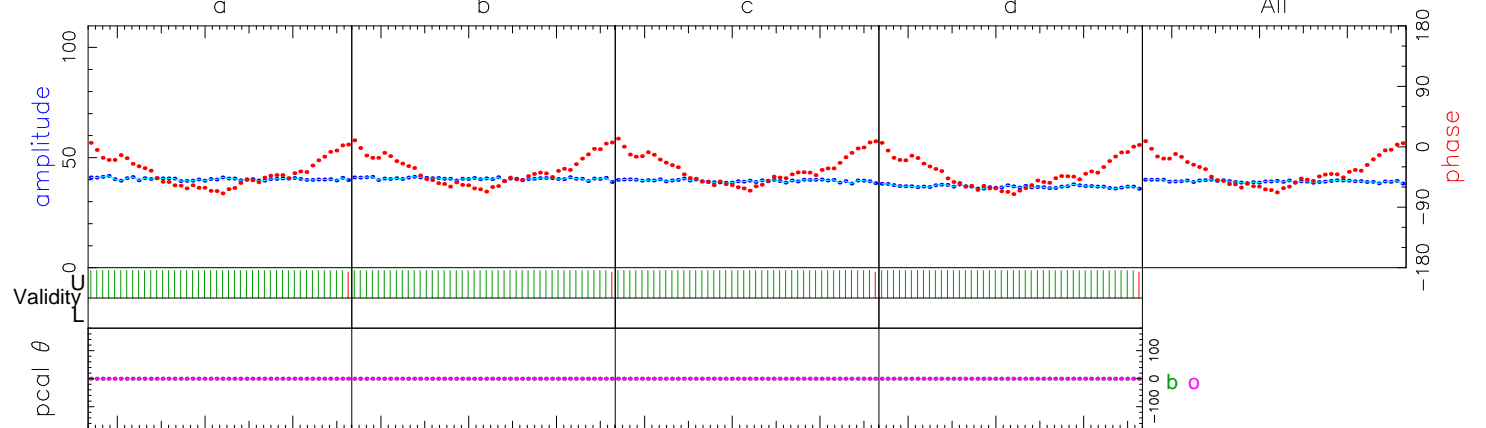


Fringe quality 8

SNR 1343.2
Int time 179.974
Amp 36.613
Phase -35.9
PFD 0.0e+00
Delays (us)
SBD 0.001975
MBD 0.001973
Fringe rate (Hz) 0.000446
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c202a
Yr:day 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
	-37.7	-34.6	-32.8	-38.7	Phase	-35.9
	37.6	37.8	36.8	34.4	Ampl.	36.6
	514.0	514.1	513.8	514.1	Sbd box	514.0
U/L	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
b:o	0:0	0:0	0:0	0:0	PC phase	
b:o	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.14033883553E+03	Apriori delay (usec)	1.14033686218E+03	Resid mbdelay (usec)	1.97334E-03	+/-	8.3E-07
Sband delay (usec)	1.14033883756E+03	Apriori clock (usec)	-2.3116692E+01	Resid sbdelay (usec)	1.97537E-03	+/-	3.2E-06
Phase delay (usec)	1.14033685987E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-2.31563E-06	+/-	5.5E-09
Delay rate (us/s)	-3.45621385567E-02	Apriori rate (us/s)	-3.45621489202E-02	Resid rate (us/s)	1.03635E-08	+/-	5.3E-11
Total phase (deg)	161.5	Apriori accel (us/s/s)	7.24793366544E-06	Resid phase (deg)	-35.9	+/-	0.1

	RMS	Theor.	Amplitude	36.613 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	21.2	0.3	Search (1024X16)	36.231	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	7.3	0.5	Interp.	0.000	Sample rate(MISamp/s): 256	nlags: 512	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	3.3	0.1	Inc. seg. avg.	39.232	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	3.7	0.1	Inc. frq. avg.	36.643					

b: az 47.6 el 70.3 pa -109.3 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 193.533 785.903 simultaneous interpolator

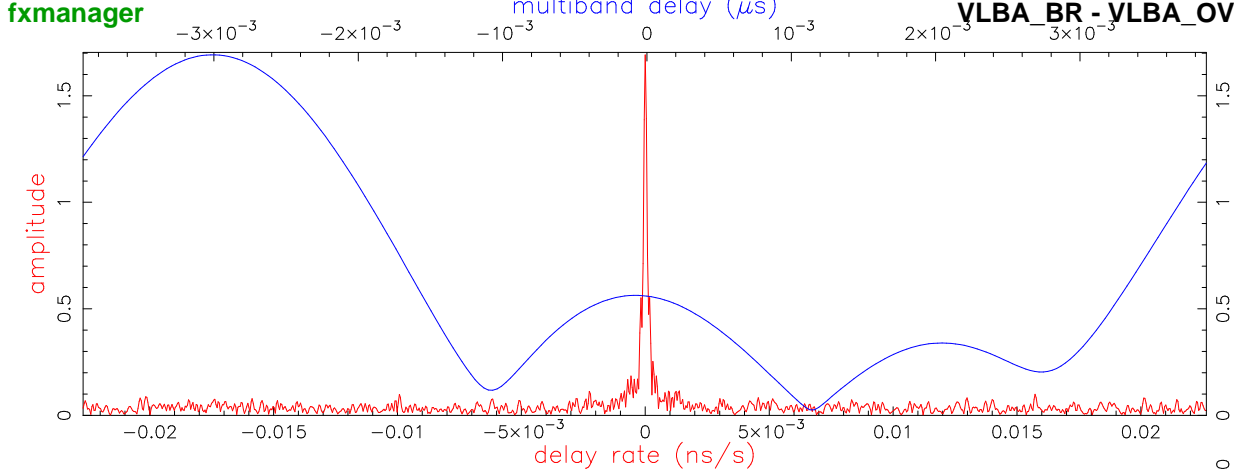
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo.Q.32.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

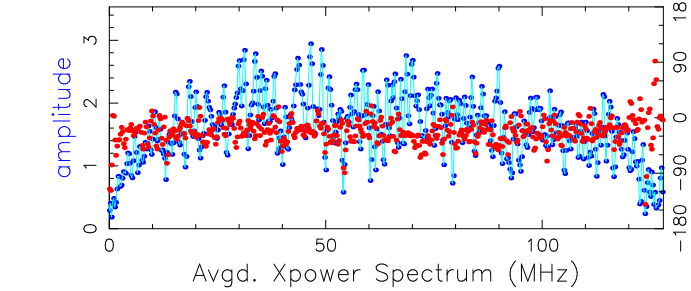
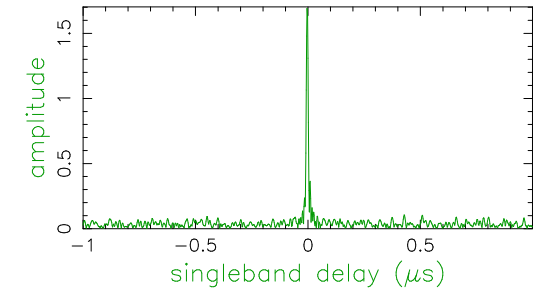
0102+584.1HP6Q8, No0090, bo

VLBA_BR - VLBA_OV, fgroup Q, pol LR



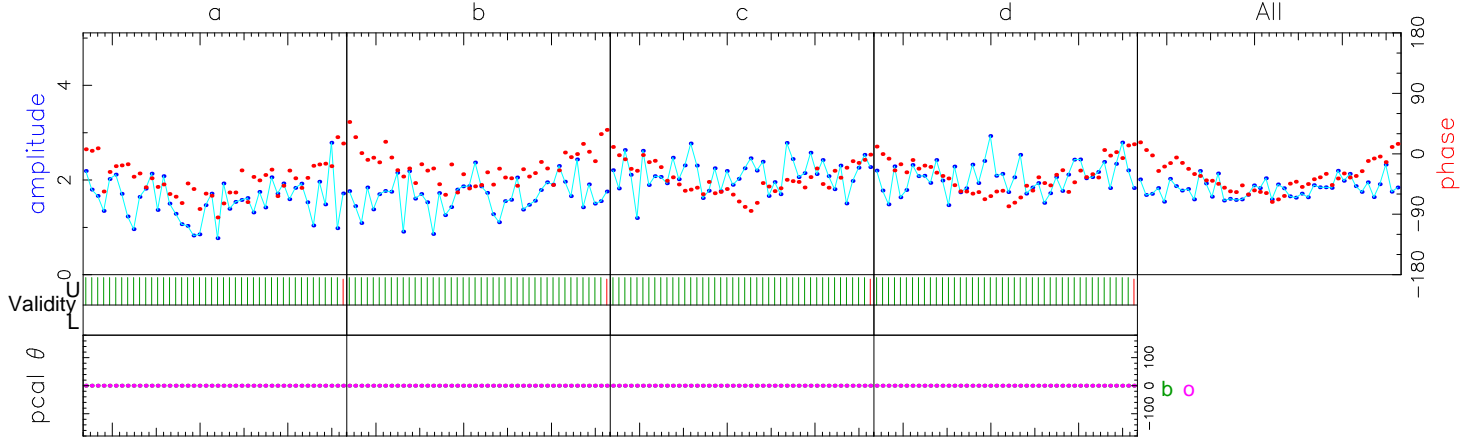
Fringe quality 9

SNR 62.5
 Int time 179.974
 Amp 1.704
 Phase -31.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.003345
 MBD -0.002982
 Fringe rate (Hz)
 0.000455
 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
U/L	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	PC freqs	
b:o	0:0	0:0	0:0	0:0	PC phase	
b	1000	1000	1000	1000	Manl PC	
o	1000	1000	1000	1000	PC amp	
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.14033388015E+03	Apriori delay (usec)	1.14033686218E+03	Resid mbdelay (usec)	-2.98203E-03	+/- 1.8E-05
Sband delay (usec)	1.14033351706E+03	Apriori clock (usec)	-2.3116692E+01	Resid sbdelay (usec)	-3.34512E-03	+/- 6.9E-05
Phase delay (usec)	1.14033686012E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-2.06004E-06	+/- 1.2E-07
Delay rate (us/s)	-3.45621383468E-02	Apriori rate (us/s)	-3.45621489202E-02	Resid rate (us/s)	1.05734E-08	+/- 1.1E-09
Total phase (deg)	165.5	Apriori accel (us/s/s)	7.24793366544E-06	Resid phase (deg)	-31.9	+/- 1.8

	RMS	Theor.	Amplitude	1.704 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	22.3	6.1	Search (1024X16)	1.670	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	13.2	10.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	10.1	1.8	Inc. seg. avg.	1.815	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	13.2	3.2	Inc. frq. avg.	1.703	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 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 193.533 785.903 simultaneous interpolator

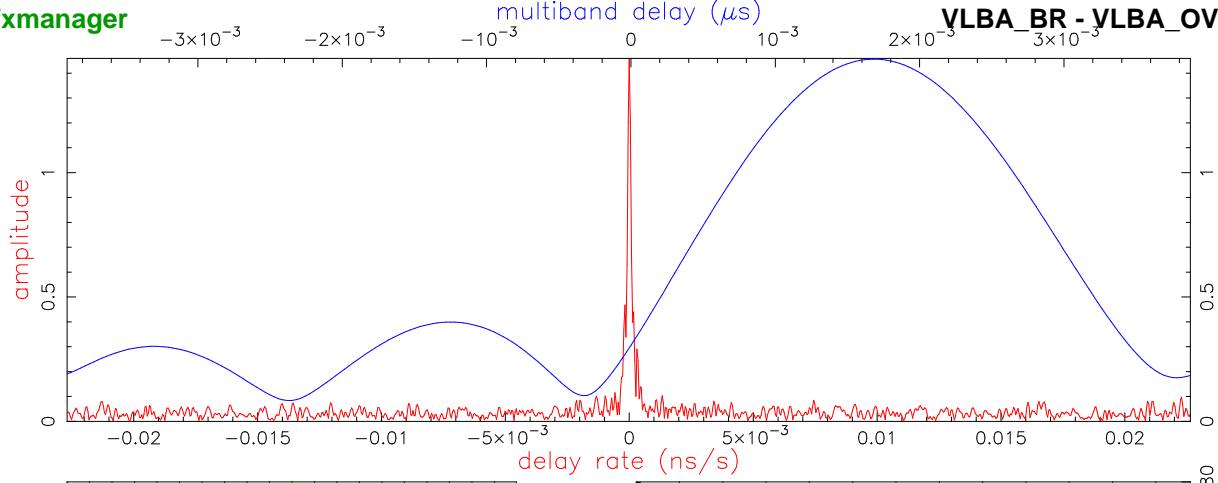
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo.Q.56.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

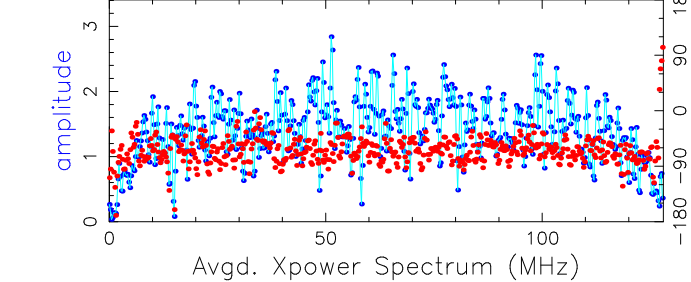
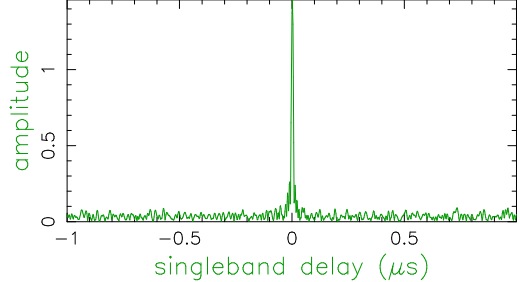
0102+584.1HP6Q8, No0090, bo

VLBA_BR - VLBA_OV, fgroup Q, pol RL



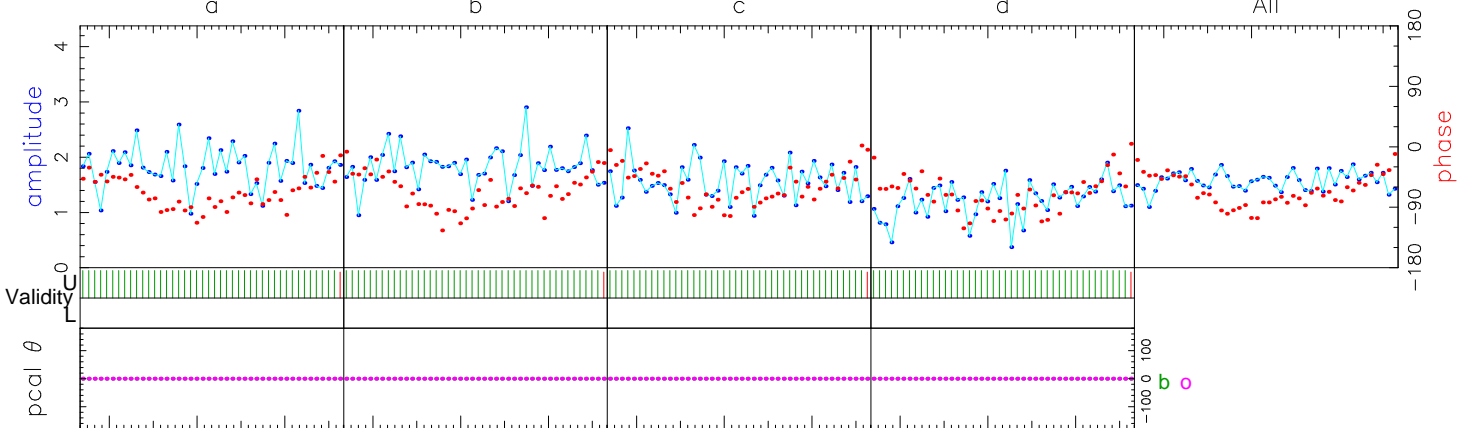
Fringe quality 8

SNR 53.5
 Int time 179.974
 Amp 1.459
 Phase -65.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.001645
 MBD 0.001667
 Fringe rate (Hz)
 0.000514
 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
	-67.1	-66.9	-58.6	-68.7	Phase	-65.3
	1.7	1.6	1.4	1.1	Ampl.	1.5
	513.8	513.7	513.9	514.1	Sbd box	513.8
U/L	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
b:o	0:0	0:0	0:0	0:0	PC phase	
b:o	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.14033852965E+03	Apriori delay (usec)	1.14033686218E+03	Resid mbdelay (usec)	1.66747E-03	+/-	2.1E-05
Sband delay (usec)	1.14033850743E+03	Apriori clock (usec)	-2.3116692E+01	Resid sbdelay (usec)	1.64525E-03	+/-	8.0E-05
Phase delay (usec)	1.14033685797E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-4.21266E-06	+/-	1.4E-07
Delay rate (us/s)	-3.45621369798E-02	Apriori rate (us/s)	-3.45621489202E-02	Resid rate (us/s)	1.19404E-08	+/-	1.3E-09
Total phase (deg)	132.1	Apriori accel (us/s/s)	7.24793366544E-06	Resid phase (deg)	-65.3	+/-	2.1

ph/seg (deg)	23.1	Theor.	7.1	Amplitude	1.459 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	13.7	Search (1024X16)	1.410	Search	1.410	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	5.6	Inc. seg. avg.	1.565	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	16.4	Inc. frq. avg.	1.458	Inc. seg. avg.	1.565	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	1.458	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 47.6 el 70.3 pa -109.3 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 193.533 785.903 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo.Q.73.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

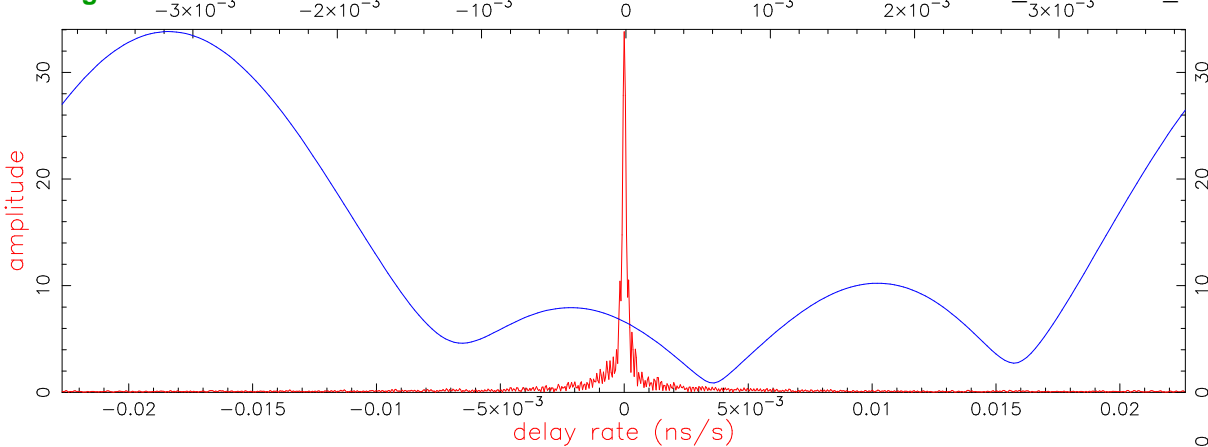
fxmanager

0102+584.1HP6Q8, No0090, bo

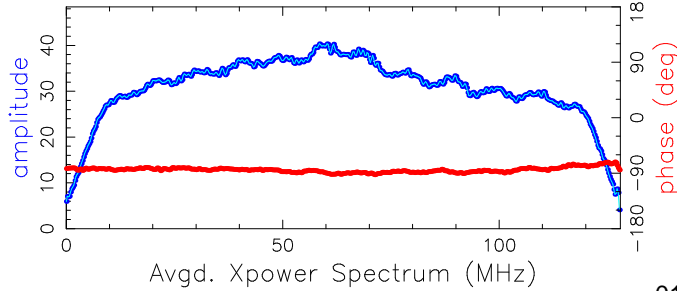
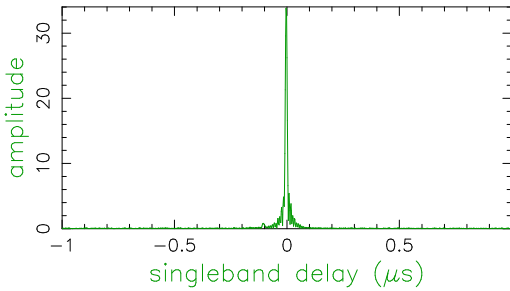
VLBA_BR - VLBA_OV, fgroup Q, pol LL

multiband delay (μ s)

Fringe quality 7

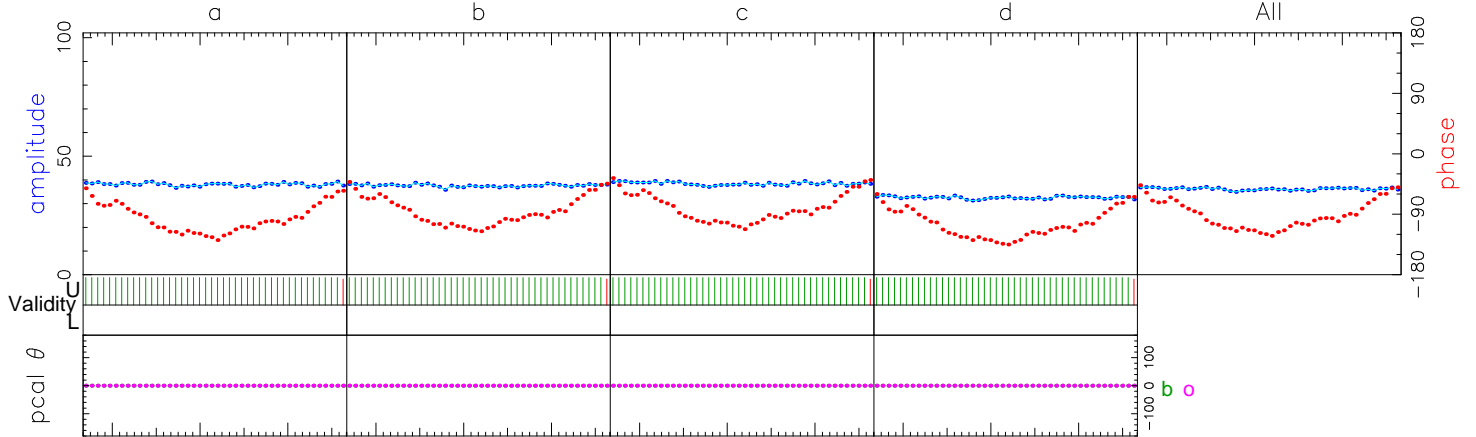


SNR 1248.5
 Int time 179.974
 Amp 34.032
 Phase -90.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.003358
 MBD -0.003134
 Fringe rate (Hz)
 0.000452
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



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
-95.5	-84.9	-79.8	-104.3	Phase	-90.6
35.6	35.2	35.9	30.4	Ampl.	34.3
511.6	511.6	511.0	510.7	Sbd box	511.3
U/L 352/0	352/0	352/0	352/0	APs used	
b 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
b:o 0:0	0:0	0:0	0:0	PC phase	
b:o 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	1.14033372850E+03	Apriori delay (usec)	1.14033686218E+03	Resid mbdelay (usec)	-3.13369E-03	+/-	8.9E-07
Sband delay (usec)	1.14033350406E+03	Apriori clock (usec)	-2.3116692E+01	Resid sbdelay (usec)	-3.35812E-03	+/-	3.4E-06
Phase delay (usec)	1.14033685634E+03	Apriori clockrate (us/s)	9.9999998E-08	Resid phdelay (usec)	-5.84737E-06	+/-	5.9E-09
Delay rate (us/s)	-3.45621384149E-02	Apriori rate (us/s)	-3.45621489202E-02	Resid rate (us/s)	1.05053E-08	+/-	5.7E-11
Total phase (deg)	106.8	Apriori accel (us/s/s)	7.24793366544E-06	Resid phase (deg)	-90.6	+/-	0.1

ph/seg (deg)	21.1	0.3	Search (1024X16)	32.725	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	6.6	0.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	13.4	0.1	Inc. seg. avg.	36.223	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	6.6	0.2	Inc. frq. avg.	34.260	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 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 193.533 785.903 simultaneous interpolator

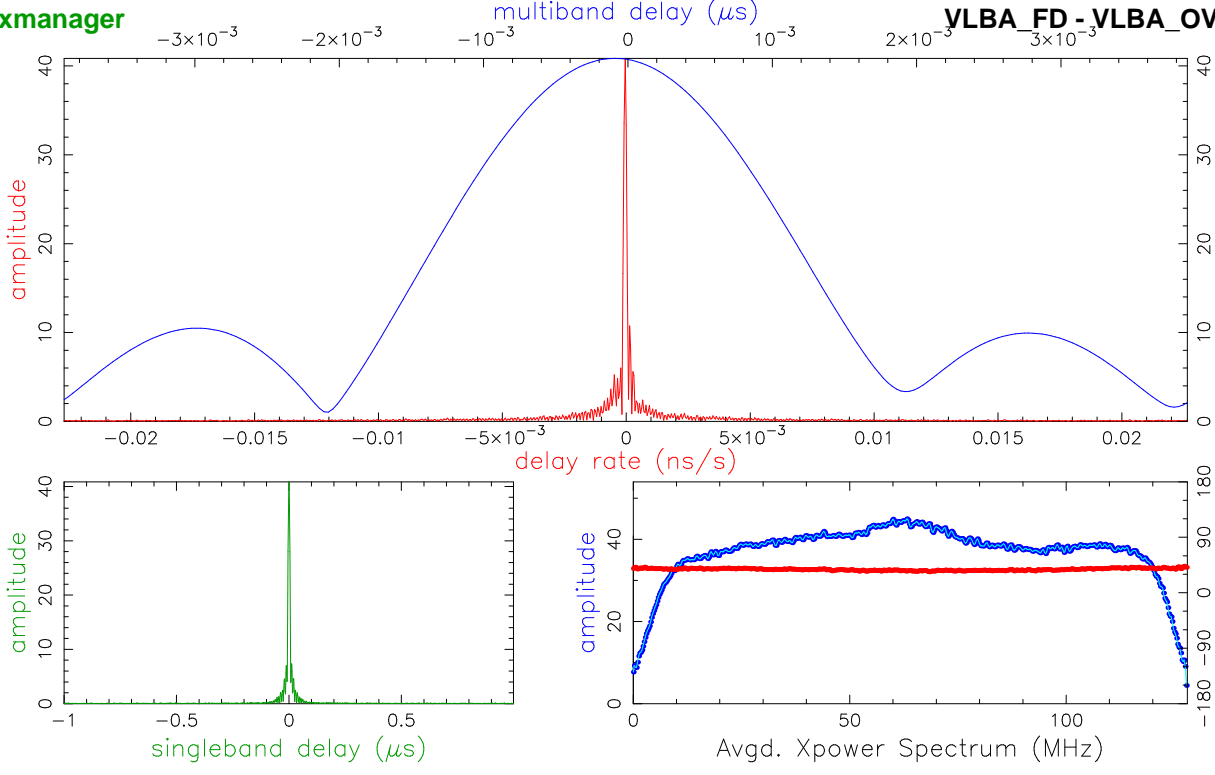
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/bo.Q.8.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, fo

VLBA_FD - VLBA_OV, fgroup Q, pol LL

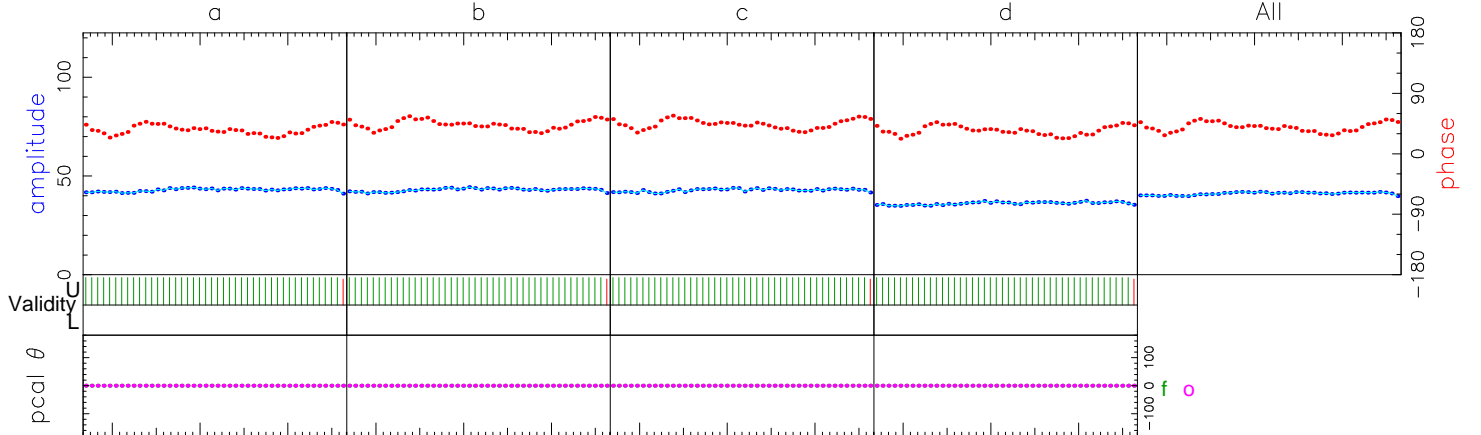


Fringe quality 9

SNR 1498.8
 Int time 179.975
 Amp 40.854
 Phase 39.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.000004
 MBD -0.000089
 Fringe rate (Hz) -0.000963
 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		
f	1000	1000	1000	1000	Phase	39.7
o	1000	1000	1000	1000	Ampl.	41.0
f:0	0:0	0:0	0:0	0:0	Sbd box	513.0
fo	0:0	0:0	0:0	0:0	APs used	
f	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
f	Q00UL	Q01UL	Q02UL	Q03UL	PC phase	
o	Q00UL	Q01UL	Q02UL	Q03UL	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-3.13662753734E+02	Apriori delay (usec)	-3.13662664289E+02	Resid mbdelay (usec)	-8.94458E-05	+/-	7.4E-07
Sband delay (usec)	-3.13662668289E+02	Apriori clock (usec)	-1.3575455E+01	Resid sbdelay (usec)	-4.00000E-06	+/-	2.9E-06
Phase delay (usec)	-3.13662661728E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	2.56055E-06	+/-	4.9E-09
Delay rate (us/s)	-1.41275146331E-01	Apriori rate (us/s)	-1.41275123964E-01	Resid rate (us/s)	-2.23663E-08	+/-	4.7E-11
Total phase (deg)	14.1	Apriori accel (us/s/s)	-7.58034692090E-06	Resid phase (deg)	39.7	+/-	0.1

ph/seg (deg)	6.8	Theor.	0.3	Amplitude	40.854 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	1.9		0.4	Search (1024X16)	38.842	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	6.1		0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	7.1		0.1	Inc. seg. avg.	41.137	Sample rate(MISamp/s): 256	mb window (us) -0.004 0.004
				Inc. frq. avg.	40.967	Data rate(Mb/s): 2048	dr window (ns/s) -0.023 0.023
						nlags: 512	ion window (TEC) 0.00 0.00

f: az 13.6 el 60.8 pa -157.8 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 769.444 -711.522 simultaneous interpolator

