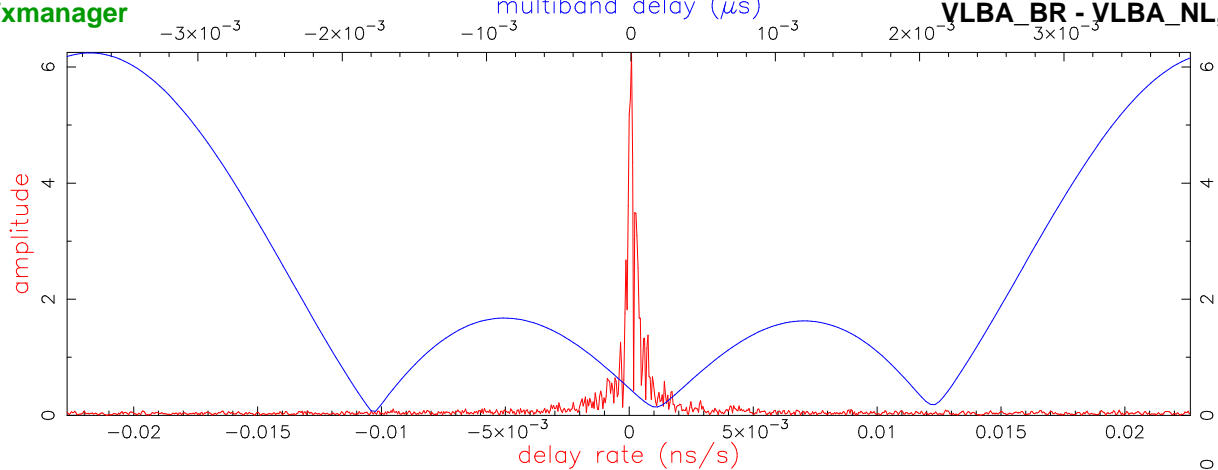


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, bn

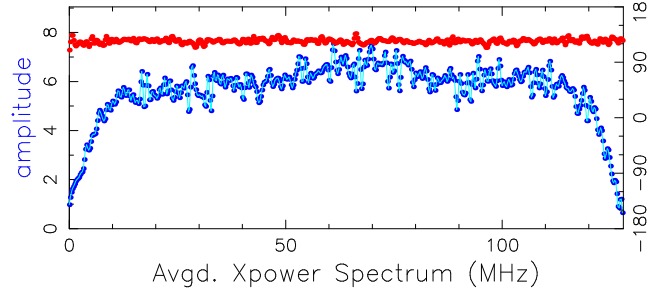
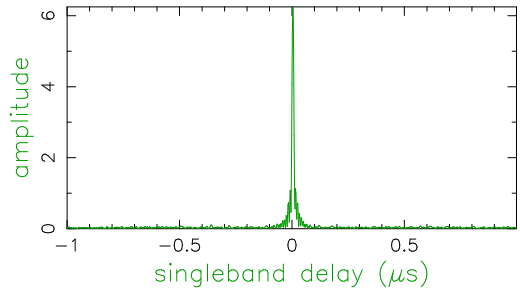
VLBA_BR - VLBA_NL, fgroup Q, pol RR



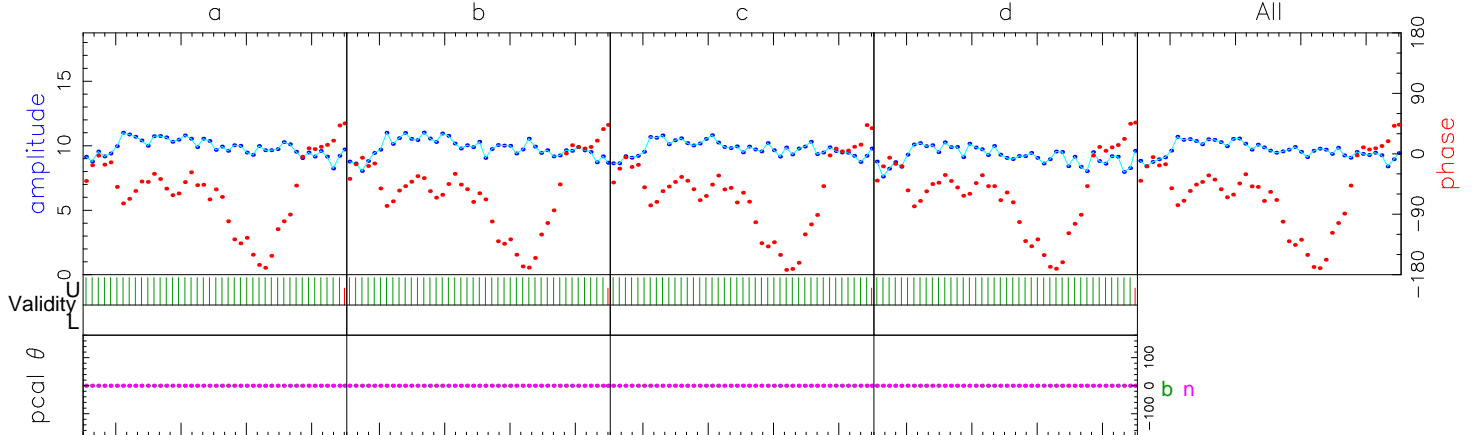
Fringe quality 5

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

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



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

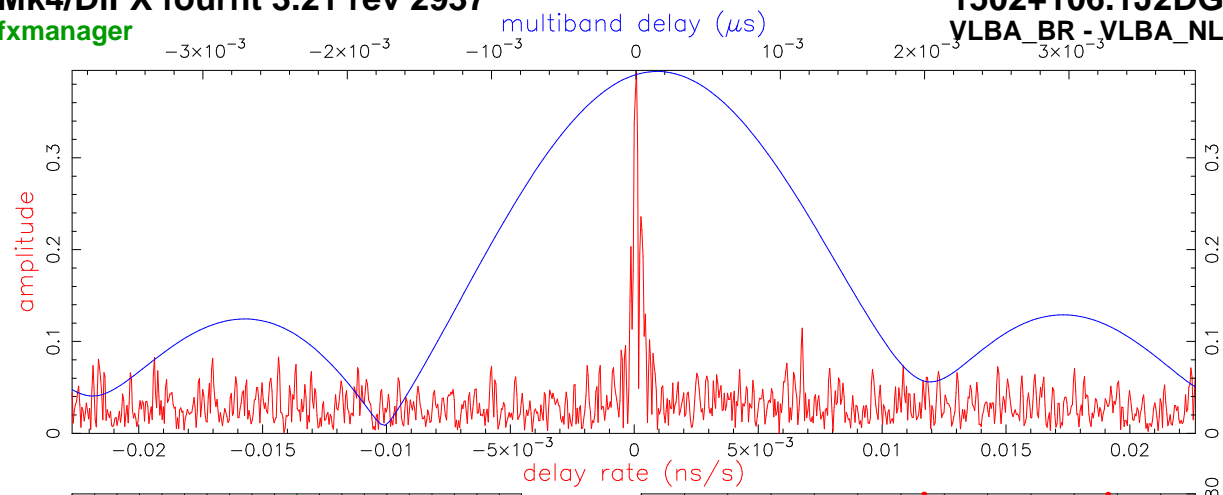


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
b	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	PC phase	
b:n	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR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

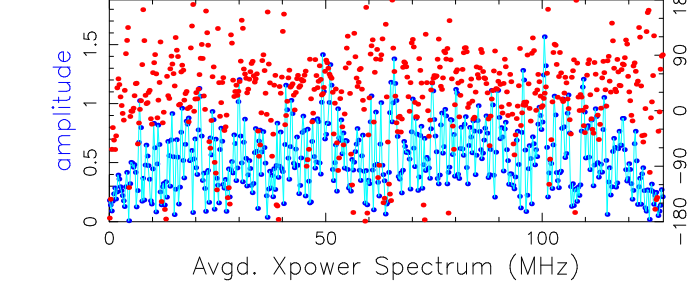
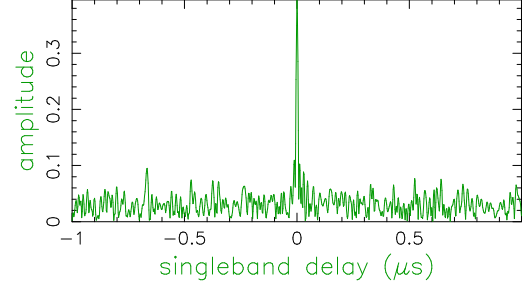
Group delay (usec)(sbd)	-4.12946800936E+03	Apriori delay (usec)	-4.12947208729E+03	Resid mbdelay (usec)	-3.73457E-03	+/-	4.2E-06
Sband delay (usec)	-4.12946794454E+03	Apriori clock (usec)	-1.8955145E+00	Resid sbdelay (usec)	4.14275E-03	+/-	1.6E-05
Phase delay (usec)	-4.12947209078E+03	Apriori clockrate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

ph/seg (deg)	53.7	1.4	Amplitude	6.252 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	55.3	2.5	Search (1024X16)	6.164	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	1.6	0.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	3.7	0.8	Inc. seg. avg.	9.653	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	6.244	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
b: az 125.7 el 40.0 pa -33.5	n: az 159.6 el 57.2 pa -15.1	u,v (fr/asec)	-1237.874 516.504		nlags: 512	t_cohere infinite

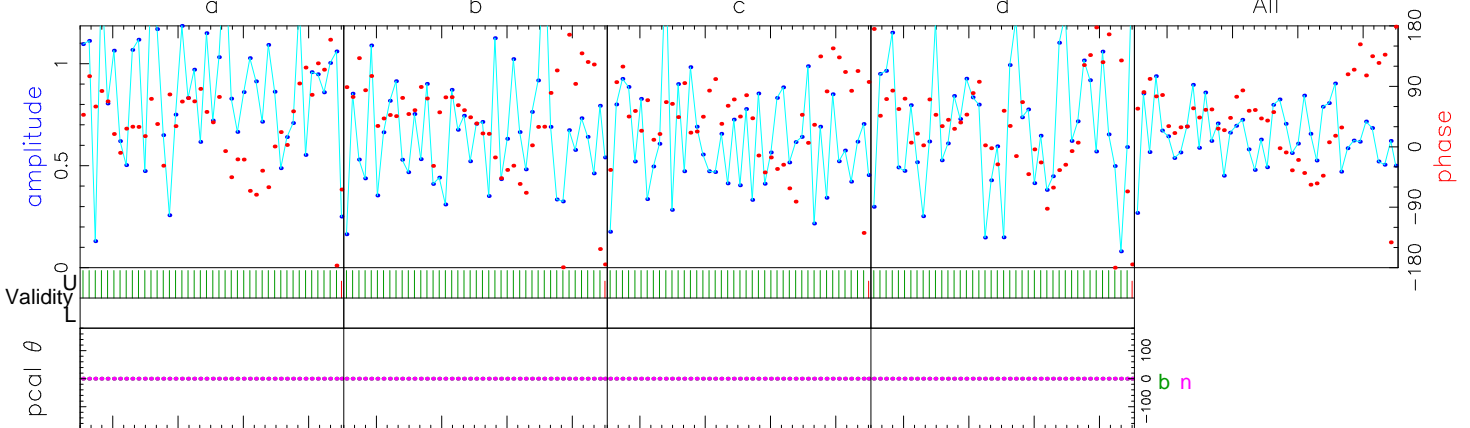
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bn.Q.30.1J2DGP



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



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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
43.2	53.1	49.6	39.3	Phase	46.2
0.5	0.4	0.4	0.3	Ampl.	0.4
513.5	512.7	513.3	513.1	Sbd box	513.2
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
b:n 0:0	0:0	0:0	0:0	PC phase	
b:n 0:0	0:0	0:0	0:0	ManI PC	
b 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
b Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

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

ph/seg (deg)	RMS	Theor.	Amplitude	0.395 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	59.7	22.4	Search (1024X16)	0.382	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	7.6	6.8	Inc. seg. avg.	0.606	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023	0.023
amp/frq (%)	16.0	11.9	Inc. frq. avg.	0.393	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

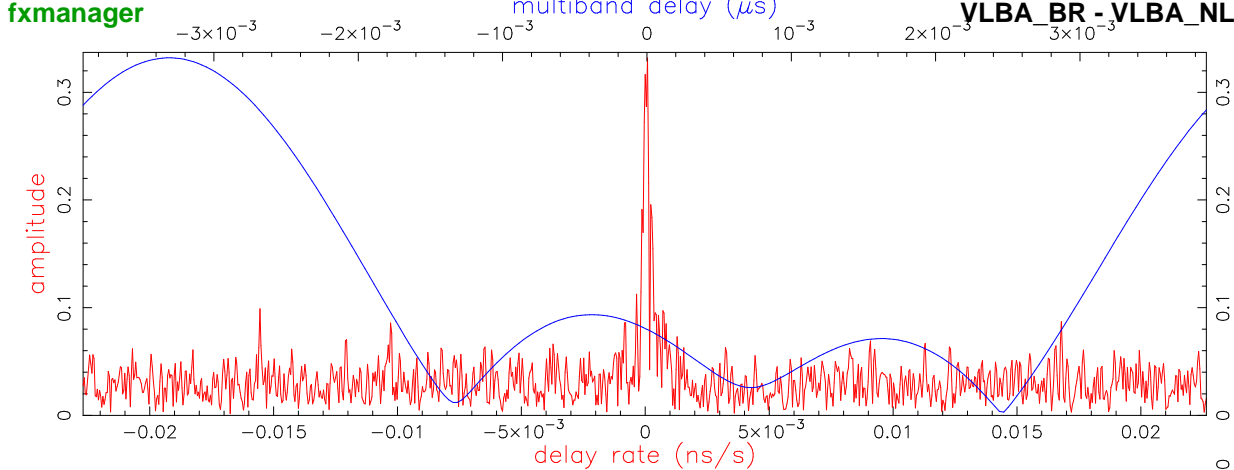
b: az 125.7 el 40.0 pa -33.5 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1237.874 516.504 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bn.Q.46.1J2DGP

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fxmanager

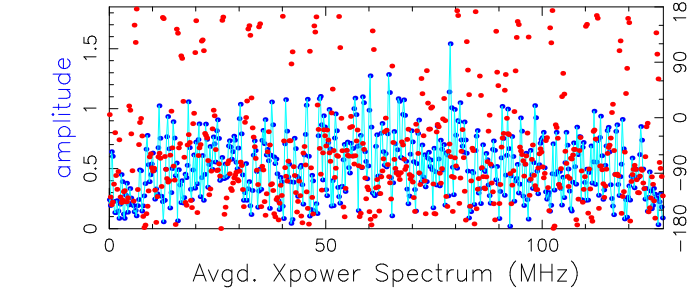
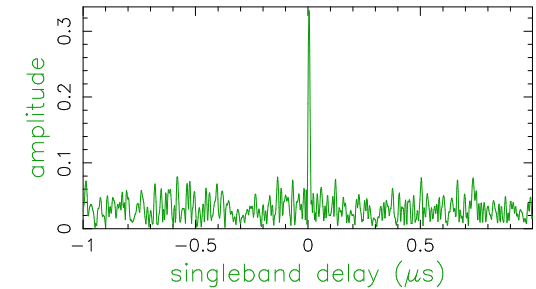
1502+106.1J2DGP, No0154, bn

VLBA_BR - VLBA_NL, fgroup Q, pol RL



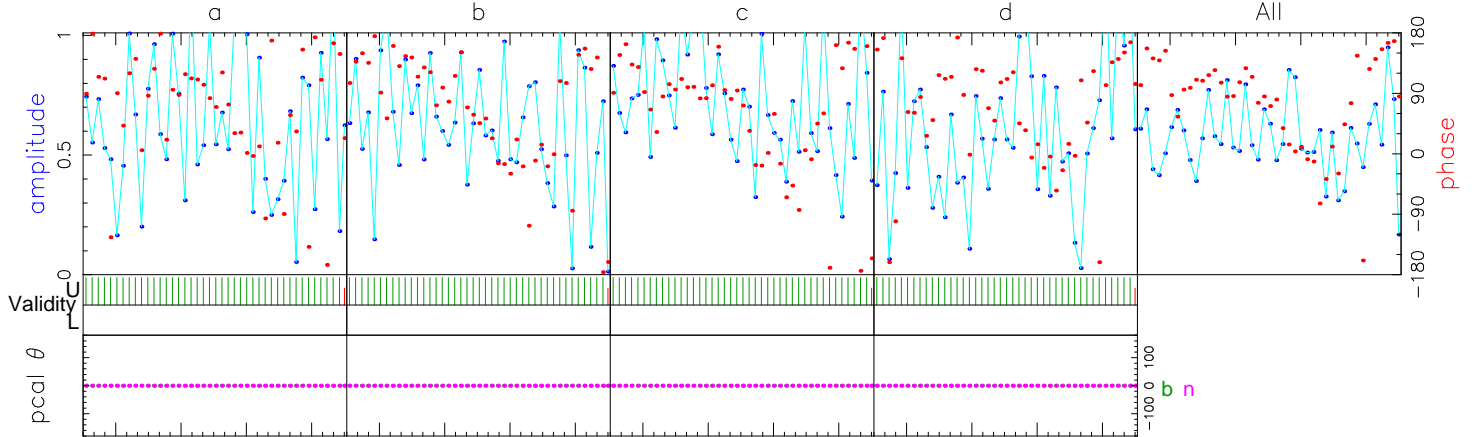
Fringe quality 9

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



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

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



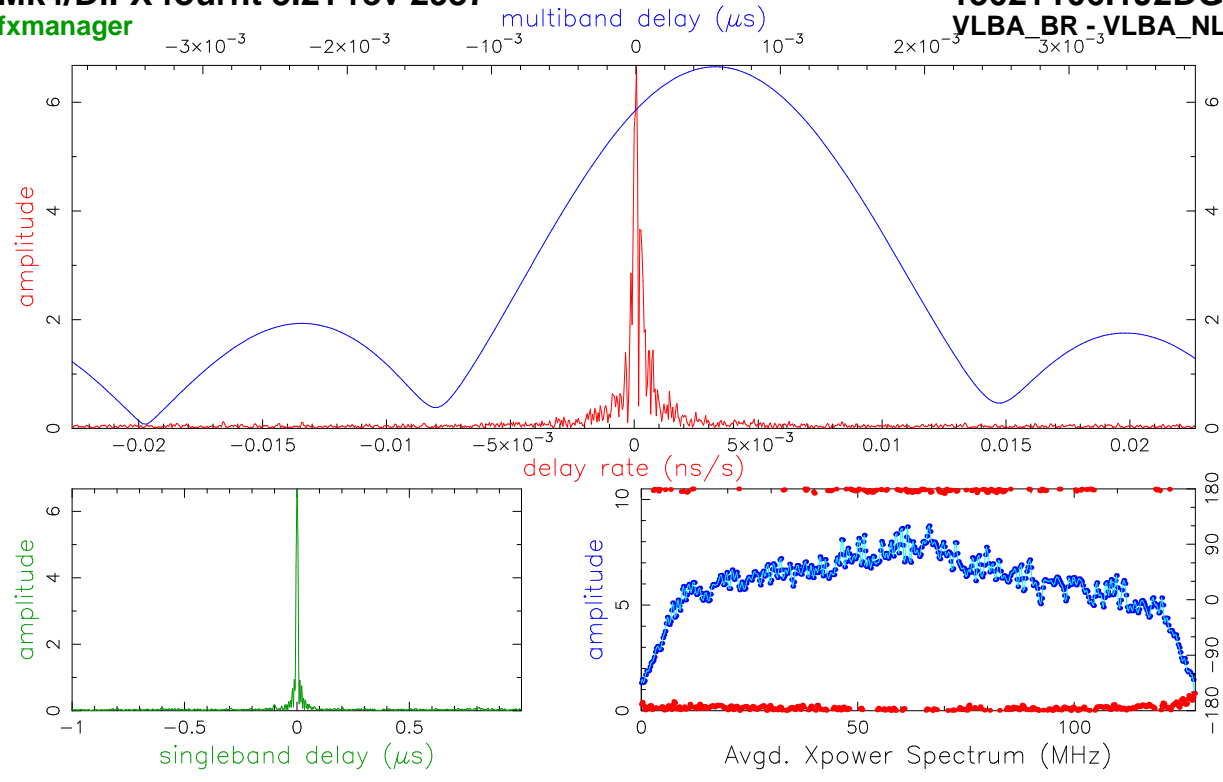
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
99.8	99.0	91.3	97.2	Phase	96.6
0.3	0.3	0.4	0.3	Ampl.	0.3
515.1	515.2	515.7	515.7	Sbd box	515.4
U/L 469/0	469/0	469/0	469/0	APs used	
b 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
b:n 0:0	0:0	0:0	0:0	PC phase	
b:n 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
b Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

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

ph/seg (deg)	RMS 63.0	Theor. 26.3	Amplitude Search (1024X16)	0.337 +/- 0.024	0.330	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	84.2	45.9	Interp.	0.000		Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	4.7	8.0	Inc. seg. avg.	0.523		Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	9.5	14.0	Inc. frq. avg.	0.329		Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

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

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/bn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/bn.Q.70.1J2DGP

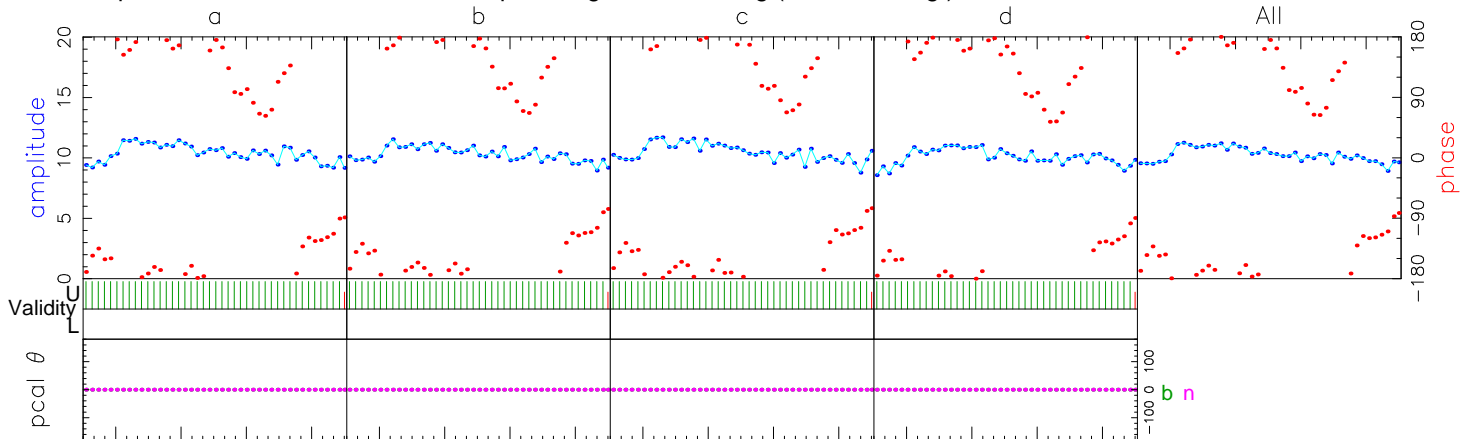


Fringe quality 5

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

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

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



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

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

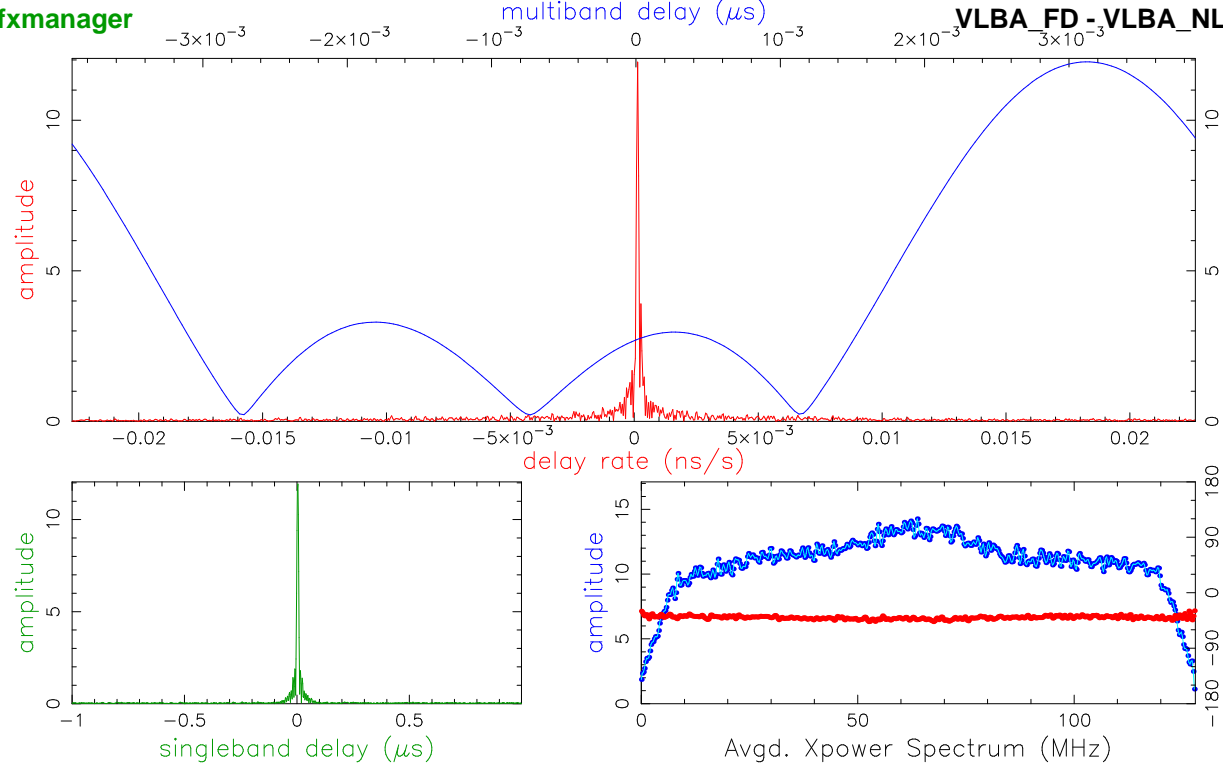
ph/seg (deg)	53.9	1.3	Amplitude	6.677 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	54.6	2.3	Search (1024X16)	6.610	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	7.6	0.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004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

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fxmanager

1502+106.1J2DGP, No0154, fn

VLBA_FD - VLBA_NL, fgroup Q, pol LL

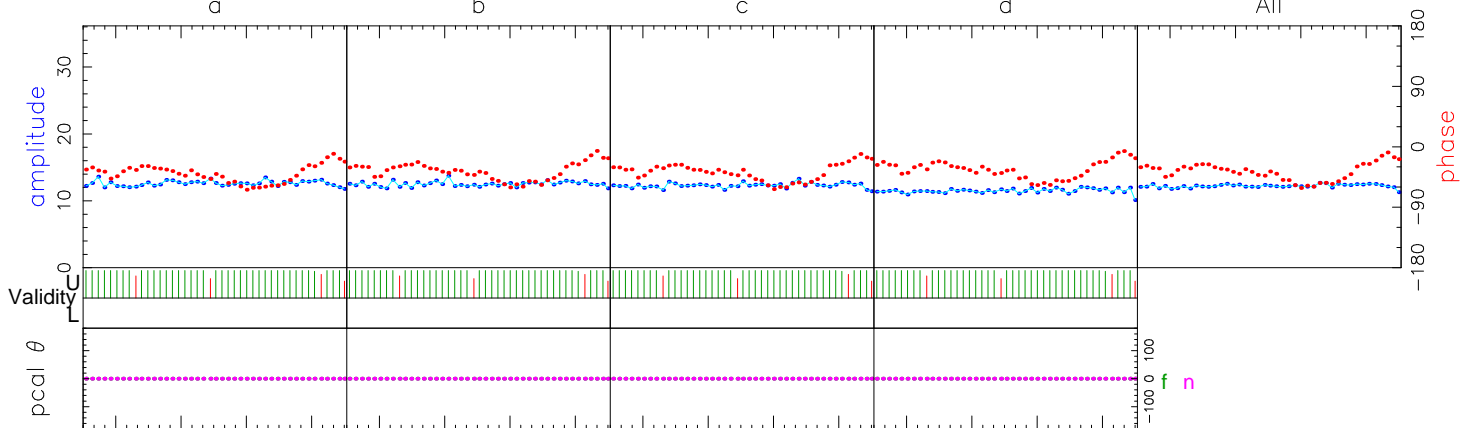


Fringe quality 8

SNR 506.6
 Int time 236.233
 Amp 12.053
 Phase -37.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.003237
 MBD 0.003087
 Fringe rate (Hz) 0.004935
 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
-40.0	-36.4	-37.8	-33.8	Phase	-37.1
12.3	12.2	12.0	11.2	Ampl.	11.9
514.8	514.6	514.6	514.7	Sbd box	514.7
U/L 465/0	465/0	465/0	465/0	APs used	
f 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
f:n 0:0	0:0	0:0	0:0	PC phase	
f:n 0:0	0:0	0:0	0:0	ManI PC	
f 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec)(sbd)	6.50615784491E+02	Apriori delay (usec)	6.50612697947E+02	Resid mbdelay (usec)	3.08654E-03 +/- 2.2E-06
Sband delay (usec)	6.50615934697E+02	Apriori clock (usec)	7.6972971E+00	Resid sbdelay (usec)	3.23675E-03 +/- 8.5E-06
Phase delay (usec)	6.50612695555E+02	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-2.39174E-06 +/- 1.5E-08
Delay rate (us/s)	3.03053641326E-01	Apriori rate (us/s)	3.03053526670E-01	Resid rate (us/s)	1.14656E-07 +/- 1.1E-10
Total phase (deg)	150.0	Apriori accel (us/s/s)	-6.60957102034E-06	Resid phase (deg)	-37.1 +/- 0.2

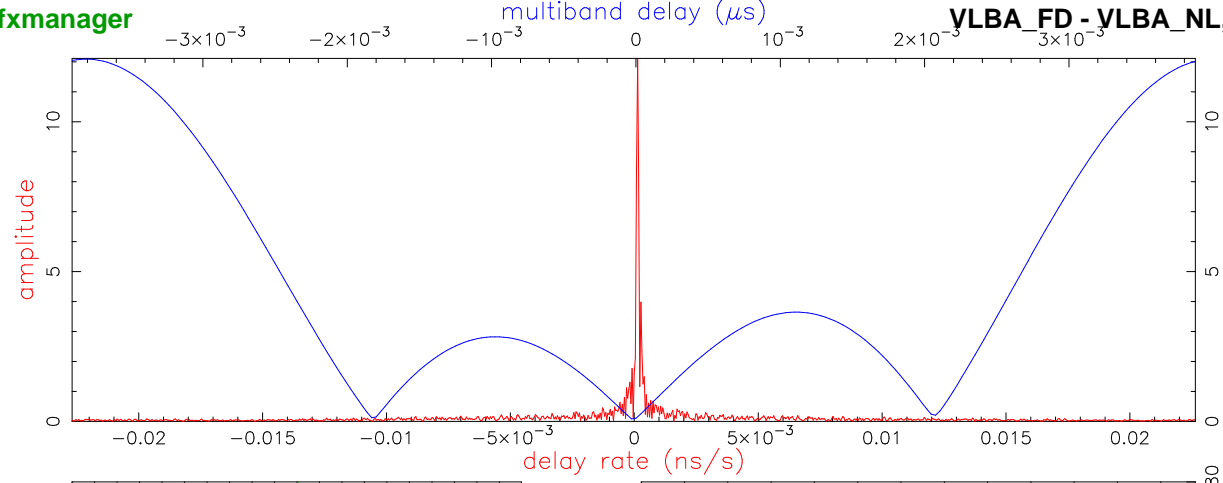
ph/seg (deg) 12.8 0.7 Search (1024X16) 11.075 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 2.5 1.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 3.2 0.2 Inc. seg. avg. 12.233 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 3.6 0.4 Inc. frq. avg. 11.942 Sample rate(MISamp/s): 256 Data rate (Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
 f: az 127.9 el 60.3 pa -43.4 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -885.635 -725.726 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn.Q.16.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, fn

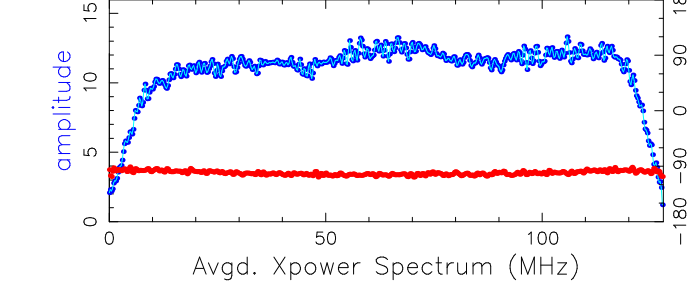
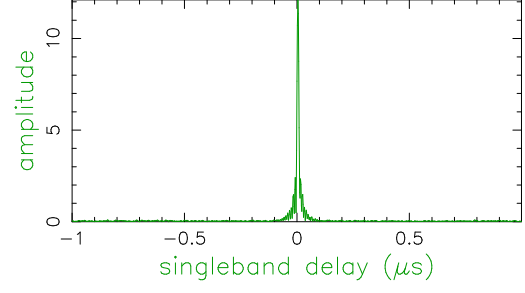
VLBA_FD - VLBA_NL, fgroup Q, pol RR



