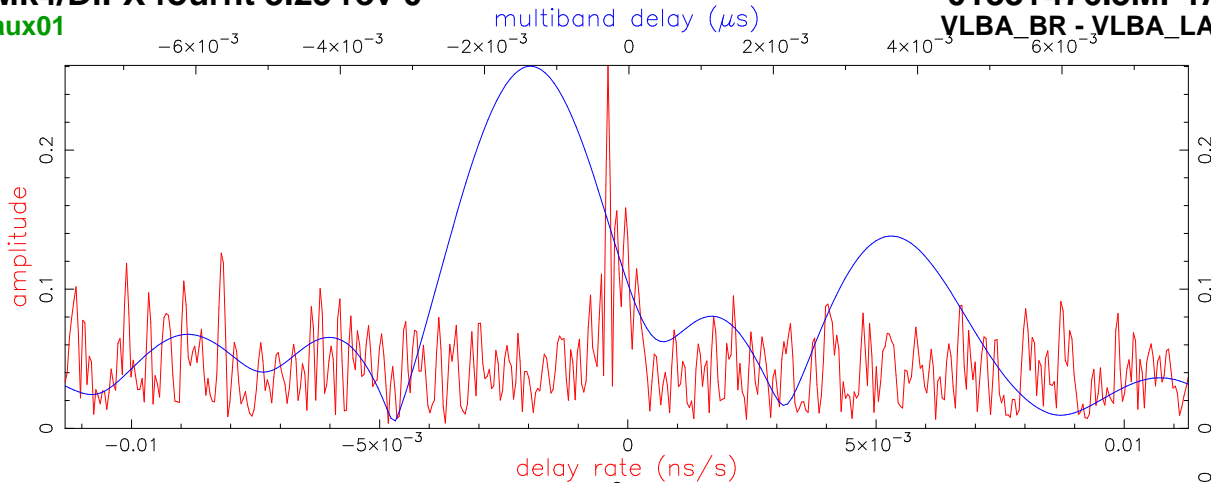


Mk4/DiFX fourfit 3.25 rev 0

aux01

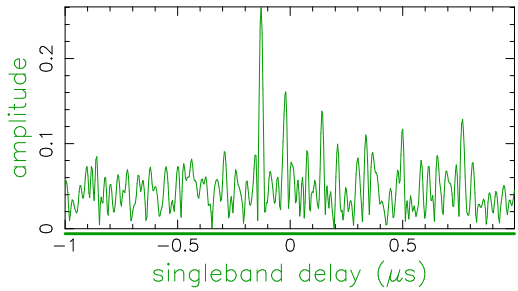
0133+476.3MP1AB, No0916, bl

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

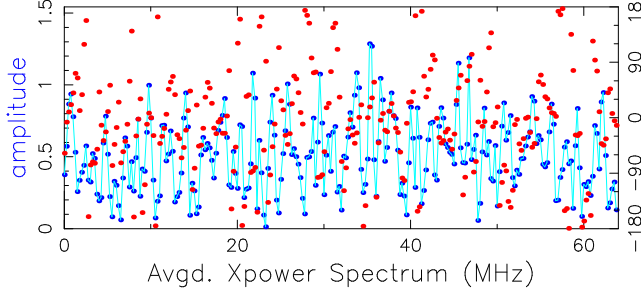


Fringe quality 9

SNR 7.6  
 Int time 112.624  
 Amp 0.261  
 Phase -44.0  
 PFD 3.1e-06  
 Delays (us)  
 SBD -0.129453  
 MBD -0.001384  
 Fringe rate (Hz)  
 -0.032952  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

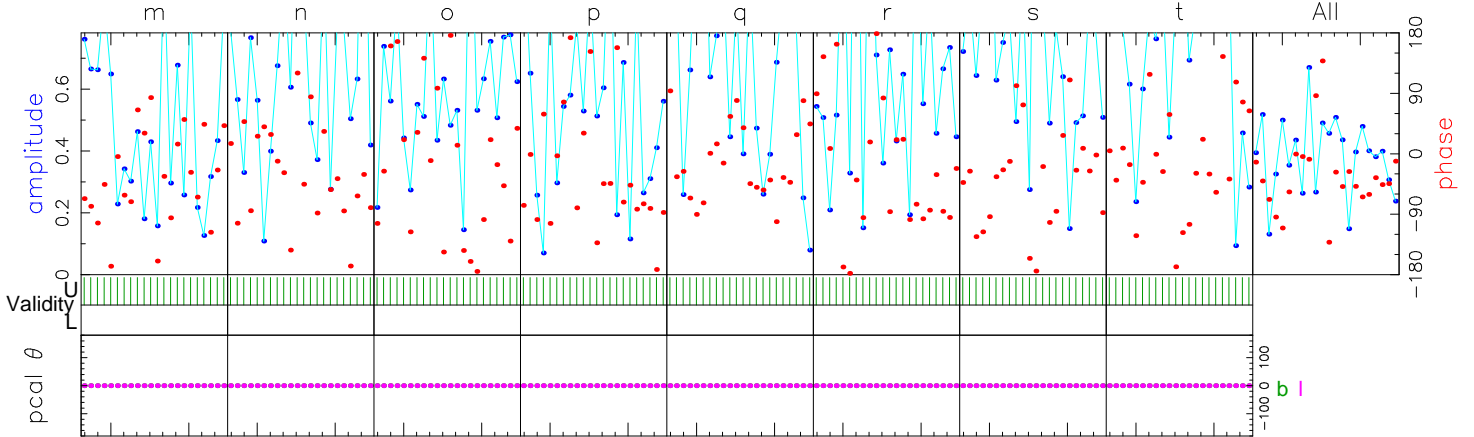


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112938  
 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
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		
l	0	0	0	0	0	0	0	0		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-5.29101670453E+02	Apriori delay (usec)	-5.28975286294E+02	Resid mbdelay (usec)	-1.38416E-03	+/-	1.4E-04
Sband delay (usec)	-5.29104739044E+02	Apriori clock (usec)	1.2946423E+01	Resid sbdelay (usec)	-1.29453E-01	+/-	1.1E-03
Phase delay (usec)	-5.28975287712E+02	Apriori clockrate (us/s)	8.1044199E-07	Resid phdelay (usec)	-1.41850E-06	+/-	4.9E-07
Delay rate (us/s)	6.68496809478E-02	Apriori rate (us/s)	6.68500634895E-02	Resid rate (us/s)	-3.82542E-07	+/-	7.5E-09
Total phase (deg)	-102.1	Apriori accel (us/s/s)	1.62919158147E-05	Resid phase (deg)	-44.0	+/-	15.1

ph/seg (deg)	57.3	Theor.	35.5	Amplitude	0.261 +/- 0.034	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	67.9		62.0	Search (512X32)	0.246	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	31.2		21.4	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	37.3		37.4	Inc. seg. avg.	0.324	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.261	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 l: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) -561.186 2371.416 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bl\_.3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bl.W.39.3MP1AB

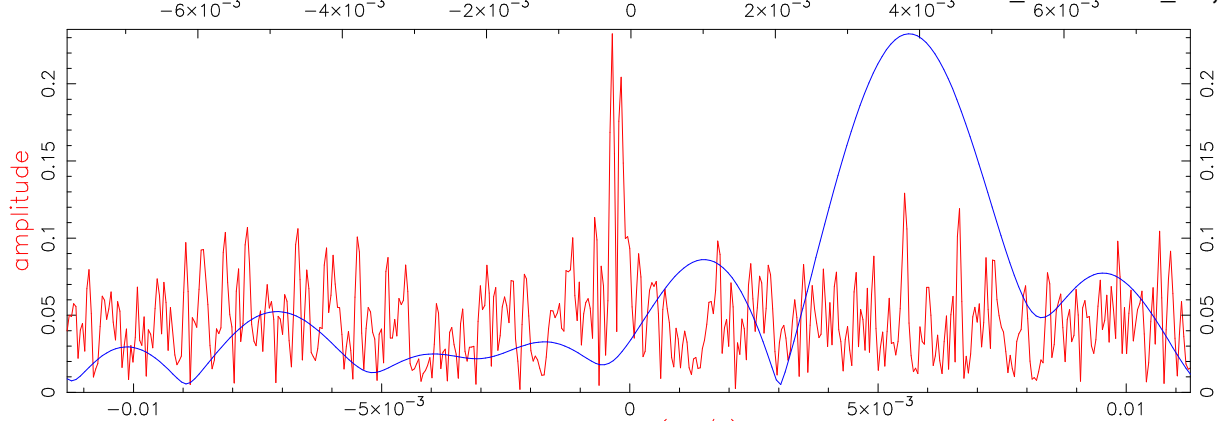
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bl

