

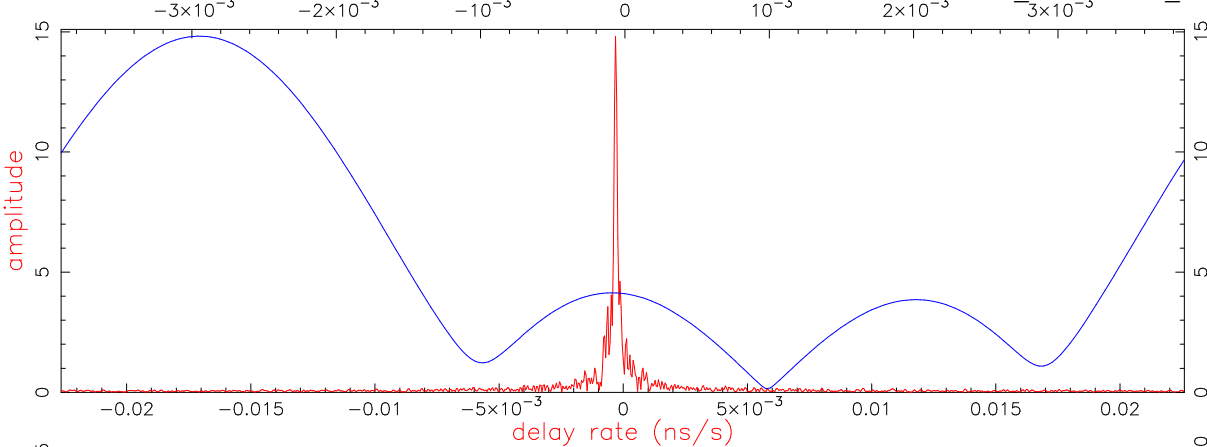
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bn

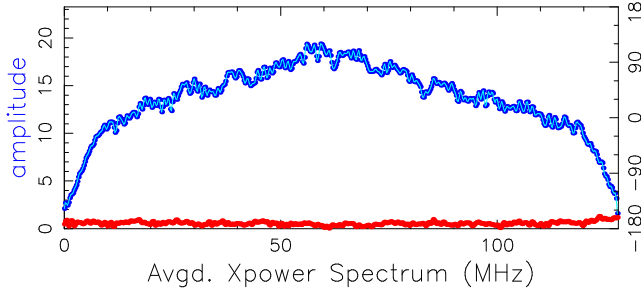
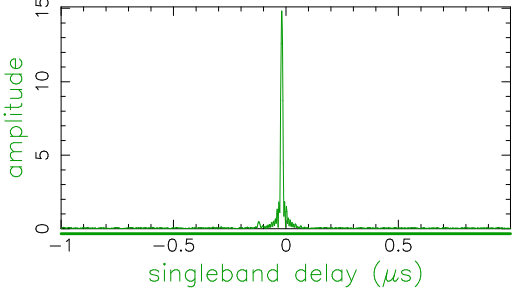
VLBA\_BR - VLBA\_NL, fgroup Q, pol LL

multiband delay ( $\mu$ s)



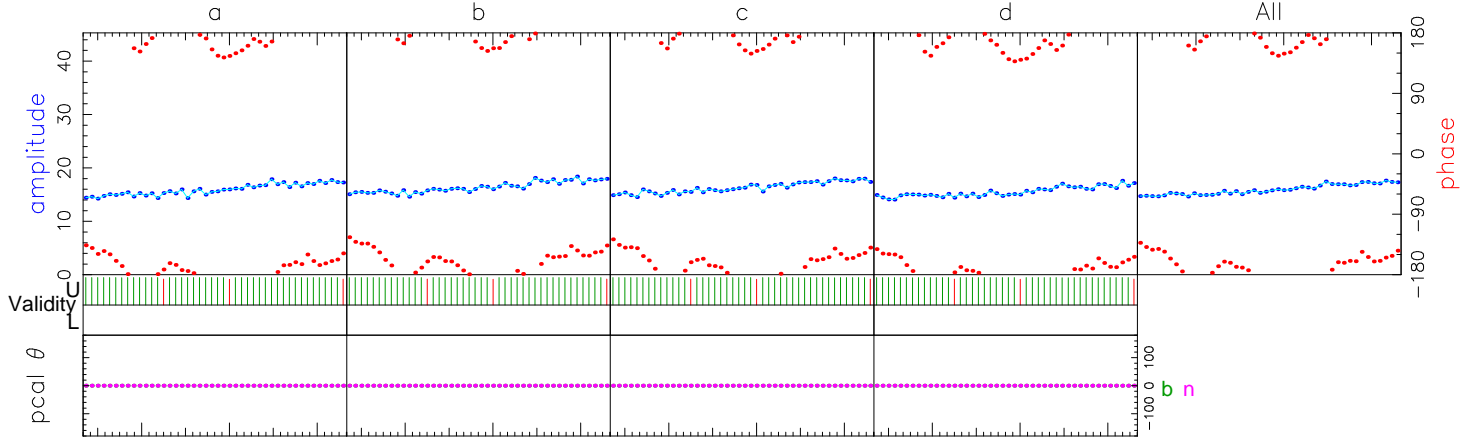
Fringe quality 8

SNR 552.9  
 Int time 179.295  
 Amp 15.101  
 Phase -15.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.018562  
 MBD -0.002909  
 Fringe rate (Hz)  
 -0.013516  
 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
	-176.5	-164.5	-168.7	178.4	Phase	-172.7
	14.8	15.2	15.1	14.4	Ampl.	14.9
	503.8	503.5	503.3	503.3	Sbd box	503.5
U/L	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	PC phase	
b:n	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	1.21963037291E+03	Apriori delay (usec)	1.21964890684E+03	Resid mbdelay (usec)	-2.90893E-03	+/-	2.0E-06
Sband delay (usec)	1.21963034434E+03	Apriori clock (usec)	4.9362011E+00	Resid sbdelay (usec)	-1.85625E-02	+/-	7.8E-06
Phase delay (usec)	1.21964889572E+03	Apriori clockrate (us/s)	2.7918098E-07	Resid phdelay (usec)	-1.11187E-05	+/-	1.3E-08
Delay rate (us/s)	5.11047294214E-01	Apriori rate (us/s)	5.11047607516E-01	Resid rate (us/s)	-3.13302E-07	+/-	1.3E-10
Total phase (deg)	-72.4	Apriori accel (us/s/s)	-3.42358499332E-06	Resid phase (deg)	-15.2	+/-	0.2

ph/seg (deg)	RMS 22.1	Theor. 0.7	Amplitude Search (1024X16)	15.101 +/- 0.027	14.741	14.741	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	8.3	1.2	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)	9.4	0.2	Inc. seg. avg.	15.950	15.950	15.950	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	2.5	0.4	Inc. frq. avg.	14.909	14.909	14.909	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      n: az 239.9 el 55.9 pa 43.6      u,v (fr/asec) -1562.321 282.425      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/bn..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/bn.Q.16.3N2DRU

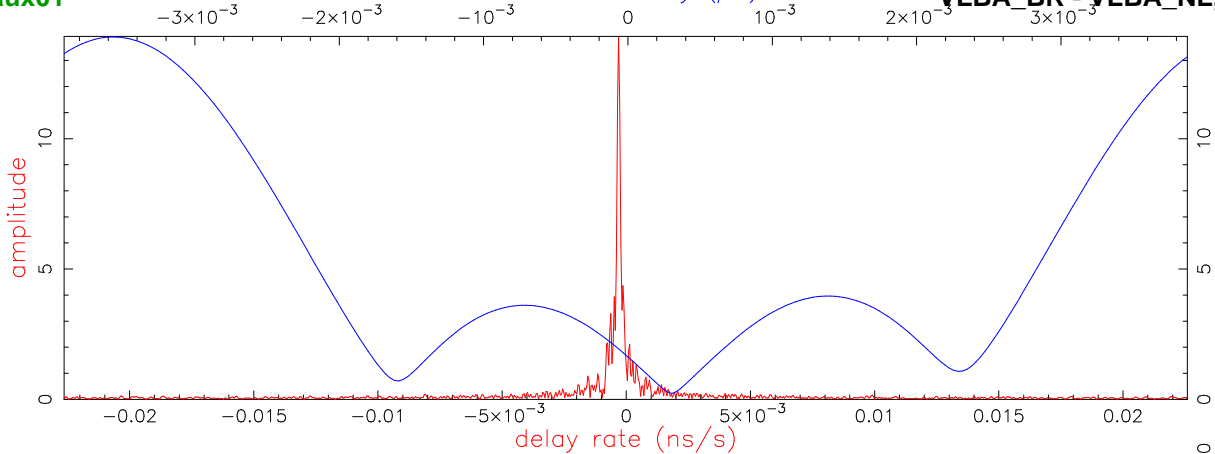
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bn

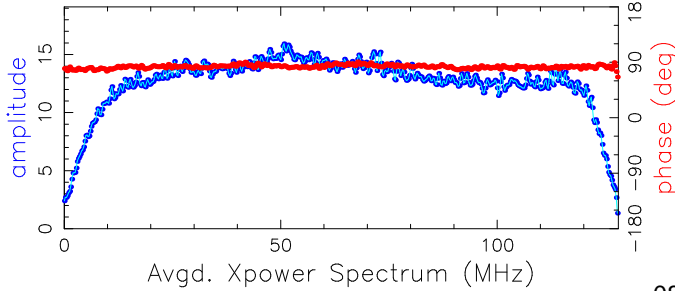
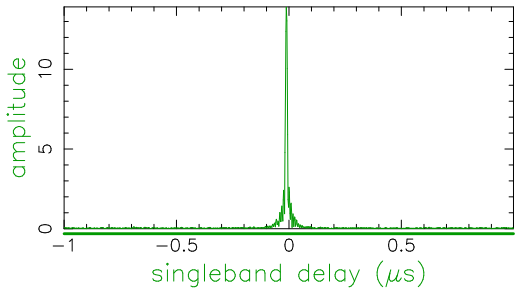
VLBA\_BR - VLBA\_NL, fgroup Q, pol RR

multiband delay ( $\mu$ s)



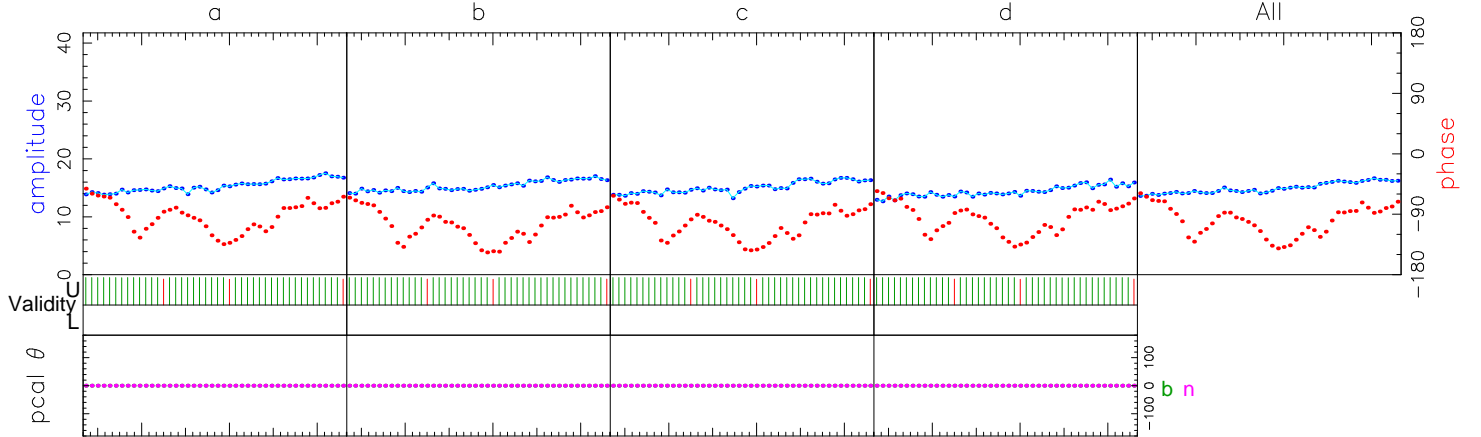
Fringe quality 8

SNR 509.8  
Int time 179.295  
Amp 13.925  
Phase -20.2  
PFD 0.0e+00  
Delays (us)  
SBD -0.011447  
MBD -0.003551  
Fringe rate (Hz)  
-0.013526  
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		
n	1000	1000	1000	1000		
b:n	0:0	0:0	0:0	0:0		
b:n	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000		
n	1000	1000	1000	1000		
b	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	1.21963754372E+03	Apriori delay (usec)	1.21964890684E+03	Resid mbdelay (usec)	-3.55062E-03	+/-	2.2E-06
Sband delay (usec)	1.21963746022E+03	Apriori clock (usec)	4.9362011E+00	Resid sbdelay (usec)	-1.14466E-02	+/-	8.4E-06
Phase delay (usec)	1.21964890047E+03	Apriori clockrate (us/s)	2.7918098E-07	Resid phdelay (usec)	-6.36868E-06	+/-	1.4E-08
Delay rate (us/s)	5.11047293982E-01	Apriori rate (us/s)	5.11047607516E-01	Resid rate (us/s)	-3.13534E-07	+/-	1.4E-10
Total phase (deg)	-77.4	Apriori accel (us/s/s)	-3.42358499332E-06	Resid phase (deg)	-20.2	+/-	0.2

ph/seg (deg)	22.1	RMS	22.1	Theor.	0.7	Amplitude	13.925 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	9.9		9.9		1.3	Search (1024X16)	13.747	Pcal rate: 0.000E+00, 0.000E+00 (us/s)			mb window (us)	-0.004	0.004
ph/frq (deg)	7.5		7.5		0.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled		dr window (ns/s)	-0.023	0.023
amp/frq (%)	2.6		2.6		0.4	Inc. seg. avg.	14.970	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us			ion window (TEC)	0.00	0.00
						Inc. frq. avg.	13.961	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite			

b: az 185.8 el 61.8 pa 4.5 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -1562.321 282.425 simultaneous interpolator

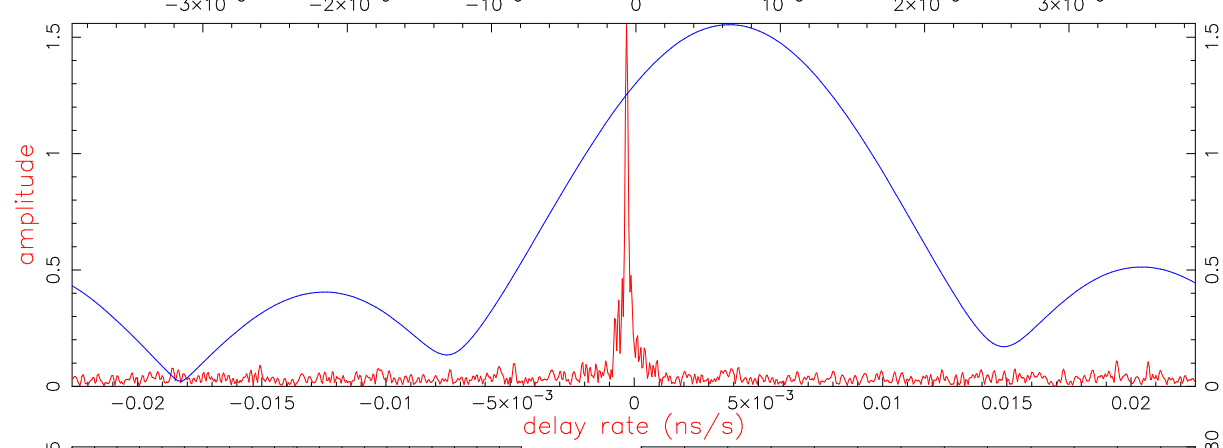
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/bn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/bn.Q.28.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bn

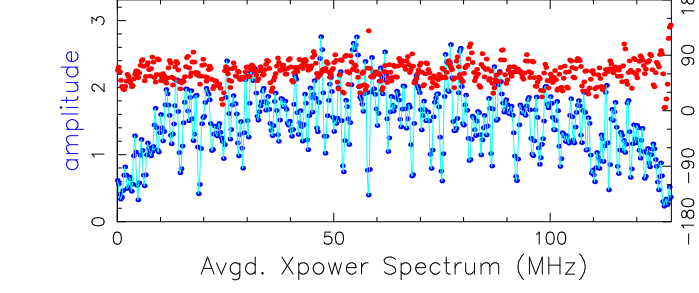
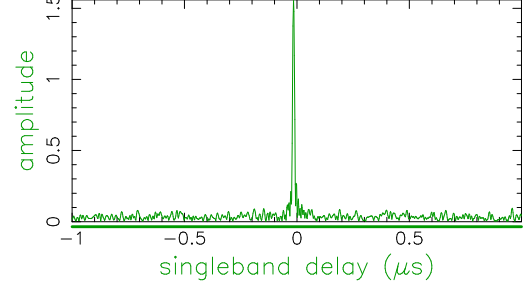
VLBA\_BR - VLBA\_NL, fgroup Q, pol LR



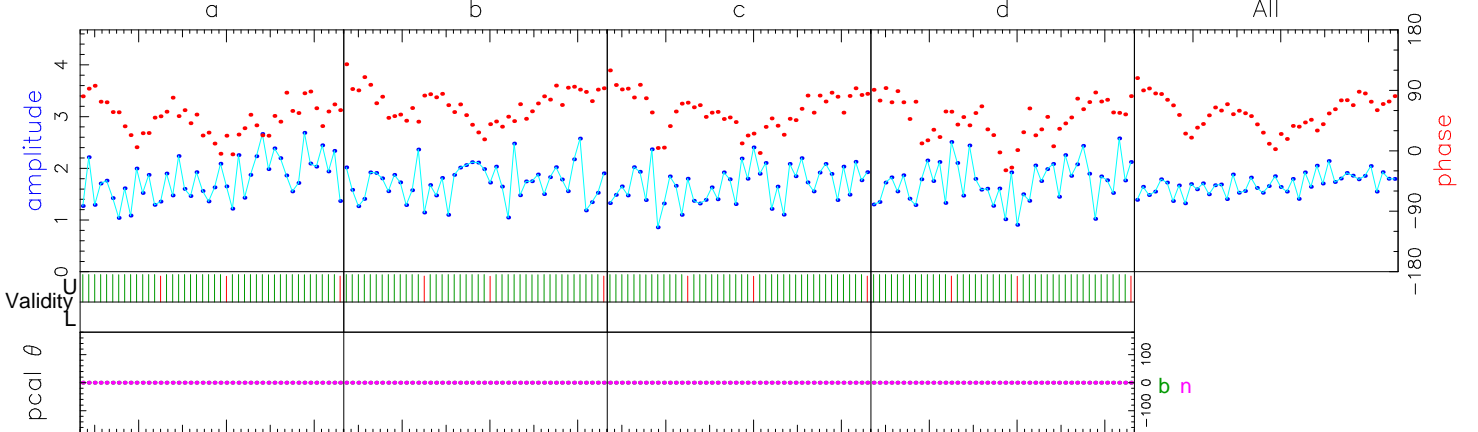
Fringe quality 7

SNR 57.1  
 Int time 179.295  
 Amp 1.559  
 Phase -146.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.015219  
 MBD 0.000665  
 Fringe rate (Hz)  
 -0.013431  
 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		
b	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	
b:n	0:0	0:0	0:0	0:0	PC phase	
b:n	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
b	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	1.21963394716E+03	Apriori delay (usec)	1.21964890684E+03	Resid mbdelay (usec)	6.65319E-04	+/- 1.9E-05
Sband delay (usec)	1.21963368747E+03	Apriori clock (usec)	4.9362011E+00	Resid sbdelay (usec)	-1.52194E-02	+/- 7.5E-05
Phase delay (usec)	1.21964891046E+03	Apriori clockrate (us/s)	2.7918098E-07	Resid phdelay (usec)	3.62023E-06	+/- 1.3E-07
Delay rate (us/s)	5.11047296175E-01	Apriori rate (us/s)	5.11047607516E-01	Resid rate (us/s)	-3.11342E-07	+/- 1.2E-09
Total phase (deg)	-203.5	Apriori accel (us/s/s)	-3.42358499332E-06	Resid phase (deg)	-146.3	+/- 2.0

ph/seg (deg)	24.0	Theor.	6.7	Amplitude	1.559 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	14.8		11.6	Search (1024X16)	1.526	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	11.9		2.0	Inc. seg. avg.	1.683	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	2.7		3.5	Inc. frq. avg.	1.570	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		

b: az 185.8 el 61.8 pa 4.5      n: az 239.9 el 55.9 pa 43.6      u,v (fr/asec) -1562.321 282.425      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/bn..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/bn.Q.47.3N2DRU

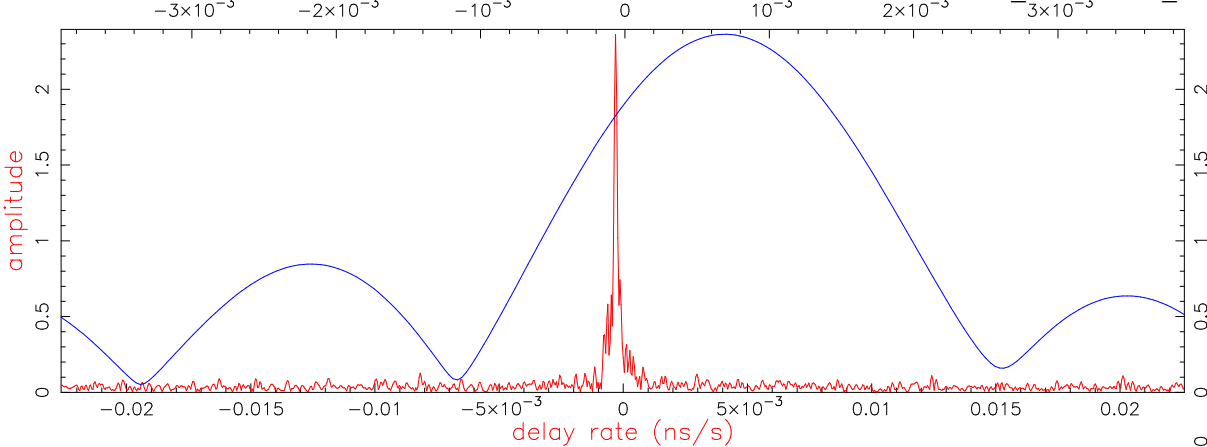
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, bn

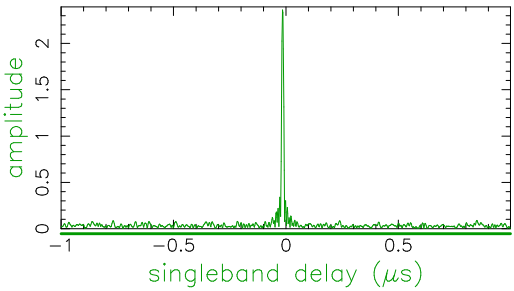
VLBA\_BR - VLBA\_NL, fgroup Q, pol RL

multiband delay ( $\mu$ s)

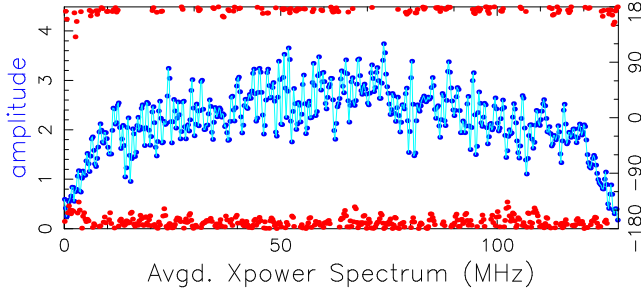


Fringe quality 8

SNR 87.7  
 Int time 179.295  
 Amp 2.396  
 Phase -14.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.014813  
 MBD 0.000728  
 Fringe rate (Hz)  
 -0.013534  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



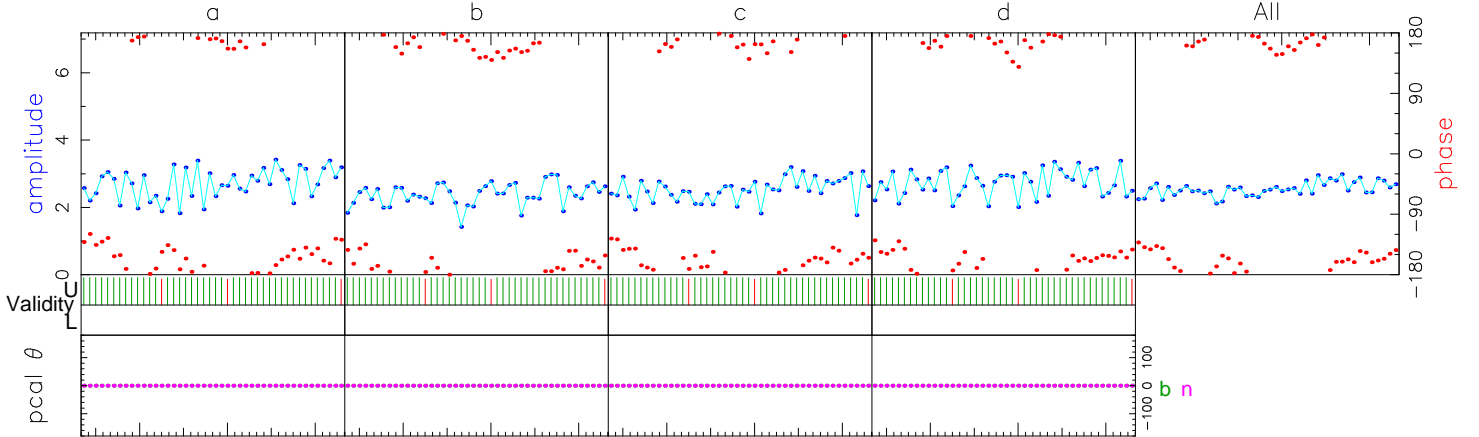
singleband delay ( $\mu$ s)



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  
 2025:049:103149  
 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
-163.6	178.4	-171.4	-172.2	Phase	-171.9
2.5	2.2	2.3	2.5	Ampl.	2.4
505.0	505.3	505.8	505.4	Sbd box	505.4
U/L 352/0	352/0	352/0	352/0	APs used	
b 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
b:n 0:0	0:0	0:0	0:0	PC phase	
b:n 0:0	0:0	0:0	0:0	Manl PC	
b 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
b Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	1.21963400975E+03	Apriori delay (usec)	1.21964890684E+03	Resid mbdelay (usec)	7.27913E-04	+/-	1.3E-05
Sband delay (usec)	1.21963409434E+03	Apriori clock (usec)	4.9362011E+00	Resid sbdelay (usec)	-1.48125E-02	+/-	4.9E-05
Phase delay (usec)	1.21964889577E+03	Apriori clockrate (us/s)	2.7918098E-07	Resid phdelay (usec)	-1.10696E-05	+/-	8.4E-08
Delay rate (us/s)	5.11047293789E-01	Apriori rate (us/s)	5.11047607516E-01	Resid rate (us/s)	-3.13727E-07	+/-	8.1E-10
Total phase (deg)	-71.6	Apriori accel (us/s/s)	-3.42358499332E-06	Resid phase (deg)	-14.4	+/-	1.3

ph/seg (deg)	RMS	Theor.	Amplitude	2.396 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	22.3	4.3	Search (1024X16)	2.298	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	10.7	7.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	9.0	1.3	Inc. seg. avg.	2.542	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
	5.4	2.3	Inc. frq. avg.	2.376	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite			

b: az 185.8 el 61.8 pa 4.5 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -1562.321 282.425 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/bn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/bn.Q.65.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

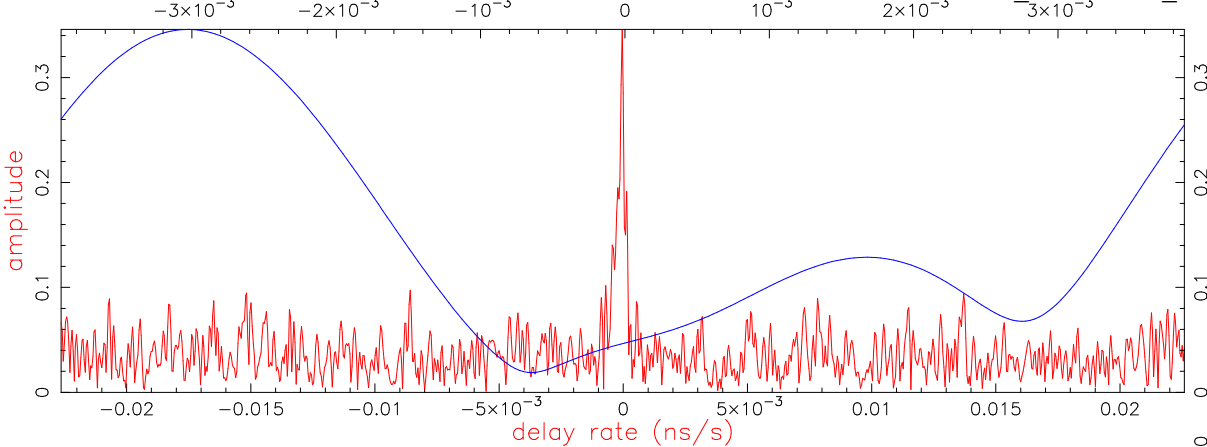
aux01

OJ287.3N2DRU, No0676, fn

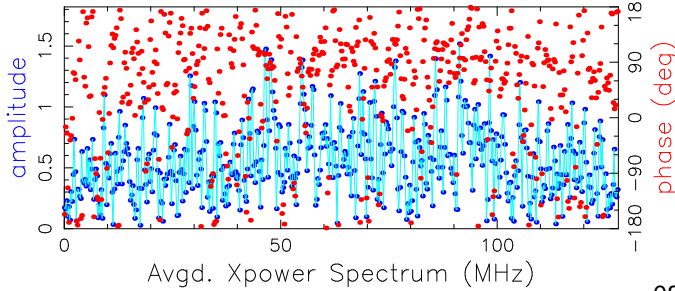
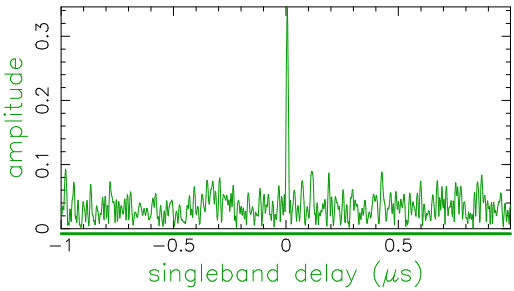
VLBA\_FD - VLBA\_NL, fgroup Q, pol RL

multiband delay ( $\mu$ s)

Fringe quality 9

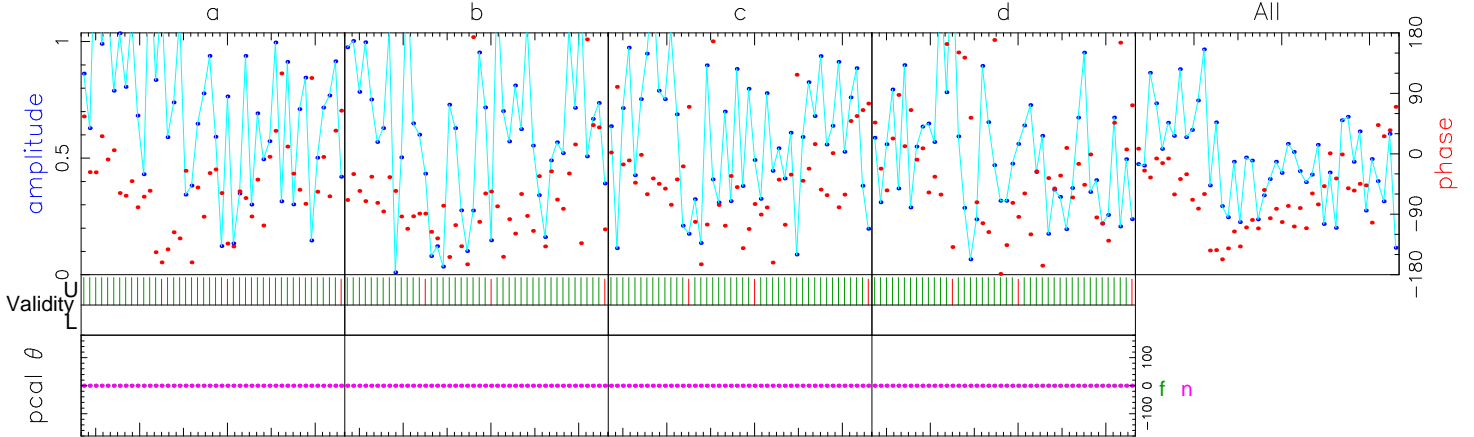


SNR 12.7  
 Int time 179.294  
 Amp 0.346  
 Phase 223.0  
 PFD 2.5e-28  
 Delays (us)  
 SBD 0.005764  
 MBD -0.003036  
 Fringe rate (Hz)  
 -0.002683  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



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
U/L	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000		
n	1000	1000	1000	1000		
f:n	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
n	1000	1000	1000	1000		
f	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec) (SBD)	2.41130061753E+03	Apriori delay (usec)	2.41129584087E+03	Resid mbdelay (usec)	-3.03584E-03	+/-	8.8E-05
Sband delay (usec)	2.41130160450E+03	Apriori clock (usec)	3.2124519E-01	Resid sbdelay (usec)	5.76362E-03	+/-	3.4E-04
Phase delay (usec)	2.41129583712E+03	Apriori clockrate (us/s)	-2.4704002E-07	Resid phdelay (usec)	-3.74767E-06	+/-	5.8E-07
Delay rate (us/s)	1.56277095132E-01	Apriori rate (us/s)	1.56277157330E-01	Resid rate (us/s)	-6.21981E-08	+/-	5.6E-09
Total phase (deg)	70.1	Apriori accel (us/s/s)	-1.88607024748E-05	Resid phase (deg)	223.0	+/-	9.0

ph/seg (deg)	53.1	Theor.	30.0	Amplitude	0.346 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	68.8	Search (1024X16)	0.334	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	19.2	Inc. seg. avg.	0.435	Inc. frq. avg.	0.353	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	27.6	Inc. frq. avg.	0.353			Data rate(MSamp/s):	256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023 0.023	

f: az 242.1 el 70.1 pa 54.5      n: az 239.9 el 55.9 pa 43.6      u,v (fr/asec) -485.103 -921.370      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/fn..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/fn.Q.107.3N2DRU