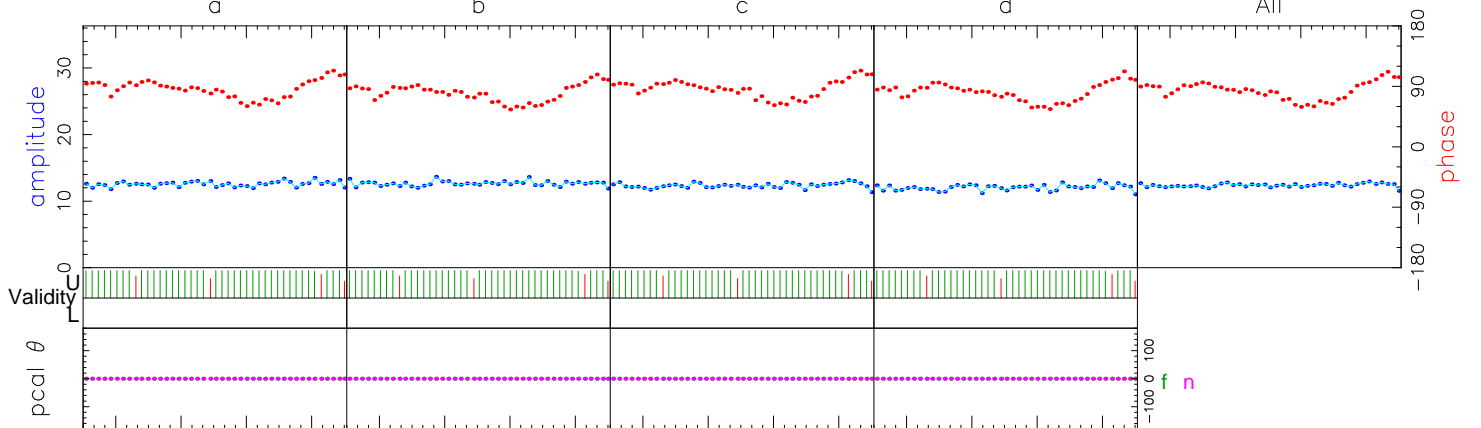
Fringe quality 8

SNR 509.1
 Int time 236.233
 Amp 12.113
 Phase 83.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.004211
 MBD -0.003793
 Fringe rate (Hz) 0.004928
 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	APs used	
n	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	PC phase	
f	1000	1000	1000	1000	ManI PC	
n	1000	1000	1000	1000	PC amp	
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	6.50616717398E+02	Apriori delay (usec)	6.50612697947E+02	Resid mbdelay (usec)	-3.79305E-03	+/- 2.2E-06
Group delay (usec)(sbd)	6.50616908822E+02	Apriori clock (usec)	7.6972971E+00	Resid sbdelay (usec)	4.21087E-03	+/- 8.5E-06
Sband delay (usec)	6.50612703339E+02	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	5.39184E-06	+/- 1.5E-08
Phase delay (usec)	3.03053641179E-01	Apriori rate (us/s)	3.03053526670E-01	Resid rate (us/s)	1.14509E-07	+/- 1.1E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-6.60957102034E-06	Resid phase (deg)	83.5	+/- 0.2
Total phase (deg)	270.6					

	RMS	Theor.	Amplitude	12.113 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	12.9	0.7	Search (1024X16)	11.311	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	3.2	1.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.2	0.2	Inc. seg. avg.	12.400	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.9	0.4	Inc. frq. avg.	12.104	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 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -885.635 -725.726 simultaneous interpolator

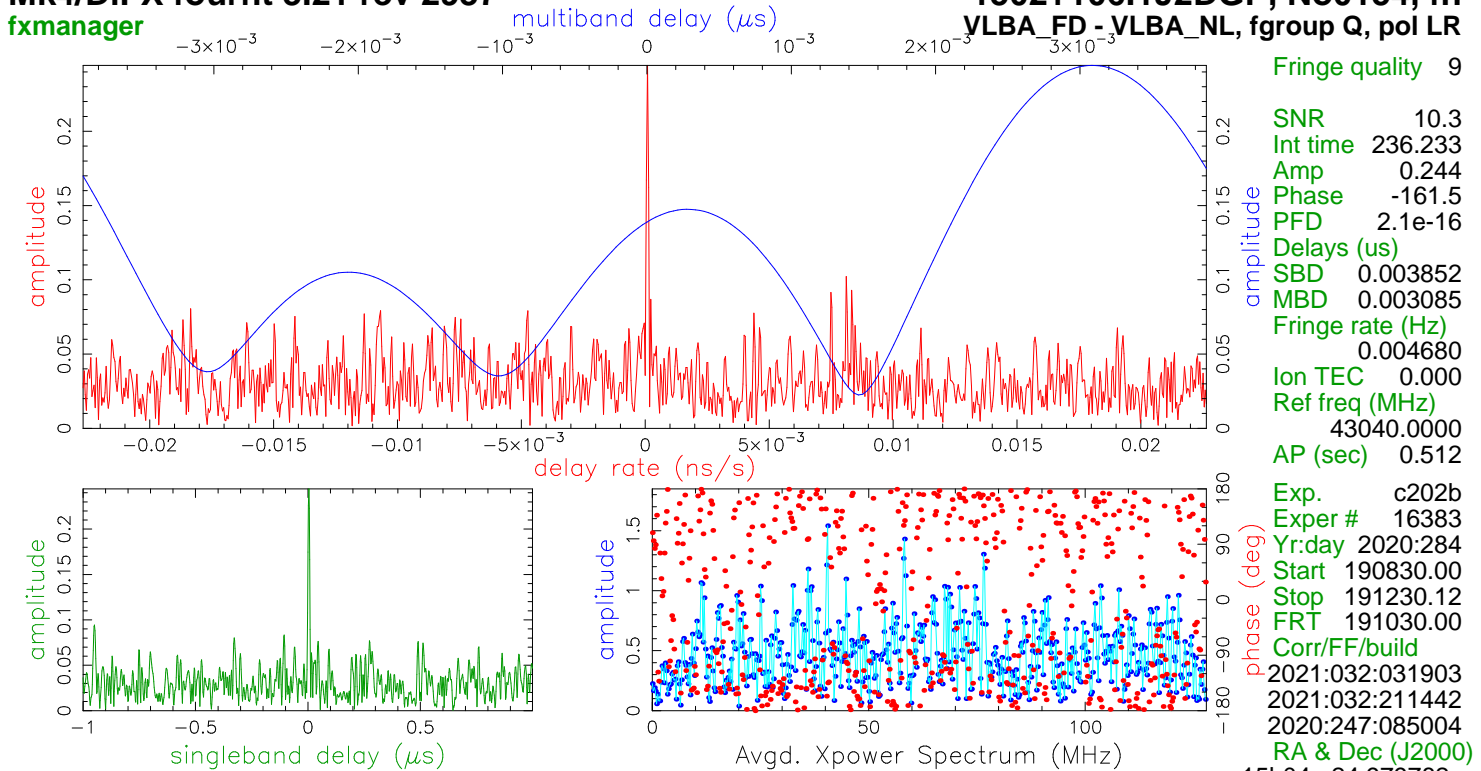
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn.Q.41.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

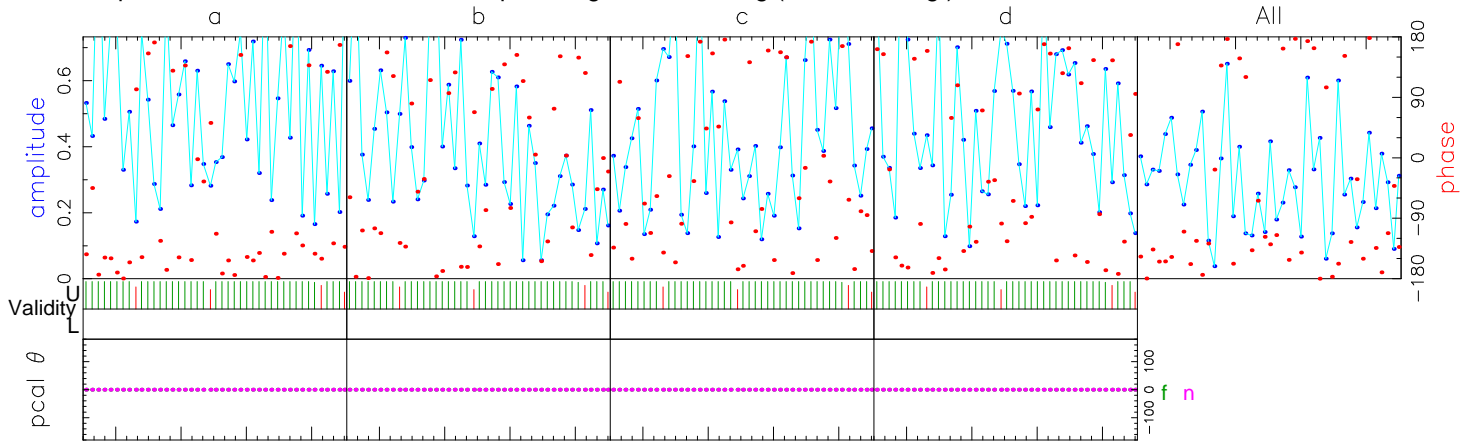
1502+106.1J2DGP, No0154, fn

VLBA_FD - VLBA_NL, fgroup Q, pol LR



Fringe quality 9
 SNR 10.3
 Int time 236.233
 Amp 0.244
 Phase -161.5
 PFD 2.1e-16
 Delays (us)
 SBD 0.003852
 MBD 0.003085
 Fringe rate (Hz)
 0.004680
 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
	-161.5	-172.3	-142.4	-167.8	Phase	-161.5
	0.4	0.2	0.2	0.3	Ampl.	0.2
	515.2	513.8	516.0	26.1	Sbd box	515.0
U/L	465/0	465/0	465/0	465/0	APs used	
f	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	6.50615782529E+02	Apriori delay (usec)	6.50612697947E+02	Resid mbdelay (usec)	3.08458E-03	+/-	1.1E-04
Sband delay (usec)	6.50616549447E+02	Apriori clock (usec)	7.6972971E+00	Resid sbdelay (usec)	3.85150E-03	+/-	4.2E-04
Phase delay (usec)	6.50612687525E+02	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-1.04219E-05	+/-	7.2E-07
Delay rate (us/s)	3.03053635402E-01	Apriori rate (us/s)	3.03053526670E-01	Resid rate (us/s)	1.08732E-07	+/-	5.2E-09
Total phase (deg)	25.6	Apriori accel (us/s/s)	-6.60957102034E-06	Resid phase (deg)	-161.5	+/-	11.2

	RMS	Theor.	Amplitude	0.244 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
ph/seg (deg)	50.9	36.4	Search (1024X16)	0.224	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
amp/seg (%)	64.1	63.6	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
ph/frq (deg)	16.1	11.2	Inc. seg. avg.	0.249	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	38.7	19.5	Inc. frq. avg.	0.243						

f: az 127.9 el 60.3 pa -43.4 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -885.635 -725.726 simultaneous interpolator

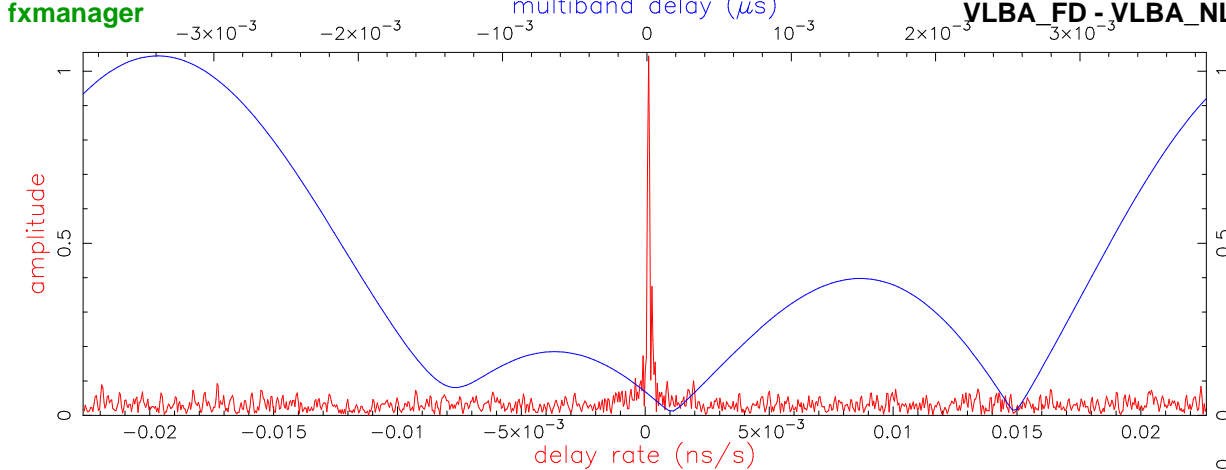
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn.Q.60.1J2DGP

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fxmanager

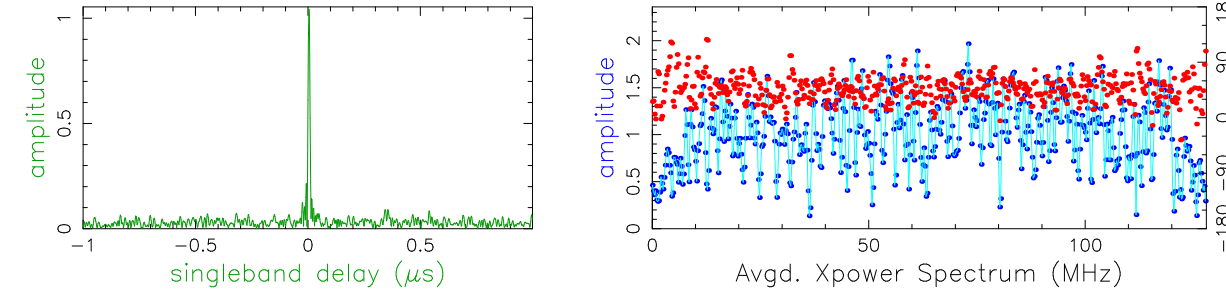
1502+106.1J2DGP, No0154, fn

VLBA_FD - VLBA_NL, fgroup Q, pol RL



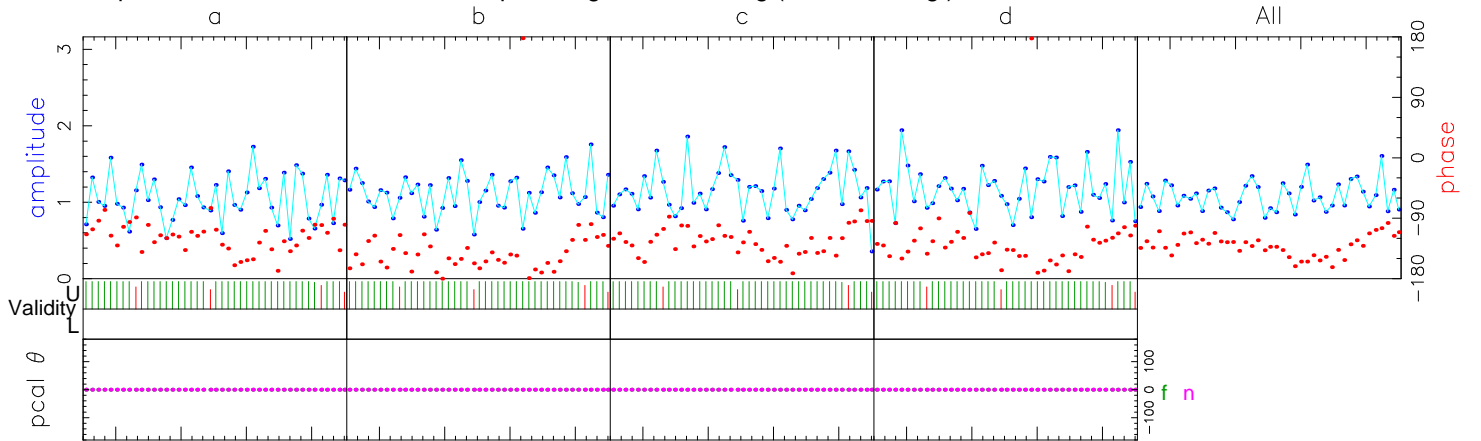
Fringe quality 8

SNR 44.3
 Int time 236.233
 Amp 1.055
 Phase -130.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.004579
 MBD -0.003352
 Fringe rate (Hz)
 0.004930
 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
 2021:032:211444
 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



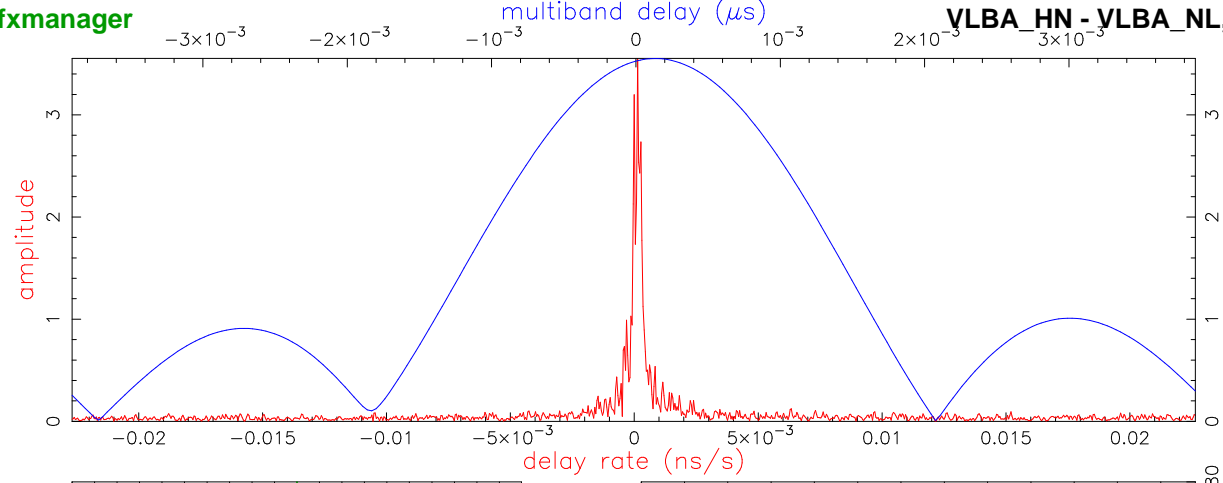
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-119.7	-145.3	-123.3	-133.2	Phase	-130.5
	1.0	1.0	1.1	1.1	Ampl.	1.1
	515.4	515.1	515.8	515.0	Sbd box	515.3
U/L	465/0	465/0	465/0	465/0	APs used	
f	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	6.50617158804E+02	Apriori delay (usec)	6.50612697947E+02	Resid mbdelay (usec)	-3.35164E-03	+/- 2.5E-05
Group delay (usec)(sbd)	6.50617276572E+02	Apriori clock (usec)	7.6972971E+00	Resid sbdelay (usec)	4.57862E-03	+/- 9.7E-05
Sband delay (usec)	6.50612689527E+02	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-8.41990E-06	+/- 1.7E-07
Phase delay (usec)	3.03053641216E-01	Apriori rate (us/s)	3.03053526670E-01	Resid rate (us/s)	1.14546E-07	+/- 1.2E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-6.60957102034E-06	Resid phase (deg)	-130.5	+/- 2.6
Total phase (deg)	56.6					

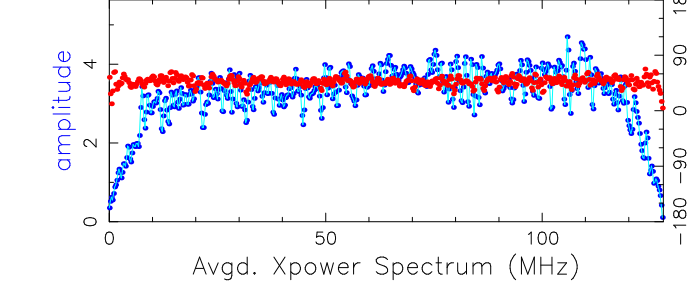
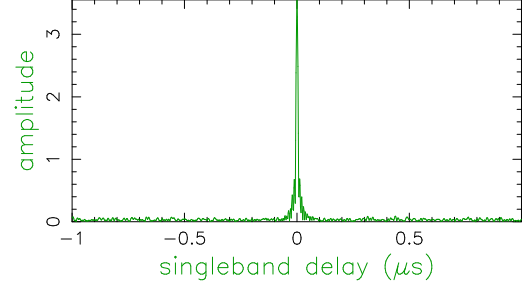
	RMS	Theor.	Amplitude	1.055 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	15.6	8.4	Search (1024X16)	0.979	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	17.9	14.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	14.0	2.6	Inc. seg. avg.	1.071	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.9	4.5	Inc. frq. avg.	1.058	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 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -885.635 -725.726 simultaneous interpolator

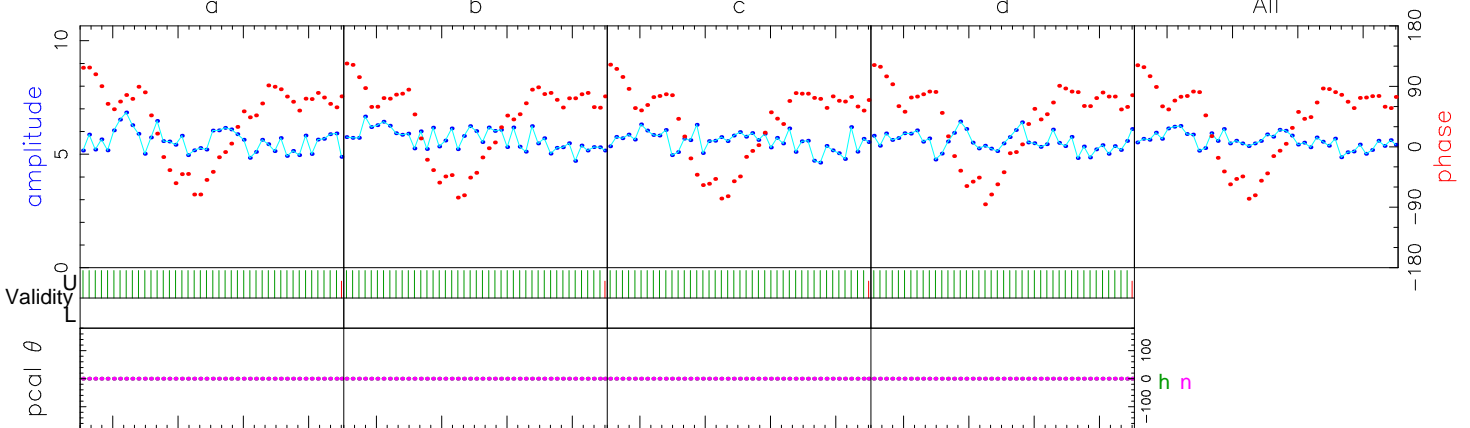
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/fn.Q.76.1J2DGP



Fringe quality 5
SNR 150.5
Int time 239.982
Amp 3.553
Phase 46.7
PFD 0.0e+00
Delays (us)
SBD 0.000101
MBD 0.000139
Fringe rate (Hz) 0.005960
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"



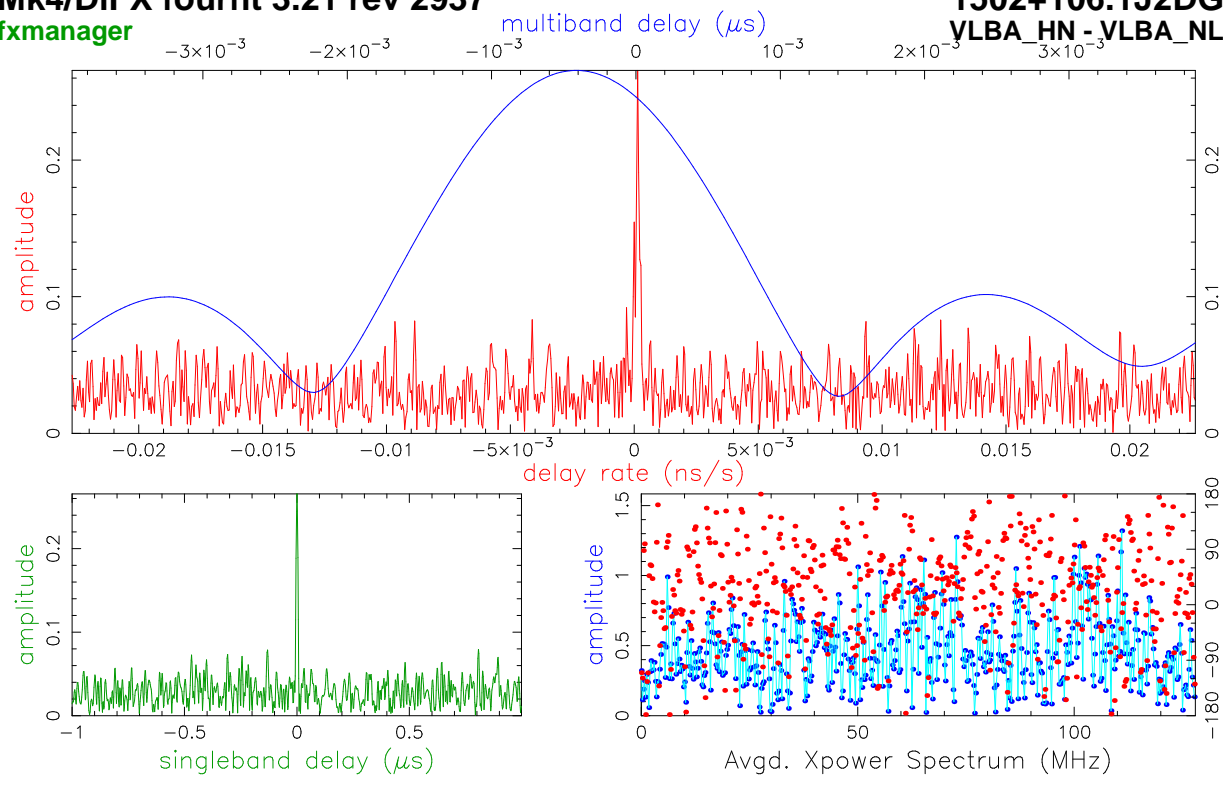
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



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

Group delay (usec)(sbd)	-1.62427388270E+02	Apriori delay (usec)	-1.62427527189E+02	Resid mbdelay (usec)	1.38920E-04	+/-	7.4E-06
Sband delay (usec)	-1.62427426314E+02	Apriori clock (usec)	3.7520218E-01	Resid sbdelay (usec)	1.00875E-04	+/-	2.9E-05
Phase delay (usec)	-1.62427524178E+02	Apriori clockrate (us/s)	-2.7000001E-07	Resid phdelay (usec)	3.01135E-06	+/-	4.9E-08
Delay rate (us/s)	-3.84410089830E-01	Apriori rate (us/s)	-3.84410228311E-01	Resid rate (us/s)	1.38481E-07	+/-	3.5E-10
Total phase (deg)	-230.6	Apriori accel (us/s/s)	1.17176844239E-06	Resid phase (deg)	46.7	+/-	0.8

ph/seg (deg)	54.2	RMS	54.2	Theor.	2.5	Amplitude	3.553 +/- 0.024	PCal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	58.4	Search (1024X16)	3.497	Inc. seg. avg.	5.596	PCal rate: 0.000E+00, 0.000E+00 (us/s)	3.497	SampCntNorm: enabled	sb window (us)	-1.000 1.000
ph/frq (deg)	2.5	Inc. frq. avg.	3.553	Inc. frq. avg.	3.553	Bits/sample: 2x2	3.553	Sample rate(MISamp/s): 256	mb window (us)	-0.004 0.004
amp/frq (%)	2.0	u,v (fr/asec)	1119.008 69.950	Data rate(Mb/s): 2048	nlags: 512	Sample rate(MISamp/s): 256	1119.008 69.950	ion window (TEC)	0.00 0.00	

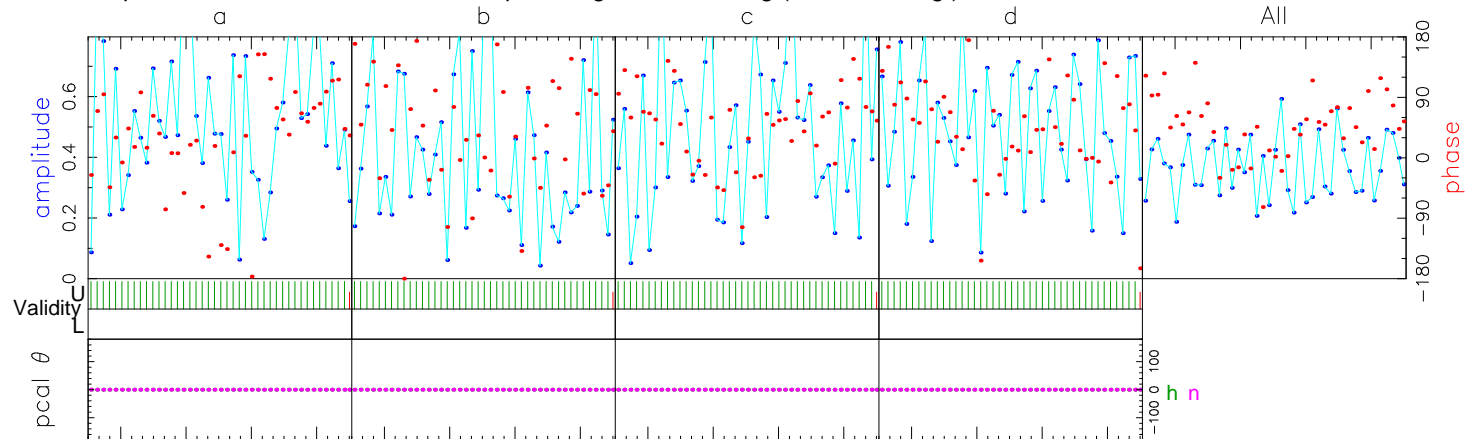


Fringe quality 9

SNR 11.3
Int time 239.982
Amp 0.266
Phase 49.9
PFD 5.4e-21
Delays (us)
SBD 0.000011
MBD -0.000412
Fringe rate (Hz)
0.006264
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		
h	1000	1000	1000	1000		
n	1000	1000	1000	1000		
h:n	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
n	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.62427939488E+02	Apriori delay (usec)	-1.62427527189E+02	Resid mbdelay (usec)	-4.12299E-04	+/-	9.9E-05
Sband delay (usec)	-1.62427516564E+02	Apriori clock (usec)	3.7520218E-01	Resid sbdelay (usec)	1.06250E-05	+/-	3.8E-04
Phase delay (usec)	-1.62427523968E+02	Apriori clockrate (us/s)	-2.7000001E-07	Resid phdelay (usec)	3.22097E-06	+/-	6.6E-07
Delay rate (us/s)	-3.84410082782E-01	Apriori rate (us/s)	-3.84410228311E-01	Resid rate (us/s)	1.45529E-07	+/-	4.7E-09
Total phase (deg)	-227.4	Apriori accel (us/s/s)	1.17176844239E-06	Resid phase (deg)	49.9	+/-	10.2

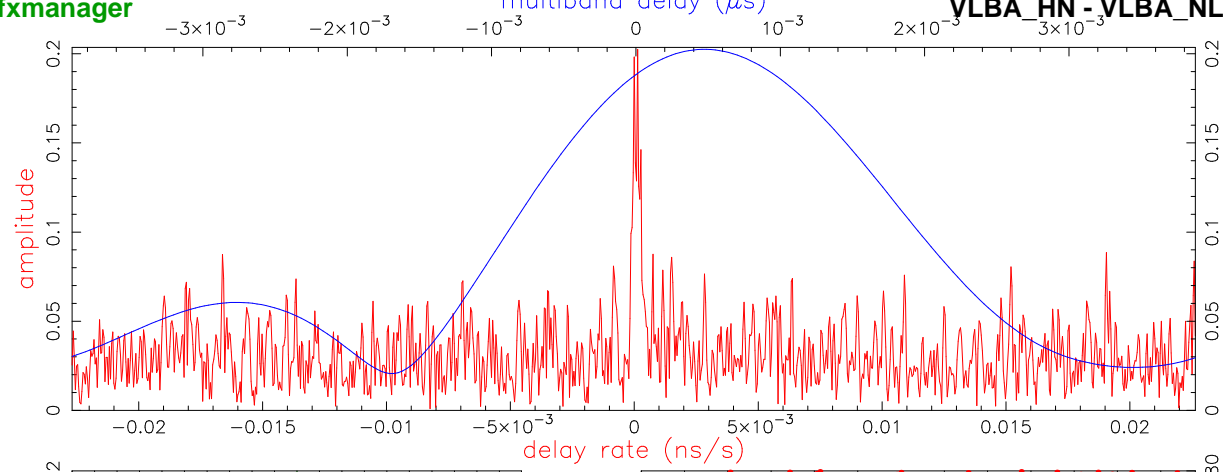
	RMS	Theor.	Amplitude	0.266 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	46.2	33.4	Search (1024X16)	0.257	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	54.7	58.3	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	1.5	10.2	Inc. seg. avg.	0.317	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
amp/frq (%)	26.7	17.8	Inc. frq. avg.	0.261					

