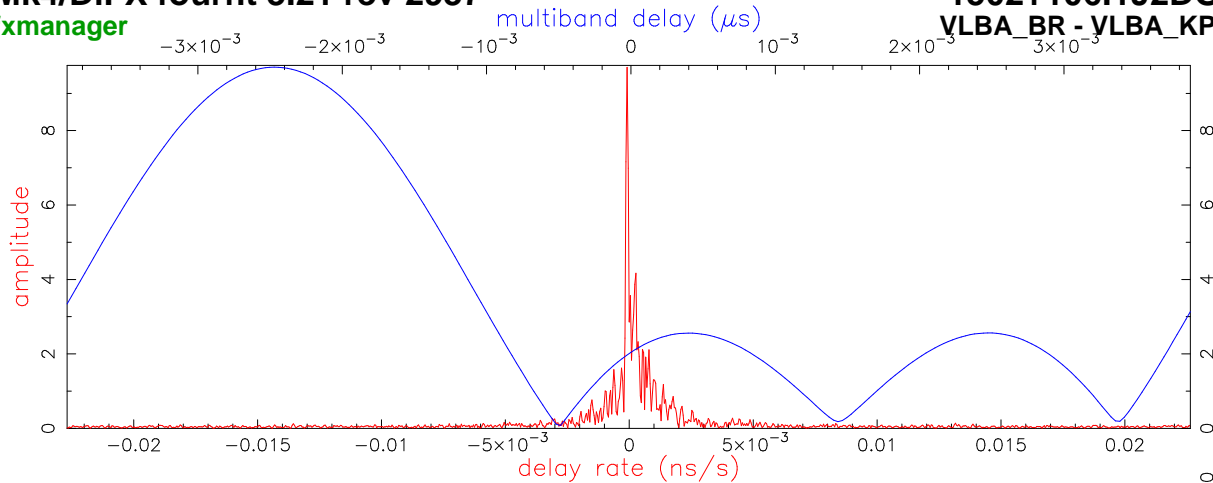


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

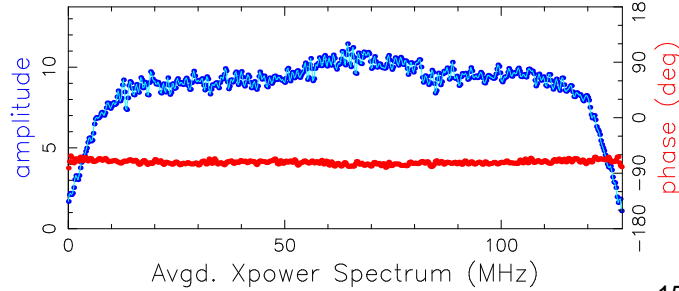
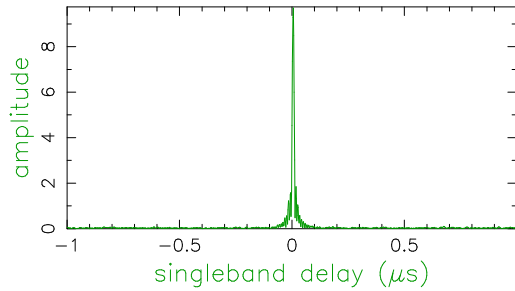
1502+106.1J2DGP, No0154, bk

VLBA_BR - VLBA_KP, fgroup Q, pol RR



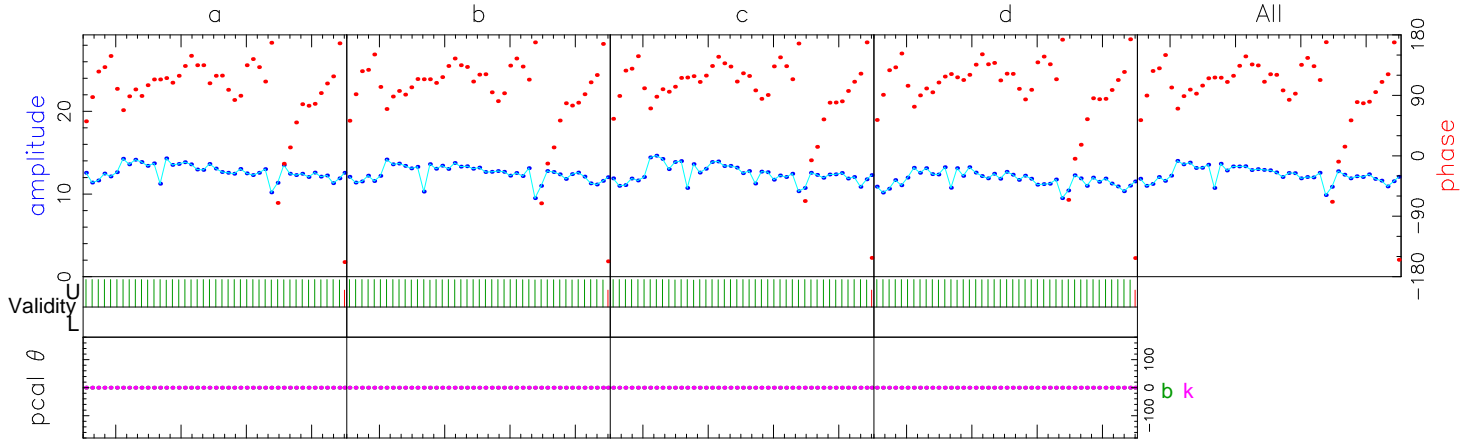
Fringe quality 6

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



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

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



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

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

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

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

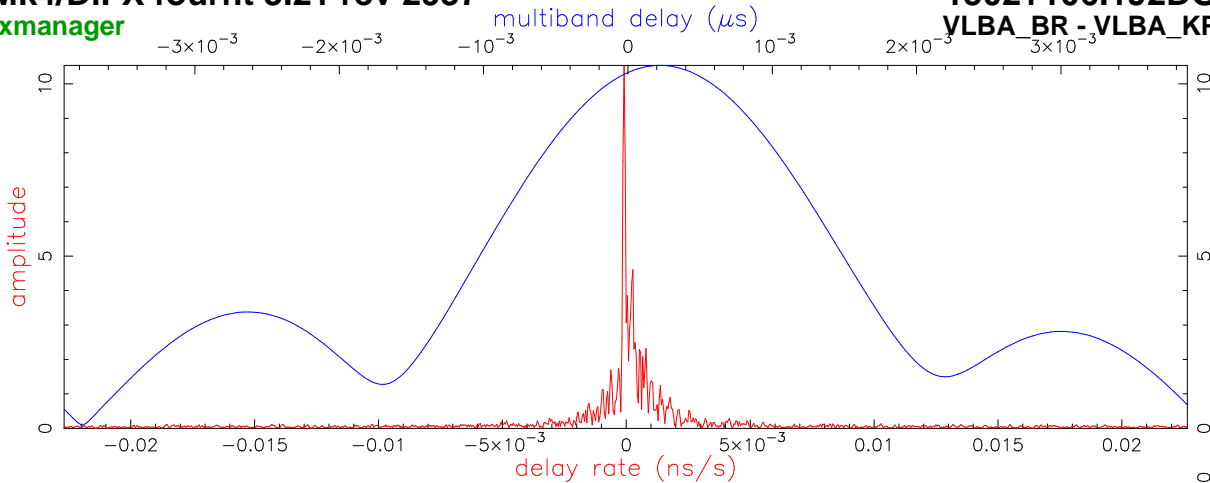
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bk.Q.18.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

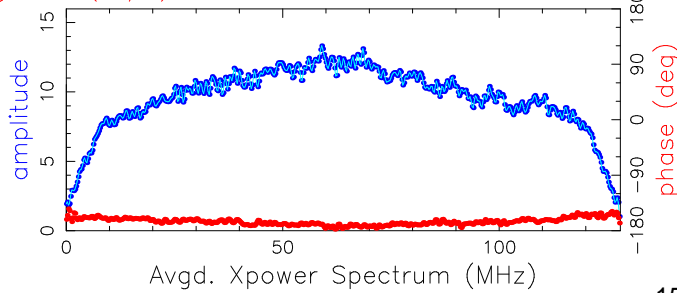
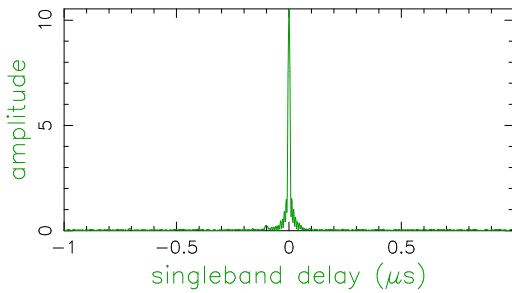
1502+106.1J2DGP, No0154, bk

VLBA_BR - VLBA_KP, fgroup Q, pol LL



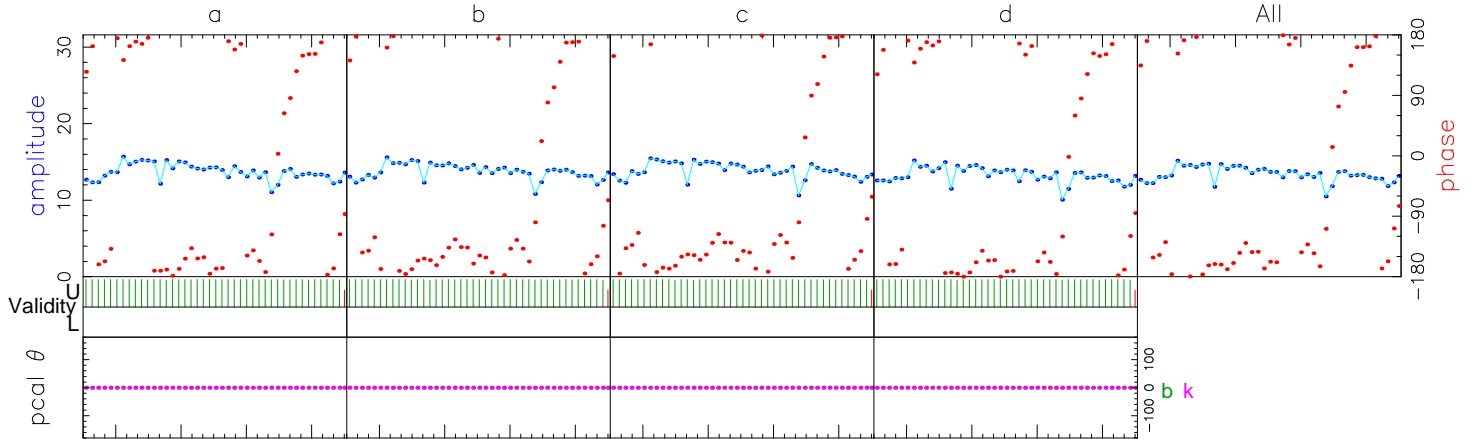
Fringe quality 5

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



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

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



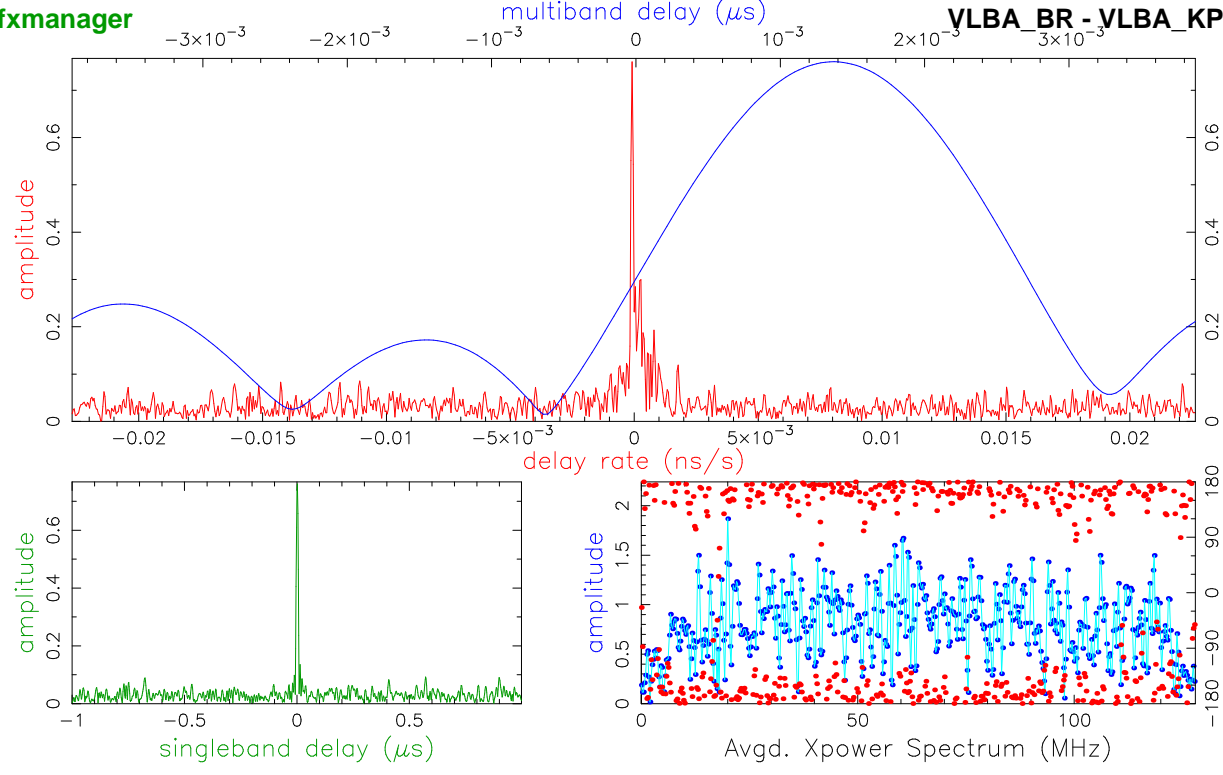
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000		
k	1000	1000	1000	1000		
b:k	0:0	0:0	0:0	0:0		
b:k	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
k	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL		
k	Q00UL	Q01UL	Q02UL	Q03UL		

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

ph/seg (deg)	45.8	0.8	Search (1024X16)	10.070	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	28.7	1.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	15.3	0.3	Inc. seg. avg.	13.408	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	2.5	0.4	Inc. frq. avg.	10.729	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

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

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bk.Q.2.1J2DGP

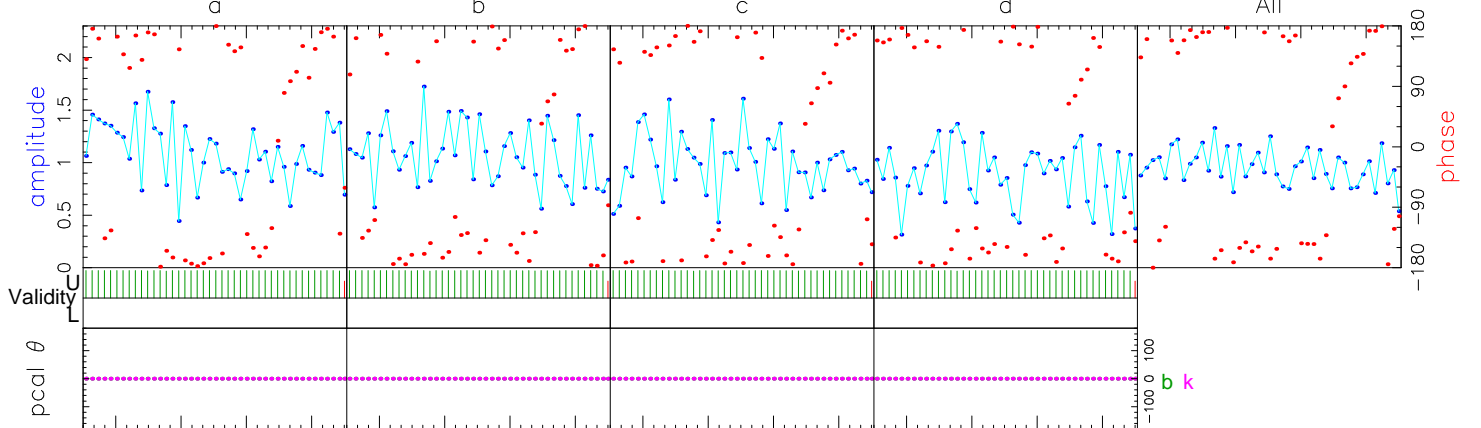


Fringe quality 9

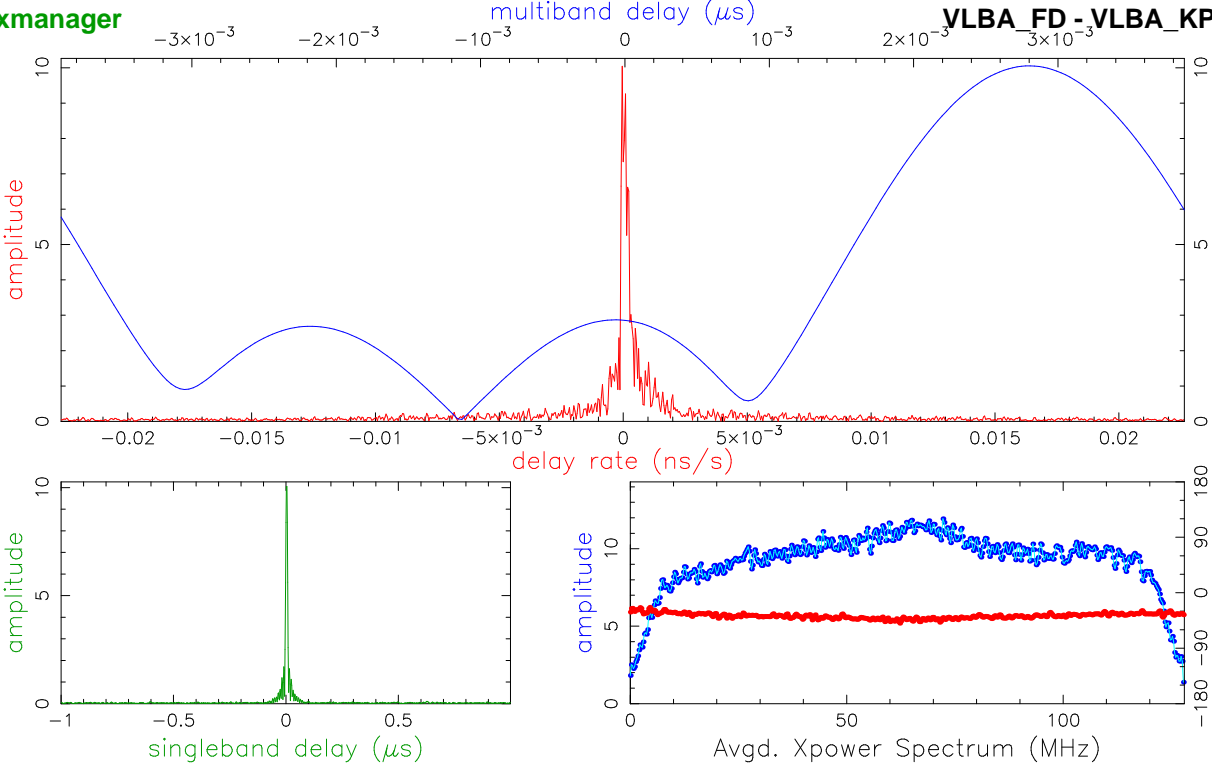
SNR 32.4
Int time 239.075
Amp 0.767
Phase -179.5
PFD 0.0e+00
Delays (us)
SBD 0.001269
MBD 0.001329
Fringe rate (Hz)
-0.003232
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

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

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
174.3	-172.7	177.9	-177.0	Phase	-179.5
0.8	0.8	0.7	0.7	Ampl.	0.8
514.0	513.7	513.4	513.3	Sbd box	513.6
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	PC freqs	
b:k 0:0	0:0	0:0	0:0	PC phase	
b:k 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-3.55230645220E+03	Apriori delay (usec)	-3.55230778143E+03	Resid mbdelay (usec)	1.32923E-03 +/- 3.4E-05
Sband delay (usec)	-3.55230651205E+03	Apriori clock (usec)	-2.0507021E+00	Resid sbdelay (usec)	1.26937E-03 +/- 1.3E-04
Phase delay (usec)	-3.55230779301E+03	Apriori clockrate (us/s)	-9.9999991E-08	Resid phdelay (usec)	-1.15838E-05 +/- 2.3E-07
Delay rate (us/s)	-2.16704974760E-02	Apriori rate (us/s)	-2.16704223761E-02	Resid rate (us/s)	-7.509999E-08 +/- 1.6E-09
Total phase (deg)	-148.0	Apriori accel (us/s/s)	2.32707588716E-05	Resid phase (deg)	-179.5 +/- 3.5
RMS	Theor.	Amplitude	0.767 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
43.5	11.6	Search (1024X16)	0.735	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
33.5	20.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
7.0	3.5	Inc. seg. avg.	0.945	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
7.4	6.2	Inc. frq. avg.	0.761	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5	k: az 119.9 el 54.1 pa -48.3	u, v (fr/asec) 74.778 1105.206			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bk..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bk.Q.33.1J2DGP			

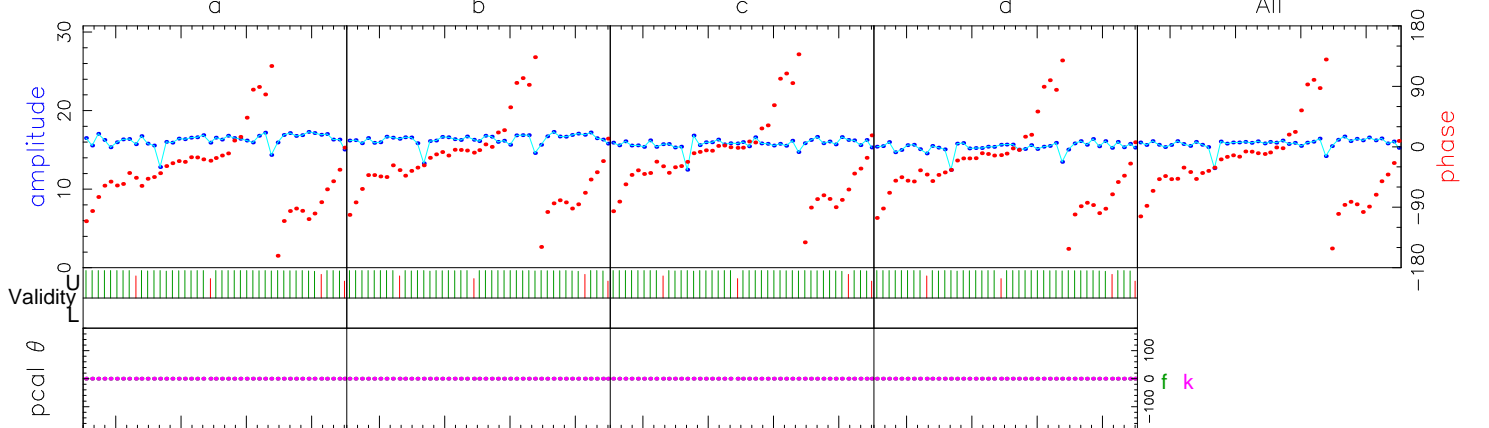


Fringe quality 5

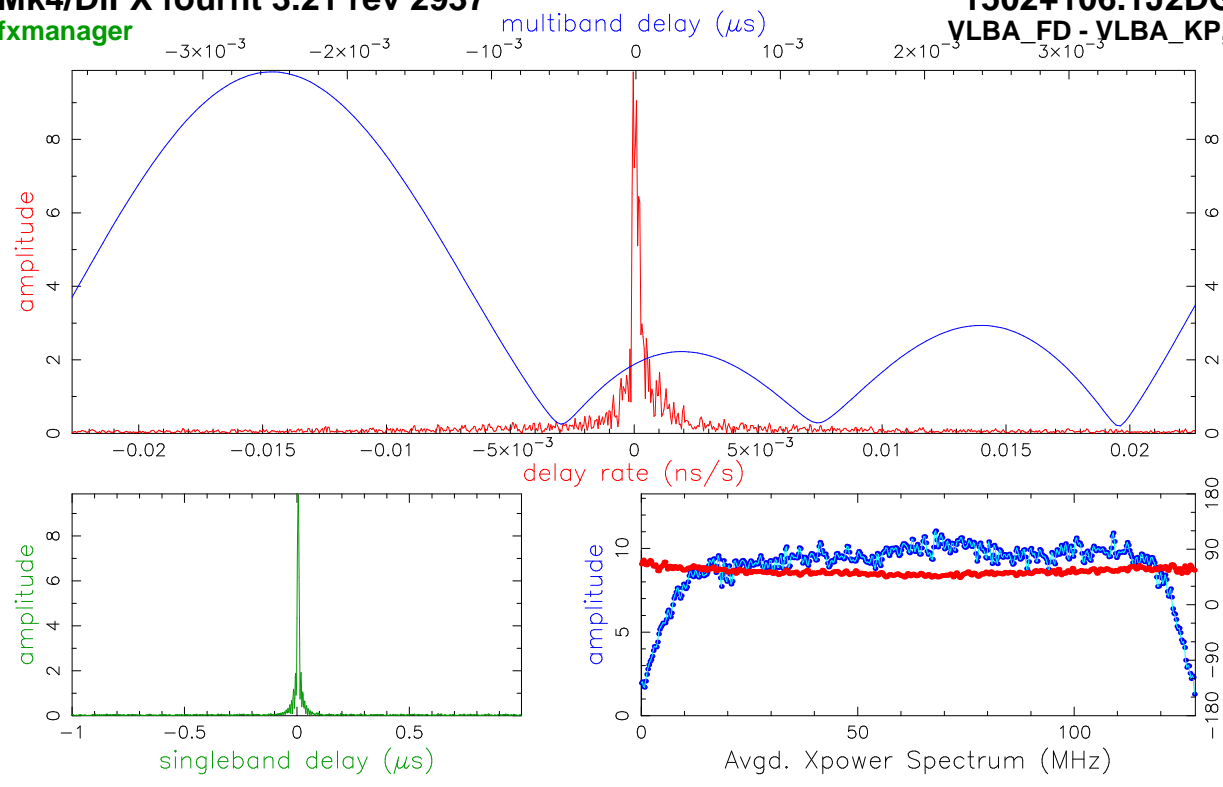
SNR 430.6
Int time 235.326
Amp 10.266
Phase -34.2
PFD 0.0e+00
Delays (us)
SBD 0.002929
MBD 0.002744
Fringe rate (Hz)
-0.002320
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

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

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-43.5	-30.9	-25.7	-36.8	Phase	-34.2
	10.3	10.4	10.0	9.8	Ampl.	10.1
	514.7	514.5	514.3	514.4	Sbd box	514.5
U/L	465/0	465/0	465/0	465/0	APs used	
f	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	1.22777974813E+03		Apriori delay (usec)	1.22777700381E+03	Resid mbdelay (usec)	2.74432E-03 +/- 2.6E-06
Sband delay (usec)	1.22777993281E+03		Apriori clock (usec)	7.5421095E+00	Resid sbdelay (usec)	2.92900E-03 +/- 1.0E-05
Phase delay (usec)	1.22777700160E+03		Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-2.21002E-06 +/- 1.7E-08
Delay rate (us/s)	-1.47869793641E-01		Apriori rate (us/s)	-1.47869739745E-01	Resid rate (us/s)	-5.38964E-08 +/- 1.2E-10
Total phase (deg)		53.6	Apriori accel (us/s/s)	-6.89068183219E-06	Resid phase (deg)	-34.2 +/- 0.3
RMS	57.9	0.9	Amplitude	10.266 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.9	0.9	Search (1024X16)	9.817	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	54.6	1.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	9.4	0.3	Inc. seg. avg.	15.830	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.7	0.5	Inc. frq. avg.	10.109	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 127.9 el 60.3 pa -43.4		k: az 119.9 el 54.1 pa -48.3		u,v (fr/asec) 427.017 -137.025		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/fk..1J2DGP		Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fk.Q.11.1J2DGP		

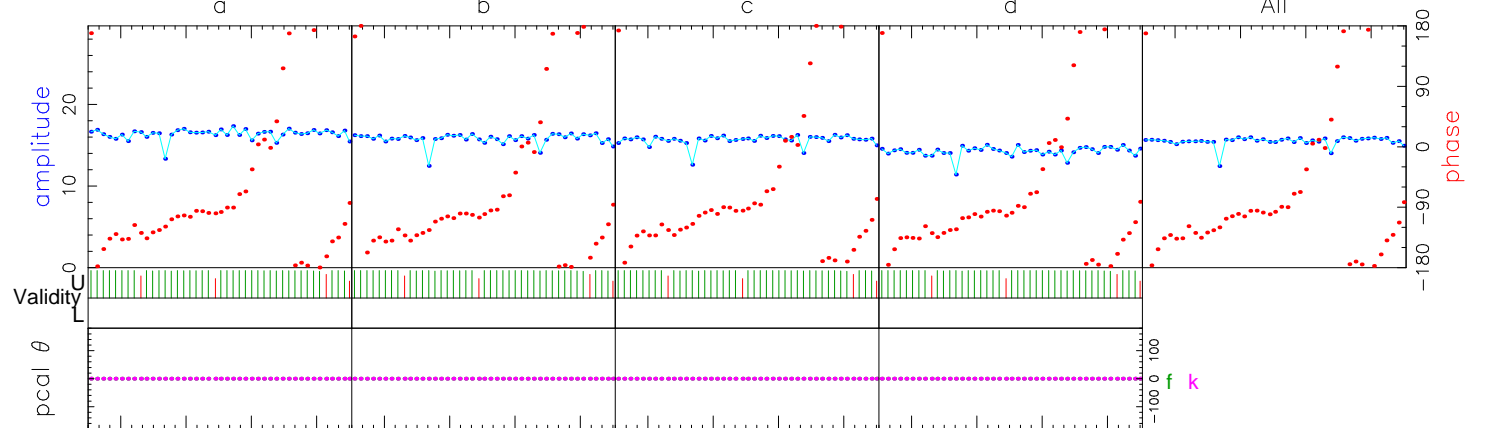


Fringe quality 5

SNR 414.4
Int time 235.325
Amp 9.878
Phase -122.5
PFD 0.0e+00
Delays (us)
SBD 0.005459
MBD -0.002545
Fringe rate (Hz)
-0.002319
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

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

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-123.0	-126.7	-117.6	-122.6	Phase	-122.5
	10.3	10.0	10.0	9.1	Ampl.	9.9
	516.2	515.6	516.1	515.1	Sbd box	515.8
U/L	465/0	465/0	465/0	465/0	APs used	
f	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	1.22778227097E+03	Apriori delay (usec)	1.22777700381E+03	Resid mbdelay (usec)	-2.54534E-03	+/- 2.7E-06
Sband delay (usec)	1.22778246281E+03	Apriori clock (usec)	7.5421095E+00	Resid sbdelay (usec)	5.45900E-03	+/- 1.0E-05
Phase delay (usec)	1.2277699591E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-7.90464E-06	+/- 1.8E-08
Delay rate (us/s)	-1.47869793627E-01	Apriori rate (us/s)	-1.47869739745E-01	Resid rate (us/s)	-5.38822E-08	+/- 1.3E-10
Total phase (deg)		Apriori accel (us/s/s)	-6.89068183219E-06	Resid phase (deg)	-122.5	+/- 0.3

