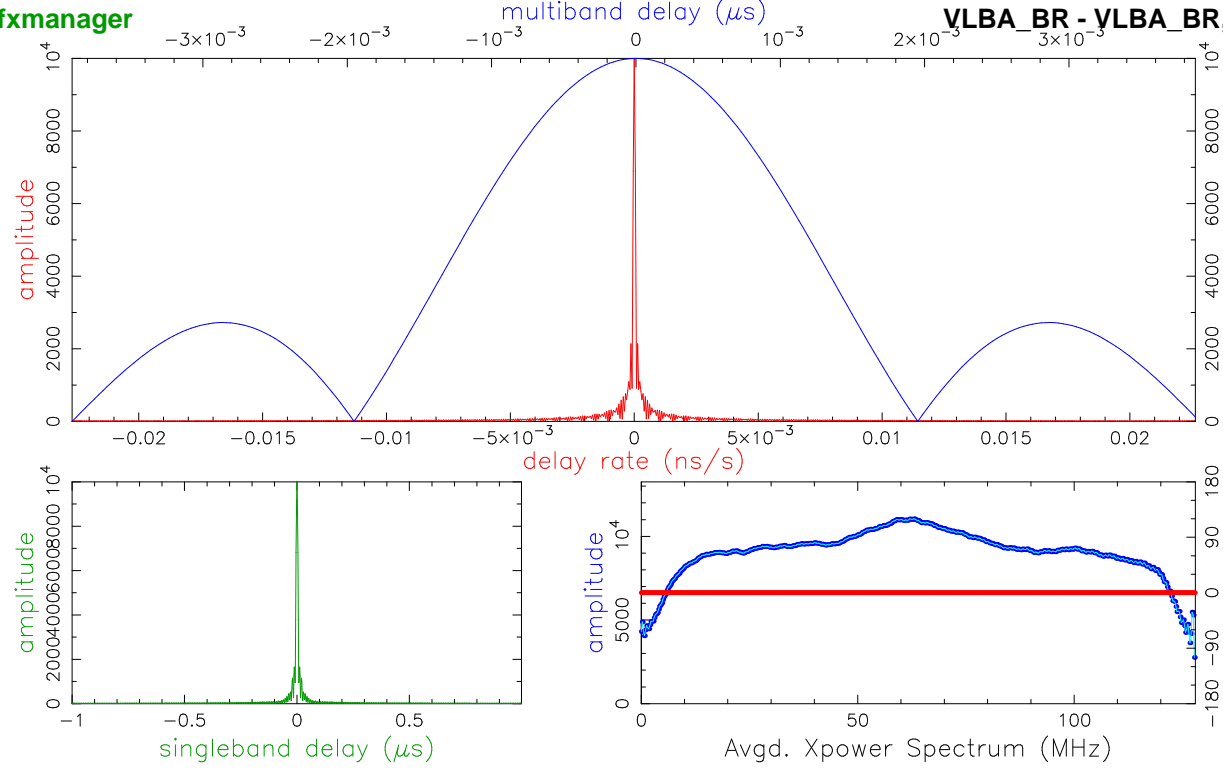


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bb

VLBA_BR - VLBA_BR, fgroup Q, pol RR

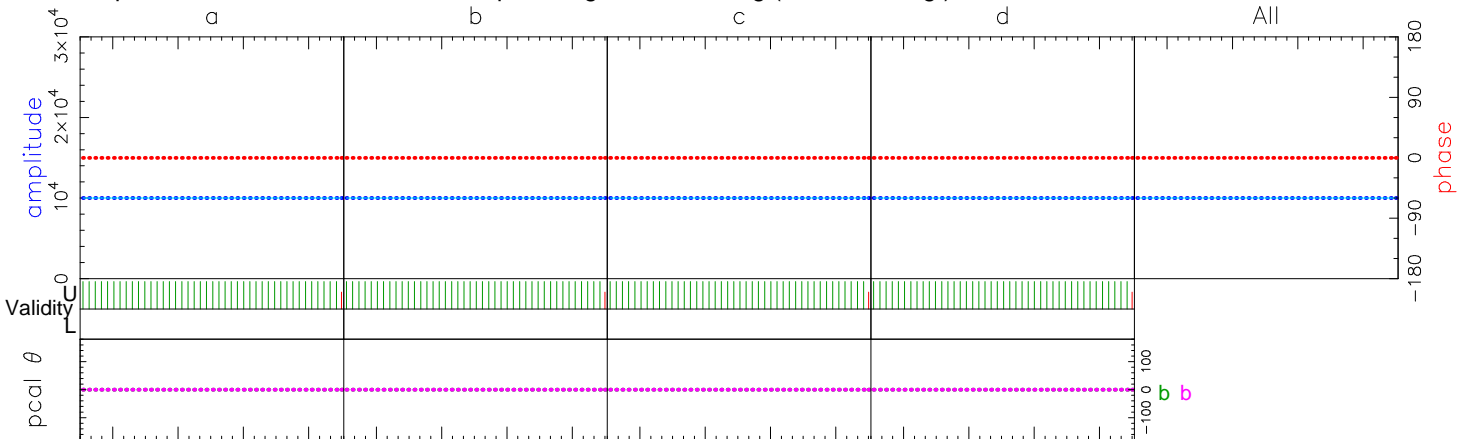


Fringe quality 9

SNR 423633.9
 Int time 239.986
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133523
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
b:b	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
b	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
b	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	Theor.	0.0	Amplitude	10000.000 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (1024X16)	10000.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	10000.000	Data rate (Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 187.1 el 40.3 pa 4.7 b: az 187.1 el 40.3 pa 4.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb.Q.28.1V2A0K

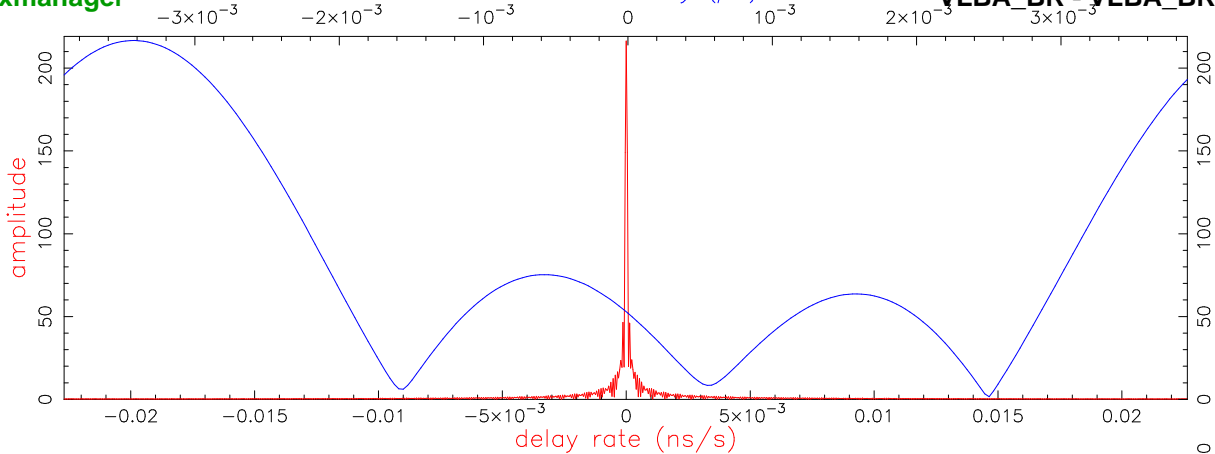
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bb

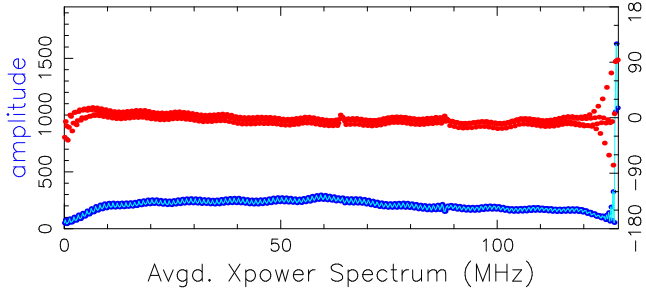
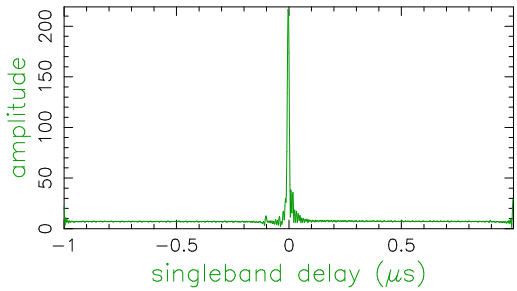
VLBA_BR - VLBA_BR, fgroup Q, pol LR

multiband delay (μ s)



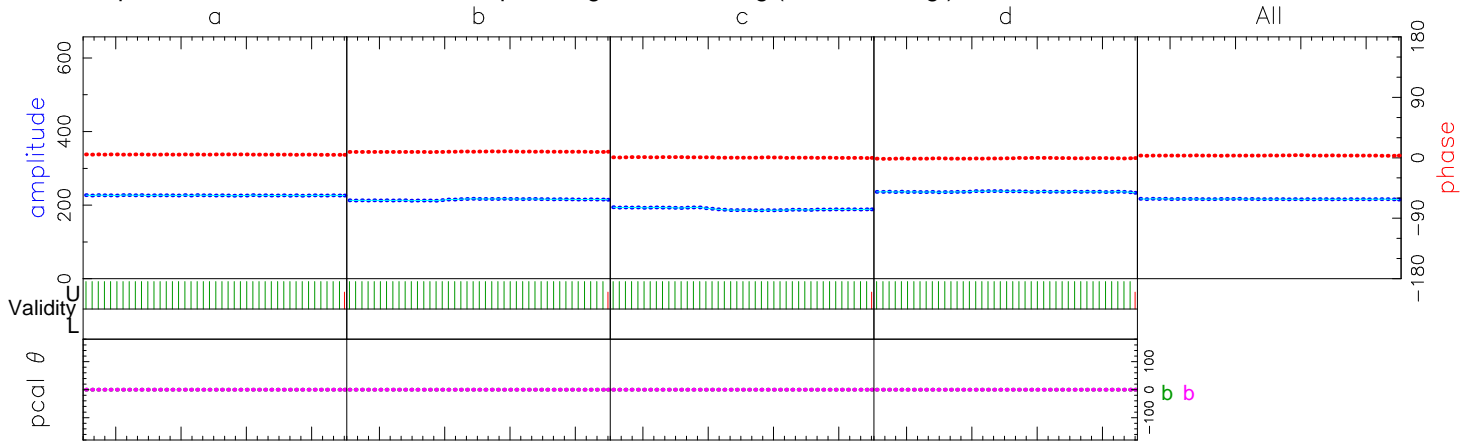
Fringe quality 9

SNR 9284.9
 Int time 239.986
 Amp 219.172
 Phase 3.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.003141
 MBD -0.003371
 Fringe rate (Hz) 0.000008
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133526
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
b:b	0:0	0:0	0:0	0:0	PC freqs	
b:b	0:0	0:0	0:0	0:0	PC phase	
b	1000	1000	1000	1000	Manl PC	
b	1000	1000	1000	1000	PC amp	
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
b	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.37078125000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.37078E-03	+/- 1.2E-07
Sband delay (usec)	-3.14087500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-3.14087E-03	+/- 4.6E-07
Phase delay (usec)	2.14441508018E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	2.14442E-07	+/- 8.0E-10
Delay rate (us/s)	1.75844772665E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.75845E-10	+/- 5.7E-12
Total phase (deg)	3.3	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	3.3	+/- 0.0

	RMS	Theor.	Amplitude	219.172 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.2	0.0	Search (1024X16)	216.673	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	1.3	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.5	0.0	Inc. seg. avg.	216.410	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	8.0	0.0	Inc. frq. avg.	216.905	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 b: az 187.1 el 40.3 pa 4.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

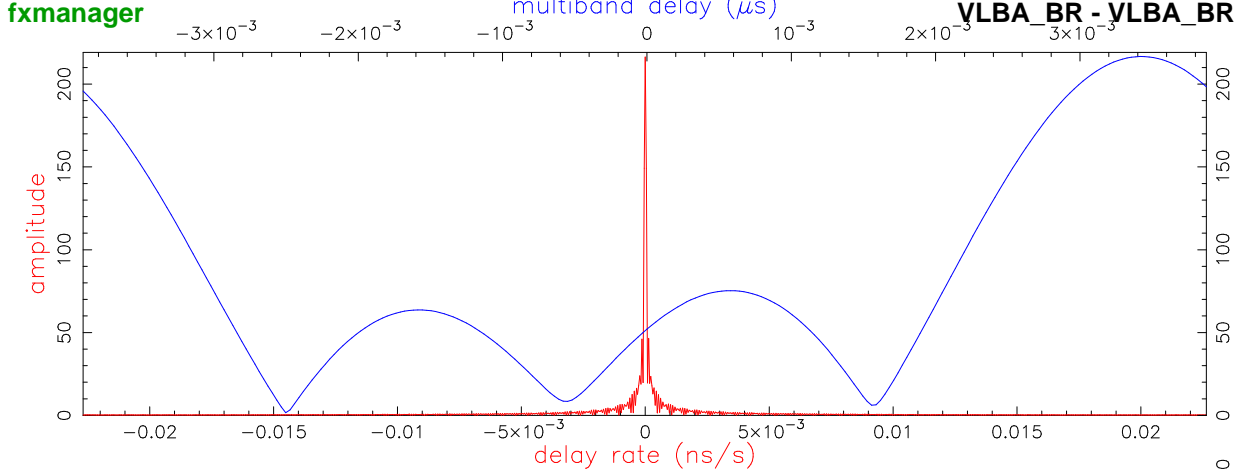
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb.Q.52.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

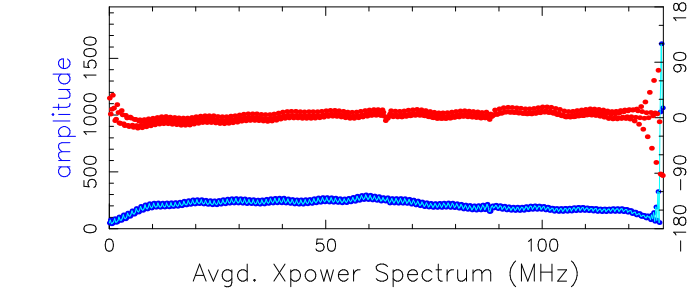
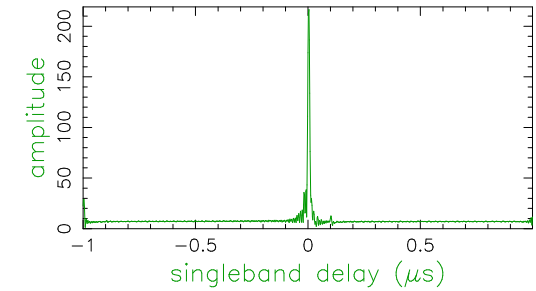
0420-014.1V2A0K, No0121, bb

VLBA_BR - VLBA_BR, fgroup Q, pol RL



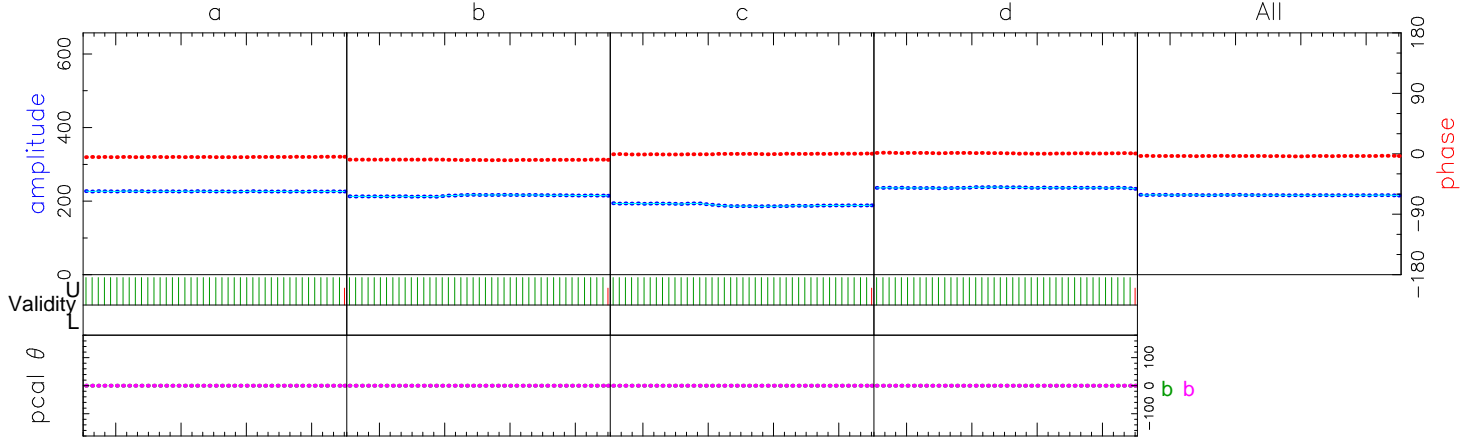
Fringe quality 9

SNR 9284.9
 Int time 239.986
 Amp 219.172
 Phase -3.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.003141
 MBD 0.003371
 Fringe rate (Hz)
 -0.000008
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133528
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-4.8	-9.0	-0.4	0.8	Phase	-3.3
	226.6	214.9	189.7	236.5	Ampl.	216.9
	514.3	514.9	514.8	514.4	Sbd box	514.6
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
b	1000	1000	1000	1000	PC freqs	
b:b	0:0	0:0	0:0	0:0	PC phase	
b:b	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
b	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	3.37078125000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	3.37078E-03	+/-	1.2E-07
Sband delay (usec)	3.14087500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	3.14087E-03	+/-	4.6E-07
Phase delay (usec)	-2.14441508395E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-2.14442E-07	+/-	8.0E-10
Delay rate (us/s)	-1.75844772665E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.75845E-10	+/-	5.7E-12
Total phase (deg)	-3.3	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-3.3	+/-	0.0

ph/seg (deg)	0.2	Theor.	0.0	Amplitude	219.172 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	1.3		0.1	Search (1024X16)	216.673	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	5.5		0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	8.0		0.0	Inc. seg. avg.	216.410	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	216.905	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
b: az 187.1 el 40.3 pa 4.7		b: az 187.1 el 40.3 pa 4.7		u,v (fr/asec)	0.000 0.000	nlags: 512	t_cohere infinite

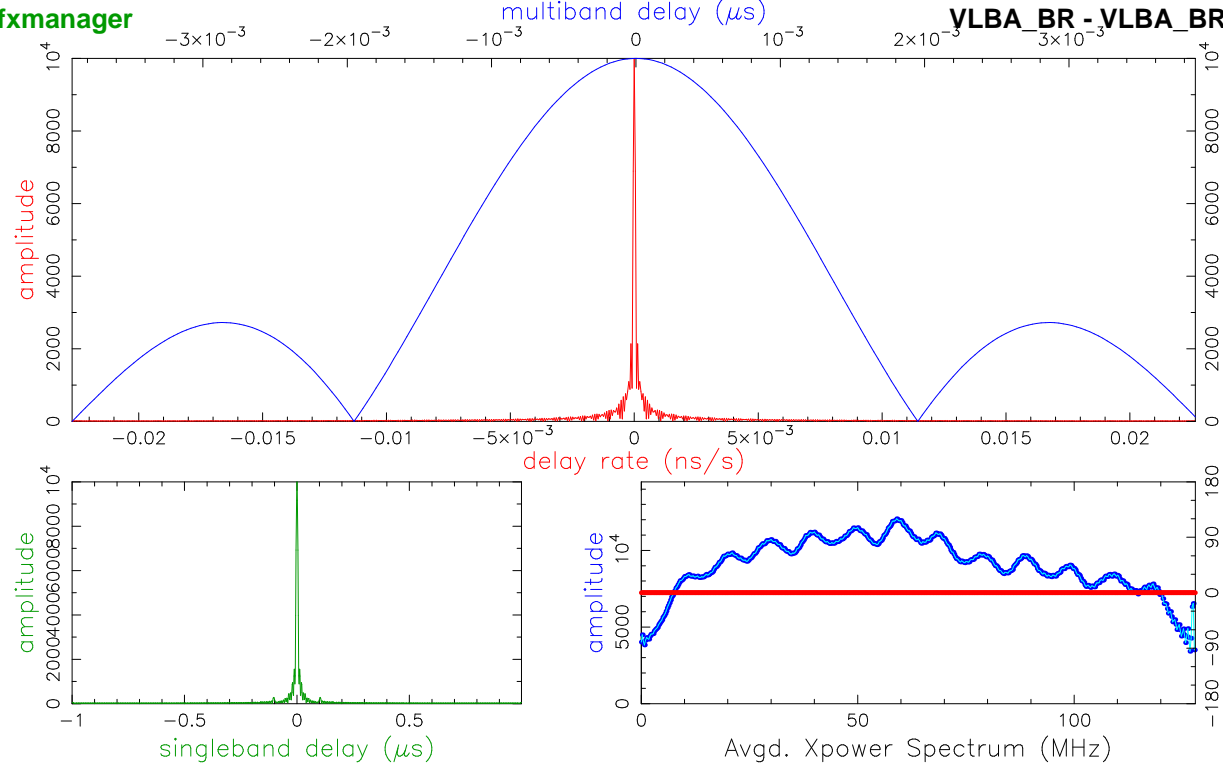
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb.Q.70.1V2A0K simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bb

VLBA_BR - VLBA_BR, fgroup Q, pol LL

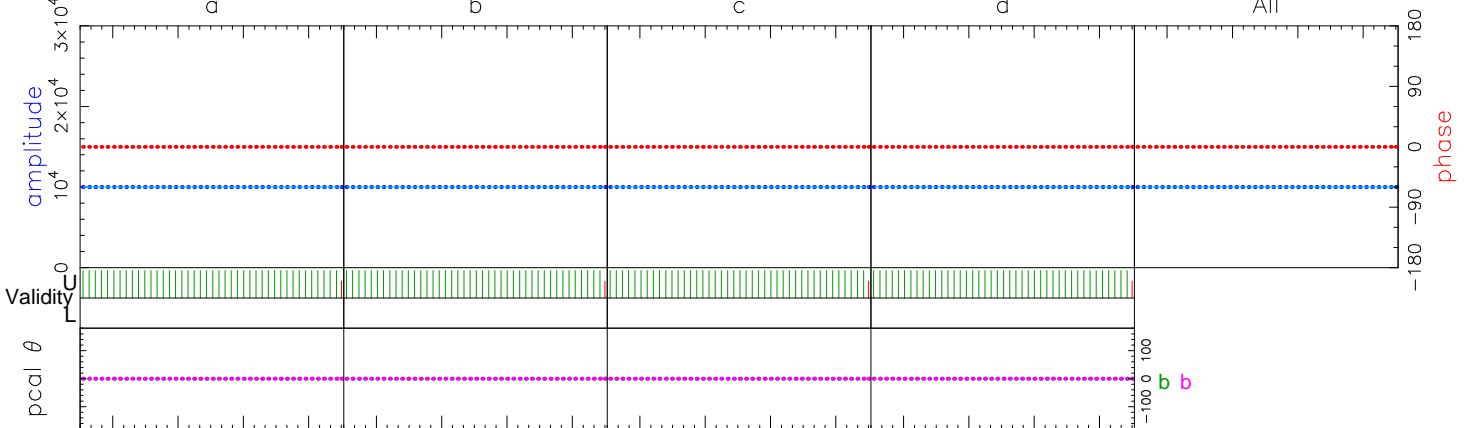


Fringe quality 9

SNR 423633.9
 Int time 239.986
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
b:b	0:0	0:0	0:0	0:0	PC freqs	
b:b	0:0	0:0	0:0	0:0	PC phase	
b	1000	1000	1000	1000	ManI PC	
b	1000	1000	1000	1000	PC amp	
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
b	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/- 2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/- 1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/- 1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/- 0.0

	RMS	Theor.	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 b: az 187.1 el 40.3 pa 4.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

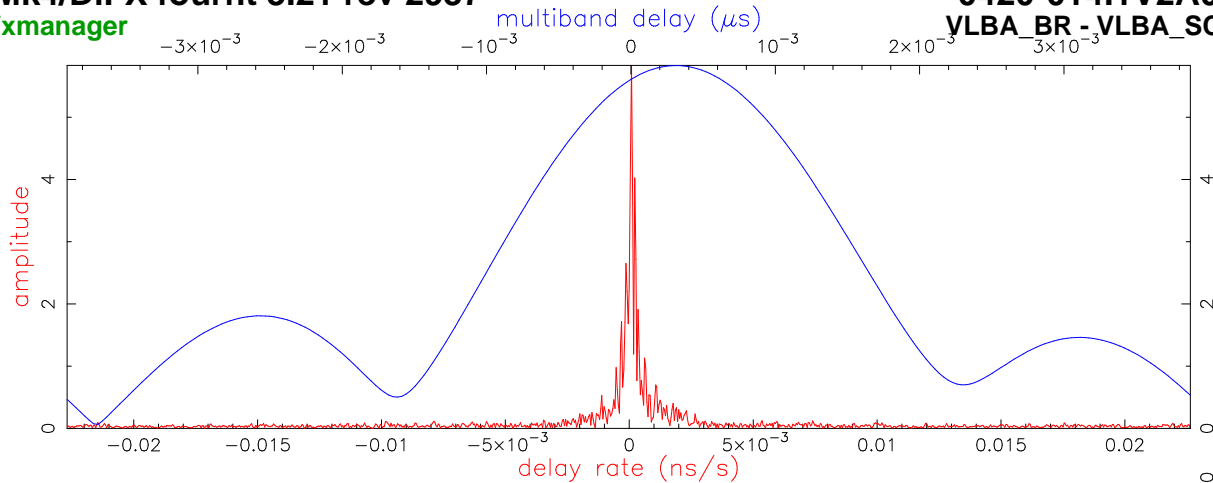
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bb.Q.8.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

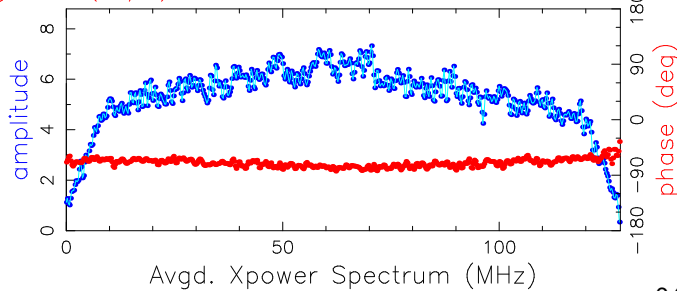
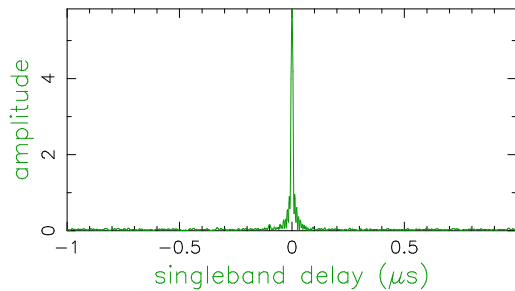
0420-014.1V2A0K, No0121, bc

VLBA_BR - VLBA_SC, fgroup Q, pol LL



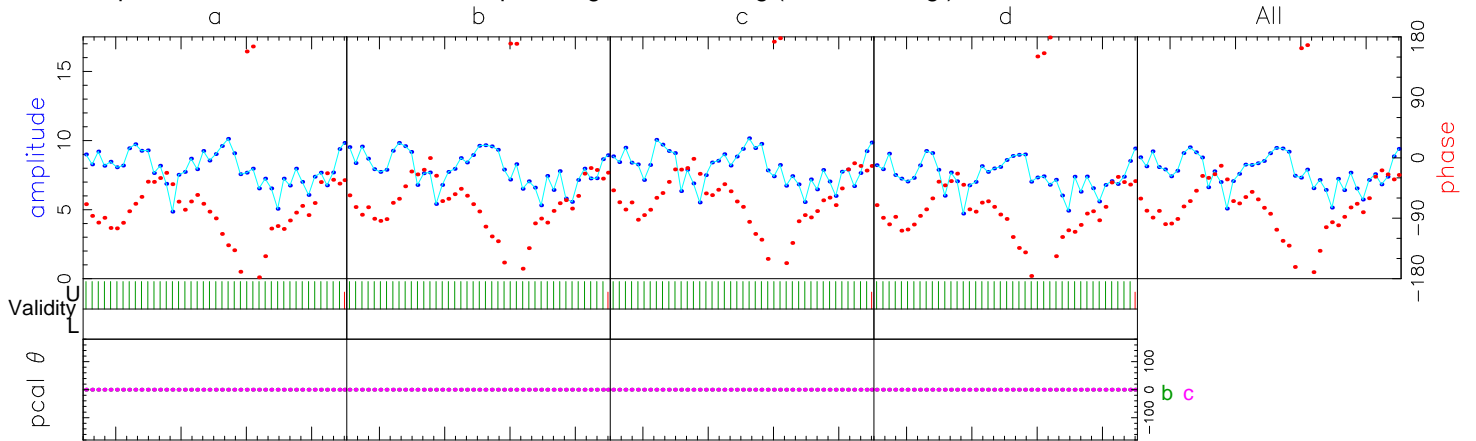
Fringe quality 5

SNR 247.2
 Int time 239.986
 Amp 5.834
 Phase -75.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.000138
 MBD 0.000320
 Fringe rate (Hz) 0.003284
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133520
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-81.6	-70.2	-64.0	-85.8	Phase	-75.2
	6.1	5.9	6.0	5.6	Ampl.	5.9
	513.3	513.4	512.9	512.4	Sbd box	513.1
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
b:c	0:0	0:0	0:0	0:0	PC phase	
b:c	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	4.14060179773E+03	Apriori delay (usec)	4.14060147821E+03	Resid mbdelay (usec)	3.19519E-04	+/-	4.5E-06
Sband delay (usec)	4.14060161621E+03	Apriori clock (usec)	-1.5147427E+01	Resid sbdelay (usec)	1.38000E-04	+/-	1.7E-05
Phase delay (usec)	4.14060147335E+03	Apriori clockrate (us/s)	-4.1600000E-07	Resid phdelay (usec)	-4.85415E-06	+/-	3.0E-08
Delay rate (us/s)	1.18487942637E+00	Apriori rate (us/s)	1.18487935007E+00	Resid rate (us/s)	7.63024E-08	+/-	2.2E-10
Total phase (deg)	148.7	Apriori accel (us/s/s)	-2.32182720819E-05	Resid phase (deg)	-75.2	+/-	0.5

ph/seg (deg)	44.9	RMS	44.9	Theor.	1.5	Amplitude	5.834 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	38.2	Search (1024X16)	5.568	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.004	0.004		
ph/frq (deg)	12.3	Inc. seg. avg.	7.754	Inc. frq. avg.	5.899	Bits/sample:	2x2	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023	0.023		
amp/frq (%)	3.6	Inc. frq. avg.	5.899	nlags:	512	Data rate (Mb/s):	2048	t_cohere:	infinite	ion window (TEC)	0.00	0.00		

b: az 187.1 el 40.3 pa 4.7 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -3404.914 1957.756 simultaneous interpolator

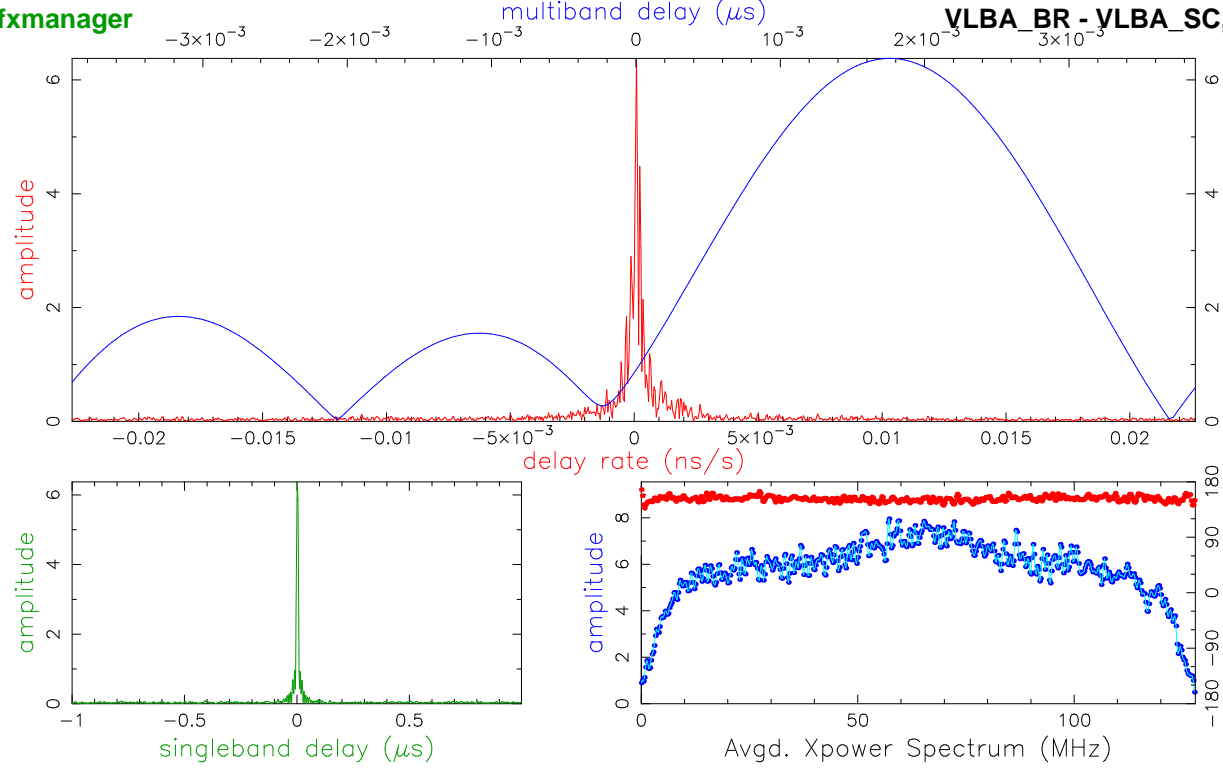
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc.Q.1.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bc

VLBA_BR - VLBA_SC, fgroup Q, pol RR

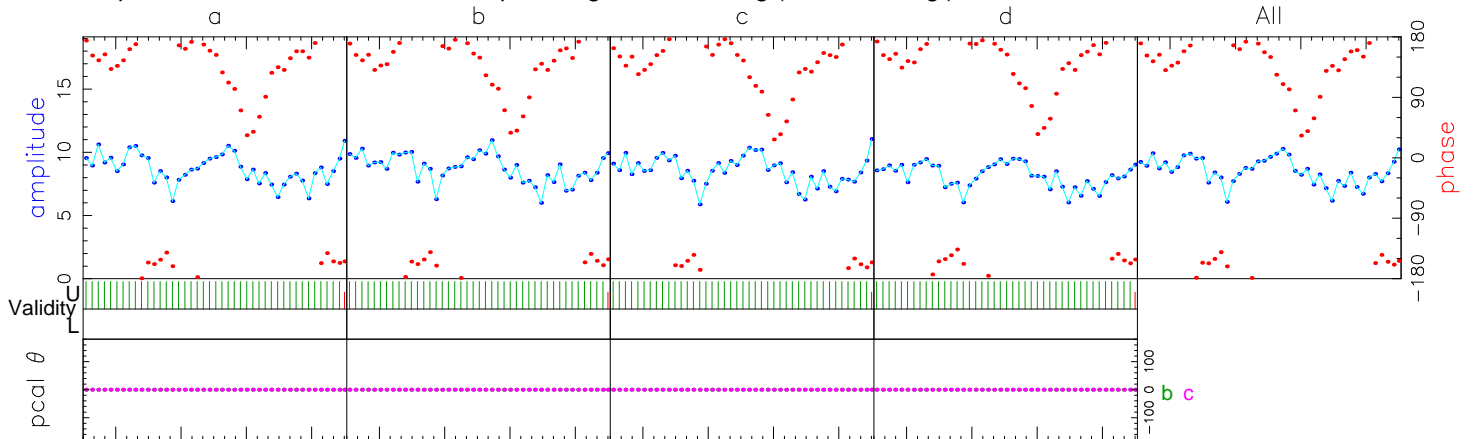


Fringe quality 6

SNR 270.2
 Int time 239.986
 Amp 6.379
 Phase 156.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.001925
 MBD 0.001756
 Fringe rate (Hz) 0.003266
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133522
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
c	1000	1000	1000	1000		
b:c	0:0	0:0	0:0	0:0		
b:c	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
c	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	4.14060323401E+03	Apriori delay (usec)	4.14060147821E+03	Resid mbdelay (usec)	1.75580E-03	+/- 4.1E-06
Sband delay (usec)	4.14060340296E+03	Apriori clock (usec)	-1.5147427E+01	Resid sbdelay (usec)	1.92475E-03	+/- 1.6E-05
Phase delay (usec)	4.14060148829E+03	Apriori clockrate (us/s)	-4.1600000E-07	Resid phdelay (usec)	1.00833E-05	+/- 2.7E-08
Delay rate (us/s)	1.18487942596E+00	Apriori rate (us/s)	1.18487935007E+00	Resid rate (us/s)	7.58912E-08	+/- 2.0E-10
Total phase (deg)	20.2	Apriori accel (us/s/s)	-2.32182720819E-05	Resid phase (deg)	156.2	+/- 0.4

	RMS	Theor.	Amplitude	6.379 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	45.1	1.4	Search (1024X16)	6.058	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	37.4	2.4	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
ph/frq (deg)	3.9	0.4	Inc. seg. avg.	8.532	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.0	0.7	Inc. frq. avg.	6.386	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -3404.914 1957.756 simultaneous interpolator

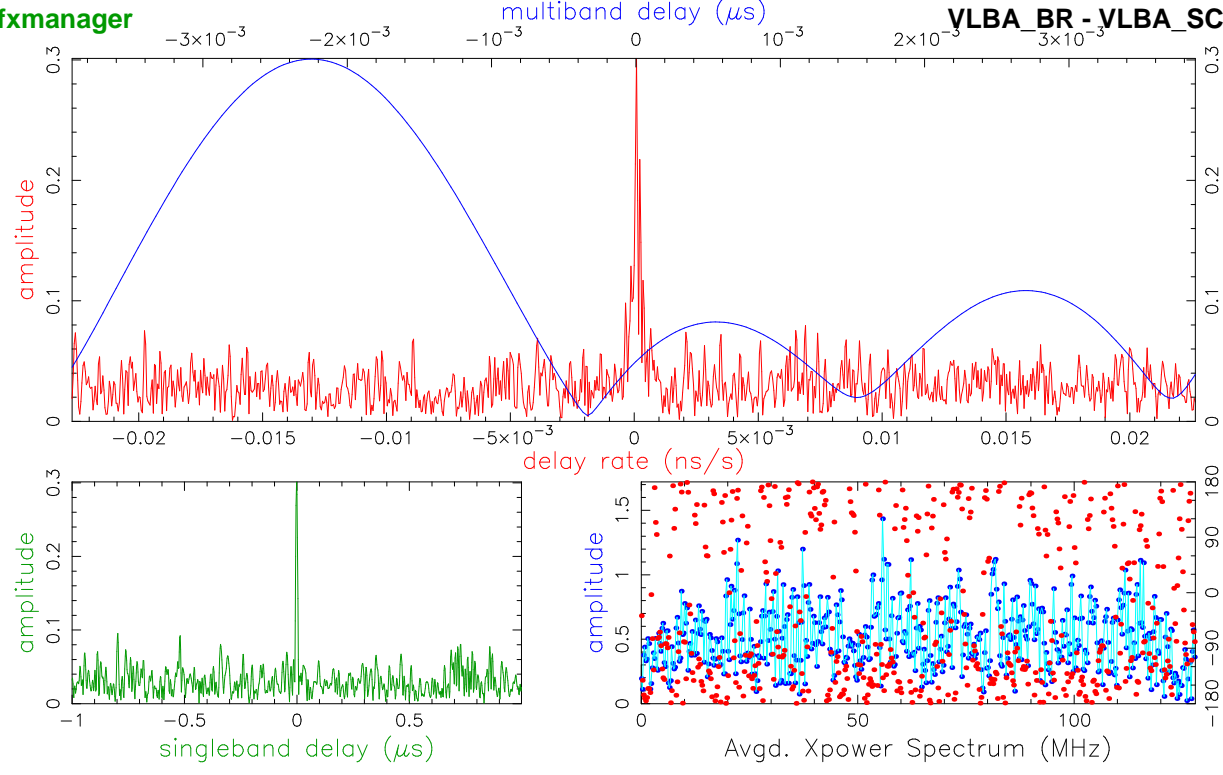
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc.Q.20.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bc

VLBA_BR - VLBA_SC, fgroup Q, pol LR

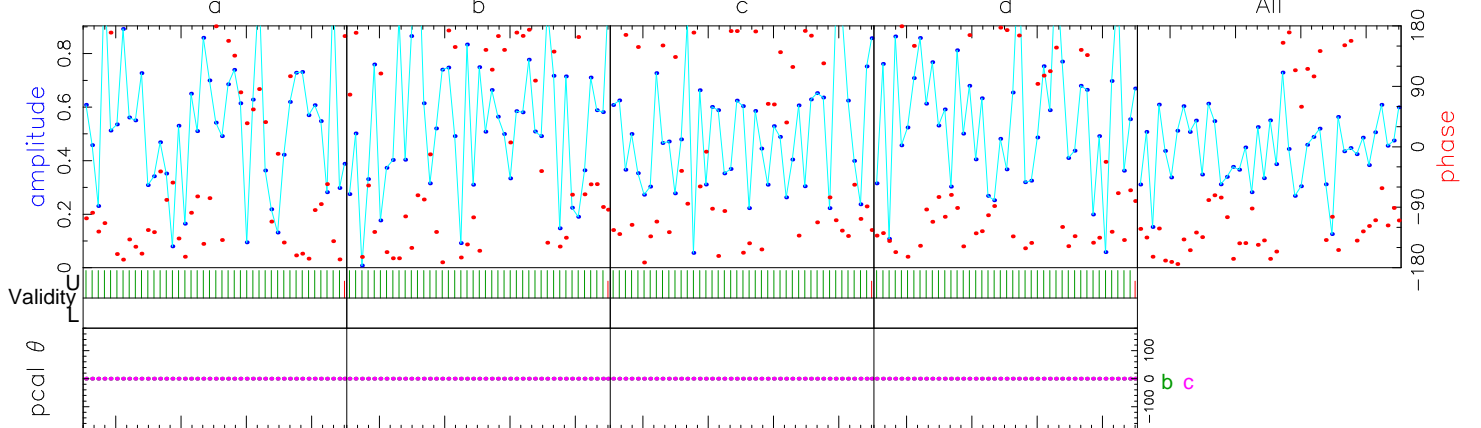


Fringe quality 9

SNR 12.8
 Int time 239.986
 Amp 0.301
 Phase -144.5
 PFD 7.2e-29
 Delays (us)
 SBD -0.001641
 MBD -0.002247
 Fringe rate (Hz) 0.003347
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133524
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All		
	-144.5	-147.9	-137.0	-147.7	Phase	-144.5		
	0.3	0.3	0.3	0.4	Ampl.	0.3		
	512.6	512.9	511.7	511.5	Sbd box	512.2		
U/L	469/0	469/0	469/0	469/0	APs used			
b	1000	1000	1000	1000	PC freqs			
c	1000	1000	1000	1000	PC freqs			
b:c	0:0	0:0	0:0	0:0	PC phase			
b:c	0:0	0:0	0:0	0:0	Manl PC			
b	1000	1000	1000	1000	PC amp			
c	1000	1000	1000	1000				
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids			
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks			
					Chan ids			
					Tracks			
Group delay (usec)(sbd)	4.14059923126E+03	Apriori delay (usec)	4.14060147821E+03	Resid mbdelay (usec)	-2.24695E-03	+/- 8.7E-05		
Sband delay (usec)	4.14059983683E+03	Apriori clock (usec)	-1.5147427E+01	Resid sbdelay (usec)	-1.64138E-03	+/- 3.4E-04		
Phase delay (usec)	4.14060146888E+03	Apriori clockrate (us/s)	-4.1600000E-07	Resid phdelay (usec)	-9.32752E-06	+/- 5.8E-07		
Delay rate (us/s)	1.18487942784E+00	Apriori rate (us/s)	1.18487935007E+00	Resid rate (us/s)	7.77688E-08	+/- 4.2E-09		
Total phase (deg)	79.4	Apriori accel (us/s/s)	-2.32182720819E-05	Resid phase (deg)	-144.5	+/- 9.0		
RMS	Theor.	Amplitude	0.301 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
51.9	29.4	Search (1024X16)	0.289	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
62.0	51.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
6.3	9.0	Inc. seg. avg.	0.389	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
10.2	15.7	Inc. frq. avg.	0.298	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00
b: az 187.1 el 40.3 pa 4.7	c: az 258.8 el 27.5 pa 69.2	u,v (fr/asec)	-3404.914 1957.756	simultaneous interpolator				
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc.Q.38.1V2A0K								

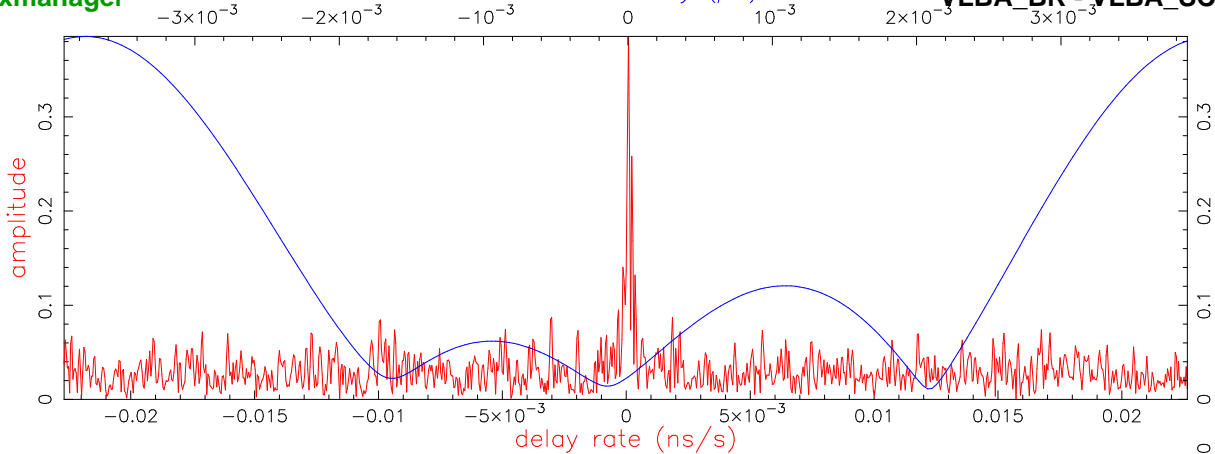
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bc

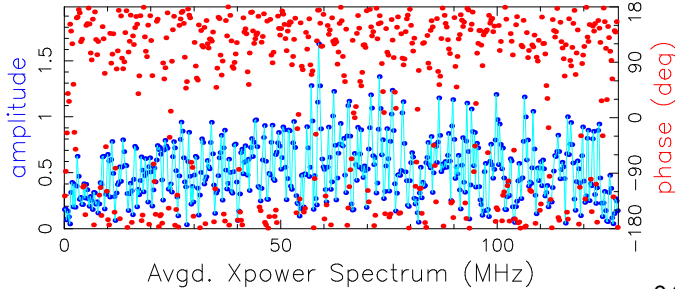
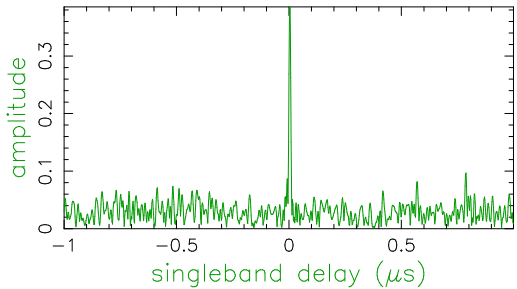
VLBA_BR - VLBA_SC, fgroup Q, pol RL

multiband delay (μ s)



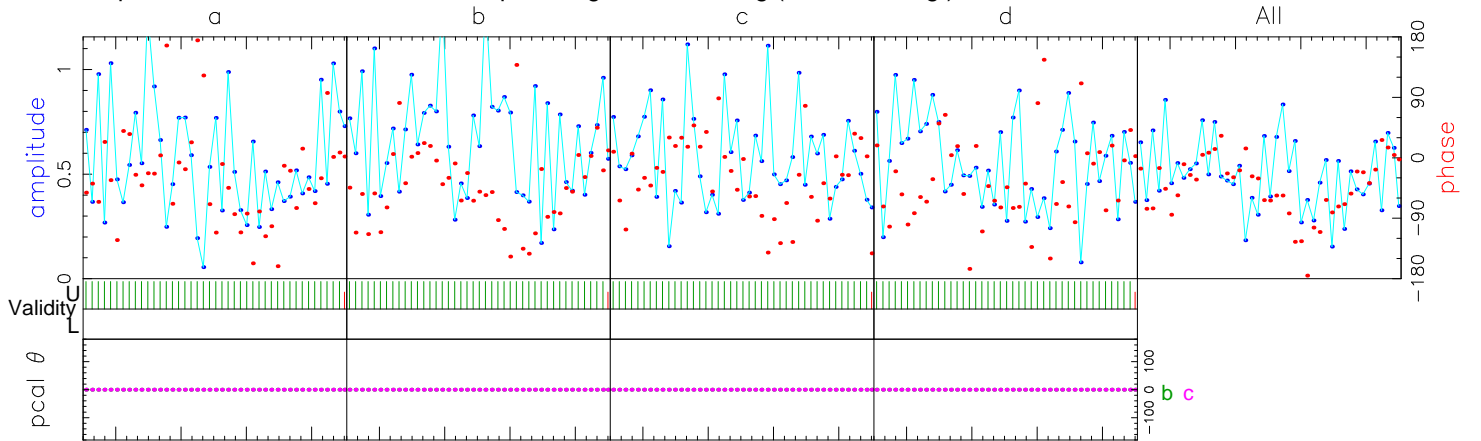
Fringe quality 9

SNR 16.3
 Int time 239.986
 Amp 0.385
 Phase -38.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.003814
 MBD -0.003766
 Fringe rate (Hz)
 0.003316
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133527
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



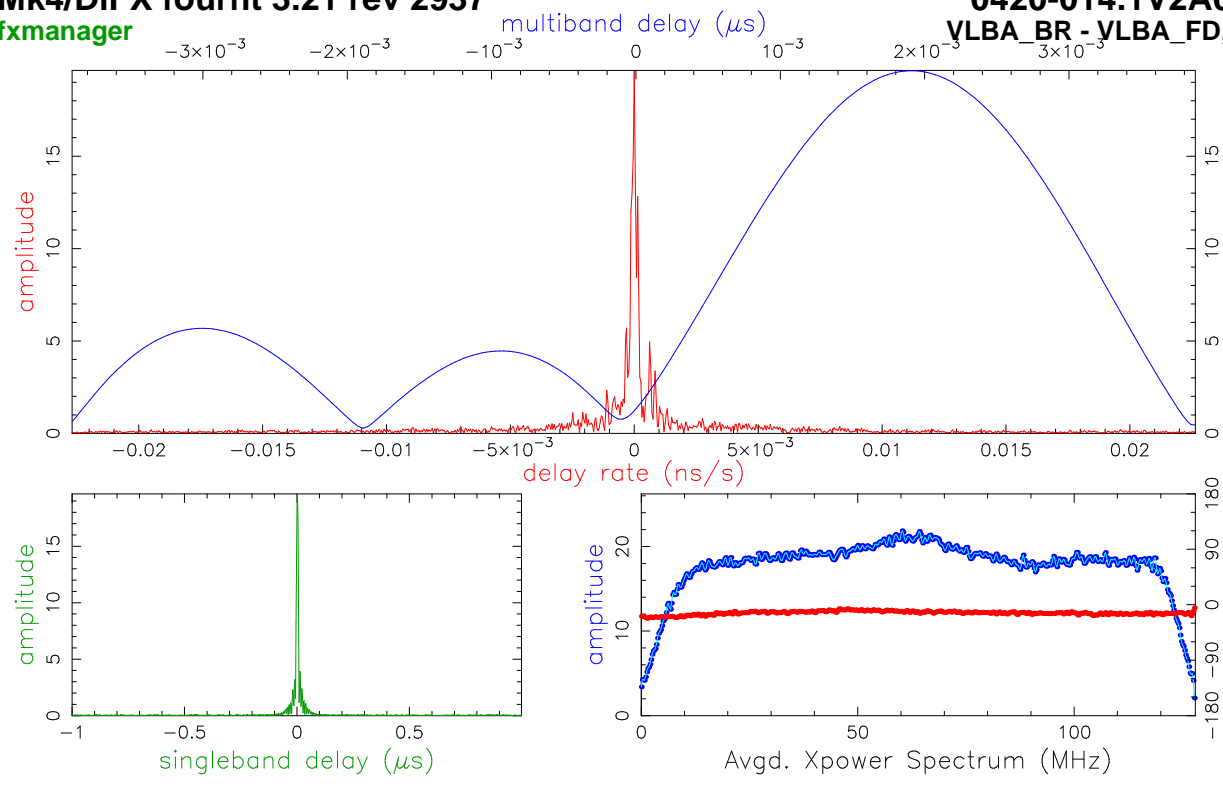
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-37.1	-45.3	-28.1	-42.6	Phase	-38.5
	0.4	0.4	0.4	0.4	Ampl.	0.4
	515.0	515.1	515.2	514.4	Sbd box	515.0
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
b:c	0:0	0:0	0:0	0:0	PC phase	
b:c	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	4.14060552460E+03	Apriori delay (usec)	4.14060147821E+03	Resid mbdelay (usec)	-3.76611E-03	+/-	6.8E-05
Sband delay (usec)	4.14060529171E+03	Apriori clock (usec)	-1.5147427E+01	Resid sbdelay (usec)	3.81350E-03	+/-	2.6E-04
Phase delay (usec)	4.14060147572E+03	Apriori clockrate (us/s)	-4.1600000E-07	Resid phdelay (usec)	-2.48795E-06	+/-	4.5E-07
Delay rate (us/s)	1.18487942711E+00	Apriori rate (us/s)	1.18487935007E+00	Resid rate (us/s)	7.70427E-08	+/-	3.3E-09
Total phase (deg)	185.4	Apriori accel (us/s/s)	-2.32182720819E-05	Resid phase (deg)	-38.5	+/-	7.0

	RMS	Theor.	Amplitude	0.385 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	44.6	23.0	Search (1024X16)	0.372	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	52.7	40.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
ph/frq (deg)	9.3	7.0	Inc. seg. avg.	0.465	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
amp/frq (%)	9.3	12.2	Inc. frq. avg.	0.385	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 187.1 el 40.3 pa 4.7 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -3404.914 1957.756 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bc.Q.61.1V2A0K

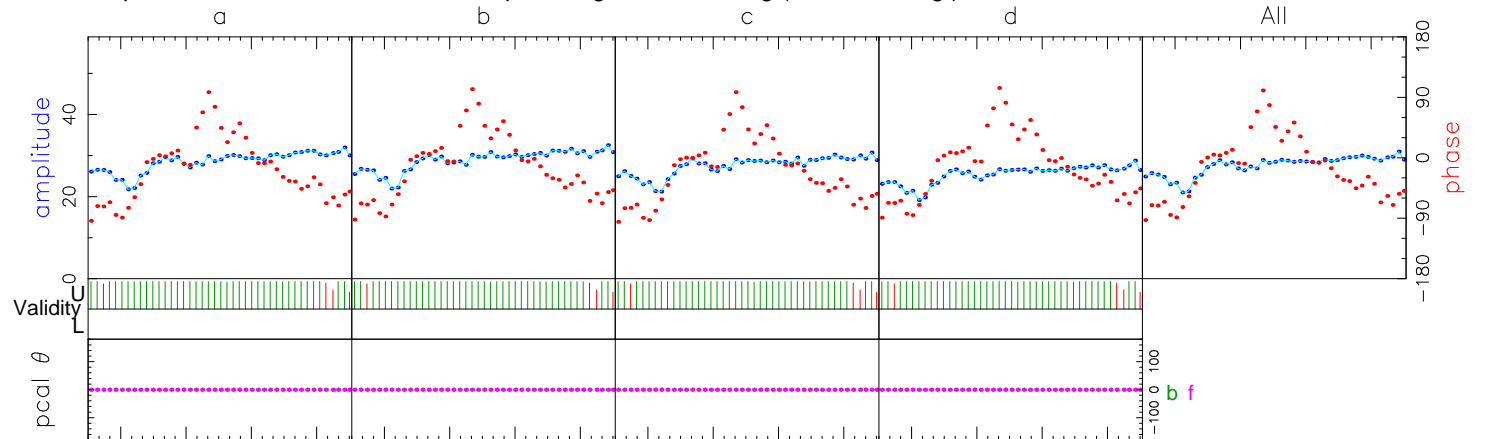


Fringe quality 5

SNR 827.4
Int time 237.261
Amp 19.642
Phase -16.9
PFD 0.0e+00
Delays (us)
SBD 0.001726
MBD 0.001895
Fringe rate (Hz)
0.000163
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133523
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



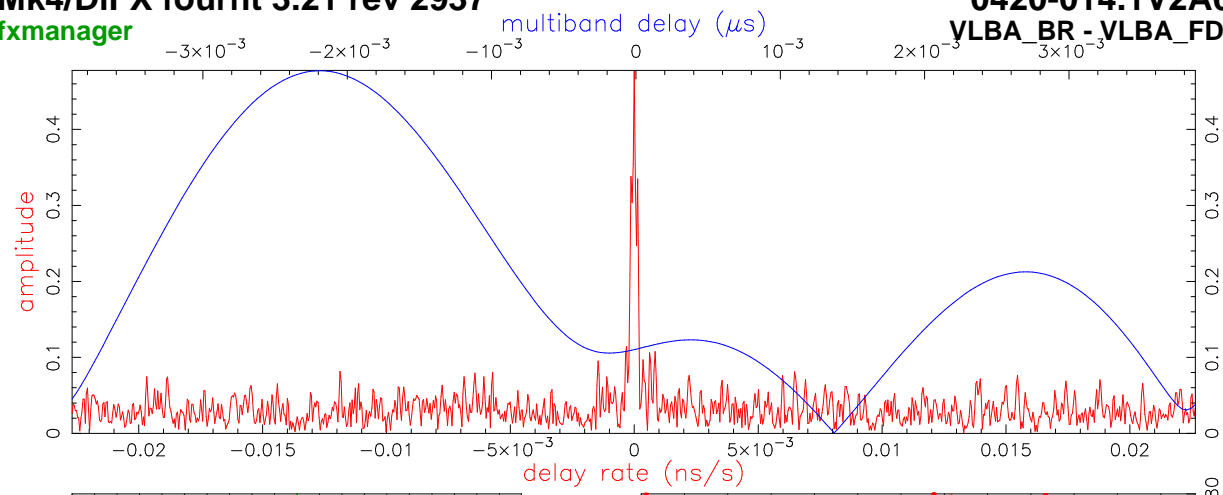
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-18.2	-14.5	-20.8	-13.8	Phase	-16.9
	20.4	20.6	19.5	18.1	Ampl.	19.6
	513.6	514.0	513.7	514.4	Sbd box	513.9
U/L	467/0	467/0	467/0	467/0	APs used	
b	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
f	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-2.99500011360E+03	Apriori delay (usec)	-2.99500200816E+03	Resid mbdelay (usec)	1.89456E-03	+/- 1.3E-06
Sband delay (usec)	-2.99500028241E+03	Apriori clock (usec)	-1.3196857E+01	Resid sbdelay (usec)	1.72575E-03	+/- 5.2E-06
Phase delay (usec)	-2.99500200925E+03	Apriori clockrate (us/s)	-1.6000000E-07	Resid phdelay (usec)	-1.08787E-06	+/- 8.9E-09
Delay rate (us/s)	3.86600010125E-01	Apriori rate (us/s)	3.86600006336E-01	Resid rate (us/s)	3.78917E-09	+/- 6.5E-11
Total phase (deg)		Apriori accel (us/s/s)	1.52560714890E-05	Resid phase (deg)	-16.9	+/- 0.1
	RMS	Theor.	Amplitude	19.642 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	47.1	0.5	Search (1024X16)	19.557	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	41.9	0.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.0	0.1	Inc. seg. avg.	27.540	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.1	0.2	Inc. frq. avg.	19.643	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 187.1 el 40.3 pa 4.7		f: az 216.1 el 52.2 pa 30.9		u, v (fr/asec) -1101.908 1024.406		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf.Q.29.1V2A0K		

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

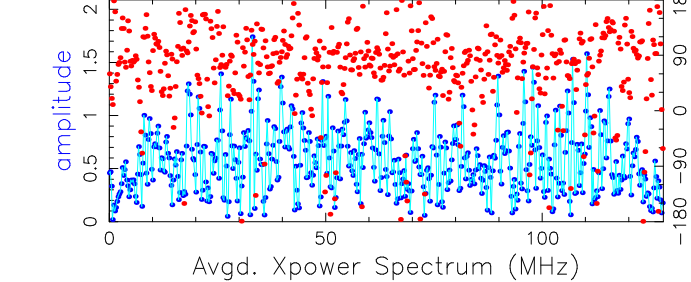
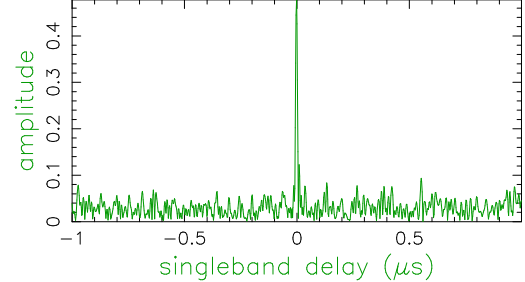
0420-014.1V2A0K, No0121, bf

VLBA_BR - VLBA_FD, fgroup Q, pol LR



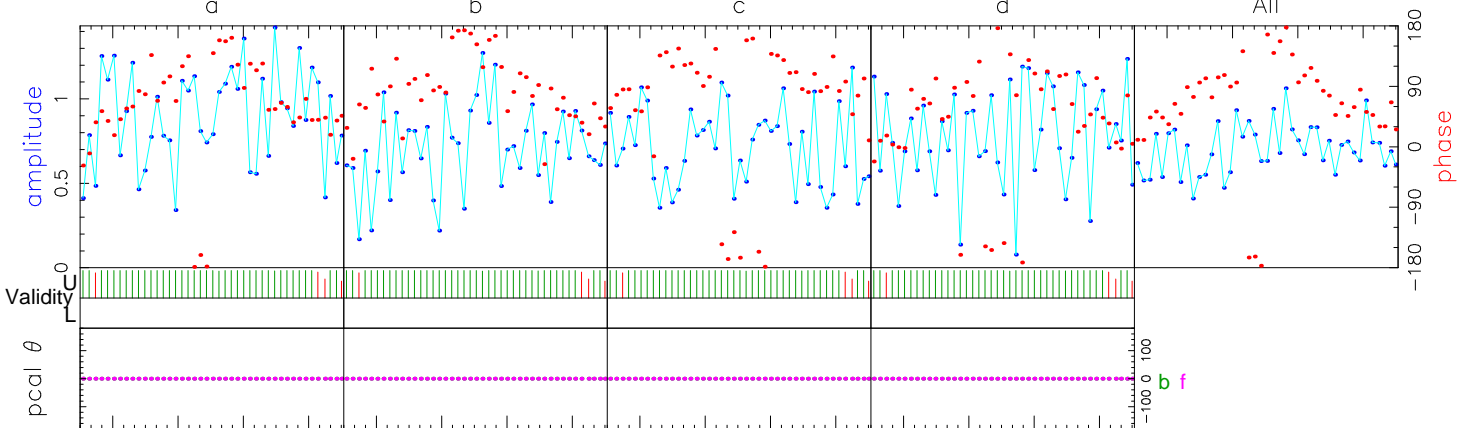
Fringe quality 8

SNR 20.1
 Int time 237.261
 Amp 0.478
 Phase 87.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.002168
 MBD -0.002206
 Fringe rate (Hz)
 0.000419
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133525
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



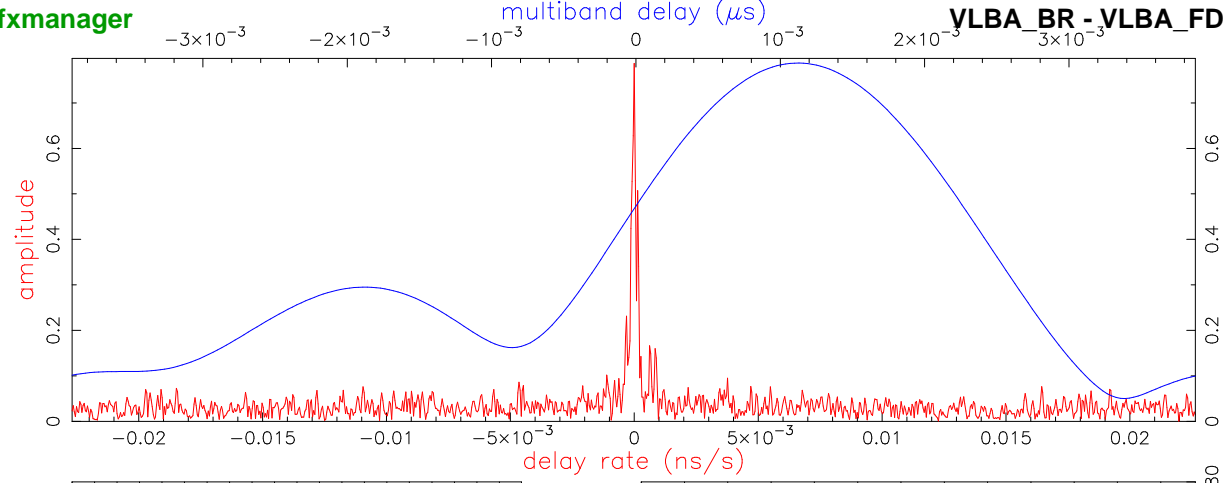
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
b	1000	1000	1000	1000		
f	1000	1000	1000	1000		
b:f	0:0	0:0	0:0	0:0		
b:f	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
f	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
f	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-2.99500421413E+03	Apriori delay (usec)	-2.99500200816E+03	Resid mbdelay (usec)	-2.20597E-03	+/-	5.5E-05
Sband delay (usec)	-2.99500417604E+03	Apriori clock (usec)	-1.3196857E+01	Resid sbdelay (usec)	-2.16787E-03	+/-	2.1E-04
Phase delay (usec)	-2.99500200249E+03	Apriori clockrate (us/s)	-1.6000000E-07	Resid phdelay (usec)	5.67132E-06	+/-	3.7E-07
Delay rate (us/s)	3.86600016064E-01	Apriori rate (us/s)	3.86600006336E-01	Resid rate (us/s)	9.72819E-09	+/-	2.7E-09
Total phase (deg)		Apriori accel (us/s/s)	1.52560714890E-05	Resid phase (deg)	87.9	+/-	5.7

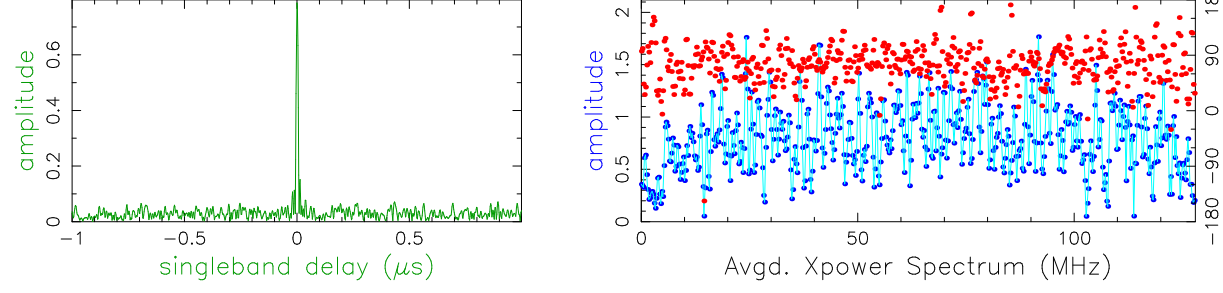
ph/seg (deg)	48.9	Theor.	18.6	Amplitude	0.478 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	56.3		32.5	Search (1024X16)	0.459	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	22.5		5.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	11.5		9.9	Inc. seg. avg.	0.669	Sample rate(MSamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.493	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

b: az 187.1 el 40.3 pa 4.7 f: az 216.1 el 52.2 pa 30.9 u,v (fr/asec) -1101.908 1024.406 simultaneous interpolator

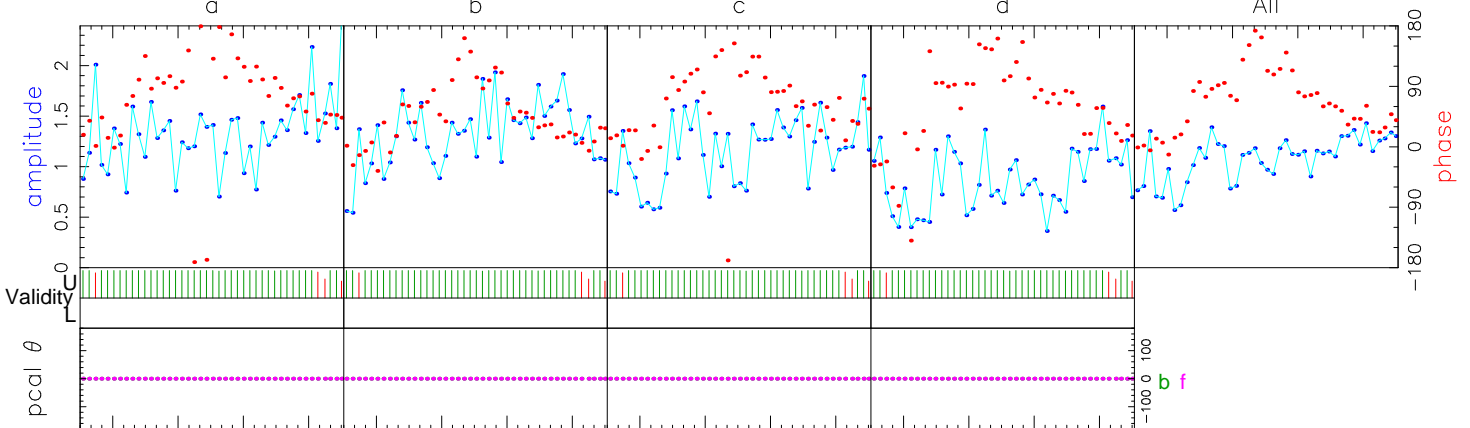
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf.Q.46.1V2A0K



Fringe quality 5
SNR 33.6
Int time 237.261
Amp 0.798
Phase 67.6
PFD 0.0e+00
Delays (us)
SBD 0.000788
MBD 0.001180
Fringe rate (Hz)
-0.000129
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133527
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
b	1000	1000	1000	1000	APs used	
f	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	PC phase	
b	1000	1000	1000	1000	Manl PC	
f	1000	1000	1000	1000	PC amp	
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
f	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-2.99500082791E+03	Apriori delay (usec)	-2.99500200816E+03	Resid mbdelay (usec)	1.18025E-03	+/-	3.3E-05
Sband delay (usec)	-2.99500121991E+03	Apriori clock (usec)	-1.3196857E+01	Resid sbdelay (usec)	7.88250E-04	+/-	1.3E-04
Phase delay (usec)	-2.99500200380E+03	Apriori clockrate (us/s)	-1.6000000E-07	Resid phdelay (usec)	4.36510E-06	+/-	2.2E-07
Delay rate (us/s)	3.86600003344E-01	Apriori rate (us/s)	3.86600006336E-01	Resid rate (us/s)	-2.99220E-09	+/-	1.6E-09
Total phase (deg)		Apriori accel (us/s/s)	1.52560714890E-05	Resid phase (deg)	67.6	+/-	3.4

ph/seg (deg)	46.1	Theor.	11.2	Amplitude	0.798 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	44.8		19.5	Search (1024X16)	0.781	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	19.4		3.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	21.5		6.0	Inc. seg. avg.	1.061	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.812	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

b: az 187.1 el 40.3 pa 4.7 f: az 216.1 el 52.2 pa 30.9 u,v (fr/asec) -1101.908 1024.406 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf.Q.64.1V2A0K

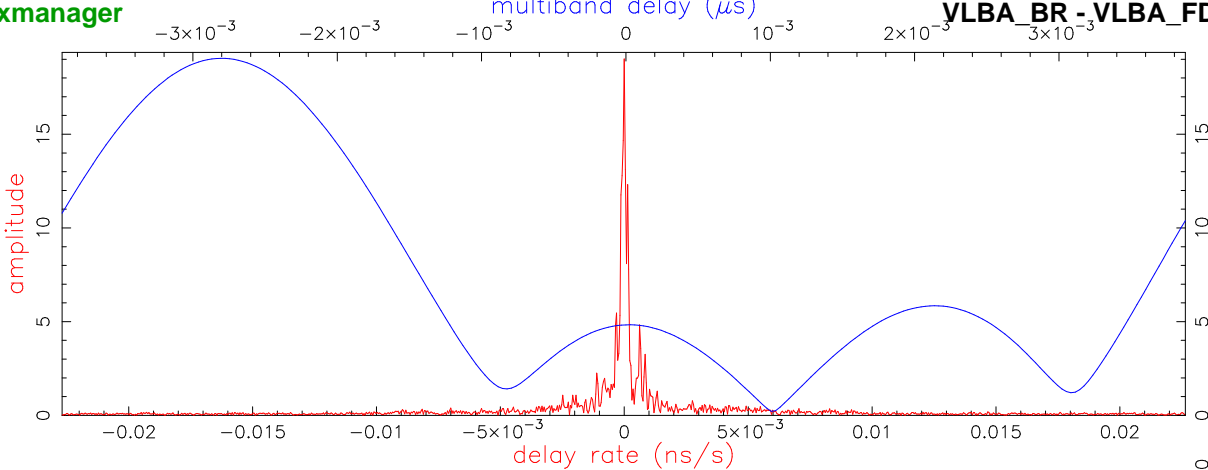
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

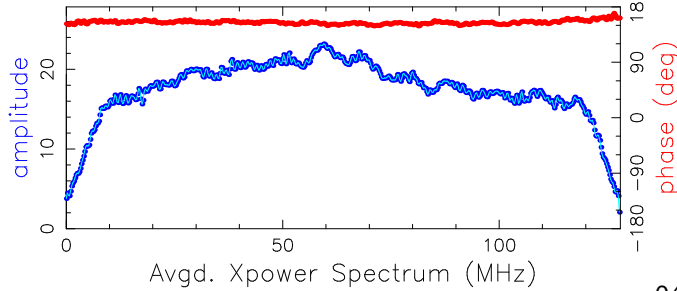
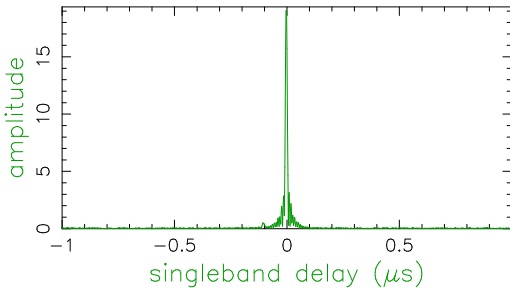
0420-014.1V2A0K, No0121, bf

VLBA_BR - VLBA_FD, fgroup Q, pol LL

Fringe quality 6

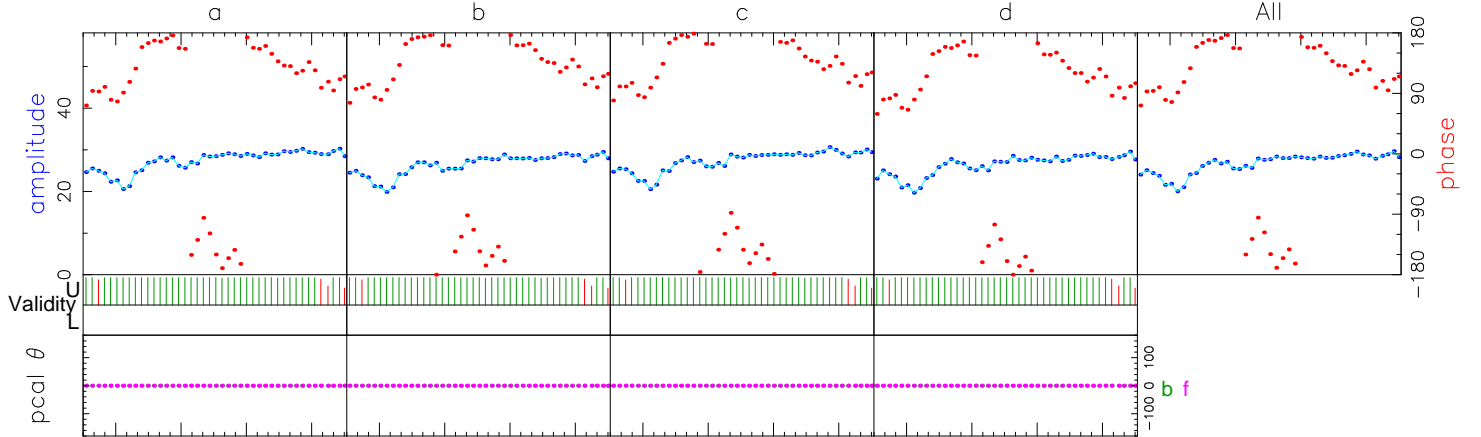


SNR 815.8
 Int time 237.261
 Amp 19.366
 Phase 148.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.003005
 MBD -0.002740
 Fringe rate (Hz)
 0.000162
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	147.7	152.2	155.0	137.2	Phase	148.1
	19.6	18.9	19.5	18.7	Ampl.	19.2
	511.5	511.8	511.4	511.0	Sbd box	511.5
U/L	467/0	467/0	467/0	467/0	APs used	
b	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
f	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-2.99500474851E+03	Apriori delay (usec)	-2.99500200816E+03	Resid mbdelay (usec)	-2.74034E-03	+/-	1.4E-06
Sband delay (usec)	-2.99500501366E+03	Apriori clock (usec)	-1.3196857E+01	Resid sbdelay (usec)	-3.00550E-03	+/-	5.3E-06
Phase delay (usec)	-2.99500199861E+03	Apriori clockrate (us/s)	-1.6000000E-07	Resid phdelay (usec)	9.55868E-06	+/-	9.1E-09
Delay rate (us/s)	3.86600010111E-01	Apriori rate (us/s)	3.86600006336E-01	Resid rate (us/s)	3.77499E-09	+/-	6.6E-11
Total phase (deg)	-7.2	Apriori accel (us/s/s)	1.52560714890E-05	Resid phase (deg)	148.1	+/-	0.1

ph/seg (deg)	47.2	0.5	Amplitude	19.366 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	39.8	0.8	Search (1024X16)	18.875	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	9.5	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
amp/frq (%)	2.2	0.2	Inc. seg. avg.	26.693	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023	
			Inc. frq. avg.	19.153	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 187.1 el 40.3 pa 4.7 f: az 216.1 el 52.2 pa 30.9 u,v (fr/asec) -1101.908 1024.406 simultaneous interpolator

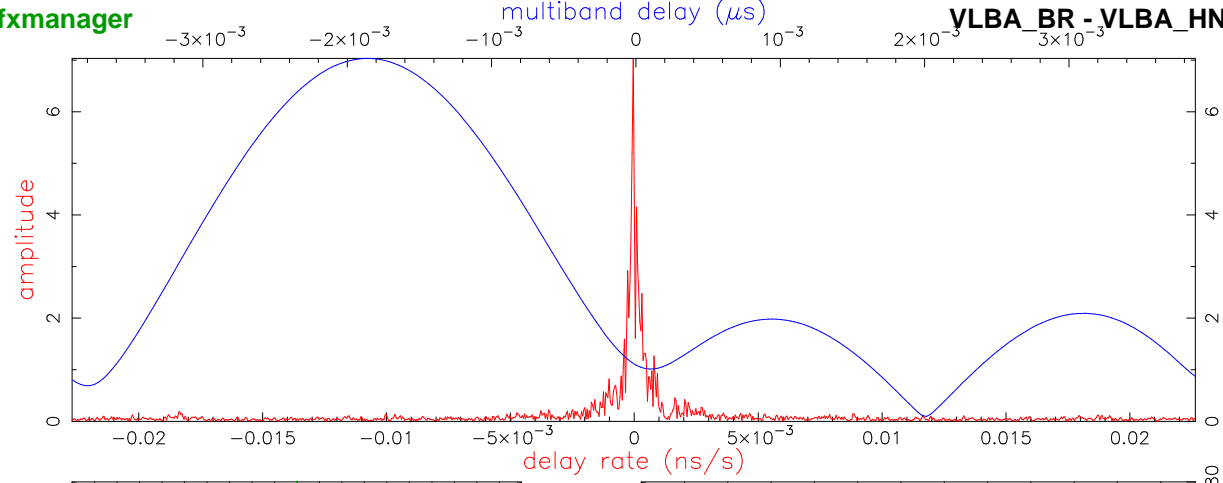
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bf.Q.9.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bh

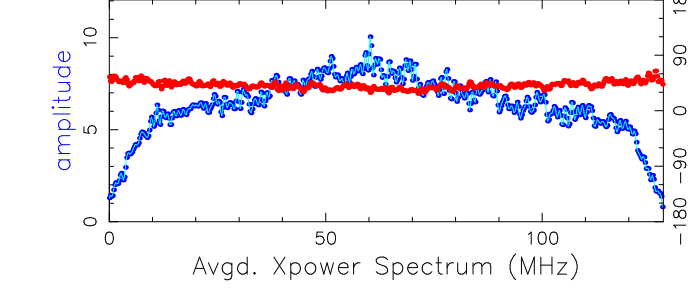
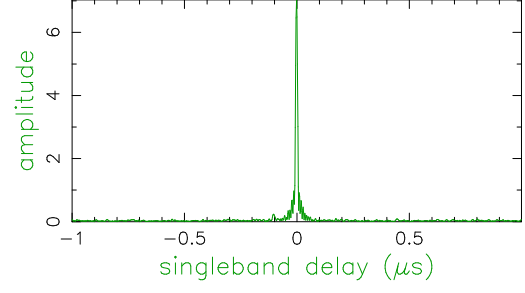
VLBA_BR - VLBA_HN, fgroup Q, pol LL



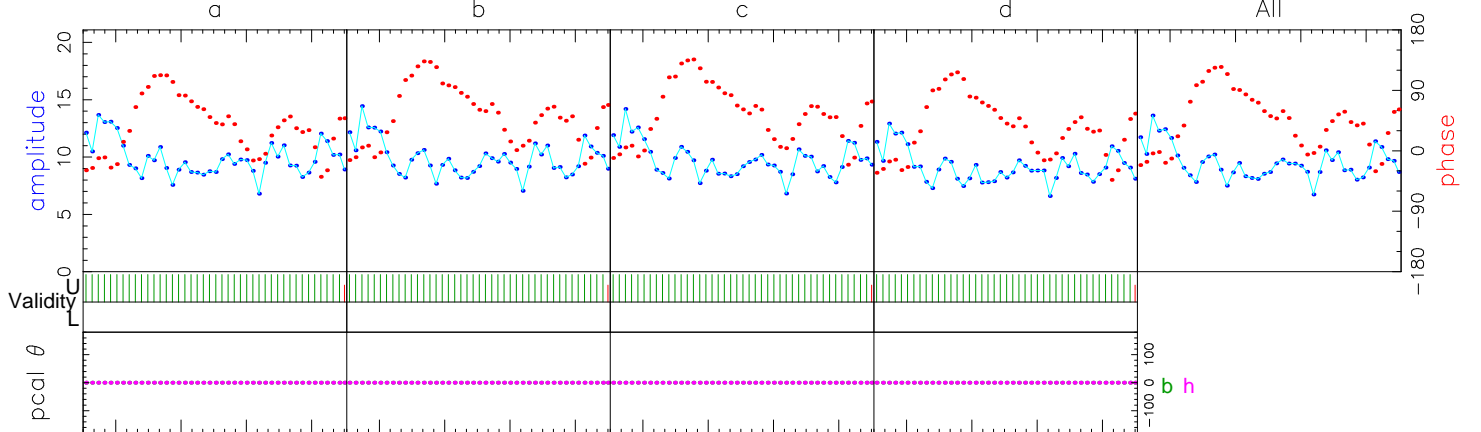
Fringe quality 4

SNR 297.9
 Int time 239.986
 Amp 7.033
 Phase 38.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.001927
 MBD -0.001858
 Fringe rate (Hz)
 -0.002856
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133520
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
30.0	47.5	49.6	28.1	Phase	38.9
7.4	7.3	7.1	6.7	Ampl.	7.1
512.5	512.2	511.8	511.3	Sbd box	512.0
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
h 1000	1000	1000	1000	PC freqs	
b:h 0:0	0:0	0:0	0:0	PC phase	
b:h 0:0	0:0	0:0	0:0	ManI PC	
b 1000	1000	1000	1000	PC amp	
h 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	4.88387451969E+03	Apriori delay (usec)	4.88387637789E+03	Resid mbdelay (usec)	-1.85821E-03 +/- 3.7E-06
Sband delay (usec)	4.88387445077E+03	Apriori clock (usec)	-5.7492943E+00	Resid sbdelay (usec)	-1.92713E-03 +/- 1.4E-05
Phase delay (usec)	4.88387638040E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	2.51183E-06 +/- 2.5E-08
Delay rate (us/s)	8.07887996549E-01	Apriori rate (us/s)	8.07888062905E-01	Resid rate (us/s)	-6.63559E-08 +/- 1.8E-10
Total phase (deg)	148.5	Apriori accel (us/s/s)	-2.61622658632E-05	Resid phase (deg)	38.9 +/- 0.4

ph/seg (deg) 43.1 1.3 Amplitude 7.033 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 40.7 2.2 Search (1024X16) 6.430 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 13.8 0.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004

amp/frq (%) 4.0 0.7 Inc. seg. avg. 9.528 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023

 Inc. frq. avg. 7.136 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 h: az 242.0 el 25.1 pa 40.5 u,v (fr/asec) -2324.071 299.777 simultaneous interpolator

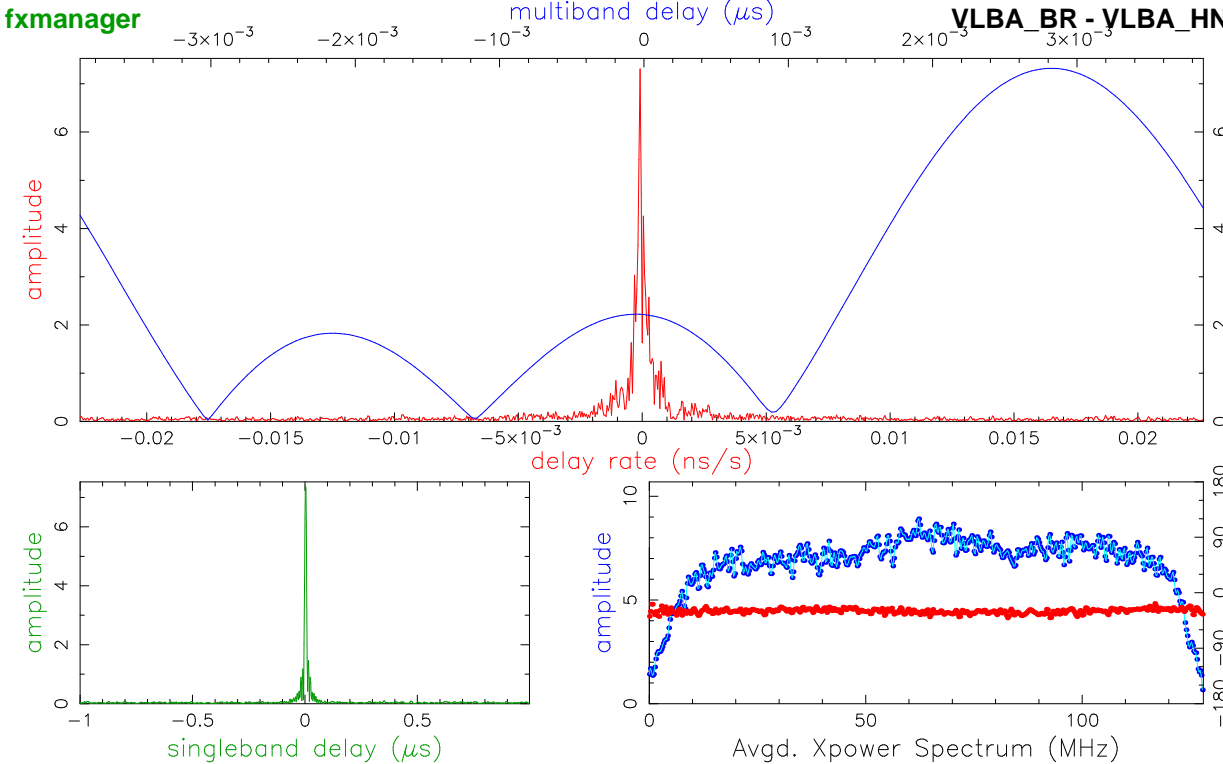
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh.Q.2.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bh

VLBA_BR - VLBA_HN, fgroup Q, pol RR

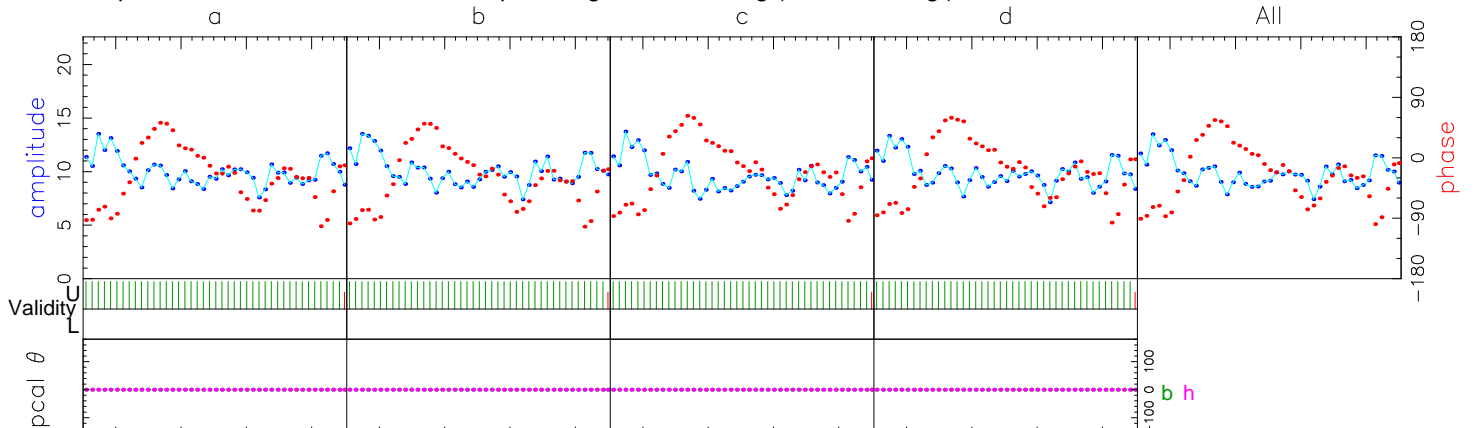


Fringe quality 6

SNR 318.9
 Int time 239.986
 Amp 7.528
 Phase -30.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.002767
 MBD 0.002752
 Fringe rate (Hz)
 -0.002899
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133523
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



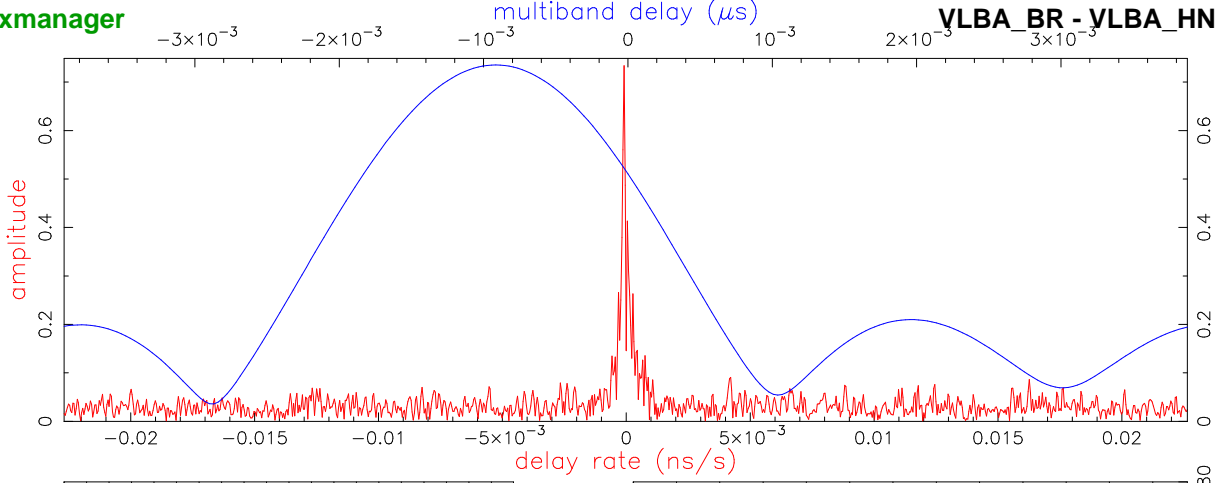
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-32.7	-35.7	-26.5	-25.1	Phase	-30.1
	7.4	7.5	7.1	7.3	Ampl.	7.3
	514.5	514.4	514.2	514.7	Sbd box	514.4
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
h	1000	1000	1000	1000	PC freqs	
b:h	0:0	0:0	0:0	0:0	PC phase	
b:h	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	4.88387912965E+03	Apriori delay (usec)	4.88387637789E+03	Resid mbdelay (usec)	2.75176E-03	+/- 3.5E-06
Sband delay (usec)	4.88387914489E+03	Apriori clock (usec)	-5.7492943E+00	Resid sbdelay (usec)	2.76700E-03	+/- 1.4E-05
Phase delay (usec)	4.88387637595E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	-1.94014E-06	+/- 2.3E-08
Delay rate (us/s)	8.07887995542E-01	Apriori rate (us/s)	8.07888062905E-01	Resid rate (us/s)	-6.73627E-08	+/- 1.7E-10
Total phase (deg)		79.6	Apriori accel (us/s/s)	-2.61622658632E-05	Resid phase (deg)	-30.1 +/- 0.4
	RMS	Theor.	Amplitude	7.528 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	42.9	1.2	Search (1024X16)	6.751	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	35.6	2.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	6.2	0.4	Inc. seg. avg.	9.870	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.2	0.6	Inc. frq. avg.	7.329	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 187.1 el 40.3 pa 4.7		h: az 242.0 el 25.1 pa 40.5		u,v (fr/asec) -2324.071 299.777		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh.Q.24.1V2A0K		

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bh

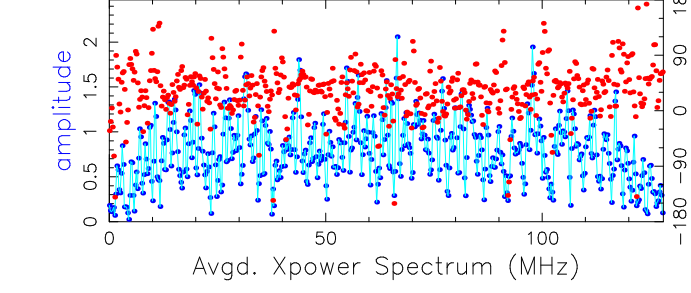
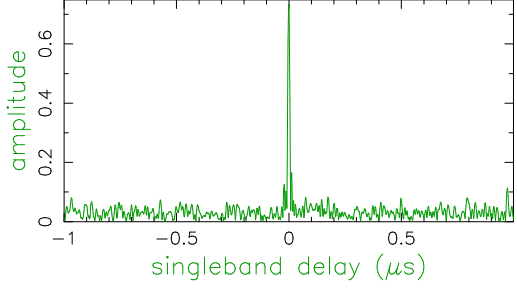
VLBA_BR - VLBA_HN, fgroup Q, pol LR



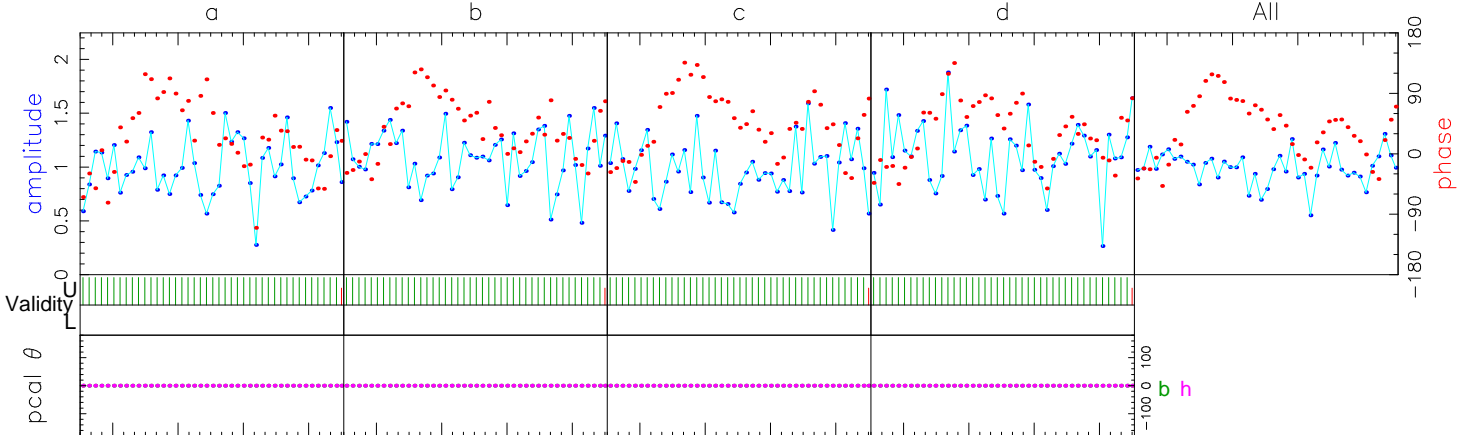
Fringe quality 9

SNR 31.7
 Int time 239.986
 Amp 0.749
 Phase 34.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.000958
 MBD -0.000991
 Fringe rate (Hz)
 -0.002916
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133525
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
h	1000	1000	1000	1000	PC freqs	
b:h	0:0	0:0	0:0	0:0	PC phase	
b:h	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	4.88387538640E+03	Apriori delay (usec)	4.88387637789E+03	Resid mbdelay (usec)	-9.91488E-04	+/- 3.5E-05
Group delay (usec)(sbd)	4.88387542014E+03	Apriori clock (usec)	-5.7492943E+00	Resid sbdelay (usec)	-9.57750E-04	+/- 1.4E-04
Sband delay (usec)	4.88387638013E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	2.23700E-06	+/- 2.3E-07
Phase delay (usec)	8.07887995145E-01	Apriori rate (us/s)	8.07888062905E-01	Resid rate (us/s)	-6.77598E-08	+/- 1.7E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-2.61622658632E-05	Resid phase (deg)	34.7	+/- 3.6
Total phase (deg)	144.3					

	RMS	Theor.	Amplitude	0.749 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	43.8	11.8	Search (1024X16)	0.685	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	38.5	20.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	9.4	3.6	Inc. seg. avg.	0.976	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	9.5	6.3	Inc. frq. avg.	0.737	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 h: az 242.0 el 25.1 pa 40.5 u,v (fr/asec) -2324.071 299.777 simultaneous interpolator

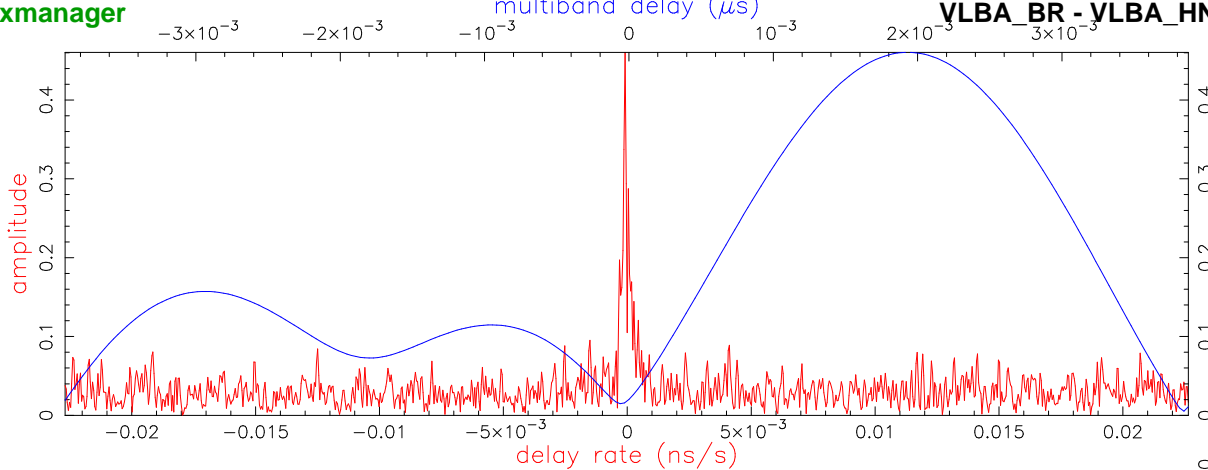
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh.Q.47.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

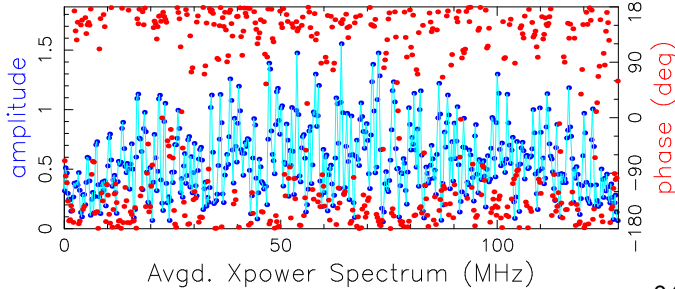
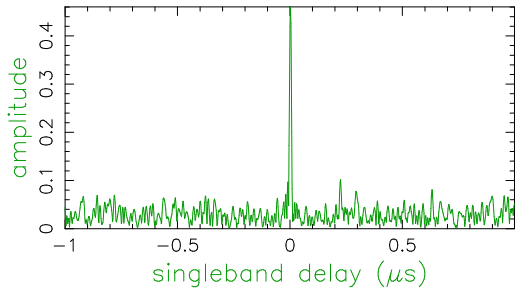
0420-014.1V2A0K, No0121, bh

VLBA_BR - VLBA_HN, fgroup Q, pol RL



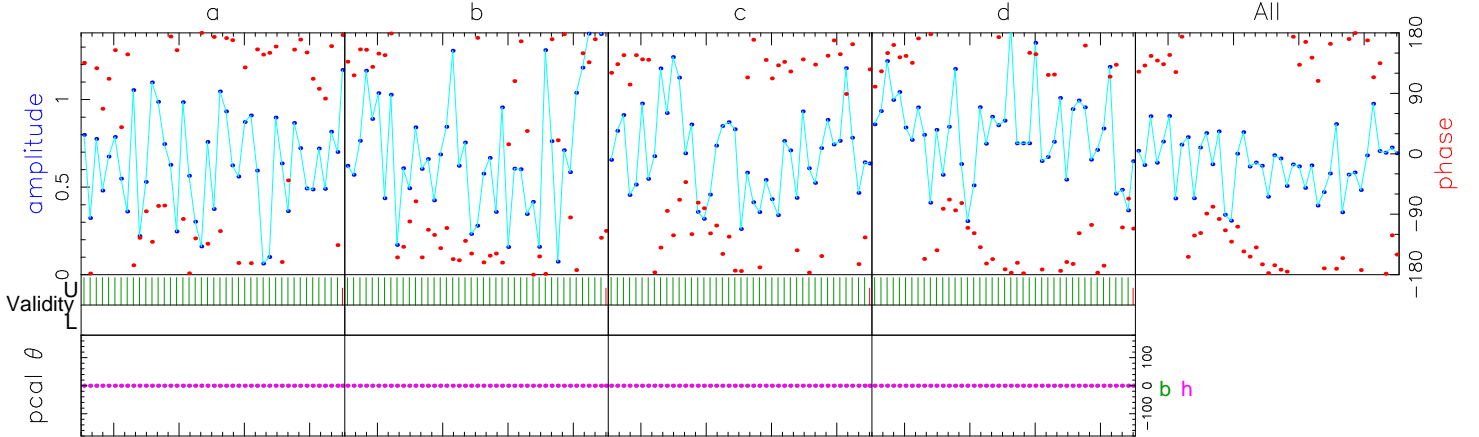
Fringe quality 9

SNR 19.5
 Int time 239.986
 Amp 0.460
 Phase -177.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.002019
 MBD 0.001935
 Fringe rate (Hz)
 -0.003144
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133528
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
h	1000	1000	1000	1000	PC freqs	
b:h	0:0	0:0	0:0	0:0	PC phase	
b:h	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	4.88387831269E+03	Apriori delay (usec)	4.88387637789E+03	Resid mbdelay (usec)	1.93479E-03	+/- 5.7E-05
Sband delay (usec)	4.88387839664E+03	Apriori clock (usec)	-5.7492943E+00	Resid sbdelay (usec)	2.01875E-03	+/- 2.2E-04
Phase delay (usec)	4.88387636647E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	-1.14204E-05	+/- 3.8E-07
Delay rate (us/s)	8.07887989847E-01	Apriori rate (us/s)	8.07888062905E-01	Resid rate (us/s)	-7.30578E-08	+/- 2.7E-09
Total phase (deg)	-67.3	Apriori accel (us/s/s)	-2.61622658632E-05	Resid phase (deg)	-177.0	+/- 5.9

ph/seg (deg)	44.5	RMS	19.3	Theor.	Amplitude	0.460 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	51.2	Search (1024X16)	0.440	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000			
ph/frq (deg)	5.4	Inc. seg. avg.	0.603	Inc. frq. avg.	0.459	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004		
amp/frq (%)	16.5	Inc. frq. avg.	0.459	Sample rate(MSamp/s):	256	Data rate(Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 187.1 el 40.3 pa 4.7 h: az 242.0 el 25.1 pa 40.5 u,v (fr/asec) -2324.071 299.777 simultaneous interpolator

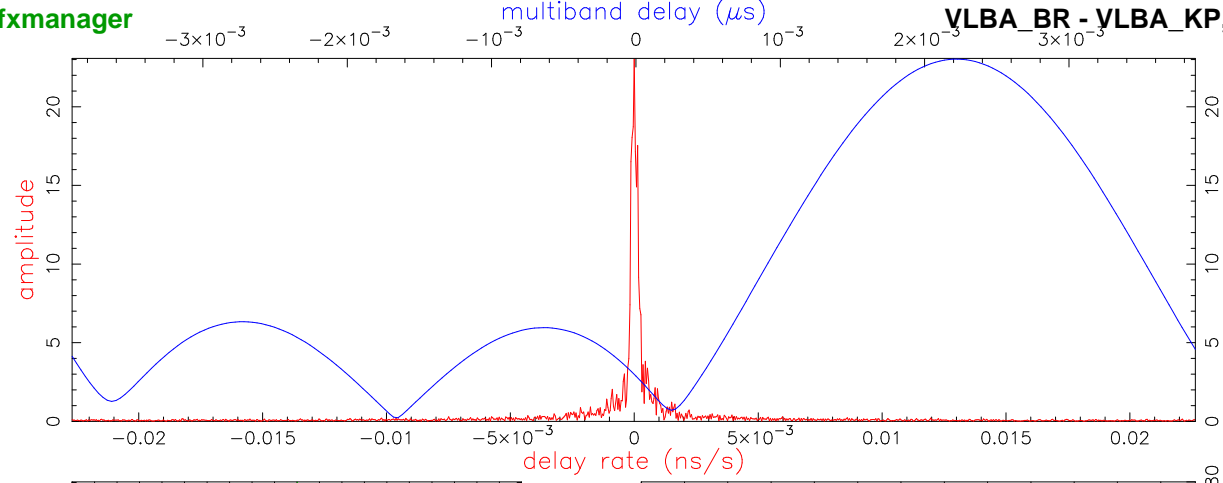
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bh.Q.68.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

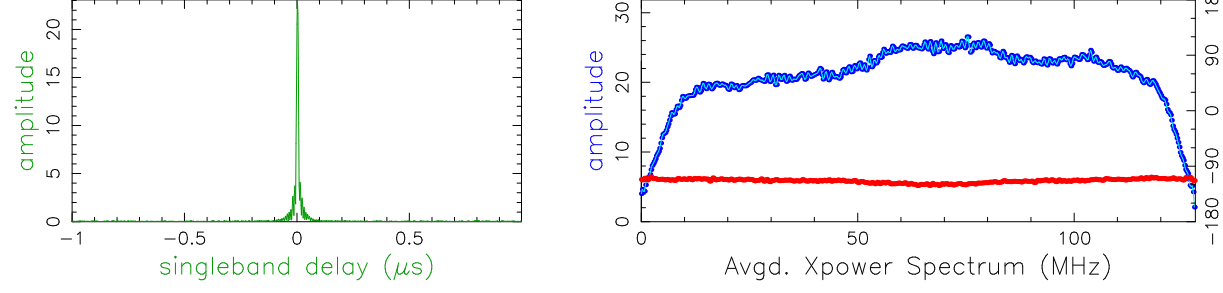
fxmanager

0420-014.1V2A0K, No0121, bk

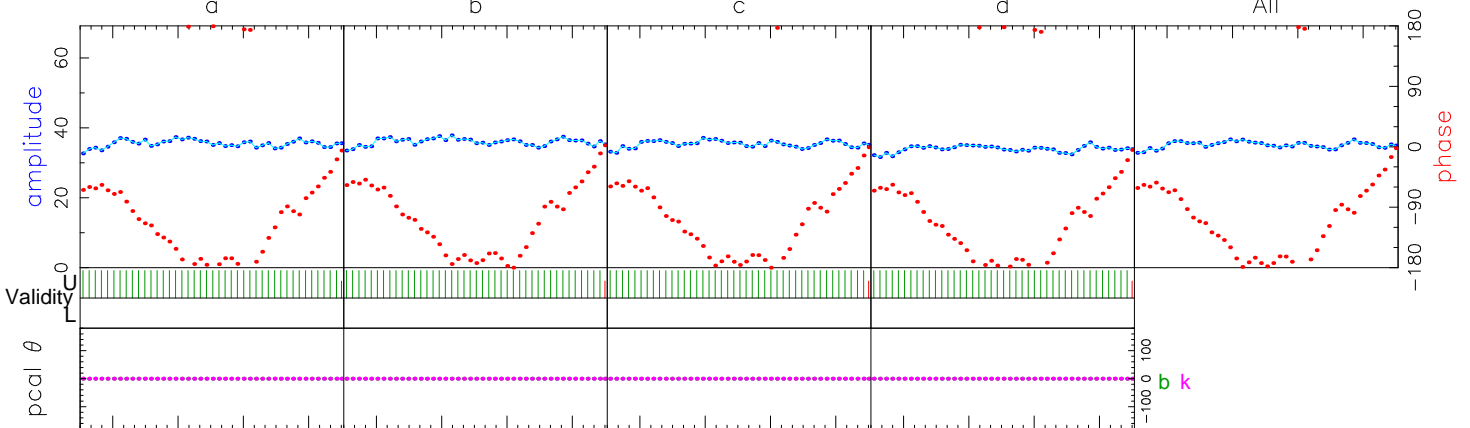
VLBA_BR - VLBA_KP, fgroup Q, pol RR



Fringe quality 5
 SNR 977.5
 Int time 239.983
 Amp 23.074
 Phase -113.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.002248
 MBD 0.002236
 Fringe rate (Hz)
 -0.000888
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133524
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-116.4	-109.1	-111.6	-118.0	Phase	-113.7
23.4	23.6	23.1	22.2	Ampl.	23.1
514.2	514.2	514.0	514.3	Sbd box	514.2
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	PC freqs	
b:k 0:0	0:0	0:0	0:0	PC phase	
b:k 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000		
b Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-3.48555984006E+03	Apriori delay (usec)	-3.48556207656E+03	Resid mbdelay (usec)	2.23650E-03	+/- 1.1E-06
Sband delay (usec)	-3.48555982893E+03	Apriori clock (usec)	-3.2889099E+00	Resid sbdelay (usec)	2.24763E-03	+/- 4.4E-06
Phase delay (usec)	-3.48556208390E+03	Apriori clockrate (us/s)	-9.9999998E-08	Resid phdelay (usec)	-7.33928E-06	+/- 7.6E-09
Delay rate (us/s)	2.12138086338E-01	Apriori rate (us/s)	2.12138106963E-01	Resid rate (us/s)	-2.06249E-08	+/- 5.5E-11
Total phase (deg)	-32.7	Apriori accel (us/s/s)	1.79675345981E-05	Resid phase (deg)	-113.7	+/- 0.1

ph/seg (deg)	50.5	Theor.	0.4	Amplitude	23.074 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	52.6		0.7	Search (1024X16)	21.134	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	5.1		0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	2.3		0.2	Inc. seg. avg.	35.165	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	23.073	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

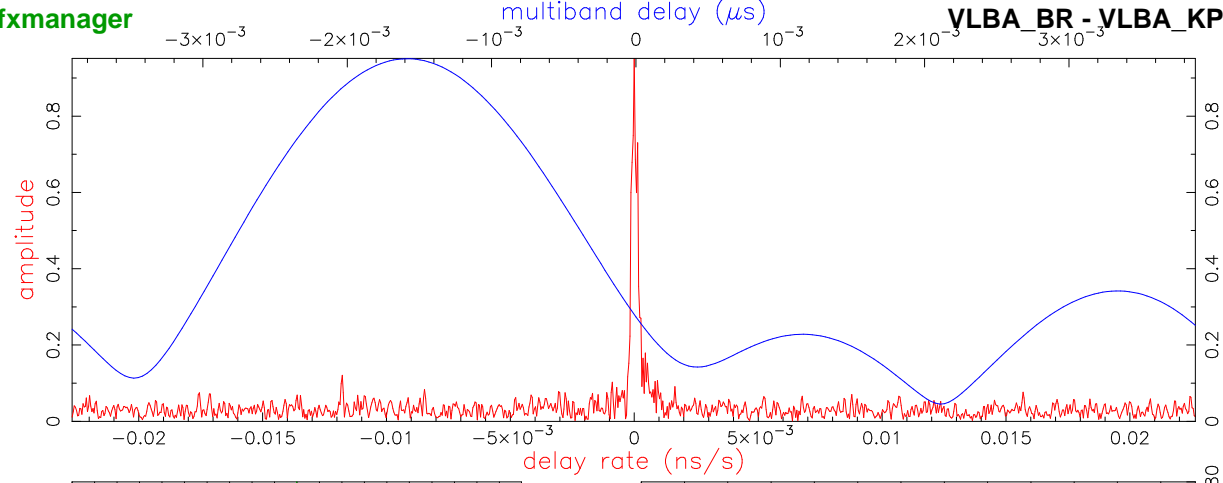
b: az 187.1 el 40.3 pa 4.7 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) -601.240 935.818 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk.Q.35.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

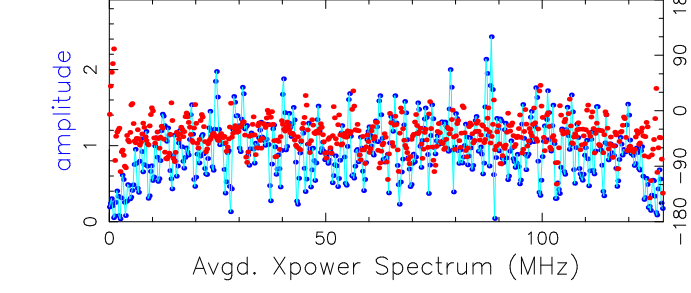
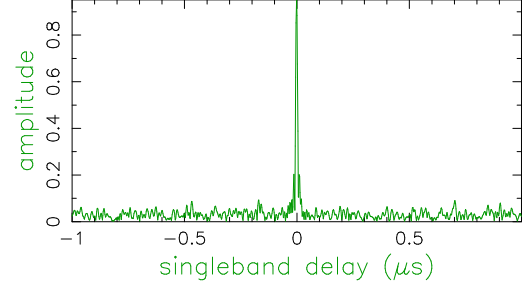
0420-014.1V2A0K, No0121, bk

VLBA_BR - VLBA_KP, fgroup Q, pol LR



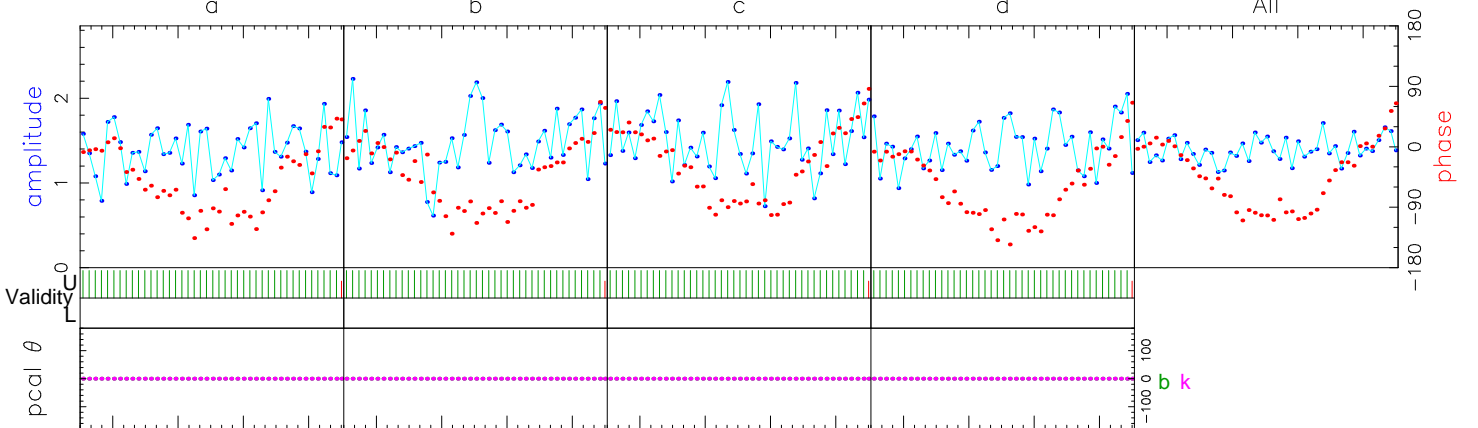
Fringe quality 6

SNR 40.3
 Int time 239.983
 Amp 0.951
 Phase -43.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.001758
 MBD -0.001570
 Fringe rate (Hz)
 -0.000860
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133526
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	43296.00	Freq (MHz)	All
-50.9	-41.3	-25.2	-58.6	-58.6	Phase	-43.9
1.0	1.0	1.0	1.0	1.0	Ampl.	1.0
512.3	512.3	512.1	511.4	511.4	Sbd box	512.1
U/L 469/0	469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	1000	PC freqs	
b:k 0:0	0:0	0:0	0:0	0:0	PC phase	
b:k 0:0	0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Q03UL	Chan ids	
k Q00UR	Q01UR	Q02UR	Q03UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.48556364624E+03	Apriori delay (usec)	-3.48556207656E+03	Resid mbdelay (usec)	-1.56969E-03	+/- 2.8E-05
Sband delay (usec)	-3.48556383431E+03	Apriori clock (usec)	-3.2889099E+00	Resid sbdelay (usec)	-1.75775E-03	+/- 1.1E-04
Phase delay (usec)	-3.48556207939E+03	Apriori clockrate (us/s)	-9.9999998E-08	Resid phdelay (usec)	-2.83171E-06	+/- 1.8E-07
Delay rate (us/s)	2.12138086979E-01	Apriori rate (us/s)	2.12138106963E-01	Resid rate (us/s)	-1.99839E-08	+/- 1.3E-09
Total phase (deg)	-322.9	Apriori accel (us/s/s)	1.79675345981E-05	Resid phase (deg)	-43.9	+/- 2.8

ph/seg (deg)	47.8	Theor.	9.3	Amplitude	0.951 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	49.5		16.3	Search (1024X16)	0.883	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	17.6		2.8	Inc. seg. avg.	1.382	Bits/sample: 2x2	Sample rate(MSamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	2.9		5.0	Inc. frq. avg.	0.972	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 187.1 el 40.3 pa 4.7 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) -601.240 935.818 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk.Q.50.1V2A0K

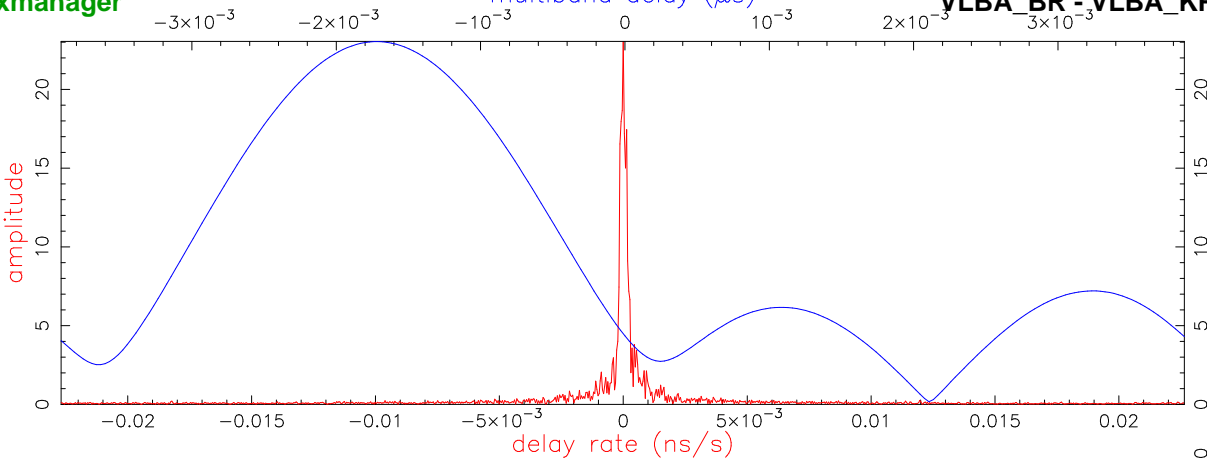
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bk

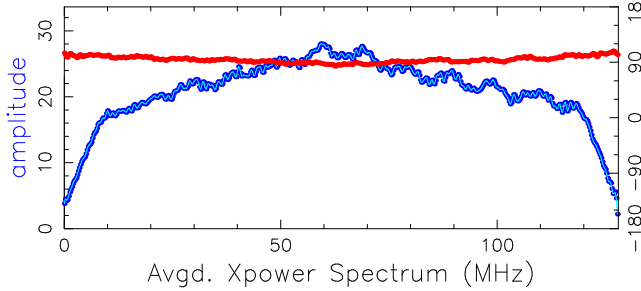
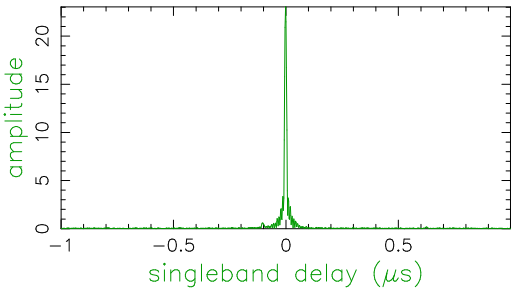
VLBA_BR - VLBA_KP, fgroup Q, pol LL

multiband delay (μ s)



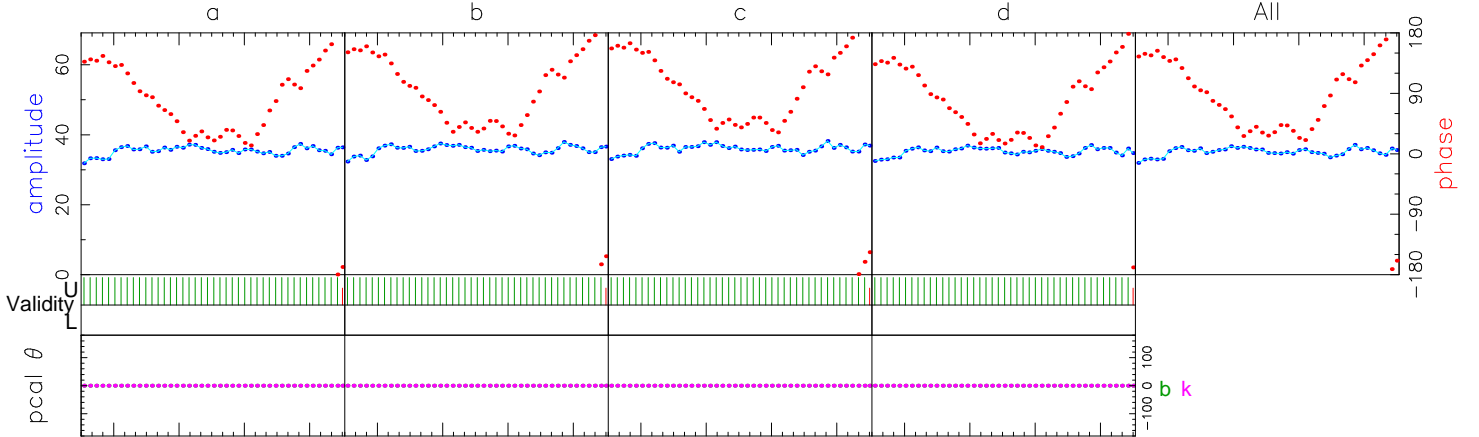
Fringe quality 4

SNR 976.4
 Int time 239.983
 Amp 23.048
 Phase 91.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.001796
 MBD -0.001710
 Fringe rate (Hz)
 -0.000877
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



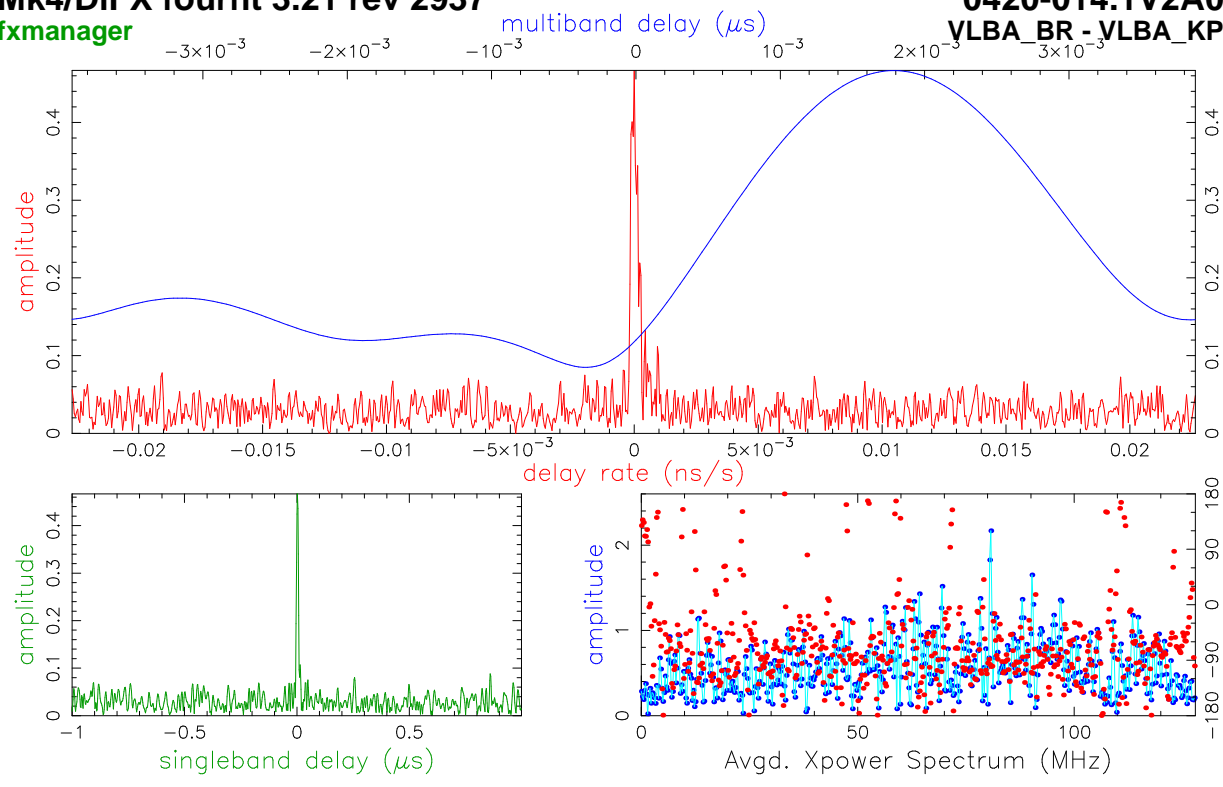
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
83.8	97.8	102.9	80.4	Phase	91.3
23.3	23.4	23.6	23.1	Ampl.	23.3
512.4	512.3	511.8	511.6	Sbd box	512.1
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	PC freqs	
b:k 0:0	0:0	0:0	0:0	PC phase	
b:k 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-3.48556378612E+03	Apriori delay (usec)	-3.48556207656E+03	Resid mbdelay (usec)	-1.70956E-03	+/- 1.1E-06
Sband delay (usec)	-3.48556387243E+03	Apriori clock (usec)	-3.2889099E+08	Resid sbdelay (usec)	-1.79588E-03	+/- 4.4E-06
Phase delay (usec)	-3.48556207066E+03	Apriori clockrate (us/s)	-9.9999998E-08	Resid phdelay (usec)	5.89296E-06	+/- 7.6E-09
Delay rate (us/s)	2.12138086582E-01	Apriori rate (us/s)	2.12138106963E-01	Resid rate (us/s)	-2.03810E-08	+/- 5.5E-11
Total phase (deg)	-187.7	Apriori accel (us/s/s)	1.79675345981E-05	Resid phase (deg)	91.3	+/- 0.1

ph/seg (deg)	50.4	Theor.	0.4	Amplitude	23.048 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	52.7	0.7	Interp.	Search (1024X16)	21.122	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	13.3	0.1	Inc. seg. avg.	Inc. seg. avg.	35.144	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	1.6	0.2	Inc. frq. avg.	Inc. frq. avg.	23.348	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 187.1 el 40.3 pa 4.7 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) -601.240 935.818 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk.Q.7.1V2A0K

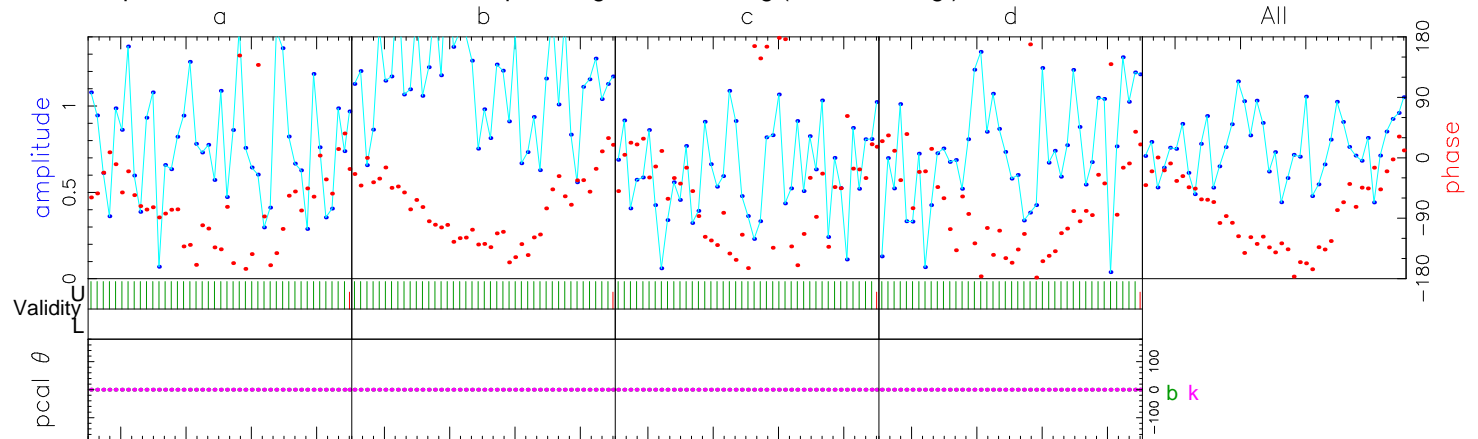


Fringe quality 8

SNR 19.8
Int time 239.983
Amp 0.467
Phase -77.7
PFD 0.0e+00
Delays (us)
SBD 0.002112
MBD 0.001791
Fringe rate (Hz)
-0.000846
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133528
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-83.0	-74.4	-69.2	-84.3	Phase	-77.7
	0.4	0.8	0.3	0.4	Ampl.	0.5
	514.4	514.0	513.5	514.6	Sbd box	514.1
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
b:k	0:0	0:0	0:0	0:0	PC phase	
b:k	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.48556028531E+03	Apriori delay (usec)	-3.48556207656E+03	Resid mbdelay (usec)	1.79125E-03	+/-	5.6E-05
Sband delay (usec)	-3.48555996431E+03	Apriori clock (usec)	-3.2889099E+00	Resid sbdelay (usec)	2.11225E-03	+/-	2.2E-04
Phase delay (usec)	-3.48556208157E+03	Apriori clockrate (us/s)	-9.9999998E-08	Resid phdelay (usec)	-5.01274E-06	+/-	3.7E-07
Delay rate (us/s)	2.12138087311E-01	Apriori rate (us/s)	2.12138106963E-01	Resid rate (us/s)	-1.96521E-08	+/-	2.7E-09
Total phase (deg)	-356.7	Apriori accel (us/s/s)	1.79675345981E-05	Resid phase (deg)	-77.7	+/-	5.8

ph/seg (deg)	54.0	19.0	Search (1024X16)	0.431	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	73.7	33.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	8.8	5.8	Inc. seg. avg.	0.722	Bits/sample: 2x2	Sample rate(MSamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	45.0	10.1	Inc. frq. avg.	0.466	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 187.1 el 40.3 pa 4.7 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) -601.240 935.818 simultaneous interpolator

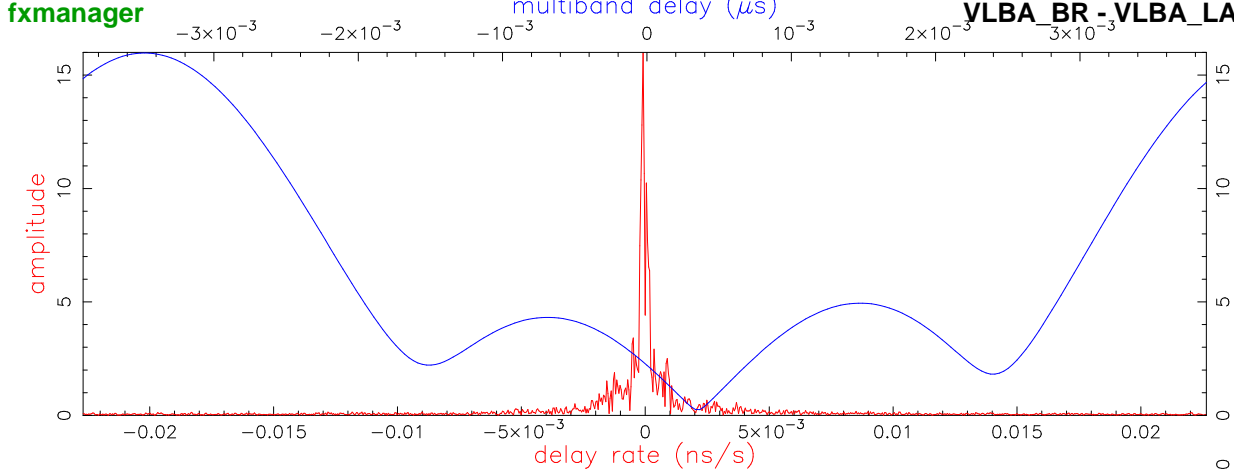
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bk.Q.72.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

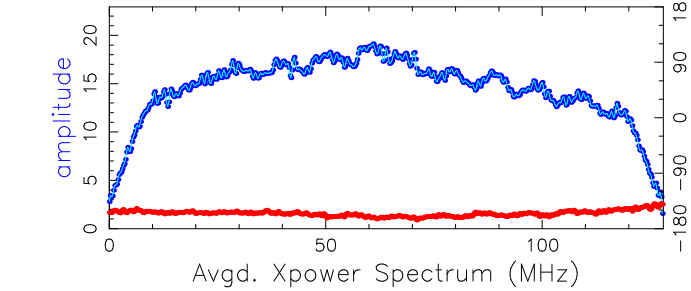
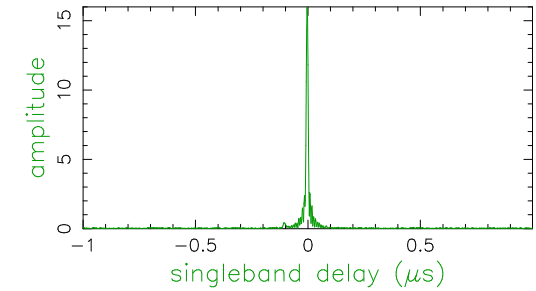
0420-014.1V2A0K, No0121, bl

VLBA_BR - VLBA_LA, fgroup Q, pol LL



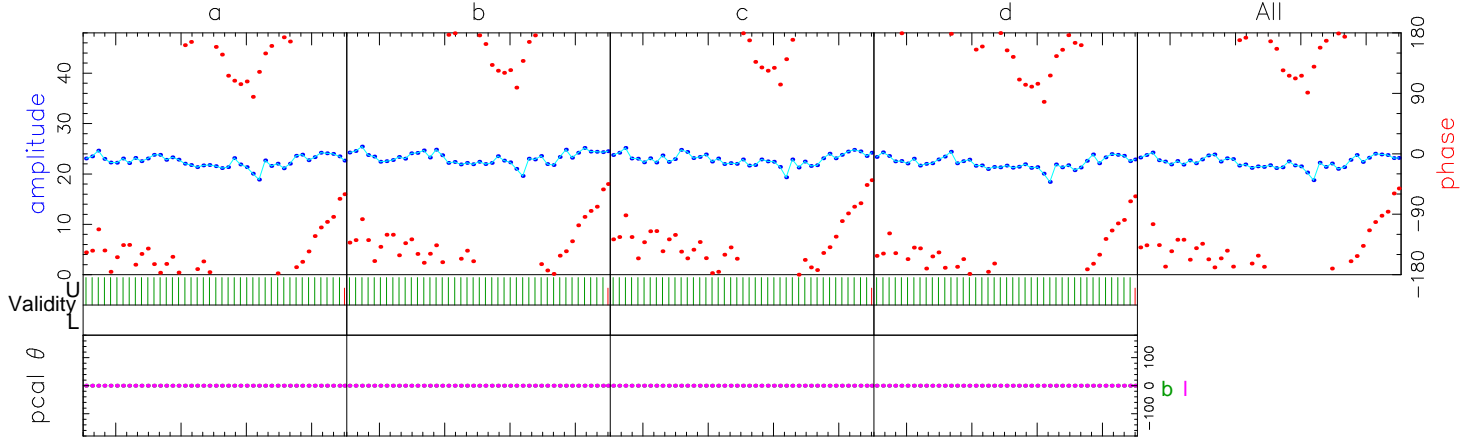
Fringe quality 4

SNR 677.9
 Int time 239.984
 Amp 16.002
 Phase -159.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.003608
 MBD -0.003464
 Fringe rate (Hz)
 -0.002906
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
l	1000	1000	1000	1000	PC freqs	
b:l	0:0	0:0	0:0	0:0	PC phase	
b	1000	1000	1000	1000	Manl PC	
l	1000	1000	1000	1000	PC amp	
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	-2.22500493582E+03	Apriori delay (usec)	-2.22500147165E+03	Resid mbdelay (usec)	-3.46418E-03	+/- 1.6E-06
Group delay (usec)(sbd)	-2.22500493582E+03	Apriori clock (usec)	-3.8686562E-01	Resid sbdelay (usec)	-3.60787E-03	+/- 6.4E-06
Sband delay (usec)	-2.22500507952E+03	Apriori clockrate (us/s)	1.8600001E-07	Resid phdelay (usec)	-1.02944E-05	+/- 1.1E-08
Phase delay (usec)	-2.22500148194E+03	Apriori rate (us/s)	3.11094693482E-01	Resid rate (us/s)	-6.75244E-08	+/- 7.9E-11
Delay rate (us/s)	3.11094625958E-01	Apriori accel (us/s/s)	1.14211255392E-05	Resid phase (deg)	-159.5	+/- 0.2
Total phase (deg)	-281.8					

	RMS	Theor.	Amplitude	16.002 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	47.3	0.6	Search (1024X16)	15.006	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	40.3	1.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	14.7	0.2	Inc. seg. avg.	22.347	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.3	0.3	Inc. frq. avg.	16.237	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) -886.825 696.208 simultaneous interpolator

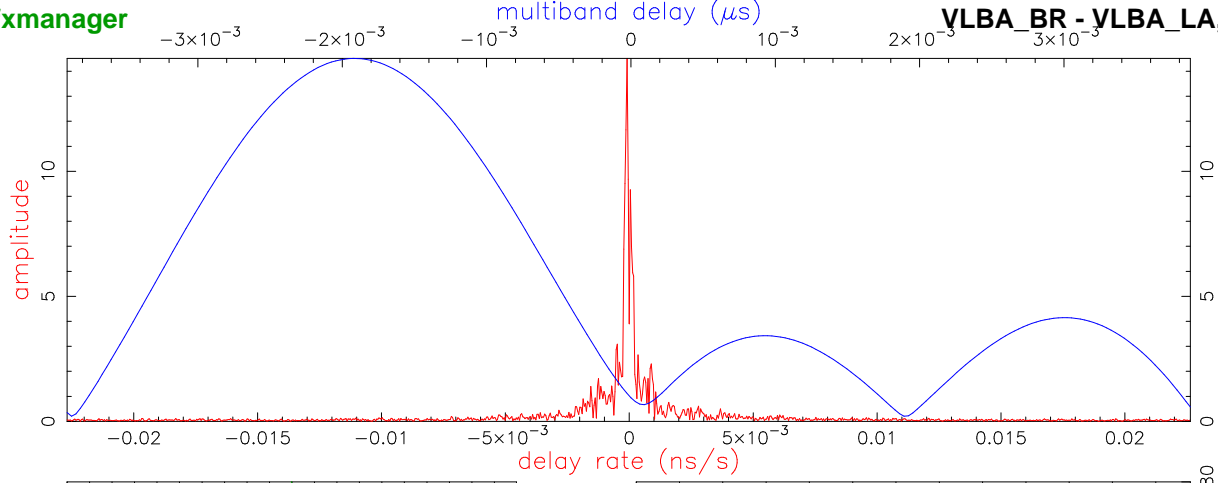
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl.1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl.Q.10.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bl

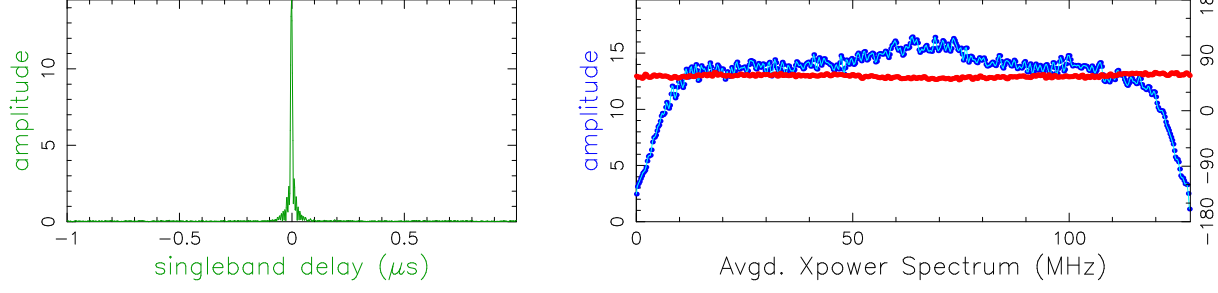
VLBA_BR - VLBA_LA, fgroup Q, pol RR



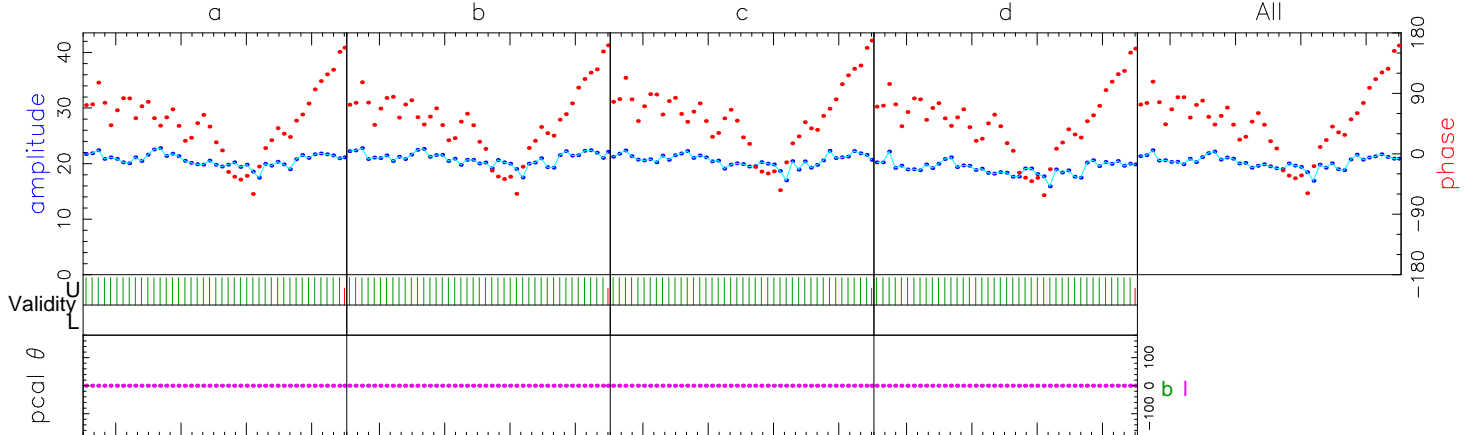
Fringe quality 5

SNR 614.9
 Int time 239.984
 Amp 14.515
 Phase 52.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.002068
 MBD -0.001922
 Fringe rate (Hz)
 -0.002914
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133523
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

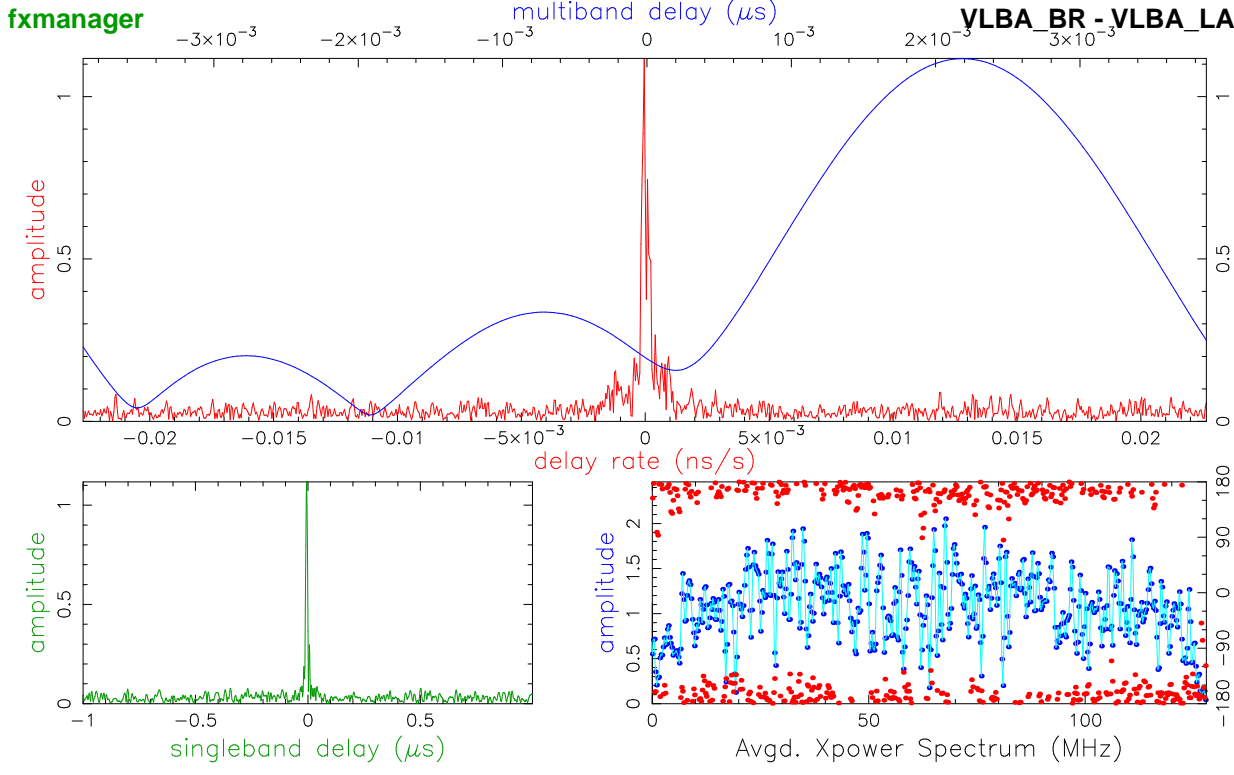


Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	Phase	52.7
l	1000	1000	1000	1000	Ampl.	14.5
b:l	0:0	0:0	0:0	0:0	Sbd box	511.9
b:l	0:0	0:0	0:0	0:0	APs used	
b	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
b	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
l	Q00UR	Q01UR	Q02UR	Q03UR	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-2.22500339382E+03	Apriori delay (usec)	-2.22500147165E+03	Resid mbdelay (usec)	-1.92218E-03	+/- 1.8E-06
Sband delay (usec)	-2.22500353990E+03	Apriori clock (usec)	-3.8686562E-01	Resid sbdelay (usec)	-2.06825E-03	+/- 7.0E-06
Phase delay (usec)	-2.22500146825E+03	Apriori clockrate (us/s)	1.8600001E-07	Resid phdelay (usec)	3.40237E-06	+/- 1.2E-08
Delay rate (us/s)	3.11094625779E-01	Apriori rate (us/s)	3.11094693482E-01	Resid rate (us/s)	-6.77031E-08	+/- 8.7E-11
Total phase (deg)	-69.6	Apriori accel (us/s/s)	1.14211255392E-05	Resid phase (deg)	52.7	+/- 0.2

ph/seg (deg) 47.6 0.6 Theor. Amplitude 14.515 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 40.7 1.1 Search (1024X16) 13.656 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 4.5 0.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 3.4 0.3 Inc. seg. avg. 20.325 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
 b: az 187.1 el 40.3 pa 4.7 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) -886.825 696.208 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl.Q.26.1V2A0K

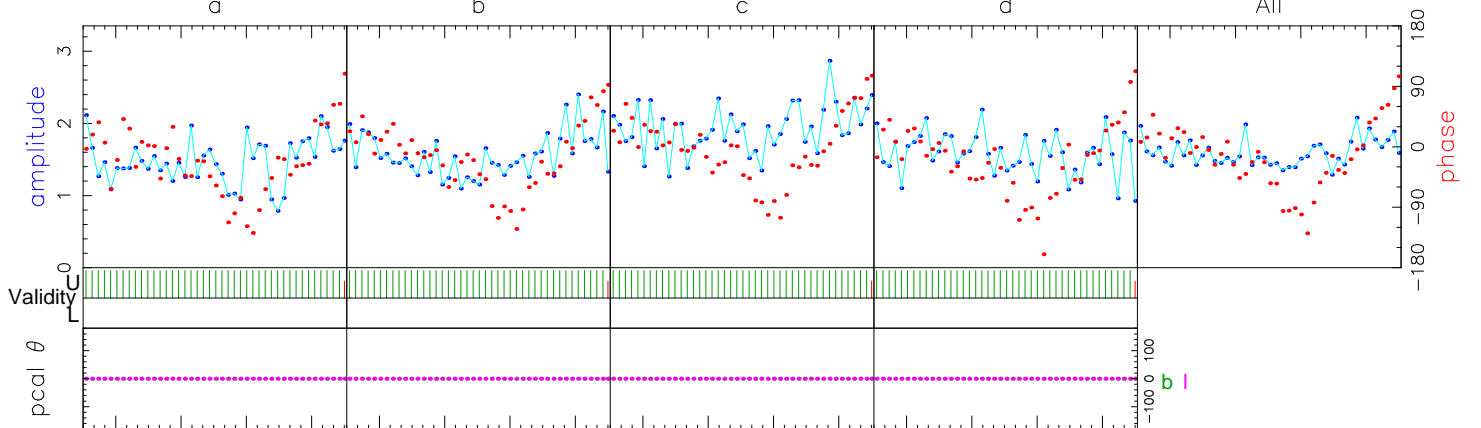


Fringe quality 7

SNR 47.3
Int time 239.984
Amp 1.118
Phase -11.3
PFD 0.0e+00
Delays (us)
SBD -0.006047
MBD 0.002170
Fringe rate (Hz)
-0.002851
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133525
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

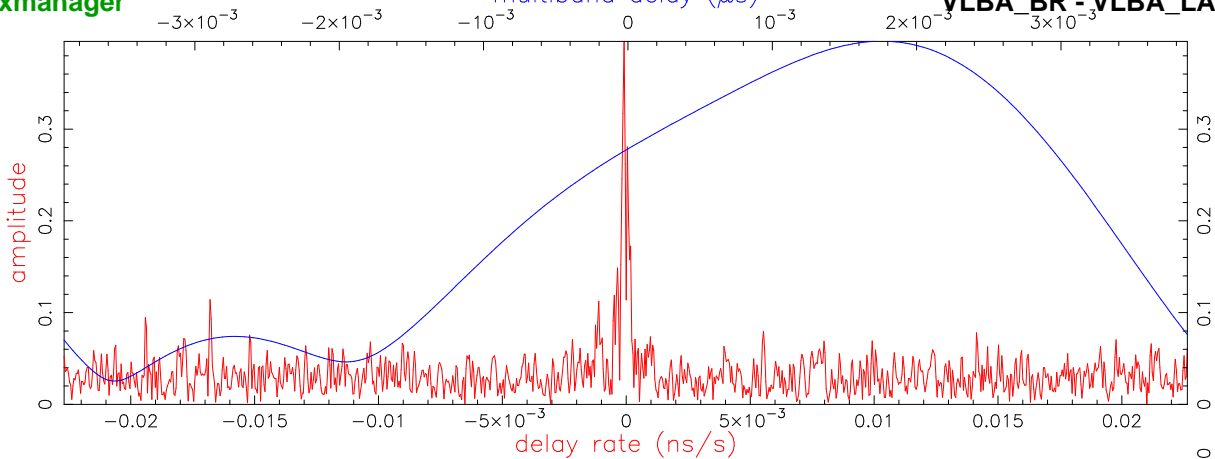
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



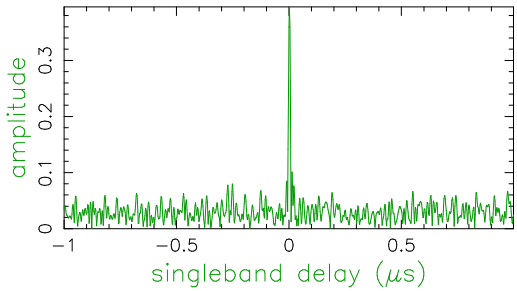
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
l	1000	1000	1000	1000		
b:l	0:0	0:0	0:0	0:0		
b:l	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
l	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
l	Q00UR	Q01UR	Q02UR	Q03UR		
Group delay (usec)(sbd)	-2.22500711448E+03			-2.22500147165E+03	2.16967E-03	+/- 2.3E-05
Sband delay (usec)	-2.22500751890E+03			-3.8686562E-01	-6.04725E-03	+/- 9.1E-05
Phase delay (usec)	-2.22500147238E+03			1.8600001E-07	-7.29370E-07	+/- 1.6E-07
Delay rate (us/s)	3.11094627237E-01			3.11094693482E-01	-6.62453E-08	+/- 1.1E-09
Total phase (deg)		-133.6		1.14211255392E-05	-11.3	+/- 2.4
Apriori delay (usec)						
Apriori clock (usec)						
Apriori clockrate (us/s)						
Apriori rate (us/s)						
Apriori accel (us/s/s)						
Resid mbdelay (usec)						
Resid sbdelay (usec)						
Resid phdelay (usec)						
Resid rate (us/s)						
Resid phase (deg)						
Pcal mode: MANUAL, MANUAL						
Pcal rate: 0.000E+00, 0.000E+00 (us/s)						
Bits/sample: 2x2						
Sample rate(MISamp/s): 256						
Data rate(Mb/s): 2048						
nlags: 512						
t_cohere infinite						
ion window (TEC)						
sb window (us)	-1.000	1.000				
mb window (us)	-0.004	0.004				
dr window (ns/s)	-0.023	0.023				
ion window (TEC)	0.00	0.00				
PC period (AP's) 5, 5						
SampCntNorm: enabled						
simultaneous interpolator						
b: az 187.1 el 40.3 pa 4.7		l: az 209.5 el 49.0 pa 24.1		u,v (fr/asec) -886.825 696.208		
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl.1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl.Q.43.1V2A0K		

multiband delay (μ s)

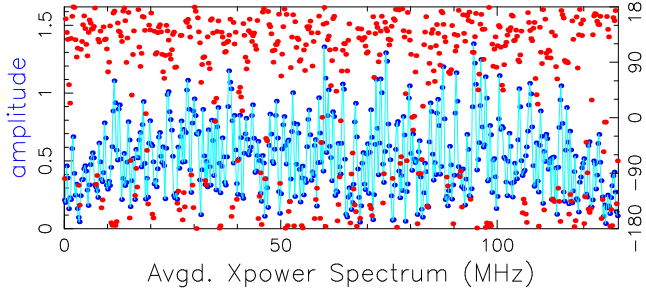
Fringe quality 7



SNR 16.8
Int time 239.984
Amp 0.396
Phase 150.7
PFD 0.0e+00
Delays (us)
SBD 0.001961
MBD 0.001763
Fringe rate (Hz)
-0.003148
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



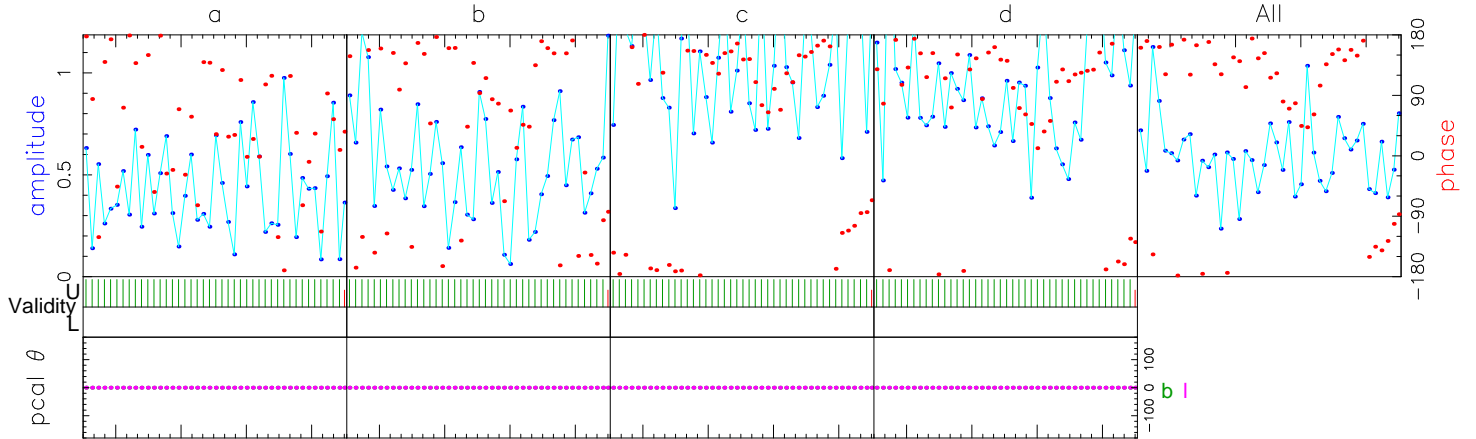
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133527
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
l	1000	1000	1000	1000		
b:l	0:0	0:0	0:0	0:0		
b:l	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
l	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
l	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-2.22499970914E+03	Apriori delay (usec)	-2.22500147165E+03	Resid mbdelay (usec)	1.76251E-03	+/-	6.6E-05
Sband delay (usec)	-2.22499951065E+03	Apriori clock (usec)	-3.8686562E-01	Resid sbdelay (usec)	1.96100E-03	+/-	2.6E-04
Phase delay (usec)	-2.22500146192E+03	Apriori clockrate (us/s)	1.8600001E-07	Resid phdelay (usec)	9.72824E-06	+/-	4.4E-07
Delay rate (us/s)	3.11094620331E-01	Apriori rate (us/s)	3.11094693482E-01	Resid rate (us/s)	-7.31514E-08	+/-	3.2E-09
Total phase (deg)	28.4	Apriori accel (us/s/s)	1.14211255392E-05	Resid phase (deg)	150.7	+/-	6.8

ph/seg (deg)	50.5	Theor.	22.4	Amplitude	0.396 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	66.8	Search (1024X16)	0.382	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	56.3	Inc. seg. avg.	0.553	Inc. frq. avg.	0.424	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	60.7	Inc. frq. avg.	0.424			Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

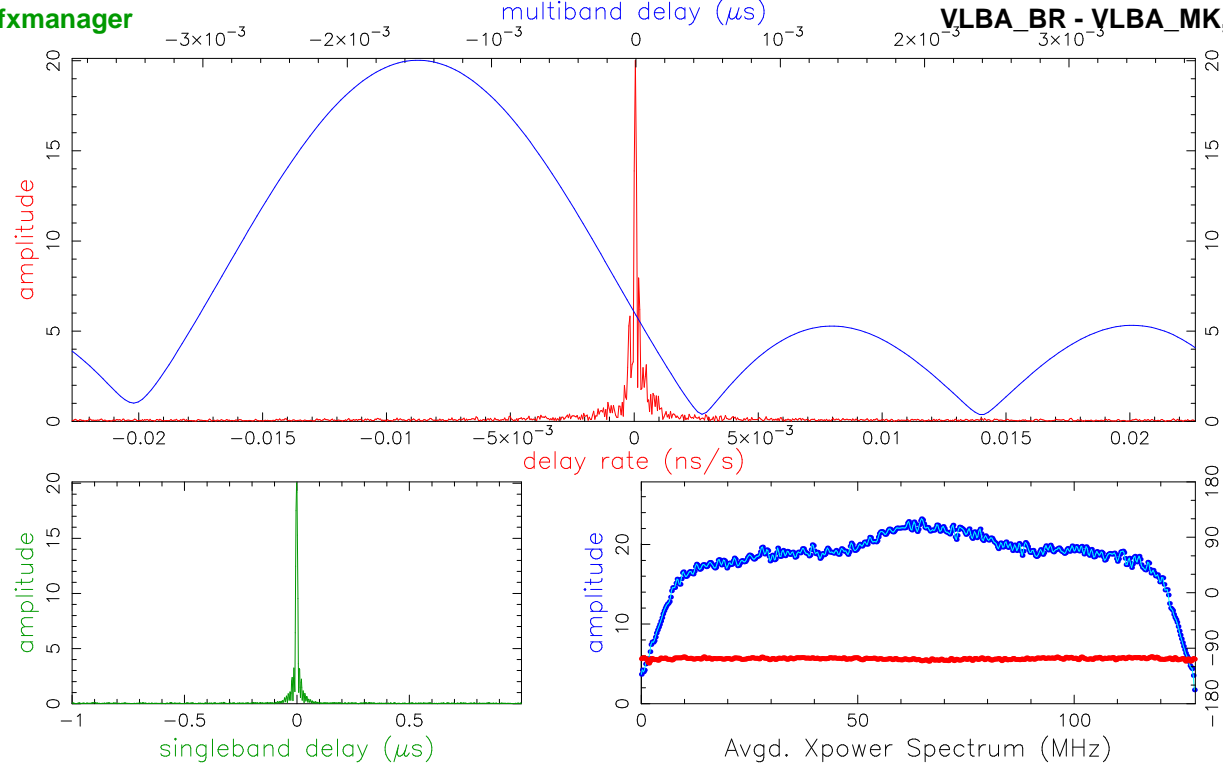
b: az 187.1 el 40.3 pa 4.7 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) -886.825 696.208 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bl.Q.60.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bm

VLBA_BR - VLBA_MK, fgroup Q, pol RR

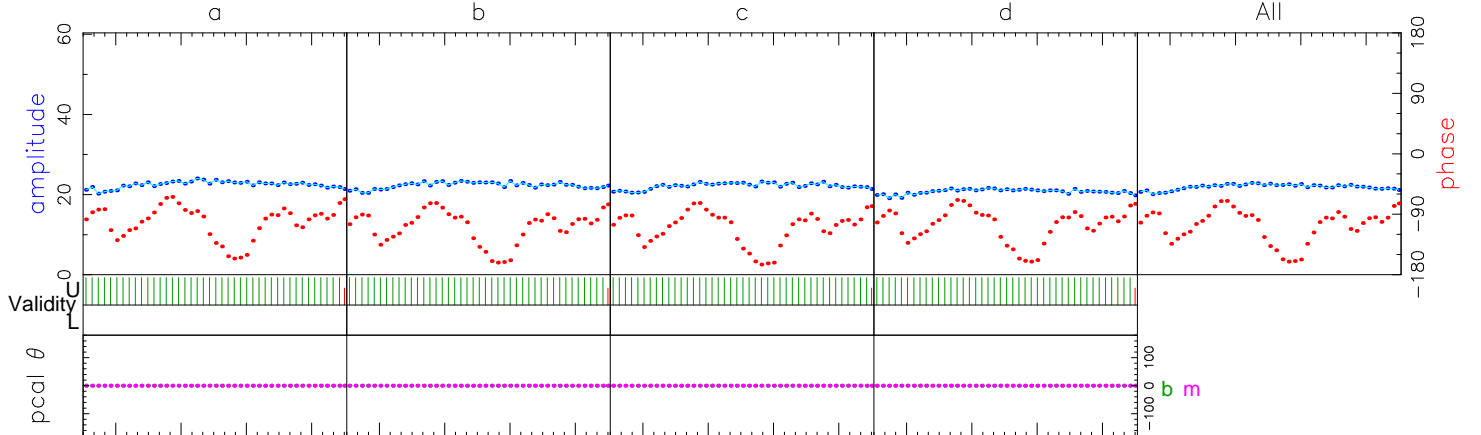


Fringe quality 7

SNR 852.5
 Int time 239.981
 Amp 20.124
 Phase -106.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.001451
 MBD -0.001479
 Fringe rate (Hz) 0.002315
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133523
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-101.4	-108.6	-109.7	-105.6	Phase	-106.3
	20.6	20.4	20.2	19.0	Ampl.	20.0
	512.1	512.3	512.2	512.6	Sbd box	512.3
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	-3.46569851134E+03	Apriori delay (usec)	-3.46569703199E+03	Resid mbdelay (usec)	-1.47935E-03	+/- 1.3E-06
Group delay (usec)(sbd)	-3.46569851134E+03	Apriori clock (usec)	-1.8615528E+01	Resid sbdelay (usec)	-1.45137E-03	+/- 5.1E-06
Sband delay (usec)	-3.46569848336E+03	Apriori clockrate (us/s)	-4.1800000E-07	Resid phdelay (usec)	-6.86333E-06	+/- 8.7E-09
Phase delay (usec)	-3.46569703885E+03	Apriori rate (us/s)	-8.3353373260E-01	Resid rate (us/s)	5.37858E-08	+/- 6.3E-11
Delay rate (us/s)	-8.3353319474E-01	Apriori accel (us/s/s)	1.72950765980E-05	Resid phase (deg)	-106.3	+/- 0.1
Total phase (deg)	-198.8					

	RMS	Theor.	Amplitude	20.124 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	24.2	0.4	Search (1024X16)	19.662	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	9.5	0.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.5	0.1	Inc. seg. avg.	21.907	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.2	0.2	Inc. frq. avg.	20.045	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2389.817 1784.056 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm.Q.25.1V2A0K

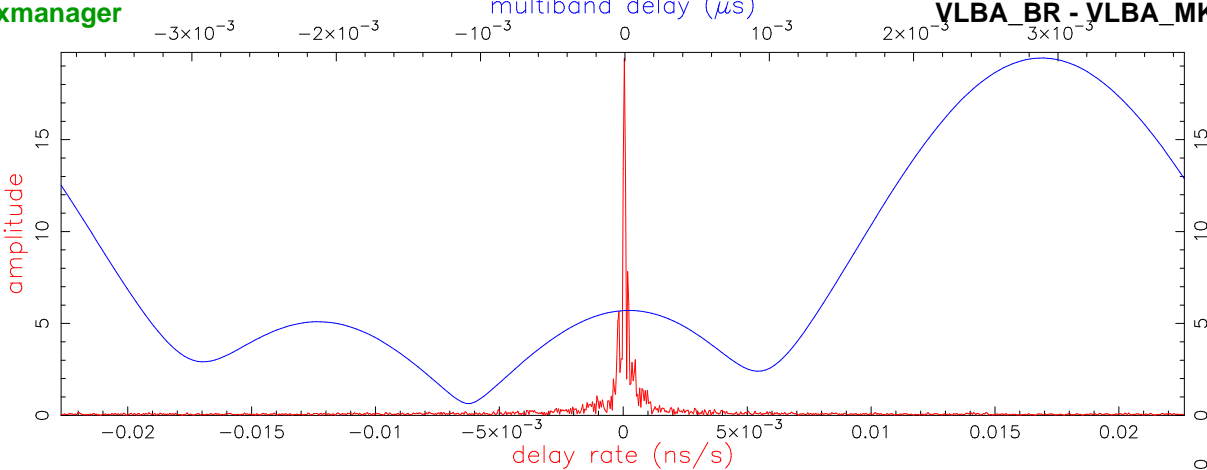
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bm

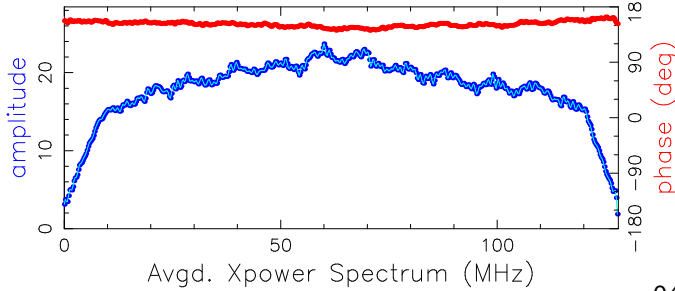
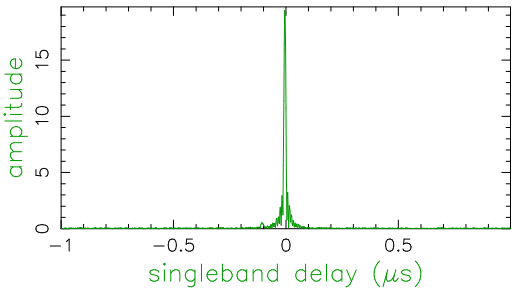
VLBA_BR - VLBA_MK, fgroup Q, pol LL

multiband delay (μ s)



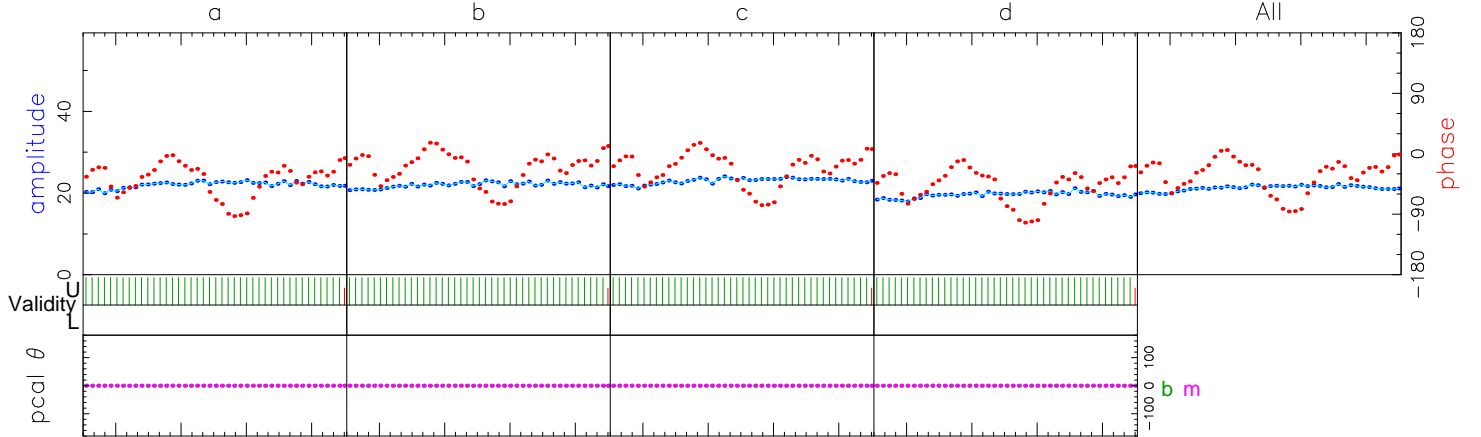
Fringe quality 6

SNR 836.5
 Int time 239.981
 Amp 19.747
 Phase -31.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.004979
 MBD 0.002941
 Fringe rate (Hz)
 0.002322
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-38.0	-20.5	-21.5	-47.3	Phase	-31.3
	20.1	20.1	21.0	17.9	Ampl.	19.8
	510.8	510.8	510.1	509.9	Sbd box	510.5
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.46570190390E+03	Apriori delay (usec)	-3.46569703199E+03	Resid mbdelay (usec)	2.94059E-03	+/-	1.3E-06
Sband delay (usec)	-3.46570201124E+03	Apriori clock (usec)	-1.8615528E+01	Resid sbdelay (usec)	-4.97925E-03	+/-	5.1E-06
Phase delay (usec)	-3.46569703400E+03	Apriori clockrate (us/s)	-4.1800000E-07	Resid phdelay (usec)	-2.01788E-06	+/-	8.8E-09
Delay rate (us/s)	-8.3353319321E-01	Apriori rate (us/s)	-8.3353373260E-01	Resid rate (us/s)	5.39390E-08	+/-	6.4E-11
Total phase (deg)	-123.7	Apriori accel (us/s/s)	1.72950765980E-05	Resid phase (deg)	-31.3	+/-	0.1

ph/seg (deg)	24.1	Theor.	0.4	Amplitude	19.747 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	8.2	Search (1024X16)	19.084	Search	19.084	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	16.0	Inc. seg. avg.	21.244	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	5.8	Inc. frq. avg.	19.793	Inc. seg. avg.	21.244	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	19.793	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 187.1 el 40.3 pa 4.7 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2389.817 1784.056 simultaneous interpolator

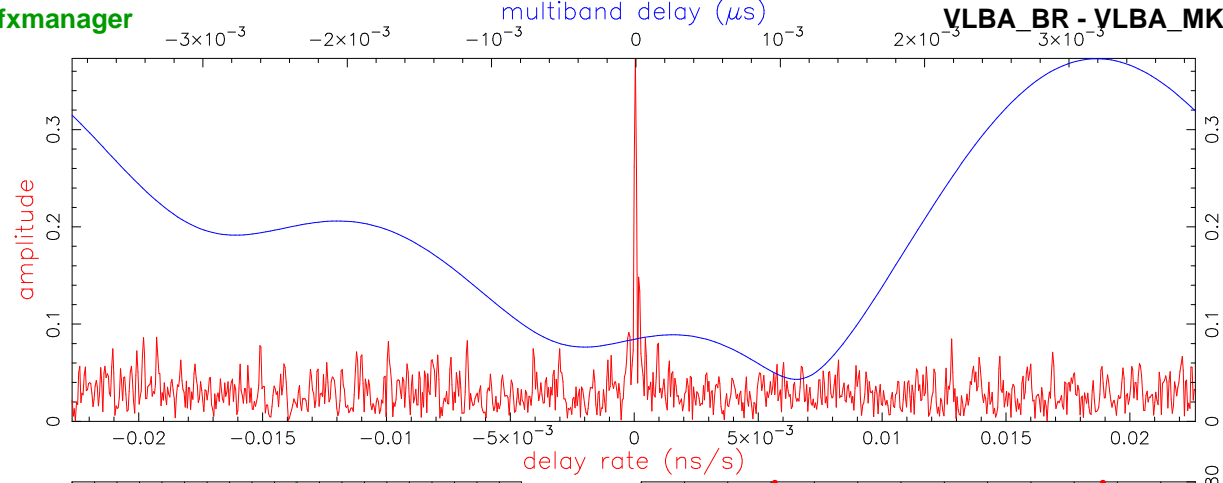
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm.Q.3.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

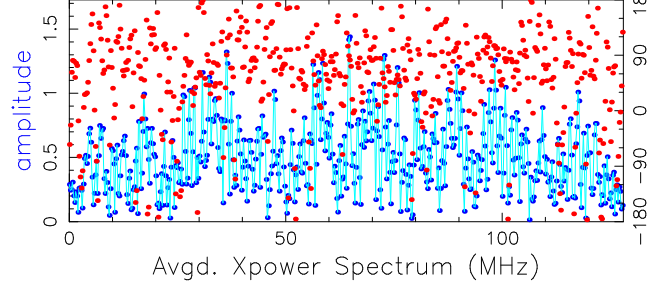
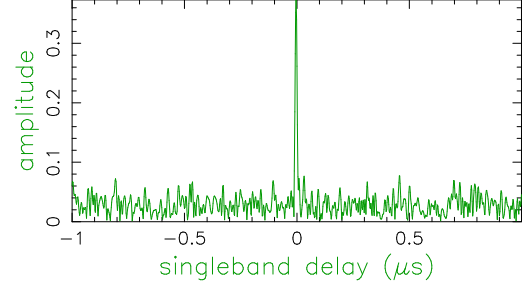
0420-014.1V2A0K, No0121, bm

VLBA_BR - VLBA_MK, fgroup Q, pol LR



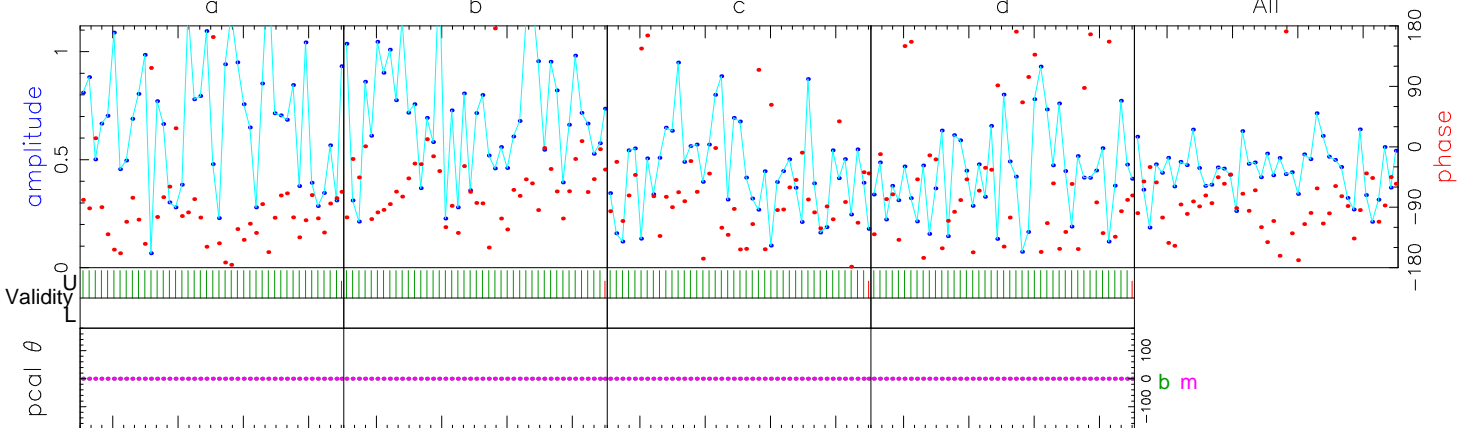
Fringe quality 8

SNR 15.8
 Int time 239.981
 Amp 0.373
 Phase -91.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.004130
 MBD 0.003186
 Fringe rate (Hz) 0.002199
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133525
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-113.2	-60.8	-87.3	-118.4	Phase	-91.5
	0.5	0.6	0.3	0.2	Ampl.	0.4
	510.4	511.5	509.5	511.6	Sbd box	510.9
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.46570165809E+03	Apriori delay (usec)	-3.46569703199E+03	Resid mbdelay (usec)	3.18640E-03	+/-	7.0E-05
Sband delay (usec)	-3.46570116174E+03	Apriori clock (usec)	-1.8615528E+01	Resid sbdelay (usec)	-4.12975E-03	+/-	2.7E-04
Phase delay (usec)	-3.46569703789E+03	Apriori clockrate (us/s)	-4.1800000E-07	Resid phdelay (usec)	-5.90245E-06	+/-	4.7E-07
Delay rate (us/s)	-8.33533322177E-01	Apriori rate (us/s)	-8.33533373260E-01	Resid rate (us/s)	5.10829E-08	+/-	3.4E-09
Total phase (deg)	-183.9	Apriori accel (us/s/s)	1.72950765980E-05	Resid phase (deg)	-91.5	+/-	7.2

ph/seg (deg)	37.4	Theor.	23.8	Amplitude	0.373 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	37.4	Search (1024X16)	0.363	Search	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	32.8	Inc. seg. avg.	0.417	Inc. seg. avg.	0.417	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	39.3	Inc. frq. avg.	0.405	Inc. frq. avg.	0.405	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
						nlags: 512	t_cohere infinite

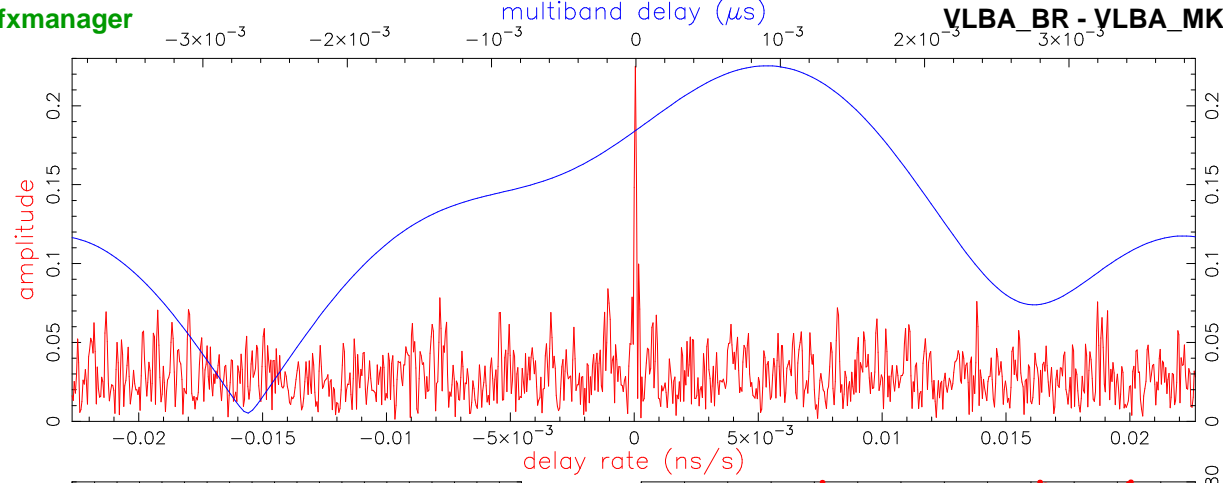
b: az 187.1 el 40.3 pa 4.7 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2389.817 1784.056 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm.Q.42.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bm

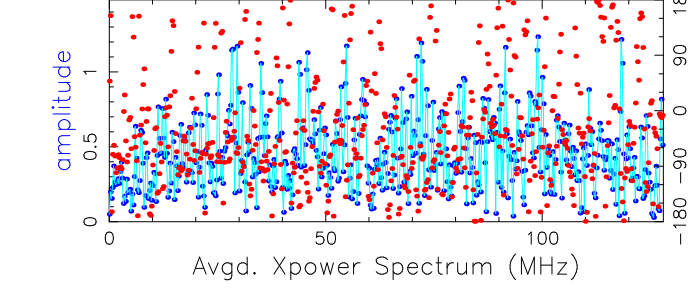
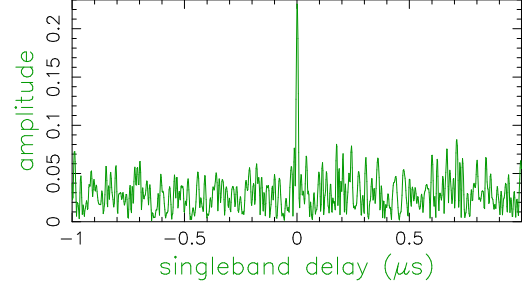
VLBA_BR - VLBA_MK, fgroup Q, pol RL



