

Mk4/DiFX fourfit 3.25 rev 0

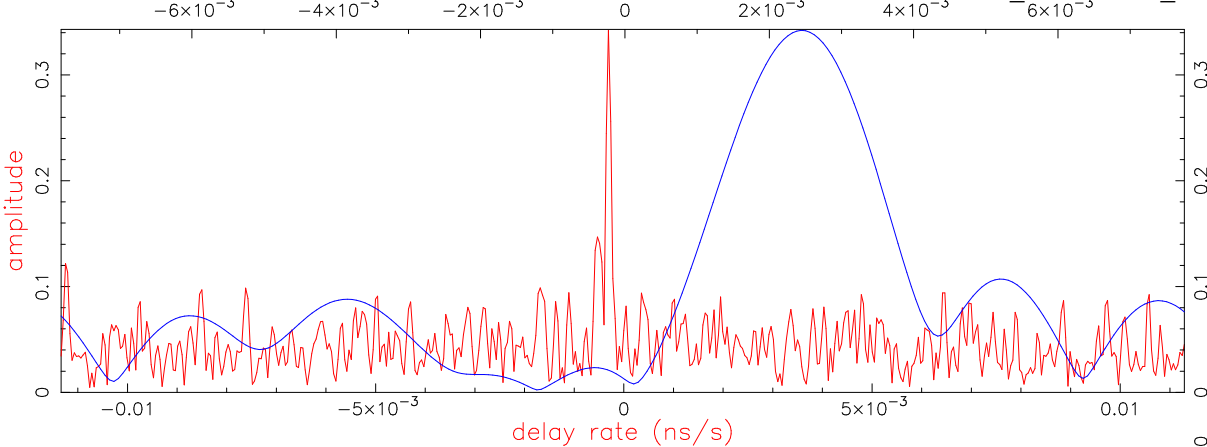
aux01

0133+476.3MP1AB, No0916, bf

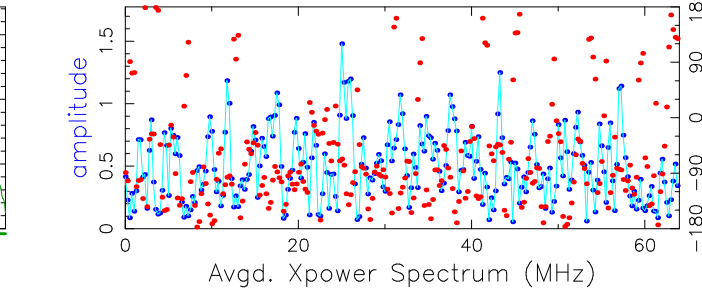
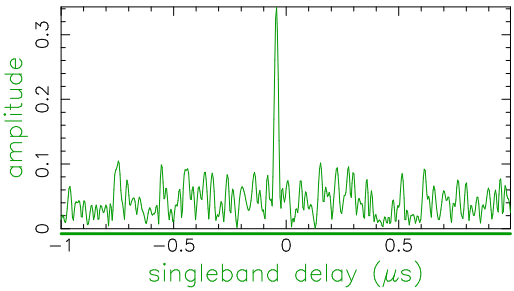
VLBA\_BR - VLBA\_FD, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 9

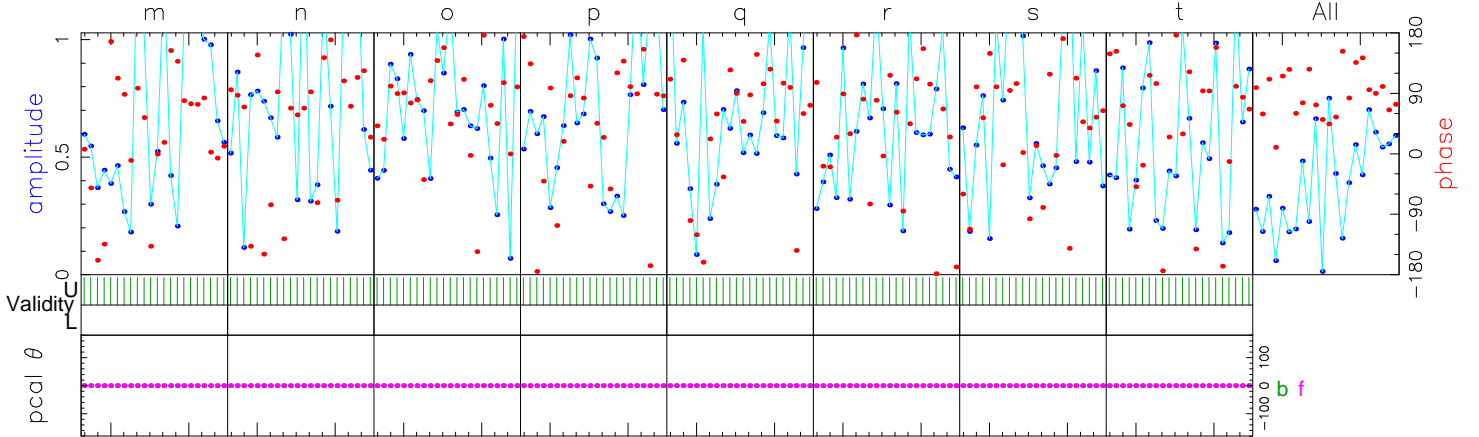


SNR 10.0  
 Int time 112.624  
 Amp 0.343  
 Phase 88.1  
 PFD 2.6e-15  
 Delays (us)  
 SBD -0.043665  
 MBD 0.002440  
 Fringe rate (Hz)  
 -0.028324  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112935  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
b	0	0	0	0	0	0	0	0		
f	0	0	0	0	0	0	0	0		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-1.90489560065E+02	Apriori delay (usec)	-1.90445124916E+02	Resid mbdelay (usec)	2.43985E-03	+/-	1.1E-04
Sband delay (usec)	-1.90488789666E+02	Apriori clock (usec)	4.5807724E+00	Resid sbdelay (usec)	-4.36647E-02	+/-	8.7E-04
Phase delay (usec)	-1.90445122076E+02	Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	2.83994E-06	+/-	3.7E-07
Delay rate (us/s)	7.59810233958E-02	Apriori rate (us/s)	7.59813522147E-02	Resid rate (us/s)	-3.28819E-07	+/-	5.7E-09
Total phase (deg)		Apriori accel (us/s/s)	2.07349396224E-05	Resid phase (deg)	88.1	+/-	11.5

ph/seg (deg)	RMS 35.1	Theor. 27.0	Amplitude Search (512X32)	0.343 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	62.6	47.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	19.3	16.3	Inc. seg. avg.	0.353	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	18.6	28.4	Inc. frq. avg.	0.343	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
					Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

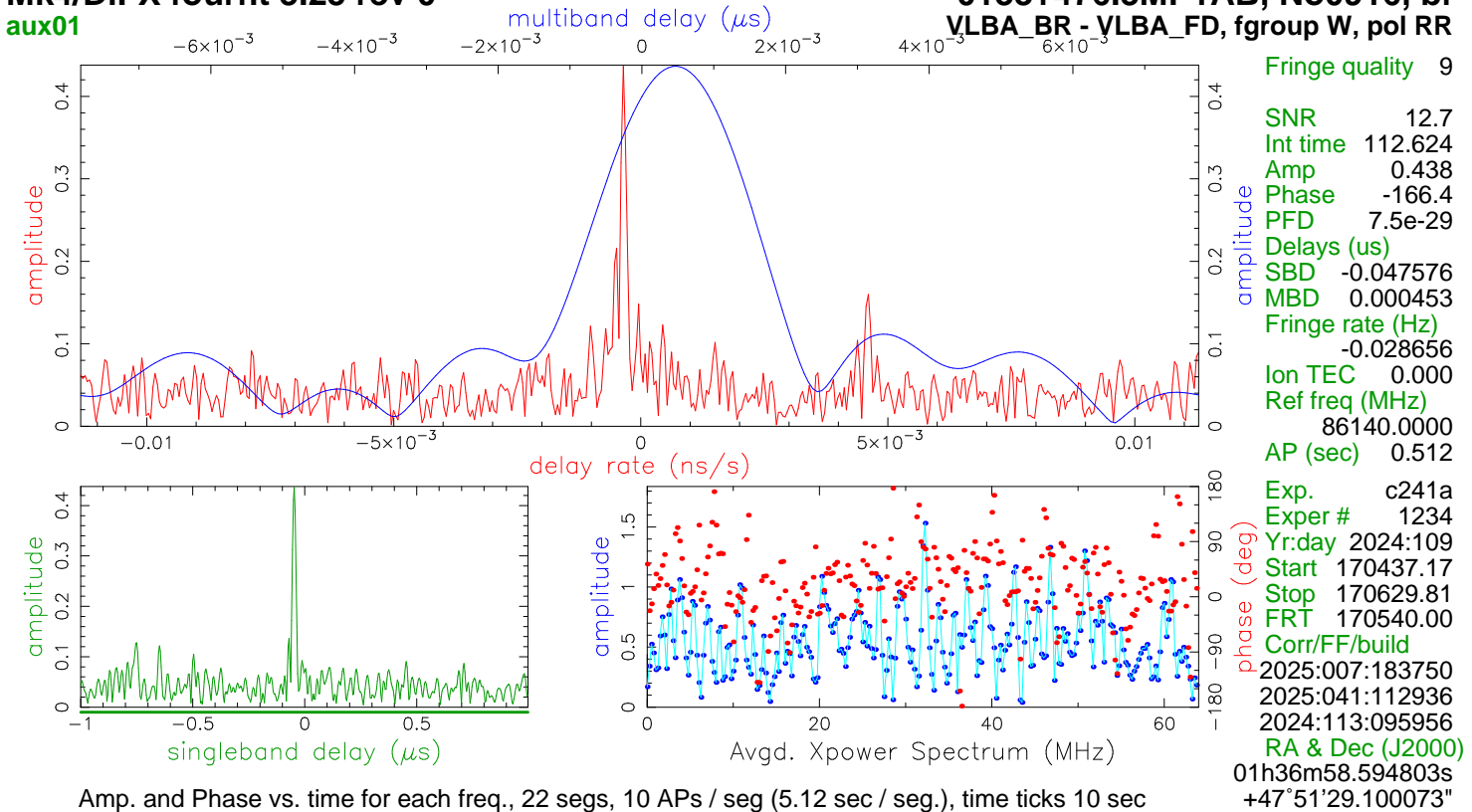
b: az 74.8 el 62.9 pa -74.1 f: az 40.8 el 64.1 pa -123.1 u,v (fr/asec) -636.621 3203.949 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bf..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bf.W.22.3MP1AB

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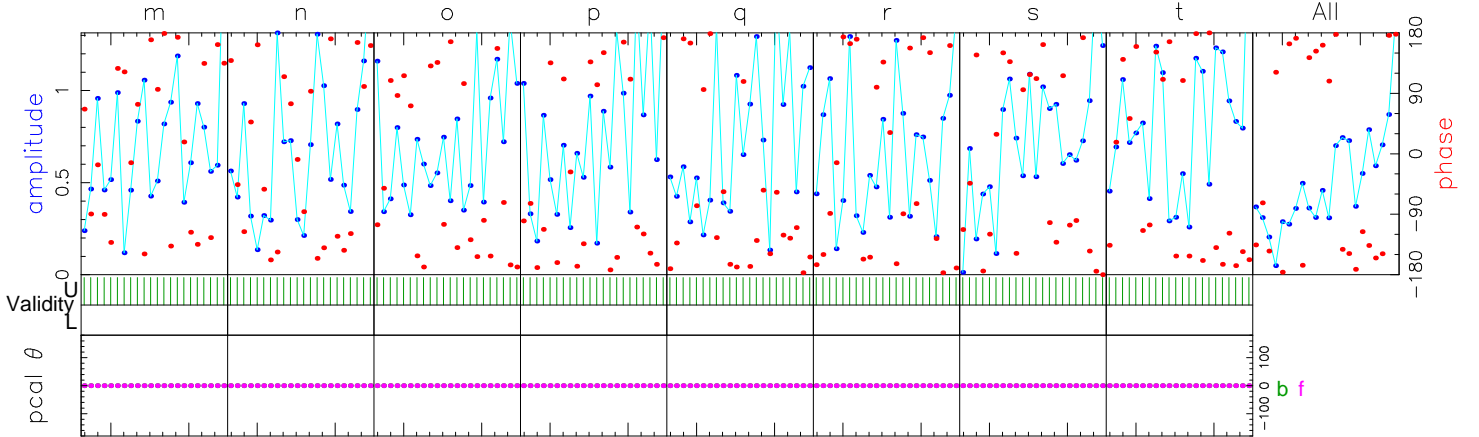
aux01

0133+476.3MP1AB, No0916, bf

VLBA\_BR - VLBA\_FD, fgroup W, pol RR



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
177.2	-178.0	-164.1	-161.5	-136.6	-168.8	-176.7	-172.8		Phase	-166.4
0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6		Ampl.	0.4
132.7	244.9	244.5	245.4	245.1	245.1	244.7	245.3		Sbd box	244.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0		APs used	
b	0	0	0	0	0	0	0		PC freqs	
f	0	0	0	0	0	0	0		PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC	
b	1000	1000	1000	1000	1000	1000	1000		PC amp	
f	1000	1000	1000	1000	1000	1000	1000			
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec) (SBD)	-1.90491546679E+02		Apriori delay (usec)	-1.90445124916E+02	Resid mbdelay (usec)	4.53237E-04	+/-	8.5E-05		
Sband delay (usec)	-1.90492701166E+02		Apriori clock (usec)	4.5807724E+00	Resid sbdelay (usec)	-4.75762E-02	+/-	6.8E-04		
Phase delay (usec)	-1.90445130284E+02		Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	-5.36729E-06	+/-	2.9E-07		
Delay rate (us/s)	7.59810195412E-02		Apriori rate (us/s)	7.59813522147E-02	Resid rate (us/s)	-3.32673E-07	+/-	4.5E-09		
Total phase (deg)		-188.1	Apriori accel (us/s/s)	2.07349396224E-05	Resid phase (deg)	-166.4	+/-	9.0		

ph/seg (deg) 39.9 21.2 Amplitude 0.438 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 67.0 36.9 Search (512X32) 0.406 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 15.7 12.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 18.9 22.3 Inc. seg. avg. 0.478 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011

b: az 74.8 el 62.9 pa -74.1 f: az 40.8 el 64.1 pa -123.1 u, v (fr/asec) -636.621 3203.949 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bf..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bf.W.28.3MP1AB simultaneous interpolator

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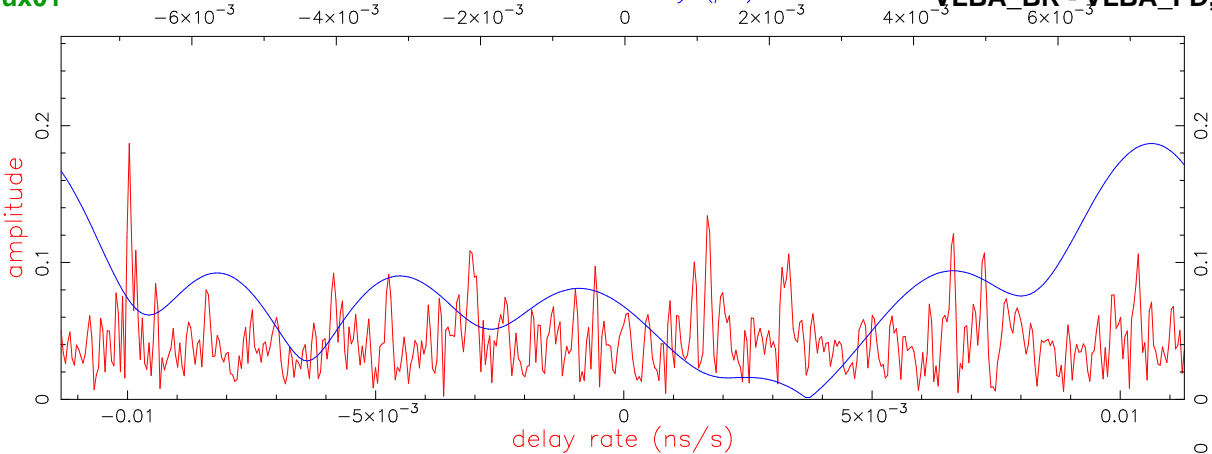
aux01

0133+476.3MP1AB, No0916, bf

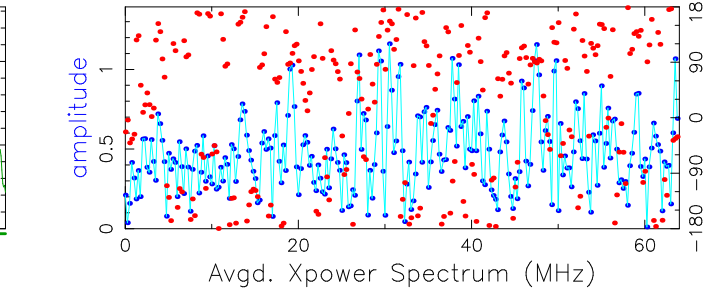
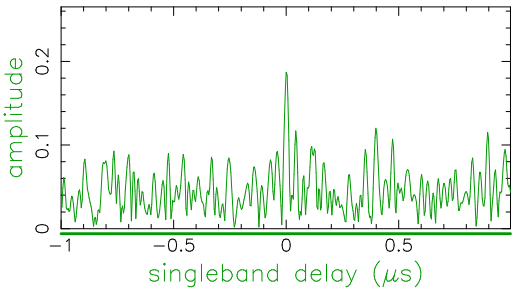
VLBA\_BR - VLBA\_FD, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

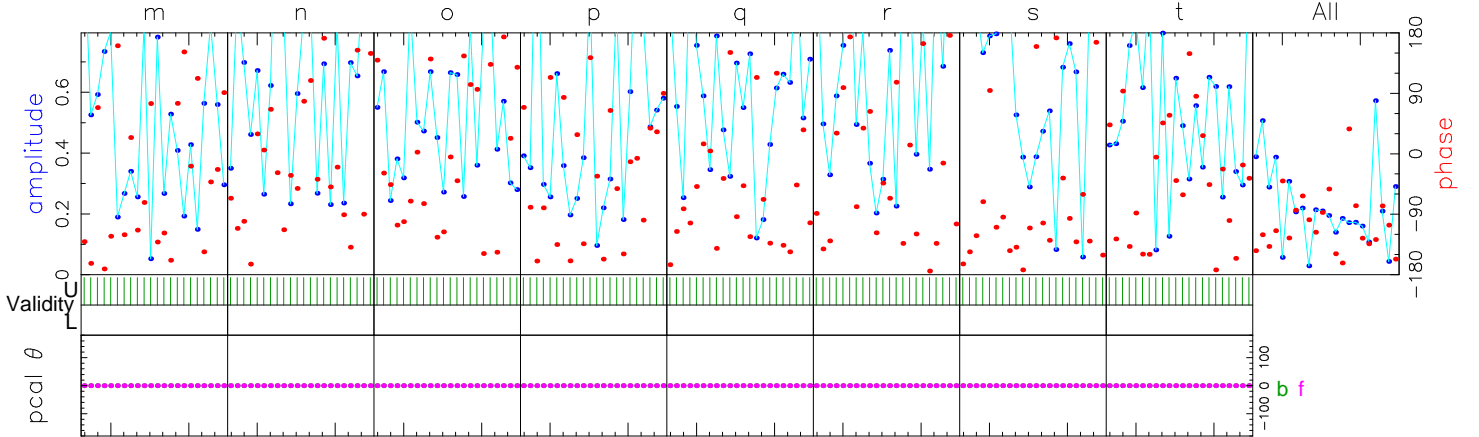


SNR 5.5  
 Int time 112.624  
 Amp 0.265  
 Phase -116.0  
 PFD 9.3e-01  
 Delays (us)  
 SBD 0.001420  
 MBD -0.008301  
 Fringe rate (Hz)  
 -0.858973  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112938  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-121.9	-96.8	-140.5	-70.3	-99.4	-127.8	-132.1	-80.9	Phase	-116.0
	0.3	0.2	0.1	0.1	0.4	0.3	0.7	0.2	Ampl.	0.2
	444.2	399.7	418.9	297.9	268.0	488.8	257.2	51.2	Sbd box	257.4
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.90437800698E+02	Apriori delay (usec)	-1.90445124916E+02	Resid mbdelay (usec)	-8.30078E-03	+/-	2.0E-04
Sband delay (usec)	-1.90443705166E+02	Apriori clock (usec)	4.5807724E+00	Resid sbdelay (usec)	1.41975E-03	+/-	1.6E-03
Phase delay (usec)	-1.90445128657E+02	Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	-3.74030E-06	+/-	6.8E-07
Delay rate (us/s)	7.59713803914E-02	Apriori rate (us/s)	7.59813522147E-02	Resid rate (us/s)	-9.97182E-06	+/-	1.0E-08
Total phase (deg)	-137.7	Apriori accel (us/s/s)	2.07349396224E-05	Resid phase (deg)	-116.0	+/-	20.9

ph/seg (deg)	RMS 46.7	Theor. 49.1	Amplitude Search (512X32)	0.183	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.9	85.7	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	28.9	29.6	Inc. seg. avg.	0.237	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	77.2	51.7	Inc. frq. avg.	0.246	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 74.8 el 62.9 pa -74.1 f: az 40.8 el 64.1 pa -123.1 u, v (fr/asec) -636.621 3203.949 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bf..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bf.W.35.3MP1AB

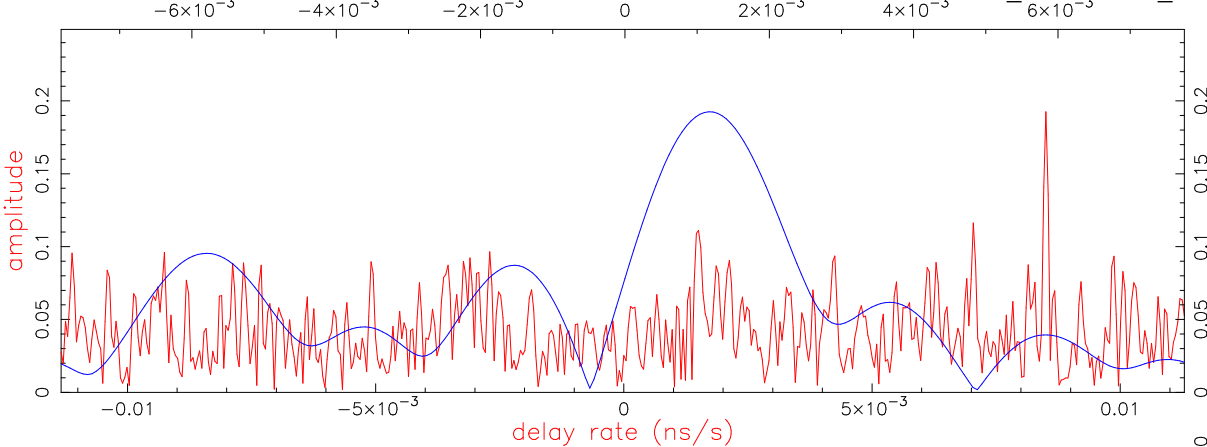
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bf

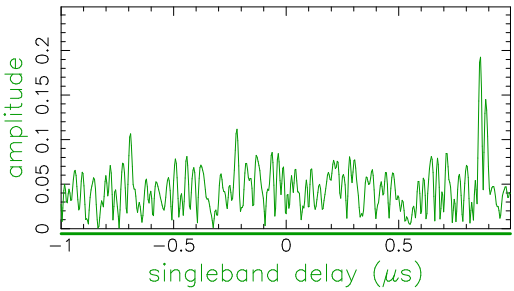
VLBA\_BR - VLBA\_FD, fgroup W, pol RL

multiband delay ( $\mu$ s)

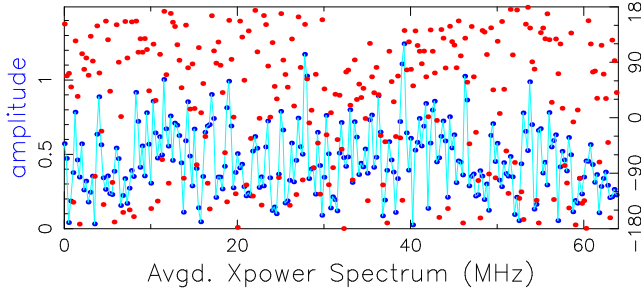


Fringe quality 0

SNR 5.7  
 Int time 112.624  
 Amp 0.249  
 Phase -45.3  
 PFD 5.8e-01  
 Delays (us)  
 SBD 0.861866  
 MBD 0.001181  
 Fringe rate (Hz)  
 0.731980  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

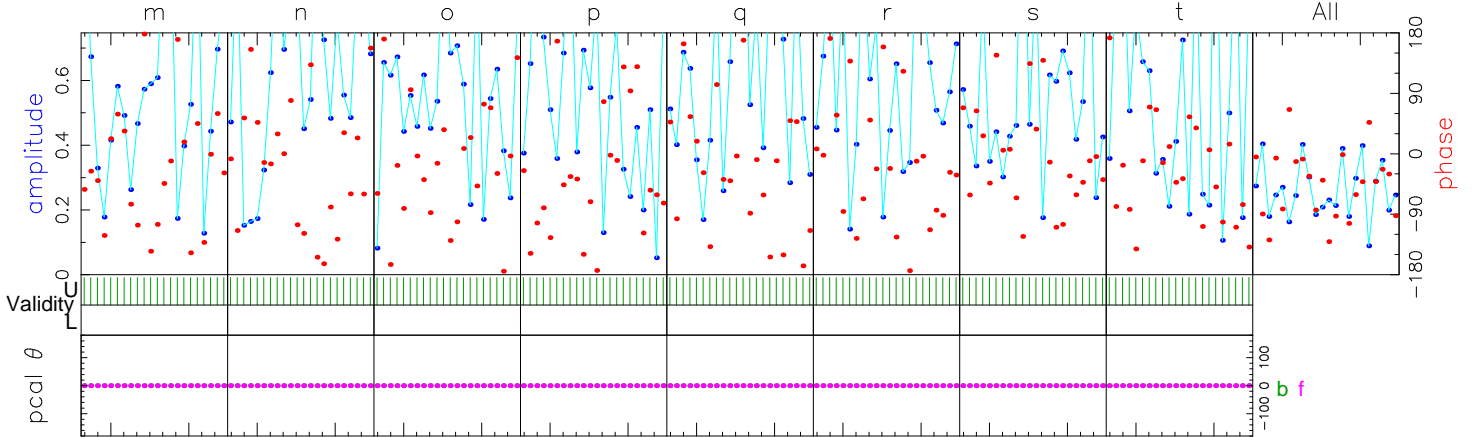


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112939  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-25.2	-66.0	-29.8	-82.8	-19.5	-48.7	-28.9	-46.4	Phase	-45.3
	0.3	0.2	0.2	0.3	0.1	0.3	0.3	0.4	Ampl.	0.2
	437.3	385.5	463.5	334.7	83.3	199.5	408.8	79.7	Sbd box	477.6
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.89584568664E+02	Apriori delay (usec)	-1.90445124916E+02	Resid mbdelay (usec)	1.18125E-03	+/-	1.9E-04
Sband delay (usec)	-1.89583258666E+02	Apriori clock (usec)	4.5807724E+00	Resid sbdelay (usec)	8.61866E-01	+/-	1.5E-03
Phase delay (usec)	-1.90445126376E+02	Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	-1.45990E-06	+/-	6.5E-07
Delay rate (us/s)	7.59898497733E-02	Apriori rate (us/s)	7.59813522147E-02	Resid rate (us/s)	8.49756E-06	+/-	1.0E-08
Total phase (deg)	-67.0	Apriori accel (us/s/s)	2.07349396224E-05	Resid phase (deg)	-45.3	+/-	20.2

ph/seg (deg)	50.7	Theor.	47.4	Amplitude	0.249 +/- 0.044	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	55.2	Search (512X32)	0.187	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	23.9	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	39.2	Inc. seg. avg.	0.249	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
		Inc. frq. avg.	0.232	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 74.8 el 62.9 pa -74.1 f: az 40.8 el 64.1 pa -123.1 u,v (fr/asec) -636.621 3203.949 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bf..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bf.W.42.3MP1AB





Mk4/DiFX fourfit 3.25 rev 0

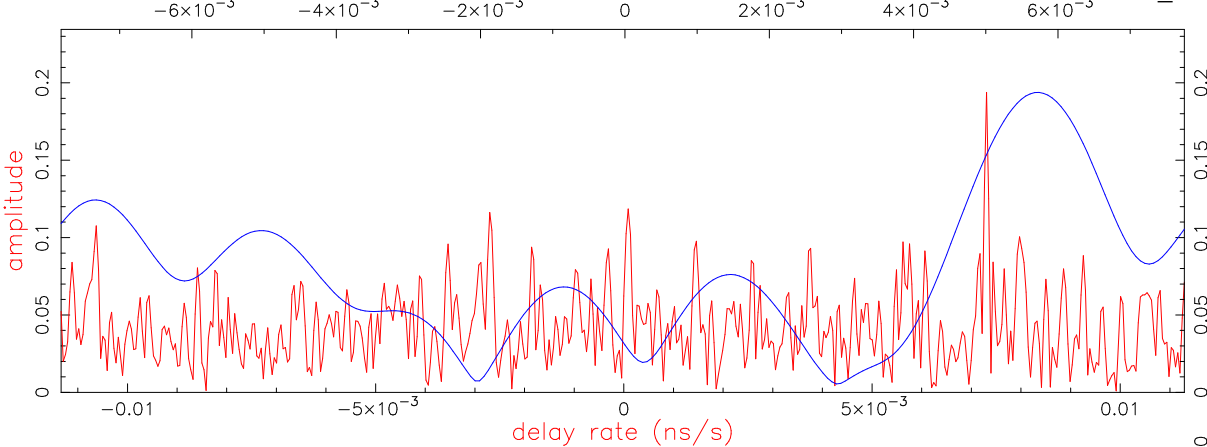
aux01

0133+476.3MP1AB, No0916, Bf

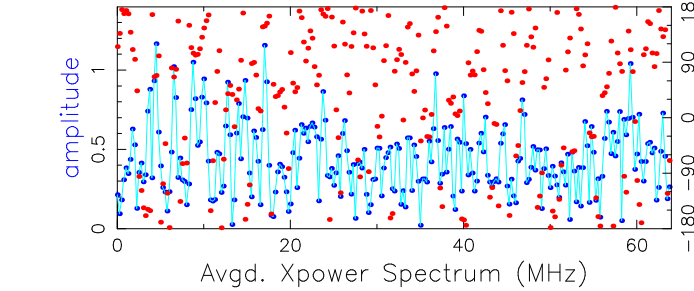
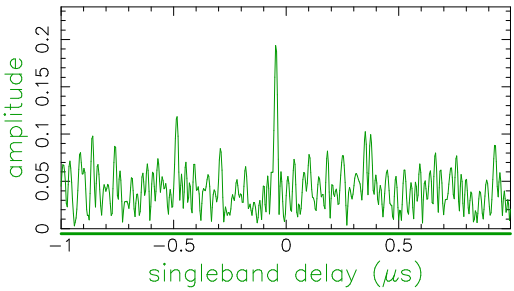
EFLSBERG - VLBA\_FD, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

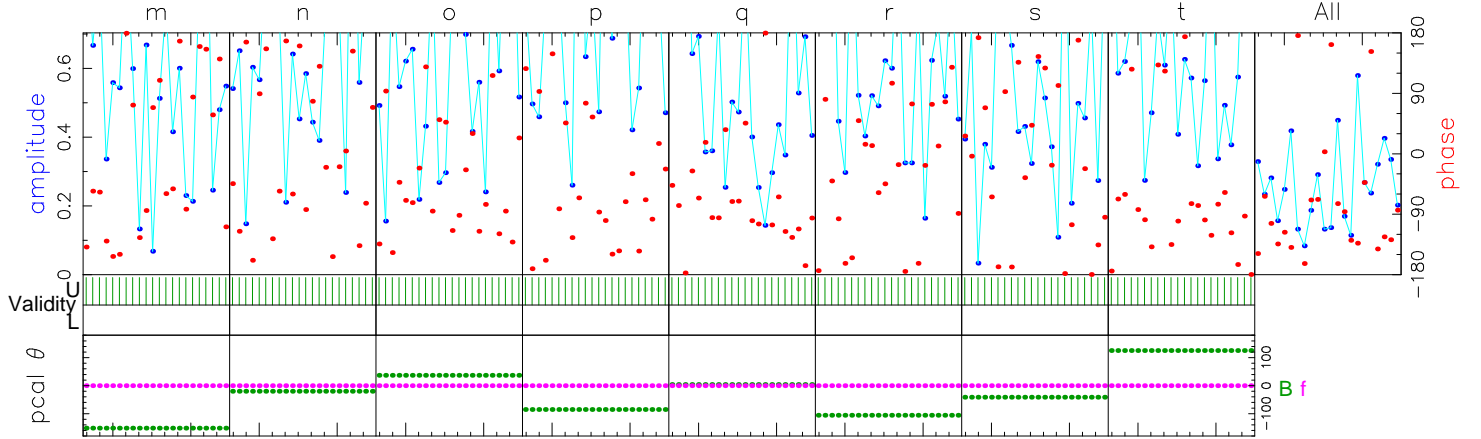


SNR 5.7  
 Int time 112.640  
 Amp 0.235  
 Phase -115.2  
 PFD 5.2e-01  
 Delays (us)  
 SBD -0.045515  
 MBD 0.005743  
 Fringe rate (Hz)  
 0.630410  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112948  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
B	0	0	0	0	0	0	0	0		
f	0	0	0	0	0	0	0	0		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:f	-151:0	-20:0	37:0	-85:0	4:0	-106:0	-41:0	125:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-6.40115040272E+03	Apriori delay (usec)	-6.40110927027E+03	Resid mbdelay (usec)	5.74256E-03	+/-	1.9E-04
Sband delay (usec)	-6.40115478477E+03	Apriori clock (usec)	-3.5458302E+01	Resid sbdelay (usec)	-4.55145E-02	+/-	1.5E-03
Phase delay (usec)	-6.40110927399E+03	Apriori clockrate (us/s)	-2.3975895E-07	Resid phdelay (usec)	-3.71558E-06	+/-	6.5E-07
Delay rate (us/s)	-1.03561785053E+00	Apriori rate (us/s)	-1.03562516897E+00	Resid rate (us/s)	7.31844E-06	+/-	1.0E-08
Total phase (deg)	-310.0	Apriori accel (us/s/s)	5.58347470213E-05	Resid phase (deg)	-115.2	+/-	20.1

ph/seg (deg)	50.4	Theor.	47.2	Amplitude	0.235 +/- 0.041	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	69.8	Search (512X32)	0.188	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	64.6	Inc. seg. avg.	0.232	Inc. frq. avg.	0.247	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	55.3	Inc. frq. avg.	0.247			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 302.9 el 37.3 pa 52.8 f: az 40.8 el 64.1 pa -123.1 u,v (fr/asec) 8899.330 6386.120 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Bf..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Bf.W.73.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

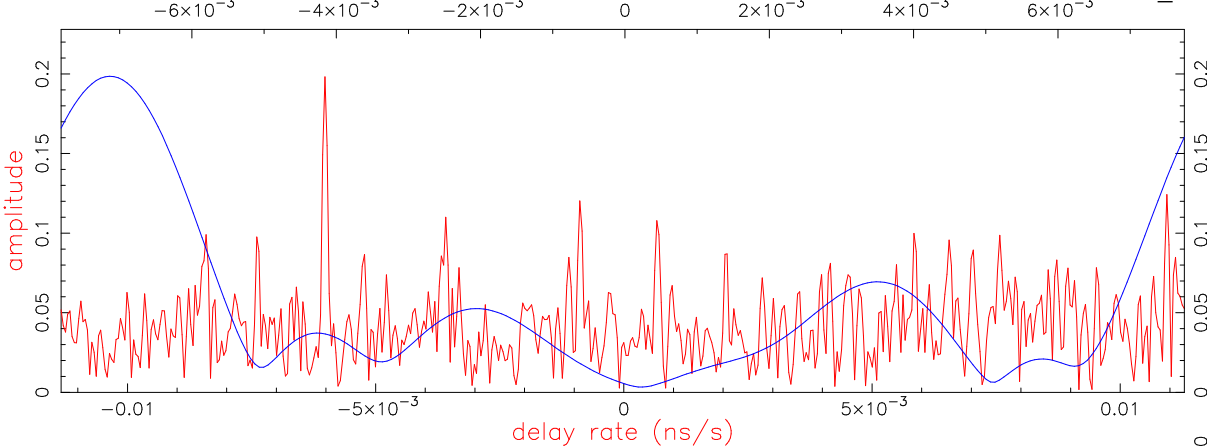
aux01

0133+476.3MP1AB, No0916, Bf

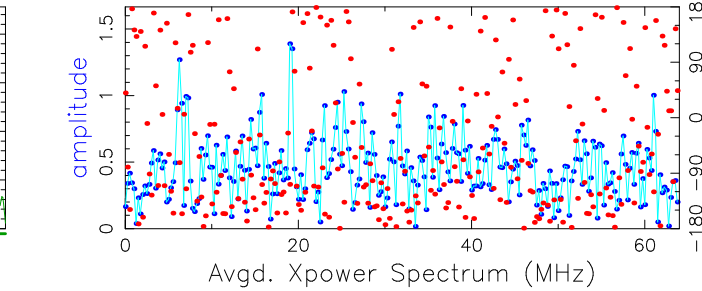
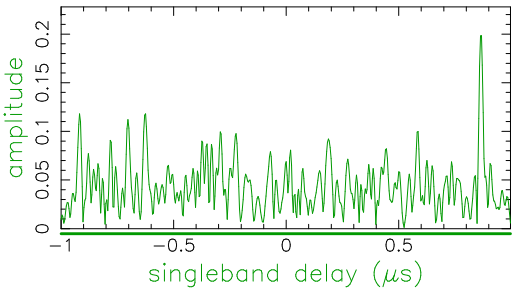
EFLSBERG - VLBA\_FD, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

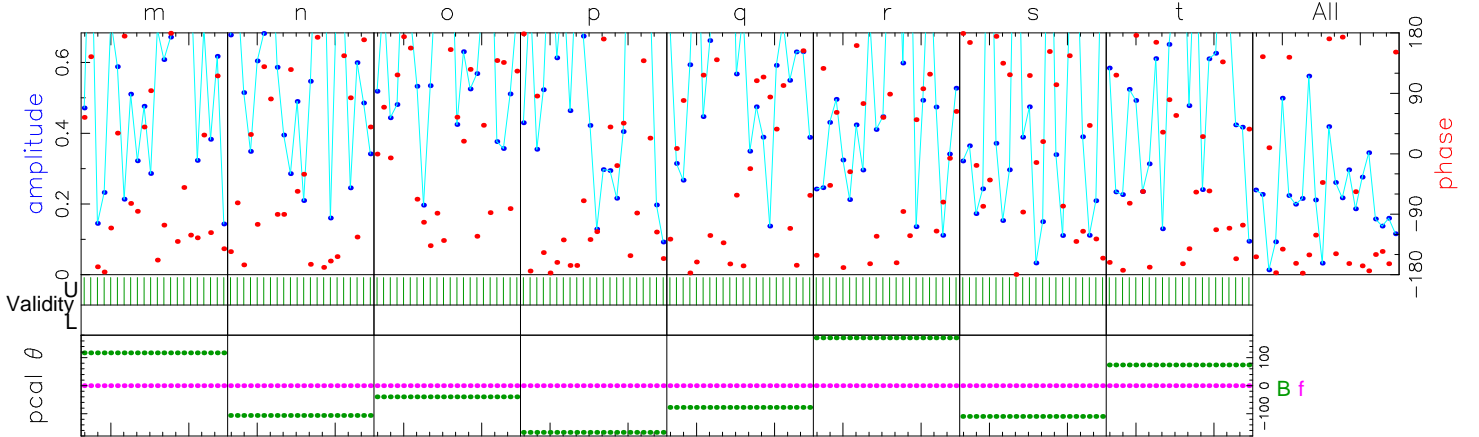


SNR 5.9  
 Int time 112.640  
 Amp 0.228  
 Phase -163.6  
 PFD 2.4e-01  
 Delays (us)  
 SBD 0.865243  
 MBD -0.007065  
 Fringe rate (Hz)  
 -0.520139  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112949  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-138.4	-163.6	-175.4	-156.2	-172.0	167.8	-169.4	-147.8	Phase	-163.6
	0.2	0.3	0.1	0.3	0.3	0.1	0.3	0.2	Ampl.	0.2
	308.1	160.5	458.3	316.3	101.7	240.6	133.6	196.6	Sbd box	478.5
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.40024133487E+03	Apriori delay (usec)	-6.40110927027E+03	Resid mbdelay (usec)	-7.06460E-03	+/-	1.8E-04
Sband delay (usec)	-6.40024402727E+03	Apriori clock (usec)	-3.5458302E+01	Resid sbdelay (usec)	8.65243E-01	+/-	1.5E-03
Phase delay (usec)	-6.40110927555E+03	Apriori clockrate (us/s)	-2.3975895E-07	Resid phdelay (usec)	-5.27497E-06	+/-	6.3E-07
Delay rate (us/s)	-1.03563120727E+00	Apriori rate (us/s)	-1.03562516897E+00	Resid rate (us/s)	-6.03830E-06	+/-	9.7E-09
Total phase (deg)	-358.4	Apriori accel (us/s/s)	5.58347470213E-05	Resid phase (deg)	-163.6	+/-	19.5

ph/seg (deg) 55.7 45.8 Search (512X32) 0.191 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 66.4 79.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 18.3 27.6 Inc. seg. avg. 0.198 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 33.1 48.2 Inc. frq. avg. 0.206 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

B: az 302.9 el 37.3 pa 52.8 f: az 40.8 el 64.1 pa -123.1 u,v (fr/asec) 8899.330 6386.120 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Bf..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Bf.W.81.3MP1AB

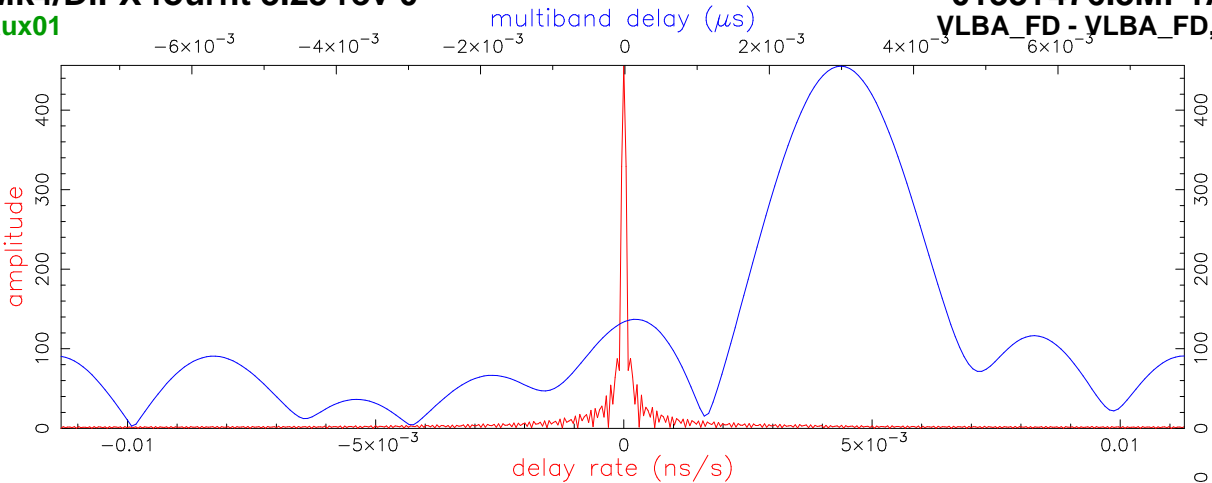


Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, ff

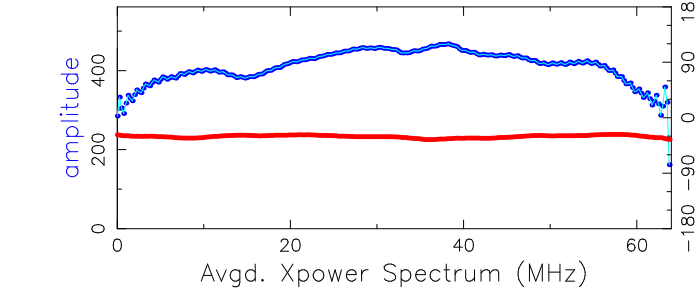
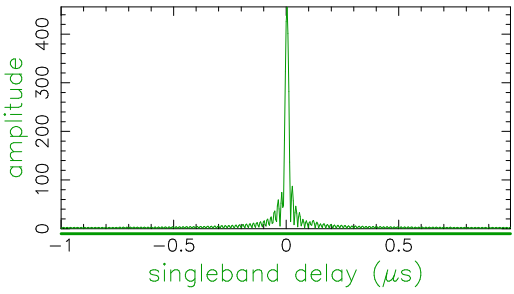
VLBA\_FD - VLBA\_FD, fgroup W, pol RL



