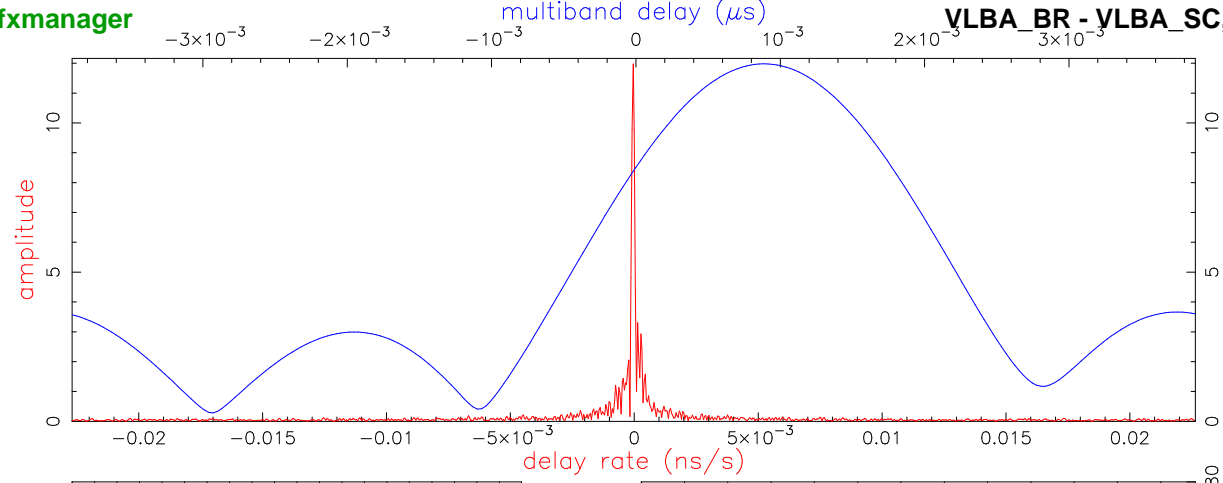


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, bc

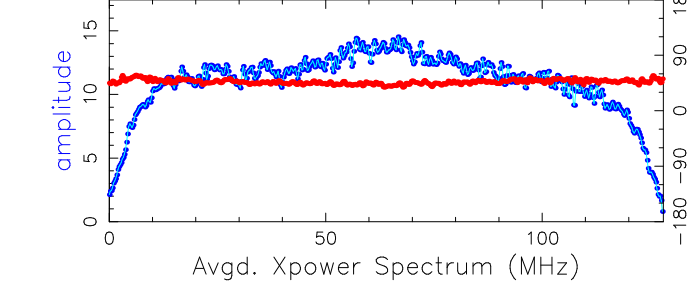
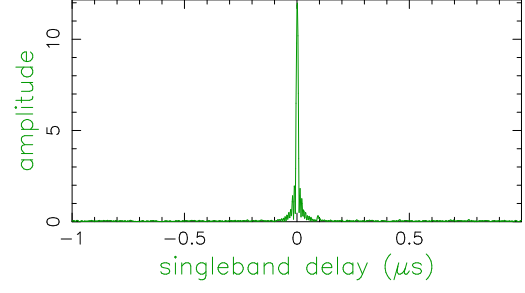
VLBA_BR - VLBA_SC, fgroup Q, pol RR



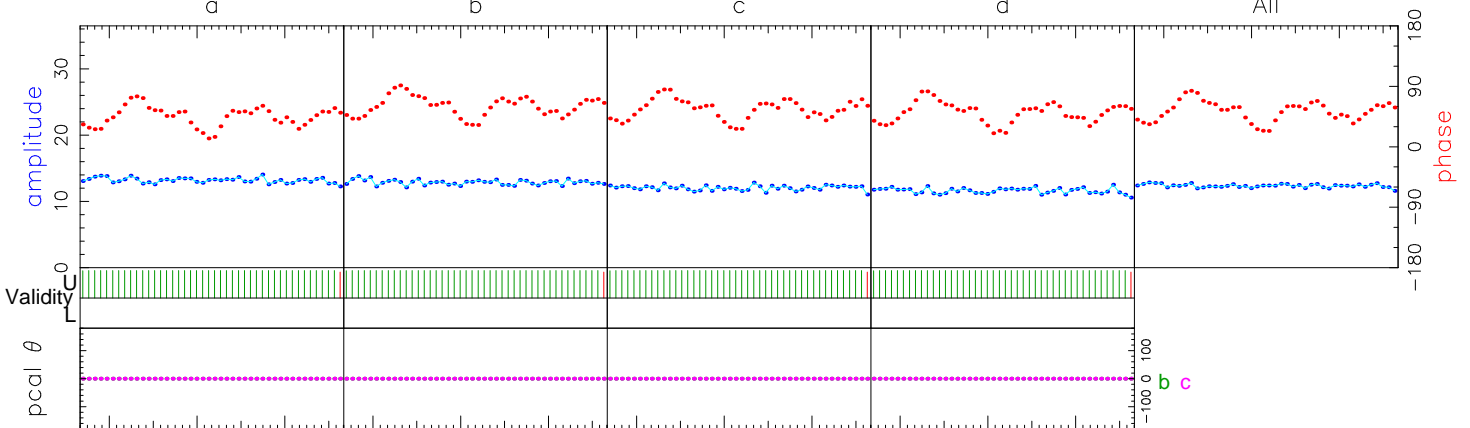
Fringe quality 8

SNR 446.2
 Int time 179.971
 Amp 12.162
 Phase 52.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.001118
 MBD 0.000856
 Fringe rate (Hz)
 -0.001833
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163102
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
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 freqs	
b:c	0:0	0:0	0:0	0:0	PC phase	
b	1000	1000	1000	1000	Manl PC	
c	1000	1000	1000	1000	PC amp	
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	5.09797587180E+03	Apriori delay (usec)	5.09797501559E+03	Resid mbdelay (usec)	8.56210E-04	+/- 2.5E-06
Sband delay (usec)	5.09797613371E+03	Apriori clock (usec)	-1.0156545E+01	Resid sbdelay (usec)	1.11813E-03	+/- 9.7E-06
Phase delay (usec)	5.09797501900E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	3.41495E-06	+/- 1.7E-08
Delay rate (us/s)	6.06601777953E-01	Apriori rate (us/s)	6.06601820539E-01	Resid rate (us/s)	-4.25856E-08	+/- 1.6E-10
Total phase (deg)	294.4	Apriori accel (us/s/s)	1.50999363938E-05	Resid phase (deg)	52.9	+/- 0.3

	RMS	Theor.	Amplitude	12.162 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	14.5	0.9	Search (1024X16)	11.937	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	2.8	1.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.2	0.3	Inc. seg. avg.	12.369	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.2	0.4	Inc. frq. avg.	12.041	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 47.6 el 70.3 pa -109.3 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3314.871 2006.007 simultaneous interpolator

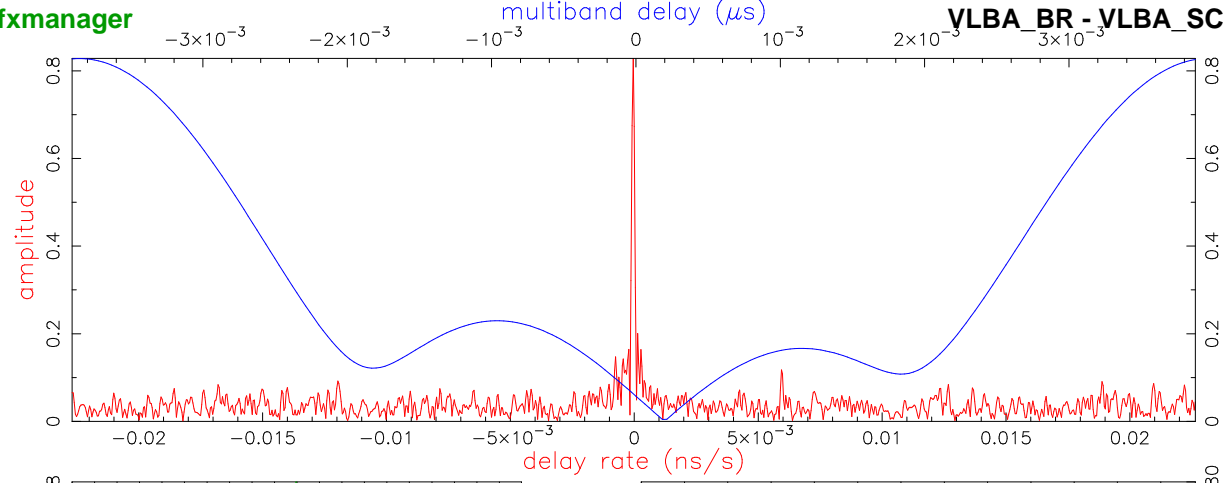
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc.Q.25.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, bc

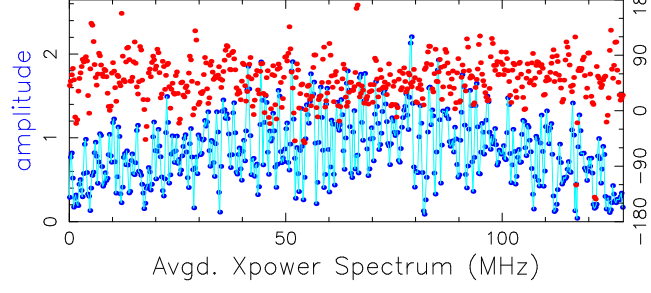
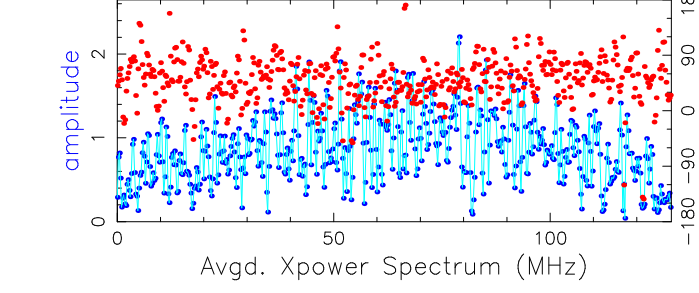
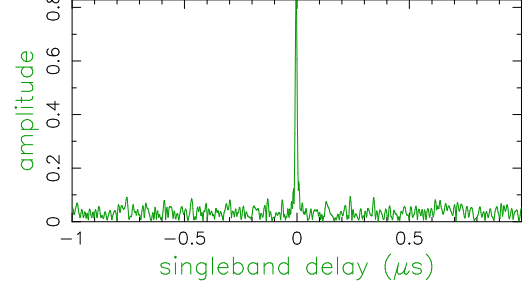
VLBA_BR - VLBA_SC, fgroup Q, pol LR



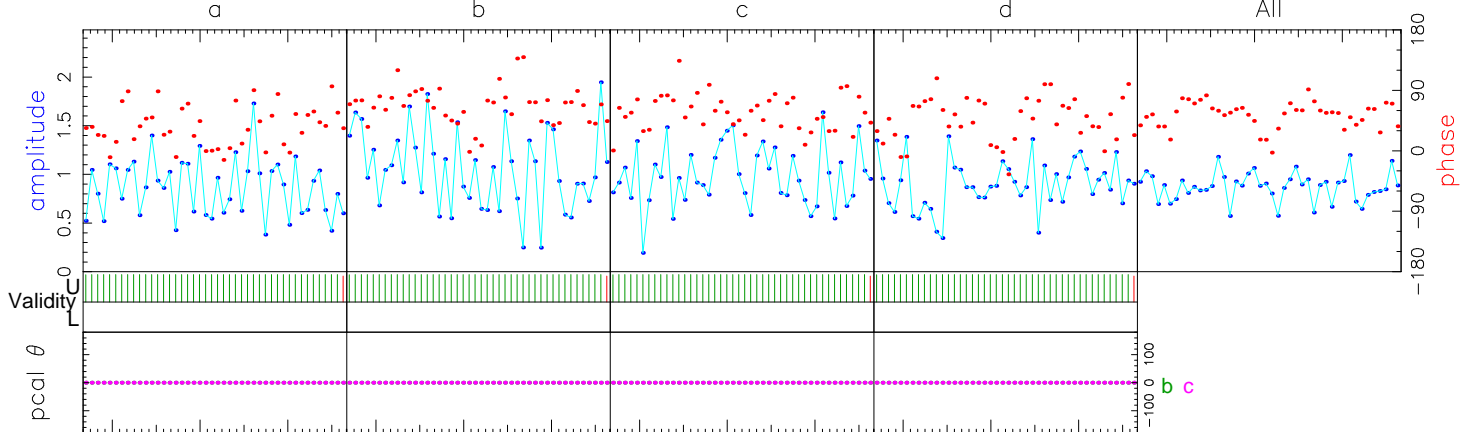
Fringe quality 8

SNR 30.4
 Int time 179.971
 Amp 0.828
 Phase 53.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.003744
 MBD -0.003844
 Fringe rate (Hz)
 -0.001920
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163103
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



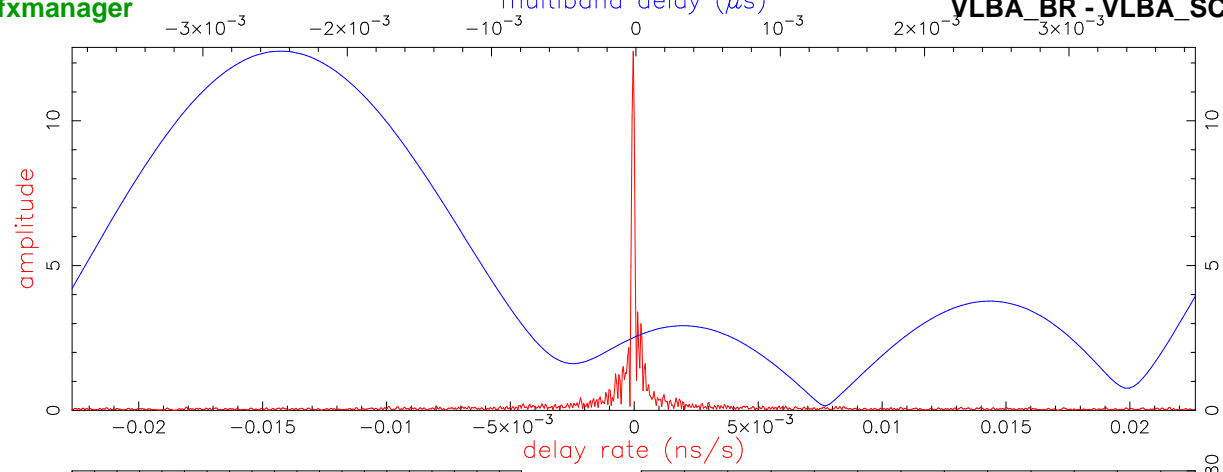
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
40.9	66.7	59.8	42.9	Phase	53.7
0.8	1.0	0.9	0.8	Ampl.	0.8
511.9	511.2	510.4	510.9	Sbd box	511.1
U/L 352/0	352/0	352/0	352/0	APs used	
b 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
b:c 0:0	0:0	0:0	0:0	PC phase	
b:c 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	5.09797117127E+03	Apriori delay (usec)	5.09797501559E+03	Resid mbdelay (usec)	-3.84431E-03 +/- 3.7E-05
Sband delay (usec)	5.09797127196E+03	Apriori clock (usec)	-1.0156545E+01	Resid sbdelay (usec)	-3.74363E-03 +/- 1.4E-04
Phase delay (usec)	5.09797501906E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	3.46824E-06 +/- 2.4E-07
Delay rate (us/s)	6.06601775934E-01	Apriori rate (us/s)	6.06601820539E-01	Resid rate (us/s)	-4.46050E-08 +/- 2.3E-09
Total phase (deg)	295.2	Apriori accel (us/s/s)	1.50999363938E-05	Resid phase (deg)	53.7 +/- 3.8
RMS	Theor.	Amplitude	0.828 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
19.4	12.5	Search (1024X16)	0.826	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
18.3	21.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
15.6	3.8	Inc. seg. avg.	0.854	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
10.9	6.6	Inc. frq. avg.	0.842	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 47.6 el 70.3 pa -109.3	c: az 340.7 el 44.8 pa 142.6	u, v (fr/asec) -3314.871 2006.007			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc..1HP6Q8	Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc.Q.40.1HP6Q8			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, bc

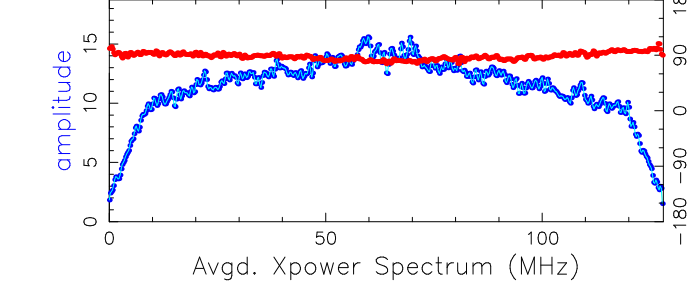
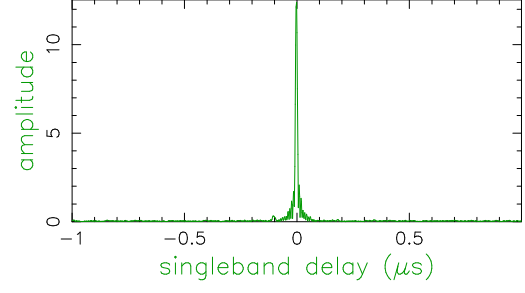
VLBA_BR - VLBA_SC, fgroup Q, pol LL



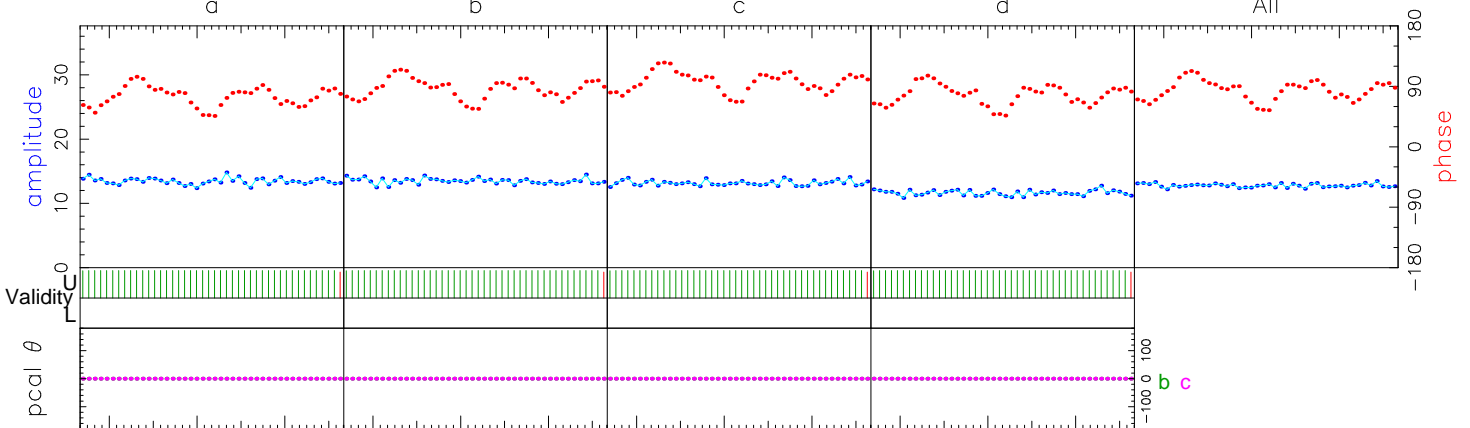
Fringe quality 7

SNR 459.9
 Int time 179.971
 Amp 12.538
 Phase 83.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.002674
 MBD -0.002507
 Fringe rate (Hz)
 -0.001830
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163100
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
b:c	0:0	0:0	0:0	0:0	PC phase	
b:c	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	5.09797250908E+03	Apriori delay (usec)	5.09797501559E+03	Resid mbdelay (usec)	-2.50651E-03	+/- 2.4E-06
Sband delay (usec)	5.09797234109E+03	Apriori clock (usec)	-1.0156545E+01	Resid sbdelay (usec)	-2.67450E-03	+/- 9.4E-06
Phase delay (usec)	5.09797502099E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	5.40595E-06	+/- 1.6E-08
Delay rate (us/s)	6.06601778027E-01	Apriori rate (us/s)	6.06601820539E-01	Resid rate (us/s)	-4.25119E-08	+/- 1.5E-10
Total phase (deg)	325.3	Apriori accel (us/s/s)	1.50999363938E-05	Resid phase (deg)	83.8	+/- 0.2

	RMS	Theor.	Amplitude	12.538 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	14.4	0.8	Search (1024X16)	12.396	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	3.1	1.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	12.2	0.2	Inc. seg. avg.	12.795	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.8	0.4	Inc. frq. avg.	12.540	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 47.6 el 70.3 pa -109.3 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3314.871 2006.007 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc.Q.4.1HP6Q8

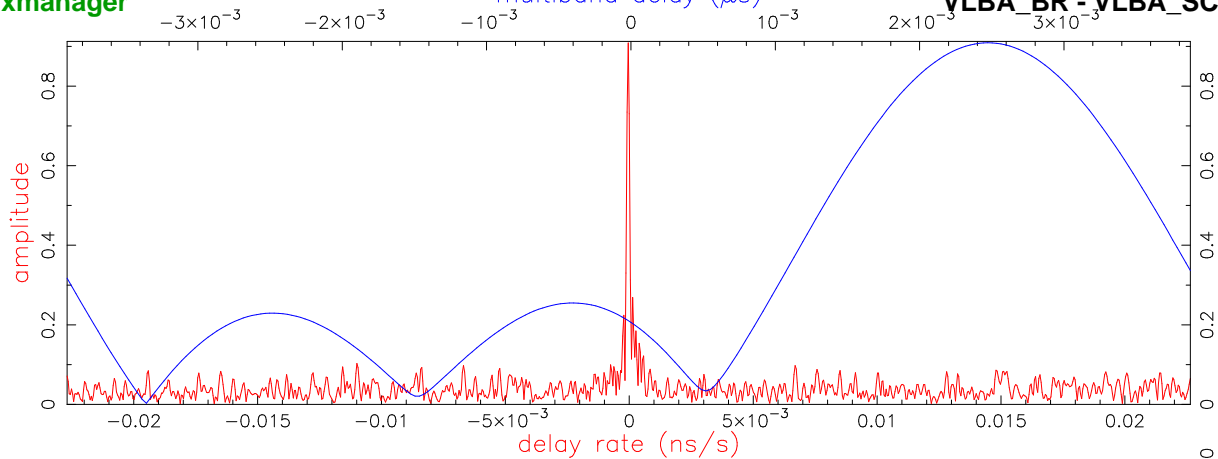
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, bc

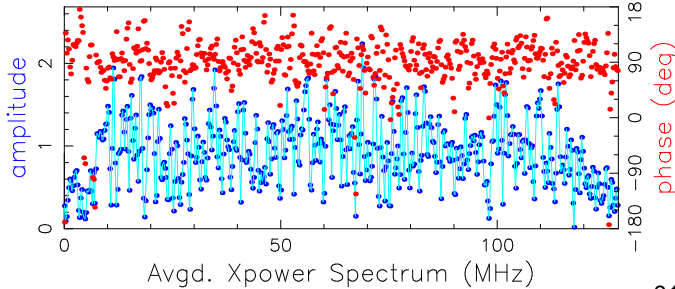
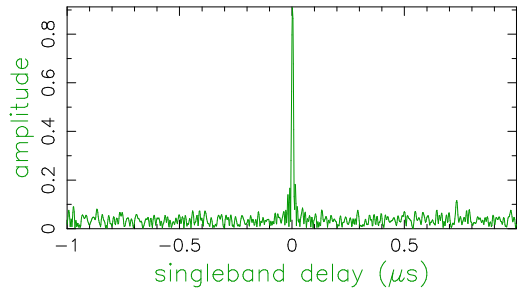
VLBA_BR - VLBA_SC, fgroup Q, pol RL

multiband delay (μ s)



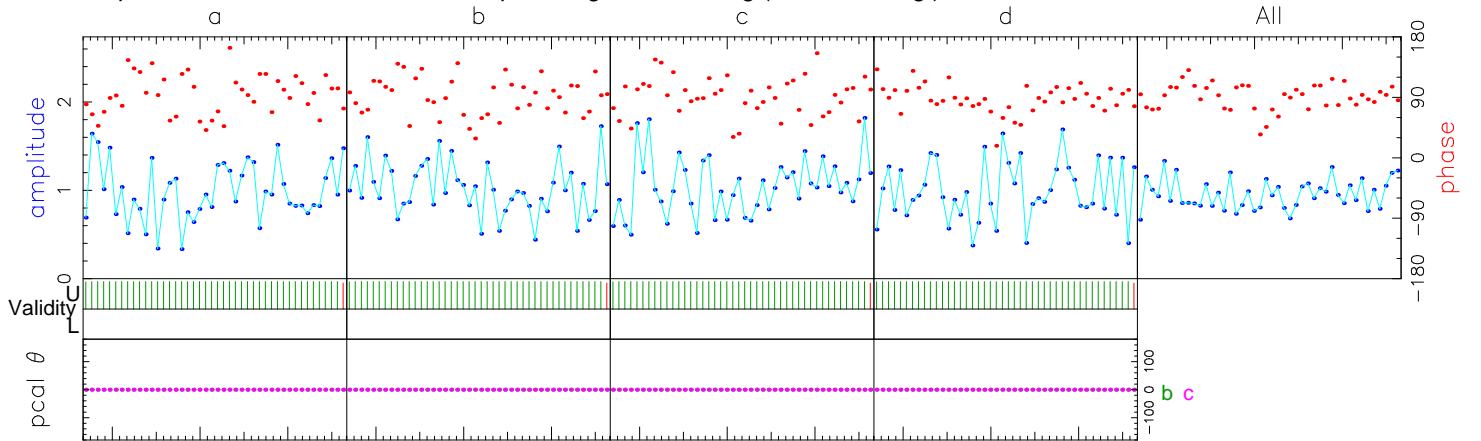
Fringe quality 9

SNR 33.5
 Int time 179.971
 Amp 0.913
 Phase 90.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.002383
 MBD 0.002505
 Fringe rate (Hz)
 -0.001710
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163105
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



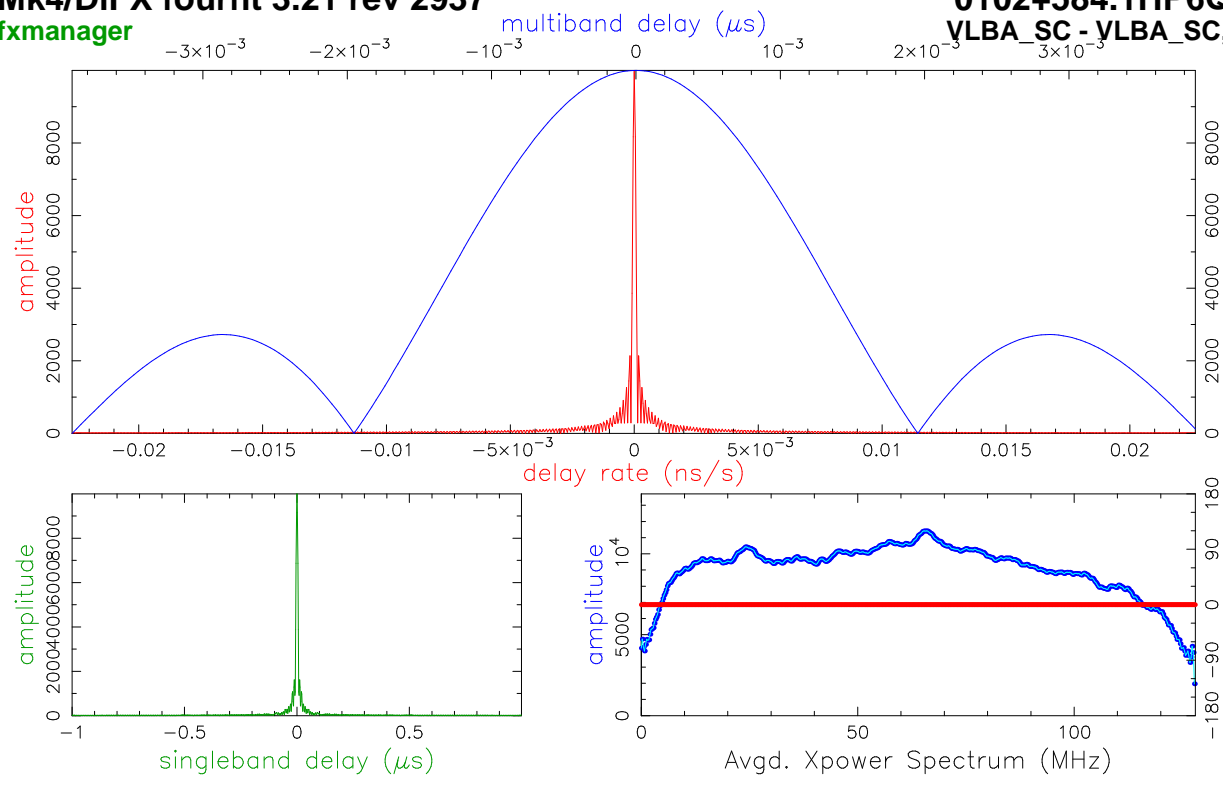
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	91.9	91.4	93.2	86.6	Phase	90.7
	0.9	0.9	0.9	0.9	Ampl.	0.9
	514.1	514.0	514.4	514.3	Sbd box	514.2
U/L	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
b:c	0:0	0:0	0:0	0:0	PC phase	
b:c	0:0	0:0	0:0	0:0	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	

	5.09797752092E+03	Apriori delay (usec)	5.09797501559E+03	Resid mbdelay (usec)	2.50534E-03	+/- 3.3E-05
Group delay (usec)(sbd)	5.09797739821E+03	Apriori clock (usec)	-1.0156545E+01	Resid sbdelay (usec)	2.38262E-03	+/- 1.3E-04
Sband delay (usec)	5.09797502144E+03	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	5.85519E-06	+/- 2.2E-07
Phase delay (usec)	6.06601780801E-01	Apriori rate (us/s)	6.06601820539E-01	Resid rate (us/s)	-3.97381E-08	+/- 2.1E-09
Delay rate (us/s)		Apriori accel (us/s/s)	1.50999363938E-05	Resid phase (deg)	90.7	+/- 3.4
Total phase (deg)	332.2					

	RMS	Theor.	Amplitude	0.913 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	19.1	11.4	Search (1024X16)	0.906	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	18.7	19.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.6	3.4	Inc. seg. avg.	0.942	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.5	6.0	Inc. frq. avg.	0.908	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 47.6 el 70.3 pa -109.3 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3314.871 2006.007 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bc.Q.55.1HP6Q8

