

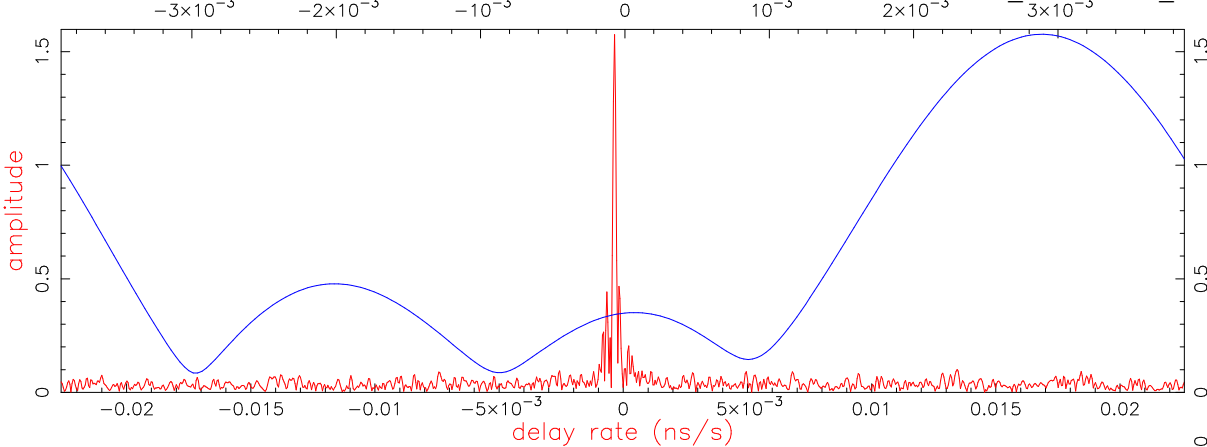
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bh

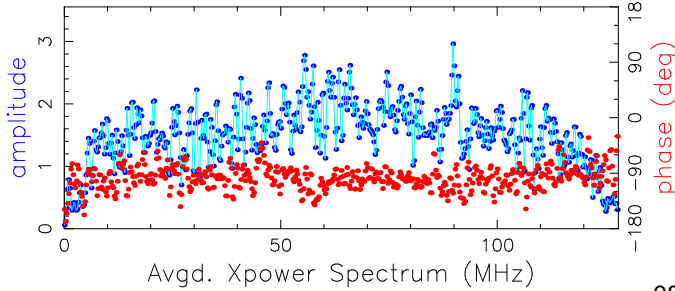
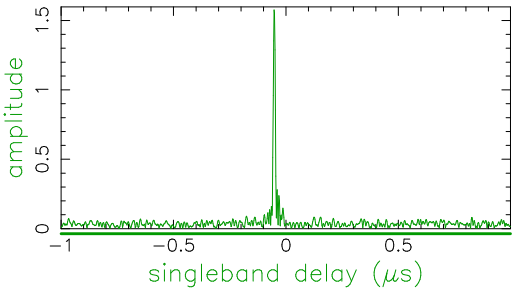
VLBA_BR - VLBA_HN, fgroup Q, pol LR

multiband delay (μ s)



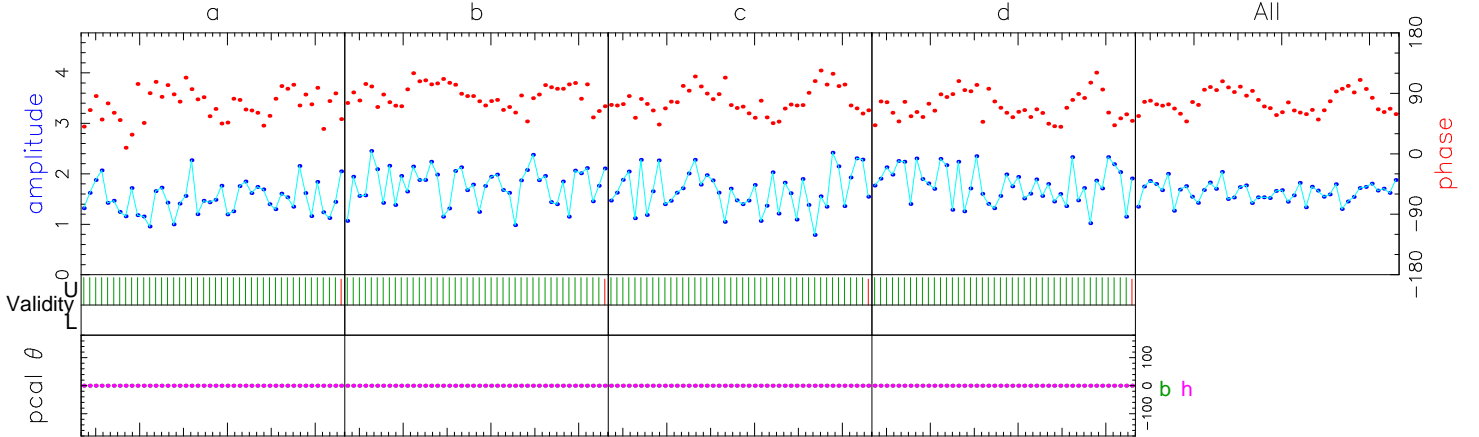
Fringe quality 9

SNR 58.6
 Int time 179.981
 Amp 1.598
 Phase -91.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.051919
 MBD 0.002932
 Fringe rate (Hz)
 -0.016089
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103142
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	APs used	
h	1000	1000	1000	1000	PC freqs	
b:h	0:0	0:0	0:0	0:0	PC phase	
b:h	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	4.63725605057E+03	Apriori delay (usec)	4.63730780619E+03	Resid mbdelay (usec)	2.93188E-03	+/-	1.9E-05
Sband delay (usec)	4.63725588756E+03	Apriori clock (usec)	-7.7525520E+00	Resid sbdelay (usec)	-5.19186E-02	+/-	7.3E-05
Phase delay (usec)	4.63730781118E+03	Apriori clockrate (us/s)	4.9750395E-07	Resid phdelay (usec)	4.99420E-06	+/-	1.3E-07
Delay rate (us/s)	7.72756038267E-01	Apriori rate (us/s)	7.72756411212E-01	Resid rate (us/s)	-3.72945E-07	+/-	1.2E-09
Total phase (deg)	-178.0	Apriori accel (us/s/s)	-2.22439062531E-05	Resid phase (deg)	-91.2	+/-	2.0

ph/seg (deg)	16.2	Theor.	6.5	Amplitude	1.598 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	11.2	Search (1024X16)	1.514	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	9.5	Inc. seg. avg.	1.631	Inc. frq. avg.	1.586	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	7.7	Inc. frq. avg.	1.586			Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023 0.023	
						Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00 0.00

b: az 185.8 el 61.8 pa 4.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -2370.332 -47.970 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/bh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/bh.Q.20.3N2DRU

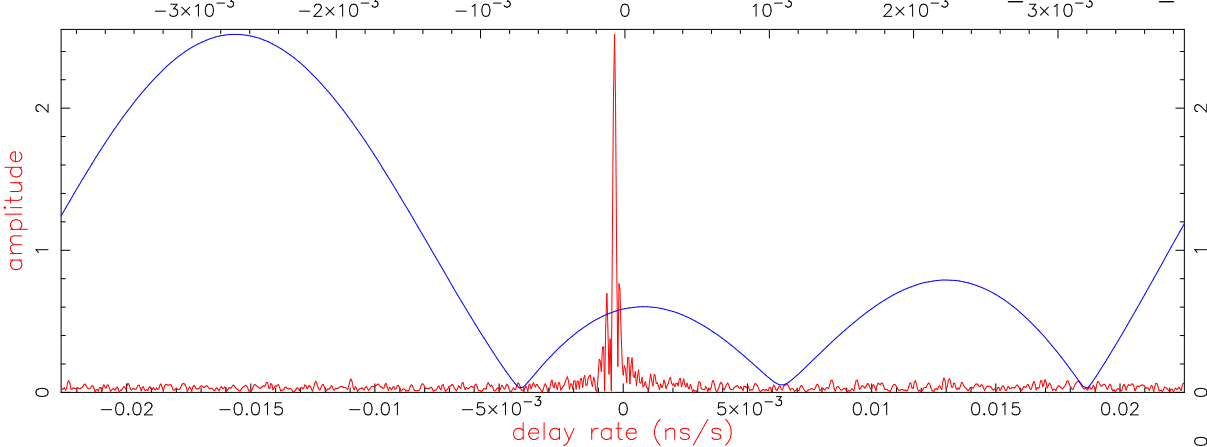
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bh

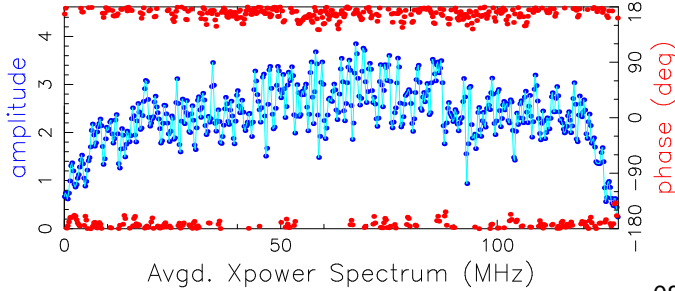
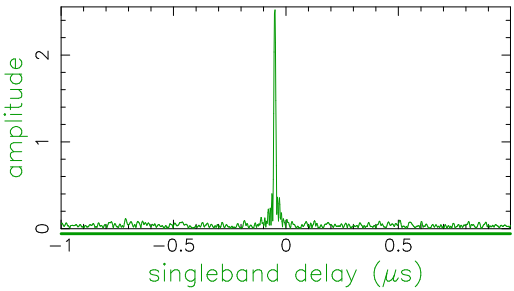
VLBA_BR - VLBA_HN, fgroup Q, pol RL

multiband delay (μ s)



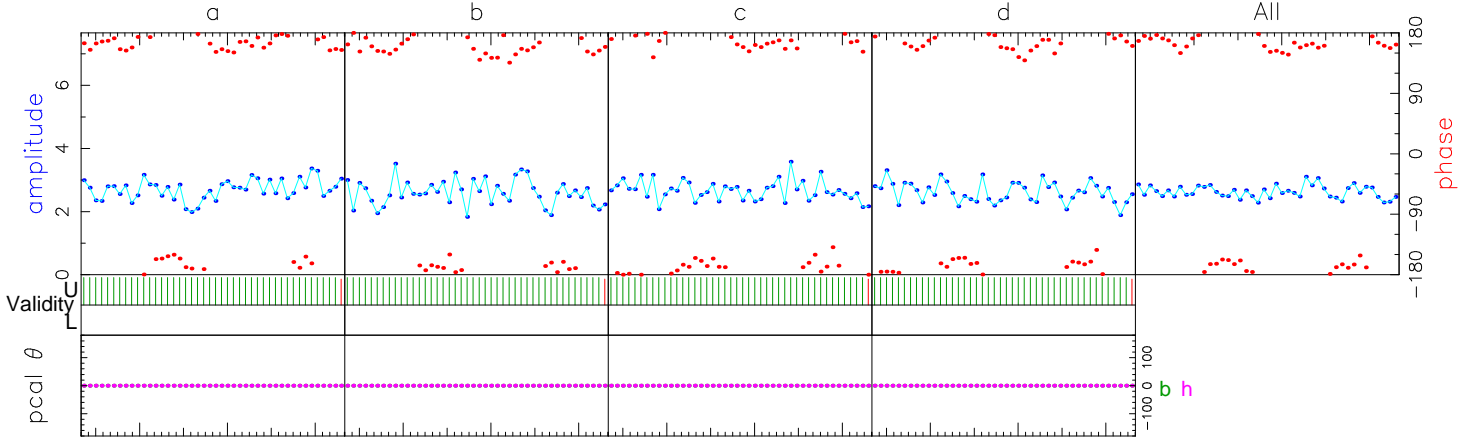
Fringe quality 8

SNR 93.7
 Int time 179.981
 Amp 2.555
 Phase -73.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.049625
 MBD -0.002741
 Fringe rate (Hz)
 -0.016155
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103144
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	APs used	
h	1000	1000	1000	1000	PC freqs	
b:h	0:0	0:0	0:0	0:0	PC phase	
b:h	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	4.63725818982E+03	Apriori delay (usec)	4.63730780619E+03	Resid mbdelay (usec)	-2.74137E-03	+/-	1.2E-05
Sband delay (usec)	4.63725818156E+03	Apriori clock (usec)	-7.7525520E+00	Resid sbdelay (usec)	-4.96246E-02	+/-	4.6E-05
Phase delay (usec)	4.63730781741E+03	Apriori clockrate (us/s)	4.9750395E-07	Resid phdelay (usec)	1.12284E-05	+/-	7.9E-08
Delay rate (us/s)	7.72756036724E-01	Apriori rate (us/s)	7.72756411212E-01	Resid rate (us/s)	-3.74488E-07	+/-	7.6E-10
Total phase (deg)	-159.9	Apriori accel (us/s/s)	-2.22439062531E-05	Resid phase (deg)	-73.1	+/-	1.2

ph/seg (deg)	RMS 16.7	Theor. 4.1	Amplitude 2.555 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	8.2	7.1	Search (1024X16) 2.357	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	5.6	1.2	Inc. seg. avg. 2.622	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	2.2	2.1	Inc. frq. avg. 2.524	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 185.8 el 61.8 pa 4.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -2370.332 -47.970 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/bh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/bh.Q.34.3N2DRU

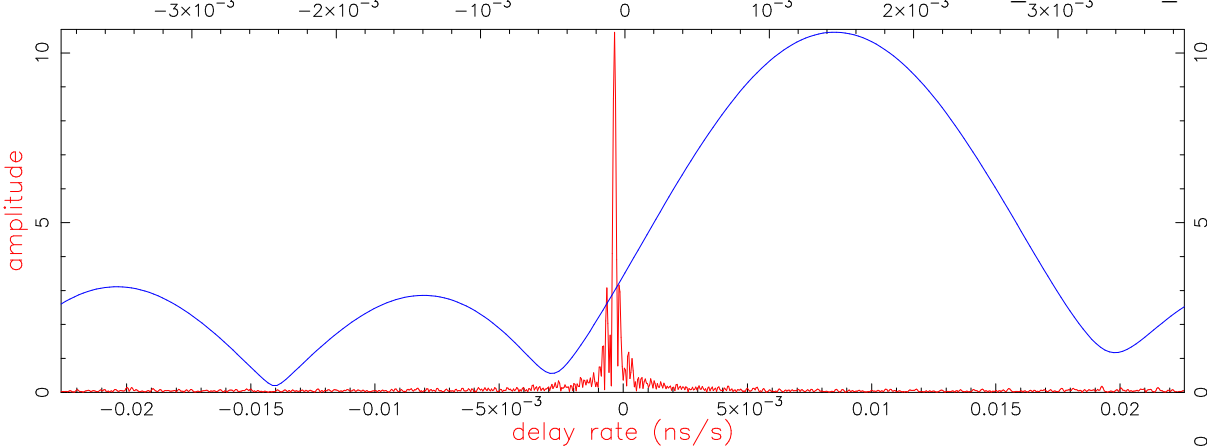
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bh

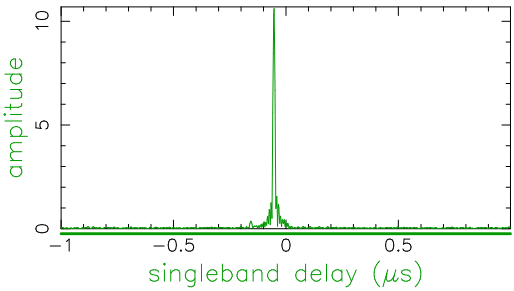
VLBA_BR - VLBA_HN, fgroup Q, pol LL

multiband delay (μ s)

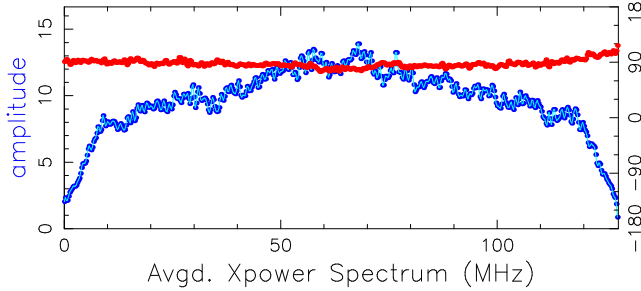


Fringe quality 8

SNR 392.3
 Int time 179.981
 Amp 10.695
 Phase -264.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.053352
 MBD 0.001424
 Fringe rate (Hz)
 -0.016081
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



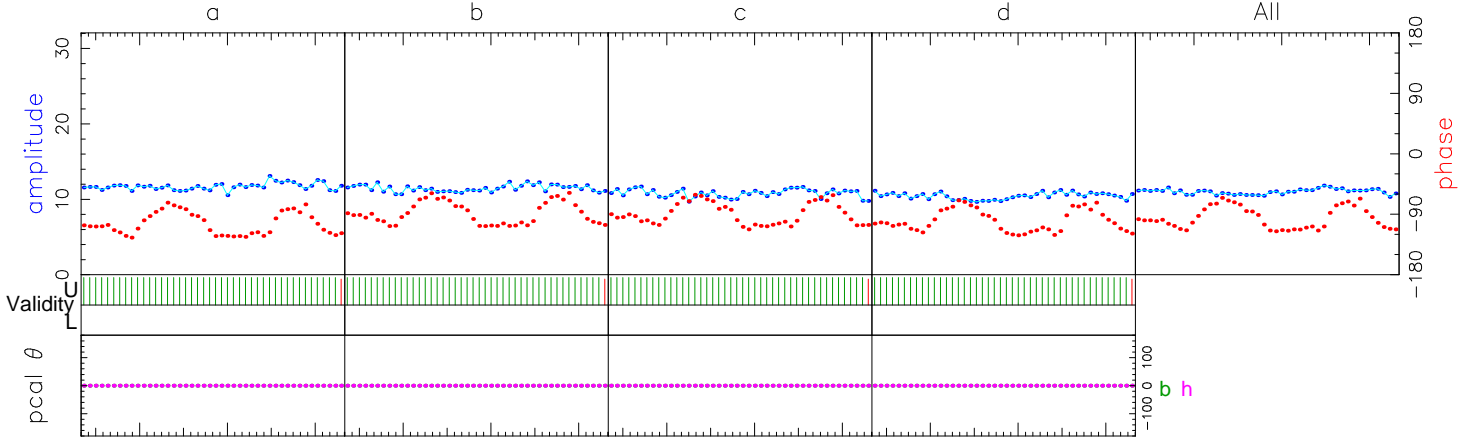
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103138
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

Group delay (usec) (SBD)	4.63725454238E+03	Apriori delay (usec)	4.63730780619E+03	Resid mbdelay (usec)	1.42369E-03	+/- 2.8E-06
Sband delay (usec)	4.63725445406E+03	Apriori clock (usec)	-7.7525520E+00	Resid sbdelay (usec)	-5.33521E-02	+/- 1.1E-05
Phase delay (usec)	4.63730780004E+03	Apriori clockrate (us/s)	4.9750395E-07	Resid phdelay (usec)	-6.15030E-06	+/- 1.9E-08
Delay rate (us/s)	7.72756038439E-01	Apriori rate (us/s)	7.72756411212E-01	Resid rate (us/s)	-3.72773E-07	+/- 1.8E-10
Total phase (deg)	-351.1	Apriori accel (us/s/s)	-2.22439062531E-05	Resid phase (deg)	-264.3	+/- 0.3

ph/seg (deg)	RMS 16.0	Theor. 1.0	Amplitude Search (1024X16)	10.695 +/- 0.027	10.186	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	4.5	1.7	Interp.	0.000	11.029	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	9.4	0.3	Inc. seg. avg.	11.029	10.683	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.5	0.5	Inc. frq. avg.	10.683		Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 185.8 el 61.8 pa 4.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -2370.332 -47.970 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/bh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/bh.Q.4.3N2DRU

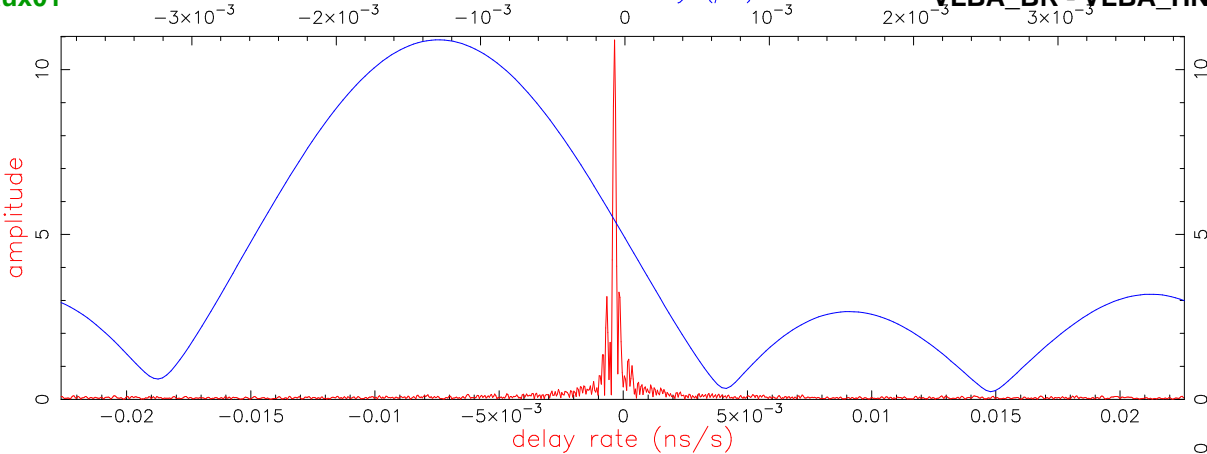
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bh

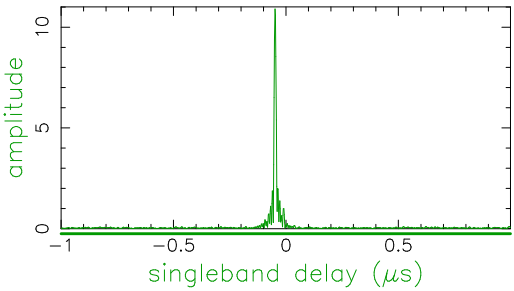
VLBA_BR - VLBA_HN, fgroup Q, pol RR

multiband delay (μ s)

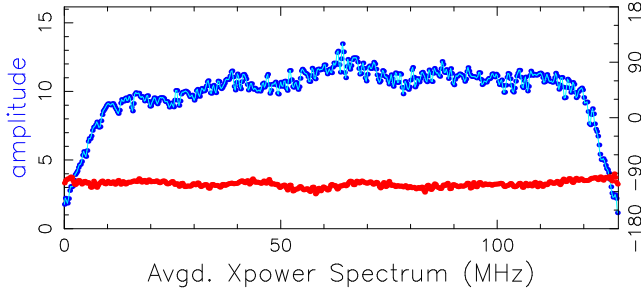


Fringe quality 8

SNR 403.8
 Int time 179.981
 Amp 11.009
 Phase -356.1
 PFD 0.0e+00
 Delays (us)
 SBD -0.048170
 MBD -0.001255
 Fringe rate (Hz)
 -0.016100
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



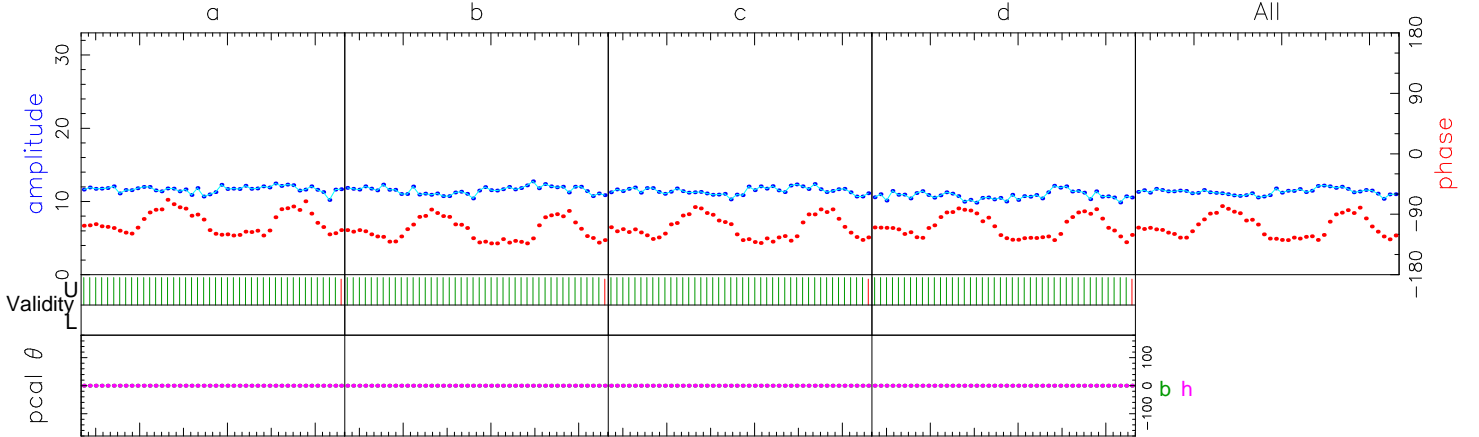
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103139
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

Group delay (usec) (SBD)	4.63725967616E+03	Apriori delay (usec)	4.63730780619E+03	Resid mbdelay (usec)	-1.25502E-03	+/- 2.8E-06
Sband delay (usec)	4.63725963656E+03	Apriori clock (usec)	-7.7525520E+00	Resid sbdelay (usec)	-4.81696E-02	+/- 1.1E-05
Phase delay (usec)	4.63730779919E+03	Apriori clockrate (us/s)	4.9750395E-07	Resid phdelay (usec)	-6.99285E-06	+/- 1.8E-08
Delay rate (us/s)	7.72756038003E-01	Apriori rate (us/s)	7.72756411212E-01	Resid rate (us/s)	-3.73209E-07	+/- 1.8E-10
Total phase (deg)	-82.9	Apriori accel (us/s/s)	-2.22439062531E-05	Resid phase (deg)	-356.1	+/- 0.3

ph/seg (deg)	RMS 15.9	Theor. 0.9	Amplitude Search (1024X16)	11.009 +/- 0.027	10.280	10.280	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	4.7	1.6	Interp.	0.000	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)	6.2	0.3	Inc. seg. avg.	11.333	11.333	11.333	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.0	0.5	Inc. frq. avg.	10.934	10.934	10.934	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 185.8 el 61.8 pa 4.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -2370.332 -47.970 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/bh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/bh.Q.9.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

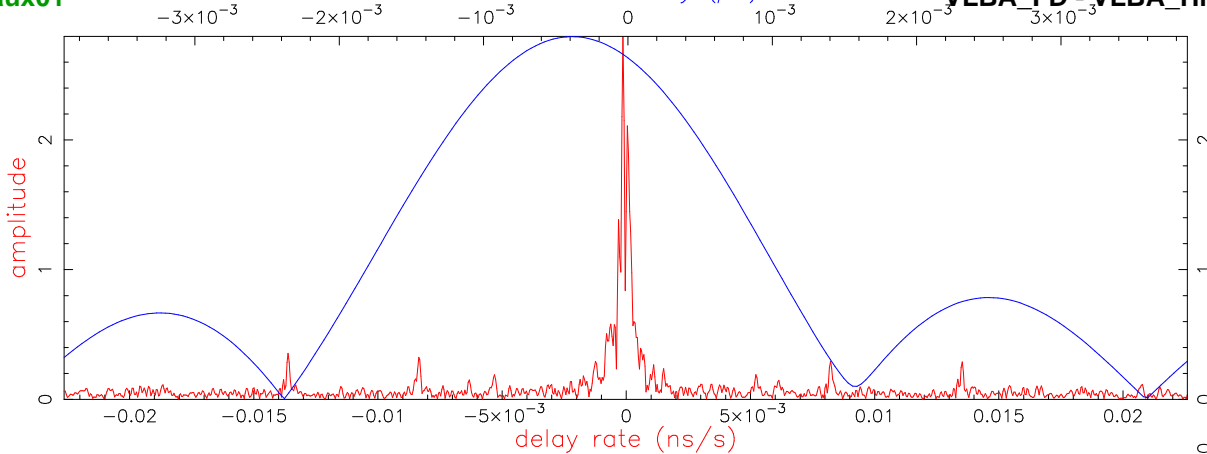
aux01

OJ287.3N2DRU, No0676, fh

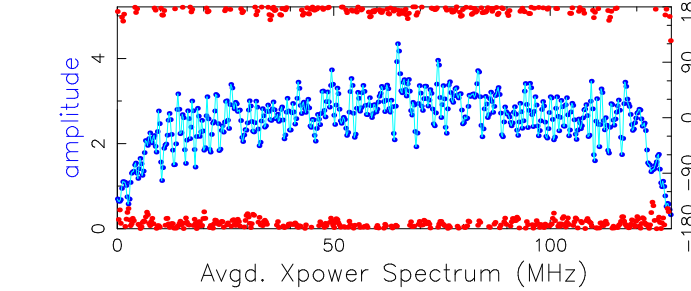
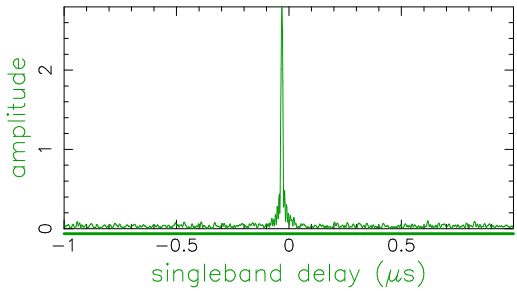
VLBA_FD - VLBA_HN, fgroup Q, pol LL

multiband delay (μ s)

Fringe quality 5

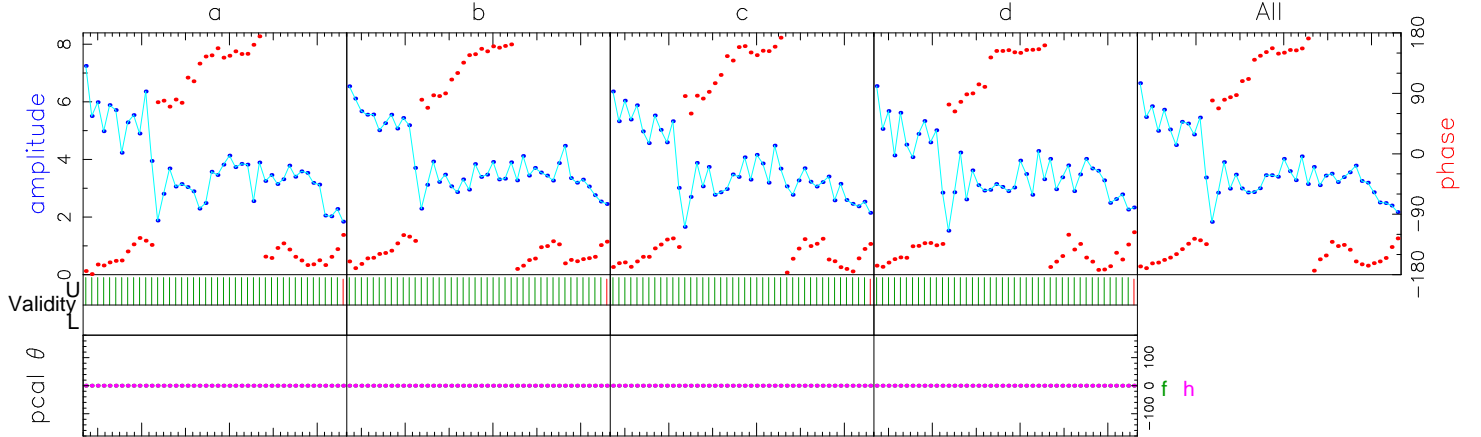


SNR 102.7
 Int time 179.980
 Amp 2.798
 Phase -217.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.031436
 MBD -0.000398
 Fringe rate (Hz)
 -0.006396
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103141
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-175.4	-169.3	-173.3	-172.4	Phase	-172.6
2.8	2.9	2.8	2.7	Ampl.	2.8
497.1	496.8	496.8	496.9	Sbd box	496.9
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
h 1000	1000	1000	1000	PC freqs	
f:h 0:0	0:0	0:0	0:0	PC phase	
f:h 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
h 1000	1000	1000	1000		
f Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	5.82892309269E+03	Apriori delay (usec)	5.82895474022E+03	Resid mbdelay (usec)	-3.97529E-04	+/-	1.1E-05
Sband delay (usec)	5.82892330409E+03	Apriori clock (usec)	-1.2367508E+01	Resid sbdelay (usec)	-3.14361E-02	+/-	4.2E-05
Phase delay (usec)	5.82895472910E+03	Apriori clockrate (us/s)	-2.8717046E-08	Resid phdelay (usec)	-1.11128E-05	+/-	7.2E-08
Delay rate (us/s)	4.17985812776E-01	Apriori rate (us/s)	4.17985961026E-01	Resid rate (us/s)	-1.48250E-07	+/-	6.9E-10
Total phase (deg)	-40.1	Apriori accel (us/s/s)	-3.76810237347E-05	Resid phase (deg)	-217.6	+/-	1.1

ph/seg (deg)	48.2	3.7	Search (1024X16)	2.695	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	51.0	6.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	3.1	1.1	Inc. seg. avg.	3.729	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/frq (%)	3.3	1.9	Inc. frq. avg.	2.798	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	ion window (ns/s)	-0.023	0.023	
					Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 242.1 el 70.1 pa 54.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -1293.114 -1251.764 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/fh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/fh.Q.14.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