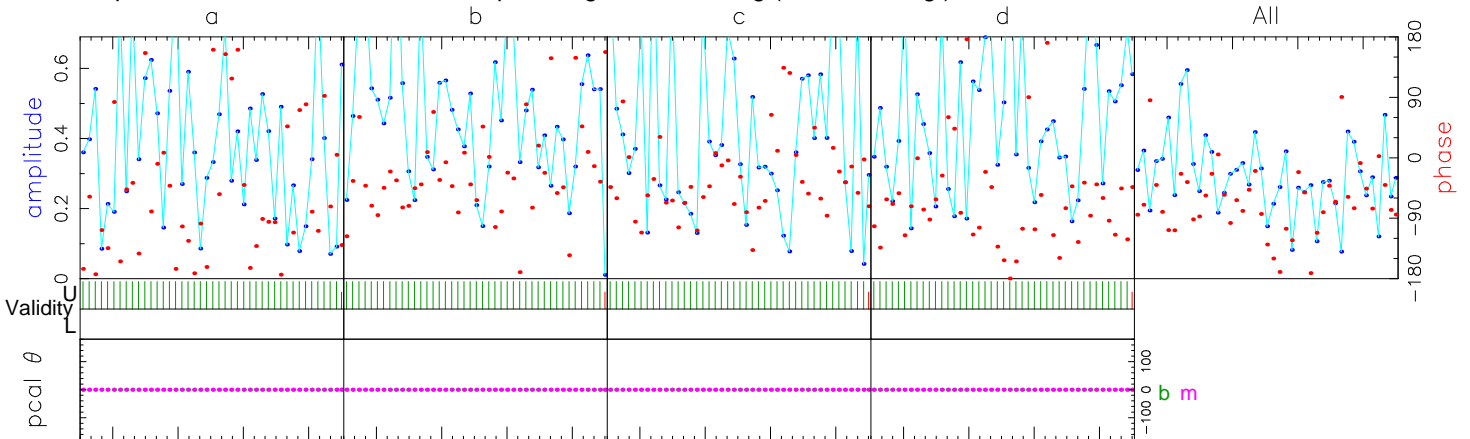
Fringe quality 9

SNR 9.7
 Int time 239.981
 Amp 0.230
 Phase -64.8
 PFD 4.0e-14
 Delays (us)
 SBD 0.000942
 MBD 0.000840
 Fringe rate (Hz) 0.002335
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133527
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-129.1	-33.0	-41.9	-88.6	Phase	-64.8
	0.2	0.3	0.3	0.3	Ampl.	0.3
	590.8	513.7	513.5	512.3	Sbd box	513.5
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-3.46569619237E+03	Apriori delay (usec)	-3.46569703199E+03	Resid mbdelay (usec)	8.39619E-04	+/-	1.1E-04
Sband delay (usec)	-3.46569609011E+03	Apriori clock (usec)	-1.8615528E+01	Resid sbdelay (usec)	9.41875E-04	+/-	4.4E-04
Phase delay (usec)	-3.46569703617E+03	Apriori clockrate (us/s)	-4.1800000E-07	Resid phdelay (usec)	-4.17978E-06	+/-	7.6E-07
Delay rate (us/s)	-8.33533319006E-01	Apriori rate (us/s)	-8.33533373260E-01	Resid rate (us/s)	5.42538E-08	+/-	5.5E-09
Total phase (deg)	-157.2	Apriori accel (us/s/s)	1.72950765980E-05	Resid phase (deg)	-64.8	+/-	11.8

ph/seg (deg)	52.9	Theor.	38.6	Amplitude	0.230 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	55.8	Search (1024X16)	0.220	Search	0.220	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	55.9	Inc. seg. avg.	0.240	Inc. seg. avg.	0.240	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	30.4	Inc. frq. avg.	0.270	Inc. frq. avg.	0.270	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
						nlags: 512	t_cohere infinite

b: az 187.1 el 40.3 pa 4.7 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2389.817 1784.056 simultaneous interpolator

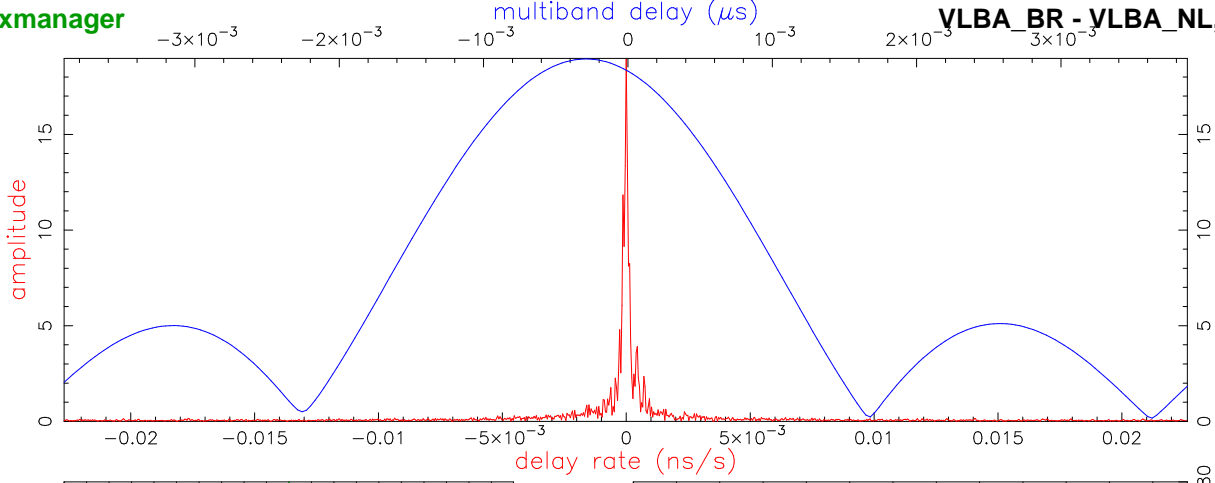
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bm.Q.67.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

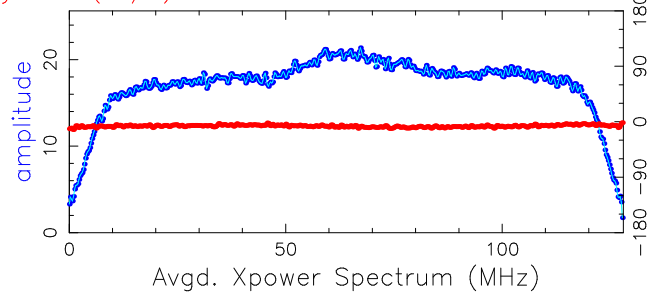
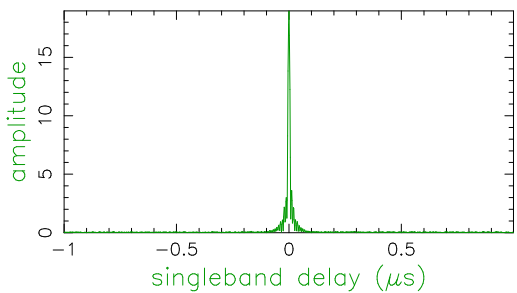
0420-014.1V2A0K, No0121, bn

VLBA_BR - VLBA_NL, fgroup Q, pol RR



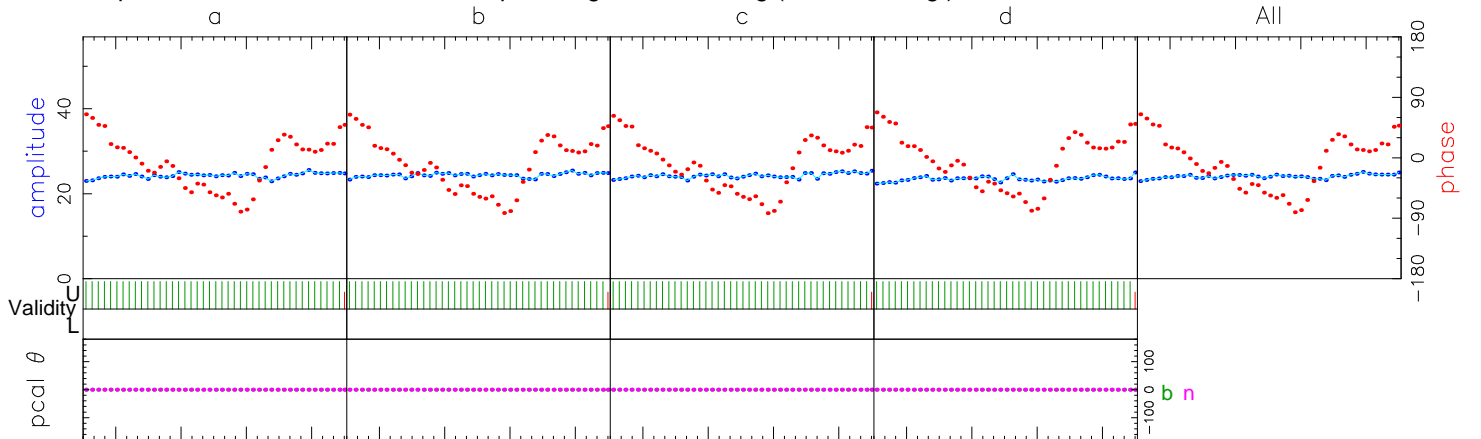
Fringe quality 6

SNR 803.7
 Int time 239.986
 Amp 18.972
 Phase -6.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.000281
 MBD -0.000306
 Fringe rate (Hz)
 -0.000122
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133522
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-6.2	-8.0	-7.9	-3.7	Phase	-6.5
	19.2	19.1	19.1	18.4	Ampl.	18.9
	512.9	512.8	512.7	513.0	Sbd box	512.9
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	PC phase	
b:n	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	9.51229715995E+02	Apriori delay (usec)	9.51230022245E+02	Resid mbdelay (usec)	-3.06250E-04	+/- 1.4E-06
Sband delay (usec)	9.51229740995E+02	Apriori clock (usec)	-8.3726425E+00	Resid sbdelay (usec)	-2.81250E-04	+/- 5.4E-06
Phase delay (usec)	9.51230021828E+02	Apriori clockrate (us/s)	-3.9999999E-07	Resid phdelay (usec)	-4.17269E-07	+/- 9.2E-09
Delay rate (us/s)	5.41190086690E-01	Apriori rate (us/s)	5.41190089526E-01	Resid rate (us/s)	-2.83621E-09	+/- 6.6E-11
Total phase (deg)		50.2	Apriori accel (us/s/s)	-5.30307043498E-06	Resid phase (deg)	-6.5 +/- 0.1

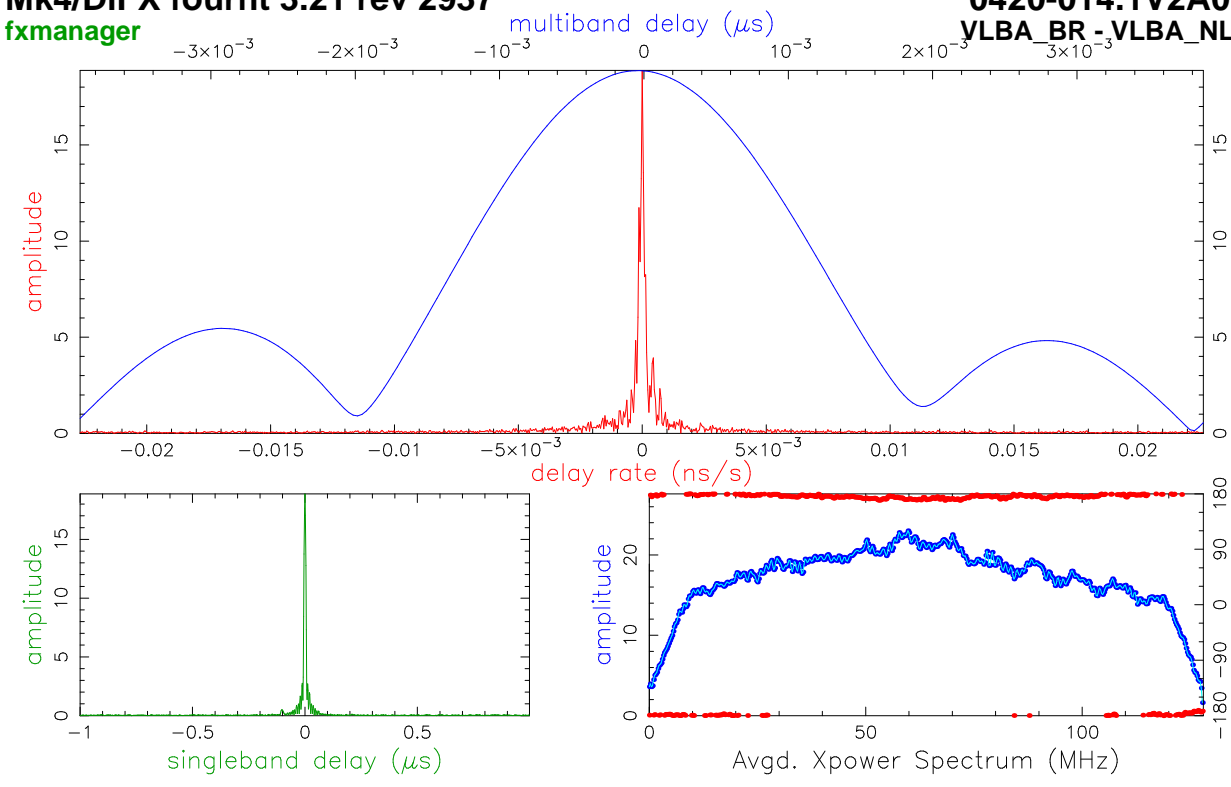
ph/seg (deg) 39.1 0.5 Amplitude 18.972 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 27.1 0.8 Search (1024X16) 18.617 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 2.5 0.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 1.6 0.2 Inc. seg. avg. 24.091 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
 b: az 187.1 el 40.3 pa 4.7 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -1551.909 349.347 ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn.Q.19.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bn

VLBA_BR - VLBA_NL, fgroup Q, pol LL

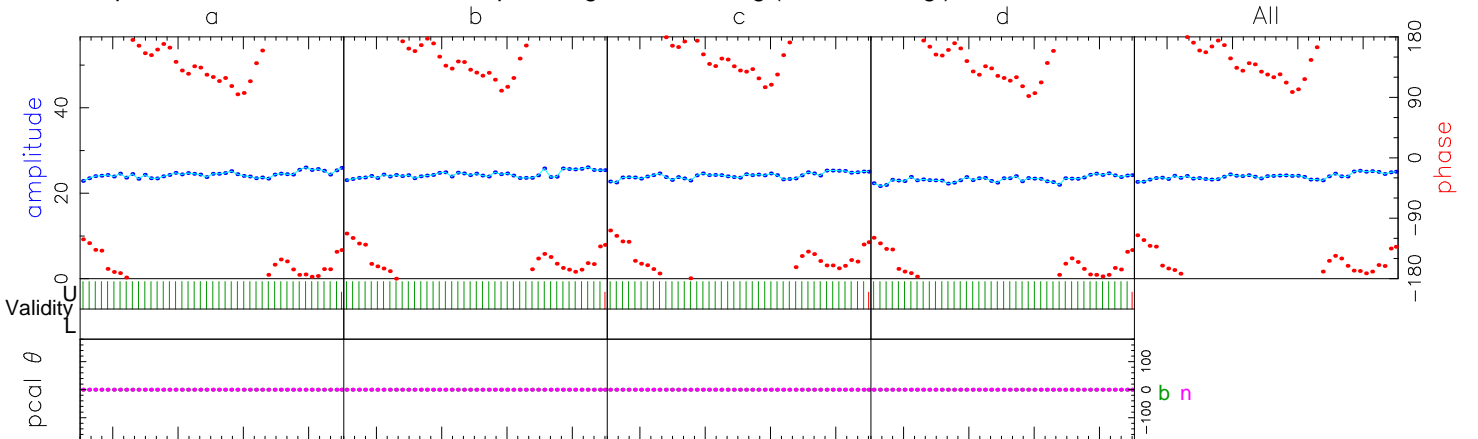


Fringe quality 6

SNR 799.6
 Int time 239.986
 Amp 18.874
 Phase 173.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.000190
 MBD -0.000054
 Fringe rate (Hz)
 -0.000105
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
n	1000	1000	1000	1000		
b:n	0:0	0:0	0:0	0:0		
b:n	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
n	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	9.51229968589E+02	Apriori delay (usec)	9.51230022245E+02	Resid mbdelay (usec)	-5.36563E-05	+/-	1.4E-06
Sband delay (usec)	9.51229832495E+02	Apriori clock (usec)	-8.3726425E+00	Resid sbdelay (usec)	-1.89750E-04	+/-	5.4E-06
Phase delay (usec)	9.51230033431E+02	Apriori clockrate (us/s)	-3.9999999E-07	Resid phdelay (usec)	1.11857E-05	+/-	9.2E-09
Delay rate (us/s)	5.41190087081E-01	Apriori rate (us/s)	5.41190089526E-01	Resid rate (us/s)	-2.44481E-09	+/-	6.7E-11
Total phase (deg)	230.0	Apriori accel (us/s/s)	-5.30307043498E-06	Resid phase (deg)	173.3	+/-	0.1

ph/seg (deg)	38.9	RMS	18.874 +/- 0.024	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	27.1	Theor.	18.827	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	7.3	Search (1024X16)	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	2.2	Inc. seg. avg.	23.951	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023 0.023	
		Inc. frq. avg.	18.937	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

b: az 187.1 el 40.3 pa 4.7 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -1551.909 349.347 simultaneous interpolator

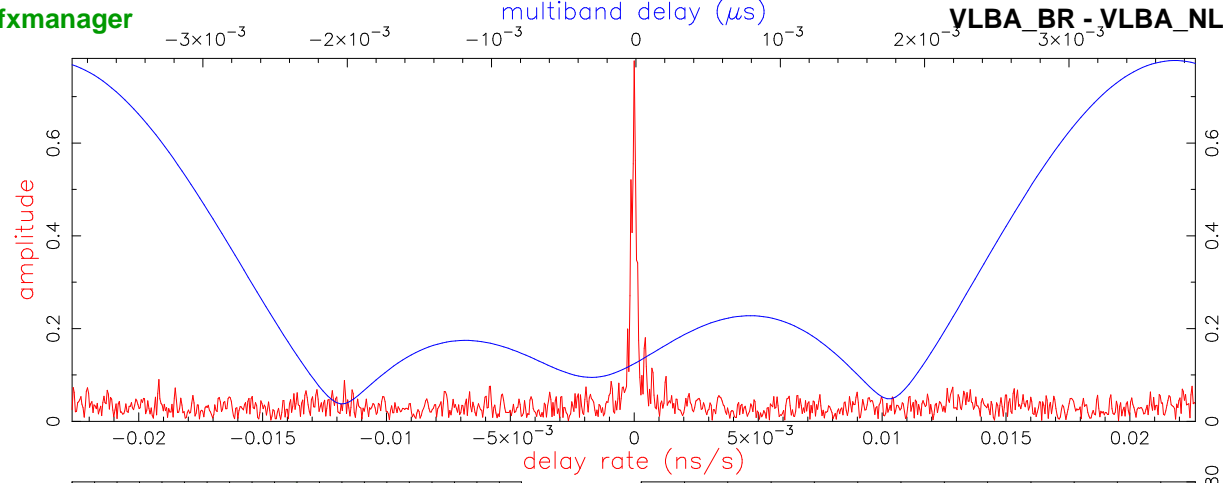
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn.Q.4.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

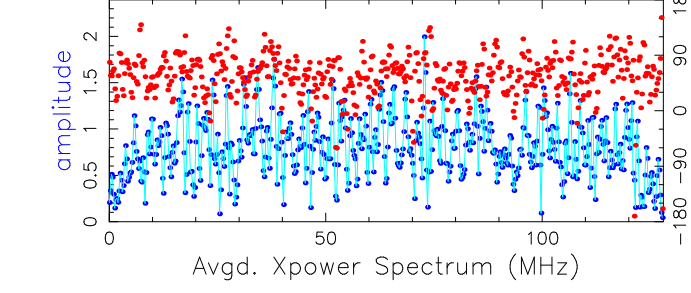
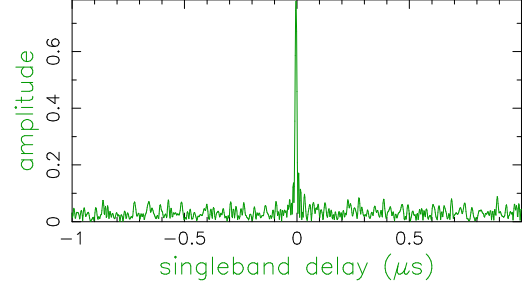
0420-014.1V2A0K, No0121, bn

VLBA_BR - VLBA_NL, fgroup Q, pol LR



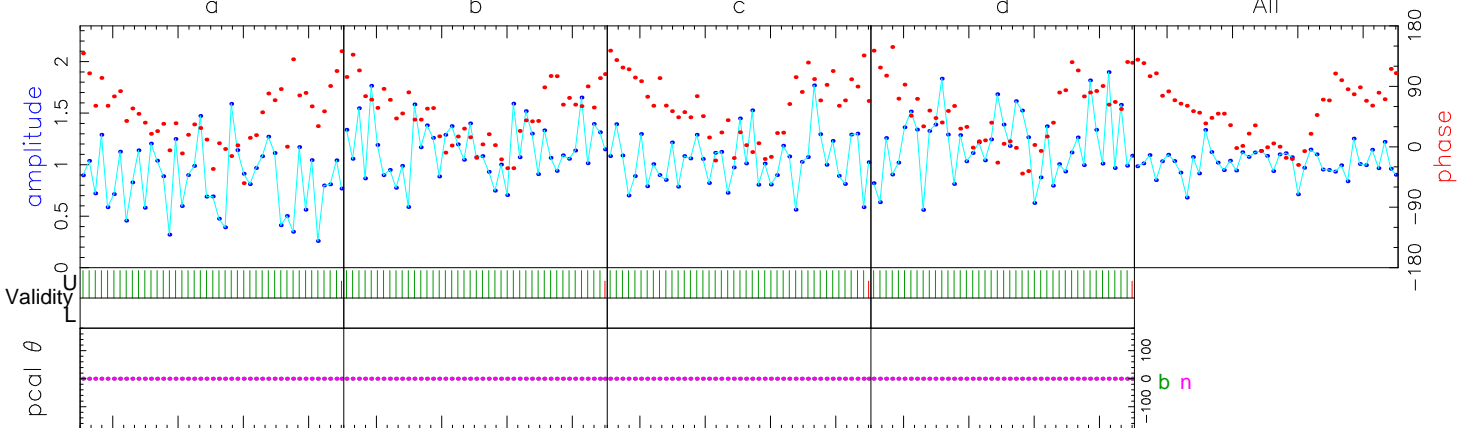
Fringe quality 8

SNR 33.2
 Int time 239.986
 Amp 0.783
 Phase 52.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.004434
 MBD -0.004125
 Fringe rate (Hz)
 -0.000041
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133527
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
46.2	50.0	63.3	49.8	Phase	52.3
0.6	0.9	0.7	0.8	Ampl.	0.8
511.0	511.1	510.5	510.1	Sbd box	510.7
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
b:n 0:0	0:0	0:0	0:0	PC phase	
b:n 0:0	0:0	0:0	0:0	ManI PC	
b 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	9.51225897714E+02	Apriori delay (usec)	9.51230022245E+02	Resid mbdelay (usec)	-4.12453E-03	+/- 3.4E-05
Sband delay (usec)	9.51225588620E+02	Apriori clock (usec)	-8.3726425E+00	Resid sbdelay (usec)	-4.43362E-03	+/- 1.3E-04
Phase delay (usec)	9.51230025622E+02	Apriori clockrate (us/s)	-3.9999999E-07	Resid phdelay (usec)	3.37658E-06	+/- 2.2E-07
Delay rate (us/s)	5.41190088564E-01	Apriori rate (us/s)	5.41190089526E-01	Resid rate (us/s)	-9.61474E-10	+/- 1.6E-09
Total phase (deg)	109.0	Apriori accel (us/s/s)	-5.30307043498E-06	Resid phase (deg)	52.3	+/- 3.5

ph/seg (deg)	RMS 42.0	Theor. 11.3	Amplitude 0.783 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	34.5	19.8	Search (1024X16) 0.769	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	9.2	3.5	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	12.2	6.0	Inc. seg. avg. 1.003	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg. 0.781	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -1551.909 349.347 simultaneous interpolator

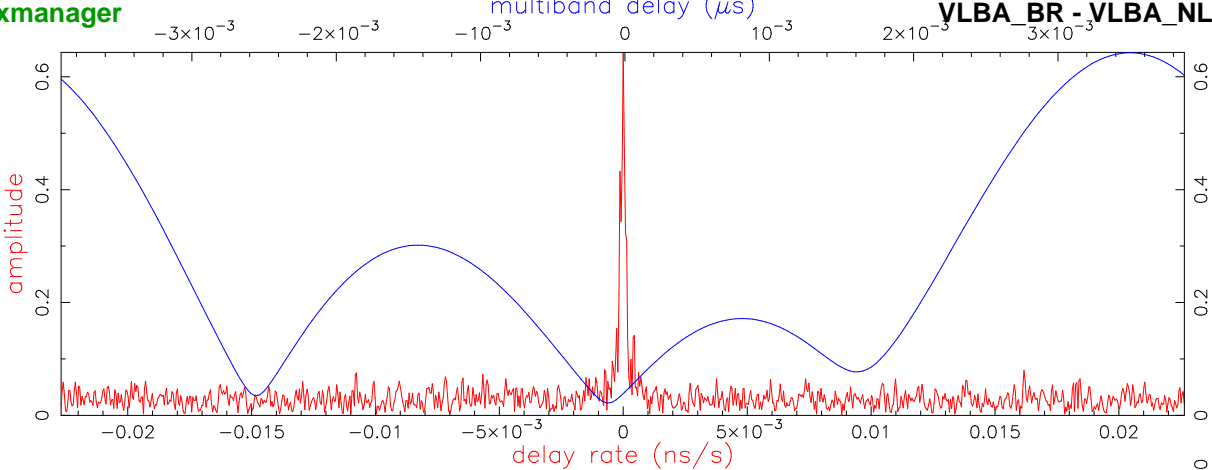
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn.Q.65.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

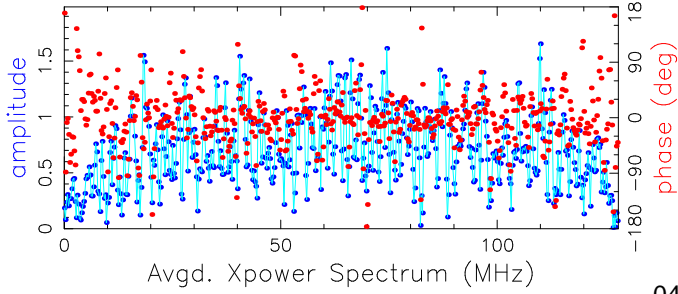
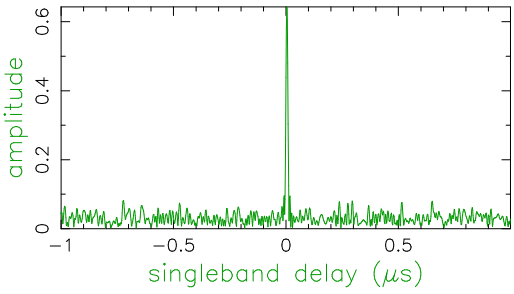
fxmanager

0420-014.1V2A0K, No0121, bn

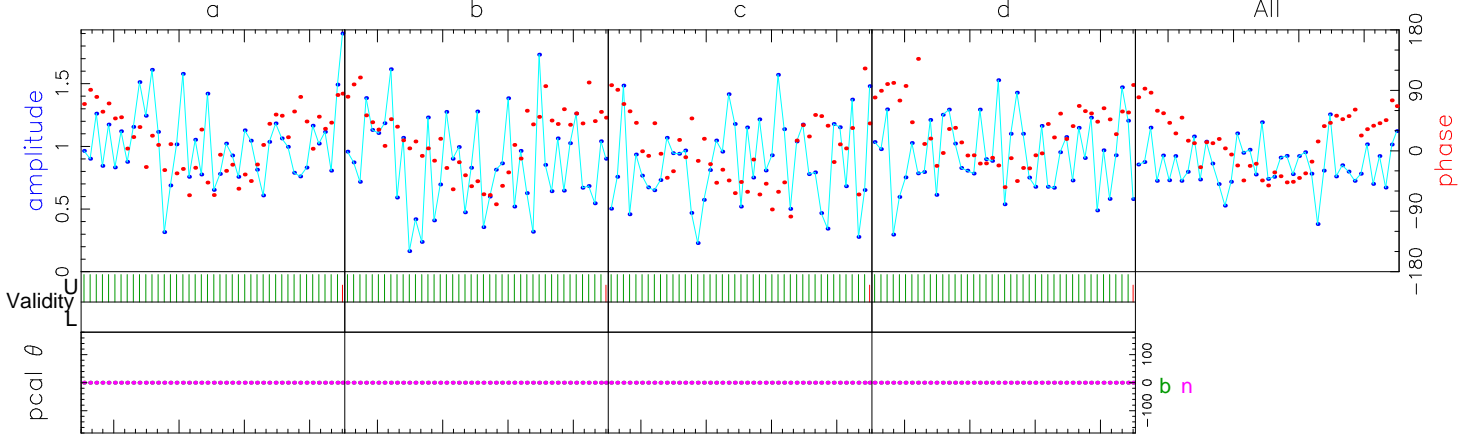
VLBA_BR - VLBA_NL, fgroup Q, pol RL



Fringe quality 8
 SNR 27.3
 Int time 239.986
 Amp 0.643
 Phase 16.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.004147
 MBD 0.003509
 Fringe rate (Hz)
 -0.000041
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133529
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
19.5	22.1	-7.0	26.2	Phase	16.1
0.7	0.6	0.6	0.7	Ampl.	0.7
515.4	514.6	515.3	515.3	Sbd box	515.1
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
b:n 0:0	0:0	0:0	0:0	PC phase	
b:n 0:0	0:0	0:0	0:0	ManI PC	
b 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
b Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	9.51233531620E+02	Apriori delay (usec)	9.51230022245E+02	Resid mbdelay (usec)	3.50938E-03	+/-	4.1E-05
Sband delay (usec)	9.51234169370E+02	Apriori clock (usec)	-8.3726425E+00	Resid sbdelay (usec)	4.14712E-03	+/-	1.6E-04
Phase delay (usec)	9.51230023282E+02	Apriori clockrate (us/s)	-3.9999999E-07	Resid phdelay (usec)	1.03723E-06	+/-	2.7E-07
Delay rate (us/s)	5.41190088567E-01	Apriori rate (us/s)	5.41190089526E-01	Resid rate (us/s)	-9.58638E-10	+/-	2.0E-09
Total phase (deg)	72.7	Apriori accel (us/s/s)	-5.30307043498E-06	Resid phase (deg)	16.1	+/-	4.2

ph/seg (deg)	41.1	Theor.	13.8	Amplitude	0.643 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	42.4	Search (1024X16)	0.641	Search	0.641	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	18.5	Inc. seg. avg.	0.832	Inc. seg. avg.	0.832	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	10.4	Inc. frq. avg.	0.656	Inc. frq. avg.	0.656	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
						nlags: 512	t_cohere infinite

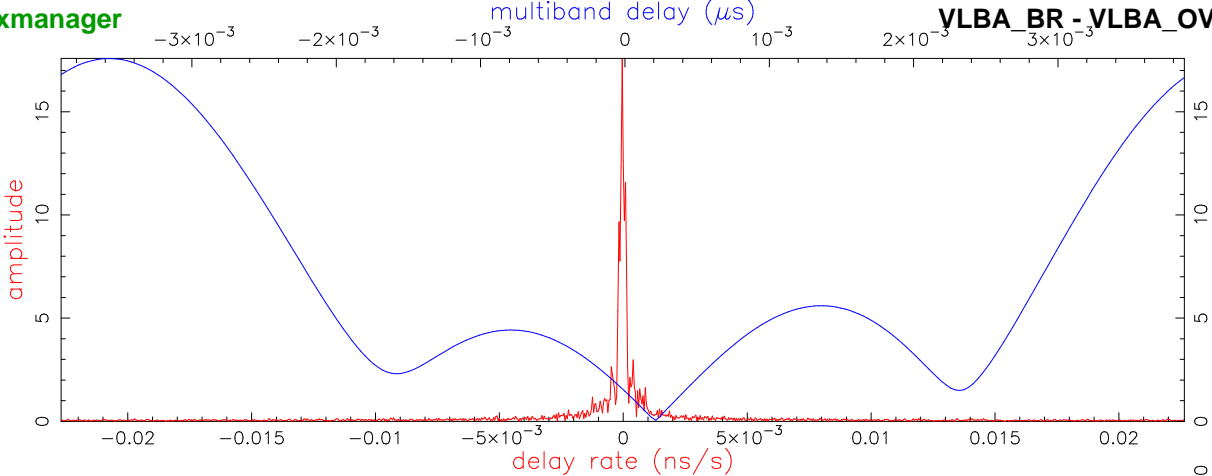
b: az 187.1 el 40.3 pa 4.7 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -1551.909 349.347 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bn.Q.79.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

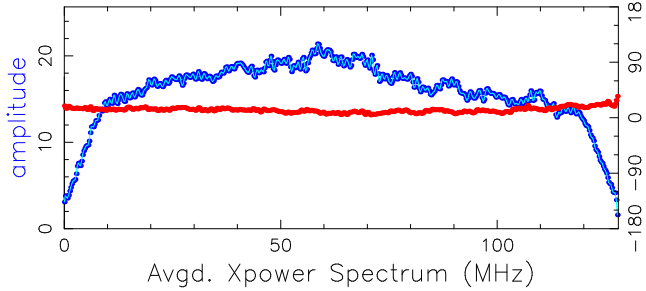
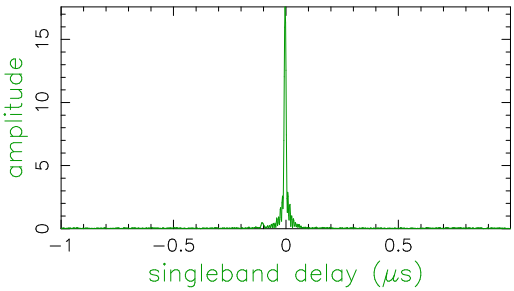
0420-014.1V2A0K, No0121, bo

VLBA_BR - VLBA_OV, fgroup Q, pol LL



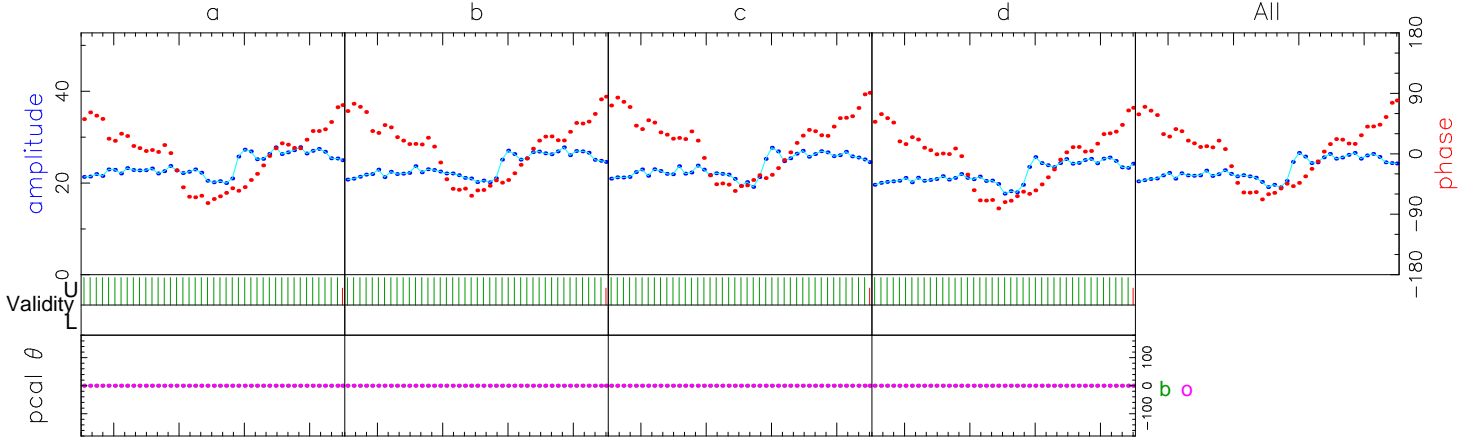
Fringe quality 5

SNR 744.8
 Int time 239.882
 Amp 17.585
 Phase 7.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.003782
 MBD -0.003565
 Fringe rate (Hz)
 -0.002562
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133522
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



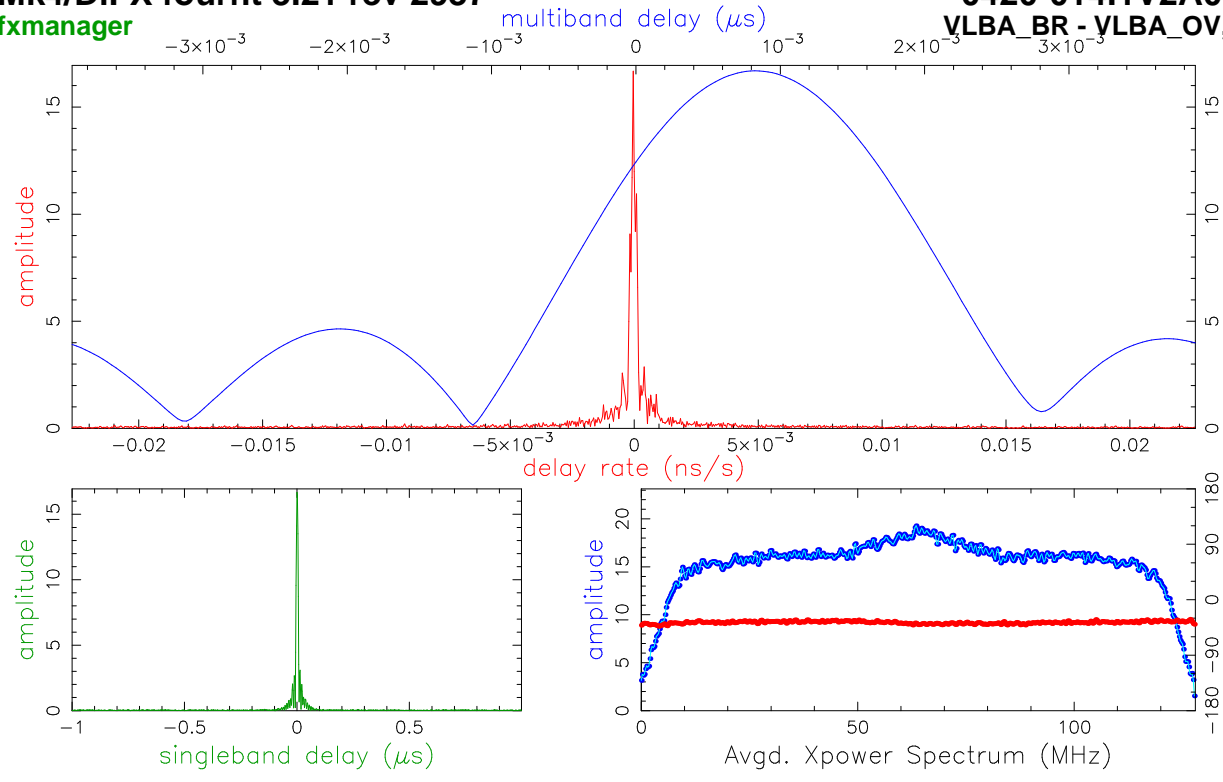
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	PC freqs	
b:o	0:0	0:0	0:0	0:0	PC phase	
b:o	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-2.74531934740E+03	Apriori delay (usec)	-2.74531578272E+03	Resid mbdelay (usec)	-3.56468E-03	+/- 1.5E-06
Sband delay (usec)	-2.74531956422E+03	Apriori clock (usec)	-6.6115894E+00	Resid sbdelay (usec)	-3.78150E-03	+/- 5.8E-06
Phase delay (usec)	-2.74531578226E+03	Apriori clockrate (us/s)	-4.5999999E-07	Resid phdelay (usec)	4.59291E-07	+/- 9.9E-09
Delay rate (us/s)	5.11672752007E-02	Apriori rate (us/s)	5.11673347157E-02	Resid rate (us/s)	-5.95149E-08	+/- 7.2E-11
Total phase (deg)	-96.6	Apriori accel (us/s/s)	1.42066687430E-05	Resid phase (deg)	7.1	+/- 0.2

ph/seg (deg)	41.9	0.5	Amplitude	17.585 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	33.2	0.9	Search (1024X16)	16.704	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	13.2	0.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	3.6	0.3	Inc. seg. avg.	22.962	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	17.809	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) -141.504 605.197 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo.Q.13.1V2A0K

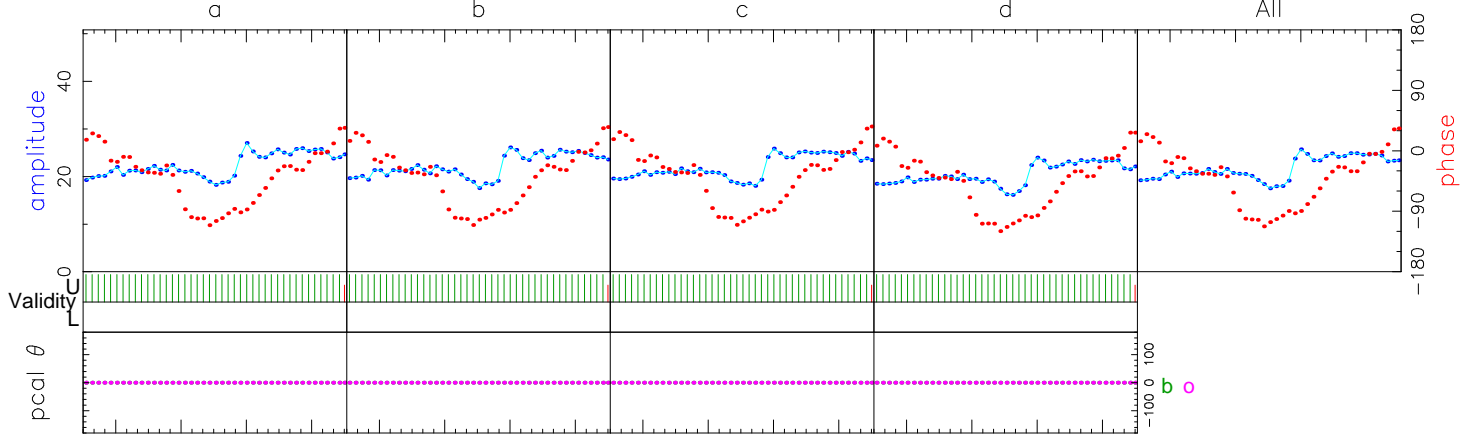


Fringe quality 6

SNR 717.7
Int time 239.882
Amp 16.946
Phase -37.8
PFD 0.0e+00
Delays (us)
SBD 0.000834
MBD 0.000877
Fringe rate (Hz)
-0.002553
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133524
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-36.3	-36.1	-35.3	-44.2	Phase	-37.8
	17.3	17.0	16.9	15.7	Ampl.	16.7
	513.4	513.5	513.3	513.5	Sbd box	513.4
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
b:o	0:0	0:0	0:0	0:0	PC phase	
b:o	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-2.74531490612E+03	Apriori delay (usec)	-2.74531578272E+03	Resid mbdelay (usec)	8.76600E-04	+/- 1.5E-06
Sband delay (usec)	-2.74531494859E+03	Apriori clock (usec)	-6.6115894E+00	Resid sbdelay (usec)	8.34125E-04	+/- 6.0E-06
Phase delay (usec)	-2.74531578516E+03	Apriori clockrate (us/s)	-4.5999999E-07	Resid phdelay (usec)	-2.44177E-06	+/- 1.0E-08
Delay rate (us/s)	5.11672753936E-02	Apriori rate (us/s)	5.11673347157E-02	Resid rate (us/s)	-5.93221E-08	+/- 7.4E-11
Total phase (deg)	-141.6	Apriori accel (us/s/s)	1.42066687430E-05	Resid phase (deg)	-37.8	+/- 0.2

ph/seg (deg)	RMS 41.9	Theor. 0.5	Amplitude Search (1024X16)	16.946 +/- 0.024	15.894	15.894	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	31.5	0.9	Interp.	0.000	21.744	16.709	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	5.1	0.2	Inc. seg. avg.	21.744	16.709	16.709	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	3.9	0.3	Inc. frq. avg.	16.709	16.709	16.709	Data rate(Mb/s): 2048	nlags: 512	t_coherence infinite	ion window (TEC)	0.00	0.00

b: az 187.1 el 40.3 pa 4.7 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) -141.504 605.197 simultaneous interpolator

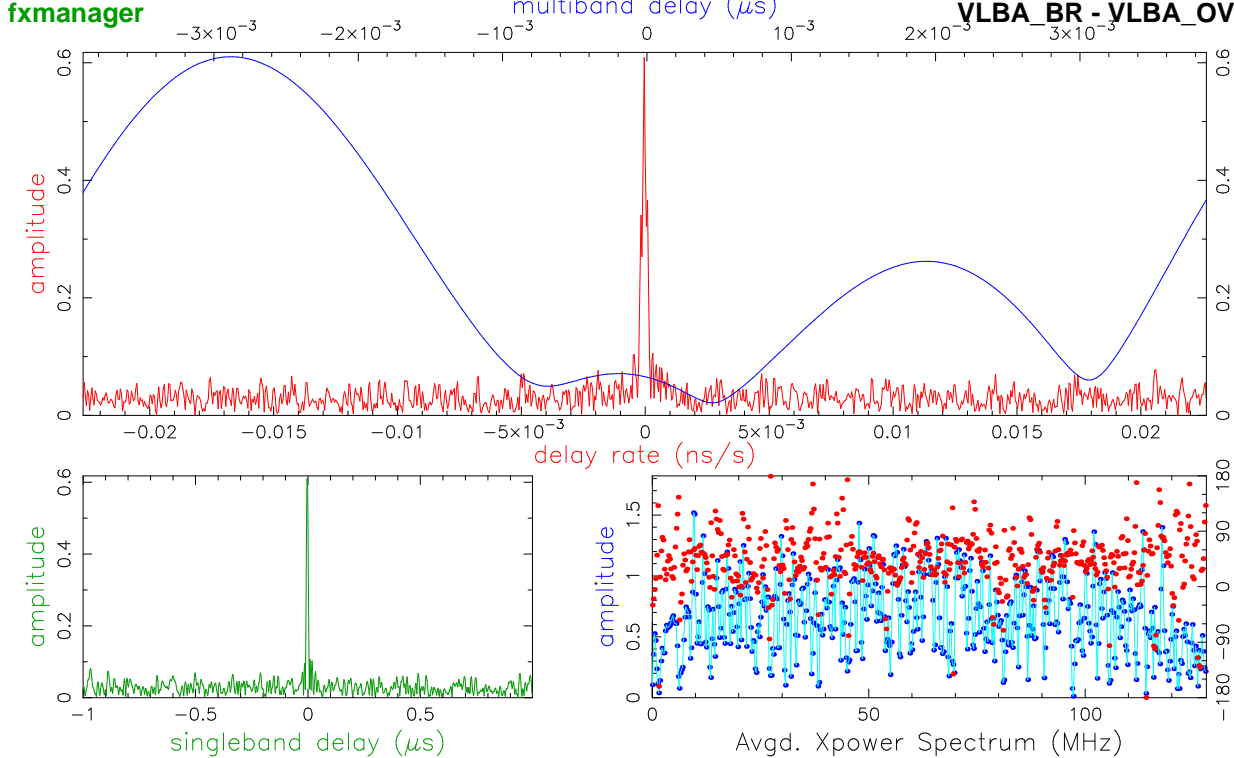
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo.Q.32.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, bo

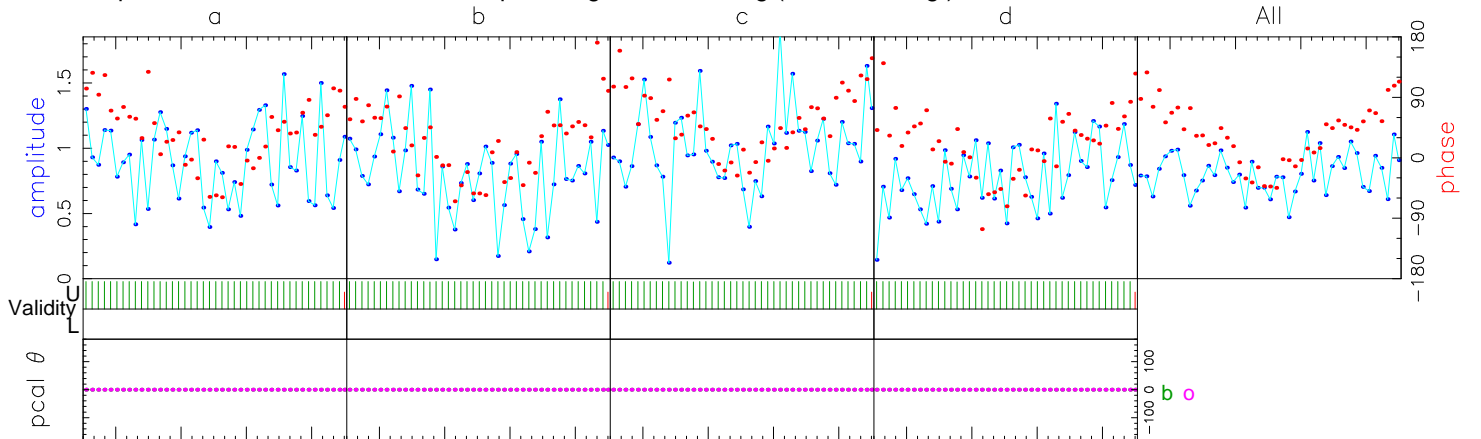
VLBA_BR - VLBA_OV, fgroup Q, pol LR



Fringe quality 8

SNR 26.2
 Int time 239.882
 Amp 0.618
 Phase 37.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.003125
 MBD -0.002821
 Fringe rate (Hz)
 -0.002425
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133525
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
o	1000	1000	1000	1000		
b:o	0:0	0:0	0:0	0:0		
b:o	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
o	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-2.74531860381E+03	Apriori delay (usec)	-2.74531578272E+03	Resid mbdelay (usec)	-2.82109E-03	+/-	4.3E-05
Sband delay (usec)	-2.74531890809E+03	Apriori clock (usec)	-6.6115894E+00	Resid sbdelay (usec)	-3.12537E-03	+/-	1.6E-04
Phase delay (usec)	-2.74531578028E+03	Apriori clockrate (us/s)	-4.5999999E-07	Resid phdelay (usec)	2.43413E-06	+/-	2.8E-07
Delay rate (us/s)	5.11672783716E-02	Apriori rate (us/s)	5.11673347157E-02	Resid rate (us/s)	-5.63441E-08	+/-	2.0E-09
Total phase (deg)	-66.0	Apriori accel (us/s/s)	1.42066687430E-05	Resid phase (deg)	37.7	+/-	4.4

ph/seg (deg)	43.5	Theor.	14.4	Amplitude	0.618 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	39.2	Search (1024X16)	0.594	Search	0.594	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	19.7	Interp.	0.000	Inc. seg. avg.	0.782	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	12.5	Inc. frq. avg.	0.626	Inc. frq. avg.	0.626	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
						Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 187.1 el 40.3 pa 4.7 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) -141.504 605.197 simultaneous interpolator

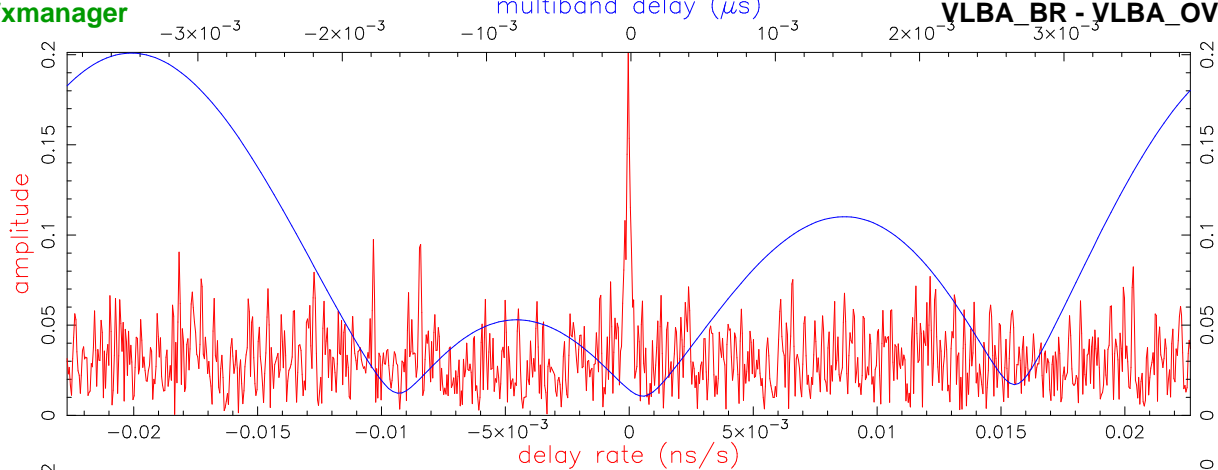
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo.Q.48.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

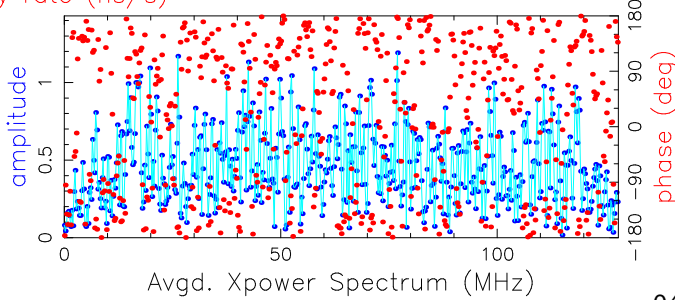
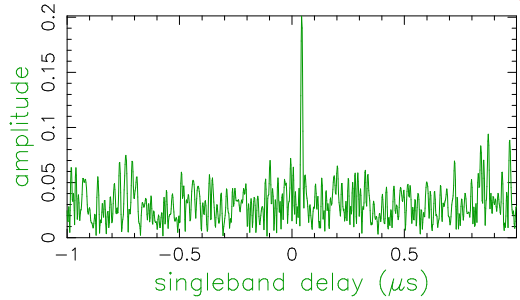
0420-014.1V2A0K, No0121, bo

VLBA_BR - VLBA_OV, fgroup Q, pol RL



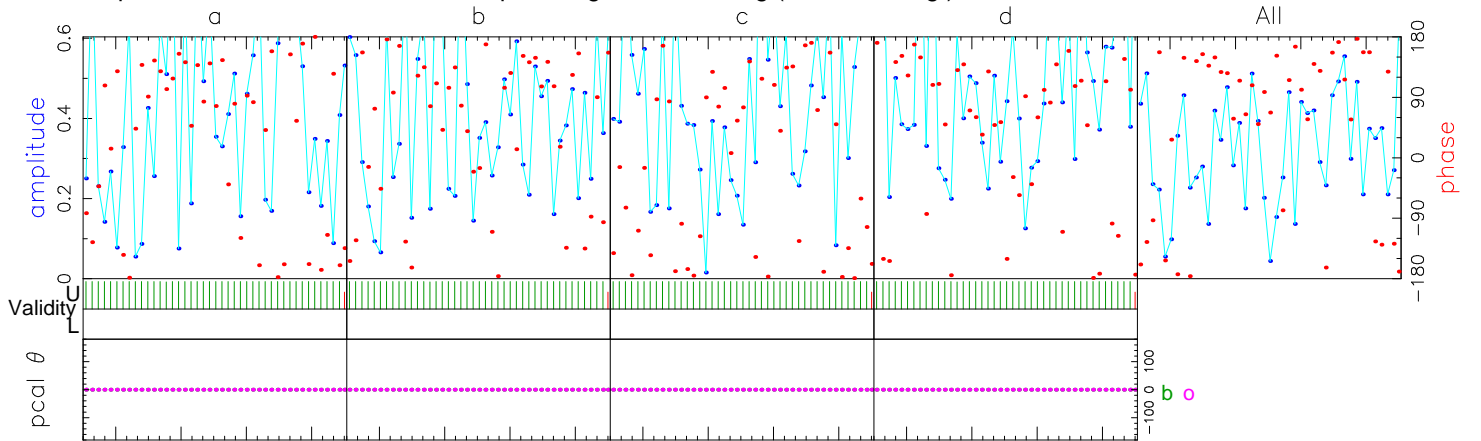
Fringe quality 9

SNR 8.5
 Int time 239.882
 Amp 0.201
 Phase 148.0
 PFD 2.8e-09
 Delays (us)
 SBD 0.043310
 MBD -0.003439
 Fringe rate (Hz)
 -0.002369
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133527
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
149.1	135.4	174.3	136.5	Phase	148.0
0.2	0.2	0.2	0.2	Ampl.	0.2
535.3	511.2	512.0	534.9	Sbd box	535.2
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
b:o 0:0	0:0	0:0	0:0	PC phase	
b:o 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
b Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-2.74527234649E+03	Apriori delay (usec)	-2.74531578272E+03	Resid mbdelay (usec)	-3.43878E-03	+/-	1.3E-04
Sband delay (usec)	-2.74527247272E+03	Apriori clock (usec)	-6.6115894E+00	Resid sbdelay (usec)	4.33100E-02	+/-	5.1E-04
Phase delay (usec)	-2.74531577317E+03	Apriori clockrate (us/s)	-4.5999999E-07	Resid phdelay (usec)	9.54887E-06	+/-	8.7E-07
Delay rate (us/s)	5.11672796677E-02	Apriori rate (us/s)	5.11673347157E-02	Resid rate (us/s)	-5.50479E-08	+/-	6.3E-09
Total phase (deg)	44.2	Apriori accel (us/s/s)	1.42066687430E-05	Resid phase (deg)	148.0	+/-	13.4

ph/seg (deg)	RMS 59.2	Theor. 44.1	Amplitude Search (1024X16)	0.201 +/- 0.024	0.197	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	91.4	76.9	Interp.	0.000	0.250	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	22.2	13.4	Inc. seg. avg.	0.250	0.202	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	15.6	23.5	Inc. frq. avg.	0.202		Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 187.1 el 40.3 pa 4.7 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) -141.504 605.197 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bo.Q.66.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

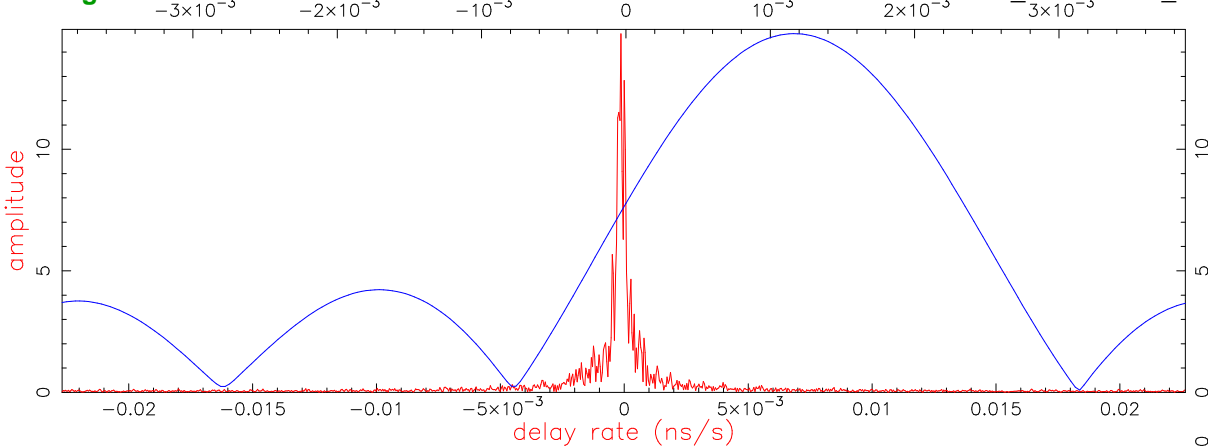
fxmanager

0420-014.1V2A0K, No0121, bp

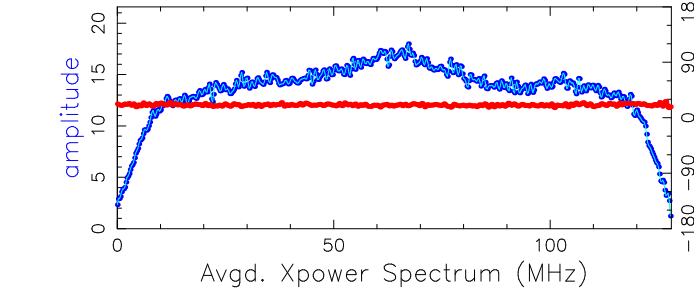
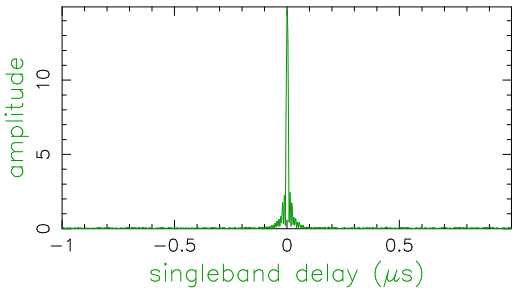
VLBA_BR - VLBA_PT, fgroup Q, pol RR

multiband delay (μ s)

Fringe quality 5

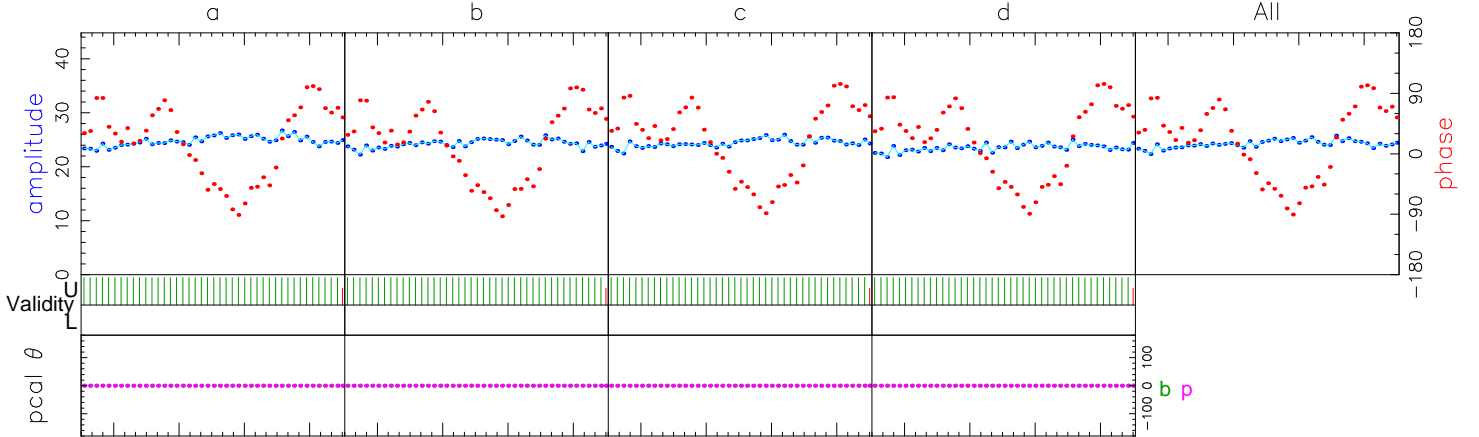


SNR 632.6
 Int time 239.983
 Amp 14.934
 Phase 22.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.001209
 MBD 0.001130
 Fringe rate (Hz)
 -0.005399
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133522
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	PC freqs	
b:p	0:0	0:0	0:0	0:0	PC freqs	
b:p	0:0	0:0	0:0	0:0	PC phase	
b	1000	1000	1000	1000	Manl PC	
p	1000	1000	1000	1000	PC amp	
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	-2.72256527951E+03	Apriori delay (usec)	-2.72256640978E+03	Resid mbdelay (usec)	1.13027E-03	+/-	1.8E-06
Sband delay (usec)	-2.72256520128E+03	Apriori clock (usec)	-8.5110168E+00	Resid sbdelay (usec)	1.20850E-03	+/-	6.8E-06
Phase delay (usec)	-2.72256640833E+03	Apriori clockrate (us/s)	2.0000000E-08	Resid phdelay (usec)	1.45110E-06	+/-	1.2E-08
Delay rate (us/s)	2.78964043734E-01	Apriori rate (us/s)	2.78964169177E-01	Resid rate (us/s)	-1.25443E-07	+/-	8.4E-11
Total phase (deg)	-77.2	Apriori accel (us/s/s)	1.39700594238E-05	Resid phase (deg)	22.5	+/-	0.2

ph/seg (deg)	RMS 54.4	Theor. 0.6	Amplitude Search (1024X16)	14.934 +/- 0.024	14.329	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	62.4	1.0	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	sb window (us) -1.000 1.000
ph/frq (deg)	3.3	0.2	Inc. seg. avg.	24.228	Bits/sample: 2x2	Sample rate(MISamp/s): 256	mb window (us) -0.004 0.004
amp/frq (%)	2.3	0.3	Inc. frq. avg.	14.763	Data rate(Mb/s): 2048	nlags: 512	dr window (ns/s) -0.023 0.023

b: az 187.1 el 40.3 pa 4.7 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -793.942 787.193 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp.Q.21.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

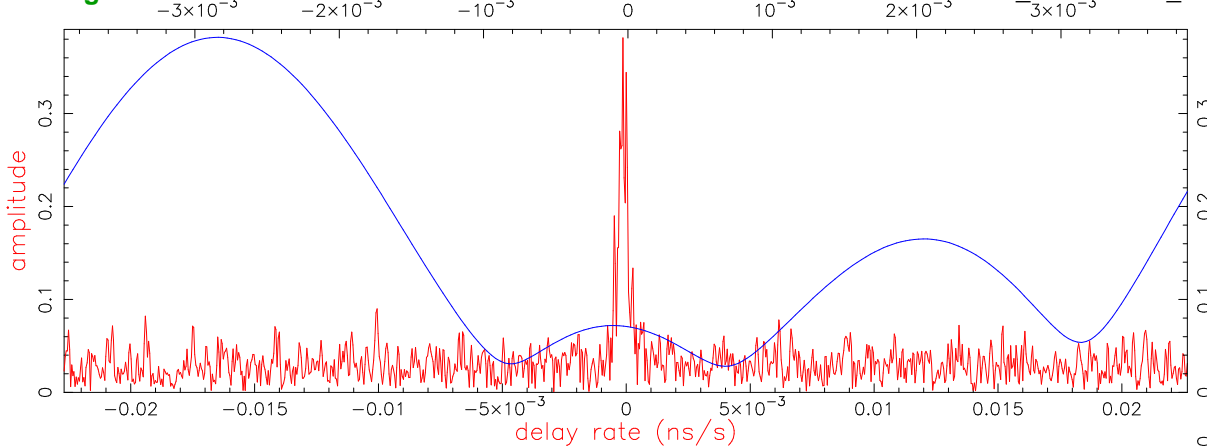
fxmanager

0420-014.1V2A0K, No0121, bp

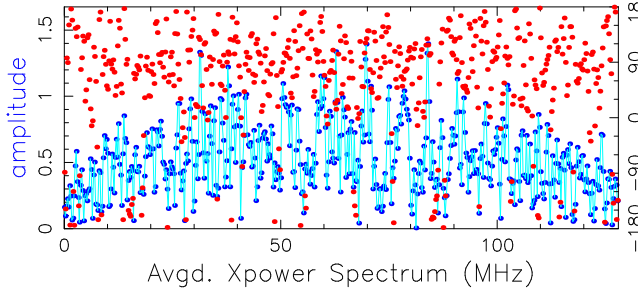
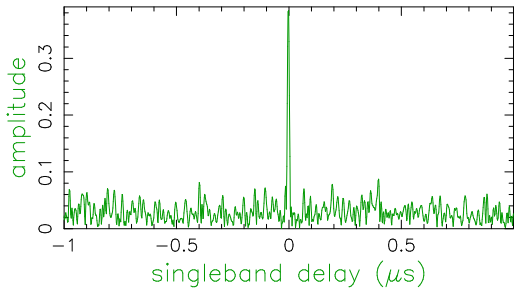
VLBA_BR - VLBA_PT, fgroup Q, pol LR

multiband delay (μ s)

Fringe quality 9

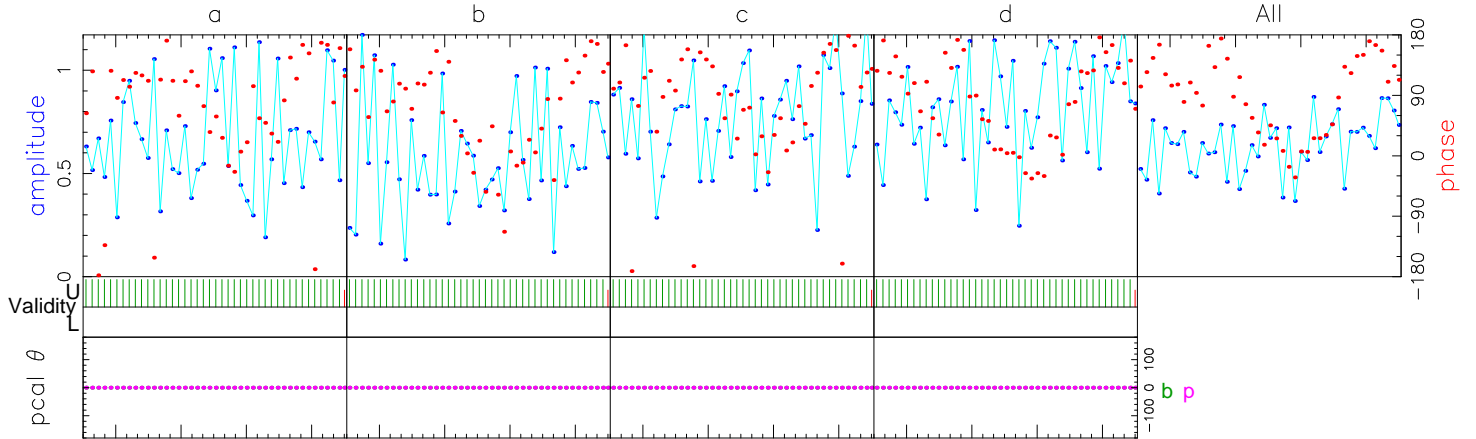


SNR 16.5
 Int time 239.983
 Amp 0.391
 Phase 94.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.002849
 MBD -0.002791
 Fringe rate (Hz)
 -0.005050
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133525
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	PC freqs	
b:p	0:0	0:0	0:0	0:0	PC phase	
b:p	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	-2.72256920039E+03	Apriori delay (usec)	-2.72256640978E+03	Resid mbdelay (usec)	-2.79061E-03	+/- 6.7E-05
Sband delay (usec)	-2.72256925928E+03	Apriori clock (usec)	-8.5110168E+00	Resid sbdelay (usec)	-2.84950E-03	+/- 2.6E-04
Phase delay (usec)	-2.72256640366E+03	Apriori clockrate (us/s)	2.0000000E-08	Resid phdelay (usec)	6.12203E-06	+/- 4.5E-07
Delay rate (us/s)	2.78964051846E-01	Apriori rate (us/s)	2.78964169177E-01	Resid rate (us/s)	-1.17331E-07	+/- 3.2E-09
Total phase (deg)	-4.8	Apriori accel (us/s/s)	1.39700594238E-05	Resid phase (deg)	94.9	+/- 6.9

	RMS	Theor.	Amplitude	0.391 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	56.6	22.7	Search (1024X16)	0.361	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	72.2	39.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	15.1	6.9	Inc. seg. avg.	0.592	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	17.9	12.1	Inc. frq. avg.	0.385	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -793.942 787.193 simultaneous interpolator

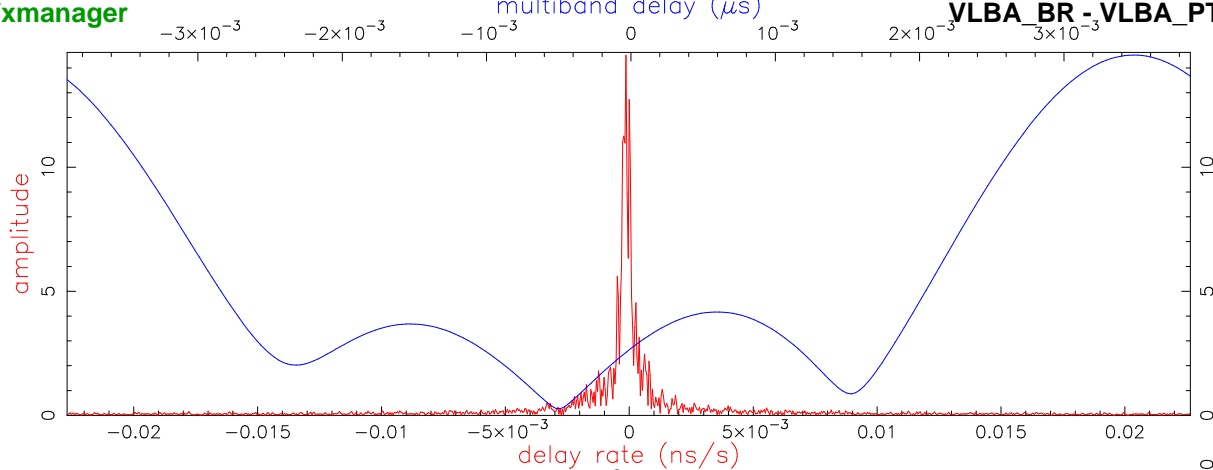
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp.Q.40.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

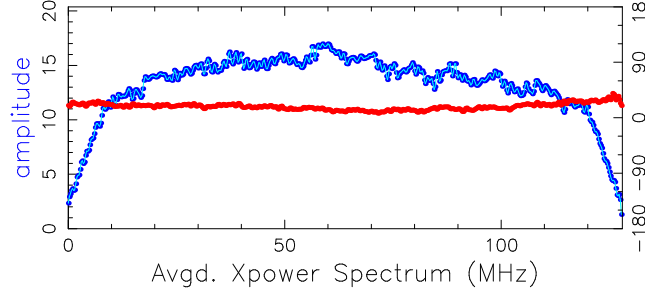
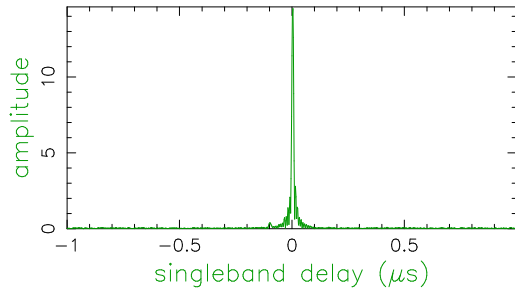
0420-014.1V2A0K, No0121, bp

VLBA_BR - VLBA_PT, fgroup Q, pol LL



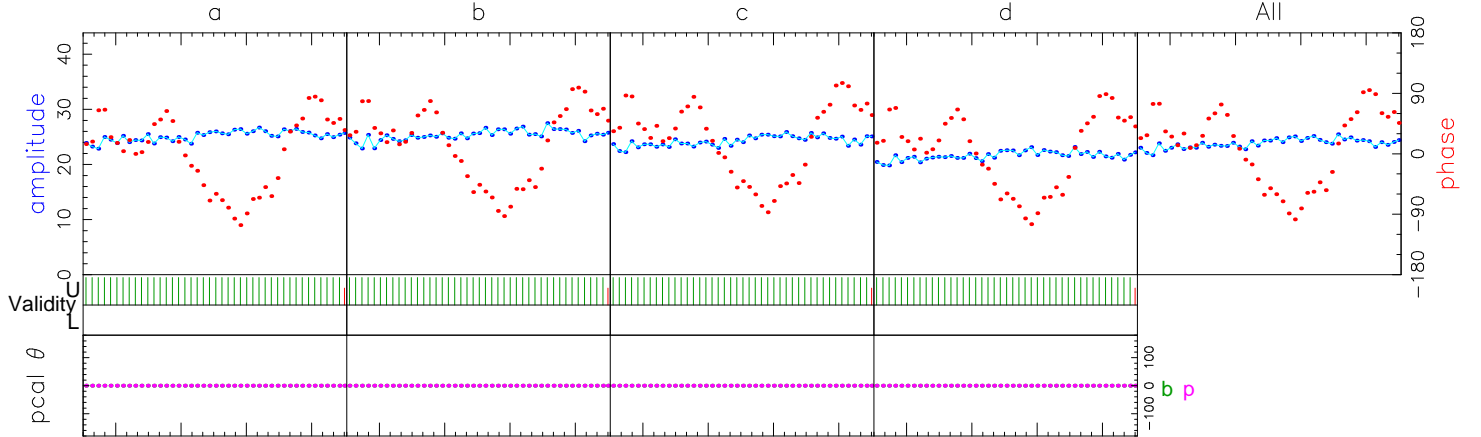
Fringe quality 4

SNR 619.6
 Int time 239.983
 Amp 14.627
 Phase 14.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.003306
 MBD 0.003449
 Fringe rate (Hz)
 -0.005396
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	PC freqs	
b:p	0:0	0:0	0:0	0:0	PC phase	
b:p	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-2.72256296092E+03	Apriori delay (usec)	-2.72256640978E+03	Resid mbdelay (usec)	3.44886E-03	+/- 1.8E-06
Sband delay (usec)	-2.72256310328E+03	Apriori clock (usec)	-8.5110168E+00	Resid sbdelay (usec)	3.30650E-03	+/- 7.0E-06
Phase delay (usec)	-2.72256640885E+03	Apriori clockrate (us/s)	2.0000000E-08	Resid phdelay (usec)	9.23709E-07	+/- 1.2E-08
Delay rate (us/s)	2.78964043811E-01	Apriori rate (us/s)	2.78964169177E-01	Resid rate (us/s)	-1.25366E-07	+/- 8.6E-11
Total phase (deg)	-85.4	Apriori accel (us/s/s)	1.39700594238E-05	Resid phase (deg)	14.3	+/- 0.2

ph/seg (deg)	54.3	0.6	Amplitude	14.627 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	63.2	1.1	Search (1024X16)	14.295	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	11.8	0.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	6.6	0.3	Inc. seg. avg.	23.835	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	14.669	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -793.942 787.193 simultaneous interpolator

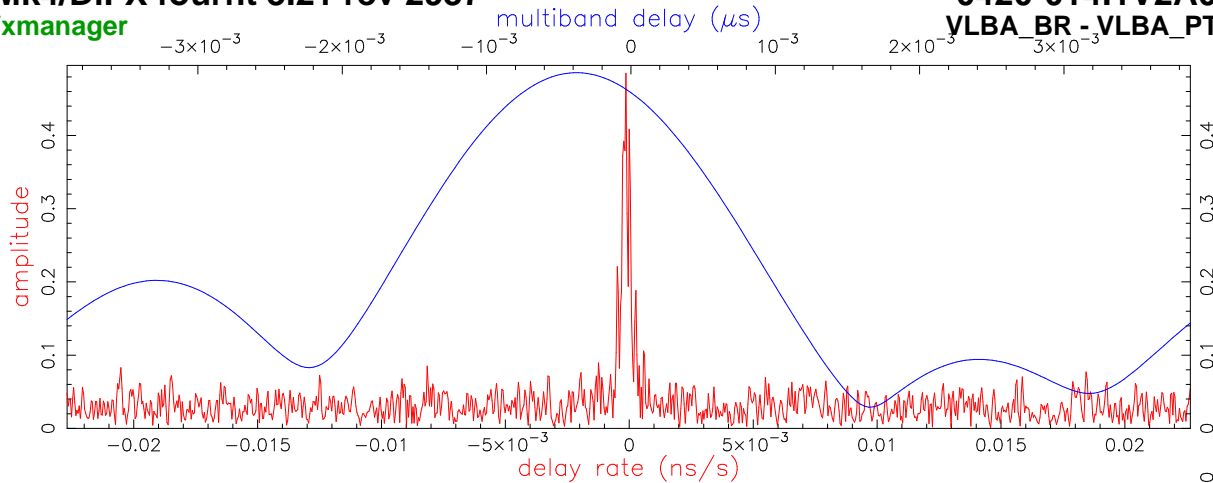
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp.Q.5.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

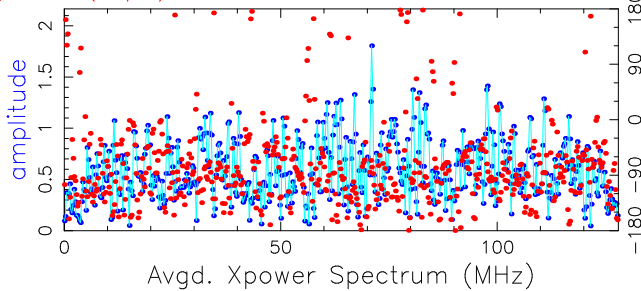
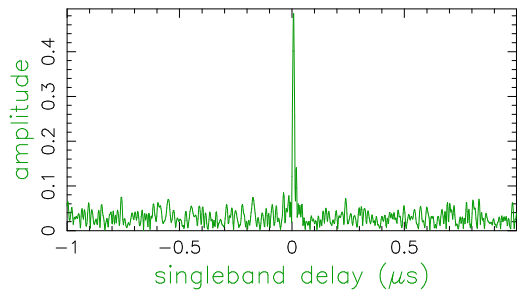
0420-014.1V2A0K, No0121, bp

VLBA_BR - VLBA_PT, fgroup Q, pol RL



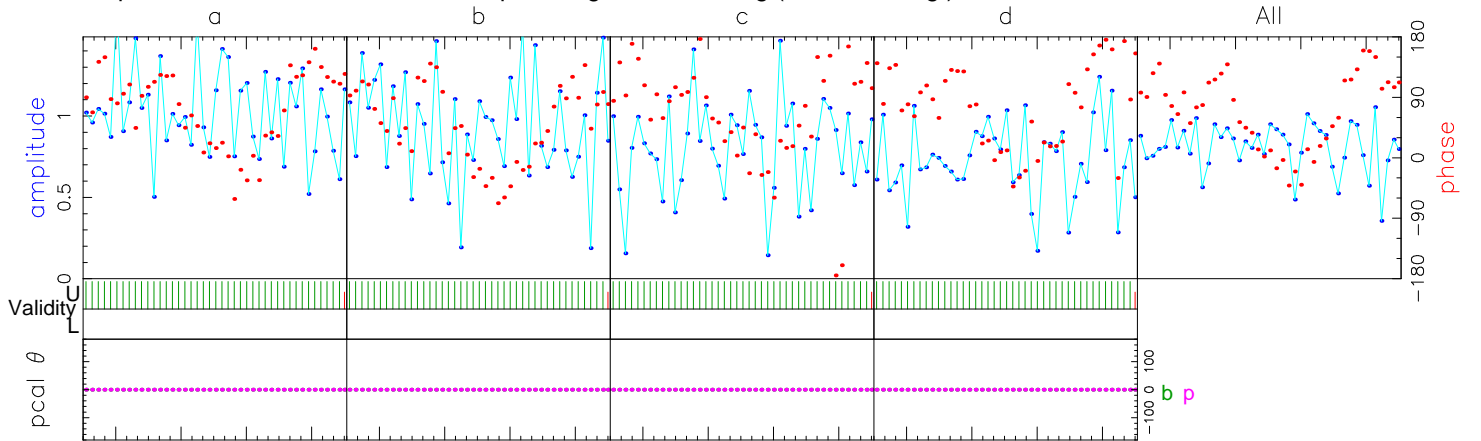
Fringe quality 8

SNR 21.0
 Int time 239.983
 Amp 0.496
 Phase 73.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.006857
 MBD -0.000436
 Fringe rate (Hz)
 -0.005435
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133526
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



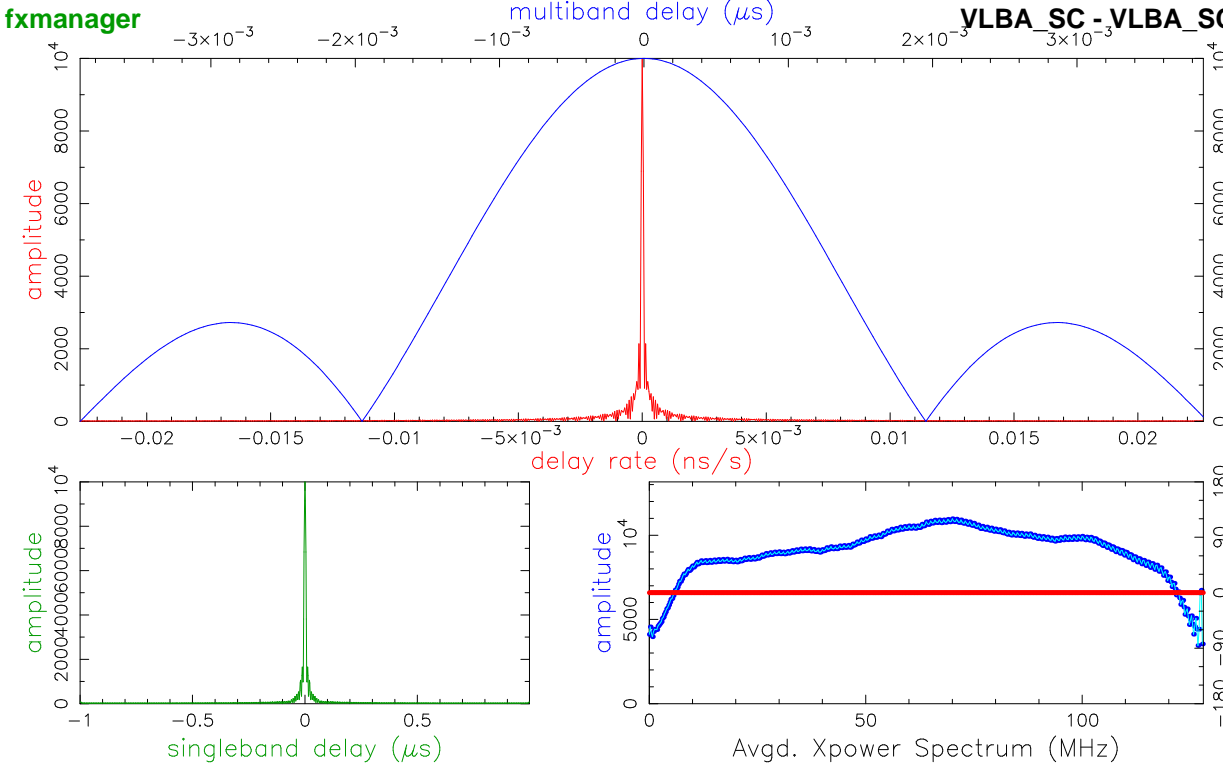
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
p	1000	1000	1000	1000		
b:p	0:0	0:0	0:0	0:0		
b:p	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
p	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-2.72255903289E+03	Apriori delay (usec)	-2.72256640978E+03	Resid mbdelay (usec)	-4.35607E-04	+/- 5.3E-05
Sband delay (usec)	-2.72255955328E+03	Apriori clock (usec)	-8.5110168E+00	Resid sbdelay (usec)	6.85650E-03	+/- 2.1E-04
Phase delay (usec)	-2.72256640505E+03	Apriori clockrate (us/s)	2.0000000E-08	Resid phdelay (usec)	4.73034E-06	+/- 3.5E-07
Delay rate (us/s)	2.78964042897E-01	Apriori rate (us/s)	2.78964169177E-01	Resid rate (us/s)	-1.26279E-07	+/- 2.5E-09
Total phase (deg)	-26.4	Apriori accel (us/s/s)	1.39700594238E-05	Resid phase (deg)	73.3	+/- 5.5

	RMS	Theor.	Amplitude	0.496 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	55.6	17.9	Search (1024X16)	0.479	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	70.4	31.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	14.9	5.5	Inc. seg. avg.	0.775	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	19.0	9.5	Inc. frq. avg.	0.491	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 187.1 el 40.3 pa 4.7 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -793.942 787.193 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/bp.Q.56.1V2A0K

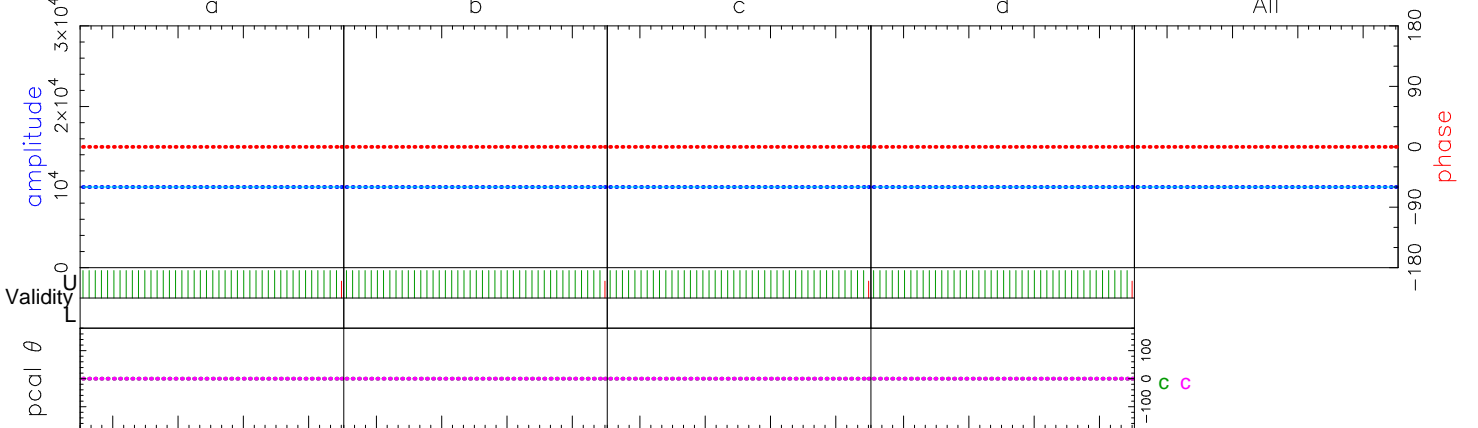


Fringe quality 9

SNR 423637.4
Int time 239.990
Amp 10000.000
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133522
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
c	1000	1000	1000	1000	APs used	
c:c	0:0	0:0	0:0	0:0	PC freqs	
c:c	0:0	0:0	0:0	0:0	PC phase	
c	1000	1000	1000	1000	ManI PC	
c	1000	1000	1000	1000	PC amp	
c	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 2.6E-09
Group delay (usec)(sbd)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 1.0E-08
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 1.7E-11
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 1.3E-13
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000E+00	+/- 0.0
Total phase (deg)	0.0	0.0	0.0	0.0	0.0	+/- 0.0

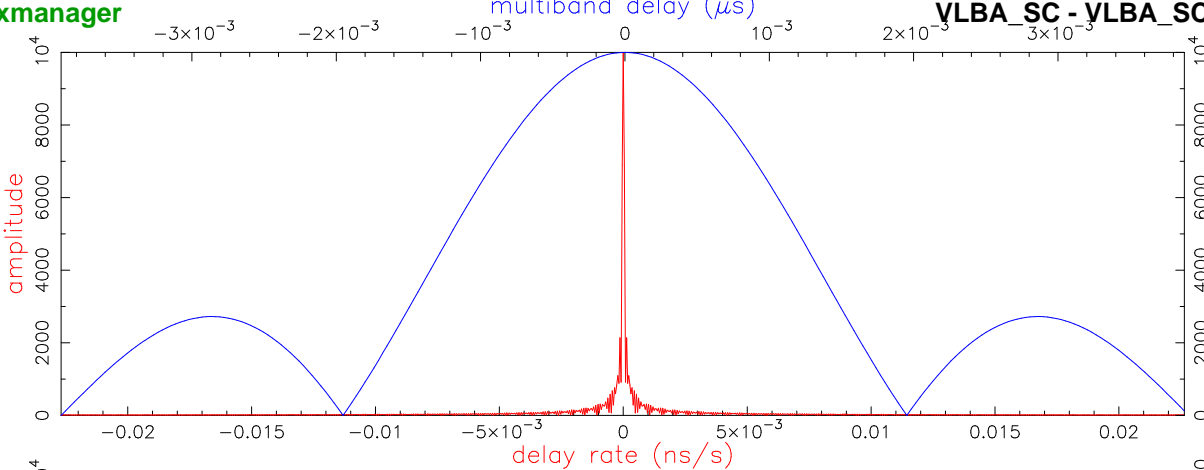
ph/seg (deg) 0.0 0.0 Search (1024X16) 10000.000 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc.Q.14.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

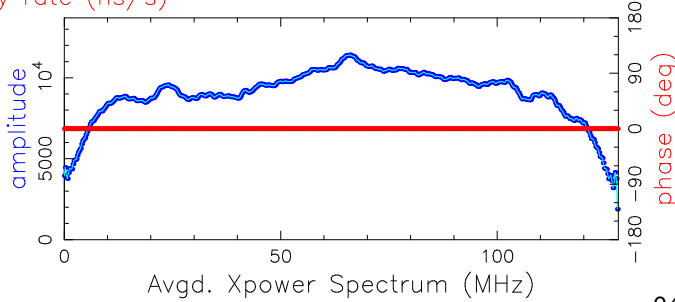
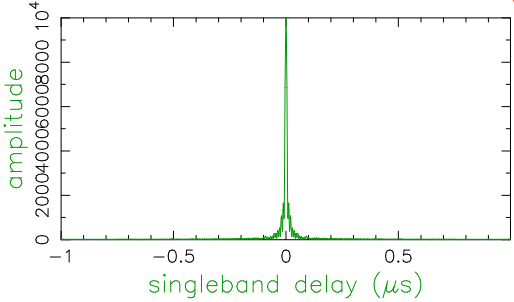
0420-014.1V2A0K, No0121, cc

VLBA_SC - VLBA_SC, fgroup Q, pol RR



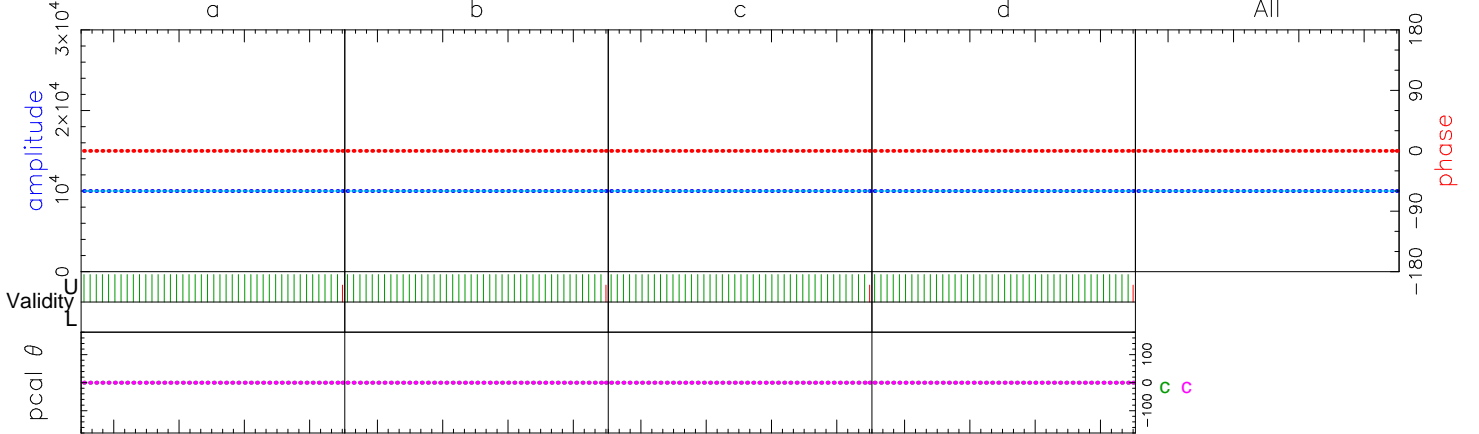
Fringe quality 9

SNR 423637.4
 Int time 239.990
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133524
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



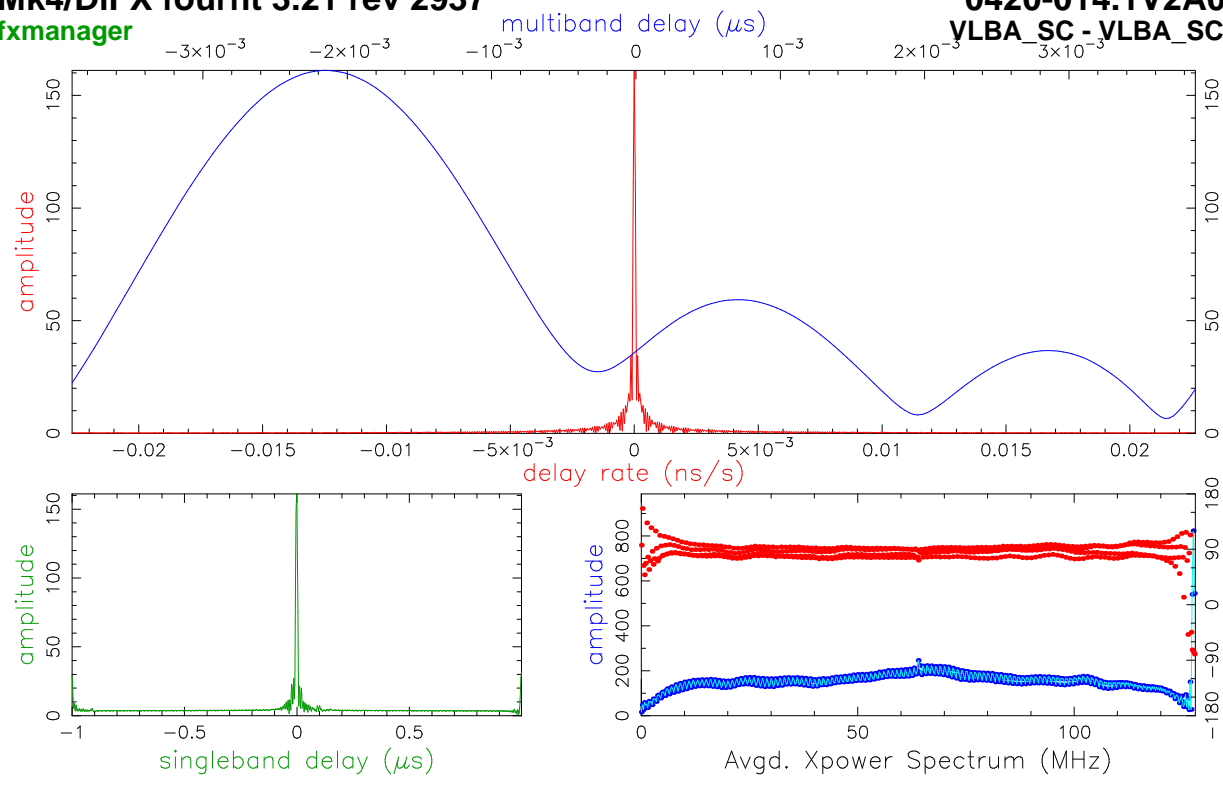
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	513.0	513.0
c	1000	1000	1000	1000	10000.0	10000.0
c:c	0:0	0:0	0:0	0:0	Sbd box	513.0
c:c	0:0	0:0	0:0	0:0	APs used	
c	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
c	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
c	Q00UR	Q01UR	Q02UR	Q03UR	Manl PC	
c	Q00UR	Q01UR	Q02UR	Q03UR	PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/- 2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/- 1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/- 1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/- 0.0

	RMS	Theor.	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

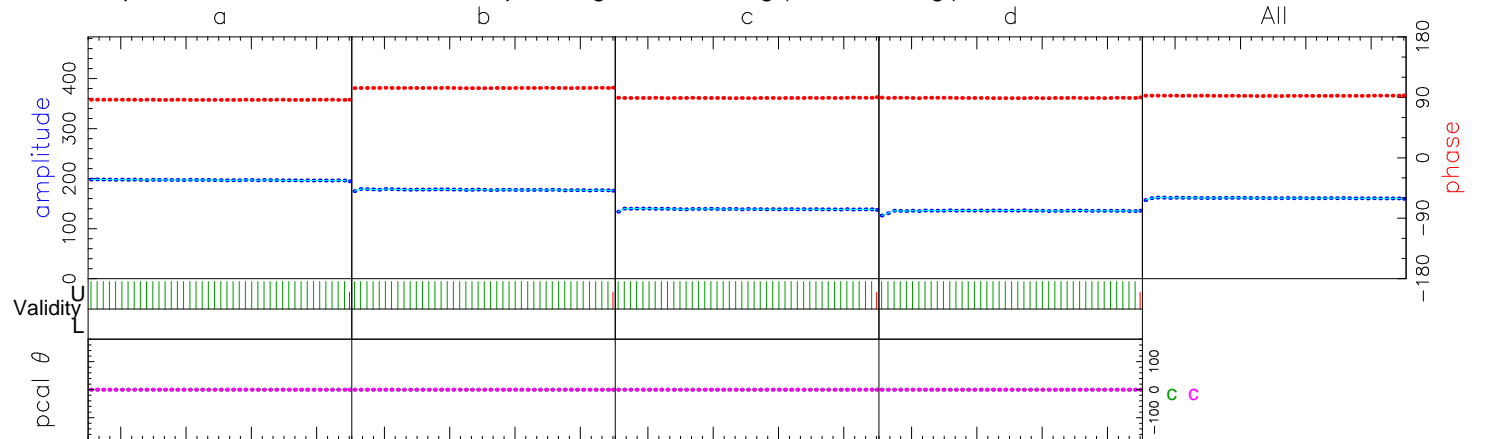
c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc.Q.31.1V2A0K

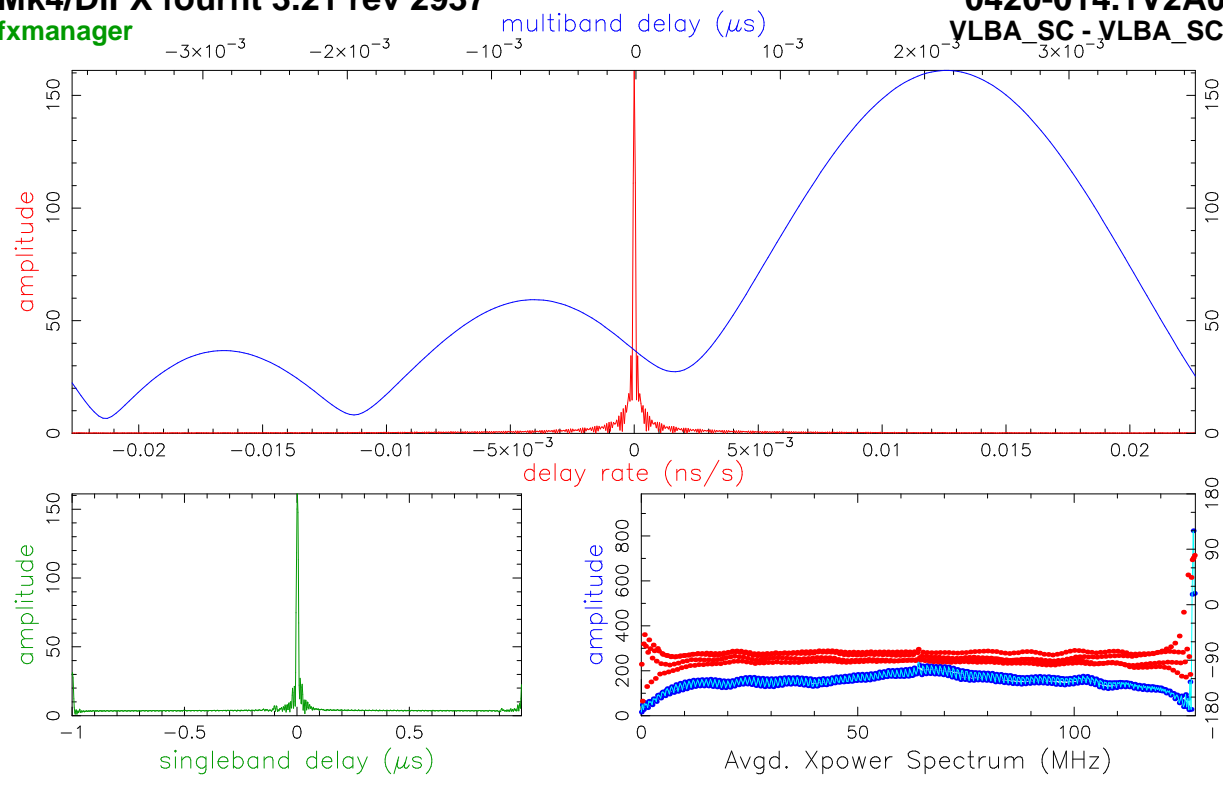


Fringe quality 9
SNR 6826.1
Int time 239.990
Amp 161.130
Phase 92.3
PFD 0.0e+00
Delays (us)
SBD -0.001860
MBD -0.002146
Fringe rate (Hz)
-0.000003
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133526
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
c	1000	1000	1000	1000		
c:c	0:0	0:0	0:0	0:0		
c:c	0:0	0:0	0:0	0:0		
c	1000	1000	1000	1000		
c	1000	1000	1000	1000		
c	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		
Group delay (usec)(sbd)	-2.14596875000E-03				-2.14597E-03	+/- 1.6E-07
Sband delay (usec)	-1.86012500000E-03				-1.86012E-03	+/- 6.3E-07
Phase delay (usec)	5.95388148285E-06				5.95388E-06	+/- 1.1E-09
Delay rate (us/s)	-7.09051502683E-11				-7.09051E-11	+/- 7.8E-12
Total phase (deg)		92.3			92.3	+/- 0.0
Apriori delay (usec)			0.00000000000E+00			
Apriori clock (usec)			0.0000000E+00			
Apriori clockrate (us/s)			0.0000000E+00			
Apriori rate (us/s)			0.00000000000E+00			
Apriori accel (us/s/s)			0.00000000000E+00			
Resid mbdelay (usec)						
Resid sbdelay (usec)						
Resid phdelay (usec)						
Resid rate (us/s)						
Resid phase (deg)						
Pcal mode: MANUAL, MANUAL						
Pcal rate: 0.000E+00, 0.000E+00 (us/s)						
Bits/sample: 2x2						
Sample rate(MISamp/s): 256						
Data rate(Mb/s): 2048						
nlags: 512						
t_cohere infinite						
ion window (TEC)						
sb window (us)	-1.000	1.000				
mb window (us)	-0.004	0.004				
dr window (ns/s)	-0.023	0.023				
ion window (TEC)	0.00	0.00				
pcal mode: MANUAL, MANUAL						
PC period (AP's) 5, 5						
simultaneous interpolator						
c: az 258.8 el 27.5 pa 69.2		c: az 258.8 el 27.5 pa 69.2		u,v (fr/asec) 0.000 0.000		
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc.Q.49.1V2A0K		

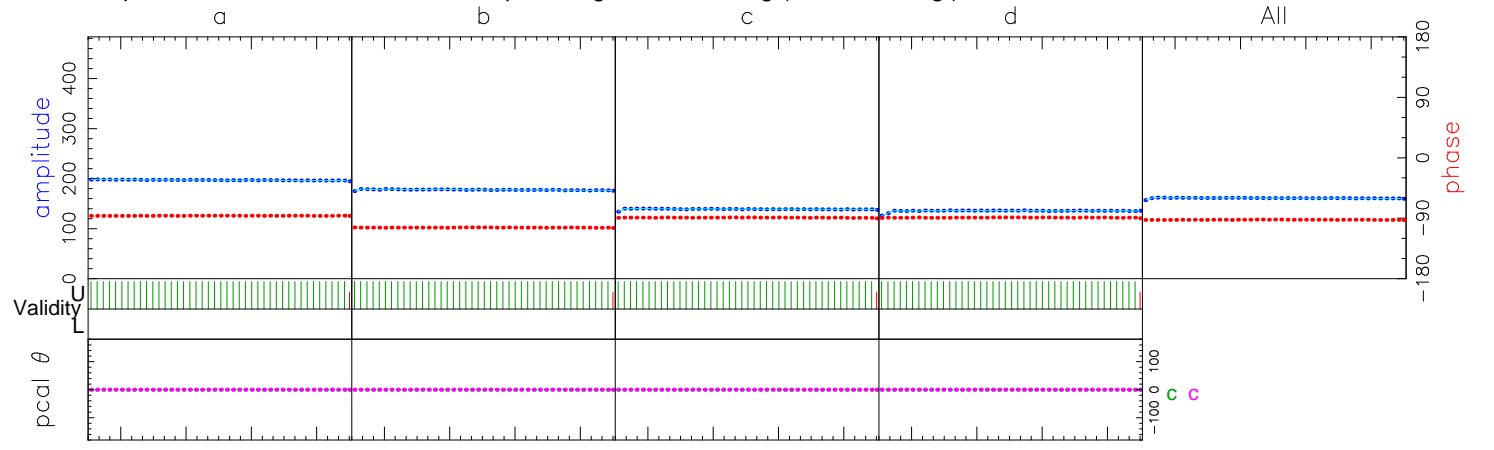


Fringe quality 9

SNR 6826.1
Int time 239.990
Amp 161.130
Phase -92.3
PFD 0.0e+00
Delays (us)
SBD 0.001860
MBD 0.002146
Fringe rate (Hz)
0.000003
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133528
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

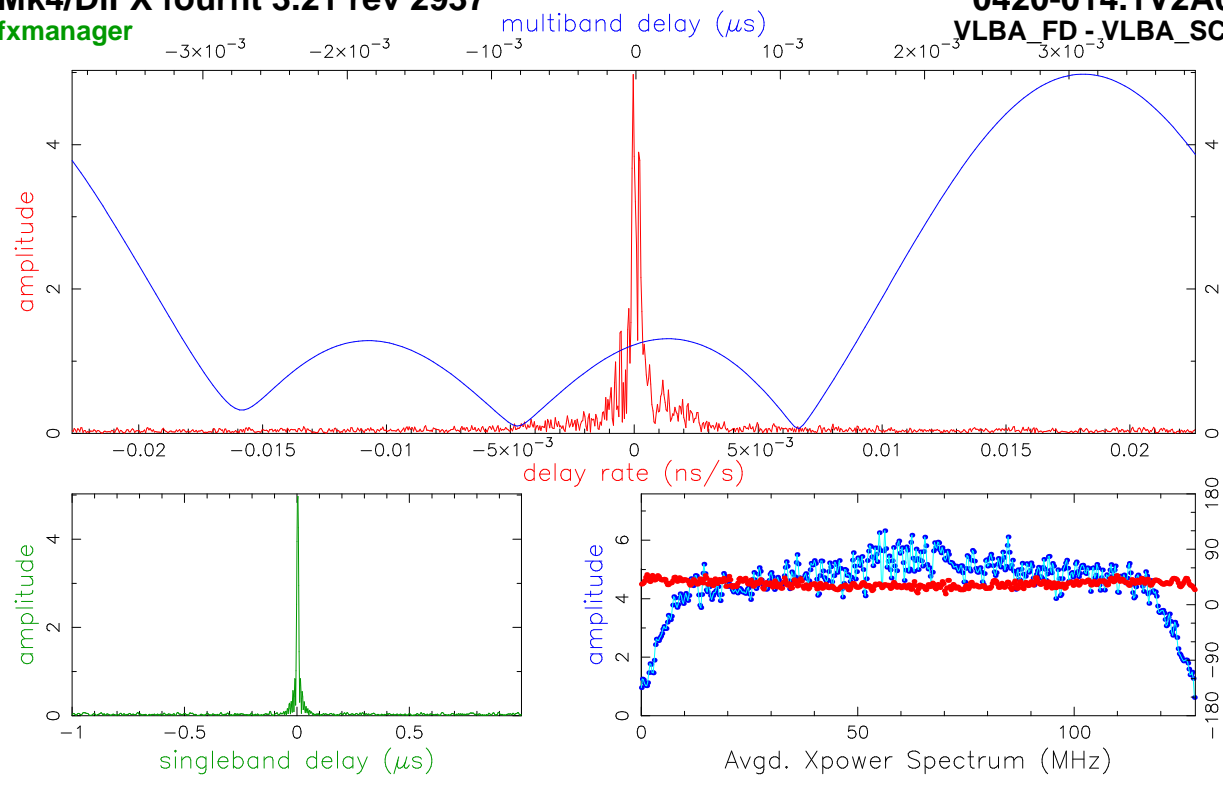
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-86.3	-103.9	-89.1	-89.0	Phase	-92.3
	197.1	177.7	139.1	135.6	Ampl.	162.4
	513.6	513.9	514.7	513.5	Sbd box	514.0
U/L	469/0	469/0	469/0	469/0	APs used	
c	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
c:c	0:0	0:0	0:0	0:0	PC phase	
c:c	0:0	0:0	0:0	0:0	Manl PC	
c	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
c	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	2.14596875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	2.14597E-03	+/-	1.6E-07
Sband delay (usec)	1.86012500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.86012E-03	+/-	6.3E-07
Phase delay (usec)	-5.95388148297E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-5.95388E-06	+/-	1.1E-09
Delay rate (us/s)	7.09051502683E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	7.09051E-11	+/-	7.8E-12
Total phase (deg)	-92.3	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-92.3	+/-	0.0

ph/seg (deg) 0.1 0.1 RMS Theor. Amplitude 161.130 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.5 0.1 Search (1024X16) 158.591 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 9.8 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 16.2 0.0 Inc. seg. avg. 161.102 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/cc.Q.71.1V2A0K simultaneous interpolator

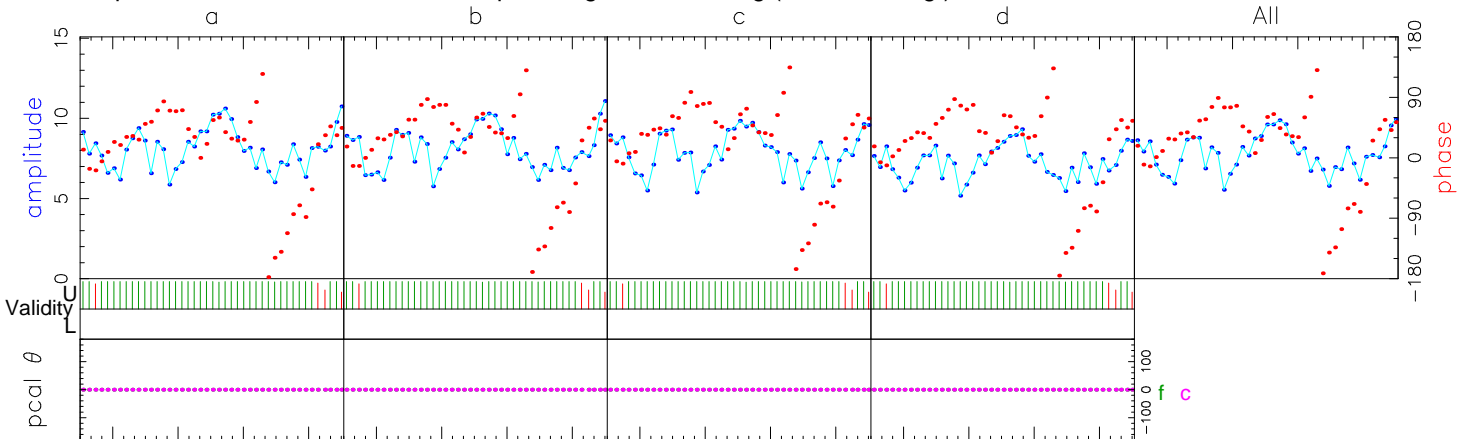


Fringe quality 5

SNR 211.8
Int time 237.261
Amp 5.029
Phase 36.4
PFD 0.0e+00
Delays (us)
SBD 0.003192
MBD 0.003056
Fringe rate (Hz)
-0.001610
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133522
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



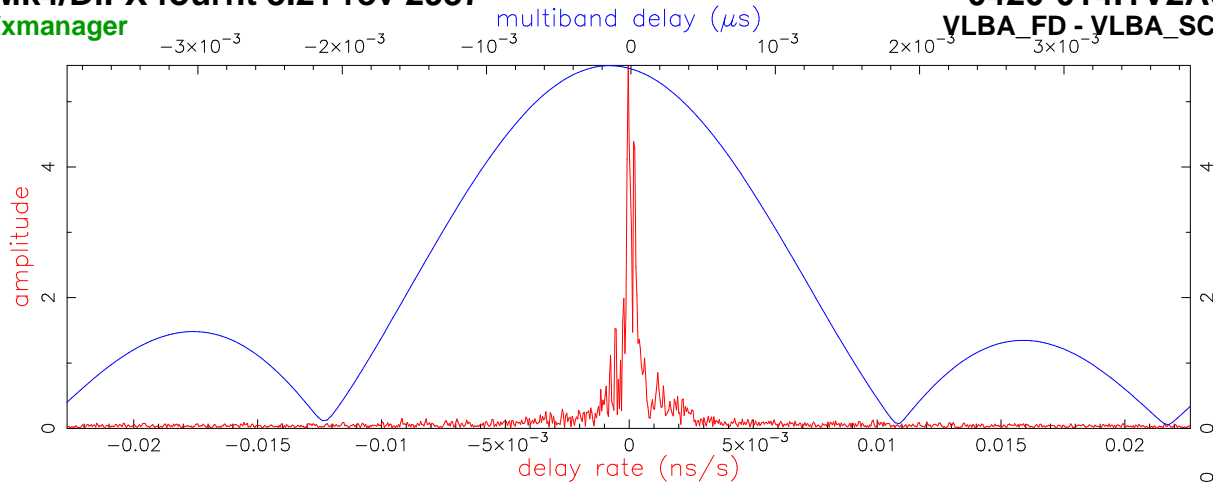
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
c	1000	1000	1000	1000		
f:c	0:0	0:0	0:0	0:0		
f:c	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
c	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UL	Q01UL	Q02UL	Q03UL		

	7.13560654269E+03	Apriori delay (usec)	7.13560348637E+03	Resid mbdelay (usec)	3.05632E-03	+/- 5.3E-06
Group delay (usec)(sbd)	7.13560667837E+03	Apriori clock (usec)	-1.9505692E+00	Resid sbdelay (usec)	3.19200E-03	+/- 2.0E-05
Sband delay (usec)	7.13560348872E+03	Apriori clockrate (us/s)	-2.5600000E-07	Resid phdelay (usec)	2.35042E-06	+/- 3.5E-08
Phase delay (usec)	7.98279306317E-01	Apriori rate (us/s)	7.98279343732E-01	Resid rate (us/s)	-3.74152E-08	+/- 2.5E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-3.84743435709E-05	Resid phase (deg)	36.4	+/- 0.5
Total phase (deg)	55.6					

	RMS	Theor.	Amplitude	5.029 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	65.1	1.8	Search (1024X16)	4.878	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	59.7	3.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.3	0.5	Inc. seg. avg.	7.801	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.8	0.9	Inc. frq. avg.	4.983	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

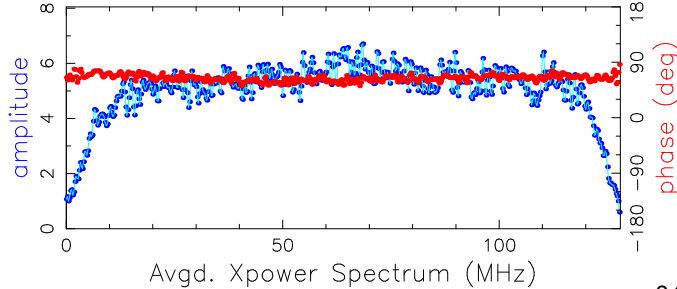
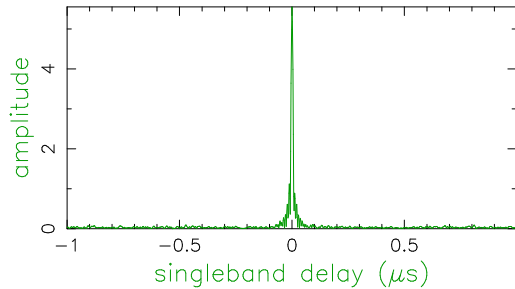
f: az 216.1 el 52.2 pa 30.9 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2303.006 933.350 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc.Q.16.1V2A0K



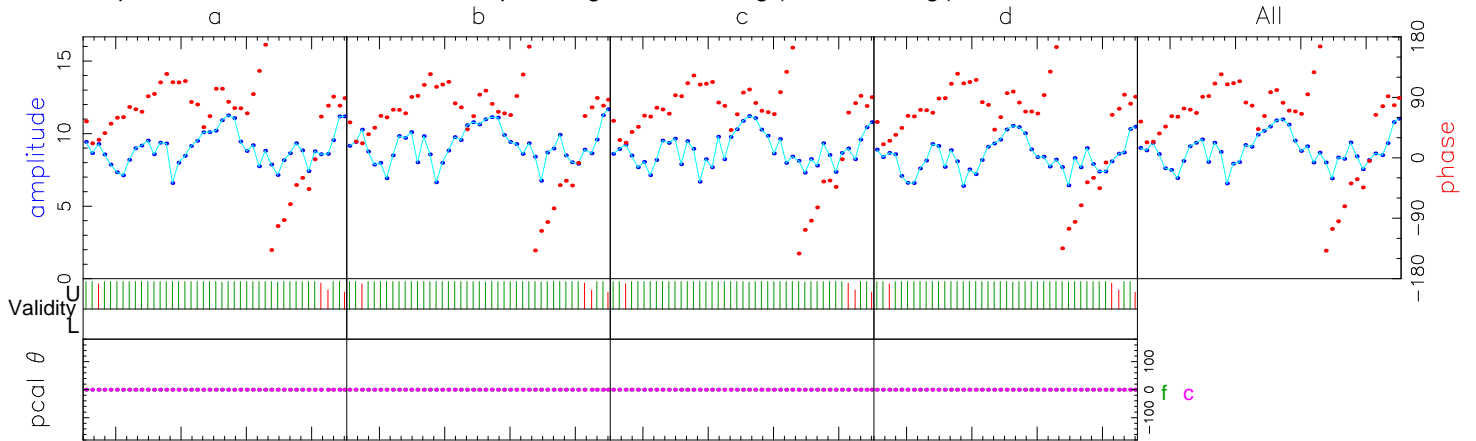
Fringe quality 5

SNR 234.0
Int time 237.261
Amp 5.556
Phase 72.1
PFD 0.0e+00
Delays (us)
SBD 0.000203
MBD -0.000142
Fringe rate (Hz)
-0.001640
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133524
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

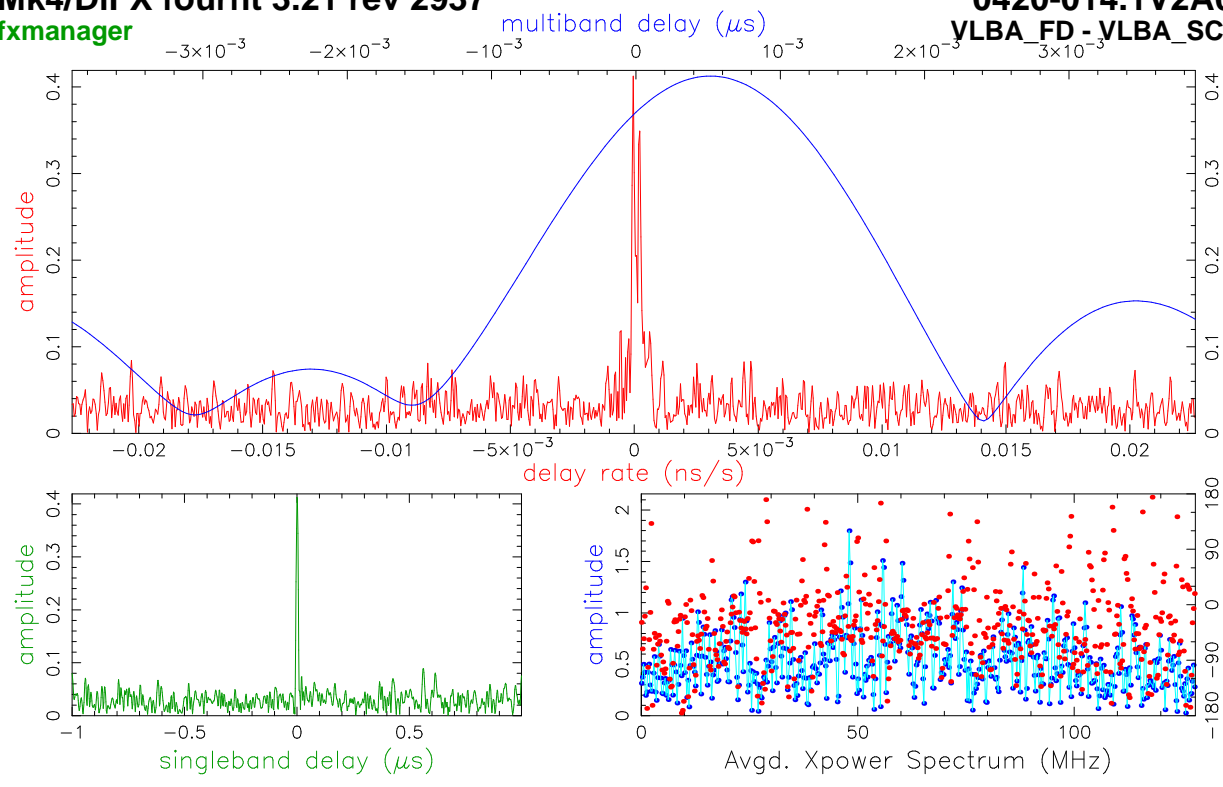


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000	APs used	1000
c	1000	1000	1000	1000	PC freqs	1000
f:c	0:0	0:0	0:0	0:0	PC phase	0:0
f:c	0:0	0:0	0:0	0:0	ManI PC	0:0
f	1000	1000	1000	1000	PC amp	1000
c	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.13560334450E+03	Apriori delay (usec)	7.13560348637E+03	Resid mbdelay (usec)	-1.41869E-04	+/-	4.8E-06
Sband delay (usec)	7.13560368925E+03	Apriori clock (usec)	-1.9505692E+00	Resid sbdelay (usec)	2.02875E-04	+/-	1.8E-05
Phase delay (usec)	7.13560349102E+03	Apriori clockrate (us/s)	-2.5600000E-07	Resid phdelay (usec)	4.65286E-06	+/-	3.2E-08
Delay rate (us/s)	7.98279305622E-01	Apriori rate (us/s)	7.98279343732E-01	Resid rate (us/s)	-3.81101E-08	+/-	2.3E-10
Total phase (deg)	91.3	Apriori accel (us/s/s)	-3.84743435709E-05	Resid phase (deg)	72.1	+/-	0.5

	RMS	Theor.	Amplitude	5.556 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	64.8	1.6	Search (1024X16)	5.471	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	62.6	2.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
ph/frq (deg)	1.5	0.5	Inc. seg. avg.	8.856	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
amp/frq (%)	3.6	0.9	Inc. frq. avg.	5.553	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 216.1 el 52.2 pa 30.9 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2303.006 933.350 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc.Q.37.1V2A0K

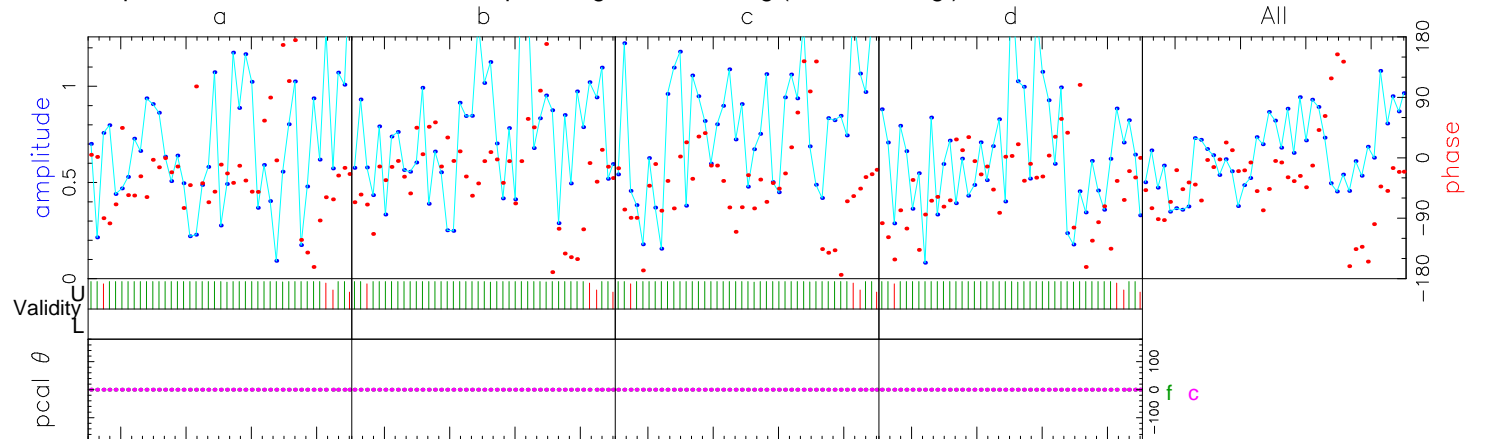


Fringe quality 9

SNR 17.7
Int time 237.261
Amp 0.419
Phase -34.3
PFD 0.0e+00
Delays (us)
SBD 0.000896
MBD 0.000550
Fringe rate (Hz)
-0.001428
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133526
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

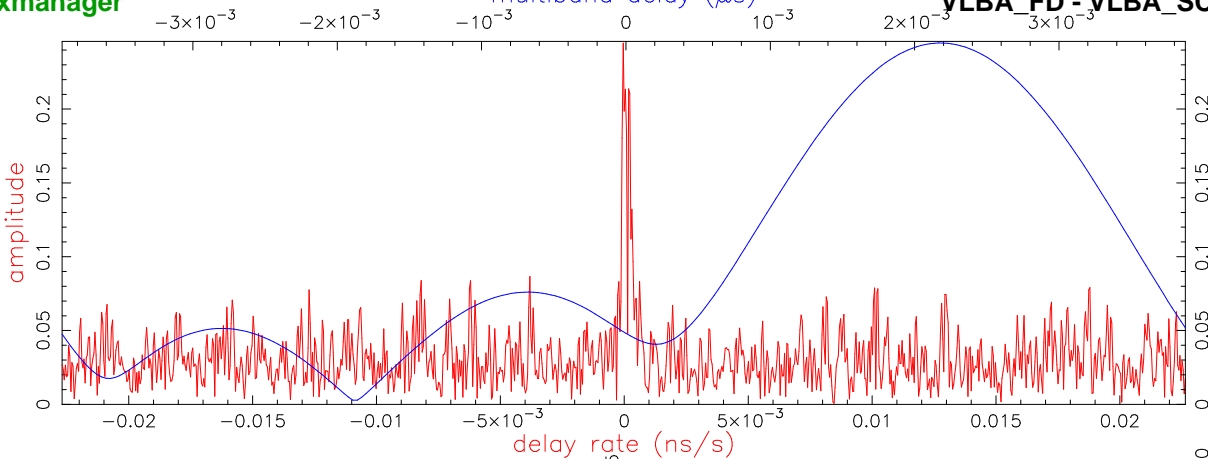
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



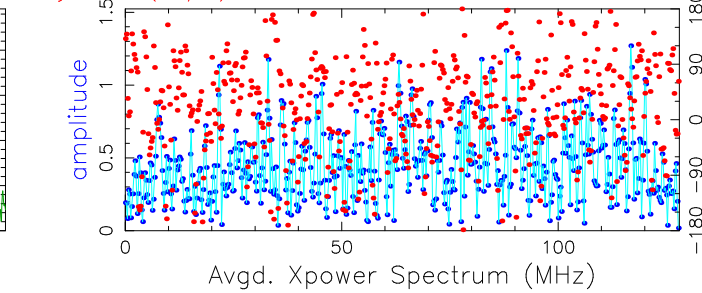
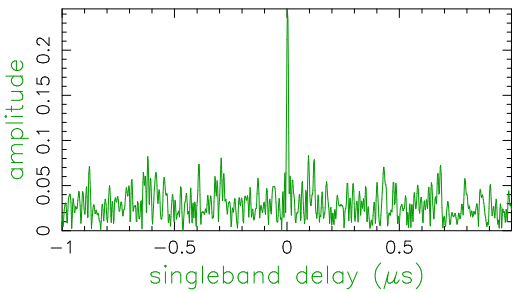
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-40.3	-16.9	-41.9	-37.3	Phase	-34.3
	0.4	0.4	0.4	0.4	Ampl.	0.4
	513.6	513.4	512.6	514.4	Sbd box	513.5
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
f:c	0:0	0:0	0:0	0:0	PC phase	
f:c	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	7.13560403666E+03		Apriori delay (usec)	7.13560348637E+03	Resid mbdelay (usec)	5.50287E-04 +/- 6.3E-05
Sband delay (usec)	7.13560438250E+03		Apriori clock (usec)	-1.9505692E+00	Resid sbdelay (usec)	8.96125E-04 +/- 2.4E-04
Phase delay (usec)	7.13560348416E+03		Apriori clockrate (us/s)	-2.5600000E-07	Resid phdelay (usec)	-2.21276E-06 +/- 4.2E-07
Delay rate (us/s)	7.98279310554E-01		Apriori rate (us/s)	7.98279343732E-01	Resid rate (us/s)	-3.31779E-08 +/- 3.0E-09
Total phase (deg)		-15.1	Apriori accel (us/s/s)	-3.84743435709E-05	Resid phase (deg)	-34.3 +/- 6.5
RMS	65.1	21.2	Amplitude	0.419 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
Theor.	21.2		Search (1024X16)	0.401	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/seg (deg)	70.8	37.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
amp/seg (%)	14.3	6.5	Inc. seg. avg.	0.610	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
ph/frq (deg)	3.8	11.3	Inc. frq. avg.	0.416	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
amp/frq (%)						
f: az 216.1 el 52.2 pa 30.9	c: az 258.8 el 27.5 pa 69.2	u, v (fr/asec) -2303.006 933.350				simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc.Q.53.1V2A0K				

multiband delay (μ s)

Fringe quality 9

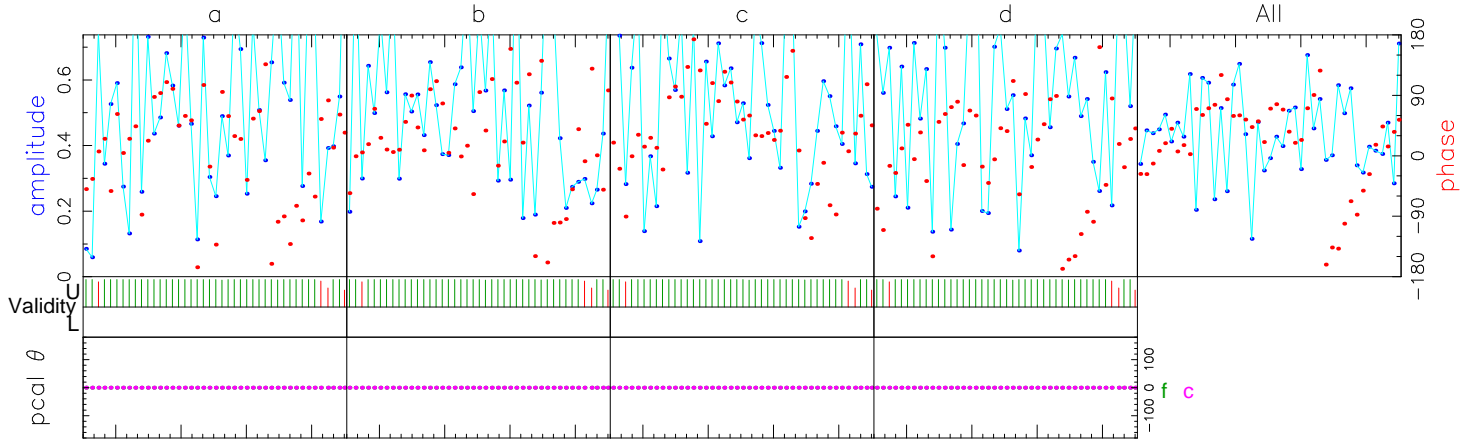


SNR 10.4
Int time 237.261
Amp 0.246
Phase 35.8
PFD 8.6e-17
Delays (us)
SBD 0.002421
MBD 0.002216
Fringe rate (Hz)
-0.001536
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133528
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

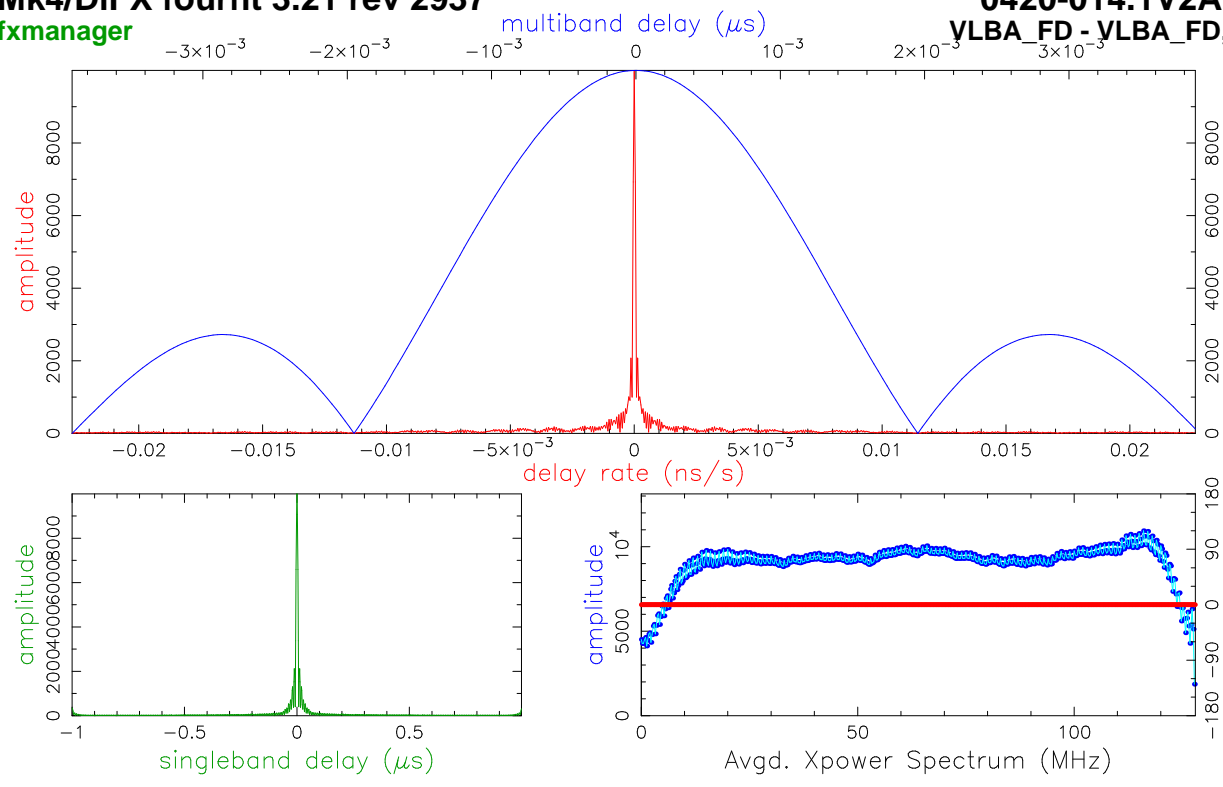


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
c	1000	1000	1000	1000		
f:c	0:0	0:0	0:0	0:0		
f:c	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
c	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	7.13560570247E+03	Apriori delay (usec)	7.13560348637E+03	Resid mbdelay (usec)	2.21610E-03	+/-	1.1E-04
Sband delay (usec)	7.13560590725E+03	Apriori clock (usec)	-1.9505692E+00	Resid sbdelay (usec)	2.42088E-03	+/-	4.2E-04
Phase delay (usec)	7.13560348868E+03	Apriori clockrate (us/s)	-2.5600000E-07	Resid phdelay (usec)	2.31031E-06	+/-	7.1E-07
Delay rate (us/s)	7.98279308036E-01	Apriori rate (us/s)	7.98279343732E-01	Resid rate (us/s)	-3.56965E-08	+/-	5.2E-09
Total phase (deg)	55.0	Apriori accel (us/s/s)	-3.84743435709E-05	Resid phase (deg)	35.8	+/-	11.1

ph/seg (deg)	67.1	Theor.	36.2	Amplitude	0.246 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	93.8	Search (1024X16)	0.237	Search	0.237	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	13.7	Inc. seg. avg.	0.366	Inc. seg. avg.	0.366	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	9.7	Inc. frq. avg.	0.244	Inc. frq. avg.	0.244	Sample rate(MISamp/s): 256	nlags: 512	t_cohere infinite	dr window (ns/s)	-0.023 0.023
f: az 216.1 el 52.2 pa 30.9		c: az 258.8 el 27.5 pa 69.2		u,v (fr/asec)	-2303.006 933.350	Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00		

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fc.Q.73.1V2A0K simultaneous interpolator

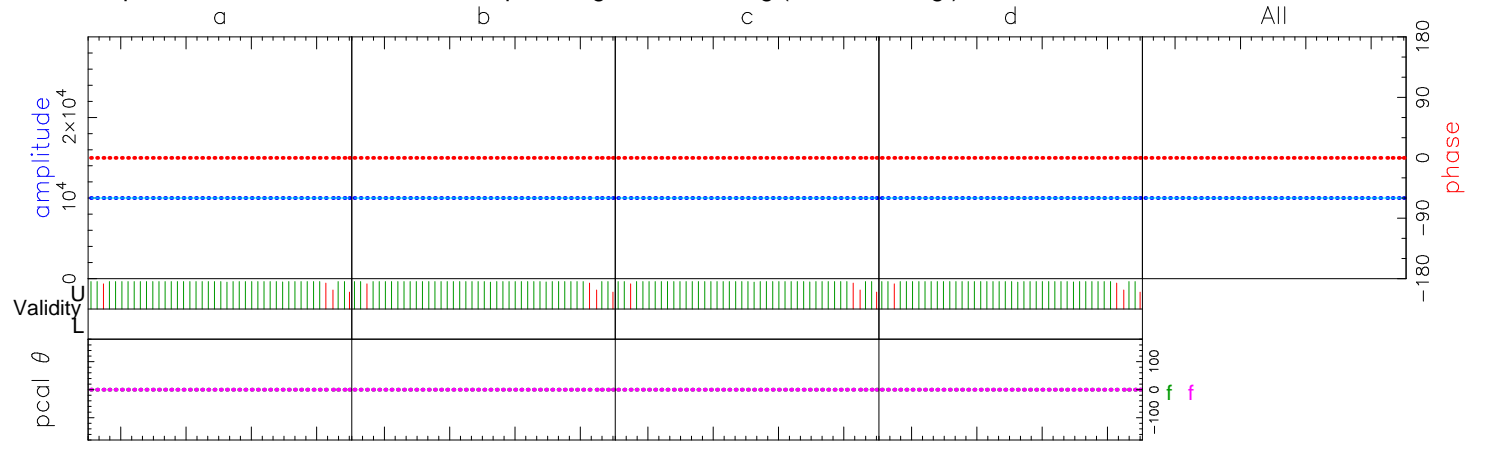


Fringe quality 9

SNR 421222.1
Int time 237.261
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133523
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
0.0	0.0	0.0	0.0	Phase	0.0
10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
513.0	513.0	513.0	513.0	Sbd box	513.0
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
f 1000	1000	1000	1000	PC freqs	
f:f 0:0	0:0	0:0	0:0	PC phase	
f:f 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
f 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
f Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	0.00000000000E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	0.00000E+00 +/- 2.6E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00 +/- 1.0E-08
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00 +/- 1.8E-11
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00 +/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	0.0 +/- 0.0
RMS	Theor.	Amplitude	9999.999 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9	f: az 216.1 el 52.2 pa 30.9	u,v (fr/asec) 0.000 0.000			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff.Q.22.1V2A0K			

Mk4/DiFX fourfit 3.21 rev 2937

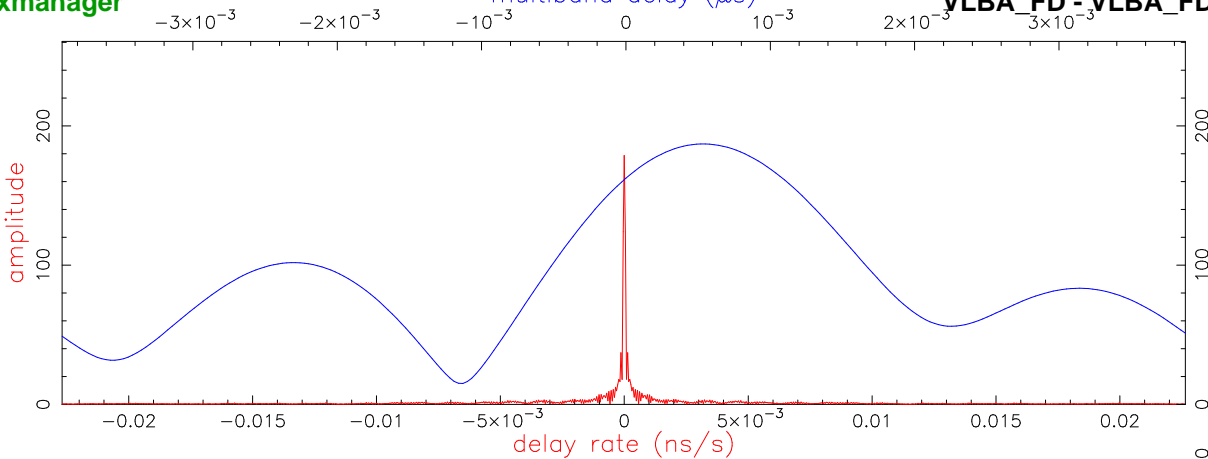
fxmanager

0420-014.1V2A0K, No0121, ff

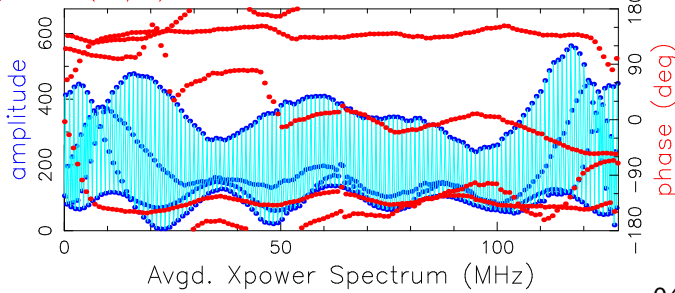
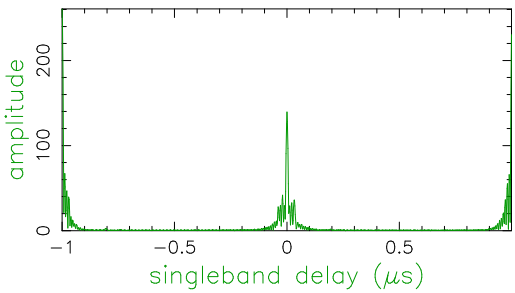
VLBA_FD - VLBA_FD, fgroup Q, pol LR

multiband delay (μ s)

Fringe quality 5

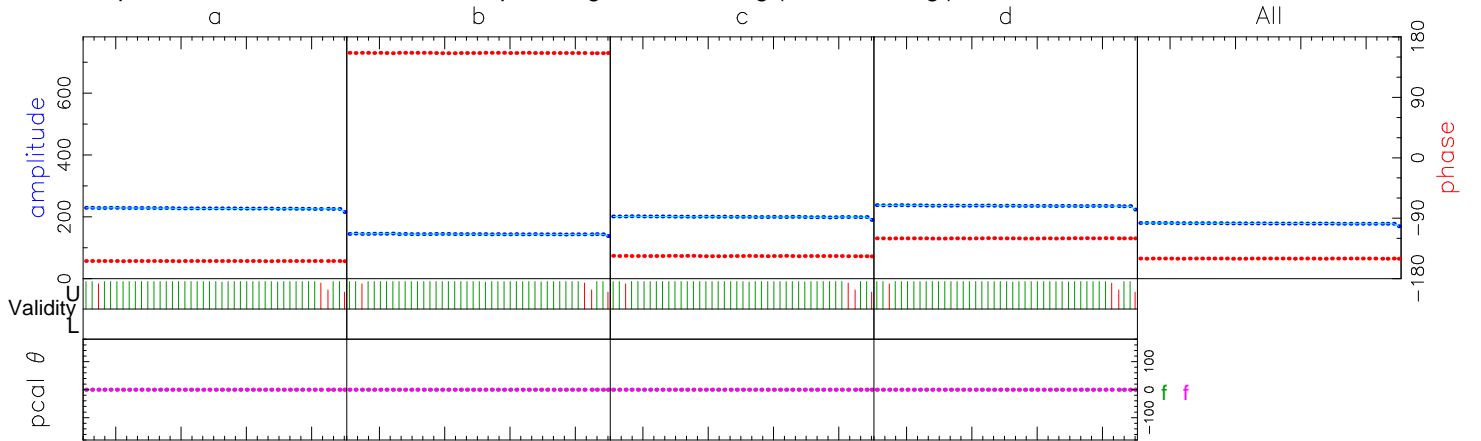


SNR 10982.0
 Int time 237.261
 Amp 260.717
 Phase -150.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.999787
 MBD 0.000228
 Fringe rate (Hz)
 0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133524
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-153.6	155.9	-146.2	-119.9	Phase	-150.0
227.3	144.3	200.1	235.9	Ampl.	201.9
513.4	1023.6	1.5	1.6	Sbd box	1.1
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
f 1000	1000	1000	1000	PC freqs	
f:f 0:0	0:0	0:0	0:0	PC phase	
f:f 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
f 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
f Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-9.99771625000E-01	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	2.28375E-04	+/-	1.0E-07
Sband delay (usec)	-9.99787187500E-01	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-9.99787E-01	+/-	3.9E-07
Phase delay (usec)	-9.67839092964E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-9.67839E-06	+/-	6.7E-10
Delay rate (us/s)	3.11982661181E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	3.11983E-11	+/-	4.9E-12
Total phase (deg)	-150.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-150.0	+/-	0.0

ph/seg (deg)	0.1	Theor.	0.0	Amplitude	260.717 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	31.4		0.1	Search (1024X16)	255.731	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	43.9		0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	26.4		0.0	Inc. seg. avg.	178.824	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	201.919	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
						nlags: 512	t_cohere infinite

f: az 216.1 el 52.2 pa 30.9 f: az 216.1 el 52.2 pa 30.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff.Q.36.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

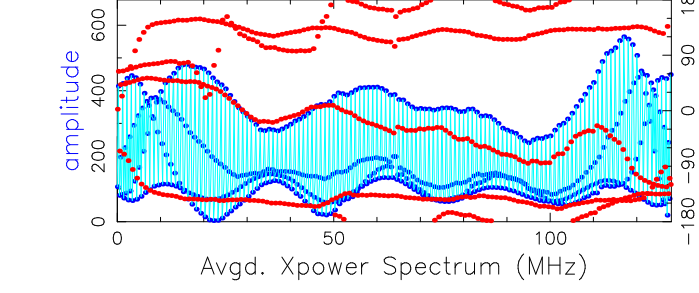
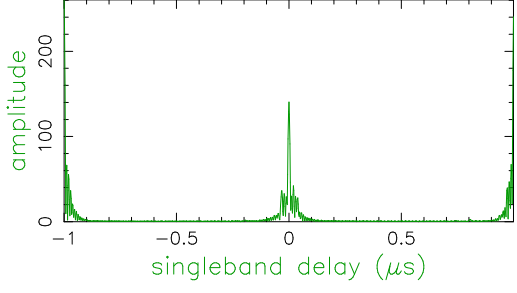
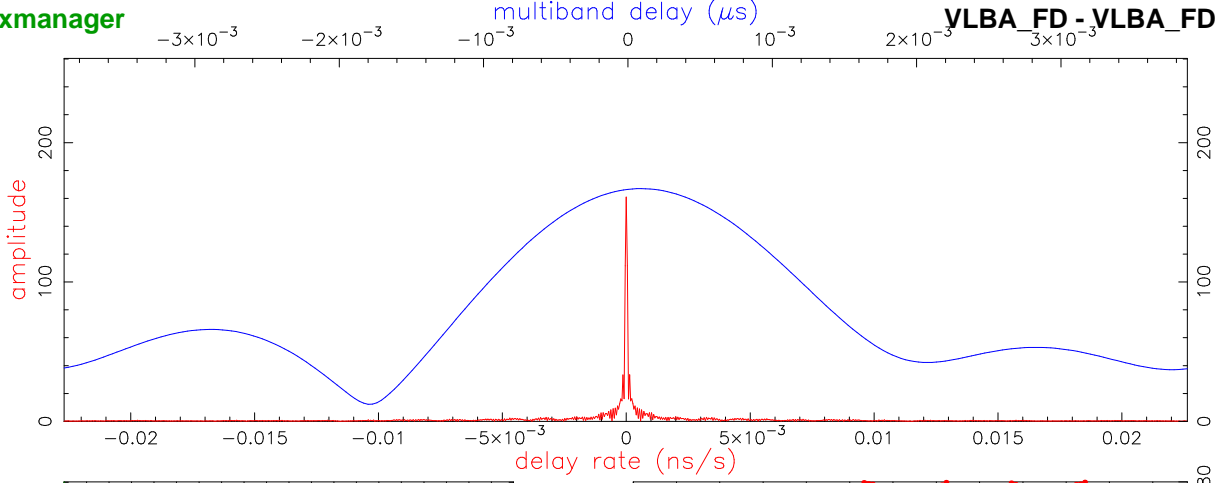
fxmanager

0420-014.1V2A0K, No0121, ff

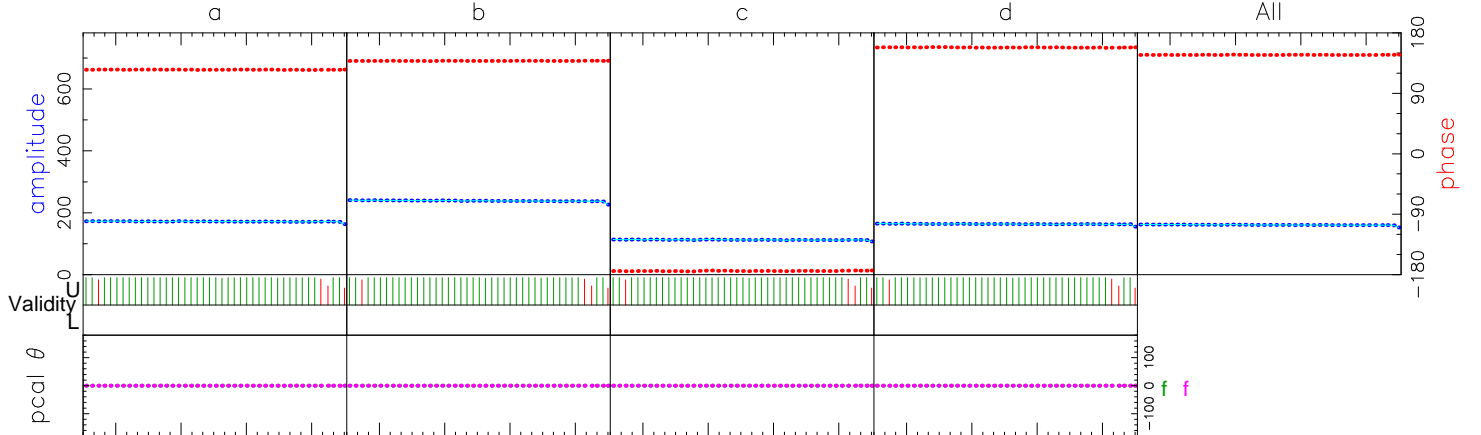
VLBA_FD - VLBA_FD, fgroup Q, pol RL

Fringe quality 5

SNR 10970.6
 Int time 237.261
 Amp 260.447
 Phase 147.1
 PFD 0.0e+00
 Delays (us)
 SBD -1.000000
 MBD -0.000210
 Fringe rate (Hz)
 -0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133526
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000	APs used	1000
f:f	0:0	0:0	0:0	0:0	PC freqs	1000
f:f	0:0	0:0	0:0	0:0	PC phase	0:0
f	1000	1000	1000	1000	Manl PC	1000
f	1000	1000	1000	1000	PC amp	1000
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
f	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-1.00021040625E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-2.10406E-04	+/-	1.0E-07
Sband delay (usec)	-1.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.00000E+00	+/-	3.9E-07
Phase delay (usec)	9.49583055222E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	9.49583E-06	+/-	6.7E-10
Delay rate (us/s)	-3.11982661181E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-3.11983E-11	+/-	4.9E-12
Total phase (deg)	147.1	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	147.1	+/-	0.0

ph/seg (deg)	RMS 0.1	Theor. 0.0	Amplitude	260.447 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	38.2	0.1	Search (1024X16)	255.731	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	32.9	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%)	38.2	0.0	Inc. seg. avg.	160.991	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	171.738	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

f: az 216.1 el 52.2 pa 30.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

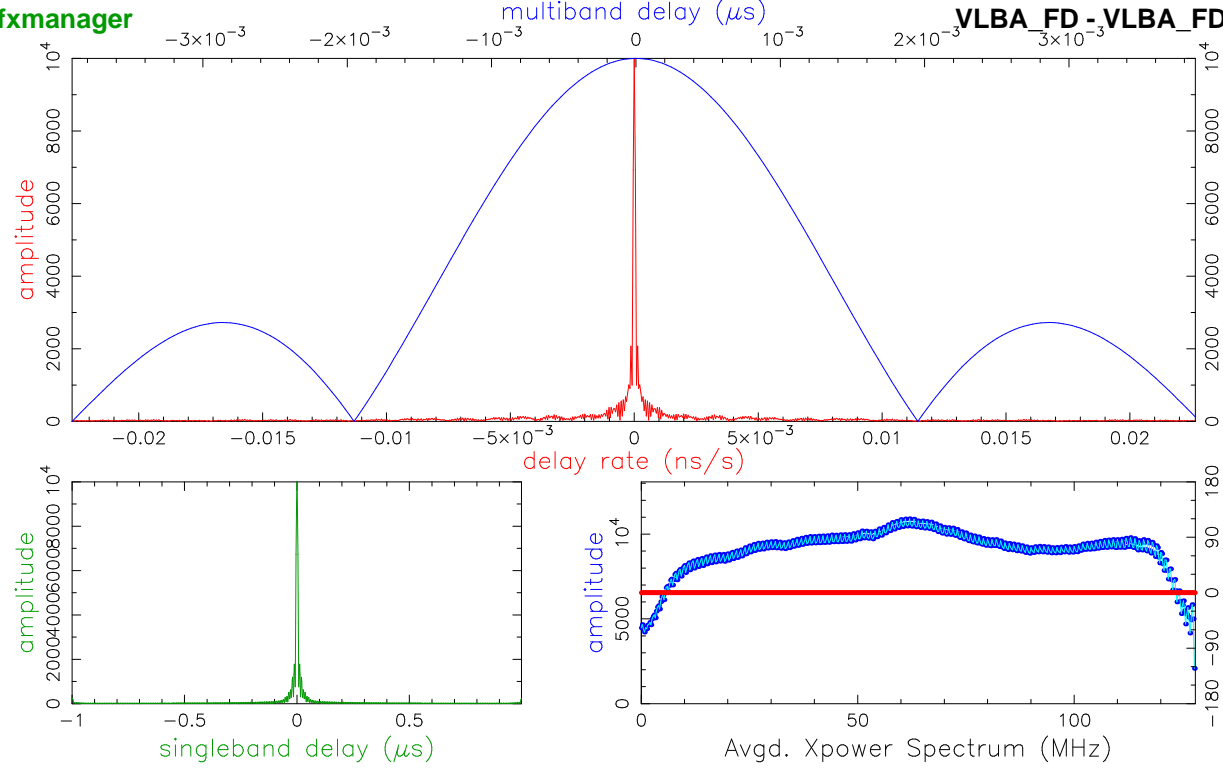
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff.Q.57.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, ff

VLBA_FD - VLBA_FD, fgroup Q, pol LL

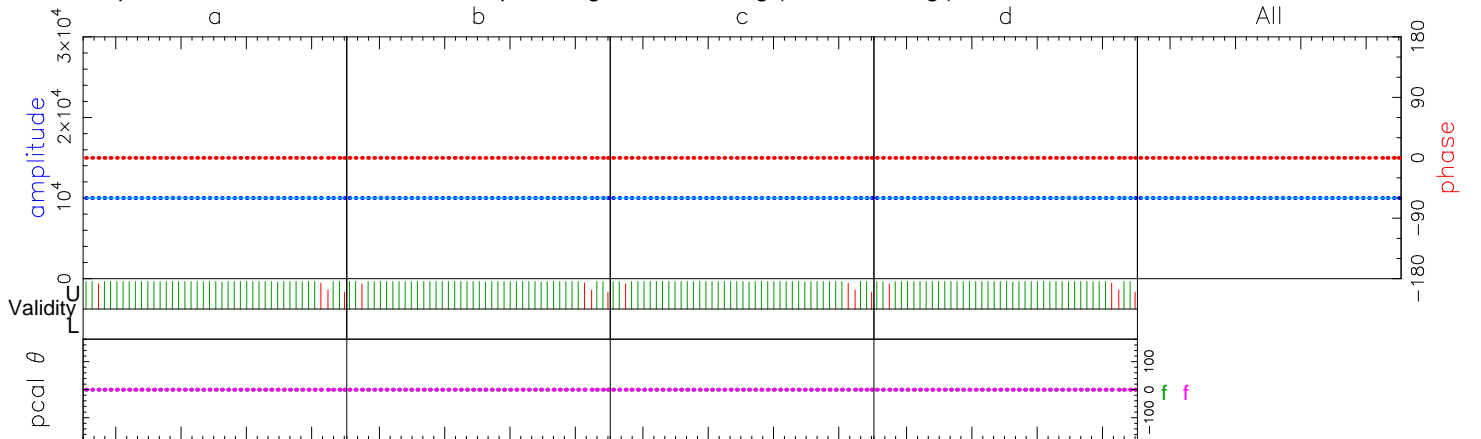


Fringe quality 9

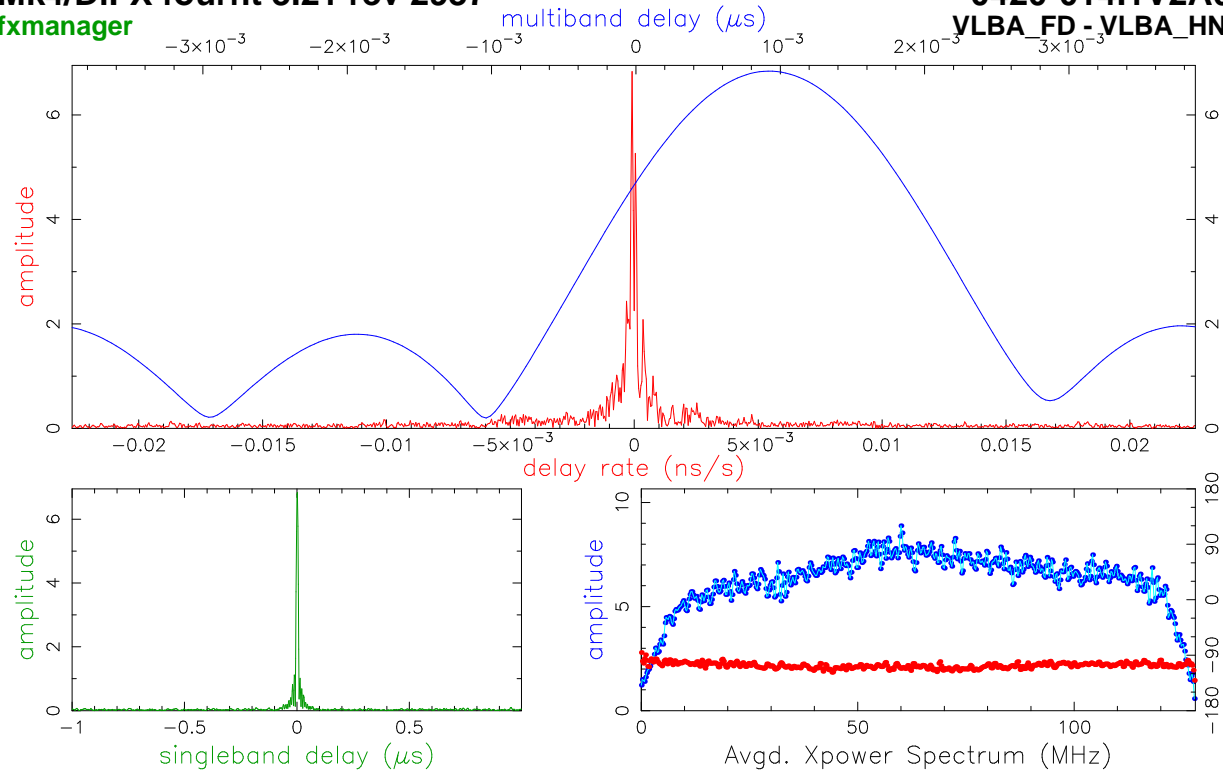
SNR 421222.0
 Int time 237.261
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133521
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
0.0	0.0	0.0	0.0	Phase	0.0
10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
513.0	513.0	513.0	513.0	Sbd box	513.0
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
f 1000	1000	1000	1000	PC freqs	
f:f 0:0	0:0	0:0	0:0	PC phase	
f:f 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
f 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
f Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00 +/- 2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.00000000E+00	Resid sbdelay (usec)	0.000000E+00 +/- 1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.00000000E+00	Resid phdelay (usec)	0.000000E+00 +/- 1.8E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00 +/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0 +/- 0.0
RMS	Theor.	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9	f: az 216.1 el 52.2 pa 30.9	u,v (fr/asec) 0.000 0.000			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff..1V2A0K				Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ff.Q.6.1V2A0K

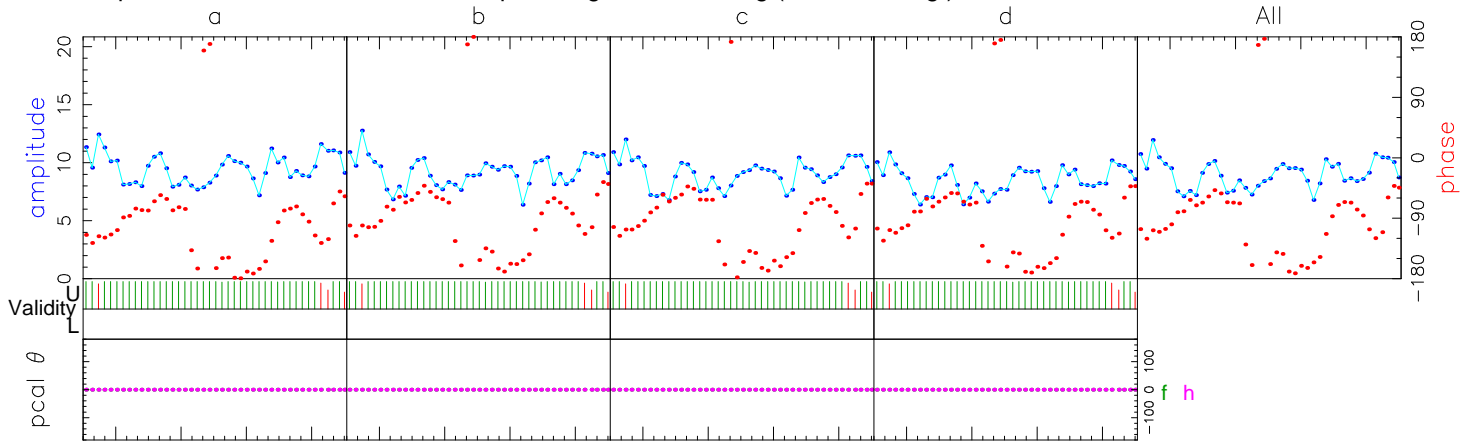


Fringe quality 6

SNR 292.8
Int time 237.261
Amp 6.950
Phase -103.0
PFD 0.0e+00
Delays (us)
SBD 0.001072
MBD 0.000872
Fringe rate (Hz)
-0.003303
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133521
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

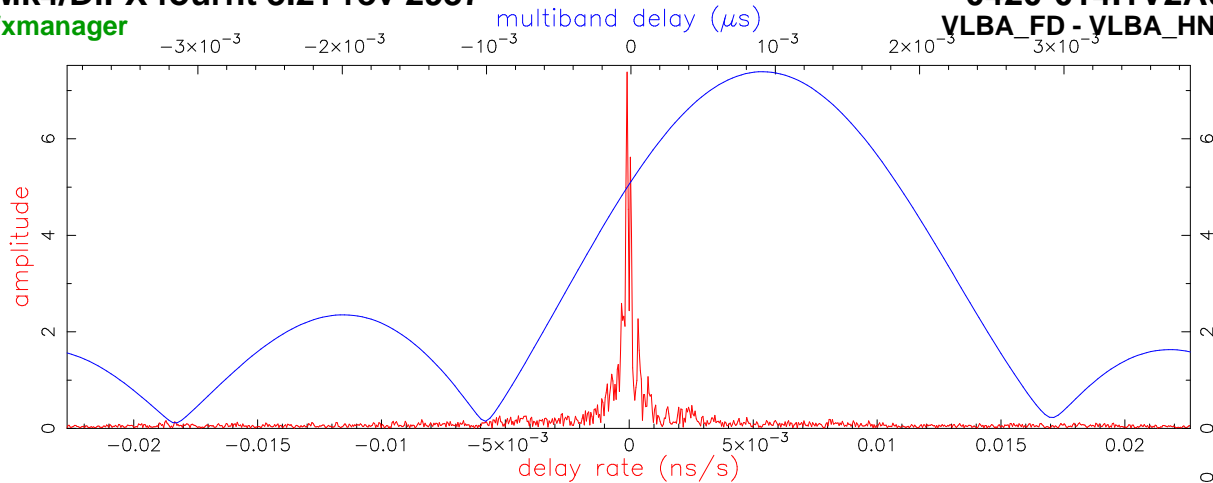
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
h	1000	1000	1000	1000		
f:h	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
h	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
h	Q00UL	Q01UL	Q02UL	Q03UL		

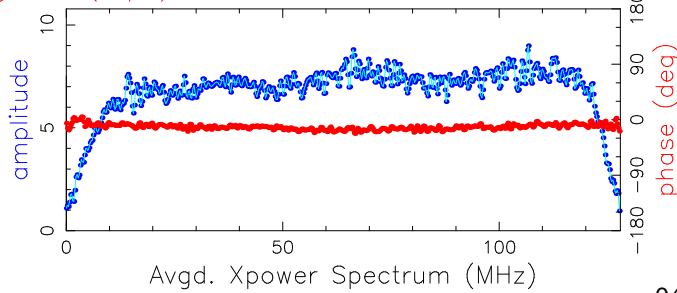
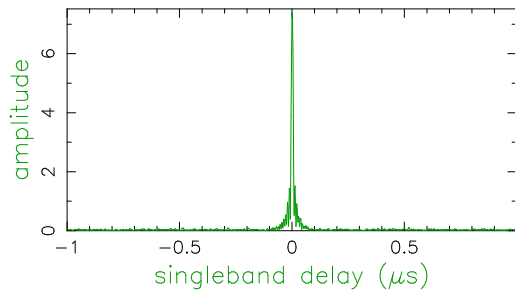
	7.87887925847E+03	Apriori delay (usec)	7.87887838606E+03	Resid mbdelay (usec)	8.72418E-04	+/- 3.8E-06
Group delay (usec)(sbd)	7.87887945843E+03	Apriori clock (usec)	7.4475632E+08	Resid sbdelay (usec)	1.07237E-03	+/- 1.5E-05
Sband delay (usec)	7.87887837941E+03	Apriori clockrate (us/s)	-7.0000002E-08	Resid phdelay (usec)	-6.64776E-06	+/- 2.5E-08
Phase delay (usec)	4.21287979816E-01	Apriori rate (us/s)	4.21288056569E-01	Resid rate (us/s)	-7.67534E-08	+/- 1.8E-10
Delay rate (us/s)	161.9	Apriori accel (us/s/s)	-4.14183373521E-05	Resid phase (deg)	-103.0	+/- 0.4
Total phase (deg)						

	RMS	Theor.	Amplitude	6.950 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	42.3	1.3	Search (1024X16)	6.629	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	34.1	2.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.1	0.4	Inc. seg. avg.	9.008	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.7	0.7	Inc. frq. avg.	6.860	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00



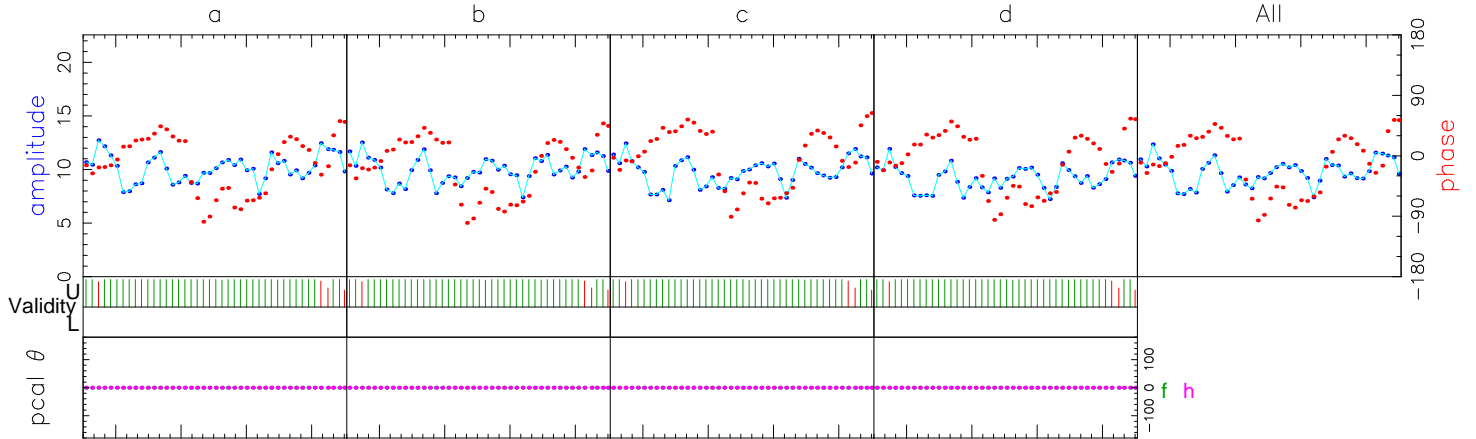
Fringe quality 6

SNR 316.9
Int time 237.261
Amp 7.522
Phase -8.1
PFD 0.0e+00
Delays (us)
SBD 0.001056
MBD 0.000856
Fringe rate (Hz)
-0.003334
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133523
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

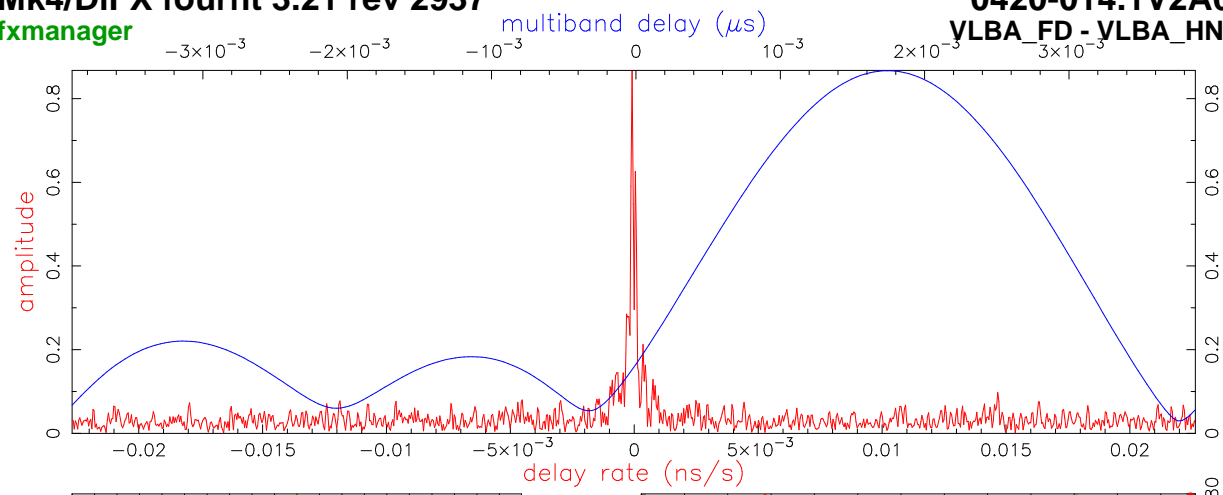


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-10.6	-14.2	-0.6	-6.6	Phase	-8.1
	7.7	7.6	7.3	7.0	Ampl.	7.4
	513.8	513.5	513.5	513.3	Sbd box	513.5
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
h	1000	1000	1000	1000	PC freqs	
f:h	0:0	0:0	0:0	0:0	PC phase	
f:h	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

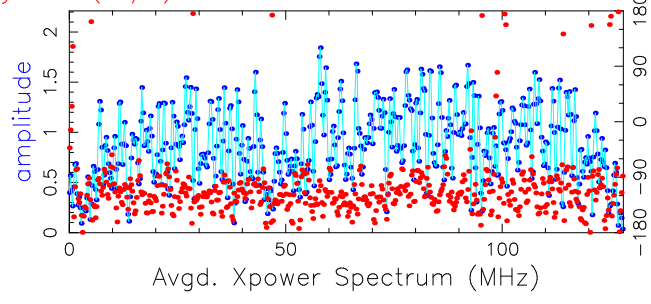
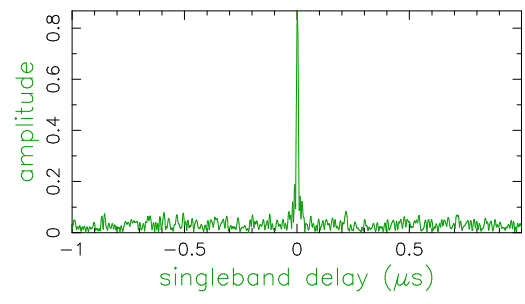
Group delay (usec)(sbd)	7.87887924241E+03	Apriori delay (usec)	7.87887838606E+03	Resid mbdelay (usec)	8.56356E-04	+/-	3.5E-06
Sband delay (usec)	7.87887944156E+03	Apriori clock (usec)	7.4475632E+08	Resid sbdelay (usec)	1.05550E-03	+/-	1.4E-05
Phase delay (usec)	7.87887838553E+03	Apriori clockrate (us/s)	-7.0000002E-08	Resid phdelay (usec)	-5.22493E-07	+/-	2.3E-08
Delay rate (us/s)	4.21287979104E-01	Apriori rate (us/s)	4.21288056569E-01	Resid rate (us/s)	-7.74653E-08	+/-	1.7E-10
Total phase (deg)	256.8	Apriori accel (us/s/s)	-4.14183373521E-05	Resid phase (deg)	-8.1	+/-	0.4

ph/seg (deg)	42.0	1.2	Search (1024X16)	7.188	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	33.4	2.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	7.1	0.4	Inc. seg. avg.	9.743	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
amp/frq (%)	4.1	0.6	Inc. frq. avg.	7.411	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023	
					Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

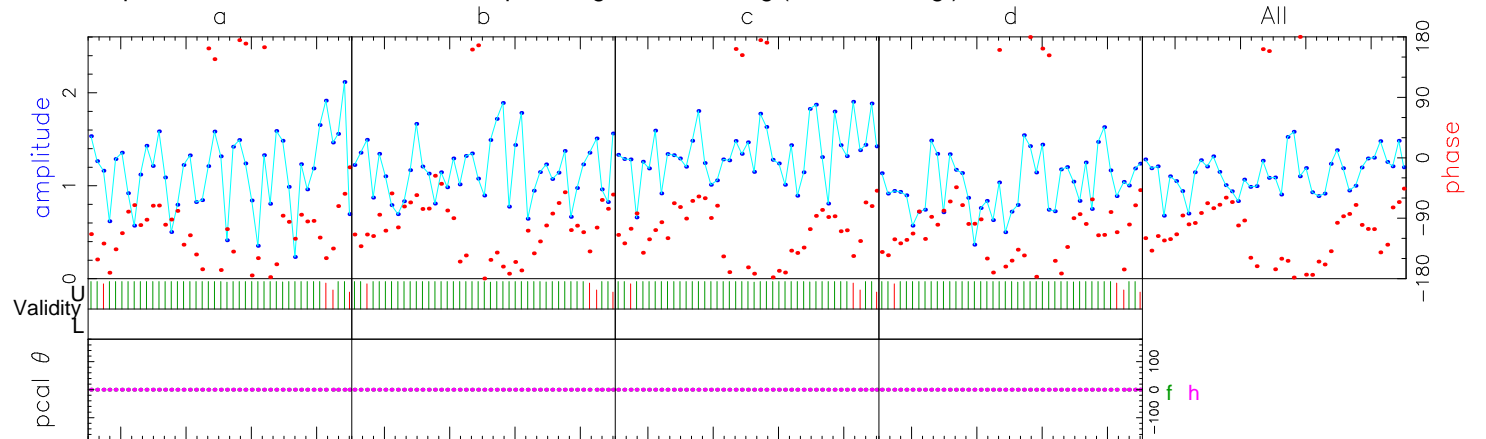
f: az 216.1 el 52.2 pa 30.9 h: az 242.0 el 25.1 pa 40.5 u,v (fr/asec) -1222.163 -724.630 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fh..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fh.Q.27.1V2A0K



Fringe quality 8
SNR 36.5
Int time 237.261
Amp 0.868
Phase -117.4
PFD 0.0e+00
Delays (us)
SBD 0.001733
MBD 0.001727
Fringe rate (Hz)
-0.003196
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133525
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



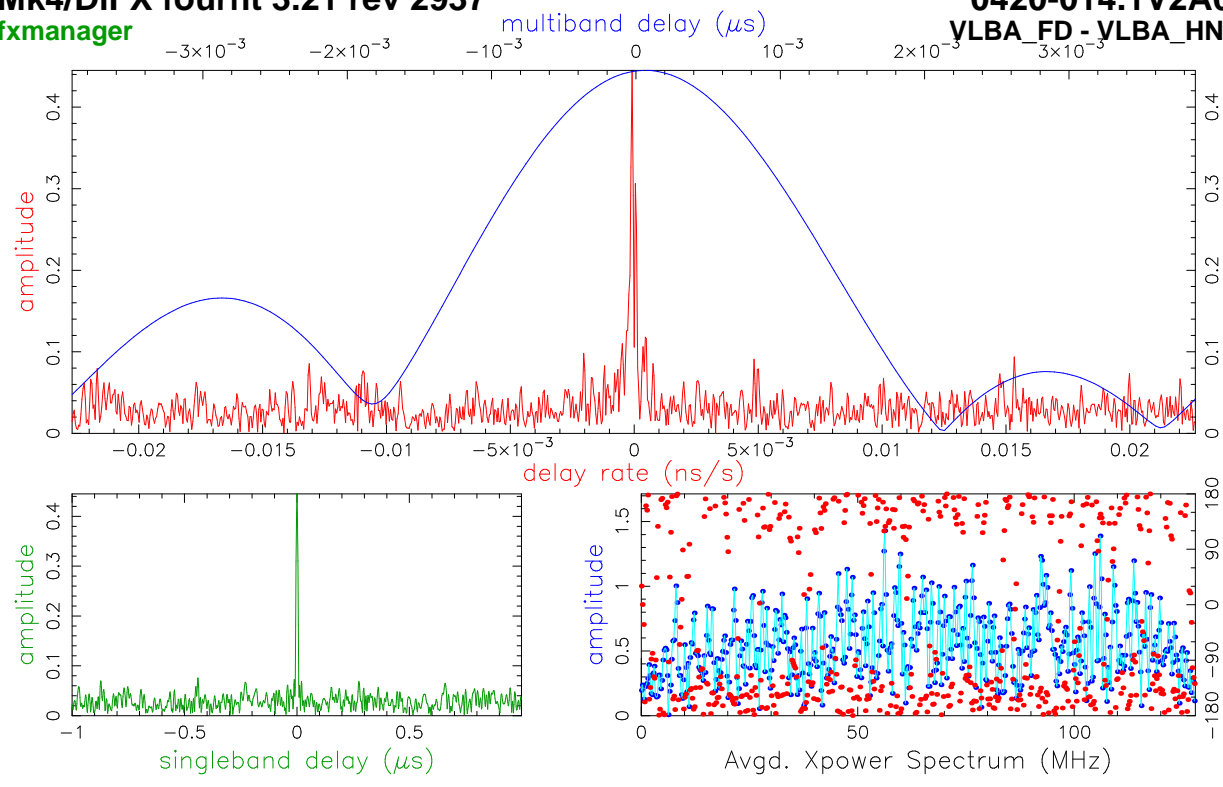
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-123.5	-110.7	-116.8	-119.2	Phase	-117.4
	0.8	0.9	1.0	0.8	Ampl.	0.9
	514.2	514.0	513.1	514.5	Sbd box	513.9
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
h	1000	1000	1000	1000	PC freqs	
f:h	0:0	0:0	0:0	0:0	PC phase	
f:h	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