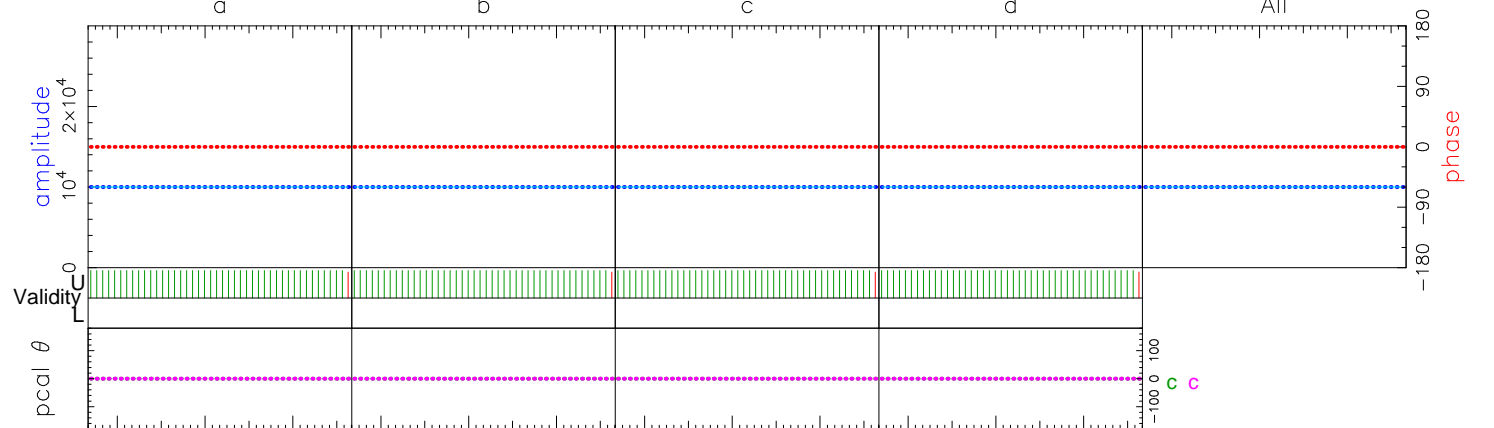


Fringe quality 9

SNR 366863.6
Int time 179.976
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. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163101
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
c	1000	1000	1000	1000		
c:c	0:0	0:0	0:0	0:0		
c:c	0:0	0:0	0:0	0:0		
c	1000	1000	1000	1000		
c	1000	1000	1000	1000		
c	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UR	Q01UR	Q02UR	Q03UR		

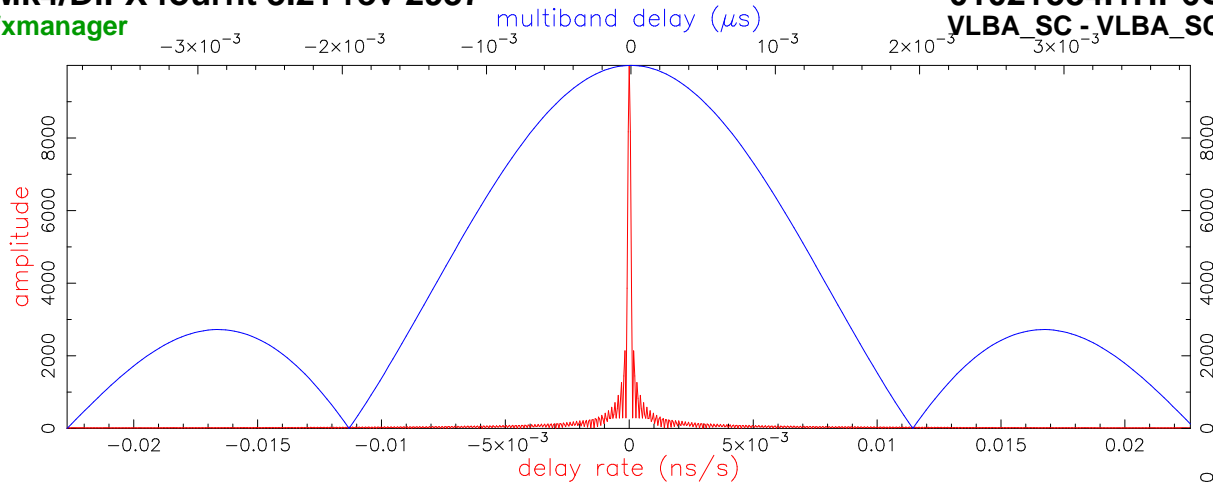
Group delay (usec)(sbd)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	3.0E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	1.2E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	2.0E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	1.9E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg) 0.0 0.0
amp/seg (%) 0.0 0.0
ph/frq (deg) 0.0 0.0
amp/frq (%) 0.0 0.0

c: az 340.7 el 44.8 pa 142.6
Control file: cf_1234_gmva7mm

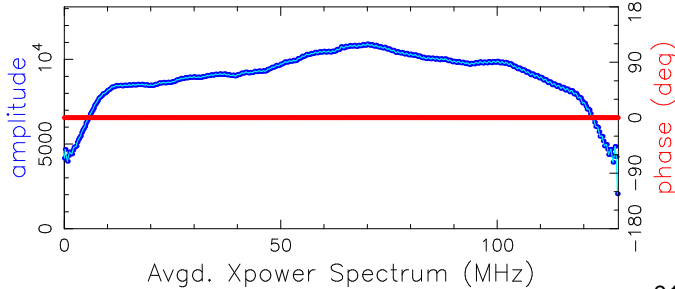
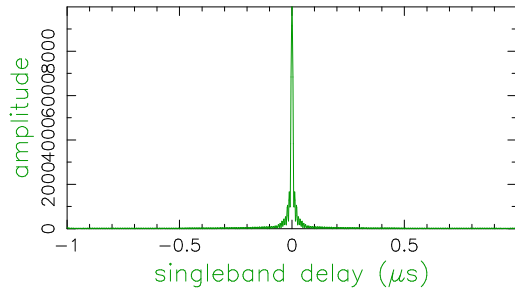
u, v (fr/asec) 0.000 0.000
Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/cc..1HP6Q8

simultaneous interpolator



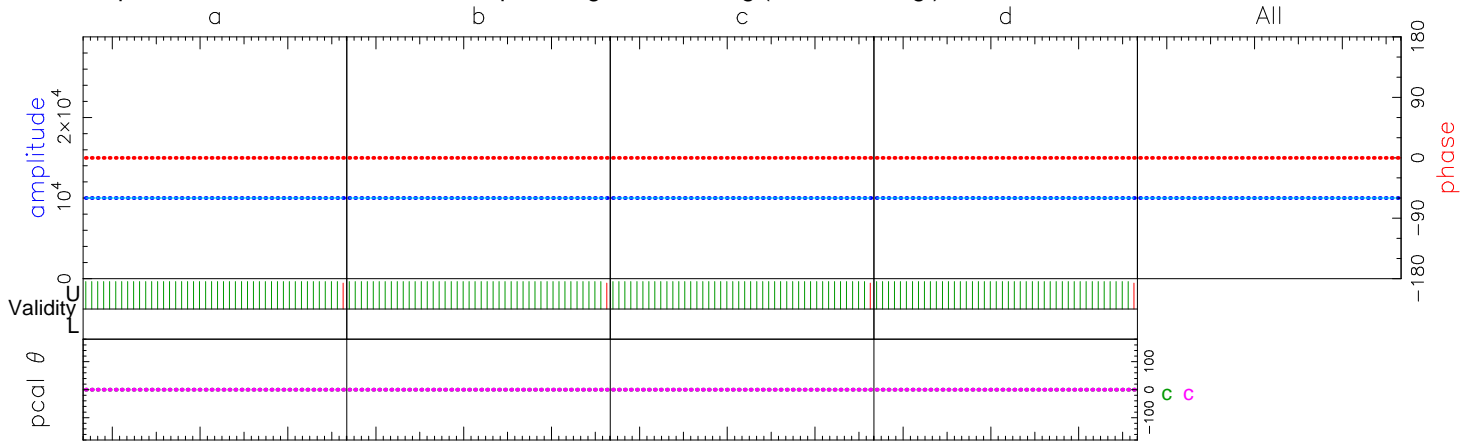
Fringe quality 9

SNR 366863.7
Int time 179.976
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. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163100
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
c	1000	1000	1000	1000		
c:c	0:0	0:0	0:0	0:0		
c:c	0:0	0:0	0:0	0:0		
c	1000	1000	1000	1000		
c	1000	1000	1000	1000		
c	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	3.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.2E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	2.0E-11
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	1.9E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

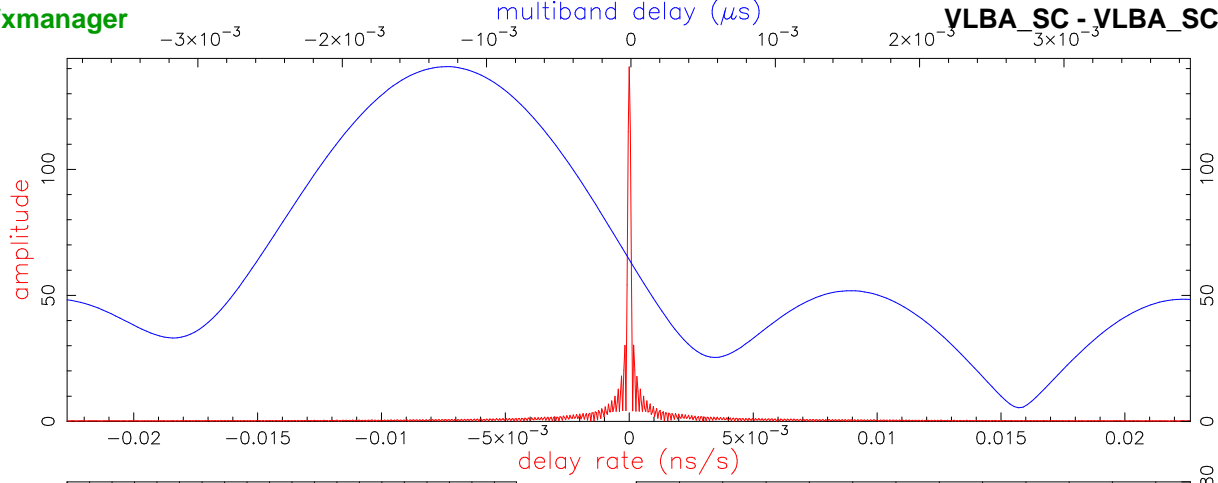
ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	9999.999 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	0.0	0.0	Search (1024X16)	9999.999	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	0.0	0.0	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MSamp/s):	256	dr window (ns/s)	-0.023 0.023		
						Inc. frq. avg.	9999.999	Data rate(Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, cc

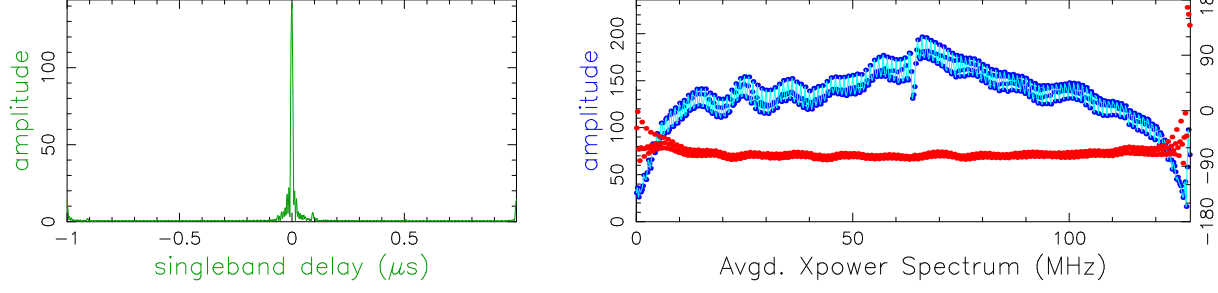
VLBA_SC - VLBA_SC, fgroup Q, pol LR



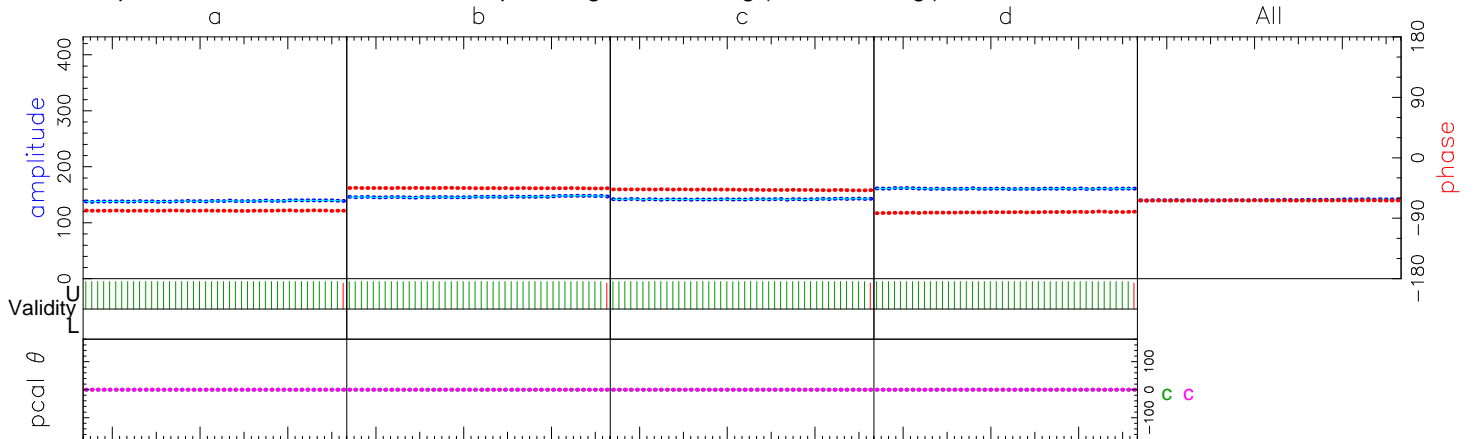
Fringe quality 7

SNR 5284.7
 Int time 179.976
 Amp 144.050
 Phase -63.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.000902
 MBD -0.001241
 Fringe rate (Hz) 0.000005
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163104
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-78.7	-45.1	-47.6	-81.1	Phase	-63.5
	138.8	146.4	142.0	160.9	Ampl.	147.0
	513.2	512.9	511.6	512.4	Sbd box	512.5
U/L	352/0	352/0	352/0	352/0	APs used	
c	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
c:c	0:0	0:0	0:0	0:0	PC phase	
c:c	0:0	0:0	0:0	0:0	Manl PC	
c	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
c	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.24084375000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.24084E-03	+/-	2.1E-07
Sband delay (usec)	-9.02125000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-9.02125E-04	+/-	8.2E-07
Phase delay (usec)	-4.09707798144E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.09708E-06	+/-	1.4E-09
Delay rate (us/s)	1.24793064472E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.24793E-10	+/-	1.3E-11
Total phase (deg)	-63.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-63.5	+/-	0.0

	RMS	Theor.	Amplitude	144.050 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.1	0.1	Search (1024X16)	138.808	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	2.4	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	23.8	0.0	Inc. seg. avg.	140.693	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	6.2	0.0	Inc. frq. avg.	147.024	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

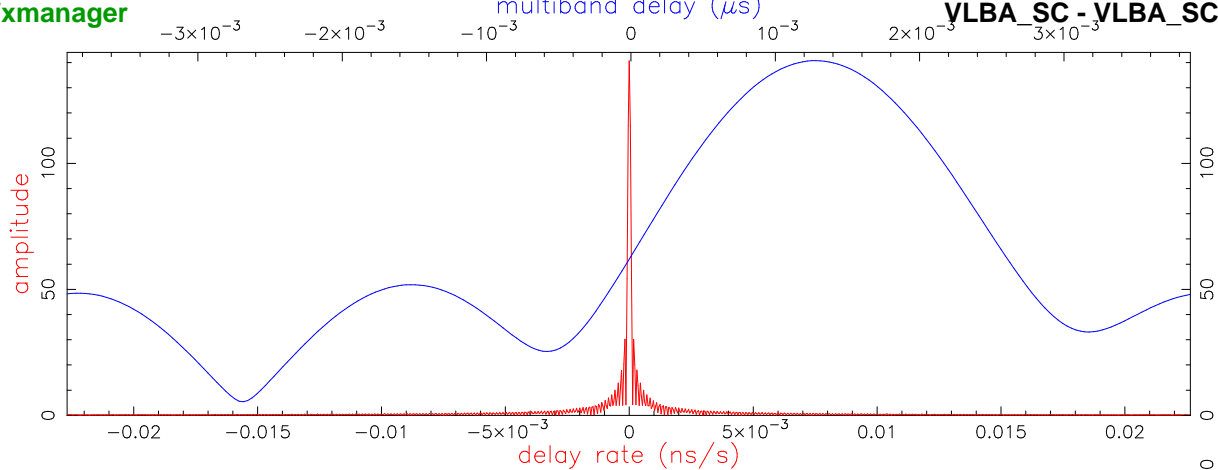
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/cc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/cc.Q.42.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

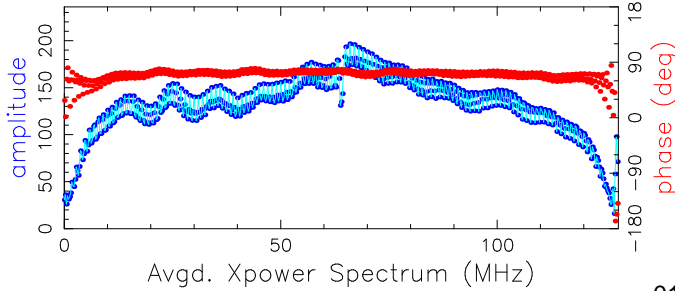
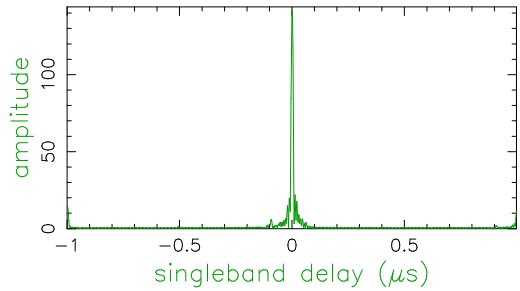
0102+584.1HP6Q8, No0090, cc

VLBA_SC - VLBA_SC, fgroup Q, pol RL



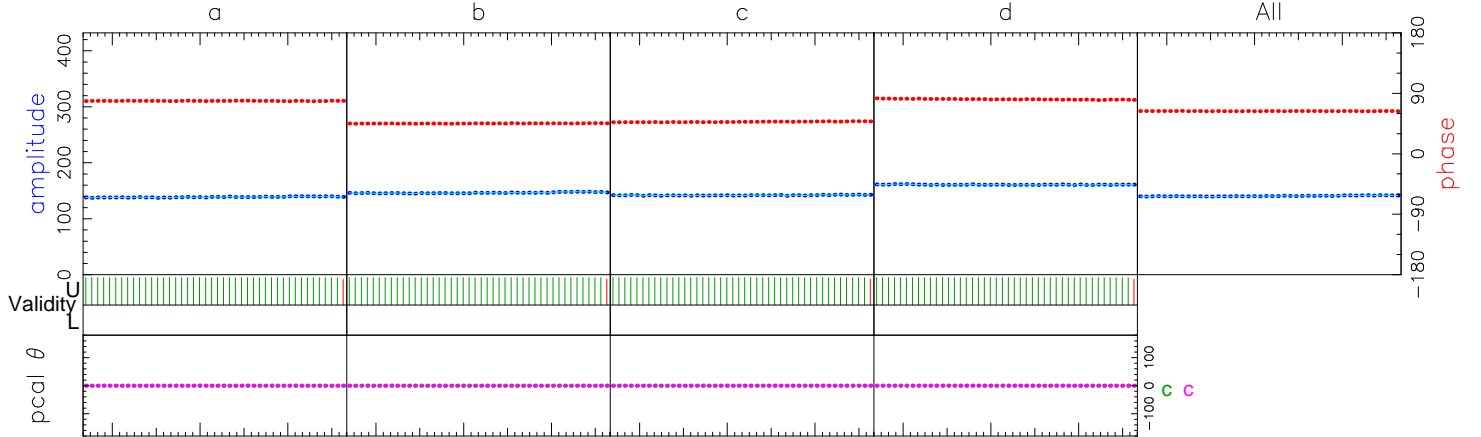
Fringe quality 7

SNR 5284.7
 Int time 179.976
 Amp 144.050
 Phase 63.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.000902
 MBD 0.001241
 Fringe rate (Hz)
 -0.000005
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163106
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
78.7	45.1	47.6	81.1	Phase	63.5
138.8	146.4	142.0	160.9	Ampl.	147.0
512.8	513.1	514.4	513.6	Sbd box	513.5
U/L 352/0	352/0	352/0	352/0	APs used	
c 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
c:c 0:0	0:0	0:0	0:0	PC phase	
c:c 0:0	0:0	0:0	0:0	ManI PC	
c 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
c Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	1.24084375000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.24084E-03	+/-	2.1E-07
Sband delay (usec)	9.02125000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	9.02125E-04	+/-	8.2E-07
Phase delay (usec)	4.09707798099E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.09708E-06	+/-	1.4E-09
Delay rate (us/s)	-1.24793064472E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.24793E-10	+/-	1.3E-11
Total phase (deg)	63.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	63.5	+/-	0.0

ph/seg (deg)	0.1	Theor.	0.1	Amplitude	144.050 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	2.4		0.1	Search (1024X16)	138.808	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	23.8		0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	6.2		0.0	Inc. seg. avg.	140.693	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	147.024	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

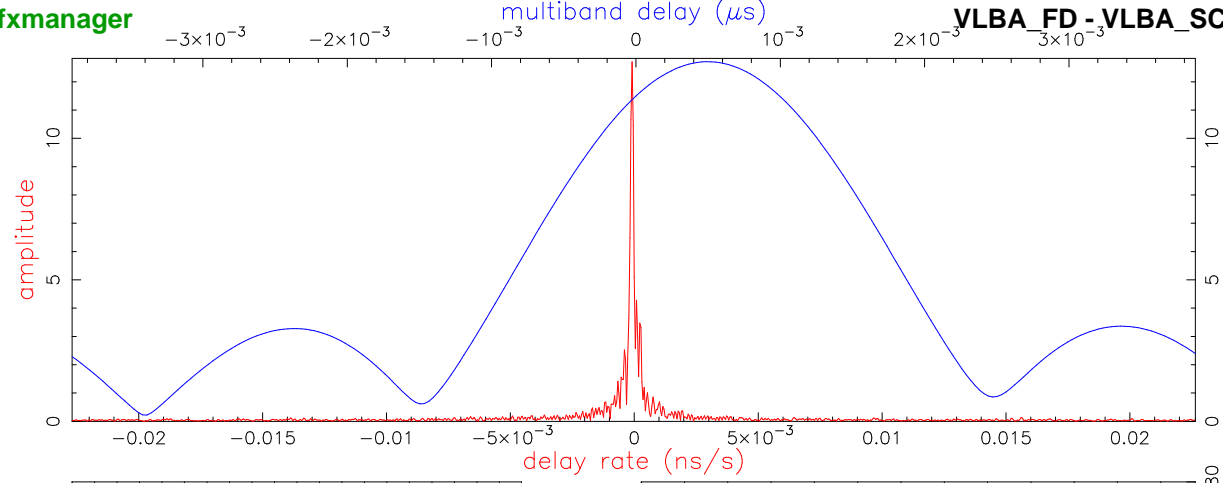
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/cc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/cc.Q.61.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, fc

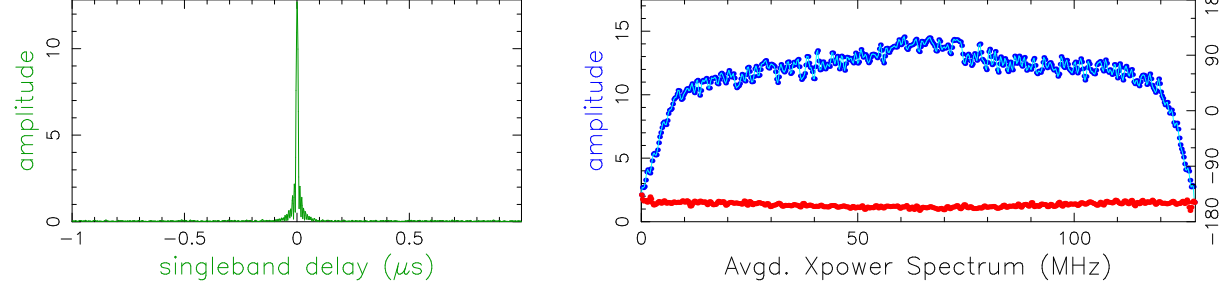
VLBA_FD - VLBA_SC, fgroup Q, pol LL



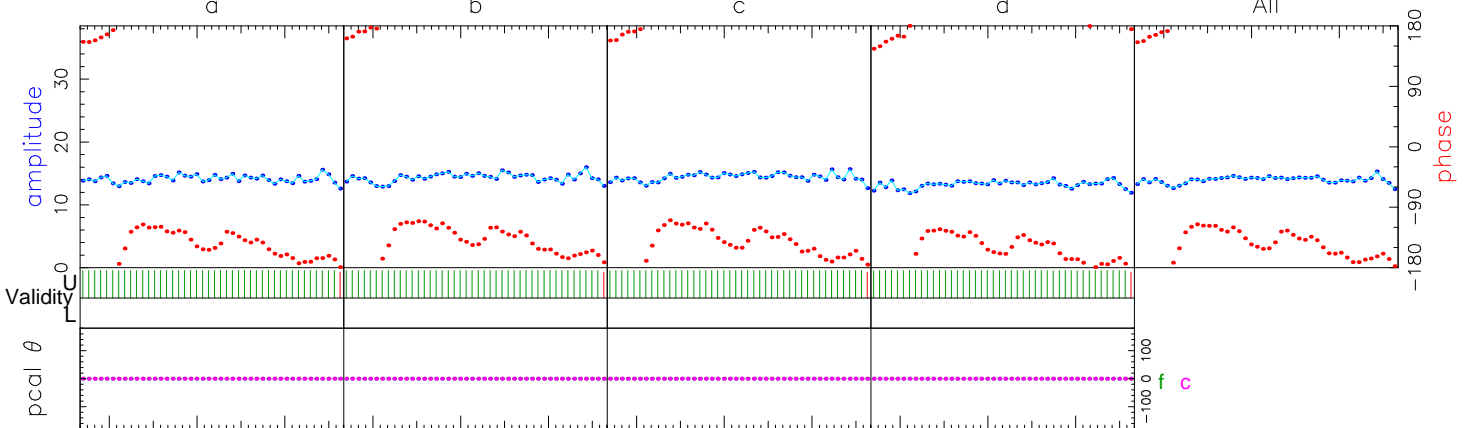
Fringe quality 7

SNR 470.6
 Int time 179.972
 Amp 12.827
 Phase -150.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.000659
 MBD 0.000538
 Fringe rate (Hz)
 -0.003298
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163100
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-152.3	-144.4	-147.2	-157.8	Phase	-150.2
	12.8	13.1	13.1	12.1	Ampl.	12.8
	513.5	513.4	513.2	513.1	Sbd box	513.3
U/L	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
f:c	0:0	0:0	0:0	0:0	PC phase	
f:c	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	3.64397602713E+03	Apriori delay (usec)	3.64397548912E+03	Resid mbdelay (usec)	5.38015E-04	+/- 2.4E-06
Group delay (usec)(sbd)	3.64397614812E+03	Apriori clock (usec)	-6.1530912E-01	Resid sbdelay (usec)	6.59000E-04	+/- 9.2E-06
Sband delay (usec)	3.64397547942E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-9.69669E-06	+/- 1.6E-08
Phase delay (usec)	4.99888768869E-01	Apriori rate (us/s)	4.99888845495E-01	Resid rate (us/s)	-7.66258E-08	+/- 1.5E-10
Delay rate (us/s)		Apriori accel (us/s/s)	2.71655807439E-07	Resid phase (deg)	-150.2	+/- 0.2
Total phase (deg)	-131.7					

	RMS	Theor.	Amplitude	12.827 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	25.1	0.8	Search (1024X16)	12.529	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	9.9	1.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.2	0.2	Inc. seg. avg.	13.979	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.3	0.4	Inc. frq. avg.	12.752	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 13.6 el 60.8 pa -157.8 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -2738.961 508.582 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc.Q.11.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

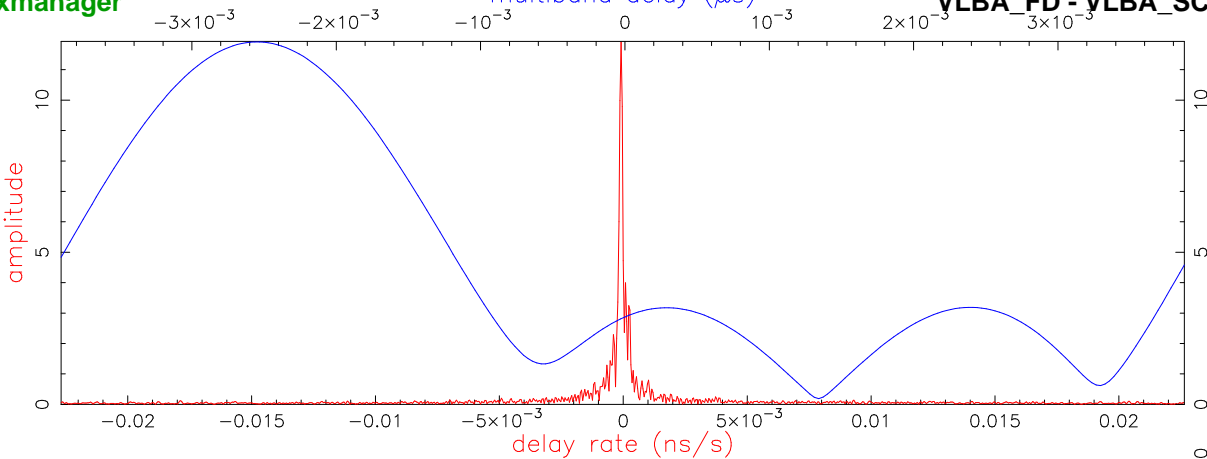
fxmanager

0102+584.1HP6Q8, No0090, fc

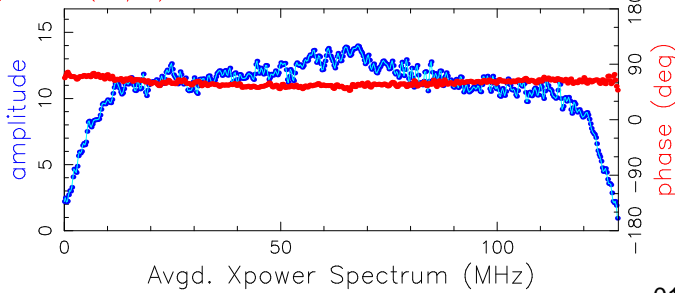
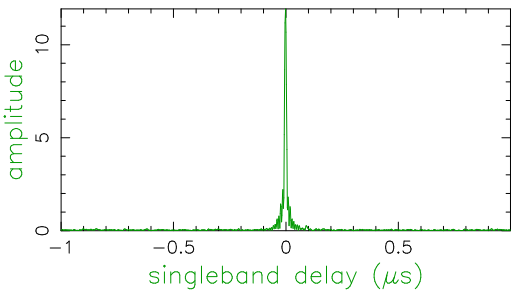
VLBA_FD - VLBA_SC, fgroup Q, pol RR

multiband delay (μ s)