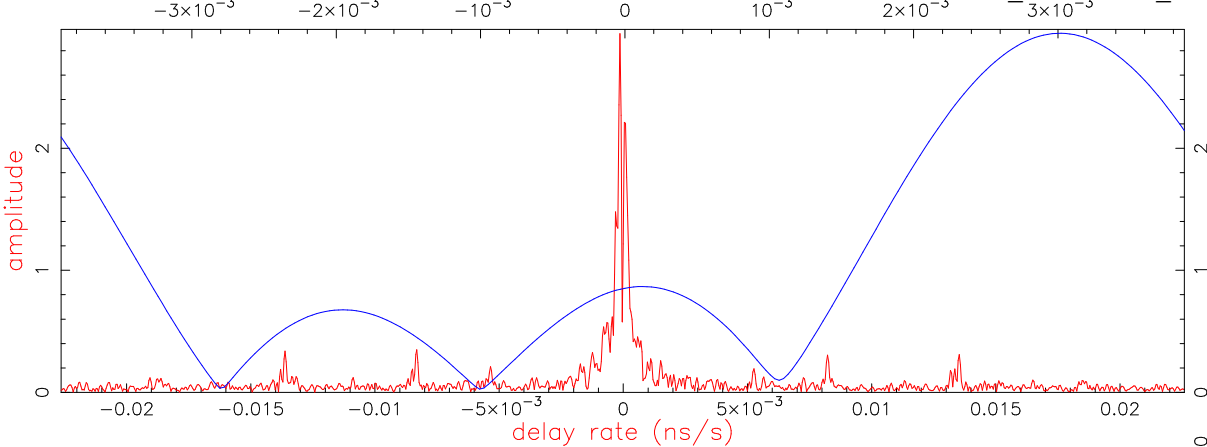
aux01

OJ287.3N2DRU, No0676, fh

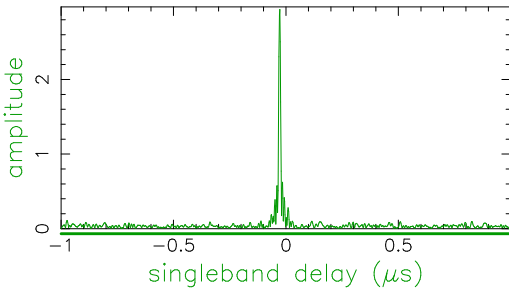
VLBA_FD - VLBA_HN, fgroup Q, pol RR

multiband delay (μ s)

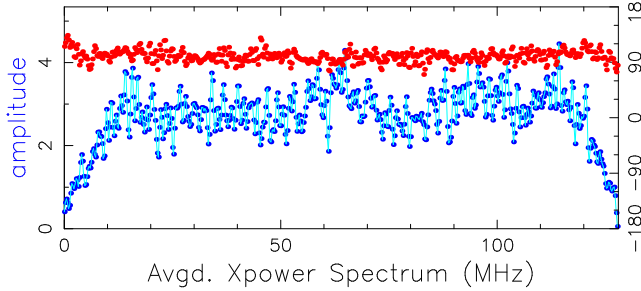
Fringe quality 5



SNR 109.1
 Int time 179.980
 Amp 2.974
 Phase -300.3
 PFD 0.0e+00
 Delays (us)
 SBD -0.028042
 MBD 0.002971
 Fringe rate (Hz)
 -0.006581
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



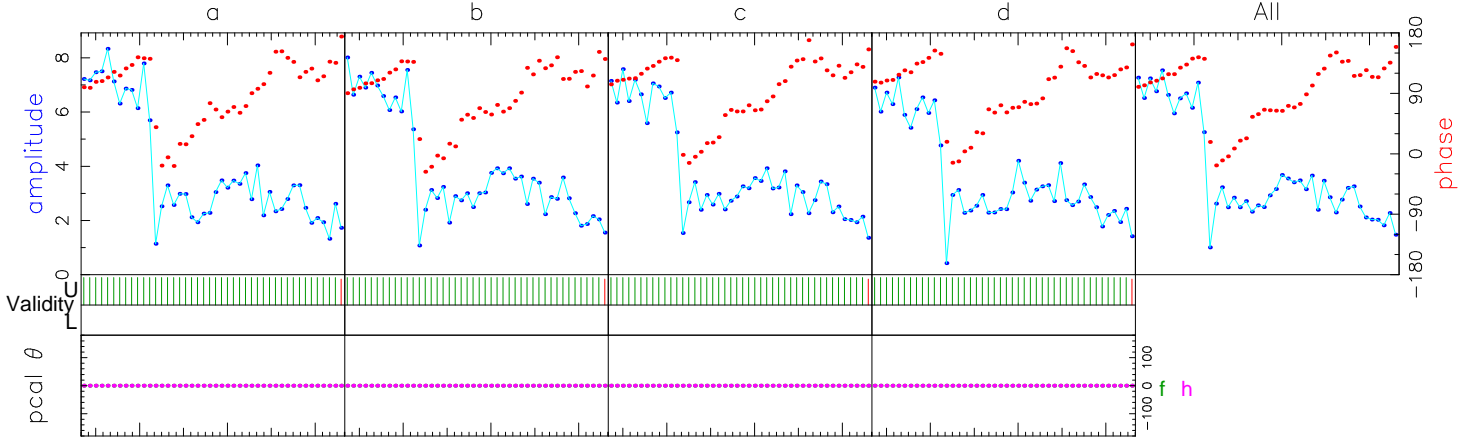
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103144
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
104.7	98.5	107.7	108.3	Phase	104.7
3.0	3.0	3.0	2.8	Ampl.	2.9
498.8	498.7	498.6	498.4	Sbd box	498.6
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
h 1000	1000	1000	1000	PC freqs	
f:h 0:0	0:0	0:0	0:0	PC phase	
f:h 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
h 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	5.82892646141E+03	Apriori delay (usec)	5.82895474022E+03	Resid mbdelay (usec)	2.97119E-03	+/-	1.0E-05
Sband delay (usec)	5.82892669834E+03	Apriori clock (usec)	-1.2367508E+01	Resid sbdelay (usec)	-2.80419E-02	+/-	3.9E-05
Phase delay (usec)	5.82895474696E+03	Apriori clockrate (us/s)	-2.8717046E-08	Resid phdelay (usec)	6.74309E-06	+/-	6.8E-08
Delay rate (us/s)	4.17985808478E-01	Apriori rate (us/s)	4.17985961026E-01	Resid rate (us/s)	-1.52548E-07	+/-	6.5E-10
Total phase (deg)	-122.8	Apriori accel (us/s/s)	-3.76810237347E-05	Resid phase (deg)	-300.3	+/-	1.1

ph/seg (deg)	48.4	3.5	Search (1024X16)	2.792	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	68.1	6.1	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)	5.5	1.1	Inc. seg. avg.	3.767	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	2.7	1.8	Inc. frq. avg.	2.947	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 242.1 el 70.1 pa 54.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -1293.114 -1251.764 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/fh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/fh.Q.30.3N2DRU

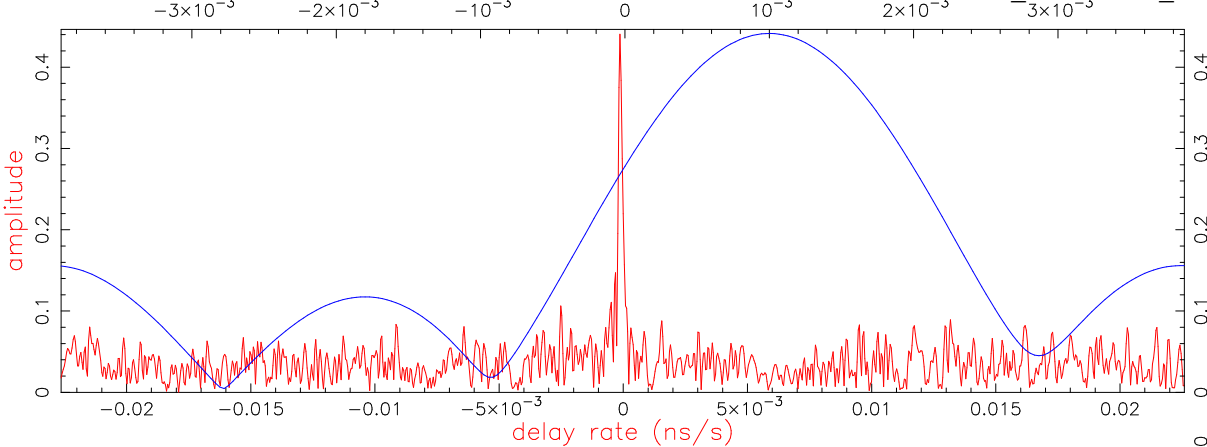
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, fh

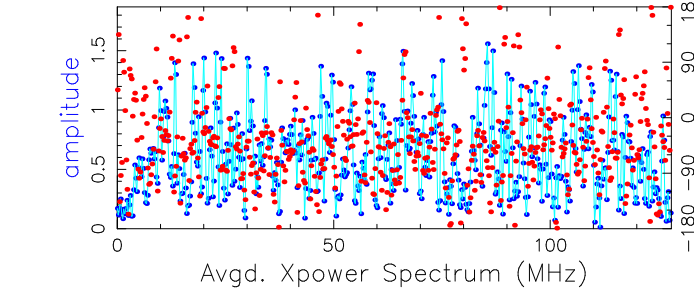
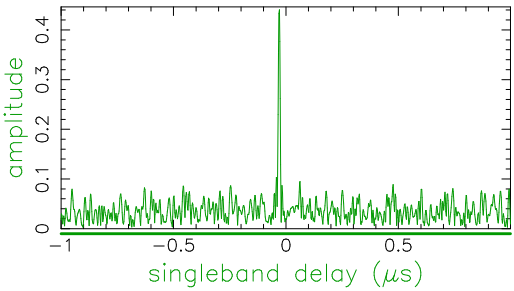
VLBA_FD - VLBA_HN, fgroup Q, pol LR

multiband delay (μ s)



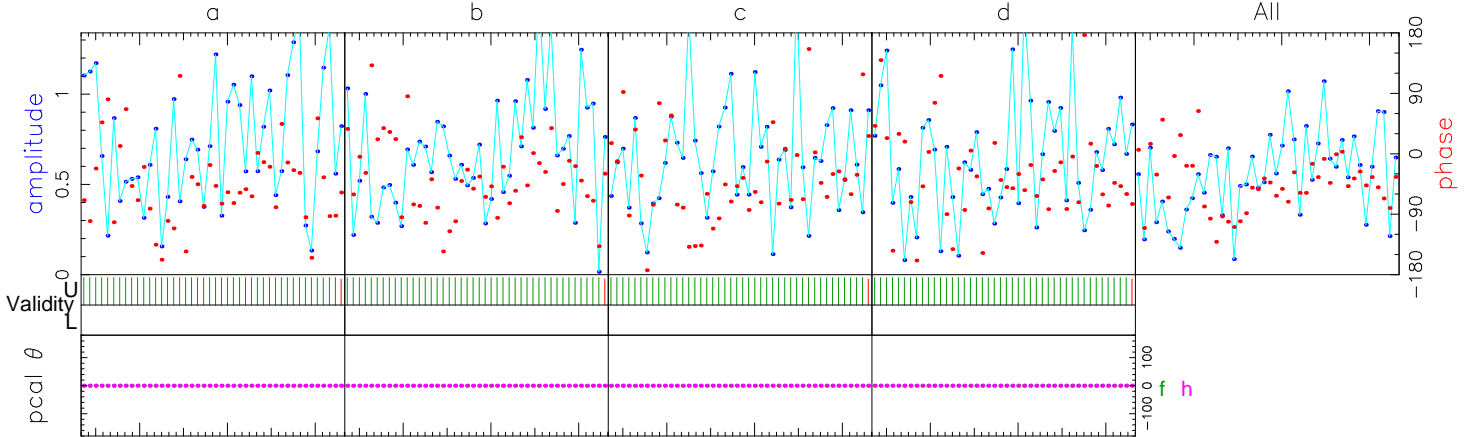
Fringe quality 9

SNR 16.4
 Int time 179.980
 Amp 0.446
 Phase -88.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.030069
 MBD 0.000932
 Fringe rate (Hz) -0.004901
 Ion TEC 0.000
 Ref freq (MHz) 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103146
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

Group delay (usec) (SBD)	5.82892442241E+03	Apriori delay (usec)	5.82895474022E+03	Resid mbdelay (usec)	9.32190E-04	+/-	6.8E-05
Sband delay (usec)	5.82892467147E+03	Apriori clock (usec)	-1.2367508E+01	Resid sbdelay (usec)	-3.00687E-02	+/-	2.6E-04
Phase delay (usec)	5.82895473743E+03	Apriori clockrate (us/s)	-2.8717046E-08	Resid phdelay (usec)	-2.79211E-06	+/-	4.5E-07
Delay rate (us/s)	4.17985847408E-01	Apriori rate (us/s)	4.17985961026E-01	Resid rate (us/s)	-1.13618E-07	+/-	4.3E-09
Total phase (deg)	-270.9	Apriori accel (us/s/s)	-3.76810237347E-05	Resid phase (deg)	-88.4	+/-	7.0

ph/seg (deg)	41.8	Theor.	23.2	Amplitude	0.446 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	56.7	Search (1024X16)	0.430	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	7.4	Inc. seg. avg.	0.511	Inc. frq. avg.	0.439	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	11.2	Inc. frq. avg.	0.439			Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	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

f: az 242.1 el 70.1 pa 54.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -1293.114 -1251.764 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/fh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/fh.Q.43.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

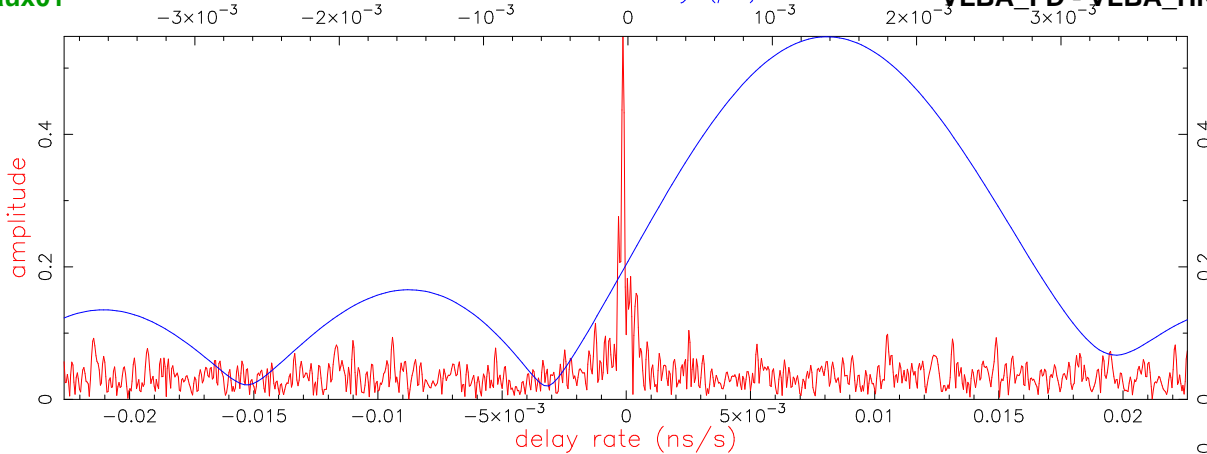
aux01

OJ287.3N2DRU, No0676, fh

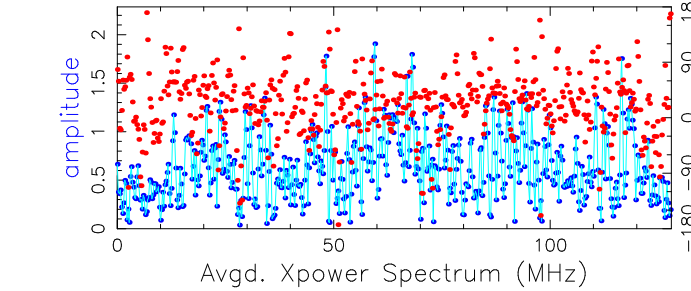
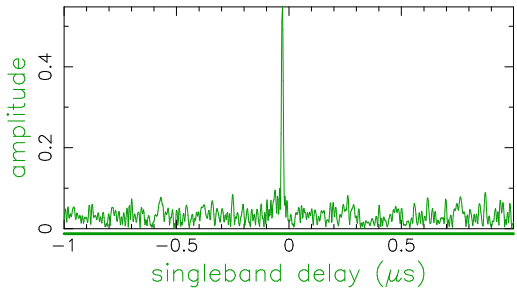
VLBA_FD - VLBA_HN, fgroup Q, pol RL

multiband delay (μ s)

Fringe quality 9

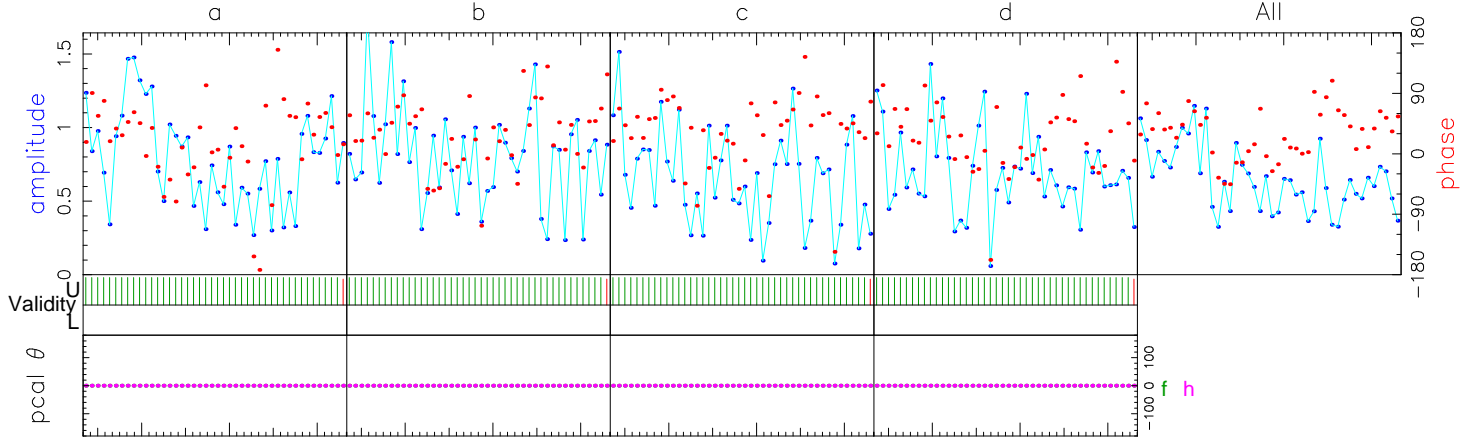


SNR 20.1
 Int time 179.980
 Amp 0.548
 Phase -11.9
 PFD 0.0e+00
 Delays (us)
 SBD -0.029534
 MBD 0.001362
 Fringe rate (Hz)
 -0.005278
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103149
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

Group delay (usec) (SBD)	5.82892485228E+03	Apriori delay (usec)	5.82895474022E+03	Resid mbdelay (usec)	1.36207E-03	+/-	5.5E-05
Sband delay (usec)	5.82892520597E+03	Apriori clock (usec)	-1.2367508E+01	Resid sbdelay (usec)	-2.95343E-02	+/-	2.1E-04
Phase delay (usec)	5.82895474235E+03	Apriori clockrate (us/s)	-2.8717046E-08	Resid phdelay (usec)	2.13294E-06	+/-	3.7E-07
Delay rate (us/s)	4.17985838687E-01	Apriori rate (us/s)	4.17985961026E-01	Resid rate (us/s)	-1.22339E-07	+/-	3.5E-09
Total phase (deg)	-194.4	Apriori accel (us/s/s)	-3.76810237347E-05	Resid phase (deg)	-11.9	+/-	5.7

ph/seg (deg)	36.5	RMS	18.9	Theor.	18.9	Amplitude	0.548 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	43.7	Search (1024X16)	0.539	Interp.	0.000	Search	0.539	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004		
ph/frq (deg)	10.7	Inc. seg. avg.	0.618	Inc. frq. avg.	0.549	Inc. seg. avg.	0.618	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBbps	16 Amb	0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	6.3	Inc. frq. avg.	0.549	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00					

f: az 242.1 el 70.1 pa 54.5 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) -1293.114 -1251.764 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/fh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/fh.Q.68.3N2DRU

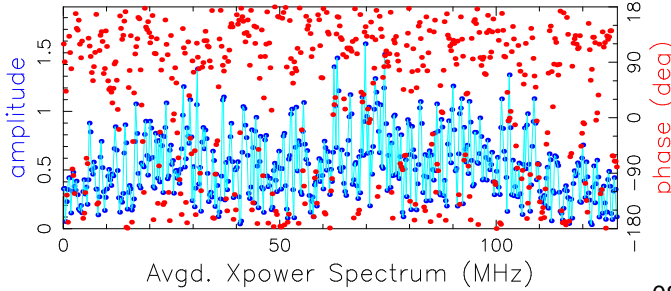
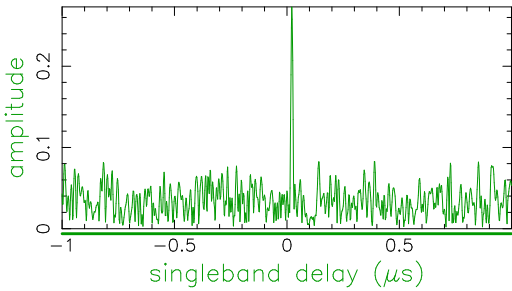
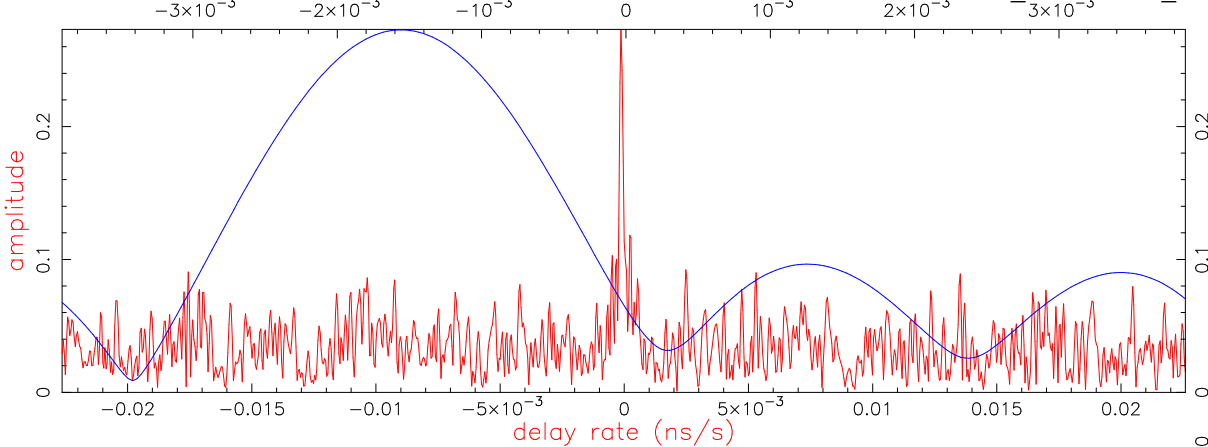
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hc

VLBA_HN - VLBA_SC, fgroup Q, pol LR

multiband delay (μs)

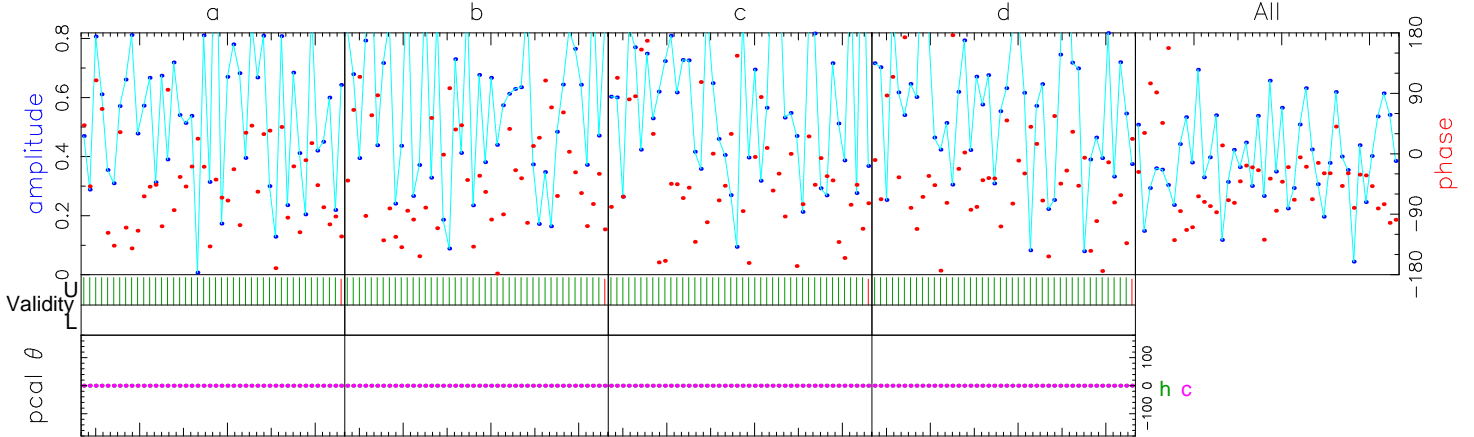


Fringe quality 9

SNR 10.0
Int time 179.986
Amp 0.273
Phase 72.8
PFD 2.7e-15
Delays (us)
SBD 0.021757
MBD -0.001538
Fringe rate (Hz)
-0.005248
Ion TEC 0.000
Ref freq (MHz)
43140.0000
AP (sec) 0.512

Exp. c241c
Exper # 1234
Yr:day 2024:113
Start 030520.00
Stop 030820.22
FRT 030650.00
Corr/FF/build
2025:048:123813
2025:049:103153
2024:113:095956
RA & Dec (J2000)
08h54m48.874931s
+20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-43.8	-54.5	-61.0	-46.5	Phase	-50.9
0.3	0.3	0.2	0.3	Ampl.	0.3
523.5	524.0	523.8	525.7	Sbd box	524.1
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
h:c 0:0	0:0	0:0	0:0	PC phase	
h:c 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec) (SBD)	2.01347609725E+03	Apriori delay (usec)	2.01345419769E+03	Resid mbdelay (usec)	-1.53793E-03 +/- 1.1E-04
Sband delay (usec)	2.01347595456E+03	Apriori clock (usec)	8.7388840E+00	Resid sbdelay (usec)	2.17569E-02 +/- 4.3E-04
Phase delay (usec)	2.01345419441E+03	Apriori clockrate (us/s)	4.7220702E-07	Resid phdelay (usec)	-3.28034E-06 +/- 7.4E-07
Delay rate (us/s)	3.52405434573E-01	Apriori rate (us/s)	3.52405556228E-01	Resid rate (us/s)	-1.21654E-07 +/- 7.1E-09
Total phase (deg)	104.6	Apriori accel (us/s/s)	3.84832340586E-06	Resid phase (deg)	72.8 +/- 11.4
RMS	Theor.	Amplitude	0.273 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
56.4	37.9	Search (1024X16)	0.269	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
69.8	66.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
9.6	11.4	Inc. seg. avg.	0.325	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
13.4	20.0	Inc. frq. avg.	0.269	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
h: az 257.9 el 42.0 pa 49.7	c: az 282.3 el 35.3 pa 82.0	u,v (fr/asec)	-1076.761 1624.217		simultaneous interpolator
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676/hc..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676/hc.Q.100.3N2DRU			

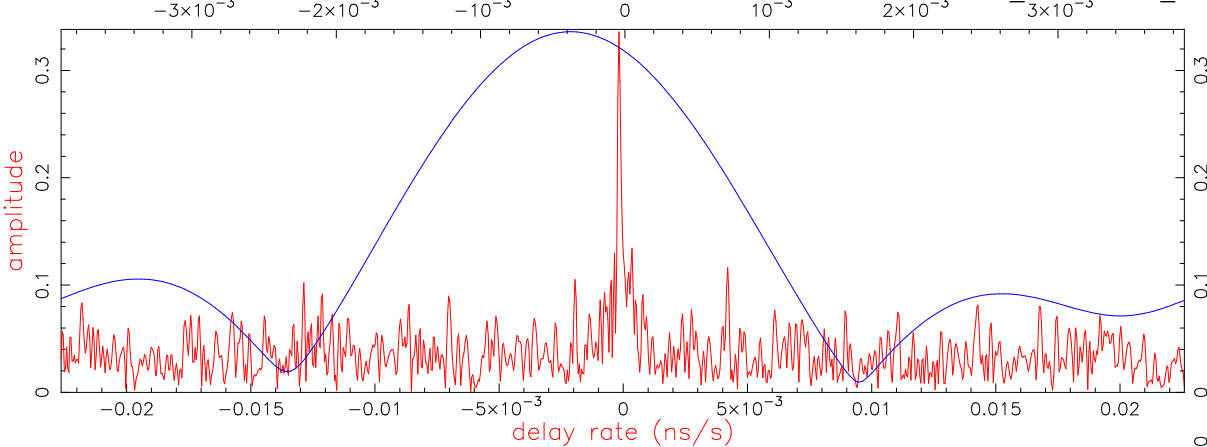
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hc

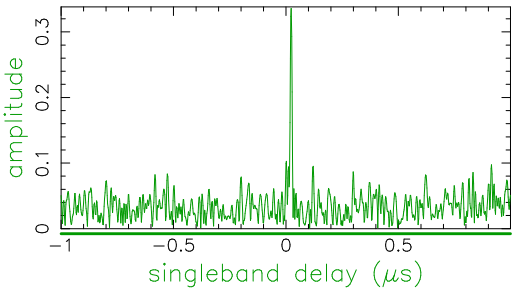
VLBA_HN - VLBA_SC, fgroup Q, pol RL

multiband delay (μ s)

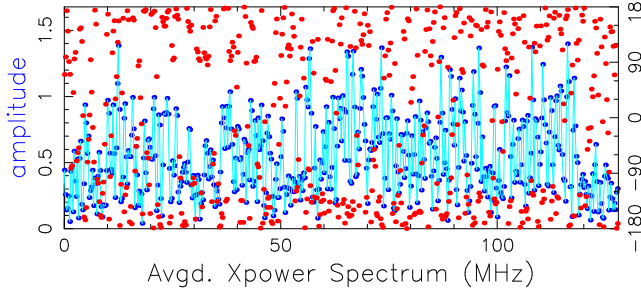


Fringe quality 9

SNR 12.4
 Int time 179.986
 Amp 0.338
 Phase 120.0
 PFD 6.1e-27
 Delays (us)
 SBD 0.022885
 MBD -0.000410
 Fringe rate (Hz)
 -0.006730
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



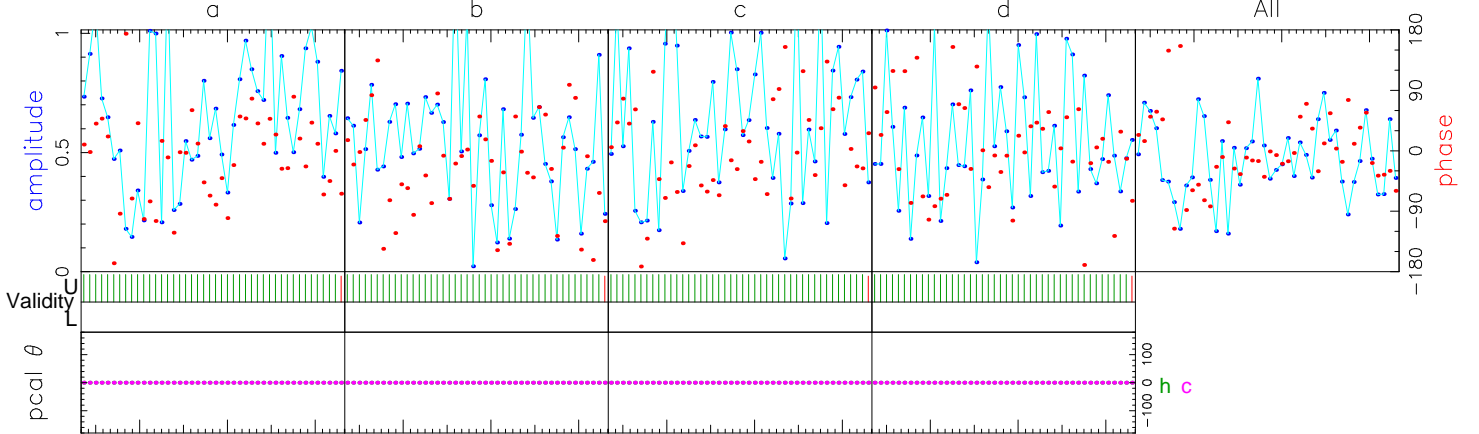
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103156
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-2.1	-13.3	-1.7	1.0	Phase	-3.8
0.4	0.3	0.4	0.3	Ampl.	0.3
524.5	524.7	525.0	524.8	Sbd box	524.7
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
h:c 0:0	0:0	0:0	0:0	PC phase	
h:c 0:0	0:0	0:0	0:0	ManI PC	
h 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	2.01347722532E+03	Apriori delay (usec)	2.01345419769E+03	Resid mbdelay (usec)	-4.09872E-04	+/-	9.0E-05
Sband delay (usec)	2.01347708294E+03	Apriori clock (usec)	8.7388840E+00	Resid sbdelay (usec)	2.28852E-02	+/-	3.5E-04
Phase delay (usec)	2.01345419745E+03	Apriori clockrate (us/s)	4.7220702E-07	Resid phdelay (usec)	-2.41559E-07	+/-	5.9E-07
Delay rate (us/s)	3.52405400230E-01	Apriori rate (us/s)	3.52405556228E-01	Resid rate (us/s)	-1.55998E-07	+/-	5.7E-09
Total phase (deg)	151.8	Apriori accel (us/s/s)	3.84832340586E-06	Resid phase (deg)	120.0	+/-	9.2

ph/seg (deg)	55.1	Theor.	30.6	Amplitude	0.338 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	61.1		53.5	Search (1024X16)	0.320	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	7.8		9.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	20.8		16.1	Inc. seg. avg.	0.416	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.333	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

h: az 257.9 el 42.0 pa 49.7 c: az 282.3 el 35.3 pa 82.0 u,v (fr/asec) -1076.761 1624.217 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hc..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hc.Q.111.3N2DRU