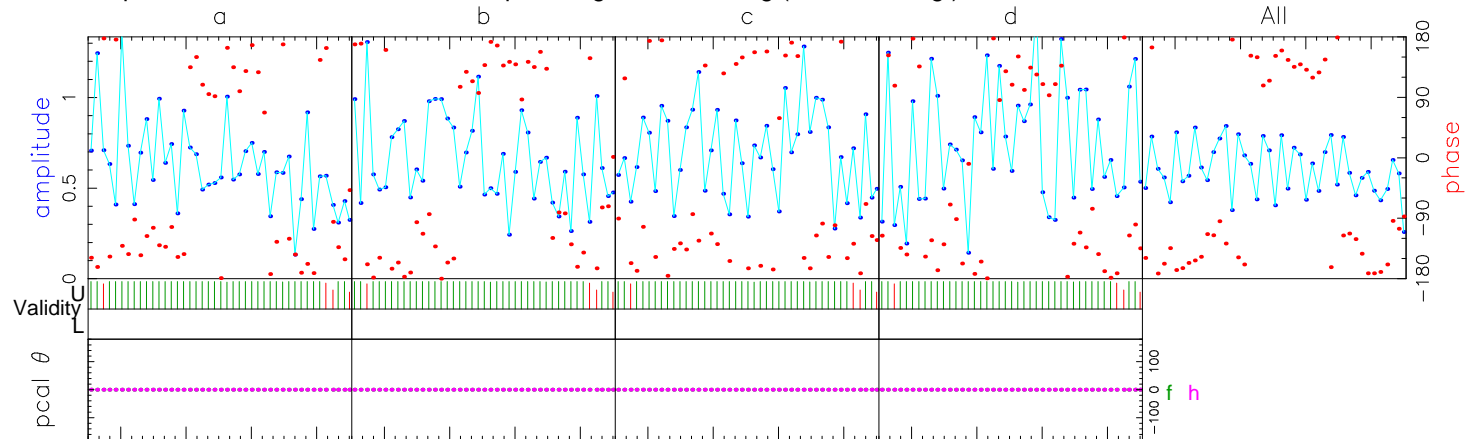
Group delay (usec)(sbd)	7.87888011291E+03	Apriori delay (usec)	7.87887838606E+03	Resid mbdelay (usec)	1.72686E-03	+/-	3.0E-05
Sband delay (usec)	7.87888011868E+03	Apriori clock (usec)	7.4475632E+08	Resid sbdelay (usec)	1.73262E-03	+/-	1.2E-04
Phase delay (usec)	7.87887837848E+03	Apriori clockrate (us/s)	-7.0000002E-08	Resid phdelay (usec)	-7.57857E-06	+/-	2.0E-07
Delay rate (us/s)	4.21287982306E-01	Apriori rate (us/s)	4.21288056569E-01	Resid rate (us/s)	-7.42632E-08	+/-	1.5E-09
Total phase (deg)	147.5	Apriori accel (us/s/s)	-4.14183373521E-05	Resid phase (deg)	-117.4	+/-	3.1

ph/seg (deg) 40.6 10.3 Amplitude 0.868 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 38.4 17.9 Search (1024X16) 0.820 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 6.5 3.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 9.7 5.5 Inc. seg. avg. 1.114 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
f: az 216.1 el 52.2 pa 30.9 h: az 242.0 el 25.1 pa 40.5 u,v (fr/asec) -1222.163 -724.630 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fh..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fh.Q.41.1V2A0K simultaneous interpolator



Fringe quality 9
SNR 18.7
Int time 237.261
Amp 0.445
Phase -168.4
PFD 0.0e+00
Delays (us)
SBD 0.000013
MBD 0.000065
Fringe rate (Hz)
-0.003589
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133527
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



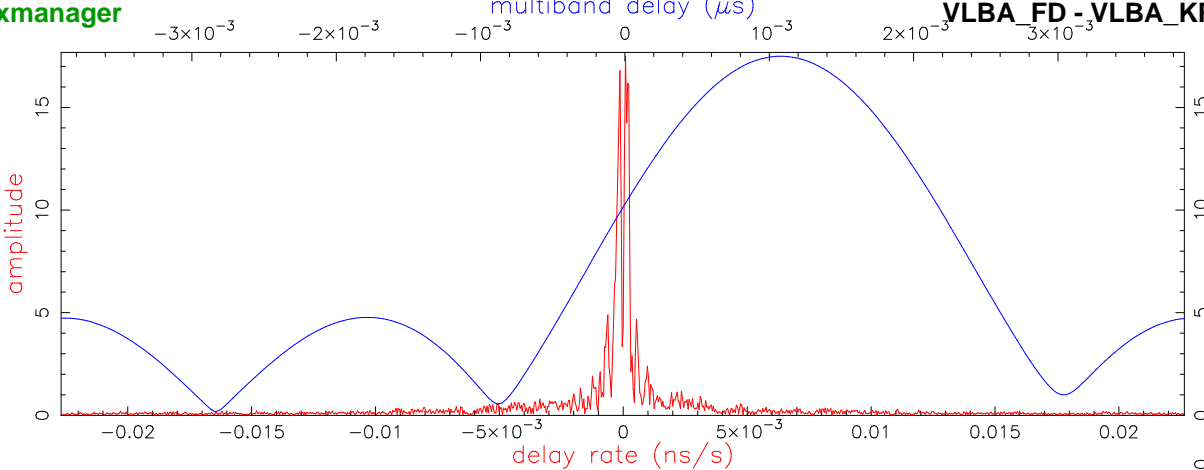
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-167.7	-177.1	-155.9	-175.0	Phase	-168.4
	0.4	0.4	0.5	0.5	Ampl.	0.4
	513.3	512.7	513.6	512.2	Sbd box	513.0
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
h	1000	1000	1000	1000	PC freqs	
f:h	0:0	0:0	0:0	0:0	PC phase	
f:h	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	7.87887845057E+03		Apriori delay (usec)	7.87887838606E+03	Resid mbdelay (usec)	6.45119E-05 +/- 5.9E-05
Sband delay (usec)	7.87887839906E+03		Apriori clock (usec)	7.4475632E+08	Resid sbdelay (usec)	1.30000E-05 +/- 2.3E-04
Phase delay (usec)	7.87887837519E+03		Apriori clockrate (us/s)	-7.0000002E-08	Resid phdelay (usec)	-1.08712E-05 +/- 3.9E-07
Delay rate (us/s)	4.21287973174E-01		Apriori rate (us/s)	4.21288056569E-01	Resid rate (us/s)	-8.33958E-08 +/- 2.9E-09
Total phase (deg)		96.5	Apriori accel (us/s/s)	-4.14183373521E-05	Resid phase (deg)	-168.4 +/- 6.1
RMS	44.0	20.0	Amplitude	0.445 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	44.0	20.0	Search (1024X16)	0.441	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	48.7	34.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	11.8	6.1	Inc. seg. avg.	0.575	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	7.8	10.7	Inc. frq. avg.	0.448	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9		h: az 242.0 el 25.1 pa 40.5		u,v (fr/asec) -1222.163 -724.630		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fh..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fh.Q.63.1V2A0K		

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

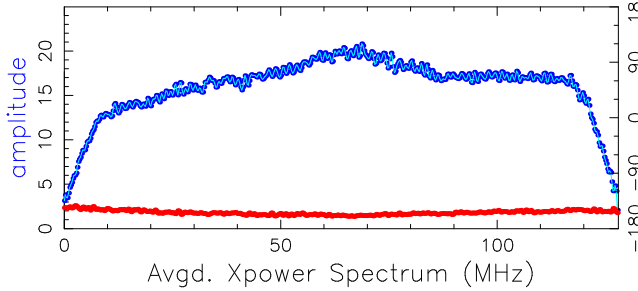
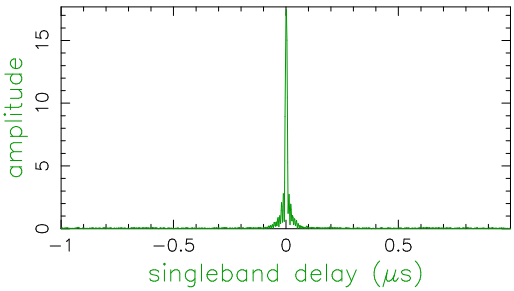
0420-014.1V2A0K, No0121, fk

VLBA_FD - VLBA_KP, fgroup Q, pol LL



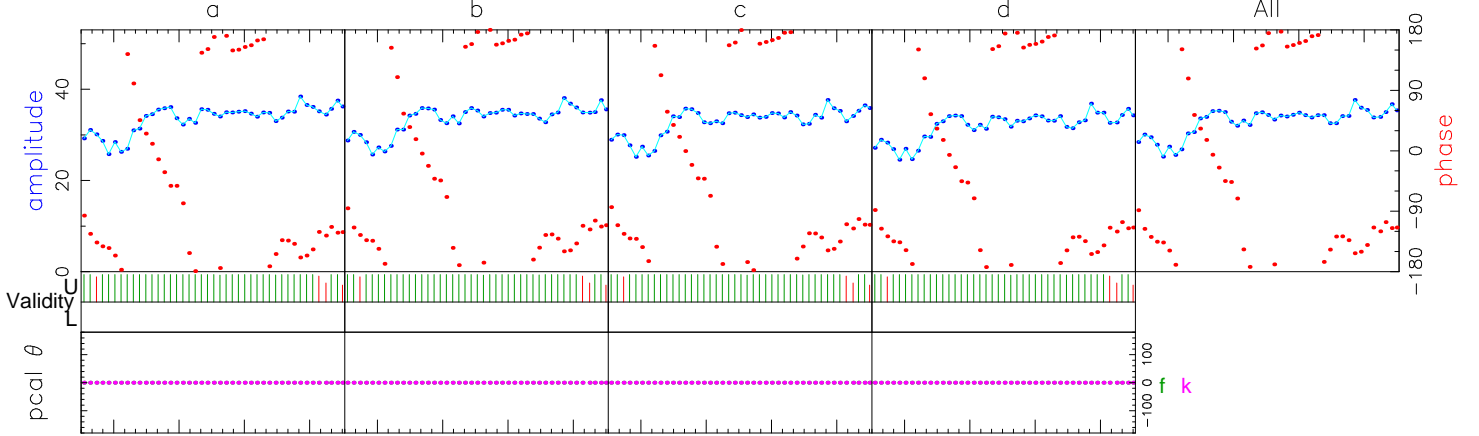
Fringe quality 5

SNR 744.8
 Int time 237.261
 Amp 17.682
 Phase -150.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.001249
 MBD 0.001039
 Fringe rate (Hz)
 0.003645
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133522
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

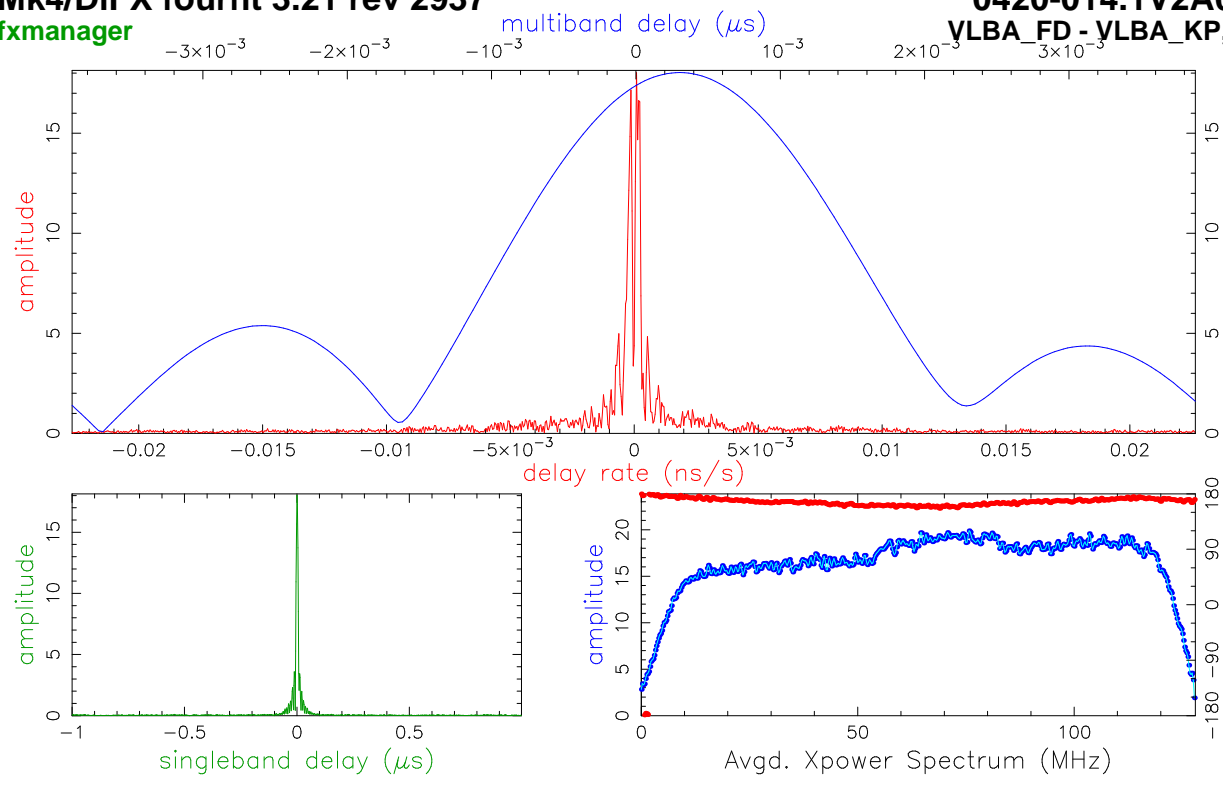


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-156.2	-147.5	-145.3	-150.9	Phase	-150.0
	17.9	17.8	17.5	16.9	Ampl.	17.5
	513.8	513.6	513.5	513.7	Sbd box	513.6
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-4.90559029655E+02	Apriori delay (usec)	-4.90560068393E+02	Resid mbdelay (usec)	1.03874E-03	+/- 1.5E-06
Sband delay (usec)	-4.90558819018E+02	Apriori clock (usec)	9.9079475E+00	Resid sbdelay (usec)	1.24938E-03	+/- 5.8E-06
Phase delay (usec)	-4.90560078073E+02	Apriori clockrate (us/s)	5.9999999E-08	Resid phdelay (usec)	-9.68019E-06	+/- 9.9E-09
Delay rate (us/s)	-1.74461814678E-01	Apriori rate (us/s)	-1.74461899373E-01	Resid rate (us/s)	8.46948E-08	+/- 7.2E-11
Total phase (deg)	-273.7	Apriori accel (us/s/s)	2.71146310915E-06	Resid phase (deg)	-150.0	+/- 0.2

ph/seg (deg)	RMS 68.6	Theor. 0.5	Amplitude Search (1024X16)	17.682 +/- 0.024	17.344	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	87.5	0.9	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	5.8	0.2	Inc. seg. avg.	32.872	32.872	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	2.3	0.3	Inc. frq. avg.	17.531	17.531	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 216.1 el 52.2 pa 30.9 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) 500.668 -88.588 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fk.Q.15.1V2A0K

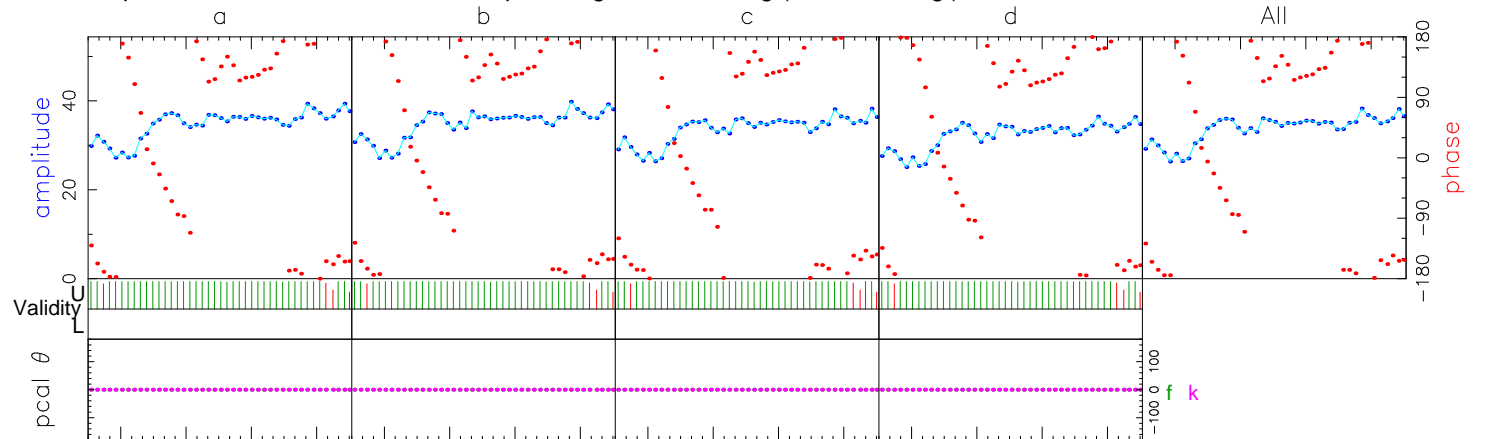


Fringe quality 5

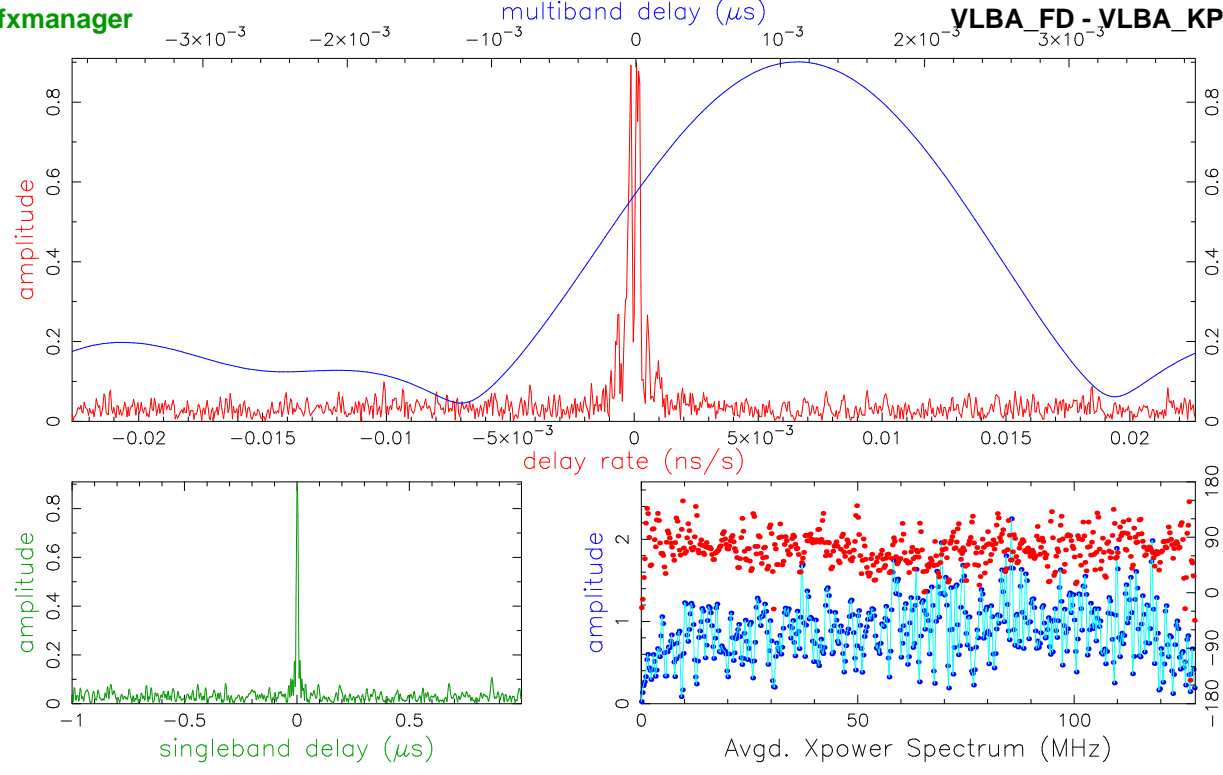
SNR 764.1
Int time 237.261
Amp 18.139
Phase 171.4
PFD 0.0e+00
Delays (us)
SBD 0.000516
MBD 0.000330
Fringe rate (Hz) 0.003655
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133524
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

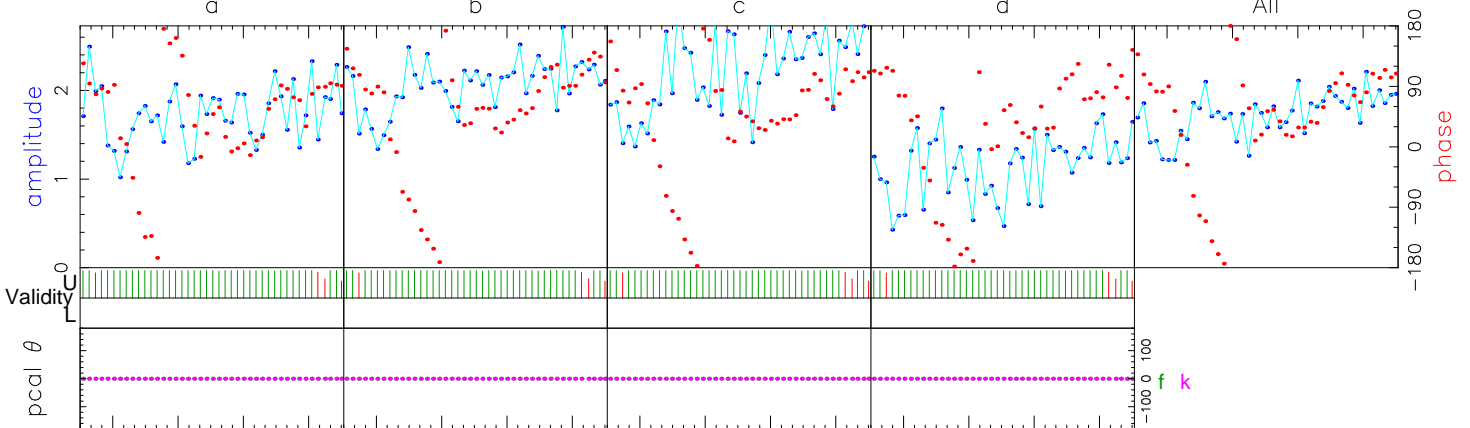


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-4.90559738498E+02		Apriori delay (usec)	-4.90560068393E+02	Resid mbdelay (usec)	3.29894E-04 +/- 1.5E-06
Sband delay (usec)	-4.90559552393E+02		Apriori clock (usec)	9.9079475E+00	Resid sbdelay (usec)	5.16000E-04 +/- 5.6E-06
Phase delay (usec)	-4.90560057329E+02		Apriori clockrate (us/s)	5.9999999E-08	Resid phdelay (usec)	1.10634E-05 +/- 9.7E-09
Delay rate (us/s)	-1.74461814463E-01		Apriori rate (us/s)	-1.74461899373E-01	Resid rate (us/s)	8.49103E-08 +/- 7.0E-11
Total phase (deg)		47.7	Apriori accel (us/s/s)	2.71146310915E-06	Resid phase (deg)	171.4 +/- 0.1
RMS	68.5	0.5	Amplitude	18.139 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	68.5	0.5	Search (1024X16)	17.664	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	87.5	0.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.5	0.1	Inc. seg. avg.	33.716	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.2	0.3	Inc. frq. avg.	18.101	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9		k: az 203.6 el 54.4 pa 20.3		u,v (fr/asec) 500.668 -88.588		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fk..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fk.Q.33.1V2A0K		



Fringe quality 6
SNR 38.3
Int time 237.261
Amp 0.910
Phase 75.0
PFD 0.0e+00
Delays (us)
SBD 0.001285
MBD 0.001073
Fringe rate (Hz) 0.003872
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133526
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

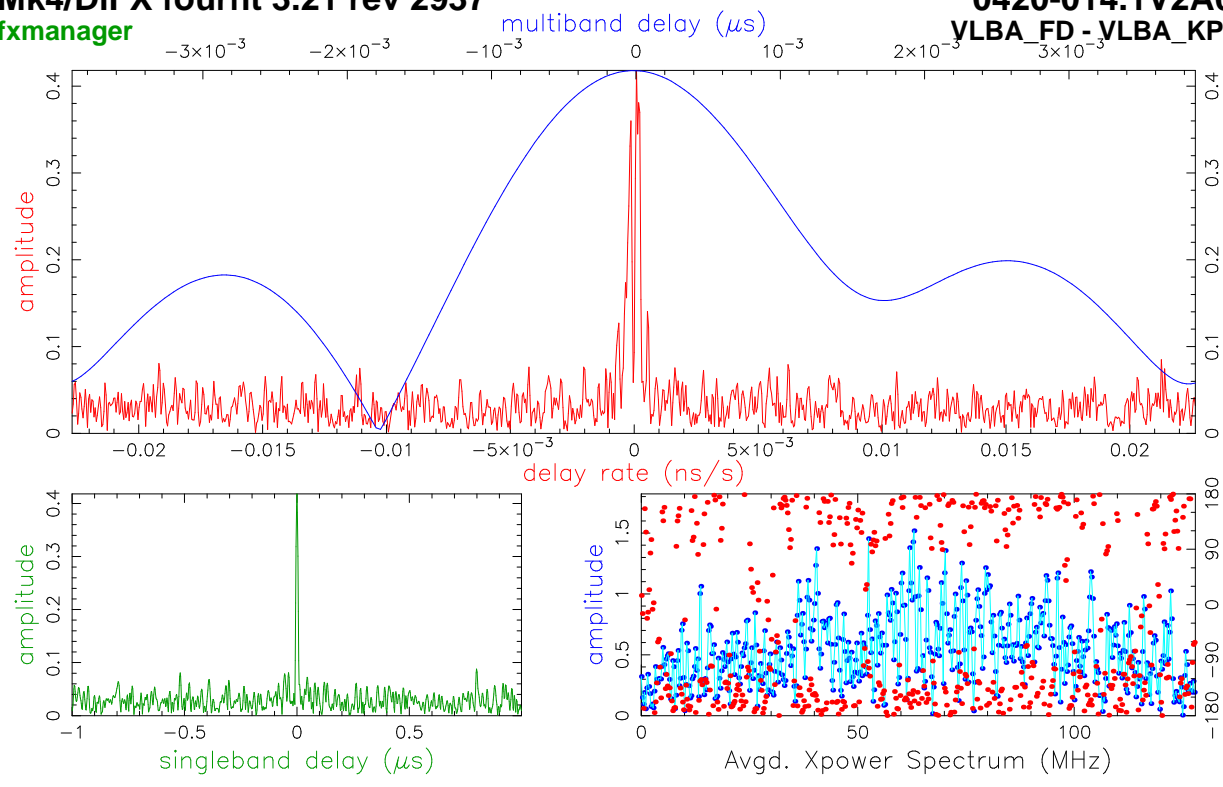
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	-4.90558994998E+02	Apriori delay (usec)	-4.90560068393E+02	Resid mbdelay (usec)	1.07339E-03	+/-	2.9E-05
Sband delay (usec)	-4.90558783643E+02	Apriori clock (usec)	9.9079475E+00	Resid sbdelay (usec)	1.28475E-03	+/-	1.1E-04
Phase delay (usec)	-4.90560063550E+02	Apriori clockrate (us/s)	5.9999999E-08	Resid phdelay (usec)	4.84221E-06	+/-	1.9E-07
Delay rate (us/s)	-1.74461809409E-01	Apriori rate (us/s)	-1.74461899373E-01	Resid rate (us/s)	8.99645E-08	+/-	1.4E-09
Total phase (deg)		Apriori accel (us/s/s)	2.71146310915E-06	Resid phase (deg)	75.0	+/-	3.0

ph/seg (deg)	69.3	9.8	Search (1024X16)	0.892	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	93.7	17.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	9.1	3.0	Inc. seg. avg.	1.701	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	24.2	5.2	Inc. frq. avg.	0.905	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023
f: az 216.1 el 52.2 pa 30.9		k: az 203.6 el 54.4 pa 20.3		u,v (fr/asec)	500.668 -88.588		ion window (TEC)	0.00 0.00

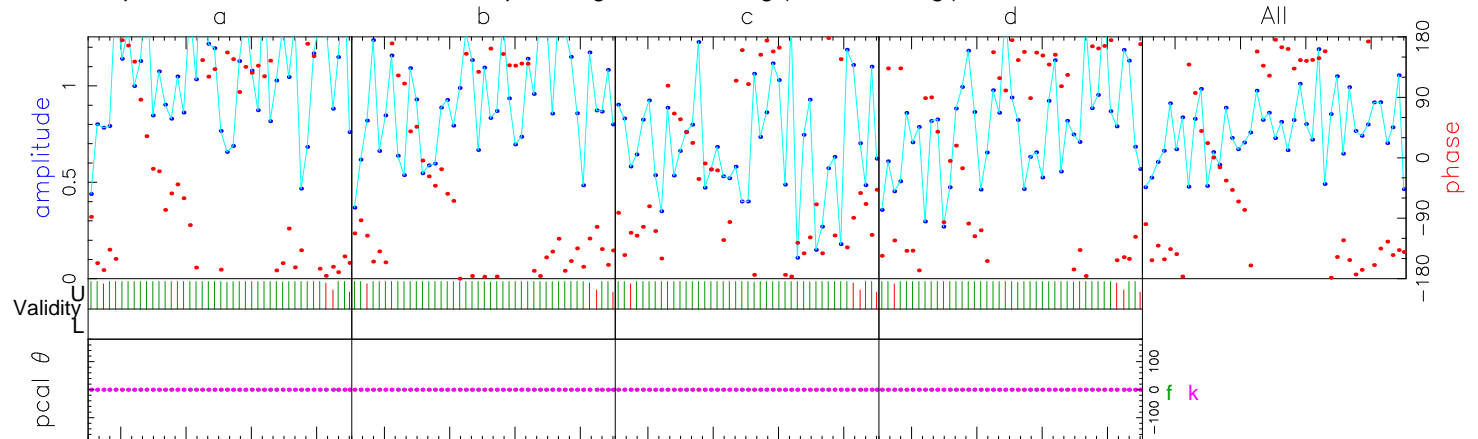


Fringe quality 8

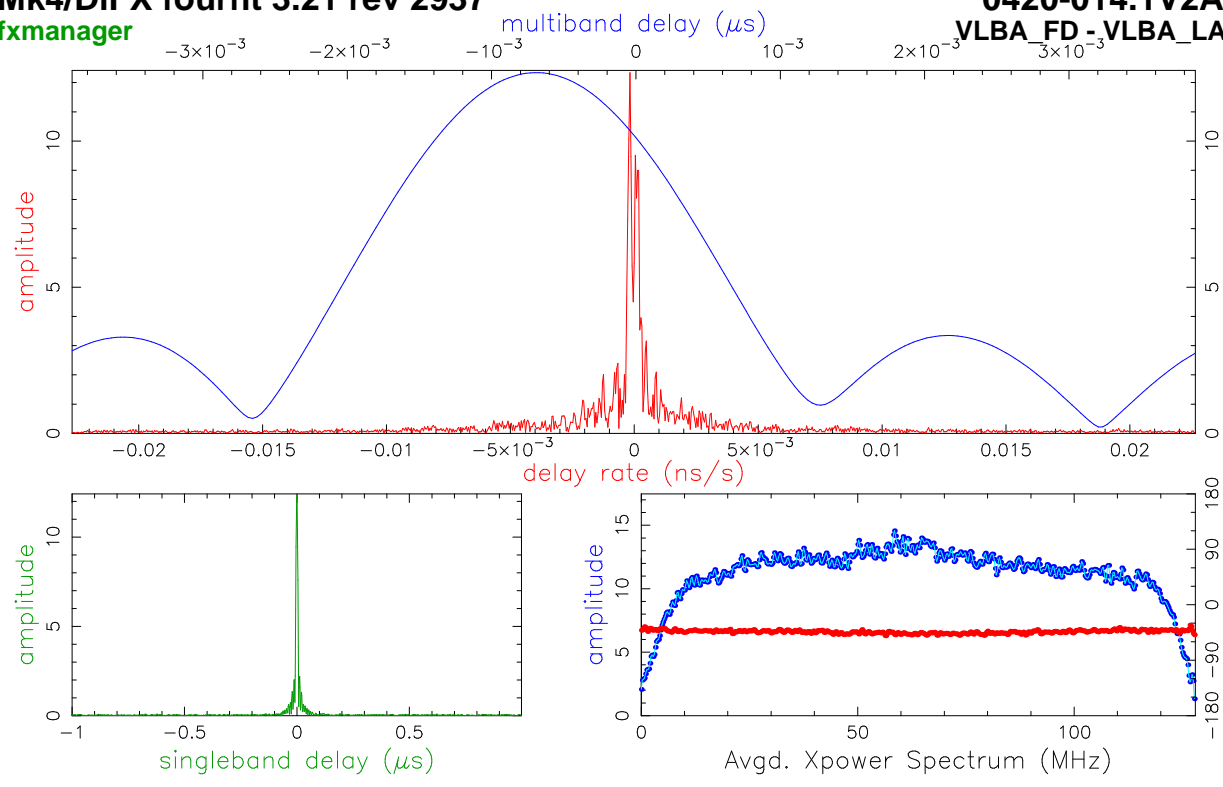
SNR 17.6
Int time 237.261
Amp 0.418
Phase -171.0
PFD 0.0e+00
Delays (us)
SBD -0.000196
MBD -0.000024
Fringe rate (Hz)
0.003725
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133528
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
178.3	-164.3	-130.9	171.6	Phase	-171.0
0.5	0.5	0.3	0.4	Ampl.	0.4
513.6	512.8	512.3	512.8	Sbd box	512.9
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	PC freqs	
f:k 0:0	0:0	0:0	0:0	PC phase	
f:k 0:0	0:0	0:0	0:0	ManI PC	
f 1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-4.90560092030E+02	Apriori delay (usec)	-4.90560068393E+02	Resid mbdelay (usec)	-2.36369E-05 +/- 6.3E-05
Sband delay (usec)	-4.90560264643E+02	Apriori clock (usec)	9.9079475E+00	Resid sbdelay (usec)	-1.96250E-04 +/- 2.4E-04
Phase delay (usec)	-4.90560079431E+02	Apriori clockrate (us/s)	5.9999999E-08	Resid phdelay (usec)	-1.10383E-05 +/- 4.2E-07
Delay rate (us/s)	-1.74461812818E-01	Apriori rate (us/s)	-1.74461899373E-01	Resid rate (us/s)	8.65553E-08 +/- 3.0E-09
Total phase (deg)	-294.7	Apriori accel (us/s/s)	2.71146310915E-06	Resid phase (deg)	-171.0 +/- 6.5
RMS	Theor.	Amplitude	0.418 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
70.4	21.3	Search (1024X16)	0.416	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
94.0	37.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
32.2	6.5	Inc. seg. avg.	0.722	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
26.9	11.4	Inc. frq. avg.	0.439	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9	k: az 203.6 el 54.4 pa 20.3	u, v (fr/asec) 500.668 -88.588			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fk..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fk.Q.76.1V2A0K			

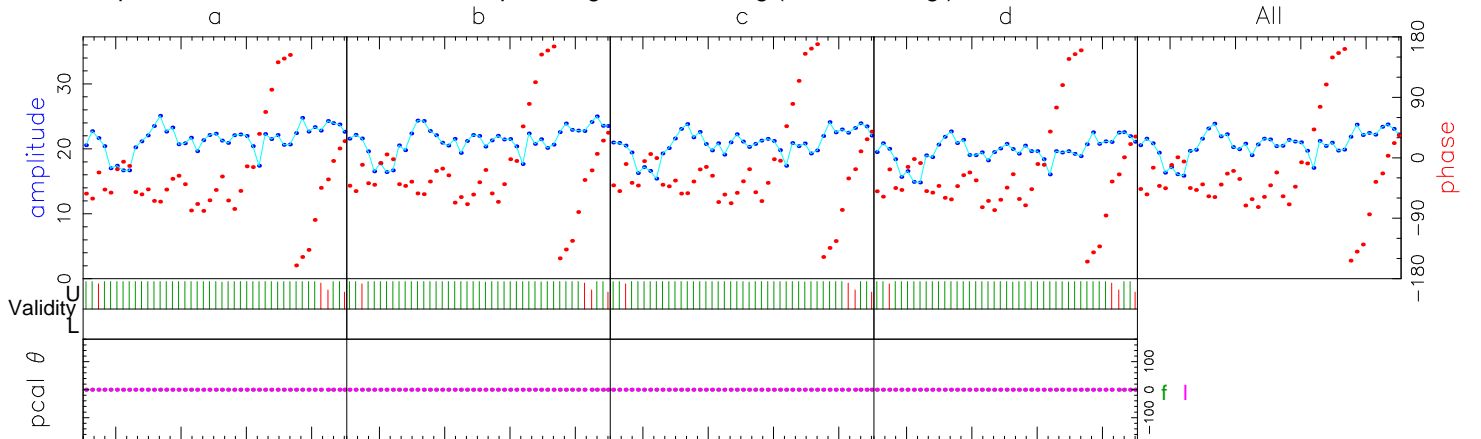


Fringe quality 5

SNR 523.0
Int time 237.261
Amp 12.417
Phase -39.7
PFD 0.0e+00
Delays (us)
SBD -0.000528
MBD -0.000719
Fringe rate (Hz)
-0.007732
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133522
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-46.4	-35.3	-34.5	-42.6	Phase	-39.7
	12.7	12.7	12.4	11.7	Ampl.	12.4
	513.2	512.6	512.5	512.6	Sbd box	512.7
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	7.69999817071E+02	Apriori delay (usec)	7.70000536516E+02	Resid mbdelay (usec)	-7.19445E-04	+/- 2.1E-06
Sband delay (usec)	7.70000008516E+02	Apriori clock (usec)	1.2809992E+01	Resid sbdelay (usec)	-5.28000E-04	+/- 8.2E-06
Phase delay (usec)	7.70000533957E+02	Apriori clockrate (us/s)	3.4600000E-07	Resid phdelay (usec)	-2.55942E-06	+/- 1.4E-08
Delay rate (us/s)	-7.55054925074E-02	Apriori rate (us/s)	-7.55053128536E-02	Resid rate (us/s)	-1.79654E-07	+/- 1.0E-10
Total phase (deg)		Apriori accel (us/s/s)	-3.83494594977E-06	Resid phase (deg)	-39.7	+/- 0.2

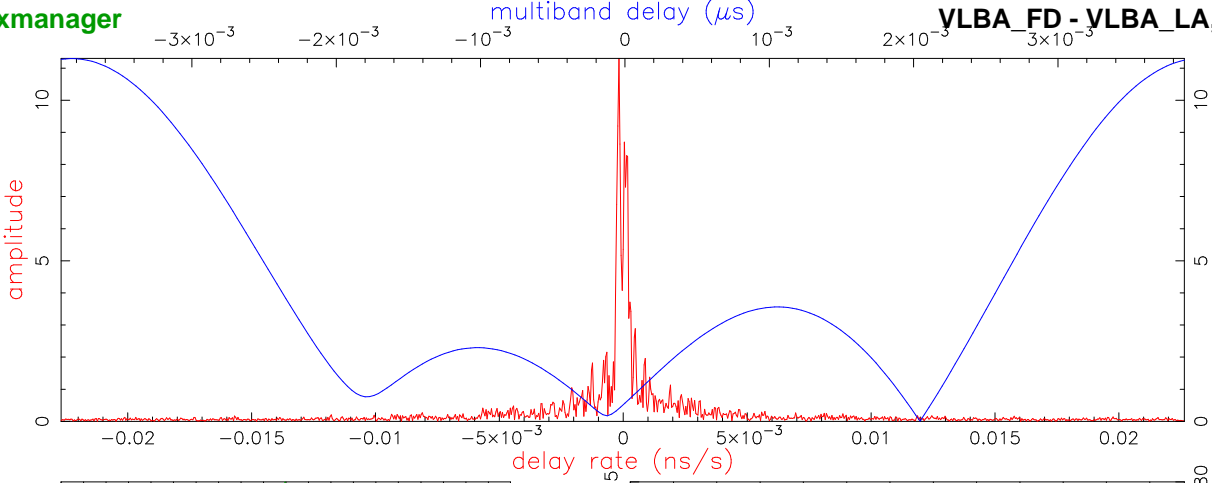
ph/seg (deg) 64.9 0.7 Search (1024X16) 12.148 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 68.6 1.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 7.1 0.2 Inc. seg. avg. 20.711 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 3.4 0.4 Inc. frq. avg. 12.386 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
f: az 216.1 el 52.2 pa 30.9 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 215.082 -328.199 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fl.Q.12.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, fl

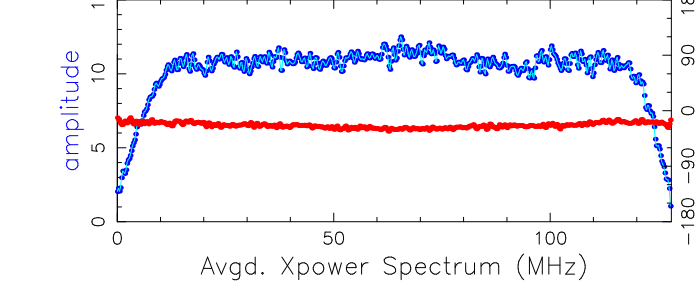
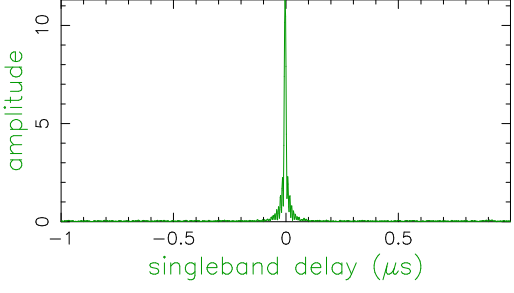
VLBA_FD - VLBA_LA, fgroup Q, pol RR



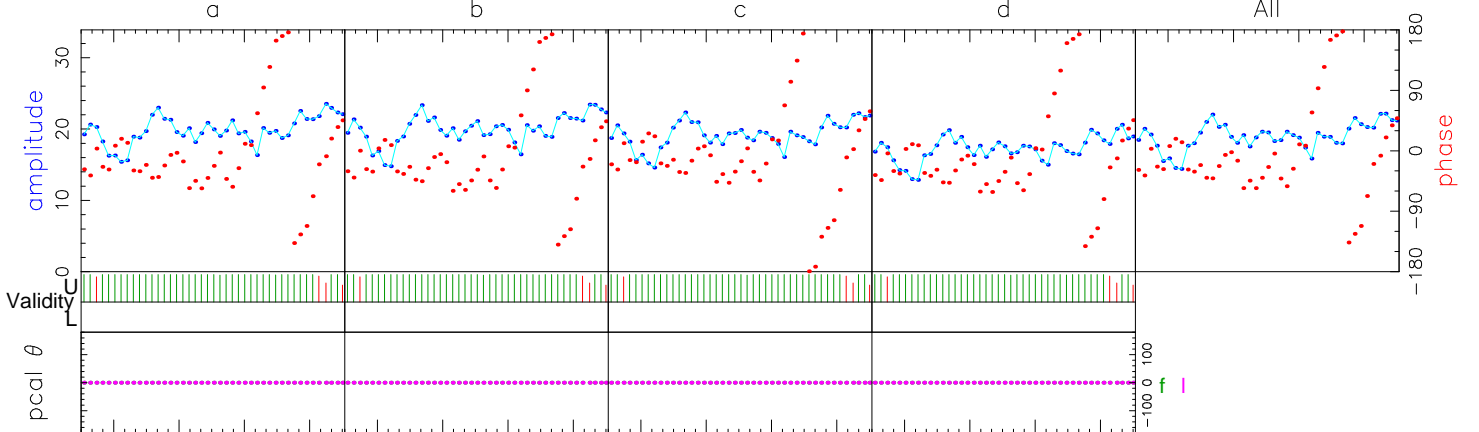
Fringe quality 5

SNR 476.1
 Int time 237.261
 Amp 11.303
 Phase -22.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.003747
 MBD -0.003821
 Fringe rate (Hz)
 -0.007712
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133524
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-22.2	-25.5	-13.4	-28.4	Phase	-22.3
	11.8	11.9	11.4	10.3	Ampl.	11.3
	511.5	511.1	511.3	510.2	Sbd box	511.1
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	7.69996715141E+02	Apriori delay (usec)	7.7000536516E+02	Resid mbdelay (usec)	-3.82138E-03	+/- 2.3E-06
Group delay (usec)(sbd)	7.69996789266E+02	Apriori clock (usec)	1.2809992E+01	Resid sbdelay (usec)	-3.74725E-03	+/- 9.0E-06
Sband delay (usec)	7.7000535079E+02	Apriori clockrate (us/s)	3.4600000E-07	Resid phdelay (usec)	-1.43742E-06	+/- 1.6E-08
Phase delay (usec)	-7.55054920366E-02	Apriori rate (us/s)	-7.55053128536E-02	Resid rate (us/s)	-1.79183E-07	+/- 1.1E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-3.83494594977E-06	Resid phase (deg)	-22.3	+/- 0.2
Total phase (deg)	10.7					

	RMS	Theor.	Amplitude	11.303 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	65.1	0.8	Search (1024X16)	11.228	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	69.7	1.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.0	0.2	Inc. seg. avg.	18.959	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.8	0.4	Inc. frq. avg.	11.349	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 216.1 el 52.2 pa 30.9 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 215.082 -328.199 simultaneous interpolator

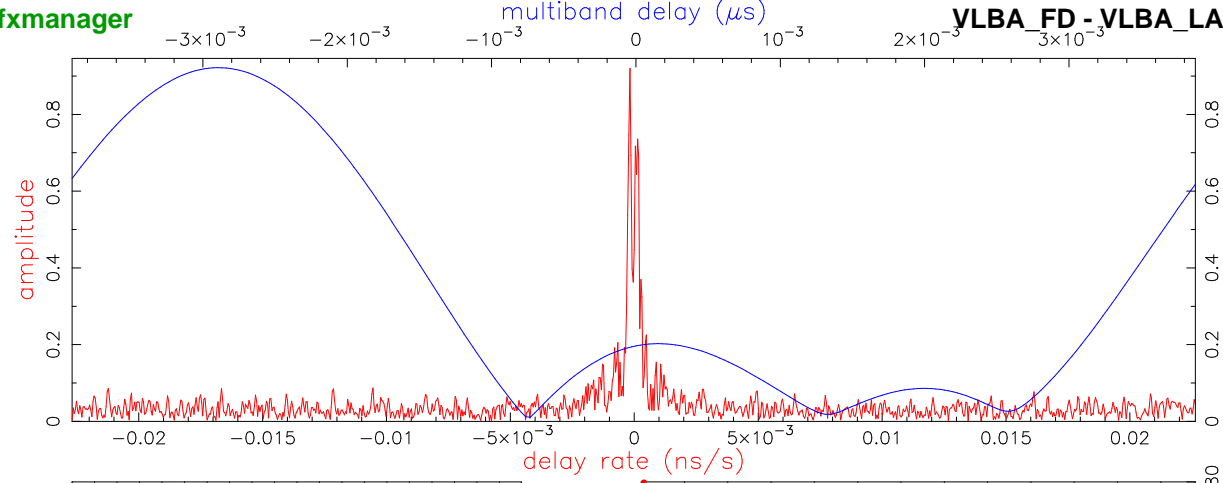
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Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, fl

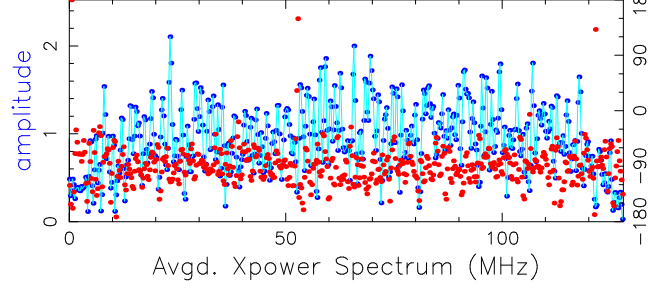
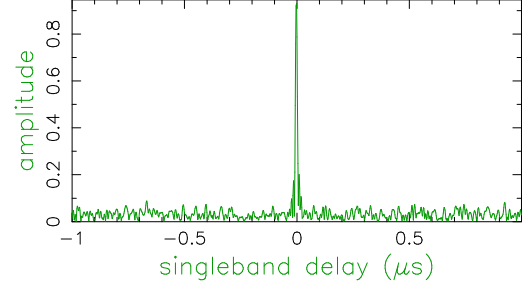
VLBA_FD - VLBA_LA, fgroup Q, pol LR



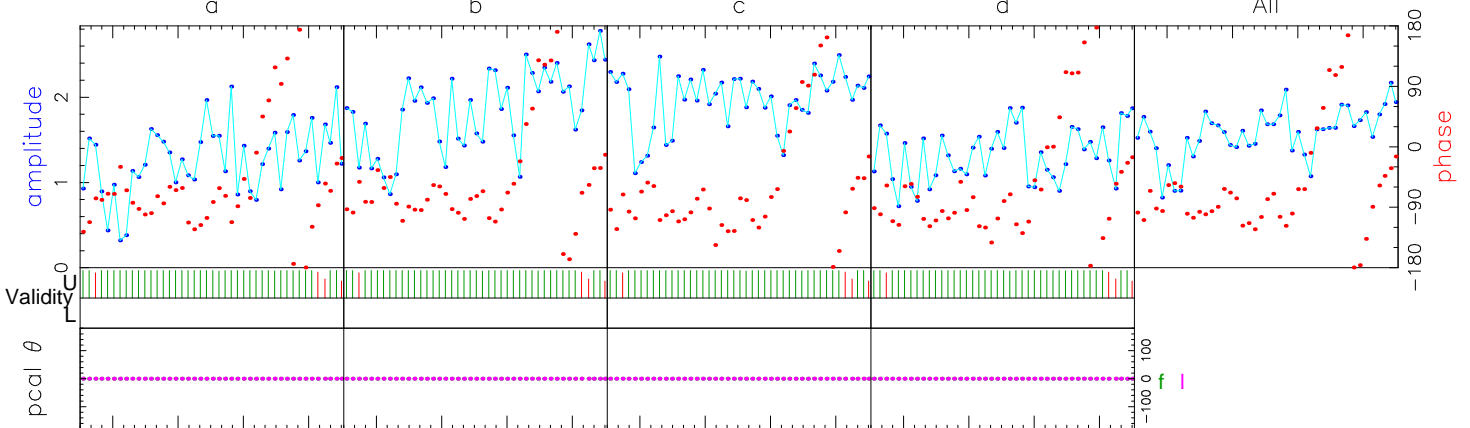
Fringe quality 7

SNR 39.8
 Int time 237.261
 Amp 0.946
 Phase -90.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.002793
 MBD -0.002812
 Fringe rate (Hz)
 -0.007808
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133527
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000	APs used	1000
l	1000	1000	1000	1000	PC freqs	1000
f:l	0:0	0:0	0:0	0:0	PC phase	0:0
f:l	0:0	0:0	0:0	0:0	ManI PC	0:0
f	1000	1000	1000	1000	PC amp	1000
l	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	7.69997724384E+02	Apriori delay (usec)	7.7000536516E+02	Resid mbdelay (usec)	-2.81213E-03	+/- 2.8E-05
Sband delay (usec)	7.69997743266E+02	Apriori clock (usec)	1.2809992E+01	Resid sbdelay (usec)	-2.79325E-03	+/- 1.1E-04
Phase delay (usec)	7.7000530663E+02	Apriori clockrate (us/s)	3.4600000E-07	Resid phdelay (usec)	-5.85297E-06	+/- 1.9E-07
Delay rate (us/s)	-7.55054942573E-02	Apriori rate (us/s)	-7.55053128536E-02	Resid rate (us/s)	-1.81404E-07	+/- 1.3E-09
Total phase (deg)	-57.7	Apriori accel (us/s/s)	-3.83494594977E-06	Resid phase (deg)	-90.7	+/- 2.9

	RMS	Theor.	Amplitude	0.946 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	62.7	9.4	Search (1024X16)	0.917	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	73.4	16.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.2	2.9	Inc. seg. avg.	1.555	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	18.2	5.0	Inc. frq. avg.	0.924	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 216.1 el 52.2 pa 30.9 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 215.082 -328.199 simultaneous interpolator

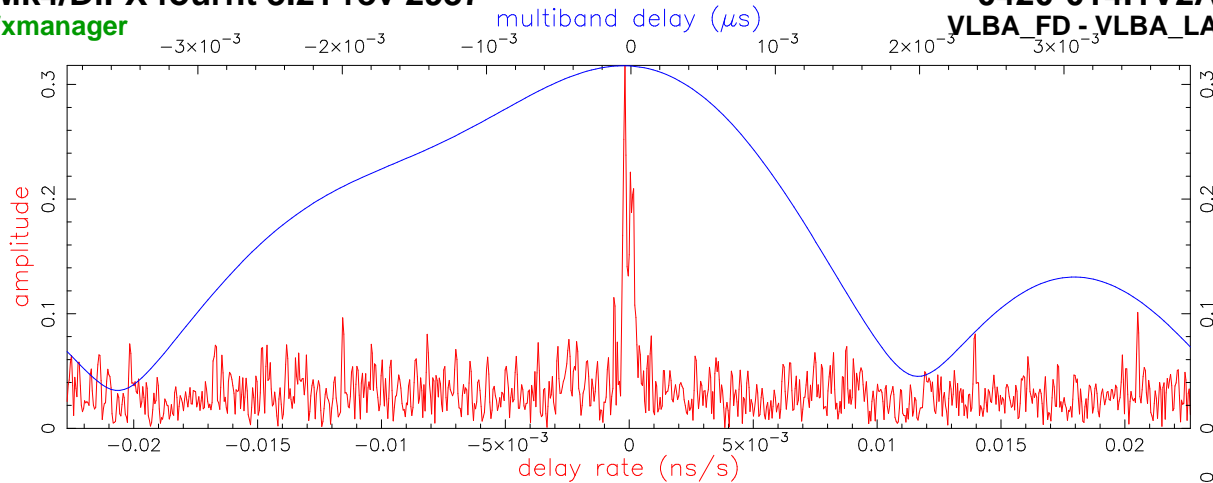
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fl.Q.59.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

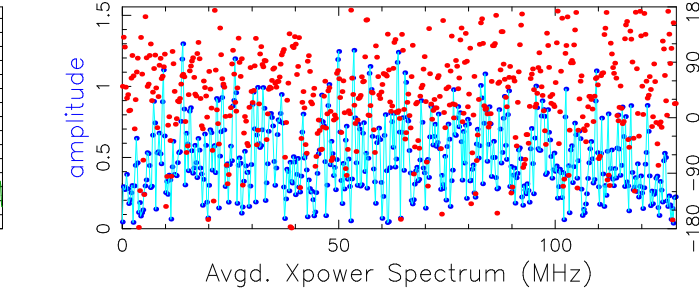
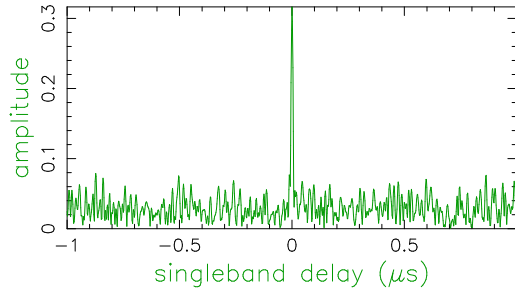
0420-014.1V2A0K, No0121, fl

VLBA_FD - VLBA_LA, fgroup Q, pol RL



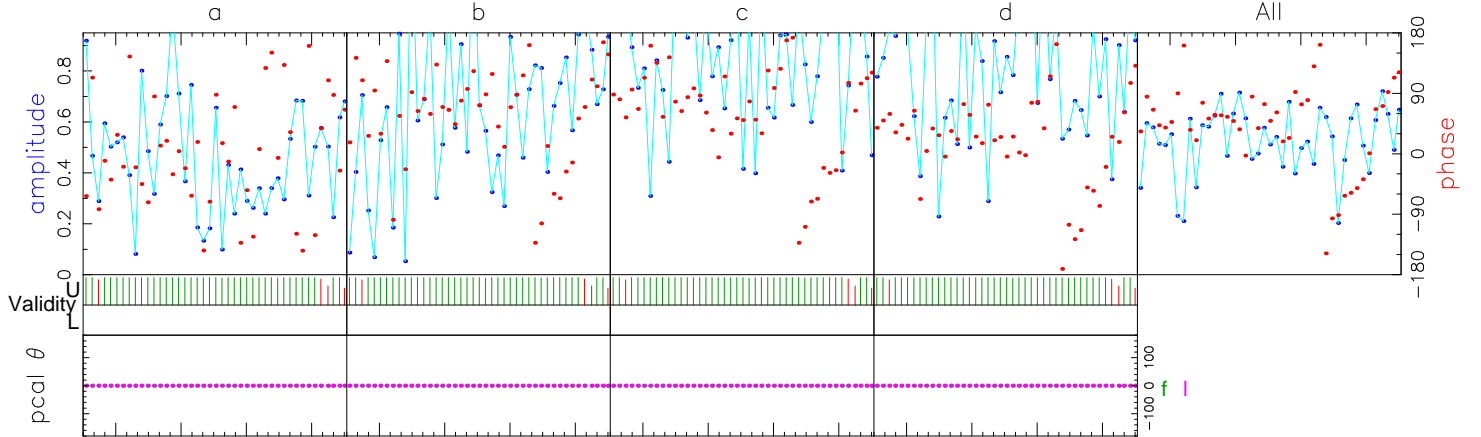
Fringe quality 7

SNR 13.3
 Int time 237.261
 Amp 0.317
 Phase 52.8
 PFD 4.0e-32
 Delays (us)
 SBD 0.000241
 MBD -0.000027
 Fringe rate (Hz)
 -0.007572
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133528
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

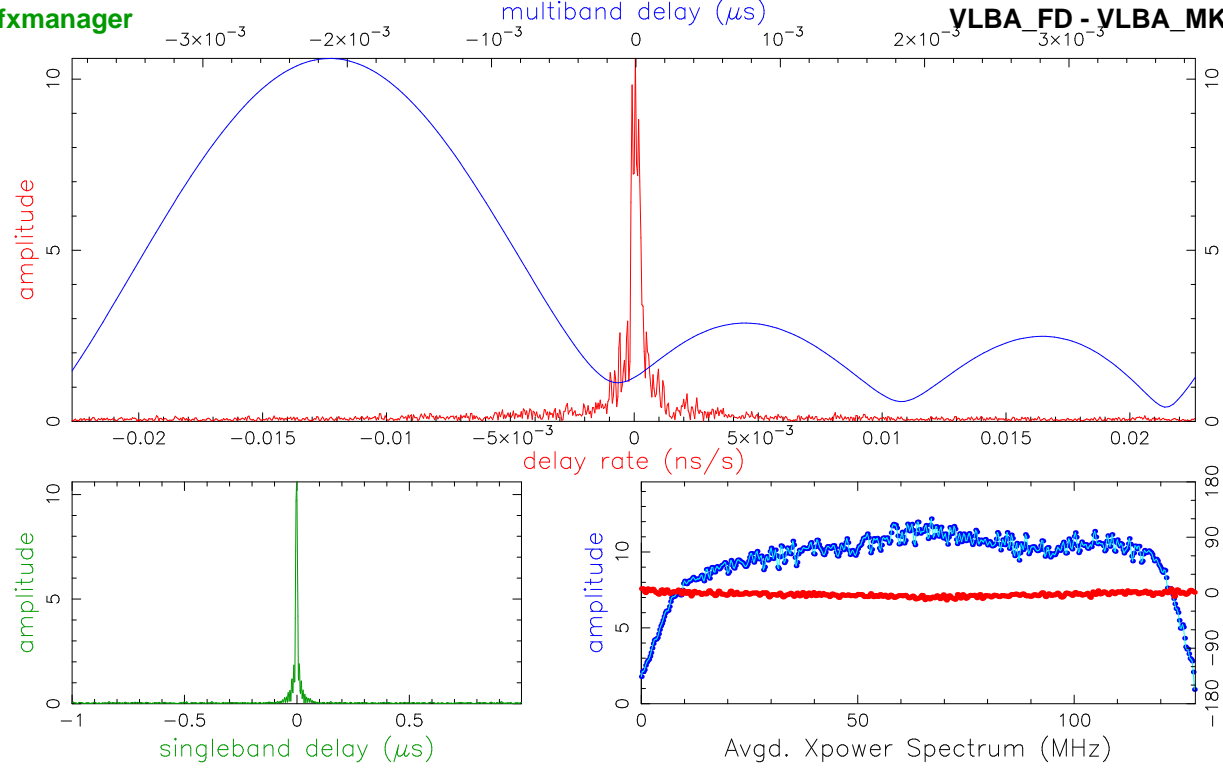


42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-16.5	80.5	73.7	32.1	Phase	52.8
0.2	0.4	0.5	0.5	Ampl.	0.4
513.2	512.2	513.5	512.3	Sbd box	513.1
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
f:l 0:0	0:0	0:0	0:0	PC phase	
f:l 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	7.70000509259E+02	Apriori delay (usec)	7.70000536516E+02	Resid mbdelay (usec)	-2.72574E-05	+/-	8.3E-05
Sband delay (usec)	7.70000777766E+02	Apriori clock (usec)	1.2809992E+01	Resid sbdelay (usec)	2.41250E-04	+/-	3.2E-04
Phase delay (usec)	7.70000539924E+02	Apriori clockrate (us/s)	3.4600000E-07	Resid phdelay (usec)	3.40792E-06	+/-	5.5E-07
Delay rate (us/s)	-7.55054887806E-02	Apriori rate (us/s)	-7.55053128536E-02	Resid rate (us/s)	-1.75927E-07	+/-	4.0E-09
Total phase (deg)	85.8	Apriori accel (us/s/s)	-3.83494594977E-06	Resid phase (deg)	52.8	+/-	8.6

ph/seg (deg)	63.2	Theor.	28.1	Amplitude	0.317 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	77.2	Search (1024X16)	0.315	Search	0.315	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	56.7	Inc. seg. avg.	0.468	Inc. seg. avg.	0.468	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	42.7	Inc. frq. avg.	0.365	Inc. frq. avg.	0.365	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
f: az 216.1 el 52.2 pa 30.9		l: az 209.5 el 49.0 pa 24.1		u,v (fr/asec)	215.082 -328.199	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fl.Q.75.1V2A0K simultaneous interpolator

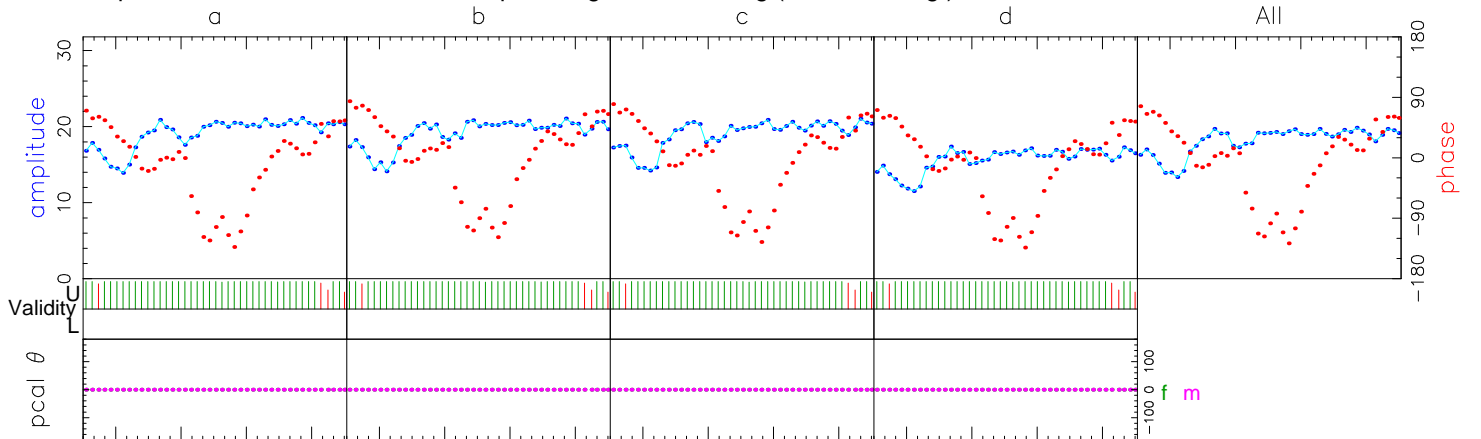


Fringe quality 5

SNR 446.7
Int time 237.260
Amp 10.605
Phase 1.2
PFD 0.0e+00
Delays (us)
SBD -0.001931
MBD -0.002118
Fringe rate (Hz) 0.002151
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133524
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



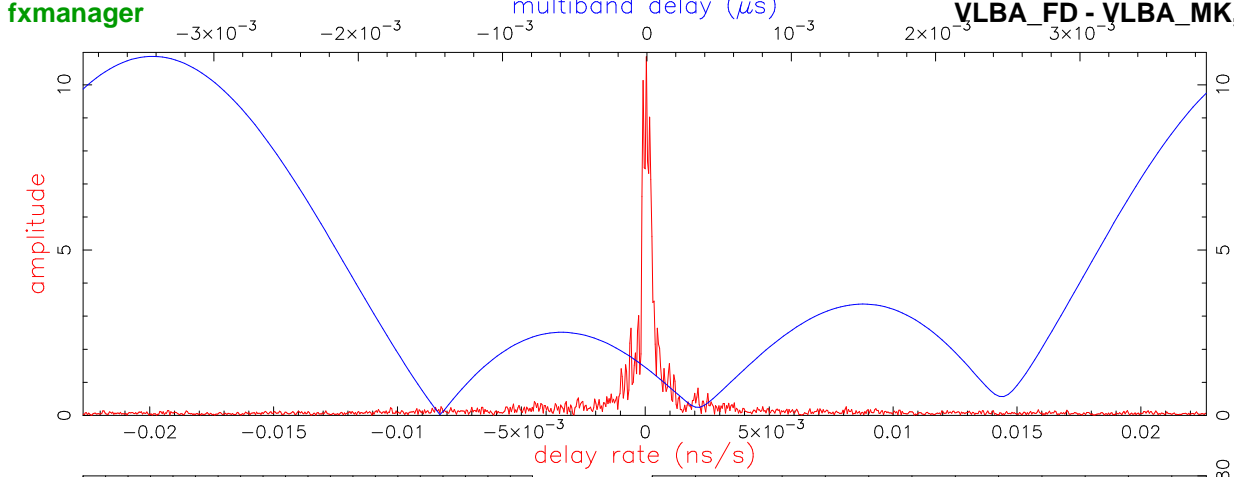
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-4.9	9.1	4.2	-4.5	Phase	1.2
11.3	11.2	11.1	9.1	Ampl.	10.7
512.3	512.0	511.8	512.0	Sbd box	512.0
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
m 1000	1000	1000	1000	PC freqs	
f:m 0:0	0:0	0:0	0:0	PC phase	
f:m 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
m 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-4.70697142172E+02	Apriori delay (usec)	-4.70695023822E+02	Resid mbdelay (usec)	-2.11835E-03 +/- 2.5E-06
Sband delay (usec)	-4.70696954947E+02	Apriori clock (usec)	-5.4186707E+00	Resid sbdelay (usec)	-1.93112E-03 +/- 9.6E-06
Phase delay (usec)	-4.70695023742E+02	Apriori clockrate (us/s)	-2.5800000E-07	Resid phdelay (usec)	8.03517E-08 +/- 1.7E-08
Delay rate (us/s)	-1.22013332961E+00	Apriori rate (us/s)	-1.22013337960E+00	Resid rate (us/s)	4.99825E-08 +/- 1.2E-10
Total phase (deg)	-295.9	Apriori accel (us/s/s)	2.03900510902E-06	Resid phase (deg)	1.2 +/- 0.3
RMS	Theor.	Amplitude	10.605 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
58.1	0.8	Search (1024X16)	10.406	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
73.0	1.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
8.4	0.3	Inc. seg. avg.	18.141	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
8.5	0.4	Inc. frq. avg.	10.660	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9	m: az 121.8 el 53.5 pa -53.0	u,v (fr/asec)	3491.725 759.650		simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm.Q.30.1V2A0K			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

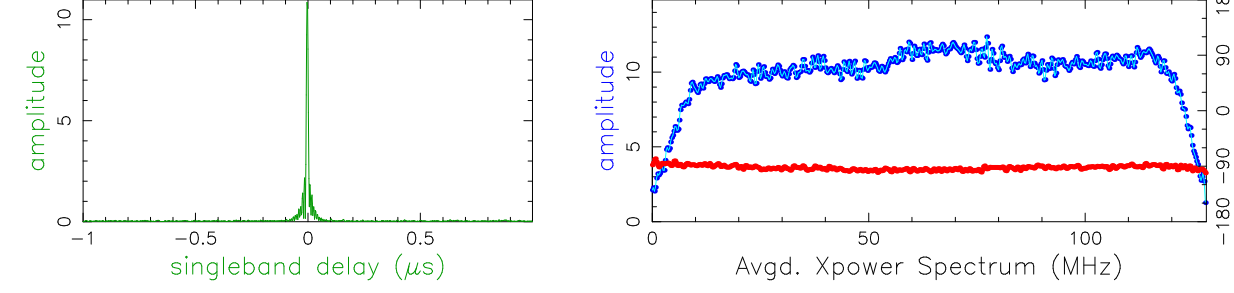
0420-014.1V2A0K, No0121, fm

VLBA_FD - VLBA_MK, fgroup Q, pol RR



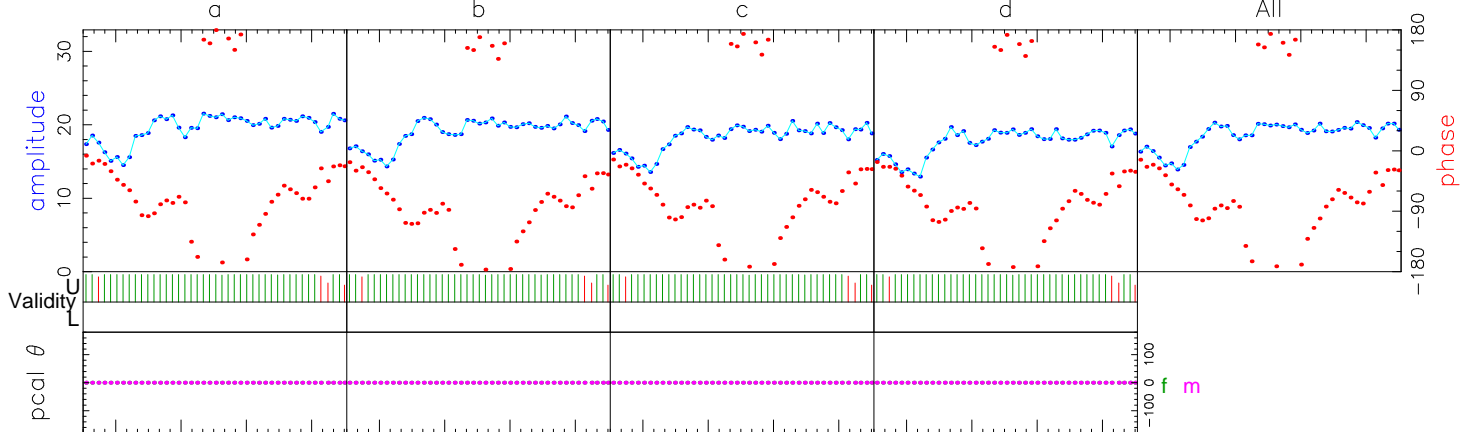
Fringe quality 5

SNR 462.5
 Int time 237.260
 Amp 10.980
 Phase -88.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.003203
 MBD -0.003382
 Fringe rate (Hz)
 0.002152
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133525
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000	APs used	
m	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	Group delay (usec)(sbd)	Sband delay (usec)	Phase delay (usec)	Delay rate (us/s)	Total phase (deg)	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)
	-4.70698405641E+02	-4.70698226947E+02	-4.70695029516E+02	-1.22013332960E+00	-25.3	-4.70695023822E+02	-5.4186707E+00	-2.5800000E-07	-1.22013337960E+00	2.03900510902E-06	-3.38182E-03	-3.20312E-03	-5.69311E-06	4.99995E-08	-88.2
											+/- 2.4E-06	+/- 9.3E-06	+/- 1.6E-08	+/- 1.2E-10	+/- 0.2

	RMS	Theor.	Amplitude	Search (1024X16)	Interp.	Inc. seg. avg.	Inc. frq. avg.	PCal mode: MANUAL, MANUAL	PCal rate: 0.000E+00, 0.000E+00 (us/s)	Bits/sample: 2x2	Sample rate(MISamp/s): 256	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	PC period (AP's) 5, 5	sb window (us)	mb window (us)	dr window (ns/s)	ion window (TEC)		
ph/seg (deg)	58.1	0.8	10.980 +/- 0.024	10.781	0.000	18.608	10.884	MANUAL, MANUAL	0.000E+00, 0.000E+00 (us/s)	2x2	256	2048	512	infinite	5, 5	-1.000	1.000	-0.004	0.004	0.00	0.00
amp/seg (%)	71.4	1.4														-0.004	0.004	-0.023	0.023		
ph/frq (deg)	6.2	0.2																			
amp/frq (%)	4.3	0.4																			

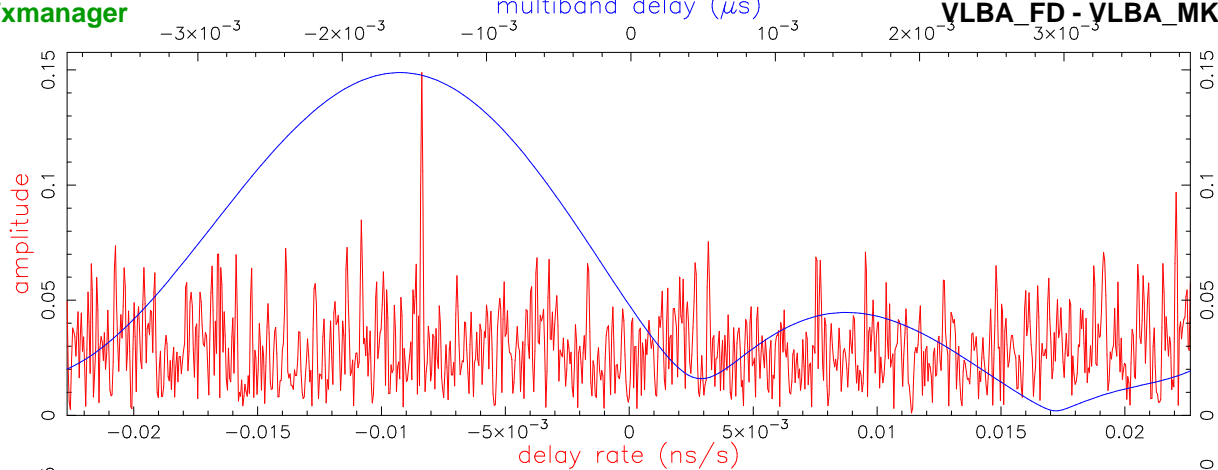
f: az 216.1 el 52.2 pa 30.9 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 3491.725 759.650 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm.Q.45.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

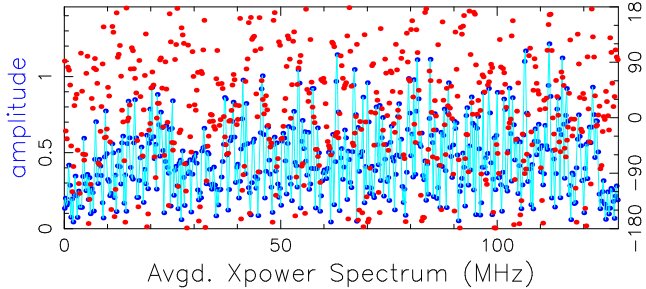
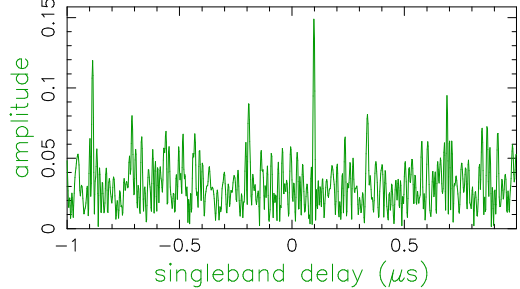
fxmanager

0420-014.1V2A0K, No0121, fm

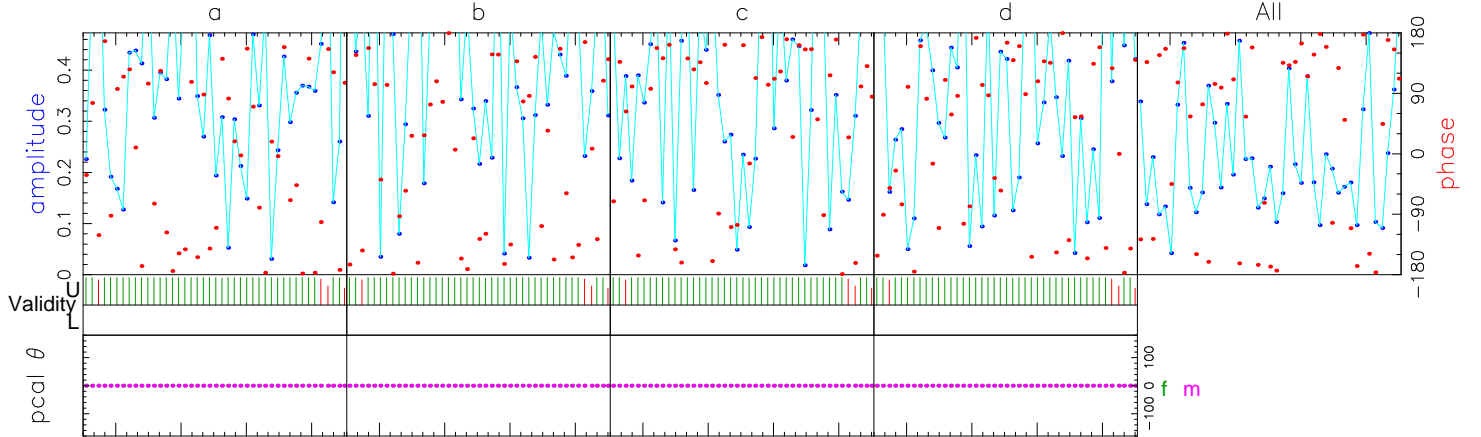
VLBA_FD - VLBA_MK, fgroup Q, pol LR



Fringe quality 0
 SNR 6.3
 Int time 237.260
 Amp 0.158
 Phase 159.1
 PFD 4.8e-02
 Delays (us)
 SBD 0.097716
 MBD -0.001596
 Fringe rate (Hz)
 -0.362474
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133527
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
m	1000	1000	1000	1000		
f:m	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
m	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
m	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-4.70595057659E+02	Apriori delay (usec)	-4.70695023822E+02	Resid mbdelay (usec)	-1.59634E-03	+/-	1.8E-04
Sband delay (usec)	-4.70597308072E+02	Apriori clock (usec)	-5.4186707E+00	Resid sbdelay (usec)	9.77158E-02	+/-	6.9E-04
Phase delay (usec)	-4.70695013554E+02	Apriori clockrate (us/s)	-2.5800000E-07	Resid phdelay (usec)	1.02688E-05	+/-	1.2E-06
Delay rate (us/s)	-1.22014180139E+00	Apriori rate (us/s)	-1.22013337960E+00	Resid rate (us/s)	-8.42179E-06	+/-	8.5E-09
Total phase (deg)	-138.0	Apriori accel (us/s/s)	2.03900510902E-06	Resid phase (deg)	159.1	+/-	18.3

ph/seg (deg)	RMS	Theor.	Amplitude	0.158 +/- 0.025	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	60.0	59.8	Search (1024X16)	0.146	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	94.8	104.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	18.2	18.3	Inc. seg. avg.	0.157	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
	22.7	31.9	Inc. frq. avg.	0.154	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 216.1 el 52.2 pa 30.9 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 3491.725 759.650 simultaneous interpolator

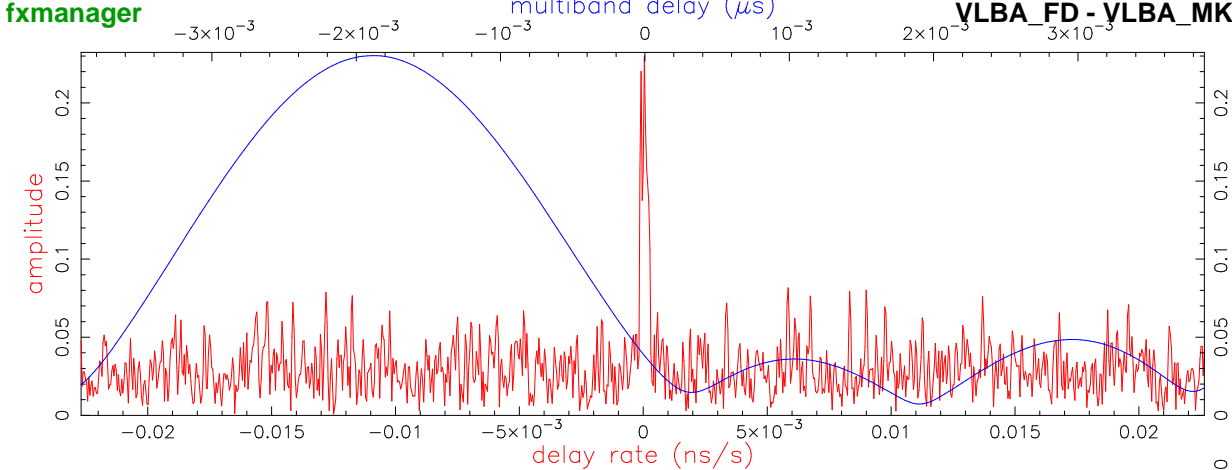
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm.Q.62.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

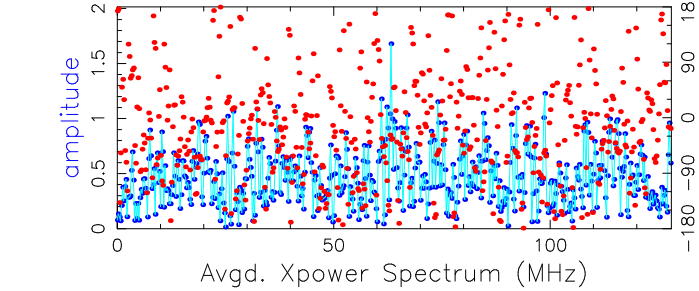
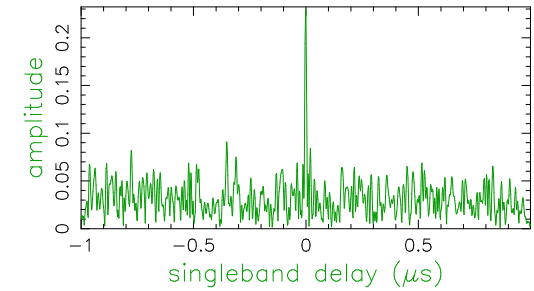
0420-014.1V2A0K, No0121, fm

VLBA_FD - VLBA_MK, fgroup Q, pol RL



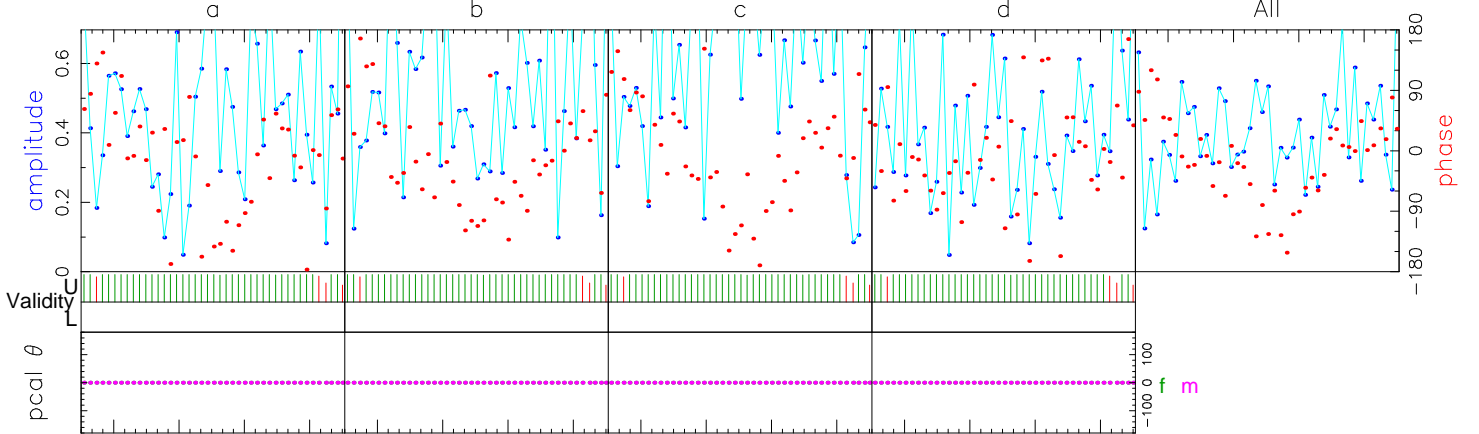
Fringe quality 9

SNR 9.8
 Int time 237.260
 Amp 0.232
 Phase -12.8
 PFD 2.7e-14
 Delays (us)
 SBD -0.001349
 MBD -0.001819
 Fringe rate (Hz) 0.002626
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133529
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
m	1000	1000	1000	1000		
f:m	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
m	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR		
m	Q00UL	Q01UL	Q02UL	Q03UL		

	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
Group delay (usec)(sbd)	-4.70696842547E+02		-4.70695023822E+02	-1.81872E-03		+/- 1.1E-04
Sband delay (usec)	-4.70696372322E+02		-5.4186707E+00	-1.34850E-03		+/- 4.4E-04
Phase delay (usec)	-4.70695024646E+02		-2.5800000E-07	-8.23826E-07		+/- 7.6E-07
Delay rate (us/s)	-1.22013331859E+00		-1.22013337960E+00	6.10068E-08		+/- 5.5E-09
Total phase (deg)		-309.9	2.03900510902E-06	-12.8		+/- 11.7

	RMS	Theor.	Amplitude	0.232 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	62.0	38.3	Search (1024X16)	0.219	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	93.6	66.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	9.2	11.7	Inc. seg. avg.	0.328	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	15.2	20.4	Inc. frq. avg.	0.227	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 216.1 el 52.2 pa 30.9 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 3491.725 759.650 simultaneous interpolator

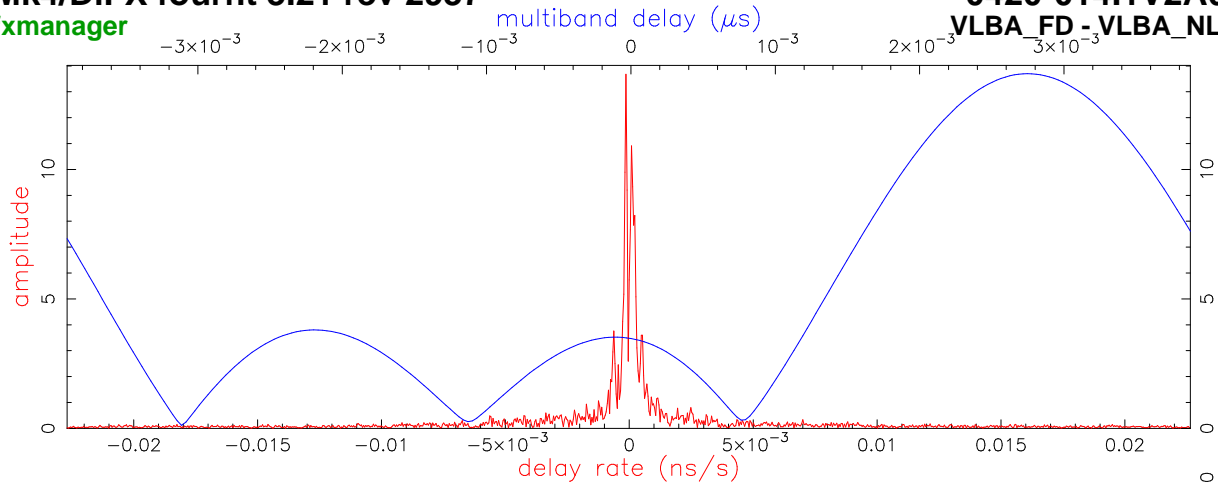
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fm.Q.78.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

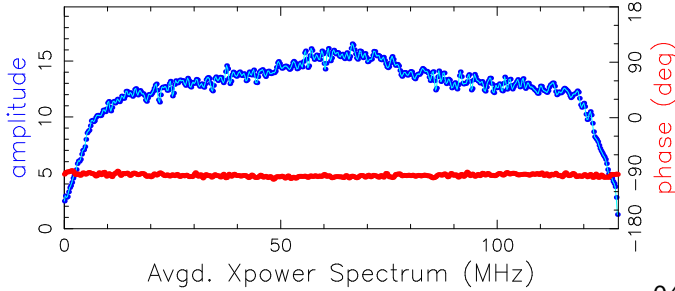
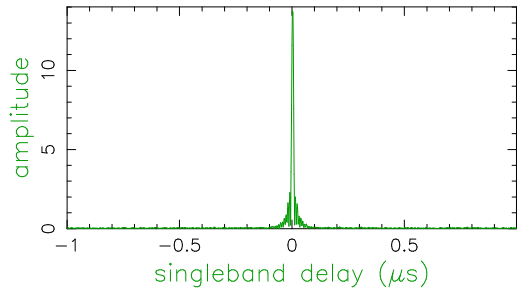
0420-014.1V2A0K, No0121, fn

VLBA_FD - VLBA_NL, fgroup Q, pol LL



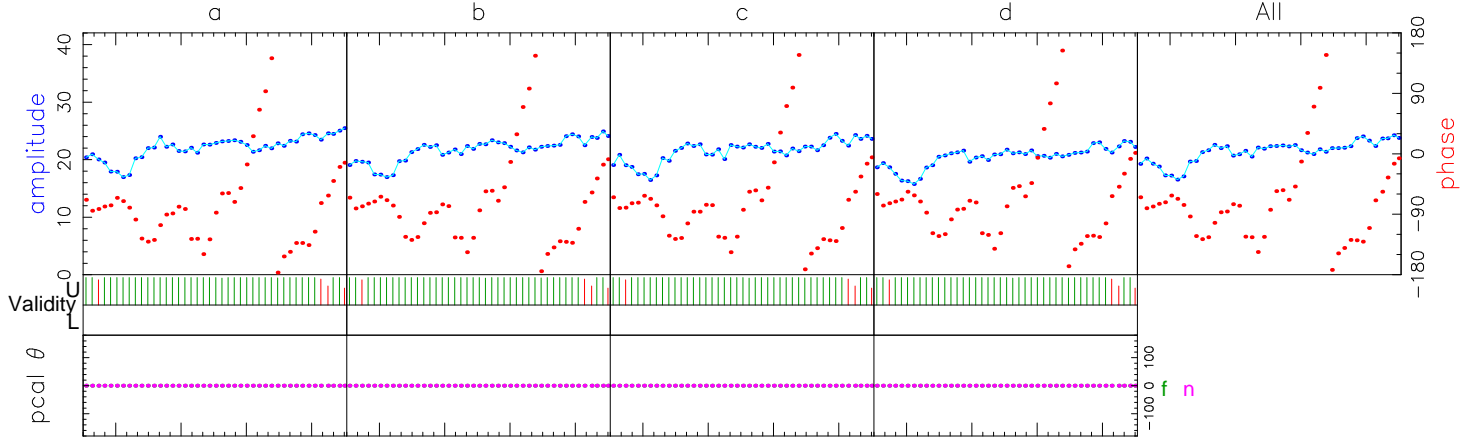
Fringe quality 5

SNR 590.5
 Int time 237.261
 Amp 14.019
 Phase -89.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.002863
 MBD 0.002690
 Fringe rate (Hz)
 -0.005913
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133522
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-93.6	-90.5	-90.1	-84.7	Phase	-89.8
14.2	13.8	13.8	13.0	Ampl.	13.7
514.6	514.4	514.4	514.5	Sbd box	514.5
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
f:n 0:0	0:0	0:0	0:0	PC phase	
f:n 0:0	0:0	0:0	0:0	ManI PC	
f 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.94623472005E+03	Apriori delay (usec)	3.94623203041E+03	Resid mbdelay (usec)	2.68964E-03	+/- 1.9E-06
Sband delay (usec)	3.94623489353E+03	Apriori clock (usec)	4.8242149E+00	Resid sbdelay (usec)	2.86312E-03	+/- 7.3E-06
Phase delay (usec)	3.94623202461E+03	Apriori clockrate (us/s)	-2.4000000E-07	Resid phdelay (usec)	-5.79710E-06	+/- 1.3E-08
Delay rate (us/s)	1.54589945816E-01	Apriori rate (us/s)	1.54590083190E-01	Resid rate (us/s)	-1.37374E-07	+/- 9.1E-11
Total phase (deg)	122.1	Apriori accel (us/s/s)	-2.05591419239E-05	Resid phase (deg)	-89.8	+/- 0.2

ph/seg (deg)	RMS 57.9	Theor. 0.6	Amplitude 14.019 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	54.0	1.1	Search (1024X16) 13.472	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	4.5	0.2	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	3.7	0.3	Inc. seg. avg. 21.345	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg. 13.702	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9	n: az 224.0 el 37.3 pa 31.3	u,v (fr/asec) -450.001 -675.060		nlags: 512	t_cohere infinite

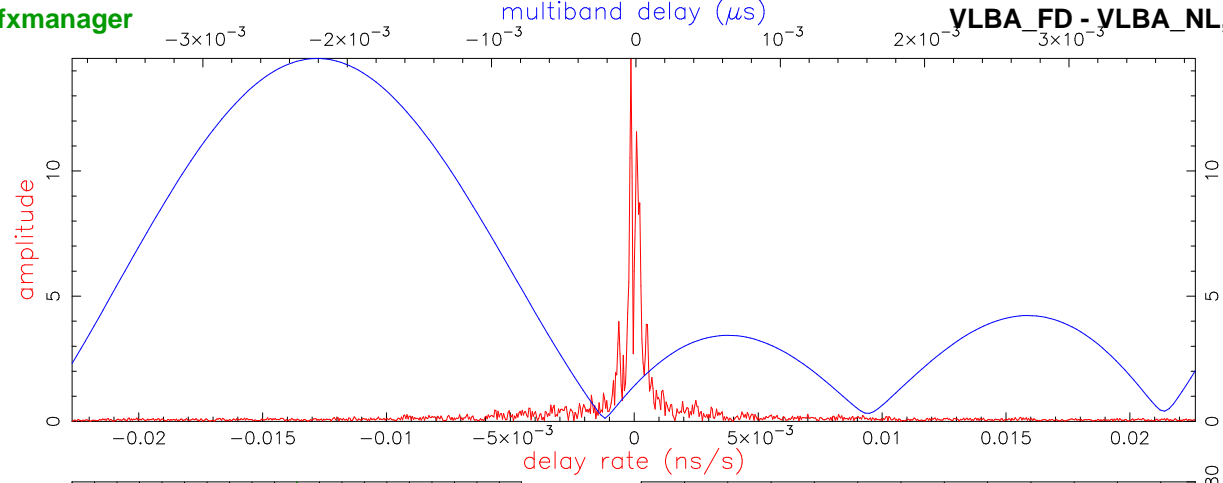
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn.Q.18.1V2A0K simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

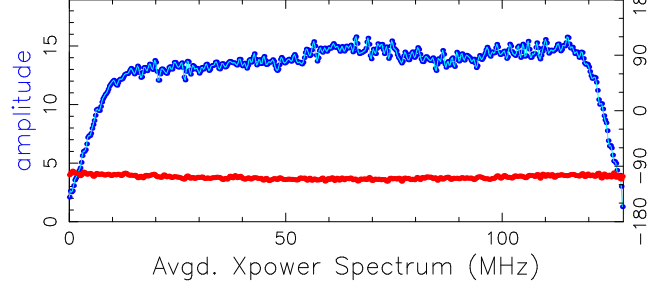
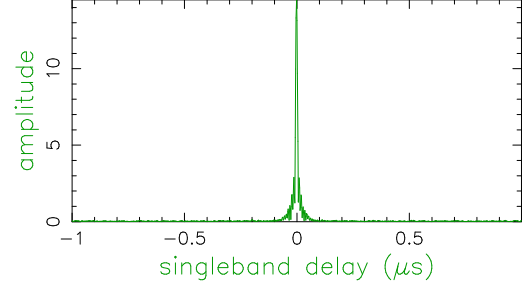
0420-014.1V2A0K, No0121, fn

VLBA_FD - VLBA_NL, fgroup Q, pol RR



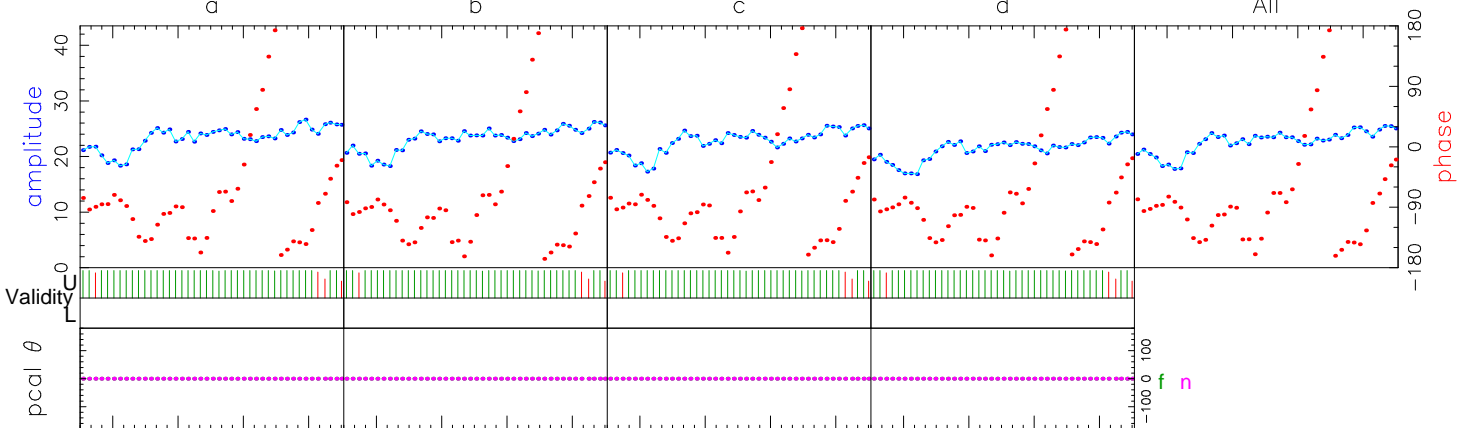
Fringe quality 5

SNR 610.8
 Int time 237.261
 Amp 14.500
 Phase -103.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.002021
 MBD -0.002212
 Fringe rate (Hz)
 -0.005925
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133525
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-102.5	-107.8	-101.5	-103.9	Phase	-103.9
15.0	14.8	14.6	13.6	Ampl.	14.5
512.3	511.9	512.1	511.6	Sbd box	512.0
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
f:n 0:0	0:0	0:0	0:0	PC phase	
f:n 0:0	0:0	0:0	0:0	ManI PC	
f 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.94622981799E+03	Apriori delay (usec)	3.94623203041E+03	Resid mbdelay (usec)	-2.21242E-03	+/- 1.8E-06
Sband delay (usec)	3.94623000903E+03	Apriori clock (usec)	4.8242149E+00	Resid sbdelay (usec)	-2.02138E-03	+/- 7.1E-06
Phase delay (usec)	3.94623202370E+03	Apriori clockrate (us/s)	-2.4000000E-07	Resid phdelay (usec)	-6.70745E-06	+/- 1.2E-08
Delay rate (us/s)	1.54589945523E-01	Apriori rate (us/s)	1.54590083190E-01	Resid rate (us/s)	-1.37667E-07	+/- 8.8E-11
Total phase (deg)	108.0	Apriori accel (us/s/s)	-2.05591419239E-05	Resid phase (deg)	-103.9	+/- 0.2

ph/seg (deg)	RMS 57.9	Theor. 0.6	Amplitude Search (1024X16)	14.500 +/- 0.024	14.082	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	57.7	1.1	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	3.4	0.2	Inc. seg. avg.	22.627	22.627	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	3.6	0.3	Inc. frq. avg.	14.511	14.511	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 216.1 el 52.2 pa 30.9 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -450.001 -675.060 simultaneous interpolator

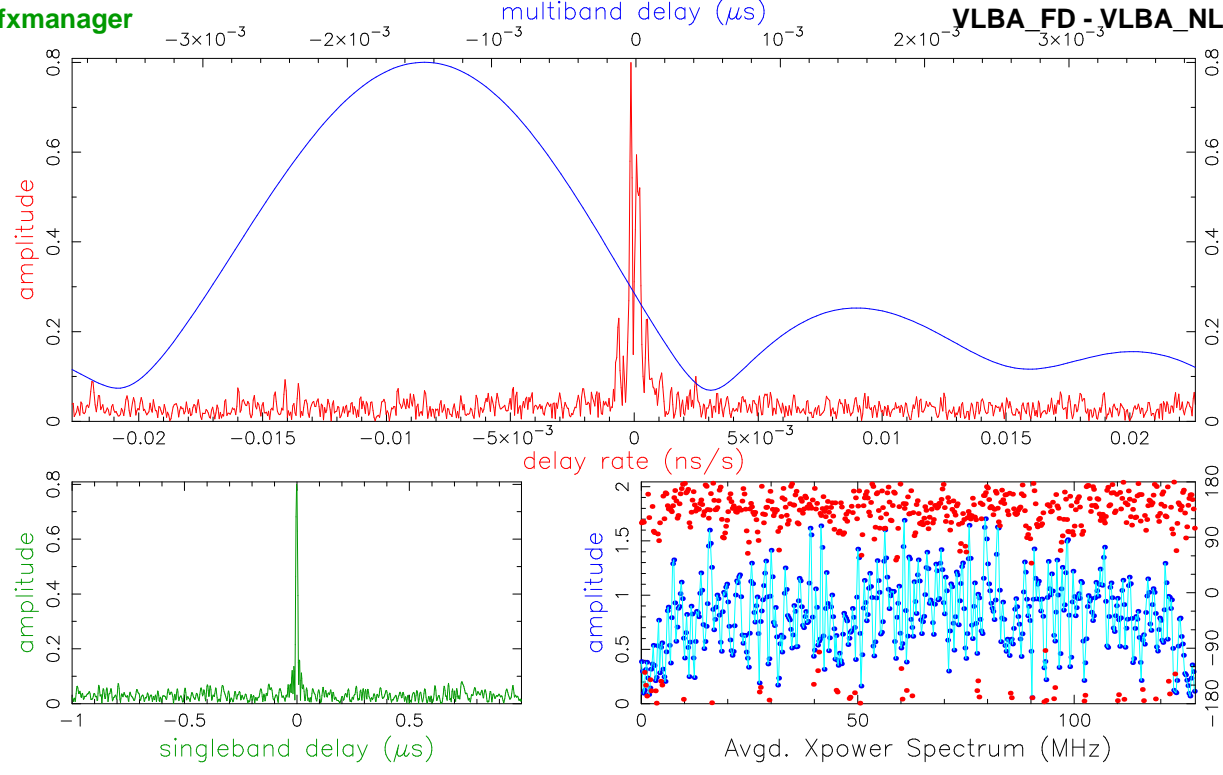
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn.Q.44.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, fn

VLBA_FD - VLBA_NL, fgroup Q, pol LR

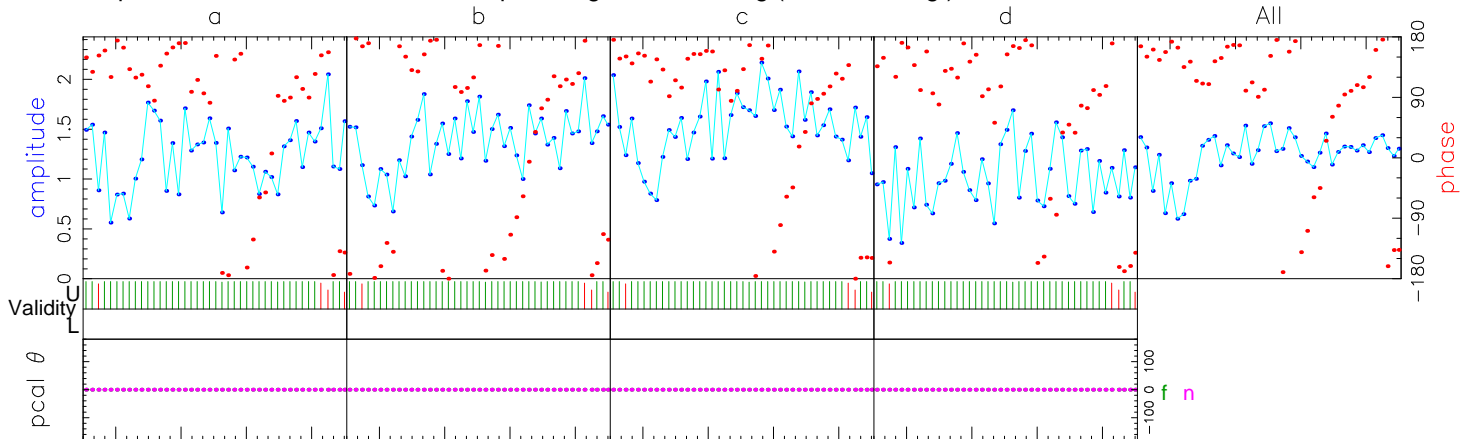


Fringe quality 6

SNR 34.1
 Int time 237.261
 Amp 0.809
 Phase 143.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.001238
 MBD -0.001410
 Fringe rate (Hz)
 -0.005764
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133526
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
n	1000	1000	1000	1000		
f:n	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
n	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		

	42912.00	43040.00	43168.00	43296.00	Resid mbdelay (usec)	-1.40970E-03	+/- 3.3E-05
Group delay (usec)(sbd)	3.94623062071E+03			3.94623203041E+03			
Sband delay (usec)	3.94623079203E+03			4.8242149E+00			
Phase delay (usec)	3.94623203966E+03			-2.4000000E-07			
Delay rate (us/s)	1.54589949276E-01			1.54590083190E-01			
Total phase (deg)		355.2		-2.05591419239E-05			
Apriori delay (usec)							
Apriori clock (usec)							
Apriori clockrate (us/s)							
Apriori rate (us/s)							
Apriori accel (us/s/s)							
Resid sbdelay (usec)							
Resid phdelay (usec)							
Resid rate (us/s)							
Resid phase (deg)							

	RMS	Theor.	Amplitude	0.809 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	57.1	11.0	Search (1024X16)	0.798	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	59.8	19.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	14.9	3.4	Inc. seg. avg.	1.216	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
amp/frq (%)	14.4	5.9	Inc. frq. avg.	0.811	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

f: az 216.1 el 52.2 pa 30.9 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -450.001 -675.060 simultaneous interpolator

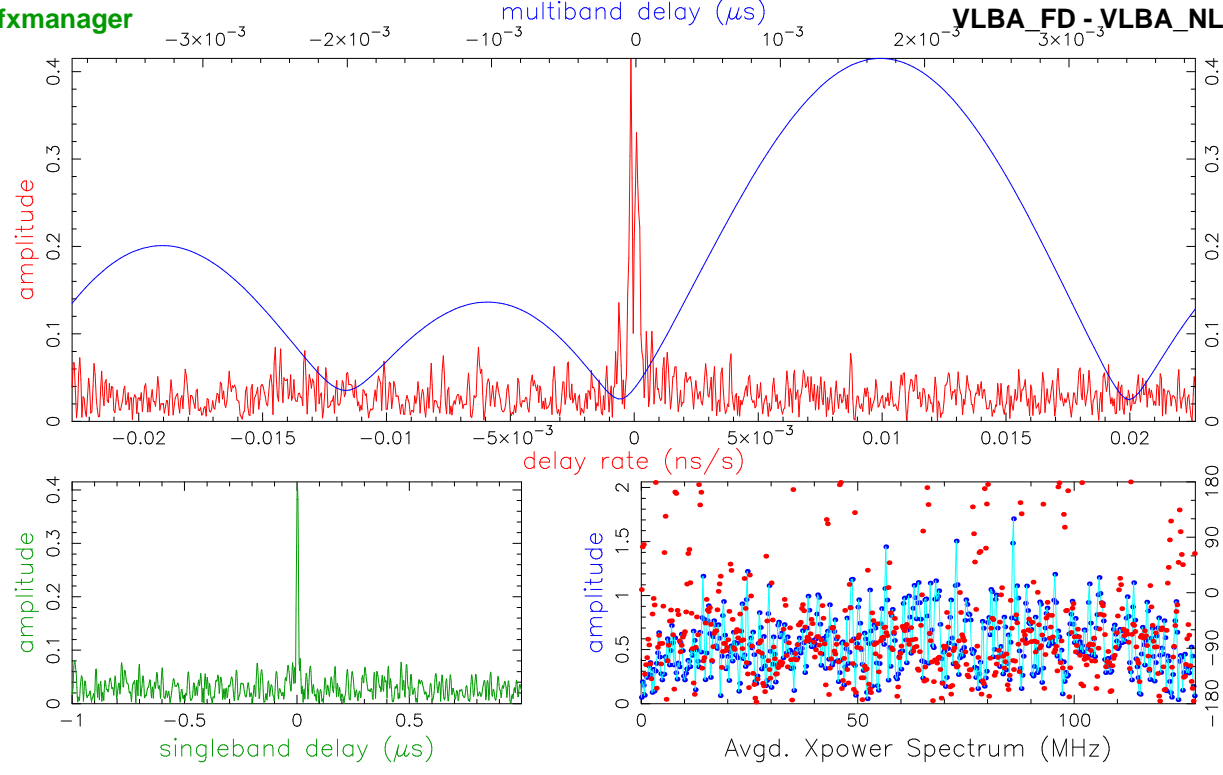
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn.Q.58.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, fn

VLBA_FD - VLBA_NL, fgroup Q, pol RL

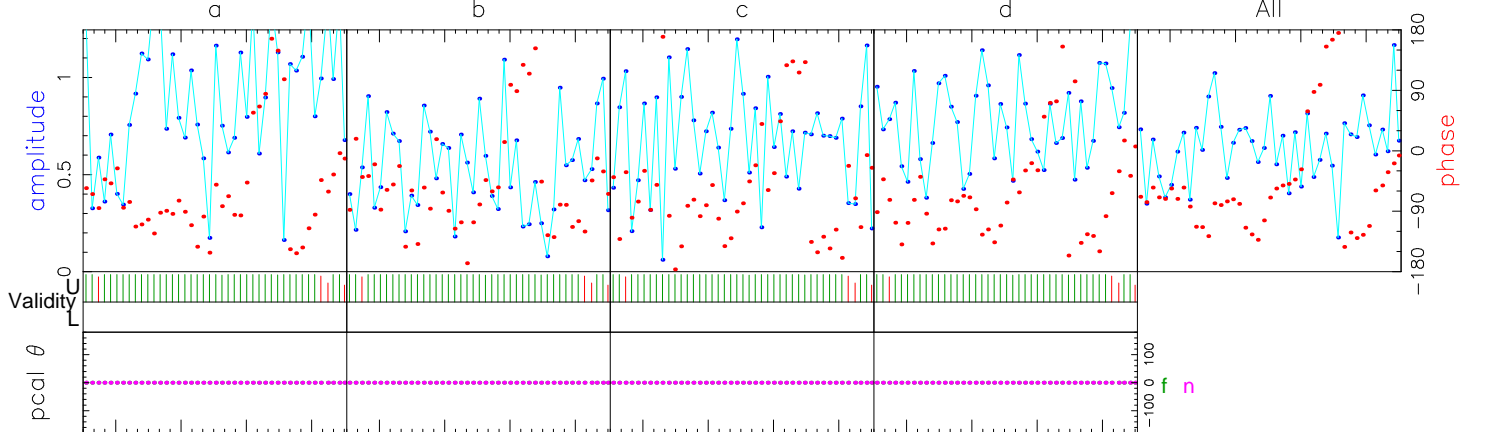


Fringe quality 9

SNR 17.5
 Int time 237.261
 Amp 0.415
 Phase -83.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.001950
 MBD 0.001695
 Fringe rate (Hz)
 -0.005707
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133529
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

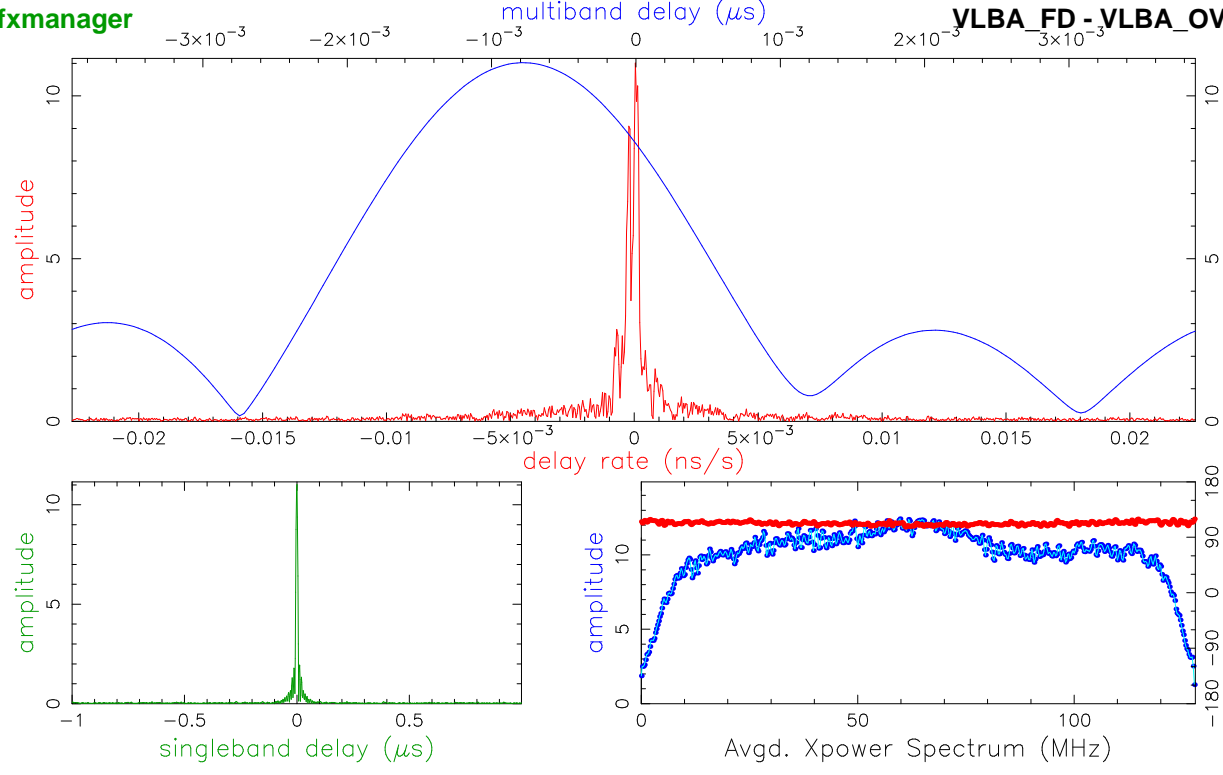
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-90.1	-63.2	-88.7	-84.8	Phase	-83.2
0.5	0.3	0.4	0.5	Ampl.	0.4
514.1	514.0	514.1	514.0	Sbd box	514.0
U/L 467/0	467/0	467/0	467/0	APs used	
f 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
f:n 0:0	0:0	0:0	0:0	PC phase	
f:n 0:0	0:0	0:0	0:0	ManI PC	
f 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.94623372521E+03	Apriori delay (usec)	3.94623203041E+03	Resid mbdelay (usec)	1.69480E-03	+/-	6.4E-05
Sband delay (usec)	3.94623398016E+03	Apriori clock (usec)	4.8242149E+00	Resid sbdelay (usec)	1.94975E-03	+/-	2.5E-04
Phase delay (usec)	3.94623202504E+03	Apriori clockrate (us/s)	-2.4000000E-07	Resid phdelay (usec)	-5.36809E-06	+/-	4.2E-07
Delay rate (us/s)	1.54589950583E-01	Apriori rate (us/s)	1.54590083190E-01	Resid rate (us/s)	-1.32607E-07	+/-	3.1E-09
Total phase (deg)	128.8	Apriori accel (us/s/s)	-2.05591419239E-05	Resid phase (deg)	-83.2	+/-	6.6

ph/seg (deg)	RMS 61.7	Theor. 21.4	Amplitude	0.415 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	72.0	37.4	Search (1024X16)	0.403	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	15.5	6.6	Inc. seg. avg.	0.607	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	17.9	11.4	Inc. frq. avg.	0.419	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
f: az 216.1 el 52.2 pa 30.9			n: az 224.0 el 37.3 pa 31.3						
Control file: cf_1234_gmva7mm			Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn..1V2A0K						simultaneous interpolator
									Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fn.Q.77.1V2A0K

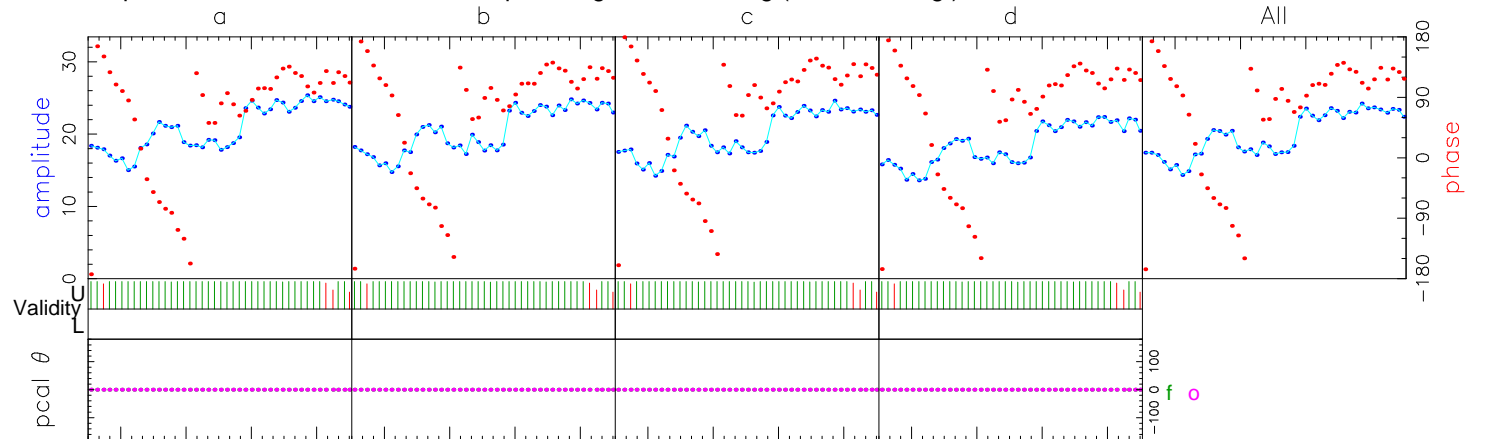


Fringe quality 5

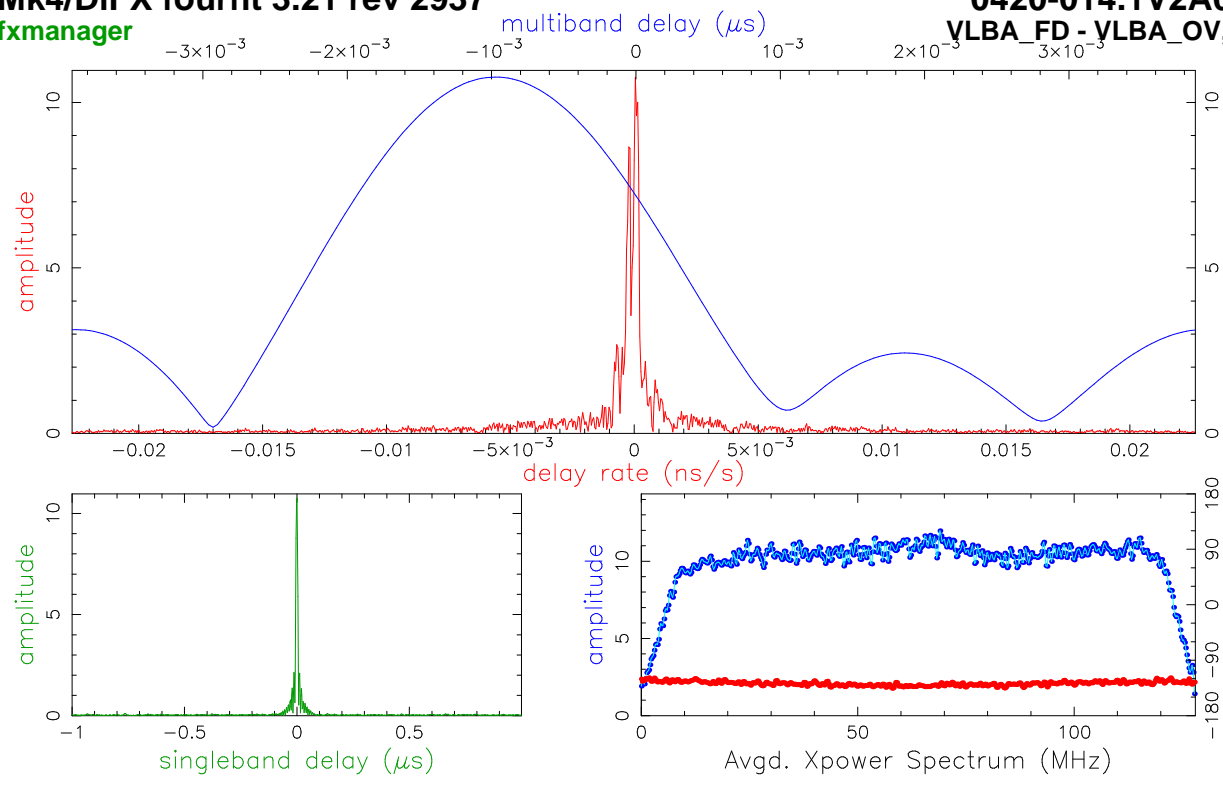
SNR 469.7
Int time 237.160
Amp 11.153
Phase 114.5
PFD 0.0e+00
Delays (us)
SBD -0.000738
MBD -0.000826
Fringe rate (Hz)
0.002139
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133523
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
o	1000	1000	1000	1000		
f:0	0:0	0:0	0:0	0:0		
f:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
o	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UL	Q01UL	Q02UL	Q03UL		
Group delay (usec)(sbd)	2.49685399534E+02			2.49686225446E+02	Resid mbdelay (usec)	-8.25912E-04 +/- 2.4E-06
Sband delay (usec)	2.49685486946E+02			6.5852680E+00	Resid sbdelay (usec)	-7.38500E-04 +/- 9.2E-06
Phase delay (usec)	2.49686232836E+02			-3.0000002E-07	Resid phdelay (usec)	7.39003E-06 +/- 1.6E-08
Delay rate (us/s)	-3.35432621921E-01			-3.35432671620E-01	Resid rate (us/s)	4.96988E-08 +/- 1.1E-10
Total phase (deg)		166.1		-1.04940274595E-06	Resid phase (deg)	114.5 +/- 0.2
ph/seg (deg)	RMS 72.6	Theor. 0.8	Amplitude 11.153 +/- 0.024	Search (1024X16) 10.805	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	82.8	1.4	Interp. 0.000	Inc. seg. avg. 19.894	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	6.0	0.2	Inc. frq. avg. 11.042	Inc. frq. avg. 11.042	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	5.0	0.4			Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
f: az 216.1 el 52.2 pa 30.9	o: az 190.9 el 51.0 pa 9.1	u,v (fr/asec) 960.404 -419.210			Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fo..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fo.Q.23.1V2A0K				ion window (TEC) 0.00 0.00

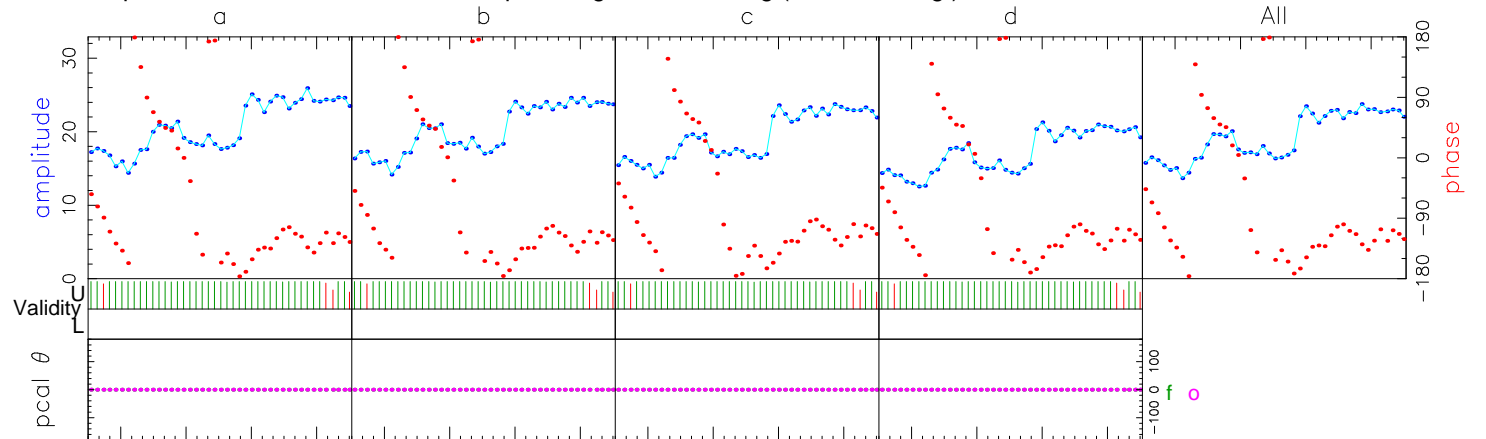


Fringe quality 5

SNR 462.0
Int time 237.160
Amp 10.970
Phase -125.5
PFD 0.0e+00
Delays (us)
SBD -0.000908
MBD -0.001027
Fringe rate (Hz)
0.002137
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133526
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

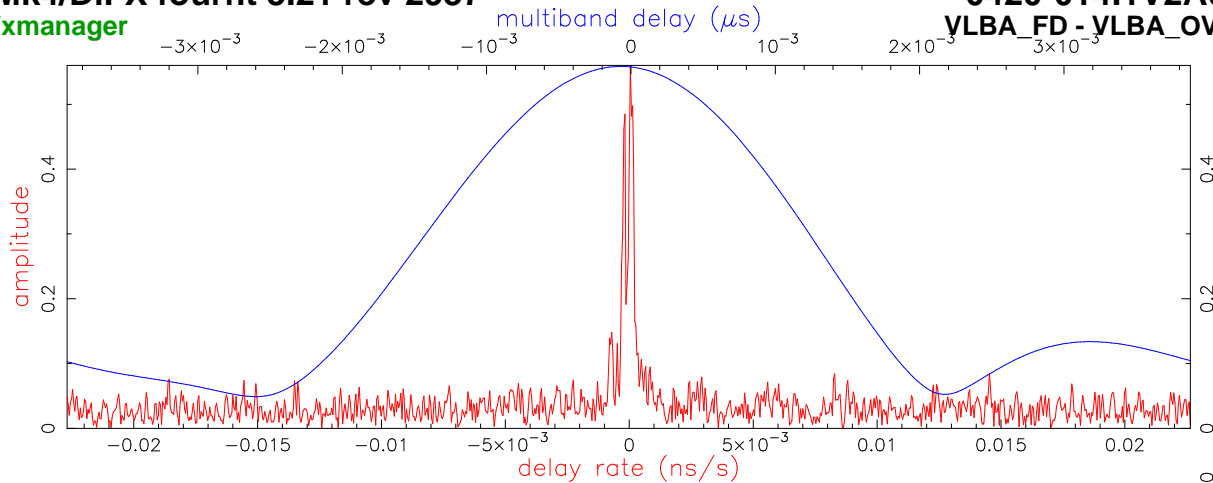


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-129.8	-128.1	-118.4	-125.2	Phase	-125.5
	11.6	11.2	10.8	9.5	Ampl.	10.8
	512.8	512.6	512.6	512.1	Sbd box	512.5
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	2.49685198909E+02		Apriori delay (usec)	2.49686225446E+02	Resid mbdelay (usec)	-1.02654E-03 +/- 2.4E-06
Sband delay (usec)	2.49685317446E+02		Apriori clock (usec)	6.5852680E+00	Resid sbdelay (usec)	-9.08000E-04 +/- 9.3E-06
Phase delay (usec)	2.49686217347E+02		Apriori clockrate (us/s)	-3.0000002E-07	Resid phdelay (usec)	-8.09989E-06 +/- 1.6E-08
Delay rate (us/s)	-3.35432621975E-01		Apriori rate (us/s)	-3.35432671620E-01	Resid rate (us/s)	4.96449E-08 +/- 1.2E-10
Total phase (deg)		-73.9	Apriori accel (us/s/s)	-1.04940274595E-06	Resid phase (deg)	-125.5 +/- 0.2

ph/seg (deg) RMS Theor. Amplitude 10.970 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 72.7 0.8 Search (1024X16) 10.716 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 80.7 1.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 6.1 0.2 Inc. seg. avg. 19.258 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_coherence infinite dr window (ns/s) -0.023 0.023
amp/frq (%) 7.4 0.4 Inc. frq. avg. 10.787 Data rate(Mb/s): 2048 nlags: 512 t_coherence infinite ion window (TEC) 0.00 0.00

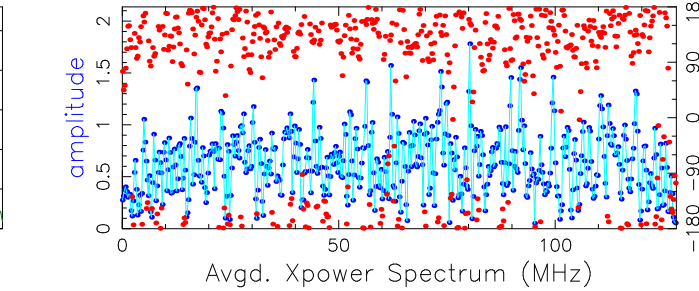
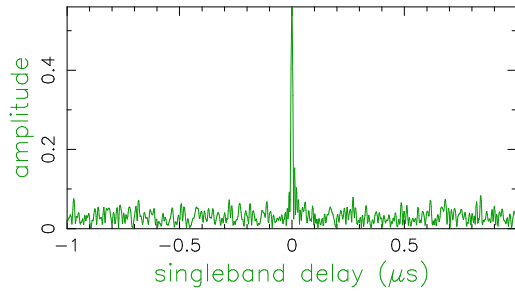
f: az 216.1 el 52.2 pa 30.9 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 960.404 -419.210 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fo.Q.51.1V2A0K



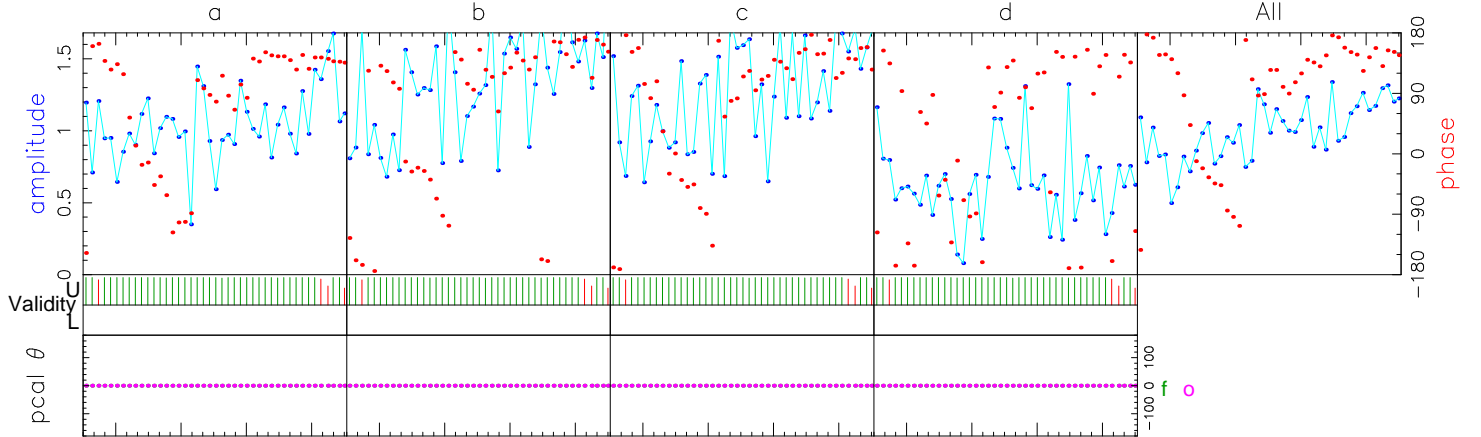
Fringe quality 7

SNR 23.6
Int time 237.160
Amp 0.560
Phase 139.5
PFD 0.0e+00
Delays (us)
SBD -0.000342
MBD -0.000098
Fringe rate (Hz)
0.002279
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133528
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000		
o	1000	1000	1000	1000		
f:0	0:0	0:0	0:0	0:0		
f:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
o	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UR	Q01UR	Q02UR	Q03UR		

	2.49686127659E+02	Apriori delay (usec)	2.49686225446E+02	Resid mbdelay (usec)	-9.77872E-05	+/- 4.7E-05
Sband delay (usec)	2.49685883571E+02	Apriori clock (usec)	6.5852680E+00	Resid sbdelay (usec)	-3.41875E-04	+/- 1.8E-04
Phase delay (usec)	2.49686234450E+02	Apriori clockrate (us/s)	-3.0000002E-07	Resid phdelay (usec)	9.00380E-06	+/- 3.1E-07
Delay rate (us/s)	-3.35432618660E-01	Apriori rate (us/s)	-3.35432671620E-01	Resid rate (us/s)	5.29605E-08	+/- 2.3E-09
Total phase (deg)	191.1	Apriori accel (us/s/s)	-1.04940274595E-06	Resid phase (deg)	139.5	+/- 4.9

	RMS	Theor.	Amplitude	0.560 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	73.2	15.9	Search (1024X16)	0.550	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	85.3	27.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	13.0	4.9	Inc. seg. avg.	0.959	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	30.0	8.5	Inc. frq. avg.	0.565	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

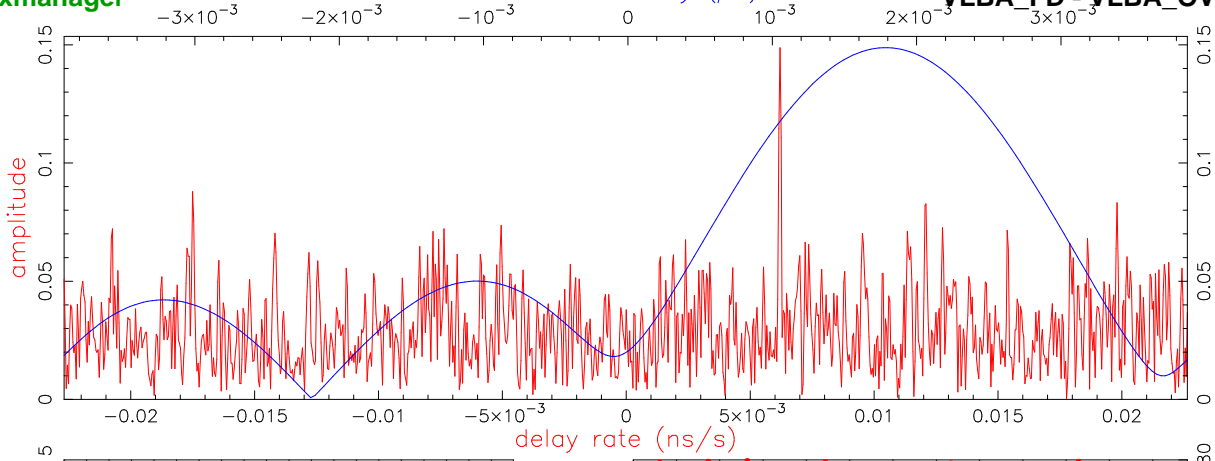
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, fo

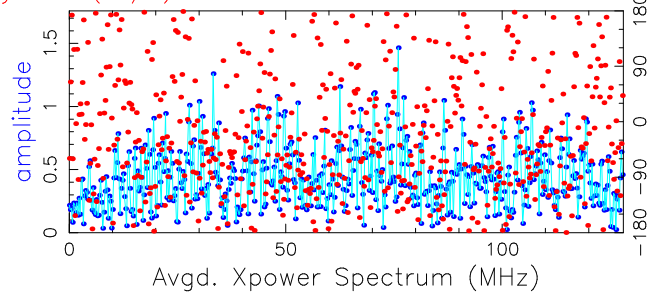
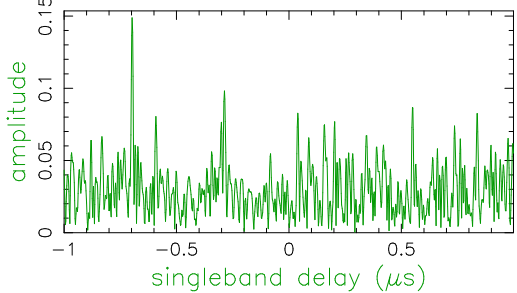
VLBA_FD - VLBA_OV, fgroup Q, pol RL

multiband delay (μ s)



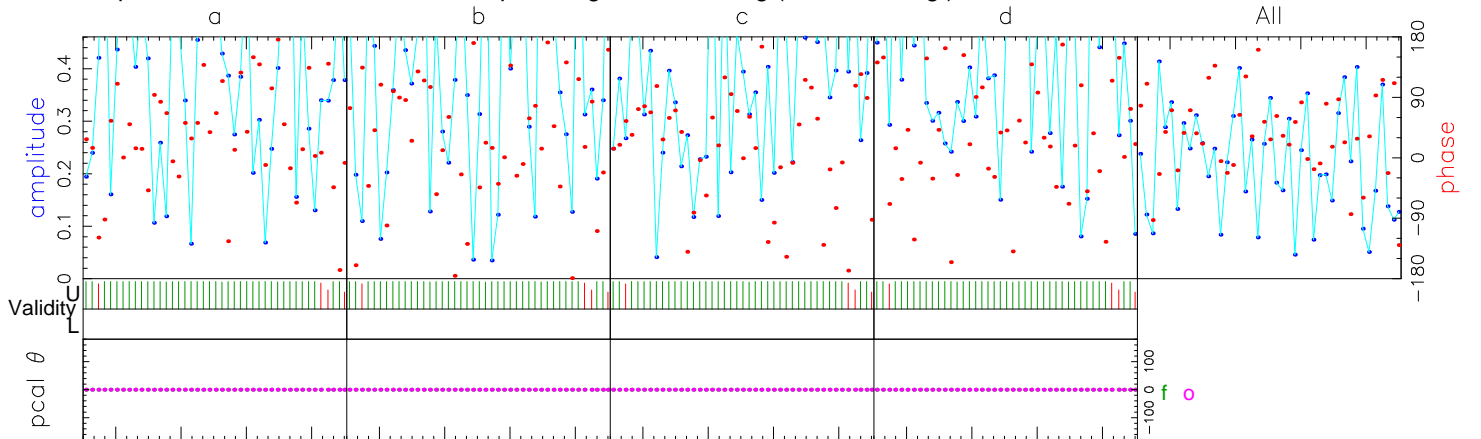
Fringe quality 0

SNR 6.3
 Int time 237.160
 Amp 0.154
 Phase 40.0
 PFD 4.8e-02
 Delays (us)
 SBD -0.697147
 MBD 0.001793
 Fringe rate (Hz)
 0.268516
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133530
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	467/0	467/0	467/0	467/0		
f	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
f:0	0:0	0:0	0:0	0:0	PC phase	
f:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	2.48992705763E+02	Apriori delay (usec)	2.49686225446E+02	Resid mbdelay (usec)	1.79282E-03	+/-	1.8E-04
Sband delay (usec)	2.48989078071E+02	Apriori clock (usec)	6.5852680E+00	Resid sbdelay (usec)	-6.97147E-01	+/-	6.9E-04
Phase delay (usec)	2.49686228031E+02	Apriori clockrate (us/s)	-3.0000002E-07	Resid phdelay (usec)	2.58464E-06	+/-	1.2E-06
Delay rate (us/s)	-3.35426432872E-01	Apriori rate (us/s)	-3.35432671620E-01	Resid rate (us/s)	6.23875E-06	+/-	8.5E-09
Total phase (deg)	91.6	Apriori accel (us/s/s)	-1.04940274595E-06	Resid phase (deg)	40.0	+/-	18.3

ph/seg (deg)	RMS 60.1	Theor. 59.8	Amplitude	0.154 +/- 0.025	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	85.8	104.4	Search (1024X16)	0.145	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	11.1	18.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	5.7	31.9	Inc. seg. avg.	0.149	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	0.148	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 216.1 el 52.2 pa 30.9 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 960.404 -419.210 simultaneous interpolator

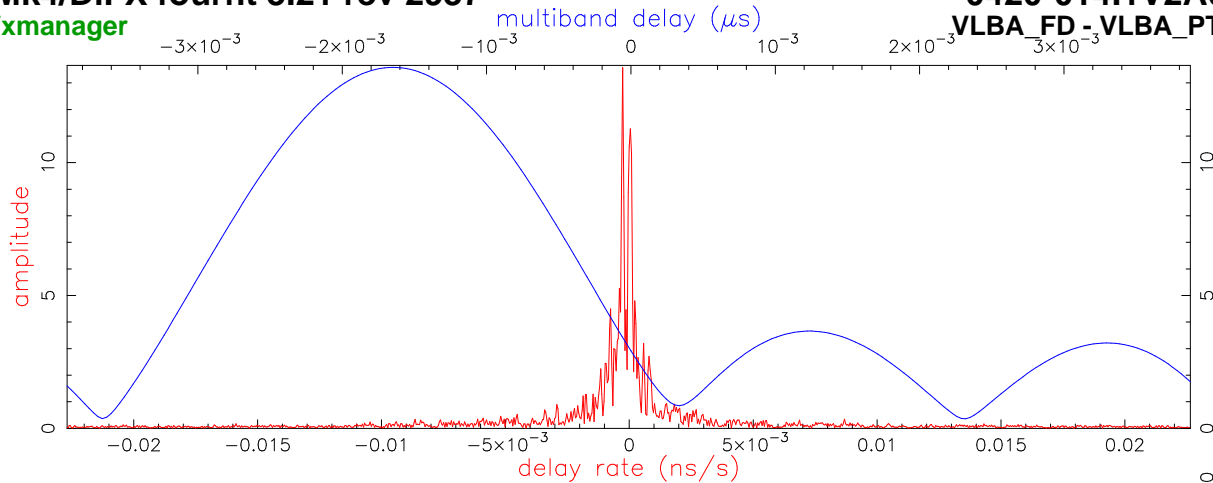
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fo.Q.80.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

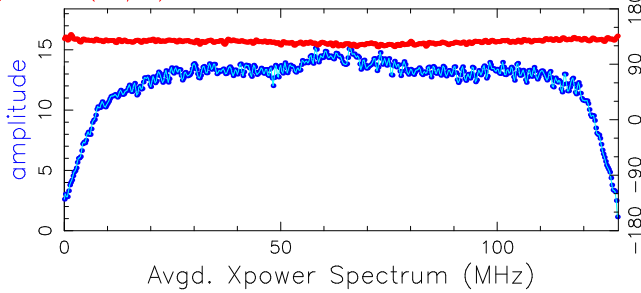
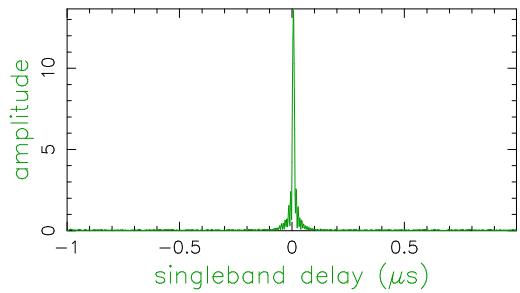
0420-014.1V2A0K, No0121, fp

VLBA_FD - VLBA_PT, fgroup Q, pol LL



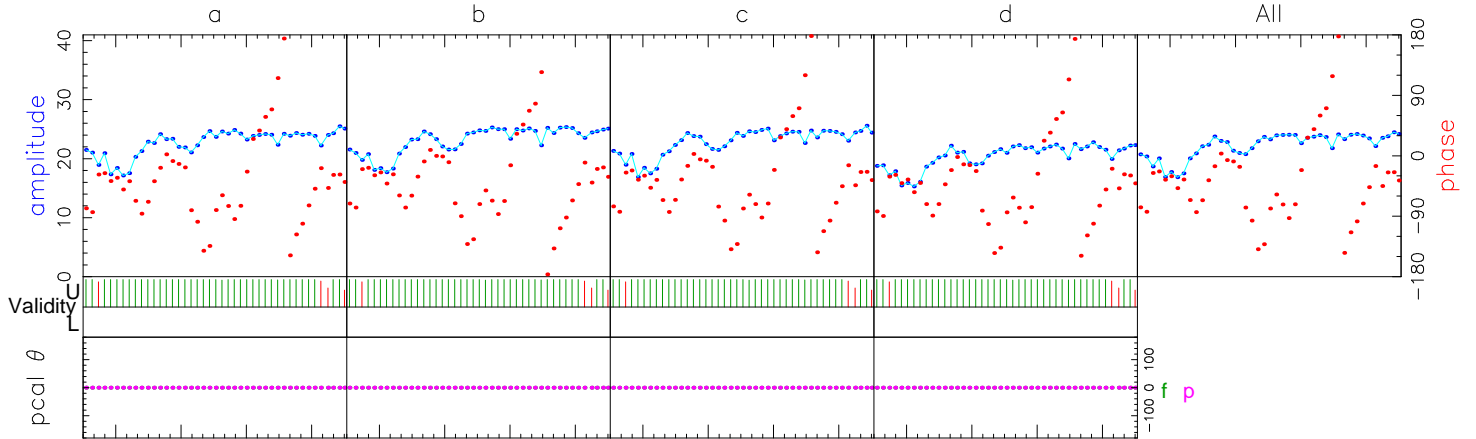
Fringe quality 5

SNR 575.3
 Int time 237.261
 Amp 13.659
 Phase -50.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.006357
 MBD -0.001620
 Fringe rate (Hz)
 -0.010524
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133522
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

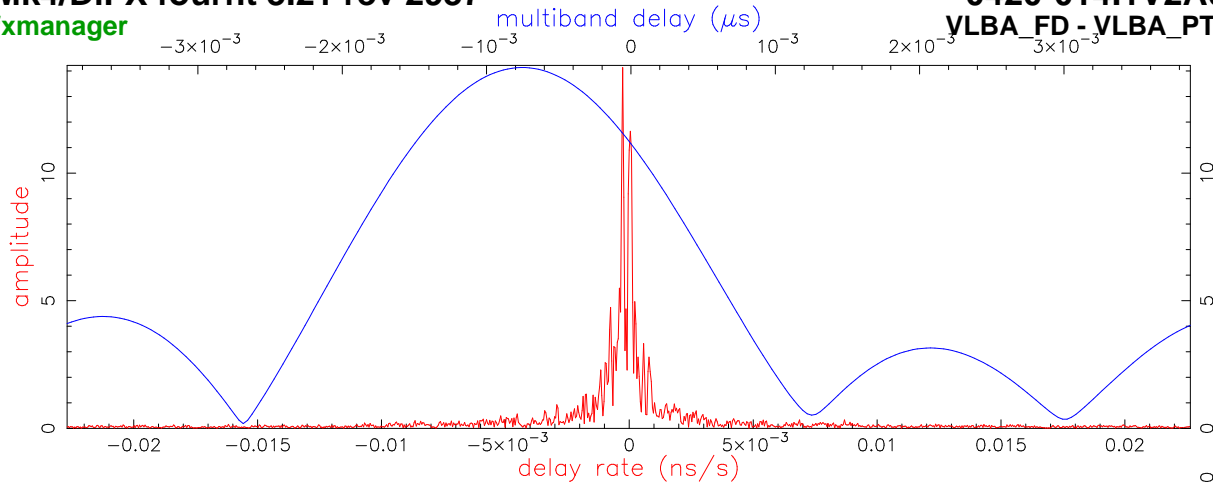


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-52.2	-44.0	-49.1	-55.1	Phase	-50.0
	13.8	14.2	14.0	12.5	Ampl.	13.6
	516.6	516.2	516.1	516.1	Sbd box	516.3
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	2.72441790390E+02	Apriori delay (usec)	2.72435598386E+02	Resid mbdelay (usec)	-1.62050E-03	+/- 1.9E-06
Group delay (usec)(sbd)	2.72441790390E+02	Apriori clock (usec)	4.6858406E+00	Resid sbdelay (usec)	6.35650E-03	+/- 7.5E-06
Sband delay (usec)	2.72441954886E+02	Apriori clockrate (us/s)	1.8000000E-07	Resid phdelay (usec)	-3.22499E-06	+/- 1.3E-08
Phase delay (usec)	2.72435595161E+02	Apriori rate (us/s)	-1.07635837159E-01	Resid rate (us/s)	-2.44526E-07	+/- 9.3E-11
Delay rate (us/s)	-1.07636081685E-01	Apriori accel (us/s/s)	-1.28601206517E-06	Resid phase (deg)	-50.0	+/- 0.2
Total phase (deg)	5.7					

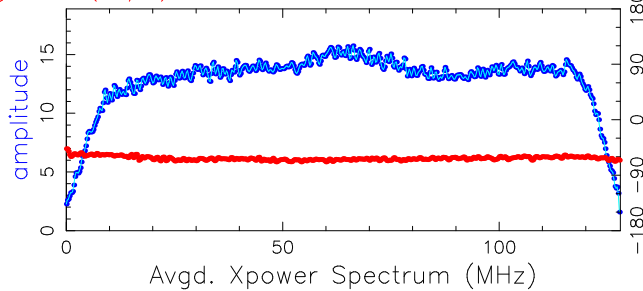
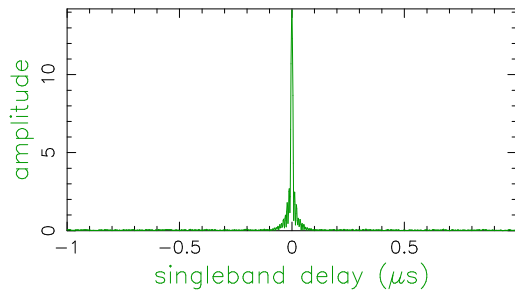
	RMS	Theor.	Amplitude	13.659 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.8	0.7	Search (1024X16)	12.243	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	64.4	1.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.8	0.2	Inc. seg. avg.	22.189	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.0	0.3	Inc. frq. avg.	13.617	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9			p: az 207.7 el 51.0 pa 23.1		u,v (fr/asec) 307.966 -237.213	simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp.Q.17.1V2A0K



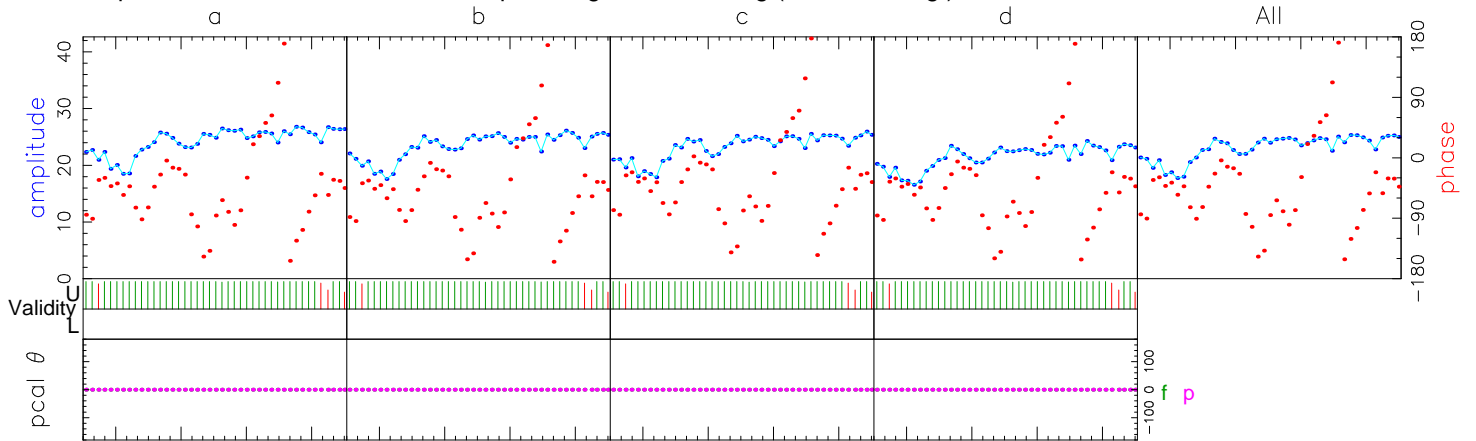
Fringe quality 5

SNR 598.9
Int time 237.261
Amp 14.218
Phase -56.7
PFD 0.0e+00
Delays (us)
SBD -0.000506
MBD -0.000777
Fringe rate (Hz)
-0.010531
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133524
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

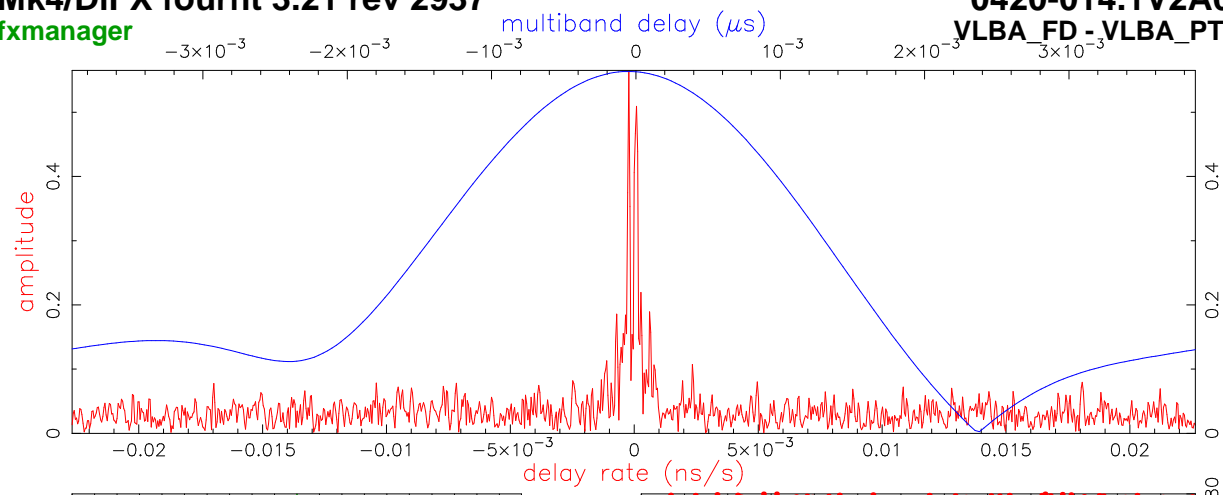


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-57.8	-61.1	-50.2	-57.8	Phase	-56.7
	14.9	14.4	14.2	13.1	Ampl.	14.2
	512.9	512.6	512.9	512.4	Sbd box	512.7
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	PC phase	
f:p	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	2.72434820953E+02	Apriori delay (usec)	2.72435598386E+02	Resid mbdelay (usec)	-7.77433E-04	+/- 1.9E-06
Group delay (usec)(sbd)	2.72435092386E+02	Apriori clock (usec)	4.6858406E+00	Resid sbdelay (usec)	-5.06000E-04	+/- 7.2E-06
Sband delay (usec)	2.72435594725E+02	Apriori clockrate (us/s)	1.8000000E-07	Resid phdelay (usec)	-3.66102E-06	+/- 1.2E-08
Phase delay (usec)	-1.07636081850E-01	Apriori rate (us/s)	-1.07635837159E-01	Resid rate (us/s)	-2.44691E-07	+/- 8.9E-11
Delay rate (us/s)	-1.1	Apriori accel (us/s/s)	-1.28601206517E-06	Resid phase (deg)	-56.7	+/- 0.2
Total phase (deg)						

	RMS	Theor.	Amplitude	14.218 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.8	0.6	Search (1024X16)	12.590	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	64.0	1.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.6	0.2	Inc. seg. avg.	23.064	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.6	0.3	Inc. frq. avg.	14.168	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 216.1 el 52.2 pa 30.9			p: az 207.7 el 51.0 pa 23.1			u,v (fr/asec) 307.966 -237.213
Control file: cf_1234_gmva7mm			Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp..1V2A0K			Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp.Q.39.1V2A0K

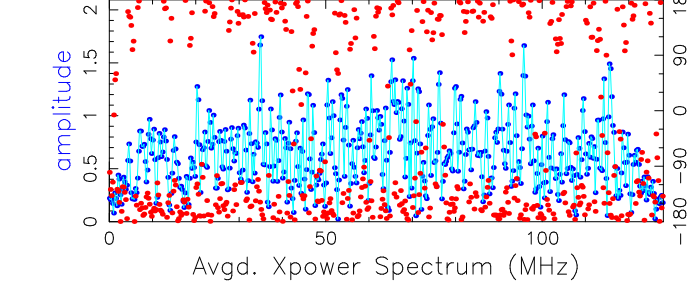
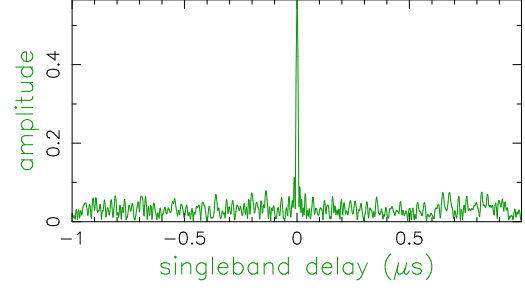
simultaneous interpolator



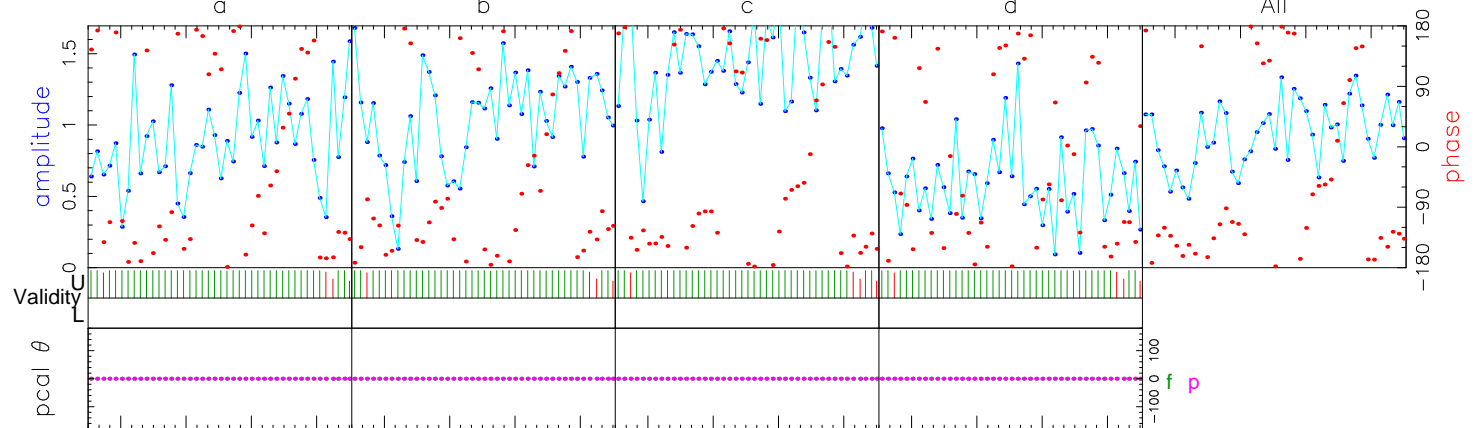
Fringe quality 7

SNR 23.8
Int time 237.261
Amp 0.565
Phase -158.2
PFD 0.0e+00
Delays (us)
SBD 0.000372
MBD -0.000026
Fringe rate (Hz)
-0.010319
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133526
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-166.2	-146.8	-157.0	-170.6	Phase	-158.2
	0.5	0.6	0.9	0.3	Ampl.	0.6
	513.2	513.2	512.9	513.7	Sbd box	513.2
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	PC phase	
f:p	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	2.72435572228E+02	Apriori delay (usec)	2.72435598386E+02	Resid mbdelay (usec)	-2.61577E-05	+/- 4.7E-05
Sband delay (usec)	2.72435970511E+02	Apriori clock (usec)	4.6858406E+00	Resid sbdelay (usec)	3.72125E-04	+/- 1.8E-04
Phase delay (usec)	2.72435588178E+02	Apriori clockrate (us/s)	1.8000000E-07	Resid phdelay (usec)	-1.02081E-05	+/- 3.1E-07
Delay rate (us/s)	-1.07636076906E-01	Apriori rate (us/s)	-1.07635837159E-01	Resid rate (us/s)	-2.39747E-07	+/- 2.3E-09
Total phase (deg)	-102.5	Apriori accel (us/s/s)	-1.28601206517E-06	Resid phase (deg)	-158.2	+/- 4.8

ph/seg (deg)	58.2	Theor.	15.7	Amplitude	0.565 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	76.0		27.5	Search (1024X16)	0.523	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	13.2		4.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	38.0		8.4	Inc. seg. avg.	0.899	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.567	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

f: az 216.1 el 52.2 pa 30.9 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 307.966 -237.213 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp.Q.55.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

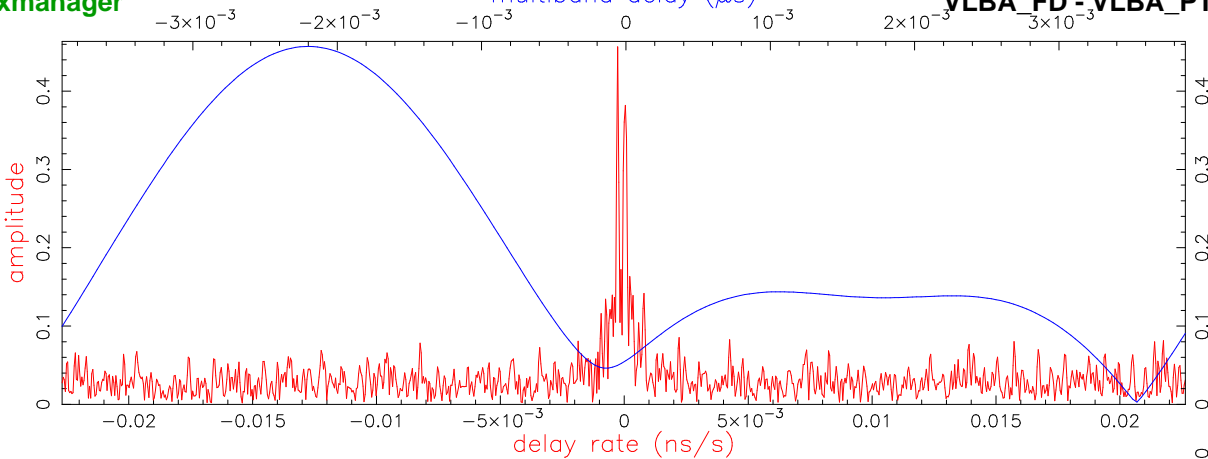
fxmanager

0420-014.1V2A0K, No0121, fp

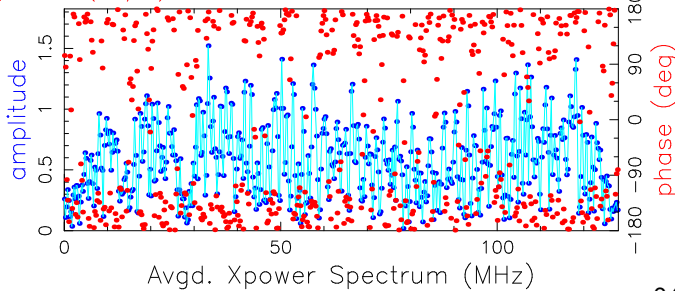
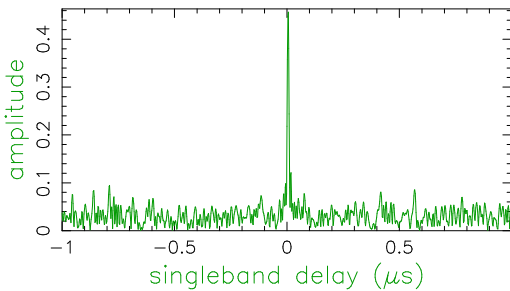
VLBA_FD - VLBA_PT, fgroup Q, pol RL

multiband delay (μ s)

Fringe quality 9

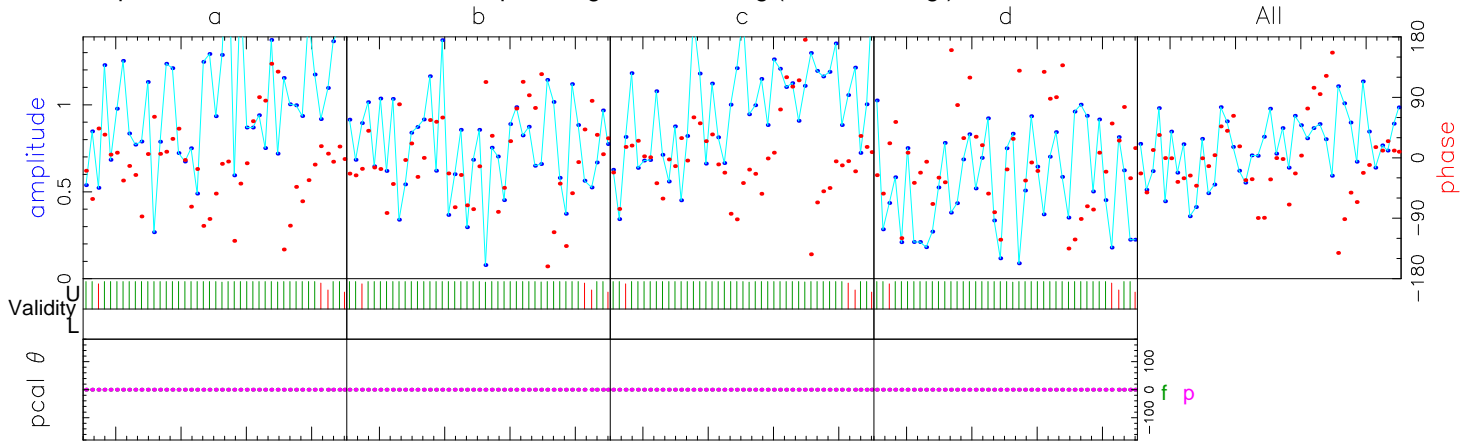


SNR 19.5
 Int time 237.261
 Amp 0.464
 Phase -6.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.005086
 MBD -0.002259
 Fringe rate (Hz)
 -0.010573
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133528
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



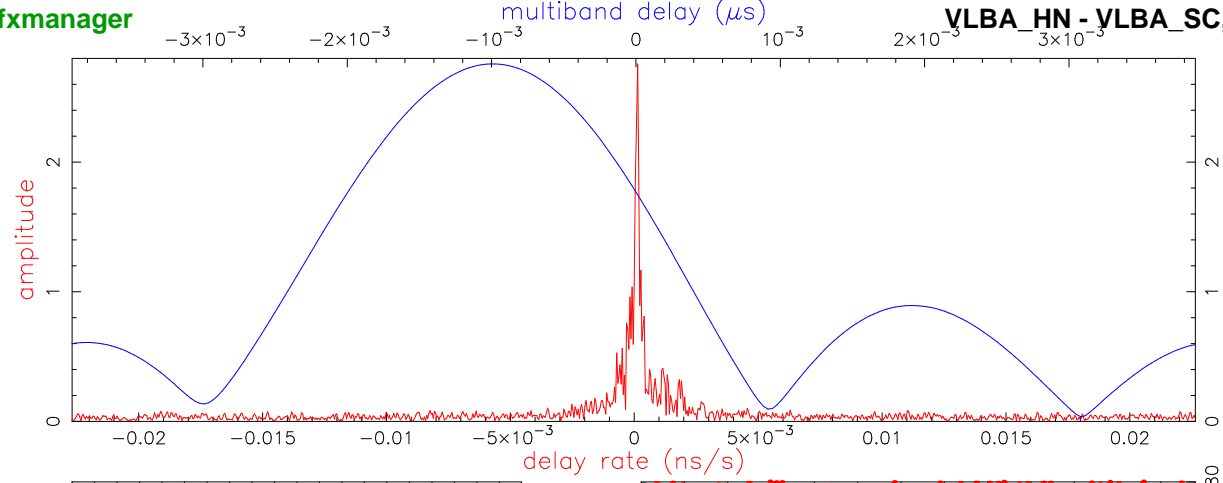
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-13.9	2.4	-5.3	-6.2	Phase	-6.6
	0.6	0.4	0.6	0.3	Ampl.	0.5
	516.2	515.3	515.9	514.3	Sbd box	515.6
U/L	467/0	467/0	467/0	467/0	APs used	
f	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	PC phase	
f:p	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	2.72441152328E+02	Apriori delay (usec)	2.72435598386E+02	Resid mbdelay (usec)	-2.25856E-03	+/- 5.7E-05
Group delay (usec)(sbd)	2.72440684136E+02	Apriori clock (usec)	4.6858406E+00	Resid sbdelay (usec)	5.08575E-03	+/- 2.2E-04
Sband delay (usec)	2.72435597961E+02	Apriori clockrate (us/s)	1.8000000E-07	Resid phdelay (usec)	-4.24880E-07	+/- 3.8E-07
Phase delay (usec)	-1.07636082826E-01	Apriori rate (us/s)	-1.07635837159E-01	Resid rate (us/s)	-2.45666E-07	+/- 2.7E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-1.28601206517E-06	Resid phase (deg)	-6.6	+/- 5.9
Total phase (deg)	49.0					

	RMS	Theor.	Amplitude	0.464 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	58.3	19.2	Search (1024X16)	0.411	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	75.7	33.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.2	5.9	Inc. seg. avg.	0.723	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	31.0	10.2	Inc. frq. avg.	0.457	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 216.1 el 52.2 pa 30.9 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 307.966 -237.213 simultaneous interpolator

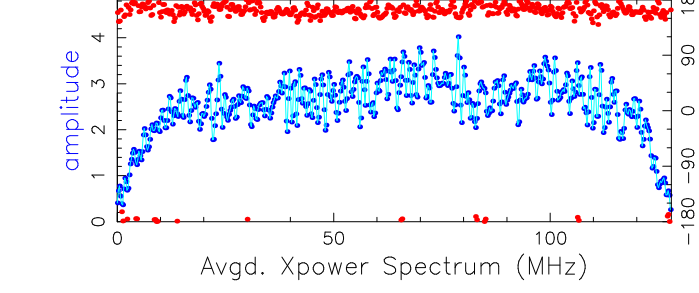
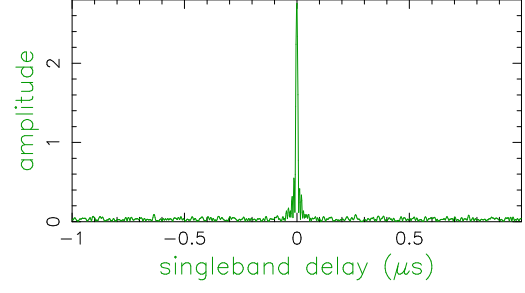
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/fp.Q.74.1V2A0K



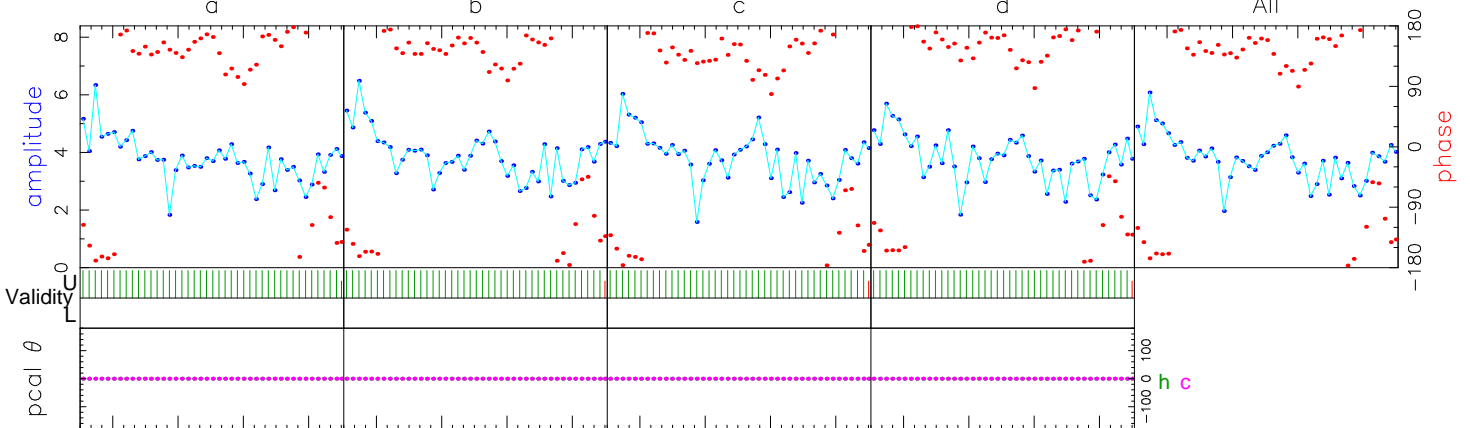
Fringe quality 5

SNR 118.6
Int time 239.990
Amp 2.800
Phase 167.4
PFD 0.0e+00
Delays (us)
SBD -0.000837
MBD -0.001019
Fringe rate (Hz)
0.005794
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133533
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



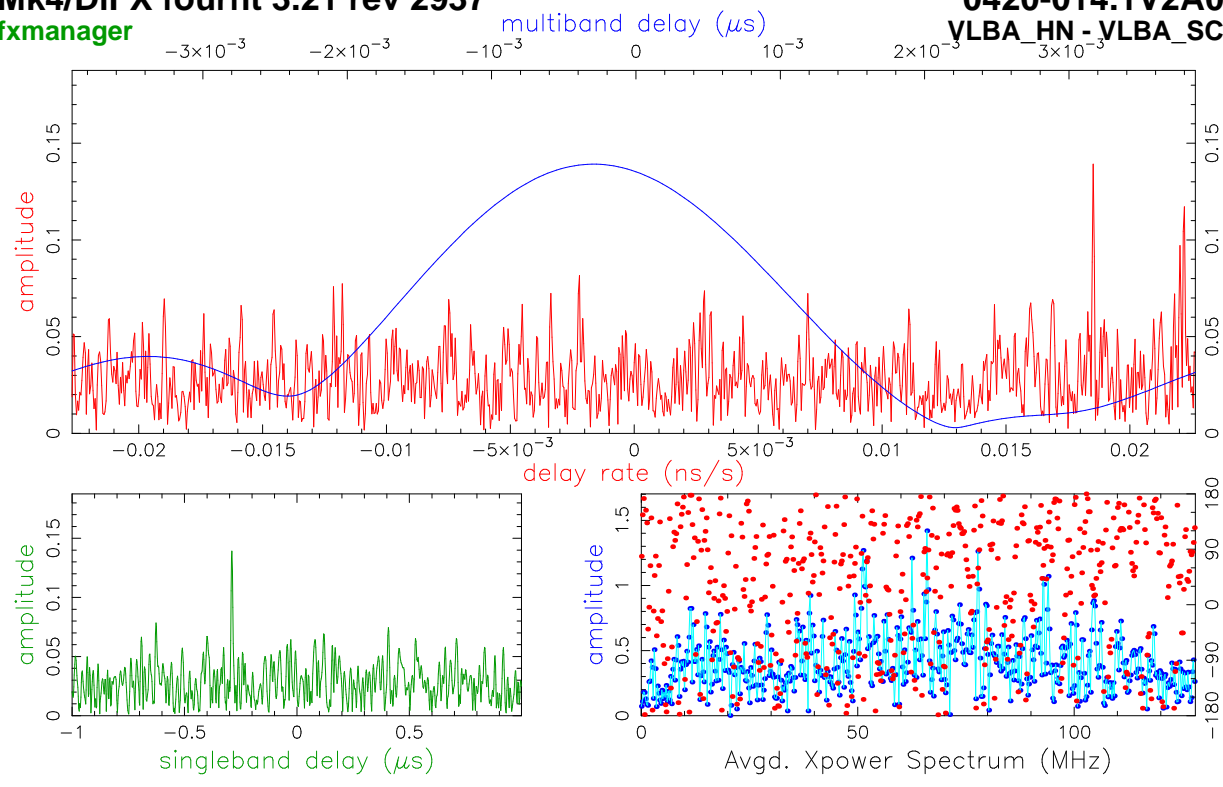
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	166.8	169.5	158.8	174.8	Phase	167.4
	2.8	2.8	2.8	2.7	Ampl.	2.8
	512.6	512.4	512.6	512.8	Sbd box	512.6
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
h:c	0:0	0:0	0:0	0:0	PC phase	
h:c	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.43275918860E+02	Apriori delay (usec)	-7.43274899685E+02	Resid mbdelay (usec)	-1.01917E-03	+/-	9.4E-06
Sband delay (usec)	-7.43275736310E+02	Apriori clock (usec)	-9.3981323E+00	Resid sbdelay (usec)	-8.36625E-04	+/-	3.6E-05
Phase delay (usec)	-7.43274888879E+02	Apriori clockrate (us/s)	-1.8599999E-07	Resid phdelay (usec)	1.08066E-05	+/-	6.2E-08
Delay rate (us/s)	3.76991421778E-01	Apriori rate (us/s)	3.76991287163E-01	Resid rate (us/s)	1.34615E-07	+/-	4.5E-10
Total phase (deg)	-78.2	Apriori accel (us/s/s)	2.94399378124E-06	Resid phase (deg)	167.4	+/-	1.0

ph/seg (deg)	47.5	3.2	Search (1024X16)	2.749	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	45.1	5.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	8.2	1.0	Inc. seg. avg.	3.800	Bits/sample: 2x2	Sample rate(MSamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	1.4	1.7	Inc. frq. avg.	2.770	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

h: az 242.0 el 25.1 pa 40.5 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -1080.843 1657.979 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc.Q.101.1V2A0K

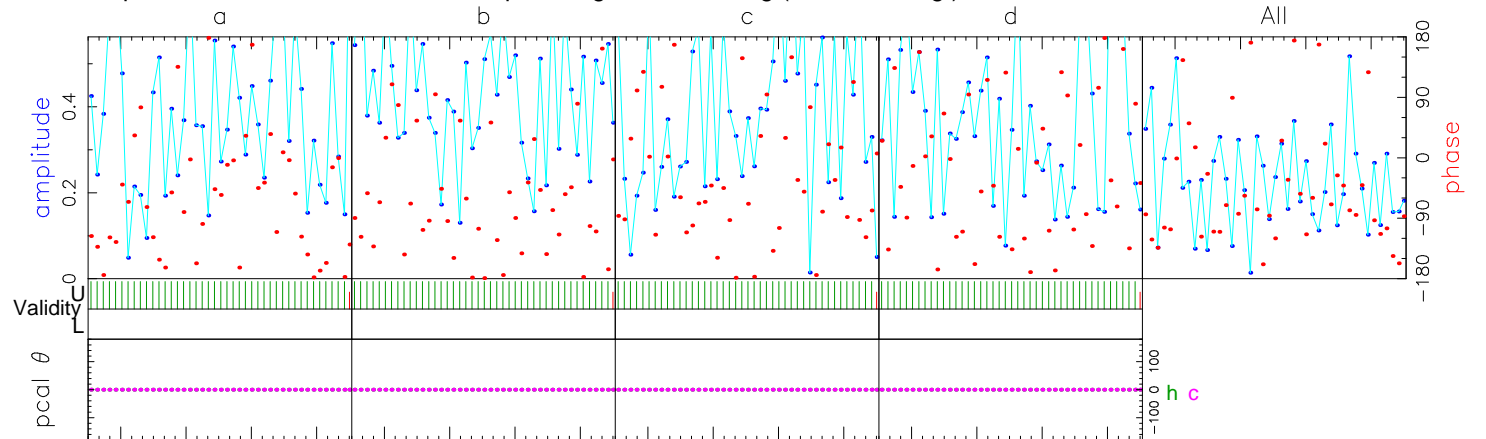


Fringe quality 0

SNR 5.9
Int time 239.990
Amp 0.188
Phase -87.8
PFD 3.2e-01
Delays (us)
SBD -0.289591
MBD -0.000319
Fringe rate (Hz)
0.799602
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133535
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-83.1	-100.2	-77.5	-88.7	Phase	-87.8
	0.2	0.2	0.2	0.1	Ampl.	0.2
	380.3	364.7	744.4	314.3	Sbd box	364.7
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
h:c	0:0	0:0	0:0	0:0	PC phase	
h:c	0:0	0:0	0:0	0:0	ManI PC	
h	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.43564280901E+02	Apriori delay (usec)	-7.43274899685E+02	Resid mbdelay (usec)	-3.18715E-04	+/-	1.9E-04
Sband delay (usec)	-7.43564491060E+02	Apriori clock (usec)	-9.3981323E+00	Resid sbdelay (usec)	-2.89591E-01	+/-	7.3E-04
Phase delay (usec)	-7.43274905349E+02	Apriori clockrate (us/s)	-1.8599999E-07	Resid phdelay (usec)	-5.66373E-06	+/-	1.2E-06
Delay rate (us/s)	3.77009865268E-01	Apriori rate (us/s)	3.76991287163E-01	Resid rate (us/s)	1.85781E-05	+/-	9.0E-09
Total phase (deg)		Apriori accel (us/s/s)	2.94399378124E-06	Resid phase (deg)	-87.8	+/-	19.3

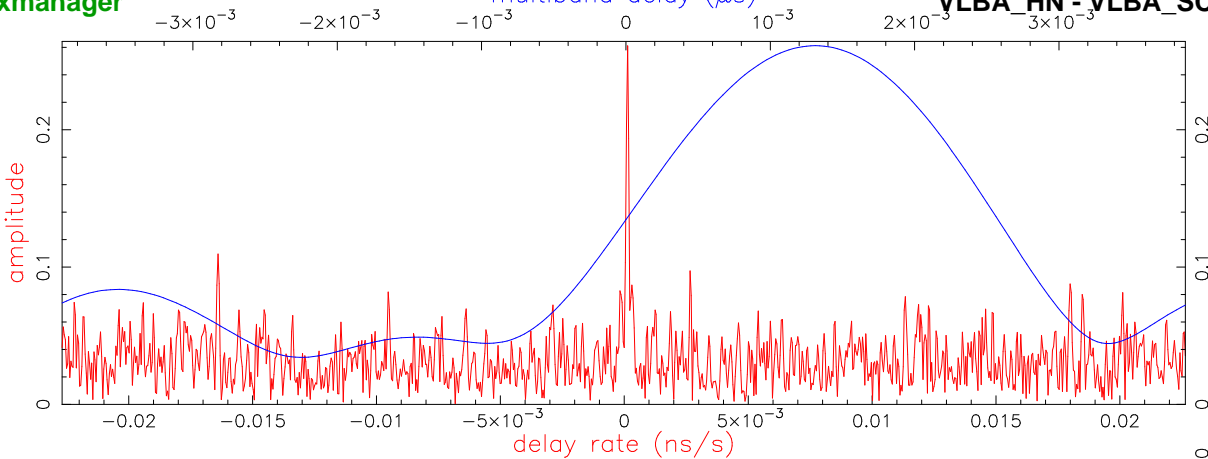
ph/seg (deg)	RMS 68.8	Theor. 63.3	Amplitude	0.188 +/- 0.032	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	105.5	110.6	Search (1024X16)	0.136	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	11.8	19.3	Inc. seg. avg.	0.194	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	26.1	33.7	Inc. frq. avg.	0.179	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

h: az 242.0 el 25.1 pa 40.5 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -1080.843 1657.979 simultaneous interpolator

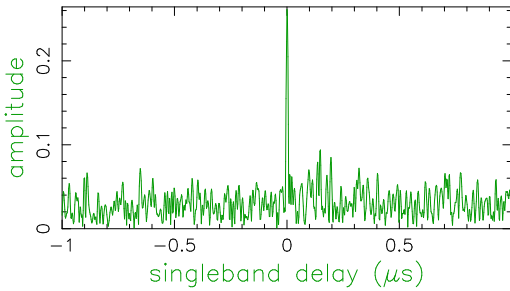
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc.Q.119.1V2A0K

multiband delay (μ s)

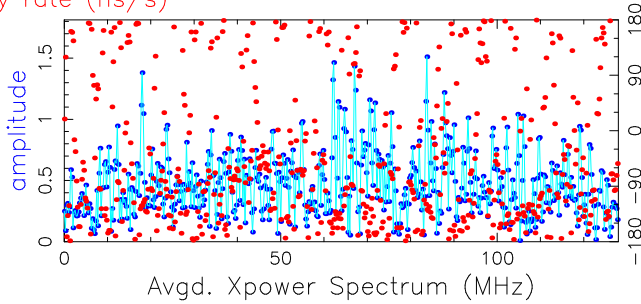
Fringe quality 9



SNR 11.2
Int time 239.990
Amp 0.264
Phase -140.6
PFD 1.0e-20
Delays (us)
SBD 0.000730
MBD 0.001347
Fringe rate (Hz)
0.005944
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