Mk4/DiFX fourfit 3.21 rev 2937

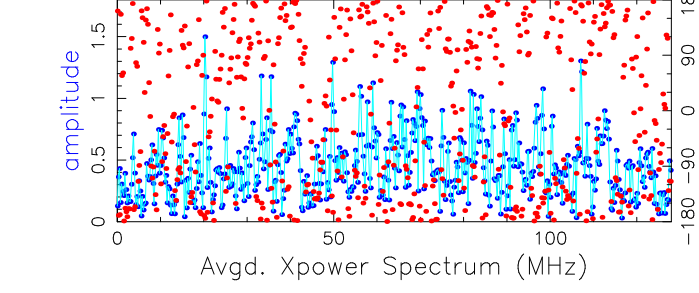
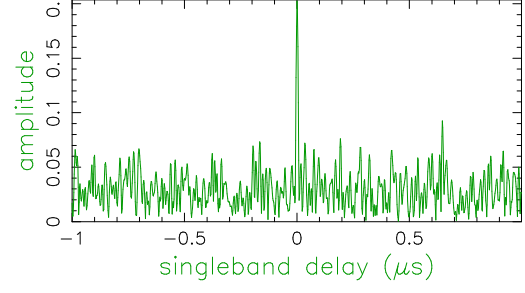
fxmanager

1502+106.1J2DGP, No0154, hn

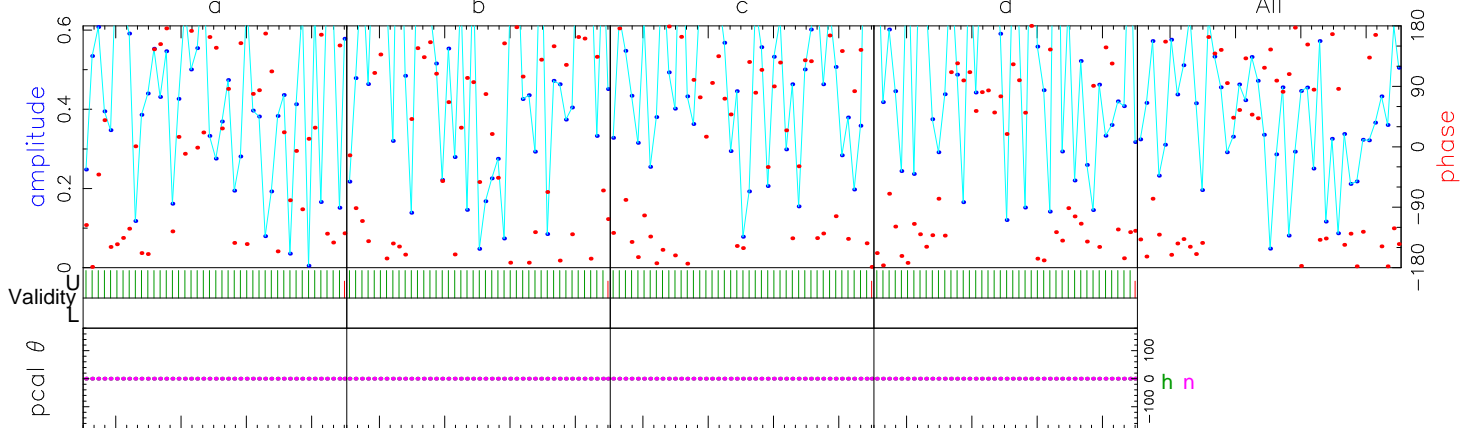
VLBA_HN - VLBA_NL, fgroup Q, pol RL



Fringe quality 9
 SNR 8.6
 Int time 239.982
 Amp 0.204
 Phase 177.1
 PFD 1.2e-09
 Delays (us)
 SBD 0.000515
 MBD 0.000484
 Fringe rate (Hz) 0.005720
 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	43296.00	Freq (MHz)	All
-155.5	167.8	168.0	-174.0	-174.0	Phase	177.1
0.1	0.3	0.2	0.2	0.2	Ampl.	0.2
817.6	513.6	513.8	512.5	512.5	Sbd box	513.3
U/L 469/0	469/0	469/0	469/0	469/0	APs used	
h 1000	1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	1000	PC freqs	
h:n 0:0	0:0	0:0	0:0	0:0	PC phase	
h:n 0:0	0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Q03UR	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.62427043270E+02	Apriori delay (usec)	-1.62427527189E+02	Resid mbdelay (usec)	4.83920E-04	+/- 1.3E-04
Sband delay (usec)	-1.62427012314E+02	Apriori clock (usec)	3.7520218E-01	Resid sbdelay (usec)	5.14875E-04	+/- 5.0E-04
Phase delay (usec)	-1.62427515760E+02	Apriori clockrate (us/s)	-2.7000001E-07	Resid phdelay (usec)	1.14288E-05	+/- 8.6E-07
Delay rate (us/s)	-3.84410095415E-01	Apriori rate (us/s)	-3.84410228311E-01	Resid rate (us/s)	1.32896E-07	+/- 6.2E-09
Total phase (deg)	-100.2	Apriori accel (us/s/s)	1.17176844239E-06	Resid phase (deg)	177.1	+/- 13.3

ph/seg (deg)	62.2	Theor.	43.6	Amplitude	0.204 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	111.8	Search (1024X16)	0.202	Search	0.202	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	22.4	Inc. seg. avg.	0.291	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	33.0	Inc. frq. avg.	0.202	Inc. seg. avg.	0.291	Sample rate(MISamp/s): 256	mb window (us) -0.004 0.004
				Inc. frq. avg.	0.202	Data rate(Mb/s): 2048	dr window (ns/s) -0.023 0.023
						nlags: 512	ion window (TEC) 0.00 0.00

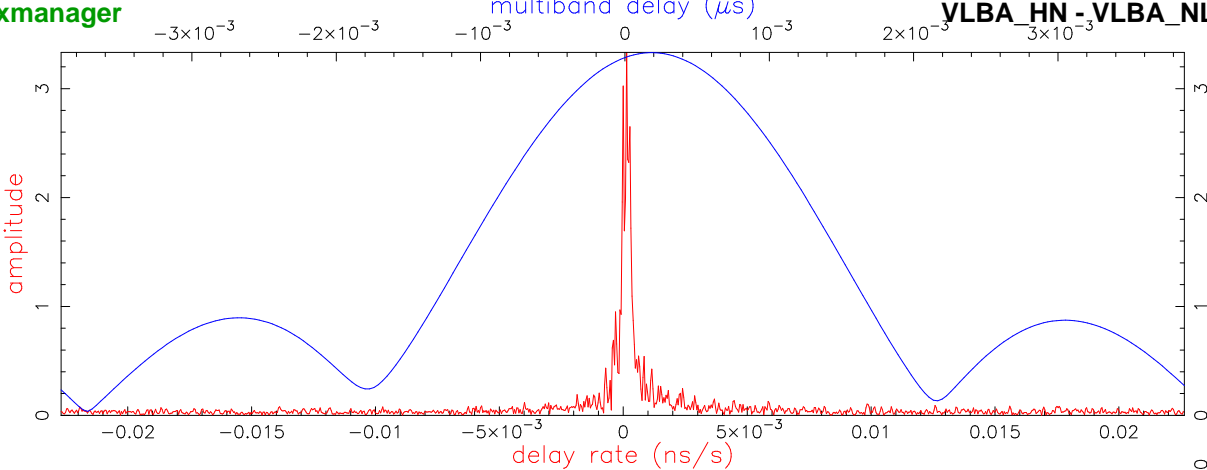
h: az 195.3 el 56.6 pa 11.8 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) 1119.008 69.950 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/hn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/hn.Q.144.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

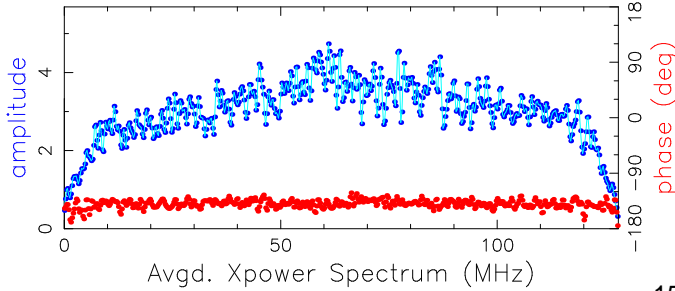
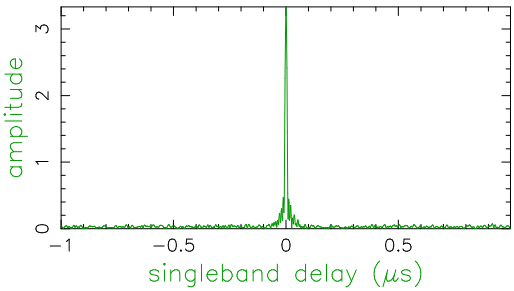
1502+106.1J2DGP, No0154, hn

VLBA_HN - VLBA_NL, fgroup Q, pol LL



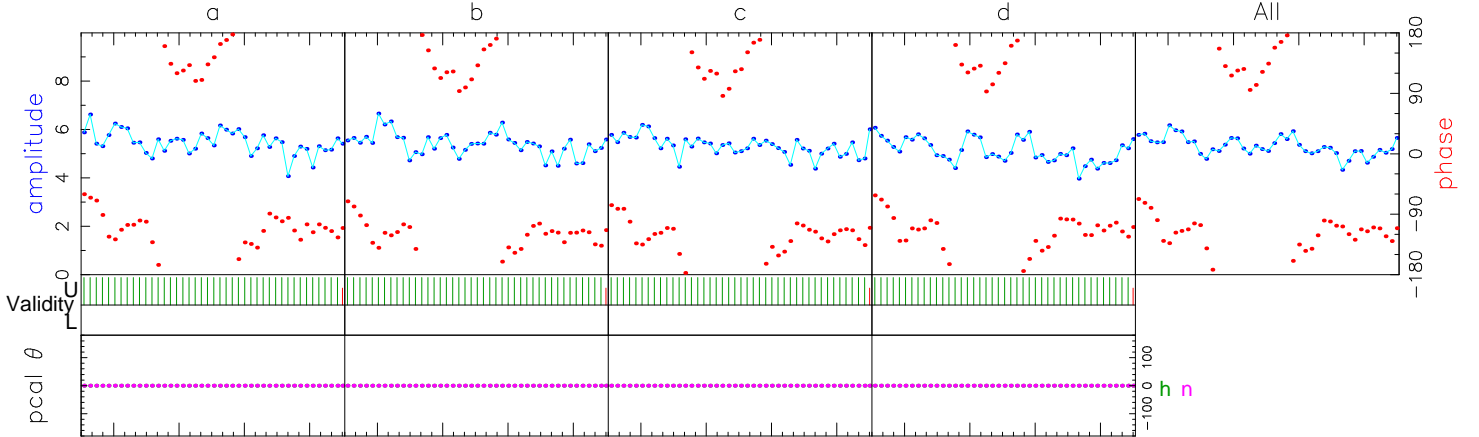
Fringe quality 5

SNR 141.2
 Int time 239.982
 Amp 3.333
 Phase -139.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.000169
 MBD 0.000194
 Fringe rate (Hz) 0.005923
 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
	-134.8	-144.4	-144.2	-135.8	Phase	-139.9
	3.4	3.4	3.4	3.2	Ampl.	3.3
	512.8	513.1	513.1	513.3	Sbd box	513.1
U/L	469/0	469/0	469/0	469/0	APs used	
h	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
h:n	0:0	0:0	0:0	0:0	PC phase	
h:n	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.62427333363E+02	Apriori delay (usec)	-1.62427527189E+02	Resid mbdelay (usec)	1.93826E-04	+/- 7.9E-06
Sband delay (usec)	-1.62427358689E+02	Apriori clock (usec)	3.7520218E-01	Resid sbdelay (usec)	1.68500E-04	+/- 3.1E-05
Phase delay (usec)	-1.62427536216E+02	Apriori clockrate (us/s)	-2.7000001E-07	Resid phdelay (usec)	-9.02685E-06	+/- 5.2E-08
Delay rate (us/s)	-3.84410090687E-01	Apriori rate (us/s)	-3.84410228311E-01	Resid rate (us/s)	1.37624E-07	+/- 3.8E-10
Total phase (deg)	-57.1	Apriori accel (us/s/s)	1.17176844239E-06	Resid phase (deg)	-139.9	+/- 0.8

ph/seg (deg)	54.7	Theor.	2.7	Amplitude	3.333 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	60.5		4.6	Search (1024X16)	3.266	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	6.4		0.8	Inc. seg. avg.	5.306	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.1		1.4	Inc. frq. avg.	3.340	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

h: az 195.3 el 56.6 pa 11.8 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) 1119.008 69.950 simultaneous interpolator

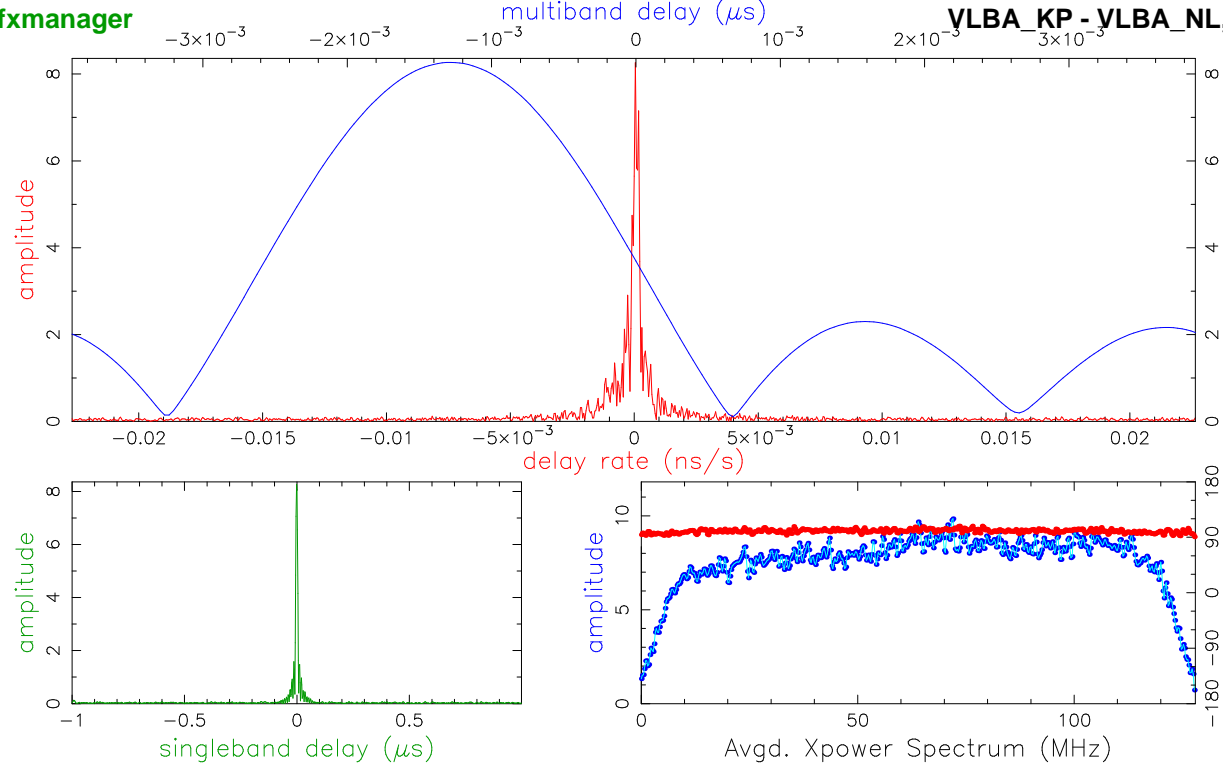
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/hn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/hn.Q.80.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, kn

VLBA_KP - VLBA_NL, fgroup Q, pol RR

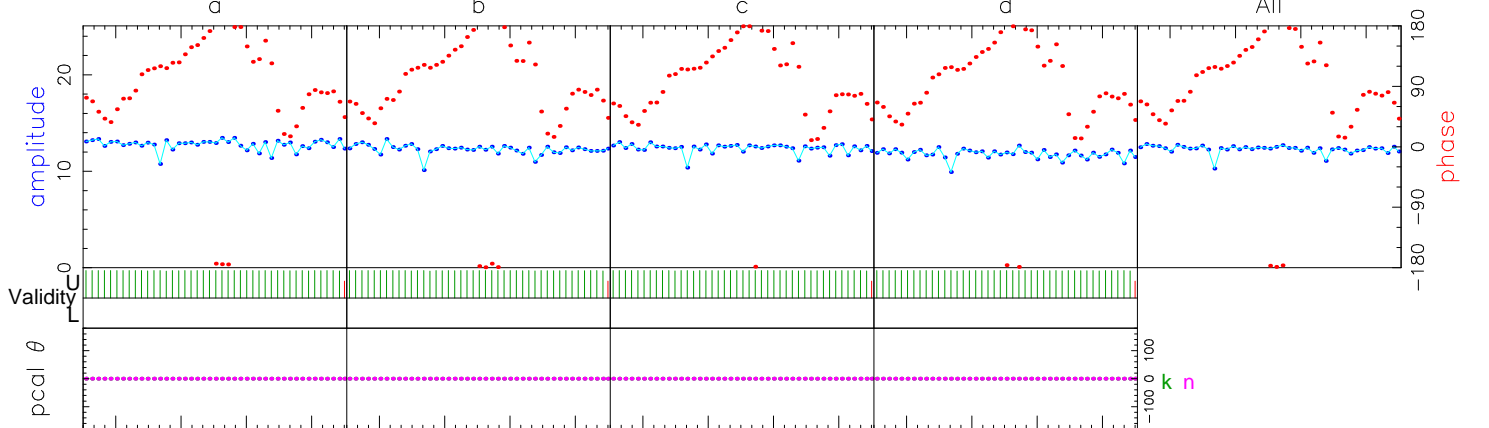


Fringe quality 5

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		
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	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

	42912.00	43040.00	43168.00	43296.00		
Group delay (usec)(sbd)	-5.77165551494E+02			-5.77164305863E+02	Resid mbdelay (usec)	-1.24563E-03 +/- 3.1E-06
Sband delay (usec)	-5.77165542988E+02			1.5518761E-01	Resid sbdelay (usec)	-1.23713E-03 +/- 1.2E-05
Phase delay (usec)	-5.77164299351E+02			-4.0000002E-07	Resid phdelay (usec)	6.51261E-06 +/- 2.1E-08
Delay rate (us/s)	4.50923316717E-01			4.50923266414E-01	Resid rate (us/s)	5.03030E-08 +/- 1.5E-10
Total phase (deg)		-159.9		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

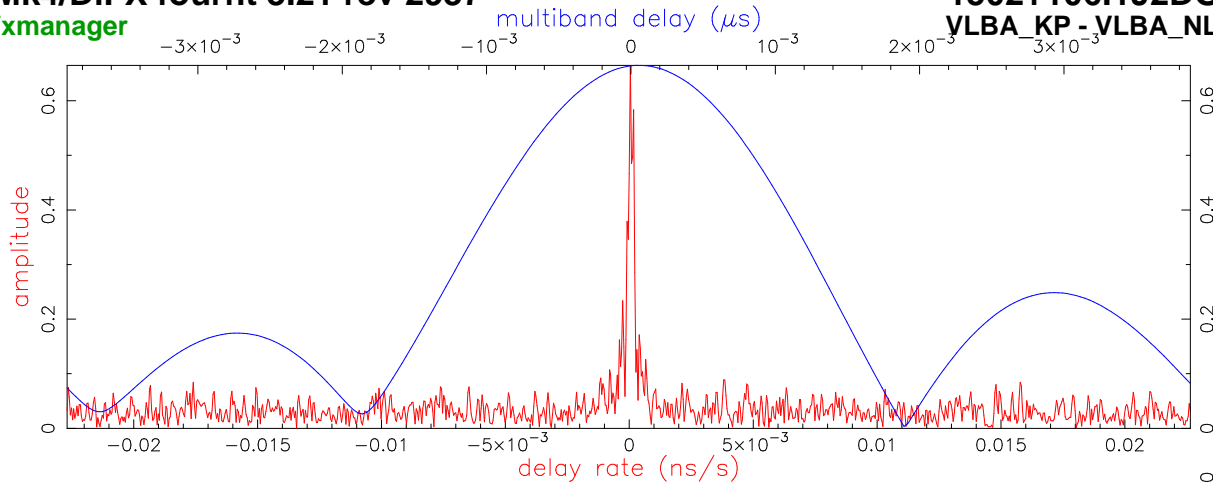
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn.Q.112.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

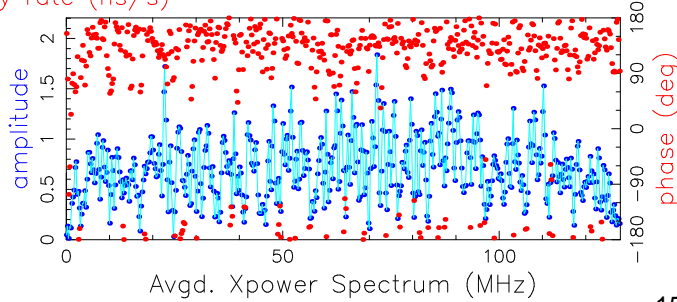
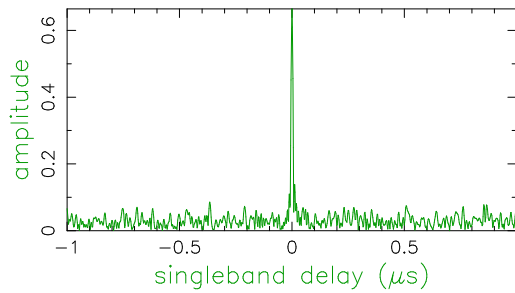
1502+106.1J2DGP, No0154, kn

VLBA_KP - VLBA_NL, fgroup Q, pol LR



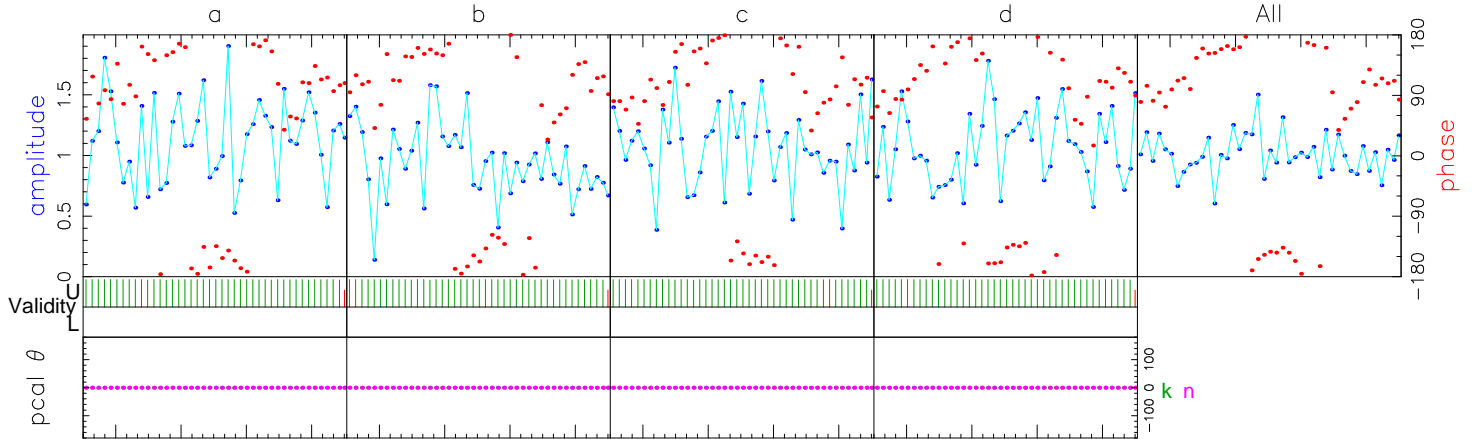
Fringe quality 9

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



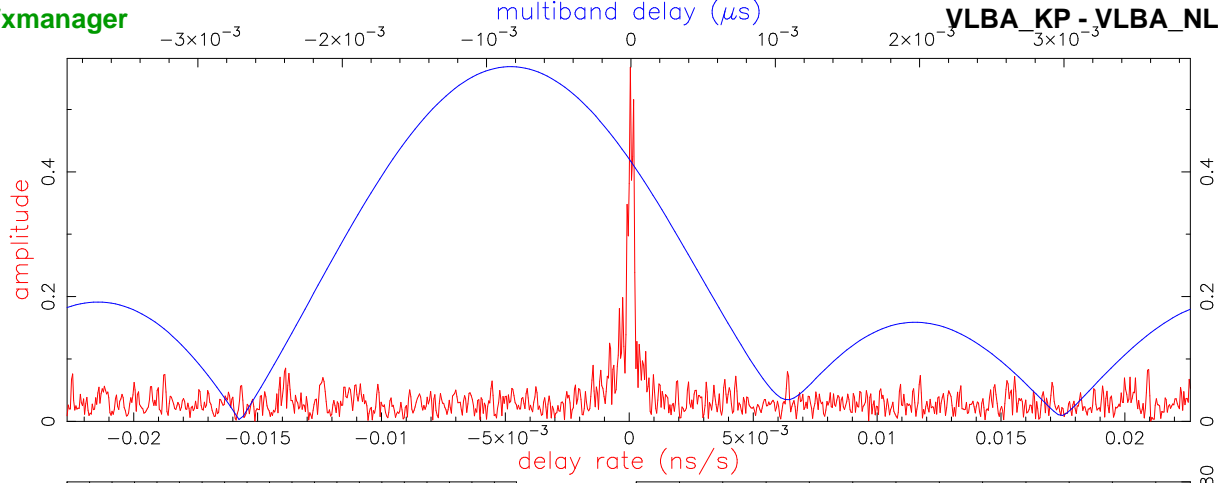
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
k	1000	1000	1000	1000		
n	1000	1000	1000	1000		
k:n	0:0	0:0	0:0	0:0		
k:n	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000		
n	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		

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

ph/seg (deg)	RMS 49.8	Theor. 13.4	Amplitude Search (1024X16)	0.665 +/- 0.024	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	57.7	23.3	Interp.	0.000	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	7.3	4.1	Inc. seg. avg.	0.985	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.004 0.004
amp/frq (%)	8.3	7.1	Inc. frq. avg.	0.666	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 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -1312.652 -588.702 simultaneous interpolator

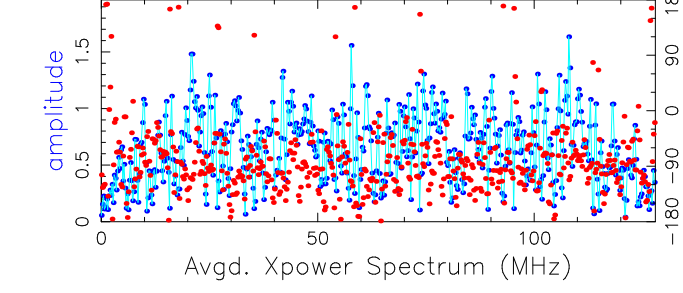
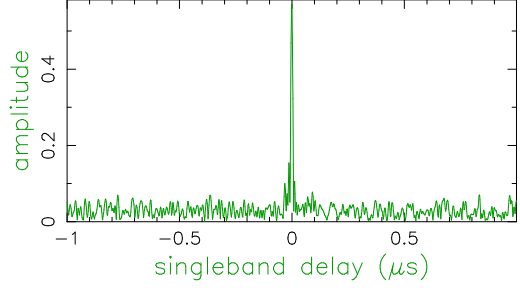
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/kn.Q.128.1J2DGP



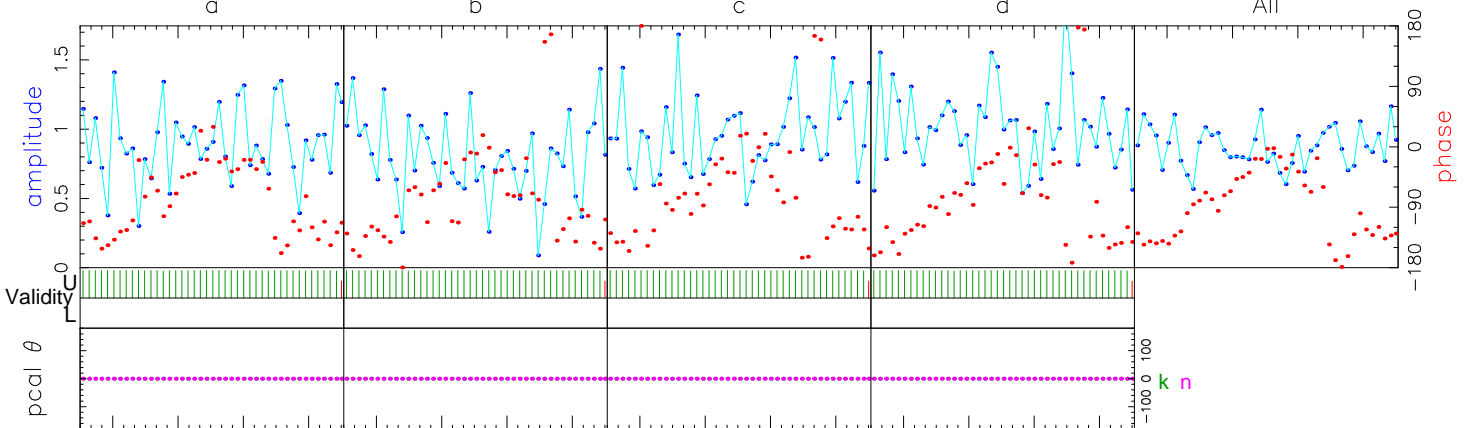
Fringe quality 9

SNR 24.6
Int time 239.075
Amp 0.582
Phase -93.7
PFD 0.0e+00
Delays (us)
SBD -0.000919
MBD -0.000771
Fringe rate (Hz) 0.002058
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"



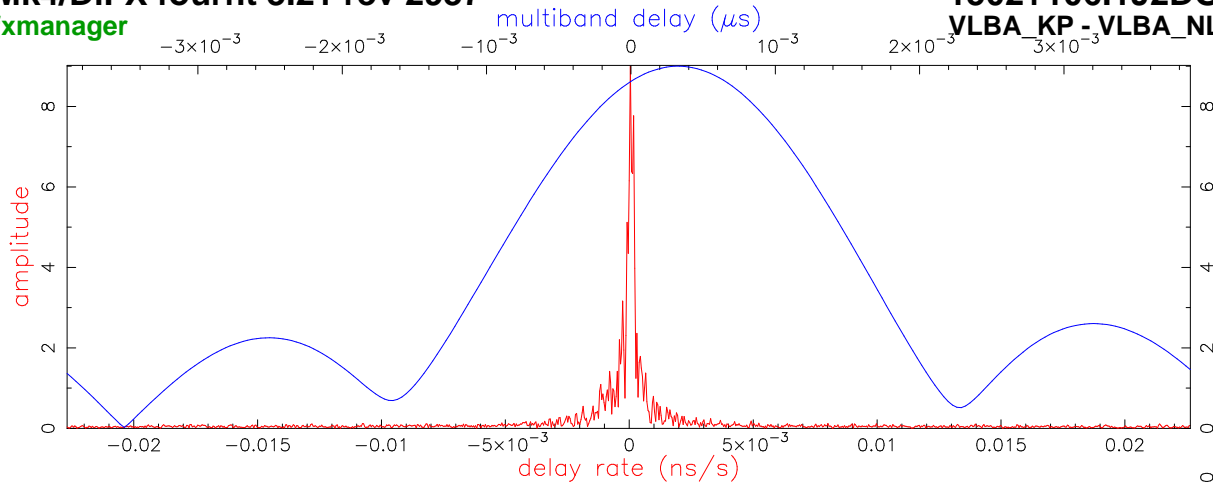
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-85.8	-98.9	-94.0	-96.7	Phase	-93.7
0.6	0.5	0.6	0.6	Ampl.	0.6
512.0	512.5	512.9	512.6	Sbd box	512.5
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	Manl PC	
k 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
k Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

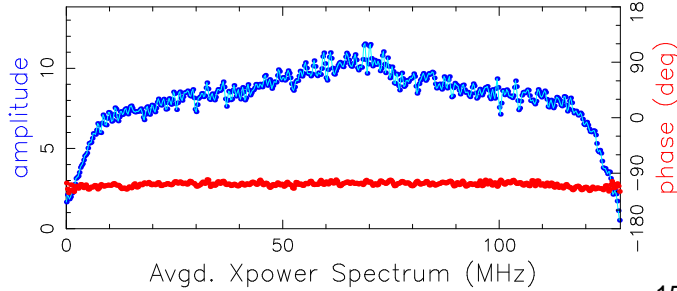
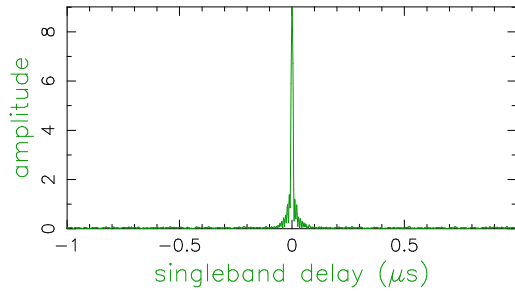
Group delay (usec)(sbd)	-5.77165077213E+02	Apriori delay (usec)	-5.77164305863E+02	Resid mbdelay (usec)	-7.71350E-04	+/- 4.5E-05
Sband delay (usec)	-5.77165224613E+02	Apriori clock (usec)	1.5518761E-01	Resid sbdelay (usec)	-9.18750E-04	+/- 1.8E-04
Phase delay (usec)	-5.77164311913E+02	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-6.04984E-06	+/- 3.0E-07
Delay rate (us/s)	4.50923314224E-01	Apriori rate (us/s)	4.50923266414E-01	Resid rate (us/s)	4.78099E-08	+/- 2.2E-09
Total phase (deg)	-354.5	Apriori accel (us/s/s)	2.81110811846E-07	Resid phase (deg)	-93.7	+/- 4.7