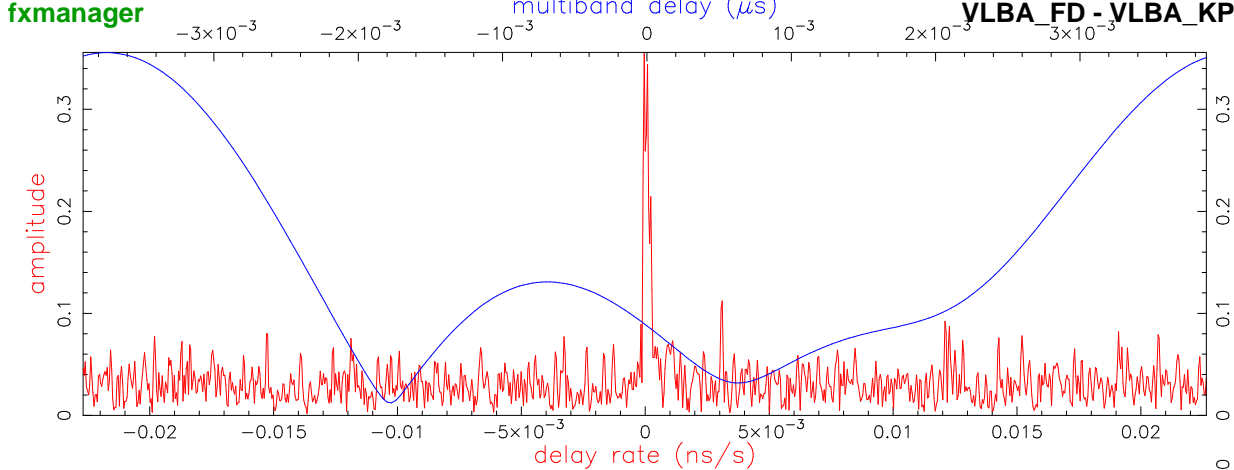
ph/seg (deg) 57.8 0.9 Amplitude 9.878 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 57.2 1.6 Search (1024X16) 9.644 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 4.6 0.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 4.7 0.5 Inc. seg. avg. 15.500 Sample rate(MISamp/s): 256 dr window (ns/s) -0.023 0.023
f: az 127.9 el 60.3 pa -43.4 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 427.017 -137.025 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/c202b/v1/v1_7mm/1234/No0154/fk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fk.Q.31.1J2DGP simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

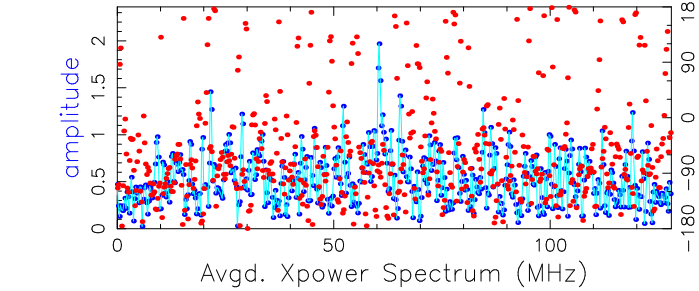
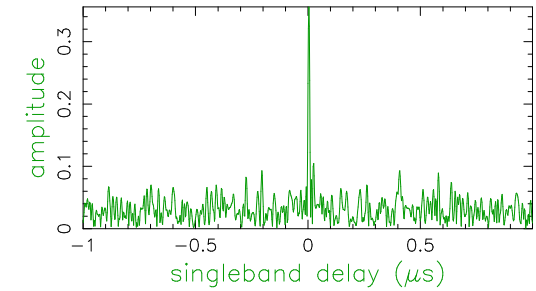
1502+106.1J2DGP, No0154, fk

VLBA_FD - VLBA_KP, fgroup Q, pol LR



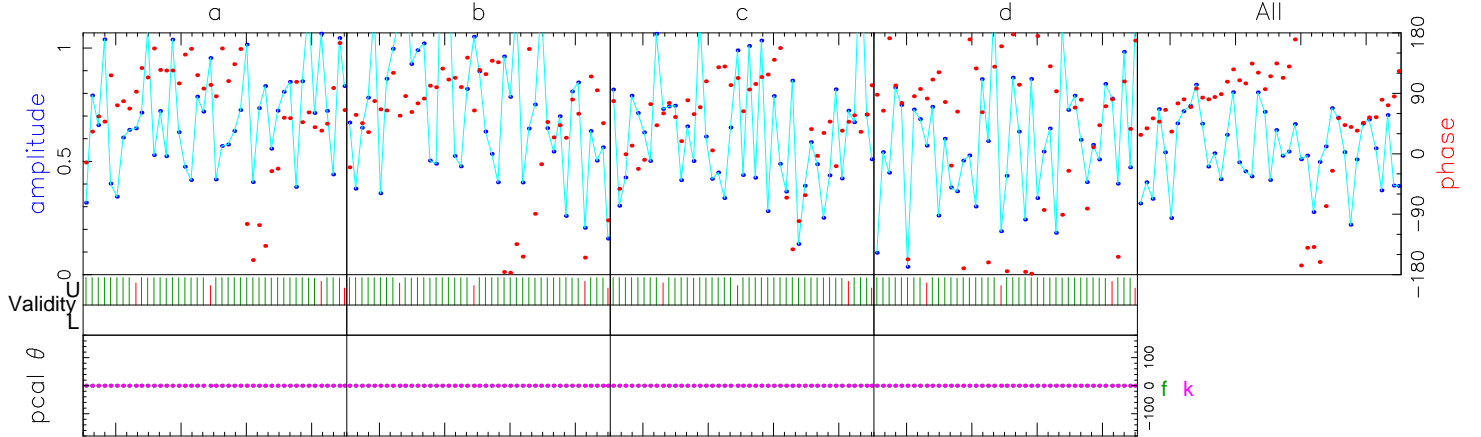
Fringe quality 8

SNR 14.9
 Int time 235.325
 Amp 0.356
 Phase 87.3
 PFD 6.9e-42
 Delays (us)
 SBD 0.003977
 MBD -0.003738
 Fringe rate (Hz)
 -0.002412
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



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

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	465/0	465/0	465/0	465/0		
f	1000	1000	1000	1000		
k	1000	1000	1000	1000		
f:k	0:0	0:0	0:0	0:0		
f:k	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
k	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
k	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

	1.22778107809E+03	Apriori delay (usec)	1.22777700381E+03	Resid mbdelay (usec)	-3.73822E-03	+/- 7.5E-05
Group delay (usec)(sbd)	1.22778098056E+03	Apriori clock (usec)	7.5421095E+00	Resid sbdelay (usec)	3.97675E-03	+/- 2.9E-04
Sband delay (usec)	1.22777700944E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	5.63254E-06	+/- 5.0E-07
Phase delay (usec)	-1.47869795785E-01	Apriori rate (us/s)	-1.47869739745E-01	Resid rate (us/s)	-5.60406E-08	+/- 3.6E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-6.89068183219E-06	Resid phase (deg)	87.3	+/- 7.7
Total phase (deg)	175.1					

	RMS	Theor.	Amplitude	0.356 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	58.5	25.1	Search (1024X16)	0.343	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	69.8	43.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	25.6	7.7	Inc. seg. avg.	0.500	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	18.2	13.4	Inc. frq. avg.	0.369	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 127.9 el 60.3 pa -43.4 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 427.017 -137.025 simultaneous interpolator

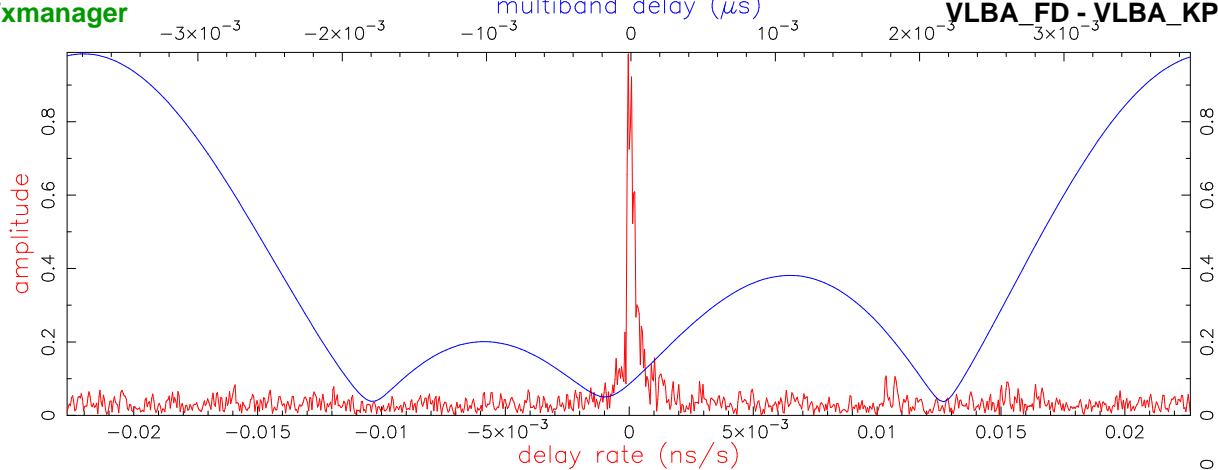
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/fk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fk.Q.47.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

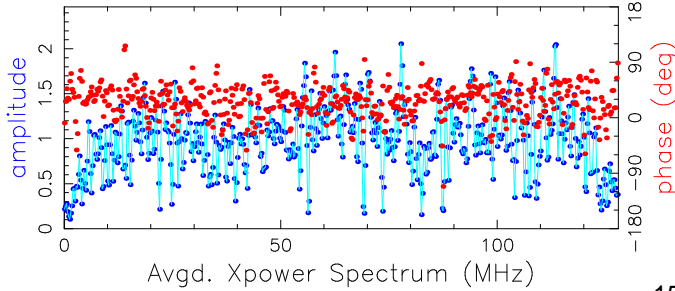
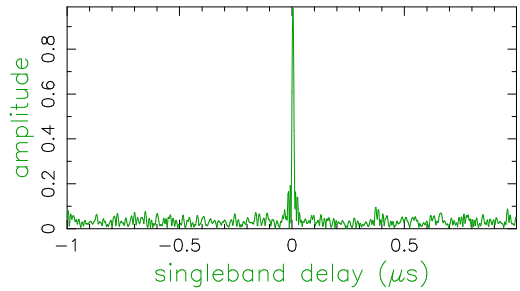
1502+106.1J2DGP, No0154, fk

VLBA_FD - VLBA_KP, fgroup Q, pol RL



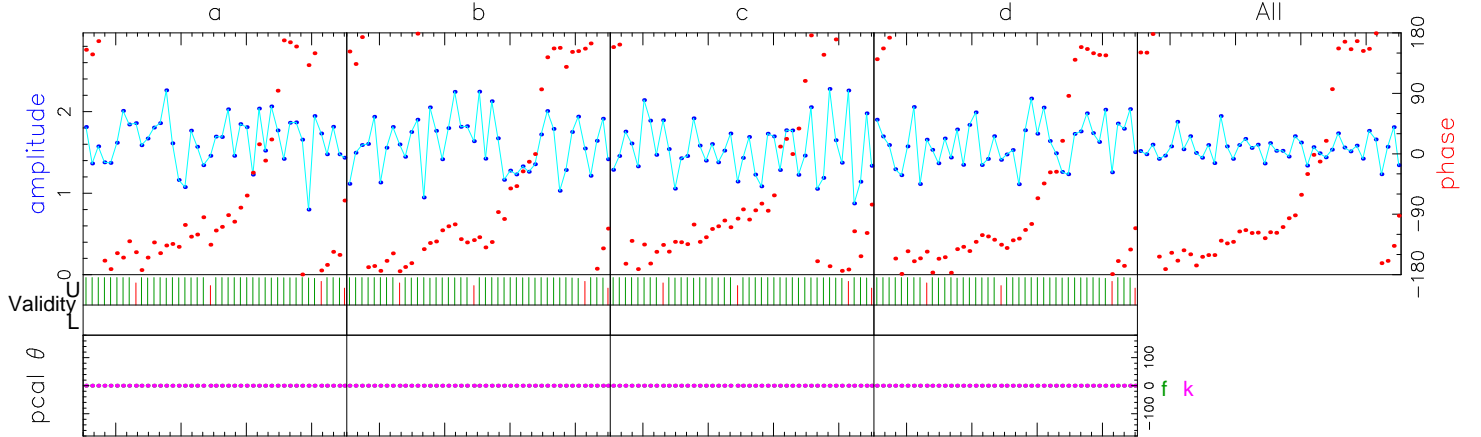
Fringe quality 6

SNR 41.5
 Int time 235.326
 Amp 0.989
 Phase -146.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.004302
 MBD -0.003770
 Fringe rate (Hz)
 -0.002332
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



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

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	465/0	465/0	465/0	465/0		
f	1000	1000	1000	1000		
k	1000	1000	1000	1000		
f:k	0:0	0:0	0:0	0:0		
f:k	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
k	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR		
k	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	1.22778104634E+03	Apriori delay (usec)	1.22777700381E+03	Resid mbdelay (usec)	-3.76997E-03	+/- 2.7E-05
Sband delay (usec)	1.22778130531E+03	Apriori clock (usec)	7.5421095E+00	Resid sbdelay (usec)	4.30150E-03	+/- 1.0E-04
Phase delay (usec)	1.22777699433E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-9.47768E-06	+/- 1.8E-07
Delay rate (us/s)	-1.47869793936E-01	Apriori rate (us/s)	-1.47869739745E-01	Resid rate (us/s)	-5.41914E-08	+/- 1.3E-09
Total phase (deg)	-59.0	Apriori accel (us/s/s)	-6.89068183219E-06	Resid phase (deg)	-146.9	+/- 2.8

ph/seg (deg)	59.0	RMS	59.0	Theor.	9.0	Amplitude	0.989 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	58.9		15.7			Search (1024X16)	0.962	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled		mb window (us)	-0.004	0.004	
ph/frq (deg)	12.5		2.8			Inc. seg. avg.	1.535	Bits/sample: 2x2	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023	
amp/frq (%)	4.1		4.8			Inc. frq. avg.	0.995	Sample rate(MISamp/s): 256	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 127.9 el 60.3 pa -43.4 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 427.017 -137.025 simultaneous interpolator

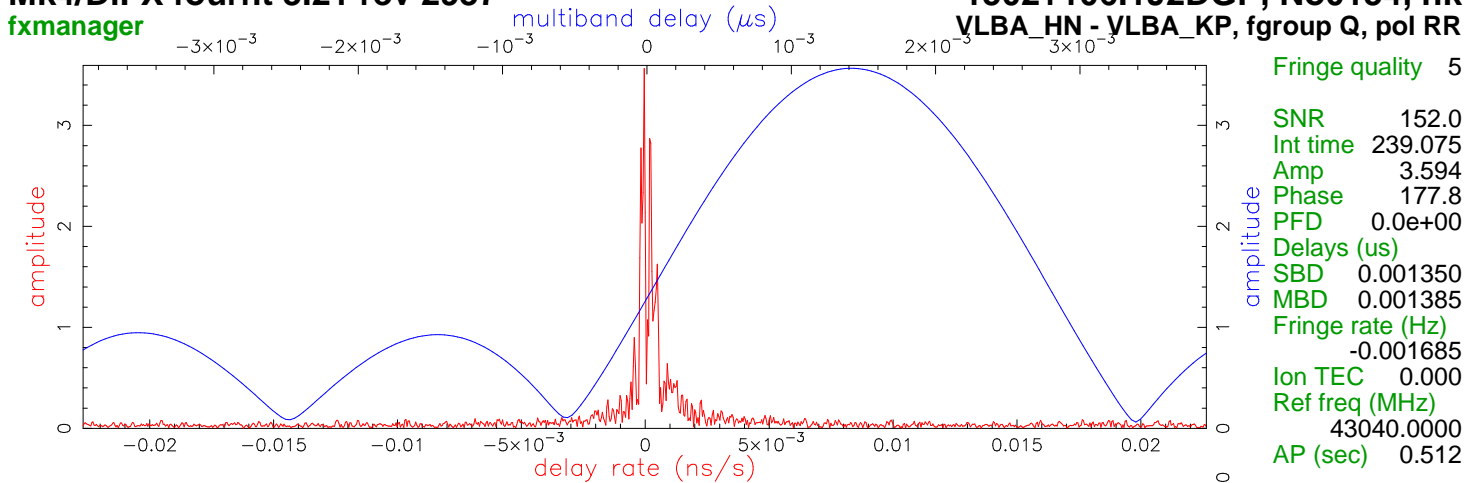
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/fk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fk.Q.64.1J2DGP

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fxmanager

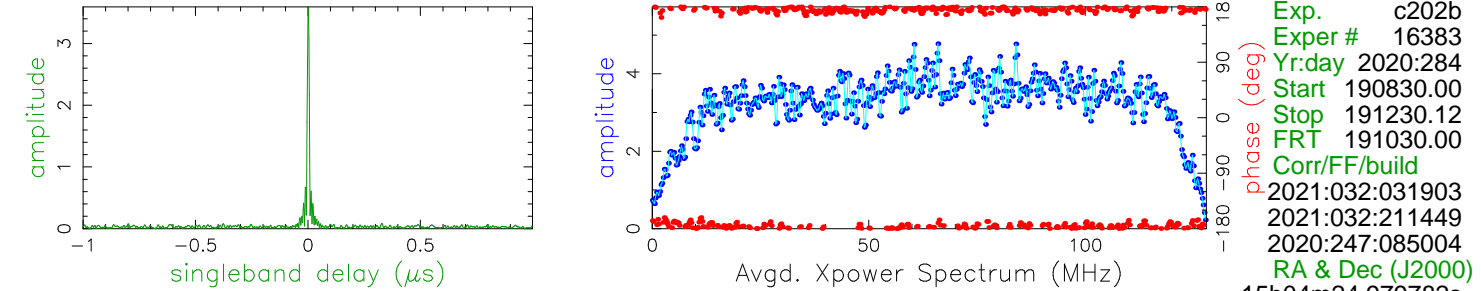
1502+106.1J2DGP, No0154, hk

VLBA_HN - VLBA_KP, fgroup Q, pol RR



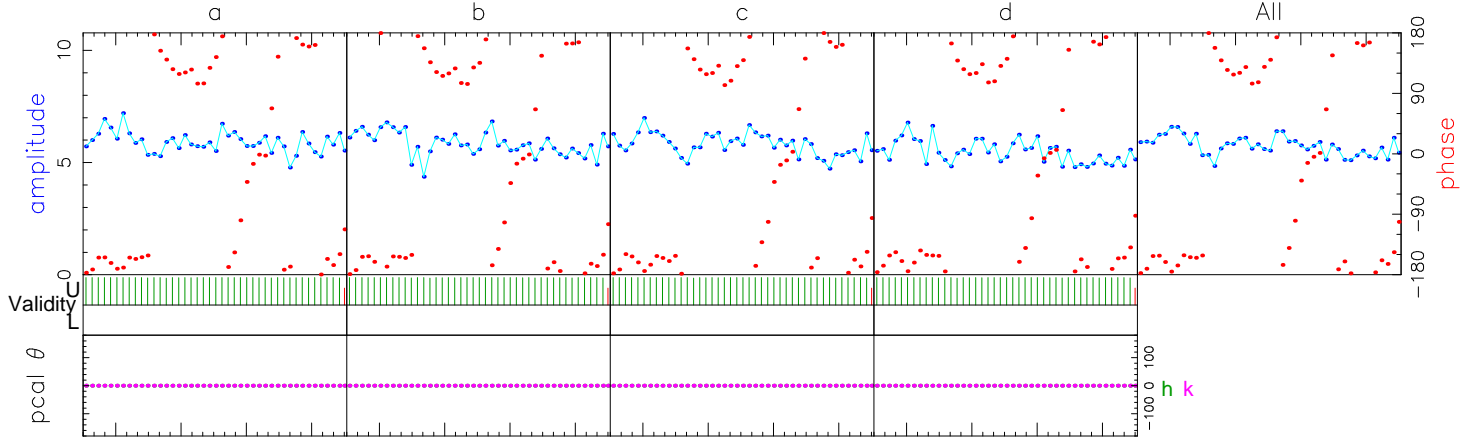
Fringe quality 5

SNR 152.0
 Int time 239.075
 Amp 3.594
 Phase 177.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.001350
 MBD 0.001385
 Fringe rate (Hz)
 -0.001685
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211449
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



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

	4.14738163586E+02	Apriori delay (usec)	4.14736778674E+02	Resid mbdelay (usec)	1.38491E-03	+/- 7.3E-06
Group delay (usec)(sbd)	4.14738129049E+02	Apriori clock (usec)	2.2001457E-01	Resid sbdelay (usec)	1.35038E-03	+/- 2.8E-05
Sband delay (usec)	4.14736790150E+02	Apriori clockrate (us/s)	1.3000001E-07	Resid phdelay (usec)	1.14765E-05	+/- 4.9E-08
Phase delay (usec)	-8.35333533876E-01	Apriori rate (us/s)	-8.35333494725E-01	Resid rate (us/s)	-3.91510E-08	+/- 3.5E-10
Delay rate (us/s)		Apriori accel (us/s/s)	8.90657630545E-07	Resid phase (deg)	177.8	+/- 0.8
Total phase (deg)	161.3					

	RMS	Theor.	Amplitude	3.594 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	64.2	2.5	Search (1024X16)	3.539	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	61.4	4.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	2.4	0.8	Inc. seg. avg.	5.755	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.4	1.3	Inc. frq. avg.	3.565	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
h: az 195.3 el 56.6 pa 11.8			k: az 119.9 el 54.1 pa -48.3			u,v (fr/asec) 2431.660 658.652
Control file: cf_1234_gmva7mm			Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/hk..1J2DGP			Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/hk.Q.107.1J2DGP

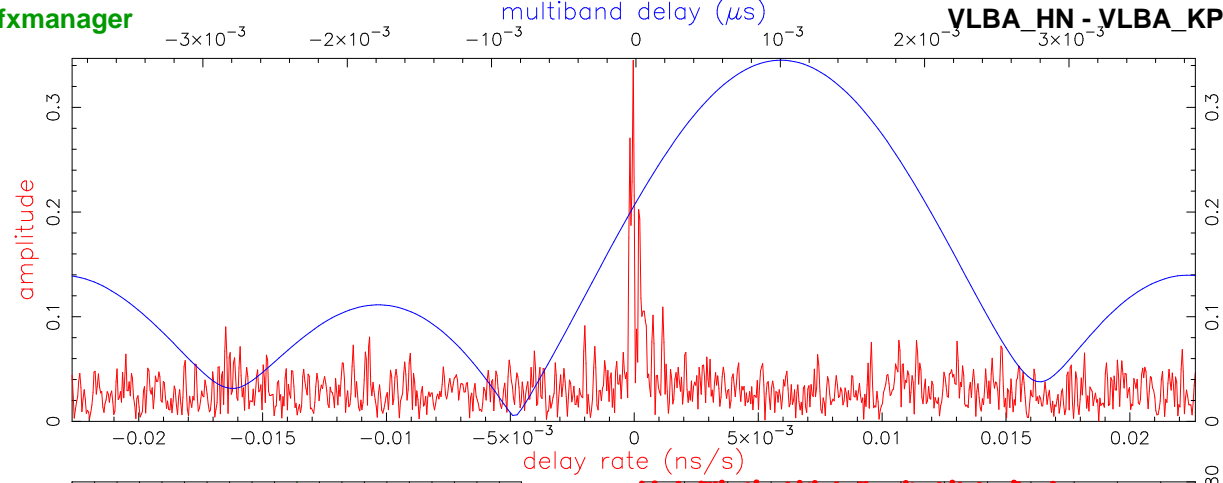
simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, hk

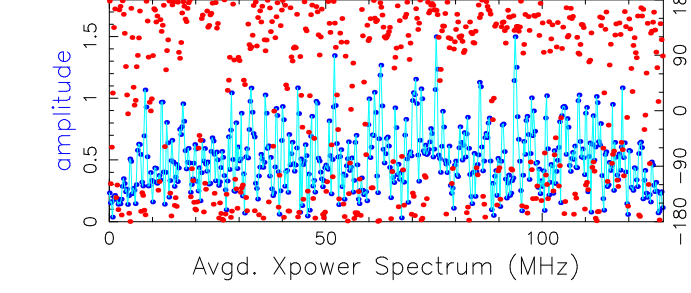
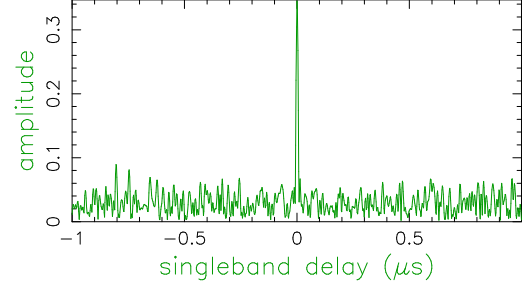
VLBA_HN - VLBA_KP, fgroup Q, pol LR



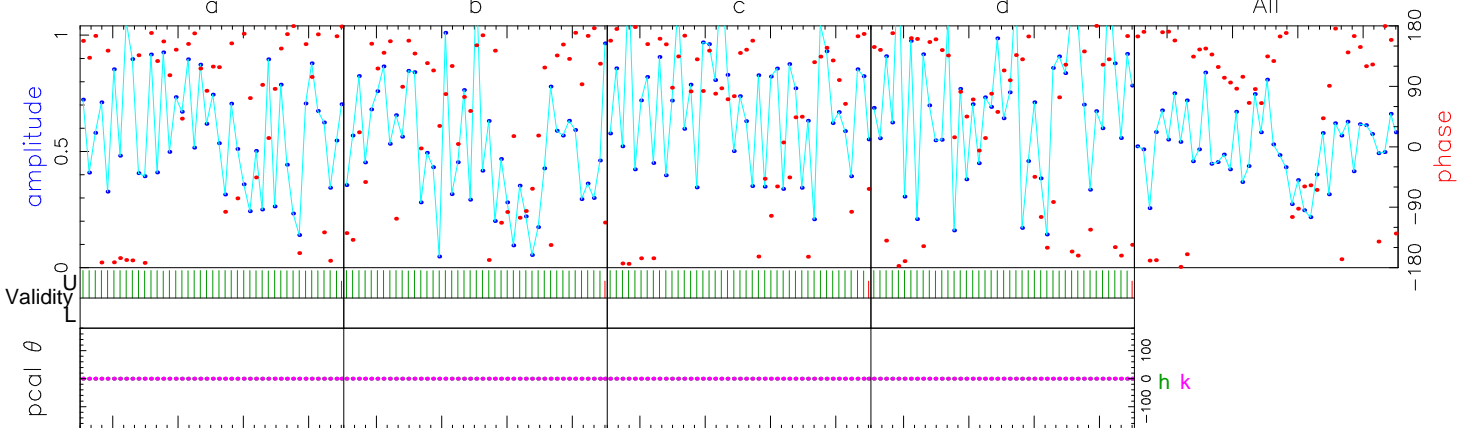
Fringe quality 9

SNR 14.7
 Int time 239.075
 Amp 0.347
 Phase 148.9
 PFD 3.4e-40
 Delays (us)
 SBD 0.000488
 MBD 0.001027
 Fringe rate (Hz)
 -0.001665
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202b
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211452
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"



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



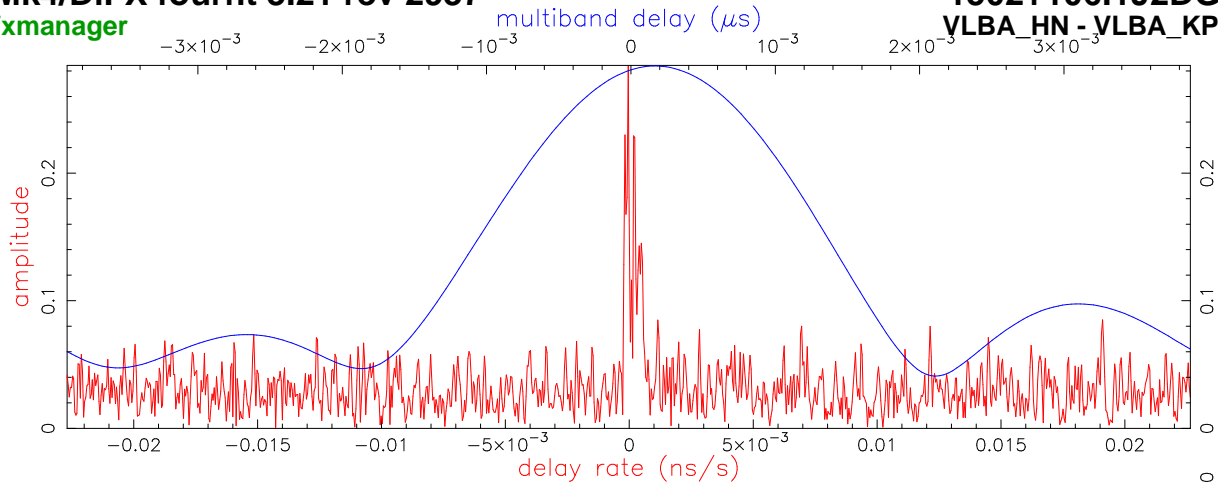
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
154.3	146.5	140.4	153.2	Phase	148.9
0.4	0.2	0.4	0.4	Ampl.	0.3
513.1	514.0	513.3	513.1	Sbd box	513.2
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	PC freqs	
h:k 0:0	0:0	0:0	0:0	PC phase	
h:k 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	4.14737806149E+02	Apriori delay (usec)	4.14736778674E+02	Resid mbdelay (usec)	1.02747E-03	+/- 7.6E-05
Sband delay (usec)	4.14737266924E+02	Apriori clock (usec)	2.2001457E-01	Resid sbdelay (usec)	4.88250E-04	+/- 2.9E-04
Phase delay (usec)	4.14736788285E+02	Apriori clockrate (us/s)	1.3000001E-07	Resid phdelay (usec)	9.61062E-06	+/- 5.0E-07
Delay rate (us/s)	-8.35333533411E-01	Apriori rate (us/s)	-8.35333494725E-01	Resid rate (us/s)	-3.86859E-08	+/- 3.6E-09
Total phase (deg)	132.4	Apriori accel (us/s/s)	8.90657630545E-07	Resid phase (deg)	148.9	+/- 7.8

ph/seg (deg)	RMS 62.0	Theor. 25.6	Amplitude Search (1024X16)	0.347 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	65.8	44.7	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	8.0	7.8	Inc. seg. avg.	0.475	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	16.8	13.6	Inc. frq. avg.	0.344	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 512	t_cohere infinite

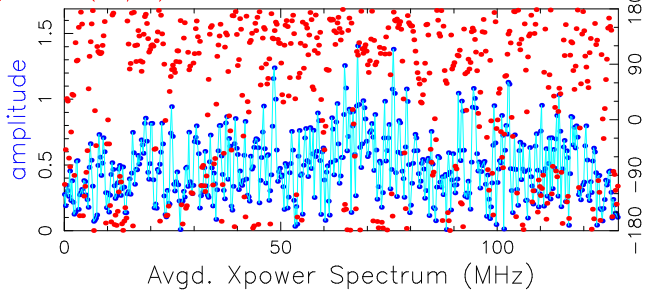
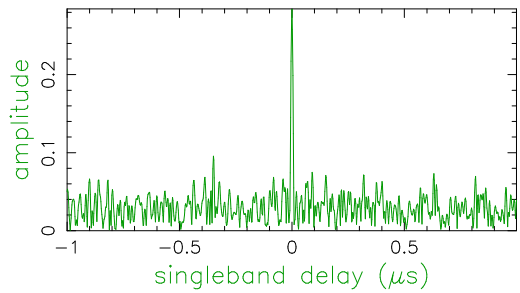
h: az 195.3 el 56.6 pa 11.8 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 2431.660 658.652 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/hk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/hk.Q.129.1J2DGP