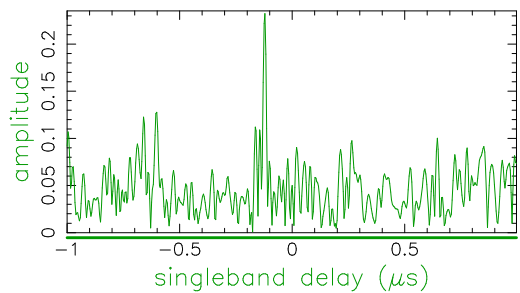
VLBA\_BR - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu$ s)

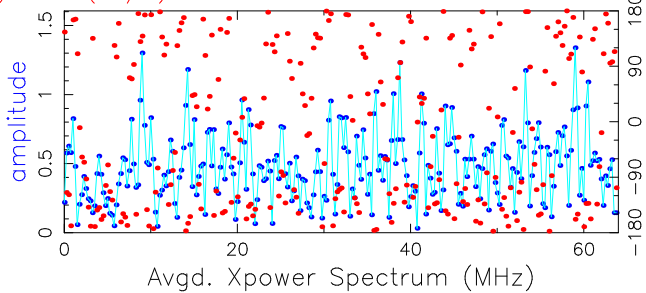


Fringe quality 0

SNR 6.8  
 Int time 112.624  
 Amp 0.235  
 Phase 174.6  
 PFD 6.4e-04  
 Delays (us)  
 SBD -0.122316  
 MBD 0.003832  
 Fringe rate (Hz)  
 -0.032430  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

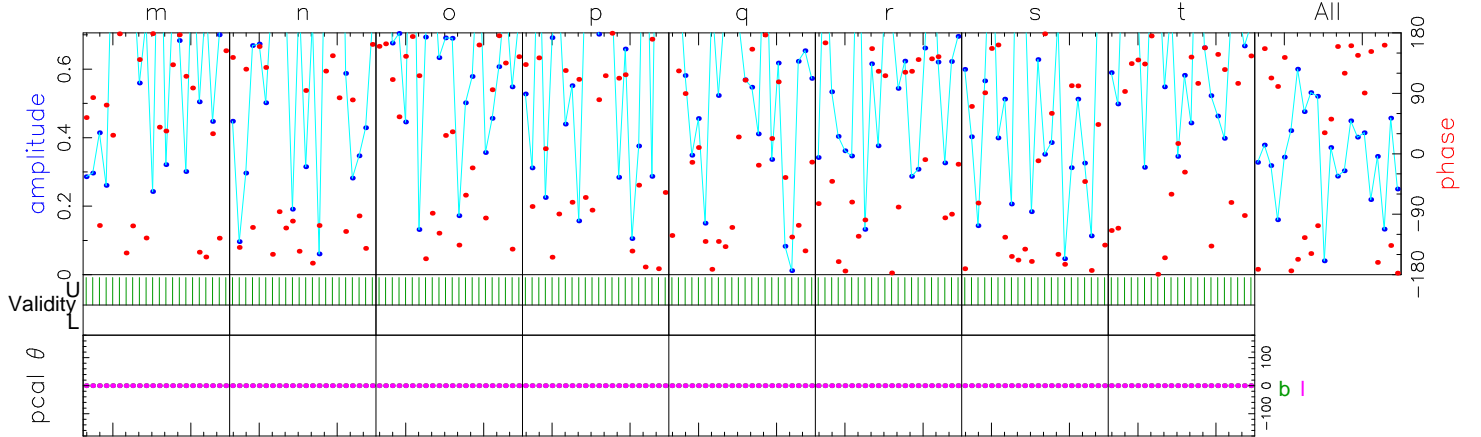


delay rate (ns/s)



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°51'29.10073"

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		
b	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -5.29096453953E+02 Apriori delay (usec) -5.28975286294E+02 Resid mbdelay (usec) 3.83234E-03 +/- 1.6E-04  
 Sband delay (usec) -5.29097602044E+02 Apriori clock (usec) 1.2946423E+01 Resid sbdelay (usec) -1.22316E-01 +/- 1.3E-03  
 Phase delay (usec) -5.28975280664E+02 Apriori clockrate (us/s) 8.1044199E-07 Resid phdelay (usec) 5.62988E-06 +/- 5.4E-07  
 Delay rate (us/s) 6.68496870130E-02 Apriori rate (us/s) 6.68500634895E-02 Resid rate (us/s) -3.76476E-07 +/- 8.3E-09  
 Total phase (deg) 116.5 Apriori accel (us/s/s) 1.62919158147E-05 Resid phase (deg) 174.6 +/- 16.8

ph/seg (deg) 57.9 39.4 39.4 Amplitude 0.235 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 75.3 68.7 Search (512X32) 0.213 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 15.3 23.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 22.8 41.4 Inc. seg. avg. 0.285 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.219 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 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) -561.186 2371.416 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bl.W.46.3MP1AB

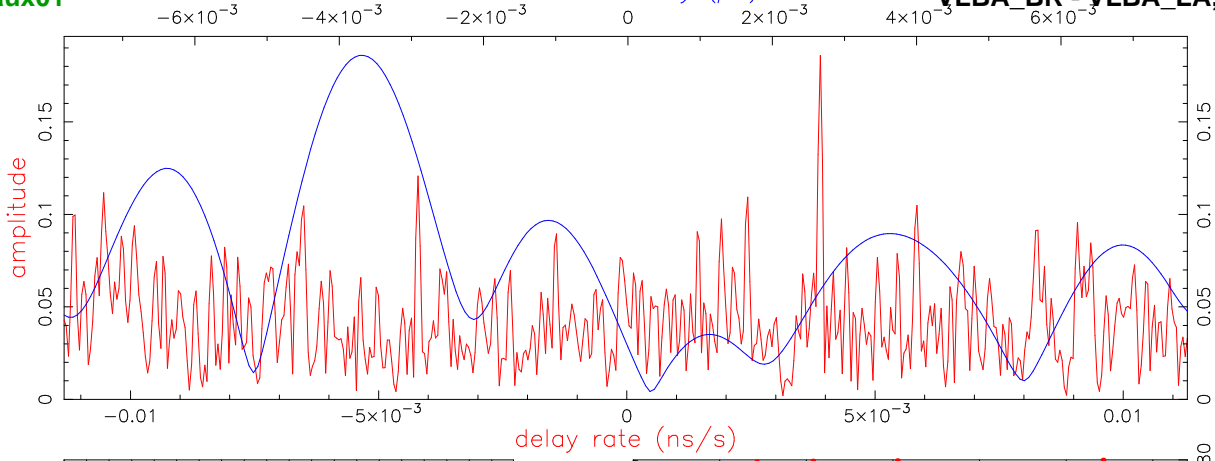
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bl

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

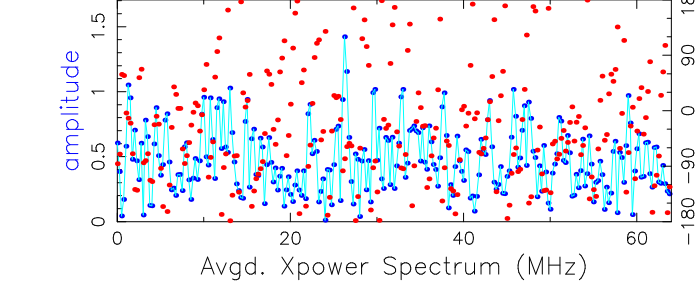
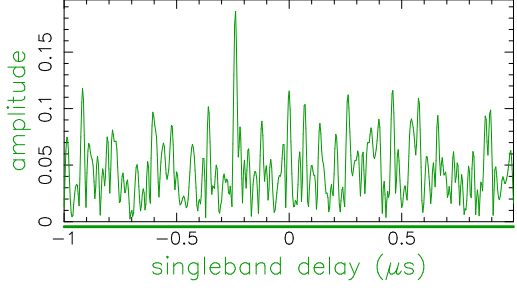
multiband delay ( $\mu$ s)



