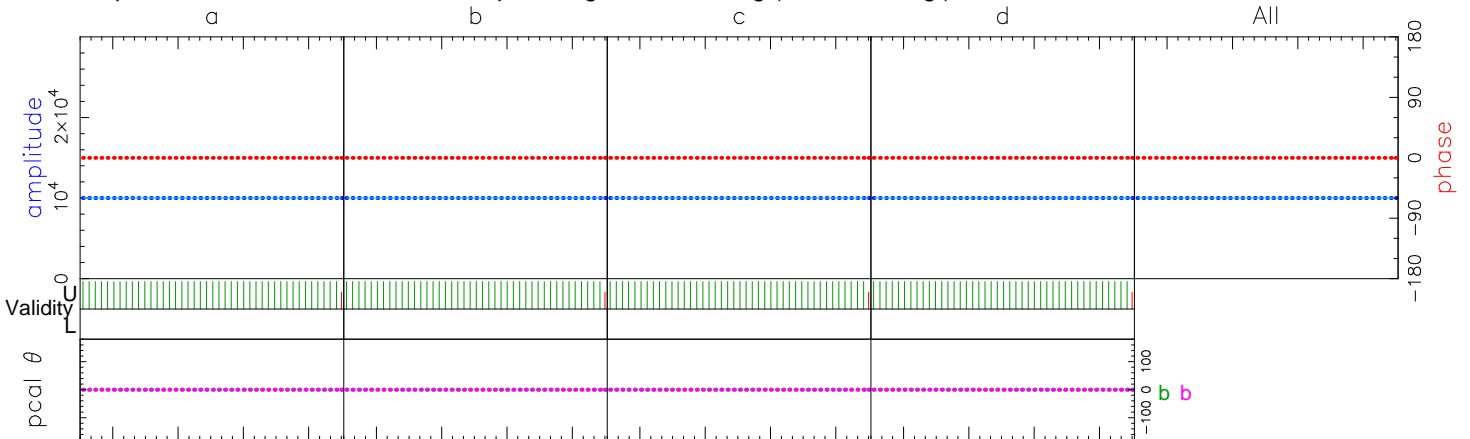


Fringe quality 9

SNR 423634.0  
Int time 239.986  
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. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211435  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

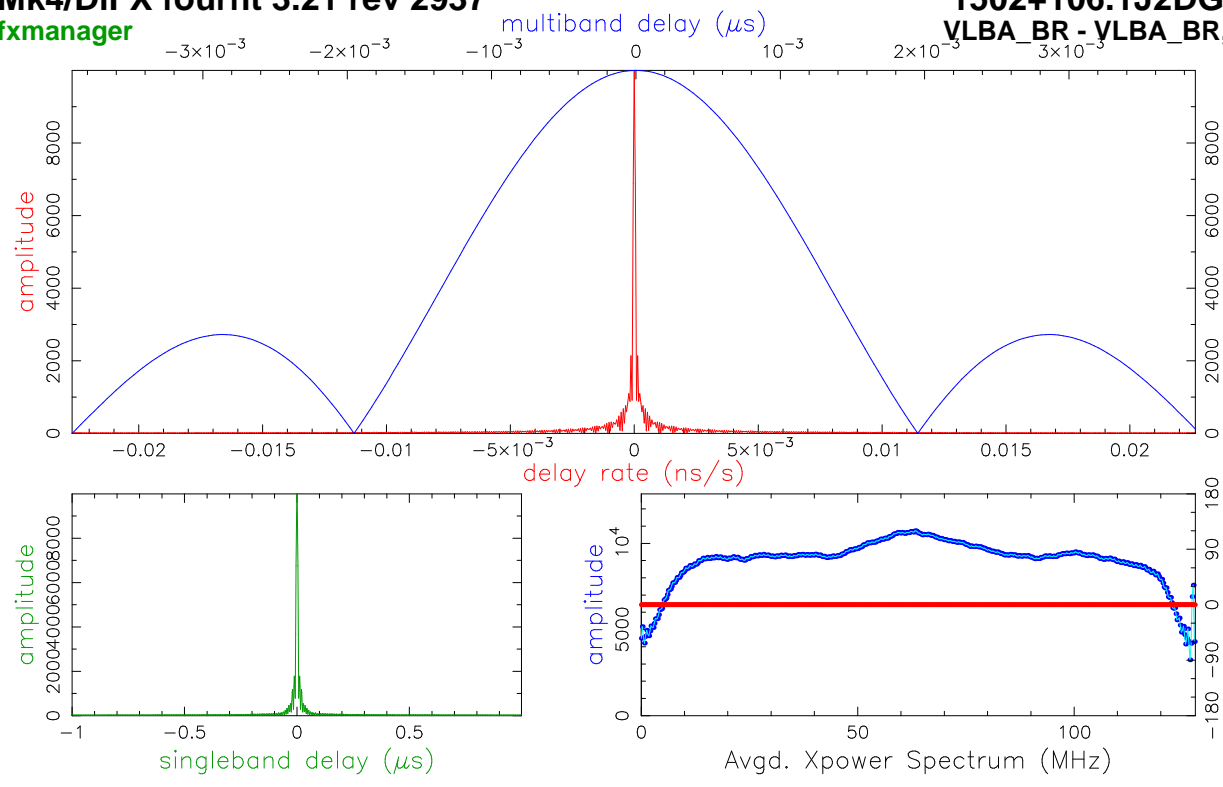
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



	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	1000
b:b	0:0	0:0	0:0	0:0	PC freqs	1000
b:b	0:0	0:0	0:0	0:0	PC phase	1000
b	1000	1000	1000	1000	ManI PC	1000
b	1000	1000	1000	1000	PC amp	1000
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	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
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 256	mb window (us) -0.004 0.004
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	dr window (ns/s) -0.023 0.023
				u,v (fr/asec) 0.000 0.000	nlags: 512	t_cohere infinite
						ion window (TEC) 0.00 0.00

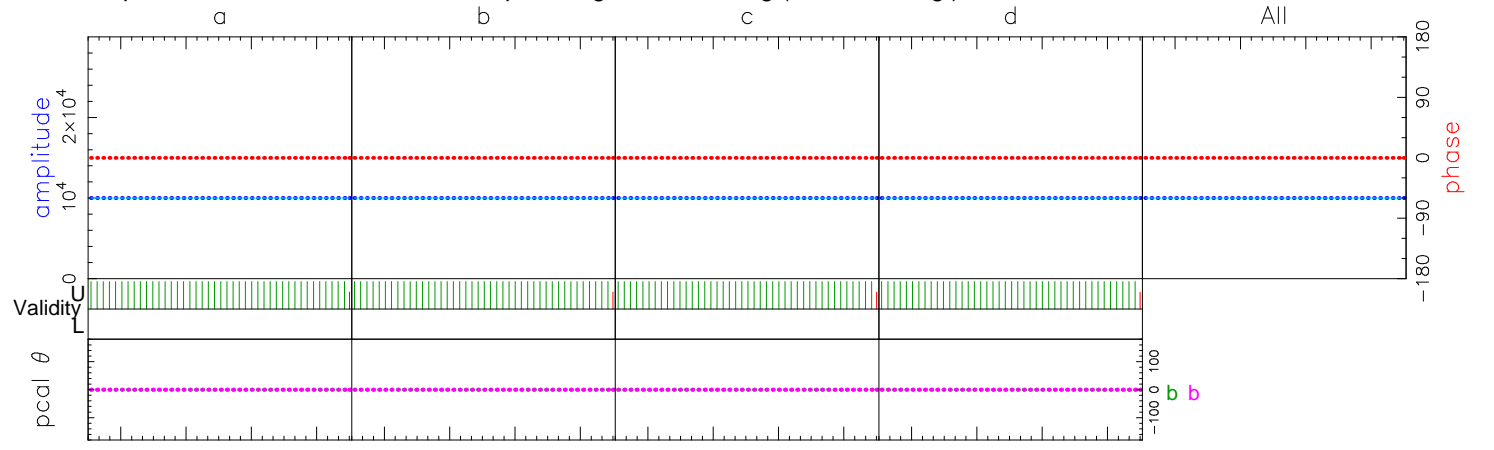


Fringe quality 9

SNR 423634.0  
Int time 239.986  
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. c202b  
Yr:day 16383  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211438  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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



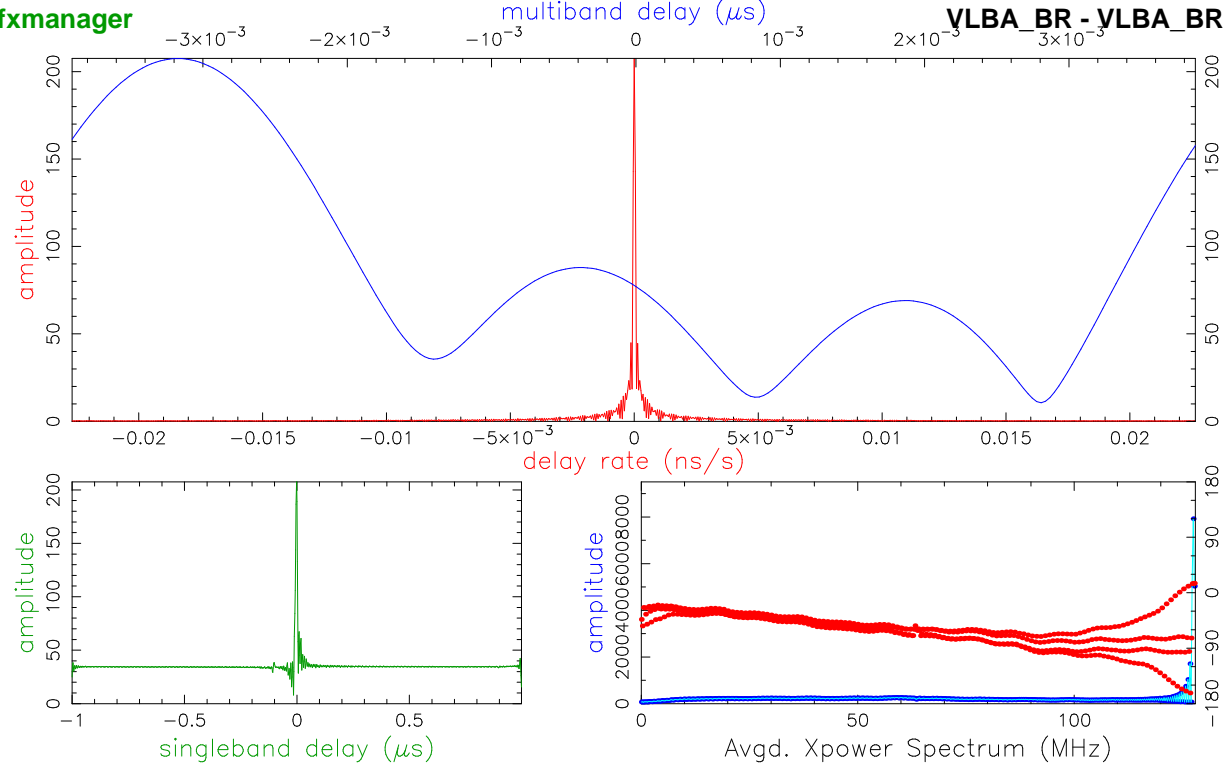
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
0.0	0.0	0.0	0.0	Phase	0.0
10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
513.0	513.0	513.0	513.0	Sbd box	513.0
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
b 1000	1000	1000	1000	PC freqs	
b:b 0:0	0:0	0:0	0:0	PC phase	
b:b 0:0	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 Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
b Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
b Q00UR	Q01UR	Q02UR	Q03UR	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	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
b: az 125.7 el 40.0 pa -33.5	b: az 125.7 el 40.0 pa -33.5	u,v (fr/asec) 0.000 0.000			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bb..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bb.Q.21.1J2DGP			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bb

VLBA\_BR - VLBA\_BR, fgroup Q, pol LR

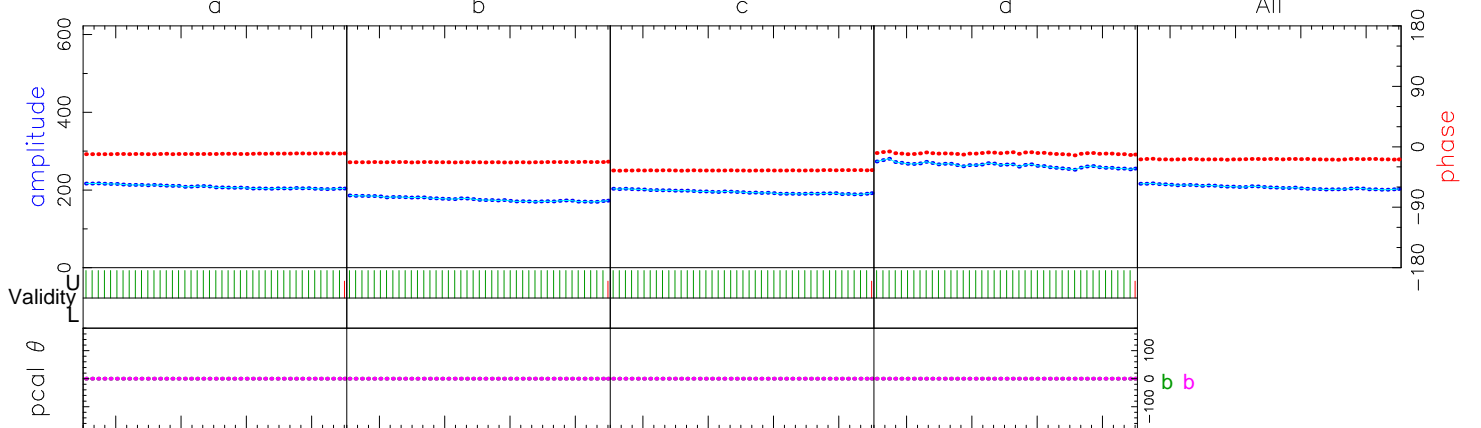


Fringe quality 8

SNR 8791.7  
 Int time 239.986  
 Amp 207.530  
 Phase -18.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001827  
 MBD -0.003168  
 Fringe rate (Hz)  
 -0.000010  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211440  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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



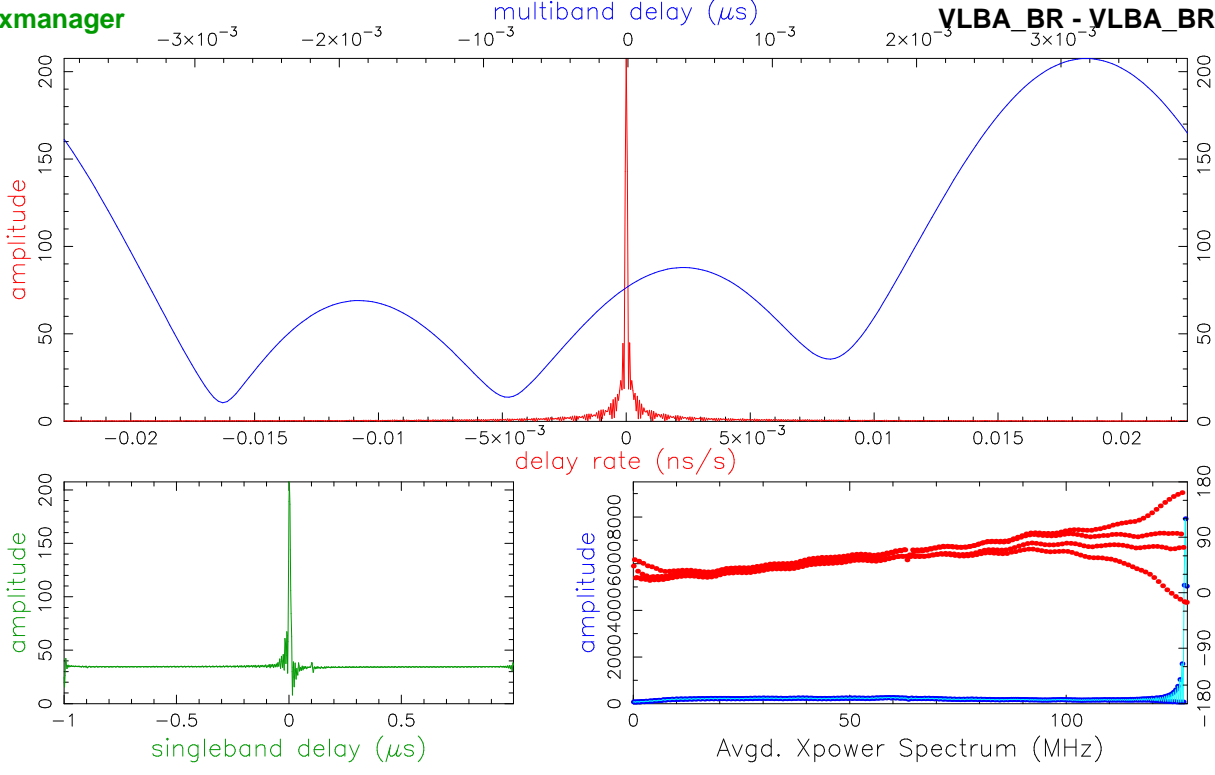
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-10.5	-22.9	-35.1	-9.9	Phase	-18.5
208.6	176.3	194.9	263.7	Ampl.	210.9
511.6	511.1	511.1	512.9	Sbd box	512.1
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
b 1000	1000	1000	1000	PC freqs	
b:b 0:0	0:0	0:0	0:0	PC phase	
b:b 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
b 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
b Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-3.16840625000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.16841E-03 +/- 1.3E-07
Sband delay (usec)	-1.82750000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.82750E-03 +/- 4.9E-07
Phase delay (usec)	-1.19719523521E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.19720E-06 +/- 8.4E-10
Delay rate (us/s)	-2.41077510912E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-2.41078E-10 +/- 6.1E-12
Total phase (deg)	-18.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-18.5 +/- 0.0
RMS	Theor.	Amplitude	207.530 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
0.4	0.0	Search (1024X16)	202.034	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
2.3	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
14.7	0.0	Inc. seg. avg.	207.449	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
15.8	0.0	Inc. frq. avg.	210.874	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5	b: az 125.7 el 40.0 pa -33.5	u,v (fr/asec) 0.000 0.000			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bb..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bb.Q.45.1J2DGP			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bb

VLBA\_BR - VLBA\_BR, fgroup Q, pol RL

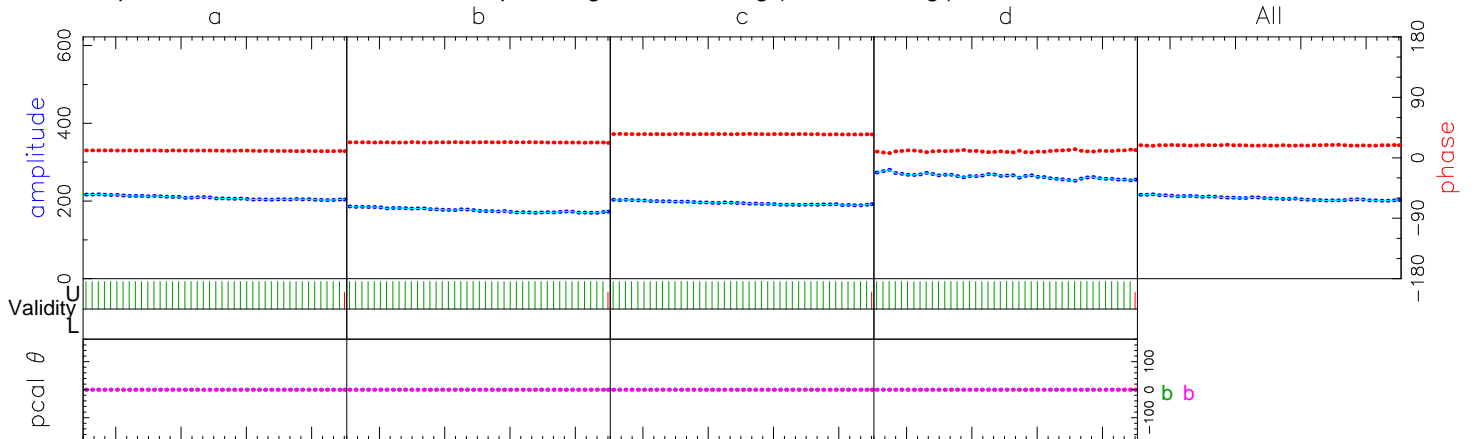


Fringe quality 8

SNR 8791.7  
 Int time 239.986  
 Amp 207.530  
 Phase 18.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001827  
 MBD 0.003168  
 Fringe rate (Hz)  
 0.000010  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Yr:day 16383  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211442  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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	
b	1000	1000	1000	1000	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	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
b	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	3.16840625000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	3.16841E-03	+/- 1.3E-07
Group delay (usec)(sbd)	3.16840625000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.82750E-03	+/- 4.9E-07
Sband delay (usec)	1.82750000000E-03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.19720E-06	+/- 8.4E-10
Phase delay (usec)	1.19719523507E-06	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	2.41078E-10	+/- 6.1E-12
Delay rate (us/s)	2.41077510912E-10	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	18.5	+/- 0.0
Total phase (deg)	18.5					

	RMS	Theor.	Amplitude	207.530 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.4	0.0	Search (1024X16)	202.034	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	2.3	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	14.7	0.0	Inc. seg. avg.	207.449	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	15.8	0.0	Inc. frq. avg.	210.874	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 125.7 el 40.0 pa -33.5 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

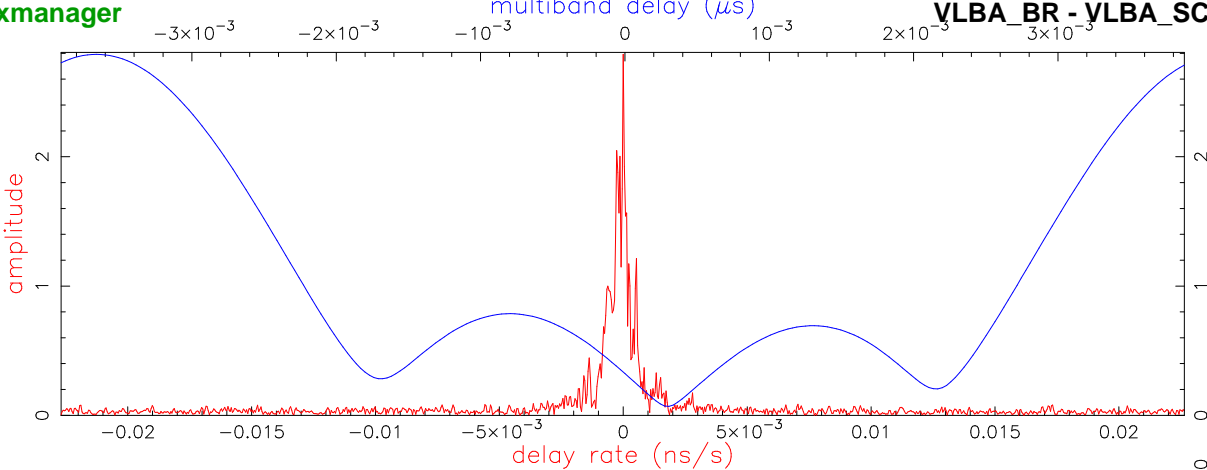
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bb..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bb.Q.61.1J2DGP

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fxmanager

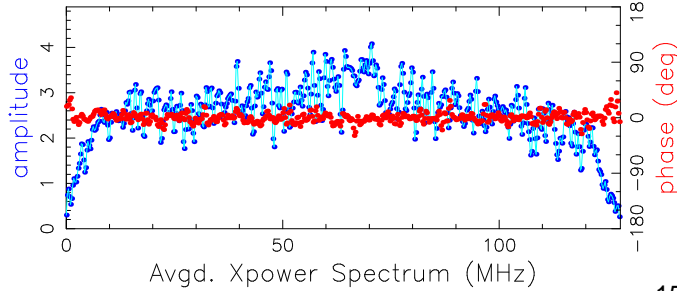
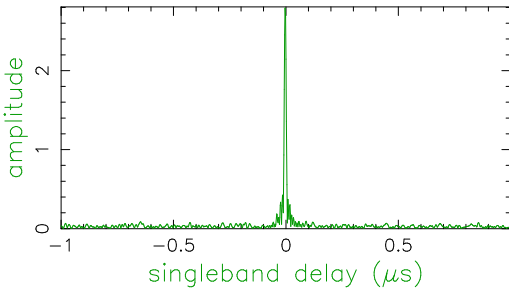
1502+106.1J2DGP, No0154, bc

VLBA\_BR - VLBA\_SC, fgroup Q, pol RR



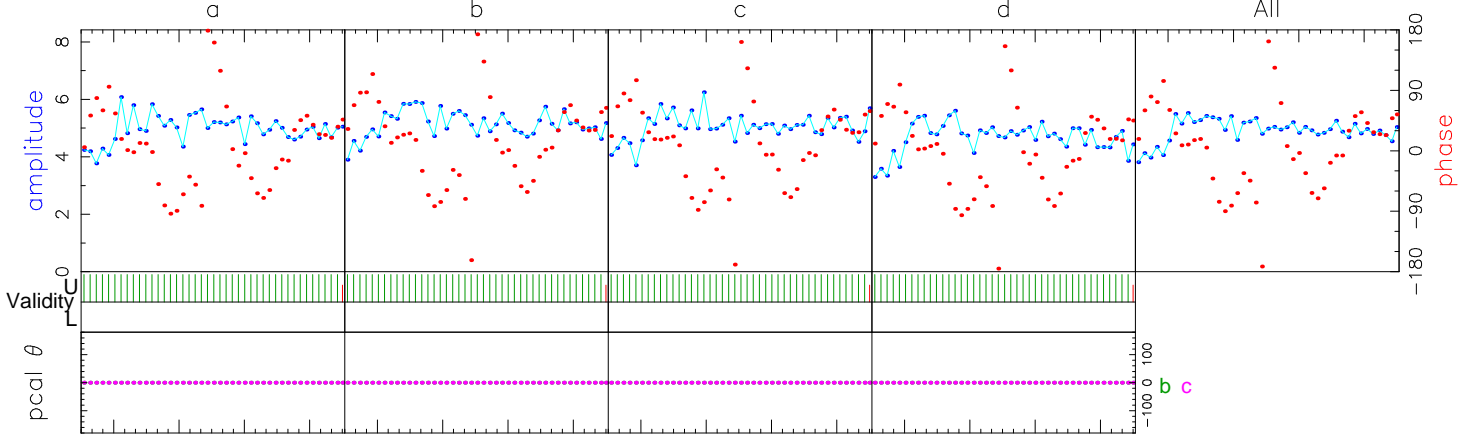
Fringe quality 5

SNR 118.9  
 Int time 239.976  
 Amp 2.807  
 Phase 4.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003413  
 MBD -0.003640  
 Fringe rate (Hz)  
 -0.000651  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211438  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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	4.6
c	1000	1000	1000	1000	Ampl.	2.8
b:c	0:0	0:0	0:0	0:0	Sbd box	511.3
b:c	0:0	0:0	0:0	0:0	APs used	
b	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
b	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
c	Q00UR	Q01UR	Q02UR	Q03UR	Manl PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-6.49323606197E+03	Apriori delay (usec)	-6.49323242190E+03	Resid mbdelay (usec)	-3.64006E-03	+/-	9.4E-06
Sband delay (usec)	-6.49323583465E+03	Apriori clock (usec)	-1.0228515E+01	Resid sbdelay (usec)	-3.41275E-03	+/-	3.6E-05
Phase delay (usec)	-6.49323242161E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	2.97422E-07	+/-	6.2E-08
Delay rate (us/s)	1.04978683995E+00	Apriori rate (us/s)	1.04978685507E+00	Resid rate (us/s)	-1.51141E-08	+/-	4.5E-10
Total phase (deg)	-153.3	Apriori accel (us/s/s)	4.34350303278E-05	Resid phase (deg)	4.6	+/-	1.0

ph/seg (deg)	63.2	Theor.	3.2	Amplitude	2.807 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	76.6	Search (1024X16)	2.603	Search	2.603	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	10.1	Inc. seg. avg.	4.911	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	4.2	Inc. frq. avg.	2.813	Inc. seg. avg.	4.911	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	2.813	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 125.7 el 40.0 pa -33.5 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -3032.087 2236.670 simultaneous interpolator

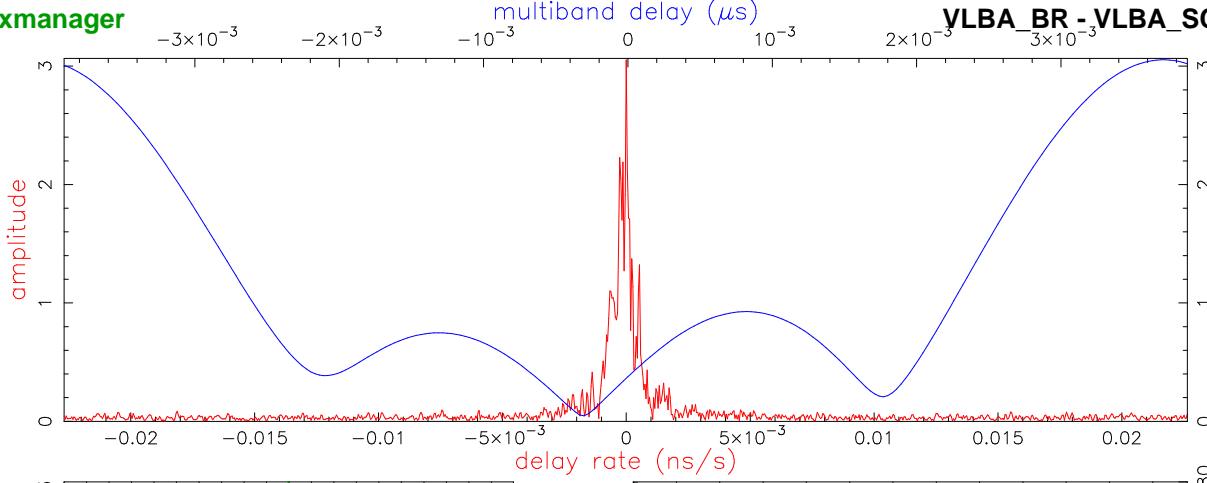
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc.Q.25.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

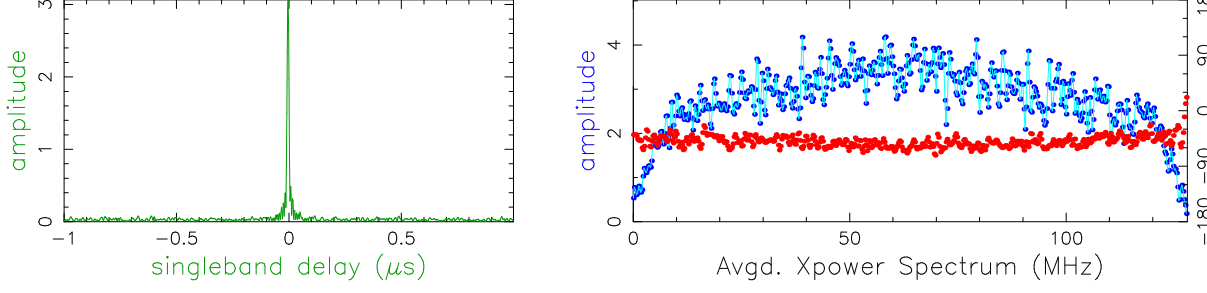
fxmanager

1502+106.1J2DGP, No0154, bc

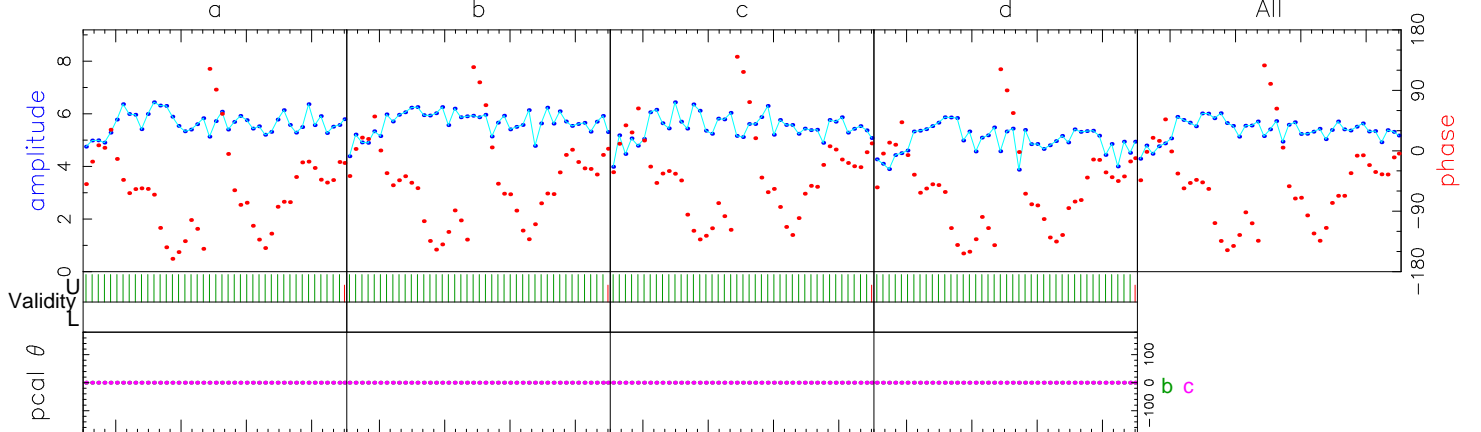
VLBA\_BR - VLBA\_SC, fgroup Q, pol LL



Fringe quality 4  
 SNR 129.9  
 Int time 239.975  
 Amp 3.065  
 Phase -55.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.004338  
 MBD -0.004130  
 Fringe rate (Hz)  
 -0.000683  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211436  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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	
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	