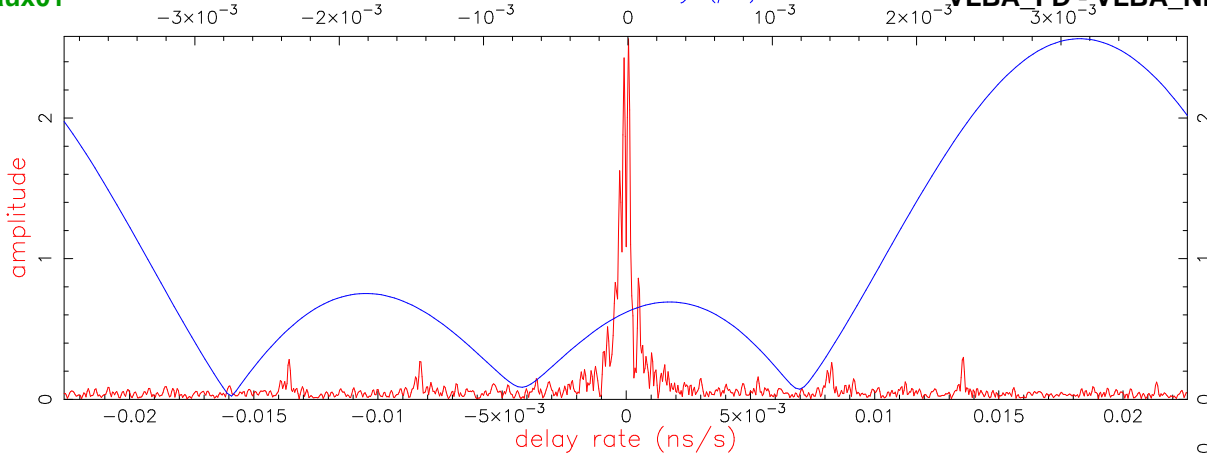
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, fn

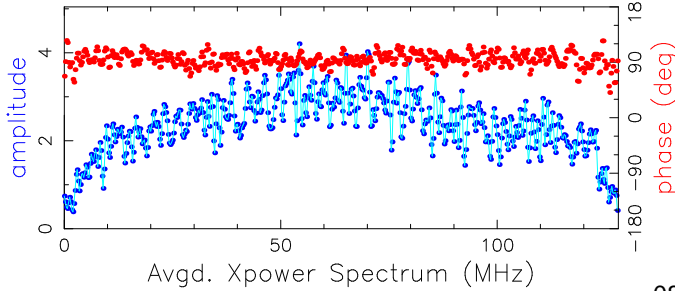
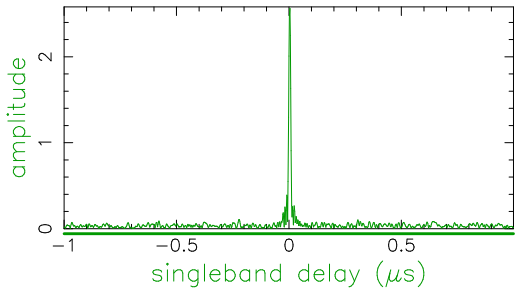
VLBA\_FD - VLBA\_NL, fgroup Q, pol LL

multiband delay ( $\mu$ s)



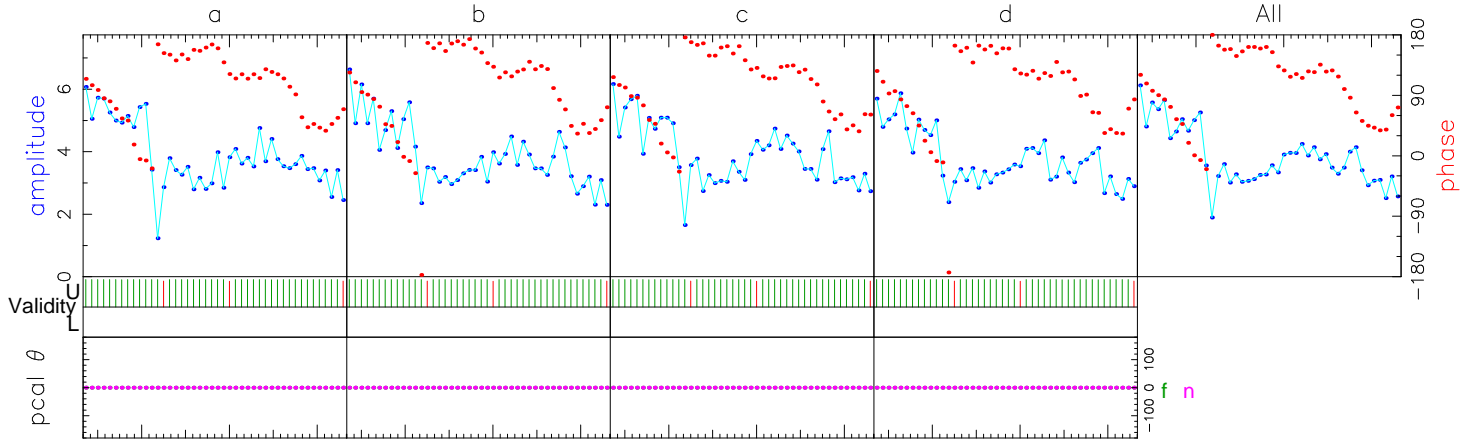
Fringe quality 5

SNR 94.5  
 Int time 179.294  
 Amp 2.580  
 Phase 100.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003339  
 MBD 0.003105  
 Fringe rate (Hz) 0.003328  
 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
	96.4	102.7	100.7	101.0	Phase	100.1
	2.6	2.4	2.7	2.5	Ampl.	2.6
	514.8	514.6	514.7	514.9	Sbd box	514.7
U/L	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	2.41129894600E+03	Apriori delay (usec)	2.41129584087E+03	Resid mbdelay (usec)	3.10512E-03	+/-	1.2E-05
Sband delay (usec)	2.41129918012E+03	Apriori clock (usec)	3.2124519E-01	Resid sbdelay (usec)	3.33925E-03	+/-	4.6E-05
Phase delay (usec)	2.41129584732E+03	Apriori clockrate (us/s)	-2.4704002E-07	Resid phdelay (usec)	6.44618E-06	+/-	7.8E-08
Delay rate (us/s)	1.56277234463E-01	Apriori rate (us/s)	1.56277157330E-01	Resid rate (us/s)	7.71329E-08	+/-	7.5E-10
Total phase (deg)	307.2	Apriori accel (us/s/s)	-1.88607024748E-05	Resid phase (deg)	100.1	+/-	1.2

ph/seg (deg)	51.4	RMS	4.0	Theor.	2.580 +/- 0.027	PCal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	60.1	Search (1024X16)	2.486	Amplitude	2.580 +/- 0.027	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	3.3	Interp.	0.000	Search (1024X16)	2.486	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004	
amp/frq (%)	3.7	Inc. seg. avg.	3.830	Interp.	0.000	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023 0.023		
		Inc. frq. avg.	2.565	Inc. seg. avg.	3.830	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 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -485.103 -921.370 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/fn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/fn.Q.48.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

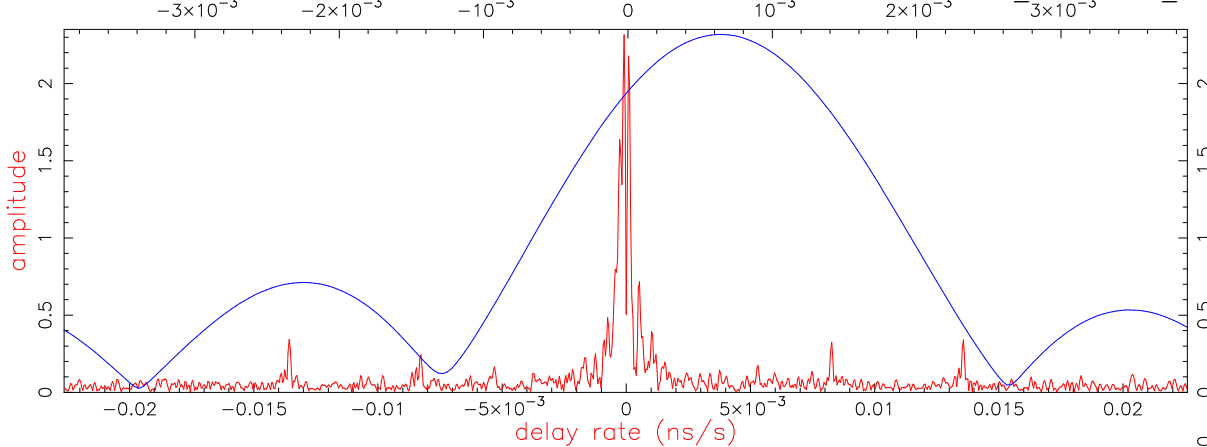
aux01

OJ287.3N2DRU, No0676, fn

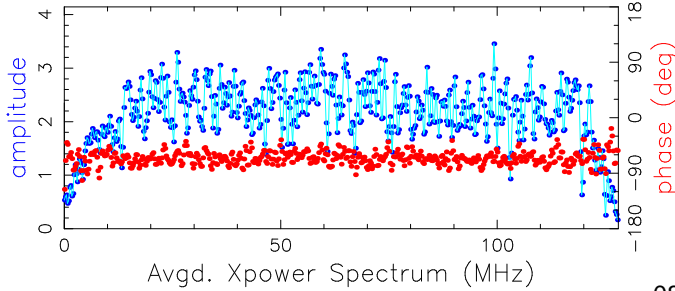
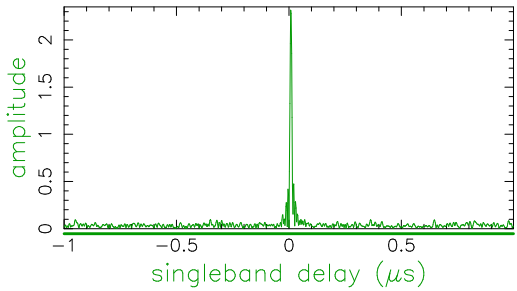
VLBA\_FD - VLBA\_NL, fgroup Q, pol RR

multiband delay ( $\mu$ s)

Fringe quality 5

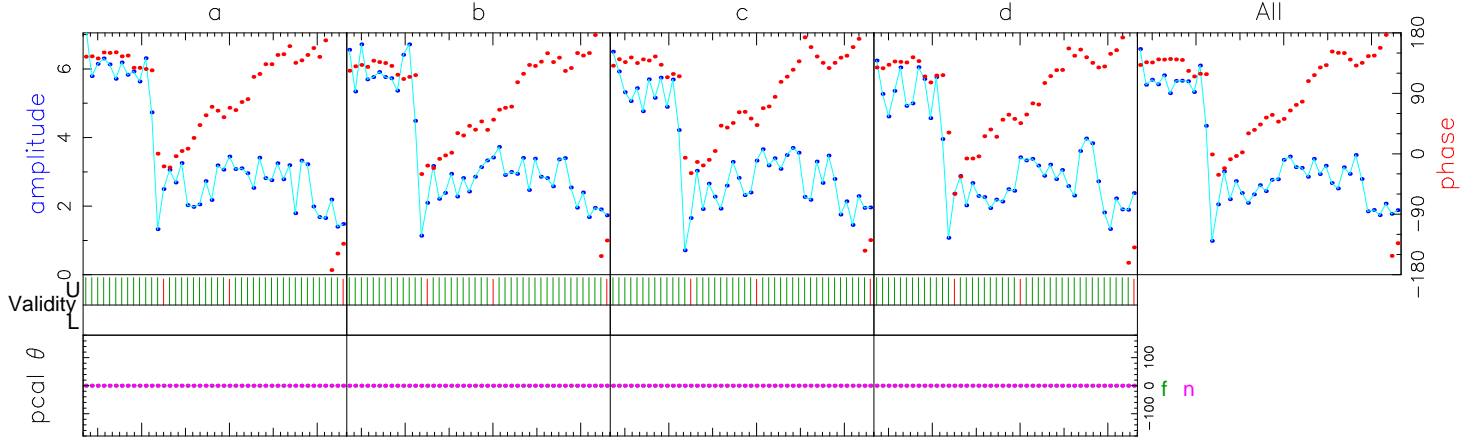


SNR 86.1  
Int time 179.294  
Amp 2.351  
Phase 38.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.008612  
MBD 0.000685  
Fringe rate (Hz)  
-0.004503  
Ion TEC 0.000  
Ref freq (MHz)  
43140.0000  
AP (sec) 0.512



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
124.0	110.9	117.4	115.4	Phase	116.9
2.4	2.4	2.3	2.2	Ampl.	2.3
517.5	517.2	517.6	517.2	Sbd box	517.4
U/L 352/0	352/0	352/0	352/0	APs used	
f 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
f:n 0:0	0:0	0:0	0:0	PC phase	
f:n 0:0	0:0	0:0	0:0	Manl PC	
f 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
f Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	2.41130433831E+03	Apriori delay (usec)	2.41129584087E+03	Resid mbdelay (usec)	6.84939E-04	+/-	1.3E-05
Sband delay (usec)	2.41130445237E+03	Apriori clock (usec)	3.2124519E-01	Resid sbdelay (usec)	8.61150E-03	+/-	5.0E-05
Phase delay (usec)	2.41129584840E+03	Apriori clockrate (us/s)	-2.4704002E-07	Resid phdelay (usec)	7.52742E-06	+/-	8.6E-08
Delay rate (us/s)	1.56277052945E-01	Apriori rate (us/s)	1.56277157330E-01	Resid rate (us/s)	-1.04385E-07	+/-	8.2E-10
Total phase (deg)	245.2	Apriori accel (us/s/s)	-1.88607024748E-05	Resid phase (deg)	38.2	+/-	1.3

ph/seg (deg)	63.1	RMS	4.4	Theor.	4.4	Amplitude	2.351 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	76.6	Search (1024X16)	2.225	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	mb window (us)	-1.000	1.000	
ph/frq (deg)	6.7	Inc. seg. avg.	3.395	Inc. frq. avg.	2.324	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004
amp/frq (%)	3.0	Inc. frq. avg.	2.324	Data rate (MSamp/s):	256 MBpts	16 Amb	0.008 us	dr window (ns/s)	-0.023	0.023	
f: az 242.1 el 70.1 pa 54.5	n: az 239.9 el 55.9 pa 43.6	u, v (fr/asec)	-485.103	-921.370	Data rate (Mb/s):	2048	nlags: 512	t_cohere infinite	ion window (TEC)	0.00	0.00

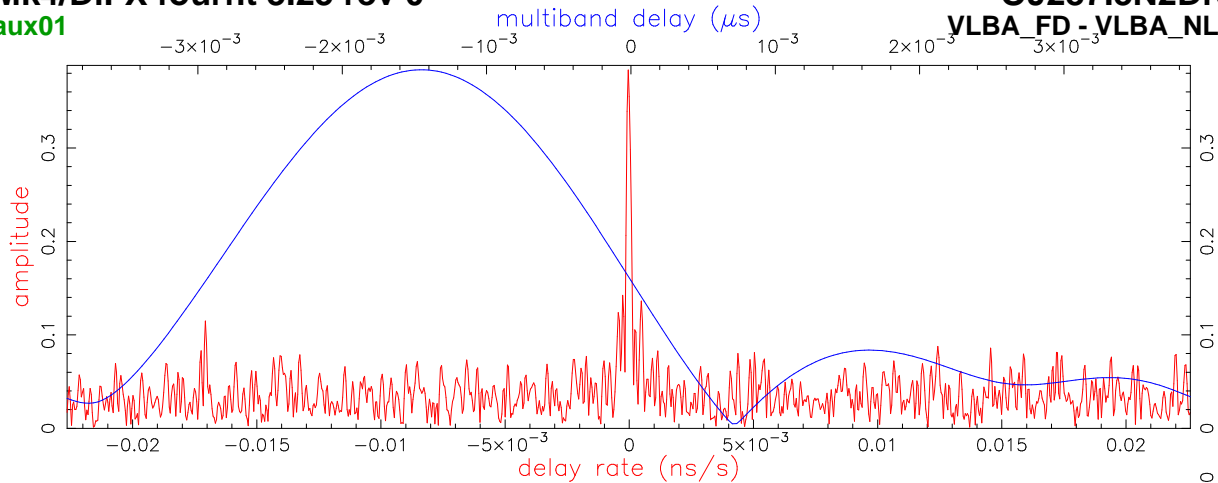
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/fn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/fn.Q.79.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

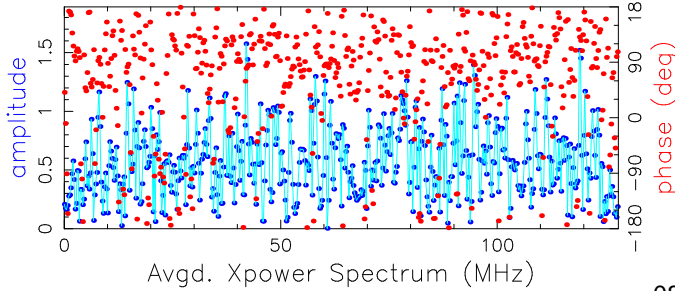
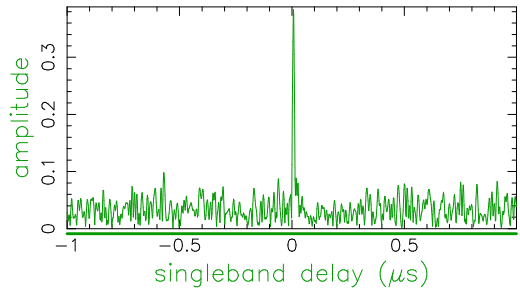
OJ287.3N2DRU, No0676, fn

VLBA\_FD - VLBA\_NL, fgroup Q, pol LR



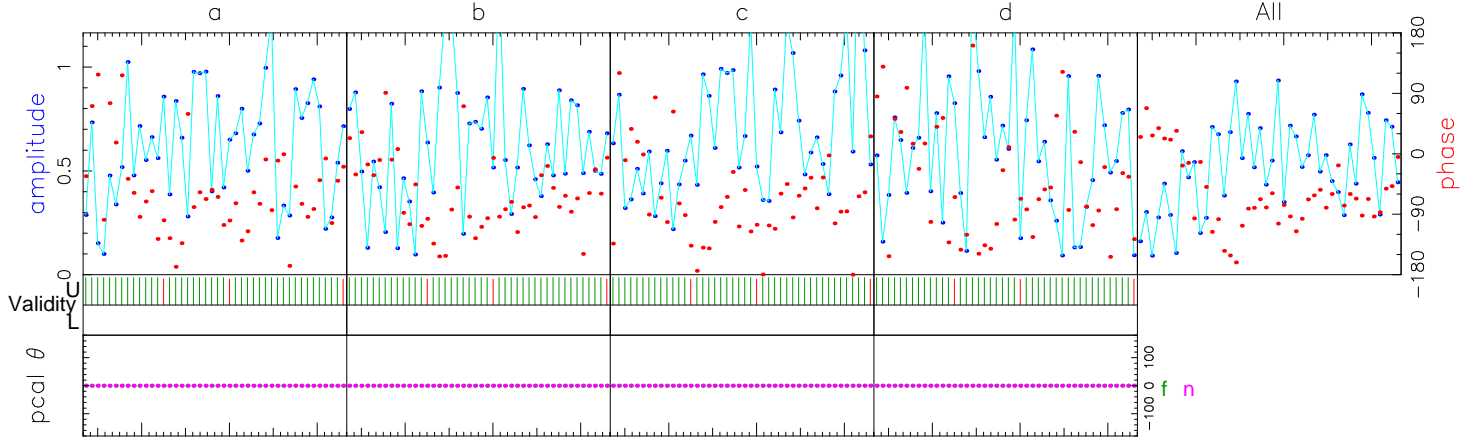
Fringe quality 9

SNR 14.2  
 Int time 179.294  
 Amp 0.388  
 Phase 206.2  
 PFD 2.1e-37  
 Delays (us)  
 SBD 0.006605  
 MBD -0.001409  
 Fringe rate (Hz)  
 -0.001092  
 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		
f	1000	1000	1000	1000		
n	1000	1000	1000	1000		
f:n	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000		
n	1000	1000	1000	1000		
f	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		

	2.41130224440E+03	2.41130224456E+03	2.41129583604E+03	1.56277132014E-01	53.3	2.41129584087E+03	3.2124519E-01	-2.4704002E-07	1.56277157330E-01	-1.88607024748E-05	Resid mbdelay (usec)	Resid sbdelay (usec)	Resid phdelay (usec)	Resid rate (us/s)	Resid phase (deg)
Group delay (usec) (SBD)											-1.40897E-03	6.60475E-03	-4.83113E-06	-2.53167E-08	206.2
Sband delay (usec)															
Phase delay (usec)															
Delay rate (us/s)															
Total phase (deg)															

	RMS	Theor.	Amplitude	0.388 +/- 0.027	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	55.0	26.7	Search (1024X16)	0.375	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	64.2	46.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	5.7	8.1	Inc. seg. avg.	0.469	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	23.0	14.1	Inc. frq. avg.	0.381	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			n: az 239.9 el 55.9 pa 43.6			simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/7mm/3001/No0676/fn..3N2DRU			Output file: /Exps/c241c/v2/7mm/3001/No0676/fn.Q.94.3N2DRU



Mk4/DiFX fourfit 3.25 rev 0

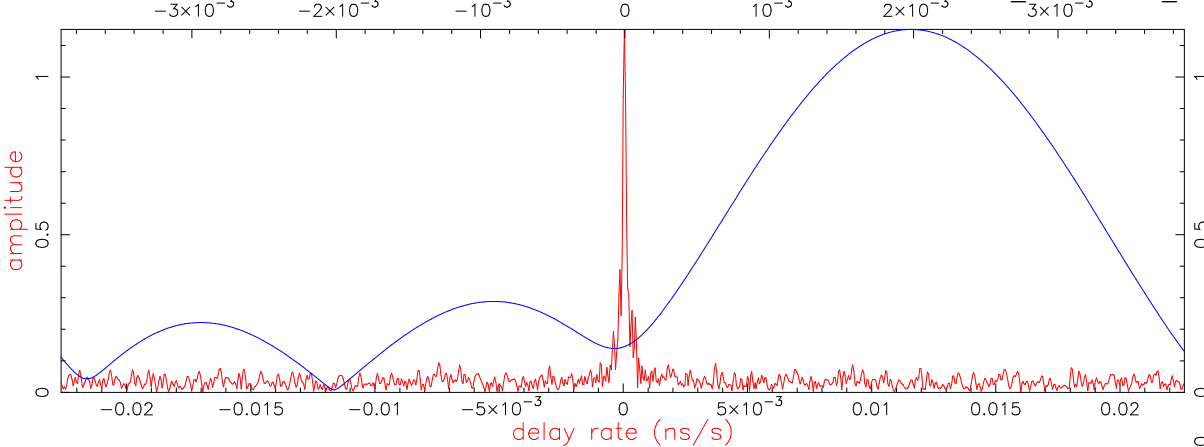
aux01

OJ287.3N2DRU, No0676, hn

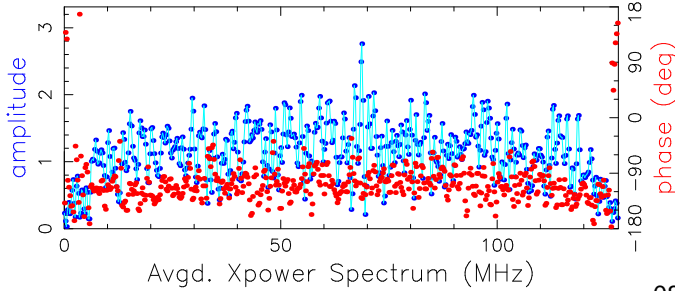
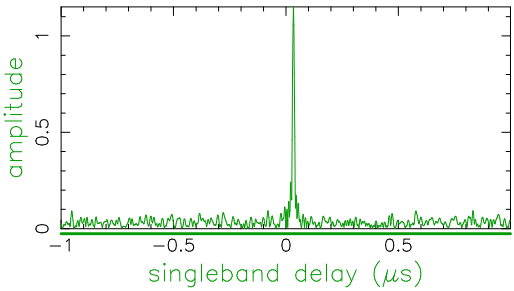
VLBA\_HN - VLBA\_NL, fgroup Q, pol RL

multiband delay ( $\mu$ s)

Fringe quality 8

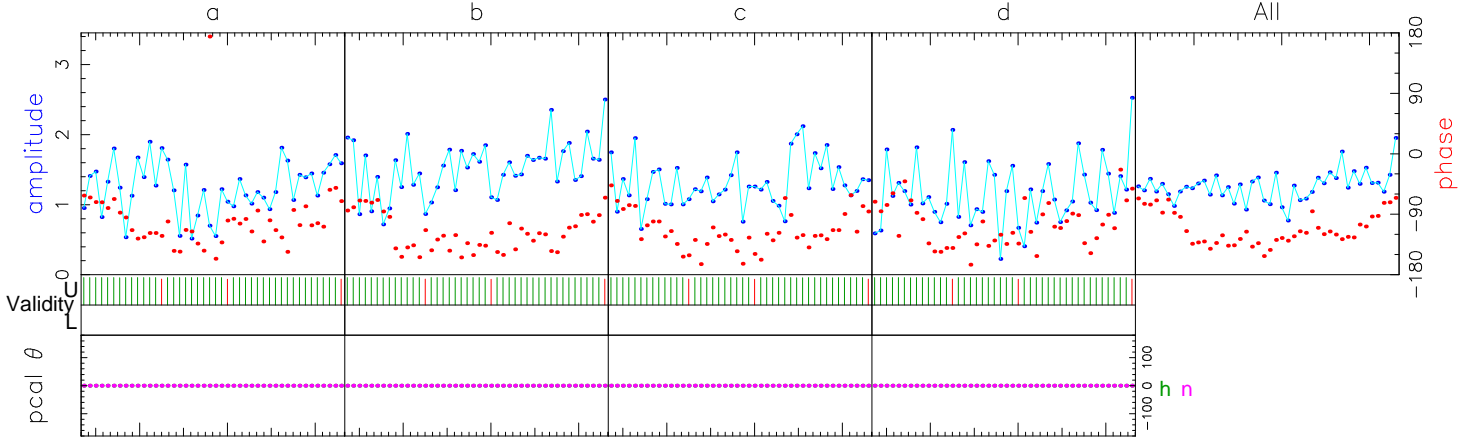


SNR 42.2  
 Int time 179.297  
 Amp 1.151  
 Phase 294.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.033184  
 MBD 0.001981  
 Fringe rate (Hz) 0.002674  
 Ion TEC 0.000  
 Ref freq (MHz) 43140.0000  
 AP (sec) 0.512



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	ManI 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

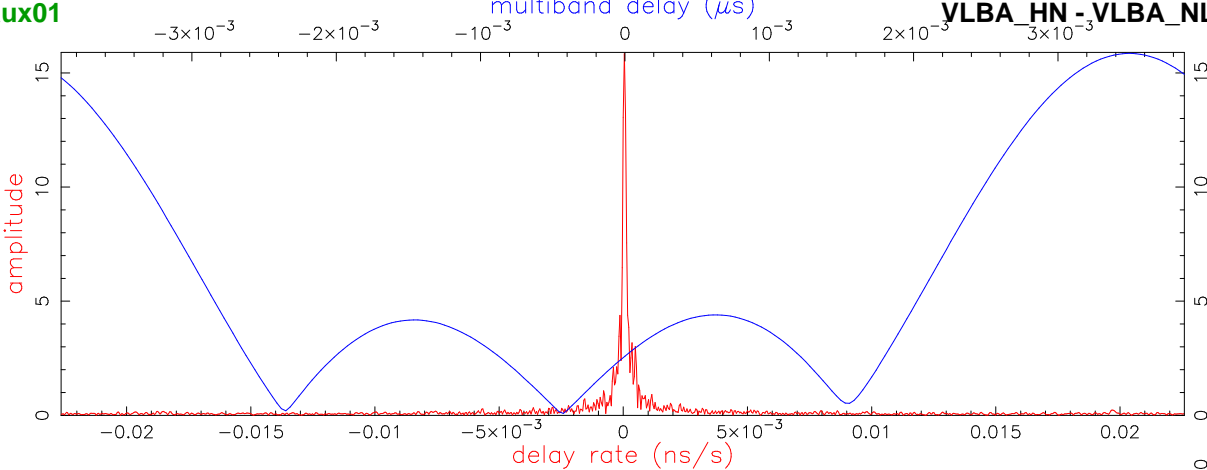
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/hn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/hn.Q.110.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

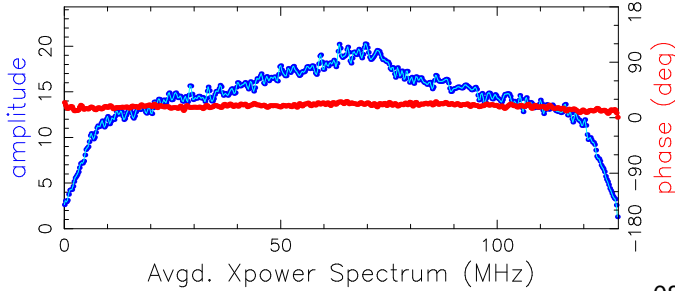
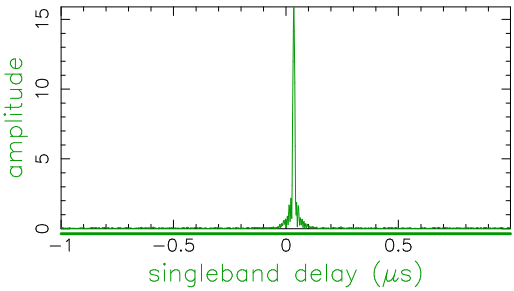
OJ287.3N2DRU, No0676, hn

VLBA\_HN - VLBA\_NL, fgroup Q, pol LL



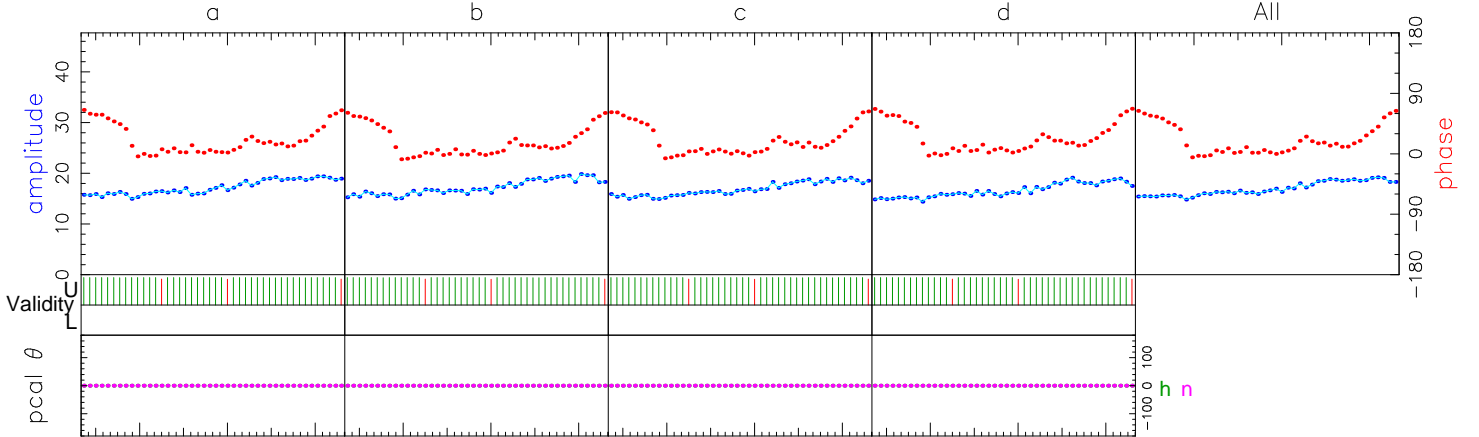
Fringe quality 8

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	1000
n	1000	1000	1000	1000	PC freqs	1000
h:n	0:0	0:0	0:0	0:0	PC phase	0:0
h:n	0:0	0:0	0:0	0:0	Manl PC	0:0
h	1000	1000	1000	1000	PC amp	1000
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

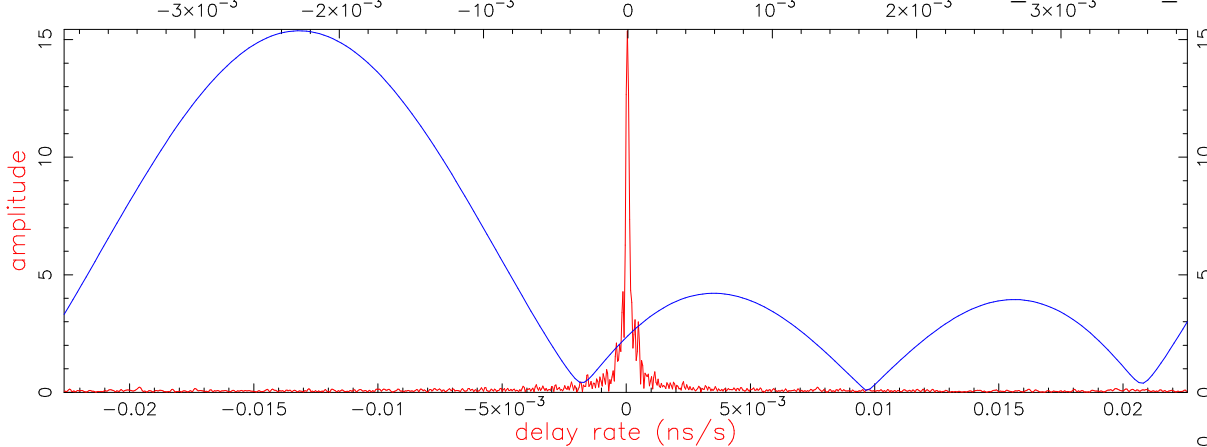
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hn