Fringe quality 7

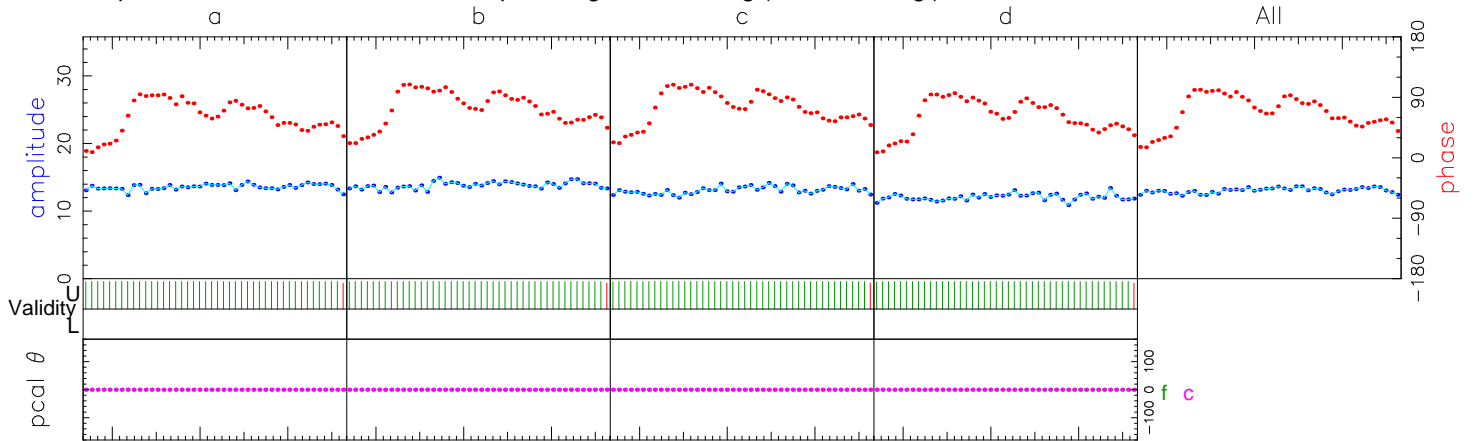


SNR 437.7
 Int time 179.972
 Amp 11.930
 Phase 67.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.002205
 MBD -0.002559
 Fringe rate (Hz)
 -0.003277
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163103
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
60.9	73.6	74.7	61.3	Phase	67.8
12.4	12.6	12.0	11.0	Ampl.	12.0
512.6	511.7	511.7	511.4	Sbd box	511.9
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
f:c 0:0	0:0	0:0	0:0	PC phase	
f:c 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.64397293060E+03	Apriori delay (usec)	3.64397548912E+03	Resid mbdelay (usec)	-2.55852E-03	+/- 2.5E-06
Sband delay (usec)	3.64397328424E+03	Apriori clock (usec)	-6.1530912E-01	Resid sbdelay (usec)	-2.20487E-03	+/- 9.8E-06
Phase delay (usec)	3.64397549349E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	4.37494E-06	+/- 1.7E-08
Delay rate (us/s)	4.99888769363E-01	Apriori rate (us/s)	4.99888845495E-01	Resid rate (us/s)	-7.61323E-08	+/- 1.6E-10
Total phase (deg)	86.3	Apriori accel (us/s/s)	2.71655807439E-07	Resid phase (deg)	67.8	+/- 0.3

ph/seg (deg)	RMS 24.6	Theor. 0.9	Amplitude	11.930 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	10.0	1.5	Search (1024X16)	11.685	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	9.3	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	5.2	0.5	Inc. seg. avg.	13.060	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	11.992	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 13.6 el 60.8 pa -157.8	c: az 340.7 el 44.8 pa 142.6	u,v (fr/asec)	-2738.961 508.582			simultaneous interpolator

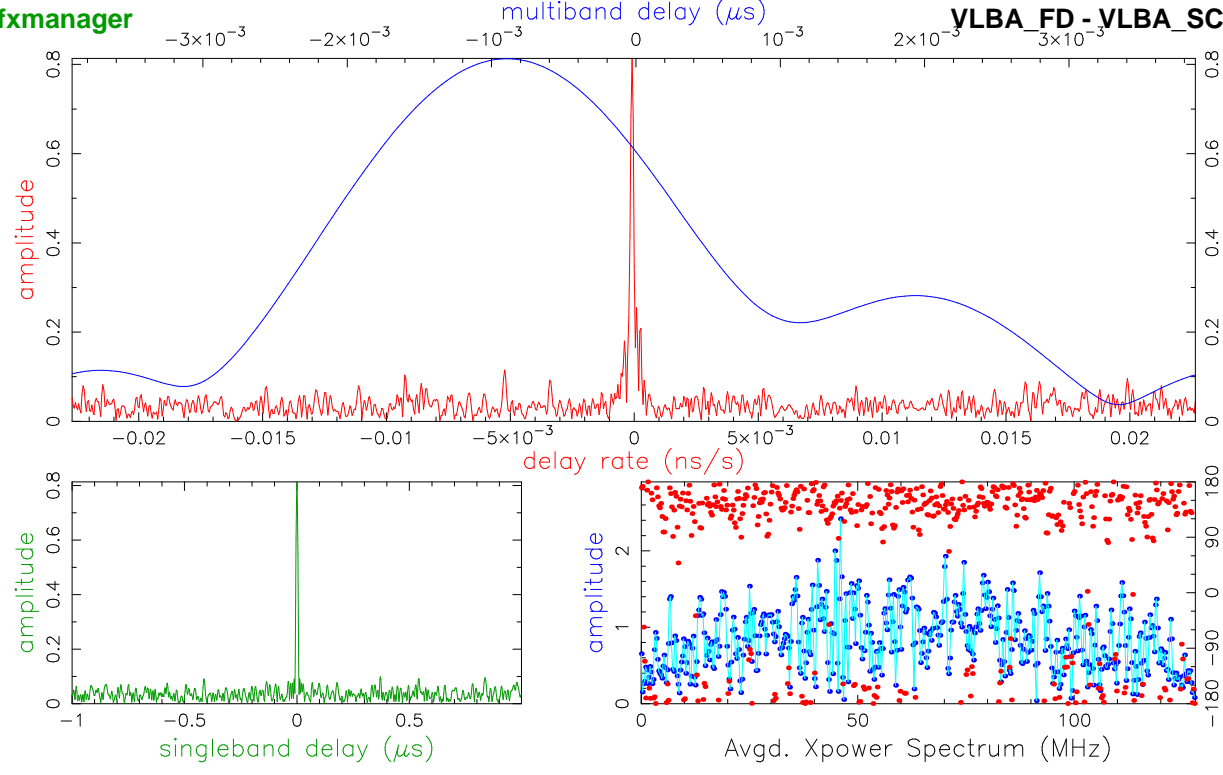
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc.Q.34.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, fc

VLBA_FD - VLBA_SC, fgroup Q, pol LR

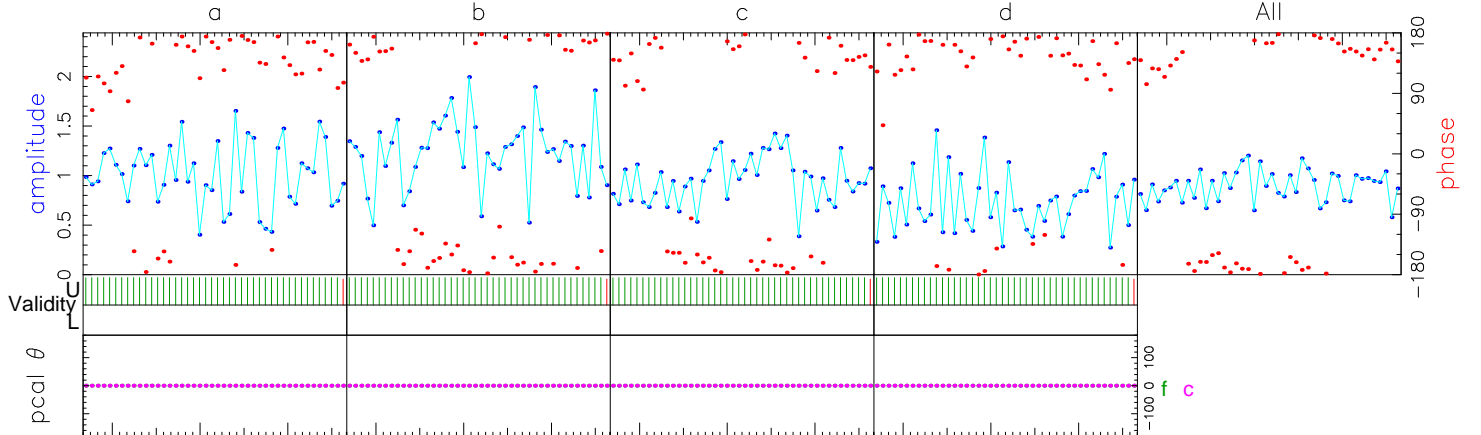


Fringe quality 7

SNR 29.8
 Int time 179.972
 Amp 0.813
 Phase 169.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.000228
 MBD -0.000906
 Fringe rate (Hz)
 -0.003514
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Yr:day 16383
 Start 2020:283
 Stop 2020:283
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163106
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



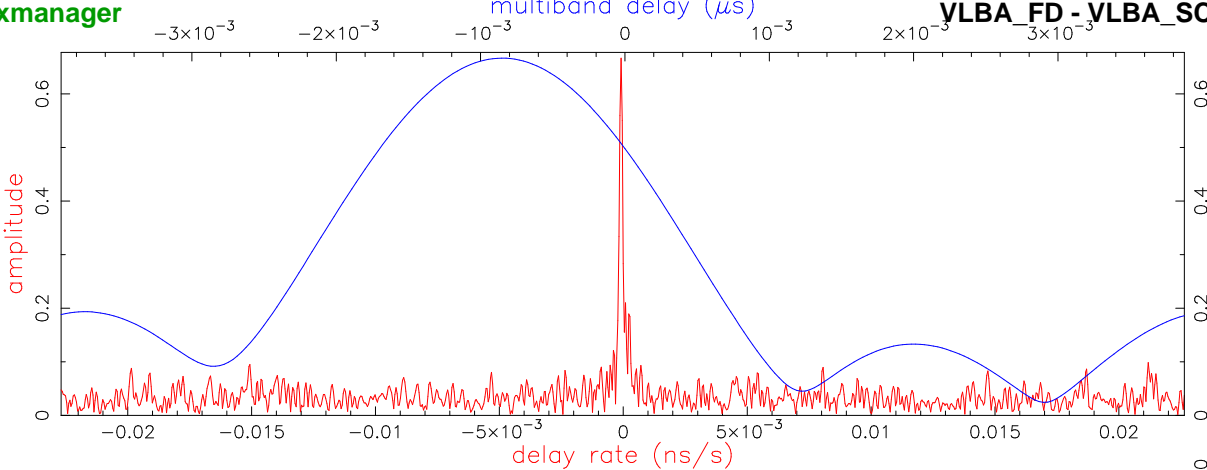
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
152.0	-172.7	173.6	156.8	Phase	169.6
0.8	1.1	0.8	0.6	Ampl.	0.8
513.3	512.8	512.1	513.3	Sbd box	512.9
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
f:c 0:0	0:0	0:0	0:0	PC phase	
f:c 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	3.64397458304E+03	Apriori delay (usec)	3.64397548912E+03	Resid mbdelay (usec)	-9.06079E-04 +/- 3.7E-05
Sband delay (usec)	3.64397526149E+03	Apriori clock (usec)	-6.1530912E-01	Resid sbdelay (usec)	-2.27625E-04 +/- 1.4E-04
Phase delay (usec)	3.64397550006E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	1.09481E-05 +/- 2.5E-07
Delay rate (us/s)	4.99888763840E-01	Apriori rate (us/s)	4.99888845495E-01	Resid rate (us/s)	-8.16544E-08 +/- 2.4E-09
Total phase (deg)	188.2	Apriori accel (us/s/s)	2.71655807439E-07	Resid phase (deg)	169.6 +/- 3.8
RMS	Theor.	Amplitude	0.813 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
26.3	12.7	Search (1024X16)	0.806	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
21.5	22.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
20.0	3.8	Inc. seg. avg.	0.877	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
21.7	6.7	Inc. frq. avg.	0.838	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 13.6 el 60.8 pa -157.8	c: az 340.7 el 44.8 pa 142.6	u, v (fr/asec) -2738.961 508.582			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc..1HP6Q8	Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc.Q.60.1HP6Q8			

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

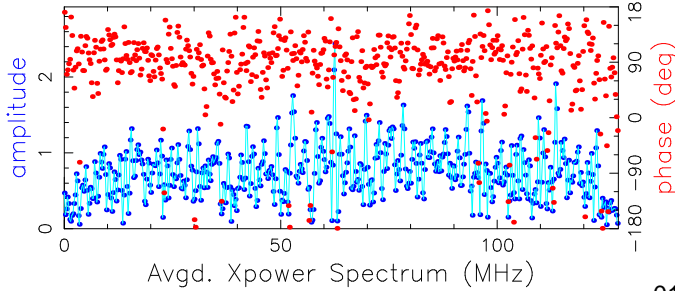
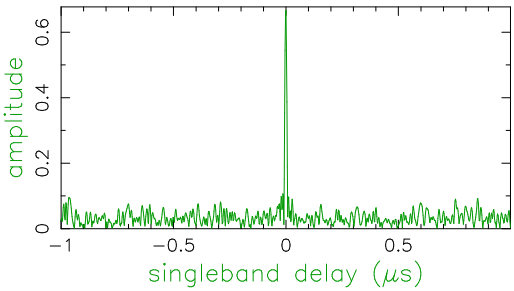
0102+584.1HP6Q8, No0090, fc

VLBA_FD - VLBA_SC, fgroup Q, pol RL



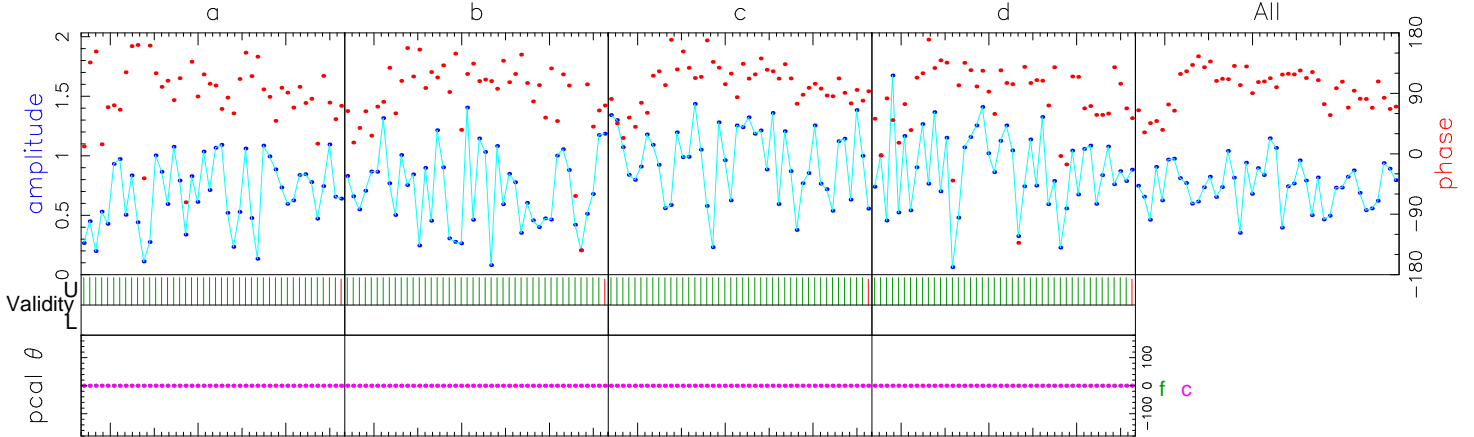
Fringe quality 9

SNR 24.9
 Int time 179.972
 Amp 0.678
 Phase 97.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.000850
 MBD -0.000880
 Fringe rate (Hz)
 -0.003380
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163107
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
94.1	95.2	103.9	95.8	Phase	97.8
0.6	0.6	0.8	0.7	Ampl.	0.7
512.2	512.5	513.0	512.2	Sbd box	512.6
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
f:c 0:0	0:0	0:0	0:0	PC phase	
f:c 0:0	0:0	0:0	0:0	ManI PC	
f 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.64397460888E+03	Apriori delay (usec)	3.64397548912E+03	Resid mbdelay (usec)	-8.80235E-04	+/- 4.5E-05
Sband delay (usec)	3.64397463874E+03	Apriori clock (usec)	-6.1530912E-01	Resid sbdelay (usec)	-8.50375E-04	+/- 1.7E-04
Phase delay (usec)	3.64397549543E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	6.31479E-06	+/- 3.0E-07
Delay rate (us/s)	4.99888766972E-01	Apriori rate (us/s)	4.99888845495E-01	Resid rate (us/s)	-7.85232E-08	+/- 2.9E-09
Total phase (deg)	116.4	Apriori accel (us/s/s)	2.71655807439E-07	Resid phase (deg)	97.8	+/- 4.6

ph/seg (deg)	RMS 28.5	Theor. 15.3	Amplitude	0.678 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	28.7	26.7	Search (1024X16)	0.656	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	5.6	4.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	16.4	8.0	Inc. seg. avg.	0.724	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	0.666	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 13.6 el 60.8 pa -157.8	c: az 340.7 el 44.8 pa 142.6	u, v (fr/asec)	-2738.961 508.582			simultaneous interpolator

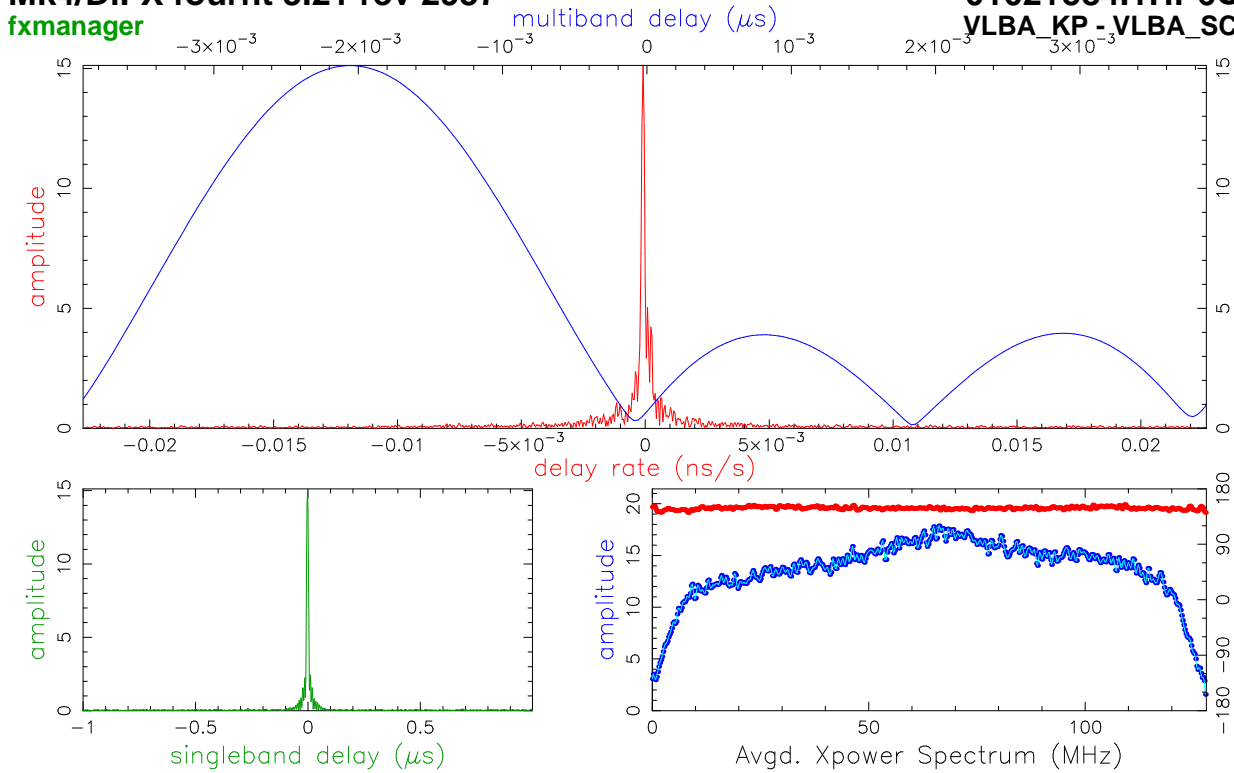
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/fc.Q.74.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, kc

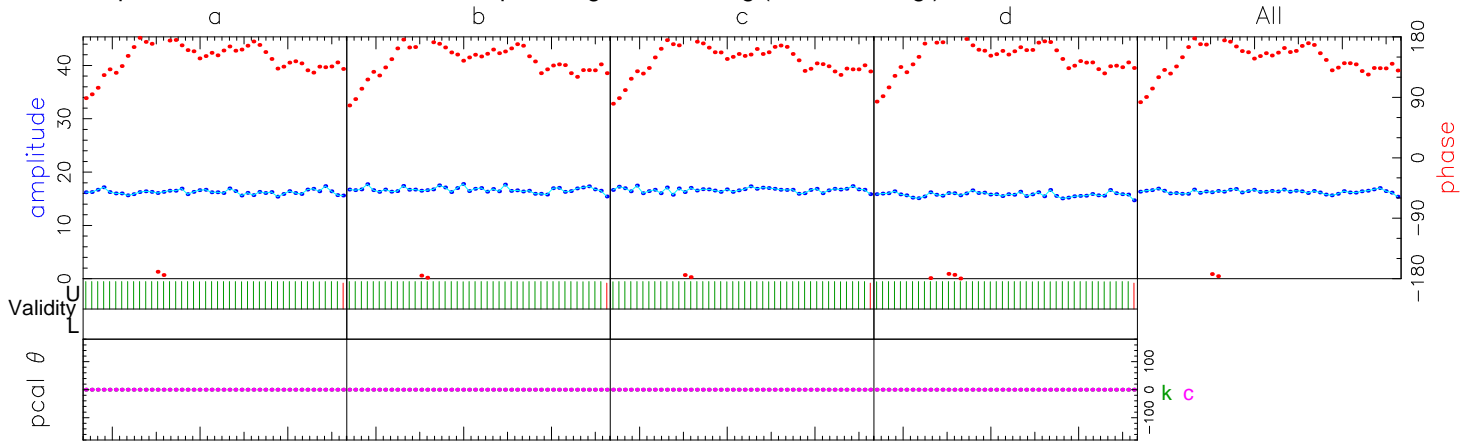
VLBA_KP - VLBA_SC, fgroup Q, pol LL



Fringe quality 8

SNR 554.6
 Int time 179.798
 Amp 15.125
 Phase 147.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.002118
 MBD -0.002066
 Fringe rate (Hz)
 -0.004324
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163101
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
k:c	0:0	0:0	0:0	0:0	PC phase	
k:c	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	3.51727788698E+03	Apriori delay (usec)	3.51727995347E+03	Resid mbdelay (usec)	-2.06649E-03	+/-	2.0E-06
Sband delay (usec)	3.51727783559E+03	Apriori clock (usec)	-8.1192360E+00	Resid sbdelay (usec)	-2.11788E-03	+/-	7.8E-06
Phase delay (usec)	3.51727996299E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	9.52569E-06	+/-	1.3E-08
Delay rate (us/s)	5.86379408191E-01	Apriori rate (us/s)	5.86379508647E-01	Resid rate (us/s)	-1.00456E-07	+/-	1.3E-10
Total phase (deg)	218.6	Apriori accel (us/s/s)	2.80168895609E-06	Resid phase (deg)	147.6	+/-	0.2

ph/seg (deg)	22.6	RMS	22.6	Theor.	0.7	Amplitude	15.125 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	8.3	Search (1024X16)	14.845	Interp.	0.000	Search (1024X16)	14.845	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	3.1	Inc. seg. avg.	16.339	Inc. frq. avg.	15.127	Inc. seg. avg.	16.339	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	2.3	Inc. frq. avg.	15.127	Inc. frq. avg.	15.127	Inc. frq. avg.	15.127	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023 0.023		
k: az 21.3 el 60.1 pa -144.4		c: az 340.7 el 44.8 pa 142.6		u,v (fr/asec)	-3211.250 719.521	Data rate (Mb/s):	2048	Data rate (Mb/s):	2048	nlags: 512	t_coherence infinite	ion window (TEC)	0.00 0.00

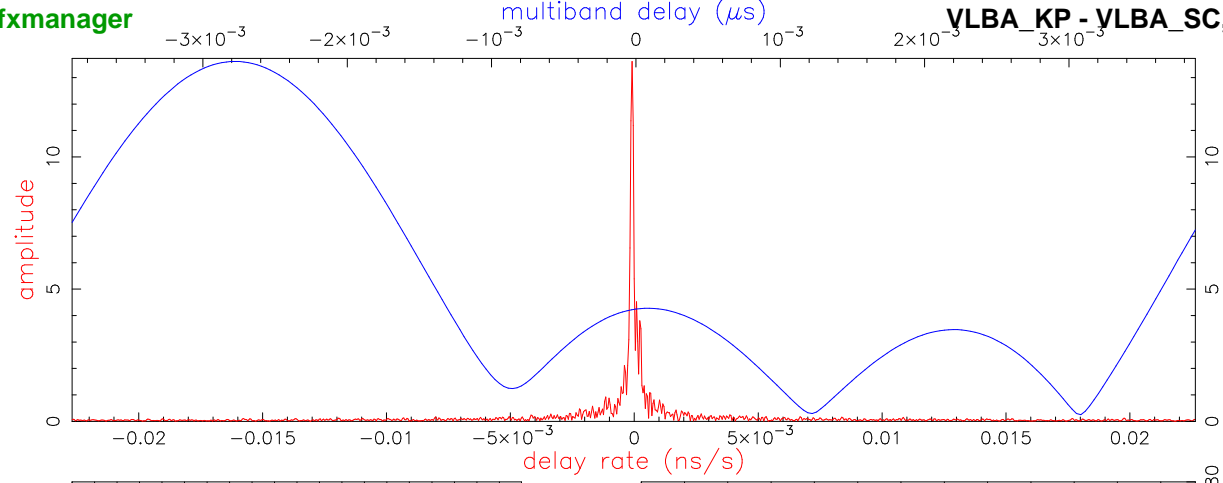
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc.Q.14.1HP6Q8 simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, kc

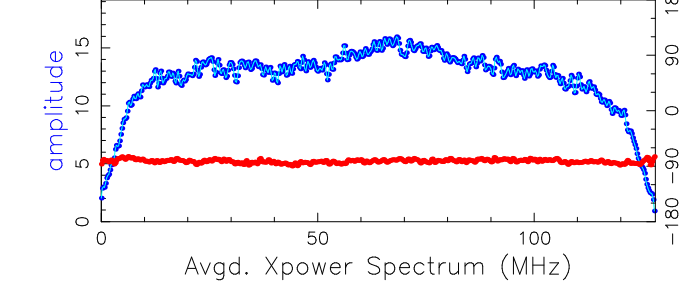
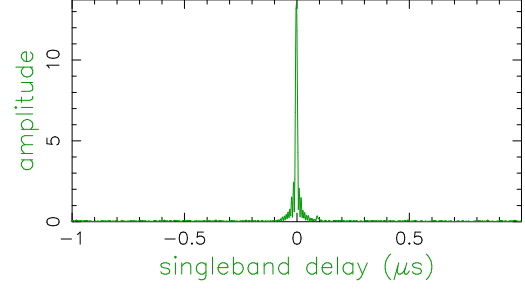
VLBA_KP - VLBA_SC, fgroup Q, pol RR



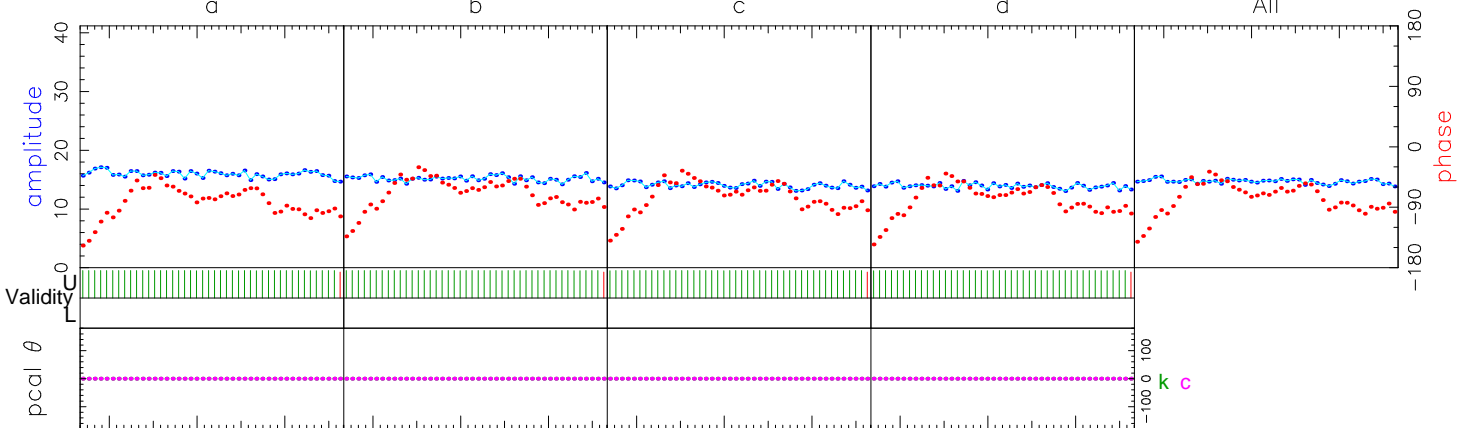
Fringe quality 8

SNR 503.4
 Int time 179.798
 Amp 13.728
 Phase -76.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.002571
 MBD -0.002794
 Fringe rate (Hz)
 -0.004292
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163102
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-82.8	-69.4	-75.0	-78.8	Phase	-76.6
	14.8	14.1	13.0	12.9	Ampl.	13.7
	512.0	511.7	511.2	511.8	Sbd box	511.7
U/L	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
k:c	0:0	0:0	0:0	0:0	PC phase	
k:c	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	3.51727715936E+03	Apriori delay (usec)	3.51727995347E+03	Resid mbdelay (usec)	-2.79411E-03	+/- 2.2E-06
Group delay (usec)(sbd)	3.51727715936E+03	Apriori clock (usec)	-8.1192360E+00	Resid sbdelay (usec)	-2.57062E-03	+/- 8.6E-06
Sband delay (usec)	3.51727738284E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-4.94061E-06	+/- 1.5E-08
Phase delay (usec)	3.51727994853E+03	Apriori rate (us/s)	5.86379508647E-01	Resid rate (us/s)	-9.97267E-08	+/- 1.4E-10
Delay rate (us/s)	5.86379408920E-01	Apriori accel (us/s/s)	2.80168895609E-06	Resid phase (deg)	-76.6	+/- 0.2
Total phase (deg)	-5.5					