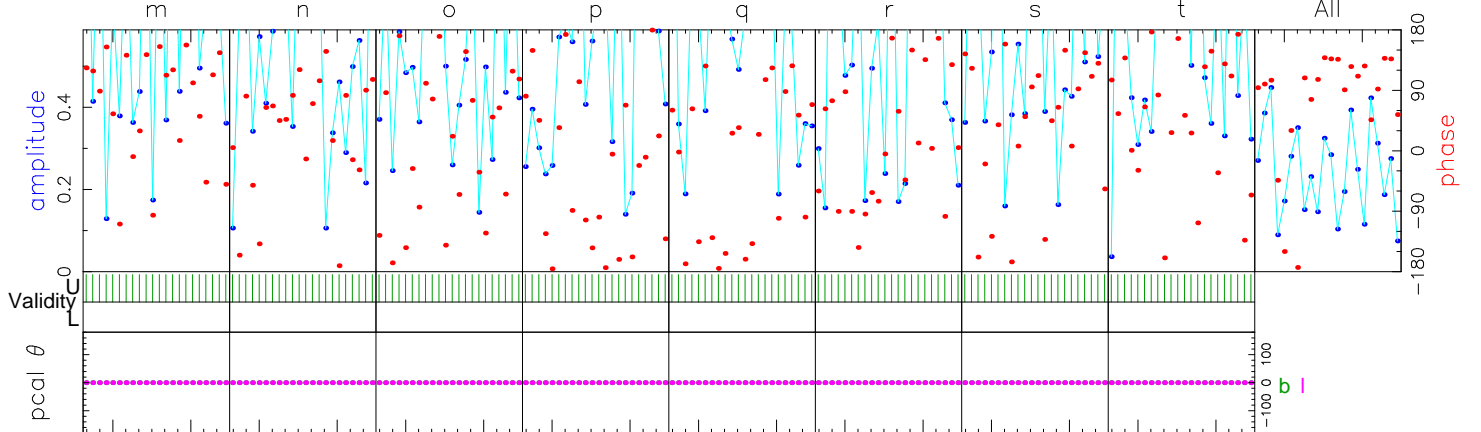
Fringe quality 0

SNR 5.4  
 Int time 112.624  
 Amp 0.196  
 Phase 109.2  
 PFD 9.7e-01  
 Delays (us)  
 SBD -0.239086  
 MBD -0.003711  
 Fringe rate (Hz)  
 0.335646  
 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  
 2025:041:112942  
 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		
b	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec) (SBD)	-5.29213371900E+02									
Sband delay (usec)	-5.29214372794E+02									
Phase delay (usec)	-5.28975282772E+02									
Delay rate (us/s)	6.68539600066E-02									
Total phase (deg)			51.1							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										

ph/seg (deg) 51.9 49.6 Search (512X32) 0.184 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 67.0 86.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.3 29.9 Inc. seg. avg. 0.190 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 62.5 52.2 Inc. frq. avg. 0.194 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 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) -561.186 2371.416 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/bl\_.3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bl.W.49.3MP1AB simultaneous interpolator

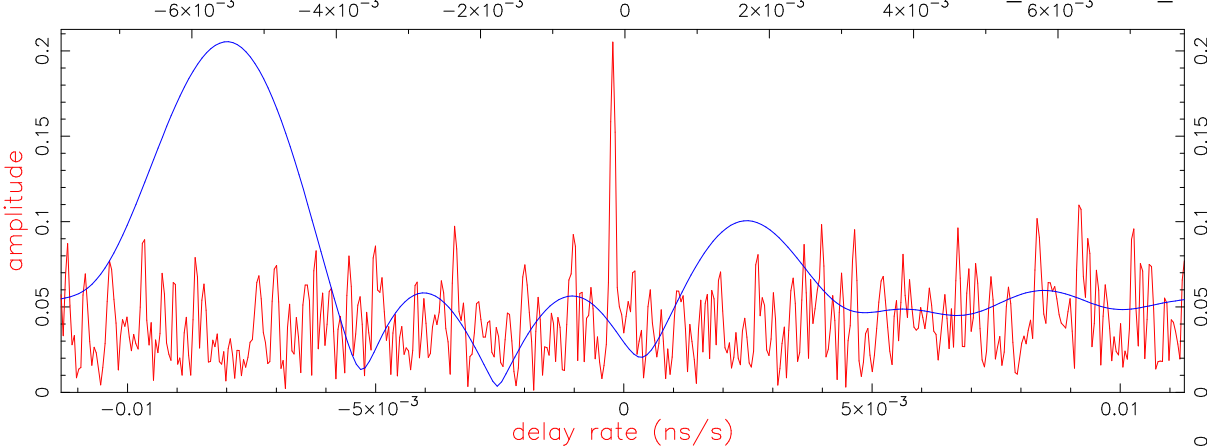
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bl

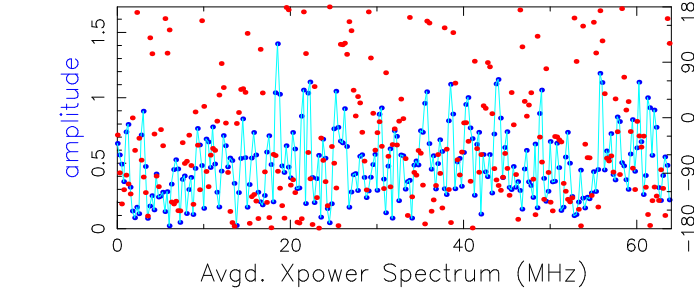
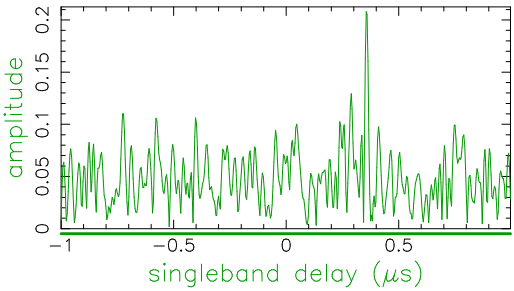
VLBA\_BR - VLBA\_LA, fgroup W, pol RL

multiband delay ( $\mu$ s)