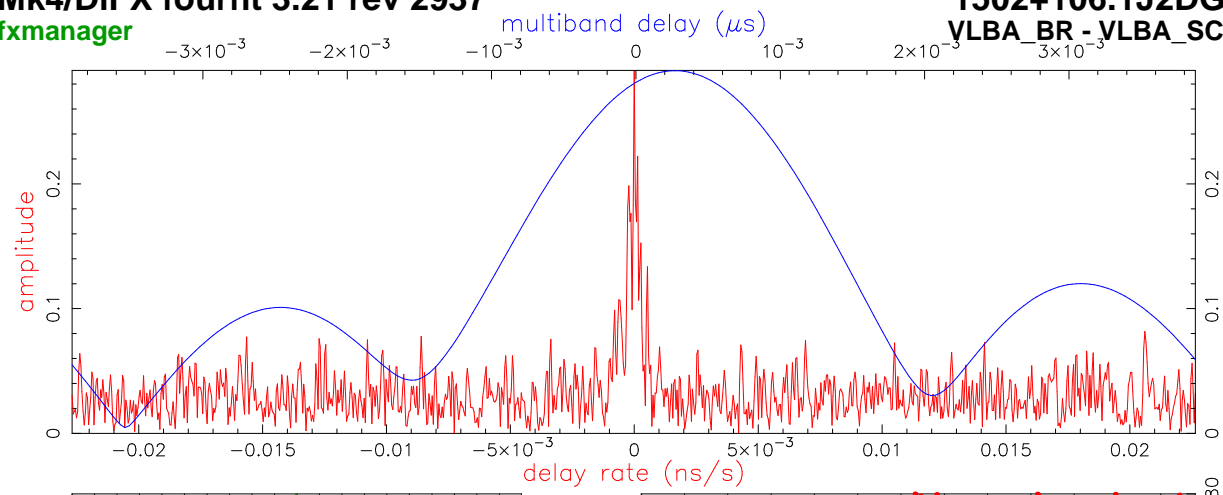
Group delay (usec)(sbd)	-6.49323655215E+03	Apriori delay (usec)	-6.49323242190E+03	Resid mbdelay (usec)	-4.13025E-03	+/-	8.6E-06
Sband delay (usec)	-6.49323675965E+03	Apriori clock (usec)	-1.0228515E+01	Resid sbdelay (usec)	-4.33775E-03	+/-	3.3E-05
Phase delay (usec)	-6.49323242550E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	-3.59536E-06	+/-	5.7E-08
Delay rate (us/s)	1.04978683920E+00	Apriori rate (us/s)	1.04978685507E+00	Resid rate (us/s)	-1.58686E-08	+/-	4.1E-10
Total phase (deg)	-213.6	Apriori accel (us/s/s)	4.34350303278E-05	Resid phase (deg)	-55.7	+/-	0.9

ph/seg (deg)	63.1	2.9	Amplitude	3.065 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	76.7	5.0	Search (1024X16)	2.857	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	11.8	0.9	Inc. seg. avg.	5.379	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	5.1	1.5	Inc. frq. avg.	3.086	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 125.7 el 40.0 pa -33.5 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -3032.087 2236.670 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc.Q.4.1J2DGP





Fringe quality 9

SNR 12.3

Int time 239.976

Amp 0.291

Phase 111.1

PFD 1.7e-26

Delays (us)

SBD -0.007951

MBD 0.000266

Fringe rate (Hz)

-0.000810

Ion TEC 0.000

Ref freq (MHz)

43040.0000

AP (sec) 0.512

Exp. c202b

Exper # 16383

Yr:day 2020:284

Start 190830.00

Stop 191230.12

FRT 191030.00

Corr/FF/build

2021:032:031903

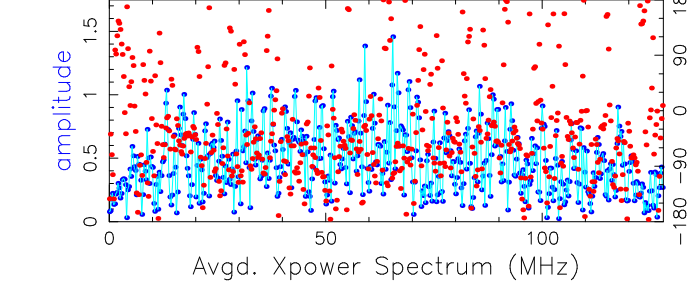
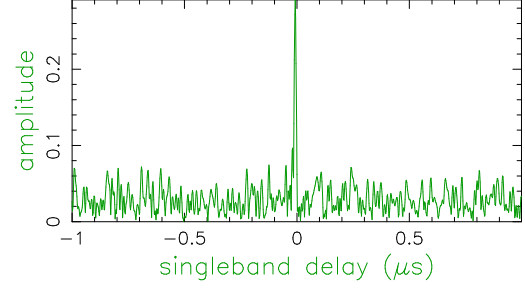
2021:032:211441

2020:247:085004

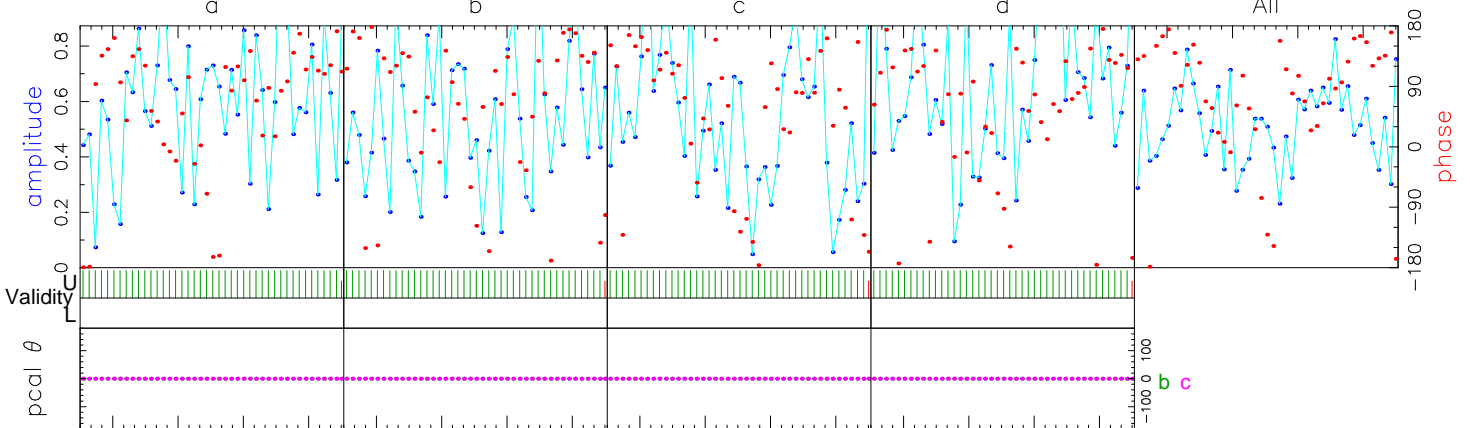
RA & Dec (J2000)

15h04m24.979782s

+10°29'39.198559"



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	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-6.49323996862E+03	Apriori delay (usec)	-6.49323242190E+03	Resid mbdelay (usec)	2.65781E-04	+/-	9.0E-05
Sband delay (usec)	-6.49324037278E+03	Apriori clock (usec)	-1.0228515E+01	Resid sbdelay (usec)	-7.95087E-03	+/-	3.5E-04
Phase delay (usec)	-6.49323241473E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	7.16951E-06	+/-	6.0E-07
Delay rate (us/s)	1.04978683624E+00	Apriori rate (us/s)	1.04978685507E+00	Resid rate (us/s)	-1.88296E-08	+/-	4.3E-09
Total phase (deg)	-46.8	Apriori accel (us/s/s)	4.34350303278E-05	Resid phase (deg)	111.1	+/-	9.3

ph/seg (deg)	61.4	Theor.	30.5	Amplitude	0.291 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	91.3		53.2	Search (1024X16)	0.265	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	16.1		9.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	12.4		16.2	Inc. seg. avg.	0.453	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.293	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

b: az 125.7 el 40.0 pa -33.5 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -3032.087 2236.670 simultaneous interpolator

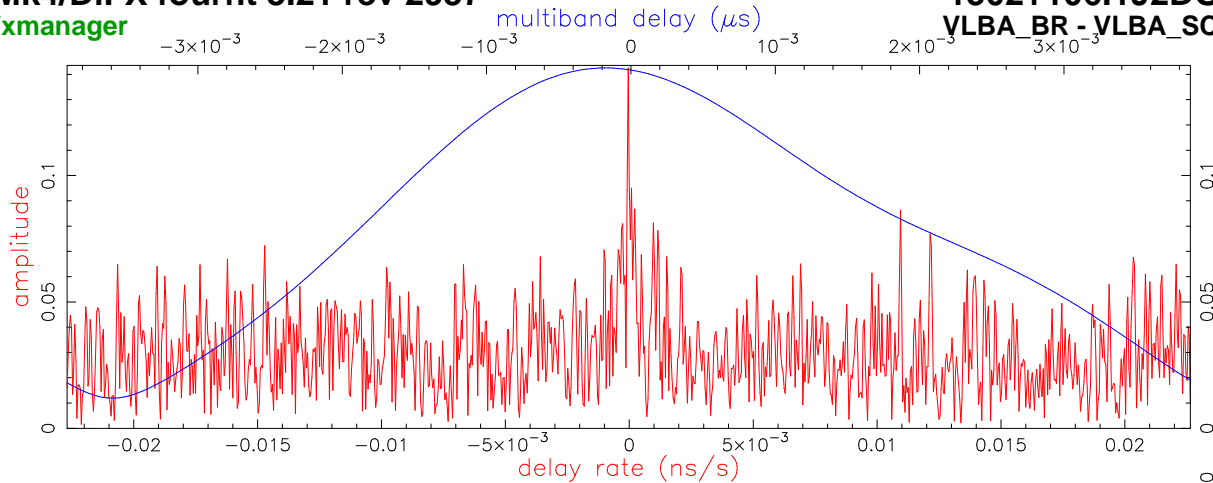
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc.Q.50.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

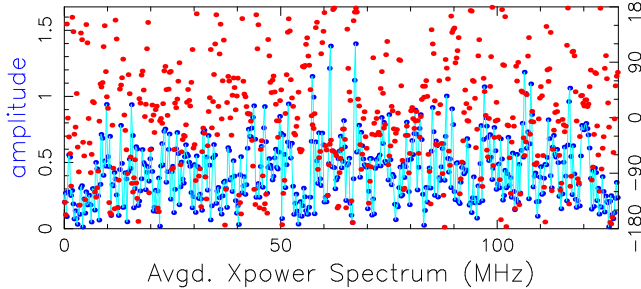
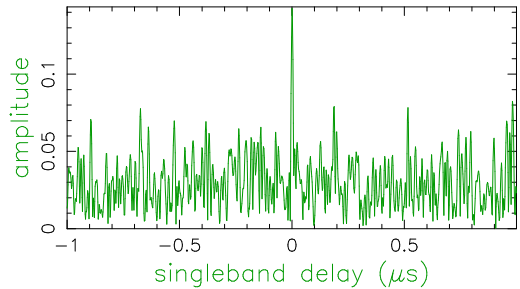
1502+106.1J2DGP, No0154, bc

VLBA\_BR - VLBA\_SC, fgroup Q, pol RL



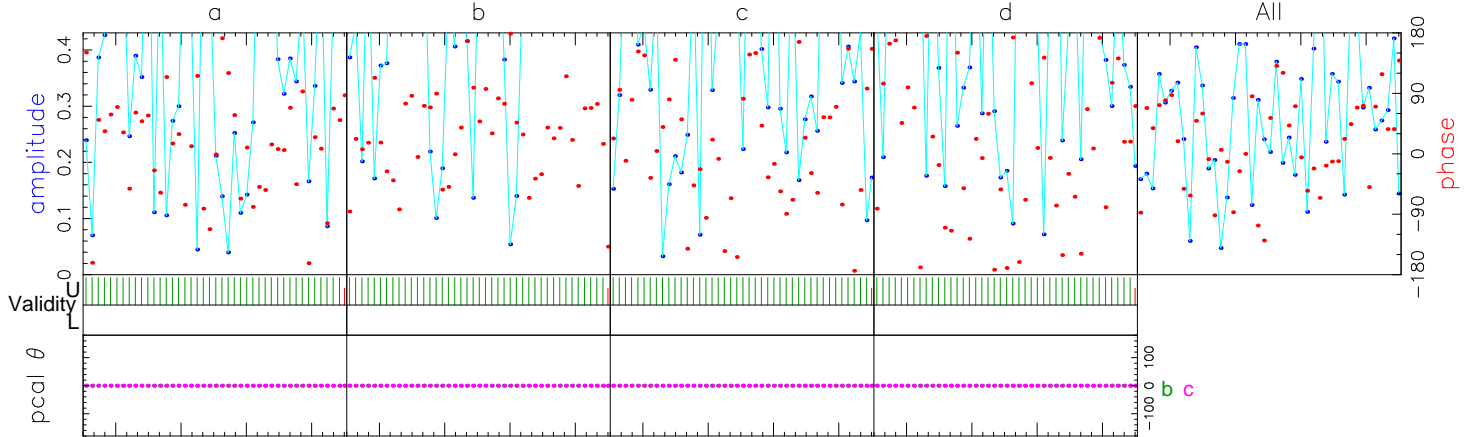
Fringe quality 0

SNR 6.1  
 Int time 239.975  
 Amp 0.144  
 Phase 19.3  
 PFD 1.4e-01  
 Delays (us)  
 SBD 0.000560  
 MBD -0.000174  
 Fringe rate (Hz)  
 -0.001471  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211443  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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



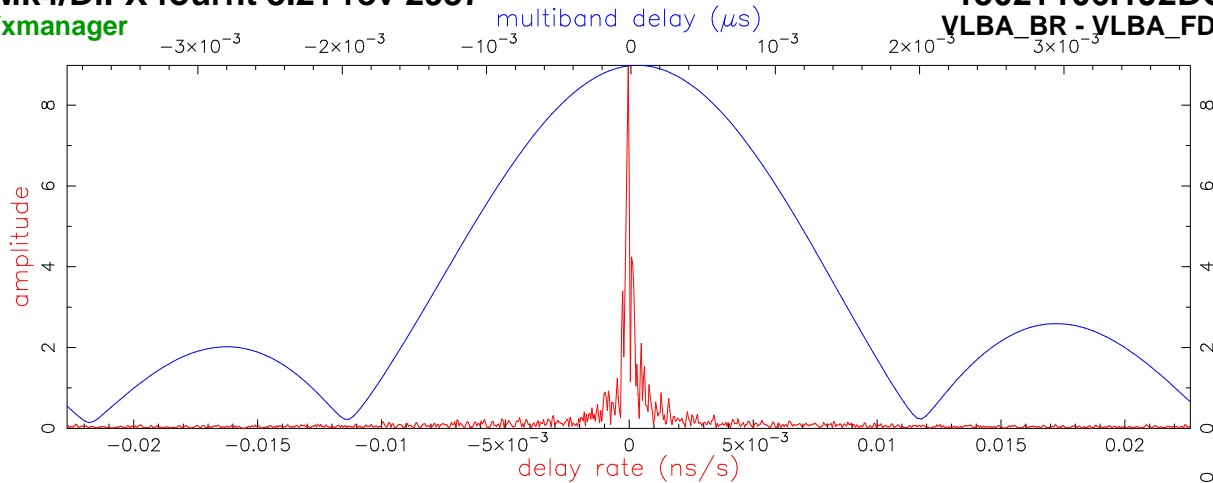
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
11.5	29.4	4.6	3.2	Phase	19.3
0.2	0.3	0.1	0.0	Ampl.	0.1
513.7	513.2	273.0	92.1	Sbd box	513.3
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
b:c 0:0	0:0	0:0	0:0	PC phase	
b:c 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
b Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-6.49323259571E+03	Apriori delay (usec)	-6.49323242190E+03	Resid mbdelay (usec)	-1.73807E-04	+/- 1.8E-04
Sband delay (usec)	-6.49323186203E+03	Apriori clock (usec)	-1.0228515E+01	Resid sbdelay (usec)	5.59875E-04	+/- 7.1E-04
Phase delay (usec)	-6.49323242065E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	1.24795E-06	+/- 1.2E-06
Delay rate (us/s)	1.04978682090E+00	Apriori rate (us/s)	1.04978685507E+00	Resid rate (us/s)	-3.41706E-08	+/- 8.8E-09
Total phase (deg)	-138.6	Apriori accel (us/s/s)	4.34350303278E-05	Resid phase (deg)	19.3	+/- 18.8

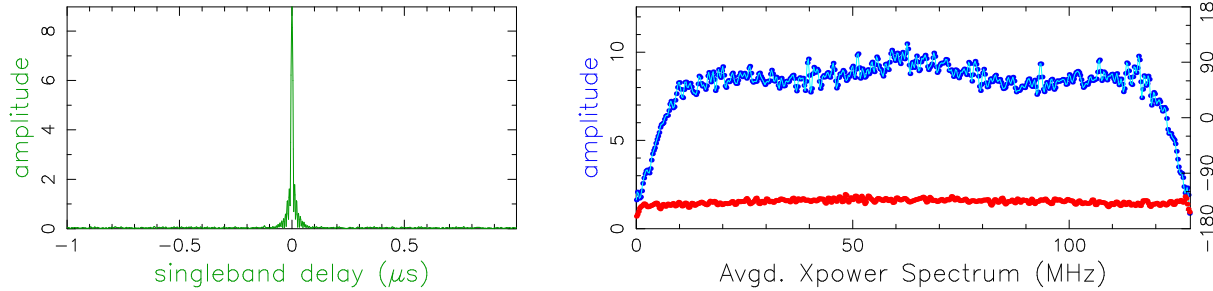
ph/seg (deg)	RMS 66.3	Theor. 61.8	Amplitude Search (1024X16)	0.144 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	137.5	107.8	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	17.9	18.8	Inc. seg. avg.	0.181	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	74.8	32.9	Inc. frq. avg.	0.137	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 125.7 el 40.0 pa -33.5      c: az 246.7 el 72.9 pa 62.7      u,v (fr/asec) -3032.087 2236.670      simultaneous interpolator  
 Control file: cf\_1234\_gmva7mm      Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc..1J2DGP      Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bc.Q.67.1J2DGP

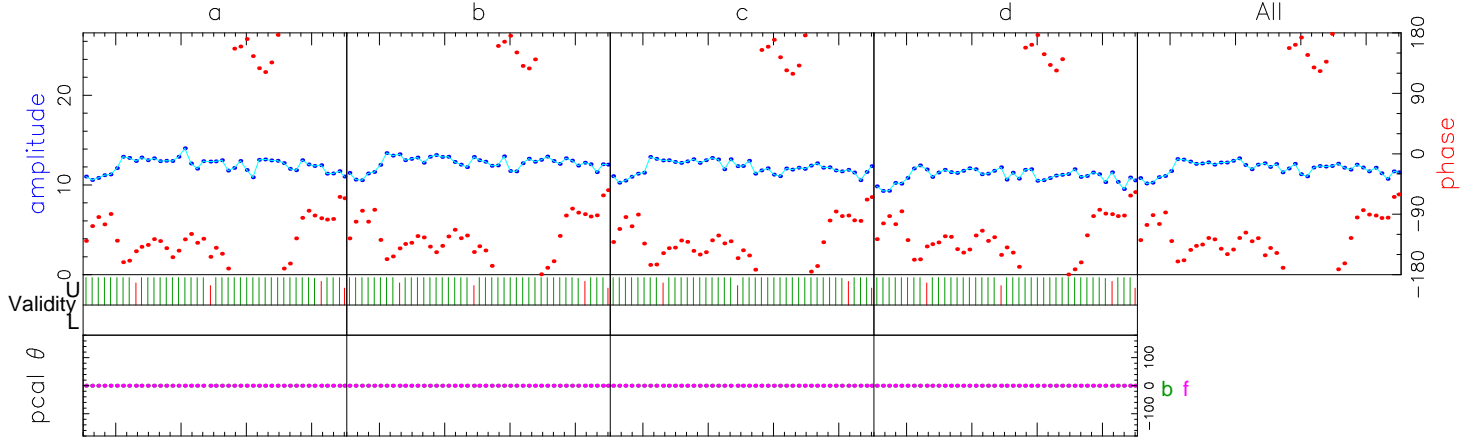




Fringe quality 6  
SNR 377.6  
Int time 236.233  
Amp 8.984  
Phase -138.6  
PFD 0.0e+00  
Delays (us)  
SBD -0.000077  
MBD 0.000041  
Fringe rate (Hz)  
-0.001273  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211438  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"



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
	-140.1	-135.3	-142.0	-137.0	Phase	-138.6
	9.2	9.4	9.0	8.3	Ampl.	9.0
	512.6	513.0	512.8	513.6	Sbd box	513.0
U/L	465/0	465/0	465/0	465/0	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)	-4.78008474376E+03	Apriori delay (usec)	-4.78008478524E+03	Resid mbdelay (usec)	4.14747E-05	+/-	2.9E-06
Sband delay (usec)	-4.78008486211E+03	Apriori clock (usec)	-9.5928116E+00	Resid sbdelay (usec)	-7.68750E-05	+/-	1.1E-05
Phase delay (usec)	-4.78008479418E+03	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-8.94639E-06	+/-	2.0E-08
Delay rate (us/s)	1.26199287792E-01	Apriori rate (us/s)	1.26199317368E-01	Resid rate (us/s)	-2.95760E-08	+/-	1.4E-10
Total phase (deg)	-195.0	Apriori accel (us/s/s)	3.01614407038E-05	Resid phase (deg)	-138.6	+/-	0.3

ph/seg (deg)	43.0	1.0	Search (1024X16)	8.685	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	33.1	1.7	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	3.7	0.3	Inc. seg. avg.	11.874	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
amp/frq (%)	4.6	0.5	Inc. frq. avg.	8.995	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 125.7 el 40.0 pa -33.5 f: az 127.9 el 60.3 pa -43.4 u,v (fr/asec) -352.239 1242.231 simultaneous interpolator

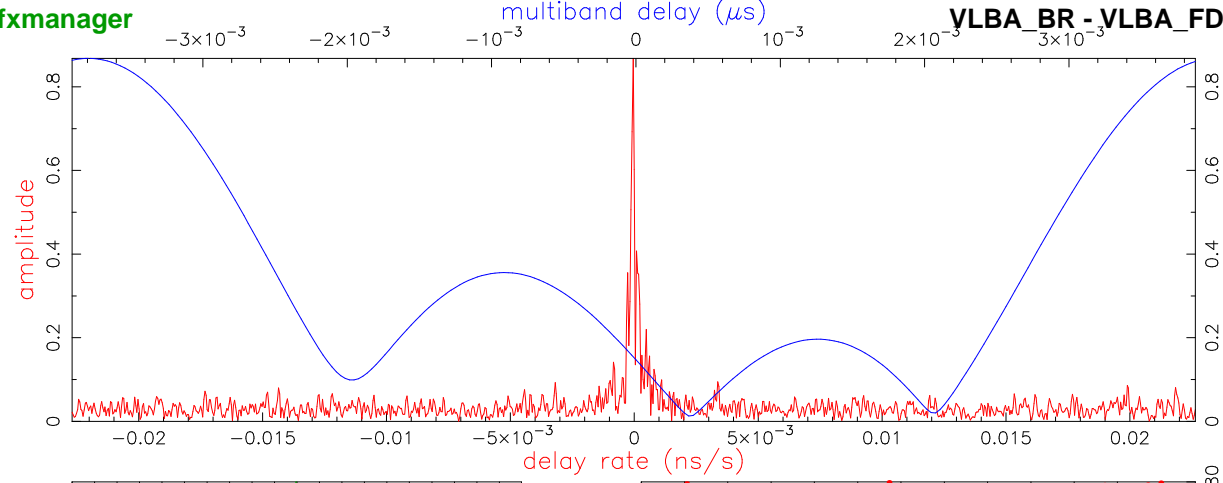
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bf..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bf.Q.22.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bf

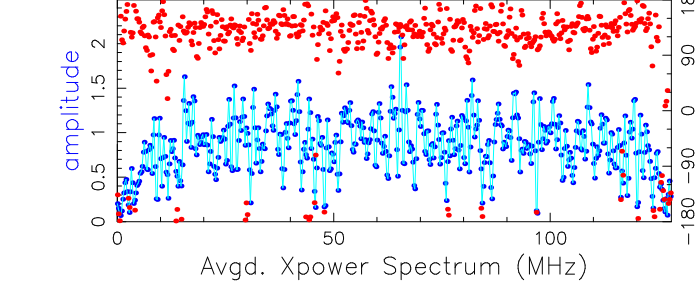
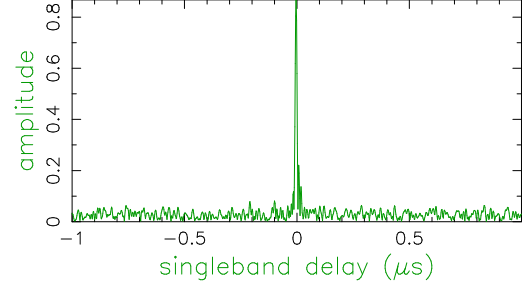
VLBA\_BR - VLBA\_FD, fgroup Q, pol LR



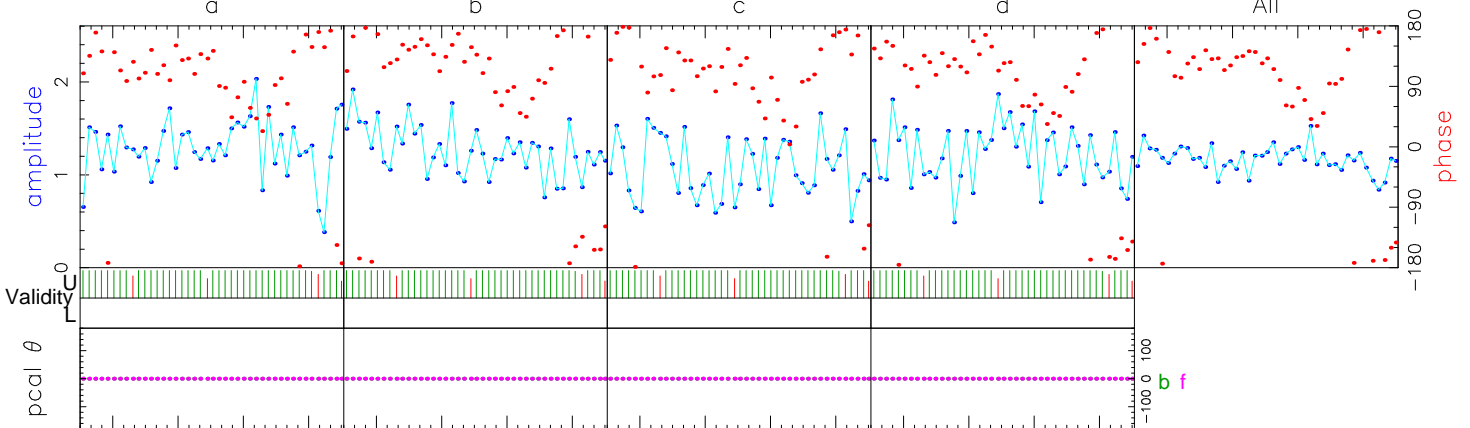
Fringe quality 7

SNR 36.5  
 Int time 236.233  
 Amp 0.868  
 Phase 127.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.004025  
 MBD -0.003801  
 Fringe rate (Hz)  
 -0.001476  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211440  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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	465/0	465/0	465/0	465/0		
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		

Group delay (usec)(sbd)	-4.78008858595E+03	Apriori delay (usec)	-4.78008478524E+03	Resid mbdelay (usec)	-3.80072E-03	+/-	3.0E-05
Sband delay (usec)	-4.78008881061E+03	Apriori clock (usec)	-9.5928116E+00	Resid sbdelay (usec)	-4.02538E-03	+/-	1.2E-04
Phase delay (usec)	-4.78008477703E+03	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	8.20359E-06	+/-	2.0E-07
Delay rate (us/s)	1.26199283084E-01	Apriori rate (us/s)	1.26199317368E-01	Resid rate (us/s)	-3.42841E-08	+/-	1.5E-09
Total phase (deg)	70.8	Apriori accel (us/s/s)	3.01614407038E-05	Resid phase (deg)	127.1	+/-	3.1

ph/seg (deg)	43.7	Theor.	10.3	Amplitude	0.868 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	38.2	Search (1024X16)	0.850	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	12.3	Inc. seg. avg.	1.152	Inc. frq. avg.	0.877	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	10.0	Inc. frq. avg.	0.877	Sample rate(MSamp/s): 256		Data rate(Mb/s): 2048	nlags: 512
				Dr window (ns/s)	-0.023 0.023	ion window (TEC)	0.00 0.00

b: az 125.7 el 40.0 pa -33.5 f: az 127.9 el 60.3 pa -43.4 u,v (fr/asec) -352.239 1242.231 simultaneous interpolator

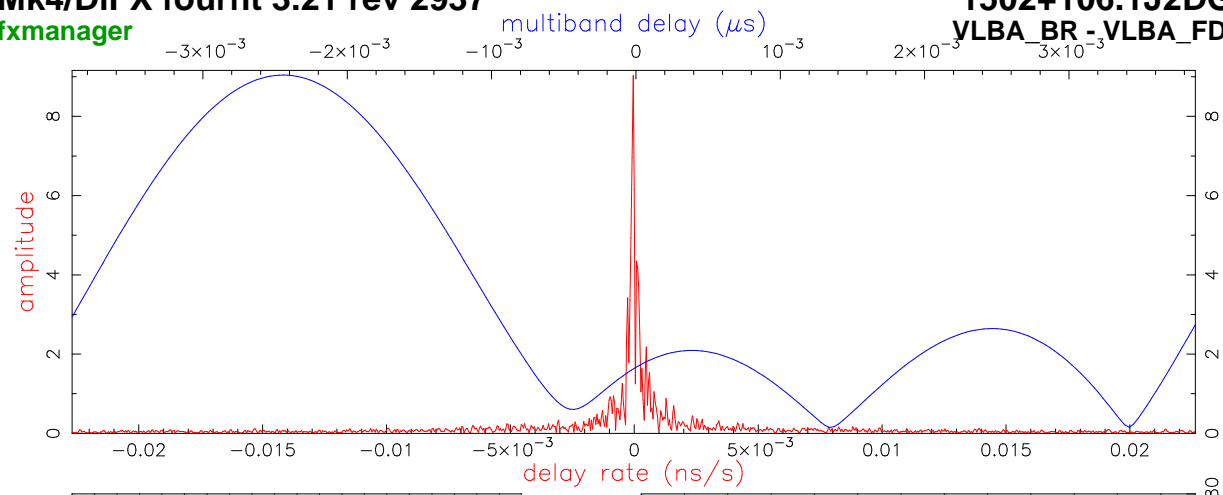
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bf..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bf.Q.40.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bf

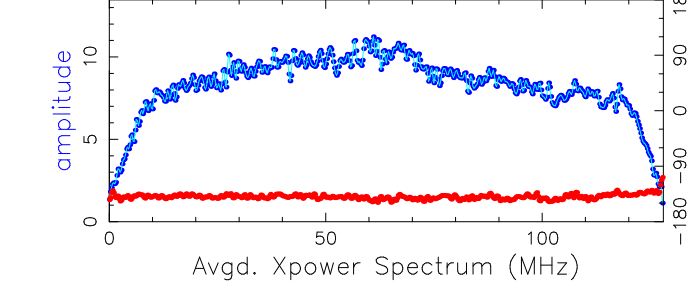
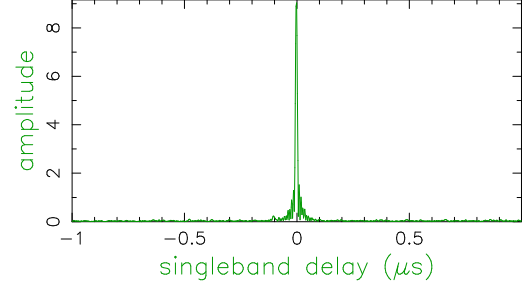
VLBA\_BR - VLBA\_FD, fgroup Q, pol LL