	RMS	Theor.	Amplitude	13.728 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	22.7	0.8	Search (1024X16)	13.302	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	7.7	1.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.0	0.2	Inc. seg. avg.	14.713	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.7	0.4	Inc. frq. avg.	13.664	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 21.3 el 60.1 pa -144.4 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3211.250 719.521 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc.Q.28.1HP6Q8

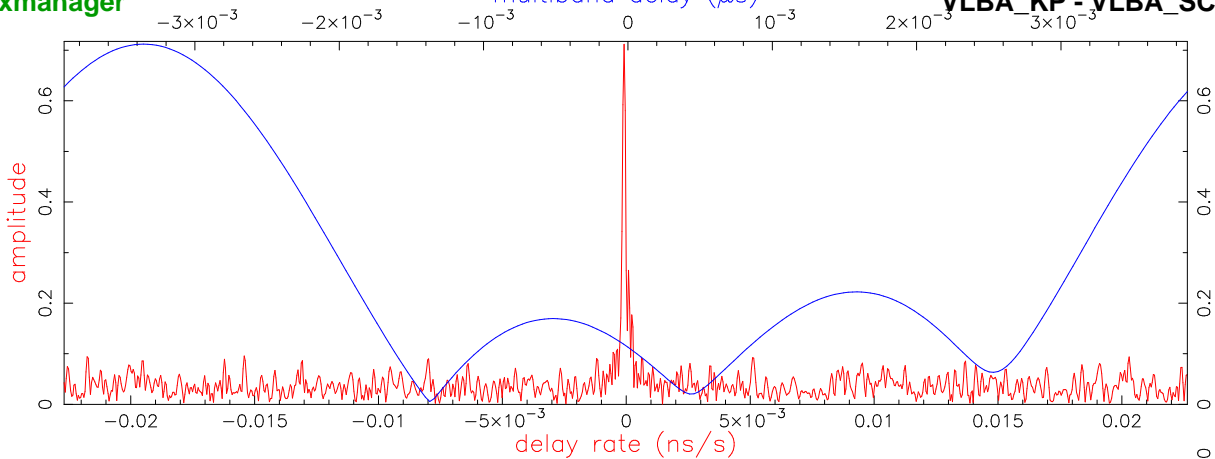
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, kc

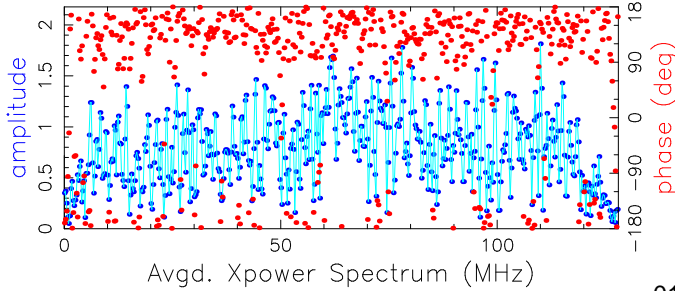
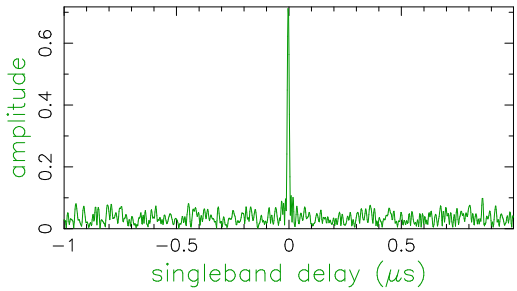
VLBA_KP - VLBA_SC, fgroup Q, pol LR

multiband delay (μ s)



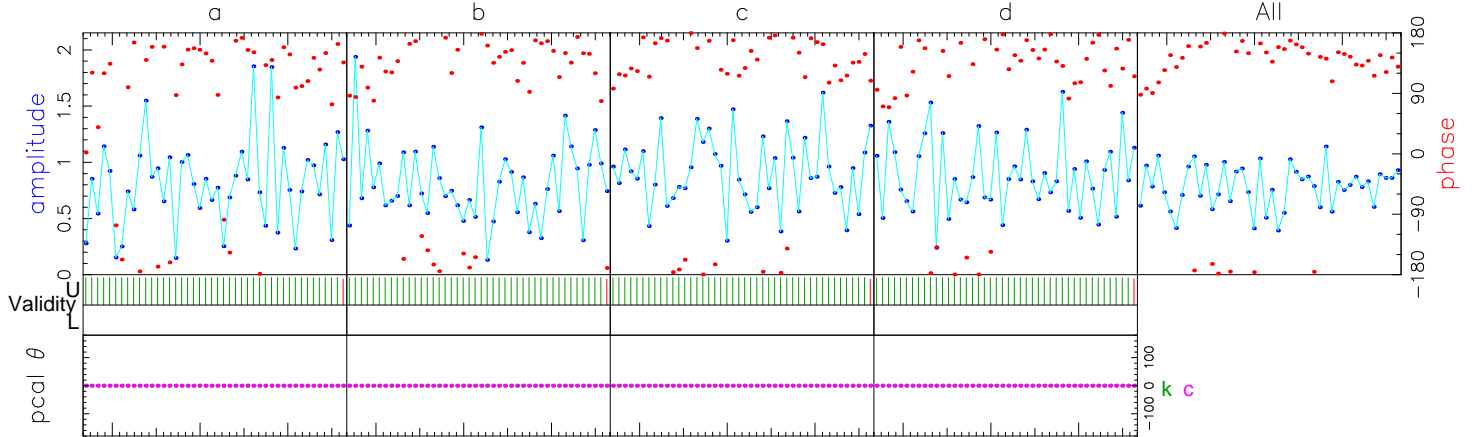
Fringe quality 9

SNR 26.3
 Int time 179.798
 Amp 0.717
 Phase 147.8
 PFD 0.0e+00
 Delays (μ s)
 SBD -0.003303
 MBD -0.003340
 Fringe rate (Hz)
 -0.004456
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163104
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
146.6	147.8	153.7	142.5	Phase	147.8
0.7	0.6	0.8	0.7	Ampl.	0.7
511.3	511.7	510.9	511.5	Sbd box	511.3
U/L 352/0	352/0	352/0	352/0	APs used	
k 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
k:c 0:0	0:0	0:0	0:0	PC phase	
k:c 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
k Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.51727661298E+03	Apriori delay (usec)	3.51727995347E+03	Resid mbdelay (usec)	-3.34049E-03	+/-	4.2E-05
Sband delay (usec)	3.51727665034E+03	Apriori clock (usec)	-8.1192360E+00	Resid sbdelay (usec)	-3.30313E-03	+/-	1.6E-04
Phase delay (usec)	3.51727996301E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	9.53719E-06	+/-	2.8E-07
Delay rate (us/s)	5.86379405122E-01	Apriori rate (us/s)	5.86379508647E-01	Resid rate (us/s)	-1.03524E-07	+/-	2.7E-09
Total phase (deg)	218.8	Apriori accel (us/s/s)	2.80168895609E-06	Resid phase (deg)	147.8	+/-	4.4

	RMS	Theor.	Amplitude	0.717 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	25.5	14.4	Search (1024X16)	0.694	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	27.5	25.2	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	5.7	4.4	Inc. seg. avg.	0.761	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
amp/frq (%)	7.8	7.6	Inc. frq. avg.	0.712					

k: az 21.3 el 60.1 pa -144.4 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3211.250 719.521 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc.Q.48.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

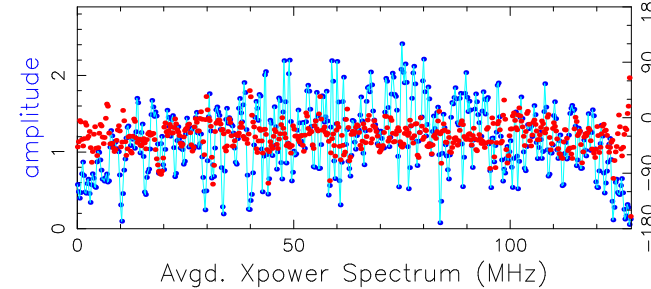
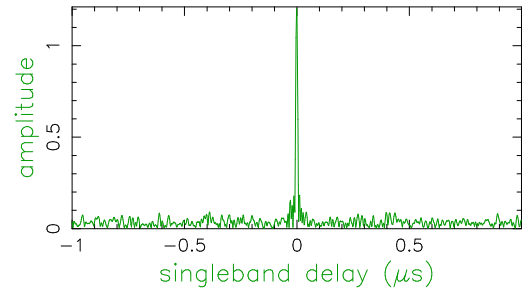
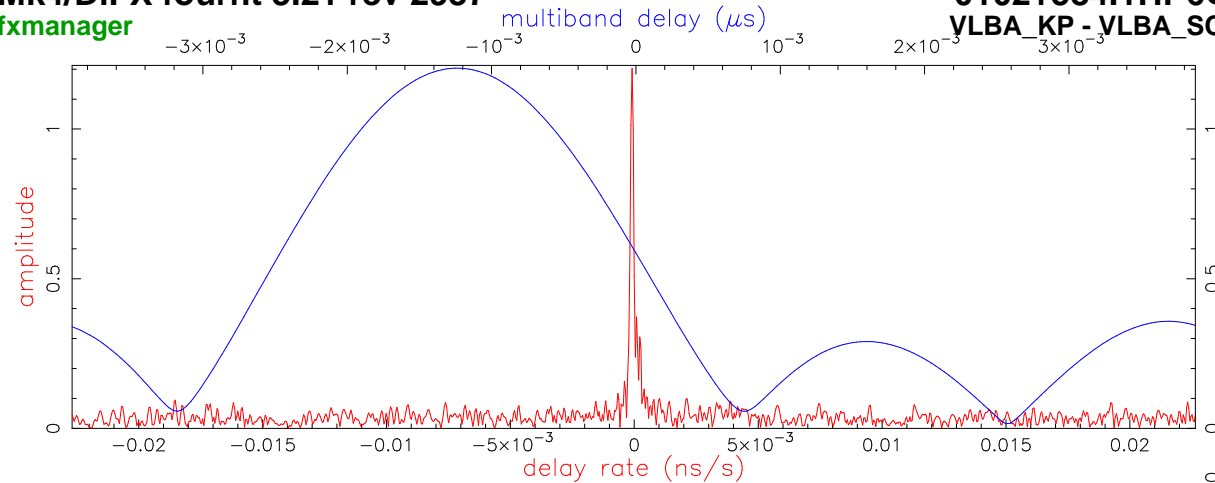
0102+584.1HP6Q8, No0090, kc

VLBA_KP - VLBA_SC, fgroup Q, pol RL

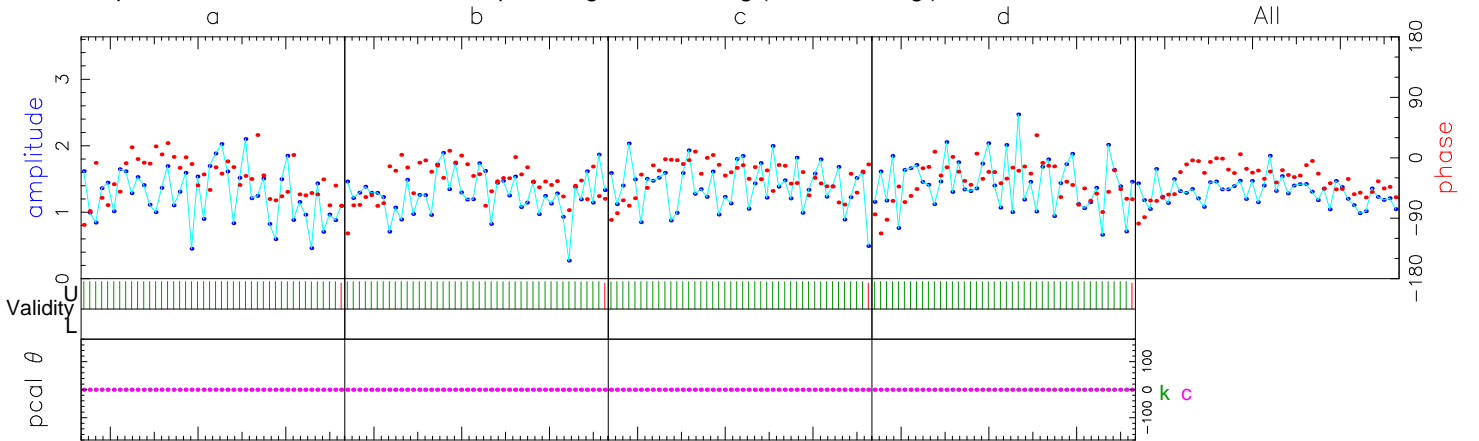
Fringe quality 8

SNR 44.5
 Int time 179.798
 Amp 1.213
 Phase -32.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.001355
 MBD -0.001209
 Fringe rate (Hz)
 -0.004148
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163107
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000		
c	1000	1000	1000	1000		
k:c	0:0	0:0	0:0	0:0		
k:c	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
c	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UL	Q01UL	Q02UL	Q03UL		

	42912.00	43040.00	43168.00	43296.00	Resid mbdelay (usec)	-1.20867E-03	+/- 2.5E-05
Group delay (usec)(sbd)	3.51727874480E+03	3.51727859797E+03	3.51727995347E+03	3.51727995347E+03	Resid sbdelay (usec)	-1.35550E-03	+/- 9.7E-05
Sband delay (usec)	3.51727859797E+03	3.51727995138E+03	3.51727995138E+03	3.51727995138E+03	Resid phdelay (usec)	-2.09105E-06	+/- 1.7E-07
Phase delay (usec)	3.51727995138E+03	5.86379412267E-01	5.86379508647E-01	5.86379508647E-01	Resid rate (us/s)	-9.63799E-08	+/- 1.6E-09
Delay rate (us/s)	5.86379412267E-01	2.80168895609E-06	2.80168895609E-06	2.80168895609E-06	Resid phase (deg)	-32.4	+/- 2.6
Total phase (deg)	38.6						

	RMS	Theor.	Amplitude	1.213 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	23.2	8.5	Search (1024X16)	1.170	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	16.4	14.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.0	2.6	Inc. seg. avg.	1.292	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	6.8	4.5	Inc. frq. avg.	1.203	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 21.3 el 60.1 pa -144.4 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3211.250 719.521 simultaneous interpolator

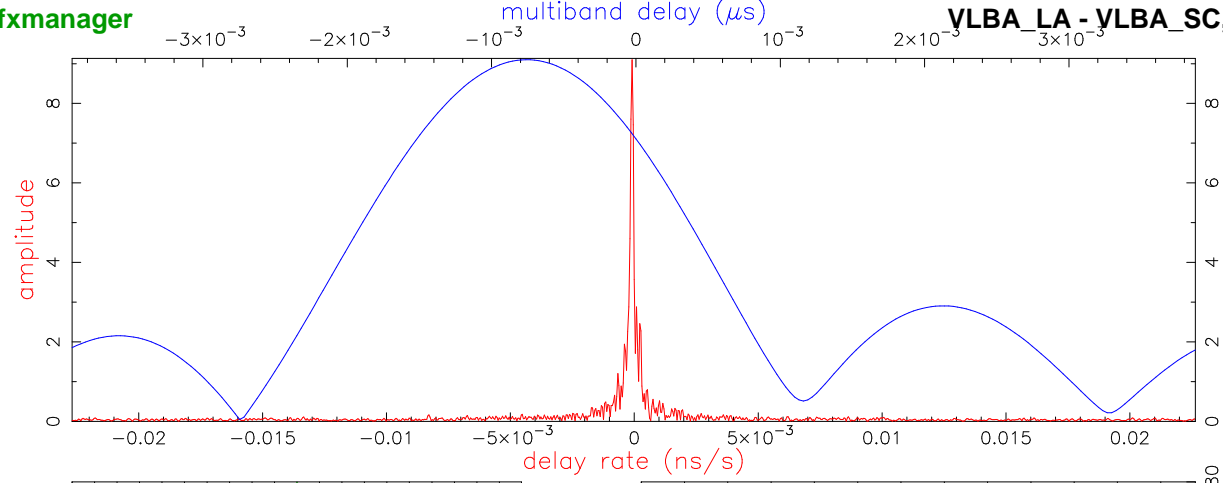
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/kc.Q.70.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

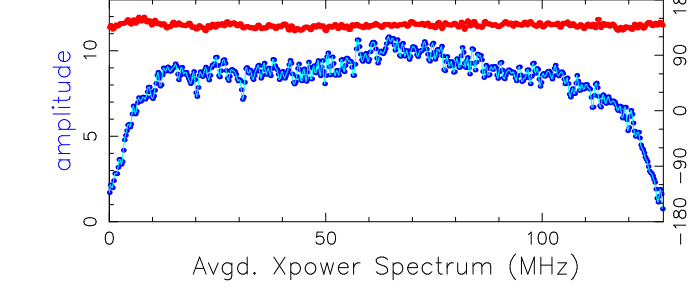
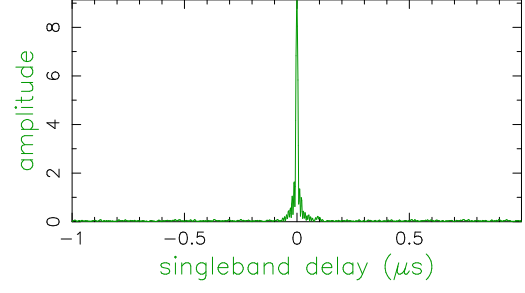
0102+584.1HP6Q8, No0090, lc

VLBA_LA - VLBA_SC, fgroup Q, pol RR



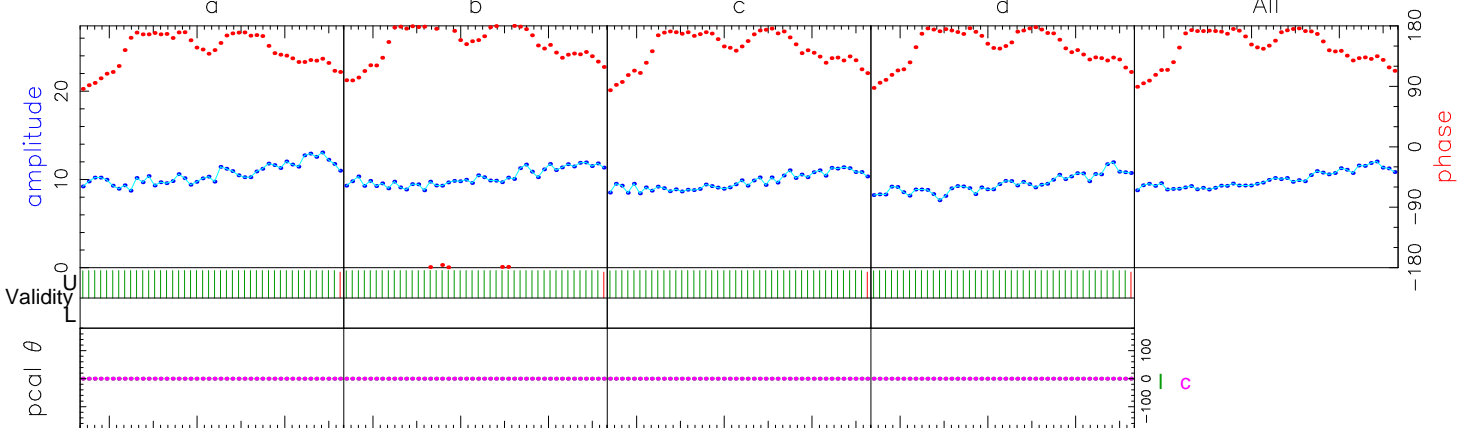
Fringe quality 7

SNR 335.1
 Int time 179.971
 Amp 9.133
 Phase 147.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.000406
 MBD -0.000770
 Fringe rate (Hz)
 -0.004263
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163112
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000		
c	1000	1000	1000	1000		
l:c	0:0	0:0	0:0	0:0		
l:c	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
c	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	4.37866610447E+03	Apriori delay (usec)	4.37866687476E+03	Resid mbdelay (usec)	-7.70298E-04	+/-	3.3E-06
Sband delay (usec)	4.37866646901E+03	Apriori clock (usec)	-8.8328543E+00	Resid sbdelay (usec)	-4.05750E-04	+/-	1.3E-05
Phase delay (usec)	4.37866688427E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	9.50227E-06	+/-	2.2E-08
Delay rate (us/s)	5.17313333427E-01	Apriori rate (us/s)	5.17313432473E-01	Resid rate (us/s)	-9.90460E-08	+/-	2.1E-10
Total phase (deg)	251.6	Apriori accel (us/s/s)	3.53865583823E-06	Resid phase (deg)	147.2	+/-	0.3

ph/seg (deg)	25.0	1.1	Amplitude	9.133 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	13.8	2.0	Search (1024X16)	8.808	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	5.9	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	4.5	0.6	Inc. seg. avg.	9.984	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	9.124	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 18.7 el 65.2 pa -150.7 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -2832.567 891.996 simultaneous interpolator

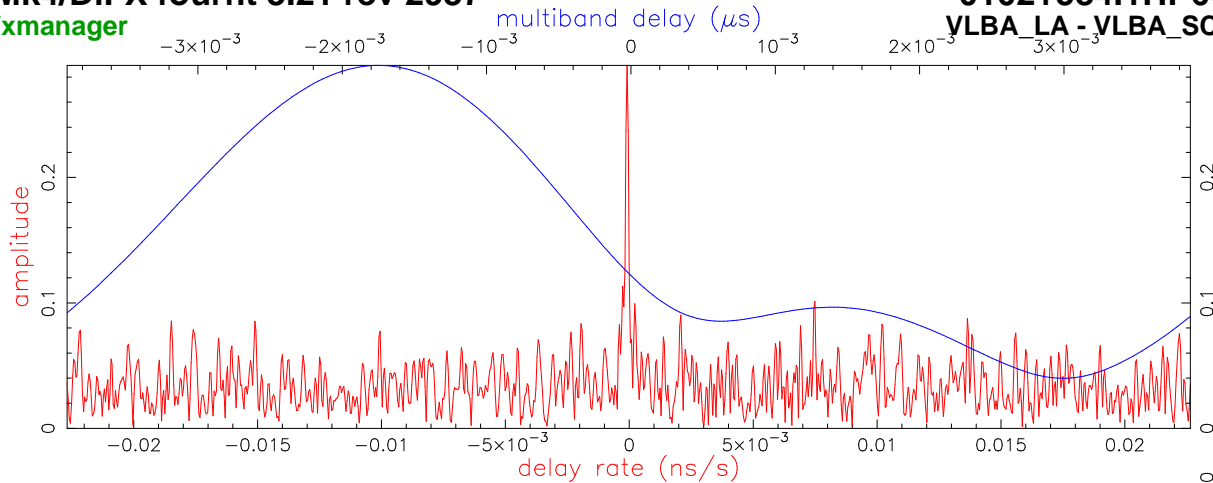
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/lc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/lc.Q.109.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

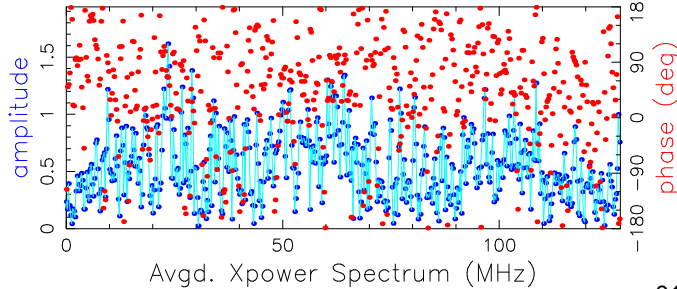
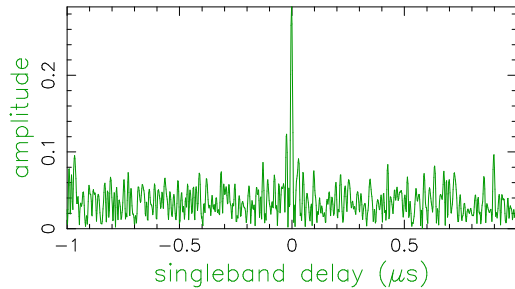
0102+584.1HP6Q8, No0090, lc

VLBA_LA - VLBA_SC, fgroup Q, pol LR



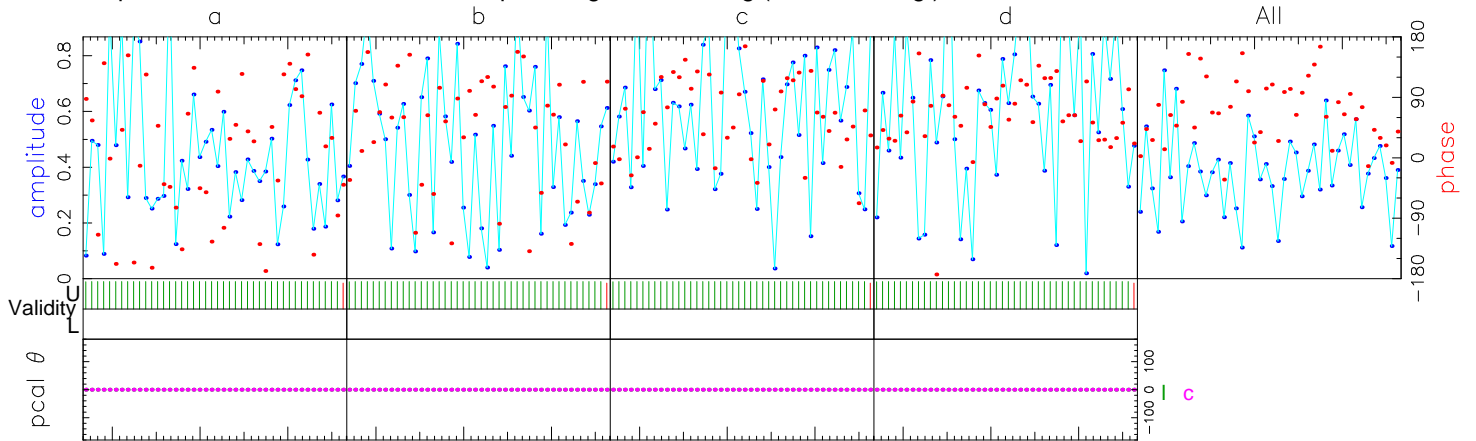
Fringe quality 8

SNR 10.6
 Int time 179.971
 Amp 0.289
 Phase 66.5
 PFD 5.8e-18
 Delays (us)
 SBD -0.001920
 MBD -0.001747
 Fringe rate (Hz)
 -0.003452
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163114
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



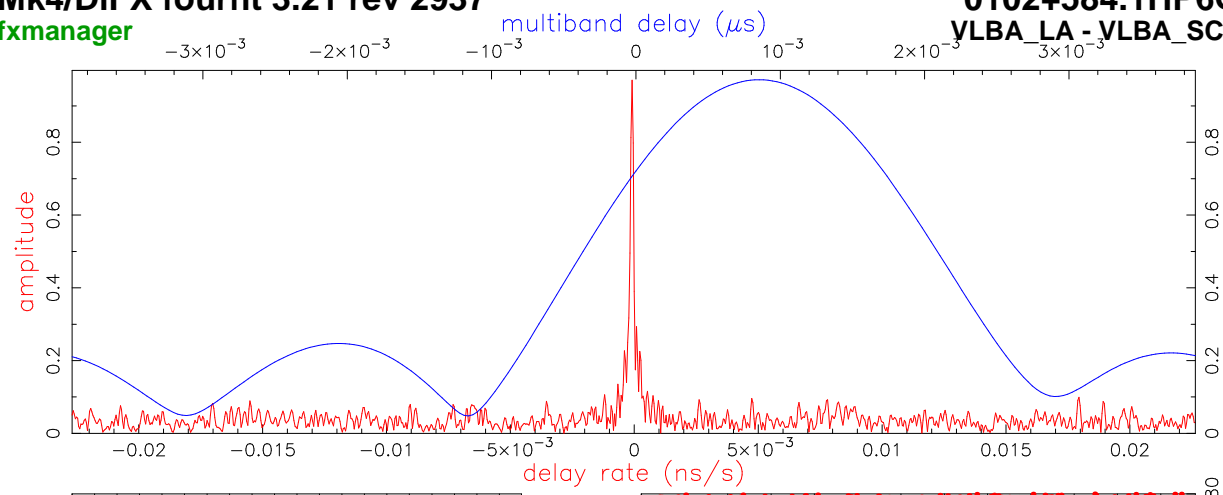
42912.00	43040.00	43168.00	43296.00	43296.00	Freq (MHz)	All
44.6	81.0	60.1	67.7	67.7	Phase	66.5
0.1	0.2	0.4	0.5	0.5	Ampl.	0.3
930.5	511.8	511.6	512.1	512.1	Sbd box	512.0
U/L 352/0	352/0	352/0	352/0	352/0	APs used	
l 1000	1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	1000	PC freqs	
l:c 0:0	0:0	0:0	0:0	0:0	PC phase	
l:c 0:0	0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000	1000		
l Q00UL	Q01UL	Q02UL	Q03UL	Q03UL	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	4.37866512784E+03	Apriori delay (usec)	4.37866687476E+03	Resid mbdelay (usec)	-1.74692E-03	+/-	1.0E-04
Sband delay (usec)	4.37866495501E+03	Apriori clock (usec)	-8.8328543E+00	Resid sbdelay (usec)	-1.91975E-03	+/-	4.1E-04
Phase delay (usec)	4.37866687906E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	4.29430E-06	+/-	7.0E-07
Delay rate (us/s)	5.17313352280E-01	Apriori rate (us/s)	5.17313432473E-01	Resid rate (us/s)	-8.01937E-08	+/-	6.7E-09
Total phase (deg)	170.9	Apriori accel (us/s/s)	3.53865583823E-06	Resid phase (deg)	66.5	+/-	10.8

ph/seg (deg)	RMS 47.4	Theor. 35.8	Amplitude	0.289 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	59.8	62.5	Search (1024X16)	0.284	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
ph/frq (deg)	19.2	10.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.004 0.004
amp/frq (%)	56.3	18.8	Inc. seg. avg.	0.326	Sample rate(MISamp/s): 256		dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	0.288	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite
							ion window (TEC) 0.00 0.00

l: az 18.7 el 65.2 pa -150.7 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -2832.567 891.996 simultaneous interpolator