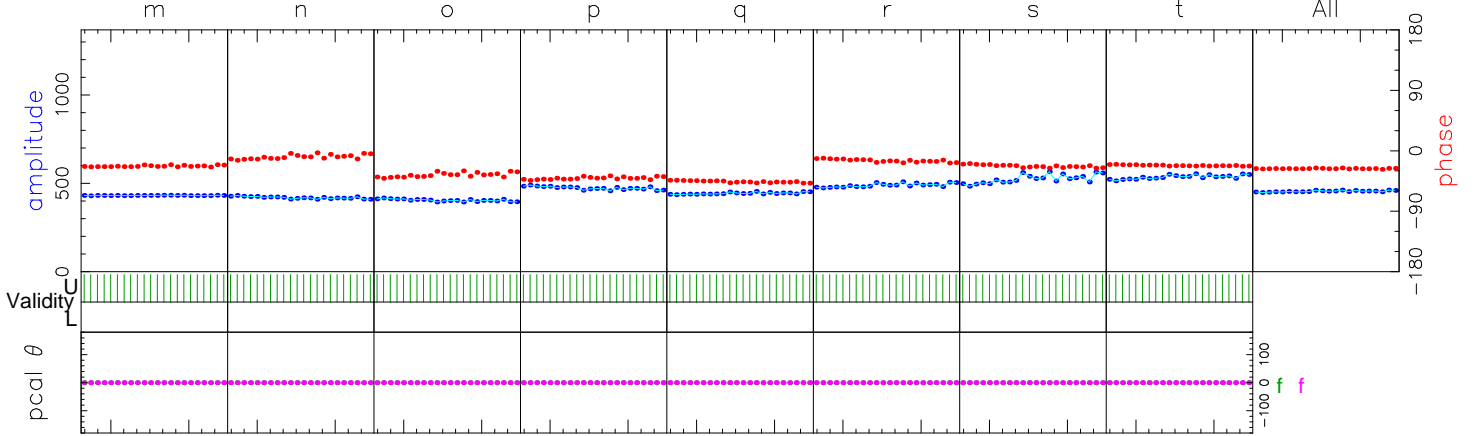
Fringe quality 8

SNR 13238.5  
 Int time 112.640  
 Amp 456.136  
 Phase -26.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003328  
 MBD 0.002982  
 Fringe rate (Hz) 0.000039  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Yr:day 1234  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112956  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-22.8	-9.1	-35.9	-40.9	-45.9	-14.7	-22.9	-21.8	Phase	-26.5
	431.3	418.7	404.1	473.4	443.5	488.9	524.6	535.9	Ampl.	465.1
	257.8	258.0	257.6	258.0	257.9	257.9	257.9	257.7	Sbd box	257.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) 2.981968750000E-03 Apriori delay (usec) 0.000000000000E+00 Resid mbdelay (usec) 2.98197E-03 +/- 8.2E-08  
 Sband delay (usec) 3.327750000000E-03 Apriori clock (usec) 0.000000000000E+00 Resid sbdelay (usec) 3.32775E-03 +/- 6.5E-07  
 Phase delay (usec) -8.54945480892E-07 Apriori clockrate (us/s) 0.000000000000E+00 Resid phdelay (usec) -8.54945E-07 +/- 2.8E-10  
 Delay rate (us/s) 4.50642646056E-10 Apriori rate (us/s) 0.000000000000E+00 Resid rate (us/s) 4.50643E-10 +/- 4.3E-12  
 Total phase (deg) -26.5 Apriori accel (us/s/s) 0.000000000000E+00 Resid phase (deg) -26.5 +/- 0.0

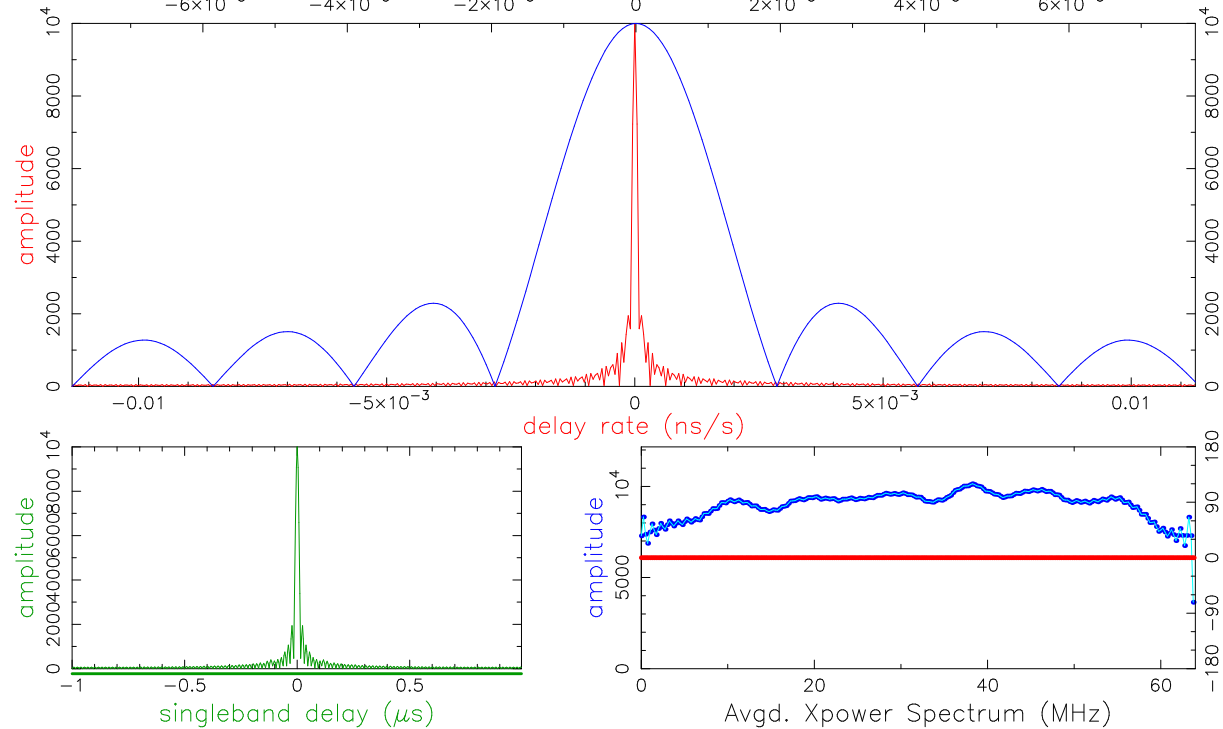
ph/seg (deg) 0.4 0.0 Search (512X32) 454.477 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.9 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 13.9 0.0 Inc. seg. avg. 455.206 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 10.2 0.0 Inc. frq. avg. 465.059 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 f: az 40.8 el 64.1 pa -123.1 u, v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ff..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ff.W.102.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

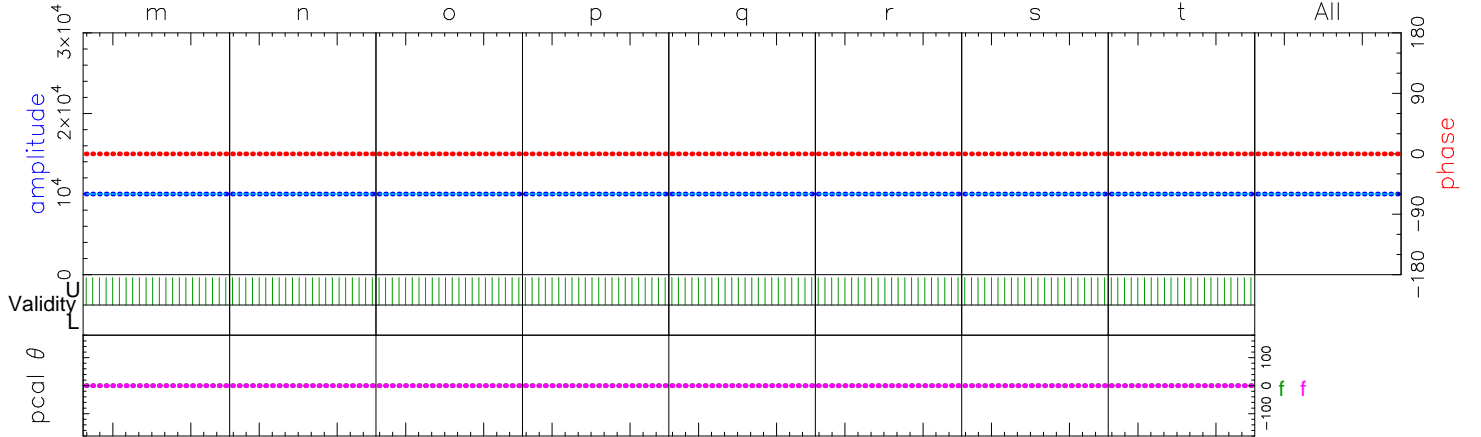
0133+476.3MP1AB, No0916, ff

VLBA\_FD - VLBA\_FD, fgroup W, pol LL



Fringe quality 9  
 SNR 290231.1  
 Int time 112.640  
 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) 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112954  
 2024:113:095956  
 RA & Dec (J2000) 01h36m58.594803s +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	10000.0	10000.0
f	0	0	0	0	0	0	0	0	Ampl.	10000.0
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC phase	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Mani PC	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.7E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 3.0E-08  
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.3E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.0E-13  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

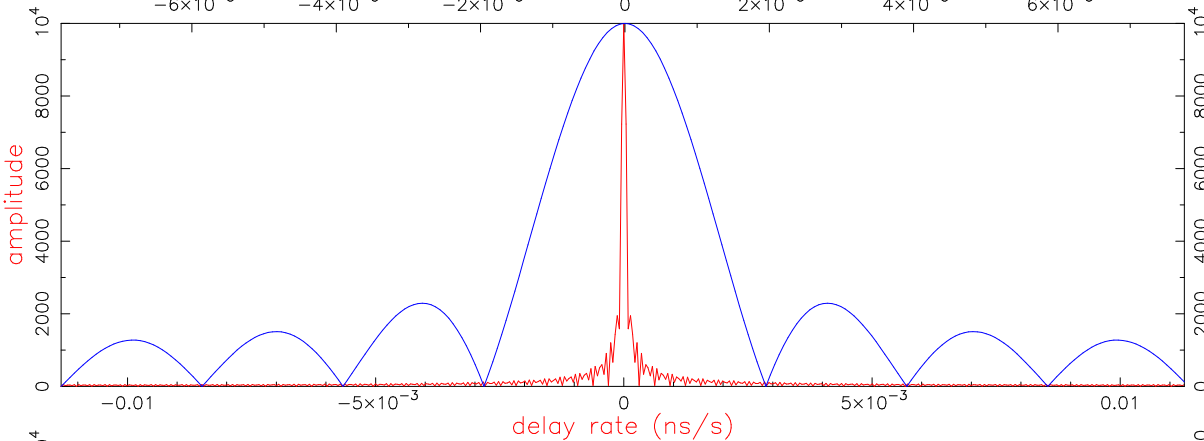
ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (512X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 f: az 40.8 el 64.1 pa -123.1 u,v (fr/asec) 0.000 0.000 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ff.3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ff.W.91.3MP1AB simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, ff

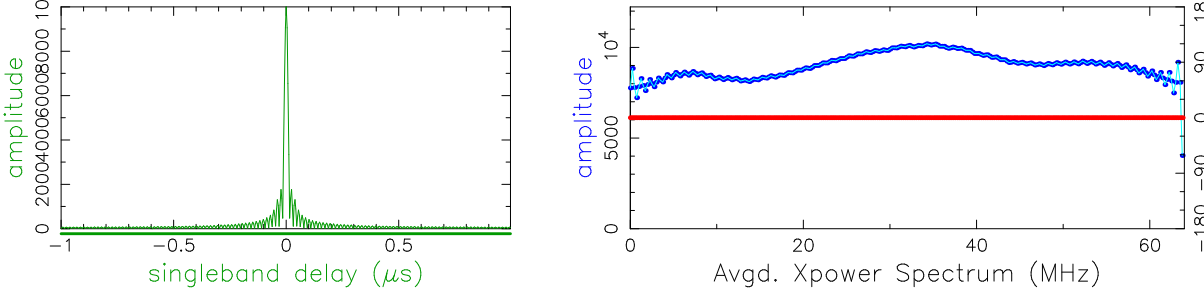
VLBA\_FD - VLBA\_FD, fgroup W, pol RR



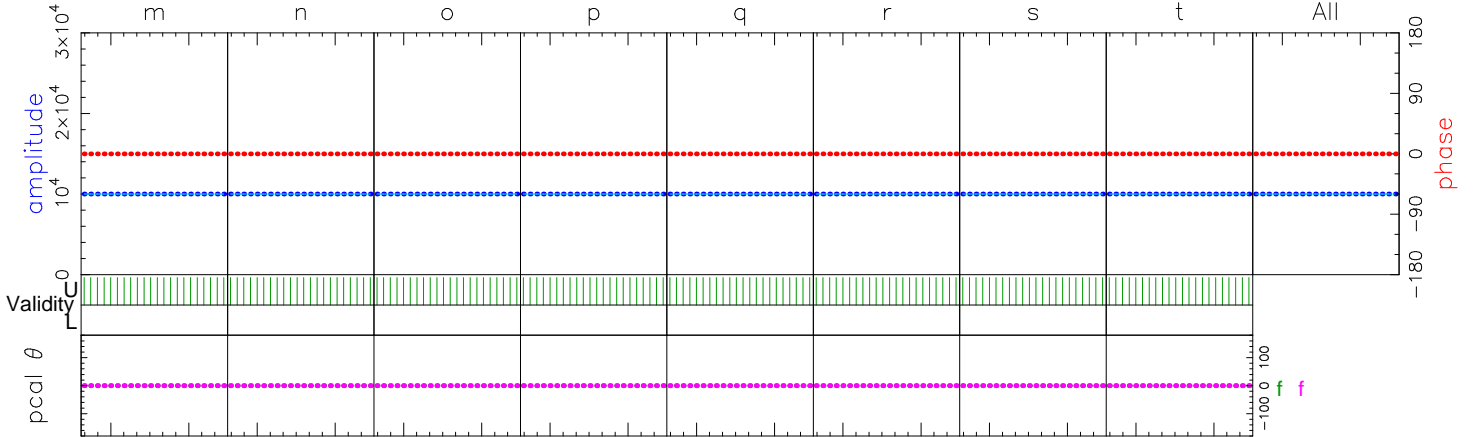
Fringe quality 9

SNR 290231.1  
 Int time 112.640  
 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)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112954  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.7E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 3.0E-08  
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.3E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.0E-13  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (512X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 f: az 40.8 el 64.1 pa -123.1 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ff..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ff.W.93.3MP1AB simultaneous interpolator



Mk4/DiFX fourfit 3.25 rev 0

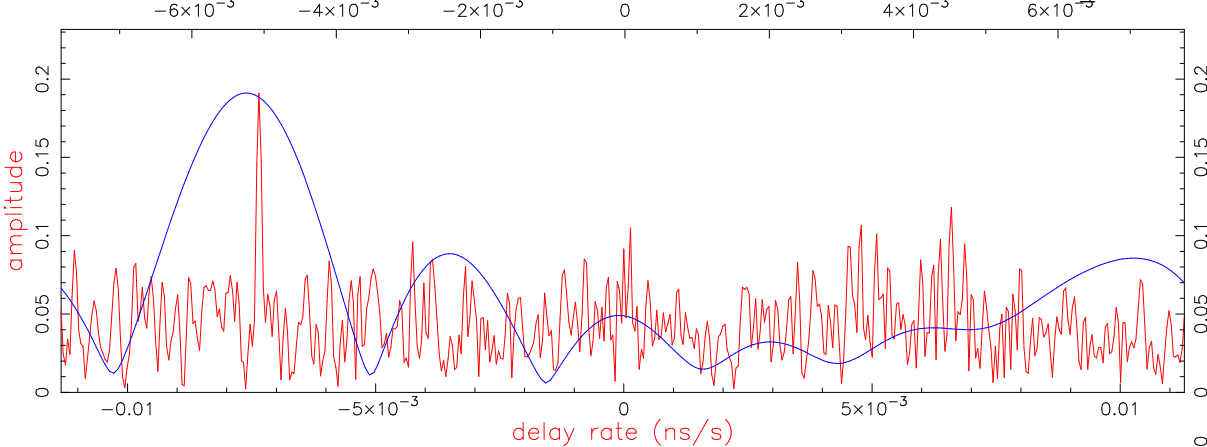
aux01

0133+476.3MP1AB, No0916, fg

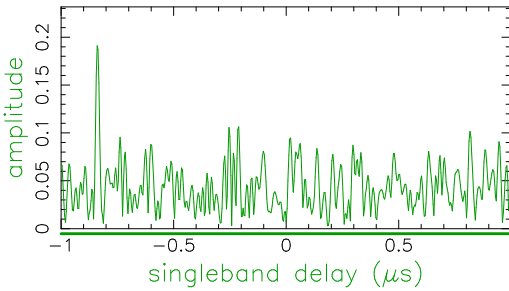
VLBA\_FD - GLT, fgroupp W, pol LR

multiband delay ( $\mu$ s)

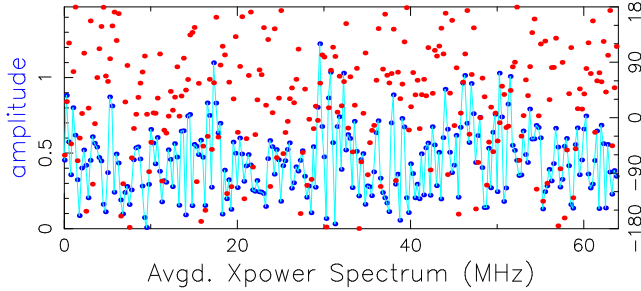
Fringe quality 0



SNR 5.6  
 Int time 112.640  
 Amp 0.232  
 Phase 179.3  
 PFD 6.8e-01  
 Delays (us)  
 SBD -0.838317  
 MBD -0.005200  
 Fringe rate (Hz)  
 -0.633143  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

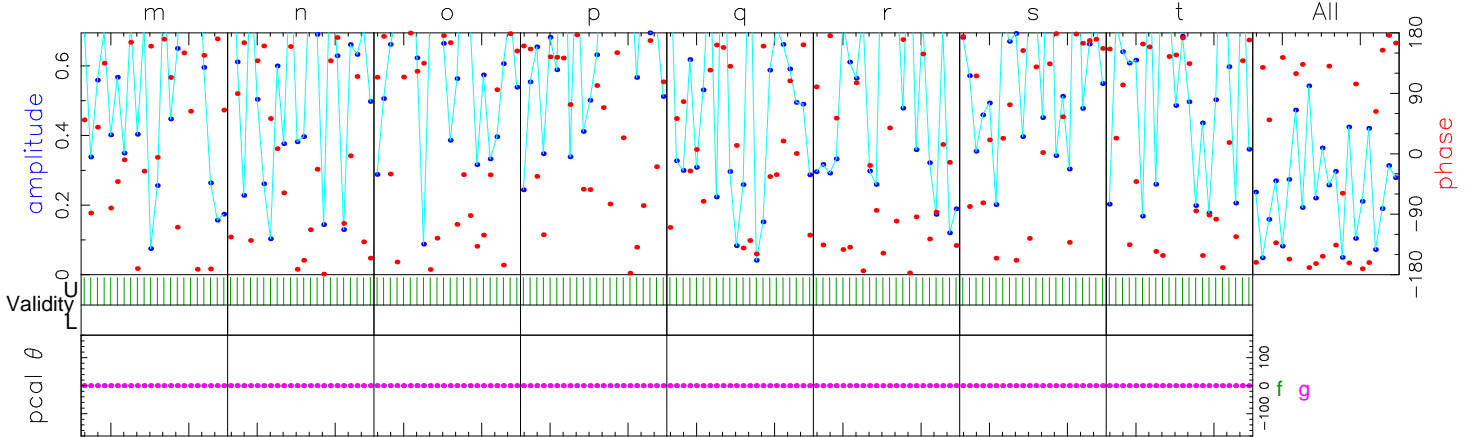


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112957  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
g	0	0	0	0	0	0	0	0		
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	5.52538913196E+02	Apriori delay (usec)		5.53372238397E+02	Resid mbdelay (usec)		-5.20020E-03	+/-	1.9E-04
Sband delay (usec)	5.52533921147E+02	Apriori clock (usec)		-4.0655708E-01	Resid sbdelay (usec)		-8.38317E-01	+/-	1.5E-03
Phase delay (usec)	5.53372244181E+02	Apriori clockrate (us/s)		-2.9740967E-08	Resid phdelay (usec)		5.78333E-06	+/-	6.6E-07
Delay rate (us/s)	4.19558254021E-01	Apriori rate (us/s)		4.19565604179E-01	Resid rate (us/s)		-7.35016E-06	+/-	1.0E-08
Total phase (deg)	40.9	Apriori accel (us/s/s)		-4.18043843749E-05	Resid phase (deg)		179.3	+/-	20.4

ph/seg (deg)	56.8	Theor.	47.8	Amplitude	0.232 +/- 0.041	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	74.9		83.4	Search (512X32)	0.188	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	28.9		28.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	41.3		50.3	Inc. seg. avg.	0.221	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.216	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 40.8 el 64.1 pa -123.1      g: az 194.0 el 61.2 pa 4.9      u,v (fr/asec) -3616.773 -6378.932      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/fg..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/fg.W.103.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

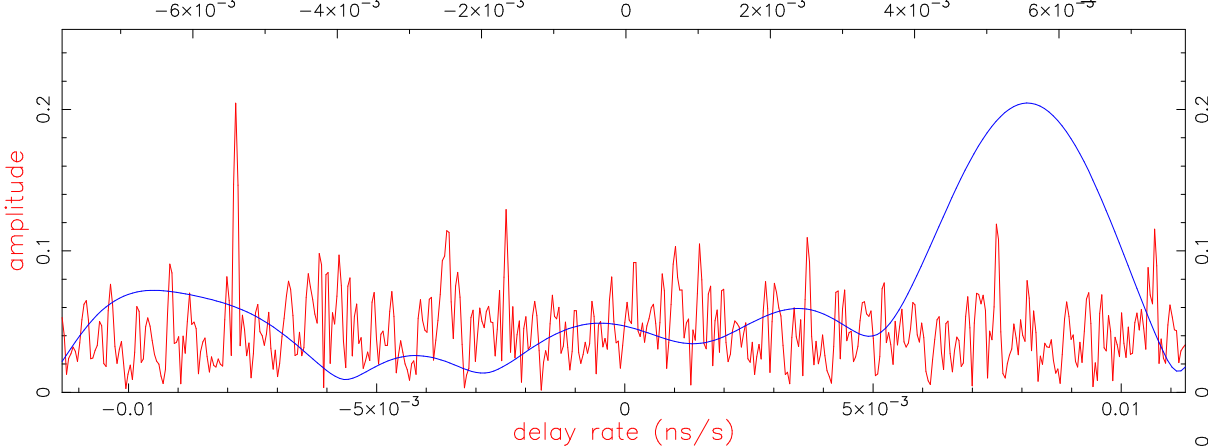
aux01

0133+476.3MP1AB, No0916, fg

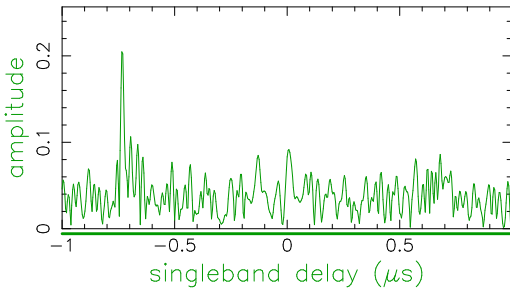
VLBA\_FD - GLT, fgroupp W, pol RL

multiband delay ( $\mu$ s)

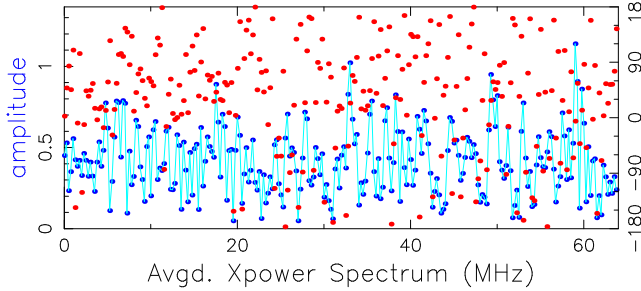
Fringe quality 0



SNR 6.1  
 Int time 112.640  
 Amp 0.257  
 Phase -167.7  
 PFD 8.2e-02  
 Delays (us)  
 SBD -0.732645  
 MBD 0.005599  
 Fringe rate (Hz)  
 -0.675720  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

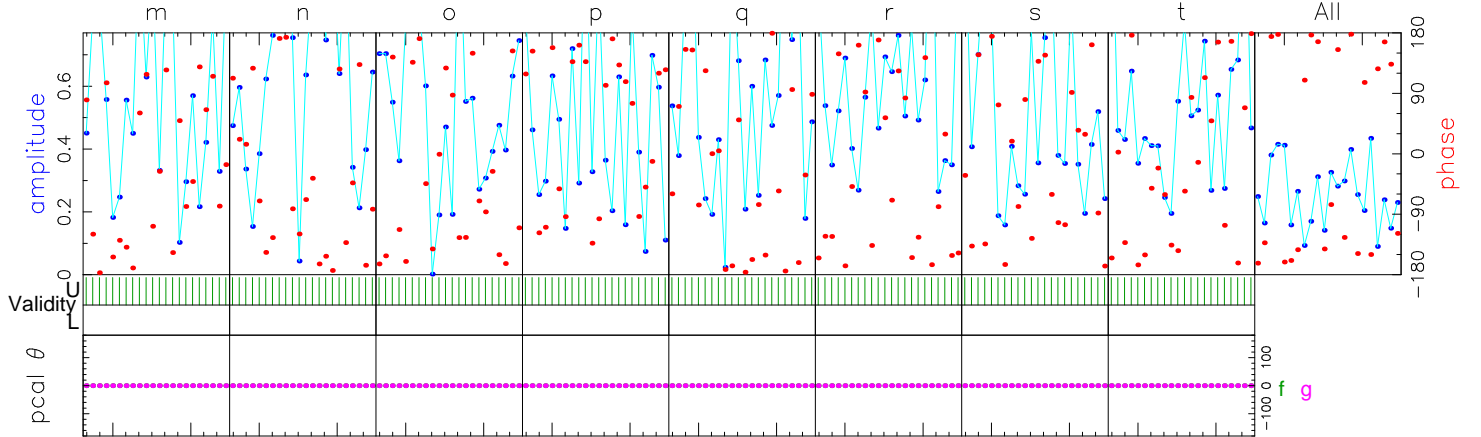


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112958  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	171.8	-143.5	-158.2	147.7	176.8	-166.8	-142.5	-169.9	Phase	-167.7
	0.1	0.4	0.4	0.2	0.3	0.4	0.2	0.2	Ampl.	0.2
	169.2	108.6	295.7	226.0	327.7	70.2	23.4	328.9	Sbd box	69.4
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	5.52643462057E+02		Apriori delay (usec)		5.53372238397E+02		Resid mbdelay (usec)		5.59866E-03	+/- 1.8E-04
Sband delay (usec)	5.52639593147E+02		Apriori clock (usec)		-4.0655708E-01		Resid sbdelay (usec)		-7.32645E-01	+/- 1.4E-03
Phase delay (usec)	5.53372232990E+02		Apriori clockrate (us/s)		-2.9740967E-08		Resid phdelay (usec)		-5.40744E-06	+/- 6.1E-07
Delay rate (us/s)	4.19557759734E-01		Apriori rate (us/s)		4.19565604179E-01		Resid rate (us/s)		-7.84444E-06	+/- 9.4E-09
Total phase (deg)	53.9		Apriori accel (us/s/s)		-4.18043843749E-05		Resid phase (deg)		-167.7	+/- 18.9

ph/seg (deg) 43.7 44.3 Search (512X32) 0.199 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 54.7 77.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 25.7 26.7 Inc. seg. avg. 0.244 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 39.4 46.6 Inc. frq. avg. 0.242 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 g: az 194.0 el 61.2 pa 4.9 u,v (fr/asec) -3616.773 -6378.932 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fg..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fg.W.106.3MP1AB

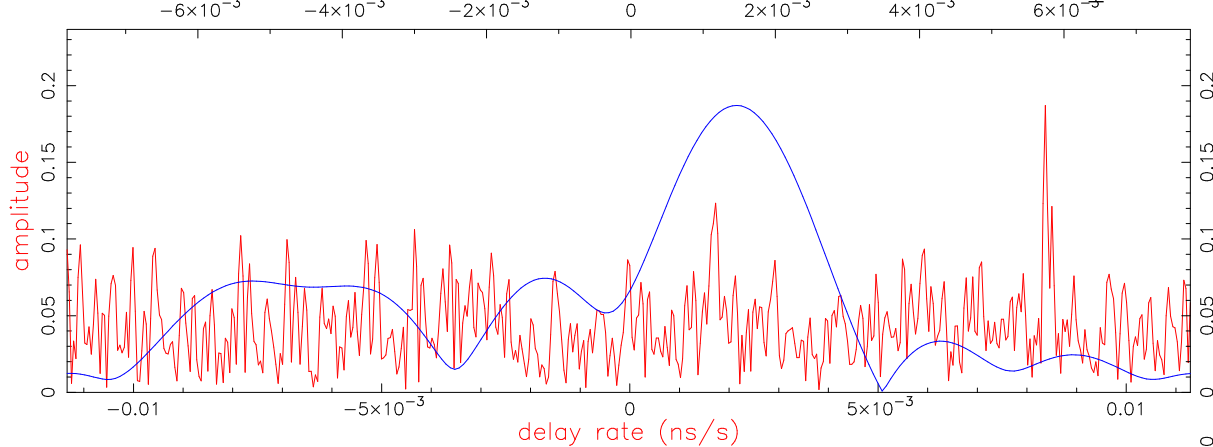
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fg

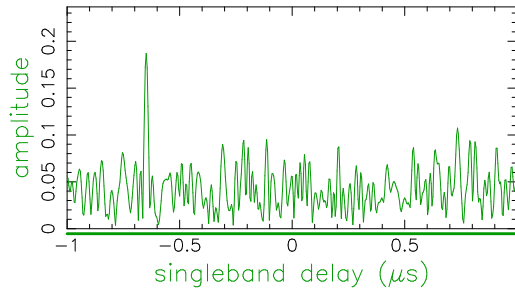
VLBA\_FD - GLT, fgroup W, pol LL

multiband delay ( $\mu$ s)

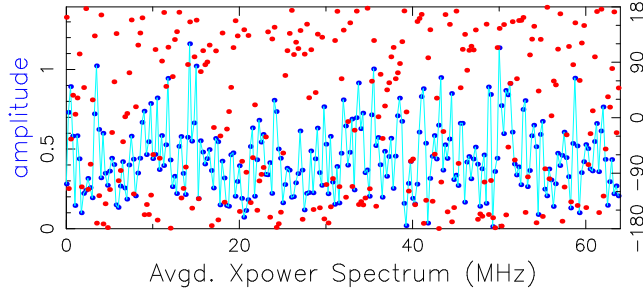


Fringe quality 0

SNR 5.4  
 Int time 112.640  
 Amp 0.237  
 Phase -119.1  
 PFD 9.6e-01  
 Delays (us)  
 SBD -0.648530  
 MBD 0.001458  
 Fringe rate (Hz) 0.720385  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

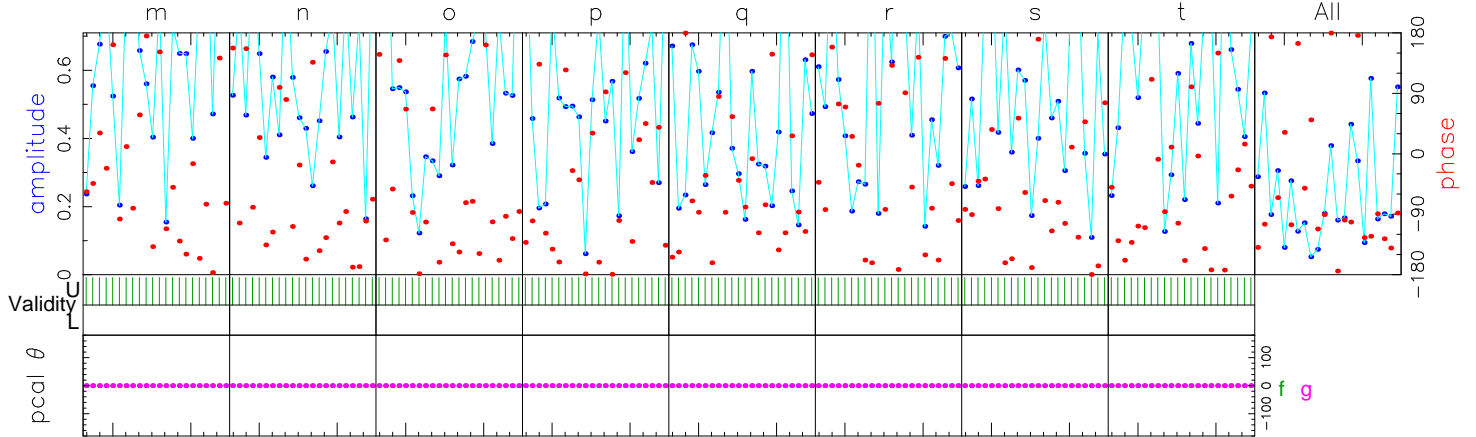


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112954  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-97.4	-112.3	-135.5	-146.7	-105.5	-166.5	-77.7	-116.7	Phase	-119.1
	0.2	0.3	0.4	0.2	0.3	0.2	0.2	0.3	Ampl.	0.2
	234.3	426.0	91.2	254.8	319.7	363.9	383.5	249.4	Sbd box	91.0
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
f,g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) 5.52717446554E+02 Apriori delay (usec) 5.53372238397E+02 Resid mbdelay (usec) 1.45816E-03 +/- 2.0E-04  
 Sband delay (usec) 5.52723708147E+02 Apriori clock (usec) -4.0655708E-01 Resid sbdelay (usec) -6.48530E-01 +/- 1.6E-03  
 Phase delay (usec) 5.53372234558E+02 Apriori clockrate (us/s) -2.9740967E-08 Resid phdelay (usec) -3.83949E-06 +/- 6.8E-07  
 Delay rate (us/s) 4.19573967137E-01 Apriori rate (us/s) 4.19565604179E-01 Resid rate (us/s) 8.36296E-06 +/- 1.0E-08  
 Total phase (deg) 102.5 Apriori accel (us/s/s) -4.18043843749E-05 Resid phase (deg) -119.1 +/- 21.1

RMS Theor. Amplitude 0.237 +/- 0.044 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 62.2 49.5 Search (512X32) 0.183 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 89.5 86.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 30.8 29.8 Inc. seg. avg. 0.229 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 30.3 52.1 Inc. frq. avg. 0.229 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 g: az 194.0 el 61.2 pa 4.9 u,v (fr/asec) -3616.773 -6378.932 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fg..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fg.W.92.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

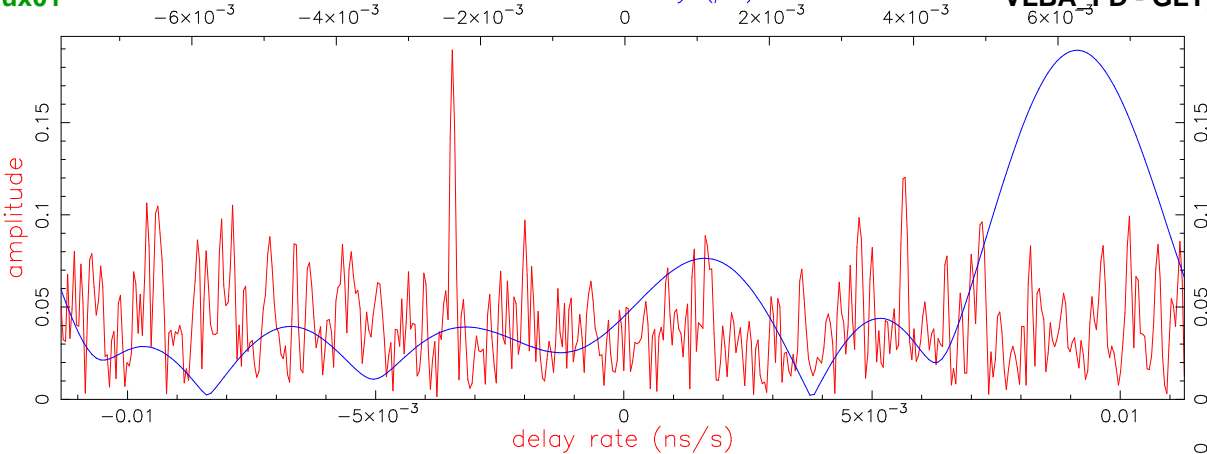
aux01

0133+476.3MP1AB, No0916, fg

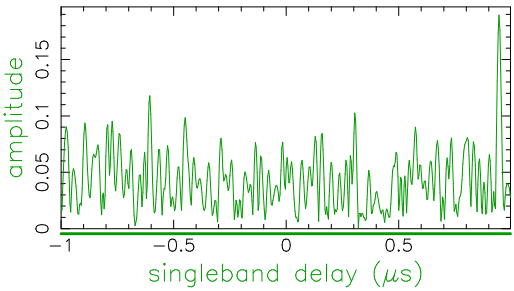
VLBA\_FD - GLT, fgroupp W, pol RR

multiband delay ( $\mu$ s)

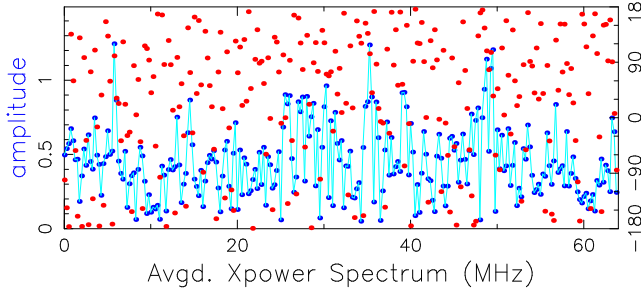
Fringe quality 0



SNR 5.5  
 Int time 112.640  
 Amp 0.197  
 Phase 125.1  
 PFD 9.0e-01  
 Delays (us)  
 SBD 0.945414  
 MBD 0.006265  
 Fringe rate (Hz)  
 -0.297864  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

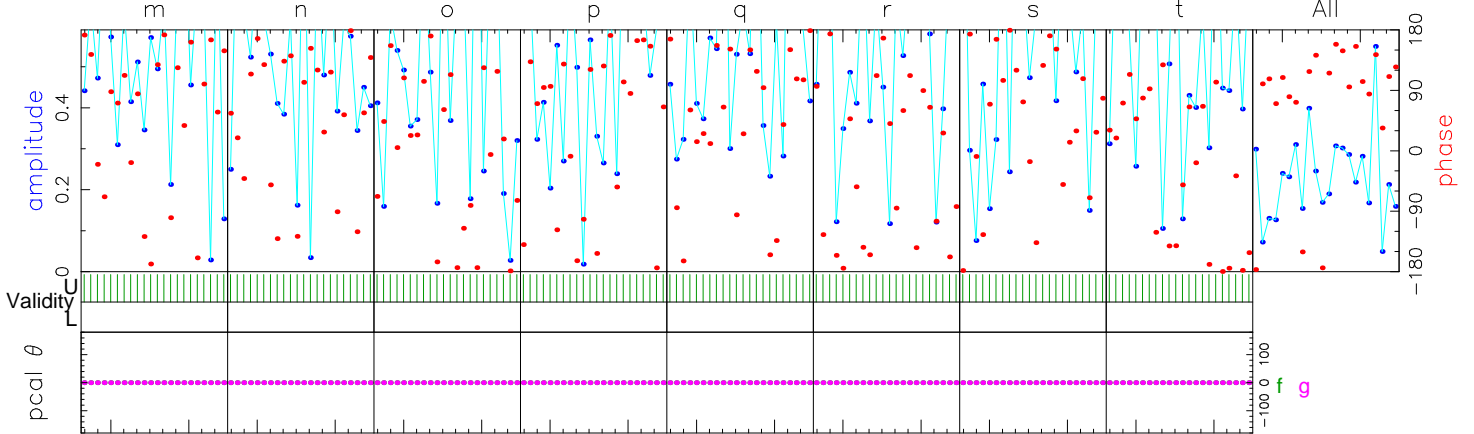


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112956  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



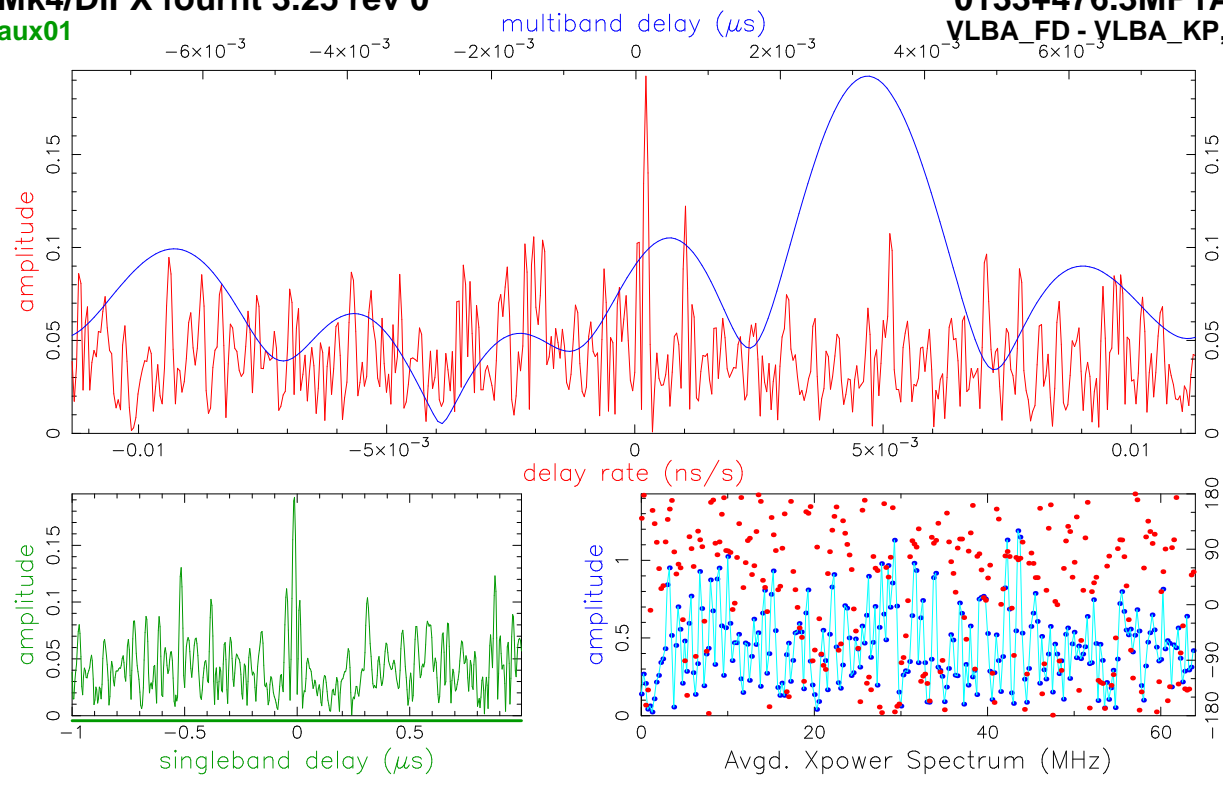
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
g	0	0	0	0	0	0	0	0		
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	5.54316003277E+02	Apriori delay (usec)	5.53372238397E+02	Resid mbdelay (usec)	6.26488E-03	+/-	2.0E-04
Sband delay (usec)	5.54317652147E+02	Apriori clock (usec)	-4.0655708E-01	Resid sbdelay (usec)	9.45414E-01	+/-	1.6E-03
Phase delay (usec)	5.53372242430E+02	Apriori clockrate (us/s)	-2.9740967E-08	Resid phdelay (usec)	4.03326E-06	+/-	6.7E-07
Delay rate (us/s)	4.19562146267E-01	Apriori rate (us/s)	4.19565604179E-01	Resid rate (us/s)	-3.45791E-06	+/-	1.0E-08
Total phase (deg)	346.7	Apriori accel (us/s/s)	-4.18043843749E-05	Resid phase (deg)	125.1	+/-	20.9

ph/seg (deg)	41.6	Theor.	48.9	Amplitude	0.197 +/- 0.036	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	61.4	Search (512X32)	0.185	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	23.5	Inc. seg. avg.	0.177	Inc. frq. avg.	0.184	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	25.3	Inc. frq. avg.	0.184			Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

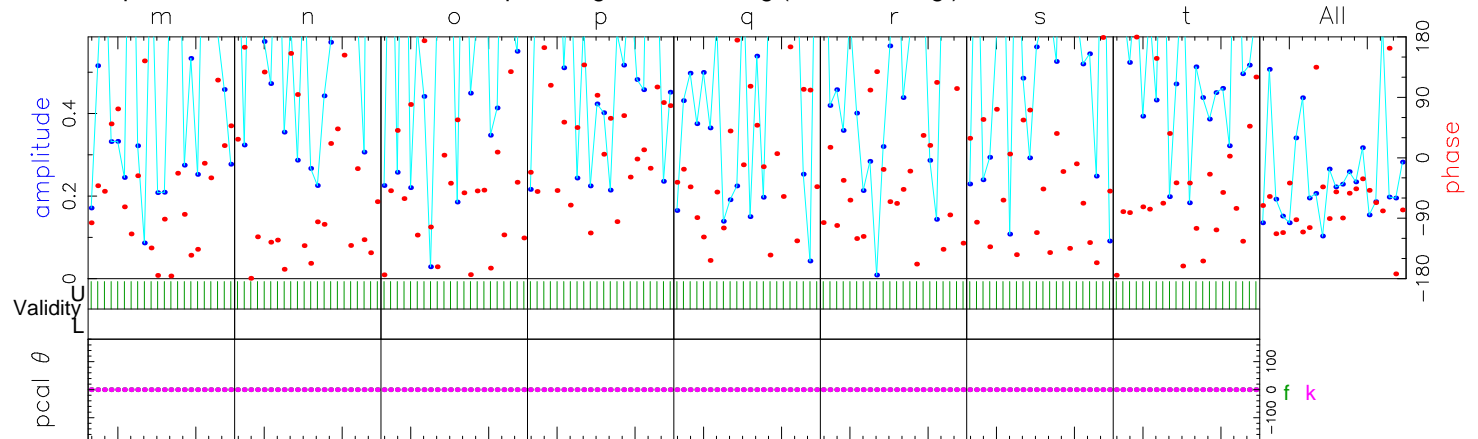
f: az 40.8 el 64.1 pa -123.1 g: az 194.0 el 61.2 pa 4.9 u,v (fr/asec) -3616.773 -6378.932 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fg..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fg.W.98.3MP1AB