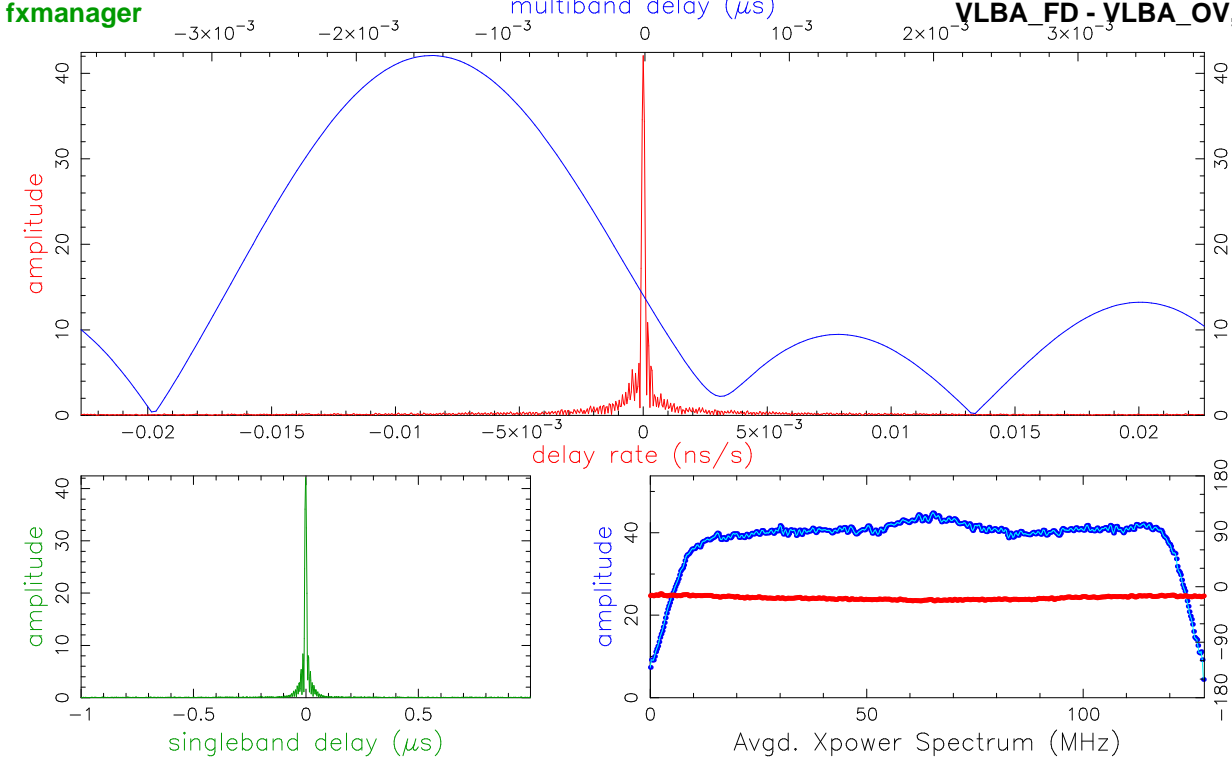
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/fo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/fo.Q.20.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, fo

VLBA_FD - VLBA_OV, fgroup Q, pol RR

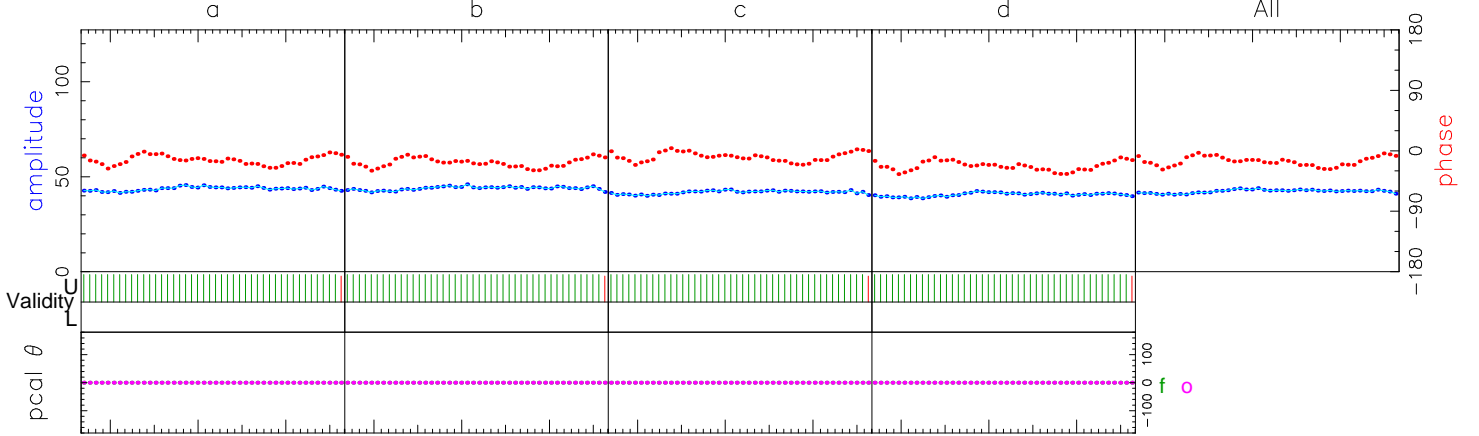


Fringe quality 9

SNR 1557.2
 Int time 179.975
 Amp 42.447
 Phase -15.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.001327
 MBD -0.001442
 Fringe rate (Hz)
 -0.000944
 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
 2021:010:163103
 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



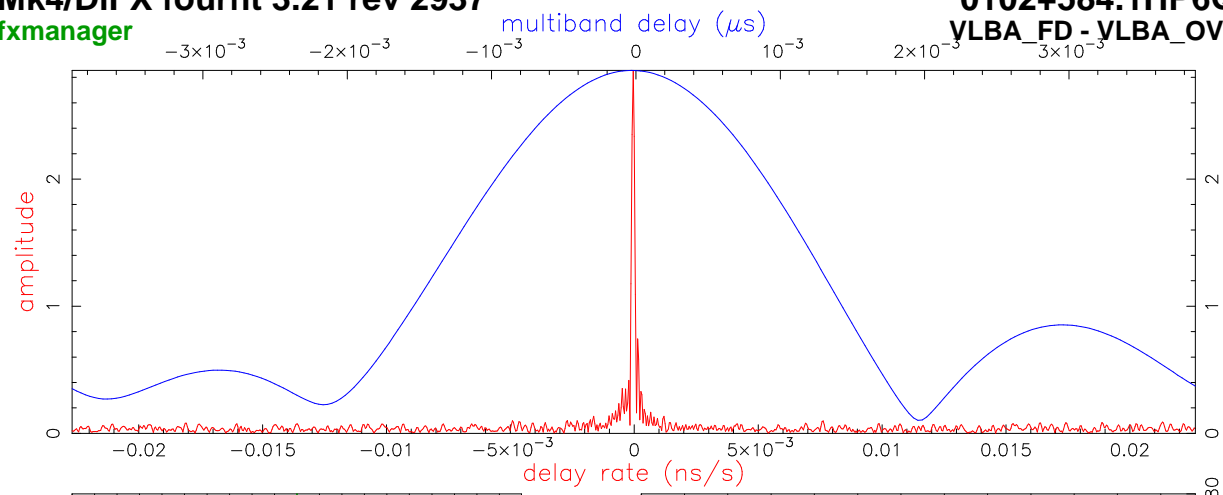
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000		
o	1000	1000	1000	1000		
f:0	0:0	0:0	0:0	0:0		
f:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
o	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UR	Q01UR	Q02UR	Q03UR		

	-3.13664105851E+02	-3.13662664289E+02	-3.13662664289E+02	-3.13662664289E+02	-1.44156E-03	+/- 7.1E-07
Group delay (usec)(sbd)	-3.13664105851E+02	-3.13662664289E+02	-3.13662664289E+02	-3.13662664289E+02	-1.44156E-03	+/- 7.1E-07
Sband delay (usec)	-3.13663991414E+02	-3.13662664289E+02	-3.13662664289E+02	-3.13662664289E+02	-1.32713E-03	+/- 2.8E-06
Phase delay (usec)	-3.13662665295E+02	-3.13662664289E+02	-3.13662664289E+02	-3.13662664289E+02	-1.00638E-06	+/- 4.7E-09
Delay rate (us/s)	-1.41275145902E-01	-1.41275145902E-01	-1.41275145902E-01	-1.41275145902E-01	-2.19381E-08	+/- 4.6E-11
Total phase (deg)	-41.1	-41.1	-41.1	-41.1	-15.6	+/- 0.1

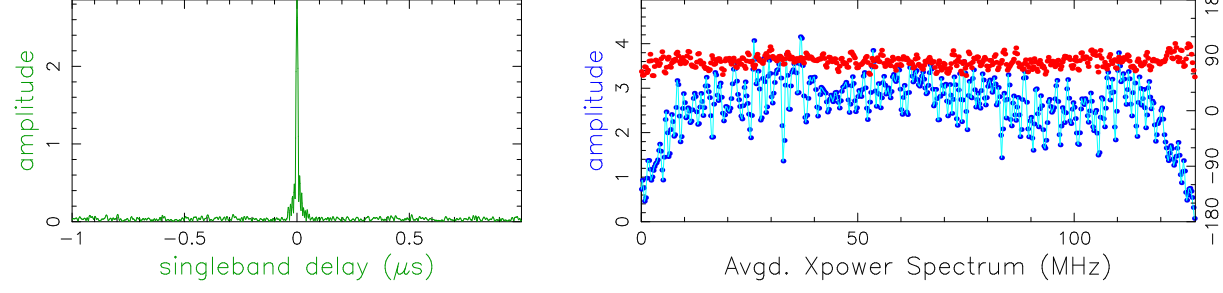
	42.447 +/- 0.027	40.120	41.6	40.3	42.213	42.342	42.213
ph/seg (deg)	42.447 +/- 0.027	40.120	41.6	40.3	42.213	42.342	42.213
amp/seg (%)	6.7	0.2	0.000	0.000	0.000	0.000	0.000
ph/frq (deg)	7.1	0.1	0.000	0.000	0.000	0.000	0.000
amp/frq (%)	3.2	0.1	0.000	0.000	0.000	0.000	0.000

f: az 13.6 el 60.8 pa -157.8 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 769.444 -711.522 simultaneous interpolator

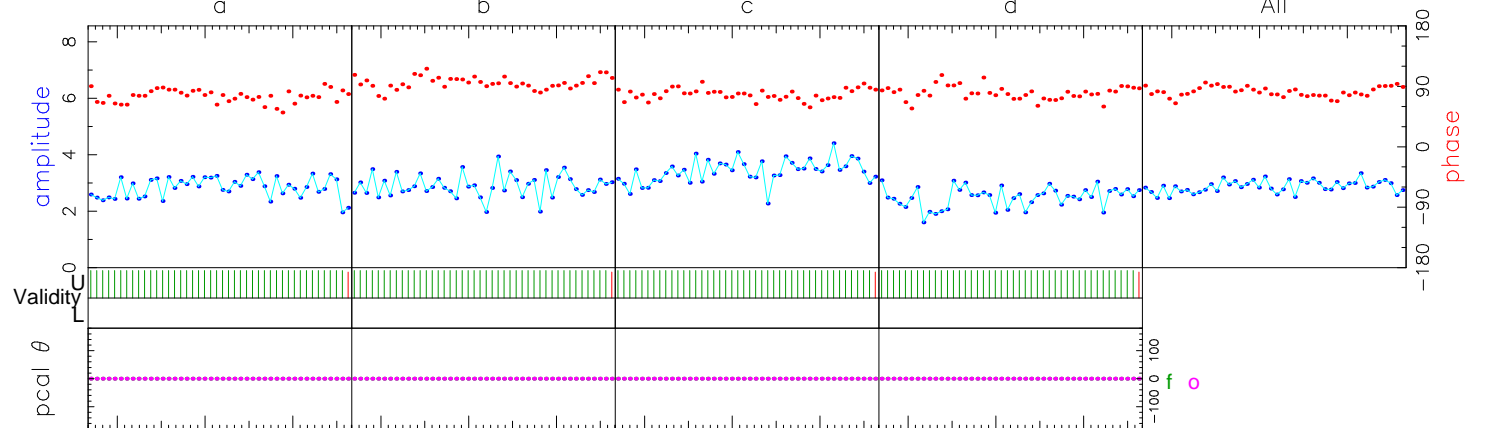
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/fo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/fo.Q.36.1HP6Q8



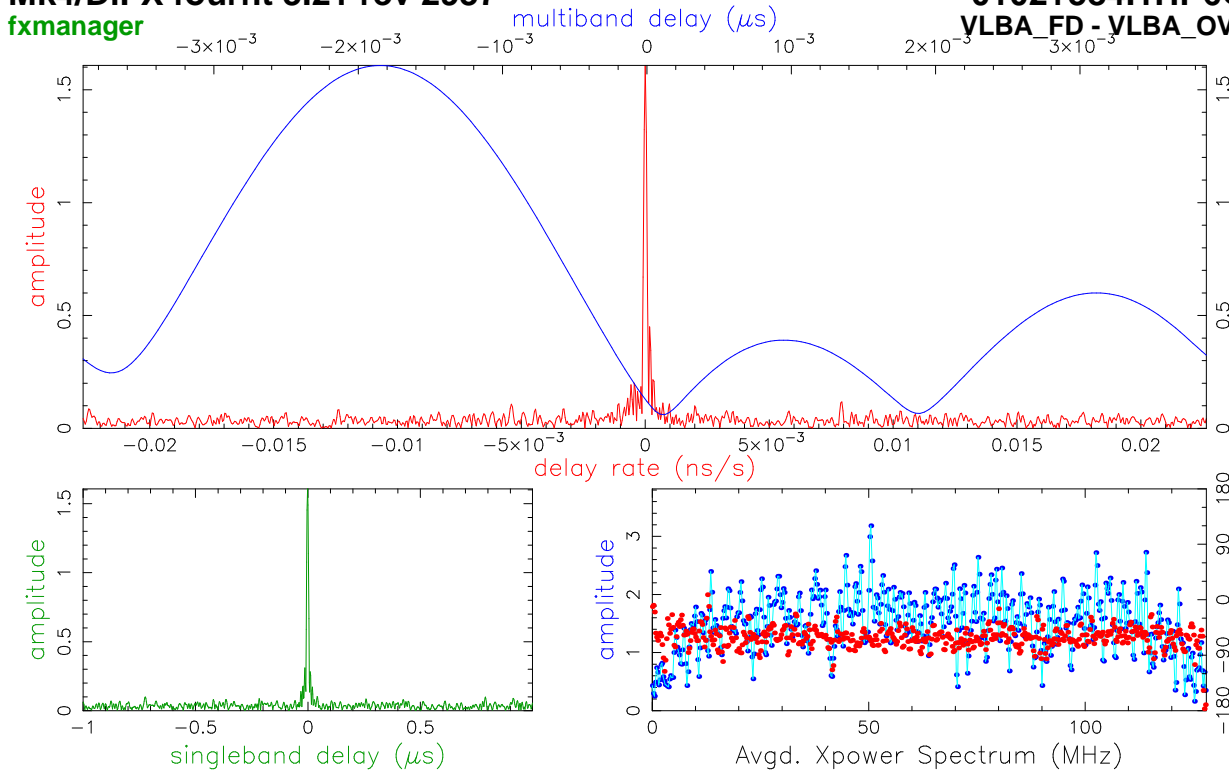
Fringe quality 9
SNR 104.7
Int time 179.975
Amp 2.855
Phase 82.1
PFD 0.0e+00
Delays (us)
SBD 0.000071
MBD -0.000024
Fringe rate (Hz)
-0.000957
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c202a
Exper # 16383
Yr:day 2020:283
Start 055640.00
Stop 055940.22
FRT 055810.00
Corr/FF/build
2021:005:135111
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

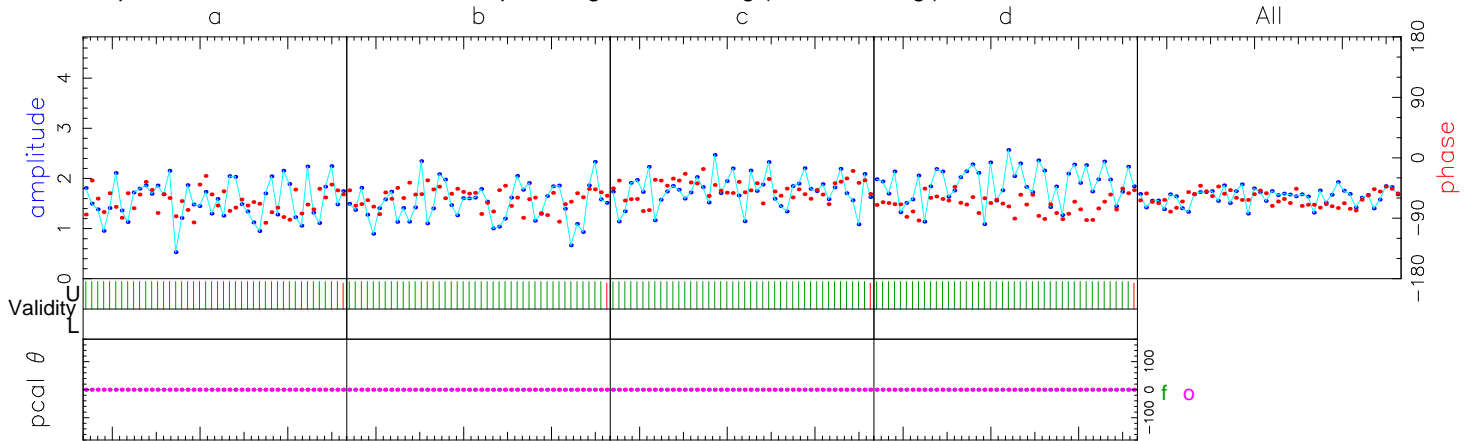


42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
75.1	95.2	78.1	80.3	Phase	82.1
2.8	2.9	3.4	2.5	Ampl.	2.9
513.3	513.1	512.5	513.6	Sbd box	513.0
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
f:0 0:0	0:0	0:0	0:0	PC phase	
f:0 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-3.13662688016E+02	Apriori delay (usec)	-3.13662664289E+02	Resid mbdelay (usec)	-2.37271E-05 +/- 1.1E-05
Sband delay (usec)	-3.13662593289E+02	Apriori clock (usec)	-1.3575455E+01	Resid sbdelay (usec)	7.10000E-05 +/- 4.1E-05
Phase delay (usec)	-3.13662658991E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	5.29736E-06 +/- 7.1E-08
Delay rate (us/s)	-1.41275146209E-01	Apriori rate (us/s)	-1.41275123964E-01	Resid rate (us/s)	-2.22444E-08 +/- 6.8E-10
Total phase (deg)	56.5	Apriori accel (us/s/s)	-7.58034692090E-06	Resid phase (deg)	82.1 +/- 1.1
RMS	Theor.	Amplitude	2.855 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	7.3 3.6	Search (1024X16)	2.721	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	7.3 6.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	11.0 1.1	Inc. seg. avg.	2.872	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	11.7 1.9	Inc. frq. avg.	2.880	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	o: az 30.8 el 62.4 pa -129.3	u, v (fr/asec)	769.444 -711.522		simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/fo..1HP6Q8	Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/fo.Q.49.1HP6Q8			



Fringe quality 8
SNR 59.0
Int time 179.975
Amp 1.608
Phase -60.5
PFD 0.0e+00
Delays (us)
SBD -0.001823
MBD -0.001840
Fringe rate (Hz)
-0.000941
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
-65.6	-59.9	-46.3	-69.8	Phase	-60.5
1.5	1.5	1.7	1.8	Ampl.	1.6
512.3	512.0	512.3	511.8	Sbd box	512.1
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
f:o 0:0	0:0	0:0	0:0	PC phase	
f:o 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-3.13664503851E+02	Apriori delay (usec)	-3.13662664289E+02	Resid mbdelay (usec)	-1.83956E-03	+/- 1.9E-05
Sband delay (usec)	-3.13664487289E+02	Apriori clock (usec)	-1.3575455E+01	Resid sbdelay (usec)	-1.82300E-03	+/- 7.3E-05
Phase delay (usec)	-3.13662668192E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-3.90346E-06	+/- 1.3E-07
Delay rate (us/s)	-1.41275145817E-01	Apriori rate (us/s)	-1.41275123964E-01	Resid rate (us/s)	-2.18530E-08	+/- 1.2E-09
Total phase (deg)	-86.0	Apriori accel (us/s/s)	-7.58034692090E-06	Resid phase (deg)	-60.5	+/- 1.9

ph/seg (deg)	RMS 10.6	Theor. 6.4	Amplitude	1.608 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	9.7	11.2	Search (1024X16)	1.526	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	12.5	1.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	9.9	3.4	Inc. seg. avg.	1.625	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	1.627	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 13.6 el 60.8 pa -157.8			o: az 30.8 el 62.4 pa -129.3		u,v (fr/asec) 769.444 -711.522	simultaneous interpolator

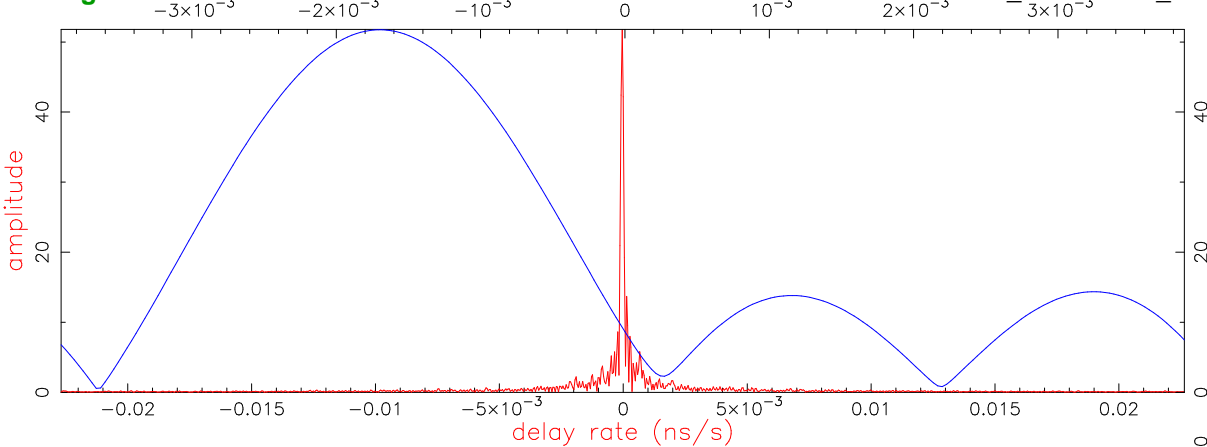
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, ko

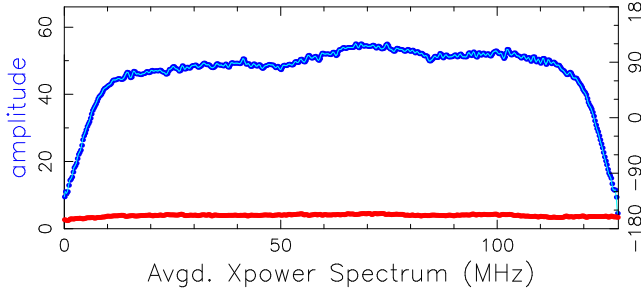
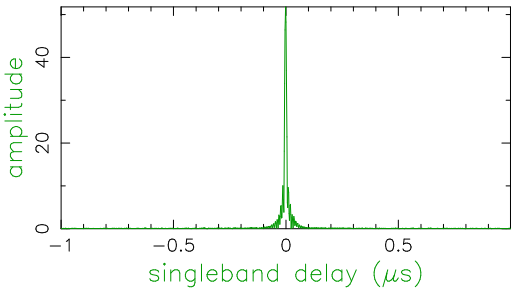
VLBA_KP - VLBA_OV, fgroup Q, pol RR

multiband delay (μ s)



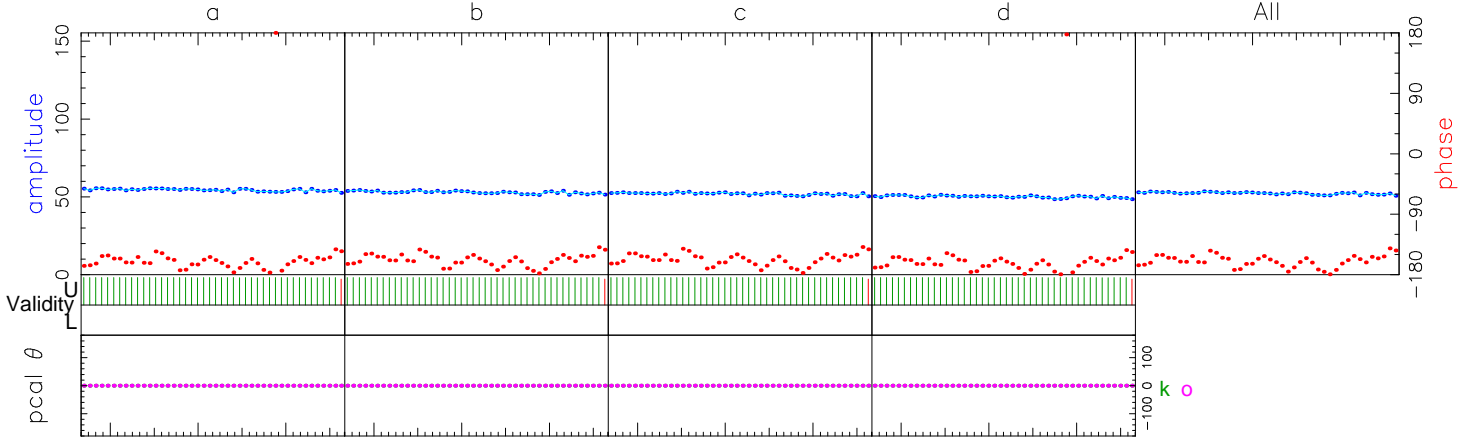
Fringe quality 9

SNR 1899.5
 Int time 179.800
 Amp 51.801
 Phase -159.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.001747
 MBD -0.001687
 Fringe rate (Hz)
 -0.001970
 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		
k	1000	1000	1000	1000	APs used	1000
o	1000	1000	1000	1000	PC freqs	1000
k:o	0:0	0:0	0:0	0:0	PC phase	0:0
k	1000	1000	1000	1000	ManI PC	1000
o	1000	1000	1000	1000	PC amp	1000
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

	42912.00	43040.00	43168.00	43296.00		
Group delay (usec)(sbd)	-4.40359886474E+02	-158.0	-157.3	-162.9	Resid mbdelay (usec)	-1.68654E-03 +/- 5.9E-07
Sband delay (usec)	-4.40359946685E+02	52.4	51.4	49.5	Resid sbdelay (usec)	-1.74675E-03 +/- 2.3E-06
Phase delay (usec)	-4.40358210243E+02	511.9	511.9	512.3	Resid phdelay (usec)	-1.03083E-05 +/- 3.9E-09
Delay rate (us/s)	-5.47845065774E-02	0:0	0:0	0:0	Resid rate (us/s)	-4.57650E-08 +/- 3.7E-11
Total phase (deg)		-132.8			Resid phase (deg)	-159.7 +/- 0.1

	RMS	Theor.	Amplitude	51.801 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	8.7	0.2	Search (1024X16)	50.630	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	1.8	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.2	0.1	Inc. seg. avg.	52.354	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.0	0.1	Inc. frq. avg.	51.789	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