	RMS	Theor.	Amplitude	0.582 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	51.2	15.3	Search (1024X16)	0.563	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	55.8	26.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	7.0	4.7	Inc. seg. avg.	0.843	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023
amp/frq (%)	6.6	8.1	Inc. frq. avg.	0.568	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC) 0.00 0.00



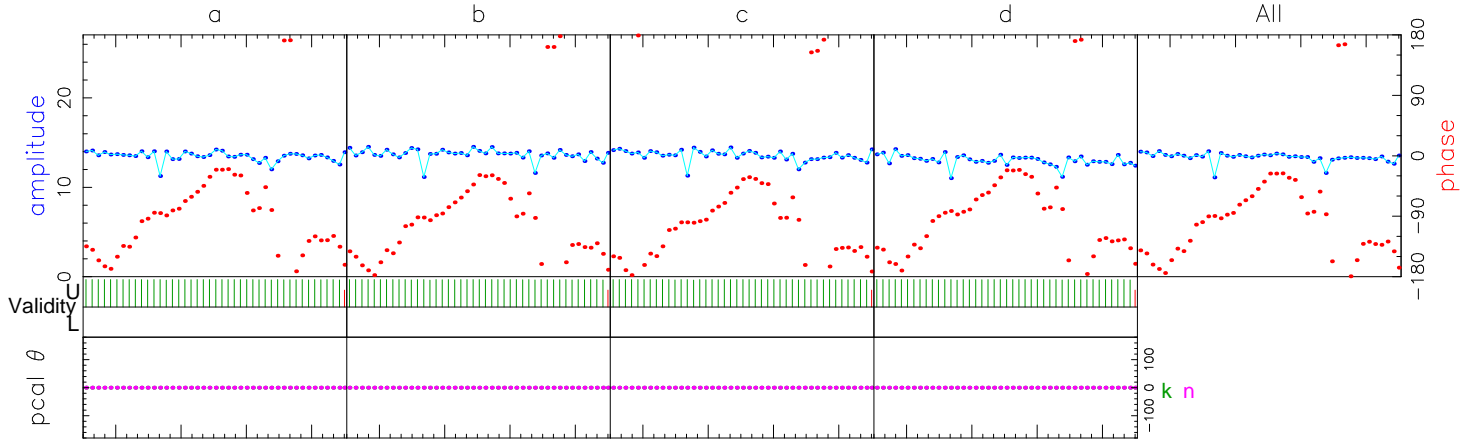
Fringe quality 5

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



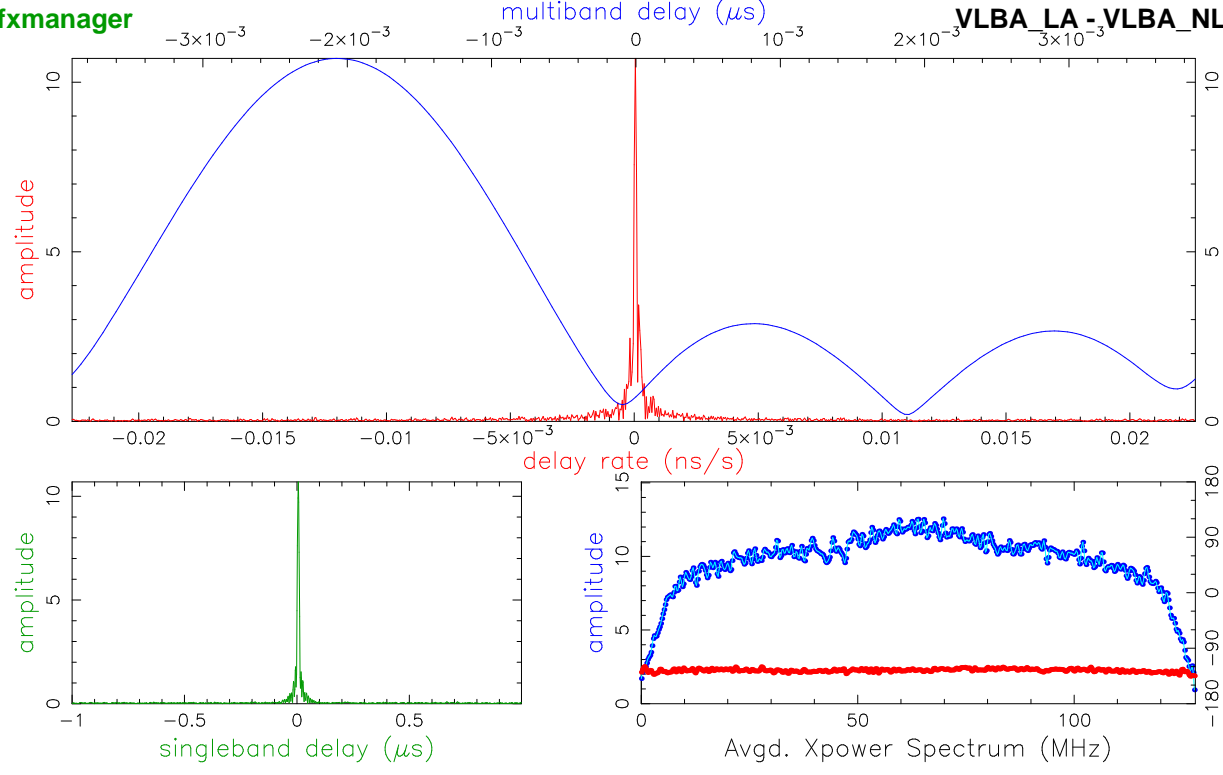
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-102.3	-110.7	-115.9	-102.8	Phase	-108.0
	9.1	9.2	9.2	8.7	Ampl.	9.0
	513.1	513.1	513.3	513.3	Sbd box	513.2
U/L	469/0	469/0	469/0	469/0	APs used	
k	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0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

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

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

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

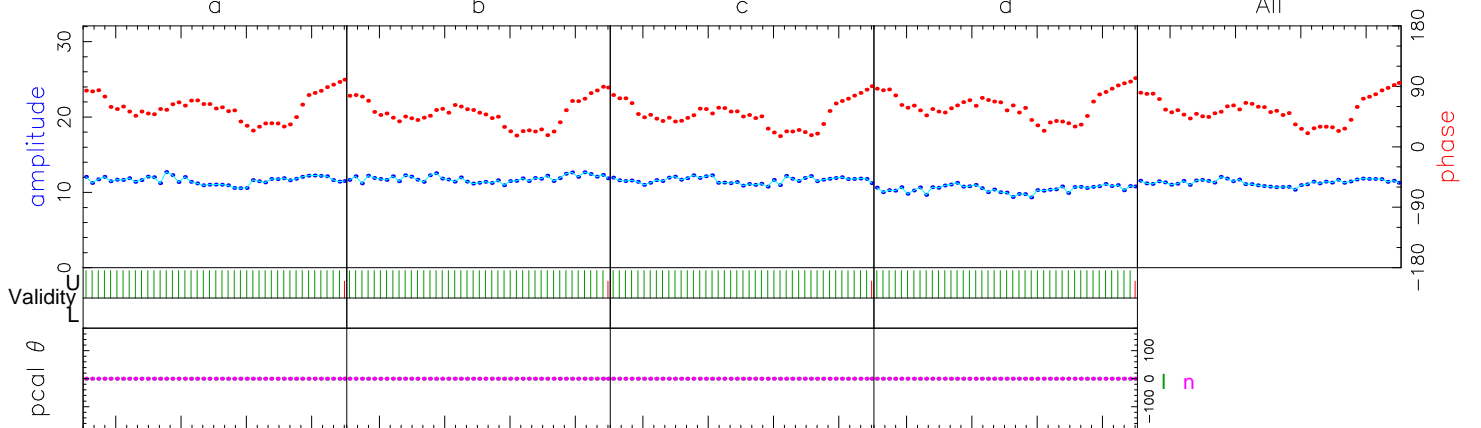


Fringe quality 8

SNR 453.4
Int time 239.982
Amp 10.702
Phase 54.6
PFD 0.0e+00
Delays (us)
SBD 0.005749
MBD -0.002076
Fringe rate (Hz)
0.002611
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
2021:032:211456
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



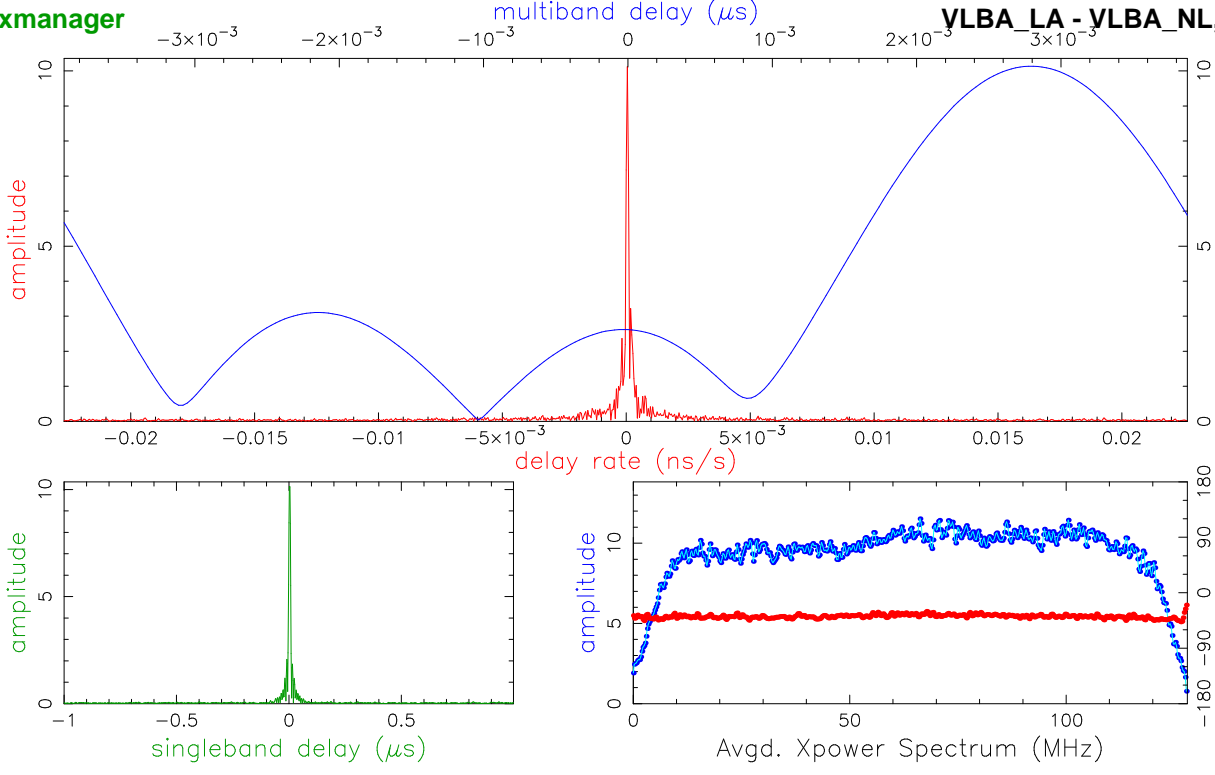
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	
l:n	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL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

Group delay (usec)(sbd)	-2.90314197694E+02	Apriori delay (usec)	-2.90319934501E+02	Resid mbdelay (usec)	-2.07569E-03	+/- 2.5E-06
Sband delay (usec)	-2.90314185376E+02	Apriori clock (usec)	-5.9021759E-01	Resid sbdelay (usec)	5.74913E-03	+/- 9.5E-06
Phase delay (usec)	-2.90319930980E+02	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	3.52106E-06	+/- 1.6E-08
Delay rate (us/s)	3.19596880550E-01	Apriori rate (us/s)	3.19596819892E-01	Resid rate (us/s)	6.06579E-08	+/- 1.2E-10
Total phase (deg)	-298.6	Apriori accel (us/s/s)	-1.19827416187E-07	Resid phase (deg)	54.6	+/- 0.3

	RMS	Theor.	Amplitude	10.702 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	19.1	0.8	Search (1024X16)	10.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	6.7	1.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	7.8	0.3	Inc. seg. avg.	11.317	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.9	0.4	Inc. frq. avg.	10.749	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite

l: az 131.0 el 55.5 pa -38.1 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -930.400 -352.082 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/ln..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/ln.Q.155.1J2DGP

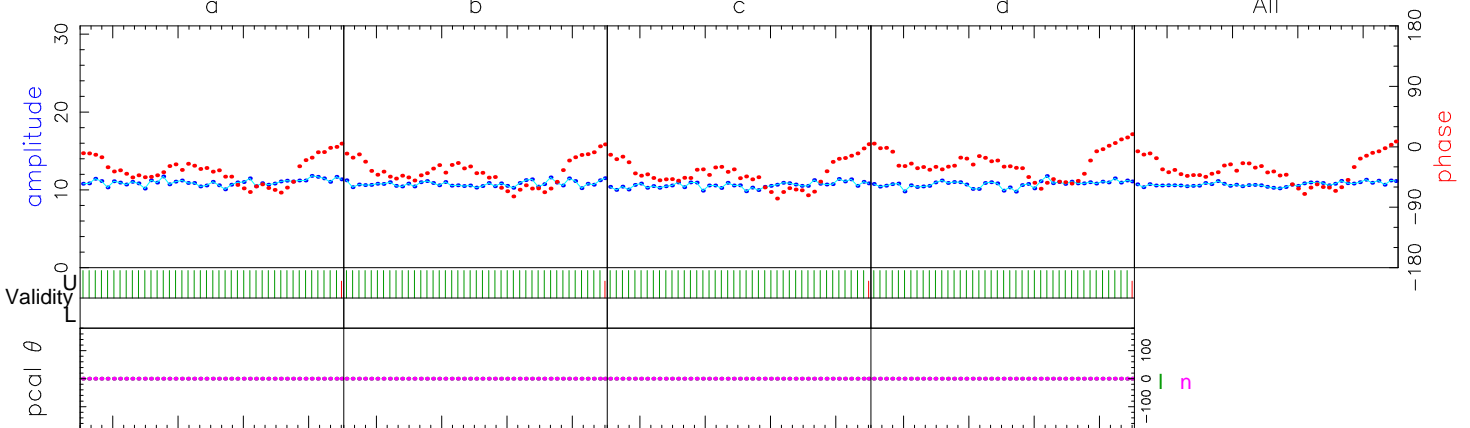


Fringe quality 8

SNR 438.8
Int time 239.982
Amp 10.358
Phase -34.5
PFD 0.0e+00
Delays (us)
SBD 0.002906
MBD 0.002734
Fringe rate (Hz) 0.002620
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

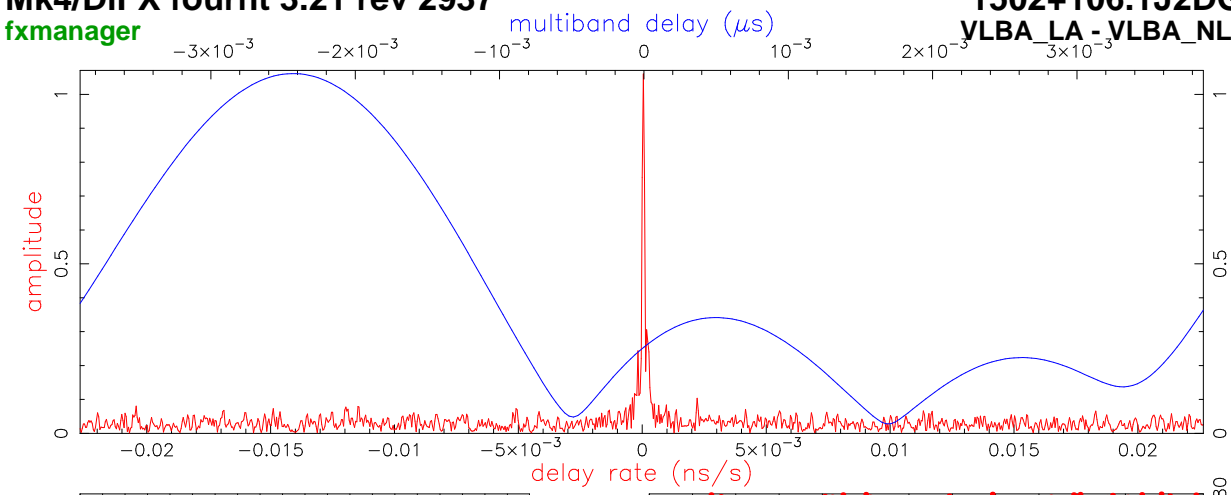
Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211458
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UR	Q01UR	Q02UR	Q03UR		
Group delay (usec)(sbd)	-2.90317200100E+02					
Sband delay (usec)	-2.90317028751E+02					
Phase delay (usec)	-2.90319936726E+02					
Delay rate (us/s)	3.19596880769E-01					
Total phase (deg)		-27.6				
Apriori delay (usec)			-2.90319934501E+02		2.73440E-03	+/- 2.5E-06
Apriori clock (usec)			-5.9021759E-01		2.90575E-03	+/- 9.8E-06
Apriori clockrate (us/s)			-6.0000003E-07		-2.22527E-06	+/- 1.7E-08
Apriori rate (us/s)			3.19596819892E-01		Resid rate (us/s)	6.08763E-08 +/- 1.2E-10
Apriori accel (us/s/s)			-1.19827416187E-07		Resid phase (deg)	-34.5 +/- 0.3

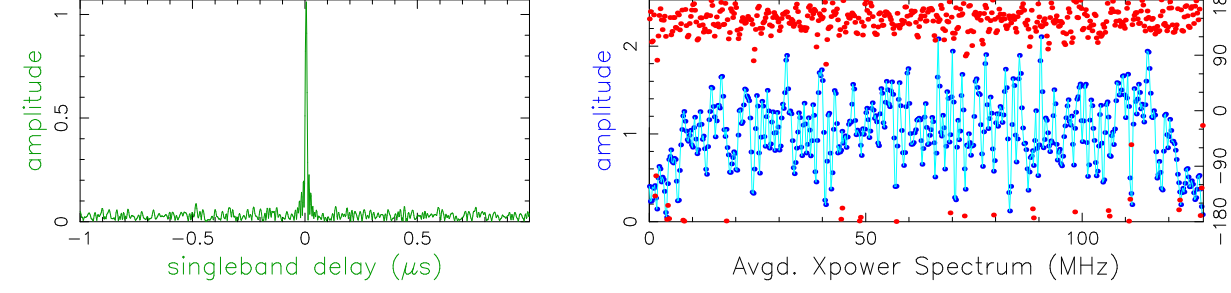
ph/seg (deg) 19.2 0.9 Search (1024X16) 9.586 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 4.3 1.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 8.3 0.3 Inc. seg. avg. 10.715 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%) 2.2 0.5 Inc. frq. avg. 10.174 Sample rate(MISamp/s): 256 Data rate (Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
l: az 131.0 el 55.5 pa -38.1 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -930.400 -352.082 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/In..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/In.Q.169.1J2DGP



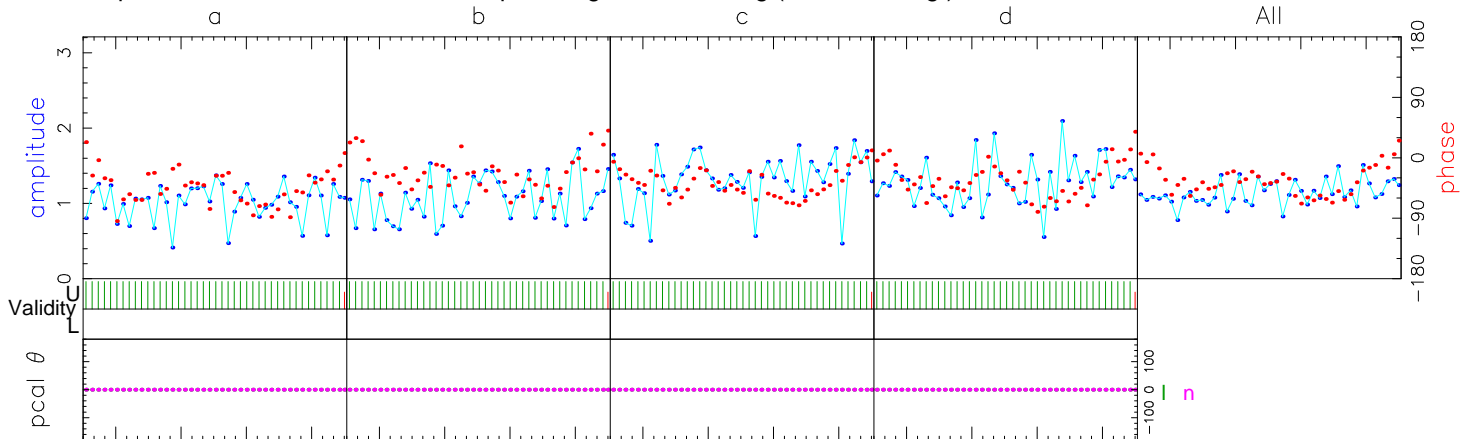
Fringe quality 9

SNR 45.4
Int time 239.982
Amp 1.071
Phase -34.0
PFD 0.0e+00
Delays (us)
SBD 0.005221
MBD -0.002470
Fringe rate (Hz) 0.002621
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
2021:032:211500
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



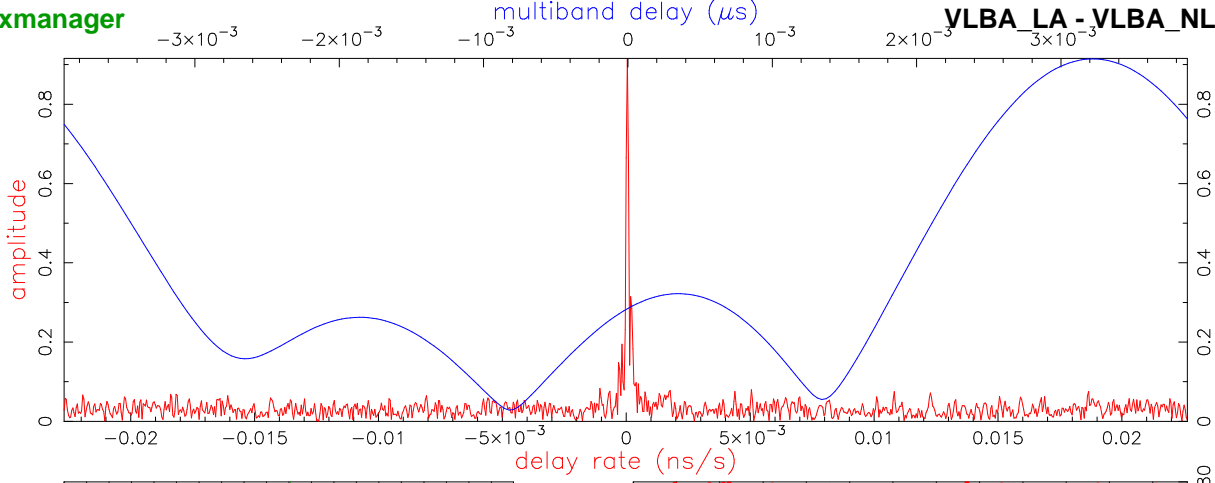
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec)(sbd)	-2.90314591913E+02	Apriori delay (usec)	-2.90319934501E+02	Resid mbdelay (usec)	-2.46991E-03	+/- 2.5E-05
Sband delay (usec)	-2.90314713251E+02	Apriori clock (usec)	-5.9021759E-01	Resid sbdelay (usec)	5.22125E-03	+/- 9.5E-05
Phase delay (usec)	-2.90319936693E+02	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	-2.19232E-06	+/- 1.6E-07
Delay rate (us/s)	3.19596880780E-01	Apriori rate (us/s)	3.19596819892E-01	Resid rate (us/s)	6.08877E-08	+/- 1.2E-09
Total phase (deg)	-27.1	Apriori accel (us/s/s)	-1.19827416187E-07	Resid phase (deg)	-34.0	+/- 2.5

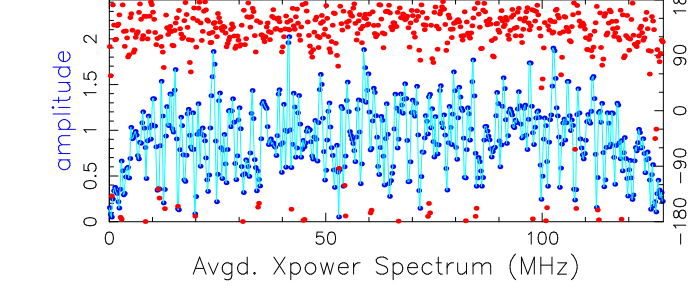
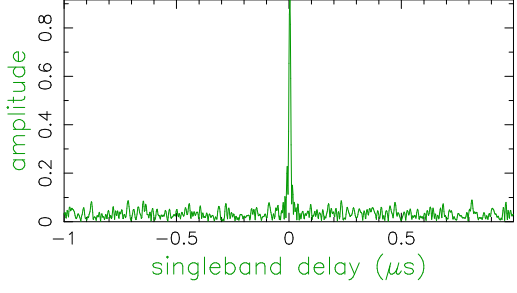
	RMS	Theor.	Amplitude	1.071 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	21.6	8.3	Search (1024X16)	1.012	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	16.5	14.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	10.7	2.5	Inc. seg. avg.	1.129	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	12.1	4.4	Inc. frq. avg.	1.068	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 131.0 el 55.5 pa -38.1 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -930.400 -352.082 simultaneous interpolator

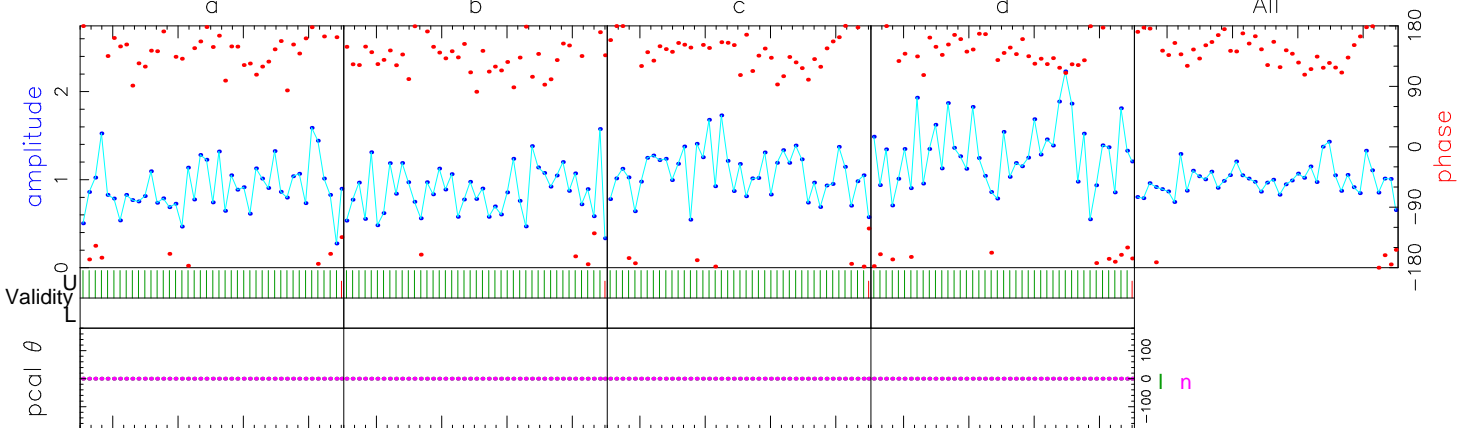
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/ln..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/ln.Q.186.1J2DGP



Fringe quality 8
SNR 38.8
Int time 239.982
Amp 0.916
Phase 148.4
PFD 0.0e+00
Delays (us)
SBD 0.003646
MBD 0.003207
Fringe rate (Hz)
0.002568
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
2021:032:211502
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		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-2.90316727632E+02	Apriori delay (usec)	-2.90319934501E+02	Resid mbdelay (usec)	3.20687E-03	+/-	2.9E-05
Sband delay (usec)	-2.90316288501E+02	Apriori clock (usec)	-5.9021759E-01	Resid sbdelay (usec)	3.64600E-03	+/-	1.1E-04
Phase delay (usec)	-2.90319924926E+02	Apriori clockrate (us/s)	-6.0000003E-07	Resid phdelay (usec)	9.57496E-06	+/-	1.9E-07
Delay rate (us/s)	3.19596879549E-01	Apriori rate (us/s)	3.19596819892E-01	Resid rate (us/s)	5.96568E-08	+/-	1.4E-09
Total phase (deg)	-204.8	Apriori accel (us/s/s)	-1.19827416187E-07	Resid phase (deg)	148.4	+/-	3.0

ph/seg (deg)	24.4	Theor.	9.7	Amplitude	0.916 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	19.4		16.9	Search (1024X16)	0.864	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	9.7		3.0	Inc. seg. avg.	0.987	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
amp/frq (%)	16.8		5.2	Inc. frq. avg.	0.919	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00

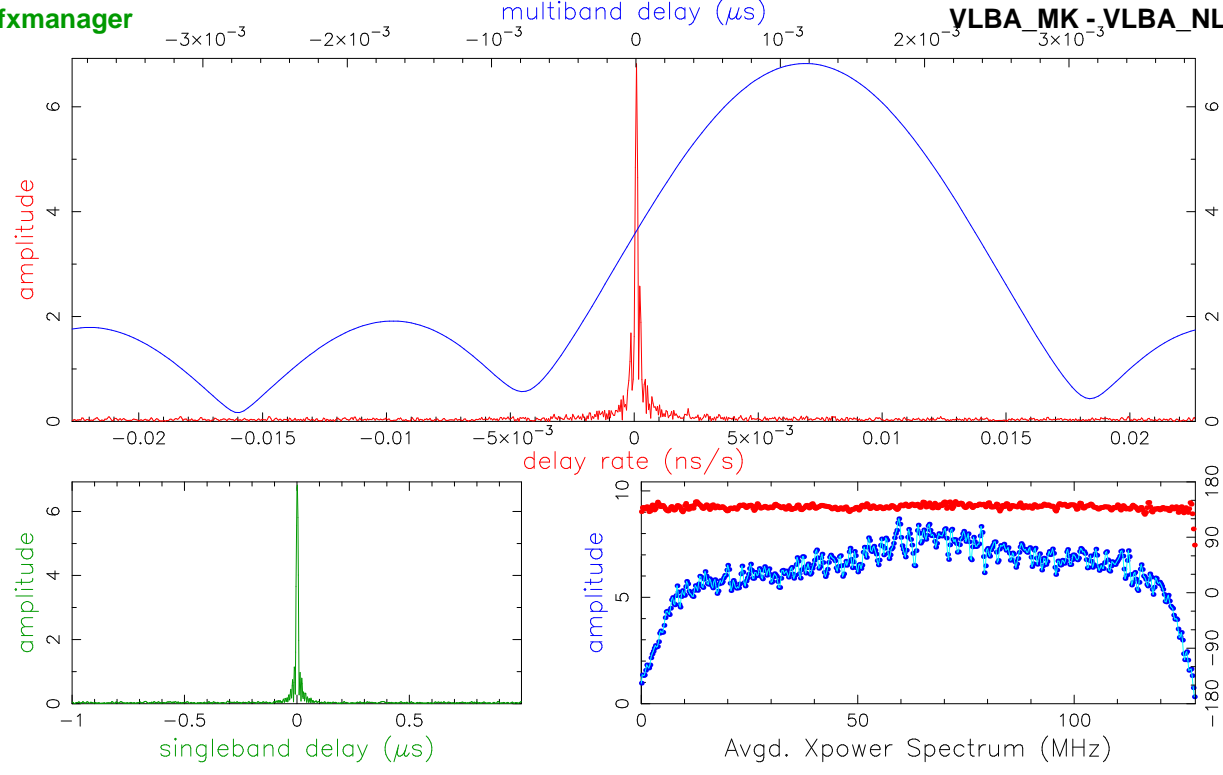
l: az 131.0 el 55.5 pa -38.1 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -930.400 -352.082 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/In..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/In.Q.203.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, mn