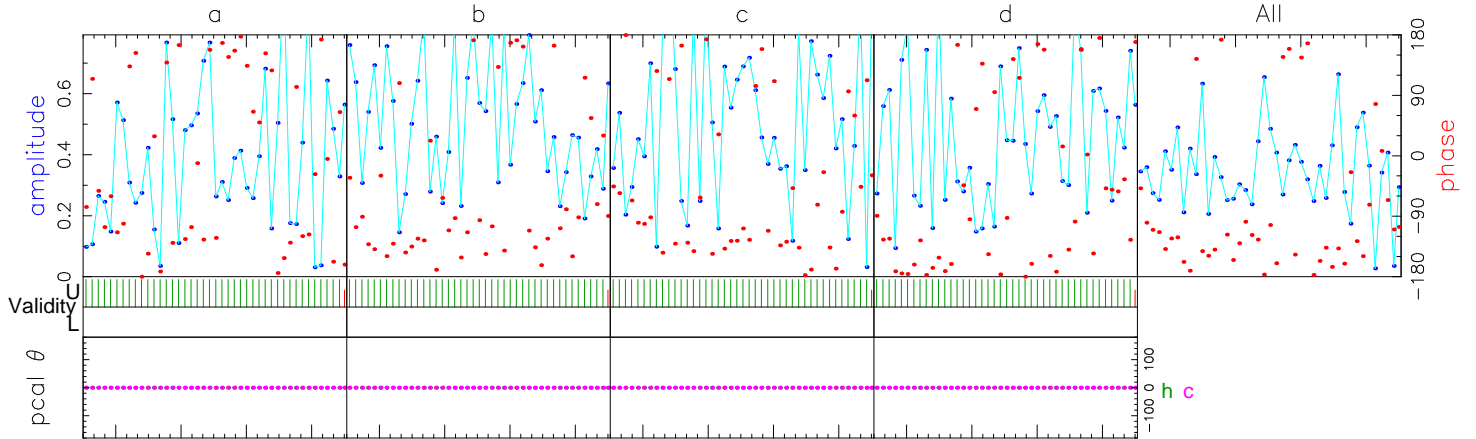


singleband delay (μ s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133536
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

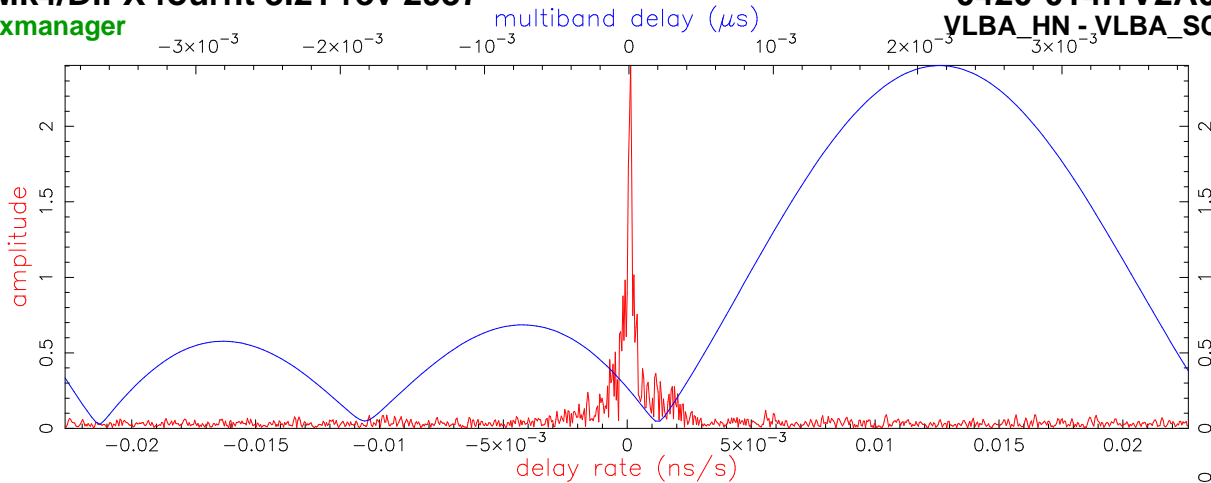


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-157.8	-128.6	-128.5	-155.3	Phase	-140.6
	0.2	0.3	0.3	0.3	Ampl.	0.3
	513.5	513.6	513.9	512.4	Sbd box	513.4
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
h:c	0:0	0:0	0:0	0:0	PC phase	
h:c	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.43273552360E+02	Apriori delay (usec)	-7.43274899685E+02	Resid mbdelay (usec)	1.34733E-03	+/-	9.9E-05
Sband delay (usec)	-7.43274169310E+02	Apriori clock (usec)	-9.3981323E+00	Resid sbdelay (usec)	7.30375E-04	+/-	3.8E-04
Phase delay (usec)	-7.43274908761E+02	Apriori clockrate (us/s)	-1.8599999E-07	Resid phdelay (usec)	-9.07586E-06	+/-	6.6E-07
Delay rate (us/s)	3.76991425275E-01	Apriori rate (us/s)	3.76991287163E-01	Resid rate (us/s)	1.38112E-07	+/-	4.8E-09
Total phase (deg)		Apriori accel (us/s/s)	2.94399378124E-06	Resid phase (deg)	-140.6	+/-	10.2

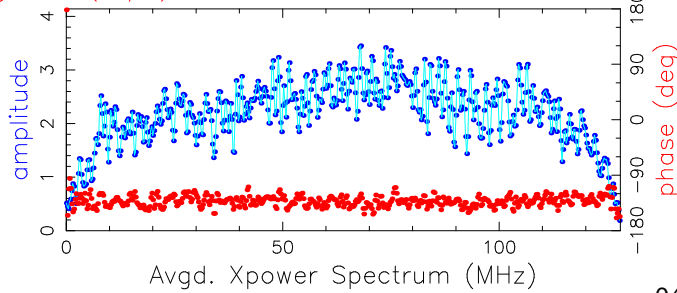
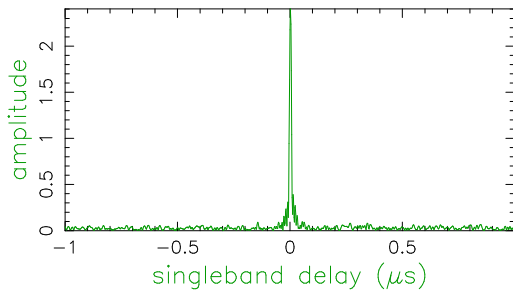
ph/seg (deg)	RMS 52.1	Theor. 33.6	Amplitude	0.264 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	60.1	58.6	Search (1024X16)	0.257	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled		mb window (us)	-0.004	0.004
ph/frq (deg)	20.0	10.2	Inc. seg. avg.	0.299	Bits/sample: 2x2	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023
amp/frq (%)	21.1	17.9	Inc. frq. avg.	0.265	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

h: az 242.0 el 25.1 pa 40.5 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -1080.843 1657.979 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc.Q.134.1V2A0K



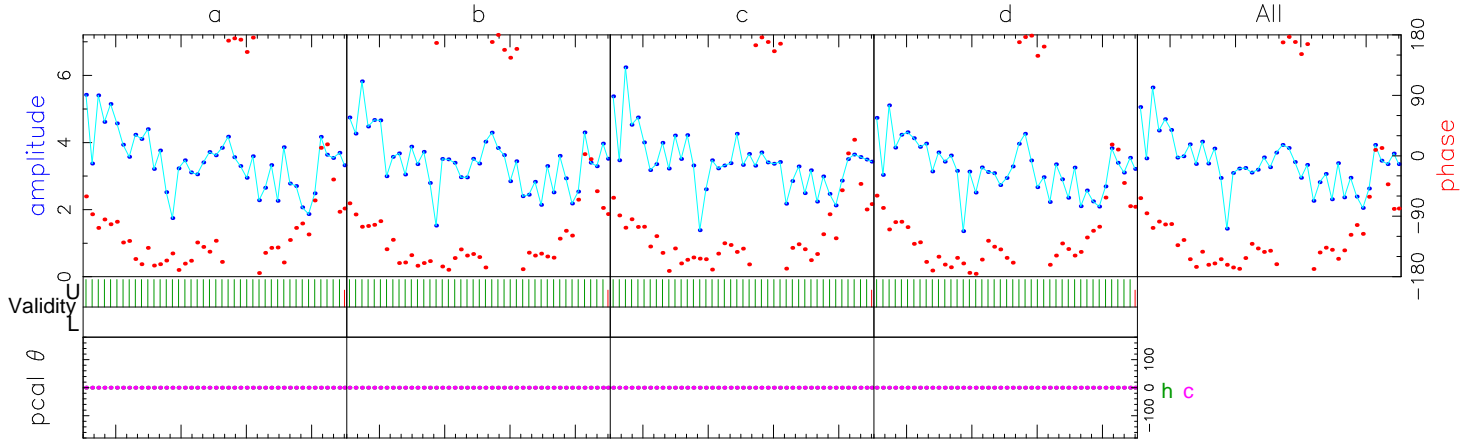
Fringe quality 5

SNR 101.8
Int time 239.990
Amp 2.404
Phase -133.2
PFD 0.0e+00
Delays (us)
SBD 0.002116
MBD 0.002161
Fringe rate (Hz)
0.005744
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133530
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

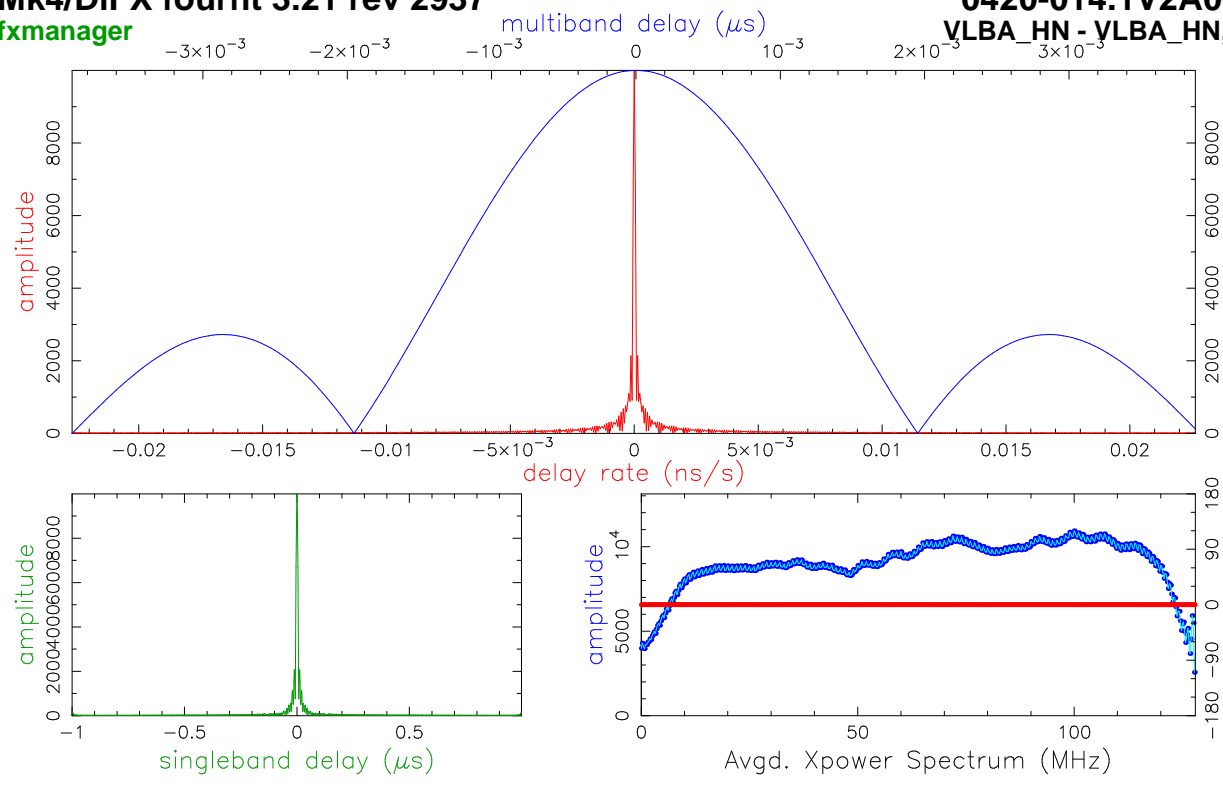


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-131.5	-135.8	-131.2	-134.5	Phase	-133.2
	2.5	2.4	2.4	2.3	Ampl.	2.4
	513.8	514.2	514.2	514.1	Sbd box	514.1
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
h:c	0:0	0:0	0:0	0:0	PC phase	
h:c	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.43272738953E+02	Apriori delay (usec)	-7.43274899685E+02	Resid mbdelay (usec)	2.16073E-03	+/-	1.1E-05
Sband delay (usec)	-7.43272783560E+02	Apriori clock (usec)	-9.3981323E+00	Resid sbdelay (usec)	2.11613E-03	+/-	4.2E-05
Phase delay (usec)	-7.43274908284E+02	Apriori clockrate (us/s)	-1.8599999E-07	Resid phdelay (usec)	-8.59822E-06	+/-	7.3E-08
Delay rate (us/s)	3.76991420629E-01	Apriori rate (us/s)	3.76991287163E-01	Resid rate (us/s)	1.33466E-07	+/-	5.2E-10
Total phase (deg)	-18.9	Apriori accel (us/s/s)	2.94399378124E-06	Resid phase (deg)	-133.2	+/-	1.1

ph/seg (deg)	48.5	RMS	48.5	Theor.	3.7	Amplitude	2.404 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	52.0	Search (1024X16)	2.366	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.004	0.004		
ph/frq (deg)	2.8	Inc. seg. avg.	3.378	Inc. frq. avg.	2.403	Bits/sample:	2x2	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023	0.023		
amp/frq (%)	3.3	Inc. frq. avg.	2.403	Data rate (Mb/s):	2048	nlags:	512	t_coherence:	infinite	ion window (TEC)	0.00	0.00		
h:	az 242.0 el 25.1 pa 40.5	c:	az 258.8 el 27.5 pa 69.2	u,v (fr/asec)	-1080.843 1657.979	simultaneous interpolator								

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hc.Q.81.1V2A0K

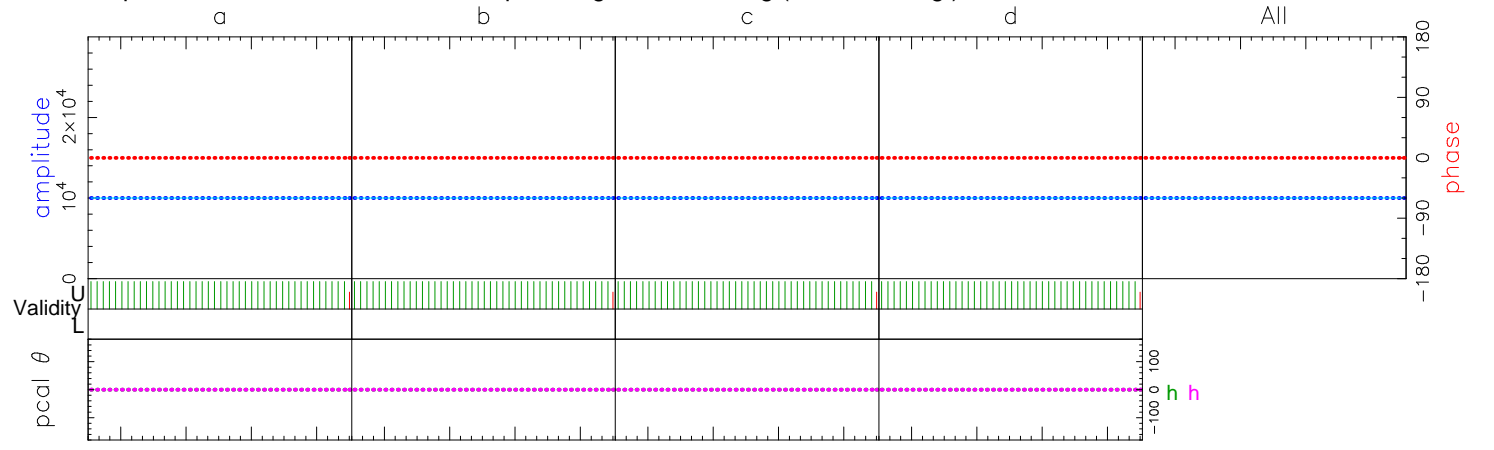


Fringe quality 9

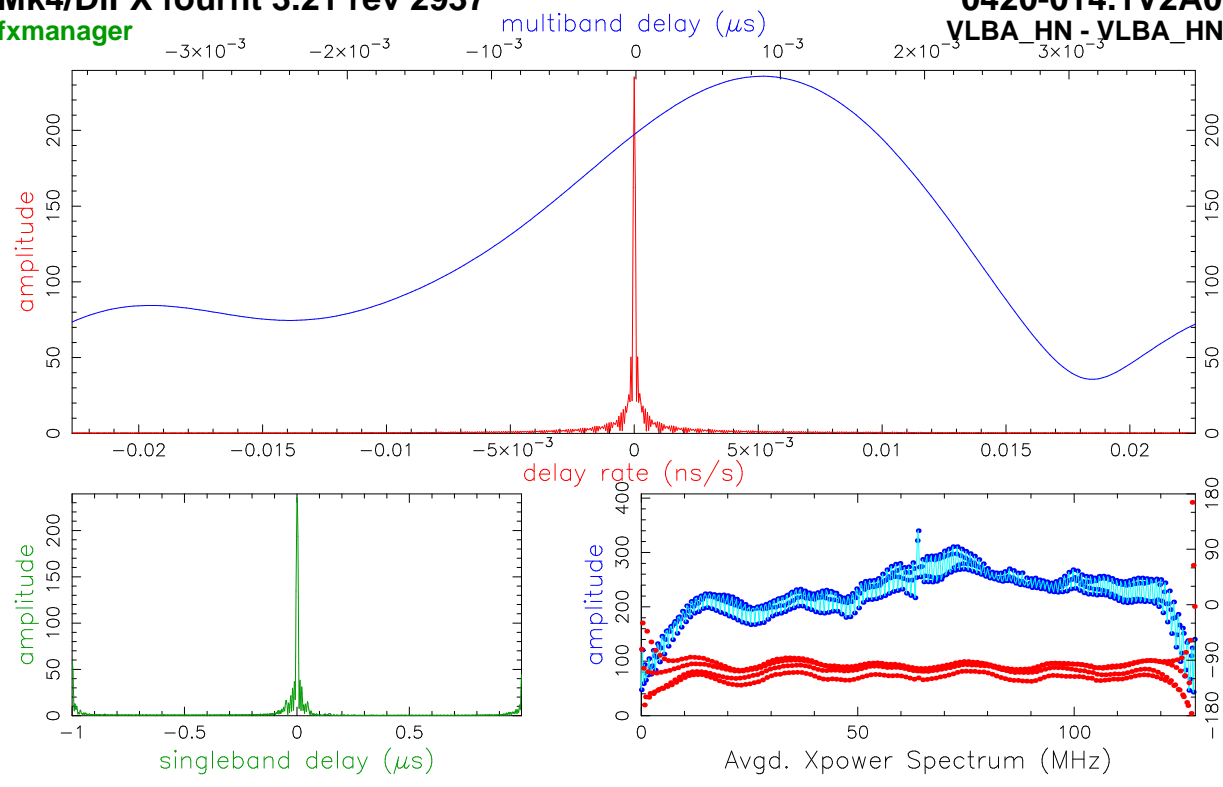
SNR 423638.1
Int time 239.991
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133533
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	APs used	10000.0
h	1000	1000	1000	1000	PC freqs	513.0
h:h	0:0	0:0	0:0	0:0	PC phase	
h	1000	1000	1000	1000	ManI PC	
h	1000	1000	1000	1000	PC amp	
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00 +/- 2.6E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid sbdelay (usec)	0.00000E+00 +/- 1.0E-08
Phase delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid phdelay (usec)	0.00000E+00 +/- 1.7E-11
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid rate (us/s)	0.00000E+00 +/- 1.3E-13
Total phase (deg)	0.0	0.0	0.0	0.0	Resid phase (deg)	0.0 +/- 0.0
RMS	0.0	0.0	0.0	0.0	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
Theor.	0.0	0.0	0.0	0.0	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
Amplitude	9999.999 +/- 0.024	9999.999 +/- 0.024	9999.999 +/- 0.024	9999.999 +/- 0.024	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
Search (1024X16)	10000.000	10000.000	10000.000	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
Interp.	0.000	0.000	0.000	0.000	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
Inc. seg. avg.	10000.000	10000.000	10000.000	10000.000	nlags: 512	t_cohere infinite
Inc. frq. avg.	10000.000	10000.000	10000.000	10000.000		
h: az 242.0 el 25.1 pa 40.5	h: az 242.0 el 25.1 pa 40.5	u,v (fr/asec) 0.000 0.000				simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hh..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hh.Q.104.1V2A0K				

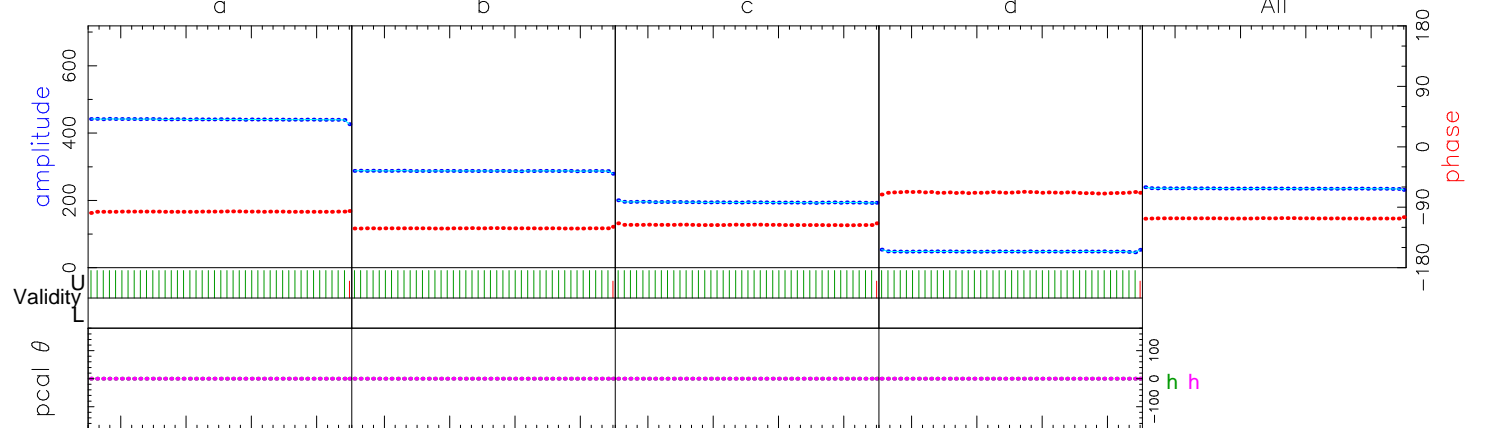


Fringe quality 5

SNR 10149.9
Int time 239.991
Amp 239.589
Phase -106.5
PFD 0.0e+00
Delays (us)
SBD 0.000894
MBD 0.000958
Fringe rate (Hz)
-0.000003
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133535
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

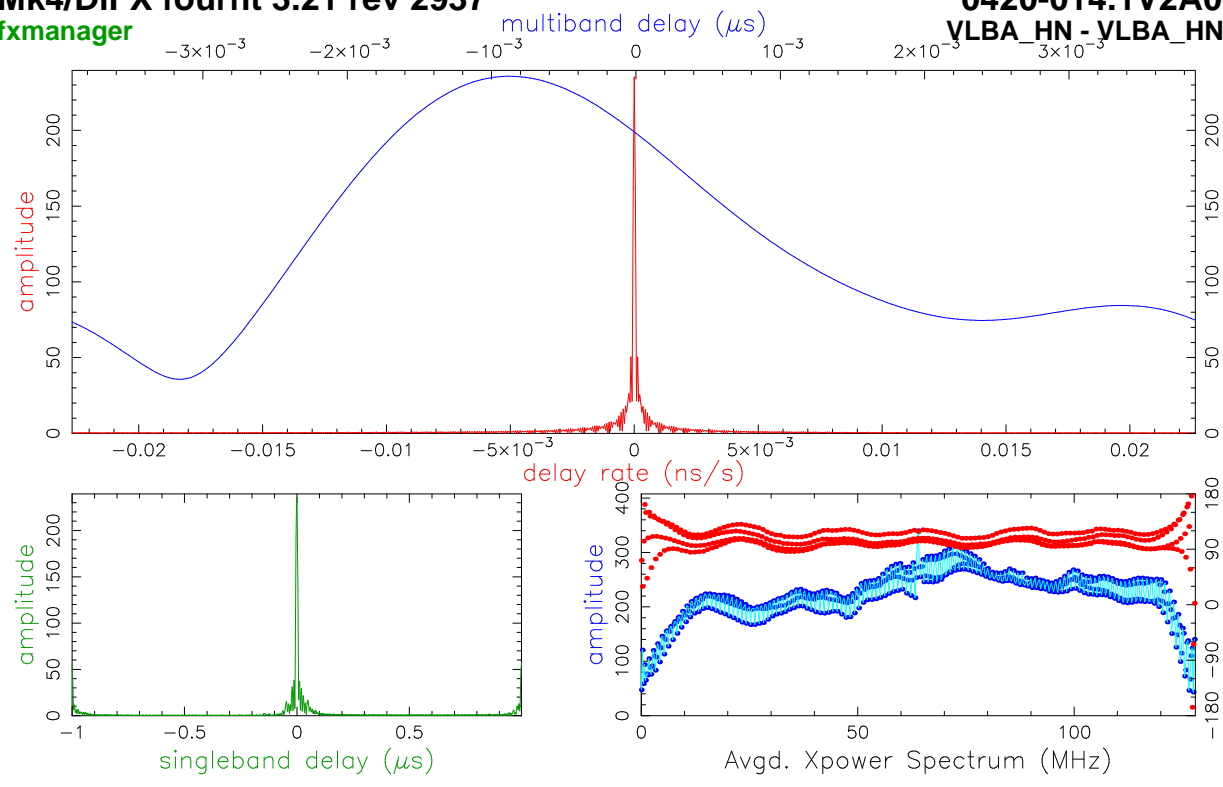
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000	APs used	1000
h:h	0:0	0:0	0:0	0:0	PC freqs	1000
h:h	0:0	0:0	0:0	0:0	PC phase	1000
h	1000	1000	1000	1000	ManI PC	1000
h	1000	1000	1000	1000	PC amp	1000
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	9.58187500000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	9.58188E-04	+/- 1.1E-07
Group delay (usec)(sbd)	9.58187500000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	9.58188E-04	+/- 4.2E-07
Sband delay (usec)	8.94000000000E-04	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-6.87529E-06	+/- 7.3E-10
Phase delay (usec)	-6.8752908079E-06	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-7.94138E-11	+/- 5.3E-12
Delay rate (us/s)	-7.94137683005E-11	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-106.5	+/- 0.0
Total phase (deg)	-106.5					

ph/seg (deg) 0.3 0.0 Amplitude 239.589 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 1.8 0.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 30.7 0.0 Inc. seg. avg. 235.324 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 59.5 0.0 Inc. frq. avg. 242.650 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
h: az 242.0 el 25.1 pa 40.5 h: az 242.0 el 25.1 pa 40.5 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hh..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hh.Q.124.1V2A0K

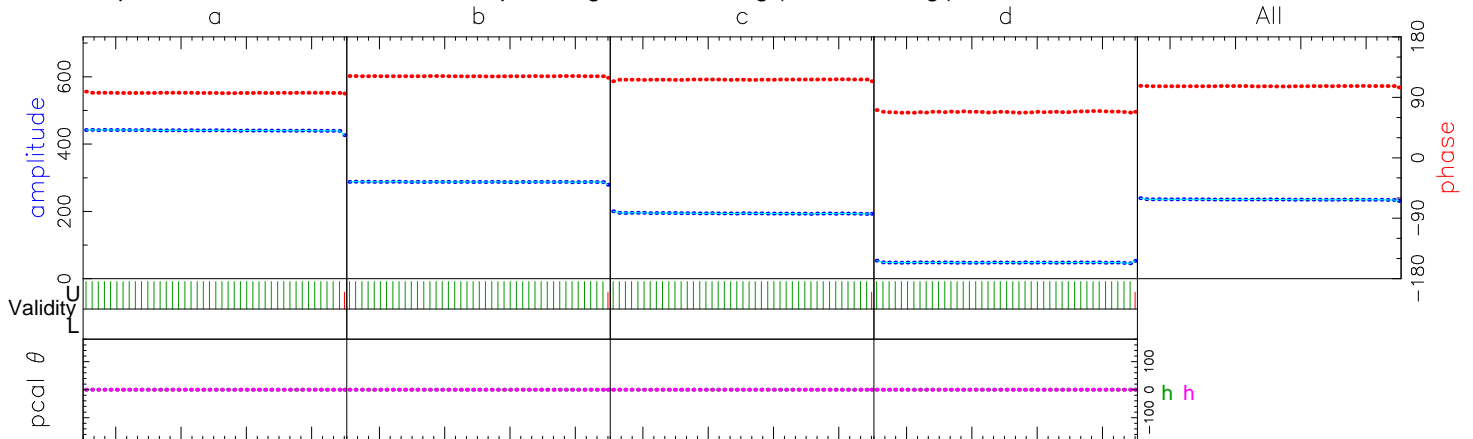


Fringe quality 5

SNR 10149.9
Int time 239.991
Amp 239.589
Phase 106.5
PFD 0.0e+00
Delays (us)
SBD -0.000894
MBD -0.000958
Fringe rate (Hz) 0.000003
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133537
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

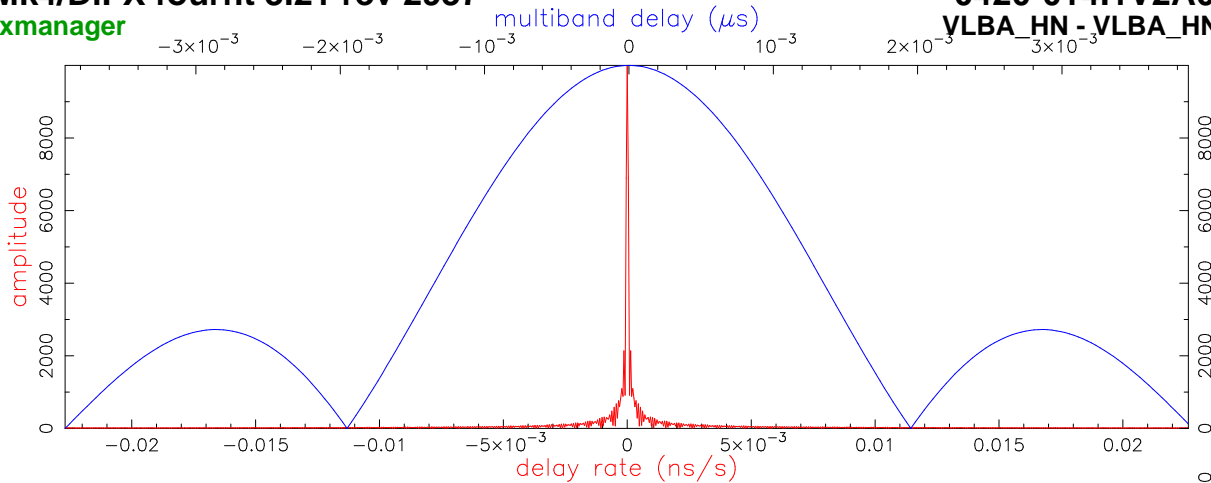
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



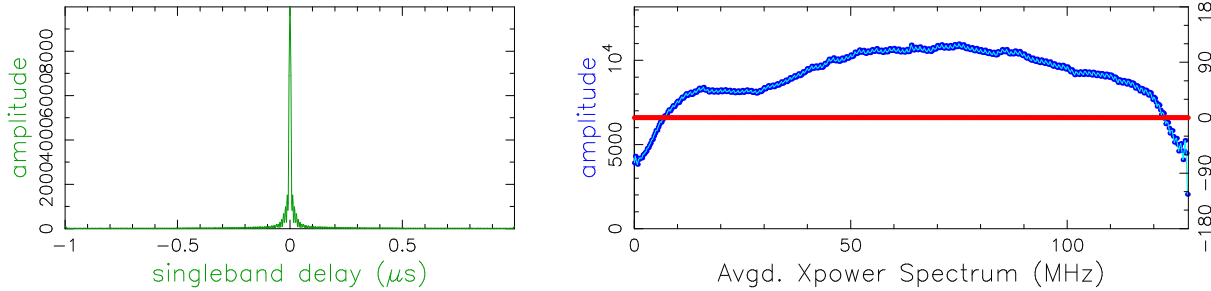
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	96.6	121.3	116.2	68.2	Phase	106.5
	440.5	287.5	194.4	48.3	Ampl.	242.6
	512.8	512.5	512.6	1.4	Sbd box	512.5
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
h	1000	1000	1000	1000	PC freqs	
h:h	0:0	0:0	0:0	0:0	PC phase	
h:h	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-9.58187500000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-9.58188E-04	+/-	1.1E-07
Sband delay (usec)	-8.94000000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-8.94000E-04	+/-	4.2E-07
Phase delay (usec)	6.87529080851E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	6.87529E-06	+/-	7.3E-10
Delay rate (us/s)	7.94137683005E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	7.94138E-11	+/-	5.3E-12
Total phase (deg)	106.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	106.5	+/-	0.0

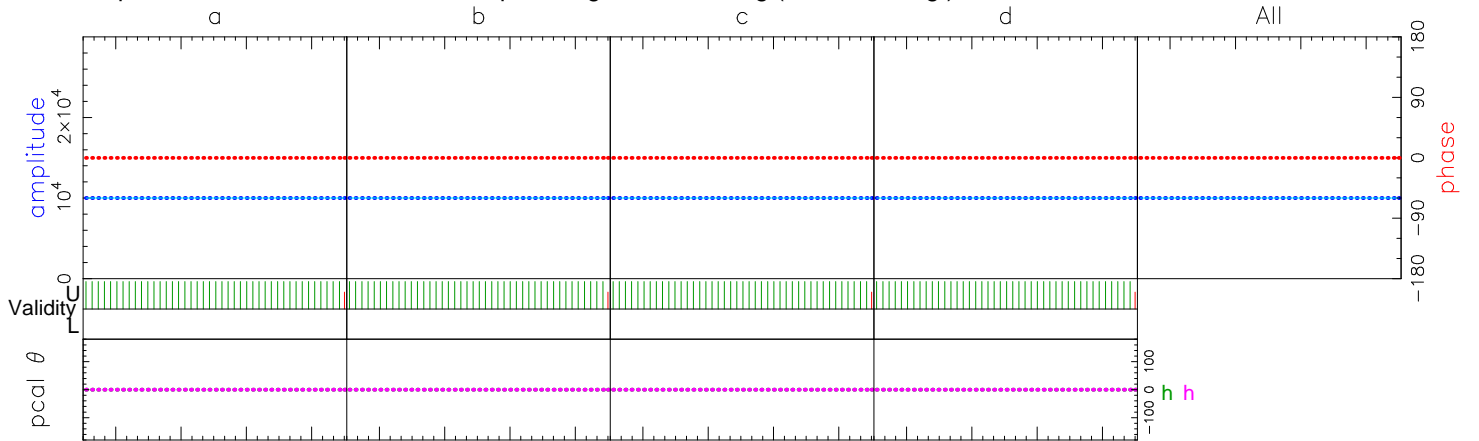
ph/seg (deg)	0.3	0.0	Amplitude	239.589 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	1.8	0.1	Search (1024X16)	235.120	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	30.7	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	59.5	0.0	Inc. seg. avg.	235.324	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	242.650	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
h: az 242.0 el 25.1 pa 40.5		h: az 242.0 el 25.1 pa 40.5		u,v (fr/asec) 0.000 0.000		simultaneous interpolator



Fringe quality 9
SNR 423638.1
Int time 239.991
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133531
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000	APs used	1000
h:h	0:0	0:0	0:0	0:0	PC freqs	1000
h:h	0:0	0:0	0:0	0:0	PC phase	1000
h	1000	1000	1000	1000	ManI PC	1000
h	1000	1000	1000	1000	PC amp	1000
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/- 2.6E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/- 1.0E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/- 1.7E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/- 0.0

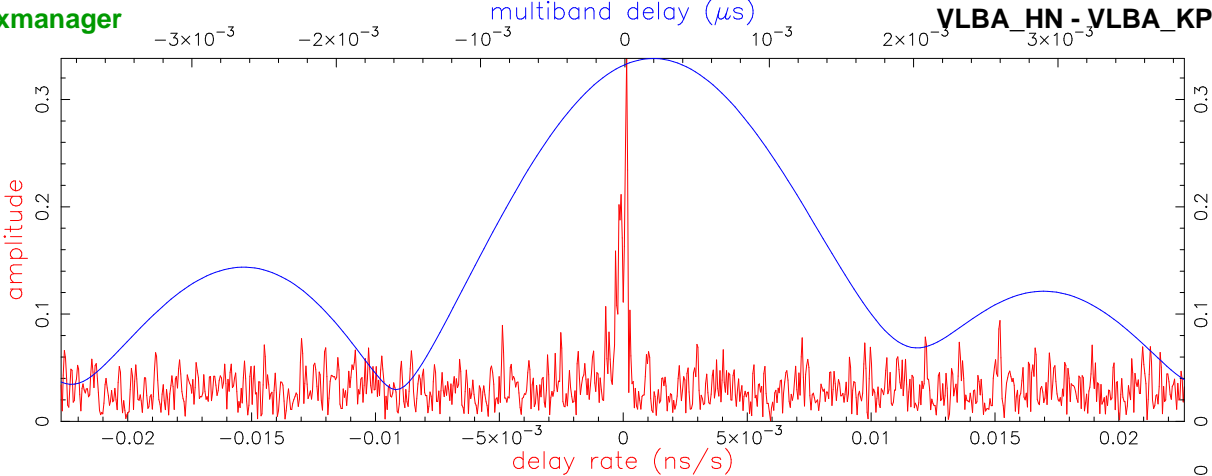
	RMS	Theor.	Amplitude	9999.999 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

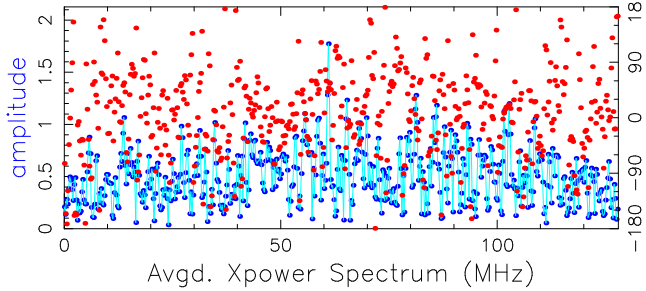
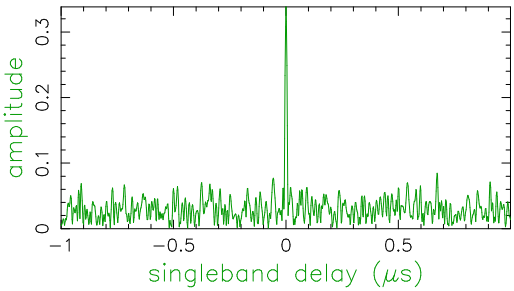
0420-014.1V2A0K, No0121, hk

VLBA_HN - VLBA_KP, fgroup Q, pol LR



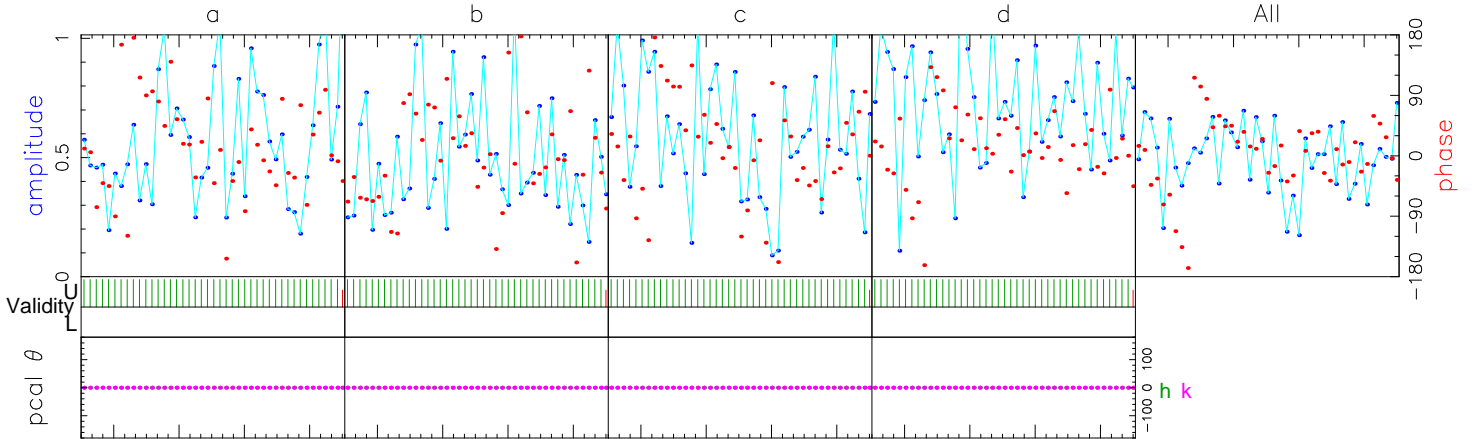
Fringe quality 9

SNR 14.3
 Int time 239.983
 Amp 0.338
 Phase 9.1
 PFD 4.1e-38
 Delays (us)
 SBD 0.000160
 MBD 0.000205
 Fringe rate (Hz)
 0.006082
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133535
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000	APs used	
k	1000	1000	1000	1000	PC freqs	
h:k	0:0	0:0	0:0	0:0	PC phase	
h:k	0:0	0:0	0:0	0:0	ManI PC	
h	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	-8.36943824953E+03	Apriori delay (usec)	-8.36943845445E+03	Resid mbdelay (usec)	2.04920E-04	+/- 7.8E-05
Sband delay (usec)	-8.36943829482E+03	Apriori clock (usec)	2.4603844E+00	Resid sbdelay (usec)	1.59625E-04	+/- 3.0E-04
Phase delay (usec)	-8.36943845386E+03	Apriori clockrate (us/s)	1.3000000E-07	Resid phdelay (usec)	5.90464E-07	+/- 5.2E-07
Delay rate (us/s)	-5.95749814634E-01	Apriori rate (us/s)	-5.95749955942E-01	Resid rate (us/s)	1.41308E-07	+/- 3.7E-09
Total phase (deg)	-19.5	Apriori accel (us/s/s)	4.41298004613E-05	Resid phase (deg)	9.1	+/- 8.0

ph/seg (deg)	56.3	Theor.	26.2	Amplitude	0.338 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	63.2	Search (1024X16)	0.329	Search	0.329	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	10.2	Inc. seg. avg.	0.453	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	26.3	Inc. frq. avg.	0.337	Inc. seg. avg.	0.453	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	0.337	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

h: az 242.0 el 25.1 pa 40.5 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) 1722.831 636.042 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk.Q.122.1V2A0K

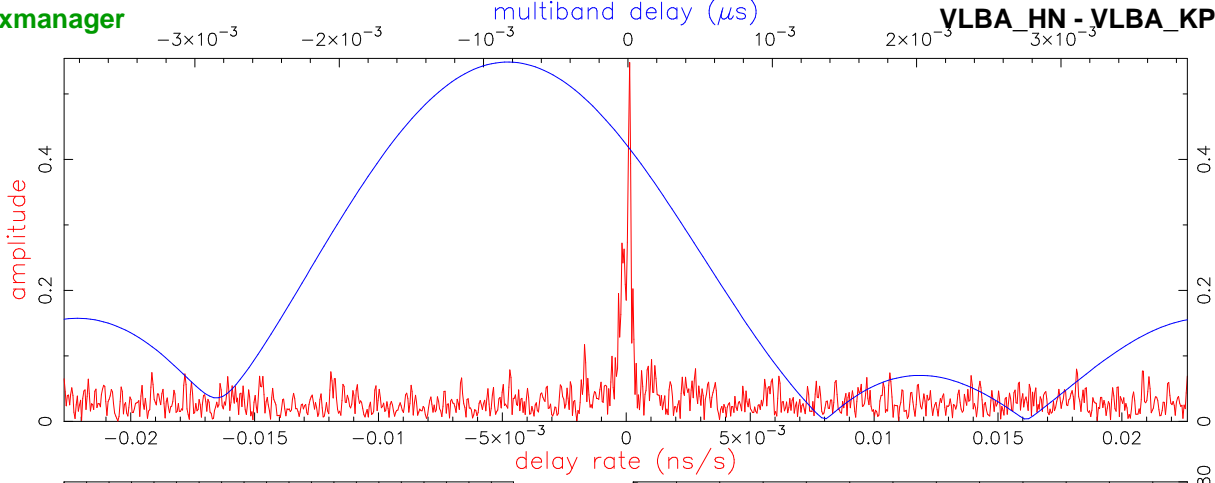
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

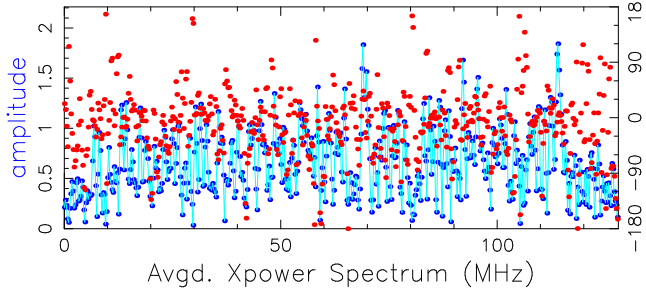
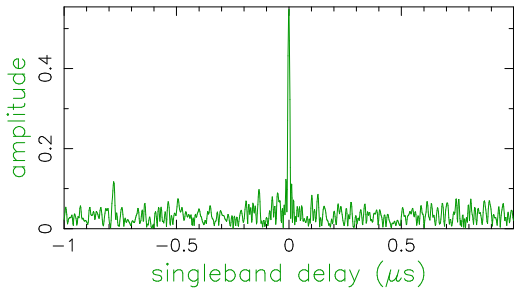
0420-014.1V2A0K, No0121, hk

VLBA_HN - VLBA_KP, fgroup Q, pol RL

Fringe quality 9

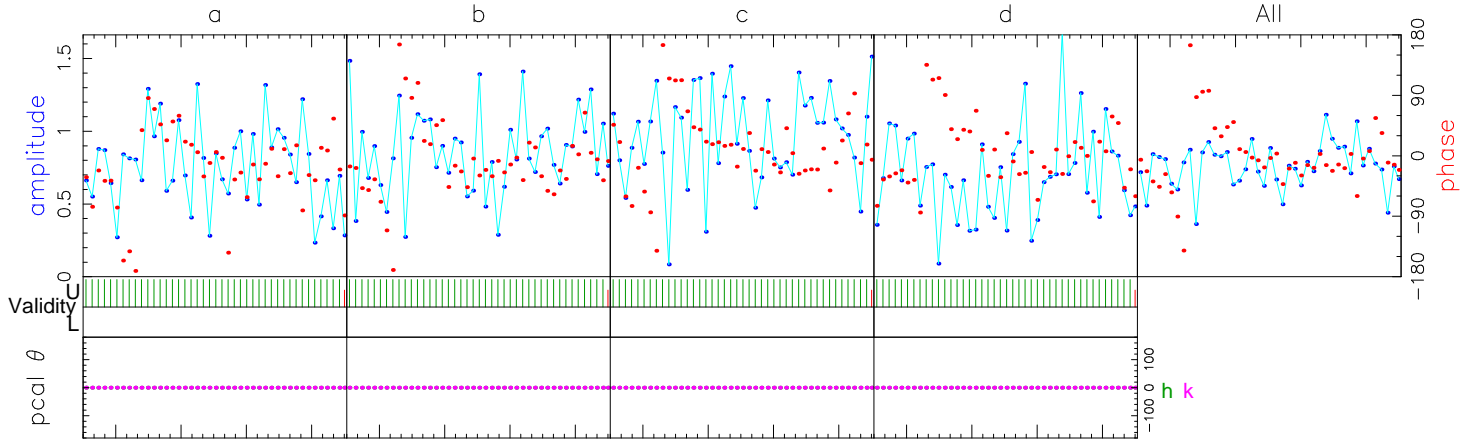


SNR 23.5
 Int time 239.983
 Amp 0.554
 Phase -4.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.000701
 MBD -0.000885
 Fringe rate (Hz)
 0.005991
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133537
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-7.9	-11.3	6.3	-6.8	Phase	-4.4
	0.5	0.6	0.6	0.5	Ampl.	0.6
	512.4	512.6	513.1	512.3	Sbd box	512.6
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
h:k	0:0	0:0	0:0	0:0	PC phase	
h:k	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-8.36943933953E+03	Apriori delay (usec)	-8.36943845445E+03	Resid mbdelay (usec)	-8.85080E-04	+/-	4.7E-05
Sband delay (usec)	-8.36943915545E+03	Apriori clock (usec)	2.4603844E+00	Resid sbdelay (usec)	-7.01000E-04	+/-	1.8E-04
Phase delay (usec)	-8.36943845474E+03	Apriori clockrate (us/s)	1.3000000E-07	Resid phdelay (usec)	-2.86655E-07	+/-	3.1E-07
Delay rate (us/s)	-5.95749816747E-01	Apriori rate (us/s)	-5.95749955942E-01	Resid rate (us/s)	1.39195E-07	+/-	2.3E-09
Total phase (deg)	-33.1	Apriori accel (us/s/s)	4.41298004613E-05	Resid phase (deg)	-4.4	+/-	4.9

ph/seg (deg)	50.9	RMS	16.0	Theor.	16.0	Amplitude	0.554 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	46.5	Search (1024X16)	0.540	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	0.540	sb window (us)	-1.000	1.000	
ph/frq (deg)	9.5	Inc. seg. avg.	0.735	Inc. frq. avg.	0.550	Bits/sample: 2x2	1.3000000E-07	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/frq (%)	11.6	Inc. frq. avg.	0.550	Sample rate (MSamp/s): 256		Data rate (Mb/s): 2048	-5.95749955942E-01	nlags: 512	dr window (ns/s)	-0.023	0.023
h: az 242.0 el 25.1 pa 40.5		k: az 203.6 el 54.4 pa 20.3		u,v (fr/asec)	1722.831 636.042			ion window (TEC)	0.00	0.00	simultaneous interpolator

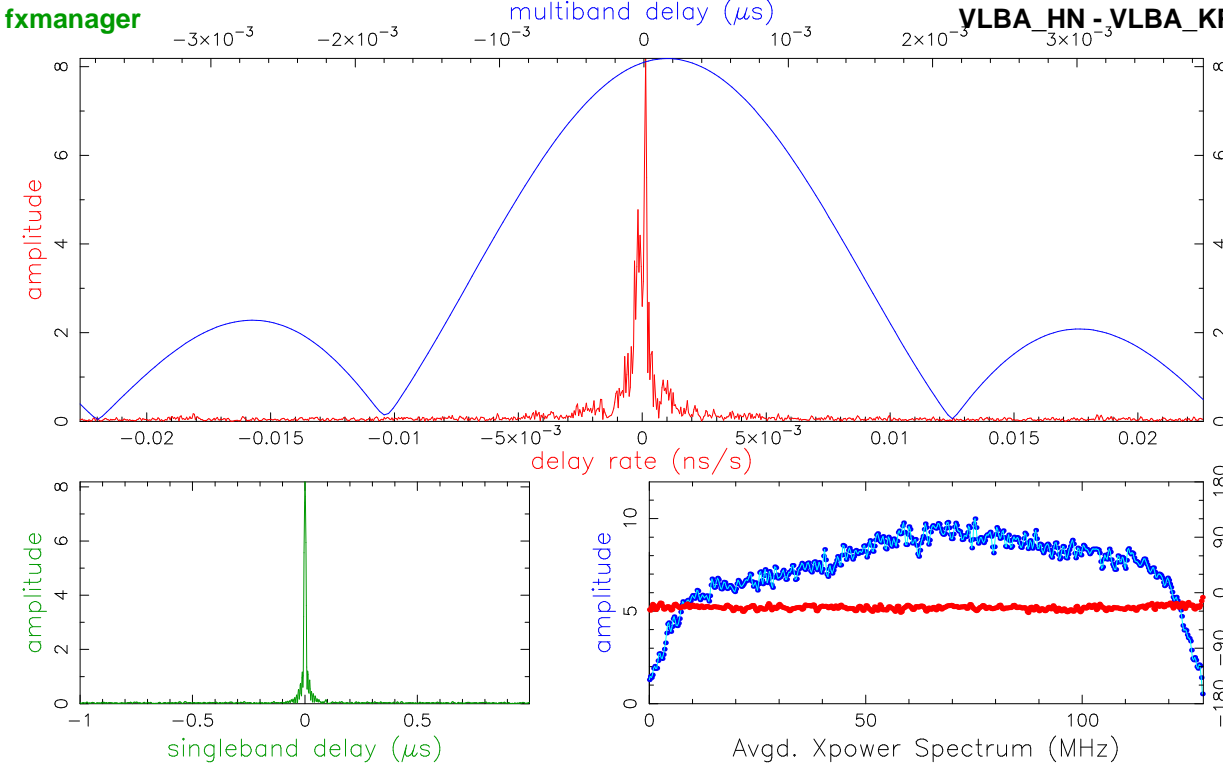
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk.Q.142.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, hk

VLBA_HN - VLBA_KP, fgroup Q, pol LL

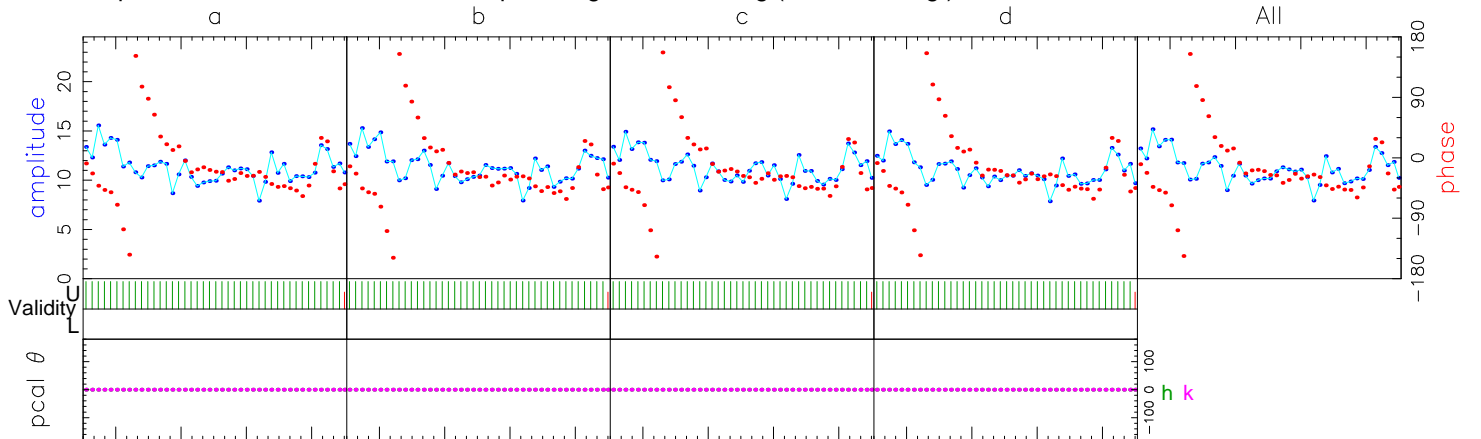


Fringe quality 5

SNR 346.8
 Int time 239.983
 Amp 8.186
 Phase -24.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.000171
 MBD 0.000169
 Fringe rate (Hz) 0.006323
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133531
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

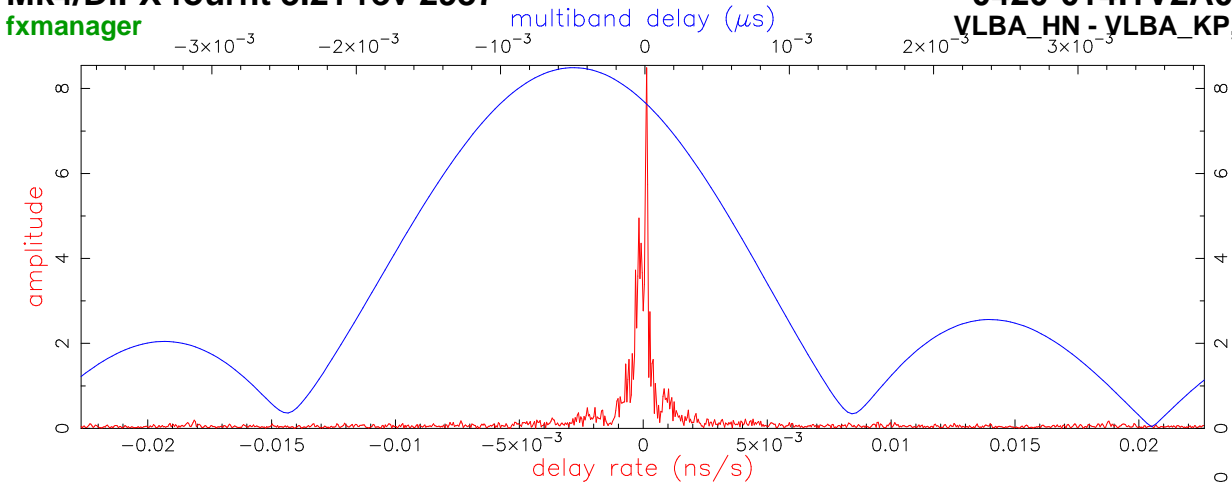
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



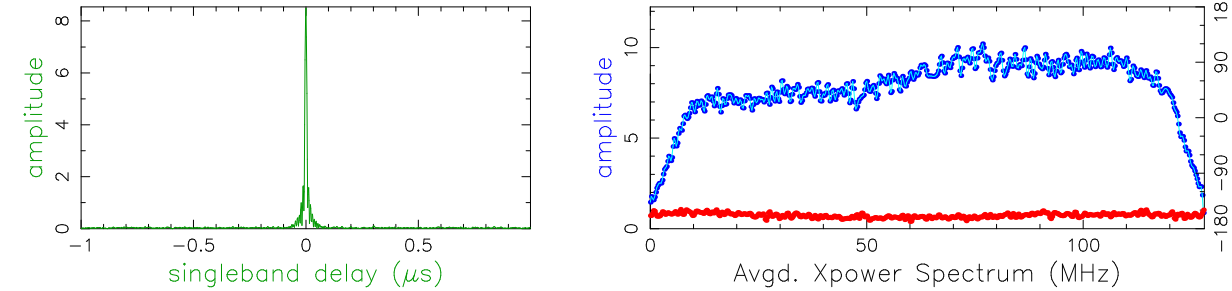
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-22.1	-26.2	-23.9	-24.1	Phase	-24.1
	8.2	8.3	8.2	8.0	Ampl.	8.2
	512.9	513.1	513.1	513.3	Sbd box	513.1
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
h:k	0:0	0:0	0:0	0:0	PC phase	
h:k	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-8.36943828506E+03	Apriori delay (usec)	-8.36943845445E+03	Resid mbdelay (usec)	1.69388E-04	+/-	3.2E-06
Sband delay (usec)	-8.36943828370E+03	Apriori clock (usec)	2.4603844E+00	Resid sbdelay (usec)	1.70750E-04	+/-	1.2E-05
Phase delay (usec)	-8.36943845600E+03	Apriori clockrate (us/s)	1.3000000E-07	Resid phdelay (usec)	-1.55286E-06	+/-	2.1E-08
Delay rate (us/s)	-5.95749809021E-01	Apriori rate (us/s)	-5.95749955942E-01	Resid rate (us/s)	1.46921E-07	+/-	1.5E-10
Total phase (deg)	-52.7	Apriori accel (us/s/s)	4.41298004613E-05	Resid phase (deg)	-24.1	+/-	0.3

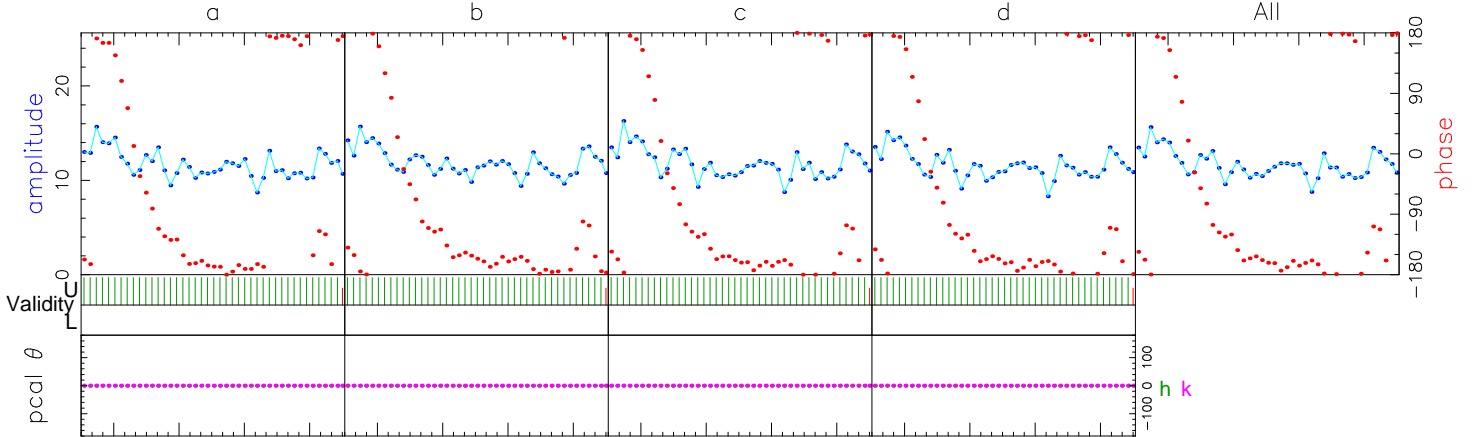
ph/seg (deg)	51.3	1.1	Search (1024X16)	7.815	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	41.4	1.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	2.1	0.3	Inc. seg. avg.	11.242	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
amp/frq (%)	1.2	0.6	Inc. frq. avg.	8.185	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023	
h: az 242.0 el 25.1 pa 40.5			k: az 203.6 el 54.4 pa 20.3		Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00
Control file: cf_1234_gmva7mm			Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk..1V2A0K							simultaneous interpolator
										Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk.Q.83.1V2A0K



Fringe quality 5
SNR 362.0
Int time 239.983
Amp 8.545
Phase -159.6
PFD 0.0e+00
Delays (us)
SBD -0.000545
MBD -0.000526
Fringe rate (Hz)
0.006340
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133532
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



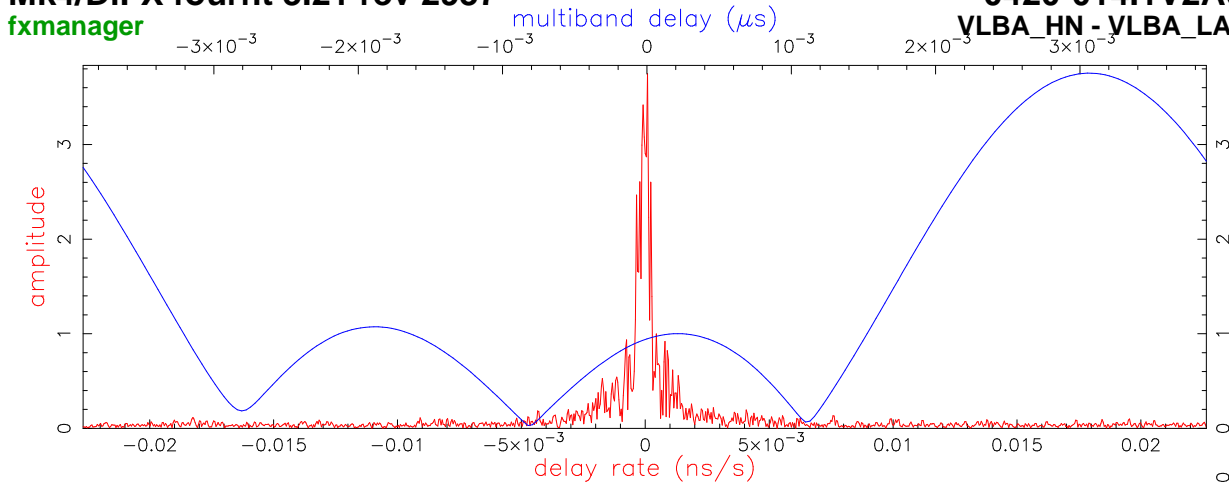
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-166.3	-153.6	-159.1	-159.7	Phase	-159.6
8.5	8.6	8.5	8.5	Ampl.	8.5
512.7	512.8	512.8	512.6	Sbd box	512.7
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	PC freqs	
h:k 0:0	0:0	0:0	0:0	PC phase	
h:k 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

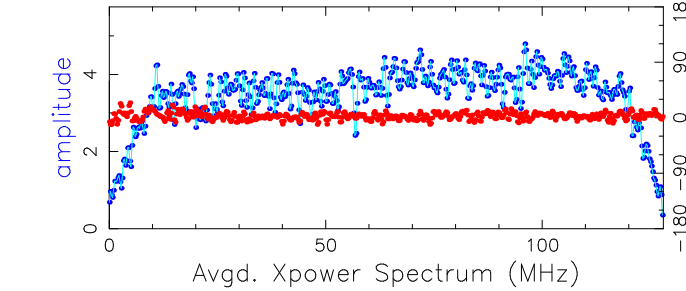
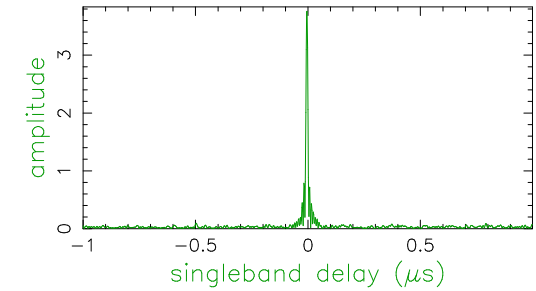
Group delay (usec)(sbd)	-8.36943898037E+03	Apriori delay (usec)	-8.36943845445E+03	Resid mbdelay (usec)	-5.25924E-04	+/-	3.1E-06
Sband delay (usec)	-8.3694389907E+03	Apriori clock (usec)	2.4603844E+00	Resid sbdelay (usec)	-5.44625E-04	+/-	1.2E-05
Phase delay (usec)	-8.36943846475E+03	Apriori clockrate (us/s)	1.3000000E-07	Resid phdelay (usec)	-1.03022E-05	+/-	2.0E-08
Delay rate (us/s)	-5.95749808627E-01	Apriori rate (us/s)	-5.95749955942E-01	Resid rate (us/s)	1.47315E-07	+/-	1.5E-10
Total phase (deg)	-188.2	Apriori accel (us/s/s)	4.41298004613E-05	Resid phase (deg)	-159.6	+/-	0.3

ph/seg (deg)	51.5	Theor.	1.0	Amplitude	8.545 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	40.3	Search (1024X16)	8.167	Search	8.167	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	6.3	Inc. seg. avg.	11.702	Inc. seg. avg.	11.702	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	0.8	Inc. frq. avg.	8.514	Inc. frq. avg.	8.514	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
h: az 242.0 el 25.1 pa 40.5		k: az 203.6 el 54.4 pa 20.3		u,v (fr/asec)	1722.831 636.042	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hk.Q.96.1V2A0K		ion window (TEC) 0.00 0.00	simultaneous interpolator



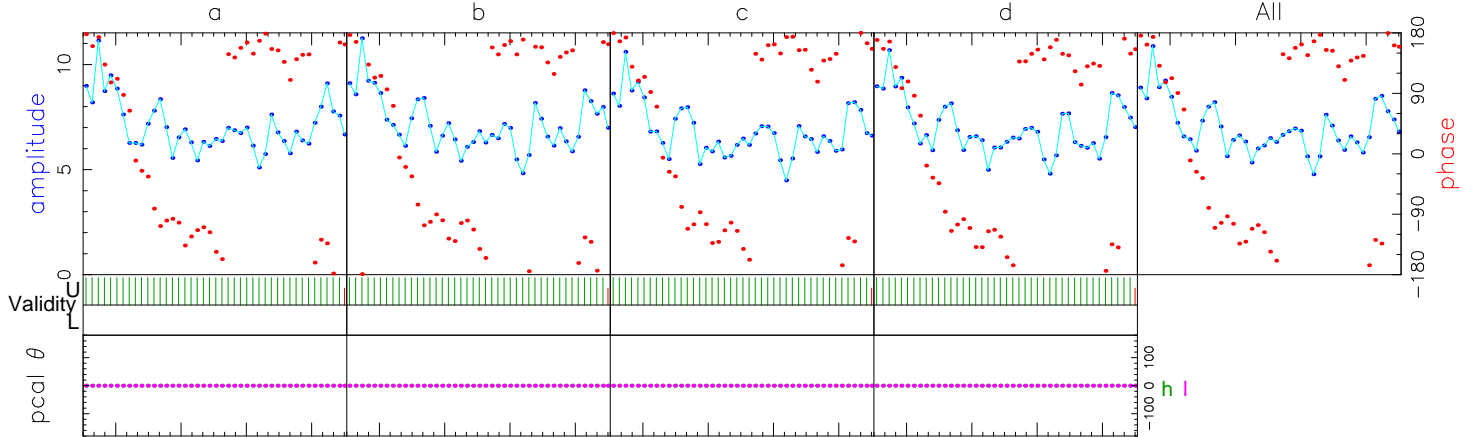
Fringe quality 5

SNR 162.5
Int time 239.984
Amp 3.836
Phase 179.5
PFD 0.0e+00
Delays (us)
SBD -0.004853
MBD 0.003128
Fringe rate (Hz)
0.004459
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133532
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

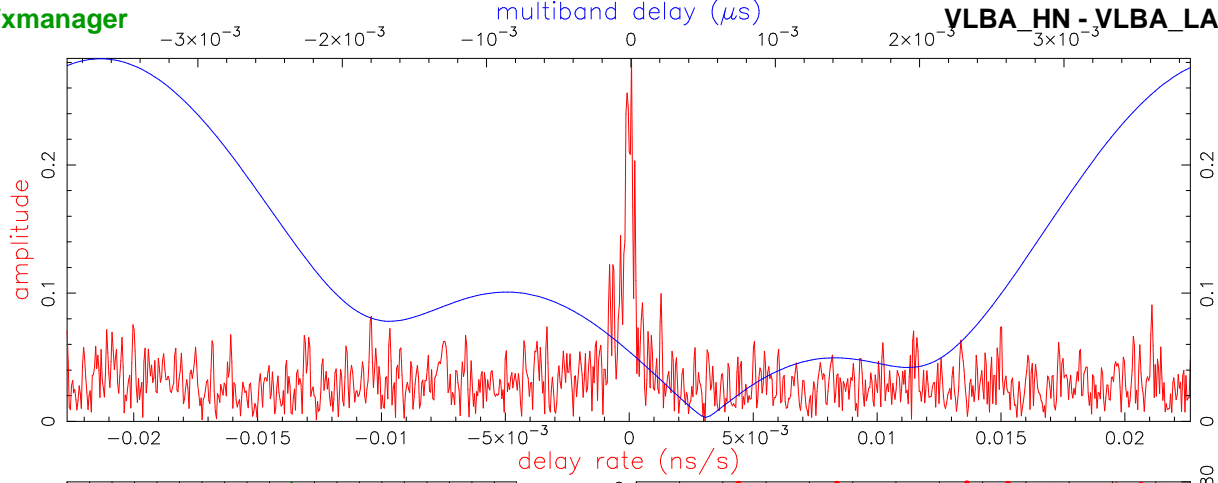
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



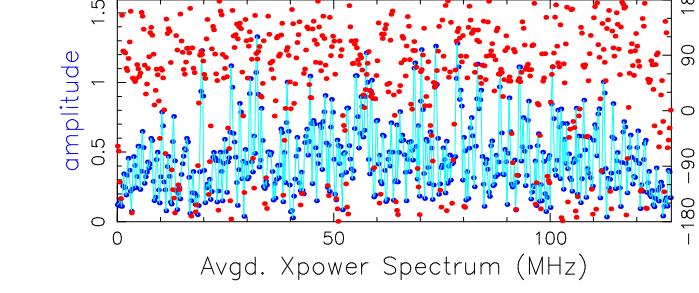
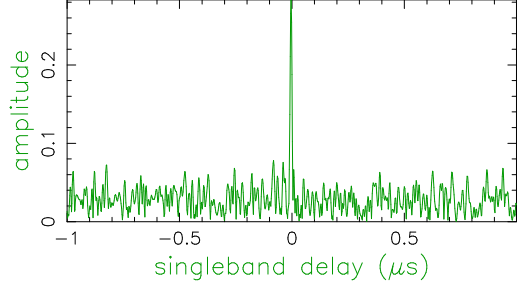
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-179.2	-175.6	179.7	172.7	Phase	179.5
	3.8	3.9	3.6	3.7	Ampl.	3.8
	510.6	510.6	510.8	510.0	Sbd box	510.5
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
h:l	0:0	0:0	0:0	0:0	PC phase	
h:l	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.10888253415E+03	Apriori delay (usec)	-7.10887784954E+03	Resid mbdelay (usec)	3.12789E-03	+/-	6.8E-06
Sband delay (usec)	-7.10888270292E+03	Apriori clock (usec)	5.3624287E+00	Resid sbdelay (usec)	-4.85337E-03	+/-	2.7E-05
Phase delay (usec)	-7.10887783796E+03	Apriori clockrate (us/s)	4.1600003E-07	Resid phdelay (usec)	1.15827E-05	+/-	4.6E-08
Delay rate (us/s)	-4.96793265819E-01	Apriori rate (us/s)	-4.96793369423E-01	Resid rate (us/s)	1.03604E-07	+/-	3.3E-10
Total phase (deg)	-52.4	Apriori accel (us/s/s)	3.75833914024E-05	Resid phase (deg)	179.5	+/-	0.7

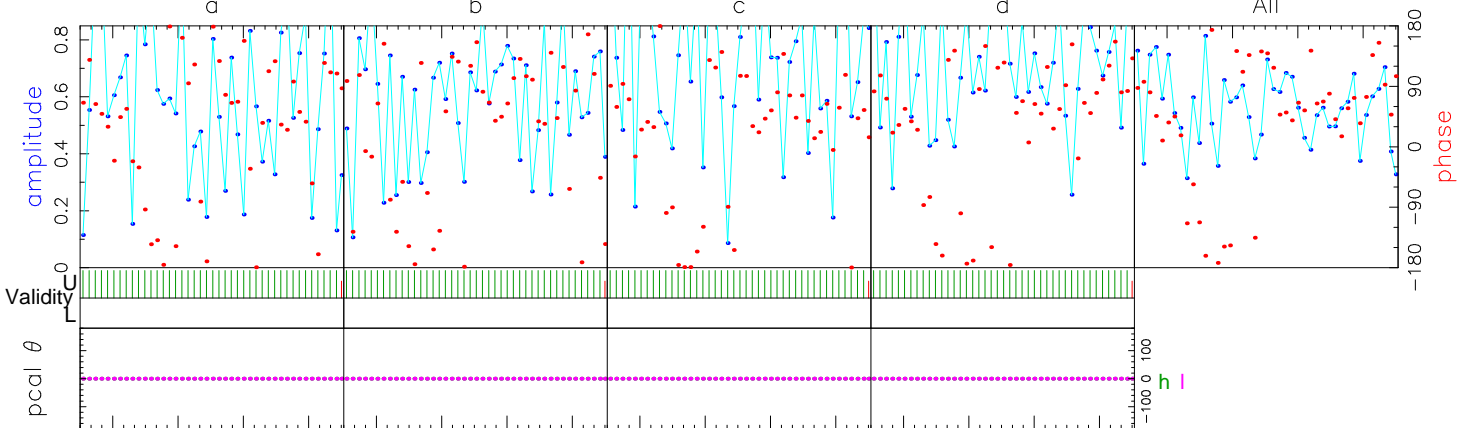
ph/seg (deg)	65.9	RMS	2.3	Theor.	Amplitude	3.836 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	88.5	Search (1024X16)	3.573	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000			
ph/frq (deg)	6.0	Inc. seg. avg.	7.004	Inc. frq. avg.	3.758	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004		
amp/frq (%)	3.2	Inc. frq. avg.	3.758	Sample rate (MSamp/s):	256	Data rate (Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00
h: az 242.0 el 25.1 pa 40.5		l: az 209.5 el 49.0 pa 24.1		u,v (fr/asec)	1437.246 396.431						simultaneous interpolator	



Fringe quality 9
SNR 12.0
Int time 239.984
Amp 0.283
Phase 87.1
PFD 9.9e-25
Delays (us)
SBD -0.004143
MBD -0.003684
Fringe rate (Hz) 0.004711
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133534
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
88.3	93.1	77.7	93.3	Phase	87.1
0.2	0.2	0.4	0.4	Ampl.	0.3
512.3	510.6	510.8	510.7	Sbd box	510.9
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
h:l 0:0	0:0	0:0	0:0	PC phase	
h:l 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-7.10888153396E+03	Apriori delay (usec)	-7.10887784954E+03	Resid mbdelay (usec)	-3.68442E-03	+/-	9.3E-05
Sband delay (usec)	-7.10888199229E+03	Apriori clock (usec)	5.3624287E+00	Resid sbdelay (usec)	-4.14275E-03	+/-	3.6E-04
Phase delay (usec)	-7.10887784392E+03	Apriori clockrate (us/s)	4.1600003E-07	Resid phdelay (usec)	5.61818E-06	+/-	6.2E-07
Delay rate (us/s)	-4.96793259974E-01	Apriori rate (us/s)	-4.96793369423E-01	Resid rate (us/s)	1.09449E-07	+/-	4.4E-09
Total phase (deg)	-144.9	Apriori accel (us/s/s)	3.75833914024E-05	Resid phase (deg)	87.1	+/-	9.6

ph/seg (deg)	RMS 70.6	Theor. 31.3	Amplitude	0.283 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	108.9	54.7	Search (1024X16)	0.257	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	9.1	9.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	32.7	16.7	Inc. seg. avg.	0.491	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	0.281	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

h: az 242.0 el 25.1 pa 40.5 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 1437.246 396.431 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hl.1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hl.Q.116.1V2A0K

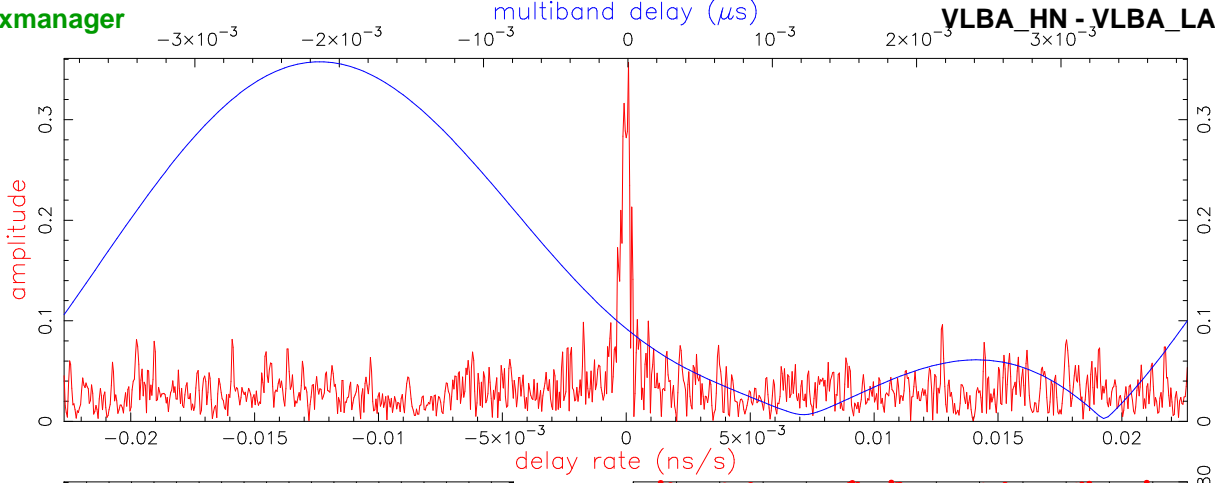
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

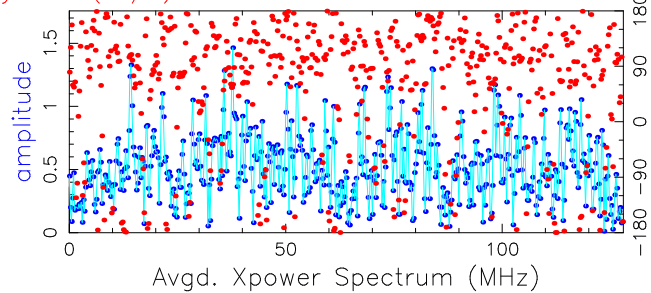
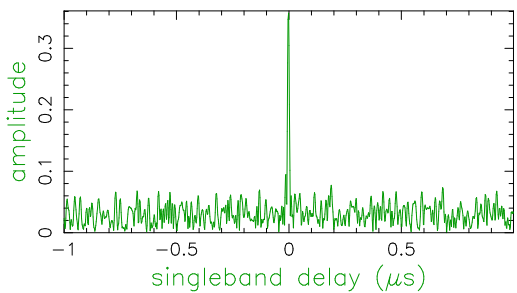
0420-014.1V2A0K, No0121, hl

VLBA_HN - VLBA_LA, fgroup Q, pol RL

Fringe quality 9

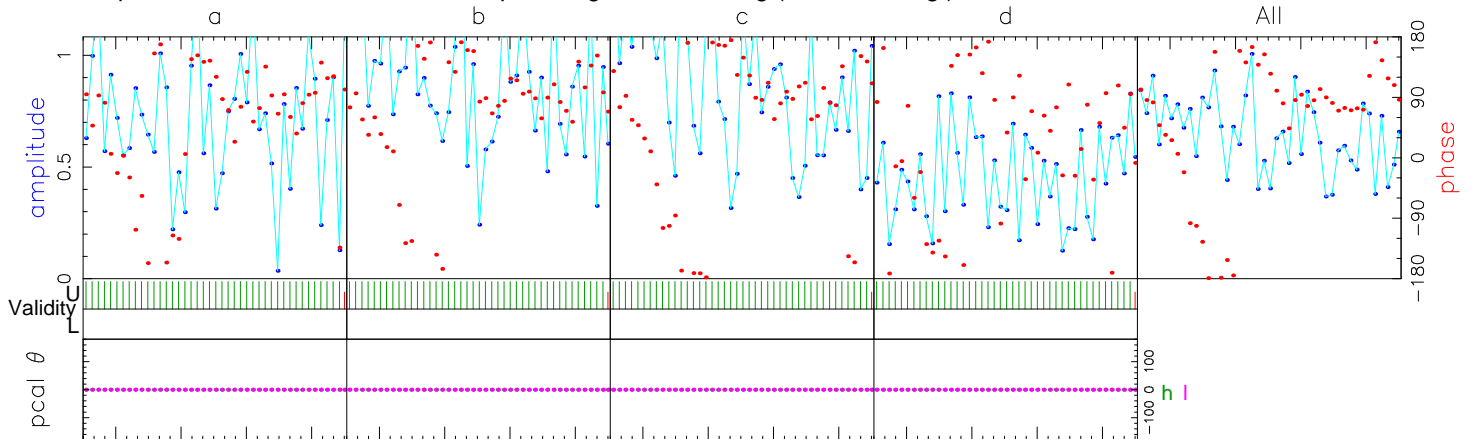


SNR 15.3
 Int time 239.984
 Amp 0.361
 Phase 106.4
 PFD 2.9e-44
 Delays (us)
 SBD -0.002639
 MBD -0.002210
 Fringe rate (Hz)
 0.004064
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133536
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
97.9	106.0	118.9	93.7	Phase	106.4
0.4	0.5	0.4	0.2	Ampl.	0.4
511.8	511.3	512.1	290.0	Sbd box	511.6
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
h:l 0:0	0:0	0:0	0:0	PC phase	
h:l 0:0	0:0	0:0	0:0	ManI PC	
h 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-7.10888005915E+03	Apriori delay (usec)	-7.10887784954E+03	Resid mbdelay (usec)	-2.20961E-03	+/- 7.3E-05
Sband delay (usec)	-7.10888048829E+03	Apriori clock (usec)	5.3624287E+00	Resid sbdelay (usec)	-2.63875E-03	+/- 2.8E-04
Phase delay (usec)	-7.10887784267E+03	Apriori clockrate (us/s)	4.1600003E-07	Resid phdelay (usec)	6.86836E-06	+/- 4.8E-07
Delay rate (us/s)	-4.96793274997E-01	Apriori rate (us/s)	-4.96793369423E-01	Resid rate (us/s)	9.44258E-08	+/- 3.5E-09
Total phase (deg)	-125.5	Apriori accel (us/s/s)	3.75833914024E-05	Resid phase (deg)	106.4	+/- 7.5

ph/seg (deg)	RMS	Theor.	Amplitude	0.361 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	62.8	24.6	Search (1024X16)	0.350	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	93.0	42.9	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	13.9	7.5	Inc. seg. avg.	0.598	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00
	35.7	13.1	Inc. frq. avg.	0.358					

h: az 242.0 el 25.1 pa 40.5 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 1437.246 396.431 simultaneous interpolator

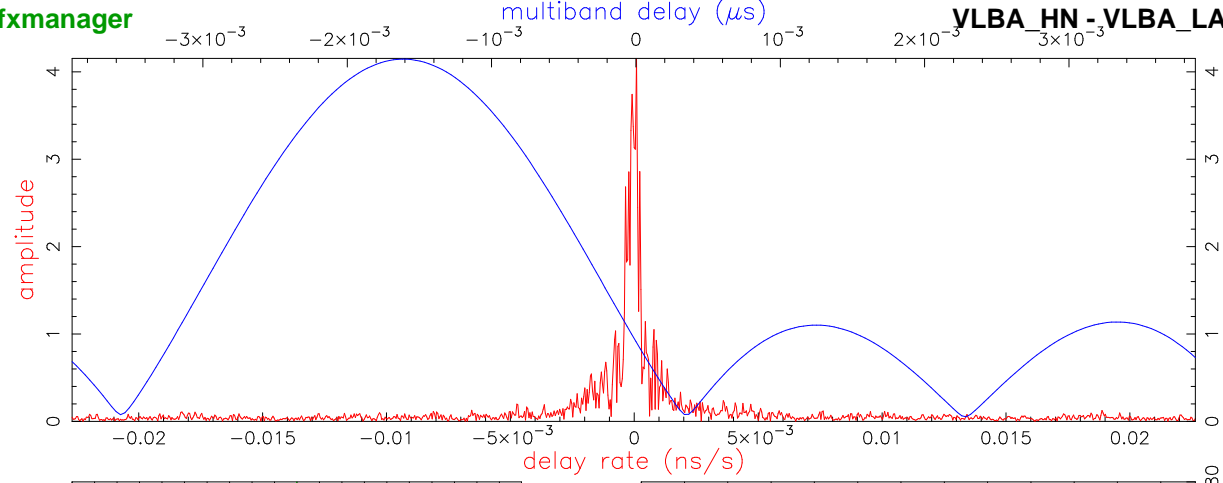
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hl.Q.133.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

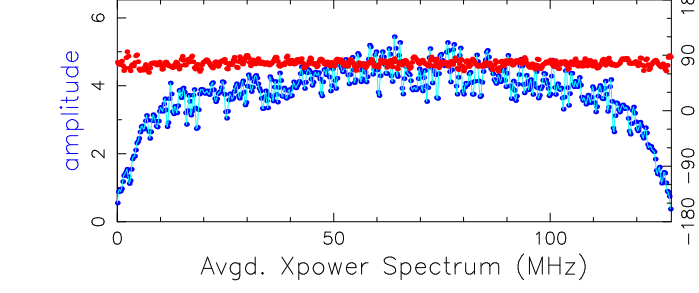
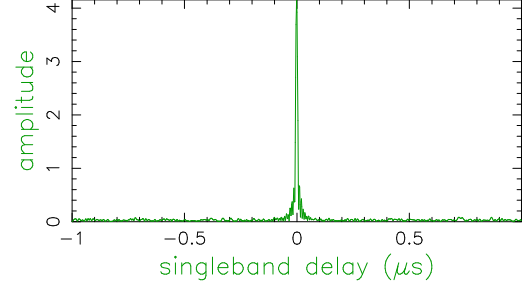
fxmanager

0420-014.1V2A0K, No0121, hl

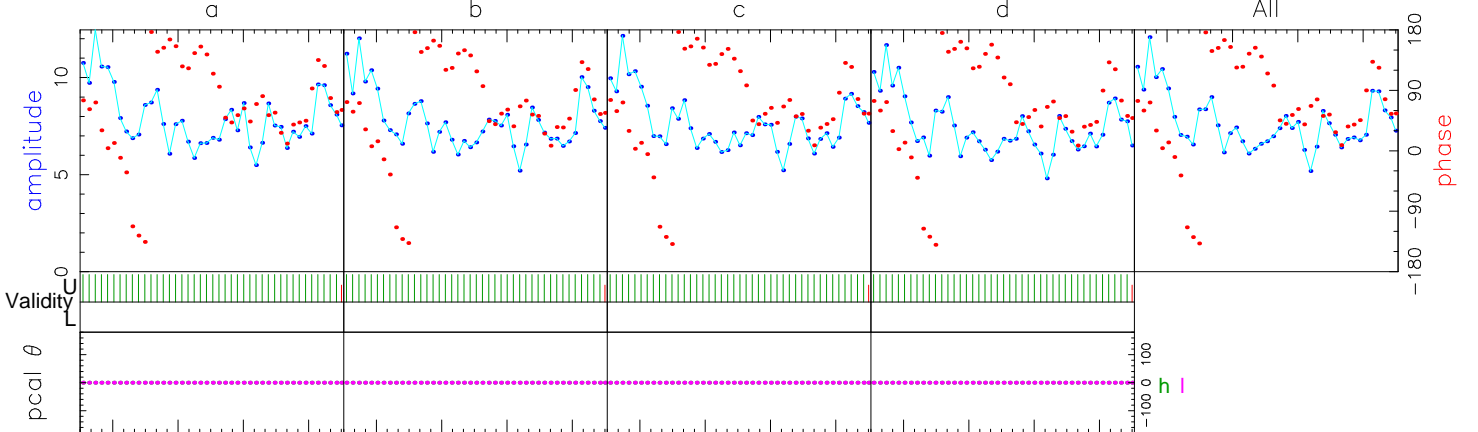
VLBA_HN - VLBA_LA, fgroup Q, pol LL



Fringe quality 5
 SNR 176.0
 Int time 239.984
 Amp 4.154
 Phase 76.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.001609
 MBD -0.001596
 Fringe rate (Hz) 0.004453
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133530
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	APs used	512.2
h	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
h:l	0:0	0:0	0:0	0:0	PC phase	
h:l	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.10887944602E+03	Apriori delay (usec)	-7.10887784954E+03	Resid mbdelay (usec)	-1.59648E-03	+/-	6.3E-06
Sband delay (usec)	-7.10887945817E+03	Apriori clock (usec)	5.3624287E+00	Resid sbdelay (usec)	-1.60863E-03	+/-	2.4E-05
Phase delay (usec)	-7.10887784459E+03	Apriori clockrate (us/s)	4.1600003E-07	Resid phdelay (usec)	4.94593E-06	+/-	4.2E-08
Delay rate (us/s)	-4.96793265961E-01	Apriori rate (us/s)	-4.96793369423E-01	Resid rate (us/s)	1.03462E-07	+/-	3.0E-10
Total phase (deg)	-155.3	Apriori accel (us/s/s)	3.75833914024E-05	Resid phase (deg)	76.6	+/-	0.7

ph/seg (deg)	65.9	2.1	Amplitude	4.154 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	92.0	3.7	Search (1024X16)	3.926	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	1.2	0.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	2.8	1.1	Inc. seg. avg.	7.706	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	4.145	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

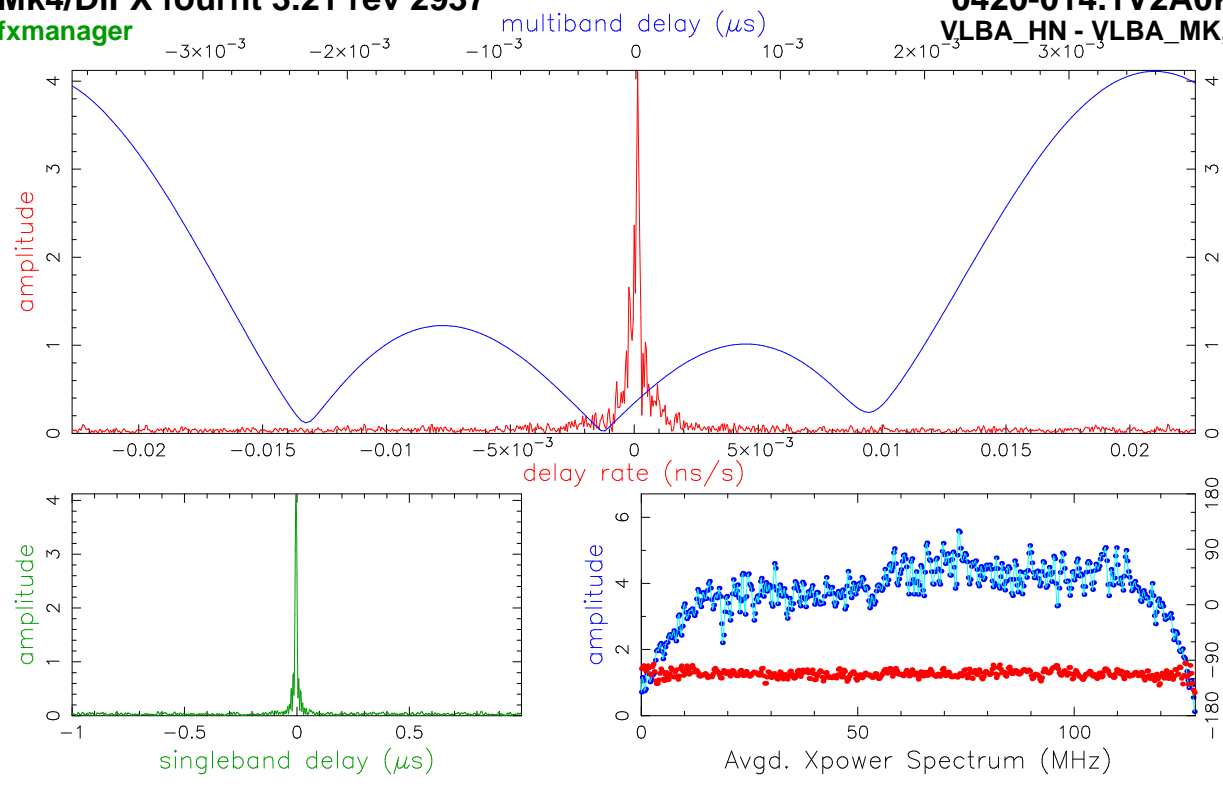
h: az 242.0 el 25.1 pa 40.5 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 1437.246 396.431 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hl.Q.82.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, hm

VLBA_HN - VLBA_MK, fgroup Q, pol RR

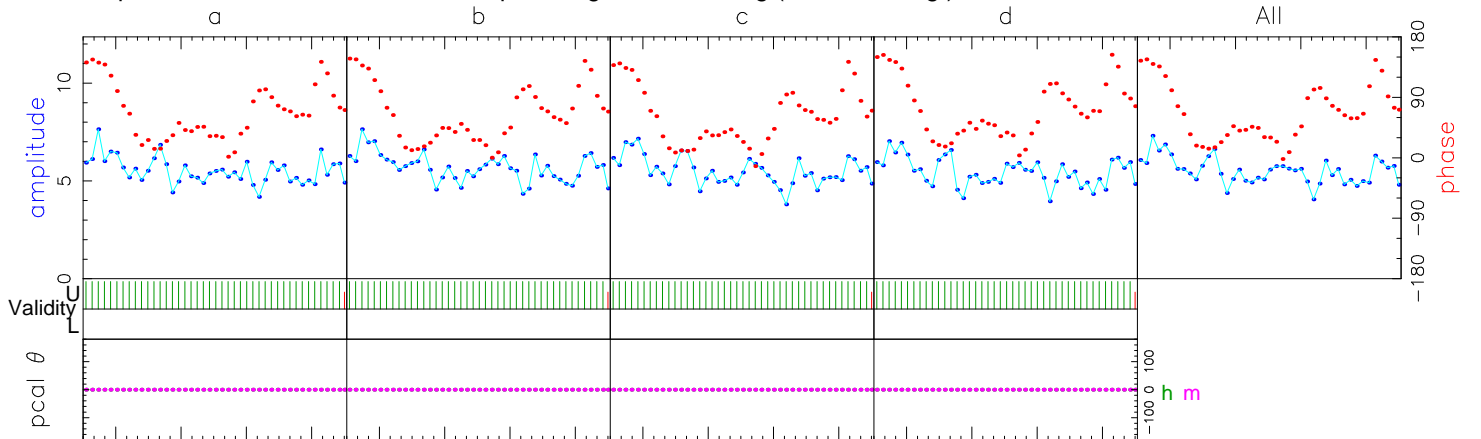


Fringe quality 6

SNR 174.6
 Int time 239.981
 Amp 4.122
 Phase 66.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.004289
 MBD 0.003567
 Fringe rate (Hz)
 0.005363
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133533
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



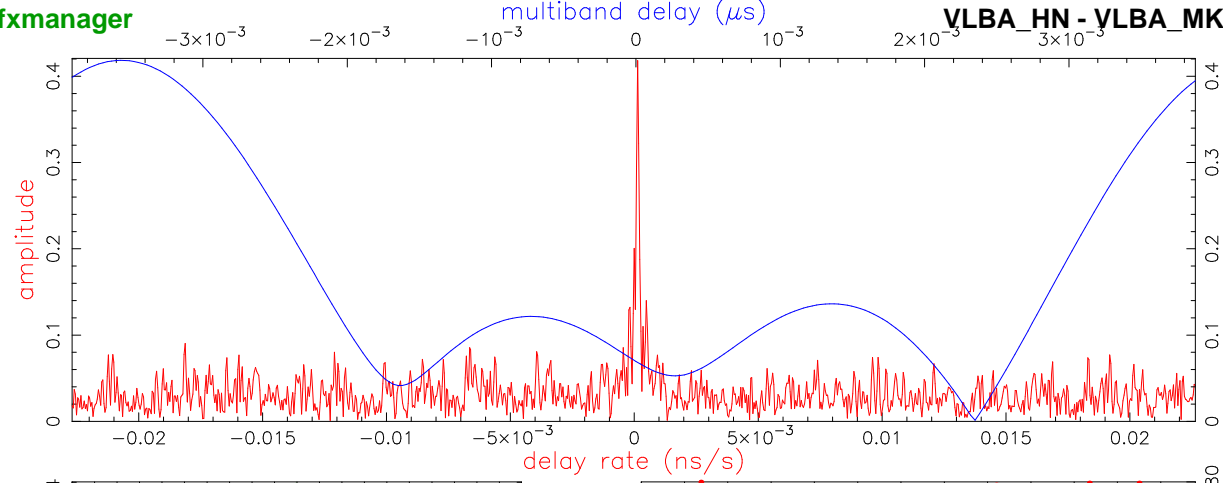
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
67.3	65.5	60.5	72.9	Phase	66.5
4.2	4.2	4.1	4.0	Ampl.	4.1
510.5	510.8	511.0	510.9	Sbd box	510.8
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
m 1000	1000	1000	1000	PC freqs	
h:m 0:0	0:0	0:0	0:0	PC phase	
h:m 0:0	0:0	0:0	0:0	ManI PC	
h 1000	1000	1000	1000	PC amp	
m 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-8.34957765574E+03	Apriori delay (usec)	-8.34957340988E+03	Resid mbdelay (usec)	3.56664E-03 +/- 6.4E-06
Sband delay (usec)	-8.34957769925E+03	Apriori clock (usec)	-1.2866234E+01	Resid sbdelay (usec)	-4.28938E-03 +/- 2.5E-05
Phase delay (usec)	-8.34957340559E+03	Apriori clockrate (us/s)	-1.8799999E-07	Resid phdelay (usec)	4.29125E-06 +/- 4.2E-08
Delay rate (us/s)	-1.64142131156E+00	Apriori rate (us/s)	-1.64142143617E+00	Resid rate (us/s)	1.24600E-07 +/- 3.1E-10
Total phase (deg)	-135.5	Apriori accel (us/s/s)	4.34573424612E-05	Resid phase (deg)	66.5 +/- 0.7
RMS	Theor.	Amplitude	4.122 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
41.7	2.2	Search (1024X16)	4.013	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
37.8	3.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
6.3	0.7	Inc. seg. avg.	5.533	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
1.9	1.1	Inc. frq. avg.	4.122	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
h: az 242.0 el 25.1 pa 40.5	m: az 121.8 el 53.5 pa -53.0	u,v (fr/asec)	4713.888 1484.280		simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm.Q.106.1V2A0K			

Mk4/DiFX fourfit 3.21 rev 2937

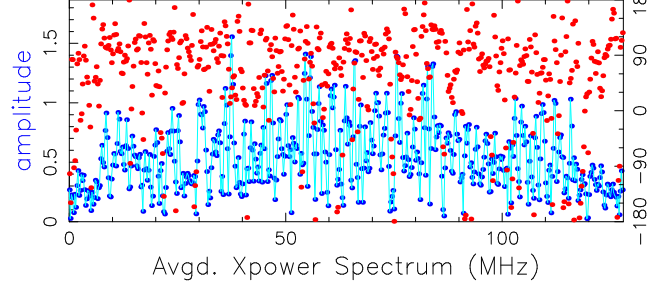
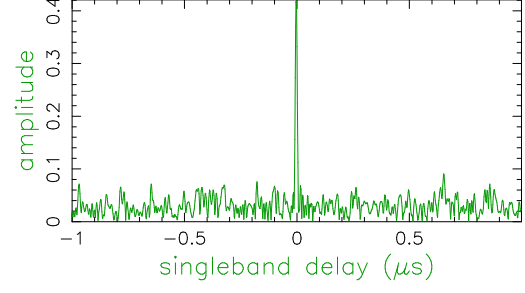
fxmanager

0420-014.1V2A0K, No0121, hm

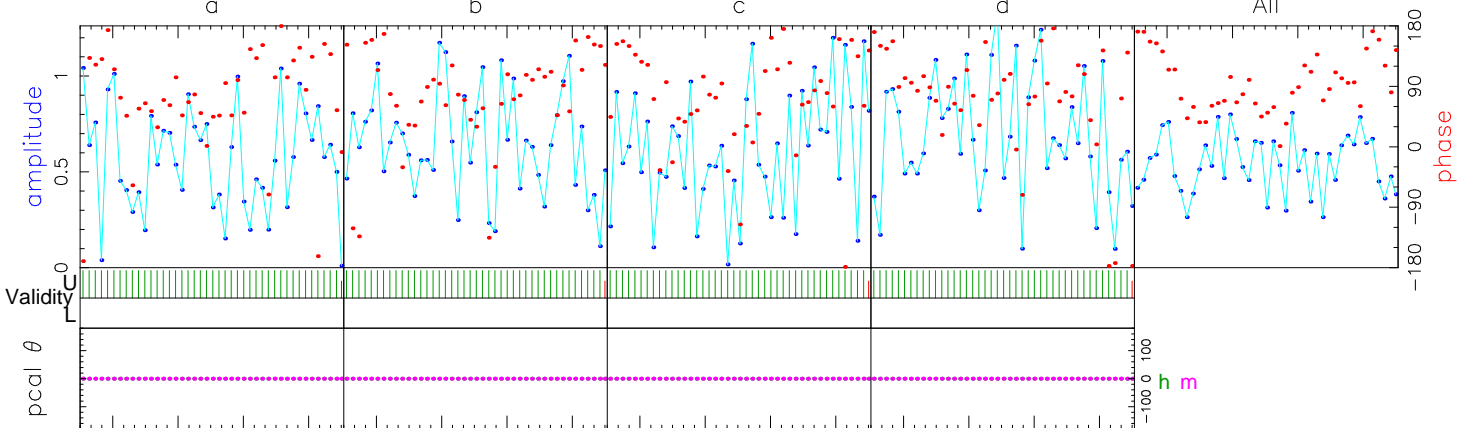
VLBA_HN - VLBA_MK, fgroup Q, pol LR



Fringe quality 9
 SNR 17.8
 Int time 239.981
 Amp 0.421
 Phase 93.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.003363
 MBD -0.003531
 Fringe rate (Hz) 0.005512
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133535
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000		
m	1000	1000	1000	1000		
h:m	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
m	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL		
m	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-8.34957694046E+03	Apriori delay (usec)	-8.34957340988E+03	Resid mbdelay (usec)	-3.53058E-03	+/-	6.2E-05
Sband delay (usec)	-8.34957677288E+03	Apriori clock (usec)	-1.2866234E+01	Resid sbdelay (usec)	-3.36300E-03	+/-	2.4E-04
Phase delay (usec)	-8.34957340382E+03	Apriori clockrate (us/s)	-1.8799999E-07	Resid phdelay (usec)	6.05773E-06	+/-	4.1E-07
Delay rate (us/s)	-1.64142130810E+00	Apriori rate (us/s)	-1.64142143617E+00	Resid rate (us/s)	1.28066E-07	+/-	3.0E-09
Total phase (deg)	-108.2	Apriori accel (us/s/s)	4.34573424612E-05	Resid phase (deg)	93.9	+/-	6.4

ph/seg (deg)	42.4	Theor.	21.1	Amplitude	0.421 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	46.7		36.8	Search (1024X16)	0.412	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	7.0		6.4	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
amp/frq (%)	14.7		11.2	Inc. seg. avg.	0.514	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	0.417	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

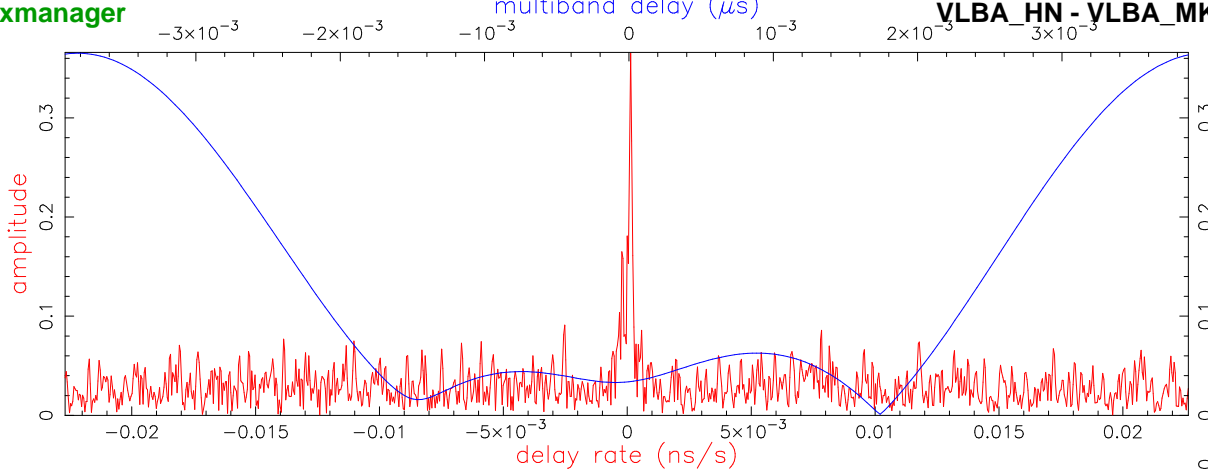
h: az 242.0 el 25.1 pa 40.5 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 4713.888 1484.280 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm.Q.120.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

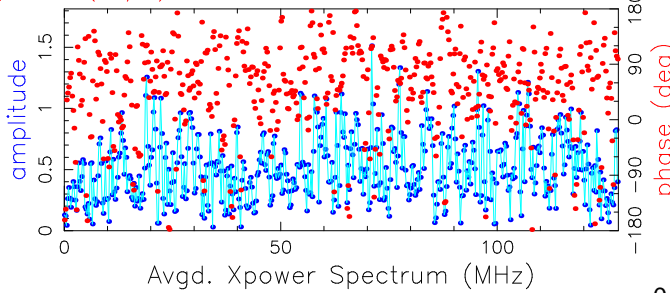
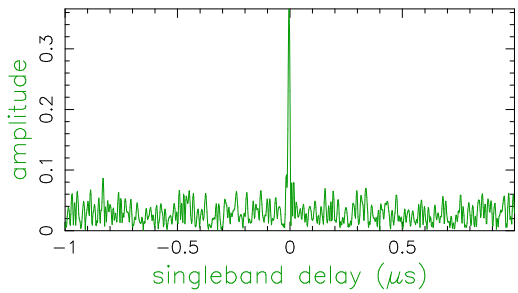
0420-014.1V2A0K, No0121, hm

VLBA_HN - VLBA_MK, fgroup Q, pol RL



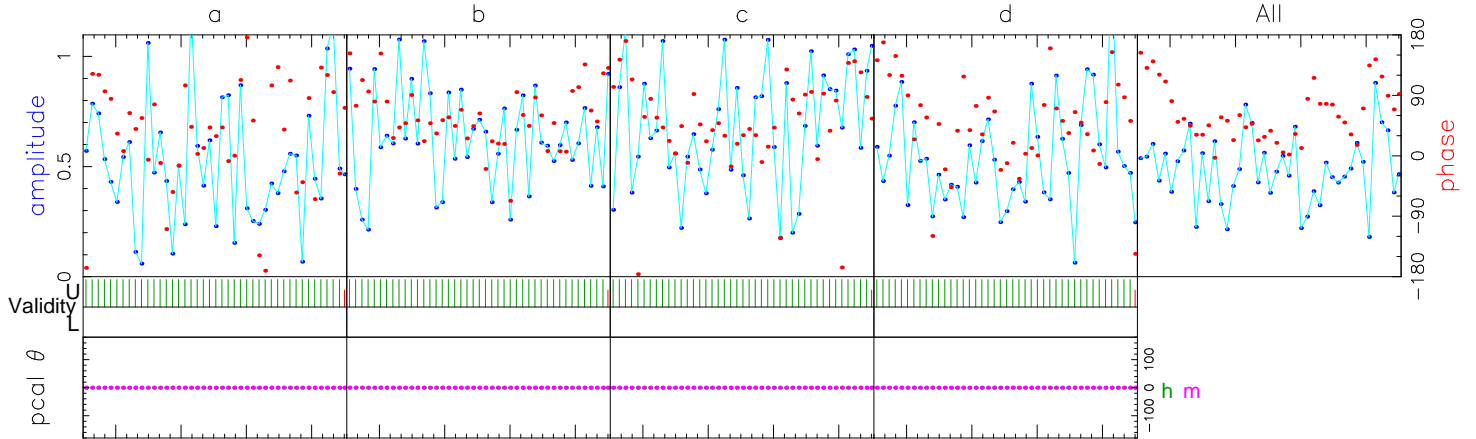
Fringe quality 9

SNR 15.5
 Int time 239.981
 Amp 0.366
 Phase 62.2
 PFD 1.4e-45
 Delays (us)
 SBD -0.004230
 MBD -0.003833
 Fringe rate (Hz) 0.005539
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133537
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000	APs used	
m	1000	1000	1000	1000	PC freqs	
h:m	0:0	0:0	0:0	0:0	PC phase	
h	1000	1000	1000	1000	Manl PC	
m	1000	1000	1000	1000	PC amp	
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-8.34957724249E+03	Apriori delay (usec)	-8.34957340988E+03	Resid mbdelay (usec)	-3.83261E-03	+/- 7.2E-05
Sband delay (usec)	-8.34957763975E+03	Apriori clock (usec)	-1.2866234E+01	Resid sbdelay (usec)	-4.22987E-03	+/- 2.8E-04
Phase delay (usec)	-8.34957340587E+03	Apriori clockrate (us/s)	-1.8799999E-07	Resid phdelay (usec)	4.01301E-06	+/- 4.8E-07
Delay rate (us/s)	-1.64142130747E+00	Apriori rate (us/s)	-1.64142143617E+00	Resid rate (us/s)	1.28693E-07	+/- 3.4E-09
Total phase (deg)	-139.8	Apriori accel (us/s/s)	4.34573424612E-05	Resid phase (deg)	62.2	+/- 7.4

ph/seg (deg)	41.5	Theor.	24.2	Amplitude	0.366 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	53.8	Search (1024X16)	0.363	Search	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	4.2	Inc. seg. avg.	0.449	Inc. seg. avg.	0.449	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	23.9	Inc. frq. avg.	0.363	Inc. frq. avg.	0.363	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
h: az 242.0 el 25.1 pa 40.5		m: az 121.8 el 53.5 pa -53.0		u,v (fr/asec)	4713.888 1484.280	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm.Q.138.1V2A0K		ion window (TEC) 0.00 0.00	simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

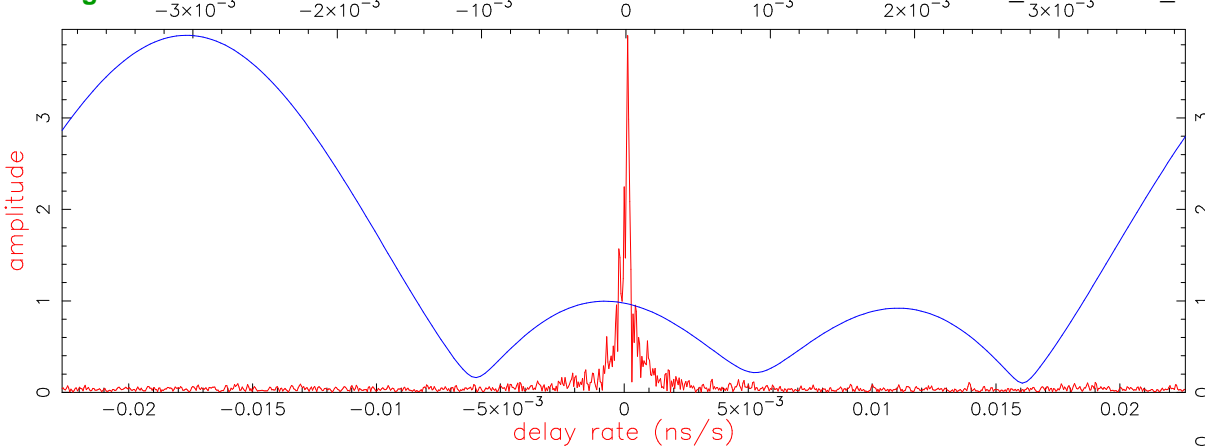
fxmanager

0420-014.1V2A0K, No0121, hm

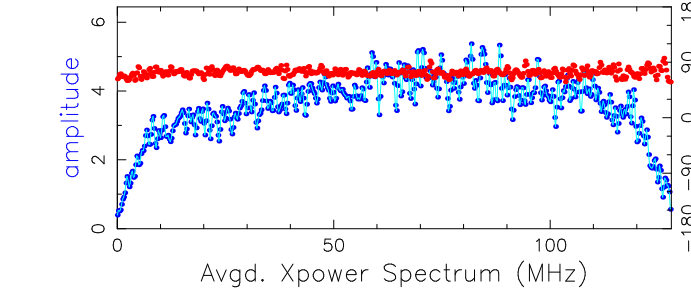
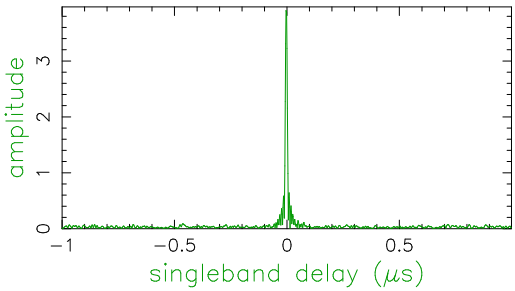
VLBA_HN - VLBA_MK, fgroup Q, pol LL

multiband delay (μ s)

Fringe quality 6

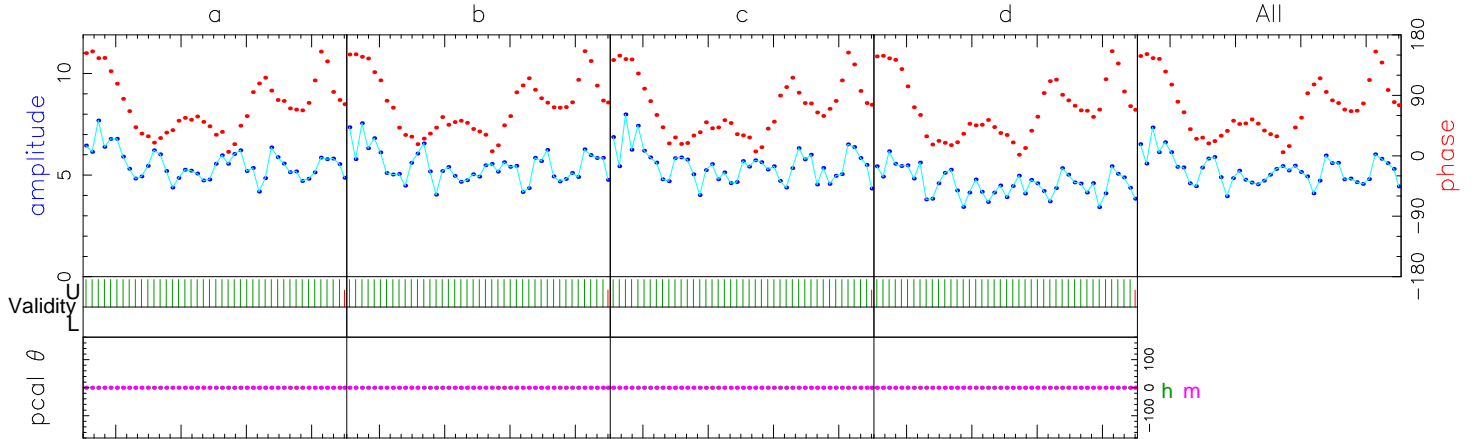


SNR 168.1
 Int time 239.981
 Amp 3.968
 Phase 73.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.003017
 MBD -0.003002
 Fringe rate (Hz)
 0.005320
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133531
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000	APs used	
m	1000	1000	1000	1000	PC freqs	
h:m	0:0	0:0	0:0	0:0	PC phase	
h	1000	1000	1000	1000	Manl PC	
m	1000	1000	1000	1000	PC amp	
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-8.34957641199E+03	Apriori delay (usec)	-8.34957340988E+03	Resid mbdelay (usec)	-3.00211E-03	+/- 6.6E-06
Sband delay (usec)	-8.34957642675E+03	Apriori clock (usec)	-1.2866234E+01	Resid sbdelay (usec)	-3.01687E-03	+/- 2.6E-05
Phase delay (usec)	-8.34957340511E+03	Apriori clockrate (us/s)	-1.8799999E-07	Resid phdelay (usec)	4.76903E-06	+/- 4.4E-08
Delay rate (us/s)	-1.64142131257E+00	Apriori rate (us/s)	-1.64142143617E+00	Resid rate (us/s)	1.23596E-07	+/- 3.2E-10
Total phase (deg)	-128.1	Apriori accel (us/s/s)	4.34573424612E-05	Resid phase (deg)	73.9	+/- 0.7

ph/seg (deg)	41.8	RMS	2.2	Theor.	4.1	Amplitude	3.968 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	37.1	Search (1024X16)	3.813	Inc. seg. avg.	5.265	Search	3.813	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	3.3	Inc. frq. avg.	3.904	Inc. frq. avg.	3.904	Inc. frq. avg.	3.904	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004		
amp/frq (%)	8.6	u,v (fr/asec)	4713.888 1484.280	u,v (fr/asec)	4713.888 1484.280	u,v (fr/asec)	4713.888 1484.280	Sample rate (MSamp/s):	256	nlags:	512	t_cohere infinite	dr window (ns/s)	-0.023 0.023
h: az 242.0 el 25.1 pa 40.5		m: az 121.8 el 53.5 pa -53.0		simultaneous interpolator				Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00			

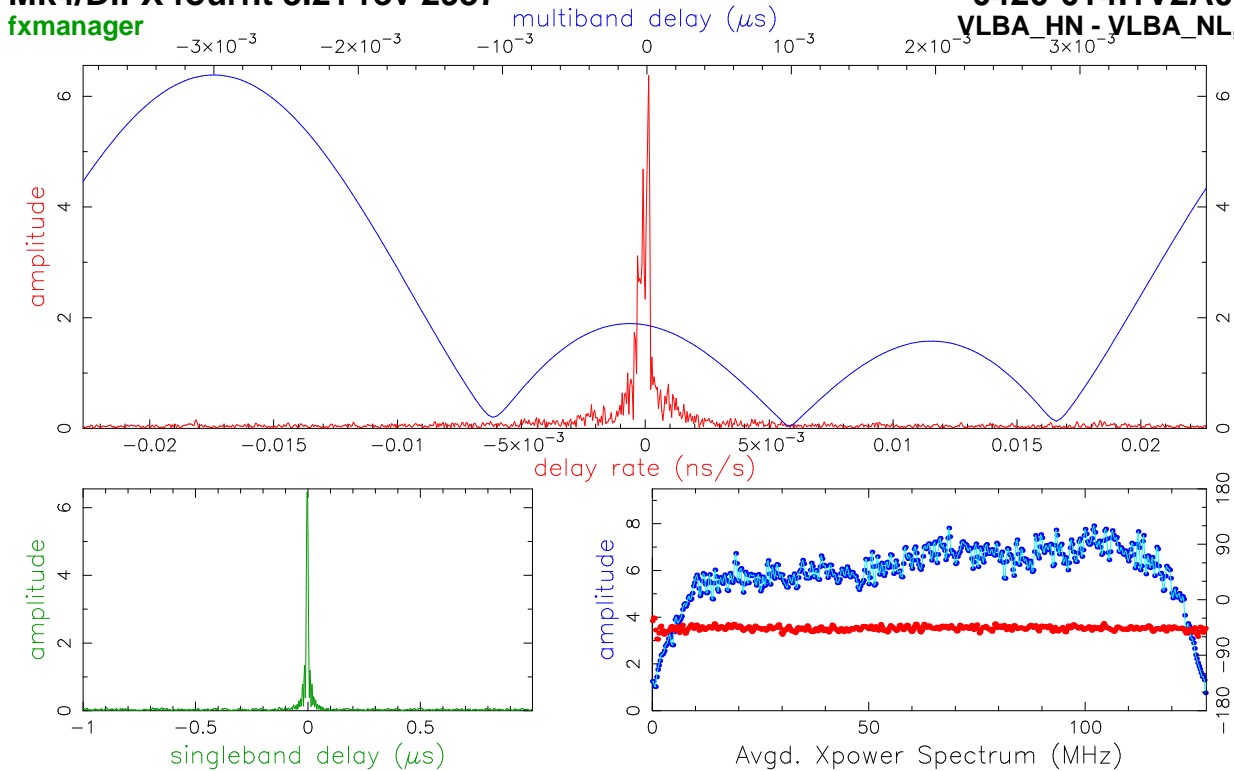
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hm.Q.84.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, hn

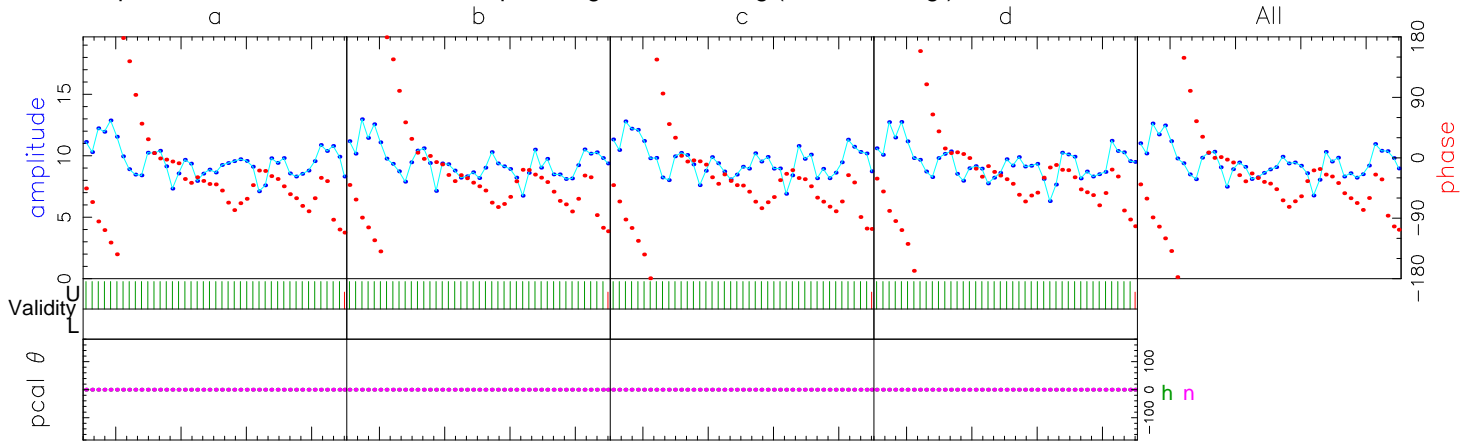
VLBA_HN - VLBA_NL, fgroup Q, pol RR



Fringe quality 5

SNR 277.9
 Int time 239.987
 Amp 6.560
 Phase -47.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.003067
 MBD -0.003067
 Fringe rate (Hz) 0.006646
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133533
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000		
n	1000	1000	1000	1000		
h:n	0:0	0:0	0:0	0:0		
h:n	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
n	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.93264942304E+03	Apriori delay (usec)	-3.93264635565E+03	Resid mbdelay (usec)	-3.06739E-03	+/-	4.0E-06
Sband delay (usec)	-3.93264942290E+03	Apriori clock (usec)	-2.6233482E+00	Resid sbdelay (usec)	-3.06725E-03	+/-	1.6E-05
Phase delay (usec)	-3.93264635869E+03	Apriori clockrate (us/s)	-1.6999999E-07	Resid phdelay (usec)	-3.04151E-06	+/-	2.7E-08
Delay rate (us/s)	-2.66697818968E-01	Apriori rate (us/s)	-2.66697973379E-01	Resid rate (us/s)	1.54412E-07	+/-	1.9E-10
Total phase (deg)	-100.1	Apriori accel (us/s/s)	2.08591954282E-05	Resid phase (deg)	-47.1	+/-	0.4

ph/seg (deg)	54.5	1.4	Amplitude	6.560 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	48.0	2.4	Search (1024X16)	5.967	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	6.4	0.4	Inc. seg. avg.	9.463	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	2.8	0.7	Inc. frq. avg.	6.394	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
h: az 242.0 el 25.1 pa 40.5			n: az 224.0 el 37.3 pa 31.3		Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00
Control file: cf_1234_gmva7mm			Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn..1V2A0K						simultaneous interpolator
									Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn.Q.109.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

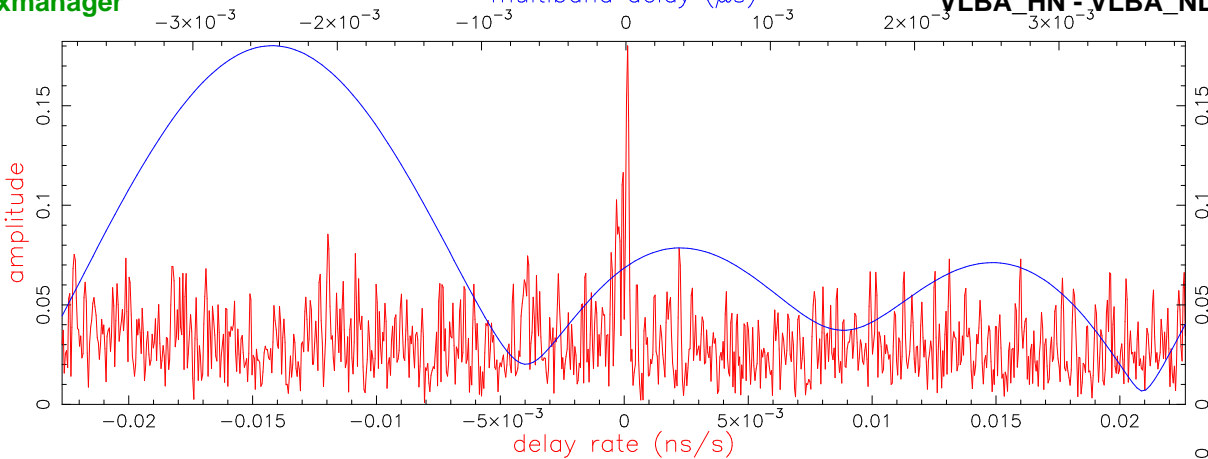
fxmanager

0420-014.1V2A0K, No0121, hn

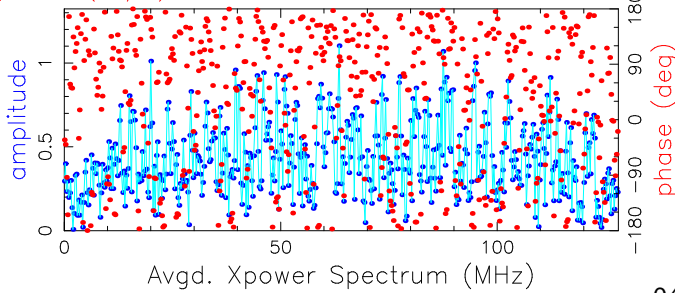
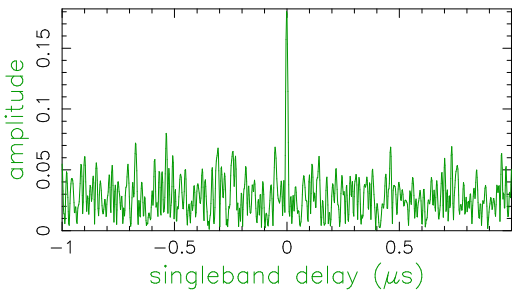
VLBA_HN - VLBA_NL, fgroup Q, pol LR

multiband delay (μ s)

Fringe quality 9

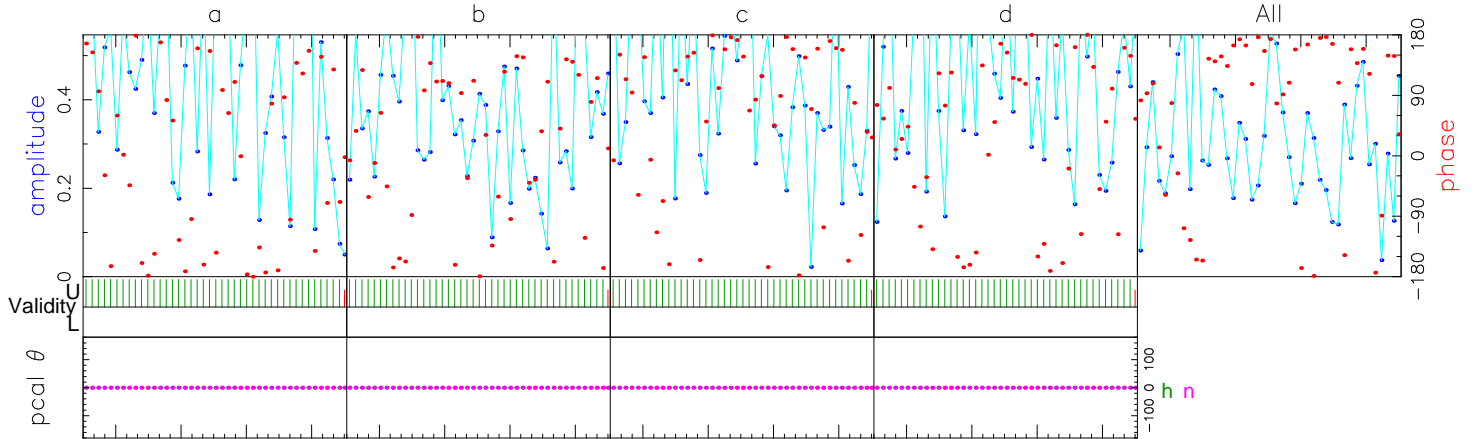


SNR 7.7
 Int time 239.987
 Amp 0.182
 Phase 155.2
 PFD 1.9e-06
 Delays (us)
 SBD -0.001140
 MBD -0.002421
 Fringe rate (Hz)
 0.005519
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133536
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
162.6	142.6	149.5	159.2	Phase	155.2
0.2	0.1	0.2	0.2	Ampl.	0.2
511.9	485.9	512.4	512.5	Sbd box	512.4
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
h:n 0:0	0:0	0:0	0:0	PC phase	
h:n 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-3.93264877673E+03	Apriori delay (usec)	-3.93264635565E+03	Resid mbdelay (usec)	-2.42108E-03	+/- 1.4E-04
Sband delay (usec)	-3.93264749577E+03	Apriori clock (usec)	-2.6233482E+00	Resid sbdelay (usec)	-1.14012E-03	+/- 5.6E-04
Phase delay (usec)	-3.93264634563E+03	Apriori clockrate (us/s)	-1.6999999E-07	Resid phdelay (usec)	1.00184E-05	+/- 9.6E-07
Delay rate (us/s)	-2.66697845157E-01	Apriori rate (us/s)	-2.66697973379E-01	Resid rate (us/s)	1.28222E-07	+/- 6.9E-09
Total phase (deg)	102.3	Apriori accel (us/s/s)	2.08591954282E-05	Resid phase (deg)	155.2	+/- 14.8

ph/seg (deg)	RMS 61.7	Theor. 48.6	Amplitude	0.182 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	103.5	84.9	Search (1024X16)	0.179	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	11.5	14.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	26.5	25.9	Inc. seg. avg.	0.223	Sample rate(MISamp/s): 256	mb window (us) -0.004 0.004
			Inc. frq. avg.	0.176	Data rate(Mb/s): 2048	dr window (ns/s) -0.023 0.023
					nlags: 512	t_cohere infinite
						ion window (TEC) 0.00 0.00

h: az 242.0 el 25.1 pa 40.5 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) 772.162 49.570 simultaneous interpolator

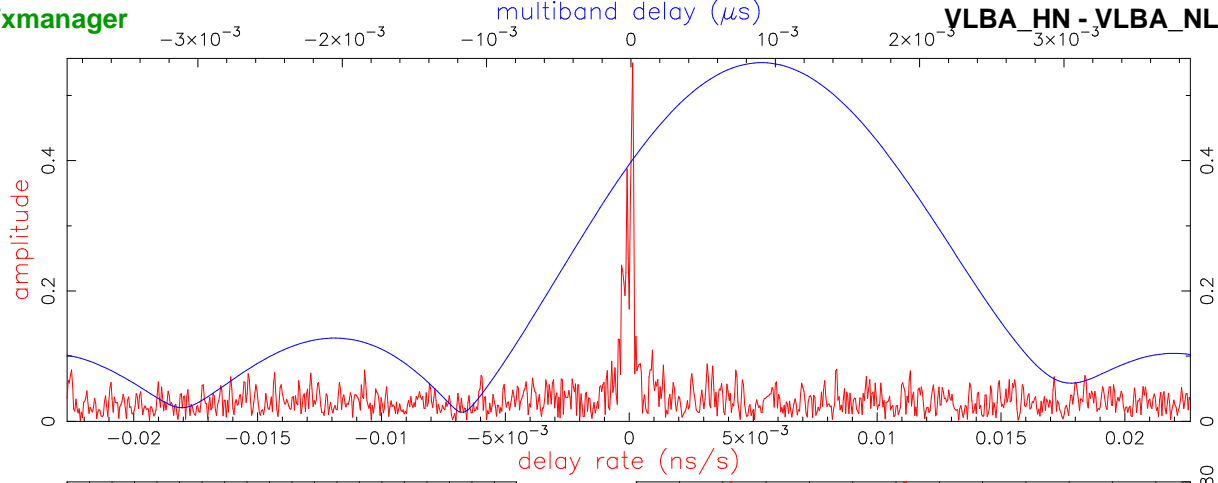
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn.Q.129.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, hn

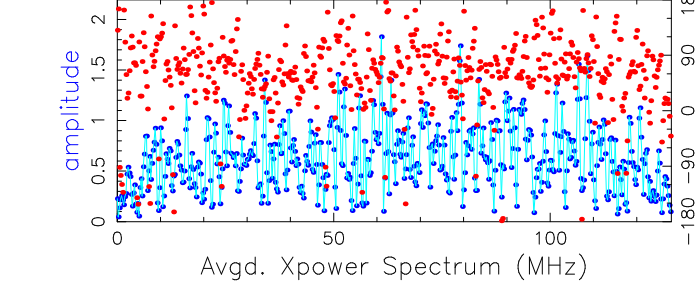
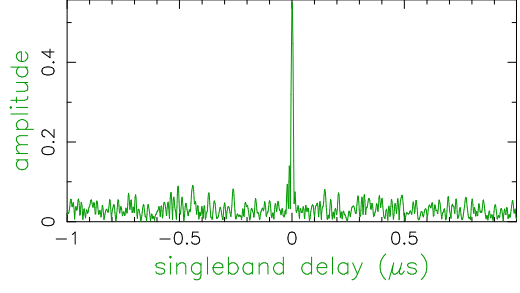
VLBA_HN - VLBA_NL, fgroup Q, pol RL



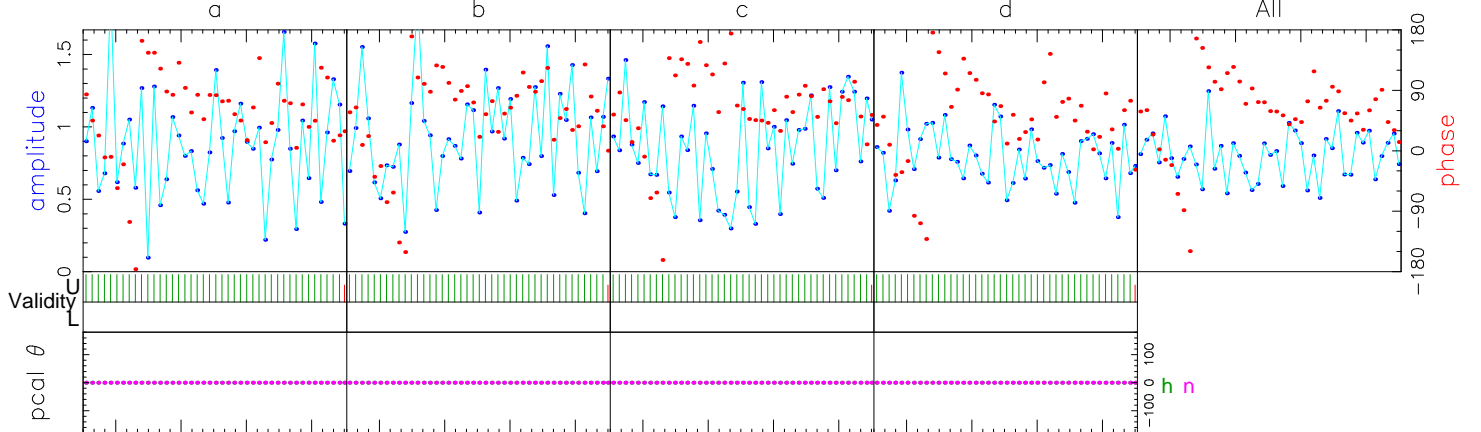
Fringe quality 9

SNR 23.6
 Int time 239.987
 Amp 0.557
 Phase 65.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.000772
 MBD 0.000956
 Fringe rate (Hz)
 0.006540
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	64.6	69.3	70.9	54.3	Phase	65.6
	0.6	0.6	0.6	0.4	Ampl.	0.6
	513.2	513.5	513.6	513.0	Sbd box	513.4
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
h:n	0:0	0:0	0:0	0:0	PC phase	
h:n	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.93264539979E+03	Apriori delay (usec)	-3.93264635565E+03	Resid mbdelay (usec)	9.55857E-04	+/-	4.7E-05
Sband delay (usec)	-3.93264558390E+03	Apriori clock (usec)	-2.6233482E+00	Resid sbdelay (usec)	7.71750E-04	+/-	1.8E-04
Phase delay (usec)	-3.93264635141E+03	Apriori clockrate (us/s)	-1.6999999E-07	Resid phdelay (usec)	4.23327E-06	+/-	3.1E-07
Delay rate (us/s)	-2.66697821427E-01	Apriori rate (us/s)	-2.66697973379E-01	Resid rate (us/s)	1.51953E-07	+/-	2.3E-09
Total phase (deg)	12.6	Apriori accel (us/s/s)	2.08591954282E-05	Resid phase (deg)	65.6	+/-	4.9

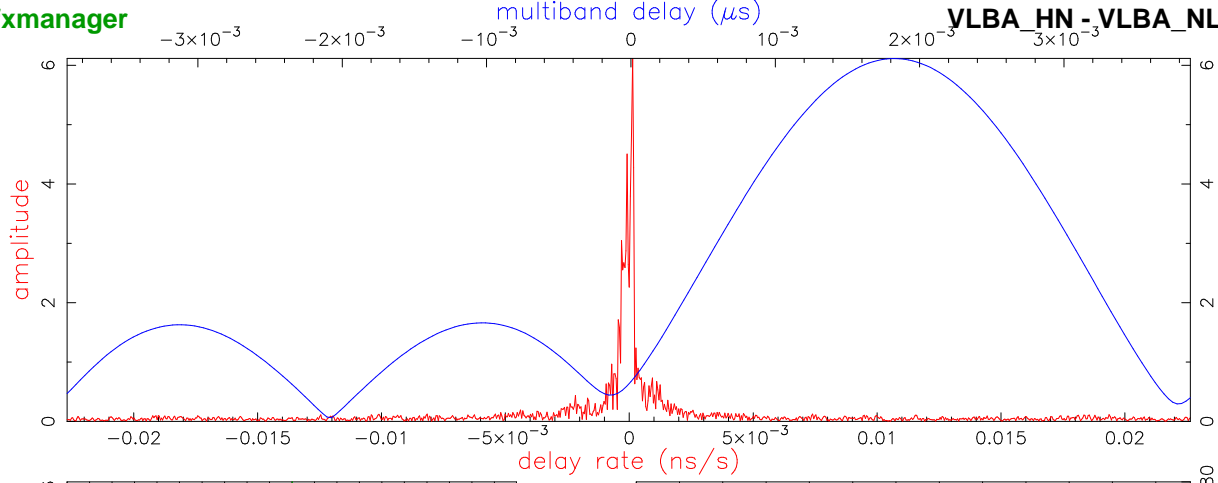
ph/seg (deg)	54.2	Theor.	15.9	Amplitude	0.557 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	54.0	Search (1024X16)	0.522	Search	0.522	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	9.2	Inc. seg. avg.	0.779	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	13.1	Inc. frq. avg.	0.551	Inc. seg. avg.	0.779	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
h: az 242.0 el 25.1 pa 40.5		n: az 224.0 el 37.3 pa 31.3		Inc. frq. avg.	0.551	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn..1V2A0K		u,v (fr/asec) 772.162 49.570		nlags: 512	t_cohere infinite
							simultaneous interpolator
							Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn.Q.154.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

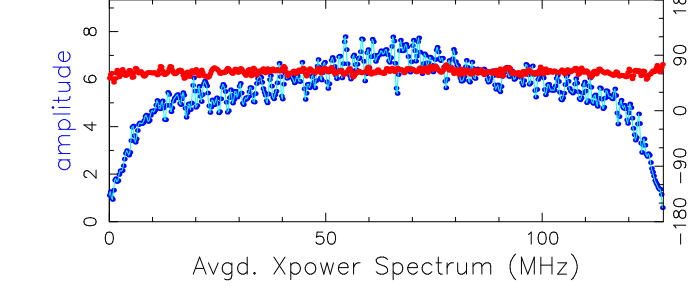
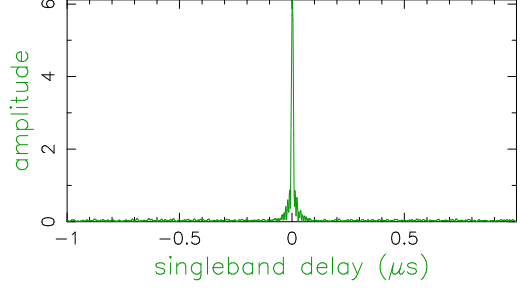
fxmanager

0420-014.1V2A0K, No0121, hn

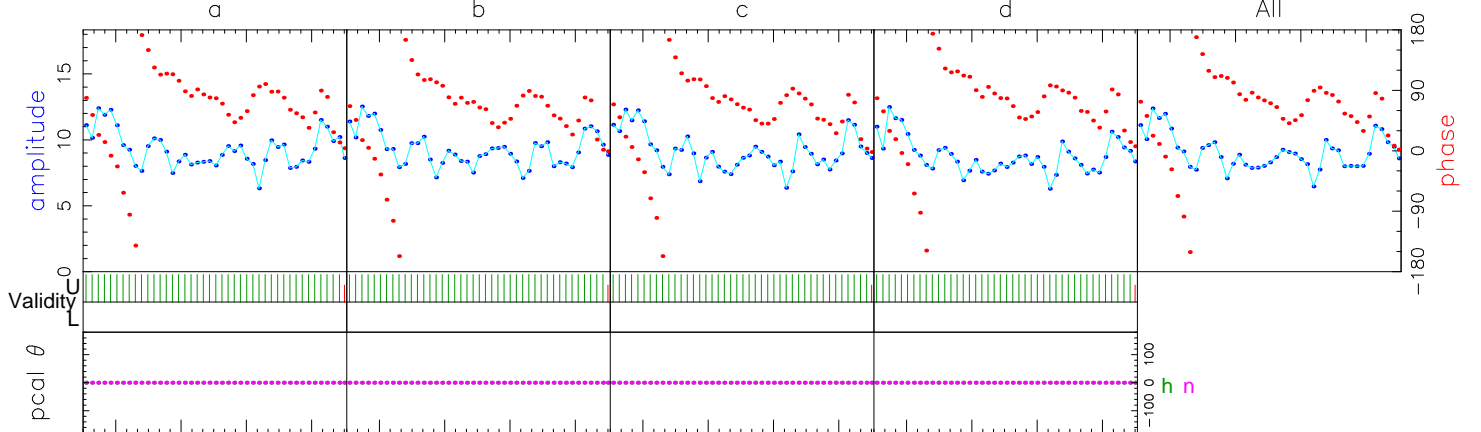
VLBA_HN - VLBA_NL, fgroup Q, pol LL



Fringe quality 5
 SNR 259.1
 Int time 239.987
 Amp 6.116
 Phase 63.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.001806
 MBD 0.001818
 Fringe rate (Hz) 0.006654
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133531
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
67.5	57.9	58.8	68.5	Phase	63.1
6.2	6.3	6.2	5.9	Ampl.	6.1
513.6	513.9	514.0	514.2	Sbd box	513.9
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
h:n 0:0	0:0	0:0	0:0	PC phase	
h:n 0:0	0:0	0:0	0:0	ManI PC	
h 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-3.93264453742E+03	Apriori delay (usec)	-3.93264635565E+03	Resid mbdelay (usec)	1.81823E-03 +/- 4.3E-06
Sband delay (usec)	-3.93264455015E+03	Apriori clock (usec)	-2.6233482E+00	Resid sbdelay (usec)	1.80550E-03 +/- 1.7E-05
Phase delay (usec)	-3.93264635158E+03	Apriori clockrate (us/s)	-1.6999999E-07	Resid phdelay (usec)	4.07214E-06 +/- 2.9E-08
Delay rate (us/s)	-2.66697818783E-01	Apriori rate (us/s)	-2.66697973379E-01	Resid rate (us/s)	1.54596E-07 +/- 2.1E-10
Total phase (deg)	10.1	Apriori accel (us/s/s)	2.08591954282E-05	Resid phase (deg)	63.1 +/- 0.4

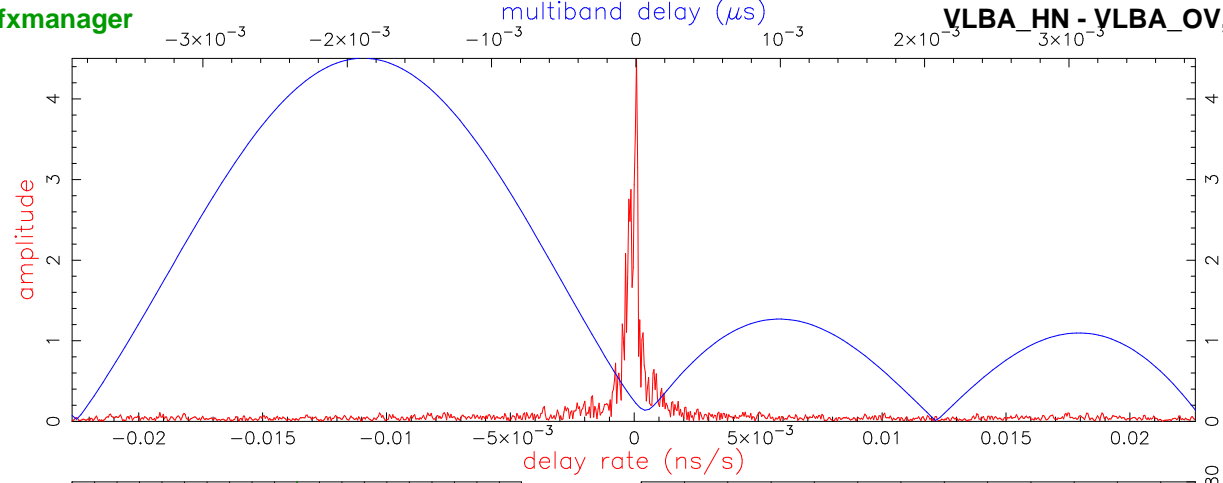
ph/seg (deg) 54.5 1.5 Amplitude 6.116 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 53.0 2.5 Search (1024X16) 5.662 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 6.9 0.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 2.4 0.8 Inc. seg. avg. 9.082 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
 h: az 242.0 el 25.1 pa 40.5 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) 772.162 49.570 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hn.Q.86.1V2A0K simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, ho

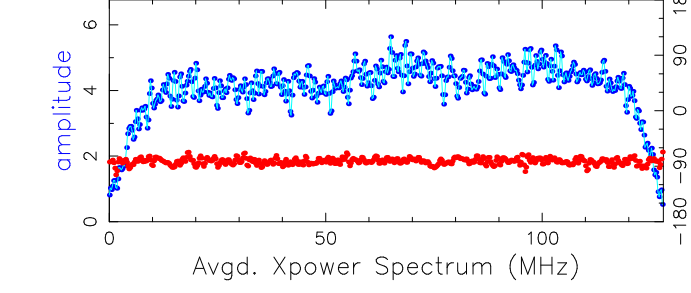
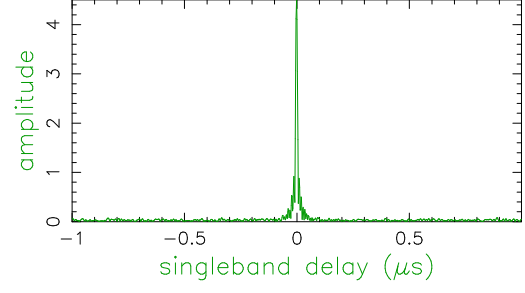
VLBA_HN - VLBA_OV, fgroup Q, pol RR



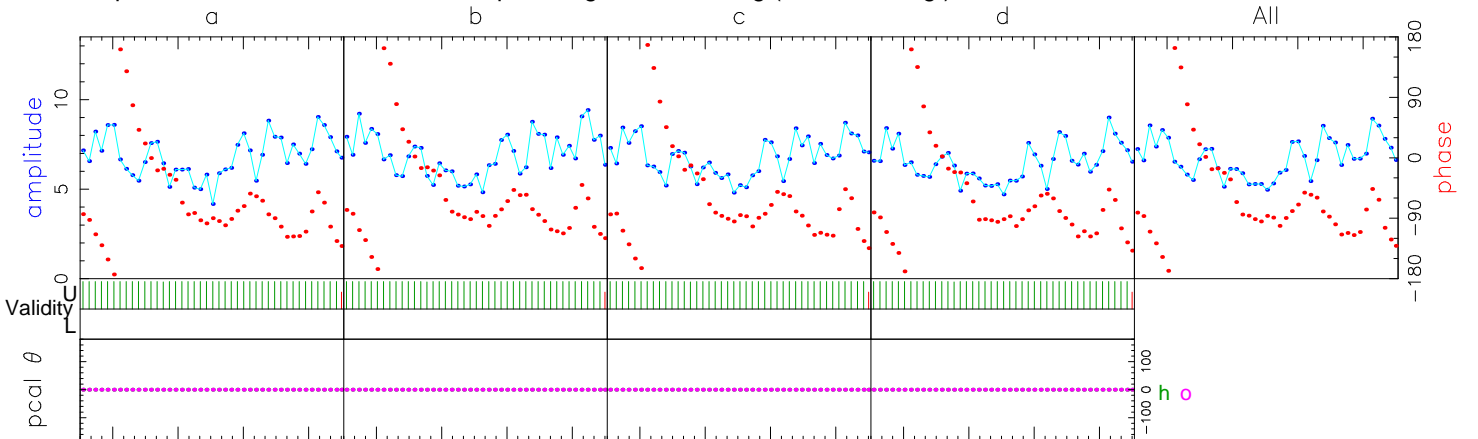
Fringe quality 5

SNR 190.7
 Int time 239.882
 Amp 4.504
 Phase -83.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.001973
 MBD -0.001891
 Fringe rate (Hz) 0.004387
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133534
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000	Phase	-83.9
o	1000	1000	1000	1000	Ampl.	4.5
h:o	0:0	0:0	0:0	0:0	Sbd box	512.0
h:o	0:0	0:0	0:0	0:0	APs used	
h	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
h	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
o	Q00UR	Q01UR	Q02UR	Q03UR	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.62919405131E+03	Apriori delay (usec)	-7.62919216061E+03	Resid mbdelay (usec)	-1.89070E-03	+/-	5.8E-06
Sband delay (usec)	-7.62919413361E+03	Apriori clock (usec)	-8.6229515E-01	Resid sbdelay (usec)	-1.97300E-03	+/-	2.3E-05
Phase delay (usec)	-7.62919216603E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	-5.41538E-06	+/-	3.9E-08
Delay rate (us/s)	-7.56720626265E-01	Apriori rate (us/s)	-7.56720728189E-01	Resid rate (us/s)	1.01925E-07	+/-	2.8E-10
Total phase (deg)	-297.3	Apriori accel (us/s/s)	4.03689346062E-05	Resid phase (deg)	-83.9	+/-	0.6

ph/seg (deg)	56.3	RMS	56.3	Theor.	2.0	Amplitude	4.504 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	55.2	Search (1024X16)	4.374	Inc. seg. avg.	6.755	Search (1024X16)	4.374	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	2.9	Inc. frq. avg.	4.508	Inc. frq. avg.	4.508	Inc. frq. avg.	4.508	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004		
amp/frq (%)	2.4	h: az 242.0 el 25.1 pa 40.5	o: az 190.9 el 51.0 pa 9.1	u,v (fr/asec)	2182.567 305.420	Sample rate(MISamp/s):	256	Data rate(Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

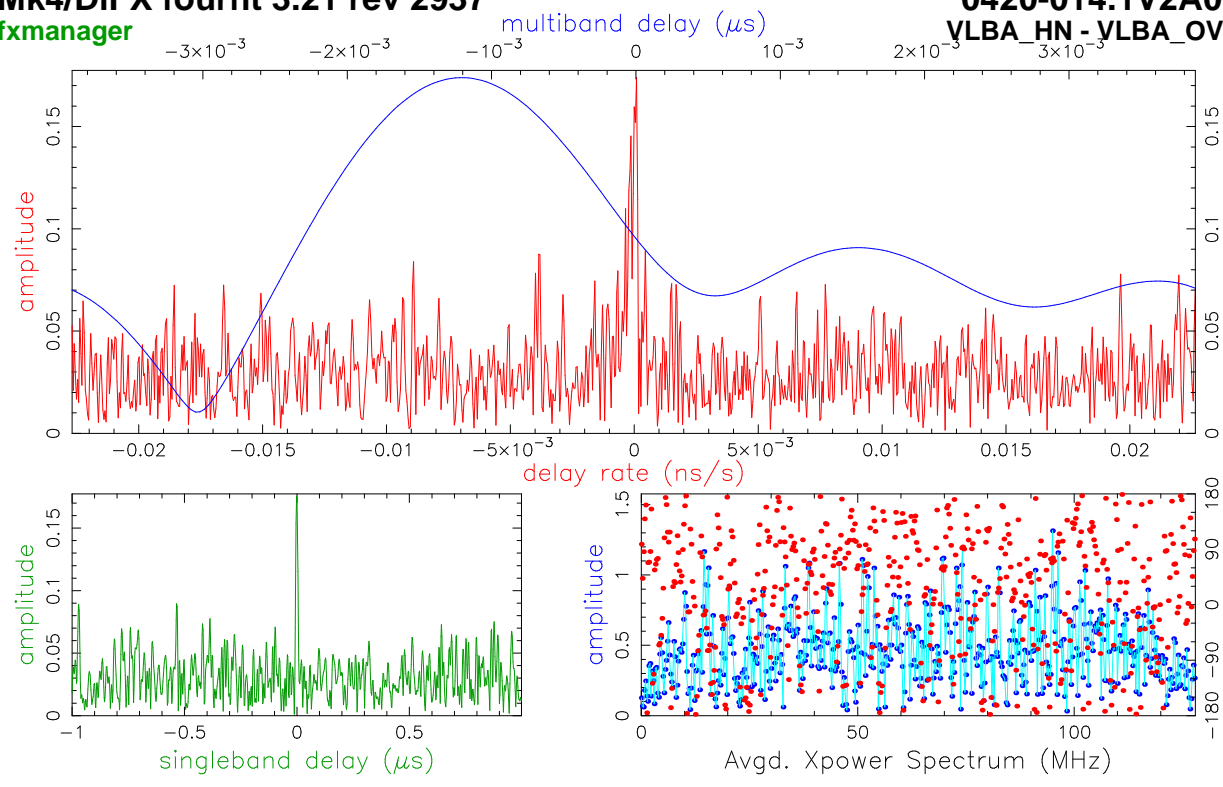
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho.Q.114.1V2A0K simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, ho

VLBA_HN - VLBA_OV, fgroup Q, pol LR

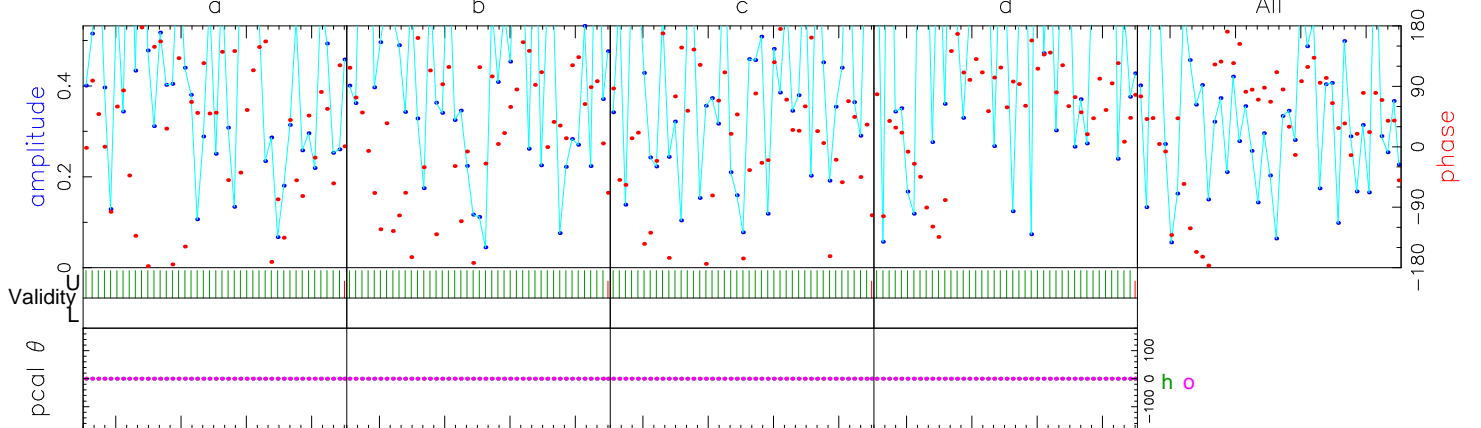


Fringe quality 9

SNR 7.5
 Int time 239.882
 Amp 0.177
 Phase 74.5
 PFD 9.2e-06
 Delays (us)
 SBD -0.001096
 MBD -0.001236
 Fringe rate (Hz)
 0.004757
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133536
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
87.6	70.7	43.1	85.6	Phase	74.5
0.1	0.1	0.1	0.3	Ampl.	0.2
999.3	148.7	134.3	512.8	Sbd box	512.4
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
h:o 0:0	0:0	0:0	0:0	PC phase	
h:o 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-7.62919339681E+03	Apriori delay (usec)	-7.62919216061E+03	Resid mbdelay (usec)	-1.23620E-03 +/- 1.5E-04
Sband delay (usec)	-7.62919325649E+03	Apriori clock (usec)	-8.6229515E-01	Resid sbdelay (usec)	-1.09588E-03 +/- 5.7E-04
Phase delay (usec)	-7.62919215580E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	4.80968E-06 +/- 9.8E-07
Delay rate (us/s)	-7.56720617671E-01	Apriori rate (us/s)	-7.56720728189E-01	Resid rate (us/s)	1.10518E-07 +/- 7.1E-09
Total phase (deg)	-138.8	Apriori accel (us/s/s)	4.03689346062E-05	Resid phase (deg)	74.5 +/- 15.2
RMS	Theor.	Amplitude	0.177 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
67.9	50.0	Search (1024X16)	0.164	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	130.1 87.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	25.5 15.2	Inc. seg. avg.	0.242	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	45.1 26.6	Inc. frq. avg.	0.175	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
h: az 242.0 el 25.1 pa 40.5	o: az 190.9 el 51.0 pa 9.1	u,v (fr/asec)	2182.567 305.420		simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho.Q.131.1V2A0K			

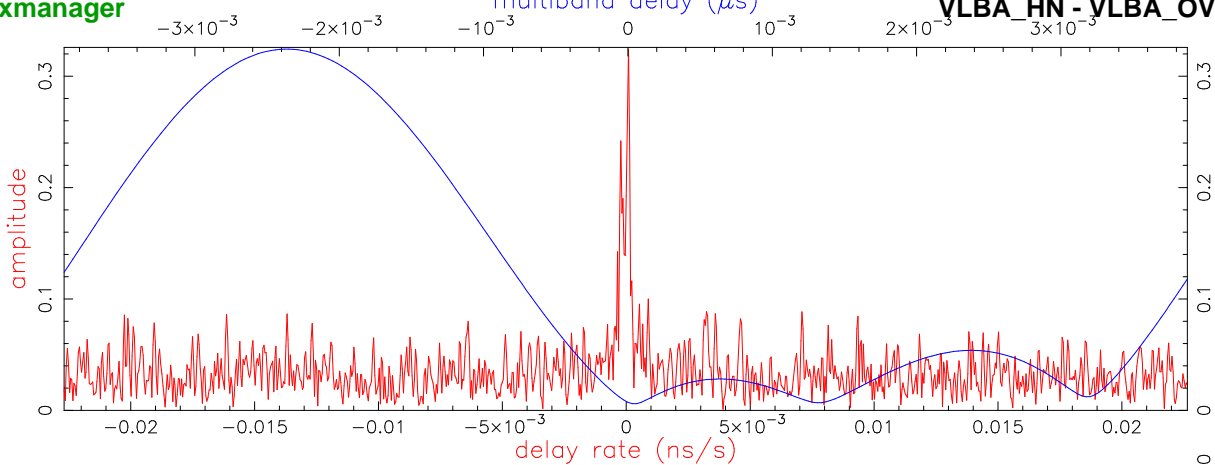
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, ho

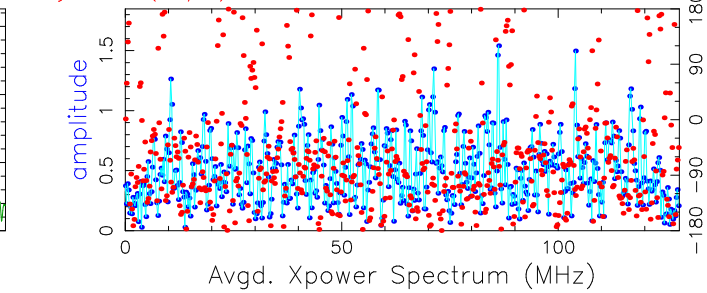
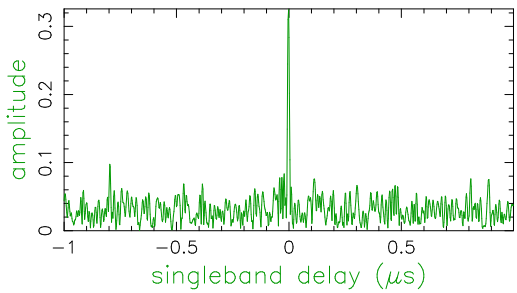
VLBA_HN - VLBA_OV, fgroup Q, pol RL

multiband delay (μ s)



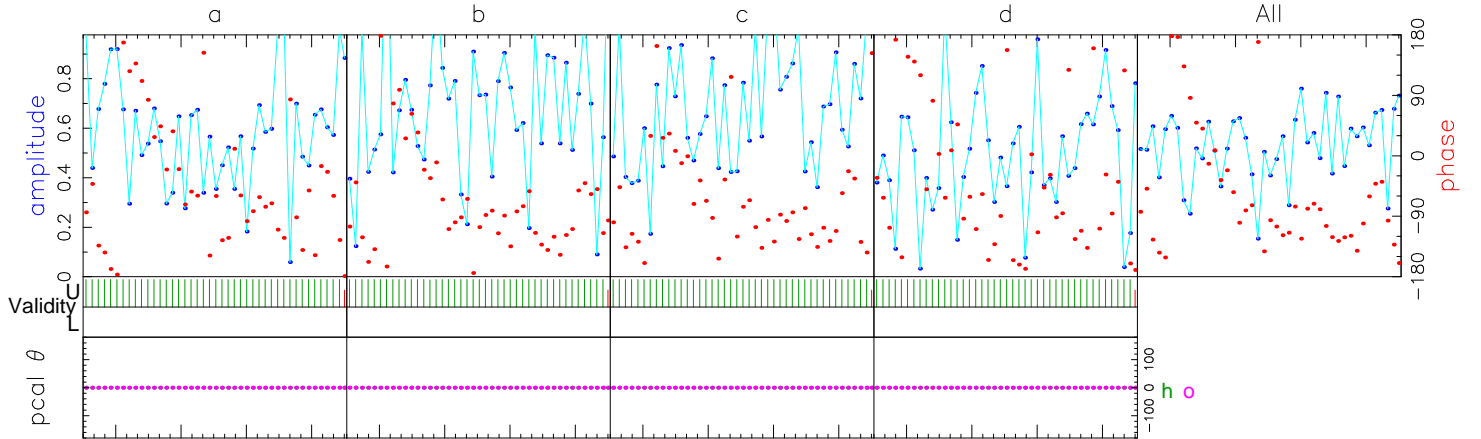
Fringe quality 9

SNR 13.8
 Int time 239.882
 Amp 0.326
 Phase -97.1
 PFD 7.2e-35
 Delays (us)
 SBD -0.002429
 MBD -0.002393
 Fringe rate (Hz) 0.004548
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

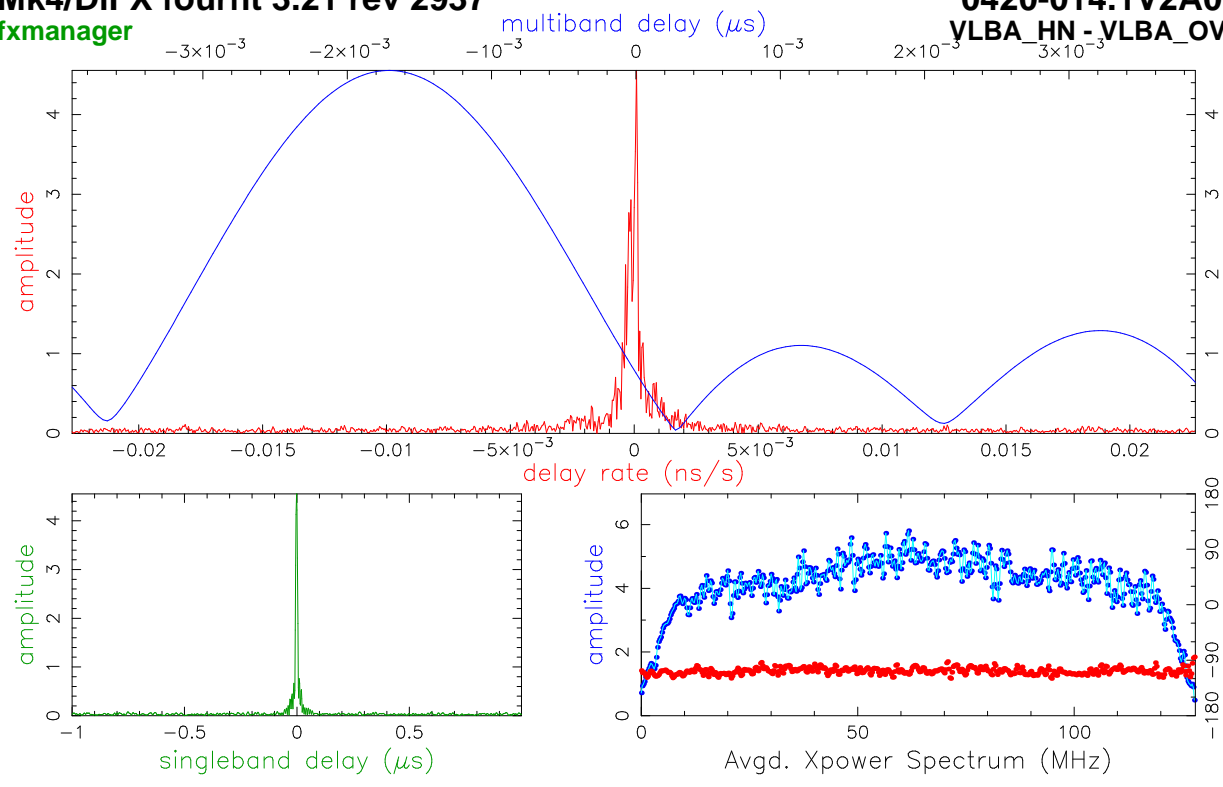


42912.00	43040.00	43168.00	43296.00	43296.00	Freq (MHz)	All
-100.3	-99.2	-91.8	-99.7	-99.7	Phase	-97.1
0.3	0.4	0.4	0.2	0.2	Ampl.	0.3
511.6	511.9	512.0	511.1	511.1	Sbd box	511.8
U/L 469/0	469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	1000	PC freqs	
h:o 0:0	0:0	0:0	0:0	0:0	PC phase	
h:o 0:0	0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Q03UR	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.62919455359E+03	Apriori delay (usec)	-7.62919216061E+03	Resid mbdelay (usec)	-2.39298E-03	+/- 8.1E-05
Sband delay (usec)	-7.62919458961E+03	Apriori clock (usec)	-8.6229515E-01	Resid sbdelay (usec)	-2.42900E-03	+/- 3.1E-04
Phase delay (usec)	-7.62919216688E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	-6.26991E-06	+/- 5.4E-07
Delay rate (us/s)	-7.56720622529E-01	Apriori rate (us/s)	-7.56720728189E-01	Resid rate (us/s)	1.05660E-07	+/- 3.9E-09
Total phase (deg)	-310.5	Apriori accel (us/s/s)	4.03689346062E-05	Resid phase (deg)	-97.1	+/- 8.3

ph/seg (deg)	63.6	Theor.	27.2	Amplitude	0.326 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.9		47.5	Search (1024X16)	0.312	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	5.0		8.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	23.1		14.5	Inc. seg. avg.	0.474	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.322	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		
h: az 242.0 el 25.1 pa 40.5	o: az 190.9 el 51.0 pa 9.1	u, v (fr/asec)	2182.567	305.420						simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho.Q.147.1V2A0K

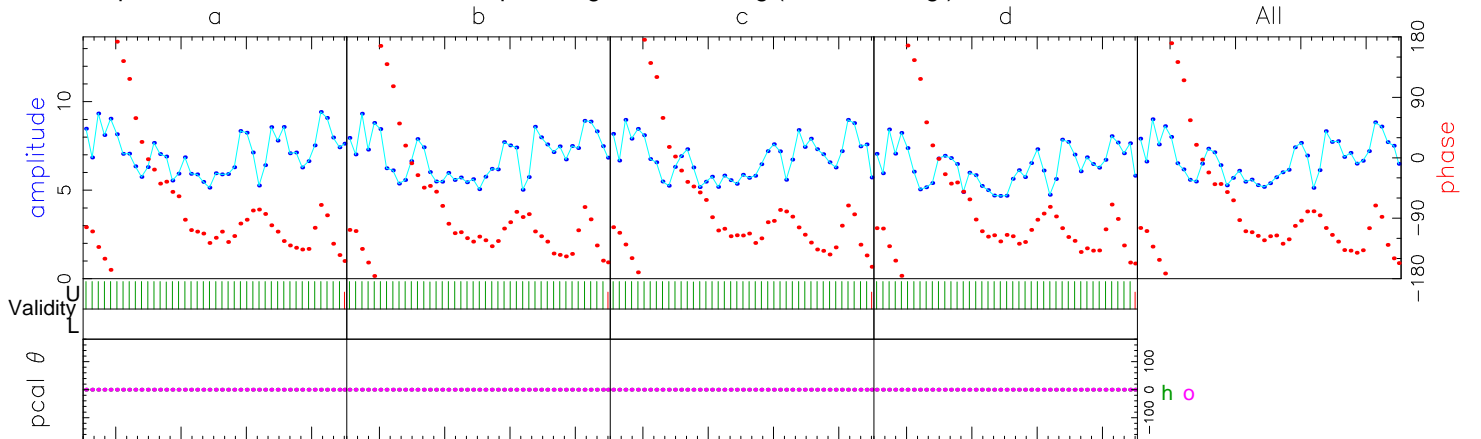


Fringe quality 5

SNR 192.9
Int time 239.882
Amp 4.555
Phase -110.3
PFD 0.0e+00
Delays (us)
SBD -0.001830
MBD -0.001704
Fringe rate (Hz) 0.004423
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133532
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



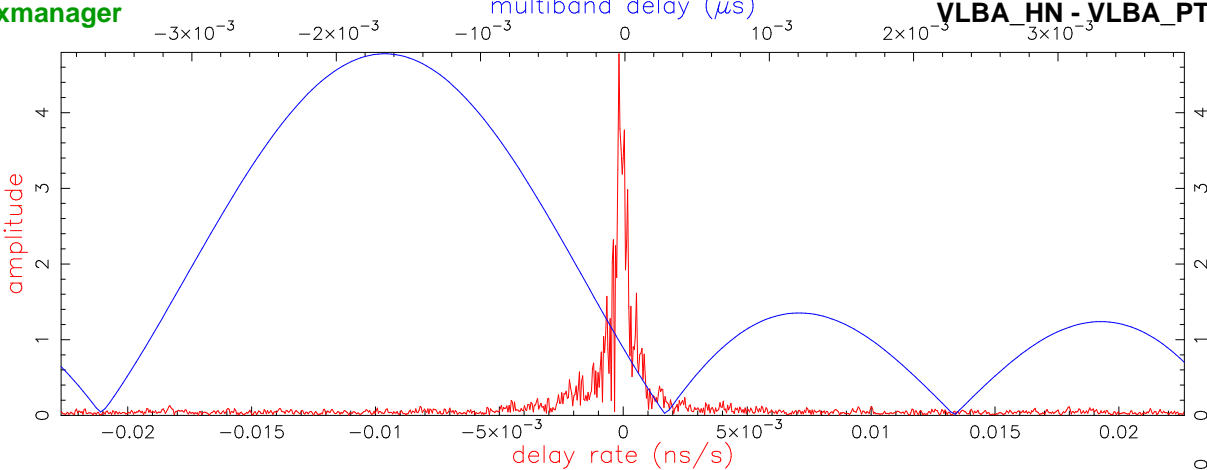
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-108.1	-113.4	-109.1	-110.5	Phase	-110.3
4.8	4.6	4.6	4.2	Ampl.	4.6
511.9	512.2	512.1	512.1	Sbd box	512.1
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
h:o 0:0	0:0	0:0	0:0	PC phase	
h:o 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-7.62919386497E+03	Apriori delay (usec)	-7.62919216061E+03	Resid mbdelay (usec)	-1.70436E-03 +/- 5.8E-06
Sband delay (usec)	-7.62919399049E+03	Apriori clock (usec)	-8.6229515E-01	Resid sbdelay (usec)	-1.82988E-03 +/- 2.2E-05
Phase delay (usec)	-7.62919216773E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	-7.11803E-06 +/- 3.8E-08
Delay rate (us/s)	-7.56720625417E-01	Apriori rate (us/s)	-7.56720728189E-01	Resid rate (us/s)	1.02773E-07 +/- 2.8E-10
Total phase (deg)	-323.6	Apriori accel (us/s/s)	4.03689346062E-05	Resid phase (deg)	-110.3 +/- 0.6
RMS	Theor.	Amplitude	4.555 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
56.1	1.9	Search (1024X16)	4.311	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
54.4	3.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
2.8	0.6	Inc. seg. avg.	6.779	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
4.4	1.0	Inc. frq. avg.	4.558	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
h: az 242.0 el 25.1 pa 40.5	o: az 190.9 el 51.0 pa 9.1	u,v (fr/asec)	2182.567 305.420		simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ho.Q.94.1V2A0K			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

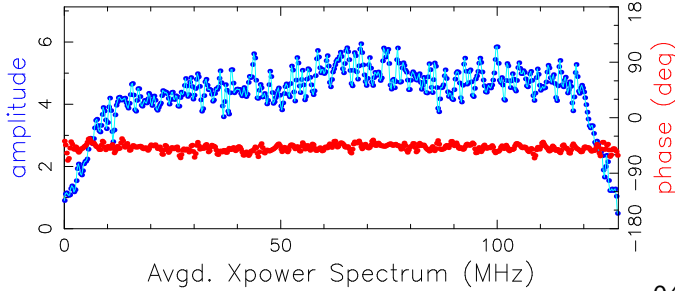
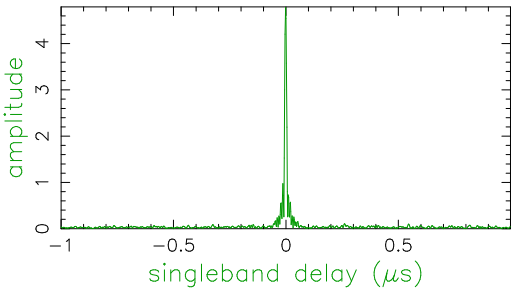
0420-014.1V2A0K, No0121, hp

VLBA_HN - VLBA_PT, fgroup Q, pol RR



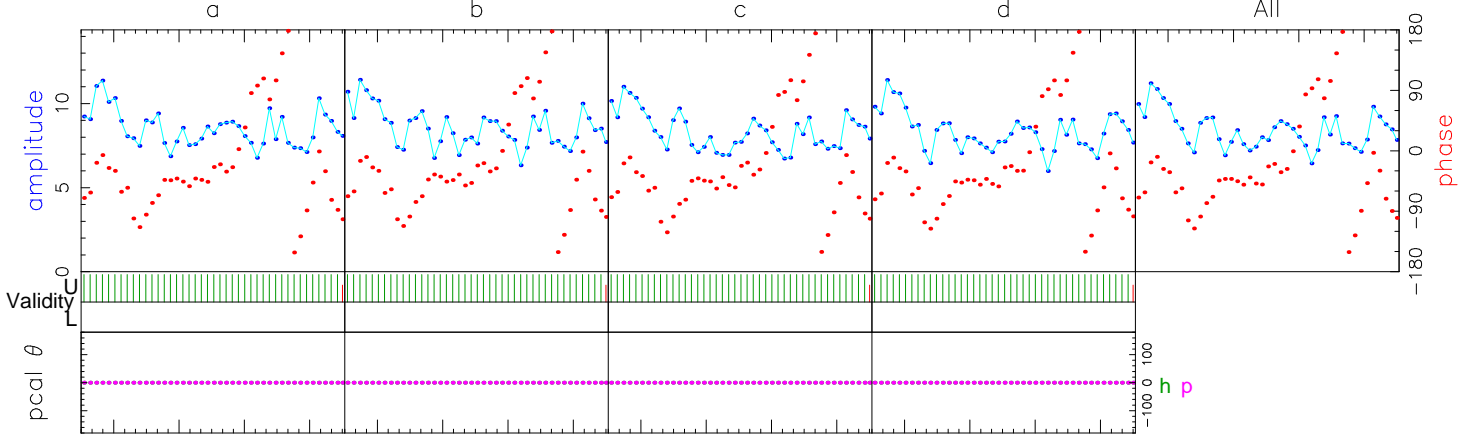
Fringe quality 5

SNR 203.2
 Int time 239.983
 Amp 4.796
 Phase -46.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.001544
 MBD -0.001643
 Fringe rate (Hz)
 -0.007079
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133533
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000		
p	1000	1000	1000	1000		
h:p	0:0	0:0	0:0	0:0		
h:p	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
p	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-7.60644443058E+03	Apriori delay (usec)	-7.60644278767E+03	Resid mbdelay (usec)	-1.64291E-03	+/-	5.5E-06
Sband delay (usec)	-7.60644433180E+03	Apriori clock (usec)	-2.7617226E+00	Resid sbdelay (usec)	-1.54413E-03	+/-	2.1E-05
Phase delay (usec)	-7.60644279065E+03	Apriori clockrate (us/s)	2.5000000E-07	Resid phdelay (usec)	-2.97606E-06	+/-	3.6E-08
Delay rate (us/s)	-5.28924058211E-01	Apriori rate (us/s)	-5.28923893728E-01	Resid rate (us/s)	-1.64483E-07	+/-	2.6E-10
Total phase (deg)	-255.4	Apriori accel (us/s/s)	4.01323252870E-05	Resid phase (deg)	-46.1	+/-	0.6

ph/seg (deg)	68.1	1.8	Search (1024X16)	4.572	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	79.0	3.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	2.1	0.6	Inc. seg. avg.	8.427	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	1.0	1.0	Inc. frq. avg.	4.779	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

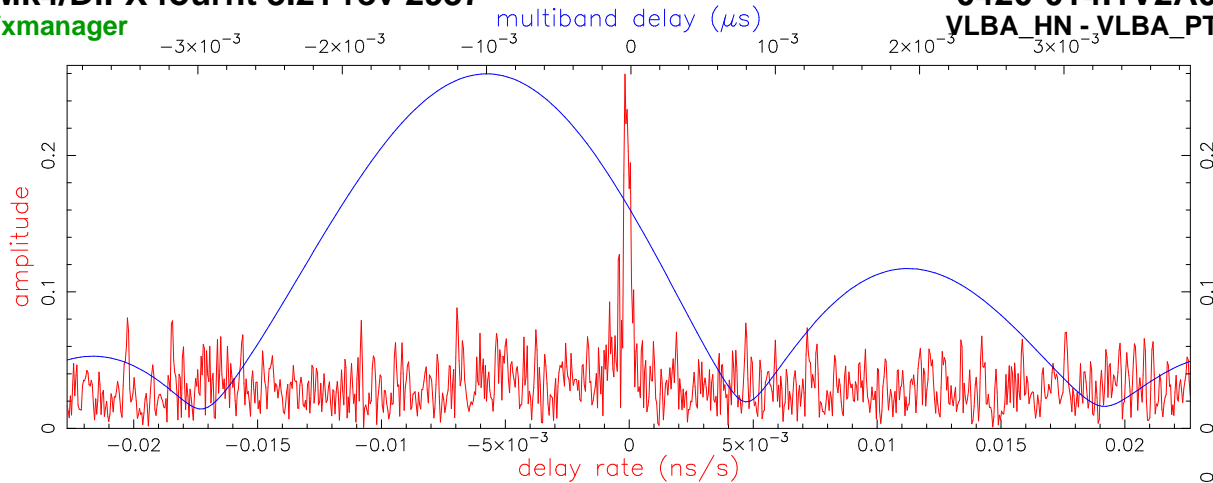
h: az 242.0 el 25.1 pa 40.5 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 1530.129 487.416 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp.Q.102.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

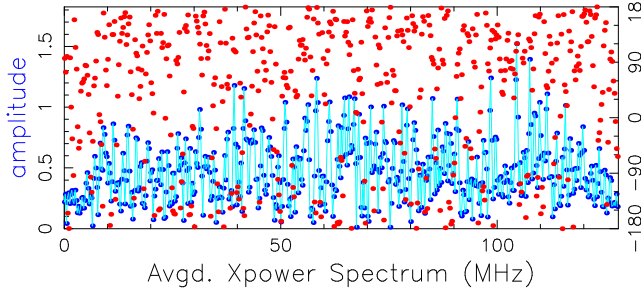
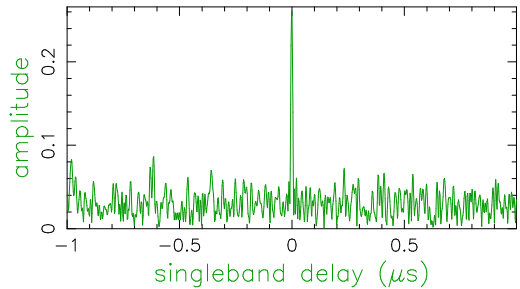
0420-014.1V2A0K, No0121, hp