Fringe quality 0  
SNR 5.7  
Int time 112.640  
Amp 0.195  
Phase -80.3  
PFD 5.9e-01  
Delays (us)  
SBD -0.013314  
MBD 0.003188  
Fringe rate (Hz) 0.019091  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 170437.17  
Stop 170629.81  
FRT 170540.00  
Corr/FF/build  
2025:007:183750  
2025:041:112957  
2024:113:095956  
RA & Dec (J2000)  
01h36m58.594803s  
+47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-63.7	-136.8	-72.8	18.2	-61.0	-77.0	-86.6	-95.6	Phase	-80.3		
	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	Ampl.	0.2		
	237.2	379.7	125.0	445.1	412.5	183.4	392.9	252.1	Sbd box	253.6		
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used			
f	0	0	0	0	0	0	0	0	PC freqs			
k	0	0	0	0	0	0	0	0	PC freqs			
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
k	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec) (SBD)	6.189866653E+02		Apriori delay (usec)		6.18999103728E+02		Resid mbdelay (usec)		3.18782E-03	+/- 1.9E-04		
Sband delay (usec)	6.18985790228E+02		Apriori clock (usec)		-9.5621109E-02		Resid sbdelay (usec)		-1.33135E-02	+/- 1.5E-03		
Phase delay (usec)	6.18999101139E+02		Apriori clockrate (us/s)		-1.0198613E-07		Resid phdelay (usec)		-2.58976E-06	+/- 6.5E-07		
Delay rate (us/s)	-9.83274844657E-02		Apriori rate (us/s)		-9.83277060940E-02		Resid rate (us/s)		2.21628E-07	+/- 1.0E-08		
Total phase (deg)	205.9		Apriori accel (us/s/s)		-4.94399657976E-06		Resid phase (deg)		-80.3	+/- 20.2		
	RMS	Theor.	Amplitude	0.195 +/- 0.034		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	51.0	47.4	Search (512X32)	0.187		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	70.1	82.8	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	48.1	28.6	Inc. seg. avg.	0.189		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	36.3	49.9	Inc. frq. avg.	0.214		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 40.8 el 64.1 pa -123.1	k: az 47.5 el 60.5 pa -111.0		u, v (fr/asec) 837.764 -551.323						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/fk..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/fk.W.104.3MP1AB									

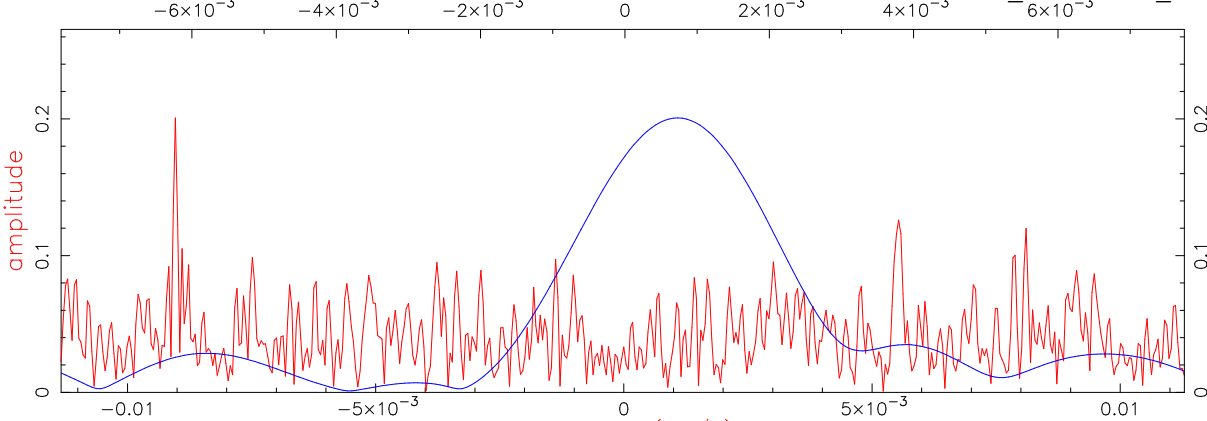
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fk

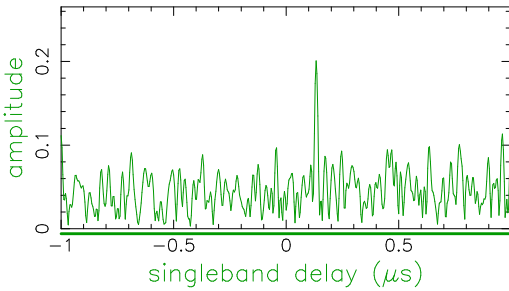
VLBA\_FD - VLBA\_KP, fgroup W, pol RL

multiband delay ( $\mu$ s)

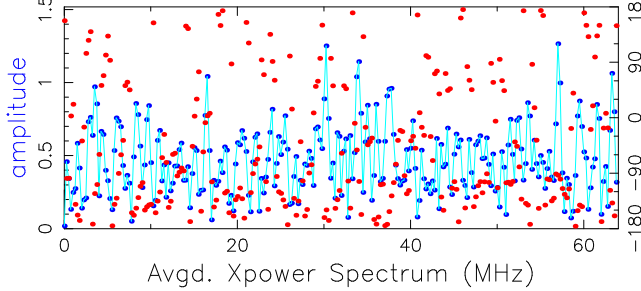


Fringe quality 0

SNR 5.8  
 Int time 112.640  
 Amp 0.265  
 Phase -37.3  
 PFD 2.9e-01  
 Delays (us)  
 SBD 0.133353  
 MBD 0.000739  
 Fringe rate (Hz)  
 -0.779848  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

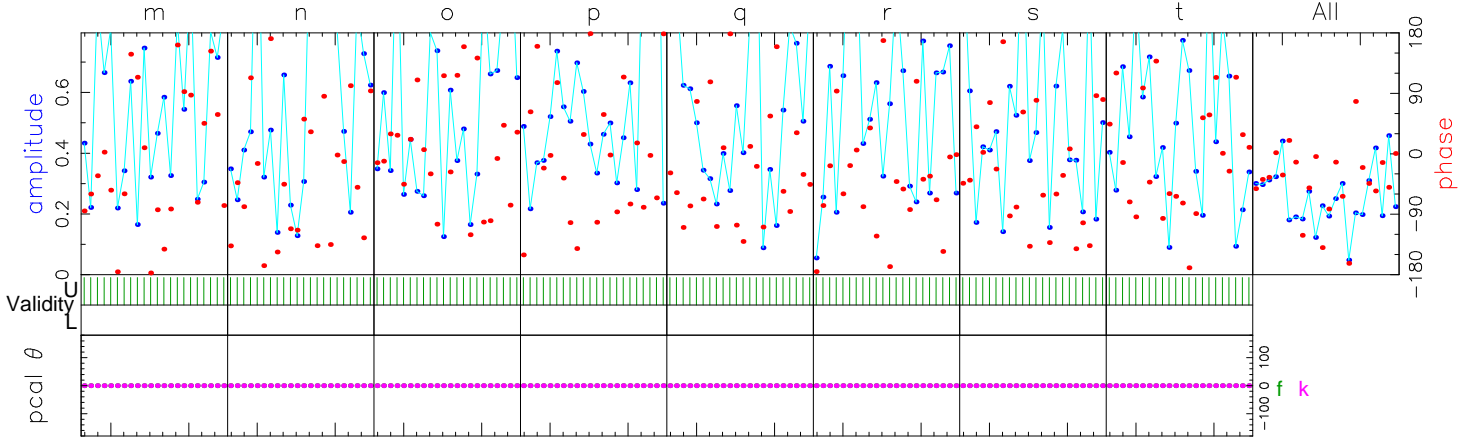


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112958  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-40.5	-37.9	-19.6	-48.0	-42.5	-42.0	-41.4	-22.5	Phase	-37.3
	0.1	0.2	0.3	0.3	0.4	0.4	0.3	0.2	Ampl.	0.2
	319.8	415.0	159.1	209.1	292.2	326.7	502.9	303.2	Sbd box	291.1
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.19124842472E+02	Apriori delay (usec)	6.18999103728E+02	Resid mbdelay (usec)	7.38744E-04	+/-	1.9E-04
Sband delay (usec)	6.19132456228E+02	Apriori clock (usec)	-9.5621109E-02	Resid sbdelay (usec)	1.33353E-01	+/-	1.5E-03
Phase delay (usec)	6.18999102526E+02	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-1.20240E-06	+/-	6.3E-07
Delay rate (us/s)	-9.83367593574E-02	Apriori rate (us/s)	-9.83277060940E-02	Resid rate (us/s)	-9.05326E-06	+/-	9.7E-09
Total phase (deg)	249.0	Apriori accel (us/s/s)	-4.94399657976E-06	Resid phase (deg)	-37.3	+/-	19.6

ph/seg (deg)	52.1	RMS	46.0	Theor.	52.1	Amplitude	0.265 +/- 0.045	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	55.9	Search (512X32)	0.180	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	11.0	Inc. seg. avg.	0.256	Inc. frq. avg.	0.241	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	43.0	Inc. frq. avg.	0.241	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 40.8 el 64.1 pa -123.1 k: az 47.5 el 60.5 pa -111.0 u,v (fr/asec) 837.764 -551.323 simultaneous interpolator

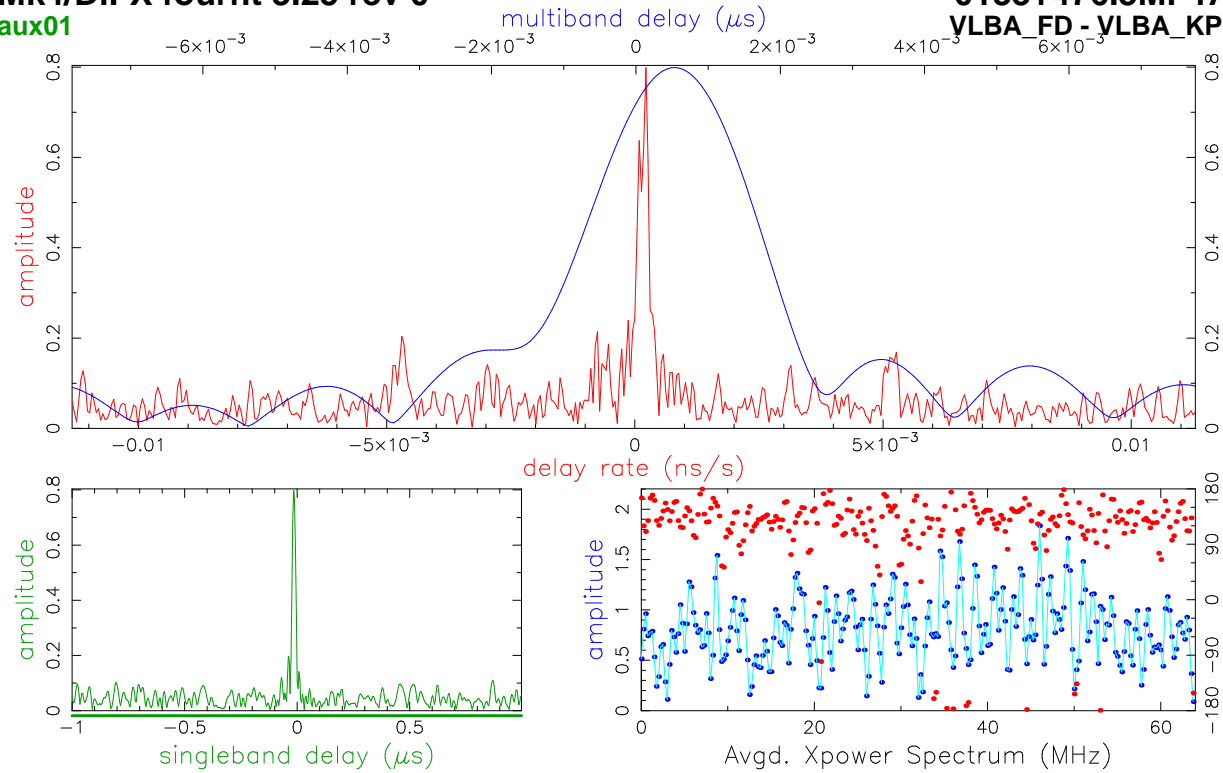
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fk..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fk.W.107.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fk

VLBA\_FD - VLBA\_KP, fgroup W, pol LL

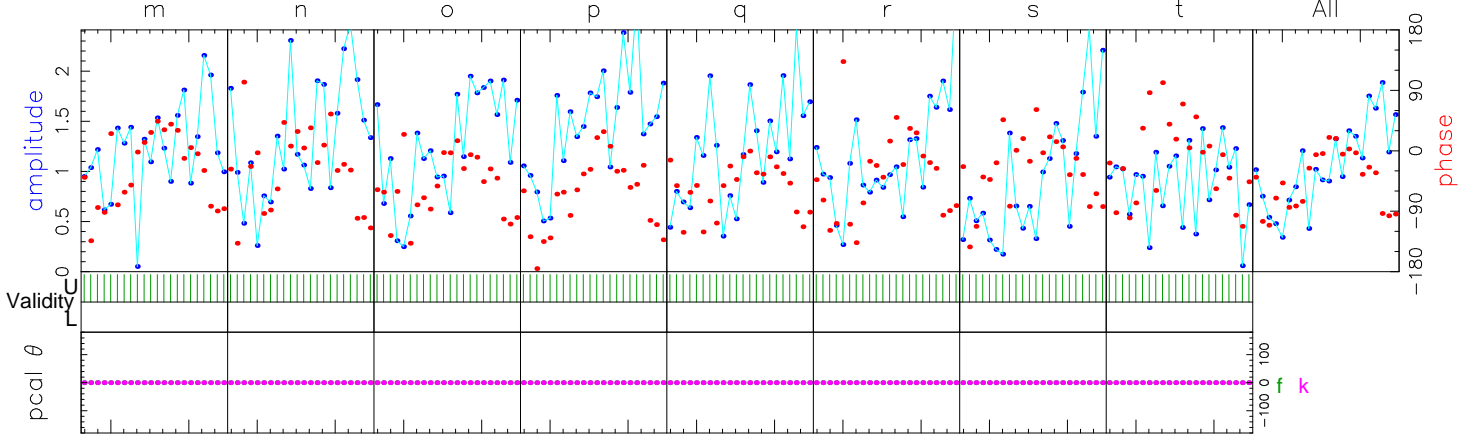


Fringe quality 9

SNR 23.3  
 Int time 112.640  
 Amp 0.804  
 Phase -42.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.014652  
 MBD 0.000562  
 Fringe rate (Hz) 0.017897  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112955  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-28.6	-27.4	-51.6	-54.4	-56.3	-51.0	-38.6	-20.5	Phase	-42.6
	0.8	0.9	0.9	1.0	1.0	0.7	0.7	0.6	Ampl.	0.8
	253.7	253.2	253.4	253.0	253.5	253.2	252.4	253.6	Sbd box	253.2
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.1898404522E+02	Apriori delay (usec)	6.18999103728E+02	Resid mbdelay (usec)	5.61793E-04	+/-	4.7E-05
Sband delay (usec)	6.18984451228E+02	Apriori clock (usec)	-9.5621109E-02	Resid sbdelay (usec)	-1.46525E-02	+/-	3.7E-04
Phase delay (usec)	6.18999102355E+02	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-1.37378E-06	+/-	1.6E-07
Delay rate (us/s)	-9.83274983223E-02	Apriori rate (us/s)	-9.83277060940E-02	Resid rate (us/s)	2.07772E-07	+/-	2.4E-09
Total phase (deg)	243.7	Apriori accel (us/s/s)	-4.94399657976E-06	Resid phase (deg)	-42.6	+/-	4.9

	RMS	Theor.	Amplitude	0.804 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	41.6	11.5	Search (512X32)	0.776	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	61.4	20.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	15.3	6.9	Inc. seg. avg.	1.041	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
amp/frq (%)	17.9	12.1	Inc. frq. avg.	0.814	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

f: az 40.8 el 64.1 pa -123.1 k: az 47.5 el 60.5 pa -111.0 u,v (fr/asec) 837.764 -551.323 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fk..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fk.W.94.3MP1AB

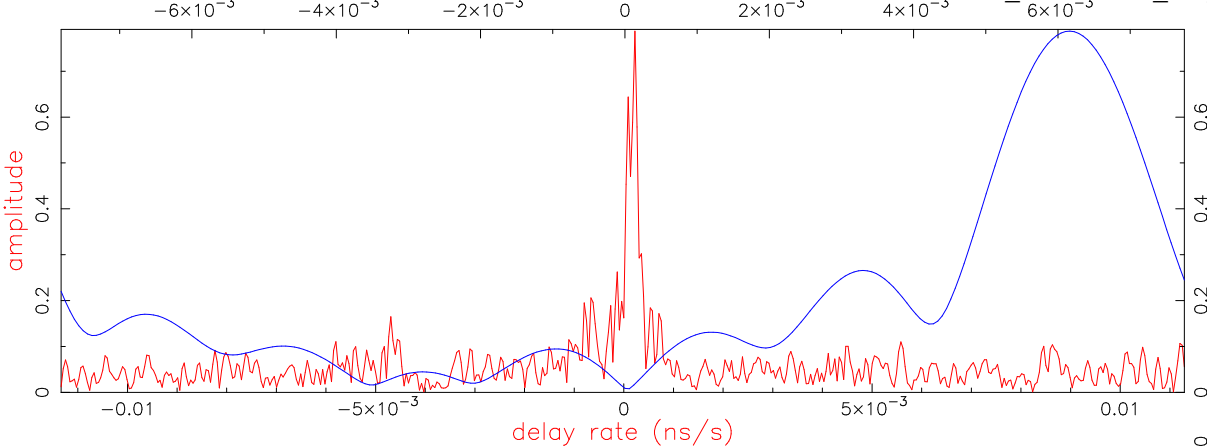
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fk

VLBA\_FD - VLBA\_KP, fgroup W, pol RR

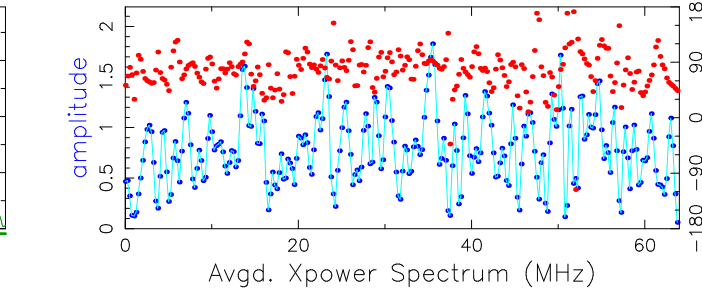
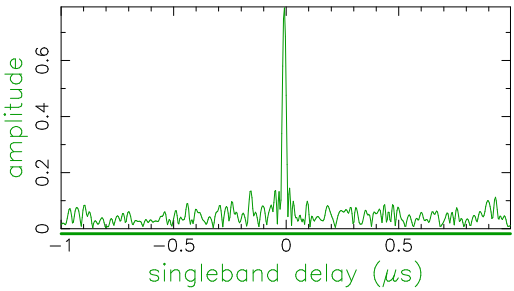
multiband delay ( $\mu$ s)



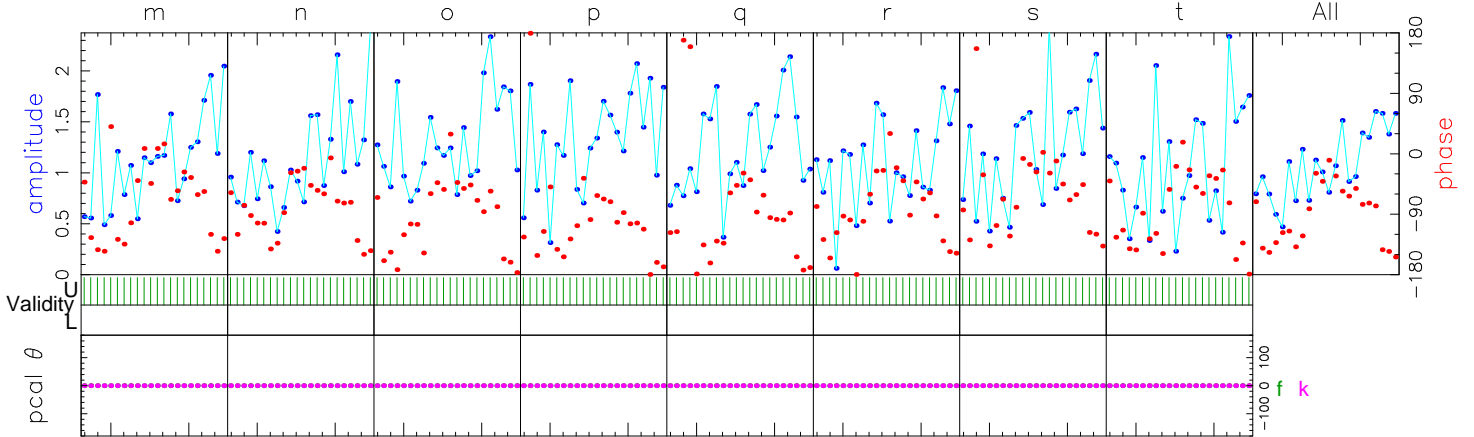
Fringe quality 9

SNR 23.0  
 Int time 112.640  
 Amp 0.791  
 Phase -92.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.008694  
 MBD 0.006145  
 Fringe rate (Hz) 0.018315  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build 2025:007:183750  
 2025:041:112956  
 2024:113:095956  
 RA & Dec (J2000) 01h36m58.594803s +47°51'29.100073"



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-77.9	-81.4	-94.8	-118.3	-112.4	-86.5	-68.3	-91.0	Phase	-92.5
	0.7	0.9	0.8	1.0	0.9	0.7	0.9	0.7	Ampl.	0.8
	254.3	254.3	254.7	254.6	255.3	254.3	254.9	254.4	Sbd box	254.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	6.18989623678E+02		Apriori delay (usec)		6.18999103728E+02		Resid mbdelay (usec)		6.14495E-03	+/- 4.7E-05
Sband delay (usec)	6.18990409478E+02		Apriori clock (usec)		-9.5621109E-02		Resid sbdelay (usec)		-8.69425E-03	+/- 3.8E-04
Phase delay (usec)	6.18999100747E+02		Apriori clockrate (us/s)		-1.0198613E-07		Resid phdelay (usec)		-2.98140E-06	+/- 1.6E-07
Delay rate (us/s)	-9.83274934786E-02		Apriori rate (us/s)		-9.83277060940E-02		Resid rate (us/s)		2.12615E-07	+/- 2.5E-09
Total phase (deg)	193.8		Apriori accel (us/s/s)		-4.94399657976E-06		Resid phase (deg)		-92.5	+/- 5.0

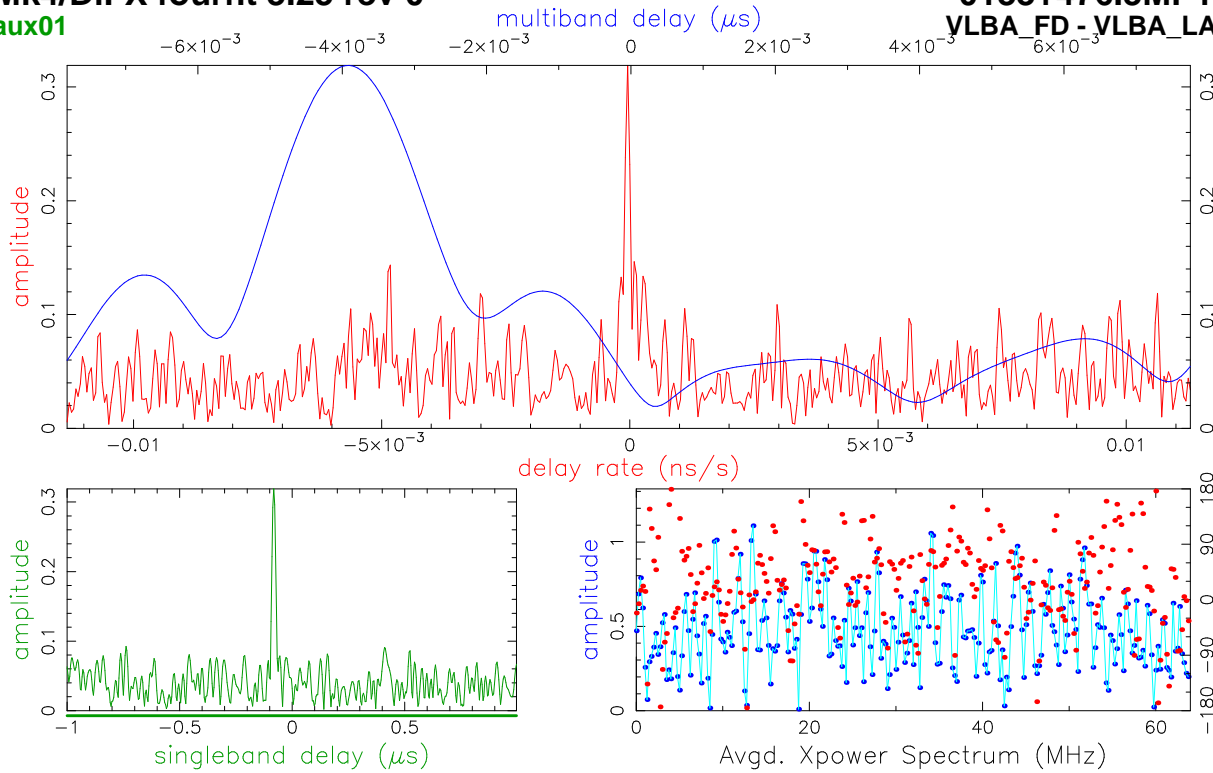
ph/seg (deg) 43.9 11.7 Search (512X32) 0.764 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 55.3 20.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 18.4 7.1 Inc. seg. avg. 1.055 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 14.4 12.3 Inc. frq. avg. 0.816 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 k: az 47.5 el 60.5 pa -111.0 u,v (fr/asec) 837.764 -551.323 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fk..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fk.W.99.3MP1AB simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fl

VLBA\_FD - VLBA\_LA, fgroup W, pol LL

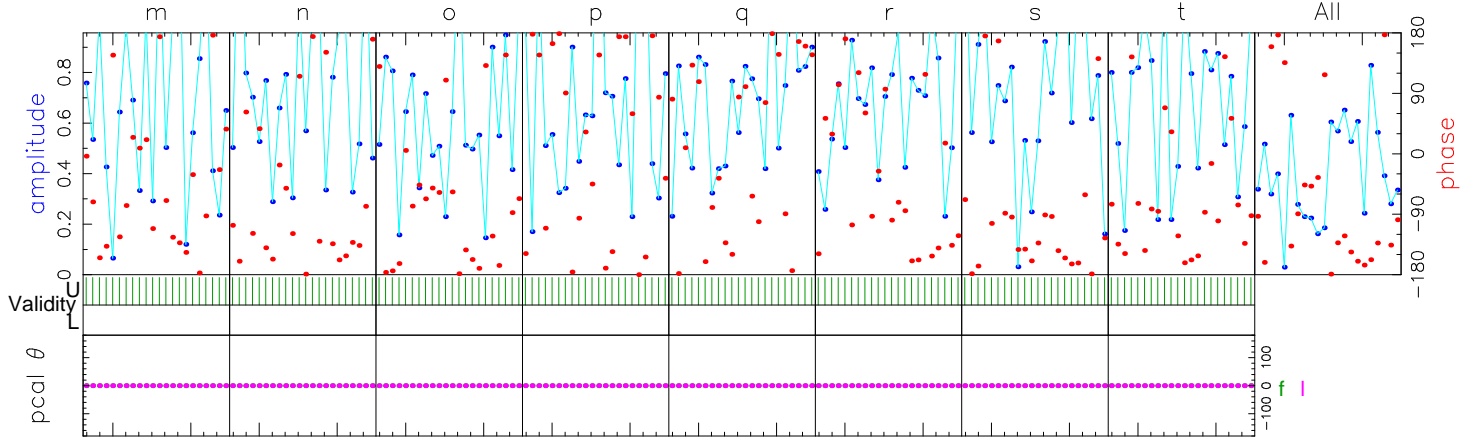


Fringe quality 9

SNR 9.3  
 Int time 112.640  
 Amp 0.319  
 Phase -144.3  
 PFD 2.1e-12  
 Delays (us)  
 SBD -0.081888  
 MBD -0.003915  
 Fringe rate (Hz)  
 -0.003431  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113001  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-104.5	-144.5	-131.3	-177.8	175.1	-142.8	-136.9	-115.6	Phase	-144.3		
	0.3	0.4	0.3	0.4	0.3	0.2	0.5	0.3	Ampl.	0.3		
	420.2	235.3	235.8	235.0	237.1	290.6	236.4	405.6	Sbd box	236.0		
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used			
f	0	0	0	0	0	0	0	0	PC freqs			
l	0	0	0	0	0	0	0	0	PC freqs			
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
l	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Tracks			
Group delay (usec) (SBD)	-3.38612201242E+02		Apriori delay (usec)		-3.38530161377E+02		Resid mbdelay (usec)		-3.91486E-03	+/- 1.2E-04		
Sband delay (usec)	-3.38612049627E+02		Apriori clock (usec)		8.3656502E+00		Resid sbdelay (usec)		-8.18883E-02	+/- 9.3E-04		
Phase delay (usec)	-3.38530166031E+02		Apriori clockrate (us/s)		2.8422100E-07		Resid phdelay (usec)		-4.65332E-06	+/- 4.0E-07		
Delay rate (us/s)	-9.13132855177E-03		Apriori rate (us/s)		-9.13128872517E-03		Resid rate (us/s)		-3.98266E-08	+/- 6.1E-09		
Total phase (deg)			Apriori accel (us/s/s)		-4.4430238077E-06		Resid phase (deg)		-144.3	+/- 12.4		
	RMS	Theor.	Amplitude	0.319 +/- 0.034		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	53.9	29.0	Search (512X32)	0.318		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	66.8	50.7	Interp.	0.000		SampCntNorm: enabled		mb window (us)	-0.008	0.008		
ph/frq (deg)	30.0	17.5	Inc. seg. avg.	0.359		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	30.3	30.6	Inc. frq. avg.	0.337		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 40.8 el 64.1 pa -123.1	l: az 50.4 el 66.3 pa -111.1		u, v (fr/asec) 75.435 -832.533						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/fl..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/fl.W.110.3MP1AB									

Mk4/DiFX fourfit 3.25 rev 0

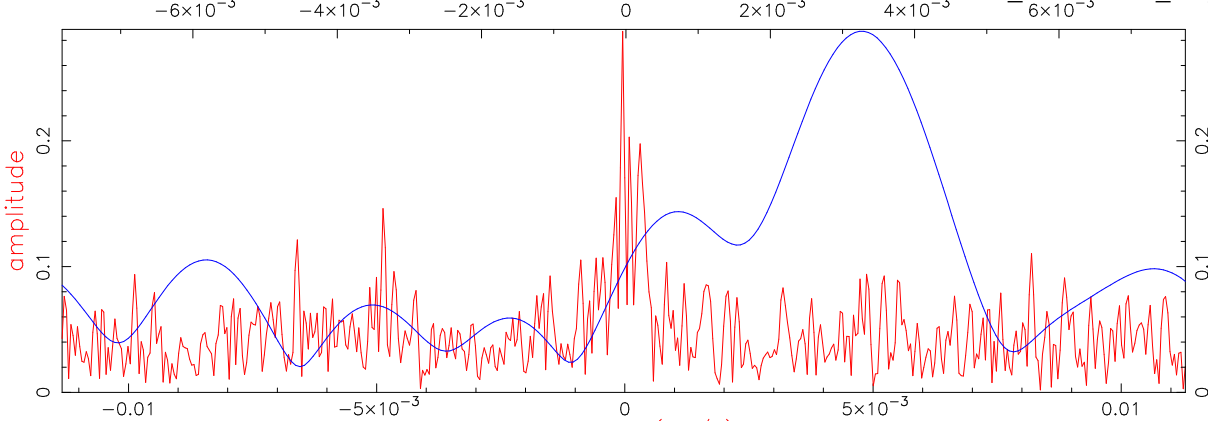
aux01

0133+476.3MP1AB, No0916, fl

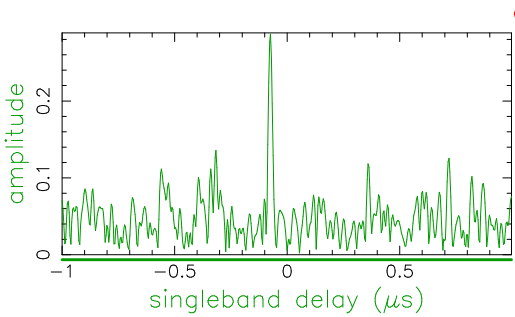
VLBA\_FD - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu$ s)

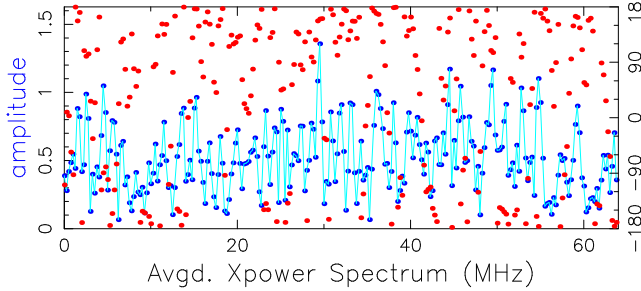
Fringe quality 9



SNR 8.4  
 Int time 112.640  
 Amp 0.289  
 Phase -31.6  
 PFD 4.8e-09  
 Delays (us)  
 SBD -0.075274  
 MBD 0.003240  
 Fringe rate (Hz)  
 -0.003048  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

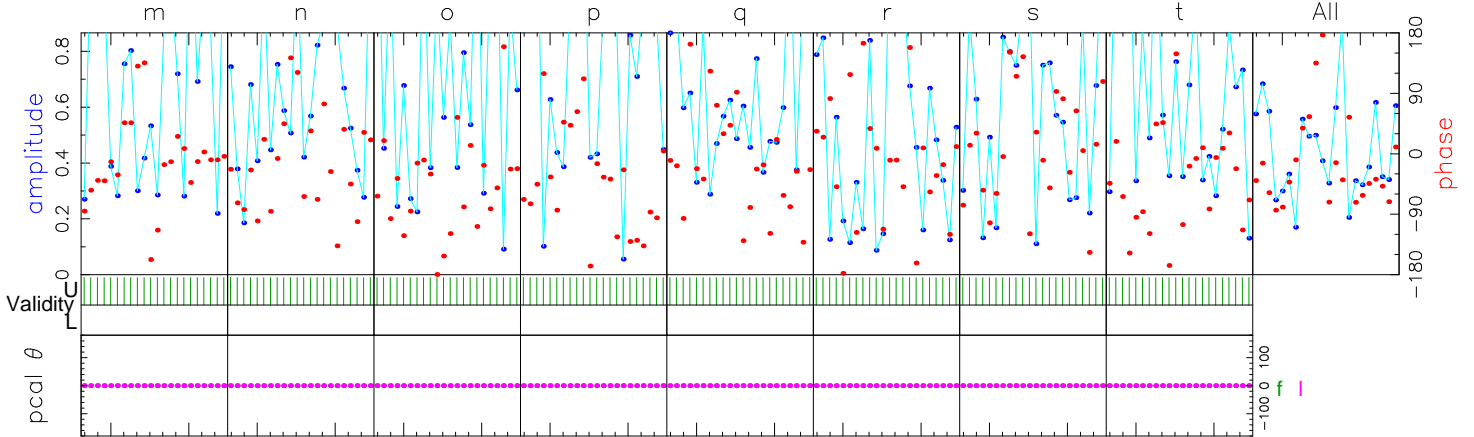


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113003  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-15.2	-7.8	-68.1	-62.1	-40.1	-12.8	34.9	-32.1	Phase	-31.6
	0.5	0.3	0.5	0.3	0.3	0.2	0.2	0.3	Ampl.	0.3
	238.1	237.8	237.2	480.8	197.7	393.4	425.9	7.0	Sbd box	237.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-3.38605046336E+02	Apriori delay (usec)	-3.38530161377E+02	Resid mbdelay (usec)	3.24004E-03	+/-	1.3E-04
Sband delay (usec)	-3.38605435627E+02	Apriori clock (usec)	8.3656502E+00	Resid sbdelay (usec)	-7.52743E-02	+/-	1.0E-03
Phase delay (usec)	-3.38530162397E+02	Apriori clockrate (us/s)	2.8422100E-07	Resid phdelay (usec)	-1.02013E-06	+/-	4.4E-07
Delay rate (us/s)	-9.13132411337E-03	Apriori rate (us/s)	-9.13128872517E-03	Resid rate (us/s)	-3.53882E-08	+/-	6.8E-09
Total phase (deg)	-68.0	Apriori accel (us/s/s)	-4.44302380777E-06	Resid phase (deg)	-31.6	+/-	13.7

ph/seg (deg)	62.4	Theor.	32.1	Amplitude	0.289 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	82.5	Search (512X32)	0.279	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	36.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	38.8	Inc. seg. avg.	0.389	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
		Inc. frq. avg.	0.307	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 40.8 el 64.1 pa -123.1 l: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 75.435 -832.533 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fl.W.112.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

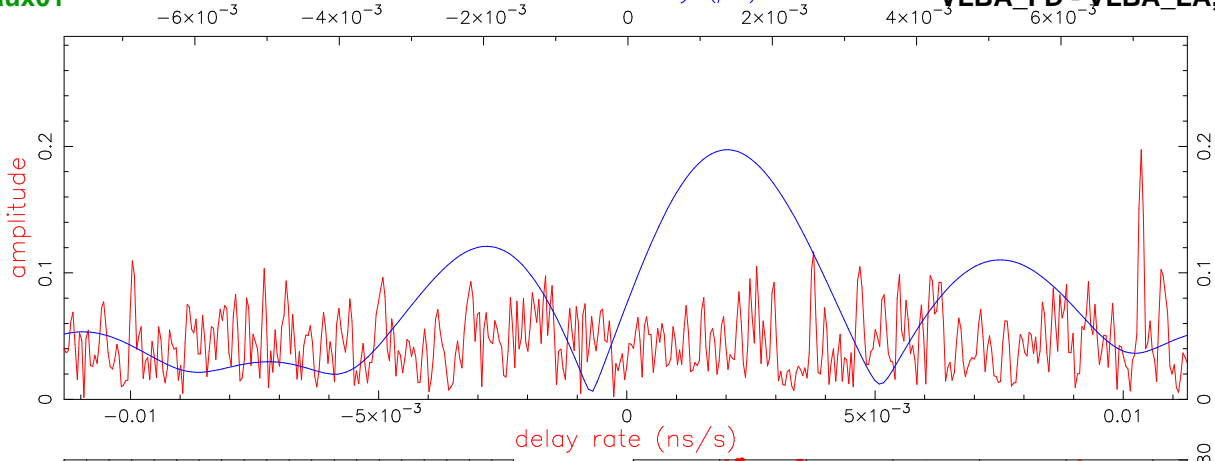
aux01

0133+476.3MP1AB, No0916, fl

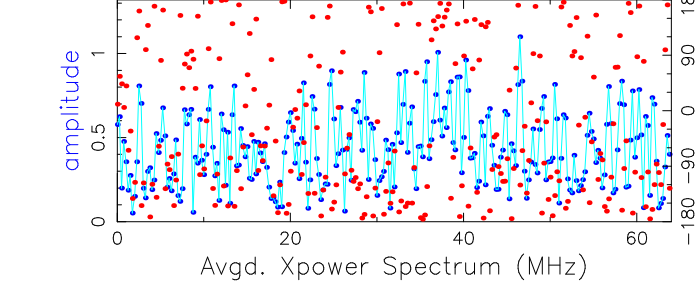
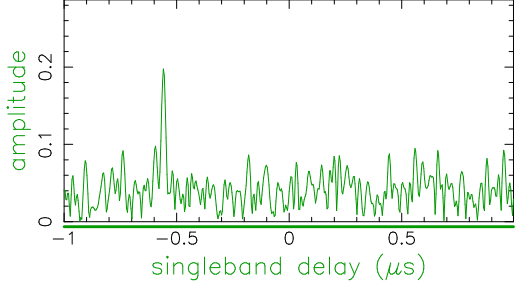
VLBA\_FD - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

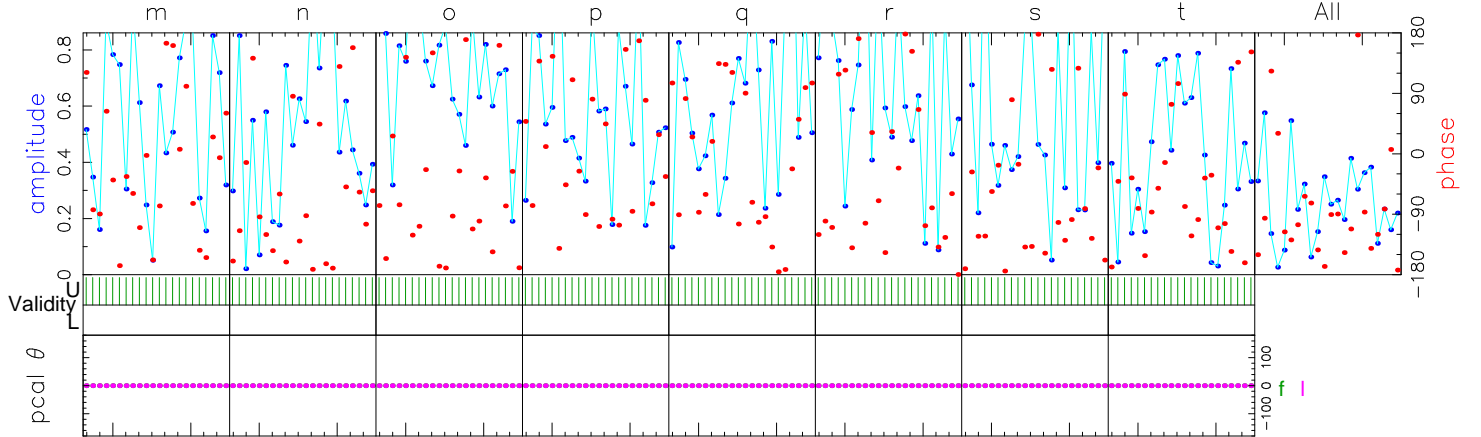


SNR 5.7  
 Int time 112.640  
 Amp 0.287  
 Phase -119.3  
 PFD 4.5e-01  
 Delays (us)  
 SBD -0.558008  
 MBD 0.001384  
 Fringe rate (Hz)  
 0.894932  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113004  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-33.5	-148.4	-119.6	-135.4	-81.8	-114.8	-125.4	-106.0	Phase	-119.3
	0.2	0.4	0.6	0.1	0.1	0.5	0.6	0.2	Ampl.	0.3
	295.7	424.0	114.4	506.0	370.2	452.2	113.6	108.6	Sbd box	114.2
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) -3.39091277840E+02 Apriori delay (usec) -3.38530161377E+02 Resid mbdelay (usec) 1.38354E-03 +/- 1.9E-04  
 Sband delay (usec) -3.39088169127E+02 Apriori clock (usec) 8.3656502E+00 Resid sbdelay (usec) -5.58008E-01 +/- 1.5E-03  
 Phase delay (usec) -3.38530165226E+02 Apriori clockrate (us/s) 2.8422100E-07 Resid phdelay (usec) -3.84844E-06 +/- 6.4E-07  
 Delay rate (us/s) -9.12089945089E-03 Apriori rate (us/s) -9.13128872517E-03 Resid rate (us/s) 1.03893E-05 +/- 9.9E-09  
 Total phase (deg) -155.7 Apriori accel (us/s/s) -4.44302380777E-06 Resid phase (deg) -119.3 +/- 20.0