VLBA_MK - VLBA_NL, fgroup Q, pol LL

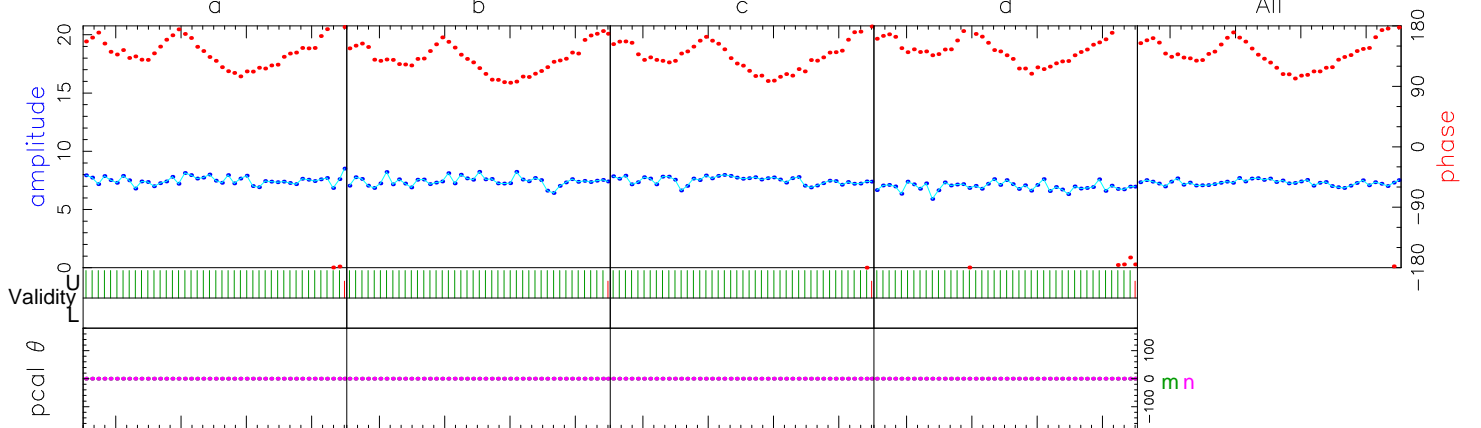


Fringe quality 8

SNR 293.3
 Int time 239.982
 Amp 6.924
 Phase 139.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.001133
 MBD 0.001134
 Fringe rate (Hz) 0.003942
 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
 2021:032:211457
 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



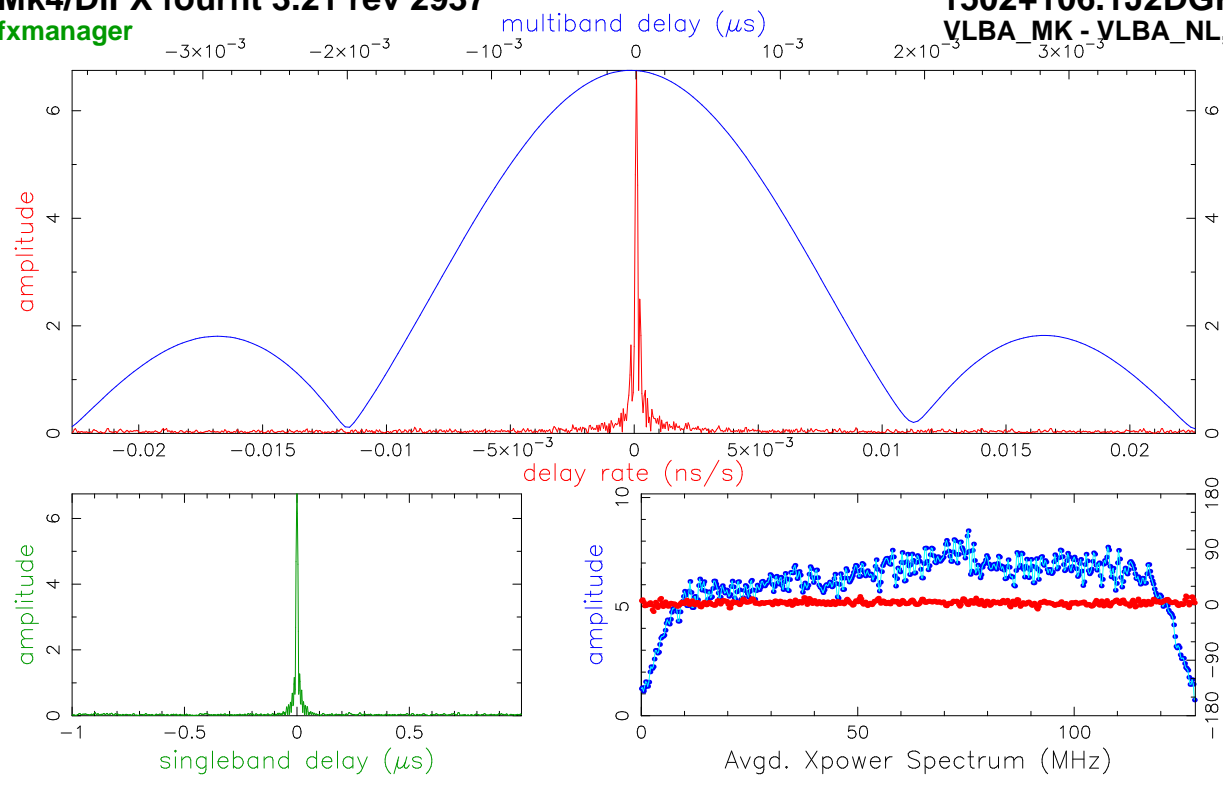
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
m	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	ManI PC	
m	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.12892854301E+04				Resid mbdelay (usec)	1.13408E-03 +/- 3.8E-06
Sband delay (usec)	-1.12892854310E+04				Resid sbdelay (usec)	1.13313E-03 +/- 1.5E-05
Phase delay (usec)	-1.12892865552E+04				Resid phdelay (usec)	8.98064E-06 +/- 2.5E-08
Delay rate (us/s)	1.17686252730E+00				Resid rate (us/s)	9.15839E-08 +/- 1.8E-10
Total phase (deg)		-120.4			Resid phase (deg)	139.1 +/- 0.4
					Apriori delay (usec)	-1.12892865642E+04
					Apriori clock (usec)	1.3185188E+01
					Apriori clockrate (us/s)	-4.0000002E-07
					Apriori rate (us/s)	1.17686243572E+00
					Apriori accel (us/s/s)	5.34328629990E-05
ph/seg (deg)	21.1	1.3	6.924 +/- 0.024		PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	6.3	2.2	Search (1024X16)	6.710	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	8.9	0.4	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
amp/frq (%)	3.1	0.7	Inc. seg. avg.	7.303	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	6.863	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
m: az 85.0 el 17.5 pa -72.4		n: az 159.6 el 57.2 pa -15.1		u,v (fr/asec) -3402.232 -1025.553		simultaneous interpolator
Control file: cf_1234_gmva7mm		Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn..1J2DGP		Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn.Q.164.1J2DGP		

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, mn

VLBA_MK - VLBA_NL, fgroup Q, pol RR

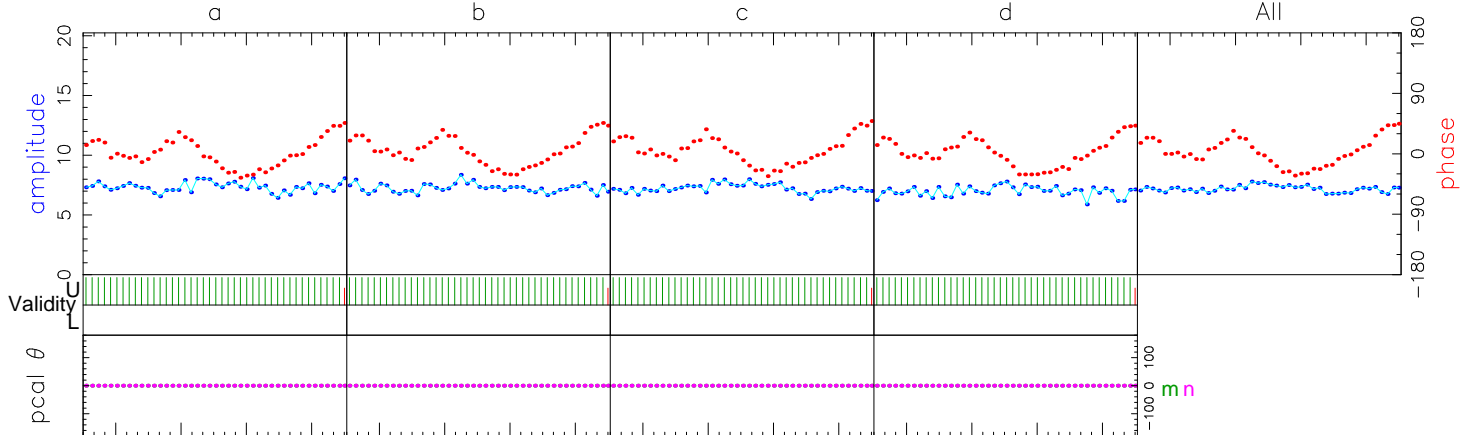


Fringe quality 8

SNR 285.9
 Int time 239.982
 Amp 6.750
 Phase 3.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.000034
 MBD -0.000037
 Fringe rate (Hz) 0.003974
 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
 2021:032:211459
 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		
m	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	513.0
m:n	0:0	0:0	0:0	0:0	PC phase	
m	1000	1000	1000	1000	ManI PC	
n	1000	1000	1000	1000	PC amp	
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	

Group delay (usec)(sbd)	-1.12892866016E+04	Apriori delay (usec)	-1.12892865642E+04	Resid mbdelay (usec)	-3.74807E-05	+/- 3.9E-06
Sband delay (usec)	-1.12892865982E+04	Apriori clock (usec)	1.3185188E+01	Resid sbdelay (usec)	-3.40000E-05	+/- 1.5E-05
Phase delay (usec)	-1.12892865639E+04	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	2.08372E-07	+/- 2.6E-08
Delay rate (us/s)	1.17686252804E+00	Apriori rate (us/s)	1.17686243572E+00	Resid rate (us/s)	9.23213E-08	+/- 1.9E-10
Total phase (deg)	-256.4	Apriori accel (us/s/s)	5.34328629990E-05	Resid phase (deg)	3.2	+/- 0.4

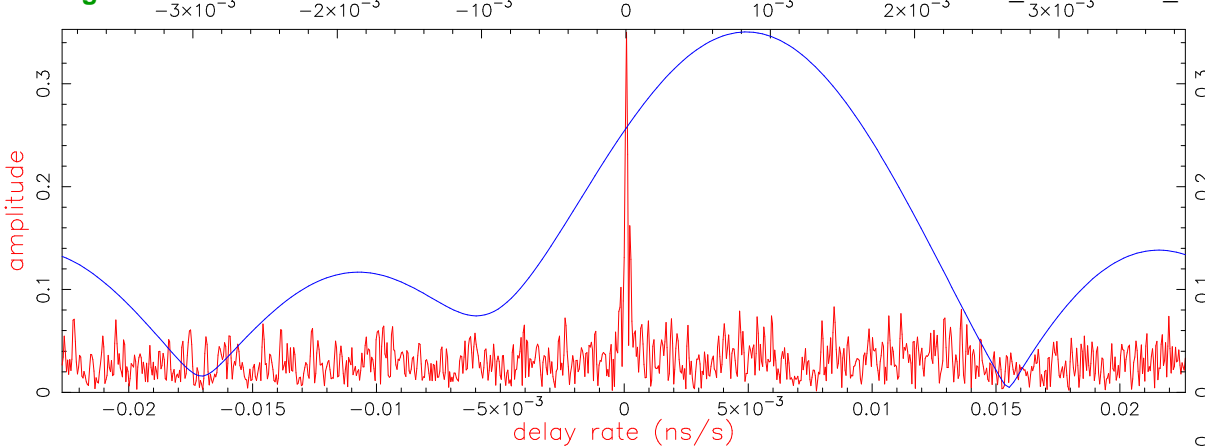
	RMS	Theor.	Amplitude	6.750 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	20.6	1.3	Search (1024X16)	6.716	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	7.8	2.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	2.6	0.4	Inc. seg. avg.	7.203	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.8	0.7	Inc. frq. avg.	6.753	Data rate(Mb/s): 2048	nlags: 512 t_coherence infinite ion window (TEC) 0.00 0.00

m: az 85.0 el 17.5 pa -72.4 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -3402.232 -1025.553 simultaneous interpolator

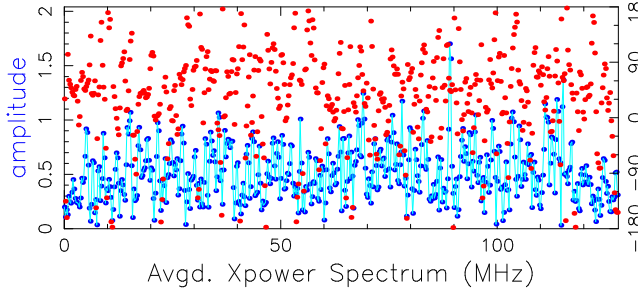
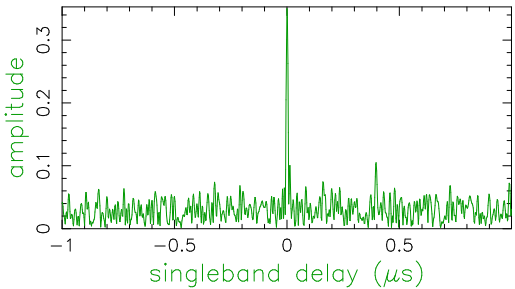
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn.Q.180.1J2DGP

multiband delay (μ s)

Fringe quality 9

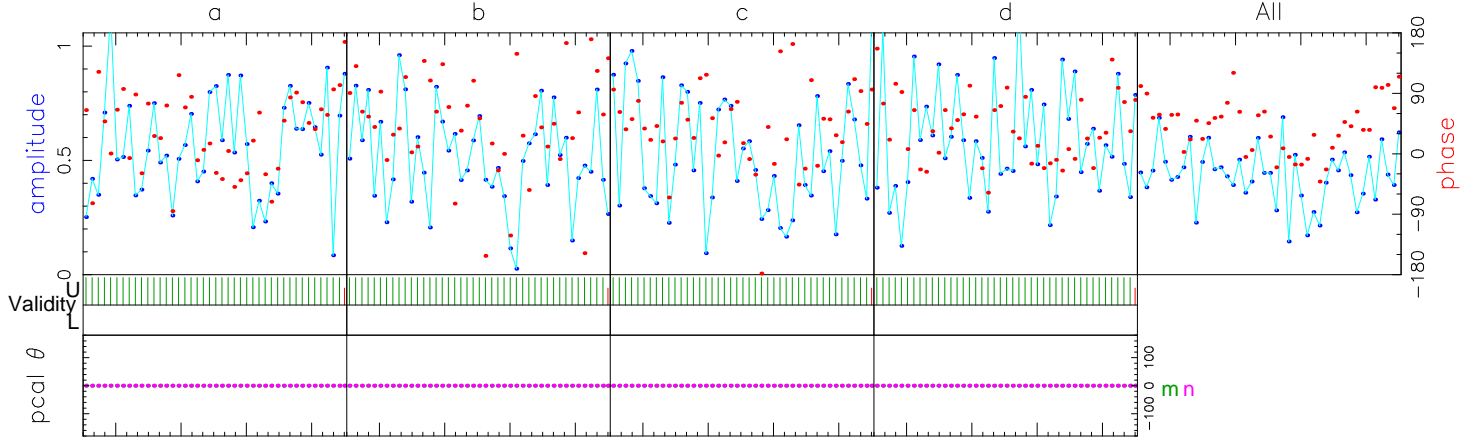


SNR 15.0
Int time 239.982
Amp 0.353
Phase 43.1
PFD 4.9e-42
Delays (us)
SBD 0.000563
MBD 0.000872
Fringe rate (Hz) 0.003986
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211501
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

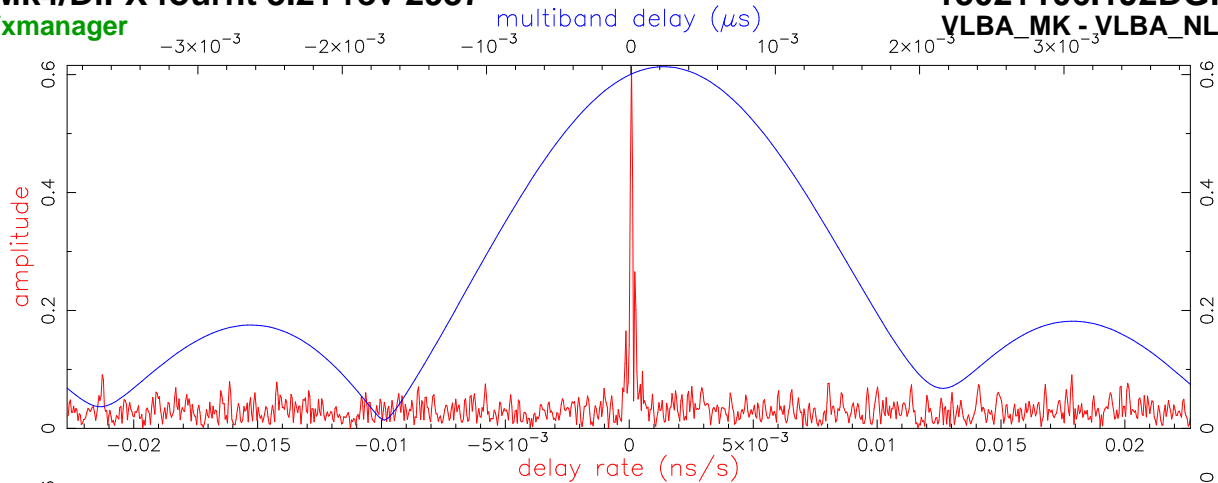


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	34.1	64.7	45.3	34.5	Phase	43.1
	0.4	0.3	0.4	0.4	Ampl.	0.4
	513.2	513.0	513.3	513.2	Sbd box	513.3
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

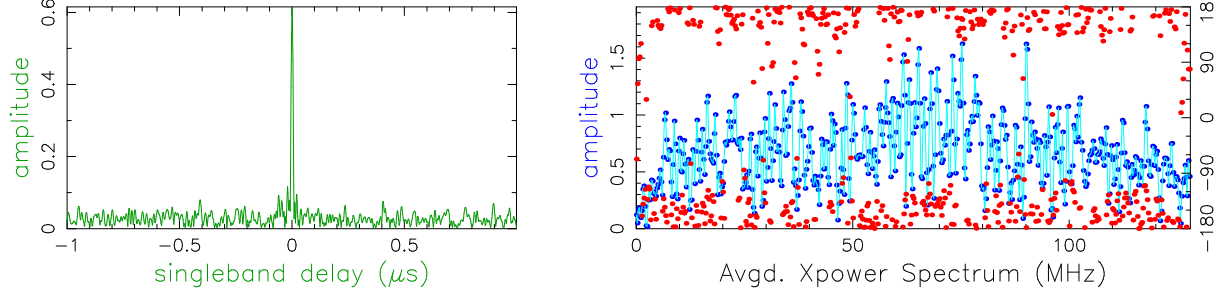
Group delay (usec)(sbd)	-1.12892856919E+04	Apriori delay (usec)	-1.12892865642E+04	Resid mbdelay (usec)	8.72238E-04	+/-	7.4E-05
Sband delay (usec)	-1.12892860009E+04	Apriori clock (usec)	1.3185188E+01	Resid sbdelay (usec)	5.63250E-04	+/-	2.9E-04
Phase delay (usec)	-1.12892865614E+04	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	2.78250E-06	+/-	4.9E-07
Delay rate (us/s)	1.17686252833E+00	Apriori rate (us/s)	1.17686243572E+00	Resid rate (us/s)	9.26106E-08	+/-	3.6E-09
Total phase (deg)	-216.5	Apriori accel (us/s/s)	5.34328629990E-05	Resid phase (deg)	43.1	+/-	7.7

	RMS	Theor.	Amplitude	0.353 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	39.2	25.1	Search (1024X16)	0.345	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	42.1	43.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
ph/frq (deg)	17.7	7.7	Inc. seg. avg.	0.396	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
amp/frq (%)	14.6	13.4	Inc. frq. avg.	0.354	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

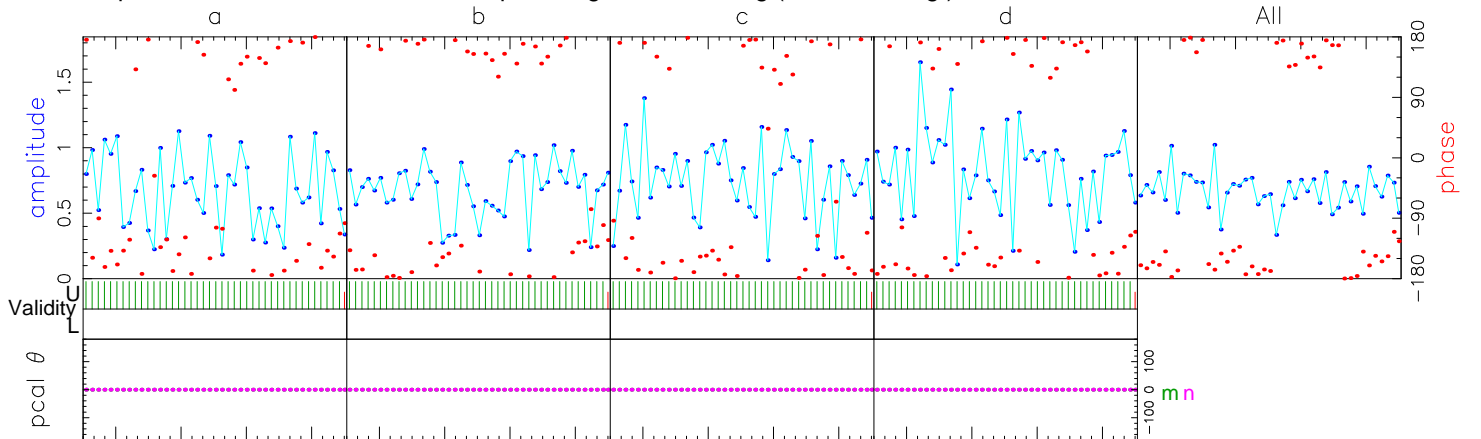
m: az 85.0 el 17.5 pa -72.4 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -3402.232 -1025.553 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn.Q.196.1J2DGP



Fringe quality 9
SNR 26.1
Int time 239.982
Amp 0.615
Phase -171.5
PFD 0.0e+00
Delays (us)
SBD 0.000435
MBD 0.000261
Fringe rate (Hz) 0.004089
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
2021:032:211503
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
	-165.1	-173.5	-176.3	-170.4	Phase	-171.5
	0.5	0.6	0.6	0.7	Ampl.	0.6
	513.7	513.0	513.7	512.7	Sbd box	513.2
U/L	469/0	469/0	469/0	469/0	APs used	
m	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.12892863033E+04	Apriori delay (usec)	-1.12892865642E+04	Resid mbdelay (usec)	2.60832E-04	+/-	4.3E-05
Sband delay (usec)	-1.12892861295E+04	Apriori clock (usec)	1.3185188E+01	Resid sbdelay (usec)	4.34625E-04	+/-	1.7E-04
Phase delay (usec)	-1.12892865752E+04	Apriori clockrate (us/s)	-4.0000002E-07	Resid phdelay (usec)	-1.10668E-05	+/-	2.8E-07
Delay rate (us/s)	1.17686253072E+00	Apriori rate (us/s)	1.17686243572E+00	Resid rate (us/s)	9.49959E-08	+/-	2.0E-09
Total phase (deg)	-71.1	Apriori accel (us/s/s)	5.34328629990E-05	Resid phase (deg)	-171.5	+/-	4.4

	RMS	Theor.	Amplitude	0.615 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	25.8	14.4	Search (1024X16)	0.596	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/seg (%)	24.5	25.1	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	5.9	4.4	Inc. seg. avg.	0.656	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00	0.00
amp/frq (%)	11.2	7.7	Inc. frq. avg.	0.613					

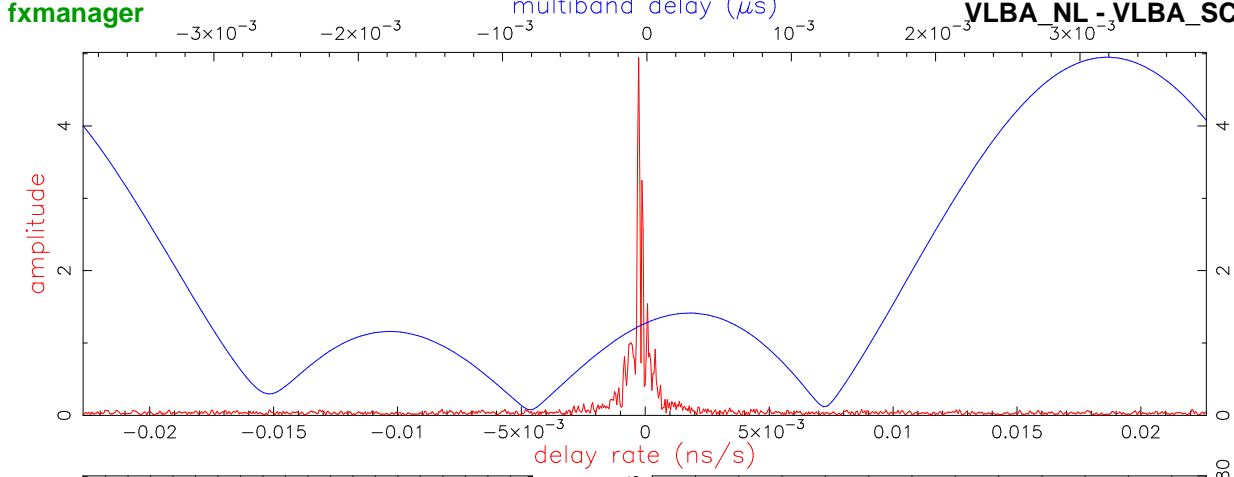
m: az 85.0 el 17.5 pa -72.4 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) -3402.232 -1025.553 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/mn.Q.212.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, nc

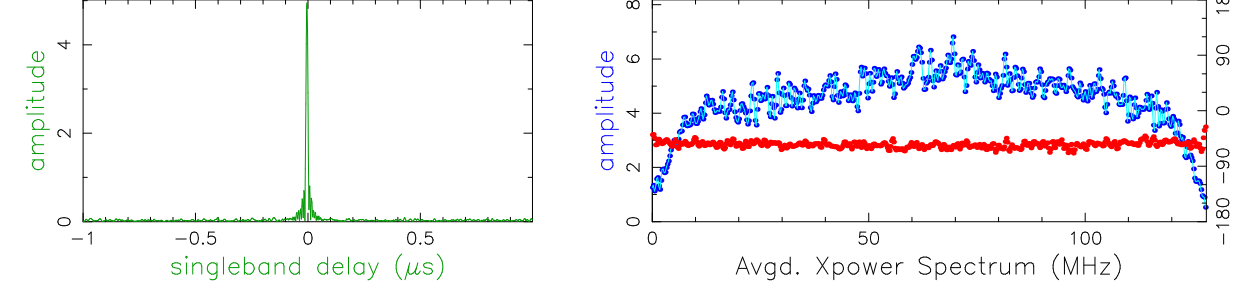
VLBA_NL - VLBA_SC, fgroup Q, pol LL



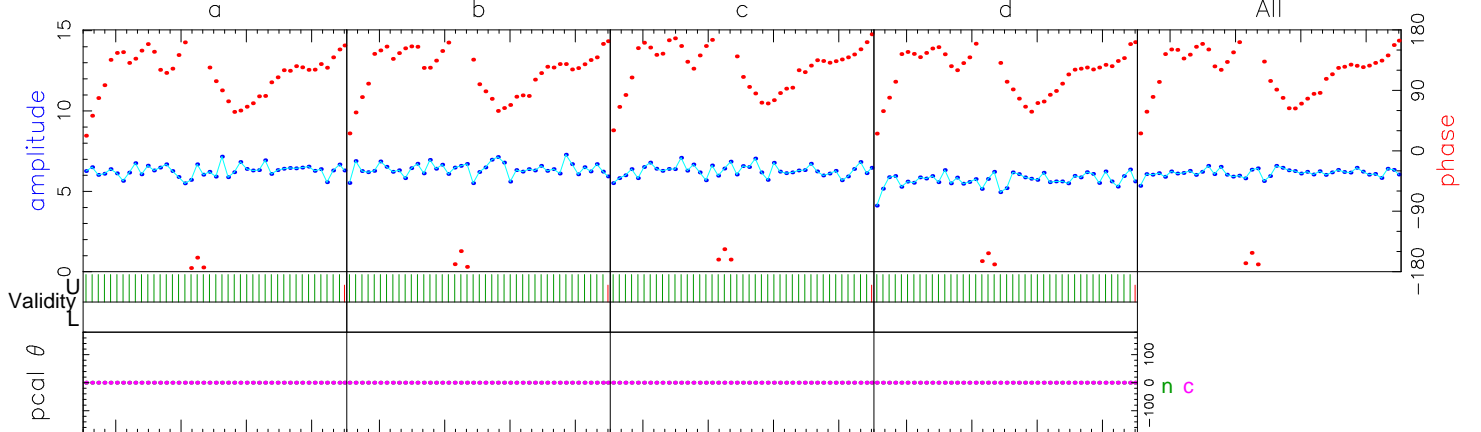
Fringe quality 6

SNR 212.5
 Int time 239.975
 Amp 5.017
 Phase 123.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.004713
 MBD 0.003146
 Fringe rate (Hz)
 -0.010709
 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
 2021:032:211456
 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



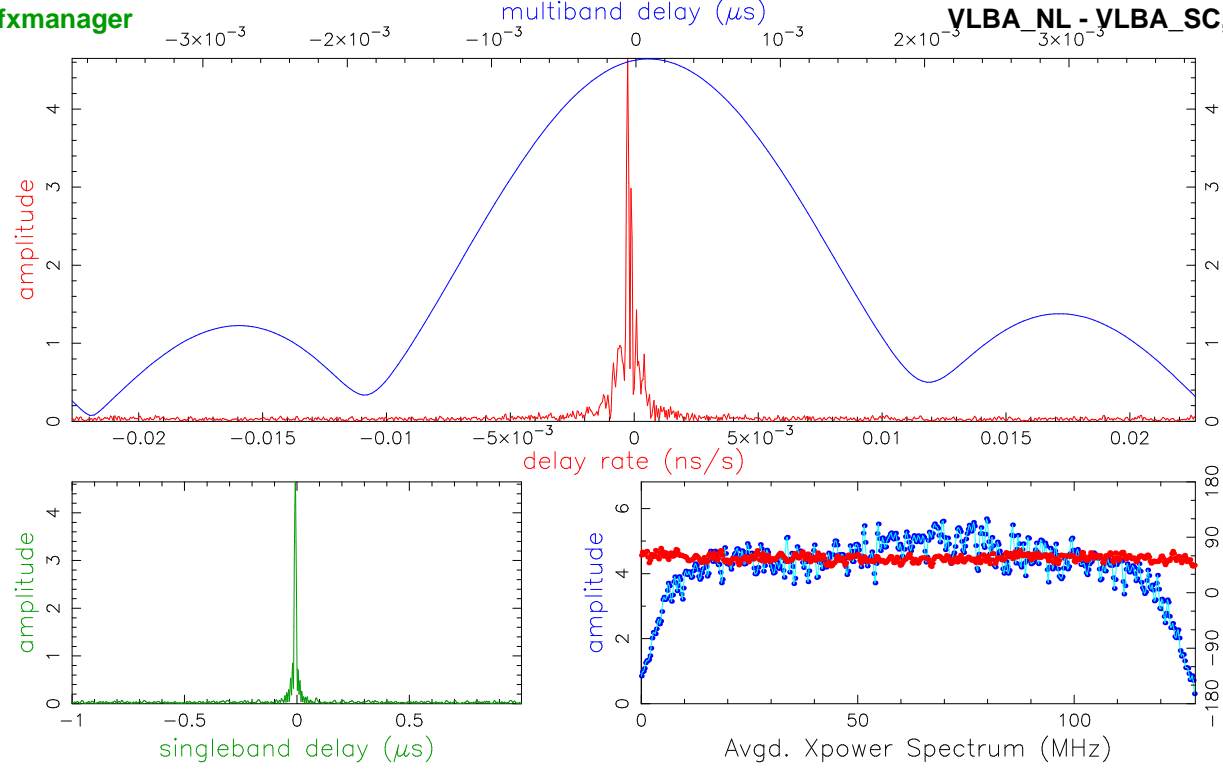
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
118.1	123.0	130.6	121.9	Phase	123.4
5.1	5.1	5.1	4.6	Ampl.	5.0
510.7	510.7	510.6	510.3	Sbd box	510.6
U/L 469/0	469/0	469/0	469/0	APs used	
n 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
n:c 0:0	0:0	0:0	0:0	PC phase	
n:c 0:0	0:0	0:0	0:0	ManI PC	
n 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	-2.36376500161E+03	Apriori delay (usec)	-2.36376033461E+03	Resid mbdelay (usec)	3.14550E-03	+/- 5.2E-06
Sband delay (usec)	-2.36376504724E+03	Apriori clock (usec)	-8.3330002E+00	Resid sbdelay (usec)	-4.71262E-03	+/- 2.0E-05
Phase delay (usec)	-2.36376032665E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	7.96463E-06	+/- 3.5E-08
Delay rate (us/s)	6.20533762210E-01	Apriori rate (us/s)	6.20534011030E-01	Resid rate (us/s)	-2.48820E-07	+/- 2.5E-10
Total phase (deg)	-165.2	Apriori accel (us/s/s)	1.98831606443E-05	Resid phase (deg)	123.4	+/- 0.5

ph/seg (deg)	38.1	1.8	Amplitude	5.017 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	23.1	3.1	Search (1024X16)	4.612	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	6.4	0.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	4.0	0.9	Inc. seg. avg.	6.150	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	4.963	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

n: az 159.6 el 57.2 pa -15.1 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -1794.213 1720.166 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/nc..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/nc.Q.158.1J2DGP