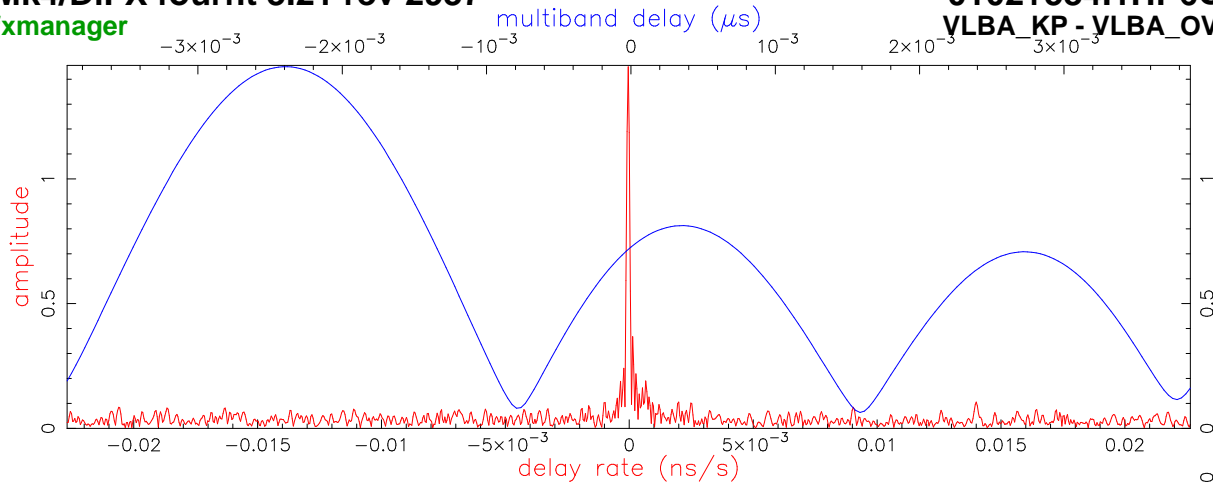
k: az 21.3 el 60.1 pa -144.4 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 297.154 -500.583 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko.Q.106.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

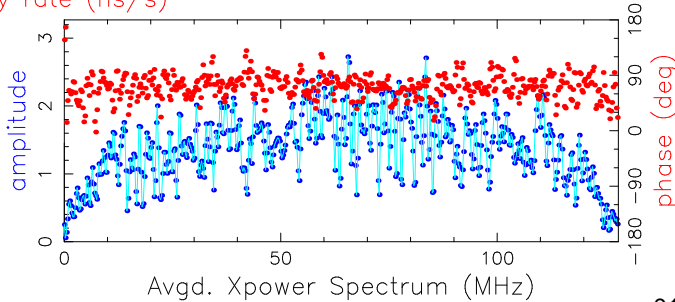
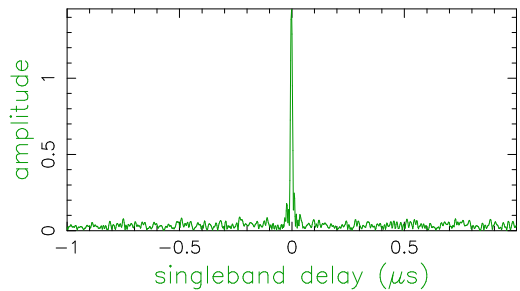
0102+584.1HP6Q8, No0090, ko

VLBA_KP - VLBA_OV, fgroup Q, pol LR



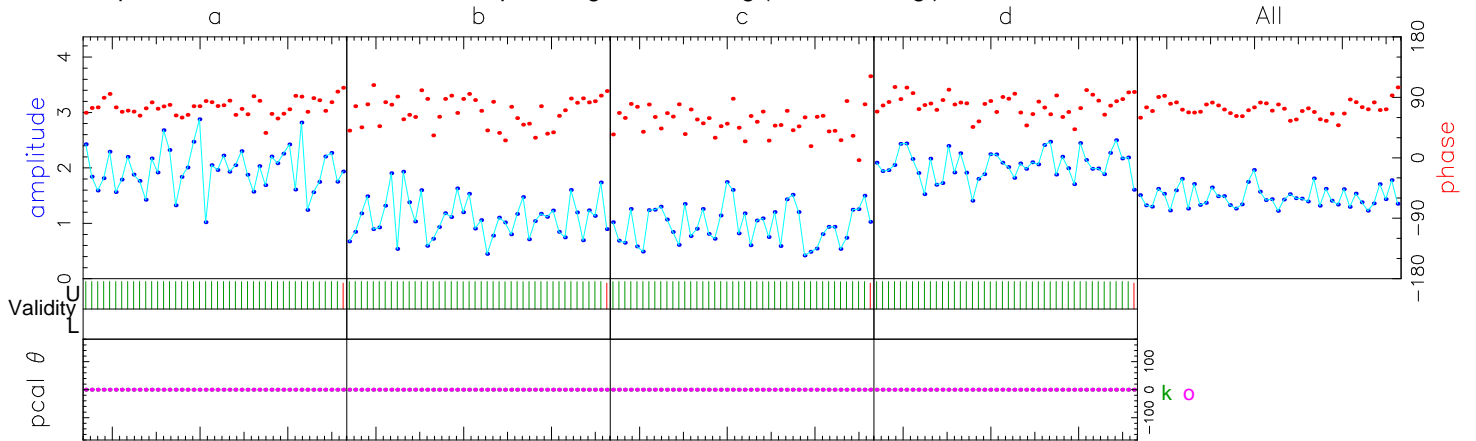
Fringe quality 7

SNR 53.4
 Int time 179.800
 Amp 1.455
 Phase 73.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.002365
 MBD -0.002405
 Fringe rate (Hz)
 -0.001983
 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		
k	1000	1000	1000	1000		
o	1000	1000	1000	1000		
k:o	0:0	0:0	0:0	0:0		
k:o	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
o	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-4.40360605381E+02	Apriori delay (usec)	-4.40358199935E+02	Resid mbdelay (usec)	-2.40545E-03	+/-	2.1E-05
Sband delay (usec)	-4.40360565185E+02	Apriori clock (usec)	-2.1079382E+01	Resid sbdelay (usec)	-2.36525E-03	+/-	8.1E-05
Phase delay (usec)	-4.40358195220E+02	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	4.71531E-06	+/-	1.4E-07
Delay rate (us/s)	-5.47845068780E-02	Apriori rate (us/s)	-5.47844608123E-02	Resid rate (us/s)	-4.60657E-08	+/-	1.3E-09
Total phase (deg)	-260.0	Apriori accel (us/s/s)	-5.05031377225E-06	Resid phase (deg)	73.1	+/-	2.1

ph/seg (deg)	11.0	Theor.	7.1	Amplitude	1.455 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	12.3		12.4	Search (1024X16)	1.447	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	14.2		2.1	Inc. seg. avg.	1.466	Bits/sample: 2x2	mb window (us) -0.004 0.004
amp/frq (%)	34.1		3.7	Inc. frq. avg.	1.465	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

k: az 21.3 el 60.1 pa -144.4 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 297.154 -500.583 simultaneous interpolator

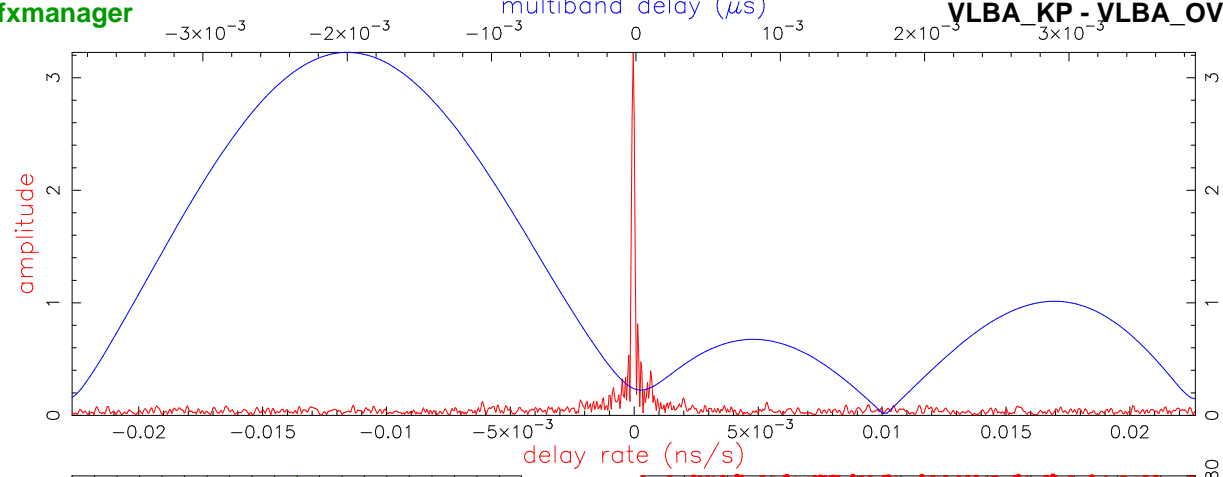
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko.Q.119.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

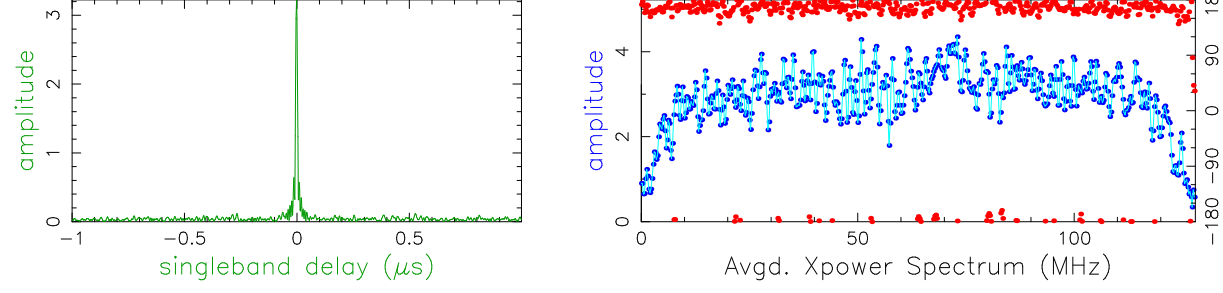
fxmanager

0102+584.1HP6Q8, No0090, ko

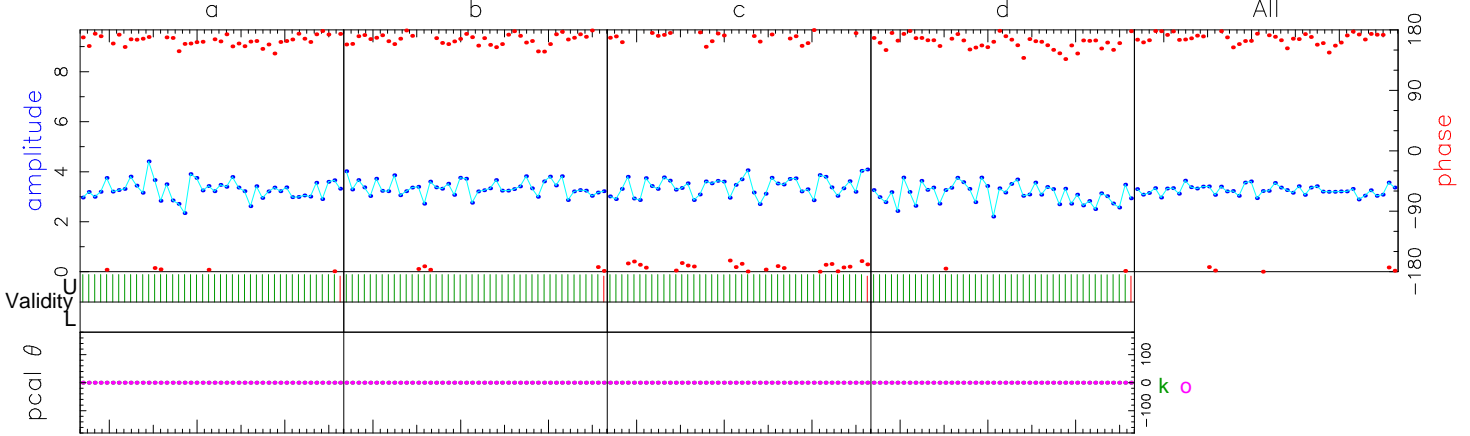
VLBA_KP - VLBA_OV, fgroup Q, pol RL



Fringe quality 9
 SNR 118.3
 Int time 179.800
 Amp 3.225
 Phase 169.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.001979
 MBD -0.002001
 Fringe rate (Hz)
 -0.001926
 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
U/L	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	APs used	1000
o	1000	1000	1000	1000	PC freqs	1000
k:o	0:0	0:0	0:0	0:0	PC phase	0:0
k:o	0:0	0:0	0:0	0:0	Manl PC	0:0
k	1000	1000	1000	1000	PC amp	1000
o	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-4.40360200849E+02	Apriori delay (usec)	-4.40358199935E+02	Resid mbdelay (usec)	-2.00091E-03	+/-	9.4E-06
Sband delay (usec)	-4.40360178435E+02	Apriori clock (usec)	-2.1079382E+01	Resid sbdelay (usec)	-1.97850E-03	+/-	3.6E-05
Phase delay (usec)	-4.40358189027E+02	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	1.09081E-05	+/-	6.3E-08
Delay rate (us/s)	-5.47845055535E-02	Apriori rate (us/s)	-5.47844608123E-02	Resid rate (us/s)	-4.47411E-08	+/-	6.0E-10
Total phase (deg)	-164.1	Apriori accel (us/s/s)	-5.05031377225E-06	Resid phase (deg)	169.0	+/-	1.0

ph/seg (deg)	8.8	Theor.	3.2	Amplitude	3.225 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	5.7		5.6	Search (1024X16)	3.221	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	9.0		1.0	Inc. seg. avg.	3.258	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	3.4		1.7	Inc. frq. avg.	3.244	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
						Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 21.3 el 60.1 pa -144.4 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 297.154 -500.583 simultaneous interpolator

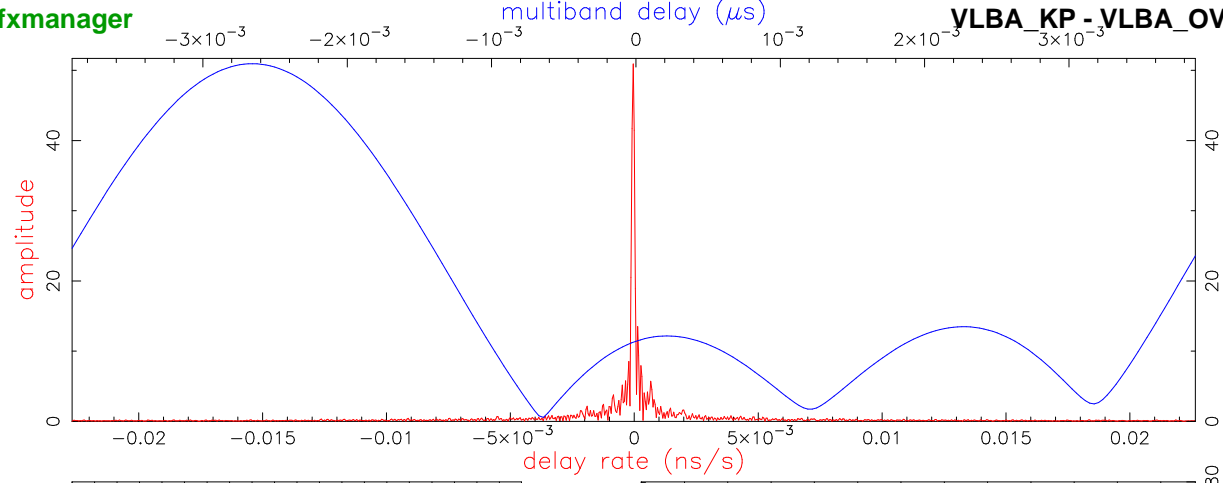
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko.Q.139.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, ko

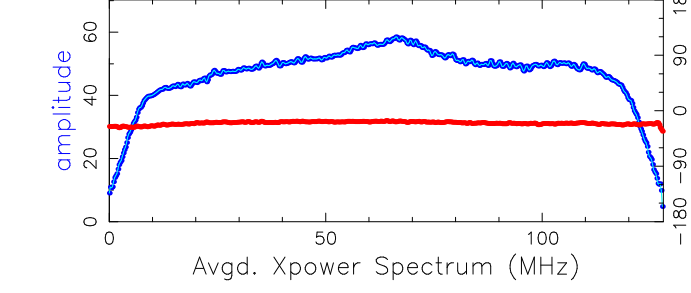
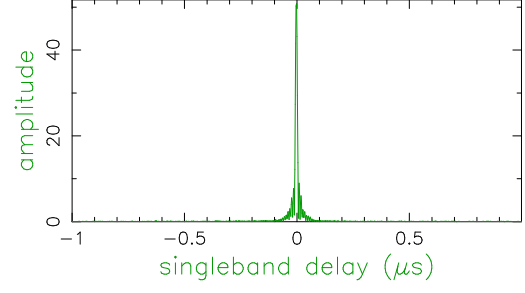
VLBA_KP - VLBA_OV, fgroup Q, pol LL



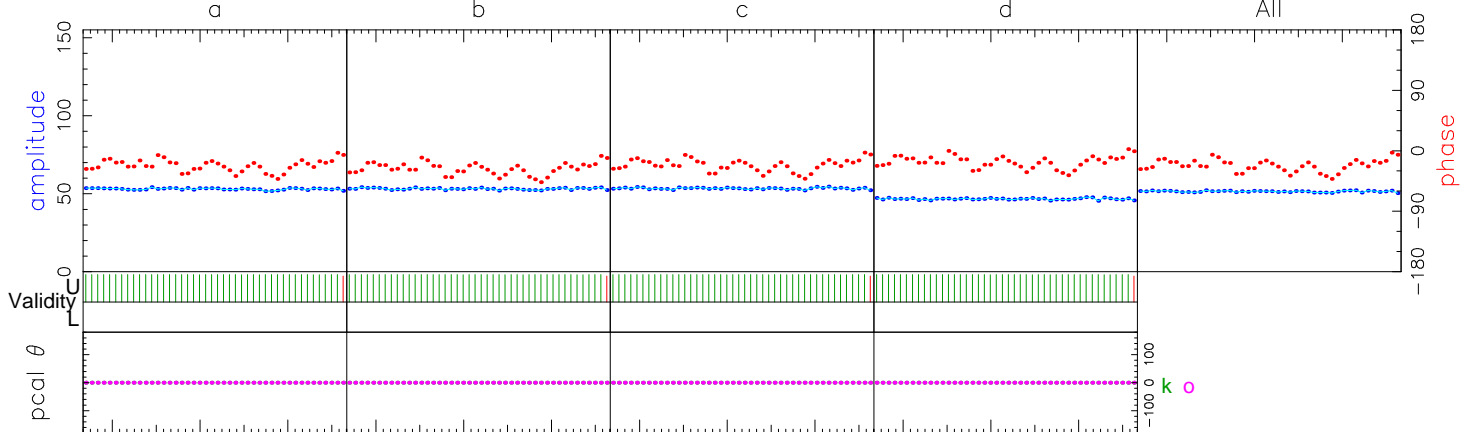
Fringe quality 9

SNR 1896.1
 Int time 179.800
 Amp 51.708
 Phase -21.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.002785
 MBD -0.002702
 Fringe rate (Hz) -0.001984
 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		
k	1000	1000	1000	1000	APs used	1000
o	1000	1000	1000	1000	PC freqs	1000
k:o	0:0	0:0	0:0	0:0	PC phase	0:0
k:o	0:0	0:0	0:0	0:0	ManI PC	0:0
k	1000	1000	1000	1000	PC amp	1000
o	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	42912.00	43040.00	43168.00	43296.00		
Group delay (usec)(sbd)	-4.40360901974E+02		-4.40358199935E+02		Resid mbdelay (usec)	-2.70204E-03 +/- 5.9E-07
Sband delay (usec)	-4.40360985310E+02		-2.1079382E+01		Resid sbdelay (usec)	-2.78538E-03 +/- 2.3E-06
Phase delay (usec)	-4.40358201337E+02		1.9999998E-07		Resid phdelay (usec)	-1.40171E-06 +/- 3.9E-09
Delay rate (us/s)	-5.47845069177E-02		-5.47844608123E-02		Resid rate (us/s)	-4.61054E-08 +/- 3.7E-11
Total phase (deg)		-354.8	-5.05031377225E-06		Resid phase (deg)	-21.7 +/- 0.1

	RMS	Theor.	Amplitude	51.708 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	8.8	0.2	Search (1024X16)	50.014	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	1.0	0.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.0	0.1	Inc. seg. avg.	51.506	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.6	0.1	Inc. frq. avg.	51.003	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 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 297.154 -500.583 simultaneous interpolator

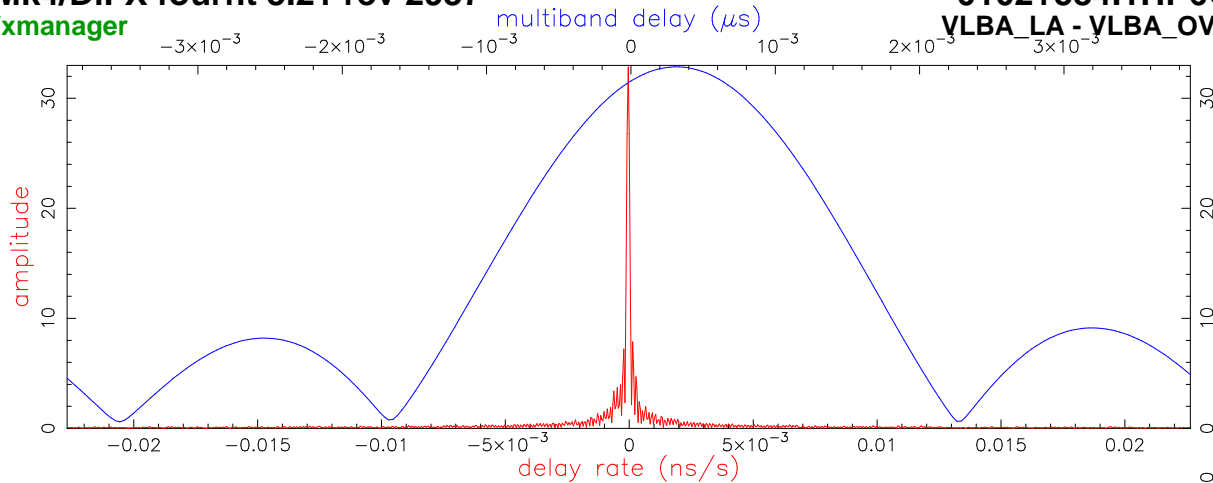
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/ko.Q.85.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

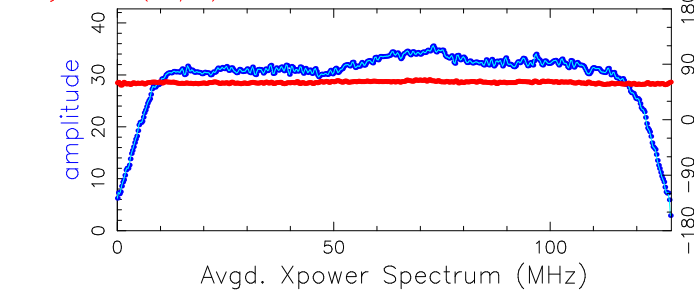
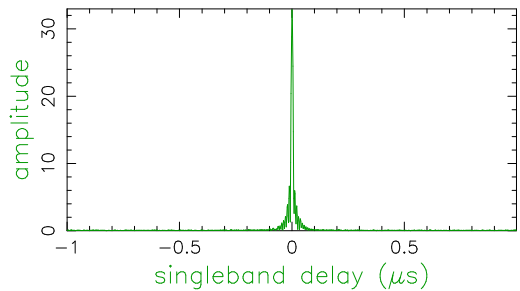
0102+584.1HP6Q8, No0090, lo

VLBA_LA - VLBA_OV, fgroup Q, pol RR



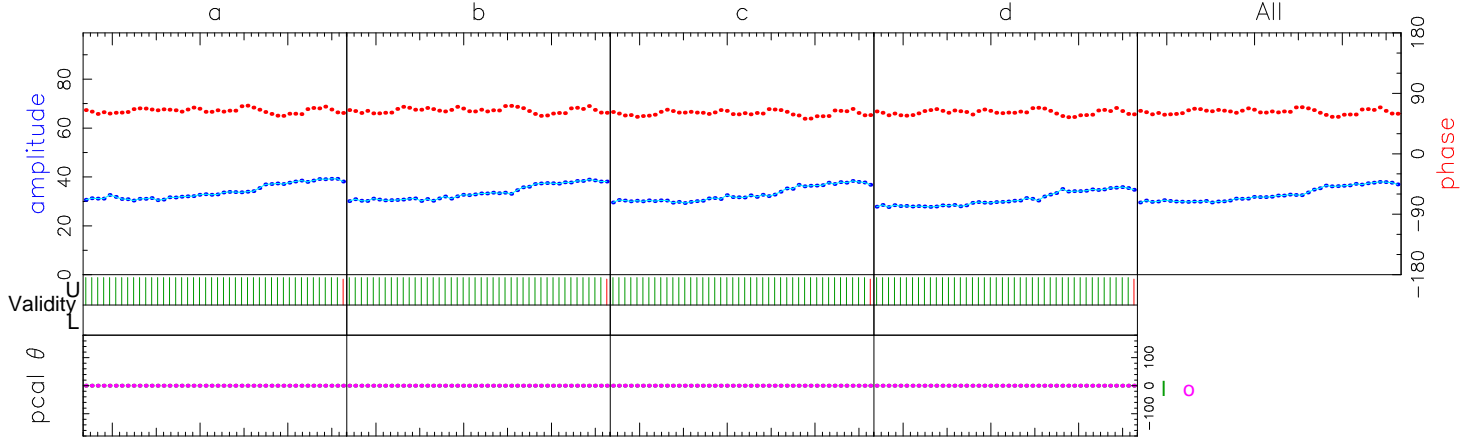
Fringe quality 9

SNR 1210.4
 Int time 179.974
 Amp 32.992
 Phase 62.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.000424
 MBD 0.000340
 Fringe rate (Hz)
 -0.001863
 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
64.0	64.5	60.2	61.6	Phase	62.6
34.0	33.6	32.9	30.9	Ampl.	32.9
513.0	513.2	513.1	513.6	Sbd box	513.2
U/L 352/0	352/0	352/0	352/0	APs used	
l 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
l:o 0:0	0:0	0:0	0:0	PC phase	
l:o 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
l Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	4.21029061570E+02	Apriori delay (usec)	4.21028721360E+02	Resid mbdelay (usec)	3.40210E-04	+/-	9.2E-07
Sband delay (usec)	4.21029145110E+02	Apriori clock (usec)	-2.1792999E+01	Resid sbdelay (usec)	4.23750E-04	+/-	3.6E-06
Phase delay (usec)	4.21028725400E+02	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.04010E-06	+/-	6.1E-09
Delay rate (us/s)	-1.23850580269E-01	Apriori rate (us/s)	-1.23850536986E-01	Resid rate (us/s)	-4.32833E-08	+/-	5.9E-11
Total phase (deg)	122.8	Apriori accel (us/s/s)	-4.31334689010E-06	Resid phase (deg)	62.6	+/-	0.1

RMS	Theor.	Amplitude	32.992 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	3.6	Search (1024X16)	32.465	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	9.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	2.5	Inc. seg. avg.	32.921	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.6	Inc. frq. avg.	32.870	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

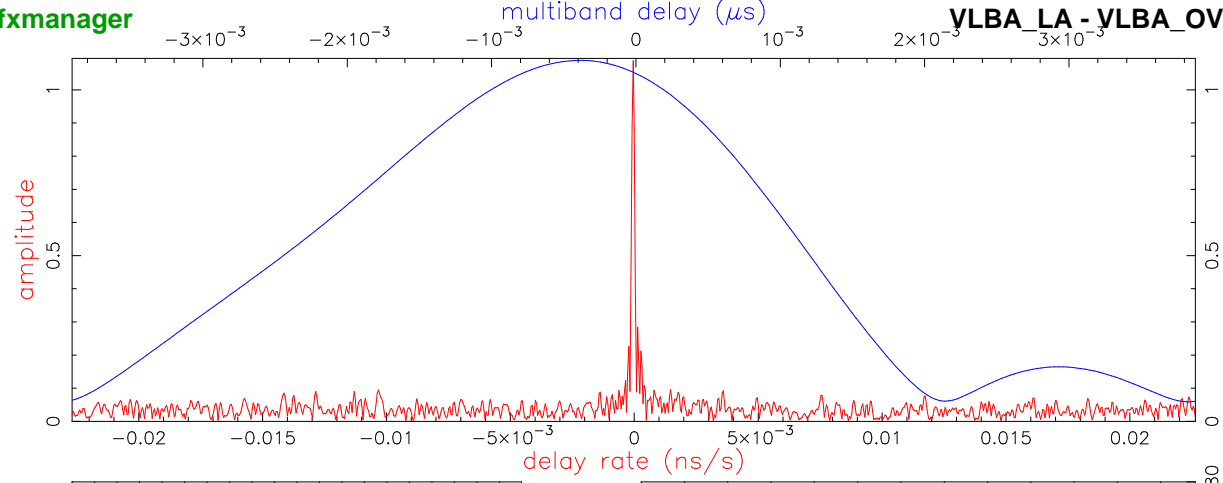
l: az 18.7 el 65.2 pa -150.7 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 675.837 -328.108 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo.Q.110.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, lo