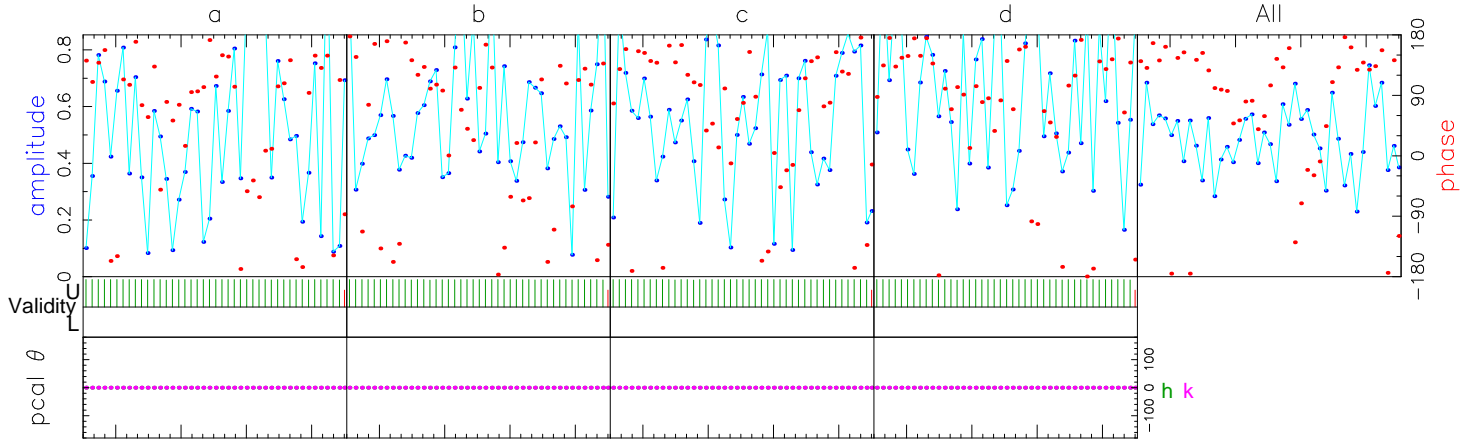
Fringe quality 9

SNR 12.0
Int time 239.075
Amp 0.284
Phase 130.9
PFD 6.6e-25
Delays (us)
SBD -0.000261
MBD 0.000158
Fringe rate (Hz)
-0.001623
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c202b
Yr:day 16383
Start 2020:284
Stop 2020:284
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211453
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
125.8	136.9	127.9	131.6	Phase	130.9
0.2	0.3	0.3	0.4	Ampl.	0.3
512.7	513.1	512.6	512.8	Sbd box	512.9
U/L 469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	PC freqs	
k 1000	1000	1000	1000	PC freqs	
h:k 0:0	0:0	0:0	0:0	PC phase	
h:k 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
k Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	4.14736936586E+02	Apriori delay (usec)	4.14736778674E+02	Resid mbdelay (usec)	1.57912E-04	+/-	9.2E-05
Sband delay (usec)	4.14736517299E+02	Apriori clock (usec)	2.2001457E-01	Resid sbdelay (usec)	-2.61375E-04	+/-	3.6E-04
Phase delay (usec)	4.14736787125E+02	Apriori clockrate (us/s)	1.3000001E-07	Resid phdelay (usec)	8.45125E-06	+/-	6.1E-07
Delay rate (us/s)	-8.35333532436E-01	Apriori rate (us/s)	-8.35333494725E-01	Resid rate (us/s)	-3.77102E-08	+/-	4.4E-09
Total phase (deg)	114.4	Apriori accel (us/s/s)	8.90657630545E-07	Resid phase (deg)	130.9	+/-	9.5

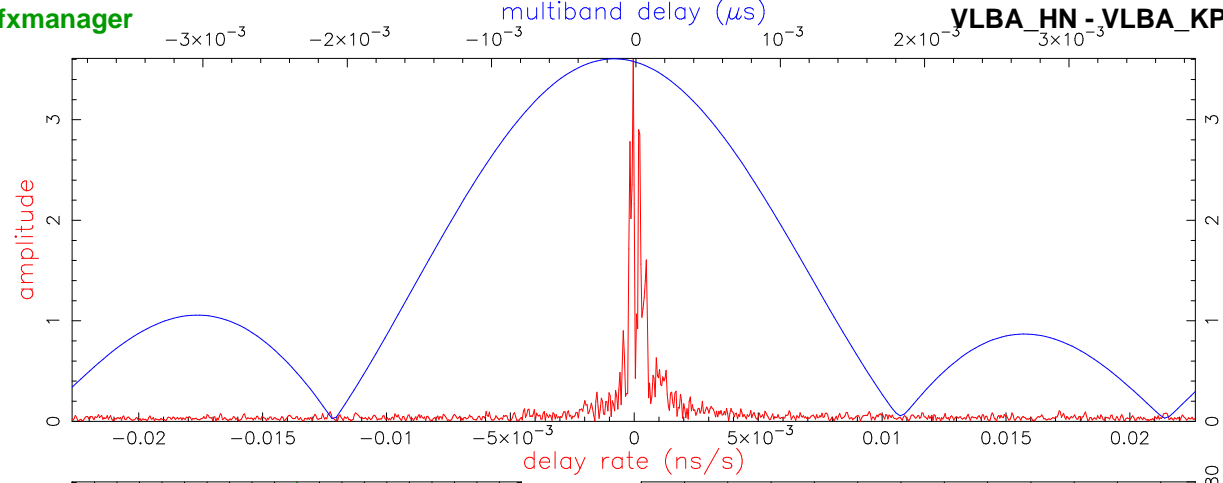
	RMS	Theor.	Amplitude	0.284 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	63.5	31.2	Search (1024X16)	0.278	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	82.9	54.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	6.0	9.5	Inc. seg. avg.	0.426	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
amp/frq (%)	27.8	16.6	Inc. frq. avg.	0.281	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, hk

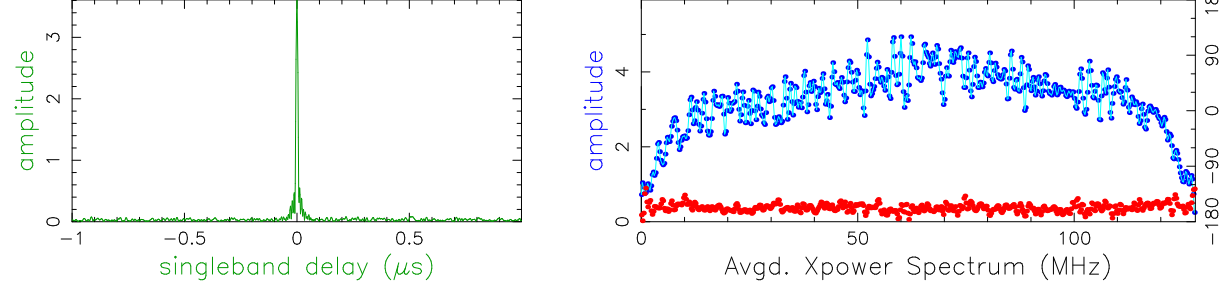
VLBA_HN - VLBA_KP, fgroup Q, pol LL



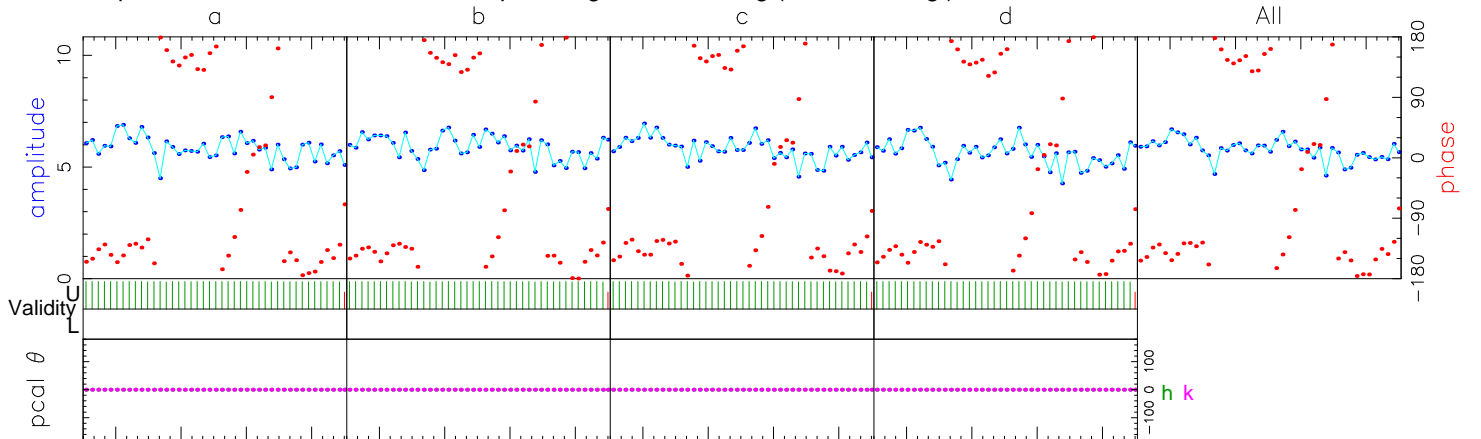
Fringe quality 5

SNR 152.7
 Int time 239.075
 Amp 3.610
 Phase -159.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.000219
 MBD -0.000161
 Fringe rate (Hz)
 -0.001654
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211447
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"



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



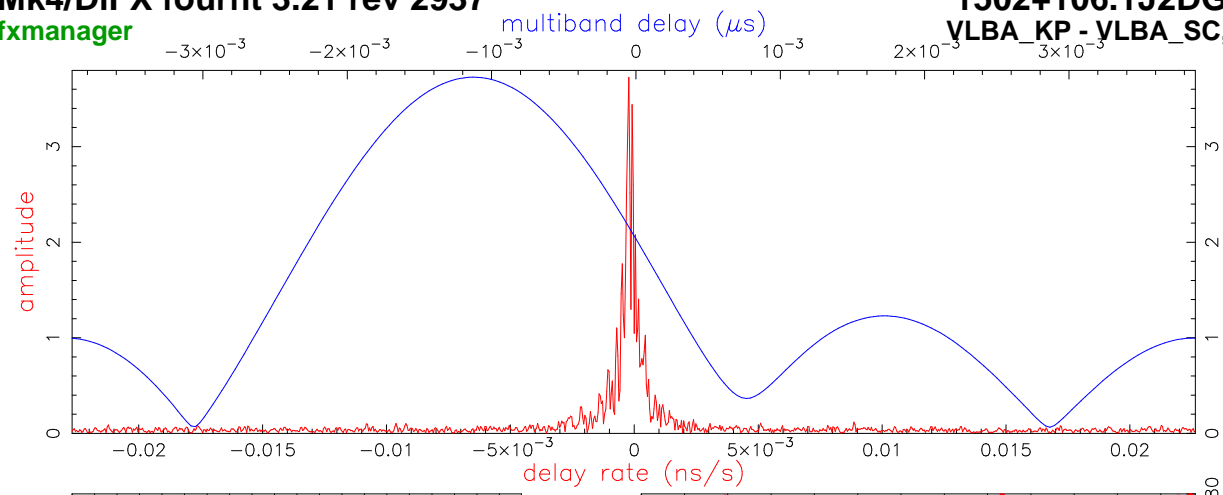
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-159.7	-161.6	-155.3	-160.3	Phase	-159.2
	3.6	3.6	3.6	3.5	Ampl.	3.6
	512.7	513.0	512.8	513.0	Sbd box	512.9
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
h:k	0:0	0:0	0:0	0:0	PC phase	
h:k	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	4.14736617274E+02		Apriori delay (usec)	4.14736778674E+02	Resid mbdelay (usec)	-1.61400E-04 +/- 7.3E-06
Sband delay (usec)	4.14736559549E+02		Apriori clock (usec)	2.2001457E-01	Resid sbdelay (usec)	-2.19125E-04 +/- 2.8E-05
Phase delay (usec)	4.14736768397E+02		Apriori clockrate (us/s)	1.3000001E-07	Resid phdelay (usec)	-1.02770E-05 +/- 4.8E-08
Delay rate (us/s)	-8.35333533145E-01		Apriori rate (us/s)	-8.35333494725E-01	Resid rate (us/s)	-3.84192E-08 +/- 3.5E-10
Total phase (deg)		184.3	Apriori accel (us/s/s)	8.90657630545E-07	Resid phase (deg)	-159.2 +/- 0.8
RMS	64.4	2.5	Amplitude	3.610 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	64.4	2.5	Search (1024X16)	3.546	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	61.7	4.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.3	0.8	Inc. seg. avg.	5.786	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.5	1.3	Inc. frq. avg.	3.609	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
h: az 195.3 el 56.6 pa 11.8		k: az 119.9 el 54.1 pa -48.3		u,v (fr/asec) 2431.660 658.652		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/hk..1J2DGP		Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/hk.Q.85.1J2DGP		

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, kc

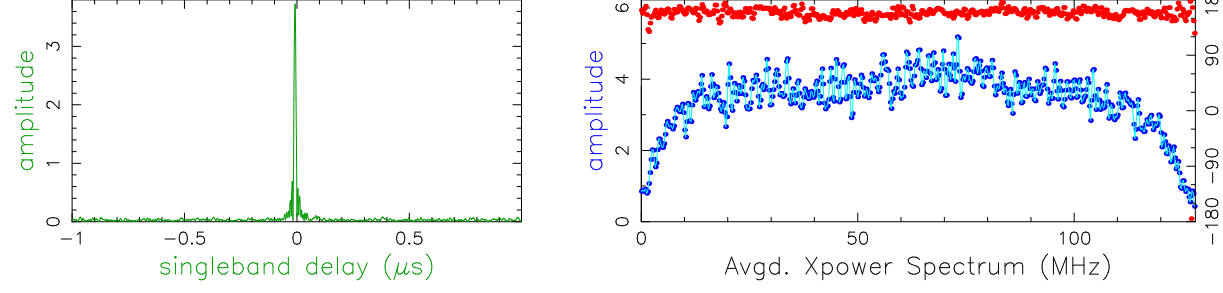
VLBA_KP - VLBA_SC, fgroup Q, pol RR



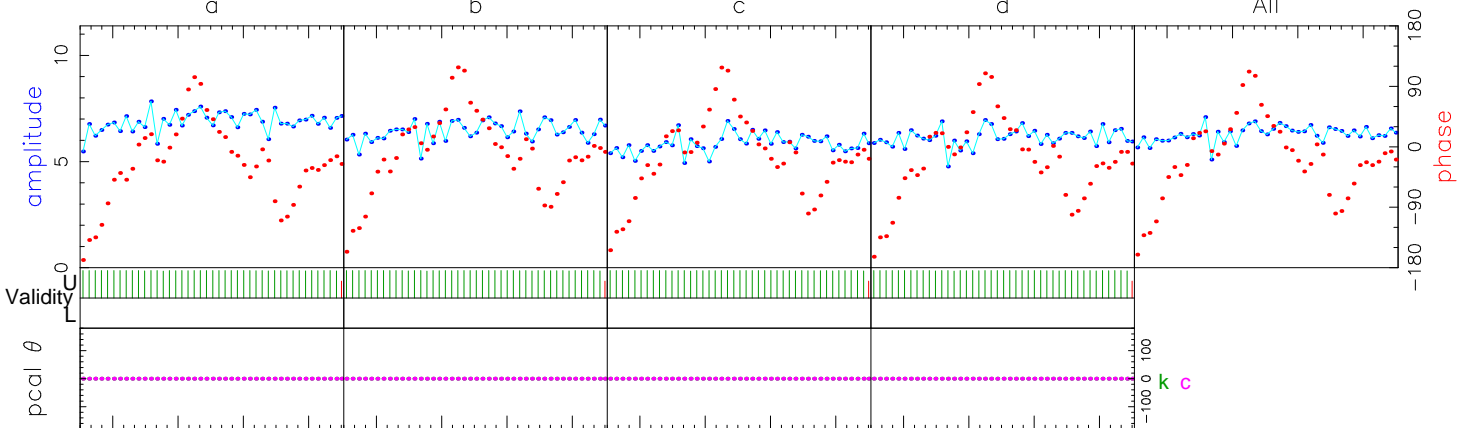
Fringe quality 5

SNR 160.6
 Int time 239.069
 Amp 3.798
 Phase -15.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.008761
 MBD -0.001152
 Fringe rate (Hz) -0.008840
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211449
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"



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



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

	42912.00	43040.00	43168.00	43296.00	All
Group delay (usec)(sbd)	-2.94093360451E+03	-8.5	-13.8	-17.8	-15.9
Sband delay (usec)	-2.94093340123E+03	3.8	3.4	3.6	3.7
Phase delay (usec)	-2.94092464150E+03	0:0	0:0	0:0	3.7
Delay rate (us/s)	1.07145707206E+00	0:0	0:0	0:0	3.3E-10
Total phase (deg)		-205.3			0.7

	42912.00	43040.00	43168.00	43296.00	All
ph/seg (deg)	59.7	2.3	3.567	3.567	3.567
amp/seg (%)	66.5	4.1	0.000	0.000	0.000
ph/frq (deg)	7.5	0.7	6.293	6.293	6.293
amp/frq (%)	6.8	1.2	3.742	3.742	3.742

k: az 119.9 el 54.1 pa -48.3 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -3106.864 1131.464 simultaneous interpolator

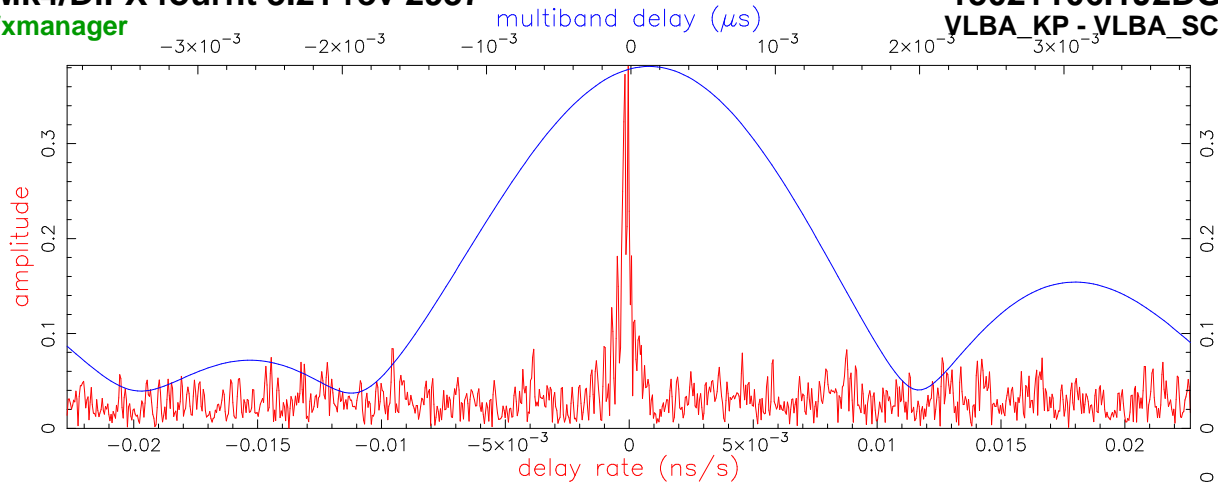
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc.Q.108.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

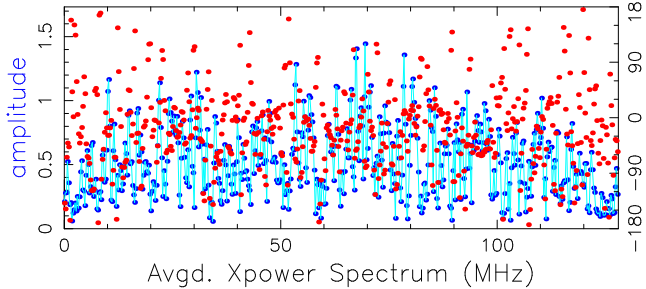
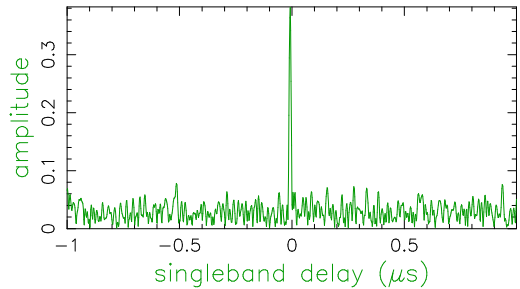
1502+106.1J2DGP, No0154, kc

VLBA_KP - VLBA_SC, fgroup Q, pol LR



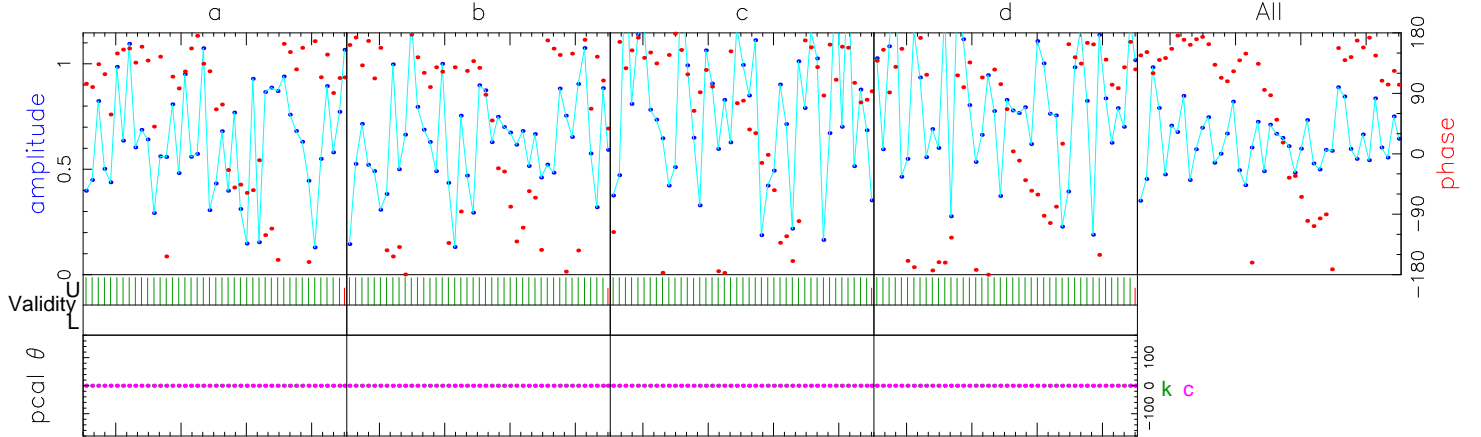
Fringe quality 9

SNR 16.2
 Int time 239.069
 Amp 0.382
 Phase 147.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.008184
 MBD 0.000114
 Fringe rate (Hz)
 -0.002547
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211451
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



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

Group delay (usec)(sbd)	-2.94093233869E+03	Apriori delay (usec)	-2.94092464048E+03	Resid mbdelay (usec)	1.14287E-04	+/-	6.9E-05
Sband delay (usec)	-2.94093282423E+03	Apriori clock (usec)	-8.1778126E+00	Resid sbdelay (usec)	-8.18375E-03	+/-	2.7E-04
Phase delay (usec)	-2.94092463098E+03	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	9.49506E-06	+/-	4.6E-07
Delay rate (us/s)	1.07145721827E+00	Apriori rate (us/s)	1.07145727744E+00	Resid rate (us/s)	-5.91774E-08	+/-	3.3E-09
Total phase (deg)	-42.3	Apriori accel (us/s/s)	2.01642714561E-05	Resid phase (deg)	147.1	+/-	7.1

	RMS	Theor.	Amplitude	0.382 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	66.8	23.2	Search (1024X16)	0.358	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	74.8	40.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	14.3	7.1	Inc. seg. avg.	0.586	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	17.5	12.4	Inc. frq. avg.	0.384	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

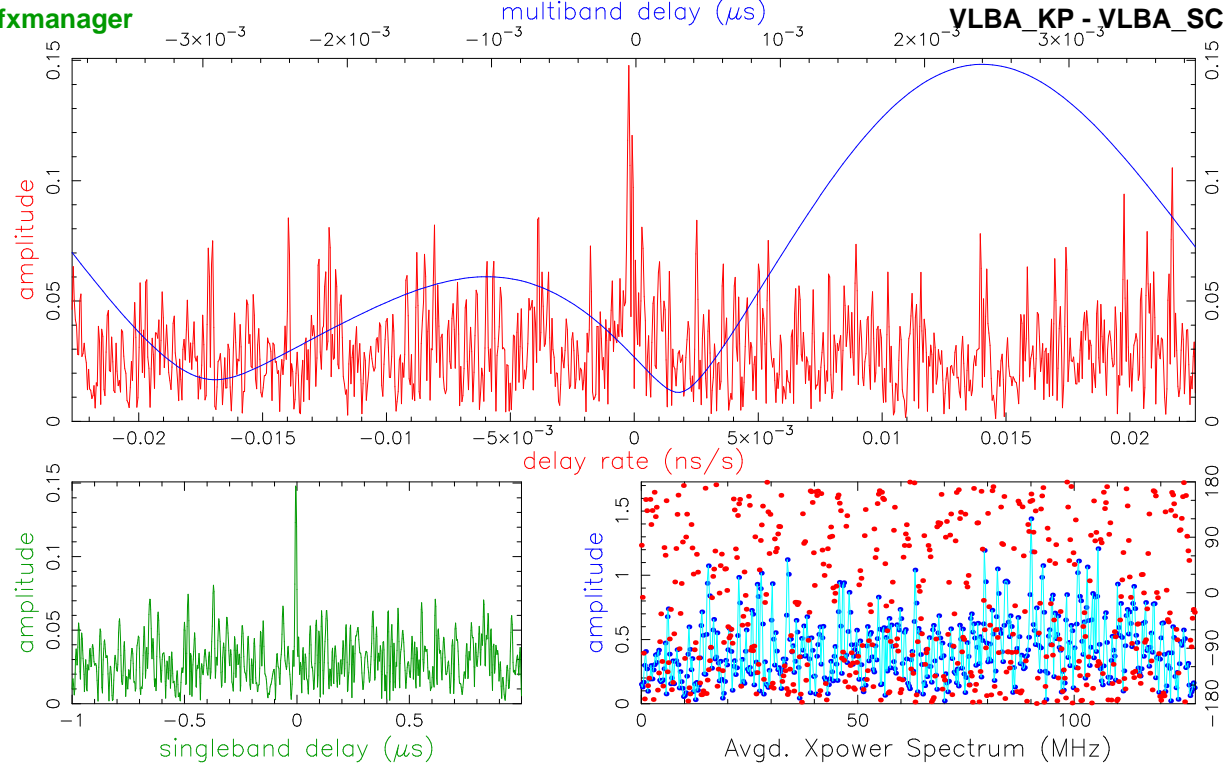
k: az 119.9 el 54.1 pa -48.3 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -3106.864 1131.464 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc.Q.126.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, kc

VLBA_KP - VLBA_SC, fgroup Q, pol RL

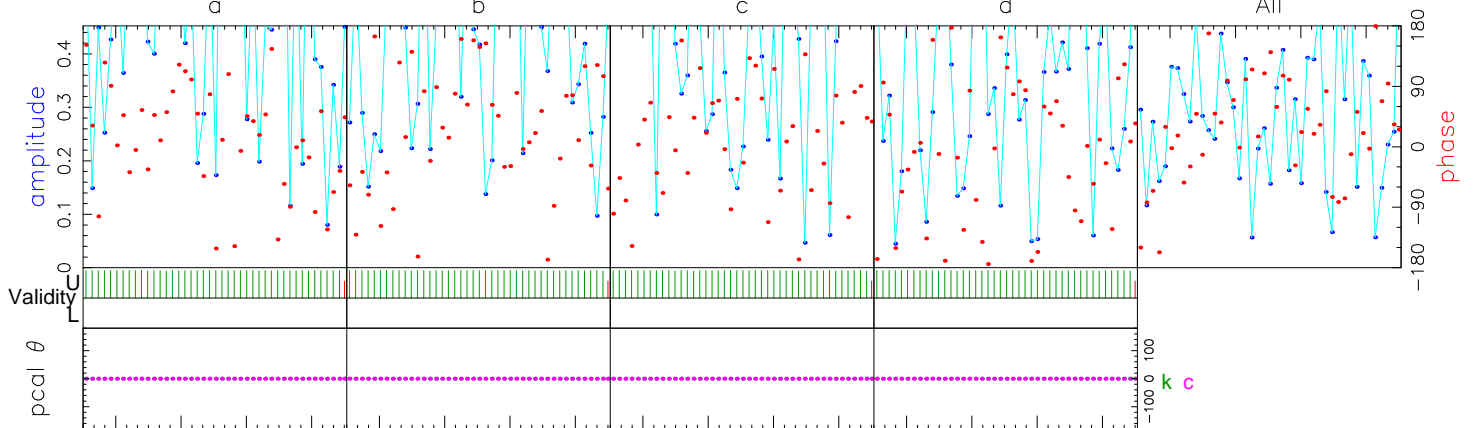


Fringe quality 0

SNR 6.4
 Int time 239.068
 Amp 0.151
 Phase 28.3
 PFD 2.4e-02
 Delays (us)
 SBD -0.004950
 MBD 0.002502
 Fringe rate (Hz)
 -0.009174
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211453
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



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

	42912.00	43040.00	43168.00	43296.00	Resid mbdelay (usec)	2.50175E-03	+/- 1.7E-04
Group delay (usec)(sbd)	-2.94092995123E+03				Resid sbdelay (usec)	-4.94988E-03	+/- 6.8E-04
Sband delay (usec)	-2.94092959035E+03				Resid phdelay (usec)	1.82326E-06	+/- 1.2E-06
Phase delay (usec)	-2.94092463865E+03				Resid rate (us/s)	-2.13152E-07	+/- 8.4E-09
Delay rate (us/s)	1.07145706429E+00				Resid phase (deg)	28.3	+/- 18.0
Total phase (deg)		-161.2					

	RMS	Theor.	Amplitude	0.151 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	75.3	58.9	Search (1024X16)	0.145	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	125.8	102.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	27.7	18.0	Inc. seg. avg.	0.188	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	41.3	31.4	Inc. frq. avg.	0.144	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -3106.864 1131.464 simultaneous interpolator

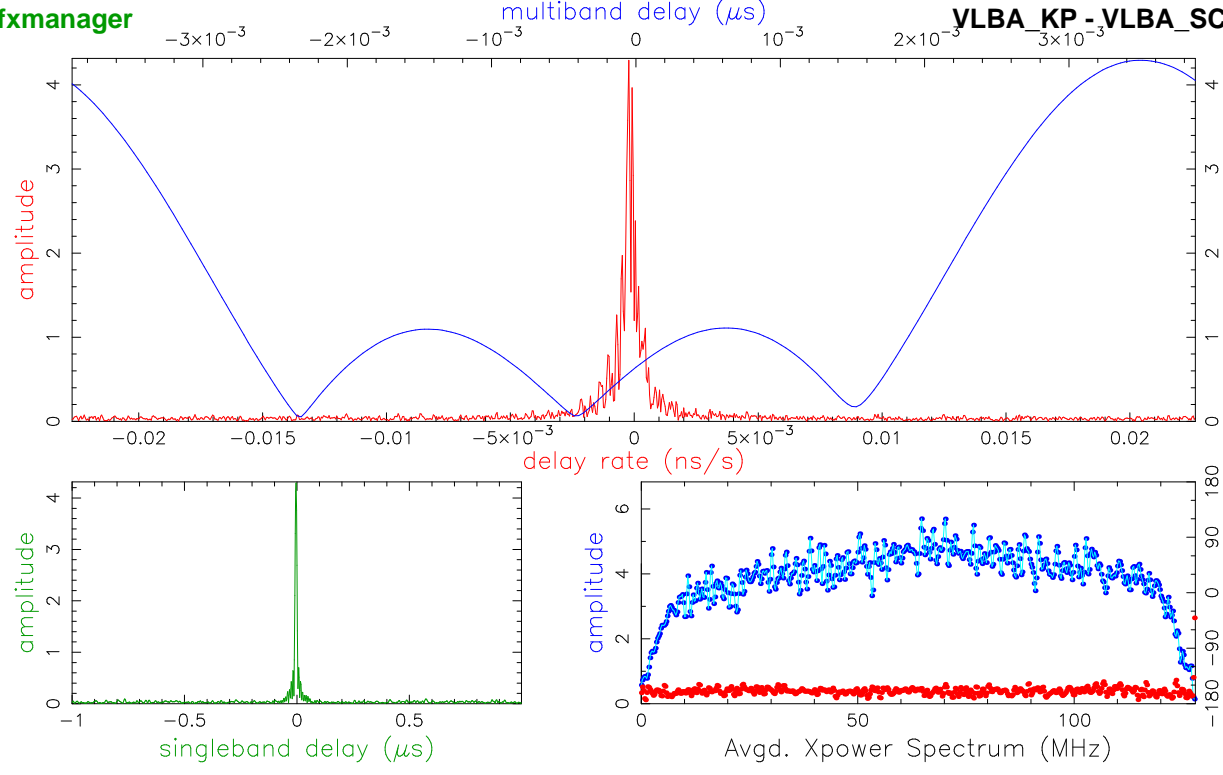
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc.Q.141.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, kc