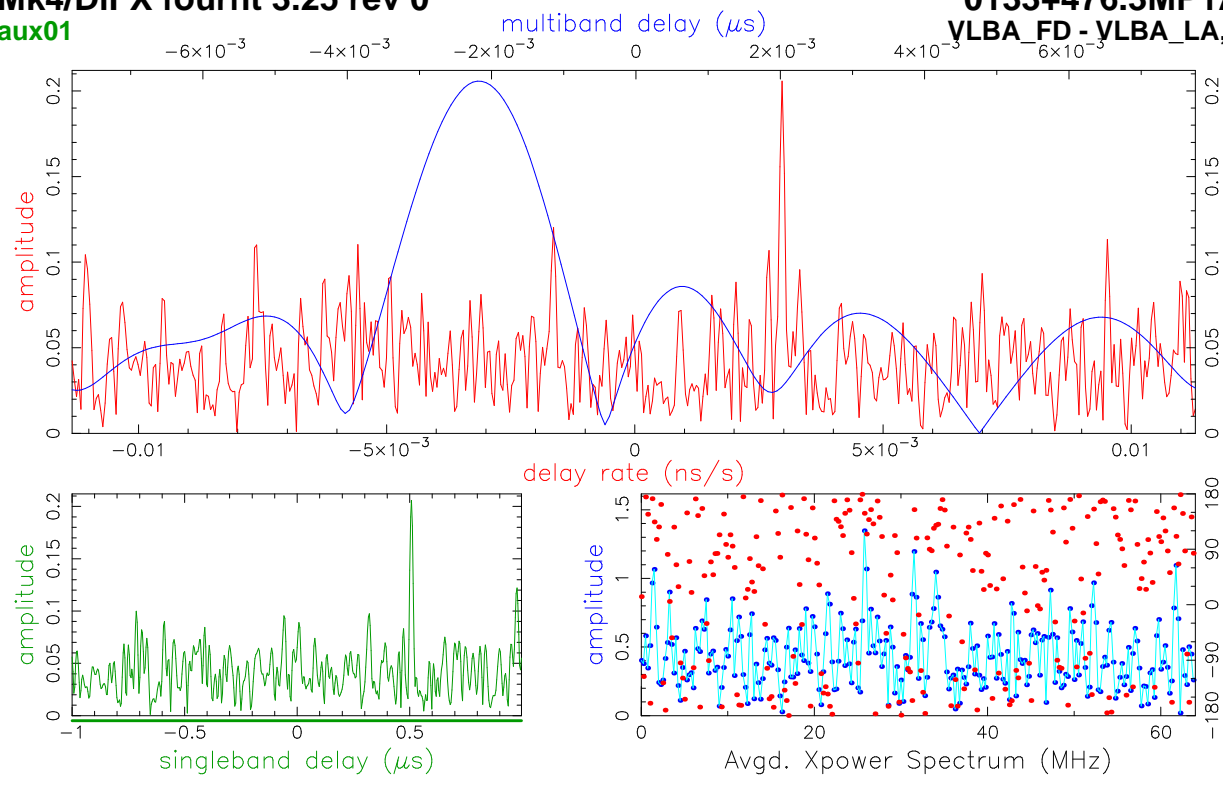
ph/seg (deg) 58.2 46.8 Amplitude 0.287 +/- 0.050 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 78.3 81.8 Search (512X32) 0.184 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 41.1 28.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 68.7 49.3 Inc. seg. avg. 0.284 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 l: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 75.435 -832.533 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fl.W.114.3MP1AB simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

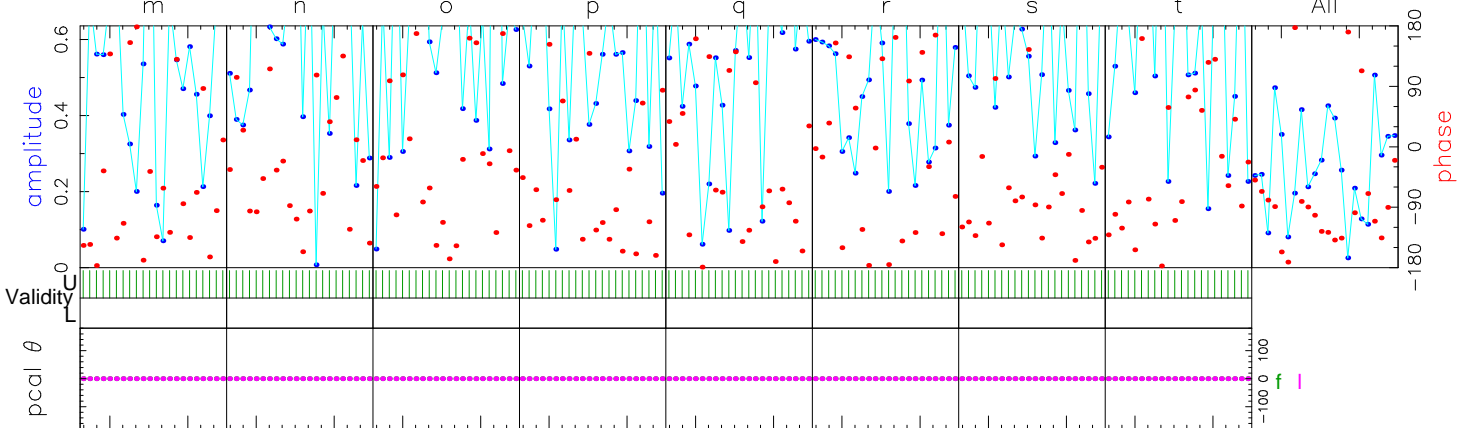
0133+476.3MP1AB, No0916, fl

VLBA\_FD - VLBA\_LA, fgroup W, pol RL



Fringe quality 0  
 SNR 6.0  
 Int time 112.640  
 Amp 0.212  
 Phase -107.2  
 PFD 1.3e-01  
 Delays (us)  
 SBD 0.507374  
 MBD -0.002186  
 Fringe rate (Hz)  
 0.256886  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113005  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-123.7	-77.0	-109.5	-114.1	-109.0	-162.9	-93.7	-109.1	Phase	-107.2
	0.2	0.2	0.3	0.2	0.2	0.1	0.4	0.2	Ampl.	0.2
	146.9	56.4	456.6	506.7	444.1	450.3	386.2	439.6	Sbd box	386.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -3.38016722803E+02 Apriori delay (usec) -3.38530161377E+02 Resid mbdelay (usec) -2.18643E-03 +/- 1.8E-04  
 Sband delay (usec) -3.38022787127E+02 Apriori clock (usec) 8.3656502E+00 Resid sbdelay (usec) 5.07374E-01 +/- 1.4E-03  
 Phase delay (usec) -3.38530164834E+02 Apriori clockrate (us/s) 2.8422100E-07 Resid phdelay (usec) -3.45660E-06 +/- 6.2E-07  
 Delay rate (us/s) -9.12830653652E-03 Apriori rate (us/s) -9.13128872517E-03 Resid rate (us/s) 2.98219E-06 +/- 9.5E-09  
 Total phase (deg) -143.6 Apriori accel (us/s/s) -4.44302380777E-06 Resid phase (deg) -107.2 +/- 19.2

ph/seg (deg) RMS Theor. Amplitude 0.212 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 69.2 78.4 Interp. 0.197 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 27.5 27.1 Inc. seg. avg. 0.211 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 38.4 47.3 Inc. frq. avg. 0.202 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) 75.435 -832.533 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fl.W.116.3MP1AB simultaneous interpolator



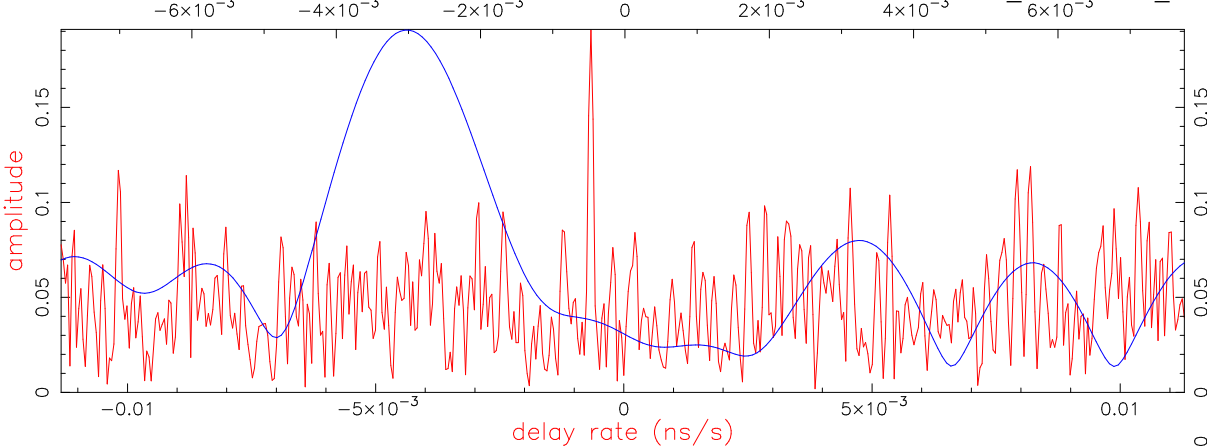
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fm

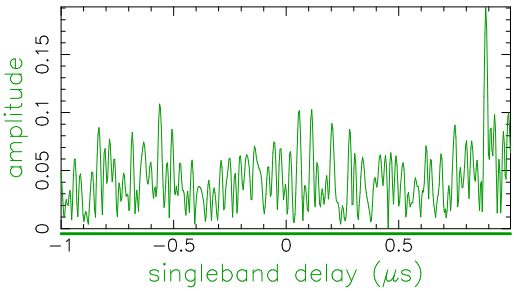
VLBA\_FD - VLBA\_MK, fgroup W, pol LL

multiband delay ( $\mu$ s)

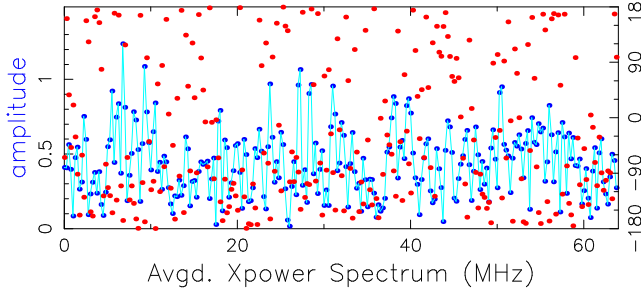


Fringe quality 0

SNR 5.5  
 Int time 112.640  
 Amp 0.191  
 Phase 30.4  
 PFD 8.4e-01  
 Delays (us)  
 SBD 0.886923  
 MBD -0.003014  
 Fringe rate (Hz)  
 -0.057629  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

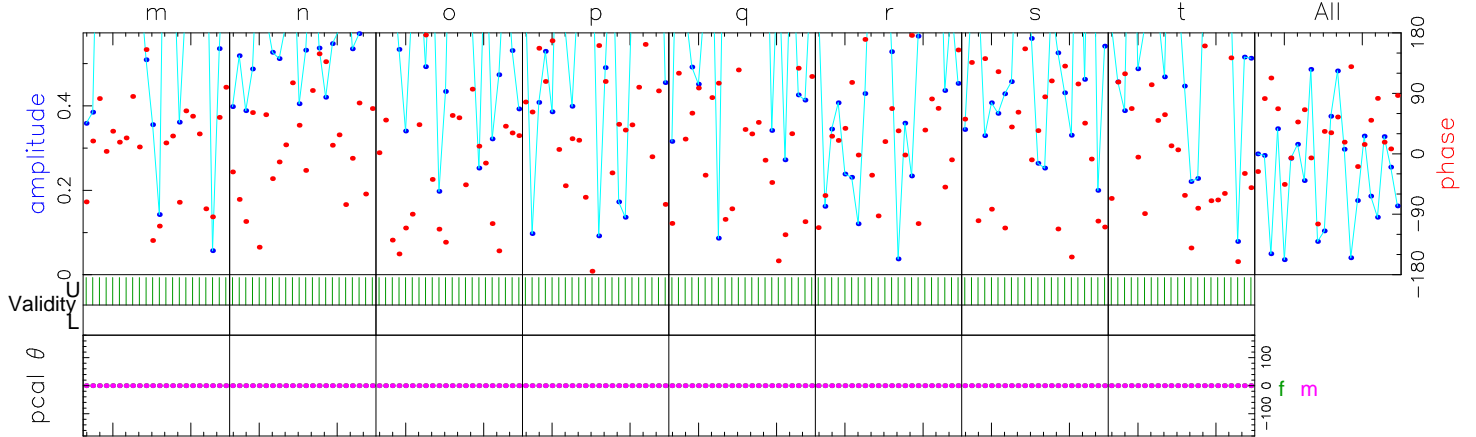


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113001  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
m	0	0	0	0	0	0	0	0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	1.06520021254E+04	Apriori delay (usec)	1.0651145145E+04	Resid mbdelay (usec)	-3.01410E-03	+/-	2.0E-04
Sband delay (usec)	1.06520014373E+04	Apriori clock (usec)	-4.8431587E-01	Resid sbdelay (usec)	8.86923E-01	+/-	1.6E-03
Phase delay (usec)	1.0651145155E+04	Apriori clockrate (us/s)	6.4719931E-08	Resid phdelay (usec)	9.79751E-07	+/-	6.7E-07
Delay rate (us/s)	-5.74731402300E-01	Apriori rate (us/s)	-5.74730733282E-01	Resid rate (us/s)	-6.69017E-07	+/-	1.0E-08
Total phase (deg)	132.2	Apriori accel (us/s/s)	-4.23597411232E-05	Resid phase (deg)	30.4	+/-	20.7

ph/seg (deg) 53.3 48.5 Search (512X32) 0.189 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 72.0 84.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 32.6 29.3 Inc. seg. avg. 0.176 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 43.1 51.1 Inc. frq. avg. 0.183 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 m: az 45.2 el 23.3 pa -86.1 u, v (fr/asec) 4884.704 -2702.249 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fm..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fm.W.109.3MP1AB simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

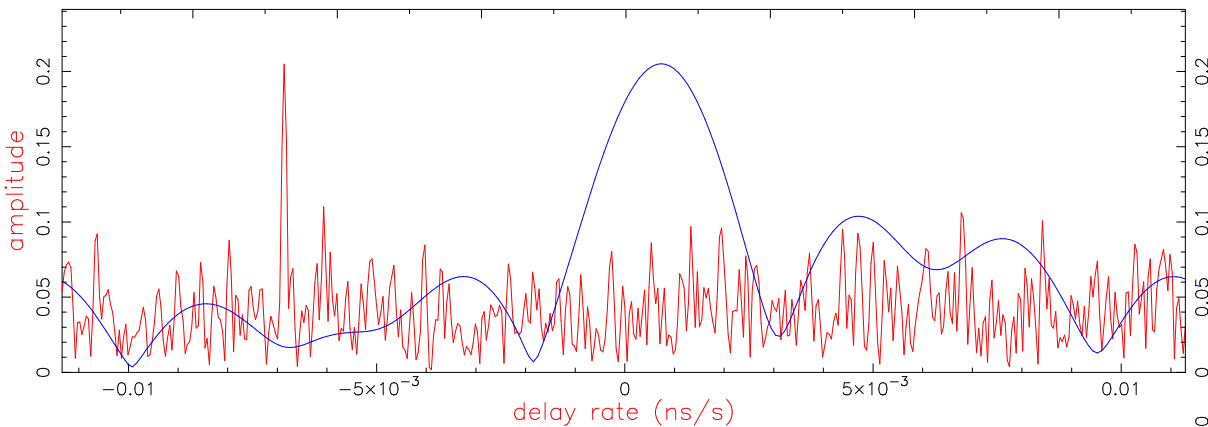
aux01

0133+476.3MP1AB, No0916, fm

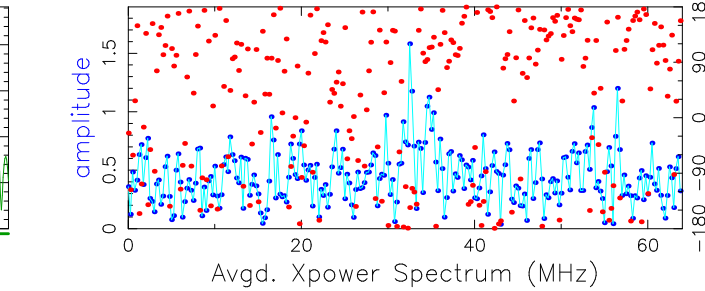
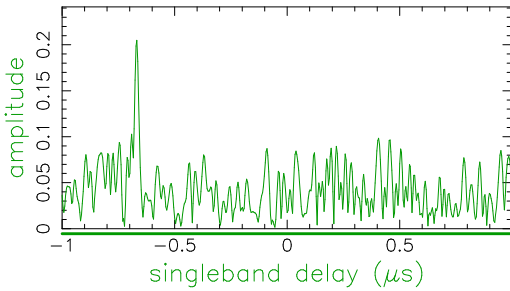
VLBA\_FD - VLBA\_MK, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

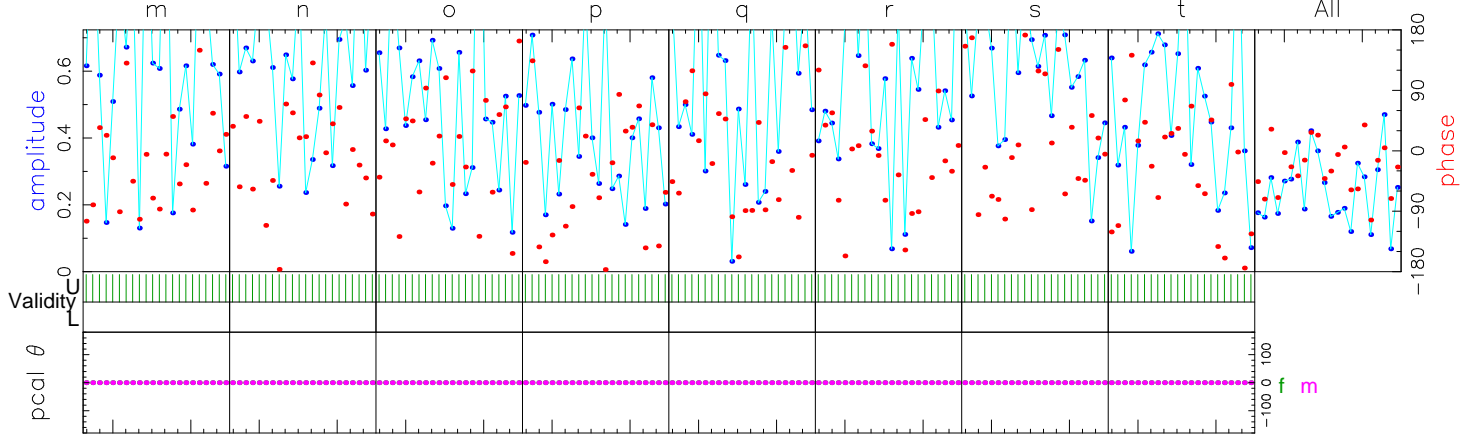


SNR 6.0  
 Int time 112.640  
 Amp 0.241  
 Phase -14.6  
 PFD 1.3e-01  
 Delays (us)  
 SBD -0.669149  
 MBD 0.000443  
 Fringe rate (Hz)  
 -0.592998  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113002  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-35.5	0.4	1.9	-42.9	-19.3	-4.8	-43.1	-3.9	Phase	-14.6
	0.4	0.4	0.2	0.1	0.2	0.3	0.2	0.3	Ampl.	0.2
	85.6	373.6	82.2	312.8	109.4	346.3	475.1	332.8	Sbd box	85.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.06504430822E+04	Apriori delay (usec)	1.06511145145E+04	Resid mbdelay (usec)	4.42625E-04	+/-	1.8E-04
Sband delay (usec)	1.06504453653E+04	Apriori clock (usec)	-4.8431587E-01	Resid sbdelay (usec)	-6.69149E-01	+/-	1.4E-03
Phase delay (usec)	1.06511145141E+04	Apriori clockrate (us/s)	6.4719931E-08	Resid phdelay (usec)	-4.70040E-07	+/-	6.2E-07
Delay rate (us/s)	-5.74737617396E-01	Apriori rate (us/s)	-5.74730733282E-01	Resid rate (us/s)	-6.88411E-06	+/-	9.5E-09
Total phase (deg)	87.3	Apriori accel (us/s/s)	-4.23597411232E-05	Resid phase (deg)	-14.6	+/-	19.1

ph/seg (deg)	RMS 38.6	Theor. 44.9	Amplitude Search (512X32)	0.241 +/- 0.040	0.192	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	53.3	78.3	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	21.5	27.1	Inc. seg. avg.	0.221	0.221	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.4	47.2	Inc. frq. avg.	0.225	0.225	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 40.8 el 64.1 pa -123.1 m: az 45.2 el 23.3 pa -86.1 u,v (fr/asec) 4884.704 -2702.249 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fm..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fm.W.111.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

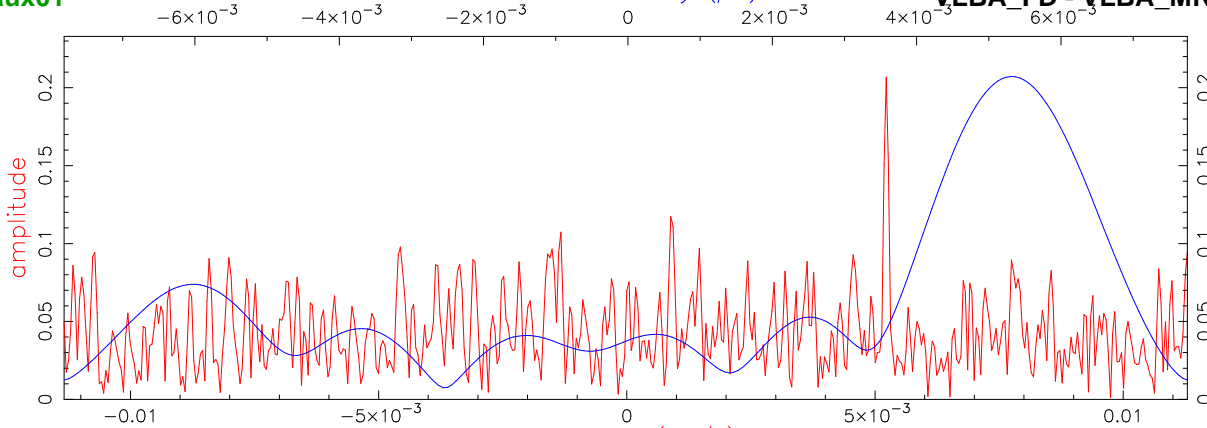
aux01

0133+476.3MP1AB, No0916, fm

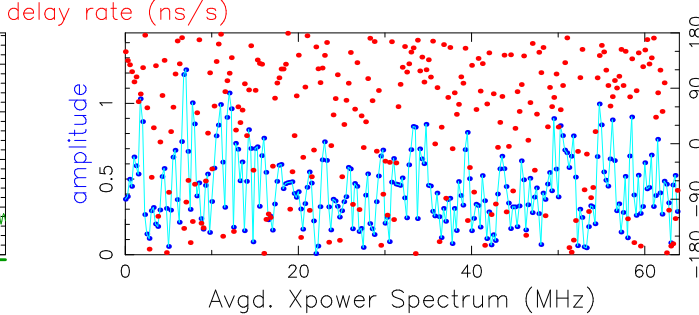
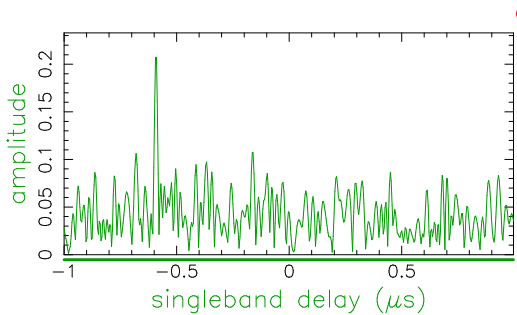
VLBA\_FD - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

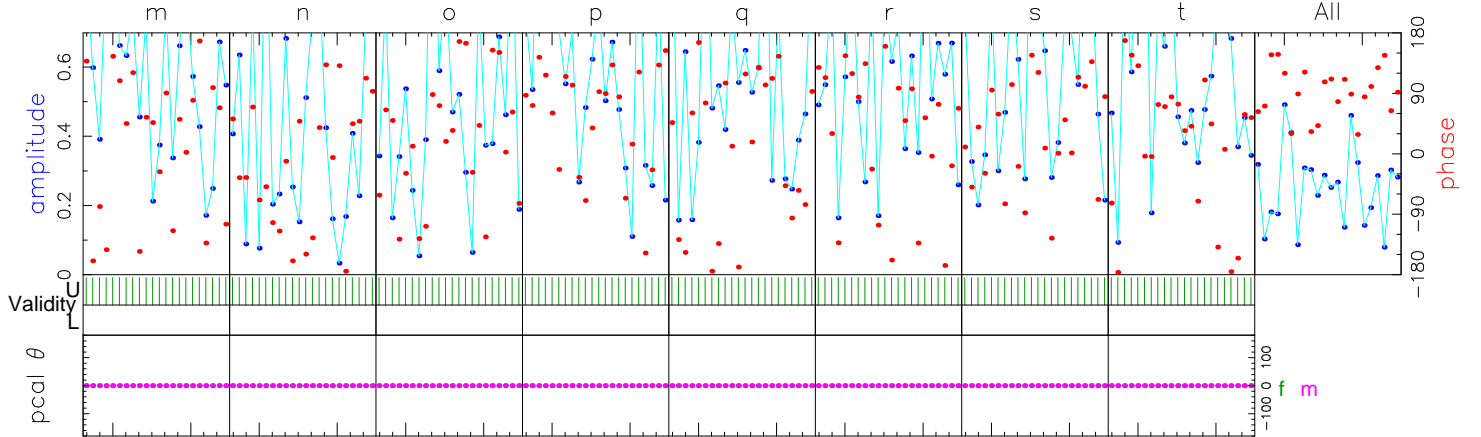


SNR 6.2  
 Int time 112.640  
 Amp 0.233  
 Phase 87.0  
 PFD 4.0e-02  
 Delays (us)  
 SBD -0.591760  
 MBD 0.005386  
 Fringe rate (Hz)  
 0.450358  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113003  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
m	0	0	0	0	0	0	0	0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	1.06505261507E+04	Apriori delay (usec)	1.0651145145E+04	Resid mbdelay (usec)	5.38619E-03	+/-	1.8E-04
Sband delay (usec)	1.06505227543E+04	Apriori clock (usec)	-4.8431587E-01	Resid sbdelay (usec)	-5.91760E-01	+/-	1.4E-03
Phase delay (usec)	1.0651145174E+04	Apriori clockrate (us/s)	6.4719931E-08	Resid phdelay (usec)	2.80485E-06	+/-	6.0E-07
Delay rate (us/s)	-5.74725505071E-01	Apriori rate (us/s)	-5.74730733282E-01	Resid rate (us/s)	5.22821E-06	+/-	9.2E-09
Total phase (deg)	188.8	Apriori accel (us/s/s)	-4.23597411232E-05	Resid phase (deg)	87.0	+/-	18.5

ph/seg (deg)	36.7	Theor.	43.4	Amplitude	0.233 +/- 0.038	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	55.3	Search (512X32)	0.204	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	27.7	Inc. seg. avg.	0.217	Inc. frq. avg.	0.218	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	28.6	Inc. frq. avg.	0.218			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 40.8 el 64.1 pa -123.1 m: az 45.2 el 23.3 pa -86.1 u,v (fr/asec) 4884.704 -2702.249 simultaneous interpolator

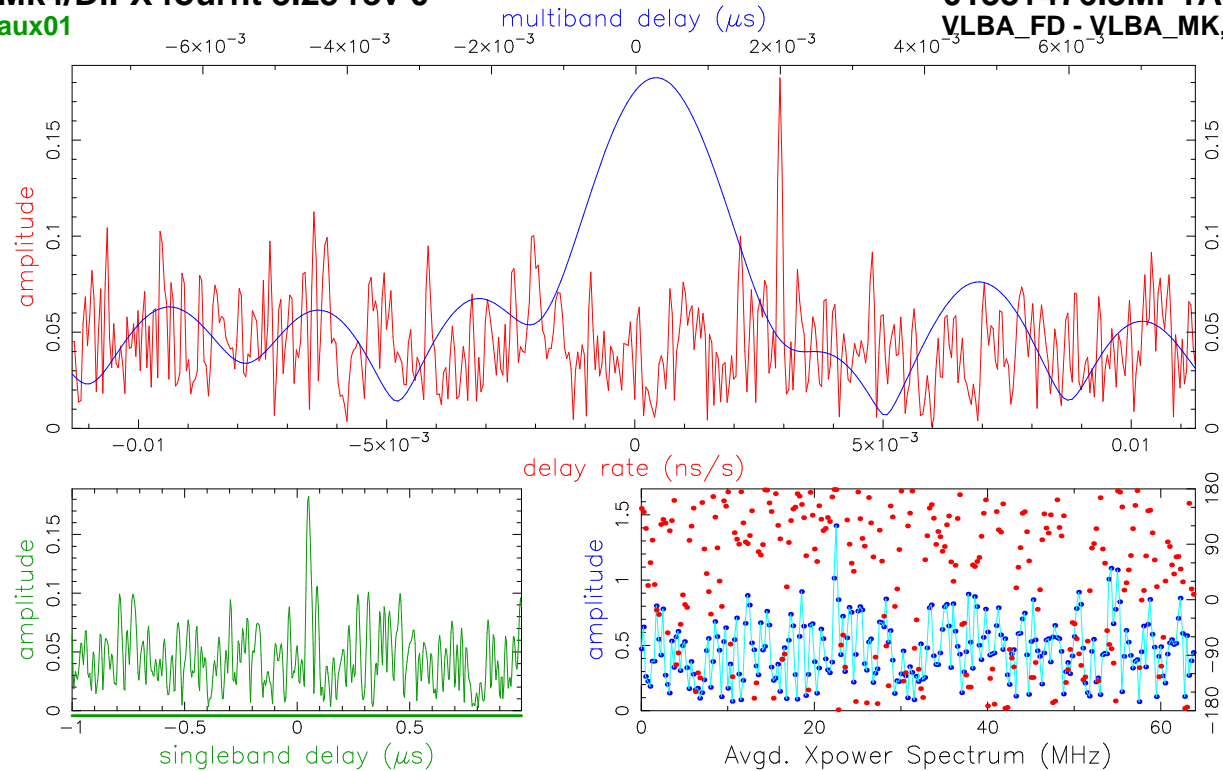
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fm..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fm.W.113.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fm

VLBA\_FD - VLBA\_MK, fgroup W, pol RL

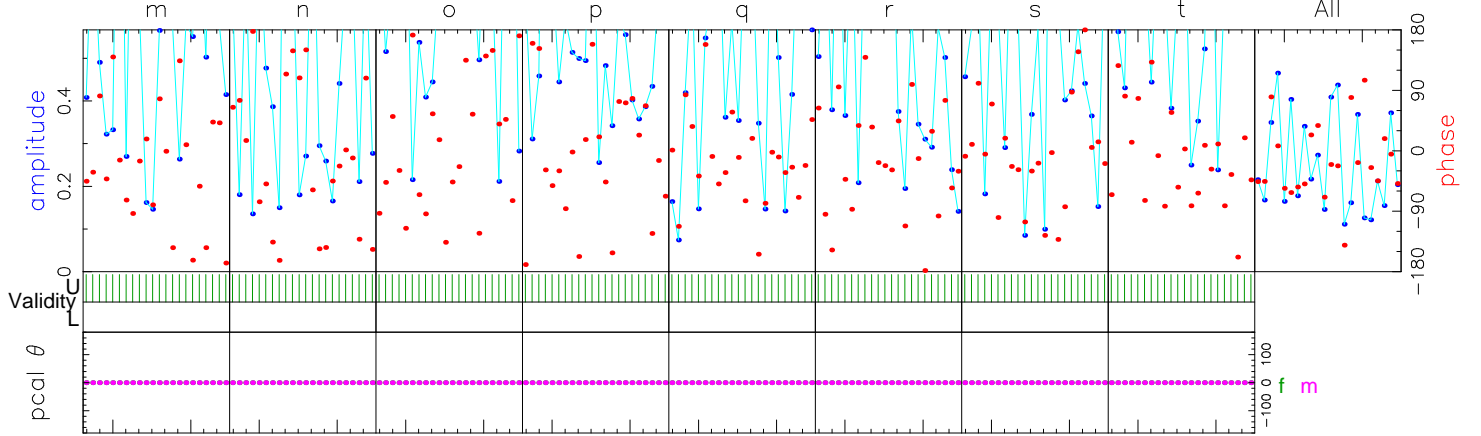


Fringe quality 0

SNR 5.3  
 Int time 112.640  
 Amp 0.189  
 Phase -17.4  
 PFD 1.0e+00  
 Delays (us)  
 SBD 0.049429  
 MBD 0.000245  
 Fringe rate (Hz)  
 0.251709  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113004  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-22.2	25.2	-47.0	-27.5	-12.6	-0.7	-8.2	-23.9	Phase	-17.4
	0.2	0.0	0.1	0.1	0.3	0.2	0.2	0.4	Ampl.	0.2
	436.8	74.6	385.6	374.0	493.8	170.2	503.3	361.6	Sbd box	269.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	1.06511616345E+04		Apriori delay (usec)	1.0651145145E+04	Resid mbdelay (usec)	2.44991E-04	+/-	2.0E-04		
Sband delay (usec)	1.06511639433E+04		Apriori clock (usec)	-4.8431587E-01	Resid sbdelay (usec)	4.94287E-02	+/-	1.6E-03		
Phase delay (usec)	1.0651145140E+04		Apriori clockrate (us/s)	6.4719931E-08	Resid phdelay (usec)	-5.60345E-07	+/-	6.9E-07		
Delay rate (us/s)	-5.74727811191E-01		Apriori rate (us/s)	-5.74730733282E-01	Resid rate (us/s)	2.92209E-06	+/-	1.1E-08		
Total phase (deg)		84.5	Apriori accel (us/s/s)	-4.23597411232E-05	Resid phase (deg)	-17.4	+/-	21.5		
ph/seg (deg)	RMS 55.4	Theor. 50.4	Search (512X32)	0.189 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	72.6	88.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	23.3	30.4	Inc. seg. avg.	0.189	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	53.3	53.0	Inc. frq. avg.	0.169	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00	
f: az 40.8 el 64.1 pa -123.1		m: az 45.2 el 23.3 pa -86.1		u,v (fr/asec) 4884.704 -2702.249						simultaneous interpolator
Control file: cf_1234_gmva		Input file: /Exps/c241a/v2/3mm/1234/No0916/fm..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/fm.W.115.3MP1AB						

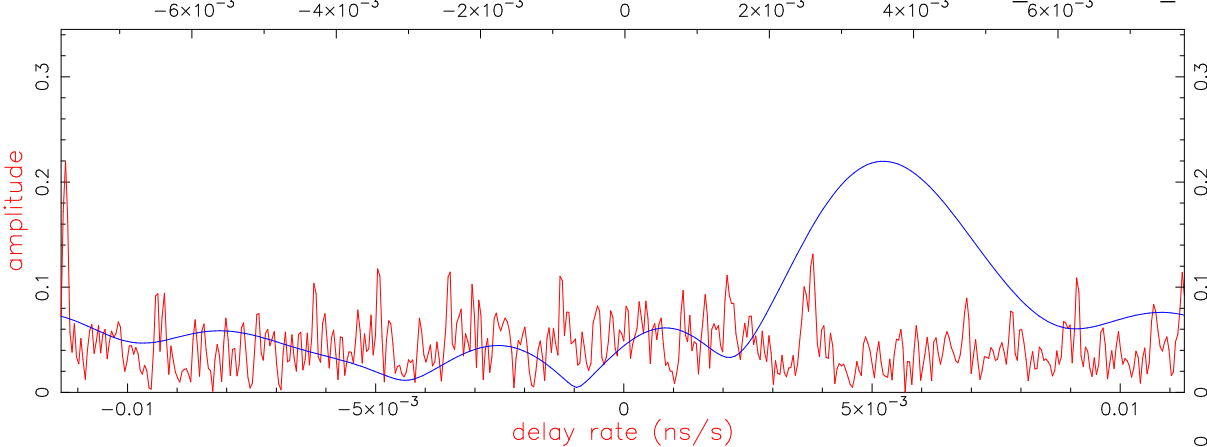
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fn

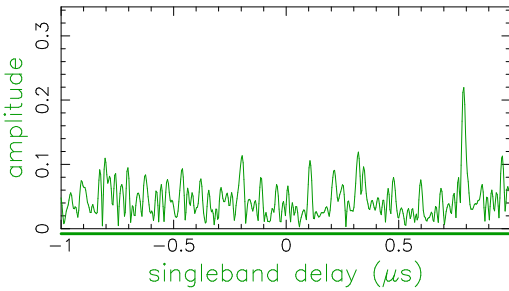
VLBA\_FD - VLBA\_NL, fgroup W, pol LL

multiband delay ( $\mu$ s)

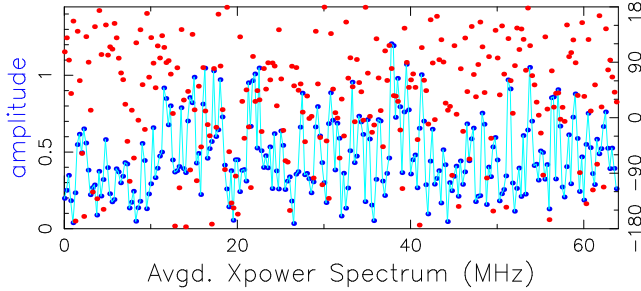


Fringe quality 0

SNR 6.4  
 Int time 112.505  
 Amp 0.345  
 Phase 103.2  
 PFD 9.7e-03  
 Delays (us)  
 SBD 0.787896  
 MBD 0.003520  
 Fringe rate (Hz) -0.970092  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

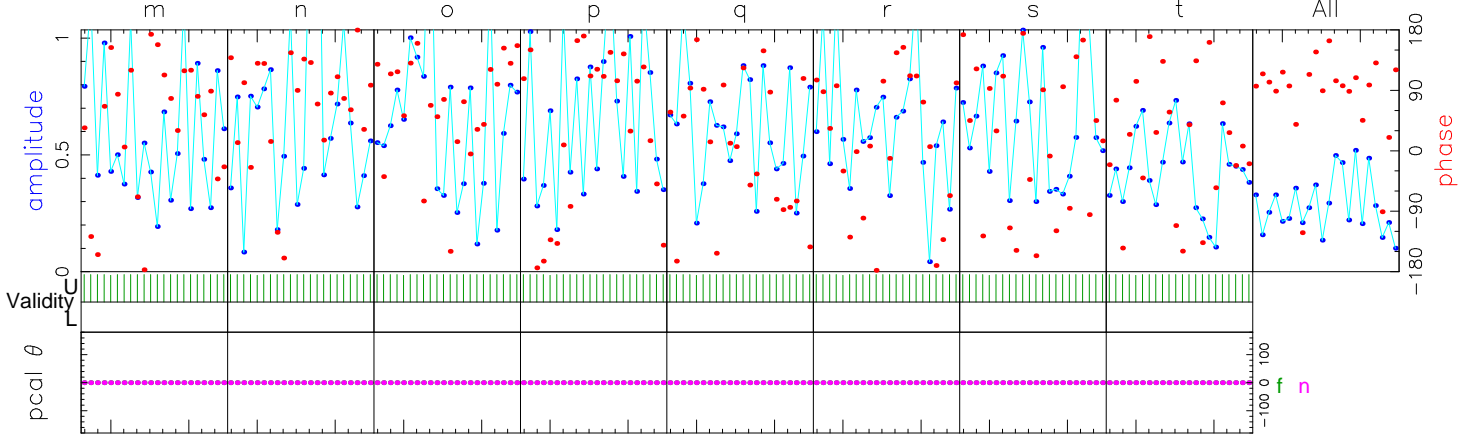


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113007  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	94.4	92.3	106.6	124.8	79.9	106.2	151.9	37.4	Phase	103.2
	0.3	0.7	0.5	0.5	0.2	0.4	0.2	0.2	Ampl.	0.3
	434.3	458.9	458.6	456.8	226.0	135.7	374.8	253.8	Sbd box	458.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -1.71787420569E+03 Apriori delay (usec) -1.71865897528E+03 Resid mbdelay (usec) 3.51959E-03 +/- 1.7E-04  
 Sband delay (usec) -1.71787107953E+03 Apriori clock (usec) 3.3729362E-01 Resid sbdelay (usec) 7.87896E-01 +/- 1.3E-03  
 Phase delay (usec) -1.71865897195E+03 Apriori clockrate (us/s) -2.4704002E-07 Resid phdelay (usec) 3.32778E-06 +/- 5.8E-07  
 Delay rate (us/s) 2.08283655153E-01 Apriori rate (us/s) 2.08294916959E-01 Resid rate (us/s) -1.12618E-05 +/- 8.9E-09  
 Total phase (deg) 56.1 Apriori accel (us/s/s) -3.96905700624E-06 Resid phase (deg) 103.2 +/- 17.9

RMS Theor. Amplitude 0.345 +/- 0.054 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 55.7 41.9 Search (512X32) 0.213 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 61.5 73.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 36.4 25.3 Inc. seg. avg. 0.352 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 48.4 44.1 Inc. frq. avg. 0.341 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1783.797 -1266.288 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fn..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fn.W.117.3MP1AB

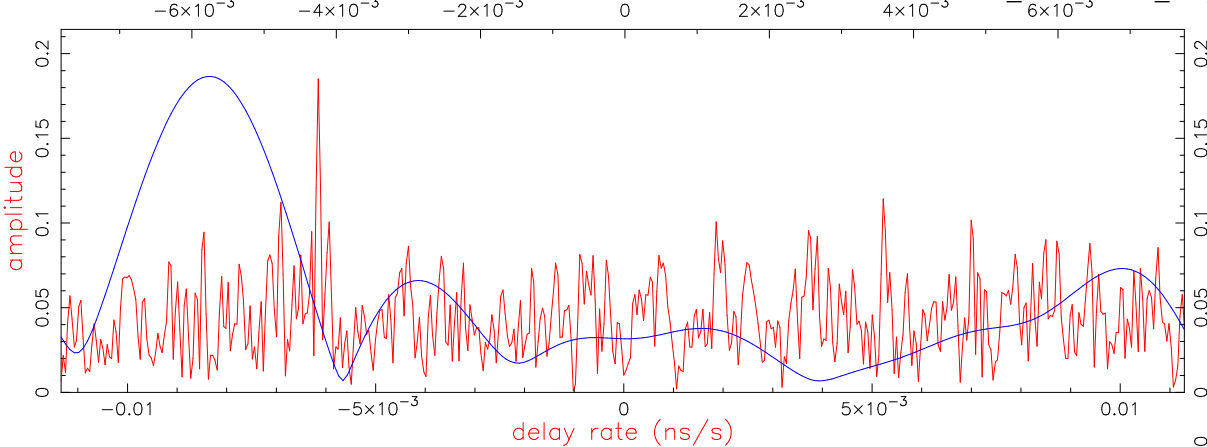
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fn

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

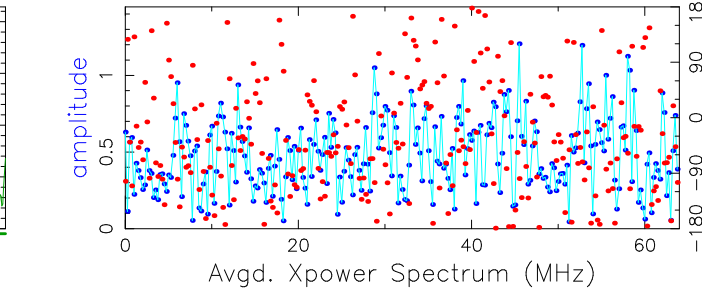
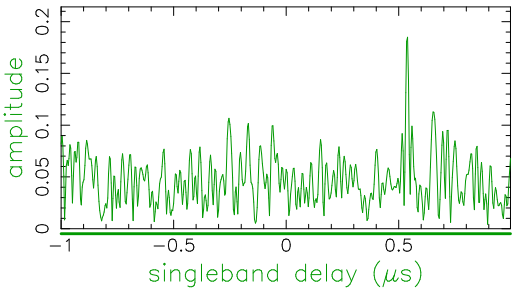
multiband delay ( $\mu$ s)