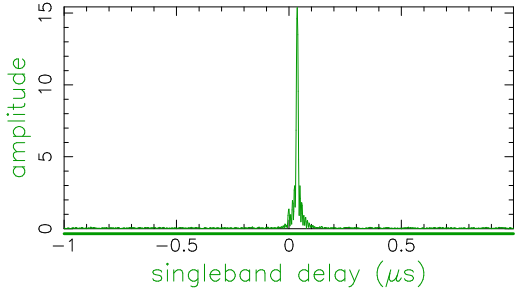
VLBA\_HN - VLBA\_NL, fgroup Q, pol RR

multiband delay ( $\mu$ s)

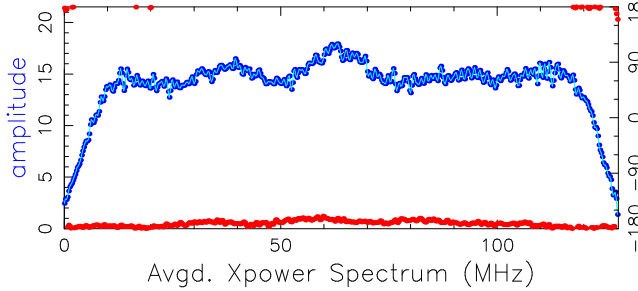


Fringe quality 8

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



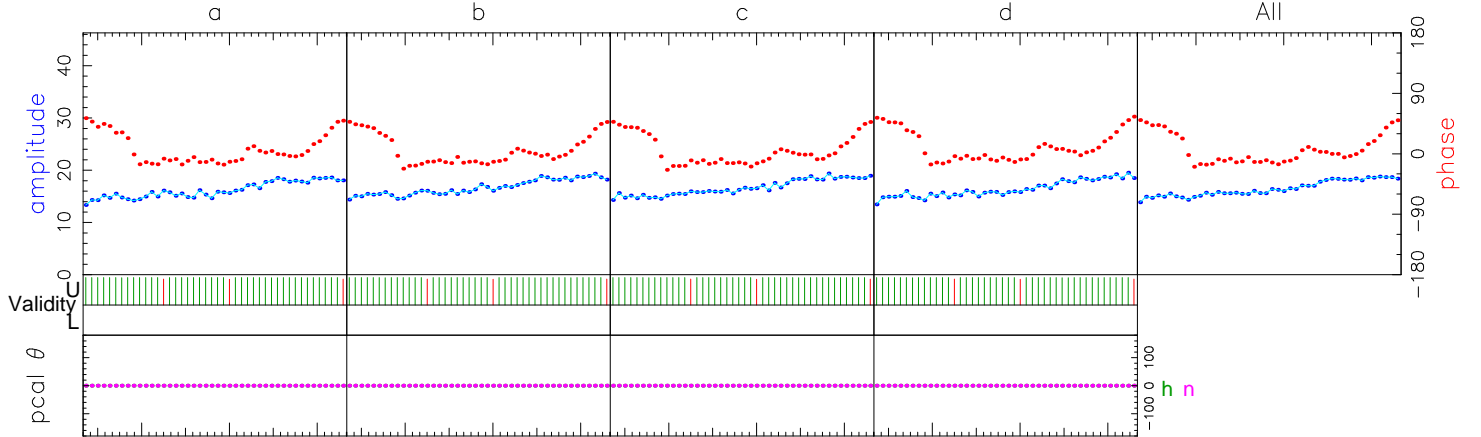
singleband delay ( $\mu$ s)



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	APs used	
n	1000	1000	1000	1000	PC freqs	
h:n	0:0	0:0	0:0	0:0	PC phase	
h	1000	1000	1000	1000	Manl PC	
n	1000	1000	1000	1000	PC amp	
h	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

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

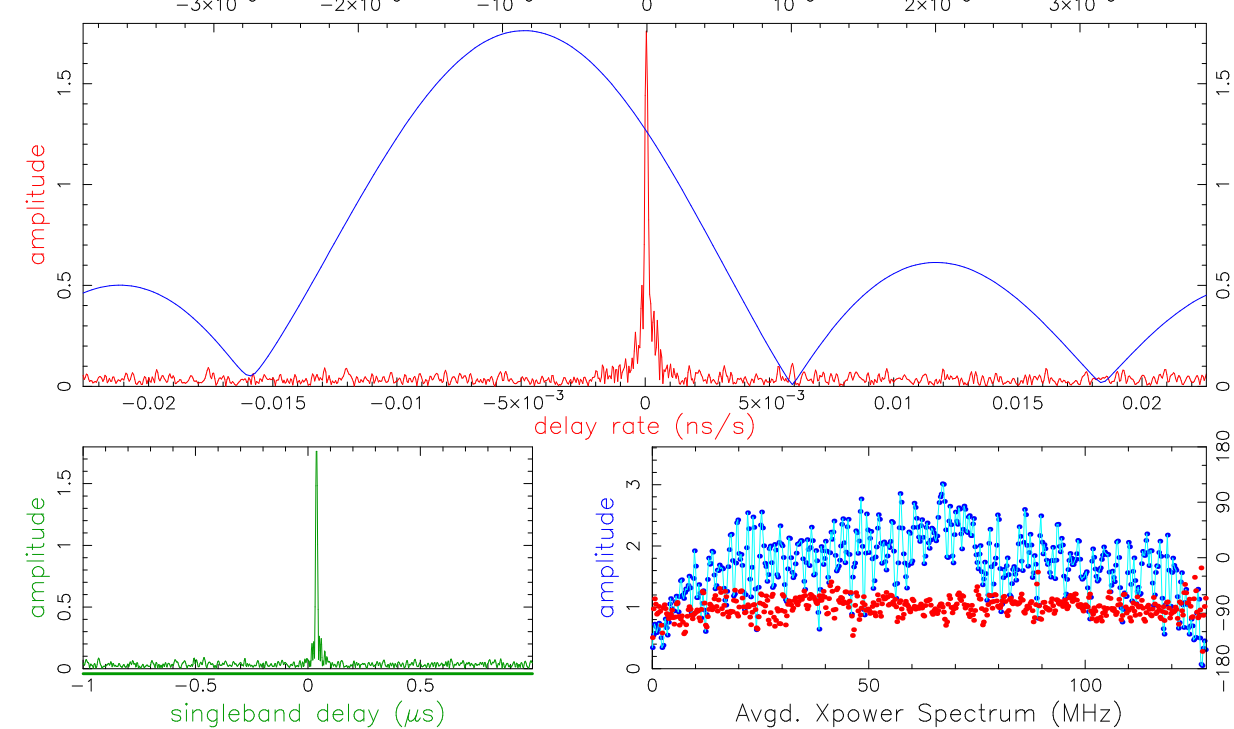
	RMS	Theor.	Amplitude	15.434 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	21.7	0.7	Search (1024X16)	14.844	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	11.6	1.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.5	0.2	Inc. seg. avg.	16.491	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	1.3	0.4	Inc. frq. avg.	15.385	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			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.80.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, hn

VLBA\_HN - VLBA\_NL, fgroup Q, pol LR

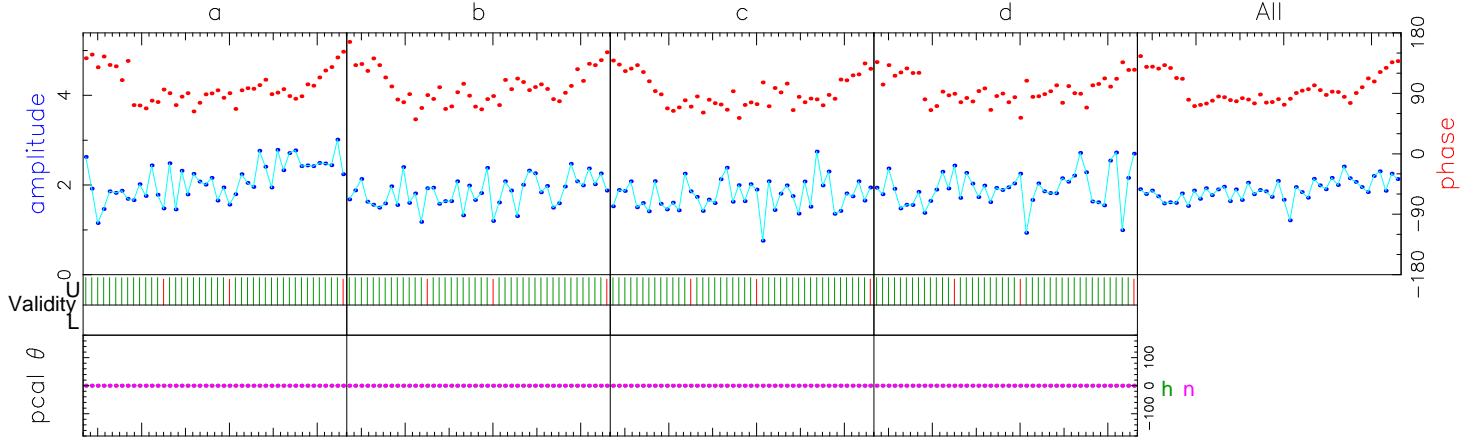


Fringe quality 9

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	APs used	
n	1000	1000	1000	1000	PC freqs	
h:n	0:0	0:0	0:0	0:0	PC phase	
h	1000	1000	1000	1000	ManI PC	
n	1000	1000	1000	1000	PC amp	
h	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

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)		Apriori accel (us/s/s)	1.88203212598E-05	Resid phase (deg)	63.4	+/-	1.7

ph/seg (deg)	21.4	Theor.	5.8	Amplitude	1.799 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	13.5	10.1		Search (1024X16)	1.705	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	5.7	1.7		Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	6.9	3.0		Inc. seg. avg.	1.879	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		Inc. frq. avg.	1.764	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.95.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

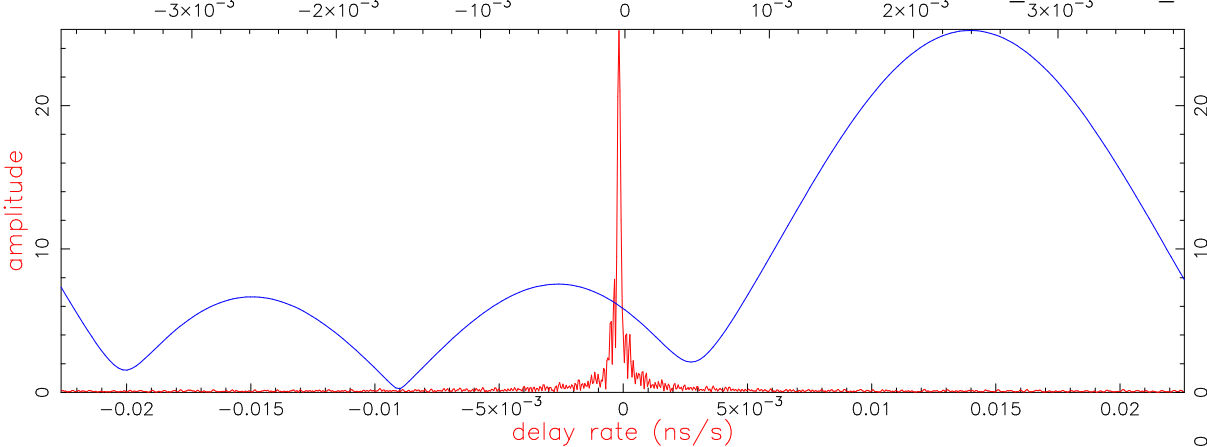
aux01

OJ287.3N2DRU, No0676, kn

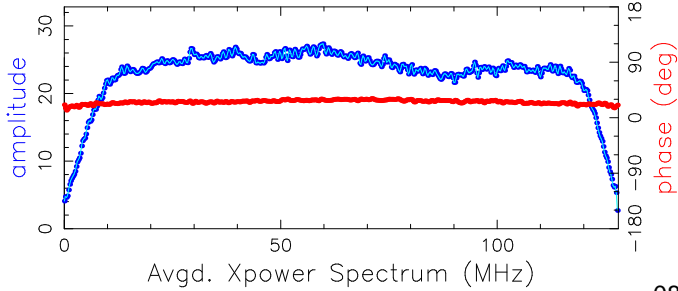
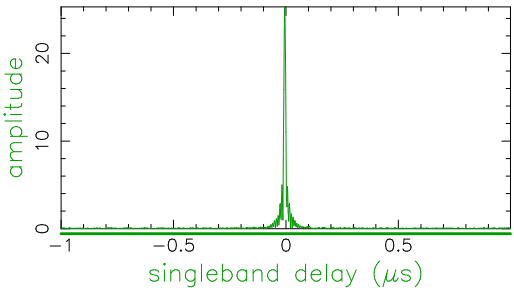
VLBA\_KP - VLBA\_NL, fgroup Q, pol RR

multiband delay ( $\mu$ s)

Fringe quality 8

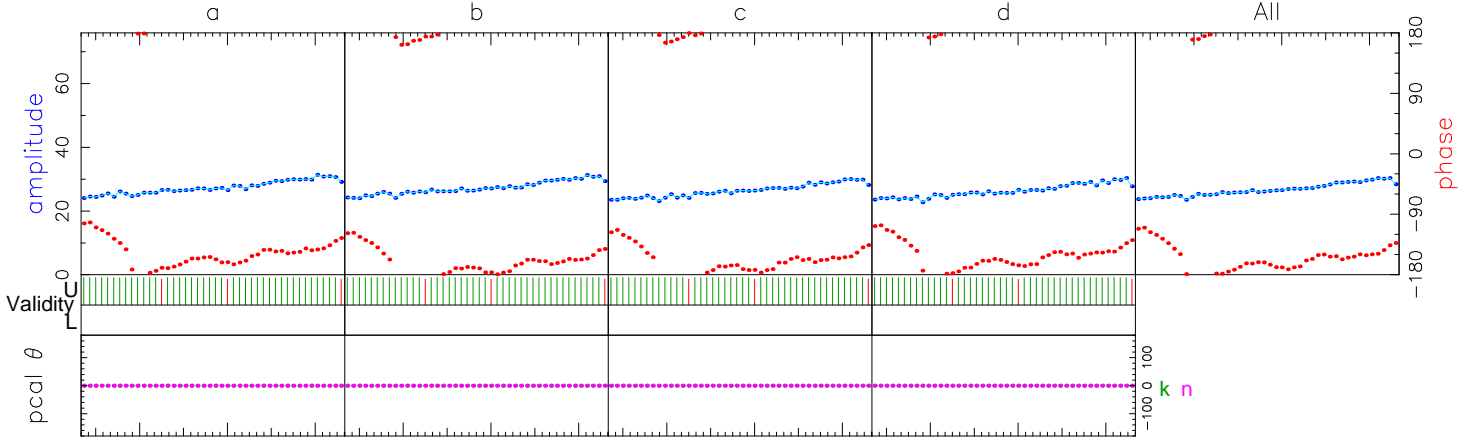


SNR 927.2  
 Int time 179.294  
 Amp 25.322  
 Phase -77.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.005499  
 MBD 0.002411  
 Fringe rate (Hz)  
 -0.006820  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



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
-148.5	-163.5	-160.5	-152.2	Phase	-156.2
25.9	25.8	25.0	24.9	Ampl.	25.4
510.0	510.1	510.3	510.4	Sbd box	510.2
U/L 352/0	352/0	352/0	352/0	APs used	
k 1000	1000	1000	1000	PC freqs	
n 1000	1000	1000	1000	PC freqs	
k:n 0:0	0:0	0:0	0:0	PC phase	
k:n 0:0	0:0	0:0	0:0	Manl PC	
k 1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000		
k Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	2.93902287424E+03	Apriori delay (usec)	2.93902827621E+03	Resid mbdelay (usec)	2.41053E-03	+/- 1.2E-06
Sband delay (usec)	2.93902277721E+03	Apriori clock (usec)	4.2349243E-01	Resid sbdelay (usec)	-5.49900E-03	+/- 4.6E-06
Phase delay (usec)	2.93902826615E+03	Apriori clockrate (us/s)	-1.4505389E-07	Resid phdelay (usec)	-1.00552E-05	+/- 8.0E-09
Delay rate (us/s)	3.21563720684E-01	Apriori rate (us/s)	3.21563878775E-01	Resid rate (us/s)	-1.58092E-07	+/- 7.6E-11
Total phase (deg)	-136.6	Apriori accel (us/s/s)	-2.09051369457E-05	Resid phase (deg)	-77.4	+/- 0.1

ph/seg (deg)	19.8	RMS	19.8	Theor.	0.4	Amplitude	25.322 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	9.5		0.4			Search (1024X16)	24.335	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	8.6		0.1			Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	1.9		0.2			Inc. seg. avg.	26.691	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
						Inc. frq. avg.	25.388	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

k: az 222.2 el 74.5 pa 38.1 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -990.815 -867.278 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/kn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/kn.Q.106.3N2DRU

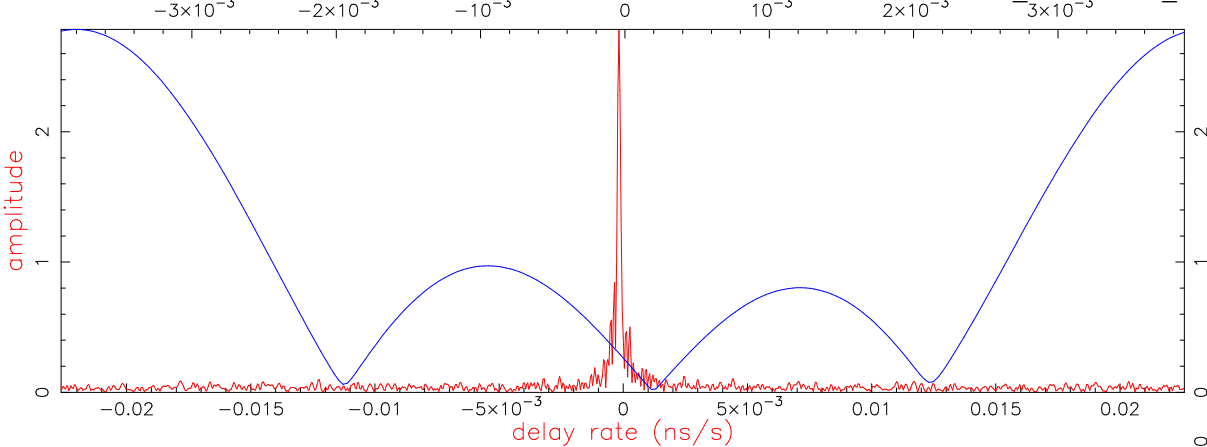
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, kn

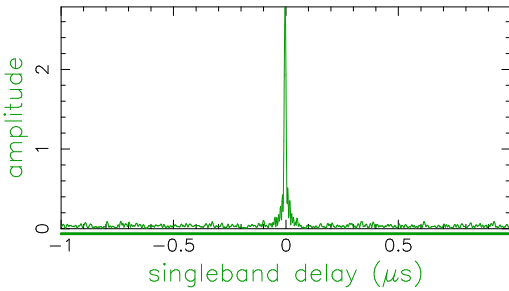
VLBA\_KP - VLBA\_NL, fgroup Q, pol LR

multiband delay ( $\mu$ s)

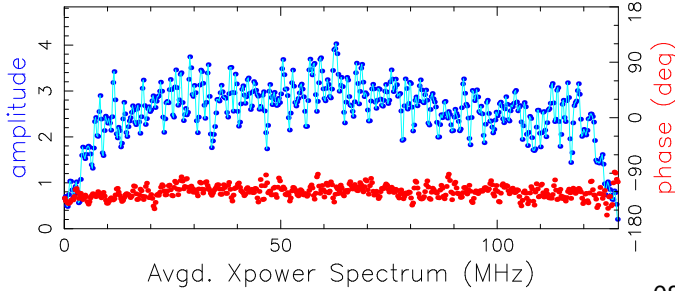


Fringe quality 8

SNR 102.0  
 Int time 179.294  
 Amp 2.786  
 Phase -121.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003880  
 MBD -0.003798  
 Fringe rate (Hz)  
 -0.006805  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



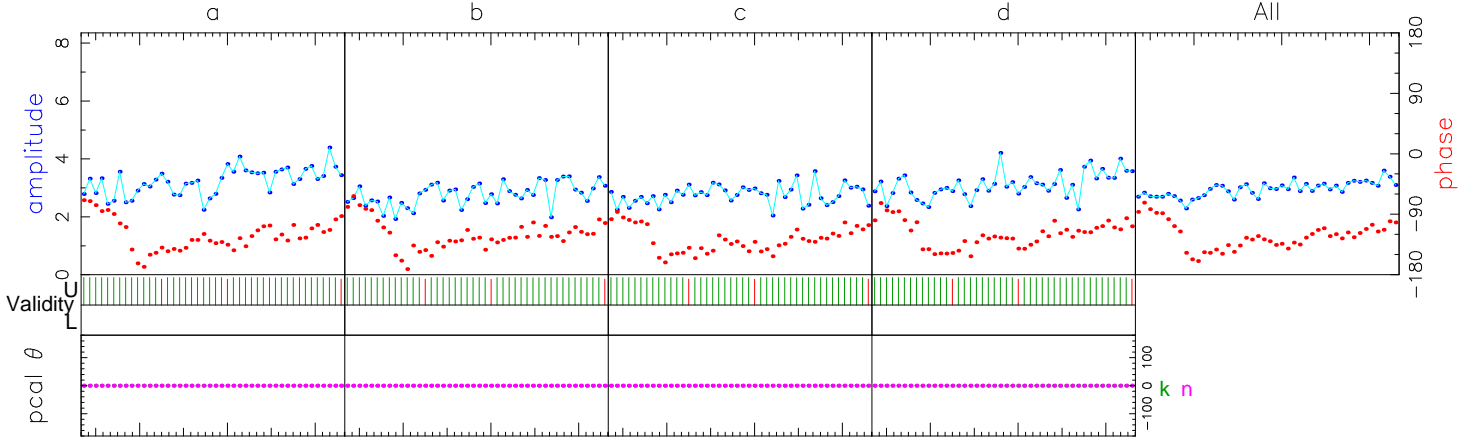
singleband delay ( $\mu$ s)



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  
 2025:049:103158  
 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
	-120.9	-120.2	-127.6	-118.9	Phase	-121.8
	3.0	2.6	2.6	2.9	Ampl.	2.8
	510.9	511.0	510.9	511.2	Sbd box	511.0
U/L	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

	2.93902447852E+03	Apriori delay (usec)	2.93902827621E+03	Resid mbdelay (usec)	-3.79769E-03	+/- 1.1E-05
Group delay (usec) (SBD)	2.93902439633E+03	Apriori clock (usec)	4.2349243E-01	Resid sbdelay (usec)	-3.87987E-03	+/- 4.2E-05
Sband delay (usec)	2.93902826837E+03	Apriori clockrate (us/s)	-1.4505389E-07	Resid phdelay (usec)	-7.83990E-06	+/- 7.2E-08
Phase delay (usec)	3.21563721037E-01	Apriori rate (us/s)	3.21563878775E-01	Resid rate (us/s)	-1.57738E-07	+/- 7.0E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-2.09051369457E-05	Resid phase (deg)	-121.8	+/- 1.1
Total phase (deg)	179.0					

	RMS	Theor.	Amplitude	2.786 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	20.1	3.7	Search (1024X16)	2.667	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	11.0	6.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	4.8	1.1	Inc. seg. avg.	2.947	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00
amp/frq (%)	6.5	2.0	Inc. frq. avg.	2.790	Data rate(Mb/s): 2048				

k: az 222.2 el 74.5 pa 38.1 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -990.815 -867.278 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/kn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/kn.Q.128.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

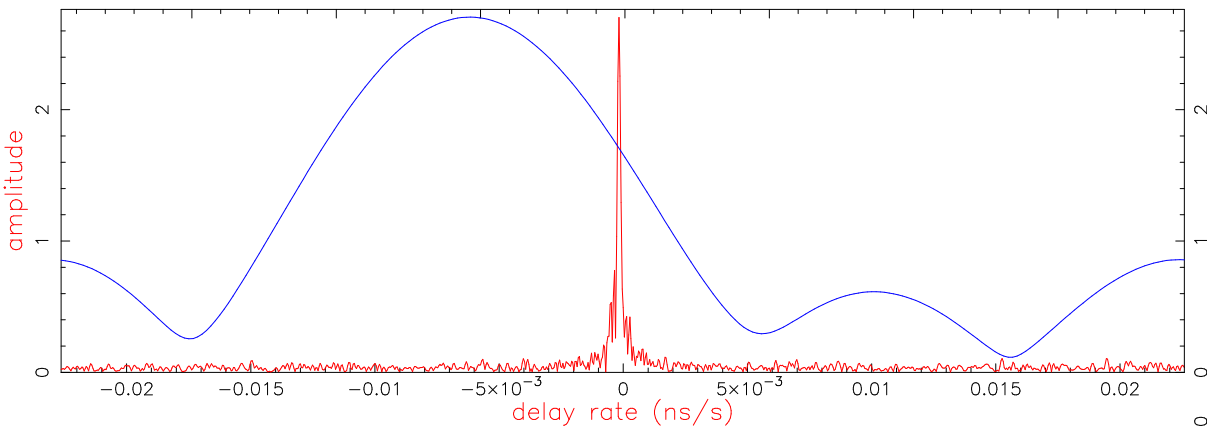
aux01

OJ287.3N2DRU, No0676, kn

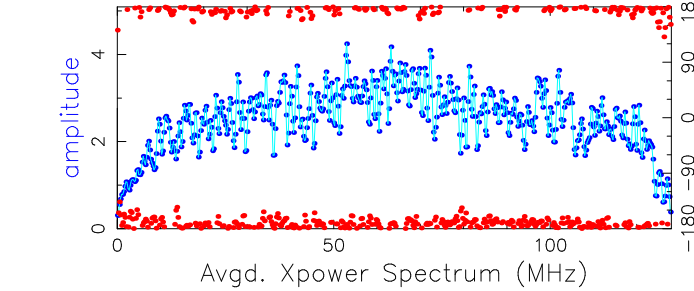
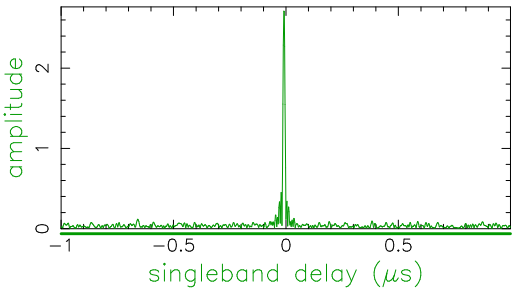
VLBA\_KP - VLBA\_NL, fgroup Q, pol RL

multiband delay ( $\mu$ s)

Fringe quality 7

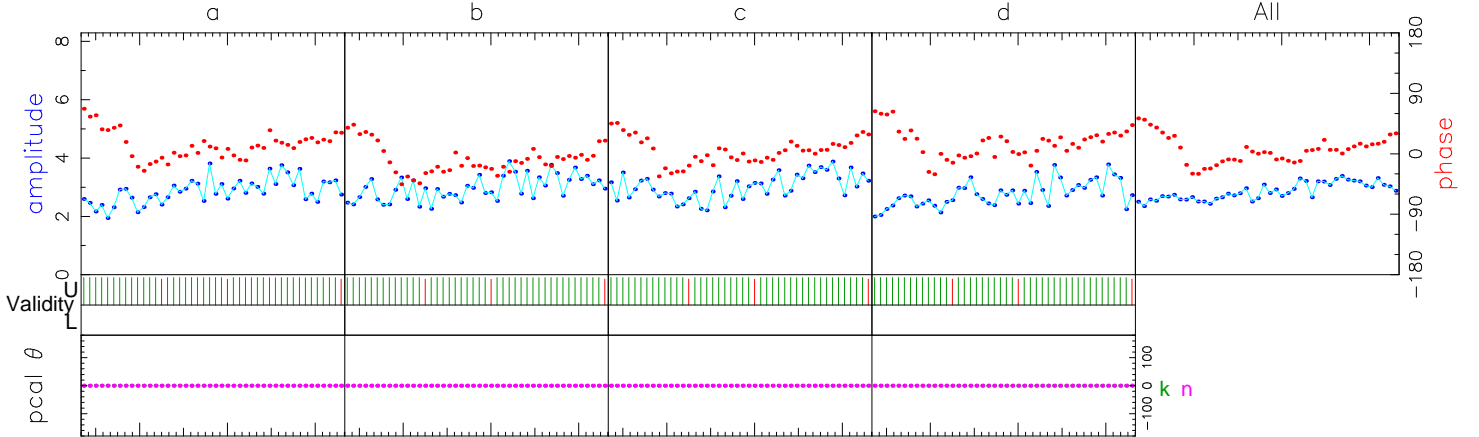


SNR 101.2  
 Int time 179.294  
 Amp 2.764  
 Phase -275.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.008829  
 MBD -0.001124  
 Fringe rate (Hz)  
 -0.006920  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:113  
 Start 030520.00  
 Stop 030820.22  
 FRT 030650.00  
 Corr/FF/build  
 2025:048:123813  
 2025:049:103159  
 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		
k	1000	1000	1000	1000	APs used	508.5
n	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
k	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	2.93901933968E+03	Apriori delay (usec)	2.93902827621E+03	Resid mbdelay (usec)	-1.12403E-03	+/- 1.1E-05
Group delay (usec) (SBD)	2.93901933968E+03	2.622	4.2349243E-01	Resid sbdelay (usec)	-8.82925E-03	+/- 4.3E-05
Sband delay (usec)	2.93901944696E+03	0.000	-1.4505389E-07	Resid phdelay (usec)	3.87134E-07	+/- 7.3E-08
Phase delay (usec)	2.93902827659E+03	0.000	3.21563878775E-01	Resid rate (us/s)	-1.60400E-07	+/- 7.0E-10
Delay rate (us/s)	3.21563718375E-01	-2.09051369457E-05		Resid phase (deg)	-275.2	+/- 1.1
Total phase (deg)	25.6					

	RMS	Theor.	Amplitude	2.764 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	19.9	3.8	Search (1024X16)	2.622	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	10.8	6.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	13.6	1.1	Inc. seg. avg.	2.850	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.8	2.0	Inc. frq. avg.	2.740	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 222.2 el 74.5 pa 38.1 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -990.815 -867.278 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/kn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/kn.Q.142.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

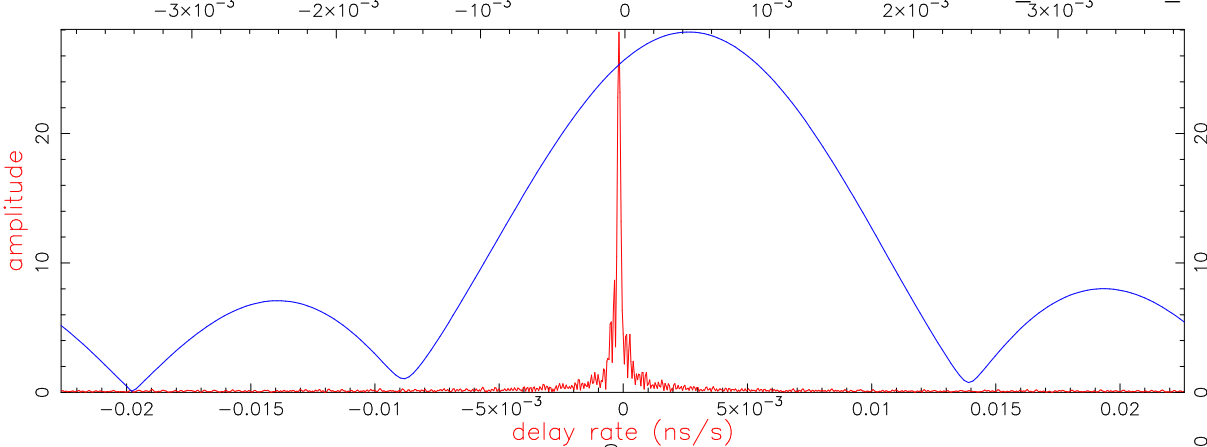
aux01

OJ287.3N2DRU, No0676, kn

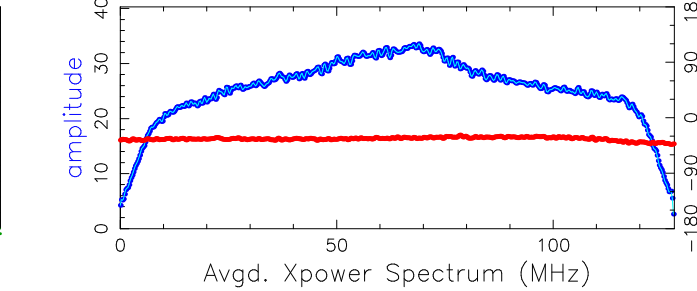
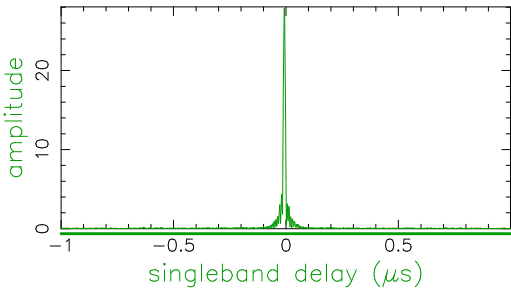
VLBA\_KP - VLBA\_NL, fgroup Q, pol LL

multiband delay ( $\mu$ s)