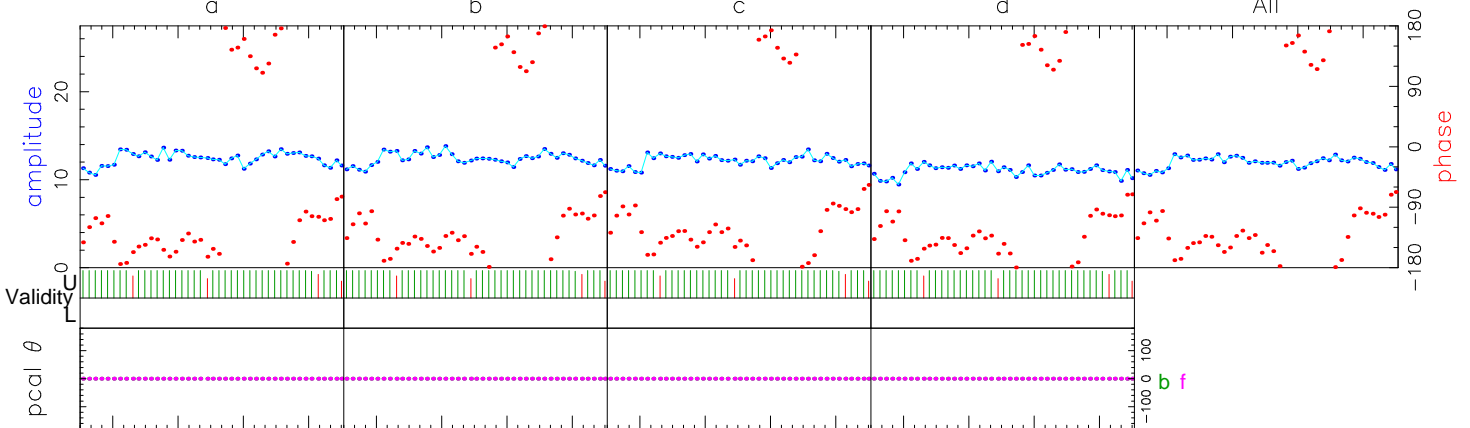
Fringe quality 6

SNR 385.0  
 Int time 236.233  
 Amp 9.160  
 Phase -145.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002758  
 MBD -0.002500  
 Fringe rate (Hz)  
 -0.001293  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211436  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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
-151.3	-146.7	-137.4	-146.6	Phase	-145.5
9.4	9.4	9.2	8.4	Ampl.	9.1
511.7	511.9	511.5	511.1	Sbd box	511.6
U/L 465/0	465/0	465/0	465/0	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 Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
f Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-4.78008728504E+03	Apriori delay (usec)	-4.78008478524E+03	Resid mbdelay (usec)	-2.49981E-03	+/- 2.9E-06
Sband delay (usec)	-4.78008754374E+03	Apriori clock (usec)	-9.5928116E+00	Resid sbdelay (usec)	-2.75850E-03	+/- 1.1E-05
Phase delay (usec)	-4.78008479463E+03	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-9.39293E-06	+/- 1.9E-08
Delay rate (us/s)	1.26199287333E-01	Apriori rate (us/s)	1.26199317368E-01	Resid rate (us/s)	-3.00354E-08	+/- 1.4E-10
Total phase (deg)	-201.9	Apriori accel (us/s/s)	3.01614407038E-05	Resid phase (deg)	-145.5	+/- 0.3

ph/seg (deg)	42.9	1.0	Amplitude	9.160 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	31.2	1.7	Search (1024X16)	8.761	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	7.1	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	4.6	0.5	Inc. seg. avg.	11.950	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	9.067	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 125.7 el 40.0 pa -33.5 f: az 127.9 el 60.3 pa -43.4 u,v (fr/asec) -352.239 1242.231 simultaneous interpolator

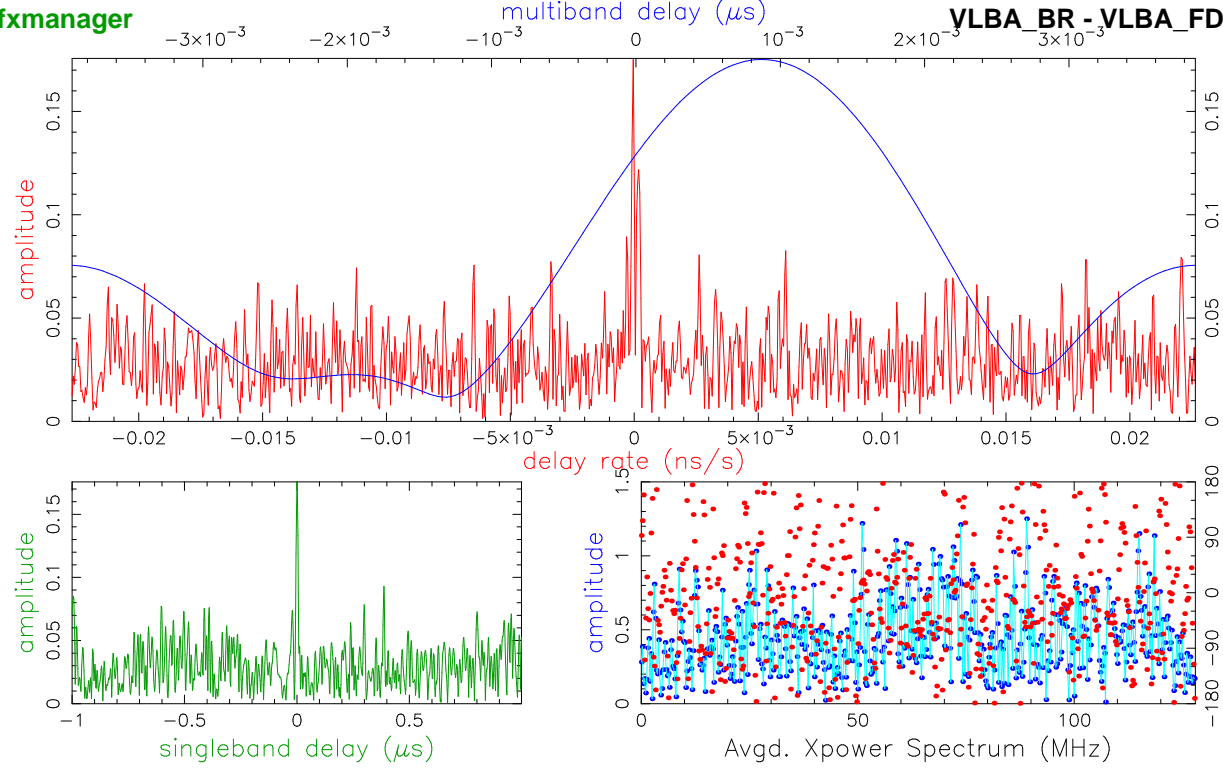
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bf..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bf.Q.6.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bf

VLBA\_BR - VLBA\_FD, fgroup Q, pol RL

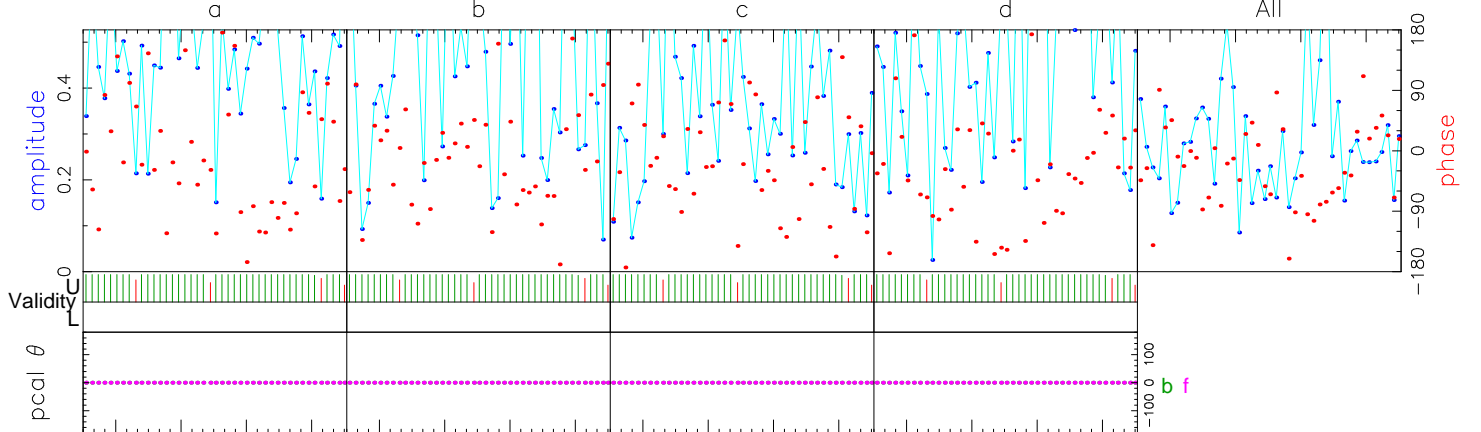


Fringe quality 9

SNR 7.4  
 Int time 236.233  
 Amp 0.176  
 Phase -31.9  
 PFD 2.4e-05  
 Delays (us)  
 SBD 0.000391  
 MBD 0.000883  
 Fringe rate (Hz)  
 -0.001877  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211443  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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



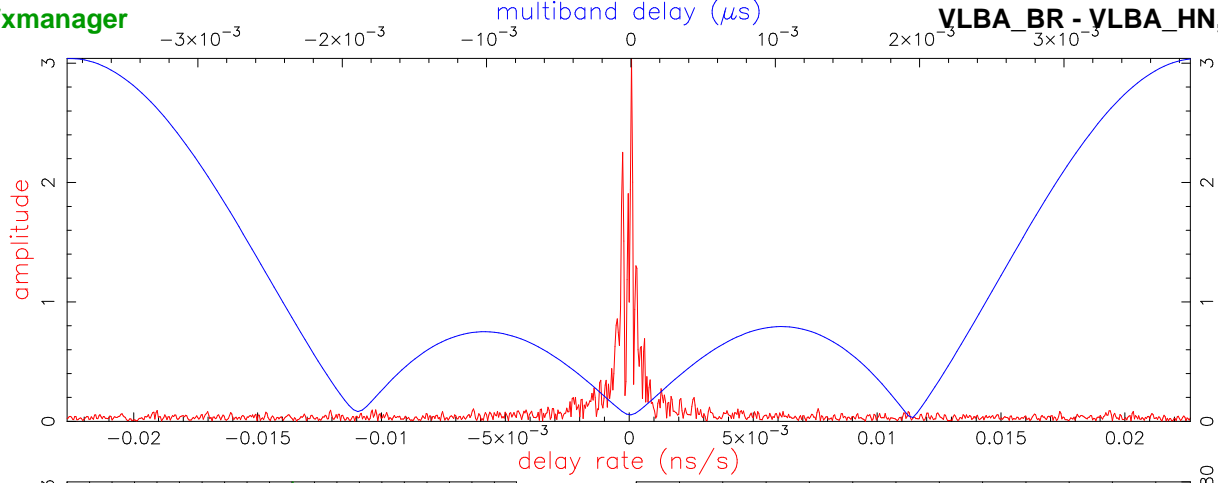
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-47.4	-15.3	-36.7	-37.0	Phase	-31.9
	0.1	0.2	0.1	0.2	Ampl.	0.2
	663.1	513.3	511.4	514.6	Sbd box	513.2
U/L	465/0	465/0	465/0	465/0	APs used	
b	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
f	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-4.78008390223E+03		Apriori delay (usec)	-4.78008478524E+03	Resid mbdelay (usec)	8.83006E-04 +/- 1.5E-04
Sband delay (usec)	-4.78008439424E+03		Apriori clock (usec)	-9.5928116E+00	Resid sbdelay (usec)	3.91000E-04 +/- 5.8E-04
Phase delay (usec)	-4.78008478730E+03		Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-2.06160E-06 +/- 1.0E-06
Delay rate (us/s)	1.26199273762E-01		Apriori rate (us/s)	1.26199317368E-01	Resid rate (us/s)	-4.36067E-08 +/- 7.3E-09
Total phase (deg)		-88.3	Apriori accel (us/s/s)	3.01614407038E-05	Resid phase (deg)	-31.9 +/- 15.5
RMS	61.1	50.7	Amplitude	0.176 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	61.1	50.7	Search (1024X16)	0.174	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	102.3	88.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	16.8	15.5	Inc. seg. avg.	0.208	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	22.0	27.1	Inc. frq. avg.	0.173	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5		f: az 127.9 el 60.3 pa -43.4		u,v (fr/asec) -352.239 1242.231		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bf..1J2DGP		Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bf.Q.68.1J2DGP		

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bh

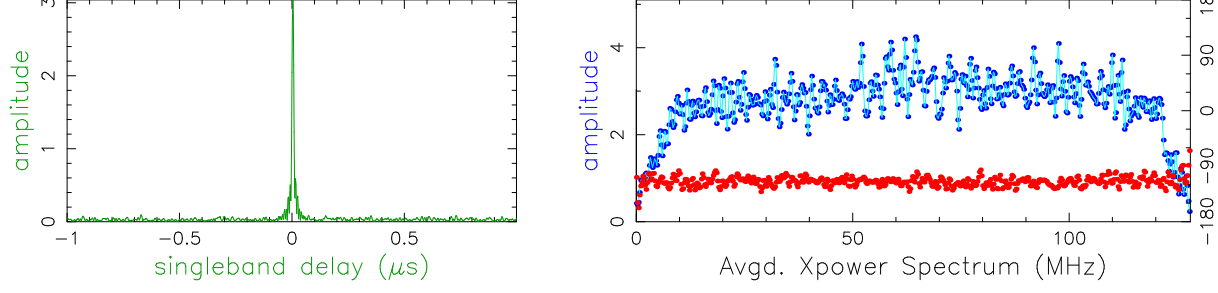
VLBA\_BR - VLBA\_HN, fgroup Q, pol RR



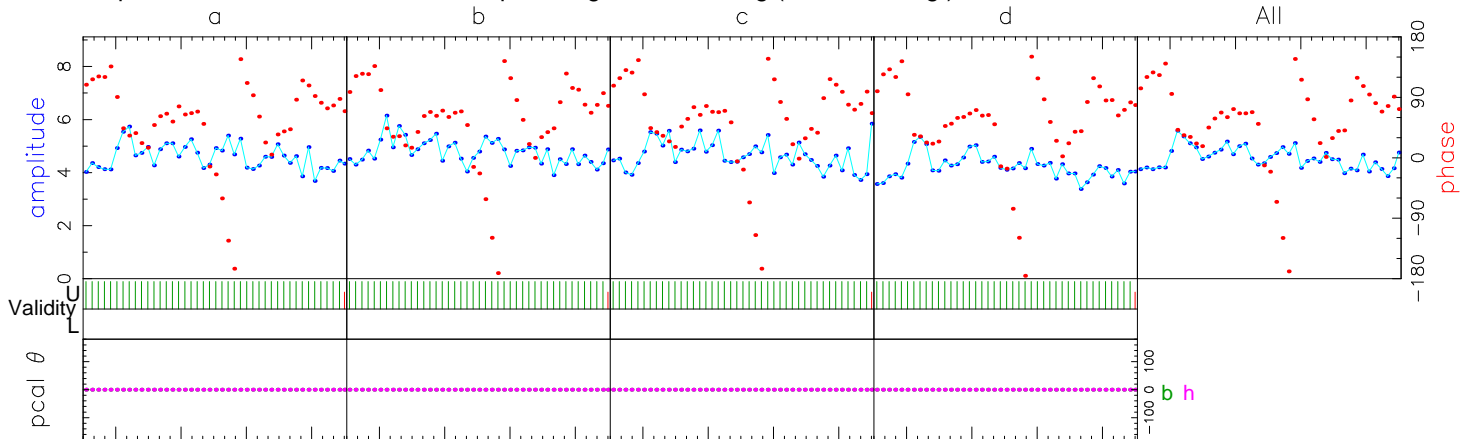
Fringe quality 5

SNR 128.8  
 Int time 239.982  
 Amp 3.040  
 Phase 67.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004021  
 MBD -0.003879  
 Fringe rate (Hz) 0.003898  
 Ion TEC 0.000  
 Ref freq (MHz) 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211438  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

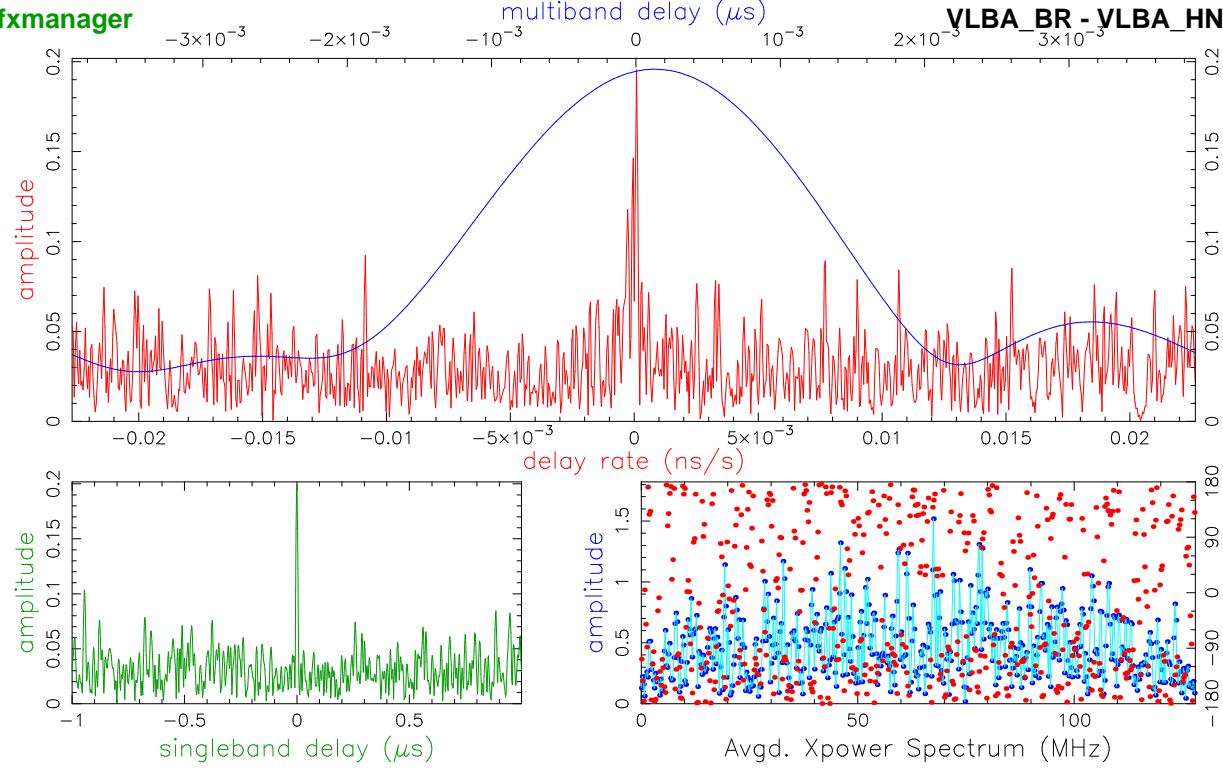
Group delay (usec)(sbd)	-3.96704062642E+03	Apriori delay (usec)	-3.96704456010E+03	Resid mbdelay (usec)	-3.87882E-03	+/-	8.6E-06
Sband delay (usec)	-3.96704053885E+03	Apriori clock (usec)	-2.2707167E+00	Resid sbdelay (usec)	4.02125E-03	+/-	3.3E-05
Phase delay (usec)	-3.96704455577E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	4.33031E-06	+/-	5.7E-08
Delay rate (us/s)	8.13663162924E-01	Apriori rate (us/s)	8.13663072349E-01	Resid rate (us/s)	9.05742E-08	+/-	4.1E-10
Total phase (deg)	-244.9	Apriori accel (us/s/s)	2.23801012411E-05	Resid phase (deg)	67.1	+/-	0.9

	RMS	Theor.	Amplitude	3.040 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	54.6	2.9	Search (1024X16)	3.031	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	51.7	5.1	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	1.4	0.9	Inc. seg. avg.	4.556	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
amp/frq (%)	4.2	1.6	Inc. frq. avg.	3.039					

b: az 125.7 el 40.0 pa -33.5 h: az 195.3 el 56.6 pa 11.8 u,v (fr/asec) -2356.882 446.554 simultaneous interpolator

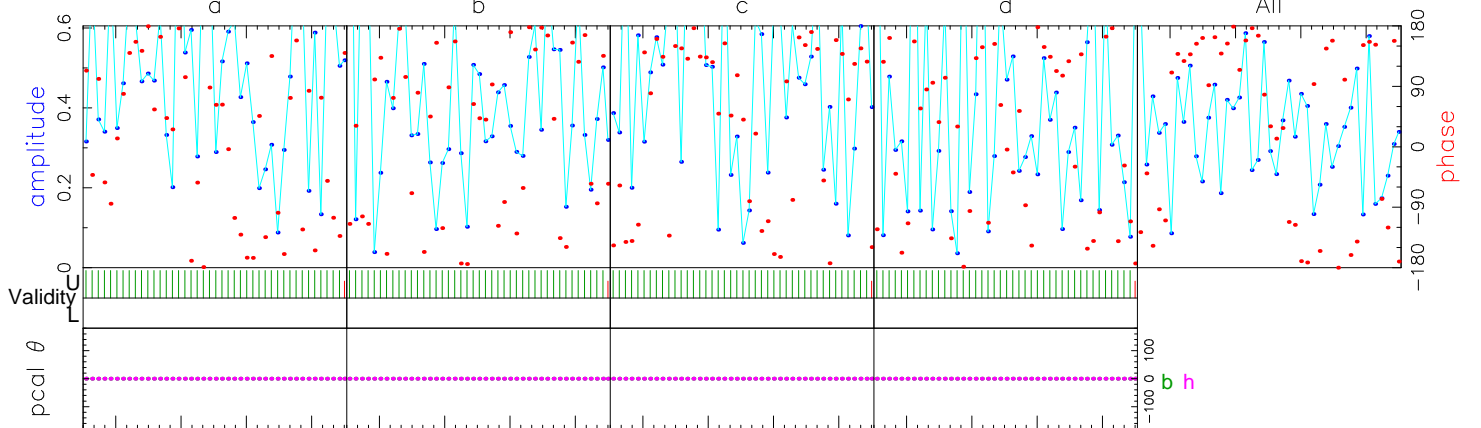
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh.Q.24.1J2DGP





Fringe quality 9  
SNR 8.6  
Int time 239.982  
Amp 0.202  
Phase 169.6  
PFD 2.2e-09  
Delays (us)  
SBD -0.000758  
MBD 0.000209  
Fringe rate (Hz) 0.004464  
Ion TEC 0.000  
Ref freq (MHz) 43040.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211441  
2020:247:085004  
RA & Dec (J2000) 15h04m24.979782s +10°29'39.198559"

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



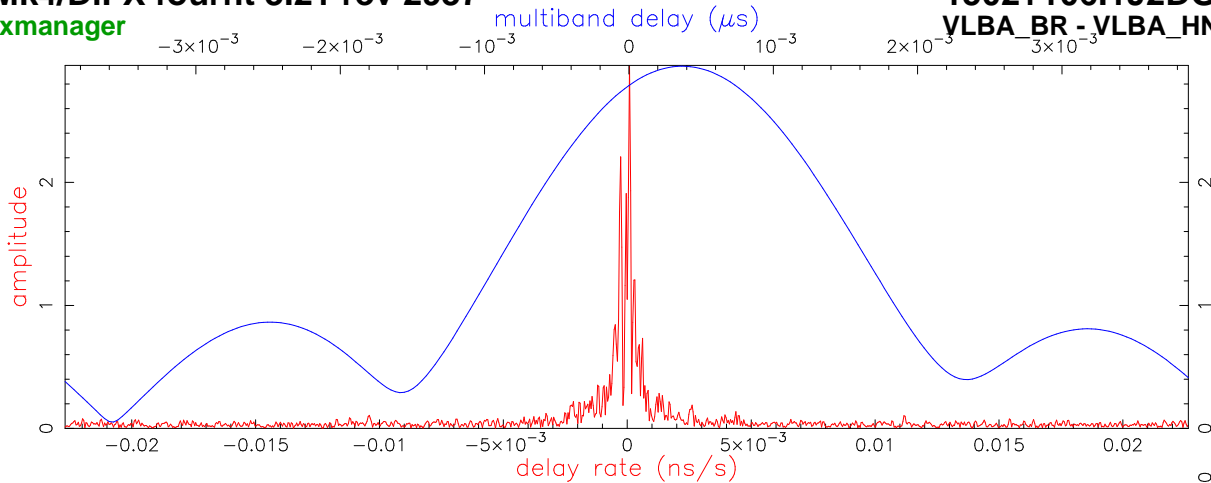
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
h	1000	1000	1000	1000		
b:h	0:0	0:0	0:0	0:0		
b:h	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
h	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
h	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks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

Group delay (usec)(sbd)	-3.96704435139E+03	Apriori delay (usec)	-3.96704456010E+03	Resid mbdelay (usec)	2.08707E-04	+/-	1.3E-04
Sband delay (usec)	-3.96704531760E+03	Apriori clock (usec)	-2.2707167E+00	Resid sbdelay (usec)	-7.57500E-04	+/-	5.0E-04
Phase delay (usec)	-3.96704454915E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	1.09464E-05	+/-	8.6E-07
Delay rate (us/s)	8.13663176072E-01	Apriori rate (us/s)	8.13663072349E-01	Resid rate (us/s)	1.03723E-07	+/-	6.2E-09
Total phase (deg)	-142.4	Apriori accel (us/s/s)	2.23801012411E-05	Resid phase (deg)	169.6	+/-	13.4

ph/seg (deg)	RMS 65.5	Theor. 43.9	Amplitude Search (1024X16)	0.202 +/- 0.024	0.188	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	98.1	76.7	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)	11.2	13.4	Inc. seg. avg.	0.268	0.268	Bits/sample: 2x2	Sample rate(MSamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	31.4	23.4	Inc. frq. avg.	0.192	0.192	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

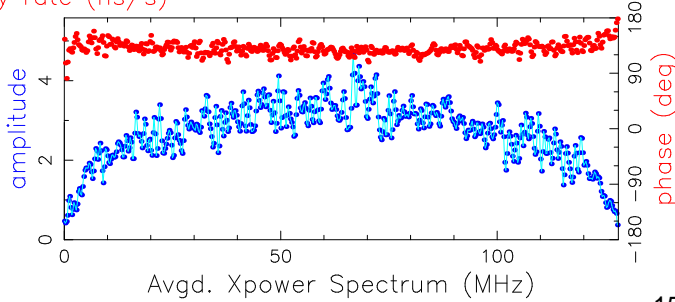
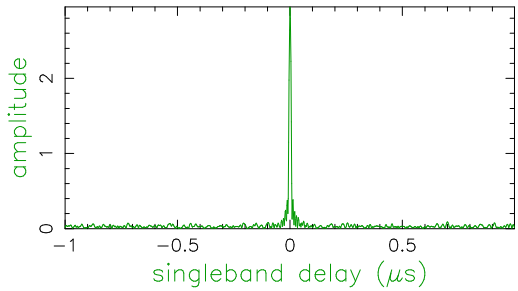
b: az 125.7 el 40.0 pa -33.5 h: az 195.3 el 56.6 pa 11.8 u,v (fr/asec) -2356.882 446.554 simultaneous interpolator  
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh.Q.51.1J2DGP





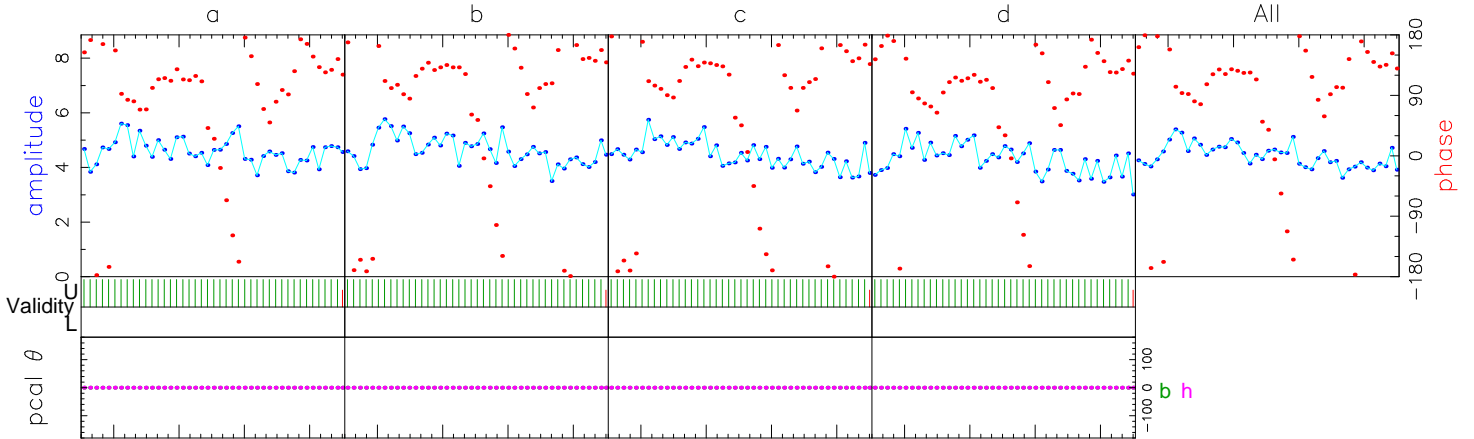
Fringe quality 4

SNR 125.1  
Int time 239.982  
Amp 2.952  
Phase 128.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.000330  
MBD 0.000389  
Fringe rate (Hz)  
0.003848  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211436  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.96704417111E+03	Apriori delay (usec)	-3.96704456010E+03	Resid mbdelay (usec)	3.88988E-04	+/-	8.9E-06
Sband delay (usec)	-3.96704423060E+03	Apriori clock (usec)	-2.2707167E+00	Resid sbdelay (usec)	3.29500E-04	+/-	3.4E-05
Phase delay (usec)	-3.96704455183E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	8.26523E-06	+/-	5.9E-08
Delay rate (us/s)	8.13663161761E-01	Apriori rate (us/s)	8.13663072349E-01	Resid rate (us/s)	8.94114E-08	+/-	4.3E-10
Total phase (deg)	-183.9	Apriori accel (us/s/s)	2.23801012411E-05	Resid phase (deg)	128.1	+/-	0.9

ph/seg (deg)	54.8	RMS	3.0	Theor.	3.0	Amplitude	2.952 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	52.5	Search (1024X16)	2.920	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)	13.5	Inc. seg. avg.	4.439	Inc. frq. avg.	2.986	Bits/sample:	2x2	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023	0.023		
amp/frq (%)	3.1	Inc. frq. avg.	2.986	Data rate (Mb/s):	2048	nlags:	512	t_coherence:	infinite	ion window (TEC)	0.00	0.00		

b: az 125.7 el 40.0 pa -33.5 h: az 195.3 el 56.6 pa 11.8 u,v (fr/asec) -2356.882 446.554 simultaneous interpolator

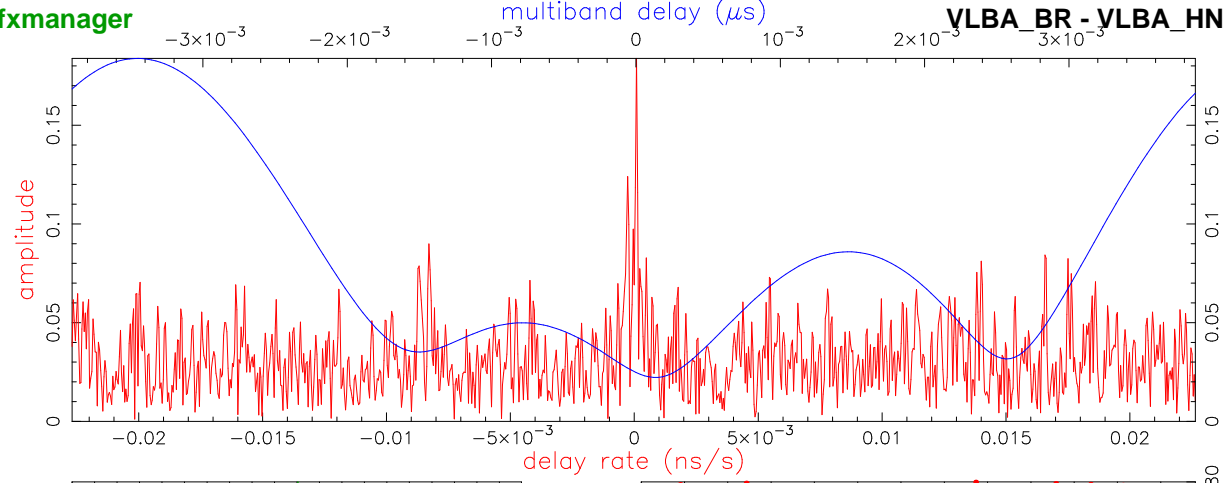
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh.Q.5.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

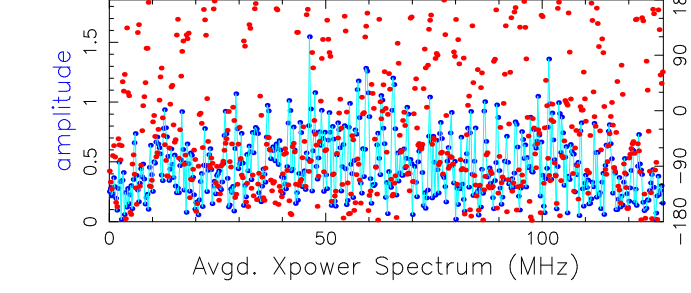
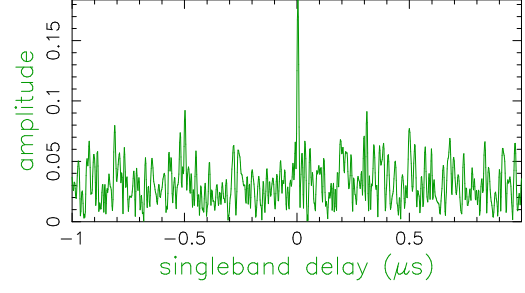
fxmanager