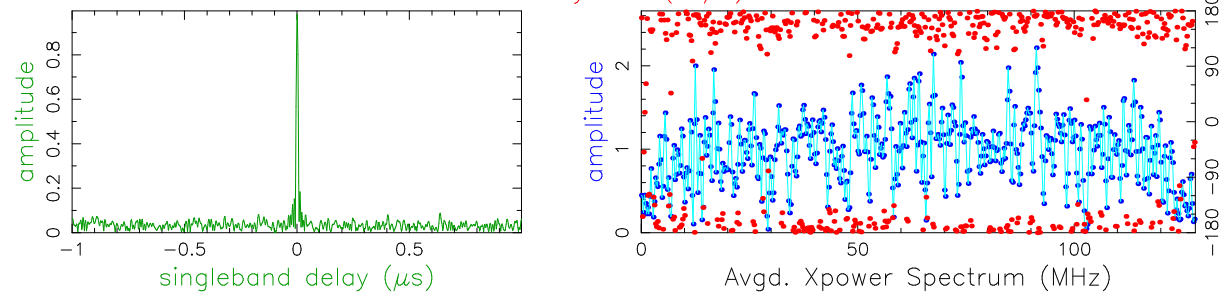
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/lc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/lc.Q.126.1HP6Q8



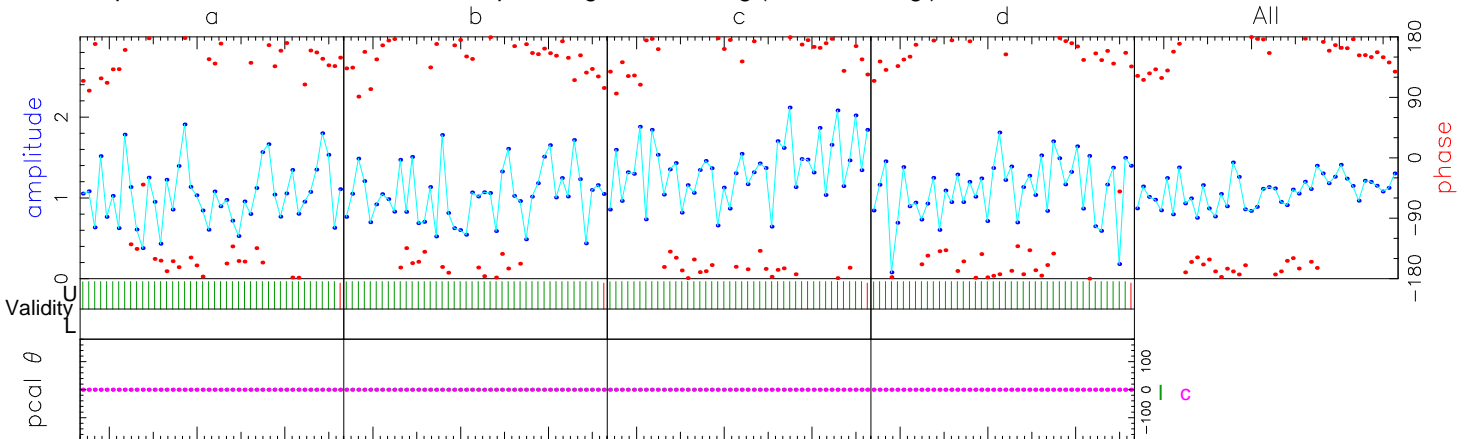
Fringe quality 8

SNR 36.6
Int time 179.972
Amp 0.998
Phase 170.8
PFD 0.0e+00
Delays (us)
SBD 0.000844
MBD 0.000790
Fringe rate (Hz)
-0.004355
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163117
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



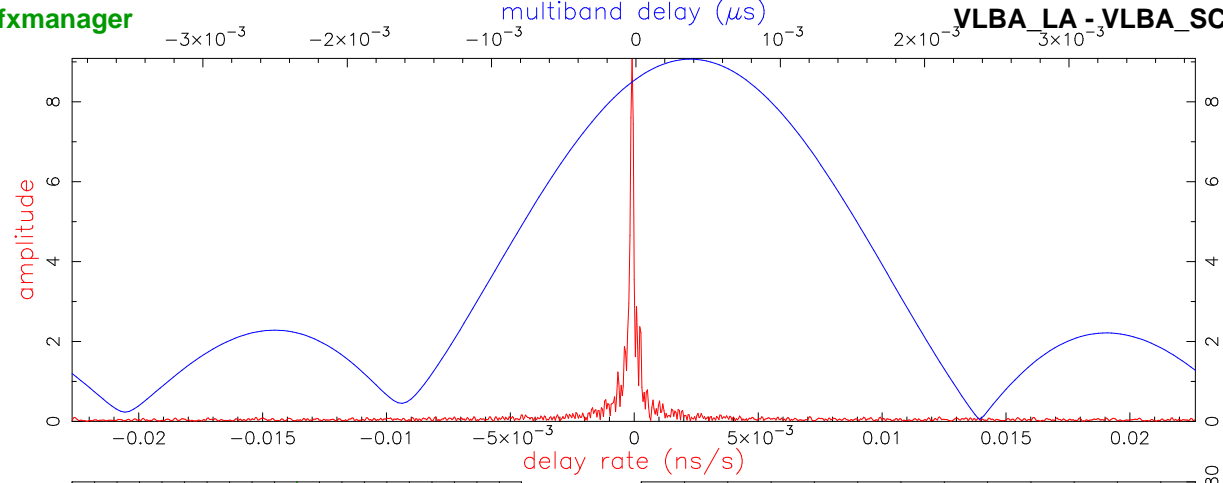
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	Phase	170.8
c	1000	1000	1000	1000	Ampl.	1.0
l:c	0:0	0:0	0:0	0:0	Sbd box	513.4
l:c	0:0	0:0	0:0	0:0	APs used	
l	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
l	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
c	Q00UL	Q01UL	Q02UL	Q03UL	Manl PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

	4.37866766472E+03	Apriori delay (usec)	4.37866687476E+03	Resid mbdelay (usec)	7.89952E-04	+/-	3.0E-05
Group delay (usec)(sbd)	4.37866771851E+03	Apriori clock (usec)	-8.8328543E+00	Resid sbdelay (usec)	8.43750E-04	+/-	1.2E-04
Sband delay (usec)	4.37866688579E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	1.10246E-05	+/-	2.0E-07
Phase delay (usec)	5.17313331289E-01	Apriori rate (us/s)	5.17313432473E-01	Resid rate (us/s)	-1.01184E-07	+/-	1.9E-09
Delay rate (us/s)		Apriori accel (us/s/s)	3.53865583823E-06	Resid phase (deg)	170.8	+/-	3.1
Total phase (deg)	275.2						

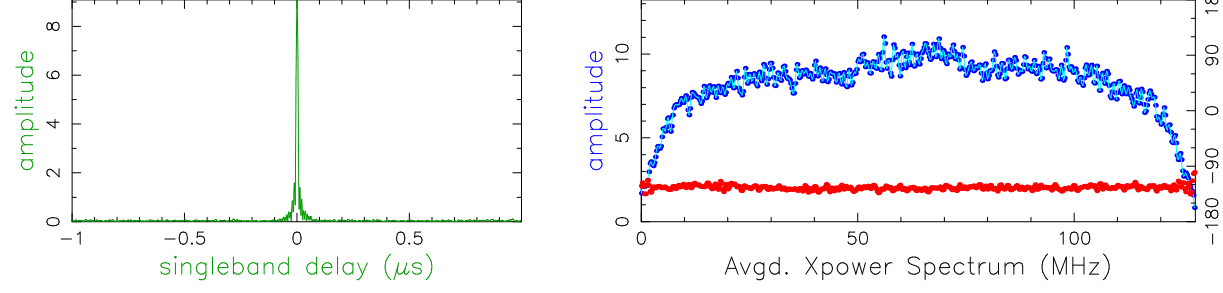
	RMS	Theor.	Amplitude	0.998 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	27.3	10.4	Search (1024X16)	0.952	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	20.0	18.1	Interp.	0.000	Sample rate(MISamp/s): 256	nlags: 512	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	6.3	3.1	Inc. seg. avg.	1.065	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	13.2	5.5	Inc. frq. avg.	0.972					

l: az 18.7 el 65.2 pa -150.7 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -2832.567 891.996 simultaneous interpolator

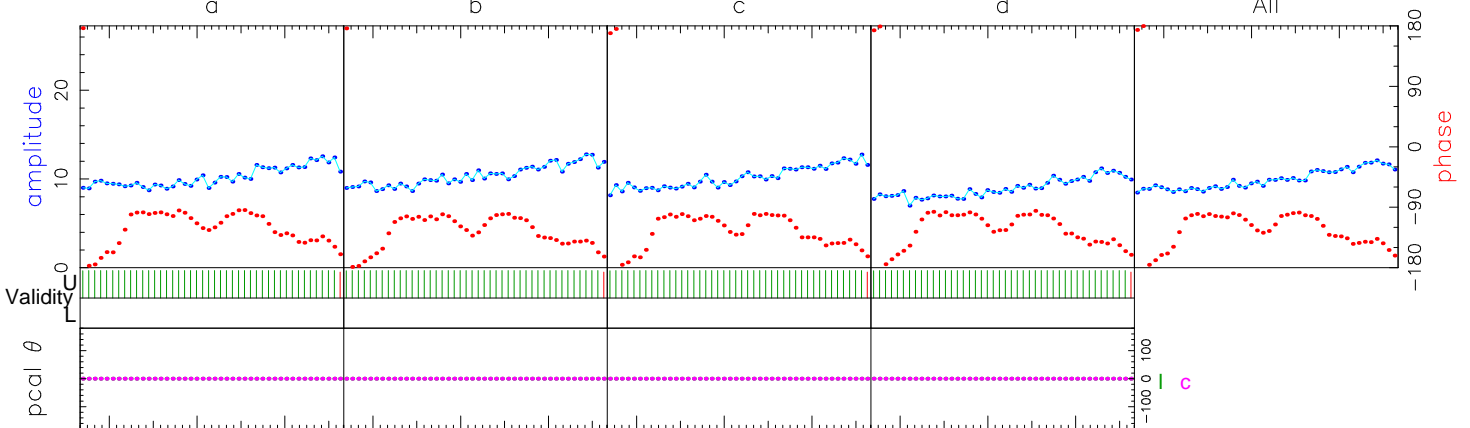
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/lc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/lc.Q.156.1HP6Q8



Fringe quality 7
SNR 333.4
Int time 179.972
Amp 9.087
Phase -126.6
PFD 0.0e+00
Delays (us)
SBD 0.000324
MBD 0.000394
Fringe rate (Hz)
-0.004309
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163111
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-123.6	-128.4	-128.3	-125.9	Phase	-126.6
9.3	9.5	9.3	8.1	Ampl.	9.1
512.8	513.3	513.3	513.1	Sbd box	513.2
U/L 352/0	352/0	352/0	352/0	APs used	
l 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
l:c 0:0	0:0	0:0	0:0	PC phase	
l:c 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
l Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	4.37866726872E+03	Apriori delay (usec)	4.37866687476E+03	Resid mbdelay (usec)	3.93952E-04	+/- 3.3E-06
Sband delay (usec)	4.37866719864E+03	Apriori clock (usec)	-8.8328543E+00	Resid sbdelay (usec)	3.23875E-04	+/- 1.3E-05
Phase delay (usec)	4.37866686659E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	-8.17024E-06	+/- 2.2E-08
Delay rate (us/s)	5.17313332367E-01	Apriori rate (us/s)	5.17313432473E-01	Resid rate (us/s)	-1.00107E-07	+/- 2.1E-10
Total phase (deg)	-22.2	Apriori accel (us/s/s)	3.53865583823E-06	Resid phase (deg)	-126.6	+/- 0.3

ph/seg (deg)	25.1	1.1	Amplitude	9.087 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	15.1	2.0	Search (1024X16)	8.906	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	2.8	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	6.0	0.6	Inc. seg. avg.	9.937	Sample rate(MISamp/s): 256	mb window (us) -0.004 0.004
			Inc. frq. avg.	9.071	Data rate(Mb/s): 2048	dr window (ns/s) -0.023 0.023
					nlags: 512	t_cohere infinite
						ion window (TEC) 0.00 0.00

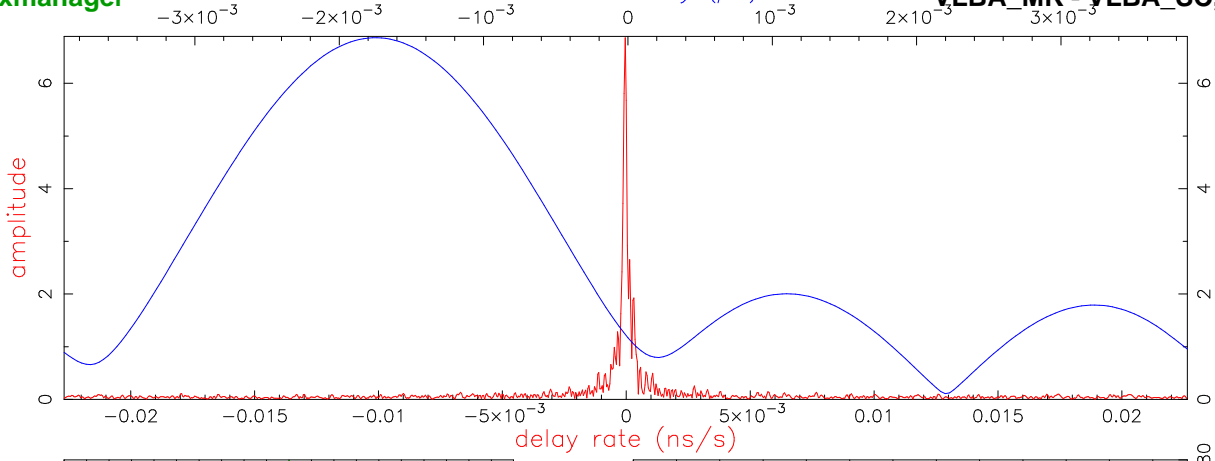
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

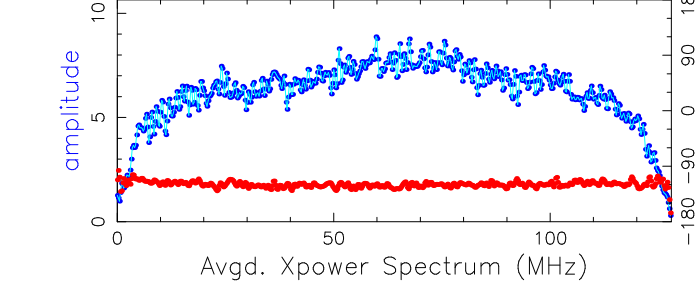
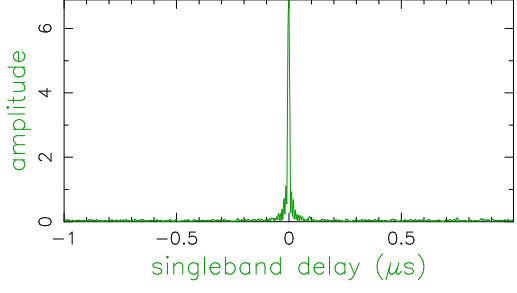
0102+584.1HP6Q8, No0090, mc

VLBA_MK - VLBA_SC, fgroup Q, pol RR

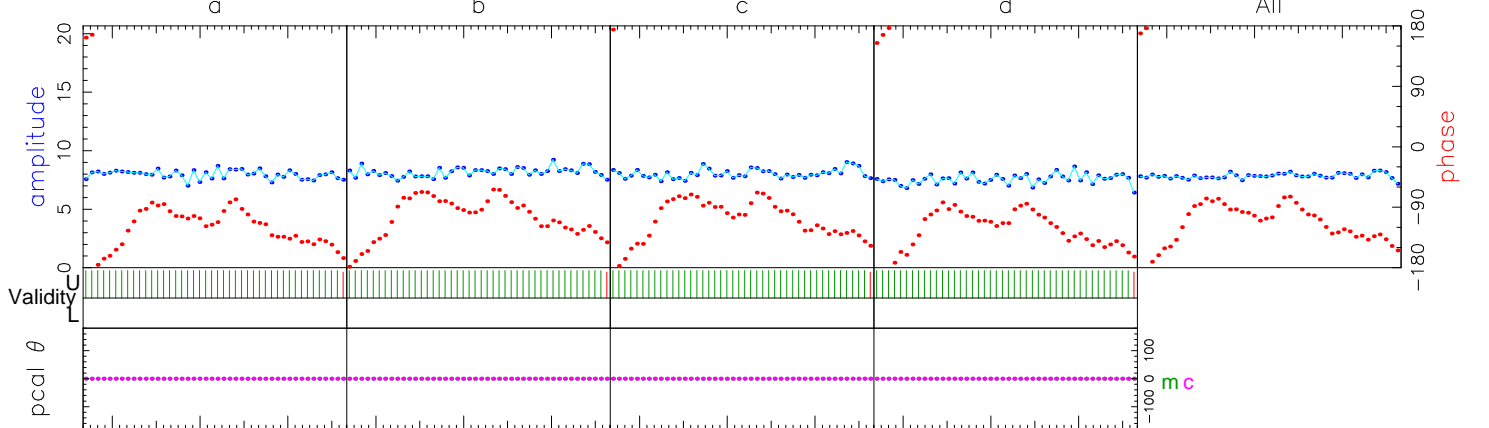
multiband delay (μ s)



Fringe quality 6
 SNR 252.8
 Int time 179.976
 Amp 6.891
 Phase -115.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.001540
 MBD -0.001731
 Fringe rate (Hz)
 -0.002587
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512
 Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163113
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



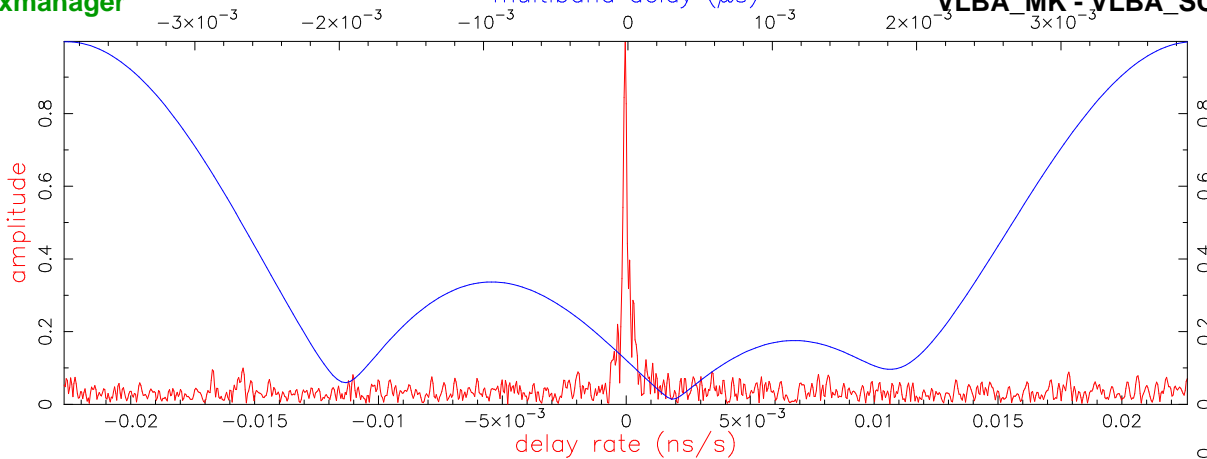
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
m	1000	1000	1000	1000		
c	1000	1000	1000	1000		
m:c	0:0	0:0	0:0	0:0		
m:c	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
c	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-4.1408666366E+03	Apriori delay (usec)	-4.14086493281E+03	Resid mbdelay (usec)	-1.73085E-03	+/- 4.4E-06
Sband delay (usec)	-4.14086647293E+03	Apriori clock (usec)	4.9107642E+00	Resid sbdelay (usec)	-1.54012E-03	+/- 1.7E-05
Phase delay (usec)	-4.14086494025E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-7.44869E-06	+/- 2.9E-08
Delay rate (us/s)	1.03717181039E+00	Apriori rate (us/s)	1.03717187051E+00	Resid rate (us/s)	-6.01162E-08	+/- 2.8E-10
Total phase (deg)	-10.3	Apriori accel (us/s/s)	2.53054160654E-05	Resid phase (deg)	-115.4	+/- 0.5

ph/seg (deg)	29.6	1.5	Amplitude	6.891 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	14.3	2.6	Search (1024X16)	6.596	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	12.2	0.5	Inc. seg. avg.	7.845	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	3.1	0.8	Inc. frq. avg.	6.943	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
m: az 32.9 el 30.2 pa -101.9	c: az 340.7 el 44.8 pa 142.6	u,v (fr/asec)	-5666.166 1738.904	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite
Control file: cf_1234_gmva7mm	Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/mc..1HP6Q8	Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/mc.Q.113.1HP6Q8				ion window (TEC) 0.00 0.00

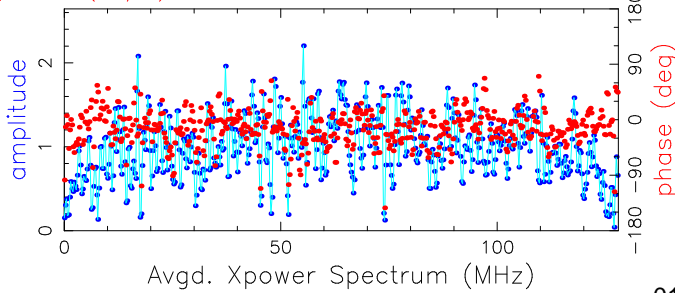
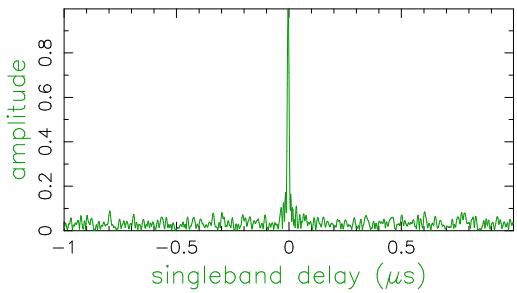
simultaneous interpolator

multiband delay (μ s)



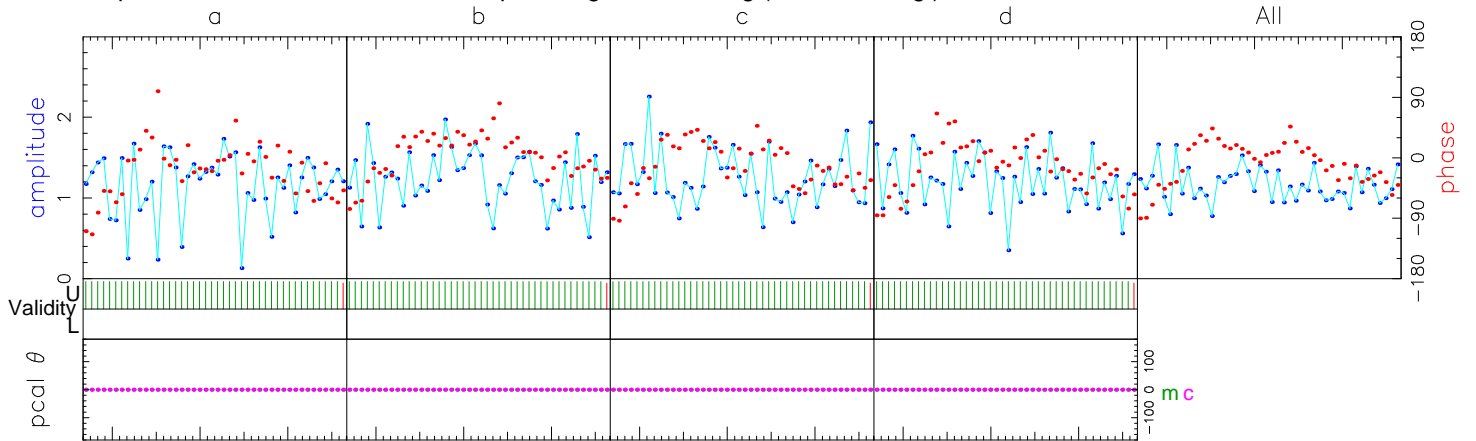
Fringe quality 7

SNR 36.6
Int time 179.976
Amp 0.998
Phase -9.2
PFD 0.0e+00
Delays (us)
SBD -0.003718
MBD -0.003885
Fringe rate (Hz)
-0.002616
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c202a
Yr:day 16383
Start 2021:005:135111
Stop 2021:010:163114
FRT 2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



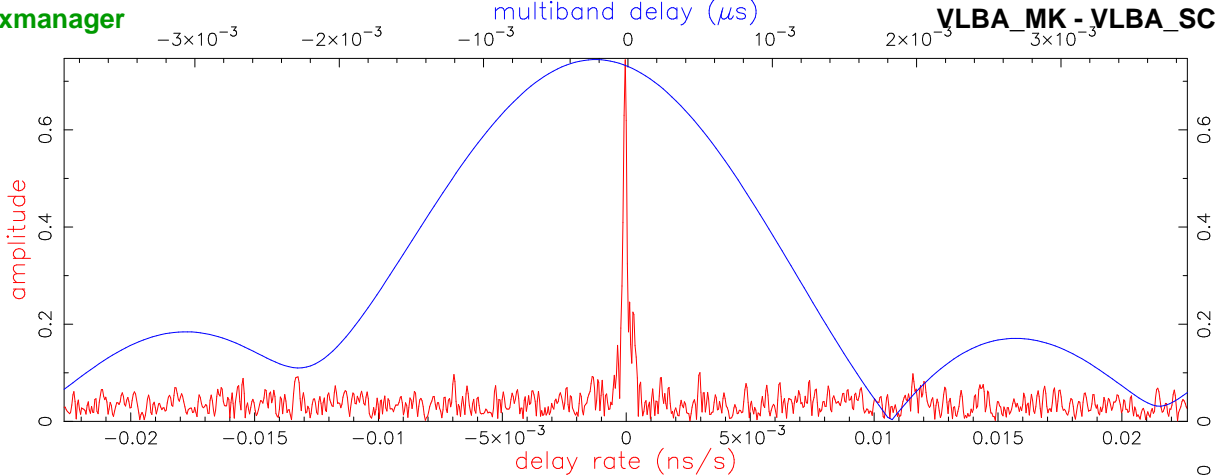
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
m	1000	1000	1000	1000		
c	1000	1000	1000	1000		
m:c	0:0	0:0	0:0	0:0		
m:c	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
c	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-4.14086881781E+03	Apriori delay (usec)	-4.14086493281E+03	Resid mbdelay (usec)	-3.88500E-03	+/-	3.0E-05
Sband delay (usec)	-4.14086865056E+03	Apriori clock (usec)	4.9107642E+00	Resid sbdelay (usec)	-3.71775E-03	+/-	1.2E-04
Phase delay (usec)	-4.14086493340E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-5.92323E-07	+/-	2.0E-07
Delay rate (us/s)	1.03717180972E+00	Apriori rate (us/s)	1.03717187051E+00	Resid rate (us/s)	-6.07856E-08	+/-	1.9E-09
Total phase (deg)	-264.0	Apriori accel (us/s/s)	2.53054160654E-05	Resid phase (deg)	-9.2	+/-	3.1

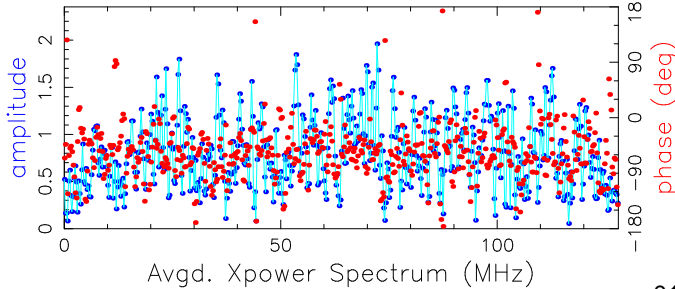
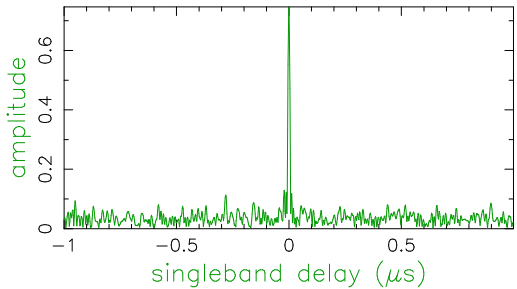
ph/seg (deg)	32.3	Theor.	10.4	Amplitude	0.998 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	26.7	Search (1024X16)	0.972	Search	0.972	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	13.2	Inc. seg. avg.	1.148	Inc. seg. avg.	1.148	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004		
amp/frq (%)	5.7	Inc. frq. avg.	1.010	Inc. frq. avg.	1.010	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023 0.023			
m: az 32.9 el 30.2 pa -101.9		c: az 340.7 el 44.8 pa 142.6		u,v (fr/asec)	-5666.166 1738.904	Data rate (Mb/s):	2048	nlags:	512	t_cohere infinite	ion window (TEC)	0.00 0.00

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/mc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/mc.Q.127.1HP6Q8 simultaneous interpolator

Fringe quality 9

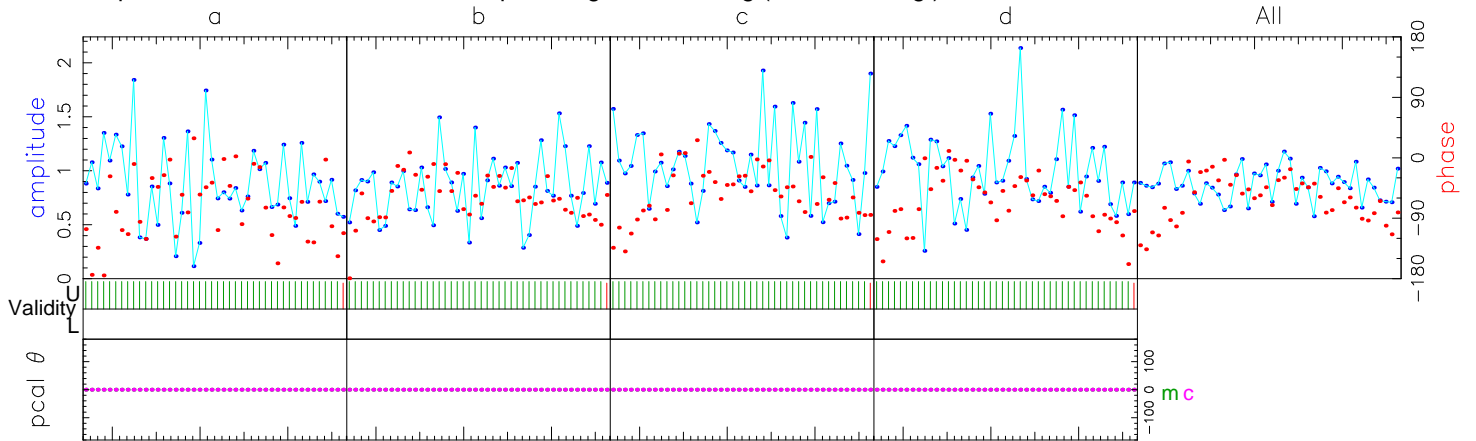


SNR 27.4
Int time 179.976
Amp 0.747
Phase -61.1
PFD 0.0e+00
Delays (us)
SBD -0.000392
MBD -0.000249
Fringe rate (Hz)
-0.002495
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163117
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-70.0	-56.8	-54.9	-65.1	Phase	-61.1
	0.6	0.7	0.9	0.8	Ampl.	0.7
	512.8	512.9	513.1	512.4	Sbd box	512.8
U/L	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
m:c	0:0	0:0	0:0	0:0	PC phase	
m:c	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-4.14086518225E+03	Apriori delay (usec)	-4.14086493281E+03	Resid mbdelay (usec)	-2.49446E-04	+/-	4.1E-05
Sband delay (usec)	-4.14086532506E+03	Apriori clock (usec)	4.9107642E+00	Resid sbdelay (usec)	-3.92250E-04	+/-	1.6E-04
Phase delay (usec)	-4.14086493675E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-3.94263E-06	+/-	2.7E-07
Delay rate (us/s)	1.03717181253E+00	Apriori rate (us/s)	1.03717187051E+00	Resid rate (us/s)	-5.79777E-08	+/-	2.6E-09
Total phase (deg)	-316.0	Apriori accel (us/s/s)	2.53054160654E-05	Resid phase (deg)	-61.1	+/-	4.2