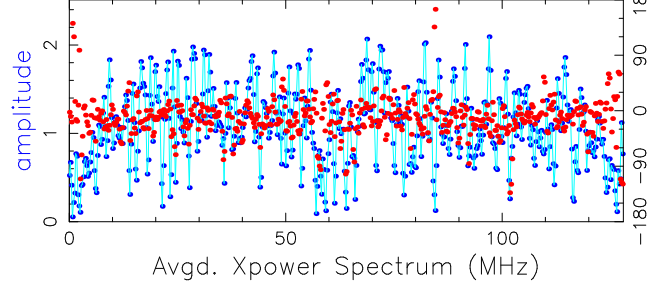
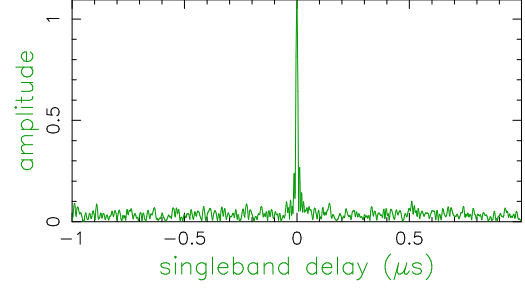
VLBA_LA - VLBA_OV, fgroup Q, pol LR



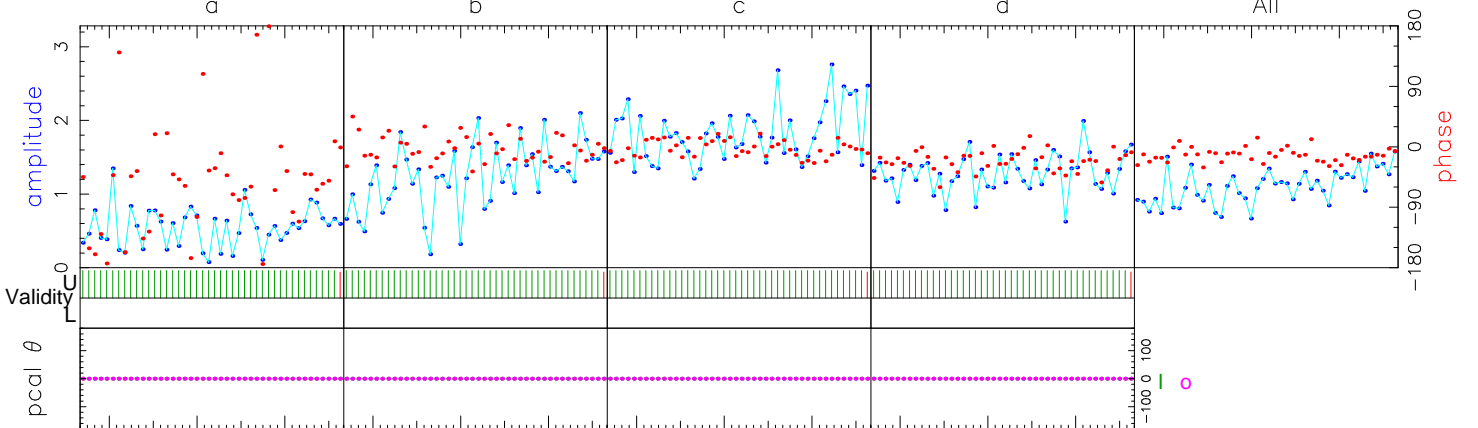
Fringe quality 5

SNR 40.2
 Int time 179.974
 Amp 1.095
 Phase -12.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.000519
 MBD -0.000452
 Fringe rate (Hz)
 -0.001676
 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	Freq (MHz)	All
-67.5	-3.6	-2.9	-21.5	Phase	-12.3
0.3	1.2	1.8	1.2	Ampl.	1.1
514.2	513.0	512.5	512.3	Sbd box	512.7
U/L 352/0	352/0	352/0	352/0	APs used	
l 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
l:o 0:0	0:0	0:0	0:0	PC phase	
l:o 0:0	0:0	0:0	0:0	Manl PC	
l 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
l Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	4.21028269289E+02	Apriori delay (usec)	4.21028721360E+02	Resid mbdelay (usec)	-4.52071E-04	+/- 2.8E-05
Sband delay (usec)	4.21028202485E+02	Apriori clock (usec)	-2.1792999E+01	Resid sbdelay (usec)	-5.18875E-04	+/- 1.1E-04
Phase delay (usec)	4.21028720569E+02	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-7.91353E-07	+/- 1.8E-07
Delay rate (us/s)	-1.23850575927E-01	Apriori rate (us/s)	-1.23850536986E-01	Resid rate (us/s)	-3.89411E-08	+/- 1.8E-09
Total phase (deg)	48.0	Apriori accel (us/s/s)	-4.31334689010E-06	Resid phase (deg)	-12.3	+/- 2.9

	RMS	Theor.	Amplitude	1.095 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	10.2	9.5	Search (1024X16)	1.083	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	21.4	16.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	40.6	2.9	Inc. seg. avg.	1.089	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	47.8	5.0	Inc. frq. avg.	1.135	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 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 675.837 -328.108 simultaneous interpolator

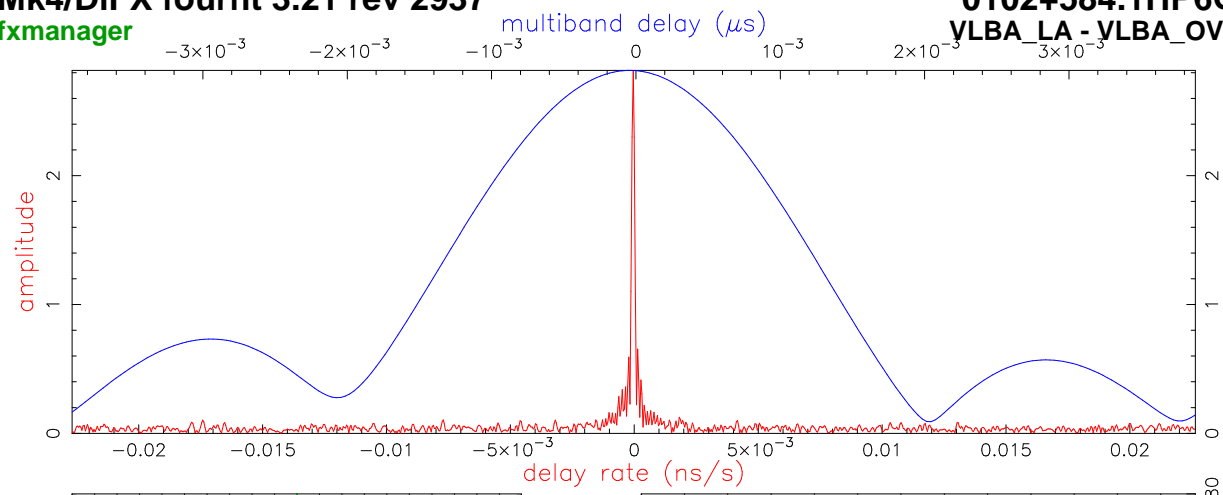
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo.Q.129.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, lo

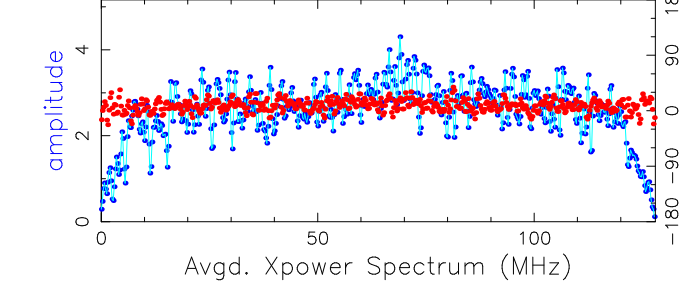
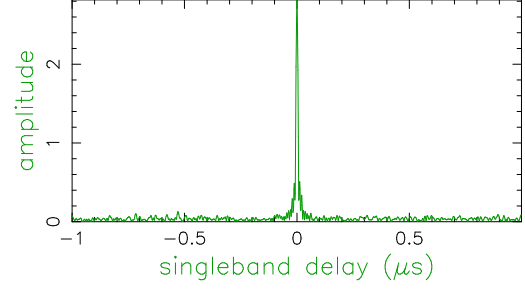
VLBA_LA - VLBA_OV, fgroup Q, pol RL



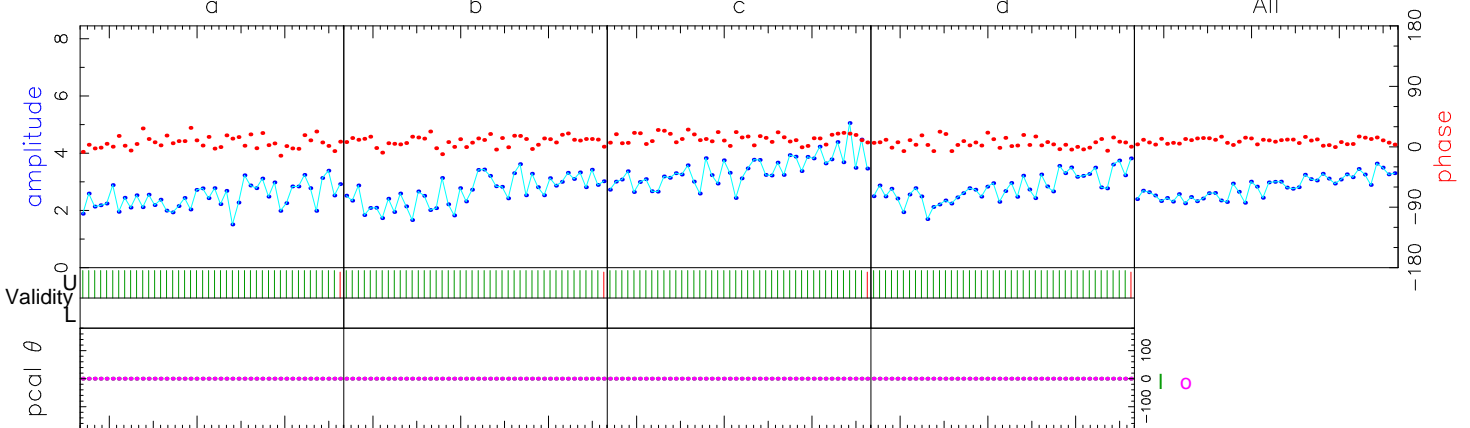
Fringe quality 9

SNR 103.4
 Int time 179.974
 Amp 2.818
 Phase 8.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.000046
 MBD -0.000046
 Fringe rate (Hz)
 -0.001835
 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
U/L	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000		
o	1000	1000	1000	1000		
l:o	0:0	0:0	0:0	0:0		
l:o	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
o	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

	4.21028675414E+02	Apriori delay (usec)	4.21028721360E+02	Resid mbdelay (usec)	-4.59458E-05	+/- 1.1E-05
Group delay (usec)(sbd)	4.21028674985E+02	Apriori clock (usec)	-2.1792999E+01	Resid sbdelay (usec)	-4.63750E-05	+/- 4.2E-05
Sband delay (usec)	4.21028721906E+02	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	5.46022E-07	+/- 7.2E-08
Phase delay (usec)	-1.23850579617E-01	Apriori rate (us/s)	-1.23850536986E-01	Resid rate (us/s)	-4.26310E-08	+/- 6.9E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-4.31334689010E-06	Resid phase (deg)	8.5	+/- 1.1
Total phase (deg)	68.7					

	RMS	Theor.	Amplitude	2.818 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	4.1	3.7	Search (1024X16)	2.813	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	13.3	6.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.1	1.1	Inc. seg. avg.	2.819	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	12.4	1.9	Inc. frq. avg.	2.821	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 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 675.837 -328.108 simultaneous interpolator

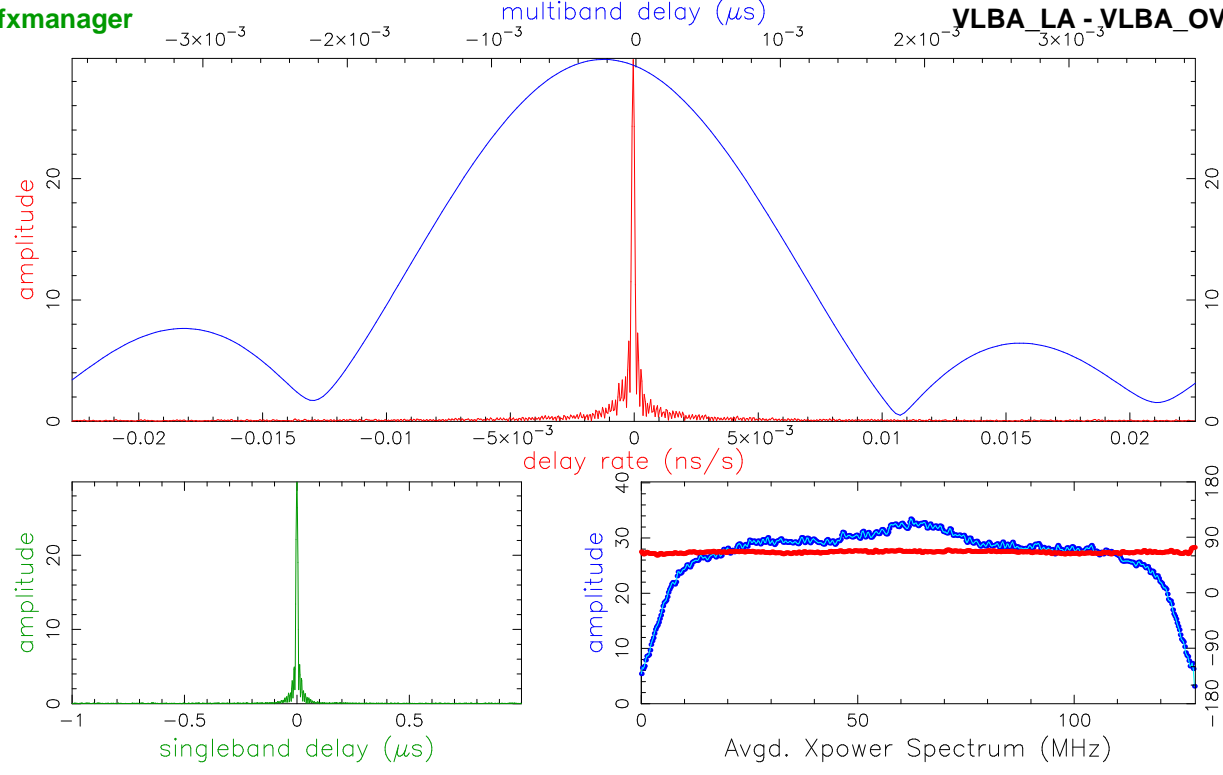
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo.Q.143.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, lo

VLBA_LA - VLBA_OV, fgroup Q, pol LL

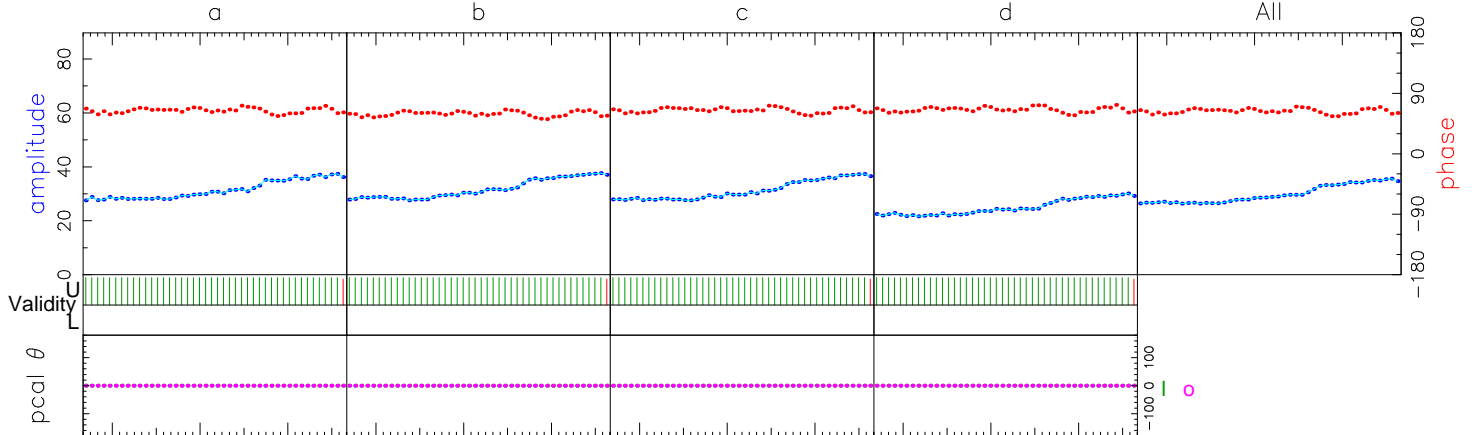


Fringe quality 9

SNR 1096.8
 Int time 179.974
 Amp 29.896
 Phase 63.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.000361
 MBD -0.000242
 Fringe rate (Hz)
 -0.001895
 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
	64.3	59.3	64.7	65.6	Phase	63.4
	31.4	31.7	31.2	24.9	Ampl.	29.8
	512.6	512.9	512.9	512.8	Sbd box	512.8
U/L	352/0	352/0	352/0	352/0	APs used	
l	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
l:o	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	4.21028479539E+02	Apriori delay (usec)	4.21028721360E+02	Resid mbdelay (usec)	-2.41821E-04	+/- 1.0E-06
Sband delay (usec)	4.21028359860E+02	Apriori clock (usec)	-2.1792999E+01	Resid sbdelay (usec)	-3.61500E-04	+/- 3.9E-06
Phase delay (usec)	4.21028725451E+02	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.09100E-06	+/- 6.7E-09
Delay rate (us/s)	-1.23850581004E-01	Apriori rate (us/s)	-1.23850536986E-01	Resid rate (us/s)	-4.40179E-08	+/- 6.5E-11
Total phase (deg)	123.6	Apriori accel (us/s/s)	-4.31334689010E-06	Resid phase (deg)	63.4	+/- 0.1

ph/seg (deg)	RMS 3.6	Theor. 0.3	Amplitude 29.896 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	10.9	0.6	Search (1024X16) 29.249	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	3.5	0.1	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	9.5	0.2	Inc. seg. avg. 29.870	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg. 29.836	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

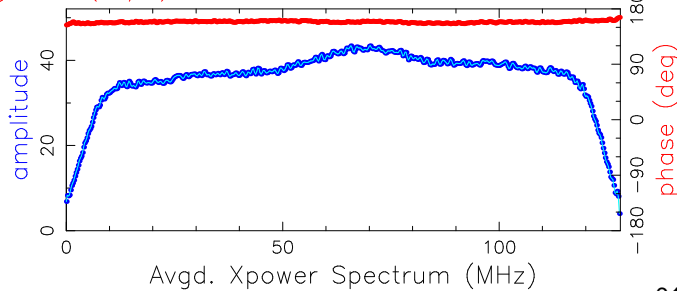
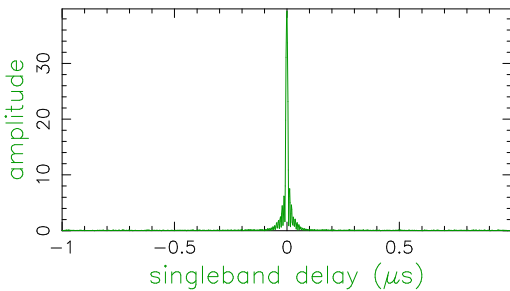
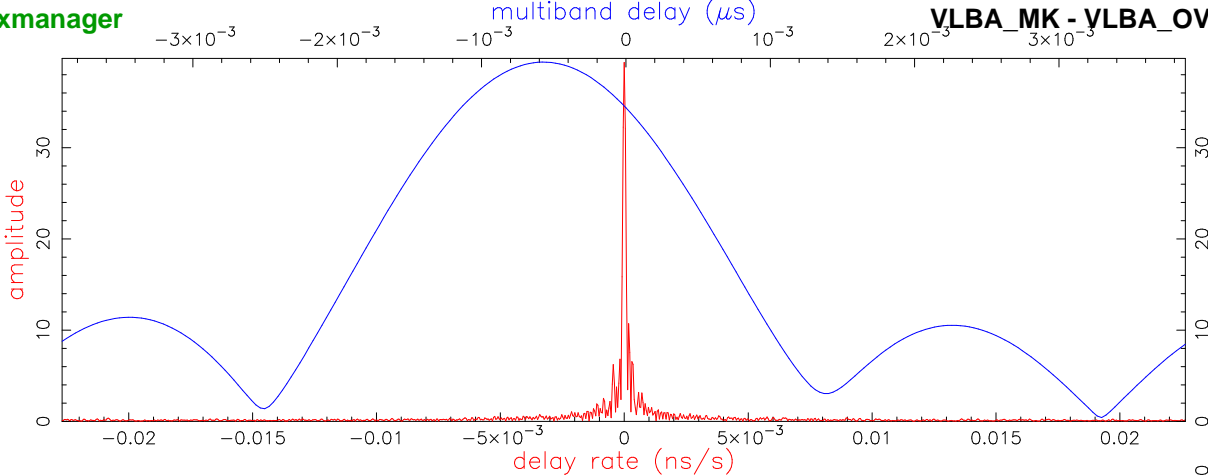
l: az 18.7 el 65.2 pa -150.7 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 675.837 -328.108 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/lo.Q.88.1HP6Q8

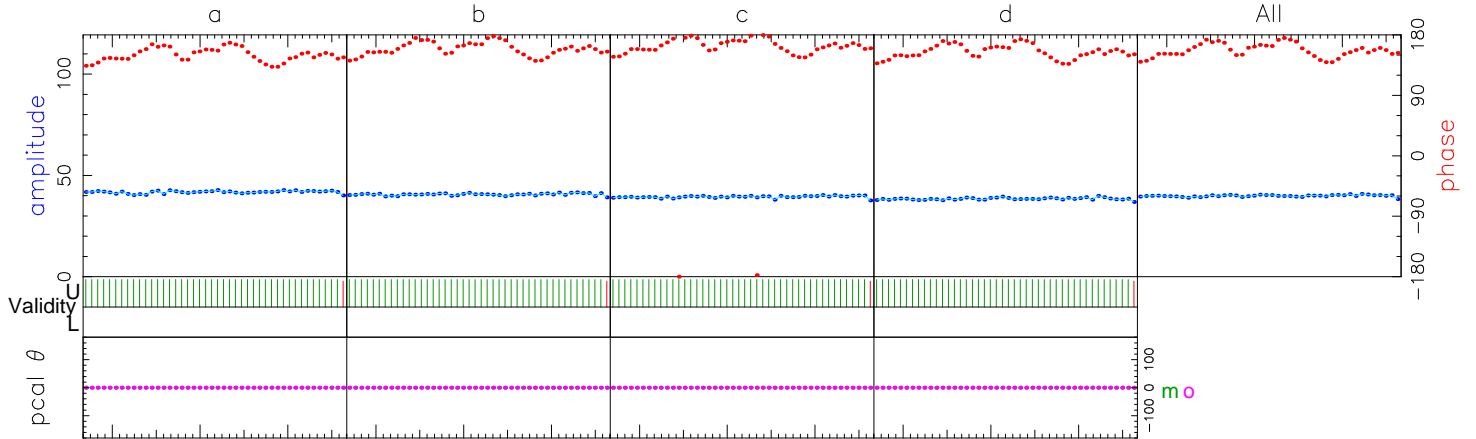
Fringe quality 9

SNR 1460.0
Int time 179.975
Amp 39.797
Phase 156.8
PFD 0.0e+00
Delays (us)
SBD -0.000693
MBD -0.000615
Fringe rate (Hz)
-0.000239
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	APs used	
o	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	PC freqs	
m:o	0:0	0:0	0:0	0:0	PC phase	
m	1000	1000	1000	1000	Manl PC	
o	1000	1000	1000	1000	PC amp	
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-8.09850370099E+03	Apriori delay (usec)	-8.09850308621E+03	Resid mbdelay (usec)	-6.14781E-04	+/-	7.6E-07
Sband delay (usec)	-8.09850377896E+03	Apriori clock (usec)	-8.0493813E+00	Resid sbdelay (usec)	-6.92750E-04	+/-	3.0E-06
Phase delay (usec)	-8.09850307609E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	1.01175E-05	+/-	5.1E-09
Delay rate (us/s)	3.96007895497E-01	Apriori rate (us/s)	3.96007901050E-01	Resid rate (us/s)	-5.55329E-09	+/-	4.9E-11
Total phase (deg)		Apriori accel (us/s/s)	1.74534133370E-05	Resid phase (deg)	156.8	+/-	0.1

ph/seg (deg)	RMS 9.7	Theor. 0.3	Amplitude Search (1024X16)	39.797 +/- 0.027	39.159	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	1.2	0.5	Interp.	0.000	39.932	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	7.2	0.1	Inc. seg. avg.	39.932	39.521	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.2	0.1	Inc. frq. avg.	39.521		Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
m: az 32.9 el 30.2 pa -101.9			o: az 30.8 el 62.4 pa -129.3			u,v (fr/asec) -2157.762 518.800				simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

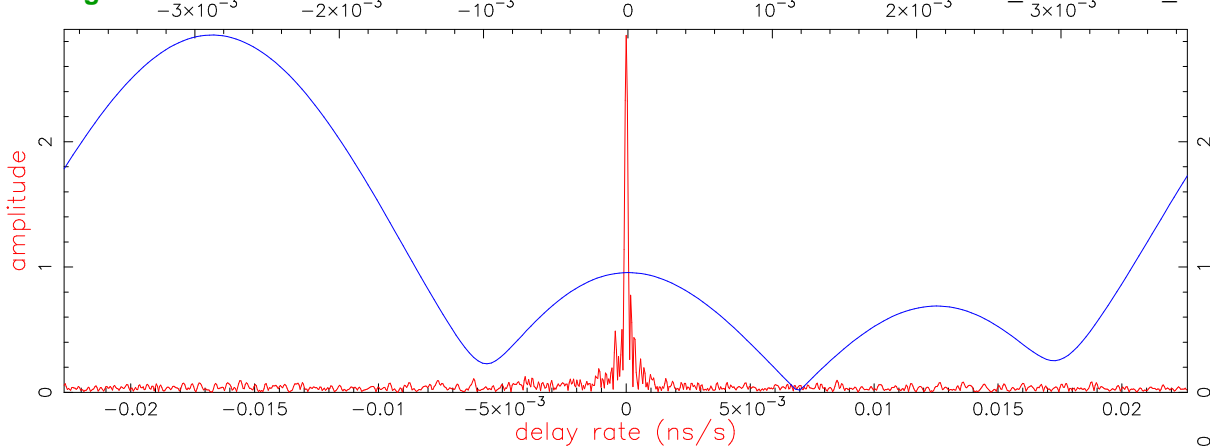
fxmanager

0102+584.1HP6Q8, No0090, mo

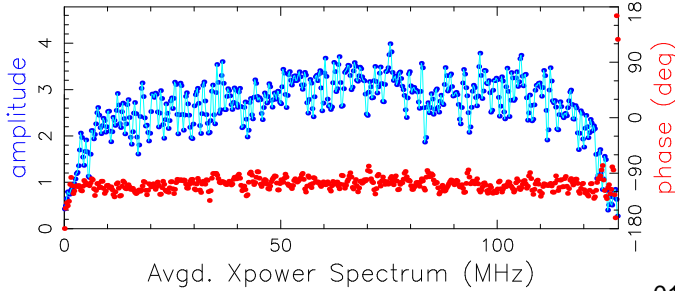
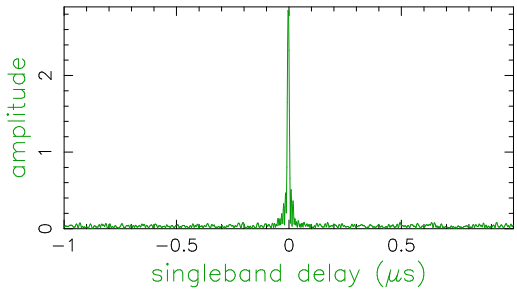
VLBA_MK - VLBA_OV, fgroup Q, pol LR

multiband delay (μ s)

Fringe quality 9

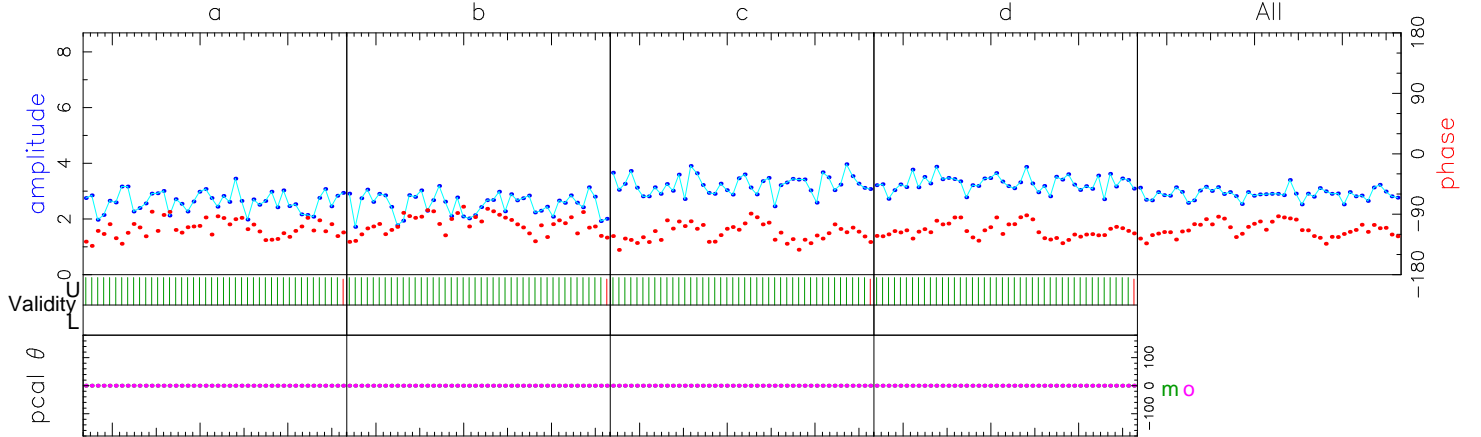


SNR 106.3
 Int time 179.975
 Amp 2.896
 Phase -112.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.003049
 MBD -0.002836
 Fringe rate (Hz)
 -0.000231
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