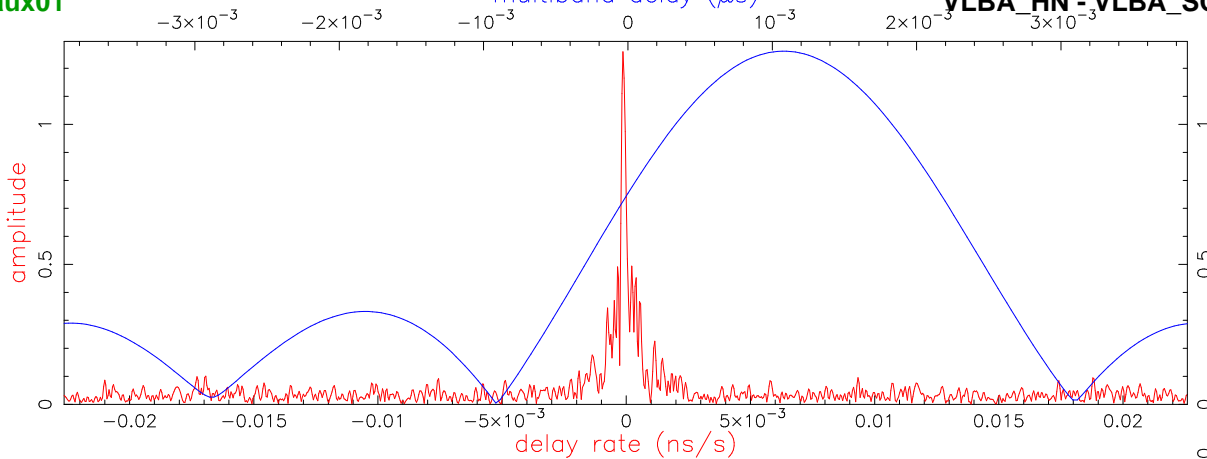
Mk4/DiFX fourfit 3.25 rev 0

aux01

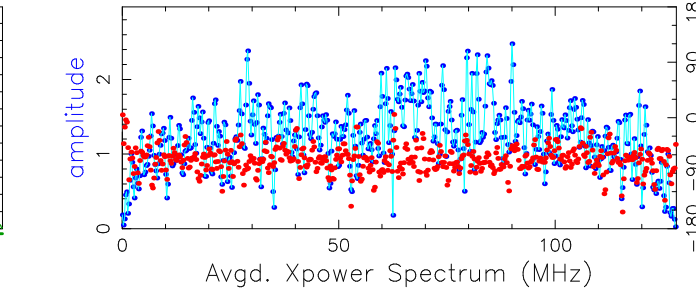
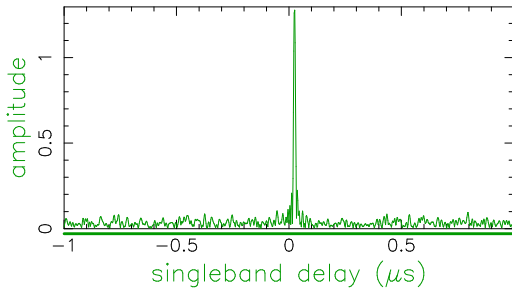
OJ287.3N2DRU, No0676, hc
VLBA_HN - VLBA_SC, fgroup Q, pol LL

multiband delay (μ s)

Fringe quality 7

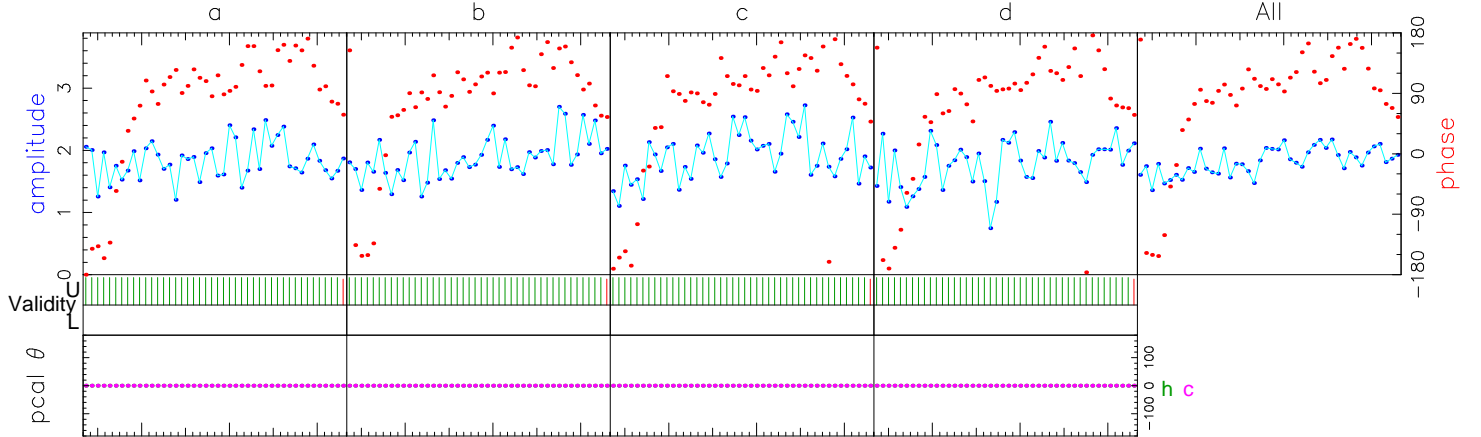


SNR 47.6
Int time 179.986
Amp 1.296
Phase 236.0
PFD 0.0e+00
Delays (us)
SBD 0.024570
MBD 0.001141
Fringe rate (Hz)
-0.005554
Ion TEC 0.000
Ref freq (MHz)
43140.0000
AP (sec) 0.512



Exp. c241c
Exper # 1234
Yr:day 2024:113
Start 030520.00
Stop 030820.22
FRT 030650.00
Corr/FF/build
2025:048:123813
2025:049:103148
2024:113:095956
RA & Dec (J2000)
08h54m48.874931s
+20°06'30.640823"

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



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

Group delay (usec) (SBD)	2.01347877575E+03	Apriori delay (usec)	2.01345419769E+03	Resid mbdelay (usec)	1.14057E-03	+/-	2.3E-05
Sband delay (usec)	2.01347876731E+03	Apriori clock (usec)	8.7388840E+00	Resid sbdelay (usec)	2.45696E-02	+/-	9.1E-05
Phase delay (usec)	2.01345420492E+03	Apriori clockrate (us/s)	4.7220702E-07	Resid phdelay (usec)	7.23008E-06	+/-	1.6E-07
Delay rate (us/s)	3.52405427485E-01	Apriori rate (us/s)	3.52405556228E-01	Resid rate (us/s)	-1.28743E-07	+/-	1.5E-09
Total phase (deg)	267.8	Apriori accel (us/s/s)	3.84832340586E-06	Resid phase (deg)	236.0	+/-	2.4

ph/seg (deg)	54.7	RMS	54.7	Theor.	8.0	Amplitude	1.296 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	43.6	Search (1024X16)	1.251	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	1.251	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	4.9	Inc. seg. avg.	1.805	Inc. frq. avg.	1.261	Bits/sample: 2x2	1.805	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	5.0	Inc. frq. avg.	1.261	u,v (fr/asec)	-1076.761 1624.217	Data rate(Mb/s): 2048	1.261	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00	

h: az 257.9 el 42.0 pa 49.7 c: az 282.3 el 35.3 pa 82.0 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hc..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hc.Q.58.3N2DRU

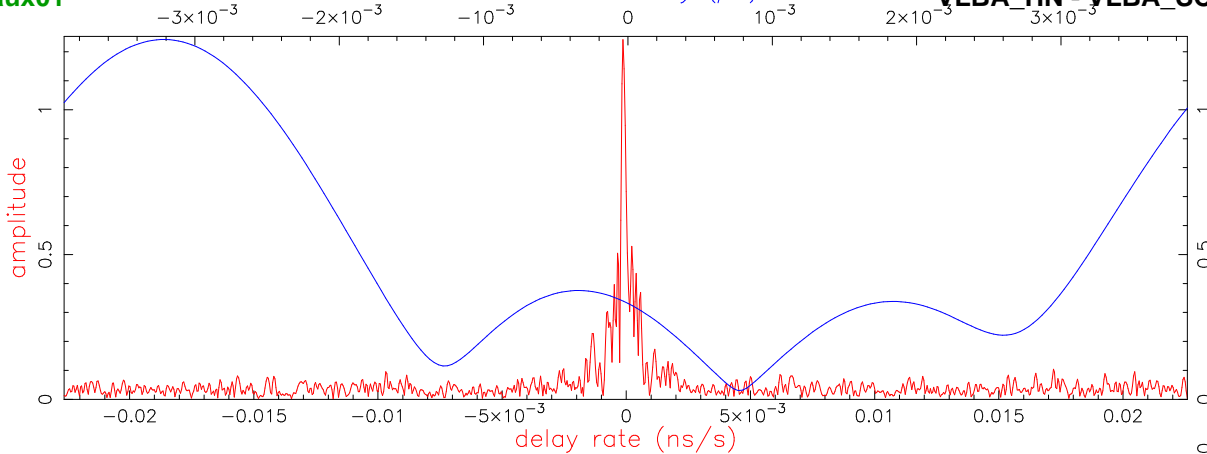
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hc

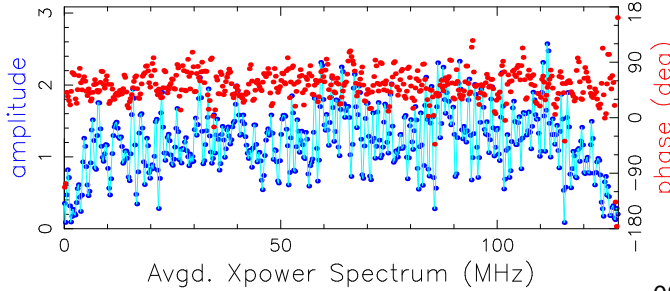
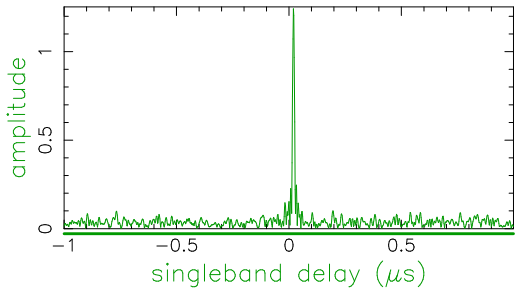
VLBA_HN - VLBA_SC, fgroup Q, pol RR

multiband delay (μ s)



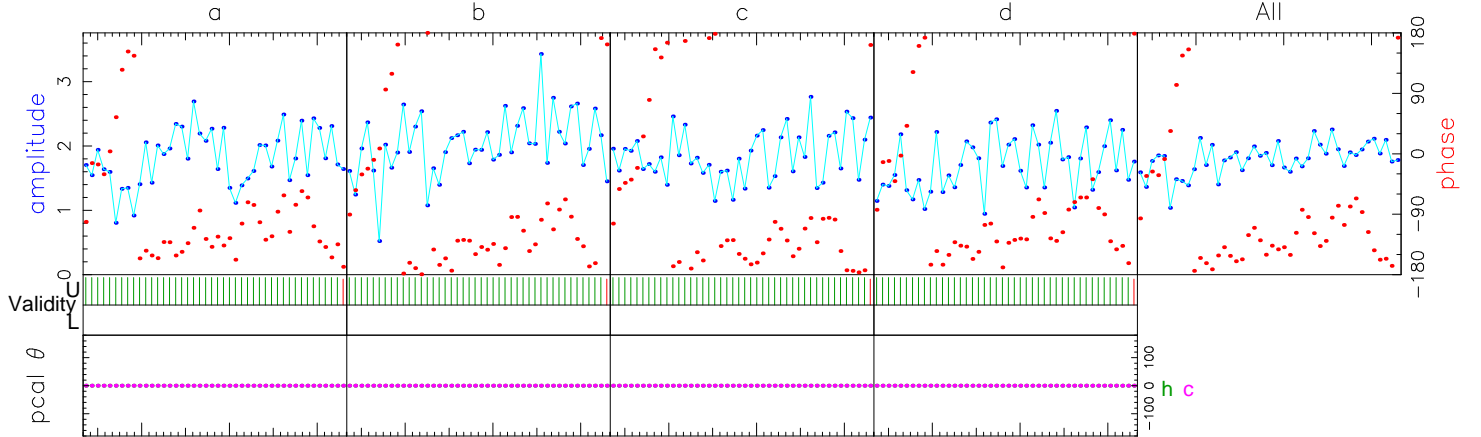
Fringe quality 6

SNR 46.0
 Int time 179.986
 Amp 1.253
 Phase 355.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.020156
 MBD -0.003184
 Fringe rate (Hz)
 -0.005734
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103150
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

Group delay (usec) (SBD)	2.01347445069E+03	Apriori delay (usec)	2.01345419769E+03	Resid mbdelay (usec)	-3.18450E-03	+/-	2.4E-05
Sband delay (usec)	2.01347435344E+03	Apriori clock (usec)	8.7388840E+07	Resid sbdelay (usec)	2.01558E-02	+/-	9.4E-05
Phase delay (usec)	2.01345418943E+03	Apriori clockrate (us/s)	4.7220702E-07	Resid phdelay (usec)	-8.25395E-06	+/-	1.6E-07
Delay rate (us/s)	3.52405423311E-01	Apriori rate (us/s)	3.52405556228E-01	Resid rate (us/s)	-1.32916E-07	+/-	1.5E-09
Total phase (deg)	27.3	Apriori accel (us/s/s)	3.84832340586E-06	Resid phase (deg)	355.6	+/-	2.5

ph/seg (deg)	55.1	RMS	55.1	Theor.	8.3	Amplitude	1.253 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	47.7	Search (1024X16)	1.218	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004	
ph/frq (deg)	16.1	Inc. seg. avg.	1.781	Inc. frq. avg.	1.266	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite	dr window (ns/s)	-0.023	0.023
amp/frq (%)	5.9	h	az 257.9 el 42.0 pa 49.7	c	az 282.3 el 35.3 pa 82.0	u,v (fr/asec)	-1076.761 1624.217			ion window (TEC)	0.00	0.00	

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hc..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hc.Q.78.3N2DRU

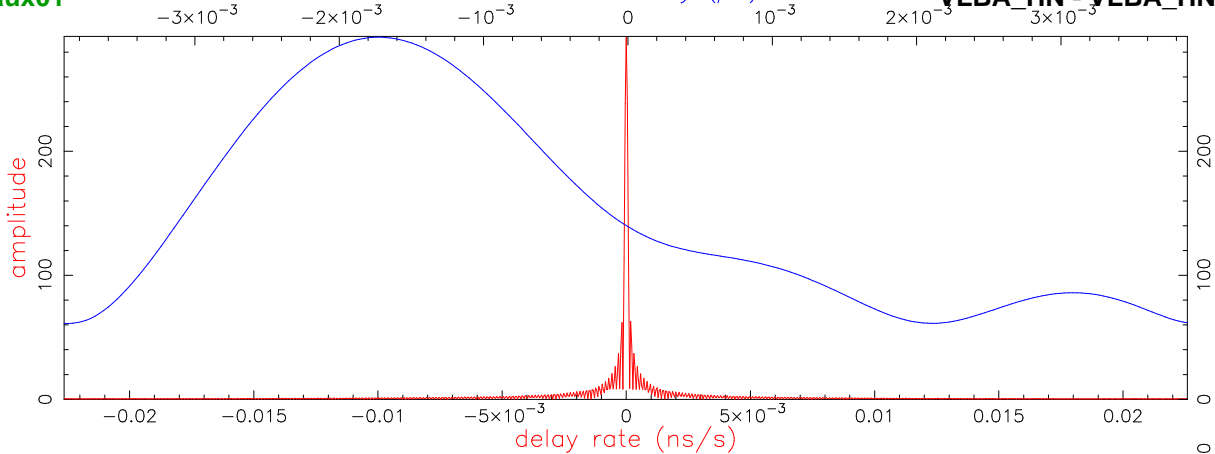
Mk4/DiFX fourfit 3.25 rev 0

aux01

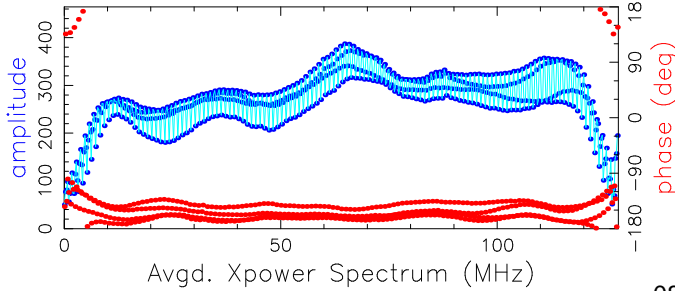
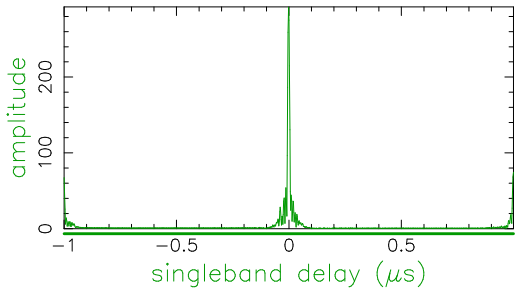
OJ287.3N2DRU, No0676, hh

VLBA_HN - VLBA_HN, fgroup Q, pol RL

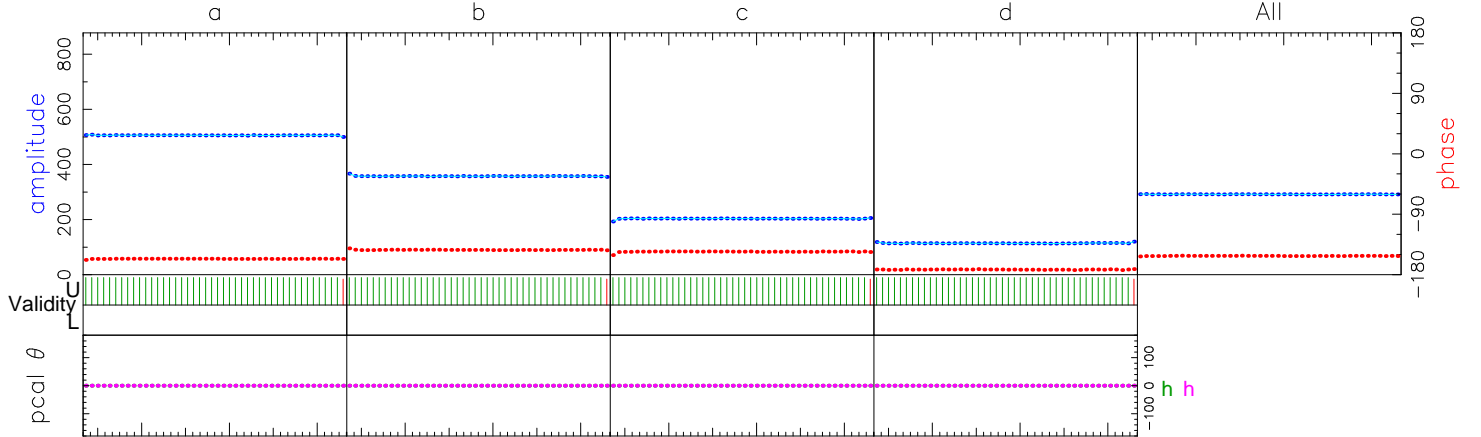
multiband delay (μ s)



Fringe quality 6
 Error code G
 SNR 10736.8
 Int time 179.986
 Amp 292.657
 Phase -152.0
 PFD 0.0e+00
 Delays (us)
 SBD -0.001631
 MBD -0.001706
 Fringe rate (Hz)
 -0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512
 Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103154
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"



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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-156.3	-143.0	-145.7	-172.3	Phase	-152.0
	506.0	358.0	203.5	114.6	Ampl.	295.5
	512.4	512.0	512.1	1023.6	Sbd box	512.2
U/L	352/0	352/0	352/0	352/0	APs used	
h	1000	1000	1000	1000	PC freqs	
h	1000	1000	1000	1000	PC freqs	
h:h	0:0	0:0	0:0	0:0	PC phase	
h:h	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
h	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-1.70568750000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.70569E-03	+/-	1.0E-07
Sband delay (usec)	-1.63125000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.63125E-03	+/-	4.0E-07
Phase delay (usec)	-9.78482951497E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-9.78483E-06	+/-	6.9E-10
Delay rate (us/s)	-3.11259474669E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-3.11259E-11	+/-	6.6E-12
Total phase (deg)	-152.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-152.0	+/-	0.0

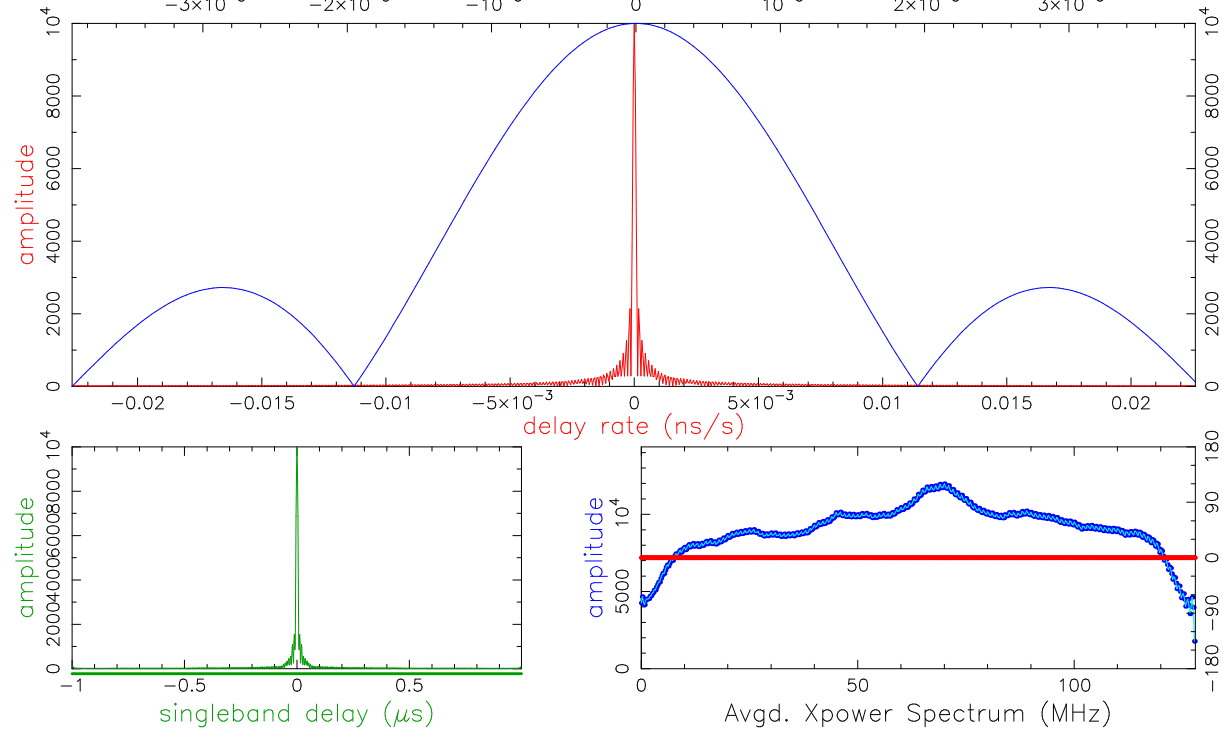
ph/seg (deg) 0.2 0.0 Search (1024X16) 292.657 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.3 0.1 Interp. 287.265 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 16.6 0.0 Inc. seg. avg. 291.965 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 51.1 0.0 Inc. frq. avg. 295.514 Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us dr window (ns/s) -0.023 0.023
 h: az 257.9 el 42.0 pa 49.7 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hh.Q.102.3N2DRU simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hh

VLBA_HN - VLBA_HN, fgroup Q, pol LL

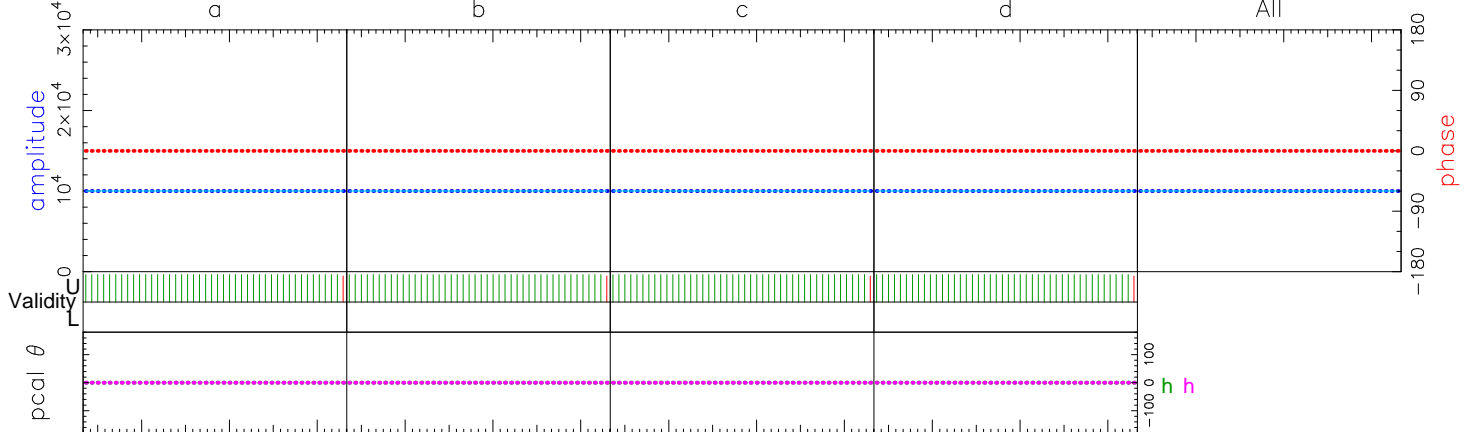


Fringe quality 9

SNR 366873.8
 Int time 179.986
 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) 43140.0000
 AP (sec) 0.512

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103147
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



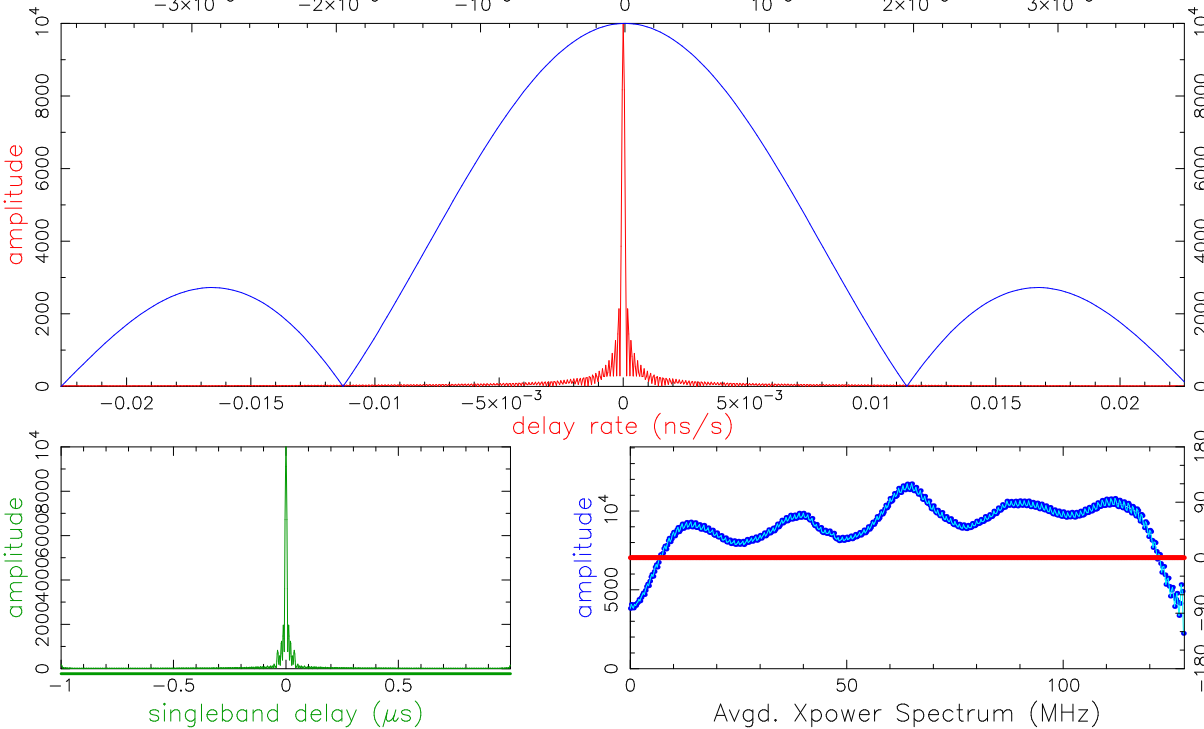
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	Sbd box	513.0
h	1000	1000	1000	1000	APs used	1000
h:h	0:0	0:0	0:0	0:0	PC freqs	1000
h:h	0:0	0:0	0:0	0:0	PC phase	0:0
h	1000	1000	1000	1000	ManI PC	1000
h	1000	1000	1000	1000	PC amp	1000
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
Group delay (usec) (SBD)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00 +/- 3.0E-09
Sband delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid sbdelay (usec)	0.000000E+00 +/- 1.2E-08
Phase delay (usec)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid phdelay (usec)	0.000000E+00 +/- 2.0E-11
Delay rate (us/s)	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	0.000000000000E+00	Resid rate (us/s)	0.000000E+00 +/- 1.9E-13
Total phase (deg)	0.0	0.0	0.0	0.0	Resid phase (deg)	0.0 +/- 0.0
RMS	0.0	0.0	0.0	0.0	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
Theor.	0.0	0.0	0.0	0.0	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
Amplitude	10000.000 +/- 0.027	10000.000 +/- 0.027	10000.000 +/- 0.027	10000.000 +/- 0.027	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
Search (1024X16)	10000.001	10000.001	10000.001	10000.001	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
Interp.	0.000	0.000	0.000	0.000	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
Inc. seg. avg.	10000.000	10000.000	10000.000	10000.000		simultaneous interpolator
Inc. frq. avg.	10000.001	10000.001	10000.001	10000.001		
h: az 257.9 el 42.0 pa 49.7	h: az 257.9 el 42.0 pa 49.7	u,v (fr/asec) 0.000 0.000				
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676/hh..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676/hh.Q.44.3N2DRU				

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hh

VLBA_HN - VLBA_HN, fgroup Q, pol RR

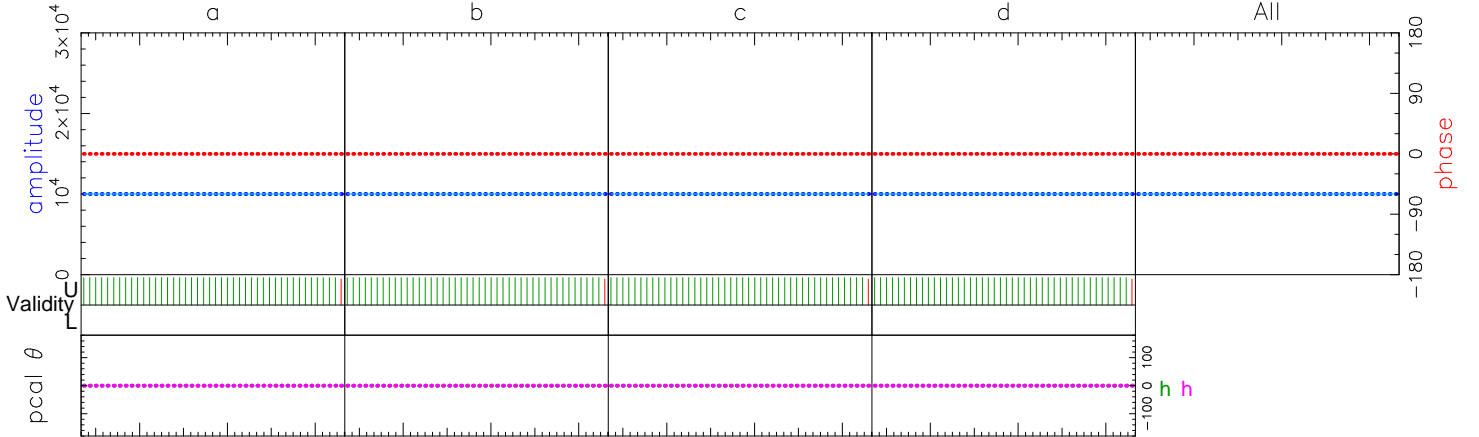


Fringe quality 9

SNR 366873.8
 Int time 179.986
 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) 43140.0000
 AP (sec) 0.512

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103149
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
h	1000	1000	1000	1000	APs used	
h:h	0:0	0:0	0:0	0:0	PC freqs	
h:h	0:0	0:0	0:0	0:0	PC phase	
h	1000	1000	1000	1000	ManI PC	
h	1000	1000	1000	1000	PC amp	
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
h	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
Group delay (usec) (SBD)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00 +/- 3.0E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid sbdelay (usec)	0.00000E+00 +/- 1.2E-08
Phase delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid phdelay (usec)	0.00000E+00 +/- 2.0E-11
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid rate (us/s)	0.00000E+00 +/- 1.9E-13
Total phase (deg)	0.0	0.0	0.0	0.0	Resid phase (deg)	0.0 +/- 0.0
RMS	0.0	0.0	0.0	0.0	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
Theor.	0.0	0.0	0.0	0.0	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
Amplitude	10000.000 +/- 0.027	10000.000 +/- 0.027	10000.000 +/- 0.027	10000.000 +/- 0.027	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
Search (1024X16)	10000.001	10000.001	10000.001	10000.001	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
Interp.	0.000	0.000	0.000	0.000	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
Inc. seg. avg.	10000.000	10000.000	10000.000	10000.000		simultaneous interpolator
Inc. frq. avg.	10000.001	10000.001	10000.001	10000.001		
h: az 257.9 el 42.0 pa 49.7	h: az 257.9 el 42.0 pa 49.7	u,v (fr/asec) 0.000 0.000				
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676/hh..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676/hh.Q.67.3N2DRU				

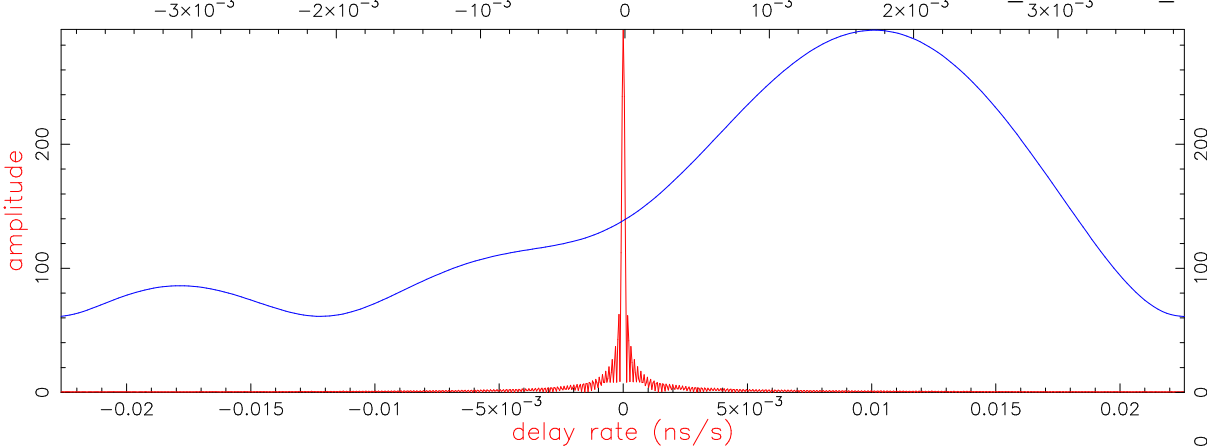
Mk4/DiFX fourfit 3.25 rev 0

aux01

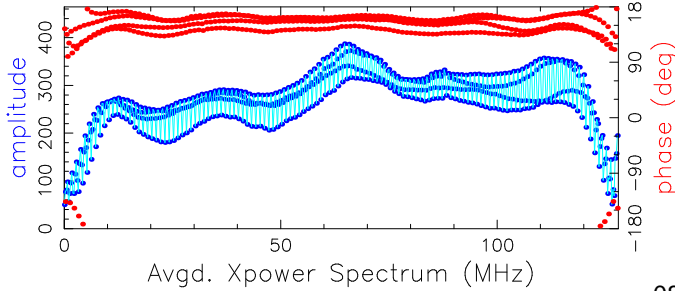
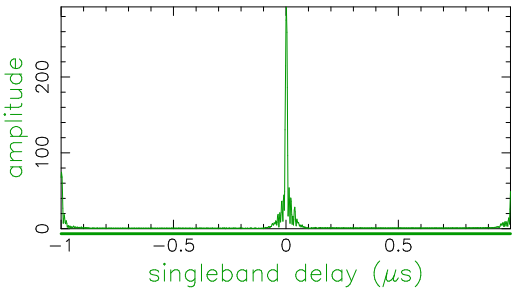
OJ287.3N2DRU, No0676, hh