VLBA_KP - VLBA_SC, fgroup Q, pol LL

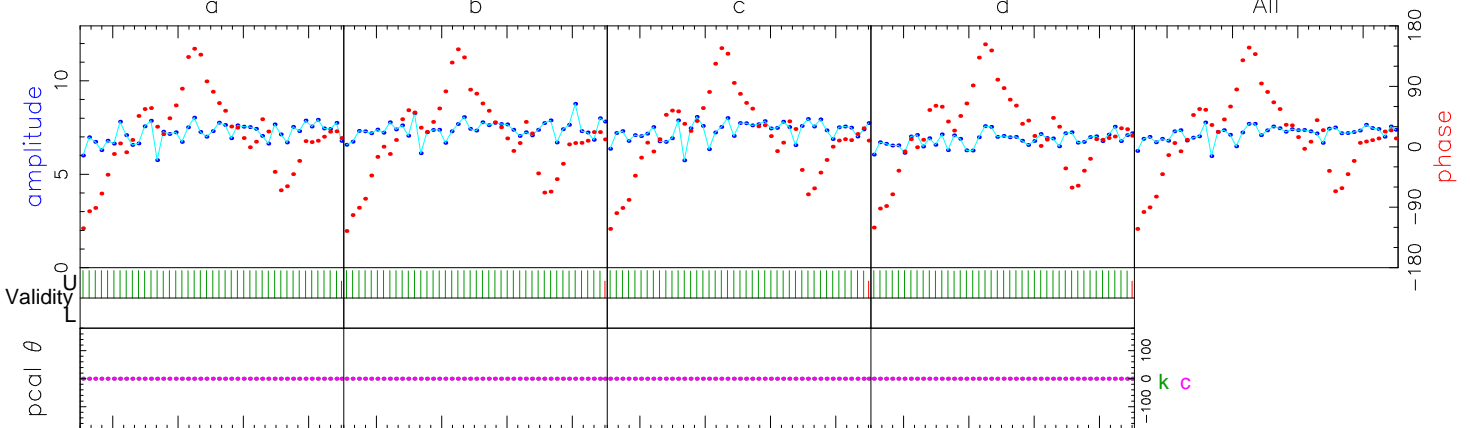


Fringe quality 5

SNR 182.4
 Int time 239.068
 Amp 4.315
 Phase 18.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.004429
 MBD 0.003469
 Fringe rate (Hz)
 -0.008822
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211447
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



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

	42912.00	43040.00	43168.00	43296.00	Resid mbdelay (usec)	3.46856E-03	+/- 6.1E-06
Group delay (usec)(sbd)	-2.94092898442E+03	-2.94092898442E+03	-2.94092898442E+03	-2.94092898442E+03	Resid sbdelay (usec)	-4.42875E-03	+/- 2.4E-05
Sband delay (usec)	-2.94092906923E+03	-2.94092906923E+03	-2.94092906923E+03	-2.94092906923E+03	Resid phdelay (usec)	1.16854E-06	+/- 4.1E-08
Phase delay (usec)	-2.94092463931E+03	-2.94092463931E+03	-2.94092463931E+03	-2.94092463931E+03	Resid rate (us/s)	-2.04967E-07	+/- 2.9E-10
Delay rate (us/s)	1.07145707248E+00	1.07145707248E+00	1.07145707248E+00	1.07145707248E+00	Resid phase (deg)	18.1	+/- 0.6
Total phase (deg)	-171.3	-171.3	-171.3	-171.3			

	RMS	Theor.	Amplitude	4.315 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	59.2	2.1	Search (1024X16)	4.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	67.1	3.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.6	0.6	Inc. seg. avg.	7.182	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.5	1.1	Inc. frq. avg.	4.296	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -3106.864 1131.464 simultaneous interpolator

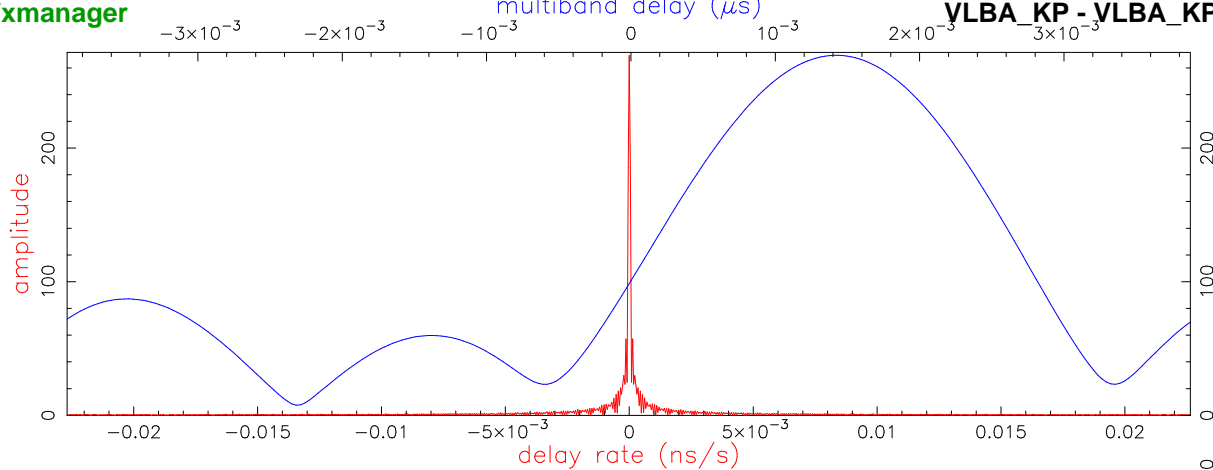
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kc.Q.89.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

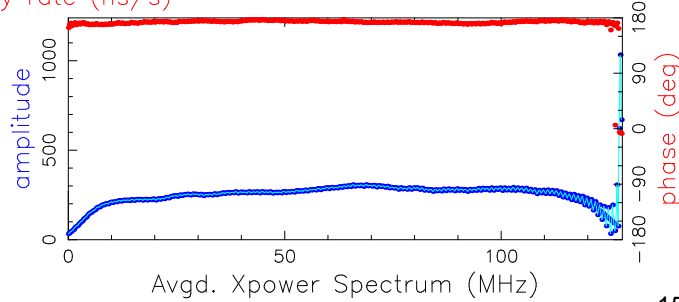
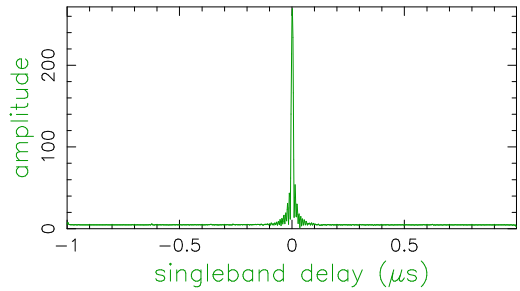
1502+106.1J2DGP, No0154, kk

VLBA_KP - VLBA_KP, fgroup Q, pol LR



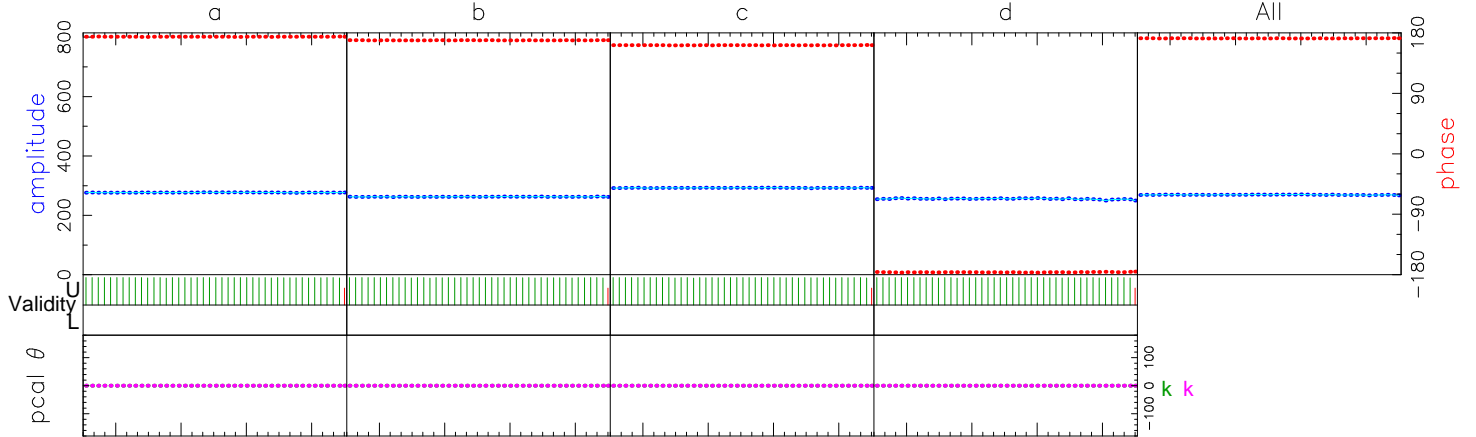
Fringe quality 8

SNR 11484.2
 Int time 239.076
 Amp 271.605
 Phase 171.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.001316
 MBD 0.001382
 Fringe rate (Hz) 0.000003
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211450
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



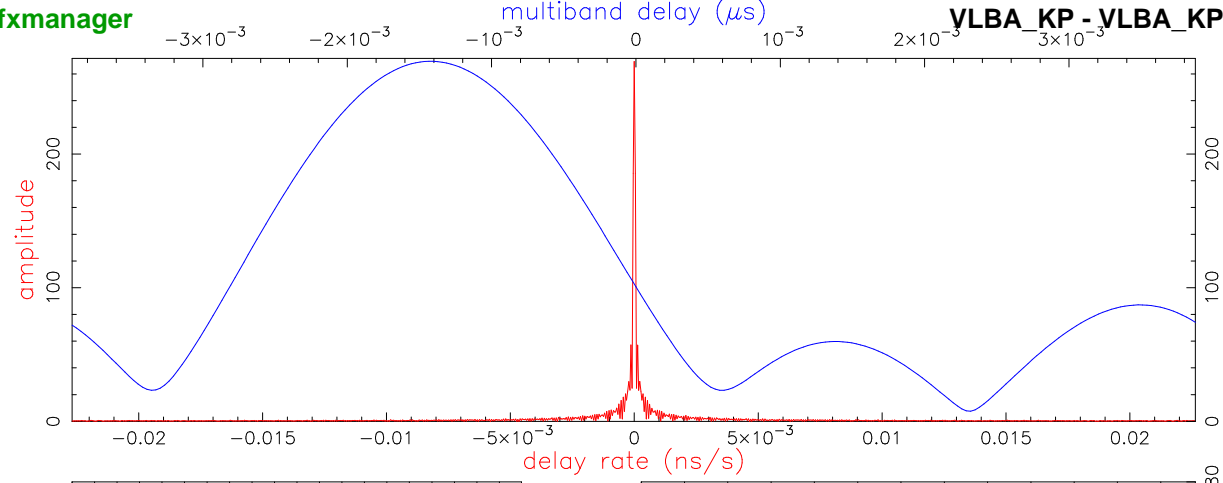
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	174.1	168.9	161.5	-176.2	Phase	171.7
	276.9	262.7	292.7	255.7	Ampl.	272.0
	513.9	513.3	513.7	513.9	Sbd box	513.7
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
k:k	0:0	0:0	0:0	0:0	PC phase	
k:k	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	1.3820000000E-03	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	1.38200E-03	+/- 9.7E-08
Group delay (usec)(sbd)	1.3160000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.31600E-03	+/- 3.8E-07
Sband delay (usec)	1.10832622199E-05	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.10833E-05	+/- 6.4E-10
Phase delay (usec)	6.23965322361E-11	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	6.23965E-11	+/- 4.6E-12
Delay rate (us/s)		Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	171.7	+/- 0.0
Total phase (deg)						

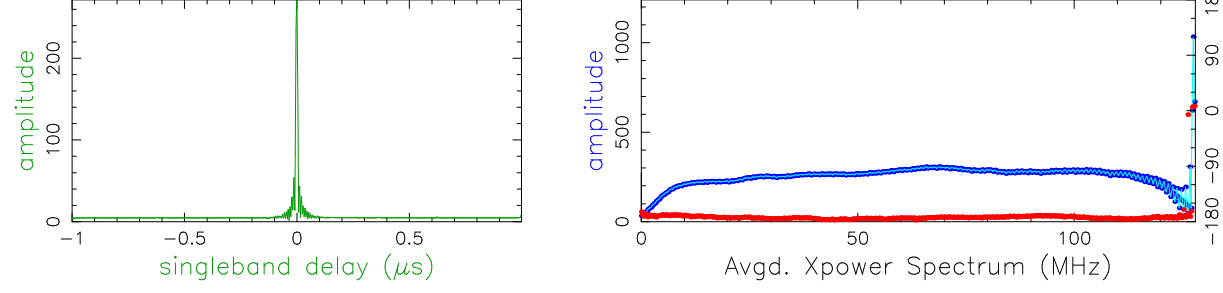
	RMS	Theor.	Amplitude	271.605 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.1	0.0	Search (1024X16)	269.233	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.9	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	11.5	0.0	Inc. seg. avg.	269.249	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	5.2	0.0	Inc. frq. avg.	271.960	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

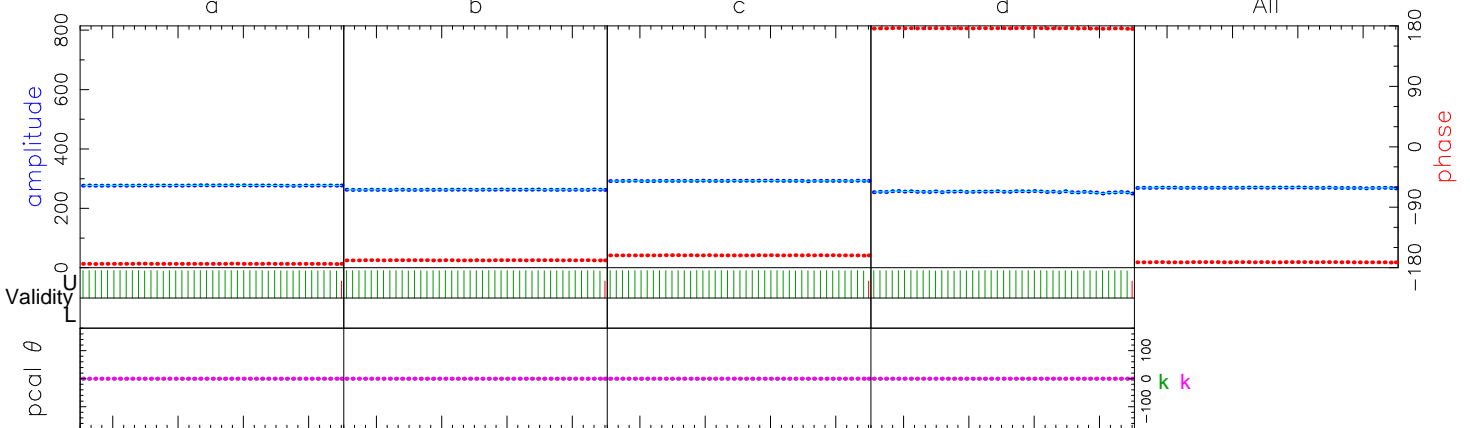
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kk.Q.117.1J2DGP



Fringe quality 8
SNR 11484.3
Int time 239.075
Amp 271.605
Phase -171.7
PFD 0.0e+00
Delays (us)
SBD -0.001316
MBD -0.001382
Fringe rate (Hz)
-0.000003
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211452
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"



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



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

Group delay (usec)(sbd)	-1.38200000000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.38200E-03	+/-	9.7E-08
Sband delay (usec)	-1.31600000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.31600E-03	+/-	3.8E-07
Phase delay (usec)	-1.10832622199E-05	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.10833E-05	+/-	6.4E-10
Delay rate (us/s)	-6.23965322361E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-6.23965E-11	+/-	4.6E-12
Total phase (deg)	-171.7	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-171.7	+/-	0.0

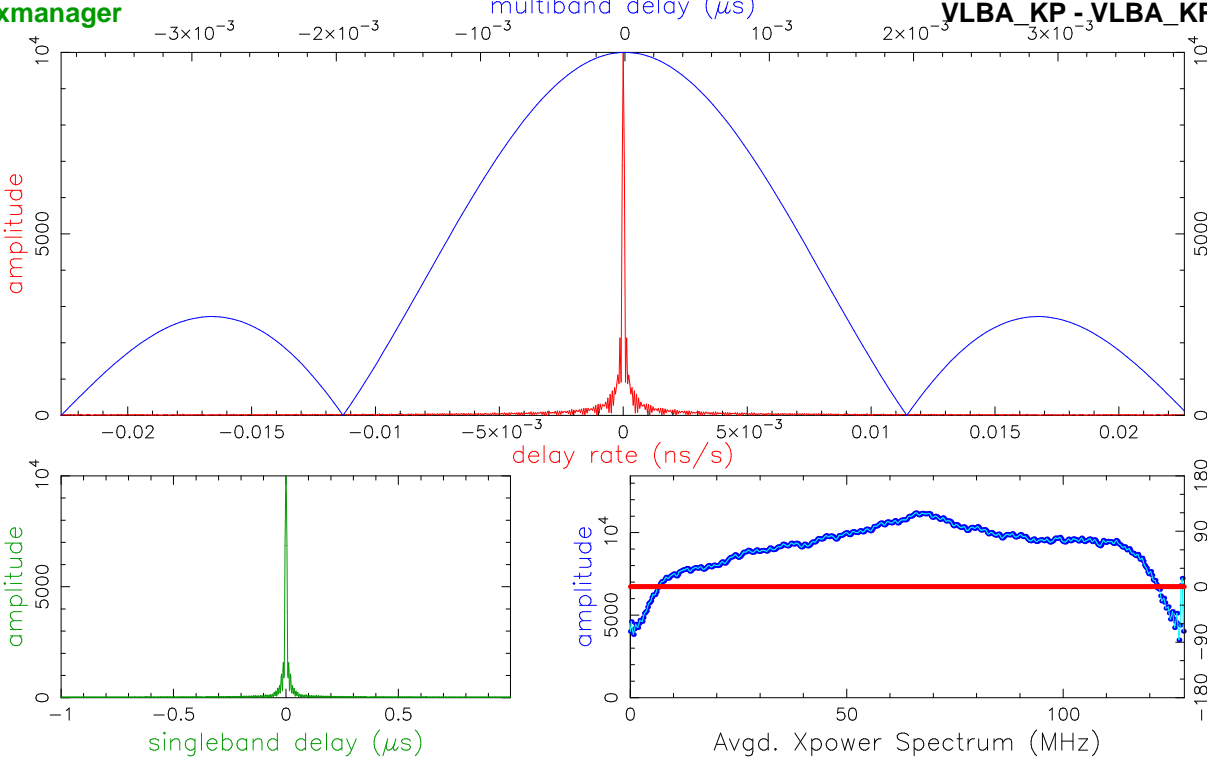
ph/seg (deg)	0.1	Theor.	0.0	Amplitude	271.605 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.9	0.1		Search (1024X16)	269.233	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	11.5	0.0		Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	5.2	0.0		Inc. seg. avg.	269.250	Sample rate(MISamp/s):	256	dr window (ns/s)	-0.023 0.023		
				Inc. frq. avg.	271.961	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

1502+106.1J2DGP, No0154, kk

VLBA_KP - VLBA_KP, fgroup Q, pol LL

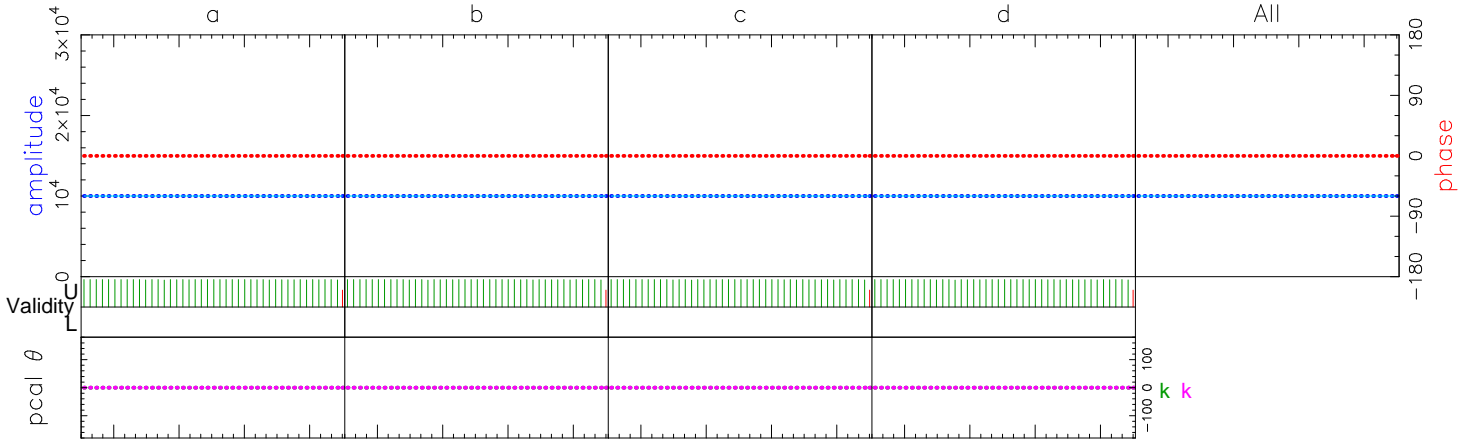


Fringe quality 9

SNR 422829.5
 Int time 239.076
 Amp 10000.001
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211446
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



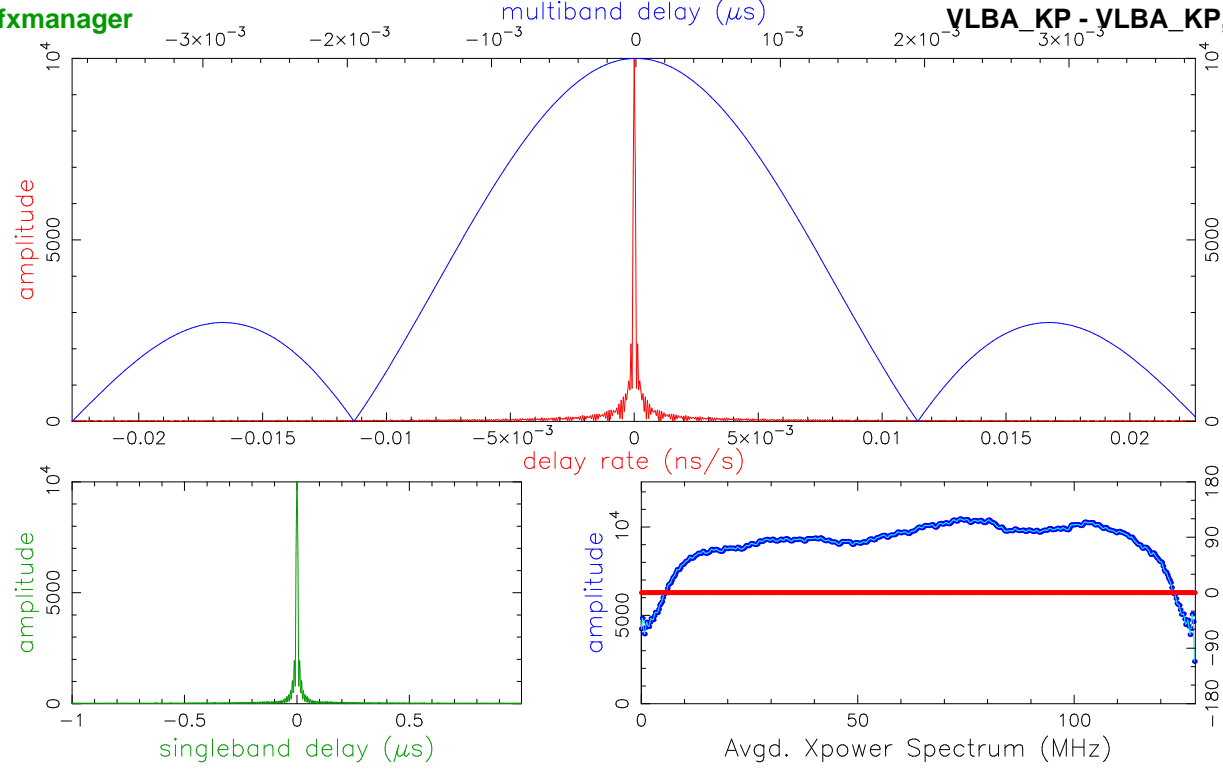
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
k:k	0:0	0:0	0:0	0:0		
k:k	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
k	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
k	Q00UL	Q01UL	Q02UL	Q03UL		

	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.000000E+00	+/- 2.6E-09
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.000000E+00	+/- 2.6E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.000000E+00	+/- 1.0E-08
Phase delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.000000E+00	+/- 1.7E-11
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.000000E+00	+/- 1.3E-13
Total phase (deg)	0.0	0.0	0.0	0.0	0.0	+/- 0.0

	RMS	Theor.	Amplitude	10000.001 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.0	0.0	Search (1024X16)	10000.001	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(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.001	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kk.Q.81.1J2DGP

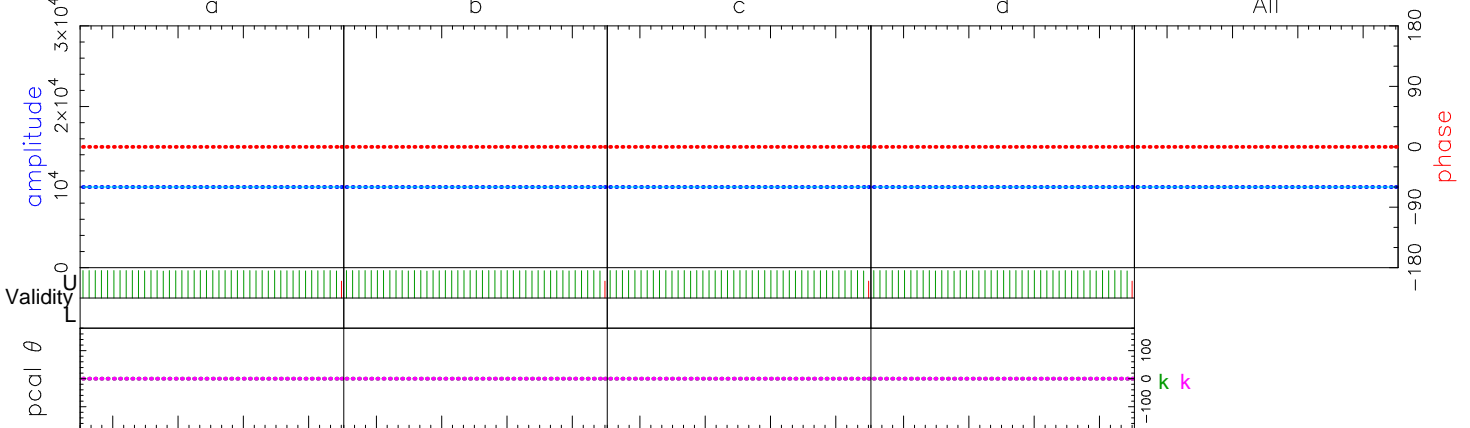


Fringe quality 9

SNR 422829.4
Int time 239.075
Amp 10000.001
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c202b
Yr:day 16383
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211448
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



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

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

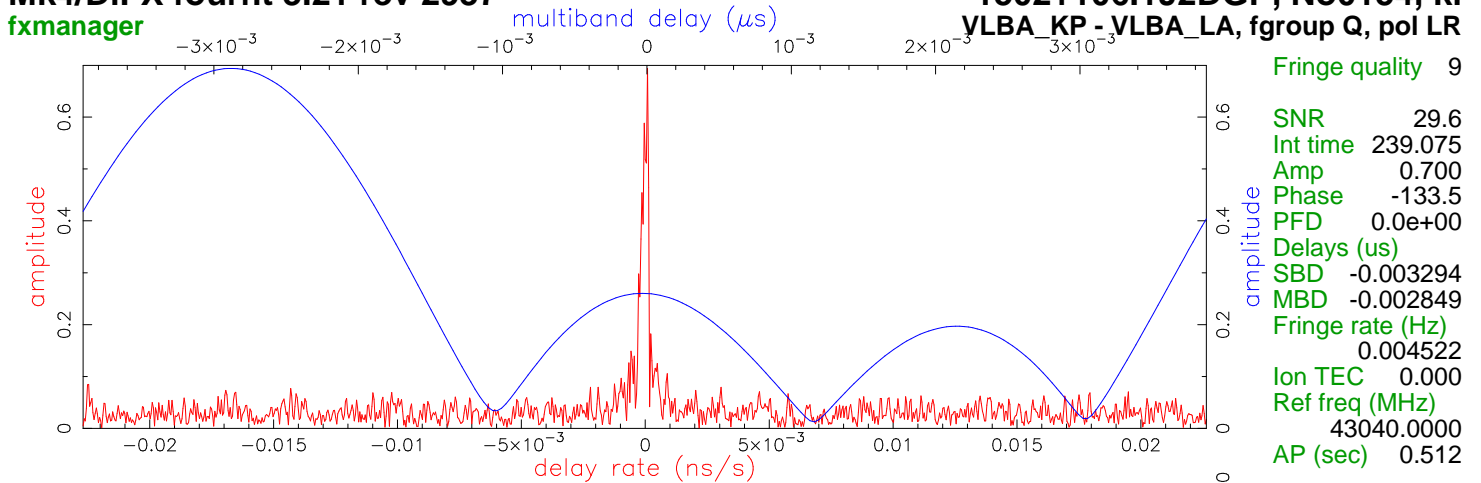
ph/seg (deg) 0.0 0.0 Search (1024X16) 10000.001 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Sample rate(MSamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
k: az 119.9 el 54.1 pa -48.3 k: az 119.9 el 54.1 pa -48.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kk..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kk.Q.97.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