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
U/L	352/0	352/0	352/0	352/0		
m	1000	1000	1000	1000		
o	1000	1000	1000	1000		
m:o	0:0	0:0	0:0	0:0		
m:o	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
o	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-8.09850592258E+03	Apriori delay (usec)	-8.09850308621E+03	Resid mbdelay (usec)	-2.83638E-03	+/-	1.0E-05
Sband delay (usec)	-8.09850613558E+03	Apriori clock (usec)	-8.0493813E+00	Resid sbdelay (usec)	-3.04938E-03	+/-	4.1E-05
Phase delay (usec)	-8.09850309346E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	-7.24958E-06	+/-	7.0E-08
Delay rate (us/s)	3.96007895684E-01	Apriori rate (us/s)	3.96007901050E-01	Resid rate (us/s)	-5.36610E-09	+/-	6.7E-10
Total phase (deg)		Apriori accel (us/s/s)	1.74534133370E-05	Resid phase (deg)	-112.3	+/-	1.1

ph/seg (deg)	10.7	Theor.	3.6	Amplitude	2.896 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	6.5		6.2	Search (1024X16)	2.841	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	7.0		1.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	11.7		1.9	Inc. seg. avg.	2.894	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023 0.023	
				Inc. frq. avg.	2.859	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

m: az 32.9 el 30.2 pa -101.9 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) -2157.762 518.800 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/mo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/mo.Q.137.1HP6Q8

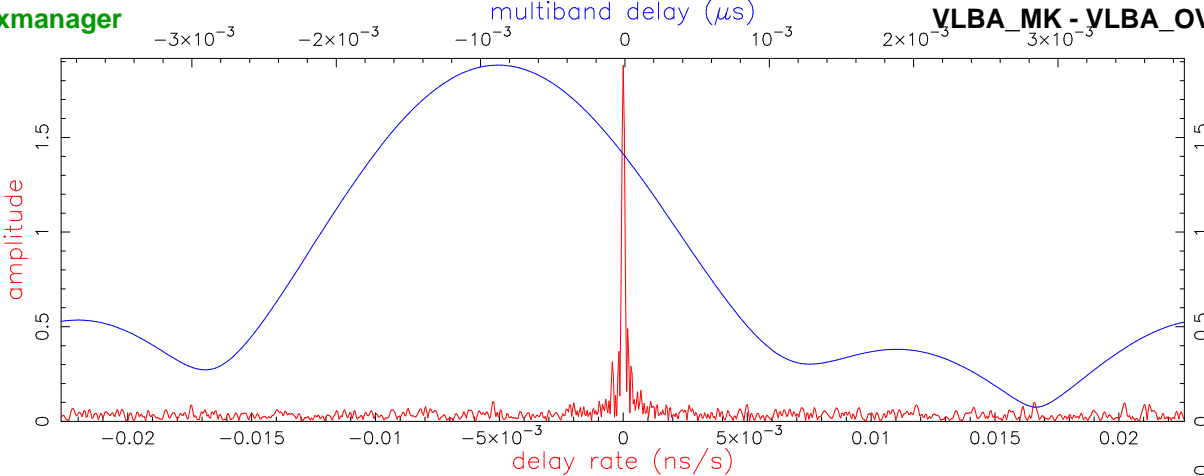
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

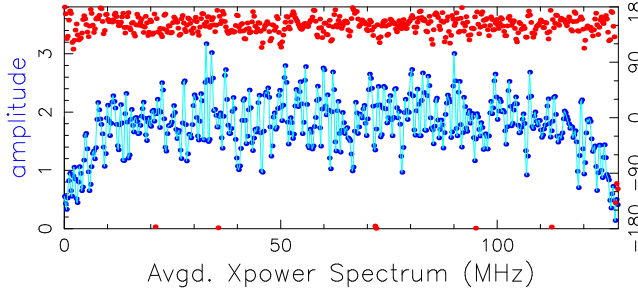
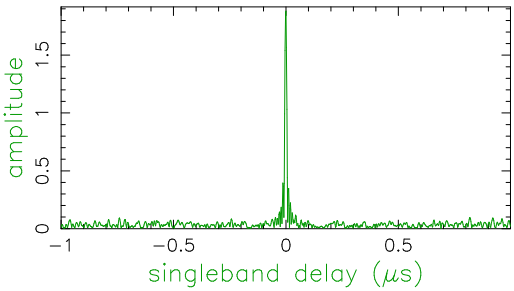
0102+584.1HP6Q8, No0090, mo

VLBA_MK - VLBA_OV, fgroup Q, pol RL

Fringe quality 8

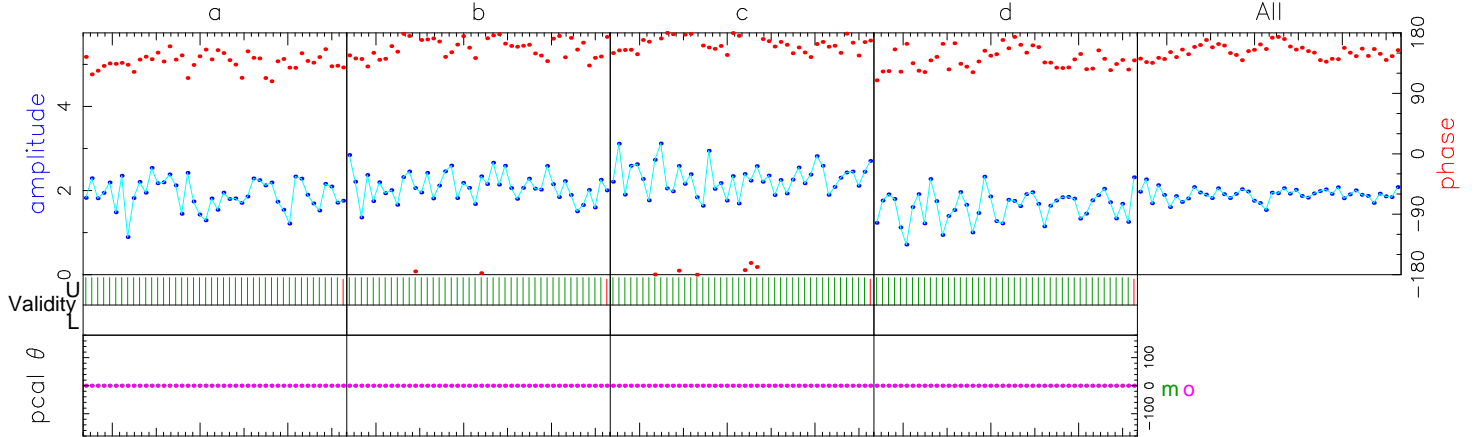


SNR 70.4
 Int time 179.975
 Amp 1.918
 Phase 151.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.000920
 MBD -0.000939
 Fringe rate (Hz)
 -0.000261
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



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		
m	1000	1000	1000	1000		
o	1000	1000	1000	1000		
m:o	0:0	0:0	0:0	0:0		
m:o	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
o	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-8.09850402518E+03	Apriori delay (usec)	-8.09850308621E+03	Resid mbdelay (usec)	-9.38969E-04	+/-	1.6E-05
Sband delay (usec)	-8.09850400658E+03	Apriori clock (usec)	-8.0493813E+00	Resid sbdelay (usec)	-9.20375E-04	+/-	6.1E-05
Phase delay (usec)	-8.09850307642E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	9.79042E-06	+/-	1.1E-07
Delay rate (us/s)	3.96007894989E-01	Apriori rate (us/s)	3.96007901050E-01	Resid rate (us/s)	-6.06097E-09	+/-	1.0E-09
Total phase (deg)	-147.3	Apriori accel (us/s/s)	1.74534133370E-05	Resid phase (deg)	151.7	+/-	1.6

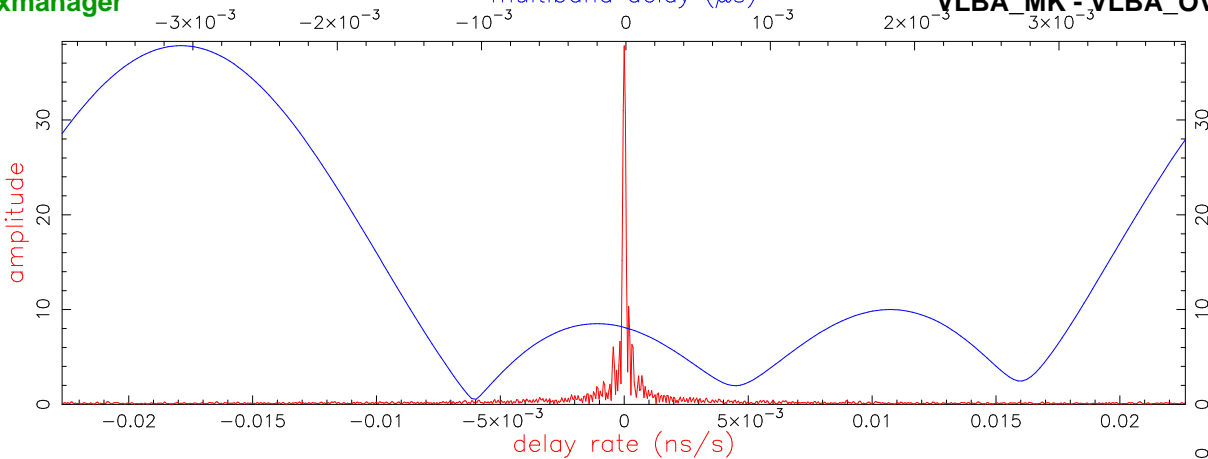
	RMS	Theor.	Amplitude	1.918 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	9.9	5.4	Search (1024X16)	1.870	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	7.2	9.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	17.5	1.6	Inc. seg. avg.	1.901	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
amp/frq (%)	12.7	2.8	Inc. frq. avg.	1.924	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

m: az 32.9 el 30.2 pa -101.9 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) -2157.762 518.800 simultaneous interpolator

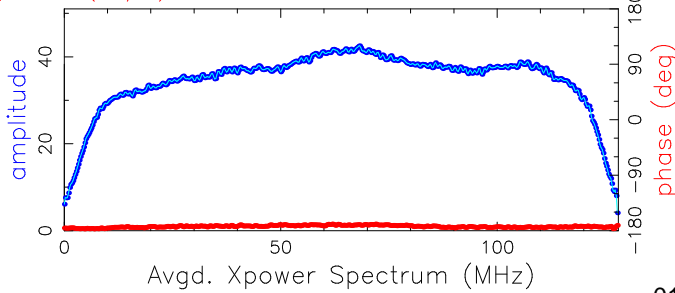
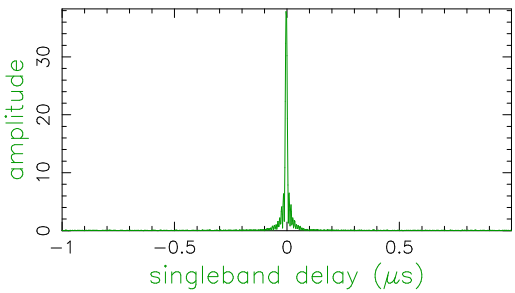
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/mo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/mo.Q.152.1HP6Q8

multiband delay (μ s)

Fringe quality 9

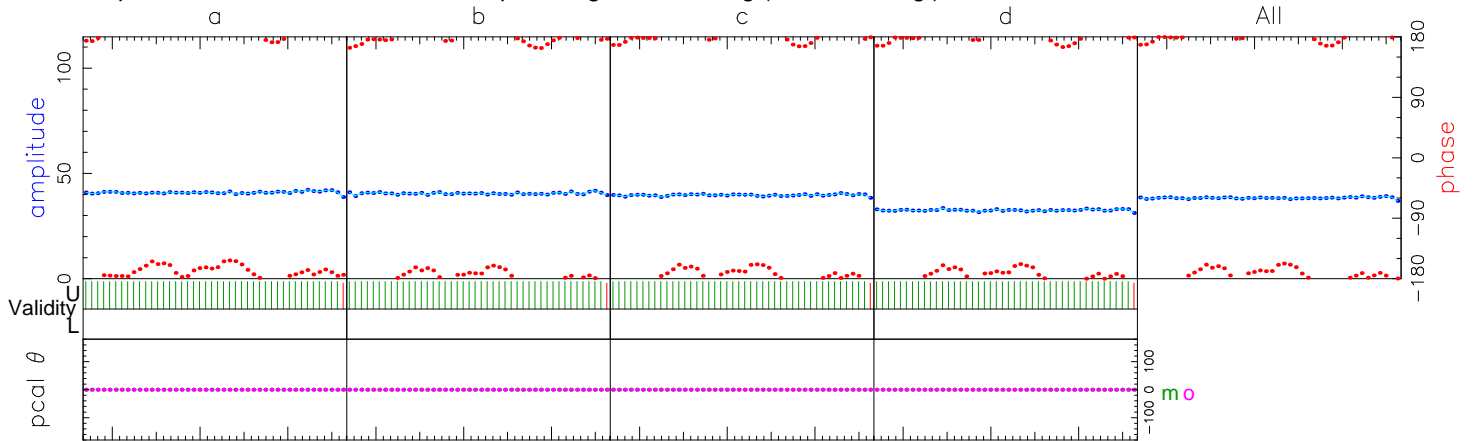


SNR 1404.9
Int time 179.975
Amp 38.296
Phase -175.6
PFD 0.0e+00
Delays (us)
SBD -0.003169
MBD -0.003044
Fringe rate (Hz)
-0.000233
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



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		
o	1000	1000	1000	1000		
m:o	0:0	0:0	0:0	0:0		
m:o	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
o	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-8.09850613005E+03	Apriori delay (usec)	-8.09850308621E+03	Resid mbdelay (usec)	-3.04384E-03	+/- 7.9E-07
Sband delay (usec)	-8.09850625546E+03	Apriori clock (usec)	-8.0493813E+00	Resid sbdelay (usec)	-3.16925E-03	+/- 3.1E-06
Phase delay (usec)	-8.09850309754E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	-1.13306E-05	+/- 5.3E-09
Delay rate (us/s)	3.96007895633E-01	Apriori rate (us/s)	3.96007901050E-01	Resid rate (us/s)	-5.41715E-09	+/- 5.1E-11
Total phase (deg)	-114.5	Apriori accel (us/s/s)	1.74534133370E-05	Resid phase (deg)	-175.6	+/- 0.1

	RMS	Theor.	Amplitude	38.296 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	9.7	0.3	Search (1024X16)	37.402	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	1.0	0.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.4	0.1	Inc. seg. avg.	38.380	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	8.9	0.1	Inc. frq. avg.	37.889	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

Mk4/DiFX fourfit 3.21 rev 2937

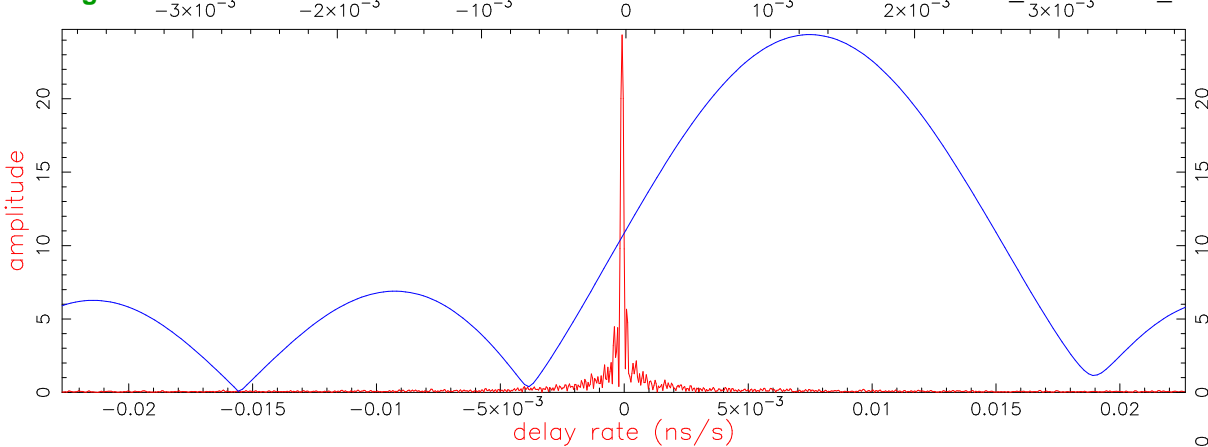
fxmanager

0102+584.1HP6Q8, No0090, no

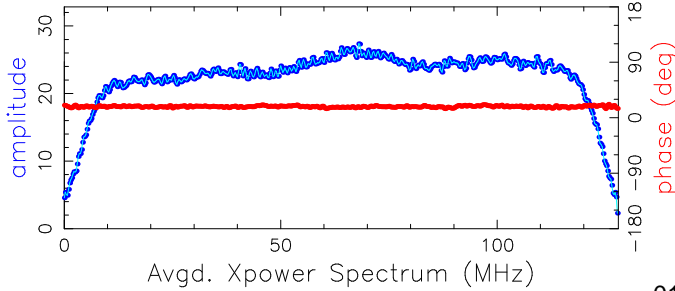
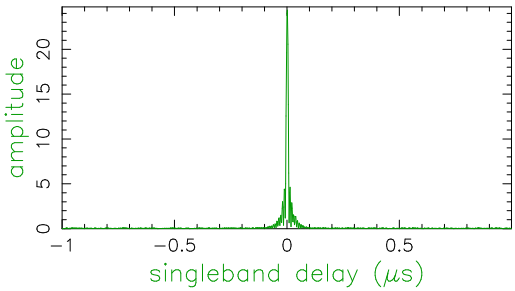
VLBA_NL - VLBA_OV, fgroup Q, pol RR

multiband delay (μ s)

Fringe quality 9

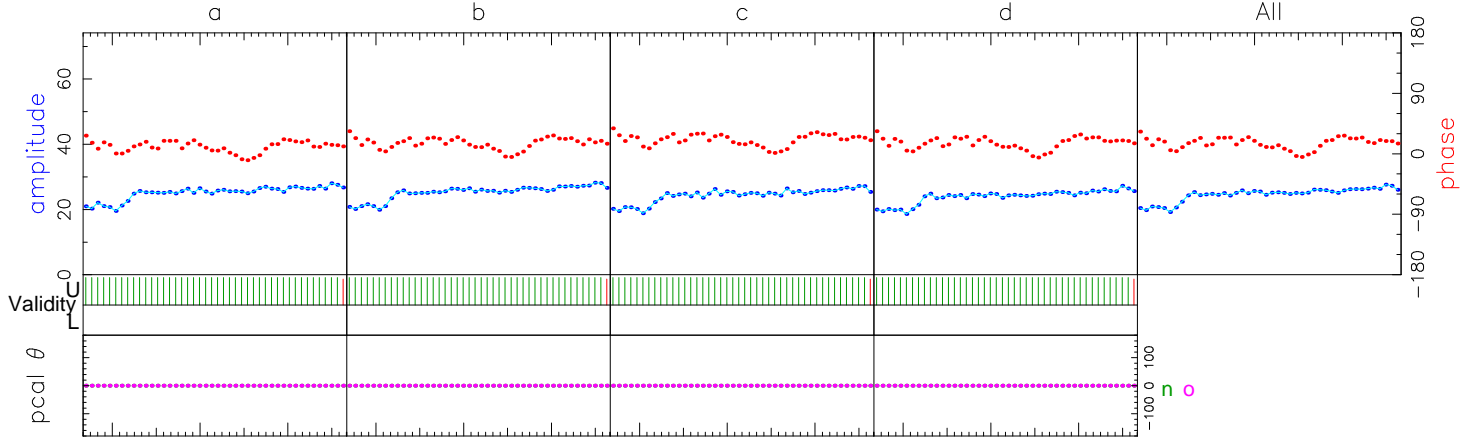


SNR 907.1
 Int time 179.973
 Amp 24.728
 Phase 15.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.001142
 MBD 0.001227
 Fringe rate (Hz)
 -0.004295
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



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
10.7	15.8	21.0	15.9	Phase	15.8
24.8	25.0	24.1	23.7	Ampl.	24.4
513.5	513.7	513.6	513.5	Sbd box	513.6
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:o 0:0	0:0	0:0	0:0	PC phase	
n:o 0:0	0:0	0:0	0:0	ManI PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	1.44944687814E+03	Apriori delay (usec)	1.44944565116E+03	Resid mbdelay (usec)	1.22698E-03	+/- 1.2E-06
Sband delay (usec)	1.44944679279E+03	Apriori clock (usec)	-2.1281145E+01	Resid sbdelay (usec)	1.14162E-03	+/- 4.7E-06
Phase delay (usec)	1.44944565218E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	1.02068E-06	+/- 8.2E-09
Delay rate (us/s)	-2.90445295701E-01	Apriori rate (us/s)	-2.90445195920E-01	Resid rate (us/s)	-9.97806E-08	+/- 7.8E-11
Total phase (deg)	313.2	Apriori accel (us/s/s)	-1.94821210795E-06	Resid phase (deg)	15.8	+/- 0.1

ph/seg (deg)	8.4	0.4	Amplitude	24.728 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	8.4	0.7	Search (1024X16)	23.728	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	5.2	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	2.6	0.2	Inc. seg. avg.	24.613	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	24.403	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
n: az 360.5 el 73.3 pa -179.4		o: az 30.8 el 62.4 pa -129.3		u,v (fr/asec) 1589.779 5.301		simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/no..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/no.Q.111.1HP6Q8

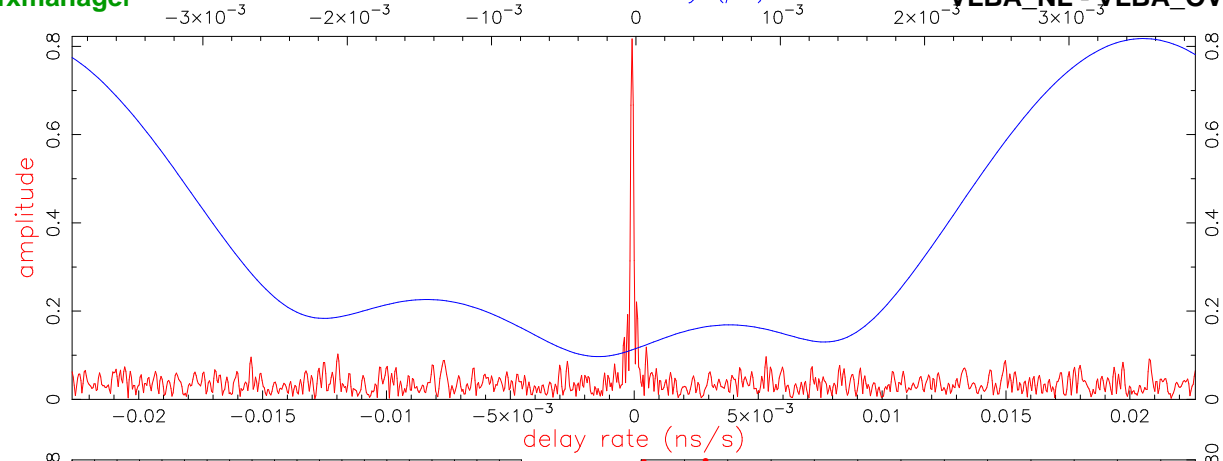
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, no

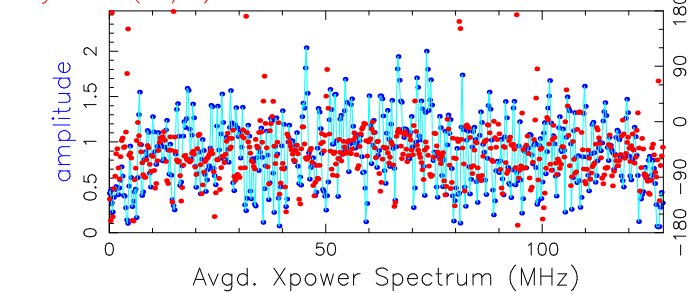
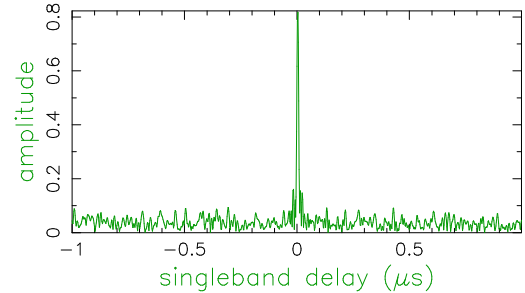
VLBA_NL - VLBA_OV, fgroup Q, pol LR

multiband delay (μ s)



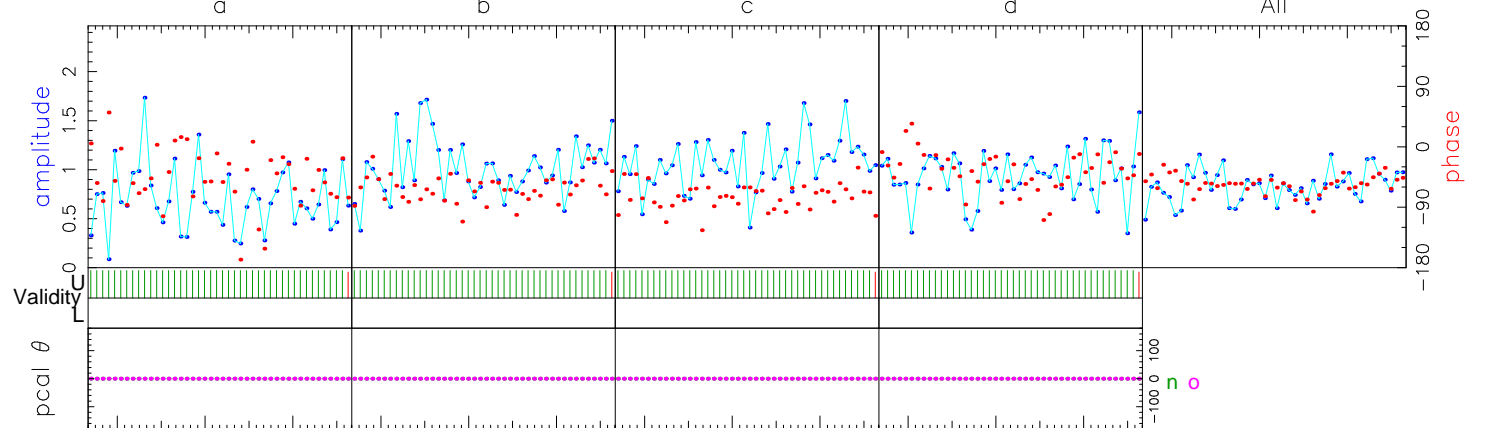
Fringe quality 7

SNR 30.2
 Int time 179.973
 Amp 0.823
 Phase -55.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.003377
 MBD 0.003471
 Fringe rate (Hz)
 -0.004554
 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	Freq (MHz)	All
-43.1	-61.6	-73.8	-36.2	Phase	-55.8
0.6	1.0	1.0	0.8	Ampl.	0.8
514.5	514.6	514.5	515.6	Sbd box	514.7
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:0 0:0	0:0	0:0	0:0	PC phase	
n:0 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	1.44944912192E+03	Apriori delay (usec)	1.44944565116E+03	Resid mbdelay (usec)	3.47076E-03	+/- 3.7E-05
Sband delay (usec)	1.44944902854E+03	Apriori clock (usec)	-2.1281145E+01	Resid sbdelay (usec)	3.37737E-03	+/- 1.4E-04
Phase delay (usec)	1.44944564756E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	-3.59932E-06	+/- 2.5E-07
Delay rate (us/s)	-2.90445301733E-01	Apriori rate (us/s)	-2.90445195920E-01	Resid rate (us/s)	-1.05813E-07	+/- 2.4E-09
Total phase (deg)	241.6	Apriori accel (us/s/s)	-1.94821210795E-06	Resid phase (deg)	-55.8	+/- 3.8

	RMS	Theor.	Amplitude	0.823 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	13.1	12.6	Search (1024X16)	0.791	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	20.0	22.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	21.2	3.8	Inc. seg. avg.	0.818	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	20.1	6.6	Inc. frq. avg.	0.845	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 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 1589.779 5.301 simultaneous interpolator