Fringe quality 8

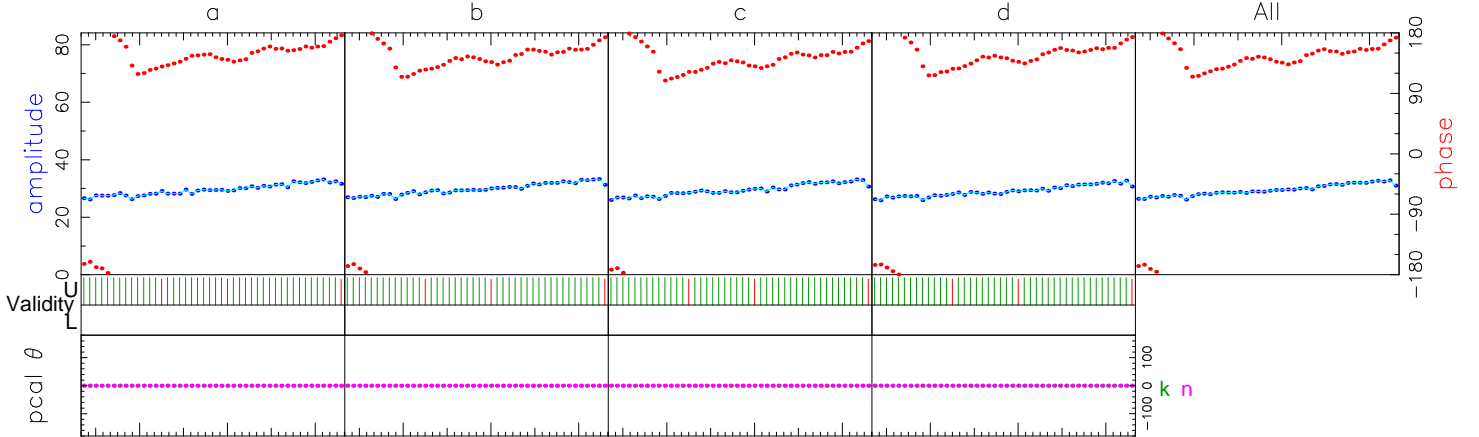


SNR 1027.1  
 Int time 179.294  
 Amp 28.052  
 Phase -132.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.007224  
 MBD 0.000468  
 Fringe rate (Hz)  
 -0.006795  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



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
U/L	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	
k:n	0:0	0:0	0:0	0:0	PC phase	
k:n	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
k	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	2.93902093158E+03	Apriori delay (usec)	2.93902827621E+03	Resid mbdelay (usec)	4.67879E-04	+/- 1.1E-06
Sband delay (usec)	2.93902105258E+03	Apriori clock (usec)	4.2349243E-01	Resid sbdelay (usec)	-7.22363E-03	+/- 4.2E-06
Phase delay (usec)	2.93902828580E+03	Apriori clockrate (us/s)	-1.4505389E-07	Resid phdelay (usec)	9.59844E-06	+/- 7.2E-09
Delay rate (us/s)	3.21563721275E-01	Apriori rate (us/s)	3.21563878775E-01	Resid rate (us/s)	-1.57500E-07	+/- 6.9E-11
Total phase (deg)	-191.4	Apriori accel (us/s/s)	-2.09051369457E-05	Resid phase (deg)	-132.2	+/- 0.1

ph/seg (deg)	19.7	Theor.	0.4	Amplitude	28.052 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	8.4		0.6	Search (1024X16)	26.788	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	4.7		0.1	Inc. seg. avg.	29.446	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	1.0		0.2	Inc. frq. avg.	27.890	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		

k: az 222.2 el 74.5 pa 38.1 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -990.815 -867.278 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/kn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/kn.Q.82.3N2DRU



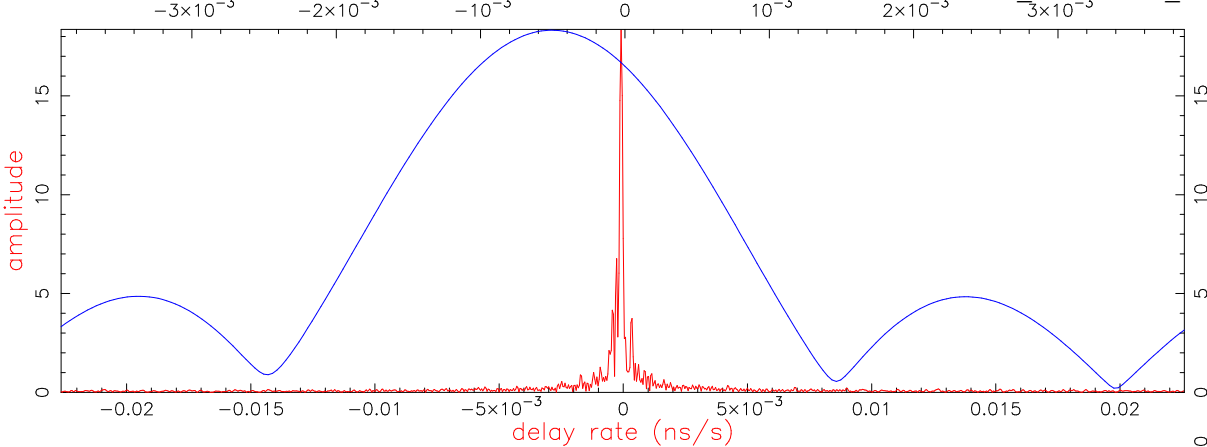
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, In

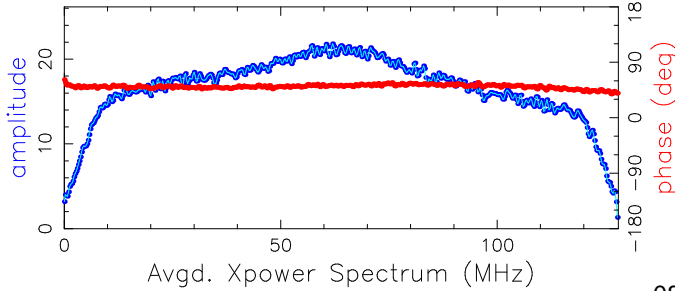
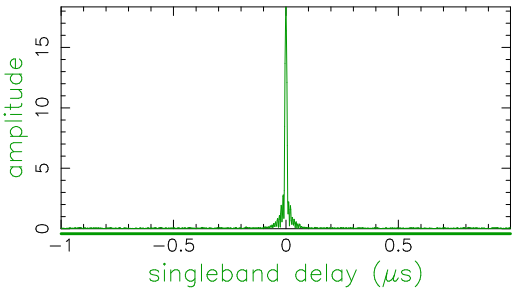
VLBA\_LA - VLBA\_NL, fgroup Q, pol LL

multiband delay ( $\mu$ s)



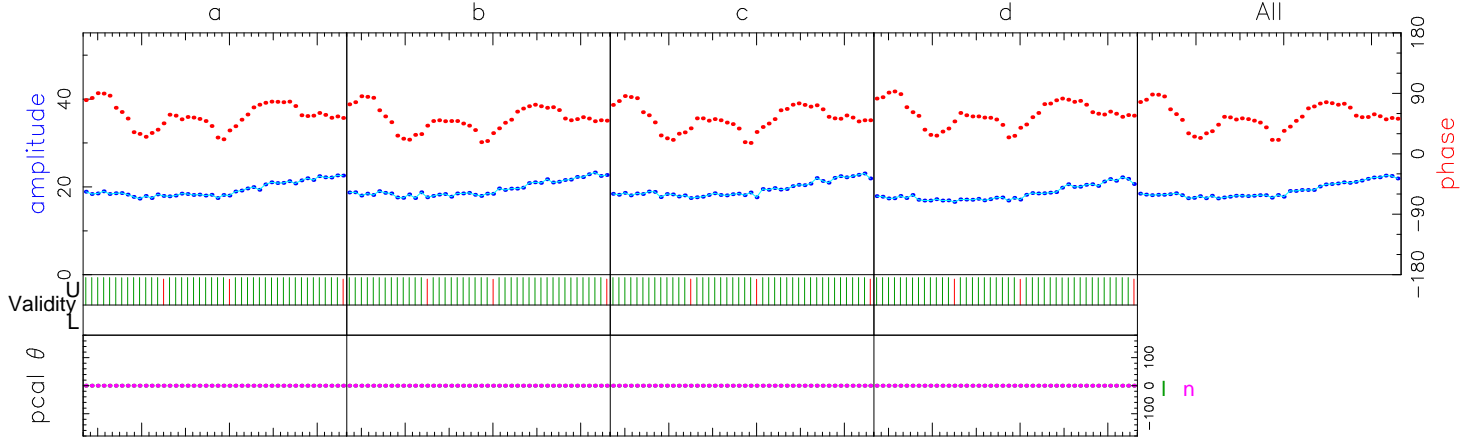
Fringe quality 8

SNR 672.3  
 Int time 179.294  
 Amp 18.362  
 Phase 55.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000331  
 MBD -0.000522  
 Fringe rate (Hz)  
 -0.003640  
 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		
l	1000	1000	1000	1000	APs used	
n	1000	1000	1000	1000	PC freqs	
l:n	0:0	0:0	0:0	0:0	PC freqs	
l:n	0:0	0:0	0:0	0:0	PC phase	
l	1000	1000	1000	1000	Manl PC	
n	1000	1000	1000	1000	PC amp	
l	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	2.22970037899E+03	Apriori delay (usec)	2.22970090084E+03	Resid mbdelay (usec)	-5.21842E-04	+/- 1.7E-06
Group delay (usec) (SBD)	2.22970056971E+03	Apriori clock (usec)	-8.0628681E+00	Resid sbdelay (usec)	-3.31125E-04	+/- 6.4E-06
Sband delay (usec)	2.22970090441E+03	Apriori clockrate (us/s)	-5.3126102E-07	Resid phdelay (usec)	3.57502E-06	+/- 1.1E-08
Phase delay (usec)	2.25103307308E-01	Apriori rate (us/s)	2.25103391679E-01	Resid rate (us/s)	-8.43711E-08	+/- 1.1E-10
Delay rate (us/s)		Apriori accel (us/s/s)	-1.50425580101E-05	Resid phase (deg)	55.5	+/- 0.2
Total phase (deg)	5.9					

	RMS	Theor.	Amplitude	18.362 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	17.9	0.6	Search (1024X16)	18.266	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	10.0	1.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	4.6	0.2	Inc. seg. avg.	19.199	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	2.2	0.3	Inc. frq. avg.	18.347	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 226.7 el 68.7 pa 39.5 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -693.909 -553.340 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/ln..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/ln.Q.114.3N2DRU

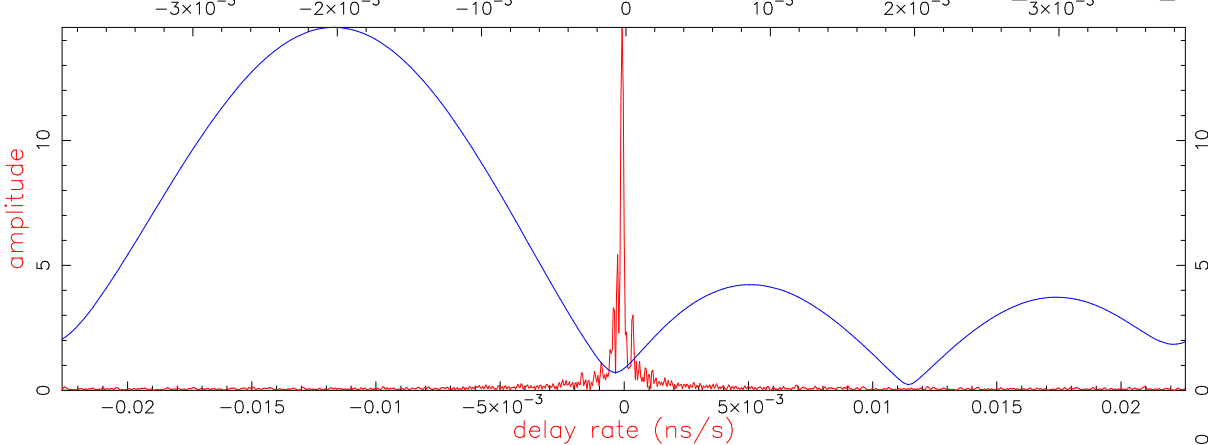
Mk4/DiFX fourfit 3.25 rev 0

aux01

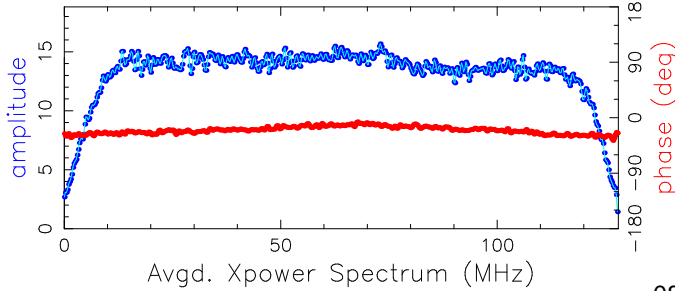
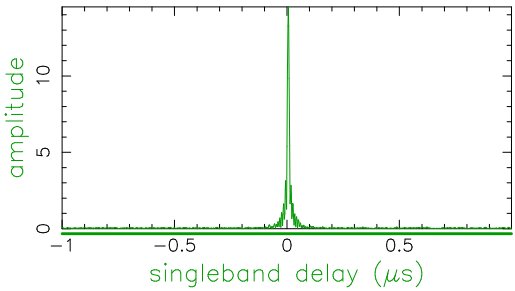
OJ287.3N2DRU, No0676, In VLBA\_LA - VLBA\_NL, fgroup Q, pol RR

multiband delay ( $\mu$ s)

Fringe quality 8

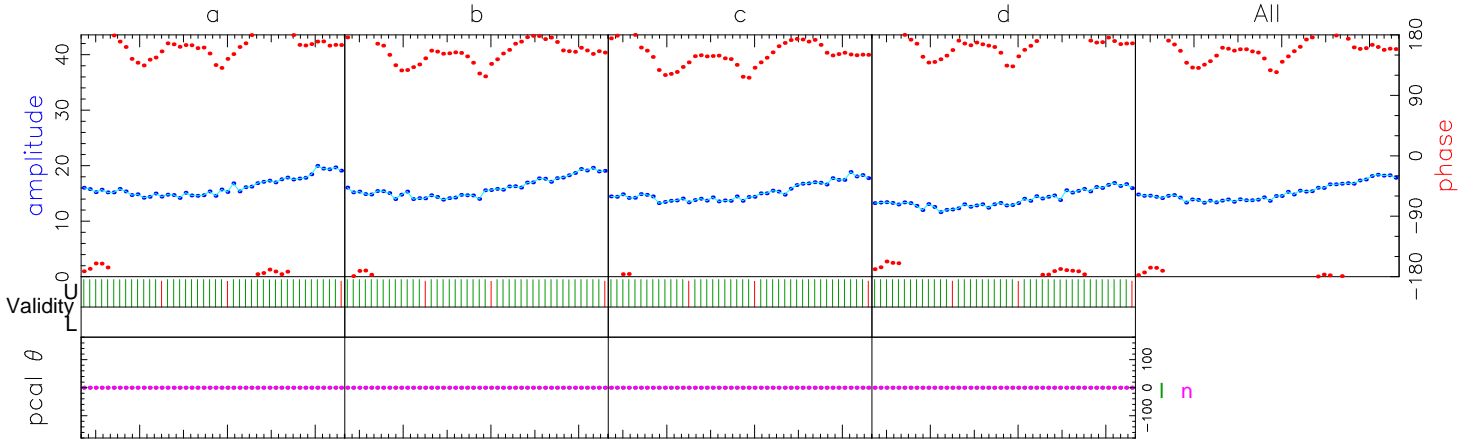


SNR 531.8  
 Int time 179.294  
 Amp 14.525  
 Phase 82.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005839  
 MBD -0.002026  
 Fringe rate (Hz)  
 -0.003666  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



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
	167.5	156.9	152.2	170.3	Phase	161.6
	15.5	15.3	14.5	13.3	Ampl.	14.6
	515.5	515.9	516.0	516.7	Sbd box	516.0
U/L	352/0	352/0	352/0	352/0	APs used	
l	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
l:n	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	2.22970668765E+03	Apriori delay (usec)	2.22970090084E+03	Resid mbdelay (usec)	-2.02569E-03	+/- 2.1E-06
Sband delay (usec)	2.22970673946E+03	Apriori clock (usec)	-8.0628681E+00	Resid sbdelay (usec)	5.83863E-03	+/- 8.1E-06
Phase delay (usec)	2.22970091124E+03	Apriori clockrate (us/s)	-5.3126102E-07	Resid phdelay (usec)	1.04033E-05	+/- 1.4E-08
Delay rate (us/s)	2.25103306708E-01	Apriori rate (us/s)	2.25103391679E-01	Resid rate (us/s)	-8.49710E-08	+/- 1.3E-10
Total phase (deg)	33.2	Apriori accel (us/s/s)	-1.50425580101E-05	Resid phase (deg)	82.8	+/- 0.2

ph/seg (deg)	17.7	Theor.	Amplitude	14.525 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	11.6	0.7	Search (1024X16)	14.466	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	10.5	1.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
amp/frq (%)	6.0	0.4	Inc. seg. avg.	15.207	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023 0.023	
			Inc. frq. avg.	14.644	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00 0.00

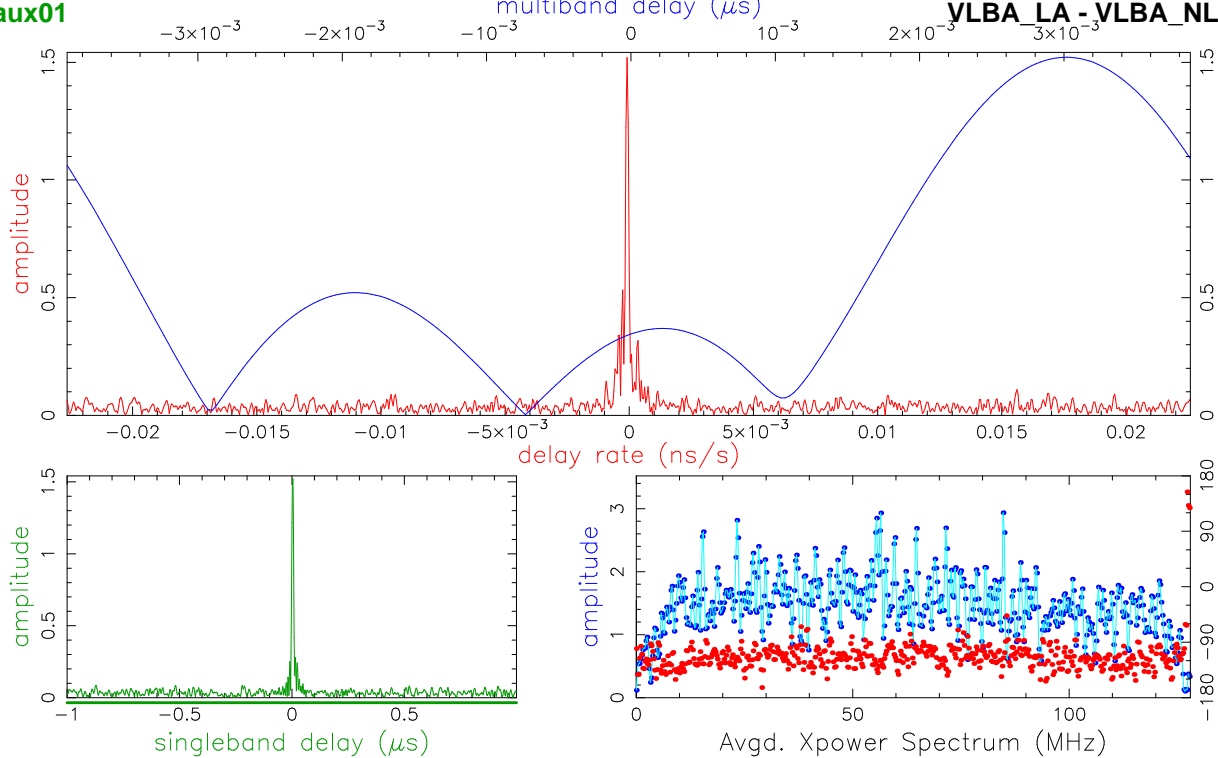
l: az 226.7 el 68.7 pa 39.5 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -693.909 -553.340 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/In..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/In.Q.129.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, In VLBA\_LA - VLBA\_NL, fgroup Q, pol LR

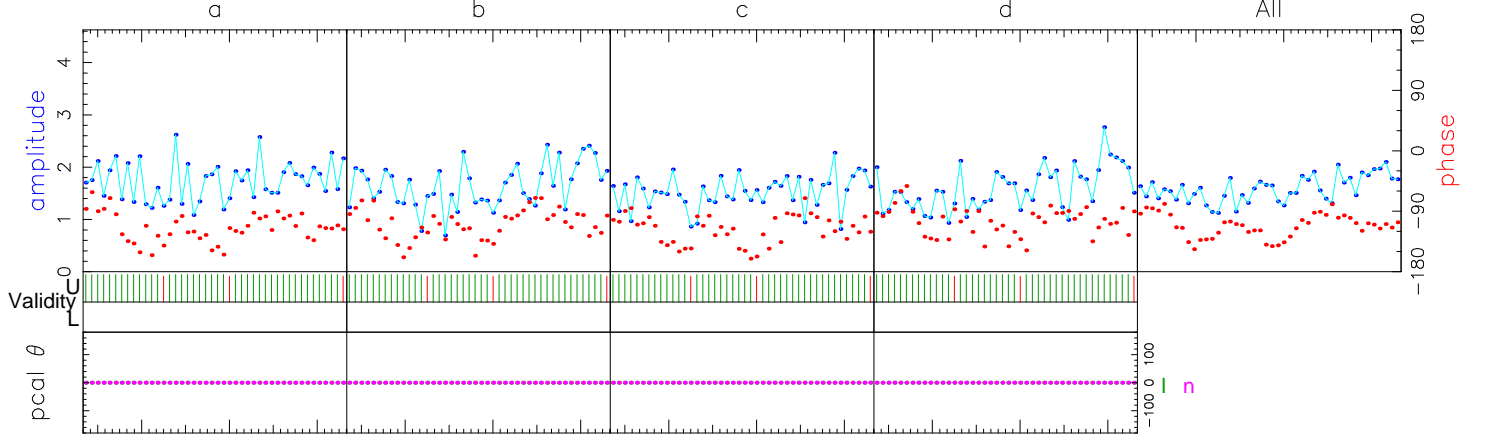


Fringe quality 9

SNR 56.5  
 Int time 179.294  
 Amp 1.542  
 Phase -110.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003125  
 MBD 0.002976  
 Fringe rate (Hz) -0.003596  
 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  
 2025:049:103202  
 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		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	2.22970387662E+03	Apriori delay (usec)	2.22970090084E+03	Resid mbdelay (usec)	2.97578E-03	+/-	2.0E-05
Sband delay (usec)	2.22970402584E+03	Apriori clock (usec)	-8.0628681E+00	Resid sbdelay (usec)	3.12500E-03	+/-	7.6E-05
Phase delay (usec)	2.22970089371E+03	Apriori clockrate (us/s)	-5.3126102E-07	Resid phdelay (usec)	-7.12442E-06	+/-	1.3E-07
Delay rate (us/s)	2.25103308318E-01	Apriori rate (us/s)	2.25103391679E-01	Resid rate (us/s)	-8.33609E-08	+/-	1.3E-09
Total phase (deg)	199.7	Apriori accel (us/s/s)	-1.50425580101E-05	Resid phase (deg)	-110.6	+/-	2.0

ph/seg (deg)	17.4	Theor.	6.7	Amplitude	1.542 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	16.1		11.7	Search (1024X16)	1.510	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	7.3		2.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.7		3.5	Inc. seg. avg.	1.577	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	1.526	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		

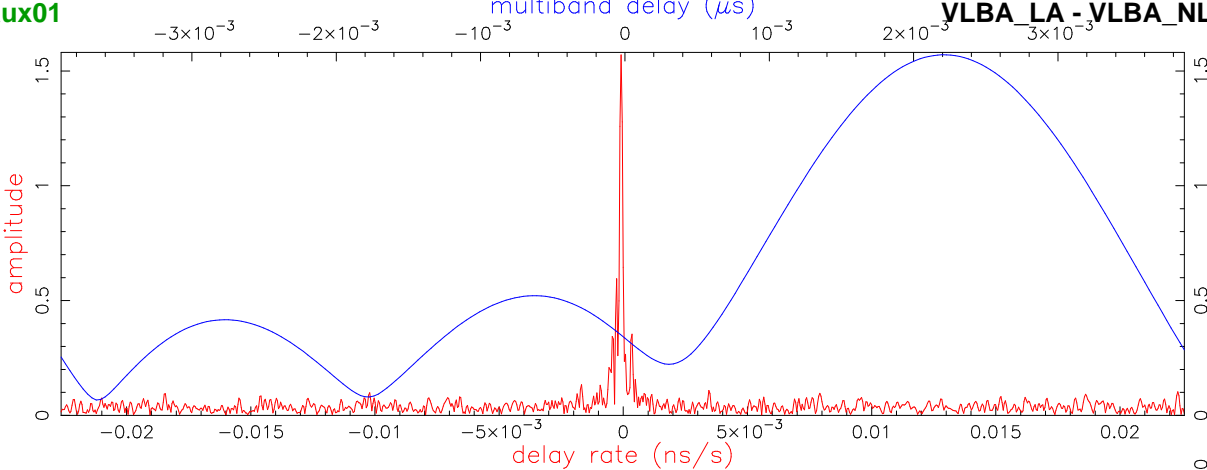
l: az 226.7 el 68.7 pa 39.5      n: az 239.9 el 55.9 pa 43.6      u,v (fr/asec) -693.909 -553.340      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/ln..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/ln.Q.155.3N2DRU

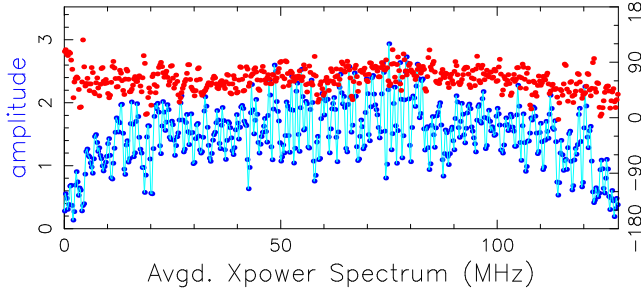
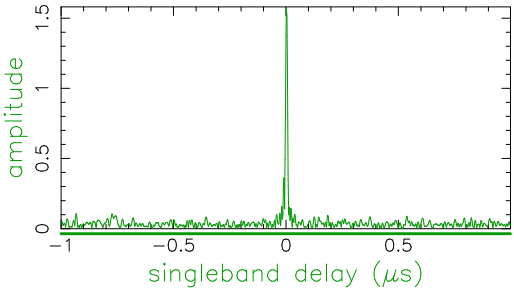
Mk4/DiFX fourfit 3.25 rev 0

aux01

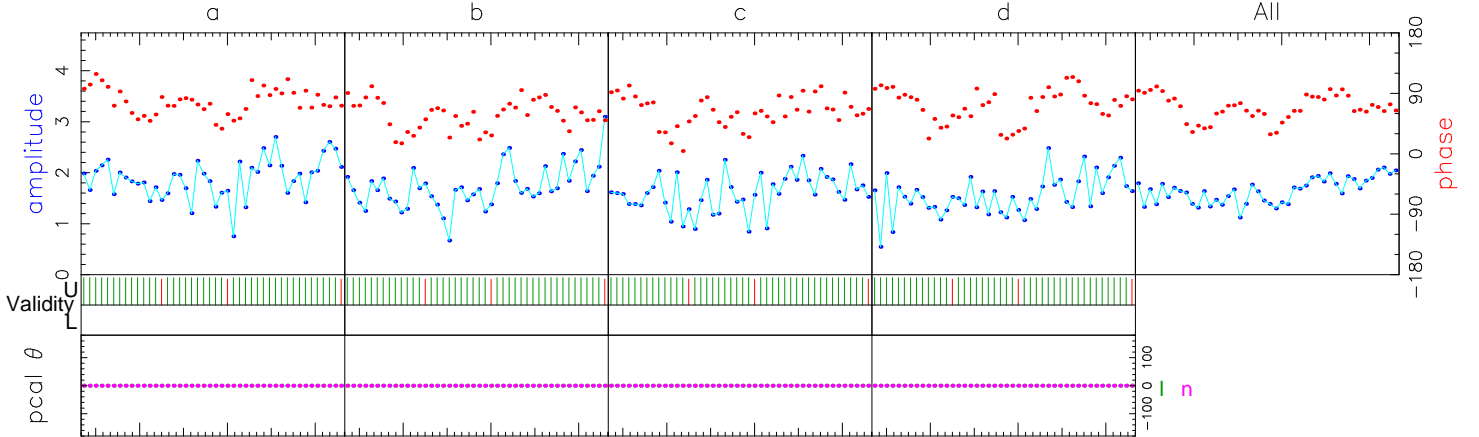
OJ287.3N2DRU, No0676, In VLBA\_LA - VLBA\_NL, fgroup Q, pol RL



Fringe quality 9  
 SNR 57.9  
 Int time 179.294  
 Amp 1.581  
 Phase 69.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.002515  
 MBD 0.002241  
 Fringe rate (Hz) -0.003750  
 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  
 2025:049:103204  
 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		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l:n	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000		
n	1000	1000	1000	1000		
l	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UL	Q01UL	Q02UL	Q03UL		

	2.22970314193E+03	2.22970090084E+03	2.22970090084E+03	2.22970090084E+03	2.24110E-03	+/- 1.9E-05
Group delay (usec) (SBD)	2.22970314193E+03	2.22970090084E+03	2.22970090084E+03	2.22970090084E+03	2.24110E-03	+/- 1.9E-05
Sband delay (usec)	2.22970341596E+03	-8.0628681E+00	-8.0628681E+00	-8.0628681E+00	2.51513E-03	+/- 7.4E-05
Phase delay (usec)	2.22970090533E+03	-5.3126102E-07	-5.3126102E-07	-5.3126102E-07	4.49113E-06	+/- 1.3E-07
Delay rate (us/s)	2.25103304762E-01	2.25103391679E-01	2.25103391679E-01	2.25103391679E-01	-8.69178E-08	+/- 1.2E-09
Total phase (deg)	20.1	-1.50425580101E-05	-1.50425580101E-05	-1.50425580101E-05	69.7	+/- 2.0

	RMS	Theor.	Amplitude	1.581 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	18.9	6.6	Search (1024X16)	1.537	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	15.8	11.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	11.1	2.0	Inc. seg. avg.	1.641	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	8.6	3.5	Inc. frq. avg.	1.585	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 226.7 el 68.7 pa 39.5 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -693.909 -553.340 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/In..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/In.Q.180.3N2DRU

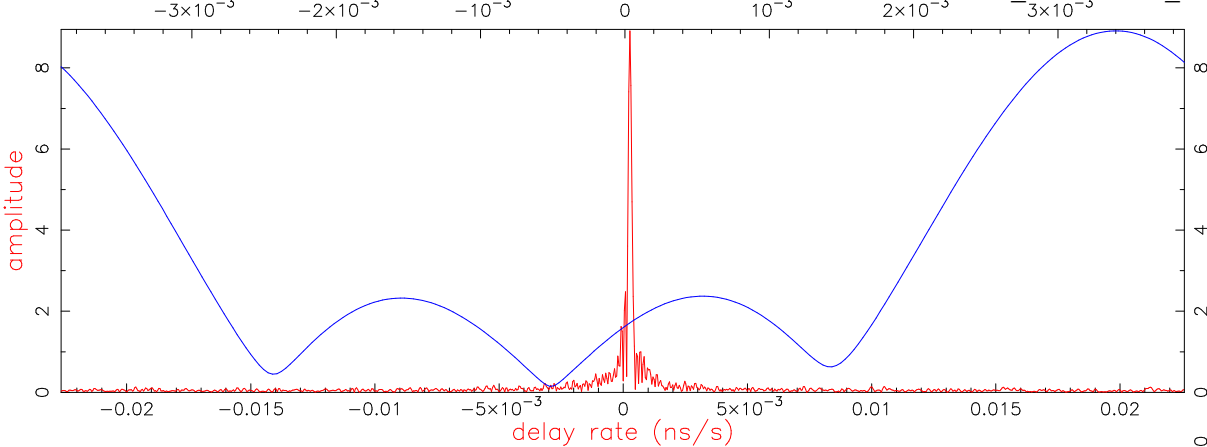
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, mn

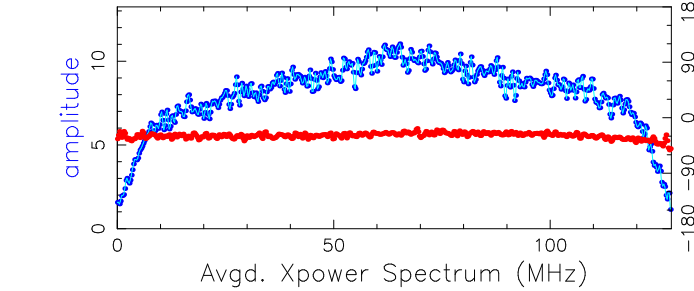
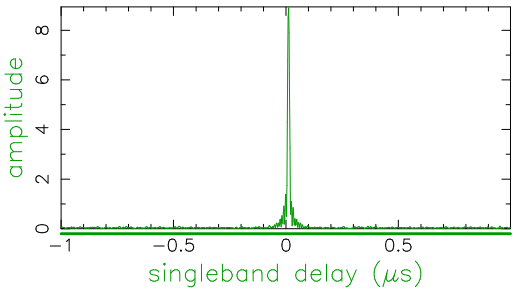
VLBA\_MK - VLBA\_NL, fgroup Q, pol LL

multiband delay ( $\mu$ s)