VLBA_HN - VLBA_HN, fgroup Q, pol LR

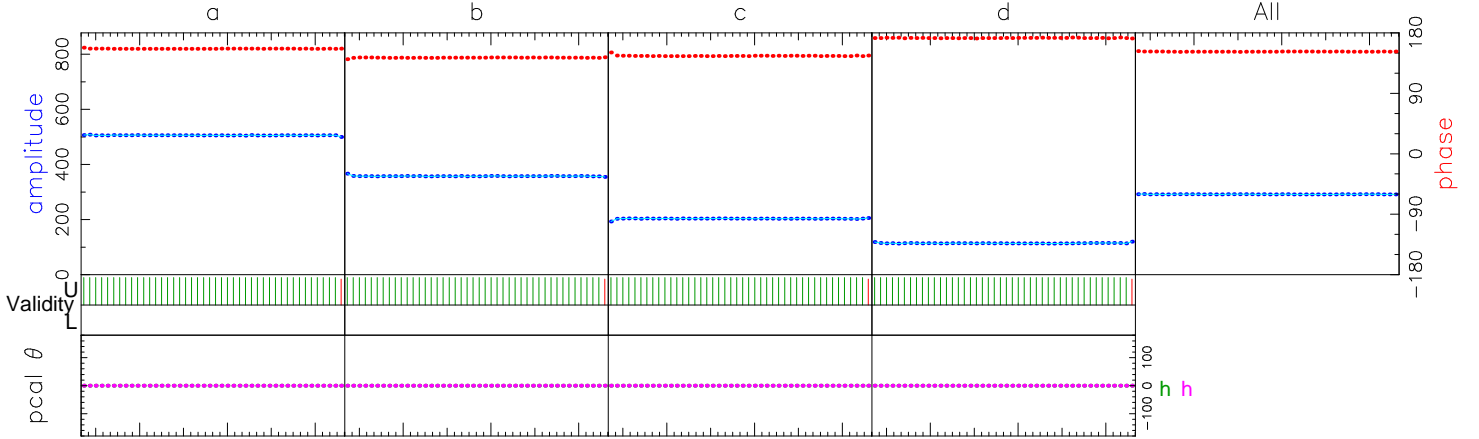
multiband delay (μ s)



Fringe quality 6
 Error code G
 SNR 10736.8
 Int time 179.986
 Amp 292.657
 Phase 152.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.001631
 MBD 0.001706
 Fringe rate (Hz)
 0.000001
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512
 Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103152
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"



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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
156.3	143.0	145.7	172.3	Phase	152.0
506.0	358.0	203.5	114.6	Ampl.	295.5
513.6	514.0	513.9	1.9	Sbd box	513.8
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
h 1000	1000	1000	1000	PC freqs	
h:h 0:0	0:0	0:0	0:0	PC phase	
h:h 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
h 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
h Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	1.70568750000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.70569E-03	+/-	1.0E-07
Sband delay (usec)	1.63125000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.63125E-03	+/-	4.0E-07
Phase delay (usec)	9.78482951493E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	9.78483E-06	+/-	6.9E-10
Delay rate (us/s)	3.11259474669E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	3.11259E-11	+/-	6.6E-12
Total phase (deg)	152.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	152.0	+/-	0.0

ph/seg (deg) 0.2 0.0 Amplitude 292.657 +/- 0.027 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) 16.6 0.0 Inc. seg. avg. 291.965 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 51.1 0.0 Inc. frq. avg. 295.514 Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us dr window (ns/s) -0.023 0.023
 h: az 257.9 el 42.0 pa 49.7 h: az 257.9 el 42.0 pa 49.7 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hh..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hh.Q.88.3N2DRU simultaneous interpolator

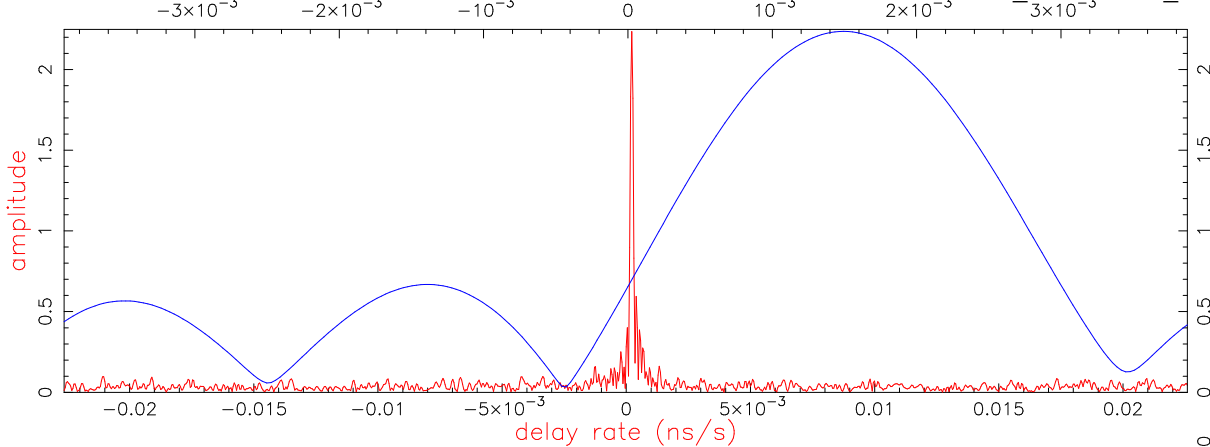
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hk

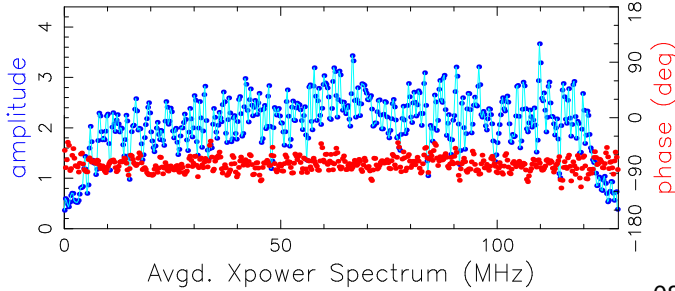
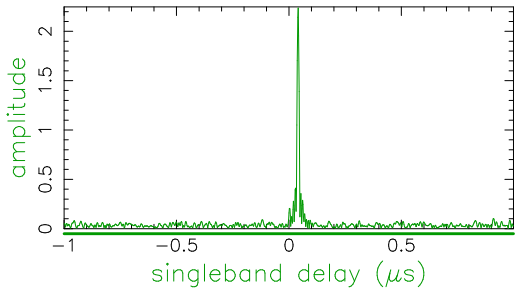
VLBA_HN - VLBA_KP, fgroup Q, pol RL

multiband delay (μ s)



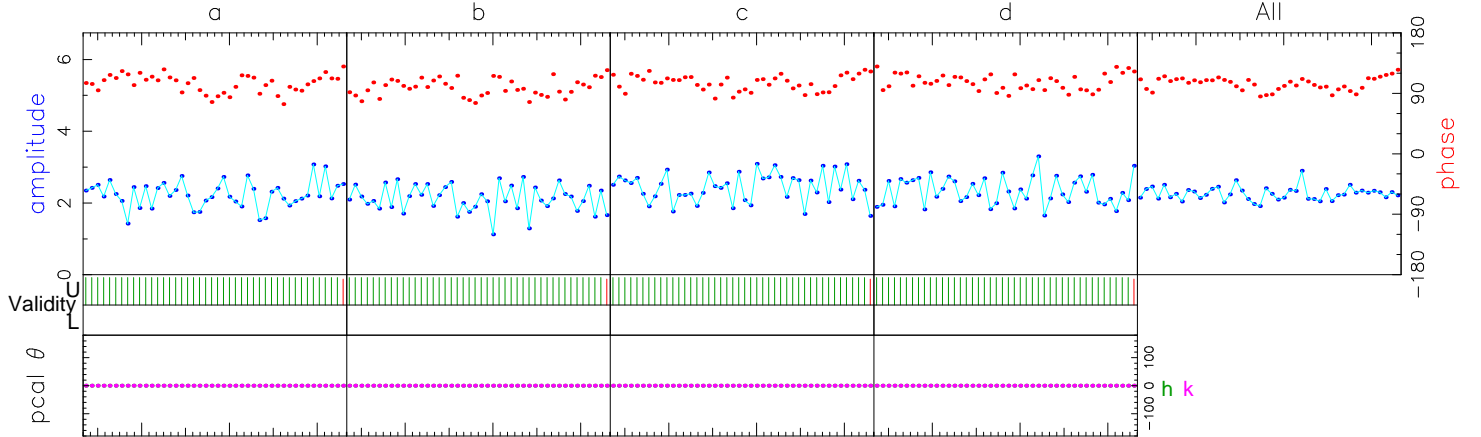
Fringe quality 9

SNR 82.5
 Int time 179.979
 Amp 2.248
 Phase 70.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.040515
 MBD 0.001464
 Fringe rate (Hz)
 0.009332
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103156
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
h	1000	1000	1000	1000	Phase	104.2
k	1000	1000	1000	1000	Ampl.	2.2
h:k	0:0	0:0	0:0	0:0	Sbd box	533.7
h:k	0:0	0:0	0:0	0:0	APs used	
h	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
h	Q00UR	Q01UR	Q02UR	Q03UR	PC phase	
k	Q00UL	Q01UL	Q02UL	Q03UL	Manl PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-6.35664664934E+03	Apriori delay (usec)	-6.35668717555E+03	Resid mbdelay (usec)	1.46371E-03	+/-	1.3E-05
Sband delay (usec)	-6.35664666055E+03	Apriori clock (usec)	1.2265261E+01	Resid sbdelay (usec)	4.05150E-02	+/-	5.2E-05
Phase delay (usec)	-6.35668716884E+03	Apriori clockrate (us/s)	-7.3269082E-08	Resid phdelay (usec)	6.71198E-06	+/-	8.9E-08
Delay rate (us/s)	-5.83272466159E-01	Apriori rate (us/s)	-5.83272682471E-01	Resid rate (us/s)	2.16311E-07	+/-	8.6E-10
Total phase (deg)	159.3	Apriori accel (us/s/s)	3.97254582055E-05	Resid phase (deg)	70.5	+/-	1.4

ph/seg (deg)	9.4	Theor.	4.6	Amplitude	2.248 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	8.1		8.0	Search (1024X16)	2.225	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	4.6		1.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	5.3		2.4	Inc. seg. avg.	2.258	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00
h: az 257.9 el 42.0 pa 49.7		k: az 222.2 el 74.5 pa 38.1		Inc. frq. avg.	2.238	Data rate(Mb/s): 2048				
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/7mm/3001/No0676/hk..3N2DRU								
						Output file: /Exps/c241c/v2/7mm/3001/No0676/hk.Q.117.3N2DRU				

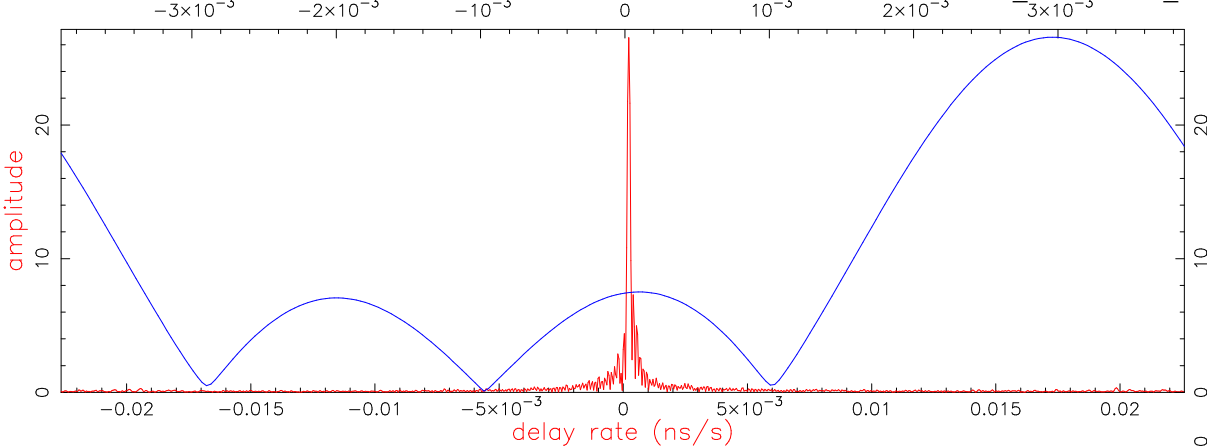
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hk

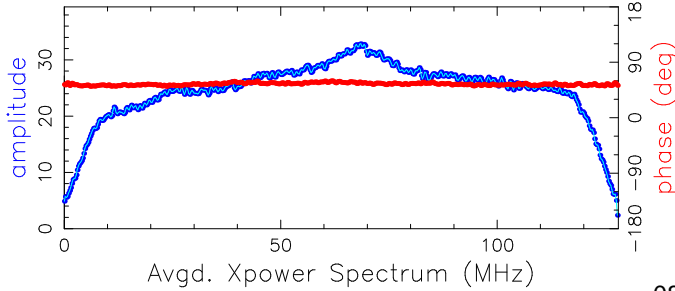
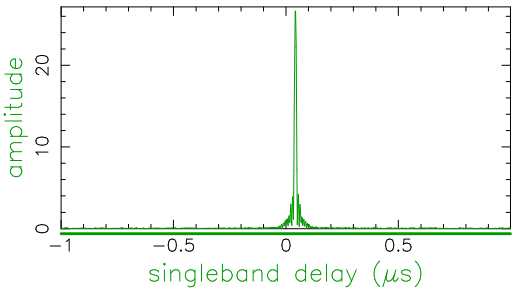
VLBA_HN - VLBA_KP, fgroup Q, pol LL

multiband delay (μ s)



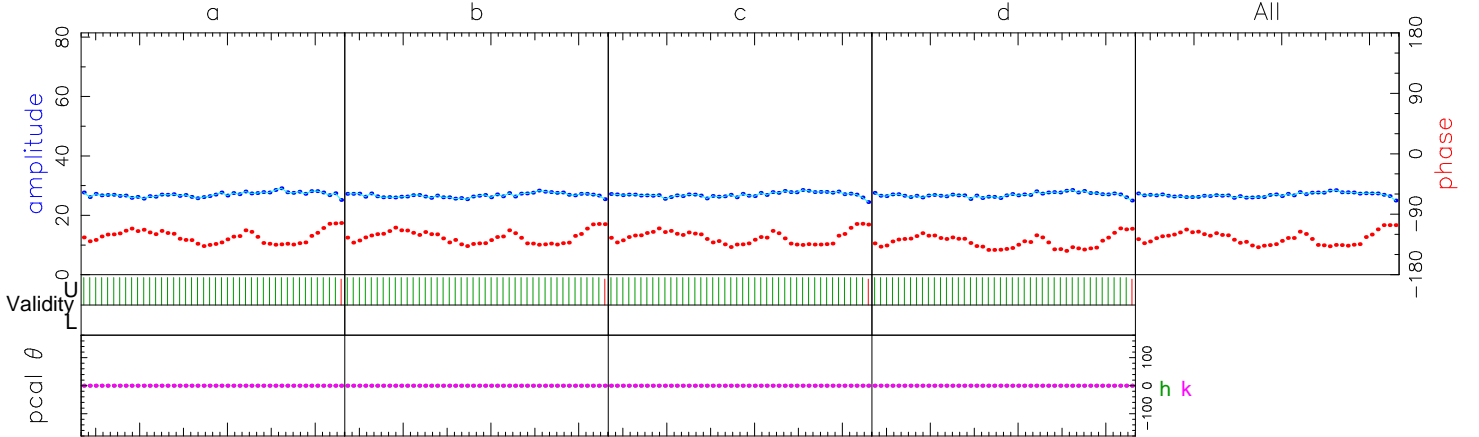
Fringe quality 9

SNR 996.0
 Int time 179.979
 Amp 27.149
 Phase 200.6
 PFD 0.0e+00
 Delays (us)
 SBD 0.042034
 MBD 0.003014
 Fringe rate (Hz)
 0.009362
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103148
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-123.3	-123.9	-124.4	-131.1	Phase	-125.7
	26.7	26.4	26.6	26.6	Ampl.	26.6
	534.5	534.6	534.5	534.4	Sbd box	534.5
U/L	352/0	352/0	352/0	352/0	APs used	
h	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	PC freqs	
h:k	0:0	0:0	0:0	0:0	PC phase	
h:k	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
k	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-6.35664509884E+03	Apriori delay (usec)	-6.35668717555E+03	Resid mbdelay (usec)	3.01421E-03	+/-	1.1E-06
Sband delay (usec)	-6.35664514130E+03	Apriori clock (usec)	1.2265261E+01	Resid sbdelay (usec)	4.20342E-02	+/-	4.3E-06
Phase delay (usec)	-6.35668718364E+03	Apriori clockrate (us/s)	-7.3269082E-08	Resid phdelay (usec)	-8.09099E-06	+/-	7.4E-09
Delay rate (us/s)	-5.83272465452E-01	Apriori rate (us/s)	-5.83272682471E-01	Resid rate (us/s)	2.17019E-07	+/-	7.1E-11
Total phase (deg)	289.4	Apriori accel (us/s/s)	3.97254582055E-05	Resid phase (deg)	200.6	+/-	0.1

ph/seg (deg)	9.2	RMS	27.149 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	2.7	Theor.	26.450	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	4.5	Search (1024X16)	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	2.1	Interp.	26.880	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
		Inc. seg. avg.	26.577	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

h: az 257.9 el 42.0 pa 49.7 k: az 222.2 el 74.5 pa 38.1 u,v (fr/asec) 1798.827 1197.672 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hk..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hk.Q.59.3N2DRU

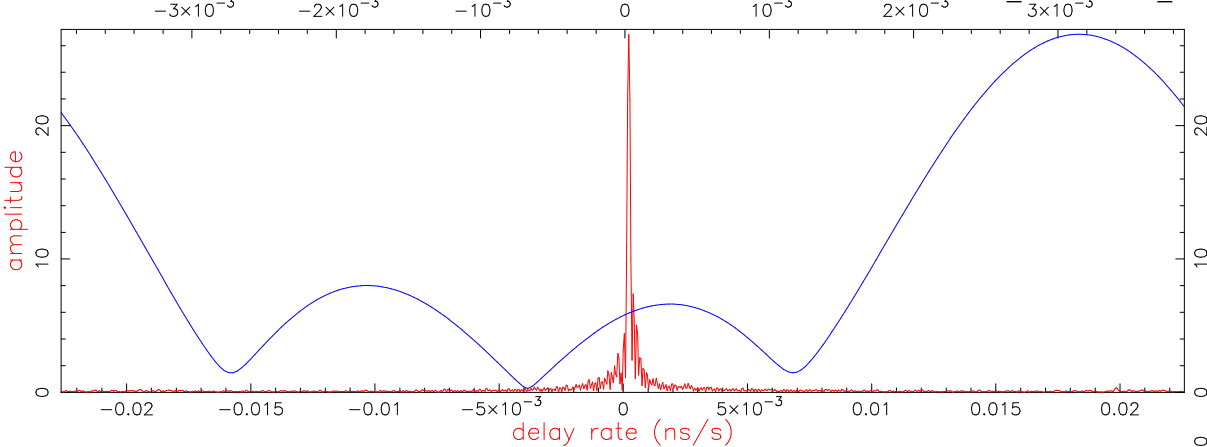
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hk

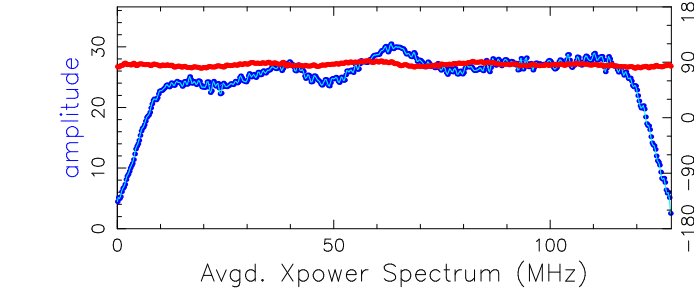
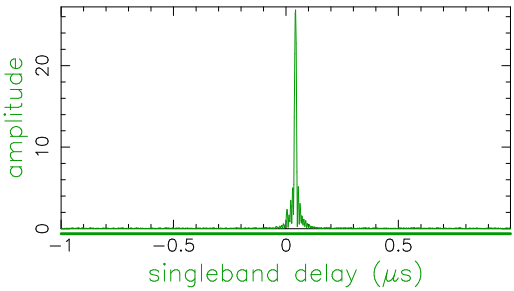
VLBA_HN - VLBA_KP, fgroup Q, pol RR

multiband delay (μ s)



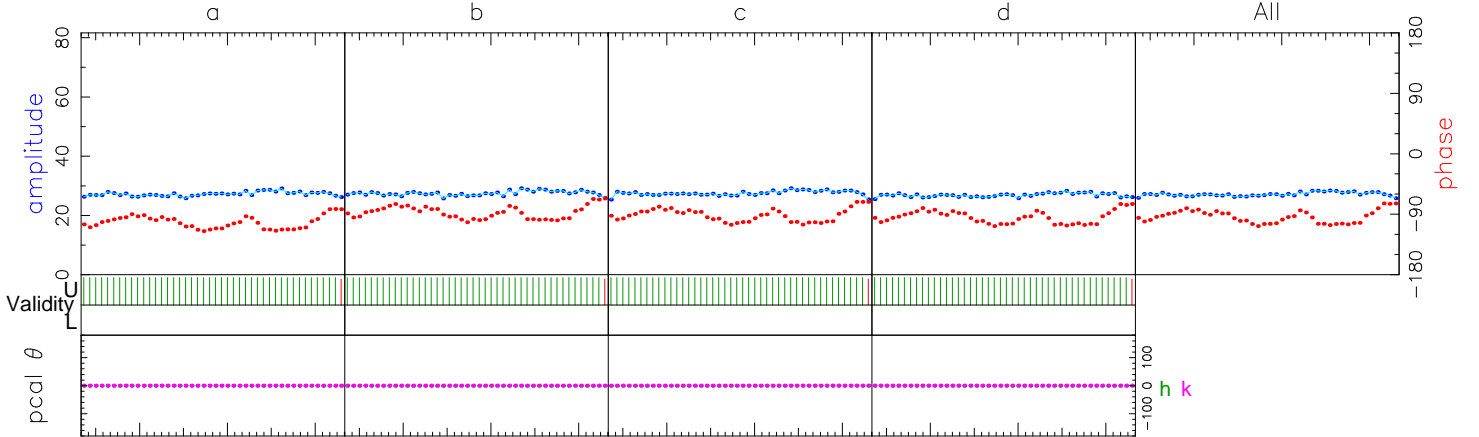
Fringe quality 9

SNR 998.5
 Int time 179.979
 Amp 27.218
 Phase 232.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.042188
 MBD 0.003105
 Fringe rate (Hz)
 0.009397
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103150
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

Group delay (usec) (SBD)	-6.35664500849E+03	Apriori delay (usec)	-6.35668717555E+03	Resid mbdelay (usec)	3.10456E-03	+/-	1.1E-06
Sband delay (usec)	-6.35664498805E+03	Apriori clock (usec)	1.2265261E+01	Resid sbdelay (usec)	4.21875E-02	+/-	4.3E-06
Phase delay (usec)	-6.35668718159E+03	Apriori clockrate (us/s)	-7.3269082E-08	Resid phdelay (usec)	-6.03636E-06	+/-	7.4E-09
Delay rate (us/s)	-5.83272464654E-01	Apriori rate (us/s)	-5.83272682471E-01	Resid rate (us/s)	2.17817E-07	+/-	7.1E-11
Total phase (deg)	321.3	Apriori accel (us/s/s)	3.97254582055E-05	Resid phase (deg)	232.5	+/-	0.1

ph/seg (deg)	9.3	Theor.	0.4	Amplitude	27.218 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	2.4	Search (1024X16)	26.341	Search (1024X16)	26.341	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	7.6	Interp.	0.000	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.004 0.004
amp/frq (%)	1.3	Inc. seg. avg.	27.188	Inc. seg. avg.	27.188	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
		Inc. frq. avg.	26.954	Inc. frq. avg.	26.954	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

h: az 257.9 el 42.0 pa 49.7 k: az 222.2 el 74.5 pa 38.1 u,v (fr/asec) 1798.827 1197.672 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hk..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hk.Q.76.3N2DRU

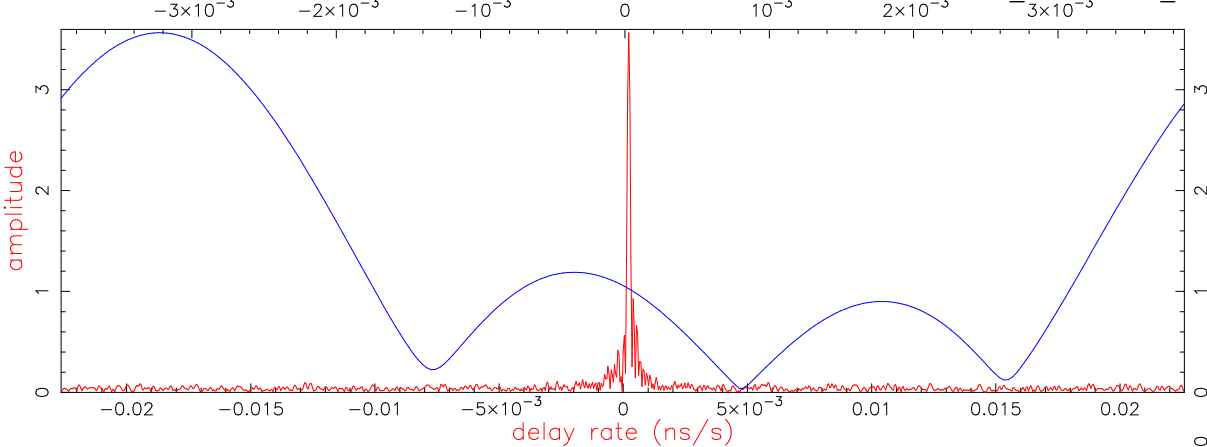
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hk

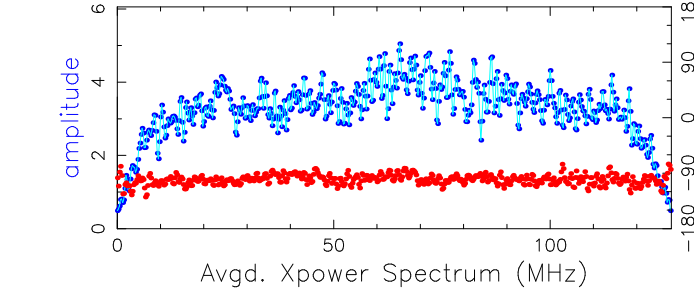
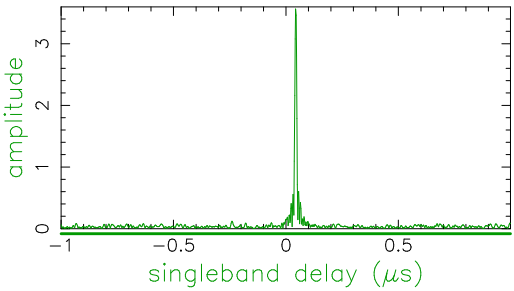
VLBA_HN - VLBA_KP, fgroup Q, pol LR

multiband delay (μ s)



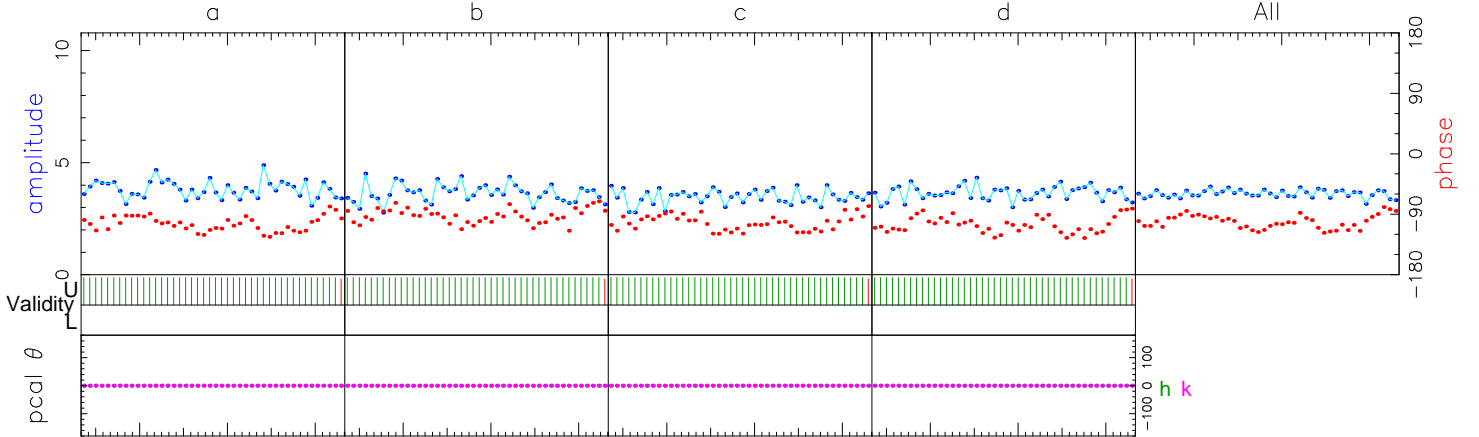
Fringe quality 9

SNR 132.0
Int time 179.979
Amp 3.598
Phase 146.4
PFD 0.0e+00
Delays (us)
SBD 0.043622
MBD -0.003193
Fringe rate (Hz) 0.009409
Ion TEC 0.000
Ref freq (MHz) 43140.0000
AP (sec) 0.512



Exp. c241c
Exper # 1234
Yr:day 2024:113
Start 030520.00
Stop 030820.22
FRT 030650.00
Corr/FF/build
2025:048:123813
2025:049:103153
2024:113:095956
RA & Dec (J2000)
08h54m48.874931s
+20°06'30.640823"

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



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

Group delay (usec) (SBD)	-6.35664349399E+03	Apriori delay (usec)	-6.35668717555E+03	Resid mbdelay (usec)	-3.19344E-03	+/-	8.4E-06
Sband delay (usec)	-6.35664355318E+03	Apriori clock (usec)	1.2265261E+01	Resid sbdelay (usec)	4.36224E-02	+/-	3.3E-05
Phase delay (usec)	-6.35668718206E+03	Apriori clockrate (us/s)	-7.3269082E-08	Resid phdelay (usec)	-6.50729E-06	+/-	5.6E-08
Delay rate (us/s)	-5.83272464371E-01	Apriori rate (us/s)	-5.83272682471E-01	Resid rate (us/s)	2.18100E-07	+/-	5.4E-10
Total phase (deg)	235.3	Apriori accel (us/s/s)	3.97254582055E-05	Resid phase (deg)	146.4	+/-	0.9

ph/seg (deg)	9.9	Theor.	2.9	Amplitude	3.598 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	4.7		5.0	Search (1024X16)	3.507	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	7.6		0.9	Inc. seg. avg.	3.612	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	3.4		1.5	Inc. frq. avg.	3.579	Data rate(MSamp/s):	256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023 0.023	
h: az 257.9 el 42.0 pa 49.7		k: az 222.2 el 74.5 pa 38.1		u,v (fr/asec)	1798.827 1197.672	Data rate(Mb/s):	2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00 0.00

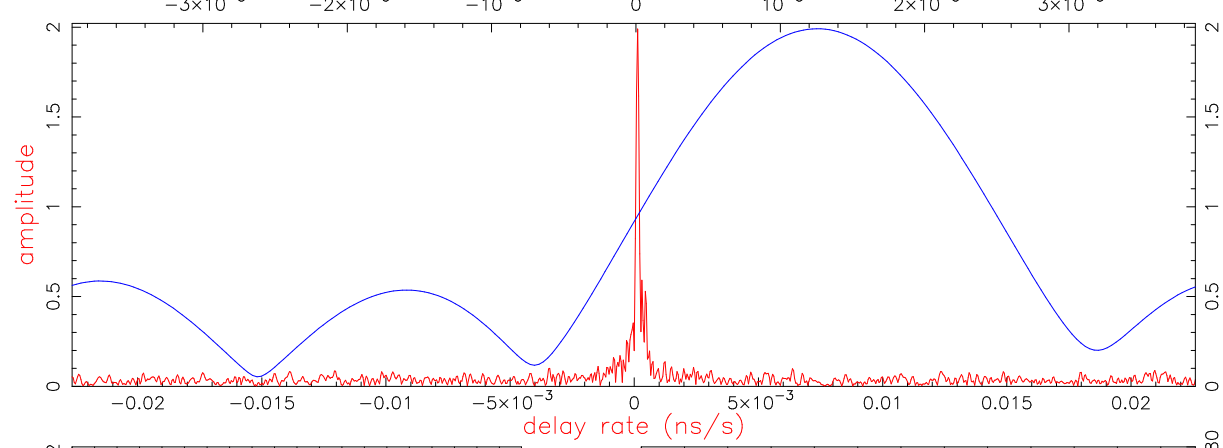
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hk..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hk.Q.97.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hl