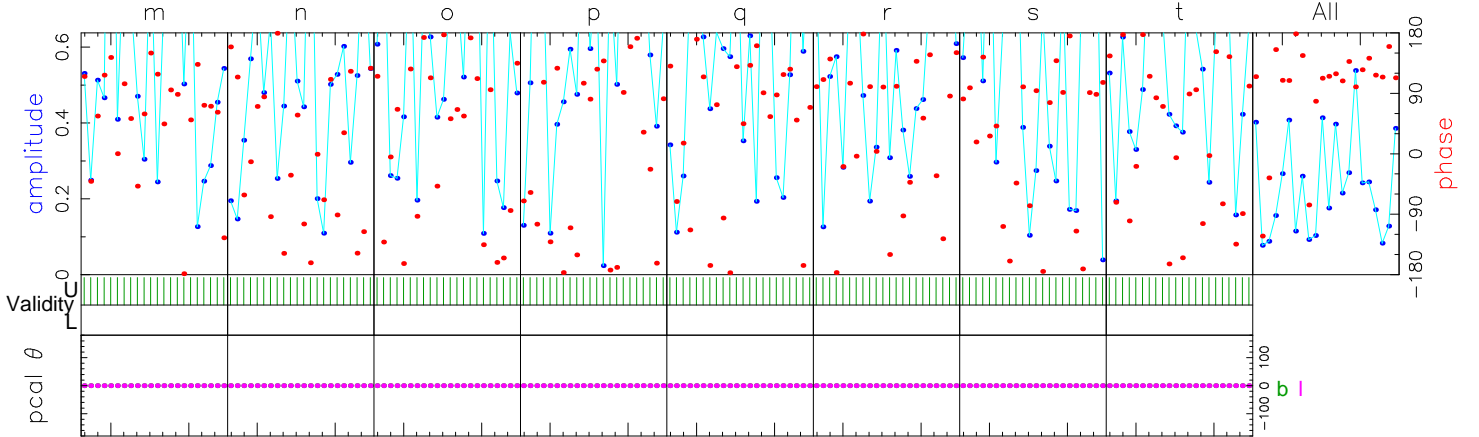
Fringe quality 0

SNR 6.2  
 Int time 112.624  
 Amp 0.213  
 Phase 120.4  
 PFD 4.5e-02  
 Delays (us)  
 SBD 0.357177  
 MBD -0.005561  
 Fringe rate (Hz)  
 -0.018130  
 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  
 2025:041:112945  
 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		
l	0	0	0	0	0	0	0	0		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD) -5.28621472306E+02 Apriori delay (usec) -5.28975286294E+02 Resid mbdelay (usec) -5.56101E-03 +/- 1.8E-04  
 Sband delay (usec) -5.28618109544E+02 Apriori clock (usec) 1.2946423E+01 Resid sbdelay (usec) 3.57177E-01 +/- 1.4E-03  
 Phase delay (usec) -5.28975282413E+02 Apriori clockrate (us/s) 8.1044199E-07 Resid phdelay (usec) 3.88105E-06 +/- 6.0E-07  
 Delay rate (us/s) 6.68498530139E-02 Apriori rate (us/s) 6.68500634895E-02 Resid rate (us/s) -2.10476E-07 +/- 9.2E-09  
 Total phase (deg) 62.3 Apriori accel (us/s/s) 1.62919158147E-05 Resid phase (deg) 120.4 +/- 18.6

ph/seg (deg) 58.5 43.6 43.6 Amplitude 0.213 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 63.0 76.0 76.0 Search (512X32) 0.202 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 48.9 26.3 26.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 39.5 45.9 45.9 Inc. seg. avg. 0.185 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 74.8 el 62.9 pa -74.1 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) -561.186 2371.416 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bl.3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bl.W.52.3MP1AB

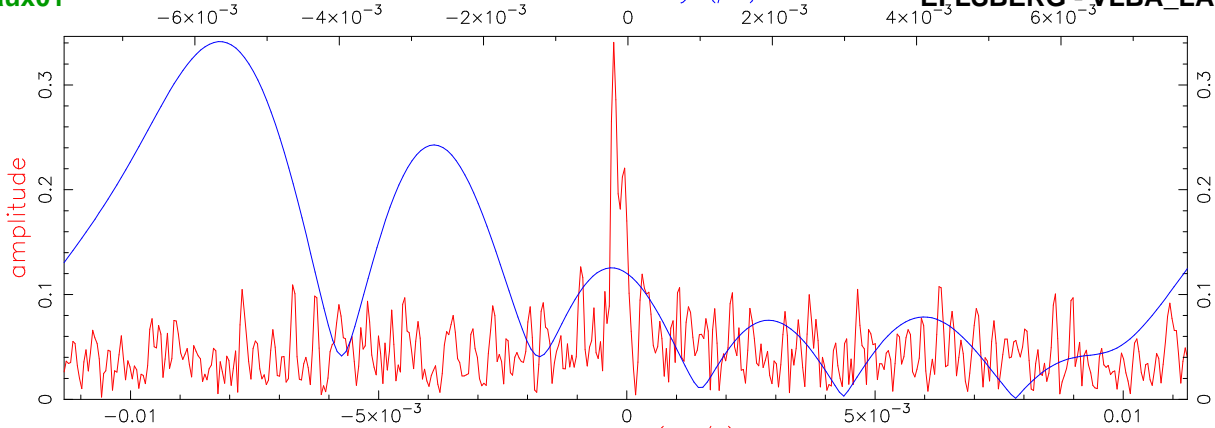
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, BI

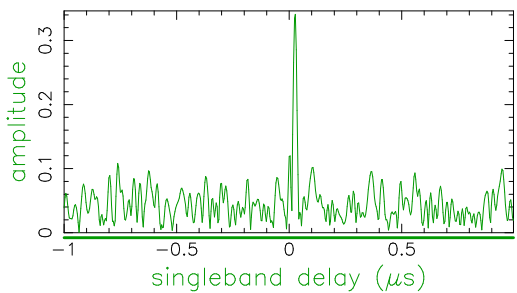
EFLSBERG - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)

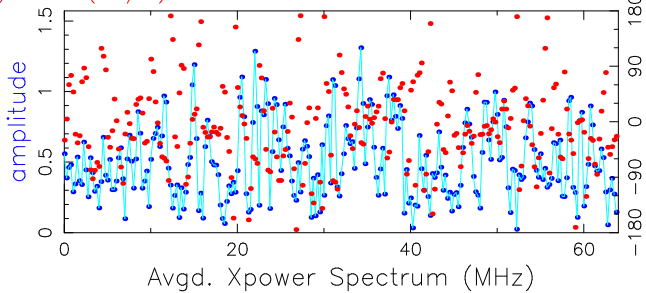


Fringe quality 9

SNR 10.0  
 Int time 112.640  
 Amp 0.346  
 Phase -9.8  
 PFD 1.0e-15  
 Delays (us)  
 SBD 0.025736  
 MBD -0.005727  
 Fringe rate (Hz)  
 -0.024130  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

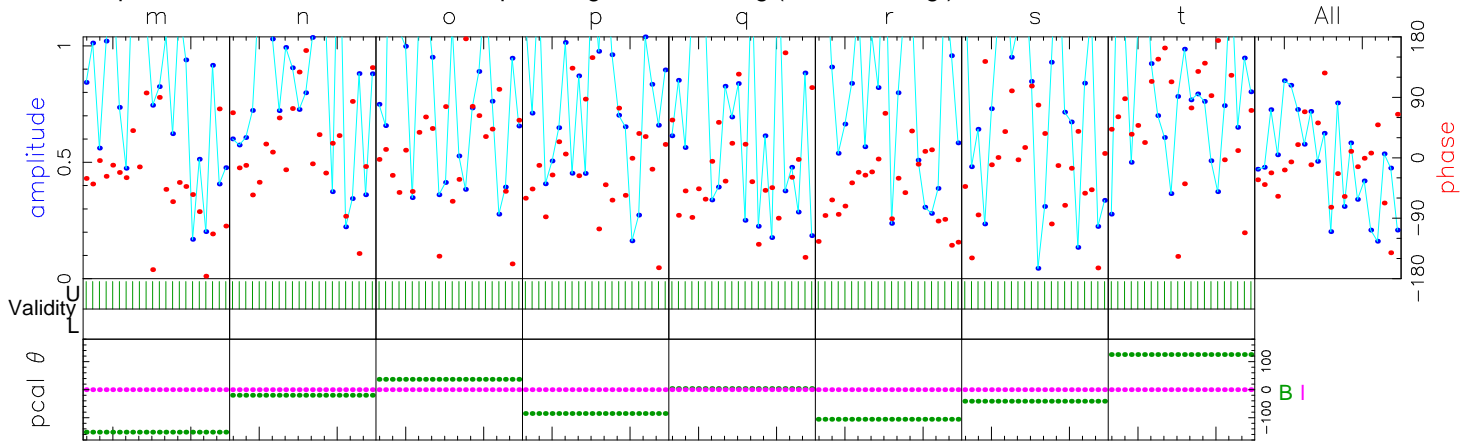


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112946  
 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		
I	0	0	0	0	0	0	0	0		
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:I	-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		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-6.73961390877E+03	Apriori delay (usec)	-6.73963943165E+03	Resid mbdelay (usec)	-5.72713E-03	+/-	1.1E-04
Sband delay (usec)	-6.73961369590E+03	Apriori clock (usec)	-2.7092653E+01	Resid sbdelay (usec)	2.57358E-02	+/-	8.6E-04
Phase delay (usec)	-6.73963943197E+03	Apriori clockrate (us/s)	4.4462047E-08	Resid phdelay (usec)	-3.17189E-07	+/-	3.7E-07
Delay rate (us/s)	-1.04475673782E+00	Apriori rate (us/s)	-1.04475645770E+00	Resid rate (us/s)	-2.80127E-07	+/-	5.7E-09
Total phase (deg)	-241.0	Apriori accel (us/s/s)	5.13917232136E-05	Resid phase (deg)	-9.8	+/-	11.4

ph/seg (deg) 56.4 26.7 Search (512X32) 0.331 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 75.8 46.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 47.1 16.1 Inc. seg. avg. 0.461 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 26.9 28.1 Inc. frq. avg. 0.413 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 B: az 302.9 el 37.3 pa 52.8 I: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 8974.765 5553.587 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/BI..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/BI.W.58.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