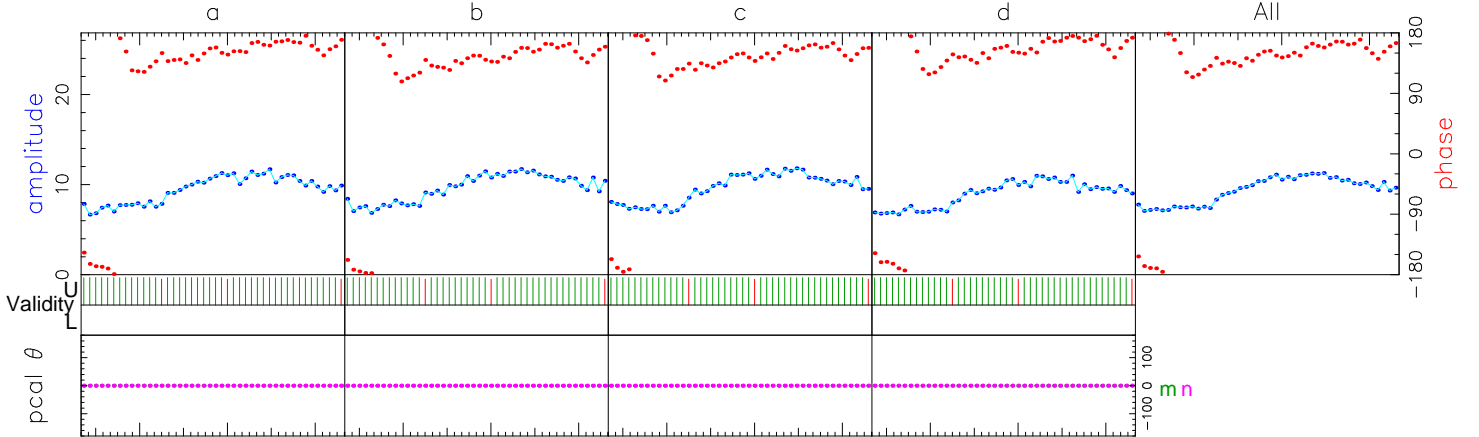
Fringe quality 8

SNR 327.7  
 Int time 179.290  
 Amp 8.949  
 Phase 74.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.011284  
 MBD 0.003382  
 Fringe rate (Hz)  
 0.011692  
 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
U/L	352/0	352/0	352/0	352/0		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m:n	0:0	0:0	0:0	0:0		
m:n	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UL	Q01UL	Q02UL	Q03UL		

	8.74854572519E+02	8.74854662055E+02	8.74843388319E+02	1.30308989838E+00	8.74843378430E+02	8.0135727E-01	-3.1175995E-07	1.30308962735E+00	-1.72672268316E-05	3.38159E-03	1.12836E-02	9.88868E-06	2.71031E-07	74.8	3.4E-06	1.3E-05	2.3E-08	2.2E-10	0.3	
Group delay (usec) (SBD)																				
Sband delay (usec)																				
Phase delay (usec)																				
Delay rate (us/s)																				
Total phase (deg)		199.2																		
Apriori delay (usec)																				
Apriori clock (usec)																				
Apriori clockrate (us/s)																				
Apriori rate (us/s)																				
Apriori accel (us/s/s)																				
Resid mbdelay (usec)																				
Resid sbdelay (usec)																				
Resid phdelay (usec)																				
Resid rate (us/s)																				
Resid phase (deg)																				

	RMS	Theor.	Amplitude	8.949 +/- 0.027	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	20.2	1.2	Search (1024X16)	8.852	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	16.9	2.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.0	0.3	Inc. seg. avg.	9.387	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	3.1	0.6	Inc. frq. avg.	8.946	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 83.9 el 59.2 pa -84.9 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -3983.807 -1600.531 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/mn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/mn.Q.131.3N2DRU

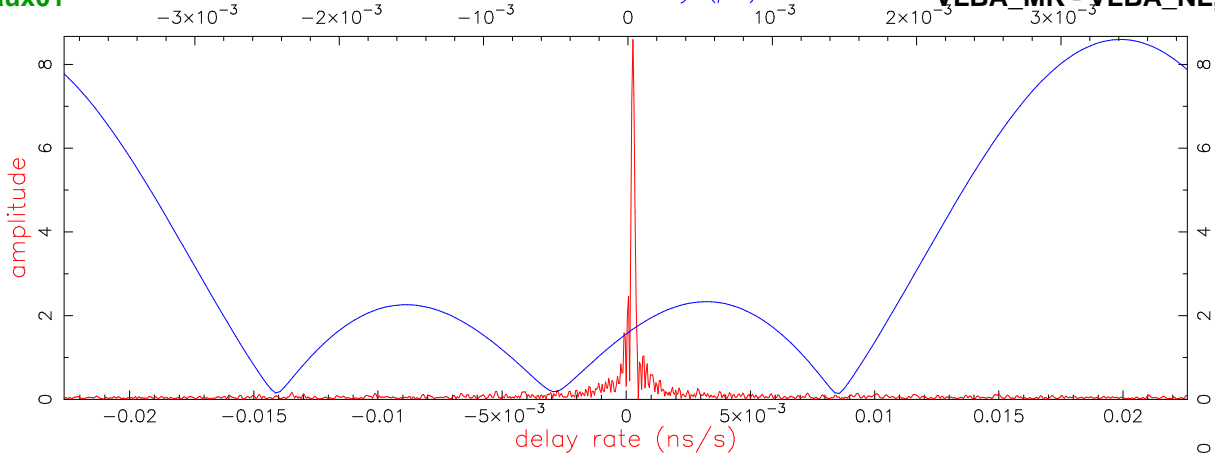
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, mn

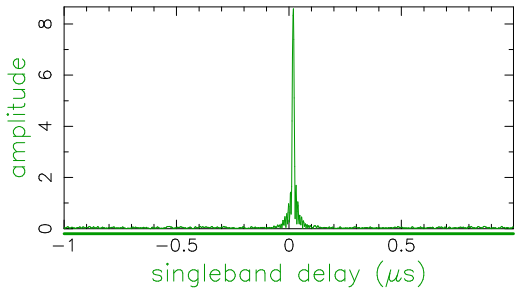
VLBA\_MK - VLBA\_NL, fgroup Q, pol RR

multiband delay ( $\mu$ s)

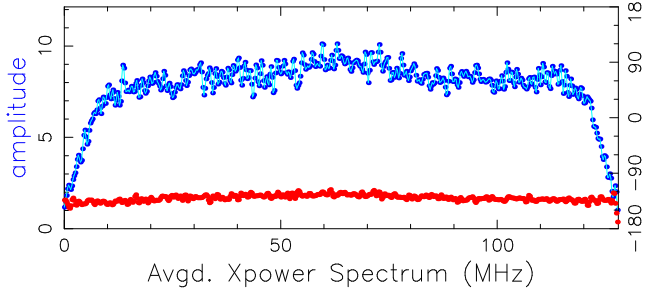


Fringe quality 8

SNR 317.5  
 Int time 179.294  
 Amp 8.670  
 Phase 70.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.018905  
 MBD 0.003376  
 Fringe rate (Hz)  
 0.011701  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



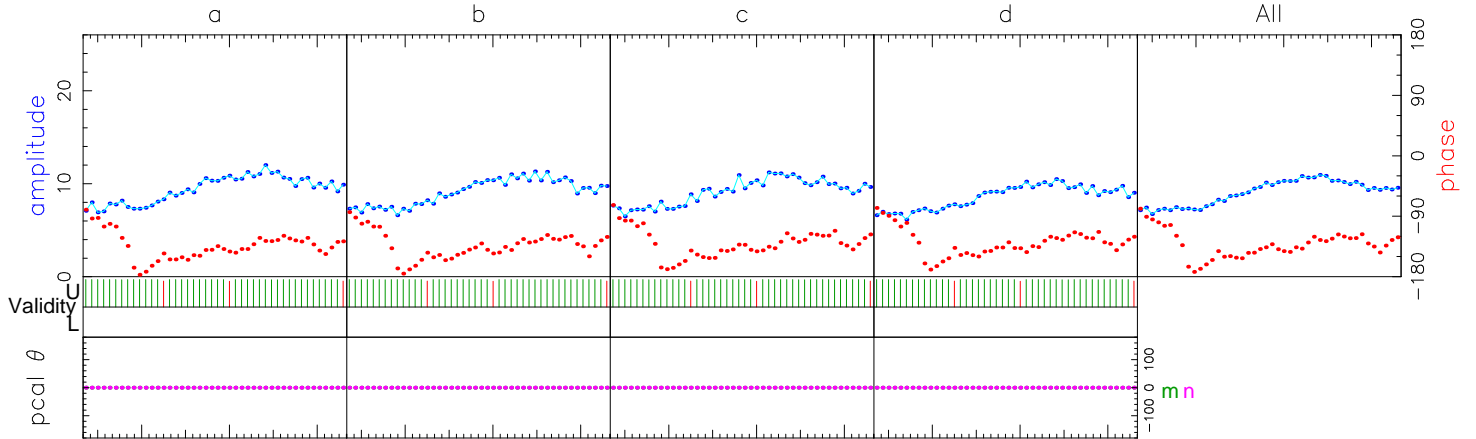
singleband delay ( $\mu$ s)



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  
 2025:049:103201  
 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
	-134.4	-133.2	-130.6	-129.7	Phase	-132.1
	8.9	8.7	8.6	8.2	Ampl.	8.6
	522.6	522.6	522.7	522.8	Sbd box	522.7
U/L	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	8.74862379456E+02	Apriori delay (usec)	8.74843378430E+02	Resid mbdelay (usec)	3.37603E-03	+/-	3.5E-06
Sband delay (usec)	8.74862283680E+02	Apriori clock (usec)	8.0135727E-01	Resid sbdelay (usec)	1.89053E-02	+/-	1.4E-05
Phase delay (usec)	8.74843369927E+02	Apriori clockrate (us/s)	-3.1175995E-07	Resid phdelay (usec)	-8.50289E-06	+/-	2.3E-08
Delay rate (us/s)	1.30308989859E+00	Apriori rate (us/s)	1.30308962735E+00	Resid rate (us/s)	2.71234E-07	+/-	2.2E-10
Total phase (deg)	194.8	Apriori accel (us/s/s)	-1.72672268316E-05	Resid phase (deg)	70.4	+/-	0.4

	RMS	Theor.	Amplitude	8.670 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	20.2	1.2	Search (1024X16)	8.538	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	15.6	2.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	2.7	0.4	Inc. seg. avg.	9.052	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023	
amp/frq (%)	3.3	0.6	Inc. frq. avg.	8.597	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

m: az 83.9 el 59.2 pa -84.9 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -3983.807 -1600.531 simultaneous interpolator

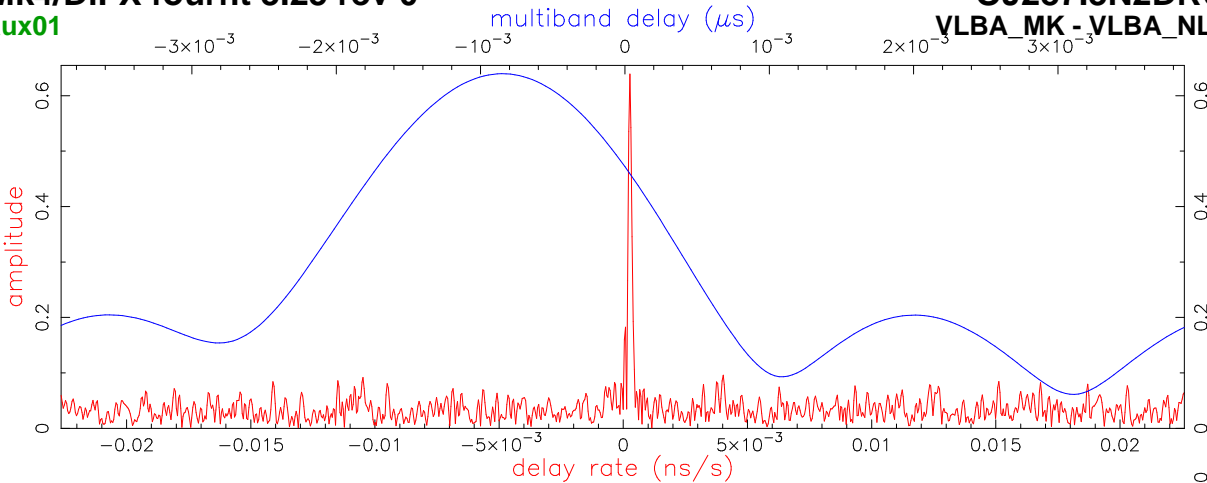
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/mn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/mn.Q.150.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

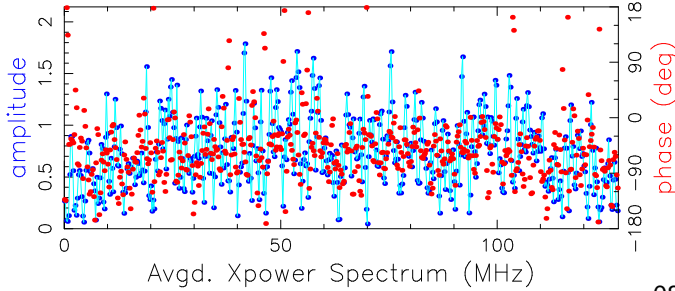
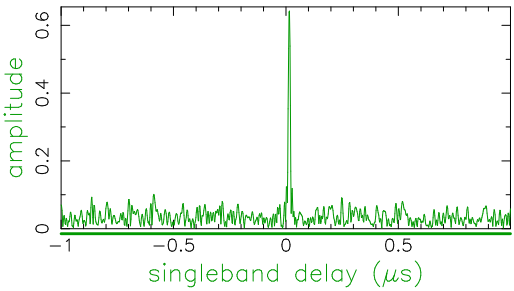
OJ287.3N2DRU, No0676, mn

VLBA\_MK - VLBA\_NL, fgroup Q, pol LR



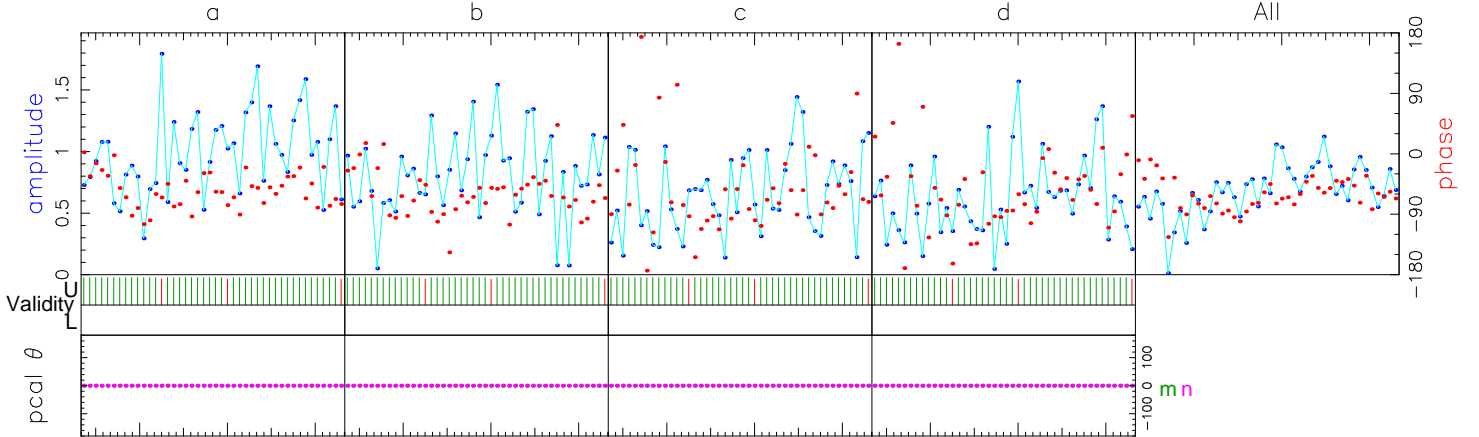
Fringe quality 8

SNR 24.0  
 Int time 179.290  
 Amp 0.655  
 Phase 143.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.014700  
 MBD -0.000802  
 Fringe rate (Hz)  
 0.011887  
 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  
 2025:049:103204  
 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		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m:n	0:0	0:0	0:0	0:0		
m:n	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m	Q00UL	Q01UL	Q02UL	Q03UL		
n	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec) (SBD)	8.74858201519E+02	Apriori delay (usec)	8.74843378430E+02	Resid mbdelay (usec)	-8.01912E-04	+/- 4.6E-05
Sband delay (usec)	8.74858078805E+02	Apriori clock (usec)	8.0135727E-01	Resid sbdelay (usec)	1.47004E-02	+/- 1.8E-04
Phase delay (usec)	8.74843374614E+02	Apriori clockrate (us/s)	-3.1175995E-07	Resid phdelay (usec)	-3.81657E-06	+/- 3.1E-07
Delay rate (us/s)	1.30308990290E+00	Apriori rate (us/s)	1.30308962735E+00	Resid rate (us/s)	2.75544E-07	+/- 3.0E-09
Total phase (deg)	267.6	Apriori accel (us/s/s)	-1.72672268316E-05	Resid phase (deg)	143.2	+/- 4.8

	RMS	Theor.	Amplitude	0.655 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	23.9	15.9	Search (1024X16)	0.629	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	32.1	27.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	7.0	4.8	Inc. seg. avg.	0.657	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	28.2	8.3	Inc. frq. avg.	0.639	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 83.9 el 59.2 pa -84.9 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -3983.807 -1600.531 simultaneous interpolator

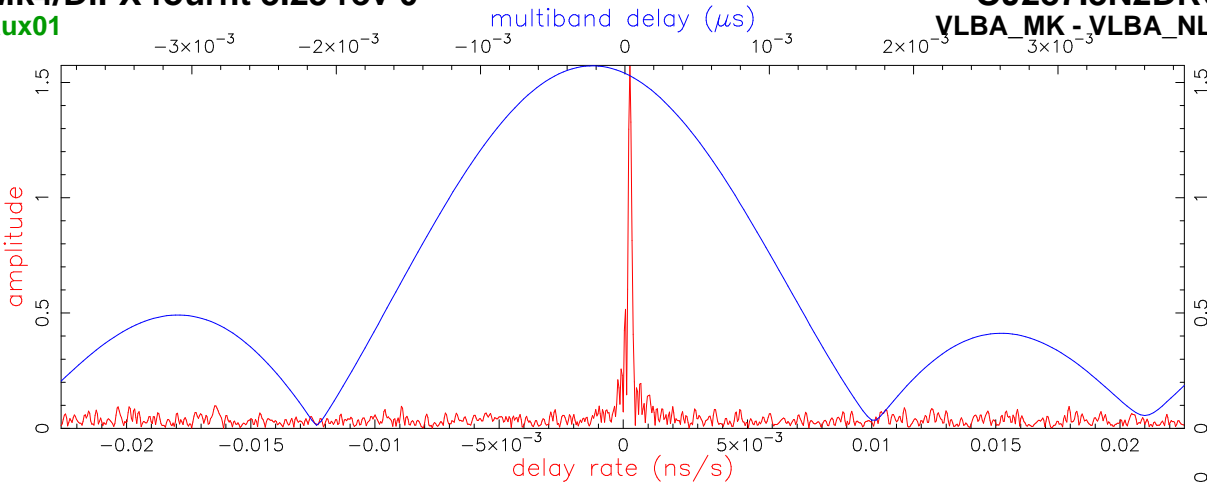
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/mn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/mn.Q.172.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

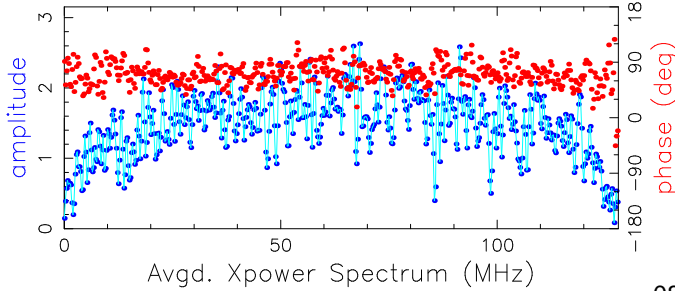
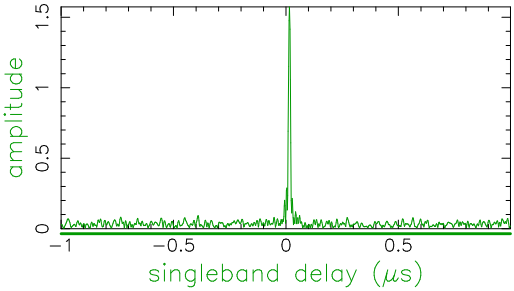
OJ287.3N2DRU, No0676, mn

VLBA\_MK - VLBA\_NL, fgroup Q, pol RL



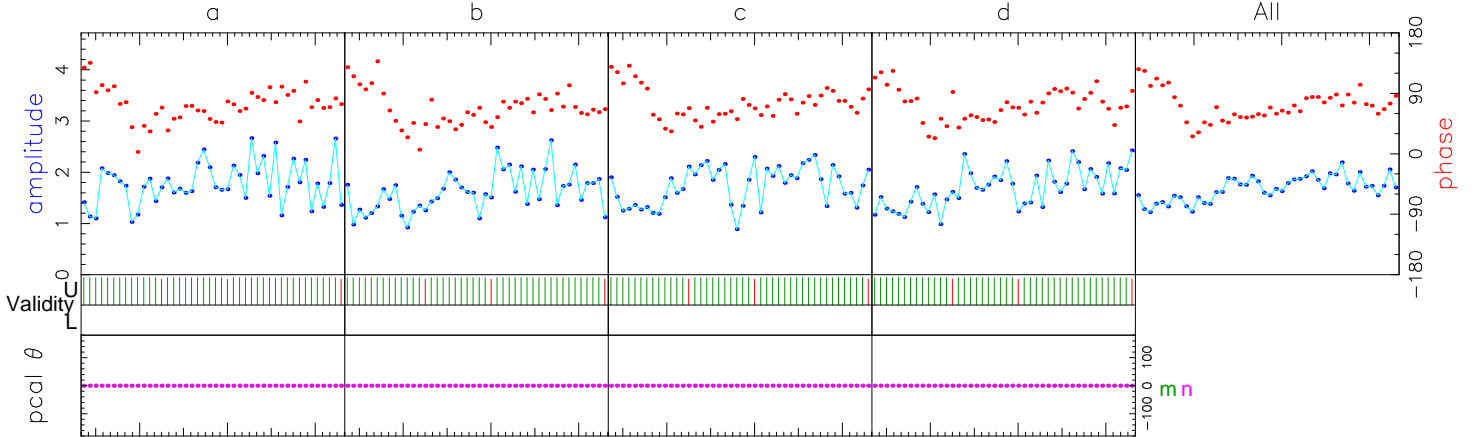
Fringe quality 9

SNR 57.6  
 Int time 179.294  
 Amp 1.574  
 Phase 274.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.015383  
 MBD -0.000237  
 Fringe rate (Hz)  
 0.011627  
 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  
 2025:049:103206  
 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		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m:n	0:0	0:0	0:0	0:0		
m:n	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000		
n	1000	1000	1000	1000		
m	Q00UR	Q01UR	Q02UR	Q03UR		
n	Q00UL	Q01UL	Q02UL	Q03UL		

	8.74858766862E+02	Apriori delay (usec)	8.74843378430E+02	Resid mbdelay (usec)	-2.36568E-04	+/- 1.9E-05
Group delay (usec) (SBD)	8.74858761930E+02	Apriori clock (usec)	8.0135727E-01	Resid sbdelay (usec)	1.53835E-02	+/- 7.5E-05
Sband delay (usec)	8.74843383069E+02	Apriori clockrate (us/s)	-3.1175995E-07	Resid phdelay (usec)	4.63823E-06	+/- 1.3E-07
Phase delay (usec)	1.30308989688E+00	Apriori rate (us/s)	1.30308962735E+00	Resid rate (us/s)	2.69525E-07	+/- 1.2E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-1.72672268316E-05	Resid phase (deg)	274.5	+/- 2.0
Total phase (deg)	38.9					

	RMS	Theor.	Amplitude	1.574 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	22.1	6.6	Search (1024X16)	1.527	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	16.4	11.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	3.8	2.0	Inc. seg. avg.	1.669	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	4.0	3.5	Inc. frq. avg.	1.573	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 83.9 el 59.2 pa -84.9 n: az 239.9 el 55.9 pa 43.6 u,v (fr/asec) -3983.807 -1600.531 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/mn..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/mn.Q.187.3N2DRU



Mk4/DiFX fourfit 3.25 rev 0

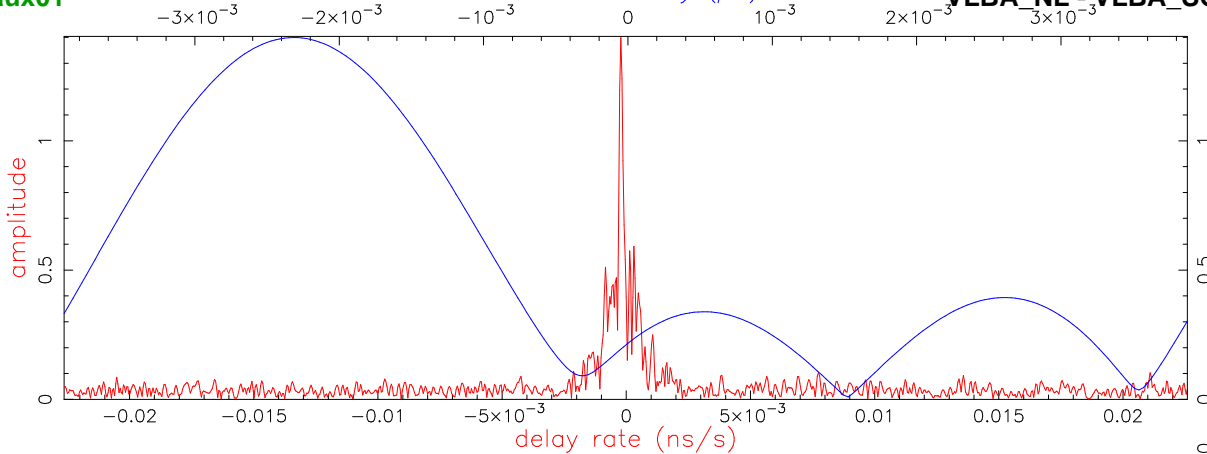
aux01

OJ287.3N2DRU, No0676, nc

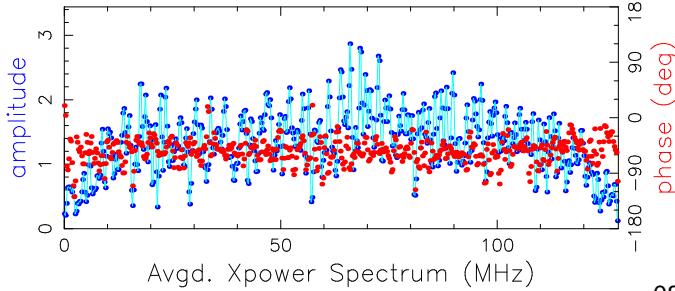
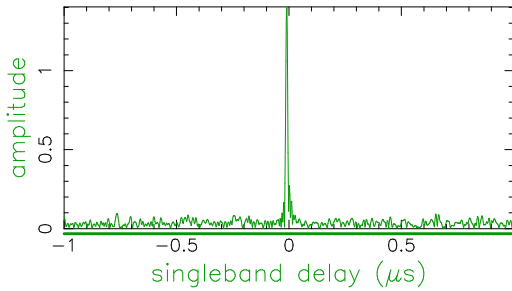
VLBA\_NL - VLBA\_SC, fgroup Q, pol LL

multiband delay ( $\mu$ s)

Fringe quality 7

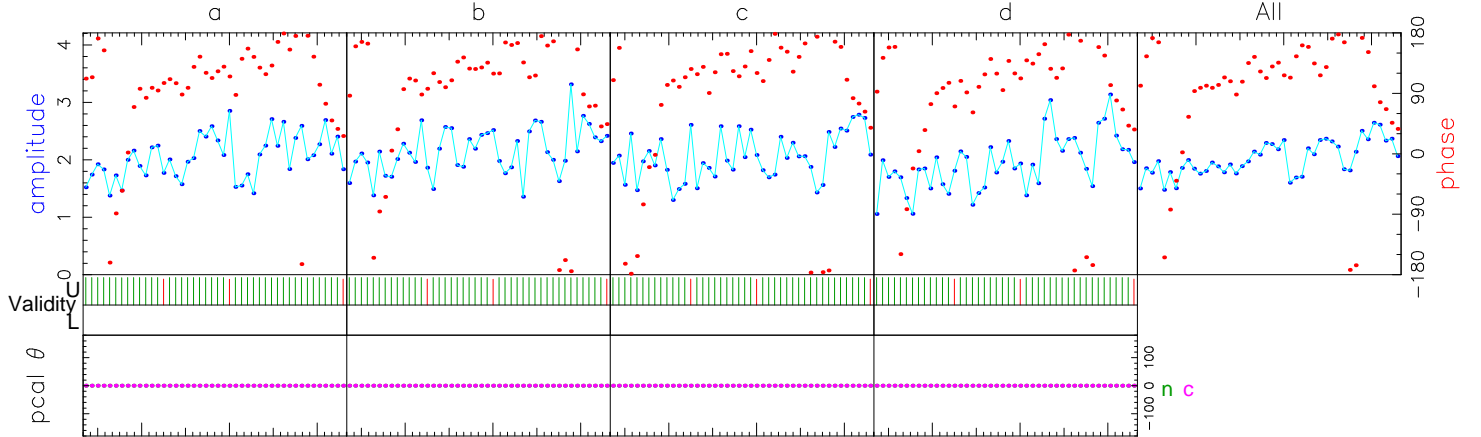


SNR 51.4  
 Int time 179.297  
 Amp 1.404  
 Phase -156.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.010142  
 MBD -0.002329  
 Fringe rate (Hz)  
 -0.008692  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:113  
 Start 030520.00  
 Stop 030820.22  
 FRT 030650.00  
 Corr/FF/build  
 2025:048:123813  
 2025:049:103203  
 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



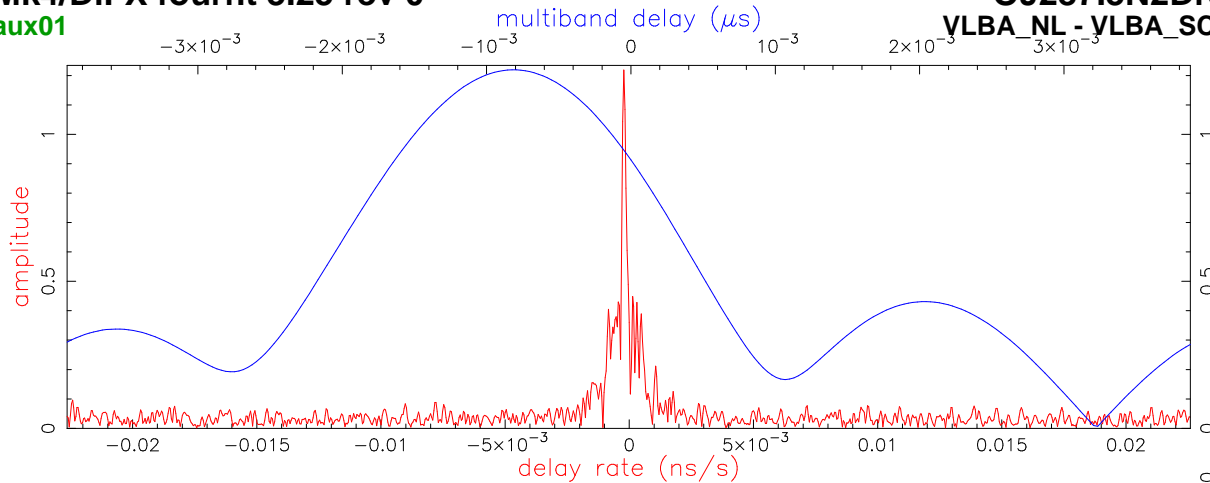
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
121.0	125.8	131.0	121.0	Phase	124.7
1.4	1.5	1.4	1.3	Ampl.	1.4
507.9	508.0	507.6	507.8	Sbd box	507.8
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
c 1000	1000	1000	1000	PC freqs	
n:c 0:0	0:0	0:0	0:0	PC phase	
n:c 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
c 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
c Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec) (SBD)	5.43110295569E+03	Apriori delay (usec)	5.43111309703E+03	Resid mbdelay (usec)	-2.32884E-03 +/- 2.2E-05
Sband delay (usec)	5.43110295541E+03	Apriori clock (usec)	-3.9498692E+00	Resid sbdelay (usec)	-1.01416E-02 +/- 8.4E-05
Phase delay (usec)	5.43111310507E+03	Apriori clockrate (us/s)	6.9052999E-07	Resid phdelay (usec)	8.03225E-06 +/- 1.4E-07
Delay rate (us/s)	6.14114158445E-01	Apriori rate (us/s)	6.14114359923E-01	Resid rate (us/s)	-2.01478E-07 +/- 1.4E-09
Total phase (deg)	-154.3	Apriori accel (us/s/s)	-1.49719978540E-05	Resid phase (deg)	-156.5 +/- 2.2
RMS	Theor.	Amplitude	1.404 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
54.3	7.4	Search (1024X16)	1.342	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
48.6	12.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
5.8	2.2	Inc. seg. avg.	2.003	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
3.5	3.9	Inc. frq. avg.	1.402	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
n: az 239.9 el 55.9 pa 43.6	c: az 282.3 el 35.3 pa 82.0	u, v (fr/asec)	-1884.772 1293.823		simultaneous interpolator
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676/nc..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676/nc.Q.165.3N2DRU			

Mk4/DiFX fourfit 3.25 rev 0

aux01

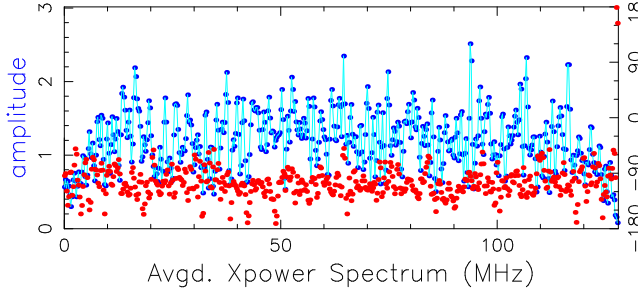
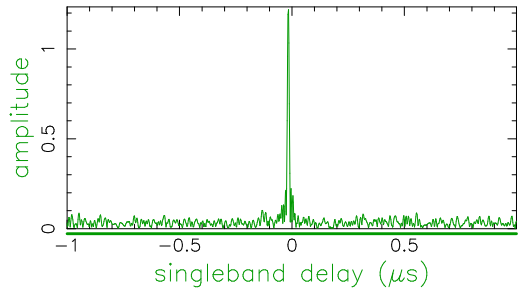
OJ287.3N2DRU, No0676, nc