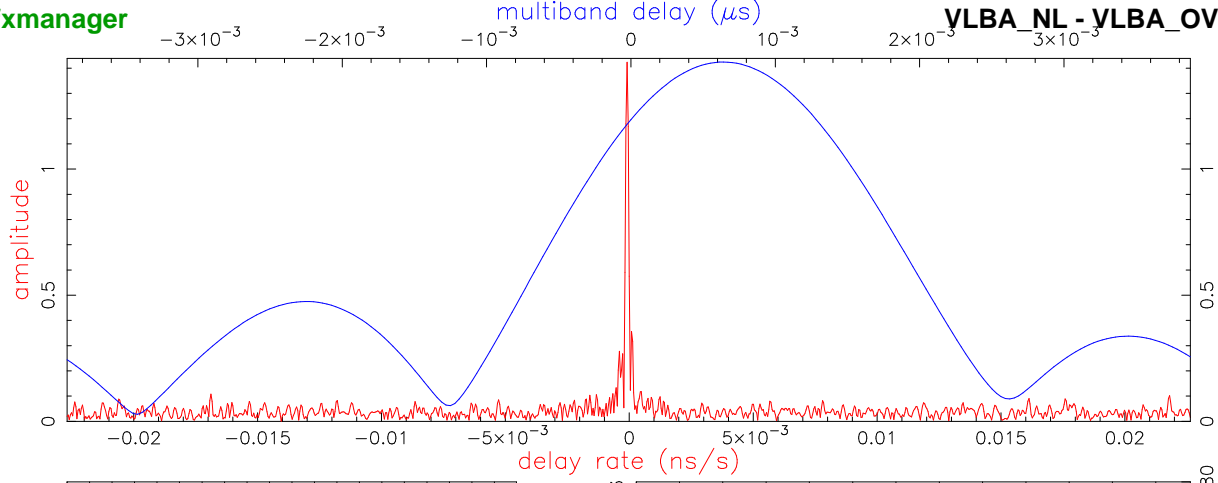
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/no..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/no.Q.128.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

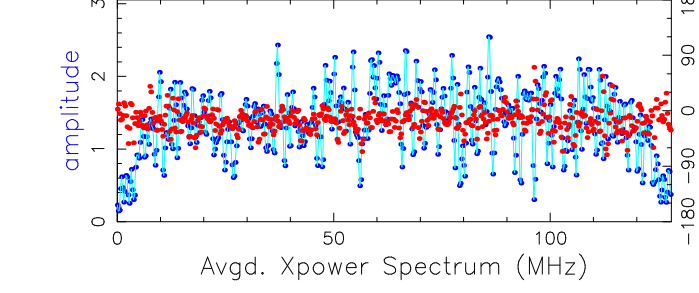
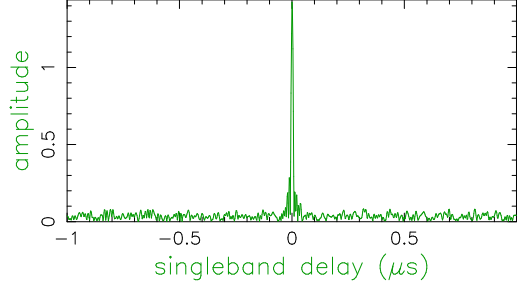
fxmanager

0102+584.1HP6Q8, No0090, no

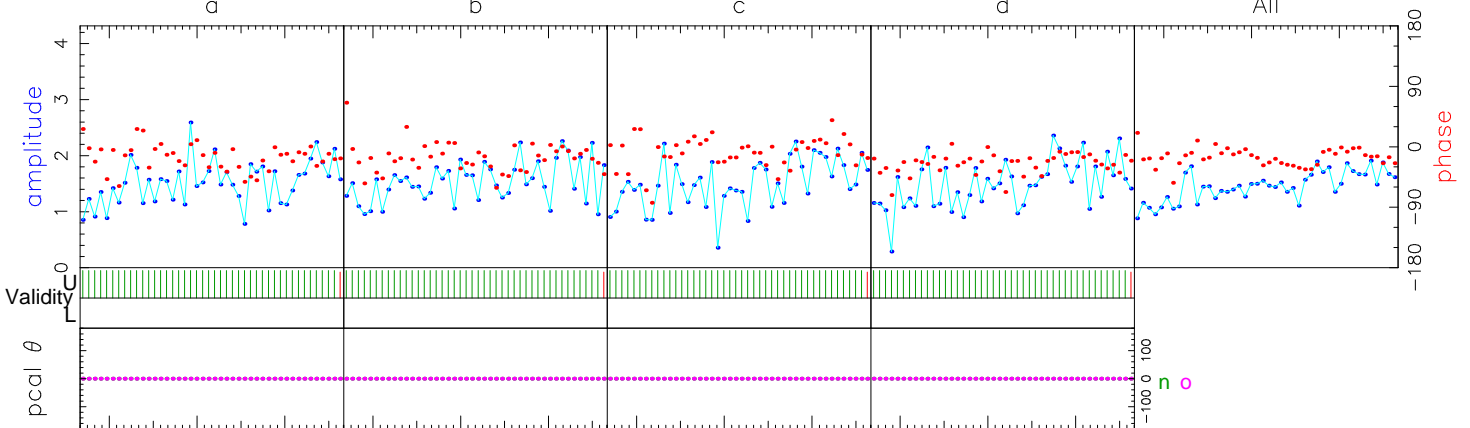
VLBA_NL - VLBA_OV, fgroup Q, pol RL



Fringe quality 9
 SNR 52.8
 Int time 179.973
 Amp 1.439
 Phase -15.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.000680
 MBD 0.000680
 Fringe rate (Hz) -0.004288
 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
U/L	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
o	1000	1000	1000	1000	PC amp	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	1.44944633074E+03	Apriori delay (usec)	1.44944565116E+03	Resid mbdelay (usec)	6.79577E-04	+/- 2.1E-05
Sband delay (usec)	1.44944633116E+03	Apriori clock (usec)	-2.1281145E-01	Resid sbdelay (usec)	6.80000E-04	+/- 8.2E-05
Phase delay (usec)	1.44944565017E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	-9.85509E-07	+/- 1.4E-07
Delay rate (us/s)	-2.90445295559E-01	Apriori rate (us/s)	-2.90445195920E-01	Resid rate (us/s)	-9.96388E-08	+/- 1.3E-09
Total phase (deg)	282.1	Apriori accel (us/s/s)	-1.94821210795E-06	Resid phase (deg)	-15.3	+/- 2.2

ph/seg (deg)	12.9	Theor.	7.2	Amplitude	1.439 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	18.4		12.6	Search (1024X16)	1.391	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	9.2		2.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	1.4		3.8	Inc. seg. avg.	1.443	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
n: az 360.5 el 73.3 pa -179.4		o: az 30.8 el 62.4 pa -129.3		Inc. frq. avg.	1.432	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

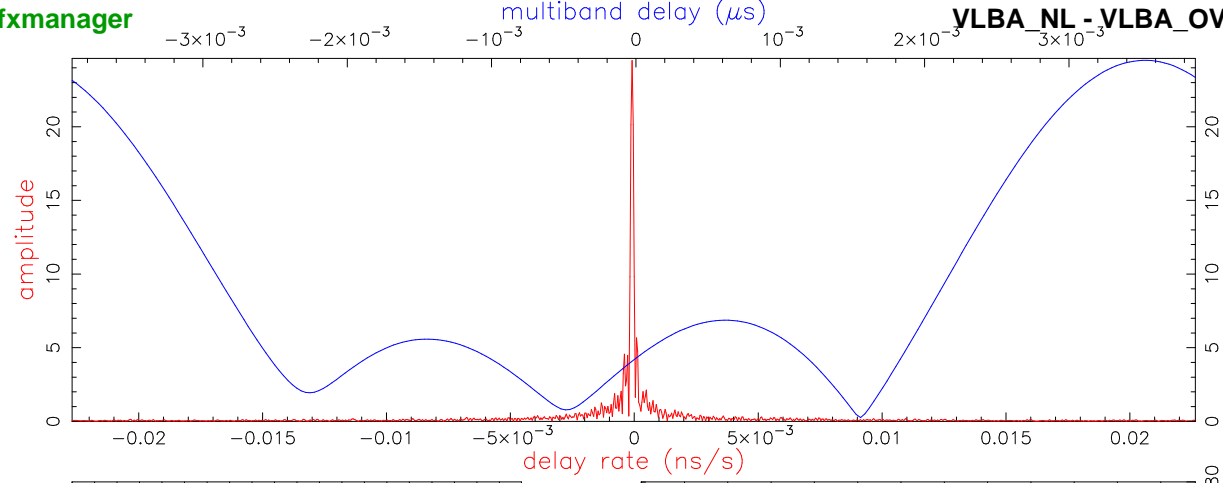
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/no..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/no.Q.142.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, no

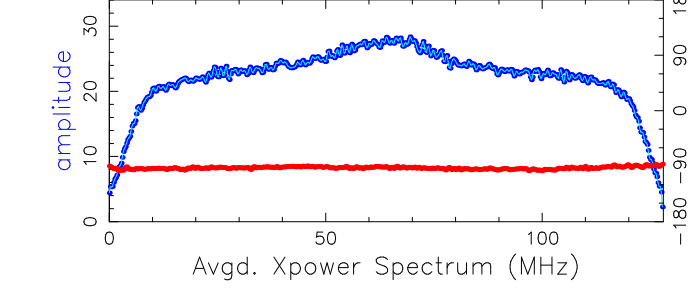
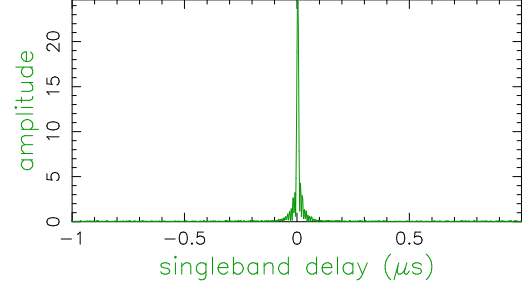
VLBA_NL - VLBA_OV, fgroup Q, pol LL



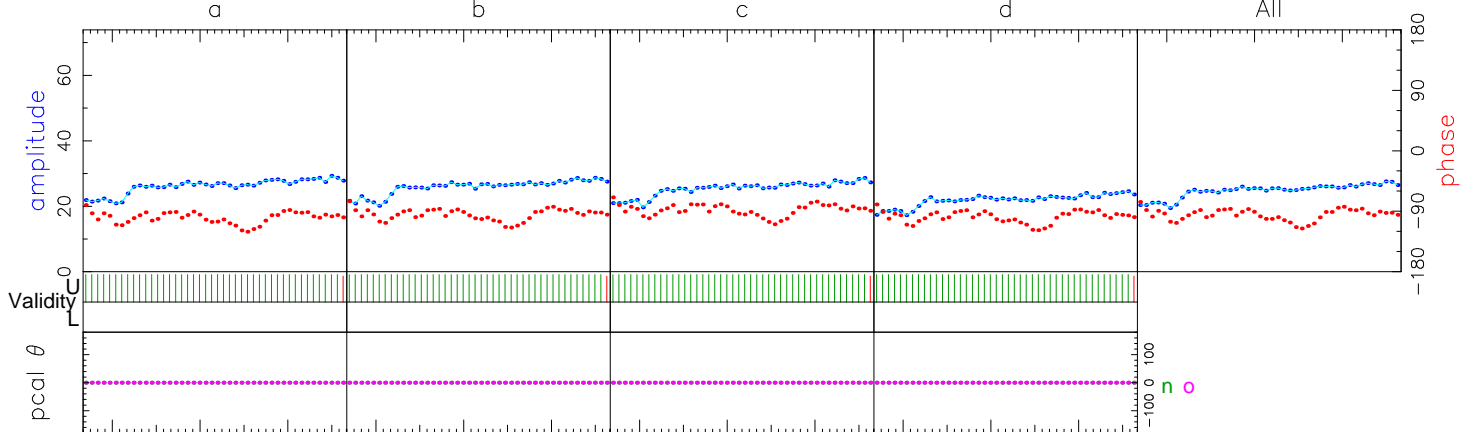
Fringe quality 9

SNR 904.0
 Int time 179.973
 Amp 24.642
 Phase -95.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.003402
 MBD 0.003499
 Fringe rate (Hz)
 -0.004344
 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



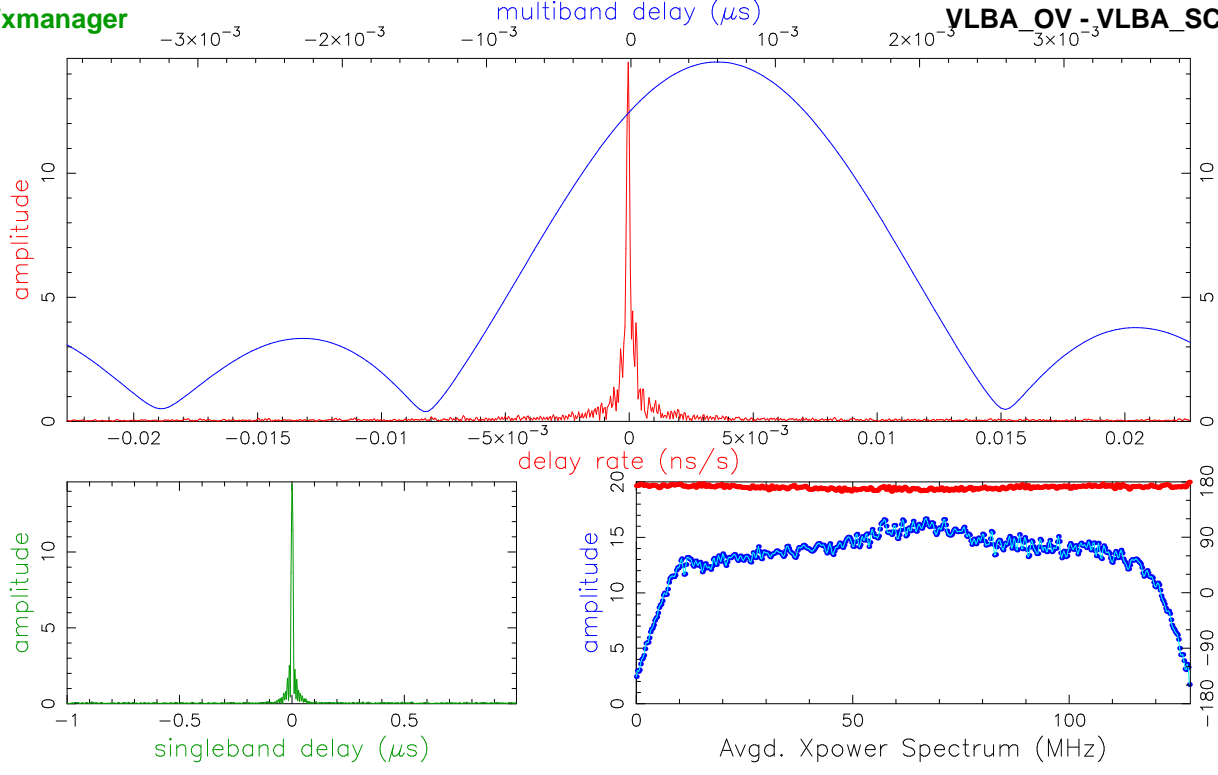
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
o	1000	1000	1000	1000	PC amp	
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	1.44944915021E+03	Apriori delay (usec)	1.44944565116E+03	Resid mbdelay (usec)	3.49905E-03	+/- 1.2E-06
Sband delay (usec)	1.44944905354E+03	Apriori clock (usec)	-2.1281145E+01	Resid sbdelay (usec)	3.40237E-03	+/- 4.8E-06
Phase delay (usec)	1.44944564503E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	-6.13413E-06	+/- 8.2E-09
Delay rate (us/s)	-2.90445296852E-01	Apriori rate (us/s)	-2.90445195920E-01	Resid rate (us/s)	-1.00932E-07	+/- 7.9E-11
Total phase (deg)	202.3	Apriori accel (us/s/s)	-1.94821210795E-06	Resid phase (deg)	-95.0	+/- 0.1

ph/seg (deg)	8.5	Theor.	0.4	Amplitude	24.642 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	8.3		0.7	Search (1024X16)	24.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	6.3		0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	6.9		0.2	Inc. seg. avg.	24.764	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	24.577	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 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 1589.779 5.301 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/no..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/no.Q.96.1HP6Q8

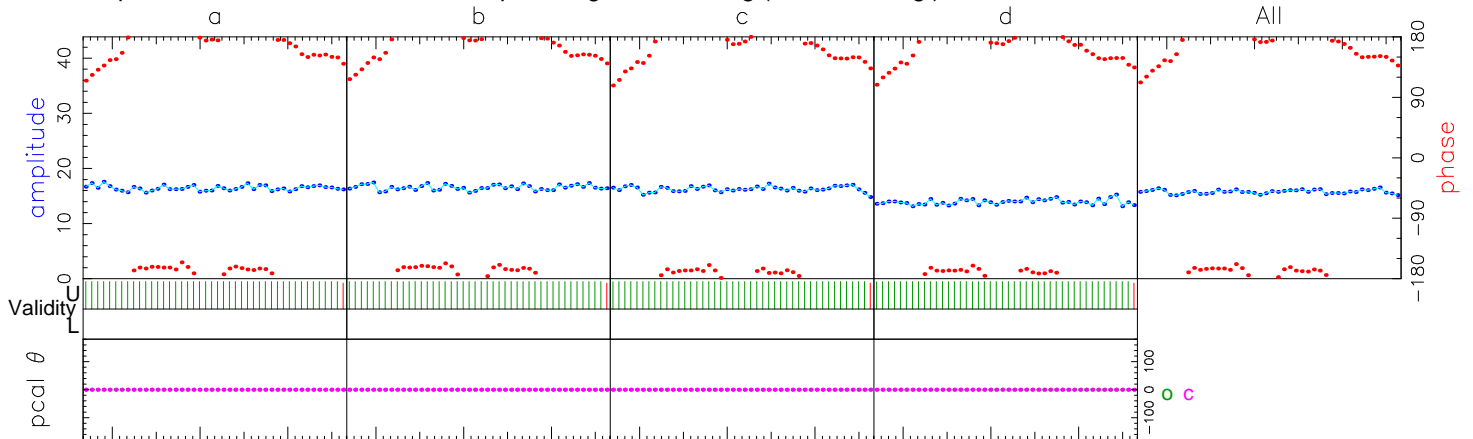


Fringe quality 7

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

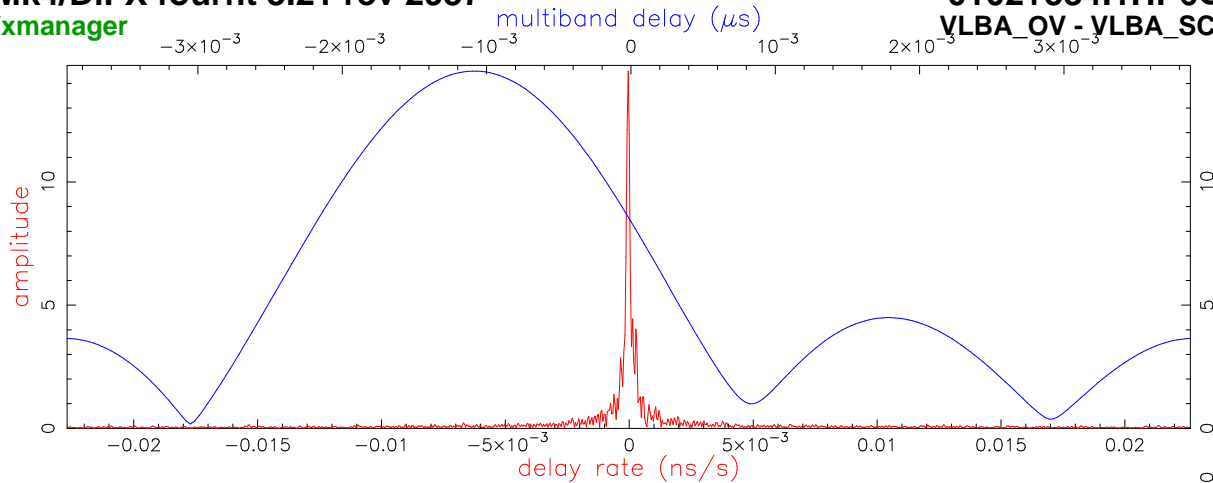


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
o	1000	1000	1000	1000	APs used	
c	1000	1000	1000	1000	PC freqs	
o:c	0:0	0:0	0:0	0:0	PC phase	
o:c	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c	Q00UL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

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

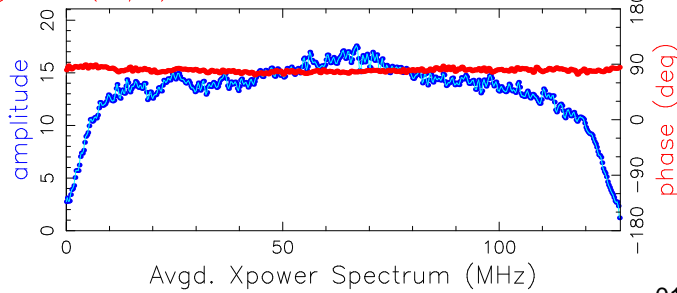
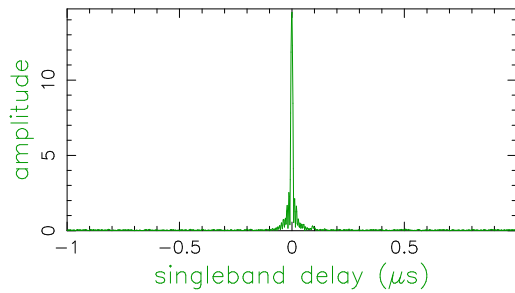
ph/seg (deg)	23.8	Theor.	0.7	Amplitude	14.628 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	8.3		1.2	Search (1024X16)	14.282	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	3.3		0.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004		
amp/frq (%)	6.9		0.4	Inc. seg. avg.	15.793	Sample rate(MISamp/s):	256	dr window (ns/s)	-0.023 0.023			
				Inc. frq. avg.	14.488	Data rate(Mb/s):	2048	nlags:	512	t_cohere infinite	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.144.1HP6Q8



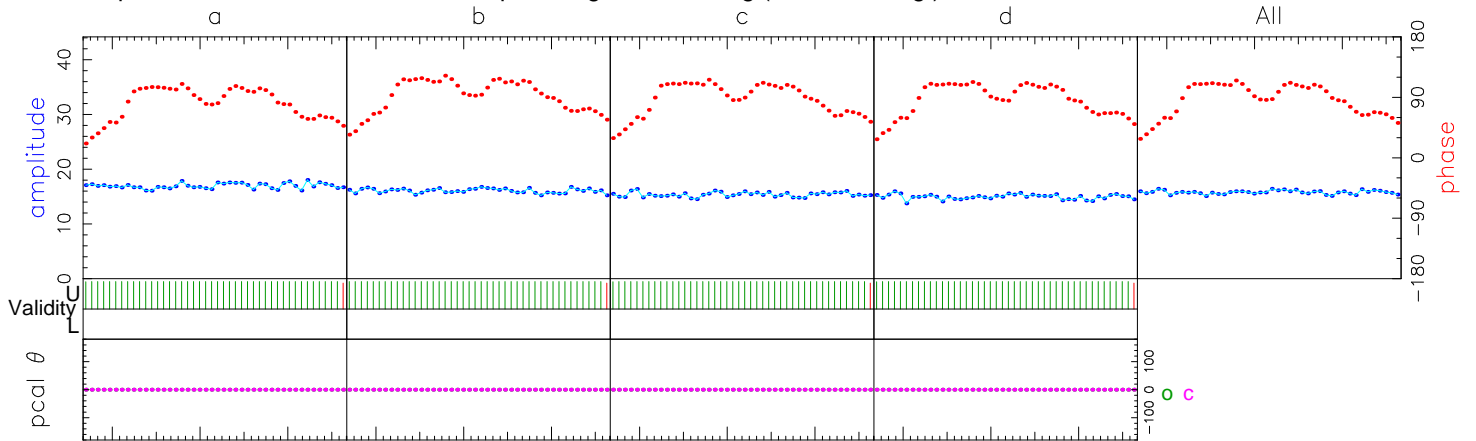
Fringe quality 7

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	
					Chan ids	
					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)	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)	14.300	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	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.8		0.4	Inc. seg. avg.	15.807	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
				Inc. frq. avg.	14.537					
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

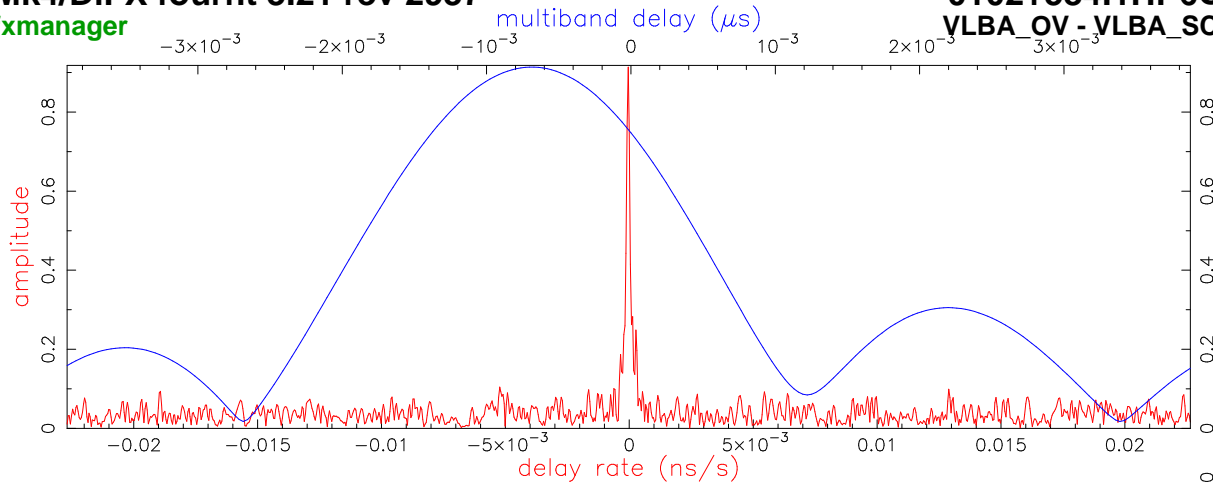
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/oc..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/oc.Q.159.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

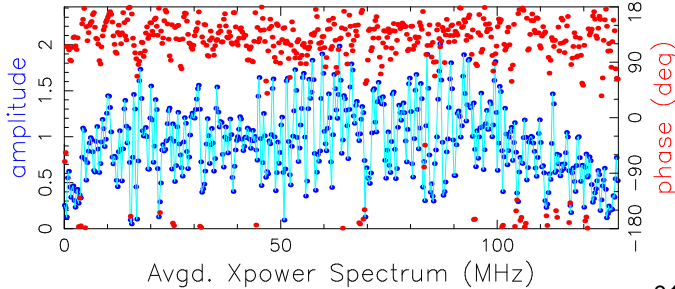
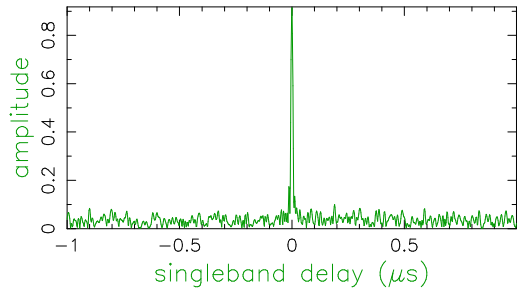
0102+584.1HP6Q8, No0090, oc

VLBA_OV - VLBA_SC, fgroup Q, pol LR



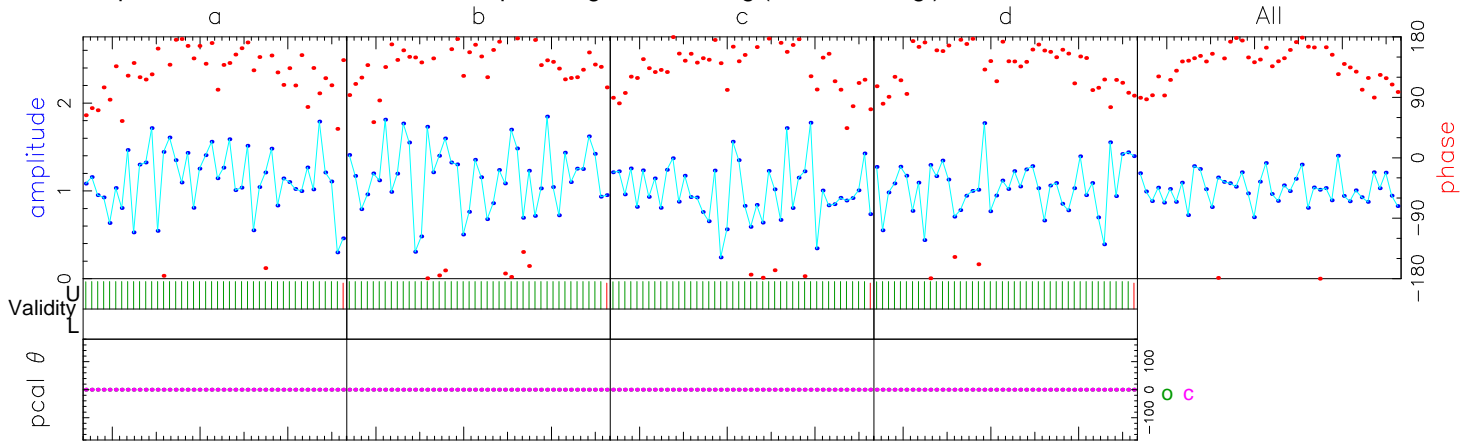
Fringe quality 8

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 2020:283
 Stop 2020:283
 FRT 055810.00
 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