VLBA_HN - VLBA_PT, fgroup Q, pol LR



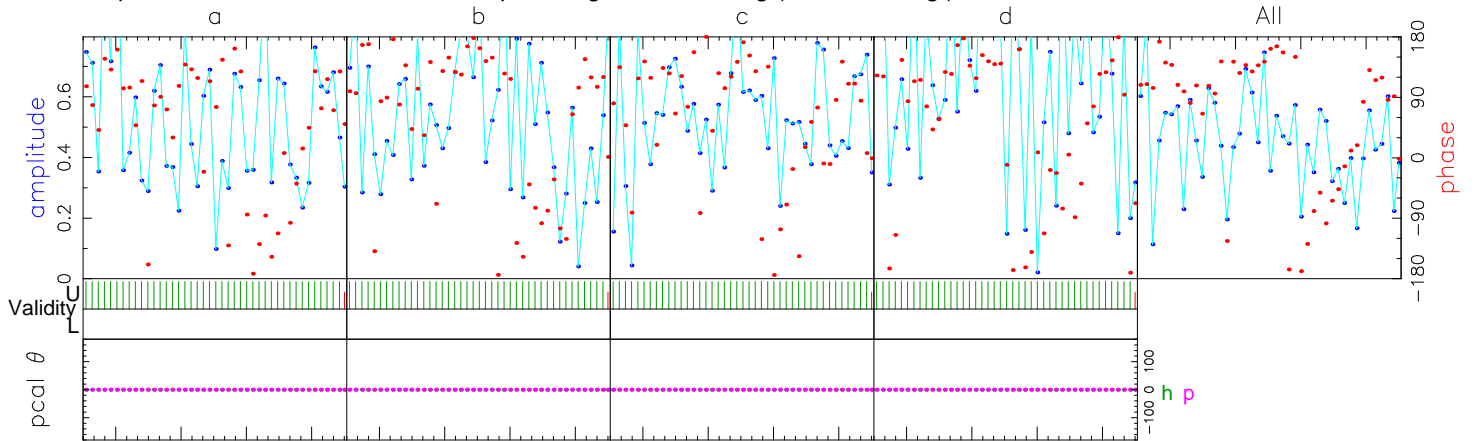
Fringe quality 9

SNR 11.3
 Int time 239.983
 Amp 0.266
 Phase 127.2
 PFD 4.5e-21
 Delays (us)
 SBD -0.001042
 MBD -0.001053
 Fringe rate (Hz)
 -0.006848
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133535
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000		
p	1000	1000	1000	1000		
h:p	0:0	0:0	0:0	0:0		
h:p	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
p	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-7.60644384105E+03	Apriori delay (usec)	-7.60644278767E+03	Resid mbdelay (usec)	-1.05338E-03	+/- 9.9E-05
Sband delay (usec)	-7.60644382980E+03	Apriori clock (usec)	-2.7617226E+00	Resid sbdelay (usec)	-1.04213E-03	+/- 3.8E-04
Phase delay (usec)	-7.60644277946E+03	Apriori clockrate (us/s)	2.5000000E-07	Resid phdelay (usec)	8.21082E-06	+/- 6.6E-07
Delay rate (us/s)	-5.28924052828E-01	Apriori rate (us/s)	-5.28923893728E-01	Resid rate (us/s)	-1.59100E-07	+/- 4.7E-09
Total phase (deg)	-82.1	Apriori accel (us/s/s)	4.01323252870E-05	Resid phase (deg)	127.2	+/- 10.2

	RMS	Theor.	Amplitude	0.266 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	75.3	33.3	Search (1024X16)	0.247	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	92.6	58.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	16.1	10.2	Inc. seg. avg.	0.389	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	12.2	17.7	Inc. frq. avg.	0.260	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

h: az 242.0 el 25.1 pa 40.5 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 1530.129 487.416 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp.Q.127.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

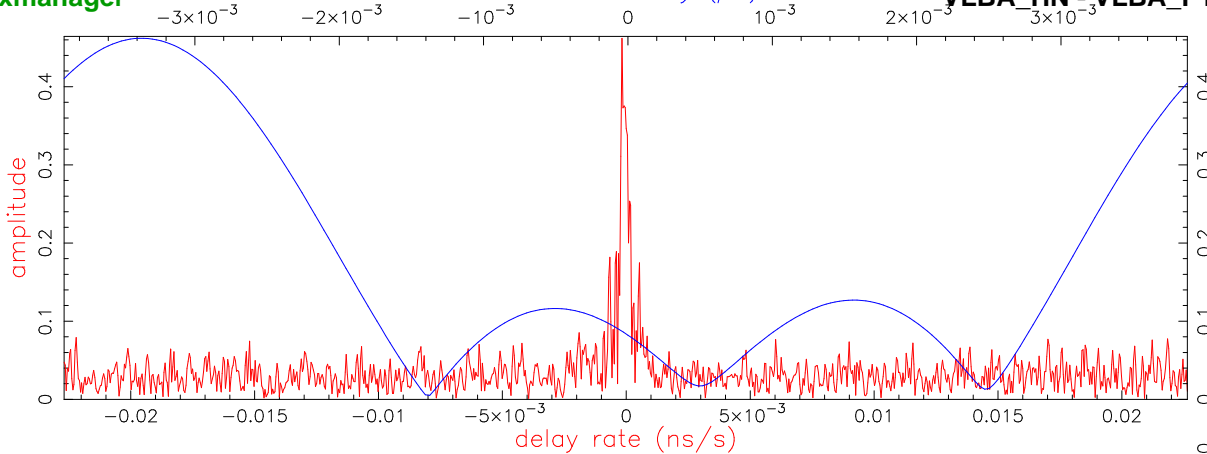
fxmanager

0420-014.1V2A0K, No0121, hp

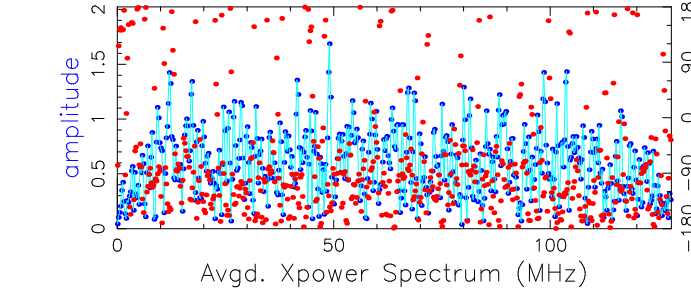
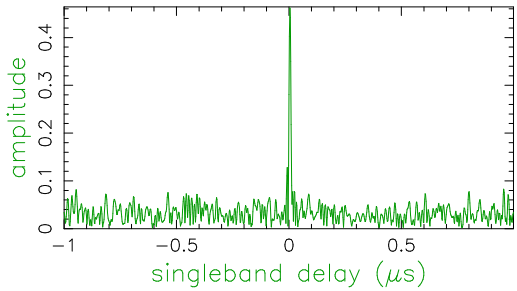
VLBA_HN - VLBA_PT, fgroup Q, pol RL

multiband delay (μ s)

Fringe quality 9

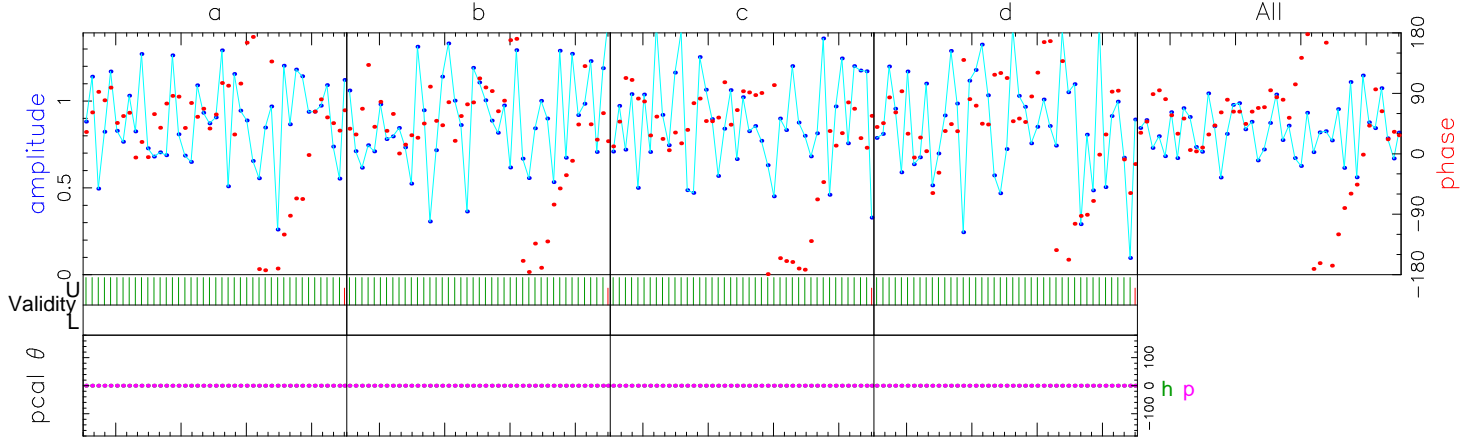


SNR 19.7
 Int time 239.983
 Amp 0.464
 Phase 58.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.004397
 MBD -0.003335
 Fringe rate (Hz)
 -0.006996
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000		
p	1000	1000	1000	1000		
h:p	0:0	0:0	0:0	0:0		
h:p	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
p	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-7.60643831027E+03	Apriori delay (usec)	-7.60644278767E+03	Resid mbdelay (usec)	-3.33510E-03	+/- 5.7E-05
Sband delay (usec)	-7.60643839017E+03	Apriori clock (usec)	-2.7617226E+00	Resid sbdelay (usec)	4.39750E-03	+/- 2.2E-04
Phase delay (usec)	-7.60644278390E+03	Apriori clockrate (us/s)	2.5000000E-07	Resid phdelay (usec)	3.76792E-06	+/- 3.8E-07
Delay rate (us/s)	-5.28924056266E-01	Apriori rate (us/s)	-5.28923893728E-01	Resid rate (us/s)	-1.62537E-07	+/- 2.7E-09
Total phase (deg)	-150.9	Apriori accel (us/s/s)	4.01323252870E-05	Resid phase (deg)	58.4	+/- 5.8

ph/seg (deg)	66.8	Theor.	19.1	Amplitude	0.464 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	84.0	Search (1024X16)	0.443	Search	0.443	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	3.0	Inc. seg. avg.	0.783	Inc. seg. avg.	0.783	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	4.7	Inc. frq. avg.	0.460	Inc. frq. avg.	0.460	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
h: az 242.0 el 25.1 pa 40.5		p: az 207.7 el 51.0 pa 23.1		u,v (fr/asec)	1530.129 487.416	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp.Q.151.1V2A0K		ion window (TEC)	0.00 0.00

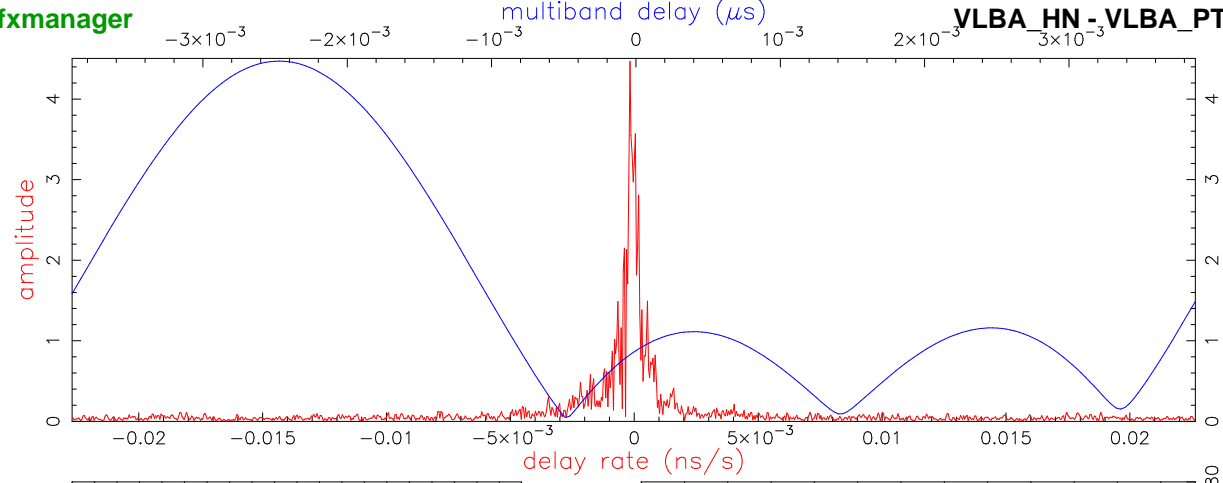
simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, hp

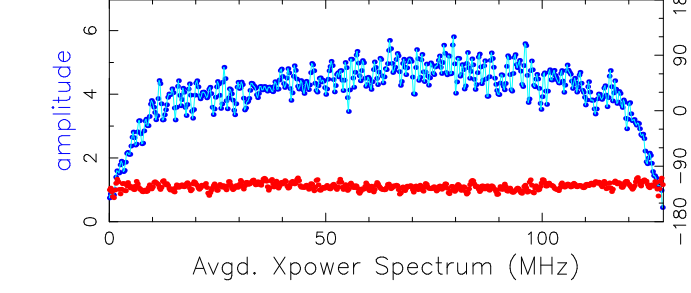
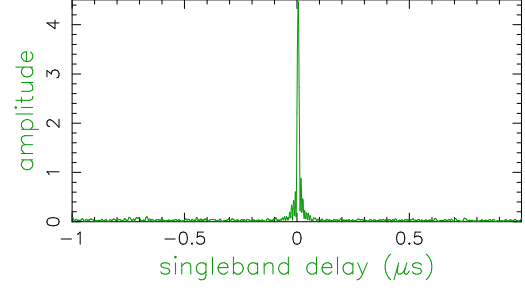
VLBA_HN - VLBA_PT, fgroup Q, pol LL



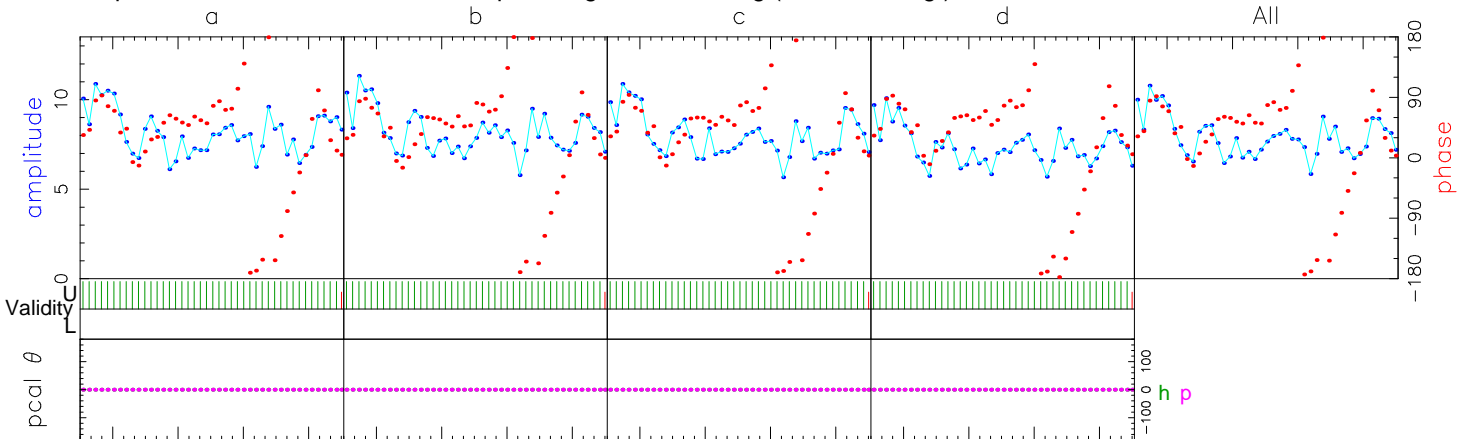
Fringe quality 5

SNR 190.8
Int time 239.983
Amp 4.505
Phase 55.8
PFD 0.0e+00
Delays (us)
SBD 0.005273
MBD -0.002500
Fringe rate (Hz) -0.007108
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133531
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
h	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	PC freqs	
h:p	0:0	0:0	0:0	0:0	PC phase	
h:p	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-7.60643747493E+03	Apriori delay (usec)	-7.60644278767E+03	Resid mbdelay (usec)	-2.49976E-03	+/-	5.8E-06
Sband delay (usec)	-7.60643751480E+03	Apriori clock (usec)	-2.7617226E+00	Resid sbdelay (usec)	5.27288E-03	+/-	2.3E-05
Phase delay (usec)	-7.60644278407E+03	Apriori clockrate (us/s)	2.5000000E-07	Resid phdelay (usec)	3.60428E-06	+/-	3.9E-08
Delay rate (us/s)	-5.28924058878E-01	Apriori rate (us/s)	-5.28923893728E-01	Resid rate (us/s)	-1.65149E-07	+/-	2.8E-10
Total phase (deg)	-153.4	Apriori accel (us/s/s)	4.01323252870E-05	Resid phase (deg)	55.8	+/-	0.6

ph/seg (deg)	68.0	Theor.	2.0	Amplitude	4.505 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	79.6	Search (1024X16)	4.347	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	3.2	Inc. seg. avg.	7.917	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us) -0.004 0.004
amp/frq (%)	3.9	Inc. frq. avg.	4.473	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023
h: az 242.0 el 25.1 pa 40.5		p: az 207.7 el 51.0 pa 23.1		Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00

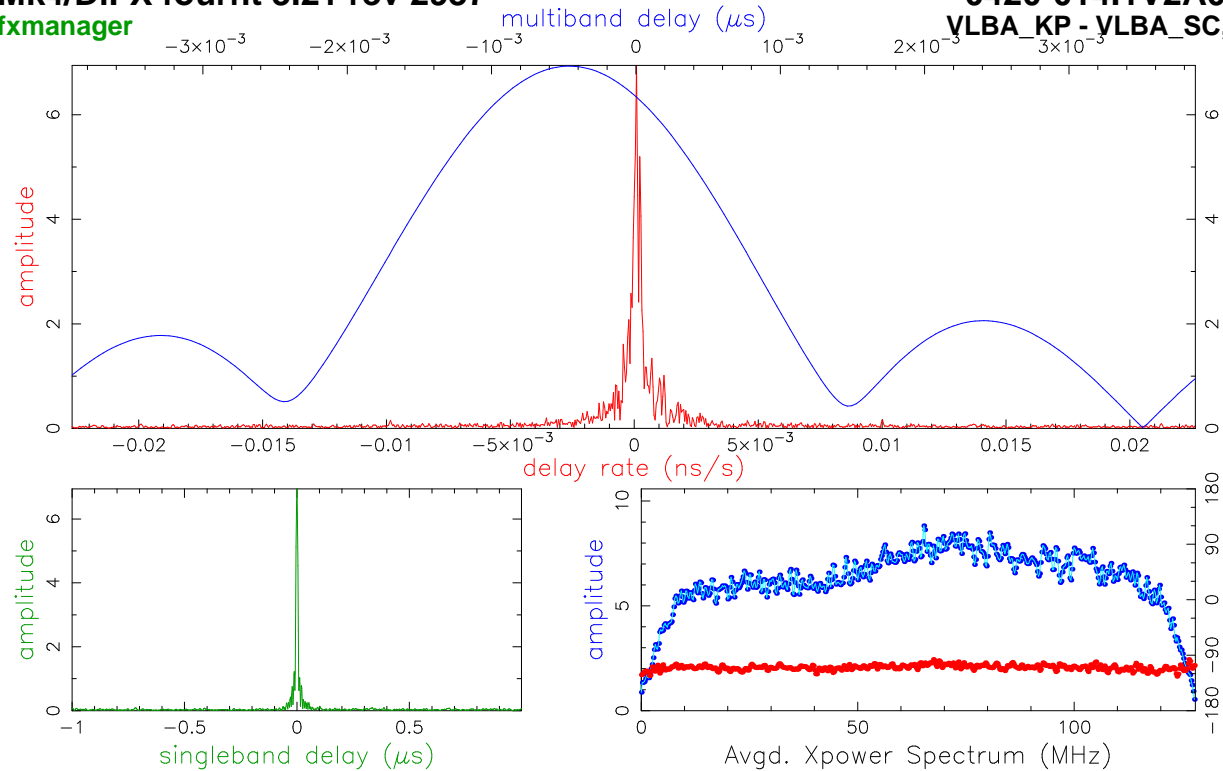
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/hp.Q.85.1V2A0K simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kc

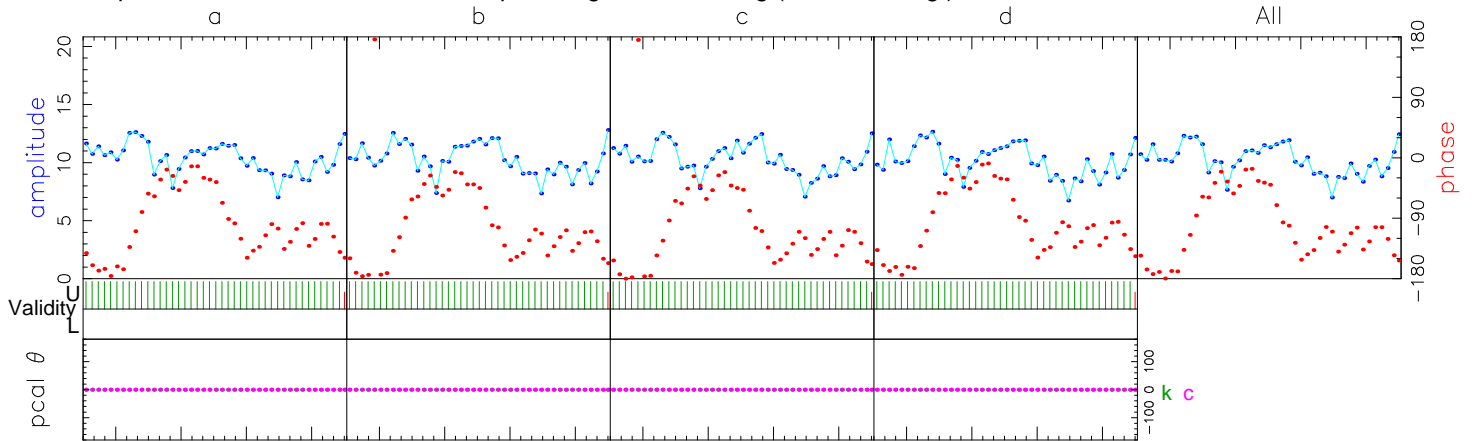
VLBA_KP - VLBA_SC, fgroup Q, pol RR



Fringe quality 5

SNR 294.2
 Int time 239.983
 Amp 6.945
 Phase -106.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.000308
 MBD -0.000470
 Fringe rate (Hz)
 0.003960
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133534
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-101.9	-109.3	-113.5	-99.1	Phase	-106.0
	7.0	7.0	7.0	6.8	Ampl.	7.0
	513.0	512.6	512.8	513.2	Sbd box	512.8
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
k:c	0:0	0:0	0:0	0:0	PC phase	
k:c	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	7.62616308491E+03	Apriori delay (usec)	7.62616355476E+03	Resid mbdelay (usec)	-4.69856E-04	+/- 3.8E-06
Group delay (usec)(sbd)	7.62616324714E+03	Apriori clock (usec)	-1.1858517E+01	Resid sbdelay (usec)	-3.07625E-04	+/- 1.5E-05
Sband delay (usec)	7.62616354792E+03	Apriori clockrate (us/s)	-3.1599999E-07	Resid phdelay (usec)	-6.84016E-06	+/- 2.5E-08
Phase delay (usec)	9.72741335120E-01	Apriori rate (us/s)	9.72741243105E-01	Resid rate (us/s)	9.20150E-08	+/- 1.8E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-4.11858066800E-05	Resid phase (deg)	-106.0	+/- 0.4
Total phase (deg)	36.9					

	RMS	Theor.	Amplitude	6.945 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	48.3	1.3	Search (1024X16)	6.899	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	50.7	2.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.1	0.4	Inc. seg. avg.	10.231	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.2	0.7	Inc. frq. avg.	6.965	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

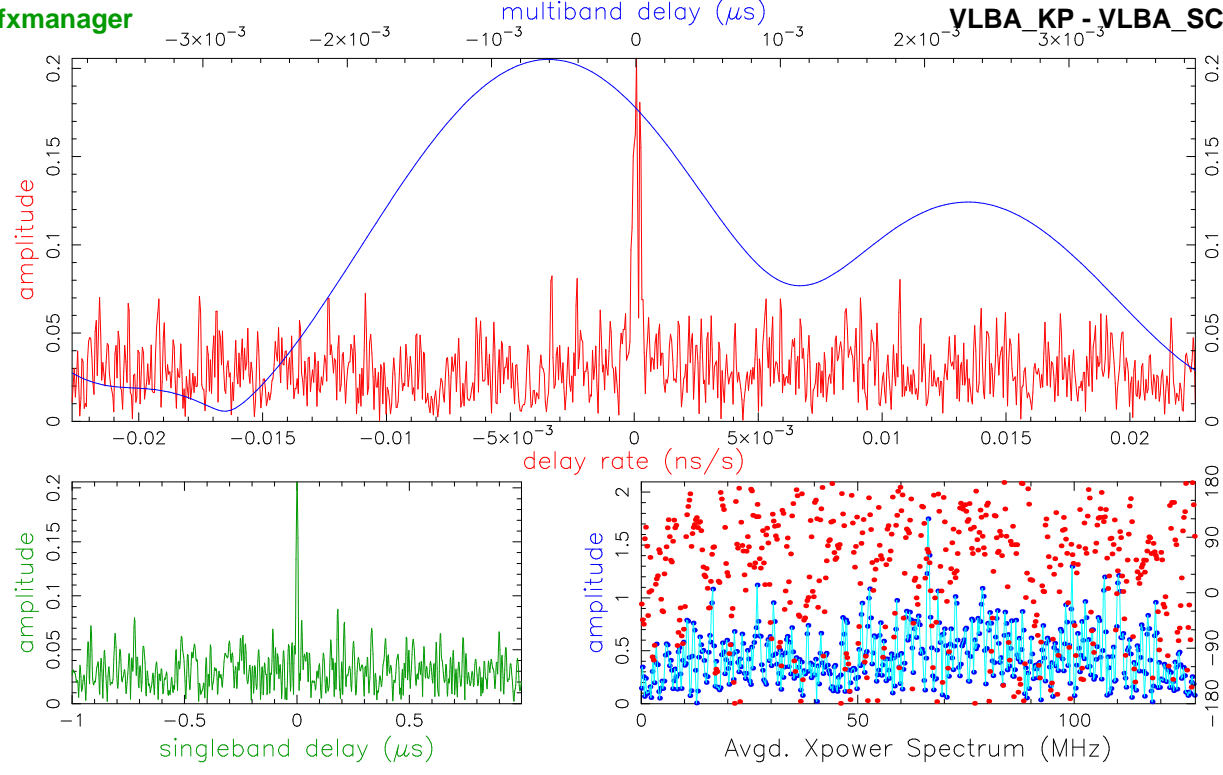
k: az 203.6 el 54.4 pa 20.3 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2803.674 1021.938 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc.Q.111.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kc

VLBA_KP - VLBA_SC, fgroup Q, pol LR

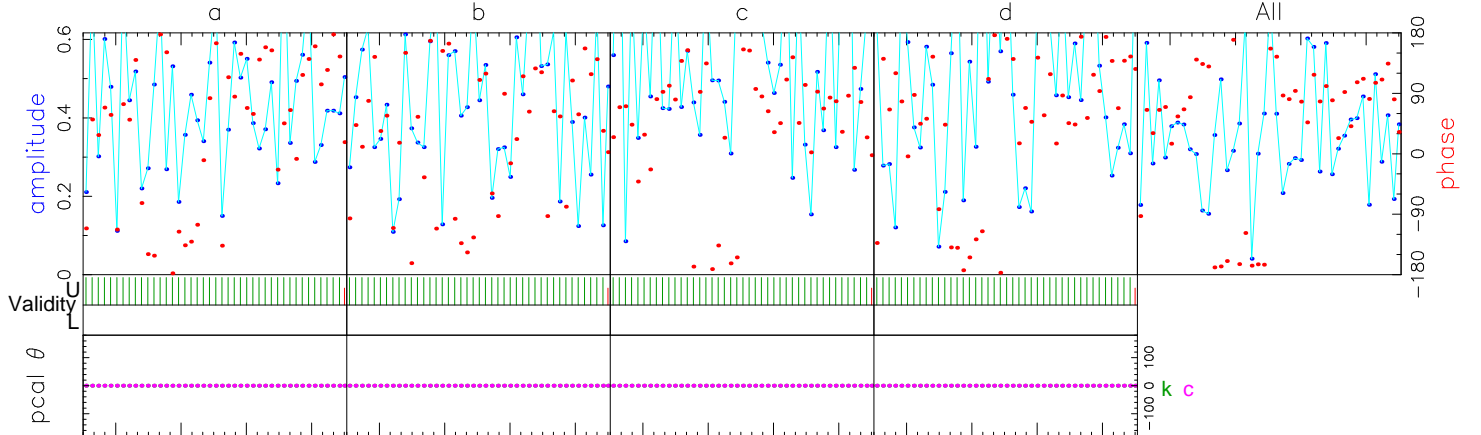


Fringe quality 9

SNR 8.7
 Int time 239.983
 Amp 0.206
 Phase 105.9
 PFD 5.5e-10
 Delays (us)
 SBD 0.000391
 MBD -0.000578
 Fringe rate (Hz) 0.004202
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133536
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
c	1000	1000	1000	1000		
k:c	0:0	0:0	0:0	0:0		
k:c	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
c	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	7.62616297713E+03	Apriori delay (usec)	7.62616355476E+03	Resid mbdelay (usec)	-5.77637E-04	+/- 1.3E-04
Sband delay (usec)	7.62616394526E+03	Apriori clock (usec)	-1.1858517E+01	Resid sbdelay (usec)	3.90500E-04	+/- 4.9E-04
Phase delay (usec)	7.62616356160E+03	Apriori clockrate (us/s)	-3.1599999E-07	Resid phdelay (usec)	6.83678E-06	+/- 8.5E-07
Delay rate (us/s)	9.72741340727E-01	Apriori rate (us/s)	9.72741243105E-01	Resid rate (us/s)	9.76222E-08	+/- 6.1E-09
Total phase (deg)	248.9	Apriori accel (us/s/s)	-4.11858066800E-05	Resid phase (deg)	105.9	+/- 13.2

	RMS	Theor.	Amplitude	0.206 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	60.7	43.1	Search (1024X16)	0.201	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	102.7	75.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	23.8	13.2	Inc. seg. avg.	0.282	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	43.6	23.0	Inc. frq. avg.	0.210	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2803.674 1021.938 simultaneous interpolator

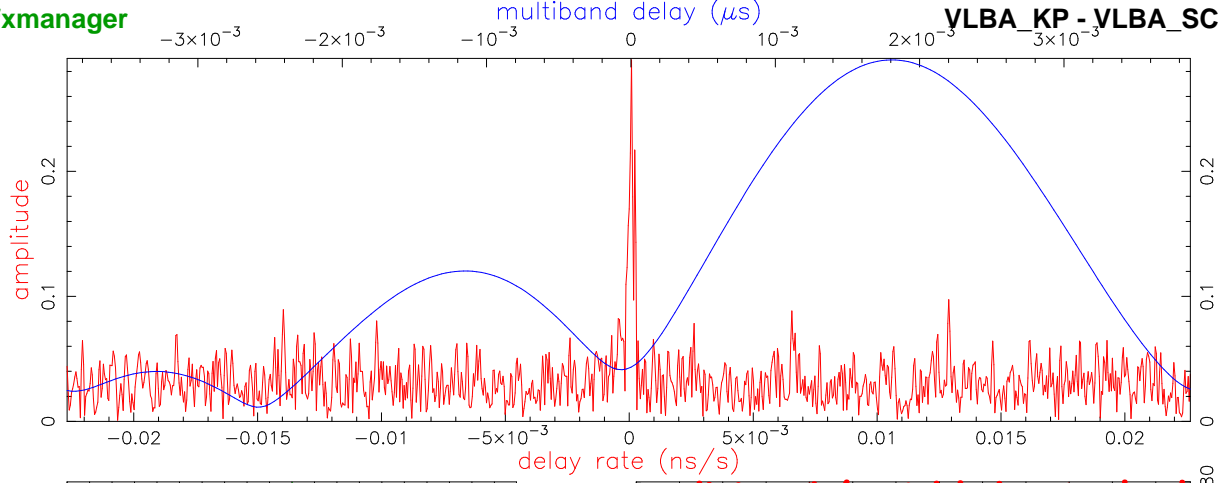
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc.Q.136.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

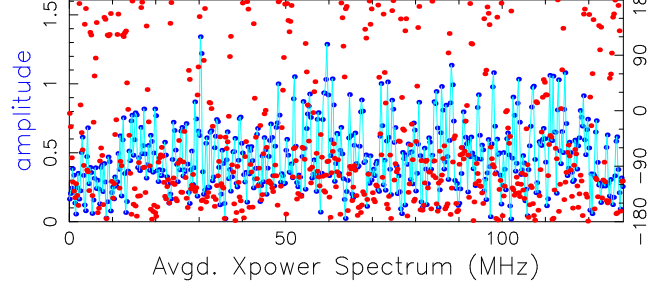
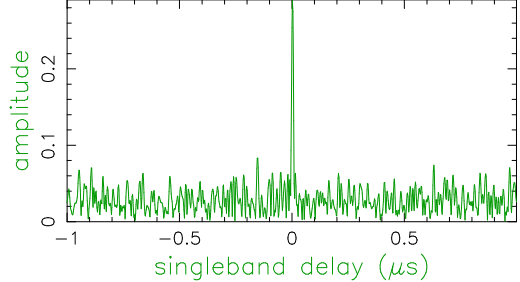
0420-014.1V2A0K, No0121, kc

VLBA_KP - VLBA_SC, fgroup Q, pol RL



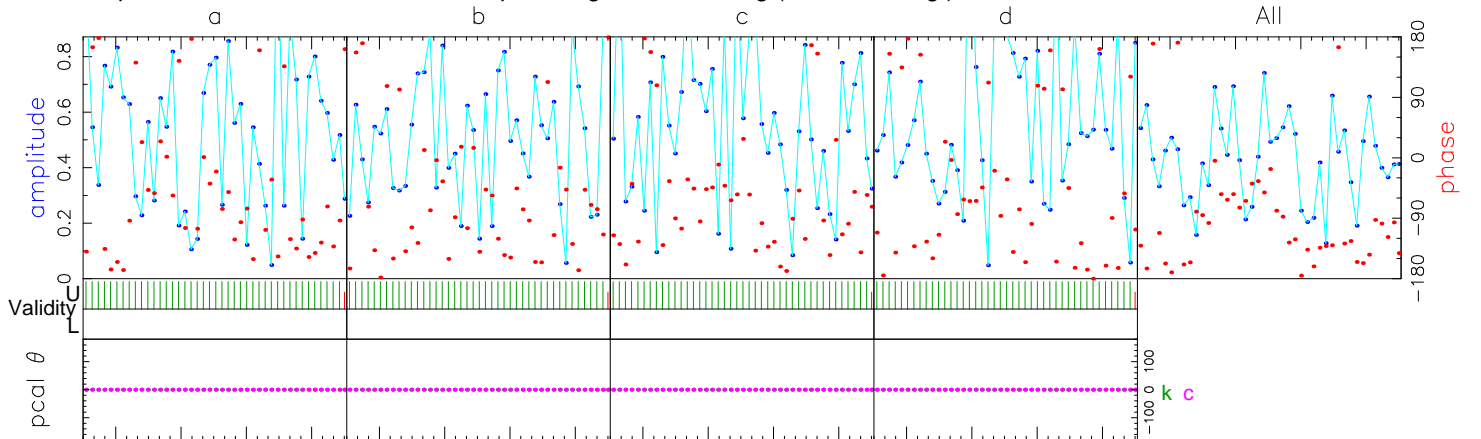
Fringe quality 9

SNR 12.3
 Int time 239.983
 Amp 0.290
 Phase -111.8
 PFD 2.3e-26
 Delays (us)
 SBD 0.002383
 MBD 0.001828
 Fringe rate (Hz)
 0.003932
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-115.2	-115.9	-93.6	-128.4	Phase	-111.8
	0.3	0.3	0.4	0.3	Ampl.	0.3
	513.7	514.5	514.6	513.7	Sbd box	514.2
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
k:c	0:0	0:0	0:0	0:0	PC phase	
k:c	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	7.62616538241E+03	Apriori delay (usec)	7.62616355476E+03	Resid mbdelay (usec)	1.82764E-03	+/-	9.0E-05
Sband delay (usec)	7.62616593814E+03	Apriori clock (usec)	-1.1858517E+01	Resid sbdelay (usec)	2.38338E-03	+/-	3.5E-04
Phase delay (usec)	7.62616354755E+03	Apriori clockrate (us/s)	-3.1599999E-07	Resid phdelay (usec)	-7.21775E-06	+/-	6.0E-07
Delay rate (us/s)	9.72741334456E-01	Apriori rate (us/s)	9.72741243105E-01	Resid rate (us/s)	9.13514E-08	+/-	4.3E-09
Total phase (deg)	31.1	Apriori accel (us/s/s)	-4.11858066800E-05	Resid phase (deg)	-111.8	+/-	9.3

ph/seg (deg)	48.2	Theor.	30.5	Amplitude	0.290 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	72.0		53.3	Search (1024X16)	0.285	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	17.8		9.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	14.0		16.3	Inc. seg. avg.	0.379	Sample rate(MISamp/s): 256	mb window (us) -0.004 0.004
				Inc. frq. avg.	0.293	Data rate(Mb/s): 2048	dr window (ns/s) -0.023 0.023
						nlags: 512	t_cohere infinite
							ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2803.674 1021.938 simultaneous interpolator

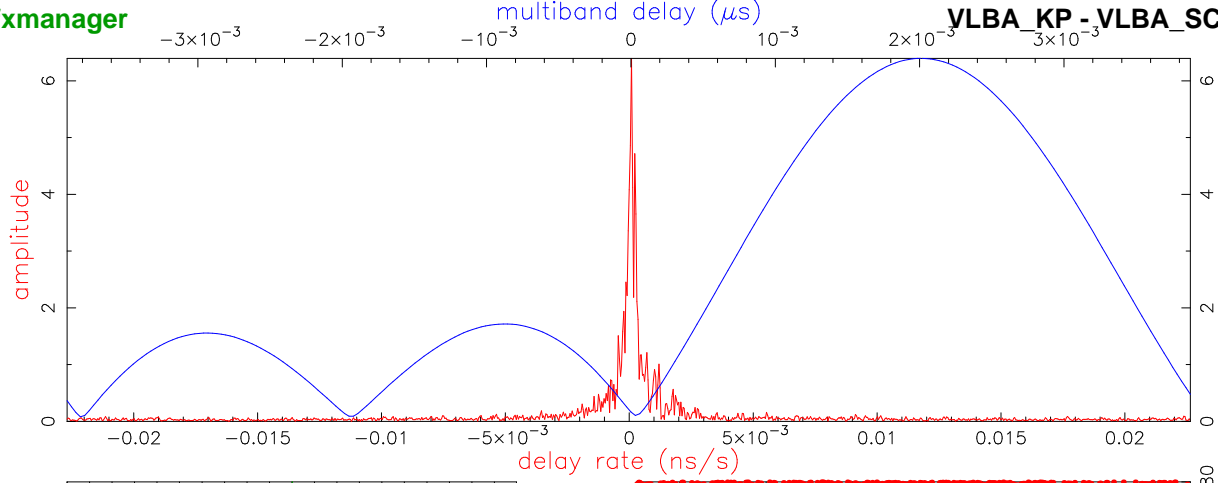
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc.Q.152.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

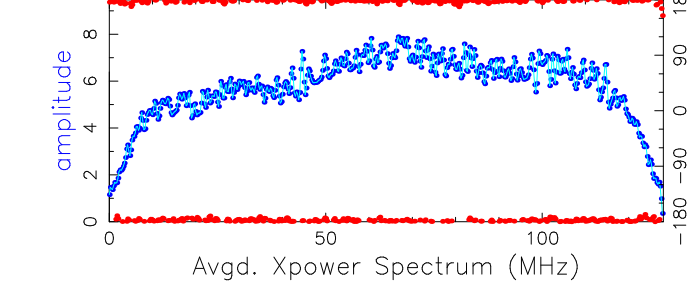
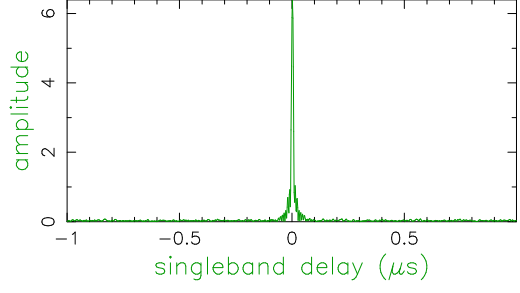
0420-014.1V2A0K, No0121, kc

VLBA_KP - VLBA_SC, fgroup Q, pol LL



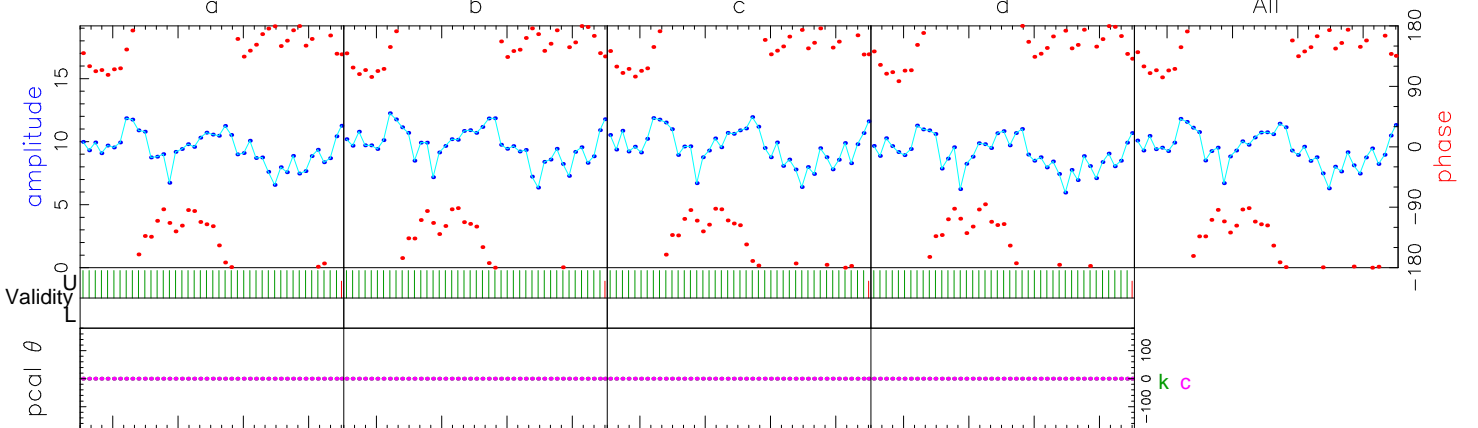
Fringe quality 5

SNR 270.9
 Int time 239.983
 Amp 6.396
 Phase 178.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.001939
 MBD 0.002010
 Fringe rate (Hz)
 0.003986
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133531
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



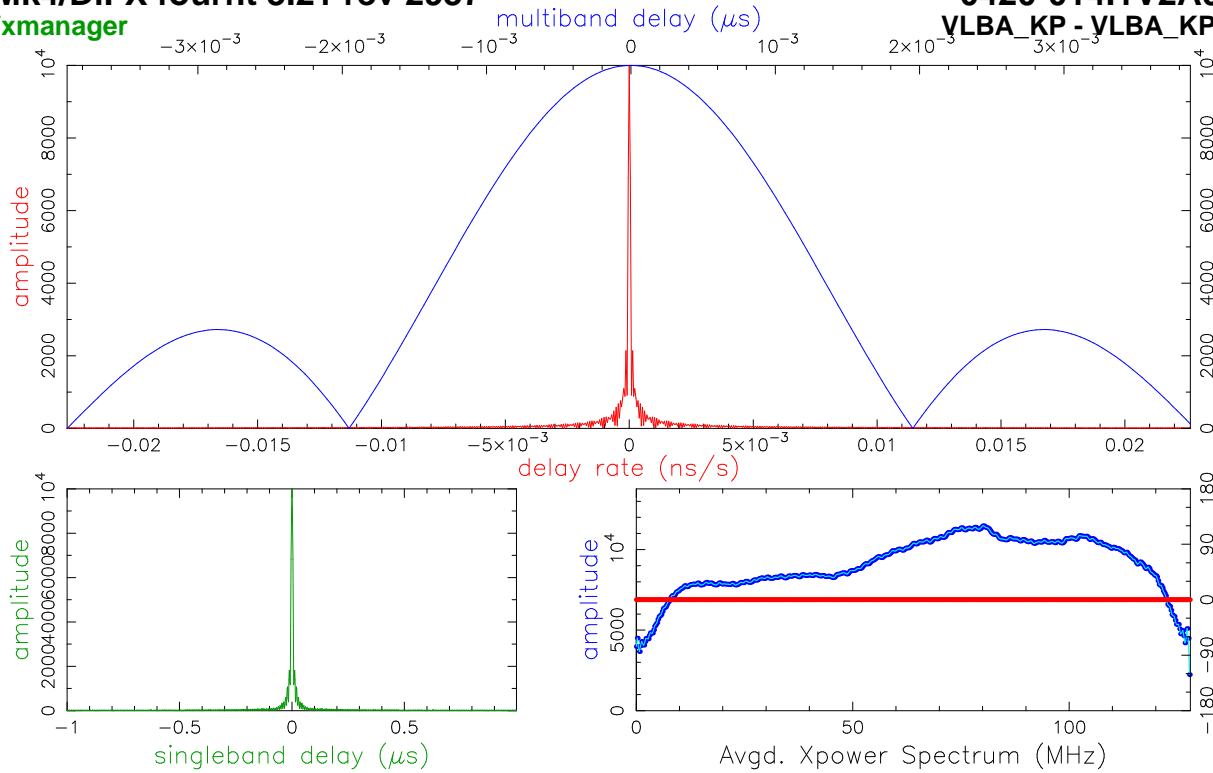
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
c	1000	1000	1000	1000		
k:c	0:0	0:0	0:0	0:0		
k:c	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
c	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UL	Q01UL	Q02UL	Q03UL		

	7.62616556488E+03	Apriori delay (usec)	7.62616355476E+03	Resid mbdelay (usec)	2.01011E-03	+/- 4.1E-06
Group delay (usec)(sbd)	7.62616549401E+03	Apriori clock (usec)	-1.1858517E+01	Resid sbdelay (usec)	1.93925E-03	+/- 1.6E-05
Sband delay (usec)	7.62616356629E+03	Apriori clockrate (us/s)	-3.1599999E-07	Resid phdelay (usec)	1.15253E-05	+/- 2.7E-08
Phase delay (usec)	9.72741335716E-01	Apriori rate (us/s)	9.72741243105E-01	Resid rate (us/s)	9.26106E-08	+/- 2.0E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-4.11858066800E-05	Resid phase (deg)	178.6	+/- 0.4
Total phase (deg)	321.5					

	RMS	Theor.	Amplitude	6.396 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	48.4	1.4	Search (1024X16)	6.358	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	51.6	2.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	1.5	0.4	Inc. seg. avg.	9.435	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.4	0.7	Inc. frq. avg.	6.397	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

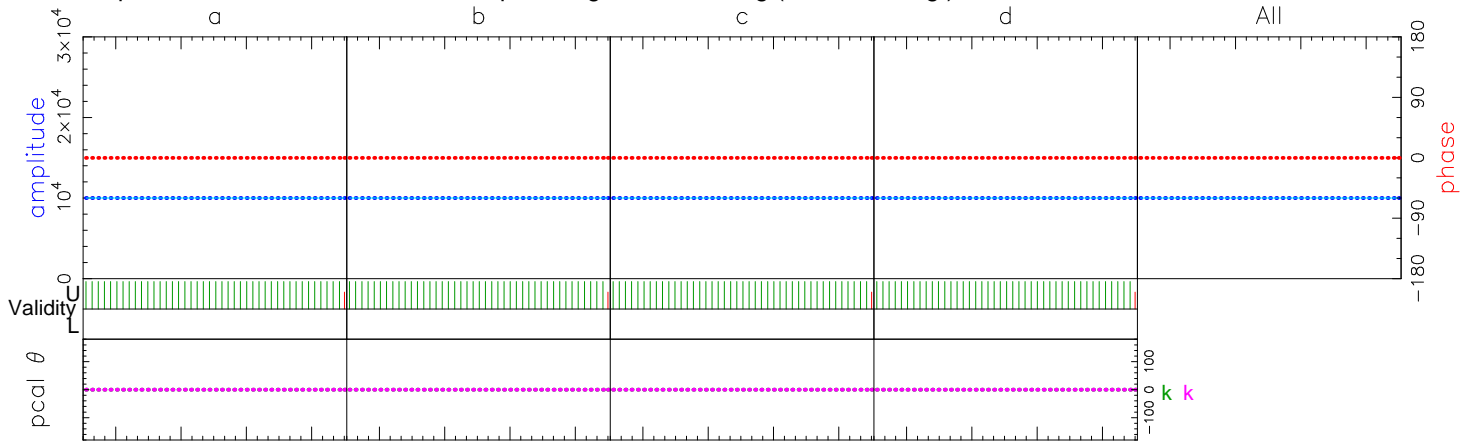
k: az 203.6 el 54.4 pa 20.3 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2803.674 1021.938 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kc.Q.90.1V2A0K



Fringe quality 9
SNR 423630.8
Int time 239.983
Amp 10000.000
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133533
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

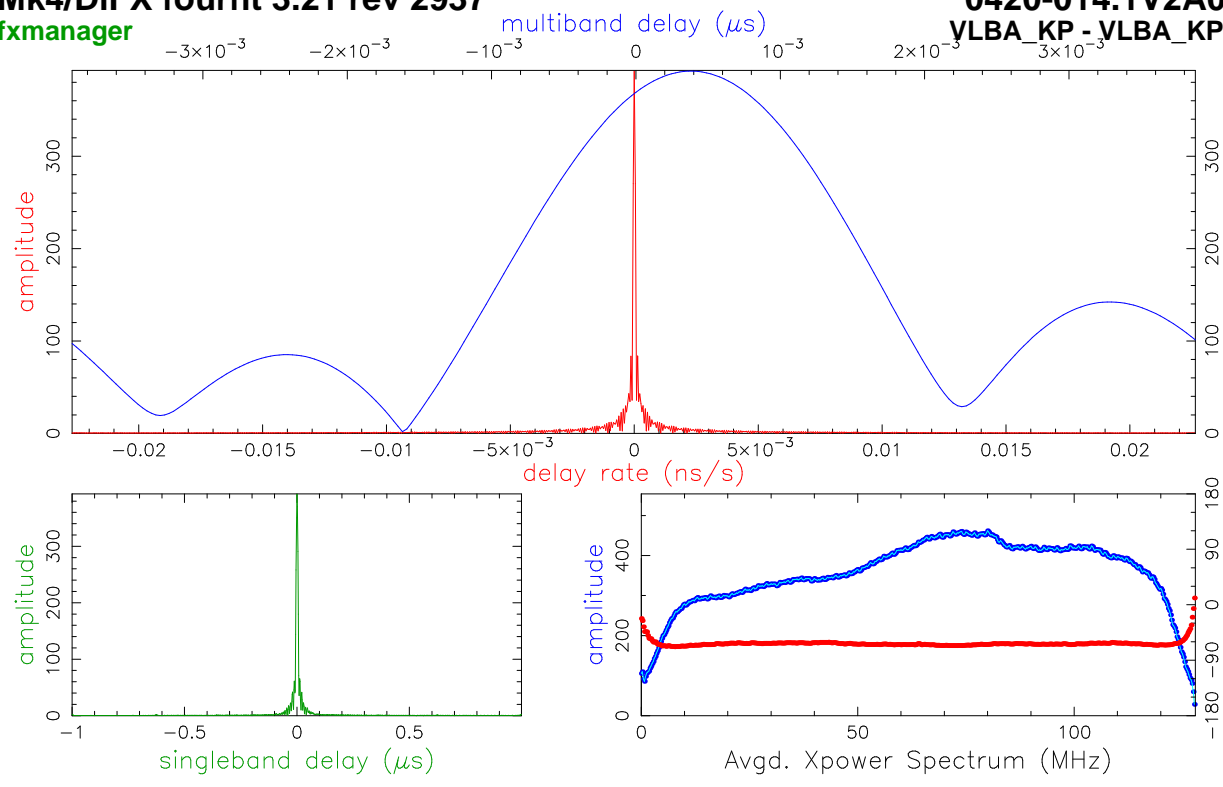
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
k:k	0:0	0:0	0:0	0:0		
k:k	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
k	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR		
k	Q00UR	Q01UR	Q02UR	Q03UR		

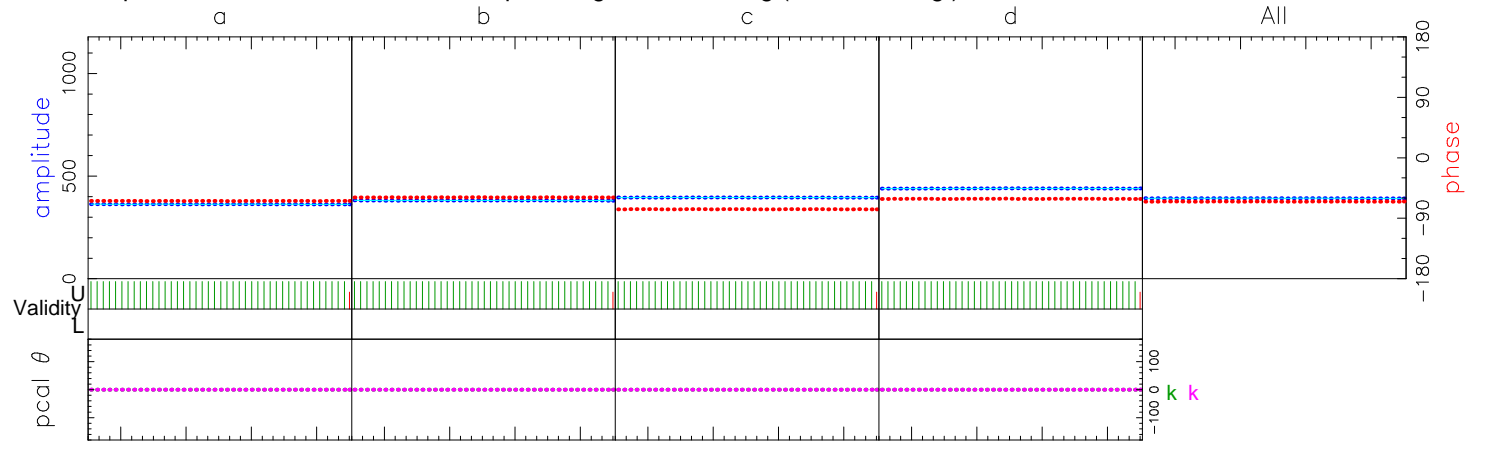
Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	10000.000 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	0.0	0.0	0.0	0.0	0.0	Search (1024X16)	10000.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled		mb window (us)	-0.004	0.004
ph/frq (deg)	0.0	0.0	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s):	256			dr window (ns/s)	-0.023	0.023
amp/frq (%)	0.0	0.0	0.0	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00



Fringe quality 9
SNR 16645.3
Int time 239.983
Amp 392.919
Phase -65.2
PFD 0.0e+00
Delays (us)
SBD 0.000311
MBD 0.000395
Fringe rate (Hz) 0.000002
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133536
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



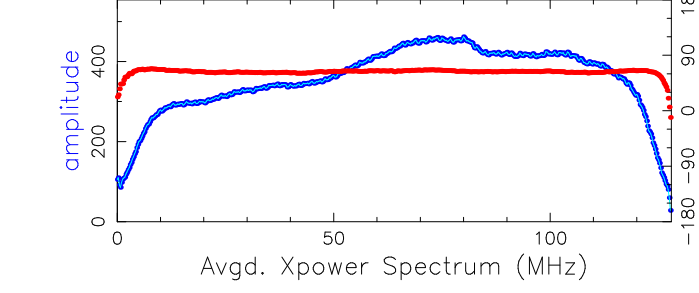
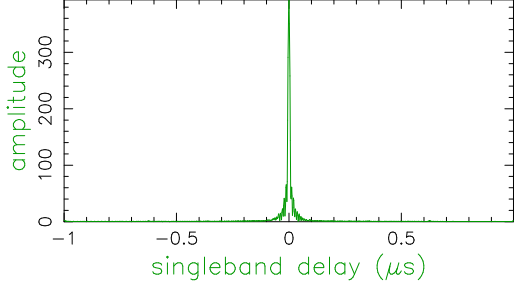
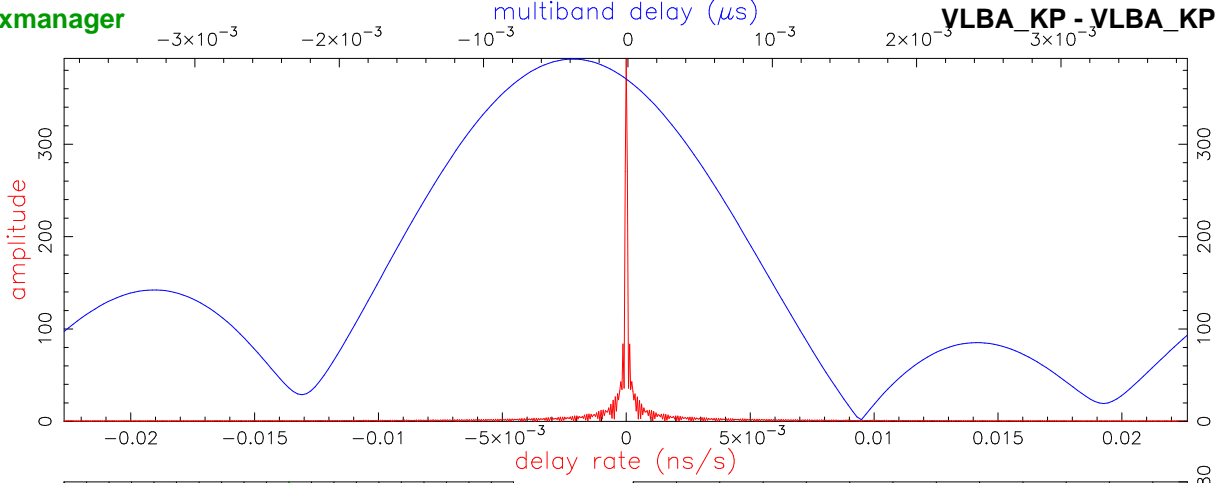
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-64.2	-58.9	-76.6	-61.1	Phase	-65.2
	362.9	381.3	395.6	439.8	Ampl.	394.9
	513.2	513.2	513.0	513.3	Sbd box	513.2
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
k:k	0:0	0:0	0:0	0:0	PC phase	
k:k	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	3.95406250000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	3.95406E-04	+/- 6.7E-08
Sband delay (usec)	3.11000000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	3.11000E-04	+/- 2.6E-07
Phase delay (usec)	-4.20514920585E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.20515E-06	+/- 4.4E-10
Delay rate (us/s)	4.53792961717E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	4.53793E-11	+/- 3.2E-12
Total phase (deg)		-65.2	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-65.2 +/- 0.0
RMS	0.1	Theor. 0.0	Amplitude 392.919 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	0.1	0.0	Search (1024X16) 390.288	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	0.2	0.0	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.004 0.004
ph/frq (deg)	9.7	0.0	Inc. seg. avg. 392.088	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023	
amp/frq (%)	7.2	0.0	Inc. frq. avg. 394.901	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC) 0.00 0.00
k: az 203.6 el 54.4 pa 20.3		k: az 203.6 el 54.4 pa 20.3	u,v (fr/asec) 0.000 0.000			simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kk..1V2A0K				Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kk.Q.135.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kk

VLBA_KP - VLBA_KP, fgroup Q, pol RL

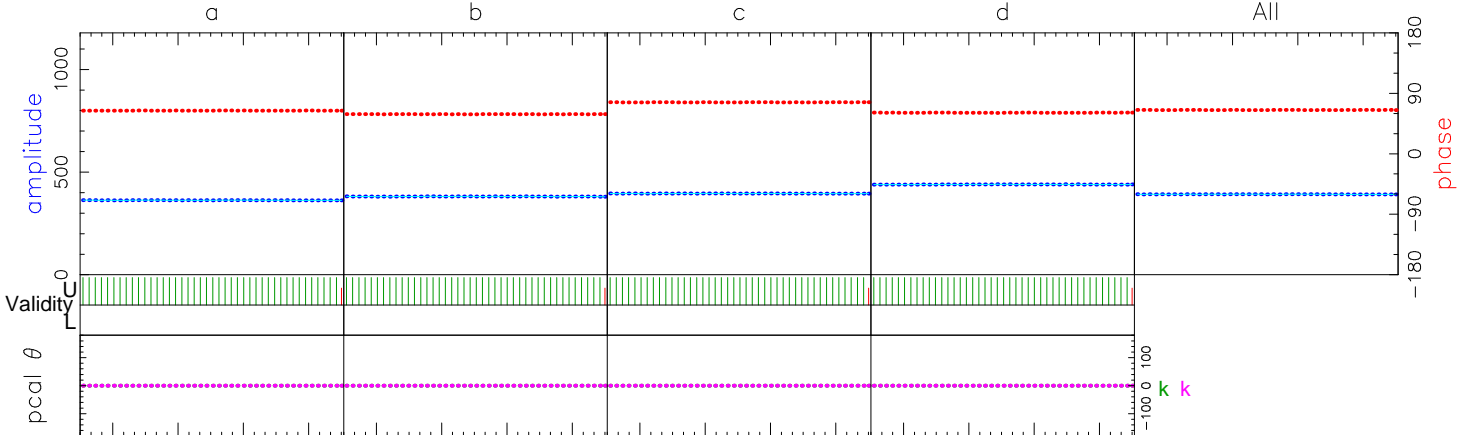


Fringe quality 9

SNR 16645.3
 Int time 239.983
 Amp 392.919
 Phase 65.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.000311
 MBD -0.000395
 Fringe rate (Hz)
 -0.000002
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	64.2	58.9	76.6	61.1	Phase	65.2
	362.9	381.3	395.6	439.8	Ampl.	394.9
	512.8	512.8	513.0	512.7	Sbd box	512.8
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
k:k	0:0	0:0	0:0	0:0	PC phase	
k:k	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.95406250000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.95406E-04	+/-	6.7E-08
Sband delay (usec)	-3.11000000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-3.11000E-04	+/-	2.6E-07
Phase delay (usec)	4.20514920552E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.20515E-06	+/-	4.4E-10
Delay rate (us/s)	-4.53792961717E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-4.53793E-11	+/-	3.2E-12
Total phase (deg)	65.2	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	65.2	+/-	0.0

	RMS	Theor.	Amplitude	392.919 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.1	0.0	Search (1024X16)	390.288	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.2	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	9.7	0.0	Inc. seg. avg.	392.088	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	7.2	0.0	Inc. frq. avg.	394.901	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

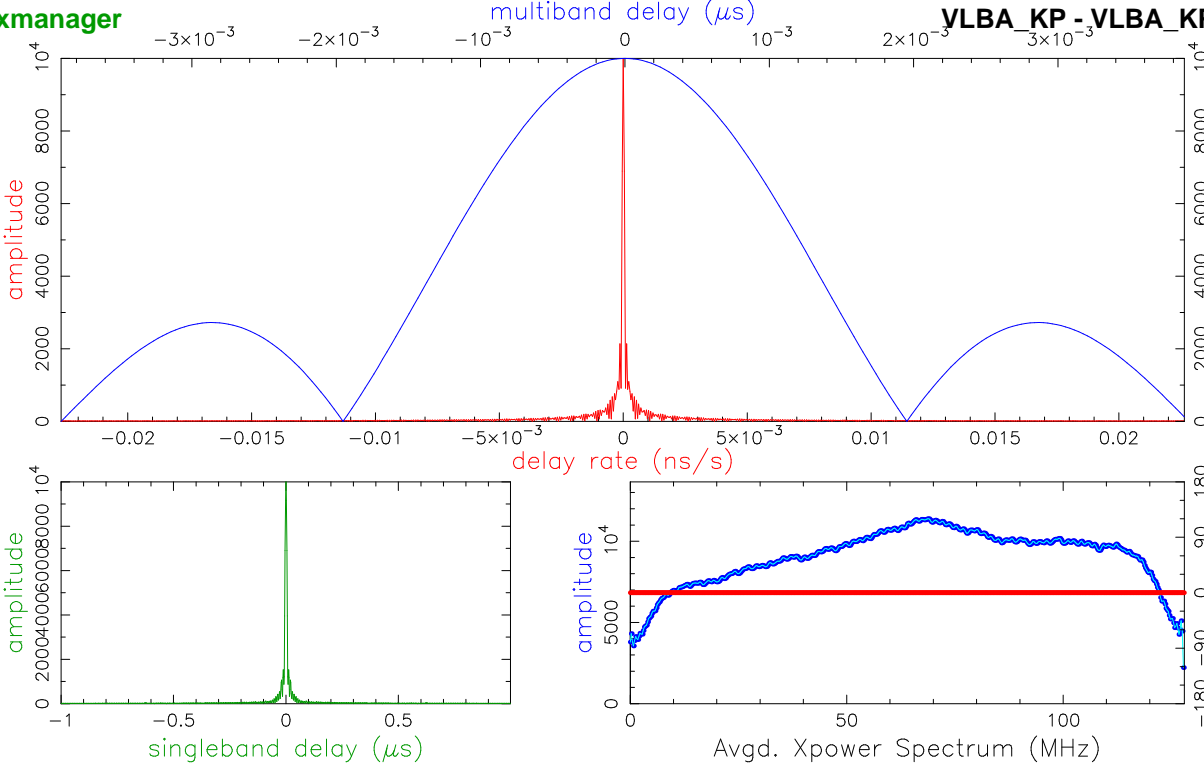
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kk.Q.148.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kk

VLBA_KP - VLBA_KP, fgroup Q, pol LL

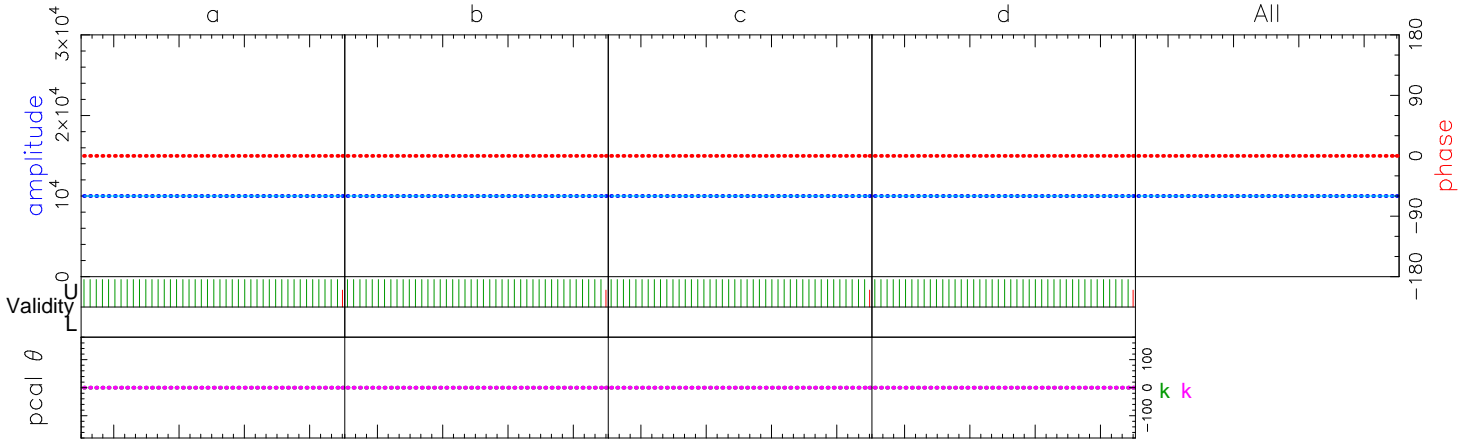


Fringe quality 9

SNR 423630.8
 Int time 239.983
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133531
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
k:k	0:0	0:0	0:0	0:0		
k:k	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
k	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
k	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	Theor.	0.0	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 203.6 el 54.4 pa 20.3 k: az 203.6 el 54.4 pa 20.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kk..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kk.Q.87.1V2A0K

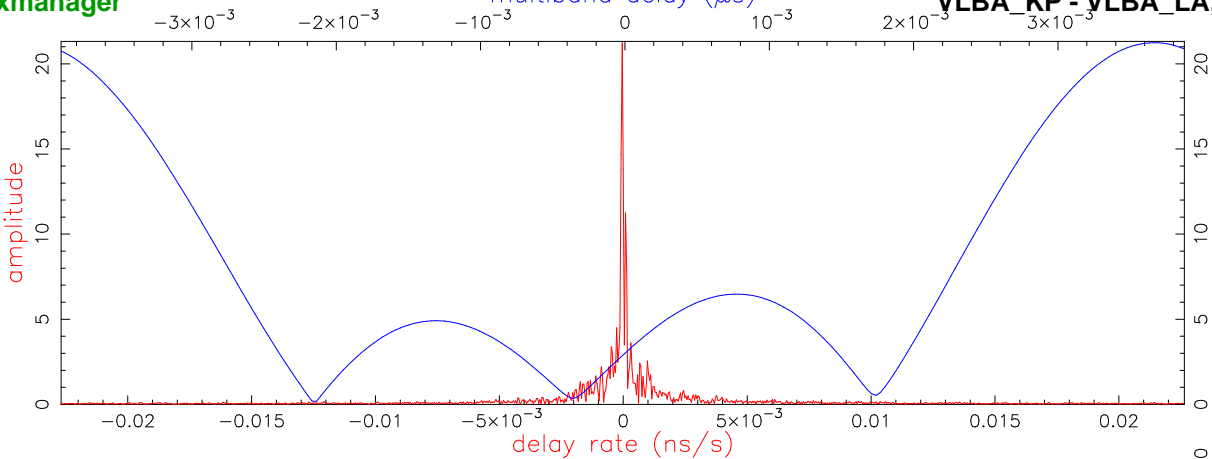
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kl

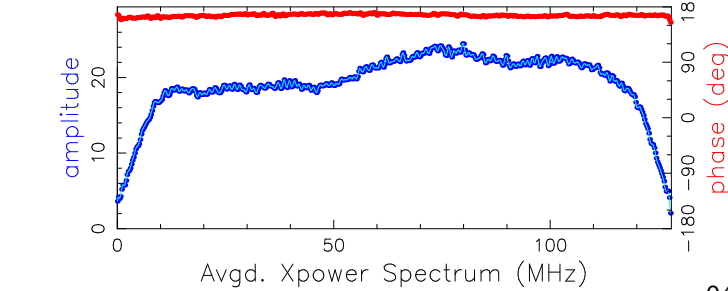
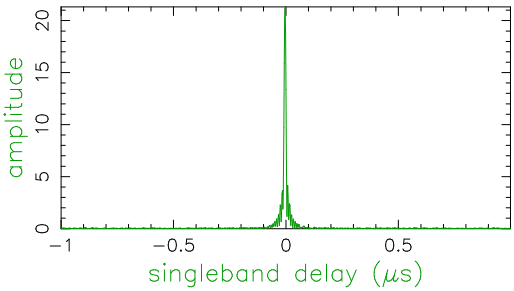
VLBA_KP - VLBA_LA, fgroup Q, pol RR

multiband delay (μ s)



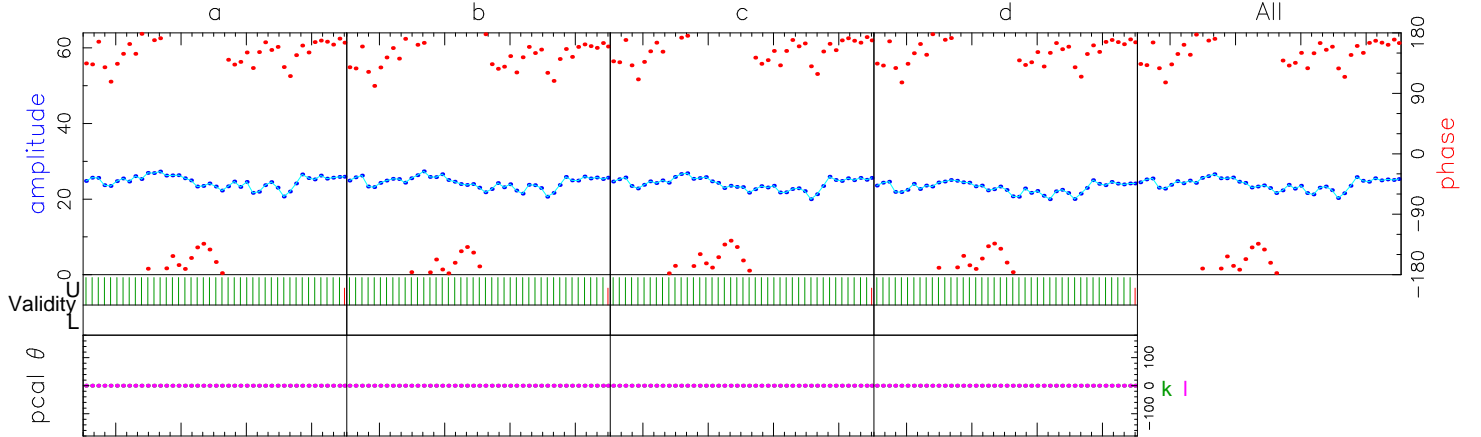
Fringe quality 7

SNR 903.3
 Int time 239.983
 Amp 21.322
 Phase 162.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.004309
 MBD -0.004167
 Fringe rate (Hz)
 -0.002051
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133533
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
l	1000	1000	1000	1000	PC freqs	1000
k:l	0:0	0:0	0:0	0:0	PC phase	0:0
k:l	0:0	0:0	0:0	0:0	Manl PC	0:0
k	1000	1000	1000	1000	PC amp	1000
l	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	1.26055643825E+03	Apriori delay (usec)	1.26056060491E+03	Resid mbdelay (usec)	-4.16666E-03	+/- 1.2E-06
Group delay (usec)(sbd)	1.26055643825E+03	Apriori clock (usec)	2.9020443E+07	Resid sbdelay (usec)	-4.30900E-03	+/- 4.8E-06
Sband delay (usec)	1.26055629591E+03	Apriori clockrate (us/s)	2.8600001E-07	Resid phdelay (usec)	1.05074E-05	+/- 8.2E-09
Phase delay (usec)	1.26056061542E+03	Apriori rate (us/s)	9.89565865194E-02	Resid rate (us/s)	-4.76426E-08	+/- 5.9E-11
Delay rate (us/s)	9.89565388768E-02	Apriori accel (us/s/s)	-6.54640905892E-06	Resid phase (deg)	162.8	+/- 0.1
Total phase (deg)	319.5					

	RMS	Theor.	Amplitude	21.322 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	28.5	0.4	Search (1024X16)	20.718	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	14.2	0.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.8	0.1	Inc. seg. avg.	23.983	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.7	0.2	Inc. frq. avg.	21.279	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

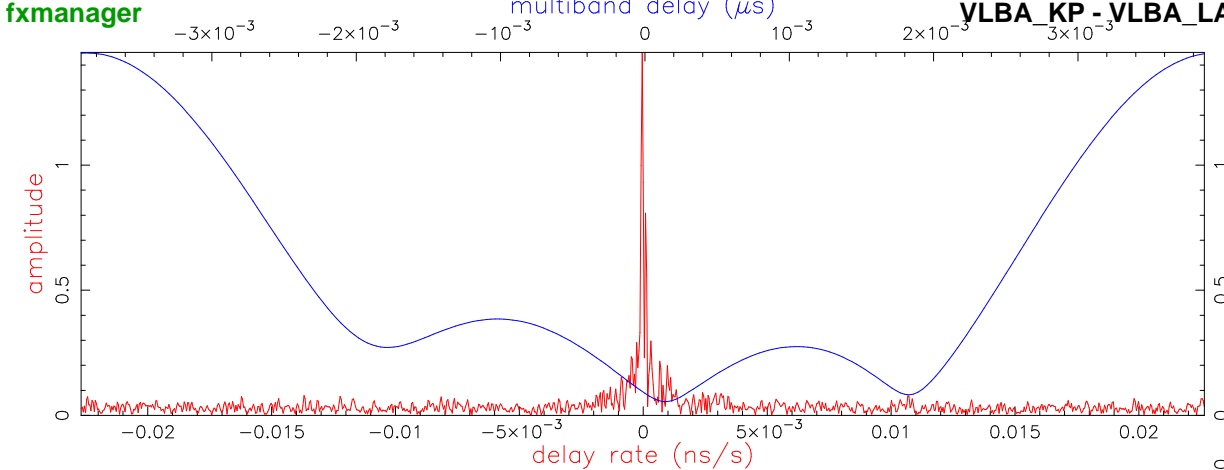
k: az 203.6 el 54.4 pa 20.3 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) -285.586 -239.610 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl.Q.107.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

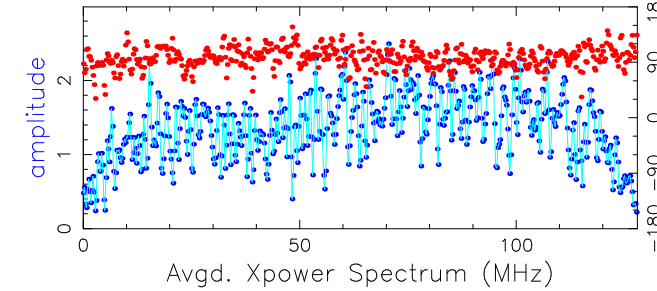
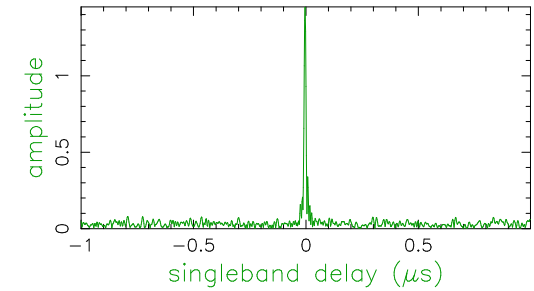
0420-014.1V2A0K, No0121, kl

VLBA_KP - VLBA_LA, fgroup Q, pol LR



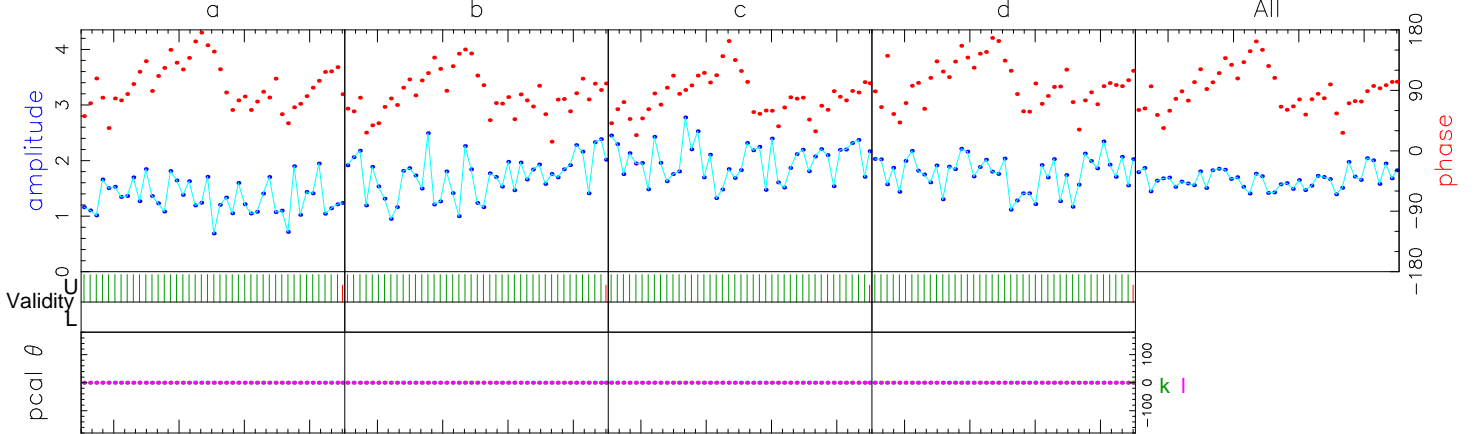
Fringe quality 7

SNR 61.5
 Int time 239.983
 Amp 1.451
 Phase 90.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.004196
 MBD -0.003884
 Fringe rate (Hz)
 -0.002059
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133535
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	APs used	510.9
k	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
k:l	0:0	0:0	0:0	0:0	PC phase	
k:l	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	1.26055672125E+03	Apriori delay (usec)	1.26056060491E+03	Resid mbdelay (usec)	-3.88366E-03	+/- 1.8E-05
Sband delay (usec)	1.26055640841E+03	Apriori clock (usec)	2.9020443E+00	Resid sbdelay (usec)	-4.19650E-03	+/- 7.0E-05
Phase delay (usec)	1.26056061071E+03	Apriori clockrate (us/s)	2.8600001E-07	Resid phdelay (usec)	5.80584E-06	+/- 1.2E-07
Delay rate (us/s)	9.89565386896E-02	Apriori rate (us/s)	9.89565865194E-02	Resid rate (us/s)	-4.78298E-08	+/- 8.7E-10
Total phase (deg)	246.7	Apriori accel (us/s/s)	-6.54640905892E-06	Resid phase (deg)	90.0	+/- 1.9

	RMS	Theor.	Amplitude	1.451 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	30.4	6.1	Search (1024X16)	1.442	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	18.6	10.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	13.4	1.9	Inc. seg. avg.	1.655	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	15.4	3.3	Inc. frq. avg.	1.468	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) -285.586 -239.610 simultaneous interpolator

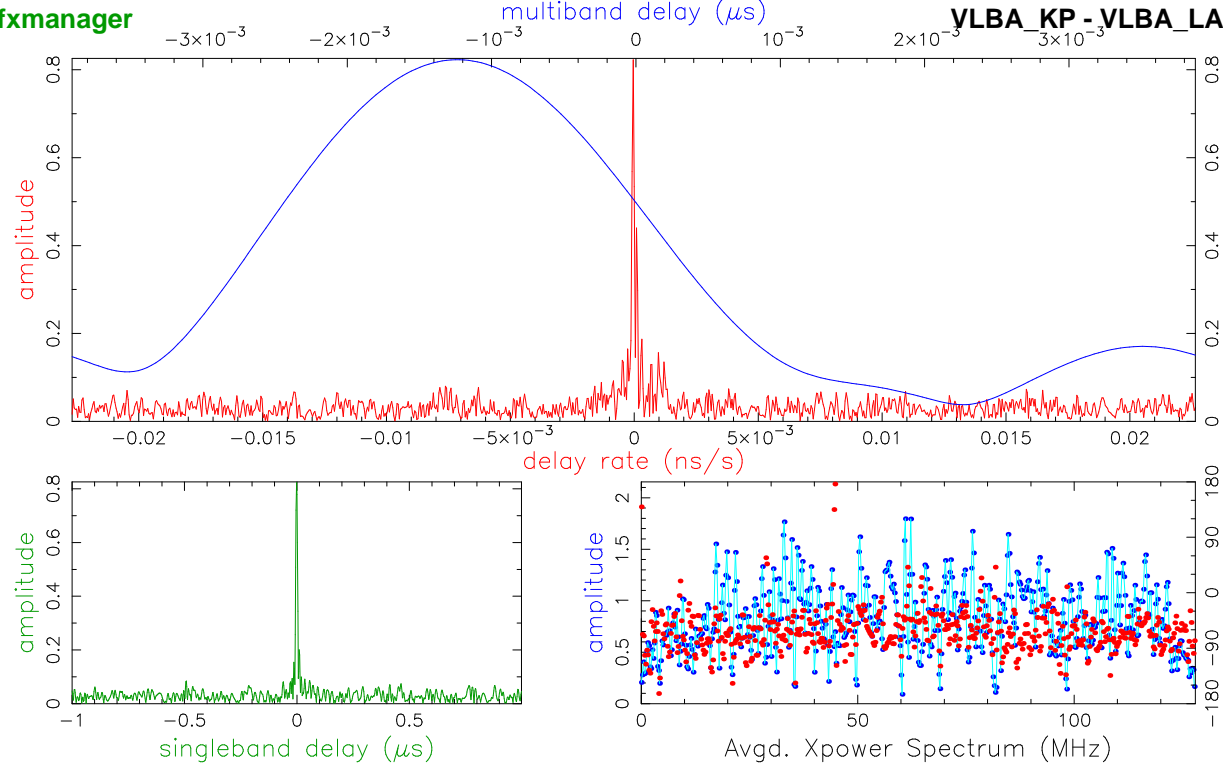
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl.Q.125.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kl

VLBA_KP - VLBA_LA, fgroup Q, pol RL

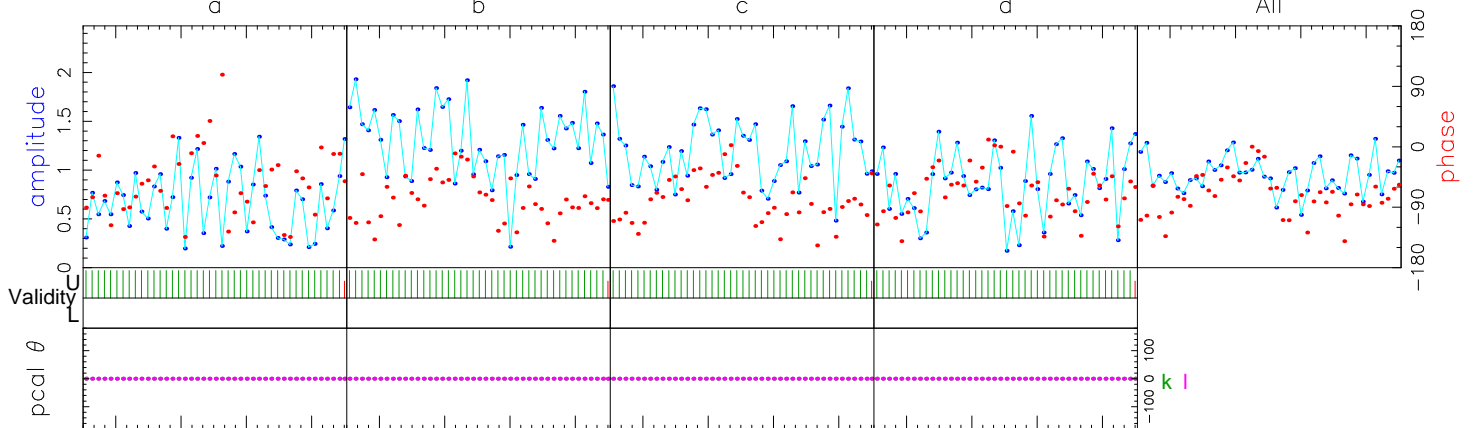


Fringe quality 6

SNR 35.0
 Int time 239.983
 Amp 0.826
 Phase -71.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.001553
 MBD -0.001205
 Fringe rate (Hz)
 -0.002009
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
l	1000	1000	1000	1000		
k:l	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
l	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR		
l	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	1.26055939966E+03	Apriori delay (usec)	1.26056060491E+03	Resid mbdelay (usec)	-1.20524E-03	+/-	3.2E-05
Sband delay (usec)	1.26055905191E+03	Apriori clock (usec)	2.9020443E+00	Resid sbdelay (usec)	-1.55300E-03	+/-	1.2E-04
Phase delay (usec)	1.26056060029E+03	Apriori clockrate (us/s)	2.8600001E-07	Resid phdelay (usec)	-4.62117E-06	+/-	2.1E-07
Delay rate (us/s)	9.89565398326E-02	Apriori rate (us/s)	9.89565865194E-02	Resid rate (us/s)	-4.66868E-08	+/-	1.5E-09
Total phase (deg)		Apriori accel (us/s/s)	-6.54640905892E-06	Resid phase (deg)	-71.6	+/-	3.3

ph/seg (deg)	31.3	Theor.	10.7	Amplitude	0.826 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	26.2	Search (1024X16)	0.808	Search	0.808	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	17.6	Inc. seg. avg.	0.939	Inc. seg. avg.	0.939	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	28.6	Inc. frq. avg.	0.837	Inc. frq. avg.	0.837	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
						Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 203.6 el 54.4 pa 20.3 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) -285.586 -239.610 simultaneous interpolator

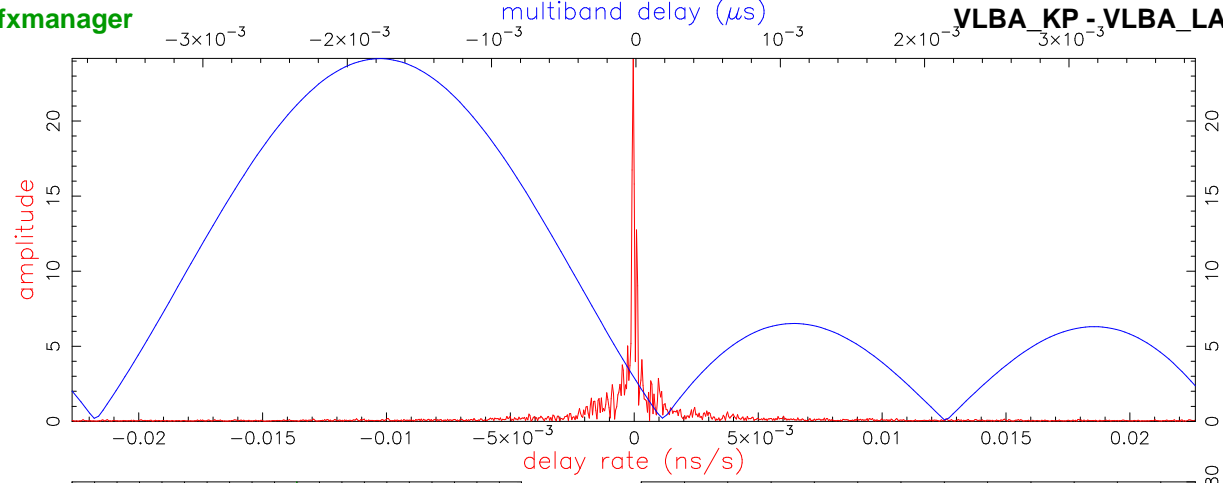
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl.Q.149.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kl

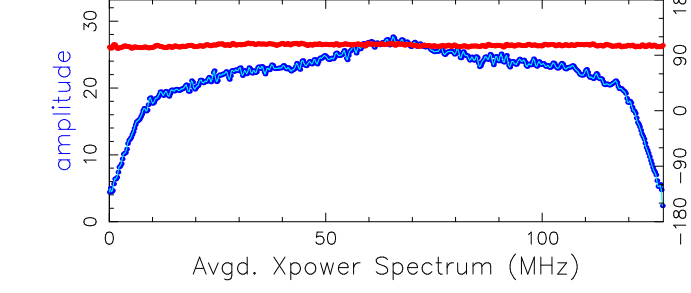
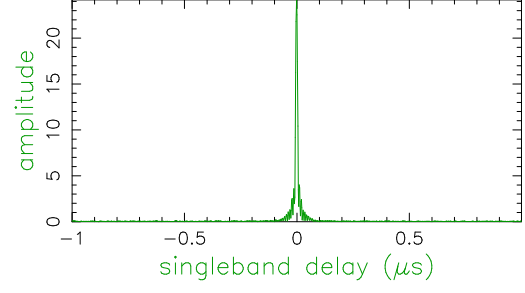
VLBA_KP - VLBA_LA, fgroup Q, pol LL



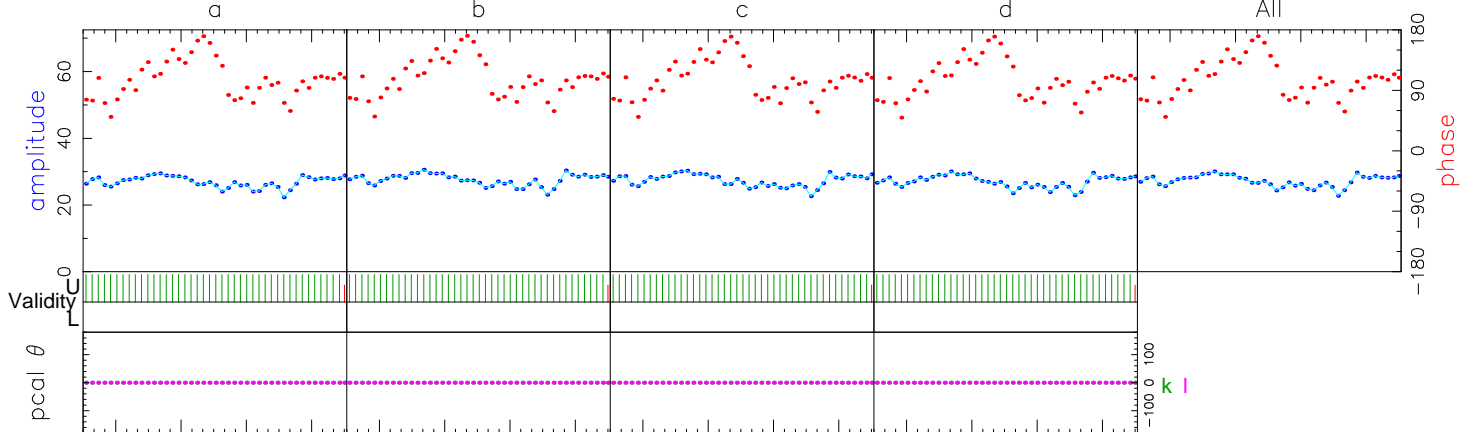
Fringe quality 7

SNR 1024.1
 Int time 239.983
 Amp 24.175
 Phase 106.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.001766
 MBD -0.001767
 Fringe rate (Hz)
 -0.002048
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133532
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	106.3	107.8	106.4	105.4	Phase	106.5
	23.9	24.5	24.3	24.0	Ampl.	24.2
	512.3	512.0	512.1	512.0	Sbd box	512.1
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
k:l	0:0	0:0	0:0	0:0	PC phase	
k:l	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	1.26055883770E+03	Apriori delay (usec)	1.26056060491E+03	Resid mbdelay (usec)	-1.76721E-03	+/- 1.1E-06
Group delay (usec)(sbd)						
Sband delay (usec)	1.26055883916E+03	Apriori clock (usec)	2.9020443E+00	Resid sbdelay (usec)	-1.76575E-03	+/- 4.2E-06
Phase delay (usec)	1.26056061178E+03	Apriori clockrate (us/s)	2.8600001E-07	Resid phdelay (usec)	6.87239E-06	+/- 7.2E-09
Delay rate (us/s)	9.89565389449E-02	Apriori rate (us/s)	9.89565865194E-02	Resid rate (us/s)	-4.75745E-08	+/- 5.2E-11
Total phase (deg)	263.2	Apriori accel (us/s/s)	-6.54640905892E-06	Resid phase (deg)	106.5	+/- 0.1

	RMS	Theor.	Amplitude	24.175 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	28.4	0.4	Search (1024X16)	23.765	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	14.5	0.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	1.2	0.1	Inc. seg. avg.	27.254	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.0	0.2	Inc. frq. avg.	24.158	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) -285.586 -239.610 simultaneous interpolator

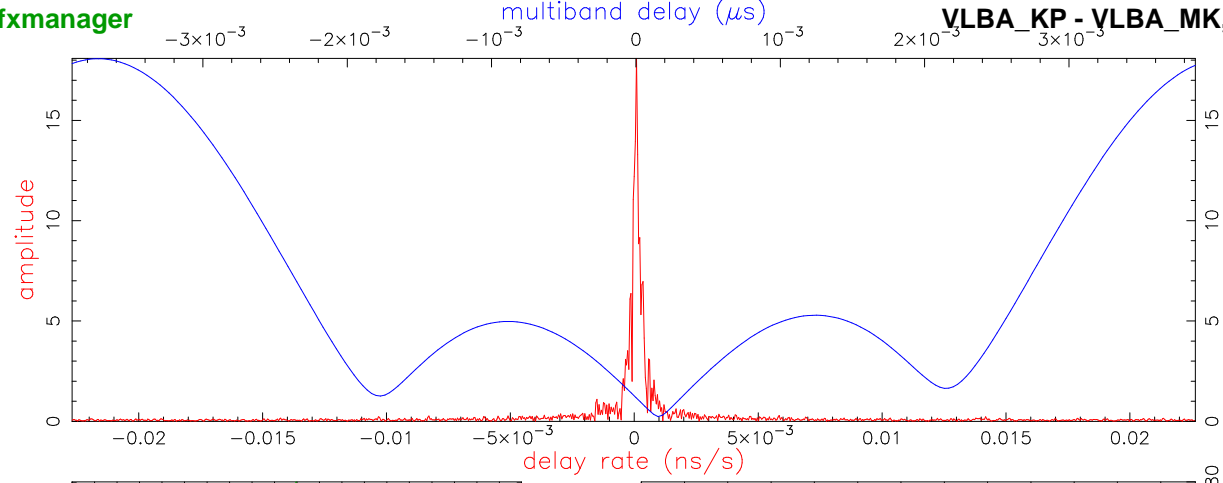
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kl.Q.91.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, km

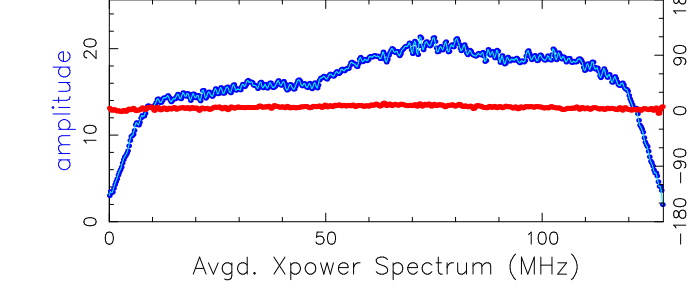
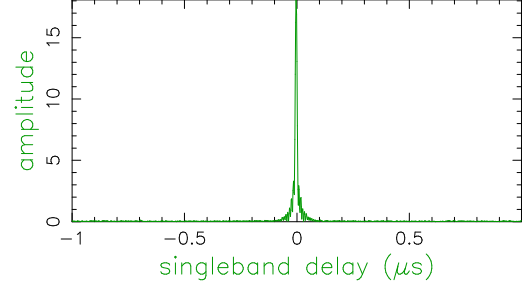
VLBA_KP - VLBA_MK, fgroup Q, pol RR



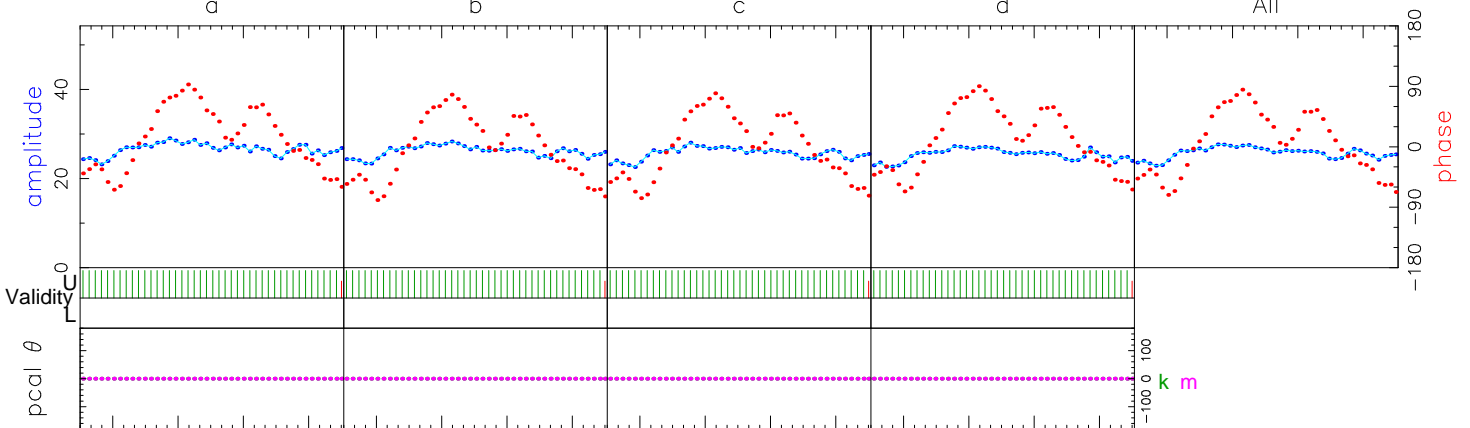
Fringe quality 5

SNR 766.3
 Int time 239.981
 Amp 18.088
 Phase 6.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.003693
 MBD -0.003713
 Fringe rate (Hz) 0.003059
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133535
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
m	1000	1000	1000	1000	PC freqs	1000
k:m	0:0	0:0	0:0	0:0	PC phase	0:0
k:m	0:0	0:0	0:0	0:0	Manl PC	0:0
k	1000	1000	1000	1000	PC amp	1000
m	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.98613317145E+01	Apriori delay (usec)	1.98650445702E+01	Resid mbdelay (usec)	-3.71286E-03	+/- 1.5E-06
Sband delay (usec)	1.98613519452E+01	Apriori clock (usec)	-1.5326618E+01	Resid sbdelay (usec)	-3.69263E-03	+/- 5.6E-06
Phase delay (usec)	1.98650449960E+01	Apriori clockrate (us/s)	-3.1799999E-07	Resid phdelay (usec)	4.25813E-07	+/- 9.7E-09
Delay rate (us/s)	-1.04567140914E+00	Apriori rate (us/s)	-1.04567148022E+00	Resid rate (us/s)	7.10838E-08	+/- 7.0E-11
Total phase (deg)	193.2	Apriori accel (us/s/s)	-6.72458000132E-07	Resid phase (deg)	6.6	+/- 0.1

ph/seg (deg)	46.4	RMS	46.4	Theor.	0.5	Amplitude	18.088 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	43.0	Search (1024X16)	16.980	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	9.3	Inc. seg. avg.	25.762	Inc. frq. avg.	18.190	Bits/sample: 2x2		Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	2.0	Inc. frq. avg.	18.190			Data rate(Mb/s): 2048		nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 203.6 el 54.4 pa 20.3 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2991.057 848.238 simultaneous interpolator

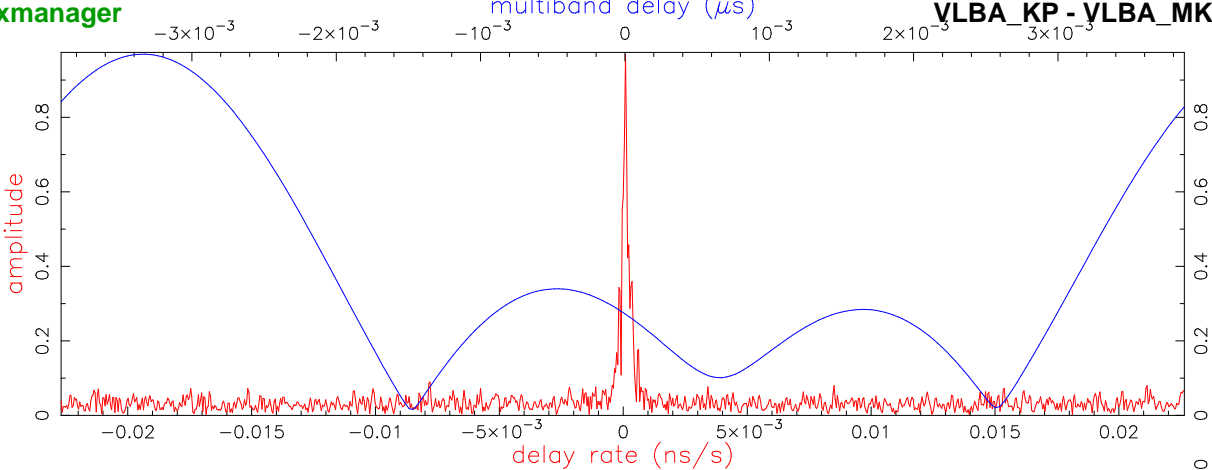
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/km..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/km.Q.123.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

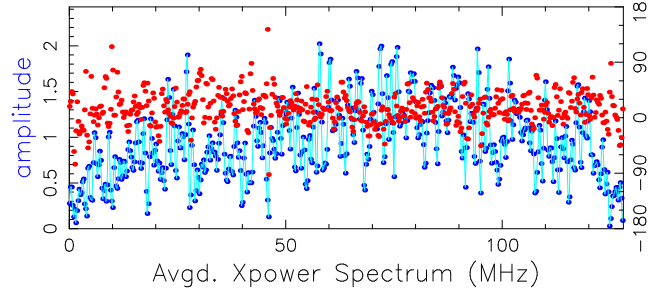
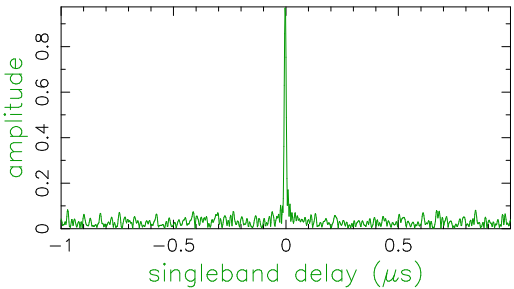
0420-014.1V2A0K, No0121, km

VLBA_KP - VLBA_MK, fgroup Q, pol LR



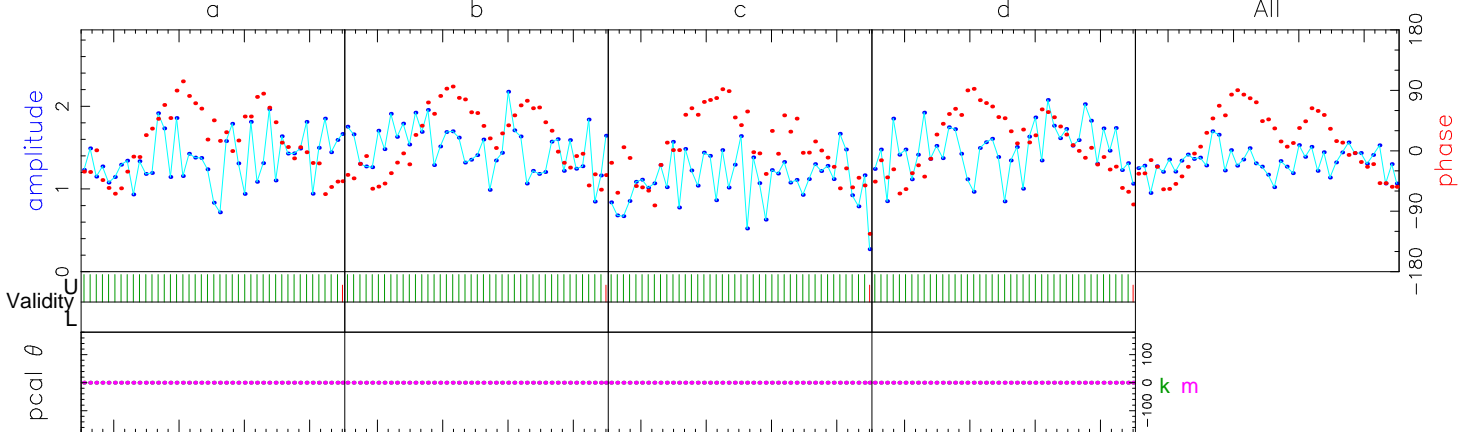
Fringe quality 7

SNR 41.3
 Int time 239.981
 Amp 0.974
 Phase 12.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.003403
 MBD -0.003309
 Fringe rate (Hz)
 0.003107
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133537
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
m	1000	1000	1000	1000	PC freqs	1000
k:m	0:0	0:0	0:0	0:0	PC phase	0:0
k:m	0:0	0:0	0:0	0:0	ManI PC	0:0
k	1000	1000	1000	1000	PC amp	1000
m	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.98617354645E+01	Apriori delay (usec)	1.98650445702E+01	Resid mbdelay (usec)	-3.30911E-03	+/-	2.7E-05
Sband delay (usec)	1.98616414452E+01	Apriori clock (usec)	-1.5326618E+01	Resid sbdelay (usec)	-3.40313E-03	+/-	1.0E-04
Phase delay (usec)	1.98650453835E+01	Apriori clockrate (us/s)	-3.1799999E-07	Resid phdelay (usec)	8.13312E-07	+/-	1.8E-07
Delay rate (us/s)	-1.04567140804E+00	Apriori rate (us/s)	-1.04567148022E+00	Resid rate (us/s)	7.21786E-08	+/-	1.3E-09
Total phase (deg)	199.2	Apriori accel (us/s/s)	-6.72458000132E-07	Resid phase (deg)	12.6	+/-	2.8

ph/seg (deg)	44.2	RMS	44.2	Theor.	9.1	Amplitude	0.974 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	40.0	Search (1024X16)	0.925	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	0.925	sb window (us)	-1.000	1.000	
ph/frq (deg)	4.5	Inc. seg. avg.	1.316	Inc. frq. avg.	0.970	Bits/sample: 2x2	1.316	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/frq (%)	12.3	Inc. frq. avg.	0.970	Sample rate (MSamp/s): 256	256	Data rate (Mb/s): 2048	0.970	nlags: 512	dr window (ns/s)	-0.023	0.023
								t_cohere infinite	ion window (TEC)	0.00	0.00

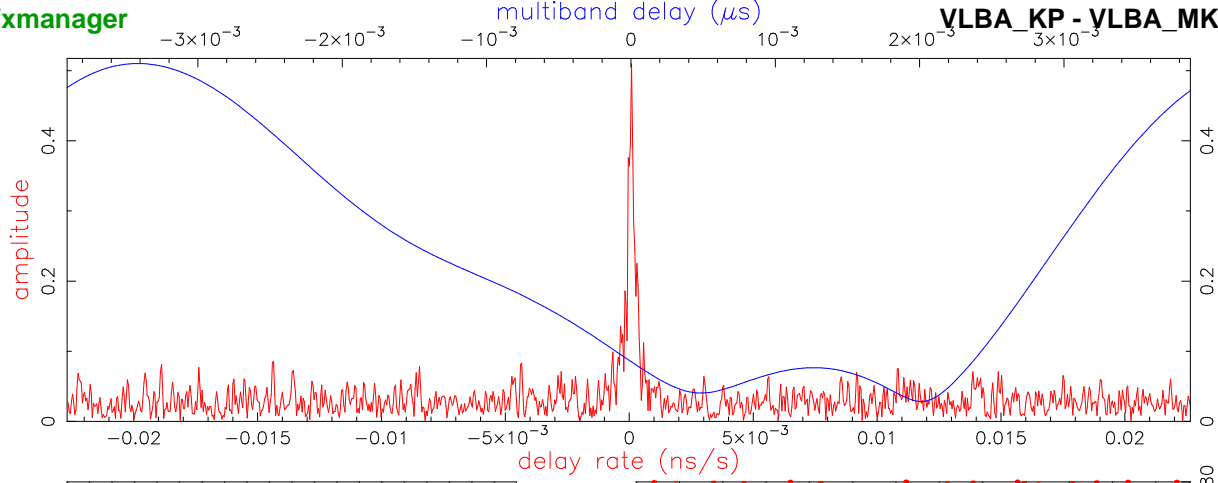
k: az 203.6 el 54.4 pa 20.3 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2991.057 848.238 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/km..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/km.Q.146.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, km

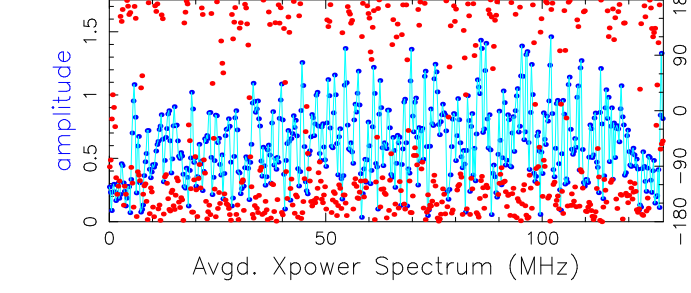
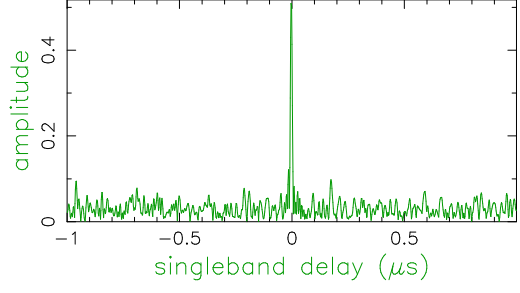
VLBA_KP - VLBA_MK, fgroup Q, pol RL



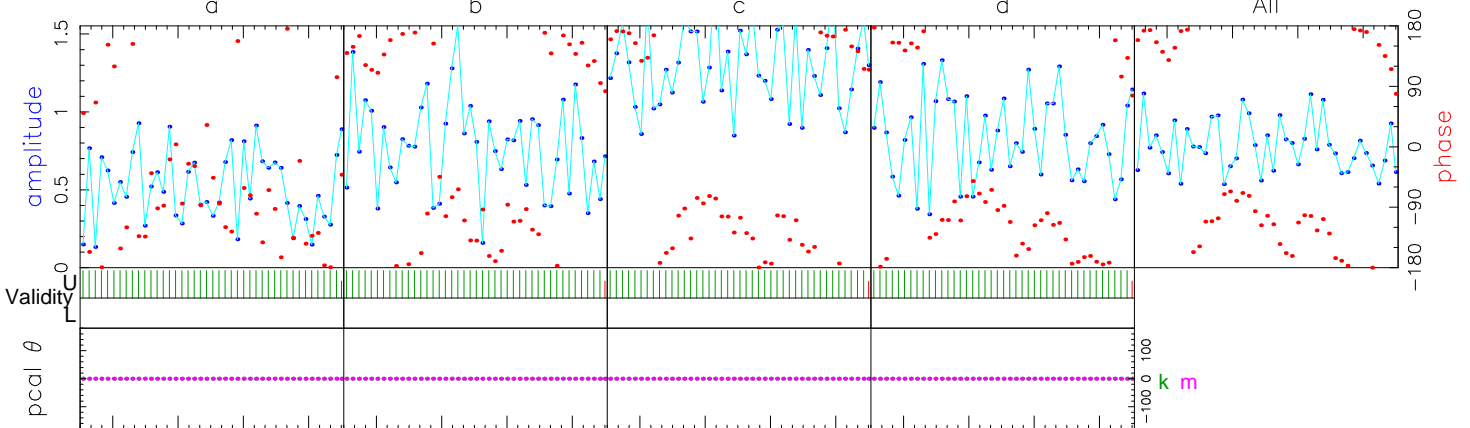
Fringe quality 5

SNR 21.9
 Int time 239.981
 Amp 0.518
 Phase -148.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.003072
 MBD -0.003342
 Fringe rate (Hz)
 0.003399
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133539
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
m	1000	1000	1000	1000		
k:m	0:0	0:0	0:0	0:0		
k:m	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
m	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR		
m	Q00UL	Q01UL	Q02UL	Q03UL		
pcal θ						

	1.98617028708E+01	Apriori delay (usec)	1.98650445702E+01	Resid mbdelay (usec)	-3.34170E-03	+/- 5.1E-05
Group delay (usec)(sbd)	1.98617028708E+01	Apriori clock (usec)	1.98650445702E+01	Resid sbdelay (usec)	-3.07200E-03	+/- 2.0E-04
Sband delay (usec)	1.98619725702E+01	Apriori clockrate (us/s)	-3.1799999E-07	Resid phdelay (usec)	-9.60518E-06	+/- 3.4E-07
Phase delay (usec)	1.98650349650E+01	Apriori rate (us/s)	-1.04567148022E+00	Resid rate (us/s)	7.89798E-08	+/- 2.4E-09
Delay rate (us/s)	-1.04567140124E+00	Apriori accel (us/s/s)	-6.72458000132E-07	Resid phase (deg)	-148.8	+/- 5.2
Total phase (deg)	37.8					

	RMS	Theor.	Amplitude	0.518 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	51.6	17.1	Search (1024X16)	0.503	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	59.8	29.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	30.9	5.2	Inc. seg. avg.	0.749	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	44.4	9.1	Inc. frq. avg.	0.528	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2991.057 848.238 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/km..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/km.Q.161.1V2A0K

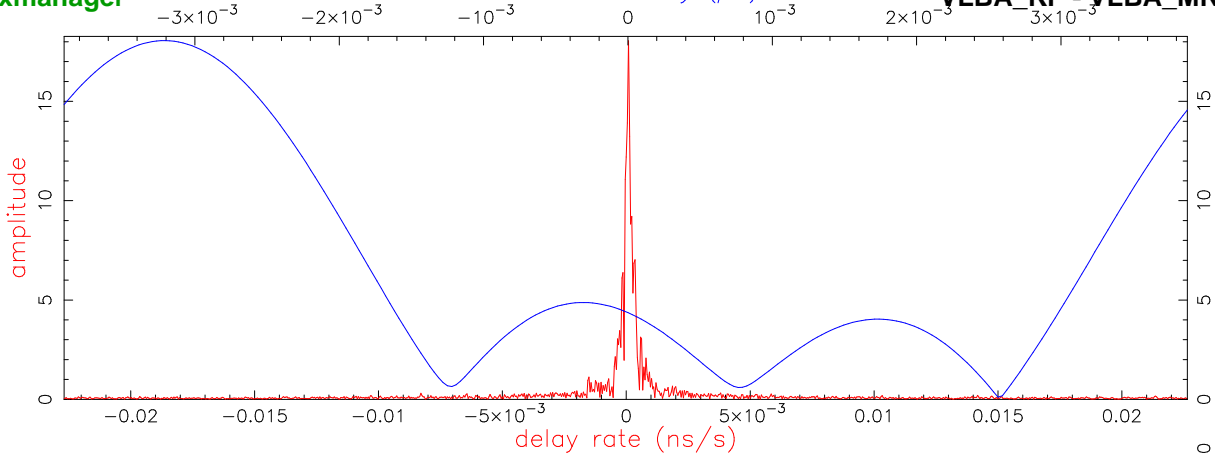
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, km

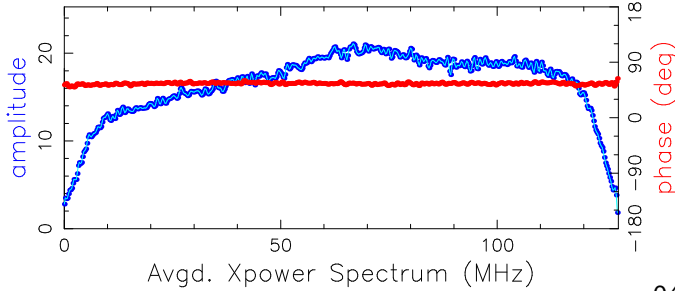
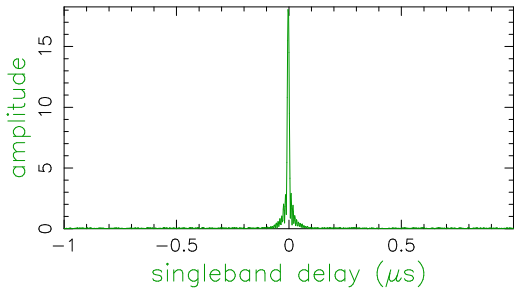
VLBA_KP - VLBA_MK, fgroup Q, pol LL

multiband delay (μ s)



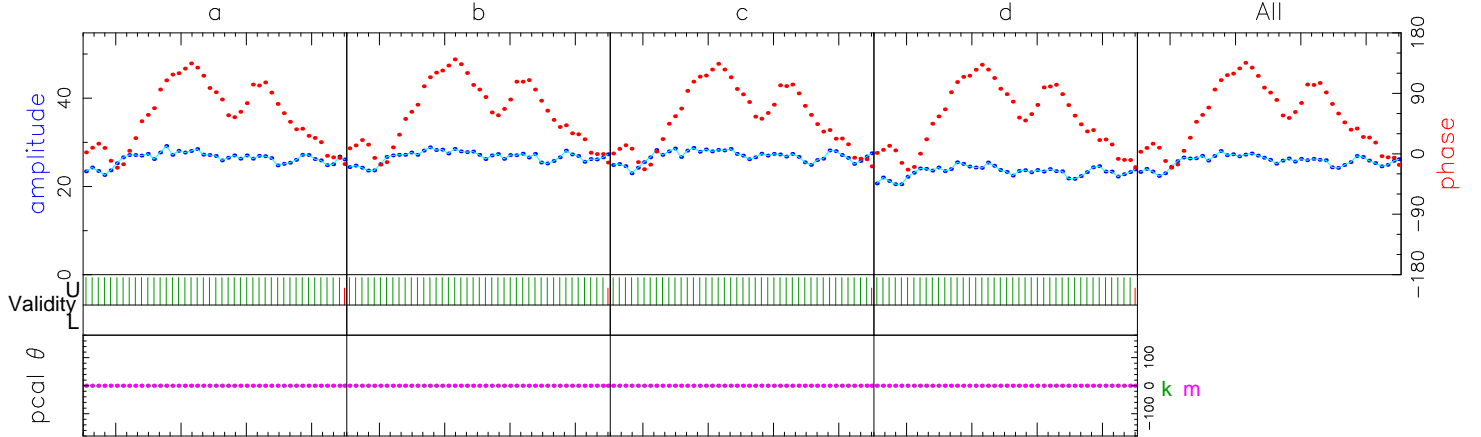
Fringe quality 5

SNR 774.0
 Int time 239.981
 Amp 18.270
 Phase 56.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.003159
 MBD -0.003176
 Fringe rate (Hz)
 0.003071
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133532
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	57.1	61.3	54.5	53.8	Phase	56.8
	18.5	18.7	18.8	16.3	Ampl.	18.1
	511.5	511.4	511.3	511.3	Sbd box	511.4
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.98618688395E+01	Apriori delay (usec)	1.98650445702E+01	Resid mbdelay (usec)	-3.17573E-03	+/- 1.4E-06
Sband delay (usec)	1.98618854452E+01	Apriori clock (usec)	-1.5326618E+01	Resid sbdelay (usec)	-3.15913E-03	+/- 5.6E-06
Phase delay (usec)	1.98650482339E+01	Apriori clockrate (us/s)	-3.1799999E-07	Resid phdelay (usec)	3.66376E-06	+/- 9.6E-09
Delay rate (us/s)	-1.04567140886E+00	Apriori rate (us/s)	-1.04567148022E+00	Resid rate (us/s)	7.13618E-08	+/- 6.9E-11
Total phase (deg)	243.4	Apriori accel (us/s/s)	-6.72458000132E-07	Resid phase (deg)	56.8	+/- 0.1

ph/seg (deg)	RMS 46.4	Theor. 0.5	Amplitude Search (1024X16)	18.270 +/- 0.024	16.932	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	41.5	0.8	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	4.2	0.1	Inc. seg. avg.	25.748	25.748	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	5.9	0.3	Inc. frq. avg.	18.072	18.072	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 203.6 el 54.4 pa 20.3 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 2991.057 848.238 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/km..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/km.Q.97.1V2A0K

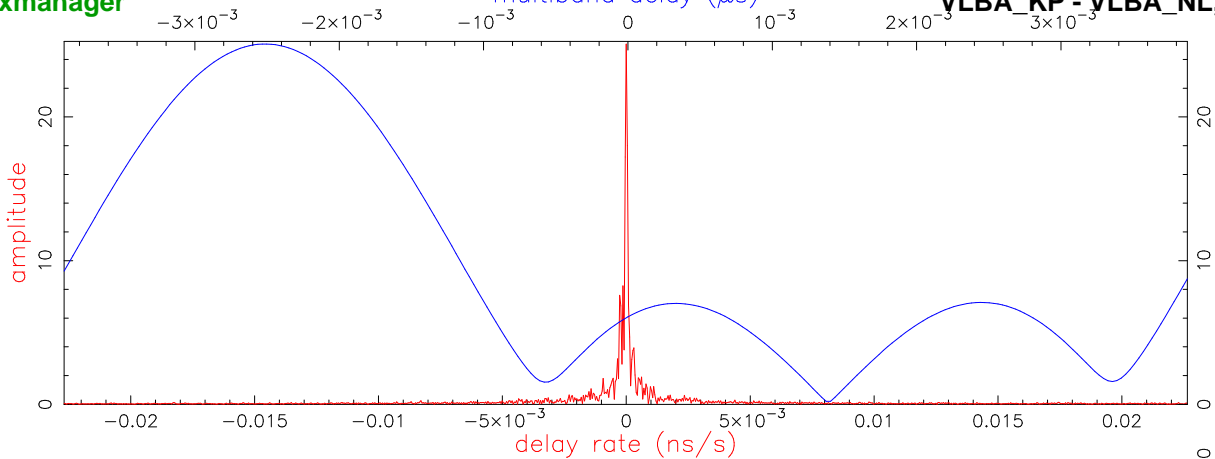
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kn

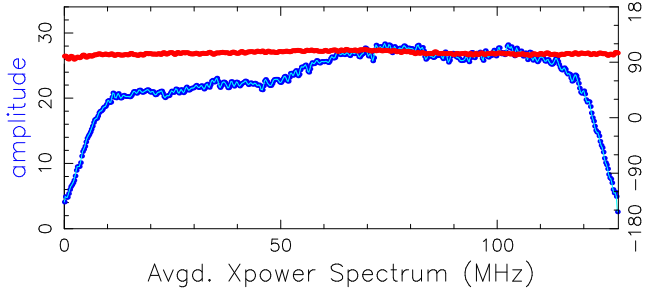
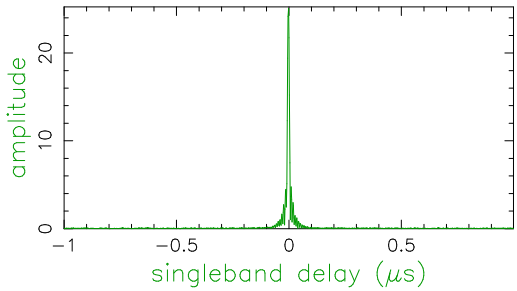
VLBA_KP - VLBA_NL, fgroup Q, pol RR

multiband delay (μ s)



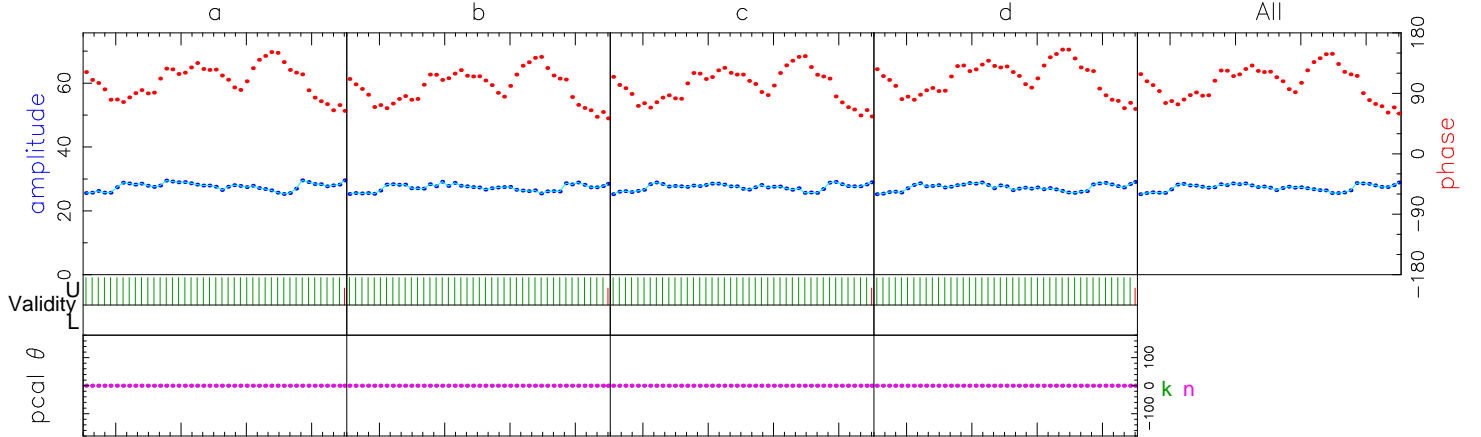
Fringe quality 7

SNR 1069.9
 Int time 239.983
 Amp 25.256
 Phase 105.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.002530
 MBD -0.002543
 Fringe rate (Hz)
 0.000579
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133534
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
n	1000	1000	1000	1000	PC freqs	1000
k:n	0:0	0:0	0:0	0:0	PC freqs	0:0
k:n	0:0	0:0	0:0	0:0	PC phase	0:0
k	1000	1000	1000	1000	ManI PC	1000
n	1000	1000	1000	1000	PC amp	1000
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	4.4367895561E+03	Apriori delay (usec)	4.43679209880E+03	Resid mbdelay (usec)	-2.54319E-03	+/- 1.0E-06
Group delay (usec)(sbd)	4.4367895561E+03	Apriori clock (usec)	-5.0837326E+00	Resid sbdelay (usec)	-2.53000E-03	+/- 4.0E-06
Sband delay (usec)	4.43678956880E+03	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	6.77737E-06	+/- 6.9E-09
Phase delay (usec)	4.43679210558E+03	Apriori rate (us/s)	3.29051982563E-01	Resid rate (us/s)	1.34465E-08	+/- 5.0E-11
Delay rate (us/s)	3.29051996009E-01	Apriori accel (us/s/s)	-2.32706050331E-05	Resid phase (deg)	105.0	+/- 0.1
Total phase (deg)	80.7					

	RMS	Theor.	Amplitude	25.256 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	23.4	0.4	Search (1024X16)	24.248	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	9.0	0.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.5	0.1	Inc. seg. avg.	27.279	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.8	0.2	Inc. frq. avg.	25.172	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

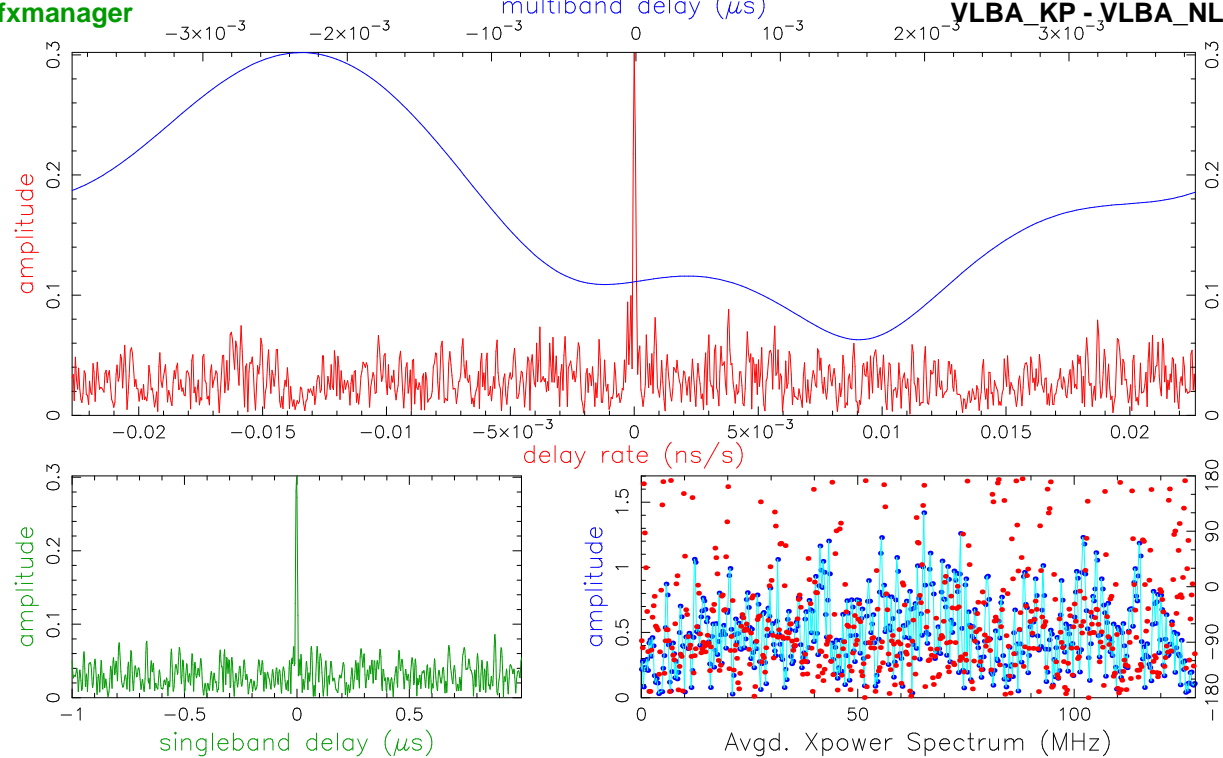
k: az 203.6 el 54.4 pa 20.3 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -950.669 -586.471 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kn.Q.110.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kn

VLBA_KP - VLBA_NL, fgroup Q, pol LR

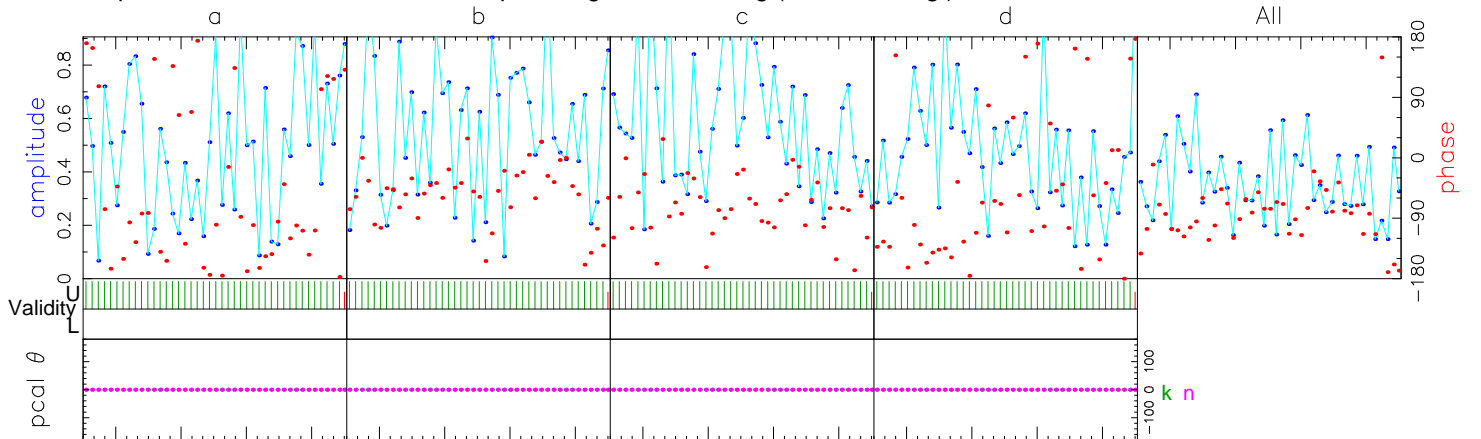


Fringe quality 8

SNR 12.8
 Int time 239.983
 Amp 0.302
 Phase -86.7
 PFD 4.8e-29
 Delays (us)
 SBD -0.002127
 MBD -0.002336
 Fringe rate (Hz)
 0.000856
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133536
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



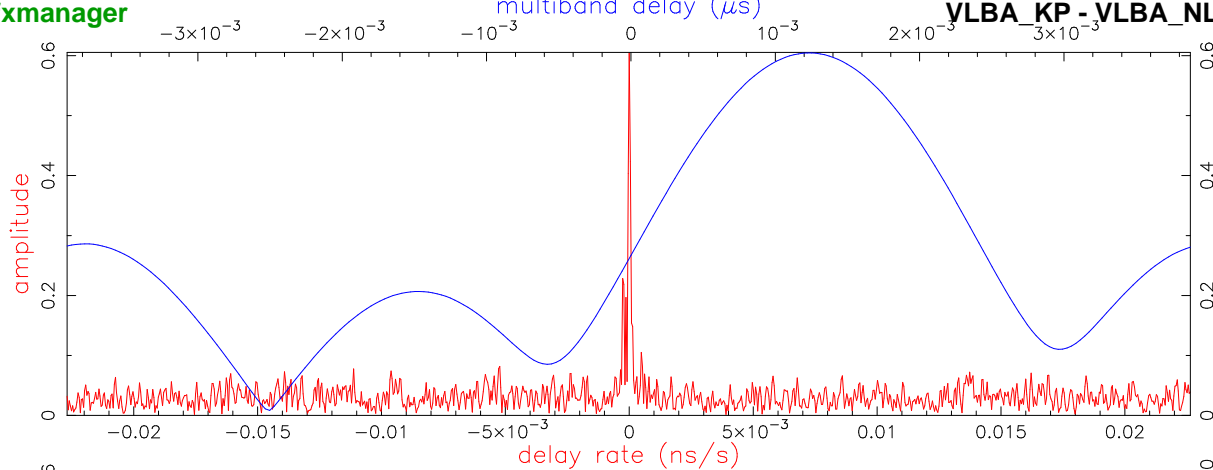
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
n	1000	1000	1000	1000		
k:n	0:0	0:0	0:0	0:0		
k:n	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
n	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		
Group delay (usec)(sbd)	4.43678976261E+03	4.43678976261E+03	4.43679209880E+03	4.43679209880E+03	Resid mbdelay (usec)	-2.33619E-03 +/- 8.7E-05
Sband delay (usec)	4.43678997143E+03	4.43678997143E+03	-5.0837326E+00	-5.0837326E+00	Resid sbdelay (usec)	-2.12737E-03 +/- 3.4E-04
Phase delay (usec)	4.43679209320E+03	4.43679209320E+03	-2.9999999E-07	-2.9999999E-07	Resid phdelay (usec)	-5.59686E-06 +/- 5.8E-07
Delay rate (us/s)	3.29052002450E-01	3.29052002450E-01	3.29051982563E-01	3.29051982563E-01	Resid rate (us/s)	1.98875E-08 +/- 4.2E-09
Total phase (deg)		248.9			Resid phase (deg)	-86.7 +/- 9.0
ph/seg (deg)	RMS 39.4	Theor. 29.4	Amplitude 0.302 +/- 0.024	Amplitude 0.302 +/- 0.024	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	50.4	51.3	Search (1024X16) 0.284	Search (1024X16) 0.284	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	50.3	9.0	Interp. 0.000	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	35.3	15.6	Inc. seg. avg. 0.321	Inc. seg. avg. 0.321	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg. 0.358	Inc. frq. avg. 0.358	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
k: az 203.6 el 54.4 pa 20.3	n: az 224.0 el 37.3 pa 31.3	u, v (fr/asec) -950.669 -586.471				ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kn..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kn.Q.130.1V2A0K				simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

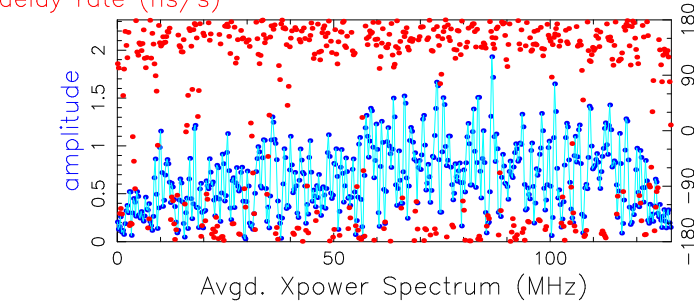
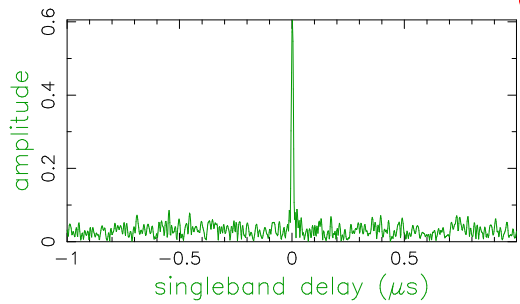
0420-014.1V2A0K, No0121, kn

VLBA_KP - VLBA_NL, fgroup Q, pol RL



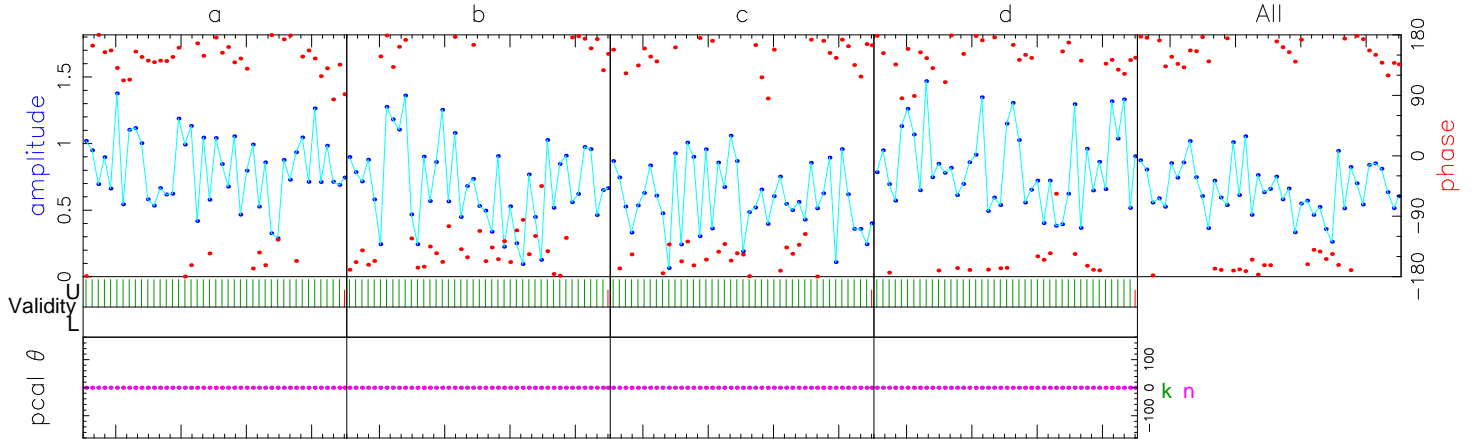
Fringe quality 8

SNR 25.7
 Int time 239.983
 Amp 0.606
 Phase 171.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.001673
 MBD 0.001221
 Fringe rate (Hz)
 0.000553
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
156.4	-166.5	-179.9	162.2	Phase	171.5
0.7	0.6	0.5	0.7	Ampl.	0.6
514.3	513.7	513.5	513.9	Sbd box	513.9
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
k:n 0:0	0:0	0:0	0:0	PC phase	
k:n 0:0	0:0	0:0	0:0	ManI PC	
k 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
k Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

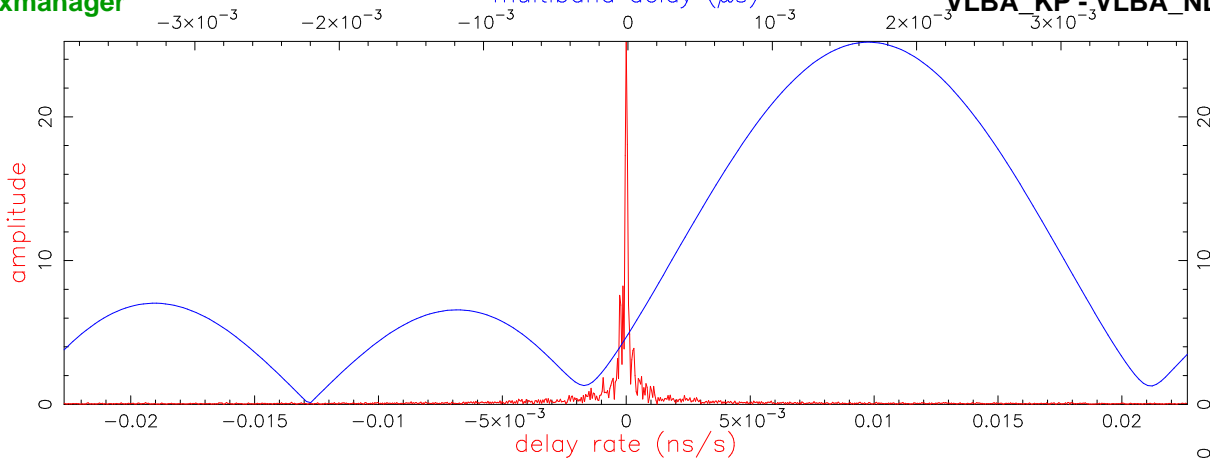
Group delay (usec)(sbd)	4.43679332002E+03	Apriori delay (usec)	4.43679209880E+03	Resid mbdelay (usec)	1.22122E-03	+/-	4.3E-05
Sband delay (usec)	4.43679377193E+03	Apriori clock (usec)	-5.0837326E+00	Resid sbdelay (usec)	1.67312E-03	+/-	1.7E-04
Phase delay (usec)	4.43679210987E+03	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	1.10694E-05	+/-	2.9E-07
Delay rate (us/s)	3.29051995422E-01	Apriori rate (us/s)	3.29051982563E-01	Resid rate (us/s)	1.28594E-08	+/-	2.1E-09
Total phase (deg)	147.2	Apriori accel (us/s/s)	-2.32706050331E-05	Resid phase (deg)	171.5	+/-	4.5

	RMS	Theor.	Amplitude	0.606 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	25.6	14.6	Search (1024X16)	0.574	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	32.1	25.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
ph/frq (deg)	20.9	4.5	Inc. seg. avg.	0.641	Sample rate(MSamp/s): 256		dr window (ns/s)	-0.023 0.023	
amp/frq (%)	14.8	7.8	Inc. frq. avg.	0.624	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 203.6 el 54.4 pa 20.3 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -950.669 -586.471 simultaneous interpolator

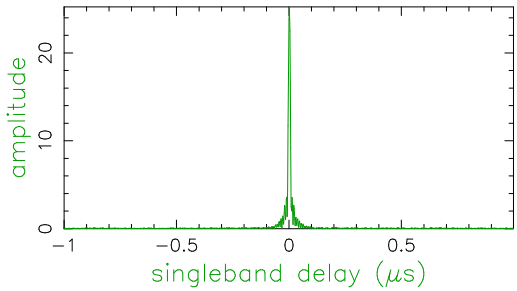
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kn.Q.153.1V2A0K

multiband delay (μ s)

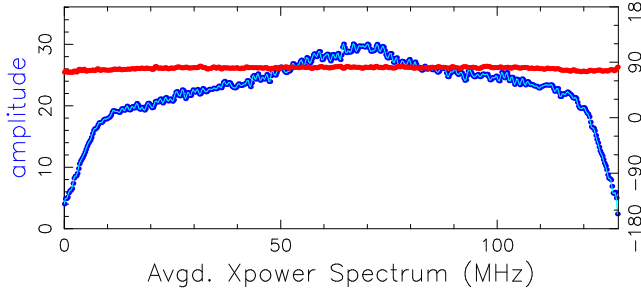


Fringe quality 7

SNR 1069.6
Int time 239.983
Amp 25.247
Phase 79.8
PFD 0.0e+00
Delays (us)
SBD 0.001623
MBD 0.001651
Fringe rate (Hz)
0.000593
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



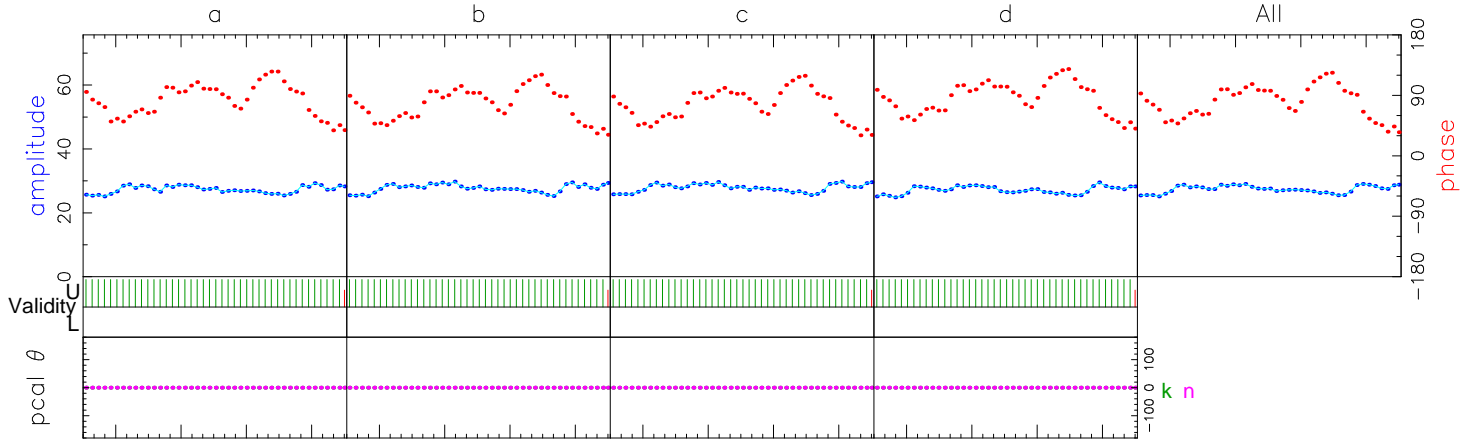
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133532
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
n	1000	1000	1000	1000	PC freqs	1000
k:n	0:0	0:0	0:0	0:0	PC phase	0:0
k:n	0:0	0:0	0:0	0:0	Manl PC	0:0
k	1000	1000	1000	1000	PC amp	1000
n	1000	1000	1000	1000		1000
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	4.43679374936E+03	Apriori delay (usec)	4.43679209880E+03	Resid mbdelay (usec)	1.65056E-03	+/-	1.0E-06
Sband delay (usec)	4.43679372130E+03	Apriori clock (usec)	-5.0837326E+00	Resid sbdelay (usec)	1.62250E-03	+/-	4.0E-06
Phase delay (usec)	4.43679210395E+03	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	5.15171E-06	+/-	6.9E-09
Delay rate (us/s)	3.29051996336E-01	Apriori rate (us/s)	3.29051982563E-01	Resid rate (us/s)	1.37726E-08	+/-	5.0E-11
Total phase (deg)	55.5	Apriori accel (us/s/s)	-2.32706050331E-05	Resid phase (deg)	79.8	+/-	0.1

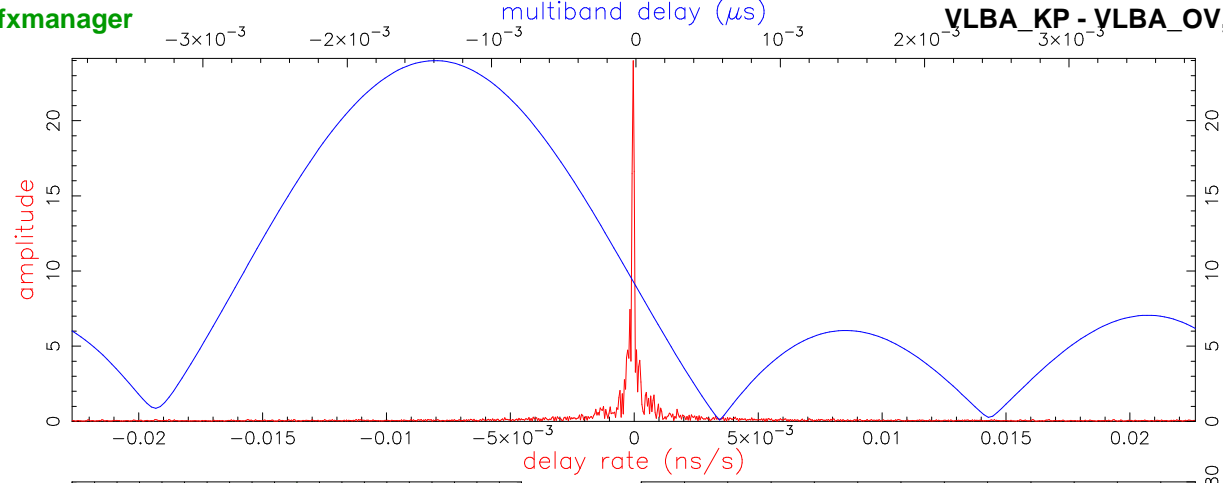
ph/seg (deg)	23.4	RMS	23.4	Theor.	0.4	Amplitude	25.247 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	9.7		0.6			Search (1024X16)	23.975	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled		mb window (us)	-0.004	0.004
ph/frq (deg)	6.1		0.1			Inc. seg. avg.	27.408	Bits/sample: 2x2	Sample rate(MSamp/s): 256		dr window (ns/s)	-0.023	0.023
amp/frq (%)	1.0		0.2			Inc. frq. avg.	25.258	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

Mk4/DiFX fourfit 3.21 rev 2937

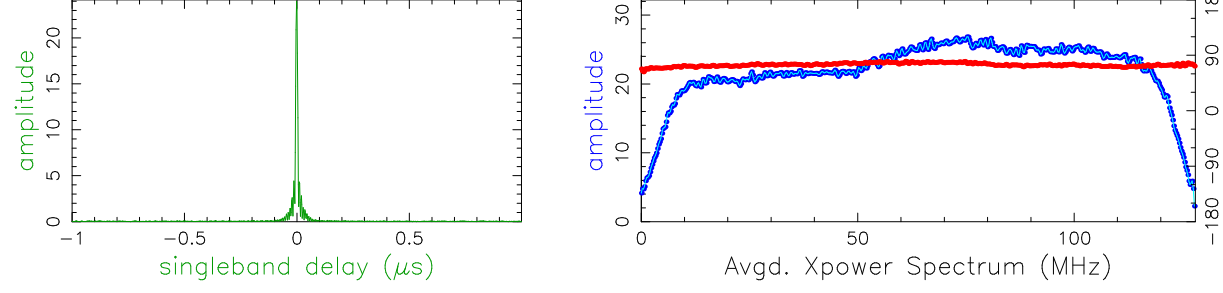
fxmanager

0420-014.1V2A0K, No0121, ko

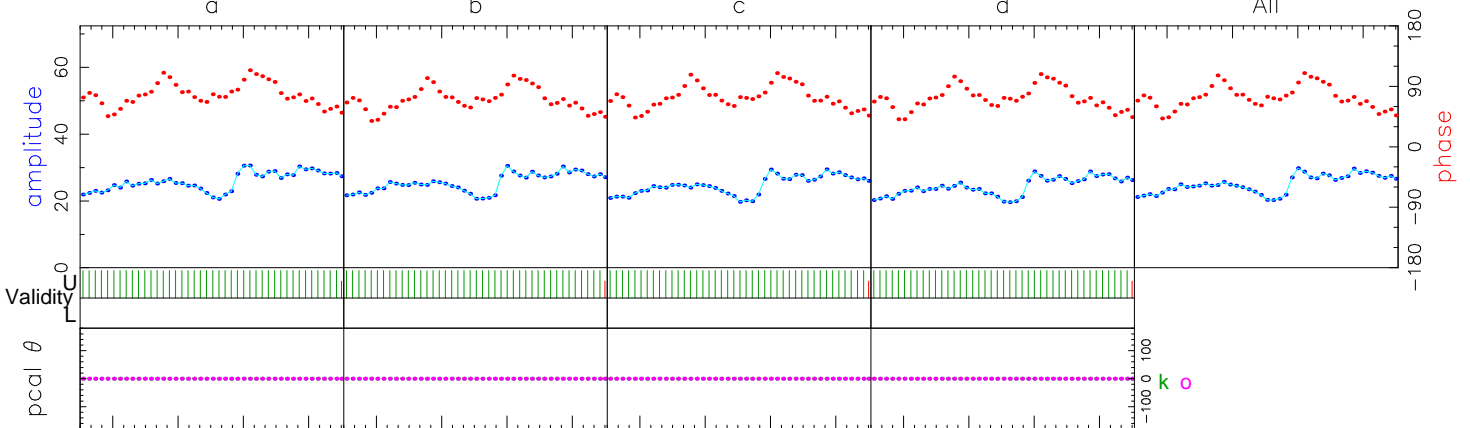
VLBA_KP - VLBA_OV, fgroup Q, pol RR



Fringe quality 8
 SNR 1022.7
 Int time 239.881
 Amp 24.145
 Phase 74.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.001420
 MBD -0.001363
 Fringe rate (Hz)
 -0.001848
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133534
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



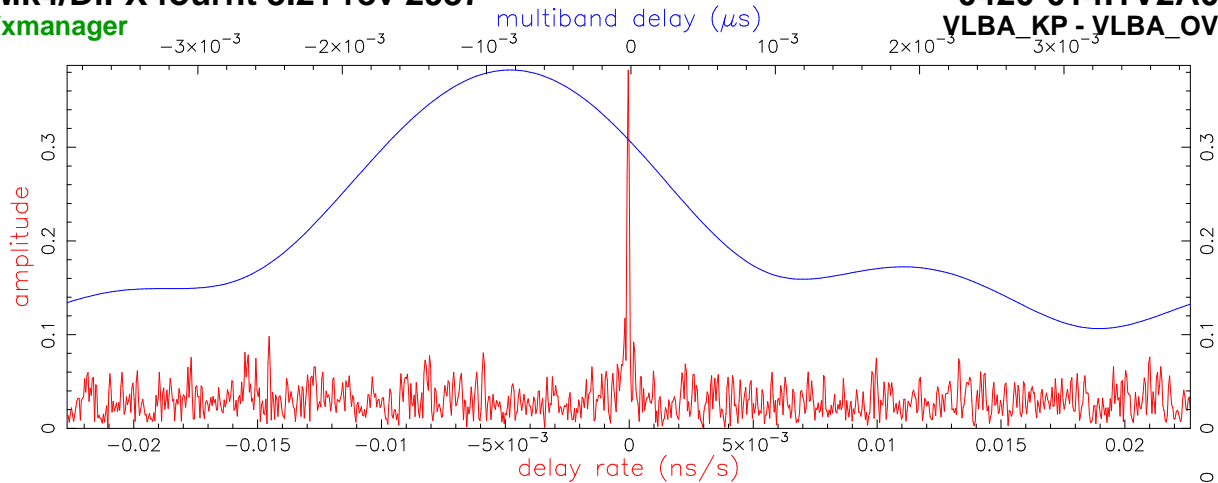
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
o	1000	1000	1000	1000	PC freqs	1000
k:o	0:0	0:0	0:0	0:0	PC phase	0:0
k:o	0:0	0:0	0:0	0:0	Manl PC	0:0
k	1000	1000	1000	1000	PC amp	1000
o	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	7.40244930501E+02	7.40244874214E+02	7.40246298612E+02	7.40246293839E+02	Resid mbdelay (usec)	-1.36334E-03	+/- 1.1E-06
Group delay (usec)(sbd)					Resid sbdelay (usec)	-1.41963E-03	+/- 4.2E-06
Sband delay (usec)					Resid phdelay (usec)	4.77288E-06	+/- 7.2E-09
Phase delay (usec)					Resid rate (us/s)	-4.29430E-08	+/- 5.2E-11
Delay rate (us/s)	-1.60970815190E-01				Resid phase (deg)	74.0	+/- 0.1
Total phase (deg)	249.2						

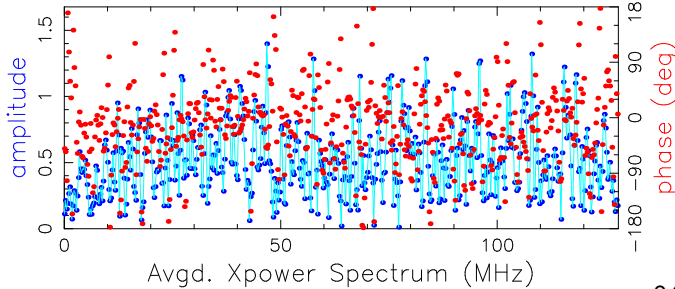
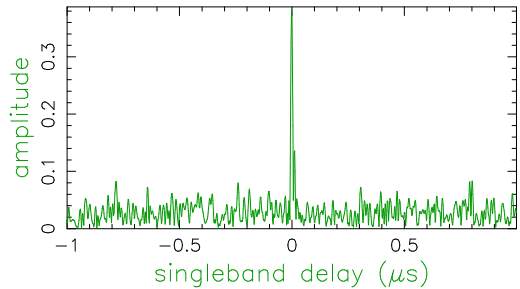
	RMS	Theor.	Amplitude	24.145 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	16.7	0.4	Search (1024X16)	23.903	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	11.8	0.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.9	0.1	Inc. seg. avg.	25.074	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.6	0.2	Inc. frq. avg.	24.017	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 459.736 -330.621 simultaneous interpolator

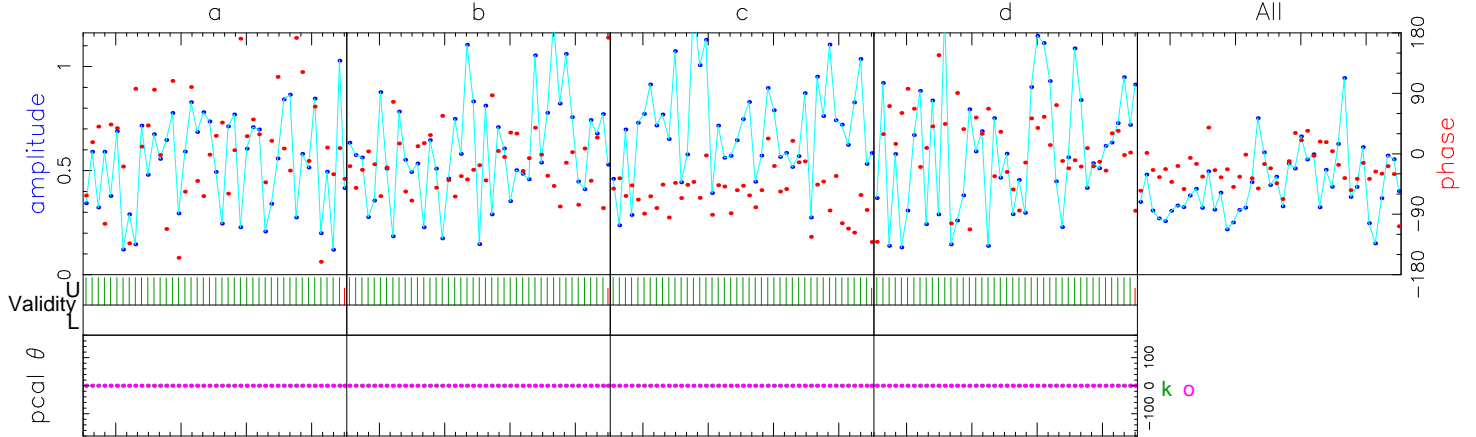
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ko..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ko.Q.112.1V2A0K



Fringe quality 8
SNR 16.4
Int time 239.881
Amp 0.387
Phase -19.5
PFD 0.0e+00
Delays (us)
SBD -0.001201
MBD -0.000797
Fringe rate (Hz)
-0.001265
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133535
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



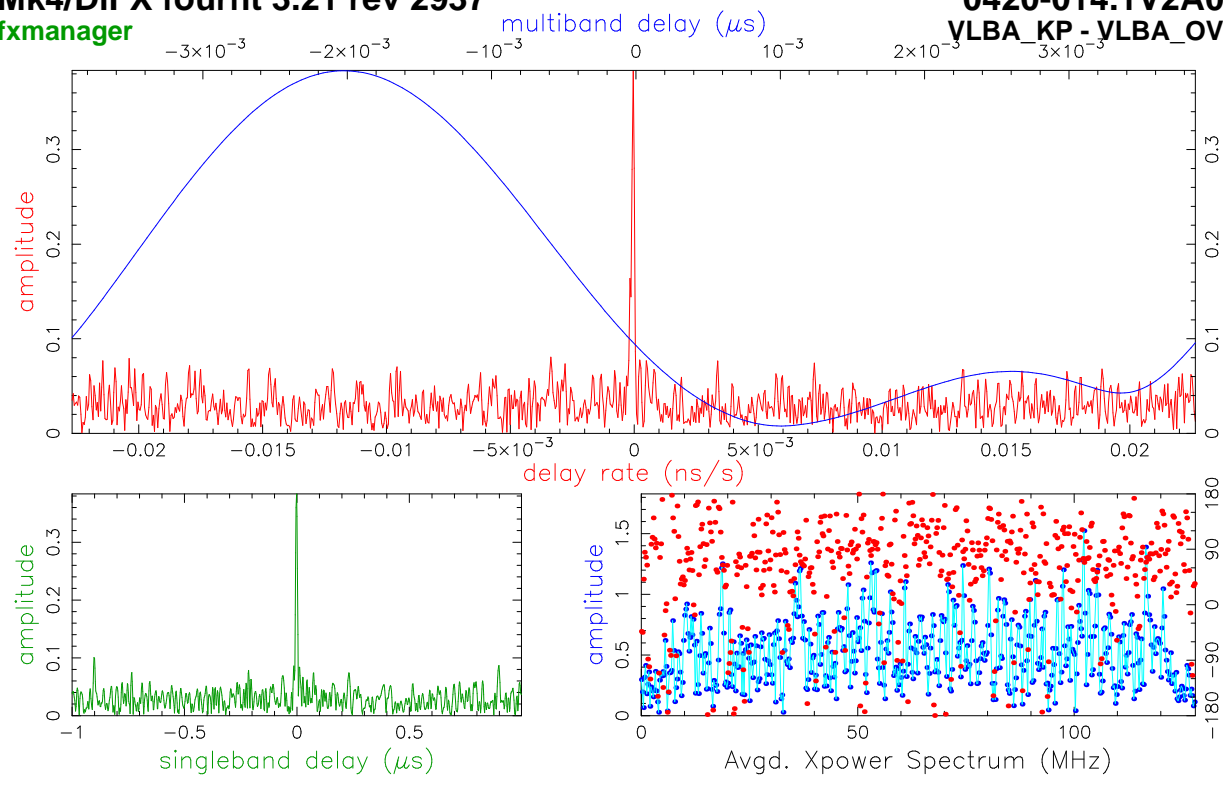
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
14.6	-22.1	-56.0	13.4	Phase	-19.5
0.3	0.5	0.6	0.4	Ampl.	0.4
512.5	511.8	512.2	512.8	Sbd box	512.4
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
k:o 0:0	0:0	0:0	0:0	PC phase	
k:o 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
k Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	7.40245496939E+02	Apriori delay (usec)	7.40246293839E+02	Resid mbdelay (usec)	-7.96900E-04	+/-	6.8E-05
Sband delay (usec)	7.40245092589E+02	Apriori clock (usec)	-3.3226795E+00	Resid sbdelay (usec)	-1.20125E-03	+/-	2.6E-04
Phase delay (usec)	7.40246292583E+02	Apriori clockrate (us/s)	-3.6000001E-07	Resid phdelay (usec)	-1.25621E-06	+/-	4.5E-07
Delay rate (us/s)	-1.60970801639E-01	Apriori rate (us/s)	-1.60970772247E-01	Resid rate (us/s)	-2.93916E-08	+/-	3.3E-09
Total phase (deg)	155.8	Apriori accel (us/s/s)	-3.76086585510E-06	Resid phase (deg)	-19.5	+/-	7.0

ph/seg (deg)	27.1	Theor.	22.9	Amplitude	0.387 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	41.2	Search (1024X16)	0.363	Search (1024X16)	0.363	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	42.3	Inc. seg. avg.	0.397	Inc. seg. avg.	0.397	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	33.6	Inc. frq. avg.	0.437	Inc. frq. avg.	0.437	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
						Data rate(Mb/s): 2048	nlags: 512
							t_cohere infinite
							ion window (TEC) 0.00 0.00

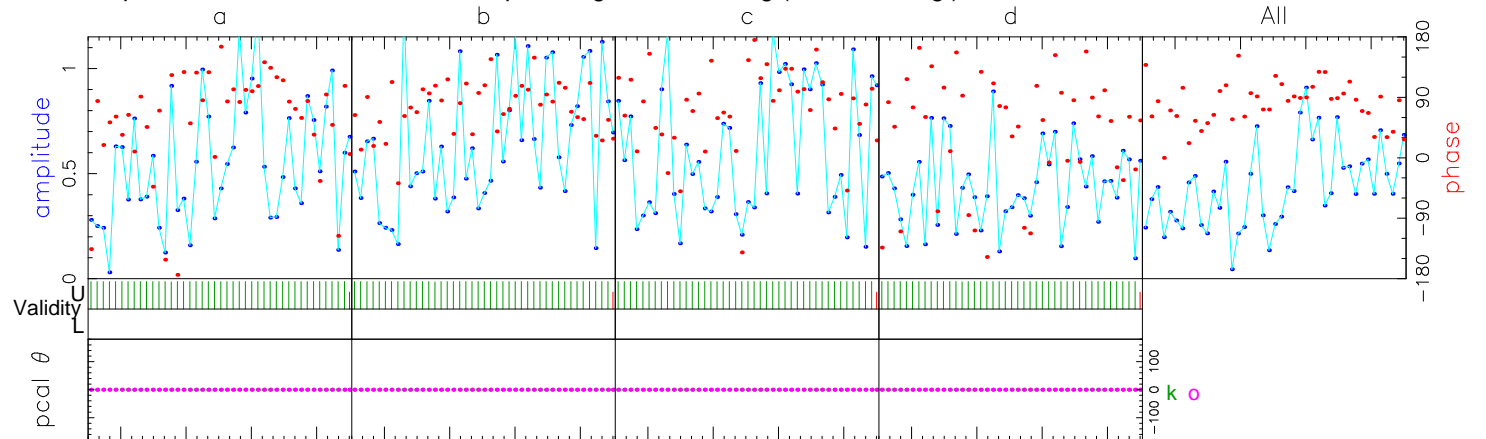


Fringe quality 9

SNR 16.3
Int time 239.881
Amp 0.384
Phase 82.6
PFD 0.0e+00
Delays (us)
SBD -0.002191
MBD -0.002034
Fringe rate (Hz)
-0.002447
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133537
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

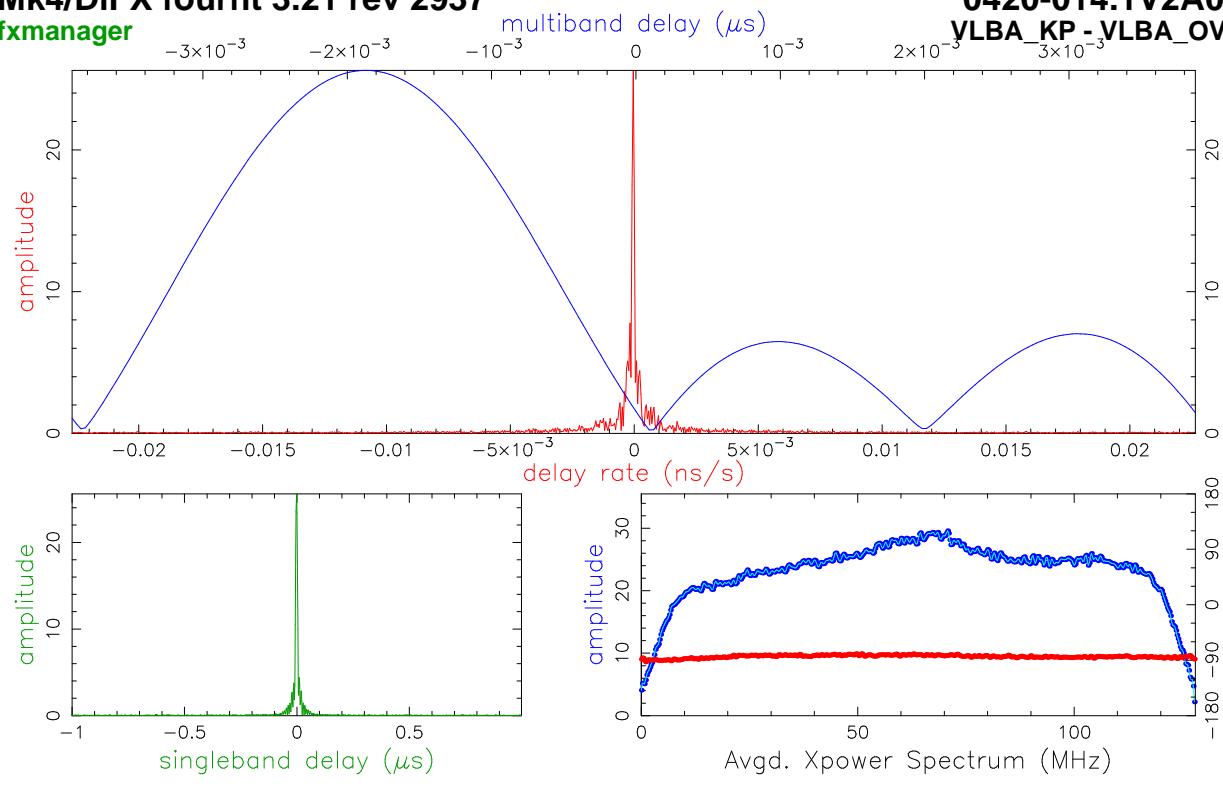
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
o	1000	1000	1000	1000		
k:o	0:0	0:0	0:0	0:0		
k:o	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
o	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

	7.40244260158E+02	Apriori delay (usec)	7.40246293839E+02	Resid mbdelay (usec)	-2.03368E-03	+/- 6.8E-05
Sband delay (usec)	7.40244102589E+02	Apriori clock (usec)	-3.3226795E+00	Resid sbdelay (usec)	-2.19125E-03	+/- 2.7E-04
Phase delay (usec)	7.40246299171E+02	Apriori clockrate (us/s)	-3.6000001E-07	Resid phdelay (usec)	5.33167E-06	+/- 4.6E-07
Delay rate (us/s)	-1.60970829110E-01	Apriori rate (us/s)	-1.60970772247E-01	Resid rate (us/s)	-5.68631E-08	+/- 3.3E-09
Total phase (deg)	257.9	Apriori accel (us/s/s)	-3.76086585510E-06	Resid phase (deg)	82.6	+/- 7.1

	RMS	Theor.	Amplitude	0.384 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	32.2	23.1	Search (1024X16)	0.374	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	52.0	40.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.0	7.1	Inc. seg. avg.	0.404	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	36.2	12.3	Inc. frq. avg.	0.382	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

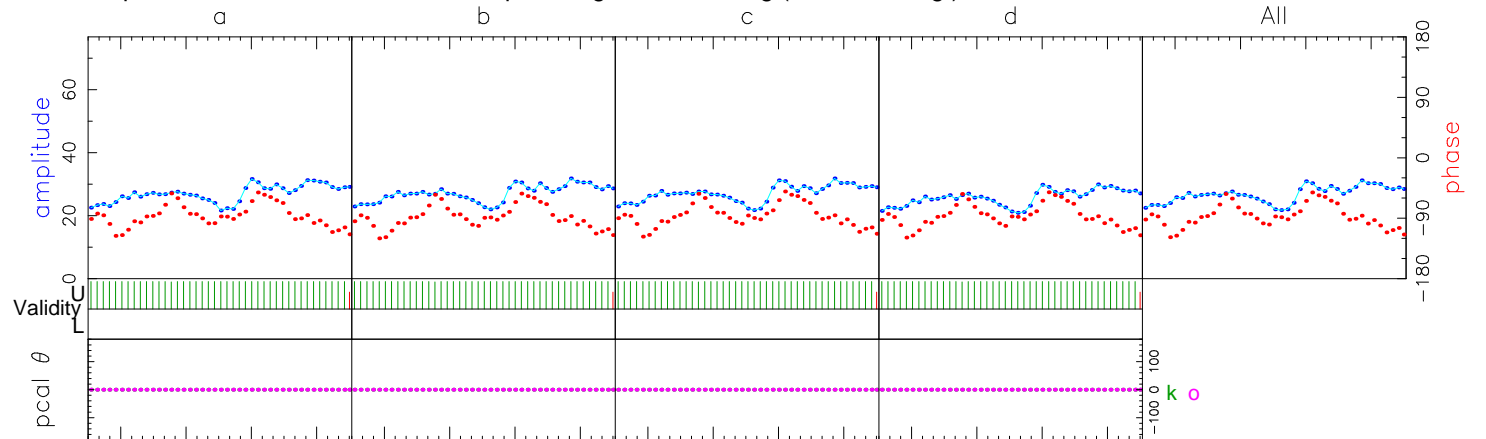


Fringe quality 8

SNR 1084.5
Int time 239.881
Amp 25.606
Phase -86.4
PFD 0.0e+00
Delays (us)
SBD -0.001993
MBD -0.001875
Fringe rate (Hz)
-0.001844
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133531
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
o	1000	1000	1000	1000	PC freqs	1000
k:o	0:0	0:0	0:0	0:0	PC phase	0:0
k:o	0:0	0:0	0:0	0:0	Manl PC	0:0
k	1000	1000	1000	1000	PC amp	1000
o	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	7.40244418970E+02	Apriori delay (usec)	7.40246293839E+02	Resid mbdelay (usec)	-1.87487E-03	+/- 1.0E-06
Sband delay (usec)	7.40244300839E+02	Apriori clock (usec)	-3.3226795E+00	Resid sbdelay (usec)	-1.99300E-03	+/- 4.0E-06
Phase delay (usec)	7.40246288263E+02	Apriori clockrate (us/s)	-3.6000001E-07	Resid phdelay (usec)	-5.57616E-06	+/- 6.8E-09
Delay rate (us/s)	-1.60970815088E-01	Apriori rate (us/s)	-1.60970772247E-01	Resid rate (us/s)	-4.28409E-08	+/- 4.9E-11
Total phase (deg)		88.9	Apriori accel (us/s/s)	-3.76086585510E-06	Resid phase (deg)	-86.4 +/- 0.1

ph/seg (deg) 16.7 0.3 Amplitude 25.606 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 11.0 0.6 Search (1024X16) 25.495 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 1.3 0.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 2.1 0.2 Inc. seg. avg. 26.755 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
amp/frq (%) 2.1 0.2 Inc. frq. avg. 25.609 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

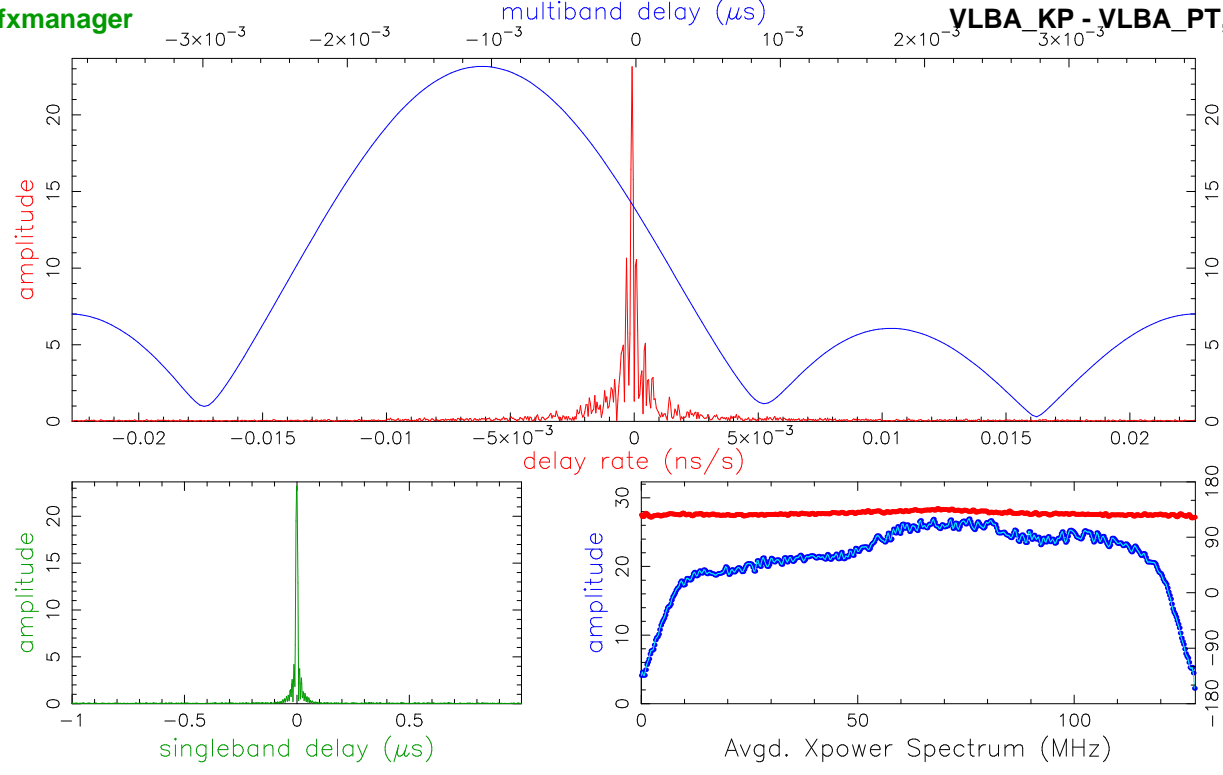
k: az 203.6 el 54.4 pa 20.3 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 459.736 -330.621 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ko..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ko.Q.89.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kp

VLBA_KP - VLBA_PT, fgroup Q, pol RR

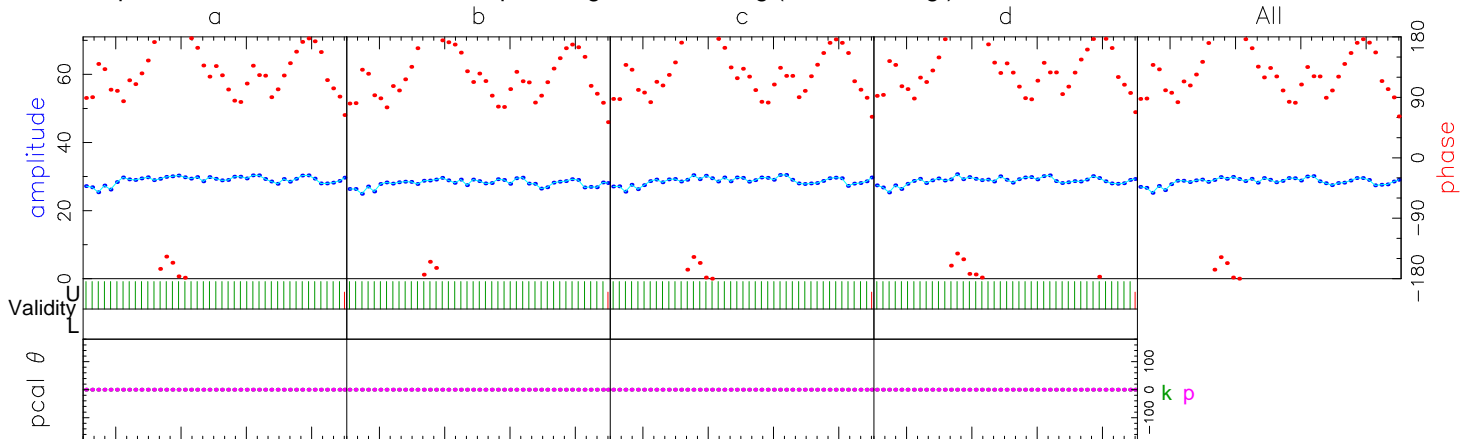


Fringe quality 6

SNR 1003.2
 Int time 239.983
 Amp 23.680
 Phase 130.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.001017
 MBD -0.001110
 Fringe rate (Hz)
 -0.004615
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133534
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	PC freqs	
k:p	0:0	0:0	0:0	0:0	PC phase	
kp	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	7.62994557228E+02	7.62994649403E+02	7.62995675193E+02	6.68259549968E-02	7.62995666778E+02	-5.2221069E+00	1.2000000E-07	6.68260622139E-02	-3.99747517432E-06	Resid mbdelay (usec)	-1.10955E-03	+/- 1.1E-06
Group delay (usec)(sbd)												
Sband delay (usec)										Resid sbdelay (usec)	-1.01738E-03	+/- 4.3E-06
Phase delay (usec)										Resid phdelay (usec)	8.41449E-06	+/- 7.4E-09
Delay rate (us/s)										Resid rate (us/s)	-1.07217E-07	+/- 5.3E-11
Total phase (deg)		309.7								Resid phase (deg)	130.4	+/- 0.1

	RMS	Theor.	Amplitude	23.680 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	36.4	0.4	Search (1024X16)	21.683	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	21.0	0.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	6.7	0.1	Inc. seg. avg.	28.544	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.3	0.2	Inc. frq. avg.	23.220	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -192.702 -148.625 simultaneous interpolator

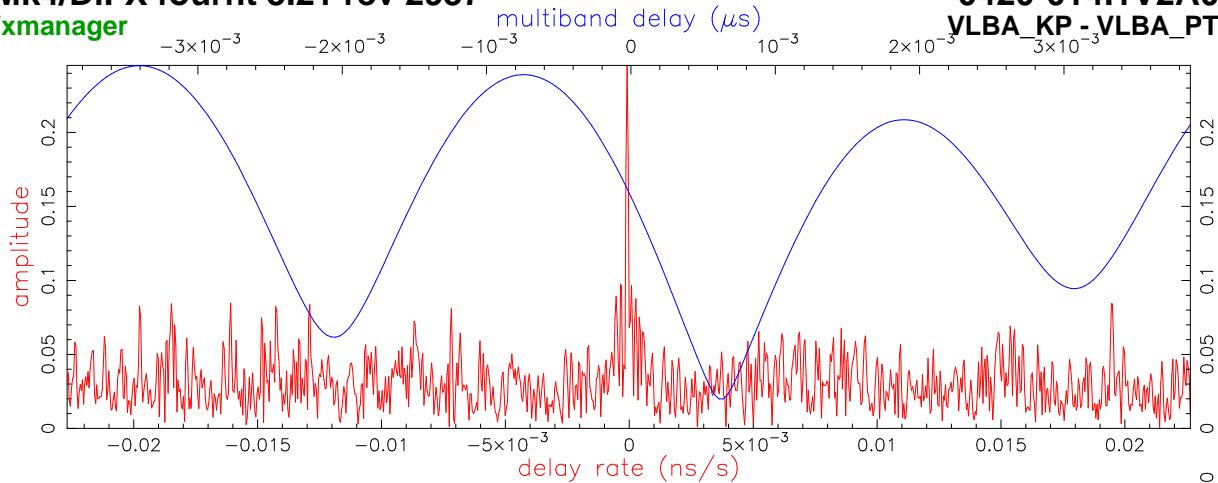
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp.Q.115.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

