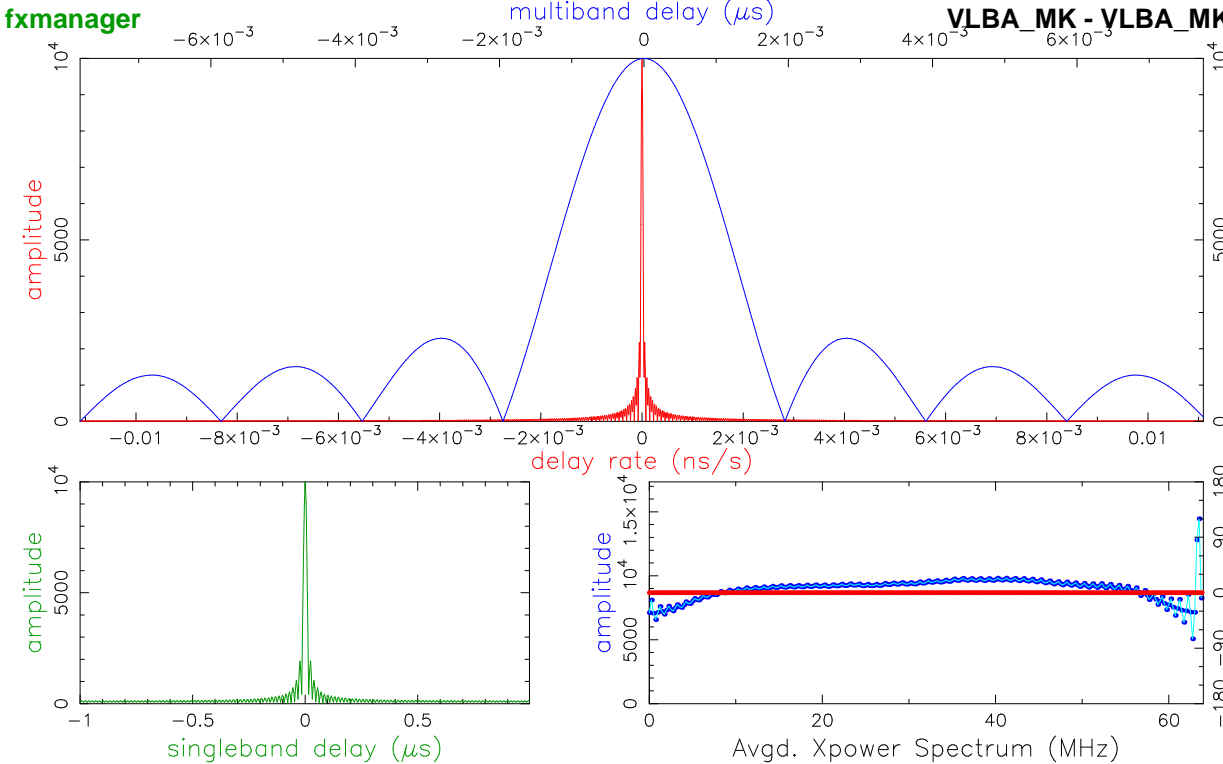
ph/seg (deg) 0.3 0.0 Theor. Amplitude 370.625 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 2.3 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 14.3 0.0 Inc. seg. avg. 367.791 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 52.6 0.0 Inc. frq. avg. 376.308 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 11.4 el 67.7 pa -165.2 m: az 11.4 el 67.7 pa -165.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mm..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mm.W.130.1JFL7R

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

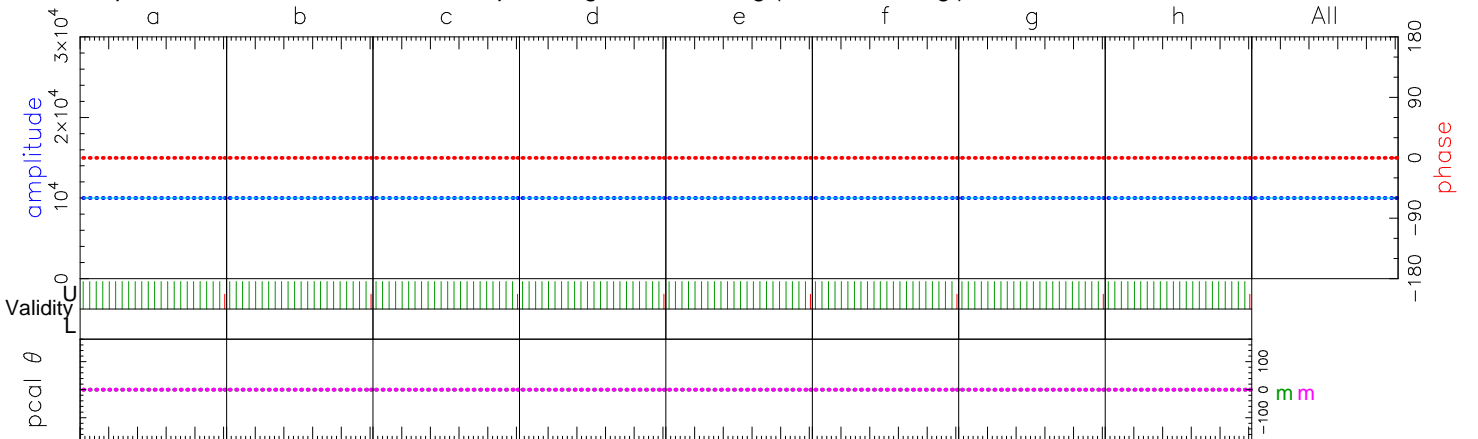
3C84.1JFL7R, No0089, mm

VLBA_MK - VLBA_MK, fgroup W, pol LL



Fringe quality 9
 SNR 473630.2
 Int time 299.974
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512
 Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064344
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 2.3E-09
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 1.8E-08
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 7.6E-12
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 4.4E-14
Total phase (deg)			0.0						0.0	+/- 0.0

ph/seg (deg) 0.0 0.0
 amp/seg (%) 0.0 0.0
 ph/frq (deg) 0.0 0.0
 amp/frq (%) 0.0 0.0
 m: az 11.4 el 67.7 pa -165.2
 Control file: cf_1234_88GHz_gmva

Amplitude 10000.001 +/- 0.021
 Search (2048X32) 10000.001
 Interp. 0.000
 Inc. seg. avg. 10000.000
 Inc. frq. avg. 10000.002
 m: az 11.4 el 67.7 pa -165.2
 Input file: /Exps/c202c/v1/1234/No0089/mm..1JFL7R

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
 u,v (fr/asec) 0.000 0.000
 Output file: /Exps/c202c/v1/1234/No0089/mm.W.83.1JFL7R

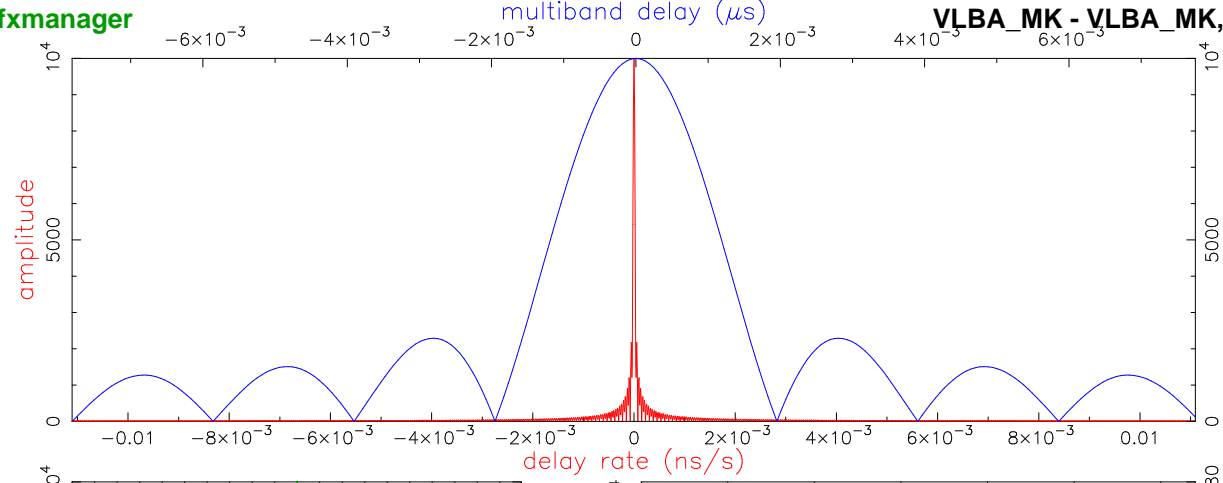
PC period (AP's) 5, 5
 sb window (us) -1.000 1.000
 SampCntNorm: enabled
 mb window (us) -0.008 0.008
 dr window (ns/s) -0.011 0.011
 nlags: 256 t_cohere infinite
 ion window (TEC) 0.00 0.00
 simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

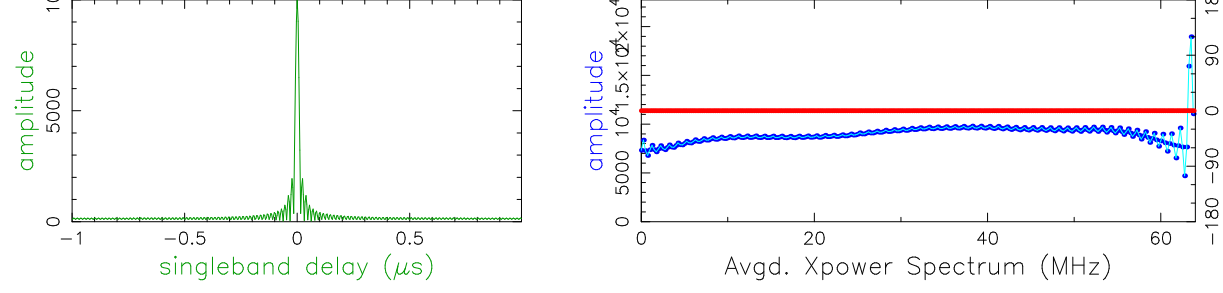
fxmanager

3C84.1JFL7R, No0089, mm

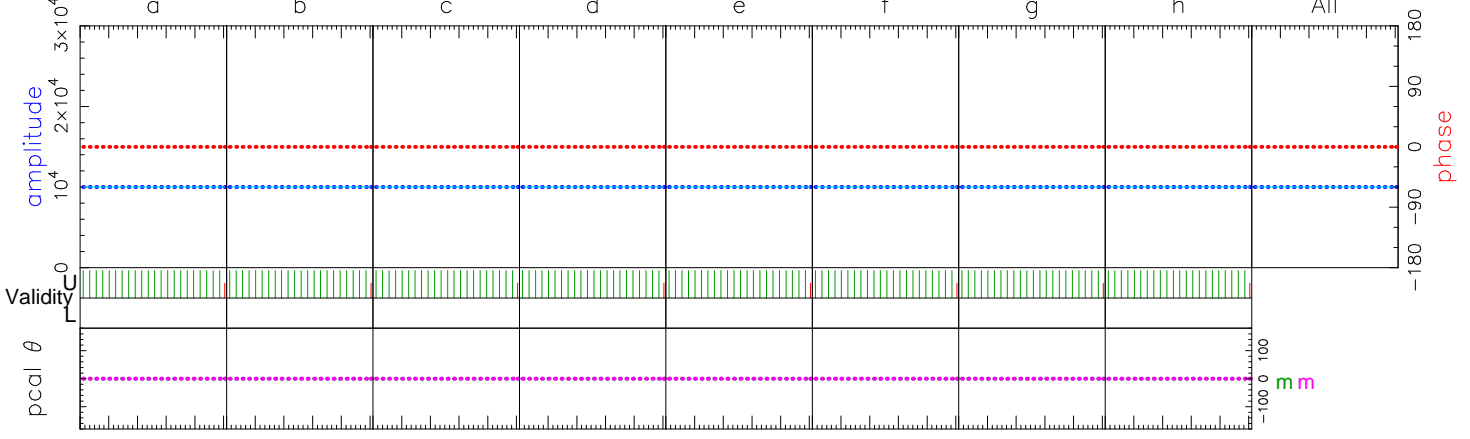
VLBA_MK - VLBA_MK, fgroup W, pol RR



Fringe quality 9
 SNR 473630.2
 Int time 299.974
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 87940.0000
 AP (sec) 0.512
 Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064346
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All	
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0			
m	1000	1000	1000	1000	1000	1000	1000	1000			
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
m	1000	1000	1000	1000	1000	1000	1000	1000			
m	1000	1000	1000	1000	1000	1000	1000	1000			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00		+/- 2.3E-09	
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00		+/- 1.8E-08	
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00		+/- 7.6E-12	
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00		+/- 4.4E-14	
Total phase (deg)			0.0							0.0	+/- 0.0

ph/seg (deg) 0.0 0.0
 amp/seg (%) 0.0 0.0
 ph/frq (deg) 0.0 0.0
 amp/frq (%) 0.0 0.0
 m: az 11.4 el 67.7 pa -165.2
 Control file: cf_1234_88GHz_gmva