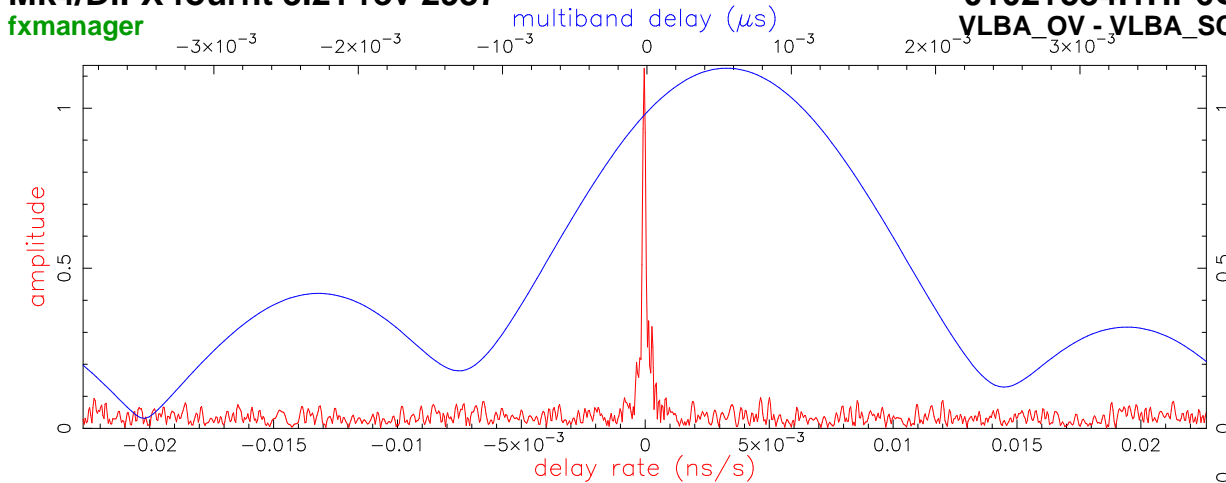
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
133.0	149.4	139.5	138.9	Phase	140.4
0.9	1.0	0.8	0.9	Ampl.	0.9
513.2	513.0	512.2	512.6	Sbd box	512.8
U/L 352/0	352/0	352/0	352/0	APs used	
o 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
o:c 0:0	0:0	0:0	0:0	PC phase	
o:c 0:0	0:0	0:0	0:0	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)	27.2	Theor.	11.3	Amplitude	0.918 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	20.9		19.7	Search (1024X16)	0.894	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	8.3		3.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	6.6		5.9	Inc. seg. avg.	1.007	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.917	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

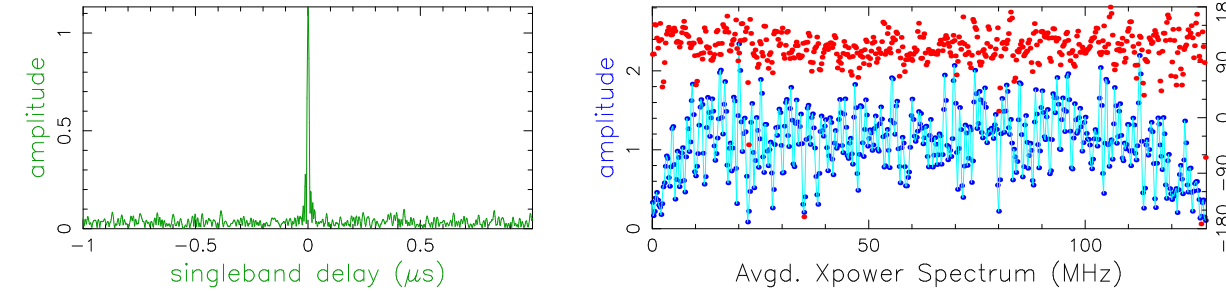
o: az 30.8 el 62.4 pa -129.3 c: az 340.7 el 44.8 pa 142.6 u,v (fr/asec) -3508.404 1220.104 simultaneous interpolator

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



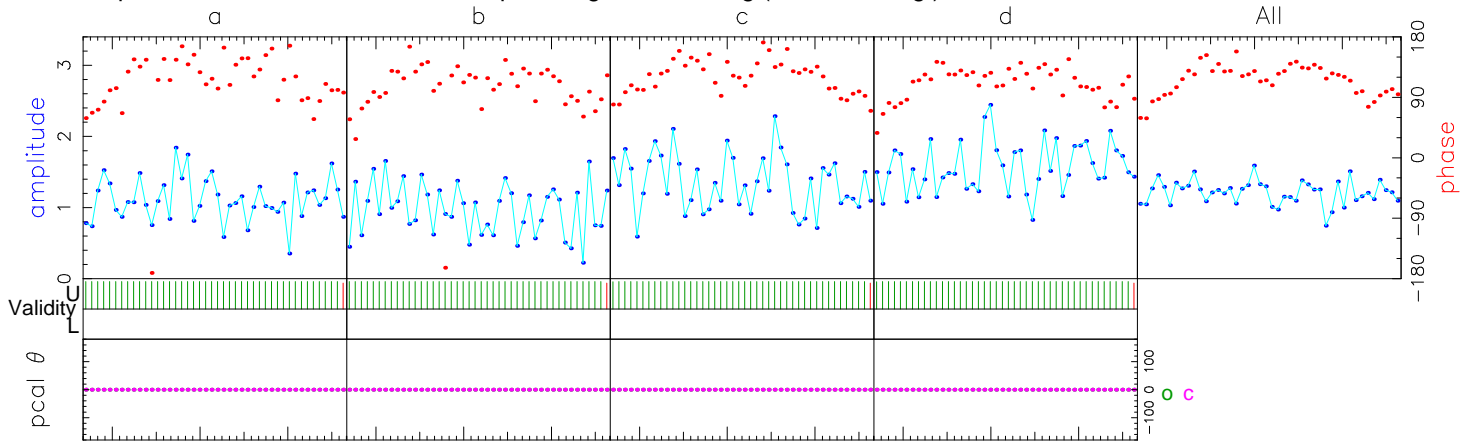
Fringe quality 7

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"

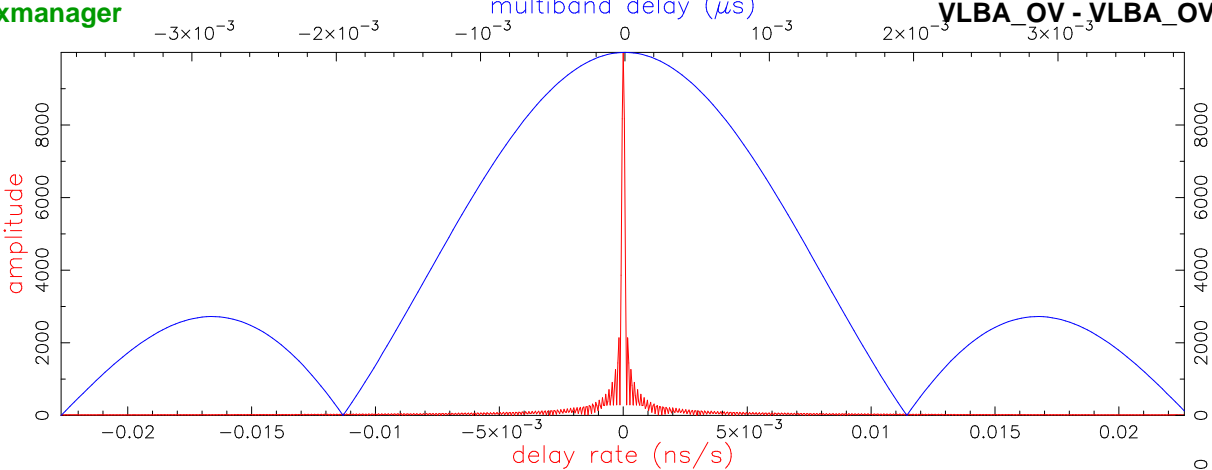
Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



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	

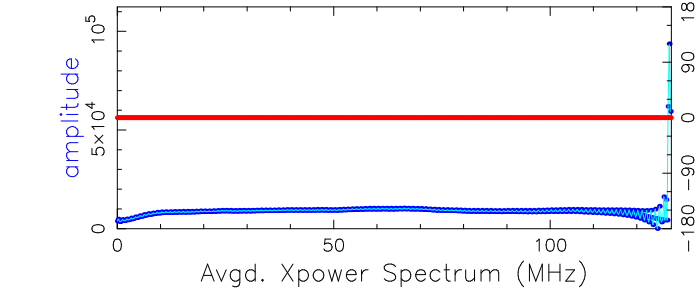
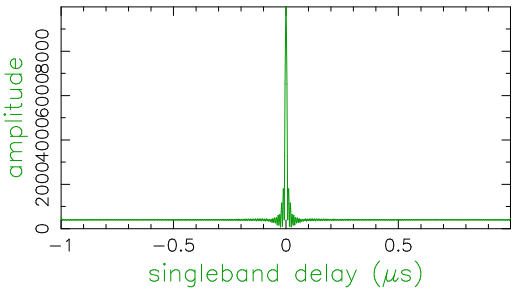
Group delay (usec)(sbd)	3.95763873533E+03	Apriori delay (usec)	3.95763815340E+03	Resid mbdelay (usec)	5.81929E-04	+/- 2.7E-05
Sband delay (usec)	3.95763874728E+03	Apriori clock (usec)	1.2960146E+01	Resid sbdelay (usec)	5.93875E-04	+/- 1.0E-04
Phase delay (usec)	3.95763816088E+03	Apriori clockrate (us/s)	-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



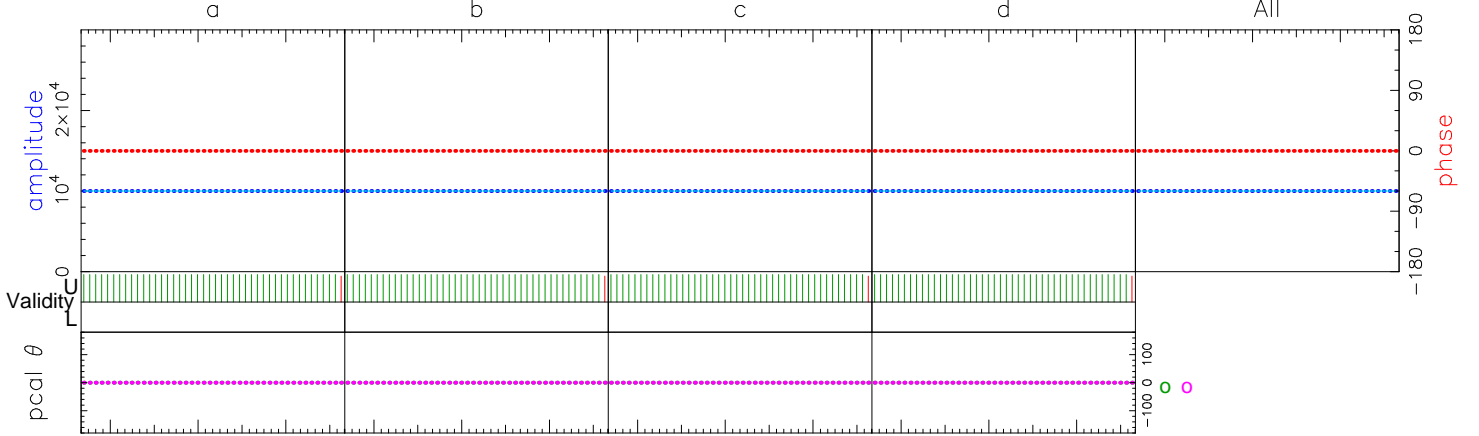
Fringe quality 9

SNR 366862.5
 Int time 179.975
 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
 2021:010:163117
 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		
o	1000	1000	1000	1000	APs used	
o:0	0:0	0:0	0:0	0:0	PC freqs	
o:0	0:0	0:0	0:0	0:0	PC phase	
o	1000	1000	1000	1000	Manl PC	
o	1000	1000	1000	1000	PC amp	
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

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

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

o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

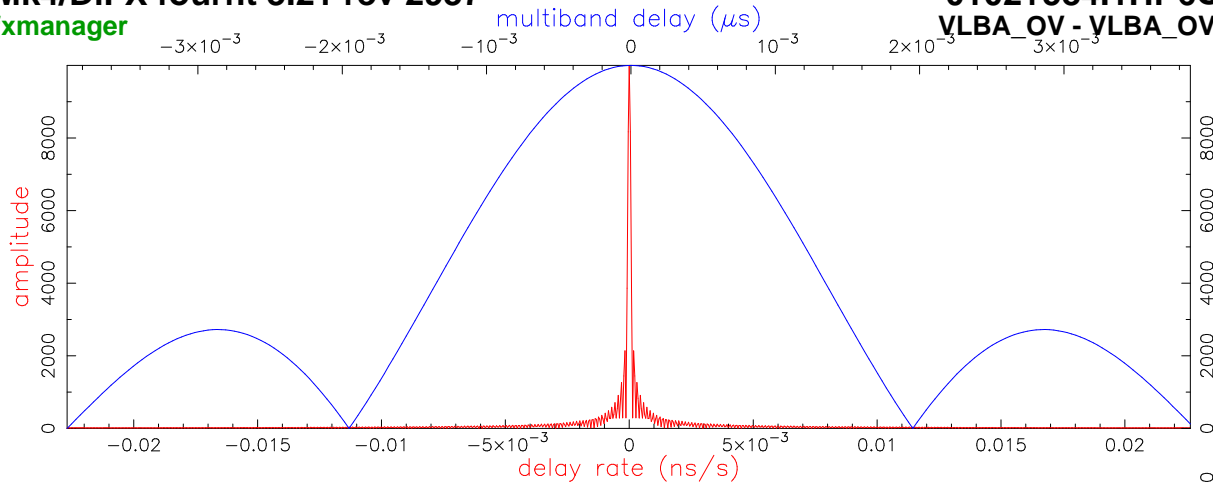
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo.Q.157.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

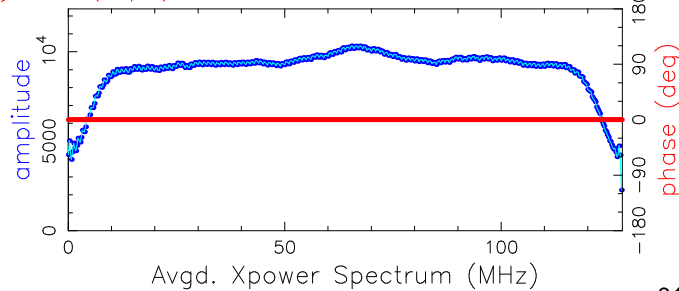
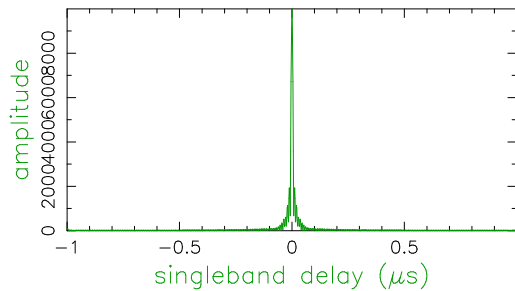
0102+584.1HP6Q8, No0090, oo

VLBA_OV - VLBA_OV, fgroup Q, pol RR



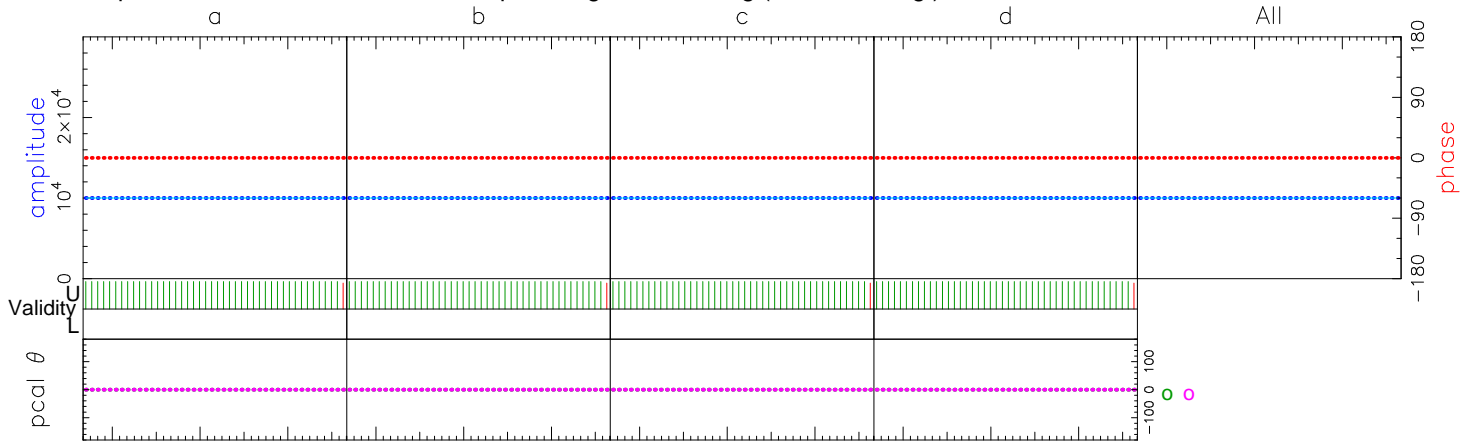
Fringe quality 9

SNR 366862.5
 Int time 179.975
 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
 2021:010:163119
 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

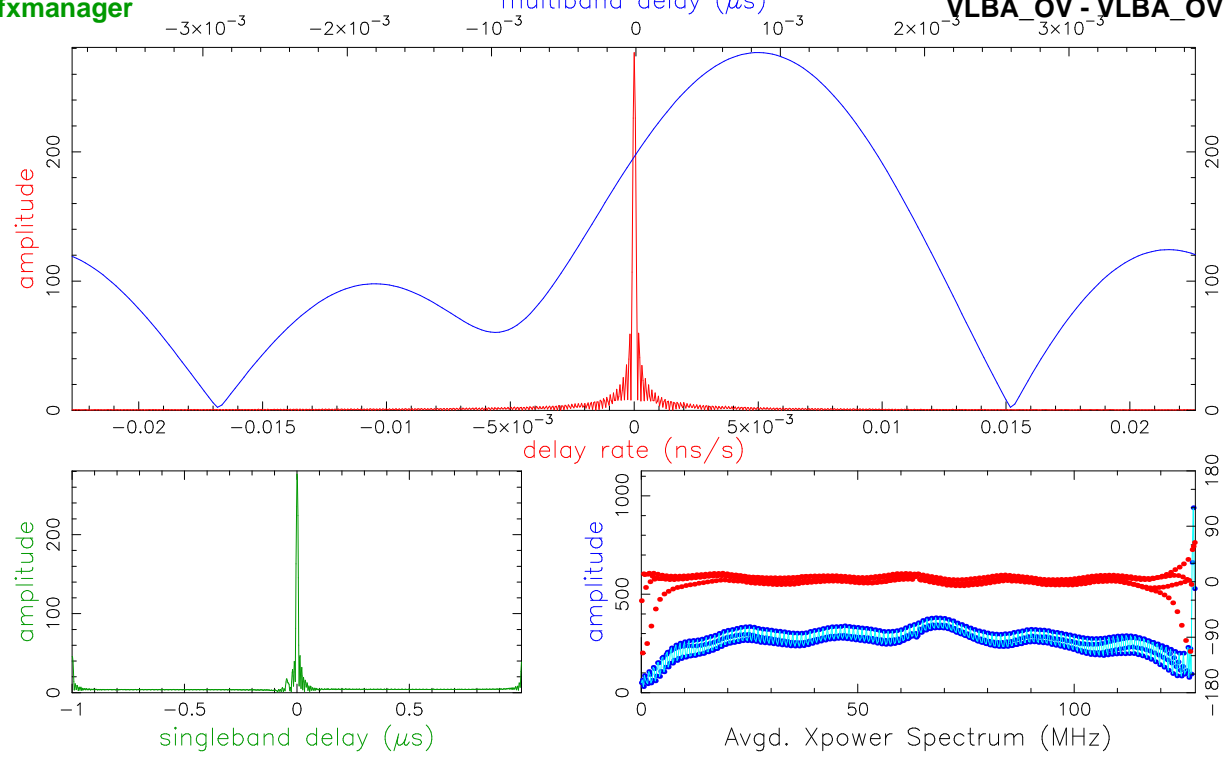


42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
0.0	0.0	0.0	0.0	Phase	0.0
10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
513.0	513.0	513.0	513.0	Sbd box	513.0
U/L 352/0	352/0	352/0	352/0	APs used	
o 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
o: 0:0	0:0	0:0	0:0	PC phase	
o: 0:0	0:0	0:0	0:0	Manl PC	
o 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
o Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

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

RMS	Theor.	Amplitude	9999.999 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	Search (1024X16)	9999.999	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	0.0	Inc. seg. avg.	10000.000	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	Inc. frq. avg.	9999.999	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
o: az 30.8 el 62.4 pa -129.3		o: az 30.8 el 62.4 pa -129.3		u,v (fr/asec) 0.000 0.000	

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo.Q.164.1HP6Q8

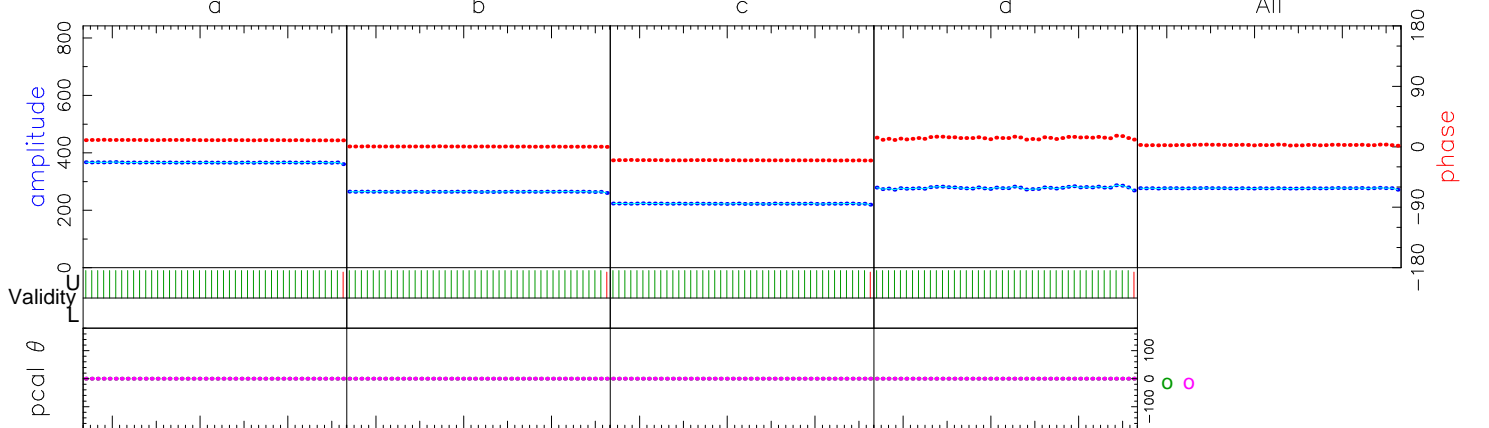


Fringe quality 8

SNR 10300.9
Int time 179.975
Amp 280.782
Phase 2.6
PFD 0.0e+00
Delays (us)
SBD 0.000811
MBD 0.000871
Fringe rate (Hz) 0.000013
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



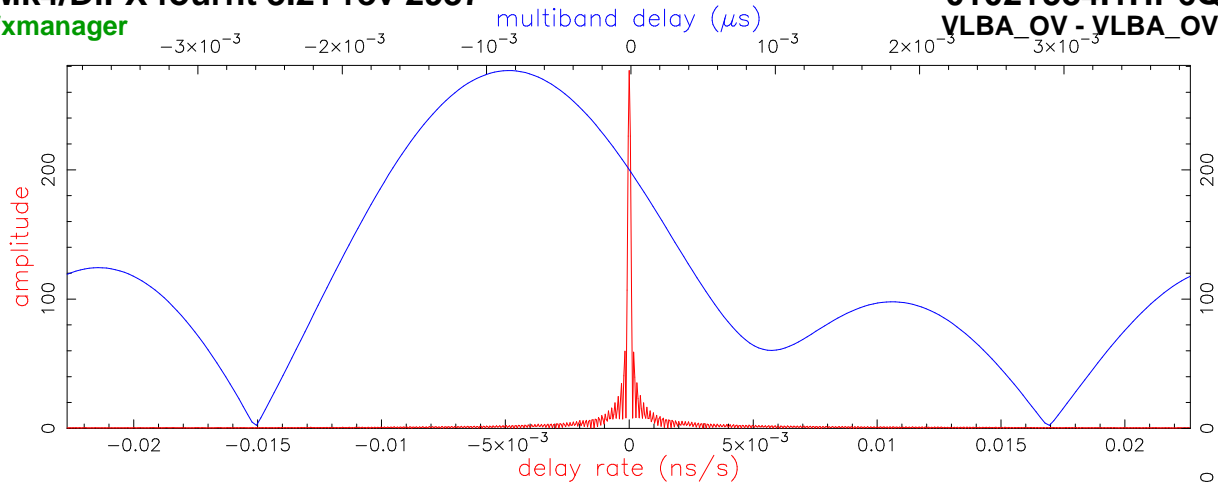
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	9.9	0.3	-20.1	13.1	Phase	2.6
	366.3	264.5	223.0	278.2	Ampl.	283.0
	513.3	513.3	513.2	513.5	Sbd box	513.4
U/L	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
o:o	0:0	0:0	0:0	0:0	PC phase	
o:o	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	8.70781250000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	8.70781E-04	+/- 1.1E-07
Sband delay (usec)	8.10500000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	8.10500E-04	+/- 4.2E-07
Phase delay (usec)	1.70901148350E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.70901E-07	+/- 7.2E-10
Delay rate (us/s)	3.06310249159E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	3.06310E-10	+/- 6.9E-12
Total phase (deg)		2.6	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	2.6 +/- 0.0
ph/seg (deg)	RMS 0.4	Theor. 0.0	Amplitude 280.782 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	1.5	0.1	Search (1024X16) 274.655	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	18.5	0.0	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.004 0.004
amp/frq (%)	18.6	0.0	Inc. seg. avg. 276.703	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023	
			Inc. frq. avg. 282.971	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite
o: az 30.8 el 62.4 pa -129.3	o: az 30.8 el 62.4 pa -129.3	u,v (fr/asec) 0.000 0.000			ion window (TEC) 0.00 0.00	simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo..1HP6Q8	Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo.Q.170.1HP6Q8				

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

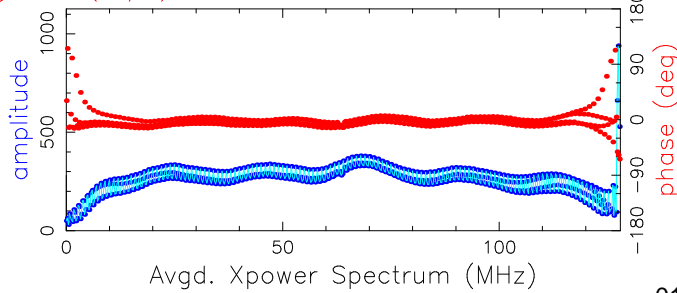
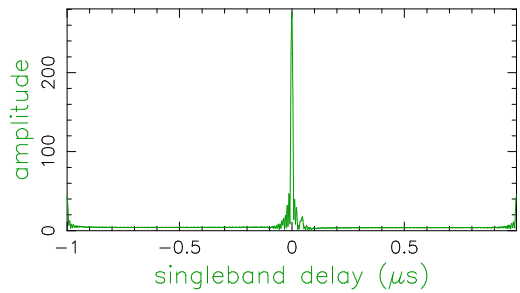
0102+584.1HP6Q8, No0090, oo

VLBA_OV - VLBA_OV, fgroup Q, pol RL



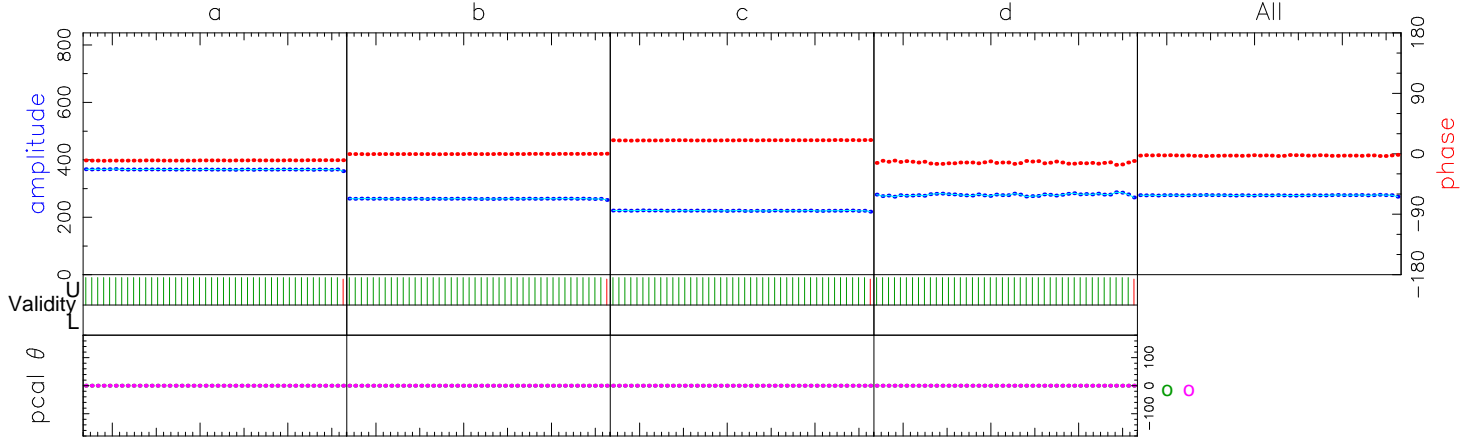
Fringe quality 8

SNR 10300.9
 Int time 179.975
 Amp 280.782
 Phase -2.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.000811
 MBD -0.000871
 Fringe rate (Hz)
 -0.000013
 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
 2021:010:163122
 2020:247:085004
 RA & Dec (J2000)
 01h02m45.762375s
 +58°24'11.136621"