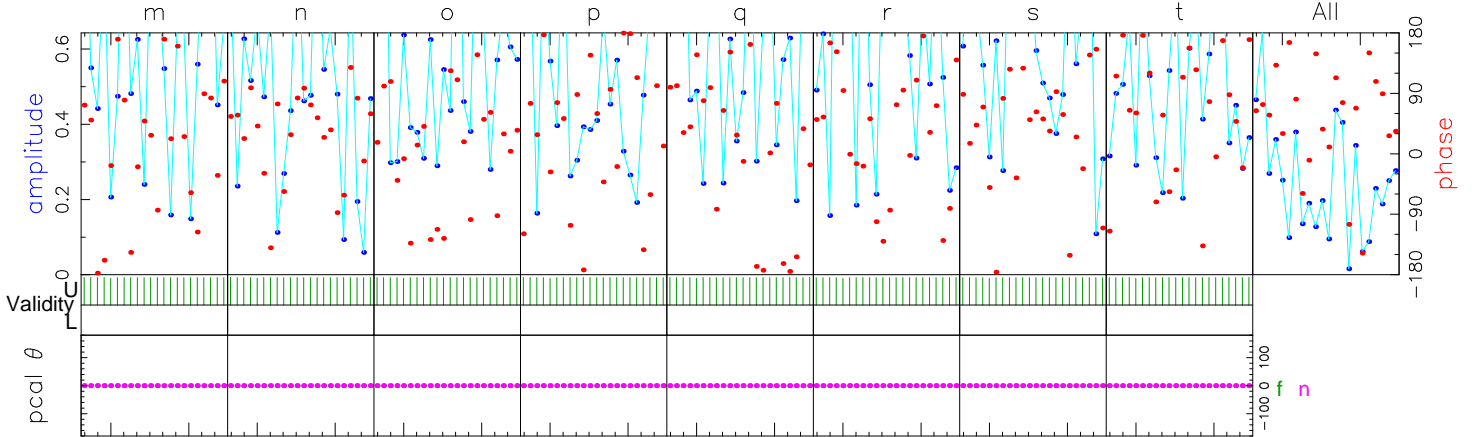
Fringe quality 0

SNR 5.5  
 Int time 112.505  
 Amp 0.214  
 Phase 73.2  
 PFD 9.1e-01  
 Delays (us)  
 SBD 0.537446  
 MBD -0.005896  
 Fringe rate (Hz)  
 -0.529983  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113008  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
n	0	0	0	0	0	0	0	0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-1.71811799651E+03	Apriori delay (usec)	-1.71865897528E+03	Resid mbdelay (usec)	-5.89622E-03	+/-	2.0E-04
Sband delay (usec)	-1.71812152953E+03	Apriori clock (usec)	3.3729362E-01	Resid sbdelay (usec)	5.37446E-01	+/-	1.6E-03
Phase delay (usec)	-1.71865897292E+03	Apriori clockrate (us/s)	-2.4704002E-07	Resid phdelay (usec)	2.35896E-06	+/-	6.7E-07
Delay rate (us/s)	2.08288764386E-01	Apriori rate (us/s)	2.08294916959E-01	Resid rate (us/s)	-6.15257E-06	+/-	1.0E-08
Total phase (deg)		Apriori accel (us/s/s)	-3.96905700624E-06	Resid phase (deg)	73.2	+/-	20.9

ph/seg (deg)	RMS 71.8	Theor. 48.9	Amplitude 512X32	0.214 +/- 0.039	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	86.2	85.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	20.4	29.5	Inc. seg. avg.	0.208	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	32.9	51.5	Inc. frq. avg.	0.193	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 40.8 el 64.1 pa -123.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1783.797 -1266.288 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fn..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fn.W.119.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

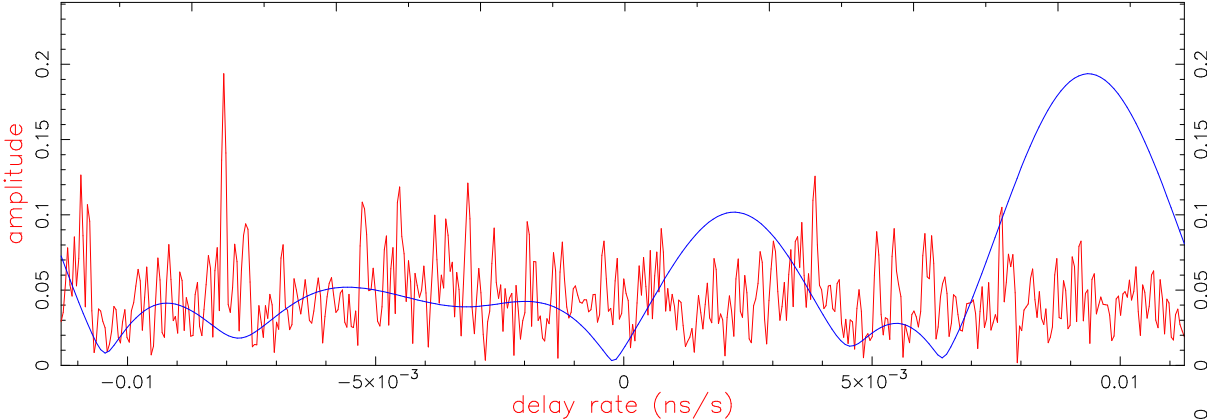
aux01

0133+476.3MP1AB, No0916, fn

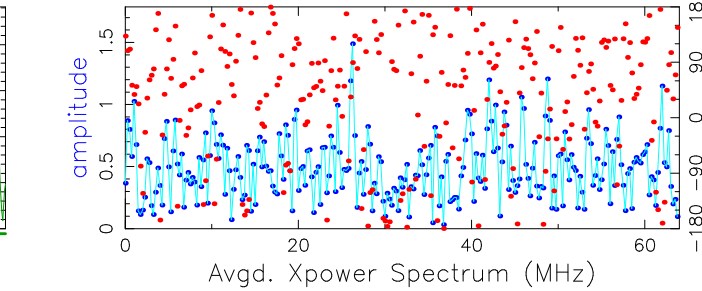
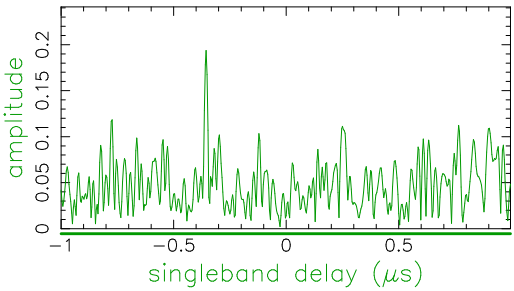
VLBA\_FD - VLBA\_NL, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

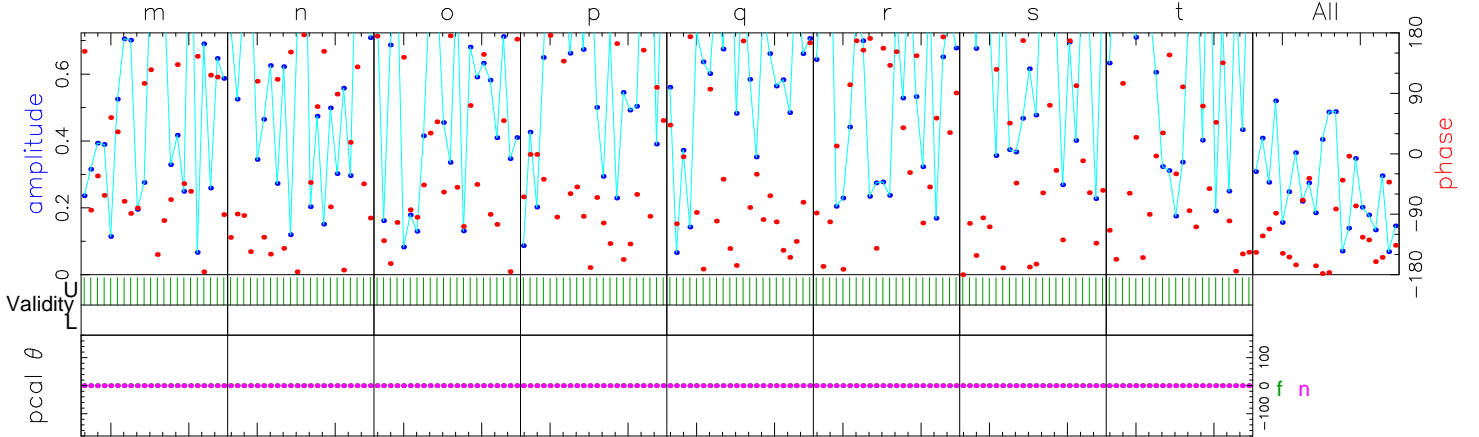


SNR 5.6  
 Int time 112.505  
 Amp 0.241  
 Phase -123.9  
 PFD 6.7e-01  
 Delays (us)  
 SBD -0.355942  
 MBD 0.006408  
 Fringe rate (Hz)  
 -0.694245  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113009  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-103.8	-146.3	-92.5	-118.4	-118.7	-177.3	-112.1	-120.5	Phase	-123.9
	0.2	0.3	0.1	0.3	0.4	0.2	0.3	0.3	Ampl.	0.2
	480.9	288.0	494.2	496.0	166.0	139.9	27.4	503.6	Sbd box	165.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) -1.71901194232E+03 Apriori delay (usec) -1.71865897528E+03 Resid mbdelay (usec) 6.40796E-03 +/- 1.9E-04  
 Sband delay (usec) -1.71901491728E+03 Apriori clock (usec) 3.3729362E-01 Resid sbdelay (usec) -3.55942E-01 +/- 1.5E-03  
 Phase delay (usec) -1.71865897928E+03 Apriori clockrate (us/s) -2.4704002E-07 Resid phdelay (usec) -3.99608E-06 +/- 6.6E-07  
 Delay rate (us/s) 2.08286857465E-01 Apriori rate (us/s) 2.08294916959E-01 Resid rate (us/s) -8.05949E-06 +/- 1.0E-08  
 Total phase (deg) -171.0 Apriori accel (us/s/s) -3.96905700624E-06 Resid phase (deg) -123.9 +/- 20.4

RMS Theor. Amplitude 0.241 +/- 0.043 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 51.4 47.7 Search (512X32) 0.192 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 77.9 83.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 28.7 28.8 Inc. seg. avg. 0.249 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 40.1 50.2 Inc. frq. avg. 0.227 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1783.797 -1266.288 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fn..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fn.W.121.3MP1AB

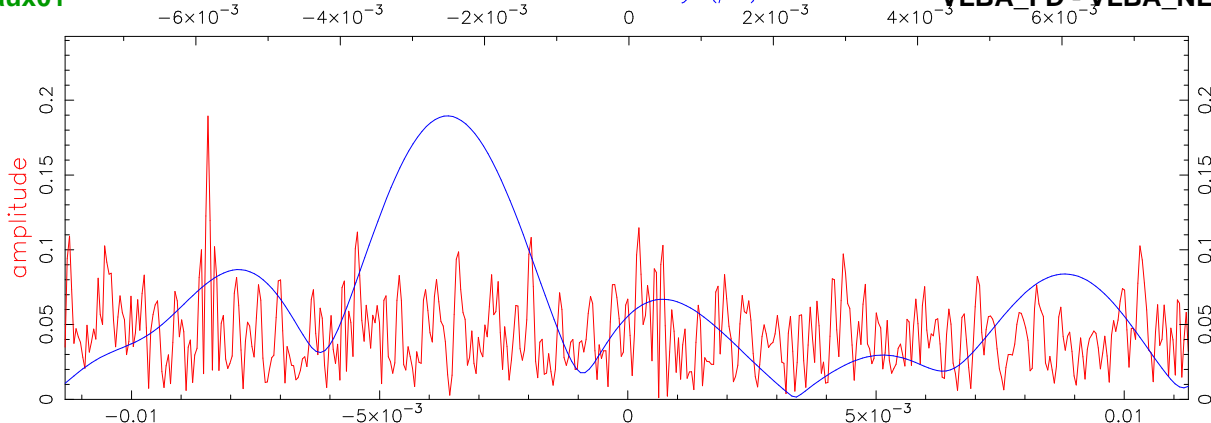
# Mk4/DiFX fourfit 3.25 rev 0

aux01

# 0133+476.3MP1AB, No0916, fn

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

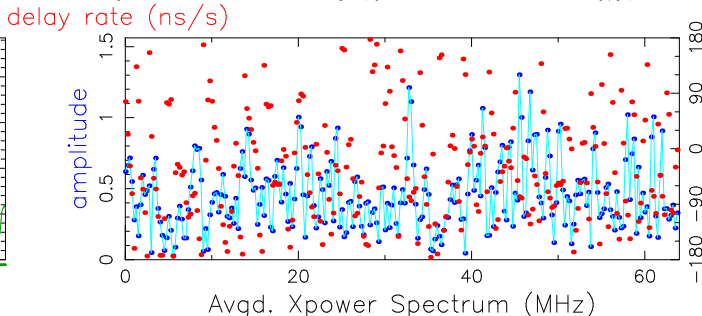
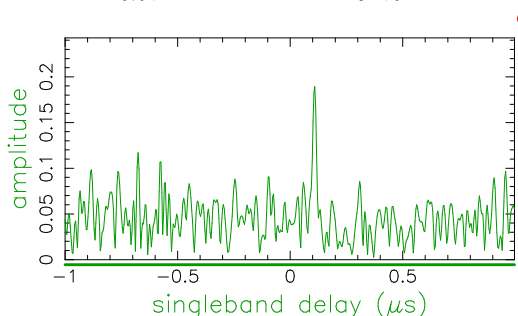
multiband delay (μs)



Fringe quality 0

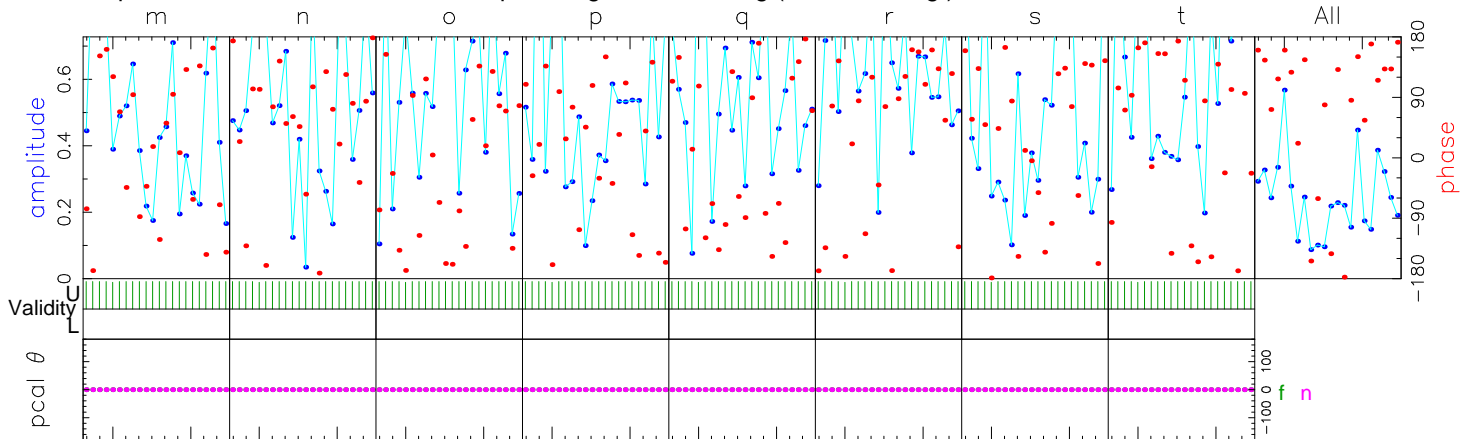
SNR 5.5  
 Int time 112.505  
 Amp 0.243  
 Phase 138.7  
 PFD 8.5e-01  
 Delays (us)  
 SBD 0.108215  
 MBD -0.002562  
 Fringe rate (Hz)  
 -0.729401  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113010  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
163.0	102.9	154.1	112.4	-172.5	130.3	131.3	146.9	146.9	Phase	138.7
0.2	0.3	0.2	0.1	0.2	0.4	0.3	0.3	0.3	Ampl.	0.2
62.0	84.2	46.2	505.6	459.8	283.7	135.8	194.1	194.1	Sbd box	284.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	-1.71855216276E+03		Apriori delay (usec)	-1.71865897528E+03		Resid mbdelay (usec)	-2.56248E-03		+/-	2.0E-04
Sband delay (usec)	-1.71855076028E+03		Apriori clock (usec)	3.3729362E-01		Resid sbdelay (usec)	1.08215E-01		+/-	1.6E-03
Phase delay (usec)	-1.71865897081E+03		Apriori clockrate (us/s)	-2.4704002E-07		Resid phdelay (usec)	4.47240E-06		+/-	6.7E-07
Delay rate (us/s)	2.08286449339E-01		Apriori rate (us/s)	2.08294916959E-01		Resid rate (us/s)	-8.46762E-06		+/-	1.0E-08
Total phase (deg)		91.6	Apriori accel (us/s/s)	-3.96905700624E-06		Resid phase (deg)	138.7		+/-	20.7

ph/seg (deg) 58.2 48.6 Search (512X32) 0.183 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 67.7 84.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 29.9 29.3 Inc. seg. avg. 0.231 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 36.3 51.1 Inc. frq. avg. 0.234 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1783.797 -1266.288 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fn..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fn.W.123.3MP1AB

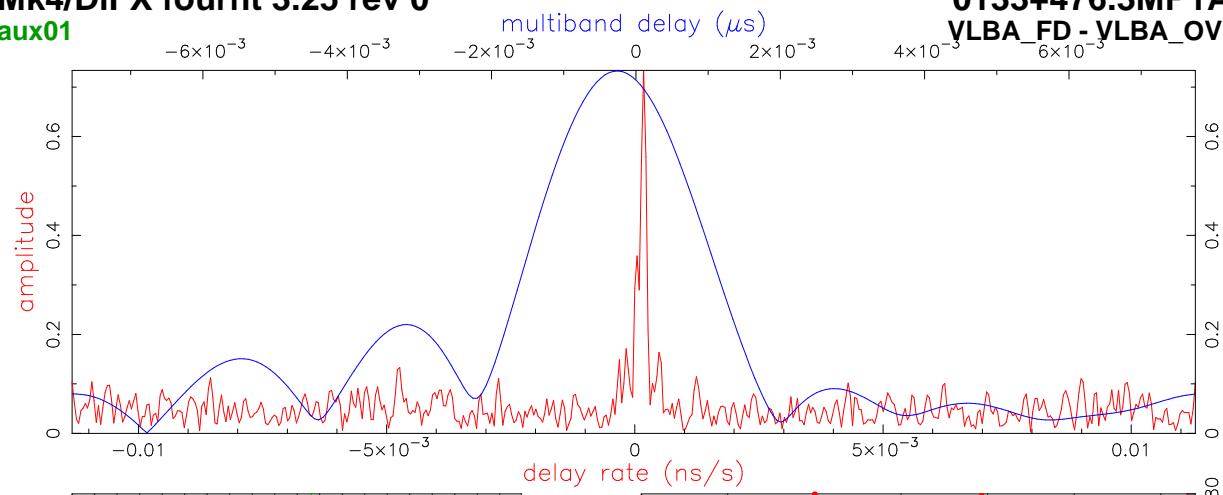


Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fo

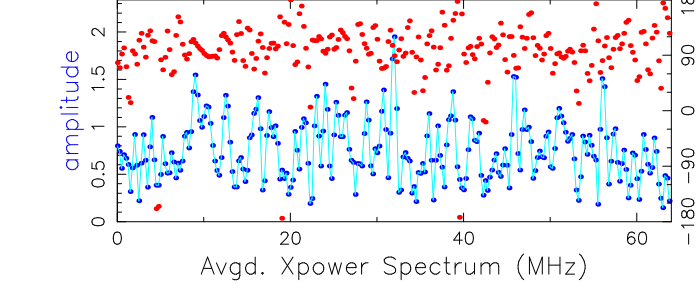
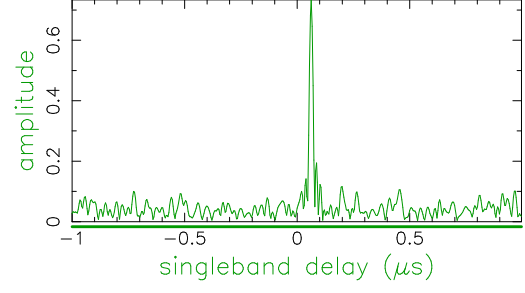
VLBA\_FD - VLBA\_OV, fgroup W, pol LL



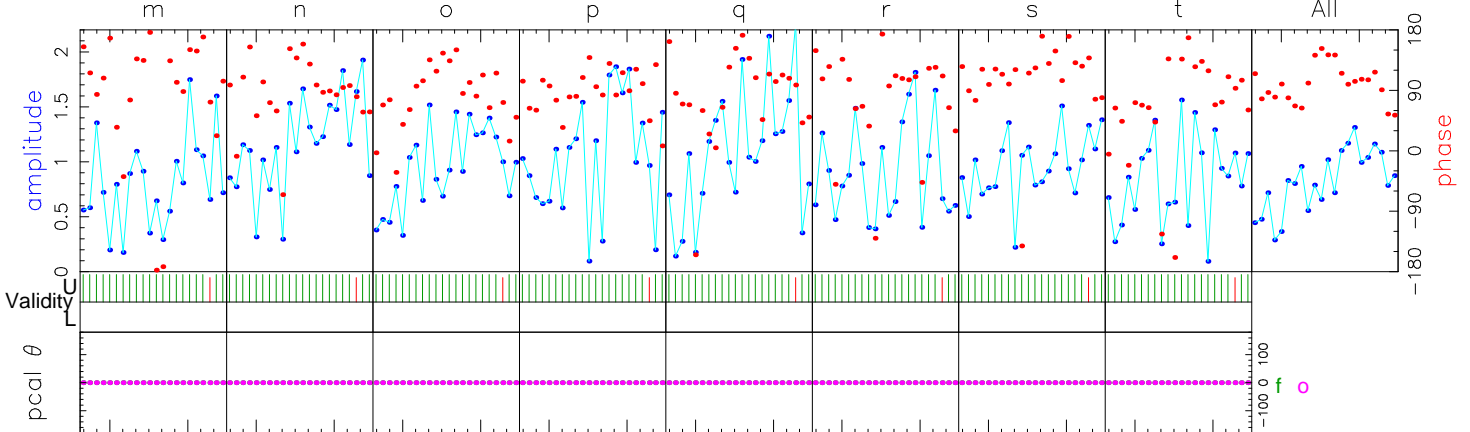
Fringe quality 9

SNR 21.2  
 Int time 112.059  
 Amp 0.734  
 Phase 100.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.062010  
 MBD -0.000272  
 Fringe rate (Hz) 0.016712  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113007  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	8.00965081452E+02	Apriori delay (usec)	8.00902853055E+02	Resid mbdelay (usec)	-2.71603E-04	+/-	5.1E-05
Sband delay (usec)	8.00964863055E+02	Apriori clock (usec)	-2.5008591E+01	Resid sbdelay (usec)	6.20100E-02	+/-	4.1E-04
Phase delay (usec)	8.00902856294E+02	Apriori clockrate (us/s)	-4.3105211E-07	Resid phdelay (usec)	3.23992E-06	+/-	1.7E-07
Delay rate (us/s)	-1.47257837705E-01	Apriori rate (us/s)	-1.47258031711E-01	Resid rate (us/s)	1.94006E-07	+/-	2.7E-09
Total phase (deg)	14.8	Apriori accel (us/s/s)	-1.23857621493E-05	Resid phase (deg)	100.5	+/-	5.4

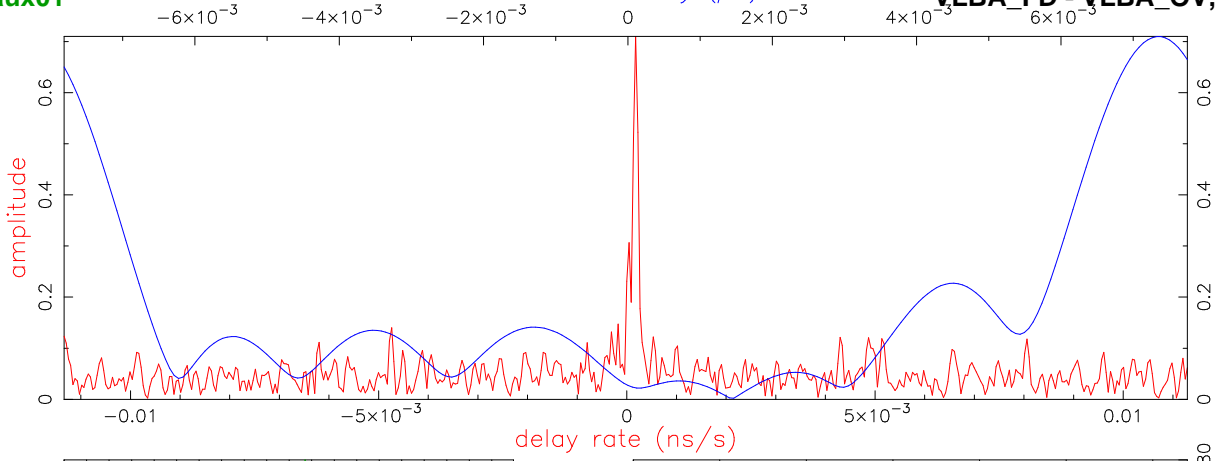
ph/seg (deg) 28.1 12.7 Search (512X32) 0.690 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 39.2 22.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 12.7 7.6 Inc. seg. avg. 0.805 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 17.8 13.3 Inc. frq. avg. 0.739 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 o: az 56.8 el 59.3 pa -95.8 u, v (fr/asec) 1251.498 -1650.503 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fo.W.118.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

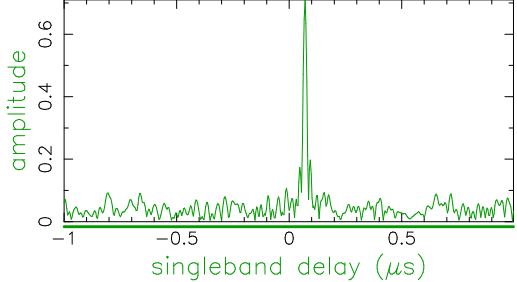
aux01

0133+476.3MP1AB, No0916, fo  
VLBA\_FD - VLBA\_OV, fgroup W, pol RR

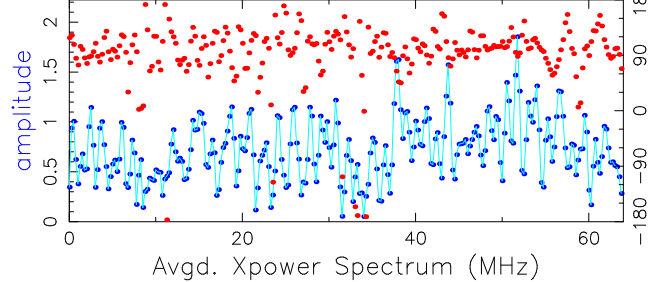
multiband delay ( $\mu$ s)



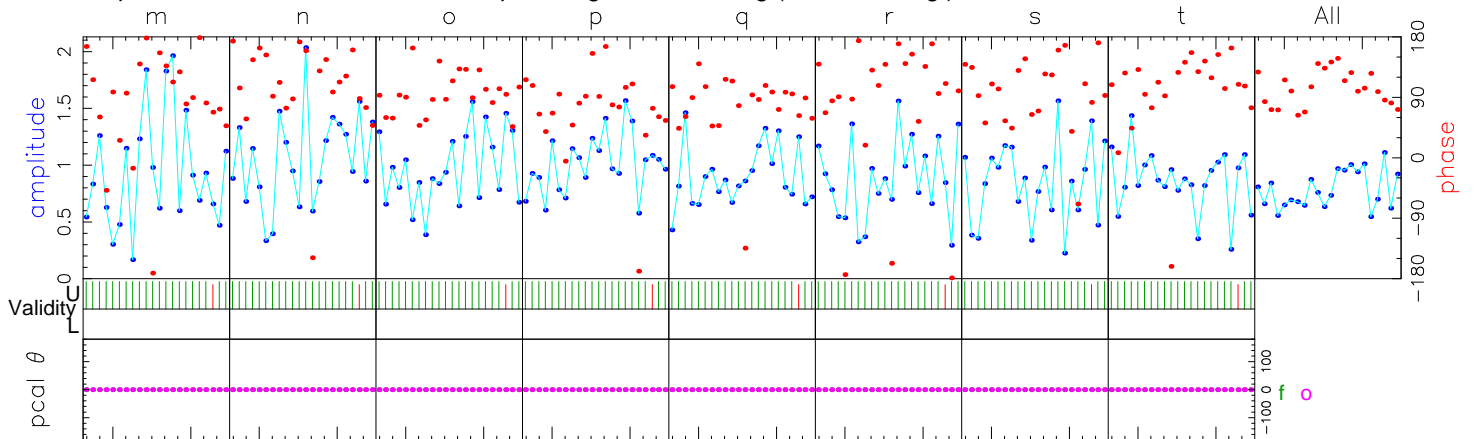
Fringe quality 9  
SNR 20.6  
Int time 112.059  
Amp 0.710  
Phase 104.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.070143  
MBD 0.007347  
Fringe rate (Hz) 0.016519  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 170437.17  
Stop 170629.81  
FRT 170540.00  
Corr/FF/build  
2025:007:183750  
2025:041:113008  
2024:113:095956  
RA & Dec (J2000)  
01h36m58.594803s  
+47°51'29.100073"



delay rate (ns/s)



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	112.9	118.6	94.5	86.8	86.2	124.1	102.1	113.4	Phase	104.3
	0.6	0.8	0.9	0.8	0.8	0.7	0.6	0.7	Ampl.	0.7
	274.8	274.6	274.8	274.8	275.7	275.5	275.0	274.5	Sbd box	275.0
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fo	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) 8.00972700014E+02 Apriori delay (usec) 8.00902853055E+02 Resid mbdelay (usec) 7.34696E-03 +/- 5.3E-05  
 Sband delay (usec) 8.00972996055E+02 Apriori clock (usec) -2.5008591E+01 Resid sbdelay (usec) 7.01430E-02 +/- 4.2E-04  
 Phase delay (usec) 8.00902856419E+02 Apriori clockrate (us/s) -4.3105211E-07 Resid phdelay (usec) 3.36412E-06 +/- 1.8E-07  
 Delay rate (us/s) -1.47257839938E-01 Apriori rate (us/s) -1.47258031711E-01 Resid rate (us/s) 1.91773E-07 +/- 2.8E-09  
 Total phase (deg) 18.7 Apriori accel (us/s/s) -1.23857621493E-05 Resid phase (deg) 104.3 +/- 5.6

ph/seg (deg) 26.0 13.1 Amplitude 0.710 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 24.8 22.8 Search (512X32) 0.685 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 15.8 7.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 12.4 13.8 Inc. seg. avg. 0.766 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 1251.498 -1650.503 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fo.W.120.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

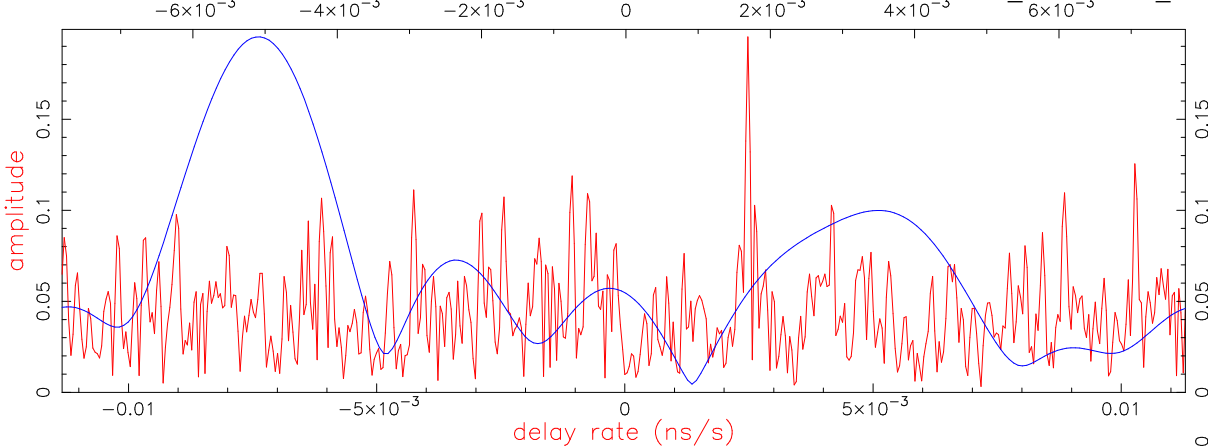
aux01

0133+476.3MP1AB, No0916, fo

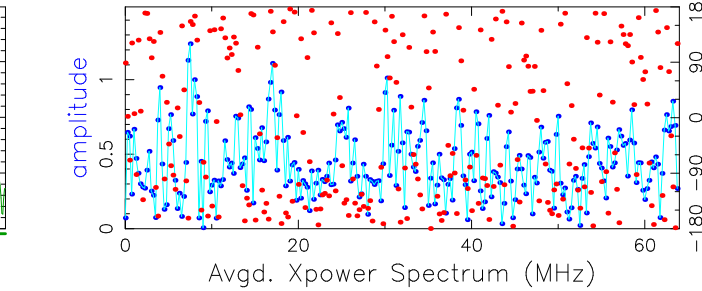
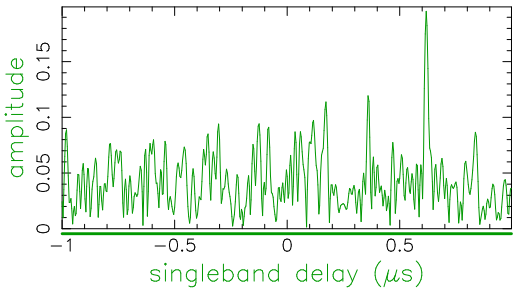
VLBA\_FD - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

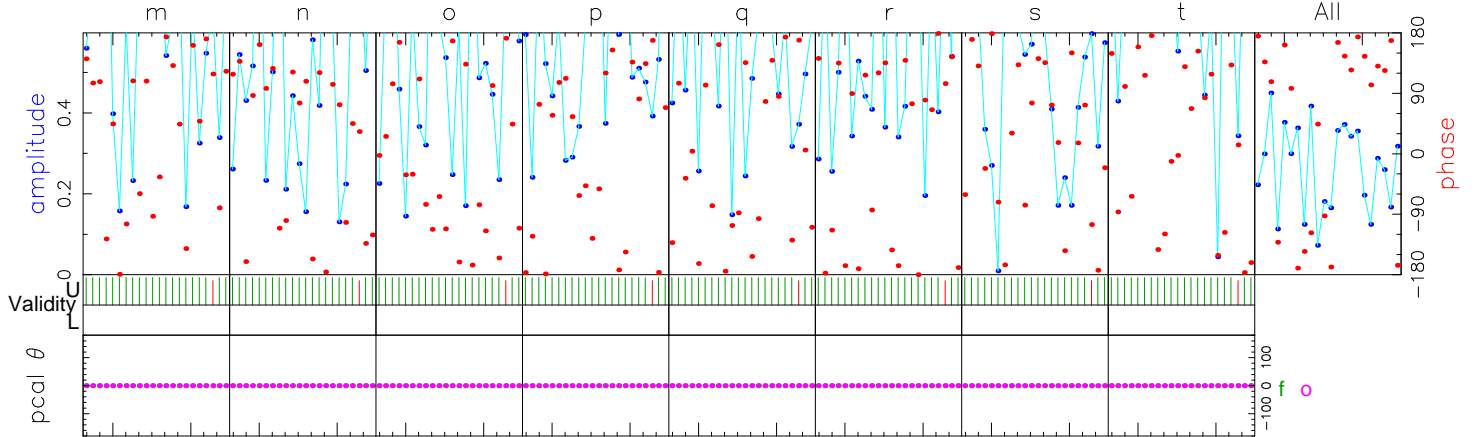


SNR 5.7  
 Int time 112.059  
 Amp 0.199  
 Phase 158.9  
 PFD 6.1e-01  
 Delays (us)  
 SBD 0.617586  
 MBD -0.005079  
 Fringe rate (Hz)  
 0.213862  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113010  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
o	0	0	0	0	0	0	0	0		
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec) (SBD)	8.01522774178E+02									
Sband delay (usec)	8.01520439555E+02									
Phase delay (usec)	8.00902858178E+02									
Delay rate (us/s)	-1.4725548990E-01									
Total phase (deg)			73.3							
Apriori delay (usec)					8.00902853055E+02					
Apriori clock (usec)					-2.5008591E+01					
Apriori clockrate (us/s)					-4.3105211E-07					
Apriori rate (us/s)					-1.47258031711E-01					
Apriori accel (us/s/s)					-1.23857621493E-05					
Resid mbdelay (usec)									-5.07888E-03	+/- 1.9E-04
Resid sbdelay (usec)									6.17586E-01	+/- 1.5E-03
Resid phdelay (usec)									5.12382E-06	+/- 6.5E-07
Resid rate (us/s)									2.48272E-06	+/- 1.0E-08
Resid phase (deg)									158.9	+/- 20.3
Pcal mode:	MANUAL, MANUAL		PC period (AP's) 5, 5							
Pcal rate:	0.000E+00, 0.000E+00 (us/s)		sb window (us) -1.000 1.000							
Bits/sample:	2x2		SampCntNorm: enabled mb window (us) -0.008 0.008							
Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us		dr window (ns/s) -0.011 0.011							
Data rate (Mb/s):	2048		nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00							
f: az 40.8 el 64.1 pa -123.1	o: az 56.8 el 59.3 pa -95.8		u, v (fr/asec) 1251.498 -1650.503						simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/fo.3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/fo.W.122.3MP1AB							

Mk4/DiFX fourfit 3.25 rev 0

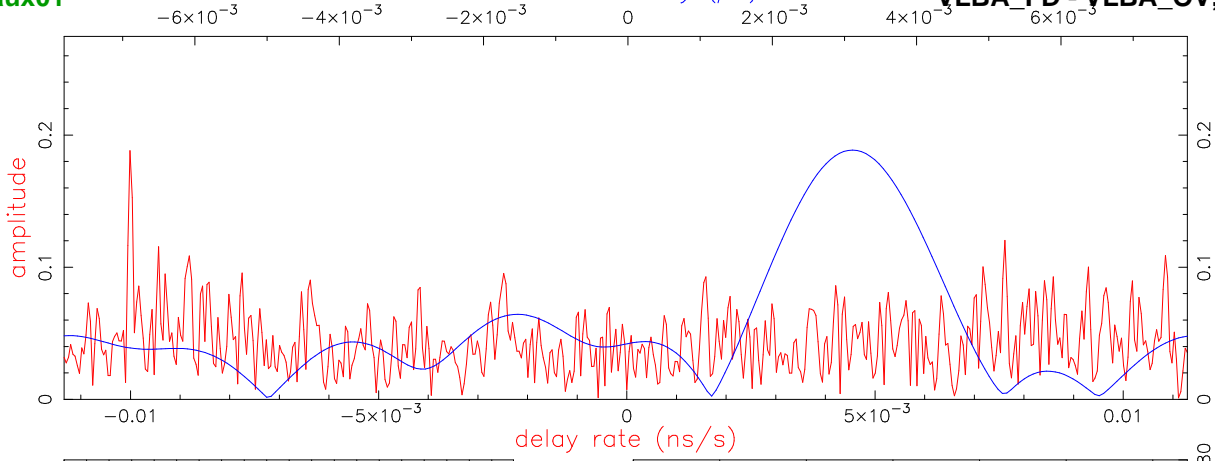
aux01

0133+476.3MP1AB, No0916, fo

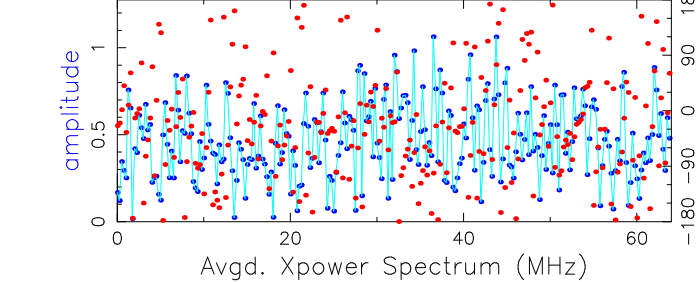
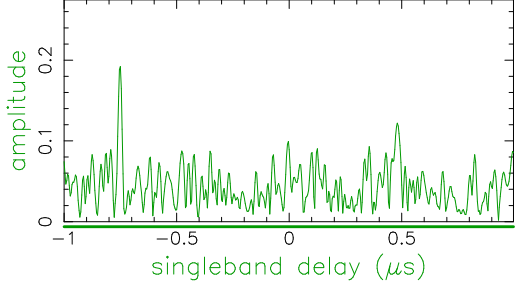
VLBA\_FD - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

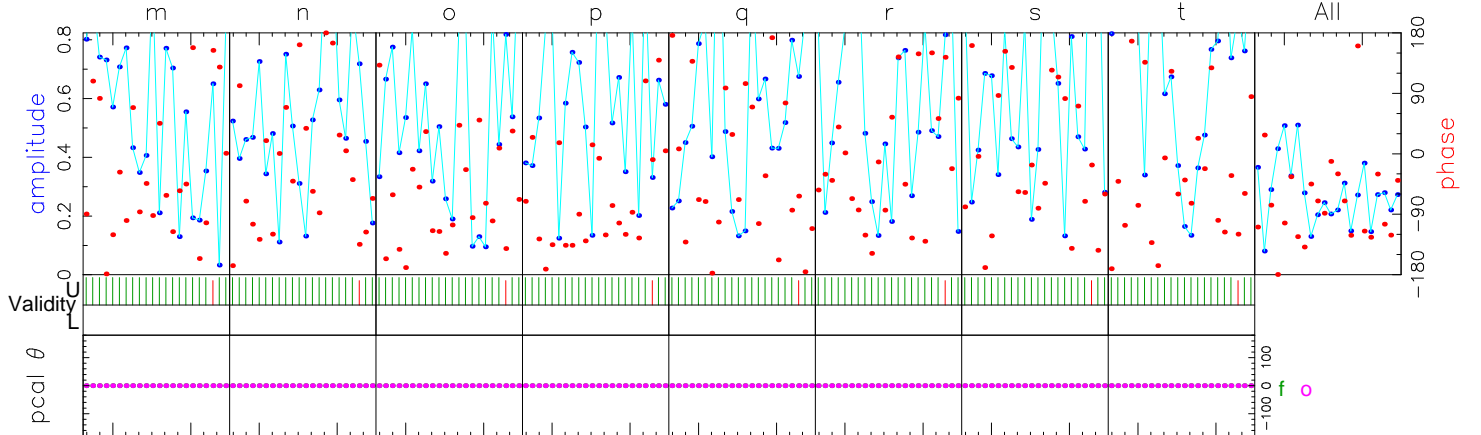


SNR 5.6  
 Int time 112.059  
 Amp 0.275  
 Phase -95.2  
 PFD 6.7e-01  
 Delays (us)  
 SBD -0.751466  
 MBD 0.003187  
 Fringe rate (Hz)  
 -0.863519  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113011  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-85.5	-109.3	-67.5	-109.4	-108.9	-62.9	-96.7	-109.0	Phase	-95.2
	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.4	Ampl.	0.2
	118.0	492.4	169.9	90.8	70.0	431.8	383.8	294.0	Sbd box	64.6
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	8.00156040333E+02	Apriori delay (usec)	8.00902853055E+02	Resid mbdelay (usec)	3.18728E-03	+/-	1.9E-04
Sband delay (usec)	8.00151386805E+02	Apriori clock (usec)	-2.5008591E+01	Resid sbdelay (usec)	-7.51466E-01	+/-	1.5E-03
Phase delay (usec)	8.00902849986E+02	Apriori clockrate (us/s)	-4.3105211E-07	Resid phdelay (usec)	-3.06866E-06	+/-	6.6E-07
Delay rate (us/s)	-1.47268056305E-01	Apriori rate (us/s)	-1.47258031711E-01	Resid rate (us/s)	-1.00246E-05	+/-	1.0E-08
Total phase (deg)	179.2	Apriori accel (us/s/s)	-1.23857621493E-05	Resid phase (deg)	-95.2	+/-	20.4

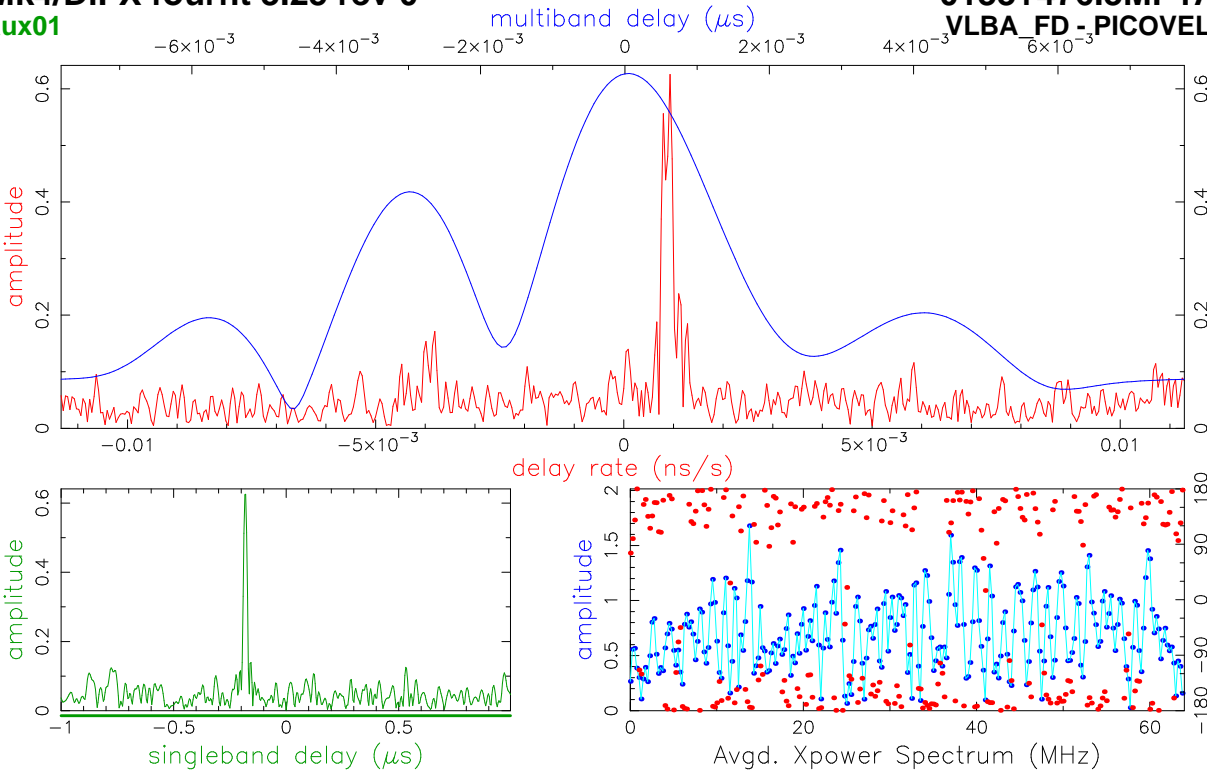
ph/seg (deg) 54.6 47.7 Search (512X32) 0.185 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 71.0 83.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 21.1 28.8 Inc. seg. avg. 0.291 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 21.7 50.2 Inc. frq. avg. 0.248 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 1251.498 -1650.503 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fo.W.124.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fP