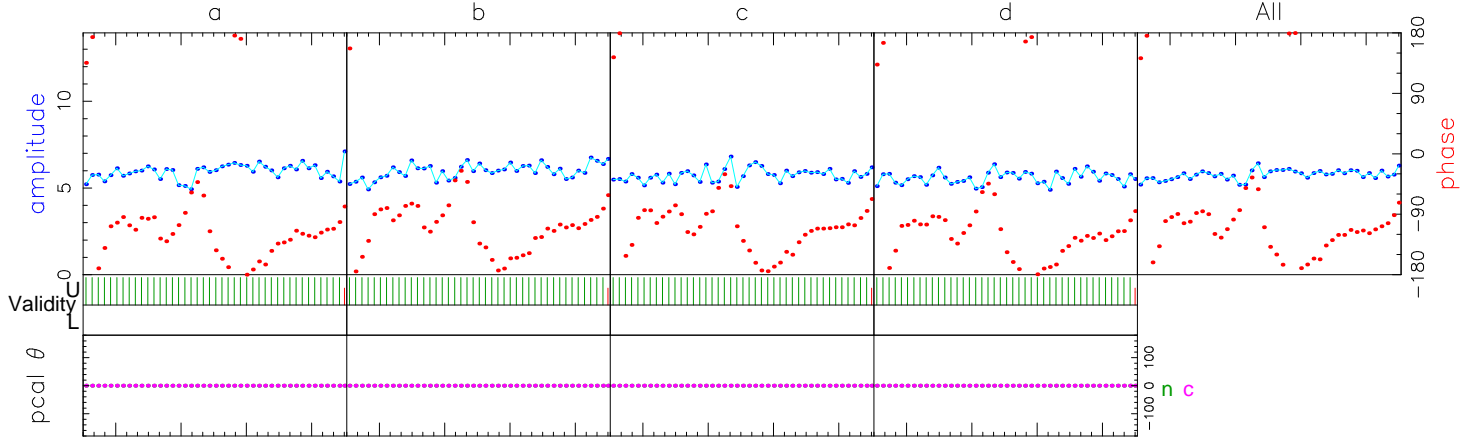


Fringe quality 6

SNR 197.0
Int time 239.976
Amp 4.650
Phase -119.7
PFD 0.0e+00
Delays (us)
SBD -0.007532
MBD 0.000097
Fringe rate (Hz)
-0.010707
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
2021:032:211458
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



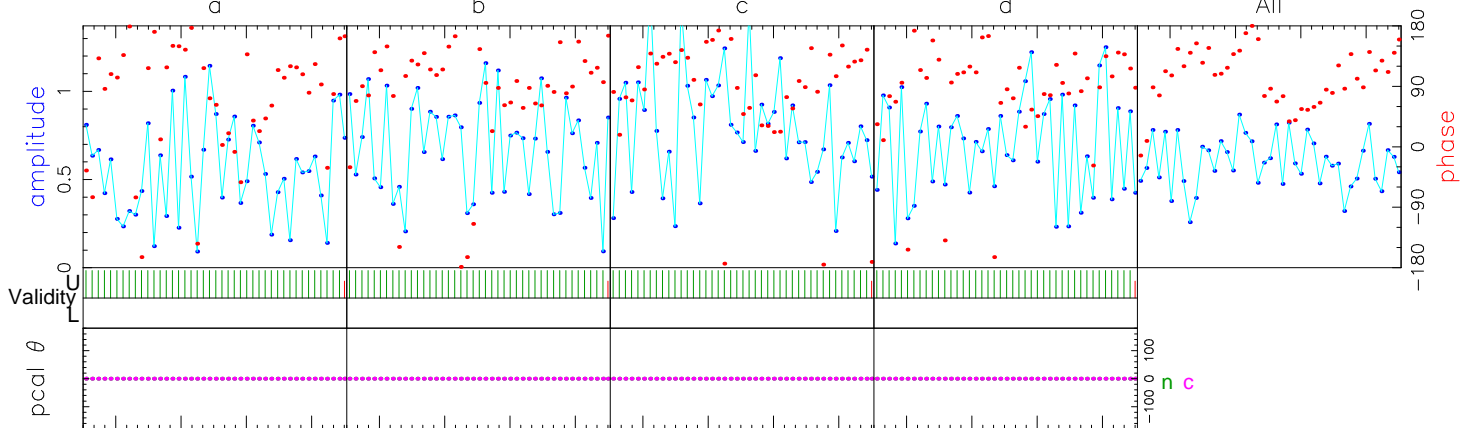
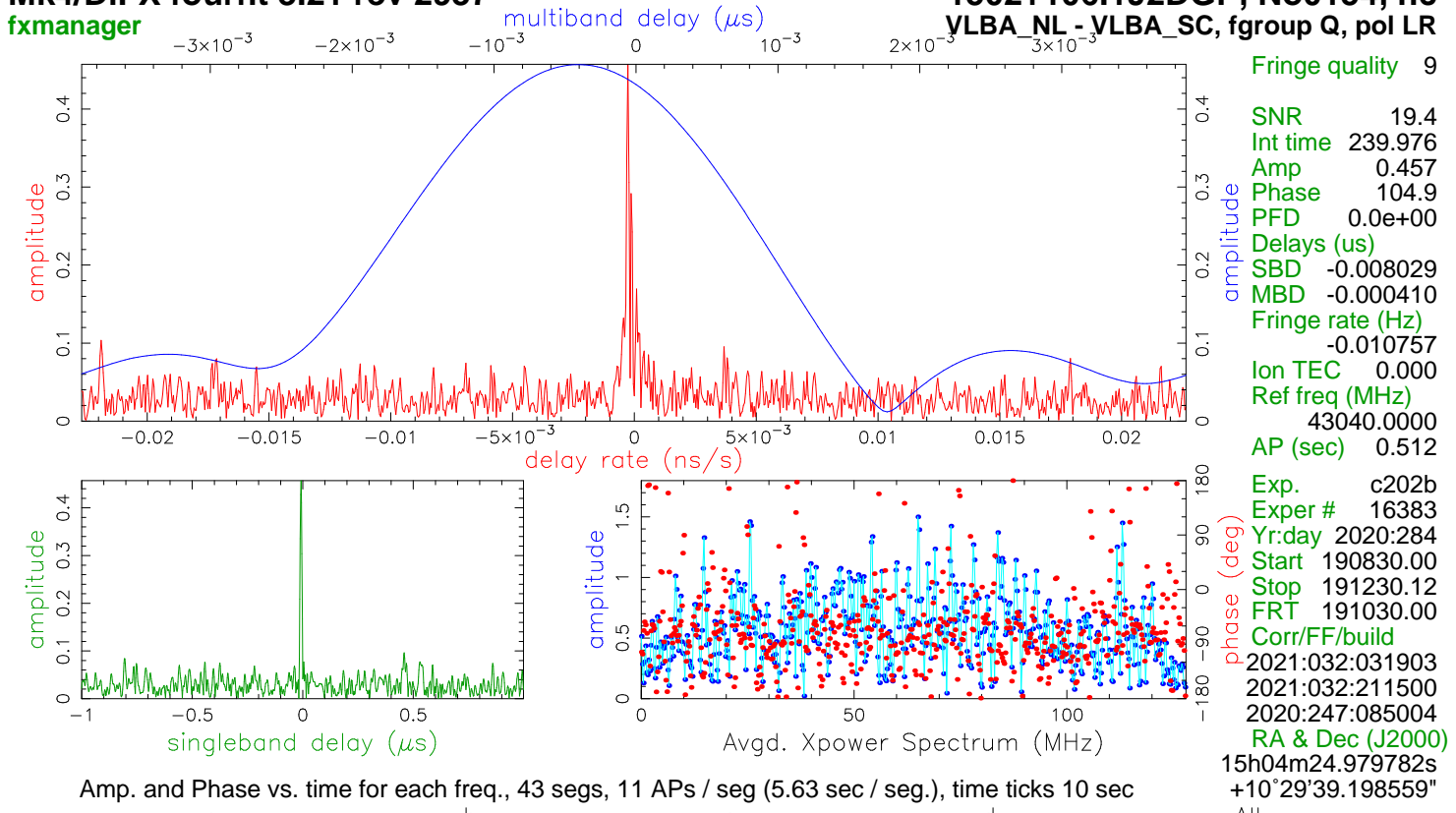
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	Phase	-119.7
c	1000	1000	1000	1000	Ampl.	4.7
n:c	0:0	0:0	0:0	0:0	Sbd box	509.1
n:c	0:0	0:0	0:0	0:0	APs used	
n	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
n	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
c	Q00UR	Q01UR	Q02UR	Q03UR	ManI PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-2.36376804983E+03	Apriori delay (usec)	-2.36376033461E+03	Resid mbdelay (usec)	9.72858E-05	+/-	5.6E-06
Sband delay (usec)	-2.36376786649E+03	Apriori clock (usec)	-8.3330002E+00	Resid sbdelay (usec)	-7.53187E-03	+/-	2.2E-05
Phase delay (usec)	-2.36376034234E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-7.72281E-06	+/-	3.8E-08
Delay rate (us/s)	6.20533762255E-01	Apriori rate (us/s)	6.20534011030E-01	Resid rate (us/s)	-2.48775E-07	+/-	2.7E-10
Total phase (deg)	-48.3	Apriori accel (us/s/s)	1.98831606443E-05	Resid phase (deg)	-119.7	+/-	0.6

	RMS	Theor.	Amplitude	4.650 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	37.8	1.9	Search (1024X16)	4.371	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	24.7	3.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	10.4	0.6	Inc. seg. avg.	5.760	Sample rate(MISamp/s): 256		ion window (TEC)	0.00	0.00
amp/frq (%)	3.2	1.0	Inc. frq. avg.	4.681	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

n: az 159.6 el 57.2 pa -15.1 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -1794.213 1720.166 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/nc..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/nc.Q.174.1J2DGP



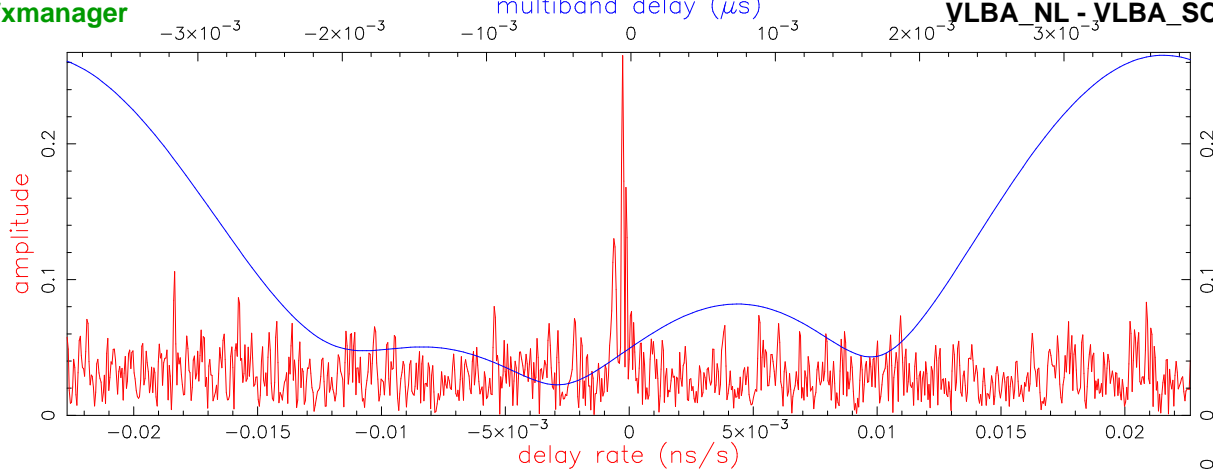
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n:c	0:0	0:0	0:0	0:0		
n:c	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		
Group delay (usec)(sbd)	-2.36376855755E+03			-2.36376033461E+03		
Sband delay (usec)	-2.36376836349E+03			-8.3330002E+00		
Phase delay (usec)	-2.36376032784E+03			0.0000000E+00		
Delay rate (us/s)	6.20533761107E-01			6.20534011030E-01		
Total phase (deg)		-183.8		1.98831606443E-05		
Apriori delay (usec)						
Apriori clock (usec)						
Apriori clockrate (us/s)						
Apriori rate (us/s)						
Apriori accel (us/s/s)						
Resid mbdelay (usec)						
Resid sbdelay (usec)						
Resid phdelay (usec)						
Resid rate (us/s)						
Resid phase (deg)						
Pcal mode: MANUAL, MANUAL						
Pcal rate: 0.000E+00, 0.000E+00 (us/s)						
Bits/sample: 2x2						
Sample rate(MISamp/s): 256						
Data rate(Mb/s): 2048						
nlags: 512						
t_cohere infinite						
sb window (us)						
mb window (us)						
dr window (ns/s)						
ion window (TEC)						
pcal mode: MANUAL, MANUAL						
PC period (AP's) 5, 5						
sb window (us)						
mb window (us)						
dr window (ns/s)						
ion window (TEC)						
simultaneous interpolator						

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

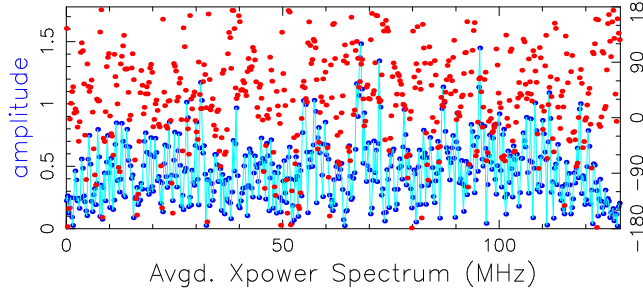
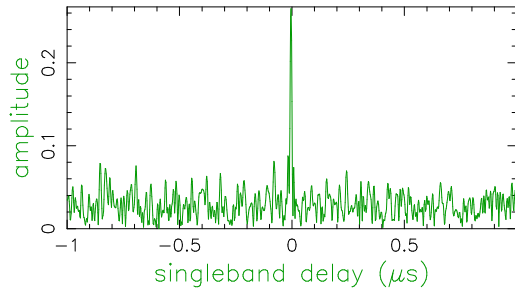
1502+106.1J2DGP, No0154, nc

VLBA_NL - VLBA_SC, fgroup Q, pol RL



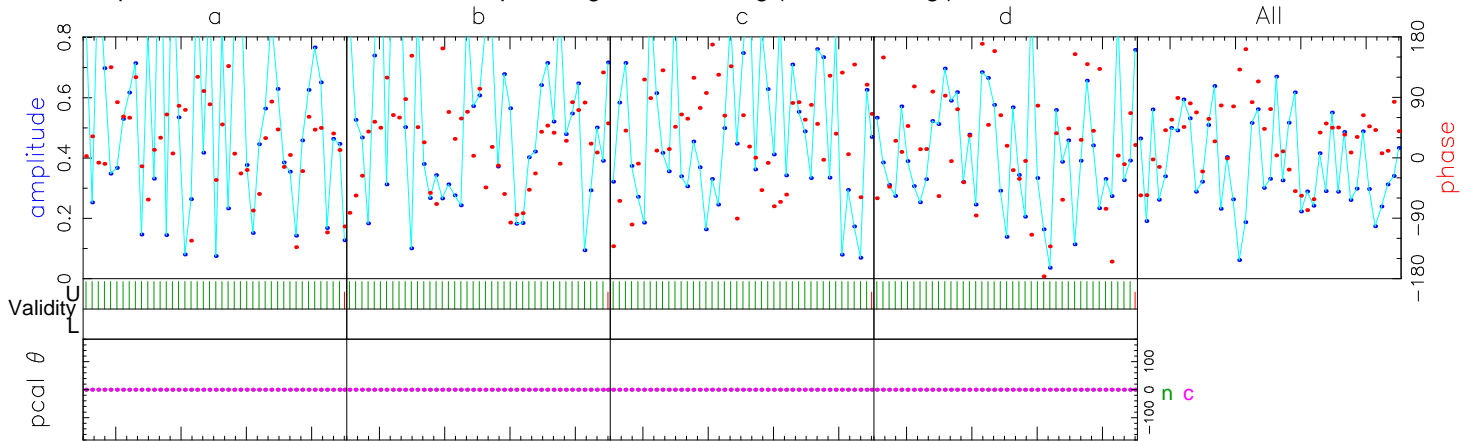
Fringe quality 9

SNR 11.3
 Int time 239.975
 Amp 0.267
 Phase 32.8
 PFD 2.3e-21
 Delays (us)
 SBD -0.004499
 MBD -0.004160
 Fringe rate (Hz)
 -0.010787
 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
 2021:032:211503
 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		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n:c	0:0	0:0	0:0	0:0		
n:c	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec)(sbd)	-2.36376449480E+03	Apriori delay (usec)	-2.36376033461E+03	Resid mbdelay (usec)	-4.16019E-03	+/- 9.8E-05
Sband delay (usec)	-2.36376483399E+03	Apriori clock (usec)	-8.3330002E+00	Resid sbdelay (usec)	-4.49937E-03	+/- 3.8E-04
Phase delay (usec)	-2.36376033250E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	2.11863E-06	+/- 6.5E-07
Delay rate (us/s)	6.20533760395E-01	Apriori rate (us/s)	6.20534011030E-01	Resid rate (us/s)	-2.50636E-07	+/- 4.7E-09
Total phase (deg)	-255.8	Apriori accel (us/s/s)	1.98831606443E-05	Resid phase (deg)	32.8	+/- 10.1

ph/seg (deg)	52.7	Theor.	33.2	Amplitude	0.267 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	68.5	Search (1024X16)	0.250	Search	0.250	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	9.2	Inc. seg. avg.	0.325	Inc. seg. avg.	0.325	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	28.3	Inc. frq. avg.	0.263	Inc. frq. avg.	0.263	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
						Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite
							ion window (TEC) 0.00 0.00

n: az 159.6 el 57.2 pa -15.1 c: az 246.7 el 72.9 pa 62.7 u,v (fr/asec) -1794.213 1720.166 simultaneous interpolator

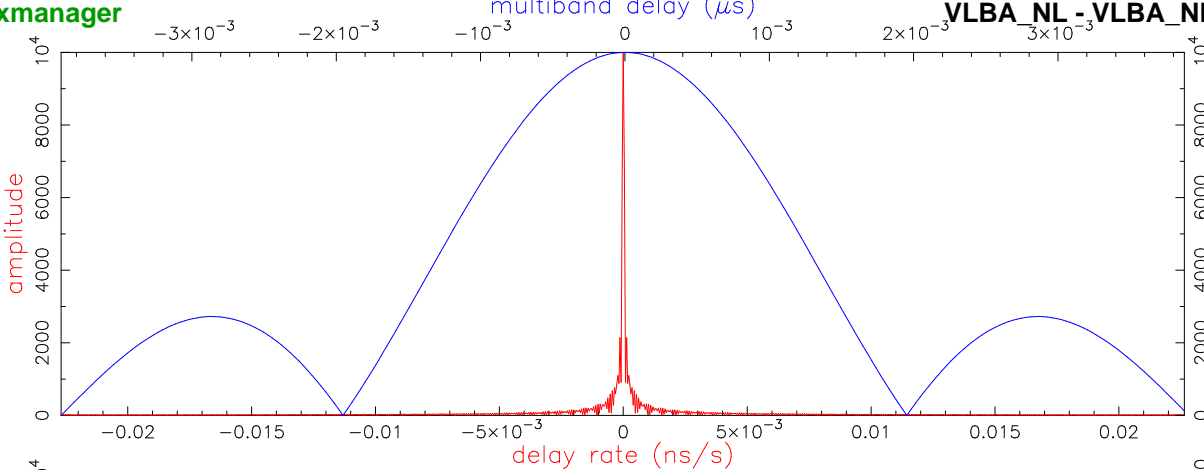
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/nc..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/nc.Q.214.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

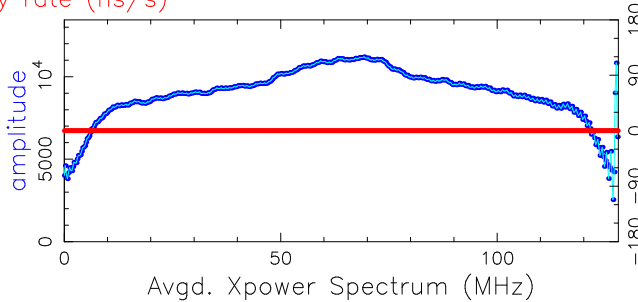
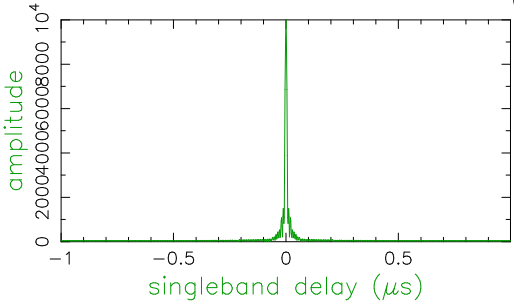
1502+106.1J2DGP, No0154, nn

VLBA_NL - VLBA_NL, fgroup Q, pol LL



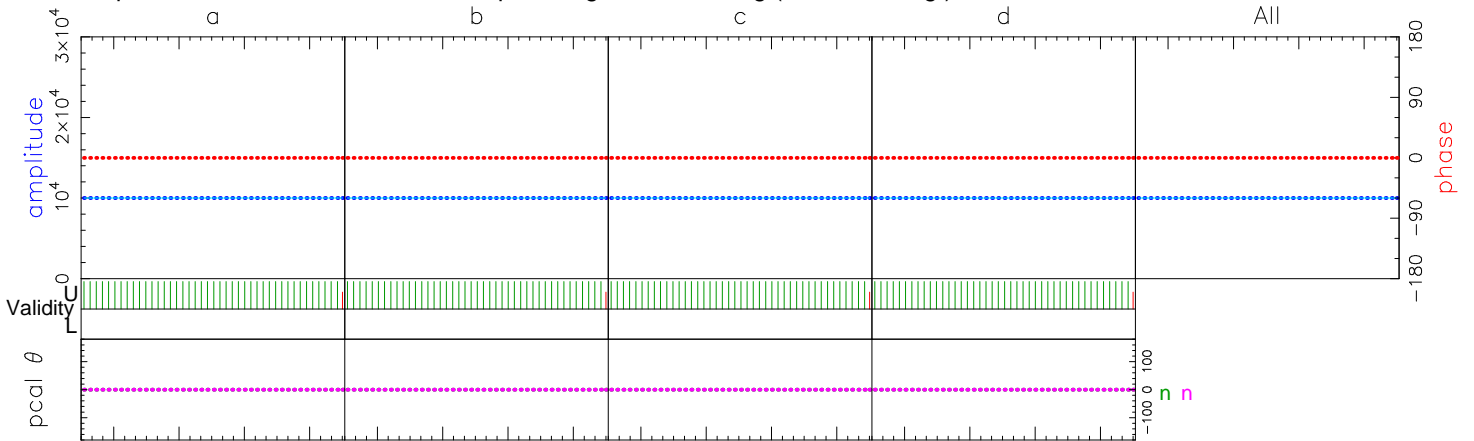
Fringe quality 9

SNR 423630.3
 Int time 239.982
 Amp 10000.000
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 43040.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 190830.00
 Stop 191230.12
 FRT 191030.00
 Corr/FF/build
 2021:032:031903
 2021:032:211457
 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



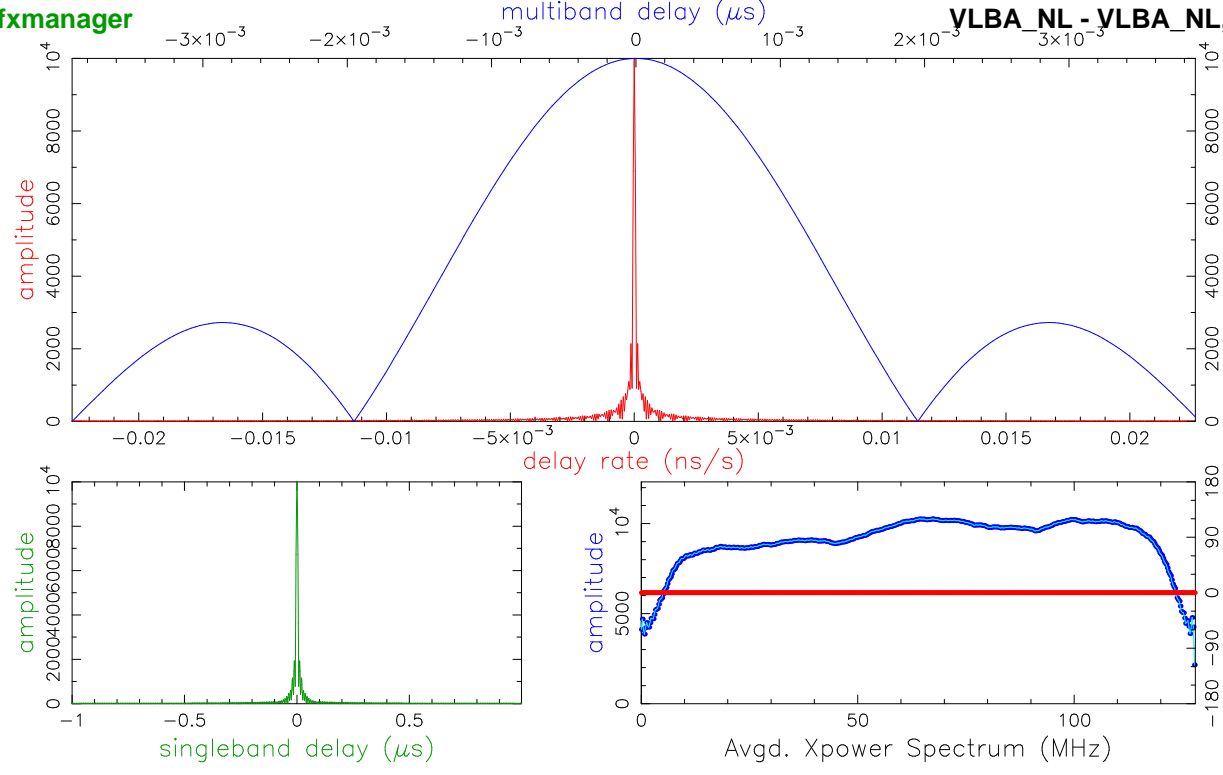
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000		
n:n	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
n	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UL	Q01UL	Q02UL	Q03UL		

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

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

n: az 159.6 el 57.2 pa -15.1 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/nn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/nn.Q.161.1J2DGP

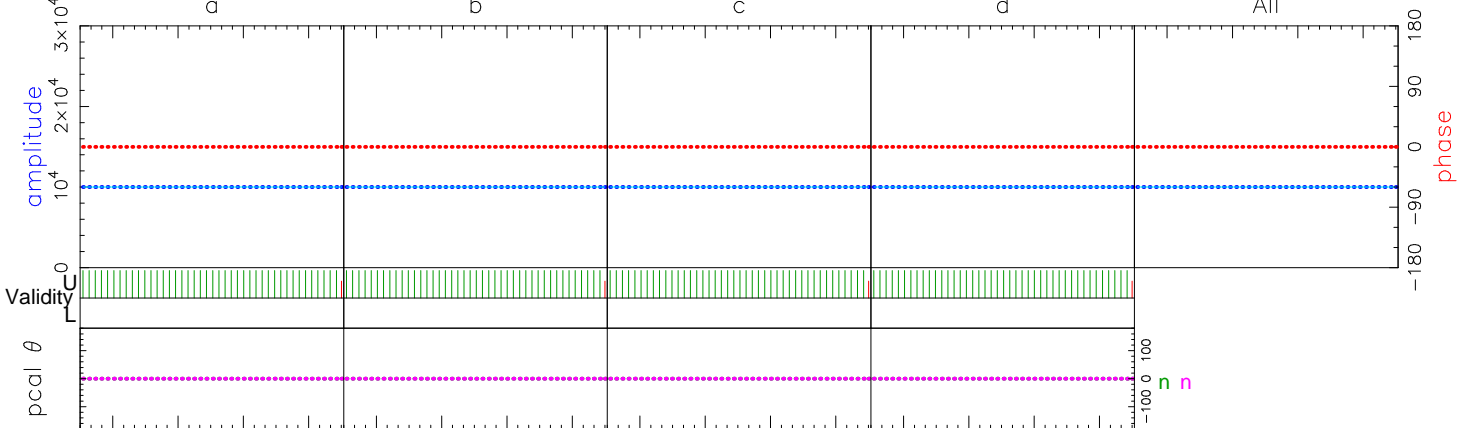


Fringe quality 9

SNR 423630.3
Int time 239.982
Amp 10000.000
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 43040.0000
AP (sec) 0.512

Exp. c202b
Yr:day 16383
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211459
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

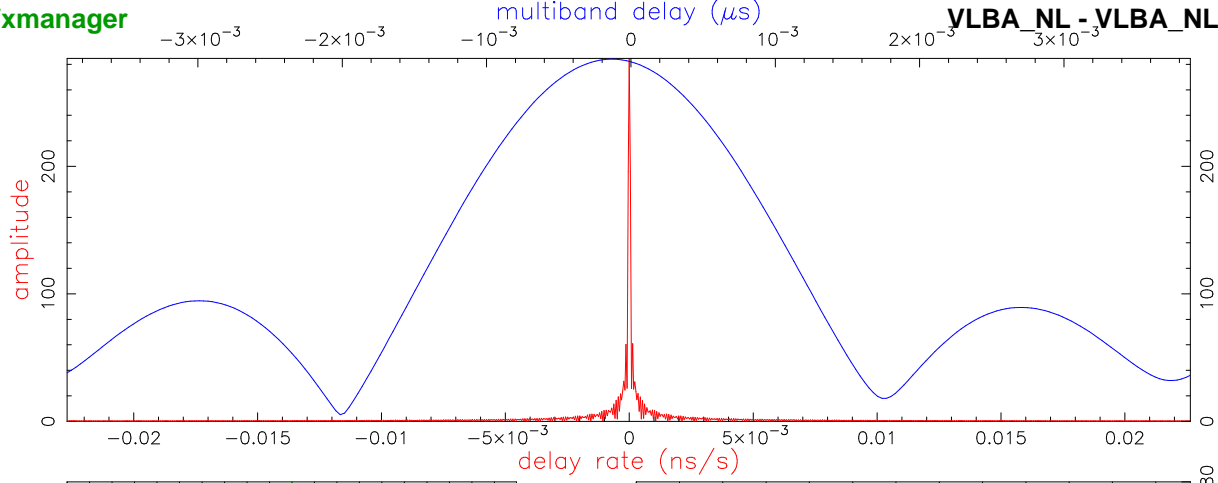
Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



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

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

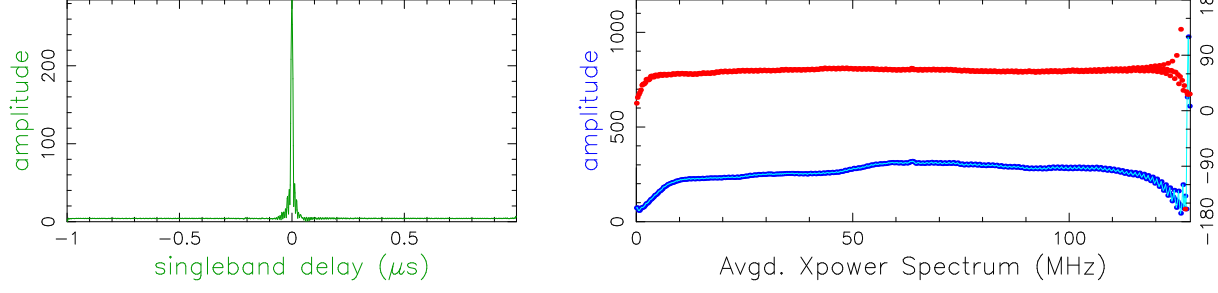
ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	10000.000 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	0.0	0.0	Search (1024X16)	10000.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	0.0	0.0	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s):	256	dr window (ns/s)	-0.023 0.023		
n:	az 159.6 el 57.2 pa -15.1					Inc. frq. avg.	10000.000	Data rate(Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00