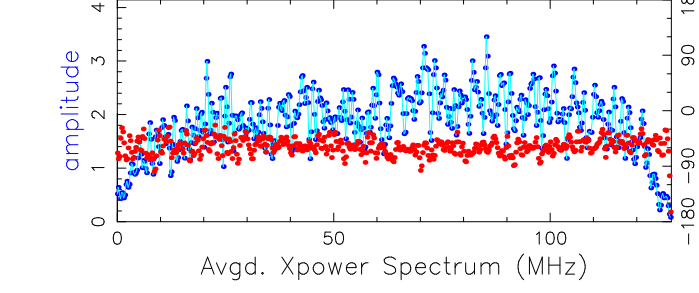
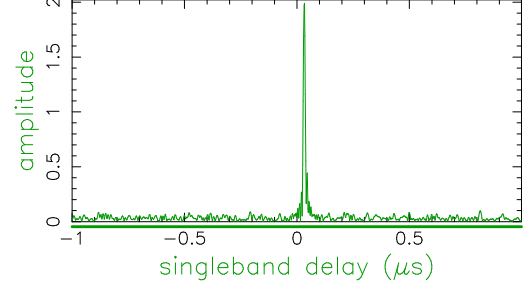
VLBA_HN - VLBA_LA, fgroup Q, pol LR



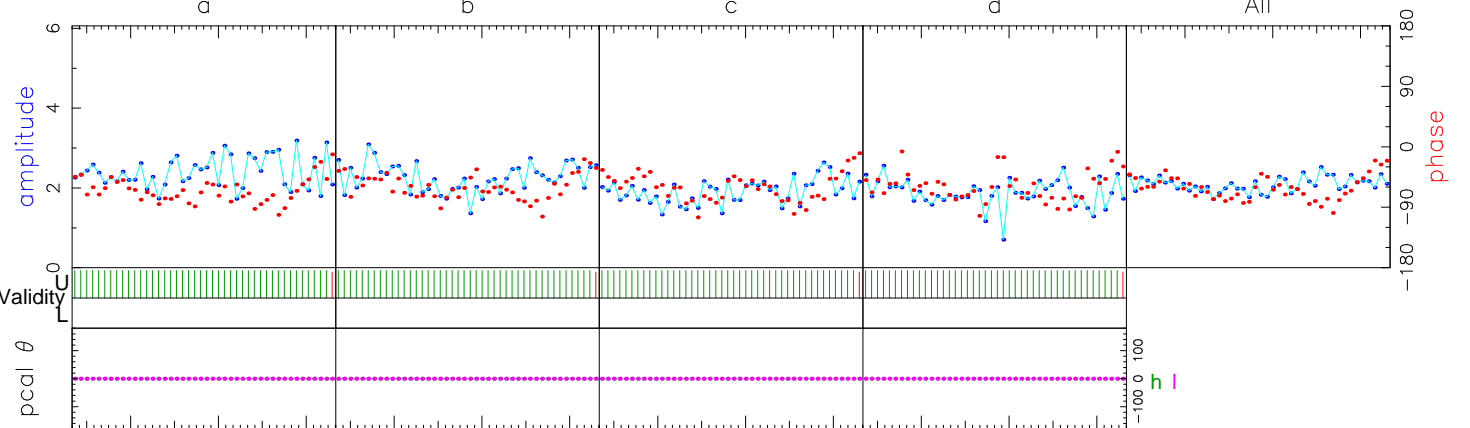
Fringe quality 8

SNR 74.2
 Int time 179.980
 Amp 2.021
 Phase 343.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.032361
 MBD 0.001212
 Fringe rate (Hz) 0.006211
 Ion TEC 0.000
 Ref freq (MHz) 43140.0000
 AP (sec) 0.512

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103156
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"



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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
h	1000	1000	1000	1000	Phase	-61.3
l	1000	1000	1000	1000	Ampl.	2.0
h:l	0:0	0:0	0:0	0:0	Sbd box	529.6
h:l	0:0	0:0	0:0	0:0	APs used	
h	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	PC freqs	
h	Q00UL	Q01UL	Q02UL	Q03UL	PC phase	
l	Q00UR	Q01UR	Q02UR	Q03UR	Manl PC	
					PC amp	
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-5.64732733806E+03	Apriori delay (usec)	-5.64735980018E+03	Resid mbdelay (usec)	1.21212E-03	+/-	1.5E-05
Sband delay (usec)	-5.64732743893E+03	Apriori clock (usec)	2.0751621E+01	Resid sbdelay (usec)	3.23613E-02	+/-	5.8E-05
Phase delay (usec)	-5.64735980413E+03	Apriori clockrate (us/s)	3.1293804E-07	Resid phdelay (usec)	-3.94577E-06	+/-	1.0E-07
Delay rate (us/s)	-4.86812051403E-01	Apriori rate (us/s)	-4.86812195375E-01	Resid rate (us/s)	1.43972E-07	+/-	9.6E-10
Total phase (deg)		Apriori accel (us/s/s)	3.38628792699E-05	Resid phase (deg)	343.7	+/-	1.5

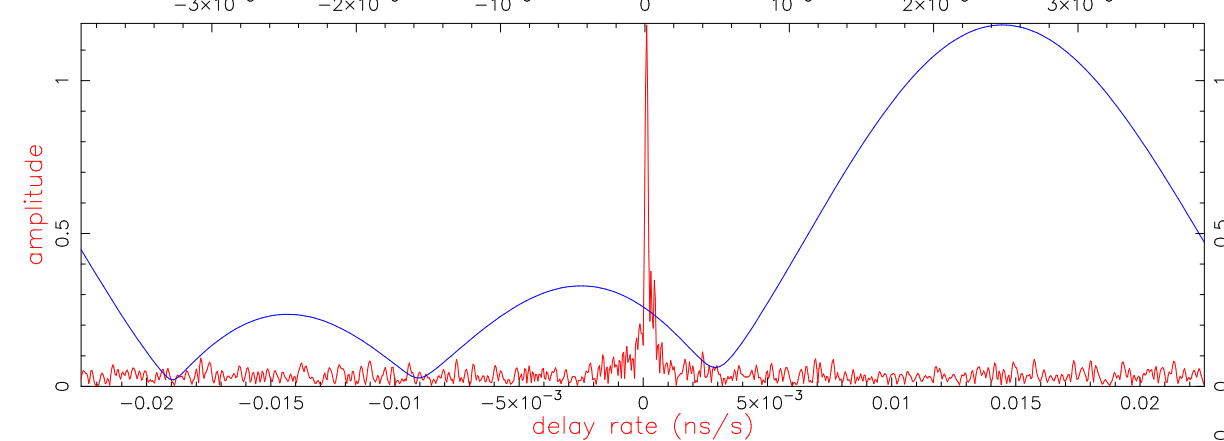
ph/seg (deg) 17.9 5.1 Search (1024X16) 1.924 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 9.6 8.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 3.9 1.5 Inc. seg. avg. 2.084 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 11.5 2.7 Inc. frq. avg. 1.992 Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us dr window (ns/s) -0.023 0.023
 h: az 257.9 el 42.0 pa 49.7 l: az 226.7 el 68.7 pa 39.5 u,v (fr/asec) 1501.920 883.735 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hl..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hl.Q.112.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

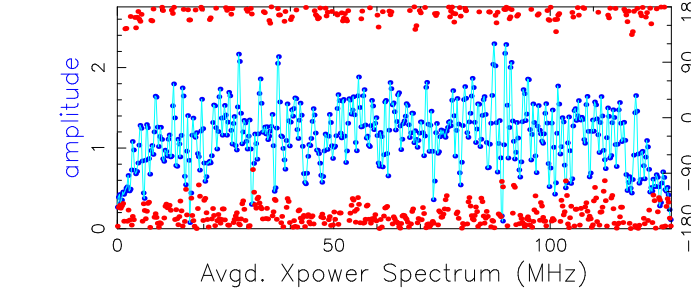
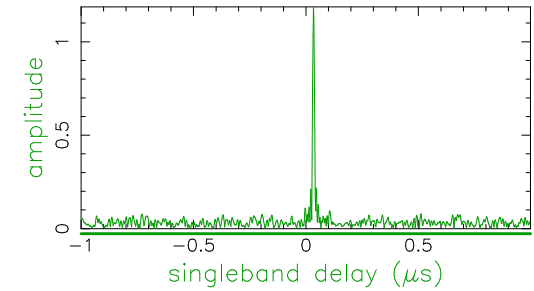
OJ287.3N2DRU, No0676, hl

VLBA_HN - VLBA_LA, fgroup Q, pol RL



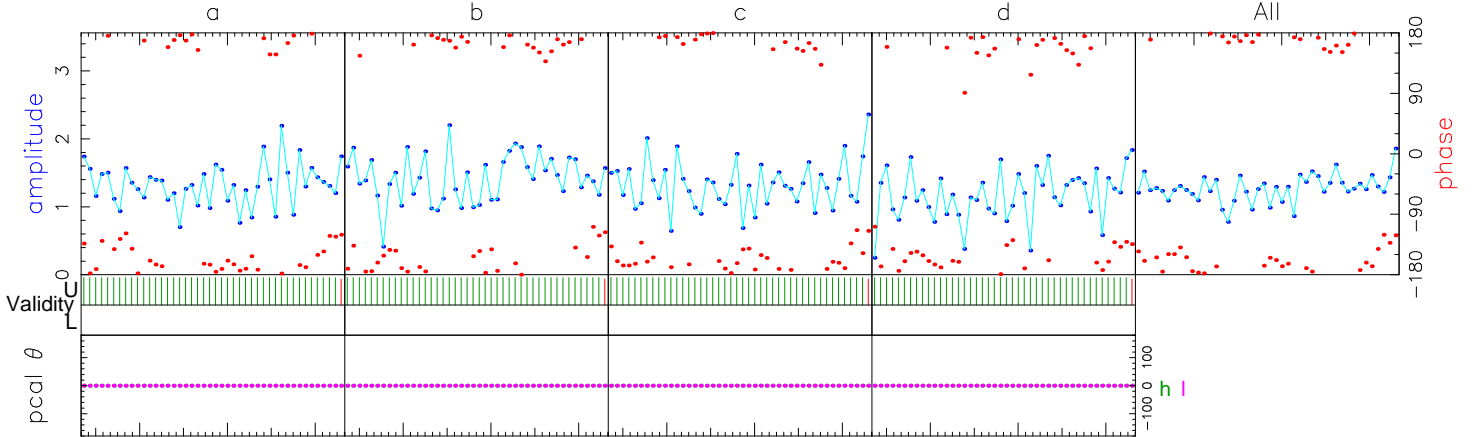
Fringe quality 9

SNR 43.6
 Int time 179.980
 Amp 1.187
 Phase 233.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.033654
 MBD 0.002505
 Fringe rate (Hz) 0.006214
 Ion TEC 0.000
 Ref freq (MHz) 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103158
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-166.7	-175.9	-168.9	-173.4	Phase	-171.2
1.2	1.3	1.2	1.0	Ampl.	1.2
530.3	530.2	530.6	529.7	Sbd box	530.2
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
h:l 0:0	0:0	0:0	0:0	PC phase	
h:l 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-5.64732604521E+03	Apriori delay (usec)	-5.64735980018E+03	Resid mbdelay (usec)	2.50497E-03	+/- 2.6E-05
Sband delay (usec)	-5.64732614618E+03	Apriori clock (usec)	2.0751621E+01	Resid sbdelay (usec)	3.36540E-02	+/- 9.9E-05
Phase delay (usec)	-5.64735981121E+03	Apriori clockrate (us/s)	3.1293804E-07	Resid phdelay (usec)	-1.10243E-05	+/- 1.7E-07
Delay rate (us/s)	-4.86812051324E-01	Apriori rate (us/s)	-4.86812195375E-01	Resid rate (us/s)	1.44051E-07	+/- 1.6E-09
Total phase (deg)	313.1	Apriori accel (us/s/s)	3.38628792699E-05	Resid phase (deg)	233.8	+/- 2.6

	RMS	Theor.	Amplitude	1.187 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	21.5	8.7	Search (1024X16)	1.164	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	18.0	15.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.1	2.6	Inc. seg. avg.	1.258	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	7.7	4.6	Inc. frq. avg.	1.183	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

h: az 257.9 el 42.0 pa 49.7 l: az 226.7 el 68.7 pa 39.5 u,v (fr/asec) 1501.920 883.735 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hl..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hl.Q.132.3N2DRU

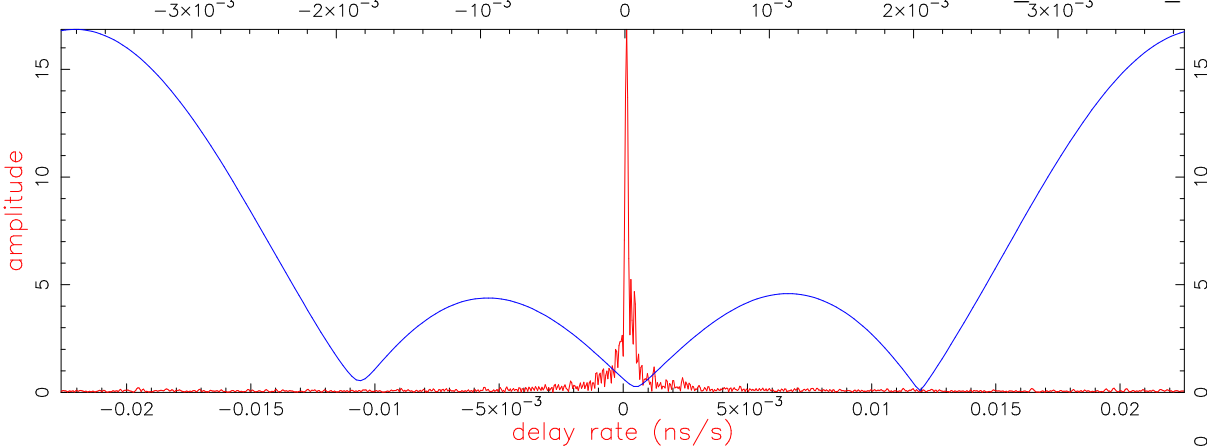
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hl

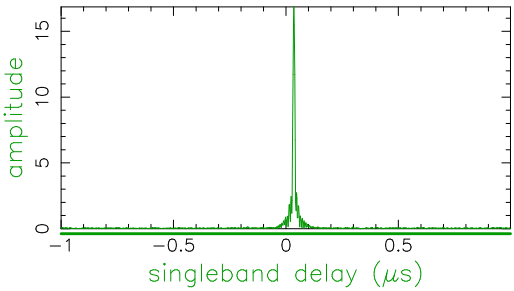
VLBA_HN - VLBA_LA, fgroup Q, pol LL

multiband delay (μ s)

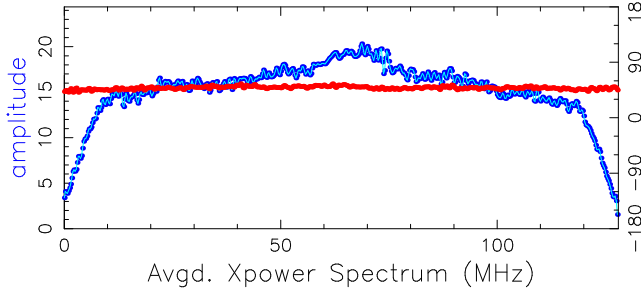


Fringe quality 8

SNR 618.5
 Int time 179.980
 Amp 16.859
 Phase 192.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.035159
 MBD -0.003809
 Fringe rate (Hz)
 0.006144
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



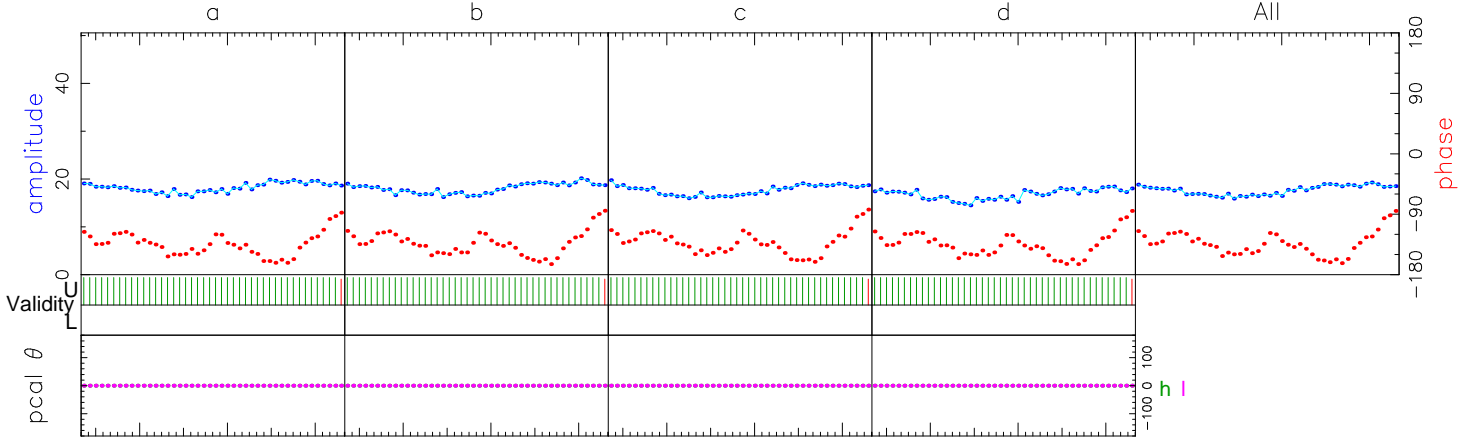
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103148
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-134.2	-133.0	-131.6	-134.8	Phase	-133.4
17.4	17.2	16.8	16.0	Ampl.	16.9
531.1	531.0	531.0	530.8	Sbd box	531.0
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
h:l 0:0	0:0	0:0	0:0	PC phase	
h:l 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
l Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-5.64732454684E+03	Apriori delay (usec)	-5.64735980018E+03	Resid mbdelay (usec)	-3.80916E-03	+/-	1.8E-06
Sband delay (usec)	-5.64732464081E+03	Apriori clock (usec)	2.0751621E+01	Resid sbdelay (usec)	3.51594E-02	+/-	7.0E-06
Phase delay (usec)	-5.64735980877E+03	Apriori clockrate (us/s)	3.1293804E-07	Resid phdelay (usec)	-8.58883E-06	+/-	1.2E-08
Delay rate (us/s)	-4.86812052962E-01	Apriori rate (us/s)	-4.86812195375E-01	Resid rate (us/s)	1.42413E-07	+/-	1.1E-10
Total phase (deg)	272.1	Apriori accel (us/s/s)	3.38628792699E-05	Resid phase (deg)	192.9	+/-	0.2

ph/seg (deg)	RMS 17.7	Theor. 0.6	Amplitude Search (1024X16)	16.859 +/- 0.027	16.627	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	7.6	1.1	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)	1.7	0.2	Inc. seg. avg.	17.706		Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.2	0.3	Inc. frq. avg.	16.863		Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

h: az 257.9 el 42.0 pa 49.7 l: az 226.7 el 68.7 pa 39.5 u,v (fr/asec) 1501.920 883.735 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hl..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hl.Q.54.3N2DRU

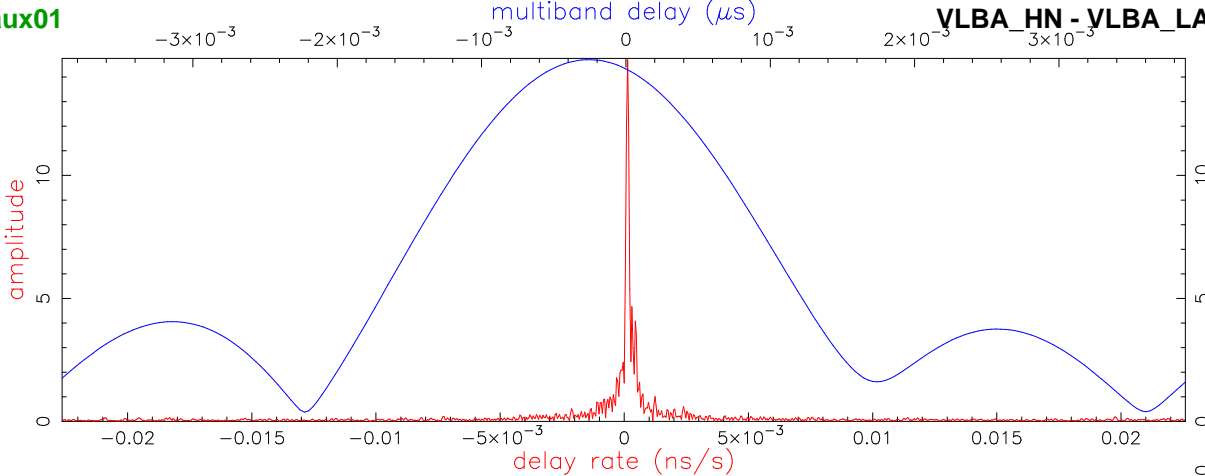
Mk4/DiFX fourfit 3.25 rev 0

aux01

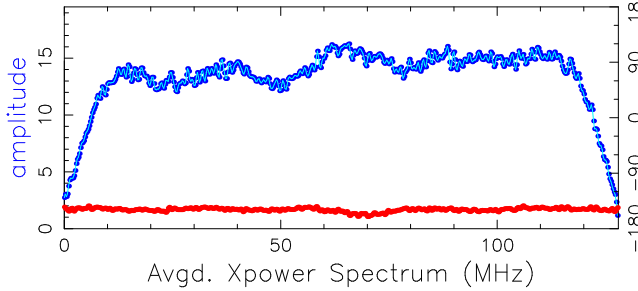
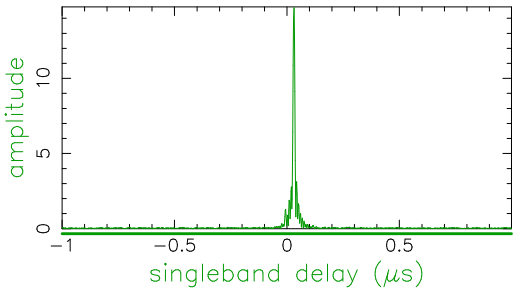
OJ287.3N2DRU, No0676, hl

VLBA_HN - VLBA_LA, fgroup Q, pol RR

Fringe quality 8

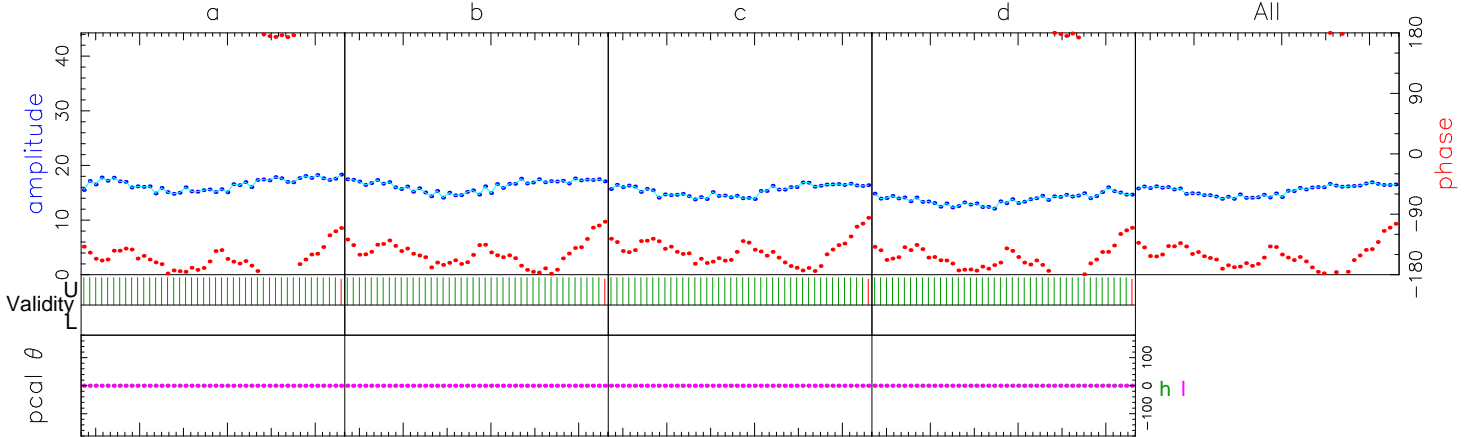


SNR 541.5
Int time 179.980
Amp 14.761
Phase 252.8
PFD 0.0e+00
Delays (us)
SBD 0.030851
MBD -0.000281
Fringe rate (Hz)
0.006189
Ion TEC 0.000
Ref freq (MHz)
43140.0000
AP (sec) 0.512



Exp. c241c
Exper # 1234
Yr:day 2024:113
Start 030520.00
Stop 030820.22
FRT 030650.00
Corr/FF/build
2025:048:123813
2025:049:103150
2024:113:095956
RA & Dec (J2000)
08h54m48.874931s
+20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-158.5	-148.7	-144.9	-156.8	Phase	-152.2
15.8	15.5	14.7	13.1	Ampl.	14.8
529.1	528.8	529.0	528.1	Sbd box	528.8
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	PC freqs	
h:l 0:0	0:0	0:0	0:0	PC phase	
h:l 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
l Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-5.64732883115E+03	Apriori delay (usec)	-5.64735980018E+03	Resid mbdelay (usec)	-2.80971E-04	+/- 2.1E-06
Sband delay (usec)	-5.64732894881E+03	Apriori clock (usec)	2.0751621E+01	Resid sbdelay (usec)	3.08514E-02	+/- 8.0E-06
Phase delay (usec)	-5.64735980998E+03	Apriori clockrate (us/s)	3.1293804E-07	Resid phdelay (usec)	-9.79848E-06	+/- 1.4E-08
Delay rate (us/s)	-4.86812051910E-01	Apriori rate (us/s)	-4.86812195375E-01	Resid rate (us/s)	1.43465E-07	+/- 1.3E-10
Total phase (deg)	332.1	Apriori accel (us/s/s)	3.38628792699E-05	Resid phase (deg)	252.8	+/- 0.2

ph/seg (deg)	17.8	Theor.	Amplitude	14.761 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	7.8	0.7	Search (1024X16)	14.236	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	8.0	0.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
amp/frq (%)	7.0	0.4	Inc. seg. avg.	15.459	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
			Inc. frq. avg.	14.778	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

h: az 257.9 el 42.0 pa 49.7 l: az 226.7 el 68.7 pa 39.5 u,v (fr/asec) 1501.920 883.735 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hl..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hl.Q.77.3N2DRU

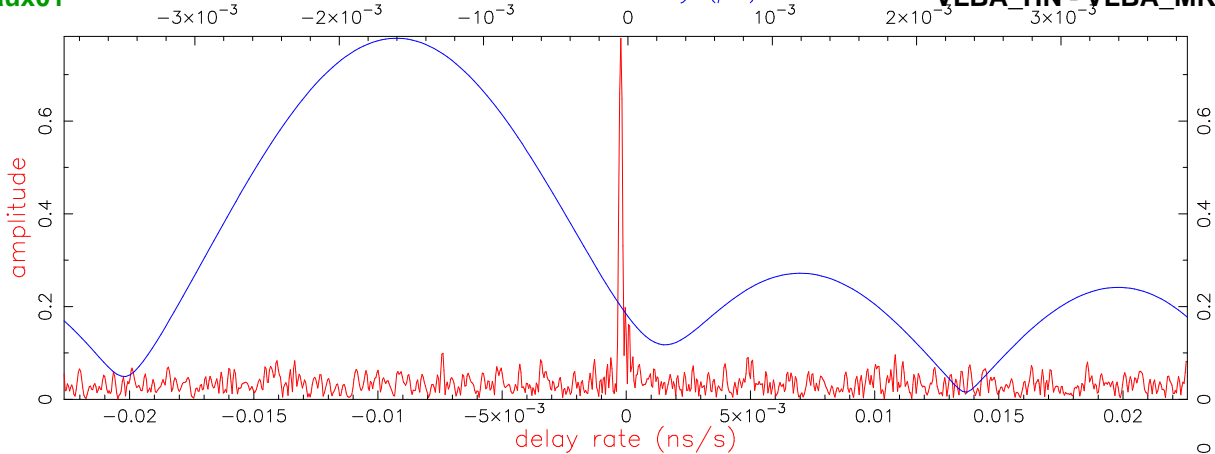
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hm

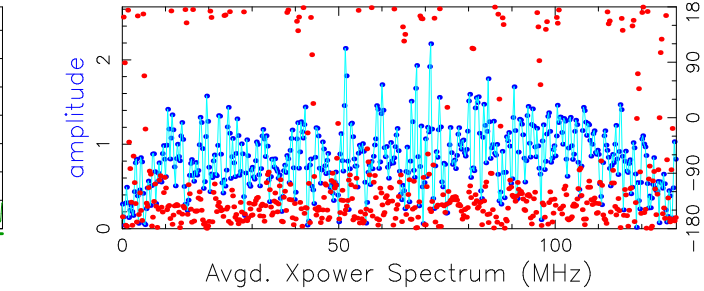
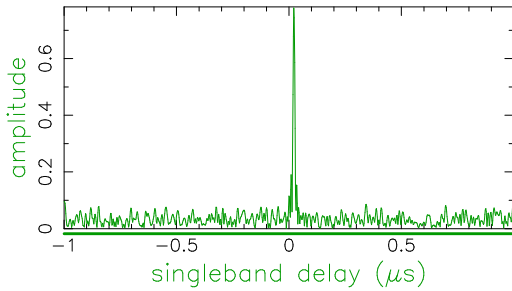
VLBA_HN - VLBA_MK, fgroup Q, pol RL

multiband delay (μ s)



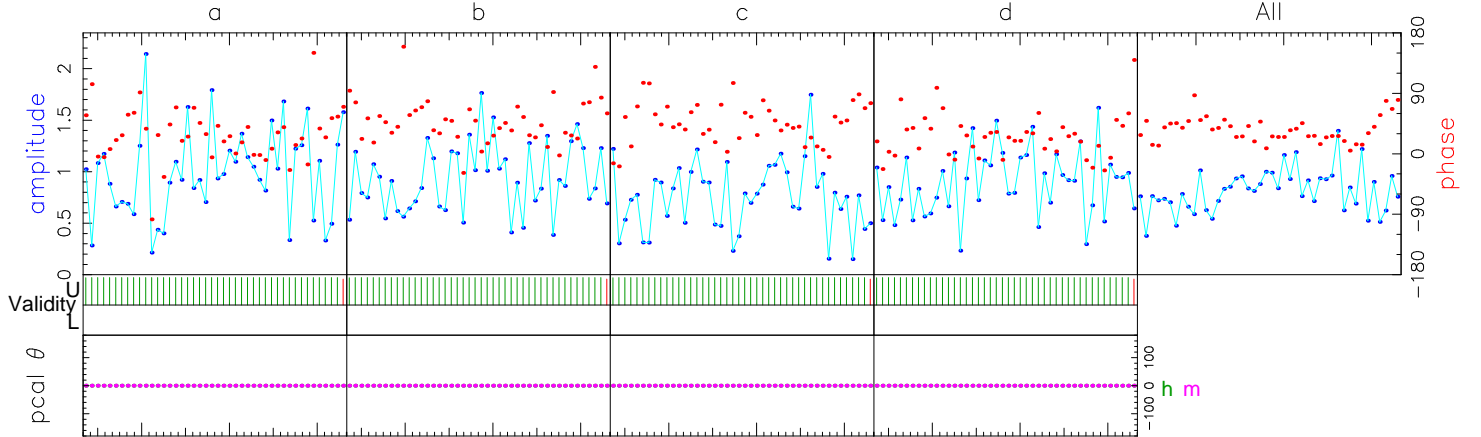
Fringe quality 8

SNR 28.7
 Int time 179.976
 Amp 0.783
 Phase 157.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.021966
 MBD -0.001575
 Fringe rate (Hz)
 -0.009051
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103154
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
Group delay (usec) (SBD)	-4.29248041502E+03		-4.29250227778E+03		-1.57475E-03	+/- 3.9E-05
Sband delay (usec)	-4.29248031140E+03		1.1887396E+01		2.19664E-02	+/- 1.5E-04
Phase delay (usec)	-4.29250227558E+03		9.3436977E-08		2.19883E-06	+/- 2.6E-07
Delay rate (us/s)	-1.56479864085E+00		-1.56479843105E+00		-2.09806E-07	+/- 2.5E-09
Total phase (deg)		63.1	3.60875480914E-05		157.9	+/- 4.0

	RMS	Theor.	Amplitude	0.783 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	18.8	13.2	Search (1024X16)	0.764	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	26.4	23.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	12.8	4.0	Inc. seg. avg.	0.796	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	8.7	7.0	Inc. frq. avg.	0.786	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

h: az 257.9 el 42.0 pa 49.7 m: az 83.9 el 59.2 pa -84.9 u,v (fr/asec) 4791.818 1930.926 simultaneous interpolator

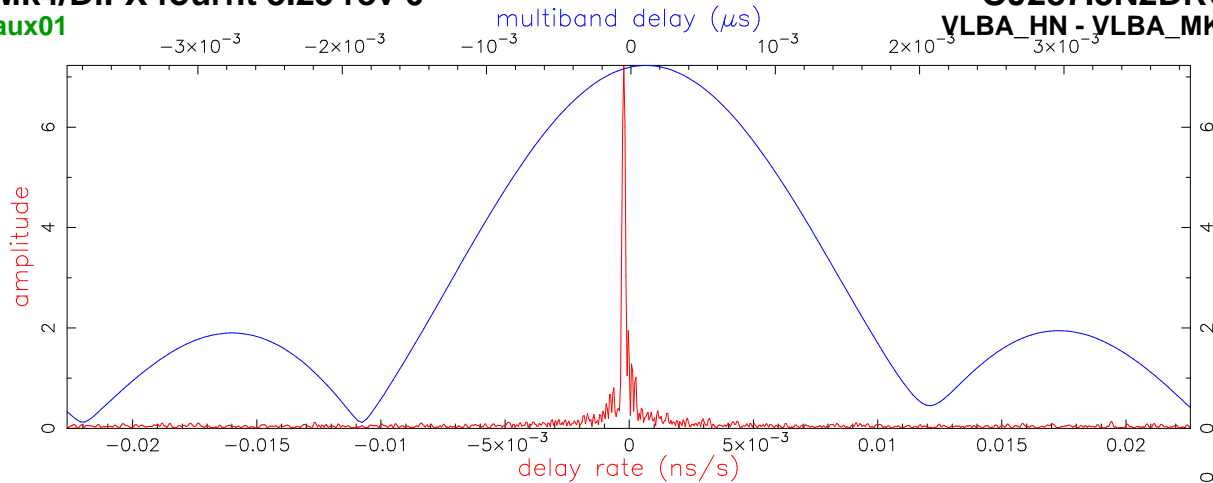
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hm..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hm.Q.103.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