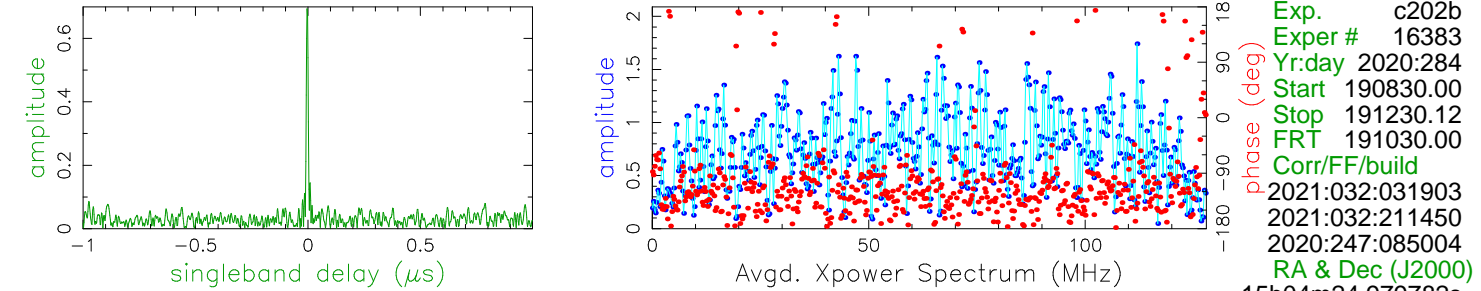
1502+106.1J2DGP, No0154, kl

VLBA_KP - VLBA_LA, fgroup Q, pol LR



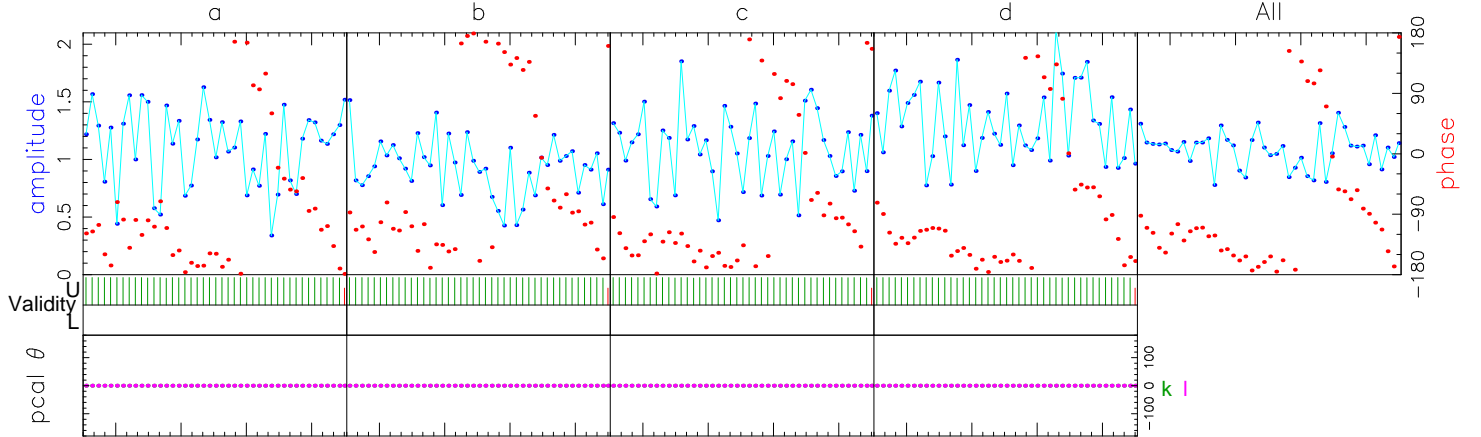
Fringe quality 9

SNR 29.6
 Int time 239.075
 Amp 0.700
 Phase -133.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.003294
 MBD -0.002849
 Fringe rate (Hz)
 0.004522
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211450
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-132.0	-127.7	-140.3	-133.3	Phase	-133.5
0.7	0.6	0.7	0.8	Ampl.	0.7
511.5	511.5	511.0	511.4	Sbd box	511.3
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
k:l 0:0	0:0	0:0	0:0	PC phase	
k:l 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
k Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-2.86847220781E+02	Apriori delay (usec)	-2.86844371362E+02	Resid mbdelay (usec)	-2.84942E-03	+/-	3.8E-05
Sband delay (usec)	-2.86847664987E+02	Apriori clock (usec)	7.4540520E-01	Resid sbdelay (usec)	-3.29363E-03	+/-	1.5E-04
Phase delay (usec)	-2.86844379978E+02	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	-8.61554E-06	+/-	2.5E-07
Delay rate (us/s)	1.31326551589E-01	Apriori rate (us/s)	1.31326446522E-01	Resid rate (us/s)	1.05067E-07	+/-	1.8E-09
Total phase (deg)	-41.1	Apriori accel (us/s/s)	4.00938228034E-07	Resid phase (deg)	-133.5	+/-	3.9

ph/seg (deg)	57.4	Theor.	12.7	Amplitude	0.700 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	58.7	Search (1024X16)	0.661	Search	0.661	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	6.4	Inc. seg. avg.	1.057	Inc. seg. avg.	1.057	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	9.6	Inc. frq. avg.	0.694	Inc. frq. avg.	0.694	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 119.9 el 54.1 pa -48.3 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -382.251 -236.619 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl.Q.115.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

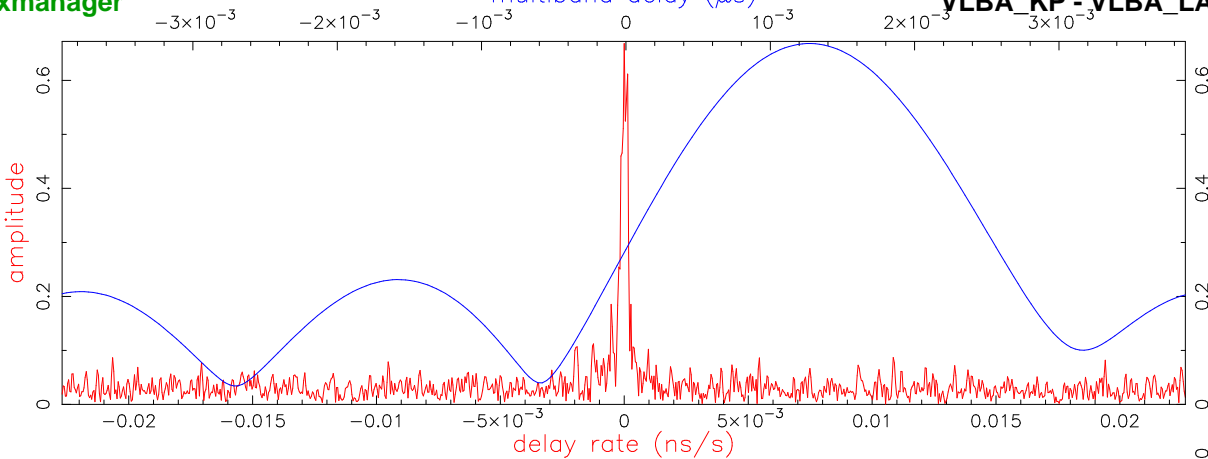
fxmanager

1502+106.1J2DGP, No0154, kl

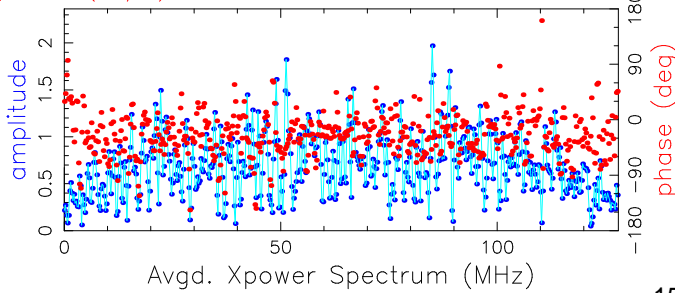
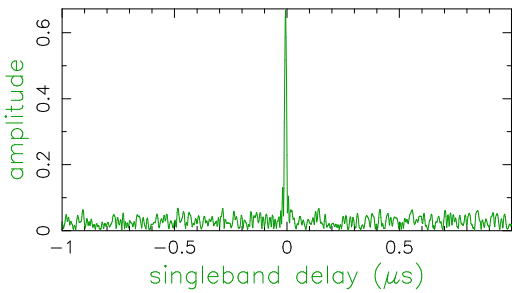
VLBA_KP - VLBA_LA, fgroup Q, pol RL

multiband delay (μ s)

Fringe quality 9

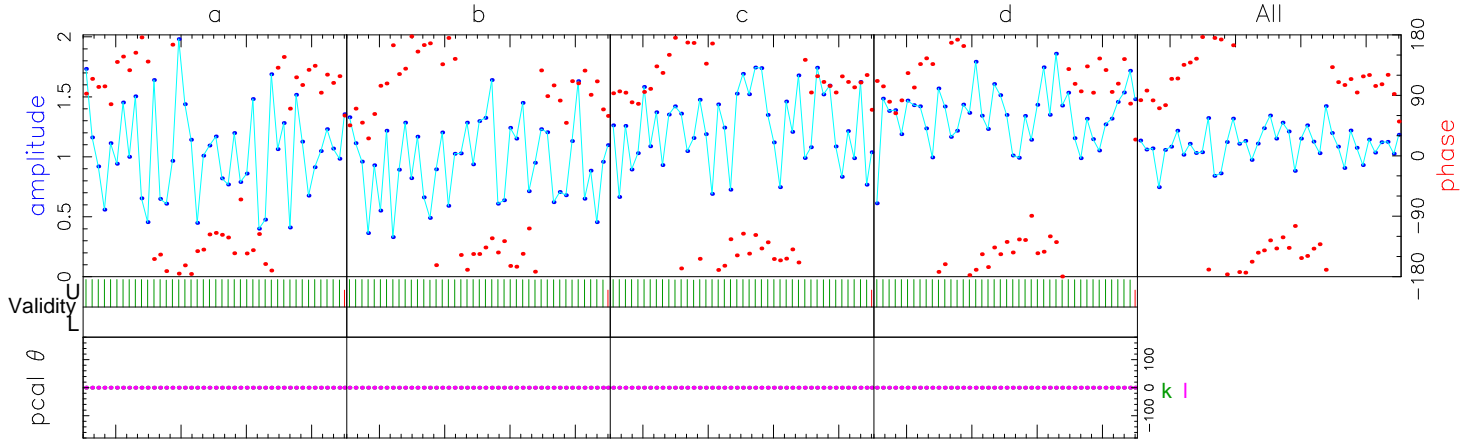


SNR 28.4
 Int time 239.075
 Amp 0.672
 Phase 157.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.006385
 MBD 0.001251
 Fringe rate (Hz)
 -0.000589
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211452
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
160.6	147.0	156.9	160.7	Phase	157.0
0.6	0.5	0.8	0.8	Ampl.	0.7
509.9	509.0	509.9	510.1	Sbd box	509.7
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
k:l 0:0	0:0	0:0	0:0	PC phase	
k:l 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
k Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-2.86850933300E+02	Apriori delay (usec)	-2.86844371362E+02	Resid mbdelay (usec)	1.25056E-03	+/-	3.9E-05
Sband delay (usec)	-2.86850756737E+02	Apriori clock (usec)	7.4540520E-01	Resid sbdelay (usec)	-6.38537E-03	+/-	1.5E-04
Phase delay (usec)	-2.86844361227E+02	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	1.01355E-05	+/-	2.6E-07
Delay rate (us/s)	1.31326432829E-01	Apriori rate (us/s)	1.31326446522E-01	Resid rate (us/s)	-1.36932E-08	+/-	1.9E-09
Total phase (deg)	-110.6	Apriori accel (us/s/s)	4.00938228034E-07	Resid phase (deg)	157.0	+/-	4.0

ph/seg (deg)	54.5	Theor.	13.2	Amplitude	0.672 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	67.5	Search (1024X16)	0.640	Search	0.640	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	8.0	Interp.	0.000	Inc. seg. avg.	1.076	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	16.1	Inc. frq. avg.	0.669	Inc. frq. avg.	0.669	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 119.9 el 54.1 pa -48.3 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -382.251 -236.619 simultaneous interpolator

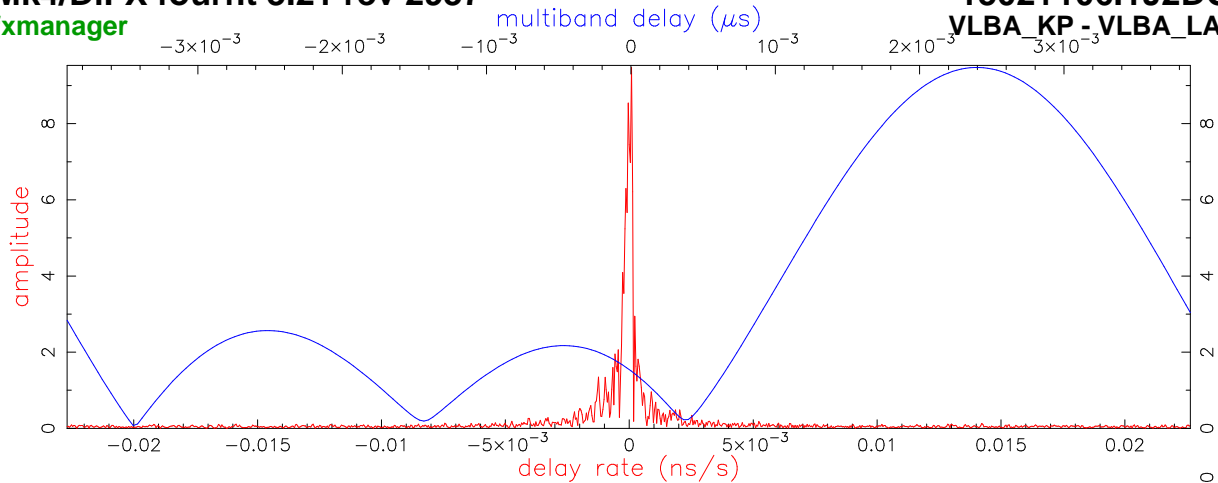
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl.Q.131.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

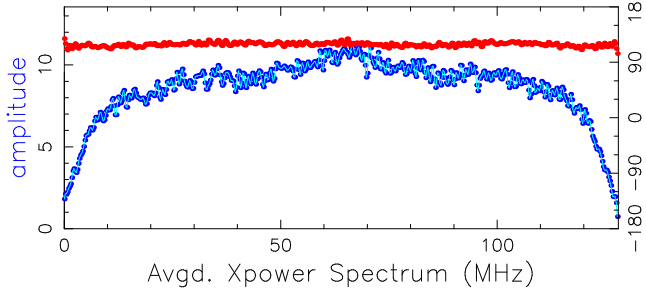
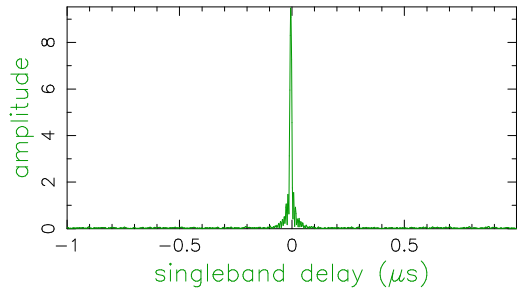
1502+106.1J2DGP, No0154, kl

VLBA_KP - VLBA_LA, fgroup Q, pol LL



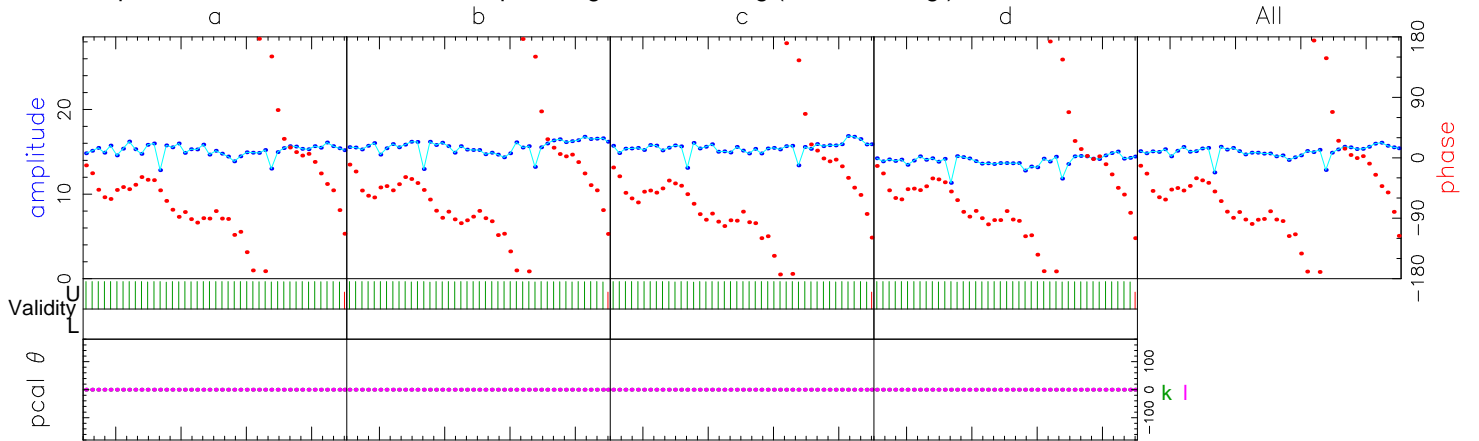
Fringe quality 5

SNR 403.0
 Int time 239.075
 Amp 9.531
 Phase -60.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.005358
 MBD 0.002420
 Fringe rate (Hz)
 0.004557
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211447
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



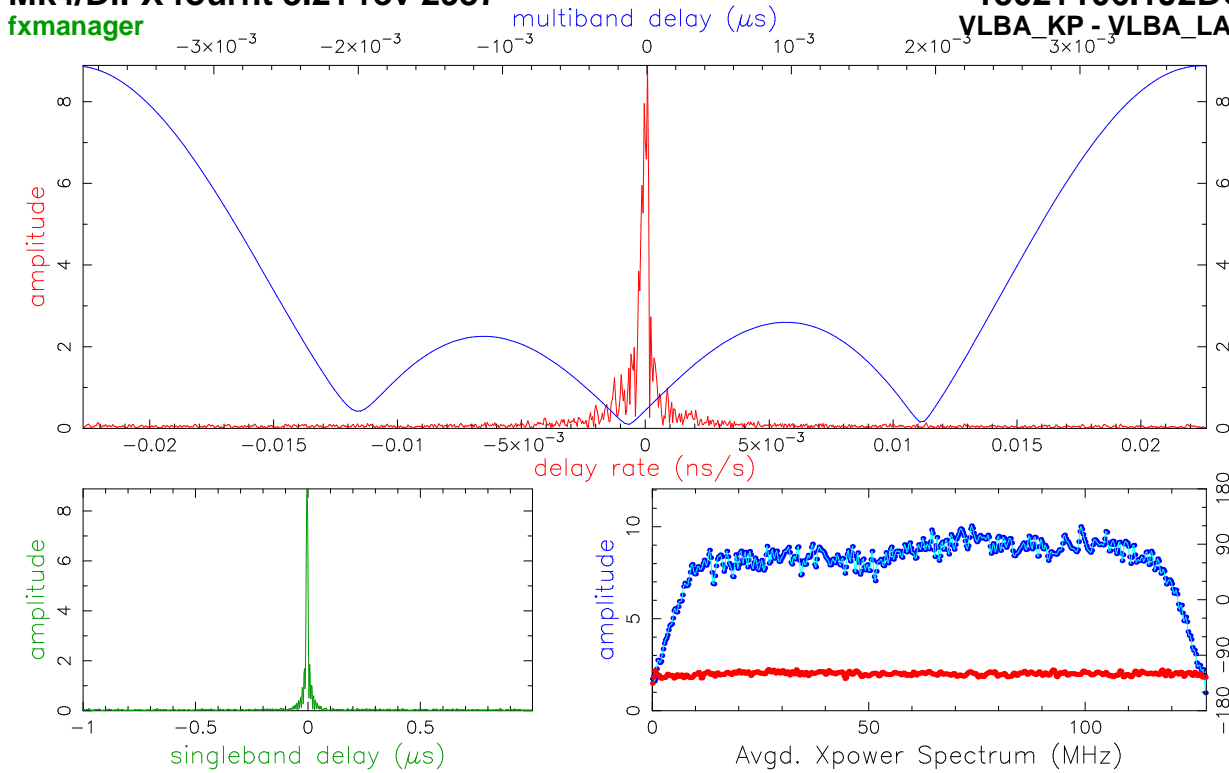
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-58.4	-58.0	-63.5	-60.1	Phase	-60.0
9.6	9.8	9.8	8.8	Ampl.	9.5
510.5	510.1	510.2	510.3	Sbd box	510.3
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
k:l 0:0	0:0	0:0	0:0	PC phase	
k:l 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
k Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-2.86849763718E+02	Apriori delay (usec)	-2.86844371362E+02	Resid mbdelay (usec)	2.42014E-03	+/- 2.8E-06
Sband delay (usec)	-2.86849729612E+02	Apriori clock (usec)	7.4540520E-01	Resid sbdelay (usec)	-5.35825E-03	+/- 1.1E-05
Phase delay (usec)	-2.86844375235E+02	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	-3.87261E-06	+/- 1.8E-08
Delay rate (us/s)	1.31326552392E-01	Apriori rate (us/s)	1.31326446522E-01	Resid rate (us/s)	1.05870E-07	+/- 1.3E-10
Total phase (deg)	-327.6	Apriori accel (us/s/s)	4.00938228034E-07	Resid phase (deg)	-60.0	+/- 0.3

ph/seg (deg)	RMS	Theor.	Amplitude	9.531 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	57.0	0.9	Search (1024X16)	8.953	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	58.0	1.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%)	3.1	0.3	Inc. seg. avg.	15.015	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
	4.5	0.5	Inc. frq. avg.	9.483	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -382.251 -236.619 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl.Q.84.1J2DGP

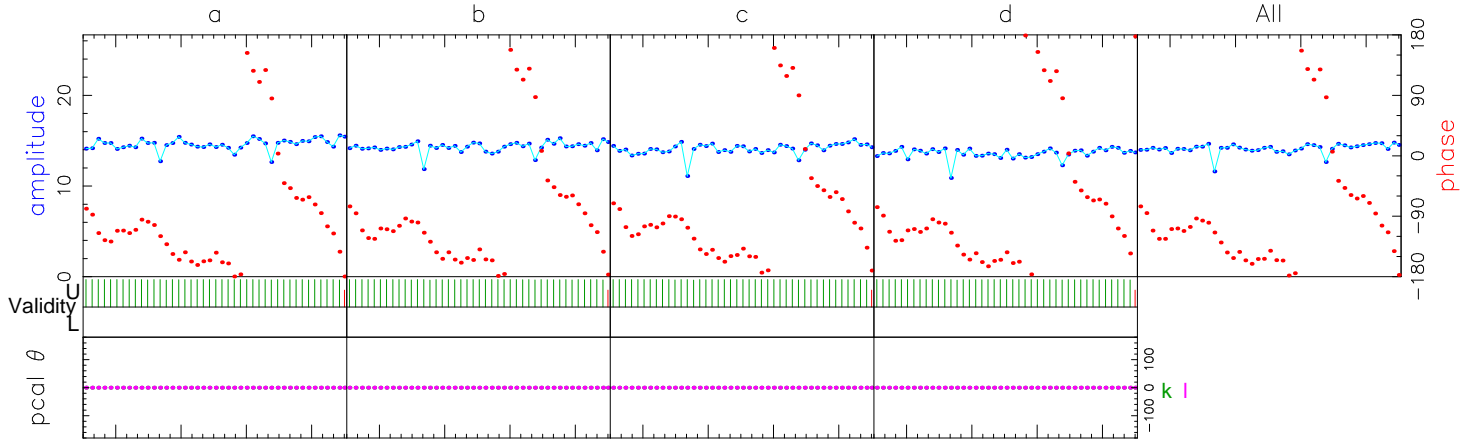


Fringe quality 5

SNR 375.9
Int time 239.075
Amp 8.890
Phase -123.1
PFD 0.0e+00
Delays (us)
SBD -0.004111
MBD -0.003983
Fringe rate (Hz) 0.004543
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211448
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-125.6	-123.0	-118.0	-125.7	Phase	-123.1
9.2	9.0	8.8	8.6	Ampl.	8.9
510.9	511.1	510.8	510.7	Sbd box	510.9
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
k:l 0:0	0:0	0:0	0:0	PC phase	
k:l 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
k Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-2.86848354281E+02	Apriori delay (usec)	-2.86844371362E+02	Resid mbdelay (usec)	-3.98292E-03	+/- 3.0E-06
Sband delay (usec)	-2.86848481987E+02	Apriori clock (usec)	7.4540520E-01	Resid sbdelay (usec)	-4.11063E-03	+/- 1.1E-05
Phase delay (usec)	-2.86844379307E+02	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	-7.94411E-06	+/- 2.0E-08
Delay rate (us/s)	1.31326552066E-01	Apriori rate (us/s)	1.31326446522E-01	Resid rate (us/s)	1.05544E-07	+/- 1.4E-10
Total phase (deg)	-30.7	Apriori accel (us/s/s)	4.00938228034E-07	Resid phase (deg)	-123.1	+/- 0.3

ph/seg (deg)	RMS 56.7	Theor. 1.0	Amplitude 8.890 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	59.3	1.7	Search (1024X16) 8.404	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	4.4	0.3	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	2.4	0.5	Inc. seg. avg. 14.129	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg. 8.893	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
				nlags: 512	t_cohere infinite

k: az 119.9 el 54.1 pa -48.3 l: az 131.0 el 55.5 pa -38.1 u,v (fr/asec) -382.251 -236.619 simultaneous interpolator

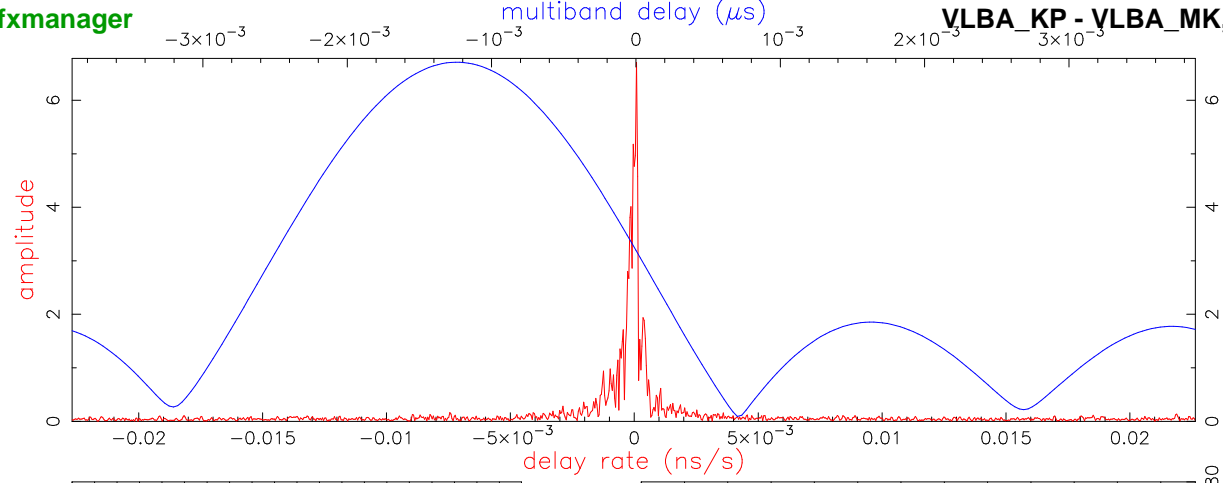
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kl.Q.99.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, km

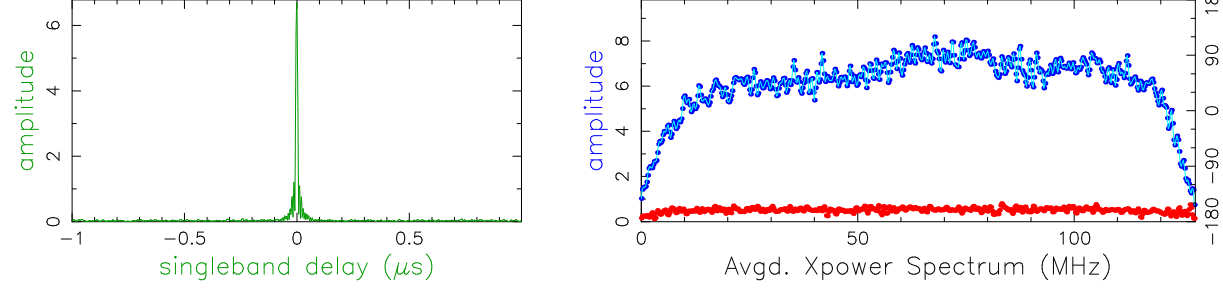
VLBA_KP - VLBA_MK, fgroup Q, pol RR



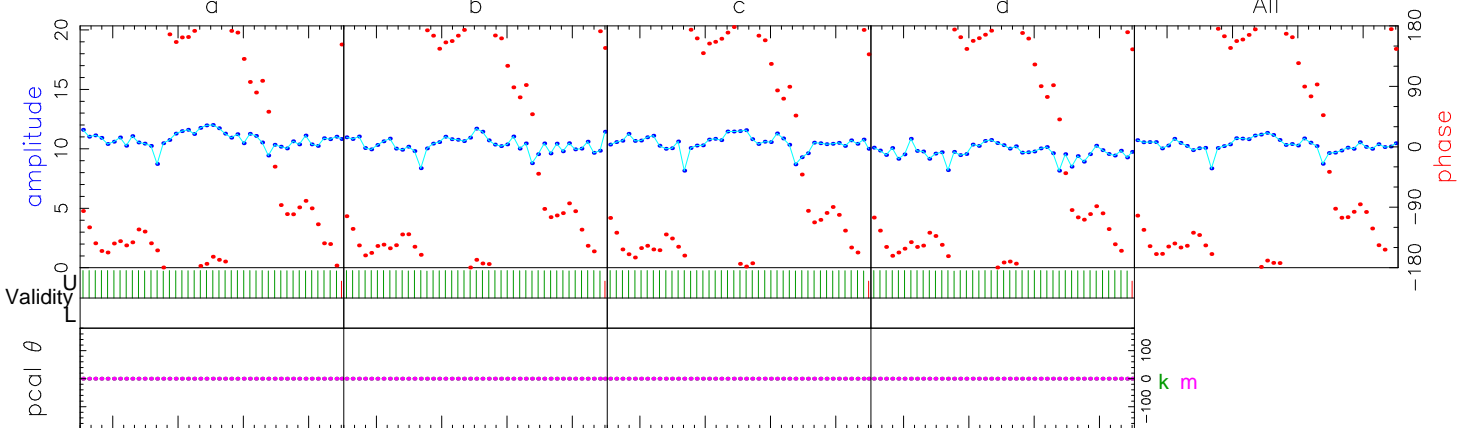
Fringe quality 5

SNR 286.8
 Int time 239.075
 Amp 6.782
 Phase -161.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.001235
 MBD -0.001200
 Fringe rate (Hz) 0.003147
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211450
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"