	RMS	Theor.	Amplitude	0.747 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	33.1	13.9	Search (1024X16)	0.719	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	26.5	24.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	8.7	4.2	Inc. seg. avg.	0.853	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023	
amp/frq (%)	13.5	7.3	Inc. frq. avg.	0.746	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00
m: az 32.9 el 30.2 pa -101.9			c: az 340.7 el 44.8 pa 142.6		u,v (fr/asec)	-5666.166	1738.904		simultaneous interpolator	

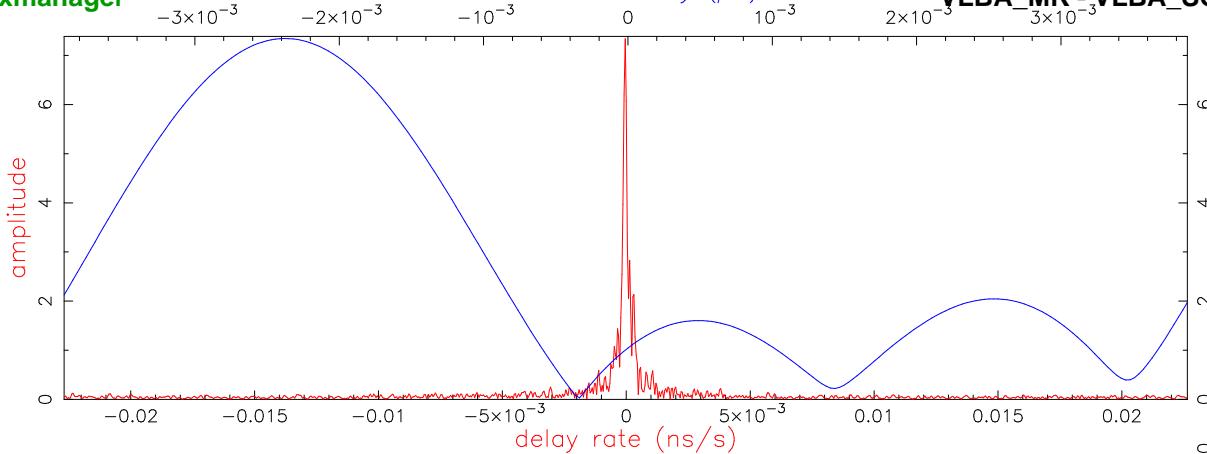
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, mc

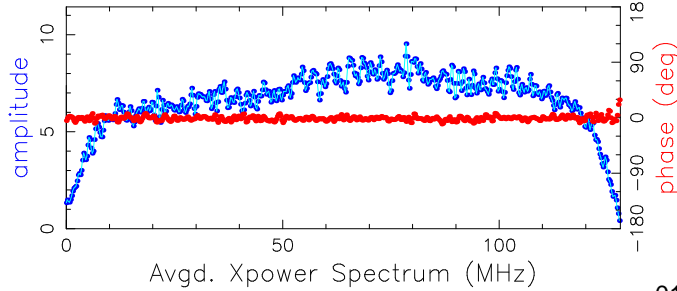
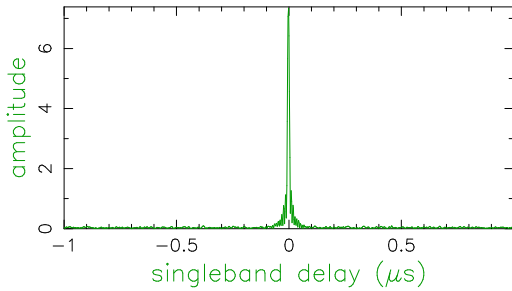
VLBA_MK - VLBA_SC, fgroup Q, pol LL

multiband delay (μ s)



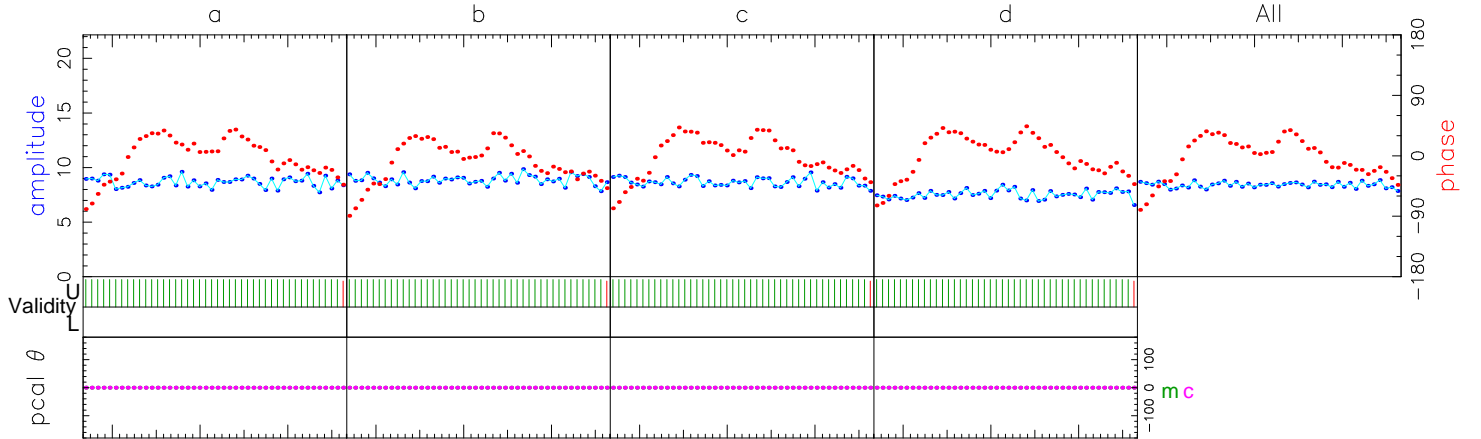
Fringe quality 7

SNR 271.0
 Int time 179.976
 Amp 7.387
 Phase -3.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.002481
 MBD -0.002402
 Fringe rate (Hz)
 -0.002610
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163110
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
m	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
m:c	0:0	0:0	0:0	0:0	PC phase	
m:c	0:0	0:0	0:0	0:0	ManI PC	
m	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	-4.14086733453E+03	Apriori delay (usec)	-4.14086493281E+03	Resid mbdelay (usec)	-2.40173E-03	+/- 4.1E-06
Sband delay (usec)	-4.14086741431E+03	Apriori clock (usec)	4.9107642E+00	Resid sbdelay (usec)	-2.48150E-03	+/- 1.6E-05
Phase delay (usec)	-4.14086493302E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-2.12960E-07	+/- 2.7E-08
Delay rate (us/s)	1.03717180987E+00	Apriori rate (us/s)	1.03717187051E+00	Resid rate (us/s)	-6.06409E-08	+/- 2.6E-10
Total phase (deg)	-258.2	Apriori accel (us/s/s)	2.53054160654E-05	Resid phase (deg)	-3.3	+/- 0.4

ph/seg (deg)	29.8	1.4	Search (1024X16)	7.149	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	14.4	2.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	4.9	0.4	Inc. seg. avg.	8.417	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	6.2	0.7	Inc. frq. avg.	7.355	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
m: az 32.9 el 30.2 pa -101.9		c: az 340.7 el 44.8 pa 142.6		u,v (fr/asec) -5666.166 1738.904	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
Control file: cf_1234_gmva7mm		Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/mc..1HP6Q8		Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/mc.Q.90.1HP6Q8		ion window (TEC) 0.00 0.00

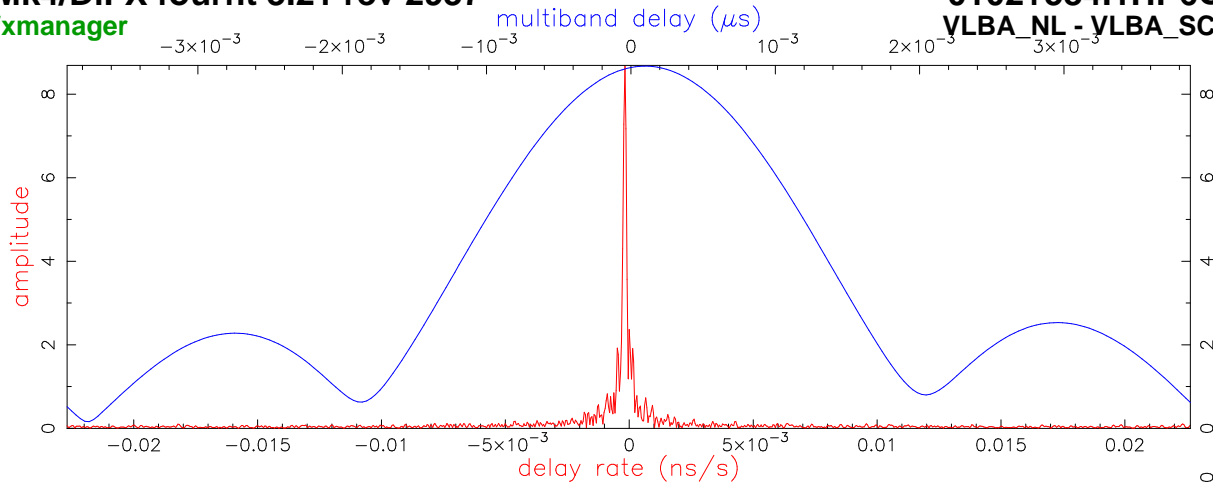
simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

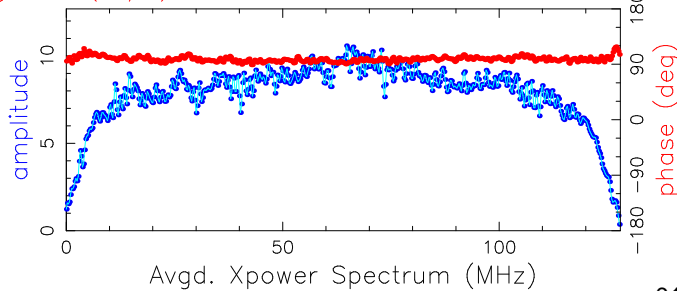
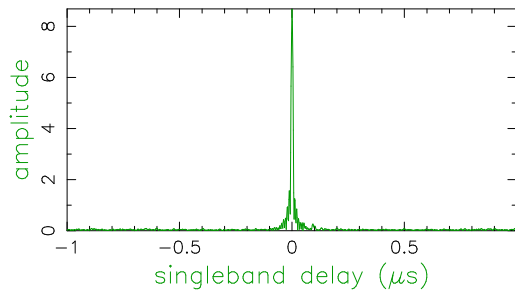
0102+584.1HP6Q8, No0090, nc

VLBA_NL - VLBA_SC, fgroup Q, pol RR



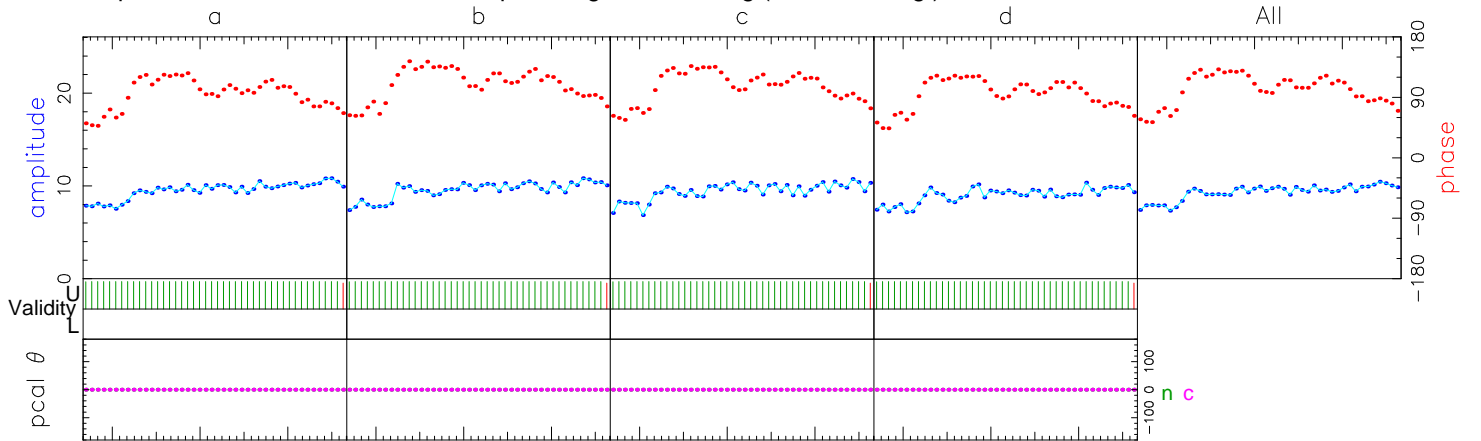
Fringe quality 8

SNR 318.8
 Int time 179.970
 Amp 8.690
 Phase 102.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.000300
 MBD 0.000107
 Fringe rate (Hz)
 -0.006721
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163113
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
c	1000	1000	1000	1000	PC amp	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	5.40708391200E+03	Apriori delay (usec)	5.40708380456E+03	Resid mbdelay (usec)	1.07435E-04	+/- 3.5E-06
Sband delay (usec)	5.40708410431E+03	Apriori clock (usec)	-8.3209991E+00	Resid sbdelay (usec)	2.99750E-04	+/- 1.4E-05
Phase delay (usec)	5.40708381117E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	6.60787E-06	+/- 2.3E-08
Delay rate (us/s)	3.50718617389E-01	Apriori rate (us/s)	3.50718773539E-01	Resid rate (us/s)	-1.56150E-07	+/- 2.2E-10
Total phase (deg)	83.8	Apriori accel (us/s/s)	5.90379062039E-06	Resid phase (deg)	102.4	+/- 0.4

	RMS	Theor.	Amplitude	8.690 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	22.5	1.2	Search (1024X16)	8.273	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	11.6	2.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	9.6	0.4	Inc. seg. avg.	9.313	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.4	0.6	Inc. frq. avg.	8.733	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
n: az 360.5 el 73.3 pa -179.4			c: az 340.7 el 44.8 pa 142.6		u,v (fr/asec) -1918.626 1225.405	simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc.Q.116.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

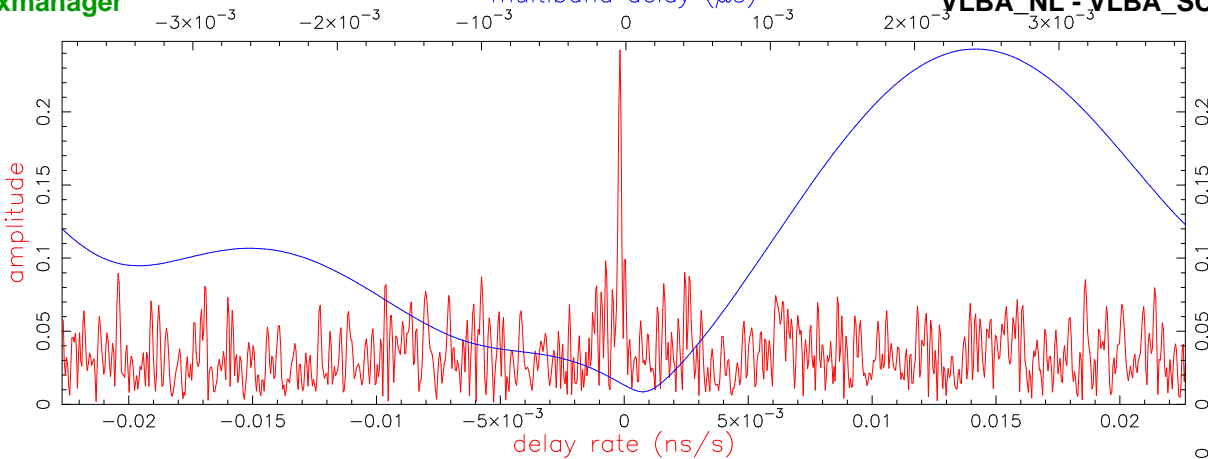
fxmanager

0102+584.1HP6Q8, No0090, nc

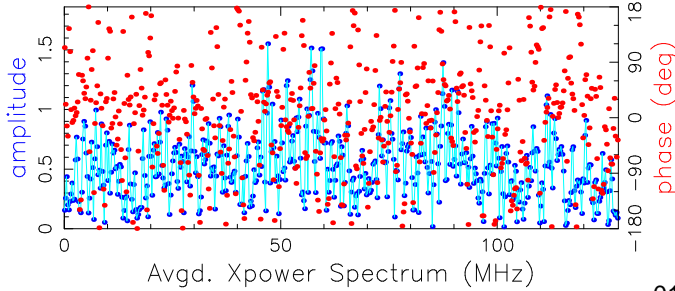
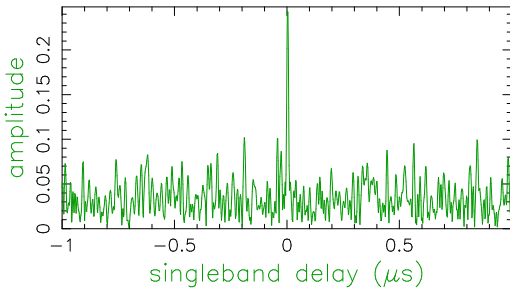
VLBA_NL - VLBA_SC, fgroup Q, pol LR

multiband delay (μ s)

Fringe quality 9

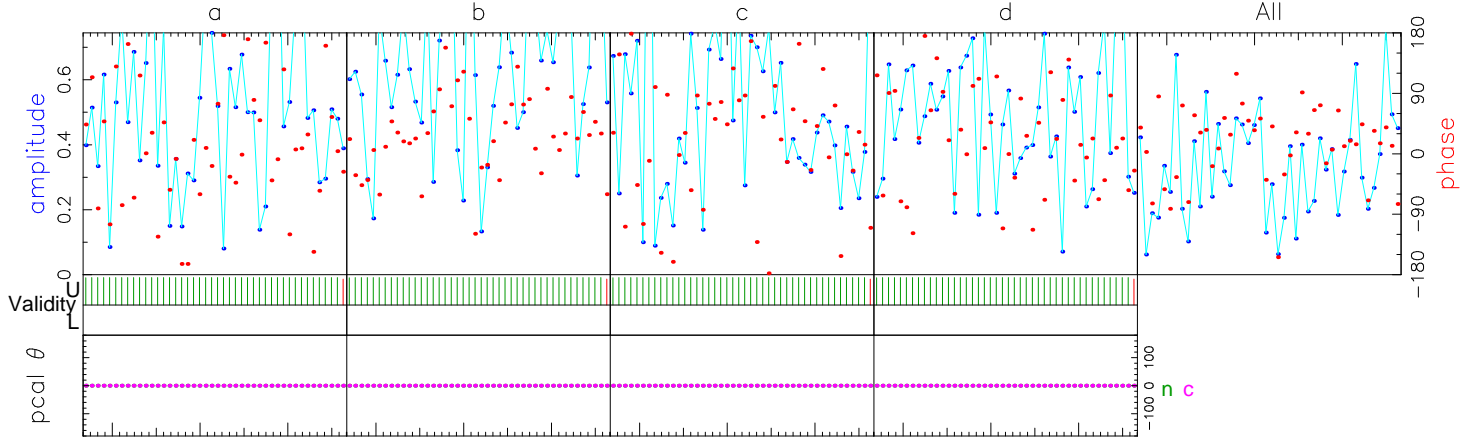


SNR 9.1
 Int time 179.970
 Amp 0.248
 Phase 25.2
 PFD 1.7e-11
 Delays (us)
 SBD 0.002885
 MBD 0.002324
 Fringe rate (Hz) -0.007912
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163115
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	1.9	34.0	42.6	16.9	Phase	25.2
	0.2	0.4	0.2	0.2	Ampl.	0.2
	515.4	514.9	512.9	514.1	Sbd box	514.5
U/L	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC phase	
n:c	0:0	0:0	0:0	0:0	ManI PC	
n	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	5.40708612853E+03	Apriori delay (usec)	5.40708380456E+03	Resid mbdelay (usec)	2.32397E-03	+/-	1.2E-04
Sband delay (usec)	5.40708668919E+03	Apriori clock (usec)	-8.3209991E+00	Resid sbdelay (usec)	2.88462E-03	+/-	4.7E-04
Phase delay (usec)	5.40708380619E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.62768E-06	+/-	8.1E-07
Delay rate (us/s)	3.50718589719E-01	Apriori rate (us/s)	3.50718773539E-01	Resid rate (us/s)	-1.83820E-07	+/-	7.8E-09
Total phase (deg)	6.7	Apriori accel (us/s/s)	5.90379062039E-06	Resid phase (deg)	25.2	+/-	12.6

ph/seg (deg)	55.5	Theor.	41.7	Amplitude	0.248 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	74.0	Search (1024X16)	0.241	Search	0.241	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	22.2	Inc. seg. avg.	0.265	Inc. seg. avg.	0.265	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	41.3	Inc. frq. avg.	0.244	Inc. frq. avg.	0.244	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
n: az 360.5 el 73.3 pa -179.4		c: az 340.7 el 44.8 pa 142.6		u, v (fr/asec)	-1918.626 1225.405	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
Control file: cf_1234_gmva7mm		Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc..1HP6Q8		Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc.Q.138.1HP6Q8		ion window (TEC)	0.00 0.00

simultaneous interpolator

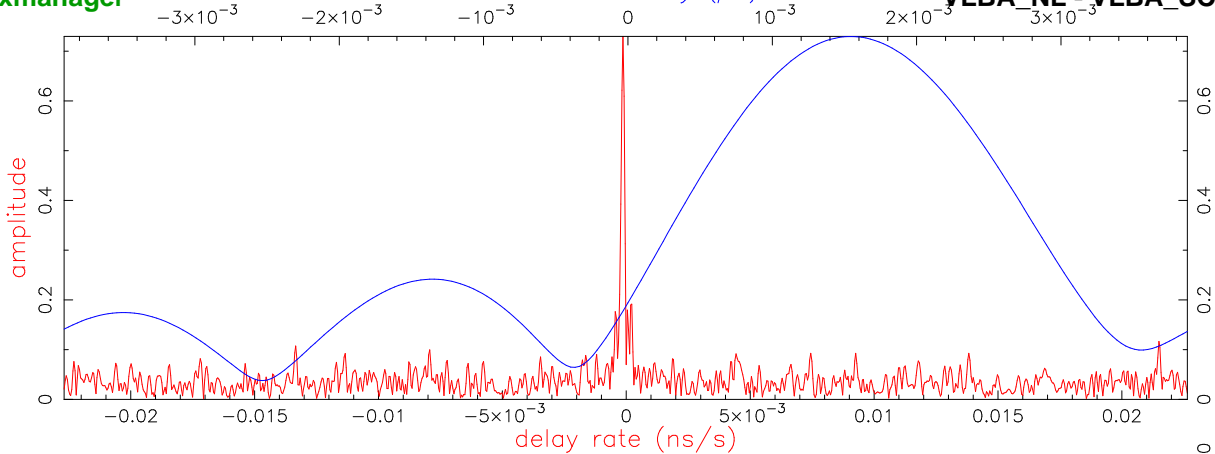
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, nc

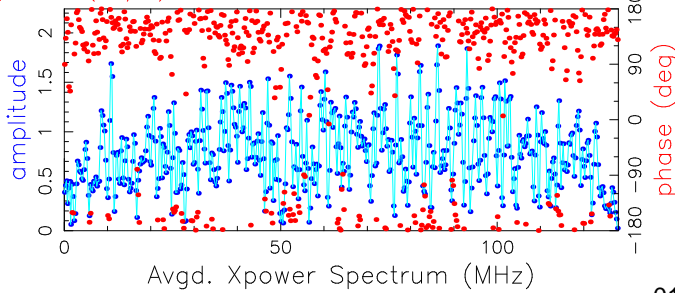
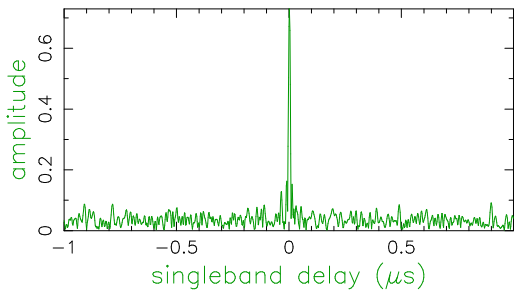
VLBA_NL - VLBA_SC, fgroup Q, pol RL

multiband delay (μ s)



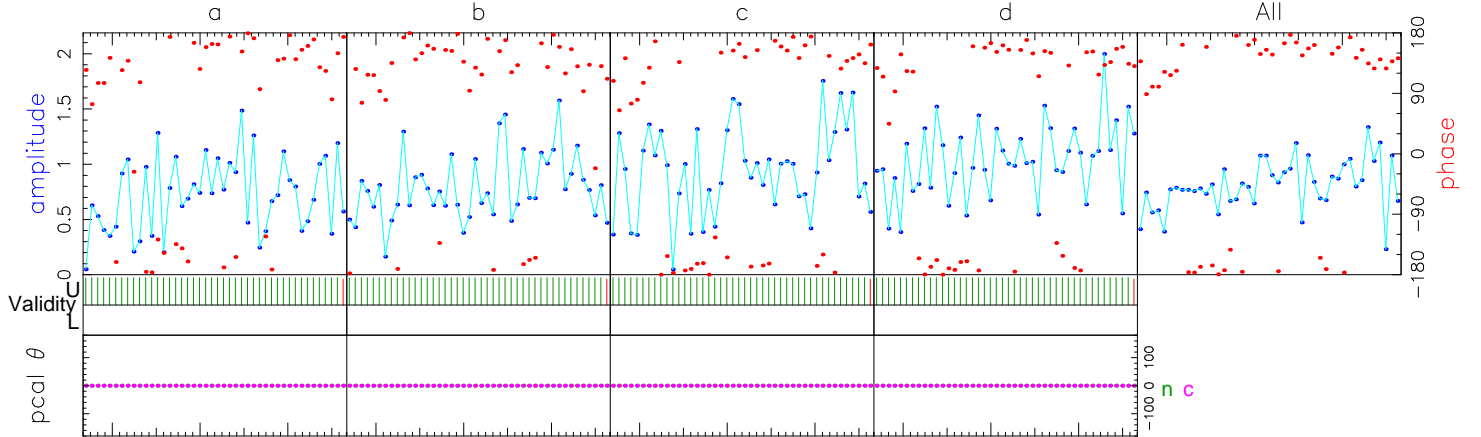
Fringe quality 9

SNR 26.8
 Int time 179.971
 Amp 0.730
 Phase 158.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.001853
 MBD 0.001537
 Fringe rate (Hz)
 -0.006684
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163118
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	162.8	149.5	161.4	159.1	Phase	158.4
	0.6	0.7	0.8	0.9	Ampl.	0.7
	513.5	514.0	514.3	513.8	Sbd box	513.9
U/L	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC phase	
n:c	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	5.40708534187E+03	Apriori delay (usec)	5.40708380456E+03	Resid mbdelay (usec)	1.53731E-03	+/- 4.2E-05
Group delay (usec)(sbd)	5.40708565706E+03	Apriori clock (usec)	-8.3209991E+00	Resid sbdelay (usec)	1.85250E-03	+/- 1.6E-04
Sband delay (usec)	5.40708381478E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.02200E-05	+/- 2.8E-07
Phase delay (usec)	3.50718618245E-01	Apriori rate (us/s)	3.50718773539E-01	Resid rate (us/s)	-1.55294E-07	+/- 2.7E-09
Delay rate (us/s)		Apriori accel (us/s/s)	5.90379062039E-06	Resid phase (deg)	158.4	+/- 4.3
Total phase (deg)	139.8					

	RMS	Theor.	Amplitude	0.730 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	28.3	14.2	Search (1024X16)	0.697	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	32.5	24.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.3	4.3	Inc. seg. avg.	0.788	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	16.6	7.5	Inc. frq. avg.	0.730	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 360.5 el 73.3 pa -179.4 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -1918.626 1225.405 simultaneous interpolator

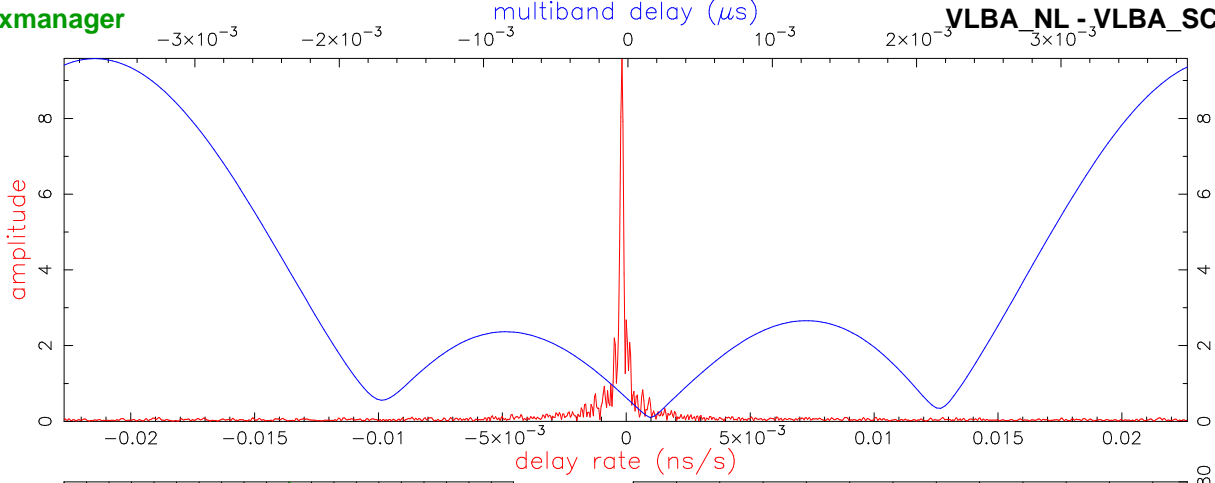
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc.Q.161.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, nc