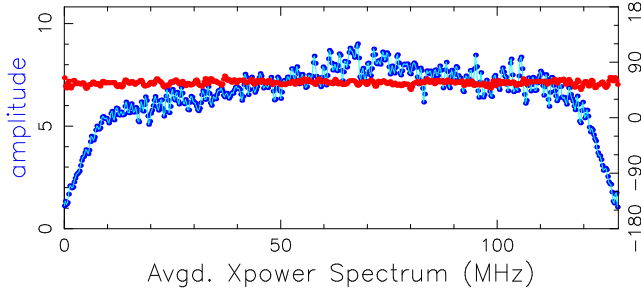
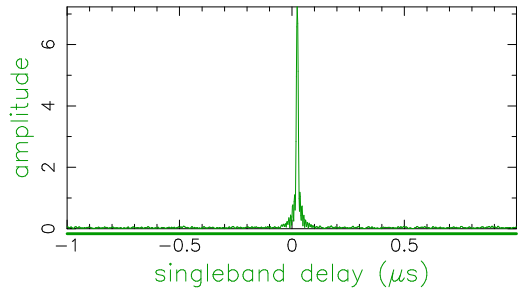
OJ287.3N2DRU, No0676, hm

VLBA_HN - VLBA_MK, fgroup Q, pol LL



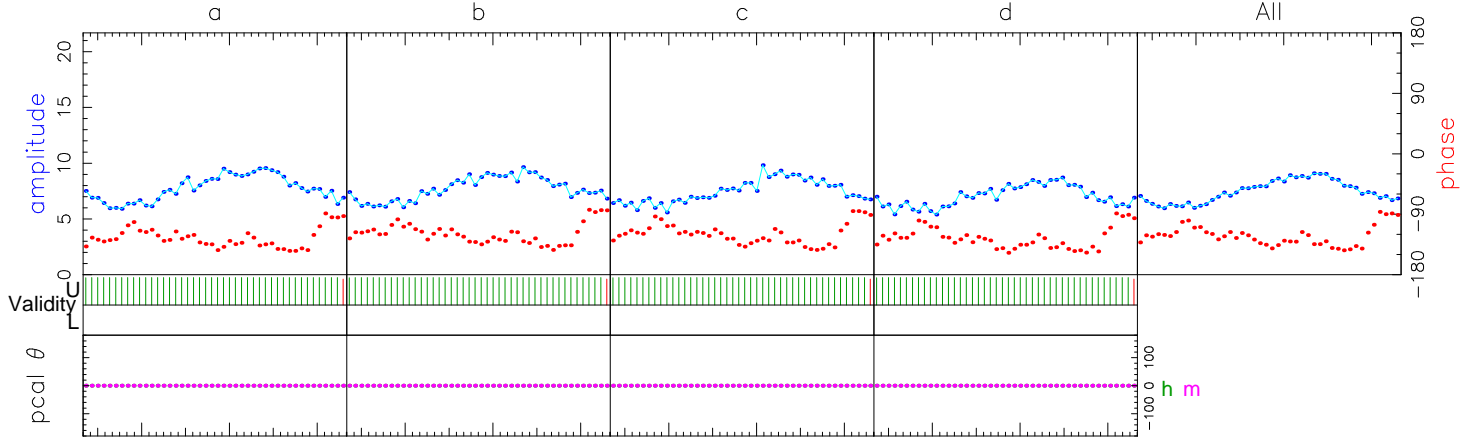
Fringe quality 8

SNR 265.3
 Int time 179.976
 Amp 7.231
 Phase 0.5
 PFD 0.0e+00
 Delays (us)
 SBD 0.023534
 MBD 0.000108
 Fringe rate (Hz)
 -0.009126
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103148
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-126.1	-119.7	-120.6	-126.8	Phase	-123.2
7.5	7.5	7.2	6.8	Ampl.	7.2
525.1	525.2	525.0	524.9	Sbd box	525.0
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
m 1000	1000	1000	1000	PC freqs	
h:m 0:0	0:0	0:0	0:0	PC phase	
h:m 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
m 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
m Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-4.29247873243E+03	Apriori delay (usec)	-4.29250227778E+03	Resid mbdelay (usec)	1.07848E-04	+/-	4.2E-06
Sband delay (usec)	-4.29247874428E+03	Apriori clock (usec)	1.1887396E+01	Resid sbdelay (usec)	2.35335E-02	+/-	1.6E-05
Phase delay (usec)	-4.29250228571E+03	Apriori clockrate (us/s)	9.3436977E-08	Resid phdelay (usec)	-7.93605E-06	+/-	2.8E-08
Delay rate (us/s)	-1.56479864260E+00	Apriori rate (us/s)	-1.56479843105E+00	Resid rate (us/s)	-2.11555E-07	+/-	2.7E-10
Total phase (deg)	265.7	Apriori accel (us/s/s)	3.60875480914E-05	Resid phase (deg)	0.5	+/-	0.4

	RMS	Theor.	Amplitude	7.231 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	15.0	1.4	Search (1024X16)	7.109	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	13.8	2.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	4.5	0.4	Inc. seg. avg.	7.469	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.9	0.8	Inc. frq. avg.	7.240	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00 0.00

h: az 257.9 el 42.0 pa 49.7 m: az 83.9 el 59.2 pa -84.9 u,v (fr/asec) 4791.818 1930.926 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hm..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hm.Q.55.3N2DRU

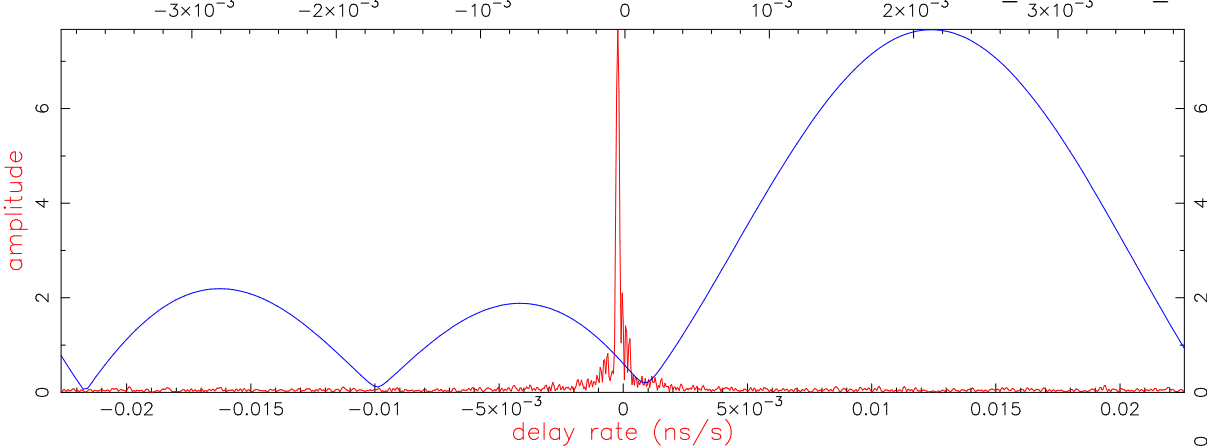
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hm

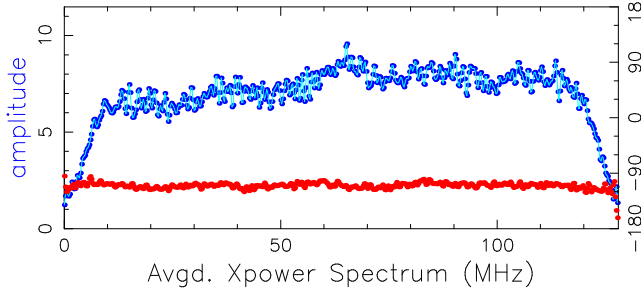
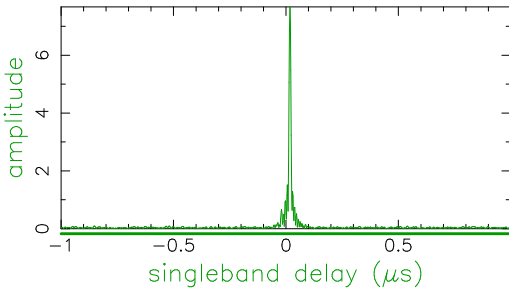
VLBA_HN - VLBA_MK, fgroup Q, pol RR

multiband delay (μ s)



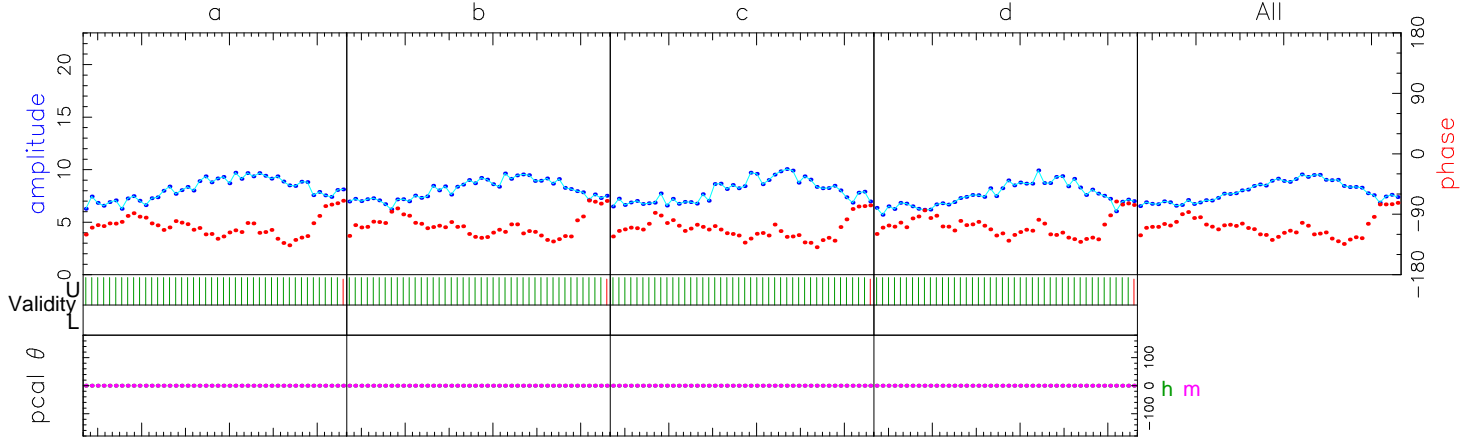
Fringe quality 8

SNR 281.6
 Int time 179.979
 Amp 7.675
 Phase 92.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.017768
 MBD 0.002134
 Fringe rate (Hz)
 -0.009149
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103150
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-108.7	-107.9	-113.0	-108.7	Phase	-109.6
	7.9	7.8	7.7	7.3	Ampl.	7.7
	522.0	522.1	522.3	522.0	Sbd box	522.1
U/L	352/0	352/0	352/0	352/0	APs used	
h	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	PC freqs	
h:m	0:0	0:0	0:0	0:0	PC phase	
h:m	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
m	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-4.29248451880E+03	Apriori delay (usec)	-4.29250227778E+03	Resid mbdelay (usec)	2.13397E-03	+/- 3.9E-06
Sband delay (usec)	-4.29248450953E+03	Apriori clock (usec)	1.1887396E+01	Resid sbdelay (usec)	1.77683E-02	+/- 1.5E-05
Phase delay (usec)	-4.29250228483E+03	Apriori clockrate (us/s)	9.3436977E-08	Resid phdelay (usec)	-7.05608E-06	+/- 2.6E-08
Delay rate (us/s)	-1.56479864313E+00	Apriori rate (us/s)	-1.56479843105E+00	Resid rate (us/s)	-2.12081E-07	+/- 2.5E-10
Total phase (deg)	358.1	Apriori accel (us/s/s)	3.60875480914E-05	Resid phase (deg)	92.9	+/- 0.4

ph/seg (deg)	15.2	1.3	Search (1024X16)	7.486	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	12.7	2.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	2.8	0.4	Inc. seg. avg.	7.932	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	2.8	0.7	Inc. frq. avg.	7.673	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	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

h: az 257.9 el 42.0 pa 49.7 m: az 83.9 el 59.2 pa -84.9 u,v (fr/asec) 4791.818 1930.926 simultaneous interpolator

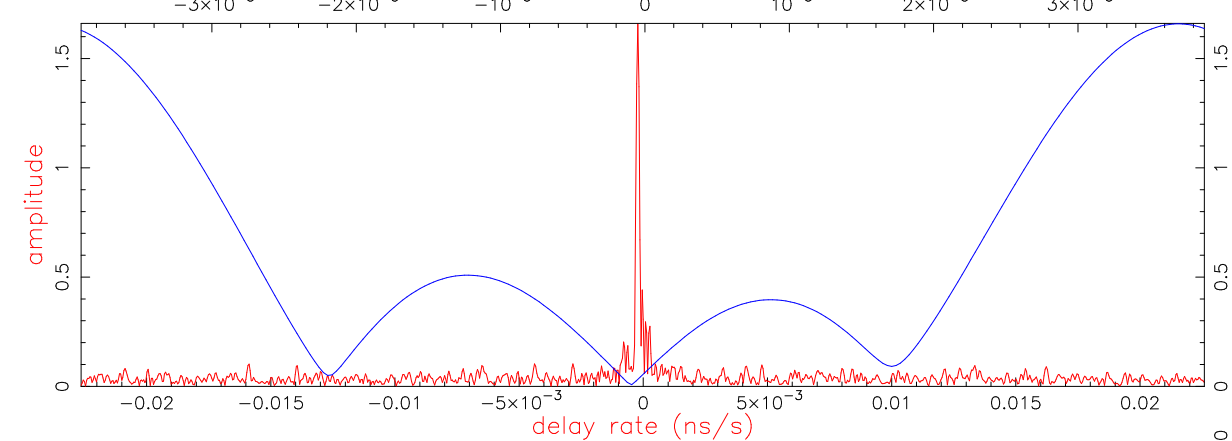
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hm..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hm.Q.73.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hm

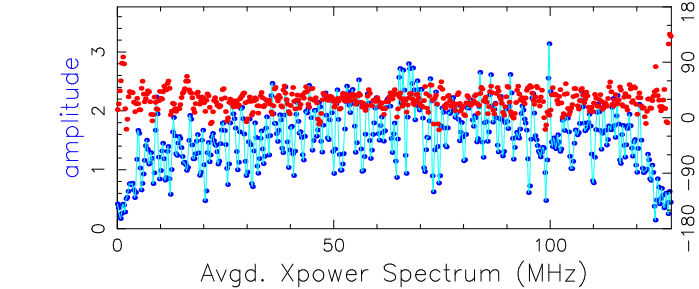
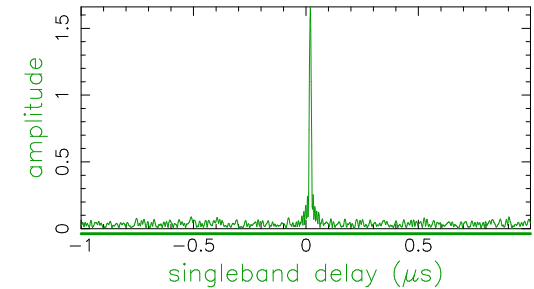
VLBA_HN - VLBA_MK, fgroup Q, pol LR



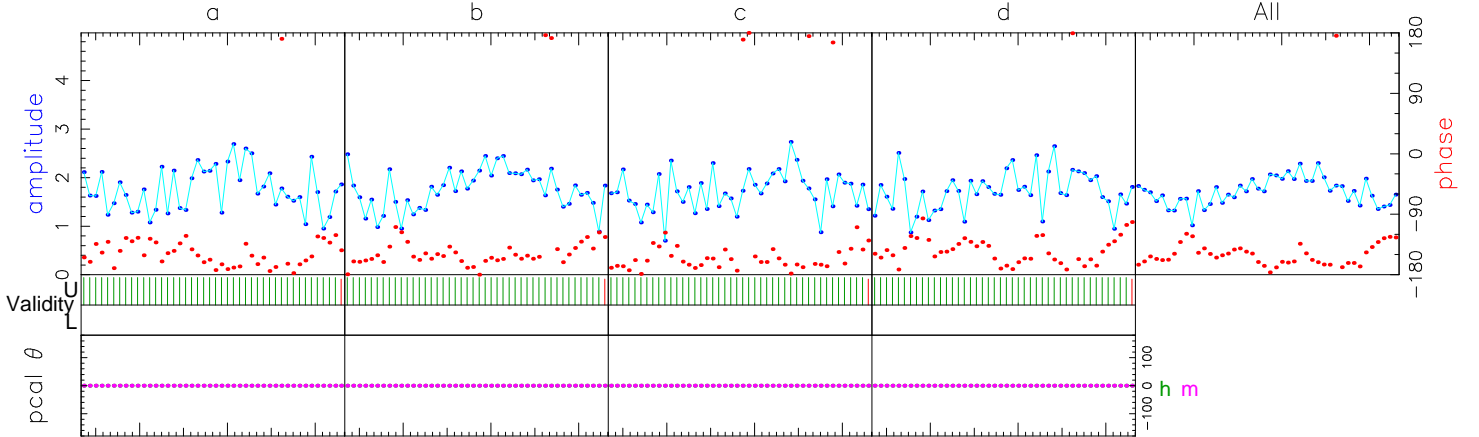
Fringe quality 9

SNR 60.9
 Int time 179.979
 Amp 1.661
 Phase 331.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.019278
 MBD -0.004132
 Fringe rate (Hz)
 -0.009142
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103152
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"



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



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

Group delay (usec) (SBD)	-4.29248297181E+03	Apriori delay (usec)	-4.29250227778E+03	Resid mbdelay (usec)	-4.13153E-03	+/- 1.8E-05
Sband delay (usec)	-4.29248300003E+03	Apriori clock (usec)	1.1887396E+01	Resid sbdelay (usec)	1.92777E-02	+/- 7.1E-05
Phase delay (usec)	-4.29250228760E+03	Apriori clockrate (us/s)	9.3436977E-08	Resid phdelay (usec)	-9.82505E-06	+/- 1.2E-07
Delay rate (us/s)	-1.56479864296E+00	Apriori rate (us/s)	-1.56479843105E+00	Resid rate (us/s)	-2.11911E-07	+/- 1.2E-09
Total phase (deg)	236.4	Apriori accel (us/s/s)	3.60875480914E-05	Resid phase (deg)	331.2	+/- 1.9

ph/seg (deg) 15.2 6.2 Search (1024X16) 1.618 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 16.6 10.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 6.6 1.9 Inc. seg. avg. 1.705 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 1.6 3.3 Inc. frq. avg. 1.663 Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us dr window (ns/s) -0.023 0.023
 h: az 257.9 el 42.0 pa 49.7 m: az 83.9 el 59.2 pa -84.9 u,v (fr/asec) 4791.818 1930.926 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hm..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hm.Q.89.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

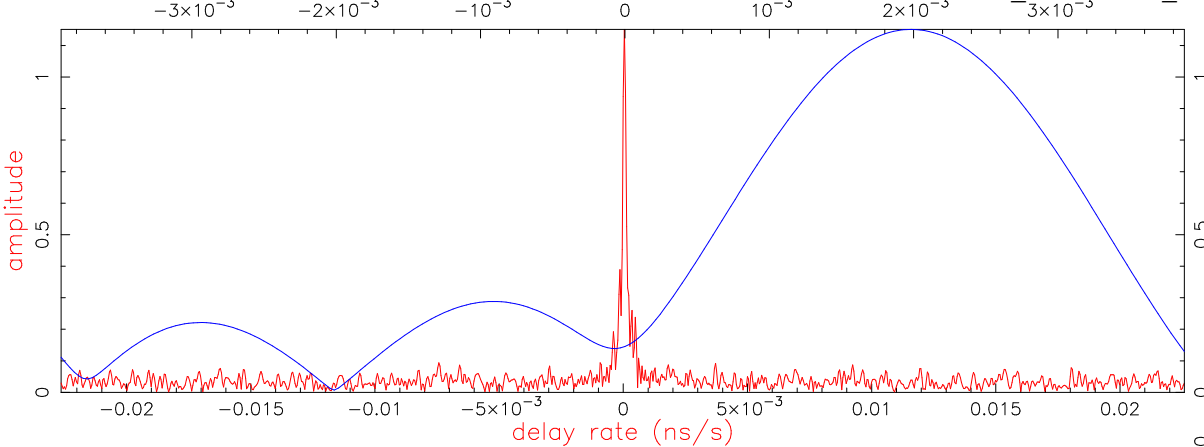
aux01

OJ287.3N2DRU, No0676, hn

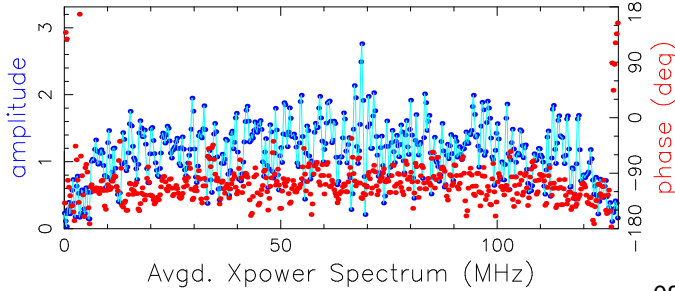
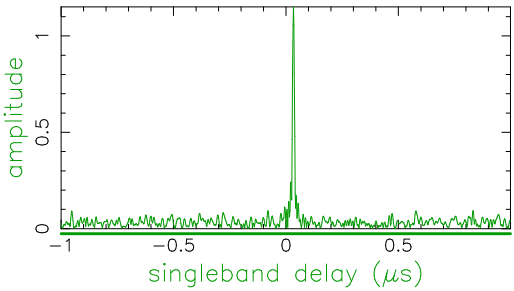
VLBA_HN - VLBA_NL, fgroup Q, pol RL

multiband delay (μ s)

Fringe quality 8

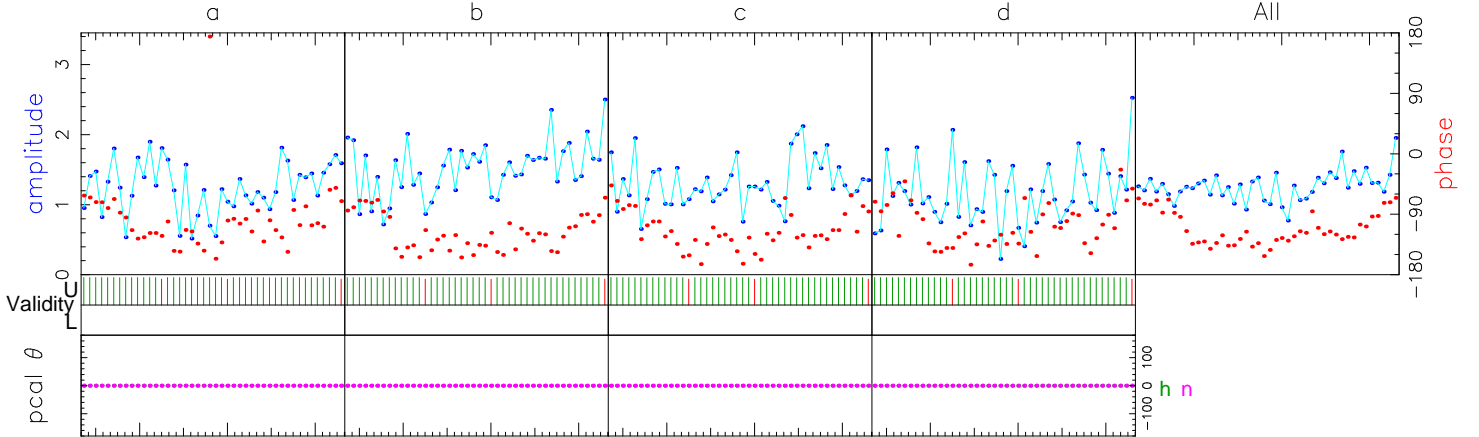


SNR 42.2
 Int time 179.297
 Amp 1.151
 Phase 294.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.033184
 MBD 0.001981
 Fringe rate (Hz) 0.002674
 Ion TEC 0.000
 Ref freq (MHz) 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103155
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-103.7	-118.0	-114.3	-104.6	Phase	-110.8
	1.1	1.4	1.2	1.0	Ampl.	1.2
	529.5	529.9	530.5	529.9	Sbd box	530.0
U/L	352/0	352/0	352/0	352/0	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	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-3.41762566800E+03	Apriori delay (usec)	-3.41765889935E+03	Resid mbdelay (usec)	1.98134E-03	+/-	2.6E-05
Sband delay (usec)	-3.41762571572E+03	Apriori clock (usec)	1.2688753E+01	Resid sbdelay (usec)	3.31836E-02	+/-	1.0E-04
Phase delay (usec)	-3.41765890648E+03	Apriori clockrate (us/s)	-2.1832297E-07	Resid phdelay (usec)	-7.13220E-06	+/-	1.8E-07
Delay rate (us/s)	-2.61708741718E-01	Apriori rate (us/s)	-2.61708803696E-01	Resid rate (us/s)	6.19774E-08	+/-	1.7E-09
Total phase (deg)	323.8	Apriori accel (us/s/s)	1.88203212598E-05	Resid phase (deg)	294.2	+/-	2.7

ph/seg (deg)	24.3	Theor.	9.0	Amplitude	1.151 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	20.3		15.7	Search (1024X16)	1.115	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	8.8		2.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	11.5		4.7	Inc. seg. avg.	1.247	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	1.157	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

h: az 257.9 el 42.0 pa 49.7 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) 808.011 330.395 simultaneous interpolator

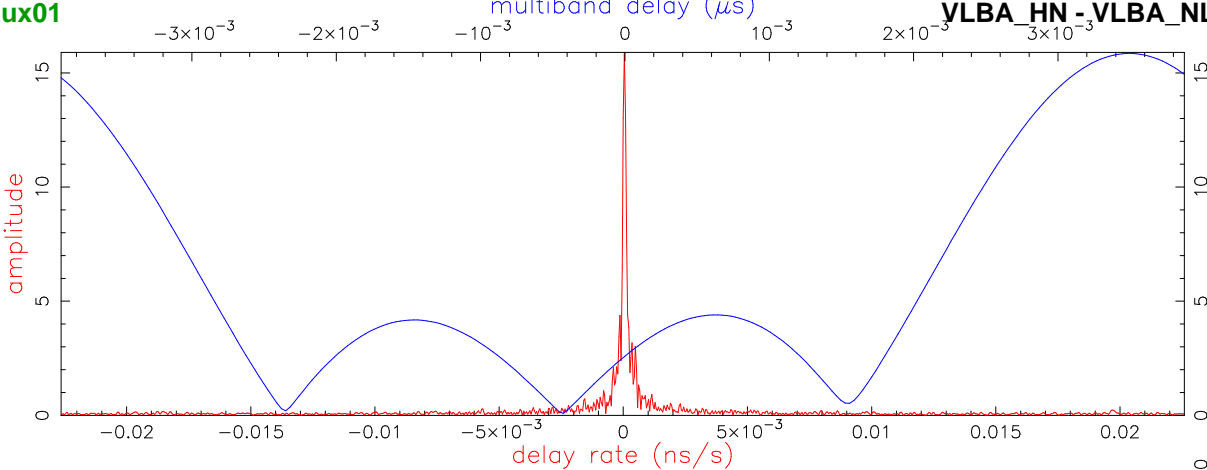
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hn.Q.110.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

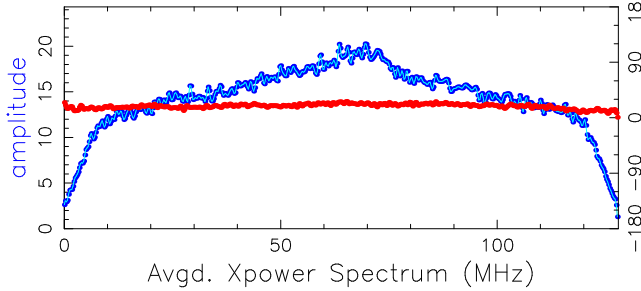
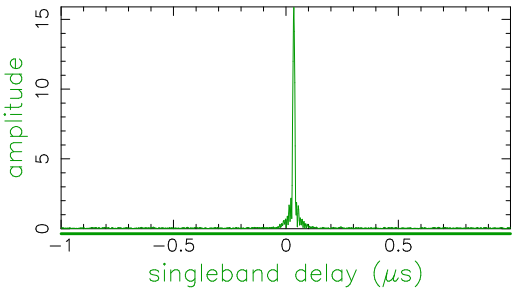
OJ287.3N2DRU, No0676, hn

VLBA_HN - VLBA_NL, fgroup Q, pol LL



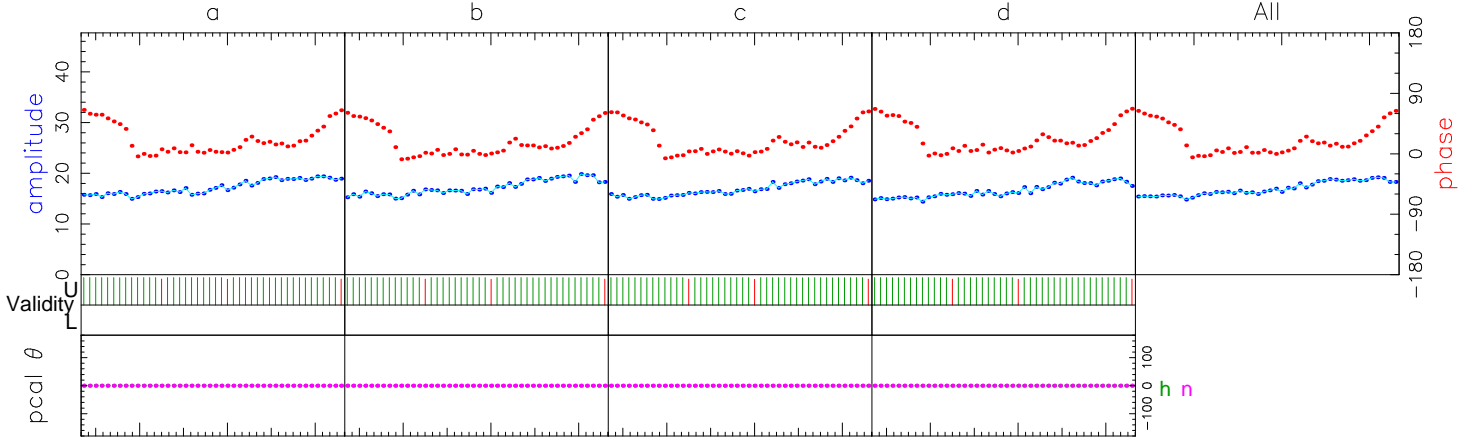
Fringe quality 8

SNR 582.1
 Int time 179.297
 Amp 15.897
 Phase 65.8
 PFD 0.0e+00
 Delays (us)
 SBD 0.034784
 MBD 0.003478
 Fringe rate (Hz)
 0.002565
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103148
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
h	1000	1000	1000	1000	APs used	
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	ManI 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)	-3.41762417103E+03	Apriori delay (usec)	-3.41765889935E+03	Resid mbdelay (usec)	3.47831E-03	+/- 1.9E-06
Sband delay (usec)	-3.41762411535E+03	Apriori clock (usec)	1.2688753E+01	Resid sbdelay (usec)	3.47840E-02	+/- 7.4E-06
Phase delay (usec)	-3.41765889801E+03	Apriori clockrate (us/s)	-2.1832297E-07	Resid phdelay (usec)	1.33664E-06	+/- 1.3E-08
Delay rate (us/s)	-2.61708744234E-01	Apriori rate (us/s)	-2.61708803696E-01	Resid rate (us/s)	5.94619E-08	+/- 1.2E-10
Total phase (deg)	95.4	Apriori accel (us/s/s)	1.88203212598E-05	Resid phase (deg)	65.8	+/- 0.2

ph/seg (deg)	21.5	0.7	Search (1024X16)	15.466	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	10.8	1.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	2.9	0.2	Inc. seg. avg.	16.980	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	1.6	0.3	Inc. frq. avg.	15.861	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	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

h: az 257.9 el 42.0 pa 49.7 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) 808.011 330.395 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hn.Q.56.3N2DRU

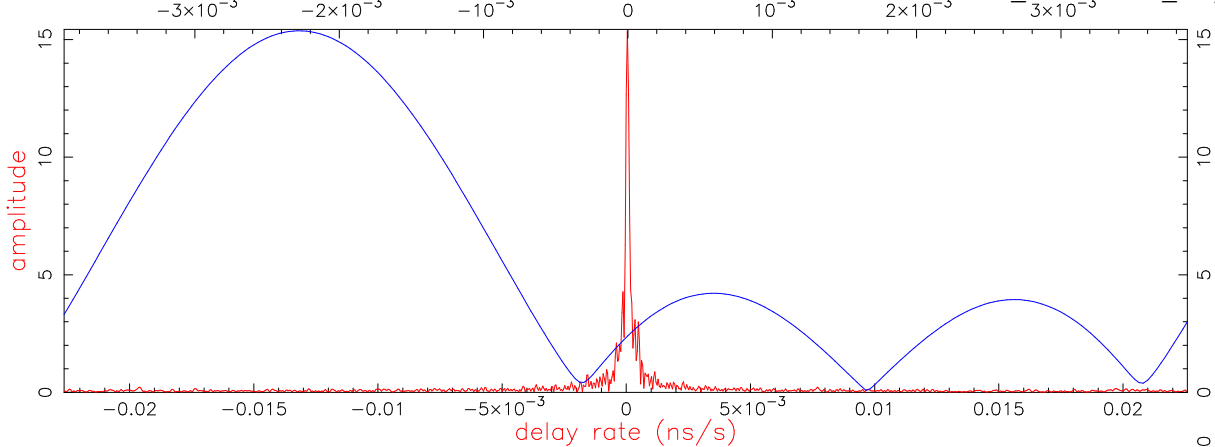
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hn

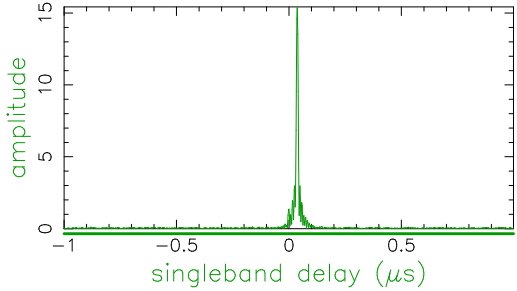
VLBA_HN - VLBA_NL, fgroup Q, pol RR

multiband delay (μ s)