Amplitude 10000.001 +/- 0.021
 Search (2048X32) 10000.001
 Interp. 0.000
 Inc. seg. avg. 10000.000
 Inc. frq. avg. 10000.002
 u,v (fr/asec) 0.000 0.000

Pcal mode: MANUAL, MANUAL
 Pcal rate: 0.000E+00, 0.000E+00 (us/s)
 Bits/sample: 2x2
 Sample rate(MISamp/s): 128
 Data rate(Mb/s): 2048
 PC period (AP's) 5, 5
 PC rate: 0.000E+00, 0.000E+00 (us/s)
 SampCntNorm: enabled
 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

Input file: /Exps/c202c/v1/1234/No0089/mm..1JFL7R
 Output file: /Exps/c202c/v1/1234/No0089/mm.W.99.1JFL7R

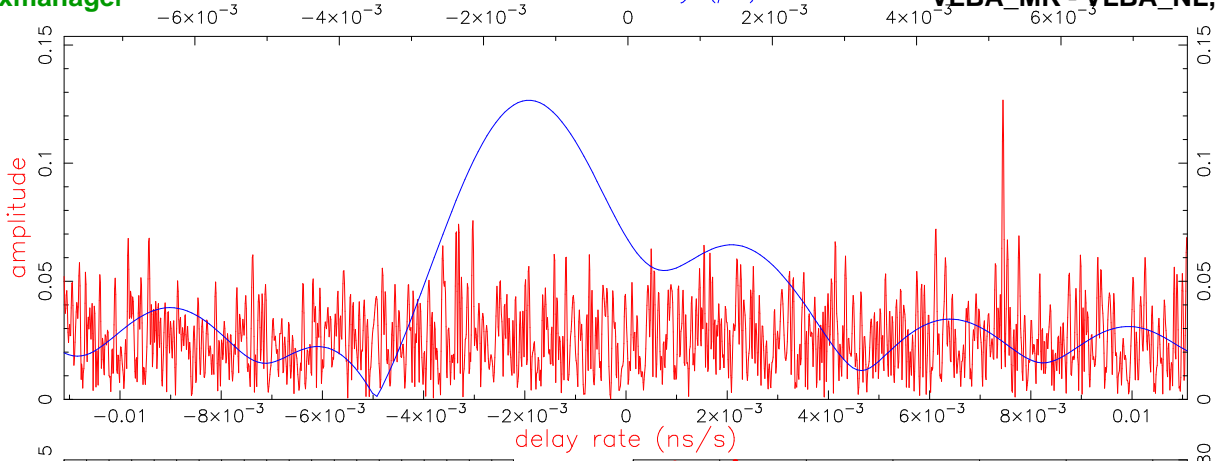
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mn

VLBA_MK - VLBA_NL, fgroup W, pol RR

multiband delay (μ s)



Fringe quality 0

SNR 6.0

Int time 297.970

Amp 0.154

Phase -137.6

PFD 4.4e-01

Delays (us)

SBD 0.484509

MBD -0.001366

Fringe rate (Hz)

0.656292

Ion TEC 0.000

Ref freq (MHz)

87940.0000

AP (sec) 0.512

Exp. c202c

Exper # 16383

Yr:day 2020:286

Start 115501.54

Stop 120000.03

FRT 115730.00

Corr/FF/build

2021:039:063420

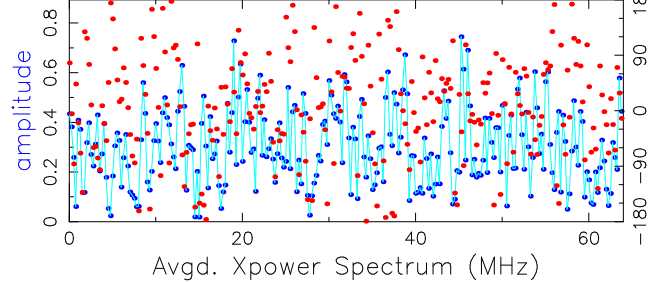
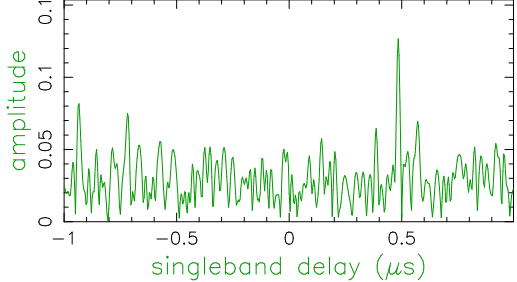
2021:039:064347

2020:247:085004

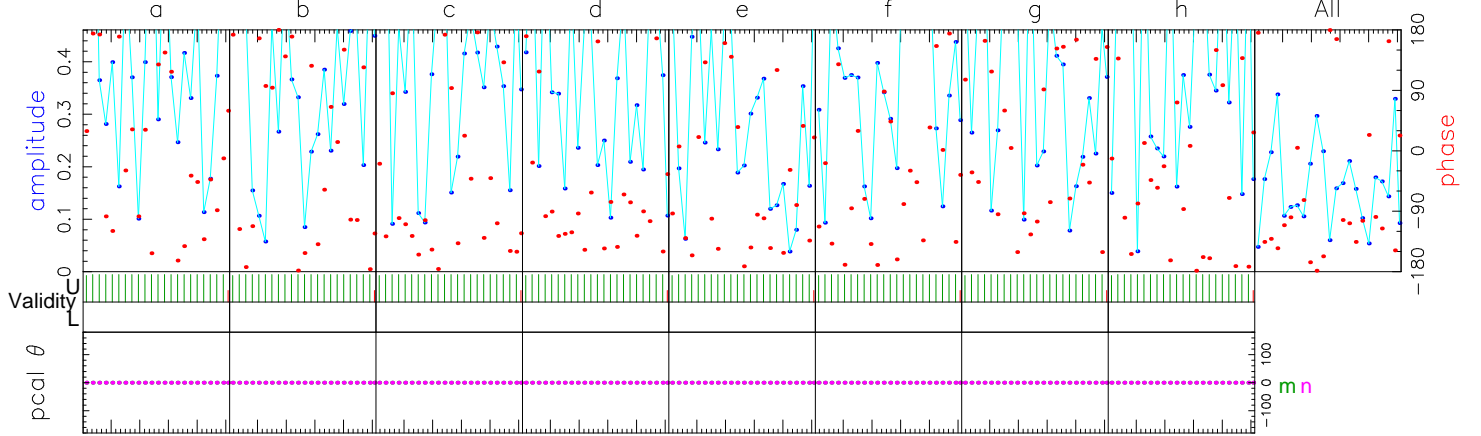
RA & Dec (J2000)

03h19m48.160095s

+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-126.0	-174.3	-128.2	-114.5	-137.3	-111.1	-151.0	-157.2	Phase	-137.6
	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.2	Ampl.	0.1
	95.8	402.2	269.9	381.6	254.1	71.9	117.0	466.8	Sbd box	381.0
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	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	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)	4.22690118981E+03		Apriori delay (usec)		4.22641818067E+03		Resid mbdelay (usec)		-1.36586E-03	+/- 1.8E-04
Sband delay (usec)	4.22690268967E+03		Apriori clock (usec)		1.3142460E+01		Resid sbdelay (usec)		4.84509E-01	+/- 1.4E-03
Phase delay (usec)	4.22641817633E+03		Apriori clockrate (us/s)		-4.0000002E-07		Resid phdelay (usec)		-4.34578E-06	+/- 6.1E-07
Delay rate (us/s)	8.35714683260E-01		Apriori rate (us/s)		8.35707220304E-01		Resid rate (us/s)		7.46296E-06	+/- 3.5E-09
Total phase (deg)	153.5		Apriori accel (us/s/s)		-4.68741608023E-05		Resid phase (deg)		-137.6	+/- 19.2

	RMS	Theor.	Amplitude	0.154 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	60.6	46.0	Search (2048X32)	0.126	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	70.4	80.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	23.7	27.1	Inc. seg. avg.	0.154	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	53.4	47.3	Inc. frq. avg.	0.149	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

m: az 11.4 el 67.7 pa -165.2 n: az 290.1 el 47.4 pa 69.6 u,v (fr/asec) -6596.394 -5492.850 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mn..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mn.W.106.1JFL7R

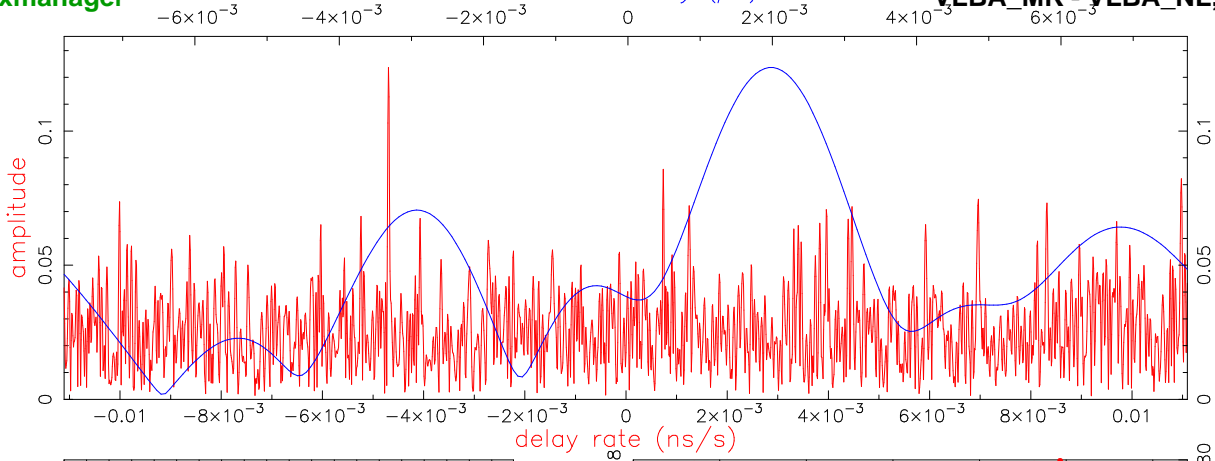
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mn

VLBA_MK - VLBA_NL, fgroup W, pol LR

multiband delay (μ s)



Fringe quality 0

SNR 5.9

Int time 297.970

Amp 0.135

Phase -169.4

PFD 5.5e-01

Delays (us)

SBD 0.111667

MBD 0.001951

Fringe rate (Hz)

-0.413297

Ion TEC 0.000

Ref freq (MHz)

87940.0000

AP (sec) 0.512

Exp. c202c

Exper # 16383

Yr:day 2020:286

Start 115501.54

Stop 120000.03

FRT 115730.00

Corr/FF/build

2021:039:063420

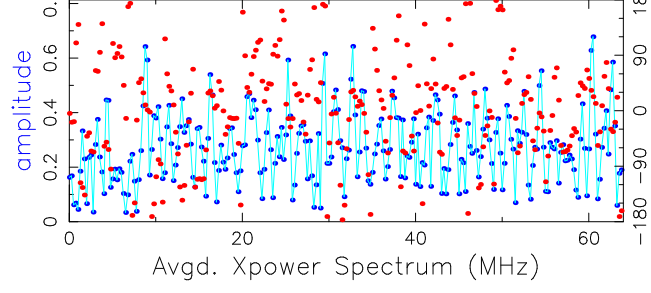
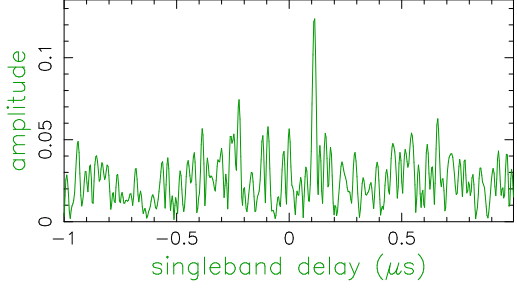
2021:039:064350