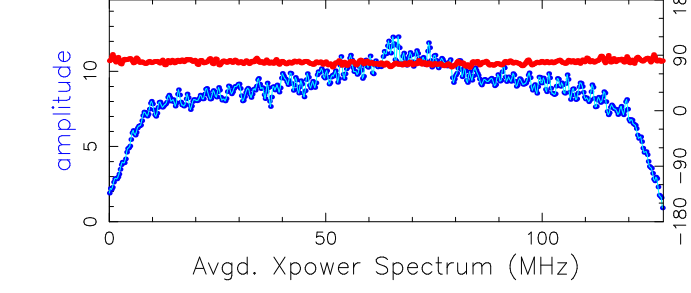
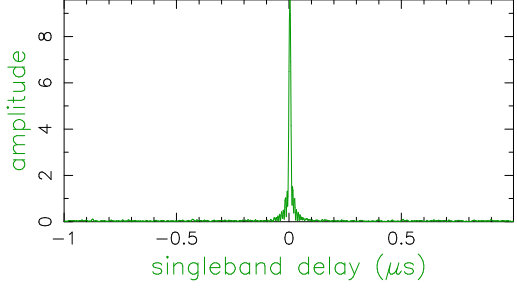
VLBA_NL - VLBA_SC, fgroup Q, pol LL



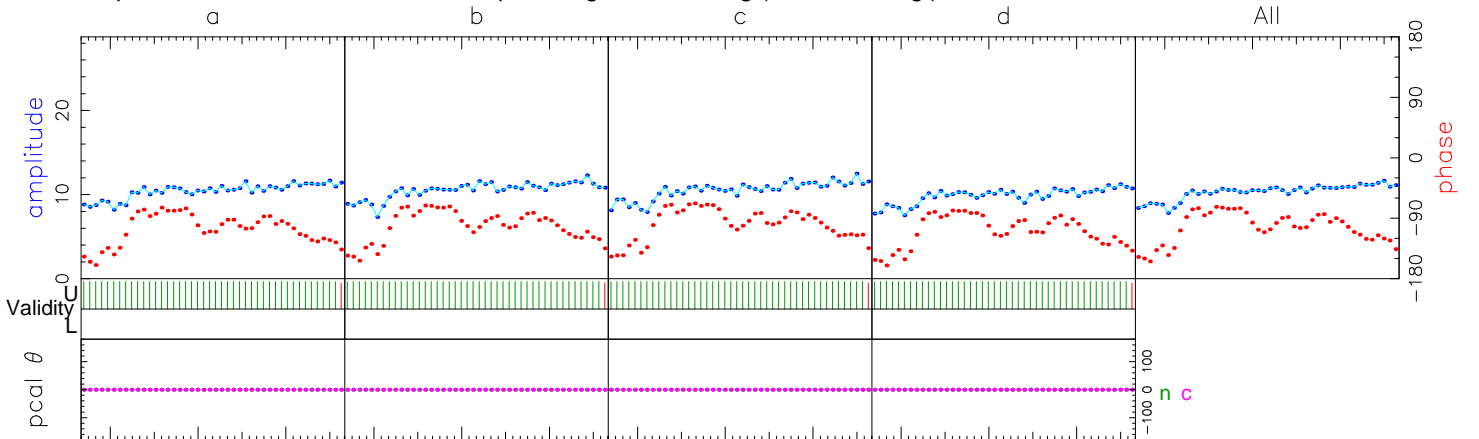
Fringe quality 8

SNR 351.7
 Int time 179.971
 Amp 9.586
 Phase -102.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.004074
 MBD -0.003686
 Fringe rate (Hz)
 -0.006772
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163111
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



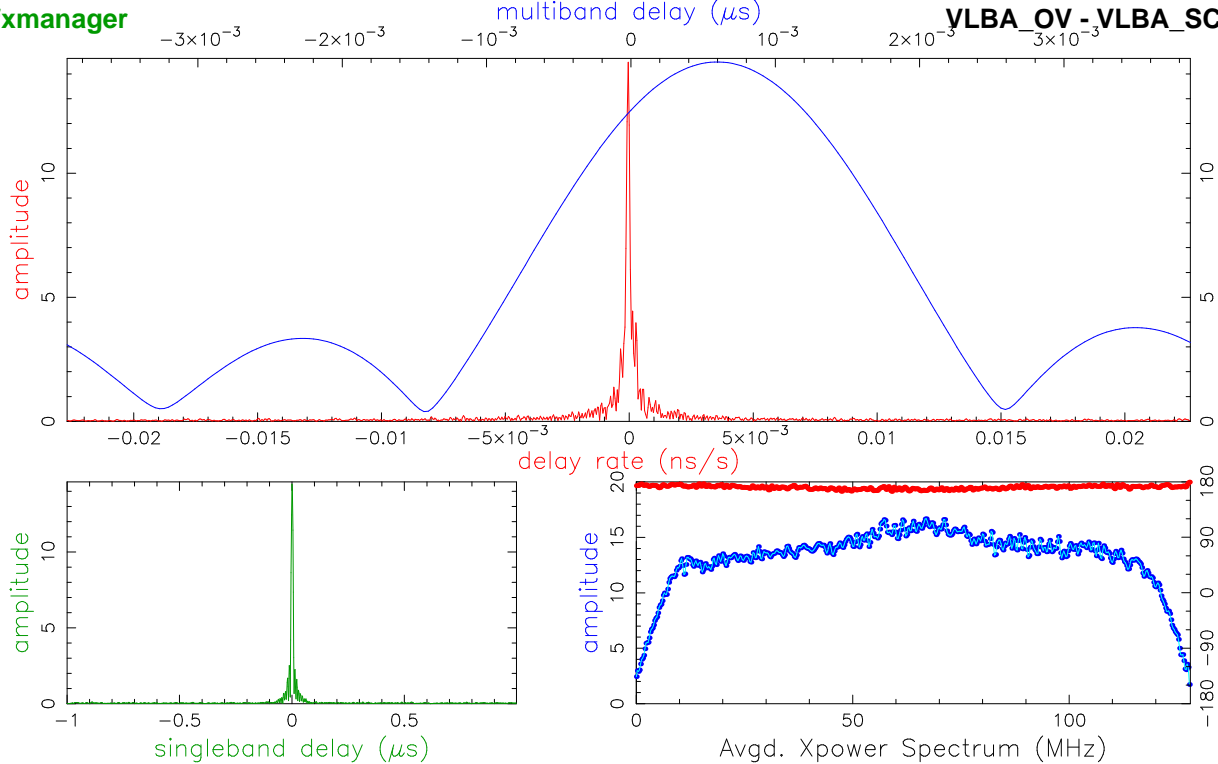
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-105.3	-100.6	-97.7	-108.0	Phase	-102.8
9.7	9.8	9.8	9.1	Ampl.	9.6
515.1	515.2	515.1	514.9	Sbd box	515.1
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
n:c 0:0	0:0	0:0	0:0	PC phase	
n:c 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	5.40708793147E+03	Apriori delay (usec)	5.40708380456E+03	Resid mbdelay (usec)	-3.68559E-03	+/- 3.2E-06
Sband delay (usec)	5.40708787806E+03	Apriori clock (usec)	-8.3209991E+00	Resid sbdelay (usec)	4.07350E-03	+/- 1.2E-05
Phase delay (usec)	5.40708379793E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-6.63445E-06	+/- 2.1E-08
Delay rate (us/s)	3.50718616201E-01	Apriori rate (us/s)	3.50718773539E-01	Resid rate (us/s)	-1.57339E-07	+/- 2.0E-10
Total phase (deg)	238.6	Apriori accel (us/s/s)	5.90379062039E-06	Resid phase (deg)	-102.8	+/- 0.3

ph/seg (deg)	22.8	1.1	Amplitude	9.586 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	12.0	1.9	Search (1024X16)	9.035	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	5.7	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	2.9	0.6	Inc. seg. avg.	10.313	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	9.603	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

n: az 360.5 el 73.3 pa -179.4 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -1918.626 1225.405 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/nc.Q.98.1HP6Q8

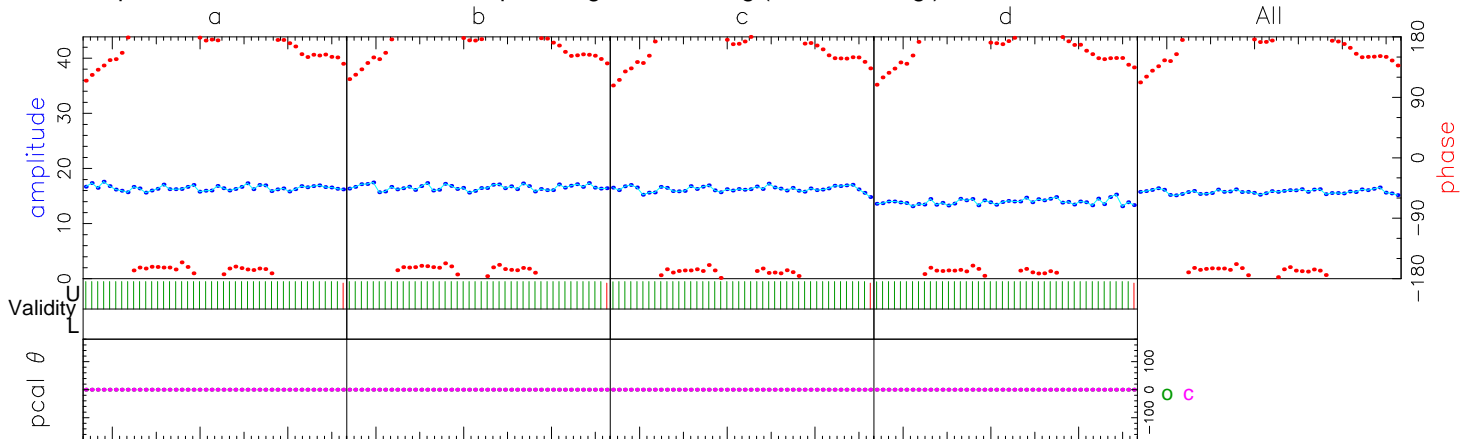


Fringe quality 7

SNR 536.6
Int time 179.972
Amp 14.628
Phase 171.8
PFD 0.0e+00
Delays (us)
SBD 0.000681
MBD 0.000638
Fringe rate (Hz)
-0.002317
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163116
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"

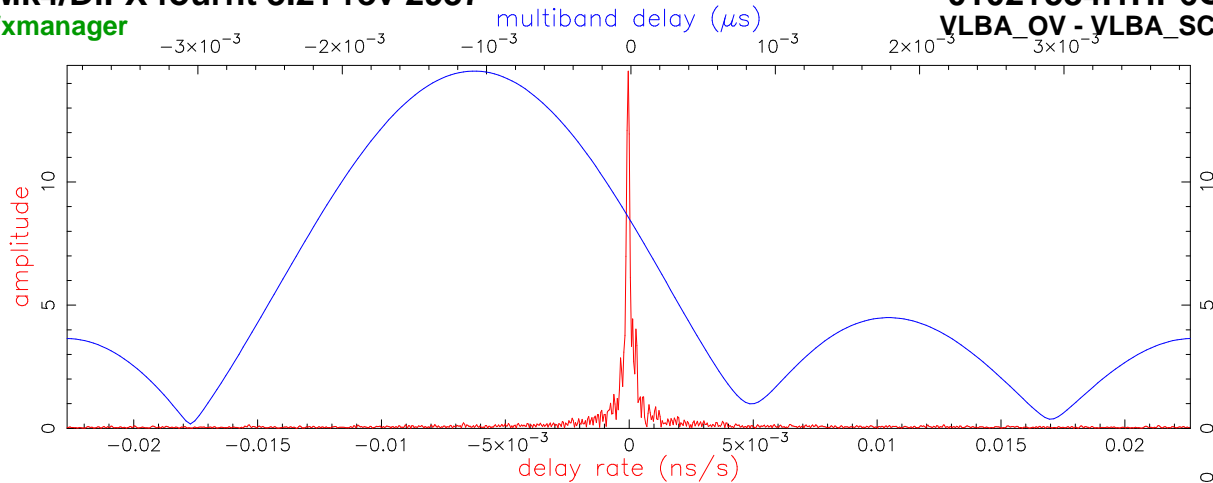
Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	173.6	174.4	169.3	169.3	Phase	171.8
	15.1	15.2	14.9	12.8	Ampl.	14.5
	513.3	513.4	513.4	513.3	Sbd box	513.3
U/L	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
o:c	0:0	0:0	0:0	0:0	PC phase	
o:c	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

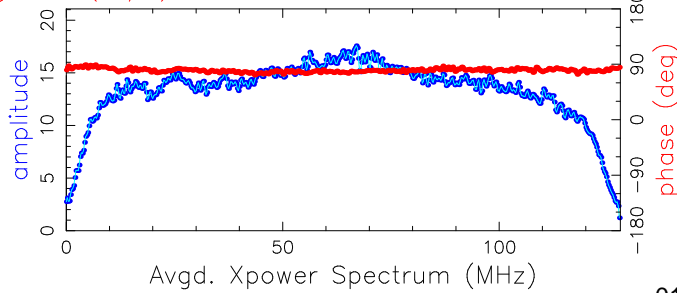
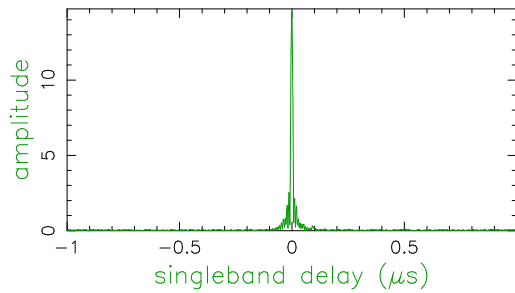
Group delay (usec)(sbd)	3.95763879155E+03	Apriori delay (usec)	3.95763815340E+03	Resid mbdelay (usec)	6.38148E-04	+/-	2.1E-06
Sband delay (usec)	3.95763883415E+03	Apriori clock (usec)	1.2960146E+01	Resid sbdelay (usec)	6.80750E-04	+/-	8.0E-06
Phase delay (usec)	3.95763816449E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	1.10852E-05	+/-	1.4E-08
Delay rate (us/s)	6.41163915619E-01	Apriori rate (us/s)	6.41163969459E-01	Resid rate (us/s)	-5.38397E-08	+/-	1.3E-10
Total phase (deg)	215.9	Apriori accel (us/s/s)	7.85200272834E-06	Resid phase (deg)	171.8	+/-	0.2

	RMS	Theor.	Amplitude	14.628 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	23.8	0.7	Search (1024X16)	14.282	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	8.3	1.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	3.3	0.2	Inc. seg. avg.	15.793	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023	
amp/frq (%)	6.9	0.4	Inc. frq. avg.	14.488	Data rate(Mb/s): 2048	nlags: 512	t_coherence infinite	ion window (TEC)	0.00	0.00



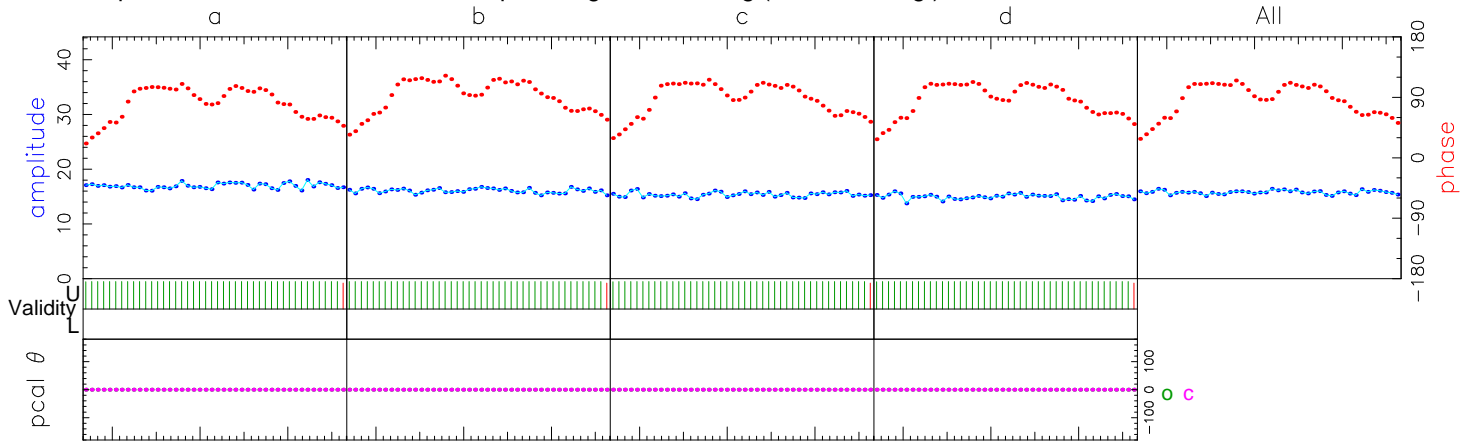
Fringe quality 7

SNR 540.4
Int time 179.972
Amp 14.732
Phase 86.3
PFD 0.0e+00
Delays (us)
SBD -0.000852
MBD -0.001114
Fringe rate (Hz)
-0.002328
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163118
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
o	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
o:c	0:0	0:0	0:0	0:0	PC freqs	
o:c	0:0	0:0	0:0	0:0	PC phase	
o	1000	1000	1000	1000	Manl PC	
c	1000	1000	1000	1000	PC amp	
o	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	3.95763703899E+03	Apriori delay (usec)	3.95763815340E+03	Resid mbdelay (usec)	-1.11441E-03	+/-	2.1E-06
Sband delay (usec)	3.95763730178E+03	Apriori clock (usec)	1.2960146E+01	Resid sbdelay (usec)	-8.51625E-04	+/-	8.0E-06
Phase delay (usec)	3.95763815897E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	5.56813E-06	+/-	1.4E-08
Delay rate (us/s)	6.41163915370E-01	Apriori rate (us/s)	6.41163969459E-01	Resid rate (us/s)	-5.40893E-08	+/-	1.3E-10
Total phase (deg)	130.4	Apriori accel (us/s/s)	7.85200272834E-06	Resid phase (deg)	86.3	+/-	0.2

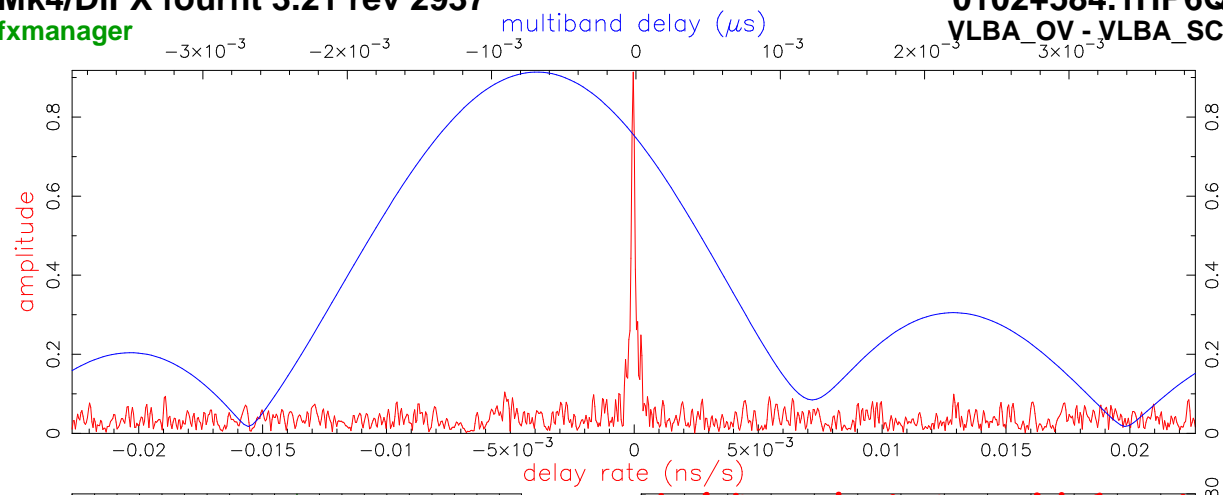
ph/seg (deg)	RMS 23.7	Theor. 0.7	Amplitude 14.732 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	7.7	1.2	Search (1024X16) 0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	6.0	0.2	Inc. seg. avg. 15.807	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.8	0.4	Inc. frq. avg. 14.537	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, oc

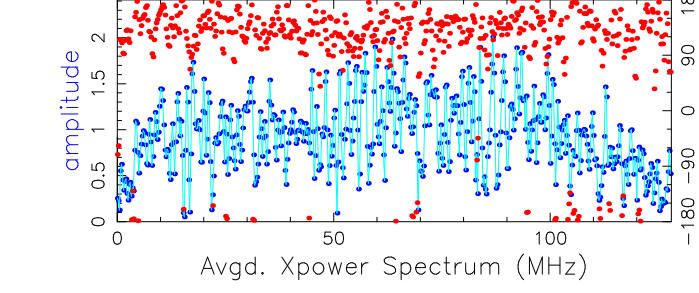
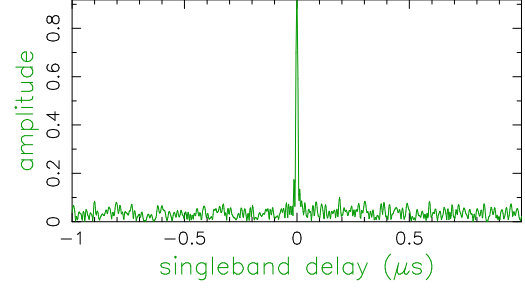
VLBA_OV - VLBA_SC, fgroup Q, pol LR



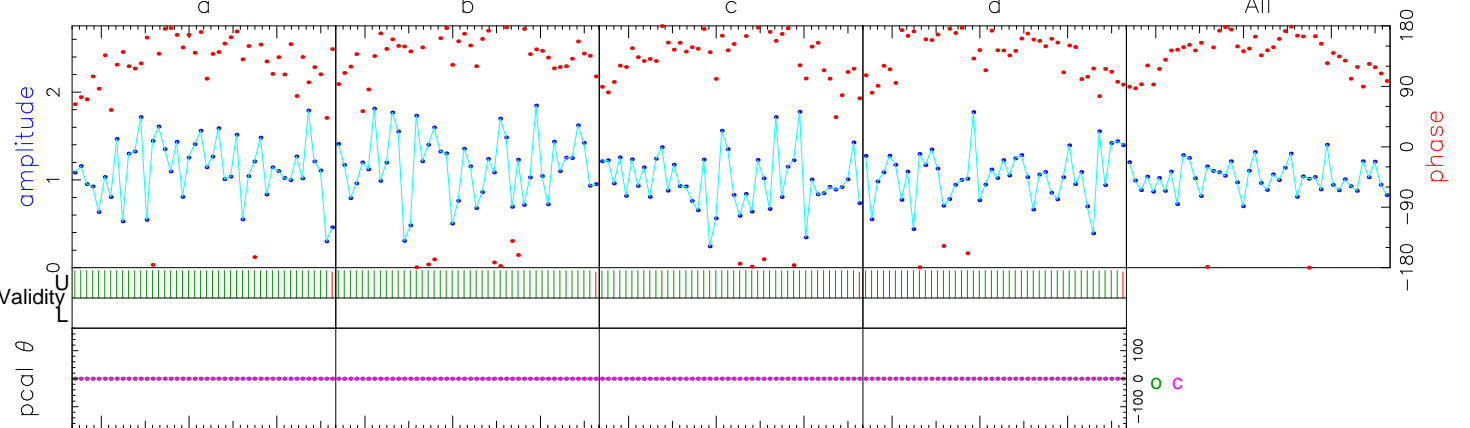
Fringe quality 8

SNR 33.7
 Int time 179.972
 Amp 0.918
 Phase 140.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.000466
 MBD -0.000704
 Fringe rate (Hz)
 -0.002259
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202a
 Yr:day # 16383
 Start 2021:005:135111
 Stop 2021:010:163119
 FRT 2020:247:085004
 Corr/FF/build
 2021:005:135111
 2021:010:163119
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



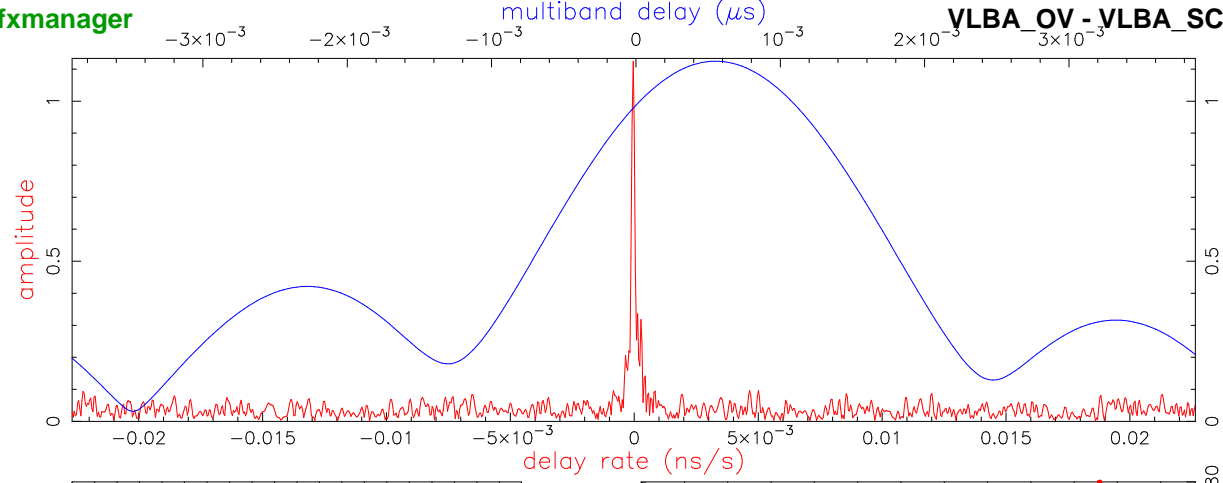
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
133.0	149.4	139.5	138.9	Phase	140.4
0.9	1.0	0.8	0.9	Ampl.	0.9
513.2	513.0	512.2	512.6	Sbd box	512.8
U/L 352/0	352/0	352/0	352/0	APs used	
o 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
o:c 0:0	0:0	0:0	0:0	PC phase	
o:c 0:0	0:0	0:0	0:0	Manl PC	
o 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
o Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.95763744930E+03	Apriori delay (usec)	3.95763815340E+03	Resid mbdelay (usec)	-7.04102E-04	+/-	3.3E-05
Sband delay (usec)	3.95763768753E+03	Apriori clock (usec)	1.2960146E+01	Resid sbdelay (usec)	-4.65875E-04	+/-	1.3E-04
Phase delay (usec)	3.95763816246E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	9.06026E-06	+/-	2.2E-07
Delay rate (us/s)	6.41163916975E-01	Apriori rate (us/s)	6.41163969459E-01	Resid rate (us/s)	-5.24840E-08	+/-	2.1E-09
Total phase (deg)	184.5	Apriori accel (us/s/s)	7.85200272834E-06	Resid phase (deg)	140.4	+/-	3.4

ph/seg (deg)	RMS	Theor.	Amplitude	0.918 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	27.2	11.3	Search (1024X16)	0.894	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	20.9	19.7	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	8.3	3.4	Inc. seg. avg.	1.007	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
	6.6	5.9	Inc. frq. avg.	0.917					

o: az 30.8 el 62.4 pa -129.3 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3508.404 1220.104 simultaneous interpolator

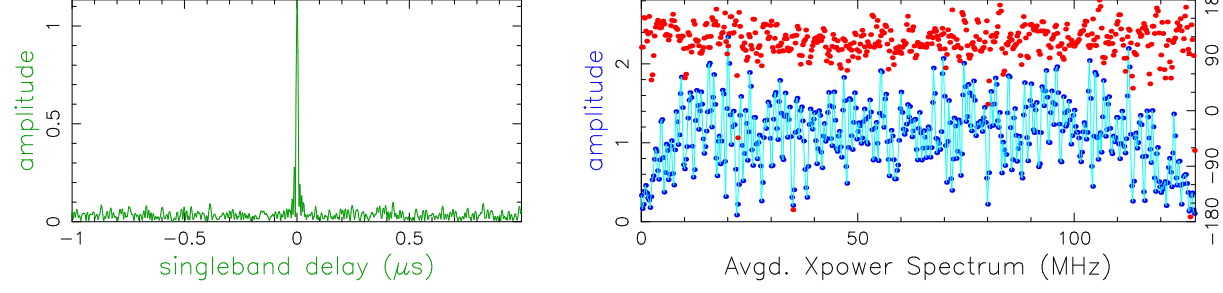
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/oc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/oc.Q.167.1HP6Q8