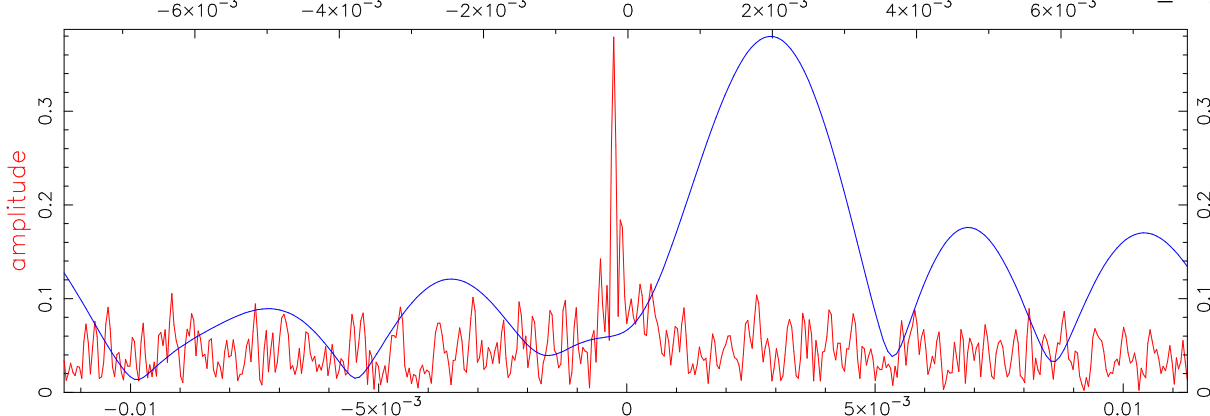
aux01

0133+476.3MP1AB, No0916, BI

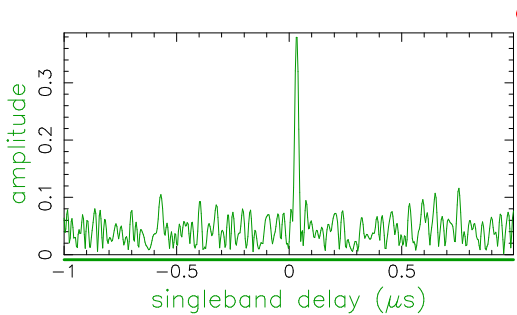
EFLSBERG - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu$ s)

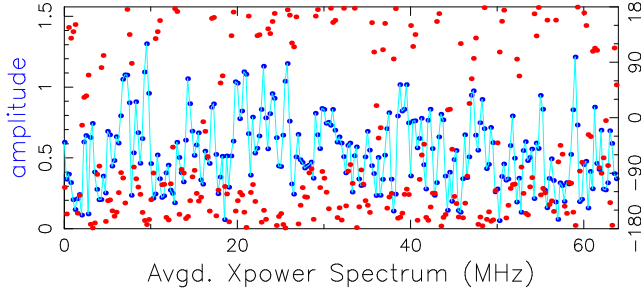
Fringe quality 9



SNR 11.2  
 Int time 112.640  
 Amp 0.387  
 Phase -153.1  
 PFD 3.3e-21  
 Delays (us)  
 SBD 0.033179  
 MBD 0.001915  
 Fringe rate (Hz)  
 -0.024014  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

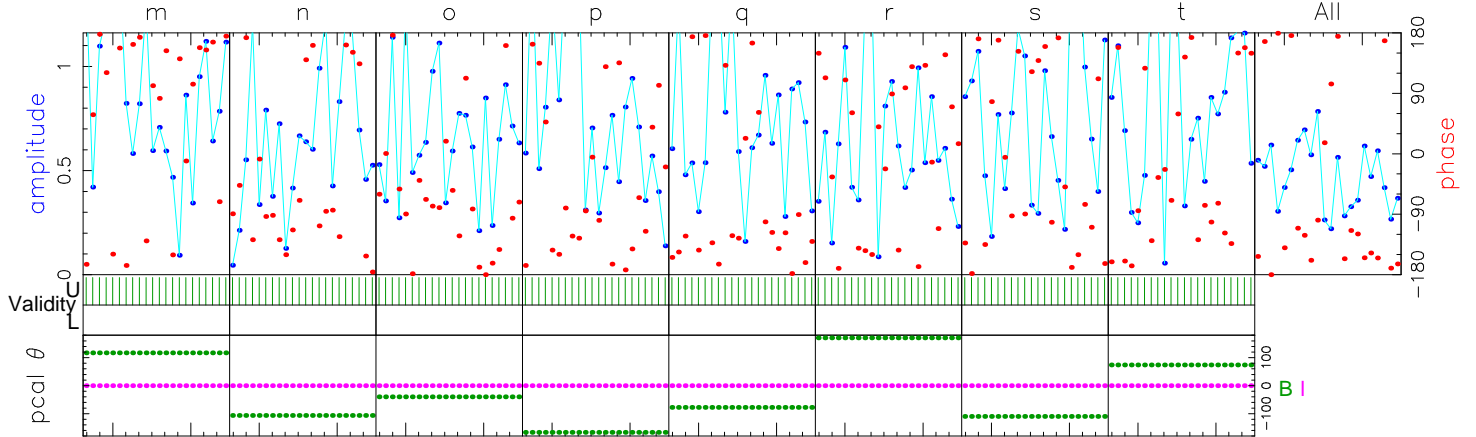


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112948  
 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		
I	0	0	0	0	0	0	0	0		
B:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:l	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-6.73960626637E+03	Apriori delay (usec)	-6.73963943165E+03	Resid mbdelay (usec)	1.91528E-03	+/-	9.7E-05
Sband delay (usec)	-6.73960625265E+03	Apriori clock (usec)	-2.7092653E+01	Resid sbdelay (usec)	3.31790E-02	+/-	7.7E-04
Phase delay (usec)	-6.73963943659E+03	Apriori clockrate (us/s)	4.4462047E-08	Resid phdelay (usec)	-4.93831E-06	+/-	3.3E-07
Delay rate (us/s)	-1.04475673648E+00	Apriori rate (us/s)	-1.04475645770E+00	Resid rate (us/s)	-2.78783E-07	+/-	5.1E-09
Total phase (deg)		Apriori accel (us/s/s)	5.13917232136E-05	Resid phase (deg)	-153.1	+/-	10.2

ph/seg (deg) 50.0 23.9 Search (512X32) 0.368 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 45.6 41.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 31.6 14.4 Inc. seg. avg. 0.434 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 29.4 25.2 Inc. frq. avg. 0.405 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 B: az 302.9 el 37.3 pa 52.8 I: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 8974.765 5553.587 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/BI..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/BI.W.69.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