2020:247:085004

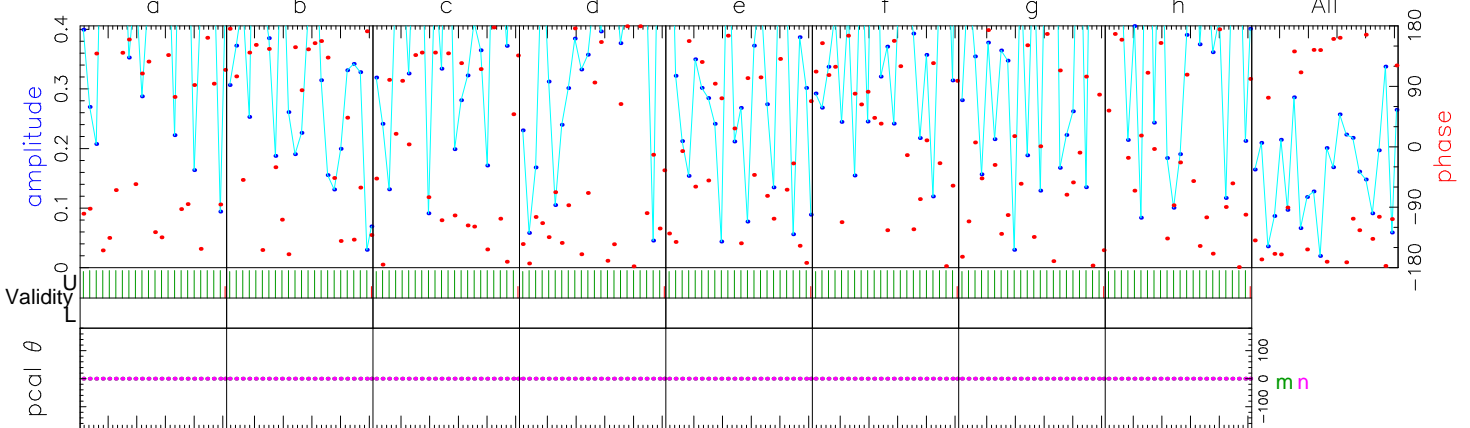
RA & Dec (J2000)

03h19m48.160095s

+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-152.7	173.2	153.4	-148.2	-149.1	93.8	-140.4	-166.4	Phase	-169.4
	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.1	Ampl.	0.1
	105.1	174.2	195.9	286.3	78.2	388.9	4.2	17.7	Sbd box	285.6
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	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		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	4.22652950698E+03		Apriori delay (usec)		4.22641818067E+03		Resid mbdelay (usec)		1.95131E-03	+/- 1.8E-04
Sband delay (usec)	4.22652984767E+03		Apriori clock (usec)		1.3142460E+01		Resid sbdelay (usec)		1.11667E-01	+/- 1.5E-03
Phase delay (usec)	4.22641817532E+03		Apriori clockrate (us/s)		-4.0000002E-07		Resid phdelay (usec)		-5.35140E-06	+/- 6.1E-07
Delay rate (us/s)	8.35702520542E-01		Apriori rate (us/s)		8.35707220304E-01		Resid rate (us/s)		-4.69976E-06	+/- 3.5E-09
Total phase (deg)	121.6		Apriori accel (us/s/s)		-4.68741608023E-05		Resid phase (deg)		-169.4	+/- 19.3

	RMS	Theor.	Amplitude	0.135 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	49.1	46.4	Search (2048X32)	0.120	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	70.6	80.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	46.7	27.4	Inc. seg. avg.	0.130	Sample rate(MSamp/s): 128	dr window (ns/s) -0.011 0.011	
amp/frq (%)	42.7	47.7	Inc. frq. avg.	0.144	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00

m: az 11.4 el 67.7 pa -165.2 n: az 290.1 el 47.4 pa 69.6 u,v (fr/asec) -6596.394 -5492.850 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mn..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mn.W.123.1JFL7R

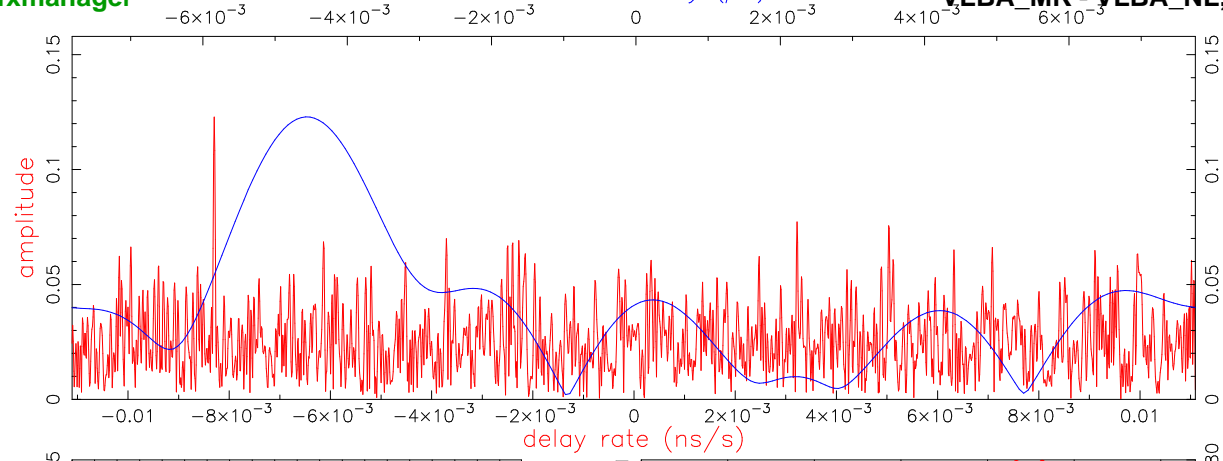
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mn

VLBA_MK - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)



Fringe quality 0

SNR 5.9

Int time 297.970

Amp 0.158

Phase -156.1

PFD 7.0e-01

Delays (us)

SBD 0.138191

MBD -0.004527

Fringe rate (Hz)

-0.730475

Ion TEC 0.000

Ref freq (MHz)

87940.0000

AP (sec) 0.512

Exp. c202c

Exper # 16383

Yr:day 2020:286

Start 115501.54

Stop 120000.03

FRT 115730.00

Corr/FF/build

2021:039:063420

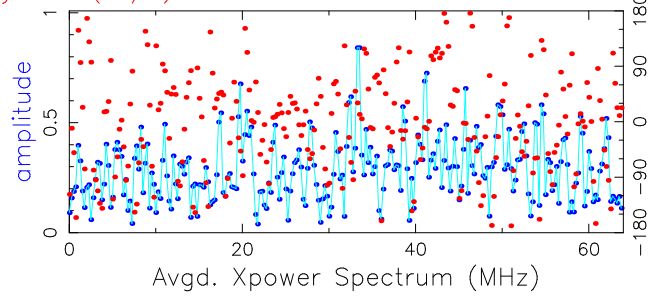
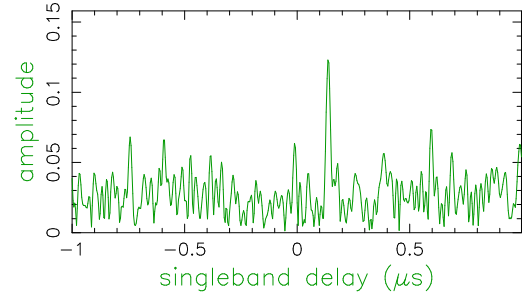
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2020:247:085004

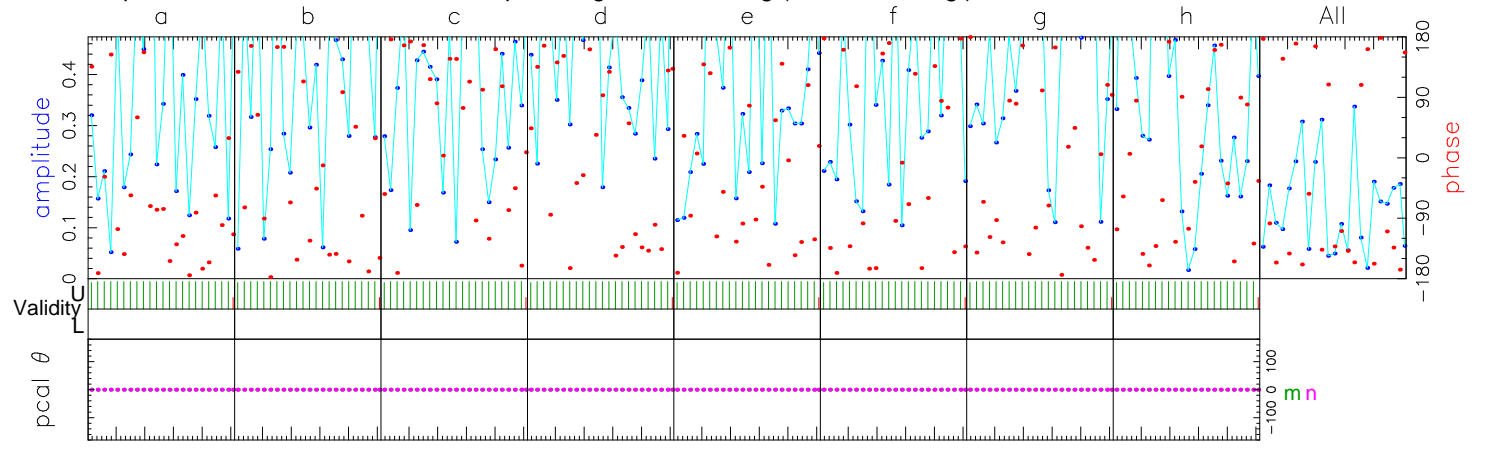
RA & Dec (J2000)

03h19m48.160095s

+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-114.9	-165.9	154.2	-178.7	-148.5	-177.4	-156.1	-117.8	Phase	-156.1
	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	Ampl.	0.2
	291.8	321.3	155.4	450.2	391.4	292.2	78.4	138.5	Sbd box	292.4
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	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	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)	4.22655427898E+03		Apriori delay (usec)		4.22641818067E+03		Resid mbdelay (usec)		-4.52669E-03	+/- 1.9E-04
Sband delay (usec)	4.22655637192E+03		Apriori clock (usec)		1.3142460E+01		Resid sbdelay (usec)		1.38191E-01	+/- 1.5E-03
Phase delay (usec)	4.22641817574E+03		Apriori clockrate (us/s)		-4.0000002E-07		Resid phdelay (usec)		-4.93135E-06	+/- 6.2E-07
Delay rate (us/s)	8.35698913785E-01		Apriori rate (us/s)		8.35707220304E-01		Resid rate (us/s)		-8.30652E-06	+/- 3.6E-09
Total phase (deg)	134.9		Apriori accel (us/s/s)		-4.68741608023E-05		Resid phase (deg)		-156.1	+/- 19.6

ph/seg (deg) 46.5 46.9 Search (2048X32) 0.122 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 75.2 81.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 33.5 27.7 Inc. seg. avg. 0.142 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 29.4 48.3 Inc. frq. avg. 0.160 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

m: az 11.4 el 67.7 pa -165.2 n: az 290.1 el 47.4 pa 69.6 u,v (fr/asec) -6596.394 -5492.850 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mn..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mn.W.139.1JFL7R

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

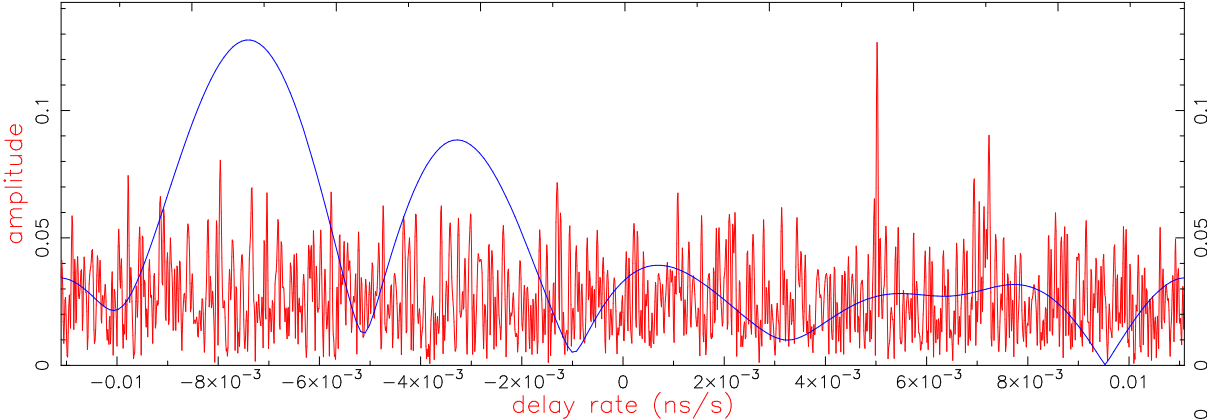
3C84.1JFL7R, No0089, mn

VLBA_MK - VLBA_NL, fgroup W, pol LL

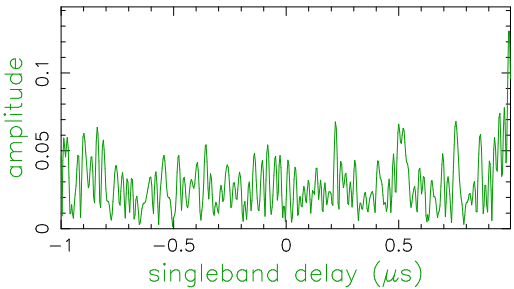
multiband delay (μ s)