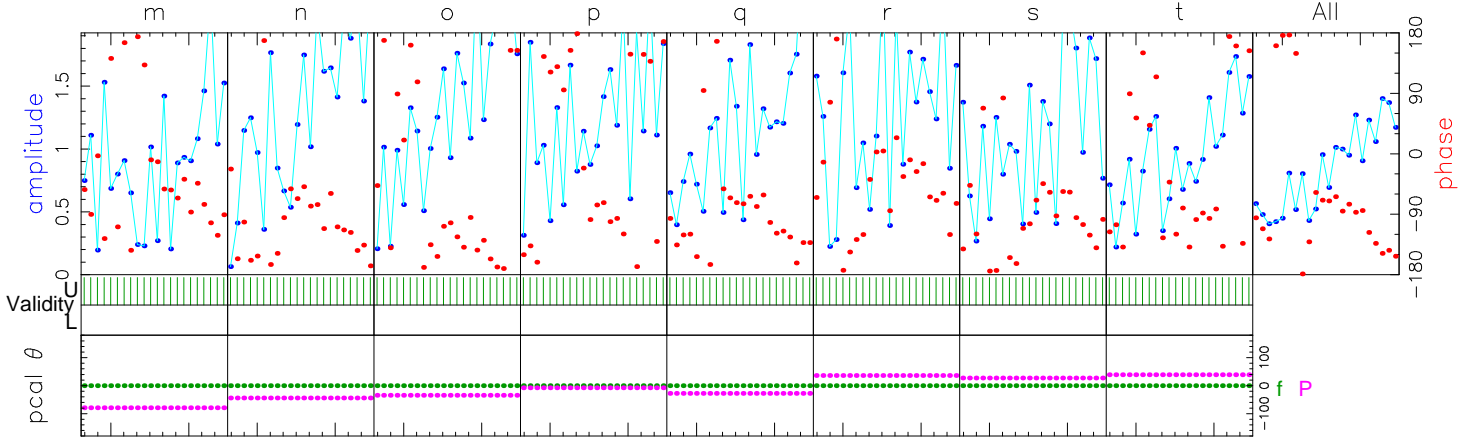
VLBA\_FD - PICOVEL, fgroup W, pol LL



Fringe quality 8

SNR 18.6  
 Int time 112.640  
 Amp 0.641  
 Phase -118.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.181588  
 MBD -0.000035  
 Fringe rate (Hz)  
 0.080314  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113011  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-87.3	-115.3	-160.7	-160.3	-114.3	-48.9	-101.4	-149.5	Phase	-118.1
	0.6	1.0	1.0	0.7	0.9	0.8	0.7	0.4	Ampl.	0.8
	208.8	210.5	210.8	210.7	211.0	210.7	210.8	208.5	Sbd box	210.5
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) 6.85733785446E+03 Apriori delay (usec) 6.85752538917E+03 Resid mbdelay (usec) -3.47117E-05 +/- 5.8E-05  
 Sband delay (usec) 6.85734380117E+03 Apriori clock (usec) 1.0650196E+00 Resid sbdelay (usec) -1.81588E-01 +/- 4.6E-04  
 Phase delay (usec) 6.85752538536E+03 Apriori clockrate (us/s) -5.4801714E-07 Resid phdelay (usec) -3.80878E-06 +/- 2.0E-07  
 Delay rate (us/s) 1.18006393909E+00 Apriori rate (us/s) 1.18006300673E+00 Resid rate (us/s) 9.32368E-07 +/- 3.1E-09  
 Total phase (deg) -109.7 Apriori accel (us/s/s) -4.42735801283E-05 Resid phase (deg) -118.1 +/- 6.2

RMS Theor. Amplitude 0.641 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 46.5 14.5 Search (512X32) 0.619 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 59.2 25.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 42.1 8.7 Inc. seg. avg. 0.814 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 34.7 15.2 Inc. frq. avg. 0.757 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 P: az 307.1 el 35.7 pa 71.7 u,v (fr/asec) -10127.880 -4370.502 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fP.W.125.3MP1AB

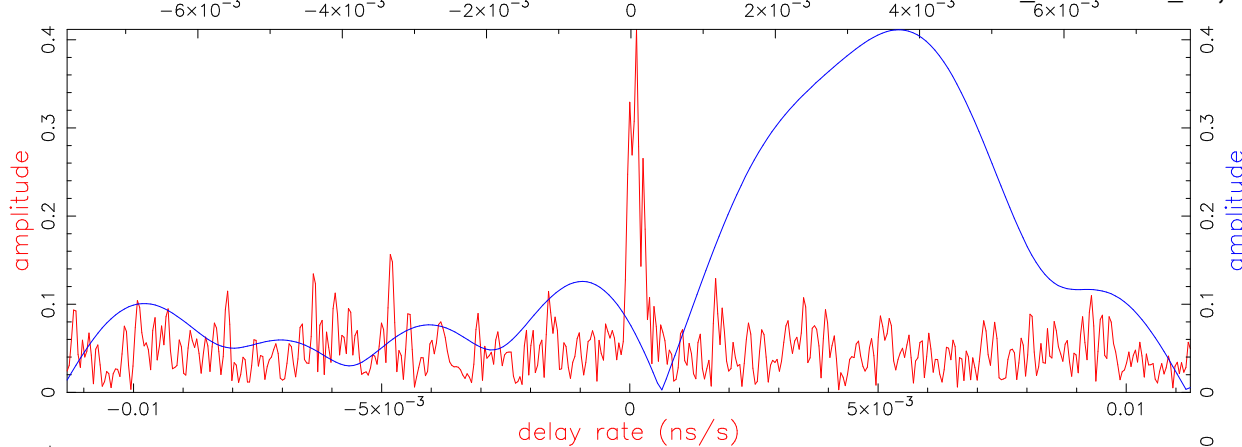
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fp

VLBA\_FD - VLBA\_PT, fgroup W, pol LL

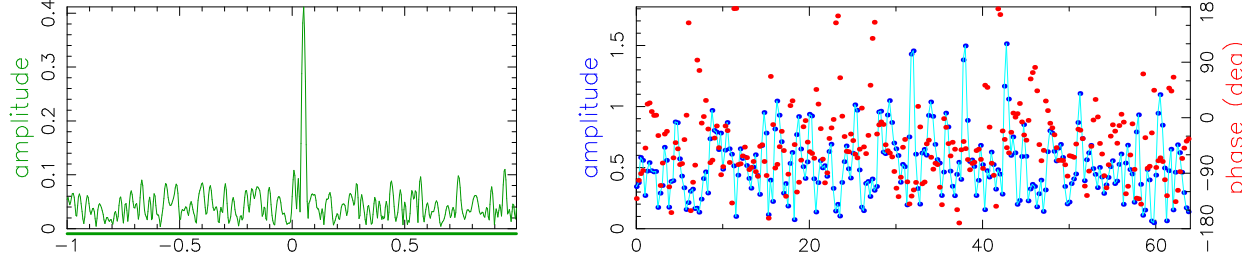
multiband delay ( $\mu$ s)



Fringe quality 9

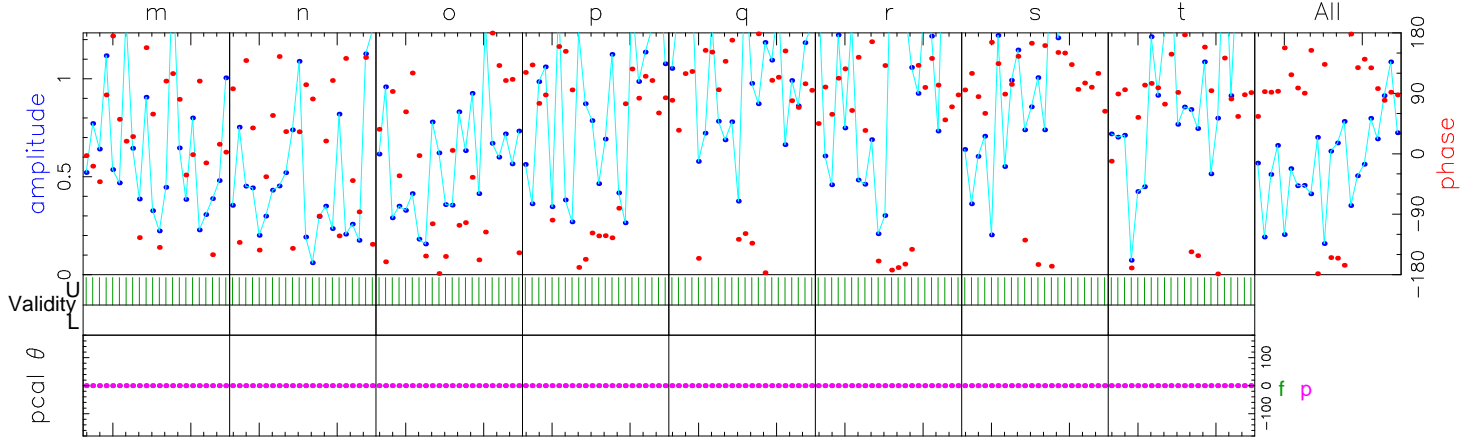
SNR 11.9  
 Int time 112.633  
 Amp 0.412  
 Phase 122.5  
 PFD 8.3e-25  
 Delays (us)  
 SBD 0.050421  
 MBD 0.003704  
 Fringe rate (Hz) 0.010070  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113011  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	45.2	171.1	-148.8	131.7	129.8	115.6	126.8	110.8	Phase	122.5
	0.3	0.1	0.2	0.4	0.6	0.7	0.8	0.7	Ampl.	0.5
	370.7	418.7	302.2	269.9	269.8	270.0	269.6	270.3	Sbd box	269.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-2.71746232438E+01	Apriori delay (usec)	-2.72252017760E+01	Resid mbdelay (usec)	3.70353E-03	+/-	9.1E-05
Sband delay (usec)	-2.71747802760E+01	Apriori clock (usec)	-5.6530151E+00	Resid sbdelay (usec)	5.04215E-02	+/-	7.2E-04
Phase delay (usec)	-2.72251978245E+01	Apriori clockrate (us/s)	-3.2847705E-07	Resid phdelay (usec)	3.95148E-06	+/-	3.1E-07
Delay rate (us/s)	-4.09183773580E-02	Apriori rate (us/s)	-4.09184942615E-02	Resid rate (us/s)	1.16904E-07	+/-	4.8E-09
Total phase (deg)	-194.6	Apriori accel (us/s/s)	-4.41098732596E-06	Resid phase (deg)	122.5	+/-	9.6

ph/seg (deg)	RMS 43.5	Theor. 22.5	Amplitude 0.412 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	67.2	39.3	Search (512X32) 0.387	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	52.5	13.6	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	62.7	23.7	Inc. seg. avg. 0.532	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011	
			Inc. frq. avg. 0.455	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) 347.249 -706.184 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fp.3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fp.W.126.3MP1AB

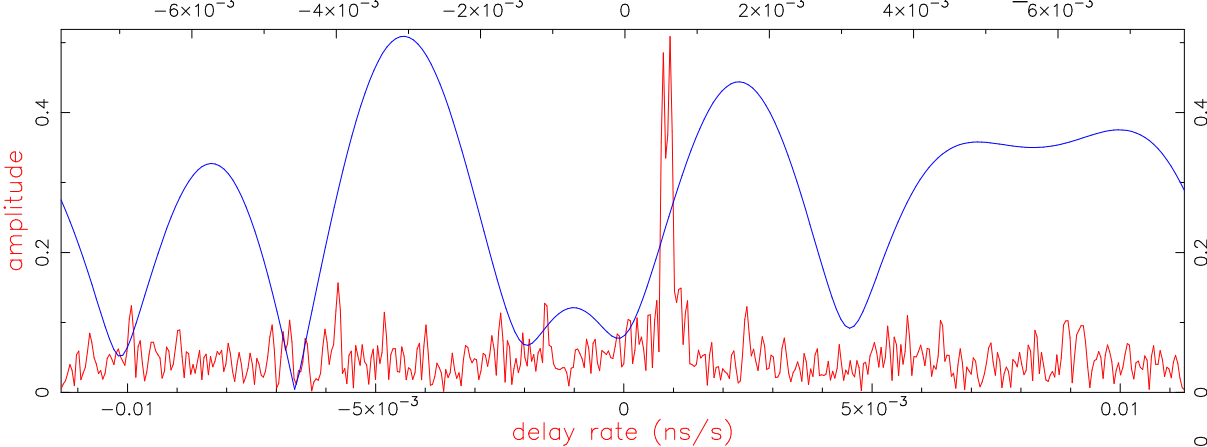
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fP

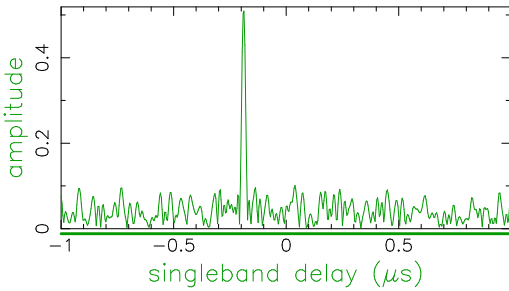
VLBA\_FD - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)

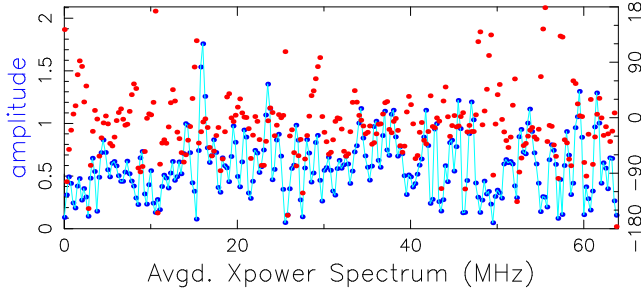


Fringe quality 7

SNR 15.0  
 Int time 112.640  
 Amp 0.519  
 Phase -0.0  
 PFD 8.5e-43  
 Delays (us)  
 SBD -0.189195  
 MBD -0.003099  
 Fringe rate (Hz)  
 0.080744  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

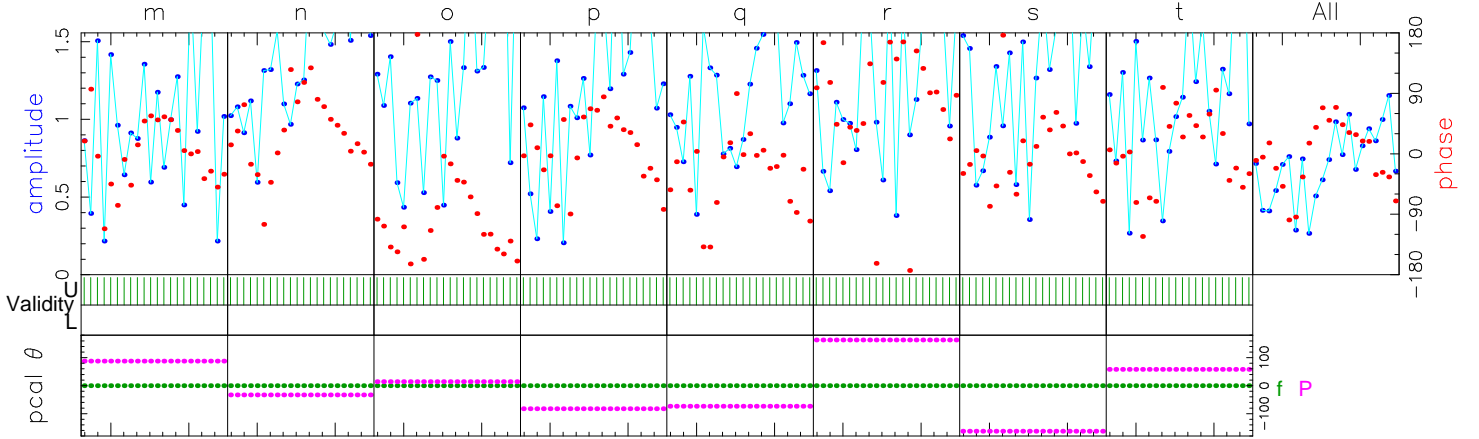


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113012  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-0.7	33.3	-114.7	13.1	-32.4	104.1	-9.7	-2.3		Phase
	0.8	0.9	1.0	0.8	0.7	0.8	0.9	0.8		Ampl.
	207.5	209.0	208.8	209.6	210.2	209.1	208.9	207.3		Sbd box
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		APs used
f	0	0	0	0	0	0	0	0		PC freqs
P	0	0	0	0	0	0	0	0		PC freqs
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
f:P	0:88	0:33	0:15	0:-82	0:-74	0:163	0:-163	0:58		Manl PC
f	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec) (SBD)	6.85733479034E+03	Apriori delay (usec)		6.85752538917E+03	Resid mbdelay (usec)	-3.09884E-03	+/-	7.2E-05	
Sband delay (usec)	6.85733619417E+03	Apriori clock (usec)		1.0650196E+00	Resid sbdelay (usec)	-1.89195E-01	+/-	5.7E-04	
Phase delay (usec)	6.85752538917E+03	Apriori clockrate (us/s)		-5.4801714E-07	Resid phdelay (usec)	-1.12357E-09	+/-	2.5E-07	
Delay rate (us/s)	1.18006394409E+00	Apriori rate (us/s)		1.18006300673E+00	Resid rate (us/s)	9.37362E-07	+/-	3.8E-09	
Total phase (deg)		8.4	Apriori accel (us/s/s)		-4.42735801283E-05	Resid phase (deg)	-0.0	+/-	7.6

	RMS	Theor.	Amplitude	0.519 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	47.1	17.9	Search (512X32)	0.486	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/seg (%)	58.5	31.2	Interp.	0.000	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	66.4	10.8	Inc. seg. avg.	0.679	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00
amp/frq (%)	63.8	18.8	Inc. frq. avg.	0.823					

f: az 40.8 el 64.1 pa -123.1 P: az 307.1 el 35.7 pa 71.7 u,v (fr/asec) -10127.880 -4370.502 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fP.W.127.3MP1AB

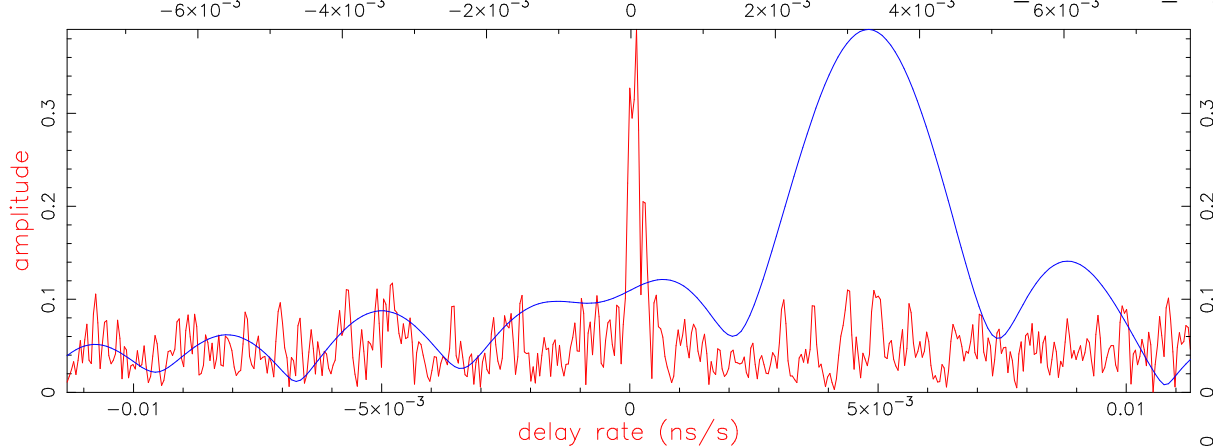
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fp

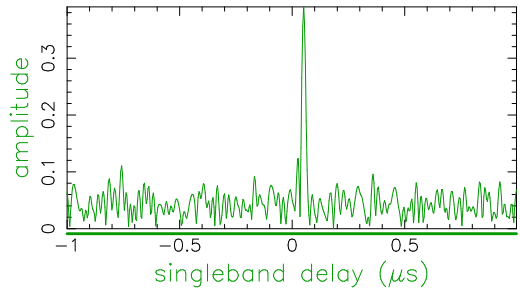
VLBA\_FD - VLBA\_PT, fgroup W, pol RR

multiband delay ( $\mu$ s)

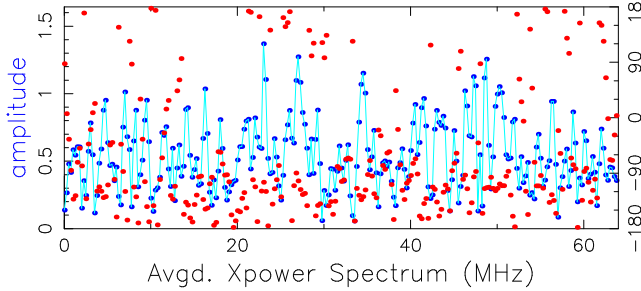


Fringe quality 9

SNR 11.3  
 Int time 112.633  
 Amp 0.390  
 Phase 68.6  
 PFD 1.2e-21  
 Delays (us)  
 SBD 0.050940  
 MBD 0.003292  
 Fringe rate (Hz) 0.009951  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

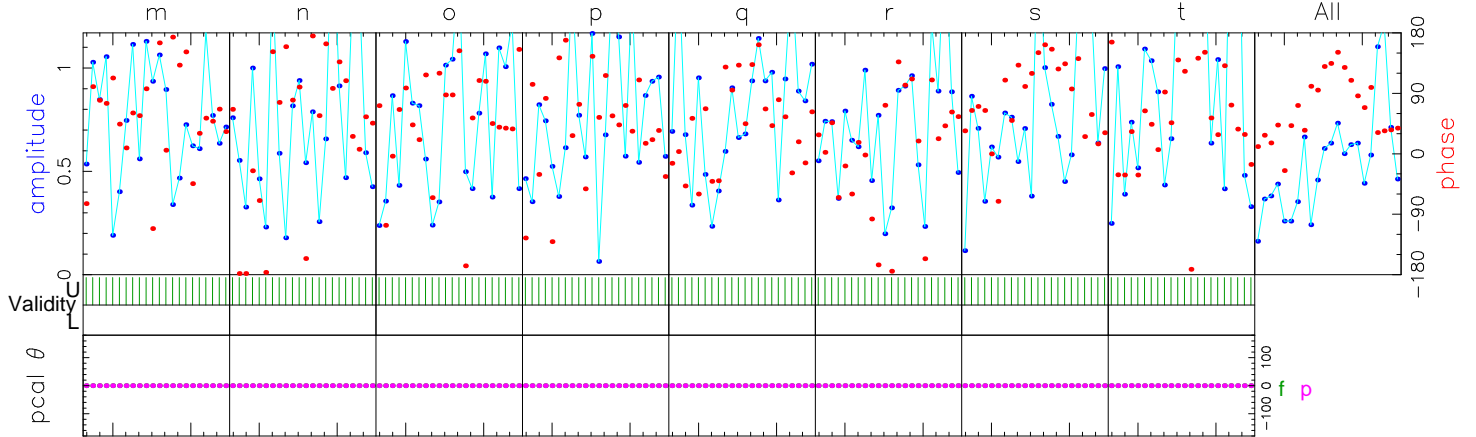


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113012  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	67.5	94.7	76.8	51.9	36.6	48.6	92.3	74.3	Phase	68.6
	0.4	0.3	0.5	0.4	0.4	0.3	0.5	0.5	Ampl.	0.4
	269.6	269.4	270.3	269.7	349.1	270.5	270.2	270.2	Sbd box	270.0
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-2.71750345875E+01					-2.72252017760E+01			Resid mbdelay (usec)	3.29219E-03 +/- 9.6E-05
Sband delay (usec)	-2.71742615260E+01					-5.6530151E+00			Resid sbdelay (usec)	5.09402E-02 +/- 7.6E-04
Phase delay (usec)	-2.72251995642E+01					-3.2847705E-07			Resid phdelay (usec)	2.21184E-06 +/- 3.3E-07
Delay rate (us/s)	-4.09183787439E-02					-4.09184942615E-02			Resid rate (us/s)	1.15518E-07 +/- 5.0E-09
Total phase (deg)			-248.6			-4.41098732596E-06			Resid phase (deg)	68.6 +/- 10.1
	RMS	Theor.	Amplitude	0.390 +/- 0.034					Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	46.1	23.7	Search (512X32)	0.369					Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	75.6	41.4	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	22.5	14.3	Inc. seg. avg.	0.500					Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	14.7	25.0	Inc. frq. avg.	0.400					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
										ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) 347.249 -706.184 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fp..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fp.W.128.3MP1AB

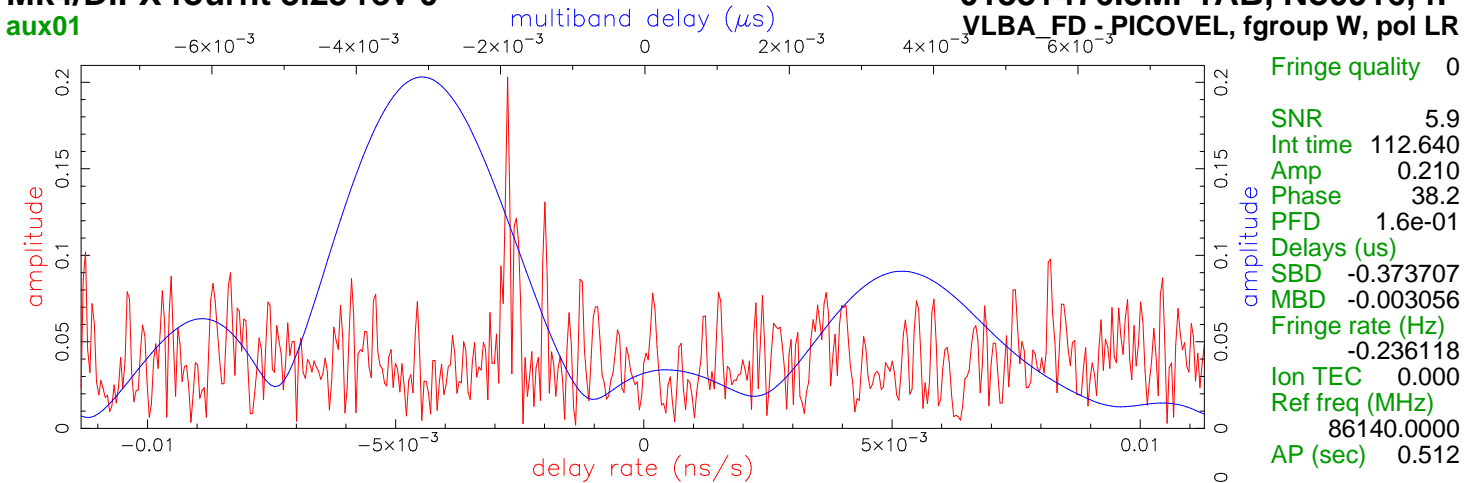


Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fP

VLBA\_FD - PICOVEL, fgroup W, pol LR



Fringe quality 0

SNR 5.9

Int time 112.640

Amplitude 0.210

Phase 38.2

PFD 1.6e-01

Delays (us)

SBD -0.373707

MBD -0.003056

Fringe rate (Hz)

-0.236118

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c241a

Exper # 1234

Yr:day 2024:109

Start 170437.17

Stop 170629.81

FRT 170540.00

Corr/FF/build

2025:007:183750

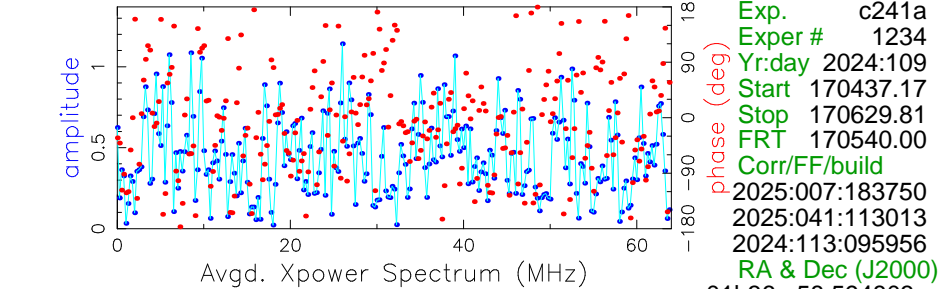
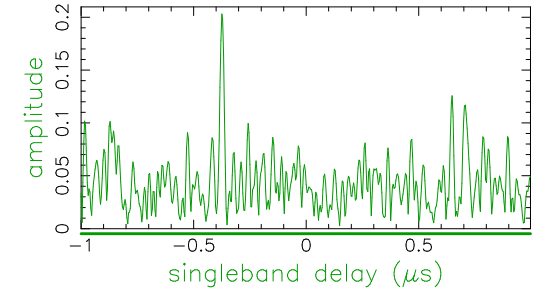
2025:041:113013

2024:113:095956

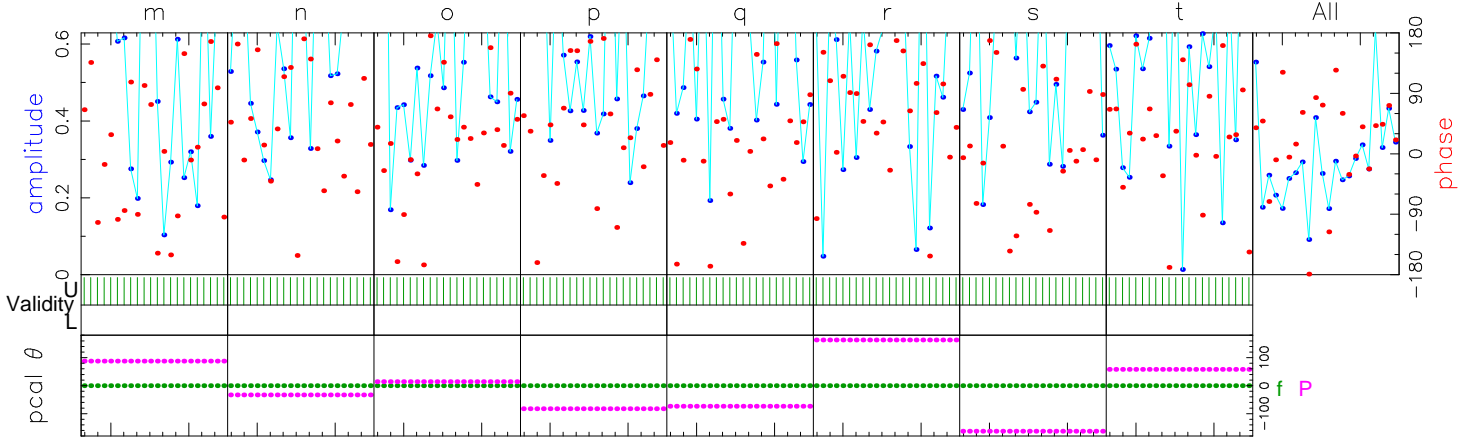
RA & Dec (J2000)

01h36m58.594803s

+47°51'29.100073"



Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:P	0:88	0:33	0:15	0:82	0:74	0:163	0:163	0:58		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) 6.85714733348E+03 Apriori delay (usec) 6.85752538917E+03 Resid mbdelay (usec) -3.05569E-03 +/- 1.8E-04

Sband delay (usec) 6.85715168242E+03 Apriori clock (usec) 1.0650196E+00 Resid sbdelay (usec) -3.73707E-01 +/- 1.4E-03

Phase delay (usec) 6.85752539040E+03 Apriori clockrate (us/s) -5.4801714E-07 Resid phdelay (usec) 1.23139E-06 +/- 6.2E-07

Delay rate (us/s) 1.18006026563E+00 Apriori rate (us/s) 1.18006300673E+00 Resid rate (us/s) -2.74109E-06 +/- 9.6E-09

Total phase (deg) 46.6 Apriori accel (us/s/s) -4.42735801283E-05 Resid phase (deg) 38.2 +/- 19.3

ph/seg (deg) 64.4 45.2 Search (512X32) 0.199 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 74.8 78.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 29.4 27.3 Inc. seg. avg. 0.233 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 35.1 47.6 Inc. frq. avg. 0.204 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011

Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 P: az 307.1 el 35.7 pa 71.7 u,v (fr/asec) -10127.880 -4370.502 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fP.W.129.3MP1AB

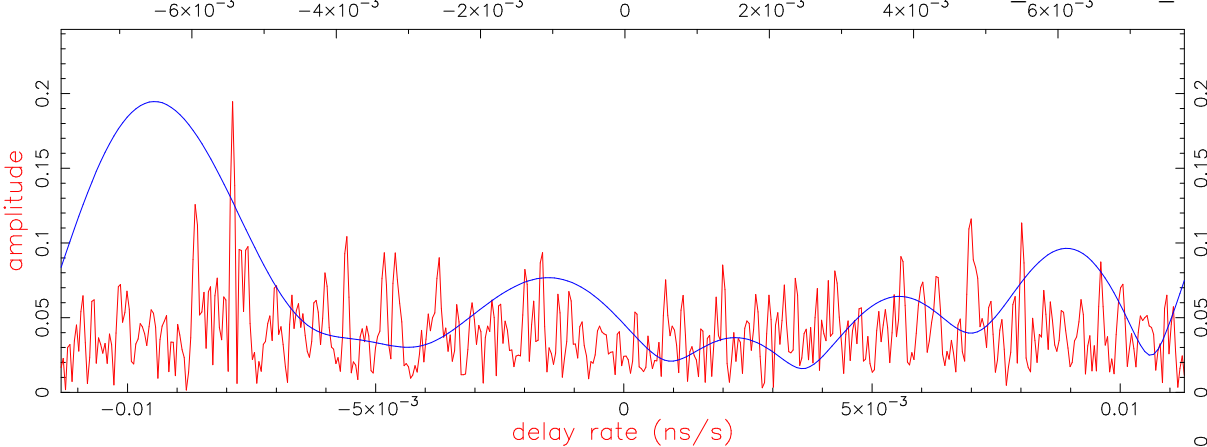
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fp

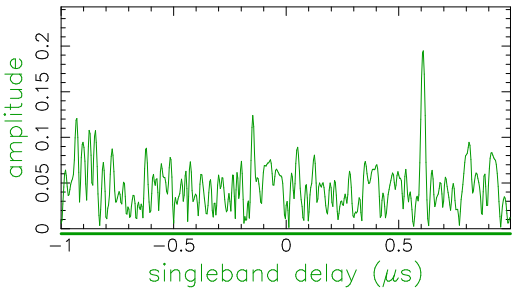
VLBA\_FD - VLBA\_PT, fgroup W, pol LR

multiband delay ( $\mu$ s)

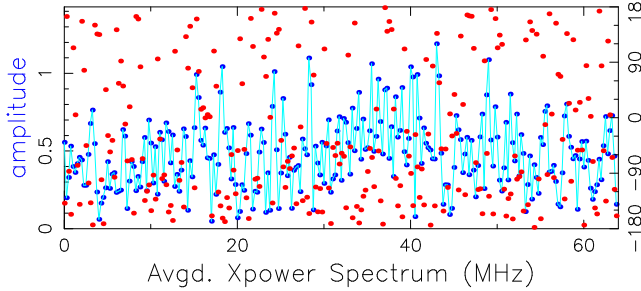


Fringe quality 0

SNR 5.7  
 Int time 112.633  
 Amp 0.243  
 Phase 102.9  
 PFD 4.7e-01  
 Delays (us)  
 SBD 0.607705  
 MBD -0.006534  
 Fringe rate (Hz)  
 -0.680364  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

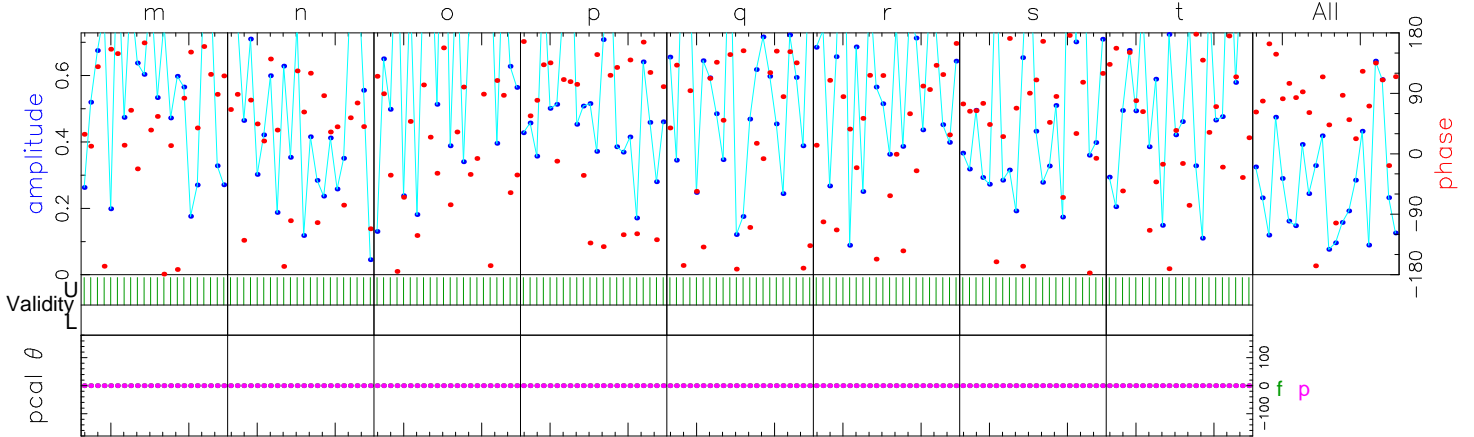


delay rate (ns/s)



Exp. c241a  
 Yr:day 1234  
 Start 2024:109  
 Stop 2024:109  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113013  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
p	0	0	0	0	0	0	0	0		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-2.66223605128E+01	Apriori delay (usec)	-2.72252017760E+01	Resid mbdelay (usec)	-6.53374E-03	+/-	1.9E-04
Sband delay (usec)	-2.66174972760E+01	Apriori clock (usec)	-5.6530151E+00	Resid sbdelay (usec)	6.07705E-01	+/-	1.5E-03
Phase delay (usec)	-2.72251984572E+01	Apriori clockrate (us/s)	-3.2847705E-07	Resid phdelay (usec)	3.31881E-06	+/-	6.5E-07
Delay rate (us/s)	-4.09263926156E-02	Apriori rate (us/s)	-4.09184942615E-02	Resid rate (us/s)	-7.89835E-06	+/-	9.9E-09
Total phase (deg)	-214.2	Apriori accel (us/s/s)	-4.41098732596E-06	Resid phase (deg)	102.9	+/-	20.0

ph/seg (deg)	57.6	Theor.	46.9	Amplitude	0.243 +/- 0.042	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	89.0	Search (512X32)	0.185	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	41.1	Inc. seg. avg.	0.254	Inc. frq. avg.	0.248	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	34.4	Inc. frq. avg.	0.248			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 40.8 el 64.1 pa -123.1 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) 347.249 -706.184 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fp..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fp.W.130.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

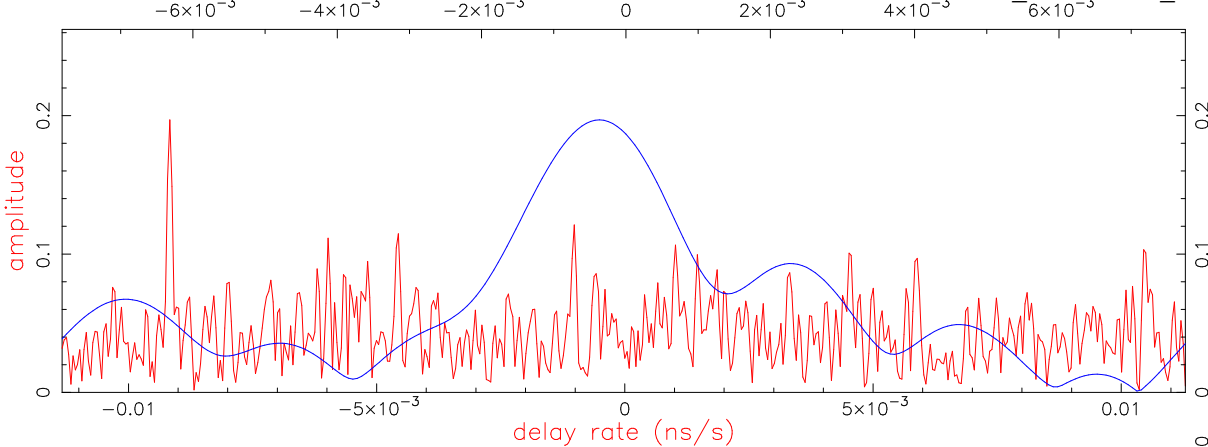
aux01

0133+476.3MP1AB, No0916, fp

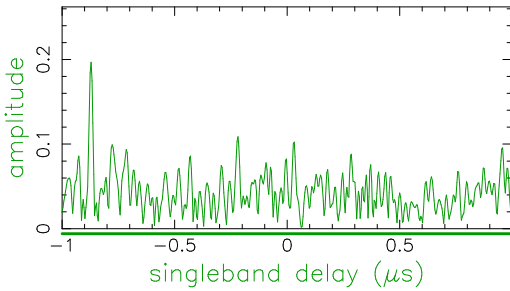
VLBA\_FD - VLBA\_PT, fgroup W, pol RL

multiband delay ( $\mu$ s)

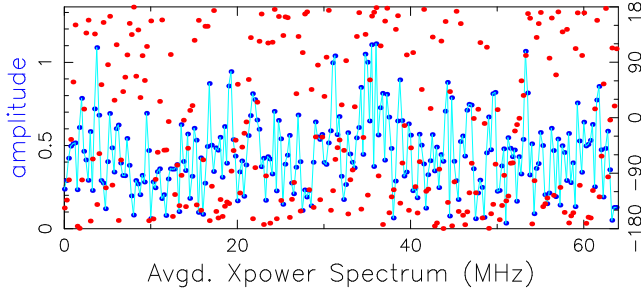
Fringe quality 0



SNR 5.7  
 Int time 112.633  
 Amp 0.262  
 Phase -118.9  
 PFD 4.7e-01  
 Delays (us)  
 SBD -0.871598  
 MBD -0.000375  
 Fringe rate (Hz)  
 -0.790189  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

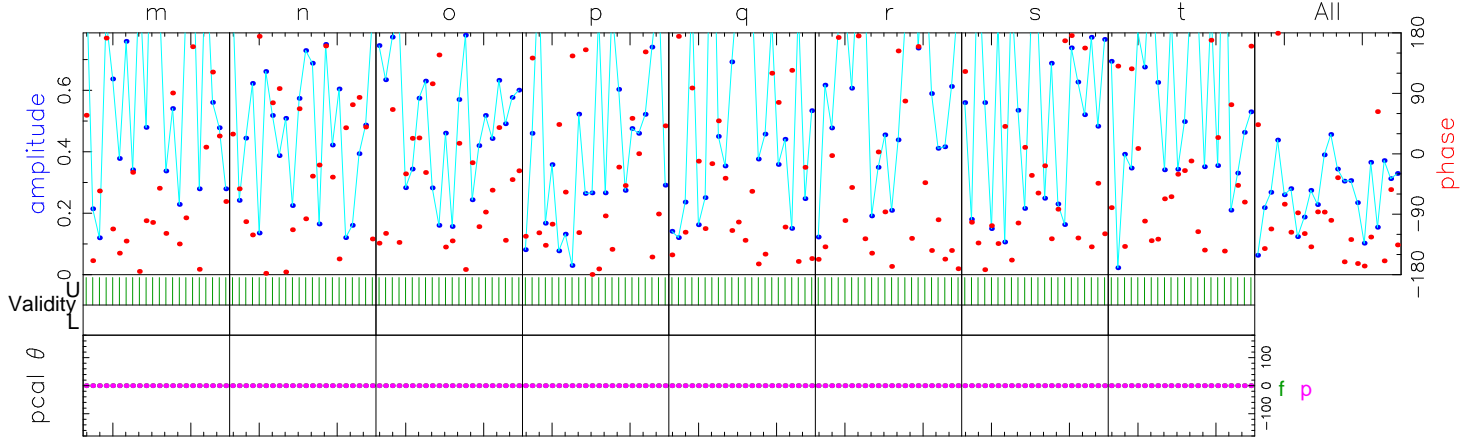


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113014  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-127.0	-138.0	-66.9	-128.7	-114.7	-137.3	-126.2	-99.8	Phase	-118.9
	0.2	0.1	0.2	0.3	0.2	0.4	0.4	0.4	Ampl.	0.2
	39.0	234.9	447.2	321.3	8.7	71.8	57.2	212.6	Sbd box	33.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	-2.81005769392E+01		Apriori delay (usec)		-2.72252017760E+01		Resid mbdelay (usec)		-3.75163E-04	+/- 1.9E-04
Sband delay (usec)	-2.80968002760E+01		Apriori clock (usec)		-5.6530151E+00		Resid sbdelay (usec)		-8.71598E-01	+/- 1.5E-03
Phase delay (usec)	-2.72252056102E+01		Apriori clockrate (us/s)		-3.2847705E-07		Resid phdelay (usec)		-3.83421E-06	+/- 6.5E-07
Delay rate (us/s)	-4.09276675743E-02		Apriori rate (us/s)		-4.09184942615E-02		Resid rate (us/s)		-9.17331E-06	+/- 9.9E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.41098732596E-06		Resid phase (deg)		-118.9	+/- 20.0

ph/seg (deg) 63.0 46.9 Search (512X32) 0.190 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 64.5 81.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 25.8 28.3 Inc. seg. avg. 0.272 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.0 49.4 Inc. frq. avg. 0.248 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) 347.249 -706.184 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fp..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fp.W.132.3MP1AB