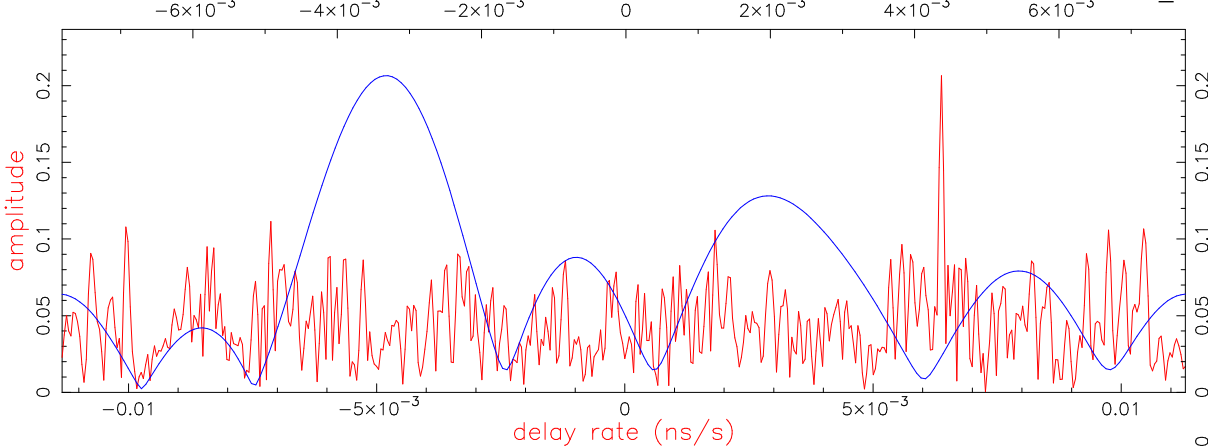
aux01

0133+476.3MP1AB, No0916, BI

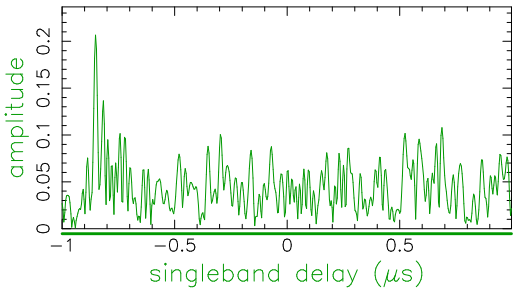
EFLSBERG - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

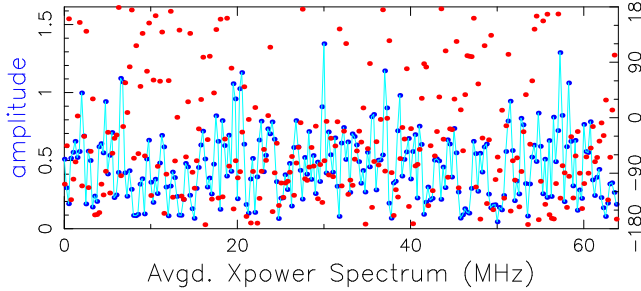
Fringe quality 0



SNR 6.0  
 Int time 112.640  
 Amp 0.237  
 Phase -135.5  
 PFD 1.2e-01  
 Delays (us)  
 SBD -0.851058  
 MBD -0.003299  
 Fringe rate (Hz)  
 0.551698  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

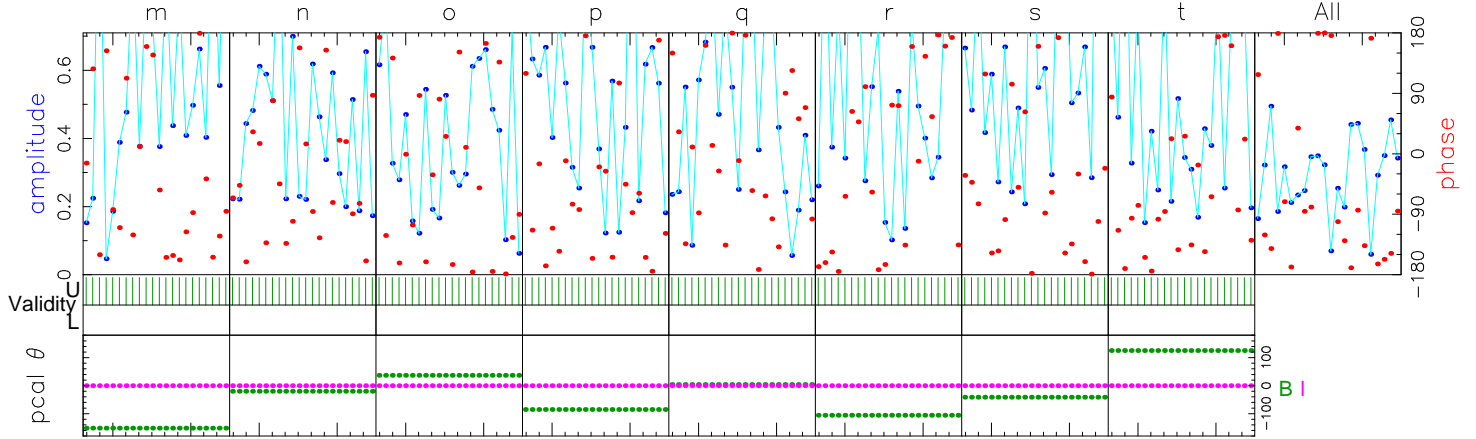


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112949  
 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
	-141.4	-80.5	-161.9	-130.8	-109.5	164.9	-116.5	-133.0	Phase	-135.5
	0.4	0.2	0.2	0.3	0.2	0.3	0.4	0.2	Ampl.	0.2
	406.4	43.1	122.0	358.6	325.7	263.4	39.9	134.2	Sbd box	39.1
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	
I	0	0	0	0	0	0	0	0	PC freqs	
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:I	-151:0	-20:0	37:0	-85:0	4:0	-106:0	-41:0	125:0	ManI PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) -6.74048648039E+03 Apriori delay (usec) -6.73963943165E+03 Resid mbdelay (usec) -3.29874E-03 +/- 1.8E-04  
 Sband delay (usec) -6.74049048940E+03 Apriori clock (usec) -2.7092653E+01 Resid sbdelay (usec) -8.51058E-01 +/- 1.4E-03  
 Phase delay (usec) -6.73963943602E+03 Apriori clockrate (us/s) 4.4462047E-08 Resid phdelay (usec) -4.37088E-06 +/- 6.2E-07  
 Delay rate (us/s) -1.04475005302E+00 Apriori rate (us/s) -1.04475645770E+00 Resid rate (us/s) 6.40467E-06 +/- 9.5E-09  
 Total phase (deg) -6.7 Apriori accel (us/s/s) 5.13917232136E-05 Resid phase (deg) -135.5 +/- 19.1

RMS Theor. Amplitude 0.237 +/- 0.039 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 57.5 44.8 Search (512X32) 0.190 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 69.4 78.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 37.4 27.0 Inc. seg. avg. 0.258 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 40.5 47.1 Inc. frq. avg. 0.245 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 I: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 8974.765 5553.587 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/BI..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/BI.W.77.3MP1AB

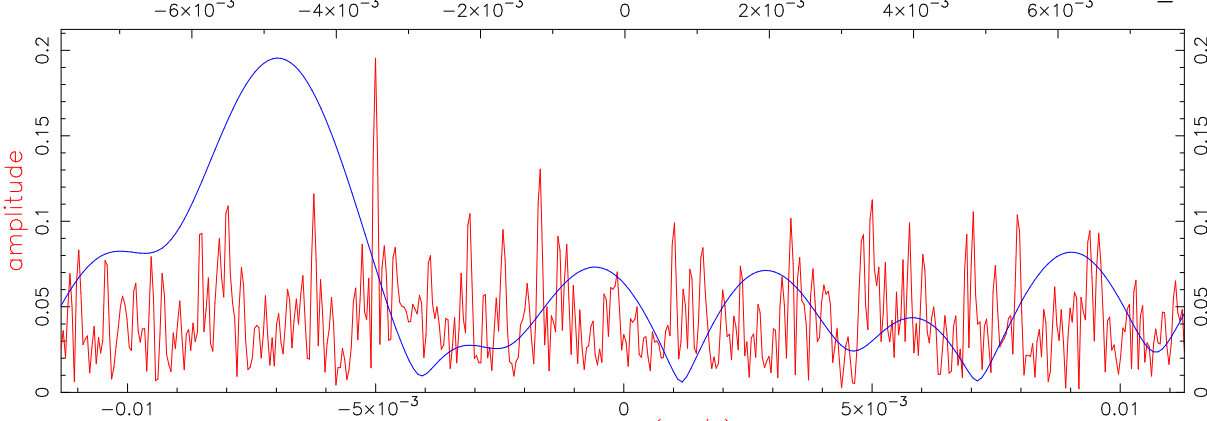
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, BI