1502+106.1J2DGP, No0154, bh

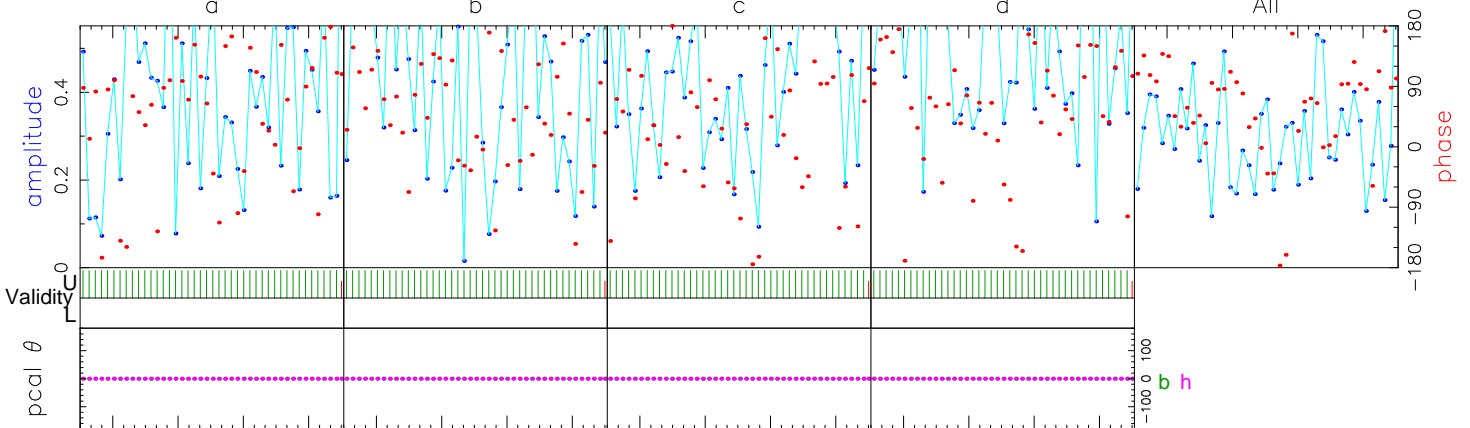
VLBA\_BR - VLBA\_HN, fgroup Q, pol RL



Fringe quality 9  
 SNR 7.8  
 Int time 239.982  
 Amp 0.184  
 Phase 75.2  
 PFD 1.1e-06  
 Delays (us)  
 SBD 0.003978  
 MBD -0.003450  
 Fringe rate (Hz) 0.003778  
 Ion TEC 0.000  
 Ref freq (MHz) 43040.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211442  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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	1000
h	1000	1000	1000	1000	PC freqs	1000
b:h	0:0	0:0	0:0	0:0	PC phase	0:0
b:h	0:0	0:0	0:0	0:0	ManI PC	0:0
b	1000	1000	1000	1000	PC amp	1000
h	1000	1000	1000	1000		1000
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.96704019749E+03	Apriori delay (usec)	-3.96704456010E+03	Resid mbdelay (usec)	-3.44989E-03	+/-	1.4E-04
Sband delay (usec)	-3.96704058222E+03	Apriori clock (usec)	-2.2707167E+00	Resid sbdelay (usec)	3.97788E-03	+/-	5.5E-04
Phase delay (usec)	-3.96704455525E+03	Apriori clockrate (us/s)	-2.2999999E-07	Resid phdelay (usec)	4.85077E-06	+/-	9.5E-07
Delay rate (us/s)	8.13663160130E-01	Apriori rate (us/s)	8.13663072349E-01	Resid rate (us/s)	8.77806E-08	+/-	6.8E-09
Total phase (deg)		Apriori accel (us/s/s)	2.23801012411E-05	Resid phase (deg)	75.2	+/-	14.7

ph/seg (deg)	59.0	Theor.	48.2	Amplitude	0.184 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	90.7	Search (1024X16)	0.183	Search	0.183	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	22.3	Inc. seg. avg.	0.226	Inc. seg. avg.	0.226	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	19.4	Inc. frq. avg.	0.185	Inc. frq. avg.	0.185	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 125.7 el 40.0 pa -33.5 h: az 195.3 el 56.6 pa 11.8 u,v (fr/asec) -2356.882 446.554 simultaneous interpolator

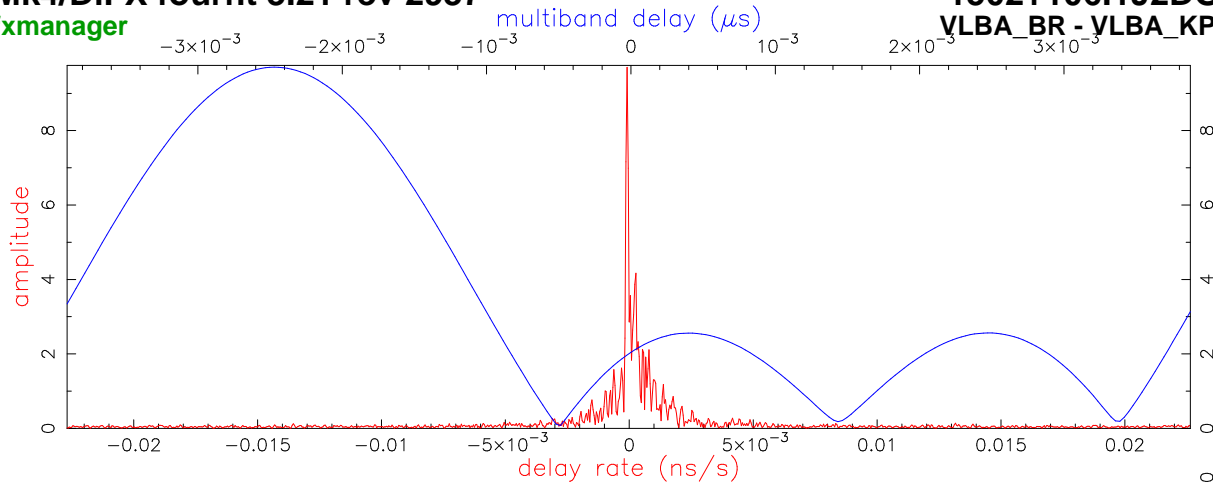
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bh.Q.66.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

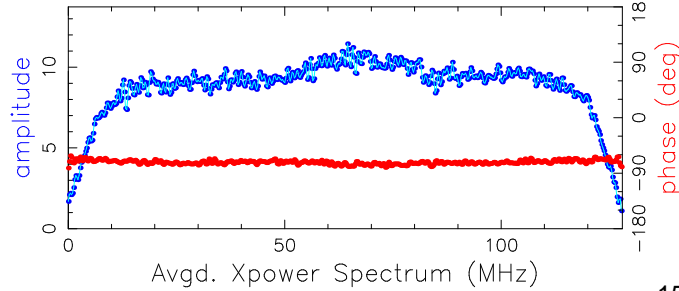
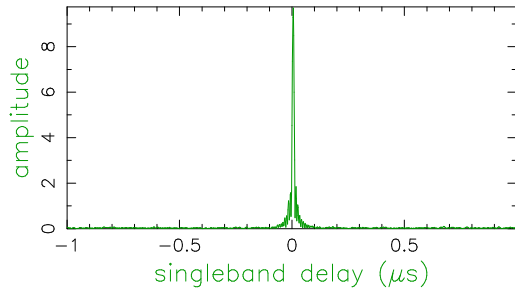
1502+106.1J2DGP, No0154, bk

VLBA\_BR - VLBA\_KP, fgroup Q, pol RR



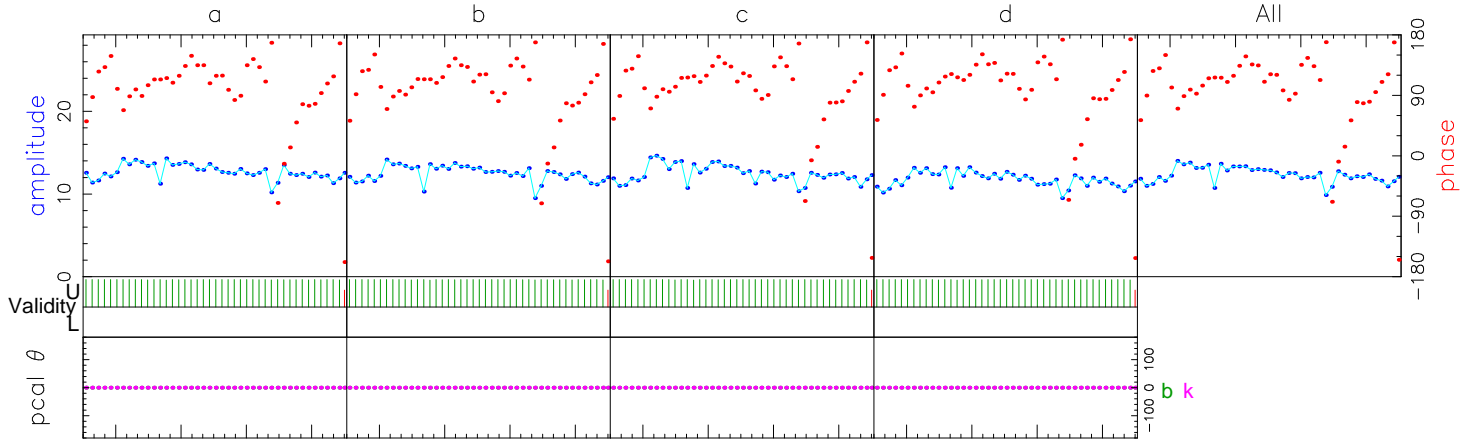
Fringe quality 6

SNR 412.3  
 Int time 239.075  
 Amp 9.751  
 Phase 108.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005373  
 MBD -0.002496  
 Fringe rate (Hz)  
 -0.003282  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211437  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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



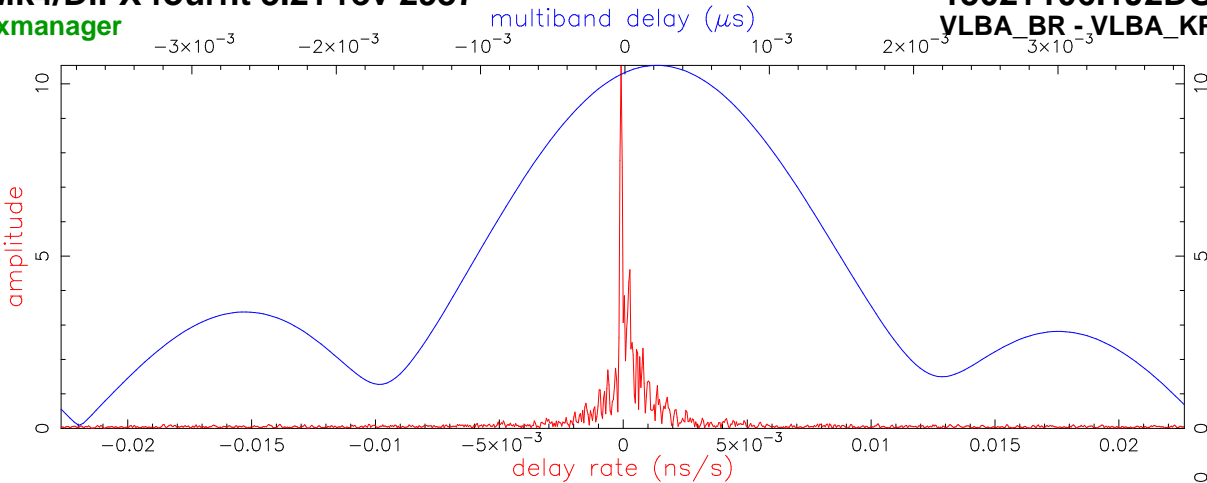
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
k	1000	1000	1000	1000	PC freqs	
b:k	0:0	0:0	0:0	0:0	PC phase	
b:k	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k	Q00UR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

Group delay (usec)(sbd)	-3.55230246513E+03	Apriori delay (usec)	-3.55230778143E+03	Resid mbdelay (usec)	-2.49621E-03	+/- 2.7E-06
Sband delay (usec)	-3.55230240880E+03	Apriori clock (usec)	-2.0507021E+00	Resid sbdelay (usec)	5.37262E-03	+/- 1.0E-05
Phase delay (usec)	-3.55230777441E+03	Apriori clockrate (us/s)	-9.9999991E-08	Resid phdelay (usec)	7.01425E-06	+/- 1.8E-08
Delay rate (us/s)	-2.16704986332E-02	Apriori rate (us/s)	-2.16704223761E-02	Resid rate (us/s)	-7.62571E-08	+/- 1.3E-10
Total phase (deg)	-219.8	Apriori accel (us/s/s)	2.32707588716E-05	Resid phase (deg)	108.7	+/- 0.3

ph/seg (deg)	45.8	RMS	45.8	Theor.	0.9	Amplitude	9.751 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000		
amp/seg (%)	28.2		28.2		1.6	Search (1024X16)	9.463	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.004	0.004		
ph/frq (deg)	2.1		2.1		0.3	Inc. seg. avg.	12.347	Bits/sample:	2x2	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023	0.023		
amp/frq (%)	2.8		2.8		0.5	Inc. frq. avg.	9.704	Data rate (Mb/s):	2048	nlags:	512	t_cohere	infinite	ion window (TEC)	0.00	0.00

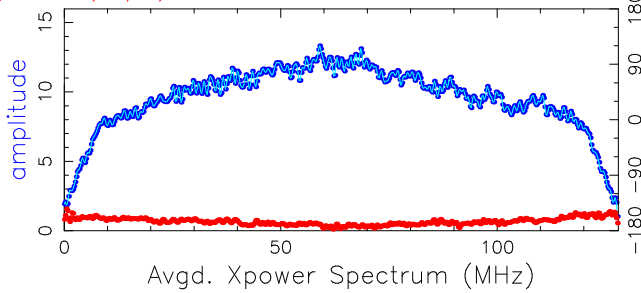
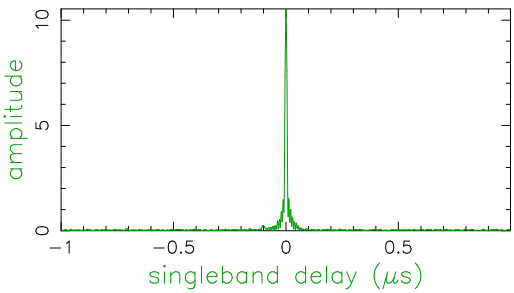
b: az 125.7 el 40.0 pa -33.5 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 74.778 1105.206 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk.Q.18.1J2DGP



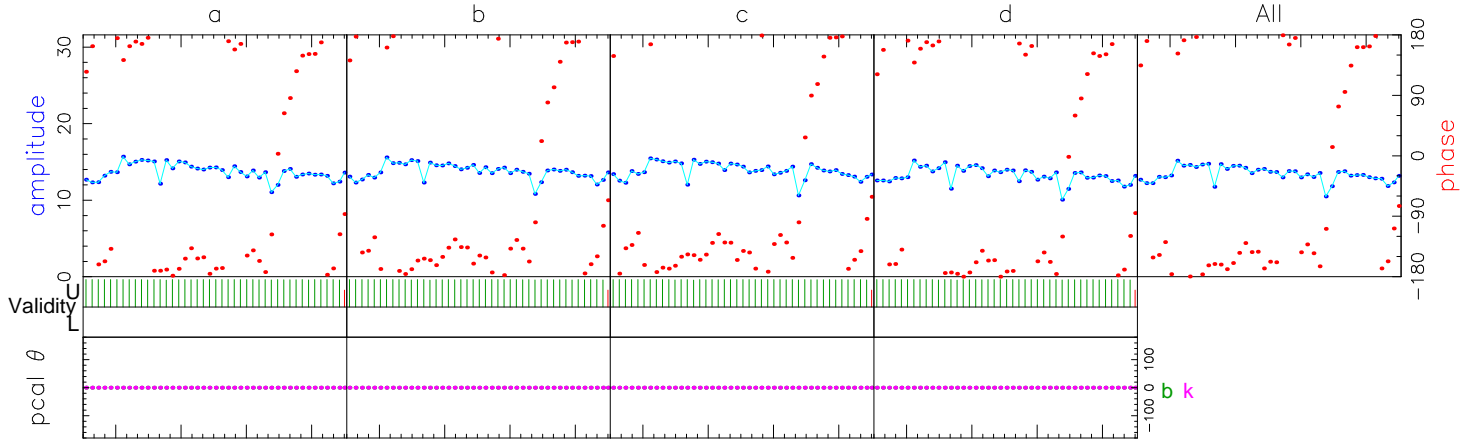
Fringe quality 5

SNR 445.5  
Int time 239.076  
Amp 10.537  
Phase -169.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.000091  
MBD 0.000228  
Fringe rate (Hz)  
-0.003299  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211436  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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		
k	1000	1000	1000	1000		
b:k	0:0	0:0	0:0	0:0		
b:k	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
k	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
k	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.55230755360E+03	Apriori delay (usec)	-3.55230778143E+03	Resid mbdelay (usec)	2.27824E-04	+/- 2.5E-06
Sband delay (usec)	-3.55230769043E+03	Apriori clock (usec)	-2.0507021E+00	Resid sbdelay (usec)	9.10000E-05	+/- 9.7E-06
Phase delay (usec)	-3.55230779235E+03	Apriori clockrate (us/s)	-9.9999991E-08	Resid phdelay (usec)	-1.09287E-05	+/- 1.7E-08
Delay rate (us/s)	-2.16704990246E-02	Apriori rate (us/s)	-2.16704223761E-02	Resid rate (us/s)	-7.66485E-08	+/- 1.2E-10
Total phase (deg)	-137.9	Apriori accel (us/s/s)	2.32707588716E-05	Resid phase (deg)	-169.3	+/- 0.3

ph/seg (deg)	45.8	0.8	Amplitude	10.537 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	28.7	1.5	Search (1024X16)	10.070	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	15.3	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	2.5	0.4	Inc. seg. avg.	13.408	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	10.729	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

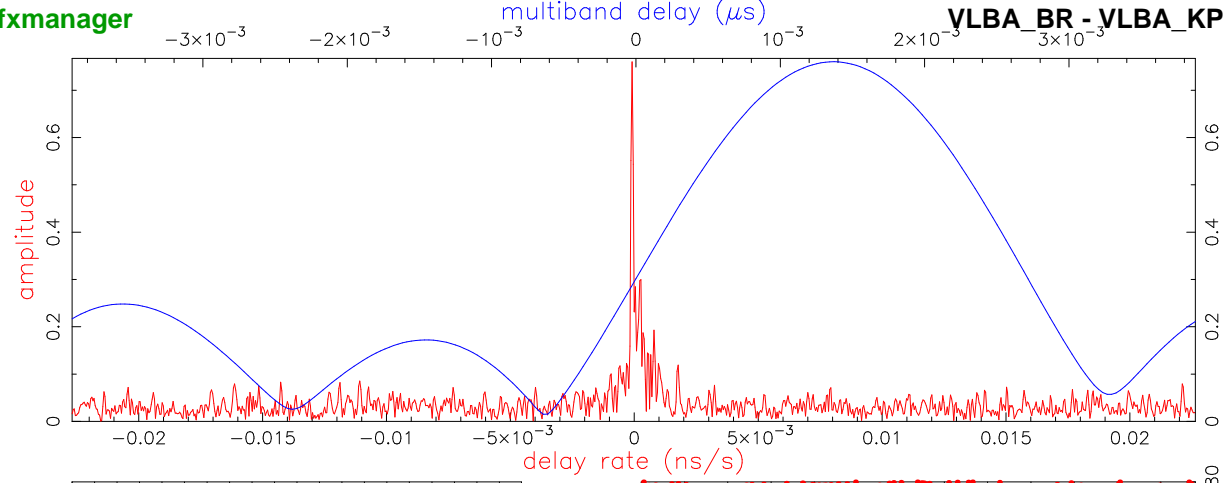
b: az 125.7 el 40.0 pa -33.5 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 74.778 1105.206 simultaneous interpolator  
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk.Q.2.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bk

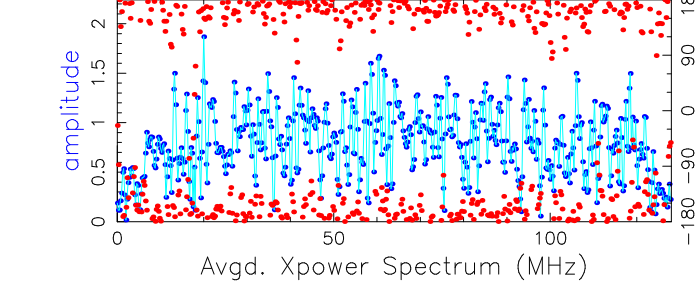
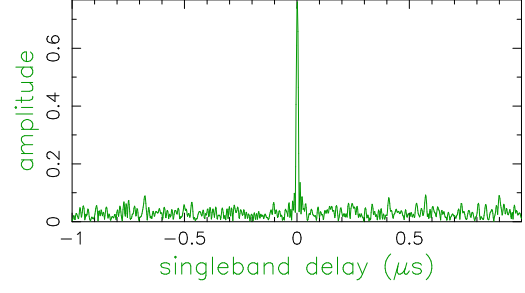
VLBA\_BR - VLBA\_KP, fgroup Q, pol LR



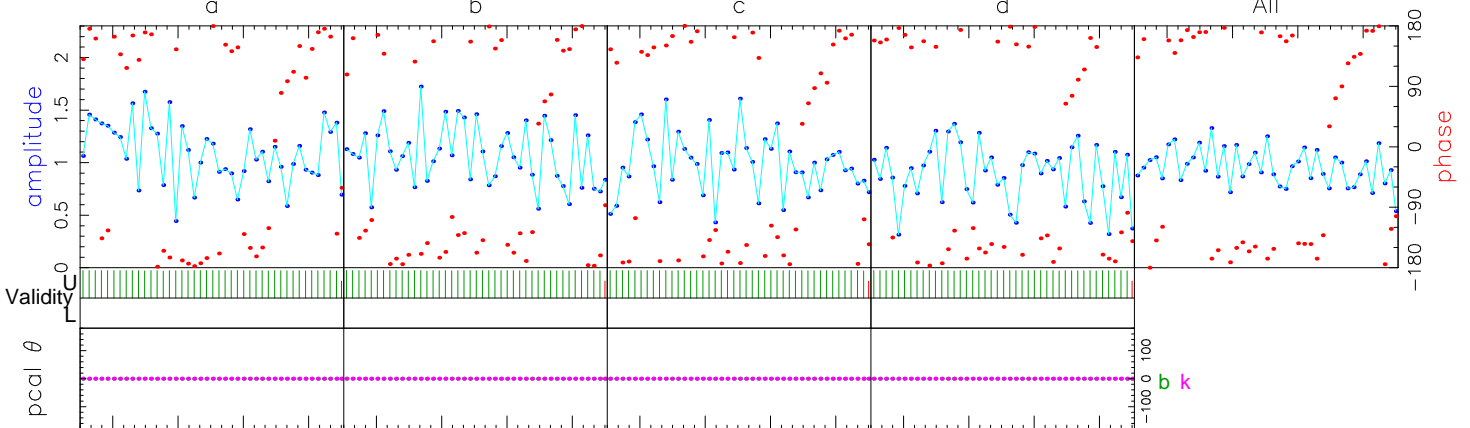
Fringe quality 9

SNR 32.4  
 Int time 239.075  
 Amp 0.767  
 Phase -179.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001269  
 MBD 0.001329  
 Fringe rate (Hz)  
 -0.003232  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211439  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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
174.3	-172.7	177.9	-177.0	Phase	-179.5
0.8	0.8	0.7	0.7	Ampl.	0.8
514.0	513.7	513.4	513.3	Sbd box	513.6
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 Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-3.55230645220E+03	Apriori delay (usec)	-3.55230778143E+03	Resid mbdelay (usec)	1.32923E-03	+/-	3.4E-05
Sband delay (usec)	-3.55230651205E+03	Apriori clock (usec)	-2.0507021E+00	Resid sbdelay (usec)	1.26937E-03	+/-	1.3E-04
Phase delay (usec)	-3.55230779301E+03	Apriori clockrate (us/s)	-9.9999991E-08	Resid phdelay (usec)	-1.15838E-05	+/-	2.3E-07
Delay rate (us/s)	-2.16704974760E-02	Apriori rate (us/s)	-2.16704223761E-02	Resid rate (us/s)	-7.509999E-08	+/-	1.6E-09
Total phase (deg)	-148.0	Apriori accel (us/s/s)	2.32707588716E-05	Resid phase (deg)	-179.5	+/-	3.5

RMS	Theor.	Amplitude	0.767 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	43.5	Search (1024X16)	0.735	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	33.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	7.0	Inc. seg. avg.	0.945	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
amp/frq (%)	7.4	Inc. frq. avg.	0.761	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

b: az 125.7 el 40.0 pa -33.5 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 74.778 1105.206 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk.Q.33.1J2DGP

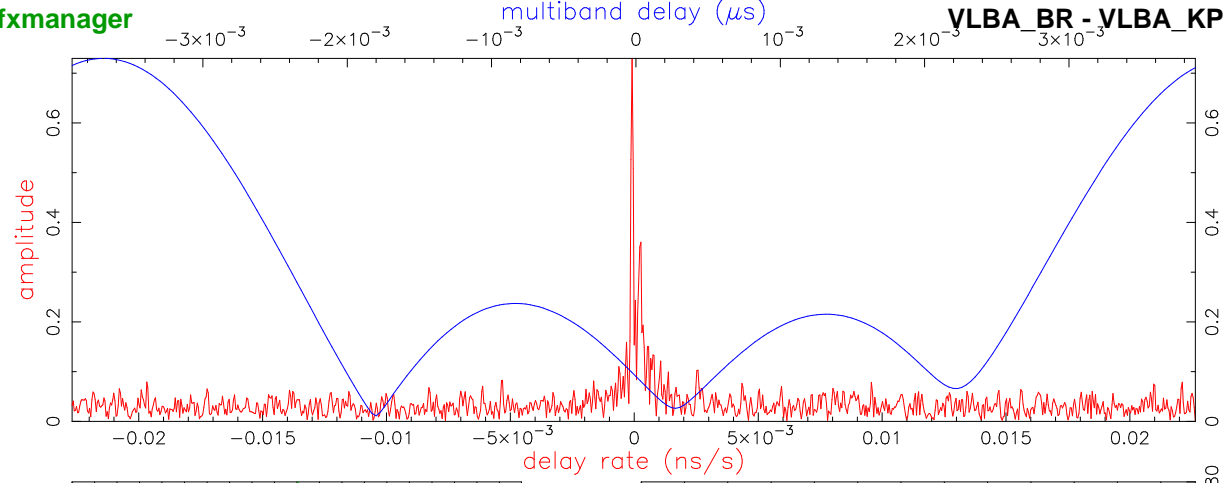


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bk

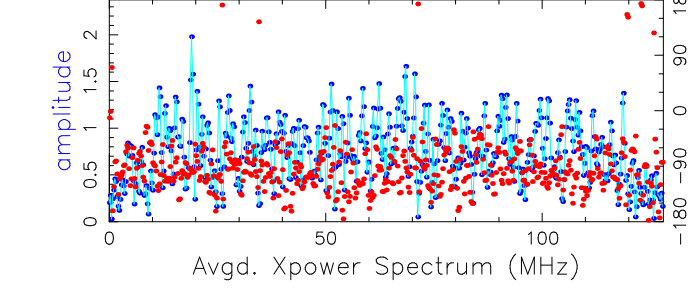
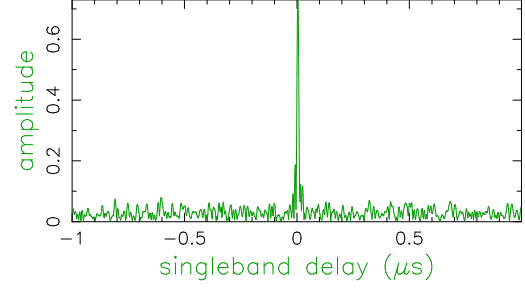
VLBA\_BR - VLBA\_KP, fgroup Q, pol RL



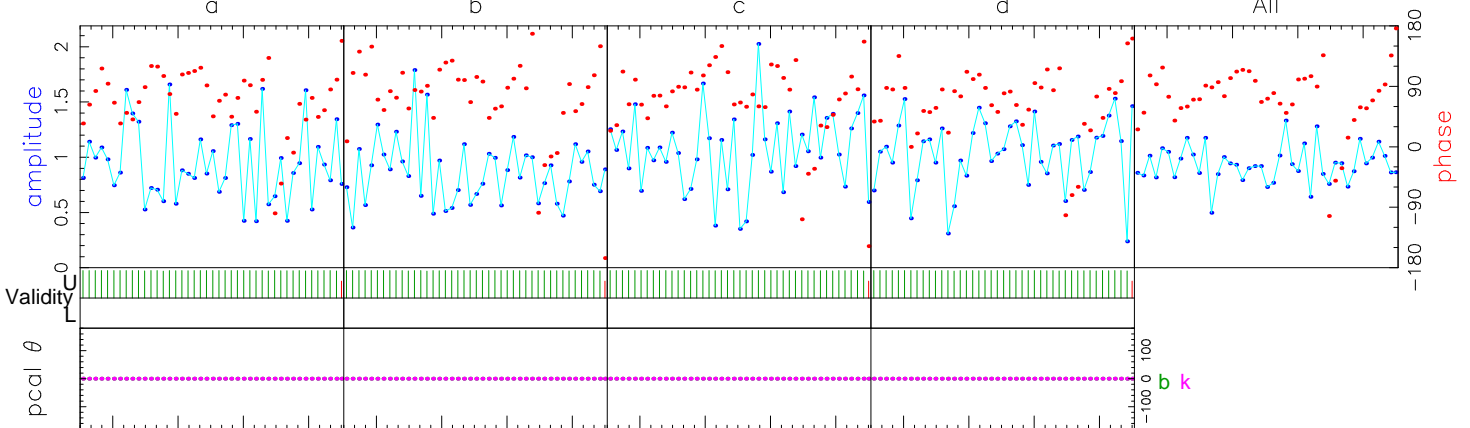
Fringe quality 9

SNR 30.9  
 Int time 239.076  
 Amp 0.730  
 Phase 78.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003971  
 MBD -0.003684  
 Fringe rate (Hz) -0.003250  
 Ion TEC 0.000  
 Ref freq (MHz) 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211441  
 2020:247:085004  
 RA & Dec (J2000) 15h04m24.979782s +10°29'39.198559"



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		
k	1000	1000	1000	1000		
b:k	0:0	0:0	0:0	0:0		
b:k	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
k	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
k	Q00UL	Q01UL	Q02UL	Q03UL		

	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
Group delay (usec)(sbd)	-3.55230365324E+03			-3.55230778143E+03		
Sband delay (usec)	-3.55230381018E+03			-2.0507021E+00		
Phase delay (usec)	-3.55230777637E+03			-9.9999991E-08		
Delay rate (us/s)	-2.16704978901E-02			-2.16704223761E-02		
Total phase (deg)		-250.2		2.32707588716E-05		
Apriori delay (usec)					Resid mbdelay (usec)	-3.68431E-03 +/- 3.6E-05
Apriori clock (usec)					Resid sbdelay (usec)	3.97125E-03 +/- 1.4E-04
Apriori clockrate (us/s)					Resid phdelay (usec)	5.05492E-06 +/- 2.4E-07
Apriori rate (us/s)					Resid rate (us/s)	-7.55140E-08 +/- 1.7E-09
Apriori accel (us/s/s)					Resid phase (deg)	78.3 +/- 3.7

	RMS	Theor.	Amplitude	0.730 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	47.7	12.2	Search (1024X16)	0.693	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	36.1	21.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.1	3.7	Inc. seg. avg.	0.916	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	7.4	6.5	Inc. frq. avg.	0.731	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 125.7 el 40.0 pa -33.5 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 74.778 1105.206 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bk.Q.56.1J2DGP