VLBA\_NL - VLBA\_SC, fgroup Q, pol RR



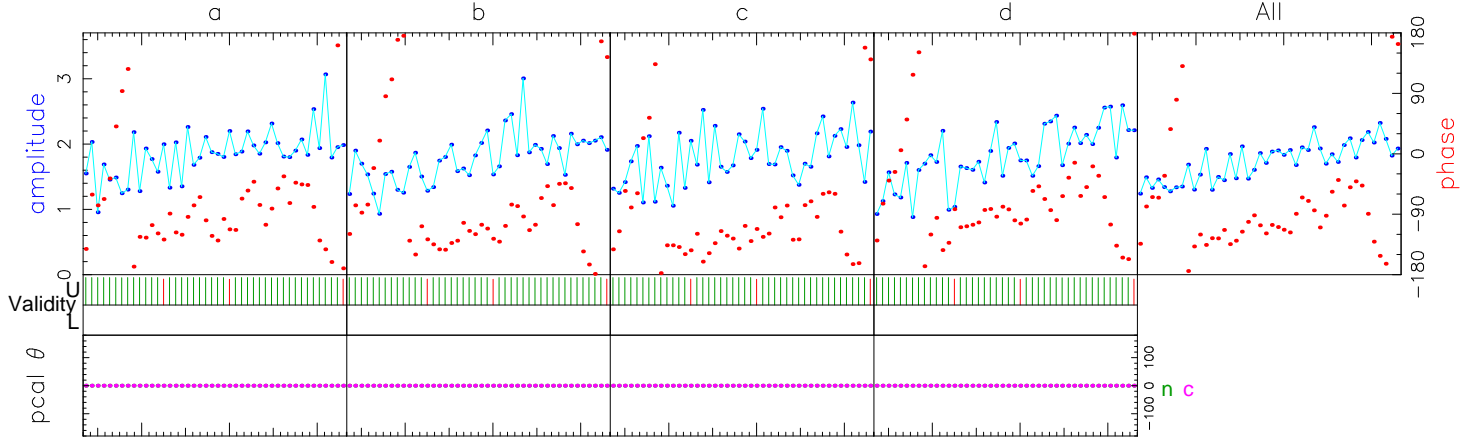
Fringe quality 6

SNR 45.2  
 Int time 179.297  
 Amp 1.234  
 Phase -306.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.016354  
 MBD -0.000846  
 Fringe rate (Hz)  
 -0.008743  
 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  
 2025:049:103207  
 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		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n:c	0:0	0:0	0:0	0:0		
n:c	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR		
c	Q00UR	Q01UR	Q02UR	Q03UR		

Group delay (usec) (SBD)	5.43109662566E+03	Apriori delay (usec)	5.43111309703E+03	Resid mbdelay (usec)	-8.46371E-04	+/- 2.5E-05
Sband delay (usec)	5.43109674341E+03	Apriori clock (usec)	-3.9498692E+00	Resid sbdelay (usec)	-1.63536E-02	+/- 9.5E-05
Phase delay (usec)	5.43111309031E+03	Apriori clockrate (us/s)	6.9052999E-07	Resid phdelay (usec)	-6.71960E-06	+/- 1.6E-07
Delay rate (us/s)	6.14114157256E-01	Apriori rate (us/s)	6.14114359923E-01	Resid rate (us/s)	-2.02667E-07	+/- 1.6E-09
Total phase (deg)	-304.7	Apriori accel (us/s/s)	-1.49719978540E-05	Resid phase (deg)	-306.9	+/- 2.5

	RMS	Theor.	Amplitude	1.234 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	54.3	8.4	Search (1024X16)	1.168	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
amp/seg (%)	46.7	14.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
ph/frq (deg)	17.6	2.5	Inc. seg. avg.	1.716	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
amp/frq (%)	3.1	4.4	Inc. frq. avg.	1.247	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite			

n: az 239.9 el 55.9 pa 43.6      c: az 282.3 el 35.3 pa 82.0      u,v (fr/asec) -1884.772 1293.823      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/nc..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/nc.Q.198.3N2DRU

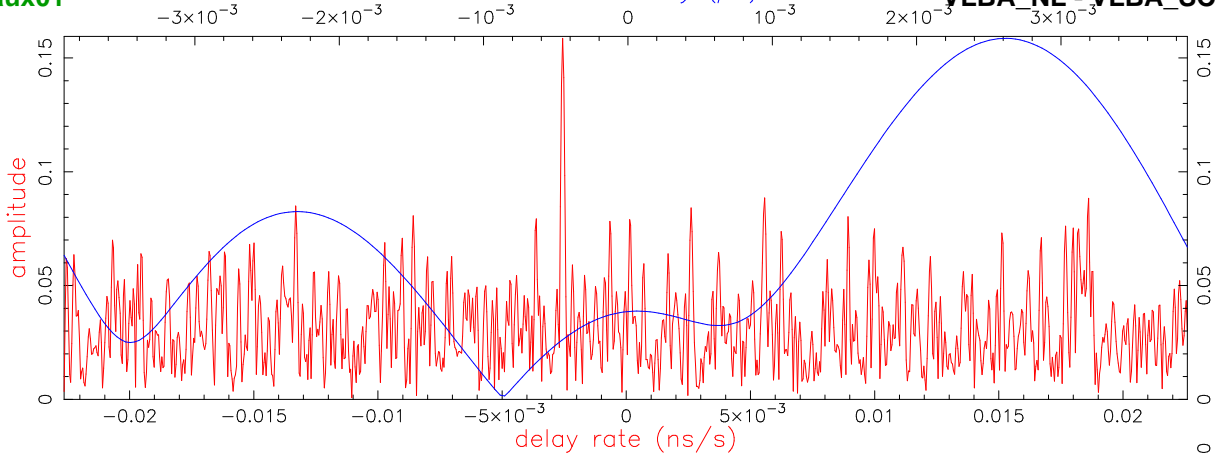
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, nc

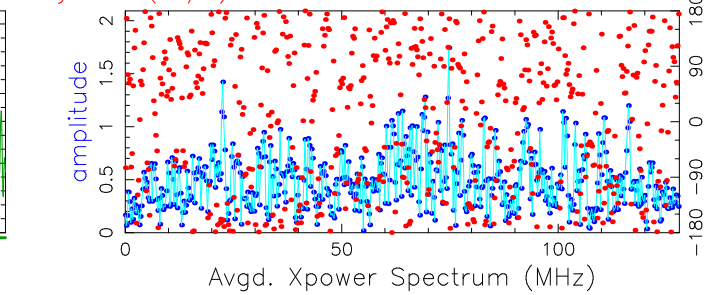
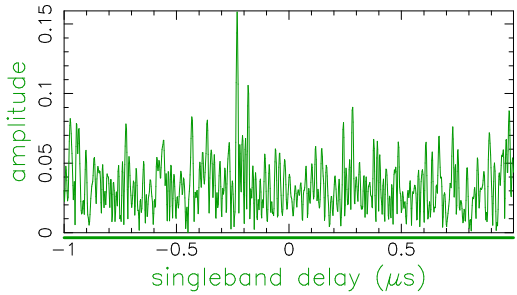
VLBA\_NL - VLBA\_SC, fgroup Q, pol LR

multiband delay ( $\mu$ s)



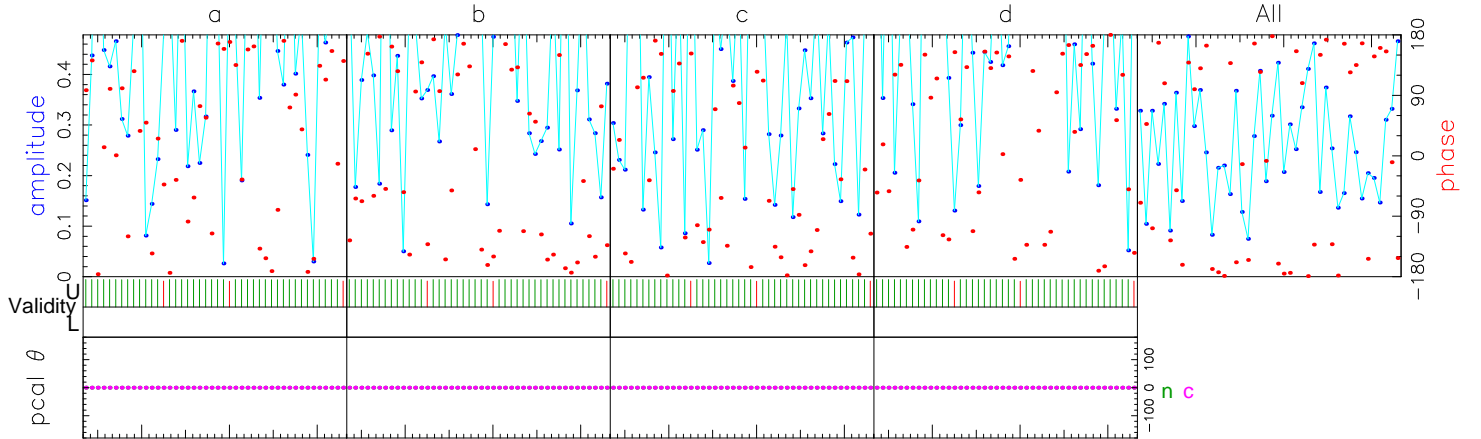
Fringe quality 0

SNR 5.8  
 Int time 179.297  
 Amp 0.159  
 Phase -345.0  
 PFD 5.5e-01  
 Delays (us)  
 SBD -0.230362  
 MBD 0.002630  
 Fringe rate (Hz)  
 -0.110363  
 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  
 2025:049:103210  
 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		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n:c	0:0	0:0	0:0	0:0		
n:c	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
c	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL		
c	Q00UR	Q01UR	Q02UR	Q03UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	5.43088135246E+03	Apriori delay (usec)	5.43111309703E+03	Resid mbdelay (usec)	2.63043E-03	+/-	1.9E-04
Sband delay (usec)	5.43088273466E+03	Apriori clock (usec)	-3.9498692E+00	Resid sbdelay (usec)	-2.30362E-01	+/-	7.4E-04
Phase delay (usec)	5.43111310814E+03	Apriori clockrate (us/s)	6.9052999E-07	Resid phdelay (usec)	1.11094E-05	+/-	1.3E-06
Delay rate (us/s)	6.14111801679E-01	Apriori rate (us/s)	6.14114359923E-01	Resid rate (us/s)	-2.55824E-06	+/-	1.2E-08
Total phase (deg)	-342.8	Apriori accel (us/s/s)	-1.49719978540E-05	Resid phase (deg)	-345.0	+/-	19.7

ph/seg (deg)	66.1	Theor.	65.4	Amplitude	0.159 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	95.5	Search (1024X16)	0.156	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)	25.7	Inc. seg. avg.	0.161	Inc. frq. avg.	0.159	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	15.1	Inc. frq. avg.	0.159			Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 239.9 el 55.9 pa 43.6      c: az 282.3 el 35.3 pa 82.0      u,v (fr/asec) -1884.772 1293.823      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/nc..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/nc.Q.206.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

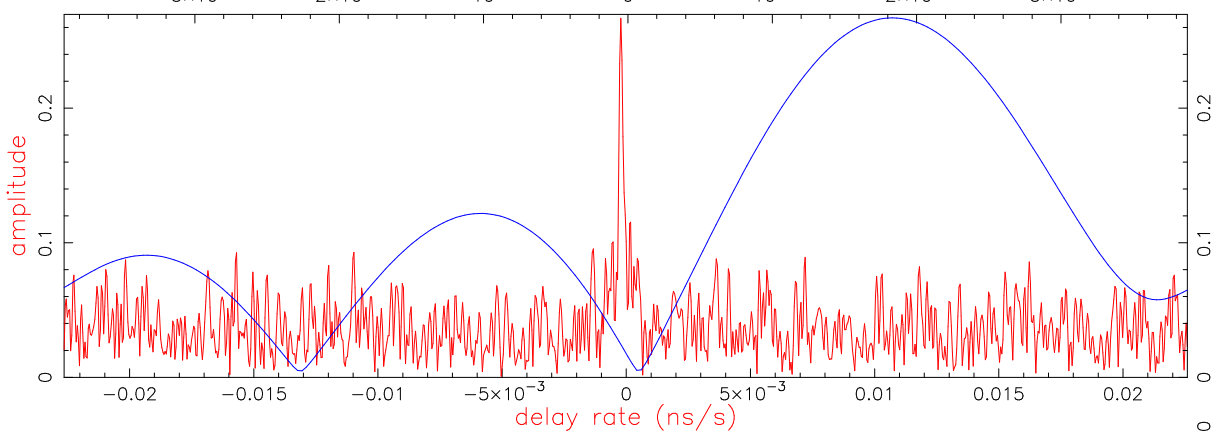
aux01

OJ287.3N2DRU, No0676, nc

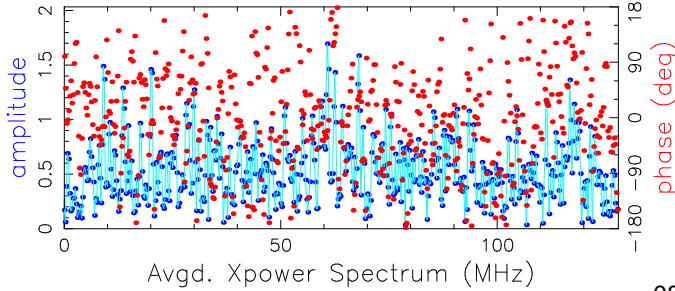
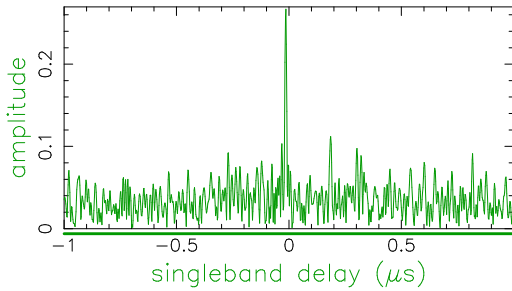
VLBA\_NL - VLBA\_SC, fgroup Q, pol RL

multiband delay ( $\mu$ s)

Fringe quality 9

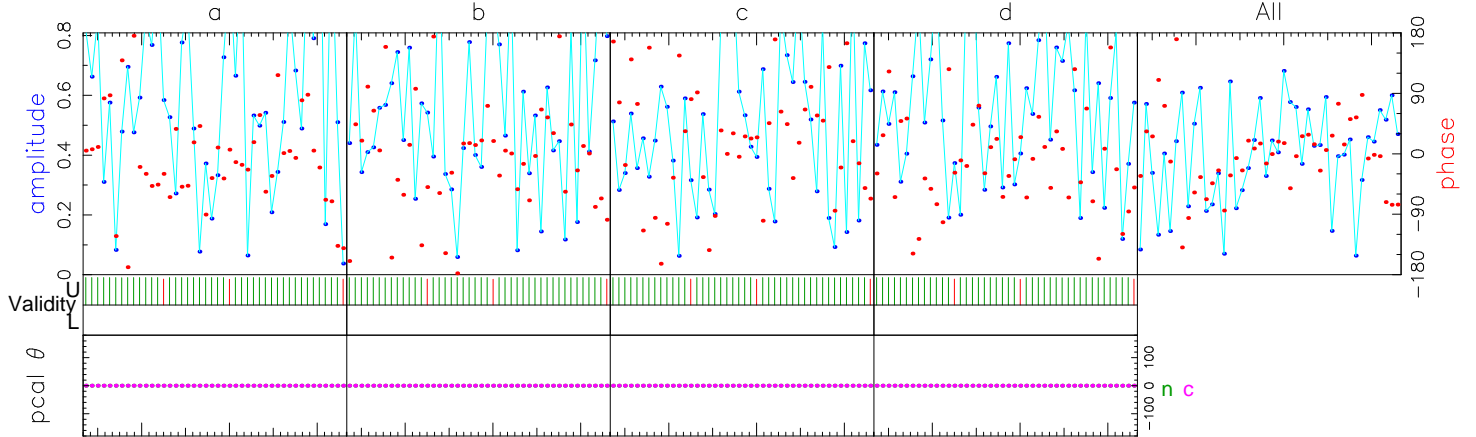


SNR 9.9  
 Int time 179.297  
 Amp 0.270  
 Phase -209.2  
 PFD 1.1e-14  
 Delays (us)  
 SBD -0.014299  
 MBD 0.001789  
 Fringe rate (Hz)  
 -0.008898  
 Ion TEC 0.000  
 Ref freq (MHz)  
 43140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:113  
 Start 030520.00  
 Stop 030820.22  
 FRT 030650.00  
 Corr/FF/build  
 2025:048:123813  
 2025:049:103212  
 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
	-13.8	-6.8	16.7	-15.4	Phase	-6.7
	0.4	0.3	0.2	0.3	Ampl.	0.3
	505.9	505.4	506.0	505.3	Sbd box	505.7
U/L	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	PC freqs	
c	1000	1000	1000	1000	PC freqs	
n:c	0:0	0:0	0:0	0:0	PC phase	
n:c	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
c	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
c	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

	5.43109926129E+03	Apriori delay (usec)	5.43111309703E+03	Resid mbdelay (usec)	1.78925E-03	+/- 1.1E-04
Group delay (usec) (SBD)	5.43109879841E+03	Apriori clock (usec)	-3.9498692E+00	Resid sbdelay (usec)	-1.42986E-02	+/- 4.4E-04
Sband delay (usec)	5.43111309660E+03	Apriori clockrate (us/s)	6.9052999E-07	Resid phdelay (usec)	-4.29674E-07	+/- 7.5E-07
Phase delay (usec)	6.14114153660E-01	Apriori rate (us/s)	6.14114359923E-01	Resid rate (us/s)	-2.06263E-07	+/- 7.2E-09
Delay rate (us/s)		Apriori accel (us/s/s)	-1.49719978540E-05	Resid phase (deg)	-209.2	+/- 11.6
Total phase (deg)						

	RMS	Theor.	Amplitude	0.270 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	56.7	38.5	Search (1024X16)	0.262	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	78.7	67.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
ph/frq (deg)	18.3	11.6	Inc. seg. avg.	0.328	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
amp/frq (%)	19.7	20.3	Inc. frq. avg.	0.267	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00

n: az 239.9 el 55.9 pa 43.6 c: az 282.3 el 35.3 pa 82.0 u,v (fr/asec) -1884.772 1293.823 simultaneous interpolator

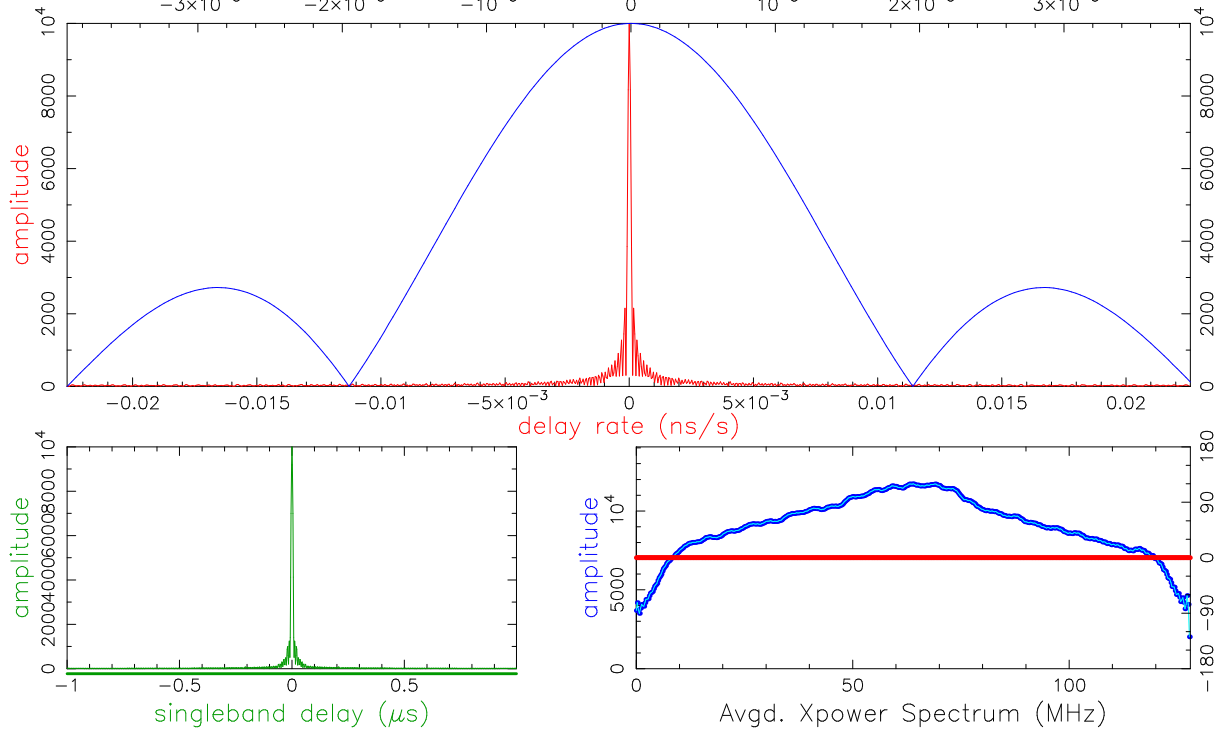
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/nc..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/nc.Q.214.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, nn

VLBA\_NL - VLBA\_NL, fgroup Q, pol LL

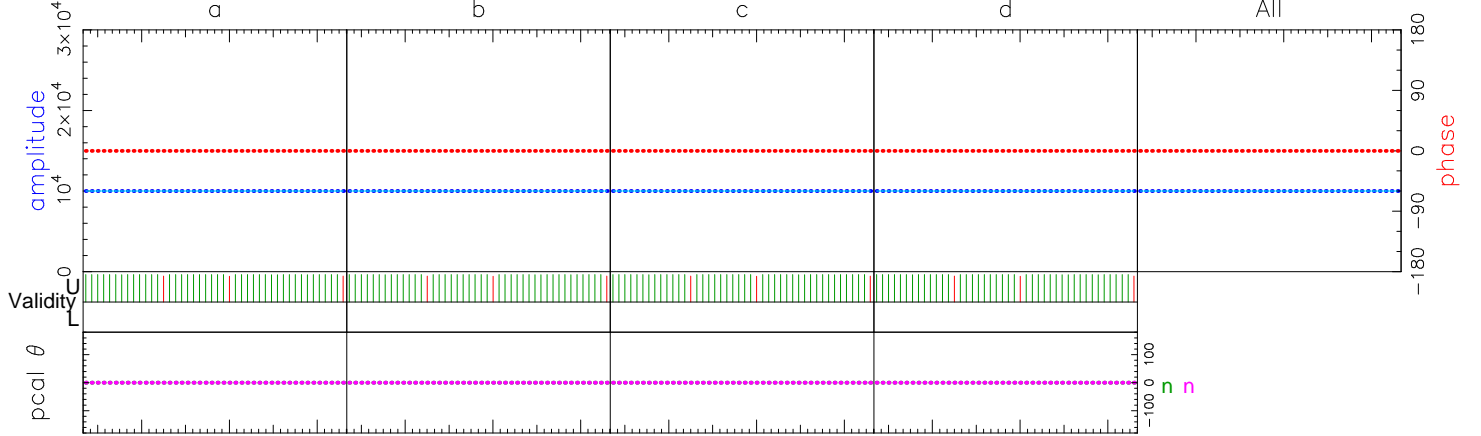


Fringe quality 9

SNR 366170.2  
 Int time 179.296  
 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  
 2025:049:103202  
 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



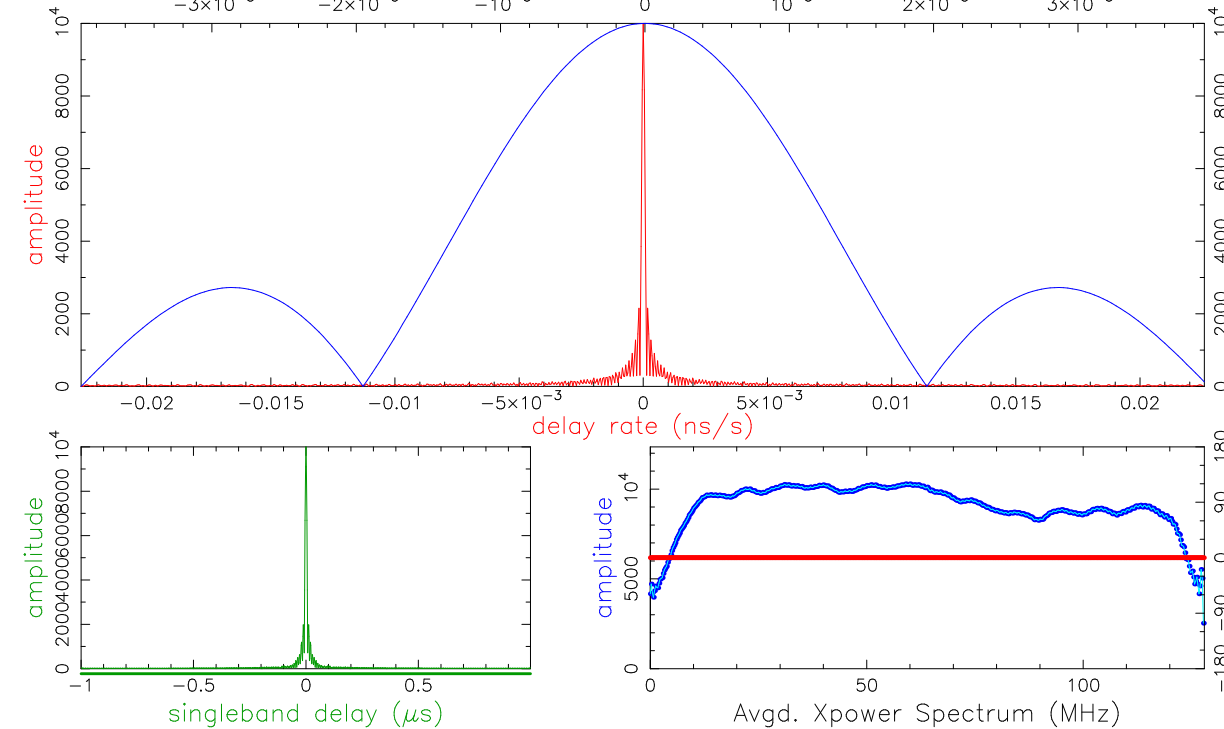
	42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	Sbd box	513.0
n	1000	1000	1000	1000	APs used	
n:n	0:0	0:0	0:0	0:0	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
n	1000	1000	1000	1000	PC amp	
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UL	Q01UL	Q02UL	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	10000.000	10000.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
Search (1024X16)	10000.000	10000.000	10000.000	10000.000	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		
Inc. frq. avg.	10000.000	10000.000	10000.000	10000.000		
ph/seg (deg)	0.0	0.0	0.0	0.0		
amp/seg (%)	0.0	0.0	0.0	0.0		
ph/frq (deg)	0.0	0.0	0.0	0.0		
amp/frq (%)	0.0	0.0	0.0	0.0		
n: az 239.9 el 55.9 pa 43.6	n: az 239.9 el 55.9 pa 43.6	u,v (fr/asec) 0.000 0.000				simultaneous interpolator
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676/nn..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676/nn.Q.156.3N2DRU				

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, nn

VLBA\_NL - VLBA\_NL, fgroup Q, pol RR

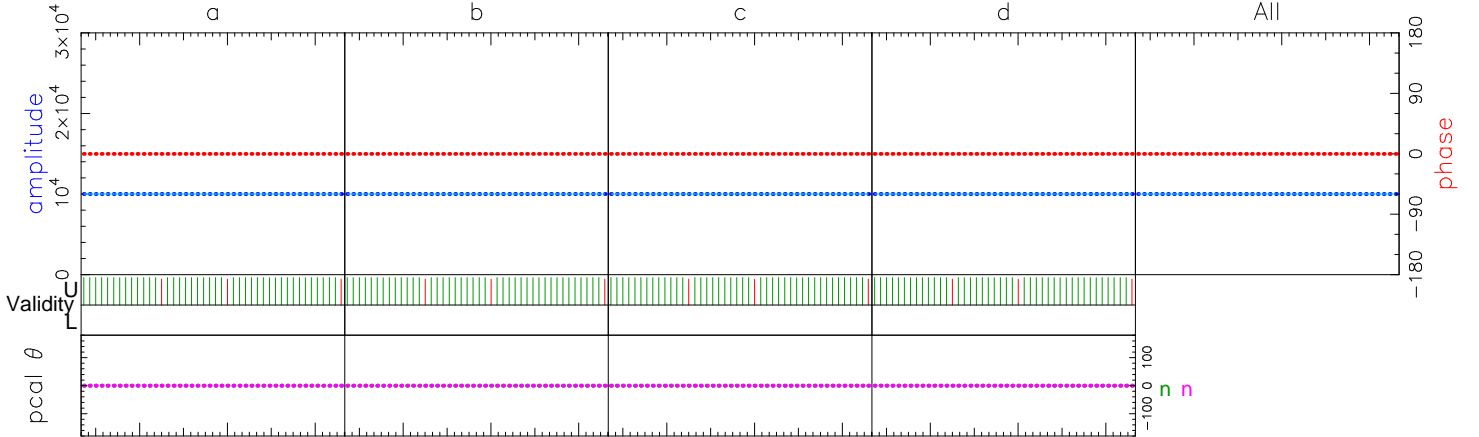


Fringe quality 9

SNR 366170.2  
 Int time 179.296  
 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  
 2025:049:103204  
 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		
n	1000	1000	1000	1000	APs used	
n:n	0:0	0:0	0:0	0:0	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n	1000	1000	1000	1000	ManI PC	
n	1000	1000	1000	1000	PC amp	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	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	10000.000	10000.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
Search (1024X16)	10000.000	10000.000	10000.000	10000.000	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		
Inc. frq. avg.	10000.001	10000.001	10000.001	10000.001		
Apriori delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori clock (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori clockrate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori accel (us/s/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
ph/seg (deg)	0.0	0.0	0.0	0.0		
amp/seg (%)	0.0	0.0	0.0	0.0		
ph/frq (deg)	0.0	0.0	0.0	0.0		
amp/frq (%)	0.0	0.0	0.0	0.0		
n: az 239.9 el 55.9 pa 43.6	n: az 239.9 el 55.9 pa 43.6	u,v (fr/asec) 0.000 0.000	simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676/nn..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676/nn.Q.177.3N2DRU				

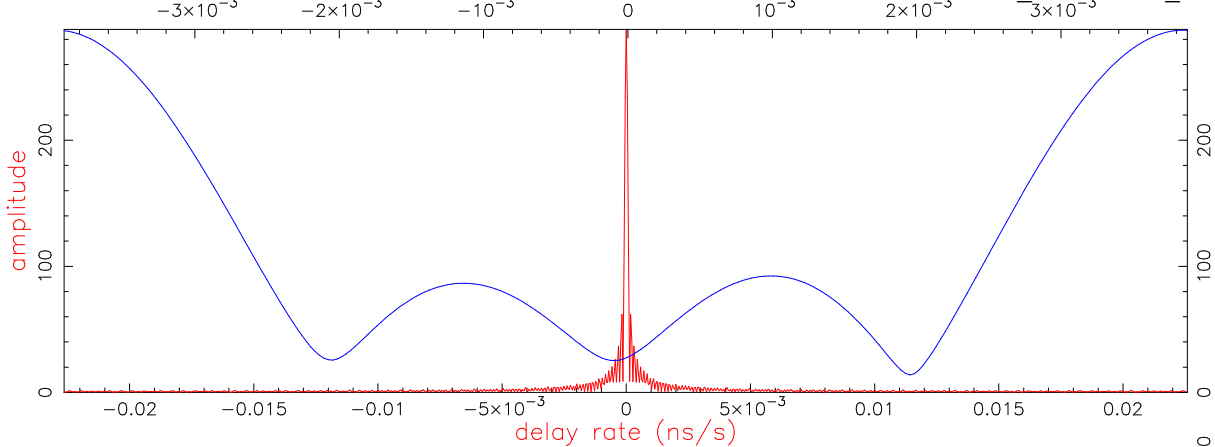
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, nn

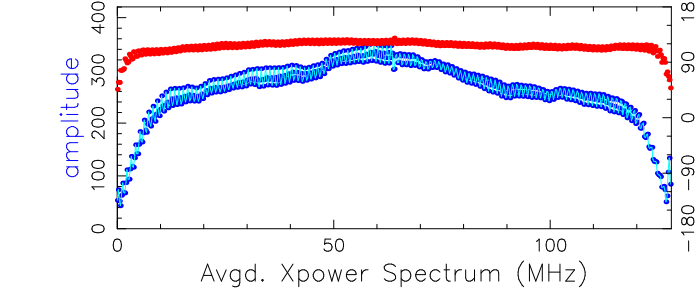
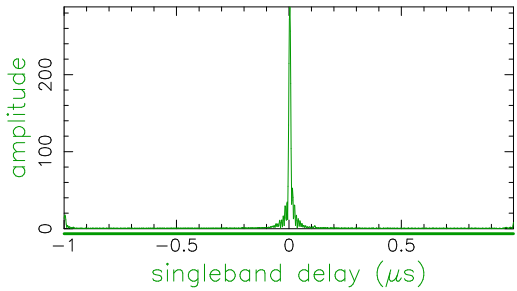
VLBA\_NL - VLBA\_NL, fgroup Q, pol LR

multiband delay ( $\mu$ s)