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

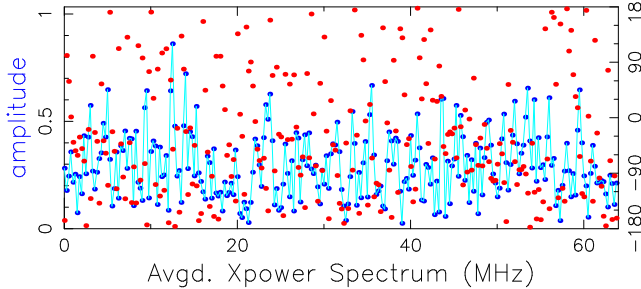
Fringe quality 0



SNR 6.2
Int time 297.970
Amp 0.142
Phase -139.2
PFD 1.7e-01
Delays (us)
SBD 0.990230
MBD -0.005091
Fringe rate (Hz)
0.442123
Ion TEC 0.000
Ref freq (MHz)
87940.0000
AP (sec) 0.512



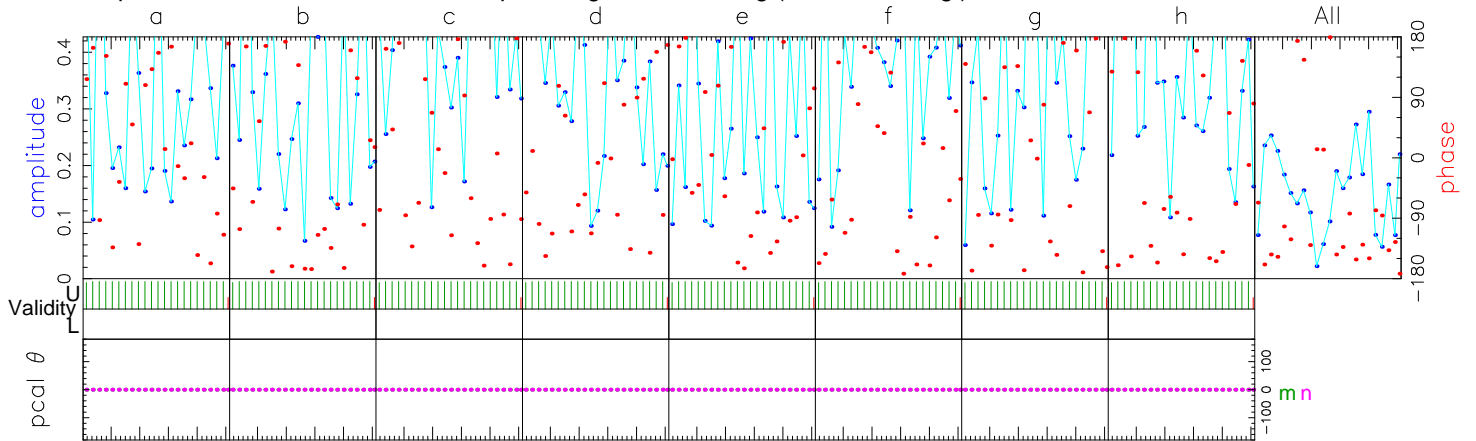
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115501.54
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064345
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-154.8	-150.0	-116.6	-79.8	-112.3	-169.7	-167.2	-146.3	Phase	-139.2
	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3	Ampl.	0.1
	50.4	155.3	503.4	236.1	476.9	366.0	407.0	510.6	Sbd box	510.5
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	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		
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)	4.22741309000E+03	Apriori delay (usec)	4.22641818067E+03	Resid mbdelay (usec)	-5.09067E-03	+/-	1.8E-04
Sband delay (usec)	4.22740841042E+03	Apriori clock (usec)	1.3142460E+01	Resid sbdelay (usec)	9.90230E-01	+/-	1.4E-03
Phase delay (usec)	4.22641817628E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-4.39780E-06	+/-	5.9E-07
Delay rate (us/s)	8.35712247853E-01	Apriori rate (us/s)	8.35707220304E-01	Resid rate (us/s)	5.02755E-06	+/-	3.4E-09
Total phase (deg)	151.8	Apriori accel (us/s/s)	-4.68741608023E-05	Resid phase (deg)	-139.2	+/-	18.6

ph/seg (deg)	57.4	Theor.	44.5	Amplitude	0.142 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	58.7		77.7	Search (2048X32)	0.125	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	33.9		26.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	43.2		45.8	Inc. seg. avg.	0.130	Sample rate(MSamp/s): 128	dr window (ns/s) -0.011 0.011
				Inc. frq. avg.	0.139	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

m: az 11.4 el 67.7 pa -165.2 n: az 290.1 el 47.4 pa 69.6 u,v (fr/asec) -6596.394 -5492.850 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mn..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mn.W.91.1JFL7R

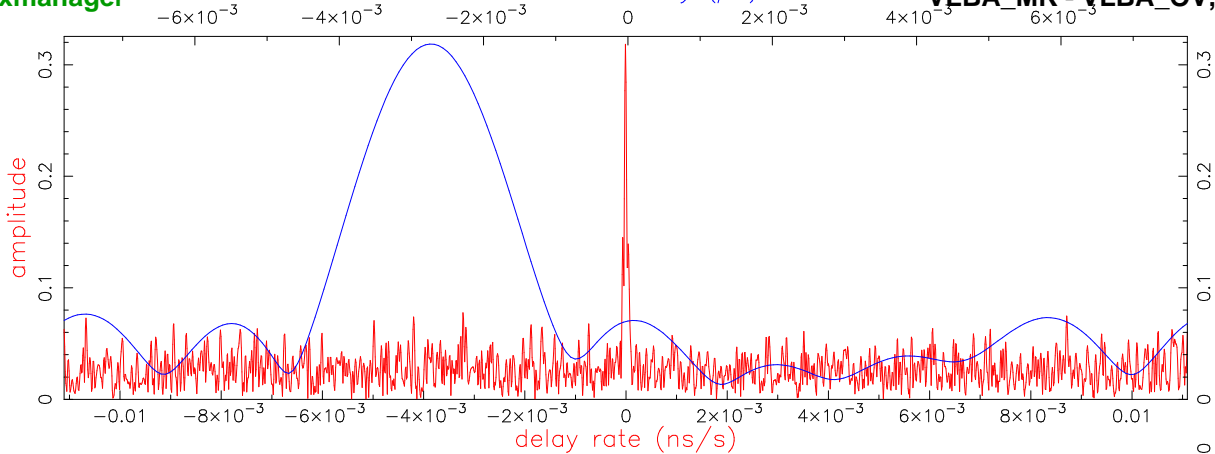
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mo

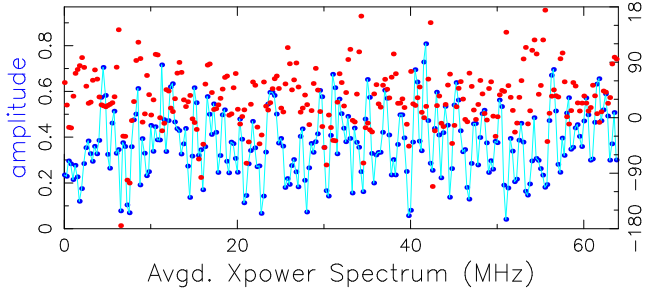
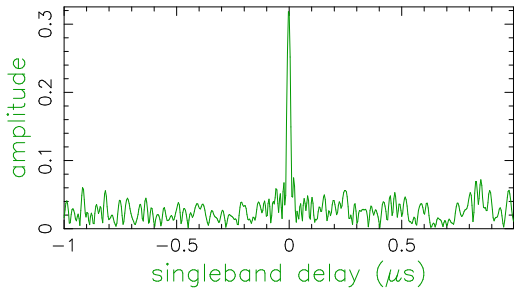
VLBA_MK - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)



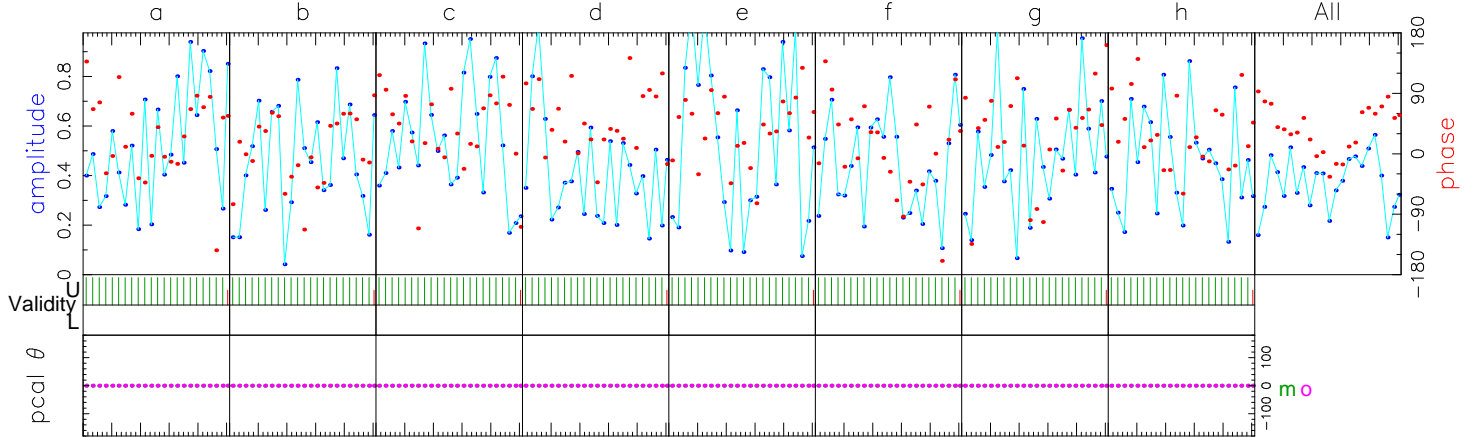
Fringe quality 9

SNR 15.4
 Int time 299.974
 Amp 0.325
 Phase 37.4
 PFD 8.4e-45
 Delays (us)
 SBD -0.002098
 MBD -0.002682
 Fringe rate (Hz)
 -0.000978
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064347
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	41.5	19.0	44.9	53.8	47.4	25.5	38.2	22.7	Phase	37.4
	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	Ampl.	0.3
	257.2	256.5	256.7	255.9	256.3	256.8	256.6	255.4	Sbd box	256.5
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	4.60367113966E+02	Apriori delay (usec)	4.60369795871E+02	Resid mbdelay (usec)	-2.68191E-03	+/-	7.0E-05
Sband delay (usec)	4.60367698121E+02	Apriori clock (usec)	-7.9982300E+00	Resid sbdelay (usec)	-2.09775E-03	+/-	5.6E-04
Phase delay (usec)	4.60369797052E+02	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	1.18165E-06	+/-	2.3E-07
Delay rate (us/s)	5.87231086941E-01	Apriori rate (us/s)	5.87231098063E-01	Resid rate (us/s)	-1.11222E-08	+/-	1.4E-09
Total phase (deg)	343.0	Apriori accel (us/s/s)	-2.23900852142E-05	Resid phase (deg)	37.4	+/-	7.4

	RMS	Theor.	Amplitude	0.325 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	34.8	17.8	Search (2048X32)	0.313	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	37.0	31.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	13.8	10.5	Inc. seg. avg.	0.356	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	15.5	18.4	Inc. frq. avg.	0.320	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

m: az 11.4 el 67.7 pa -165.2 o: az 290.0 el 65.5 pa 89.3 u,v (fr/asec) -4618.950 -3353.723 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mo..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mo.W.103.1JFL7R