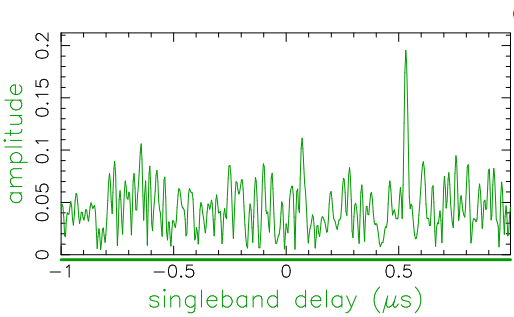
EFLSBERG - VLBA\_LA, fgroup W, pol RL

multiband delay ( $\mu$ s)

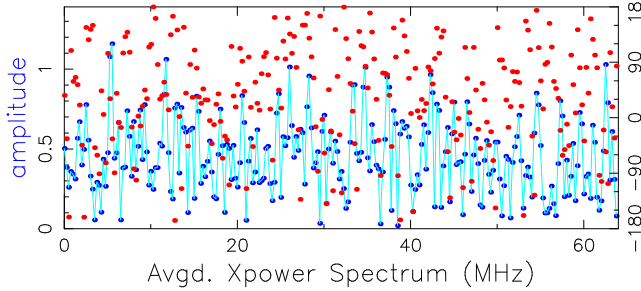


Fringe quality 0

SNR 5.7  
 Int time 112.640  
 Amp 0.212  
 Phase 119.5  
 PFD 5.6e-01  
 Delays (us)  
 SBD 0.531796  
 MBD -0.004783  
 Fringe rate (Hz)  
 -0.429886  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

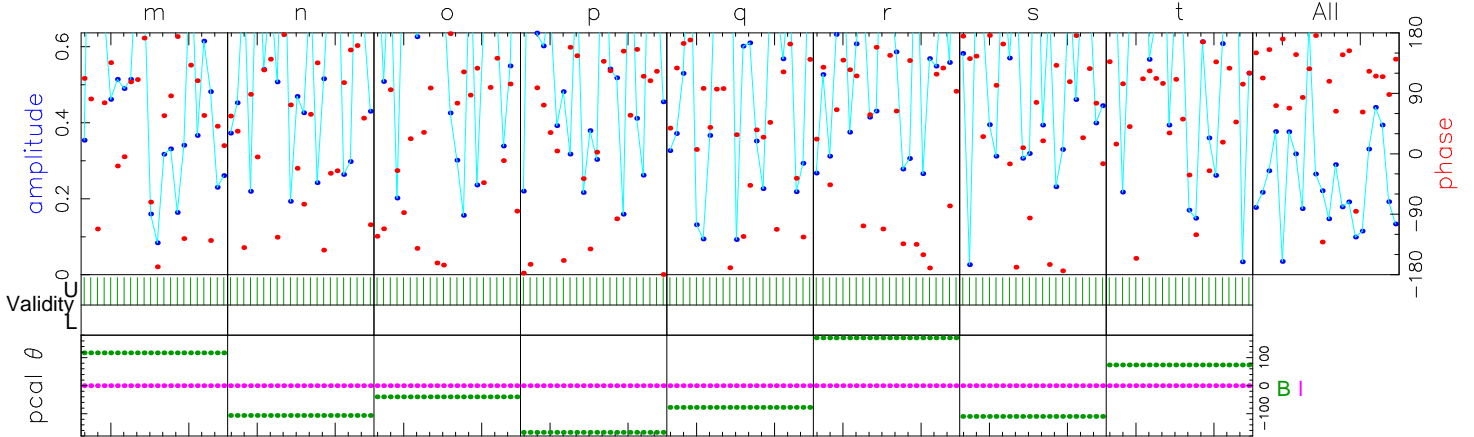


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112950  
 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		
B	0	0	0	0	0	0	0	0		
I	0	0	0	0	0	0	0	0		
B:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:I	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec) (SBD)	-6.73911296426E+03	Apriori delay (usec)	-6.73963943165E+03	Resid mbdelay (usec)	-4.78261E-03	+/-	1.9E-04
Sband delay (usec)	-6.73910763540E+03	Apriori clock (usec)	-2.7092653E+01	Resid sbdelay (usec)	5.31796E-01	+/-	1.5E-03
Phase delay (usec)	-6.73963942779E+03	Apriori clockrate (us/s)	4.4462047E-08	Resid phdelay (usec)	3.85461E-06	+/-	6.5E-07
Delay rate (us/s)	-1.04476144825E+00	Apriori rate (us/s)	-1.04475645770E+00	Resid rate (us/s)	-4.99055E-06	+/-	1.0E-08
Total phase (deg)	-111.6	Apriori accel (us/s/s)	5.13917232136E-05	Resid phase (deg)	119.5	+/-	20.2

ph/seg (deg)	RMS 52.7	Theor. 47.3	Amplitude Search (512X32)	0.212 +/- 0.037	0.186	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	75.9	82.6	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	19.7	28.5	Inc. seg. avg.	0.206	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	51.5	49.8	Inc. frq. avg.	0.199	0.000	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 I: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 8974.765 5553.587 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/BI..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/BI.W.84.3MP1AB





Mk4/DiFX fourfit 3.25 rev 0

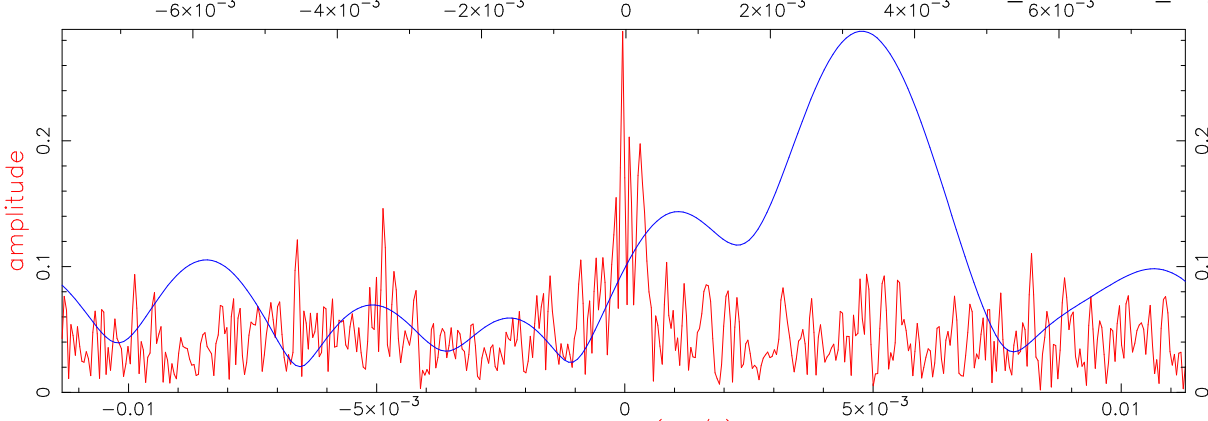
aux01

0133+476.3MP1AB, No0916, fl

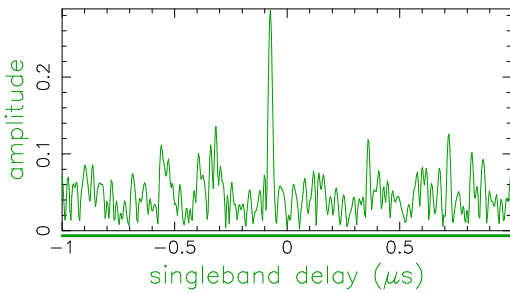
VLBA\_FD - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu$ s)