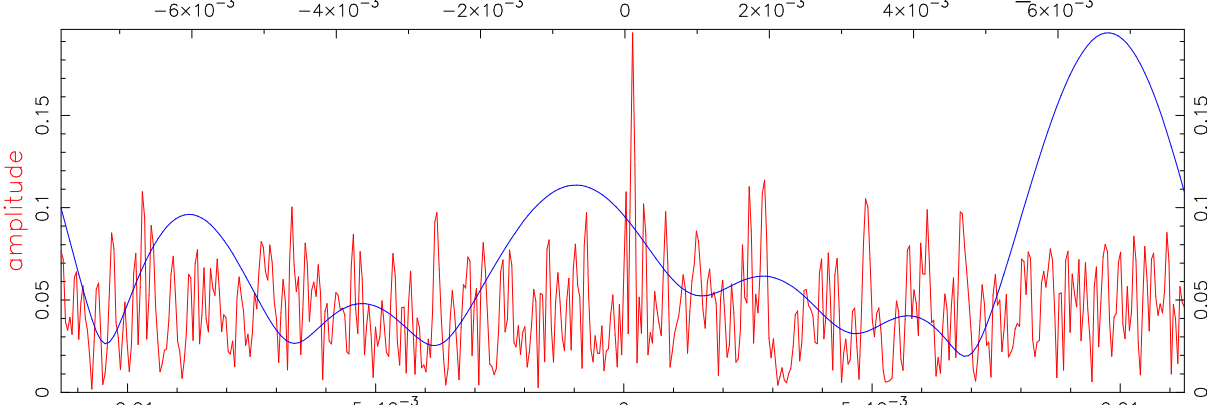
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fP

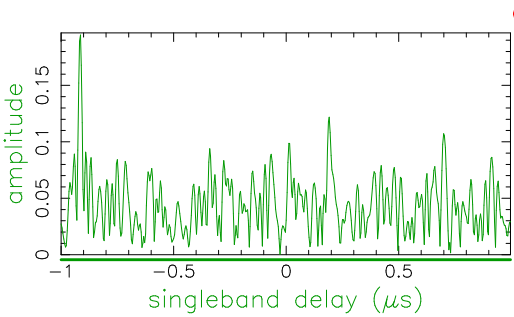
VLBA\_FD - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)

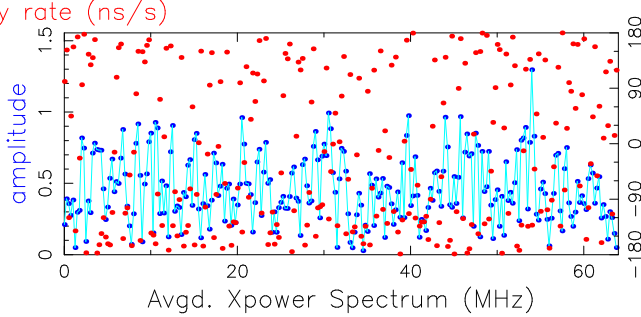


Fringe quality 0

SNR 5.7  
 Int time 112.640  
 Amp 0.197  
 Phase 14.9  
 PFD 5.1e-01  
 Delays (us)  
 SBD -0.915381  
 MBD 0.006658  
 Fringe rate (Hz)  
 0.014906  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

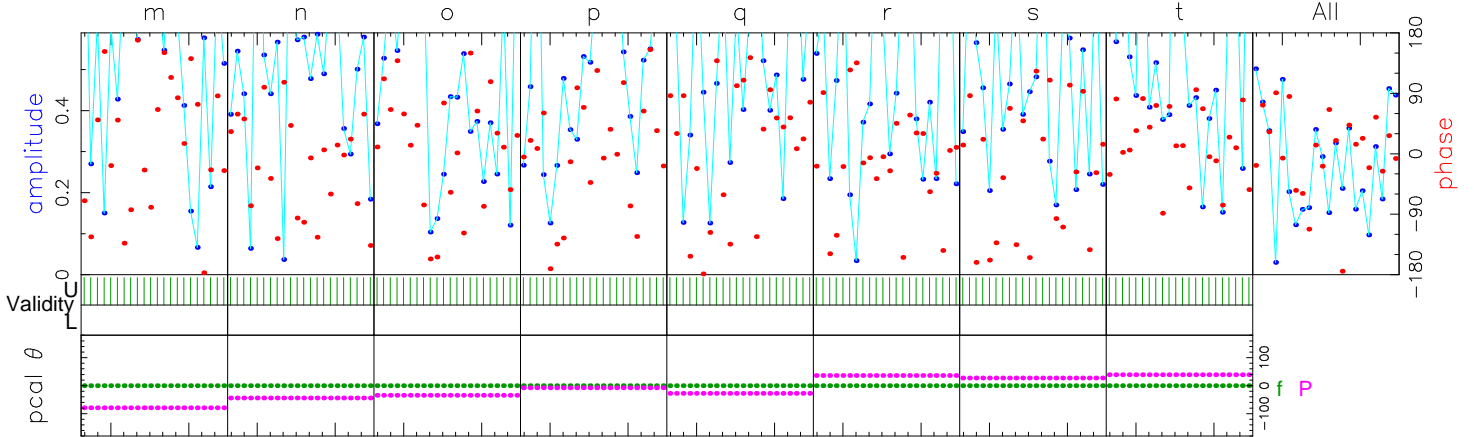


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113015  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 22 segs, 10 APs / seg (5.12 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
f	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	6.85661017210E+03	Apriori delay (usec)	6.85752538917E+03	Resid mbdelay (usec)	6.65793E-03	+/-	1.9E-04
Sband delay (usec)	6.85661000842E+03	Apriori clock (usec)	1.0650196E+00	Resid sbdelay (usec)	-9.15381E-01	+/-	1.5E-03
Phase delay (usec)	6.85752538965E+03	Apriori clockrate (us/s)	-5.4801714E-07	Resid phdelay (usec)	4.82094E-07	+/-	6.5E-07
Delay rate (us/s)	1.18006317978E+00	Apriori rate (us/s)	1.18006300673E+00	Resid rate (us/s)	1.73050E-07	+/-	1.0E-08
Total phase (deg)	23.3	Apriori accel (us/s/s)	-4.42735801283E-05	Resid phase (deg)	14.9	+/-	20.1

ph/seg (deg)	60.6	RMS	47.1	Theor.	60.6	Amplitude	0.197 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	77.2	60.6	47.1	Search (512X32)	0.192	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	32.3	77.2	82.2	Inc. seg. avg.	0.202	Inc. frq. avg.	0.188	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	61.9	32.3	28.4	Inc. frq. avg.	0.188	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite

f: az 40.8 el 64.1 pa -123.1 P: az 307.1 el 35.7 pa 71.7 u, v (fr/asec) -10127.880 -4370.502 simultaneous interpolator

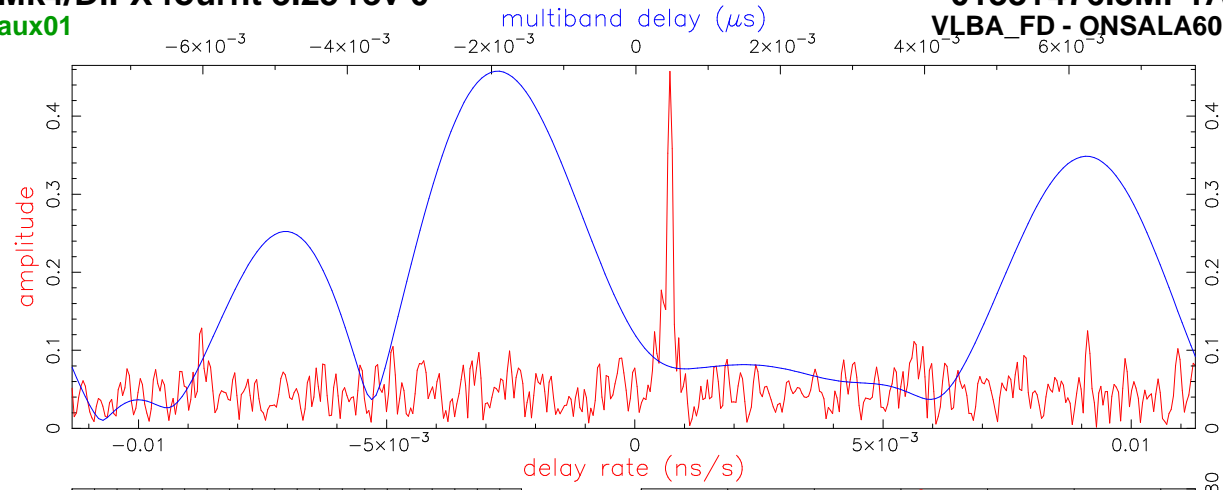
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fP.W.134.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fX

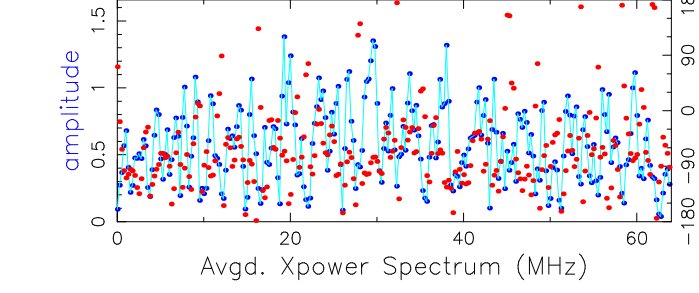
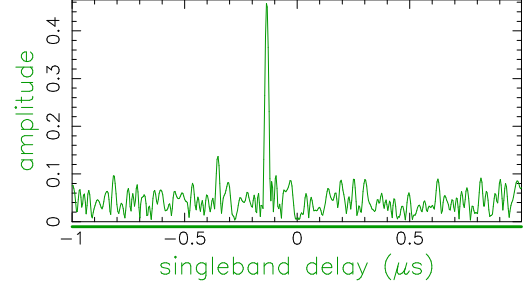
VLBA\_FD - ONSALA60, fgroup W, pol LL



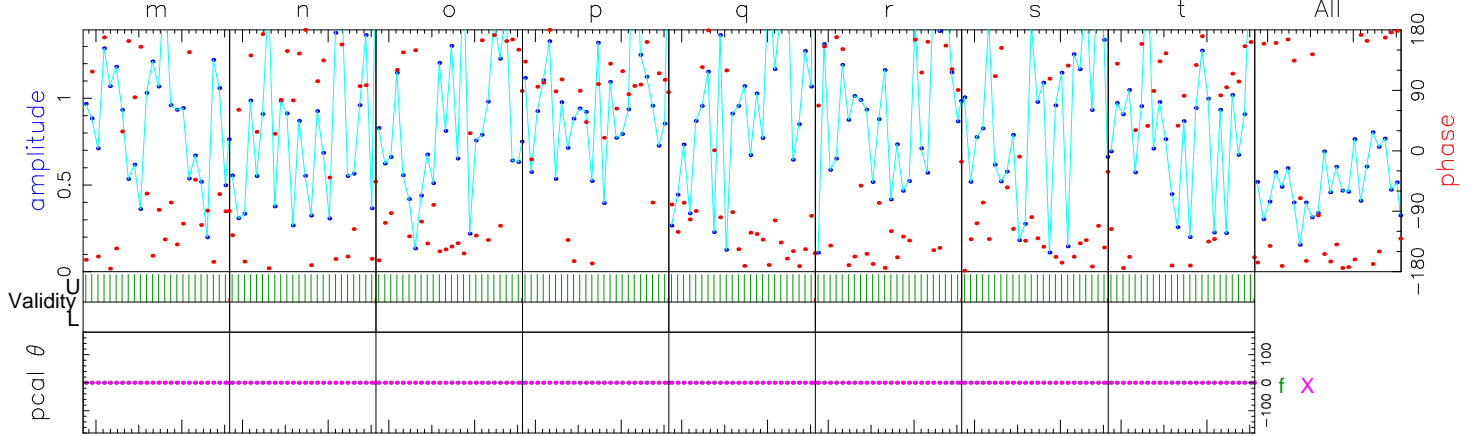
Fringe quality 9

SNR 12.6  
 Int time 98.816  
 Amp 0.465  
 Phase -172.6  
 PFD 2.1e-28  
 Delays (us)  
 SBD -0.135108  
 MBD -0.001876  
 Fringe rate (Hz) 0.059982  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113155  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"



Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-137.6	149.9	-157.1	111.3	-136.9	-175.4	-136.6	139.8	Phase	-172.6
	0.5	0.5	0.6	0.6	0.7	0.6	0.7	0.5	Ampl.	0.6
	222.6	221.8	221.6	221.4	222.4	222.0	221.6	221.4	Sbd box	222.4
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	5.91215017982E+03	Apriori delay (usec)	5.91229268128E+03	Resid mbdelay (usec)	-1.87646E-03	+/-	8.6E-05
Sband delay (usec)	5.91215757378E+03	Apriori clock (usec)	-1.1260818E+02	Resid sbdelay (usec)	-1.35108E-01	+/-	6.8E-04
Phase delay (usec)	5.91229267571E+03	Apriori clockrate (us/s)	-1.1664031E-06	Resid phdelay (usec)	-5.56621E-06	+/-	2.9E-07
Delay rate (us/s)	9.36477669107E-01	Apriori rate (us/s)	9.36476972776E-01	Resid rate (us/s)	6.96331E-07	+/-	5.1E-09
Total phase (deg)	30.9	Apriori accel (us/s/s)	-5.99446761682E-05	Resid phase (deg)	-172.6	+/-	9.1

ph/seg (deg)	RMS 34.0	Theor. 22.7	Amplitude 0.465 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	35.9	39.6	Search (512X32) 0.448	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	47.4	12.8	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	35.7	22.4	Inc. seg. avg. 0.473	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	dr window (ns/s) -0.011 0.011
			Inc. frq. avg. 0.584	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00	

f: az 40.8 el 64.1 pa -123.1 X: az 301.3 el 38.5 pa 43.4 u,v (fr/asec) -8053.555 -7166.909 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fX..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fX.W.331.3MP1AB

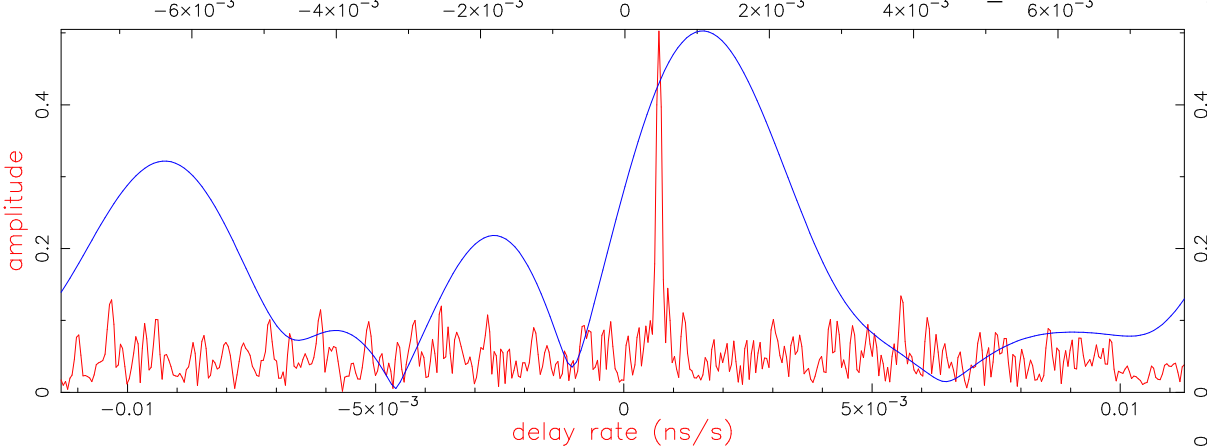
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fX

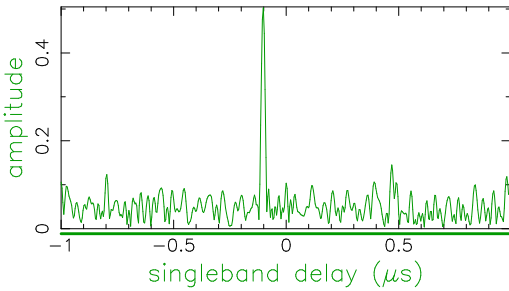
VLBA\_FD - ONSALA60, fgroup W, pol RR

multiband delay ( $\mu$ s)

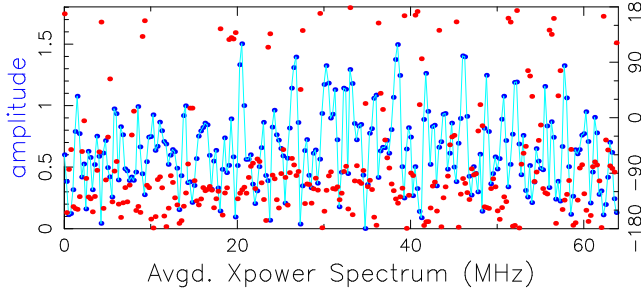


Fringe quality 9

SNR 13.7  
 Int time 98.816  
 Amp 0.505  
 Phase 126.1  
 PFD 1.4e-34  
 Delays (us)  
 SBD -0.102291  
 MBD 0.001048  
 Fringe rate (Hz)  
 0.059539  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

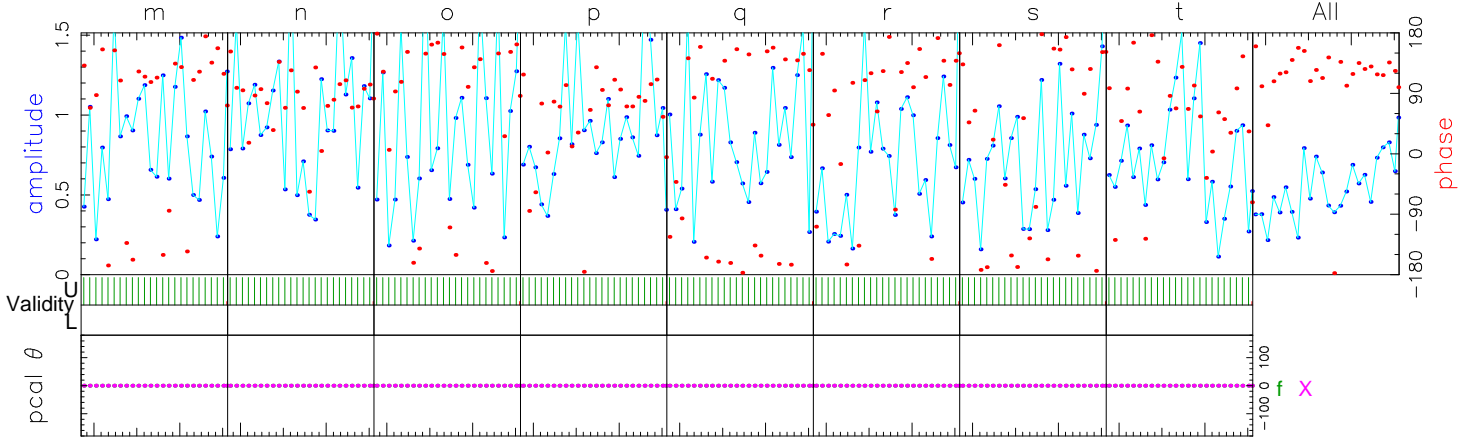


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113156  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0		
f	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	5.91218435438E+03	Apriori delay (usec)	5.91229268128E+03	Resid mbdelay (usec)	1.04811E-03	+/-	7.9E-05
Sband delay (usec)	5.91219039078E+03	Apriori clock (usec)	-1.1260818E+02	Resid sbdelay (usec)	-1.02291E-01	+/-	6.3E-04
Phase delay (usec)	5.91229268535E+03	Apriori clockrate (us/s)	-1.1664031E-06	Resid phdelay (usec)	4.06780E-06	+/-	2.7E-07
Delay rate (us/s)	9.36477663960E-01	Apriori rate (us/s)	9.36476972776E-01	Resid rate (us/s)	6.91184E-07	+/-	4.7E-09
Total phase (deg)	329.6	Apriori accel (us/s/s)	-5.99446761682E-05	Resid phase (deg)	126.1	+/-	8.4

ph/seg (deg)	26.0	Theor.	20.9	Amplitude	0.505 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	34.9	Search (512X32)	0.482	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	38.9	Inc. seg. avg.	0.503	Inc. frq. avg.	0.593	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	34.0	Inc. frq. avg.	0.593			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 40.8 el 64.1 pa -123.1 X: az 301.3 el 38.5 pa 43.4 u,v (fr/asec) -8053.555 -7166.909 simultaneous interpolator

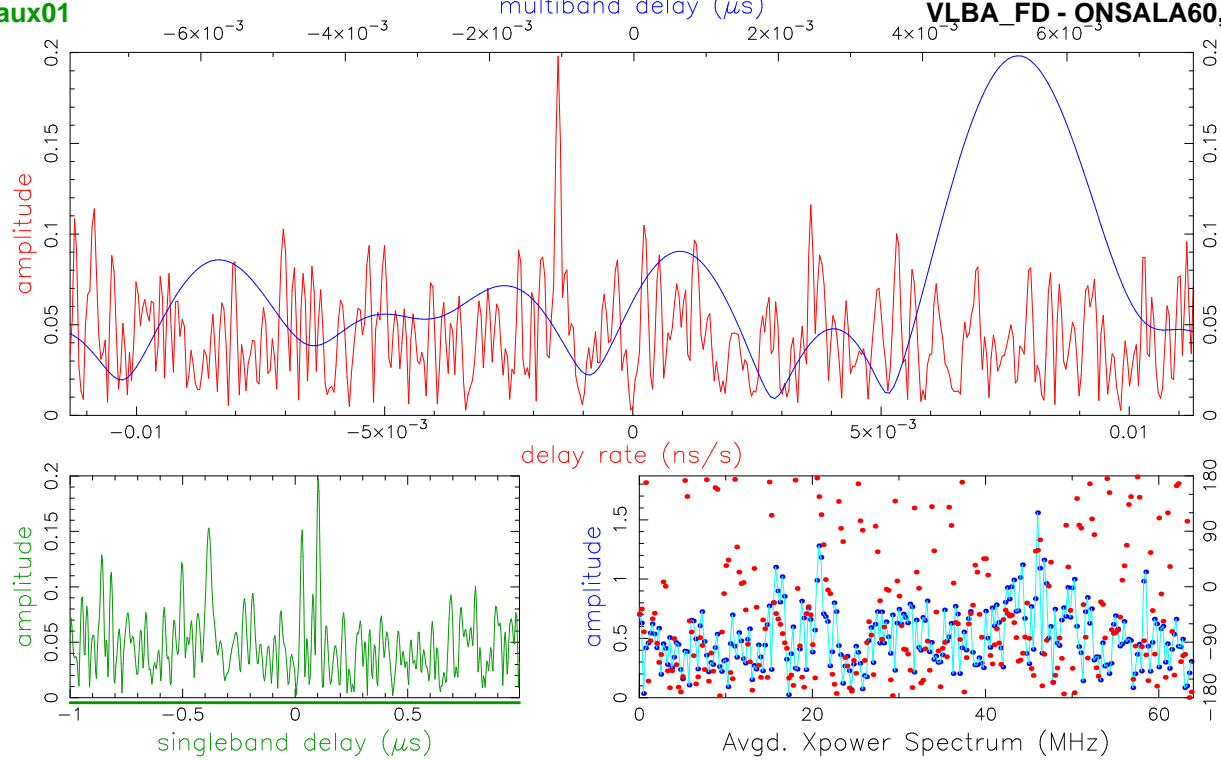
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fX..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fX.W.336.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

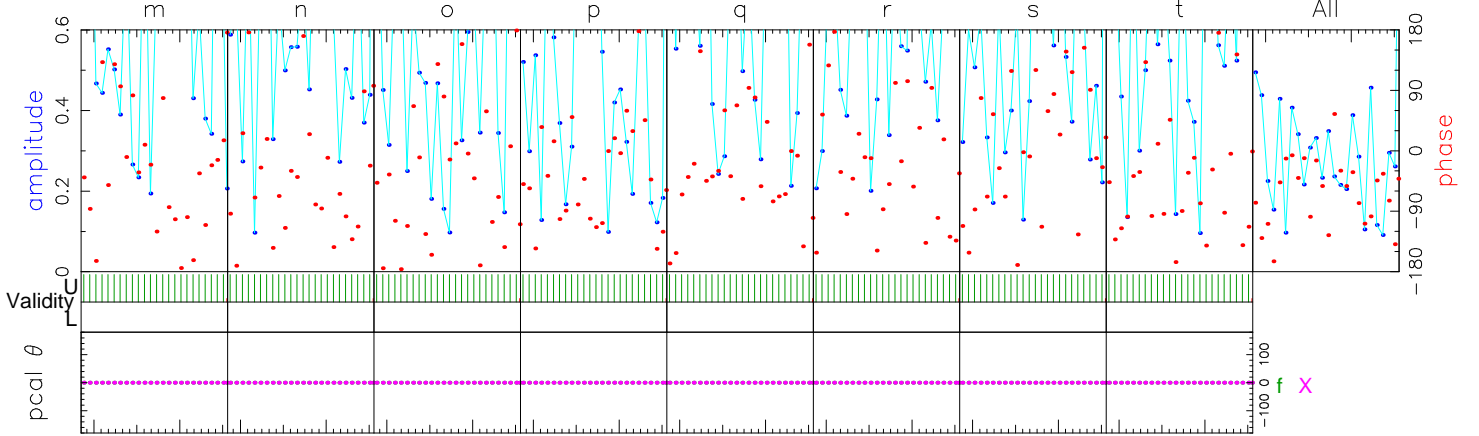
0133+476.3MP1AB, No0916, fX

VLBA\_FD - ONSALA60, fgroup W, pol LR



Fringe quality 0  
 SNR 5.4  
 Int time 98.816  
 Amp 0.200  
 Phase -65.7  
 PFD 9.8e-01  
 Delays (us)  
 SBD 0.102289  
 MBD 0.005383  
 Fringe rate (Hz) -0.129961  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113157  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-59.5	-75.1	-62.1	-62.2	-57.4	-53.6	88.1	-82.6	Phase	-65.7		
	0.2	0.3	0.1	0.3	0.3	0.2	0.1	0.4	Ampl.	0.2		
	125.1	227.8	242.0	141.5	370.3	19.0	511.7	283.8	Sbd box	283.2		
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used			
f	0	0	0	0	0	0	0	0	PC freqs			
X	0	0	0	0	0	0	0	0	PC freqs			
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
X	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Tracks			
Group delay (usec) (SBD)	5.91239181437E+03		Apriori delay (usec)		5.91229268128E+03		Resid mbdelay (usec)		5.38309E-03	+/- 2.0E-04		
Sband delay (usec)	5.91239497028E+03		Apriori clock (usec)		-1.1260818E+02		Resid sbdelay (usec)		1.02289E-01	+/- 1.6E-03		
Phase delay (usec)	5.91229267916E+03		Apriori clockrate (us/s)		-1.1664031E-06		Resid phdelay (usec)		-2.11811E-06	+/- 6.8E-07		
Delay rate (us/s)	9.36475464053E-01		Apriori rate (us/s)		9.36476972776E-01		Resid rate (us/s)		-1.50872E-06	+/- 1.2E-08		
Total phase (deg)	137.8		Apriori accel (us/s/s)		-5.99446761682E-05		Resid phase (deg)		-65.7	+/- 21.2		
	RMS	Theor.	Amplitude	0.200 +/- 0.037		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	50.2	53.0	Search (512X32)	0.196		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	76.3	92.6	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	63.7	30.0	Inc. seg. avg.	0.199		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	44.7	52.4	Inc. frq. avg.	0.191		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 40.8 el 64.1 pa -123.1	X: az 301.3 el 38.5 pa 43.4		u, v (fr/asec) -8053.555 -7166.909						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/fX..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/fX.W.341.3MP1AB									

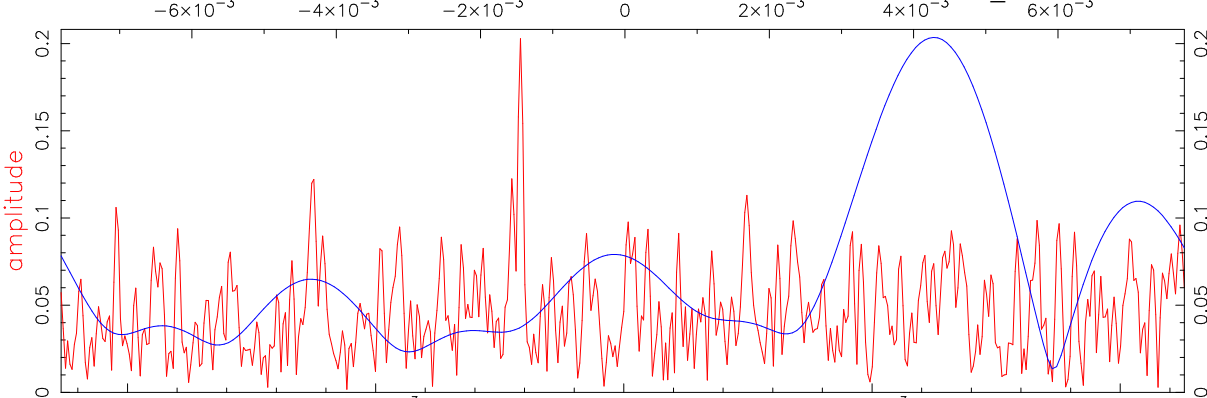
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fX

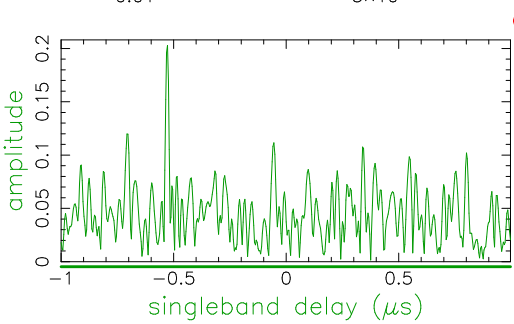
VLBA\_FD - ONSALA60, fgroup W, pol RL

multiband delay ( $\mu$ s)

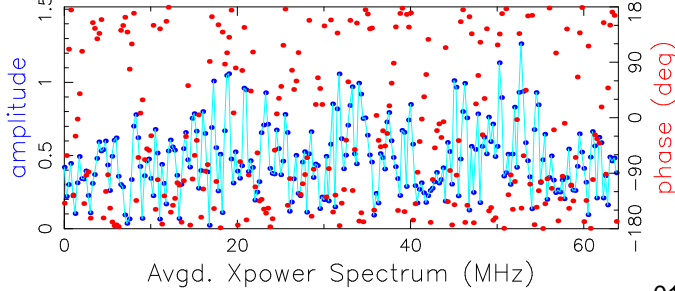


Fringe quality 0

SNR 5.6  
 Int time 98.816  
 Amp 0.208  
 Phase -177.3  
 PFD 7.7e-01  
 Delays (us)  
 SBD -0.528670  
 MBD 0.004193  
 Fringe rate (Hz)  
 -0.178205  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

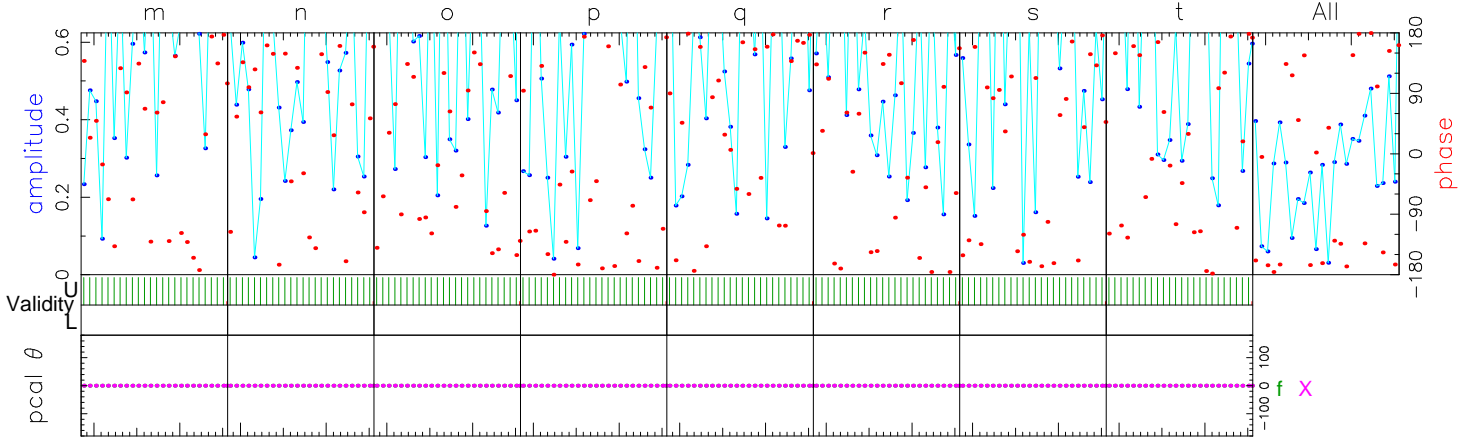


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113159  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	171.3	150.5	-145.8	-131.7	161.5	165.2	159.9	-145.3	Phase	-177.3
	0.2	0.2	0.1	0.3	0.2	0.2	0.3	0.3	Ampl.	0.2
	500.1	17.2	146.4	160.2	215.9	461.4	49.5	361.8	Sbd box	121.7
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	5.91176562477E+03	Apriori delay (usec)	5.91229268128E+03	Resid mbdelay (usec)	4.19350E-03	+/-	1.9E-04
Sband delay (usec)	5.91176401128E+03	Apriori clock (usec)	-1.1260818E+02	Resid sbdelay (usec)	-5.28670E-01	+/-	1.5E-03
Phase delay (usec)	5.91229267556E+03	Apriori clockrate (us/s)	-1.1664031E-06	Resid phdelay (usec)	-5.71623E-06	+/-	6.6E-07
Delay rate (us/s)	9.36474903992E-01	Apriori rate (us/s)	9.36476972776E-01	Resid rate (us/s)	-2.06878E-06	+/-	1.2E-08
Total phase (deg)	26.2	Apriori accel (us/s/s)	-5.99446761682E-05	Resid phase (deg)	-177.3	+/-	20.5

ph/seg (deg)	RMS 72.1	Theor. 51.3	Amplitude Search (512X32)	0.208 +/- 0.037	0.197	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	73.7	89.6	Interp.	0.000	0.197	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	33.0	29.0	Inc. seg. avg.	0.195	0.197	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	26.6	50.7	Inc. frq. avg.	0.208	0.197	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 40.8 el 64.1 pa -123.1 X: az 301.3 el 38.5 pa 43.4 u, v (fr/asec) -8053.555 -7166.909 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fX..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fX.W.347.3MP1AB



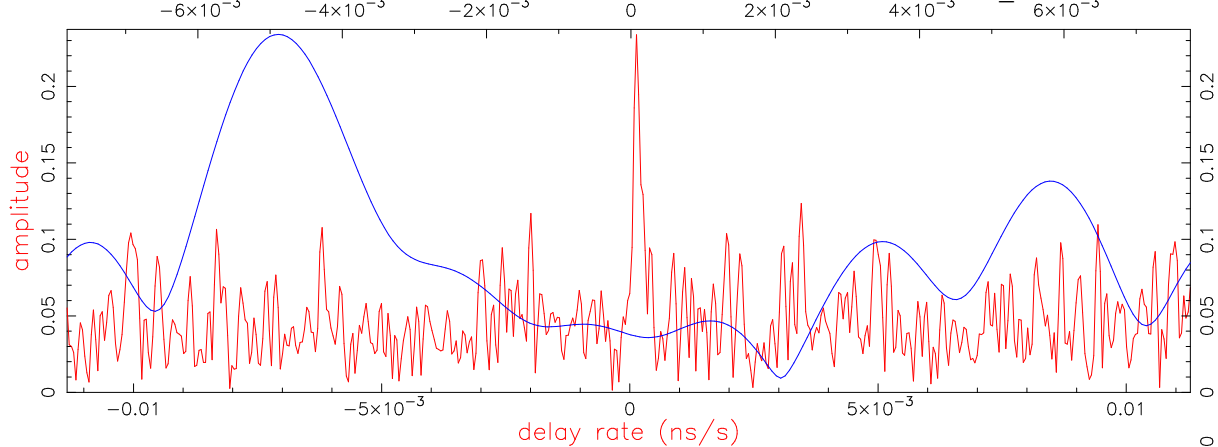
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fY

VLBA\_FD - YEBES40M, fgroup W, pol LL

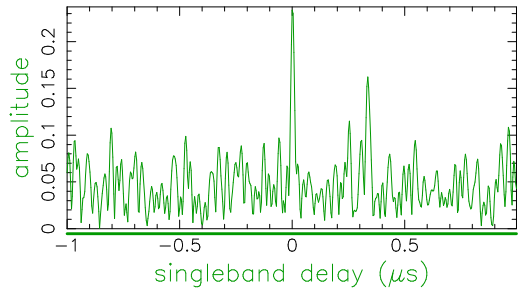
multiband delay ( $\mu$ s)



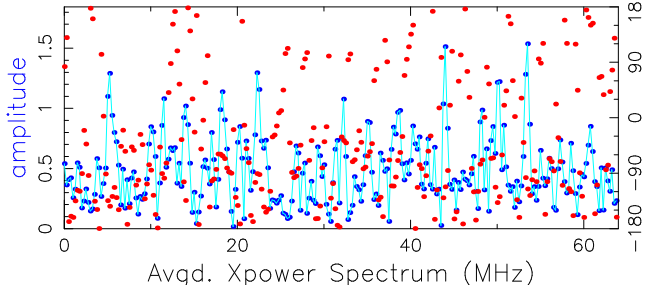
Fringe quality 0

SNR 6.5  
 Int time 99.772  
 Amp 0.237  
 Phase -35.2  
 PFD 6.4e-03  
 Delays (us)  
 SBD 0.001579  
 MBD -0.004837  
 Fringe rate (Hz)  
 0.012160  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

delay rate (ns/s)

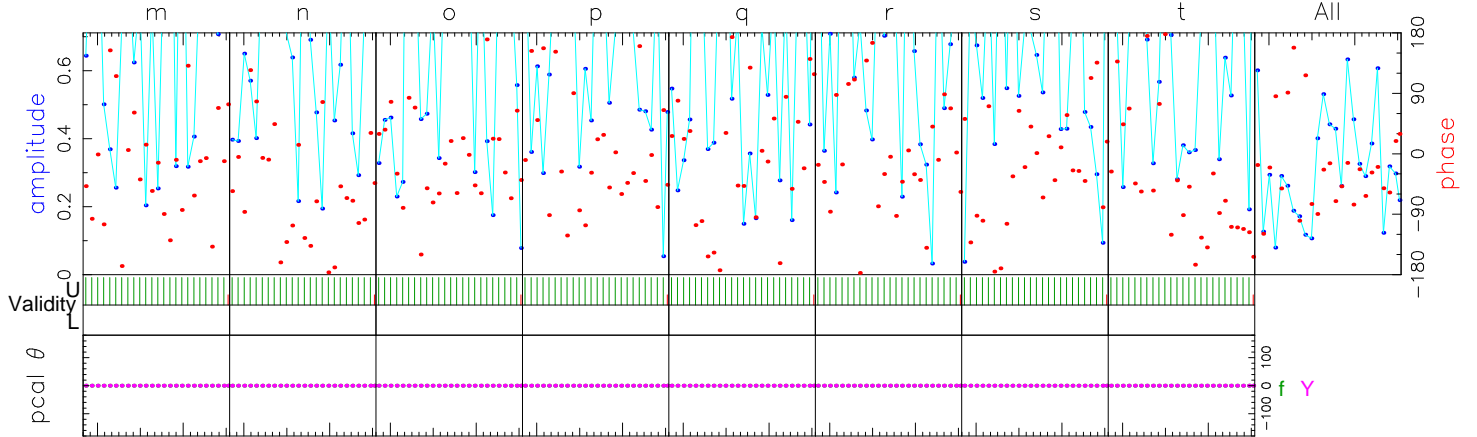


singleband delay ( $\mu$ s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170449.97  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113130  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-47.5	-82.1	1.1	-31.1	7.8	-11.9	-21.6	-99.5	Phase	-35.2
	0.4	0.2	0.4	0.3	0.1	0.3	0.3	0.3	Ampl.	0.3
	255.7	207.4	257.9	494.8	344.1	317.8	279.8	255.2	Sbd box	257.4
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.41783345598E+03	Apriori delay (usec)	6.41783829268E+03	Resid mbdelay (usec)	-4.83670E-03	+/-	1.7E-04
Sband delay (usec)	6.41783987118E+03	Apriori clock (usec)	1.1060516E+02	Resid sbdelay (usec)	1.57850E-03	+/-	1.3E-03
Phase delay (usec)	6.41783829154E+03	Apriori clockrate (us/s)	1.2638890E-06	Resid phdelay (usec)	-1.13485E-06	+/-	5.7E-07
Delay rate (us/s)	1.14289387869E+00	Apriori rate (us/s)	1.14289373753E+00	Resid rate (us/s)	1.41162E-07	+/-	9.9E-09
Total phase (deg)	156.0	Apriori accel (us/s/s)	-4.52808411840E-05	Resid phase (deg)	-35.2	+/-	17.7

ph/seg (deg) 66.7 44.2 Search (512X32) 0.231 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 76.7 77.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 41.6 25.0 Inc. seg. avg. 0.248 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 39.4 43.6 Inc. frq. avg. 0.258 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 Y: az 305.2 el 37.5 pa 68.1 u,v (fr/asec) -9810.242 -4737.552 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fY..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fY.W.273.3MP1AB

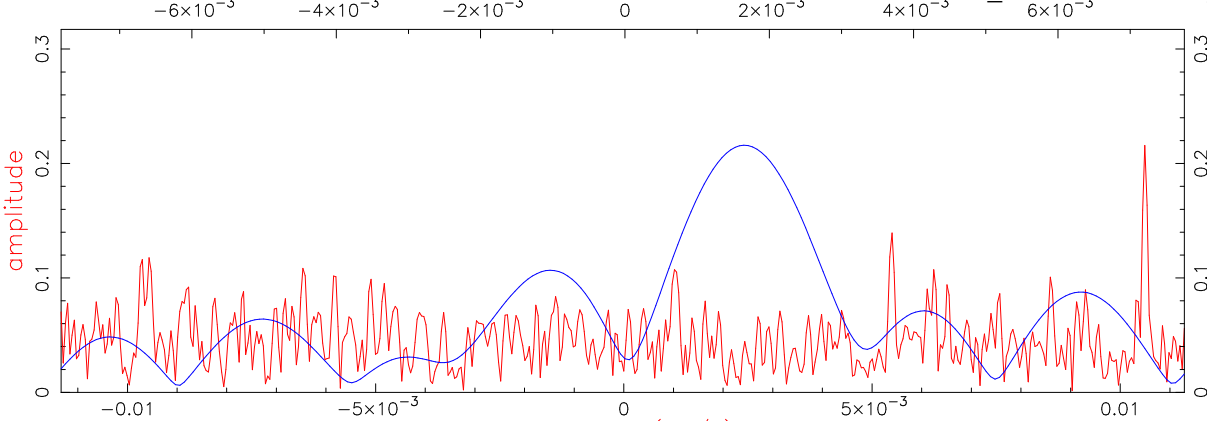
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fY

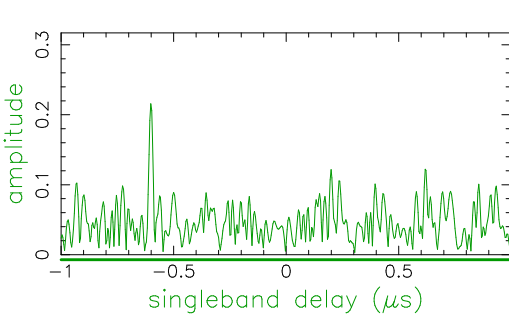
VLBA\_FD - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)

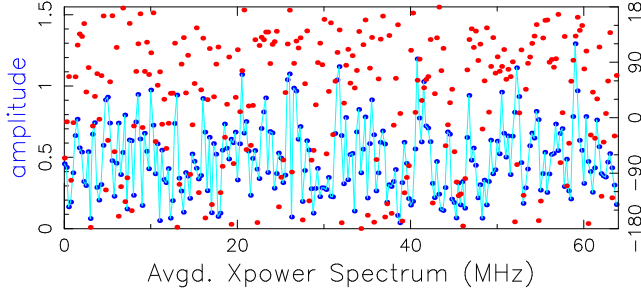


Fringe quality 0

SNR 5.9  
 Int time 99.772  
 Amp 0.317  
 Phase 9.3  
 PFD 1.9e-01  
 Delays (us)  
 SBD -0.600713  
 MBD 0.001681  
 Fringe rate (Hz)  
 0.903804  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