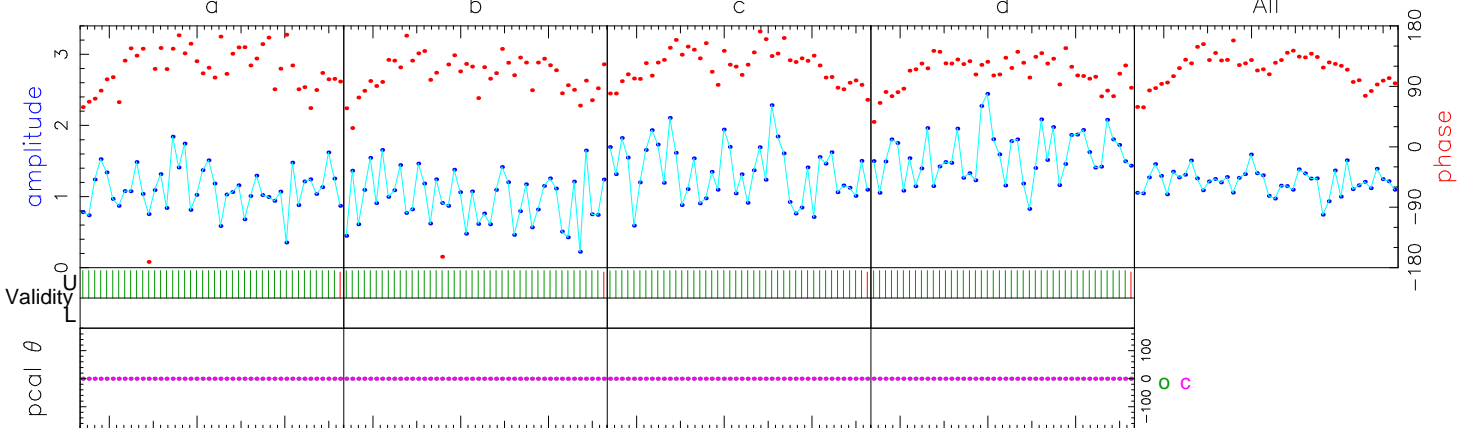
Fringe quality 7

SNR 41.6
Int time 179.972
Amp 1.133
Phase 115.9
PFD 0.0e+00
Delays (us)
SBD 0.000594
MBD 0.000582
Fringe rate (Hz)
-0.002327
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163121
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
118.2	112.4	121.8	111.4	Phase	115.9
1.0	0.9	1.2	1.5	Ampl.	1.1
513.2	513.5	513.6	512.9	Sbd box	513.3
U/L 352/0	352/0	352/0	352/0	APs used	
o 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
o:c 0:0	0:0	0:0	0:0	PC phase	
o:c 0:0	0:0	0:0	0:0	Manl PC	
o 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
o Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.95763873533E+03	Apriori delay (usec)	3.95763815340E+03	Resid mbdelay (usec)	5.81929E-04	+/- 2.7E-05
Sband delay (usec)	3.95763874728E+03	Apriori clock (usec)	1.2960146E+01	Resid sbdelay (usec)	5.93875E-04	+/- 1.0E-04
Phase delay (usec)	3.95763816088E+03	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	7.47786E-06	+/- 1.8E-07
Delay rate (us/s)	6.41163915390E-01	Apriori rate (us/s)	6.41163969459E-01	Resid rate (us/s)	-5.40694E-08	+/- 1.7E-09
Total phase (deg)	160.0	Apriori accel (us/s/s)	7.85200272834E-06	Resid phase (deg)	115.9	+/- 2.8

ph/seg (deg)	RMS 23.0	Theor. 9.1	Amplitude Search (1024X16)	1.133 +/- 0.027	1.112	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	16.1	16.0	Interp.	0.000	1.199	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	6.0	2.8	Inc. seg. avg.	1.199	1.126	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	20.3	4.8	Inc. frq. avg.	1.126		Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

o: az 30.8 el 62.4 pa -129.3 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3508.404 1220.104 simultaneous interpolator

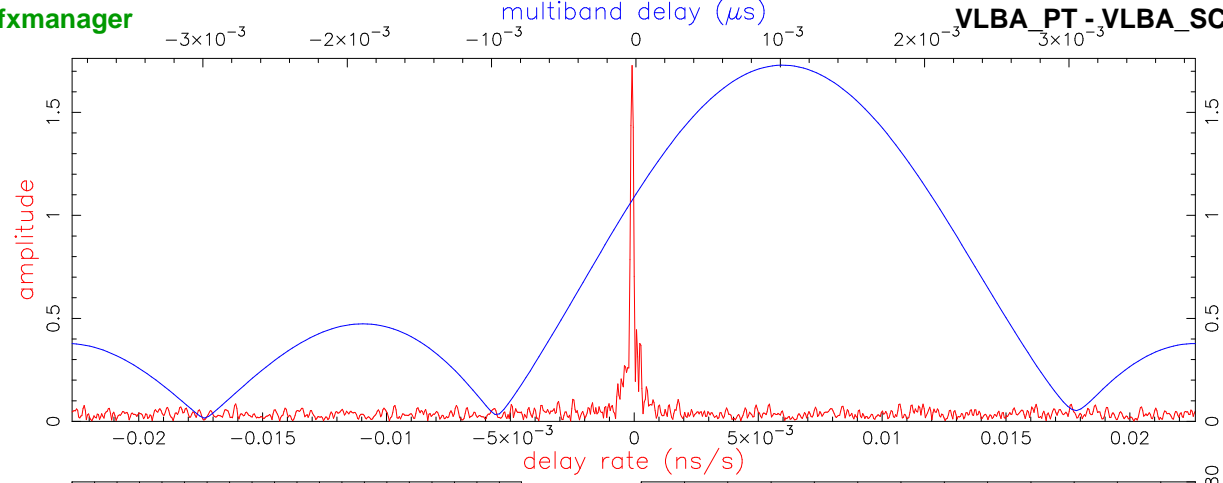
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/oc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/oc.Q.172.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, pc

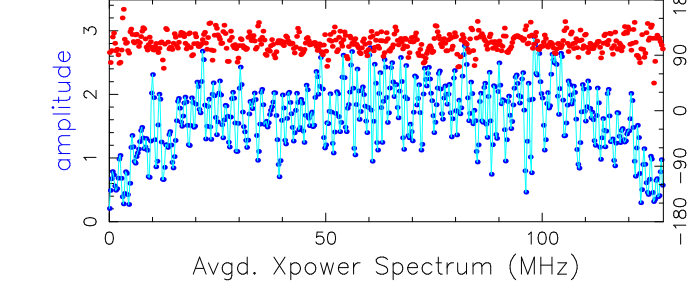
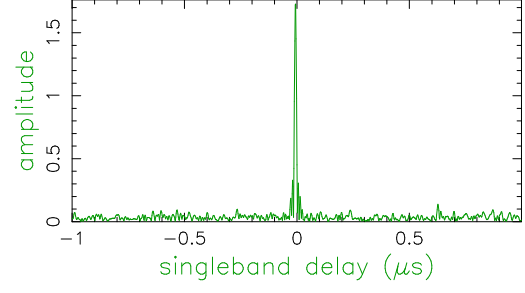
VLBA_PT - VLBA_SC, fgroup Q, pol LL



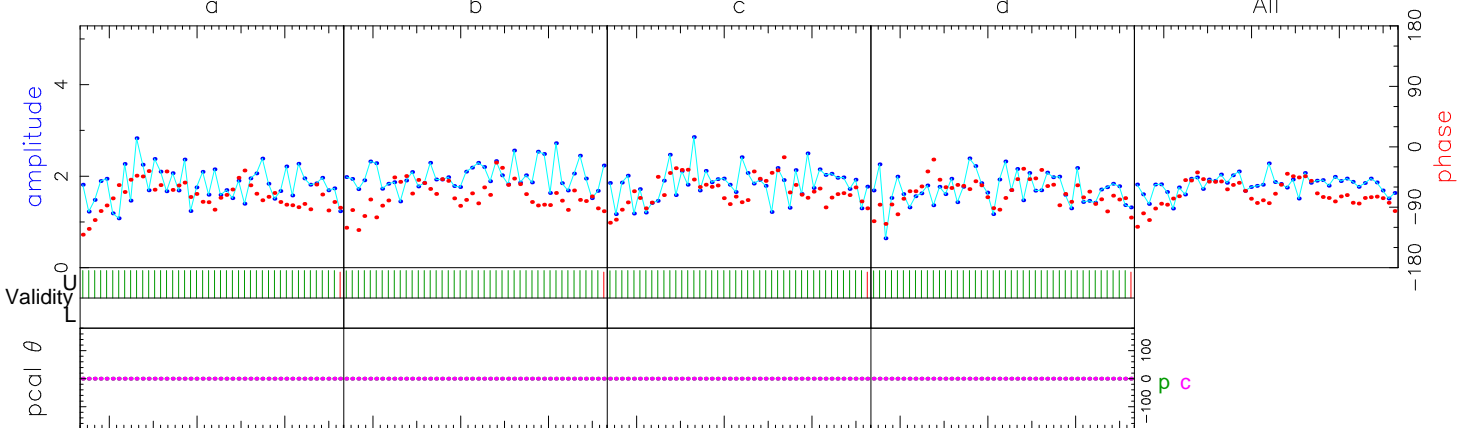
Fringe quality 9

SNR 64.6
Int time 179.972
Amp 1.762
Phase -69.6
PFD 0.0e+00
Delays (us)
SBD -0.006799
MBD 0.000969
Fringe rate (Hz)
-0.003626
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
2021:010:163120
2020:247:085004
RA & Dec (J2000)
01h02m45.762375s
+58°24'11.136621"



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-72.2	-73.0	-64.8	-67.9	Phase	-69.6
	1.7	1.9	1.7	1.6	Ampl.	1.7
	509.3	509.6	509.5	509.6	Sbd box	509.5
U/L	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
p:c	0:0	0:0	0:0	0:0	PC phase	
p:c	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
p	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

	4.07826940312E+03	Apriori delay (usec)	4.07827624648E+03	Resid mbdelay (usec)	9.69140E-04	+/- 1.7E-05
Group delay (usec)(sbd)	4.07826944786E+03	Apriori clock (usec)	-8.4043093E+00	Resid sbdelay (usec)	-6.79862E-03	+/- 6.7E-05
Sband delay (usec)	4.07827624199E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-4.48882E-06	+/- 1.1E-07
Phase delay (usec)	5.41430250517E-01	Apriori rate (us/s)	5.41430334755E-01	Resid rate (us/s)	-8.42382E-08	+/- 1.1E-09
Delay rate (us/s)		Apriori accel (us/s/s)	3.11576648004E-06	Resid phase (deg)	-69.6	+/- 1.8
Total phase (deg)	164.0					

	RMS	Theor.	Amplitude	1.762 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	18.5	5.9	Search (1024X16)	1.722	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	10.8	10.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.7	1.8	Inc. seg. avg.	1.808	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.5	3.1	Inc. frq. avg.	1.730	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

p: az 19.7 el 63.3 pa -148.5 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -2964.895 817.212 simultaneous interpolator

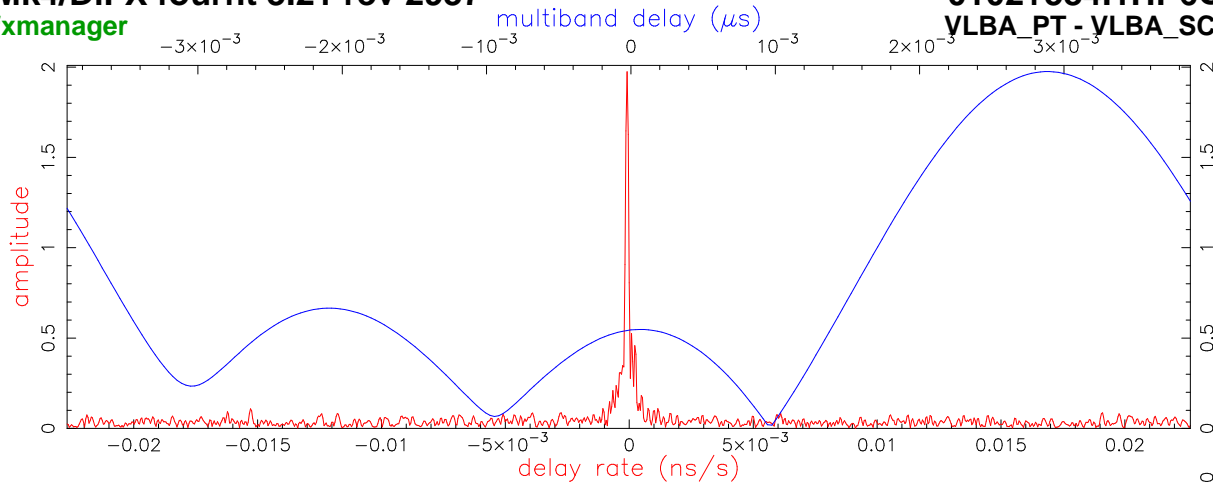
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc.Q.168.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

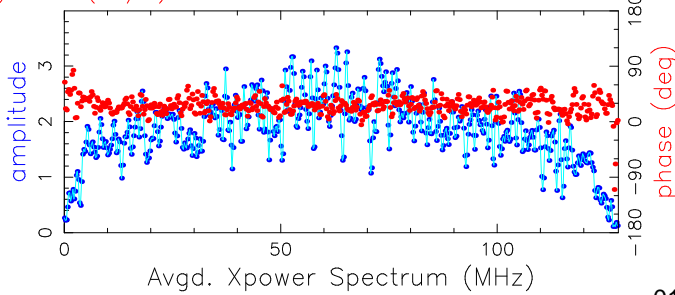
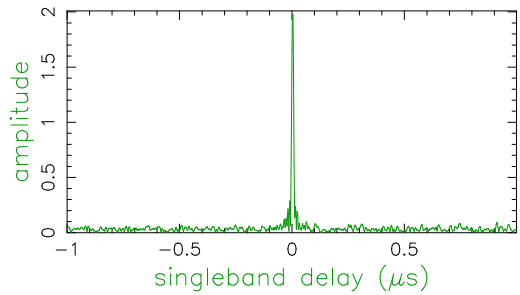
0102+584.1HP6Q8, No0090, pc

VLBA_PT - VLBA_SC, fgroup Q, pol RR



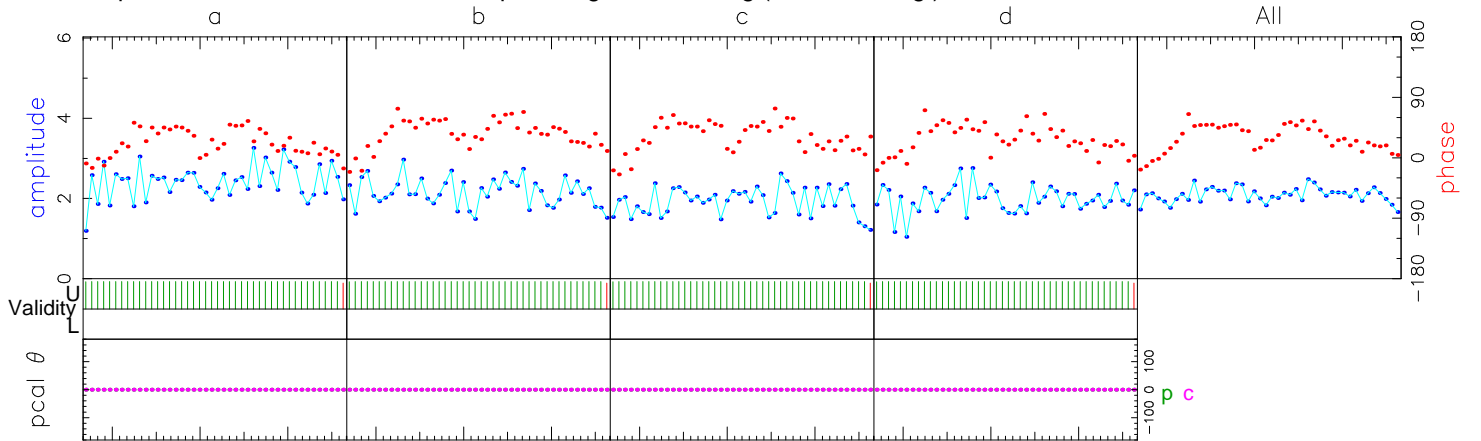
Fringe quality 8

SNR 73.7
 Int time 179.972
 Amp 2.010
 Phase 30.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.002992
 MBD 0.002859
 Fringe rate (Hz)
 -0.003554
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163121
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
p	1000	1000	1000	1000	Phase	30.0
c	1000	1000	1000	1000	Ampl.	2.0
p:c	0:0	0:0	0:0	0:0	Sbd box	514.5
p:c	0:0	0:0	0:0	0:0	APs used	
p	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
p	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
c	Q00UR	Q01UR	Q02UR	Q03UR	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

	4.07827910559E+03	Apriori delay (usec)	4.07827624648E+03	Resid mbdelay (usec)	2.85911E-03	+/- 1.5E-05
Group delay (usec)(sbd)	4.07827910559E+03	Apriori clock (usec)	-8.4043093E+00	Resid sbdelay (usec)	2.99238E-03	+/- 5.8E-05
Sband delay (usec)	4.07827923886E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	1.93483E-06	+/- 1.0E-07
Phase delay (usec)	4.07827624842E+03	Apriori rate (us/s)	5.41430334755E-01	Resid rate (us/s)	-8.25818E-08	+/- 9.6E-10
Delay rate (us/s)	5.41430252173E-01	Apriori accel (us/s/s)	3.11576648004E-06	Resid phase (deg)	30.0	+/- 1.6
Total phase (deg)	263.5					

	RMS	Theor.	Amplitude	2.010 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	19.7	5.2	Search (1024X16)	1.966	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	10.0	9.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.7	1.6	Inc. seg. avg.	2.083	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	9.5	2.7	Inc. frq. avg.	1.984	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
p: az 19.7 el 63.3 pa -148.5			c: az 340.7 el 44.8 pa 142.6			u,v (fr/asec) -2964.895 817.212
Control file: cf_1234_gmva7mm			Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc..1HP6Q8			Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc.Q.174.1HP6Q8

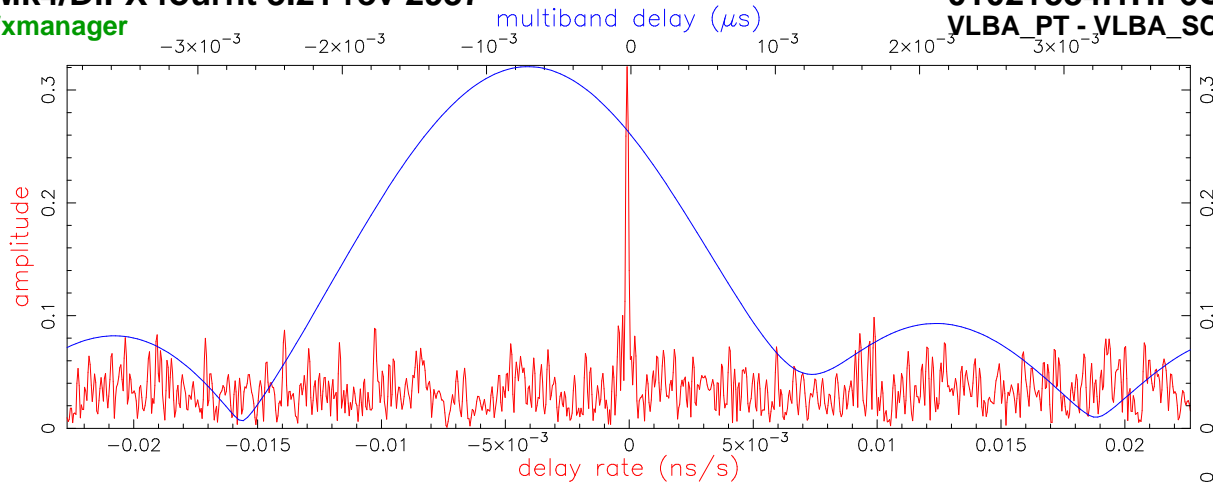
simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

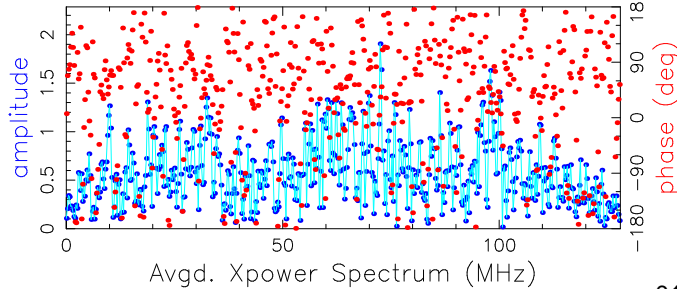
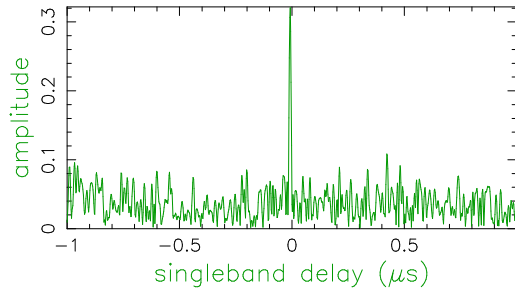
0102+584.1HP6Q8, No0090, pc

VLBA_PT - VLBA_SC, fgroup Q, pol LR



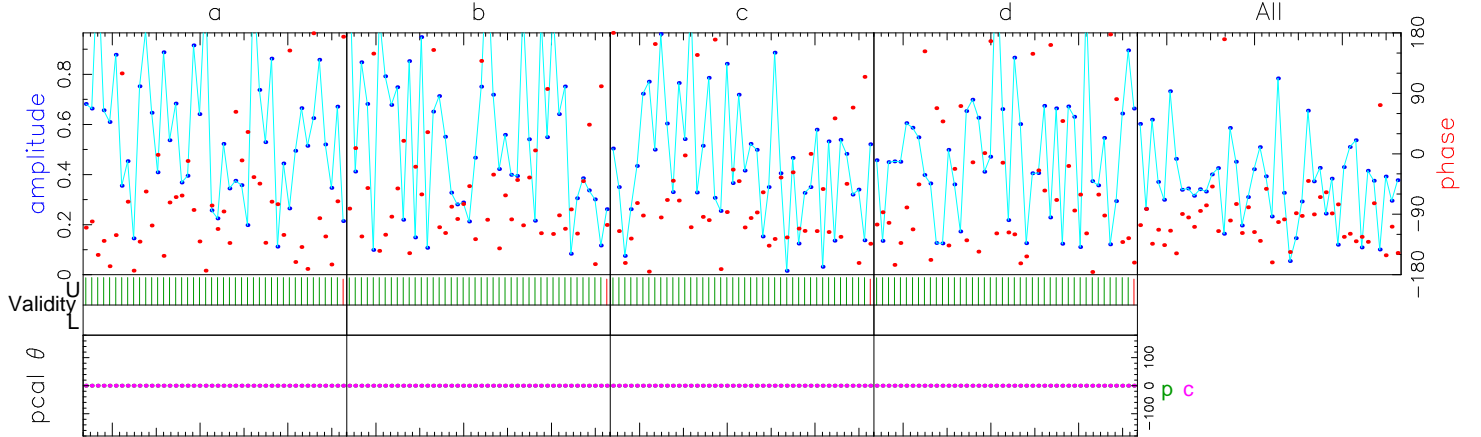
Fringe quality 9

SNR 11.8
 Int time 179.972
 Amp 0.322
 Phase -103.9
 PFD 8.8e-24
 Delays (us)
 SBD -0.008225
 MBD -0.000725
 Fringe rate (Hz)
 -0.003307
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163123
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-109.5	-98.1	-99.6	-108.6	Phase	-103.9
	0.4	0.4	0.3	0.3	Ampl.	0.3
	509.0	509.1	507.7	509.3	Sbd box	508.8
U/L	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
p:c	0:0	0:0	0:0	0:0	PC phase	
p:c	0:0	0:0	0:0	0:0	ManI PC	
p	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
p	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	4.07826770931E+03	Apriori delay (usec)	4.07827624648E+03	Resid mbdelay (usec)	-7.24673E-04	+/- 9.4E-05
Group delay (usec)(sbd)	4.07826802173E+03	Apriori clock (usec)	-8.4043093E+00	Resid sbdelay (usec)	-8.22475E-03	+/- 3.6E-04
Sband delay (usec)	4.07827623978E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-6.70460E-06	+/- 6.3E-07
Phase delay (usec)	5.41430257917E-01	Apriori rate (us/s)	5.41430334755E-01	Resid rate (us/s)	-7.68385E-08	+/- 6.0E-09
Delay rate (us/s)		Apriori accel (us/s/s)	3.11576648004E-06	Resid phase (deg)	-103.9	+/- 9.7
Total phase (deg)	129.6					

	RMS	Theor.	Amplitude	0.322 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	41.2	32.2	Search (1024X16)	0.311	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	52.7	56.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.3	9.7	Inc. seg. avg.	0.323	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	12.5	16.9	Inc. frq. avg.	0.318	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
p: az 19.7 el 63.3 pa -148.5			c: az 340.7 el 44.8 pa 142.6			u,v (fr/asec) -2964.895 817.212
Control file: cf_1234_gmva7mm			Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc..1HP6Q8			Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc.Q.178.1HP6Q8

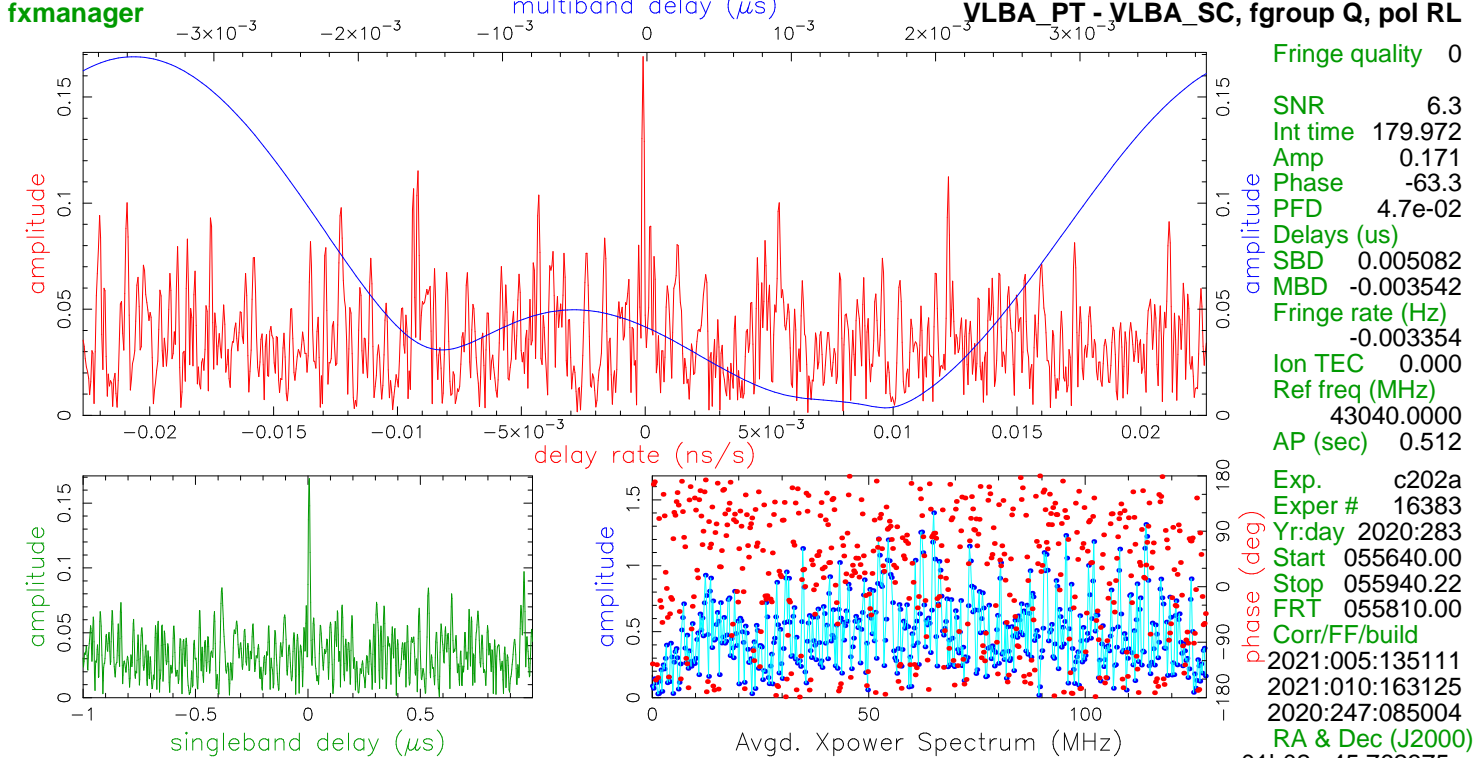
simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

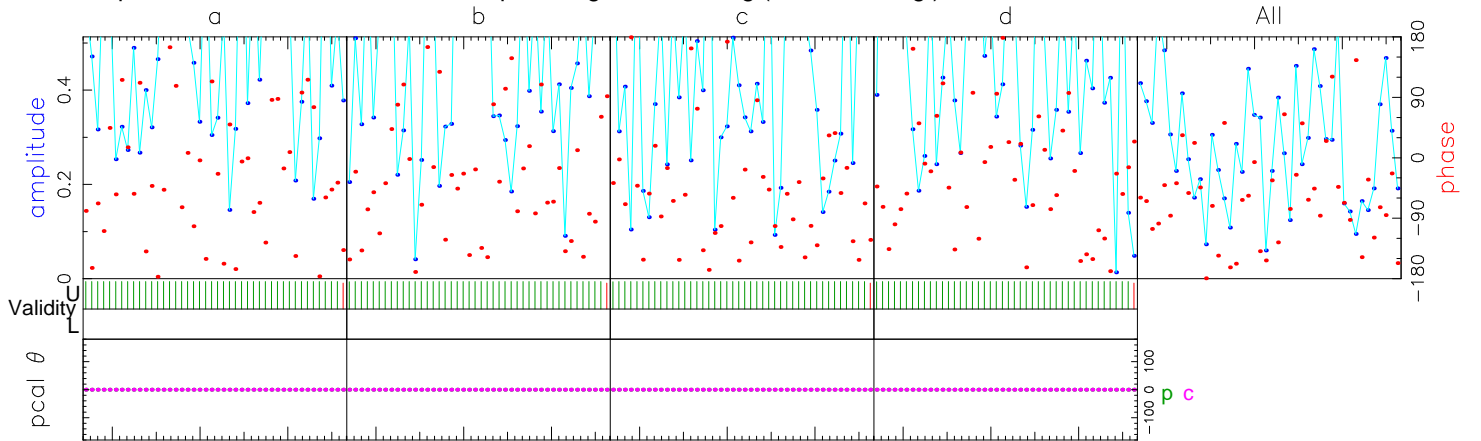
fxmanager

0102+584.1HP6Q8, No0090, pc

VLBA_PT - VLBA_SC, fgroup Q, pol RL



Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-60.3	-54.9	-78.5	-53.1	Phase	-63.3
0.1	0.2	0.2	0.2	Ampl.	0.2
114.9	599.1	516.3	135.2	Sbd box	515.6
U/L 352/0	352/0	352/0	352/0	APs used	
p 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
p:c 0:0	0:0	0:0	0:0	PC phase	
p:c 0:0	0:0	0:0	0:0	ManI PC	
p 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
p Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	4.07828051653E+03	Apriori delay (usec)	4.07827624648E+03	Resid mbdelay (usec)	-3.54245E-03	+/-	1.8E-04
Sband delay (usec)	4.07828132886E+03	Apriori clock (usec)	-8.4043093E+00	Resid sbdelay (usec)	5.08237E-03	+/-	6.9E-04
Phase delay (usec)	4.07827624240E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-4.08383E-06	+/-	1.2E-06
Delay rate (us/s)	5.41430256839E-01	Apriori rate (us/s)	5.41430334755E-01	Resid rate (us/s)	-7.79163E-08	+/-	1.1E-08
Total phase (deg)	170.2	Apriori accel (us/s/s)	3.11576648004E-06	Resid phase (deg)	-63.3	+/-	18.3

ph/seg (deg)	RMS 69.6	Theor. 60.6	Amplitude	0.171 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	101.1	105.7	Search (1024X16)	0.166	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	14.4	18.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	27.0	31.9	Inc. seg. avg.	0.184	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	0.164	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00
p: az 19.7 el 63.3 pa -148.5		c: az 340.7 el 44.8 pa 142.6		u,v (fr/asec)	-2964.895 817.212				simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/pc.Q.180.1HP6Q8