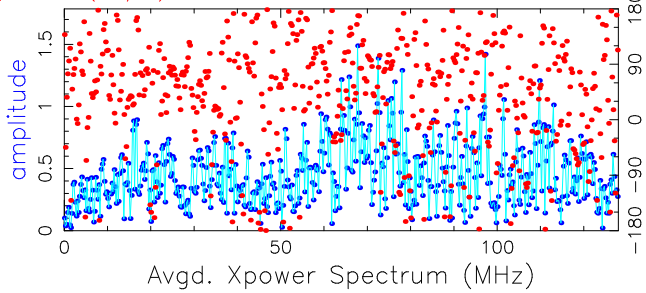
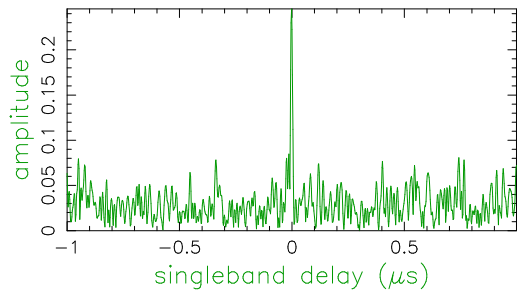
0420-014.1V2A0K, No0121, kp

VLBA_KP - VLBA_PT, fgroup Q, pol LR



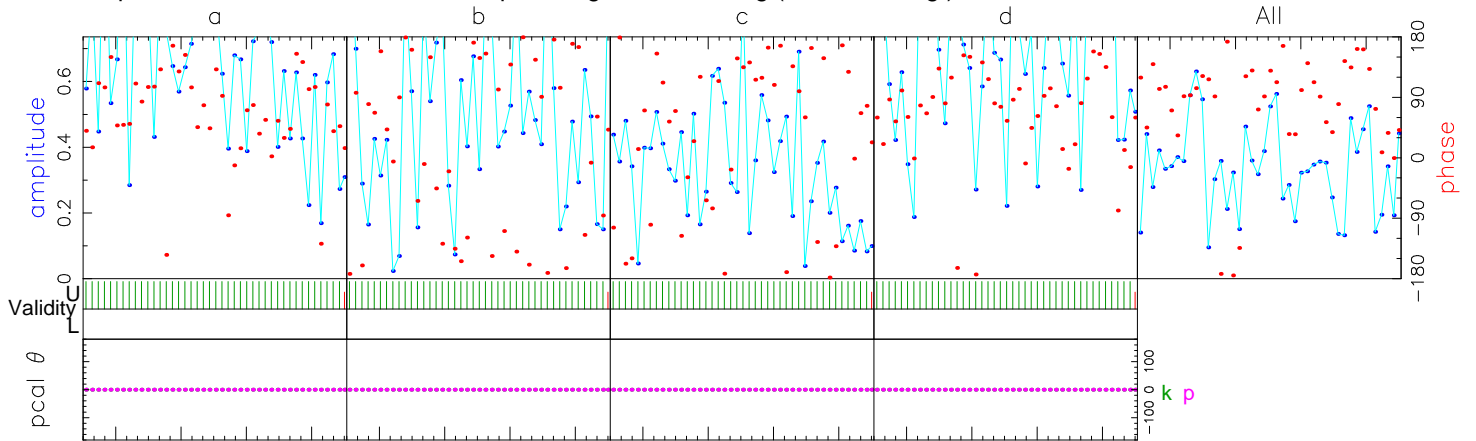
Fringe quality 7

SNR 10.4
 Int time 239.983
 Amp 0.245
 Phase 105.2
 PFD 5.8e-17
 Delays (us)
 SBD -0.002168
 MBD -0.003417
 Fringe rate (Hz)
 -0.004338
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133536
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
p	1000	1000	1000	1000		
k:p	0:0	0:0	0:0	0:0		
k:p	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
p	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UR	Q01UR	Q02UR	Q03UR		

	7.62992249572E+02	Apriori delay (usec)	7.62995666778E+02	Resid mbdelay (usec)	-3.41721E-03	+/- 1.1E-04
Sband delay (usec)	7.62993498778E+02	Apriori clock (usec)	-5.2221069E+00	Resid sbdelay (usec)	-2.16800E-03	+/- 4.1E-04
Phase delay (usec)	7.62995673568E+02	Apriori clockrate (us/s)	1.2000000E-07	Resid phdelay (usec)	6.78996E-06	+/- 7.1E-07
Delay rate (us/s)	6.68259614350E-02	Apriori rate (us/s)	6.68260622139E-02	Resid rate (us/s)	-1.00779E-07	+/- 5.1E-09
Total phase (deg)	284.5	Apriori accel (us/s/s)	-3.99747517432E-06	Resid phase (deg)	105.2	+/- 11.0

	RMS	Theor.	Amplitude	0.245 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	50.5	36.1	Search (1024X16)	0.239	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	65.5	63.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	66.1	11.0	Inc. seg. avg.	0.281	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	60.4	19.2	Inc. frq. avg.	0.309	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

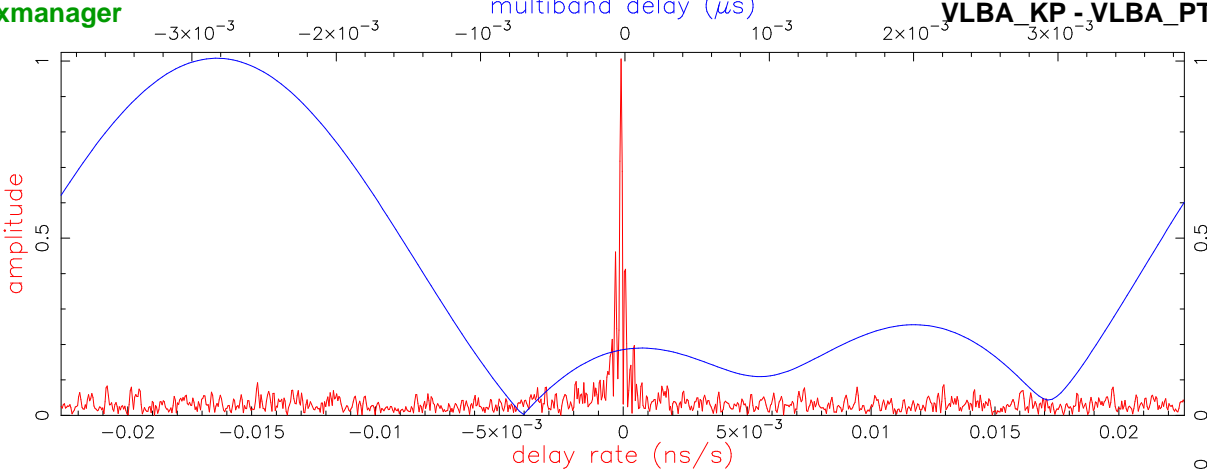
k: az 203.6 el 54.4 pa 20.3 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -192.702 -148.625 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp.Q.137.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

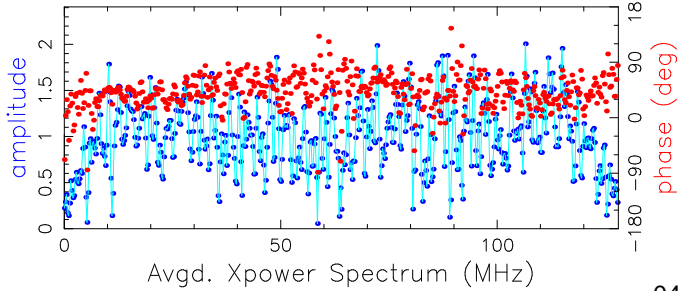
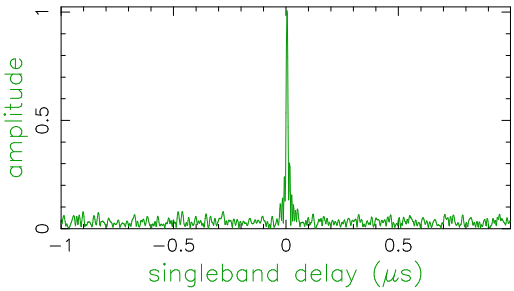
0420-014.1V2A0K, No0121, kp

VLBA_KP - VLBA_PT, fgroup Q, pol RL



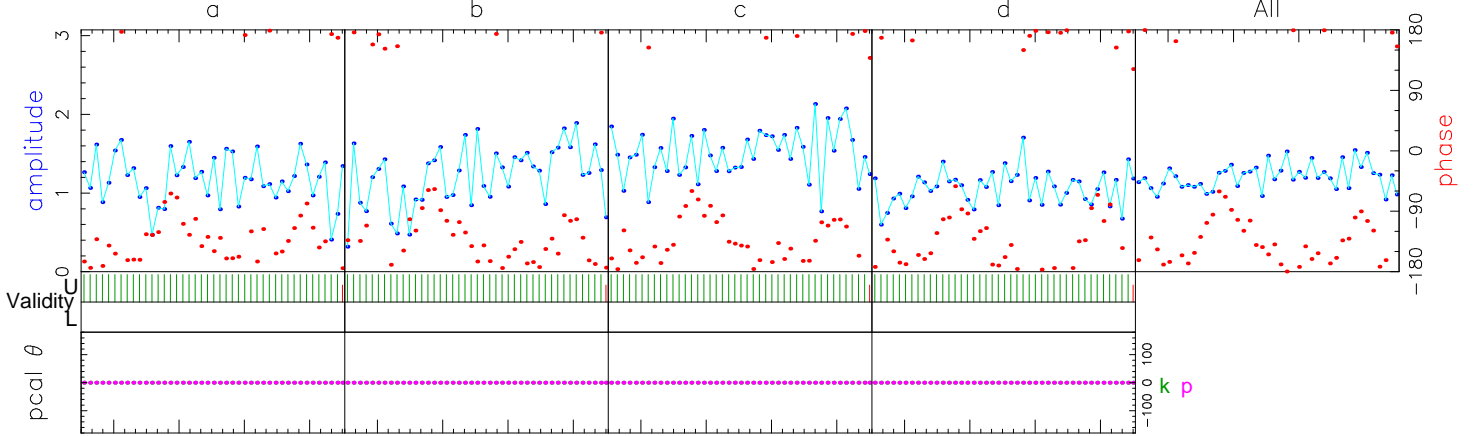
Fringe quality 8

SNR 43.4
 Int time 239.983
 Amp 1.024
 Phase -142.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.004747
 MBD -0.002759
 Fringe rate (Hz)
 -0.004634
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133538
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-139.0	-142.5	-140.7	-151.1	Phase	-142.8
	1.0	1.0	1.2	0.8	Ampl.	1.0
	515.8	514.9	515.7	515.2	Sbd box	515.4
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
k:p	0:0	0:0	0:0	0:0	PC phase	
k:p	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.63000720728E+02	Apriori delay (usec)	7.62995666778E+02	Resid mbdelay (usec)	-2.75855E-03	+/-	2.6E-05
Sband delay (usec)	7.63000414153E+02	Apriori clock (usec)	-5.2221069E+00	Resid sbdelay (usec)	4.74737E-03	+/-	9.9E-05
Phase delay (usec)	7.62995657561E+02	Apriori clockrate (us/s)	1.2000000E-07	Resid phdelay (usec)	-9.21720E-06	+/-	1.7E-07
Delay rate (us/s)	6.68259545543E-02	Apriori rate (us/s)	6.68260622139E-02	Resid rate (us/s)	-1.07660E-07	+/-	1.2E-09
Total phase (deg)	36.5	Apriori accel (us/s/s)	-3.99747517432E-06	Resid phase (deg)	-142.8	+/-	2.6

ph/seg (deg)	RMS 34.0	Theor. 8.7	Amplitude	1.024 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	23.8	15.1	Search (1024X16)	0.938	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	6.6	2.6	Inc. seg. avg.	1.196	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	15.0	4.6	Inc. frq. avg.	1.008	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 203.6 el 54.4 pa 20.3 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -192.702 -148.625 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp.Q.155.1V2A0K

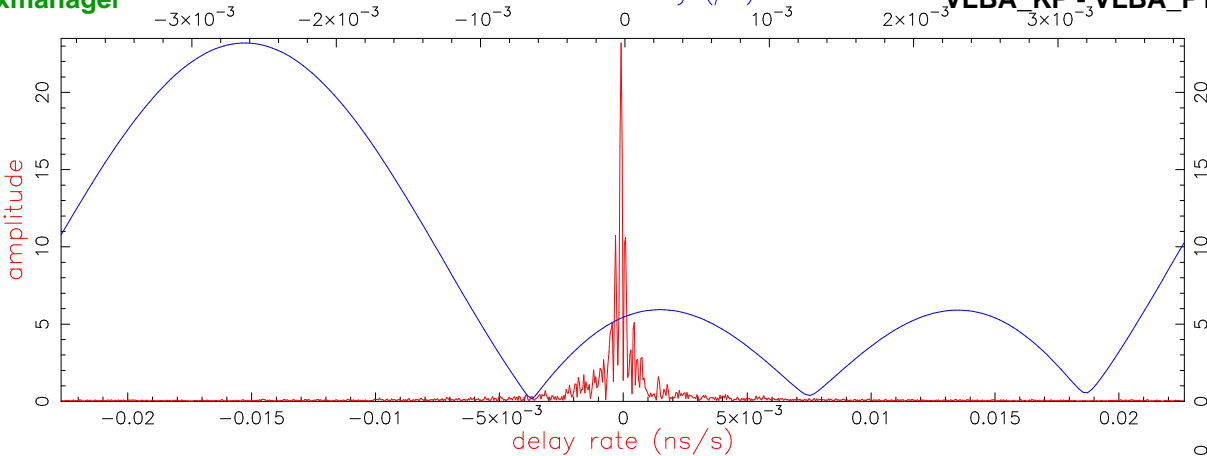
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, kp

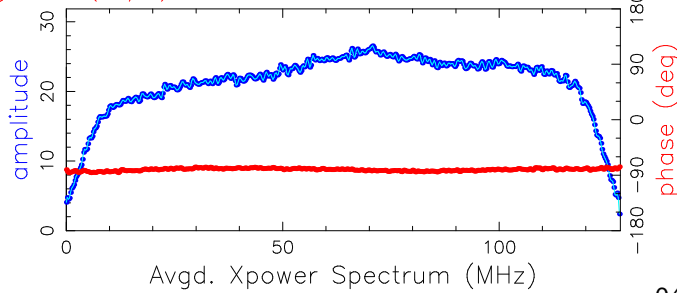
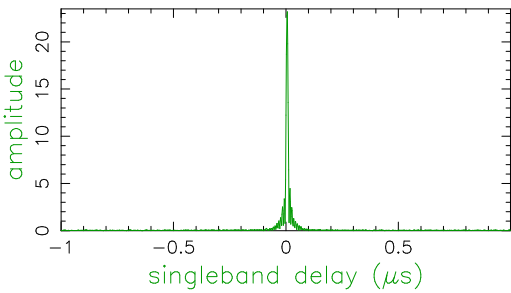
VLBA_KP - VLBA_PT, fgroup Q, pol LL

multiband delay (μ s)



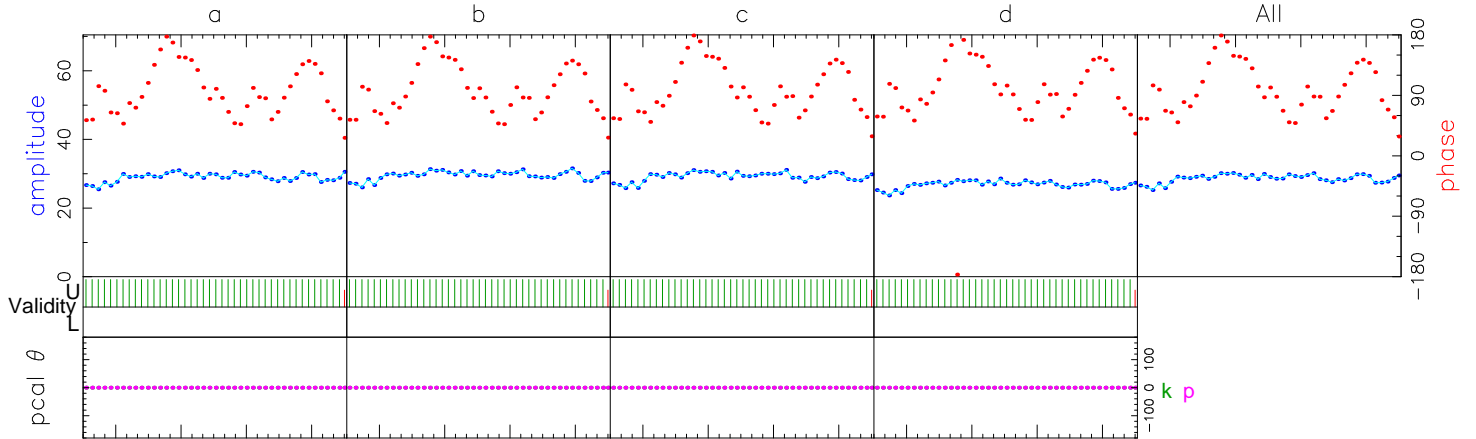
Fringe quality 6

SNR 995.3
 Int time 239.983
 Amp 23.496
 Phase 97.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.005094
 MBD -0.002670
 Fringe rate (Hz)
 -0.004609
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133532
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

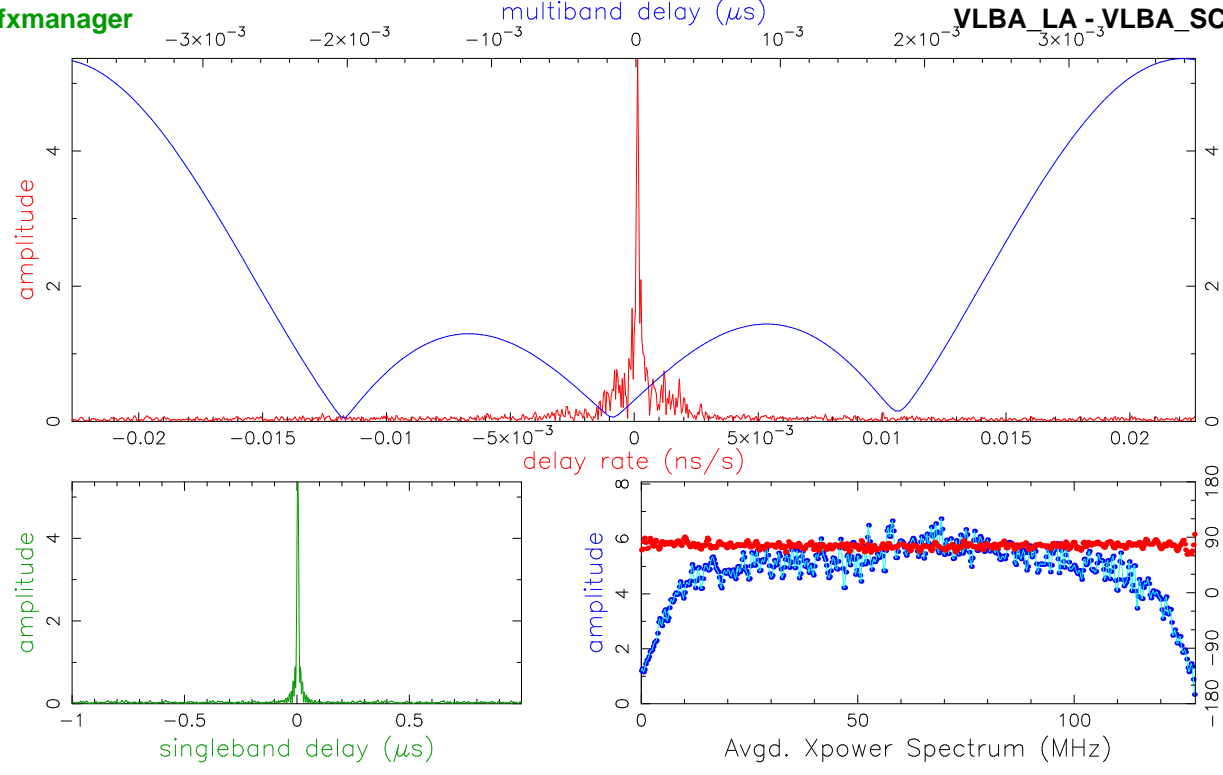


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
p	1000	1000	1000	1000		
k:p	0:0	0:0	0:0	0:0		
k:p	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
p	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UL	Q01UL	Q02UL	Q03UL		

	7.63000809322E+02	Apriori delay (usec)	7.62995666778E+02	Resid mbdelay (usec)	-2.66996E-03	+/- 1.1E-06
Sband delay (usec)	7.63000760528E+02	Apriori clock (usec)	-5.2221069E+00	Resid sbdelay (usec)	5.09375E-03	+/- 4.3E-06
Phase delay (usec)	7.62995673074E+02	Apriori clockrate (us/s)	1.2000000E-07	Resid phdelay (usec)	6.29538E-06	+/- 7.4E-09
Delay rate (us/s)	6.68259551159E-02	Apriori rate (us/s)	6.68260622139E-02	Resid rate (us/s)	-1.07098E-07	+/- 5.4E-11
Total phase (deg)	276.9	Apriori accel (us/s/s)	-3.99747517432E-06	Resid phase (deg)	97.5	+/- 0.1

	RMS	Theor.	Amplitude	23.496 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	36.4	0.4	Search (1024X16)	21.522	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	22.5	0.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	2.9	0.1	Inc. seg. avg.	28.649	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.8	0.2	Inc. frq. avg.	23.205	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 203.6 el 54.4 pa 20.3 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -192.702 -148.625 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/kp.Q.92.1V2A0K

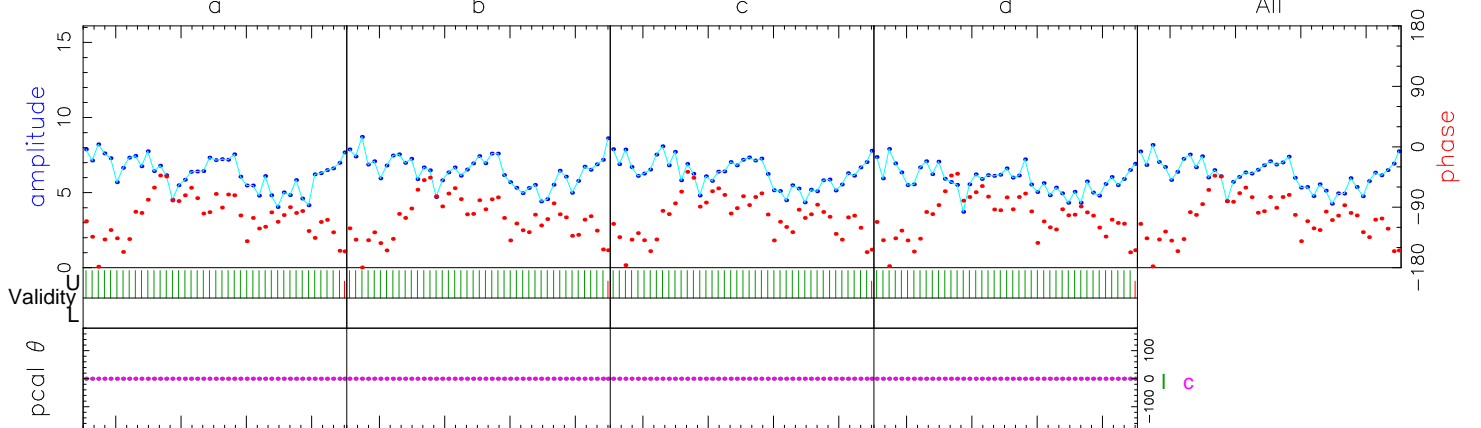


Fringe quality 6

SNR 227.5
Int time 239.984
Amp 5.370
Phase -105.3
PFD 0.0e+00
Delays (us)
SBD 0.003708
MBD -0.004033
Fringe rate (Hz)
0.006076
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133533
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

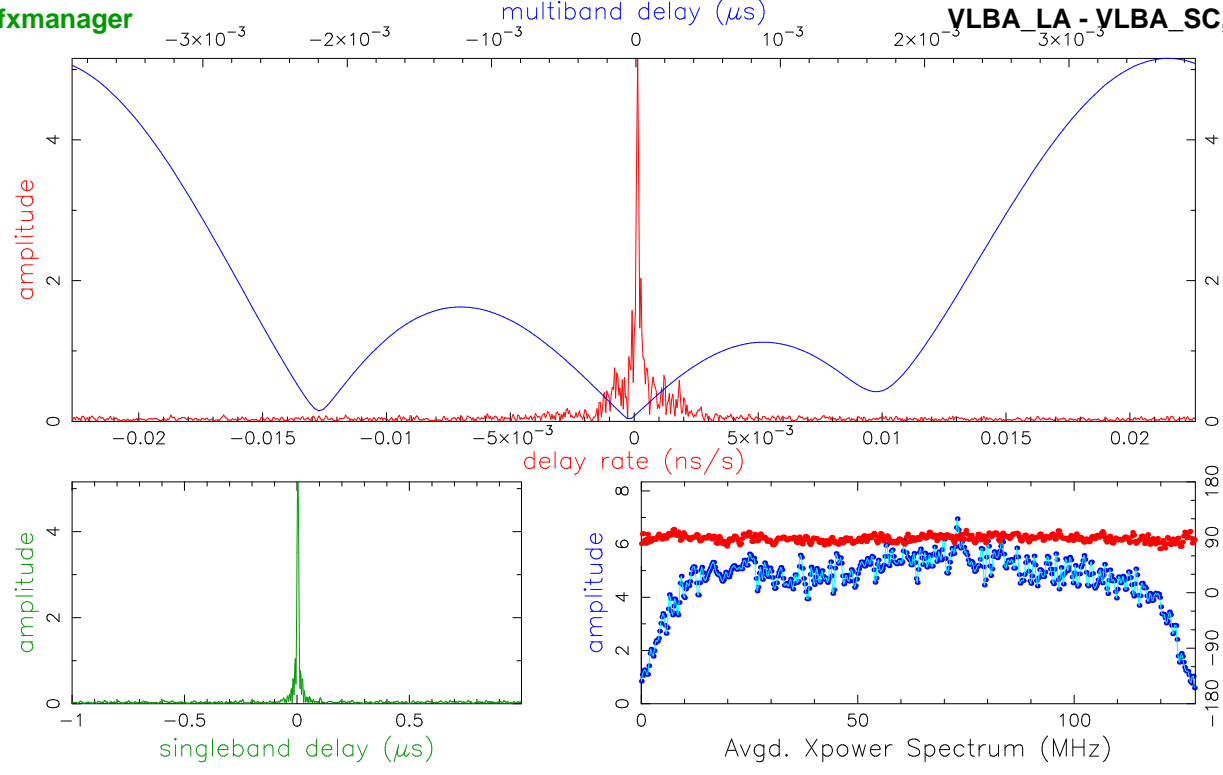
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-104.7	-107.8	-104.4	-104.3	Phase	-105.3
5.4	5.6	5.4	5.0	Ampl.	5.4
514.6	515.1	515.0	514.8	Sbd box	514.9
U/L 469/0	469/0	469/0	469/0	APs used	
l 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
l:c 0:0	0:0	0:0	0:0	PC phase	
l:c 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
l Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	6.36560672934E+03	Apriori delay (usec)	6.36560294985E+03	Resid mbdelay (usec)	-4.03302E-03	+/- 4.9E-06
Sband delay (usec)	6.36560665835E+03	Apriori clock (usec)	-1.4760561E+01	Resid sbdelay (usec)	3.70850E-03	+/- 1.9E-05
Phase delay (usec)	6.36560294306E+03	Apriori clockrate (us/s)	-6.0200000E-07	Resid phdelay (usec)	-6.79885E-06	+/- 3.3E-08
Delay rate (us/s)	8.73784797755E-01	Apriori rate (us/s)	8.73784656586E-01	Resid rate (us/s)	1.41169E-07	+/- 2.3E-10
Total phase (deg)	240.9	Apriori accel (us/s/s)	-3.46393976211E-05	Resid phase (deg)	-105.3	+/- 0.5

ph/seg (deg)	30.2	1.7	Amplitude	5.370 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	23.6	2.9	Search (1024X16)	5.250	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	2.0	0.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	3.8	0.9	Inc. seg. avg.	6.232	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	5.367	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
l: az 209.5 el 49.0 pa 24.1	c: az 258.8 el 27.5 pa 69.2	u, v (fr/asec)	-2518.089 1261.548	simultaneous interpolator		
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc.Q.105.1V2A0K				

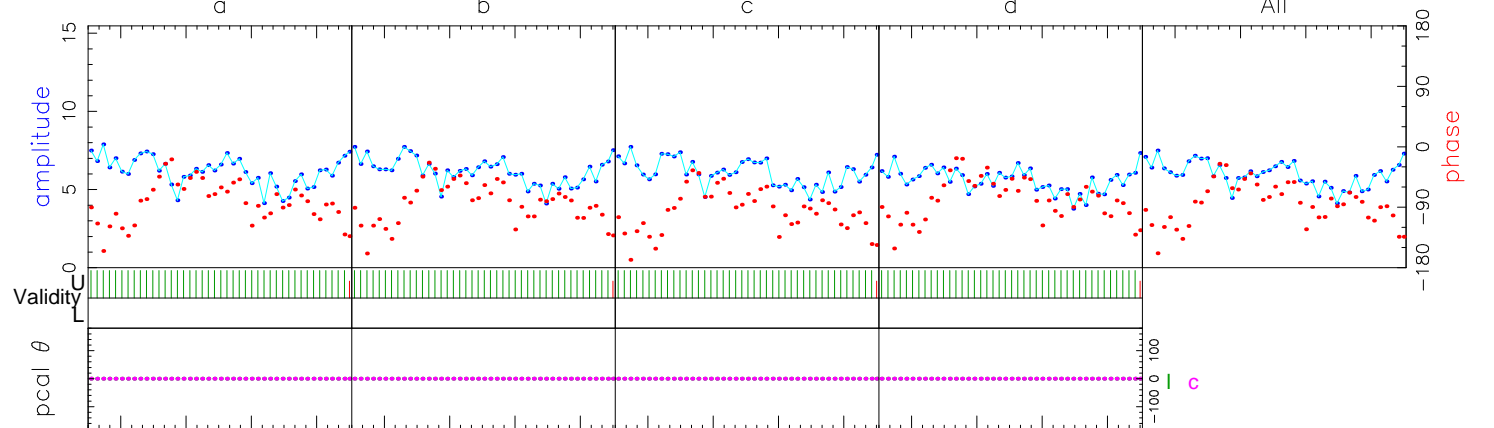


Fringe quality 6

SNR 218.5
Int time 239.984
Amp 5.159
Phase -85.8
PFD 0.0e+00
Delays (us)
SBD 0.003950
MBD -0.004124
Fringe rate (Hz) 0.006022
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133536
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



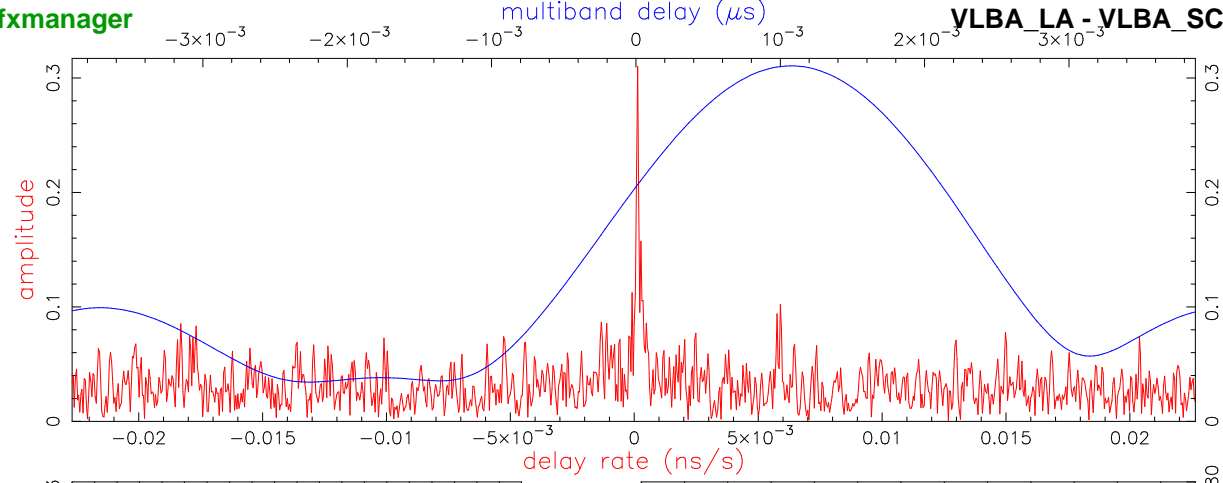
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
c	1000	1000	1000	1000		
l:c	0:0	0:0	0:0	0:0		
l:c	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
c	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	6.36560663837E+03	Apriori delay (usec)	6.36560294985E+03	Resid mbdelay (usec)	-4.12399E-03	+/-	5.1E-06
Sband delay (usec)	6.36560690023E+03	Apriori clock (usec)	-1.4760561E+01	Resid sbdelay (usec)	3.95038E-03	+/-	2.0E-05
Phase delay (usec)	6.36560294432E+03	Apriori clockrate (us/s)	-6.0200000E-07	Resid phdelay (usec)	-5.53830E-06	+/-	3.4E-08
Delay rate (us/s)	8.73784796501E-01	Apriori rate (us/s)	8.73784656586E-01	Resid rate (us/s)	1.39916E-07	+/-	2.4E-10
Total phase (deg)	260.4	Apriori accel (us/s/s)	-3.46393976211E-05	Resid phase (deg)	-85.8	+/-	0.5

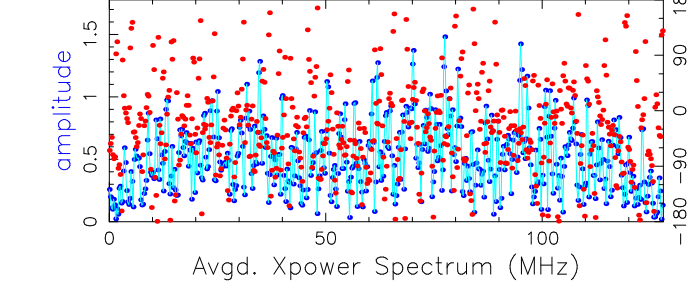
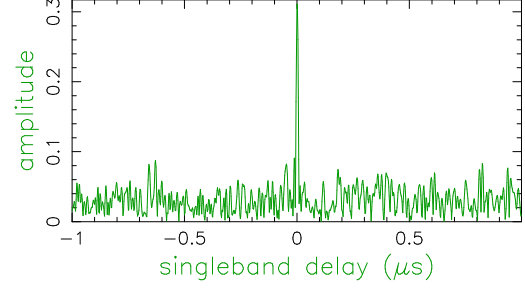
ph/seg (deg)	RMS 30.1	Theor. 1.7	Amplitude	5.159 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	22.0	3.0	Search (1024X16)	4.989	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	8.8	0.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	4.2	0.9	Inc. seg. avg.	5.973	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	5.189	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

l: az 209.5 el 49.0 pa 24.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2518.089 1261.548 simultaneous interpolator

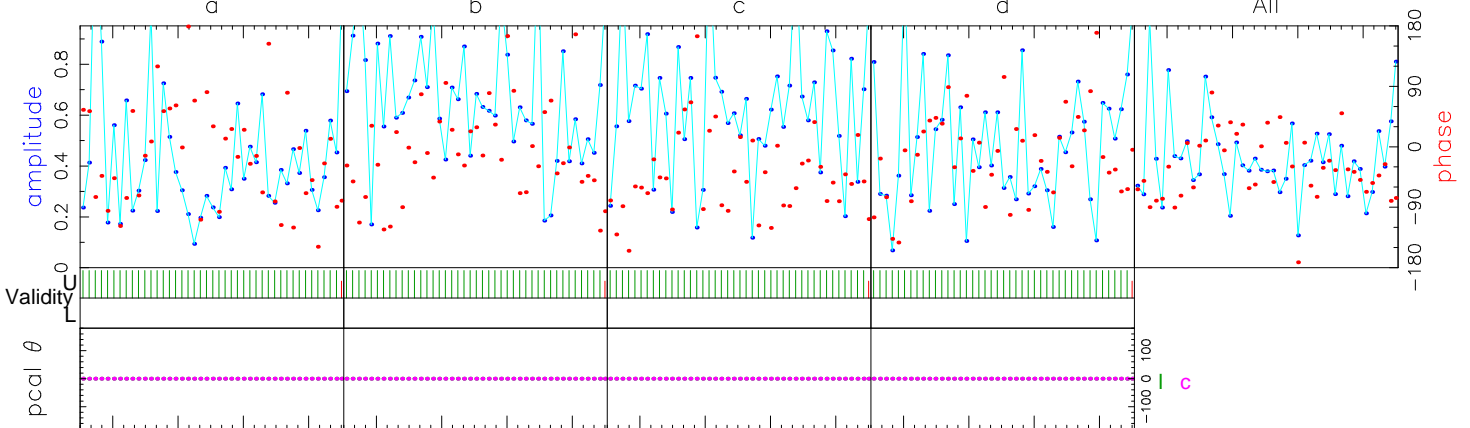
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc.Q.132.1V2A0K



Fringe quality 9
SNR 13.4
Int time 239.984
Amp 0.317
Phase -30.8
PFD 1.1e-32
Delays (us)
SBD 0.000942
MBD 0.001005
Fringe rate (Hz) 0.006220
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133538
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-28.6	-28.2	-49.8	-10.1	Phase	-30.8
	0.2	0.4	0.4	0.3	Ampl.	0.3
	513.9	513.1	513.2	514.1	Sbd box	513.5
U/L	469/0	469/0	469/0	469/0	APs used	
l	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
l:c	0:0	0:0	0:0	0:0	PC phase	
l:c	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	6.36560395509E+03	Apriori delay (usec)	6.36560294985E+03	Resid mbdelay (usec)	1.00523E-03	+/- 8.3E-05
Group delay (usec)(sbd)	6.36560389173E+03	Apriori clock (usec)	-1.4760561E+01	Resid sbdelay (usec)	9.41875E-04	+/- 3.2E-04
Sband delay (usec)	6.36560294787E+03	Apriori clockrate (us/s)	-6.0200000E-07	Resid phdelay (usec)	-1.98705E-06	+/- 5.5E-07
Phase delay (usec)	8.73784801107E-01	Apriori rate (us/s)	8.73784656586E-01	Resid rate (us/s)	1.44522E-07	+/- 4.0E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-3.46393976211E-05	Resid phase (deg)	-30.8	+/- 8.5
Total phase (deg)	315.4					

	RMS	Theor.	Amplitude	0.317 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	48.2	28.0	Search (1024X16)	0.302	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	62.2	48.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	20.0	8.5	Inc. seg. avg.	0.385	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	21.4	14.9	Inc. frq. avg.	0.317	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 209.5 el 49.0 pa 24.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2518.089 1261.548 simultaneous interpolator

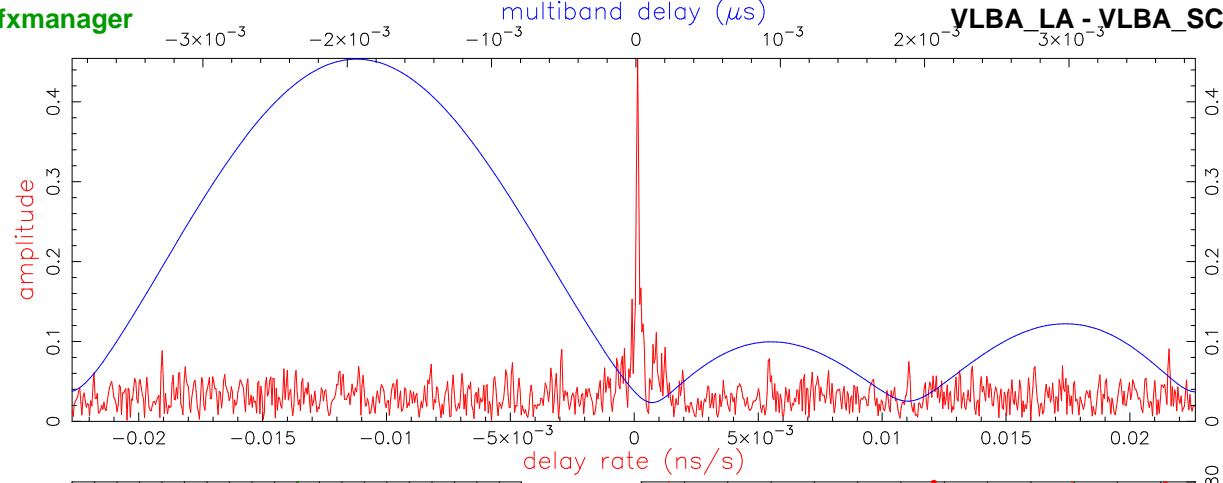
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc.Q.150.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, lc

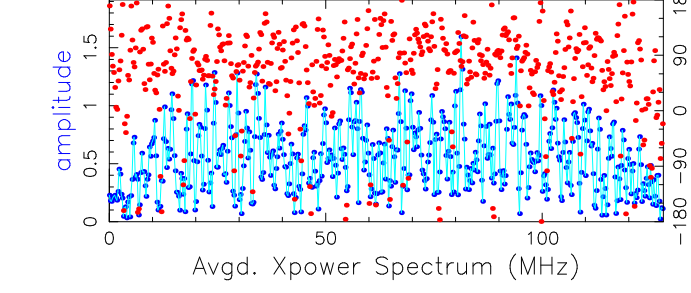
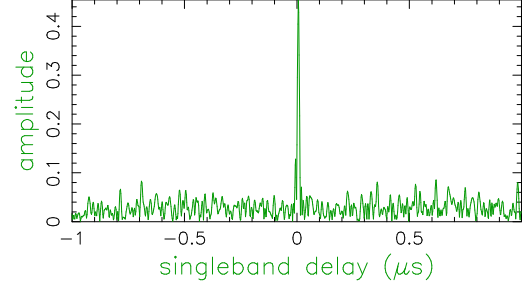
VLBA_LA - VLBA_SC, fgroup Q, pol RL



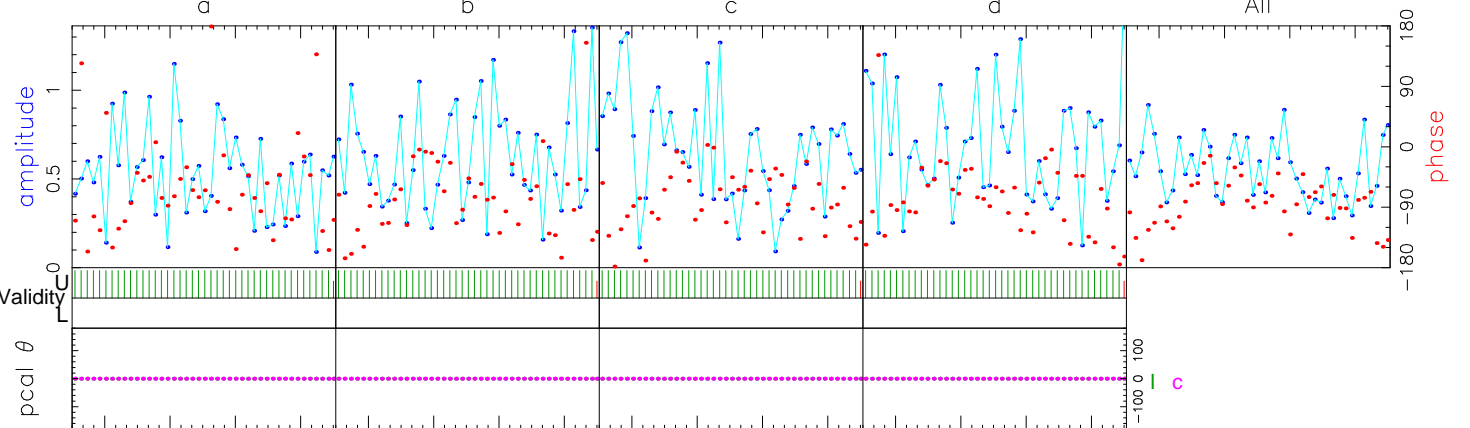
Fringe quality 9

SNR 19.2
 Int time 239.984
 Amp 0.454
 Phase -85.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.006183
 MBD -0.001913
 Fringe rate (Hz) 0.005974
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133540
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-83.7	-86.3	-82.0	-88.3	Phase	-85.2
0.4	0.5	0.5	0.5	Ampl.	0.5
515.7	516.5	515.8	516.6	Sbd box	516.2
U/L 469/0	469/0	469/0	469/0	APs used	
l 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
l:c 0:0	0:0	0:0	0:0	PC phase	
l:c 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
l Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	6.36560884940E+03	Apriori delay (usec)	6.36560294985E+03	Resid mbdelay (usec)	-1.91296E-03	+/-	5.8E-05
Sband delay (usec)	6.36560913310E+03	Apriori clock (usec)	-1.4760561E+01	Resid sbdelay (usec)	6.18325E-03	+/-	2.2E-04
Phase delay (usec)	6.36560294436E+03	Apriori clockrate (us/s)	-6.0200000E-07	Resid phdelay (usec)	-5.49612E-06	+/-	3.8E-07
Delay rate (us/s)	8.73784795384E-01	Apriori rate (us/s)	8.73784656586E-01	Resid rate (us/s)	1.38798E-07	+/-	2.8E-09
Total phase (deg)	261.1	Apriori accel (us/s/s)	-3.46393976211E-05	Resid phase (deg)	-85.2	+/-	6.0

	RMS	Theor.	Amplitude	0.454 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	35.2	19.5	Search (1024X16)	0.450	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	43.3	34.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	3.4	6.0	Inc. seg. avg.	0.529	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
amp/frq (%)	12.1	10.4	Inc. frq. avg.	0.451	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

l: az 209.5 el 49.0 pa 24.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2518.089 1261.548 simultaneous interpolator

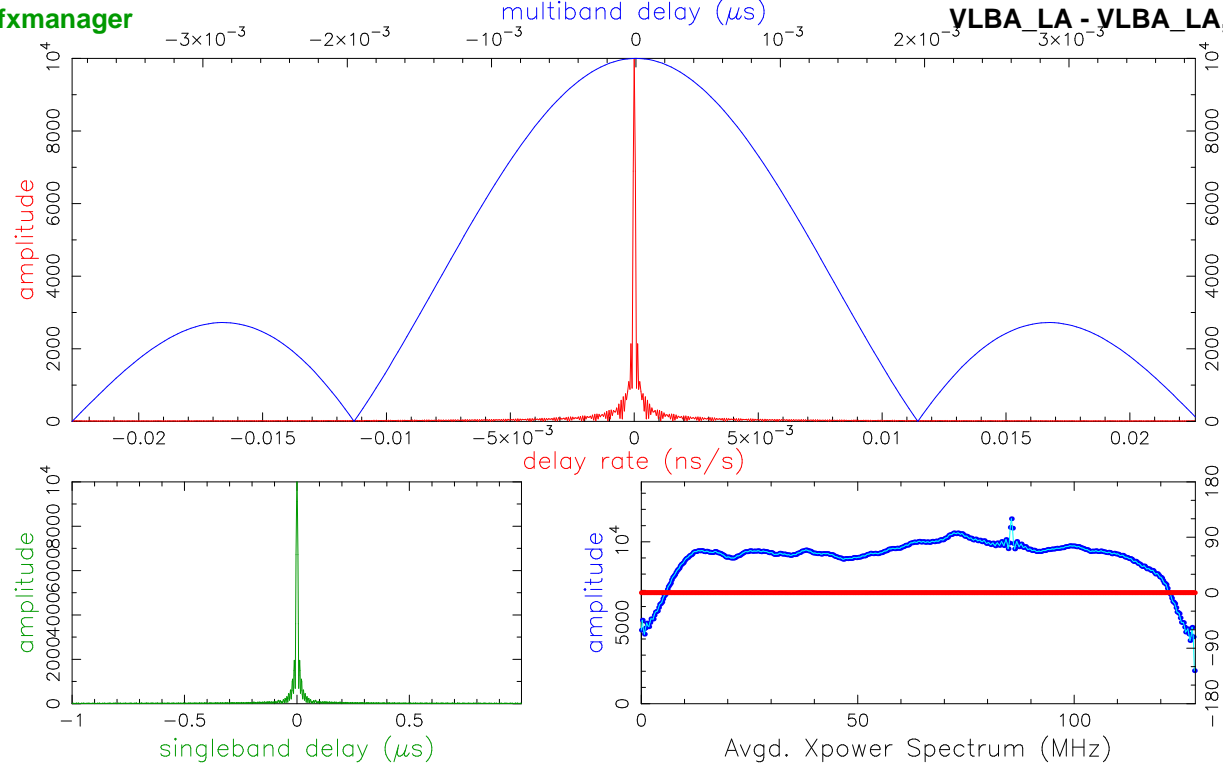
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lc.Q.162.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, II

VLBA_LA - VLBA_LA, fgroup Q, pol RR

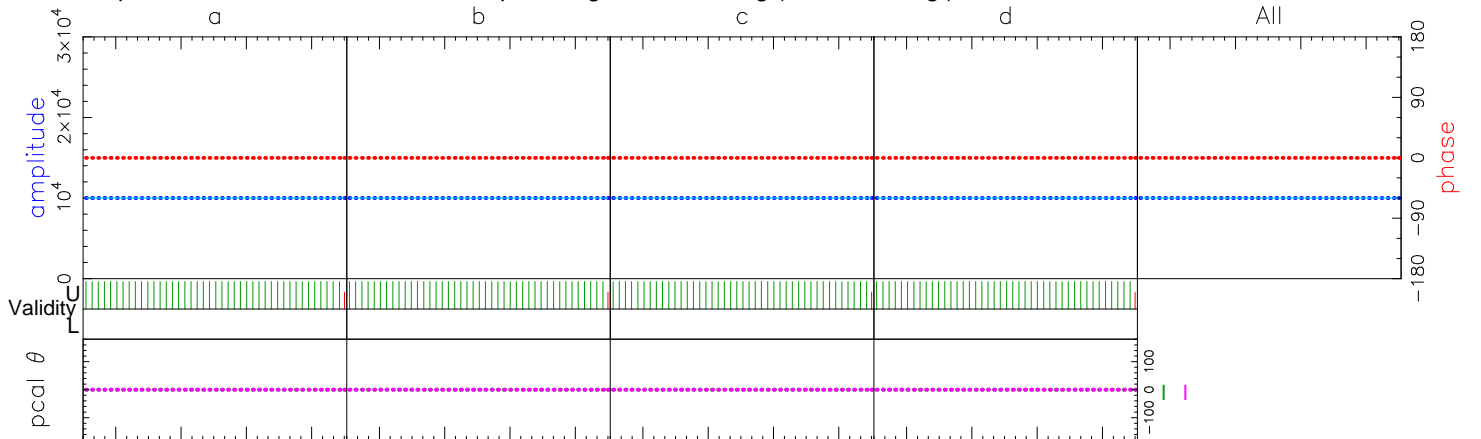


Fringe quality 9

SNR 423631.9
 Int time 239.984
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133534
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



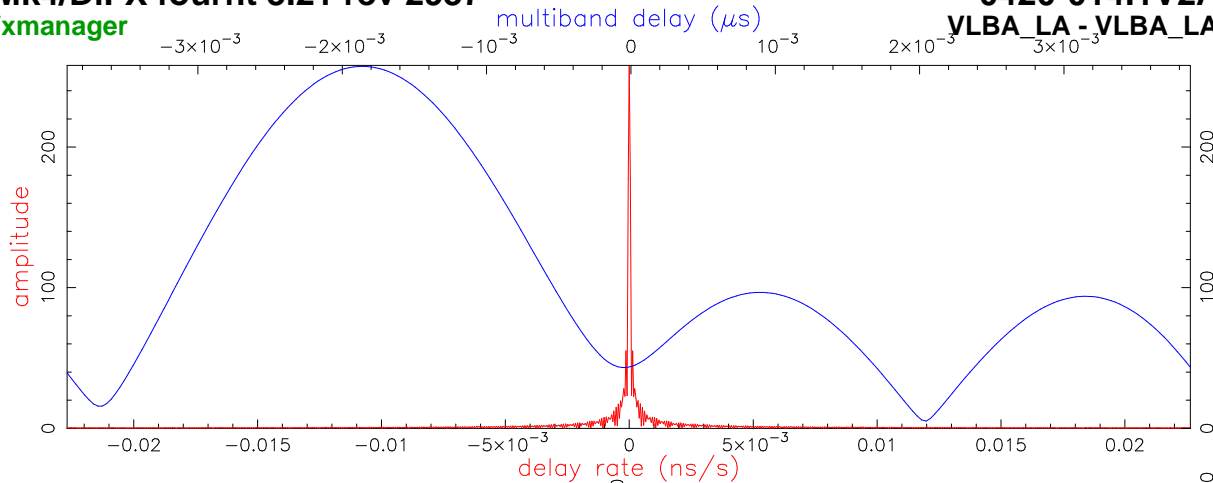
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
I	1000	1000	1000	1000		
I:I	0:0	0:0	0:0	0:0		
I:I	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000		
I	1000	1000	1000	1000		
I	Q00UR	Q01UR	Q02UR	Q03UR		
I	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	0.00000000000E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/- 2.6E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/- 1.0E-08
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/- 1.7E-11
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00	+/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	0.0	+/- 0.0

	RMS	Theor.	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

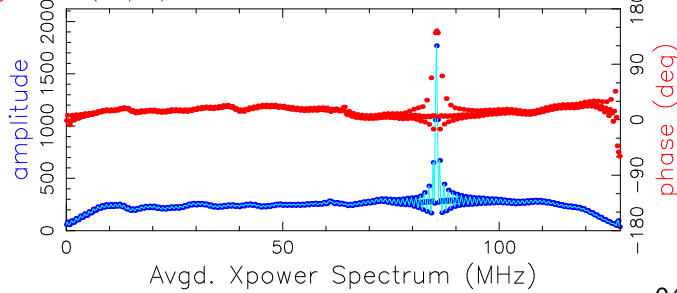
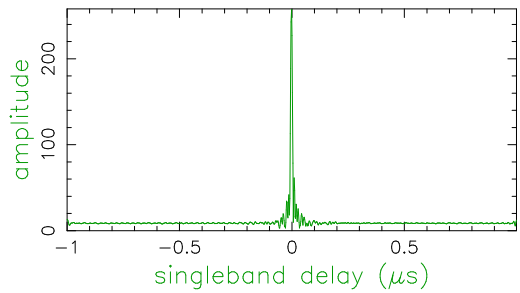
I: az 209.5 el 49.0 pa 24.1 I: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/II..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/II.Q.113.1V2A0K



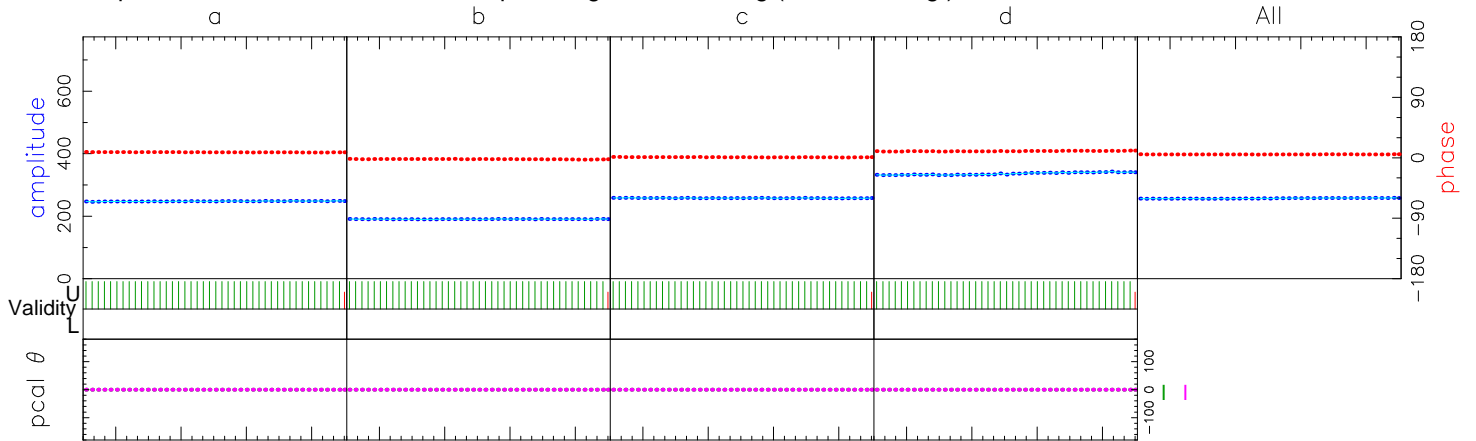
Fringe quality 8

SNR 10931.8
Int time 239.984
Amp 258.051
Phase 5.0
PFD 0.0e+00
Delays (us)
SBD -0.002300
MBD -0.001883
Fringe rate (Hz)
0.000006
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133535
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	8.2	-2.1	0.9	9.9	Phase	5.0
	247.9	190.8	258.1	336.2	Ampl.	258.3
	512.0	511.4	512.2	511.7	Sbd box	511.8
U/L	469/0	469/0	469/0	469/0	APs used	
	1000	1000	1000	1000	PC freqs	
	1000	1000	1000	1000	PC freqs	
:	0:0	0:0	0:0	0:0	PC phase	
:	0:0	0:0	0:0	0:0	Manl PC	
	1000	1000	1000	1000	PC amp	
	1000	1000	1000	1000		
	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.88306250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.88306E-03	+/-	1.0E-07
Sband delay (usec)	-2.30000000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-2.30000E-03	+/-	3.9E-07
Phase delay (usec)	3.25239677912E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	3.25240E-07	+/-	6.8E-10
Delay rate (us/s)	1.44646506547E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.44647E-10	+/-	4.9E-12
Total phase (deg)	5.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	5.0	+/-	0.0

ph/seg (deg)	0.1	Theor.	0.0	Amplitude	258.051 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	0.5		0.0	Search (1024X16)	256.423	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	7.1		0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	20.1		0.0	Inc. seg. avg.	257.324	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	258.262	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

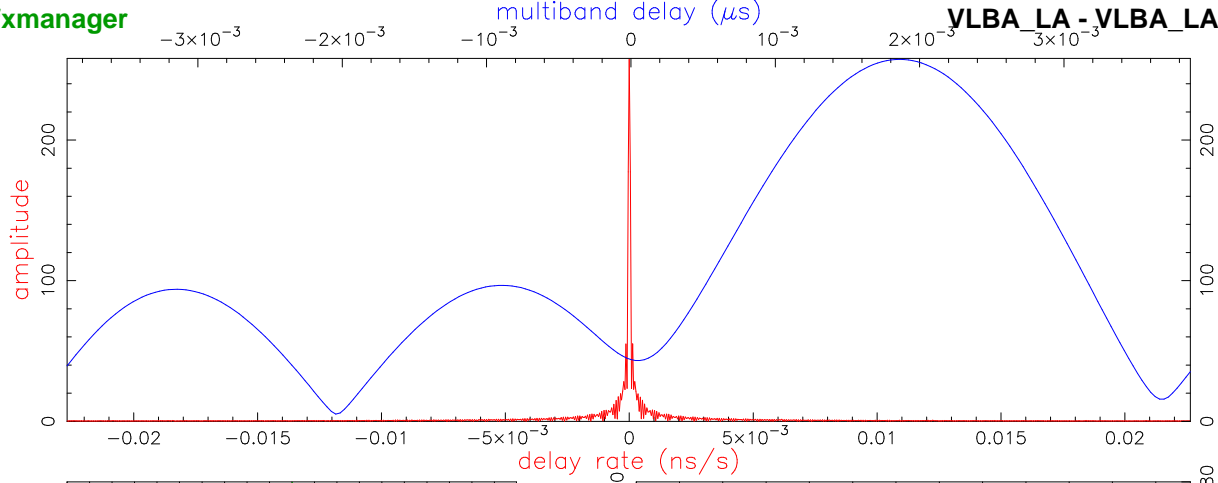
l: az 209.5 el 49.0 pa 24.1 i: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/II..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/II.Q.128.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, II

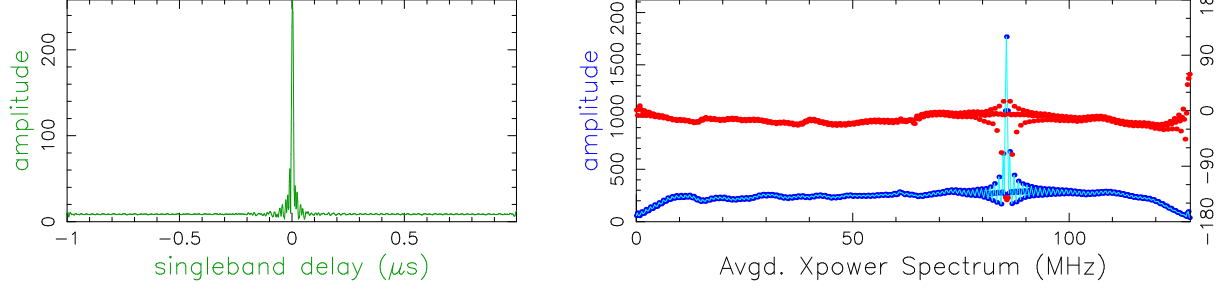
VLBA_LA - VLBA_LA, fgroup Q, pol RL



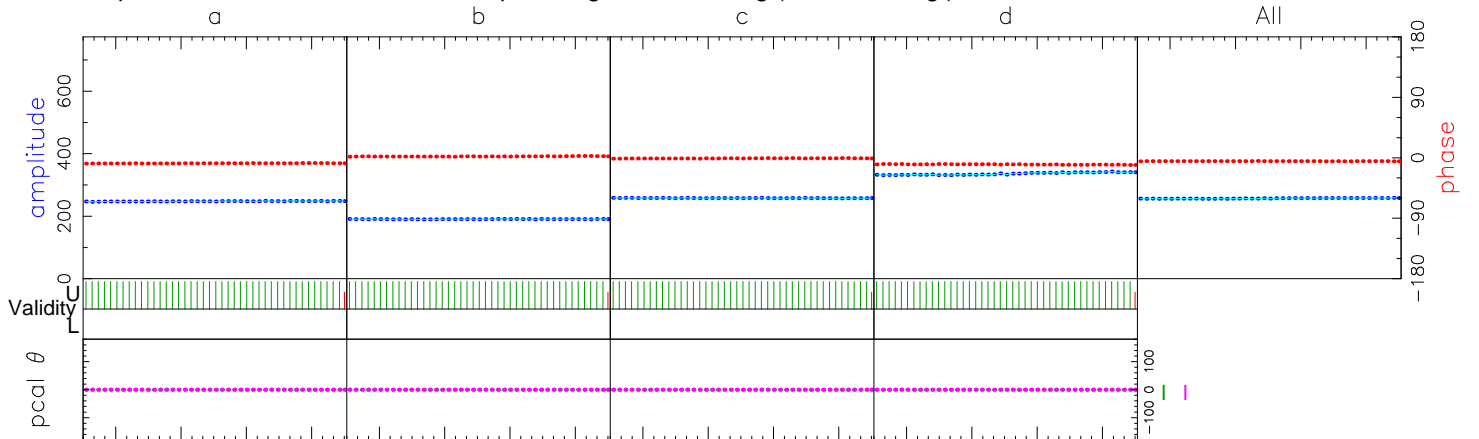
Fringe quality 8

SNR 10931.8
 Int time 239.984
 Amp 258.051
 Phase -5.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.002300
 MBD 0.001883
 Fringe rate (Hz)
 -0.000006
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133537
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	a	b	c	d	All
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-8.2	2.1	-0.9	-9.9	Phase	-5.0
247.9	190.8	258.1	336.2	Ampl.	258.3
514.0	514.6	513.8	514.3	Sbd box	514.2
U/L 469/0	469/0	469/0	469/0	APs used	
1000	1000	1000	1000	PC freqs	
1000	1000	1000	1000	PC freqs	
: 0:0	0:0	0:0	0:0	PC phase	
: 0:0	0:0	0:0	0:0	Manl PC	
1000	1000	1000	1000	PC amp	
1000	1000	1000	1000		
Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
				Tracks	
Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
				Tracks	

Group delay (usec)(sbd)	1.88306250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.88306E-03	+/-	1.0E-07
Sband delay (usec)	2.30000000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	2.30000E-03	+/-	3.9E-07
Phase delay (usec)	-3.25239677851E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-3.25240E-07	+/-	6.8E-10
Delay rate (us/s)	-1.44646506547E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.44647E-10	+/-	4.9E-12
Total phase (deg)	-5.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-5.0	+/-	0.0

ph/seg (deg)	0.1	Theor.	0.0	Amplitude	258.051 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	0.5		0.0	Search (1024X16)	256.423	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	7.1		0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	20.1		0.0	Inc. seg. avg.	257.324	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
				Inc. frq. avg.	258.262	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 209.5 el 49.0 pa 24.1 l: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

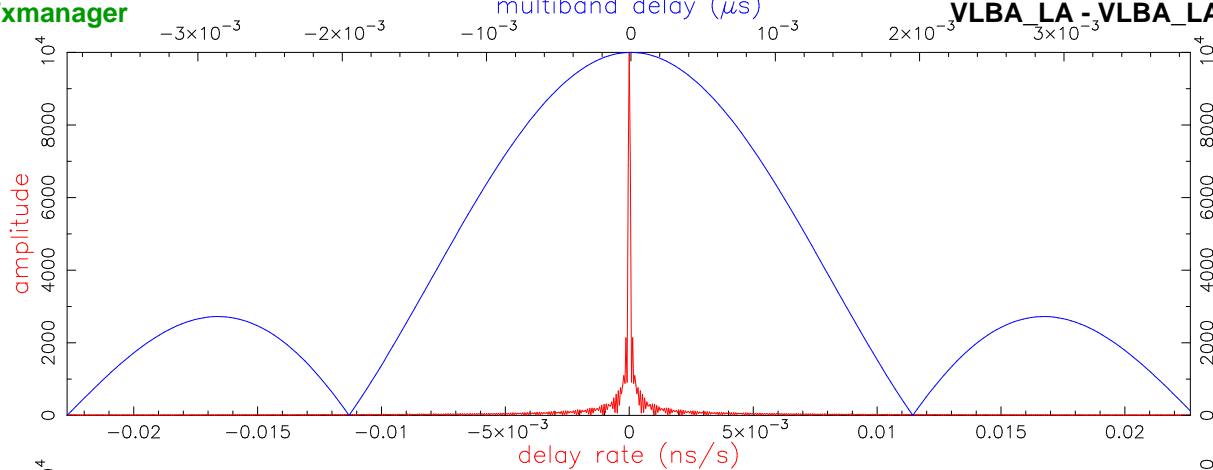
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/II..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/II.Q.143.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

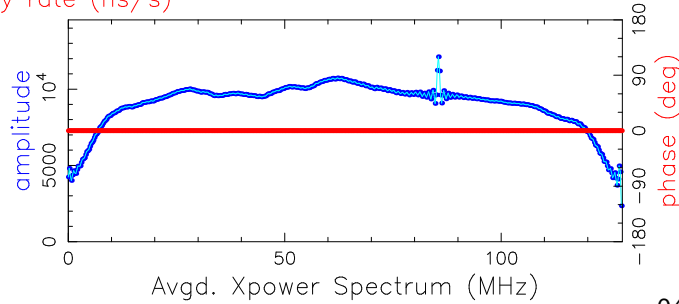
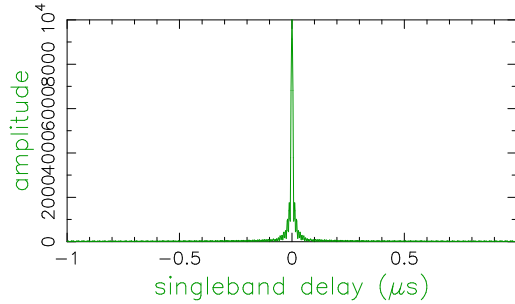
0420-014.1V2A0K, No0121, II

VLBA_LA - VLBA_LA, fgroup Q, pol LL



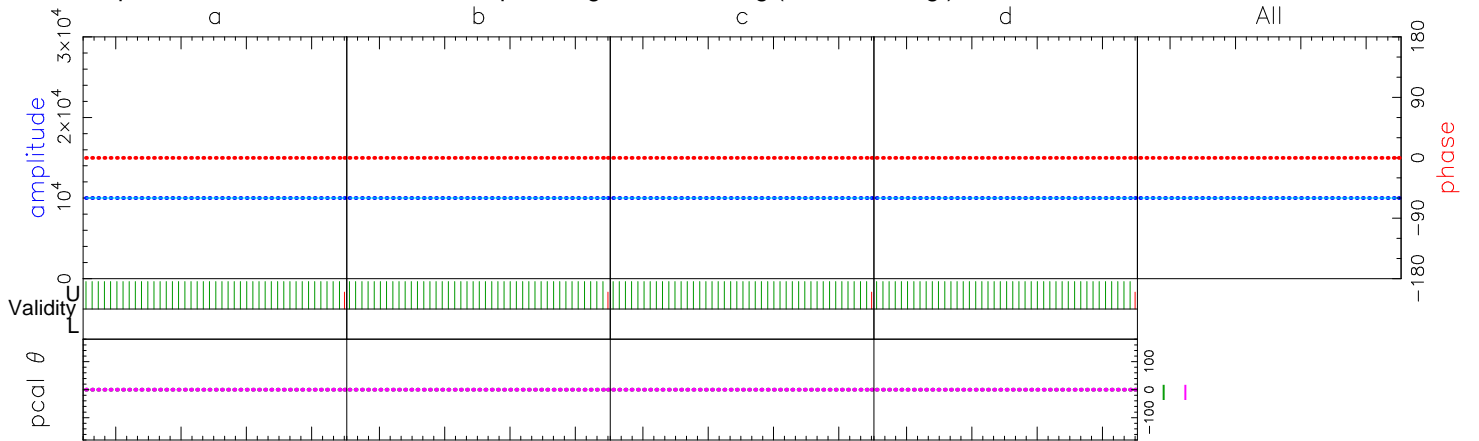
Fringe quality 9

SNR 423631.9
 Int time 239.984
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133532
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

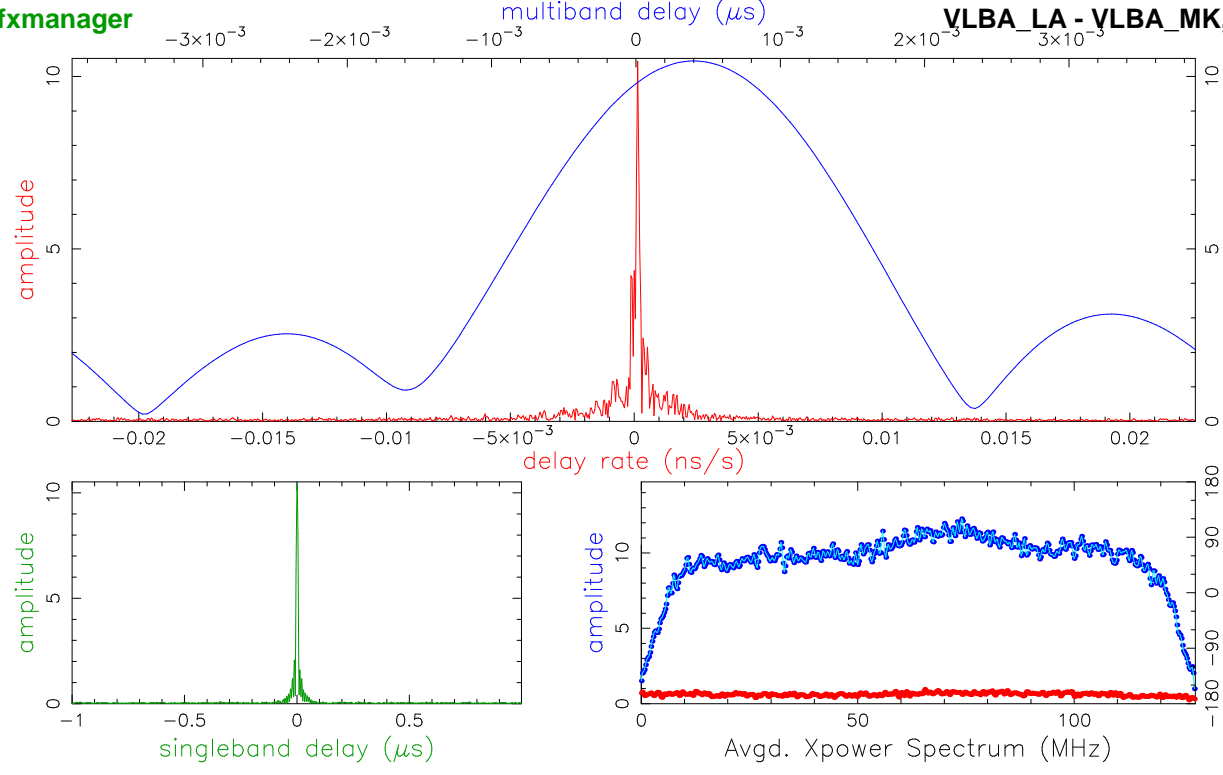


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
I	1000	1000	1000	1000		
I:I	0:0	0:0	0:0	0:0		
I:I	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000		
I	1000	1000	1000	1000		
I	Q00UL	Q01UL	Q02UL	Q03UL		
I	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/- 2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/- 1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/- 1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/- 0.0

	RMS	Theor.	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

I: az 209.5 el 49.0 pa 24.1 I: az 209.5 el 49.0 pa 24.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/II..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/II.Q.95.1V2A0K

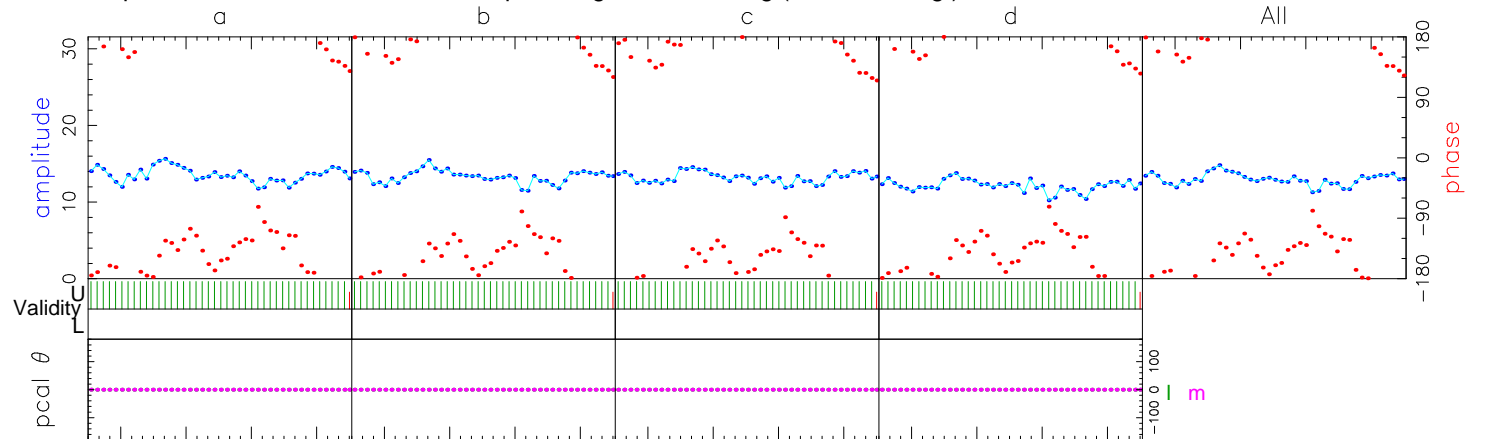


Fringe quality 6

SNR 445.8
Int time 239.981
Amp 10.524
Phase -161.1
PFD 0.0e+00
Delays (us)
SBD 0.000591
MBD 0.000441
Fringe rate (Hz)
0.005157
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133534
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
m	1000	1000	1000	1000		
l:m	0:0	0:0	0:0	0:0		
l:m	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
m	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
m	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.24069511958E+03	Apriori delay (usec)	-1.24069556034E+03	Resid mbdelay (usec)	4.40763E-04	+/- 2.5E-06
Sband delay (usec)	-1.24069496921E+03	Apriori clock (usec)	-1.8228662E+01	Resid sbdelay (usec)	5.91125E-04	+/- 9.7E-06
Phase delay (usec)	-1.24069557074E+03	Apriori clockrate (us/s)	-6.0400003E-07	Resid phdelay (usec)	-1.03993E-05	+/- 1.7E-08
Delay rate (us/s)	-1.14462794692E+00	Apriori rate (us/s)	-1.14462806674E+00	Resid rate (us/s)	1.19827E-07	+/- 1.2E-10
Total phase (deg)	-131.2	Apriori accel (us/s/s)	5.87395105879E-06	Resid phase (deg)	-161.1	+/- 0.3

ph/seg (deg)	37.8	0.8	Amplitude	10.524 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	24.6	1.5	Search (1024X16)	10.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	8.2	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	4.5	0.4	Inc. seg. avg.	13.004	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	10.497	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 209.5 el 49.0 pa 24.1 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 3276.643 1087.849 simultaneous interpolator

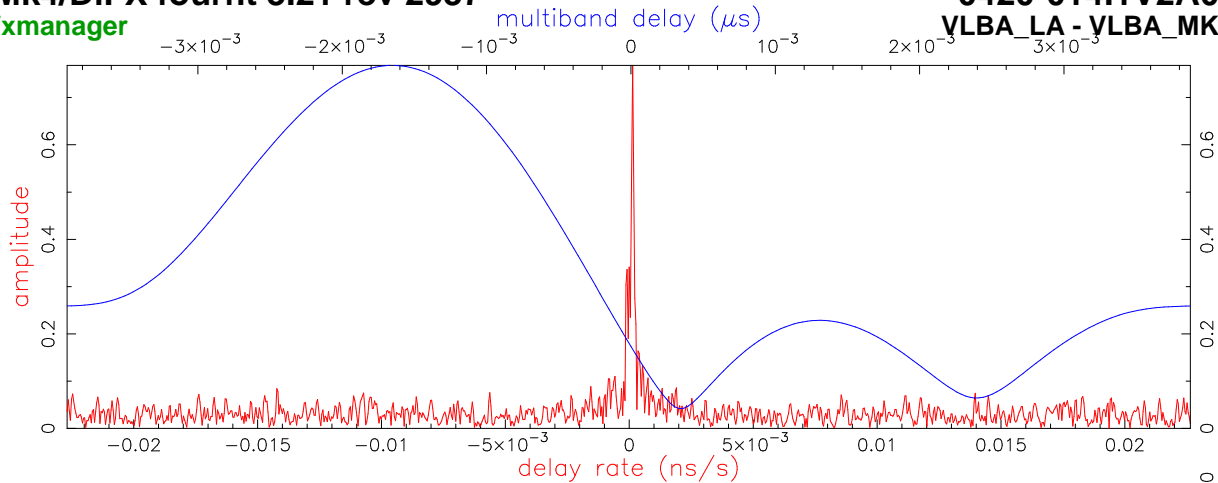
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lm.Q.118.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

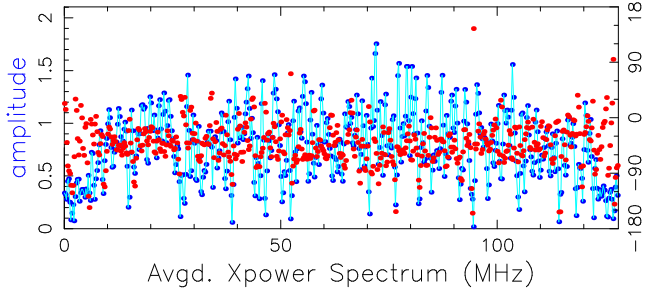
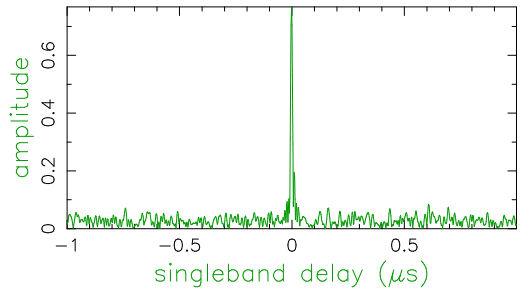
0420-014.1V2A0K, No0121, Im

VLBA_LA - VLBA_MK, fgroup Q, pol LR



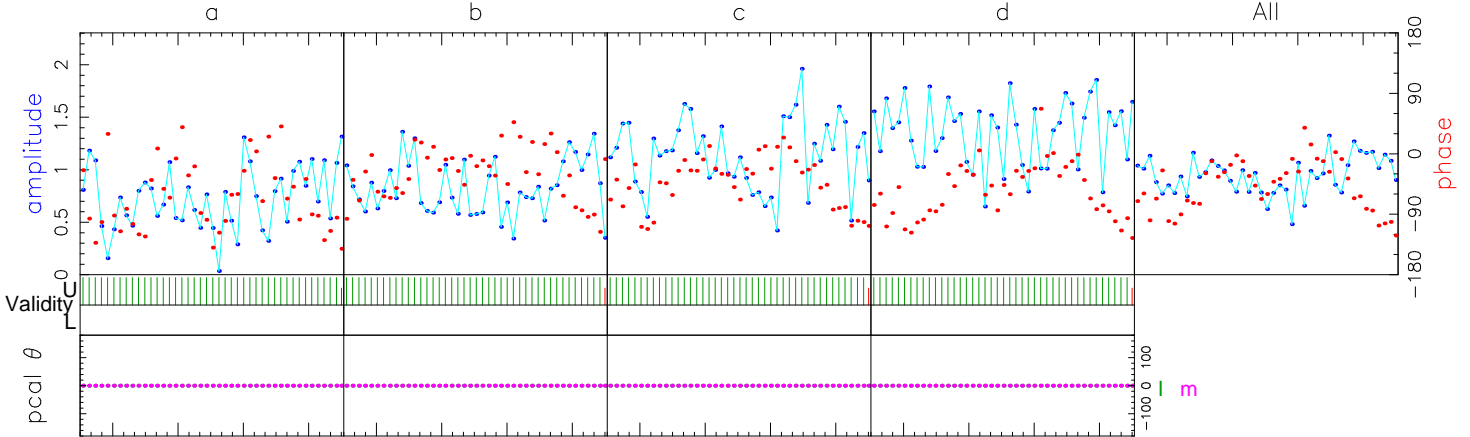
Fringe quality 7

SNR 32.5
 Int time 239.981
 Amp 0.768
 Phase -49.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.001948
 MBD -0.001652
 Fringe rate (Hz)
 0.005010
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133537
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



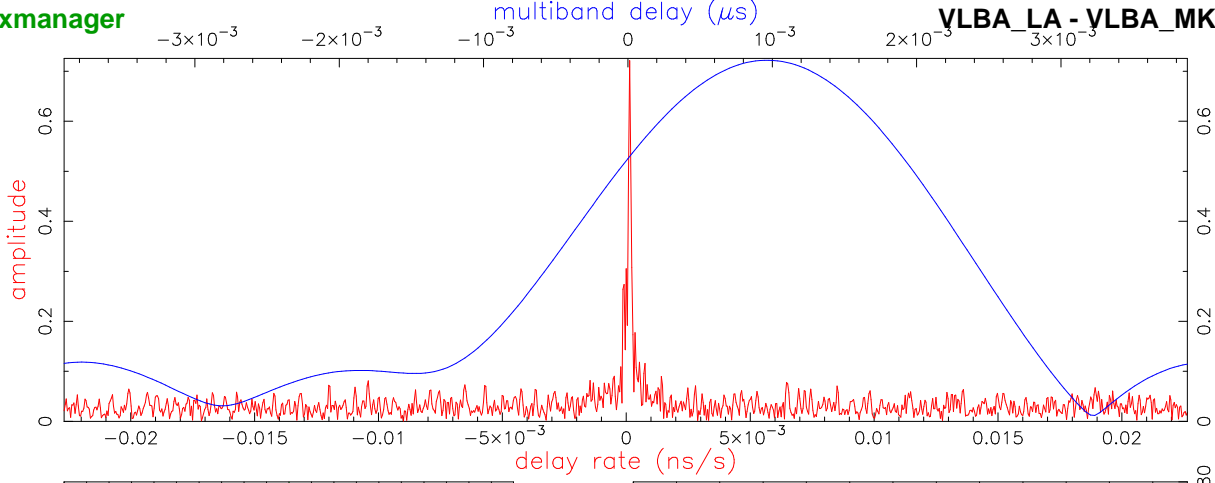
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
m	1000	1000	1000	1000		
l:m	0:0	0:0	0:0	0:0		
l:m	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
m	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL		
m	Q00UR	Q01UR	Q02UR	Q03UR		
					Validity	
					pcal θ	

Group delay (usec)(sbd)	-1.24069721242E+03	Apriori delay (usec)	-1.24069556034E+03	Resid mbdelay (usec)	-1.65208E-03	+/-	3.4E-05
Sband delay (usec)	-1.24069750871E+03	Apriori clock (usec)	-1.8228662E+01	Resid sbdelay (usec)	-1.94838E-03	+/-	1.3E-04
Phase delay (usec)	-1.24069556355E+03	Apriori clockrate (us/s)	-6.0400003E-07	Resid phdelay (usec)	-3.21394E-06	+/-	2.3E-07
Delay rate (us/s)	-1.14462795034E+00	Apriori rate (us/s)	-1.14462806674E+00	Resid rate (us/s)	1.16398E-07	+/-	1.6E-09
Total phase (deg)	-19.9	Apriori accel (us/s/s)	5.87395105879E-06	Resid phase (deg)	-49.8	+/-	3.5

ph/seg (deg)	RMS 37.1	Theor. 11.5	Amplitude	0.768 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	32.5	20.2	Search (1024X16)	0.720	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	19.7	3.5	Inc. seg. avg.	0.927	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023	0.023		
amp/frq (%)	29.8	6.1	Inc. frq. avg.	0.785	Data rate (Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

l: az 209.5 el 49.0 pa 24.1 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 3276.643 1087.849 simultaneous interpolator

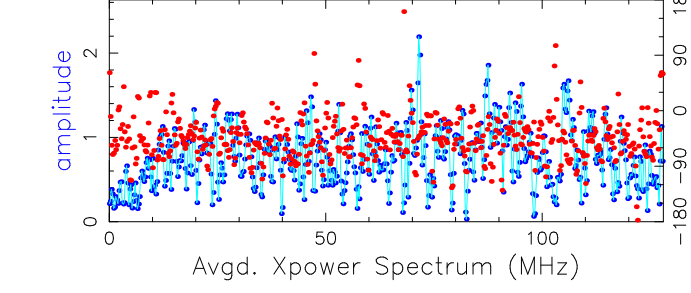
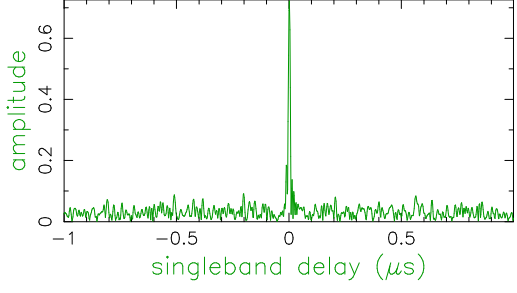
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lm.Q.144.1V2A0K



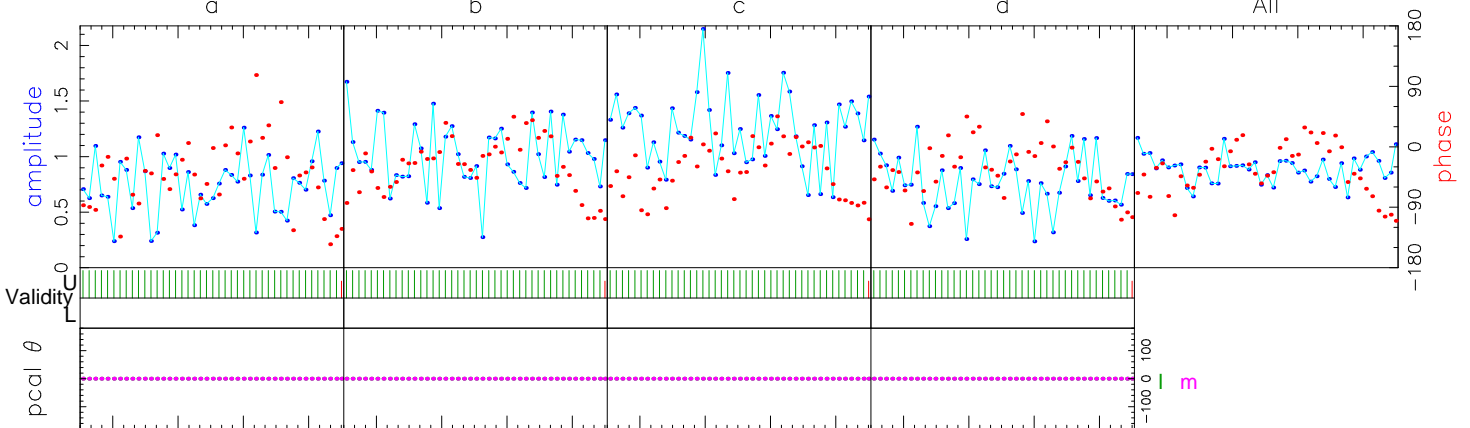
Fringe quality 8

SNR 30.7
Int time 239.981
Amp 0.726
Phase -34.0
PFD 0.0e+00
Delays (us)
SBD 0.001445
MBD 0.000916
Fringe rate (Hz) 0.005115
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133539
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



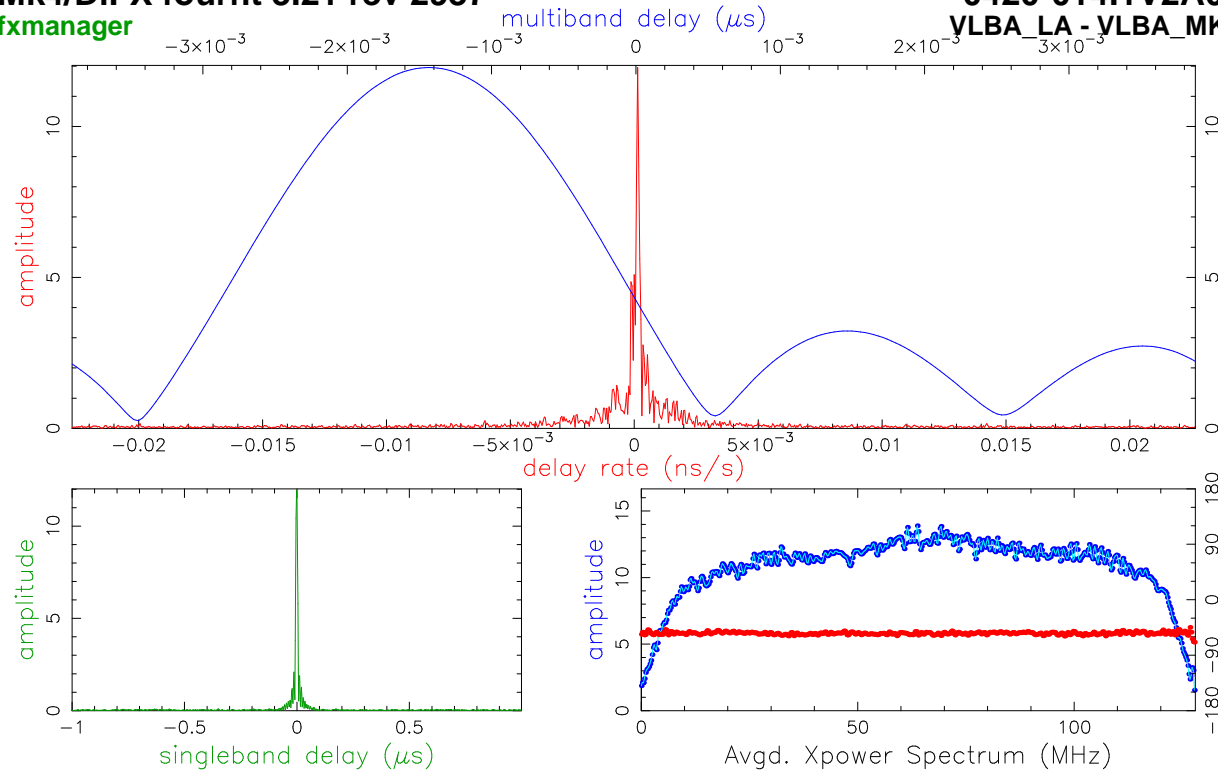
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
m	1000	1000	1000	1000		
l:m	0:0	0:0	0:0	0:0		
l:m	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
m	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
m	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-1.24069464389E+03	Apriori delay (usec)	-1.24069556034E+03	Resid mbdelay (usec)	9.16451E-04	+/-	3.6E-05
Sband delay (usec)	-1.24069411484E+03	Apriori clock (usec)	-1.8228662E+01	Resid sbdelay (usec)	1.44550E-03	+/-	1.4E-04
Phase delay (usec)	-1.24069556253E+03	Apriori clockrate (us/s)	-6.0400003E-07	Resid phdelay (usec)	-2.19130E-06	+/-	2.4E-07
Delay rate (us/s)	-1.14462794789E+00	Apriori rate (us/s)	-1.14462806674E+00	Resid rate (us/s)	1.18851E-07	+/-	1.7E-09
Total phase (deg)	-4.1	Apriori accel (us/s/s)	5.87395105879E-06	Resid phase (deg)	-34.0	+/-	3.7

ph/seg (deg)	RMS 36.7	Theor. 12.2	Amplitude 0.726 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	28.4	21.3	Search (1024X16) 0.697	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	9.5	3.7	Interp. 0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	25.0	6.5	Inc. seg. avg. 0.873	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
			Inc. frq. avg. 0.724					

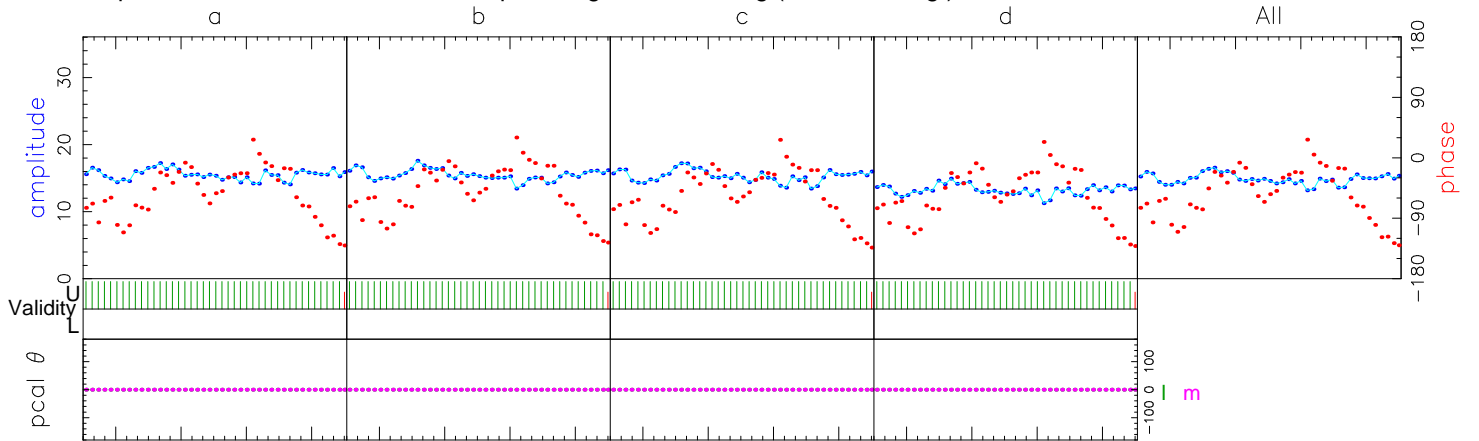


Fringe quality 6

SNR 509.3
Int time 239.981
Amp 12.023
Phase -54.6
PFD 0.0e+00
Delays (us)
SBD -0.001420
MBD -0.001412
Fringe rate (Hz)
0.005176
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133532
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



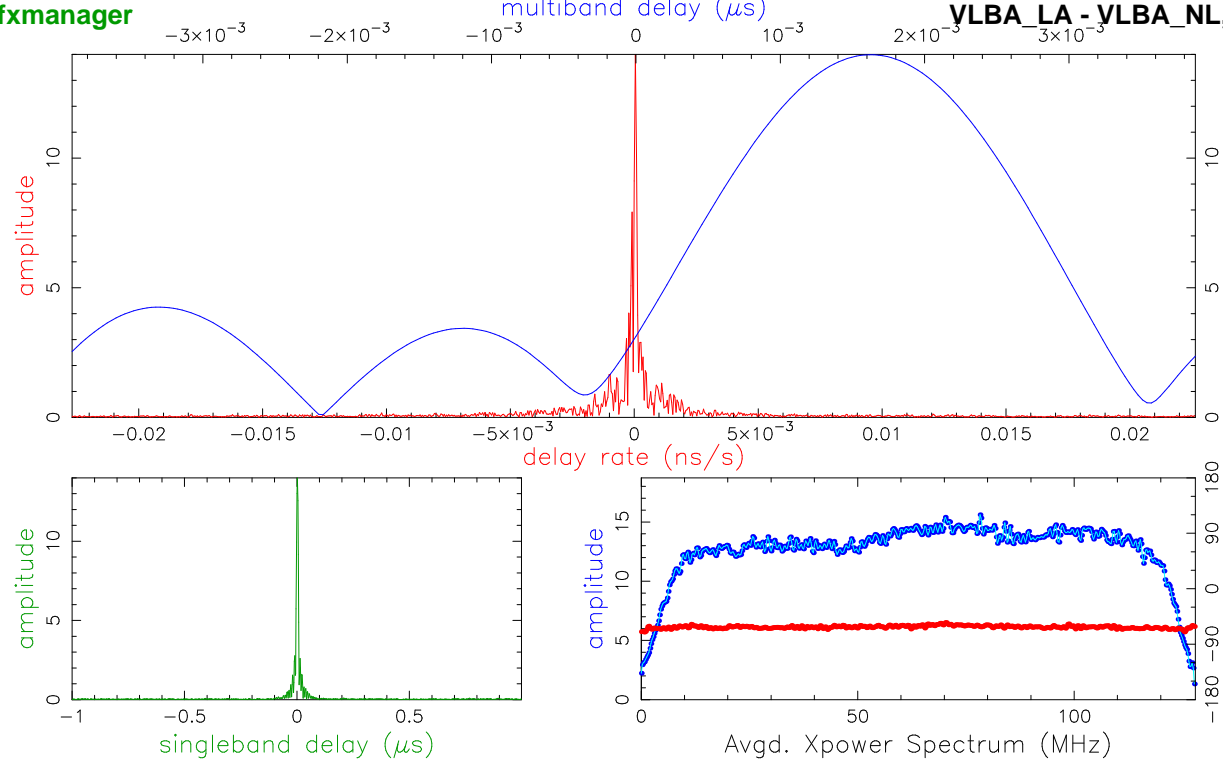
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-54.3	-51.4	-57.0	-55.9	Phase	-54.6
12.5	12.4	12.3	10.6	Ampl.	12.0
512.1	512.4	512.3	512.3	Sbd box	512.3
U/L 469/0	469/0	469/0	469/0	APs used	
l 1000	1000	1000	1000	PC freqs	
m 1000	1000	1000	1000	PC freqs	
l:m 0:0	0:0	0:0	0:0	PC phase	
l:m 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
m 1000	1000	1000	1000		
l Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-1.24069697236E+03	Apriori delay (usec)	-1.24069556034E+03	Resid mbdelay (usec)	-1.41202E-03	+/- 2.2E-06
Sband delay (usec)	-1.24069698071E+03	Apriori clock (usec)	-1.8228662E+01	Resid sbdelay (usec)	-1.42037E-03	+/- 8.5E-06
Phase delay (usec)	-1.24069556386E+03	Apriori clockrate (us/s)	-6.0400003E-07	Resid phdelay (usec)	-3.52097E-06	+/- 1.5E-08
Delay rate (us/s)	-1.14462794649E+00	Apriori rate (us/s)	-1.14462806674E+00	Resid rate (us/s)	1.20249E-07	+/- 1.0E-10
Total phase (deg)	-24.7	Apriori accel (us/s/s)	5.87395105879E-06	Resid phase (deg)	-54.6	+/- 0.2

ph/seg (deg)	RMS 37.7	Theor. 0.7	Amplitude Search (1024X16)	12.023 +/- 0.024	11.628	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	24.6	1.3	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	3.0	0.2	Inc. seg. avg.	14.879	11.958	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	6.5	0.4	Inc. frq. avg.	11.958	11.958	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

l: az 209.5 el 49.0 pa 24.1 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 3276.643 1087.849 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lm.Q.98.1V2A0K

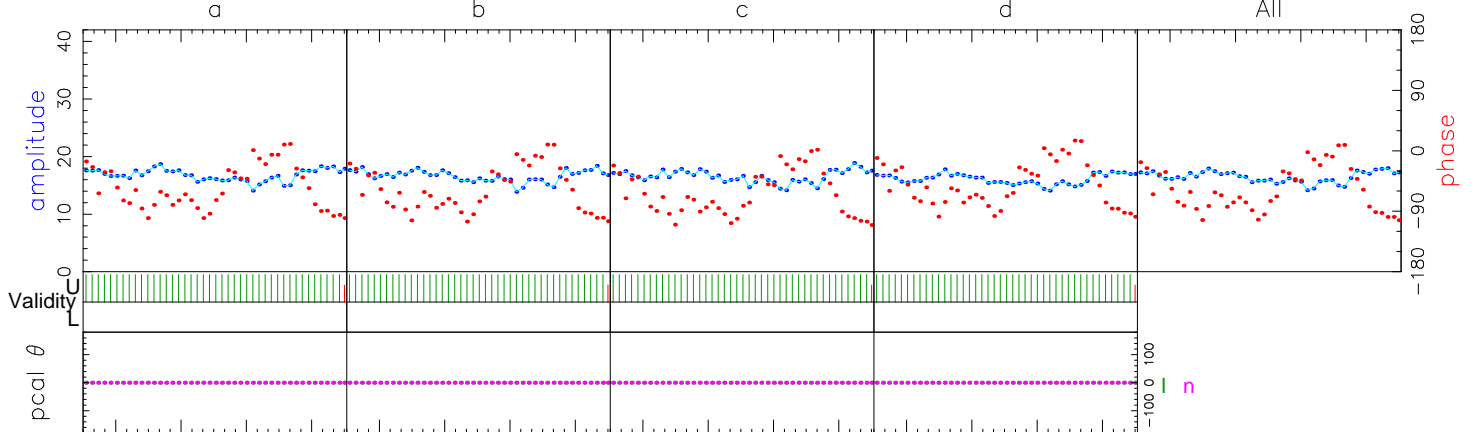


Fringe quality 7

SNR 593.2
 Int time 239.984
 Amp 14.003
 Phase -58.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.001759
 MBD 0.001615
 Fringe rate (Hz) 0.002583
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133534
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



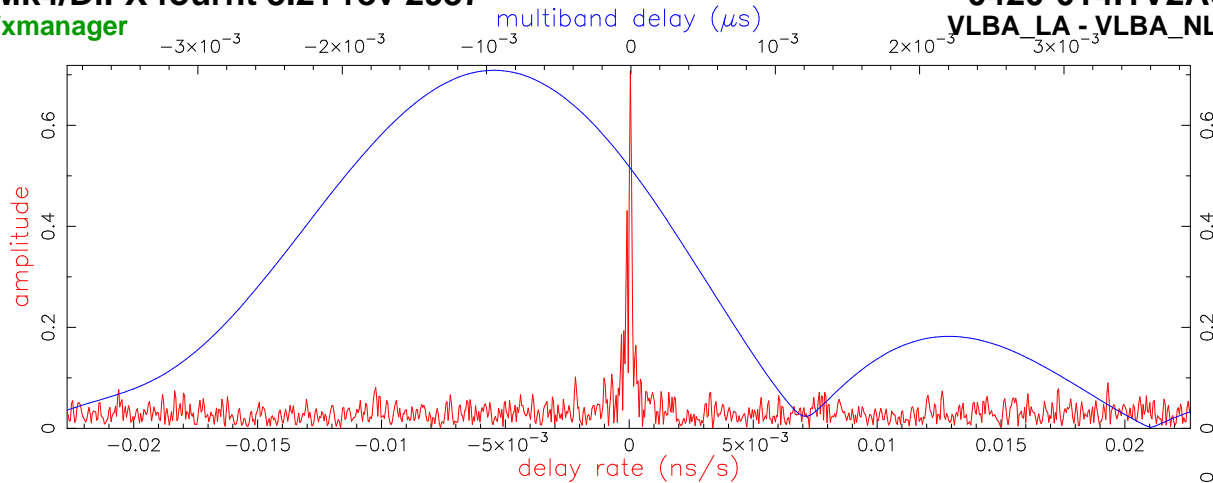
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-56.5	-59.6	-65.8	-52.5	Phase	-58.6
14.3	14.1	14.1	13.6	Ampl.	14.0
513.8	513.8	513.8	514.3	Sbd box	513.9
U/L 469/0	469/0	469/0	469/0	APs used	
l 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
l:n 0:0	0:0	0:0	0:0	PC phase	
l:n 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
l Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.17623310901E+03	Apriori delay (usec)	3.17623149389E+03	Resid mbdelay (usec)	1.61512E-03	+/-	1.9E-06
Sband delay (usec)	3.17623325302E+03	Apriori clock (usec)	-7.9857769E+00	Resid sbdelay (usec)	1.75913E-03	+/-	7.3E-06
Phase delay (usec)	3.17623149011E+03	Apriori clockrate (us/s)	-5.8600000E-07	Resid phdelay (usec)	-3.78491E-06	+/-	1.2E-08
Delay rate (us/s)	2.30095456052E-01	Apriori rate (us/s)	2.30095396044E-01	Resid rate (us/s)	6.00084E-08	+/-	9.0E-11
Total phase (deg)	120.3	Apriori accel (us/s/s)	-1.67241959742E-05	Resid phase (deg)	-58.6	+/-	0.2

ph/seg (deg)	RMS 32.7	Theor. 0.6	Amplitude Search (1024X16)	14.003 +/- 0.024	13.217	PCal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	18.7	1.1	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004		
ph/frq (deg)	6.9	0.2	Inc. seg. avg.	16.451	Bits/sample: 2x2	Sample rate (MSamp/s): 256	dr window (ns/s)	-0.023	0.023		
amp/frq (%)	1.8	0.3	Inc. frq. avg.	14.040	Data rate (Mb/s): 2048	nlags: 512	t_coherence infinite	ion window (TEC)	0.00	0.00	

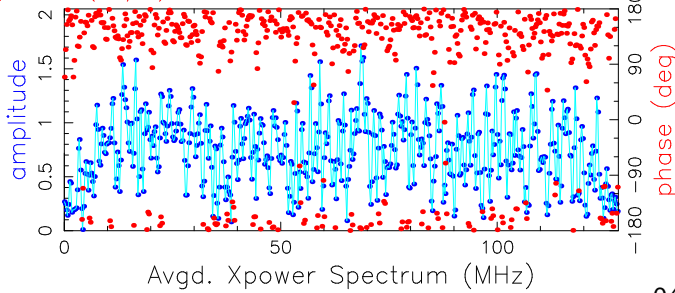
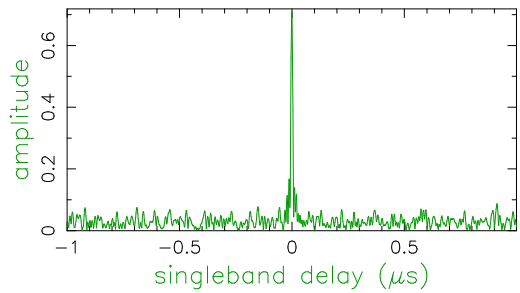
l: az 209.5 el 49.0 pa 24.1 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -665.083 -346.861 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln.Q.117.1V2A0K



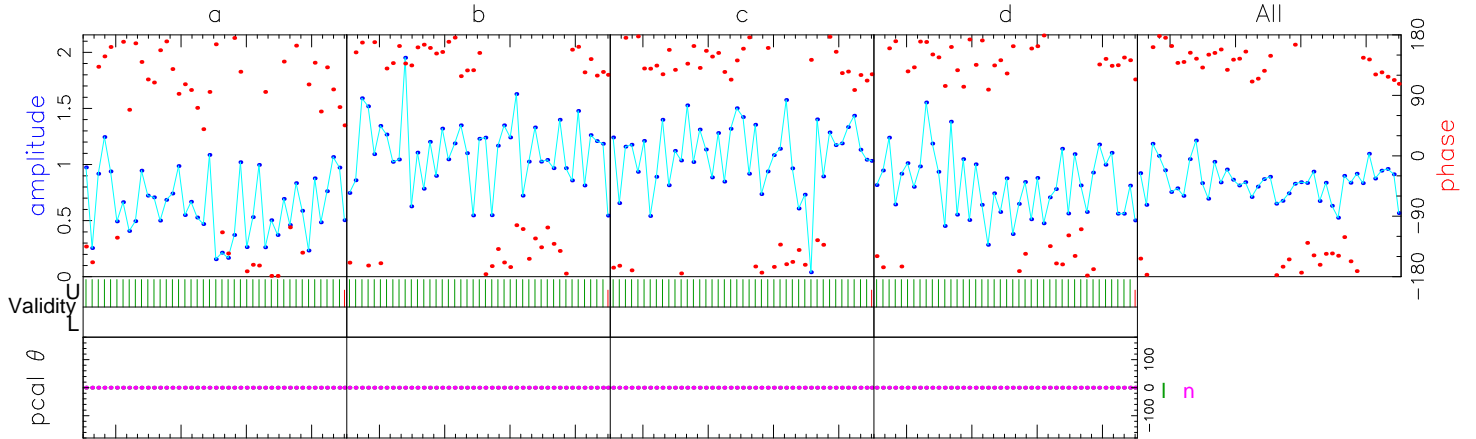
Fringe quality 7

SNR 30.5
Int time 239.984
Amp 0.719
Phase 161.8
PFD 0.0e+00
Delays (us)
SBD -0.000798
MBD -0.001028
Fringe rate (Hz)
0.002494
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133537
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	3.17623046601E+03	Apriori delay (usec)	3.17623149389E+03	Resid mbdelay (usec)	-1.02788E-03	+/- 3.7E-05
Sband delay (usec)	3.17623069602E+03	Apriori clock (usec)	-7.9857769E+00	Resid sbdelay (usec)	-7.97875E-04	+/- 1.4E-04
Phase delay (usec)	3.17623150433E+03	Apriori clockrate (us/s)	-5.8600000E-07	Resid phdelay (usec)	1.04407E-05	+/- 2.4E-07
Delay rate (us/s)	2.30095453999E-01	Apriori rate (us/s)	2.30095396044E-01	Resid rate (us/s)	5.79550E-08	+/- 1.8E-09
Total phase (deg)	340.7	Apriori accel (us/s/s)	-1.67241959742E-05	Resid phase (deg)	161.8	+/- 3.8

ph/seg (deg)	35.1	Theor.	12.3	Amplitude	0.719 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	27.6		21.5	Search (1024X16)	0.684	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	18.3		3.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	25.6		6.6	Inc. seg. avg.	0.832	Sample rate(MSamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.720	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

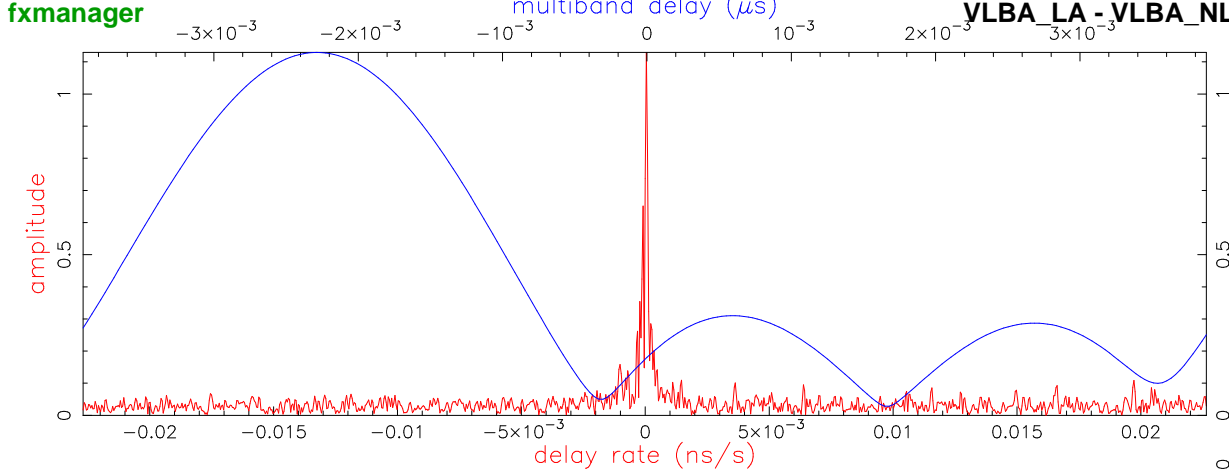
l: az 209.5 el 49.0 pa 24.1 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -665.083 -346.861 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln.Q.139.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

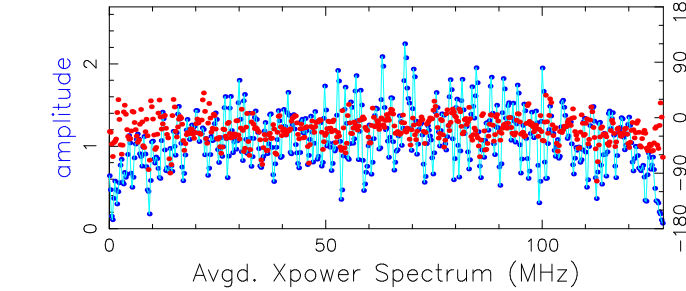
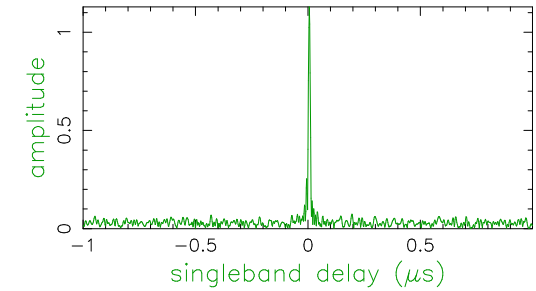
0420-014.1V2A0K, No0121, In

VLBA_LA - VLBA_NL, fgroup Q, pol RL



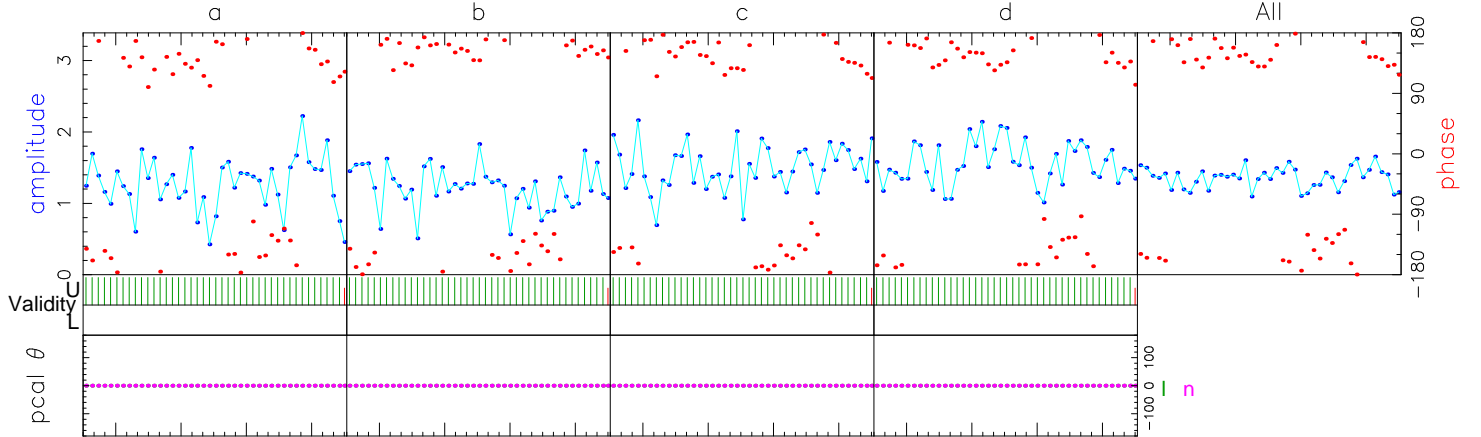
Fringe quality 8

SNR 47.9
 Int time 239.984
 Amp 1.130
 Phase 171.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.005948
 MBD -0.002279
 Fringe rate (Hz)
 0.002606
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133539
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UL	Q01UL	Q02UL	Q03UL		

	3.17623702692E+03	Apriori delay (usec)	3.17623149389E+03	Resid mbdelay (usec)	-2.27947E-03	+/- 2.3E-05
Group delay (usec)(sbd)	3.17623744239E+03	Apriori clock (usec)	-7.9857769E+00	Resid sbdelay (usec)	5.94850E-03	+/- 9.0E-05
Sband delay (usec)	3.17623150494E+03	Apriori clockrate (us/s)	-5.8600000E-07	Resid phdelay (usec)	1.10432E-05	+/- 1.5E-07
Phase delay (usec)	2.30095456594E-01	Apriori rate (us/s)	2.30095396044E-01	Resid rate (us/s)	6.05502E-08	+/- 1.1E-09
Delay rate (us/s)	350.1	Apriori accel (us/s/s)	-1.67241959742E-05	Resid phase (deg)	171.1	+/- 2.4
Total phase (deg)						

	RMS	Theor.	Amplitude	1.130 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	35.3	7.9	Search (1024X16)	1.066	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	24.5	13.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.1	2.4	Inc. seg. avg.	1.352	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	9.8	4.2	Inc. frq. avg.	1.129	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 209.5 el 49.0 pa 24.1 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -665.083 -346.861 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln.Q.158.1V2A0K

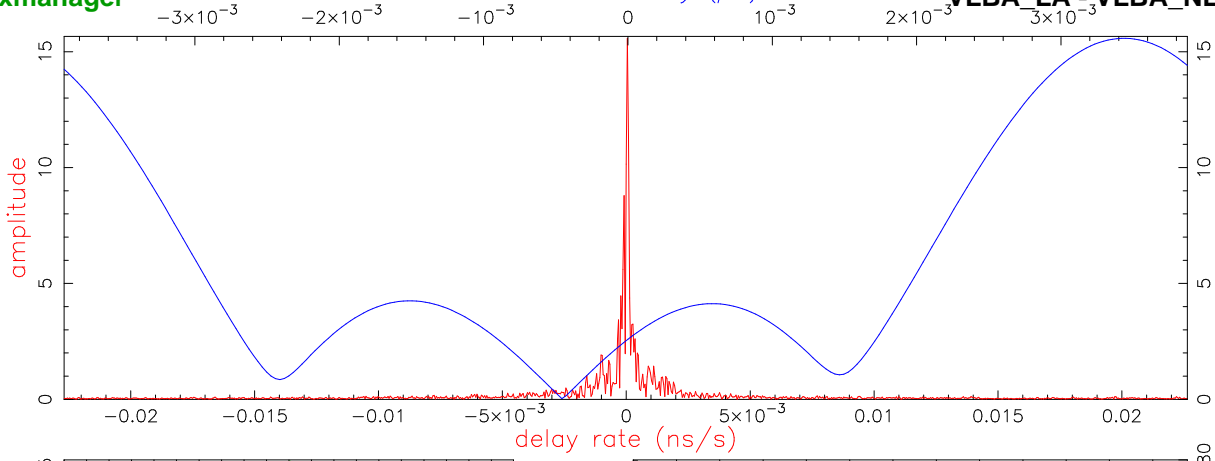
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

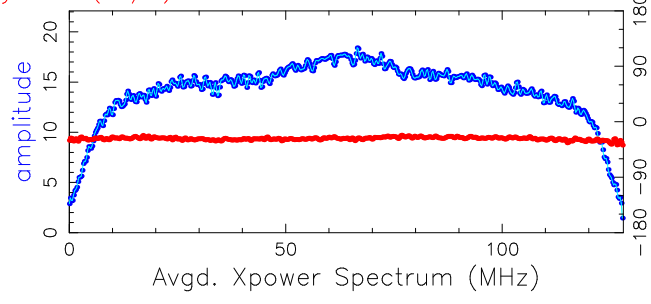
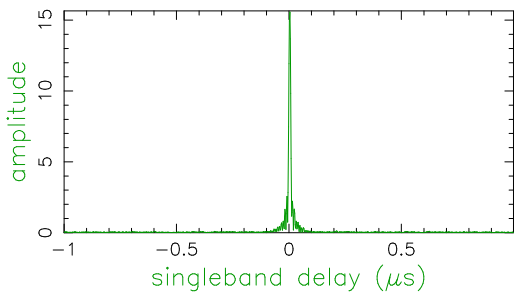
0420-014.1V2A0K, No0121, In

VLBA_LA - VLBA_NL, fgroup Q, pol LL

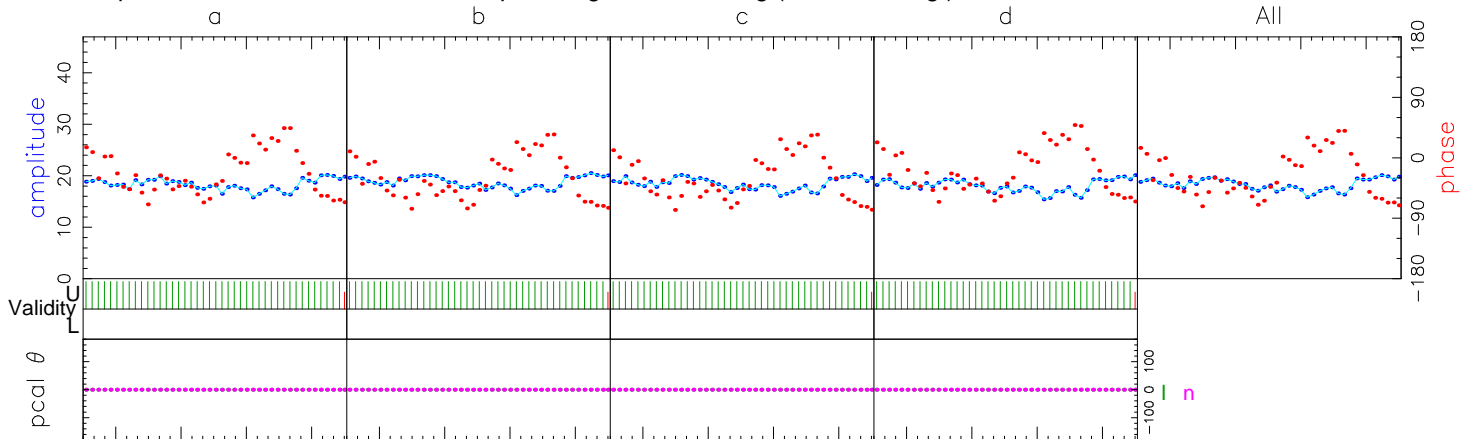
multiband delay (μ s)



Fringe quality 7
 SNR 663.4
 Int time 239.984
 Amp 15.660
 Phase -27.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.003413
 MBD 0.003414
 Fringe rate (Hz) 0.002589
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133532
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UL	Q01UL	Q02UL	Q03UL		

	3.17623490795E+03	Apriori delay (usec)	3.17623149389E+03	Resid mbdelay (usec)	3.41406E-03	+/- 1.7E-06
Group delay (usec)(sbd)	3.17623490714E+03	Apriori clock (usec)	-7.9857769E+00	Resid sbdelay (usec)	3.41325E-03	+/- 6.5E-06
Sband delay (usec)	3.17623149214E+03	Apriori clockrate (us/s)	-5.8600000E-07	Resid phdelay (usec)	-1.75080E-06	+/- 1.1E-08
Phase delay (usec)	2.30095456205E-01	Apriori rate (us/s)	2.30095396044E-01	Resid rate (us/s)	6.01616E-08	+/- 8.0E-11
Delay rate (us/s)		Apriori accel (us/s/s)	-1.67241959742E-05	Resid phase (deg)	-27.1	+/- 0.2
Total phase (deg)	151.8					

	RMS	Theor.	Amplitude	15.660 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	32.7	0.6	Search (1024X16)	14.847	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	18.3	1.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.2	0.2	Inc. seg. avg.	18.314	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.7	0.3	Inc. frq. avg.	15.637	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

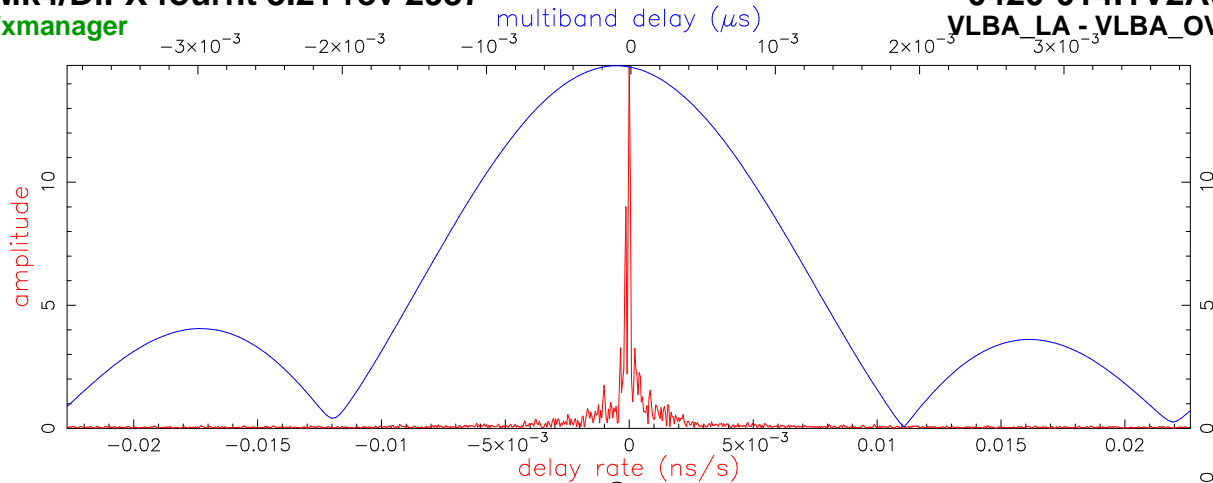
l: az 209.5 el 49.0 pa 24.1 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -665.083 -346.861 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/ln.Q.99.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

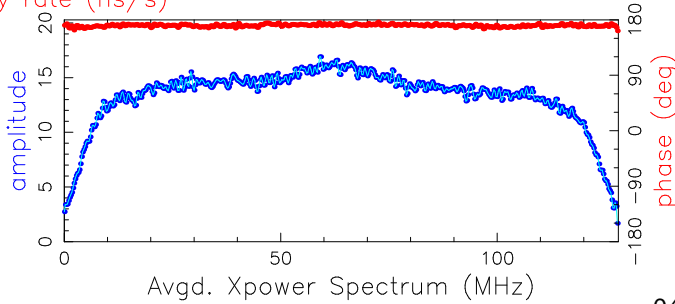
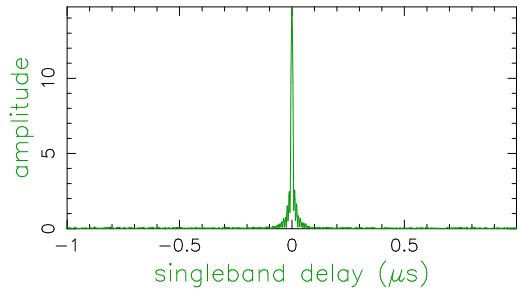
0420-014.1V2A0K, No0121, lo

VLBA_LA - VLBA_OV, fgroup Q, pol LL



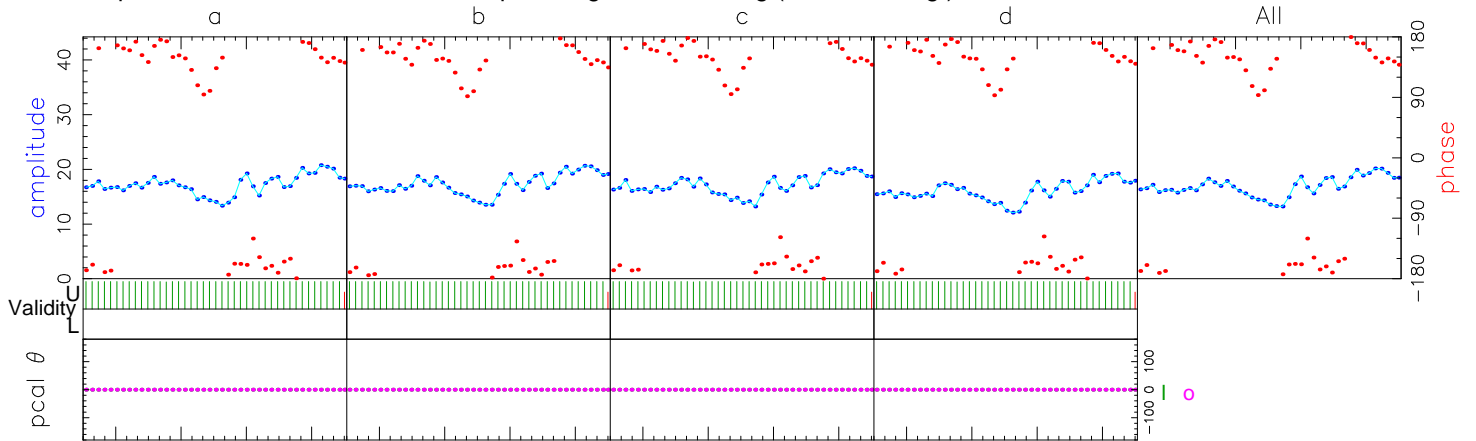
Fringe quality 7

SNR 624.7
 Int time 239.882
 Amp 14.748
 Phase 168.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.000224
 MBD -0.000111
 Fringe rate (Hz)
 0.000183
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133533
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



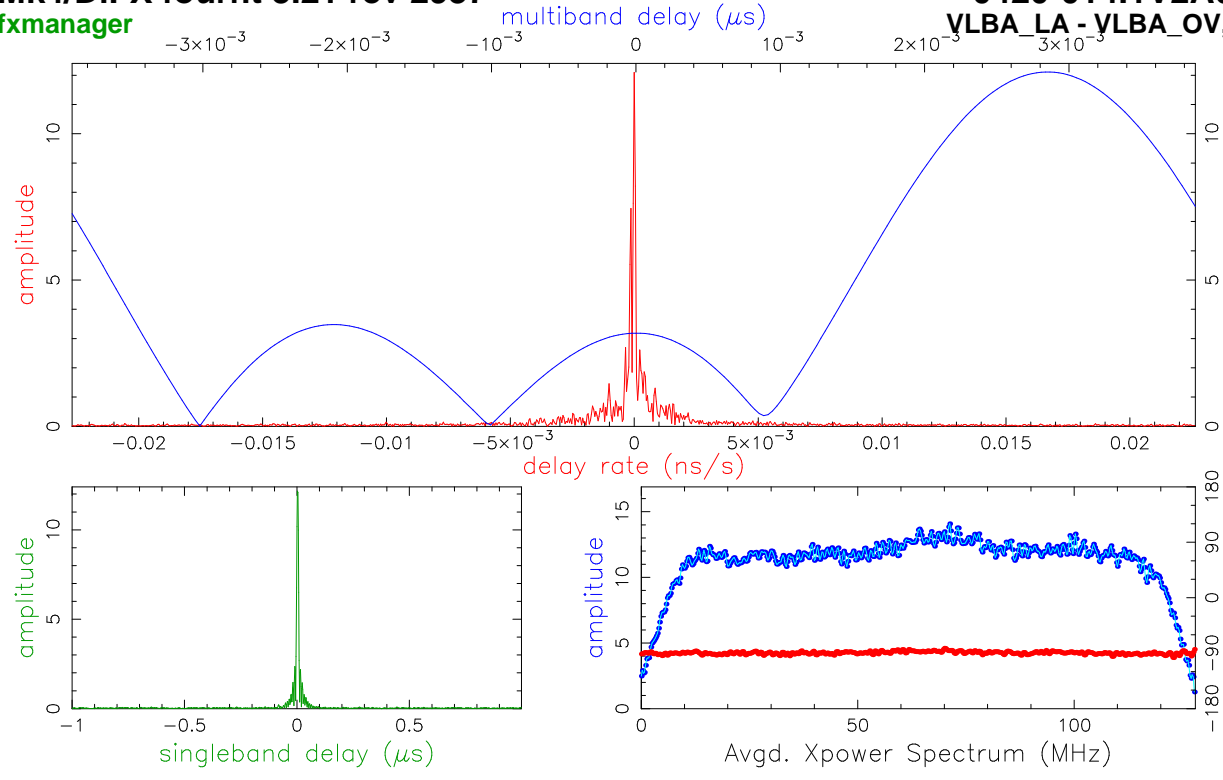
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	PC freqs	
l:o	0:0	0:0	0:0	0:0	PC freqs	
l:o	0:0	0:0	0:0	0:0	PC phase	
l	1000	1000	1000	1000	Manl PC	
o	1000	1000	1000	1000	PC amp	
l	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-5.20314422382E+02	Apriori delay (usec)	-5.20314311070E+02	Resid mbdelay (usec)	-1.11313E-04	+/- 1.8E-06
Sband delay (usec)	-5.20314534695E+02	Apriori clock (usec)	-6.2247238E+00	Resid sbdelay (usec)	-2.23625E-04	+/- 6.9E-06
Phase delay (usec)	-5.20314300195E+02	Apriori clockrate (us/s)	-6.4600002E-07	Resid phdelay (usec)	1.08749E-05	+/- 1.2E-08
Delay rate (us/s)	-2.59927354509E-01	Apriori rate (us/s)	-2.59927358767E-01	Resid rate (us/s)	4.25715E-09	+/- 8.5E-11
Total phase (deg)	-172.9	Apriori accel (us/s/s)	2.78554320382E-06	Resid phase (deg)	168.5	+/- 0.2

ph/seg (deg)	31.0	0.6	Amplitude	14.748 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	18.9	1.0	Search (1024X16)	14.622	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	2.3	0.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	3.4	0.3	Inc. seg. avg.	16.909	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	14.737	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

l: az 209.5 el 49.0 pa 24.1 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 745.321 -91.011 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo.Q.103.1V2A0K

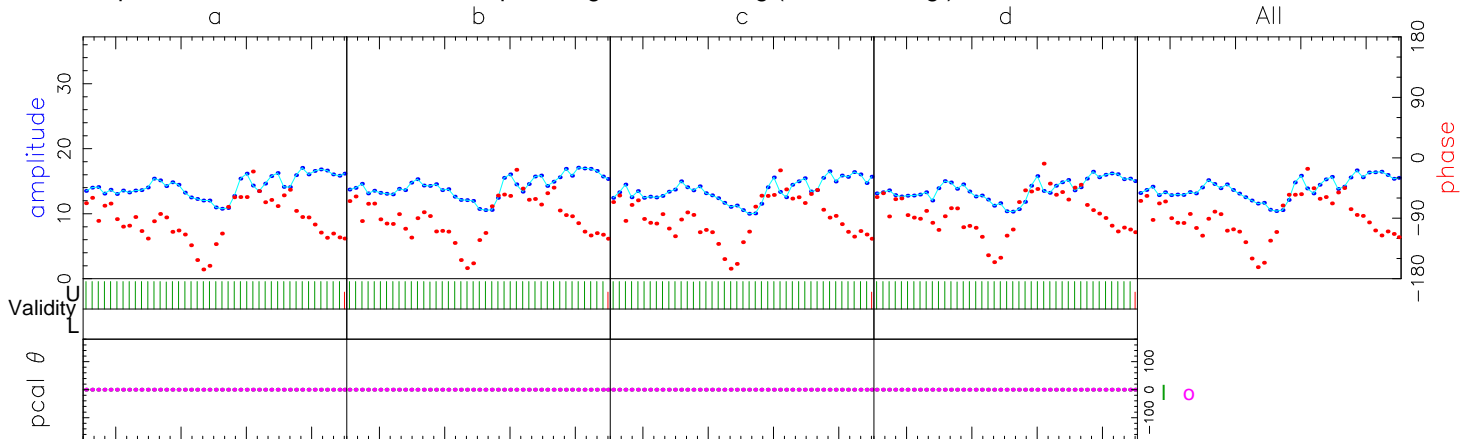


Fringe quality 7

SNR 525.4
Int time 239.882
Amp 12.405
Phase -87.7
PFD 0.0e+00
Delays (us)
SBD 0.002861
MBD 0.002789
Fringe rate (Hz) 0.000191
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133535
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
o	1000	1000	1000	1000		
l:o	0:0	0:0	0:0	0:0		
l:o	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
o	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

	42912.00	43040.00	43168.00	43296.00		
Group delay (usec)(sbd)	-5.20311521757E+02		-5.20314311070E+02		Resid mbdelay (usec)	2.78931E-03 +/- 2.1E-06
Sband delay (usec)	-5.20311450070E+02		-6.2247238E+00		Resid sbdelay (usec)	2.86100E-03 +/- 8.2E-06
Phase delay (usec)	-5.20314316732E+02		-6.4600002E-07		Resid phdelay (usec)	-5.66175E-06 +/- 1.4E-08
Delay rate (us/s)	-2.59927354328E-01		-2.59927358767E-01		Resid rate (us/s)	4.43866E-09 +/- 1.0E-10
Total phase (deg)		-69.2	2.78554320382E-06		Resid phase (deg)	-87.7 +/- 0.2

	RMS	Theor.	Amplitude	12.405 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	31.0	0.7	Search (1024X16)	12.036	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	17.8	1.2	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
ph/frq (deg)	5.1	0.2	Inc. seg. avg.	13.890	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.1	0.4	Inc. frq. avg.	12.117	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

l: az 209.5 el 49.0 pa 24.1 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 745.321 -91.011 simultaneous interpolator

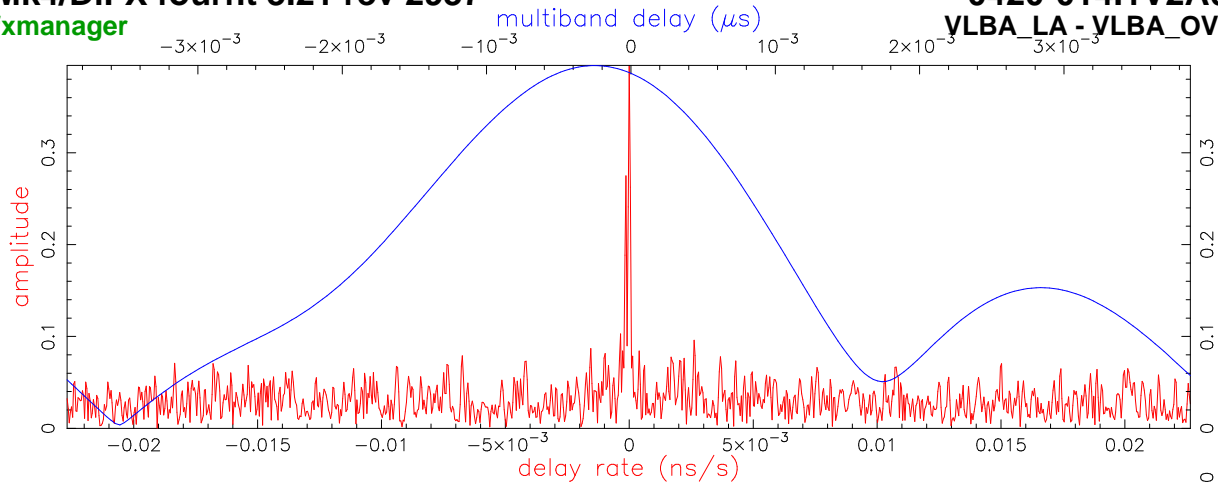
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo.Q.121.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

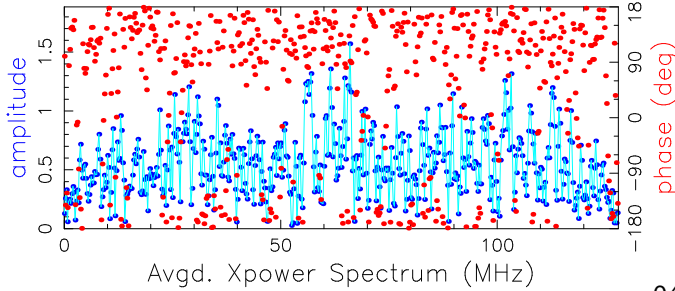
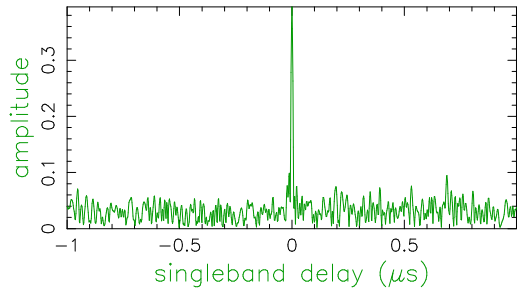
0420-014.1V2A0K, No0121, lo

VLBA_LA - VLBA_OV, fgroup Q, pol LR



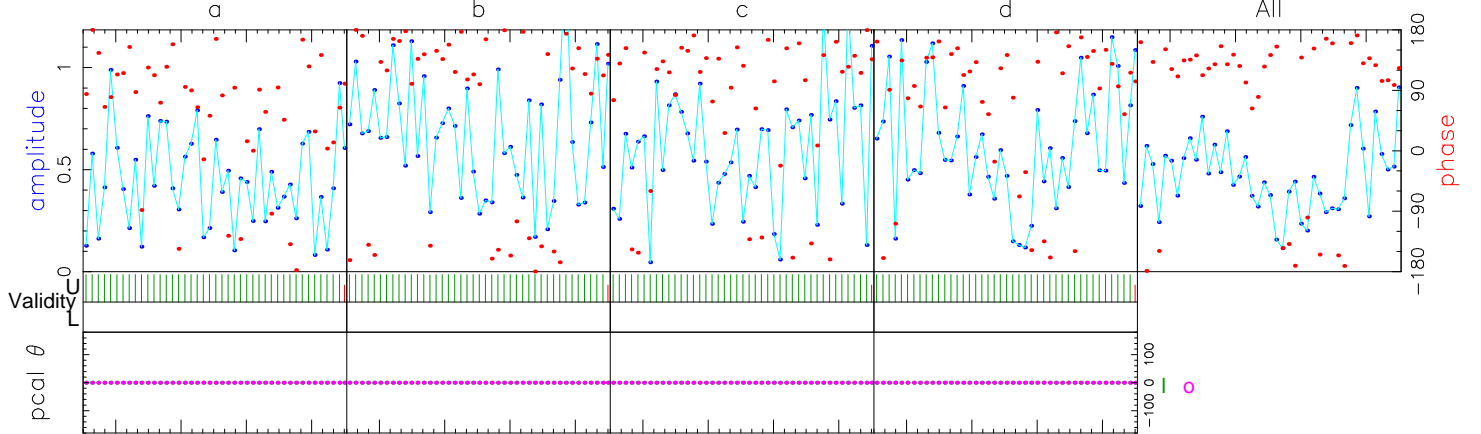
Fringe quality 8

SNR 16.7
 Int time 239.882
 Amp 0.395
 Phase 140.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.000154
 MBD -0.000263
 Fringe rate (Hz)
 -0.000092
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133537
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



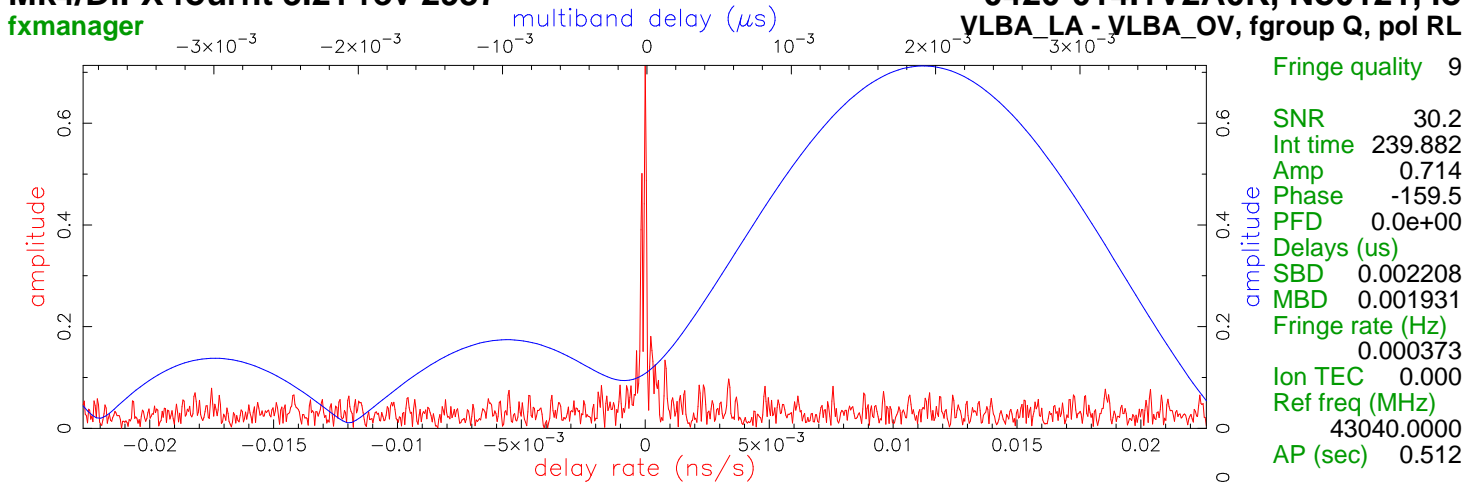
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
105.7	162.2	144.2	130.5	Phase	140.4
0.3	0.5	0.4	0.5	Ampl.	0.4
513.5	513.3	512.2	512.9	Sbd box	512.9
U/L 469/0	469/0	469/0	469/0	APs used	
l 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
l:o 0:0	0:0	0:0	0:0	PC phase	
l:o 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
l Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-5.20314574414E+02	Apriori delay (usec)	-5.20314311070E+02	Resid mbdelay (usec)	-2.63344E-04	+/- 6.6E-05
Sband delay (usec)	-5.20314464695E+02	Apriori clock (usec)	-6.2247238E+00	Resid sbdelay (usec)	-1.53625E-04	+/- 2.6E-04
Phase delay (usec)	-5.20314302008E+02	Apriori clockrate (us/s)	-6.4600002E-07	Resid phdelay (usec)	9.06231E-06	+/- 4.4E-07
Delay rate (us/s)	-2.59927360897E-01	Apriori rate (us/s)	-2.59927358767E-01	Resid rate (us/s)	-2.12999E-09	+/- 3.2E-09
Total phase (deg)	-201.0	Apriori accel (us/s/s)	2.78554320382E-06	Resid phase (deg)	140.4	+/- 6.8

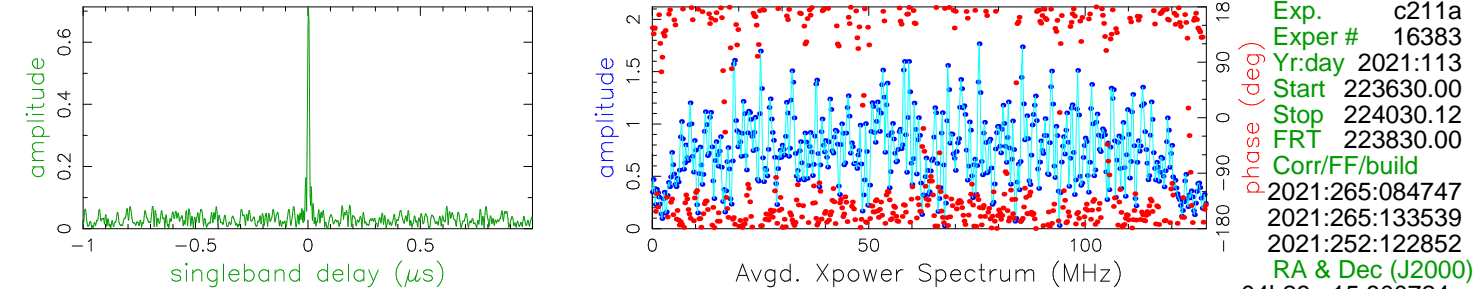
ph/seg (deg)	RMS 40.3	Theor. 22.5	Amplitude Search (1024X16)	0.395 +/- 0.024	0.388	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	49.3	39.2	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	30.0	6.8	Inc. seg. avg.	0.437	0.437	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	25.9	12.0	Inc. frq. avg.	0.414	0.414	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

l: az 209.5 el 49.0 pa 24.1 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 745.321 -91.011 simultaneous interpolator

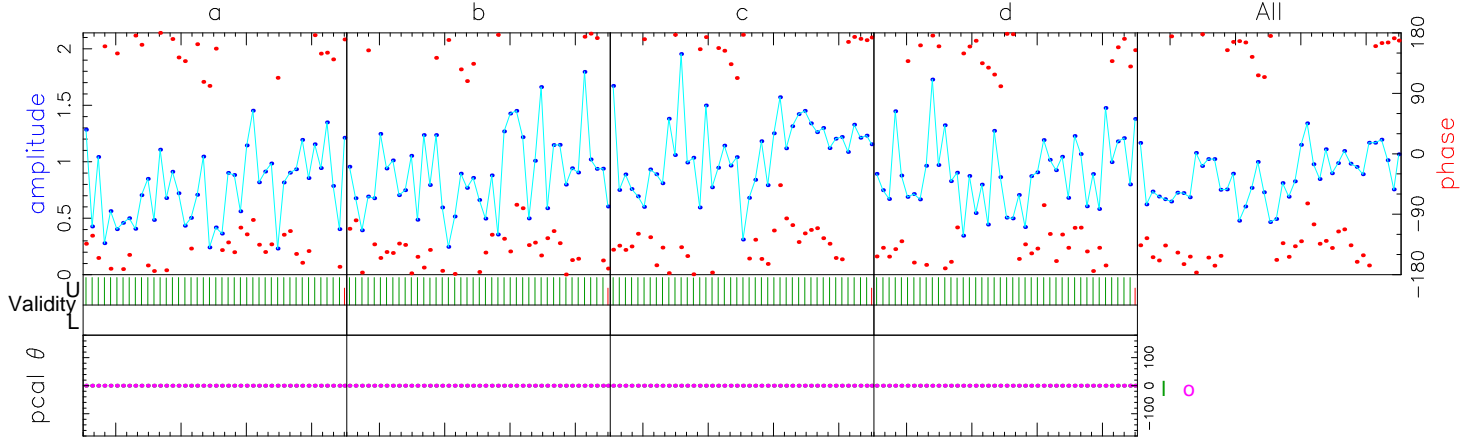
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo.Q.141.1V2A0K



Fringe quality 9
SNR 30.2
Int time 239.882
Amp 0.714
Phase -159.5
PFD 0.0e+00
Delays (us)
SBD 0.002208
MBD 0.001931
Fringe rate (Hz) 0.000373
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133539
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

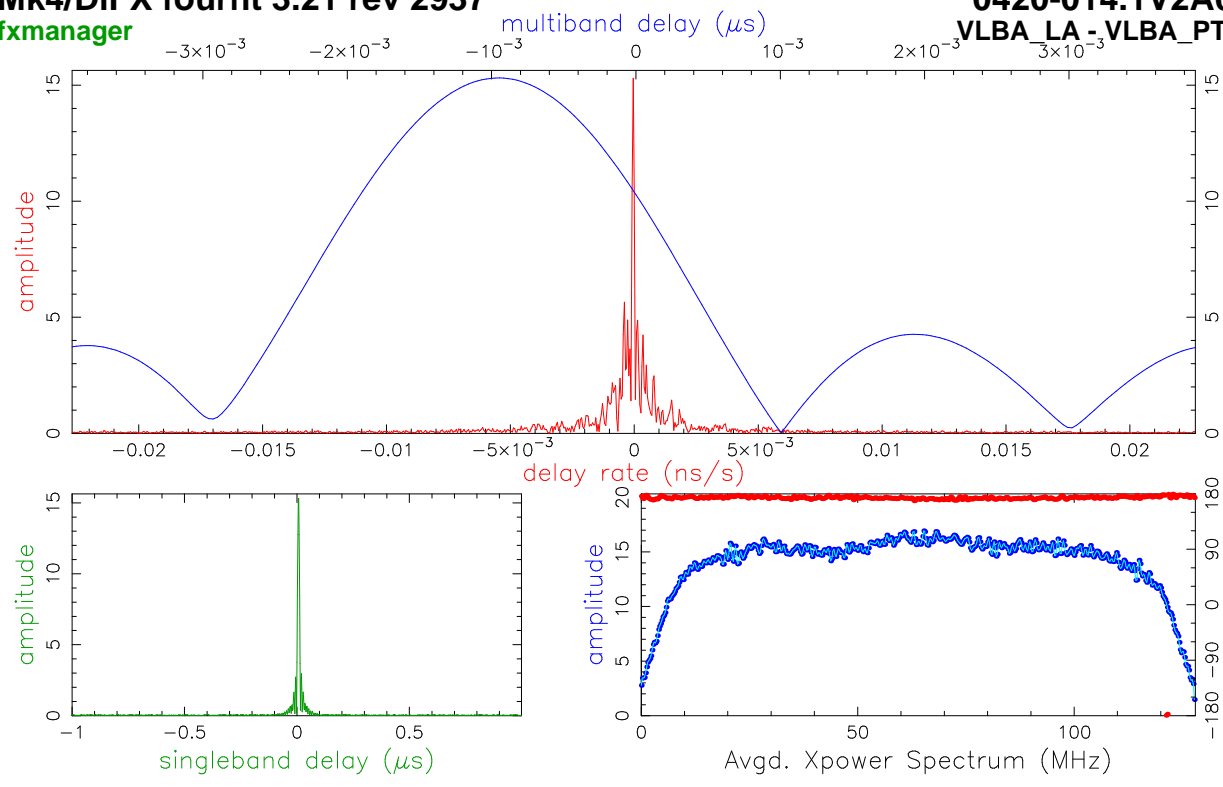


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
o	1000	1000	1000	1000		
l:o	0:0	0:0	0:0	0:0		
l:o	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
o	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-5.20312379632E+02	Apriori delay (usec)	-5.20314311070E+02	Resid mbdelay (usec)	1.93144E-03	+/-	3.7E-05
Sband delay (usec)	-5.20312102695E+02	Apriori clock (usec)	-6.2247238E+00	Resid sbdelay (usec)	2.20837E-03	+/-	1.4E-04
Phase delay (usec)	-5.20314321365E+02	Apriori clockrate (us/s)	-6.4600002E-07	Resid phdelay (usec)	-1.02949E-05	+/-	2.4E-07
Delay rate (us/s)	-2.59927350096E-01	Apriori rate (us/s)	-2.59927358767E-01	Resid rate (us/s)	8.67028E-09	+/-	1.8E-09
Total phase (deg)	-141.0	Apriori accel (us/s/s)	2.78554320382E-06	Resid phase (deg)	-159.5	+/-	3.8

ph/seg (deg)	35.2	Theor.	12.4	Amplitude	0.714 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	37.1		21.7	Search (1024X16)	0.701	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	8.8		3.8	Inc. seg. avg.	0.853	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	12.8		6.6	Inc. frq. avg.	0.715	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

l: az 209.5 el 49.0 pa 24.1 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 745.321 -91.011 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lo.Q.157.1V2A0K

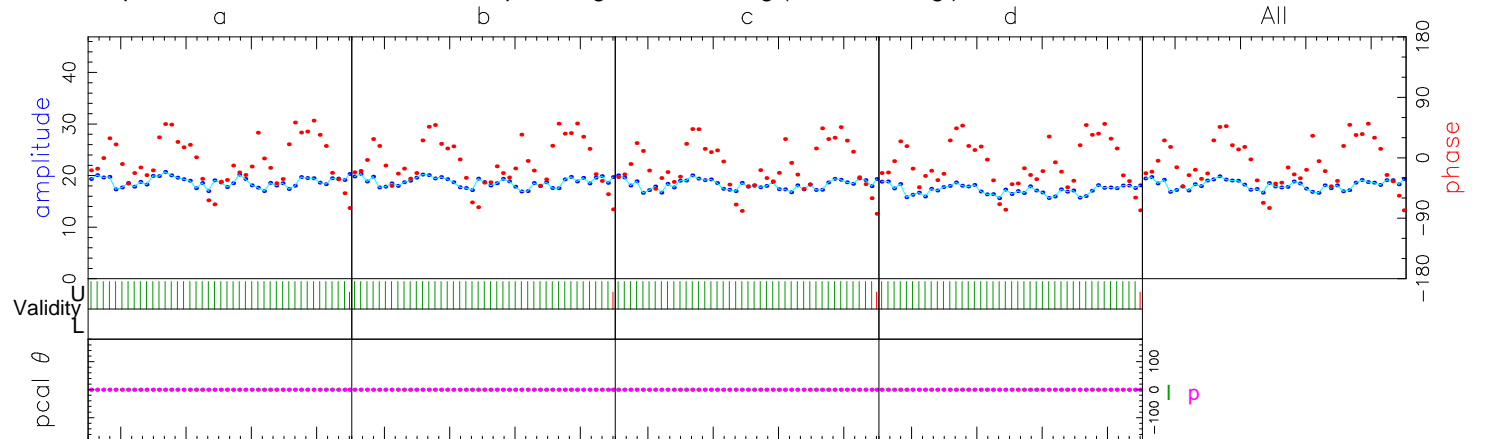


Fringe quality 7

SNR 662.4
Int time 239.983
Amp 15.636
Phase -7.8
PFD 0.0e+00
Delays (us)
SBD 0.006843
MBD -0.000909
Fringe rate (Hz)
-0.002593
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133539
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l:p	0:0	0:0	0:0	0:0		
l:p	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UL	Q01UL	Q02UL	Q03UL		
Group delay (usec)(sbd)	-4.97558034281E+02					
Sband delay (usec)	-4.97558095506E+02					
Phase delay (usec)	-4.97564938634E+02					
Delay rate (us/s)	-3.21305845551E-02					
Total phase (deg)		-345.2				
Apriori delay (usec)			-4.97564938131E+02			
Apriori clock (usec)			-8.1241512E+00			
Apriori clockrate (us/s)			-1.6600001E-07			
Apriori rate (us/s)			-3.21305243055E-02			
Apriori accel (us/s/s)			2.54893388460E-06			
Resid mbdelay (usec)				-9.08650E-04		+/- 1.7E-06
Resid sbdelay (usec)				6.84262E-03		+/- 6.5E-06
Resid phdelay (usec)				-5.03885E-07		+/- 1.1E-08
Resid rate (us/s)				-6.02495E-08		+/- 8.1E-11
Resid phase (deg)				-7.8		+/- 0.2

ph/seg (deg) 33.4 0.6
amp/seg (%) 17.6 1.0
ph/frq (deg) 4.2 0.2
amp/frq (%) 4.2 0.3

RMS Theor. Amplitude 15.636 +/- 0.024
Search (1024X16) 14.616
Interp. 0.000
Inc. seg. avg. 18.236
Inc. frq. avg. 15.319

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 256
Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite

sb window (us) -1.000 1.000
mb window (us) -0.004 0.004
dr window (ns/s) -0.023 0.023
ion window (TEC) 0.00 0.00

l: az 209.5 el 49.0 pa 24.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 92.884 90.985 simultaneous interpolator

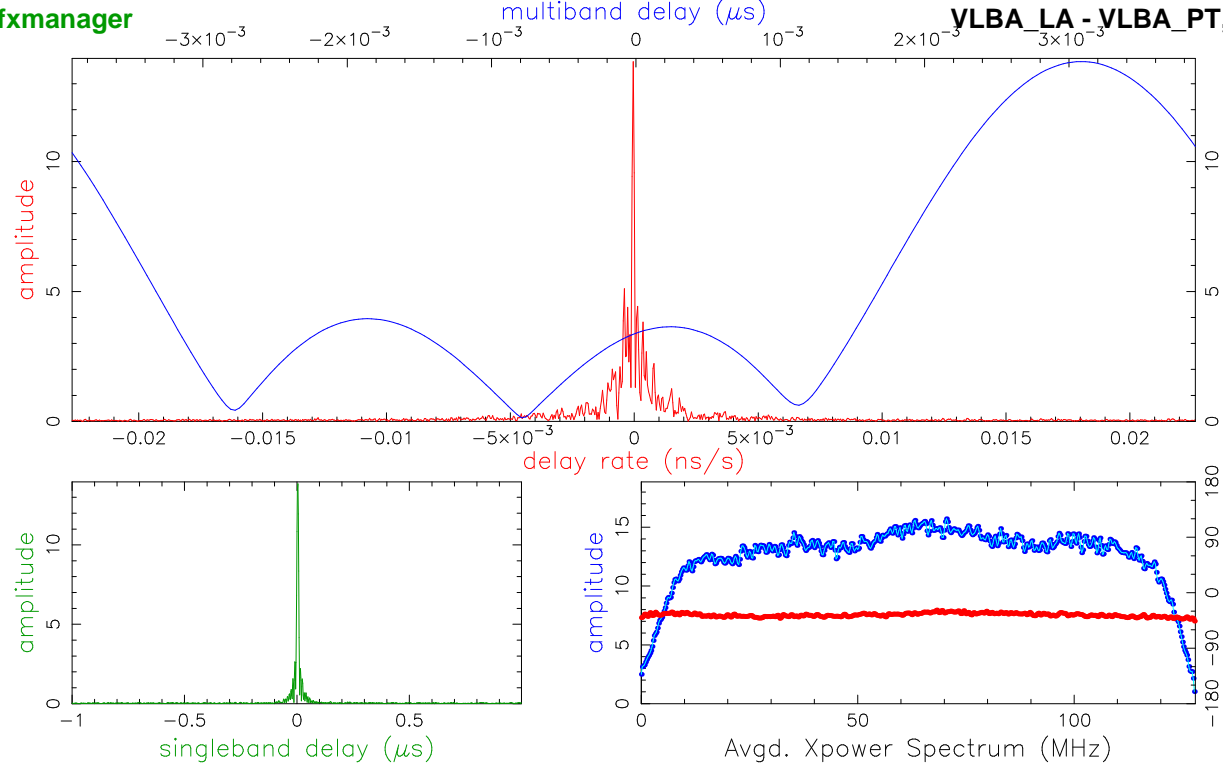
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp.Q.156.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, lp

VLBA_LA - VLBA_PT, fgroup Q, pol RR

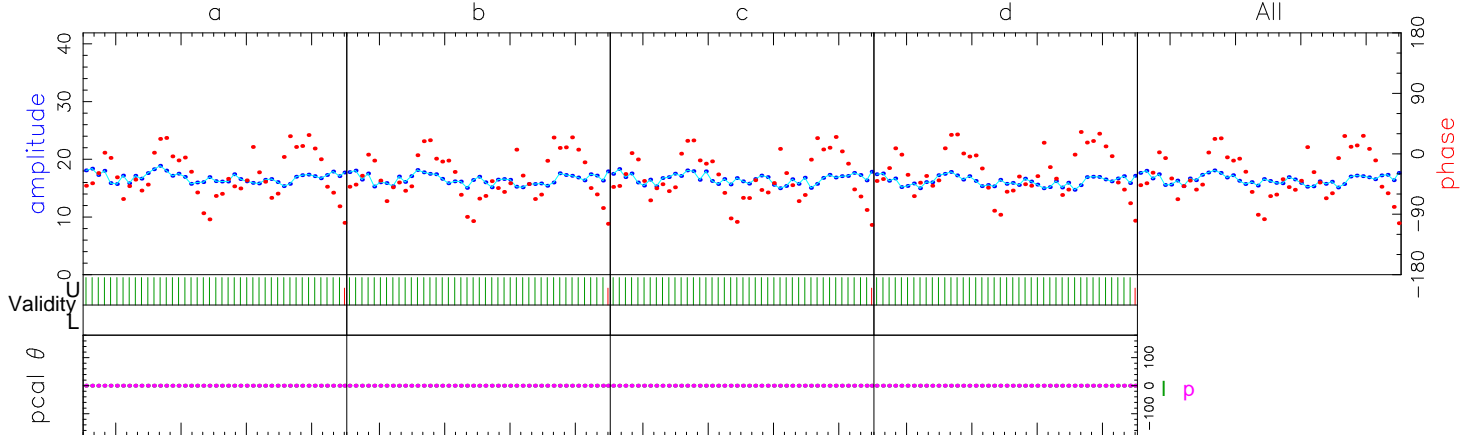


Fringe quality 7

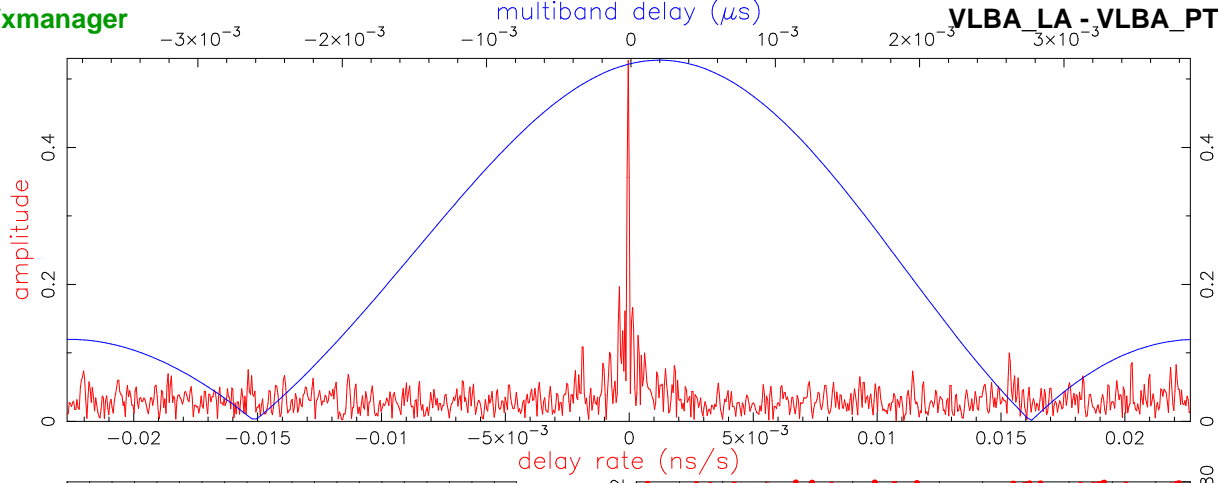
SNR 592.0
 Int time 239.983
 Amp 13.975
 Phase -31.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.003262
 MBD 0.003053
 Fringe rate (Hz)
 -0.002594
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133540
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



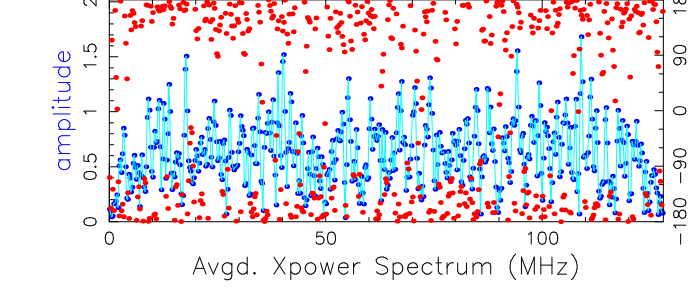
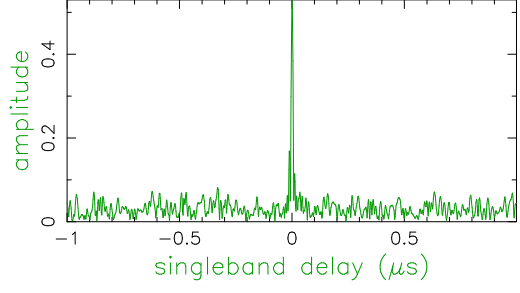
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l:p	0:0	0:0	0:0	0:0		
lp	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UR	Q01UR	Q02UR	Q03UR		
Group delay (usec)(sbd)	-4.97561885343E+02					
Sband delay (usec)	-4.97561675881E+02					
Phase delay (usec)	-4.97564940137E+02					
Delay rate (us/s)	-3.21305845636E-02					
Total phase (deg)		-8.5				
Apriori delay (usec)			-4.97564938131E+02		3.05279E-03	+/- 1.9E-06
Apriori clock (usec)			-8.1241512E+00		3.26225E-03	+/- 7.3E-06
Apriori clockrate (us/s)			-1.6600001E-07		-2.00597E-06	+/- 1.2E-08
Apriori rate (us/s)			-3.21305243055E-02		Resid rate (us/s)	-6.02580E-08 +/- 9.0E-11
Apriori accel (us/s/s)			2.54893388460E-06		Resid phase (deg)	-31.1 +/- 0.2
ph/seg (deg)	RMS 33.5	Theor. 0.6	Search (1024X16) 13.975 +/- 0.024	13.092	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	19.1	1.1	Interp. 0.000	0.000	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	5.1	0.2	Inc. seg. avg. 16.522	13.873	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%)	1.6	0.3	Inc. frq. avg. 13.873		Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
					Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
l: az 209.5 el 49.0 pa 24.1	p: az 207.7 el 51.0 pa 23.1	u,v (fr/asec) 92.884 90.985				simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp.Q.163.1V2A0K				



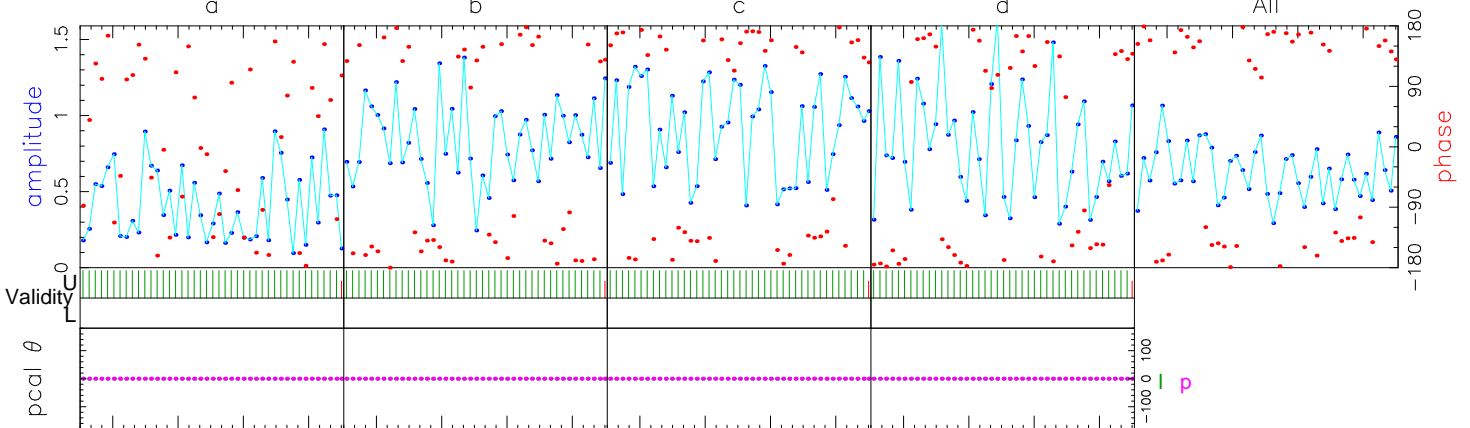
Fringe quality 6

SNR 22.5
Int time 239.983
Amp 0.530
Phase 177.4
PFD 0.0e+00
Delays (us)
SBD 0.000470
MBD 0.000253
Fringe rate (Hz)
-0.002627
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133542
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



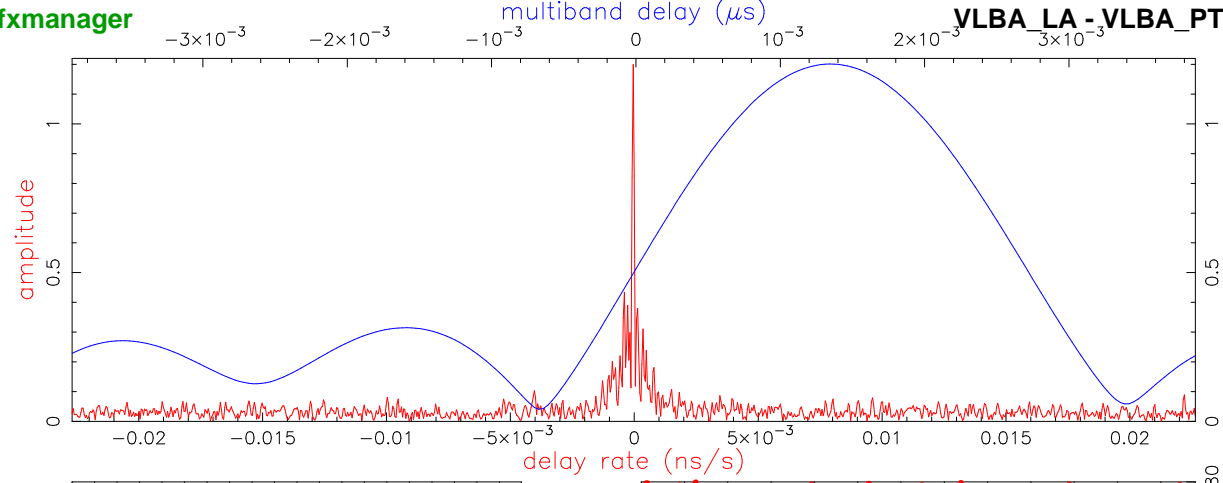
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l:p	0:0	0:0	0:0	0:0		
lp	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-4.97564684781E+02	Apriori delay (usec)	-4.97564938131E+02	Resid mbdelay (usec)	2.53350E-04	+/-	5.0E-05
Sband delay (usec)	-4.97564468256E+02	Apriori clock (usec)	-8.1241512E+00	Resid sbdelay (usec)	4.69875E-04	+/-	1.9E-04
Phase delay (usec)	-4.97564926678E+02	Apriori clockrate (us/s)	-1.6600001E-07	Resid phdelay (usec)	1.14523E-05	+/-	3.3E-07
Delay rate (us/s)	-3.21305853464E-02	Apriori rate (us/s)	-3.21305243055E-02	Resid rate (us/s)	-6.10408E-08	+/-	2.4E-09
Total phase (deg)	-159.9	Apriori accel (us/s/s)	2.54893388460E-06	Resid phase (deg)	177.4	+/-	5.1

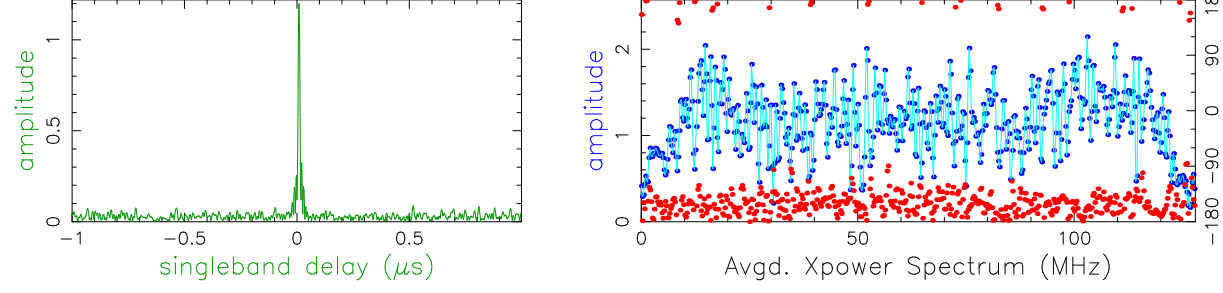
ph/seg (deg)	34.4	Theor.	16.7	Amplitude	0.530 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	37.8	Search (1024X16)	0.492	Search	0.492	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	14.5	Inc. seg. avg.	0.608	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	49.2	Inc. frq. avg.	0.528	Inc. seg. avg.	0.608	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	0.528	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 209.5 el 49.0 pa 24.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 92.884 90.985 simultaneous interpolator

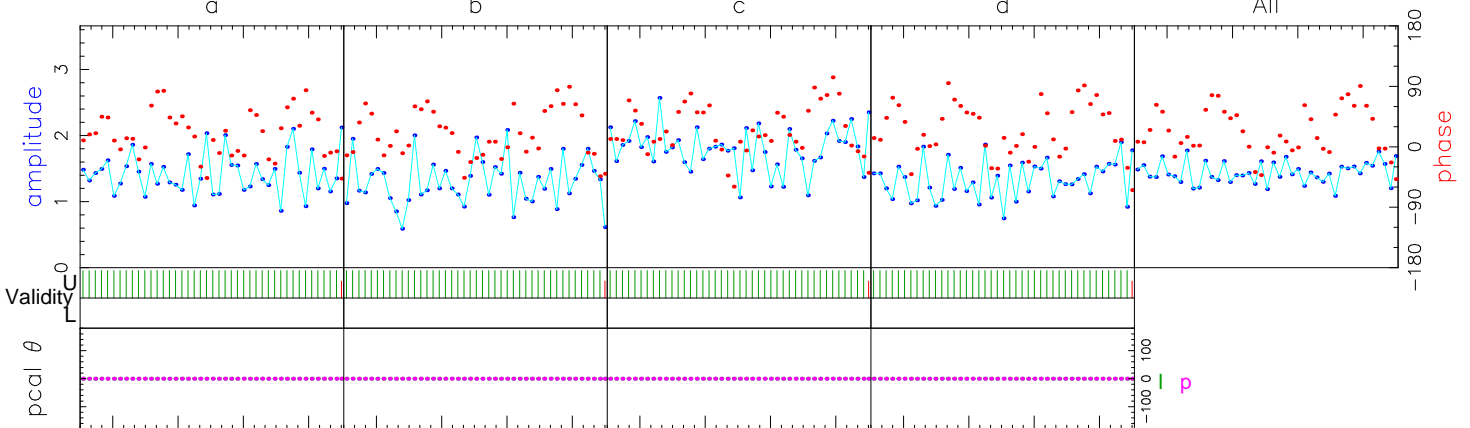
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp.Q.173.1V2A0K



Fringe quality 8
SNR 51.7
Int time 239.983
Amp 1.220
Phase 23.1
PFD 0.0e+00
Delays (us)
SBD 0.008930
MBD 0.001279
Fringe rate (Hz)
-0.002581
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133544
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

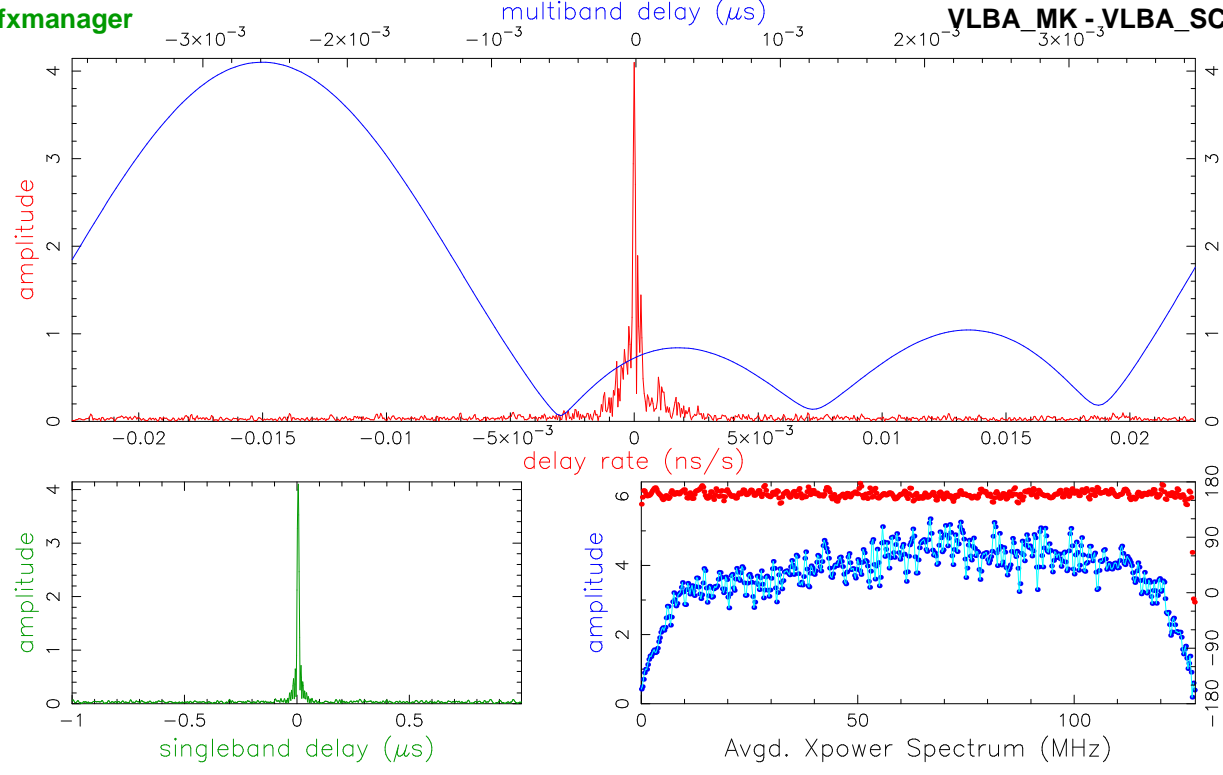


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l:p	0:0	0:0	0:0	0:0		
lp	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
p	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-4.9755846281E+02	Apriori delay (usec)	-4.97564938131E+02	Resid mbdelay (usec)	1.27935E-03	+/- 2.2E-05
Sband delay (usec)	-4.97556008131E+02	Apriori clock (usec)	-8.1241512E+00	Resid sbdelay (usec)	8.93000E-03	+/- 8.3E-05
Phase delay (usec)	-4.97564936642E+02	Apriori clockrate (us/s)	-1.6600001E-07	Resid phdelay (usec)	1.48869E-06	+/- 1.4E-07
Delay rate (us/s)	-3.21305842629E-02	Apriori rate (us/s)	-3.21305243055E-02	Resid rate (us/s)	-5.99574E-08	+/- 1.0E-09
Total phase (deg)	-314.3	Apriori accel (us/s/s)	2.54893388460E-06	Resid phase (deg)	23.1	+/- 2.2

ph/seg (deg)	34.2	Theor.	7.3	Amplitude	1.220 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	22.4	Search (1024X16)	1.142	Search	1.142	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	5.6	Inc. seg. avg.	1.429	Inc. seg. avg.	1.429	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	13.2	Inc. frq. avg.	1.201	Inc. frq. avg.	1.201	Sample rate(MISamp/s): 256	nlags: 512	dr window (ns/s)	-0.023 0.023
						Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 209.5 el 49.0 pa 24.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 92.884 90.985 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/lp.Q.189.1V2A0K

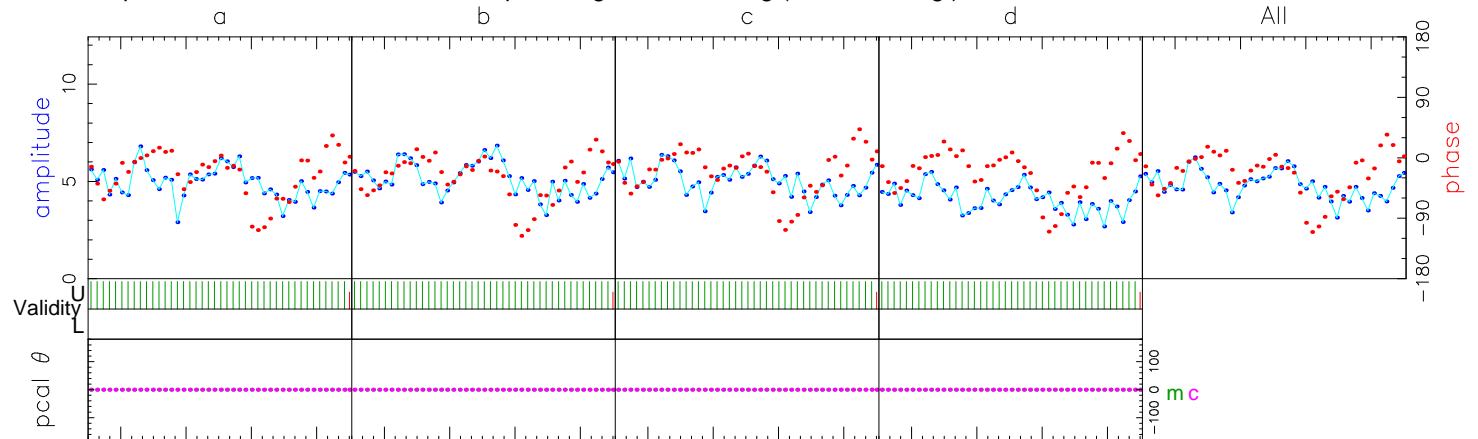


Fringe quality 6

SNR 175.6
Int time 239.981
Amp 4.144
Phase -21.3
PFD 0.0e+00
Delays (us)
SBD 0.005152
MBD -0.002627
Fringe rate (Hz) 0.000900
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133539
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