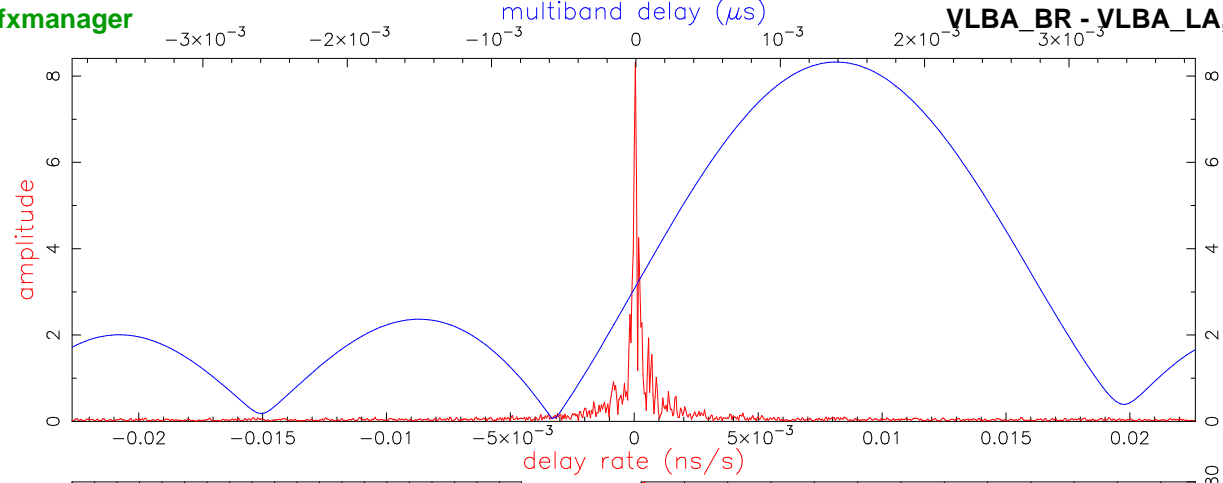


Mk4/DiFX fourfit 3.21 rev 2937

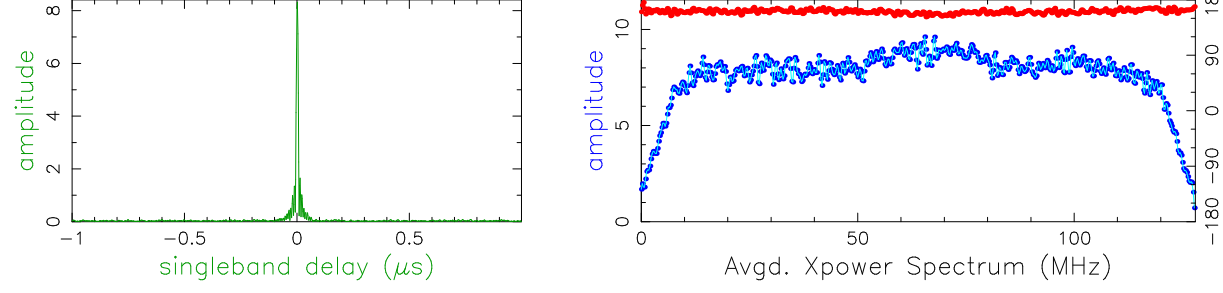
fxmanager

1502+106.1J2DGP, No0154, bl

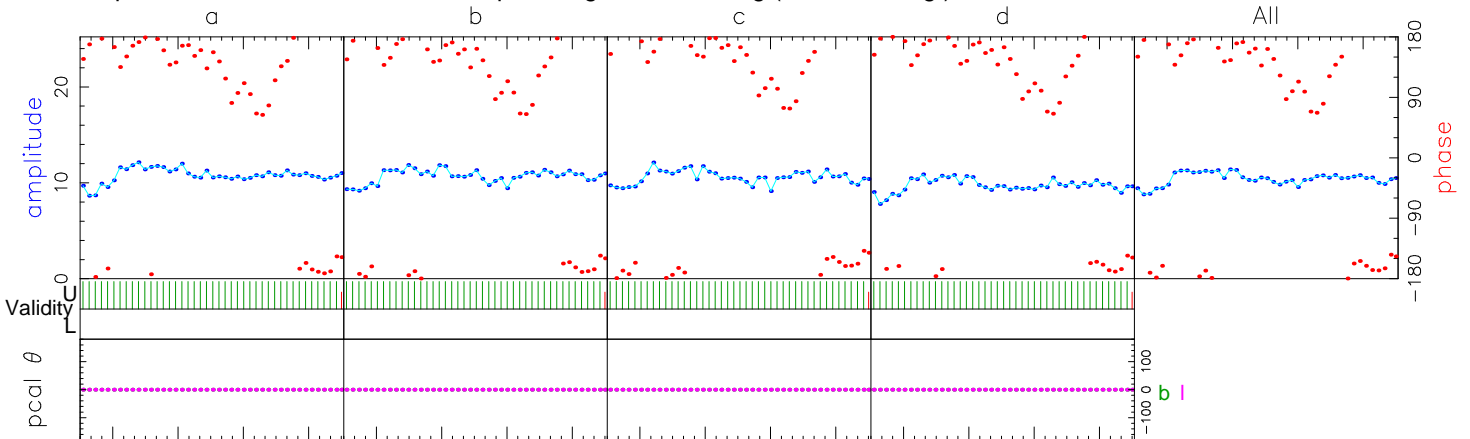
VLBA\_BR - VLBA\_LA, fgroup Q, pol RR



Fringe quality 6  
 SNR 356.2  
 Int time 239.982  
 Amp 8.408  
 Phase 159.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001270  
 MBD 0.001344  
 Fringe rate (Hz)  
 0.001060  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211438  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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:l	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	-3.83915080870E+03	Apriori delay (usec)	-3.83915215279E+03	Resid mbdelay (usec)	1.34409E-03	+/-	3.1E-06
Sband delay (usec)	-3.83915088291E+03	Apriori clock (usec)	-1.3052969E+08	Resid sbdelay (usec)	1.26987E-03	+/-	1.2E-05
Phase delay (usec)	-3.83915214252E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	1.02656E-05	+/-	2.1E-08
Delay rate (us/s)	1.09656048781E-01	Apriori rate (us/s)	1.09656024146E-01	Resid rate (us/s)	2.46353E-08	+/-	1.5E-10
Total phase (deg)	-77.1	Apriori accel (us/s/s)	2.36716970997E-05	Resid phase (deg)	159.1	+/-	0.3

ph/seg (deg)	38.6	1.1	Amplitude	8.408 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	25.2	1.8	Search (1024X16)	7.726	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	4.9	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	4.2	0.6	Inc. seg. avg.	10.427	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
			Inc. frq. avg.	8.334	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

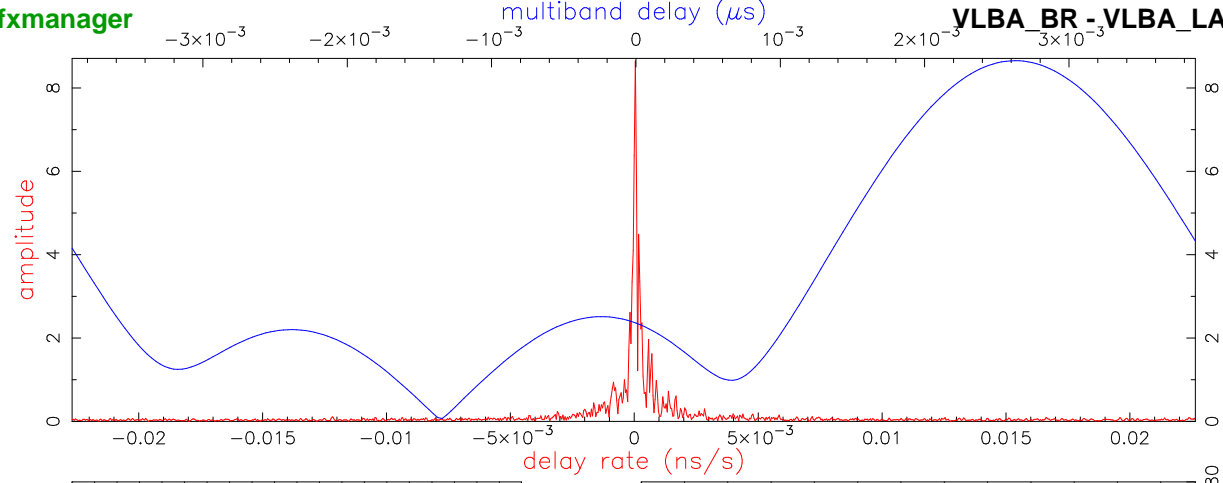
b: az 125.7 el 40.0 pa -33.5 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -307.474 868.587 simultaneous interpolator  
 Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.Q.23.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

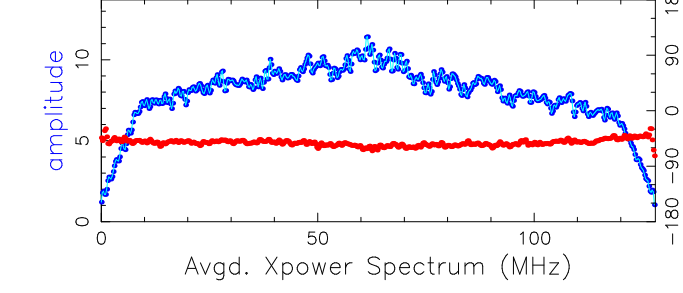
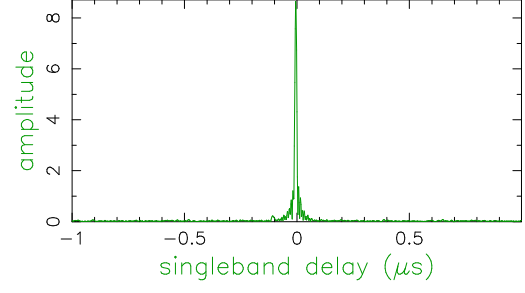
1502+106.1J2DGP, No0154, bl

VLBA\_BR - VLBA\_LA, fgroup Q, pol LL



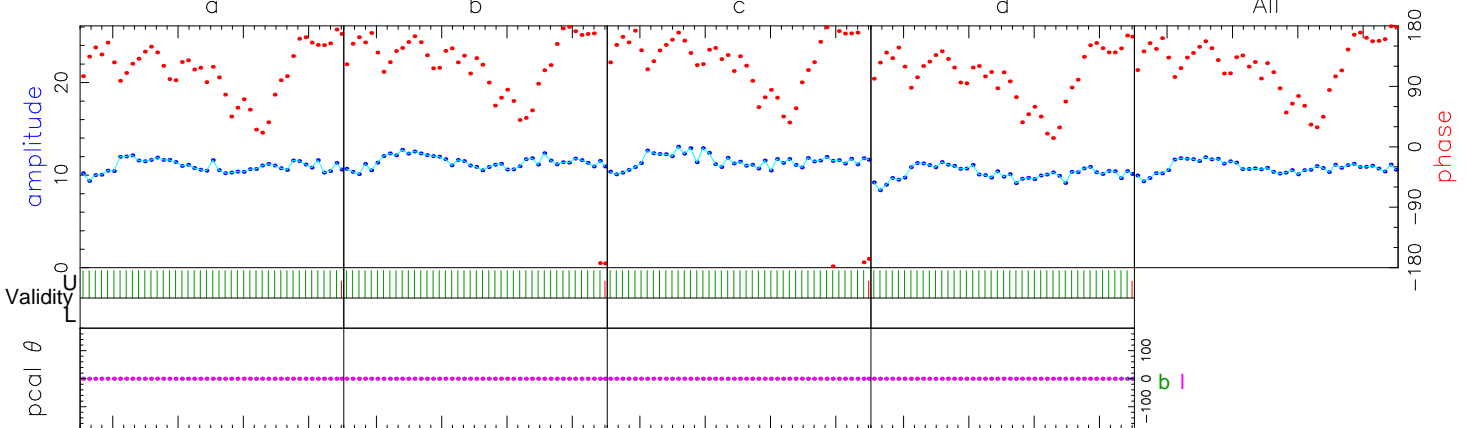
Fringe quality 5

SNR 369.0  
 Int time 239.982  
 Amp 8.710  
 Phase 123.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.005299  
 MBD 0.002662  
 Fringe rate (Hz)  
 0.001064  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211436  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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



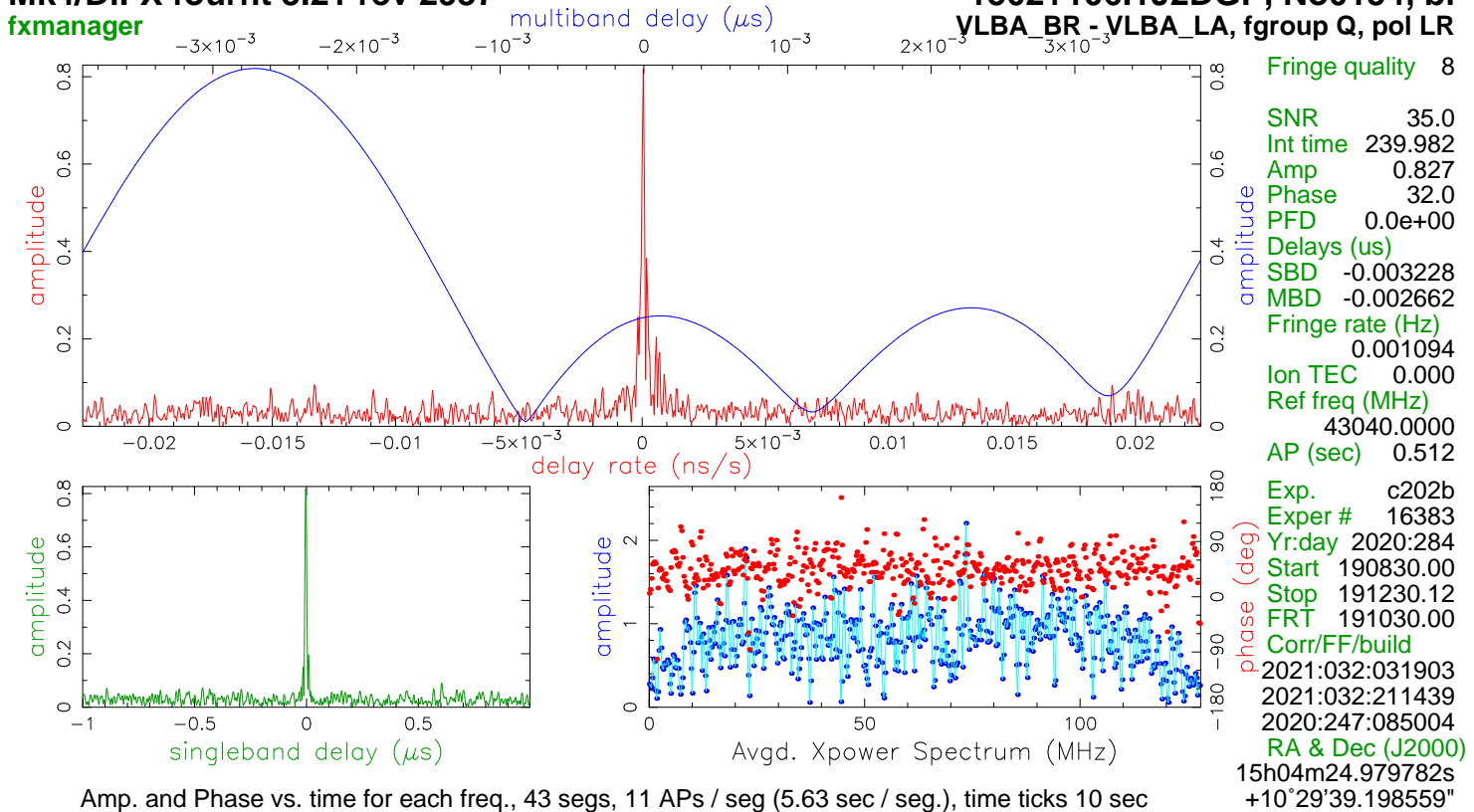
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
116.4	132.1	134.6	109.4	Phase	123.6
8.7	9.1	9.2	8.1	Ampl.	8.8
510.9	510.5	510.0	509.7	Sbd box	510.3
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
b:l 0:0	0:0	0:0	0:0	PC phase	
b:l 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-3.83915730367E+03	Apriori delay (usec)	-3.83915215279E+03	Resid mbdelay (usec)	2.66162E-03	+/-	3.0E-06
Sband delay (usec)	-3.83915745191E+03	Apriori clock (usec)	-1.3052969E+08	Resid sbdelay (usec)	-5.29912E-03	+/-	1.2E-05
Phase delay (usec)	-3.83915214481E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	7.97893E-06	+/-	2.0E-08
Delay rate (us/s)	1.09656048863E-01	Apriori rate (us/s)	1.09656024146E-01	Resid rate (us/s)	2.47175E-08	+/-	1.4E-10
Total phase (deg)	-112.5	Apriori accel (us/s/s)	2.36716970997E-05	Resid phase (deg)	123.6	+/-	0.3

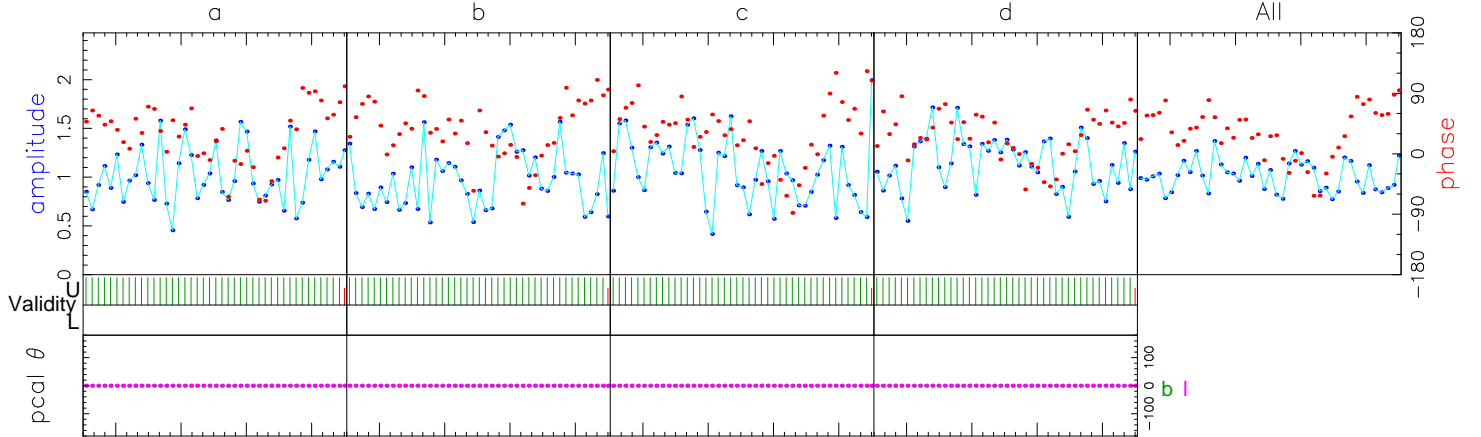
ph/seg (deg)	38.8	1.0	Amplitude	8.710 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	25.4	1.8	Search (1024X16)	7.949	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	14.9	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	5.0	0.5	Inc. seg. avg.	10.838	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	8.797	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 125.7 el 40.0 pa -33.5 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -307.474 868.587 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.Q.3.1J2DGP



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
32.8	35.2	35.6	25.9	25.9	Phase	32.0
0.8	0.7	0.8	1.0	1.0	Ampl.	0.8
511.7	511.4	511.3	511.0	511.0	Sbd box	511.3
U/L 469/0	469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	1000	PC freqs	
b:l 0:0	0:0	0:0	0:0	0:0	PC phase	
b:l 0:0	0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Q03UL	Chan ids	
l Q00UR	Q01UR	Q02UR	Q03UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-3.83915481439E+03	Apriori delay (usec)	-3.83915215279E+03	Resid mbdelay (usec)	-2.66160E-03	+/- 3.2E-05
Sband delay (usec)	-3.83915538054E+03	Apriori clock (usec)	-1.3052969E+00	Resid sbdelay (usec)	-3.22775E-03	+/- 1.2E-04
Phase delay (usec)	-3.83915215072E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	2.06591E-06	+/- 2.1E-07
Delay rate (us/s)	1.09656049558E-01	Apriori rate (us/s)	1.09656024146E-01	Resid rate (us/s)	2.54124E-08	+/- 1.5E-09
Total phase (deg)	-204.2	Apriori accel (us/s/s)	2.36716970997E-05	Resid phase (deg)	32.0	+/- 3.3

ph/seg (deg) 38.0 10.7 Amplitude 0.827 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 29.0 18.7 Search (1024X16) 0.752 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 5.5 3.3 Inc. seg. avg. 0.996 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004  
amp/frq (%) 10.0 5.7 Inc. frq. avg. 0.819 Sample rate(MSamp/s): 256 Data rate (Mb/s): 2048 nlags: 512 t\_cohere infinite dr window (ns/s) -0.023 0.023  
b: az 125.7 el 40.0 pa -33.5 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -307.474 868.587 simultaneous interpolator  
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.Q.38.1J2DGP

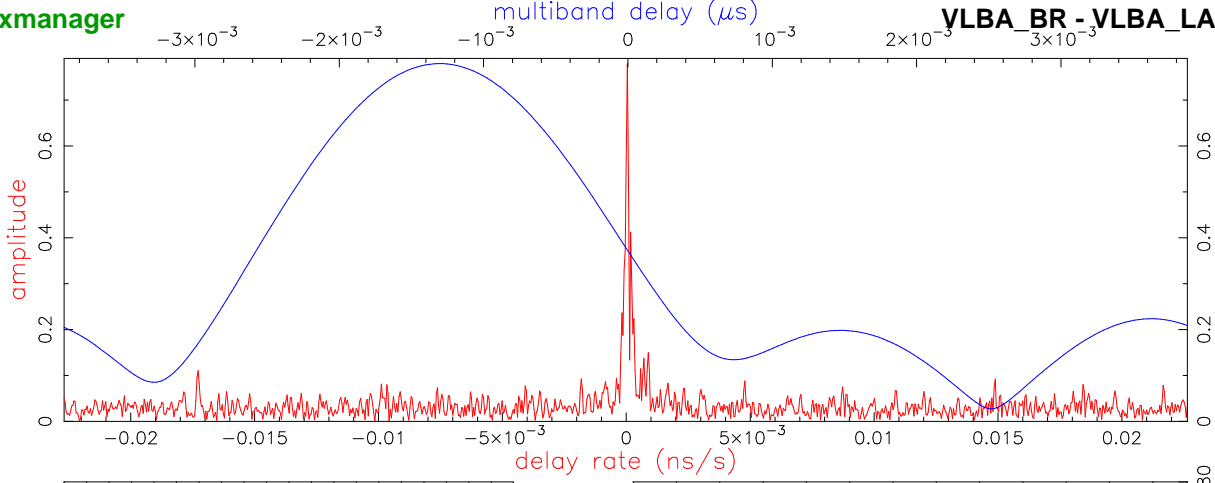
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

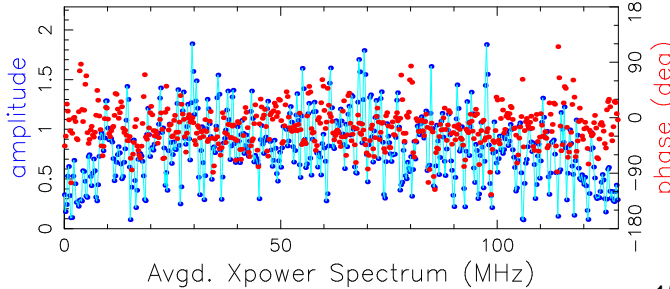
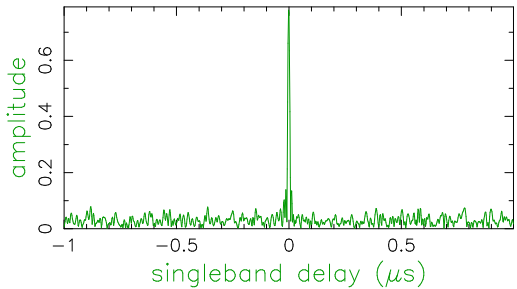
1502+106.1J2DGP, No0154, bl

VLBA\_BR - VLBA\_LA, fgroup Q, pol RL

Fringe quality 7

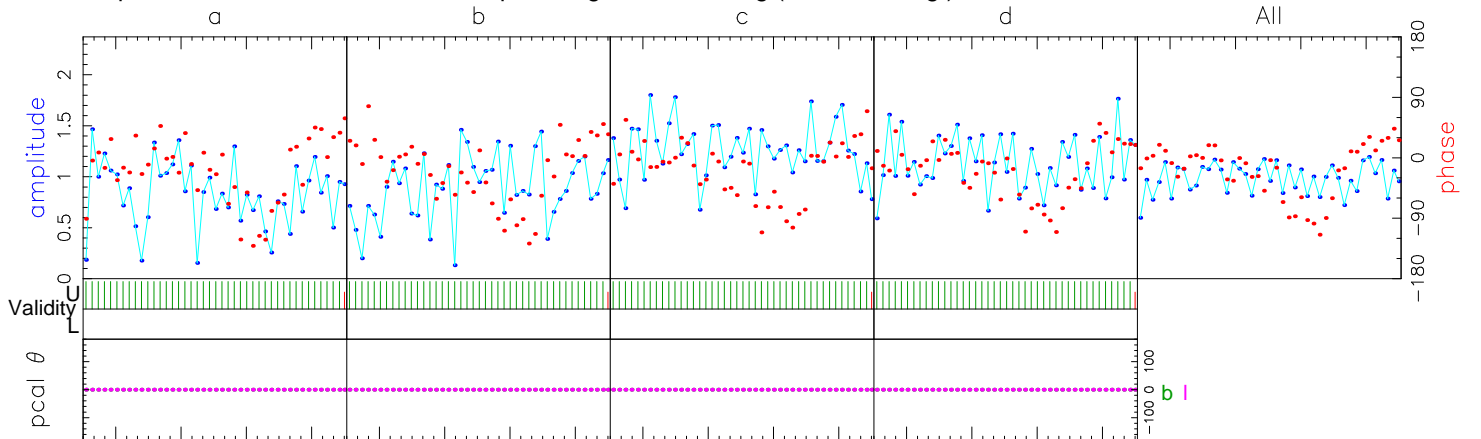


SNR 33.5  
 Int time 239.982  
 Amp 0.791  
 Phase -14.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001130  
 MBD -0.001261  
 Fringe rate (Hz)  
 0.001135  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211442  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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



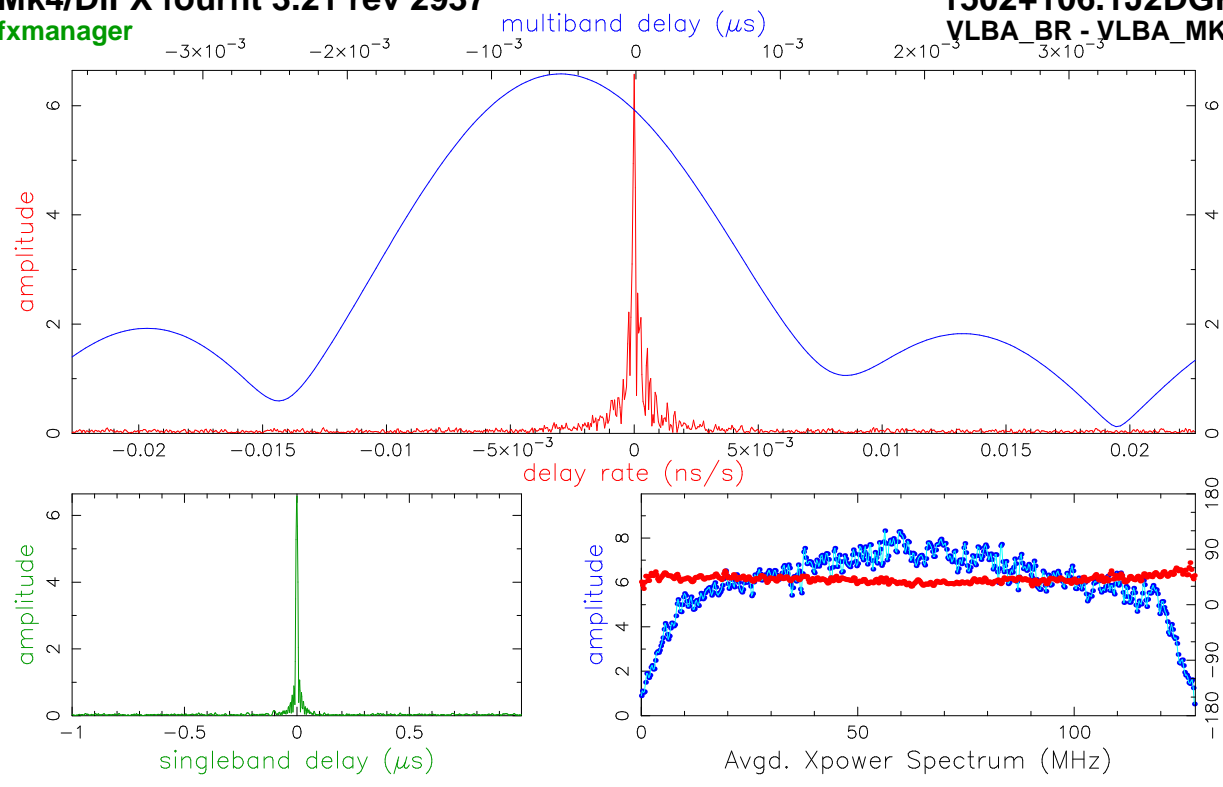
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-7.0	-20.7	-15.0	-16.0	Phase	-14.8
	0.6	0.6	1.0	0.9	Ampl.	0.8
	512.4	512.5	512.5	512.3	Sbd box	512.4
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
b:l	0:0	0:0	0:0	0:0	PC phase	
b:l	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.83915341367E+03	Apriori delay (usec)	-3.83915215279E+03	Resid mbdelay (usec)	-1.26088E-03	+/-	3.3E-05
Sband delay (usec)	-3.83915328316E+03	Apriori clock (usec)	-1.3052969E+00	Resid sbdelay (usec)	-1.13037E-03	+/-	1.3E-04
Phase delay (usec)	-3.83915215374E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-9.55651E-07	+/-	2.2E-07
Delay rate (us/s)	1.09656050514E-01	Apriori rate (us/s)	1.09656024146E-01	Resid rate (us/s)	2.63682E-08	+/-	1.6E-09
Total phase (deg)	-251.0	Apriori accel (us/s/s)	2.36716970997E-05	Resid phase (deg)	-14.8	+/-	3.4

ph/seg (deg)	39.7	Theor.	11.2	Amplitude	0.791 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	30.8		19.6	Search (1024X16)	0.727	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	7.0		3.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	20.1		6.0	Inc. seg. avg.	0.968	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.780	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

b: az 125.7 el 40.0 pa -33.5 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -307.474 868.587 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bl.Q.58.1J2DGP

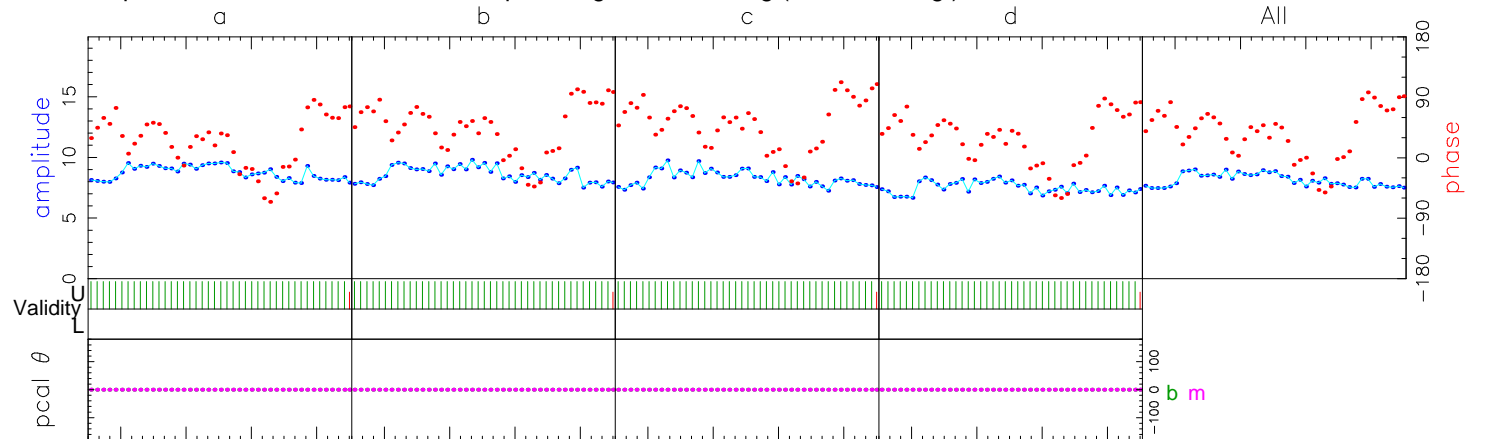


Fringe quality 5

SNR 281.5  
Int time 239.986  
Amp 6.646  
Phase 37.9  
PFD 0.0e+00  
Delays (us)  
SBD -0.000698  
MBD -0.000566  
Fringe rate (Hz)  
-0.000314  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512

Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211437  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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



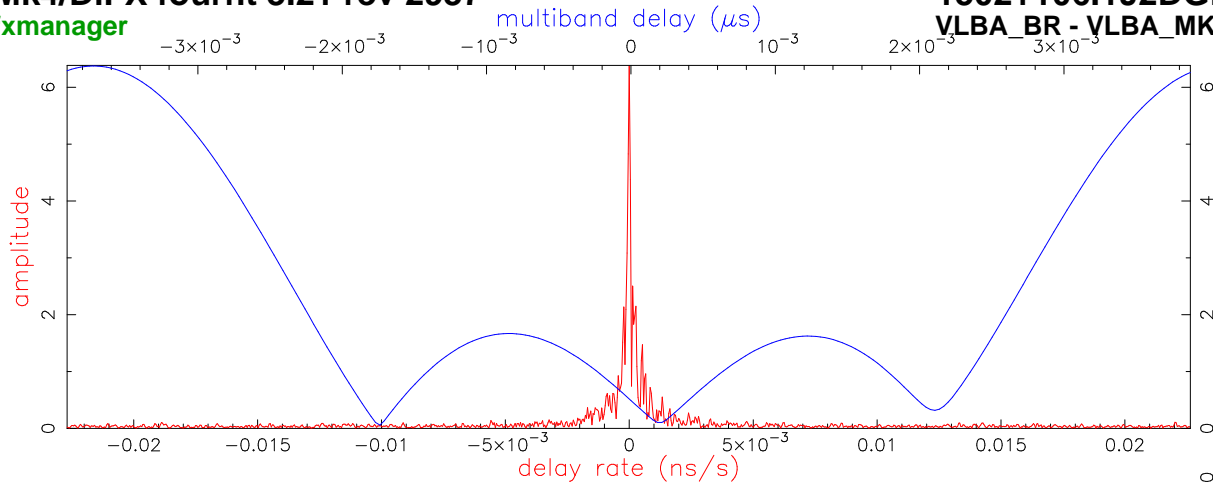
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
m	1000	1000	1000	1000		
b:m	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
m	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
m	Q00UL	Q01UL	Q02UL	Q03UL		
Group delay (usec)(sbd)	7.15981391061E+03	7.15981377899E+03	7.15981447686E+03	7.15981447686E+03	Resid mbdelay (usec)	-5.66250E-04 +/- 4.0E-06
Sband delay (usec)	7.15981377899E+03	7.15981447931E+03	-1.5080702E+01	-1.5080702E+01	Resid sbdelay (usec)	-6.97875E-04 +/- 1.5E-05
Phase delay (usec)	7.15981447931E+03	-7.47609598984E-01	-9.9999991E-08	-9.9999991E-08	Resid phdelay (usec)	2.44621E-06 +/- 2.6E-08
Delay rate (us/s)	-7.47609598984E-01		-7.47609591681E-01	-7.47609591681E-01	Resid rate (us/s)	-7.30323E-09 +/- 1.9E-10
Total phase (deg)		68.2	-2.98809933156E-05	-2.98809933156E-05	Resid phase (deg)	37.9 +/- 0.4
ph/seg (deg)	37.9	1.3	6.520	6.520	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	23.9	2.3	0.000	0.000	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	14.5	0.4	8.149	8.149	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%)	5.7	0.7	6.684	6.684	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
					Data rate(Mb/s): 2048	nlags: 512 t_coherence infinite ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5	m: az 85.0 el 17.5 pa -72.4	u,v (fr/asec) 2164.358 1542.057				simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bm..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bm.Q.12.1J2DGP				