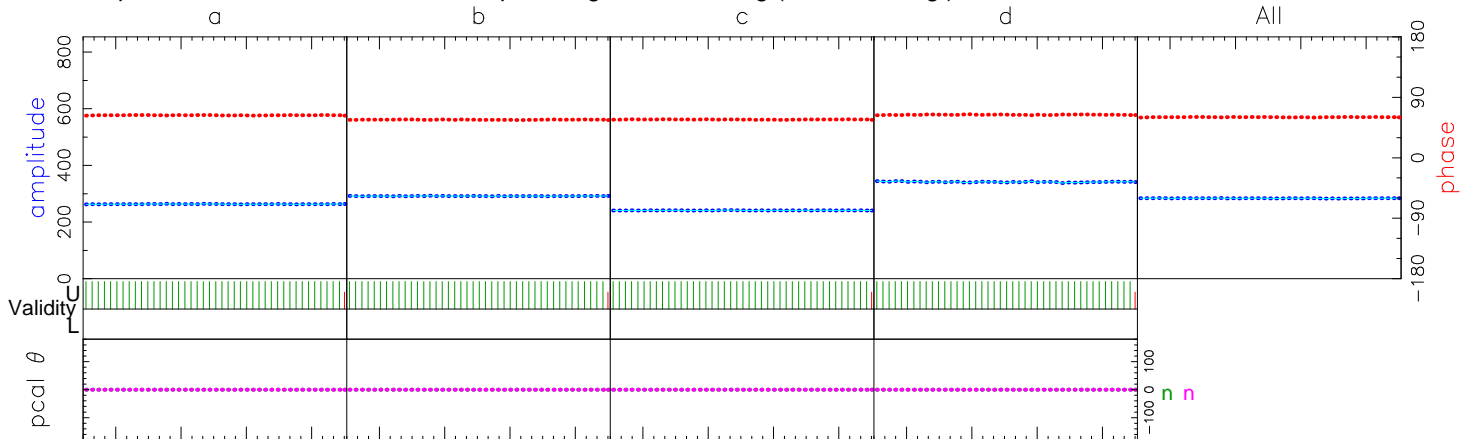
Fringe quality 9

SNR 12058.9
Int time 239.982
Amp 284.657
Phase 60.4
PFD 0.0e+00
Delays (us)
SBD -0.000305
MBD -0.000144
Fringe rate (Hz)
-0.000005
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
2021:032:211501
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

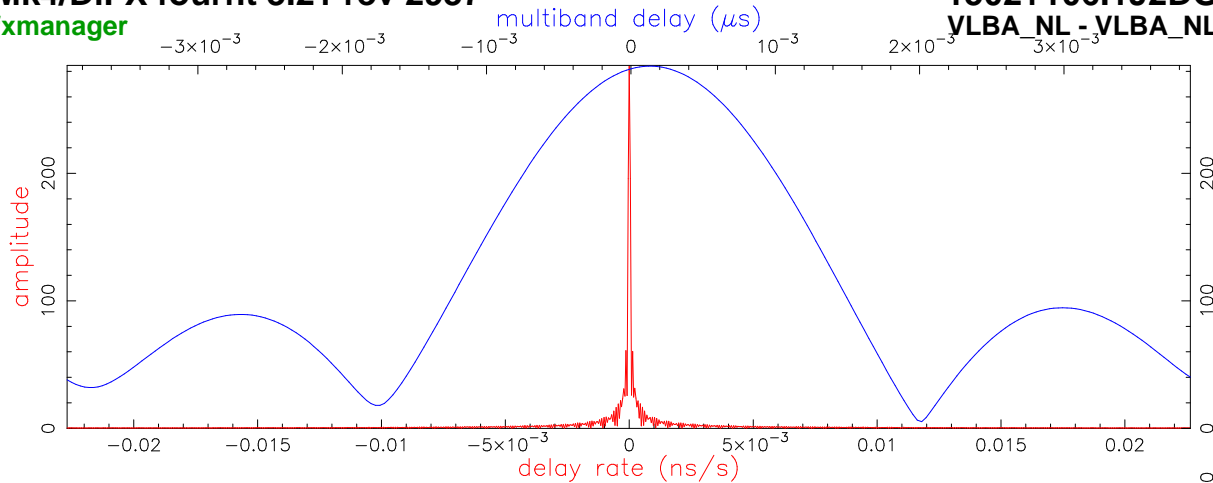


Amp. and Phase vs. time for each freq., 43 segs, 11 APs / seg (5.63 sec / seg.), time ticks 10 sec



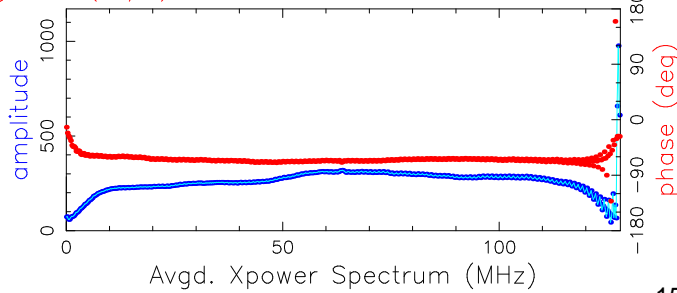
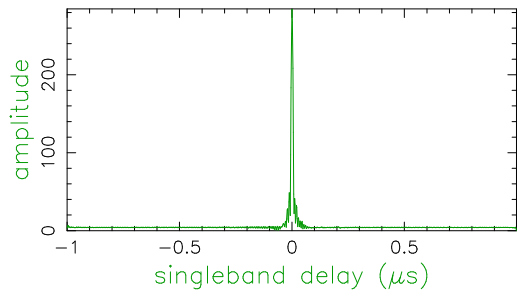
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	63.3	56.6	56.9	64.0	Phase	60.4
	263.4	291.8	241.4	341.7	Ampl.	284.6
	512.8	513.0	512.7	512.8	Sbd box	512.8
U/L	469/0	469/0	469/0	469/0	APs used	
n	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n:n	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.44437500000E-04		Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.44437E-04 +/- 9.2E-08
Sband delay (usec)	-3.05250000000E-04		Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-3.05250E-04 +/- 3.6E-07
Phase delay (usec)	3.90078759792E-06		Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	3.90079E-06 +/- 6.1E-10
Delay rate (us/s)	-1.13448240429E-10		Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.13448E-10 +/- 4.4E-12
Total phase (deg)		60.4	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	60.4 +/- 0.0

ph/seg (deg) 0.2 0.0 Amplitude 284.657 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.3 0.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 4.9 0.0 Inc. seg. avg. 284.057 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 13.2 0.0 Inc. frq. avg. 284.573 Sample rate(MISamp/s): 256 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite dr window (ns/s) -0.023 0.023
 n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/nn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/nn.Q.197.1J2DGP



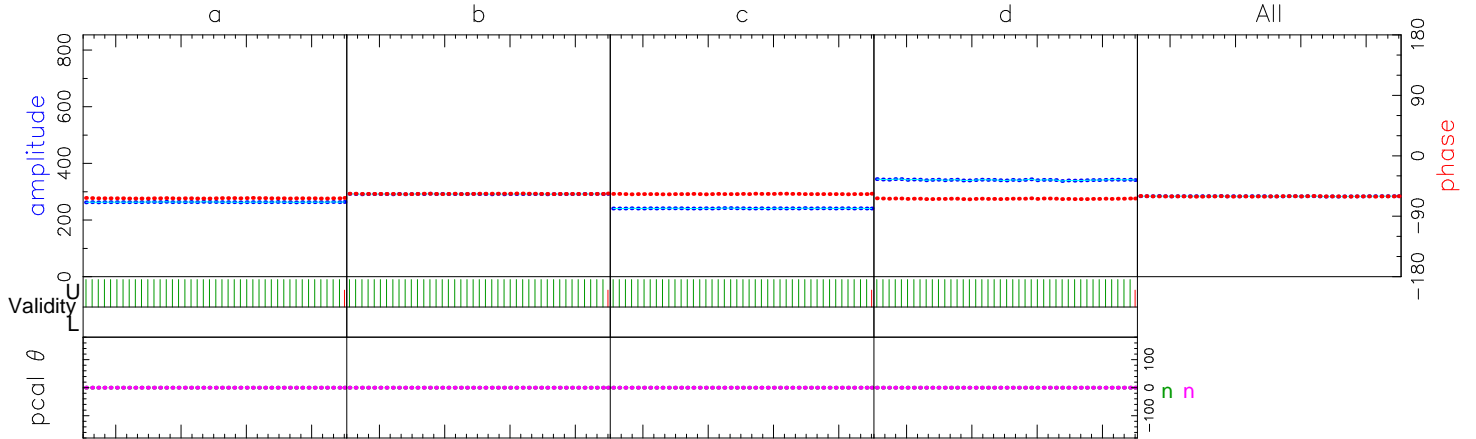
Fringe quality 9

SNR 12058.9
Int time 239.982
Amp 284.657
Phase -60.4
PFD 0.0e+00
Delays (us)
SBD 0.000305
MBD 0.000144
Fringe rate (Hz) 0.000005
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
2021:032:211502
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

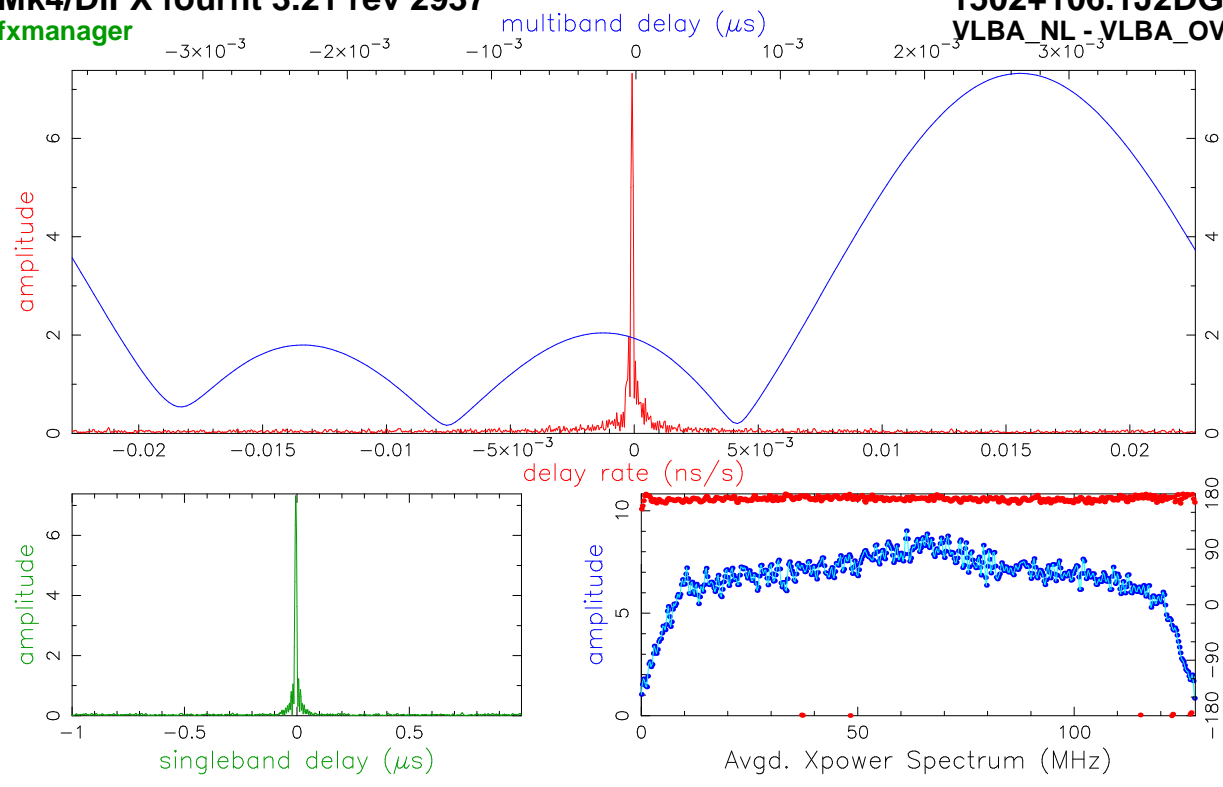


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-63.3	-56.6	-56.9	-64.0	Phase	-60.4
	263.4	291.8	241.4	341.7	Ampl.	284.6
	513.2	513.0	513.3	513.2	Sbd box	513.2
U/L	469/0	469/0	469/0	469/0	APs used	
n	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n:n	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	1.44437500000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.44437E-04	+/- 9.2E-08
Sband delay (usec)	3.05250000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	3.05250E-04	+/- 3.6E-07
Phase delay (usec)	-3.90078759781E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-3.90079E-06	+/- 6.1E-10
Delay rate (us/s)	1.13448240429E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.13448E-10	+/- 4.4E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-60.4	+/- 0.0

	RMS	Theor.	Amplitude	284.657 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	0.2	0.0	Search (1024X16)	281.976	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	0.3	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.9	0.0	Inc. seg. avg.	284.057	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	13.2	0.0	Inc. frq. avg.	284.573	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 159.6 el 57.2 pa -15.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/nn..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/nn.Q.210.1J2DGP

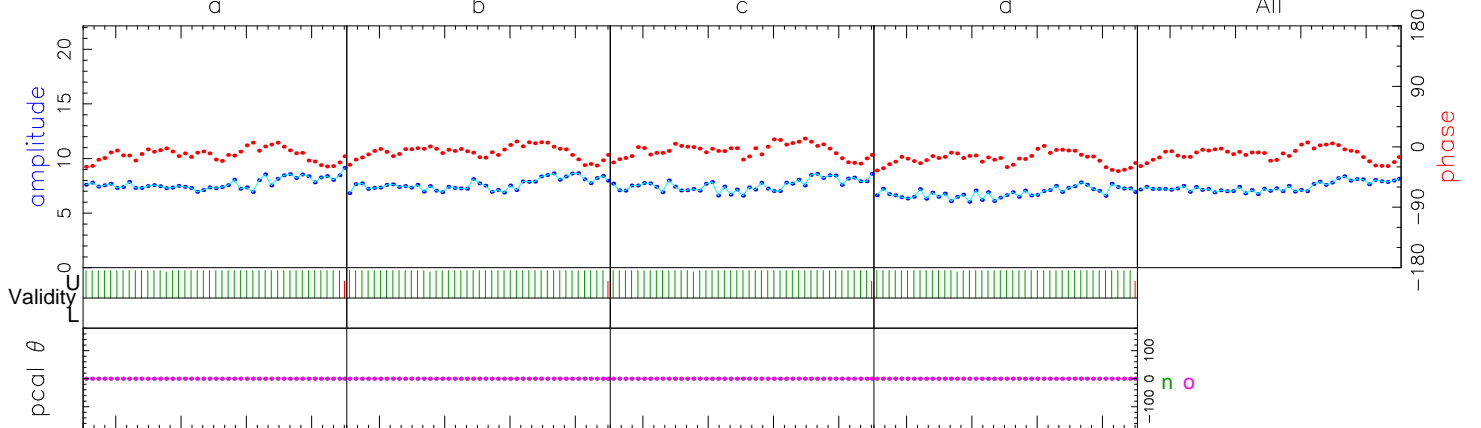


Fringe quality 9

SNR 312.7
Int time 239.711
Amp 7.386
Phase -10.7
PFD 0.0e+00
Delays (us)
SBD -0.005232
MBD 0.002696
Fringe rate (Hz)
-0.004341
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
2021:032:211457
2020:247:085004
RA & Dec (J2000)
15h04m24.979782s
+10°29'39.198559"

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



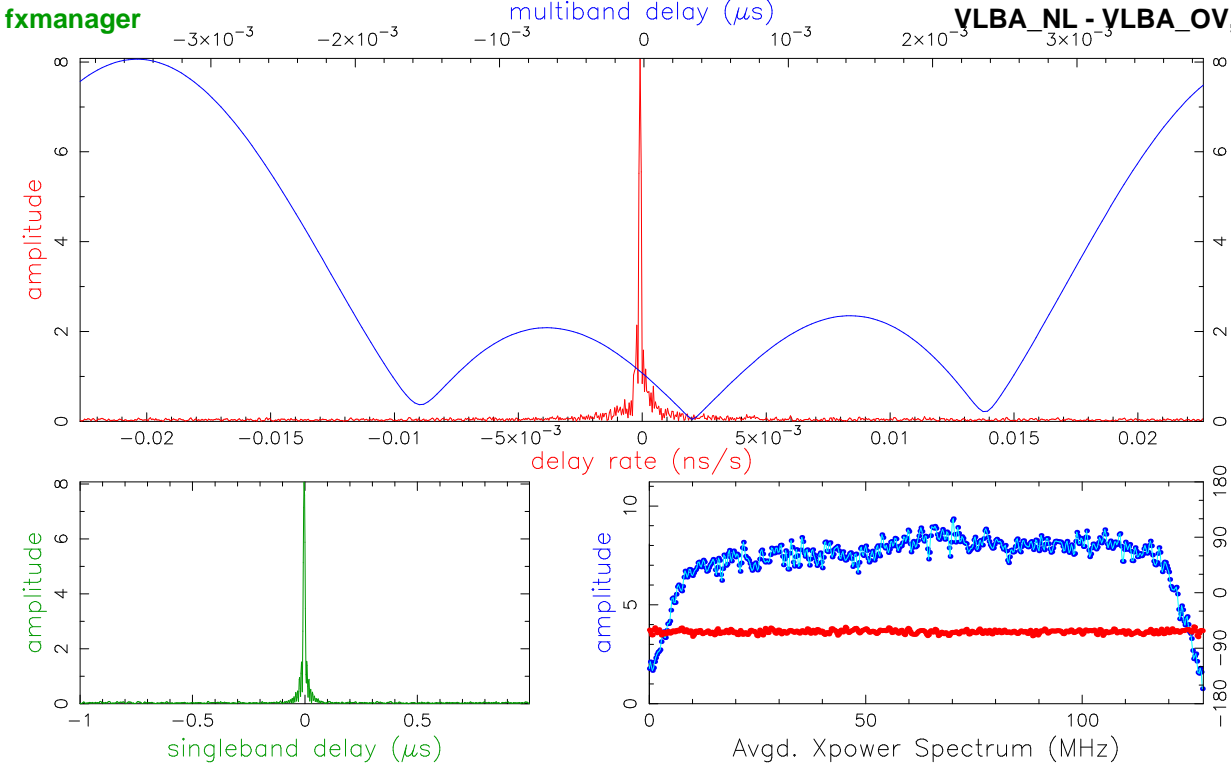
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-11.8	-7.9	-5.8	-18.2		-10.7
	7.6	7.5	7.5	6.8	Ampl.	7.3
	510.4	510.4	510.3	510.1	Sbd box	510.3
U/L	469/0	469/0	469/0	469/0	APs used	
n	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	2.28625051241E+03	Apriori delay (usec)	2.28625562893E+03	Resid mbdelay (usec)	2.69598E-03	+/- 3.6E-06
Sband delay (usec)	2.28625039693E+03	Apriori clock (usec)	-2.1210781E+01	Resid sbdelay (usec)	-5.23200E-03	+/- 1.4E-05
Phase delay (usec)	2.28625562824E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	-6.92730E-07	+/- 2.4E-08
Delay rate (us/s)	-5.28021827778E-01	Apriori rate (us/s)	-5.28021726909E-01	Resid rate (us/s)	-1.00870E-07	+/- 1.7E-10
Total phase (deg)		86.2	Apriori accel (us/s/s)	-1.10247708693E-05	Resid phase (deg)	-10.7 +/- 0.4
RMS	9.4	Theor. 1.2	Amplitude 7.386 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	9.4	1.2	Search (1024X16) 6.966	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	5.8	2.1	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.004 0.004
ph/frq (deg)	6.7	0.4	Inc. seg. avg. 7.421	Sample rate(MISamp/s): 256		dr window (ns/s) -0.023 0.023
amp/frq (%)	4.6	0.6	Inc. frq. avg. 7.345	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite
n: az 159.6 el 57.2 pa -15.1	o: az 118.4 el 46.7 pa -45.1	u, v (fr/asec) 1531.696 180.930				ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva7mm	Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/no..1J2DGP	Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/no.Q.159.1J2DGP				simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, no

VLBA_NL - VLBA_OV, fgroup Q, pol RR

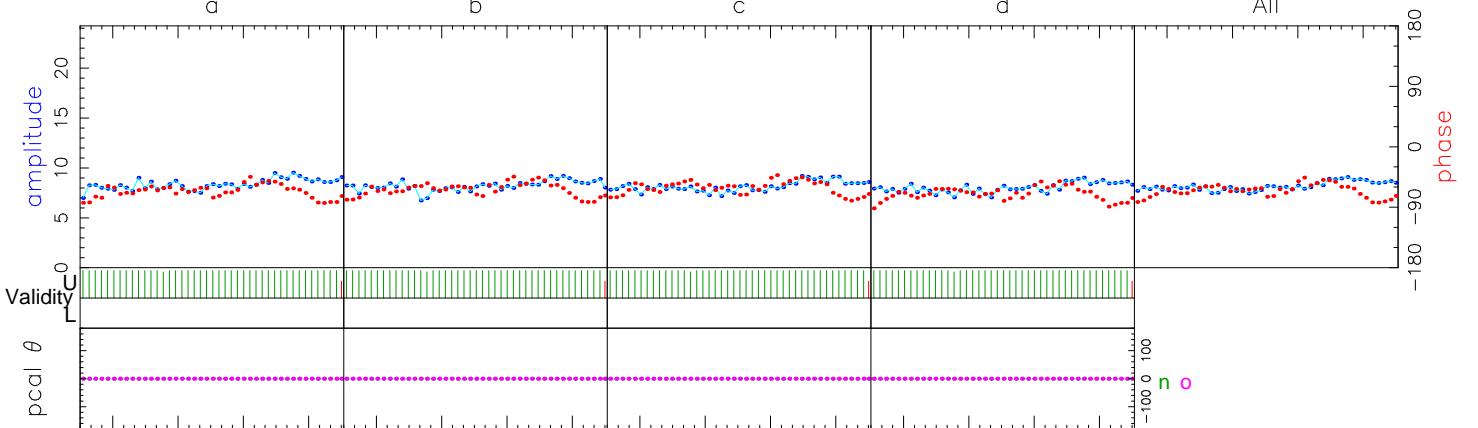


Fringe quality 9

SNR 342.1
 Int time 239.711
 Amp 8.080
 Phase -65.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.003582
 MBD -0.003495
 Fringe rate (Hz)
 -0.004351
 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
 2021:032:211459
 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		
n	1000	1000	1000	1000		
o	1000	1000	1000	1000		
n:o	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
o	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR		
o	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	2.28625213388E+03	Apriori delay (usec)	2.28625562893E+03	Resid mbdelay (usec)	-3.49505E-03	+/-	3.3E-06
Sband delay (usec)	2.28625204693E+03	Apriori clock (usec)	-2.1210781E+01	Resid sbdelay (usec)	-3.58200E-03	+/-	1.3E-05
Phase delay (usec)	2.28625562472E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	-4.21100E-06	+/-	2.2E-08
Delay rate (us/s)	-5.28021827997E-01	Apriori rate (us/s)	-5.28021726909E-01	Resid rate (us/s)	-1.01088E-07	+/-	1.6E-10
Total phase (deg)	31.7	Apriori accel (us/s/s)	-1.10247708693E-05	Resid phase (deg)	-65.2	+/-	0.3

ph/seg (deg)	9.5	1.1	Search (1024X16)	7.805	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	5.5	1.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	4.8	0.3	Inc. seg. avg.	8.173	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	1.5	0.6	Inc. frq. avg.	8.075	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
					Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00

n: az 159.6 el 57.2 pa -15.1 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 1531.696 180.930 simultaneous interpolator

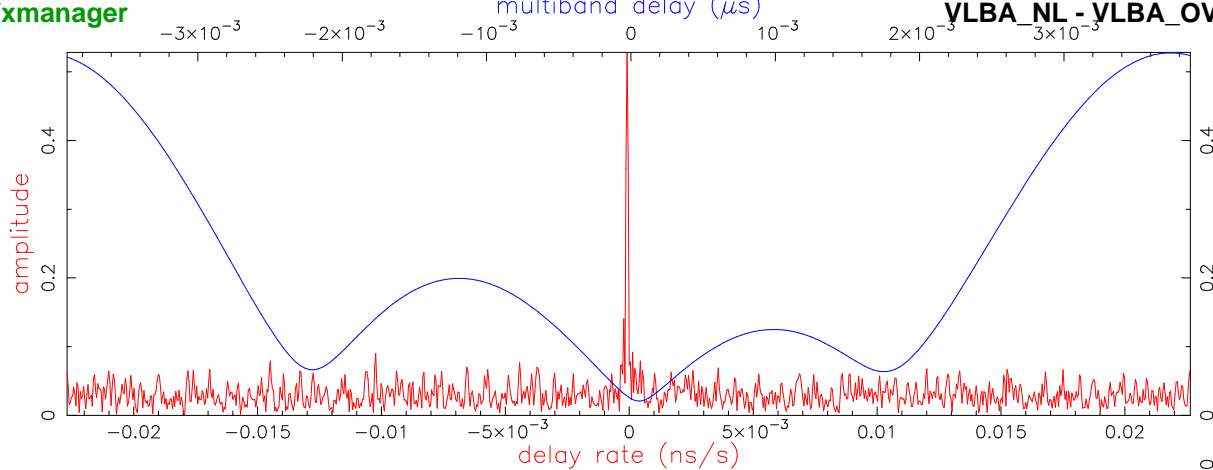
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/no..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/no.Q.177.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

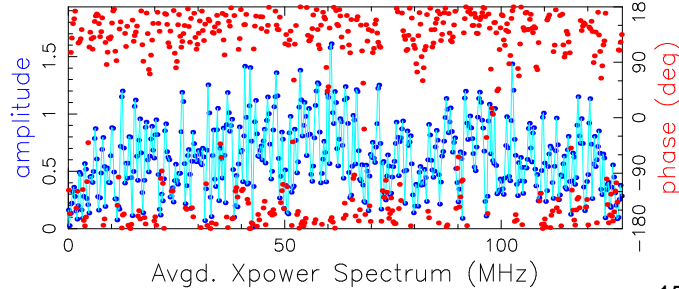
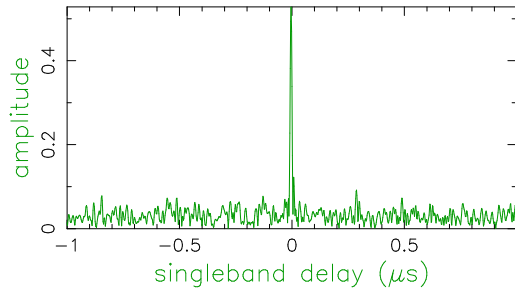
1502+106.1J2DGP, No0154, no

VLBA_NL - VLBA_OV, fgroup Q, pol LR



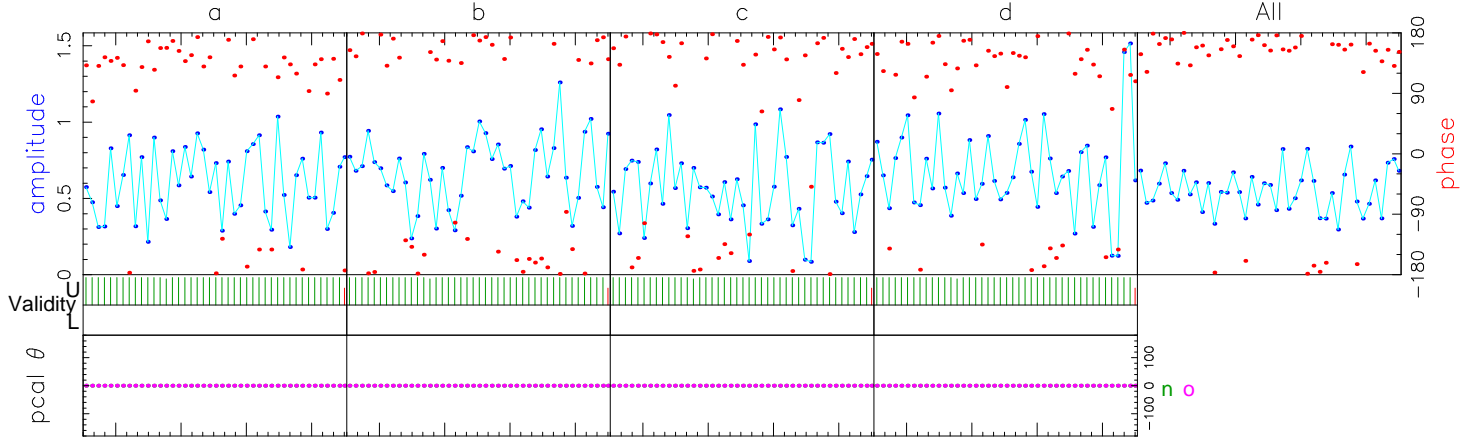
Fringe quality 8

SNR 22.4
 Int time 239.711
 Amp 0.528
 Phase 161.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.004165
 MBD -0.004087
 Fringe rate (Hz)
 -0.004341
 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
 2021:032:211501
 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
147.9	176.8	165.8	155.2	Phase	161.7
0.5	0.6	0.5	0.6	Ampl.	0.5
511.0	511.0	510.5	510.8	Sbd box	510.9
U/L 469/0	469/0	469/0	469/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:o 0:0	0:0	0:0	0:0	PC phase	
n:o 0:0	0:0	0:0	0:0	ManI PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	2.28625154221E+03	Apriori delay (usec)	2.28625562893E+03	Resid mbdelay (usec)	-4.08672E-03	+/- 5.0E-05
Sband delay (usec)	2.28625146406E+03	Apriori clock (usec)	-2.1210781E+01	Resid sbdelay (usec)	-4.16488E-03	+/- 1.9E-04
Phase delay (usec)	2.28625563937E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	1.04353E-05	+/- 3.3E-07
Delay rate (us/s)	-5.28021827761E-01	Apriori rate (us/s)	-5.28021726909E-01	Resid rate (us/s)	-1.00853E-07	+/- 2.4E-09
Total phase (deg)	258.6	Apriori accel (us/s/s)	-1.10247708693E-05	Resid phase (deg)	161.7	+/- 5.1

ph/seg (deg)	RMS 19.1	Theor. 16.8	Amplitude Search (1024X16)	0.528 +/- 0.024	0.507	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	26.6	29.3	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	15.5	5.1	Inc. seg. avg.	0.531	0.531	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	8.1	8.9	Inc. frq. avg.	0.536	0.536	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 159.6 el 57.2 pa -15.1 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 1531.696 180.930 simultaneous interpolator

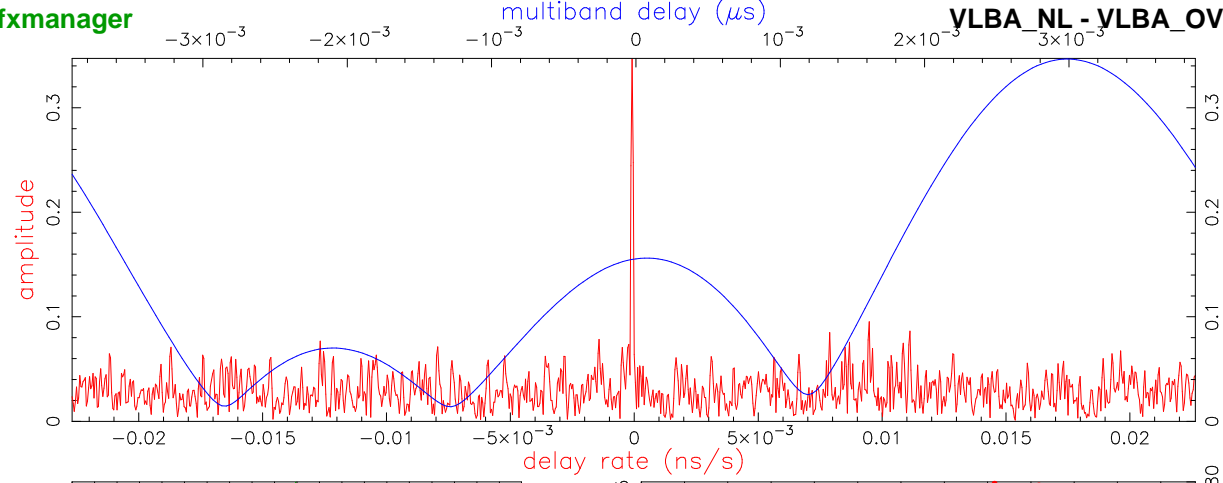
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/no..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/no.Q.195.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, no

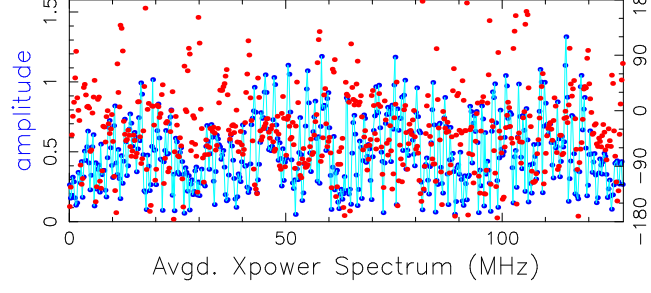
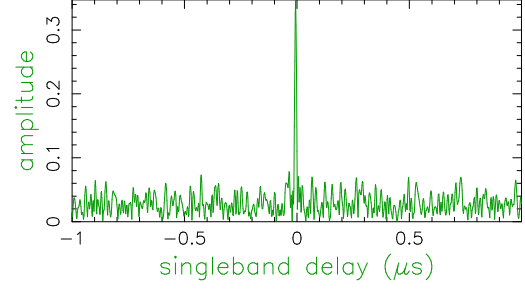
VLBA_NL - VLBA_OV, fgroup Q, pol RL