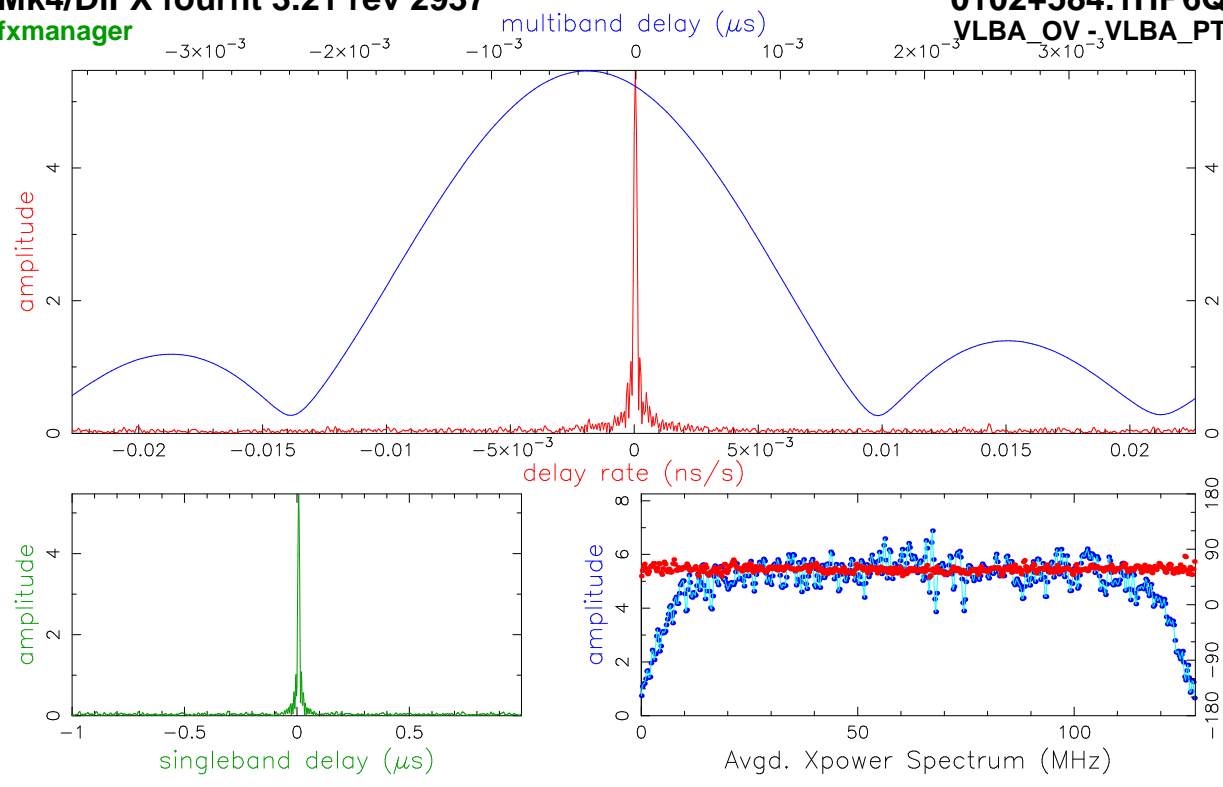
Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-9.9	-0.3	20.1	-13.1	Phase	-2.6
	366.3	264.5	223.0	278.2	Ampl.	283.0
	512.7	512.7	512.8	512.5	Sbd box	512.6
U/L	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
o:o	0:0	0:0	0:0	0:0	PC phase	
o:o	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
o	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-8.70781250000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-8.70781E-04	+/- 1.1E-07
Sband delay (usec)	-8.10500000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-8.10500E-04	+/- 4.2E-07
Phase delay (usec)	-1.70901148029E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.70901E-07	+/- 7.2E-10
Delay rate (us/s)	-3.06310249159E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-3.06310E-10	+/- 6.9E-12
Total phase (deg)		-2.6	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-2.6 +/- 0.0

	RMS	Theor.	Amplitude	280.782 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.4	0.0	Search (1024X16)	274.655	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	1.5	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	18.5	0.0	Inc. seg. avg.	276.703	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	18.6	0.0	Inc. frq. avg.	282.971	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

o: az 30.8 el 62.4 pa -129.3 o: az 30.8 el 62.4 pa -129.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/oo.Q.175.1HP6Q8

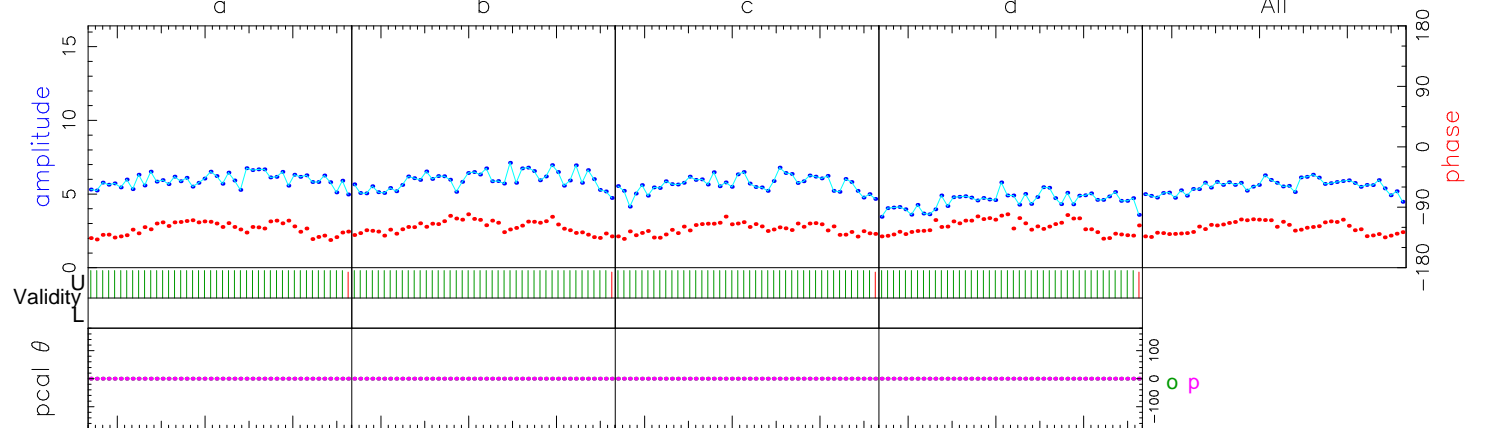


Fringe quality 9

SNR 200.8
Int time 179.975
Amp 5.473
Phase -120.4
PFD 0.0e+00
Delays (us)
SBD 0.007547
MBD -0.000353
Fringe rate (Hz)
0.001225
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
	-121.8	-118.8	-122.1	-118.4	Phase	-120.4
	5.9	5.9	5.6	4.5	Ampl.	5.5
	516.9	516.8	516.8	516.8	Sbd box	516.9
U/L	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.20630633353E+02		Apriori delay (usec)	-1.20638093080E+02	Resid mbdelay (usec)	-3.52773E-04 +/- 5.5E-06
Sband delay (usec)	-1.20630546205E+02		Apriori clock (usec)	2.1364456E+01	Resid sbdelay (usec)	7.54688E-03 +/- 2.1E-05
Phase delay (usec)	-1.20638100850E+02		Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	-7.77030E-06 +/- 3.7E-08
Delay rate (us/s)	9.97336631596E-02		Apriori rate (us/s)	9.97336347039E-02	Resid rate (us/s)	2.84557E-08 +/- 3.5E-10
Total phase (deg)		-309.8	Apriori accel (us/s/s)	4.73623624830E-06	Resid phase (deg)	-120.4 +/- 0.6

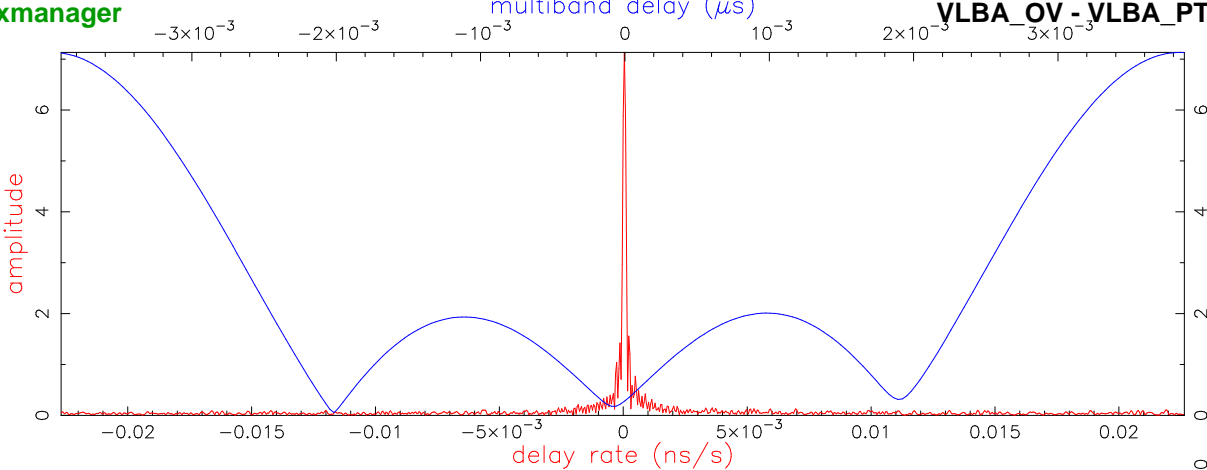
ph/seg (deg) 8.5 1.9 Search (1024X16) 5.291 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 7.9 3.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 2.4 0.6 Inc. seg. avg. 5.521 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 10.5 1.0 Inc. frq. avg. 5.466 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
o: az 30.8 el 62.4 pa -129.3 p: az 19.7 el 63.3 pa -148.5 u,v (fr/asec) -543.509 402.892 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/op..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/op.Q.160.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

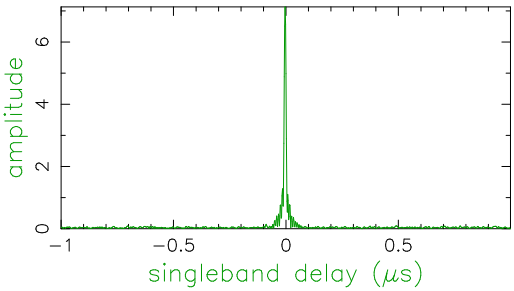
0102+584.1HP6Q8, No0090, op

VLBA_OV - VLBA_PT, fgroup Q, pol RR

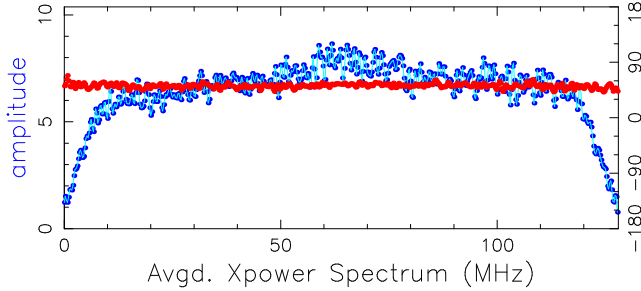


Fringe quality 9

SNR 261.7
 Int time 179.975
 Amp 7.134
 Phase 54.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.003865
 MBD -0.003967
 Fringe rate (Hz)
 0.001184
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



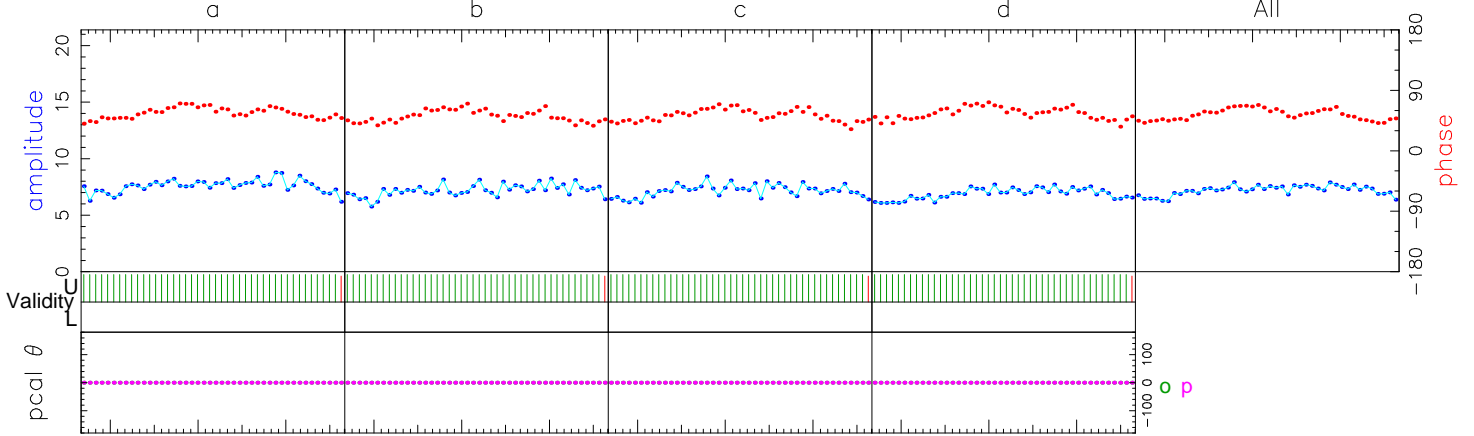
singleband delay (us)



Avgd. Xpower Spectrum (MHz)

Exp. c202a
 Exper # 16383
 Yr:day 2020:283
 Start 055640.00
 Stop 055940.22
 FRT 055810.00
 Corr/FF/build
 2021:005:135111
 2021:010:163119
 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
U/L	352/0	352/0	352/0	352/0		
o	1000	1000	1000	1000	Phase	54.2
p	1000	1000	1000	1000	Ampl.	7.1
o:p	0:0	0:0	0:0	0:0	Sbd box	511.0
o:p	0:0	0:0	0:0	0:0	APs used	
o	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
o	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
p	Q00UR	Q01UR	Q02UR	Q03UR	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

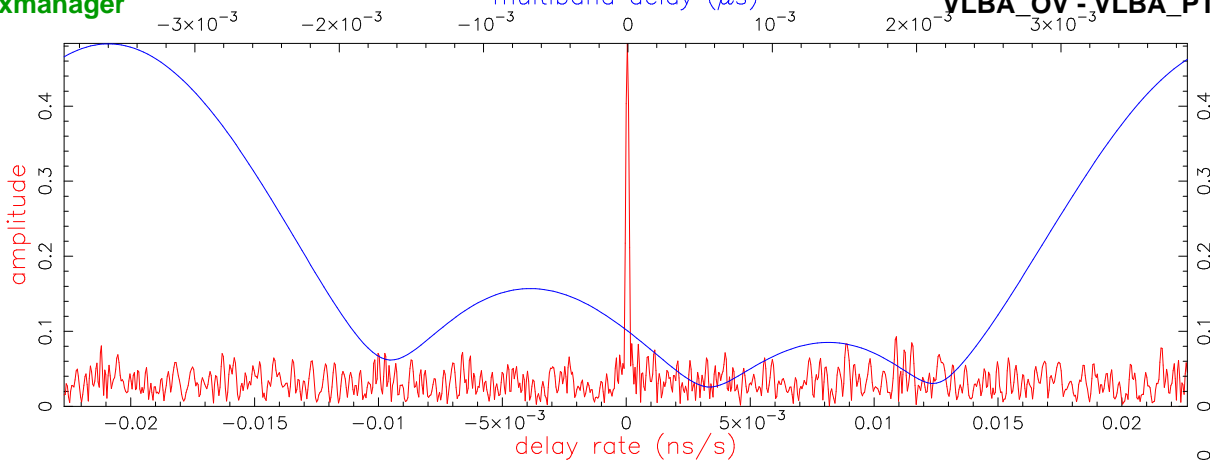
Group delay (usec)(sbd)	-1.20642060509E+02	Apriori delay (usec)	-1.20638093080E+02	Resid mbdelay (usec)	-3.96743E-03	+/-	4.2E-06
Sband delay (usec)	-1.20641958330E+02	Apriori clock (usec)	2.1364456E+01	Resid sbdelay (usec)	-3.86525E-03	+/-	1.6E-05
Phase delay (usec)	-1.20638089581E+02	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	3.49901E-06	+/-	2.8E-08
Delay rate (us/s)	9.97336622236E-02	Apriori rate (us/s)	9.97336347039E-02	Resid rate (us/s)	2.75197E-08	+/-	2.7E-10
Total phase (deg)	-135.2	Apriori accel (us/s/s)	4.73623624830E-06	Resid phase (deg)	54.2	+/-	0.4

ph/seg (deg)	8.1	Theor.	1.5	Amplitude	7.134 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	6.1	Search (1024X16)	6.927	Search	1024X16	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	3.0	Inc. seg. avg.	7.203	Inc. seg. avg.	7.203	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	3.5	Inc. frq. avg.	7.138	Inc. frq. avg.	7.138	Sample rate (MSamp/s):	256	dr window (ns/s)	-0.023 0.023		
o: az 30.8 el 62.4 pa -129.3		p: az 19.7 el 63.3 pa -148.5		u, v (fr/asec)	-543.509 402.892	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/op..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/op.Q.166.1HP6Q8

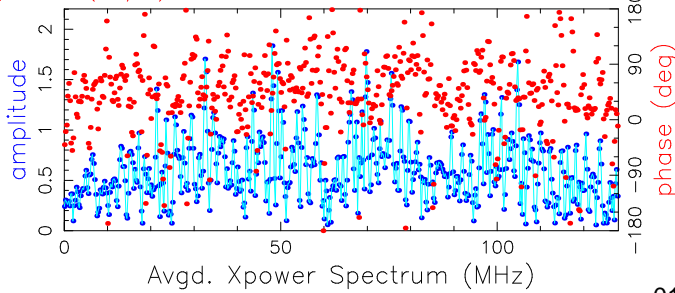
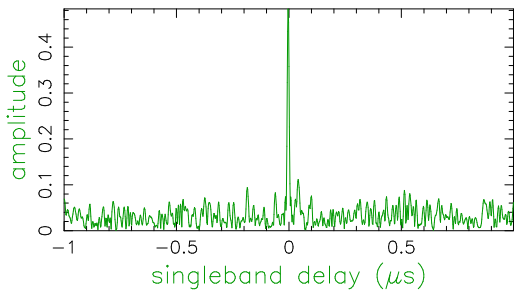
simultaneous interpolator

multiband delay (μ s)



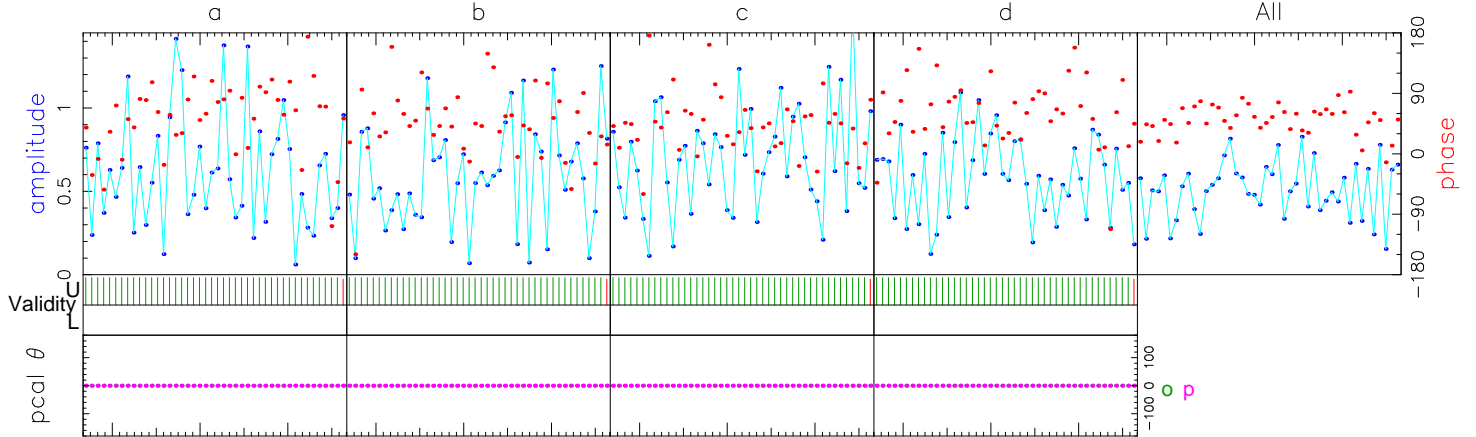
Fringe quality 9

SNR 17.7
Int time 179.975
Amp 0.484
Phase 50.9
PFD 0.0e+00
Delays (us)
SBD -0.003652
MBD -0.003593
Fringe rate (Hz)
0.001161
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		
o	1000	1000	1000	1000		
p	1000	1000	1000	1000		
o:p	0:0	0:0	0:0	0:0		
o:p	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000		
p	1000	1000	1000	1000		
o	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-1.20641685790E+02	Apriori delay (usec)	-1.20638093080E+02	Resid mbdelay (usec)	-3.59271E-03	+/-	6.3E-05
Sband delay (usec)	-1.20641745080E+02	Apriori clock (usec)	2.1364456E+01	Resid sbdelay (usec)	-3.65200E-03	+/-	2.4E-04
Phase delay (usec)	-1.20638089792E+02	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	3.28722E-06	+/-	4.2E-07
Delay rate (us/s)	9.97336616904E-02	Apriori rate (us/s)	9.97336347039E-02	Resid rate (us/s)	2.69865E-08	+/-	4.0E-09
Total phase (deg)	-138.5	Apriori accel (us/s/s)	4.73623624830E-06	Resid phase (deg)	50.9	+/-	6.5

ph/seg (deg)	RMS	Theor.	Amplitude	0.484 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	22.1	21.4	Search (1024X16)	0.463	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
ph/frq (deg)	34.9	37.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.004 0.004
amp/frq (%)	11.9	6.5	Inc. seg. avg.	0.479	Sample rate(MISamp/s): 256		dr window (ns/s) -0.023 0.023
	11.8	11.3	Inc. frq. avg.	0.485	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite
o: az 30.8 el 62.4 pa -129.3			p: az 19.7 el 63.3 pa -148.5				ion window (TEC) 0.00 0.00
			u, v (fr/asec) -543.509 402.892				simultaneous interpolator

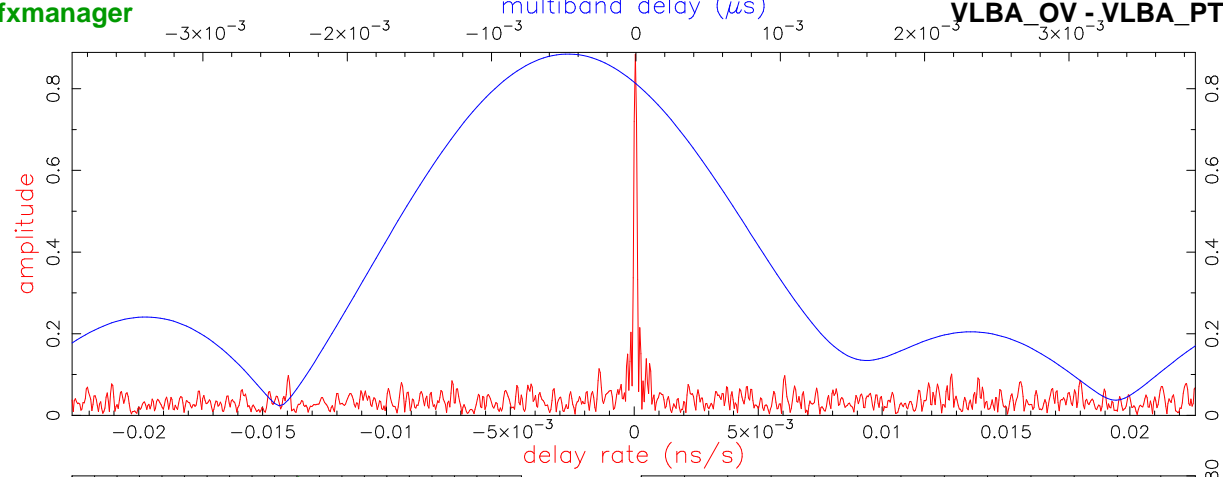
Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/op..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/op.Q.171.1HP6Q8

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HP6Q8, No0090, op

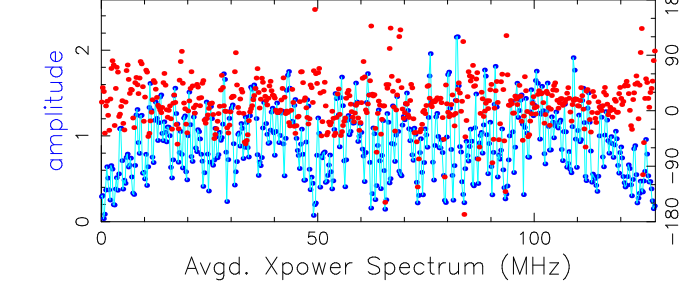
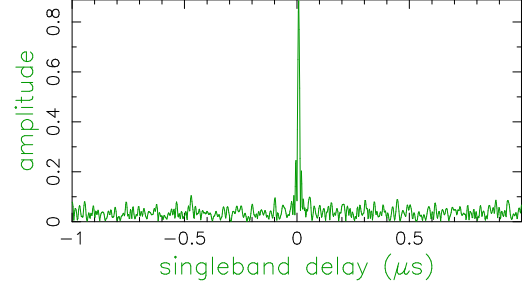
VLBA_OV - VLBA_PT, fgroup Q, pol RL



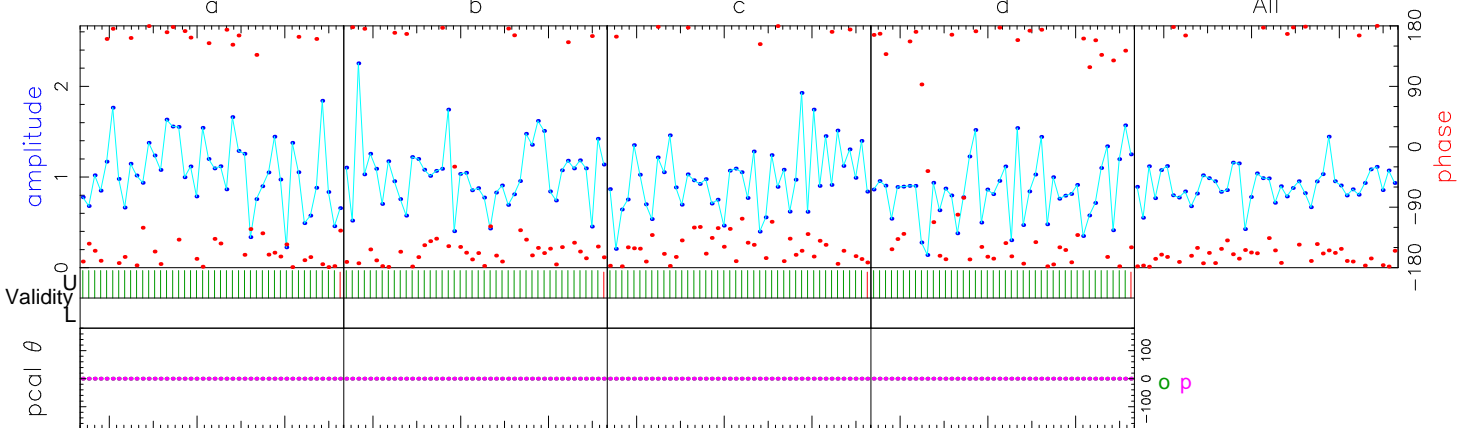
Fringe quality 9

SNR 32.6
 Int time 179.975
 Amp 0.889
 Phase -166.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.007371
 MBD -0.000494
 Fringe rate (Hz) 0.001237
 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
 2021:010:163122
 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	-162.3	-156.3	-174.3	Phase	-166.3
	1.0	1.0	0.9	0.7	Ampl.	0.9
	517.0	516.8	517.0	516.2	Sbd box	516.8
U/L	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
o	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.20630775071E+02	Apriori delay (usec)	-1.20638093080E+02	Resid mbdelay (usec)	-4.94492E-04	+/-	3.4E-05
Sband delay (usec)	-1.20630721955E+02	Apriori clock (usec)	2.1364456E+01	Resid sbdelay (usec)	7.37112E-03	+/-	1.3E-04
Phase delay (usec)	-1.20638103810E+02	Apriori clockrate (us/s)	-5.0000000E-07	Resid phdelay (usec)	-1.07300E-05	+/-	2.3E-07
Delay rate (us/s)	9.97336634460E-02	Apriori rate (us/s)	9.97336347039E-02	Resid rate (us/s)	2.87421E-08	+/-	2.2E-09
Total phase (deg)	-355.7	Apriori accel (us/s/s)	4.73623624830E-06	Resid phase (deg)	-166.3	+/-	3.5

ph/seg (deg)	14.0	Theor.	11.7	Amplitude	0.889 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	19.8	Search (1024X16)	0.863	Search	0.863	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	10.8	Inc. seg. avg.	0.893	Inc. seg. avg.	0.893	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	11.7	Inc. frq. avg.	0.891	Inc. frq. avg.	0.891	Sample rate(MISamp/s): 256	nlags: 512	t_cohere infinite	dr window (ns/s)	-0.023 0.023
						Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00		

o: az 30.8 el 62.4 pa -129.3 p: az 19.7 el 63.3 pa -148.5 u,v (fr/asec) -543.509 402.892 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202a/v1/v1_7mm/1234/No0090/op..1HP6Q8 Output file: /Exps/c202a/v1/v1_7mm/1234/No0090/op.Q.176.1HP6Q8