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



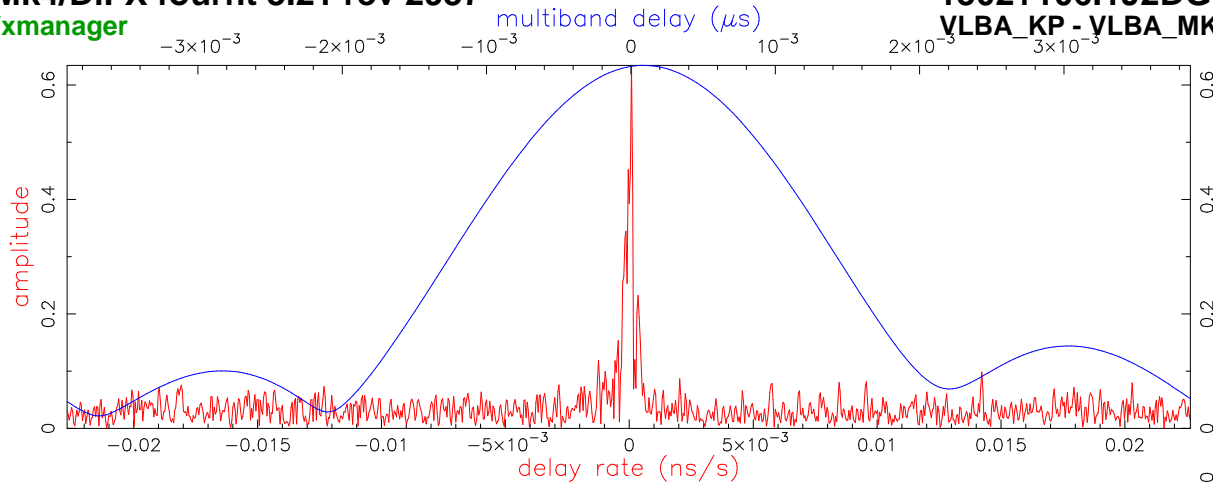
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-156.7	-162.1	-165.0	-162.0	Phase	-161.4
	7.0	6.7	6.8	6.3	Ampl.	6.7
	512.0	512.5	512.2	512.7	Sbd box	512.4
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.07121210586E+04	Apriori delay (usec)	1.07121222583E+04	Resid mbdelay (usec)	-1.19970E-03	+/-	3.9E-06
Sband delay (usec)	1.07121210228E+04	Apriori clock (usec)	-1.3030001E+01	Resid sbdelay (usec)	-1.23550E-03	+/-	1.5E-05
Phase delay (usec)	1.07121222479E+04	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.04161E-05	+/-	2.6E-08
Delay rate (us/s)	-7.25939096193E-01	Apriori rate (us/s)	-7.25939169305E-01	Resid rate (us/s)	7.31117E-08	+/-	1.9E-10
Total phase (deg)	197.4	Apriori accel (us/s/s)	-5.31517521872E-05	Resid phase (deg)	-161.4	+/-	0.4

ph/seg (deg)	RMS 55.5	Theor. 1.3	Amplitude 6.782 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	52.9	2.3	Search (1024X16) 6.301	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	4.3	0.4	Interp. 0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.9	0.7	Inc. seg. avg. 10.325	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
			Inc. frq. avg. 6.716					

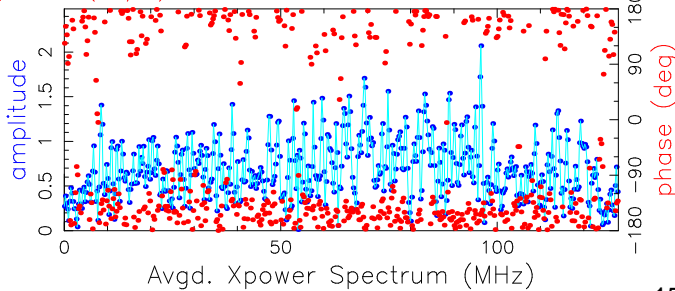
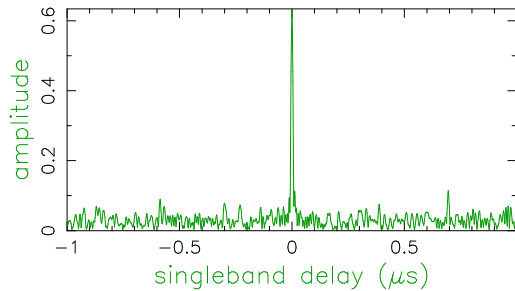
k: az 119.9 el 54.1 pa -48.3 m: az 85.0 el 17.5 pa -72.4 u,v (fr/asec) 2089.580 436.851 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/km..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/km.Q.110.1J2DGP



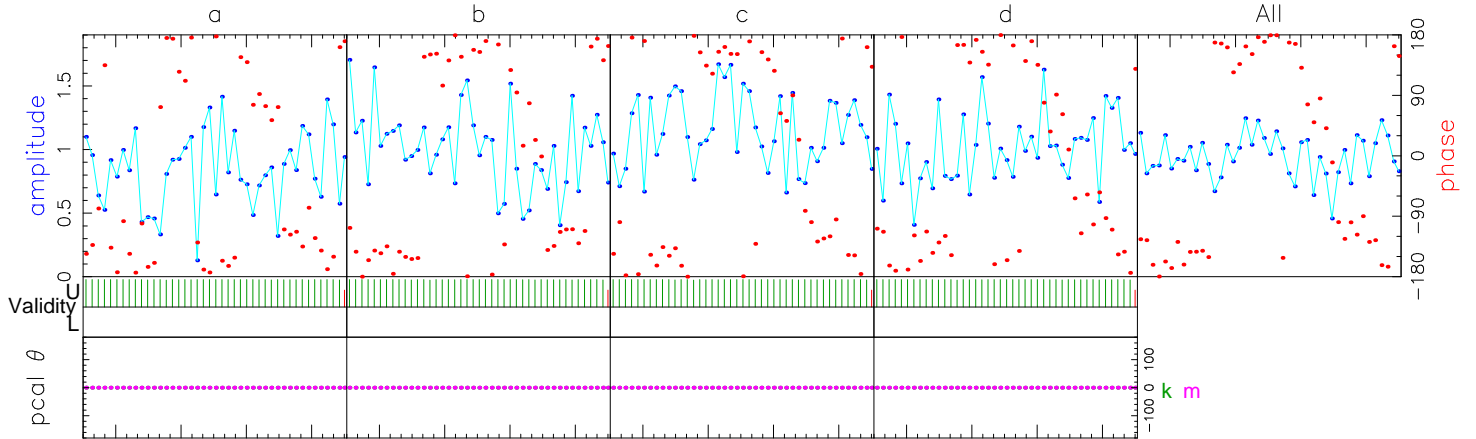
Fringe quality 9

SNR 26.8
Int time 239.076
Amp 0.634
Phase -169.6
PFD 0.0e+00
Delays (us)
SBD -0.000126
MBD 0.000080
Fringe rate (Hz)
0.003167
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211452
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



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

	1.07121223385E+04	Apriori delay (usec)	1.07121222583E+04	Resid mbdelay (usec)	8.01756E-05	+/- 4.1E-05
Group delay (usec)(sbd)	1.07121221323E+04	Apriori clock (usec)	-1.3030001E+01	Resid sbdelay (usec)	-1.26000E-04	+/- 1.6E-04
Sband delay (usec)	1.07121222473E+04	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.09429E-05	+/- 2.8E-07
Phase delay (usec)	-7.25939095728E-01	Apriori rate (us/s)	-7.25939169305E-01	Resid rate (us/s)	7.35769E-08	+/- 2.0E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-5.31517521872E-05	Resid phase (deg)	-169.6	+/- 4.3
Total phase (deg)	189.3					

	RMS	Theor.	Amplitude	0.634 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	58.1	14.0	Search (1024X16)	0.604	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	55.7	24.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.7	4.3	Inc. seg. avg.	0.917	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	15.4	7.5	Inc. frq. avg.	0.636	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 m: az 85.0 el 17.5 pa -72.4 u,v (fr/asec) 2089.580 436.851 simultaneous interpolator

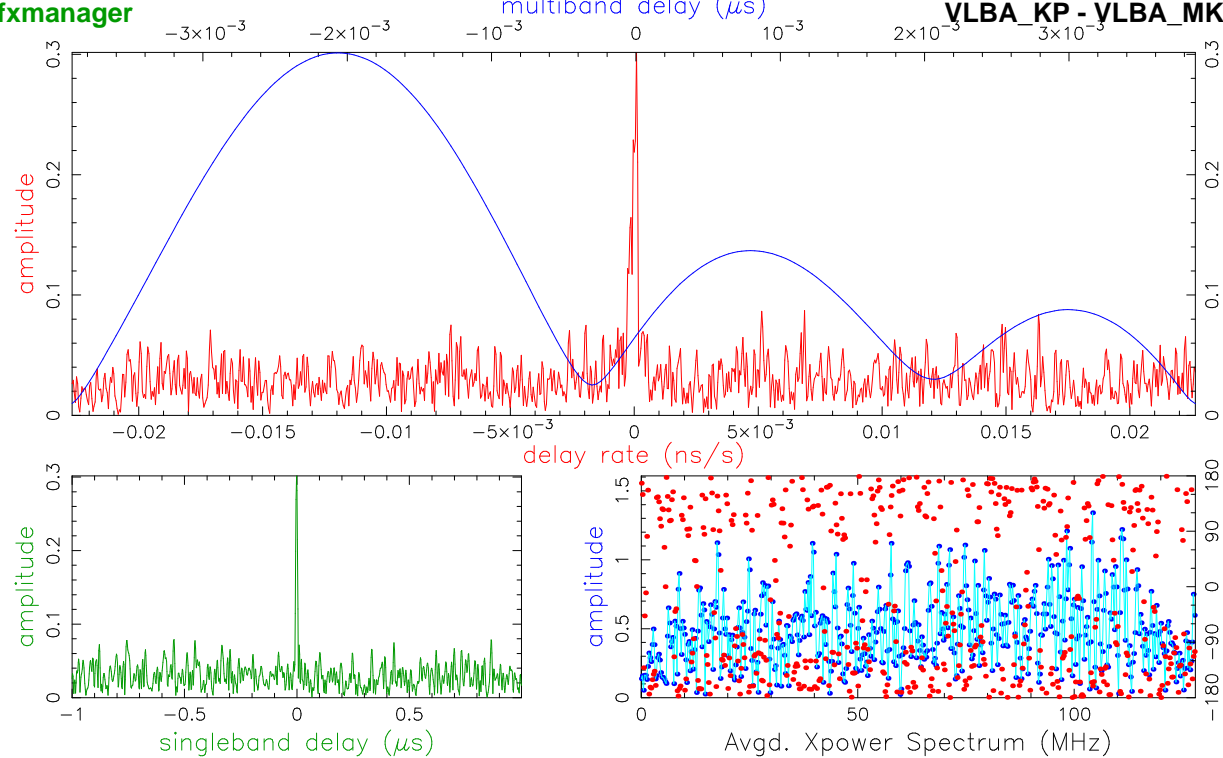
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/km..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/km.Q.130.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, km

VLBA_KP - VLBA_MK, fgroup Q, pol RL

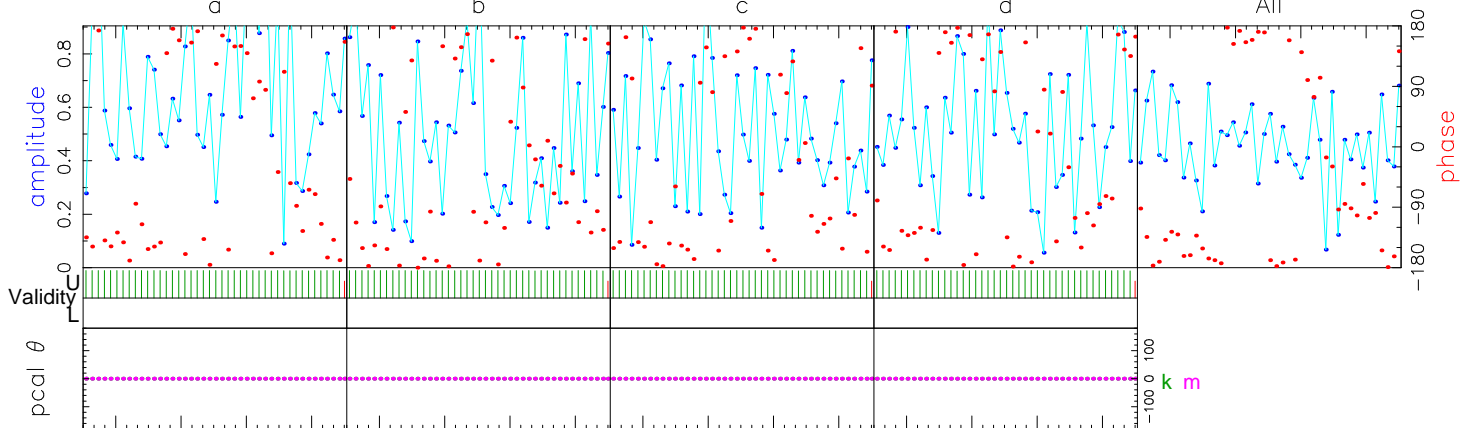


Fringe quality 9

SNR 12.8
 Int time 239.075
 Amp 0.302
 Phase -163.4
 PFD 8.1e-29
 Delays (us)
 SBD -0.001698
 MBD -0.002061
 Fringe rate (Hz)
 0.002889
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211454
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-169.7	-145.2	-169.6	-164.9	Phase	-163.4
	0.4	0.3	0.3	0.3	Ampl.	0.3
	511.9	511.9	512.3	512.3	Sbd box	512.1
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.07121201977E+04	Apriori delay (usec)	1.07121222583E+04	Resid mbdelay (usec)	-2.06054E-03	+/-	8.7E-05
Sband delay (usec)	1.07121205603E+04	Apriori clock (usec)	-1.3030001E+01	Resid sbdelay (usec)	-1.69800E-03	+/-	3.4E-04
Phase delay (usec)	1.07121222477E+04	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.05439E-05	+/-	5.8E-07
Delay rate (us/s)	-7.25939102175E-01	Apriori rate (us/s)	-7.25939169305E-01	Resid rate (us/s)	6.71302E-08	+/-	4.2E-09
Total phase (deg)	195.5	Apriori accel (us/s/s)	-5.31517521872E-05	Resid phase (deg)	-163.4	+/-	9.0

ph/seg (deg)	RMS 56.7	Theor. 29.5	Amplitude	0.302 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	71.6	51.4	Search (1024X16)	0.276	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	14.4	9.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/frq (%)	15.1	15.7	Inc. seg. avg.	0.407	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023
			Inc. frq. avg.	0.302	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

k: az 119.9 el 54.1 pa -48.3 m: az 85.0 el 17.5 pa -72.4 u,v (fr/asec) 2089.580 436.851 simultaneous interpolator

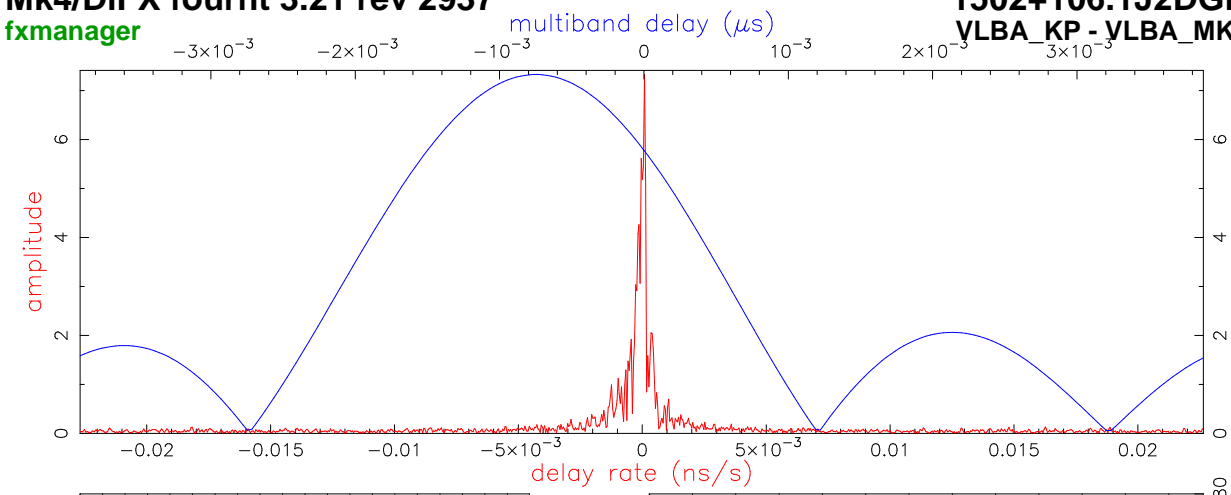
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/km..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/km.Q.150.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, km

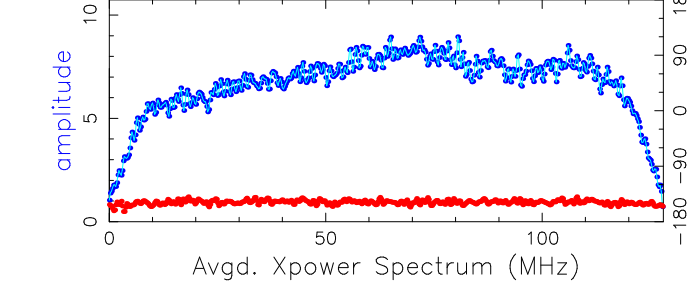
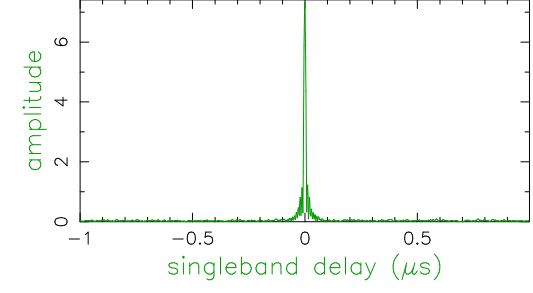
VLBA_KP - VLBA_MK, fgroup Q, pol LL



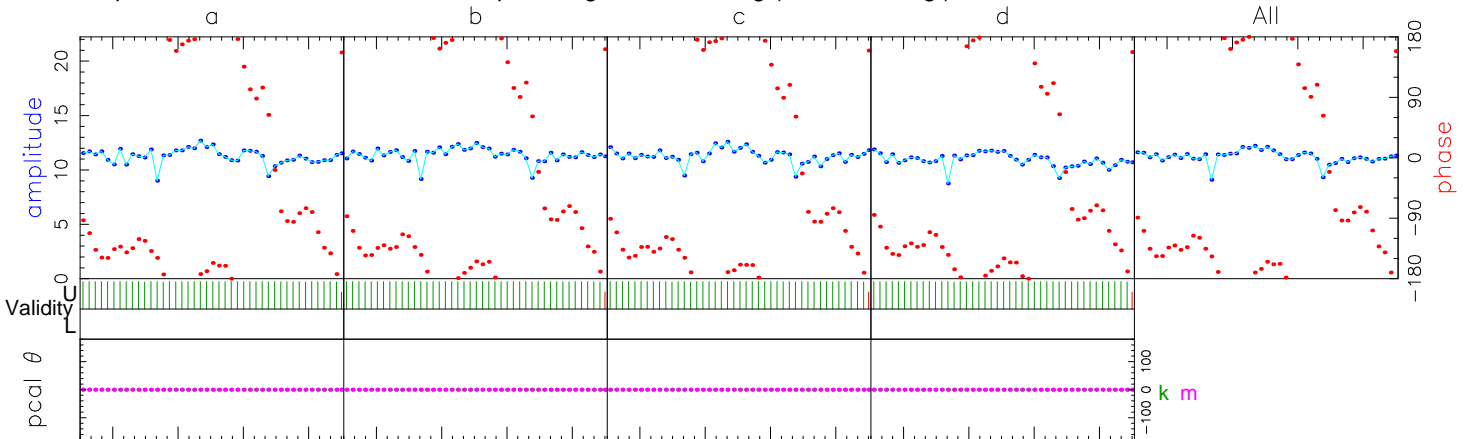
Fringe quality 5

SNR 313.4
 Int time 239.076
 Amp 7.412
 Phase -147.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.000740
 MBD -0.000783
 Fringe rate (Hz) 0.003158
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211447
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"



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



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

Group delay (usec)(sbd)	1.07121214756E+04	Apriori delay (usec)	1.07121222583E+04	Resid mbdelay (usec)	-7.82668E-04	+/- 3.5E-06
Sband delay (usec)	1.07121215183E+04	Apriori clock (usec)	-1.3030001E+01	Resid sbdelay (usec)	-7.40000E-04	+/- 1.4E-05
Phase delay (usec)	1.07121222487E+04	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-9.54025E-06	+/- 2.4E-08
Delay rate (us/s)	-7.25939095926E-01	Apriori rate (us/s)	-7.25939169305E-01	Resid rate (us/s)	7.33783E-08	+/- 1.7E-10
Total phase (deg)	211.0	Apriori accel (us/s/s)	-5.31517521872E-05	Resid phase (deg)	-147.8	+/- 0.4

ph/seg (deg)	55.2	1.2	Amplitude	7.412 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	51.9	2.1	Search (1024X16)	6.889	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	3.3	0.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	2.0	0.6	Inc. seg. avg.	11.209	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	7.331	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 m: az 85.0 el 17.5 pa -72.4 u,v (fr/asec) 2089.580 436.851 simultaneous interpolator

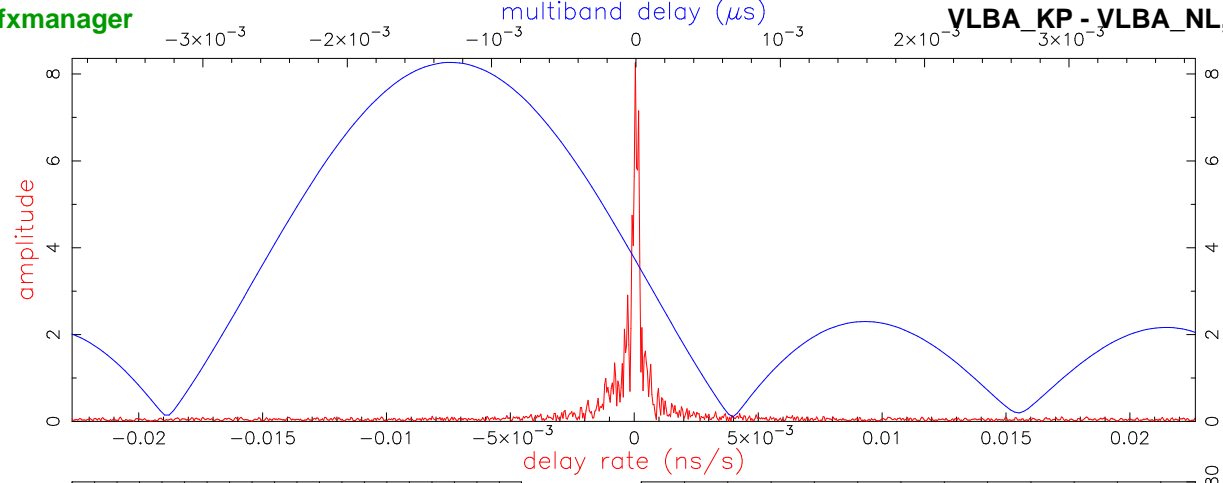
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/km..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/km.Q.87.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

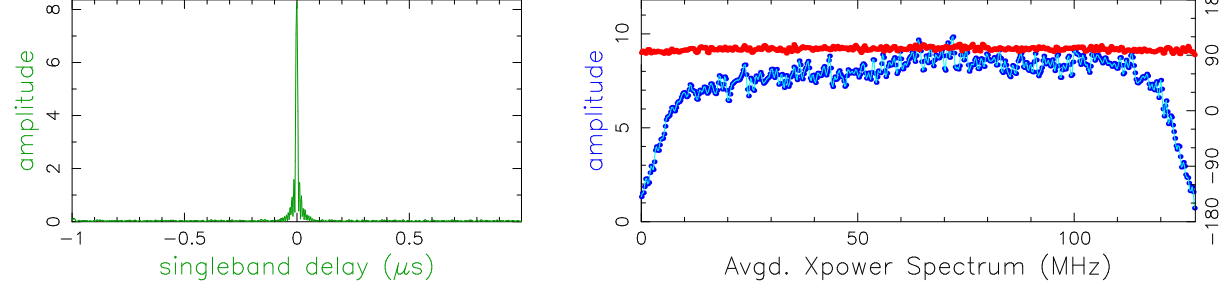
fxmanager

1502+106.1J2DGP, No0154, kn

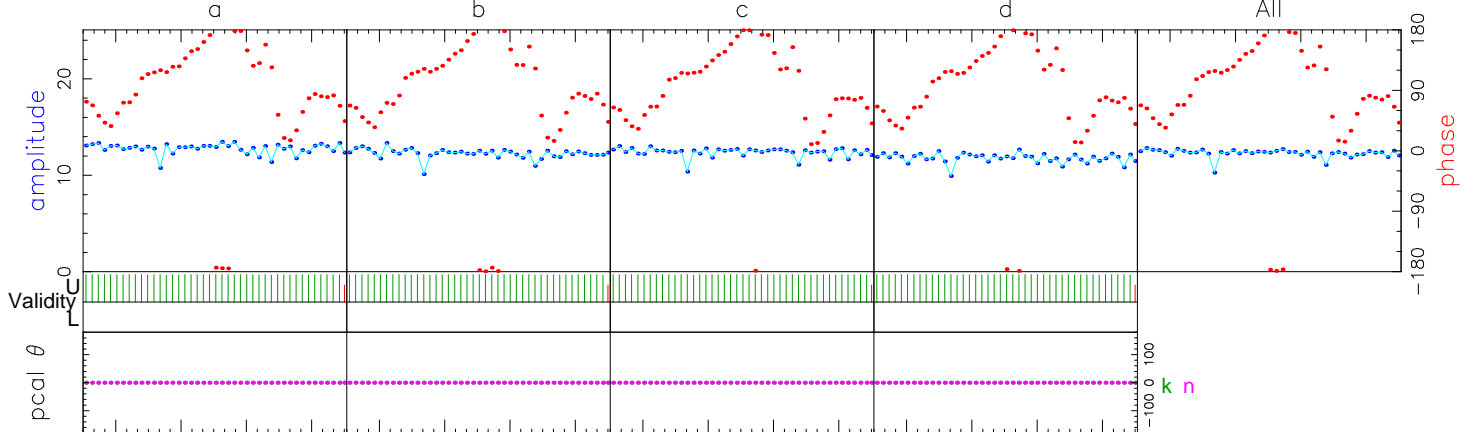
VLBA_KP - VLBA_NL, fgroup Q, pol RR



Fringe quality 5
 SNR 353.5
 Int time 239.075
 Amp 8.360
 Phase 100.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.001237
 MBD -0.001246
 Fringe rate (Hz) 0.002165
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211450
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"



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

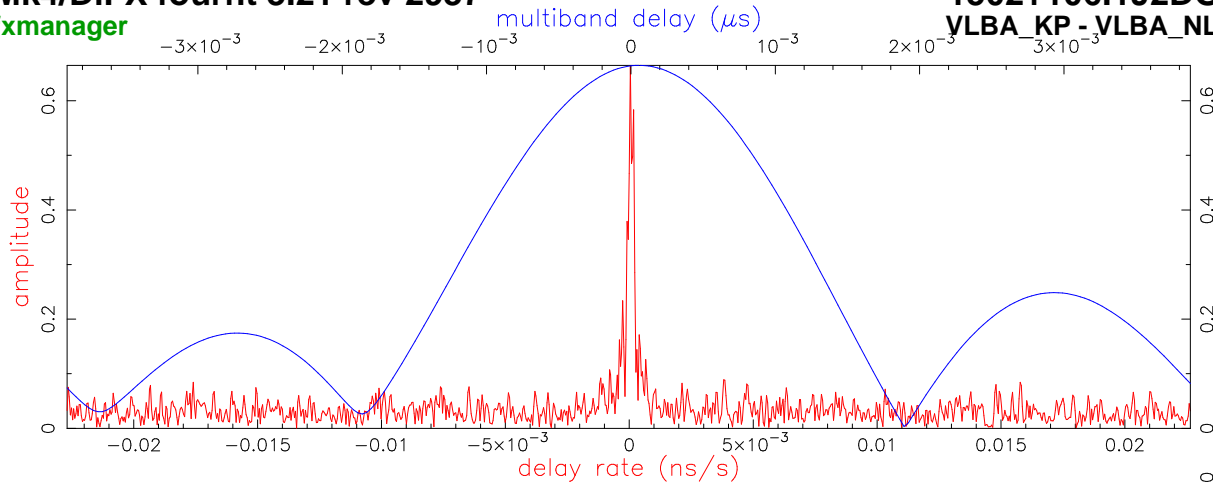


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000	APs used	1000
n	1000	1000	1000	1000	PC freqs	1000
k:n	0:0	0:0	0:0	0:0	PC phase	0:0
k:n	0:0	0:0	0:0	0:0	Manl PC	0:0
k	1000	1000	1000	1000	PC amp	1000
n	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR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

	-5.77165551494E+02	Apriori delay (usec)	-5.77164305863E+02	Resid mbdelay (usec)	-1.24563E-03	+/- 3.1E-06
Sband delay (usec)	-5.77165542988E+02	Apriori clock (usec)	1.5518761E-01	Resid sbdelay (usec)	-1.23713E-03	+/- 1.2E-05
Phase delay (usec)	-5.77164299351E+02	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	6.51261E-06	+/- 2.1E-08
Delay rate (us/s)	4.50923316717E-01	Apriori rate (us/s)	4.50923266414E-01	Resid rate (us/s)	5.03030E-08	+/- 1.5E-10
Total phase (deg)	-159.9	Apriori accel (us/s/s)	2.81110811846E-07	Resid phase (deg)	100.9	+/- 0.3

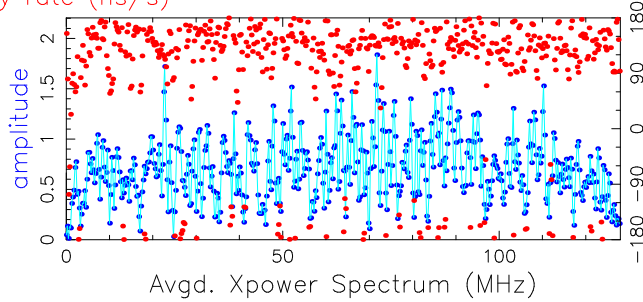
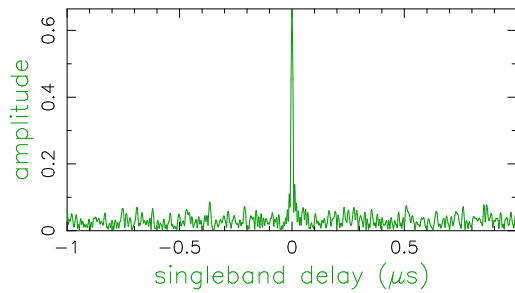
	RMS	Theor.	Amplitude	8.360 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	49.0	1.1	Search (1024X16)	8.100	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	47.4	1.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.0	0.3	Inc. seg. avg.	12.296	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.3	0.6	Inc. frq. avg.	8.269	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1312.652 -588.702 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn.Q.112.1J2DGP



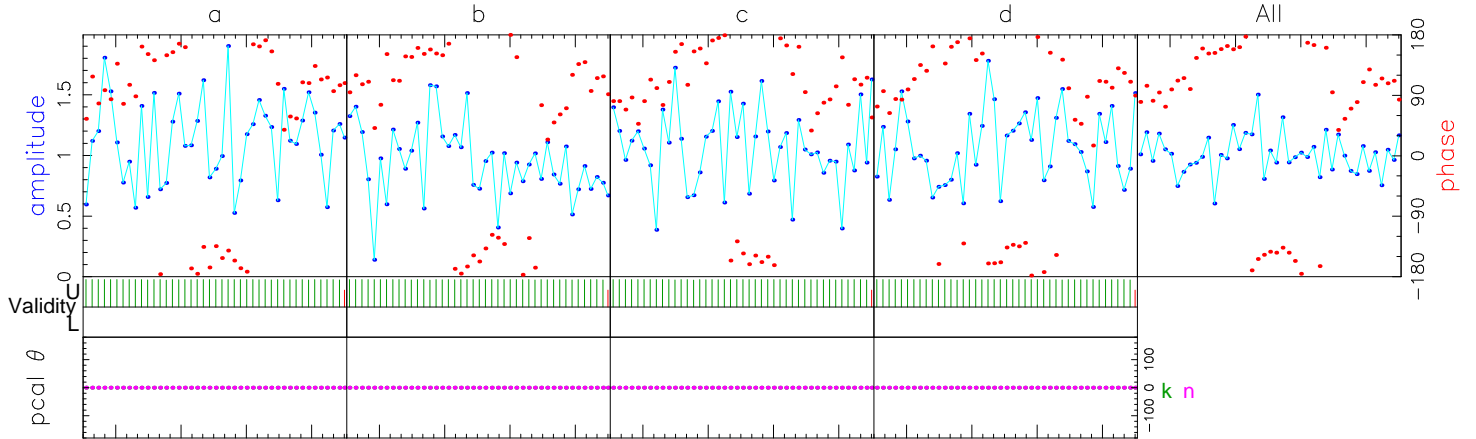
Fringe quality 9

SNR 28.1
Int time 239.075
Amp 0.665
Phase 140.2
PFD 0.0e+00
Delays (us)
SBD 0.000046
MBD 0.000060
Fringe rate (Hz)
0.002105
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211451
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