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

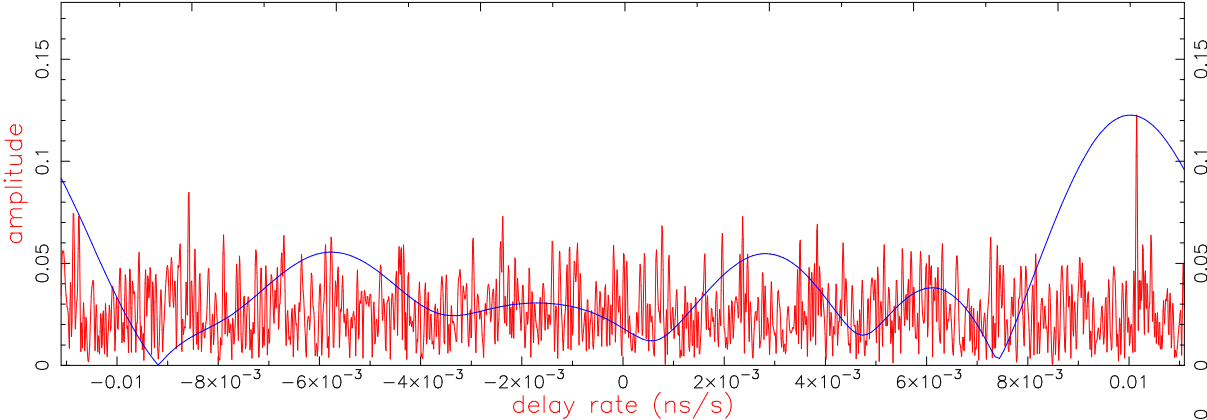
3C84.1JFL7R, No0089, mo

VLBA_MK - VLBA_OV, fgroup W, pol LR

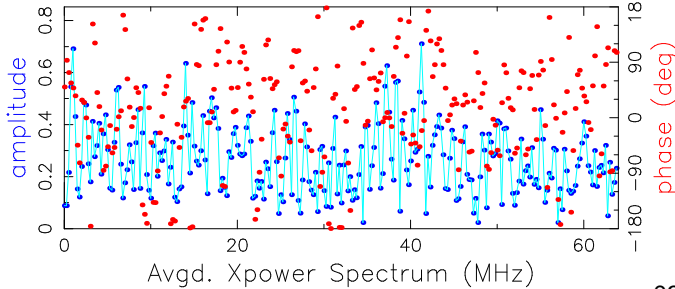
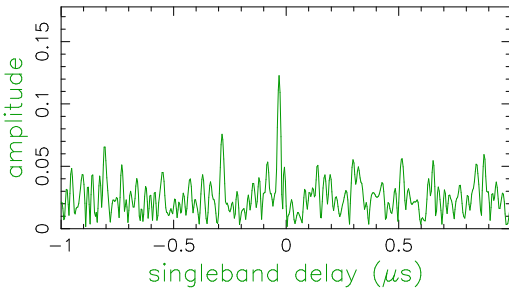
multiband delay (μ s)

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

Fringe quality 0

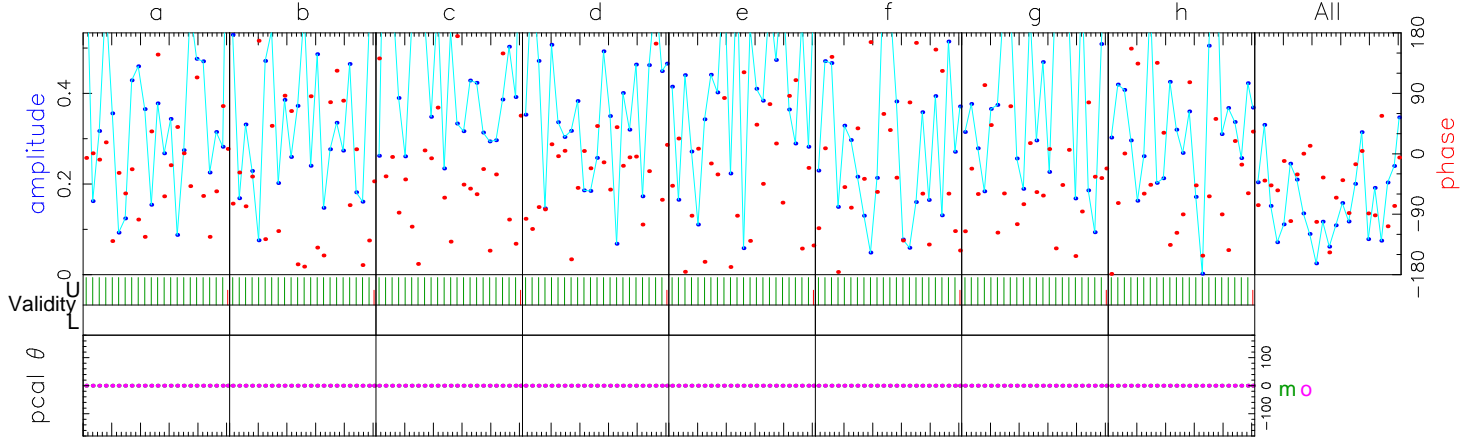


SNR 5.8
 Int time 299.974
 Amp 0.178
 Phase -48.1
 PFD 7.9e-01
 Delays (us)
 SBD -0.031346
 MBD 0.006997
 Fringe rate (Hz)
 0.893497
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064350
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-27.4	-119.3	-61.6	-39.0	-55.3	-36.4	-44.3	-52.7	Phase	-48.1
	0.3	0.1	0.2	0.3	0.1	0.1	0.3	0.1	Ampl.	0.2
	418.1	163.7	459.4	107.8	226.9	80.8	24.3	336.0	Sbd box	249.0
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	4.60345542884E+02		Apriori delay (usec)		4.60369795871E+02		Resid mbdelay (usec)		6.99701E-03	+/- 1.9E-04
Sband delay (usec)	4.60338449621E+02		Apriori clock (usec)		-7.9982300E+00		Resid sbdelay (usec)		-3.13463E-02	+/- 1.5E-03
Phase delay (usec)	4.60369794351E+02		Apriori clockrate (us/s)		1.9999998E-07		Resid phdelay (usec)		-1.52010E-06	+/- 6.2E-07
Delay rate (us/s)	5.87241258368E-01		Apriori rate (us/s)		5.87231098063E-01		Resid rate (us/s)		1.01603E-05	+/- 3.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.23900852142E-05		Resid phase (deg)		-48.1	+/- 19.7

	RMS	Theor.	Amplitude	0.178 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	46.9	47.3	Search (2048X32)	0.121	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	75.0	82.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	31.6	27.9	Inc. seg. avg.	0.174	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	48.7	48.7	Inc. frq. avg.	0.170	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

m: az 11.4 el 67.7 pa -165.2 o: az 290.0 el 65.5 pa 89.3 u,v (fr/asec) -4618.950 -3353.723 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mo..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mo.W.119.1JFL7R

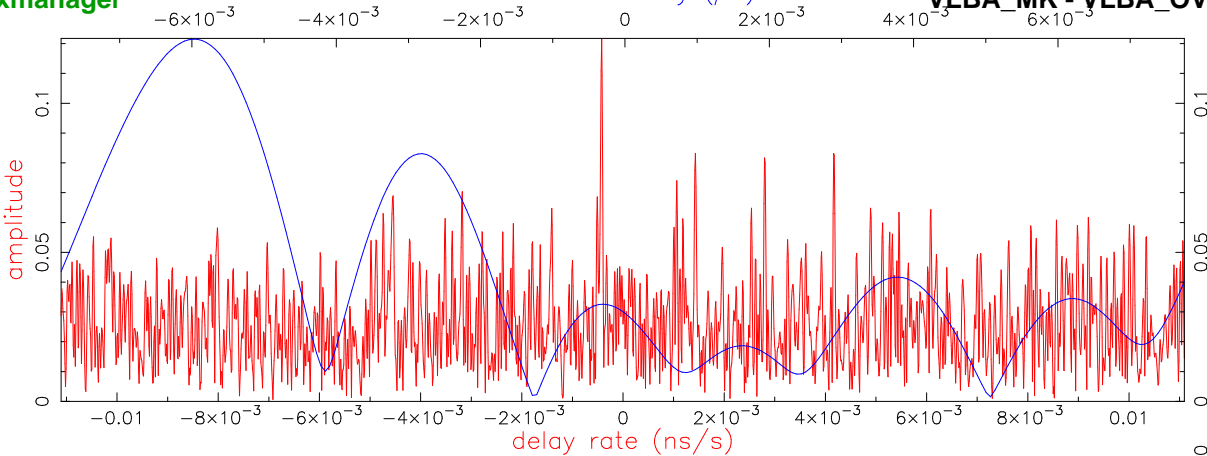
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mo

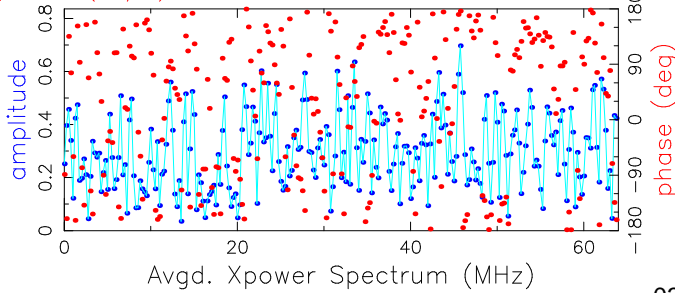
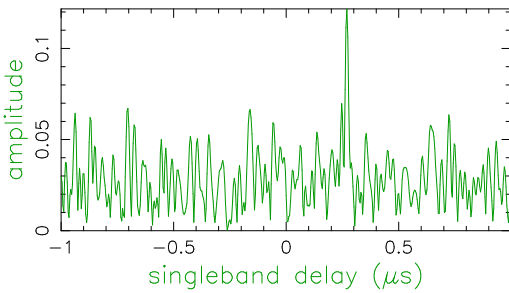
VLBA_MK - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)



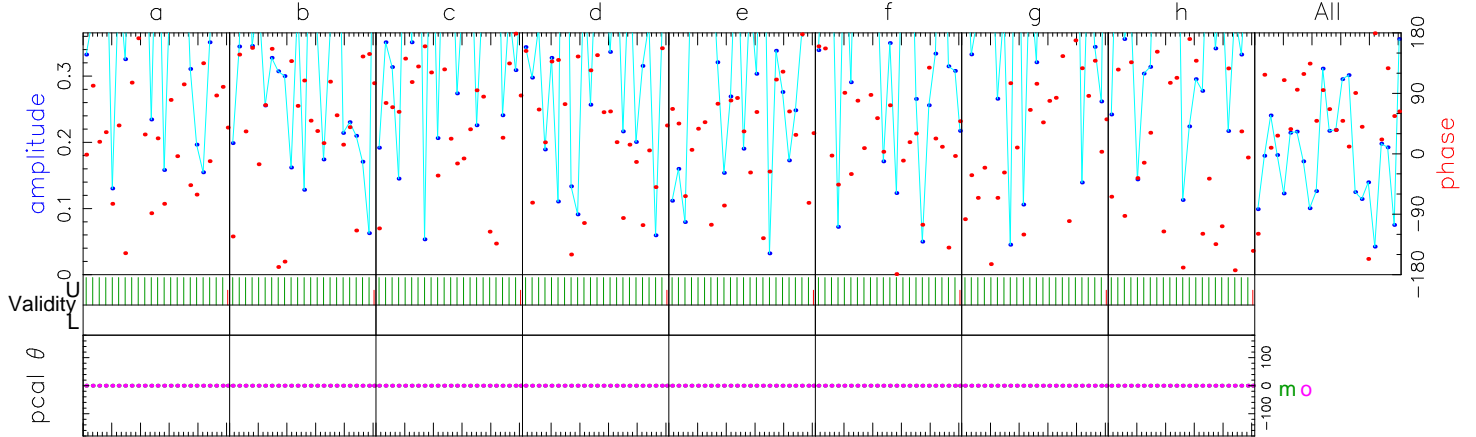
Fringe quality 0

SNR 5.8
 Int time 299.974
 Amp 0.122
 Phase 65.1
 PFD 8.7e-01
 Delays (us)
 SBD 0.269052
 MBD -0.005980
 Fringe rate (Hz)
 -0.037031
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064353
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	48.7	80.5	102.3	68.1	39.9	41.8	54.0	-179.9	Phase	65.1
	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	99.9	140.5	158.7	214.8	349.8	326.7	487.0	22.8	Sbd box	325.9
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	4.60645065538E+02		Apriori delay (usec)		4.60369795871E+02		Resid mbdelay (usec)		-5.98033E-03	+/- 1.9E-04
Sband delay (usec)	4.60638847621E+02		Apriori clock (usec)		-7.9982300E+00		Resid sbdelay (usec)		2.69052E-01	+/- 1.5E-03
Phase delay (usec)	4.60369797928E+02		Apriori clockrate (us/s)		1.9999998E-07		Resid phdelay (usec)		2.05752E-06	+/- 6.3E-07
Delay rate (us/s)	5.87230676973E-01		Apriori rate (us/s)		5.87231098063E-01		Resid rate (us/s)		-4.21090E-07	+/- 3.6E-09
Total phase (deg)	10.7		Apriori accel (us/s/s)		-2.23900852142E-05		Resid phase (deg)		65.1	+/- 19.9