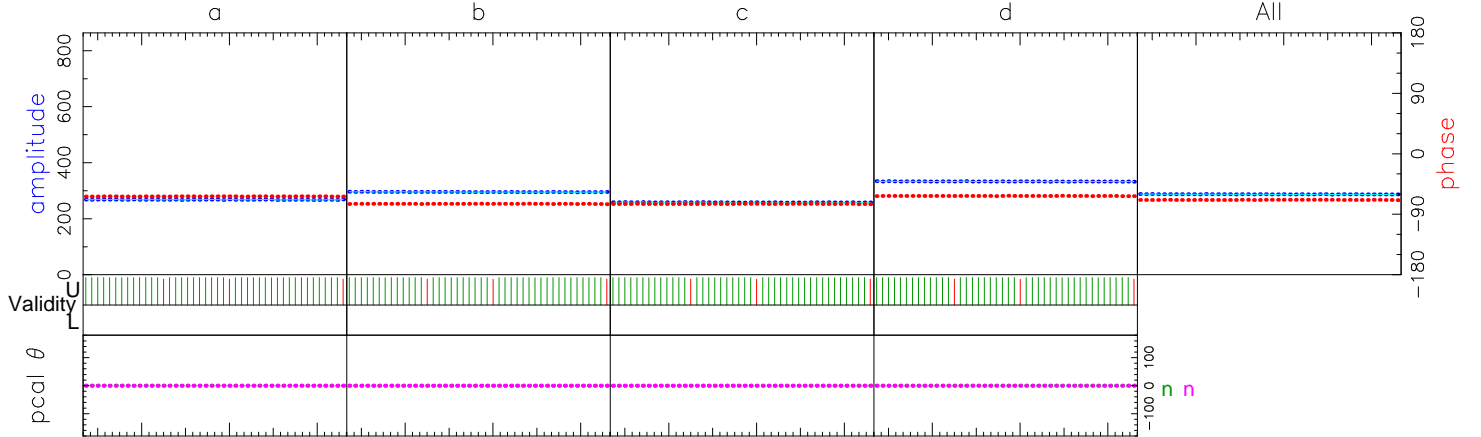
Fringe quality 9

SNR 10544.4  
 Int time 179.296  
 Amp 287.965  
 Phase 212.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003588  
 MBD -0.003978  
 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  
 2025:049:103207  
 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
	-63.4	-74.5	-74.6	-62.8	Phase	-68.6
	268.0	295.5	258.5	333.1	Ampl.	288.8
	514.5	514.9	514.6	515.2	Sbd box	514.8
U/L	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n:n	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
n	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	3.83446875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.97803E-03	+/-	1.1E-07
Sband delay (usec)	3.58812500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	3.58813E-03	+/-	4.1E-07
Phase delay (usec)	-4.41563872184E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.41564E-06	+/-	7.0E-10
Delay rate (us/s)	1.13185263516E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.13185E-11	+/-	6.7E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	212.7	+/-	0.0

	RMS	Theor.	Amplitude	287.965 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.1	0.0	Search (1024X16)	286.946	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	0.3	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	8.1	0.0	Inc. seg. avg.	287.331	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	10.1	0.0	Inc. frq. avg.	288.784	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00 0.00

n: az 239.9 el 55.9 pa 43.6      n: az 239.9 el 55.9 pa 43.6      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/nn..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/nn.Q.194.3N2DRU

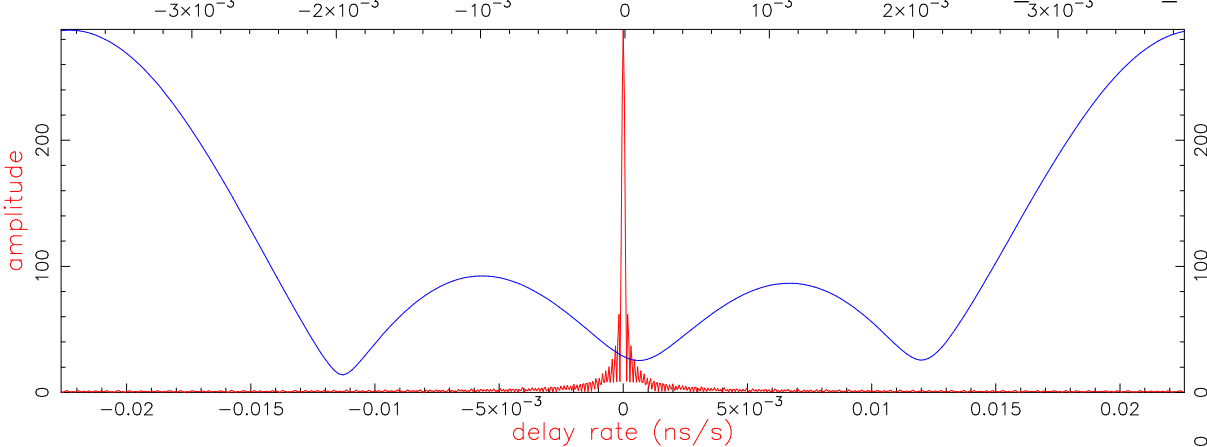
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, nn

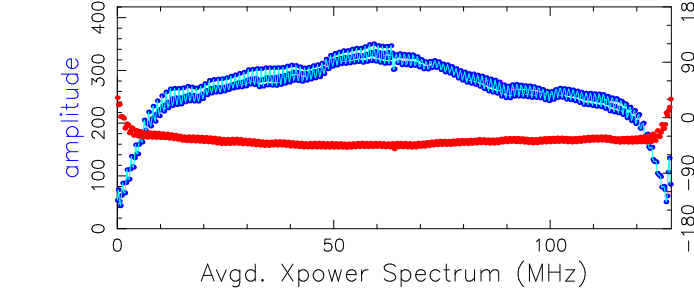
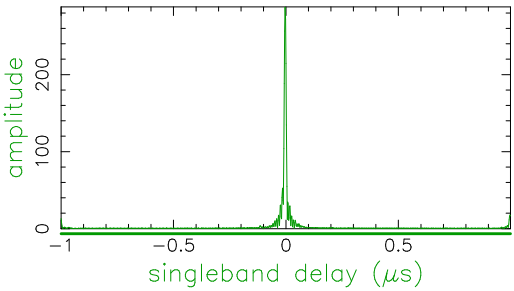
VLBA\_NL - VLBA\_NL, fgroup Q, pol RL

multiband delay ( $\mu$ s)



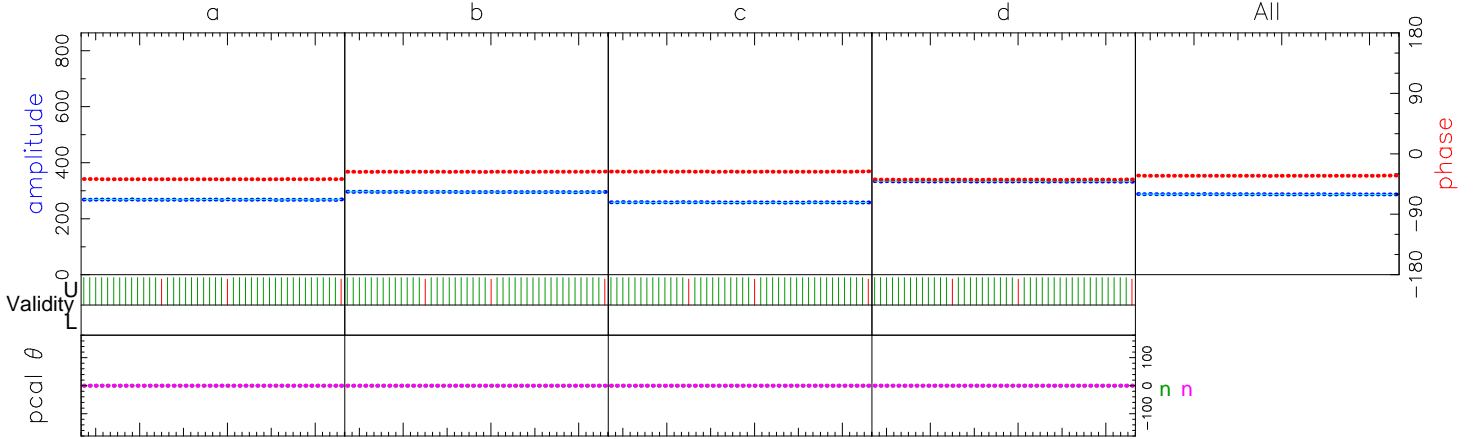
Fringe quality 9

SNR 10544.4  
 Int time 179.296  
 Amp 287.965  
 Phase -32.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003588  
 MBD -0.003834  
 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  
 2025:049:103210  
 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
	-37.8	-26.8	-26.6	-38.5	Phase	-32.7
	268.0	295.5	258.5	333.1	Ampl.	288.8
	511.5	511.1	511.4	510.8	Sbd box	511.2
U/L	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	PC freqs	
n:n	0:0	0:0	0:0	0:0	PC phase	
n:n	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
n	Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-3.83446875000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-3.83447E-03	+/-	1.1E-07
Sband delay (usec)	-3.58812500000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-3.58813E-03	+/-	4.1E-07
Phase delay (usec)	-2.10383276653E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-2.10383E-06	+/-	7.0E-10
Delay rate (us/s)	-1.13185263516E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.13185E-11	+/-	6.7E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-32.7	+/-	0.0

ph/seg (deg)	0.1	0.0	Search (1024X16)	286.946	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	0.3	0.1	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)	8.1	0.0	Inc. seg. avg.	287.331	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	10.1	0.0	Inc. frq. avg.	288.784	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 239.9 el 55.9 pa 43.6      n: az 239.9 el 55.9 pa 43.6      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/7mm/3001/No0676/nn..3N2DRU      Output file: /Exps/c241c/v2/7mm/3001/No0676/nn.Q.206.3N2DRU



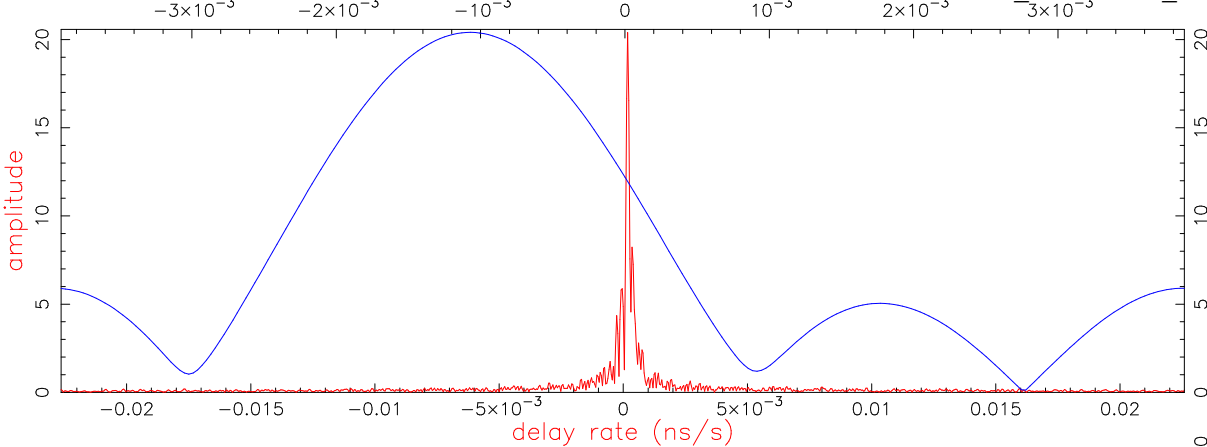
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, no

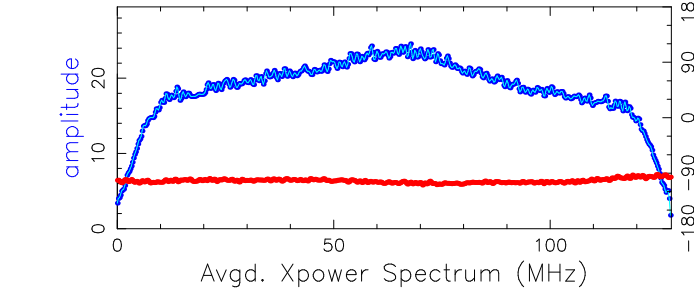
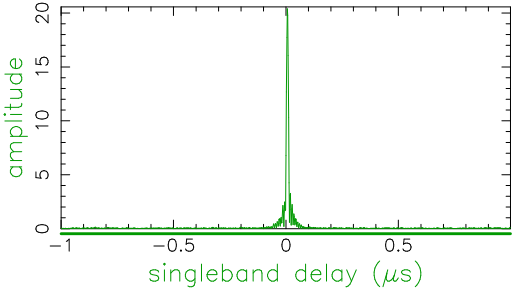
VLBA\_NL - VLBA\_OV, fgroup Q, pol LL

multiband delay ( $\mu$ s)



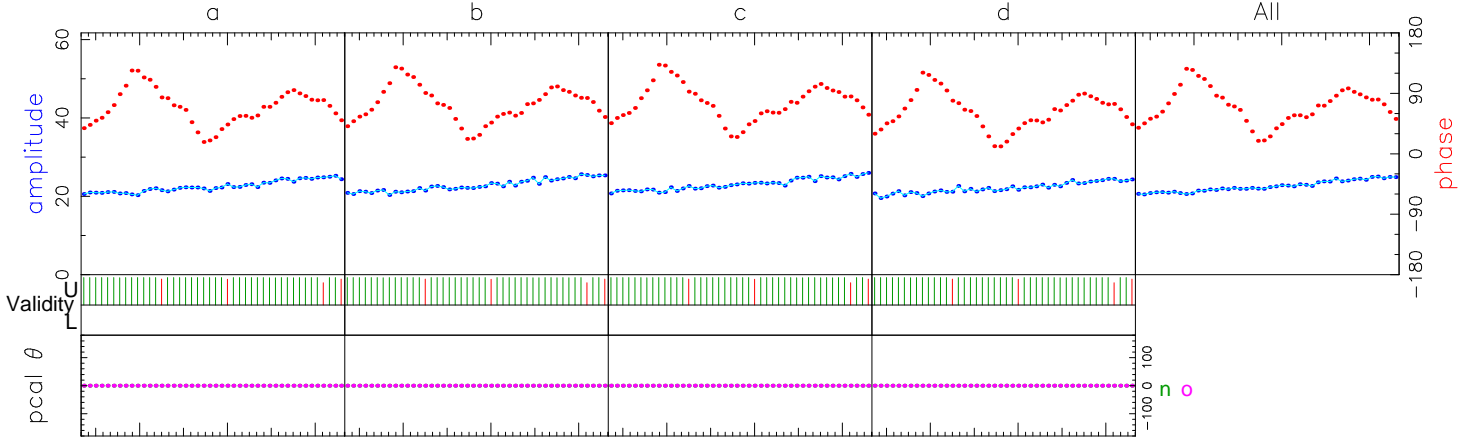
Fringe quality 7

SNR 751.7  
 Int time 178.485  
 Amp 20.575  
 Phase 351.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006487  
 MBD -0.001043  
 Fringe rate (Hz)  
 0.007651  
 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  
 2025:049:103203  
 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
68.9	73.2	76.3	63.1	Phase	70.4
20.4	20.7	20.9	20.0	Ampl.	20.5
516.5	516.6	516.2	516.0	Sbd box	516.3
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:o 0:0	0:0	0:0	0:0	PC phase	
n:o 0:0	0:0	0:0	0:0	ManI PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-2.76232923327E+03	Apriori delay (usec)	-2.76233600311E+03	Resid mbdelay (usec)	-1.04266E-03	+/- 1.5E-06
Sband delay (usec)	-2.76232951649E+03	Apriori clock (usec)	-2.5357840E+01	Resid sbdelay (usec)	6.48662E-03	+/- 5.7E-06
Phase delay (usec)	-2.76233599858E+03	Apriori clockrate (us/s)	-1.8401209E-07	Resid phdelay (usec)	4.53613E-06	+/- 9.8E-09
Delay rate (us/s)	-4.70682297880E-01	Apriori rate (us/s)	-4.70682475224E-01	Resid rate (us/s)	1.77344E-07	+/- 9.4E-11
Total phase (deg)	289.0	Apriori accel (us/s/s)	1.69108134448E-05	Resid phase (deg)	351.7	+/- 0.2

ph/seg (deg)	RMS 26.1	Theor. 0.5	Amplitude Search (1024X16)	20.575 +/- 0.027	20.257	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	11.8	0.9	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)	7.0	0.2	Inc. seg. avg.	22.573	22.573	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	1.7	0.3	Inc. frq. avg.	20.476	20.476	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 239.9 el 55.9 pa 43.6 o: az 193.6 el 72.4 pa 12.2 u,v (fr/asec) 1444.641 493.430 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/no..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/no.Q.166.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

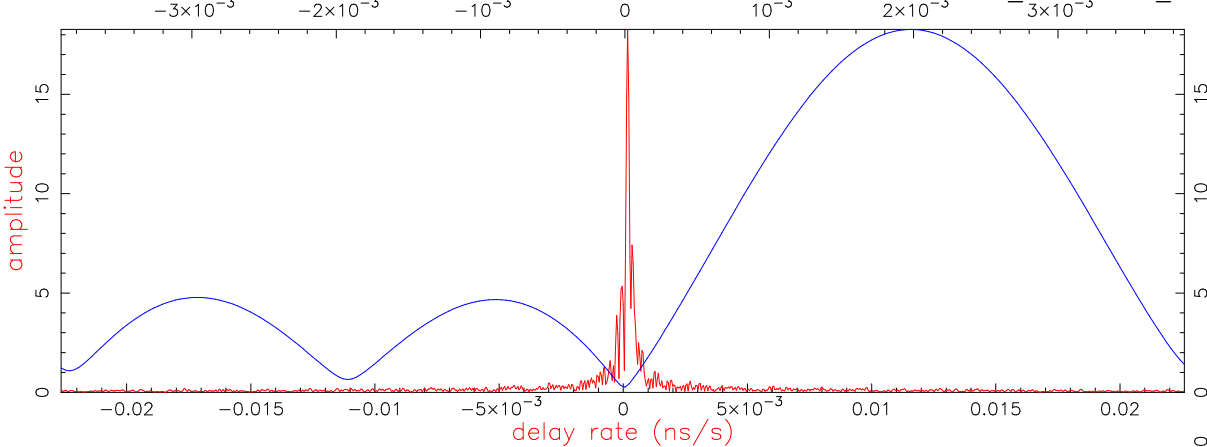
aux01

OJ287.3N2DRU, No0676, no

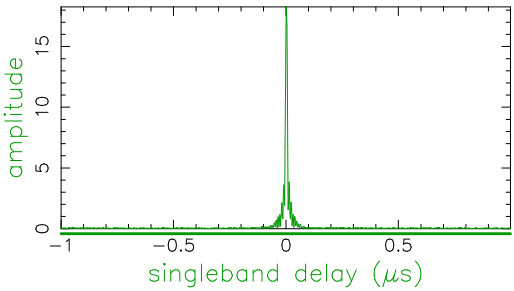
VLBA\_NL - VLBA\_OV, fgroup Q, pol RR

multiband delay ( $\mu$ s)

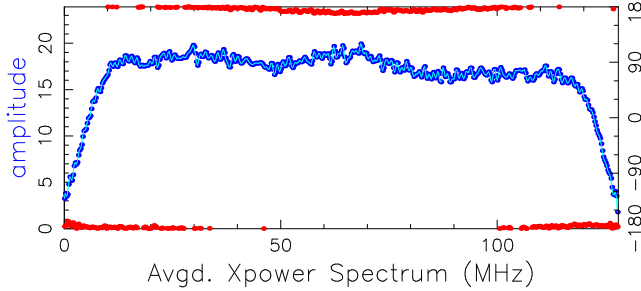
Fringe quality 7



SNR 667.4  
Int time 178.485  
Amp 18.269  
Phase 178.6  
PFD 0.0e+00  
Delays (us)  
SBD 0.002021  
MBD 0.001984  
Fringe rate (Hz) 0.007695  
Ion TEC 0.000  
Ref freq (MHz) 43140.0000  
AP (sec) 0.512



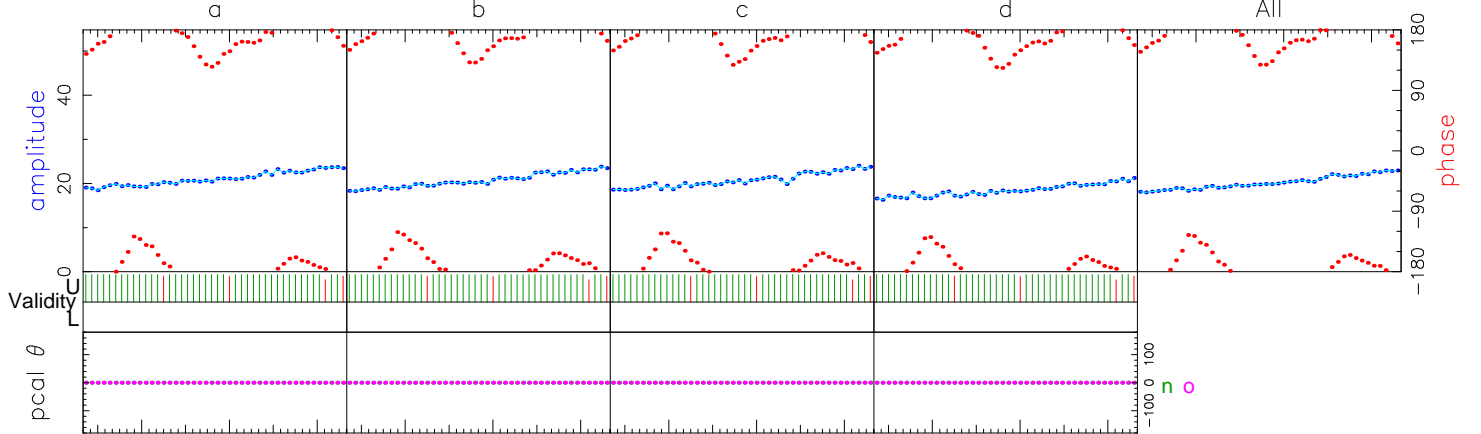
singleband delay ( $\mu$ s)



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  
2025:049:103205  
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
	175.9	-177.9	-179.1	175.3	Phase	178.6
	19.1	18.7	18.7	16.6	Ampl.	18.3
	514.6	513.9	514.2	513.3	Sbd box	514.0
U/L	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	PC freqs	
n:o	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000		
n	Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o	Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
					Chan ids	
					Tracks	

Group delay (usec) (SBD)	-2.76233401927E+03	Apriori delay (usec)	-2.76233600311E+03	Resid mbdelay (usec)	1.98384E-03	+/-	1.7E-06
Sband delay (usec)	-2.76233398174E+03	Apriori clock (usec)	-2.5357840E+01	Resid sbdelay (usec)	2.02138E-03	+/-	6.5E-06
Phase delay (usec)	-2.76233599161E+03	Apriori clockrate (us/s)	-1.8401209E-07	Resid phdelay (usec)	1.15018E-05	+/-	1.1E-08
Delay rate (us/s)	-4.70682296858E-01	Apriori rate (us/s)	-4.70682475224E-01	Resid rate (us/s)	1.78366E-07	+/-	1.1E-10
Total phase (deg)	115.9	Apriori accel (us/s/s)	1.69108134448E-05	Resid phase (deg)	178.6	+/-	0.2

ph/seg (deg)	RMS 26.2	Theor. 0.6	Amplitude Search (1024X16)	18.269 +/- 0.027	18.219	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	13.4	1.0	Interp.	0.000		Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	4.2	0.2	Inc. seg. avg.	20.212		Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	5.4	0.3	Inc. frq. avg.	18.291		Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 239.9 el 55.9 pa 43.6 o: az 193.6 el 72.4 pa 12.2 u,v (fr/asec) 1444.641 493.430 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/no..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/no.Q.183.3N2DRU

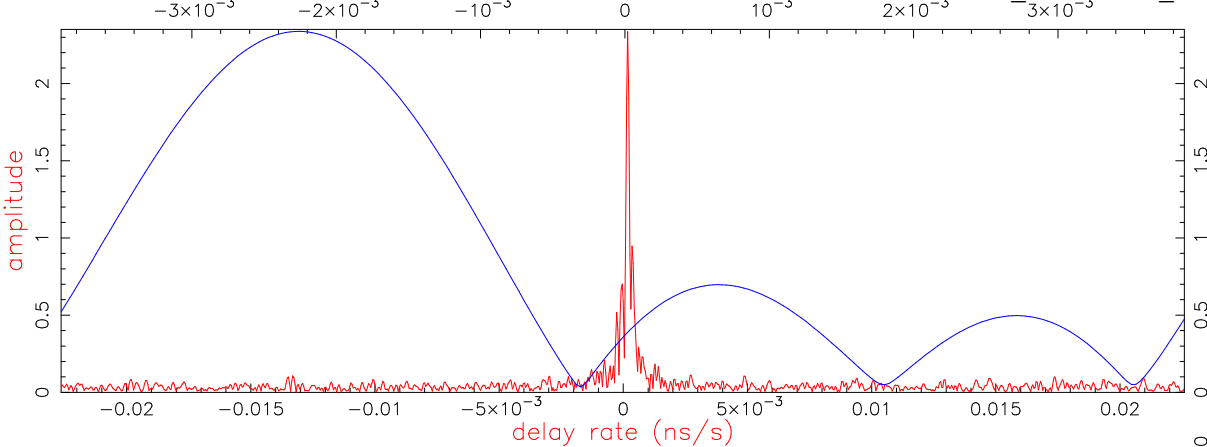
Mk4/DiFX fourfit 3.25 rev 0

aux01

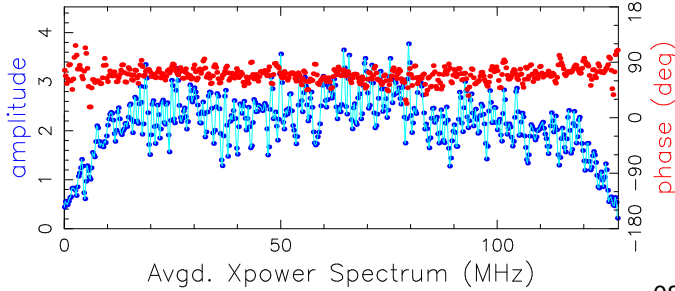
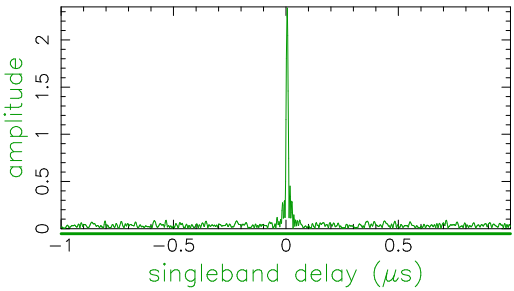
OJ287.3N2DRU, No0676, no VLBA\_NL - VLBA\_OV, fgroup Q, pol LR

multiband delay ( $\mu$ s)

Fringe quality 7

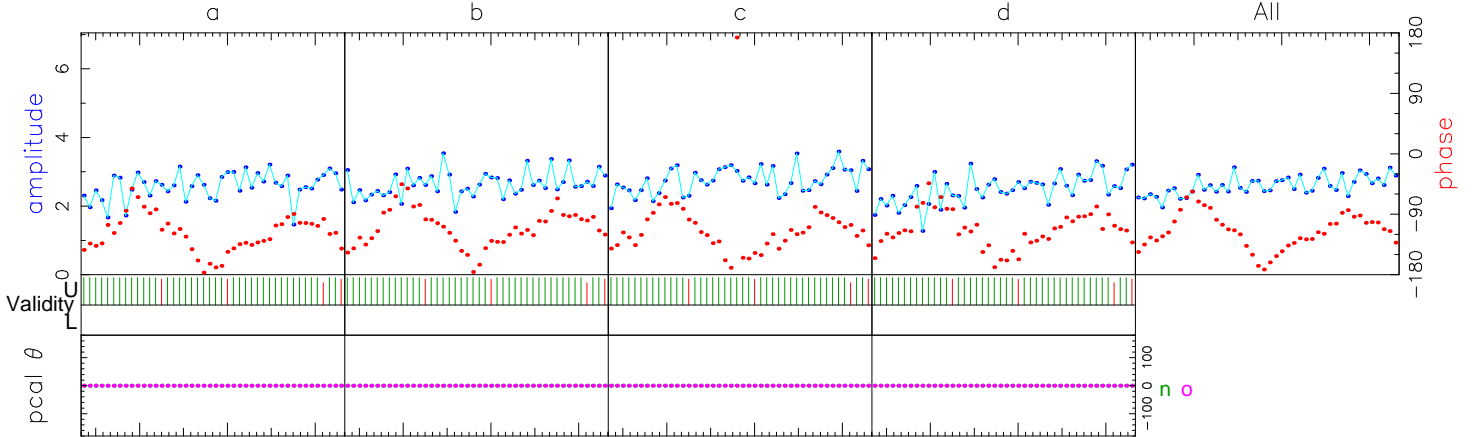


SNR 85.9  
Int time 178.485  
Amp 2.351  
Phase 166.4  
PFD 0.0e+00  
Delays (us)  
SBD 0.005353  
MBD -0.002283  
Fringe rate (Hz) 0.007713  
Ion TEC 0.000  
Ref freq (MHz) 43140.0000  
AP (sec) 0.512



Exp. c241c  
Exper # 1234  
Yr:day 2024:113  
Start 030520.00  
Stop 030820.22  
FRT 030650.00  
Corr/FF/build  
2025:048:123813  
2025:049:103207  
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
-119.5	-109.2	-117.7	-113.1	Phase	-114.9
2.3	2.4	2.5	2.2	Ampl.	2.3
516.2	515.8	515.5	515.4	Sbd box	515.7
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:o 0:0	0:0	0:0	0:0	PC phase	
n:o 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
o Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-2.76233047334E+03	Apriori delay (usec)	-2.76233600311E+03	Resid mbdelay (usec)	-2.28272E-03	+/- 1.3E-05
Sband delay (usec)	-2.76233065049E+03	Apriori clock (usec)	-2.5357840E+01	Resid sbdelay (usec)	5.35263E-03	+/- 5.0E-05
Phase delay (usec)	-2.76233601051E+03	Apriori clockrate (us/s)	-1.8401209E-07	Resid phdelay (usec)	-7.39832E-06	+/- 8.6E-08
Delay rate (us/s)	-4.70682296442E-01	Apriori rate (us/s)	-4.70682475224E-01	Resid rate (us/s)	1.78782E-07	+/- 8.3E-10
Total phase (deg)	103.6	Apriori accel (us/s/s)	1.69108134448E-05	Resid phase (deg)	166.4	+/- 1.3

ph/seg (deg)	RMS 26.6	Theor. 4.4	Amplitude 2.351 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	15.7	7.7	Search (1024X16) 2.306	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.004	0.004
ph/frq (deg)	5.7	1.3	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.023	0.023
amp/frq (%)	3.3	2.3	Inc. seg. avg. 2.591	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us		ion window (TEC)	0.00	0.00
			Inc. frq. avg. 2.343	Data rate(Mb/s): 2048	nlags: 512	t_cohere infinite		
n: az 239.9 el 55.9 pa 43.6		o: az 193.6 el 72.4 pa 12.2		u,v (fr/asec) 1444.641 493.430				simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676//no..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676//no.Q.197.3N2DRU

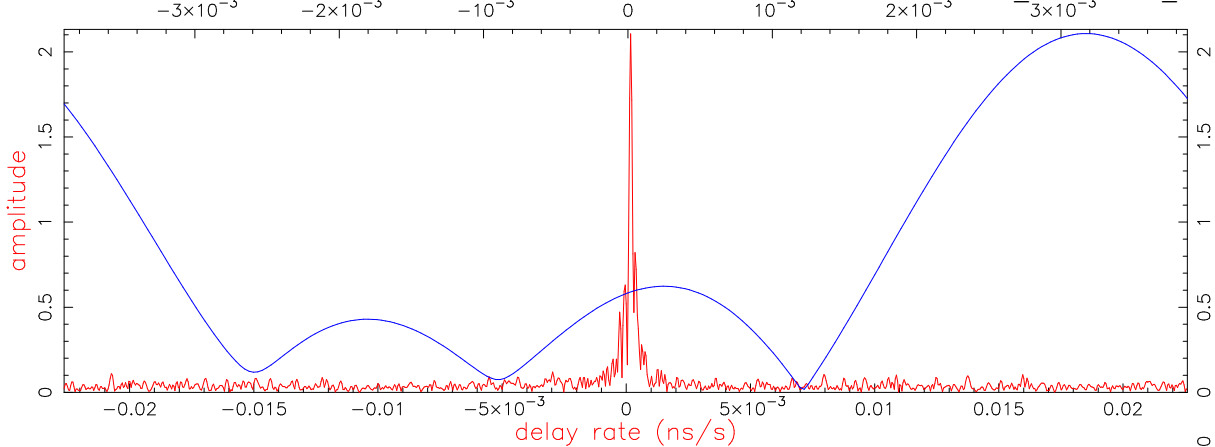
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, no

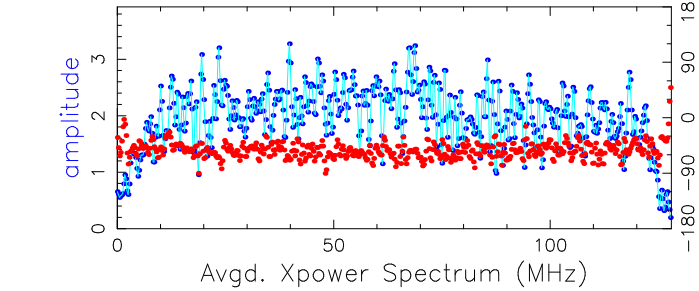
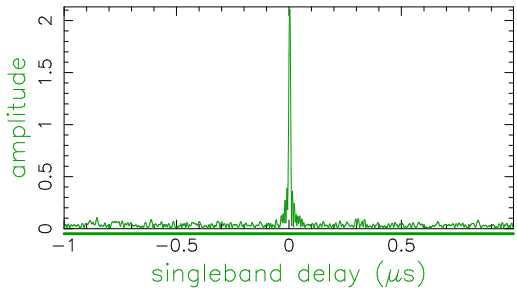
VLBA\_NL - VLBA\_OV, fgroup Q, pol RL

multiband delay ( $\mu$ s)