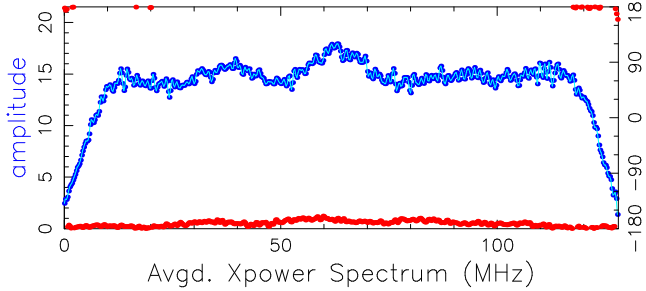


Fringe quality 8

SNR 565.1
 Int time 179.297
 Amp 15.434
 Phase 333.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.036688
 MBD -0.002302
 Fringe rate (Hz)
 0.002598
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



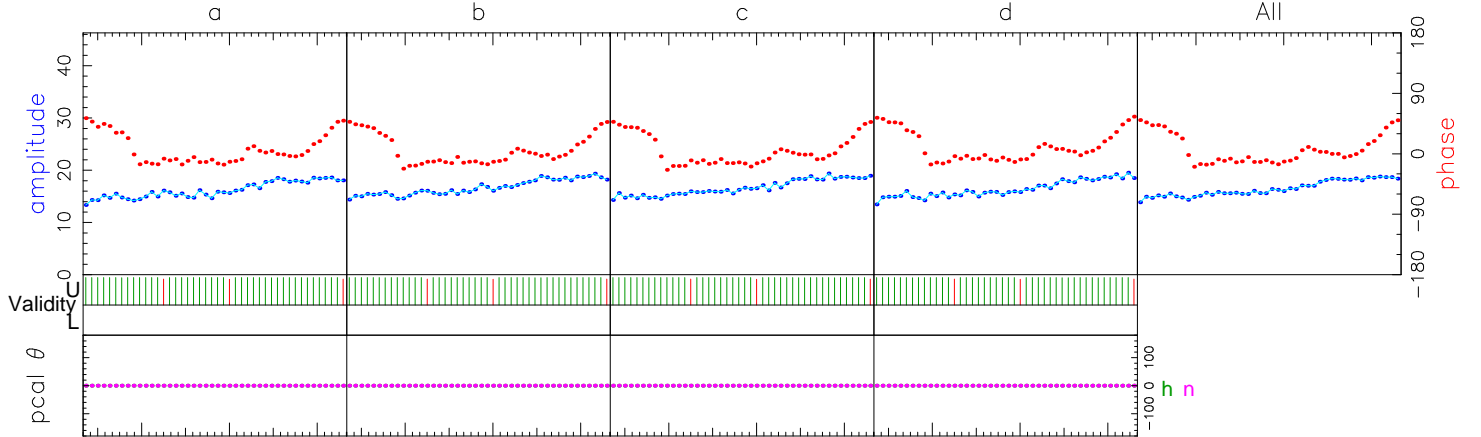
singleband delay (μ s)



Avgd. Xpower Spectrum (MHz)

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103151
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
h	1000	1000	1000	1000		
n	1000	1000	1000	1000		
h:n	0:0	0:0	0:0	0:0		
h:n	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
n	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UR	Q01UR	Q02UR	Q03UR		
Validity						
pcal θ						
Ampl.	7.0	5.3	4.4	10.9		6.8
Phase	15.1	15.6	15.5	15.3		15.4
Sbd box	531.6	531.7	532.0	531.8		531.8
APs used						
PC freqs						
PC freqs						
PC phase						
Manl PC						
PC amp						
Chan ids						
Tracks						
Chan ids						
Tracks						

Group delay (usec) (SBD)	-3.41762213860E+03	Apriori delay (usec)	-3.41765889935E+03	Resid mbdelay (usec)	-2.30175E-03	+/-	2.0E-06
Sband delay (usec)	-3.41762221097E+03	Apriori clock (usec)	1.2688753E+01	Resid sbdelay (usec)	3.66884E-02	+/-	7.6E-06
Phase delay (usec)	-3.41765889891E+03	Apriori clockrate (us/s)	-2.1832297E-07	Resid phdelay (usec)	4.40592E-07	+/-	1.3E-08
Delay rate (us/s)	-2.61708743478E-01	Apriori rate (us/s)	-2.61708803696E-01	Resid rate (us/s)	6.02174E-08	+/-	1.3E-10
Total phase (deg)	2.7	Apriori accel (us/s/s)	1.88203212598E-05	Resid phase (deg)	333.1	+/-	0.2

ph/seg (deg)	21.7	Theor.	0.7	Amplitude	15.434 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	11.6	Search (1024X16)	14.844	Search	14.844	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	3.5	Interp.	0.000	Inc. seg. avg.	16.491	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	1.3	Inc. frq. avg.	15.385	Inc. frq. avg.	15.385	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023 0.023	
h: az 257.9 el 42.0 pa 49.7		n: az 239.9 el 55.9 pa 43.6		u,v (fr/asec)	808.011 330.395	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00 0.00

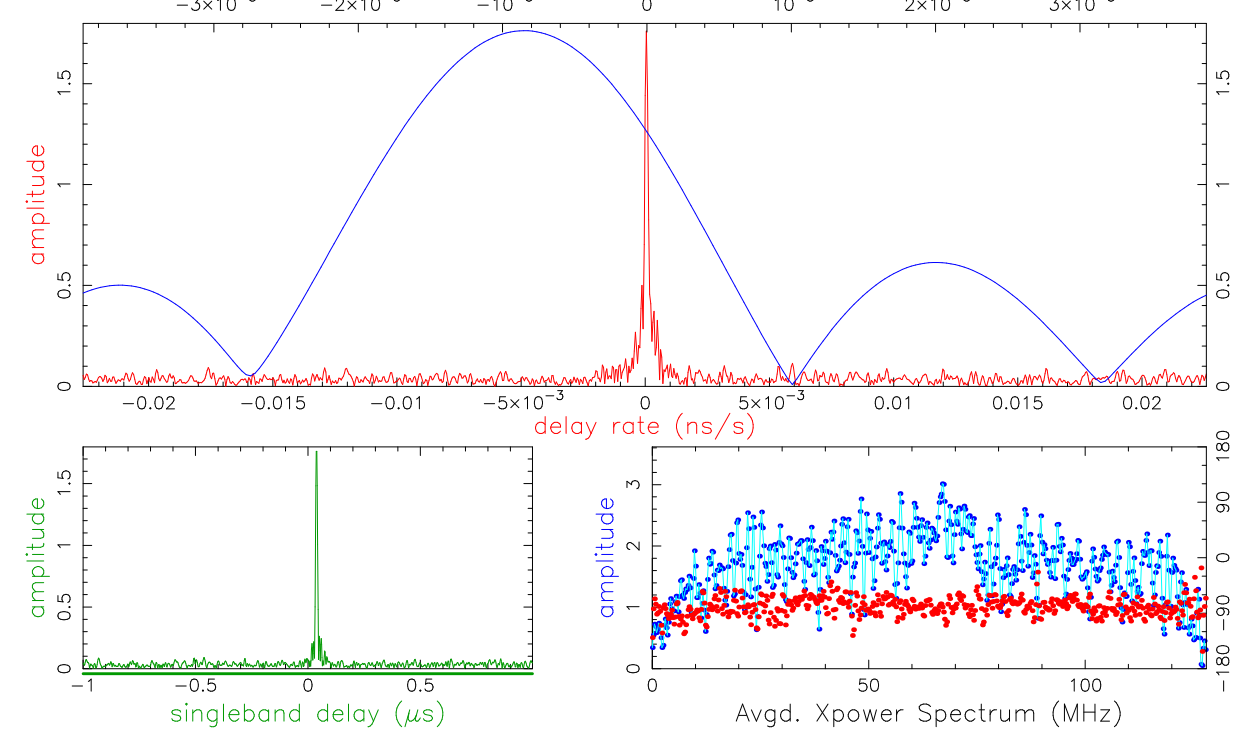
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hn.Q.80.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hn

VLBA_HN - VLBA_NL, fgroup Q, pol LR

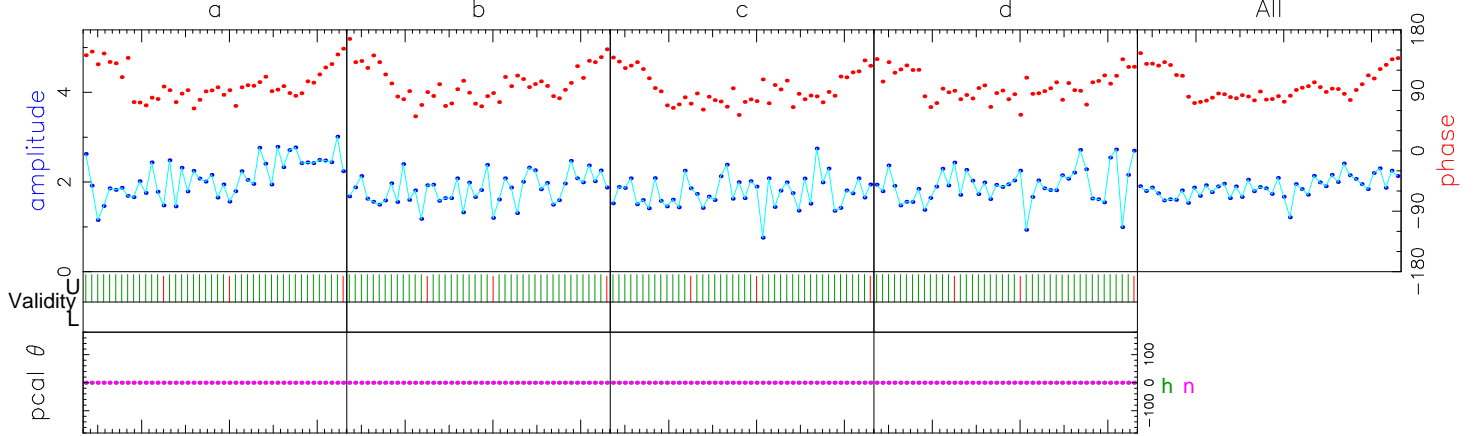


Fringe quality 9

SNR 65.9
 Int time 179.297
 Amp 1.799
 Phase 63.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.038099
 MBD -0.000801
 Fringe rate (Hz) 0.002622
 Ion TEC 0.000
 Ref freq (MHz) 43140.0000
 AP (sec) 0.512

Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build 2025:048:123813
 2025:049:103153
 2024:113:095956
 RA & Dec (J2000) 08h54m48.874931s +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
h	1000	1000	1000	1000		
n	1000	1000	1000	1000		
h:n	0:0	0:0	0:0	0:0		
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		

Group delay (usec) (SBD)	-3.41762063797E+03	Apriori delay (usec)	-3.41765889935E+03	Resid mbdelay (usec)	-8.01126E-04	+/- 1.7E-05
Sband delay (usec)	-3.41762080035E+03	Apriori clock (usec)	1.2688753E+01	Resid sbdelay (usec)	3.80990E-02	+/- 6.5E-05
Phase delay (usec)	-3.41765889309E+03	Apriori clockrate (us/s)	-2.1832297E-07	Resid phdelay (usec)	6.25631E-06	+/- 1.1E-07
Delay rate (us/s)	-2.61708742915E-01	Apriori rate (us/s)	-2.61708803696E-01	Resid rate (us/s)	6.07805E-08	+/- 1.1E-09
Total phase (deg)	93.0	Apriori accel (us/s/s)	1.88203212598E-05	Resid phase (deg)	63.4	+/- 1.7

	RMS	Theor.	Amplitude	1.799 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	21.4	5.8	Search (1024X16)	1.705	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	13.5	10.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.7	1.7	Inc. seg. avg.	1.879	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	6.9	3.0	Inc. frq. avg.	1.764	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

h: az 257.9 el 42.0 pa 49.7 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) 808.011 330.395 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hn.Q.95.3N2DRU

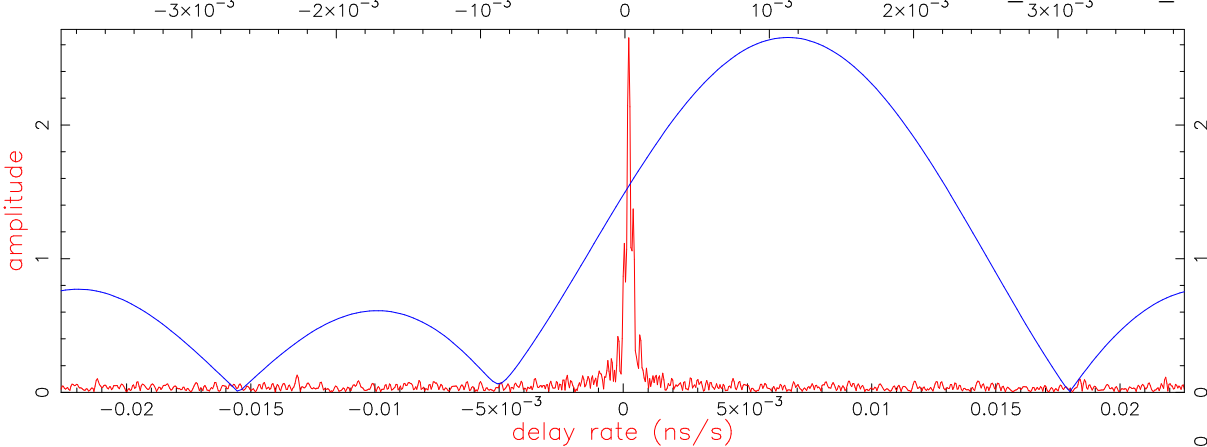
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, ho

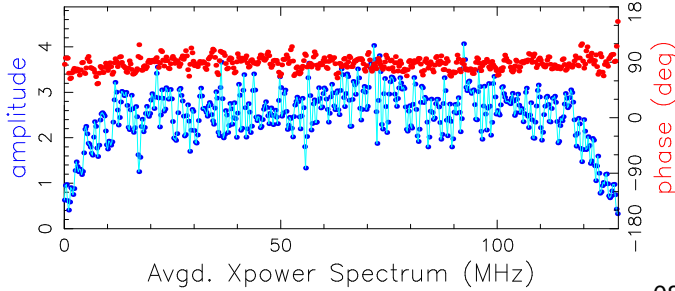
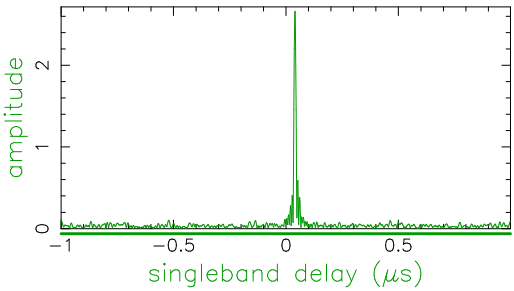
VLBA_HN - VLBA_OV, fgroup Q, pol LR

multiband delay (μ s)



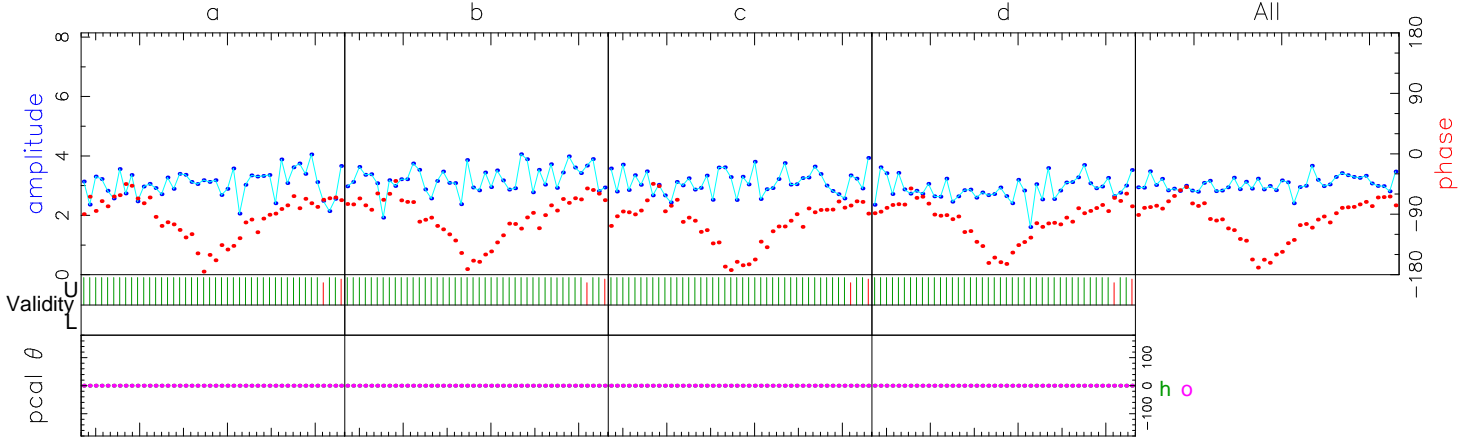
Fringe quality 7

SNR 99.4
 Int time 179.171
 Amp 2.715
 Phase 230.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.040072
 MBD 0.001177
 Fringe rate (Hz) 0.010228
 Ion TEC 0.000
 Ref freq (MHz) 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103154
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-93.0	-92.6	-101.6	-97.4	Phase	-96.1
2.7	2.7	2.7	2.6	Ampl.	2.7
533.9	533.5	533.5	533.2	Sbd box	533.5
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
h:o 0:0	0:0	0:0	0:0	PC phase	
h:o 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
h Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-6.17995466340E+03	Apriori delay (usec)	-6.17999490246E+03	Resid mbdelay (usec)	1.17656E-03	+/- 1.1E-05
Sband delay (usec)	-6.17995483008E+03	Apriori clock (usec)	-1.2669086E+01	Resid sbdelay (usec)	4.00724E-02	+/- 4.3E-05
Phase delay (usec)	-6.17999490865E+03	Apriori clockrate (us/s)	-4.0233507E-07	Resid phdelay (usec)	-6.18870E-06	+/- 7.4E-08
Delay rate (us/s)	-7.32391041825E-01	Apriori rate (us/s)	-7.32391278920E-01	Resid rate (us/s)	2.37095E-07	+/- 7.1E-10
Total phase (deg)	197.0	Apriori accel (us/s/s)	3.57311347046E-05	Resid phase (deg)	230.1	+/- 1.2

ph/seg (deg)	RMS 30.8	Theor. 3.8	Amplitude 2.715 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	15.3	6.7	Search (1024X16) 2.560	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	5.2	1.2	Interp. 0.000	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.3	2.0	Inc. seg. avg. 3.052	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00
h: az 257.9 el 42.0 pa 49.7	o: az 193.6 el 72.4 pa 12.2	u, v (fr/asec) 2252.653 823.824				simultaneous interpolator		

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/ho..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/ho.Q.104.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

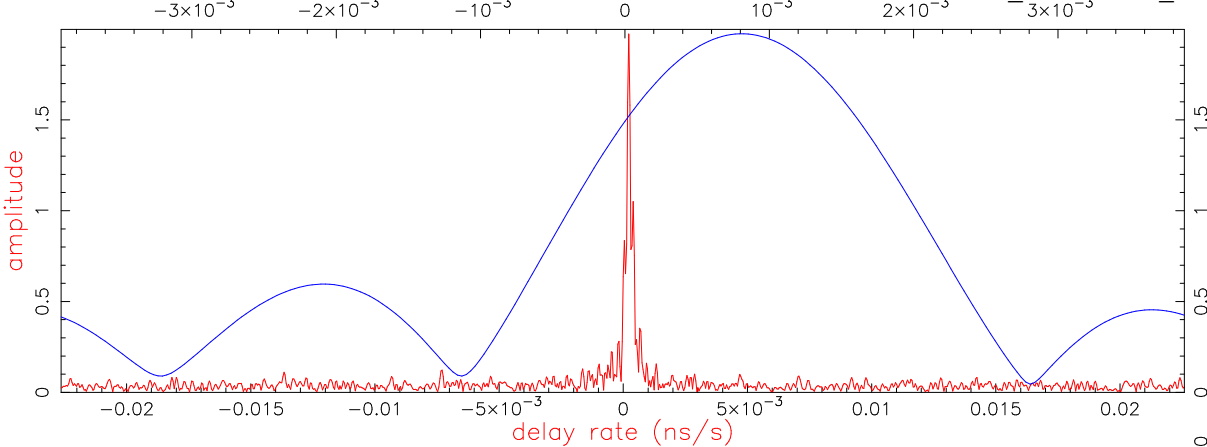
aux01

OJ287.3N2DRU, No0676, ho

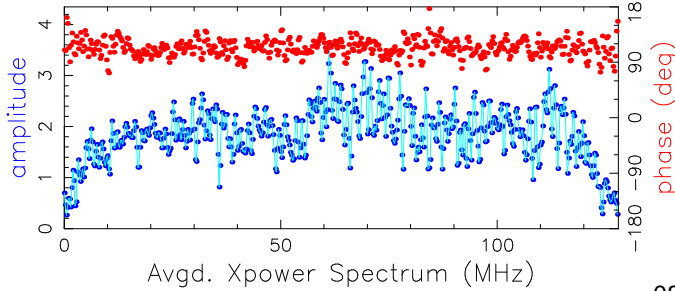
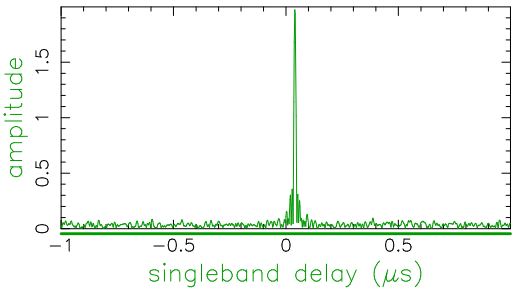
VLBA_HN - VLBA_OV, fgroup Q, pol RL

multiband delay (μ s)

Fringe quality 7

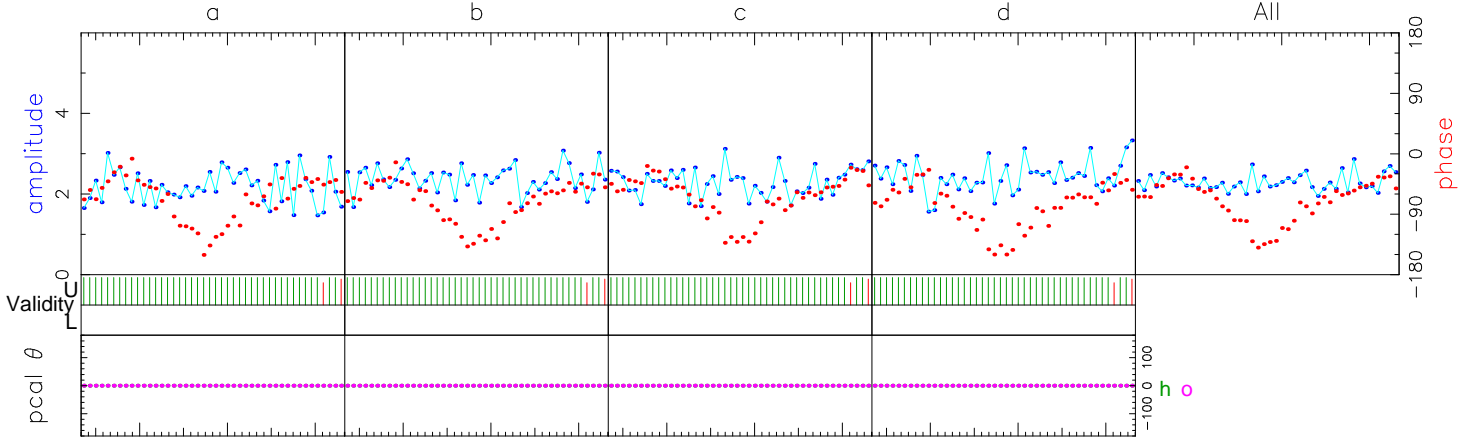


SNR 73.1
 Int time 179.171
 Amp 1.998
 Phase 257.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.039813
 MBD 0.000857
 Fringe rate (Hz) 0.010077
 Ion TEC 0.000
 Ref freq (MHz) 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103156
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-67.0	-69.5	-63.1	-76.3	Phase	-69.1
1.8	2.0	2.0	2.1	Ampl.	2.0
533.4	533.5	533.7	532.9	Sbd box	533.4
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
h:o 0:0	0:0	0:0	0:0	PC phase	
h:o 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-6.17995498278E+03	Apriori delay (usec)	-6.17999490246E+03	Resid mbdelay (usec)	8.57183E-04	+/- 1.5E-05
Sband delay (usec)	-6.17995508921E+03	Apriori clock (usec)	-1.2669086E+01	Resid sbdelay (usec)	3.98133E-02	+/- 5.9E-05
Phase delay (usec)	-6.17999490691E+03	Apriori clockrate (us/s)	-4.0233507E-07	Resid phdelay (usec)	-4.44995E-06	+/- 1.0E-07
Delay rate (us/s)	-7.32391045334E-01	Apriori rate (us/s)	-7.32391278920E-01	Resid rate (us/s)	2.33586E-07	+/- 9.7E-10
Total phase (deg)	224.0	Apriori accel (us/s/s)	3.57311347046E-05	Resid phase (deg)	257.1	+/- 1.6

ph/seg (deg)	RMS 31.5	Theor. 5.2	Amplitude Search (1024X16)	1.998 +/- 0.027	1.911	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	18.3	9.1	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)	6.8	1.6	Inc. seg. avg.	2.290	2.290	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.7	2.7	Inc. frq. avg.	1.979	1.979	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

h: az 257.9 el 42.0 pa 49.7 o: az 193.6 el 72.4 pa 12.2 u,v (fr/asec) 2252.653 823.824 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/ho..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/ho.Q.118.3N2DRU

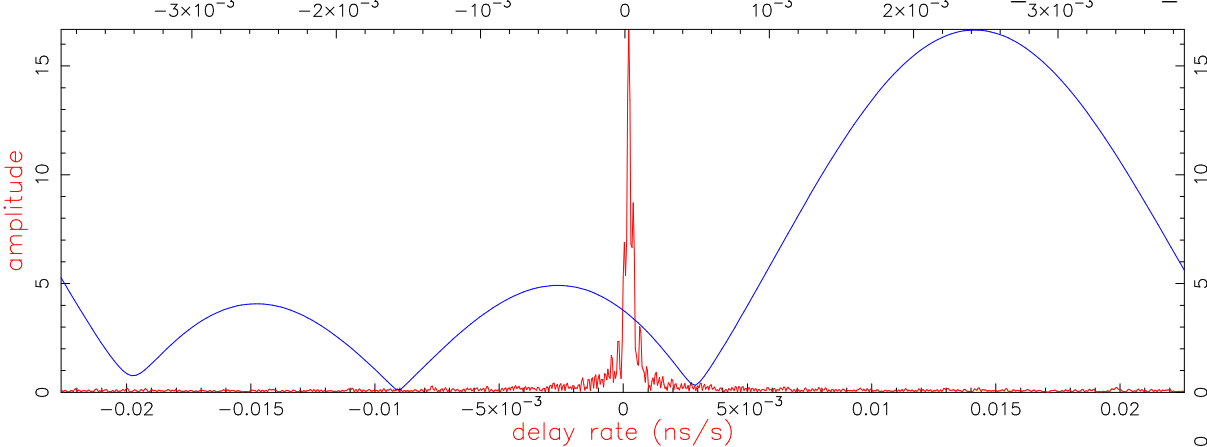
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, ho

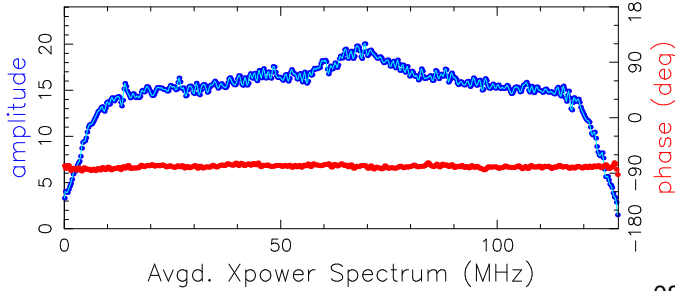
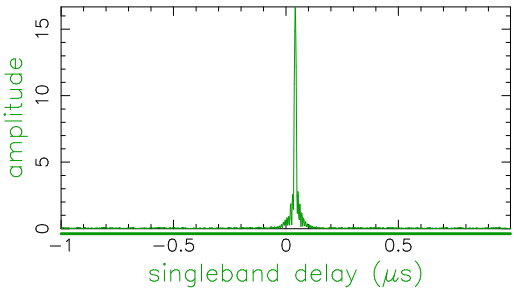
VLBA_HN - VLBA_OV, fgroup Q, pol LL

multiband delay (μ s)



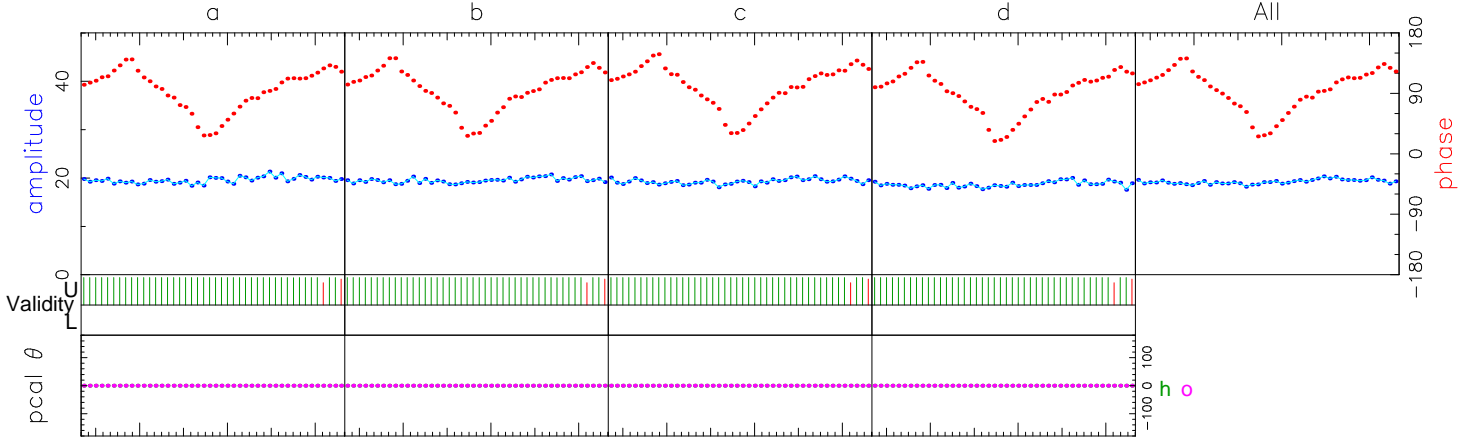
Fringe quality 7

SNR 610.6
 Int time 179.171
 Amp 16.682
 Phase 62.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.041307
 MBD 0.002437
 Fringe rate (Hz)
 0.010129
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103150
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
h	1000	1000	1000	1000		
o	1000	1000	1000	1000		
h:o	0:0	0:0	0:0	0:0		
h:0	0:0	0:0	0:0	0:0		
h	1000	1000	1000	1000		
o	1000	1000	1000	1000		
h	Q00UL	Q01UL	Q02UL	Q03UL		
o	Q00UL	Q01UL	Q02UL	Q03UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-6.17995340287E+03	Apriori delay (usec)	-6.17999490246E+03	Resid mbdelay (usec)	2.43709E-03	+/-	1.8E-06
Sband delay (usec)	-6.17995359508E+03	Apriori clock (usec)	-1.2669086E+01	Resid sbdelay (usec)	4.13074E-02	+/-	7.1E-06
Phase delay (usec)	-6.17999489625E+03	Apriori clockrate (us/s)	-4.0233507E-07	Resid phdelay (usec)	6.21003E-06	+/-	1.2E-08
Delay rate (us/s)	-7.32391044137E-01	Apriori rate (us/s)	-7.32391278920E-01	Resid rate (us/s)	2.34783E-07	+/-	1.2E-10
Total phase (deg)	29.6	Apriori accel (us/s/s)	3.57311347046E-05	Resid phase (deg)	62.7	+/-	0.2

ph/seg (deg)	31.0	0.6	Search (1024X16)	16.277	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	15.7	1.1	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)	5.0	0.2	Inc. seg. avg.	19.252	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	2.0	0.3	Inc. frq. avg.	16.681	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00
h: az 257.9 el 42.0 pa 49.7		o: az 193.6 el 72.4 pa 12.2		u,v (fr/asec) 2252.653 823.824					simultaneous interpolator

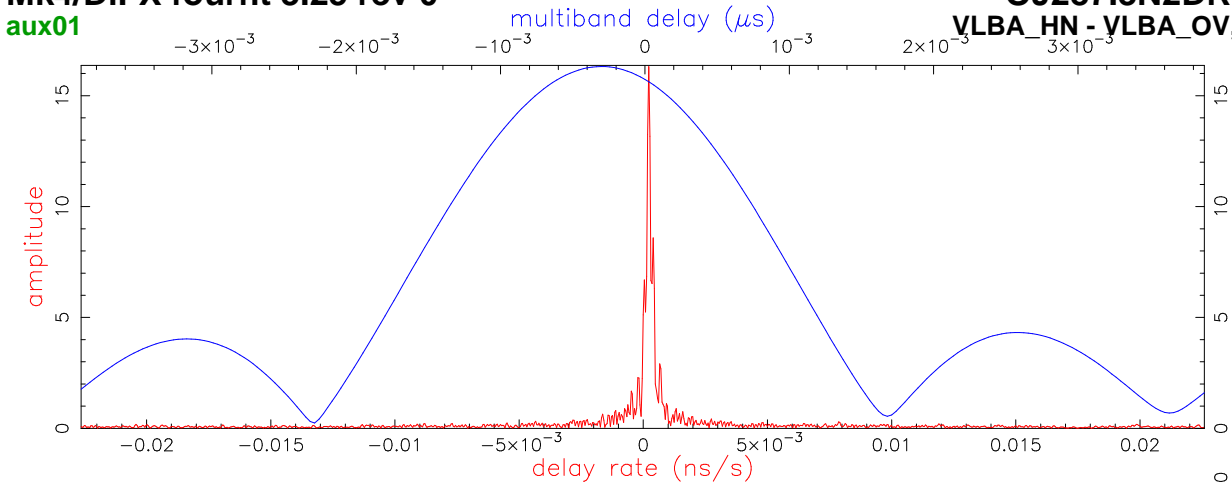
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/ho..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/ho.Q.70.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