	RMS	Theor.	Amplitude	0.122 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	64.6	47.7	Search (2048X32)	0.121	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	78.9	83.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	52.3	28.1	Inc. seg. avg.	0.134	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	44.2	49.1	Inc. frq. avg.	0.130	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

m: az 11.4 el 67.7 pa -165.2 o: az 290.0 el 65.5 pa 89.3 u,v (fr/asec) -4618.950 -3353.723 simultaneous interpolator

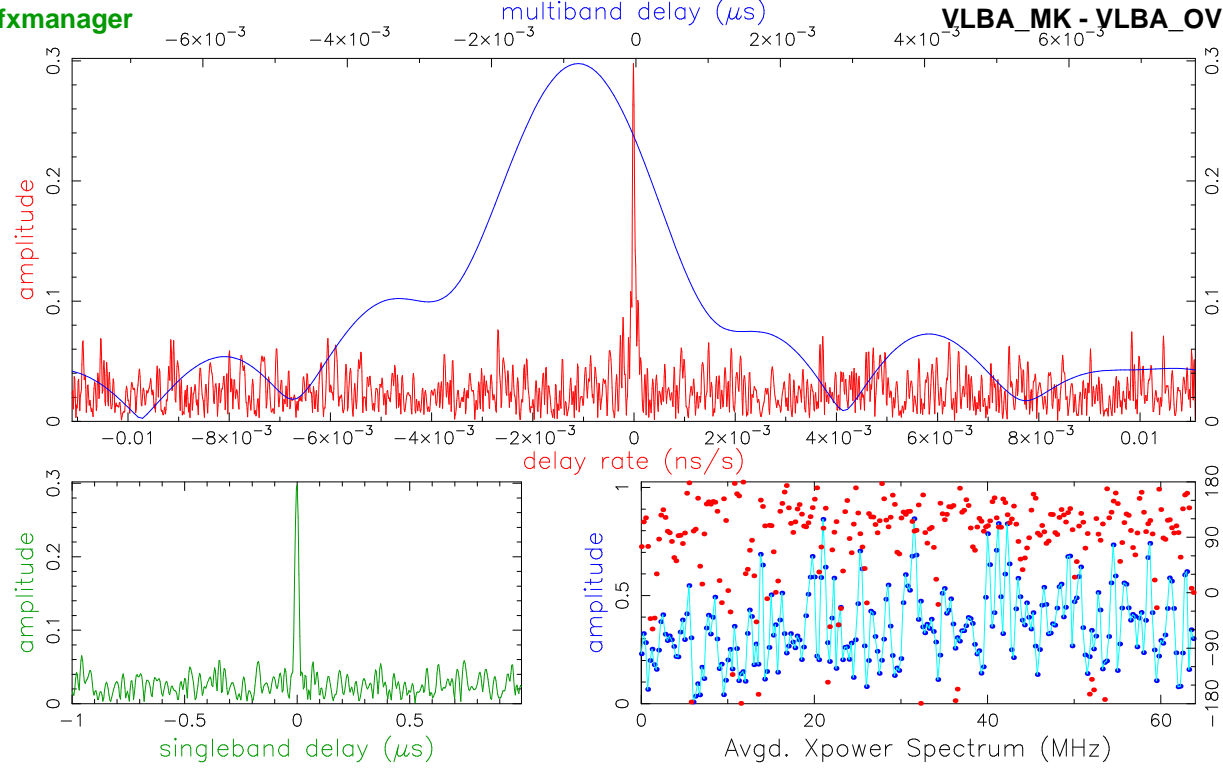
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mo..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mo.W.135.1JFL7R

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mo

VLBA_MK - VLBA_OV, fgroup W, pol LL

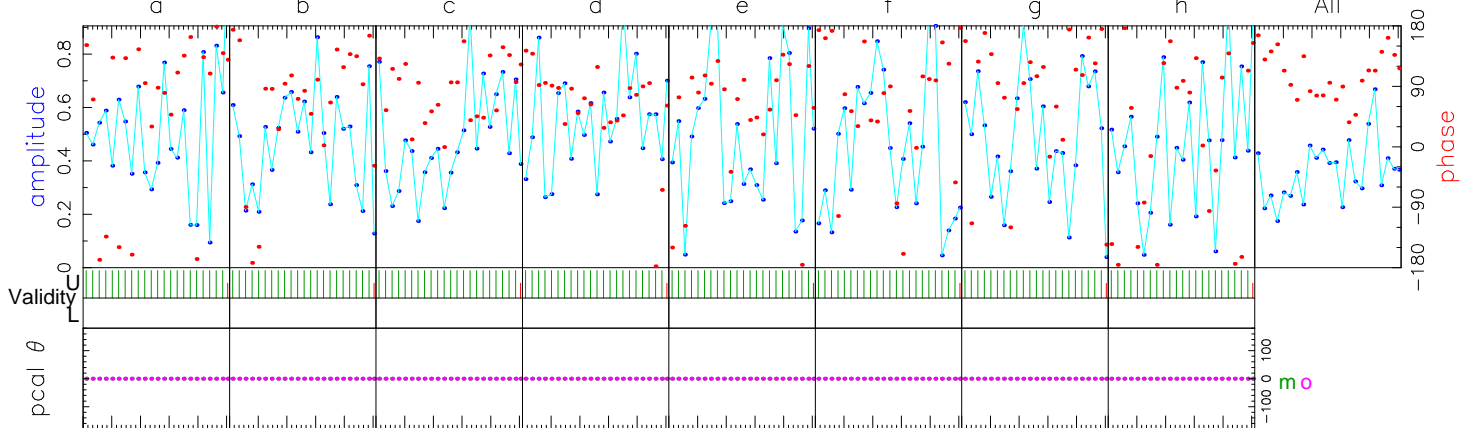


Fringe quality 8

SNR 14.3
 Int time 299.974
 Amp 0.302
 Phase 104.2
 PFD 1.2e-37
 Delays (us)
 SBD -0.001630
 MBD -0.000821
 Fringe rate (Hz)
 -0.001016
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512

Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115500.00
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064344
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
U/L	138.3	109.6	85.8	73.9	97.0	83.9	122.0	140.5	Phase	104.2
m	0.3	0.3	0.3	0.4	0.4	0.2	0.3	0.2	Ampl.	0.3
o	256.8	256.1	256.3	256.7	256.6	257.8	256.4	255.7	Sbd box	256.6
m	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	

Group delay (usec)(sbd) 4.60368974778E+02 Apriori delay (usec) 4.60369795871E+02 Resid mbdelay (usec) -8.21093E-04 +/- 7.6E-05
 Sband delay (usec) 4.60368165871E+02 Apriori clock (usec) -7.9982300E+00 Resid sbdelay (usec) -1.63000E-03 +/- 6.0E-04
 Phase delay (usec) 4.60369799162E+02 Apriori clockrate (us/s) 1.9999998E-07 Resid phdelay (usec) 3.29132E-06 +/- 2.5E-07
 Delay rate (us/s) 5.87231086505E-01 Apriori rate (us/s) 5.87231098063E-01 Resid rate (us/s) -1.15581E-08 +/- 1.5E-09
 Total phase (deg) 49.8 Apriori accel (us/s/s) -2.23900852142E-05 Resid phase (deg) 104.2 +/- 8.0

ph/seg (deg) 35.2 19.2 RMS Theor. Amplitude 0.302 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 42.3 33.5 Search (2048X32) 0.294 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.5 11.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 21.4 19.8 Inc. seg. avg. 0.343 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.318 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 11.4 el 67.7 pa -165.2 o: az 290.0 el 65.5 pa 89.3 u,v (fr/asec) -4618.950 -3353.723 simultaneous interpolator
 Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mo..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mo.W.87.1JFL7R

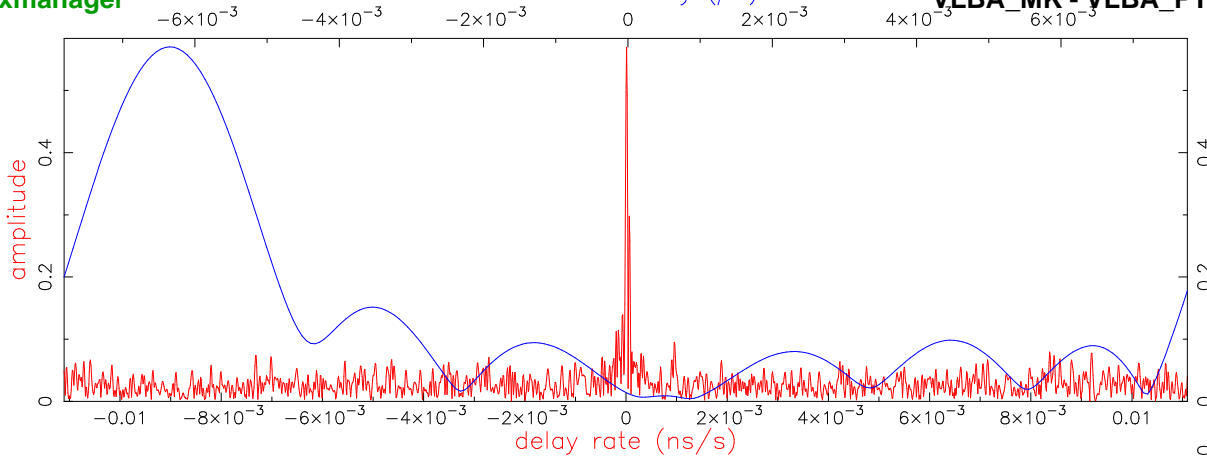
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mp

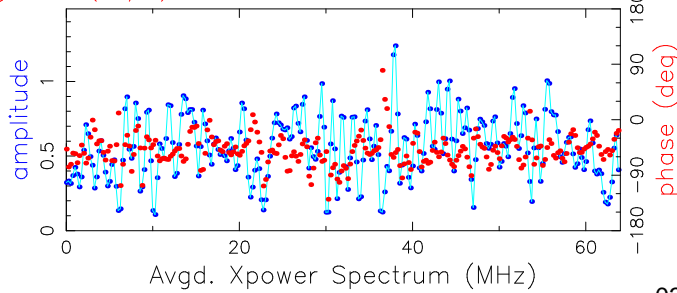
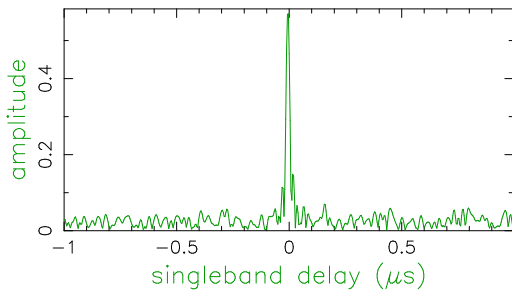
VLBA_MK - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)