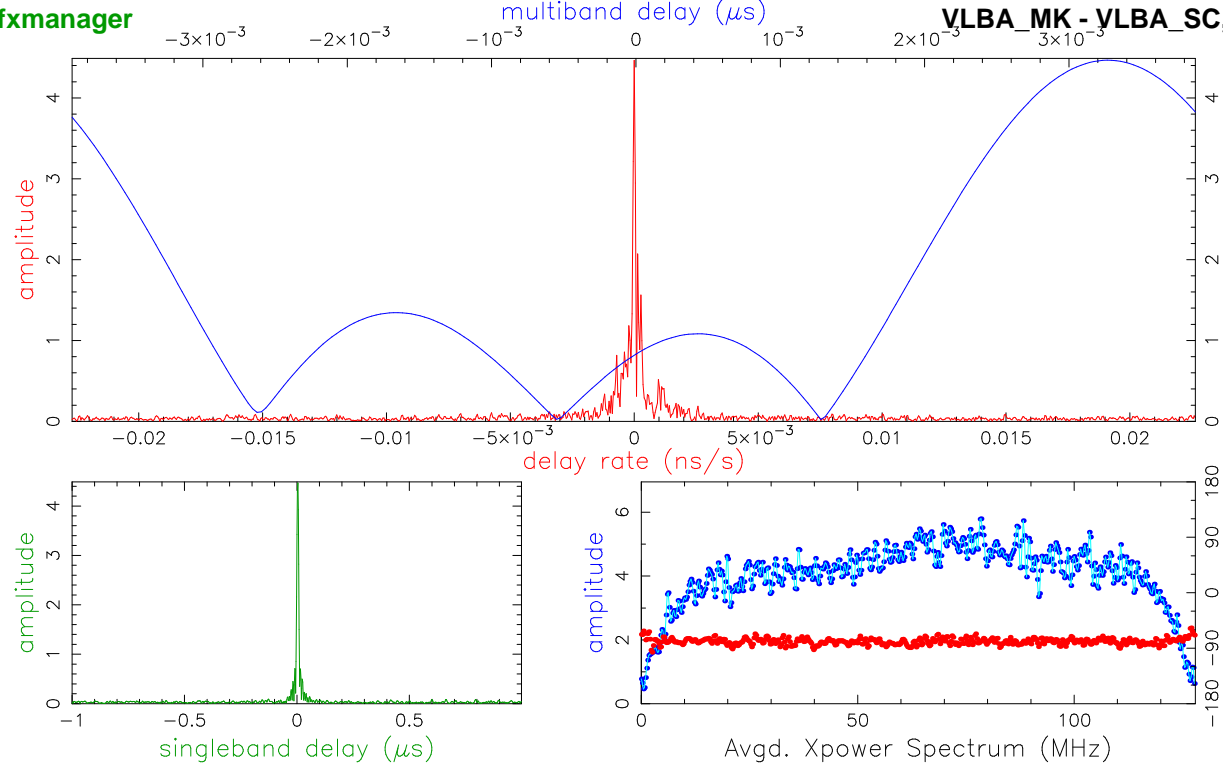
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-21.8	-25.6	-18.7	-18.4	Phase	-21.3
	4.2	4.4	4.3	3.5	Ampl.	4.1
	515.5	515.7	515.8	515.5	Sbd box	515.6
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
m:c	0:0	0:0	0:0	0:0	PC phase	
m:c	0:0	0:0	0:0	0:0	ManI PC	
m	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.60630369579E+03	Apriori delay (usec)	7.60629851019E+03	Resid mbdelay (usec)	-2.62691E-03	+/-	6.3E-06
Sband delay (usec)	7.60630366257E+03	Apriori clock (usec)	3.4681015E+09	Resid sbdelay (usec)	5.15237E-03	+/-	2.5E-05
Phase delay (usec)	7.60629850882E+03	Apriori clockrate (us/s)	2.0000006E-09	Resid phdelay (usec)	-1.37331E-06	+/-	4.2E-08
Delay rate (us/s)	2.01841274424E+00	Apriori rate (us/s)	2.01841272333E+00	Resid rate (us/s)	2.09170E-08	+/-	3.0E-10
Total phase (deg)	295.1	Apriori accel (us/s/s)	-4.05133486799E-05	Resid phase (deg)	-21.3	+/-	0.7

	RMS	Theor.	Amplitude	4.144 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	33.1	2.1	Search (1024X16)	3.772	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	23.2	3.7	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	4.1	0.7	Inc. seg. avg.	4.794	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
amp/frq (%)	8.6	1.1	Inc. frq. avg.	4.104					

m: az 121.8 el 53.5 pa -53.0 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -5794.732 173.699 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mc.Q.159.1V2A0K

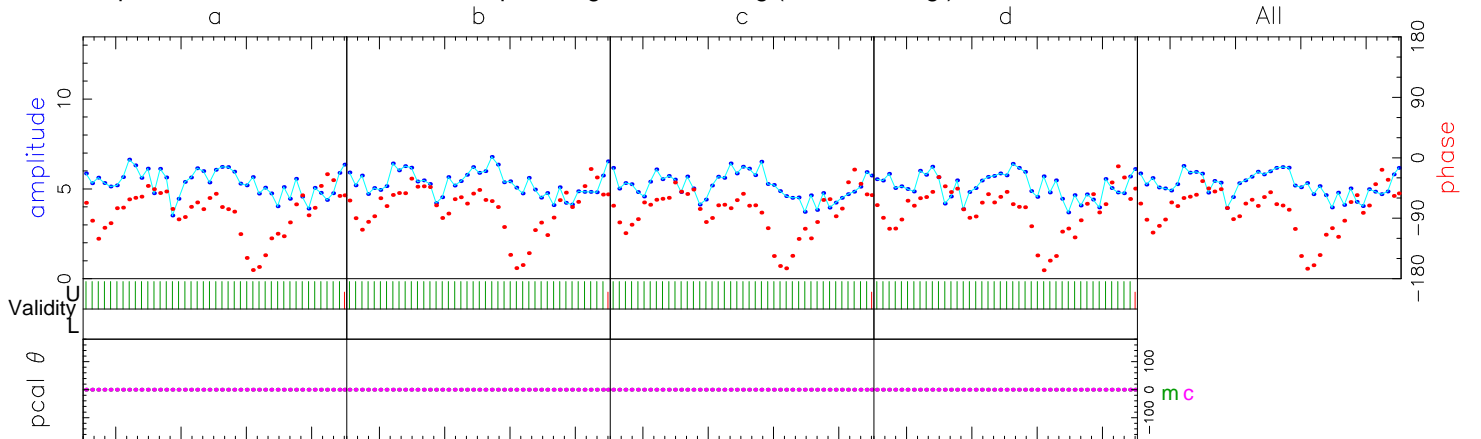


Fringe quality 6

SNR 190.2
Int time 239.981
Amp 4.489
Phase -75.6
PFD 0.0e+00
Delays (us)
SBD 0.003419
MBD 0.003252
Fringe rate (Hz) 0.000877
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133541
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

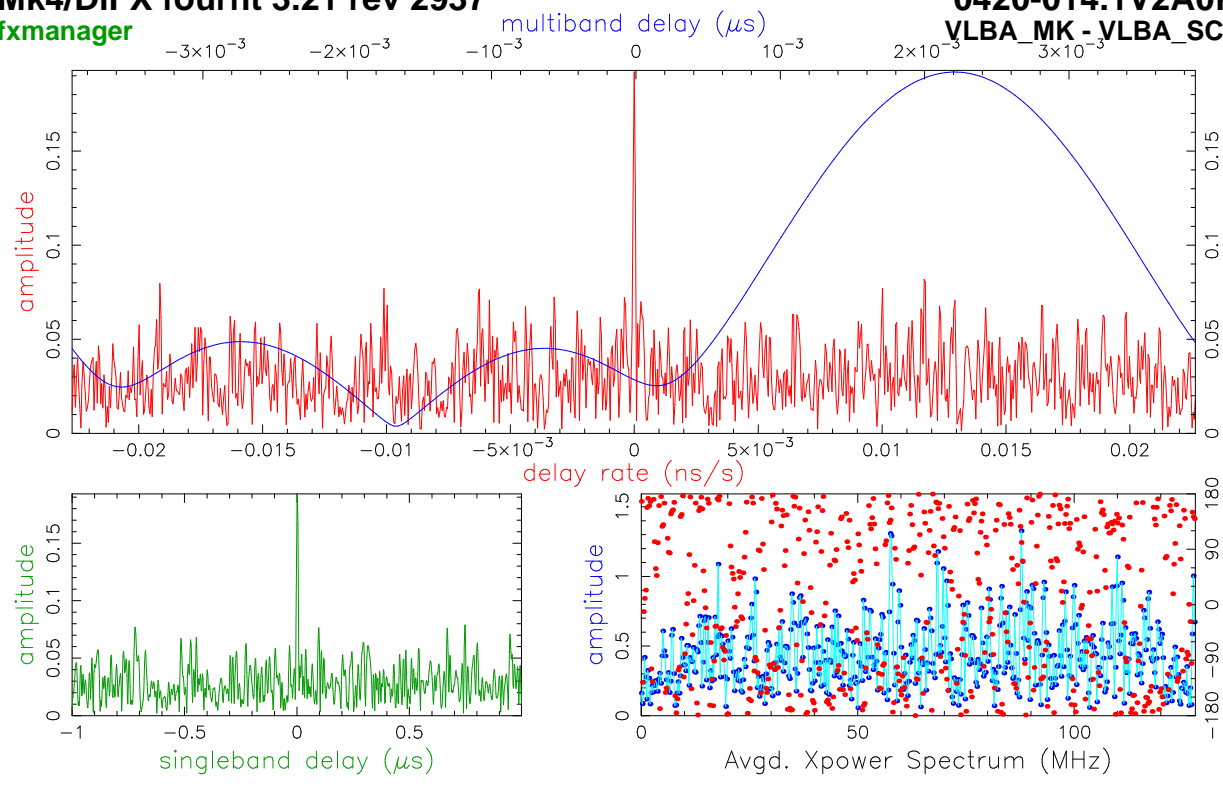
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	APs used	1000
m	1000	1000	1000	1000	PC freqs	1000
c	1000	1000	1000	1000	PC freqs	1000
m:c	0:0	0:0	0:0	0:0	PC phase	0:0
m:c	0:0	0:0	0:0	0:0	Manl PC	0:0
m	1000	1000	1000	1000	PC amp	1000
c	1000	1000	1000	1000		1000
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.60630176207E+03	Apriori delay (usec)	7.60629851019E+03	Resid mbdelay (usec)	3.25188E-03	+/-	5.8E-06
Sband delay (usec)	7.60630192882E+03	Apriori clock (usec)	3.4681015E+09	Resid sbdelay (usec)	3.41863E-03	+/-	2.3E-05
Phase delay (usec)	7.60629850531E+03	Apriori clockrate (us/s)	2.0000006E-09	Resid phdelay (usec)	-4.88229E-06	+/-	3.9E-08
Delay rate (us/s)	2.01841274370E+00	Apriori rate (us/s)	2.01841272333E+00	Resid rate (us/s)	2.03753E-08	+/-	2.8E-10
Total phase (deg)	240.7	Apriori accel (us/s/s)	-4.05133486799E-05	Resid phase (deg)	-75.6	+/-	0.6

	RMS	Theor.	Amplitude	4.489 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	33.3	2.0	Search (1024X16)	4.124	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	22.0	3.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.0	0.6	Inc. seg. avg.	5.234	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.6	1.1	Inc. frq. avg.	4.471	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
m: az 121.8 el 53.5 pa -53.0			c: az 258.8 el 27.5 pa 69.2		u,v (fr/asec) -5794.732 173.699	simultaneous interpolator

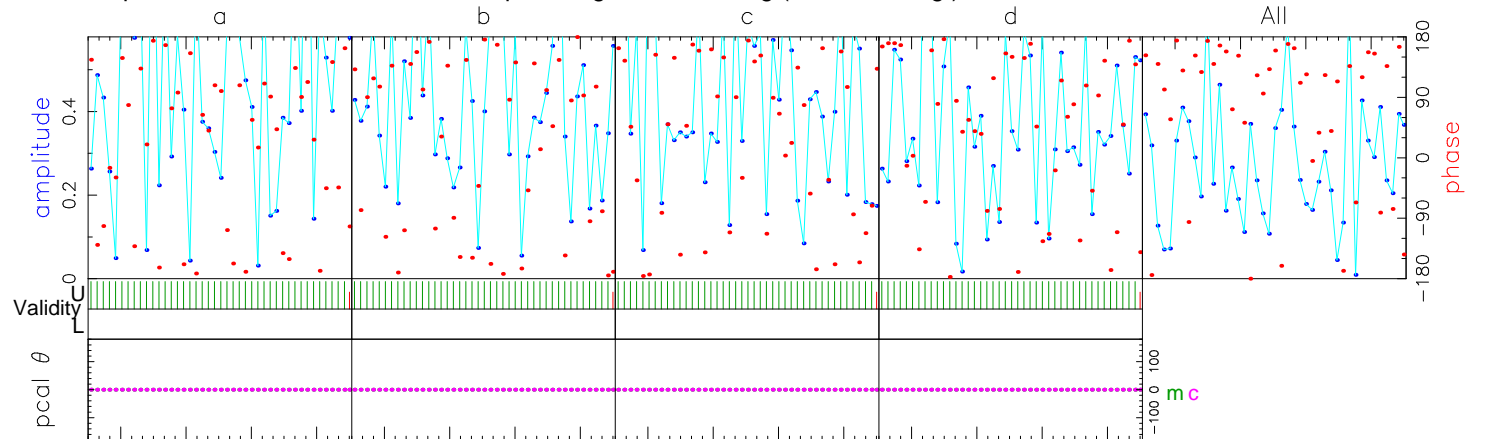


Fringe quality 9

SNR 8.2
Int time 239.981
Amp 0.193
Phase 153.9
PFD 5.3e-08
Delays (us)
SBD 0.001516
MBD 0.002194
Fringe rate (Hz) 0.000557
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133543
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000		
c	1000	1000	1000	1000		
m:c	0:0	0:0	0:0	0:0		
m:c	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
c	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.60630070444E+03	Apriori delay (usec)	7.60629851019E+03	Resid mbdelay (usec)	2.19425E-03	+/-	1.4E-04
Sband delay (usec)	7.60630002657E+03	Apriori clock (usec)	3.4681015E+09	Resid sbdelay (usec)	1.51637E-03	+/-	5.3E-04
Phase delay (usec)	7.60629852013E+03	Apriori clockrate (us/s)	2.0000006E-09	Resid phdelay (usec)	9.93547E-06	+/-	9.1E-07
Delay rate (us/s)	2.01841273628E+00	Apriori rate (us/s)	2.01841272333E+00	Resid rate (us/s)	1.29501E-08	+/-	6.5E-09
Total phase (deg)	110.3	Apriori accel (us/s/s)	-4.05133486799E-05	Resid phase (deg)	153.9	+/-	14.0

ph/seg (deg) RMS Theor. Amplitude 0.193 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 62.7 46.0 Search (1024X16) 0.183 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 92.3 80.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 1.7 14.0 Inc. seg. avg. 0.213 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
amp/frq (%) 19.7 24.5 Inc. frq. avg. 0.186 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

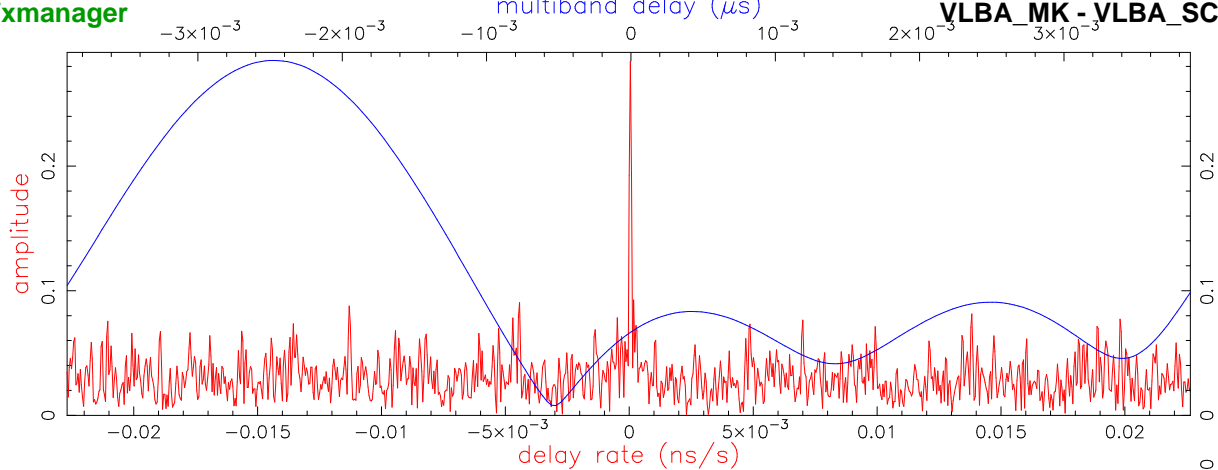
m: az 121.8 el 53.5 pa -53.0 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -5794.732 173.699 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mc.Q.180.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

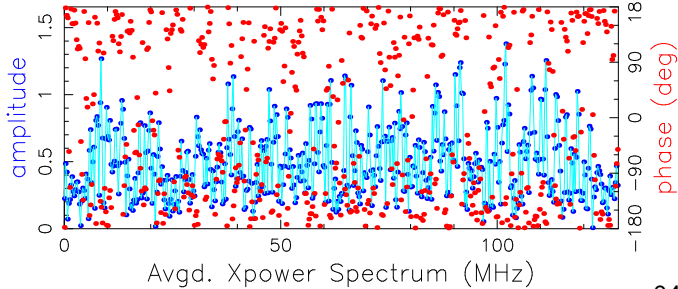
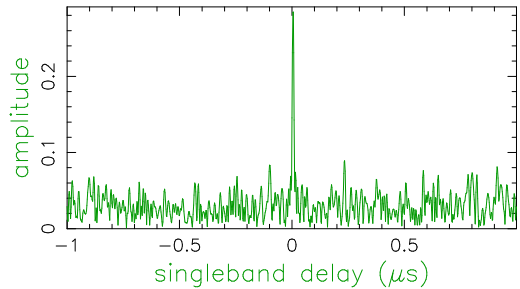
0420-014.1V2A0K, No0121, mc

VLBA_MK - VLBA_SC, fgroup Q, pol RL



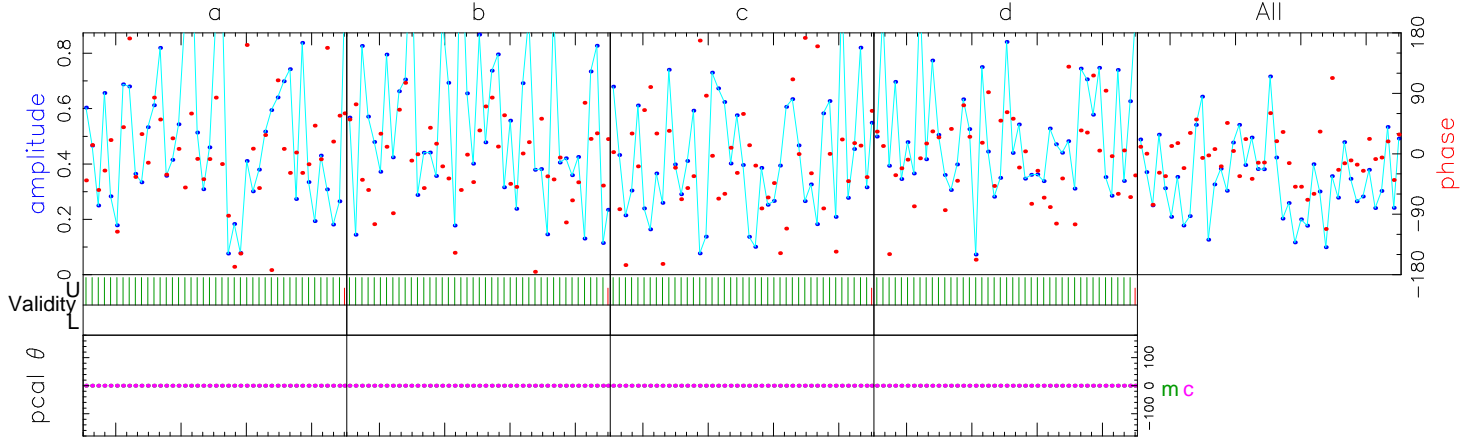
Fringe quality 9

SNR 12.3
 Int time 239.981
 Amp 0.291
 Phase -1.3
 PFD 1.5e-26
 Delays (us)
 SBD 0.004894
 MBD -0.002393
 Fringe rate (Hz)
 0.001402
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133544
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
m:c	0:0	0:0	0:0	0:0	PC phase	
m:c	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.60630393019E+03	Apriori delay (usec)	7.60629851019E+03	Resid mbdelay (usec)	-2.39251E-03	+/- 9.0E-05
Sband delay (usec)	7.60630340419E+03	Apriori clock (usec)	3.4681015E+09	Resid sbdelay (usec)	4.89400E-03	+/- 3.5E-04
Phase delay (usec)	7.60629851011E+03	Apriori clockrate (us/s)	2.0000006E-09	Resid phdelay (usec)	-8.21483E-08	+/- 6.0E-07
Delay rate (us/s)	2.01841275591E+00	Apriori rate (us/s)	2.01841272333E+00	Resid rate (us/s)	3.25823E-08	+/- 4.3E-09
Total phase (deg)	315.1	Apriori accel (us/s/s)	-4.05133486799E-05	Resid phase (deg)	-1.3	+/- 9.3

	RMS	Theor.	Amplitude	0.291 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	39.6	30.4	Search (1024X16)	0.278	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	51.5	53.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	14.0	9.3	Inc. seg. avg.	0.304	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	16.2	16.2	Inc. frq. avg.	0.284	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

m: az 121.8 el 53.5 pa -53.0 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -5794.732 173.699 simultaneous interpolator

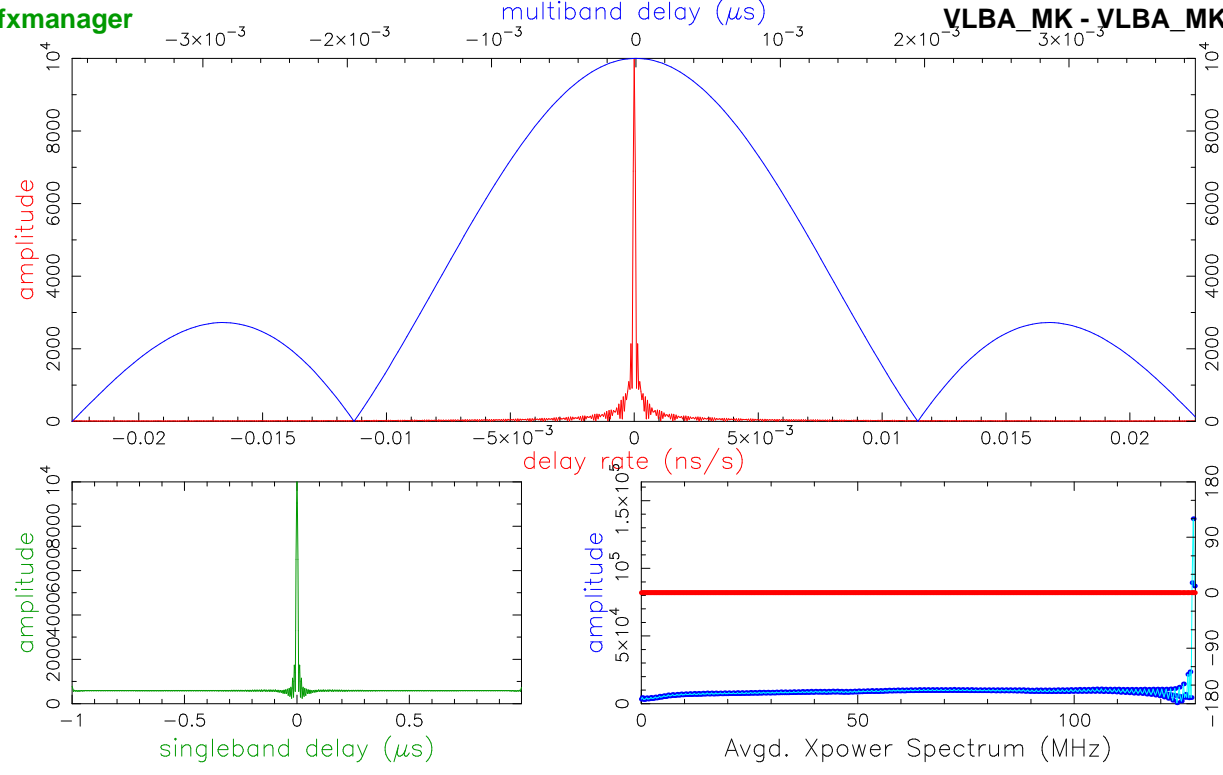
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mc.Q.194.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mm

VLBA_MK - VLBA_MK, fgroup Q, pol LL

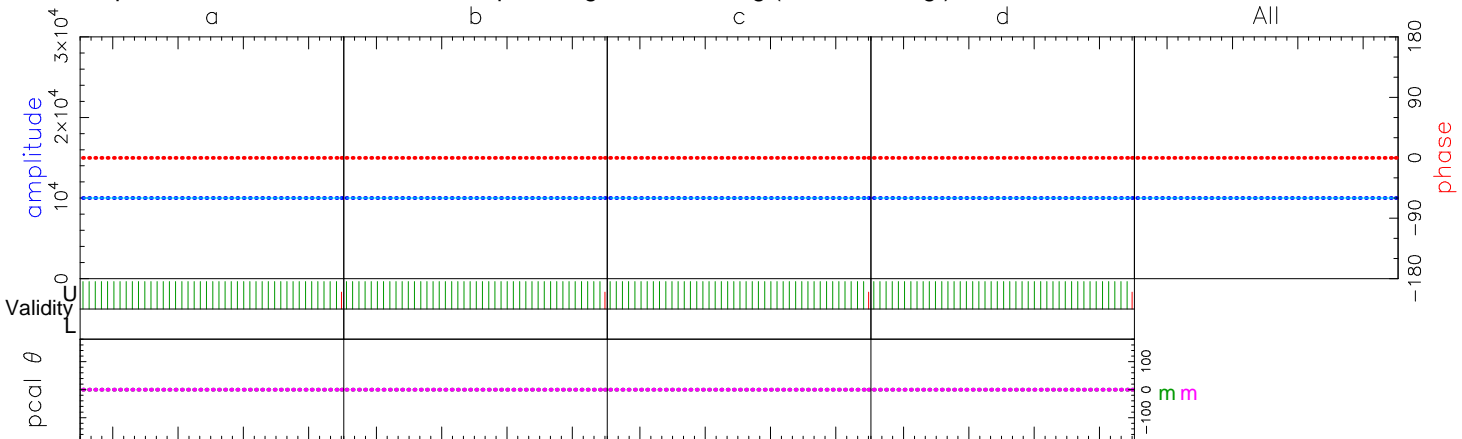


Fringe quality 9

SNR 423629.7
 Int time 239.981
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133541
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



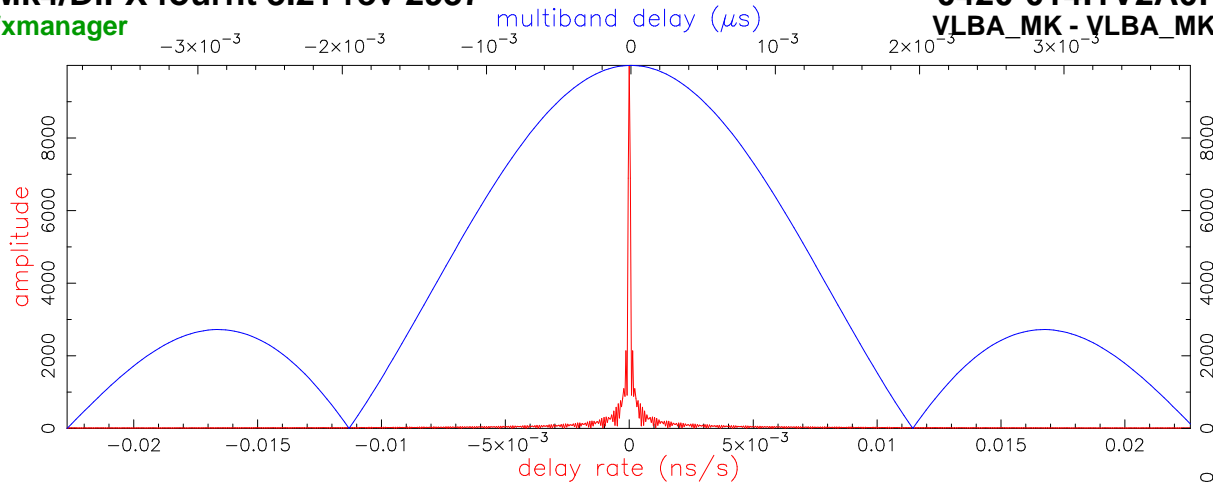
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	APs used	1000
m	1000	1000	1000	1000	PC freqs	1000
m:m	0:0	0:0	0:0	0:0	PC phase	0:0
m	1000	1000	1000	1000	ManI PC	1000
m	1000	1000	1000	1000	PC amp	1000
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	Q00UL
m	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	Q00UL

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

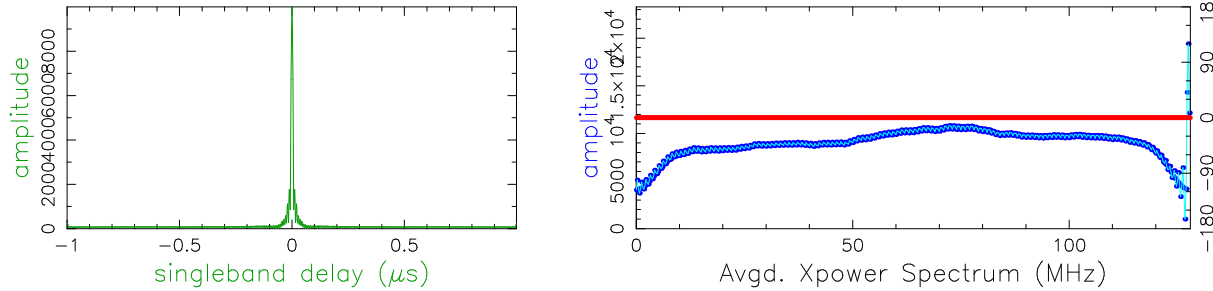
ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	10000.000 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	0.0	0.0	Search (1024X16)	10000.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	0.0	0.0	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s):	256	dr window (ns/s)	-0.023 0.023		
						Inc. frq. avg.	10000.000	Data rate(Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

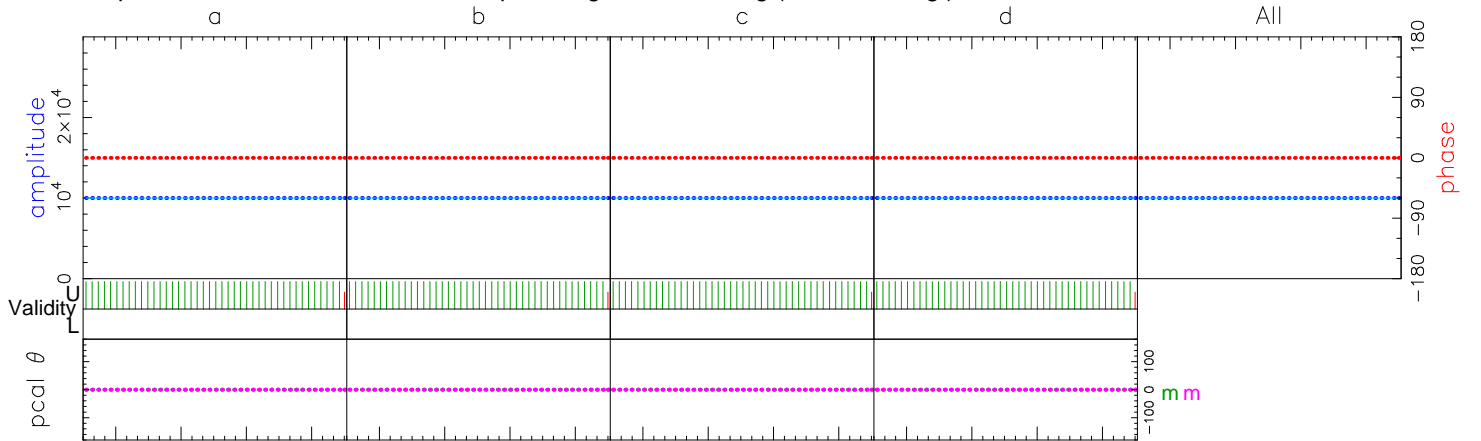
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mm.Q.165.1V2A0K



Fringe quality 9
SNR 423629.7
Int time 239.981
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133542
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



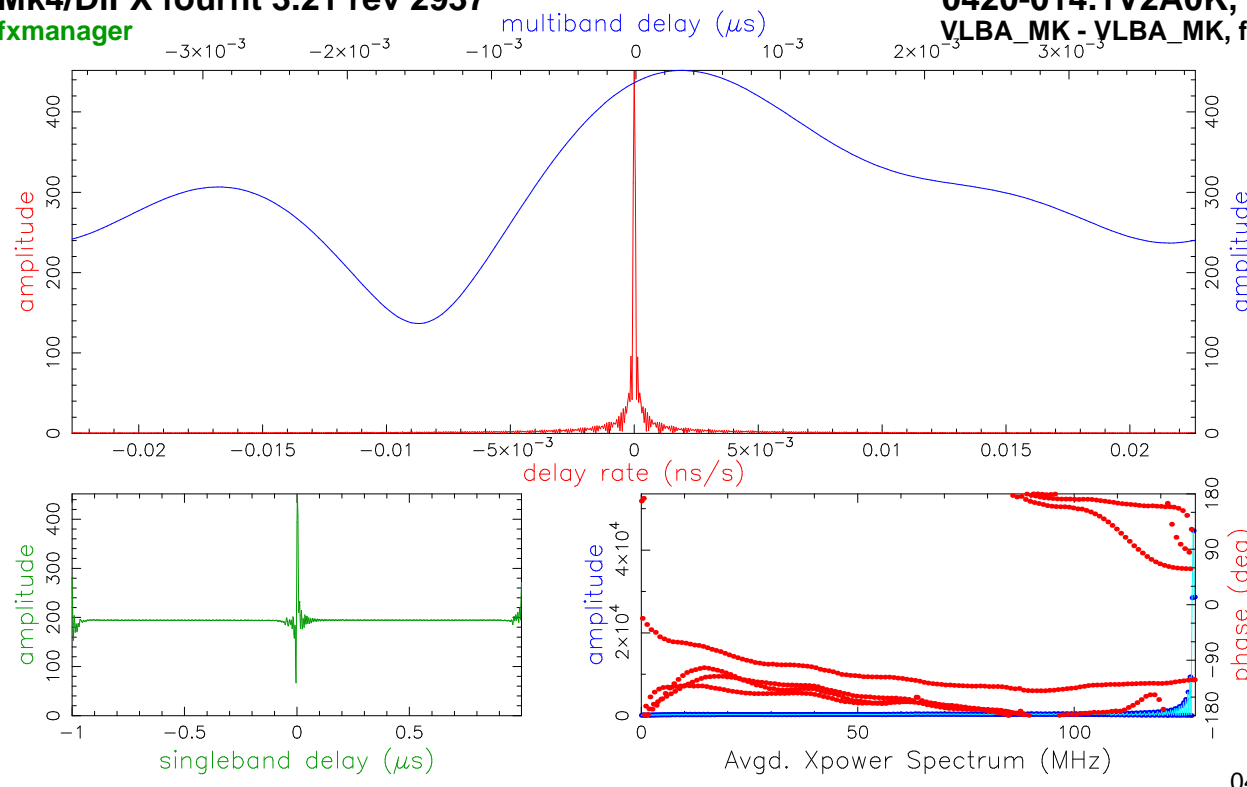
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	APs used	1000
m	1000	1000	1000	1000	PC freqs	1000
m:m	0:0	0:0	0:0	0:0	PC phase	0:0
m	1000	1000	1000	1000	ManI PC	1000
m	1000	1000	1000	1000	PC amp	1000
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	Q00UR
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	Q00UR

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg) 0.0 0.0
amp/seg (%) 0.0 0.0
ph/frq (deg) 0.0 0.0
amp/frq (%) 0.0 0.0
m: az 121.8 el 53.5 pa -53.0
Control file: cf_1234_gmva7mm

Amplitude 9999.999 +/- 0.024
Search (1024X16) 10000.000
Interp. 0.000
Inc. seg. avg. 10000.000
Inc. frq. avg. 10000.000
m: az 121.8 el 53.5 pa -53.0
Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mm..1V2A0K

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 256
Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite
sb window (us) -1.000 1.000
mb window (us) -0.004 0.004
dr window (ns/s) -0.023 0.023
ion window (TEC) 0.00 0.00
simultaneous interpolator

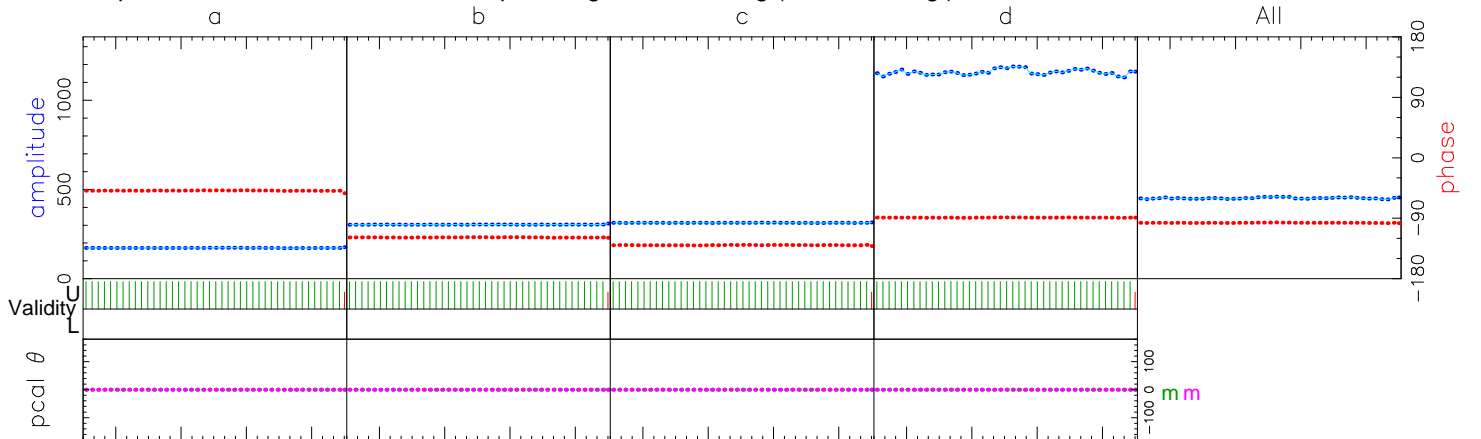


Fringe quality 5

SNR 19135.0
Int time 239.981
Amp 451.692
Phase -96.8
PFD 0.0e+00
Delays (us)
SBD 0.002035
MBD 0.000308
Fringe rate (Hz)
-0.000001
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133544
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



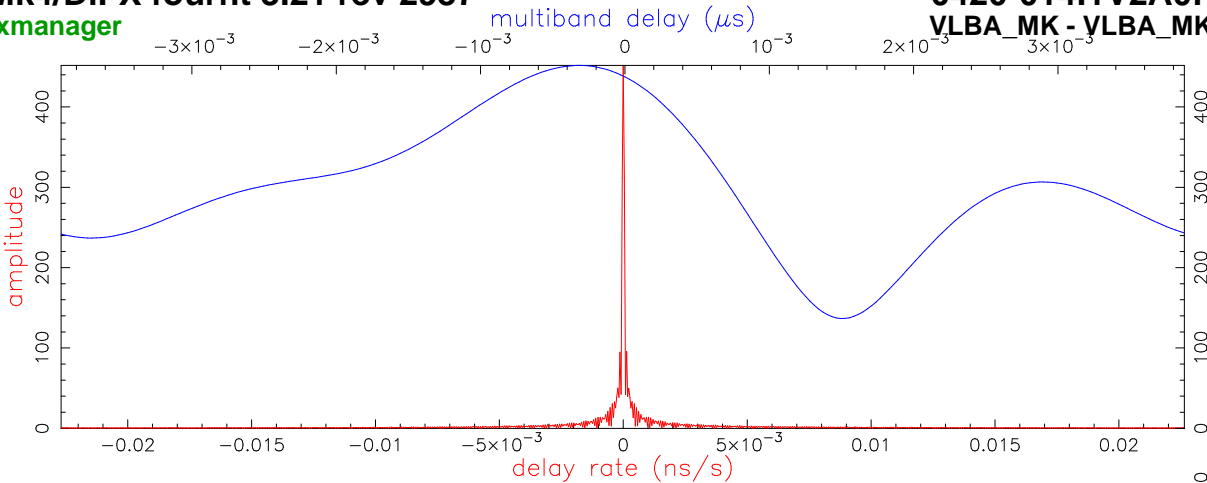
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-48.9	-118.5	-130.0	-89.0	Phase	-96.8
	172.8	303.3	313.3	1157.3	Ampl.	486.7
	1.4	513.0	513.1	514.2	Sbd box	514.0
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
m:m	0:0	0:0	0:0	0:0	PC phase	
m:m	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	3.08093750000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	3.08094E-04	+/-	5.8E-08
Sband delay (usec)	2.03487500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	2.03488E-03	+/-	2.3E-07
Phase delay (usec)	-6.24484223401E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-6.24484E-06	+/-	3.9E-10
Delay rate (us/s)	-1.41810300537E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.41810E-11	+/-	2.8E-12
Total phase (deg)	-96.8	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-96.8	+/-	0.0

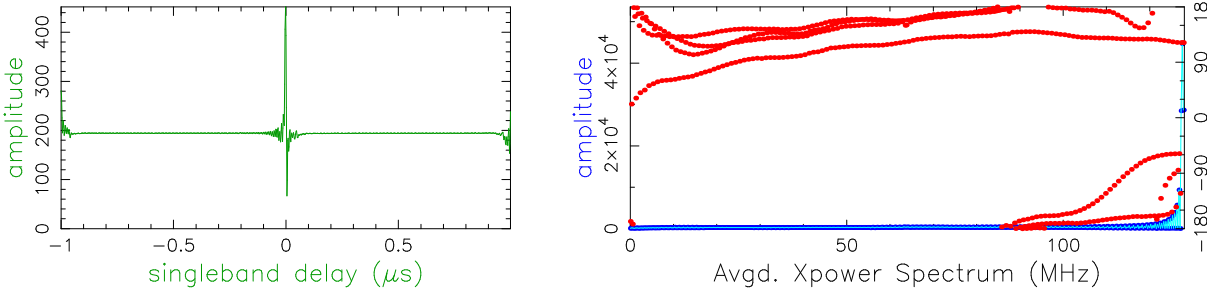
ph/seg (deg)	0.2	Theor.	Amplitude	451.692 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	0.8	0.0	Search (1024X16)	447.849	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	44.3	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	86.9	0.0	Inc. seg. avg.	451.604	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	486.655	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 512	t_cohere infinite

m: az 121.8 el 53.5 pa -53.0 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

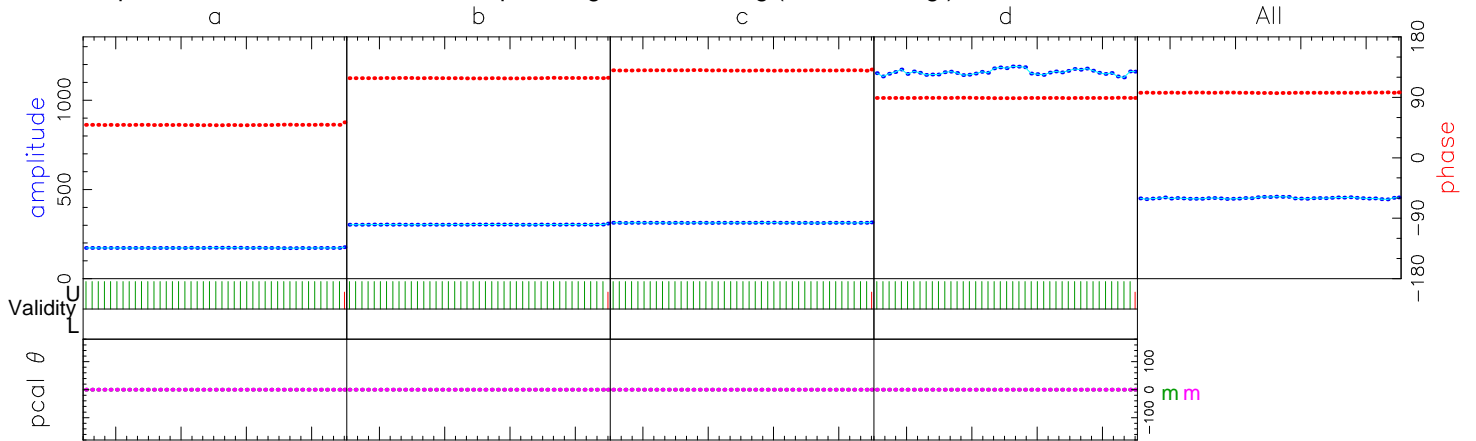
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mm.Q.191.1V2A0K



Fringe quality 5
SNR 19135.0
Int time 239.981
Amp 451.692
Phase 96.8
PFD 0.0e+00
Delays (us)
SBD -0.002035
MBD -0.000308
Fringe rate (Hz) 0.000001
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133545
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000	APs used	1000
m:m	0:0	0:0	0:0	0:0	PC freqs	1000
m	1000	1000	1000	1000	PC phase	1000
m	1000	1000	1000	1000	ManI PC	1000
m	Q00UR	Q01UR	Q02UR	Q03UR	PC amp	1000
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	Q00UR
					Tracks	Q01UL
					Chan ids	Q02UL
					Tracks	Q03UL

Group delay (usec)(sbd)	-3.08093750000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.08094E-04	+/-	5.8E-08
Sband delay (usec)	-2.03487500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-2.03488E-03	+/-	2.3E-07
Phase delay (usec)	6.24484223398E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	6.24484E-06	+/-	3.9E-10
Delay rate (us/s)	1.41810300537E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.41810E-11	+/-	2.8E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	96.8	+/-	0.0

ph/seg (deg)	0.2	Theor.	0.0	Amplitude	451.692 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	0.8	0.0		Search (1024X16)	447.849	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	44.3	0.0		Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	86.9	0.0		Inc. seg. avg.	451.604	Sample rate(MISamp/s):	256	dr window (ns/s)	-0.023 0.023	
				Inc. frq. avg.	486.655	Data rate(Mb/s):	2048	ion window (TEC)	0.00 0.00	

m: az 121.8 el 53.5 pa -53.0 m: az 121.8 el 53.5 pa -53.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mm..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mm.Q.204.1V2A0K

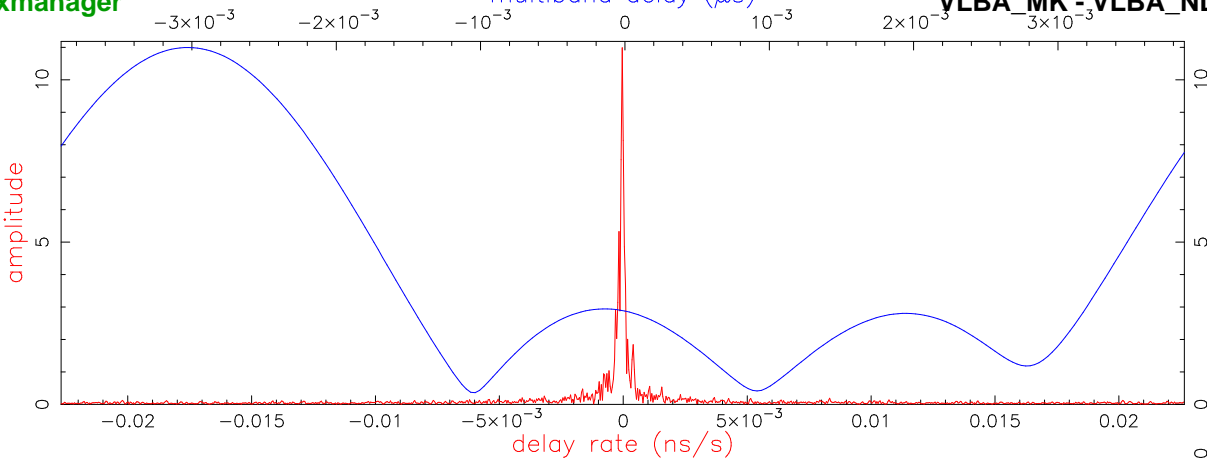
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mn

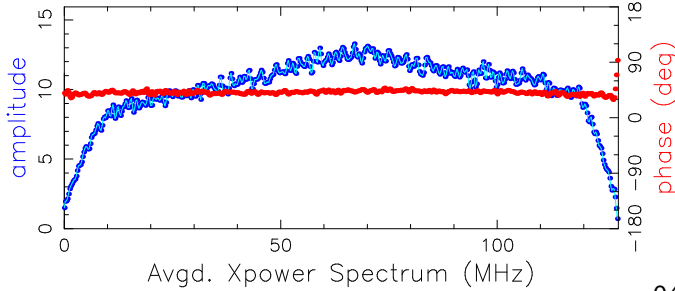
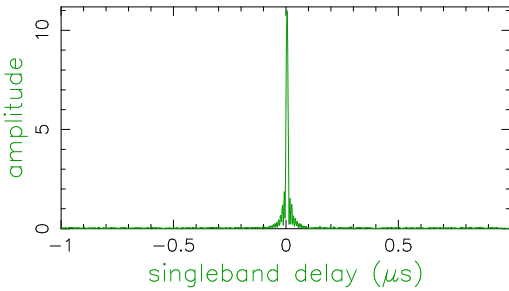
VLBA_MK - VLBA_NL, fgroup Q, pol LL

multiband delay (μ s)



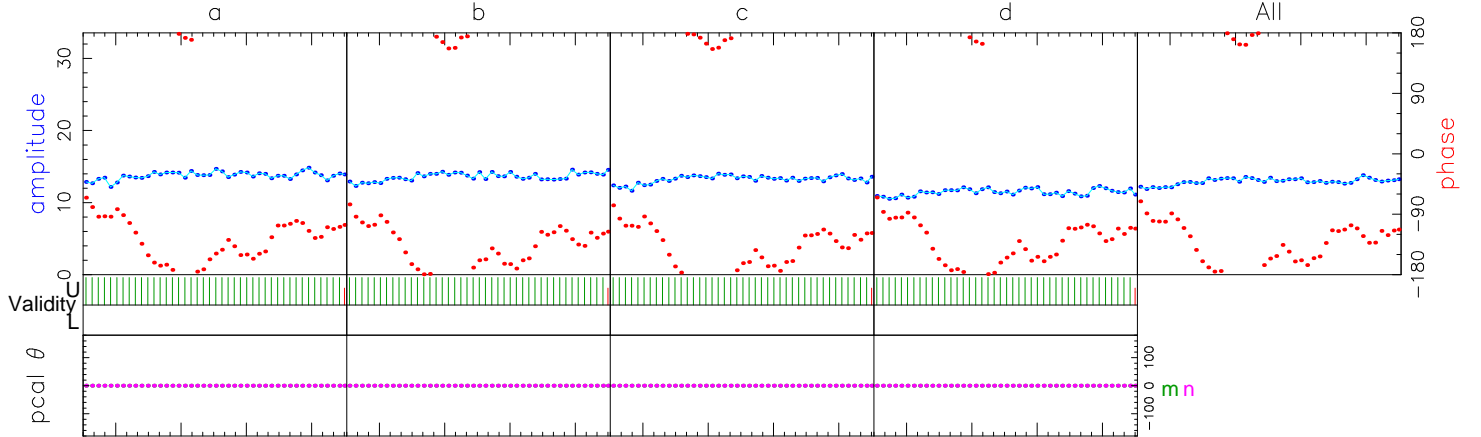
Fringe quality 7

SNR 473.8
 Int time 239.981
 Amp 11.184
 Phase -138.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.004804
 MBD -0.002986
 Fringe rate (Hz)
 -0.002448
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133541
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-130.6	-142.5	-145.6	-135.1	Phase	-138.5
	11.8	11.5	11.2	9.7	Ampl.	11.0
	515.3	515.4	515.6	515.6	Sbd box	515.5
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	4.41693188114E+03	Apriori delay (usec)	4.41692705423E+03	Resid mbdelay (usec)	-2.98559E-03	+/- 2.3E-06
Group delay (usec)(sbd)	4.41693185848E+03	Apriori clock (usec)	1.0242886E+01	Resid sbdelay (usec)	4.80425E-03	+/- 9.1E-06
Sband delay (usec)	4.41692704529E+03	Apriori clockrate (us/s)	1.8000006E-08	Resid phdelay (usec)	-8.93935E-06	+/- 1.6E-08
Phase delay (usec)	1.37472340592E+00	Apriori rate (us/s)	1.37472346279E+00	Resid rate (us/s)	-5.68688E-08	+/- 1.1E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-2.25981470330E-05	Resid phase (deg)	-138.5	+/- 0.2
Total phase (deg)	10.6					

	RMS	Theor.	Amplitude	11.184 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	32.5	0.8	Search (1024X16)	10.667	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	16.2	1.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.4	0.2	Inc. seg. avg.	12.942	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	7.3	0.4	Inc. frq. avg.	11.050	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 121.8 el 53.5 pa -53.0 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) -3941.726 -1434.710 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn.Q.166.1V2A0K

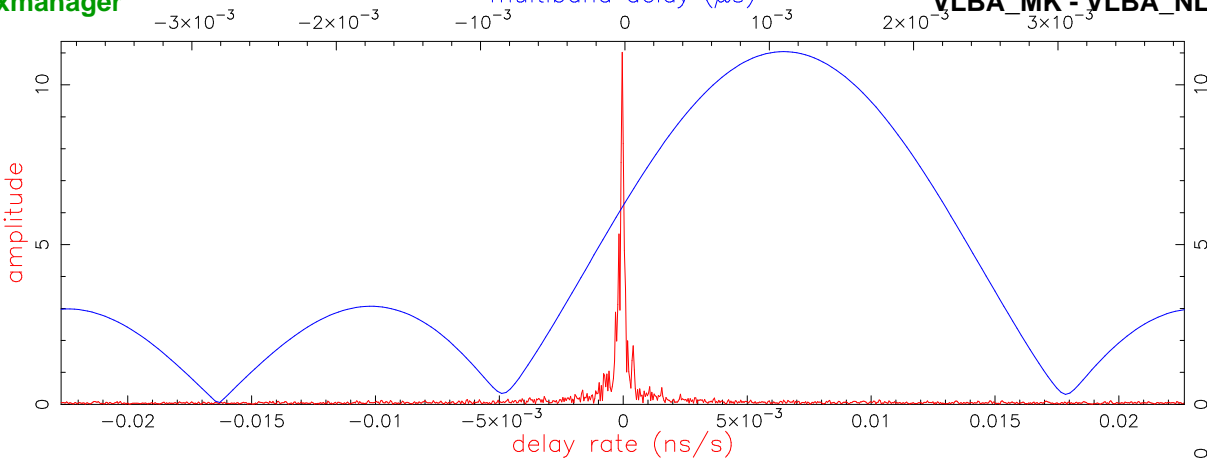
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mn

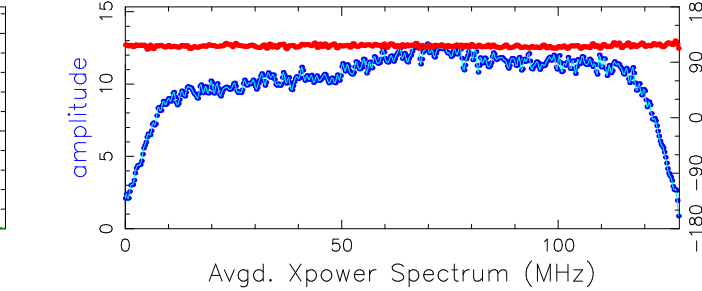
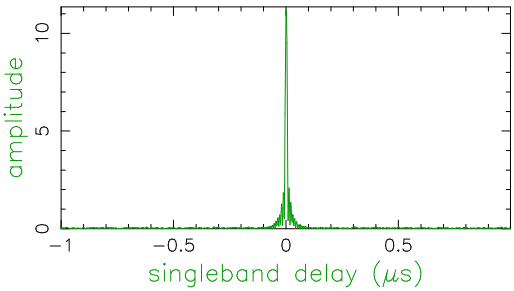
VLBA_MK - VLBA_NL, fgroup Q, pol RR

multiband delay (μ s)



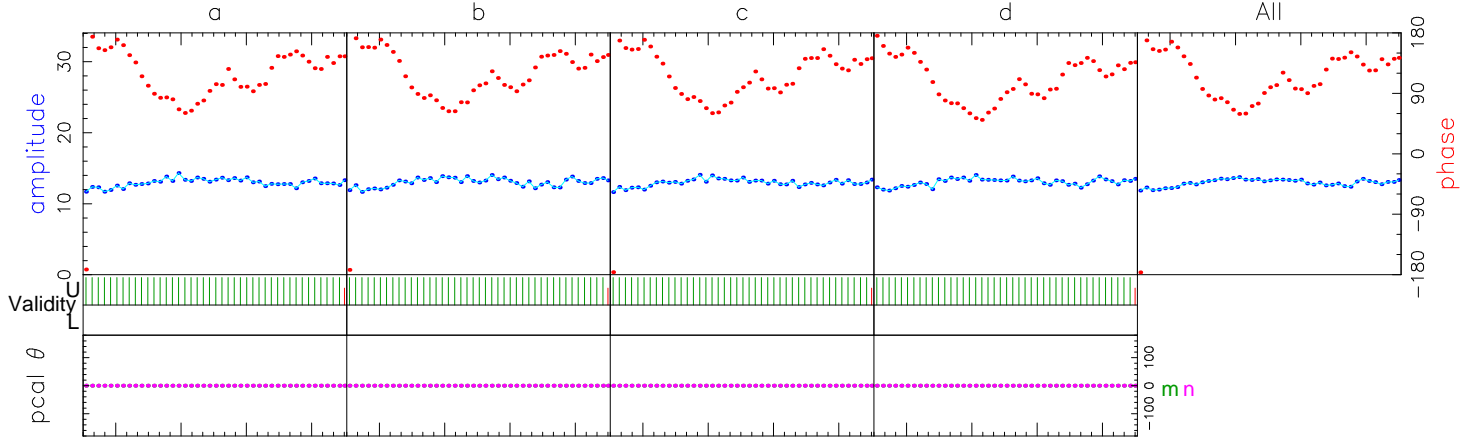
Fringe quality 7

SNR 481.3
 Int time 239.981
 Amp 11.360
 Phase 117.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.001162
 MBD 0.001172
 Fringe rate (Hz)
 -0.002455
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133543
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

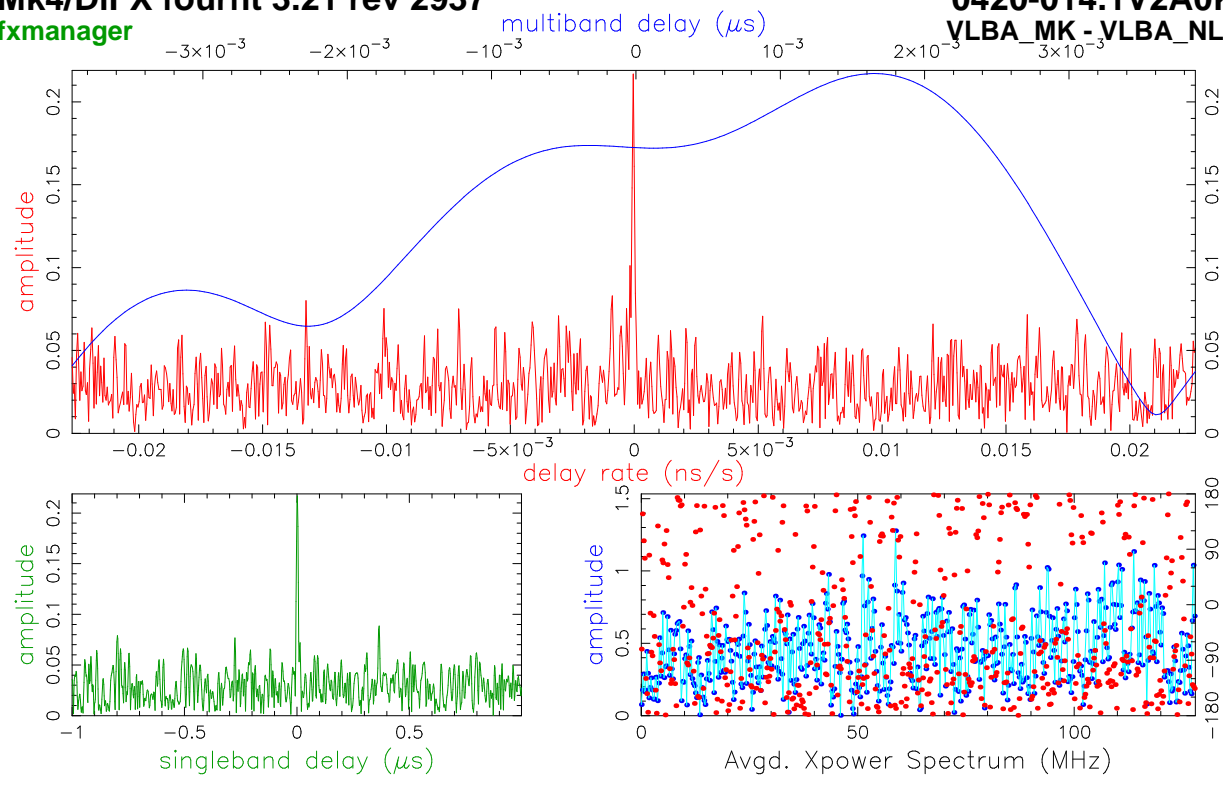


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	PC phase	
m	1000	1000	1000	1000	ManI PC	
n	1000	1000	1000	1000	PC amp	
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	4.41692822671E+03	Apriori delay (usec)	4.41692705423E+03	Resid mbdelay (usec)	1.17247E-03	+/-	2.3E-06
Sband delay (usec)	4.41692821661E+03	Apriori clock (usec)	1.0242886E+01	Resid sbdelay (usec)	1.16237E-03	+/-	9.0E-06
Phase delay (usec)	4.41692706179E+03	Apriori clockrate (us/s)	1.8000006E-08	Resid phdelay (usec)	7.55515E-06	+/-	1.5E-08
Delay rate (us/s)	1.37472340574E+00	Apriori rate (us/s)	1.37472346279E+00	Resid rate (us/s)	-5.70474E-08	+/-	1.1E-10
Total phase (deg)	266.1	Apriori accel (us/s/s)	-2.25981470330E-05	Resid phase (deg)	117.1	+/-	0.2

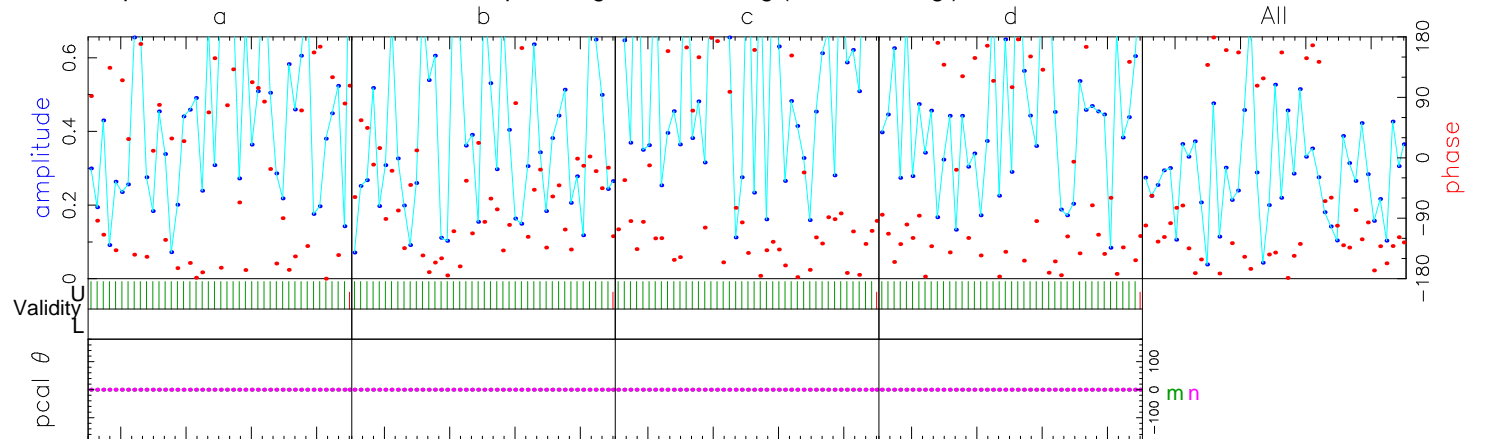
ph/seg (deg)	RMS 32.3	Theor. 0.8	Amplitude	11.360 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	14.7	1.4	Search (1024X16)	10.670	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	6.2	0.2	Inc. seg. avg.	12.959	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	2.7	0.4	Inc. frq. avg.	11.051	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
m: az 121.8 el 53.5 pa -53.0	n: az 224.0 el 37.3 pa 31.3	u,v (fr/asec)	-3941.726 -1434.710	simultaneous interpolator					

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn.Q.181.1V2A0K



Fringe quality 9
SNR 9.3
Int time 239.981
Amp 0.219
Phase -143.7
PFD 3.5e-12
Delays (us)
SBD 0.001271
MBD 0.001579
Fringe rate (Hz)
-0.002598
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133545
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m:n	0:0	0:0	0:0	0:0		
m:n	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		
Group delay (usec)(sbd)	4.41692863339E+03	4.41692863339E+03	4.41692705423E+03	4.41692705423E+03	Resid mbdelay (usec)	1.57916E-03 +/- 1.2E-04
Sband delay (usec)	4.41692832473E+03	4.41692832473E+03	1.0242886E+01	1.0242886E+01	Resid sbdelay (usec)	1.27050E-03 +/- 4.6E-04
Phase delay (usec)	4.41692704496E+03	4.41692704496E+03	1.8000006E-08	1.8000006E-08	Resid phdelay (usec)	-9.27192E-06 +/- 8.0E-07
Delay rate (us/s)	1.37472340242E+00	1.37472340242E+00	1.37472346279E+00	1.37472346279E+00	Resid rate (us/s)	-6.03630E-08 +/- 5.8E-09
Total phase (deg)		5.4	-2.25981470330E-05	-2.25981470330E-05	Resid phase (deg)	-143.7 +/- 12.4
RMS	49.1	40.5	0.219 +/- 0.024	0.219 +/- 0.024	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
Theor.	40.5	40.5	Search (1024X16)	0.207	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
Amplitude			Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/seg (deg)	63.5	12.4	Inc. seg. avg.	0.232	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/seg (%)	48.1	21.6	Inc. frq. avg.	0.264	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
ph/frq (deg)					nlags: 512	t_cohere infinite
amp/frq (%)						
m: az 121.8 el 53.5 pa -53.0	n: az 224.0 el 37.3 pa 31.3	u,v (fr/asec)	-3941.726 -1434.710			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn.Q.197.1V2A0K				

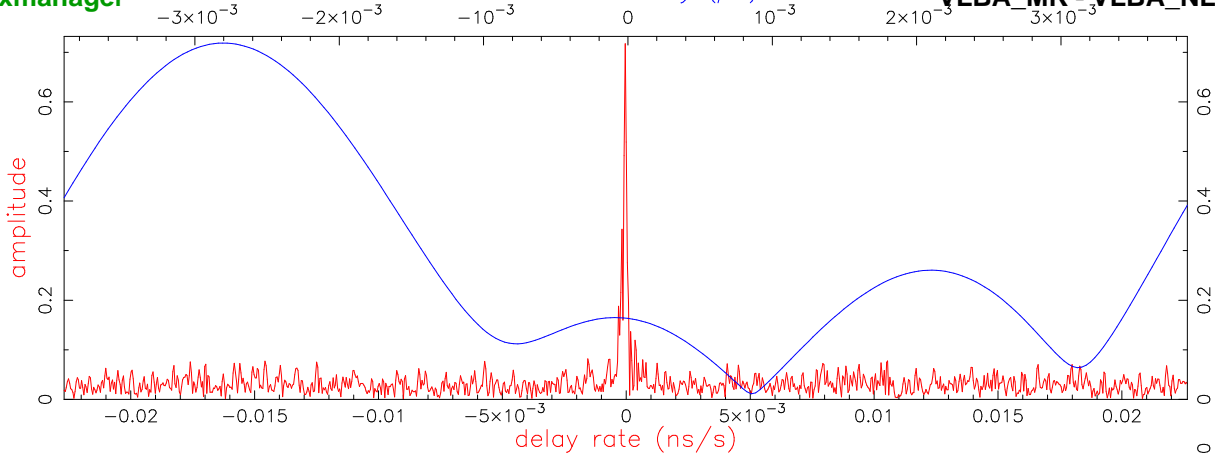
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mn

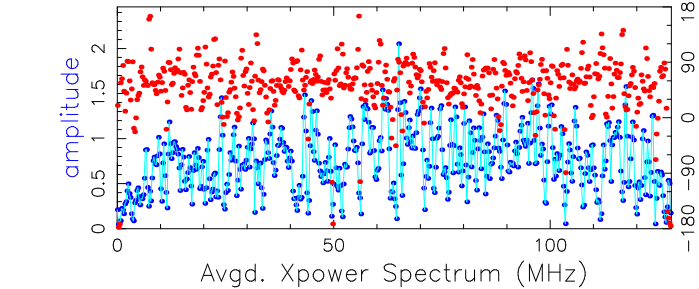
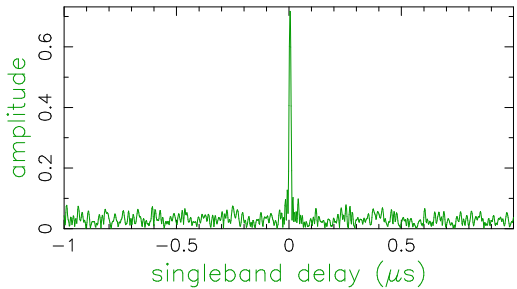
VLBA_MK - VLBA_NL, fgroup Q, pol RL

multiband delay (μ s)



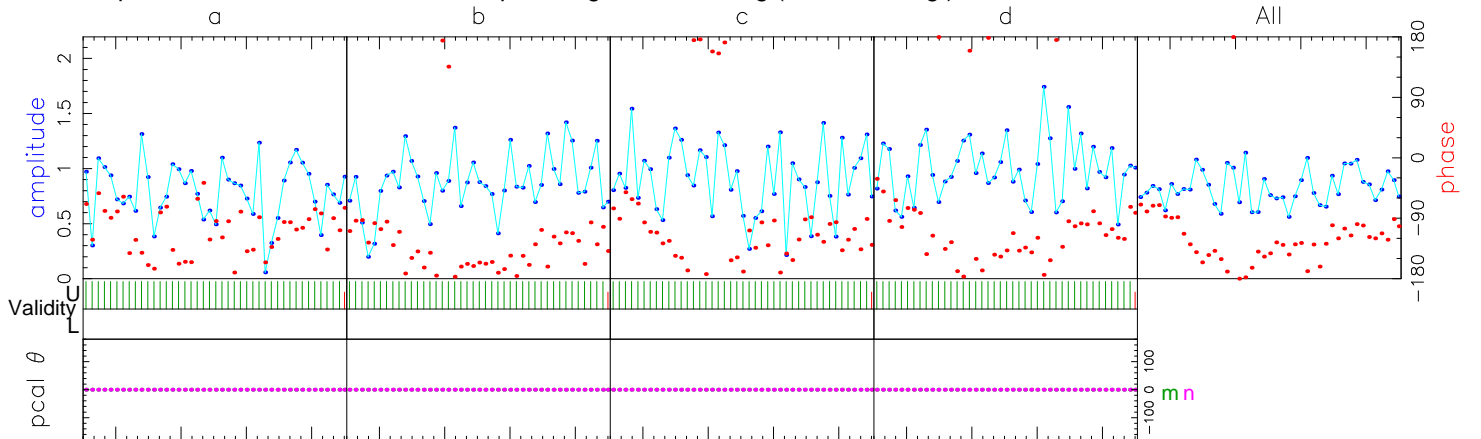
Fringe quality 8

SNR 31.0
 Int time 239.981
 Amp 0.732
 Phase -125.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.004863
 MBD -0.002736
 Fringe rate (Hz)
 -0.002494
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133546
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

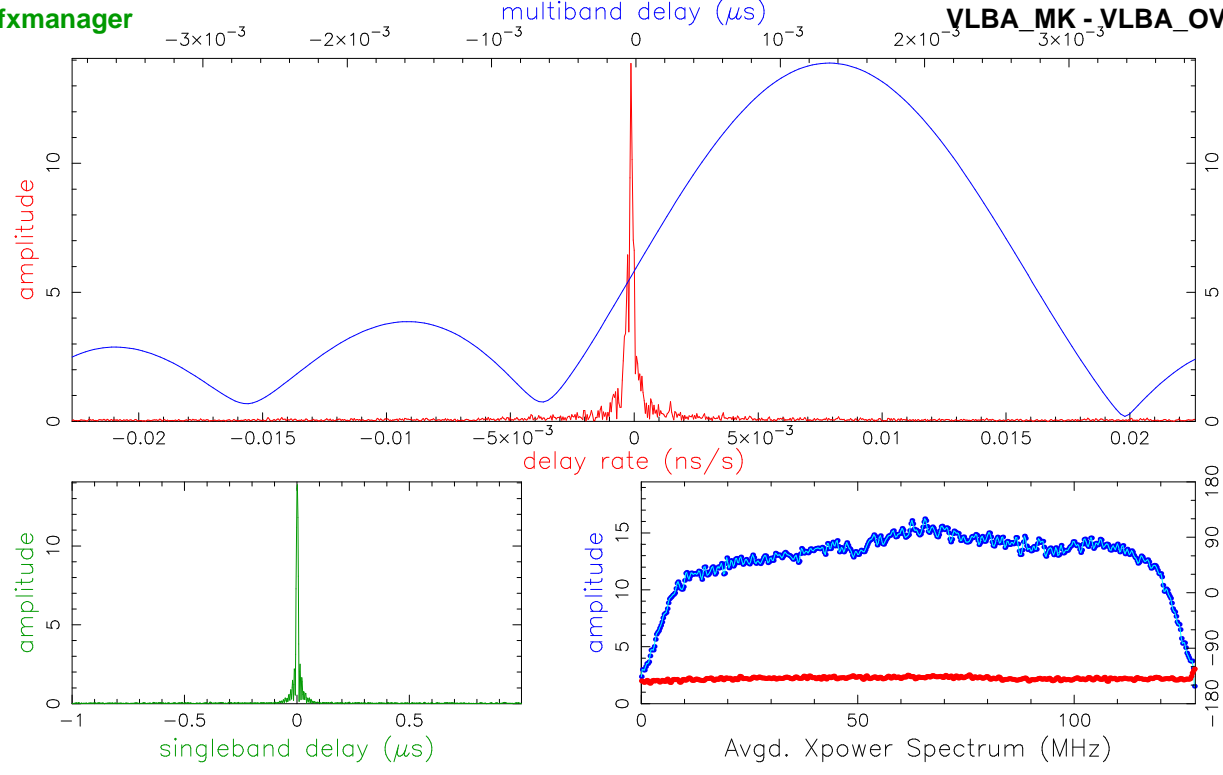


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	APs used	1000
m	1000	1000	1000	1000	PC freqs	1000
n	1000	1000	1000	1000	PC freqs	1000
m:n	0:0	0:0	0:0	0:0	PC phase	0:0
m:n	0:0	0:0	0:0	0:0	ManI PC	0:0
m	1000	1000	1000	1000	PC amp	1000
n	1000	1000	1000	1000	Chan ids	1000
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	Q00UR
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	Q00UL
					Tracks	Q01UL

	4.41693213052E+03	4.41692705423E+03	4.41692705423E+03	4.41692705423E+03	Resid mbdelay (usec)	-2.73621E-03	+/- 3.6E-05
Group delay (usec)(sbd)	4.41693213052E+03	4.41692705423E+03	4.41692705423E+03	4.41692705423E+03	Resid sbdelay (usec)	4.86312E-03	+/- 1.4E-04
Sband delay (usec)	4.41693191736E+03	4.41692705423E+03	4.41692705423E+03	4.41692705423E+03	Resid phdelay (usec)	-8.10945E-06	+/- 2.4E-07
Phase delay (usec)	4.41692704612E+03	4.41692705423E+03	4.41692705423E+03	4.41692705423E+03	Resid rate (us/s)	-5.79380E-08	+/- 1.7E-09
Delay rate (us/s)	1.37472340485E+00	1.37472340485E+00	1.37472340485E+00	1.37472340485E+00	Resid phase (deg)	-125.7	+/- 3.7
Total phase (deg)	23.4	23.4	23.4	23.4			

	RMS	Theor.	Amplitude	0.732 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	30.1	12.1	Search (1024X16)	0.690	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	24.7	21.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	17.3	3.7	Inc. seg. avg.	0.812	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	6.3	6.4	Inc. frq. avg.	0.732	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
m: az 121.8 el 53.5 pa -53.0			n: az 224.0 el 37.3 pa 31.3			u,v (fr/asec) -3941.726 -1434.710
Control file: cf_1234_gmva7mm			Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn..1V2A0K			Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mn.Q.210.1V2A0K

simultaneous interpolator

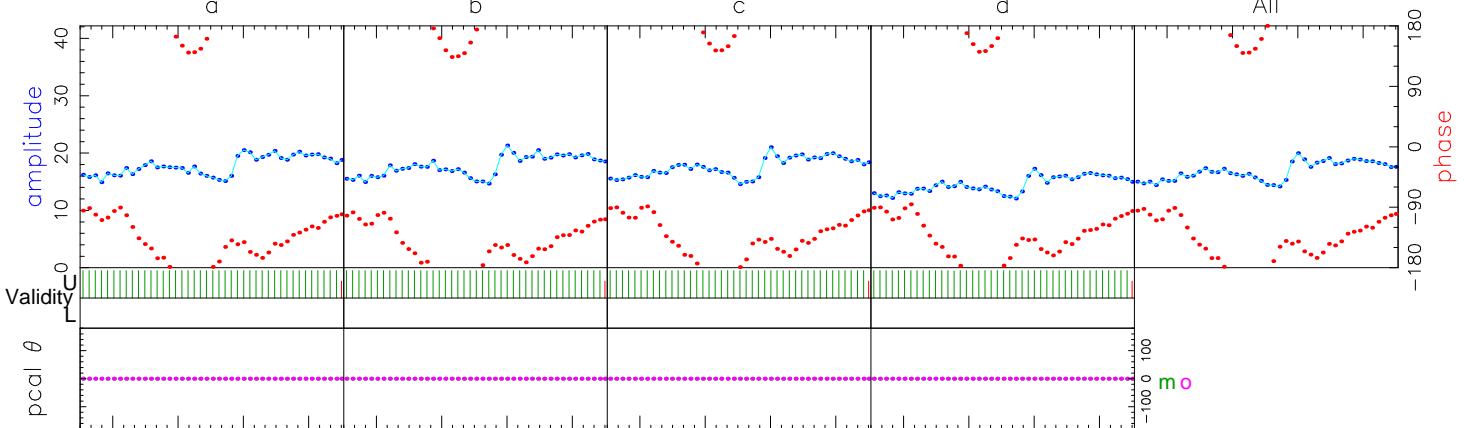


Fringe quality 6

SNR 595.7
Int time 239.880
Amp 14.066
Phase -141.9
PFD 0.0e+00
Delays (us)
SBD 0.001176
MBD 0.001296
Fringe rate (Hz)
-0.004875
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133541
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-141.9	-148.0	-138.4	-138.9	Phase	-141.9
	14.6	14.6	14.5	11.9	Ampl.	13.9
	513.6	513.6	513.7	513.5	Sbd box	513.6
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	7.20382545724E+02	Apriori delay (usec)	7.20381249269E+02	Resid mbdelay (usec)	1.29646E-03	+/- 1.9E-06
Group delay (usec)(sbd)	7.20382425769E+02	Apriori clock (usec)	1.2003939E+01	Resid sbdelay (usec)	1.17650E-03	+/- 7.2E-06
Sband delay (usec)	7.20381240108E+02	Apriori clockrate (us/s)	-4.2000013E-08	Resid phdelay (usec)	-9.16101E-06	+/- 1.2E-08
Phase delay (usec)	8.84700594698E-01	Apriori rate (us/s)	8.84700707976E-01	Resid rate (us/s)	-1.13278E-07	+/- 9.0E-11
Delay rate (us/s)	206.7	Apriori accel (us/s/s)	-3.08840785497E-06	Resid phase (deg)	-141.9	+/- 0.2
Total phase (deg)						

	RMS	Theor.	Amplitude	14.066 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	36.4	0.6	Search (1024X16)	12.846	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	22.9	1.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.4	0.2	Inc. seg. avg.	16.858	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	8.4	0.3	Inc. frq. avg.	13.907	Data rate(Mb/s): 2048	nlags: 512 t_coherence infinite ion window (TEC) 0.00 0.00

m: az 121.8 el 53.5 pa -53.0 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) -2531.322 -1178.860 simultaneous interpolator

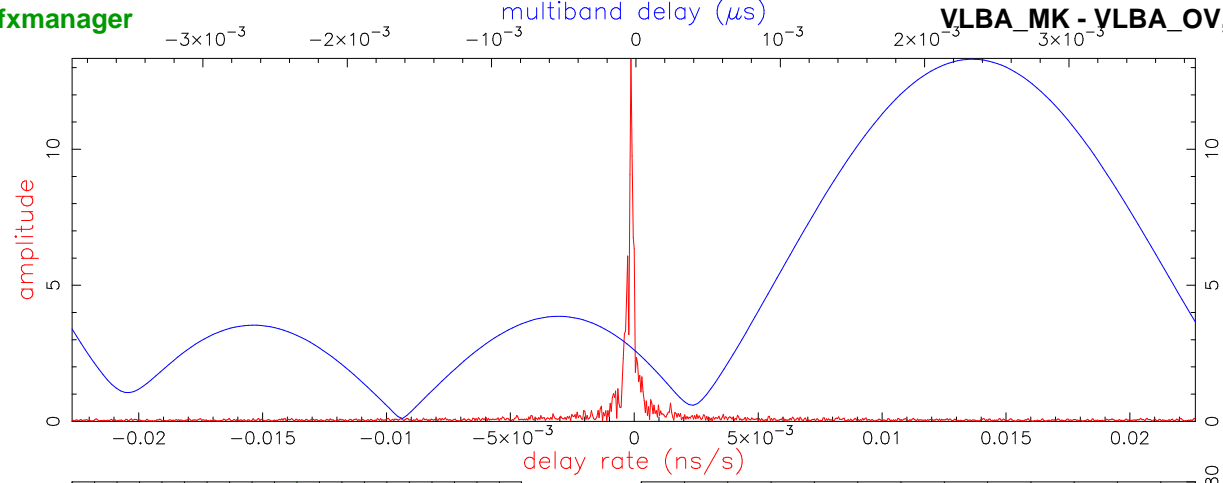
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo.Q.167.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

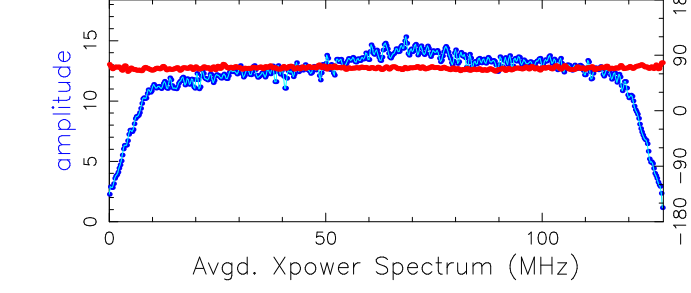
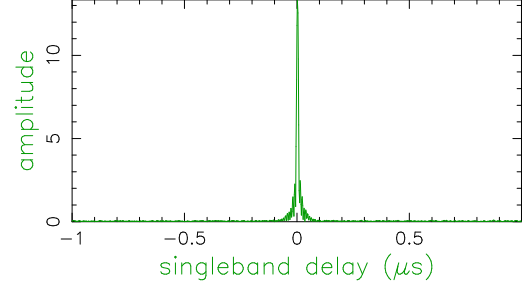
0420-014.1V2A0K, No0121, mo

VLBA_MK - VLBA_OV, fgroup Q, pol RR



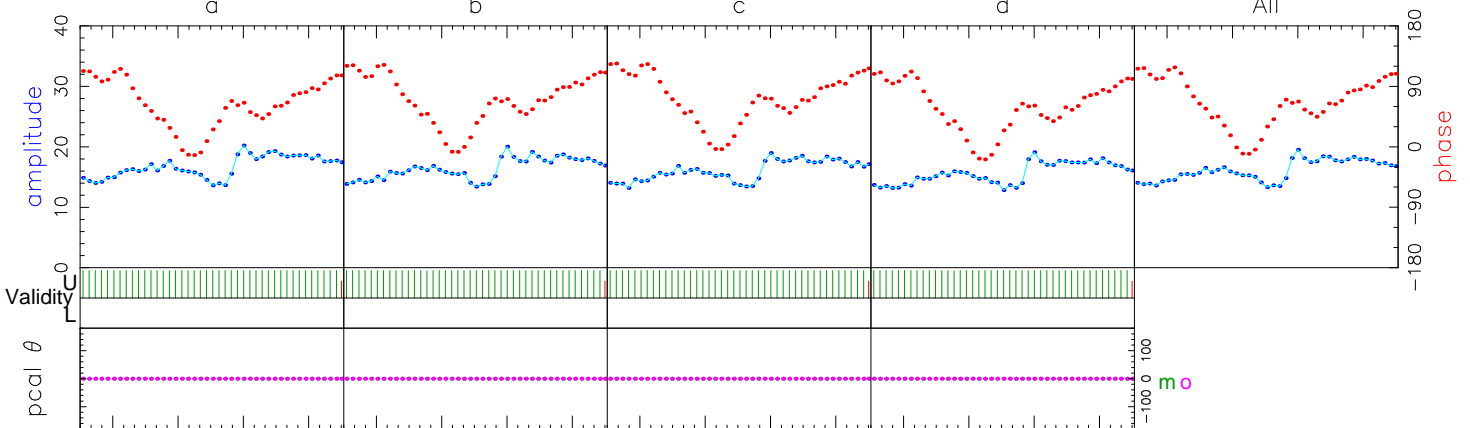
Fringe quality 6

SNR 564.9
 Int time 239.880
 Amp 13.339
 Phase 67.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.002286
 MBD 0.002351
 Fringe rate (Hz)
 -0.004863
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133543
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	64.8	71.8	73.8	60.7	Phase	67.8
	13.8	13.5	13.2	12.9	Ampl.	13.4
	514.3	514.3	514.1	514.0	Sbd box	514.2
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	7.20383600193E+02	Apriori delay (usec)	7.20381249269E+02	Resid mbdelay (usec)	2.35092E-03	+/- 2.0E-06
Group delay (usec)(sbd)	7.20383600193E+02	Apriori clock (usec)	1.2003939E+01	Resid sbdelay (usec)	2.28575E-03	+/- 7.6E-06
Sband delay (usec)	7.20383535019E+02	Apriori clockrate (us/s)	-4.2000013E-08	Resid phdelay (usec)	4.37733E-06	+/- 1.3E-08
Phase delay (usec)	7.20381253646E+02	Apriori rate (us/s)	8.84700707976E-01	Resid rate (us/s)	-1.12986E-07	+/- 9.4E-11
Delay rate (us/s)	8.84700594990E-01	Apriori accel (us/s/s)	-3.08840785497E-06	Resid phase (deg)	67.8	+/- 0.2
Total phase (deg)	56.5					

	RMS	Theor.	Amplitude	13.339 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	36.3	0.7	Search (1024X16)	12.304	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	24.4	1.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.5	0.2	Inc. seg. avg.	16.126	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.6	0.4	Inc. frq. avg.	13.361	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 121.8 el 53.5 pa -53.0 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) -2531.322 -1178.860 simultaneous interpolator

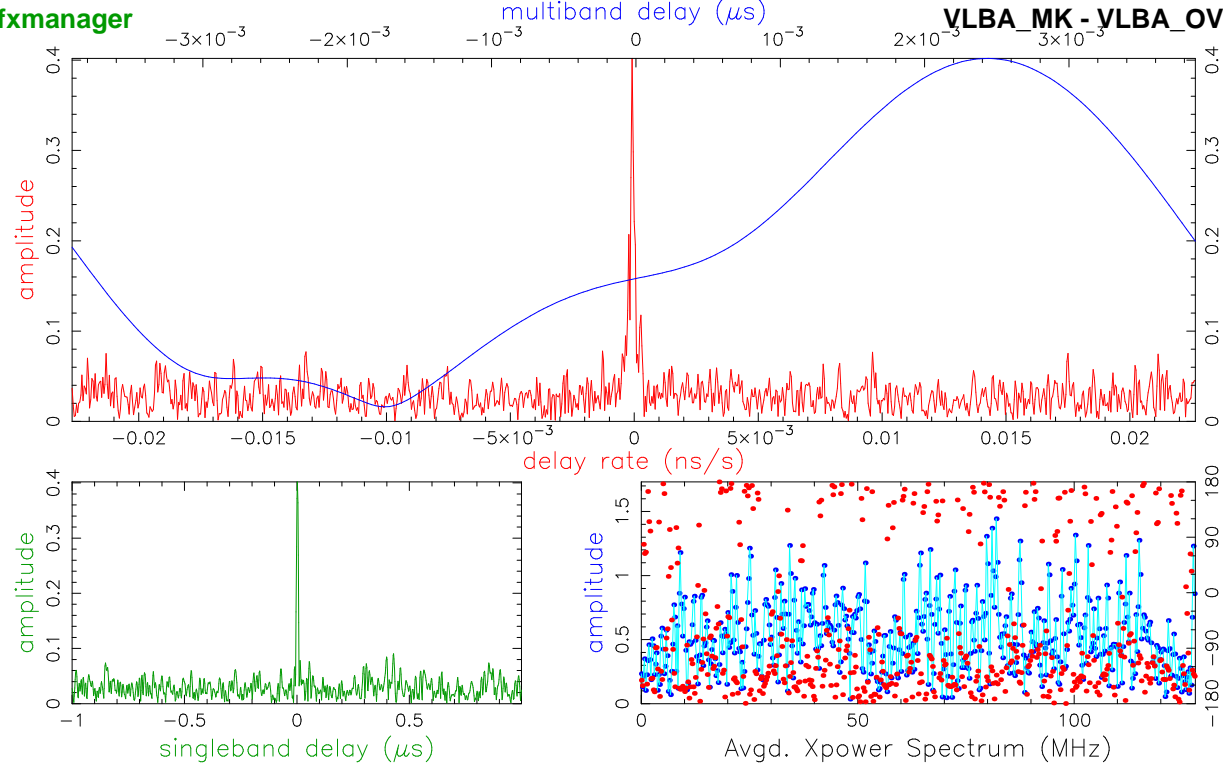
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo.Q.186.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mo

VLBA_MK - VLBA_OV, fgroup Q, pol LR

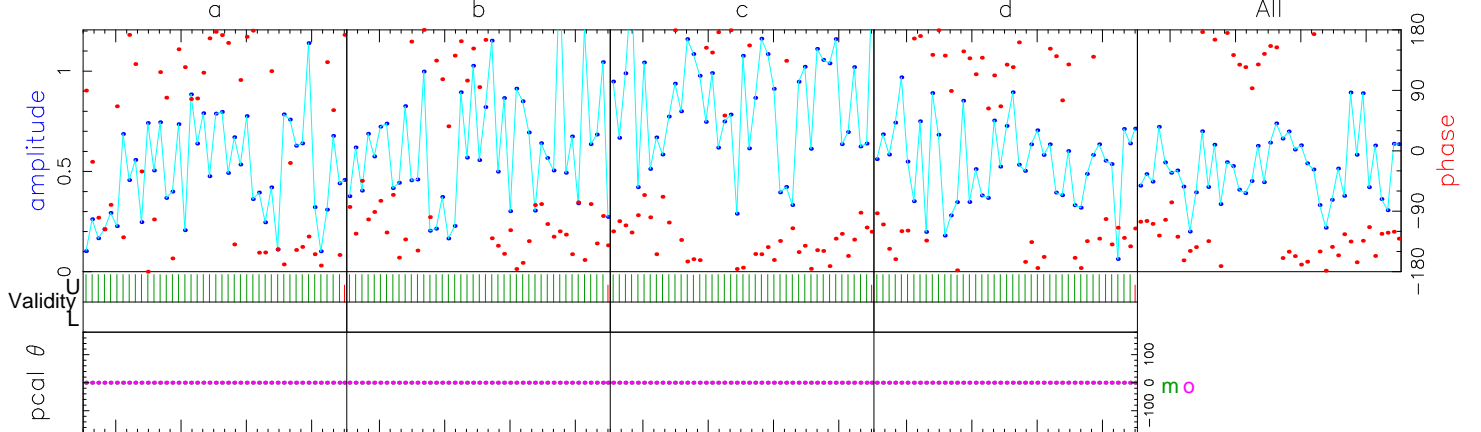


Fringe quality 8

SNR 17.0
 Int time 239.880
 Amp 0.402
 Phase -157.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.001837
 MBD 0.002432
 Fringe rate (Hz)
 -0.004677
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133545
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	171.2	-139.9	-146.0	-179.7	Phase	-157.7
	0.3	0.4	0.7	0.4	Ampl.	0.4
	513.6	514.2	513.5	514.3	Sbd box	513.9
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.20383680968E+02	Apriori delay (usec)	7.20381249269E+02	Resid mbdelay (usec)	2.43170E-03	+/-	6.5E-05
Sband delay (usec)	7.20383086519E+02	Apriori clock (usec)	1.2003939E+01	Resid sbdelay (usec)	1.83725E-03	+/-	2.5E-04
Phase delay (usec)	7.20381239094E+02	Apriori clockrate (us/s)	-4.2000013E-08	Resid phdelay (usec)	-1.01750E-05	+/-	4.3E-07
Delay rate (us/s)	8.84700599304E-01	Apriori rate (us/s)	8.84700707976E-01	Resid rate (us/s)	-1.08672E-07	+/-	3.1E-09
Total phase (deg)	191.0	Apriori accel (us/s/s)	-3.08840785497E-06	Resid phase (deg)	-157.7	+/-	6.7

ph/seg (deg)	41.6	Theor.	22.1	Amplitude	0.402 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	48.3		38.5	Search (1024X16)	0.375	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	30.9		6.7	Inc. seg. avg.	0.483	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	38.0		11.7	Inc. frq. avg.	0.423	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

m: az 121.8 el 53.5 pa -53.0 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) -2531.322 -1178.860 simultaneous interpolator

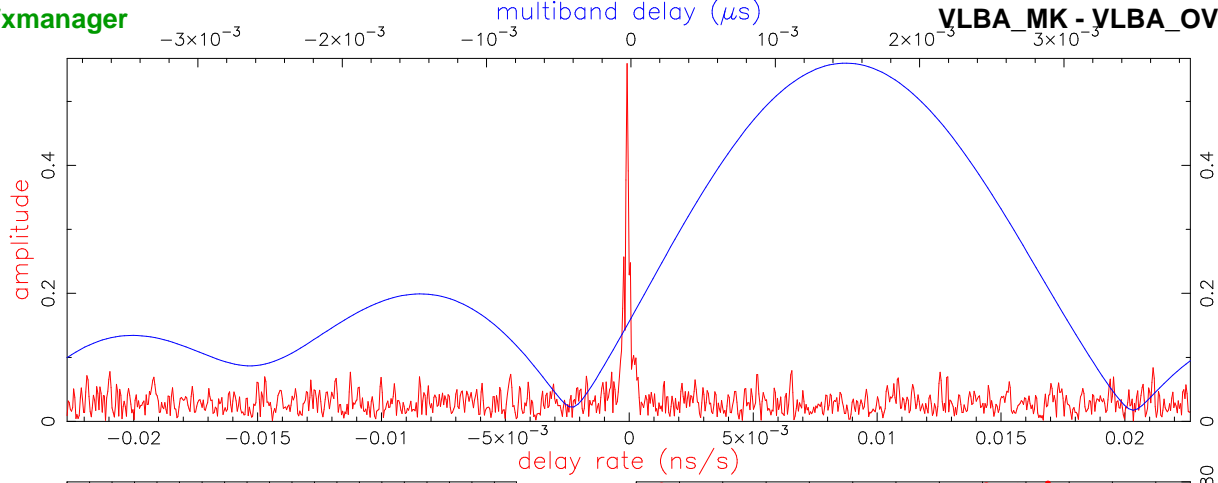
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo.Q.201.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mo

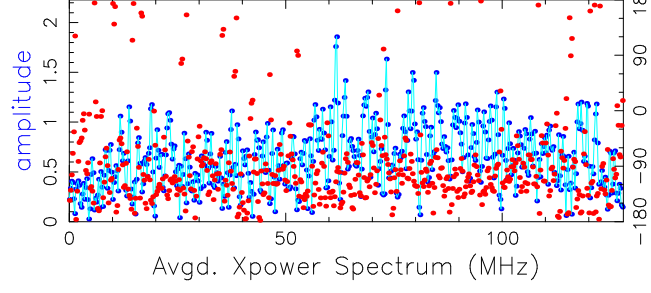
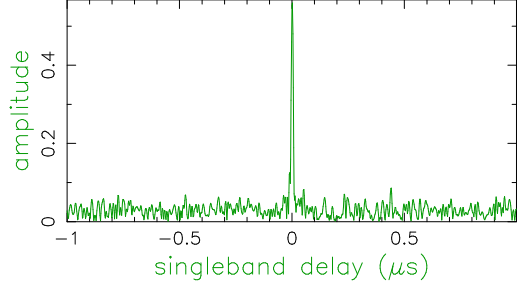
VLBA_MK - VLBA_OV, fgroup Q, pol RL



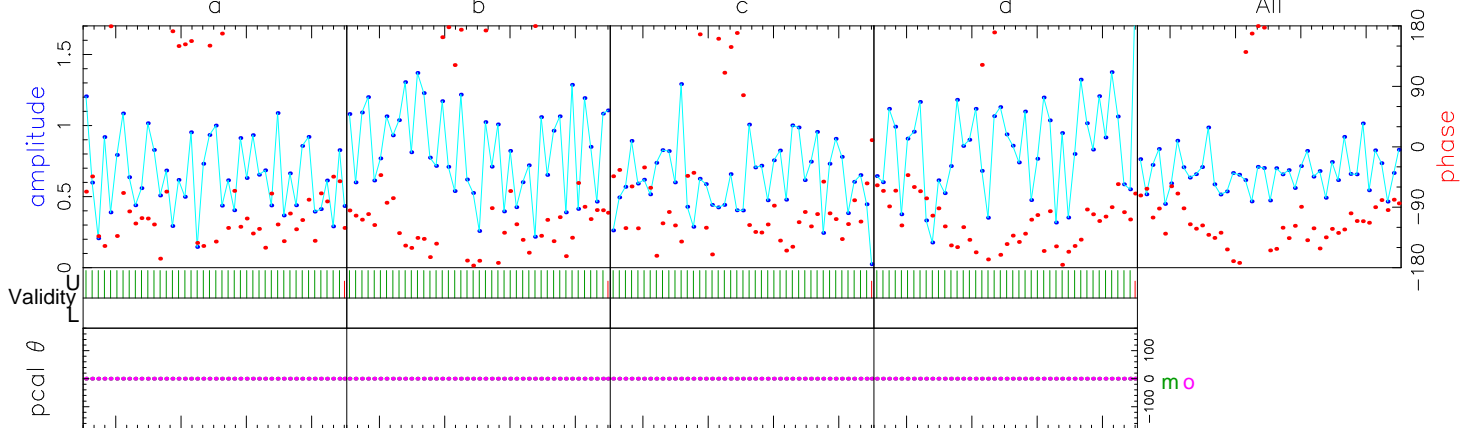
Fringe quality 9

SNR 24.0
 Int time 239.880
 Amp 0.567
 Phase -119.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.001127
 MBD 0.001431
 Fringe rate (Hz)
 -0.004773
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133547
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



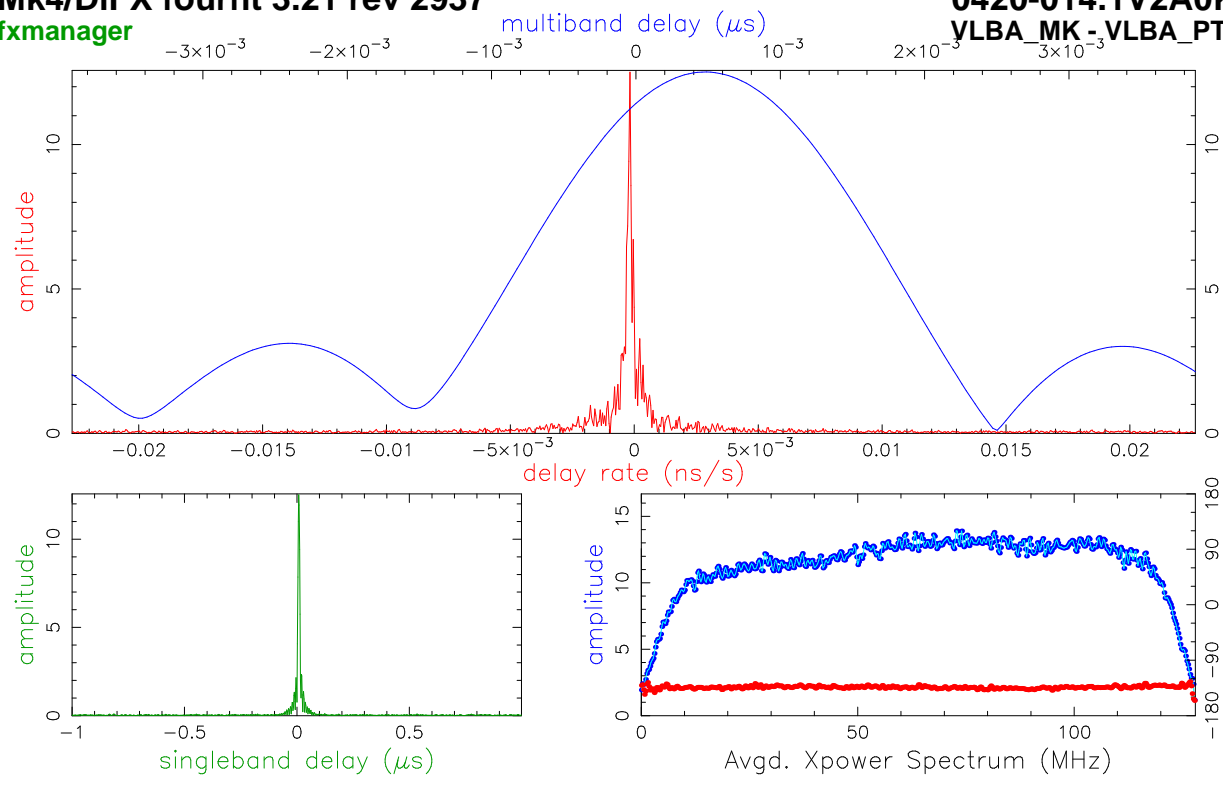
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-117.9	-128.4	-116.0	-114.8	Phase	-119.7
	0.5	0.7	0.5	0.7	Ampl.	0.6
	513.7	513.4	513.9	513.4	Sbd box	513.6
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.20382680724E+02	Apriori delay (usec)	7.20381249269E+02	Resid mbdelay (usec)	1.43146E-03	+/-	4.6E-05
Sband delay (usec)	7.20382376519E+02	Apriori clock (usec)	1.2003939E+01	Resid sbdelay (usec)	1.12725E-03	+/-	1.8E-04
Phase delay (usec)	7.20381241545E+02	Apriori clockrate (us/s)	-4.2000013E-08	Resid phdelay (usec)	-7.72358E-06	+/-	3.1E-07
Delay rate (us/s)	8.84700597080E-01	Apriori rate (us/s)	8.84700707976E-01	Resid rate (us/s)	-1.10896E-07	+/-	2.2E-09
Total phase (deg)	229.0	Apriori accel (us/s/s)	-3.08840785497E-06	Resid phase (deg)	-119.7	+/-	4.8

ph/seg (deg)	RMS 35.8	Theor. 15.6	Amplitude	0.567 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	30.2	27.3	Search (1024X16)	0.510	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	7.6	4.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	16.5	8.3	Inc. seg. avg.	0.650	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	0.560	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00
m: az 121.8 el 53.5 pa -53.0			o: az 190.9 el 51.0 pa 9.1						simultaneous interpolator
Control file: cf_1234_gmva7mm			Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo..1V2A0K						Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mo.Q.215.1V2A0K

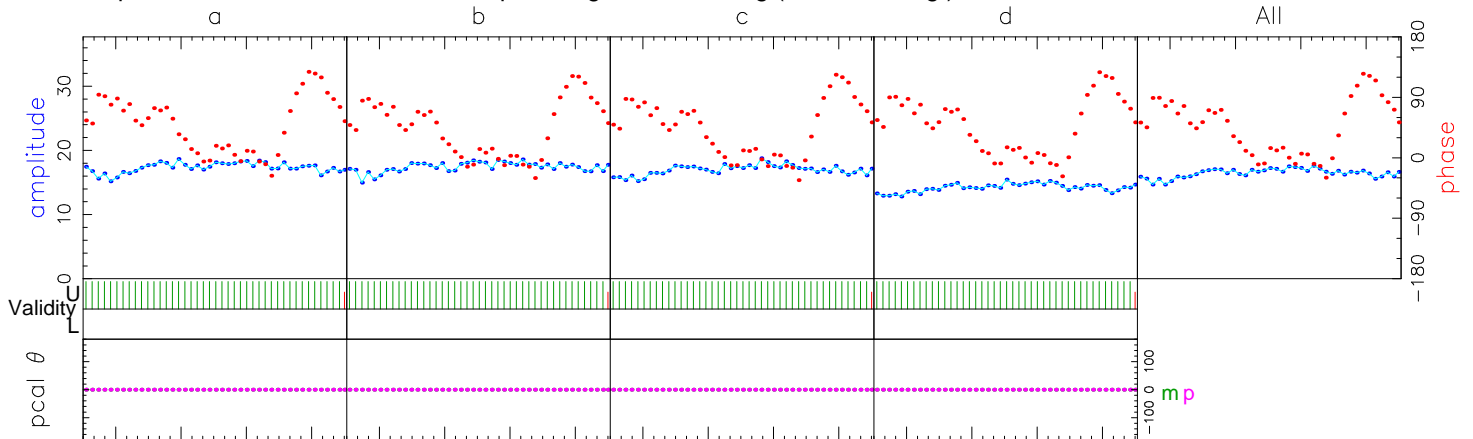


Fringe quality 6

SNR 532.4
Int time 239.981
Amp 12.568
Phase 45.1
PFD 0.0e+00
Delays (us)
SBD 0.008261
MBD 0.000500
Fringe rate (Hz)
-0.007782
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133541
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000		
p	1000	1000	1000	1000		
m:p	0:0	0:0	0:0	0:0		
m:p	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
p	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	7.43138934420E+02	Apriori delay (usec)	7.43130622208E+02	Resid mbdelay (usec)	4.99711E-04	+/- 2.1E-06
Sband delay (usec)	7.43138882958E+02	Apriori clock (usec)	1.0104511E+01	Resid sbdelay (usec)	8.26075E-03	+/- 8.1E-06
Phase delay (usec)	7.43130625119E+02	Apriori clockrate (us/s)	4.3800001E-07	Resid phdelay (usec)	2.91102E-06	+/- 1.4E-08
Delay rate (us/s)	1.11249736162E+00	Apriori rate (us/s)	1.11249754244E+00	Resid rate (us/s)	-1.80819E-07	+/- 1.0E-10
Total phase (deg)	37.8	Apriori accel (us/s/s)	-3.32501717419E-06	Resid phase (deg)	45.1	+/- 0.2

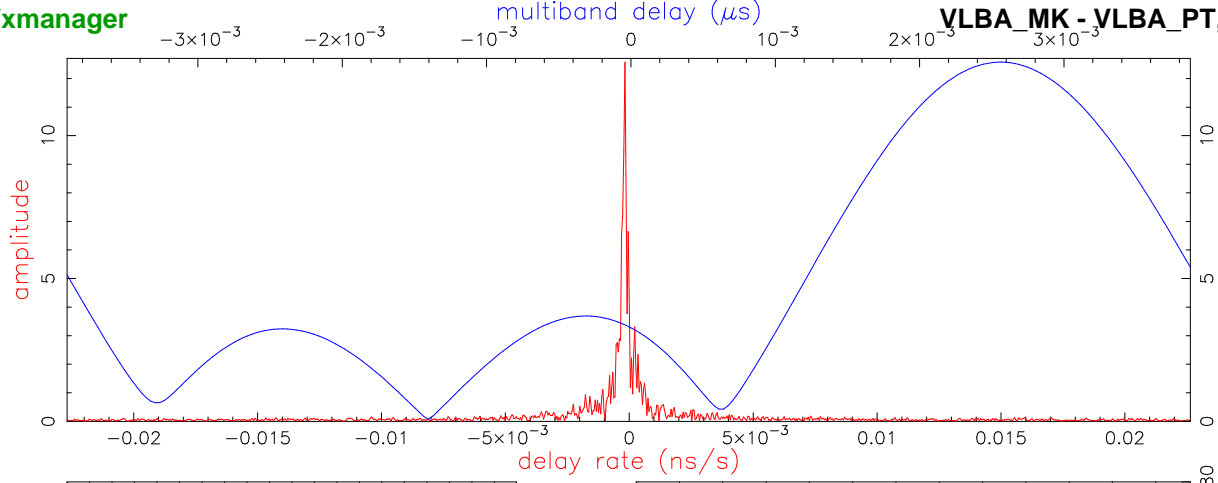
ph/seg (deg)	41.3	0.7	Amplitude	12.568 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	31.5	1.2	Search (1024X16)	12.445	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	3.7	0.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	8.2	0.4	Inc. seg. avg.	16.460	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	12.524	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mp

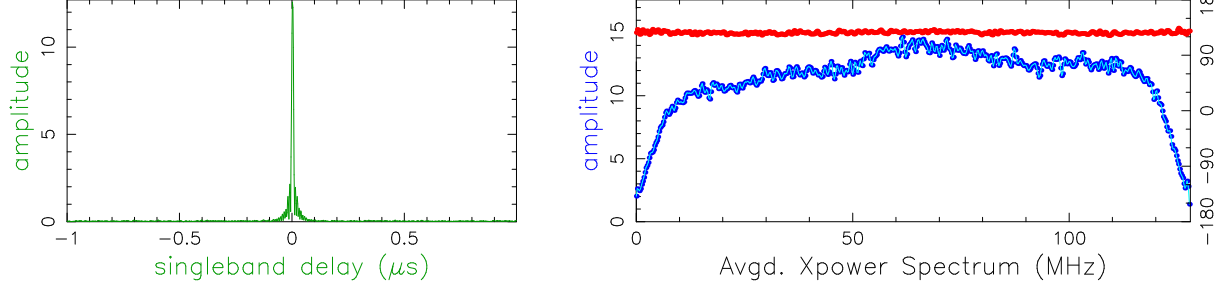
VLBA_MK - VLBA_PT, fgroup Q, pol RR



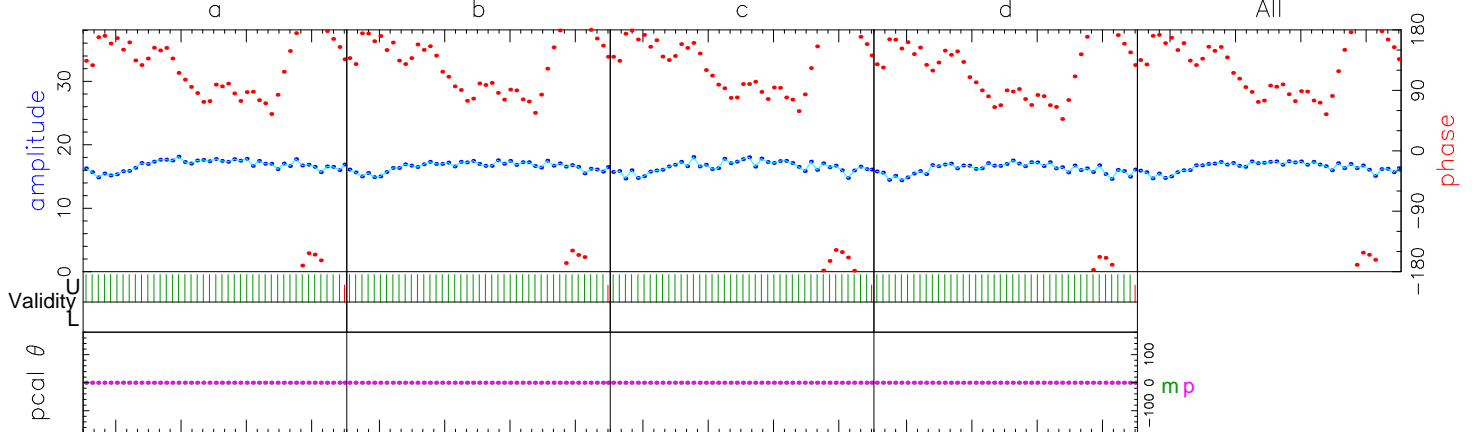
Fringe quality 6

SNR 538.2
 Int time 239.981
 Amp 12.705
 Phase 128.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.002650
 MBD 0.002597
 Fringe rate (Hz)
 -0.007786
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133543
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	128.2	130.6	133.0	121.7	Phase	128.4
	12.9	12.6	12.6	12.3	Ampl.	12.6
	514.5	514.3	514.4	514.3	Sbd box	514.4
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.43133219451E+02	Apriori delay (usec)	7.43130622208E+02	Resid mbdelay (usec)	2.59724E-03	+/-	2.1E-06
Sband delay (usec)	7.43133272083E+02	Apriori clock (usec)	1.0104511E+01	Resid sbdelay (usec)	2.64987E-03	+/-	8.0E-06
Phase delay (usec)	7.43130630496E+02	Apriori clockrate (us/s)	4.3800001E-07	Resid phdelay (usec)	8.28781E-06	+/-	1.4E-08
Delay rate (us/s)	1.11249736153E+00	Apriori rate (us/s)	1.11249754244E+00	Resid rate (us/s)	-1.80905E-07	+/-	9.9E-11
Total phase (deg)	121.2	Apriori accel (us/s/s)	-3.32501717419E-06	Resid phase (deg)	128.4	+/-	0.2

ph/seg (deg)	41.2	Theor.	0.7	Amplitude	12.705 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	30.4	Search (1024X16)	12.405	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	5.9	Inc. seg. avg.	16.497	Inc. frq. avg.	12.601	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	1.7	Inc. frq. avg.	12.601	Sample rate(MISamp/s): 256		Data rate(Mb/s): 2048	nlags: 512
m: az 121.8 el 53.5 pa -53.0		p: az 207.7 el 51.0 pa 23.1		u,v (fr/asec)	-3183.759 -996.863	t_cohere infinite	ion window (TEC) 0.00 0.00

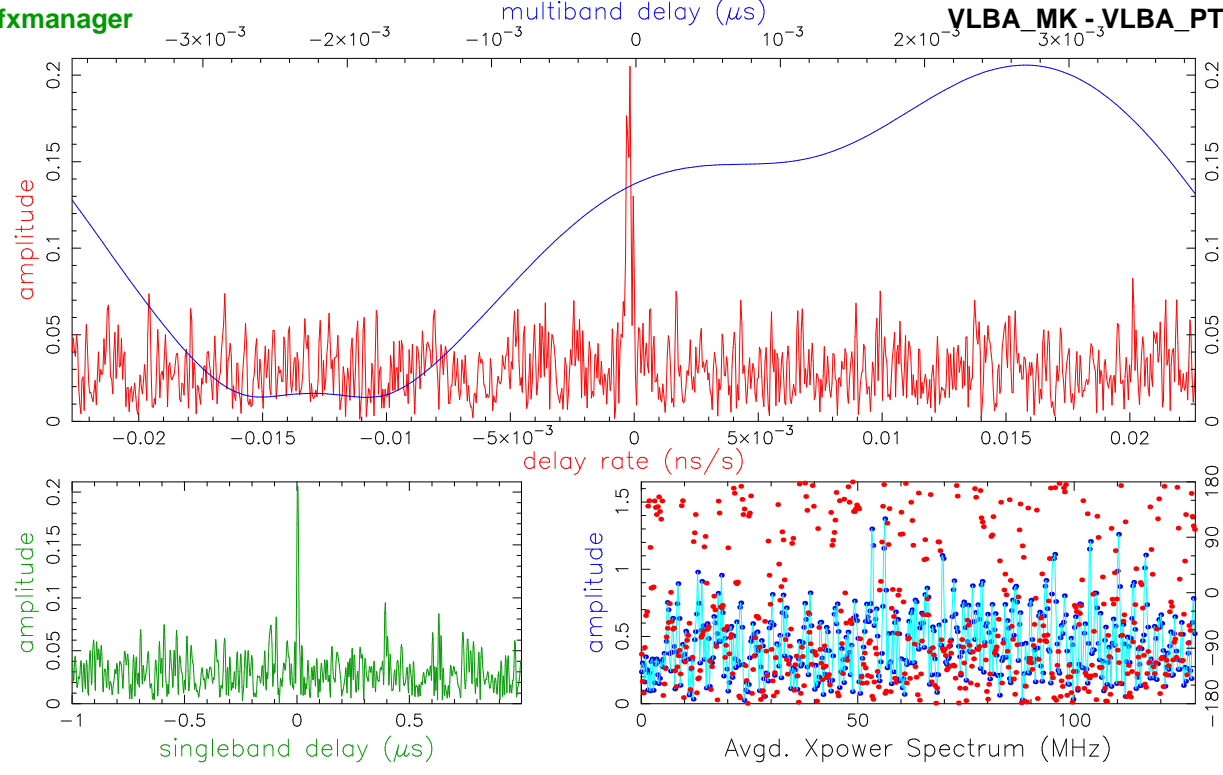
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mp.Q.183.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, mp

VLBA_MK - VLBA_PT, fgroup Q, pol LR

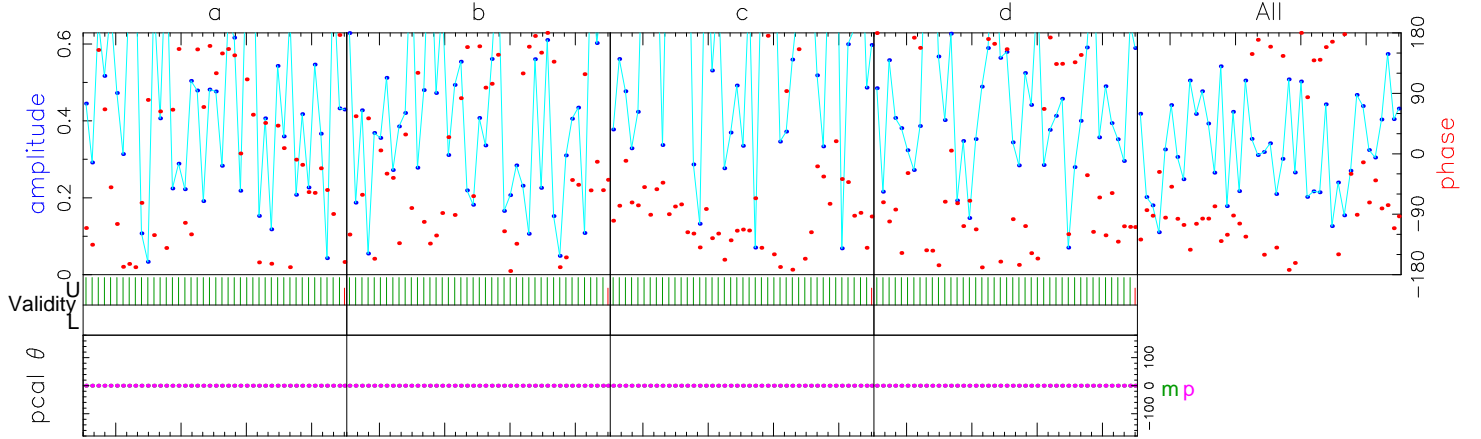


Fringe quality 9

SNR 8.9
 Int time 239.981
 Amp 0.210
 Phase -119.9
 PFD 1.3e-10
 Delays (us)
 SBD 0.002927
 MBD 0.002590
 Fringe rate (Hz)
 -0.007119
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133544
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-174.0	-105.3	-97.8	-140.4	Phase	-119.9
	0.1	0.1	0.4	0.3	Ampl.	0.2
	604.0	688.5	514.8	514.3	Sbd box	514.5
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	7.43133211982E+02	Apriori delay (usec)	7.43130622208E+02	Resid mbdelay (usec)	2.58977E-03	+/-	1.3E-04
Sband delay (usec)	7.43133549458E+02	Apriori clock (usec)	1.0104511E+01	Resid sbdelay (usec)	2.92725E-03	+/-	4.8E-04
Phase delay (usec)	7.43130614470E+02	Apriori clockrate (us/s)	4.3800001E-07	Resid phdelay (usec)	-7.73848E-06	+/-	8.3E-07
Delay rate (us/s)	1.11249737702E+00	Apriori rate (us/s)	1.11249754244E+00	Resid rate (us/s)	-1.65413E-07	+/-	6.0E-09
Total phase (deg)	232.8	Apriori accel (us/s/s)	-3.32501717419E-06	Resid phase (deg)	-119.9	+/-	12.9

	RMS	Theor.	Amplitude	0.210 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	60.2	42.3	Search (1024X16)	0.200	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	83.7	73.8	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	45.0	12.9	Inc. seg. avg.	0.264	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
amp/frq (%)	61.0	22.5	Inc. frq. avg.	0.224					

m: az 121.8 el 53.5 pa -53.0 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -3183.759 -996.863 simultaneous interpolator

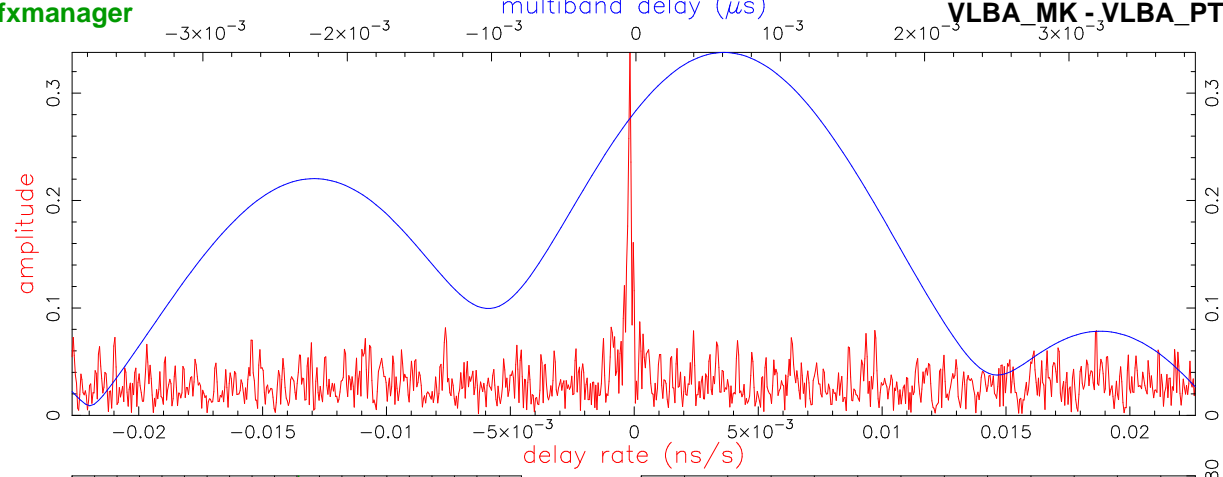
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mp.Q.196.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

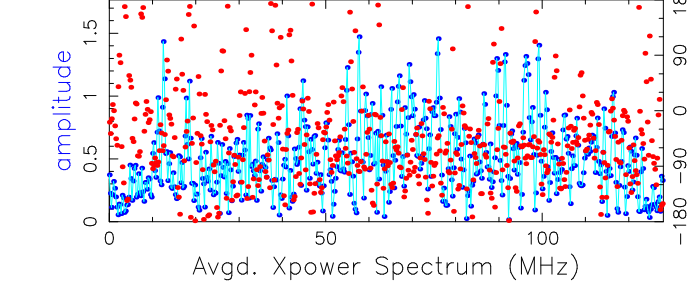
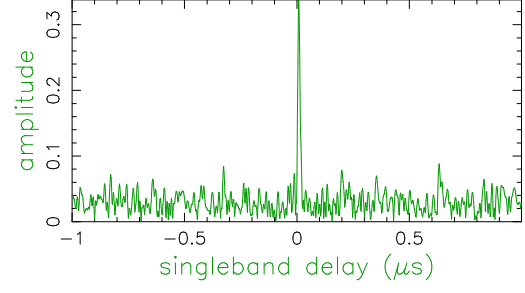
fxmanager

0420-014.1V2A0K, No0121, mp

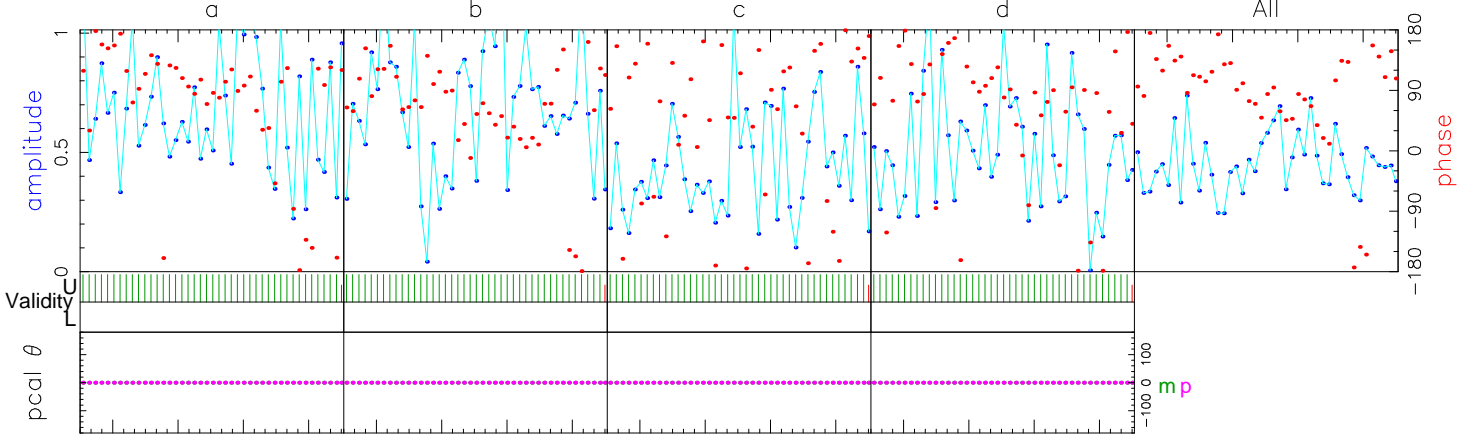
VLBA_MK - VLBA_PT, fgroup Q, pol RL



Fringe quality 8
 SNR 14.3
 Int time 239.981
 Amp 0.338
 Phase 102.9
 PFD 5.2e-38
 Delays (us)
 SBD 0.007917
 MBD 0.000612
 Fringe rate (Hz)
 -0.007849
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133546
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000		
p	1000	1000	1000	1000		
m:p	0:0	0:0	0:0	0:0		
m:p	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
p	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	7.43139047045E+02	Apriori delay (usec)	7.43130622208E+02	Resid mbdelay (usec)	6.12336E-04	+/-	7.8E-05
Sband delay (usec)	7.43138539083E+02	Apriori clock (usec)	1.0104511E+01	Resid sbdelay (usec)	7.91688E-03	+/-	3.0E-04
Phase delay (usec)	7.43130628846E+02	Apriori clockrate (us/s)	4.3800001E-07	Resid phdelay (usec)	6.63800E-06	+/-	5.2E-07
Delay rate (us/s)	1.11249736007E+00	Apriori rate (us/s)	1.11249754244E+00	Resid rate (us/s)	-1.82365E-07	+/-	3.7E-09
Total phase (deg)	95.6	Apriori accel (us/s/s)	-3.32501717419E-06	Resid phase (deg)	102.9	+/-	8.0

ph/seg (deg)	47.0	Theor.	26.2	Amplitude	0.338 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000		
amp/seg (%)	50.0		45.8	Search (1024X16)	0.333	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	29.0		8.0	Interp.	0.000	Bits/sample: 2x2		Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	35.7		14.0	Inc. seg. avg.	0.412	Data rate(Mb/s): 2048		nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00
m: az 121.8 el 53.5 pa -53.0		p: az 207.7 el 51.0 pa 23.1		Inc. frq. avg.	0.353							

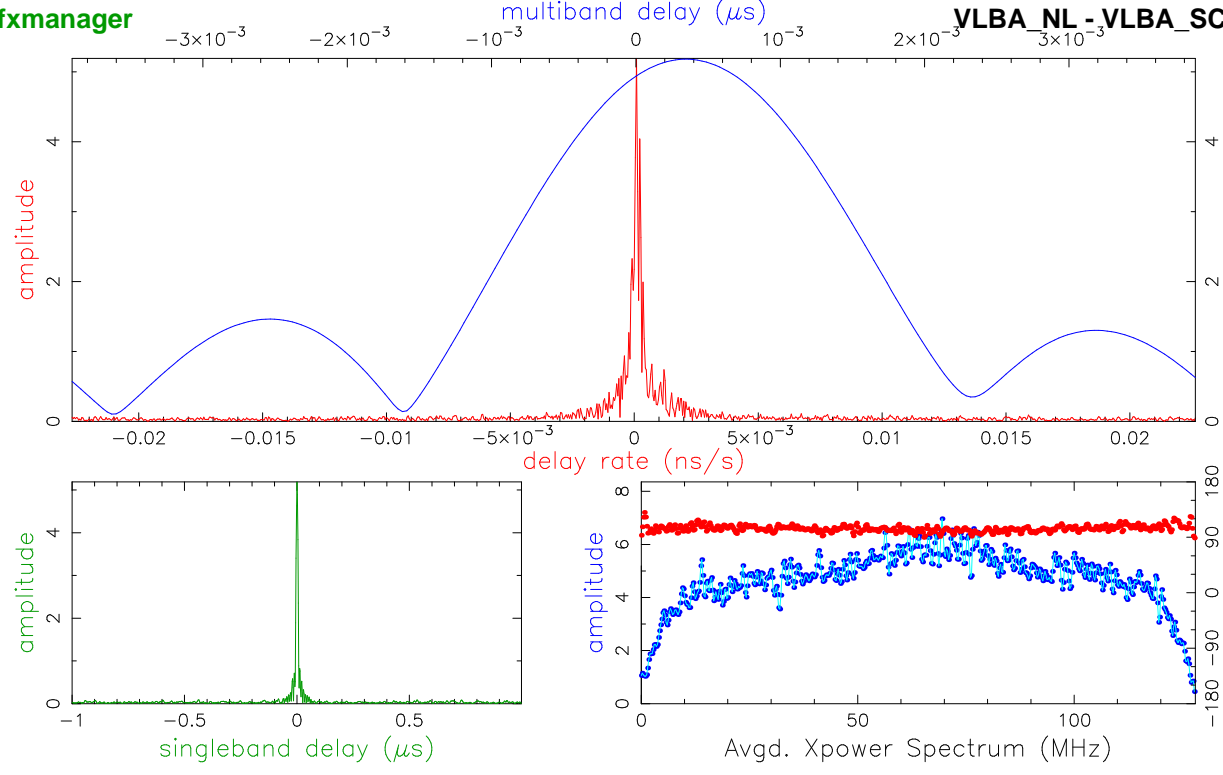
m: az 121.8 el 53.5 pa -53.0 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -3183.759 -996.863 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/mp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/mp.Q.209.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, nc

VLBA_NL - VLBA_SC, fgroup Q, pol LL

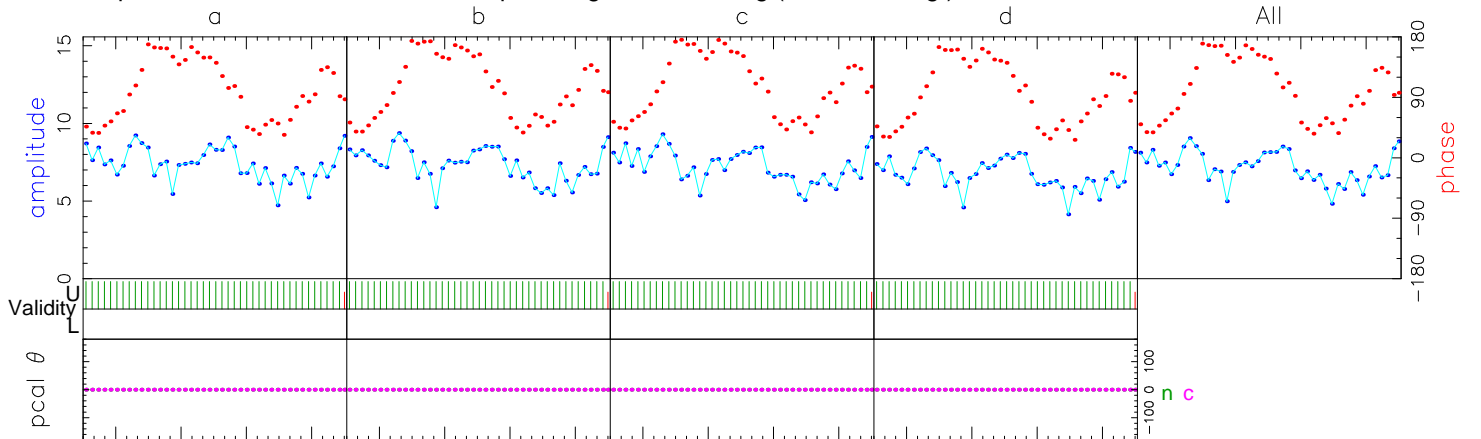


Fringe quality 5

SNR 219.9
 Int time 239.987
 Amp 5.192
 Phase 102.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.000310
 MBD 0.000361
 Fringe rate (Hz) 0.003475
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133541
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC phase	
n:c	0:0	0:0	0:0	0:0	ManI PC	
n	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	3.18937181726E+03	Apriori delay (usec)	3.18937145596E+03	Resid mbdelay (usec)	3.61301E-04	+/-	5.1E-06
Sband delay (usec)	3.18937176571E+03	Apriori clock (usec)	-6.7747841E+00	Resid sbdelay (usec)	3.09750E-04	+/-	2.0E-05
Phase delay (usec)	3.18937146258E+03	Apriori clockrate (us/s)	-1.6000005E-08	Resid phdelay (usec)	6.61435E-06	+/-	3.4E-08
Delay rate (us/s)	6.43689341283E-01	Apriori rate (us/s)	6.43689260542E-01	Resid rate (us/s)	8.07411E-08	+/-	2.4E-10
Total phase (deg)	269.7	Apriori accel (us/s/s)	-1.79152016469E-05	Resid phase (deg)	102.5	+/-	0.5

ph/seg (deg)	45.0	RMS	1.7	Theor.	5.192 +/- 0.024	Search (1024X16)	5.063	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	42.6	Interp.	0.000	Inc. seg. avg.	7.164	Inc. frq. avg.	5.193	PCal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	5.8	0.5						Bits/sample: 2x2	Sample rate(MSamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	3.8	0.9						Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 224.0 el 37.3 pa 31.3 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -1853.005 1608.409 simultaneous interpolator

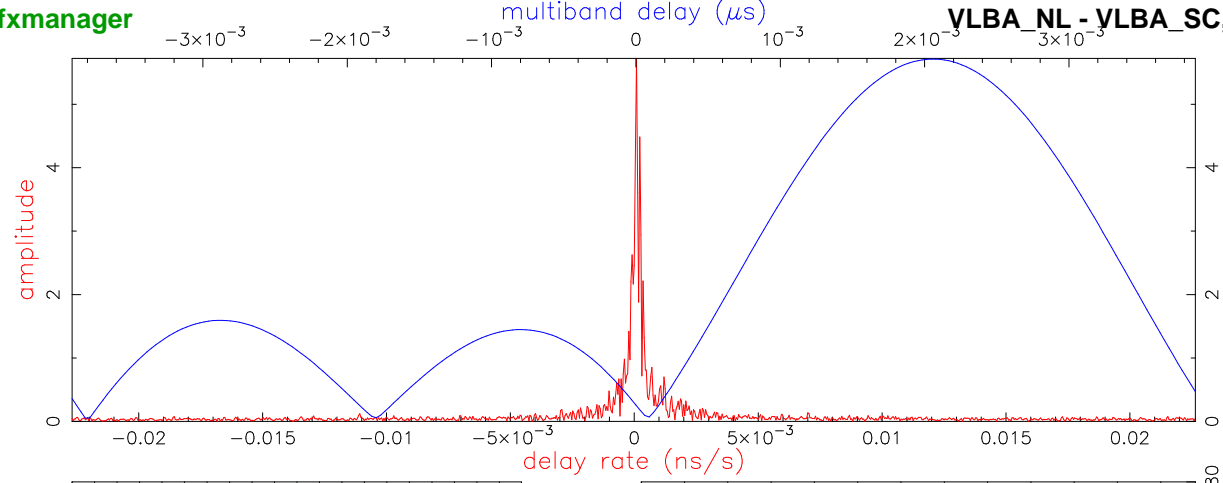
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc.Q.168.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, nc

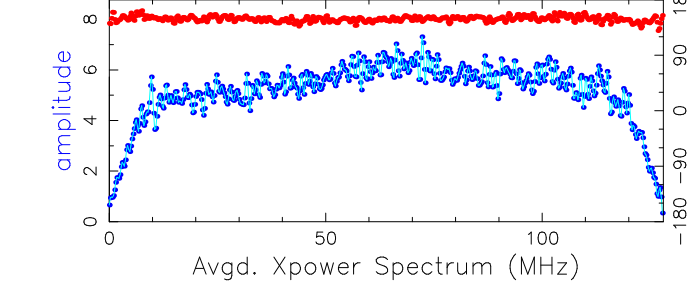
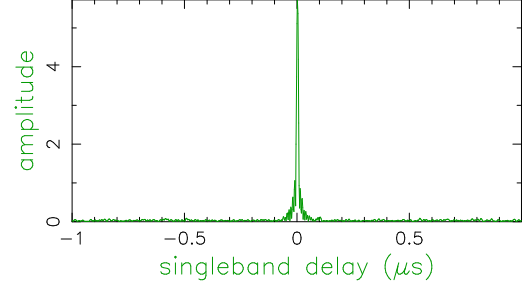
VLBA_NL - VLBA_SC, fgroup Q, pol RR



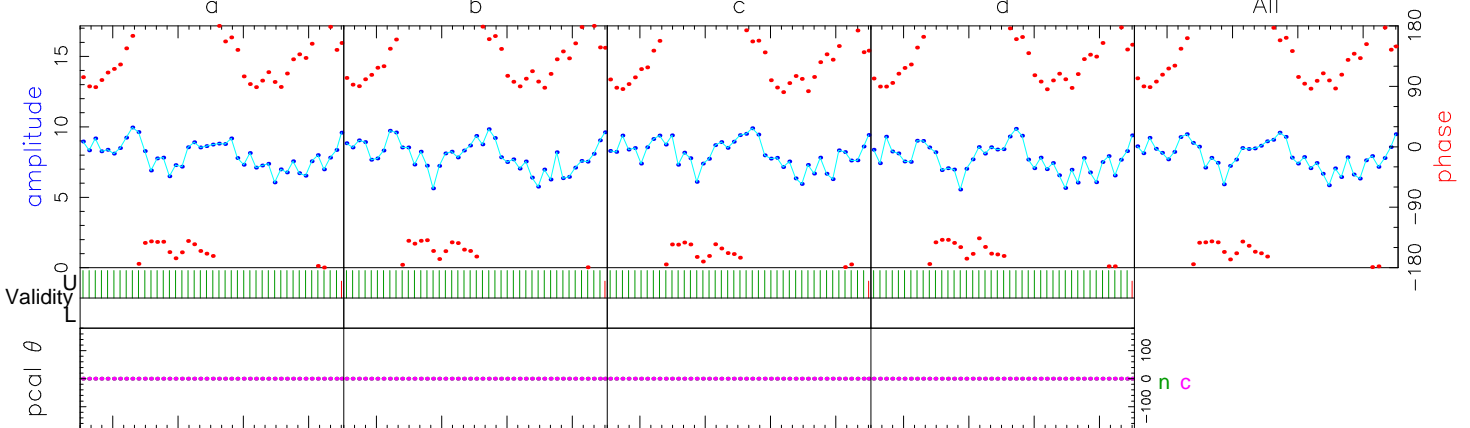
Fringe quality 5

SNR 242.5
 Int time 239.987
 Amp 5.725
 Phase 152.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.002223
 MBD 0.002066
 Fringe rate (Hz) 0.003437
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133543
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	Manl PC	
c	1000	1000	1000	1000	PC amp	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	3.18937352214E+03	Apriori delay (usec)	3.18937145596E+03	Resid mbdelay (usec)	2.06618E-03	+/-	4.6E-06
Sband delay (usec)	3.18937367909E+03	Apriori clock (usec)	-6.7747841E+00	Resid sbdelay (usec)	2.22312E-03	+/-	1.8E-05
Phase delay (usec)	3.18937146582E+03	Apriori clockrate (us/s)	-1.6000005E-08	Resid phdelay (usec)	9.86189E-06	+/-	3.0E-08
Delay rate (us/s)	6.43689340410E-01	Apriori rate (us/s)	6.43689260542E-01	Resid rate (us/s)	7.98676E-08	+/-	2.2E-10
Total phase (deg)	320.1	Apriori accel (us/s/s)	-1.79152016469E-05	Resid phase (deg)	152.8	+/-	0.5

ph/seg (deg)	45.1	RMS	45.1	Theor.	1.5	Amplitude	5.725 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	42.1	Search (1024X16)	5.601	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	1.8	Inc. seg. avg.	7.933	Inc. frq. avg.	5.715	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
amp/frq (%)	1.5	Inc. frq. avg.	5.715	Sample rate (MSamp/s):	256	Data rate (Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 224.0 el 37.3 pa 31.3 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -1853.005 1608.409 simultaneous interpolator

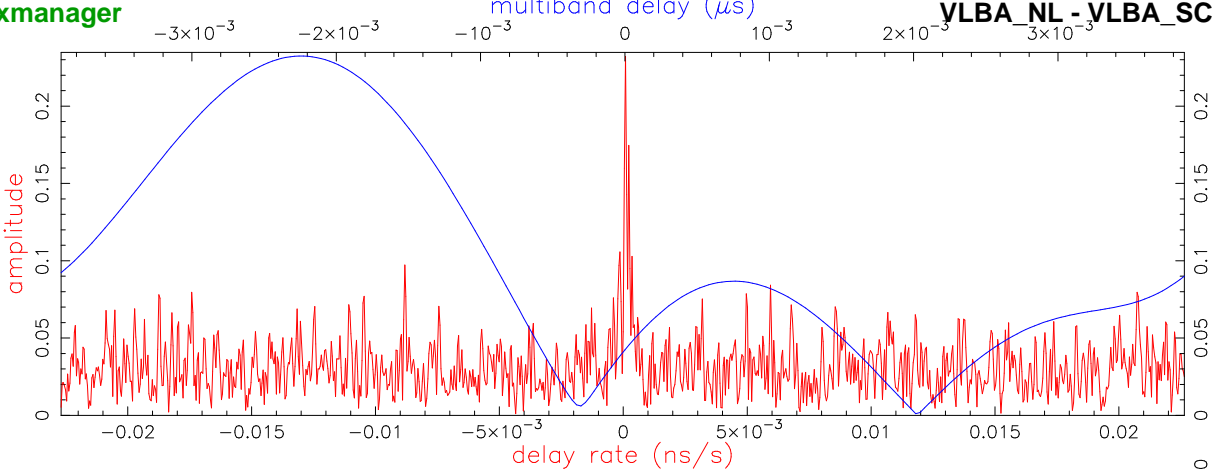
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc.Q.182.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

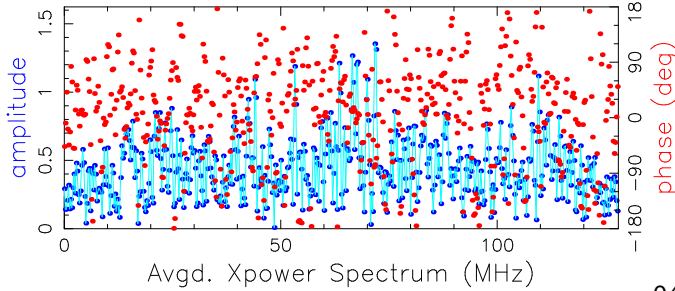
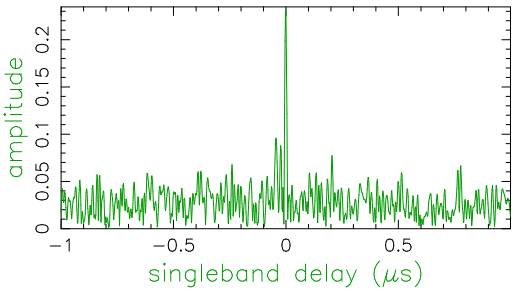
0420-014.1V2A0K, No0121, nc

VLBA_NL - VLBA_SC, fgroup Q, pol LR



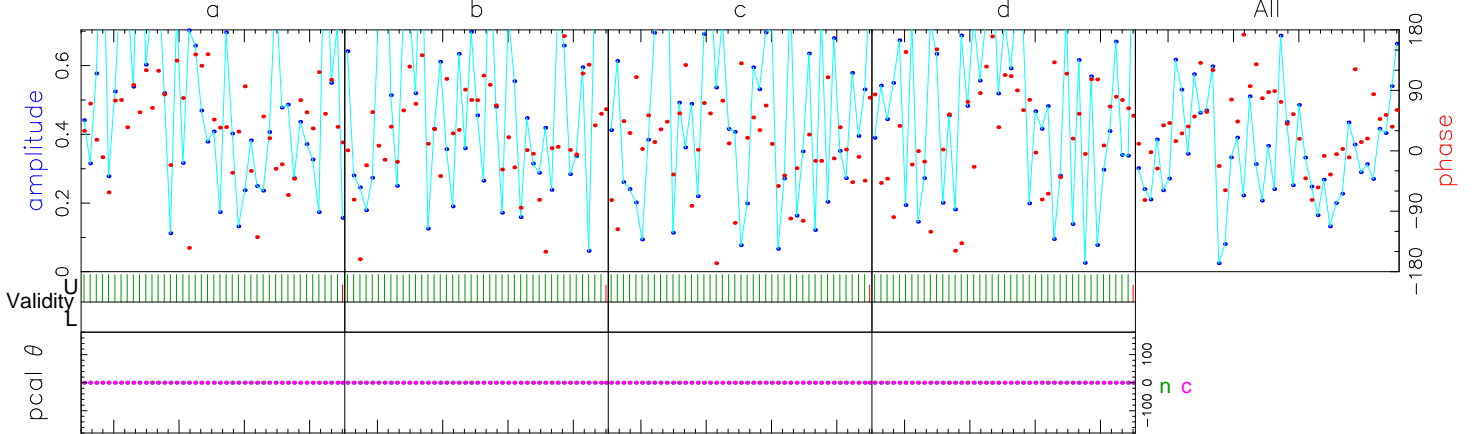
Fringe quality 9

SNR 9.9
 Int time 239.987
 Amp 0.235
 Phase 44.5
 PFD 5.7e-15
 Delays (us)
 SBD -0.001271
 MBD -0.002190
 Fringe rate (Hz)
 0.003259
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133545
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n:c	0:0	0:0	0:0	0:0		
n:c	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		

	3.18936926558E+03	Apriori delay (usec)	3.18937145596E+03	Resid mbdelay (usec)	-2.19039E-03	+/- 1.1E-04
Sband delay (usec)	3.18937018459E+03	Apriori clock (usec)	-6.7747841E+00	Resid sbdelay (usec)	-1.27137E-03	+/- 4.3E-04
Phase delay (usec)	3.18937145883E+03	Apriori clockrate (us/s)	-1.6000005E-08	Resid phdelay (usec)	2.86941E-06	+/- 7.4E-07
Delay rate (us/s)	6.43689336266E-01	Apriori rate (us/s)	6.43689260542E-01	Resid rate (us/s)	7.57239E-08	+/- 5.4E-09
Total phase (deg)	211.7	Apriori accel (us/s/s)	-1.79152016469E-05	Resid phase (deg)	44.5	+/- 11.5

	RMS	Theor.	Amplitude	0.235 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.8	37.8	Search (1024X16)	0.223	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	80.0	65.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	25.3	11.5	Inc. seg. avg.	0.285	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	19.9	20.1	Inc. frq. avg.	0.238	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 224.0 el 37.3 pa 31.3 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -1853.005 1608.409 simultaneous interpolator

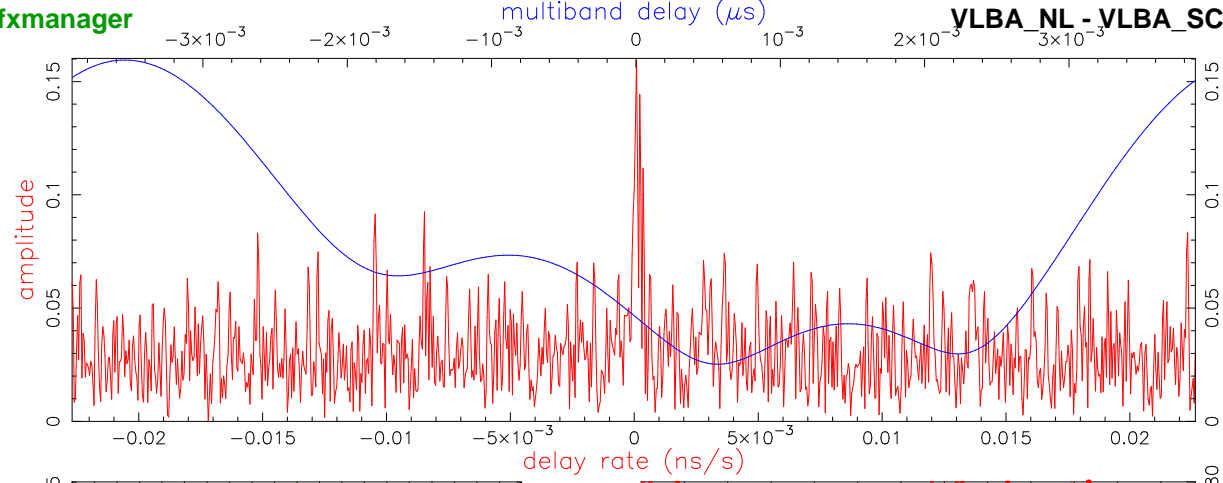
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc.Q.198.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

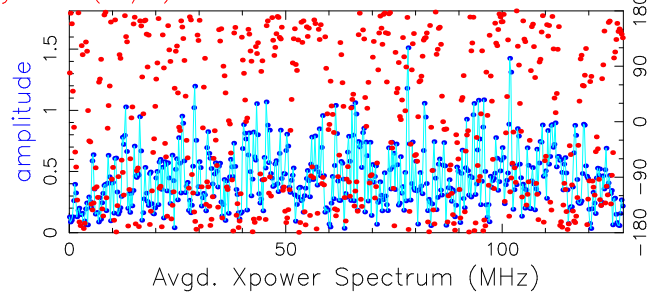
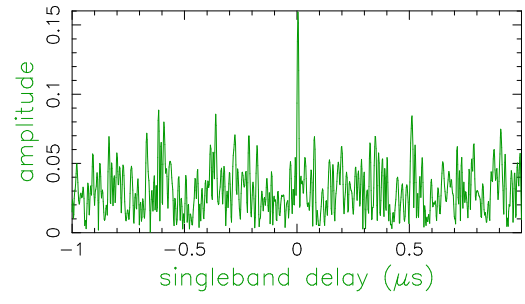
fxmanager

0420-014.1V2A0K, No0121, nc

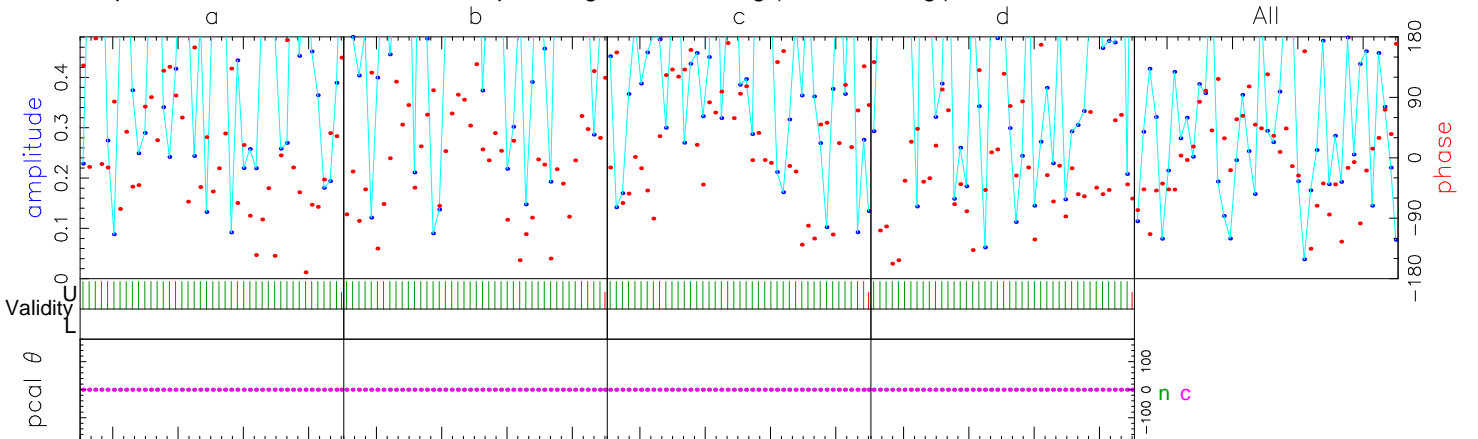
VLBA_NL - VLBA_SC, fgroup Q, pol RL



Fringe quality 0
 SNR 6.8
 Int time 239.987
 Amp 0.160
 Phase 6.1
 PFD 1.7e-03
 Delays (us)
 SBD 0.004363
 MBD -0.003489
 Fringe rate (Hz)
 0.003147
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133546
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n:c	0:0	0:0	0:0	0:0		
n:c	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	3.18937577961E+03	Apriori delay (usec)	3.18937145596E+03	Resid mbdelay (usec)	-3.48886E-03	+/-	1.6E-04
Sband delay (usec)	3.18937581909E+03	Apriori clock (usec)	-6.7747841E+00	Resid sbdelay (usec)	4.36313E-03	+/-	6.3E-04
Phase delay (usec)	3.18937145636E+03	Apriori clockrate (us/s)	-1.6000005E-08	Resid phdelay (usec)	3.95846E-07	+/-	1.1E-06
Delay rate (us/s)	6.43689333654E-01	Apriori rate (us/s)	6.43689260542E-01	Resid rate (us/s)	7.31117E-08	+/-	7.9E-09
Total phase (deg)	173.4	Apriori accel (us/s/s)	-1.79152016469E-05	Resid phase (deg)	6.1	+/-	16.9

ph/seg (deg)	RMS 70.8	Theor. 55.4	Amplitude	0.160 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	126.0	96.6	Search (1024X16)	0.151	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	34.4	16.9	Inc. seg. avg.	0.204	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	23.6	29.5	Inc. frq. avg.	0.166	Sample rate(MSamp/s): 256		dr window (ns/s)	-0.023 0.023	
n: az 224.0 el 37.3 pa 31.3			c: az 258.8 el 27.5 pa 69.2		Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

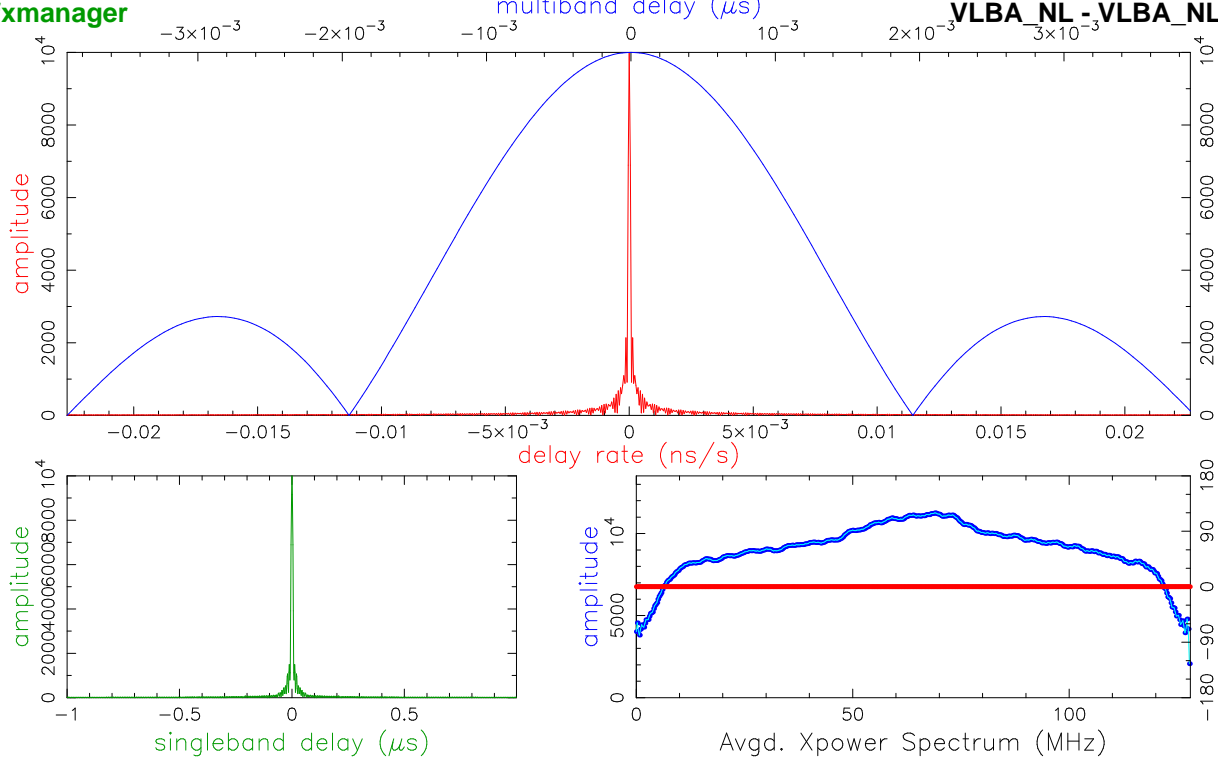
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/nc.Q.211.1V2A0K simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, nn

VLBA_NL - VLBA_NL, fgroup Q, pol LL

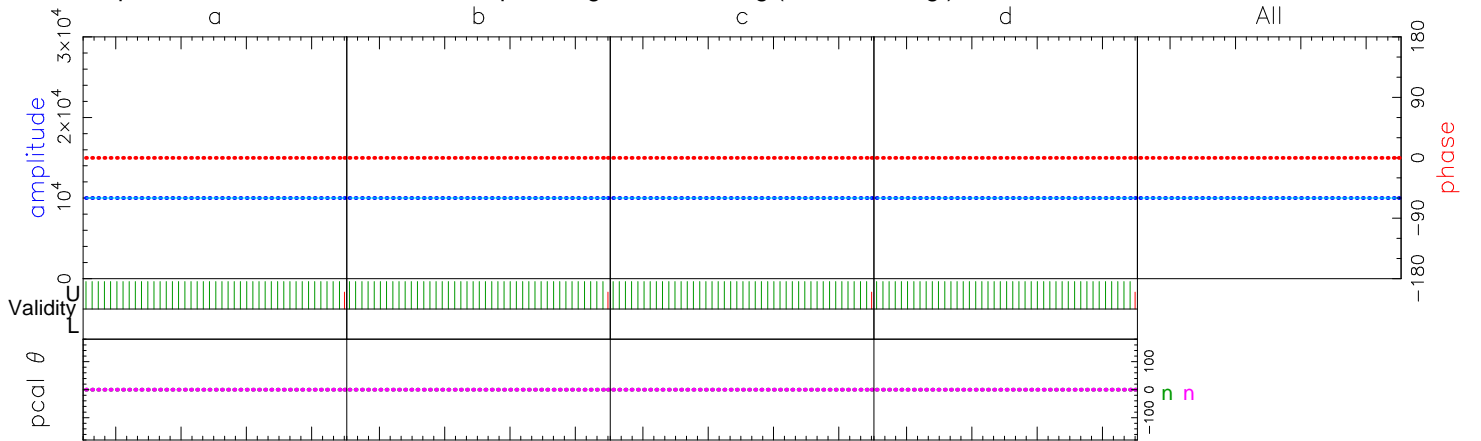


Fringe quality 9

SNR 423634.7
 Int time 239.987
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133542
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	APs used	
n:n	0:0	0:0	0:0	0:0	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
n	1000	1000	1000	1000	PC amp	
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.00000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.00000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

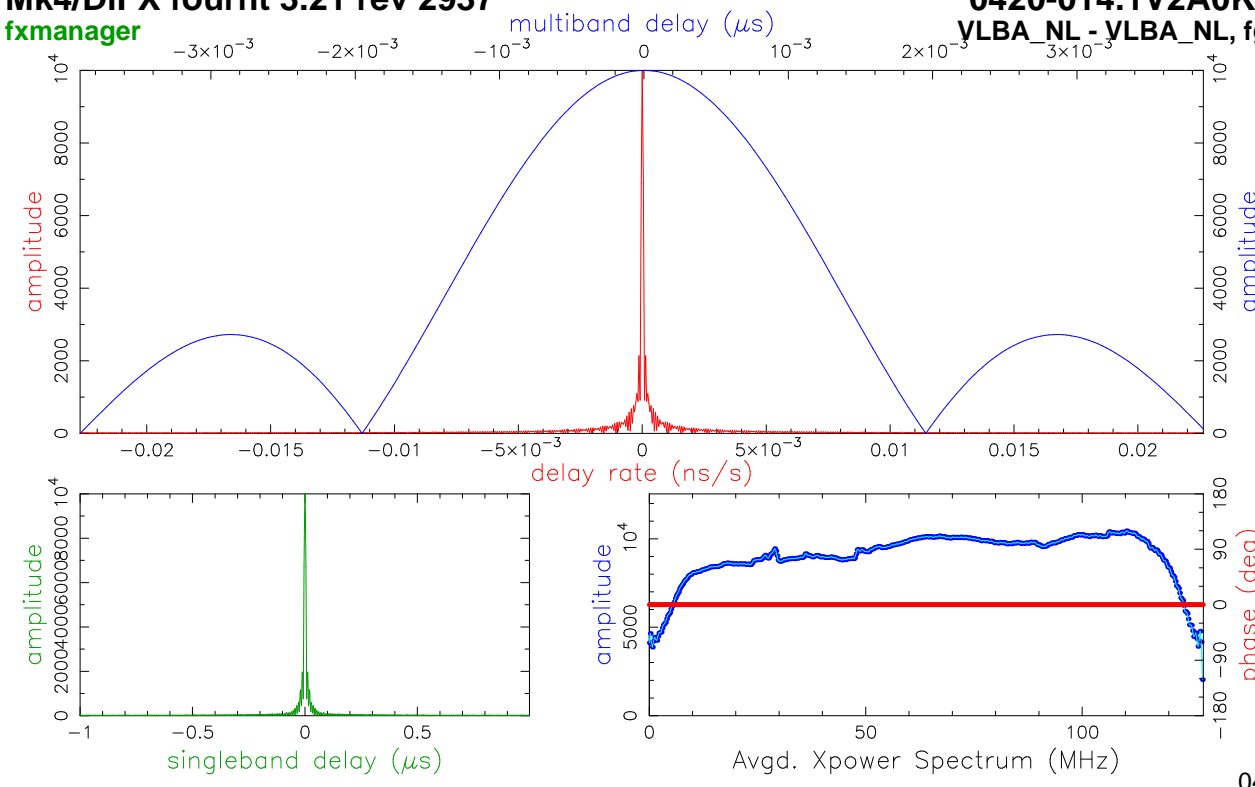
ph/seg (deg) 0.0 0.0
 amp/seg (%) 0.0 0.0
 ph/frq (deg) 0.0 0.0
 amp/frq (%) 0.0 0.0

n: az 224.0 el 37.3 pa 31.3
 Control file: cf_1234_gmva7mm

n: az 224.0 el 37.3 pa 31.3
 Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/nn..1V2A0K

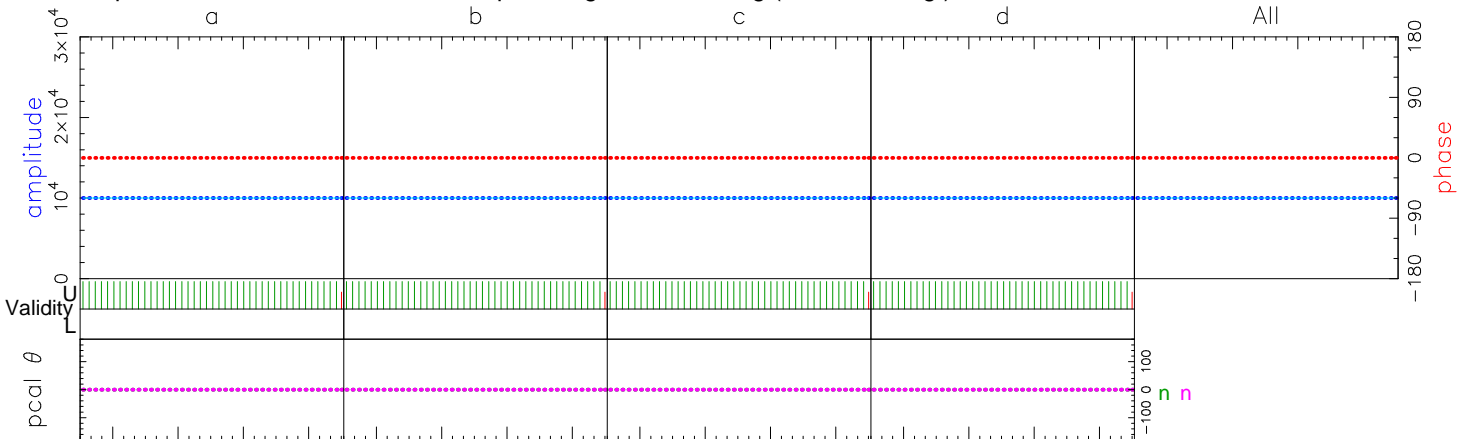
u,v (fr/asec) 0.000 0.000
 Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/nn.Q.171.1V2A0K

simultaneous interpolator



Fringe quality 9
SNR 423634.7
Int time 239.987
Amp 10000.000
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133543
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	APs used	
n:n	0:0	0:0	0:0	0:0	PC freqs	
n	1000	1000	1000	1000	PC phase	
n	1000	1000	1000	1000	ManI PC	
n	Q00UR	Q01UR	Q02UR	Q03UR	PC amp	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
					Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

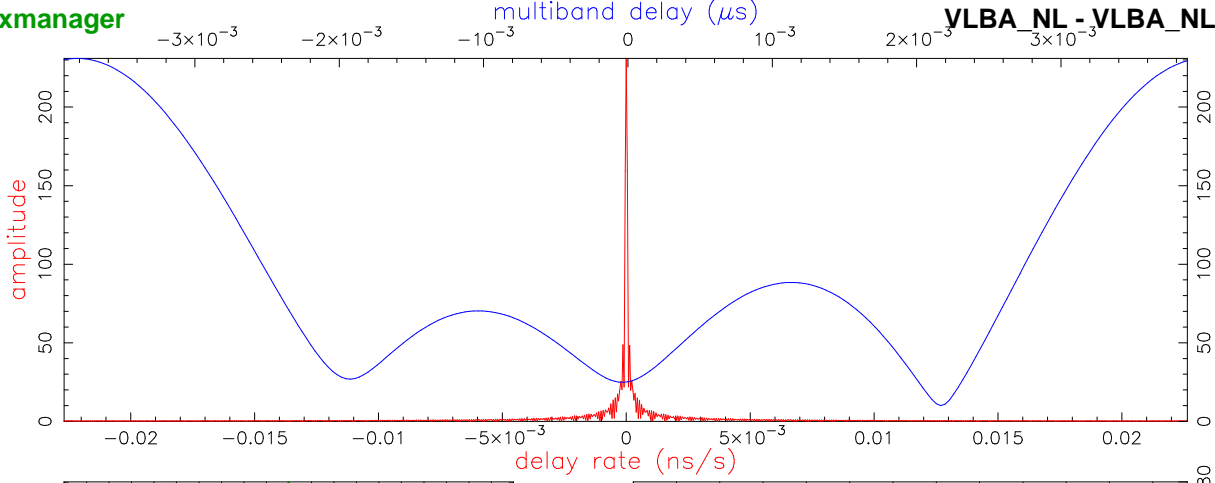
ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	10000.000 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000 1.000
amp/seg (%)	0.0	0.0	0.0	0.0	0.0	Search (1024X16)	10000.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled		mb window (us)	-0.004 0.004
ph/frq (deg)	0.0	0.0	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Bits/sample:	2x2			dr window (ns/s)	-0.023 0.023
amp/frq (%)	0.0	0.0	0.0	0.0	0.0	Inc. frq. avg.	10000.000	Sample rate(MISamp/s):	256			ion window (TEC)	0.00 0.00
n:	az 224.0 el 37.3 pa 31.3					u,v (fr/asec)	0.000 0.000	Data rate(Mb/s):	2048	nlags:	512	t_cohere	infinite

Mk4/DiFX fourfit 3.21 rev 2937

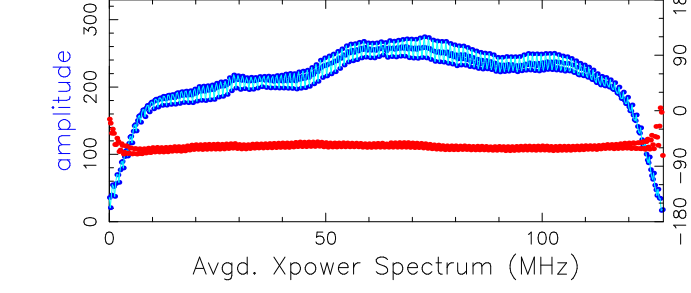
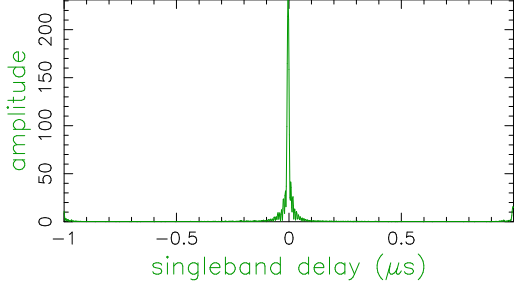
fxmanager

0420-014.1V2A0K, No0121, nn

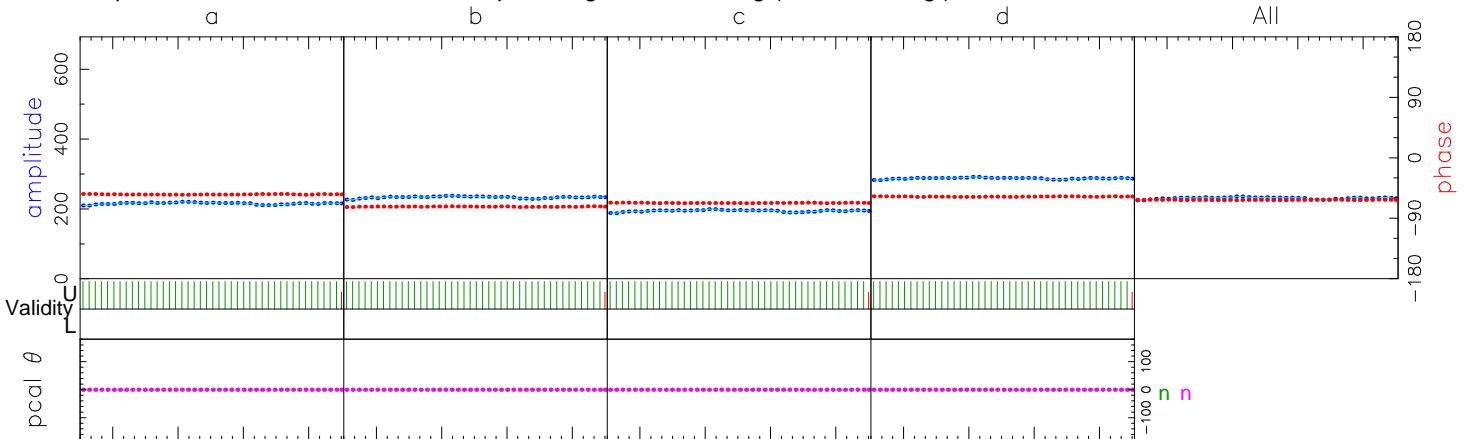
VLBA_NL - VLBA_NL, fgroup Q, pol LR



Fringe quality 9
 SNR 9785.4
 Int time 239.987
 Amp 230.987
 Phase -62.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.003984
 MBD -0.003817
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133545
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	APs used	1000
n:n	0:0	0:0	0:0	0:0	PC freqs	1000
n:n	0:0	0:0	0:0	0:0	PC phase	1000
n	1000	1000	1000	1000	ManI PC	1000
n	1000	1000	1000	1000	PC amp	1000
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	-3.81656250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.81656E-03	+/-	1.1E-07
Sband delay (usec)	-3.98362500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-3.98363E-03	+/-	4.4E-07
Phase delay (usec)	-4.04652589525E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.04653E-06	+/-	7.6E-10
Delay rate (us/s)	8.50861803220E-12	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	8.50862E-12	+/-	5.5E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-62.7	+/-	0.0

ph/seg (deg)	0.2	Theor.	0.0	Amplitude	230.987 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	1.1	0.1	0.0	Search (1024X16)	230.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	10.3	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	15.0	0.0	0.0	Inc. seg. avg.	230.958	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
n: az 224.0 el 37.3 pa 31.3				Inc. frq. avg.	232.816	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

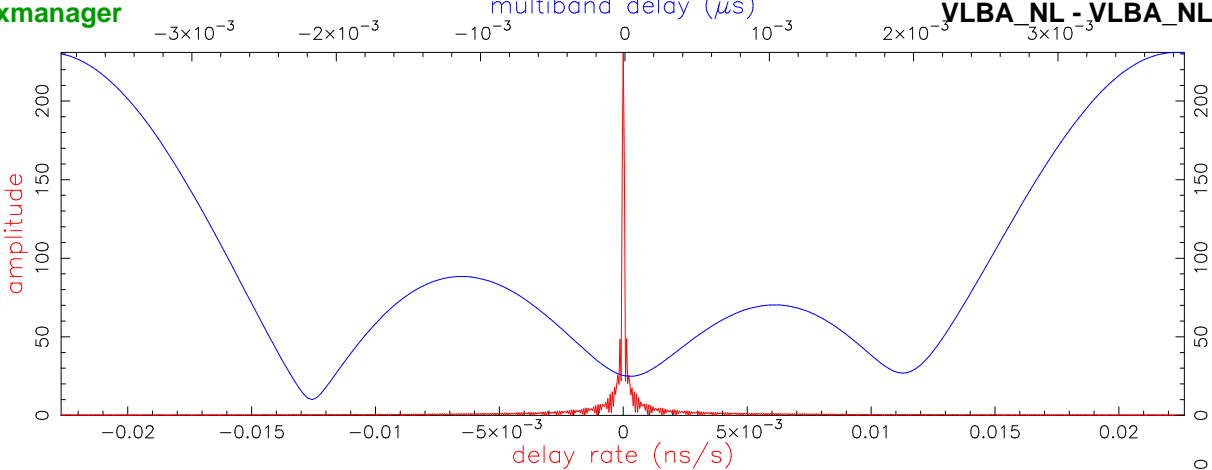
n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/nn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/nn.Q.200.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

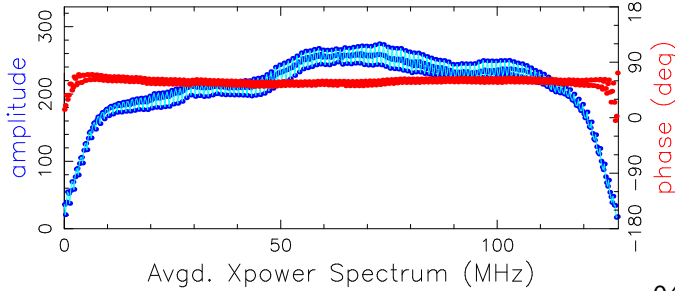
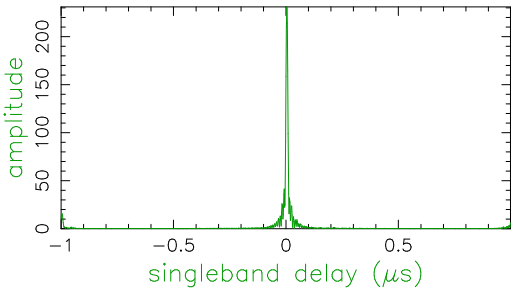
0420-014.1V2A0K, No0121, nn

VLBA_NL - VLBA_NL, fgroup Q, pol RL



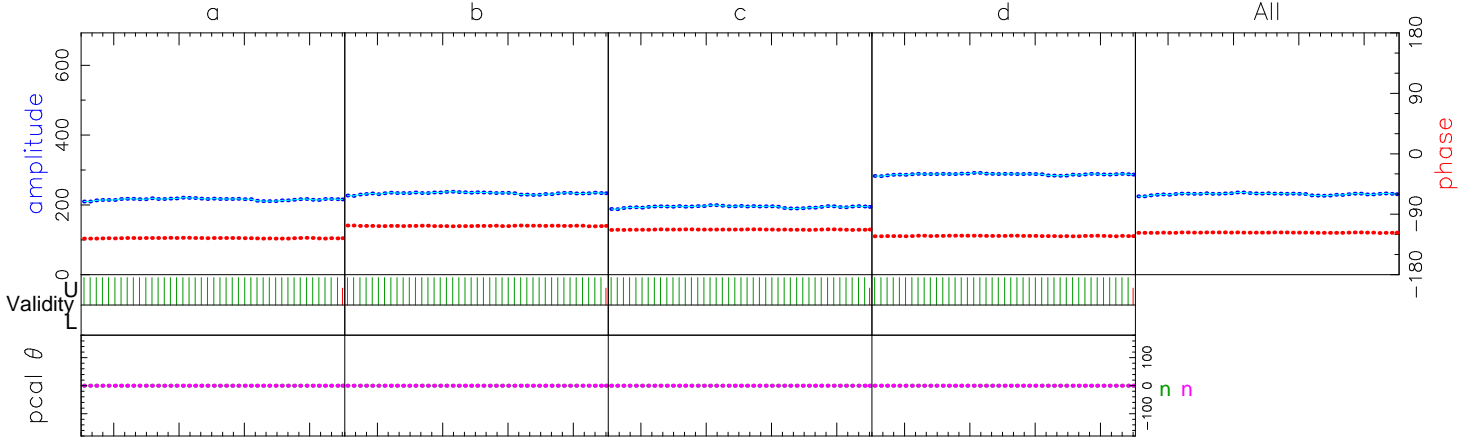
Fringe quality 9

SNR 9785.4
 Int time 239.987
 Amp 230.987
 Phase -117.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.003984
 MBD -0.003996
 Fringe rate (Hz)
 -0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133547
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-125.5	-107.3	-112.8	-122.2	Phase	-117.3
	215.8	233.3	194.5	287.6	Ampl.	232.8
	515.2	514.9	515.1	515.0	Sbd box	515.0
U/L	469/0	469/0	469/0	469/0	APs used	
n	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n:n	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	3.81656250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.99594E-03	+/- 1.1E-07
Group delay (usec)(sbd)	3.81656250000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	3.98363E-03	+/- 4.4E-07
Sband delay (usec)	3.98362500000E-03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-7.57057E-06	+/- 7.6E-10
Phase delay (usec)	-7.57057447630E-06	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-8.50862E-12	+/- 5.5E-12
Delay rate (us/s)	-8.50861803220E-12	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-117.3	+/- 0.0
Total phase (deg)	-117.3					

	RMS	Theor.	Amplitude	230.987 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.2	0.0	Search (1024X16)	230.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	1.1	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	10.3	0.0	Inc. seg. avg.	230.958	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	15.0	0.0	Inc. frq. avg.	232.816	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 224.0 el 37.3 pa 31.3 n: az 224.0 el 37.3 pa 31.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

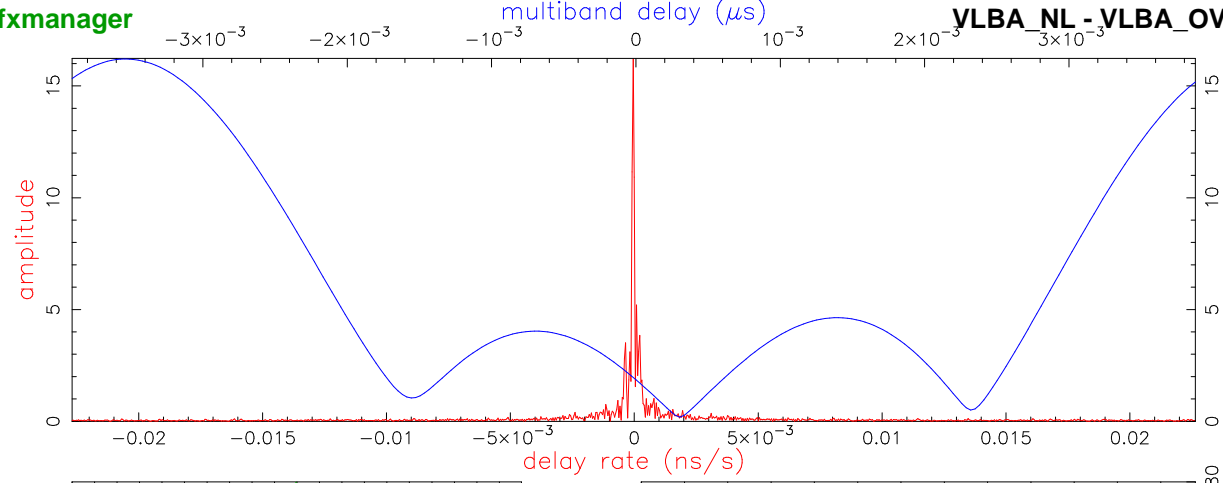
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/nn..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/nn.Q.213.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, no

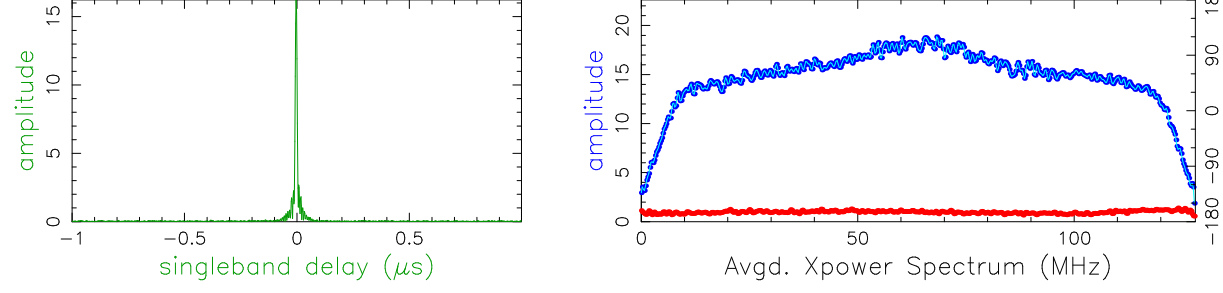
VLBA_NL - VLBA_OV, fgroup Q, pol LL



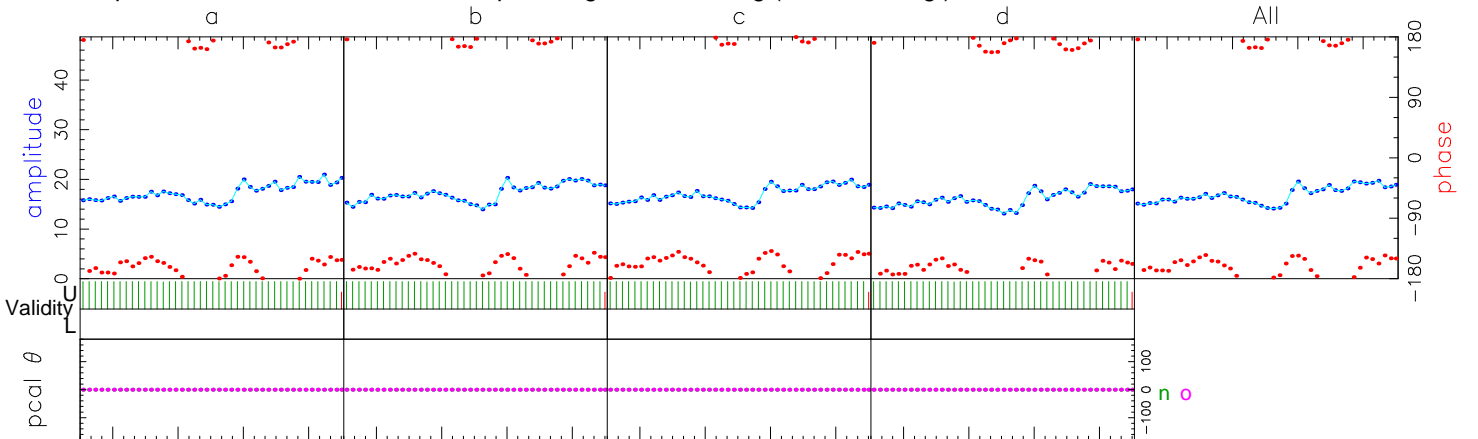
Fringe quality 8

SNR 687.5
 Int time 239.882
 Amp 16.232
 Phase -166.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.003613
 MBD -0.003520
 Fringe rate (Hz)
 -0.002426
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133542
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000		
o	1000	1000	1000	1000		
n:o	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
o	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UL	Q01UL	Q02UL	Q03UL		