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

Group delay (usec)(sbd)	-5.77164246275E+02	Apriori delay (usec)	-5.77164305863E+02	Resid mbdelay (usec)	5.95878E-05	+/- 4.0E-05
Sband delay (usec)	-5.77164259488E+02	Apriori clock (usec)	1.5518761E-01	Resid sbdelay (usec)	4.63750E-05	+/- 1.5E-04
Phase delay (usec)	-5.77164296815E+02	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	9.04767E-06	+/- 2.6E-07
Delay rate (us/s)	4.50923315328E-01	Apriori rate (us/s)	4.50923266414E-01	Resid rate (us/s)	4.89132E-08	+/- 1.9E-09
Total phase (deg)	-120.6	Apriori accel (us/s/s)	2.81110811846E-07	Resid phase (deg)	140.2	+/- 4.1

	RMS	Theor.	Amplitude	0.665 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	49.8	13.4	Search (1024X16)	0.661	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	57.7	23.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.3	4.1	Inc. seg. avg.	0.985	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	8.3	7.1	Inc. frq. avg.	0.666	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

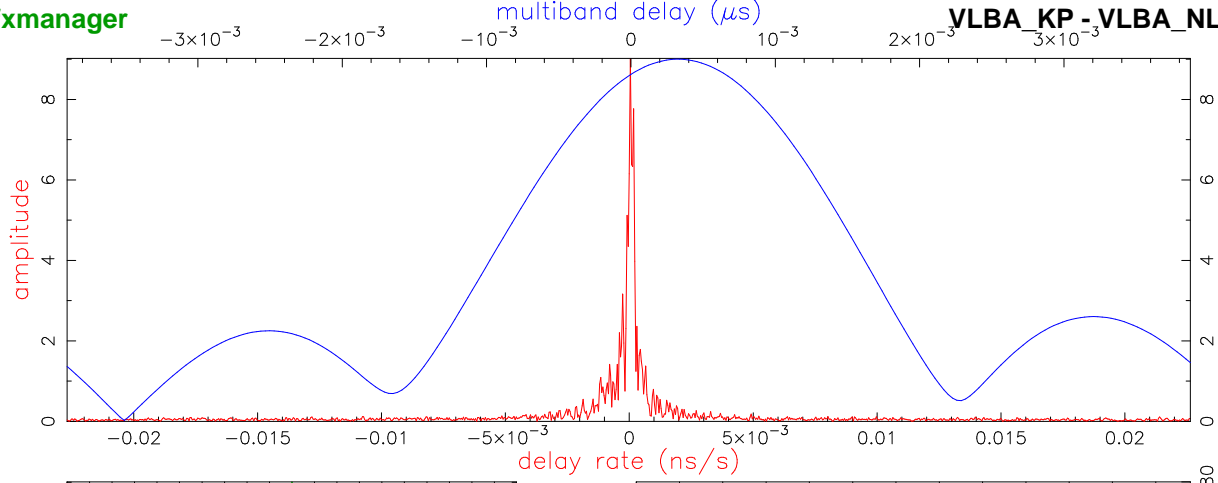
k: az 119.9 el 54.1 pa -48.3 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1312.652 -588.702 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn.Q.128.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

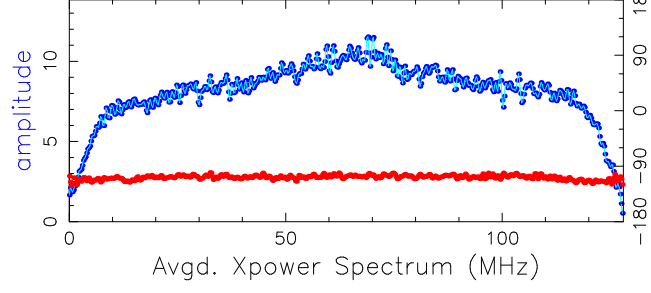
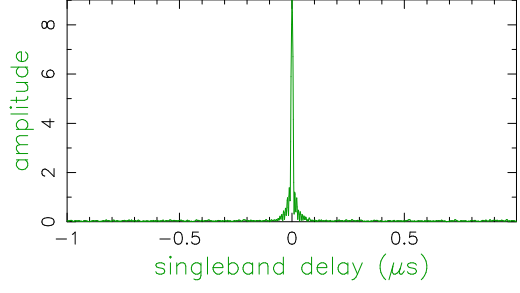
1502+106.1J2DGP, No0154, kn

VLBA_KP - VLBA_NL, fgroup Q, pol LL



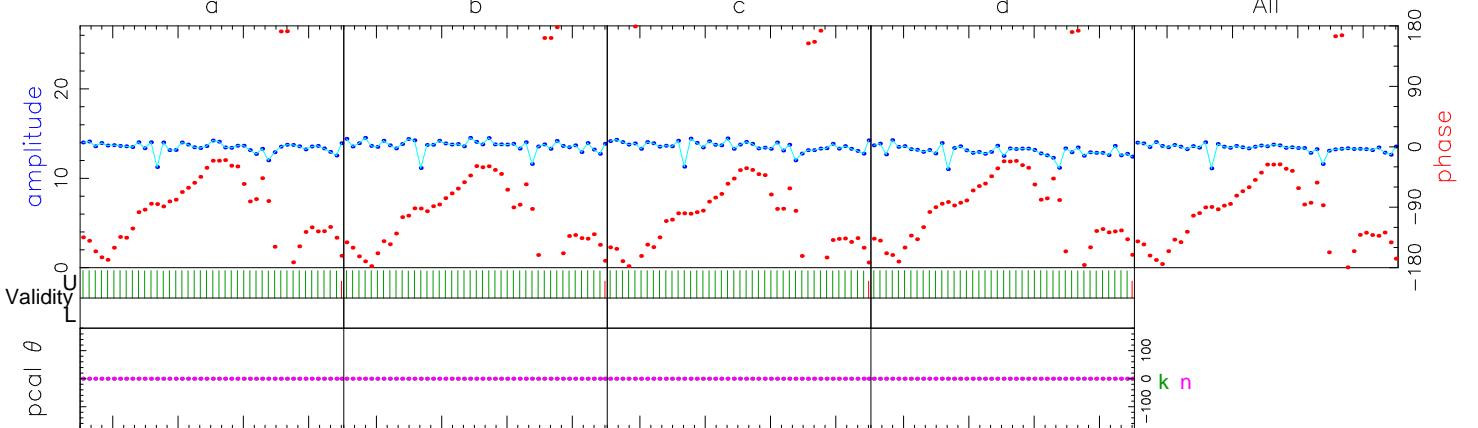
Fringe quality 5

SNR 381.4
 Int time 239.075
 Amp 9.020
 Phase -108.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000326
 MBD 0.000343
 Fringe rate (Hz) 0.002151
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211448
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-102.3	-110.7	-115.9	-102.8	Phase	-108.0
	9.1	9.2	9.2	8.7	Ampl.	9.0
	513.1	513.1	513.3	513.3	Sbd box	513.2
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	42912.00	43040.00	43168.00	43296.00		
Group delay (usec)(sbd)	-5.77163962838E+02			-5.77164305863E+02	Resid mbdelay (usec)	3.43025E-04 +/- 2.9E-06
Sband delay (usec)	-5.77163979863E+02			1.5518761E-01	Resid sbdelay (usec)	3.26000E-04 +/- 1.1E-05
Phase delay (usec)	-5.77164312835E+02			-4.0000002E-07	Resid phdelay (usec)	-6.97160E-06 +/- 1.9E-08
Delay rate (us/s)	4.50923316388E-01			4.50923266414E-01	Resid rate (us/s)	4.99739E-08 +/- 1.4E-10
Total phase (deg)		-8.8		2.81110811846E-07	Resid phase (deg)	-108.0 +/- 0.3

	RMS	Theor.	Amplitude	9.020 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	48.9	1.0	Search (1024X16)	8.837	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	48.5	1.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	8.1	0.3	Inc. seg. avg.	13.364	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.1	0.5	Inc. frq. avg.	9.045	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1312.652 -588.702 simultaneous interpolator

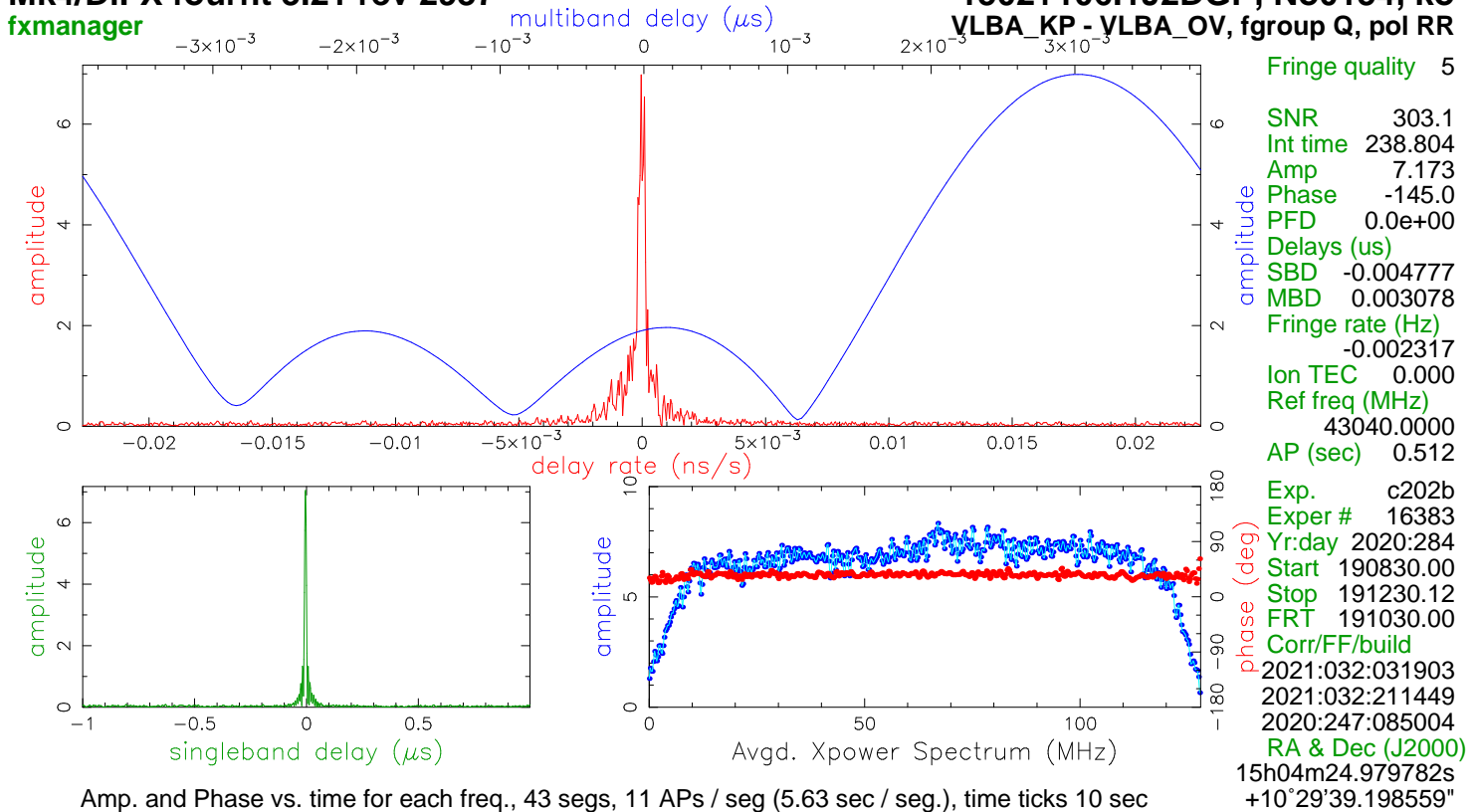
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn.Q.95.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

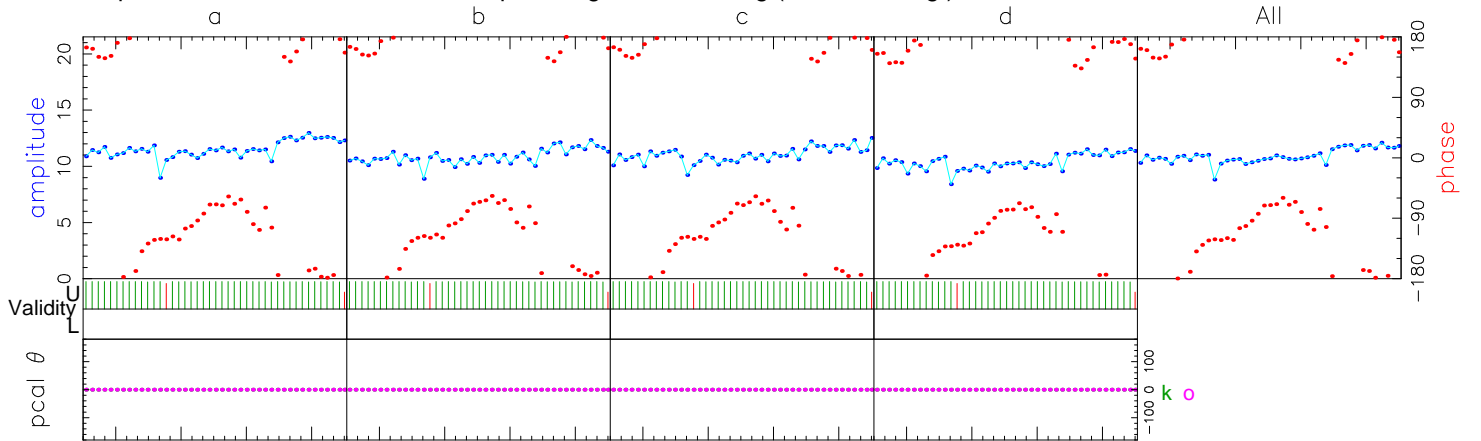
fxmanager

1502+106.1J2DGP, No0154, ko

VLBA_KP - VLBA_OV, fgroup Q, pol RR



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



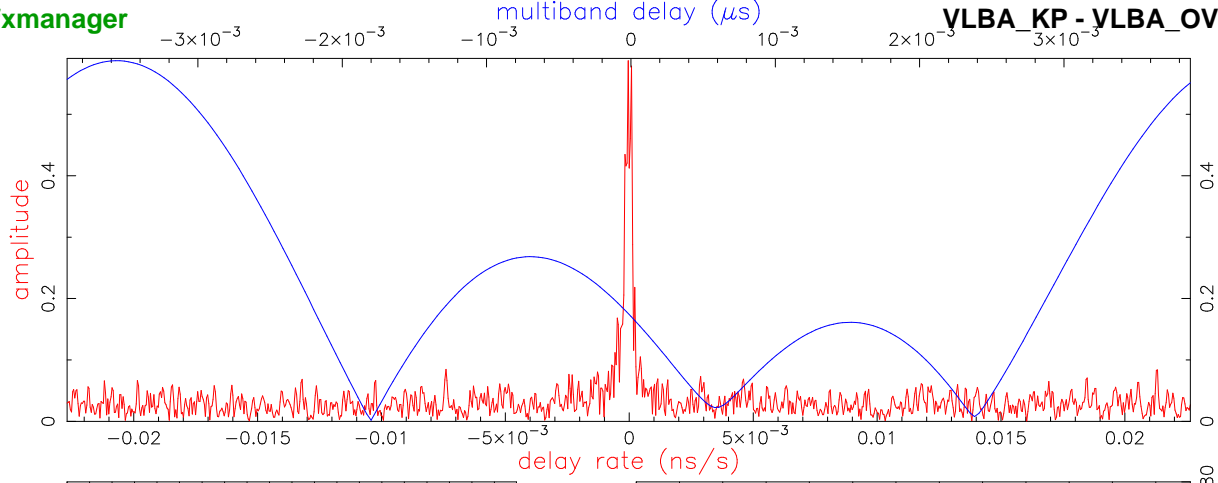
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
o	1000	1000	1000	1000		
k:o	0:0	0:0	0:0	0:0		
k:o	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
o	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks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

	1.70908658857E+03	Apriori delay (usec)	1.70909132307E+03	Resid mbdelay (usec)	3.07801E-03	+/- 3.7E-06
Group delay (usec)(sbd)	1.70908654607E+03	Apriori clock (usec)	-2.105595E+01	Resid sbdelay (usec)	-4.77700E-03	+/- 1.4E-05
Sband delay (usec)	1.70909131371E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	-9.35716E-06	+/- 2.4E-08
Phase delay (usec)	-7.70985143282E-02	Apriori rate (us/s)	-7.70984604942E-02	Resid rate (us/s)	-5.38340E-08	+/- 1.8E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-1.07436600575E-05	Resid phase (deg)	-145.0	+/- 0.4
Total phase (deg)	51.2					

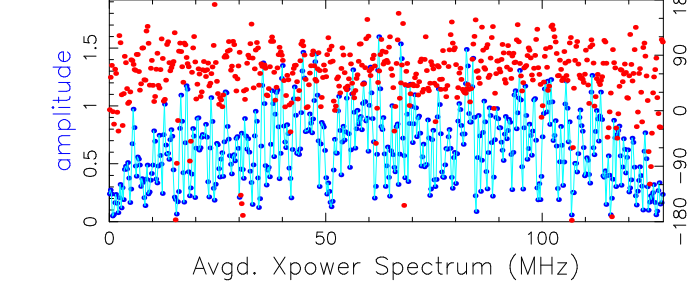
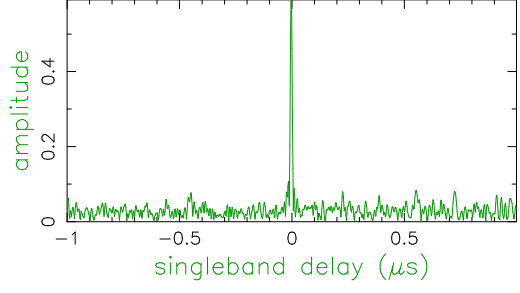
	RMS	Theor.	Amplitude	7.173 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	51.3	1.2	Search (1024X16)	6.834	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	53.0	2.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	6.2	0.4	Inc. seg. avg.	10.920	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.9	0.7	Inc. frq. avg.	6.999	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 219.044 -407.772 simultaneous interpolator

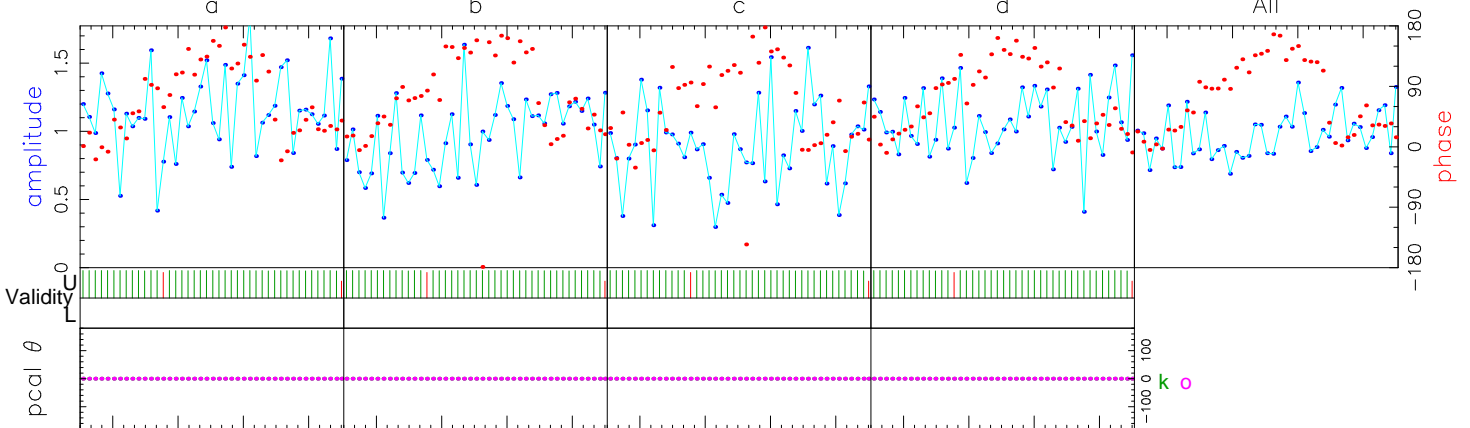
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/ko..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/ko.Q.102.1J2DGP



Fringe quality 8
SNR 25.0
Int time 238.804
Amp 0.591
Phase 70.1
PFD 0.0e+00
Delays (us)
SBD -0.003375
MBD -0.003539
Fringe rate (Hz)
-0.002466
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512
Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211451
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"



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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
68.9	81.7	56.2	72.0	Phase	70.1
0.7	0.6	0.5	0.7	Ampl.	0.6
511.1	511.8	510.7	511.4	Sbd box	511.3
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
k:o 0:0	0:0	0:0	0:0	PC phase	
k:o 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
k Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	1.70908778373E+03	Apriori delay (usec)	1.70909132307E+03	Resid mbdelay (usec)	-3.53934E-03	+/- 4.5E-05
Sband delay (usec)	1.70908794757E+03	Apriori clock (usec)	-2.1055595E+01	Resid sbdelay (usec)	-3.37550E-03	+/- 1.7E-04
Phase delay (usec)	1.70909132759E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	4.52640E-06	+/- 3.0E-07
Delay rate (us/s)	-7.70985177799E-02	Apriori rate (us/s)	-7.70984604942E-02	Resid rate (us/s)	-5.72857E-08	+/- 2.1E-09
Total phase (deg)	266.3	Apriori accel (us/s/s)	-1.07436600575E-05	Resid phase (deg)	70.1	+/- 4.6

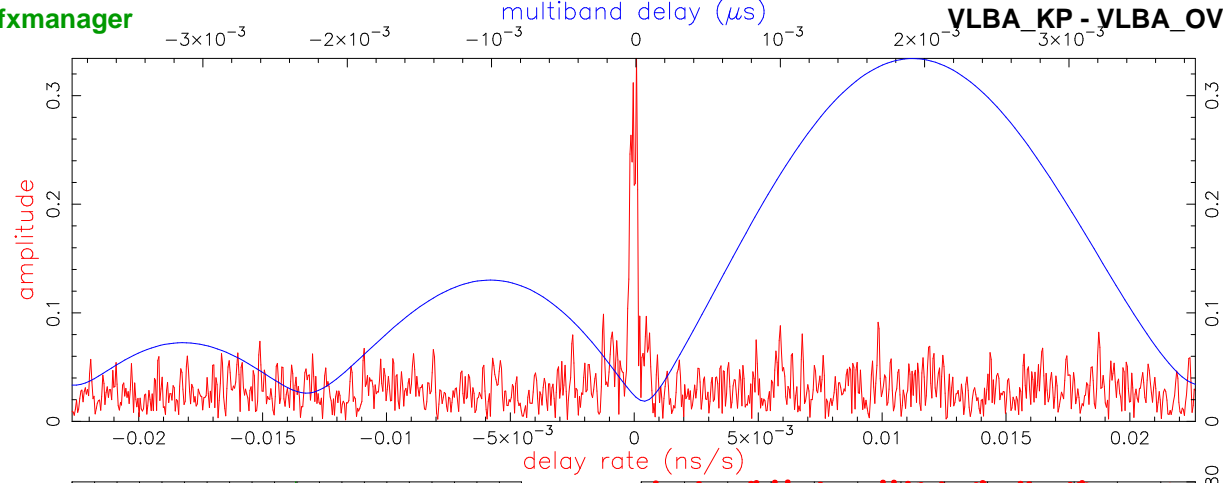
	RMS	Theor.	Amplitude	0.591 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	53.6	15.0	Search (1024X16)	0.564	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	70.6	26.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
ph/frq (deg)	12.9	4.6	Inc. seg. avg.	0.941	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
amp/frq (%)	12.7	8.0	Inc. frq. avg.	0.592	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

Mk4/DiFX fourfit 3.21 rev 2937

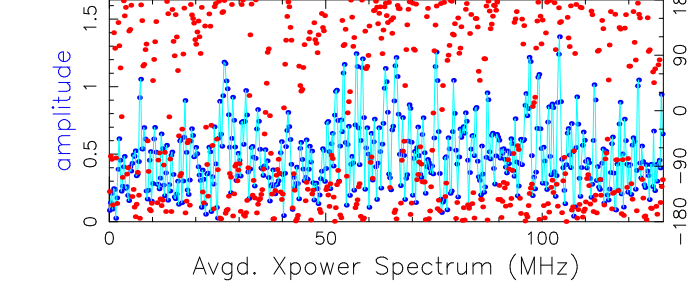
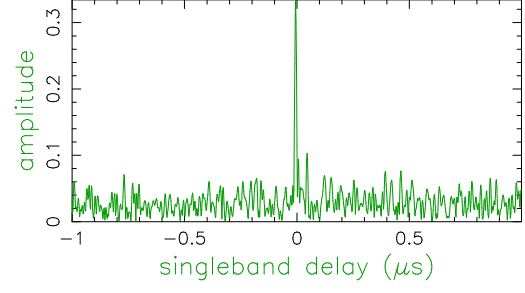
fxmanager

1502+106.1J2DGP, No0154, ko

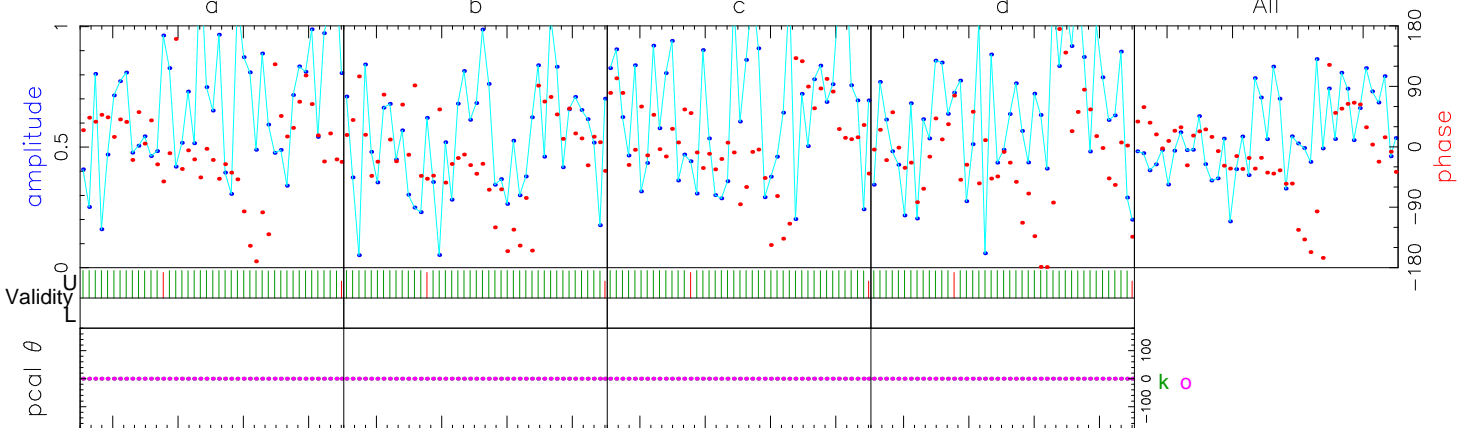
VLBA_KP - VLBA_OV, fgroup Q, pol RL



Fringe quality 9
 SNR 14.1
 Int time 238.804
 Amp 0.334
 Phase 0.6
 PFD 7.3e-37
 Delays (us)
 SBD -0.006045
 MBD 0.001904
 Fringe rate (Hz) 0.003022
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512
 Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211453
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"



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



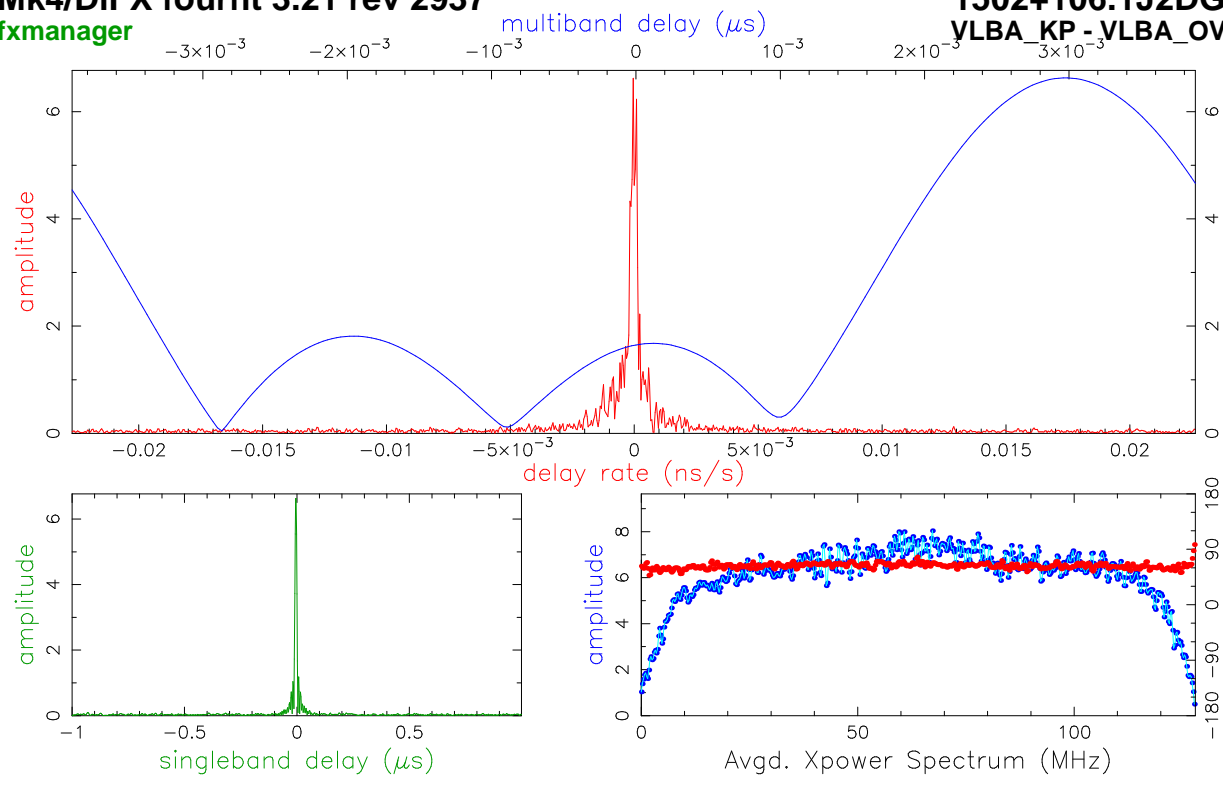
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-3.5	-1.7	15.0	-9.1	Phase	0.6
	0.4	0.3	0.4	0.3	Ampl.	0.3
	510.2	509.6	509.6	510.1	Sbd box	509.9
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
k:o	0:0	0:0	0:0	0:0	PC phase	
k:o	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	1.70908541493E+03	Apriori delay (usec)	1.70909132307E+03	Resid mbdelay (usec)	1.90436E-03	+/-	7.9E-05
Sband delay (usec)	1.70908527757E+03	Apriori clock (usec)	-2.1055595E+01	Resid sbdelay (usec)	-6.04550E-03	+/-	3.0E-04
Phase delay (usec)	1.70909132311E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	3.81063E-08	+/-	5.2E-07
Delay rate (us/s)	-7.70983902811E-02	Apriori rate (us/s)	-7.70984604942E-02	Resid rate (us/s)	7.02131E-08	+/-	3.8E-09
Total phase (deg)	196.7	Apriori accel (us/s/s)	-1.07436600575E-05	Resid phase (deg)	0.6	+/-	8.1

ph/seg (deg)	RMS 60.7	Theor. 26.6	Amplitude	0.334 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	81.0	46.4	Search (1024X16)	0.310	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	12.8	8.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	11.4	14.2	Inc. seg. avg.	0.500	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	0.335	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 219.044 -407.772 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/ko..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/ko.Q.138.1J2DGP