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

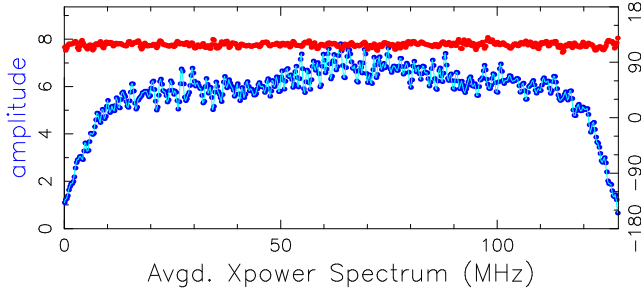
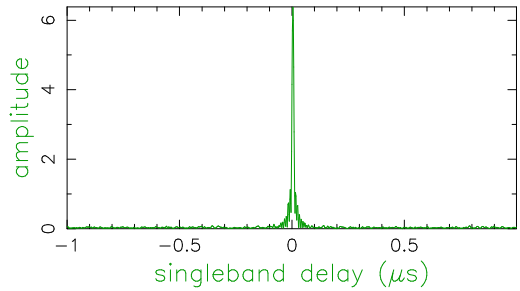
1502+106.1J2DGP, No0154, bm

VLBA\_BR - VLBA\_MK, fgroup Q, pol RR



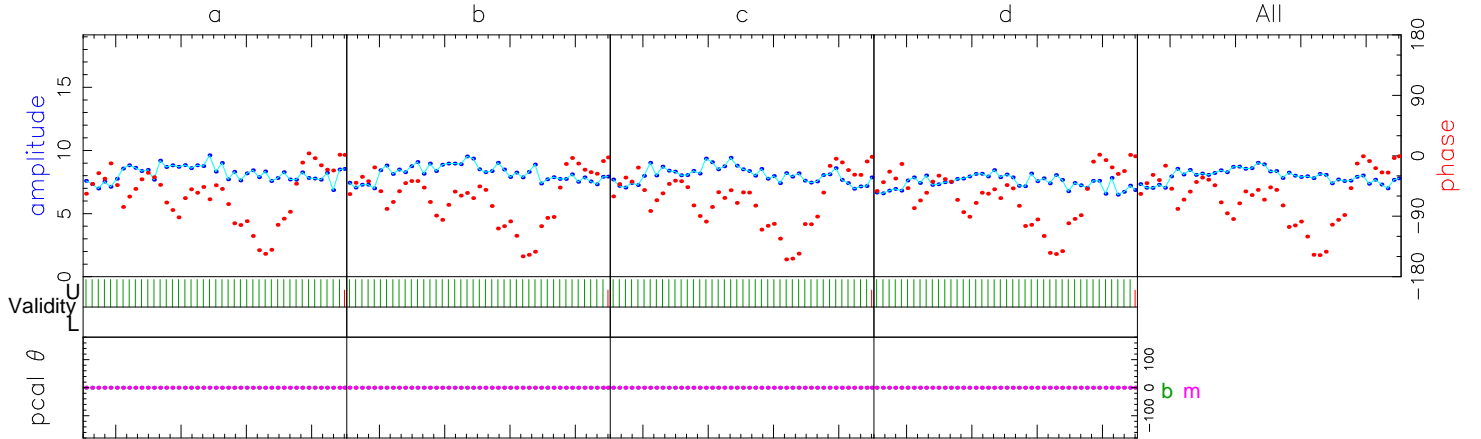
Fringe quality 6

SNR 270.5  
 Int time 239.986  
 Amp 6.386  
 Phase -59.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004178  
 MBD -0.003705  
 Fringe rate (Hz)  
 -0.000316  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211438  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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



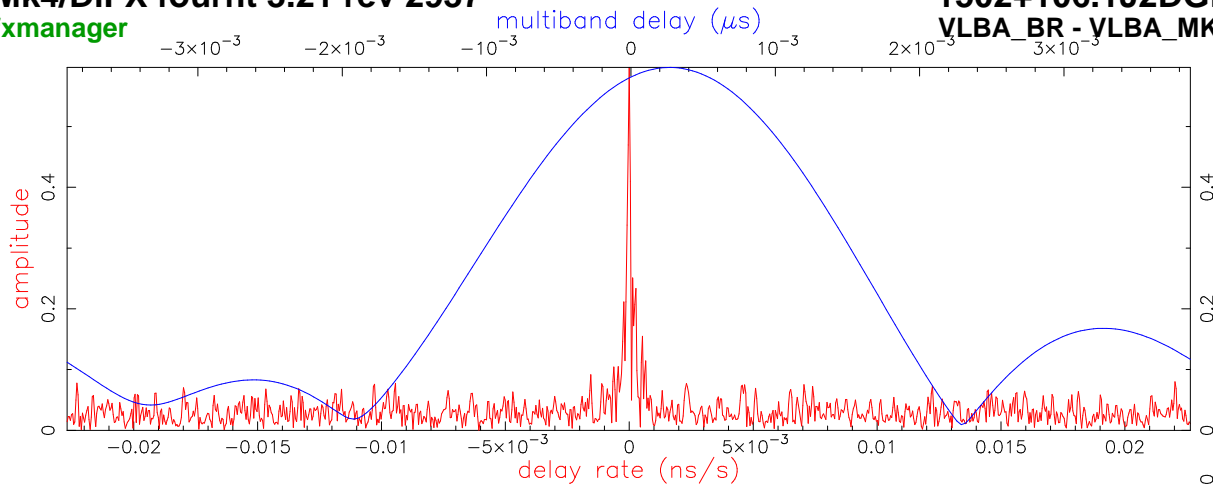
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-56.4	-61.2	-62.8	-58.3	Phase	-59.7
	6.5	6.6	6.4	5.9	Ampl.	6.4
	514.9	515.2	515.1	515.5	Sbd box	515.1
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	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	

	7.15981858417E+03	Apriori delay (usec)	7.15981447686E+03	Resid mbdelay (usec)	-3.70519E-03	+/- 4.1E-06
Group delay (usec)(sbd)	7.15981858417E+03	Apriori clock (usec)	-1.5080702E+01	Resid sbdelay (usec)	4.17750E-03	+/- 1.6E-05
Sband delay (usec)	7.15981865436E+03	Apriori clockrate (us/s)	-9.9999991E-08	Resid phdelay (usec)	-3.85446E-06	+/- 2.7E-08
Phase delay (usec)	7.15981447301E+03	Apriori rate (us/s)	-7.47609591681E-01	Resid rate (us/s)	-7.34577E-09	+/- 2.0E-10
Delay rate (us/s)	-7.47609599027E-01	Apriori accel (us/s/s)	-2.98809933156E-05	Resid phase (deg)	-59.7	+/- 0.4
Total phase (deg)	-29.4					

	RMS	Theor.	Amplitude	6.386 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	38.3	1.4	Search (1024X16)	6.236	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	26.0	2.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.5	0.4	Inc. seg. avg.	7.959	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.1	0.7	Inc. frq. avg.	6.381	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 512	t_coherence infinite

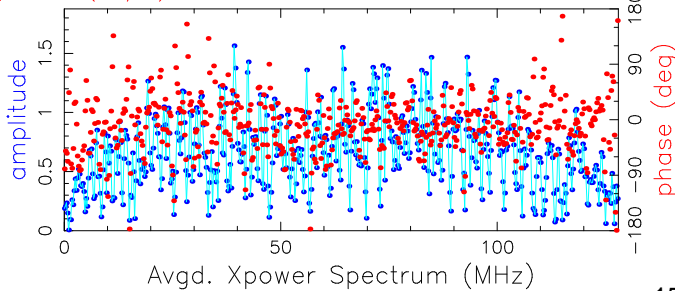
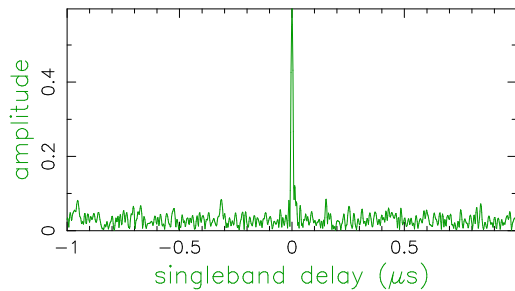
b: az 125.7 el 40.0 pa -33.5 m: az 85.0 el 17.5 pa -72.4 u,v (fr/asec) 2164.358 1542.057 simultaneous interpolator  
 Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bm..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bm.Q.28.1J2DGP





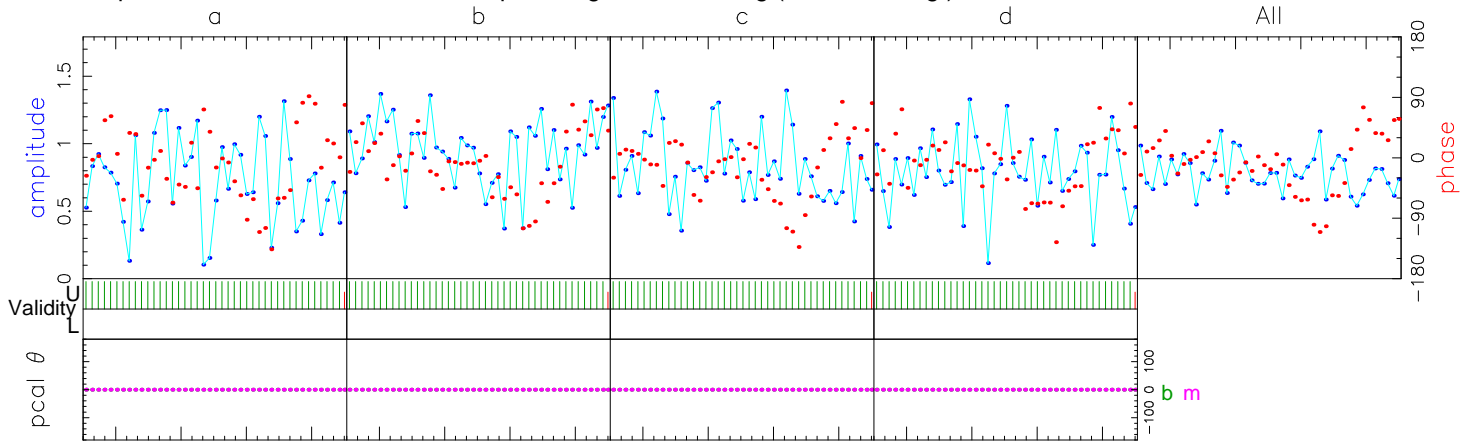
Fringe quality 9

SNR 25.3  
Int time 239.986  
Amp 0.597  
Phase -11.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.000066  
MBD 0.000273  
Fringe rate (Hz)  
-0.000394  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211440  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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
	-16.7	-3.1	-16.2	-11.2	Phase	-11.2
	0.5	0.7	0.6	0.6	Ampl.	0.6
	513.4	513.1	512.7	513.0	Sbd box	513.0
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	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	7.15981475005E+03	Apriori delay (usec)	7.15981447686E+03	Resid mbdelay (usec)	2.73187E-04	+/- 4.4E-05
Group delay (usec)(sbd)	7.15981454311E+03	Apriori clock (usec)	-1.5080702E+01	Resid sbdelay (usec)	6.62500E-05	+/- 1.7E-04
Sband delay (usec)	7.15981447614E+03	Apriori clockrate (us/s)	-9.9999991E-08	Resid phdelay (usec)	-7.24189E-07	+/- 2.9E-07
Phase delay (usec)	-7.47609600845E-01	Apriori rate (us/s)	-7.47609591681E-01	Resid rate (us/s)	-9.16378E-09	+/- 2.1E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-2.98809933156E-05	Resid phase (deg)	-11.2	+/- 4.5
Total phase (deg)	19.1					

	RMS	Theor.	Amplitude	0.597 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	42.8	14.8	Search (1024X16)	0.578	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	39.1	25.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.8	4.5	Inc. seg. avg.	0.761	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	13.5	7.9	Inc. frq. avg.	0.598	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 125.7 el 40.0 pa -33.5 m: az 85.0 el 17.5 pa -72.4 u,v (fr/asec) 2164.358 1542.057 simultaneous interpolator

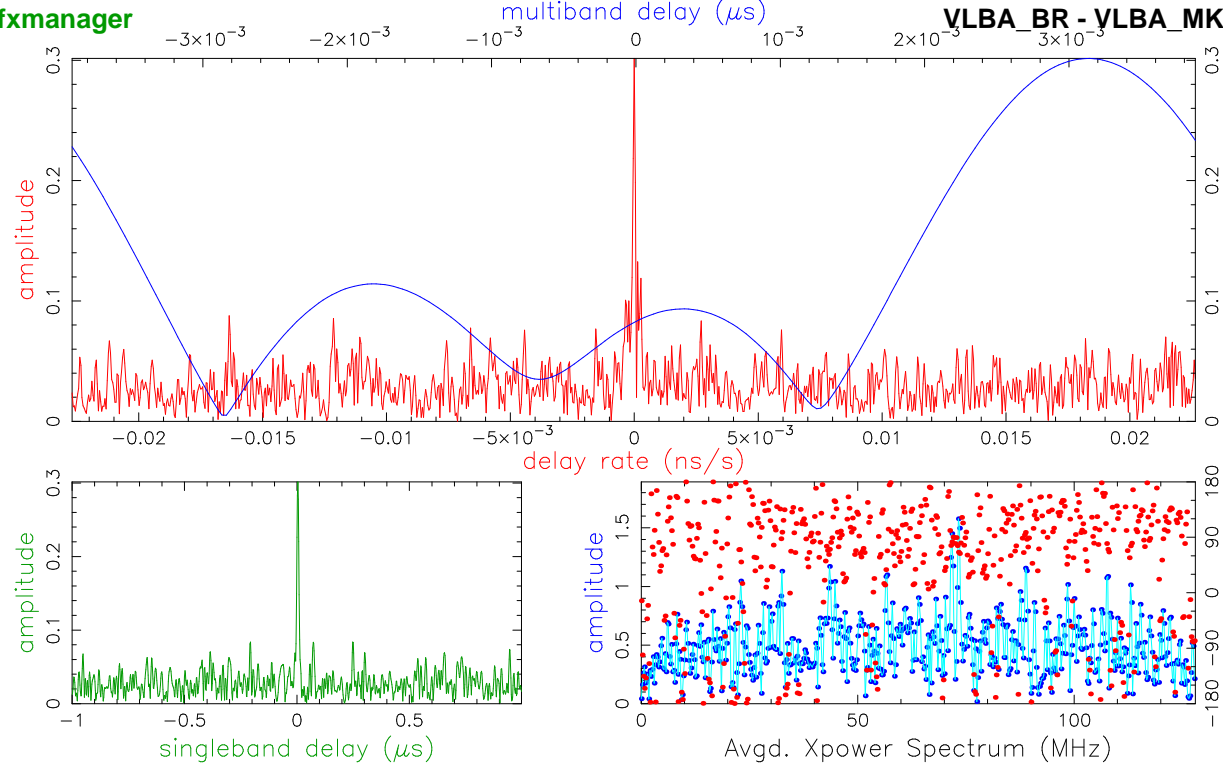
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bm..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bm.Q.43.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bm

VLBA\_BR - VLBA\_MK, fgroup Q, pol RL

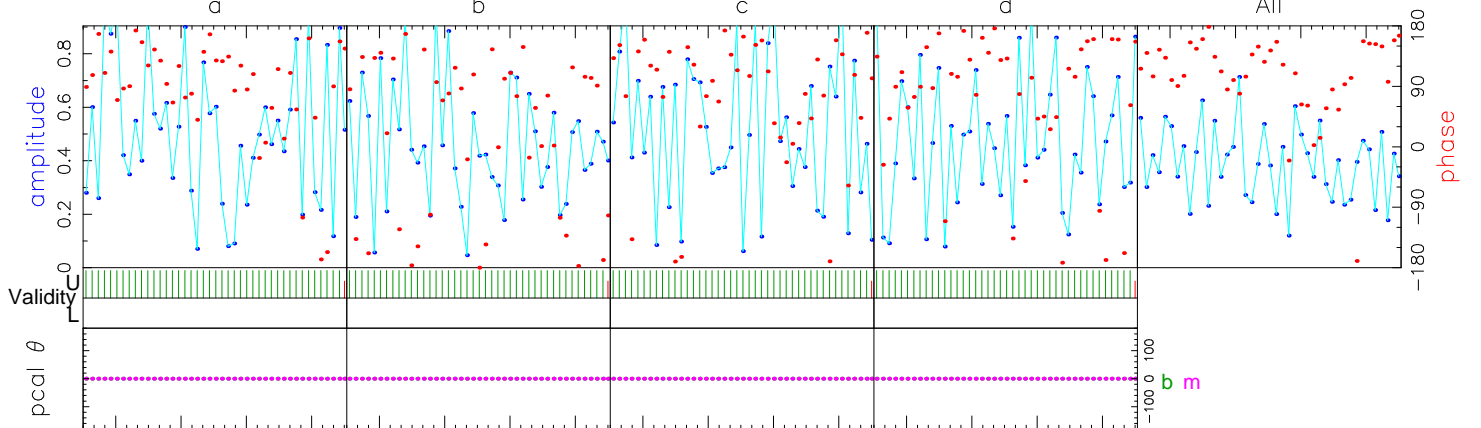


Fringe quality 9

SNR 12.8  
 Int time 239.986  
 Amp 0.302  
 Phase 116.7  
 PFD 6.1e-29  
 Delays (us)  
 SBD 0.003794  
 MBD 0.003127  
 Fringe rate (Hz)  
 -0.000318  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211442  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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		
m	1000	1000	1000	1000		
b:m	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
m	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
m	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	7.15981760377E+03	Apriori delay (usec)	7.15981447686E+03	Resid mbdelay (usec)	3.12691E-03	+/-	8.7E-05
Sband delay (usec)	7.15981827061E+03	Apriori clock (usec)	-1.5080702E+01	Resid sbdelay (usec)	3.79375E-03	+/-	3.4E-04
Phase delay (usec)	7.15981448439E+03	Apriori clockrate (us/s)	-9.9999991E-08	Resid phdelay (usec)	7.53082E-06	+/-	5.8E-07
Delay rate (us/s)	-7.47609599066E-01	Apriori rate (us/s)	-7.47609591681E-01	Resid rate (us/s)	-7.38548E-09	+/-	4.2E-09
Total phase (deg)	147.0	Apriori accel (us/s/s)	-2.98809933156E-05	Resid phase (deg)	116.7	+/-	9.0

ph/seg (deg)	45.9	Theor.	29.4	Amplitude	0.302 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	54.4		51.3	Search (1024X16)	0.294	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	5.5		9.0	Inc. seg. avg.	0.349	Bits/sample: 2x2	Sample rate(MSamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	15.0		15.7	Inc. frq. avg.	0.298	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

b: az 125.7 el 40.0 pa -33.5 m: az 85.0 el 17.5 pa -72.4 u,v (fr/asec) 2164.358 1542.057 simultaneous interpolator

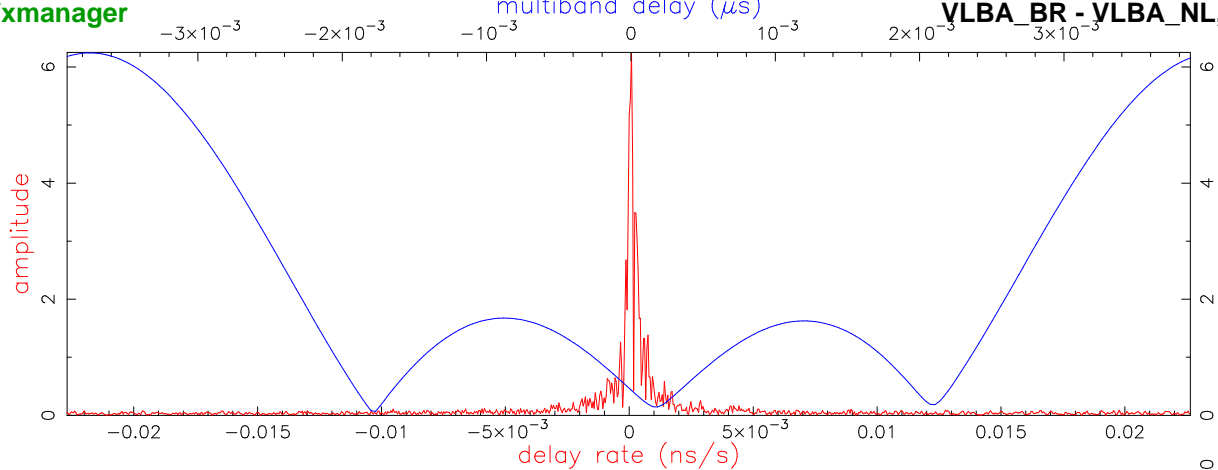
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bm..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bm.Q.63.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

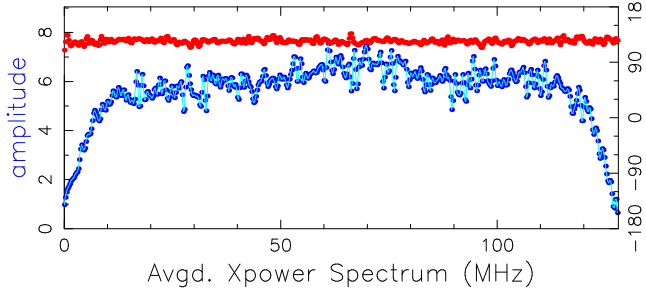
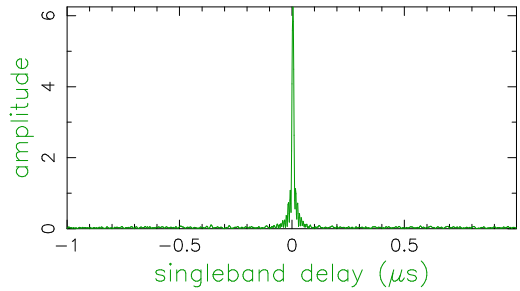
1502+106.1J2DGP, No0154, bn

VLBA\_BR - VLBA\_NL, fgroup Q, pol RR



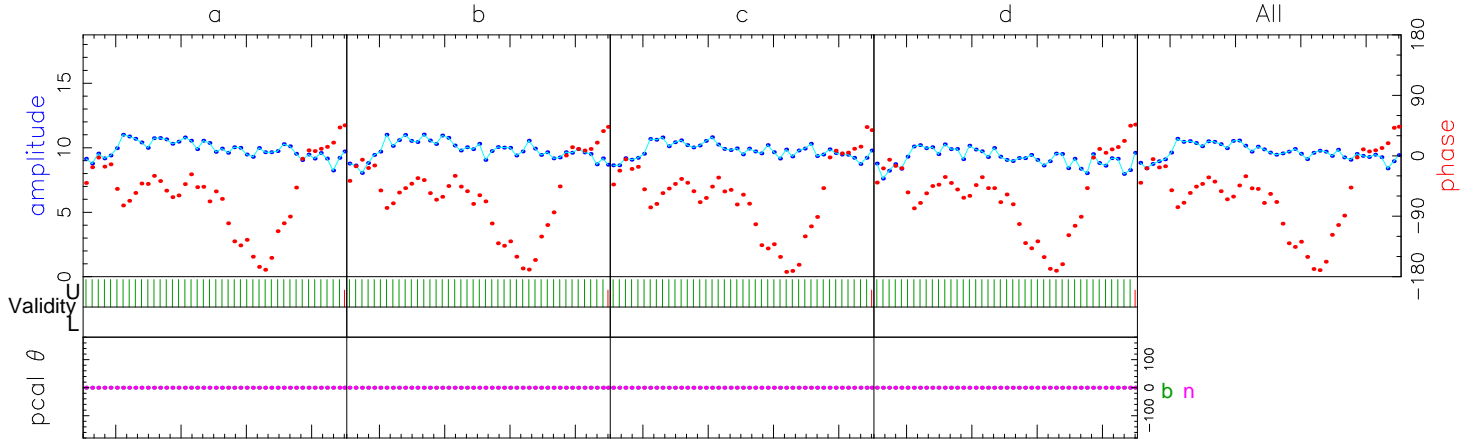
Fringe quality 5

SNR 264.8  
Int time 239.982  
Amp 6.252  
Phase -54.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.004143  
MBD -0.003735  
Fringe rate (Hz)  
0.003619  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211439  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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

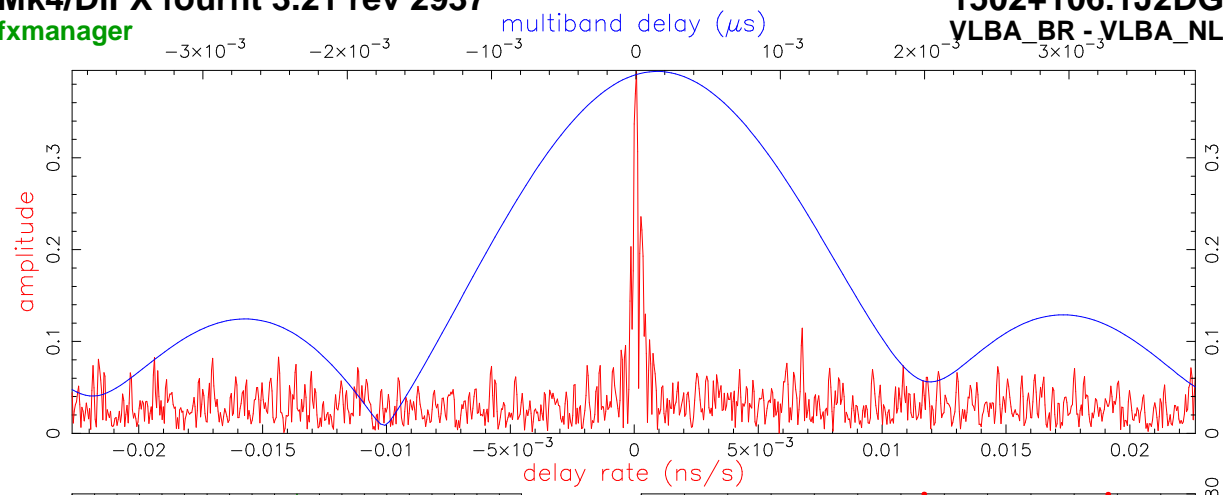


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
n	1000	1000	1000	1000		
b:n	0:0	0:0	0:0	0:0		
b:n	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
n	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks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

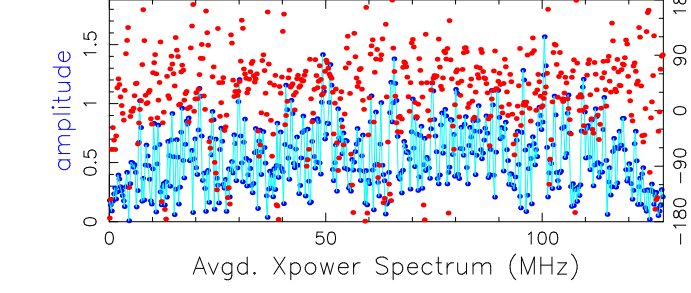
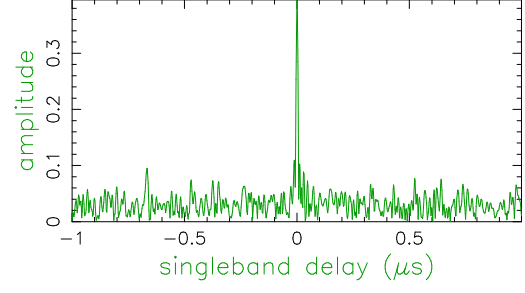
Group delay (usec)(sbd)	-4.12946800936E+03	Apriori delay (usec)	-4.12947208729E+03	Resid mbdelay (usec)	-3.73457E-03	+/- 4.2E-06
Sband delay (usec)	-4.12946794454E+03	Apriori clock (usec)	-1.8955145E+00	Resid sbdelay (usec)	4.14275E-03	+/- 1.6E-05
Phase delay (usec)	-4.12947209078E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	-3.49368E-06	+/- 2.8E-08
Delay rate (us/s)	4.29252928112E-01	Apriori rate (us/s)	4.29252844038E-01	Resid rate (us/s)	8.40737E-08	+/- 2.0E-10
Total phase (deg)	-283.4	Apriori accel (us/s/s)	2.35518696835E-05	Resid phase (deg)	-54.1	+/- 0.4

ph/seg (deg)	53.7	1.4	Amplitude	6.252 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	55.3	2.5	Search (1024X16)	6.164	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	1.6	0.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	3.7	0.8	Inc. seg. avg.	9.653	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	6.244	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5		n: az 159.6 el 57.2 pa -15.1		u,v (fr/asec) -1237.874 516.504		simultaneous interpolator

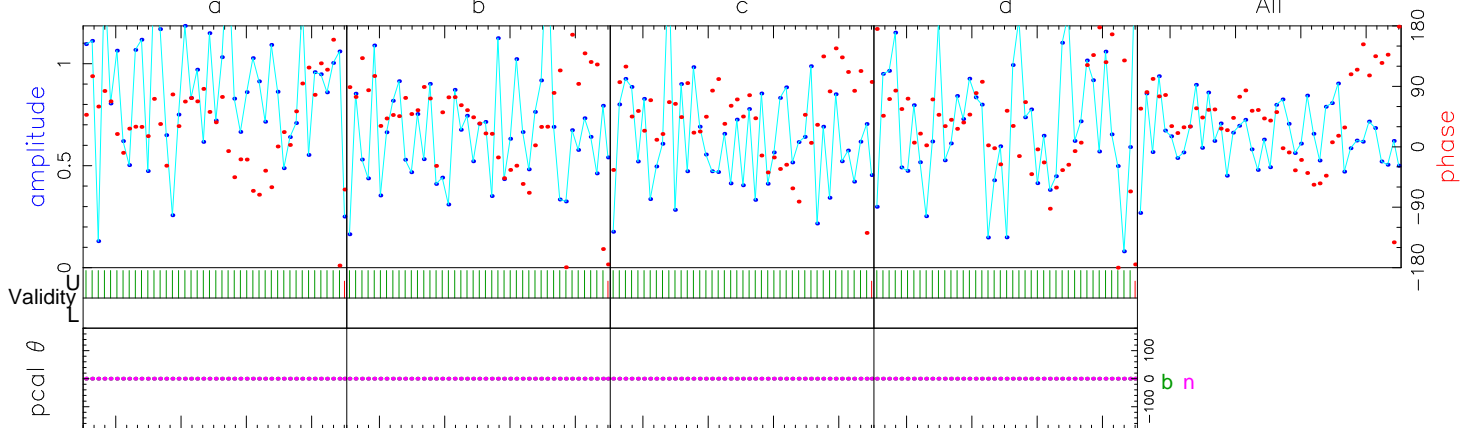
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn.Q.30.1J2DGP



Fringe quality 9  
SNR 16.7  
Int time 239.982  
Amp 0.395  
Phase 46.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.000329  
MBD 0.000166  
Fringe rate (Hz) 0.003165  
Ion TEC 0.000  
Ref freq (MHz) 43040.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211440  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"



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
43.2	53.1	49.6	39.3	Phase	46.2
0.5	0.4	0.4	0.3	Ampl.	0.4
513.5	512.7	513.3	513.1	Sbd box	513.2
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 Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-4.12947192086E+03	Apriori delay (usec)	-4.12947208729E+03	Resid mbdelay (usec)	1.66426E-04	+/-	6.6E-05
Sband delay (usec)	-4.12947175804E+03	Apriori clock (usec)	-1.8955145E+00	Resid sbdelay (usec)	3.29250E-04	+/-	2.6E-04
Phase delay (usec)	-4.12947208431E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	2.98007E-06	+/-	4.4E-07
Delay rate (us/s)	4.29252917564E-01	Apriori rate (us/s)	4.29252844038E-01	Resid rate (us/s)	7.35258E-08	+/-	3.2E-09
Total phase (deg)	-183.1	Apriori accel (us/s/s)	2.35518696835E-05	Resid phase (deg)	46.2	+/-	6.8

ph/seg (deg)	59.7	Theor.	22.4	Amplitude	0.395 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	74.1	Search (1024X16)	0.382	Search	0.382	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	7.6	Inc. seg. avg.	0.606	Inc. seg. avg.	0.606	Bits/sample: 2x2	mb window (us) -0.004 0.004
amp/frq (%)	16.0	Inc. frq. avg.	0.393	Inc. frq. avg.	0.393	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 125.7 el 40.0 pa -33.5 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1237.874 516.504 simultaneous interpolator  
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn.Q.46.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