	-3.69654932527E+03	-3.69654941784E+03	-3.69654581572E+03	-4.90022811180E-01	-327.0	-3.69654580496E+03	1.7610531E+08	-6.0000019E-08	-4.90022754810E-01	1.95097391780E-05	Resid mbdelay (usec)	Resid sbdelay (usec)	Resid phdelay (usec)	Resid rate (us/s)	Resid phase (deg)
Group delay (usec)(sbd)															
Sband delay (usec)															
Phase delay (usec)															
Delay rate (us/s)															
Total phase (deg)															

ph/seg (deg) 16.3 0.5
 amp/seg (%) 10.8 1.0
 ph/frq (deg) 6.1 0.2
 amp/frq (%) 3.0 0.3

RMS Theor. Amplitude 16.232 +/- 0.024
 Search (1024X16) 15.683
 Interp. 0.000
 Inc. seg. avg. 16.878
 Inc. frq. avg. 16.247

Group delay (usec)(sbd) -3.69654932527E+03 Apriori delay (usec) -3.69654580496E+03 Resid mbdelay (usec) -3.52031E-03 +/- 1.6E-06
 Sband delay (usec) -3.69654941784E+03 Apriori clock (usec) 1.7610531E+08 Resid sbdelay (usec) -3.61288E-03 +/- 6.3E-06
 Phase delay (usec) -3.69654581572E+03 Apriori clockrate (us/s) -6.0000019E-08 Resid phdelay (usec) -1.07547E-05 +/- 1.1E-08
 Delay rate (us/s) -4.90022811180E-01 Apriori rate (us/s) -4.90022754810E-01 Resid rate (us/s) -5.63696E-08 +/- 7.8E-11
 Total phase (deg) -327.0 Apriori accel (us/s/s) 1.95097391780E-05 Resid phase (deg) -166.6 +/- 0.2

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) -0.004 0.004
 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

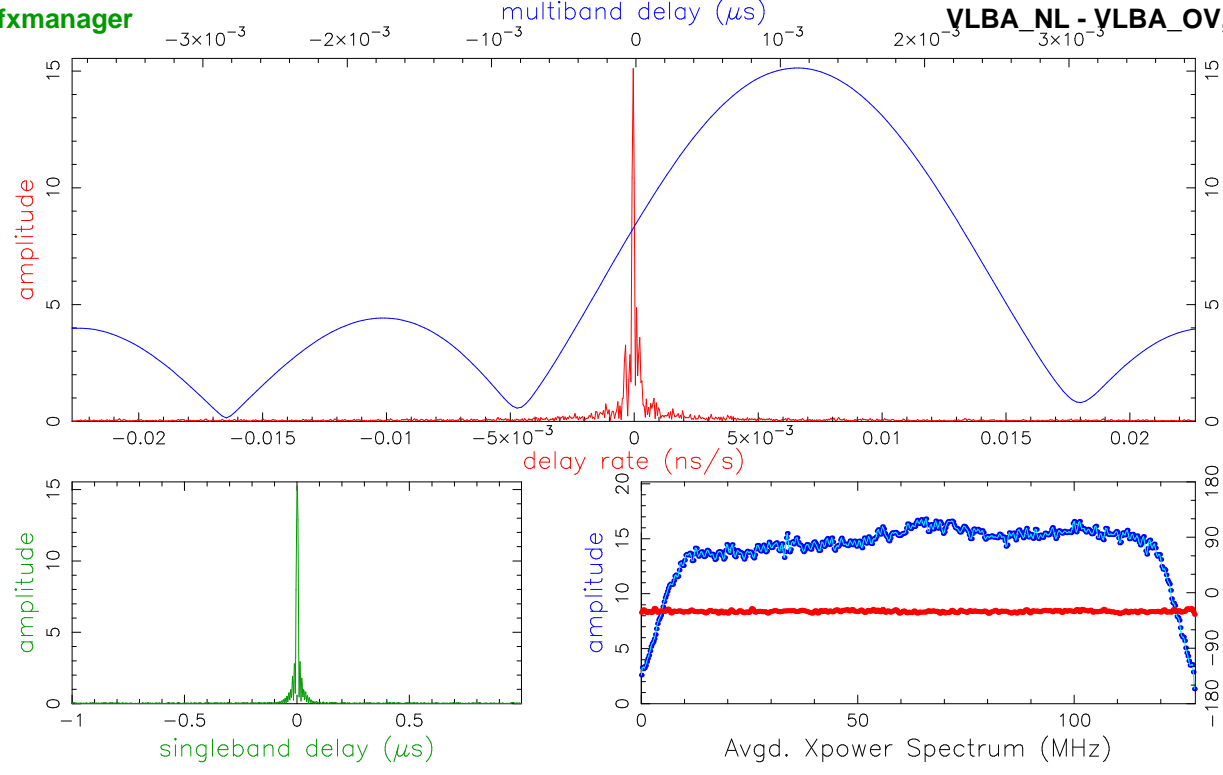
n: az 224.0 el 37.3 pa 31.3 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 1410.405 255.850 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/no..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/no.Q.172.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, no

VLBA_NL - VLBA_OV, fgroup Q, pol RR

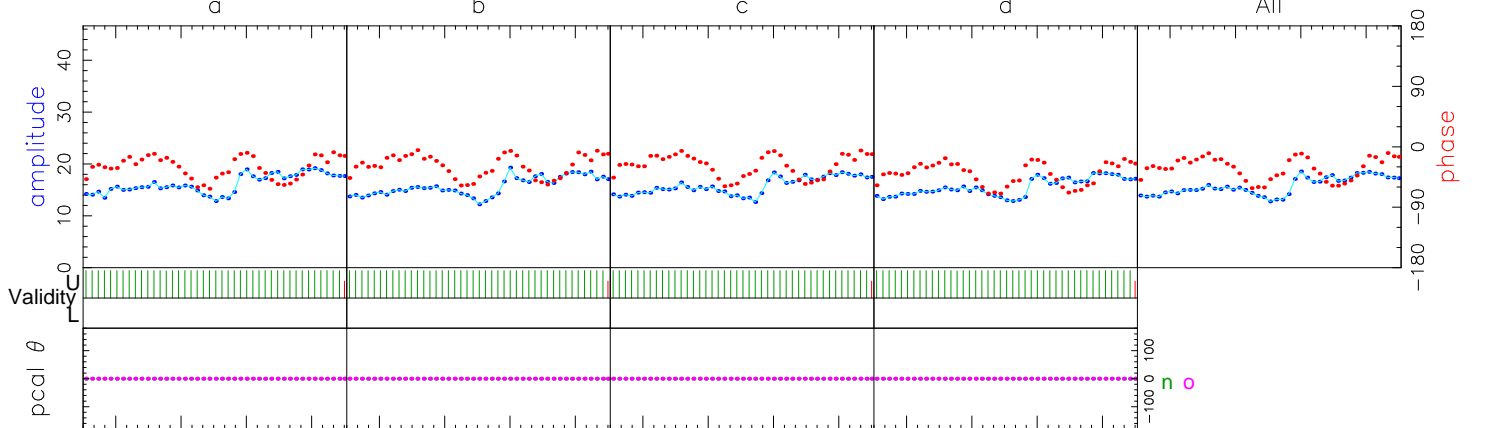


Fringe quality 8

SNR 658.3
 Int time 239.882
 Amp 15.543
 Phase -31.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.001107
 MBD 0.001178
 Fringe rate (Hz)
 -0.002414
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133543
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



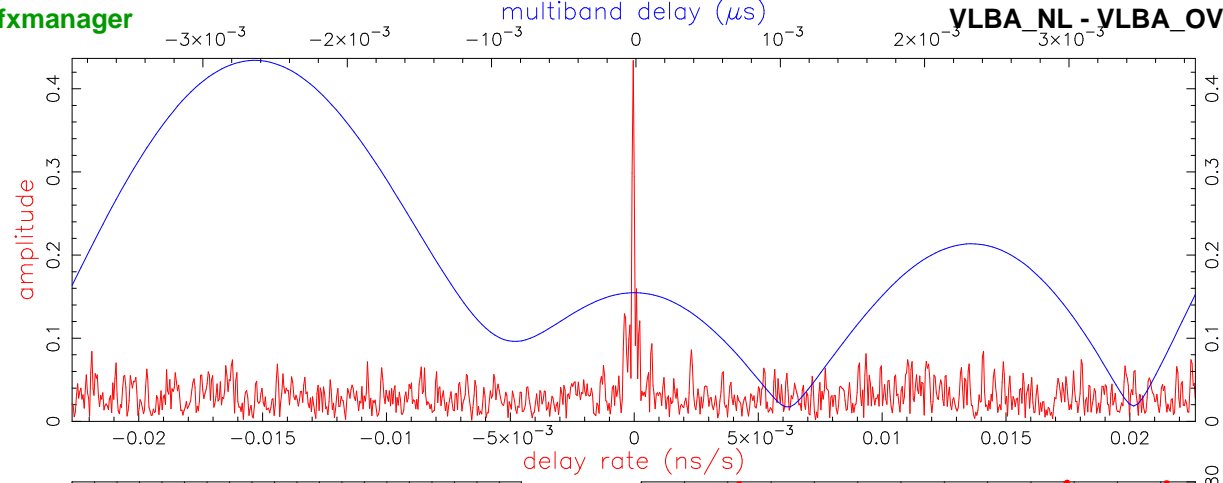
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-30.3	-28.0	-27.7	-40.1	Phase	-31.5
15.5	15.1	15.2	14.9	Ampl.	15.2
513.5	513.7	513.5	513.5	Sbd box	513.6
U/L 469/0	469/0	469/0	469/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:0 0:0	0:0	0:0	0:0	PC phase	
n:0 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-3.69654462652E+03	Apriori delay (usec)	-3.69654580496E+03	Resid mbdelay (usec)	1.17844E-03 +/- 1.7E-06
Sband delay (usec)	-3.69654469809E+03	Apriori clock (usec)	1.7610531E+08	Resid sbdelay (usec)	1.10688E-03 +/- 6.5E-06
Phase delay (usec)	-3.69654580699E+03	Apriori clockrate (us/s)	-6.0000019E-08	Resid phdelay (usec)	-2.03011E-06 +/- 1.1E-08
Delay rate (us/s)	-4.90022810905E-01	Apriori rate (us/s)	-4.90022754810E-01	Resid rate (us/s)	-5.60945E-08 +/- 8.1E-11
Total phase (deg)	-191.9	Apriori accel (us/s/s)	1.95097391780E-05	Resid phase (deg)	-31.5 +/- 0.2
RMS	Theor.	Amplitude	15.543 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
16.3	0.6	Search (1024X16)	14.612	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
11.0	1.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
7.1	0.2	Inc. seg. avg.	15.740	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
2.9	0.3	Inc. frq. avg.	15.165	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
n: az 224.0 el 37.3 pa 31.3	o: az 190.9 el 51.0 pa 9.1	u,v (fr/asec)	1410.405 255.850		simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/no..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/no.Q.187.1V2A0K			

Mk4/DiFX fourfit 3.21 rev 2937

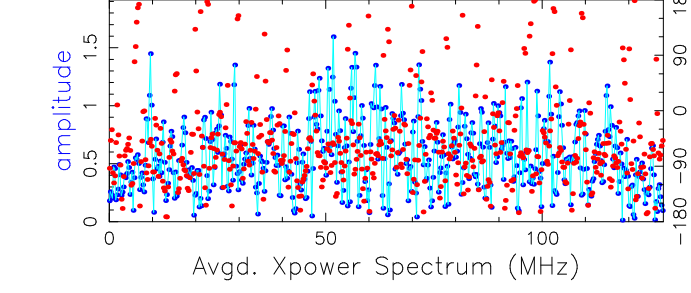
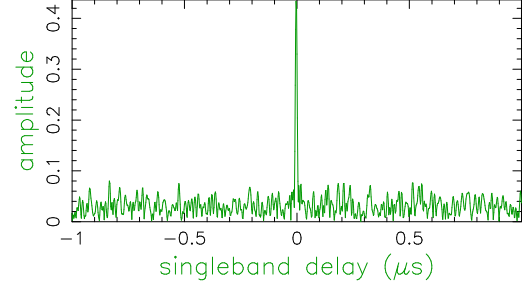
fxmanager

0420-014.1V2A0K, No0121, no

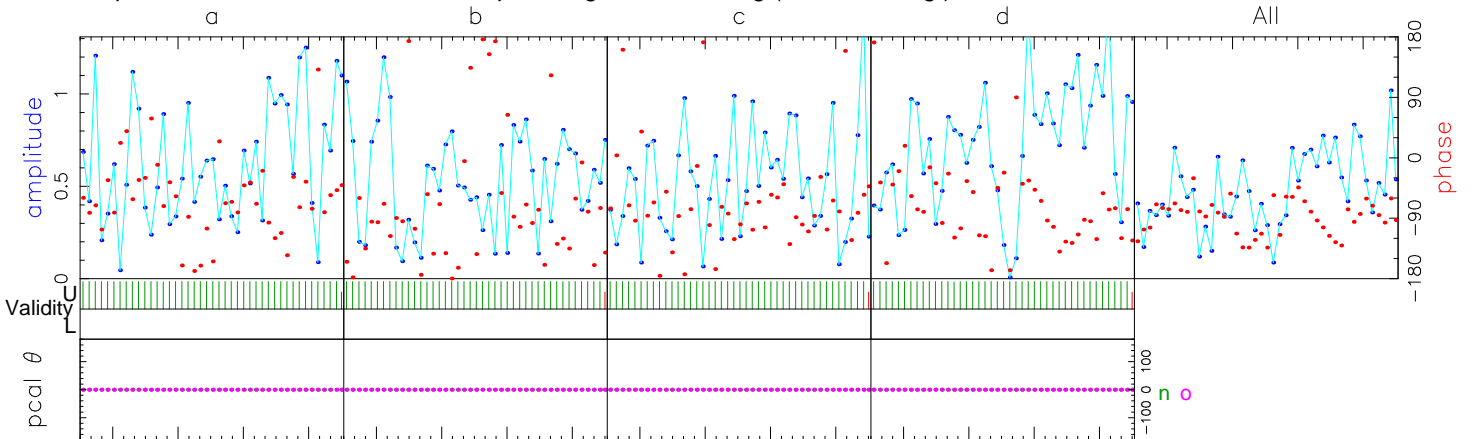
VLBA_NL - VLBA_OV, fgroup Q, pol LR



Fringe quality 8
 SNR 18.5
 Int time 239.882
 Amp 0.437
 Phase -87.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.003401
 MBD -0.002610
 Fringe rate (Hz) -0.002121
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133545
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	43296.00	Freq (MHz)	All
-71.1	-115.6	-89.3	-83.5	-83.5	Phase	-87.8
0.5	0.4	0.4	0.6	0.6	Ampl.	0.4
510.9	511.1	511.7	511.2	511.2	Sbd box	511.3
U/L 469/0	469/0	469/0	469/0	469/0	APs used	
n 1000	1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	1000	PC freqs	
n:o 0:0	0:0	0:0	0:0	0:0	PC phase	
n:o 0:0	0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.69654841480E+03	Apriori delay (usec)	-3.69654580496E+03	Resid mbdelay (usec)	-2.60984E-03	+/-	6.0E-05
Sband delay (usec)	-3.69654920571E+03	Apriori clock (usec)	1.7610531E+08	Resid sbdelay (usec)	-3.40075E-03	+/-	2.3E-04
Phase delay (usec)	-3.69654581063E+03	Apriori clockrate (us/s)	-6.0000019E-08	Resid phdelay (usec)	-5.66571E-06	+/-	4.0E-07
Delay rate (us/s)	-4.90022804084E-01	Apriori rate (us/s)	-4.90022754810E-01	Resid rate (us/s)	-4.92734E-08	+/-	2.9E-09
Total phase (deg)	-248.2	Apriori accel (us/s/s)	1.95097391780E-05	Resid phase (deg)	-87.8	+/-	6.2

ph/seg (deg)	RMS 26.2	Theor. 20.3	Amplitude Search (1024X16)	0.437 +/- 0.024	0.424	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	47.8	35.5	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	23.2	6.2	Inc. seg. avg.	0.454	0.454	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	17.4	10.8	Inc. frq. avg.	0.447	0.447	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 224.0 el 37.3 pa 31.3 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 1410.405 255.850 simultaneous interpolator

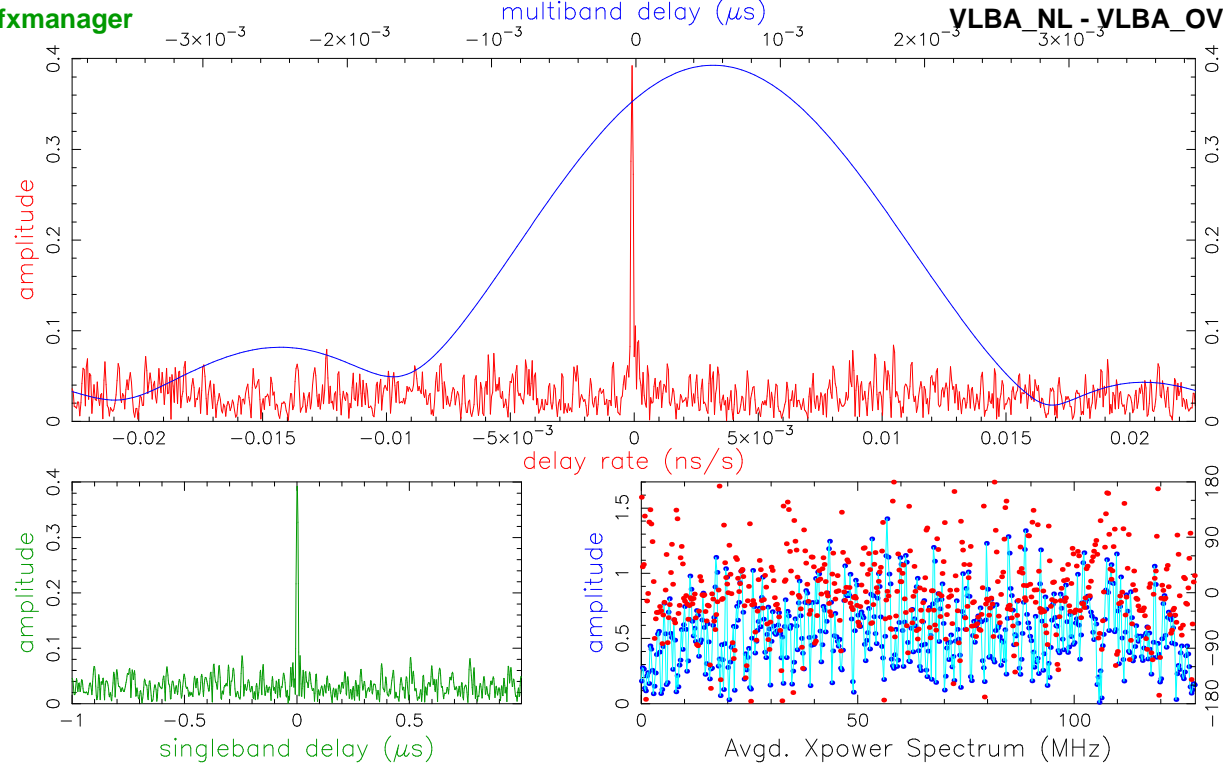
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/no..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/no.Q.202.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, no

VLBA_NL - VLBA_OV, fgroup Q, pol RL

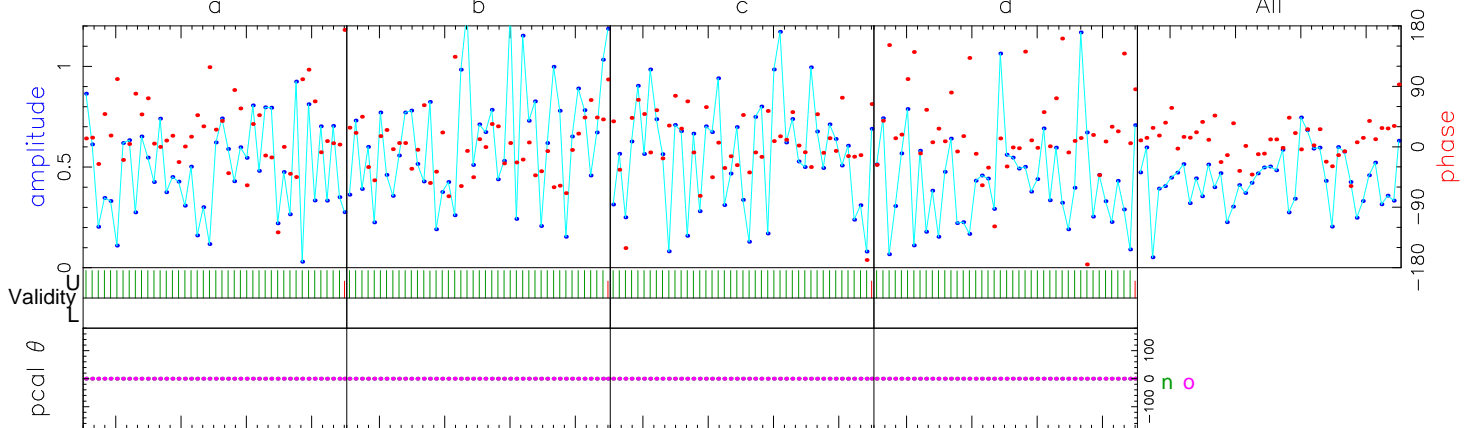


Fringe quality 9

SNR 17.0
 Int time 239.882
 Amp 0.401
 Phase 9.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.001007
 MBD 0.000468
 Fringe rate (Hz)
 -0.002892
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133547
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



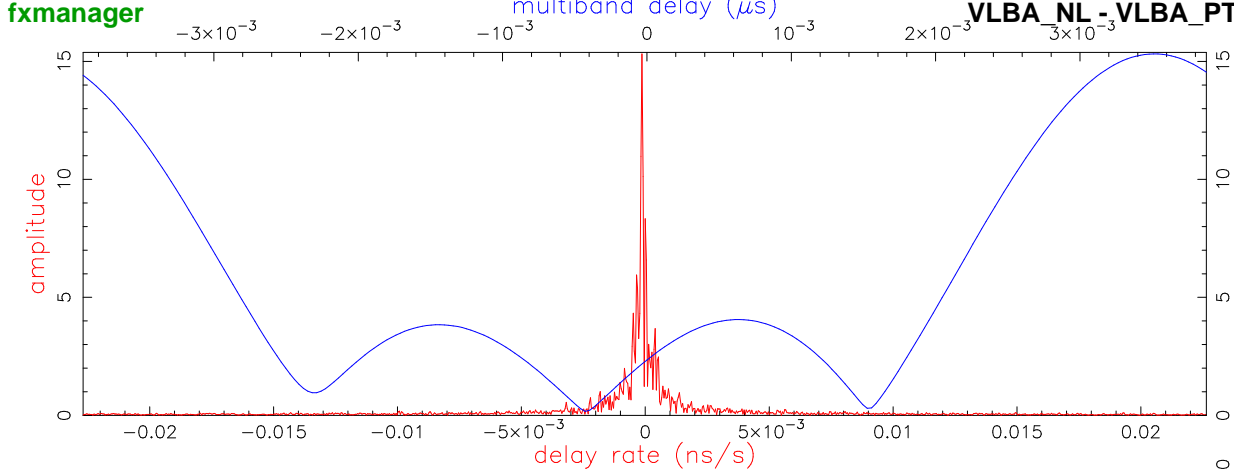
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
13.9	-1.5	11.5	20.1	Phase	9.4
0.4	0.5	0.5	0.3	Ampl.	0.4
513.0	513.6	513.8	513.3	Sbd box	513.5
U/L 469/0	469/0	469/0	469/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:0 0:0	0:0	0:0	0:0	PC phase	
n:0 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-3.69654533689E+03	Apriori delay (usec)	-3.69654580496E+03	Resid mbdelay (usec)	4.68074E-04 +/- 6.6E-05
Sband delay (usec)	-3.69654479759E+03	Apriori clock (usec)	1.7610531E+08	Resid sbdelay (usec)	1.00737E-03 +/- 2.5E-04
Phase delay (usec)	-3.69654580436E+03	Apriori clockrate (us/s)	-6.0000019E-08	Resid phdelay (usec)	6.07141E-07 +/- 4.4E-07
Delay rate (us/s)	-4.90022822003E-01	Apriori rate (us/s)	-4.90022754810E-01	Resid rate (us/s)	-6.71926E-08 +/- 3.1E-09
Total phase (deg)	-151.0	Apriori accel (us/s/s)	1.95097391780E-05	Resid phase (deg)	9.4 +/- 6.8
RMS	Theor.	Amplitude	0.401 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
26.5	22.1	Search (1024X16)	0.366	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
34.6	38.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
11.3	6.8	Inc. seg. avg.	0.405	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
22.0	11.8	Inc. frq. avg.	0.393	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
n: az 224.0 el 37.3 pa 31.3	o: az 190.9 el 51.0 pa 9.1	u, v (fr/asec)	1410.405 255.850		simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/no..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/no.Q.214.1V2A0K			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

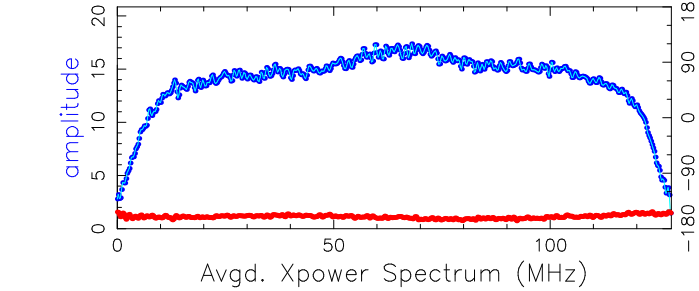
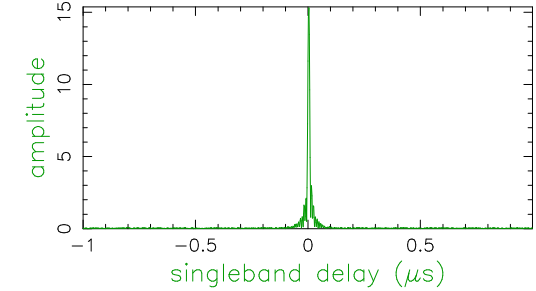
0420-014.1V2A0K, No0121, np

VLBA_NL - VLBA_PT, fgroup Q, pol LL



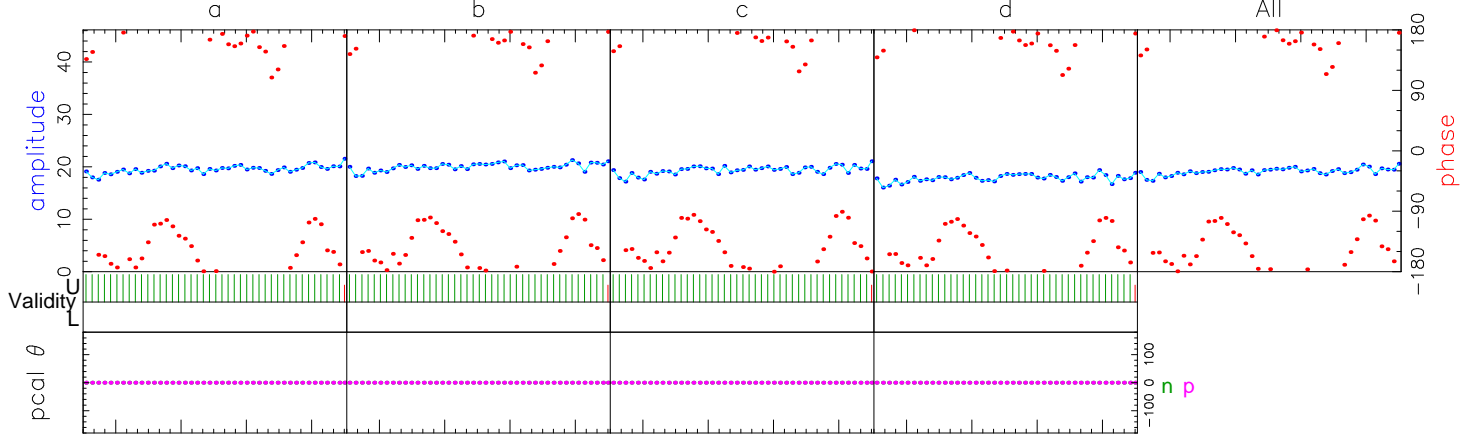
Fringe quality 6

SNR 651.6
 Int time 239.983
 Amp 15.382
 Phase -161.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.003459
 MBD 0.003494
 Fringe rate (Hz)
 -0.005232
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133542
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

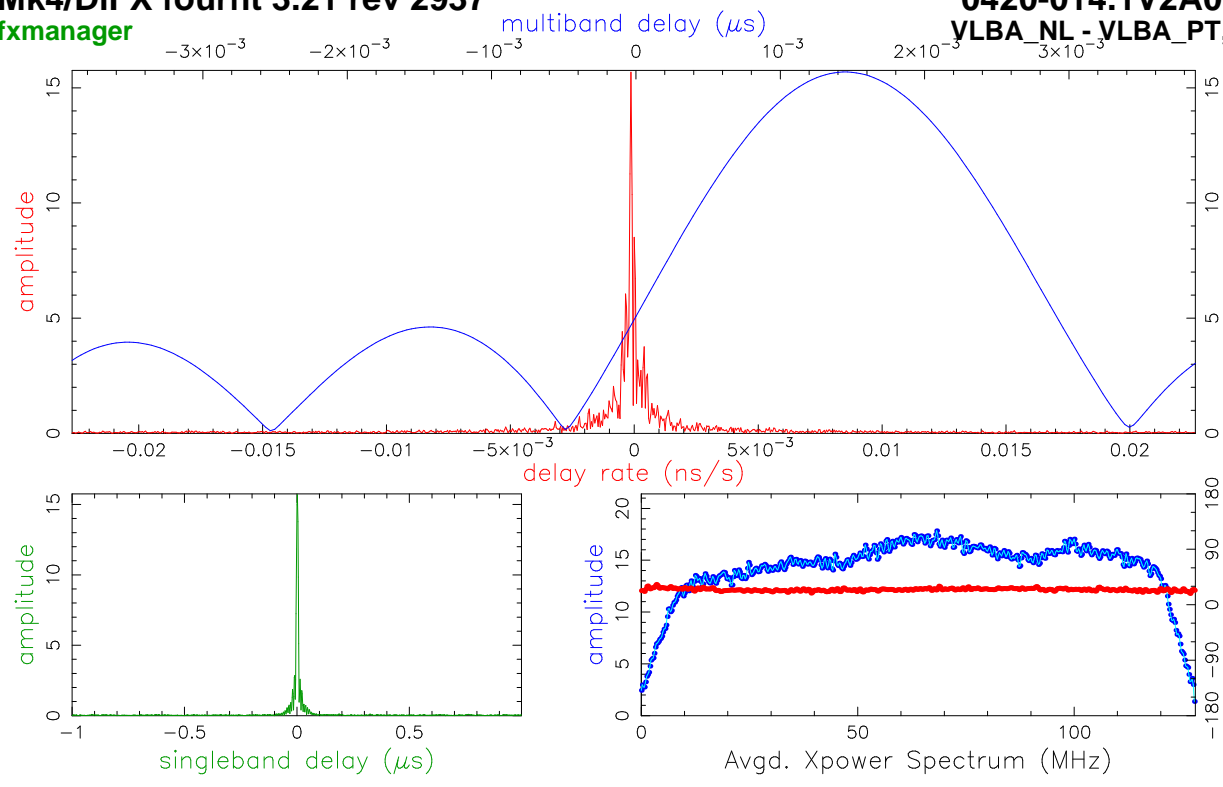
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-166.1	-160.0	-157.3	-164.1	Phase	-161.8
	15.6	16.0	15.4	14.3	Ampl.	15.3
	515.0	514.8	514.7	514.5	Sbd box	514.8
U/L	469/0	469/0	469/0	469/0	APs used	
n	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	PC phase	
n:p	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.67379293785E+03	Apriori delay (usec)	-3.67379643202E+03	Resid mbdelay (usec)	3.49417E-03	+/- 1.7E-06
Sband delay (usec)	-3.67379297340E+03	Apriori clock (usec)	-1.3837433E-01	Resid sbdelay (usec)	3.45862E-03	+/- 6.6E-06
Phase delay (usec)	-3.67379644247E+03	Apriori clockrate (us/s)	4.1999997E-07	Resid phdelay (usec)	-1.04437E-05	+/- 1.1E-08
Delay rate (us/s)	-2.62226041900E-01	Apriori rate (us/s)	-2.62225920349E-01	Resid rate (us/s)	-1.21551E-07	+/- 8.2E-11
Total phase (deg)	-318.2	Apriori accel (us/s/s)	1.92731298588E-05	Resid phase (deg)	-161.8	+/- 0.2

ph/seg (deg)	RMS 37.8	Theor. 0.6	Amplitude Search (1024X16)	15.382 +/- 0.024	14.865	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	24.9	1.0	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	4.9	0.2	Inc. seg. avg.	19.160	19.160	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.2	0.3	Inc. frq. avg.	15.344	15.344	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
n: az 224.0 el 37.3 pa 31.3			p: az 207.7 el 51.0 pa 23.1							
Control file: cf_1234_gmva7mm			Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/np..1V2A0K							simultaneous interpolator
			Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/np.Q.176.1V2A0K							

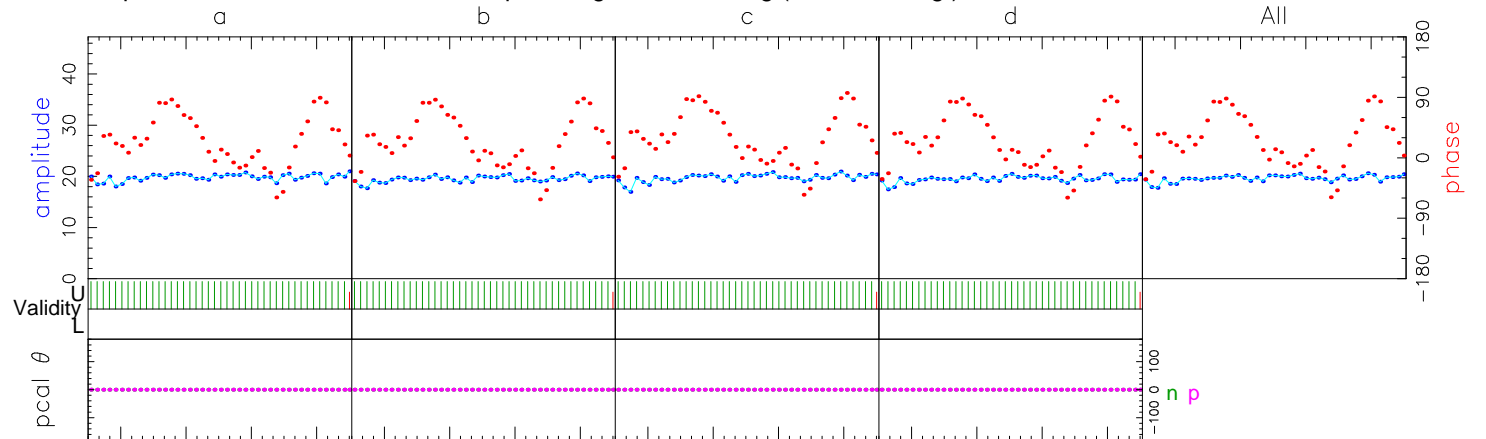


Fringe quality 6

SNR 667.4
Int time 239.983
Amp 15.756
Phase 25.9
PFD 0.0e+00
Delays (us)
SBD 0.001496
MBD 0.001429
Fringe rate (Hz)
-0.005220
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133544
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	PC freqs	
n:p	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
p	1000	1000	1000	1000	PC amp	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.67379500319E+03	Apriori delay (usec)	-3.67379643202E+03	Resid mbdelay (usec)	1.42883E-03	+/- 1.7E-06
Sband delay (usec)	-3.67379493615E+03	Apriori clock (usec)	-1.3837433E-01	Resid sbdelay (usec)	1.49587E-03	+/- 6.5E-06
Phase delay (usec)	-3.67379643035E+03	Apriori clockrate (us/s)	4.1999997E-07	Resid phdelay (usec)	1.67039E-06	+/- 1.1E-08
Delay rate (us/s)	-2.62226041634E-01	Apriori rate (us/s)	-2.62225920349E-01	Resid rate (us/s)	-1.21285E-07	+/- 8.0E-11
Total phase (deg)	-130.5	Apriori accel (us/s/s)	1.92731298588E-05	Resid phase (deg)	25.9	+/- 0.2

ph/seg (deg) 37.8 0.6
amp/seg (%) 24.8 1.0
ph/frq (deg) 3.3 0.2
amp/frq (%) 0.9 0.3

n: az 224.0 el 37.3 pa 31.3
Control file: cf_1234_gmva7mm

p: az 207.7 el 51.0 pa 23.1
Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/np..1V2A0K

u,v (fr/asec) 757.967 437.846
Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/np.Q.190.1V2A0K

simultaneous interpolator

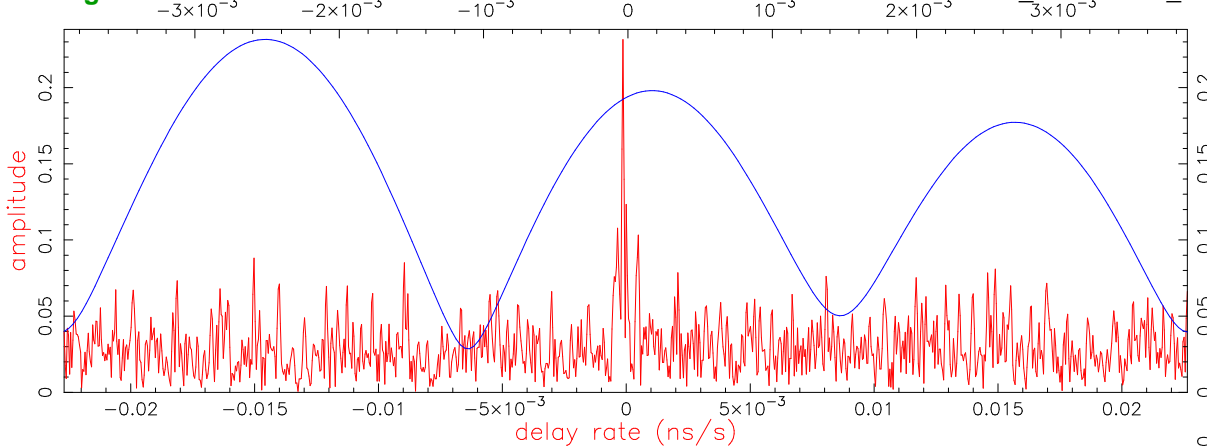
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, np

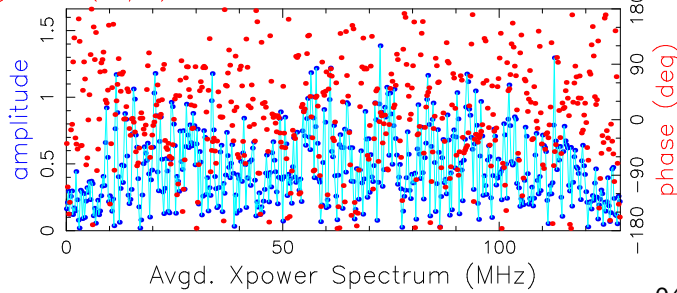
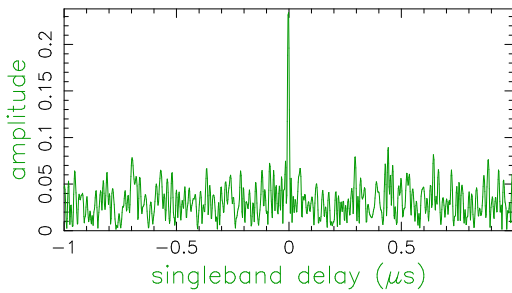
VLBA_NL - VLBA_PT, fgroup Q, pol LR

multiband delay (μ s)



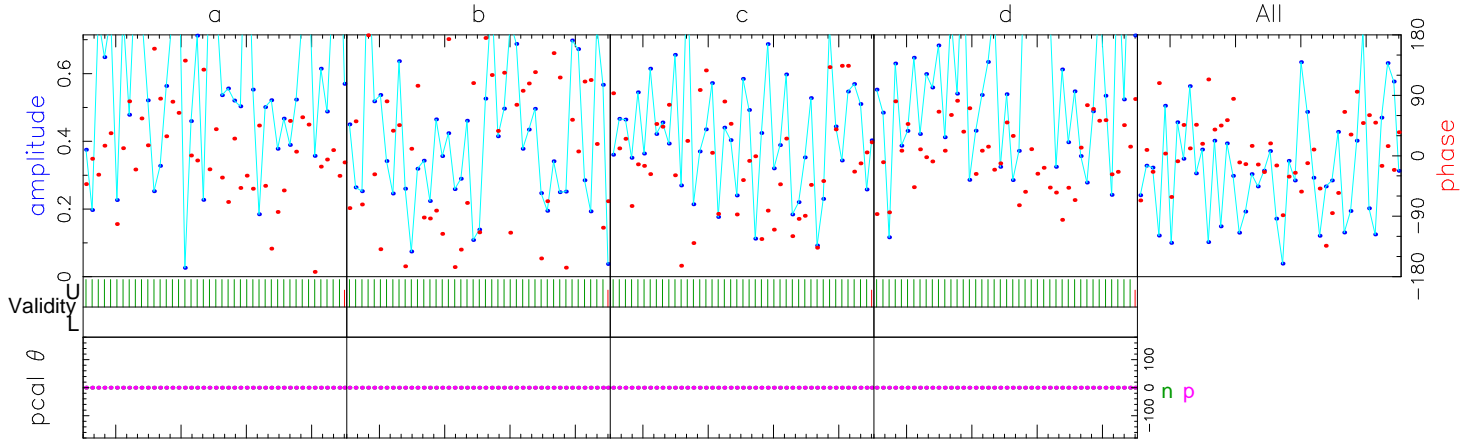
Fringe quality 7

SNR 10.1
 Int time 239.983
 Amp 0.238
 Phase 5.3
 PFD 1.3e-15
 Delays (us)
 SBD -0.002815
 MBD -0.002490
 Fringe rate (Hz)
 -0.005021
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133546
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n:p	0:0	0:0	0:0	0:0		
n:p	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-3.67379892232E+03	Apriori delay (usec)	-3.67379643202E+03	Resid mbdelay (usec)	-2.49029E-03	+/-	1.1E-04
Sband delay (usec)	-3.67379924740E+03	Apriori clock (usec)	-1.3837433E-01	Resid sbdelay (usec)	-2.81538E-03	+/-	4.3E-04
Phase delay (usec)	-3.67379643168E+03	Apriori clockrate (us/s)	4.1999997E-07	Resid phdelay (usec)	3.41790E-07	+/-	7.3E-07
Delay rate (us/s)	-2.62226037014E-01	Apriori rate (us/s)	-2.62225920349E-01	Resid rate (us/s)	-1.16664E-07	+/-	5.3E-09
Total phase (deg)	-151.0	Apriori accel (us/s/s)	1.92731298588E-05	Resid phase (deg)	5.3	+/-	11.4

ph/seg (deg)	RMS 53.1	Theor. 37.2	Amplitude	0.238 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	75.6	65.0	Search (1024X16)	0.220	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	96.6	11.4	Inc. seg. avg.	0.263	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	61.7	19.8	Inc. frq. avg.	0.252	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

n: az 224.0 el 37.3 pa 31.3 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 757.967 437.846 simultaneous interpolator

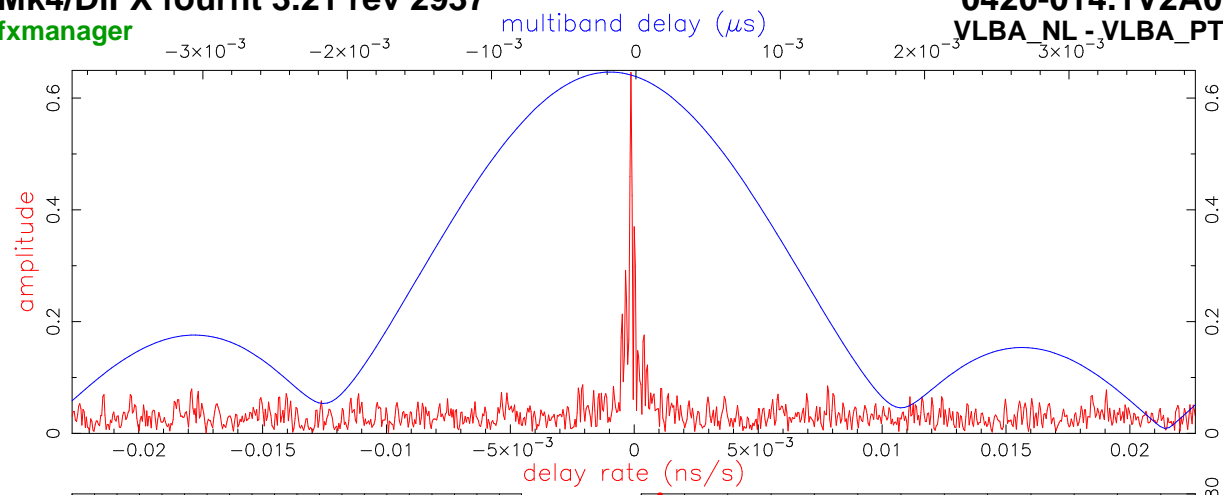
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/np..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/np.Q.205.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

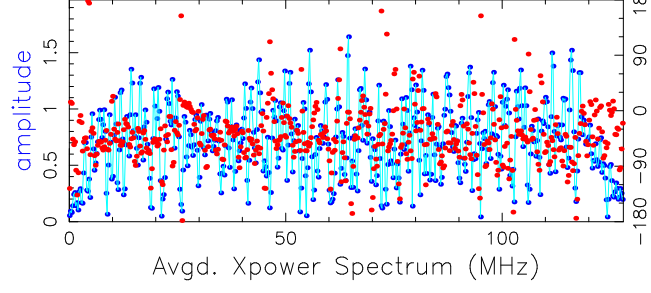
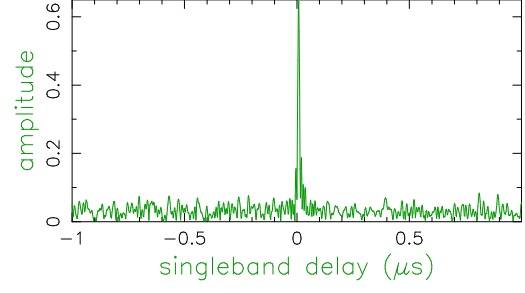
fxmanager

0420-014.1V2A0K, No0121, np

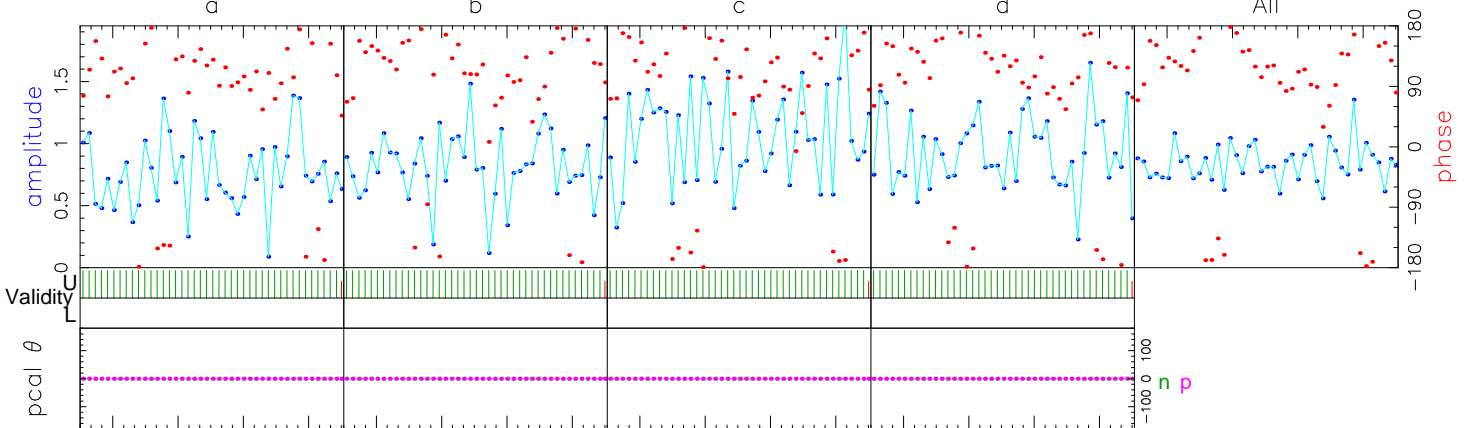
VLBA_NL - VLBA_PT, fgroup Q, pol RL



Fringe quality 9
 SNR 27.5
 Int time 239.983
 Amp 0.650
 Phase 133.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.007354
 MBD -0.000220
 Fringe rate (Hz)
 -0.005293
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133547
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n:p	0:0	0:0	0:0	0:0		
n:p	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UL	Q01UL	Q02UL	Q03UL		

	42912.00	43040.00	43168.00	43296.00	Resid mbdelay (usec)	-2.20388E-04	+/- 4.0E-05
Group delay (usec)(sbd)	-3.67378883991E+03						
Sband delay (usec)	-3.67378907802E+03						
Phase delay (usec)	-3.67379642344E+03						
Delay rate (us/s)	-2.62226043330E-01						
Total phase (deg)		-23.3					

	RMS	Theor.	Amplitude	0.650 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	41.9	13.7	Search (1024X16)	0.627	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	38.0	23.8	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
ph/frq (deg)	3.6	4.2	Inc. seg. avg.	0.822	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	11.5	7.3	Inc. frq. avg.	0.645	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

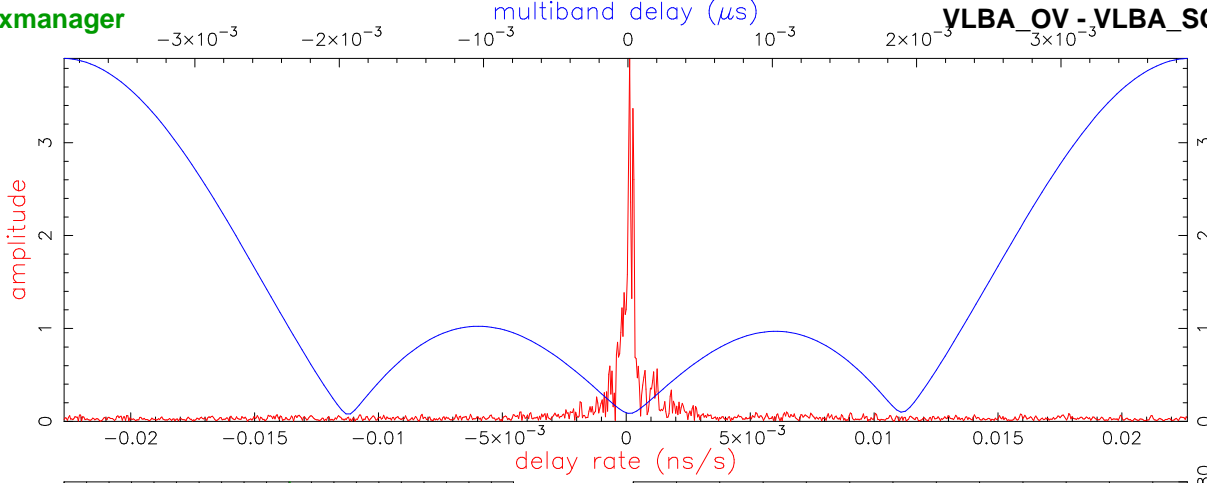
n: az 224.0 el 37.3 pa 31.3 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 757.967 437.846 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/np..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/np.Q.218.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, oc

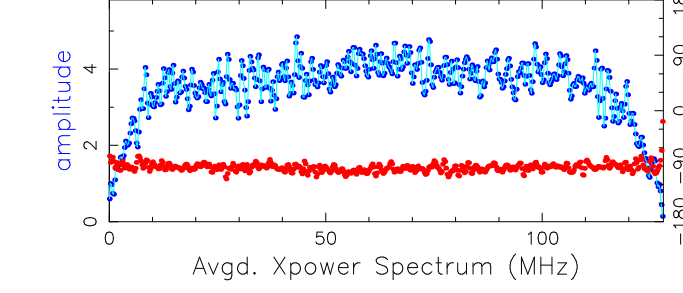
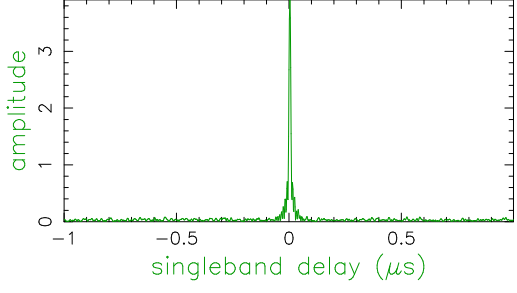
VLBA_OV - VLBA_SC, fgroup Q, pol LL



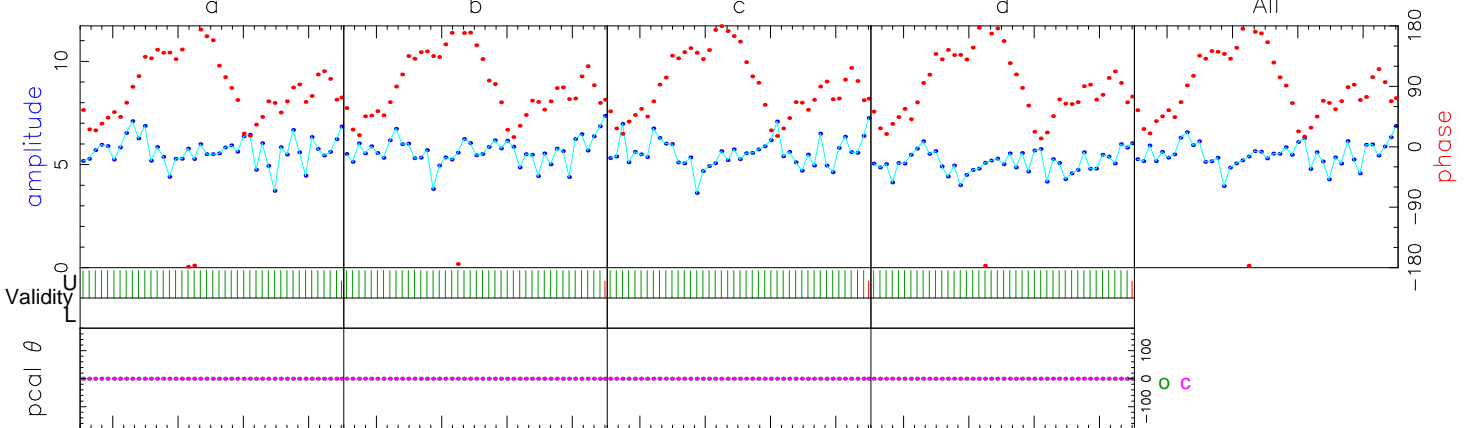
Fringe quality 5

SNR 165.5
 Int time 239.882
 Amp 3.907
 Phase 88.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.003936
 MBD -0.003918
 Fringe rate (Hz) 0.005841
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133542
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



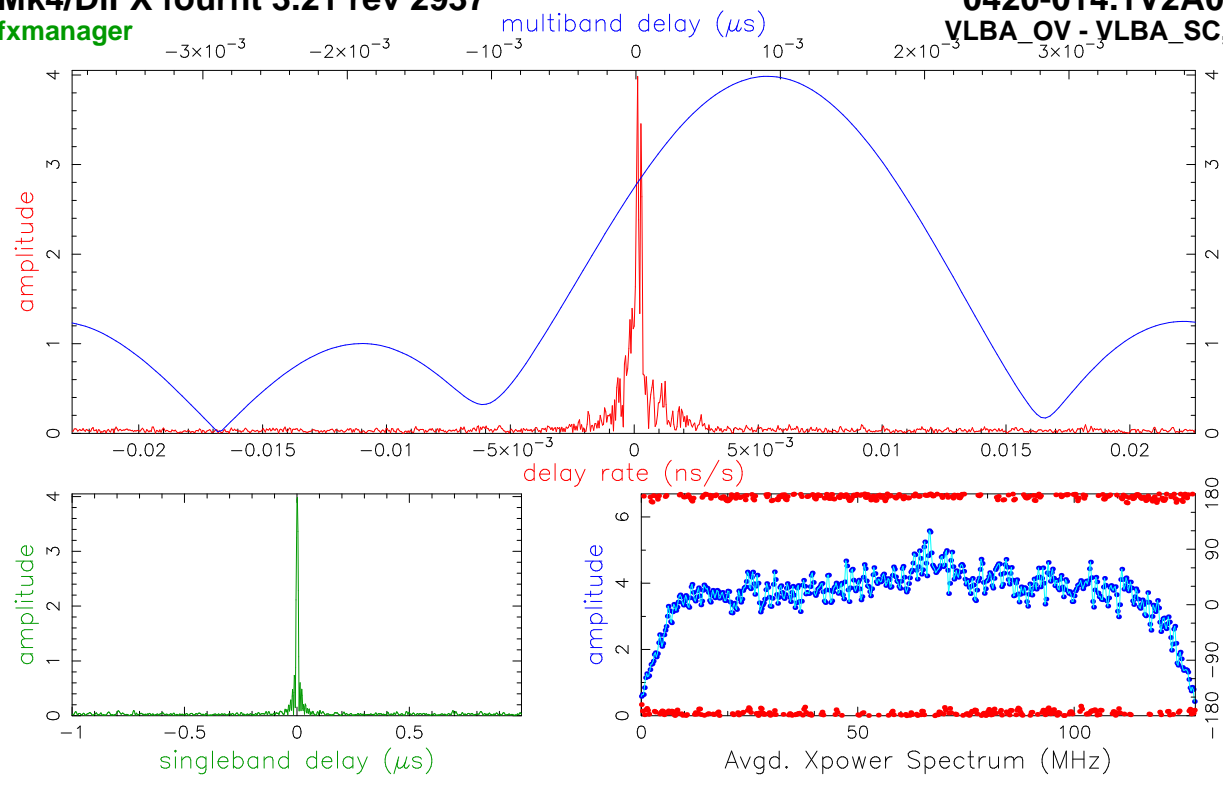
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
88.5	88.9	87.3	88.8	Phase	88.3
4.0	4.0	4.0	3.6	Ampl.	3.9
515.0	515.1	515.0	515.0	Sbd box	515.0
U/L 469/0	469/0	469/0	469/0	APs used	
o 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
o:c 0:0	0:0	0:0	0:0	PC phase	
o:c 0:0	0:0	0:0	0:0	Manl PC	
o 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
o Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	6.88592115566E+03	Apriori delay (usec)	6.88591726092E+03	Resid mbdelay (usec)	-3.91777E-03	+/- 6.7E-06
Sband delay (usec)	6.88592119730E+03	Apriori clock (usec)	-8.5358372E+00	Resid sbdelay (usec)	3.93638E-03	+/- 2.6E-05
Phase delay (usec)	6.88591726663E+03	Apriori clockrate (us/s)	4.4000014E-08	Resid phdelay (usec)	5.70117E-06	+/- 4.5E-08
Delay rate (us/s)	1.13371215107E+00	Apriori rate (us/s)	1.13371201535E+00	Resid rate (us/s)	1.35715E-07	+/- 3.2E-10
Total phase (deg)	56.0	Apriori accel (us/s/s)	-3.74249408249E-05	Resid phase (deg)	88.3	+/- 0.7

ph/seg (deg)	46.4	RMS	2.3	Theor.	2.3	Amplitude	3.907 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	43.2	Search (1024X16)	3.887	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	3.887	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	0.9	Inc. seg. avg.	5.493	Inc. frq. avg.	3.907	Bits/sample: 2x2	4.4000014E-08	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	4.6	Inc. frq. avg.	3.907	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	1.13371201535E+00	ion window (TEC)	0.00	0.00		

o: az 190.9 el 51.0 pa 9.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -3263.410 1352.559 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc.Q.170.1V2A0K

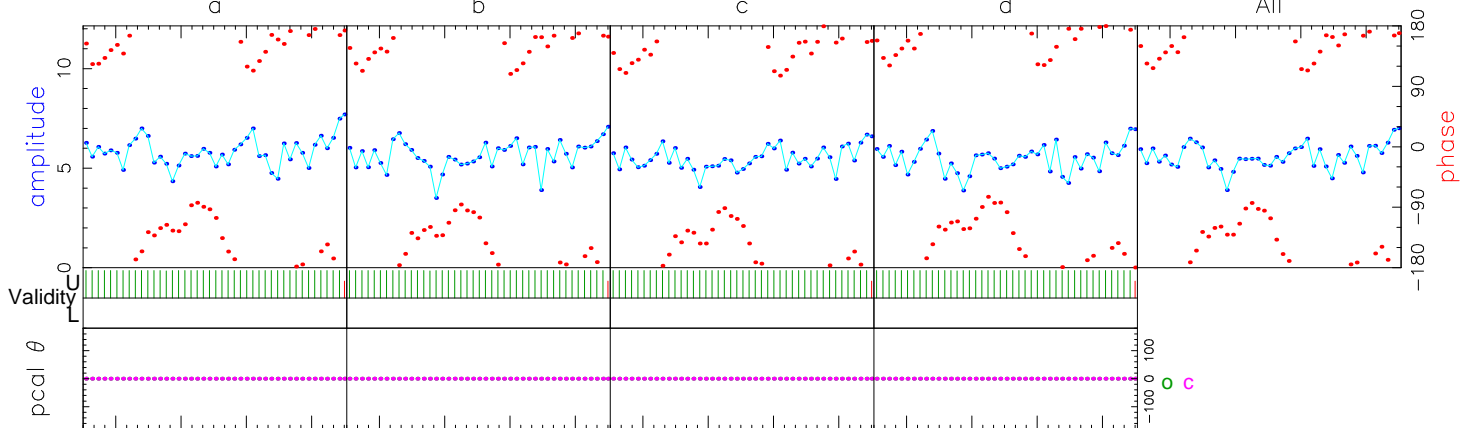


Fringe quality 5

SNR 171.6
Int time 239.882
Amp 4.051
Phase -175.7
PFD 0.0e+00
Delays (us)
SBD 0.001093
MBD 0.000885
Fringe rate (Hz)
0.005803
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133543
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-173.9	-177.6	176.0	-167.4	Phase	-175.7
4.1	4.0	3.9	3.9	Ampl.	4.0
513.7	513.3	513.4	513.9	Sbd box	513.6
U/L 469/0	469/0	469/0	469/0	APs used	
o 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
o:c 0:0	0:0	0:0	0:0	PC phase	
o:c 0:0	0:0	0:0	0:0	Manl PC	
o 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
o Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	6.88591814641E+03	Apriori delay (usec)	6.88591726092E+03	Resid mbdelay (usec)	8.85482E-04	+/- 6.5E-06
Sband delay (usec)	6.88591835405E+03	Apriori clock (usec)	-8.5358372E+08	Resid sbdelay (usec)	1.09312E-03	+/- 2.5E-05
Phase delay (usec)	6.88591724958E+03	Apriori clockrate (us/s)	4.4000014E-08	Resid phdelay (usec)	-1.13415E-05	+/- 4.3E-08
Delay rate (us/s)	1.13371215019E+00	Apriori rate (us/s)	1.13371201535E+00	Resid rate (us/s)	1.34833E-07	+/- 3.1E-10
Total phase (deg)	151.9	Apriori accel (us/s/s)	-3.74249408249E-05	Resid phase (deg)	-175.7	+/- 0.7

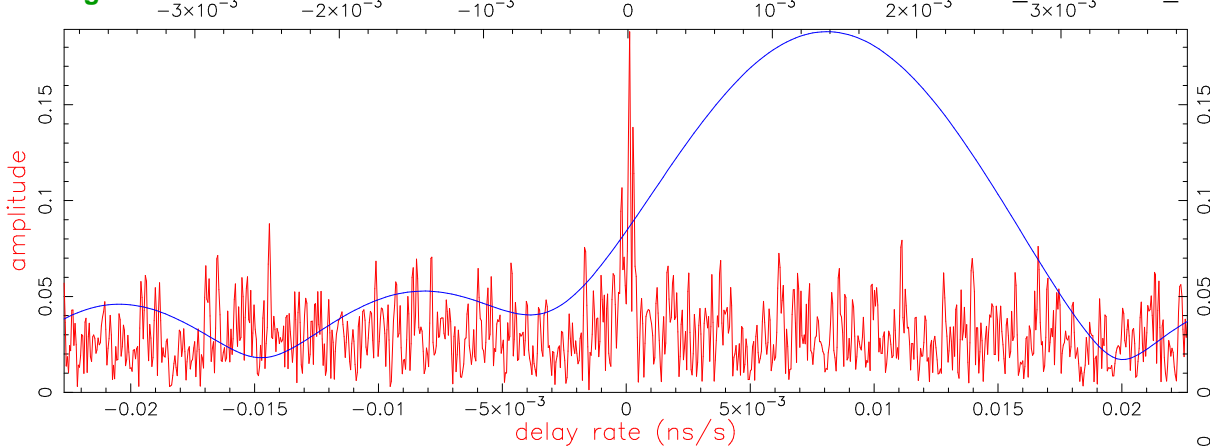
ph/seg (deg) 46.5 2.2 Amplitude 4.051 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 40.9 3.8 Search (1024X16) 3.958 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 8.5 0.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 2.6 1.2 Inc. seg. avg. 5.591 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
amp/frq (%) 2.6 1.2 Inc. frq. avg. 4.005 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 190.9 el 51.0 pa 9.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -3263.410 1352.559 simultaneous interpolator

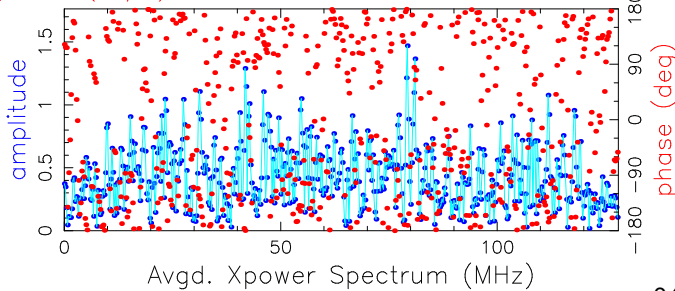
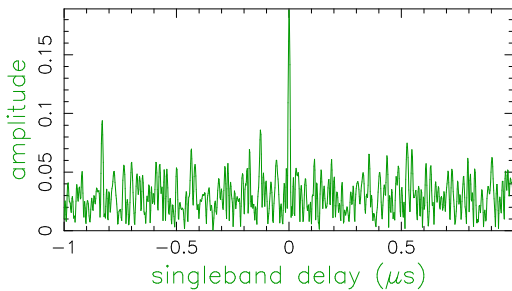
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc.Q.184.1V2A0K

multiband delay (μ s)

Fringe quality 9

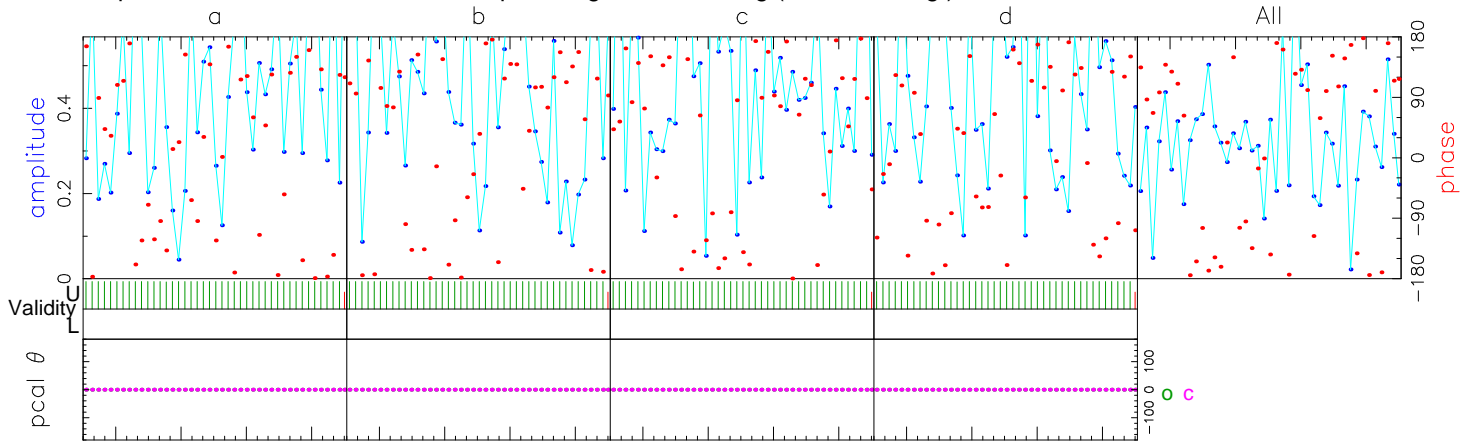


SNR 8.0
Int time 239.882
Amp 0.189
Phase 156.4
PFD 1.9e-07
Delays (us)
SBD 0.000526
MBD 0.001406
Fringe rate (Hz)
0.006077
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133545
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	169.9	142.8	148.2	168.3	Phase	156.4
	0.2	0.2	0.2	0.1	Ampl.	0.2
	512.9	513.2	512.8	515.3	Sbd box	513.3
U/L	469/0	469/0	469/0	469/0	APs used	
o	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
o:c	0:0	0:0	0:0	0:0	PC phase	
o:c	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	6.88591866719E+03	Apriori delay (usec)	6.88591726092E+03	Resid mbdelay (usec)	1.40626E-03	+/-	1.4E-04
Sband delay (usec)	6.88591778730E+03	Apriori clock (usec)	-8.5358372E+08	Resid sbdelay (usec)	5.26375E-04	+/-	5.4E-04
Phase delay (usec)	6.88591727102E+03	Apriori clockrate (us/s)	4.4000014E-08	Resid phdelay (usec)	1.00936E-05	+/-	9.2E-07
Delay rate (us/s)	1.13371215654E+00	Apriori rate (us/s)	1.13371201535E+00	Resid rate (us/s)	1.41186E-07	+/-	6.7E-09
Total phase (deg)	124.1	Apriori accel (us/s/s)	-3.74249408249E-05	Resid phase (deg)	156.4	+/-	14.3

ph/seg (deg)	RMS 67.1	Theor. 46.9	Amplitude	0.189 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	102.2	81.8	Search (1024X16)	0.185	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	17.0	14.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	15.4	24.9	Inc. seg. avg.	0.244	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	0.186	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

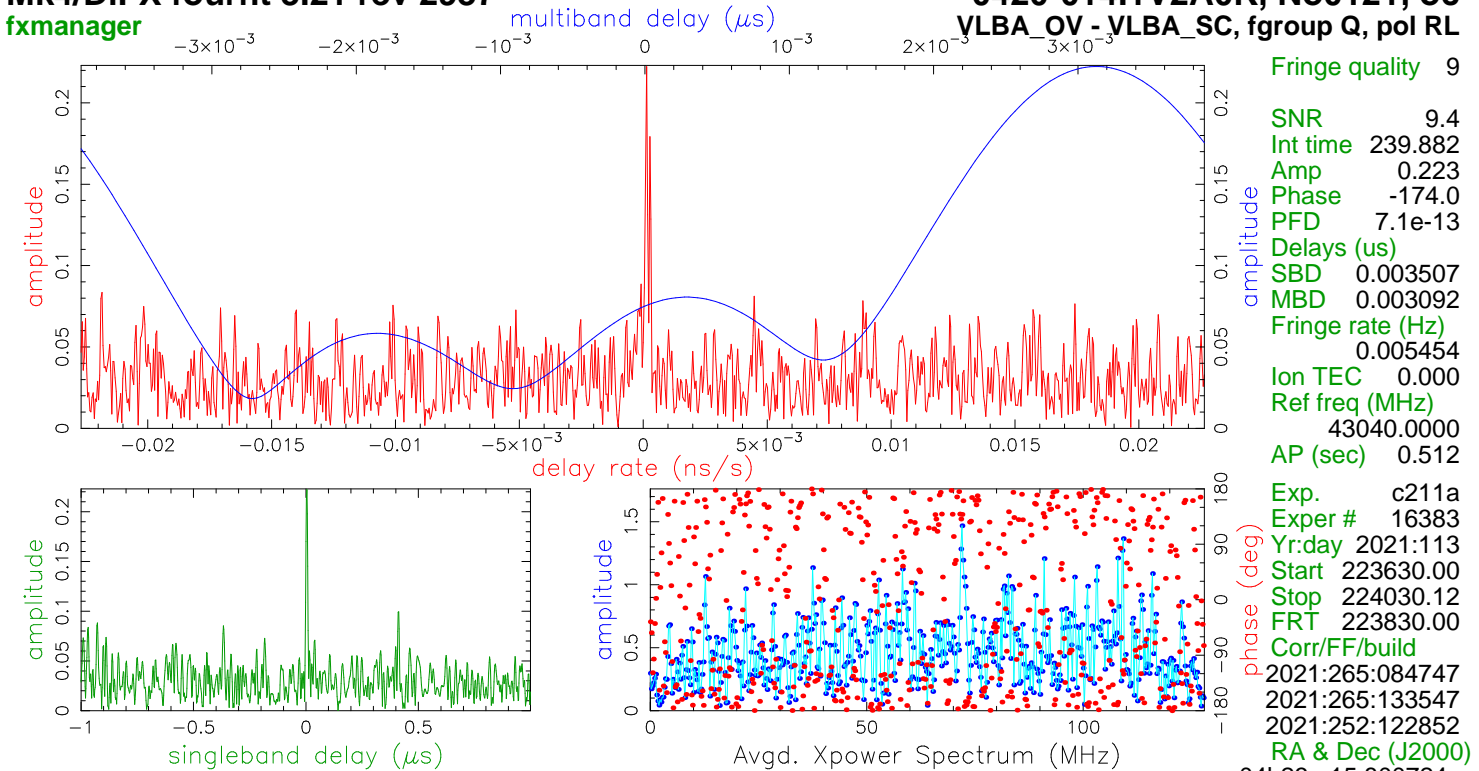
o: az 190.9 el 51.0 pa 9.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -3263.410 1352.559 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc.Q.199.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, oc

VLBA_OV - VLBA_SC, fgroup Q, pol RL

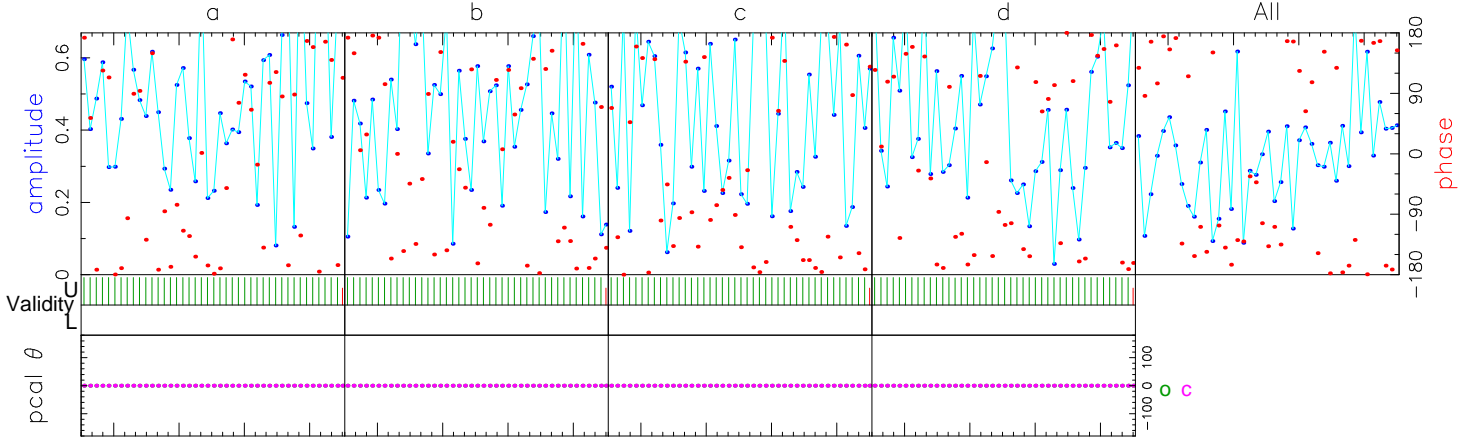


Fringe quality 9

SNR 9.4
 Int time 239.882
 Amp 0.223
 Phase -174.0
 PFD 7.1e-13
 Delays (us)
 SBD 0.003507
 MBD 0.003092
 Fringe rate (Hz) 0.005454
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133547
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



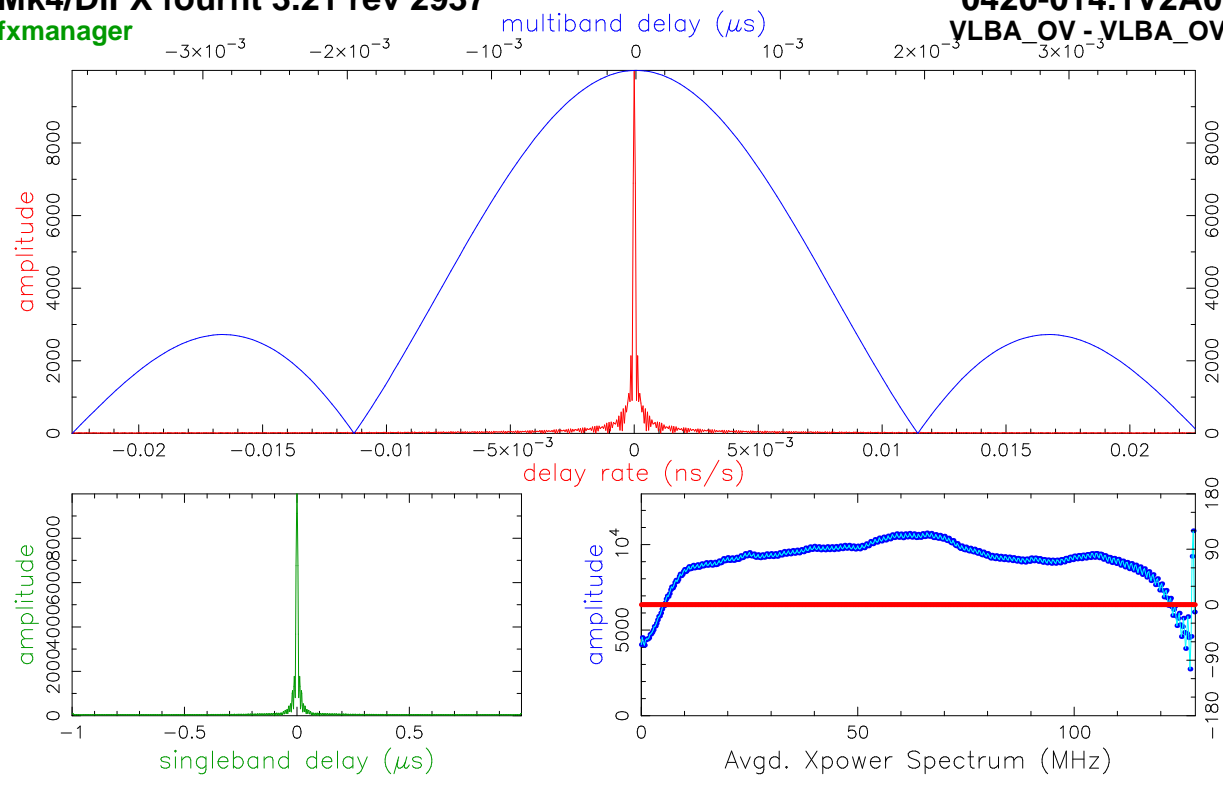
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
o	1000	1000	1000	1000		
c	1000	1000	1000	1000		
o:c	0:0	0:0	0:0	0:0		
o:c	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000		
c	1000	1000	1000	1000		
o	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	6.88592035341E+03	Apriori delay (usec)	6.88591726092E+03	Resid mbdelay (usec)	3.09248E-03	+/- 1.2E-04
Sband delay (usec)	6.88592076742E+03	Apriori clock (usec)	-8.5358372E+08	Resid sbdelay (usec)	3.50650E-03	+/- 4.6E-04
Phase delay (usec)	6.88591724970E+03	Apriori clockrate (us/s)	4.4000014E-08	Resid phdelay (usec)	-1.12267E-05	+/- 7.8E-07
Delay rate (us/s)	1.13371214207E+00	Apriori rate (us/s)	1.13371201535E+00	Resid rate (us/s)	1.26716E-07	+/- 5.6E-09
Total phase (deg)	153.7	Apriori accel (us/s/s)	-3.74249408249E-05	Resid phase (deg)	-174.0	+/- 12.1

ph/seg (deg)	55.0	Theor.	39.8	Amplitude	0.223 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	78.1		69.4	Search (1024X16)	0.216	Pcal rate: 0.000E+00, 0.000E+00 (us/s)			mb window (us)	-0.004	0.004
ph/frq (deg)	15.8		12.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled		dr window (ns/s)	-0.023	0.023
amp/frq (%)	14.6		21.2	Inc. seg. avg.	0.267	Sample rate(MISamp/s): 256			ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.222	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite			

o: az 190.9 el 51.0 pa 9.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -3263.410 1352.559 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oc.Q.212.1V2A0K

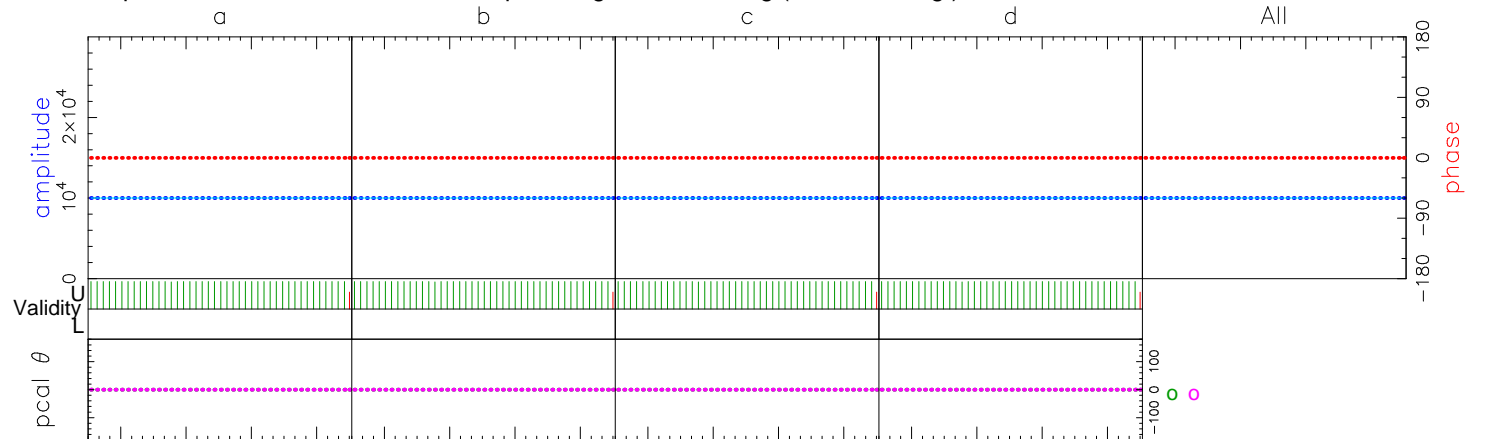


Fringe quality 9

SNR 423542.0
Int time 239.882
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133542
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

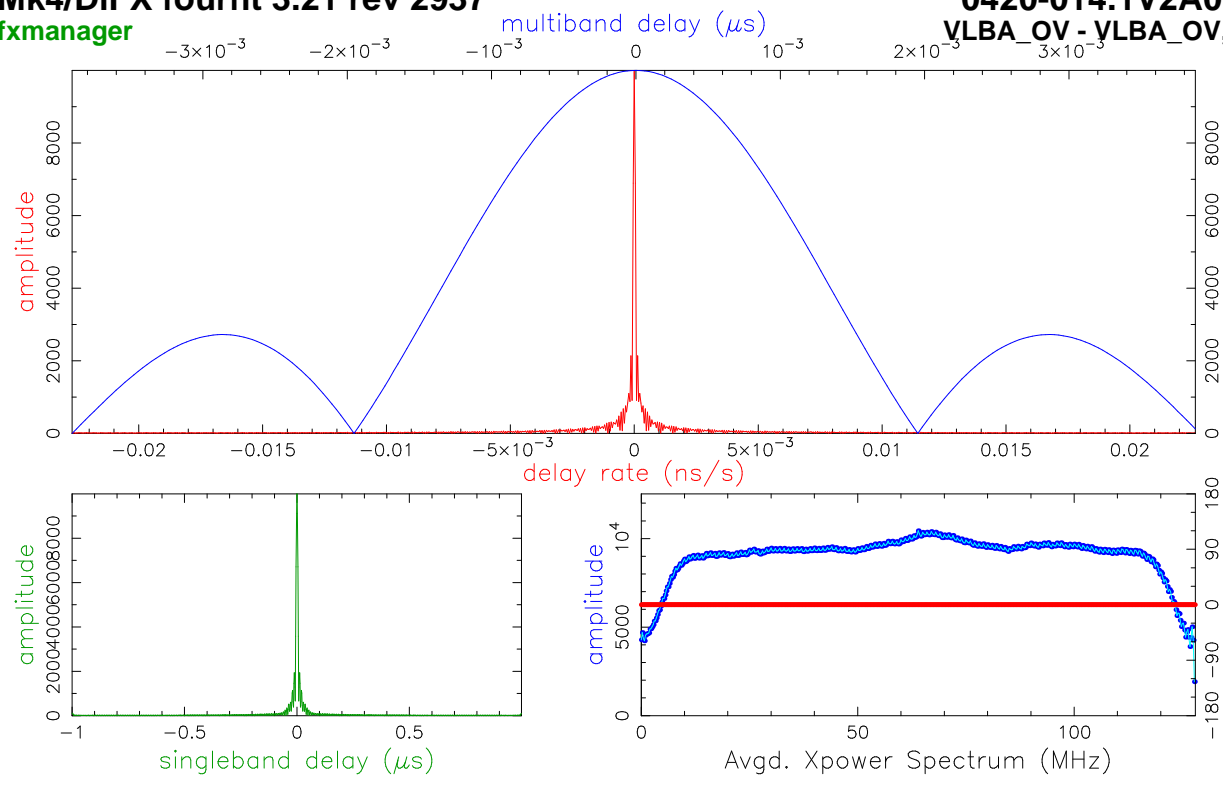
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	513.0	513.0
o	1000	1000	1000	1000	10000.0	10000.0
o:0	0:0	0:0	0:0	0:0	Sbd box	513.0
o:0	0:0	0:0	0:0	0:0	APs used	
o	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
o	Q00UL	Q01UL	Q02UL	Q03UL	PC phase	
o	Q00UL	Q01UL	Q02UL	Q03UL	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	0.00000000000E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.6E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.0E-08
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	1.7E-11
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg) 0.0 0.0 Search (1024X16) 10000.000 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 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) 0.0 0.0 Inc. seg. avg. 10000.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
o: az 190.9 el 51.0 pa 9.1 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo.Q.174.1V2A0K

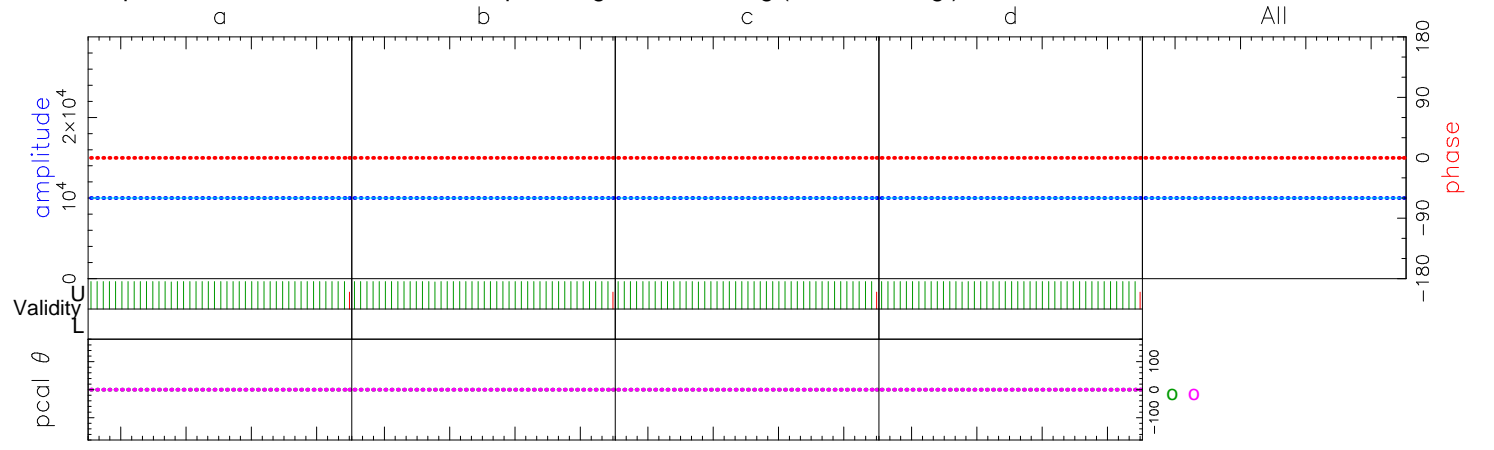


Fringe quality 9

SNR 423542.1
Int time 239.882
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133544
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



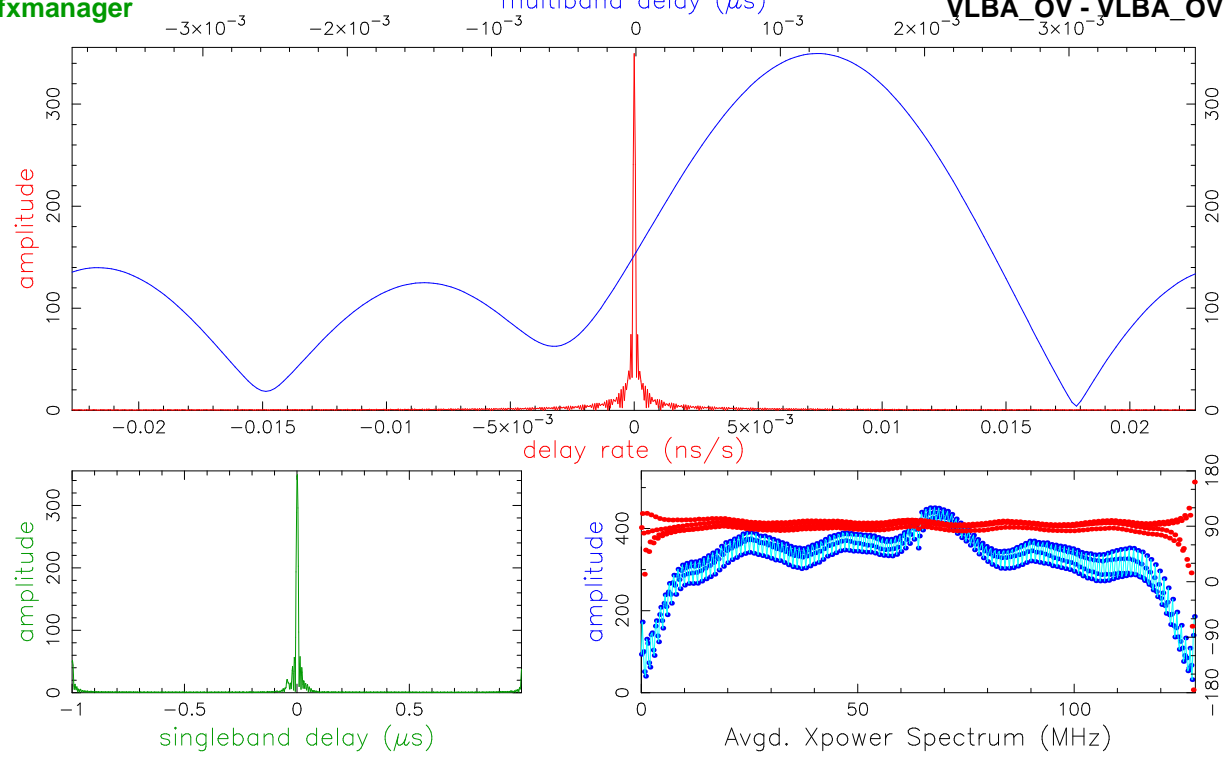
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0	513.0	513.0
o	1000	1000	1000	1000	10000.0	10000.0
o:0	0:0	0:0	0:0	0:0	Sbd box	513.0
o:0	0:0	0:0	0:0	0:0	APs used	
o	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
o	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
o	Q00UR	Q01UR	Q02UR	Q03UR	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00 +/- 2.6E-09
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid sbdelay (usec)	0.000000E+00 +/- 1.0E-08
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid phdelay (usec)	0.000000E+00 +/- 1.7E-11
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid rate (us/s)	0.000000E+00 +/- 1.3E-13
Total phase (deg)	0.0	0.0	0.0	0.0	Resid phase (deg)	0.0 +/- 0.0
	RMS	Theor.	Amplitude	9999.999 +/- 0.024	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
o: az 190.9 el 51.0 pa 9.1	o: az 190.9 el 51.0 pa 9.1	u,v (fr/asec) 0.000 0.000				simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo..1V2A0K	Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo.Q.188.1V2A0K				

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, oo

VLBA_OV - VLBA_OV, fgroup Q, pol LR

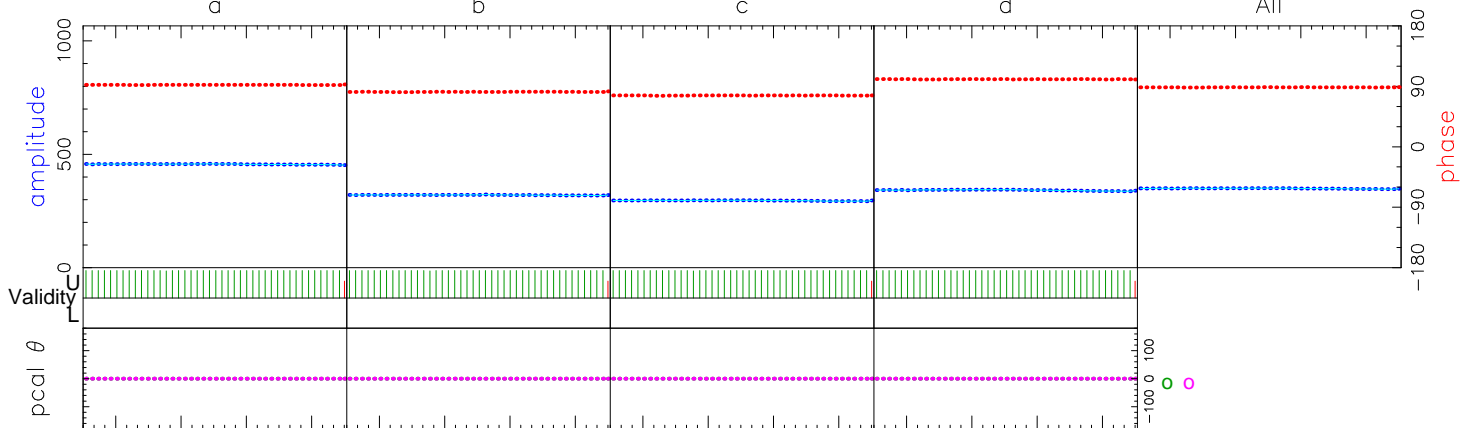


Fringe quality 8

SNR 15059.5
 Int time 239.882
 Amp 355.560
 Phase 88.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.001063
 MBD 0.001223
 Fringe rate (Hz) 0.000002
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133545
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



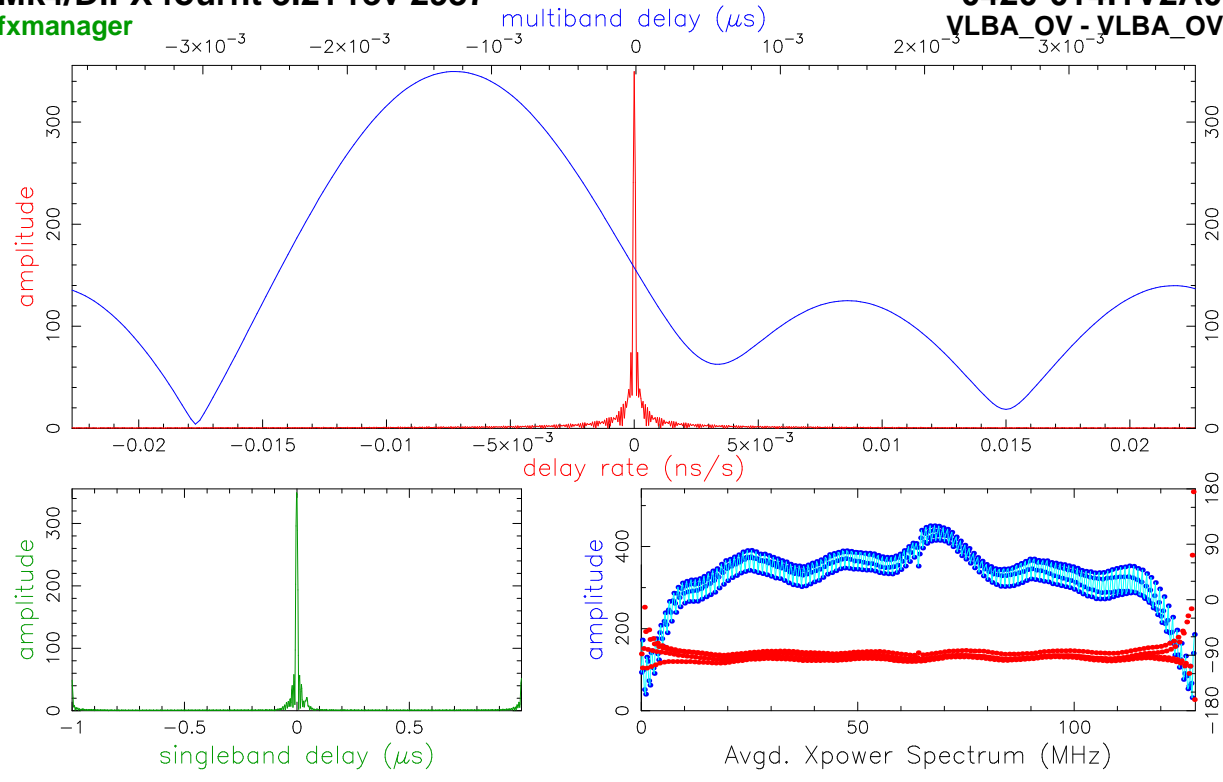
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	92.1	81.7	76.3	100.5	Phase	88.5
	456.5	320.7	296.1	341.9	Ampl.	353.8
	513.5	513.6	513.3	513.7	Sbd box	513.5
U/L	469/0	469/0	469/0	469/0	APs used	
o	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
o:o	0:0	0:0	0:0	0:0	PC phase	
o:o	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.22290625000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.22291E-03	+/-	7.4E-08
Sband delay (usec)	1.06350000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.06350E-03	+/-	2.9E-07
Phase delay (usec)	5.70943575347E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	5.70944E-06	+/-	4.9E-10
Delay rate (us/s)	5.10517081932E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	5.10517E-11	+/-	3.5E-12
Total phase (deg)	88.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	88.5	+/-	0.0

ph/seg (deg)	0.1	Theor.	0.0	Amplitude	355.560 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	1.8	0.0	Search (1024X16)	342.920	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	13.3	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	17.3	0.0	Inc. seg. avg.	349.442	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
			Inc. frq. avg.	353.766	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

o: az 190.9 el 51.0 pa 9.1 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo.Q.203.1V2A0K

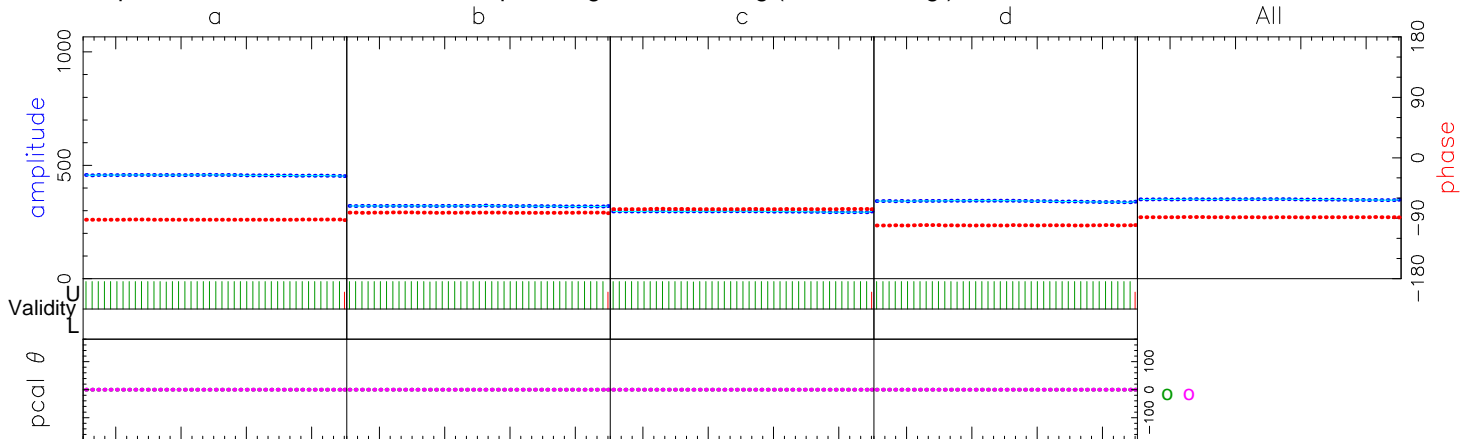


Fringe quality 8

SNR 15059.5
Int time 239.882
Amp 355.560
Phase -88.5
PFD 0.0e+00
Delays (us)
SBD -0.001063
MBD -0.001223
Fringe rate (Hz)
-0.000002
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133547
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



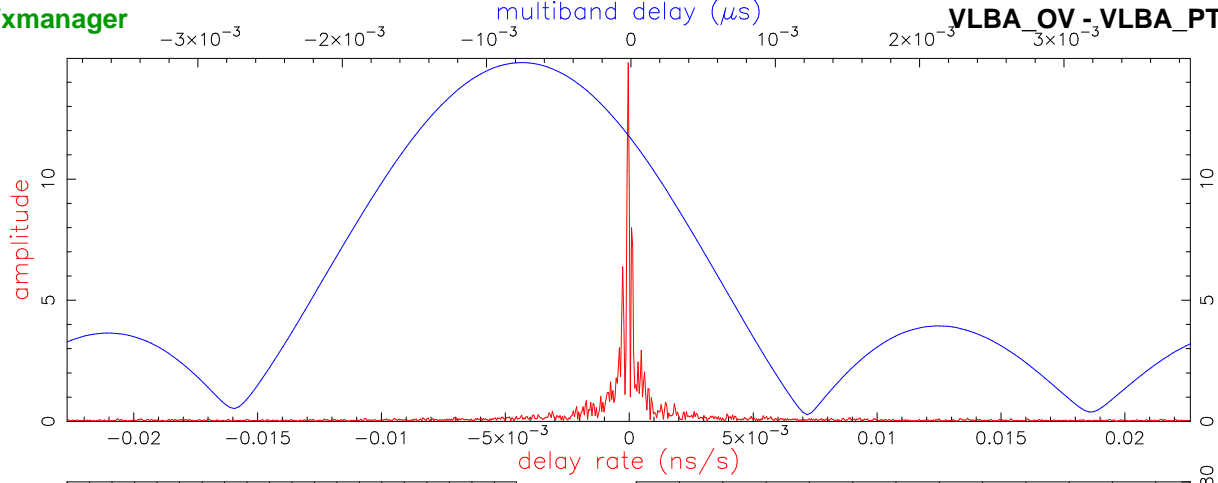
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-92.1	-81.7	-76.3	-100.5	Phase	-88.5
456.5	320.7	296.1	341.9	Ampl.	353.8
512.5	512.4	512.7	512.3	Sbd box	512.5
U/L 469/0	469/0	469/0	469/0	APs used	
o 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
o: 0:0	0:0	0:0	0:0	PC phase	
o: 0:0	0:0	0:0	0:0	Manl PC	
o 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
o Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-1.22290625000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.22291E-03	+/-	7.4E-08
Sband delay (usec)	-1.06350000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.06350E-03	+/-	2.9E-07
Phase delay (usec)	-5.70943575356E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-5.70944E-06	+/-	4.9E-10
Delay rate (us/s)	-5.10517081932E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-5.10517E-11	+/-	3.5E-12
Total phase (deg)	-88.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-88.5	+/-	0.0

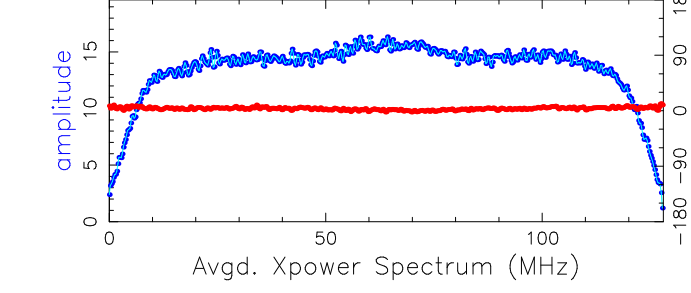
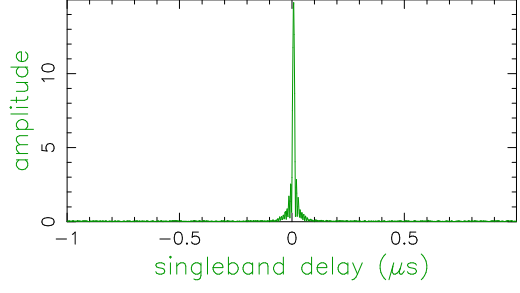
ph/seg (deg)	0.1	Theor.	0.0	Amplitude	355.560 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	1.8	0.0	Search (1024X16)	342.920	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	13.3	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	17.3	0.0	Inc. seg. avg.	349.442	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
			Inc. frq. avg.	353.766	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

o: az 190.9 el 51.0 pa 9.1 o: az 190.9 el 51.0 pa 9.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

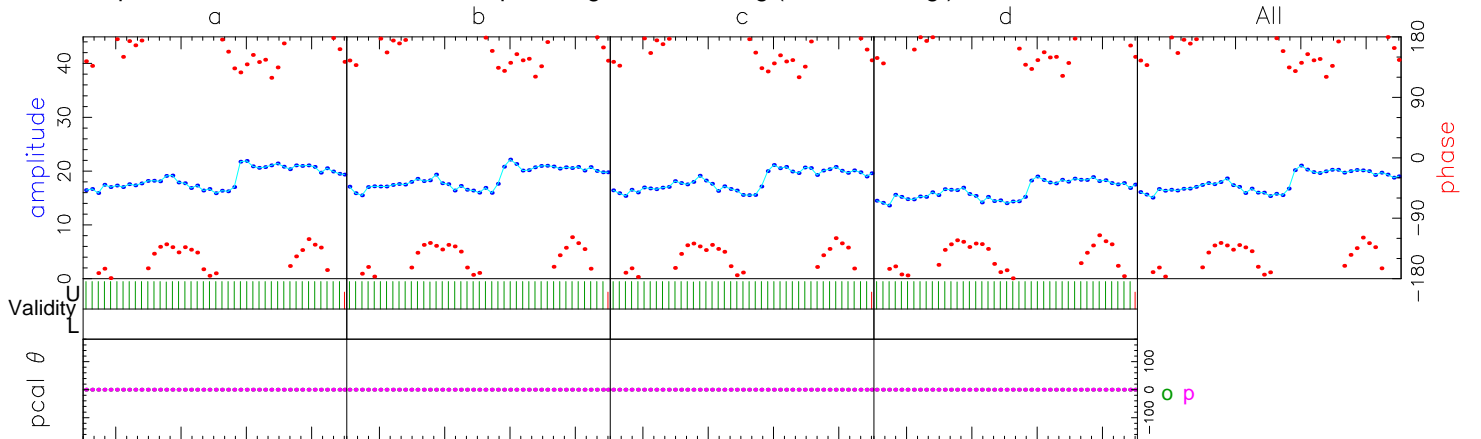
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/oo.Q.216.1V2A0K



Fringe quality 6
SNR 634.7
Int time 239.882
Amp 14.984
Phase -175.2
PFD 0.0e+00
Delays (us)
SBD 0.007088
MBD -0.000793
Fringe rate (Hz)
-0.002815
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133542
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-177.4	-175.6	-176.0	-171.3	Phase	-175.2
	15.4	15.4	15.0	13.5	Ampl.	14.8
	516.7	516.6	516.6	516.6	Sbd box	516.6
U/L	469/0	469/0	469/0	469/0	APs used	
o	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	2.27563924141E+01	Apriori delay (usec)	2.27493729394E+01	Resid mbdelay (usec)	-7.93025E-04	+/- 1.8E-06
Group delay (usec)(sbd)	2.27564609394E+01	Apriori clock (usec)	-1.8994274E+00	Resid sbdelay (usec)	7.08800E-03	+/- 6.8E-06
Sband delay (usec)	2.27493616326E+01	Apriori clockrate (us/s)	4.7999999E-07	Resid phdelay (usec)	-1.13068E-05	+/- 1.2E-08
Phase delay (usec)	2.27796769047E-01	Apriori rate (us/s)	2.27796834461E-01	Resid rate (us/s)	-6.54143E-08	+/- 8.4E-11
Delay rate (us/s)		Apriori accel (us/s/s)	-2.36609319216E-07	Resid phase (deg)	-175.2	+/- 0.2
Total phase (deg)	-171.1					

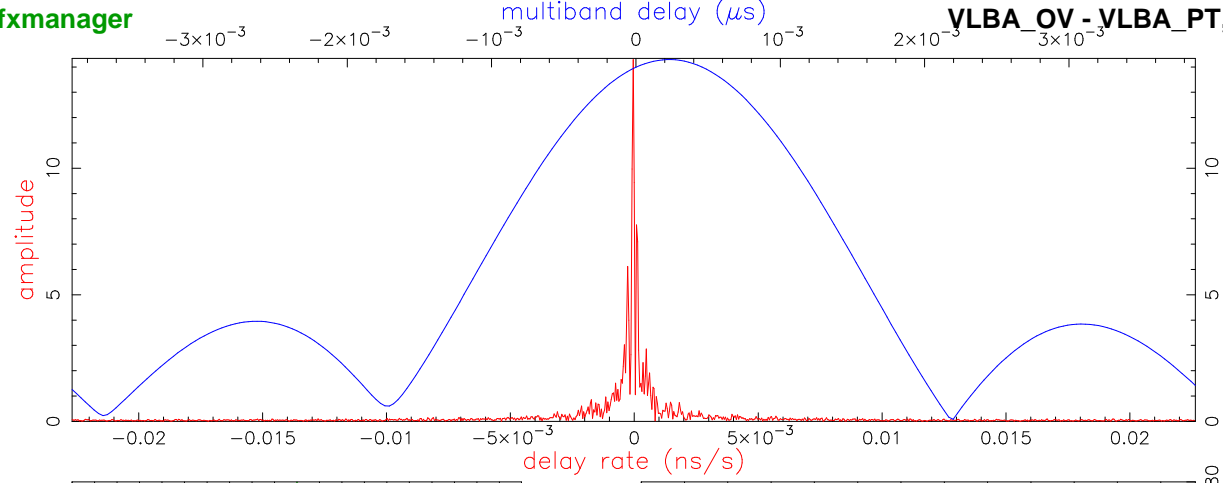
ph/seg (deg) RMS Theor. Amplitude 14.984 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 34.3 0.6 Search (1024X16) 13.332 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 23.1 1.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 3.2 0.2 Inc. seg. avg. 17.963 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
amp/frq (%) 5.4 0.3 Inc. frq. avg. 14.816 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
o: az 190.9 el 51.0 pa 9.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -652.437 181.996 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/op..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/op.Q.175.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

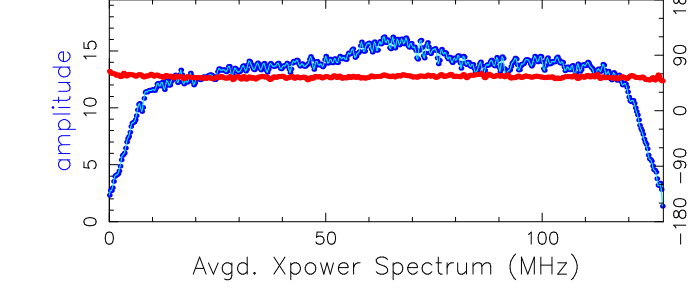
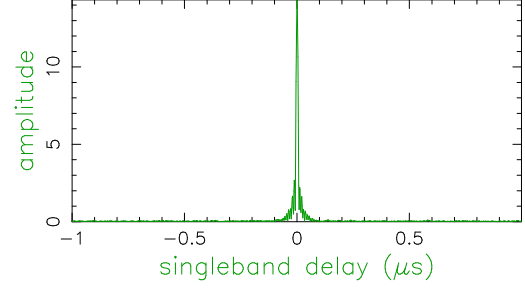
0420-014.1V2A0K, No0121, op

VLBA_OV - VLBA_PT, fgroup Q, pol RR



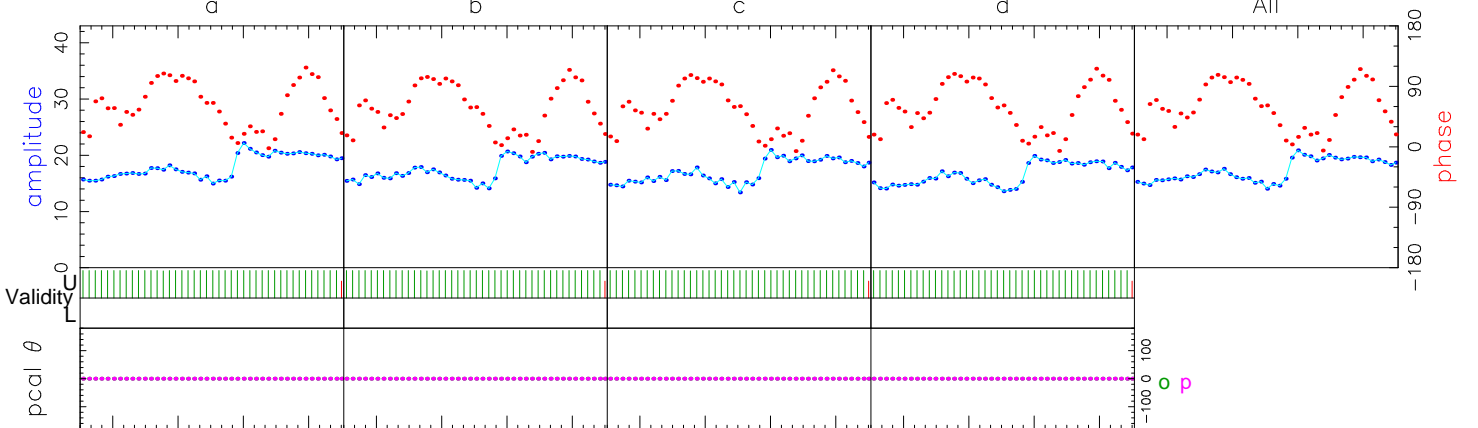
Fringe quality 6

SNR 607.3
 Int time 239.882
 Amp 14.339
 Phase 58.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.000383
 MBD 0.000248
 Fringe rate (Hz)
 -0.002816
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133544
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec

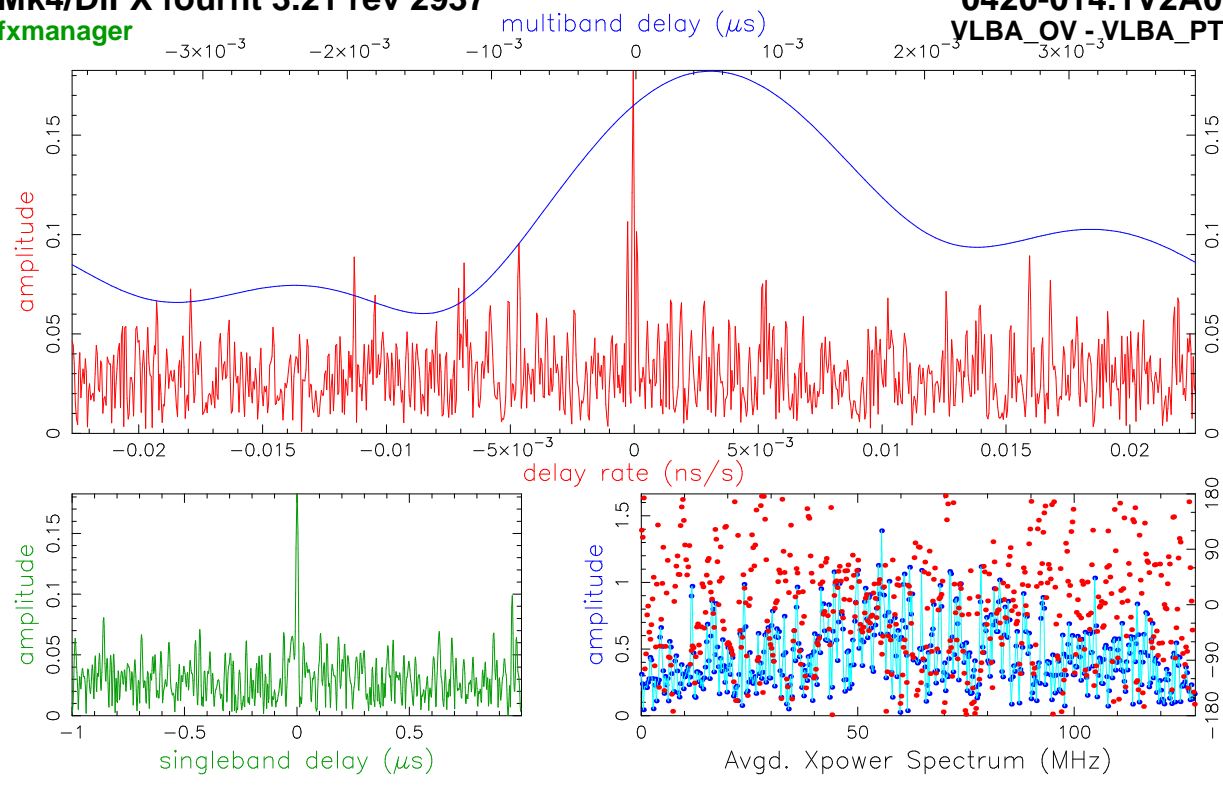


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	61.3	56.6	56.6	58.6	Phase	58.3
	14.9	14.5	14.1	13.7	Ampl.	14.3
	513.1	513.0	513.3	513.3	Sbd box	513.2
U/L	469/0	469/0	469/0	469/0	APs used	
o	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
o	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	2.27496211953E+01	Apriori delay (usec)	2.27493729394E+01	Resid mbdelay (usec)	2.48256E-04	+/-	1.8E-06
Sband delay (usec)	2.27497563144E+01	Apriori clock (usec)	-1.8994274E+00	Resid sbdelay (usec)	3.83375E-04	+/-	7.1E-06
Phase delay (usec)	2.27493767017E+01	Apriori clockrate (us/s)	4.7999999E-07	Resid phdelay (usec)	3.76230E-06	+/-	1.2E-08
Delay rate (us/s)	2.27796769024E-01	Apriori rate (us/s)	2.27796834461E-01	Resid rate (us/s)	-6.54369E-08	+/-	8.8E-11
Total phase (deg)	62.4	Apriori accel (us/s/s)	-2.36609319216E-07	Resid phase (deg)	58.3	+/-	0.2

ph/seg (deg)	RMS 34.2	Theor. 0.6	Amplitude Search (1024X16)	14.339 +/- 0.024	12.833	12.833	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	24.9	1.1	Interp.	0.000	17.336	14.300	PCal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	2.7	0.2	Inc. seg. avg.	17.336	14.300	14.300	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	3.3	0.3	Inc. frq. avg.	14.300	14.300	14.300	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

o: az 190.9 el 51.0 pa 9.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -652.437 181.996 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/op..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/op.Q.193.1V2A0K

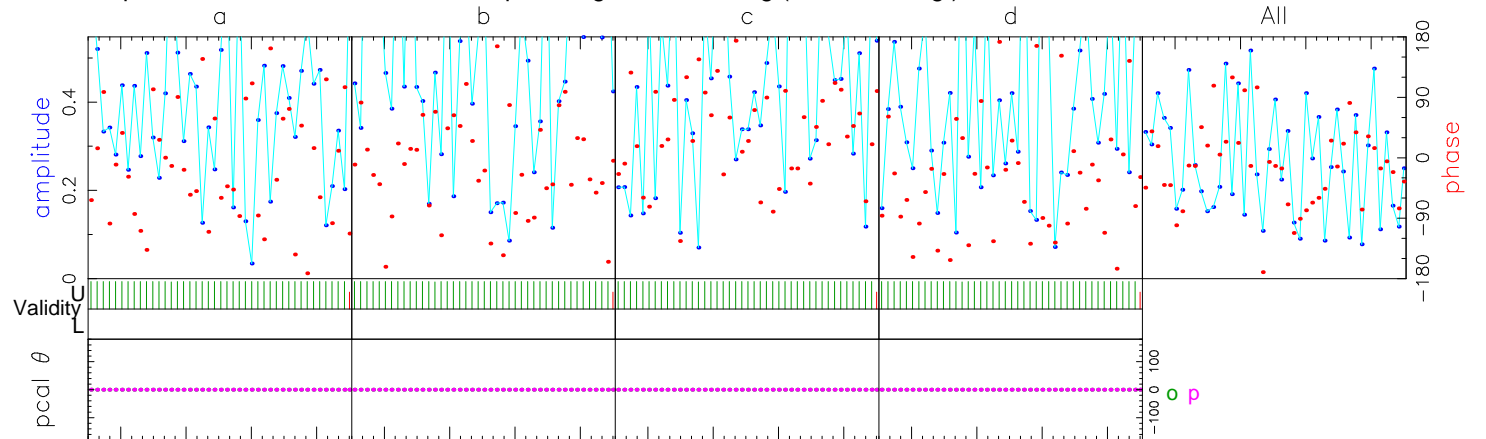


Fringe quality 9

SNR 7.7
Int time 239.882
Amp 0.183
Phase -8.7
PFD 1.7e-06
Delays (us)
SBD 0.000411
MBD 0.000547
Fringe rate (Hz)
-0.001940
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133546
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
o	1000	1000	1000	1000		
p	1000	1000	1000	1000		
o:p	0:0	0:0	0:0	0:0		
o:p	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000		
p	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UR	Q01UR	Q02UR	Q03UR		

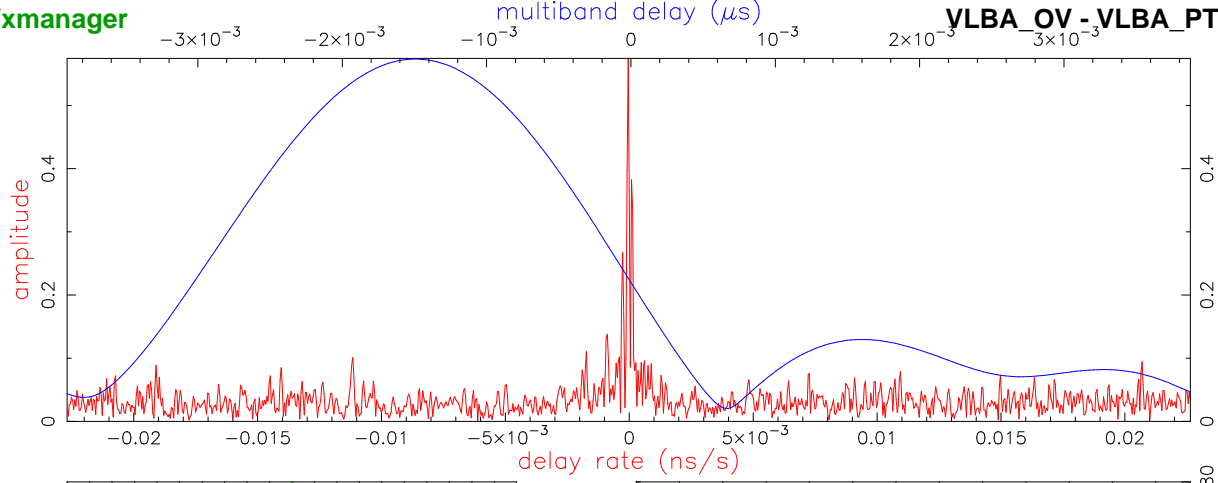
	2.27499197891E+01	Apriori delay (usec)	2.27493729394E+01	Resid mbdelay (usec)	5.46850E-04	+/- 1.4E-04
Group delay (usec)(sbd)	2.27497840644E+01	Apriori clock (usec)	-1.8994274E+00	Resid sbdelay (usec)	4.11125E-04	+/- 5.6E-04
Sband delay (usec)	2.27493723750E+01	Apriori clockrate (us/s)	4.7999999E-07	Resid phdelay (usec)	-5.64316E-07	+/- 9.6E-07
Phase delay (usec)	2.27796789397E-01	Apriori rate (us/s)	2.27796834461E-01	Resid rate (us/s)	-4.50645E-08	+/- 6.9E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-2.36609319216E-07	Resid phase (deg)	-8.7	+/- 14.8
Total phase (deg)	-4.7					

ph/seg (deg) 62.1 48.6
amp/seg (%) 82.6 84.8
ph/frq (deg) 48.4 14.8
amp/frq (%) 34.0 25.9

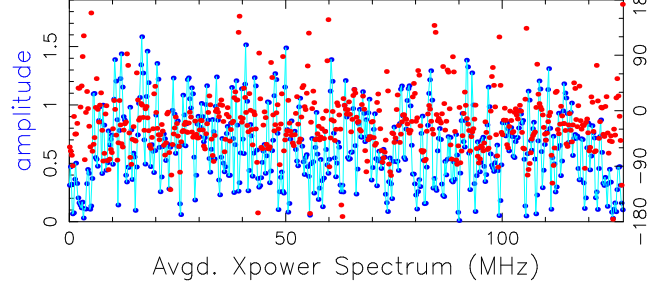
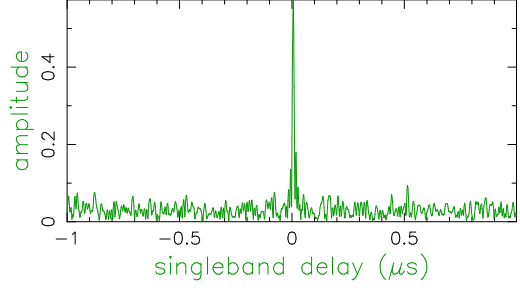
o: az 190.9 el 51.0 pa 9.1
p: az 207.7 el 51.0 pa 23.1
u,v (fr/asec) -652.437 181.996

Control file: cf_1234_gmva7mm
Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/op..1V2A0K
Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/op.Q.207.1V2A0K

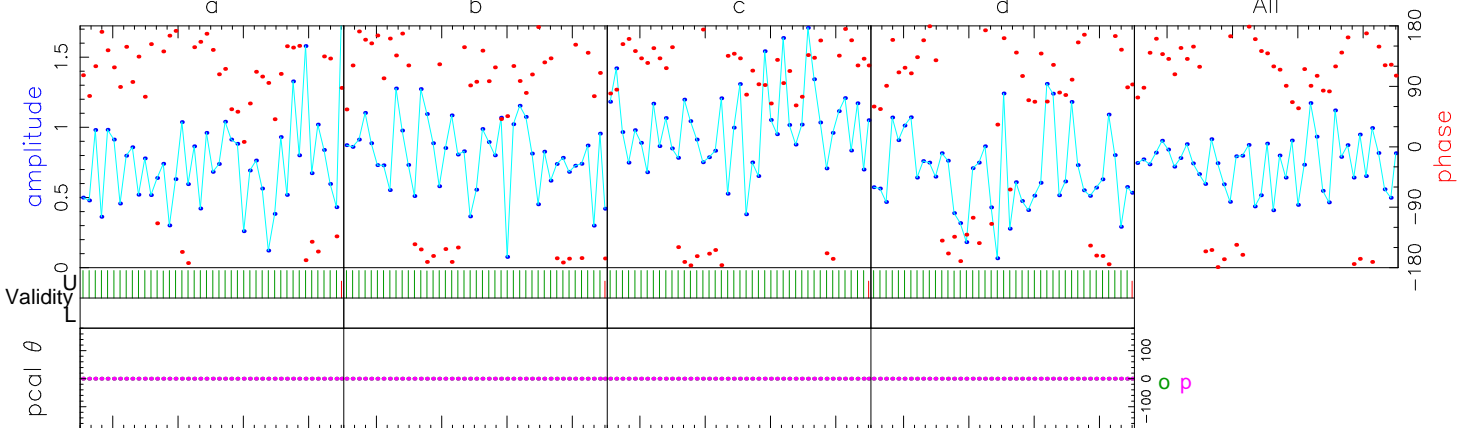
simultaneous interpolator



Fringe quality 8
SNR 24.3
Int time 239.882
Amp 0.574
Phase 139.6
PFD 0.0e+00
Delays (us)
SBD 0.005583
MBD -0.001517
Fringe rate (Hz)
-0.002837
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133547
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	134.9	145.6	136.5	142.8	Phase	139.6
	0.5	0.6	0.8	0.4	Ampl.	0.6
	516.3	515.3	516.2	515.6	Sbd box	515.9
U/L	469/0	469/0	469/0	469/0	APs used	
o	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
o	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	2.27556682638E+01	Apriori delay (usec)	2.27493729394E+01	Resid mbdelay (usec)	-1.51718E-03	+/-	4.6E-05
Sband delay (usec)	2.27549560644E+01	Apriori clock (usec)	-1.8994274E+00	Resid sbdelay (usec)	5.58313E-03	+/-	1.8E-04
Phase delay (usec)	2.27493819519E+01	Apriori clockrate (us/s)	4.7999999E-07	Resid phdelay (usec)	9.01257E-06	+/-	3.0E-07
Delay rate (us/s)	2.27796768548E-01	Apriori rate (us/s)	2.27796834461E-01	Resid rate (us/s)	-6.59134E-08	+/-	2.2E-09
Total phase (deg)	143.7	Apriori accel (us/s/s)	-2.36609319216E-07	Resid phase (deg)	139.6	+/-	4.7

ph/seg (deg)	RMS 40.7	Theor. 15.4	Amplitude	0.574 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	42.9	27.0	Search (1024X16)	0.521	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	6.2	4.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	22.7	8.2	Inc. seg. avg.	0.718	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	0.573	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

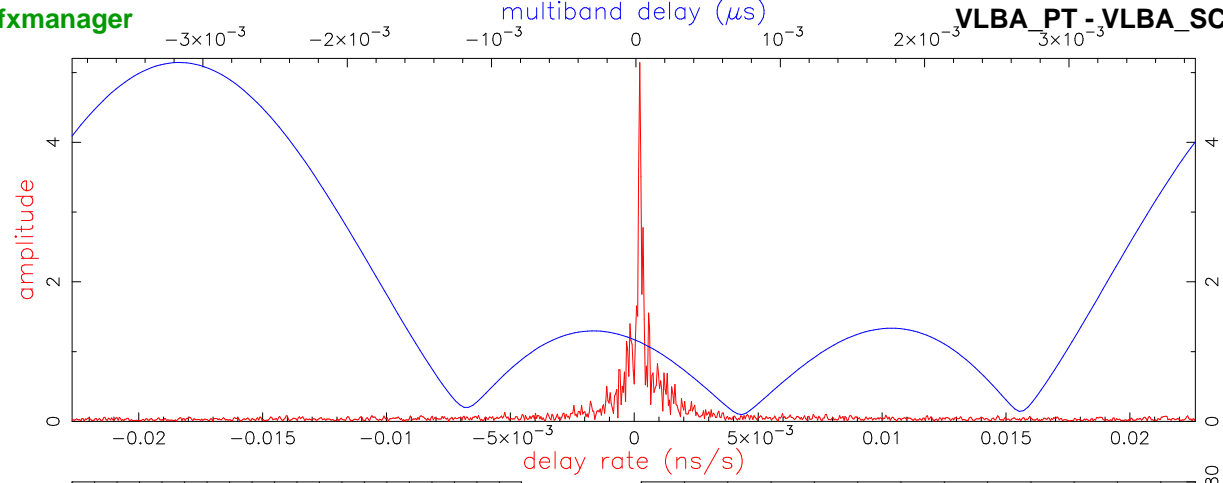
o: az 190.9 el 51.0 pa 9.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) -652.437 181.996 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/op..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/op.Q.219.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, pc

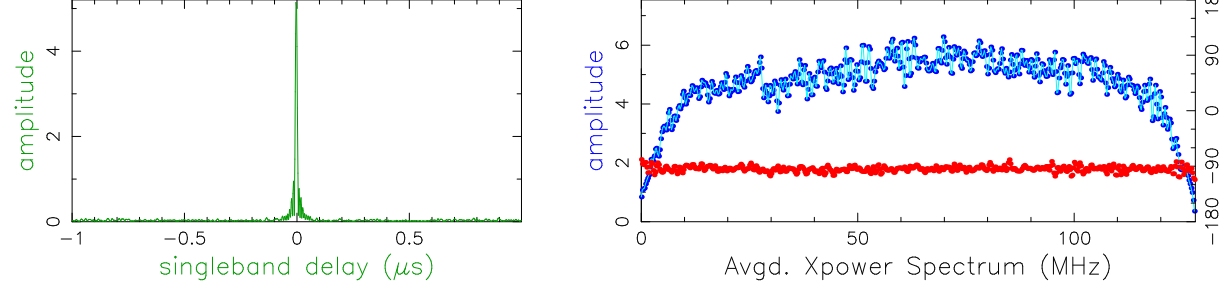
VLBA_PT - VLBA_SC, fgroup Q, pol LL



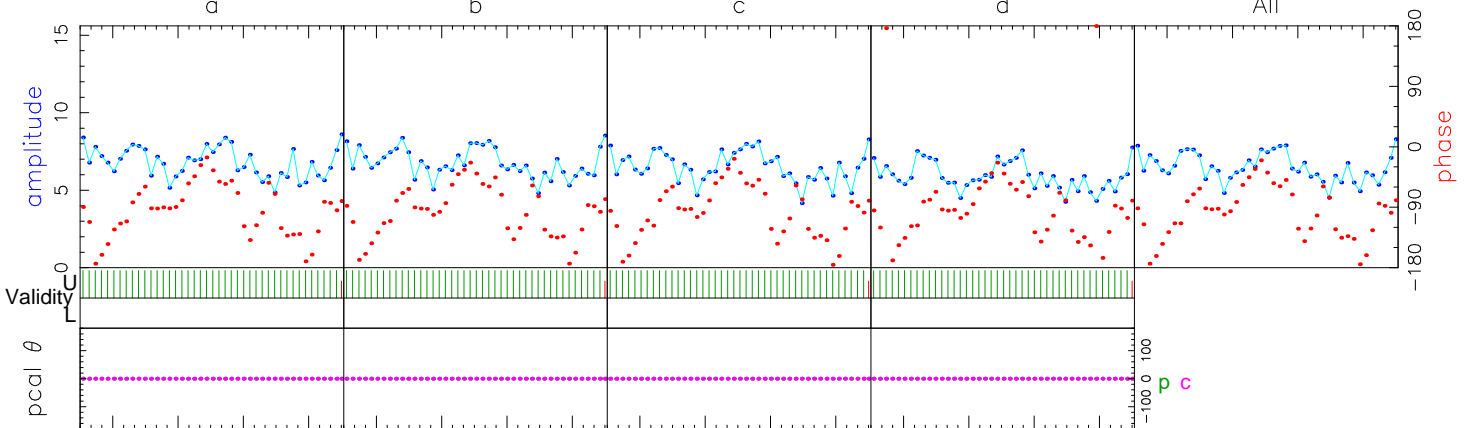
Fringe quality 6

SNR 220.4
 Int time 239.983
 Amp 5.203
 Phase -95.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.003182
 MBD -0.003128
 Fringe rate (Hz) 0.008658
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133542
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
p	1000	1000	1000	1000		
c	1000	1000	1000	1000		
p:c	0:0	0:0	0:0	0:0		
p:c	0:0	0:0	0:0	0:0		
p	1000	1000	1000	1000		
c	1000	1000	1000	1000		
p	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	6.86316476039E+03	Apriori delay (usec)	6.86316788799E+03	Resid mbdelay (usec)	-3.12759E-03	+/-	5.0E-06
Sband delay (usec)	6.86316470611E+03	Apriori clock (usec)	-6.6364098E+00	Resid sbdelay (usec)	-3.18187E-03	+/-	2.0E-05
Phase delay (usec)	6.86316788182E+03	Apriori clockrate (us/s)	-4.3599998E-07	Resid phdelay (usec)	-6.16128E-06	+/-	3.4E-08
Delay rate (us/s)	9.05915382046E-01	Apriori rate (us/s)	9.05915180891E-01	Resid rate (us/s)	2.01155E-07	+/-	2.4E-10
Total phase (deg)	228.1	Apriori accel (us/s/s)	-3.71883315057E-05	Resid phase (deg)	-95.5	+/-	0.5

	RMS	Theor.	Amplitude	5.203 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	38.2	1.7	Search (1024X16)	4.647	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	30.1	3.0	Interp.	0.000	Sample rate(MISamp/s): 256	nlags: 512	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	2.9	0.5	Inc. seg. avg.	6.490	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	5.7	0.9	Inc. frq. avg.	5.145					

p: az 207.7 el 51.0 pa 23.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2610.973 1170.563 simultaneous interpolator

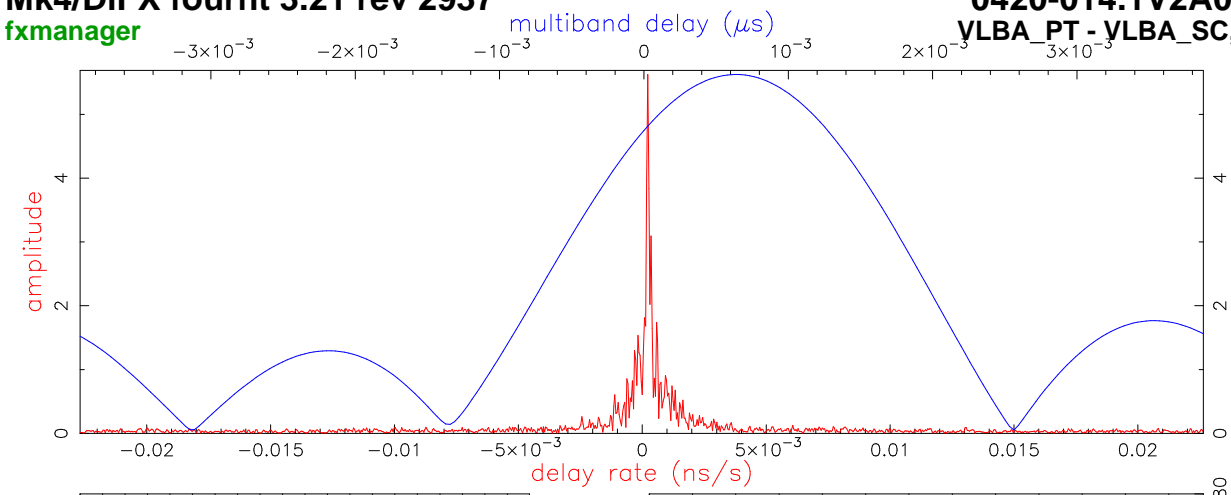
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc.Q.177.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, pc

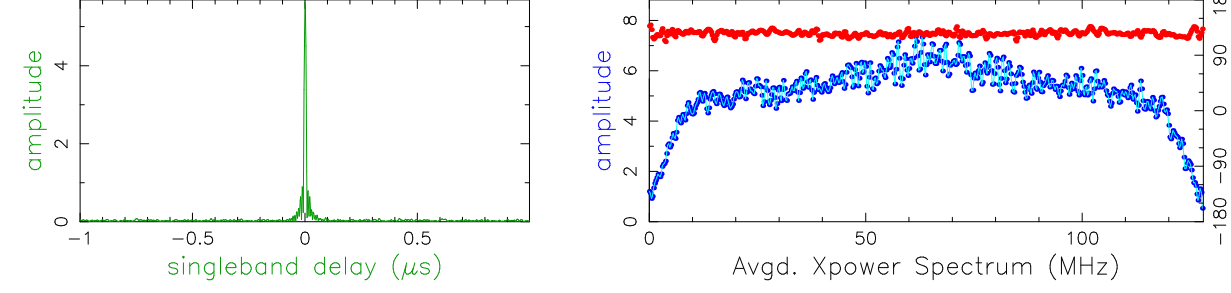
VLBA_PT - VLBA_SC, fgroup Q, pol RR



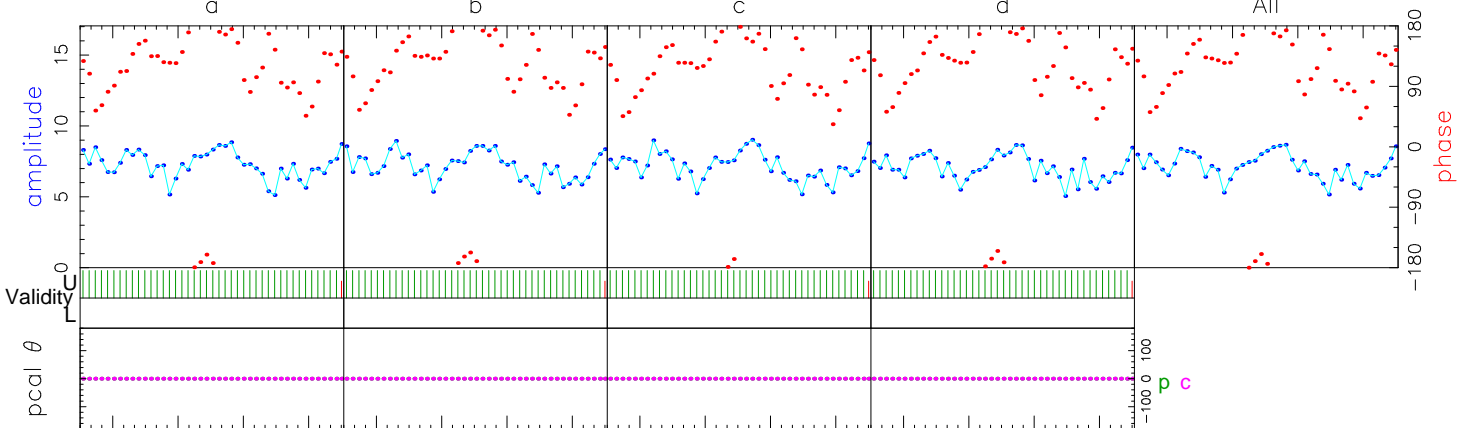
Fringe quality 6

SNR 241.0
 Int time 239.983
 Amp 5.688
 Phase 126.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.000713
 MBD 0.000651
 Fringe rate (Hz) 0.008643
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133544
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
p	1000	1000	1000	1000		
c	1000	1000	1000	1000		
p:c	0:0	0:0	0:0	0:0		
p:c	0:0	0:0	0:0	0:0		
p	1000	1000	1000	1000		
c	1000	1000	1000	1000		
p	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	6.86316853883E+03	Apriori delay (usec)	6.86316788799E+03	Resid mbdelay (usec)	6.50845E-04	+/-	4.6E-06
Sband delay (usec)	6.86316860111E+03	Apriori clock (usec)	-6.6364098E+00	Resid sbdelay (usec)	7.13125E-04	+/-	1.8E-05
Phase delay (usec)	6.86316789616E+03	Apriori clockrate (us/s)	-4.3599998E-07	Resid phdelay (usec)	8.17809E-06	+/-	3.1E-08
Delay rate (us/s)	9.05915381703E-01	Apriori rate (us/s)	9.05915180891E-01	Resid rate (us/s)	2.00812E-07	+/-	2.2E-10
Total phase (deg)	90.3	Apriori accel (us/s/s)	-3.71883315057E-05	Resid phase (deg)	126.7	+/-	0.5

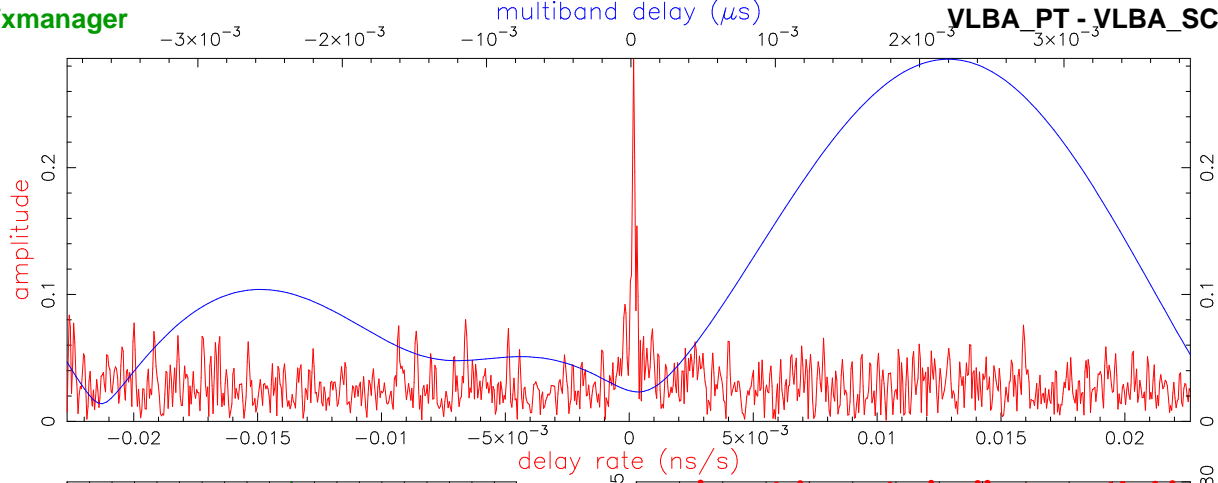
ph/seg (deg) 39.0 1.6 Theor. Amplitude 5.688 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 30.1 2.7 Search (1024X16) 5.141 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 5.4 0.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 1.7 0.8 Inc. seg. avg. 7.154 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
 p: az 207.7 el 51.0 pa 23.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2610.973 1170.563 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc.Q.195.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

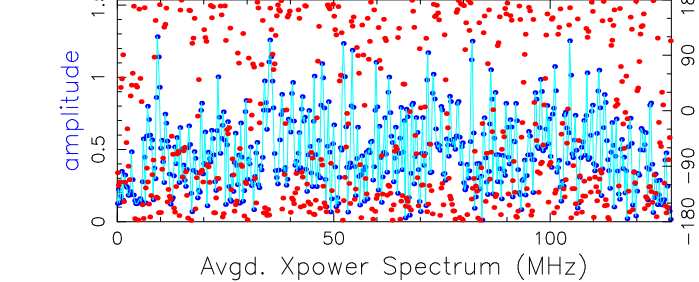
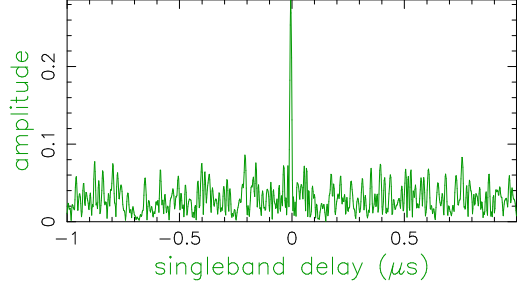
fxmanager

0420-014.1V2A0K, No0121, pc

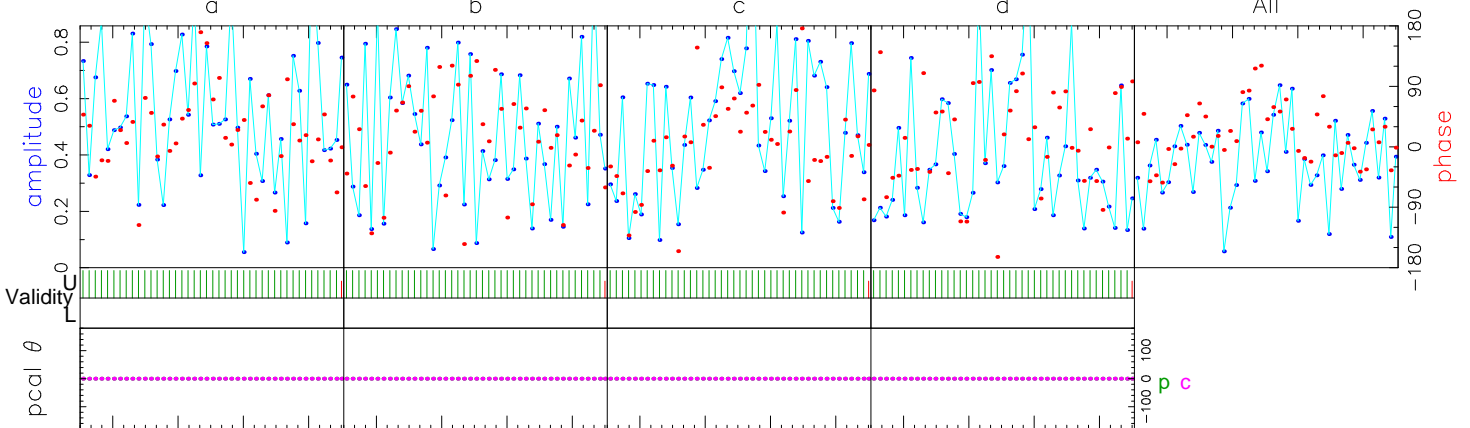
VLBA_PT - VLBA_SC, fgroup Q, pol LR



Fringe quality 9
 SNR 12.1
 Int time 239.983
 Amp 0.286
 Phase 22.2
 PFD 2.2e-25
 Delays (us)
 SBD -0.005548
 MBD 0.002206
 Fringe rate (Hz) 0.008569
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133546
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"



Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
p	1000	1000	1000	1000		
c	1000	1000	1000	1000		
p:c	0:0	0:0	0:0	0:0		
p:c	0:0	0:0	0:0	0:0		
p	1000	1000	1000	1000		
c	1000	1000	1000	1000		
p	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	6.86316228168E+03	Apriori delay (usec)	6.86316788799E+03	Resid mbdelay (usec)	2.20619E-03	+/-	9.2E-05
Sband delay (usec)	6.86316234036E+03	Apriori clock (usec)	-6.6364098E+00	Resid sbdelay (usec)	-5.54763E-03	+/-	3.6E-04
Phase delay (usec)	6.86316788942E+03	Apriori clockrate (us/s)	-4.3599998E-07	Resid phdelay (usec)	1.43533E-06	+/-	6.1E-07
Delay rate (us/s)	9.05915379987E-01	Apriori rate (us/s)	9.05915180891E-01	Resid rate (us/s)	1.99096E-07	+/-	4.4E-09
Total phase (deg)	345.8	Apriori accel (us/s/s)	-3.71883315057E-05	Resid phase (deg)	22.2	+/-	9.5

ph/seg (deg)	42.4	Theor.	31.0	Amplitude	0.286 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	59.4		54.1	Search (1024X16)	0.259	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	10.8		9.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	22.5		16.5	Inc. seg. avg.	0.332	Sample rate(MSamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.284	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

p: az 207.7 el 51.0 pa 23.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2610.973 1170.563 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc.Q.208.1V2A0K

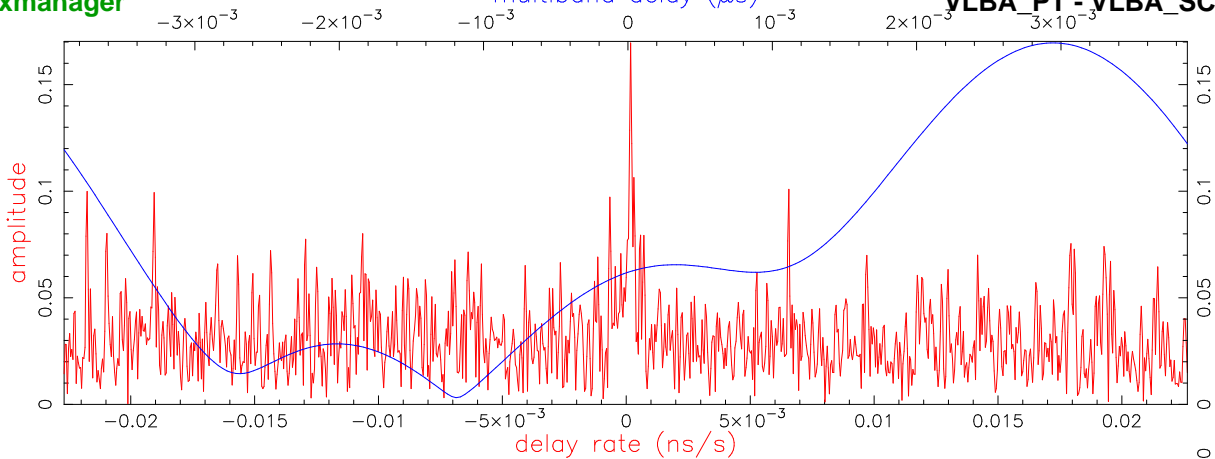
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, pc

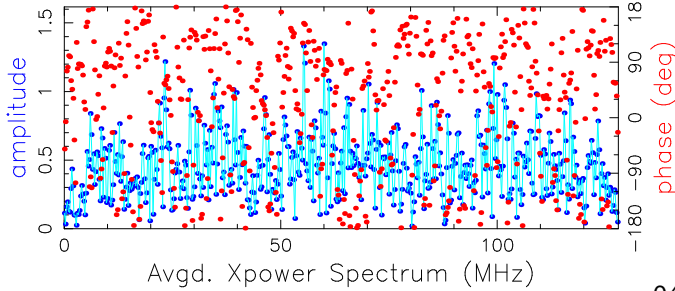
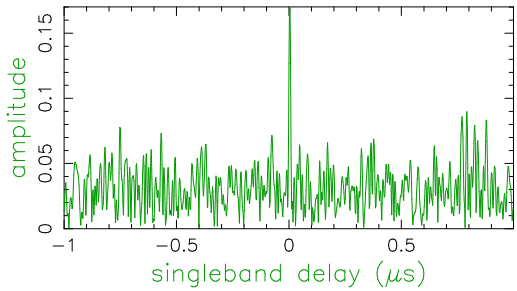
VLBA_PT - VLBA_SC, fgroup Q, pol RL

multiband delay (μ s)



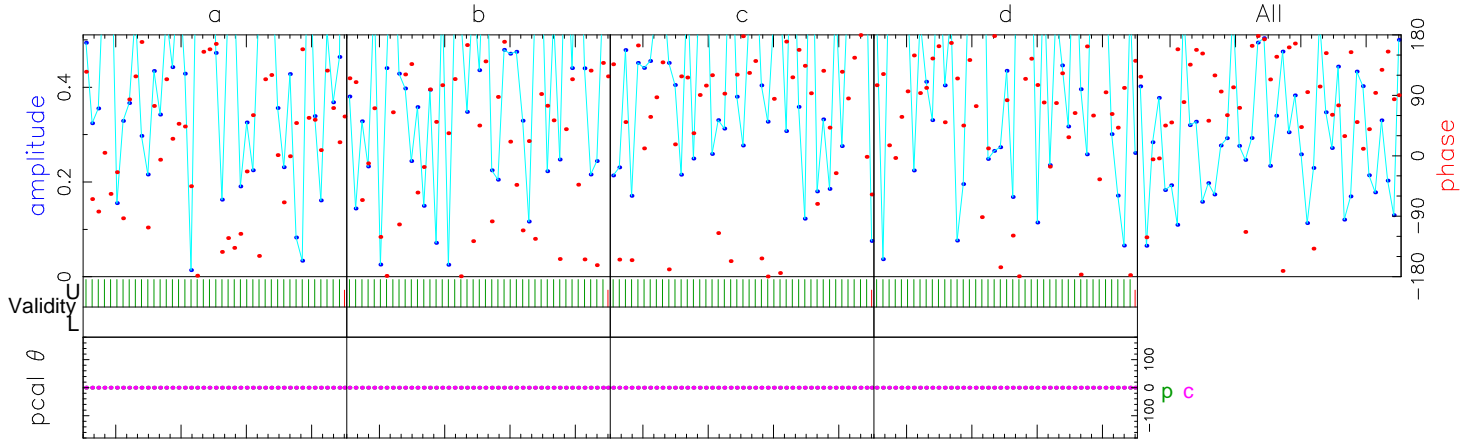
Fringe quality 9

SNR 7.2
 Int time 239.983
 Amp 0.170
 Phase 110.3
 PFD 8.6e-05
 Delays (us)
 SBD 0.003471
 MBD 0.002929
 Fringe rate (Hz) 0.008297
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133548
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



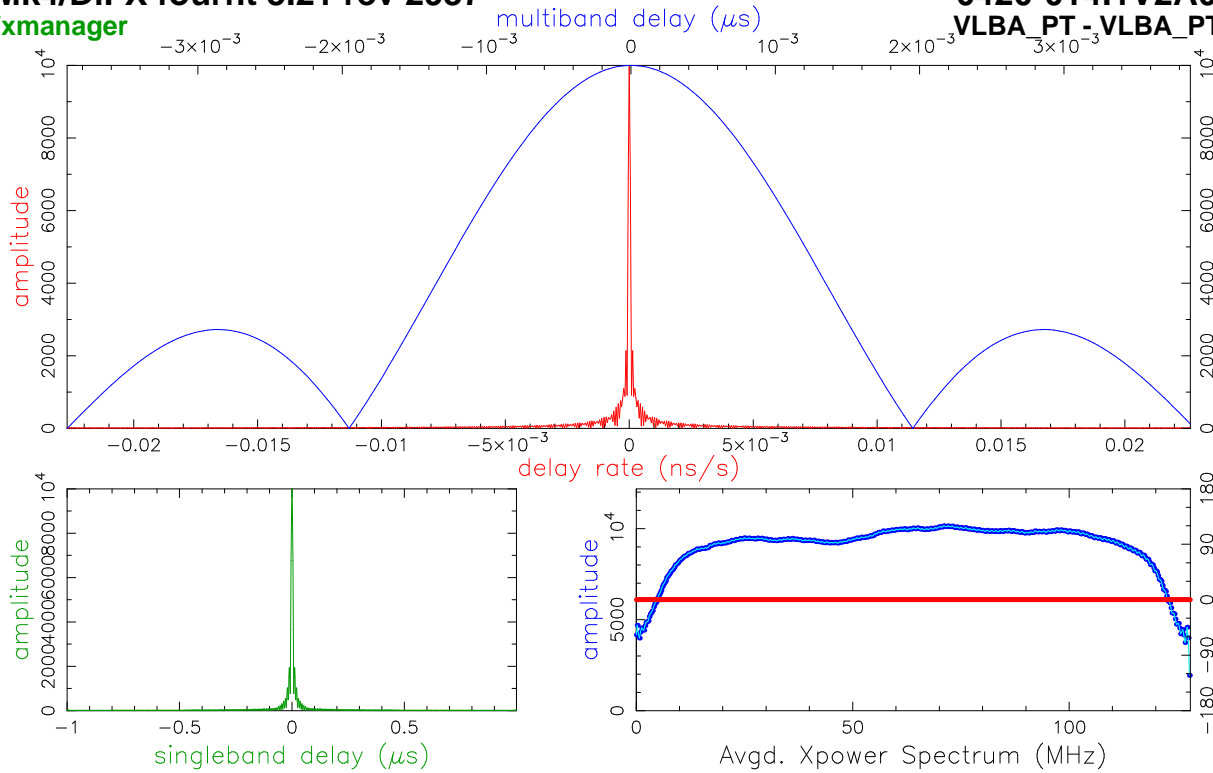
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	96.1	114.1	122.7	101.2	Phase	110.3
	0.1	0.1	0.2	0.2	Ampl.	0.2
	127.9	56.5	515.2	513.4	Sbd box	514.8
U/L	469/0	469/0	469/0	469/0	APs used	
p	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
p:c	0:0	0:0	0:0	0:0	PC phase	
p:c	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
p	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	6.86317081690E+03	Apriori delay (usec)	6.86316788799E+03	Resid mbdelay (usec)	2.92891E-03	+/- 1.5E-04
Group delay (usec)(sbd)	6.86317135924E+03	Apriori clock (usec)	-6.6364098E+00	Resid sbdelay (usec)	3.47125E-03	+/- 6.0E-04
Sband delay (usec)	6.86316789511E+03	Apriori clockrate (us/s)	-4.3599998E-07	Resid phdelay (usec)	7.12035E-06	+/- 1.0E-06
Phase delay (usec)	9.05915373654E-01	Apriori rate (us/s)	9.05915180891E-01	Resid rate (us/s)	1.92763E-07	+/- 7.4E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-3.71883315057E-05	Resid phase (deg)	110.3	+/- 15.9
Total phase (deg)	73.9					

	RMS	Theor.	Amplitude	0.170 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	61.9	52.1	Search (1024X16)	0.163	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	108.3	90.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	15.0	15.9	Inc. seg. avg.	0.212	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	35.3	27.7	Inc. frq. avg.	0.166	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

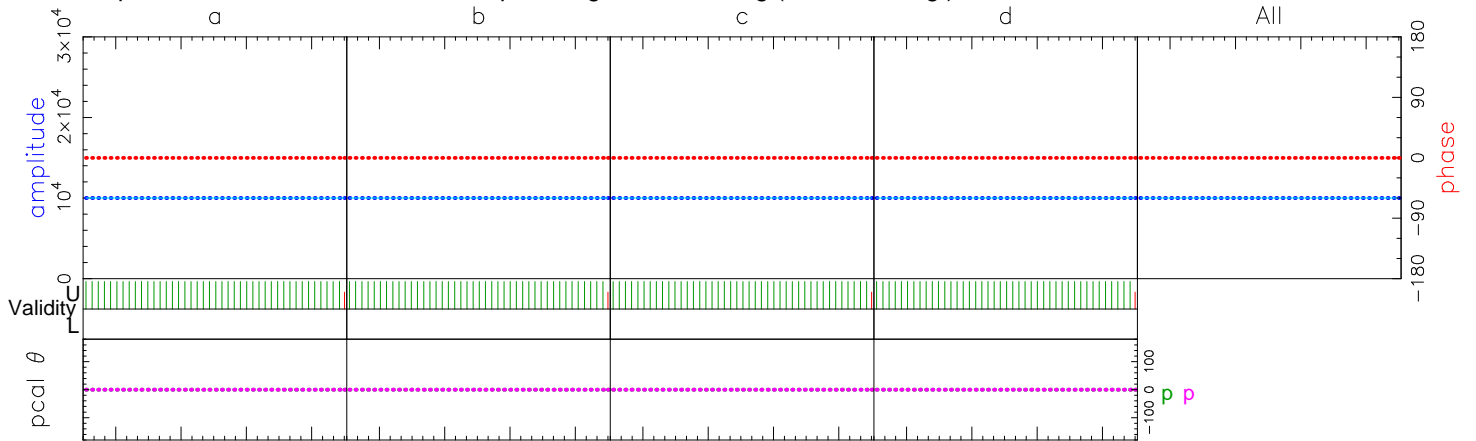
p: az 207.7 el 51.0 pa 23.1 c: az 258.8 el 27.5 pa 69.2 u,v (fr/asec) -2610.973 1170.563 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/pc.Q.220.1V2A0K



Fringe quality 9
SNR 423631.5
Int time 239.983
Amp 10000.000
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133543
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
p	1000	1000	1000	1000		
p:p	0:0	0:0	0:0	0:0		
p:p	0:0	0:0	0:0	0:0		
p	1000	1000	1000	1000		
p	1000	1000	1000	1000		
p	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UL	Q01UL	Q02UL	Q03UL		

	42912.00	43040.00	43168.00	43296.00	Resid mbdelay (usec)	0.000000E+00	+/- 2.6E-09
Group delay (usec)(sbd)	0.0	0.0	0.0	0.0	Resid sbdelay (usec)	0.000000E+00	+/- 1.0E-08
Sband delay (usec)	0.0	0.0	0.0	0.0	Resid phdelay (usec)	0.000000E+00	+/- 1.7E-11
Phase delay (usec)	0.0	0.0	0.0	0.0	Resid rate (us/s)	0.000000E+00	+/- 1.3E-13
Delay rate (us/s)	0.0	0.0	0.0	0.0	Resid phase (deg)	0.0	+/- 0.0
Total phase (deg)	0.0	0.0	0.0	0.0			

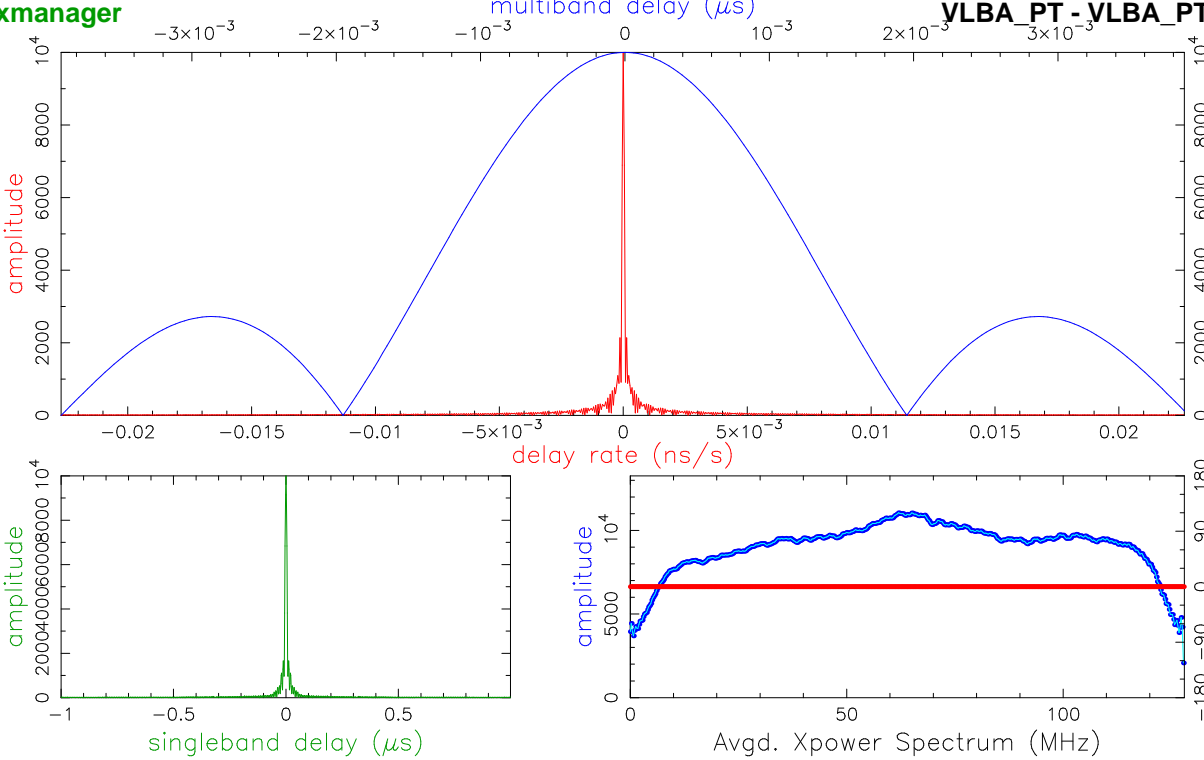
	RMS	Theor.	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
p: az 207.7 el 51.0 pa 23.1			u,v (fr/asec) 0.000 0.000			simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, pp

VLBA_PT - VLBA_PT, fgroup Q, pol RR

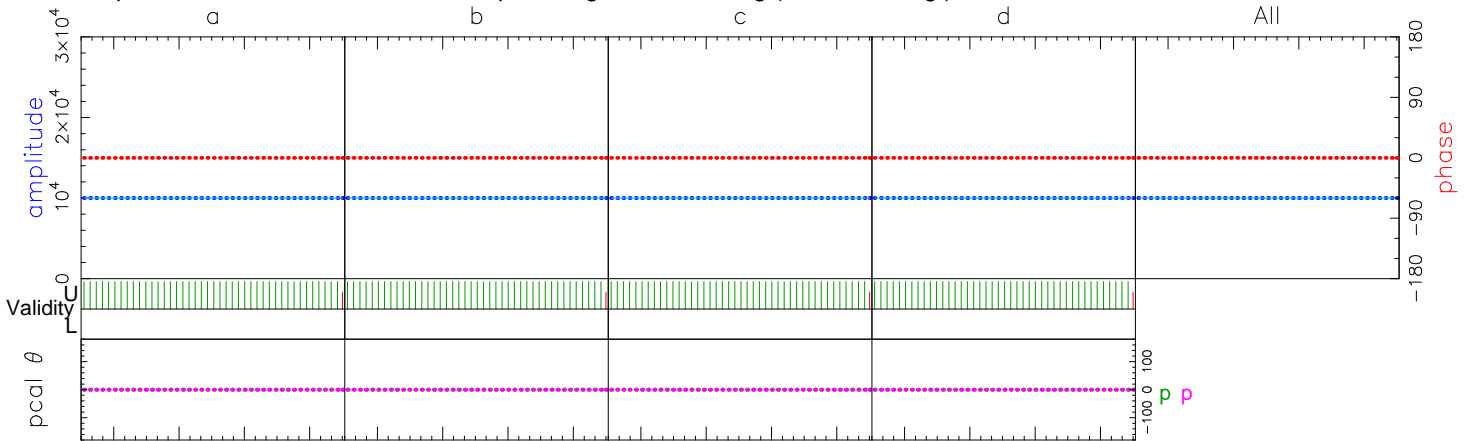


Fringe quality 9

SNR 423631.5
 Int time 239.983
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133544
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



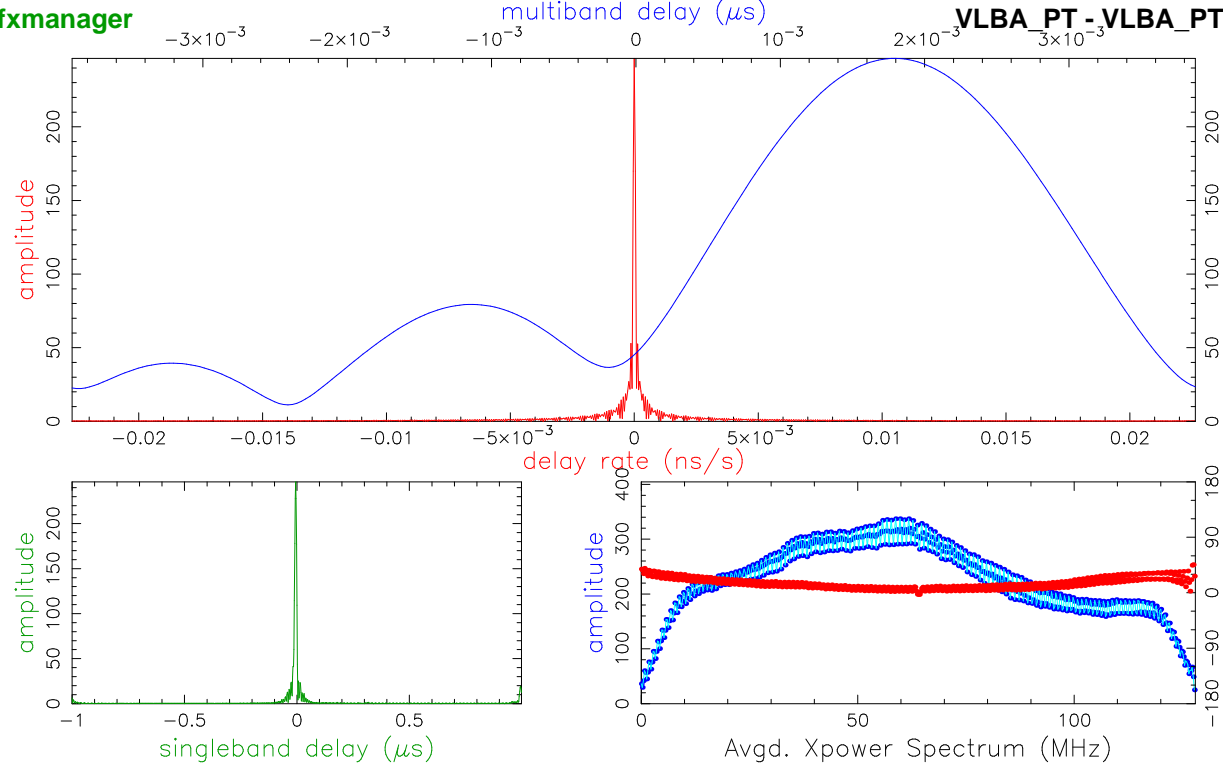
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
p	1000	1000	1000	1000		
p:p	0:0	0:0	0:0	0:0		
p:p	0:0	0:0	0:0	0:0		
p	1000	1000	1000	1000		
p	1000	1000	1000	1000		
p	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/- 2.6E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/- 1.0E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/- 1.7E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/- 1.3E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/- 0.0

	RMS	Theor.	Amplitude	10000.000 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

p: az 207.7 el 51.0 pa 23.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/pp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/pp.Q.192.1V2A0K

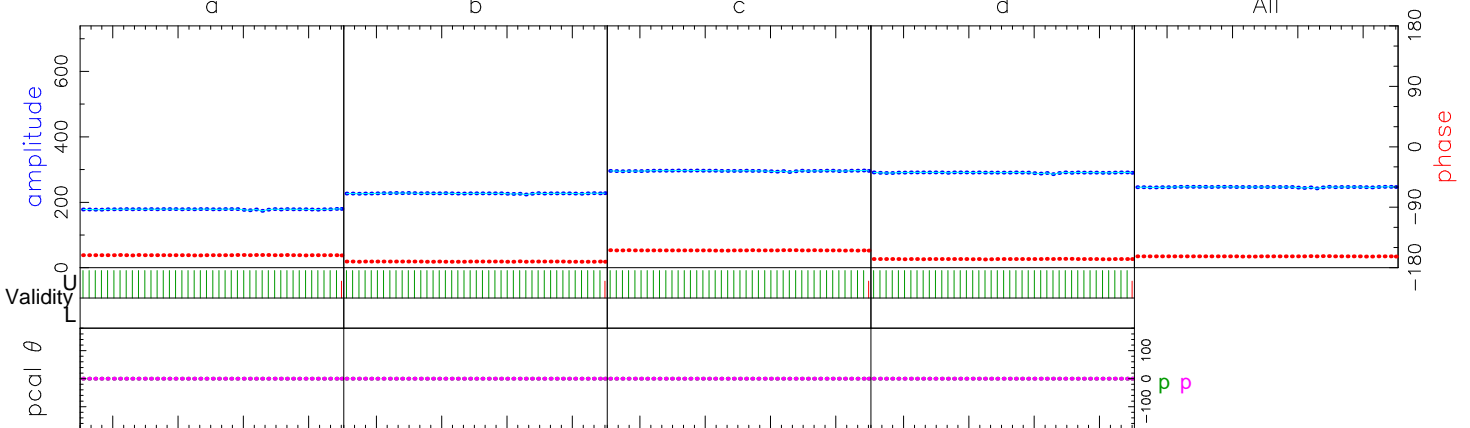


Fringe quality 9

SNR 10441.0
Int time 239.983
Amp 246.465
Phase -163.0
PFD 0.0e+00
Delays (us)
SBD -0.005853
MBD 0.001792
Fringe rate (Hz)
-0.000002
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 223630.00
Stop 224030.12
FRT 223830.00
Corr/FF/build
2021:265:084747
2021:265:133546
2021:252:122852
RA & Dec (J2000)
04h23m15.800724s
-1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-161.3	-170.8	-154.1	-167.0	Phase	-163.0
	178.5	227.2	296.0	290.6	Ampl.	248.1
	510.3	509.9	509.7	510.2	Sbd box	510.0
U/L	469/0	469/0	469/0	469/0	APs used	
p	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
p:p	0:0	0:0	0:0	0:0	PC phase	
p:p	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
p	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-6.02021875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.79228E-03	+/-	1.1E-07
Sband delay (usec)	-5.85337500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-5.85337E-03	+/-	4.1E-07
Phase delay (usec)	-1.05211845935E-05	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.05212E-05	+/-	7.1E-10
Delay rate (us/s)	-5.67241202147E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-5.67241E-11	+/-	5.1E-12
Total phase (deg)	-163.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-163.0	+/-	0.0

ph/seg (deg)	0.1	Theor.	0.0	Amplitude	246.465 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	0.4		0.1	Search (1024X16)	244.078	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	8.9		0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	19.7		0.0	Inc. seg. avg.	246.465	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	248.077	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

p: az 207.7 el 51.0 pa 23.1 p: az 207.7 el 51.0 pa 23.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

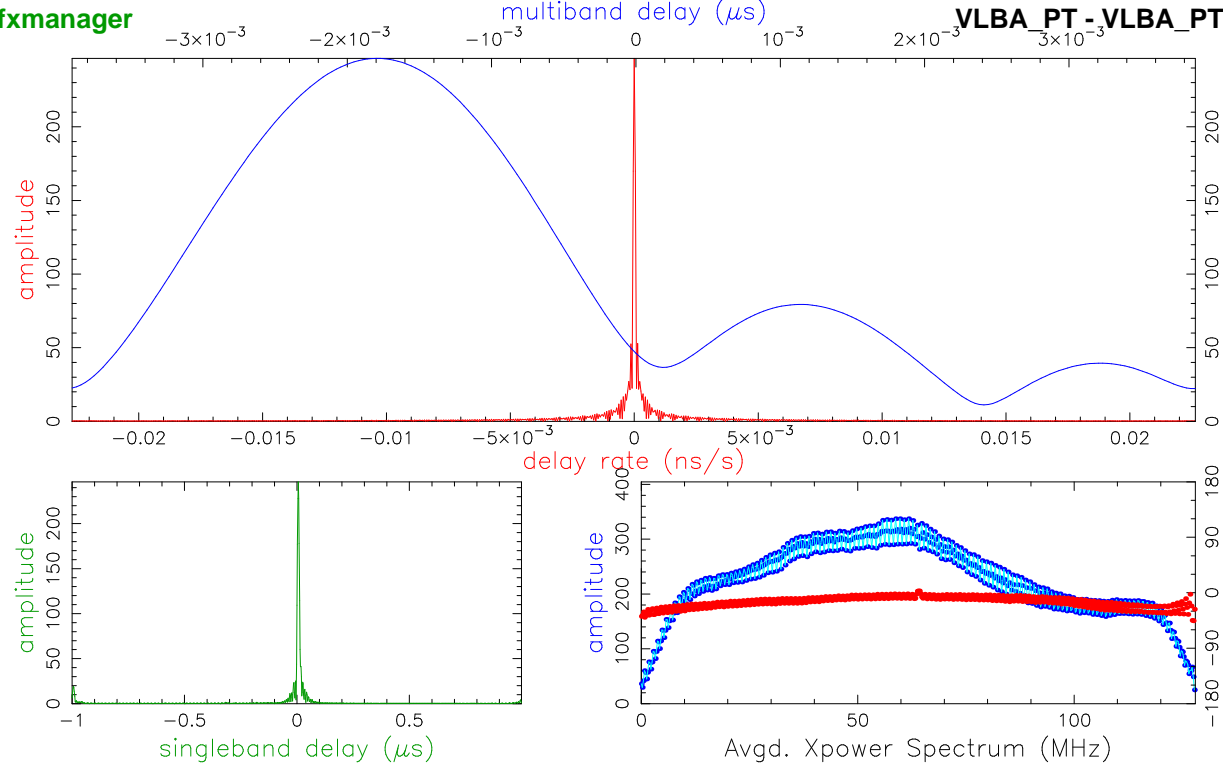
Control file: cf_1234_gmva7mm Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/pp..1V2A0K Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/pp.Q.206.1V2A0K

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0420-014.1V2A0K, No0121, pp

VLBA_PT - VLBA_PT, fgroup Q, pol RL

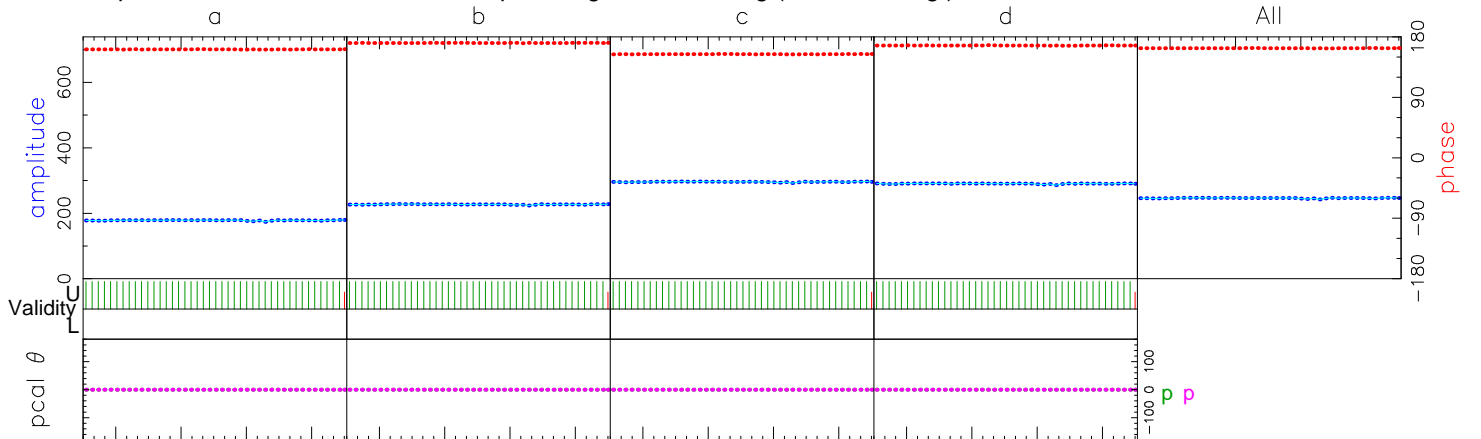


Fringe quality 9

SNR 10441.0
 Int time 239.983
 Amp 246.465
 Phase 163.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.005853
 MBD -0.001792
 Fringe rate (Hz) 0.000002
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 223630.00
 Stop 224030.12
 FRT 223830.00
 Corr/FF/build
 2021:265:084747
 2021:265:133547
 2021:252:122852
 RA & Dec (J2000)
 04h23m15.800724s
 -1°20'33.065613"

Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	161.3	170.8	154.1	167.0	Phase	163.0
	178.5	227.2	296.0	290.6	Ampl.	248.1
	515.7	516.1	516.3	515.8	Sbd box	516.0
U/L	469/0	469/0	469/0	469/0	APs used	
p	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
p:p	0:0	0:0	0:0	0:0	PC phase	
p:p	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
p	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	6.02021875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.79228E-03	+/- 1.1E-07
Sband delay (usec)	5.85337500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	5.85337E-03	+/- 4.1E-07
Phase delay (usec)	1.05211845933E-05	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.05212E-05	+/- 7.1E-10
Delay rate (us/s)	5.67241202147E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	5.67241E-11	+/- 5.1E-12
Total phase (deg)		163.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	163.0 +/- 0.0
	RMS	Theor.	Amplitude	246.465 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.1	0.0	Search (1024X16)	244.078	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.4	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.9	0.0	Inc. seg. avg.	246.465	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	19.7	0.0	Inc. frq. avg.	248.077	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
p: az 207.7 el 51.0 pa 23.1		p: az 207.7 el 51.0 pa 23.1		u,v (fr/asec) 0.000 0.000		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c211a/v1/v1_7mm/1234/No0121/pp..1V2A0K		Output file: /Exps/c211a/v1/v1_7mm/1234/No0121/pp.Q.217.1V2A0K		