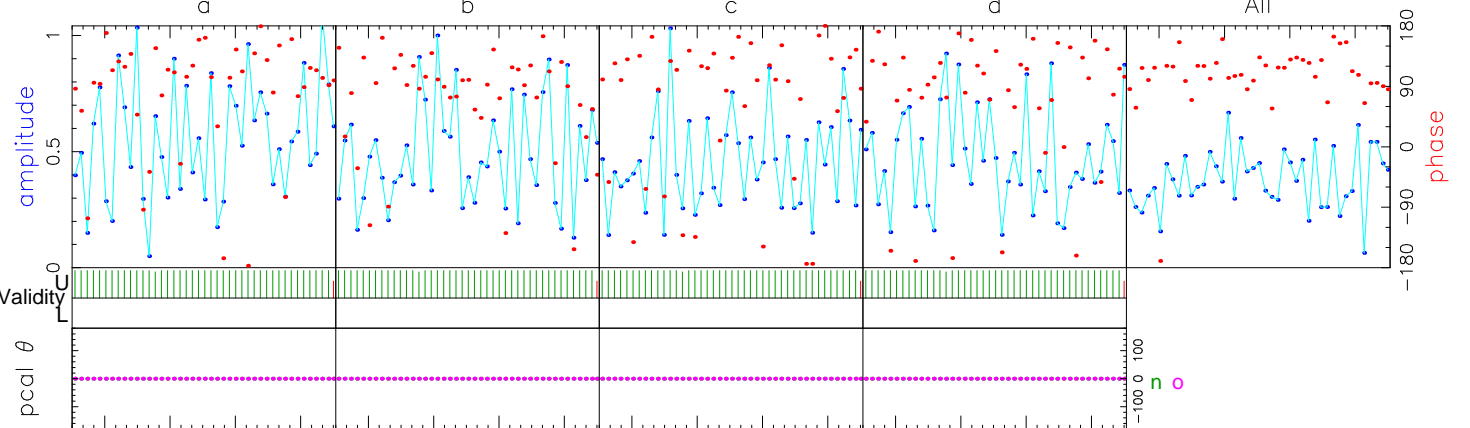
Fringe quality 9

SNR 14.7
Int time 239.711
Amp 0.347
Phase 112.3
PFD 2.0e-40
Delays (us)
SBD -0.006162
MBD 0.002967
Fringe rate (Hz) -0.004459
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
2021:032:211502
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



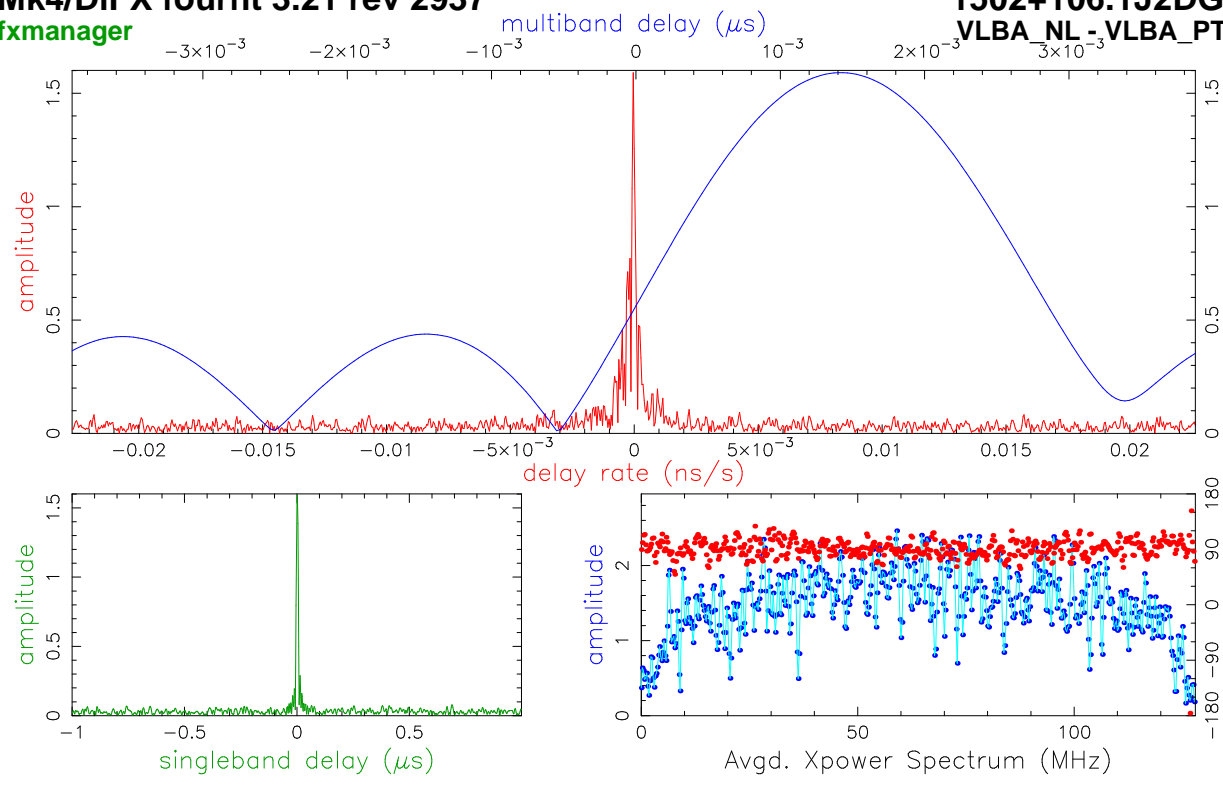
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	469/0	469/0	469/0	469/0		
n	1000	1000	1000	1000	APs used	
o	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
o	1000	1000	1000	1000	PC amp	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	

Group delay (usec)(sbd)	2.28625078385E+03	Apriori delay (usec)	2.28625562893E+03	Resid mbdelay (usec)	2.96742E-03	+/- 7.6E-05
Sband delay (usec)	2.28624946706E+03	Apriori clock (usec)	-2.1210781E+01	Resid sbdelay (usec)	-6.16188E-03	+/- 2.9E-04
Phase delay (usec)	2.28625563618E+03	Apriori clockrate (us/s)	6.0000003E-07	Resid phdelay (usec)	7.24564E-06	+/- 5.0E-07
Delay rate (us/s)	-5.28021830507E-01	Apriori rate (us/s)	-5.28021726909E-01	Resid rate (us/s)	-1.03598E-07	+/- 3.6E-09
Total phase (deg)	209.2	Apriori accel (us/s/s)	-1.10247708693E-05	Resid phase (deg)	112.3	+/- 7.8

	RMS	Theor.	Amplitude	0.347 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	28.7	25.6	Search (1024X16)	0.333	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	37.4	44.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	15.9	7.8	Inc. seg. avg.	0.347	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	10.9	13.6	Inc. frq. avg.	0.350	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 159.6 el 57.2 pa -15.1 o: az 118.4 el 46.7 pa -45.1 u,v (fr/asec) 1531.696 180.930 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/no..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/no.Q.211.1J2DGP

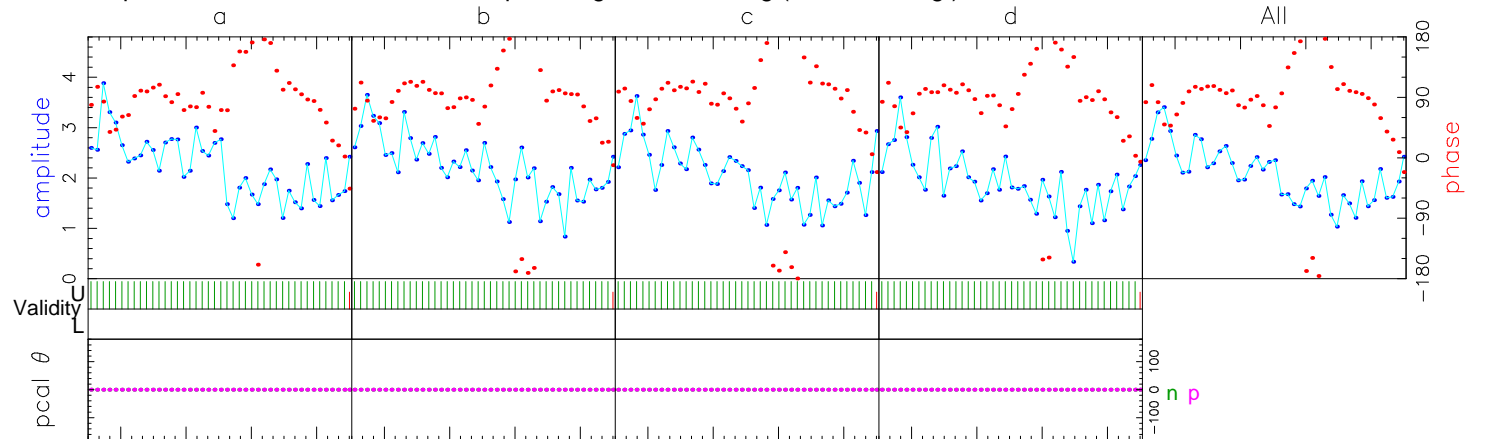


Fringe quality 5

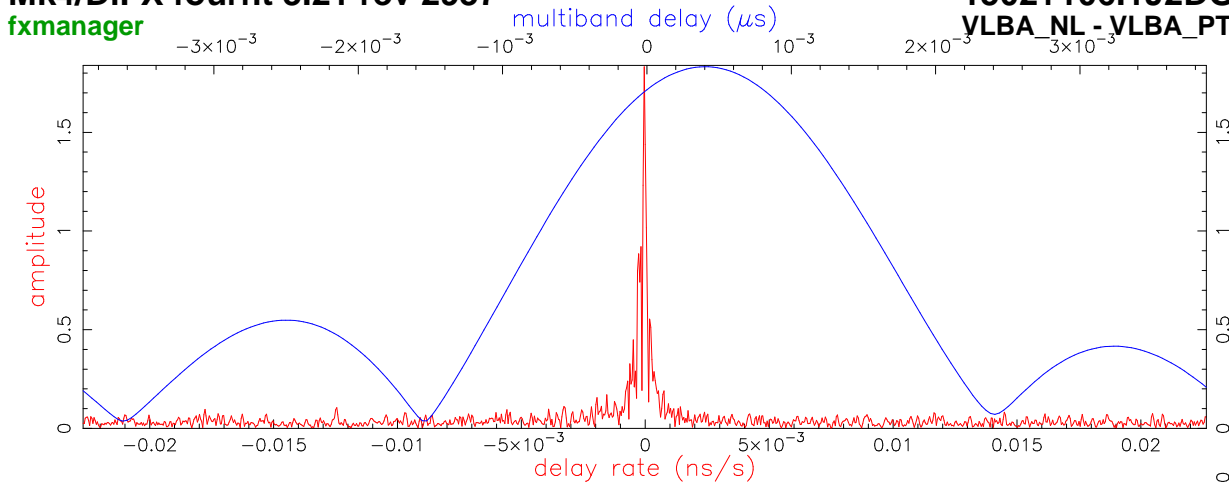
SNR 67.8
Int time 239.982
Amp 1.601
Phase 91.0
PFD 0.0e+00
Delays (us)
SBD 0.001401
MBD 0.001396
Fringe rate (Hz)
-0.002655
Ion TEC 0.000
Ref freq (MHz)
43040.0000
AP (sec) 0.512

Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 190830.00
Stop 191230.12
FRT 191030.00
Corr/FF/build
2021:032:031903
2021:032:211457
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

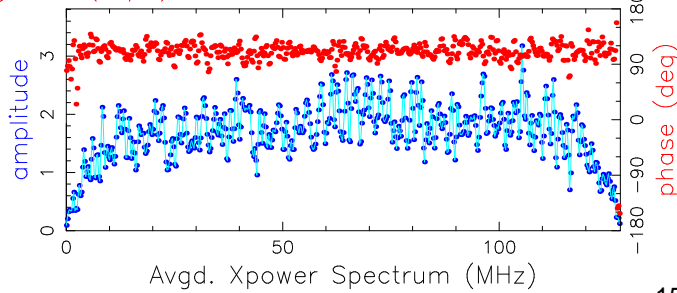
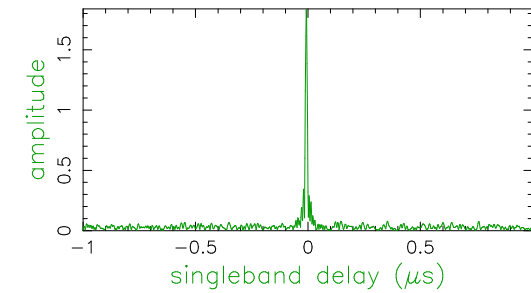


	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All		
	86.1	93.5	96.2	88.2	Phase	91.0		
	1.7	1.7	1.5	1.5	Ampl.	1.6		
	513.9	513.8	513.7	513.5	Sbd box	513.7		
U/L	469/0	469/0	469/0	469/0	APs used			
n	1000	1000	1000	1000	PC freqs			
p	1000	1000	1000	1000	PC freqs			
n:p	0:0	0:0	0:0	0:0	PC phase			
n:p	0:0	0:0	0:0	0:0	Manl PC			
n	1000	1000	1000	1000	PC amp			
p	1000	1000	1000	1000				
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids			
p	Q00UL	Q01UL	Q02UL	Q03UL	Tracks			
					Chan ids			
					Tracks			
Group delay (usec)(sbd)	3.39195983242E+02	Apriori delay (usec)	3.39194586829E+02	Resid mbdelay (usec)	1.39641E-03	+/- 1.6E-05		
Sband delay (usec)	3.39195988329E+02	Apriori clock (usec)	9.1703415E-02	Resid sbdelay (usec)	1.40150E-03	+/- 6.3E-05		
Phase delay (usec)	3.39194592700E+02	Apriori clockrate (us/s)	1.0000003E-07	Resid phdelay (usec)	5.87037E-06	+/- 1.1E-07		
Delay rate (us/s)	-3.66249240720E-01	Apriori rate (us/s)	-3.66249179027E-01	Resid rate (us/s)	-6.16932E-08	+/- 7.9E-10		
Total phase (deg)		Apriori accel (us/s/s)	2.86136324675E-07	Resid phase (deg)	91.0	+/- 1.7		
RMS	Theor.	Amplitude	1.601 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
45.2	5.5	Search (1024X16)	1.523	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
44.9	9.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
5.7	1.7	Inc. seg. avg.	2.069	Sample rate(MISamp/s): 256		dr window (ns/s)	-0.023 0.023	
6.1	2.9	Inc. frq. avg.	1.594	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00 0.00
n: az 159.6 el 57.2 pa -15.1	p: az 126.8 el 55.3 pa -41.9	u, v (fr/asec)	1066.336 444.350	simultaneous interpolator				
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/np..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/np.Q.167.1J2DGP								



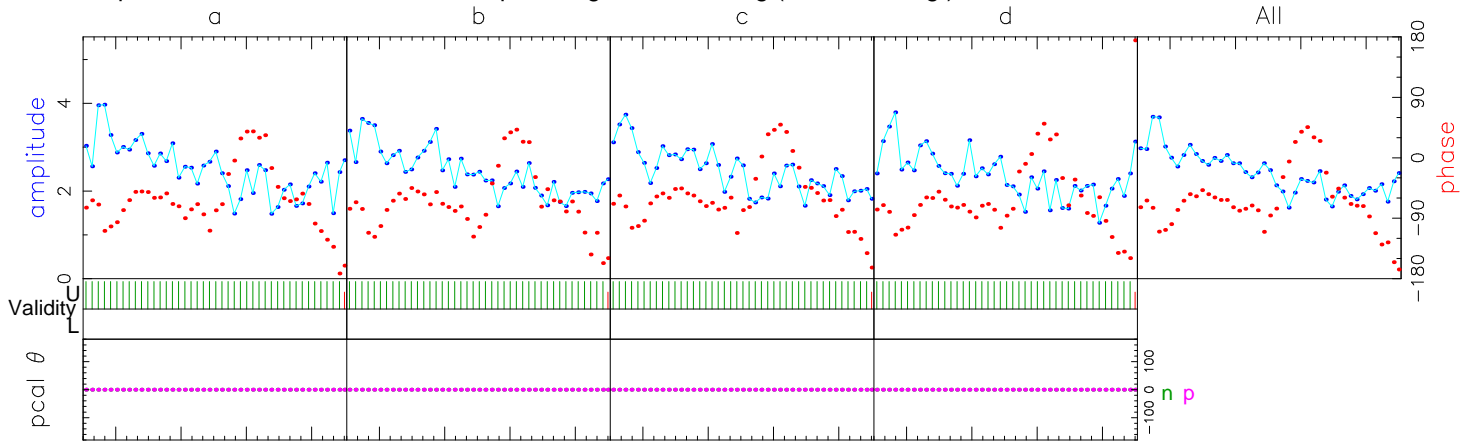
Fringe quality 5

SNR 77.9
Int time 239.982
Amp 1.839
Phase -68.3
PFD 0.0e+00
Delays (us)
SBD -0.007382
MBD 0.000422
Fringe rate (Hz)
-0.002682
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
2021:032:211459
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
-68.0	-69.5	-62.7	-73.6	Phase	-68.3
1.9	1.8	1.9	1.7	Ampl.	1.8
509.1	509.2	509.3	509.2	Sbd box	509.2
U/L 469/0	469/0	469/0	469/0	APs used	
n 1000	1000	1000	1000	PC freqs	
p 1000	1000	1000	1000	PC freqs	
n:p 0:0	0:0	0:0	0:0	PC phase	
n:p 0:0	0:0	0:0	0:0	ManI PC	
n 1000	1000	1000	1000	PC amp	
p 1000	1000	1000	1000		
n Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec)(sbd)	3.39187196523E+02	Apriori delay (usec)	3.39194586829E+02	Resid mbdelay (usec)	4.22193E-04	+/- 1.4E-05
Sband delay (usec)	3.39187205079E+02	Apriori clock (usec)	9.1703415E-02	Resid sbdelay (usec)	-7.38175E-03	+/- 5.5E-05
Phase delay (usec)	3.39194582420E+02	Apriori clockrate (us/s)	1.0000003E-07	Resid phdelay (usec)	-4.40910E-06	+/- 9.5E-08
Delay rate (us/s)	-3.66249241335E-01	Apriori rate (us/s)	-3.66249179027E-01	Resid rate (us/s)	-6.23086E-08	+/- 6.8E-10
Total phase (deg)	-62.1	Apriori accel (us/s/s)	2.86136324675E-07	Resid phase (deg)	-68.3	+/- 1.5

	RMS	Theor.	Amplitude	1.839 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	46.0	4.8	Search (1024X16)	1.744	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/seg (%)	41.1	8.4	Interp.	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 256	dr window (ns/s)	-0.023 0.023
ph/frq (deg)	5.5	1.5	Inc. seg. avg.	2.414	Data rate(Mb/s): 2048	nlags: 512	ion window (TEC)	0.00 0.00
amp/frq (%)	3.3	2.6	Inc. frq. avg.	1.836				

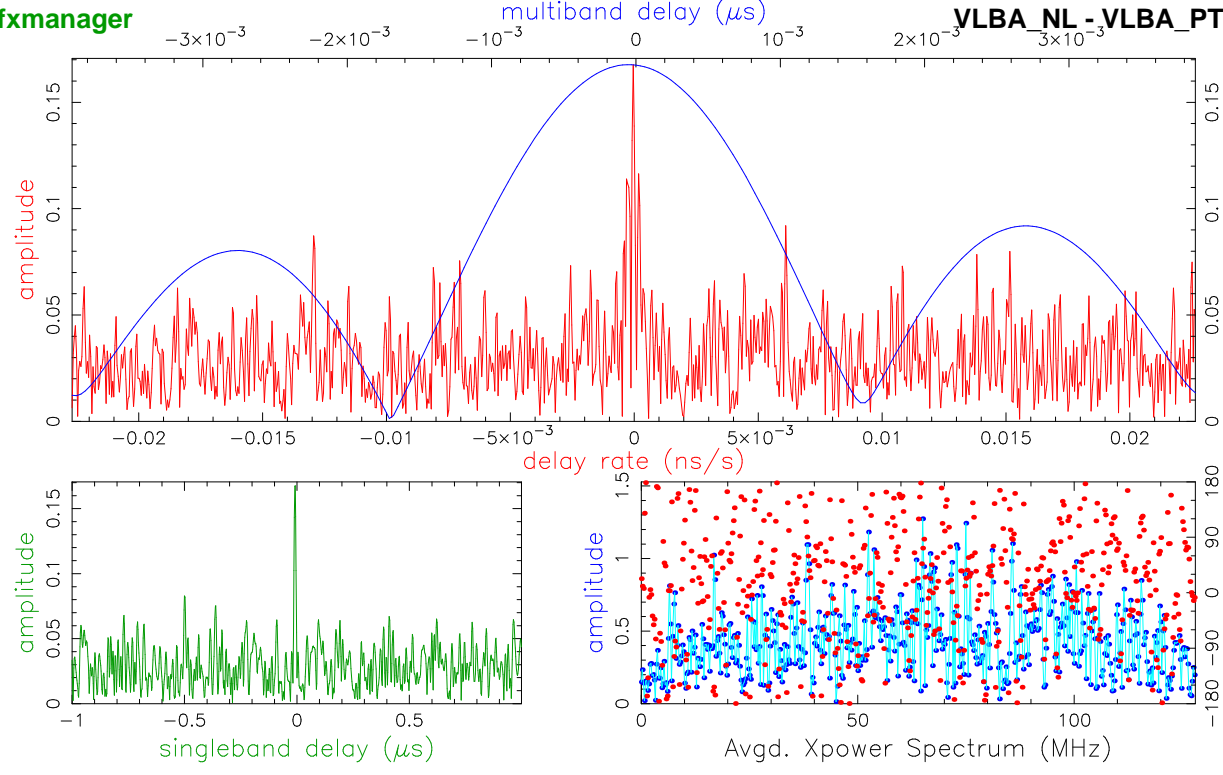
n: az 159.6 el 57.2 pa -15.1 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) 1066.336 444.350 simultaneous interpolator
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/np..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/np.Q.185.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, np

VLBA_NL - VLBA_PT, fgroup Q, pol LR

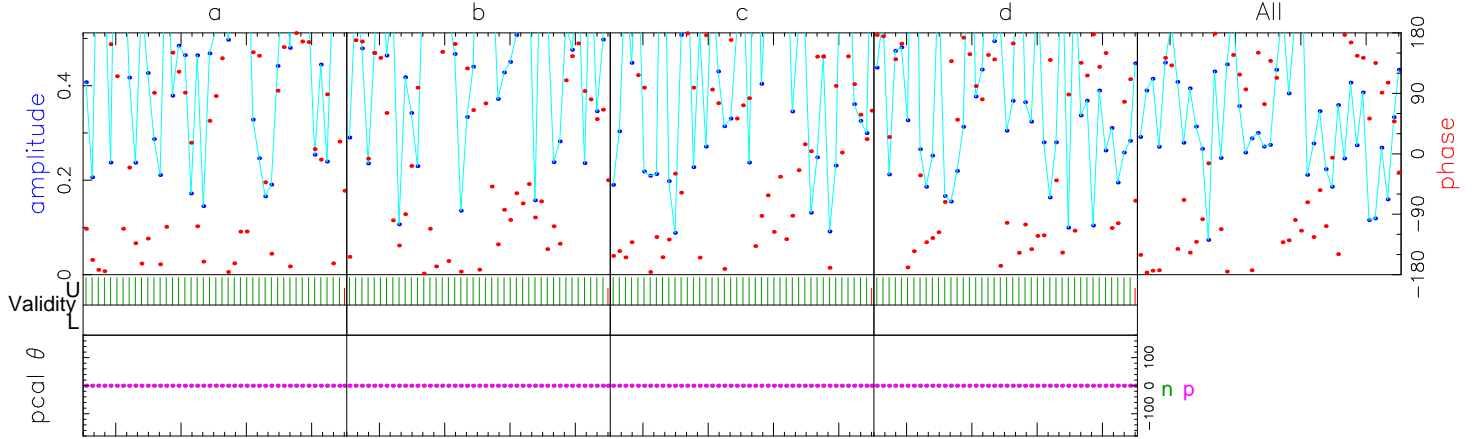


Fringe quality 9

SNR 7.2
 Int time 239.982
 Amp 0.171
 Phase -171.7
 PFD 7.5e-05
 Delays (us)
 SBD -0.008749
 MBD -0.000067
 Fringe rate (Hz)
 -0.001672
 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
 2021:032:211502
 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
	-175.8	-164.1	-173.7	-171.5	Phase	-171.7
	0.2	0.1	0.1	0.2	Ampl.	0.2
	508.9	149.6	964.3	508.7	Sbd box	508.5
U/L	469/0	469/0	469/0	469/0	APs used	
n	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	PC phase	
n:p	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	3.39186707617E+02	Apriori delay (usec)	3.39194586829E+02	Resid mbdelay (usec)	-6.67128E-05	+/- 1.5E-04
Group delay (usec)(sbd)	3.39186707617E+02	Apriori clock (usec)	9.1703415E-02	Resid sbdelay (usec)	-8.74863E-03	+/- 6.0E-04
Sband delay (usec)	3.39185838204E+02	Apriori clockrate (us/s)	1.0000003E-07	Resid phdelay (usec)	-1.10837E-05	+/- 1.0E-06
Phase delay (usec)	3.39194575746E+02	Apriori rate (us/s)	-3.66249179027E-01	Resid rate (us/s)	-3.88475E-08	+/- 7.4E-09
Delay rate (us/s)	-3.66249217874E-01	Apriori accel (us/s/s)	2.86136324675E-07	Resid phase (deg)	-171.7	+/- 15.9
Total phase (deg)	-165.6					

	RMS	Theor.	Amplitude	0.171 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	74.5	52.0	Search (1024X16)	0.168	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	122.7	90.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	6.3	15.9	Inc. seg. avg.	0.238	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	34.1	27.7	Inc. frq. avg.	0.162	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 159.6 el 57.2 pa -15.1 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) 1066.336 444.350 simultaneous interpolator

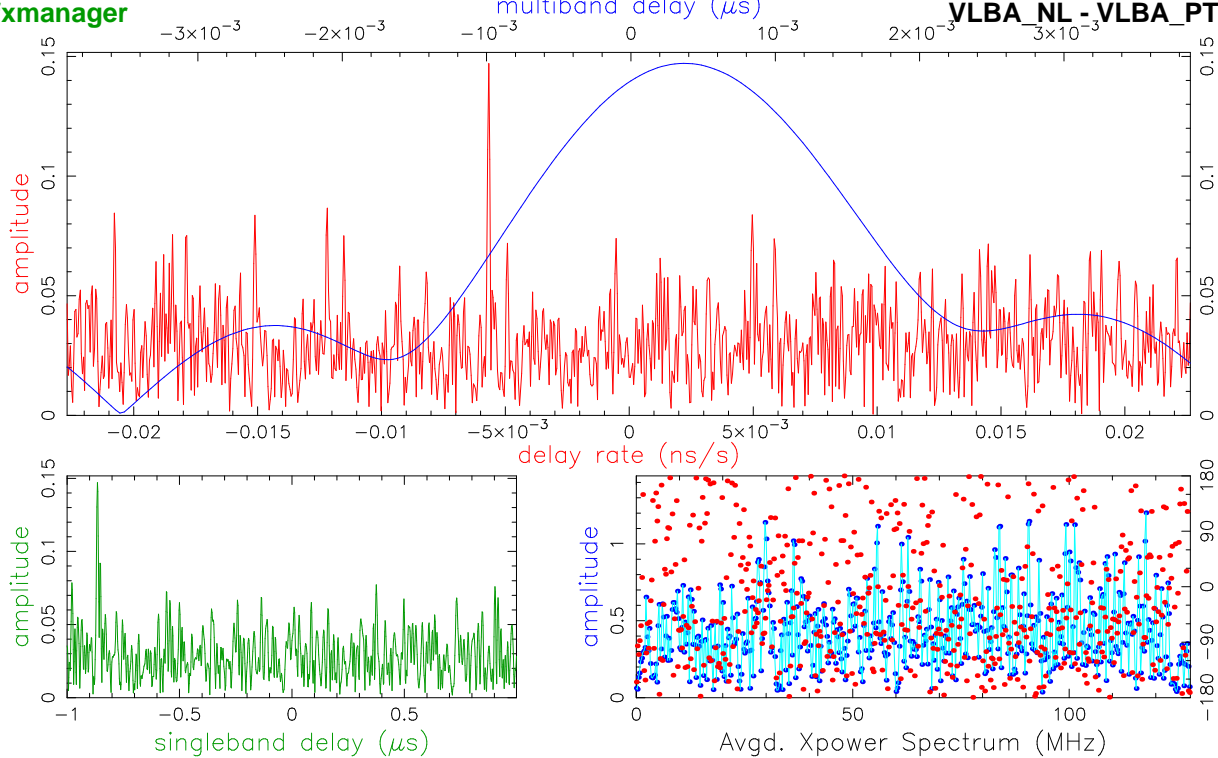
Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/np..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/np.Q.204.1J2DGP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

1502+106.1J2DGP, No0154, np

VLBA_NL - VLBA_PT, fgroup Q, pol RL

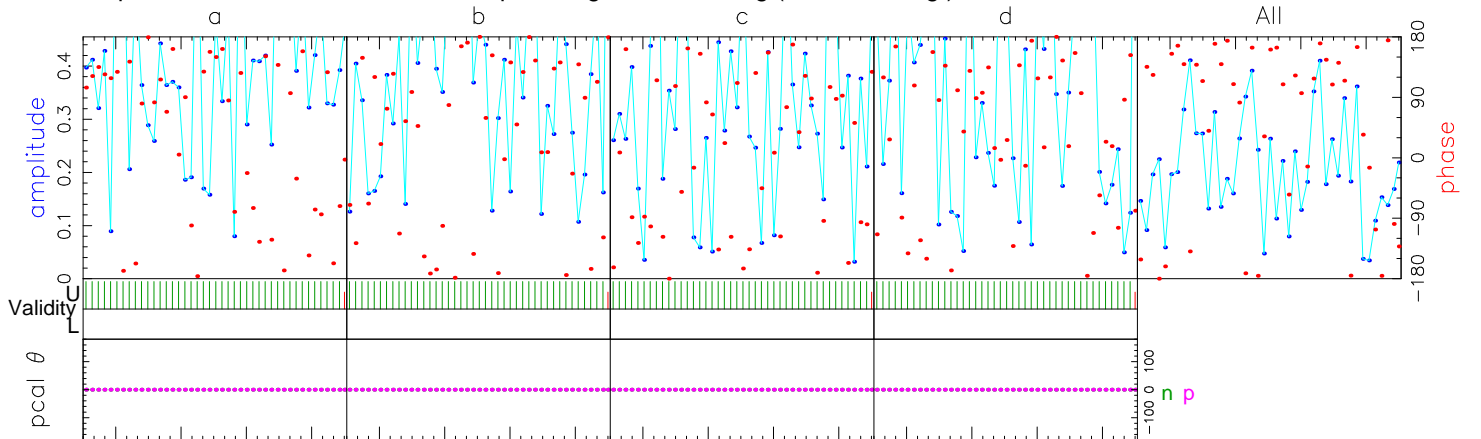


Fringe quality 0

SNR 6.3
 Int time 239.982
 Amp 0.152
 Phase 153.4
 PFD 5.0e-02
 Delays (us)
 SBD -0.864739
 MBD 0.000401
 Fringe rate (Hz)
 -0.244023
 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
 2021:032:211504
 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		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n:p	0:0	0:0	0:0	0:0		
n:p	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR		
p	Q00UL	Q01UL	Q02UL	Q03UL		

	3.38327799873E+02	3.39194586829E+02	3.39194586829E+02	3.39194586829E+02	4.00544E-04	+/- 1.8E-04
Group delay (usec)(sbd)	3.38327799873E+02	3.39194586829E+02	3.39194586829E+02	3.39194586829E+02	4.00544E-04	+/- 1.8E-04
Sband delay (usec)	3.38329847579E+02	3.39194586829E+02	3.39194586829E+02	3.39194586829E+02	-8.64739E-01	+/- 6.9E-04
Phase delay (usec)	3.39194596732E+02	3.39194596732E+02	3.39194596732E+02	3.39194596732E+02	9.90276E-06	+/- 1.2E-06
Delay rate (us/s)	-3.66254848716E-01	-3.66254848716E-01	-3.66254848716E-01	-3.66254848716E-01	-5.66969E-06	+/- 8.5E-09
Total phase (deg)	159.6	159.6	159.6	159.6	153.4	+/- 18.3

	RMS	Theor.	Amplitude	0.152 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	65.7	60.0	Search (1024X16)	0.145	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	79.5	104.7	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
ph/frq (deg)	5.9	18.3	Inc. seg. avg.	0.138	Sample rate(MISamp/s): 256	dr window (ns/s) -0.023 0.023
amp/frq (%)	29.0	31.9	Inc. frq. avg.	0.144	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

n: az 159.6 el 57.2 pa -15.1 p: az 126.8 el 55.3 pa -41.9 u,v (fr/asec) 1066.336 444.350 simultaneous interpolator

Control file: cf_1234_gmva7mm Input file: /Exps/c202b/v1/v1_7mm/1234/No0154/np..1J2DGP Output file: /Exps/c202b/v1/v1_7mm/1234/No0154/np.Q.220.1J2DGP