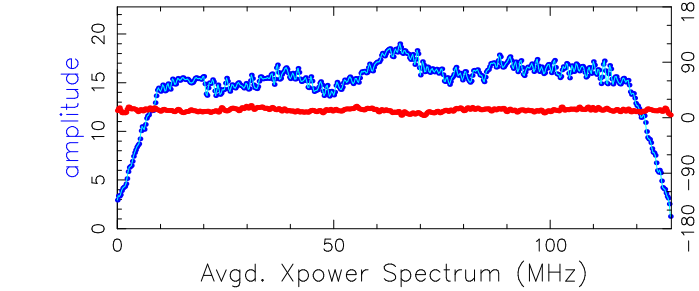
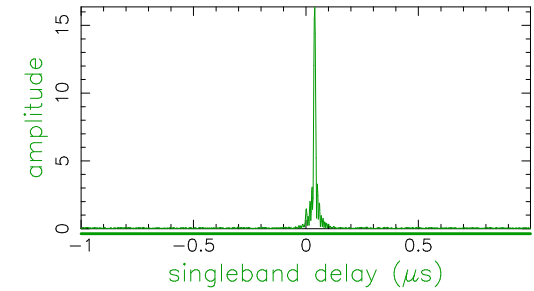
OJ287.3N2DRU, No0676, ho

VLBA_HN - VLBA_OV, fgroup Q, pol RR



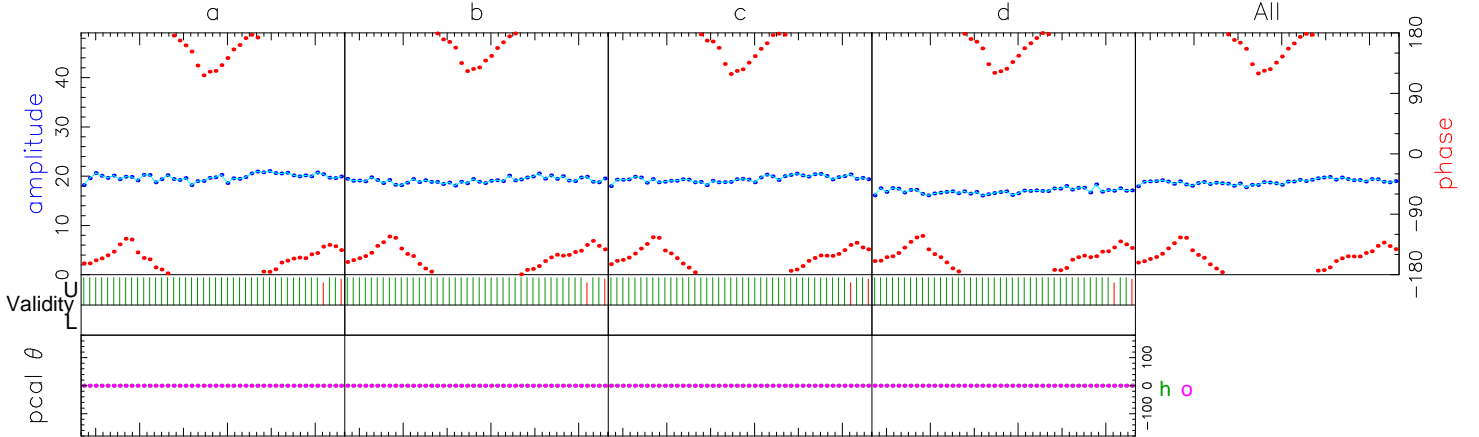
Fringe quality 7

SNR 599.1
 Int time 179.171
 Amp 16.368
 Phase 157.2
 PFD 0.0e+00
 Delays (us)
 SBD 0.038692
 MBD -0.000322
 Fringe rate (Hz)
 0.010174
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103152
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-171.5	-167.7	-168.9	-168.1	Phase	-169.1
17.2	16.6	16.8	14.7	Ampl.	16.3
533.2	532.6	533.1	532.2	Sbd box	532.8
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
h:o 0:0	0:0	0:0	0:0	PC phase	
h:o 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-6.17995616168E+03	Apriori delay (usec)	-6.17999490246E+03	Resid mbdelay (usec)	-3.21723E-04	+/- 1.9E-06
Sband delay (usec)	-6.17995621033E+03	Apriori clock (usec)	-1.2669086E+01	Resid sbdelay (usec)	3.86921E-02	+/- 7.2E-06
Phase delay (usec)	-6.17999491335E+03	Apriori clockrate (us/s)	-4.0233507E-07	Resid phdelay (usec)	-1.08883E-05	+/- 1.2E-08
Delay rate (us/s)	-7.32391043075E-01	Apriori rate (us/s)	-7.32391278920E-01	Resid rate (us/s)	2.35844E-07	+/- 1.2E-10
Total phase (deg)	124.0	Apriori accel (us/s/s)	3.57311347046E-05	Resid phase (deg)	157.2	+/- 0.2

RMS	Theor.	Amplitude	16.368 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	30.9	Search (1024X16)	15.736	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	15.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	2.1	Inc. seg. avg.	18.845	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	6.0	Inc. frq. avg.	16.321	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

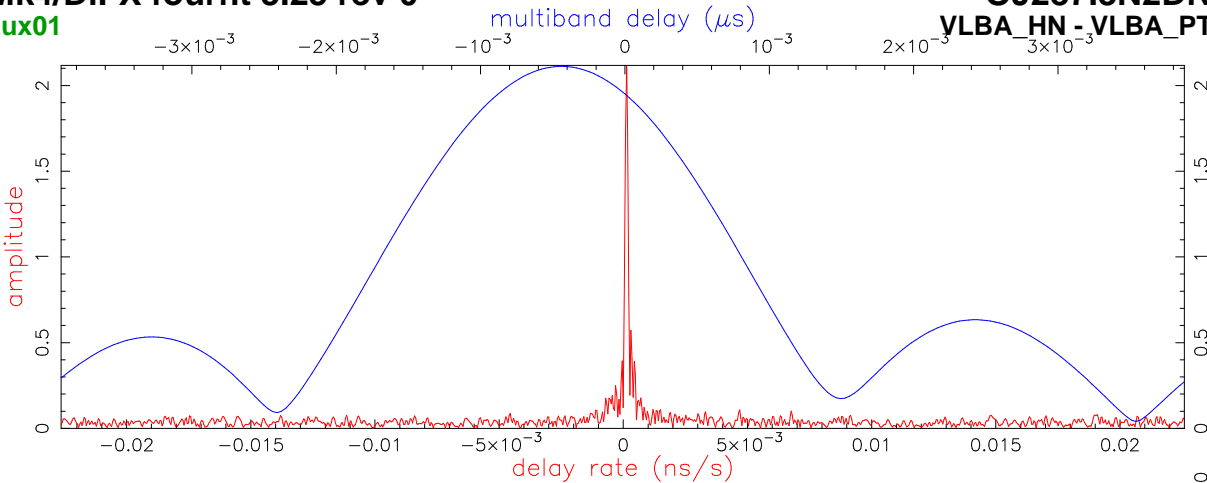
h: az 257.9 el 42.0 pa 49.7 o: az 193.6 el 72.4 pa 12.2 u,v (fr/asec) 2252.653 823.824 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/ho..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/ho.Q.90.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

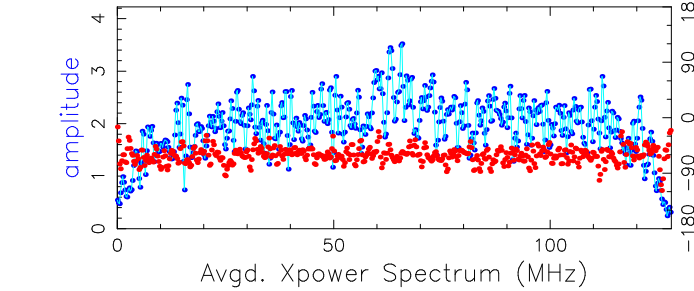
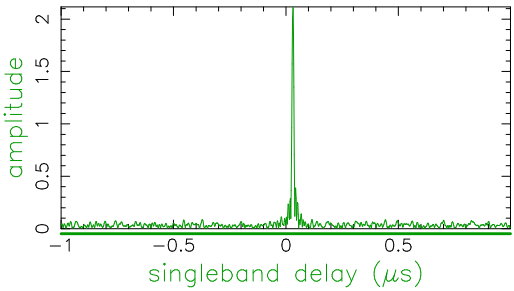
aux01

OJ287.3N2DRU, No0676, hp
VLBA_HN - VLBA_PT, fgroup Q, pol LR



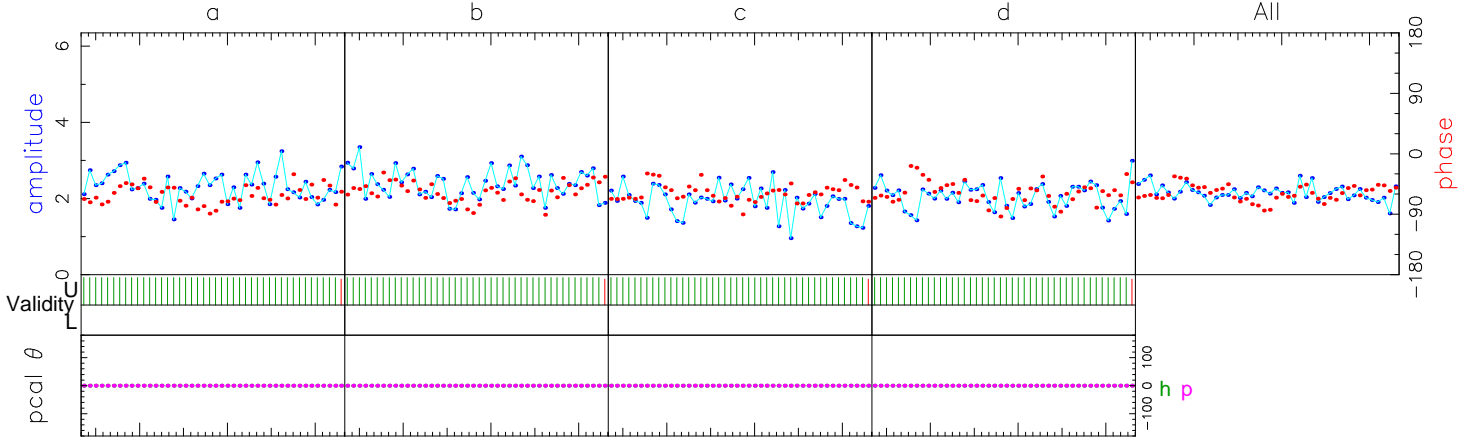
Fringe quality 8

SNR 77.7
Int time 179.980
Amp 2.117
Phase 346.4
PFD 0.0e+00
Delays (us)
SBD 0.030893
MBD -0.000455
Fringe rate (Hz)
0.005161
Ion TEC 0.000
Ref freq (MHz)
43140.0000
AP (sec) 0.512



Exp. c241c
Exper # 1234
Yr:day 2024:113
Start 030520.00
Stop 030820.22
FRT 030650.00
Corr/FF/build
2025:048:123813
2025:049:103156
2024:113:095956
RA & Dec (J2000)
08h54m48.874931s
+20°06'30.640823"

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



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

Group delay (usec) (SBD)	-5.94145764699E+03	Apriori delay (usec)	-5.94148844177E+03	Resid mbdelay (usec)	-4.55221E-04	+/-	1.4E-05
Sband delay (usec)	-5.94145754914E+03	Apriori clock (usec)	6.6931534E+00	Resid sbdelay (usec)	3.08926E-02	+/-	5.5E-05
Phase delay (usec)	-5.94148844554E+03	Apriori clockrate (us/s)	-2.9976000E-07	Resid phdelay (usec)	-3.77080E-06	+/-	9.5E-08
Delay rate (us/s)	-5.18361466396E-01	Apriori rate (us/s)	-5.18361586035E-01	Resid rate (us/s)	1.19640E-07	+/-	9.1E-10
Total phase (deg)	210.4	Apriori accel (us/s/s)	3.61639582670E-05	Resid phase (deg)	346.4	+/-	1.5

ph/seg (deg)	11.6	Theor.	4.9	Amplitude	2.117 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	9.6		8.5	Search (1024X16)	2.071	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	3.3		1.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	9.2		2.6	Inc. seg. avg.	2.147	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
				Inc. frq. avg.	2.113	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite

h: az 257.9 el 42.0 pa 49.7 p: az 225.7 el 70.8 pa 39.5 u,v (fr/asec) 1599.194 1004.139 simultaneous interpolator

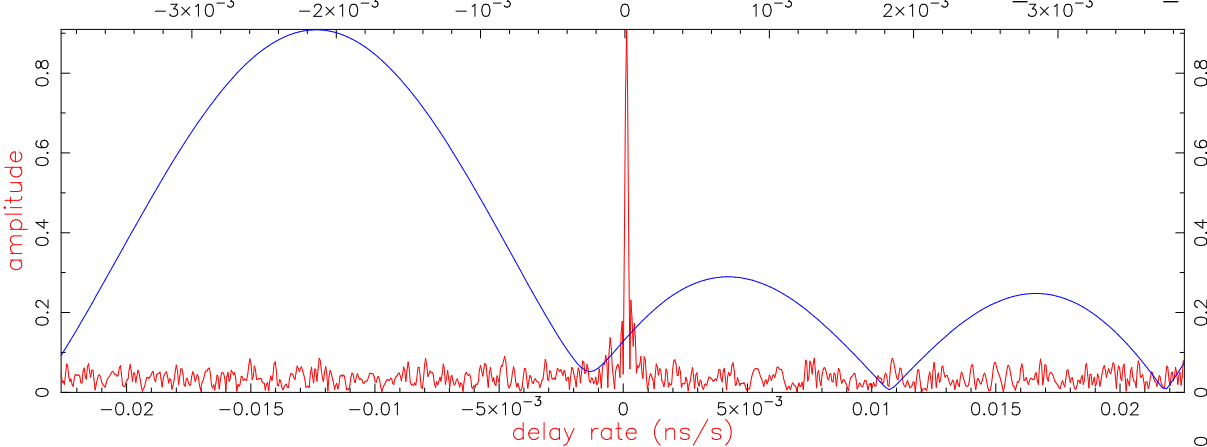
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hp..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hp.Q.113.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

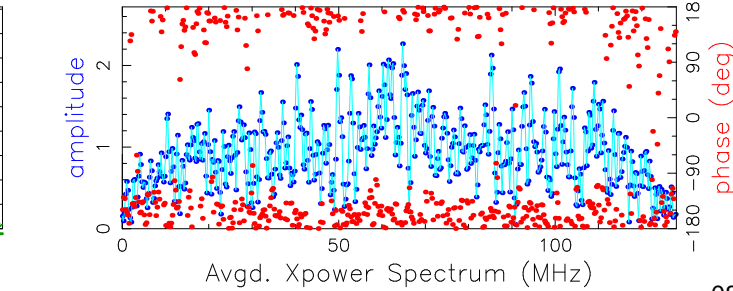
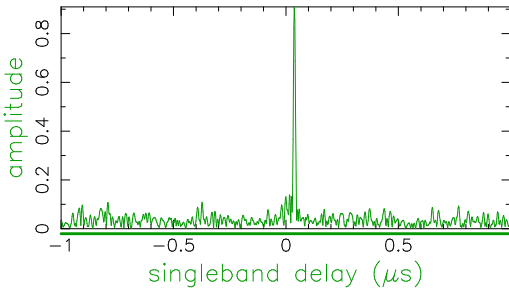
OJ287.3N2DRU, No0676, hp
VLBA_HN - VLBA_PT, fgroup Q, pol RL

multiband delay (μ s)



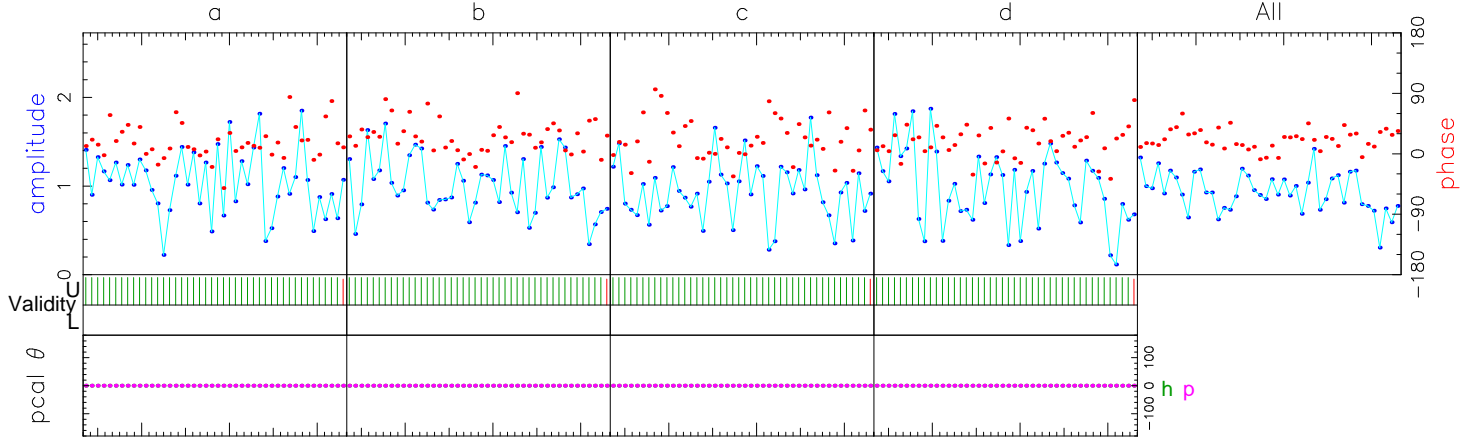
Fringe quality 9

SNR 33.4
Int time 179.980
Amp 0.910
Phase 347.5
PFD 0.0e+00
Delays (us)
SBD 0.037346
MBD -0.002131
Fringe rate (Hz)
0.005196
Ion TEC 0.000
Ref freq (MHz)
43140.0000
AP (sec) 0.512



Exp. c241c
Exper # 1234
Yr:day 2024:113
Start 030520.00
Stop 030820.22
FRT 030650.00
Corr/FF/build
2025:048:123813
2025:049:103158
2024:113:095956
RA & Dec (J2000)
08h54m48.874931s
+20°06'30.640823"

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



42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
18.6	26.4	21.2	18.7	Phase	21.2
1.0	0.9	0.8	0.9	Ampl.	0.9
532.0	532.0	532.6	531.8	Sbd box	532.1
U/L 352/0	352/0	352/0	352/0	APs used	
h 1000	1000	1000	1000	PC freqs	
p 1000	1000	1000	1000	PC freqs	
h:p 0:0	0:0	0:0	0:0	PC phase	
h:p 0:0	0:0	0:0	0:0	Manl PC	
h 1000	1000	1000	1000	PC amp	
p 1000	1000	1000	1000		
h Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-5.94145151040E+03	Apriori delay (usec)	-5.94148844177E+03	Resid mbdelay (usec)	-2.13113E-03	+/-	3.3E-05
Sband delay (usec)	-5.94145109552E+03	Apriori clock (usec)	6.6931534E+00	Resid sbdelay (usec)	3.73463E-02	+/-	1.3E-04
Phase delay (usec)	-5.94148844040E+03	Apriori clockrate (us/s)	-2.9976000E-07	Resid phdelay (usec)	1.36507E-06	+/-	2.2E-07
Delay rate (us/s)	-5.18361465592E-01	Apriori rate (us/s)	-5.18361586035E-01	Resid rate (us/s)	1.20443E-07	+/-	2.1E-09
Total phase (deg)	211.4	Apriori accel (us/s/s)	3.61639582670E-05	Resid phase (deg)	347.5	+/-	3.4

ph/seg (deg)	14.9	Theor.	11.4	Amplitude	0.910 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	24.1		19.9	Search (1024X16)	0.880	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	4.5		3.4	Inc. seg. avg.	0.920	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.9		6.0	Inc. frq. avg.	0.908	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

h: az 257.9 el 42.0 pa 49.7 p: az 225.7 el 70.8 pa 39.5 u,v (fr/asec) 1599.194 1004.139 simultaneous interpolator

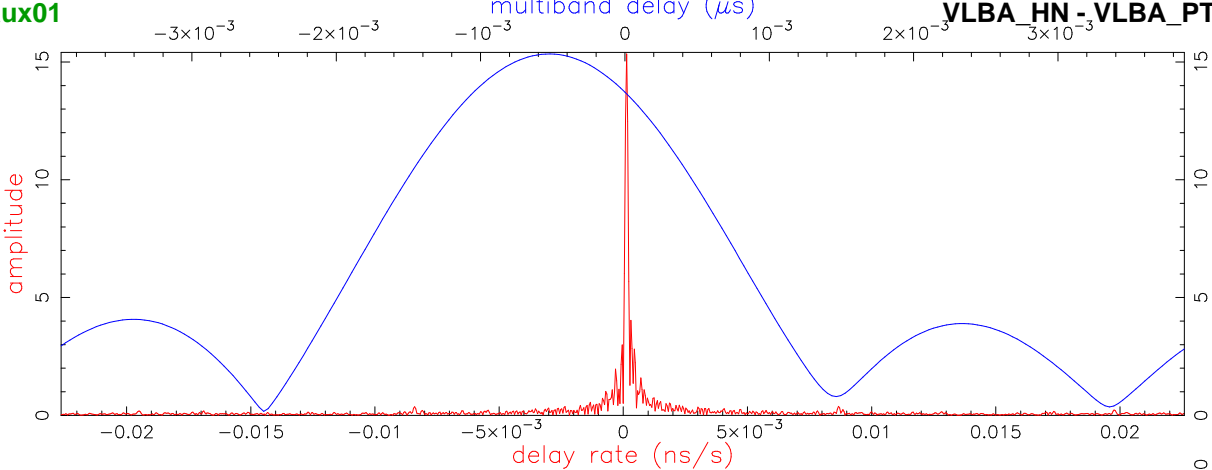
Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hp..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hp.Q.134.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

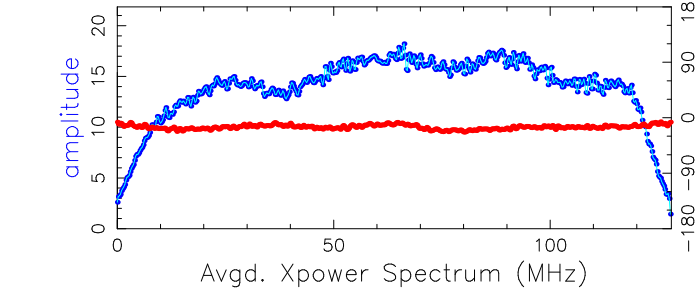
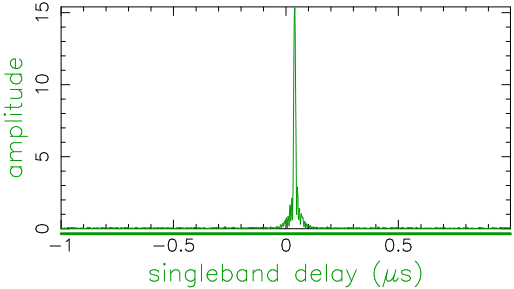
OJ287.3N2DRU, No0676, hp

VLBA_HN - VLBA_PT, fgroup Q, pol LL



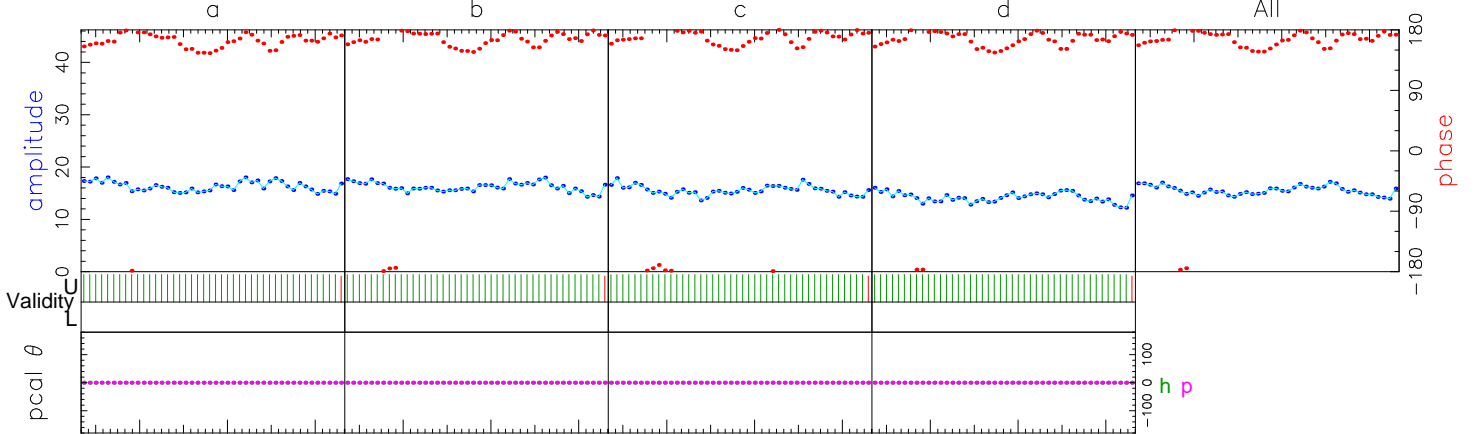
Fringe quality 9

SNR 565.2
 Int time 179.980
 Amp 15.407
 Phase 132.9
 PFD 0.0e+00
 Delays (us)
 SBD 0.038612
 MBD -0.000546
 Fringe rate (Hz)
 0.005155
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103149
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



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

Group delay (usec) (SBD)	-5.94144992555E+03	Apriori delay (usec)	-5.94148844177E+03	Resid mbdelay (usec)	-5.46284E-04	+/-	2.0E-06
Sband delay (usec)	-5.94144982989E+03	Apriori clock (usec)	6.6931534E+00	Resid sbdelay (usec)	3.86119E-02	+/-	7.6E-06
Phase delay (usec)	-5.94148843104E+03	Apriori clockrate (us/s)	-2.9976000E-07	Resid phdelay (usec)	1.07275E-05	+/-	1.3E-08
Delay rate (us/s)	-5.18361466551E-01	Apriori rate (us/s)	-5.18361586035E-01	Resid rate (us/s)	1.19484E-07	+/-	1.3E-10
Total phase (deg)		Apriori accel (us/s/s)	3.61639582670E-05	Resid phase (deg)	132.9	+/-	0.2

ph/seg (deg) 9.9 0.7 Search (1024X16) 15.039 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 5.4 1.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 2.9 0.2 Inc. seg. avg. 15.565 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.004 0.004
 amp/frq (%) 5.4 0.4 Inc. frq. avg. 15.349 Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us dr window (ns/s) -0.023 0.023
 h: az 257.9 el 42.0 pa 49.7 p: az 225.7 el 70.8 pa 39.5 u,v (fr/asec) 1599.194 1004.139 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hp..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hp.Q.62.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

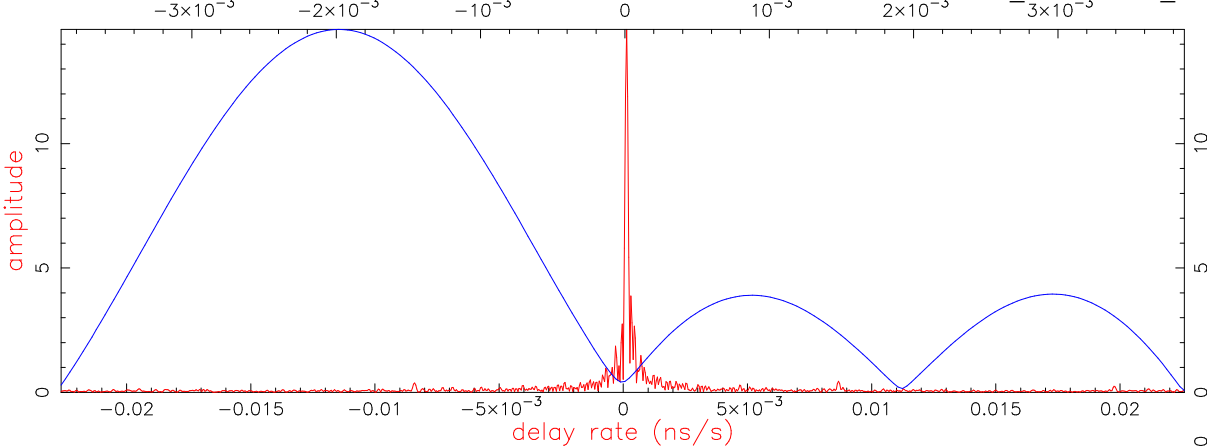
aux01

OJ287.3N2DRU, No0676, hp

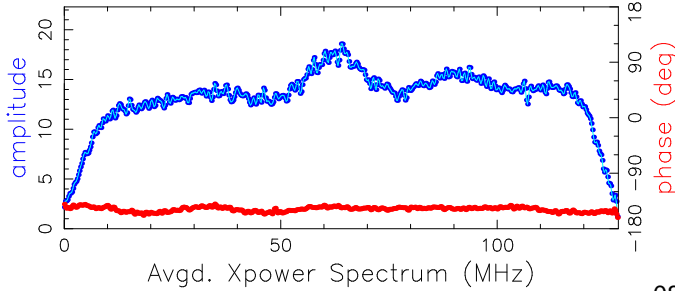
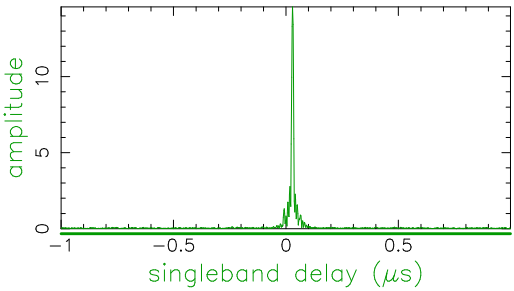
VLBA_HN - VLBA_PT, fgroup Q, pol RR

multiband delay (μ s)

Fringe quality 9

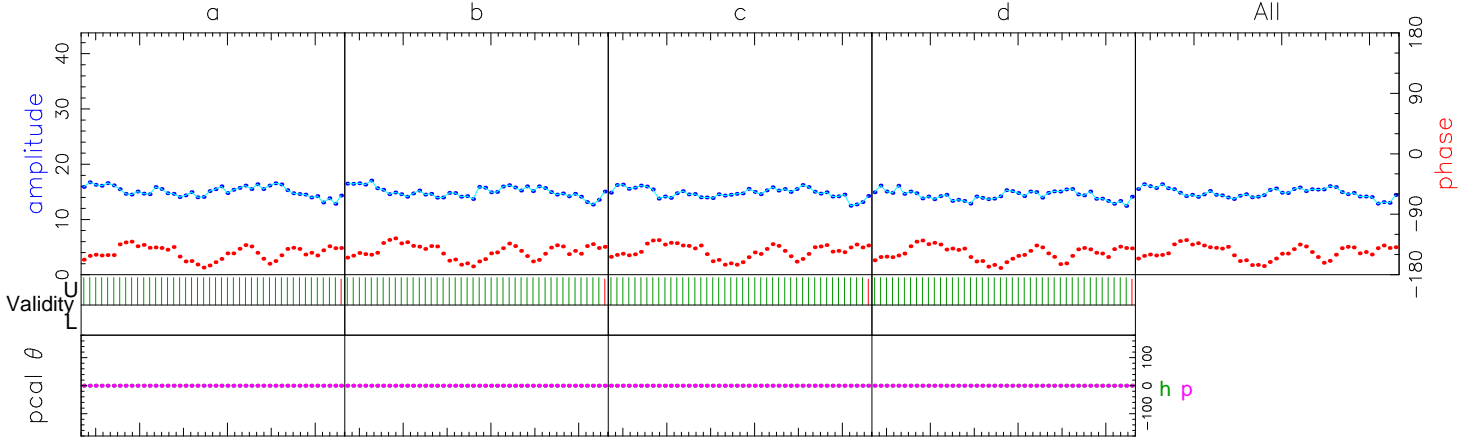


SNR 535.4
 Int time 179.980
 Amp 14.595
 Phase 258.3
 PFD 0.0e+00
 Delays (us)
 SBD 0.029342
 MBD -0.001980
 Fringe rate (Hz)
 0.005159
 Ion TEC 0.000
 Ref freq (MHz)
 43140.0000
 AP (sec) 0.512



Exp. c241c
 Exper # 1234
 Yr:day 2024:113
 Start 030520.00
 Stop 030820.22
 FRT 030650.00
 Corr/FF/build
 2025:048:123813
 2025:049:103151
 2024:113:095956
 RA & Dec (J2000)
 08h54m48.874931s
 +20°06'30.640823"

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



	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
	-147.8	-145.5	-145.3	-148.2	Phase	-146.7
	14.9	14.8	14.6	14.1	Ampl.	14.6
	528.0	527.9	528.2	527.9	Sbd box	528.0
U/L	352/0	352/0	352/0	352/0	APs used	
h	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	PC freqs	
h:p	0:0	0:0	0:0	0:0	PC phase	
h:p	0:0	0:0	0:0	0:0	Manl PC	
h	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000		
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-5.94145917158E+03	Apriori delay (usec)	-5.94148844177E+03	Resid mbdelay (usec)	-1.97982E-03	+/-	2.1E-06
Sband delay (usec)	-5.94145909989E+03	Apriori clock (usec)	6.6931534E+00	Resid sbdelay (usec)	2.93419E-02	+/-	8.0E-06
Phase delay (usec)	-5.94148845121E+03	Apriori clockrate (us/s)	-2.9976000E-07	Resid phdelay (usec)	-9.44474E-06	+/-	1.4E-08
Delay rate (us/s)	-5.18361466444E-01	Apriori rate (us/s)	-5.18361586035E-01	Resid rate (us/s)	1.19592E-07	+/-	1.3E-10
Total phase (deg)	122.3	Apriori accel (us/s/s)	3.61639582670E-05	Resid phase (deg)	258.3	+/-	0.2

ph/seg (deg)	RMS 10.0	Theor. 0.7	Amplitude Search (1024X16)	14.595 +/- 0.027	14.315	14.315	PCal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	6.0	1.2	Interp.	0.000	0.000	0.000E+00, 0.000E+00 (us/s)	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
ph/frq (deg)	1.9	0.2	Inc. seg. avg.	14.816	14.816	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	2.0	0.4	Inc. frq. avg.	14.598	14.598	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	nlags: 512	dr window (ns/s)	-0.023 0.023	
h: az 257.9 el 42.0 pa 49.7			p: az 225.7 el 70.8 pa 39.5			Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00 0.00	
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/7mm/3001/No0676/hp..3N2DRU			u,v (fr/asec) 1599.194 1004.139		simultaneous interpolator		
						Output file: /Exps/c241c/v2/7mm/3001/No0676/hp.Q.84.3N2DRU				