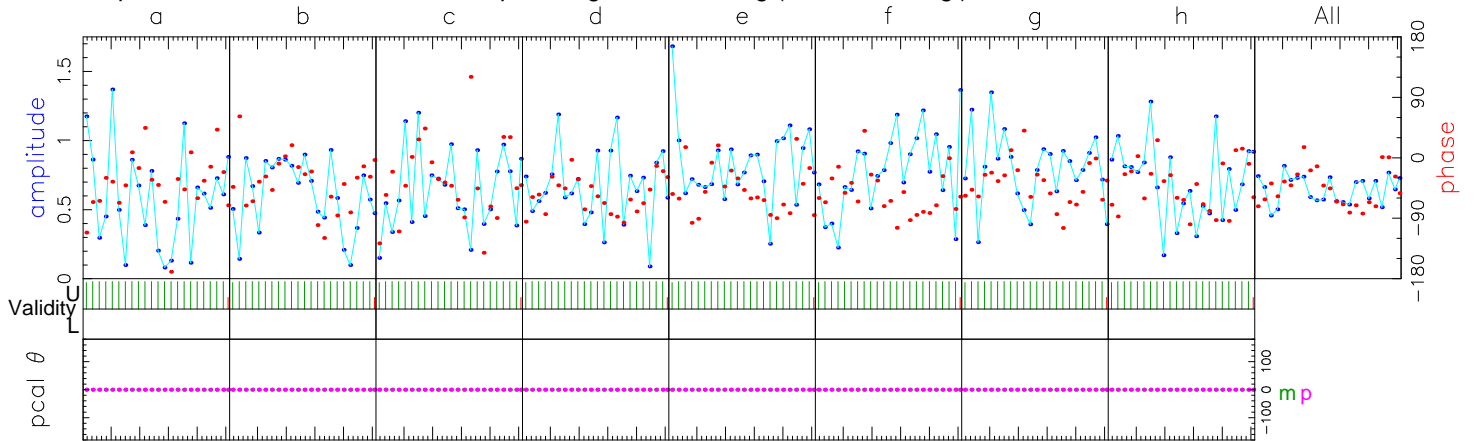
Fringe quality 8

SNR 27.6
 Int time 297.976
 Amp 0.584
 Phase -44.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.005824
 MBD -0.006289
 Fringe rate (Hz)
 0.000762
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115501.54
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064347
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	-37.4	-34.9	-31.9	-55.2	-48.6	-58.3	-37.7	-43.4	Phase	-44.3
	0.5	0.5	0.4	0.6	0.7	0.6	0.7	0.6	Ampl.	0.6
	256.1	255.7	255.3	255.4	255.4	255.7	255.1	255.5	Sbd box	255.5
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	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	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	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)	2.07719541442E+03		Apriori delay (usec)		2.07720170390E+03		Resid mbdelay (usec)		-6.28949E-03	+/- 3.9E-05
Sband delay (usec)	2.07719587965E+03		Apriori clock (usec)		1.3235845E+01		Resid sbdelay (usec)		-5.82425E-03	+/- 3.1E-04
Phase delay (usec)	2.07720170250E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		-1.39874E-06	+/- 1.3E-07
Delay rate (us/s)	7.40842991485E-01		Apriori rate (us/s)		7.40842982824E-01		Resid rate (us/s)		8.66111E-09	+/- 7.6E-10
Total phase (deg)			Apriori accel (us/s/s)		-2.77760191830E-05		Resid phase (deg)		-44.3	+/- 4.2

ph/seg (deg) 27.8 10.0 Search (2048X32) 0.567 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 19.6 17.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 10.6 5.9 Inc. seg. avg. 0.634 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 16.4 10.3 Inc. frq. avg. 0.574 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 m: az 11.4 el 67.7 pa -165.2 p: az 295.1 el 56.7 pa 88.4 u,v (fr/asec) -5828.086 -3447.265 simultaneous interpolator
 Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mp..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mp.W.107.1JFL7R

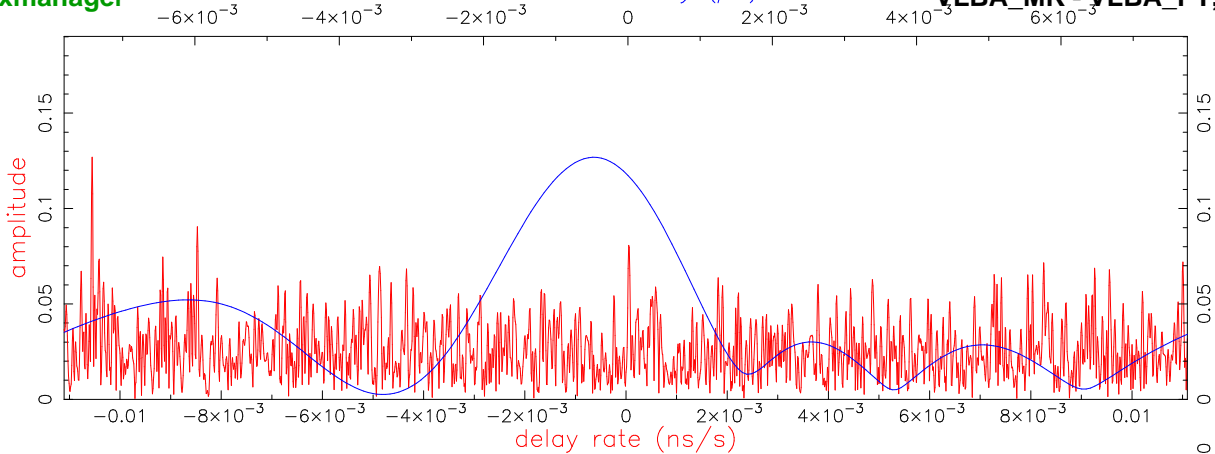
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1JFL7R, No0089, mp

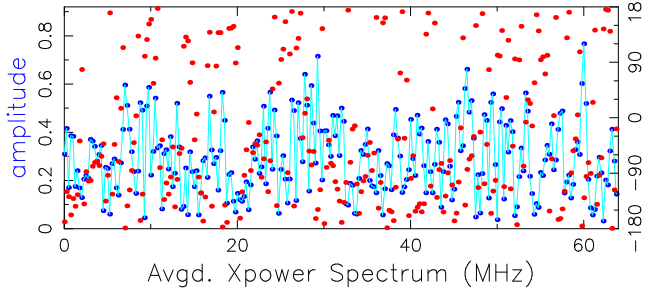
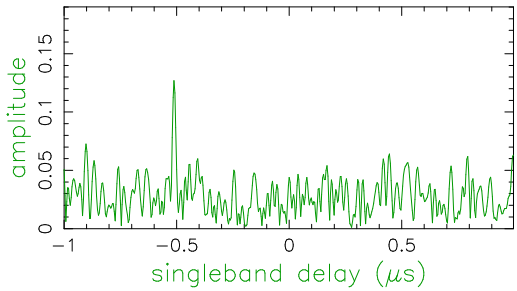
VLBA_MK - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)



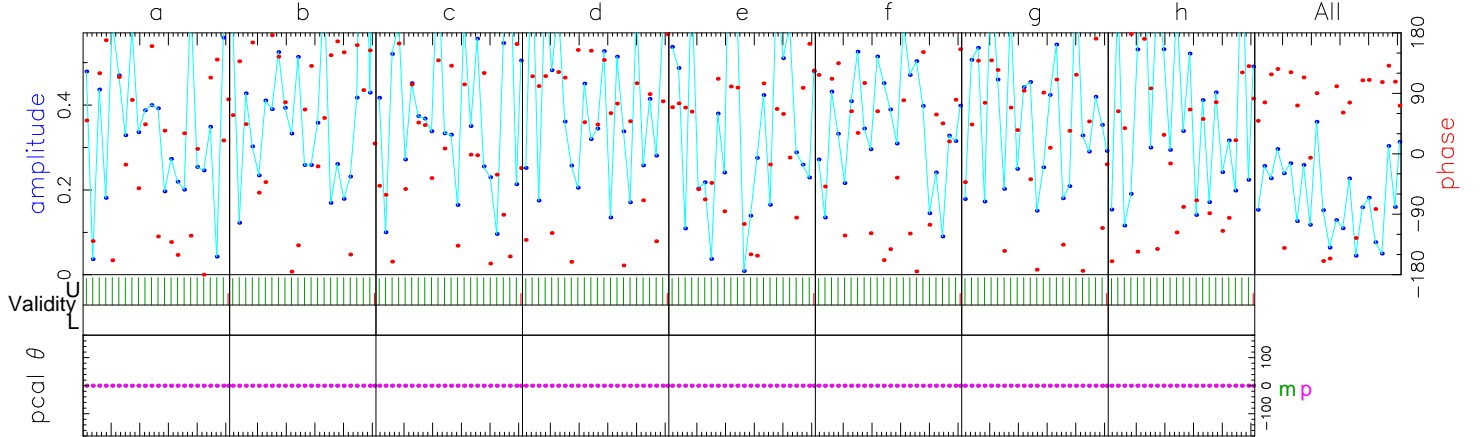
Fringe quality 0

SNR 6.0
 Int time 297.976
 Amp 0.190
 Phase 107.6
 PFD 4.2e-01
 Delays (us)
 SBD -0.511455
 MBD -0.000460
 Fringe rate (Hz)
 -0.929082
 Ion TEC 0.000
 Ref freq (MHz)
 87940.0000
 AP (sec) 0.512



Exp. c202c
 Exper # 16383
 Yr:day 2020:286
 Start 115501.54
 Stop 120000.03
 FRT 115730.00
 Corr/FF/build
 2021:039:063420
 2021:039:064350
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

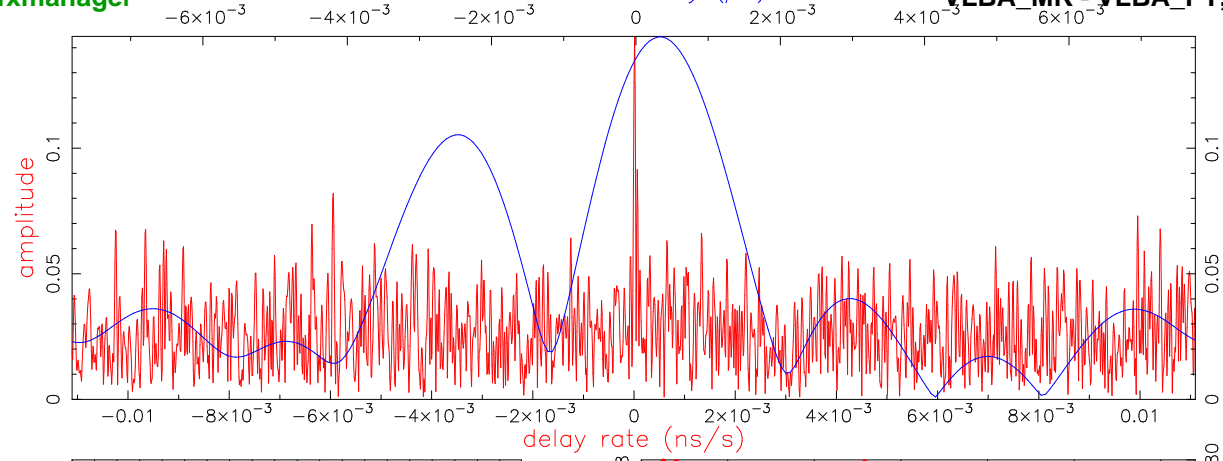


	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	106.3	109.4	140.4	118.8	78.2	115.2	102.8	132.7	Phase	107.6
	0.1	0.2	0.1	0.4	0.3	0.2	0.3	0.1	Ampl.	0.2
	194.2	323.7	69.8	470.0	125.4	255.2	91.9	182.0	Sbd box	126.1
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	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	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.07668561862E+03		Apriori delay (usec)		2.07720170390E+03		Resid mbdelay (usec)		-4.60281E-04	+/- 1.8E-04
Sband delay (usec)	2.07669024940E+03		Apriori clock (usec)		1.3235845E+01		Resid sbdelay (usec)		-5.11455E-01	+/- 1.4E-03
Phase delay (usec)	2.07720170730E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		3.40019E-06	+/- 6.0E-07
Delay rate (us/s)	7.40832417868E-01		Apriori rate (us/s)		7.40842982824E-01		Resid rate (us/s)		-1.05650E-05	+/- 3.5E-09
Total phase (deg)			50.5		Apriori accel (us/s/s)		-2.77760191830E-05		107.6	+/- 19.1

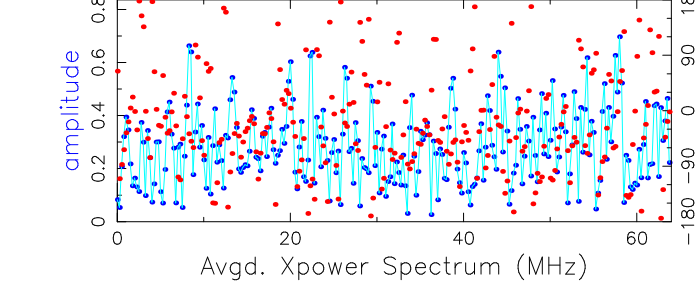
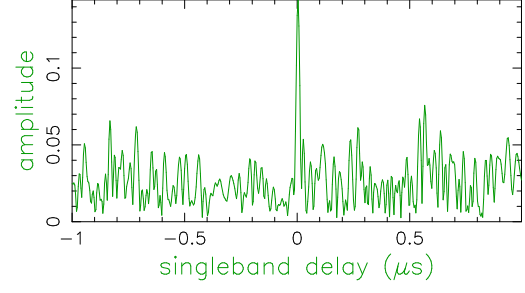
RMS Theor. Amplitude 0.190 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 66.6 45.9 Search (2048X32) 0.125 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 81.7 80.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 21.5 27.1 Inc. seg. avg. 0.207 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 51.6 47.2 Inc. frq. avg. 0.179 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 m: az 11.4 el 67.7 pa -165.2 p: az 295.1 el 56.7 pa 88.4 u,v (fr/asec) -5828.086 -3447.265 simultaneous interpolator

Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mp..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mp.W.122.1JFL7R

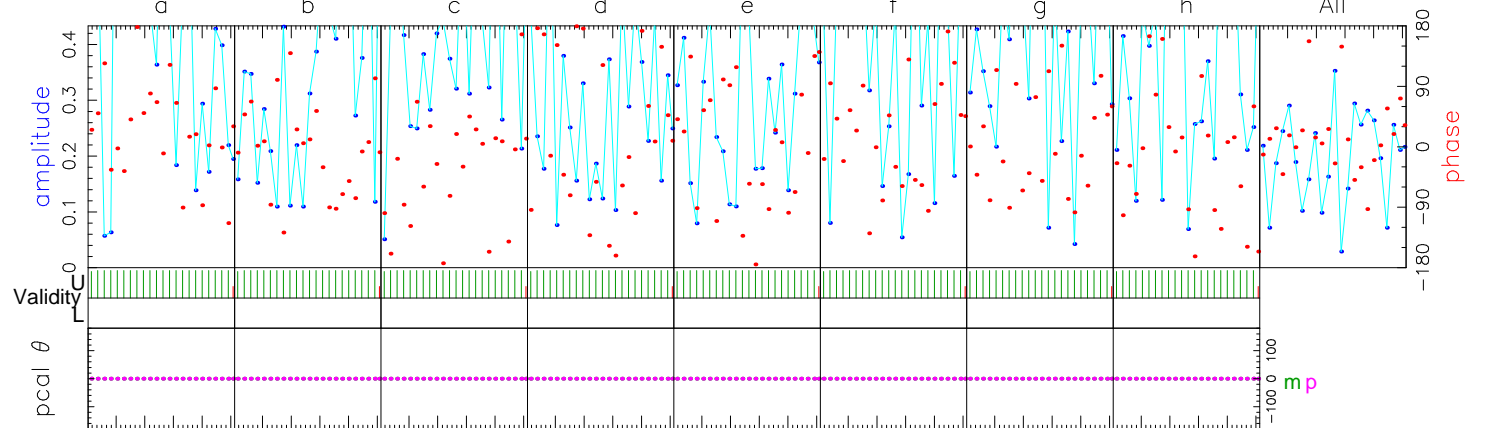
multiband delay (μs)



Fringe quality 0
SNR 6.8
Int time 297.976
Amp 0.144
Phase -3.6
PFD 2.7e-03
Delays (us)
SBD 0.003425
MBD 0.000320
Fringe rate (Hz) 0.001073
Ion TEC 0.000
Ref freq (MHz) 87940.0000
AP (sec) 0.512
Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115501.54
Stop 120000.03
FRT 115730.00
Corr/FF/build 2021:039:063420
2021:039:064353
2020:247:085004
RA & Dec (J2000) 03h19m48.160095s +41°30'42.104042"

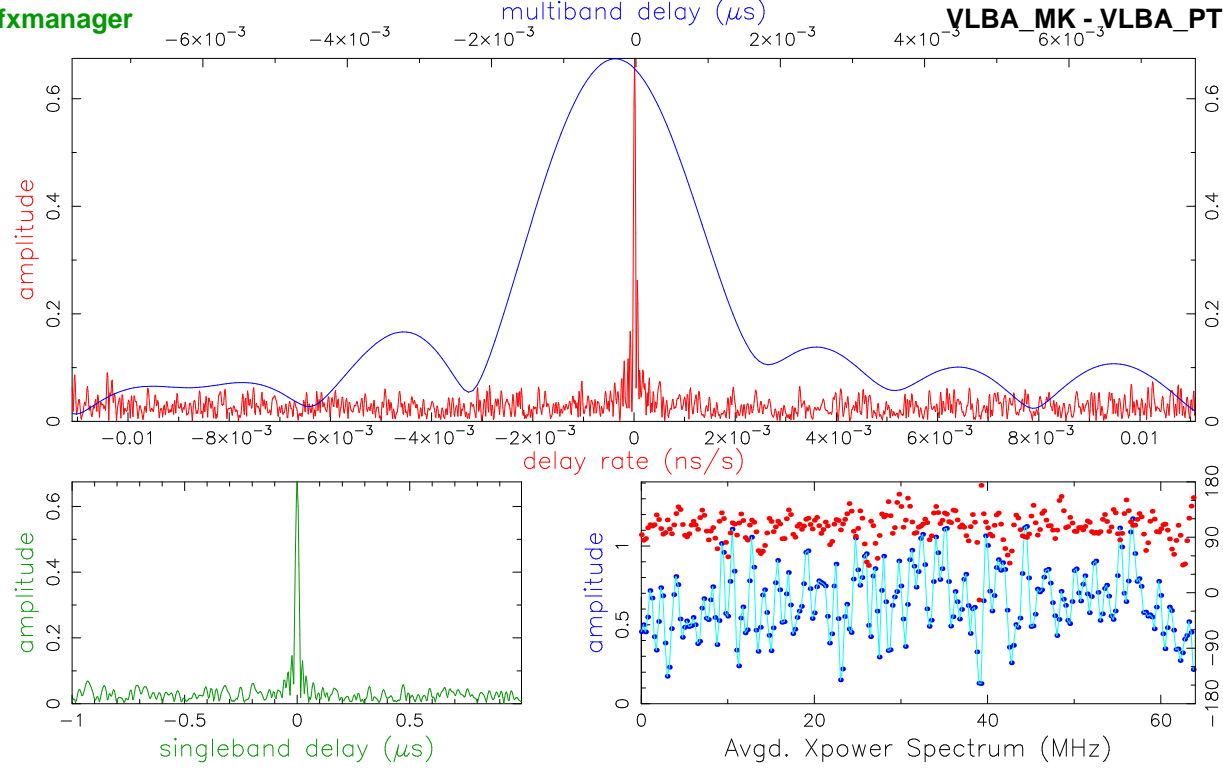


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



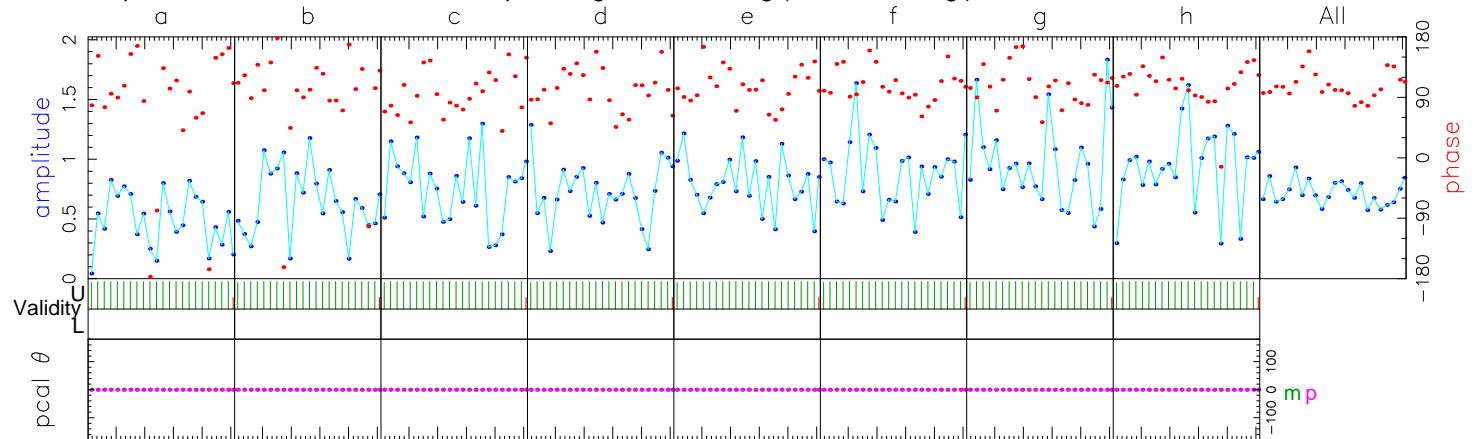
	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	22.2	-23.3	-24.0	-74.1	15.3	19.4	-1.3	-4.8	Phase	-3.6
	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	Ampl.	0.1
	342.0	393.9	498.8	442.2	317.3	227.7	257.0	358.9	Sbd box	257.9
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	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	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.07720202438E+03		Apriori delay (usec)		2.07720170390E+03		Resid mbdelay (usec)		3.20482E-04	+/- 1.6E-04
Sband delay (usec)	2.07720512940E+03		Apriori clock (usec)		1.3235845E+01		Resid sbdelay (usec)		3.42550E-03	+/- 1.3E-03
Phase delay (usec)	2.07720170379E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		-1.14053E-07	+/- 5.3E-07
Delay rate (us/s)	7.40842995025E-01		Apriori rate (us/s)		7.40842982824E-01		Resid rate (us/s)		1.22008E-08	+/- 3.1E-09
Total phase (deg)	299.2		Apriori accel (us/s/s)		-2.77760191830E-05		Resid phase (deg)		-3.6	+/- 16.8

ph/seg (deg) 58.4 40.3 Search (2048X32) 0.142 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 67.3 70.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 35.0 23.8 Inc. seg. avg. 0.158 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 38.3 41.5 Inc. frq. avg. 0.146 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 11.4 el 67.7 pa -165.2 p: az 295.1 el 56.7 pa 88.4 u,v (fr/asec) -5828.086 -3447.265 simultaneous interpolator
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mp..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mp.W.138.1JFL7R



Fringe quality 8
SNR 31.9
Int time 297.976
Amp 0.675
Phase 107.4
PFD 0.0e+00
Delays (us)
SBD -0.000417
MBD -0.000296
Fringe rate (Hz) 0.000606
Ion TEC 0.000
Ref freq (MHz) 87940.0000
AP (sec) 0.512
Exp. c202c
Exper # 16383
Yr:day 2020:286
Start 115501.54
Stop 120000.03
FRT 115730.00
Corr/FF/build
2021:039:063420
2021:039:064344
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	87812.00	87876.00	87940.00	88004.00	88068.00	88132.00	88196.00	88260.00	Freq (MHz)	All
	111.8	118.6	94.4	105.1	104.6	108.6	107.1	111.7	Phase	107.4
	0.4	0.5	0.7	0.6	0.7	0.8	0.9	0.9	Ampl.	0.7
	256.1	256.6	256.5	256.9	256.9	257.1	257.0	257.6	Sbd box	256.9
U/L	583/0	583/0	583/0	583/0	583/0	583/0	583/0	583/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	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	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.07720140757E+03		Apriori delay (usec)		2.07720170390E+03		Resid mbdelay (usec)		-2.96330E-04	+/- 3.4E-05
Sband delay (usec)	2.07720128665E+03		Apriori clock (usec)		1.3235845E+01		Resid sbdelay (usec)		-4.17250E-04	+/- 2.7E-04
Phase delay (usec)	2.07720170729E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		3.39130E-06	+/- 1.1E-07
Delay rate (us/s)	7.40842989720E-01		Apriori rate (us/s)		7.40842982824E-01		Resid rate (us/s)		6.89543E-09	+/- 6.6E-10
Total phase (deg)	50.2		Apriori accel (us/s/s)		-2.77760191830E-05		Resid phase (deg)		107.4	+/- 3.6

ph/seg (deg) 19.9 8.6 Search (2048X32) 0.653 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 15.4 15.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 7.6 5.1 Inc. seg. avg. 0.708 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 23.5 8.9 Inc. frq. avg. 0.676 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 11.4 el 67.7 pa -165.2 p: az 295.1 el 56.7 pa 88.4 u,v (fr/asec) -5828.086 -3447.265 simultaneous interpolator
Control file: cf_1234_88GHz_gmva Input file: /Exps/c202c/v1/1234/No0089/mp..1JFL7R Output file: /Exps/c202c/v1/1234/No0089/mp.W.88.1JFL7R