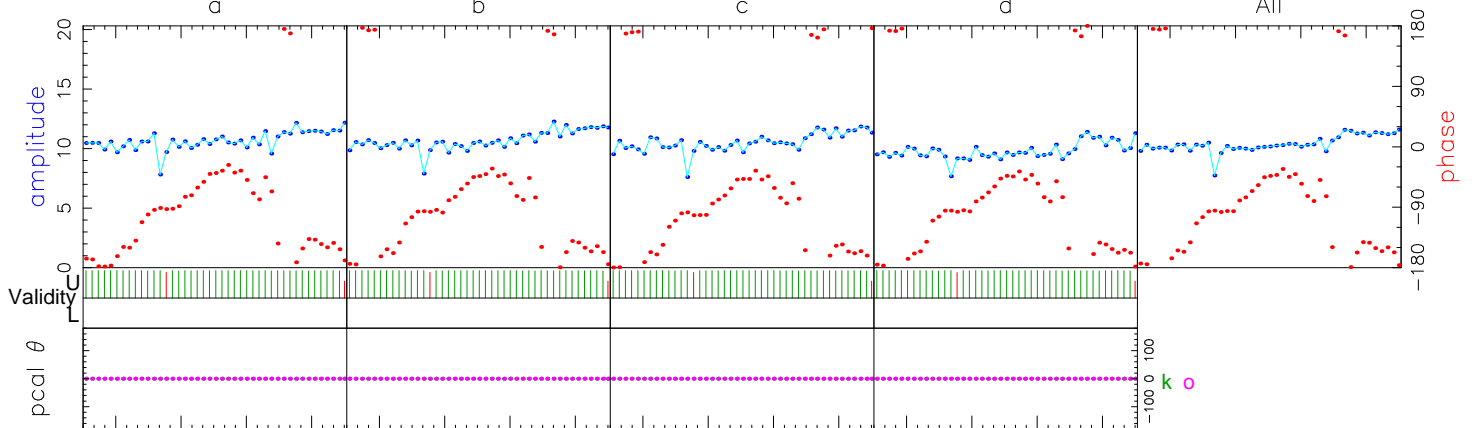


Fringe quality 5

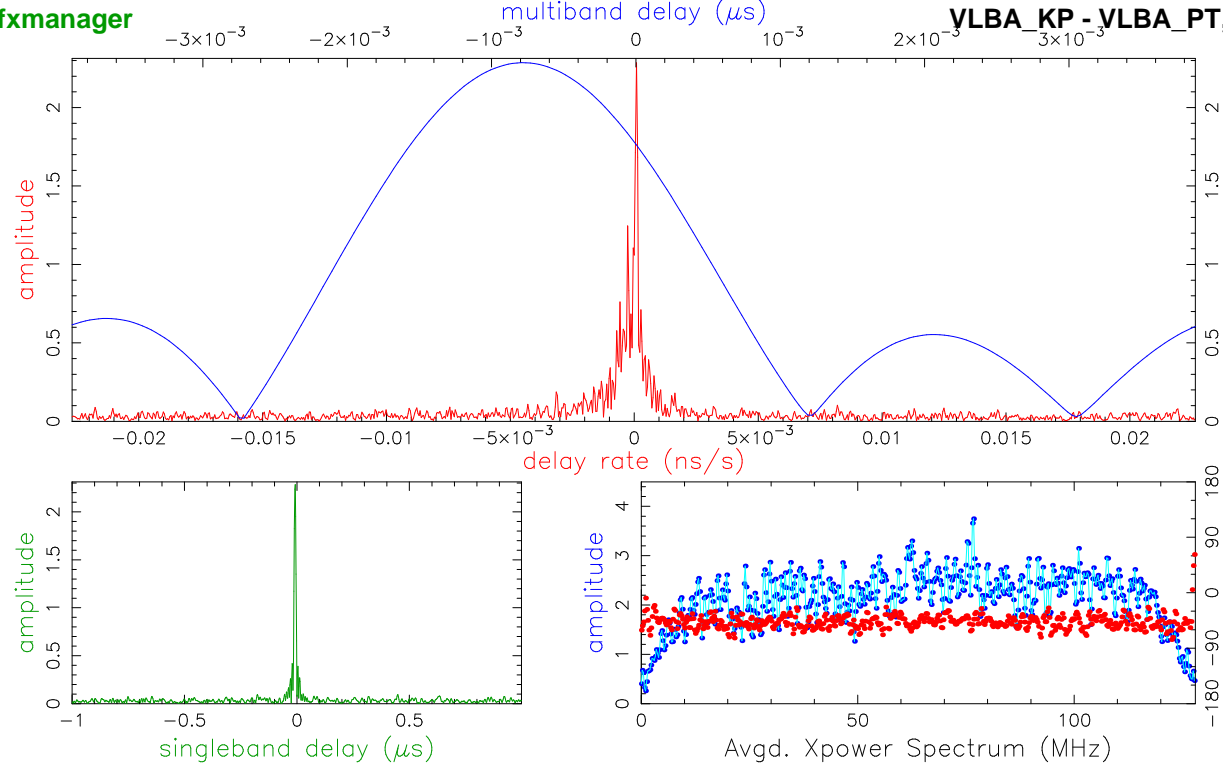
SNR 286.1
Int time 238.804
Amp 6.770
Phase -118.8
PFD 0.0e+00
Delays (us)
SBD -0.004877
MBD 0.003029
Fringe rate (Hz)
-0.002326
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211447
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-113.5	-118.5	-123.3	-120.0	Phase	-118.8
6.8	6.8	6.7	6.2	Ampl.	6.6
510.5	510.5	510.6	510.5	Sbd box	510.5
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
k:o 0:0	0:0	0:0	0:0	PC phase	
k:o 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
k Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	1.70908653985E+03	Apriori delay (usec)	1.70909132307E+03	Resid mbdelay (usec)	3.02929E-03 +/- 3.9E-06
Sband delay (usec)	1.70908644632E+03	Apriori clock (usec)	-2.1055595E+01	Resid sbdelay (usec)	-4.87675E-03 +/- 1.5E-05
Phase delay (usec)	1.70909131540E+03	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	-7.66425E-06 +/- 2.6E-08
Delay rate (us/s)	-7.70985145353E-02	Apriori rate (us/s)	-7.70984604942E-02	Resid rate (us/s)	-5.40411E-08 +/- 1.9E-10
Total phase (deg)	77.4	Apriori accel (us/s/s)	-1.07436600575E-05	Resid phase (deg)	-118.8 +/- 0.4
RMS	Theor.	Amplitude	6.770 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
51.4	1.3	Search (1024X16)	6.497	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
54.6	2.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
5.0	0.4	Inc. seg. avg.	10.398	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
4.0	0.7	Inc. frq. avg.	6.635	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
k: az 119.9 el 54.1 pa -48.3	o: az 118.4 el 46.7 pa -45.1	u,v (fr/asec) 219.044 -407.772			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/ko..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/ko.Q.86.1J2DGP			

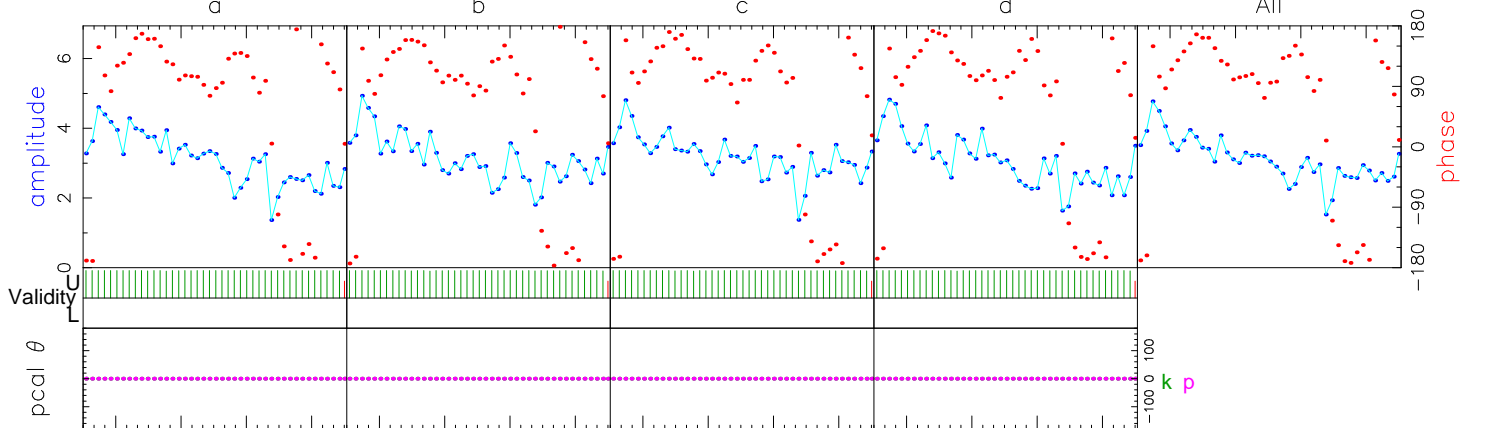


Fringe quality 5

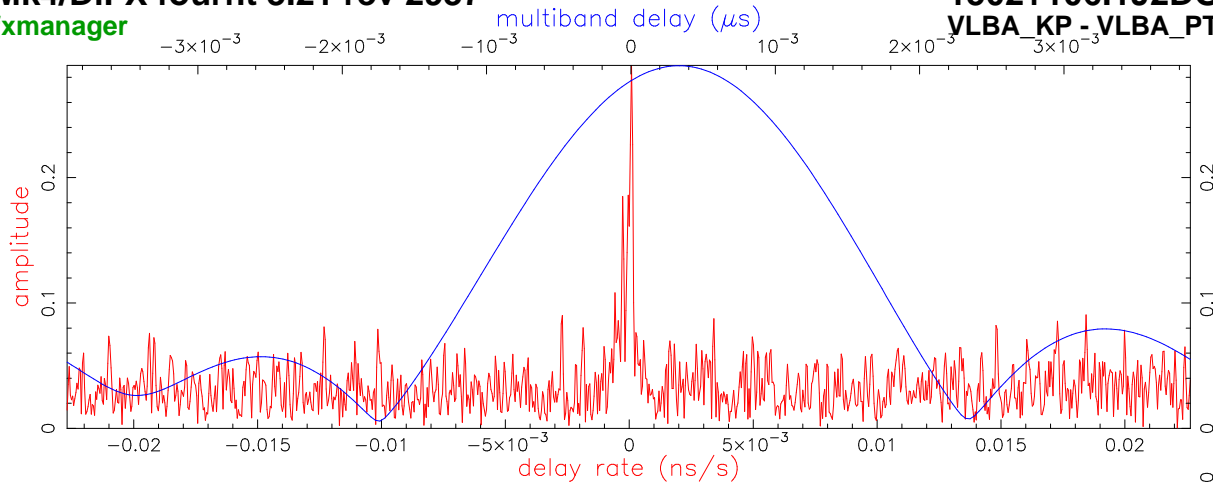
SNR 97.8
Int time 239.075
Amp 2.313
Phase 133.9
PFD 0.0e+00
Delays (us)
SBD -0.008548
MBD -0.000816
Fringe rate (Hz) 0.004331
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211450
2020:247:085004
RA & Dec (J2000) 15h04m24.979782s +10°29'39.198559"

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

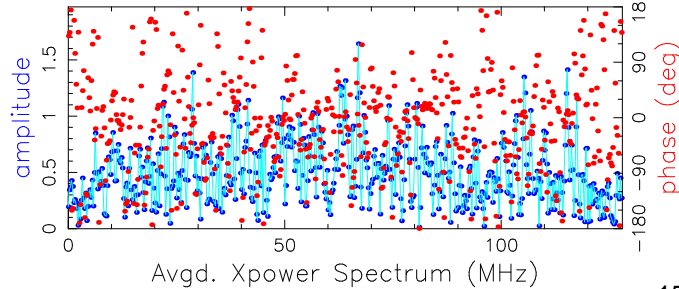
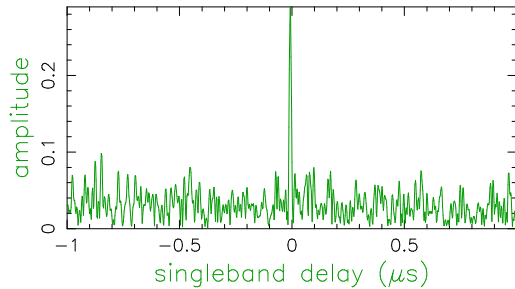


42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
131.6	131.4	137.9	134.6	Phase	133.9
2.3	2.3	2.3	2.2	Ampl.	2.3
508.4	508.7	508.5	508.9	Sbd box	508.6
U/L 469/0	469/0	469/0	469/0	APs used	
k 1000	1000	1000	1000	PC freqs	
p 1000	1000	1000	1000	PC freqs	
k:p 0:0	0:0	0:0	0:0	PC phase	
k:p 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
p 1000	1000	1000	1000		
k Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	-2.37978347202E+02	Apriori delay (usec)	-2.37969719034E+02	Resid mbdelay (usec)	-8.15668E-04 +/- 1.1E-05
Sband delay (usec)	-2.37978267284E+02	Apriori clock (usec)	2.4689102E-01	Resid sbdelay (usec)	-8.54825E-03 +/- 4.4E-05
Phase delay (usec)	-2.37969710395E+02	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	8.63917E-06 +/- 7.6E-08
Delay rate (us/s)	8.46741880136E-02	Apriori rate (us/s)	8.46740873879E-02	Resid rate (us/s)	1.00626E-07 +/- 5.5E-10
Total phase (deg)	-120.7	Apriori accel (us/s/s)	5.67247136522E-07	Resid phase (deg)	133.9 +/- 1.2
RMS	Theor.	Amplitude	2.313 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
48.5	3.8	Search (1024X16)	2.206	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
43.6	6.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
3.7	1.2	Inc. seg. avg.	3.101	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
2.3	2.0	Inc. frq. avg.	2.287	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
k: az 119.9 el 54.1 pa -48.3	p: az 126.8 el 55.3 pa -41.9	u, v (fr/asec) -246.316 -144.352			simultaneous interpolator
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kp..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kp.Q.119.1J2DGP			



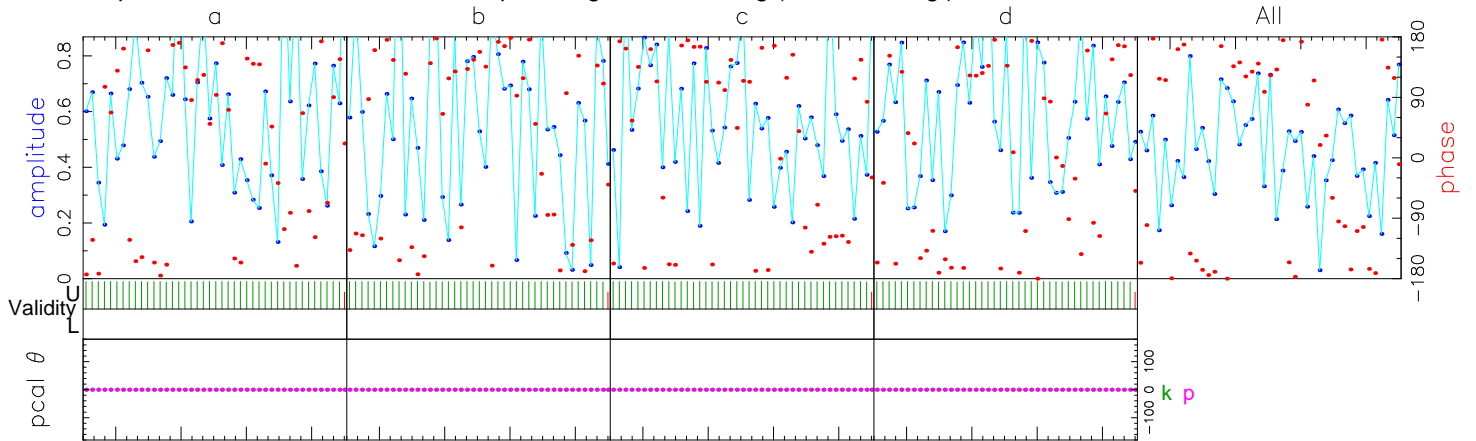
Fringe quality 9

SNR 12.2
Int time 239.075
Amp 0.290
Phase 172.0
PFD 4.7e-26
Delays (us)
SBD -0.007616
MBD 0.000336
Fringe rate (Hz)
0.004438
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211452
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



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

Group delay (usec)(sbd)	-2.37977195421E+02	Apriori delay (usec)	-2.37969719034E+02	Resid mbdelay (usec)	3.36113E-04	+/-	9.1E-05
Sband delay (usec)	-2.37977334784E+02	Apriori clock (usec)	2.4689102E-01	Resid sbdelay (usec)	-7.61575E-03	+/-	3.5E-04
Phase delay (usec)	-2.37969707932E+02	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	1.11020E-05	+/-	6.0E-07
Delay rate (us/s)	8.46741905010E-02	Apriori rate (us/s)	8.46740873879E-02	Resid rate (us/s)	1.03113E-07	+/-	4.4E-09
Total phase (deg)	-82.6	Apriori accel (us/s/s)	5.67247136522E-07	Resid phase (deg)	172.0	+/-	9.4

ph/seg (deg)	RMS 62.0	Theor. 30.7	Amplitude	0.290 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	85.1	53.6	Search (1024X16)	0.279	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
ph/frq (deg)	4.3	9.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.004 0.004
amp/frq (%)	11.8	16.3	Inc. seg. avg.	0.408	Sample rate(MISamp/s): 256		dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	0.286	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite
							ion window (TEC) 0.00 0.00

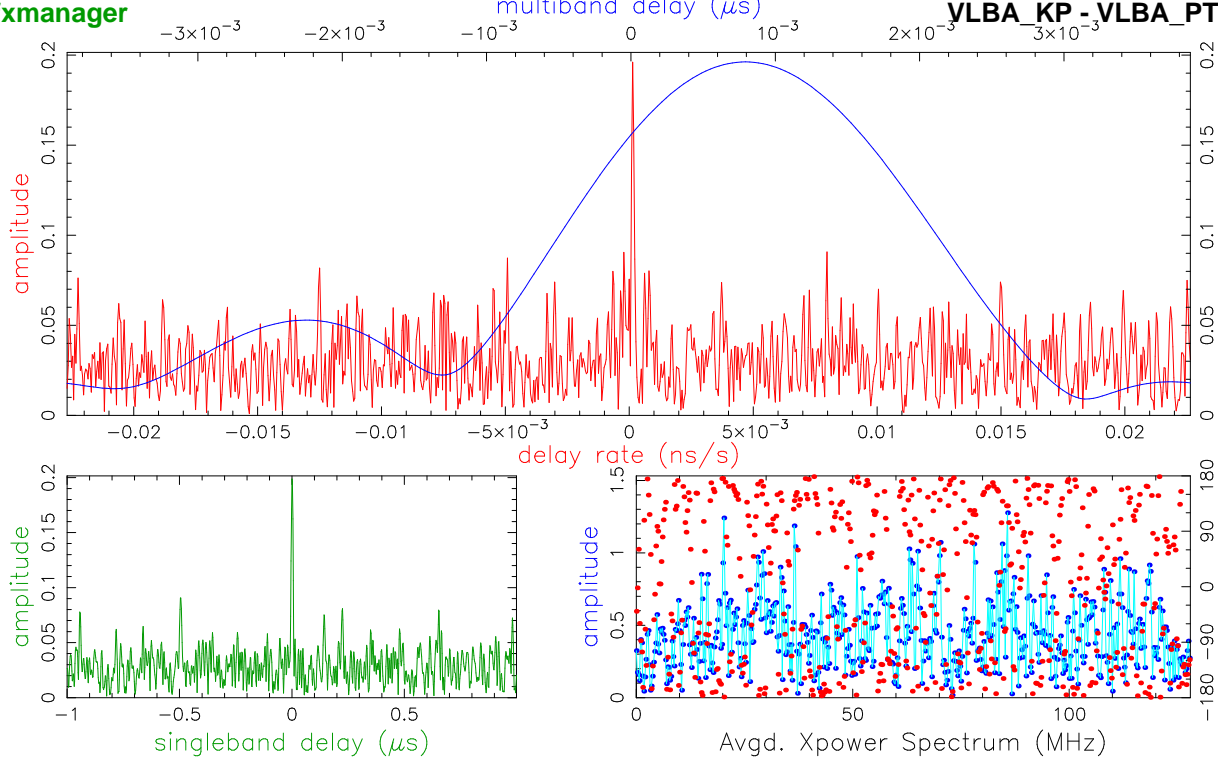
k: az 119.9 el 54.1 pa -48.3 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) -246.316 -144.352 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kp..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kp.Q.137.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, kp

VLBA_KP - VLBA_PT, fgroup Q, pol RL

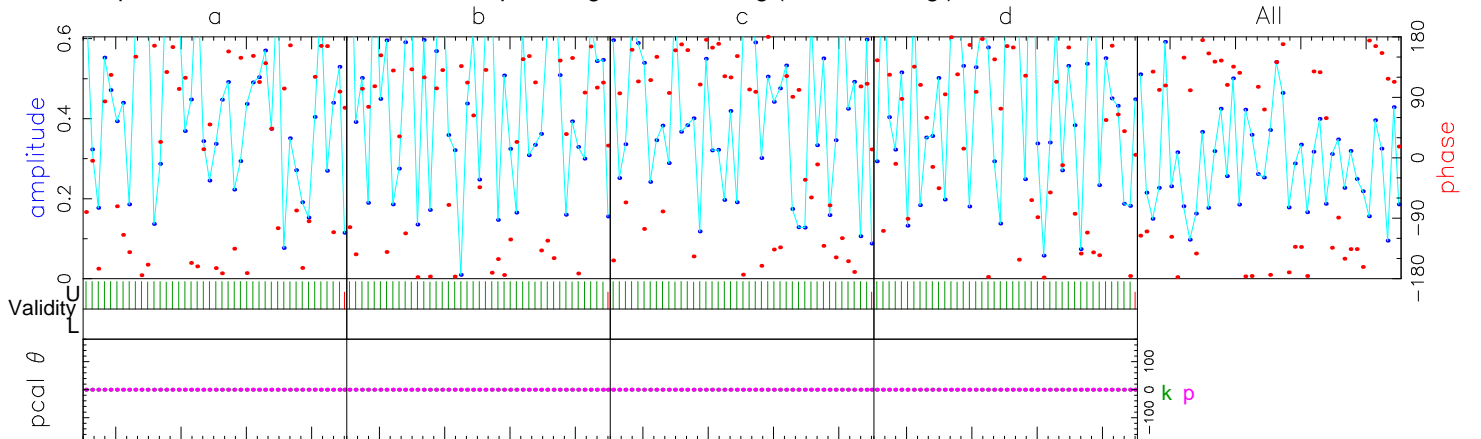


Fringe quality 9

SNR 8.5
 Int time 239.075
 Amp 0.202
 Phase 165.8
 PFD 2.9e-09
 Delays (us)
 SBD 0.000824
 MBD 0.000749
 Fringe rate (Hz) 0.005163
 Ion TEC 0.000
 Ref freq (MHz) 43040.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211454
 2020:247:085004
 RA & Dec (J2000)
 15h04m24.979782s
 +10°29'39.198559"

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



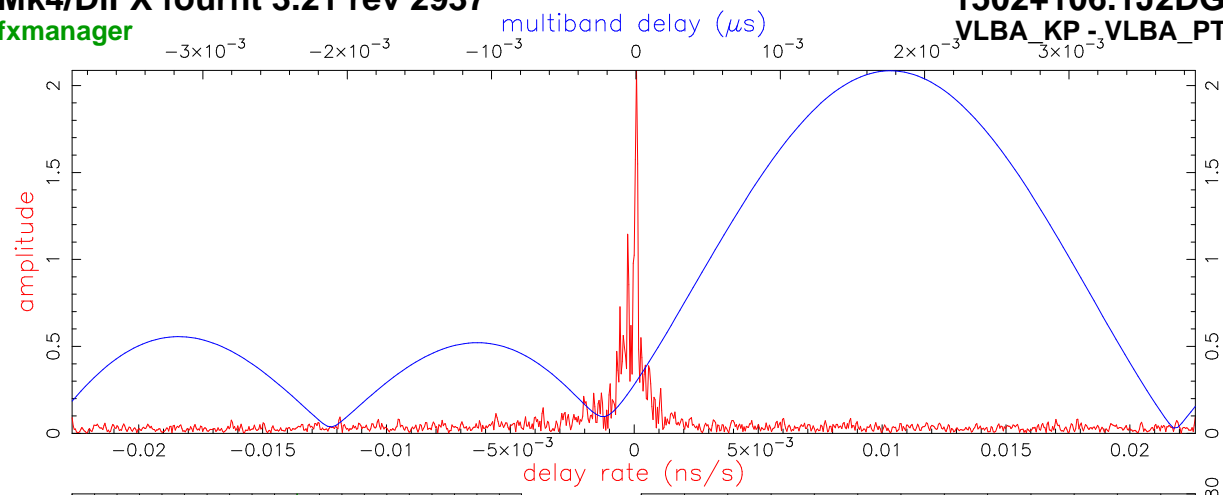
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
p	1000	1000	1000	1000		
k:p	0:0	0:0	0:0	0:0		
k:p	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
p	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UL	Q01UL	Q02UL	Q03UL		

	-2.37968970020E+02	Apriori delay (usec)	-2.37969719034E+02	Resid mbdelay (usec)	7.49013E-04	+/- 1.3E-04
Sband delay (usec)	-2.37968895034E+02	Apriori clock (usec)	2.4689102E-01	Resid sbdelay (usec)	8.24000E-04	+/- 5.1E-04
Phase delay (usec)	-2.37969708335E+02	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	1.06983E-05	+/- 8.7E-07
Delay rate (us/s)	8.46742073367E-02	Apriori rate (us/s)	8.46740873879E-02	Resid rate (us/s)	1.19949E-07	+/- 6.3E-09
Total phase (deg)	-88.8	Apriori accel (us/s/s)	5.67247136522E-07	Resid phase (deg)	165.8	+/- 13.4

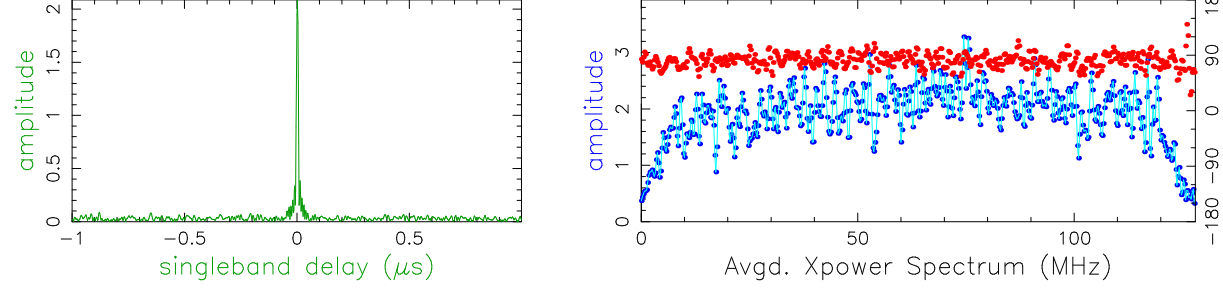
	RMS	Theor.	Amplitude	0.202 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	53.7	44.1	Search (1024X16)	0.192	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	76.2	77.0	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
ph/frq (deg)	9.4	13.4	Inc. seg. avg.	0.229	Sample rate(MSamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	22.2	23.5	Inc. frq. avg.	0.192	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

k: az 119.9 el 54.1 pa -48.3 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) -246.316 -144.352 simultaneous interpolator

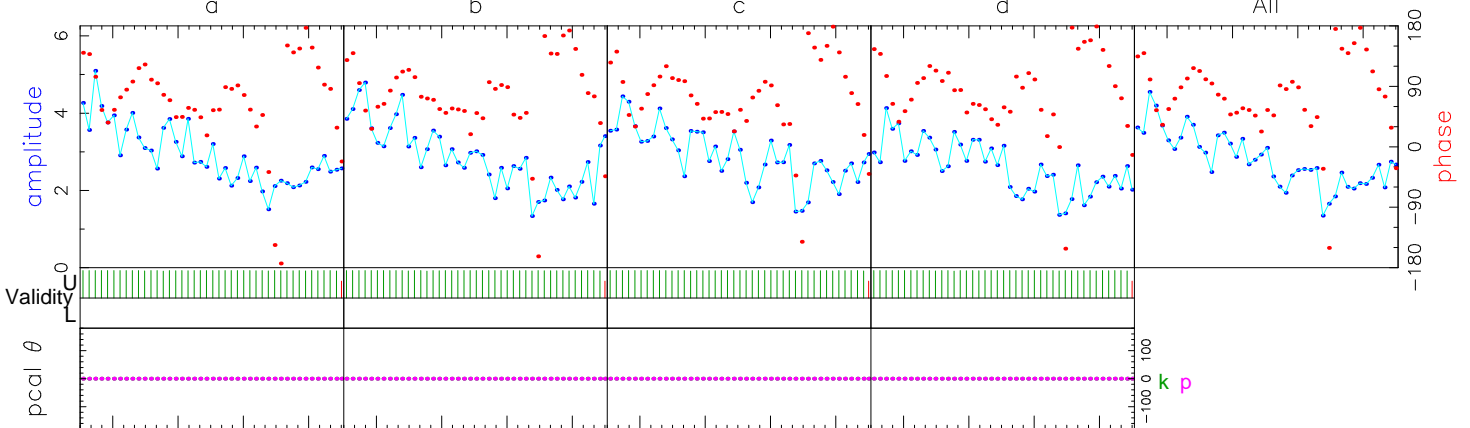
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kp..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kp.Q.152.1J2DGP



Fringe quality 5
SNR 88.2
Int time 239.075
Amp 2.087
Phase 81.7
PFD 0.0e+00
Delays (us)
SBD 0.001745
MBD 0.001753
Fringe rate (Hz) 0.004231
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512
Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211448
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"



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



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

	42912.00	43040.00	43168.00	43296.00		
Group delay (usec)(sbd)	-2.37967966452E+02		-2.37969719034E+02		Resid mbdelay (usec)	1.75258E-03 +/- 1.3E-05
Sband delay (usec)	-2.37967974409E+02		2.4689102E-01		Resid sbdelay (usec)	1.74463E-03 +/- 4.9E-05
Phase delay (usec)	-2.37969713759E+02		-2.9999999E-07		Resid phdelay (usec)	5.27512E-06 +/- 8.4E-08
Delay rate (us/s)	8.46741856965E-02		8.46740873879E-02		Resid rate (us/s)	9.83086E-08 +/- 6.0E-10
Total phase (deg)	-172.9		5.67247136522E-07		Resid phase (deg)	81.7 +/- 1.3

	RMS	Theor.	Amplitude	2.087 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	49.5	4.3	Search (1024X16)	2.022	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	47.8	7.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.6	1.3	Inc. seg. avg.	2.799	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.8	2.3	Inc. frq. avg.	2.086	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00