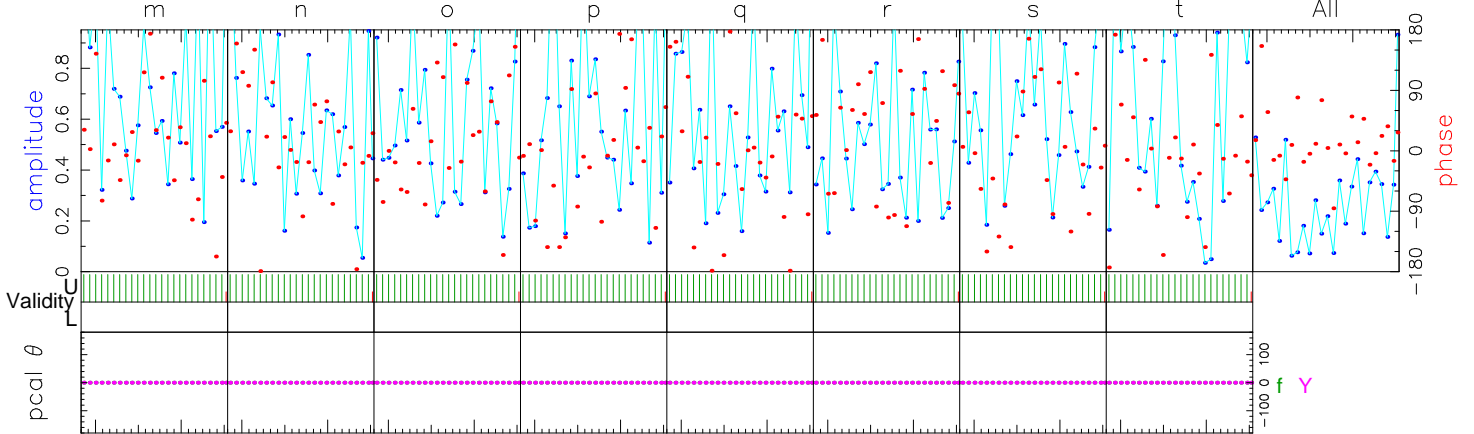


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170449.97  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113131  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0		
f	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	6.41723059898E+03	Apriori delay (usec)	6.41783829268E+03	Resid mbdelay (usec)	1.68130E-03	+/-	1.8E-04
Sband delay (usec)	6.41723757943E+03	Apriori clock (usec)	1.1060516E+02	Resid sbdelay (usec)	-6.00713E-01	+/-	1.5E-03
Phase delay (usec)	6.41783829298E+03	Apriori clockrate (us/s)	1.2638890E-06	Resid phdelay (usec)	2.99577E-07	+/-	6.2E-07
Delay rate (us/s)	1.14290422980E+00	Apriori rate (us/s)	1.14289373753E+00	Resid rate (us/s)	1.04923E-05	+/-	1.1E-08
Total phase (deg)	200.5	Apriori accel (us/s/s)	-4.52808411840E-05	Resid phase (deg)	9.3	+/-	19.4

ph/seg (deg)	46.4	RMS	48.4	Theor.	48.4	Amplitude	0.317 +/- 0.054	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	76.9	Search (512X32)	0.210	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	25.6	Inc. seg. avg.	0.289	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
amp/frq (%)	34.8	Inc. frq. avg.	0.299										

f: az 40.8 el 64.1 pa -123.1 Y: az 305.2 el 37.5 pa 68.1 u, v (fr/asec) -9810.242 -4737.552 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fY..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fY.W.275.3MP1AB

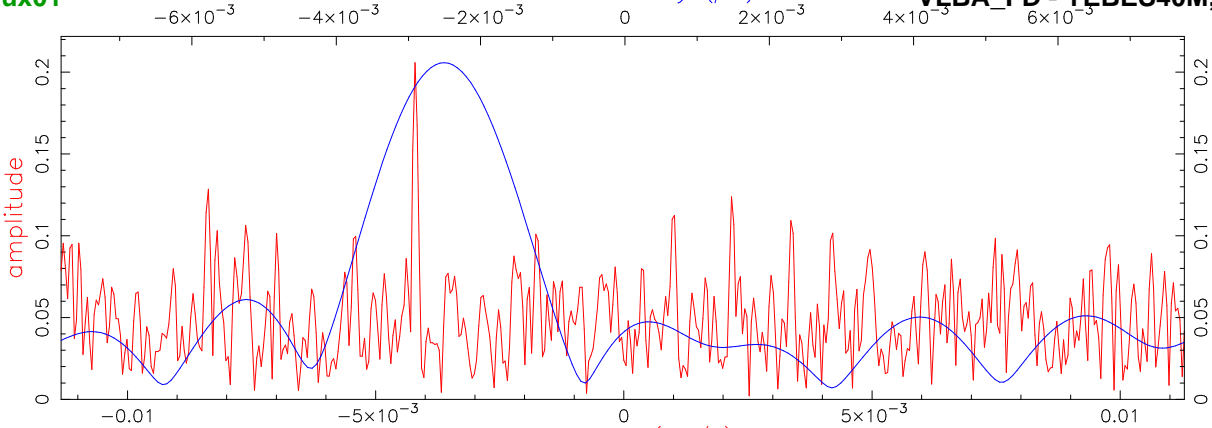
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fY

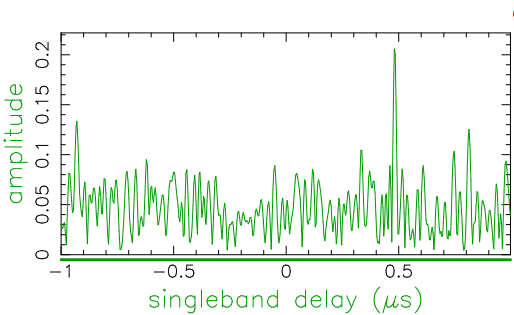
VLBA\_FD - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

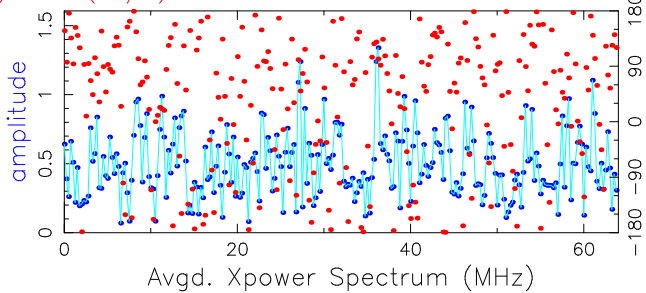


Fringe quality 0

SNR 5.7  
Int time 99.772  
Amp 0.222  
Phase -73.7  
PFD 4.7e-01  
Delays (us)  
SBD 0.481997  
MBD -0.002482  
Fringe rate (Hz)  
-0.361271  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

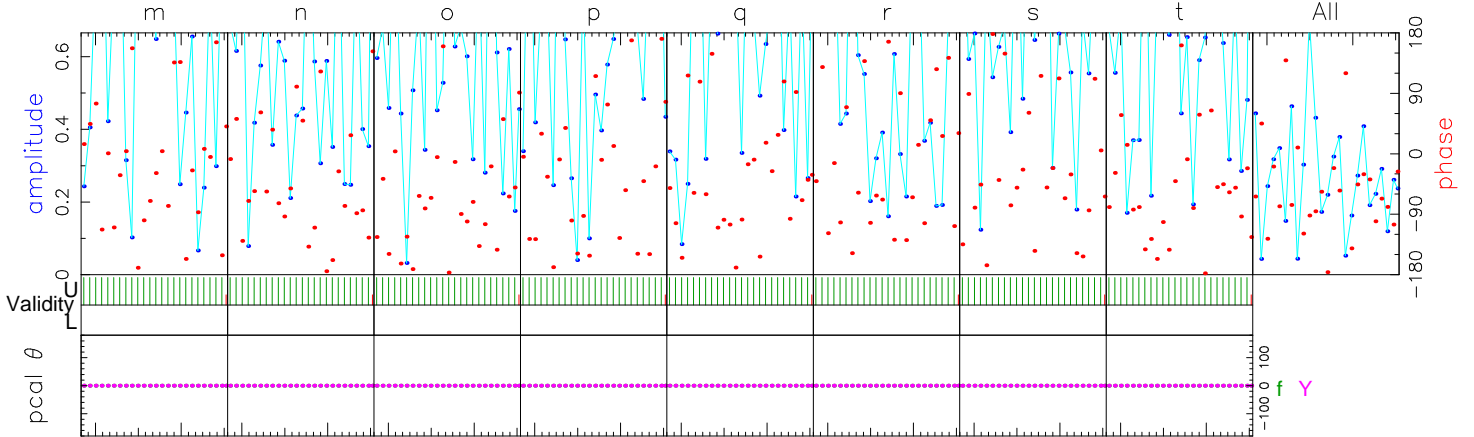


delay rate (ns/s)



Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 170449.97  
Stop 170629.81  
FRT 170540.00  
Corr/FF/build  
2025:007:183750  
2025:041:113132  
2024:113:095956  
RA & Dec (J2000)  
01h36m58.594803s  
+47°51'29.10073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-57.9	-80.1	-83.2	-69.9	-64.2	-84.3	-75.4	-72.2	Phase	-73.7
	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	Ampl.	0.2
	214.2	56.8	381.0	77.6	241.7	75.8	321.0	351.6	Sbd box	380.4
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	6.41832018552E+03	Apriori delay (usec)	6.41783829268E+03	Resid mbdelay (usec)	-2.48216E-03	+/-	1.9E-04
Sband delay (usec)	6.41832028993E+03	Apriori clock (usec)	1.1060516E+02	Resid sbdelay (usec)	4.81997E-01	+/-	1.5E-03
Phase delay (usec)	6.41783829030E+03	Apriori clockrate (us/s)	1.2638890E-02	Resid phdelay (usec)	-2.37556E-06	+/-	6.5E-07
Delay rate (us/s)	1.14288954353E+00	Apriori rate (us/s)	1.14289373753E+00	Resid rate (us/s)	-4.19400E-06	+/-	1.1E-08
Total phase (deg)	117.6	Apriori accel (us/s/s)	-4.52808411840E-05	Resid phase (deg)	-73.7	+/-	20.0

ph/seg (deg)	65.2	Theor.	50.0	Amplitude	0.222 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	77.5	Search (512X32)	0.196	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	10.0	Inc. seg. avg.	0.209	Inc. frq. avg.	0.196	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	25.1	Inc. frq. avg.	0.196			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
f: az 40.8 el 64.1 pa -123.1		Y: az 305.2 el 37.5 pa 68.1		u, v (fr/asec)	-9810.242 -4737.552	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

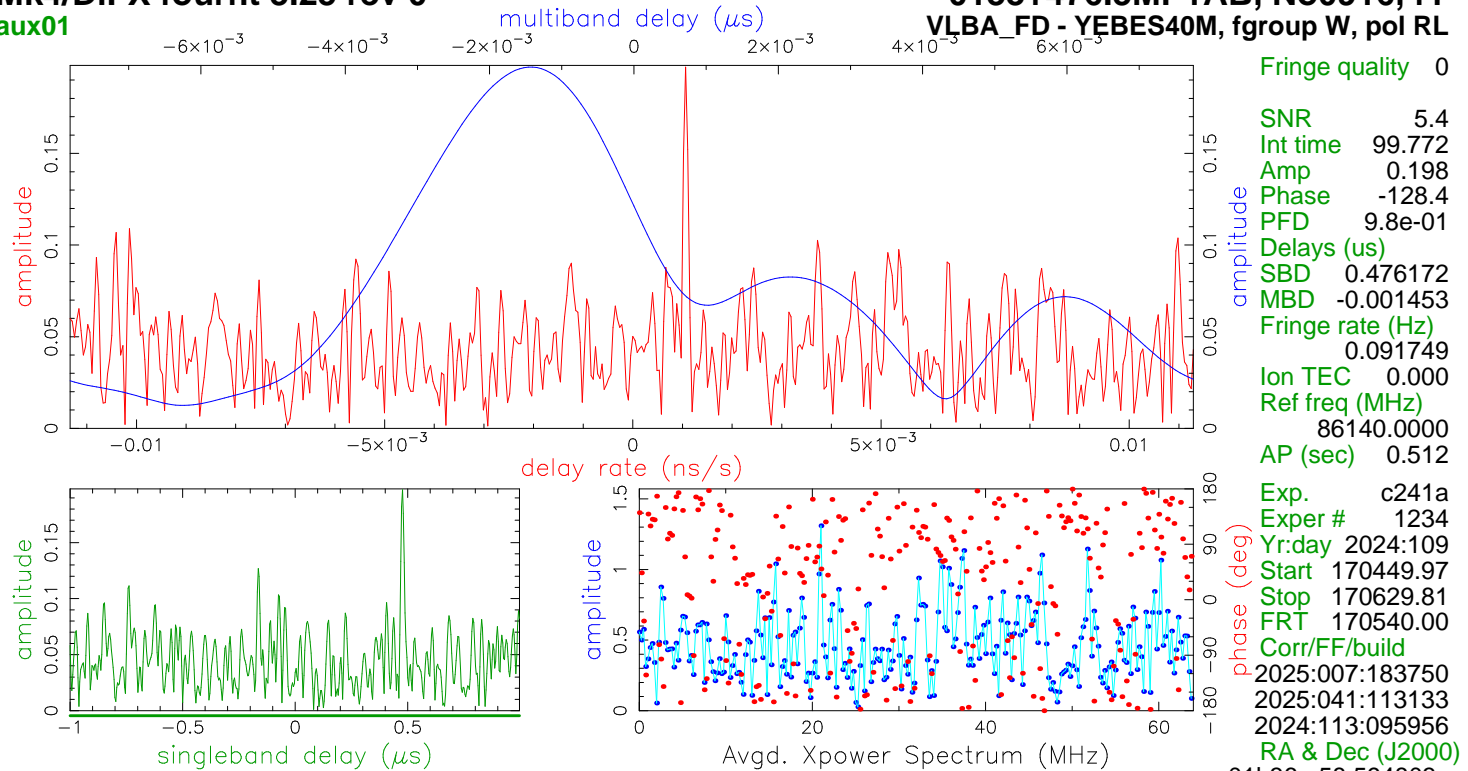
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Mk4/DiFX fourfit 3.25 rev 0

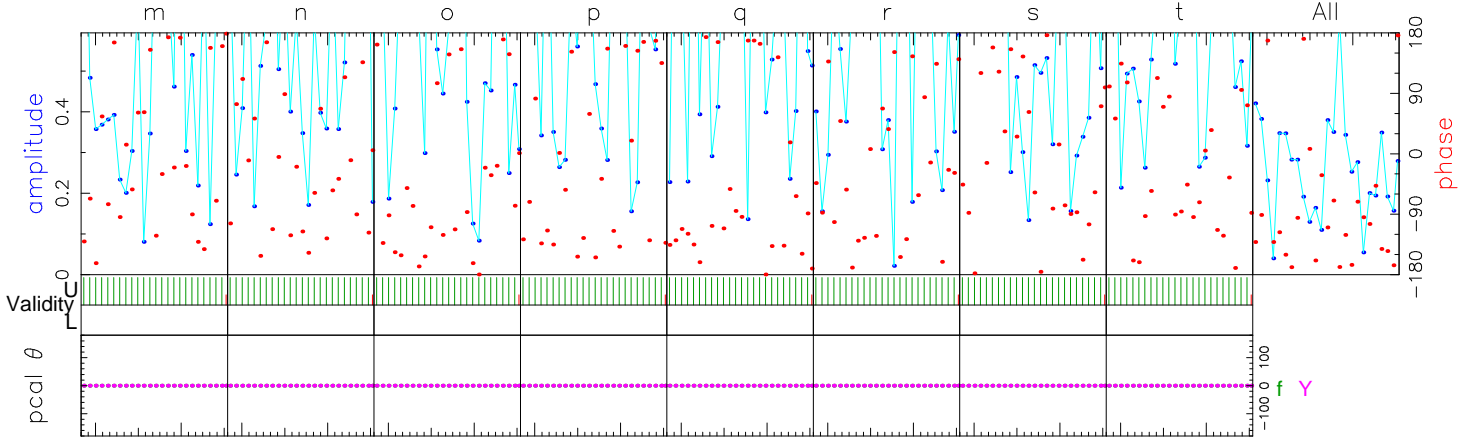
aux01

0133+476.3MP1AB, No0916, fY

VLBA\_FD - YEBES40M, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-127.6	-78.0	-130.0	-153.6	-140.4	-96.8	-127.5	-42.9	Phase	-128.4
	0.2	0.1	0.3	0.3	0.5	0.2	0.0	0.0	Ampl.	0.2
	381.1	149.9	368.8	398.3	379.3	238.1	134.2	486.5	Sbd box	378.9
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.41832121464E+03	Apriori delay (usec)	6.41783829268E+03	Resid mbdelay (usec)	-1.45303E-03	+/-	2.0E-04
Sband delay (usec)	6.41831446468E+03	Apriori clock (usec)	1.1060516E+02	Resid sbdelay (usec)	4.76172E-01	+/-	1.6E-03
Phase delay (usec)	6.41783828854E+03	Apriori clockrate (us/s)	1.2638890E-02	Resid phdelay (usec)	-4.14195E-06	+/-	6.9E-07
Delay rate (us/s)	1.14289480265E+00	Apriori rate (us/s)	1.14289373753E+00	Resid rate (us/s)	1.06512E-06	+/-	1.2E-08
Total phase (deg)	62.8	Apriori accel (us/s/s)	-4.52808411840E-05	Resid phase (deg)	-128.4	+/-	21.3

ph/seg (deg) 50.6 53.2 Search (512X32) 0.196 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 73.3 92.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.1 30.1 Inc. seg. avg. 0.185 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 73.3 52.5 Inc. frq. avg. 0.191 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 Y: az 305.2 el 37.5 pa 68.1 u,v (fr/asec) -9810.242 -4737.552 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fY..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fY.W.281.3MP1AB

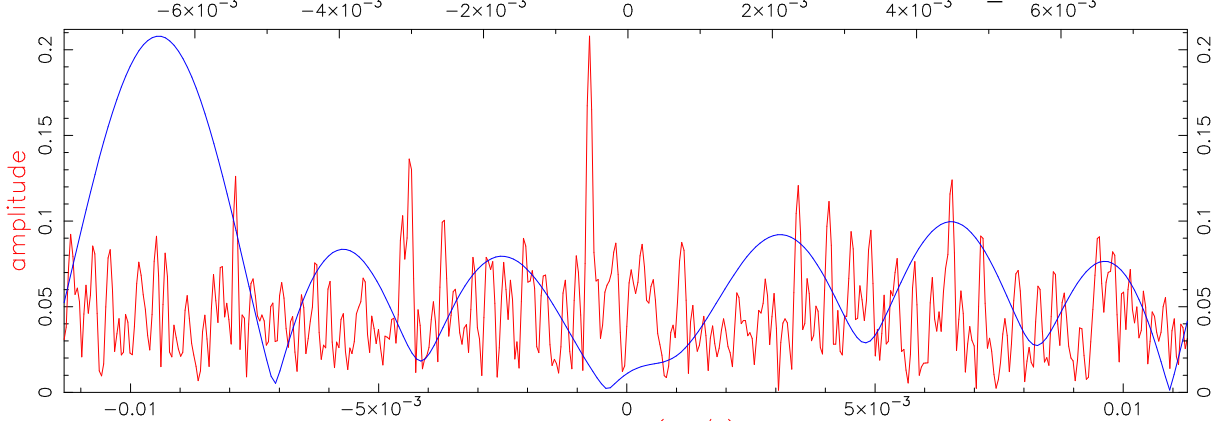
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fZ

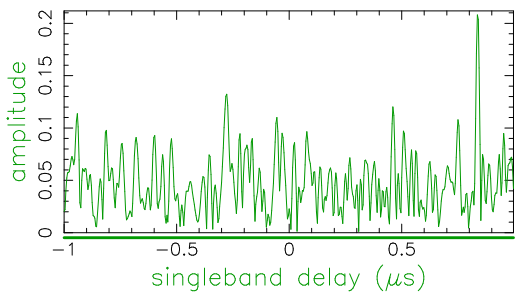
VLBA\_FD - METSAHOV, fgroup W, pol LL

multiband delay ( $\mu$ s)

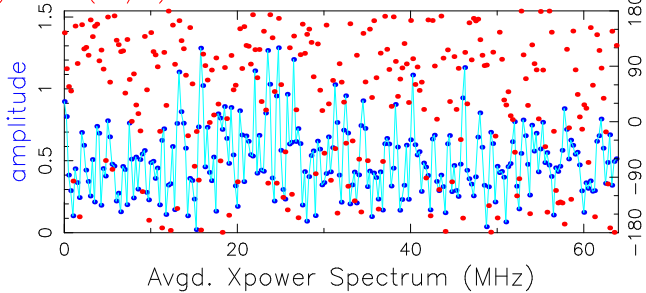


Fringe quality 0

SNR 5.7  
 Int time 98.746  
 Amp 0.212  
 Phase 121.9  
 PFD 4.3e-01  
 Delays (us)  
 SBD 0.837510  
 MBD -0.006488  
 Fringe rate (Hz)  
 -0.063524  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

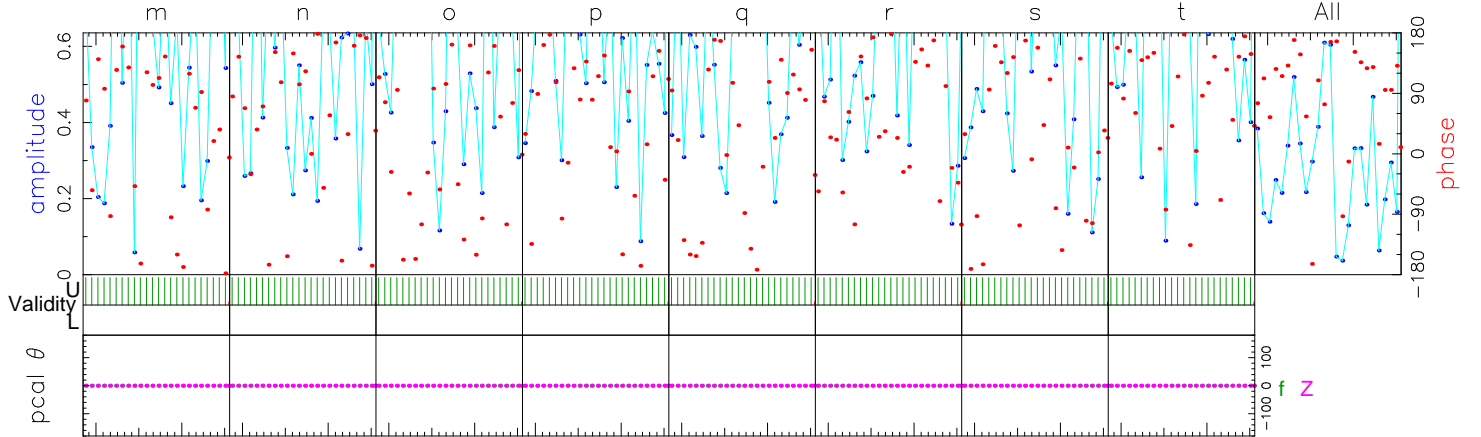


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113154  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	125.0	114.8	150.5	105.9	140.7	63.5	146.8	118.4	Phase	121.9
	0.3	0.2	0.1	0.2	0.2	0.1	0.2	0.4	Ampl.	0.2
	184.4	390.4	331.2	502.3	227.7	239.7	67.5	471.5	Sbd box	471.4
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	7.13895204780E+03	Apriori delay (usec)	7.13811478550E+03	Resid mbdelay (usec)	-6.48770E-03	+/-	1.9E-04
Sband delay (usec)	7.13895229550E+03	Apriori clock (usec)	-5.8025360E-02	Resid sbdelay (usec)	8.37510E-01	+/-	1.5E-03
Phase delay (usec)	7.13811478943E+03	Apriori clockrate (us/s)	-5.5964001E-07	Resid phdelay (usec)	3.92993E-06	+/-	6.4E-07
Delay rate (us/s)	8.78488139845E-01	Apriori rate (us/s)	8.78488877301E-01	Resid rate (us/s)	-7.37455E-07	+/-	1.1E-08
Total phase (deg)	346.3	Apriori accel (us/s/s)	-6.80098643380E-05	Resid phase (deg)	121.9	+/-	19.9

ph/seg (deg)	57.9	Theor.	Amplitude	0.212 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	90.6	49.8	Search (512X32)	0.201	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	30.4	28.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	41.5	49.2	Inc. seg. avg.	0.208	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
			Inc. frq. avg.	0.199	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

f: az 40.8 el 64.1 pa -123.1 Z: az 307.5 el 34.7 pa 36.0 u, v (fr/asec) -7563.159 -8023.785 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fz\_3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fz.W.329.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

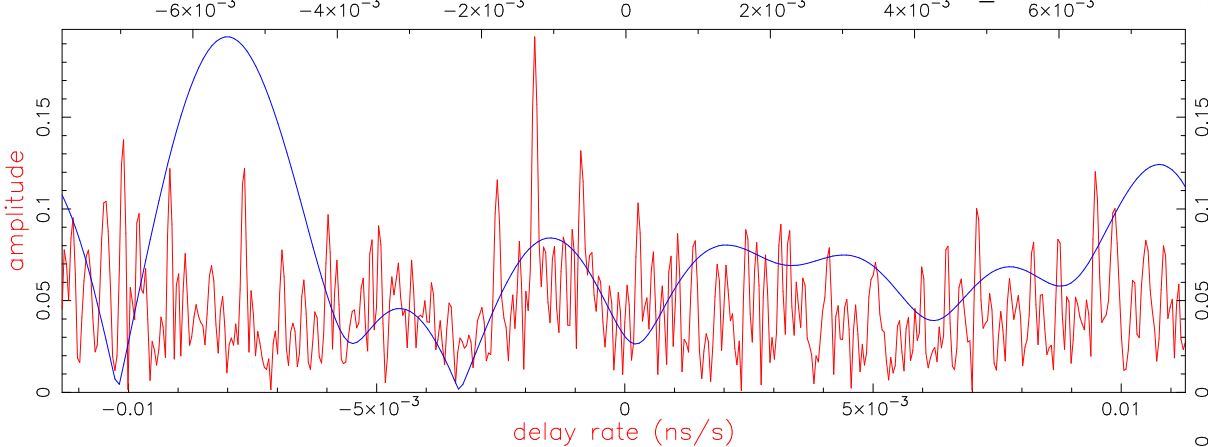
aux01

0133+476.3MP1AB, No0916, fZ

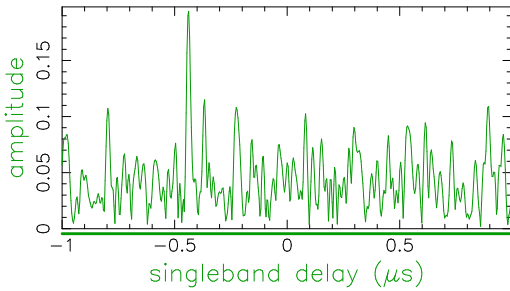
VLBA\_FD - METSAHOV, fgroup W, pol RR

multiband delay ( $\mu$ s)

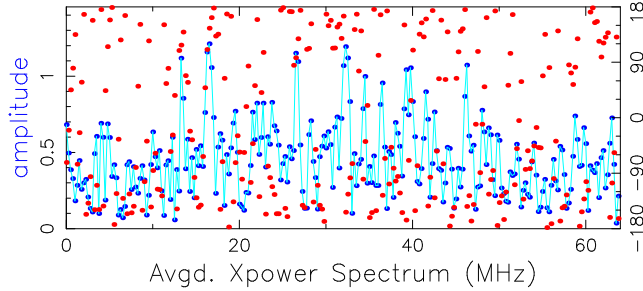
Fringe quality 0



SNR 5.3  
 Int time 98.746  
 Amp 0.198  
 Phase -119.2  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.438944  
 MBD -0.005543  
 Fringe rate (Hz)  
 -0.155565  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

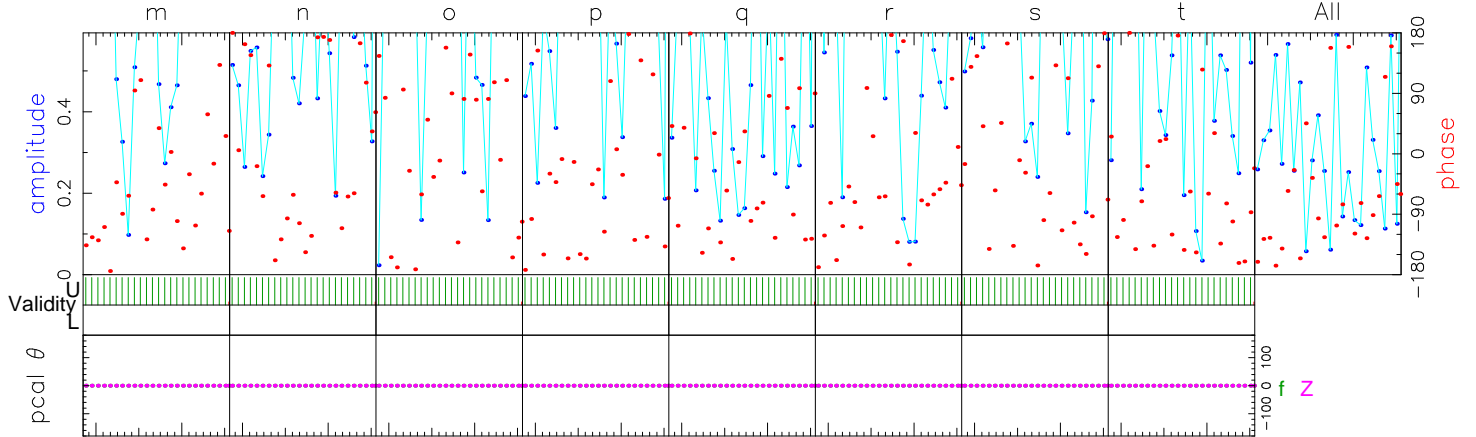


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113155  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-95.3	-129.9	151.5	-113.7	-121.5	-84.0	-157.2	-110.7	Phase	-119.2
	0.3	0.3	0.2	0.1	0.1	0.3	0.2	0.3	Ampl.	0.2
	348.9	498.6	36.1	400.8	202.5	5.5	33.9	130.8	Sbd box	144.6
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	7.13767174289E+03	Apriori delay (usec)		7.13811478550E+03	Resid mbdelay (usec)		-5.54261E-03	+/- 2.0E-04	
Sband delay (usec)	7.13767584175E+03	Apriori clock (usec)		-5.8025360E-02	Resid sbdelay (usec)		-4.38944E-01	+/- 1.6E-03	
Phase delay (usec)	7.13811478166E+03	Apriori clockrate (us/s)		-5.5964001E-07	Resid phdelay (usec)		-3.84308E-06	+/- 6.9E-07	
Delay rate (us/s)	8.78487071349E-01	Apriori rate (us/s)		8.78488877301E-01	Resid rate (us/s)		-1.80595E-06	+/- 1.2E-08	
Total phase (deg)	105.2	Apriori accel (us/s/s)		-6.80098643380E-05	Resid phase (deg)		-119.2	+/- 21.5	

ph/seg (deg)	65.6	Theor.	53.8	Amplitude	0.198 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	102.4	Search (512X32)	0.190	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	43.7	Inc. seg. avg.	0.213	Inc. frq. avg.	0.205	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	41.2	Inc. frq. avg.	0.205			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

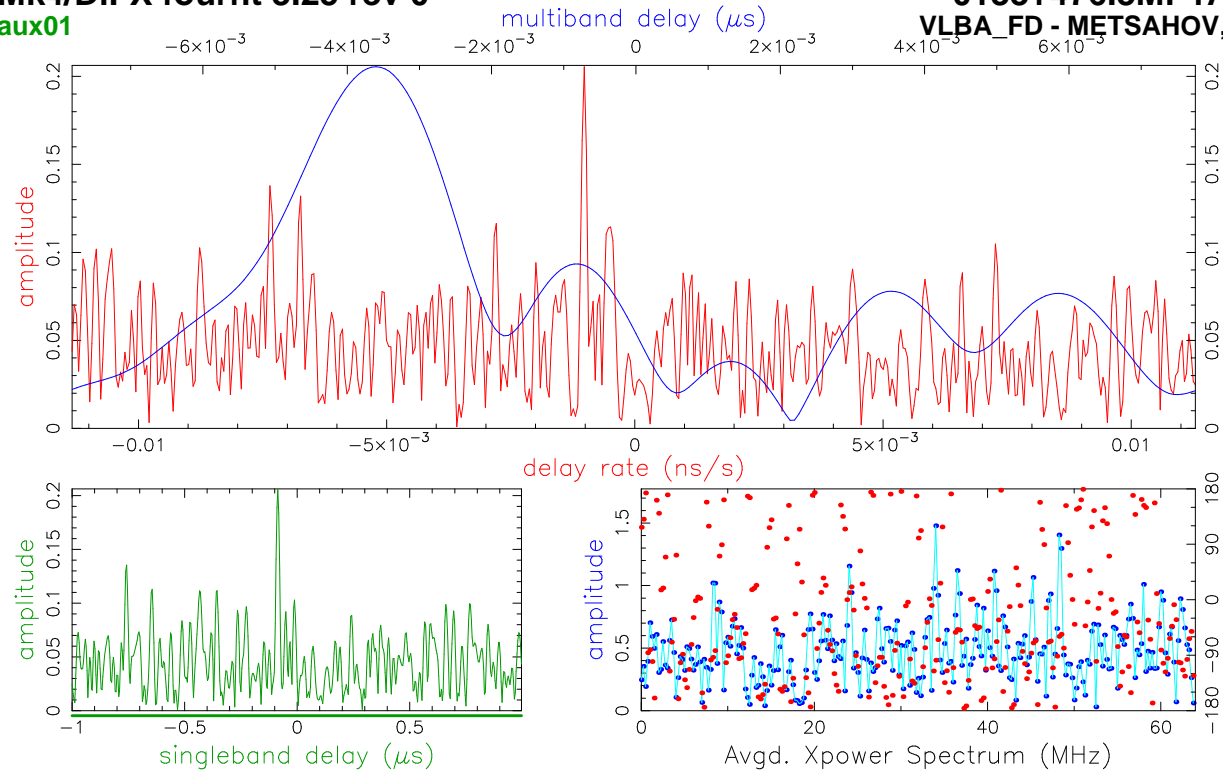
f: az 40.8 el 64.1 pa -123.1 Z: az 307.5 el 34.7 pa 36.0 u,v (fr/asec) -7563.159 -8023.785 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fz\_3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fz.W.333.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fZ

VLBA\_FD - METSAHOV, fgroup W, pol LR

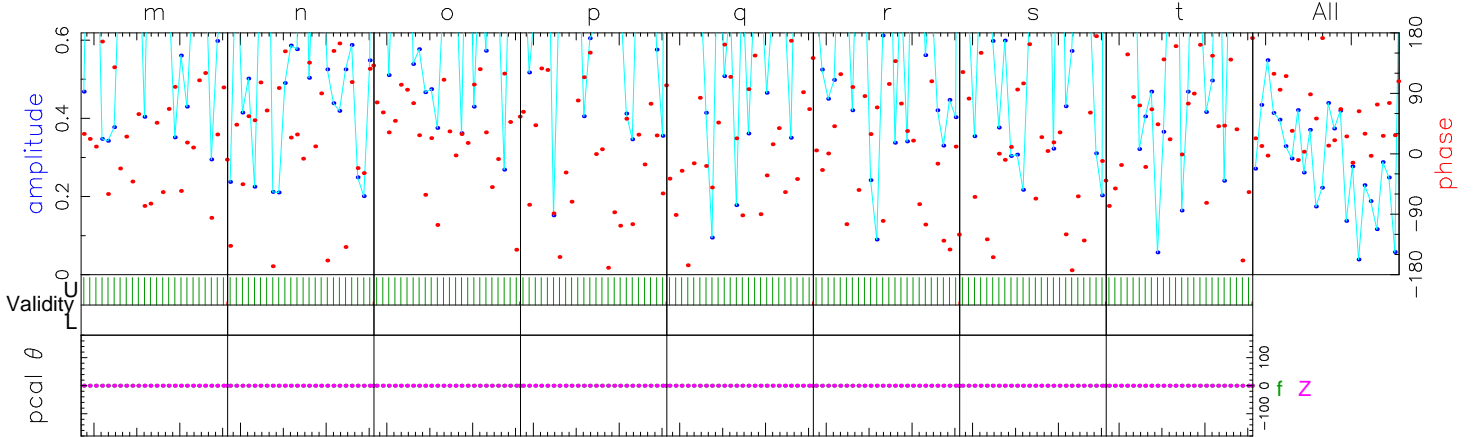


Fringe quality 0

SNR 5.6  
 Int time 98.746  
 Amp 0.206  
 Phase 40.0  
 PFD 7.5e-01  
 Delays (us)  
 SBD -0.086204  
 MBD -0.003605  
 Fringe rate (Hz)  
 -0.086328  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113156  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	21.7	74.5	50.2	28.8	12.7	20.6	8.2	72.2	Phase	40.0
	0.3	0.3	0.4	0.2	0.2	0.1	0.1	0.2	Ampl.	0.2
	234.7	204.1	236.1	360.9	320.1	411.7	141.9	89.6	Sbd box	234.9
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) 7.13803305516E+03 Apriori delay (usec) 7.13811478550E+03 Resid mbdelay (usec) -3.60534E-03 +/- 1.9E-04  
 Sband delay (usec) 7.13802858150E+03 Apriori clock (usec) -5.8025360E-02 Resid sbdelay (usec) -8.62040E-02 +/- 1.5E-03  
 Phase delay (usec) 7.13811478680E+03 Apriori clockrate (us/s) -5.5964001E-07 Resid phdelay (usec) 1.29144E-06 +/- 6.6E-07  
 Delay rate (us/s) 8.78487875114E-01 Apriori rate (us/s) 8.78488877301E-01 Resid rate (us/s) -1.00219E-06 +/- 1.2E-08  
 Total phase (deg) 264.5 Apriori accel (us/s/s) -6.80098643380E-05 Resid phase (deg) 40.0 +/- 20.5

RMS Theor. Amplitude 0.206 +/- 0.037 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 46.6 51.3 Search (512X32) 0.198 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 75.6 89.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 28.7 29.0 Inc. seg. avg. 0.209 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 54.5 50.6 Inc. frq. avg. 0.198 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 40.8 el 64.1 pa -123.1 Z: az 307.5 el 34.7 pa 36.0 u,v (fr/asec) -7563.159 -8023.785 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fz\_.3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fz.W.338.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

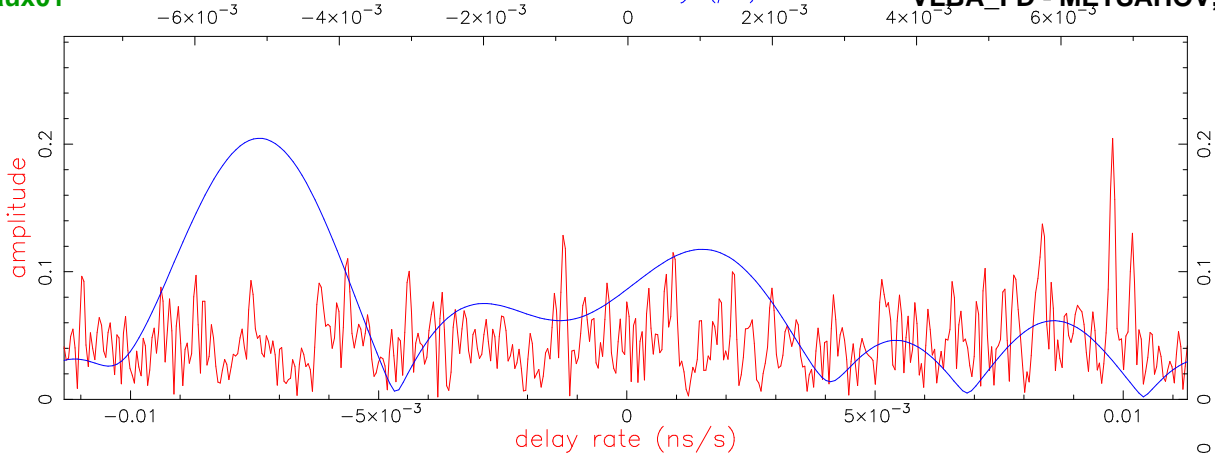
aux01

0133+476.3MP1AB, No0916, fZ

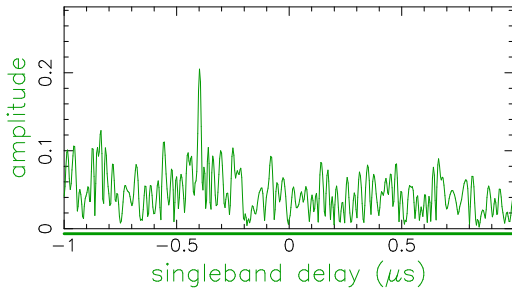
VLBA\_FD - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu$ s)

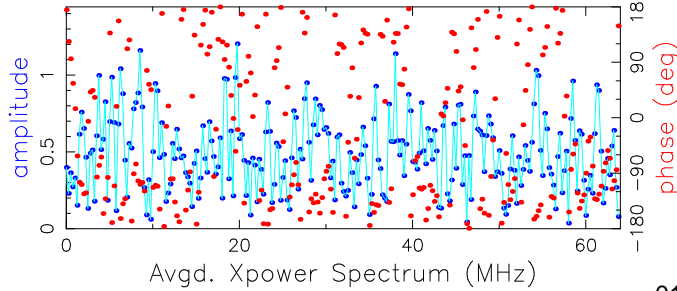
Fringe quality 0



SNR 5.6  
 Int time 98.746  
 Amp 0.284  
 Phase 2.2  
 PFD 7.8e-01  
 Delays (us)  
 SBD -0.397875  
 MBD -0.005081  
 Fringe rate (Hz)  
 0.842487  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

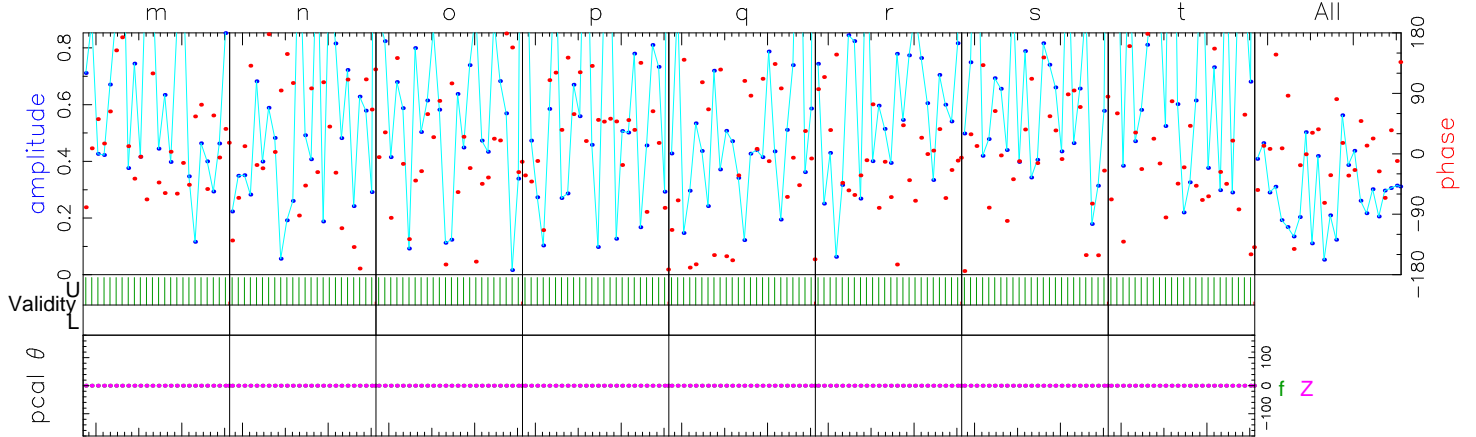


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113157  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

Amp. and Phase vs. time for each freq., 25 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-6.2	-7.9	-1.5	41.7	-54.3	-18.7	35.9	-20.2	Phase	2.2
	0.3	0.1	0.4	0.5	0.1	0.5	0.3	0.3	Ampl.	0.3
	114.1	268.9	347.6	154.7	48.2	153.5	387.6	238.3	Sbd box	155.1
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	7.13771907923E+03	Apriori delay (usec)	7.13811478550E+03	Resid mbdelay (usec)	-5.08127E-03	+/-	1.9E-04
Sband delay (usec)	7.13771691000E+03	Apriori clock (usec)	-5.8025360E-02	Resid sbdelay (usec)	-3.97875E-01	+/-	1.5E-03
Phase delay (usec)	7.13811478557E+03	Apriori clockrate (us/s)	-5.5964001E-07	Resid phdelay (usec)	6.97739E-08	+/-	6.6E-07
Delay rate (us/s)	8.78498657740E-01	Apriori rate (us/s)	8.78488877301E-01	Resid rate (us/s)	9.78044E-06	+/-	1.2E-08
Total phase (deg)	226.6	Apriori accel (us/s/s)	-6.80098643380E-05	Resid phase (deg)	2.2	+/-	20.6

ph/seg (deg)	58.0	Theor.	51.4	Amplitude	0.284 +/- 0.051	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	74.7	Search (512X32)	0.198	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	34.2	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	46.8	Inc. seg. avg.	0.284	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
		Inc. frq. avg.	0.283	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00	

f: az 40.8 el 64.1 pa -123.1 Z: az 307.5 el 34.7 pa 36.0 u,v (fr/asec) -7563.159 -8023.785 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fZ..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fZ.W.343.3MP1AB