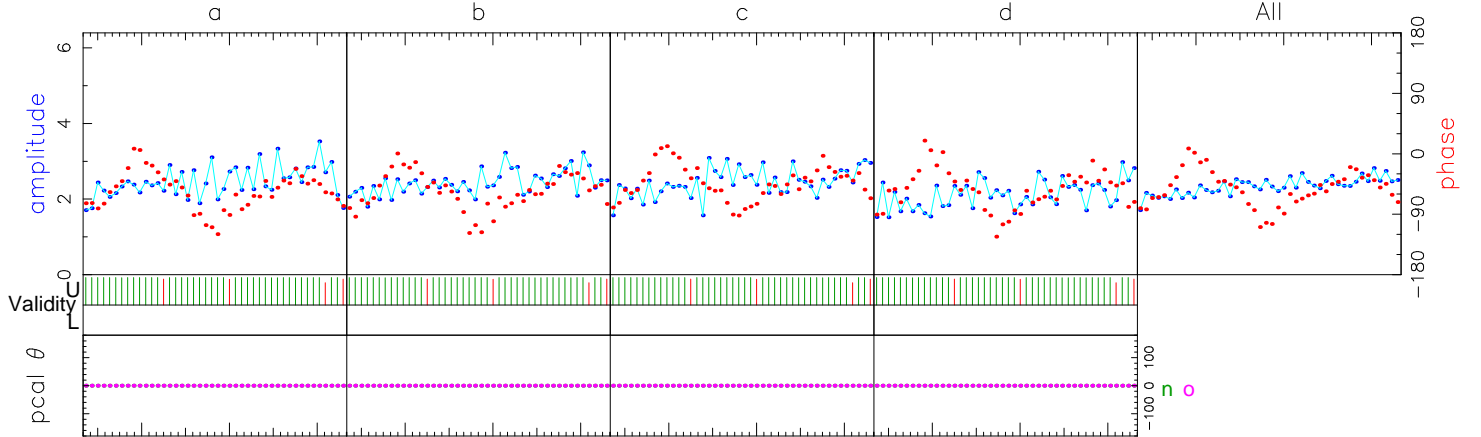
Fringe quality 7

SNR 77.9  
 Int time 178.485  
 Amp 2.132  
 Phase -52.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003181  
 MBD 0.003136  
 Fringe rate (Hz) 0.007561  
 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  
 2025:049:103210  
 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
-55.6	-55.2	-43.9	-54.2	Phase	-52.1
2.2	2.2	2.2	1.9	Ampl.	2.1
514.7	514.8	514.8	514.0	Sbd box	514.6
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	PC freqs	
n:0 0:0	0:0	0:0	0:0	PC phase	
n:0 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000		
n Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
o Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-2.76233286740E+03	Apriori delay (usec)	-2.76233600311E+03	Resid mbdelay (usec)	3.13572E-03	+/- 1.4E-05
Sband delay (usec)	-2.76233282161E+03	Apriori clock (usec)	-2.5357840E+01	Resid sbdelay (usec)	3.18150E-03	+/- 5.5E-05
Phase delay (usec)	-2.76233600647E+03	Apriori clockrate (us/s)	-1.8401209E-07	Resid phdelay (usec)	-3.35788E-06	+/- 9.5E-08
Delay rate (us/s)	-4.70682299954E-01	Apriori rate (us/s)	-4.70682475224E-01	Resid rate (us/s)	1.75270E-07	+/- 9.1E-10
Total phase (deg)	-114.9	Apriori accel (us/s/s)	1.69108134448E-05	Resid phase (deg)	-52.1	+/- 1.5

ph/seg (deg)	26.7	Theor.	4.9	Amplitude	2.132 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	14.3	Search (1024X16)	2.059	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	6.8	Inc. seg. avg.	2.332	Inc. frq. avg.	2.113	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	6.7	Inc. frq. avg.	2.113			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

n: az 239.9 el 55.9 pa 43.6 o: az 193.6 el 72.4 pa 12.2 u,v (fr/asec) 1444.641 493.430 simultaneous interpolator

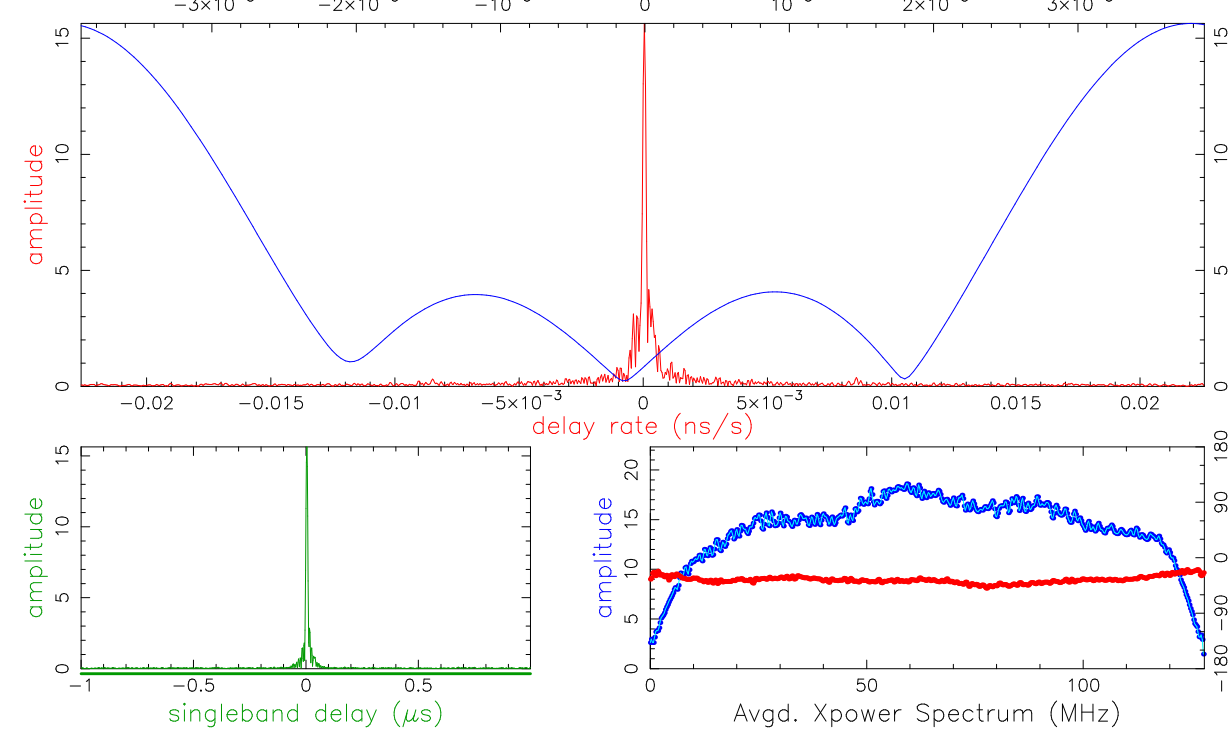
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/no..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/no.Q.207.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, np

VLBA\_NL - VLBA\_PT, fgroup Q, pol LL

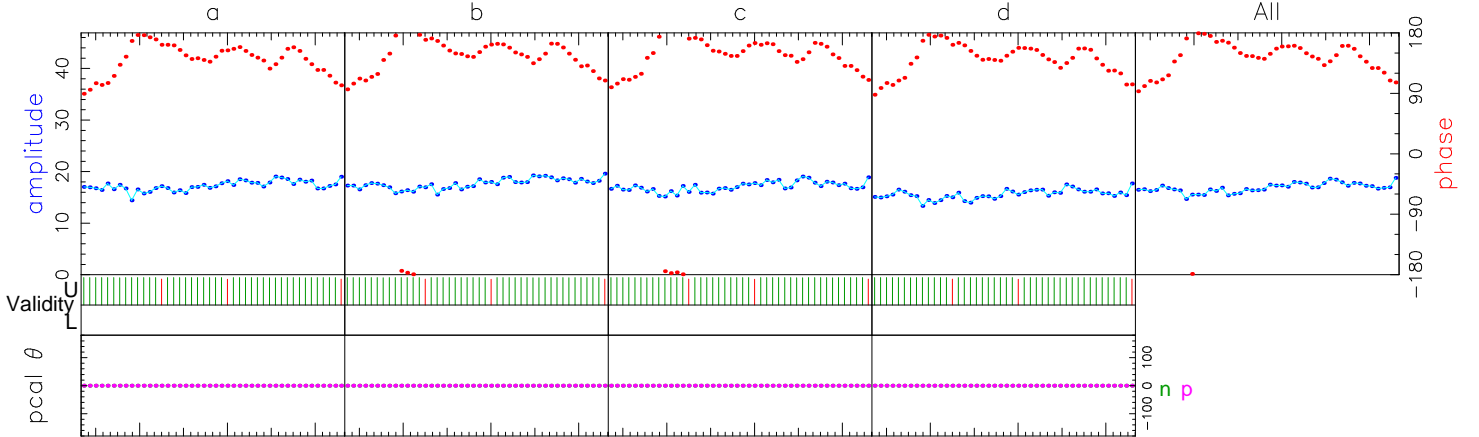


Fringe quality 8

SNR 572.7  
 Int time 179.294  
 Amp 15.641  
 Phase 65.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003800  
 MBD -0.004036  
 Fringe rate (Hz) 0.002645  
 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  
 2025:049:103203  
 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		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n:p	0:0	0:0	0:0	0:0		
n:p	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000		
p	1000	1000	1000	1000		
n	Q00UL	Q01UL	Q02UL	Q03UL		
p	Q00UL	Q01UL	Q02UL	Q03UL		

Group delay (usec) (SBD)	-2.52382576602E+03	Apriori delay (usec)	-2.52382954242E+03	Resid mbdelay (usec)	-4.03609E-03	+/- 1.9E-06
Sband delay (usec)	-2.52382574255E+03	Apriori clock (usec)	-5.9955997E+08	Resid sbdelay (usec)	3.79988E-03	+/- 7.5E-06
Phase delay (usec)	-2.52382953316E+03	Apriori clockrate (us/s)	-8.1437027E-08	Resid phdelay (usec)	9.26510E-06	+/- 1.3E-08
Delay rate (us/s)	-2.56652721022E-01	Apriori rate (us/s)	-2.56652782340E-01	Resid rate (us/s)	6.13181E-08	+/- 1.2E-10
Total phase (deg)	259.5	Apriori accel (us/s/s)	1.73436370072E-05	Resid phase (deg)	65.1	+/- 0.2

ph/seg (deg)	RMS 22.5	Theor. 0.7	Amplitude 15.641 +/- 0.027	Search (1024X16) 15.111	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	9.7	1.2	Interp. 0.000	15.111	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. 16.871	15.668	Bits/sample: 2x2	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.023	0.023
amp/frq (%)	4.6	0.3	Inc. frq. avg. 15.668	15.668	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 239.9 el 55.9 pa 43.6 p: az 225.7 el 70.8 pa 39.5 u,v (fr/asec) 791.182 673.744 simultaneous interpolator

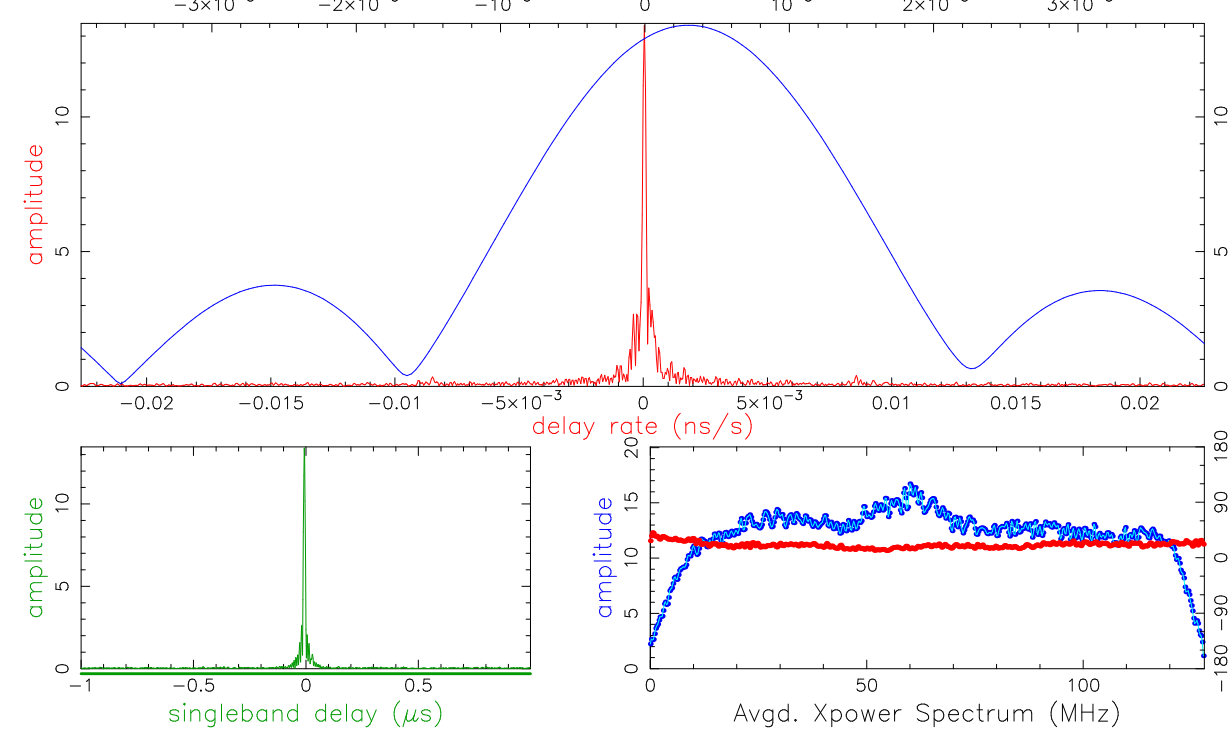
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676/np..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676/np.Q.162.3N2DRU

Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, np

VLBA\_NL - VLBA\_PT, fgroup Q, pol RR

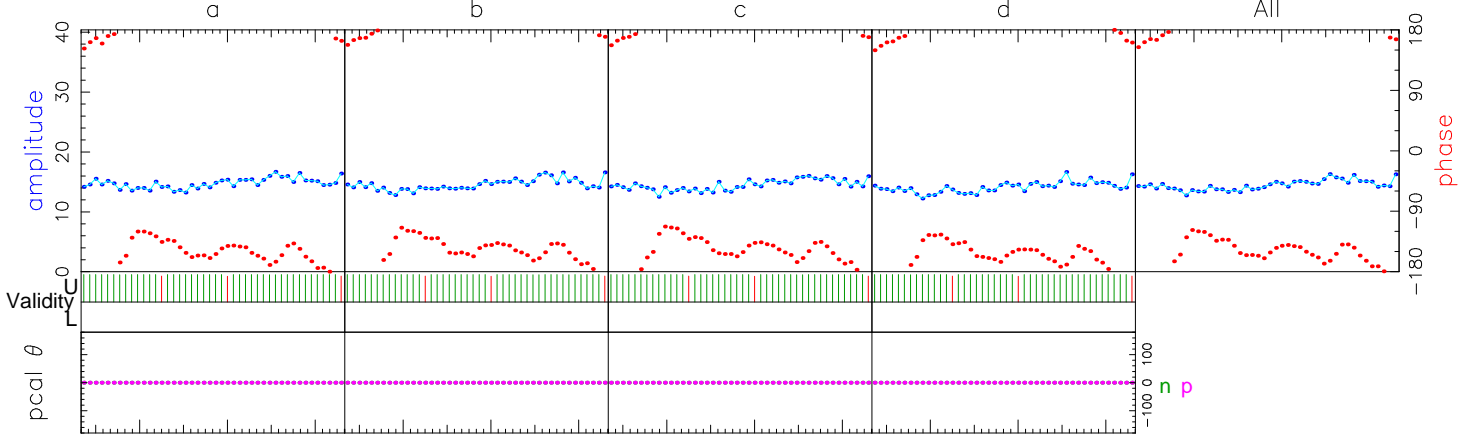


Fringe quality 8

SNR 493.1  
 Int time 179.294  
 Amp 13.468  
 Phase -77.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.007331  
 MBD 0.000323  
 Fringe rate (Hz) 0.002632  
 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  
 2025:049:103207  
 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
-157.7	-153.5	-152.9	-161.4	Phase	-156.4
13.7	13.5	13.4	13.1	Ampl.	13.4
509.4	509.2	509.2	509.0	Sbd box	509.2
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
p 1000	1000	1000	1000	PC freqs	
n:p 0:0	0:0	0:0	0:0	PC phase	
n:p 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
p 1000	1000	1000	1000		
n Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	

Group delay (usec) (SBD)	-2.52383703155E+03	Apriori delay (usec)	-2.52382954242E+03	Resid mbdelay (usec)	3.23374E-04	+/- 2.3E-06
Sband delay (usec)	-2.52383687330E+03	Apriori clock (usec)	-5.9955997E+08	Resid sbdelay (usec)	-7.33087E-03	+/- 8.7E-06
Phase delay (usec)	-2.52382955249E+03	Apriori clockrate (us/s)	-8.1437027E-08	Resid phdelay (usec)	-1.00674E-05	+/- 1.5E-08
Delay rate (us/s)	-2.56652721339E-01	Apriori rate (us/s)	-2.56652782340E-01	Resid rate (us/s)	6.10012E-08	+/- 1.4E-10
Total phase (deg)	-243.2	Apriori accel (us/s/s)	1.73436370072E-05	Resid phase (deg)	-77.6	+/- 0.2

ph/seg (deg)	RMS	Theor.	Amplitude	13.468 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	22.5	0.8	Search (1024X16)	12.856	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	9.6	1.3	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 (%)	4.9	0.2	Inc. seg. avg.	14.462	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite	ion window (TEC)	0.00	0.00
	1.6	0.4	Inc. frq. avg.	13.421					

n: az 239.9 el 55.9 pa 43.6 p: az 225.7 el 70.8 pa 39.5 u,v (fr/asec) 791.182 673.744 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/7mm/3001/No0676//np..3N2DRU Output file: /Exps/c241c/v2/7mm/3001/No0676//np.Q.193.3N2DRU

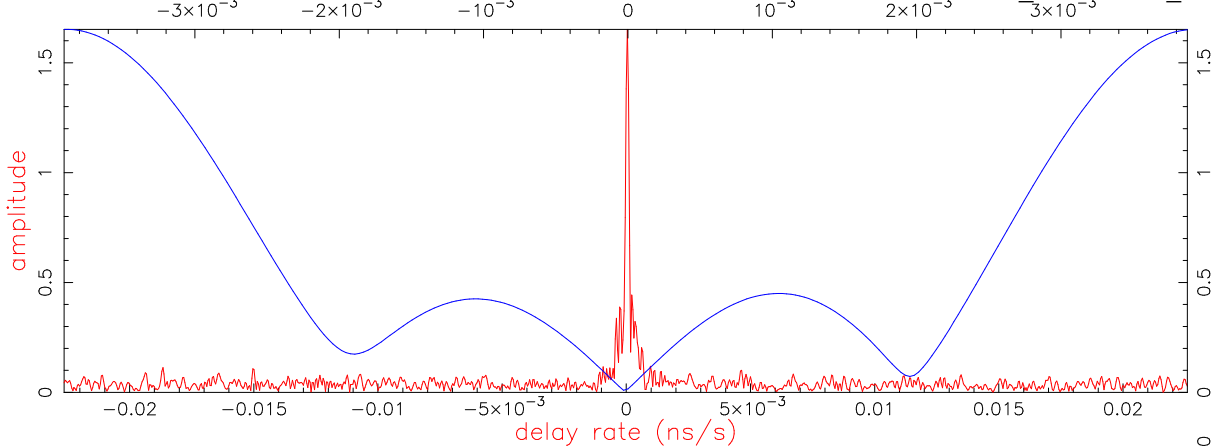
Mk4/DiFX fourfit 3.25 rev 0

aux01

OJ287.3N2DRU, No0676, np

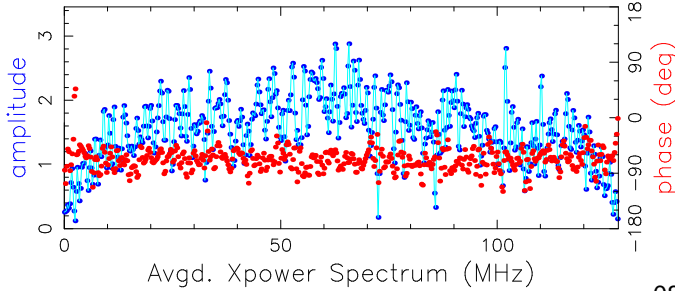
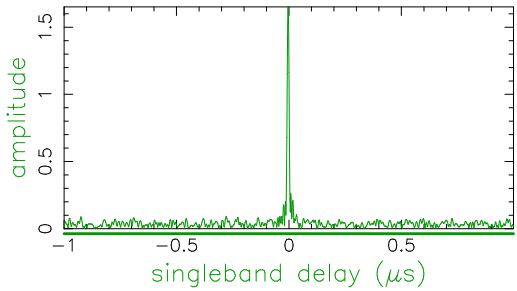
VLBA\_NL - VLBA\_PT, fgroup Q, pol LR

multiband delay ( $\mu$ s)



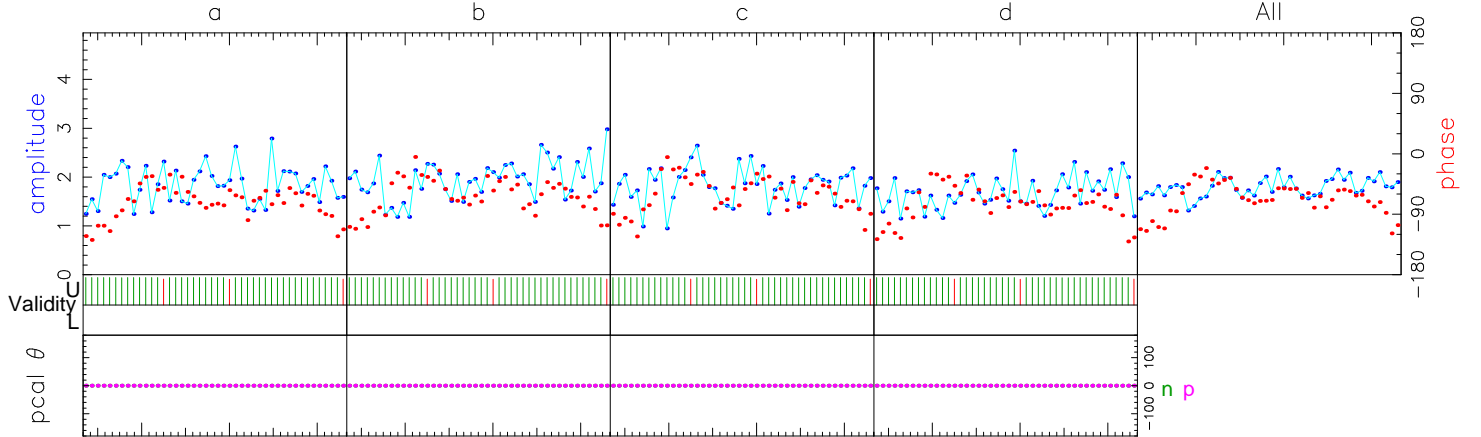
Fringe quality 8

SNR 60.5  
 Int time 179.294  
 Amp 1.652  
 Phase -67.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003854  
 MBD -0.003887  
 Fringe rate (Hz) 0.002650  
 Ion TEC 0.000  
 Ref freq (MHz) 43140.0000  
 AP (sec) 0.512

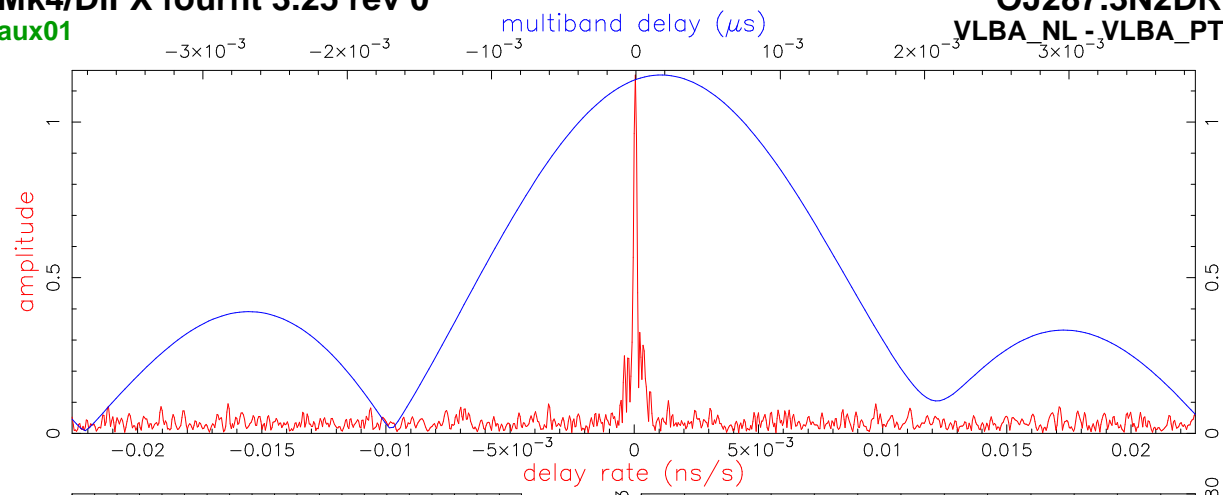


Exp. c241c  
 Exper # 1234  
 Yr:day 2024:113  
 Start 030520.00  
 Stop 030820.22  
 FRT 030650.00  
 Corr/FF/build  
 2025:048:123813  
 2025:049:103210  
 2024:113:095956  
 RA & Dec (J2000)  
 08h54m48.874931s  
 +20°06'30.640823"

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



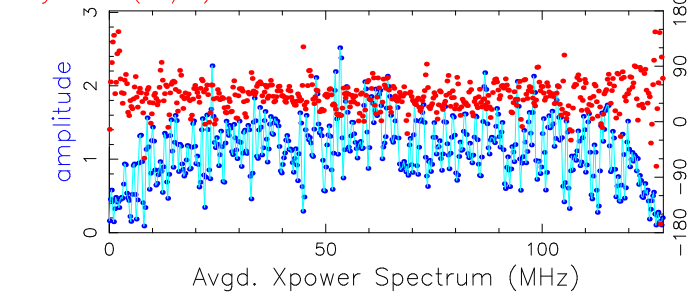
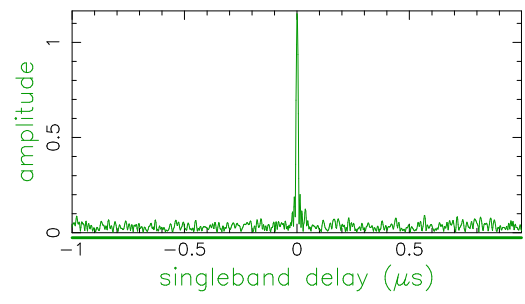
42912.00	43040.00	43168.00	43296.00	Freq (MHz)	All
-72.4	-62.6	-60.0	-74.2	Phase	-67.1
1.7	1.8	1.6	1.5	Ampl.	1.7
511.2	511.2	510.6	511.3	Sbd box	511.0
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
p 1000	1000	1000	1000	PC freqs	
n:p 0:0	0:0	0:0	0:0	PC phase	
n:p 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
p 1000	1000	1000	1000		
n Q00UL	Q01UL	Q02UL	Q03UL	Chan ids	
p Q00UR	Q01UR	Q02UR	Q03UR	Tracks	
				Chan ids	
				Tracks	
Group delay (usec) (SBD)	-2.52383342942E+03	Apriori delay (usec)	-2.52382954242E+03	Resid mbdelay (usec)	-3.88700E-03 +/- 1.8E-05
Sband delay (usec)	-2.52383339667E+03	Apriori clock (usec)	-5.9955997E+08	Resid sbdelay (usec)	-3.85425E-03 +/- 7.1E-05
Phase delay (usec)	-2.52382954675E+03	Apriori clockrate (us/s)	-8.1437027E-08	Resid phdelay (usec)	-4.32299E-06 +/- 1.2E-07
Delay rate (us/s)	-2.56652720909E-01	Apriori rate (us/s)	-2.56652782340E-01	Resid rate (us/s)	6.14313E-08 +/- 1.2E-09
Total phase (deg)	-232.8	Apriori accel (us/s/s)	1.73436370072E-05	Resid phase (deg)	-67.1 +/- 1.9
RMS	Theor.	Amplitude	1.652 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
23.7	6.3	Search (1024X16)	1.606	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
14.7	11.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
8.6	1.9	Inc. seg. avg.	1.784	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
5.0	3.3	Inc. frq. avg.	1.660	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
n: az 239.9 el 55.9 pa 43.6	p: az 225.7 el 70.8 pa 39.5	u, v (fr/asec) 791.182 673.744			simultaneous interpolator
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676//np..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676//np.Q.208.3N2DRU			



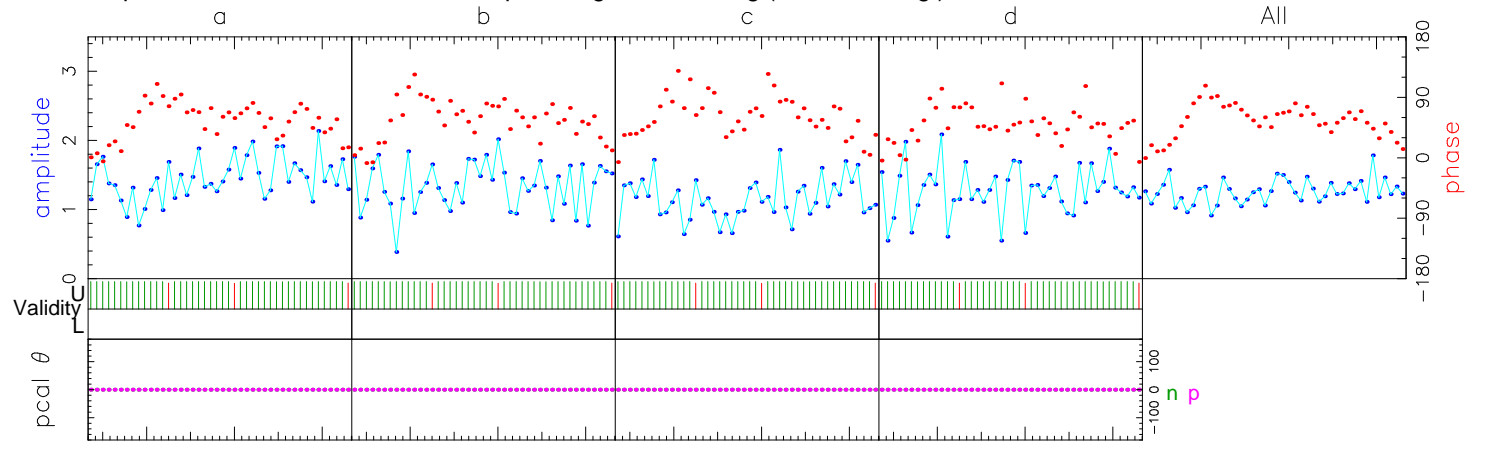
Fringe quality 8

SNR 42.7  
Int time 179.294  
Amp 1.166  
Phase 54.7  
PFD 0.0e+00  
Delays (us)  
SBD 0.000778  
MBD 0.000200  
Fringe rate (Hz) 0.002676  
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  
2025:049:103212  
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
54.6	55.1	61.6	48.4	Phase	54.7
1.3	1.2	1.0	1.1	Ampl.	1.2
513.5	513.7	513.5	512.7	Sbd box	513.4
U/L 352/0	352/0	352/0	352/0	APs used	
n 1000	1000	1000	1000	PC freqs	
p 1000	1000	1000	1000	PC freqs	
n:p 0:0	0:0	0:0	0:0	PC phase	
n:p 0:0	0:0	0:0	0:0	Manl PC	
n 1000	1000	1000	1000	PC amp	
p 1000	1000	1000	1000		
n Q00UR	Q01UR	Q02UR	Q03UR	Chan ids	
p Q00UL	Q01UL	Q02UL	Q03UL	Tracks	
				Chan ids	
				Tracks	
Group delay (usec) (SBD)	-2.52382934205E+03	Apriori delay (usec)	-2.52382954242E+03	Resid mbdelay (usec)	2.00374E-04 +/- 2.6E-05
Sband delay (usec)	-2.52382876417E+03	Apriori clock (usec)	-5.9955997E+08	Resid sbdelay (usec)	7.78250E-04 +/- 1.0E-04
Phase delay (usec)	-2.52382953890E+03	Apriori clockrate (us/s)	-8.1437027E-08	Resid phdelay (usec)	3.52476E-06 +/- 1.7E-07
Delay rate (us/s)	-2.56652720317E-01	Apriori rate (us/s)	-2.56652782340E-01	Resid rate (us/s)	6.20227E-08 +/- 1.7E-09
Total phase (deg)	-110.9	Apriori accel (us/s/s)	1.73436370072E-05	Resid phase (deg)	54.7 +/- 2.7
RMS	Theor.	Amplitude	1.166 +/- 0.027	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
24.4	8.9	Search (1024X16)	1.106	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
16.8	15.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.004 0.004
6.6	2.7	Inc. seg. avg.	1.245	Data rate(MSamp/s): 256 MBpts 16 Amb 0.008 us	dr window (ns/s) -0.023 0.023
8.7	4.7	Inc. frq. avg.	1.153	Data rate(Mb/s): 2048	nlags: 512 t_cohere infinite ion window (TEC) 0.00 0.00
n: az 239.9 el 55.9 pa 43.6	p: az 225.7 el 70.8 pa 39.5	u, v (fr/asec) 791.182 673.744			simultaneous interpolator
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/7mm/3001/No0676//np..3N2DRU	Output file: /Exps/c241c/v2/7mm/3001/No0676//np.Q.215.3N2DRU			