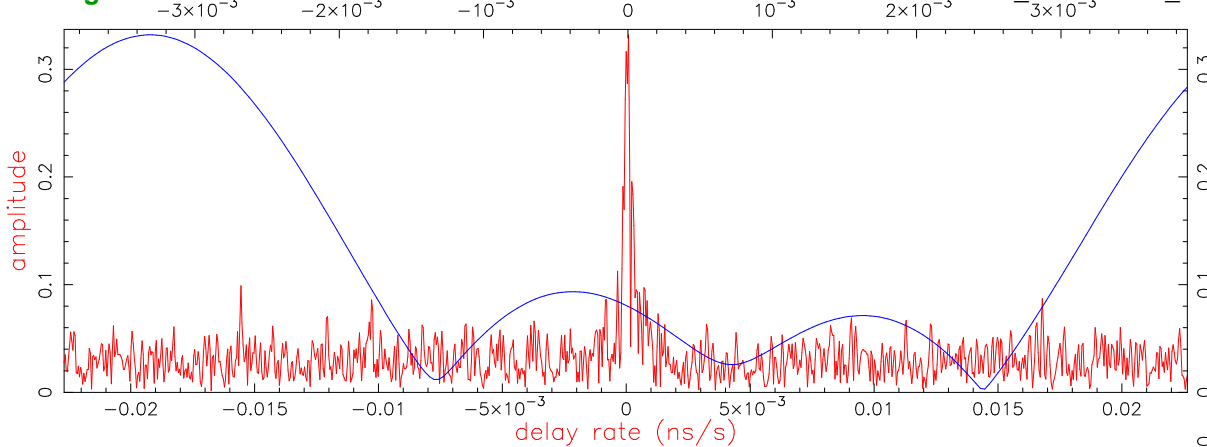
fxmanager

1502+106.1J2DGP, No0154, bn

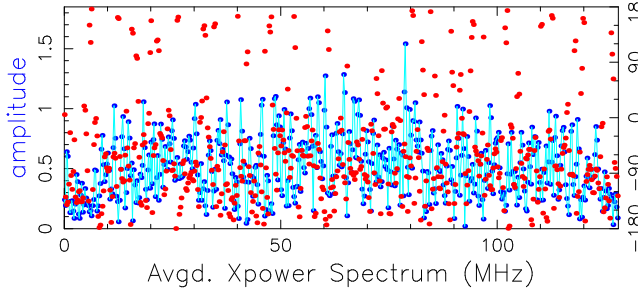
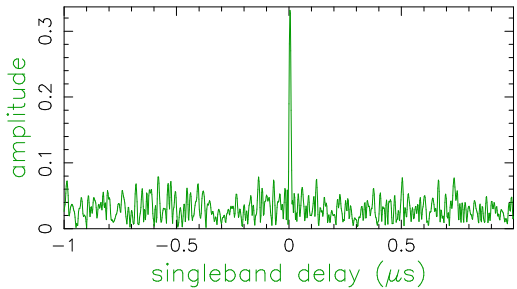
VLBA\_BR - VLBA\_NL, fgroup Q, pol RL

multiband delay ( $\mu$ s)

Fringe quality 9

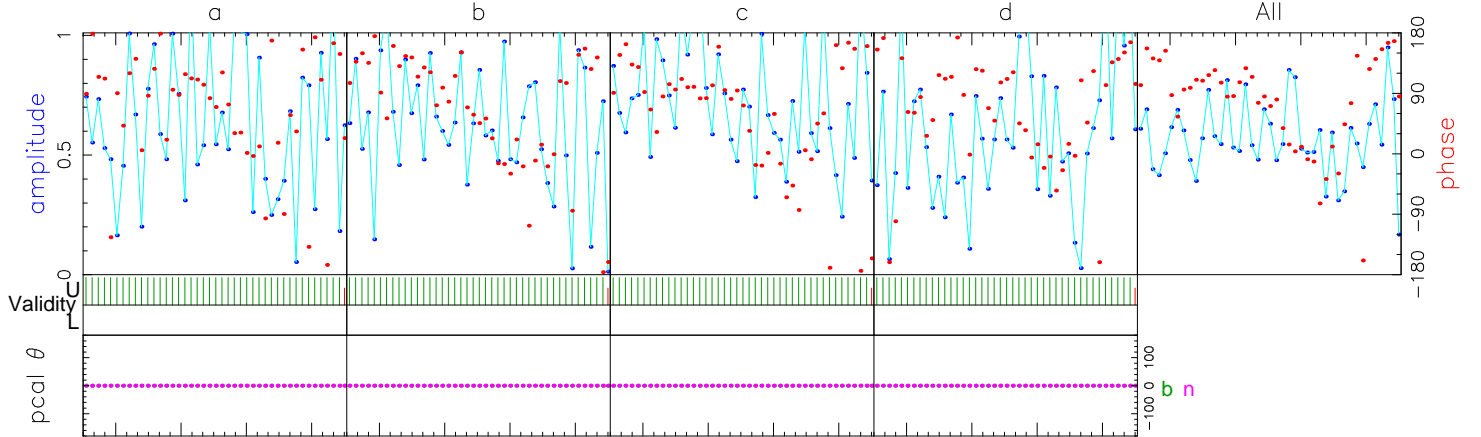


SNR 14.3  
 Int time 239.982  
 Amp 0.337  
 Phase 96.6  
 PFD 9.0e-38  
 Delays (us)  
 SBD 0.004732  
 MBD -0.003273  
 Fringe rate (Hz) 0.003740  
 Ion TEC 0.000  
 Ref freq (MHz) 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211443  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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
99.8	99.0	91.3	97.2	Phase	96.6
0.3	0.3	0.4	0.3	Ampl.	0.3
515.1	515.2	515.7	515.7	Sbd box	515.4
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 Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

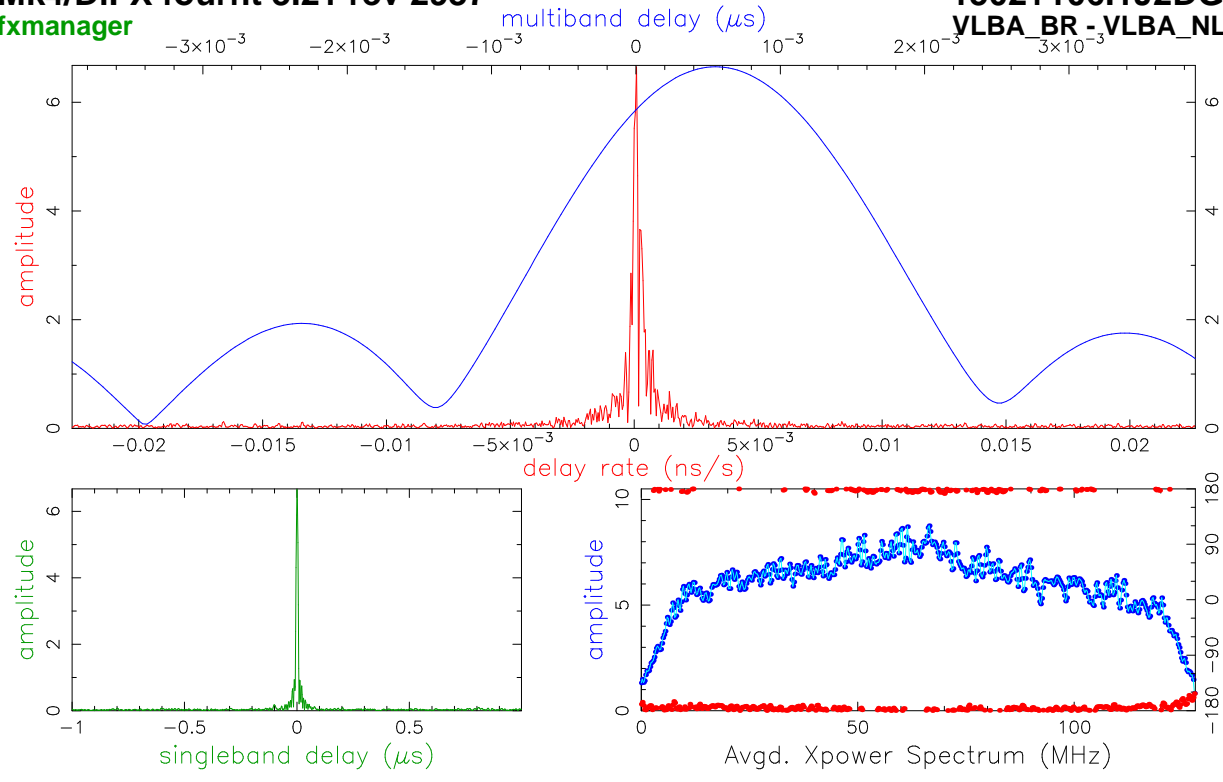
Group delay (usec)(sbd)	-4.12946754793E+03	Apriori delay (usec)	-4.12947208729E+03	Resid mbdelay (usec)	-3.27314E-03	+/- 7.8E-05
Sband delay (usec)	-4.12946735516E+03	Apriori clock (usec)	-1.8955145E+00	Resid sbdelay (usec)	4.73212E-03	+/- 3.0E-04
Phase delay (usec)	-4.12947208105E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	6.23542E-06	+/- 5.2E-07
Delay rate (us/s)	4.29252930940E-01	Apriori rate (us/s)	4.29252844038E-01	Resid rate (us/s)	8.69014E-08	+/- 3.7E-09
Total phase (deg)	-132.7	Apriori accel (us/s/s)	2.35518696835E-05	Resid phase (deg)	96.6	+/- 8.0

ph/seg (deg)	RMS	Theor.	Amplitude	0.337 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	63.0	26.3	Search (1024X16)	0.330	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	84.2	45.9	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
amp/frq (%)	4.7	8.0	Inc. seg. avg.	0.523	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
	9.5	14.0	Inc. frq. avg.	0.329	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 125.7 el 40.0 pa -33.5 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1237.874 516.504 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn.Q.70.1J2DGP



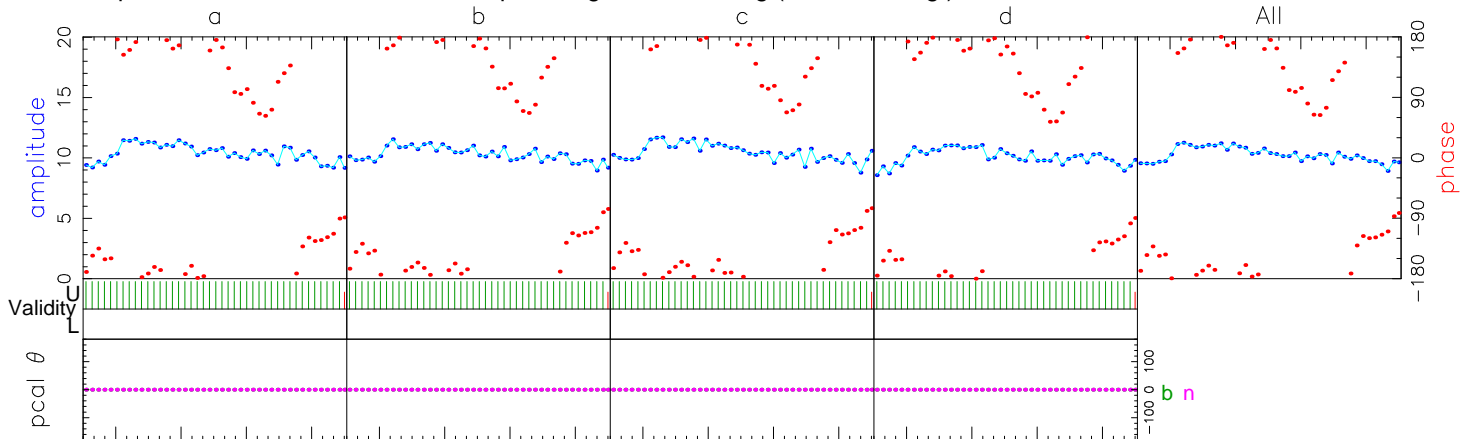


Fringe quality 5

SNR 282.9  
Int time 239.982  
Amp 6.677  
Phase 178.4  
PFD 0.0e+00  
Delays (us)  
SBD 0.000425  
MBD 0.000577  
Fringe rate (Hz) 0.003587  
Ion TEC 0.000  
Ref freq (MHz) 43040.0000  
AP (sec) 0.512

Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211436  
2020:247:085004  
RA & Dec (J2000) 15h04m24.979782s +10°29'39.198559"

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	
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	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

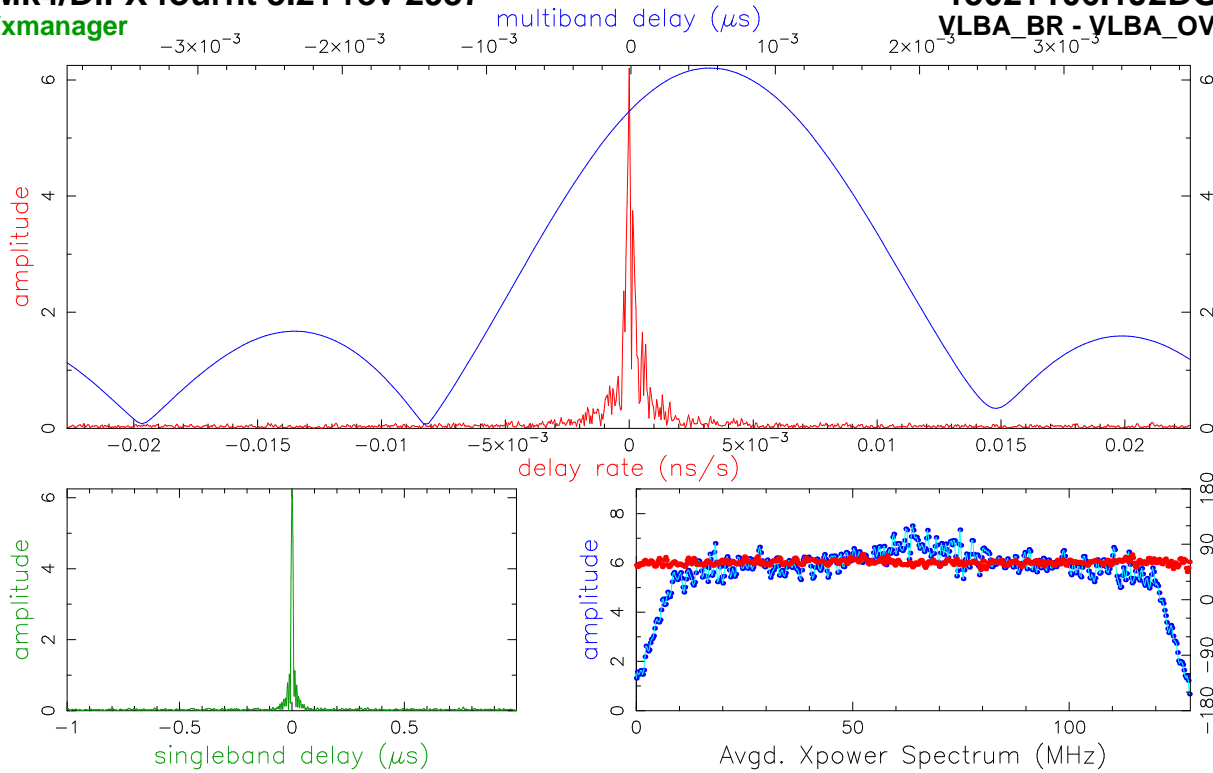
Group delay (usec)(sbd)	-4.12947151046E+03	Apriori delay (usec)	-4.12947208729E+03	Resid mbdelay (usec)	5.76832E-04	+/-	3.9E-06
Sband delay (usec)	-4.12947166191E+03	Apriori clock (usec)	-1.8955145E+00	Resid sbdelay (usec)	4.25375E-04	+/-	1.5E-05
Phase delay (usec)	-4.12947207578E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	1.15128E-05	+/-	2.6E-08
Delay rate (us/s)	4.29252927369E-01	Apriori rate (us/s)	4.29252844038E-01	Resid rate (us/s)	8.33306E-08	+/-	1.9E-10
Total phase (deg)	-50.9	Apriori accel (us/s/s)	2.35518696835E-05	Resid phase (deg)	178.4	+/-	0.4

ph/seg (deg)	53.9	1.3	Amplitude	6.677 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	54.6	2.3	Search (1024X16)	6.610	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	7.6	0.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	1.6	0.7	Inc. seg. avg.	10.274	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	6.679	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 125.7 el 40.0 pa -33.5 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1237.874 516.504 simultaneous interpolator

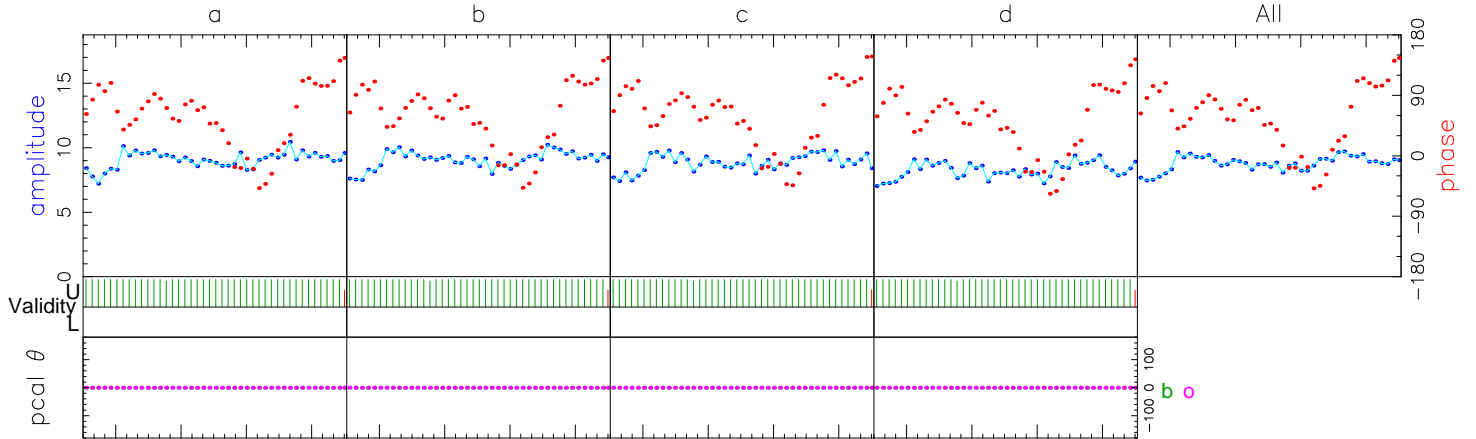
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bn.Q.9.1J2DGP





Fringe quality 5  
SNR 264.7  
Int time 239.713  
Amp 6.251  
Phase 60.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.000581  
MBD 0.000581  
Fringe rate (Hz)  
-0.000645  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211438  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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

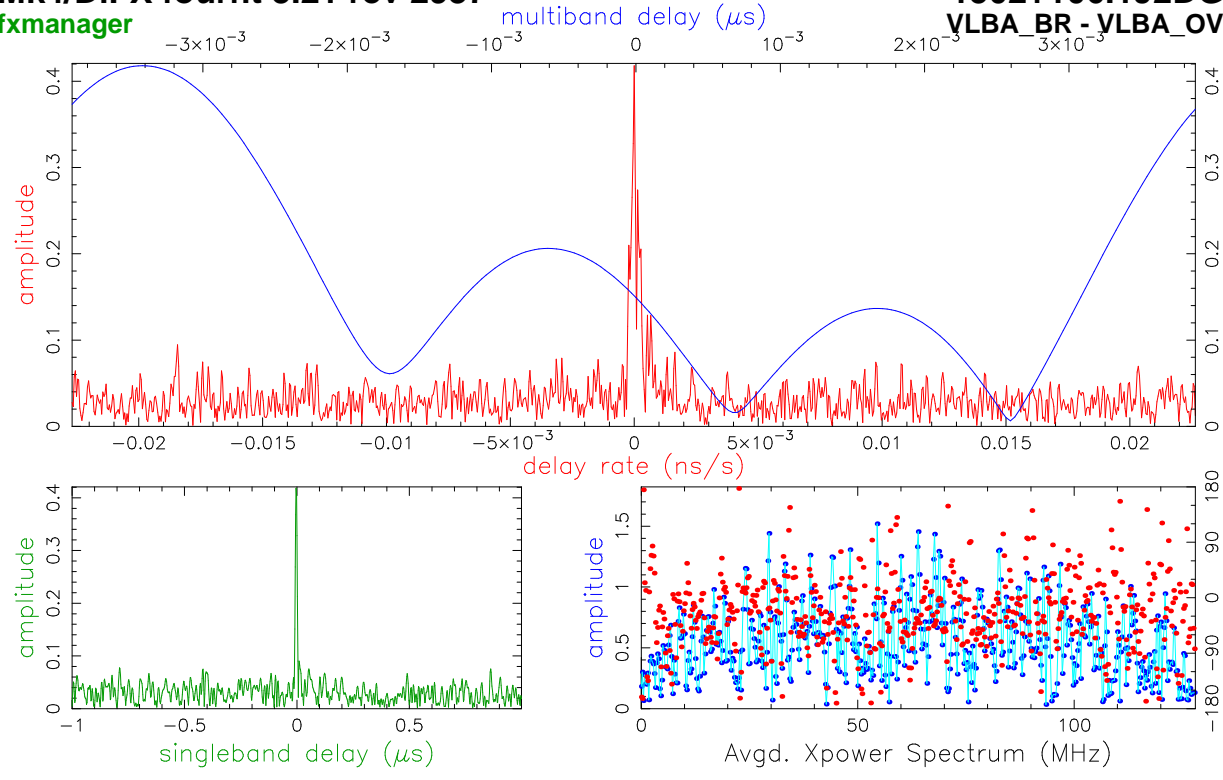


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	PC freqs	
b:o	0:0	0:0	0:0	0:0	PC phase	
b:o	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR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

Group delay (usec)(sbd)	-1.84321587742E+03	Apriori delay (usec)	-1.84321645836E+03	Resid mbdelay (usec)	5.80937E-04	+/-	4.2E-06
Sband delay (usec)	-1.84321587698E+03	Apriori clock (usec)	-2.3106297E+01	Resid sbdelay (usec)	5.81375E-04	+/-	1.6E-05
Phase delay (usec)	-1.84321645443E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	3.92438E-06	+/-	2.8E-08
Delay rate (us/s)	-9.87688978597E-02	Apriori rate (us/s)	-9.87688828703E-02	Resid rate (us/s)	-1.49893E-08	+/-	2.0E-10
Total phase (deg)	-71.6	Apriori accel (us/s/s)	1.25270988141E-05	Resid phase (deg)	60.8	+/-	0.4

ph/seg (deg)	47.5	1.4	Amplitude	6.251 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	41.7	2.5	Search (1024X16)	5.956	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	4.6	0.4	Inc. seg. avg.	8.795	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	3.9	0.8	Inc. frq. avg.	6.212	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 125.7 el 40.0 pa -33.5 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 293.822 697.434 simultaneous interpolator  
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bo..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bo.Q.26.1J2DGP

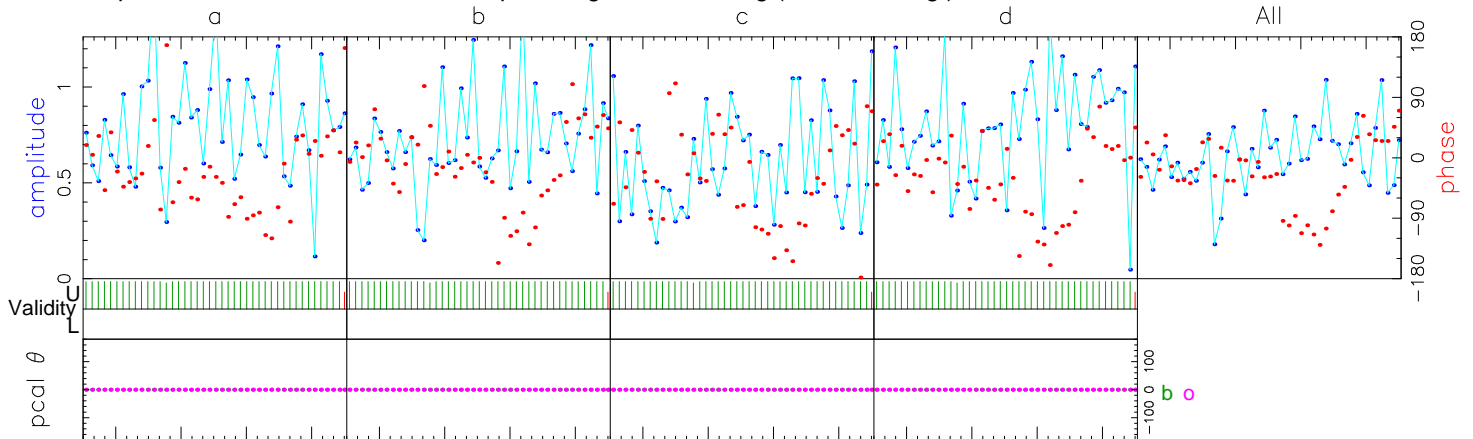


Fringe quality 9

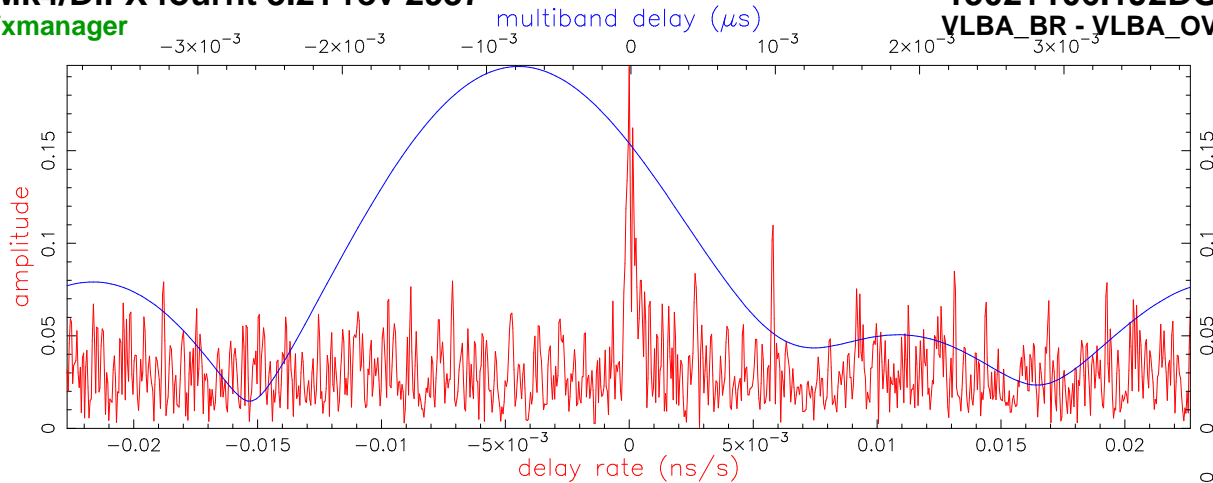
SNR 17.8  
Int time 239.713  
Amp 0.421  
Phase -23.1  
PFD 0.0e+00  
Delays (us)  
SBD -0.003350  
MBD -0.003394  
Fringe rate (Hz)  
-0.000777  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512

Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211441  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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

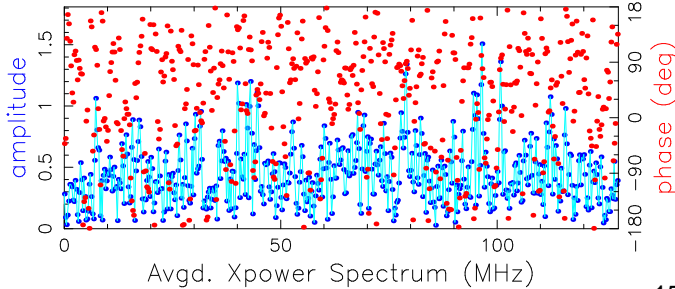
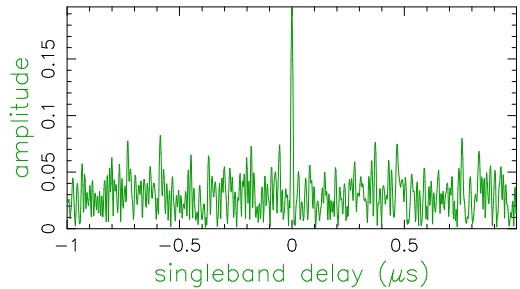


42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-28.7	-8.3	-28.1	-27.4	Phase	-23.1
0.5	0.4	0.3	0.5	Ampl.	0.4
511.6	511.4	510.6	511.1	Sbd box	511.3
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
b:o 0:0	0:0	0:0	0:0	PC phase	
b:o 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-1.84321985286E+03	Apriori delay (usec)	-1.84321645836E+03	Resid mbdelay (usec)	-3.39450E-03 +/- 6.2E-05
Sband delay (usec)	-1.84321980798E+03	Apriori clock (usec)	-2.3106297E+01	Resid sbdelay (usec)	-3.34963E-03 +/- 2.4E-04
Phase delay (usec)	-1.84321645985E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-1.49347E-06 +/- 4.2E-07
Delay rate (us/s)	-9.87689009200E-02	Apriori rate (us/s)	-9.87688828703E-02	Resid rate (us/s)	-1.80496E-08 +/- 3.0E-09
Total phase (deg)	-155.5	Apriori accel (us/s/s)	1.25270988141E-05	Resid phase (deg)	-23.1 +/- 6.4
RMS	Theor.	Amplitude	0.421 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
49.8	21.1	Search (1024X16)	0.394	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
64.9	36.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
12.1	6.4	Inc. seg. avg.	0.599	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
22.3	11.2	Inc. frq. avg.	0.420	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5	o: az 118.4 el 46.7 pa -45.1	u,v (fr/asec) 293.822 697.434			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bo..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bo.Q.52.1J2DGP			



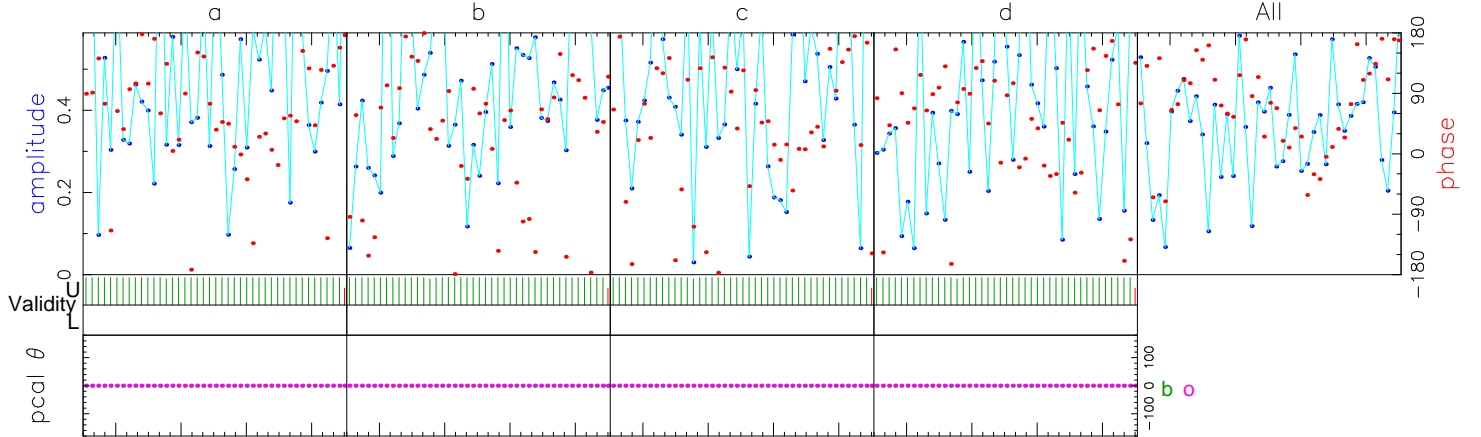
Fringe quality 9

SNR 8.3  
Int time 239.713  
Amp 0.196  
Phase 86.2  
PFD 1.8e-08  
Delays (us)  
SBD -0.000386  
MBD -0.000798  
Fringe rate (Hz)  
-0.000339  
Ion TEC 0.000  
Ref freq (MHz)  
43040.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211443  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"

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
76.7	93.6	103.8	69.0	Phase	86.2
0.3	0.2	0.2	0.2	Ampl.	0.2
512.9	513.1	511.8	834.7	Sbd box	512.8
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)	-1.84321725601E+03	Apriori delay (usec)	-1.84321645836E+03	Resid mbdelay (usec)	-7.97656E-04	+/- 1.3E-04
Sband delay (usec)	-1.84321684461E+03	Apriori clock (usec)	-2.3106297E+01	Resid sbdelay (usec)	-3.86250E-04	+/- 5.2E-04
Phase delay (usec)	-1.84321645279E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	5.56622E-06	+/- 8.9E-07
Delay rate (us/s)	-9.87688907550E-02	Apriori rate (us/s)	-9.87688828703E-02	Resid rate (us/s)	-7.88465E-09	+/- 6.4E-09
Total phase (deg)	-46.1	Apriori accel (us/s/s)	1.25270988141E-05	Resid phase (deg)	86.2	+/- 13.8

ph/seg (deg)	68.4	Theor.	45.2	Amplitude	0.196 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	105.4		79.0	Search (1024X16)	0.190	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	19.4		13.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	19.0		24.1	Inc. seg. avg.	0.273	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.195	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

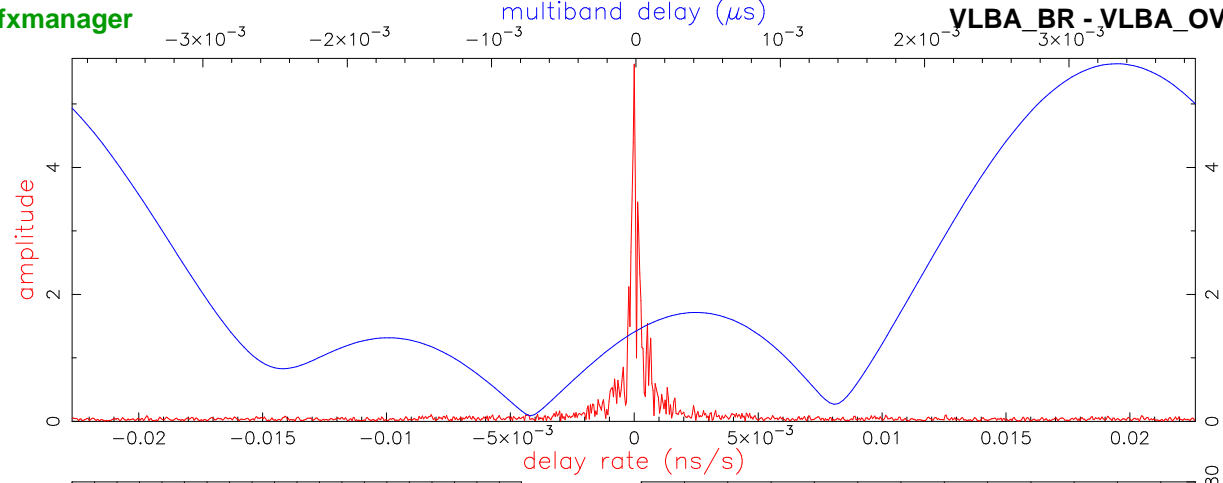
b: az 125.7 el 40.0 pa -33.5 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 293.822 697.434 simultaneous interpolator  
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bo..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bo.Q.69.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

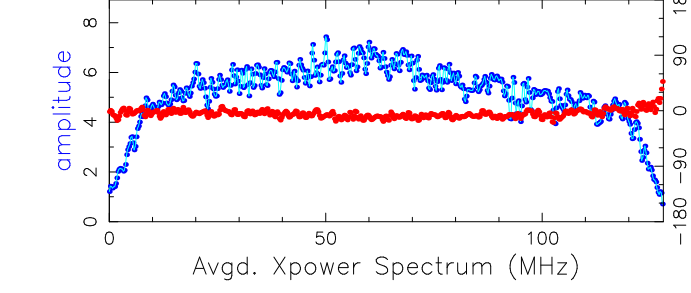
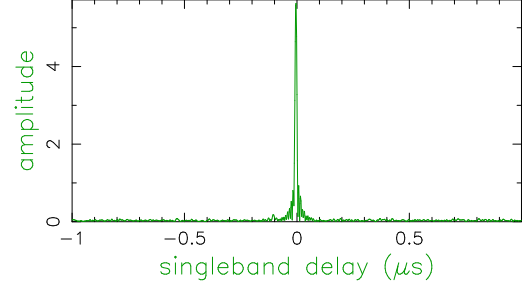
fxmanager

1502+106.1J2DGP, No0154, bo

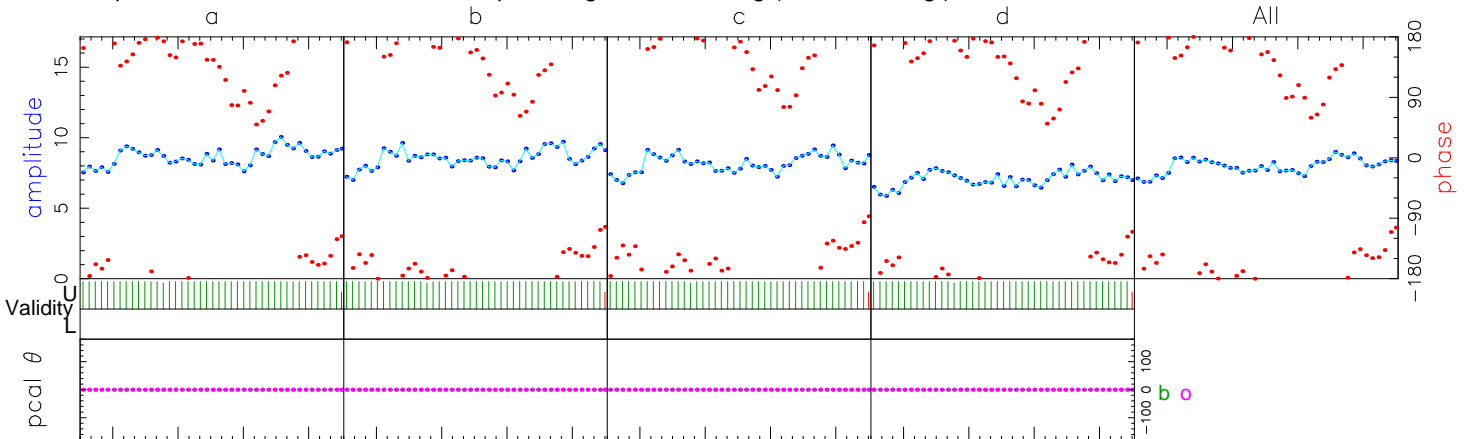
VLBA\_BR - VLBA\_OV, fgroup Q, pol LL



Fringe quality 4  
 SNR 242.1  
 Int time 239.713  
 Amp 5.718  
 Phase 169.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.004766  
 MBD 0.003270  
 Fringe rate (Hz)  
 -0.000649  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211436  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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
159.9	171.7	-176.5	163.2	Phase	169.7
6.1	6.0	5.7	5.0	Ampl.	5.7
510.9	510.9	510.3	509.9	Sbd box	510.6
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 Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-1.84322100048E+03	Apriori delay (usec)	-1.84321645836E+03	Resid mbdelay (usec)	3.27038E-03	+/-	4.6E-06
Sband delay (usec)	-1.84322122411E+03	Apriori clock (usec)	-2.3106297E+01	Resid sbdelay (usec)	-4.76575E-03	+/-	1.8E-05
Phase delay (usec)	-1.84321644741E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	1.09495E-05	+/-	3.1E-08
Delay rate (us/s)	-9.87688979533E-02	Apriori rate (us/s)	-9.87688828703E-02	Resid rate (us/s)	-1.50829E-08	+/-	2.2E-10
Total phase (deg)	37.3	Apriori accel (us/s/s)	1.25270988141E-05	Resid phase (deg)	169.7	+/-	0.5

ph/seg (deg)	47.8	1.6	Amplitude	5.718 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	41.1	2.7	Search (1024X16)	5.393	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	12.9	0.5	Inc. seg. avg.	8.004	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	7.9	0.8	Inc. frq. avg.	5.698	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

b: az 125.7 el 40.0 pa -33.5 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 293.822 697.434 simultaneous interpolator

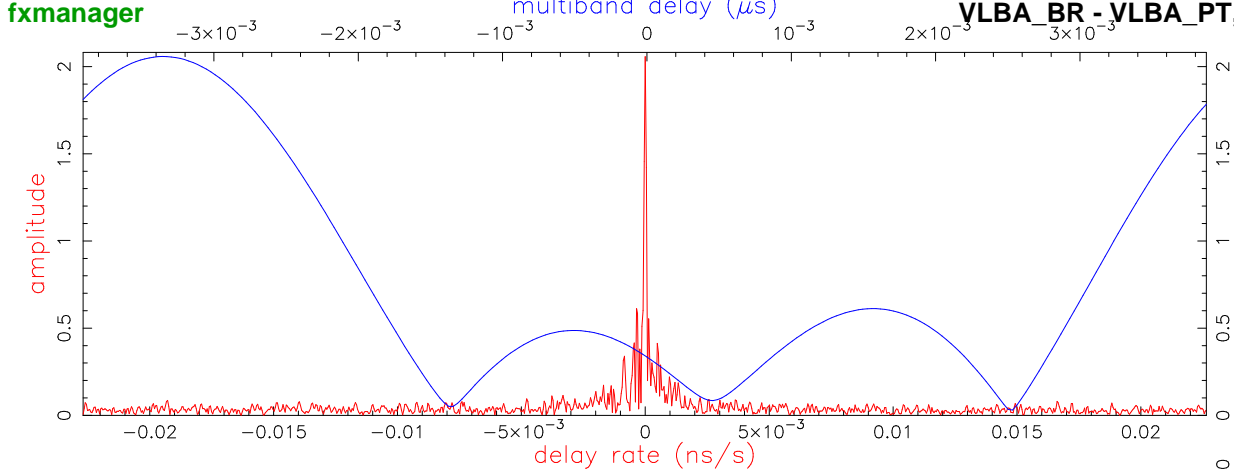
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bo..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bo.Q.8.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bp

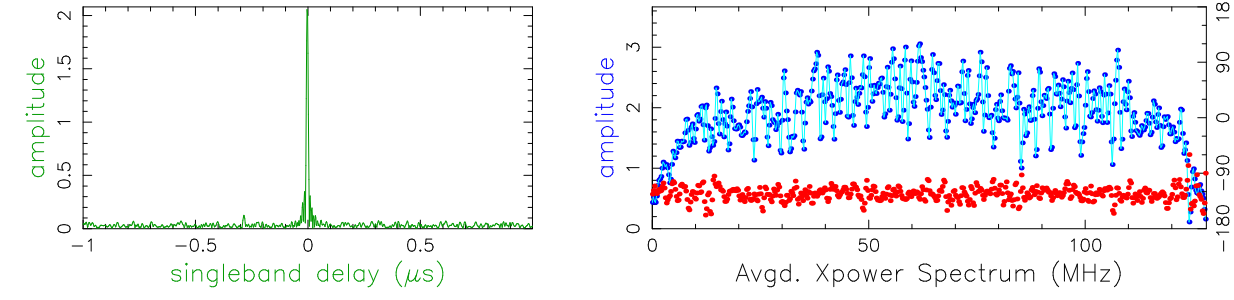
VLBA\_BR - VLBA\_PT, fgroup Q, pol RR



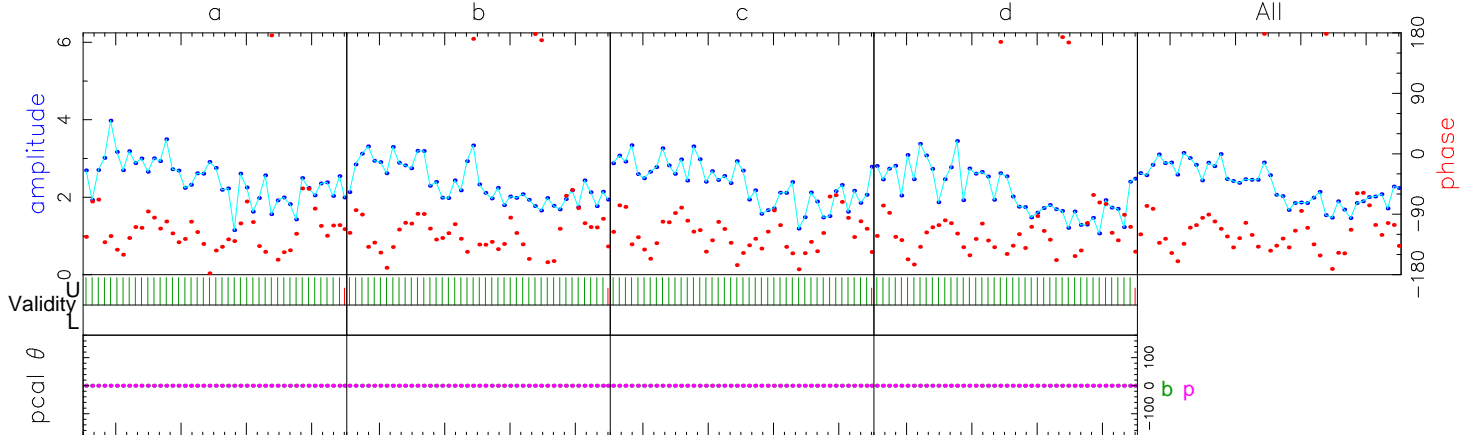
Fringe quality 6

SNR 88.2  
 Int time 239.982  
 Amp 2.082  
 Phase -120.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003174  
 MBD -0.003312  
 Fringe rate (Hz) 0.000948  
 Ion TEC 0.000  
 Ref freq (MHz) 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211438  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"



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	Q00UR	Q01UR	Q02UR	Q03UR		
					Phase	-120.4
					Ampl.	2.1
					Sbd box	511.4
					APs used	
					PC freqs	
					PC phase	
					ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.79028081271E+03	Apriori delay (usec)	-3.79027750046E+03	Resid mbdelay (usec)	-3.31225E-03	+/- 1.3E-05
Sband delay (usec)	-3.79028067433E+03	Apriori clock (usec)	-1.8038111E+00	Resid sbdelay (usec)	-3.17387E-03	+/- 4.9E-05
Phase delay (usec)	-3.79027750823E+03	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-7.77176E-06	+/- 8.4E-08
Delay rate (us/s)	6.30036870405E-02	Apriori rate (us/s)	6.30036650117E-02	Resid rate (us/s)	2.20288E-08	+/- 6.0E-10
Total phase (deg)	-343.5	Apriori accel (us/s/s)	2.38380060081E-05	Resid phase (deg)	-120.4	+/- 1.3

ph/seg (deg)	28.7	Theor.	4.3	Amplitude	2.082 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	25.7	Search (1024X16)	1.890	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	4.6	Inc. seg. avg.	2.307	Inc. frq. avg.	2.059	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	5.1	Inc. frq. avg.	2.059			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 125.7 el 40.0 pa -33.5 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) -171.538 960.854 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bp..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bp.Q.27.1J2DGP

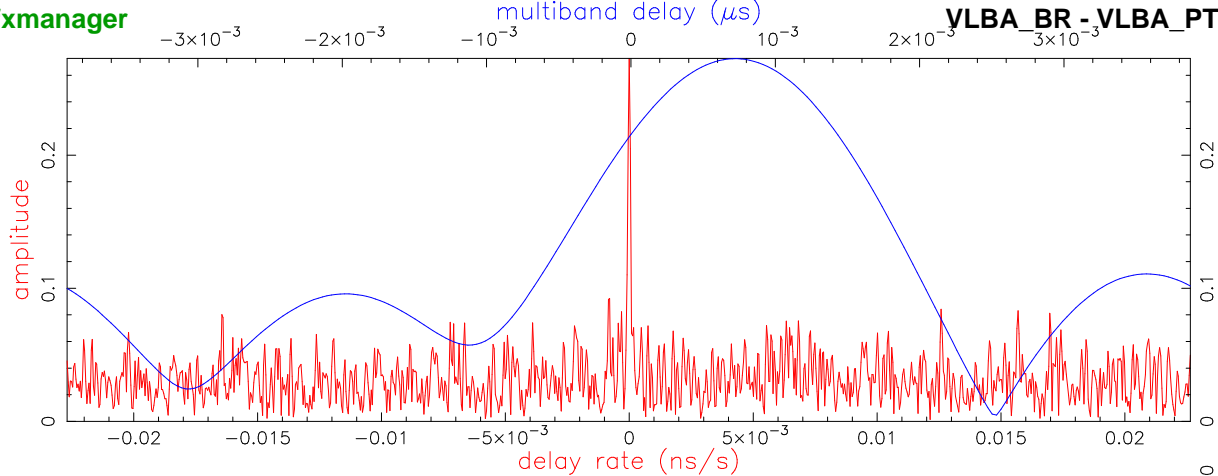


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

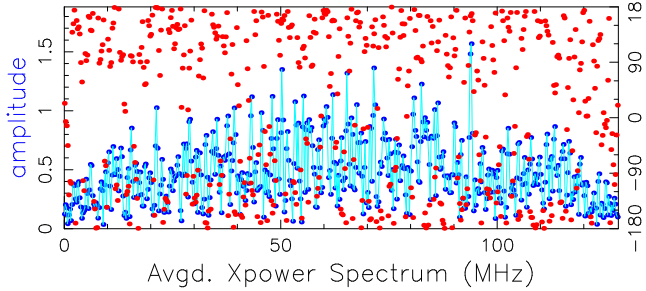
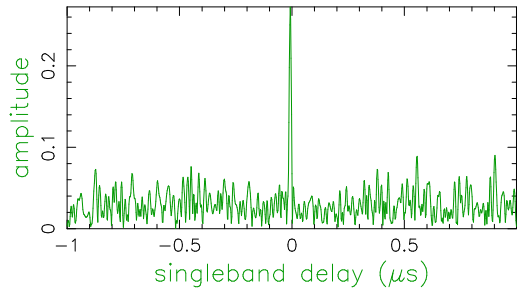
1502+106.1J2DGP, No0154, bp

VLBA\_BR - VLBA\_PT, fgroup Q, pol LR



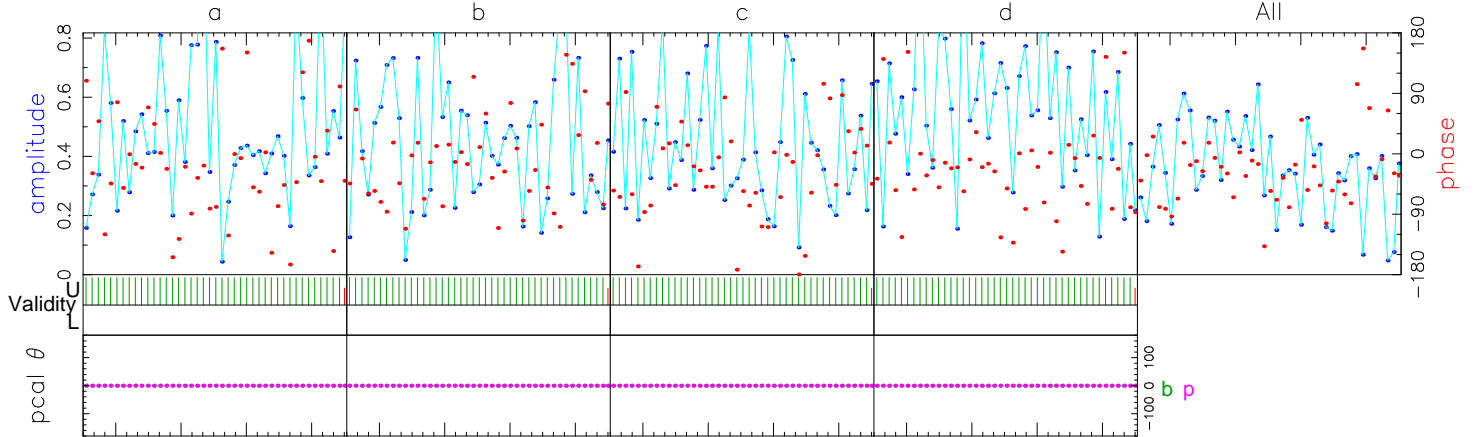
Fringe quality 9

SNR 11.6  
 Int time 239.982  
 Amp 0.273  
 Phase -29.8  
 PFD 1.8e-22  
 Delays (us)  
 SBD -0.007611  
 MBD 0.000729  
 Fringe rate (Hz)  
 0.000868  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211440  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

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	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.79028458362E+03	Apriori delay (usec)	-3.79027750046E+03	Resid mbdelay (usec)	7.29344E-04	+/-	9.6E-05
Sband delay (usec)	-3.79028511158E+03	Apriori clock (usec)	-1.8038111E+00	Resid sbdelay (usec)	-7.61112E-03	+/-	3.7E-04
Phase delay (usec)	-3.79027750238E+03	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-1.92358E-06	+/-	6.4E-07
Delay rate (us/s)	6.30036851885E-02	Apriori rate (us/s)	6.30036650117E-02	Resid rate (us/s)	2.01768E-08	+/-	4.6E-09
Total phase (deg)	-252.9	Apriori accel (us/s/s)	2.38380060081E-05	Resid phase (deg)	-29.8	+/-	9.9

ph/seg (deg)	53.6	Theor.	32.5	Amplitude	0.273 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	63.4	Search (1024X16)	0.253	Search	0.253	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	13.6	Inc. seg. avg.	0.310	Inc. seg. avg.	0.310	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	21.2	Inc. frq. avg.	0.272	Inc. frq. avg.	0.272	Sample rate(MISamp/s): 256	nlags: 512	t_cohere infinite	dr window (ns/s)	-0.023 0.023
						Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00		

b: az 125.7 el 40.0 pa -33.5 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) -171.538 960.854 simultaneous interpolator

Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bp..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bp.Q.42.1J2DGP

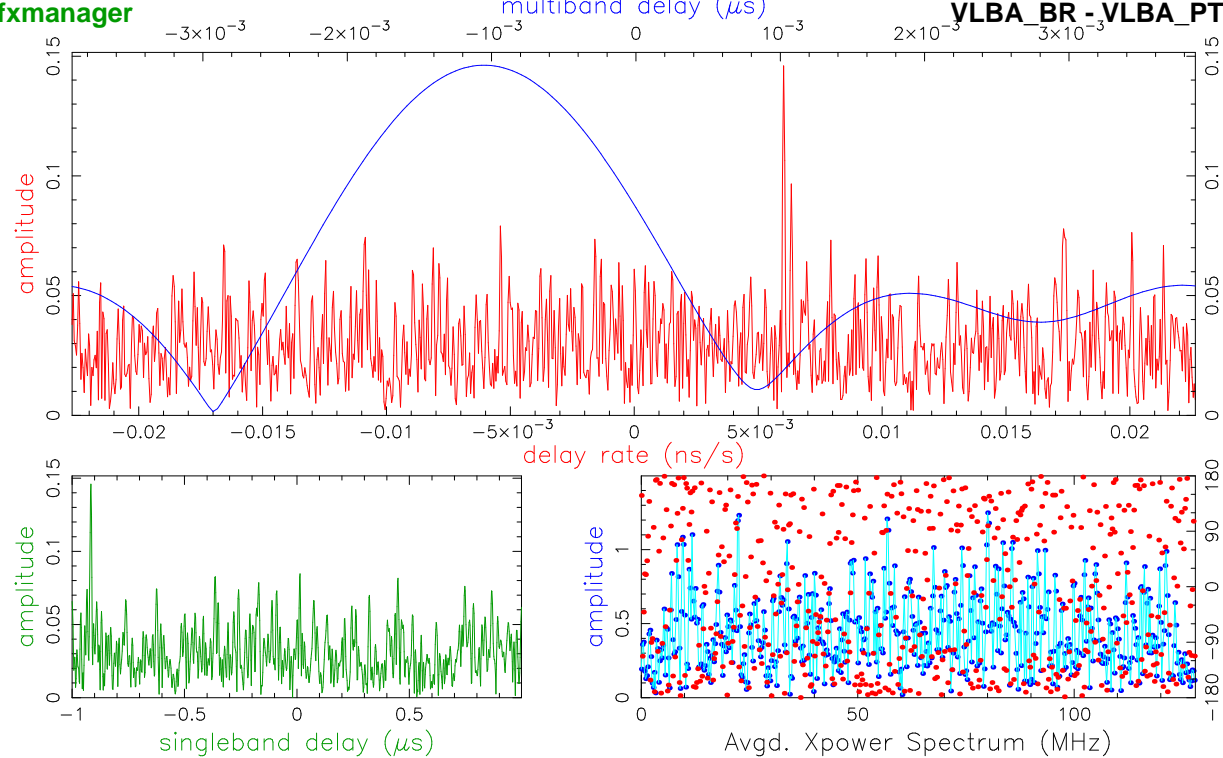


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bp

VLBA\_BR - VLBA\_PT, fgroup Q, pol RL

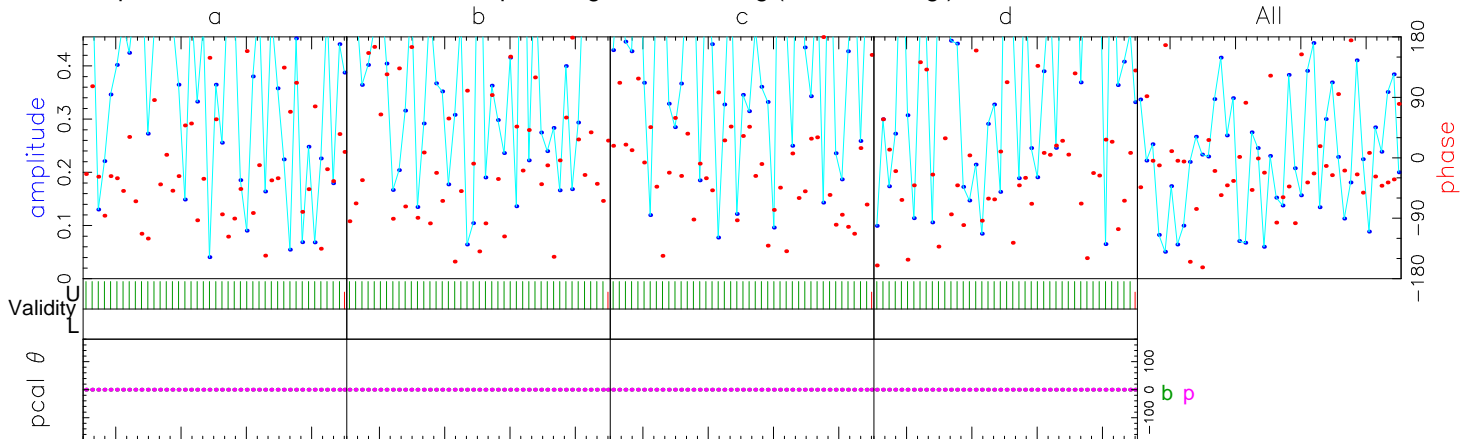


Fringe quality 0

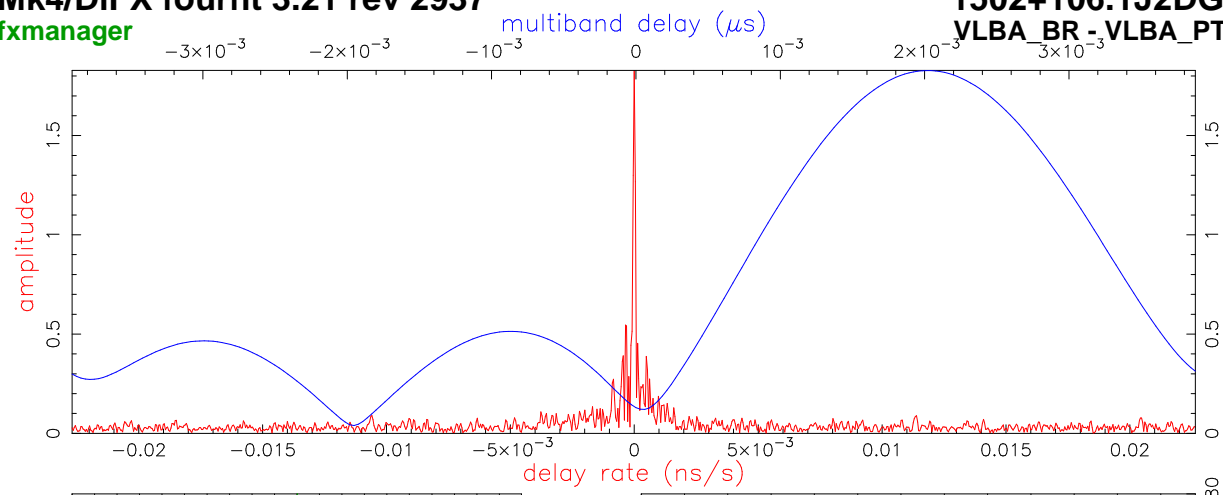
SNR 6.2  
 Int time 239.982  
 Amp 0.152  
 Phase -29.9  
 PFD 5.9e-02  
 Delays (us)  
 SBD -0.916596  
 MBD -0.001117  
 Fringe rate (Hz)  
 0.261001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43040.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 190830.00  
 Stop 191230.12  
 FRT 191030.00  
 Corr/FF/build  
 2021:032:031903  
 2021:032:211442  
 2020:247:085004  
 RA & Dec (J2000)  
 15h04m24.979782s  
 +10°29'39.198559"

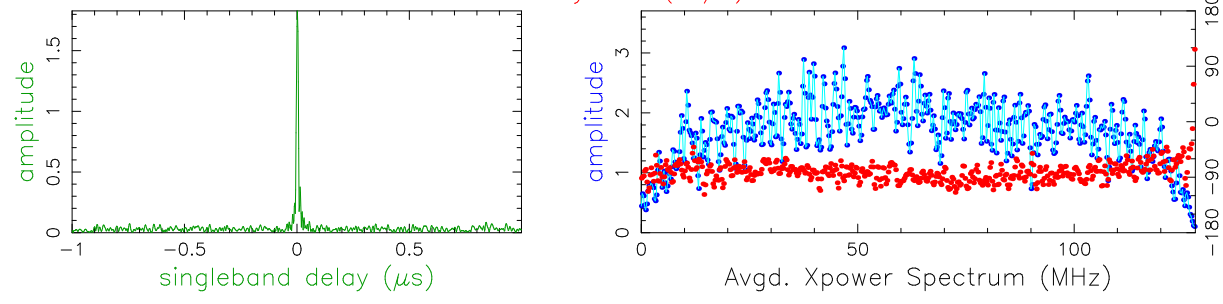
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



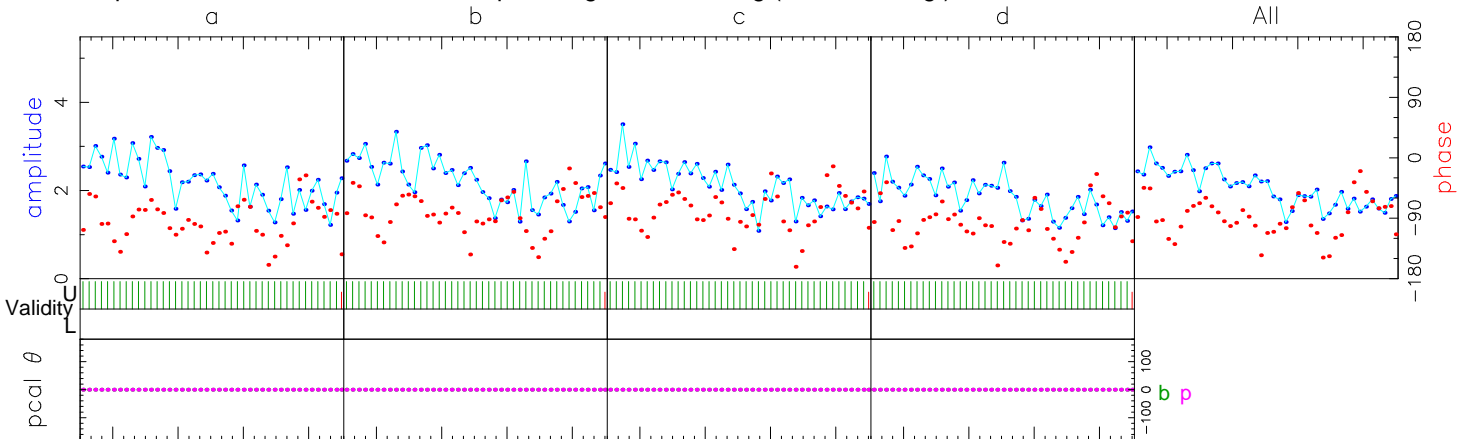
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-31.4	-40.7	-27.5	-23.6	Phase	-29.9
	0.2	0.1	0.2	0.1	Ampl.	0.1
	42.9	914.1	44.0	512.5	Sbd box	43.7
U/L	469/0	469/0	469/0	469/0	APs used	
b	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
b:p	0:0	0:0	0:0	0:0	PC phase	
b:p	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-3.79119268009E+03		Apriori delay (usec)	-3.79027750046E+03	Resid mbdelay (usec)	-1.11713E-03 +/- 1.8E-04
Sband delay (usec)	-3.79119409596E+03		Apriori clock (usec)	-1.8038111E+00	Resid sbdelay (usec)	-9.16596E-01 +/- 6.9E-04
Phase delay (usec)	-3.79027750239E+03		Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-1.93058E-06 +/- 1.2E-06
Delay rate (us/s)	6.30097291577E-02		Apriori rate (us/s)	6.30036650117E-02	Resid rate (us/s)	6.06415E-06 +/- 8.6E-09
Total phase (deg)		-253.0	Apriori accel (us/s/s)	2.38380060081E-05	Resid phase (deg)	-29.9 +/- 18.4
	RMS	Theor.	Amplitude	0.152 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	71.1	60.3	Search (1024X16)	0.141	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	94.1	105.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	9.1	18.4	Inc. seg. avg.	0.153	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	27.3	32.1	Inc. frq. avg.	0.144	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5			p: az 126.8 el 55.3 pa -41.9		u,v (fr/asec) -171.538 960.854	simultaneous interpolator
Control file: cf_1234_gmva7mm			Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bp..1J2DGP		Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bp.Q.65.1J2DGP	



Fringe quality 5  
SNR 77.5  
Int time 239.982  
Amp 1.828  
Phase -87.5  
PFD 0.0e+00  
Delays (us)  
SBD 0.001825  
MBD 0.002013  
Fringe rate (Hz) 0.000920  
Ion TEC 0.000  
Ref freq (MHz) 43040.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 190830.00  
Stop 191230.12  
FRT 191030.00  
Corr/FF/build  
2021:032:031903  
2021:032:211436  
2020:247:085004  
RA & Dec (J2000)  
15h04m24.979782s  
+10°29'39.198559"



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	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-3.79027548730E+03	Apriori delay (usec)	-3.79027750046E+03	Resid mbdelay (usec)	2.01316E-03	+/- 1.4E-05
Sband delay (usec)	-3.79027567546E+03	Apriori clock (usec)	-1.8038111E+00	Resid sbdelay (usec)	1.82500E-03	+/- 5.6E-05
Phase delay (usec)	-3.79027750611E+03	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-5.64682E-06	+/- 9.5E-08
Delay rate (us/s)	6.30036863797E-02	Apriori rate (us/s)	6.30036650117E-02	Resid rate (us/s)	2.13680E-08	+/- 6.9E-10
Total phase (deg)	-310.6	Apriori accel (us/s/s)	2.38380060081E-05	Resid phase (deg)	-87.5	+/- 1.5

ph/seg (deg)	28.9	Theor.	4.9	Amplitude	1.828 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	25.7		4.9	Search (1024X16)	1.688	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	12.4		1.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	7.4		2.6	Inc. seg. avg.	2.050	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	1.848	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 125.7 el 40.0 pa -33.5 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) -171.538 960.854 simultaneous interpolator  
Control file: cf\_1234\_gmva7mm Input file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bp..1J2DGP Output file: /Exps/c202b/v1/v1\_7mm/1234/No0154/bp.Q.7.1J2DGP