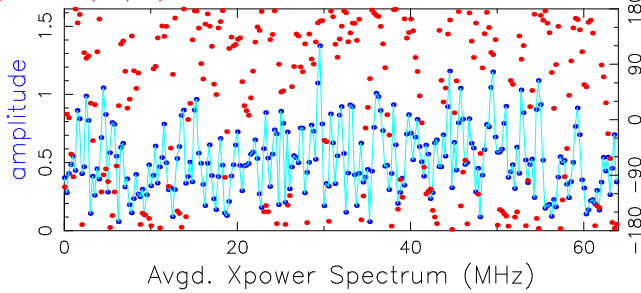
Fringe quality 9



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

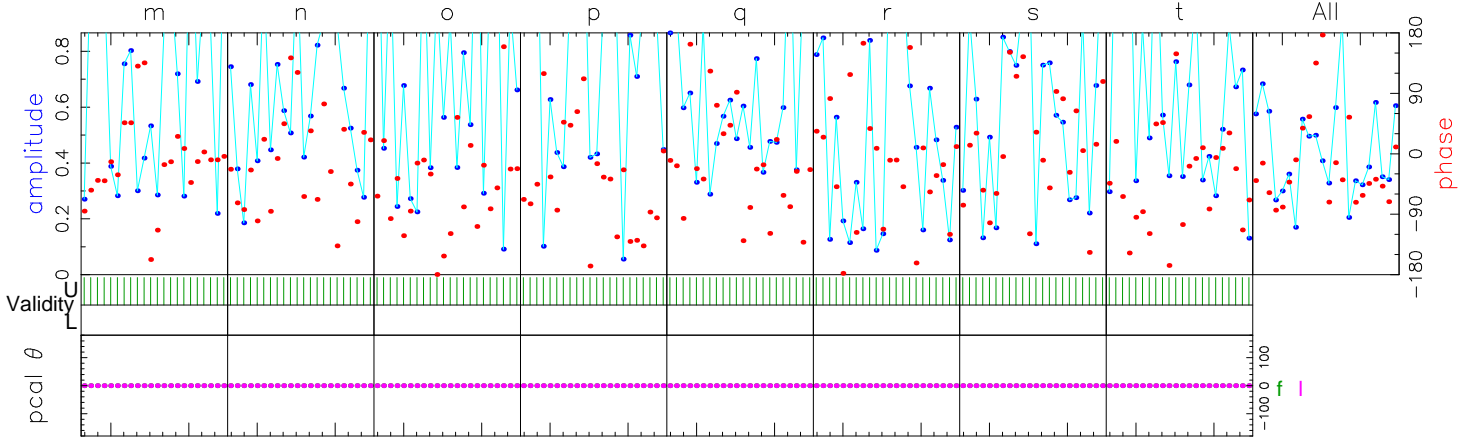


delay rate (ns/s)



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	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
		Inc. frq. avg.	0.307	Data rate(Mb/s): 2048		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

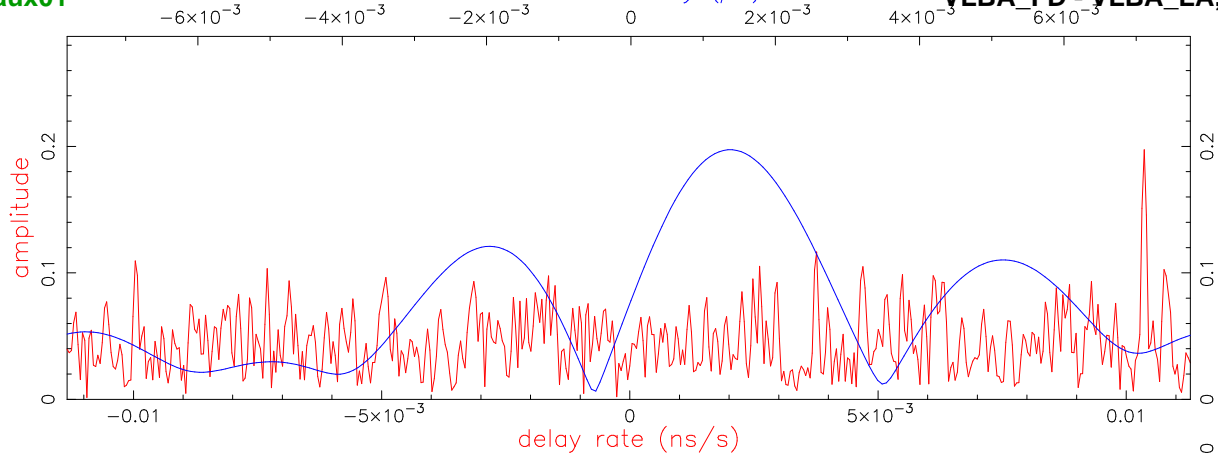
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fl

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

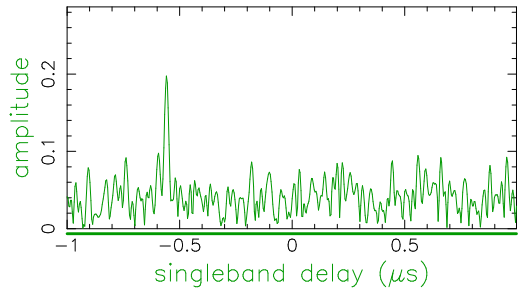
multiband delay ( $\mu$ s)



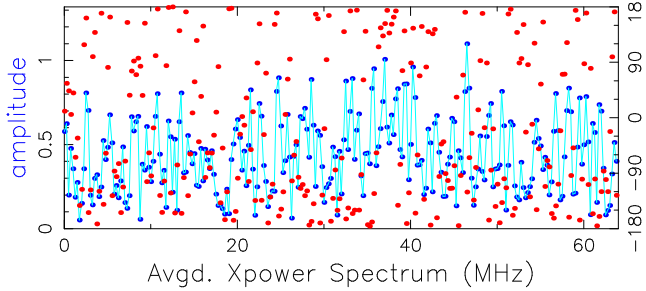
Fringe quality 0

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

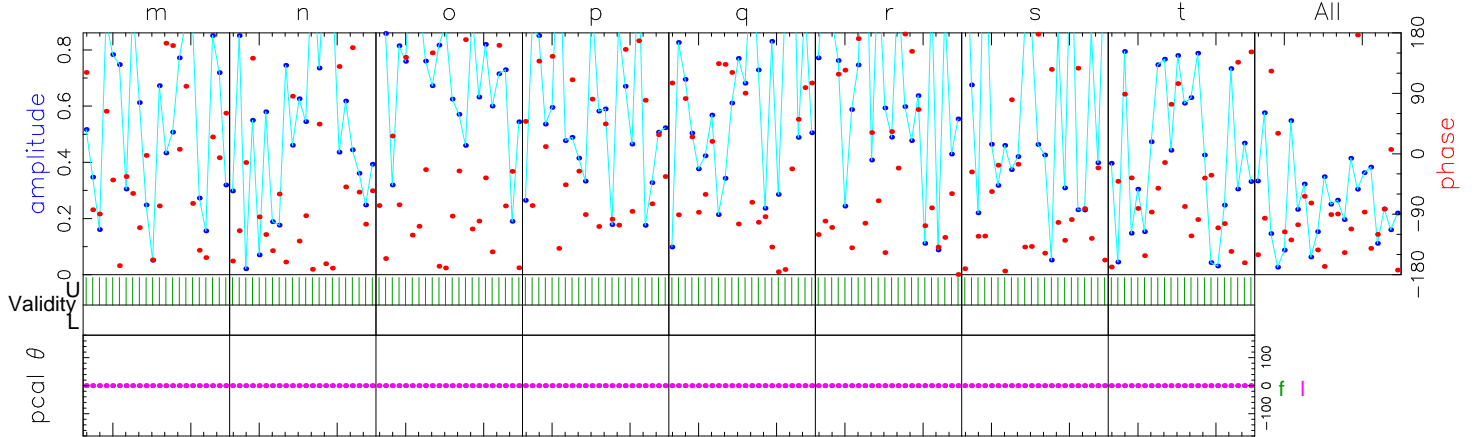
Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113004  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"



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
	-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) -4.4430238077E-06 Resid phase (deg) -119.3 +/- 20.0

RMS Theor. Amplitude 0.287 +/- 0.050 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 58.2 46.8 Search (512X32) 0.184 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 78.3 81.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 41.1 28.2 Inc. seg. avg. 0.284 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 68.7 49.3 Inc. frq. avg. 0.282 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

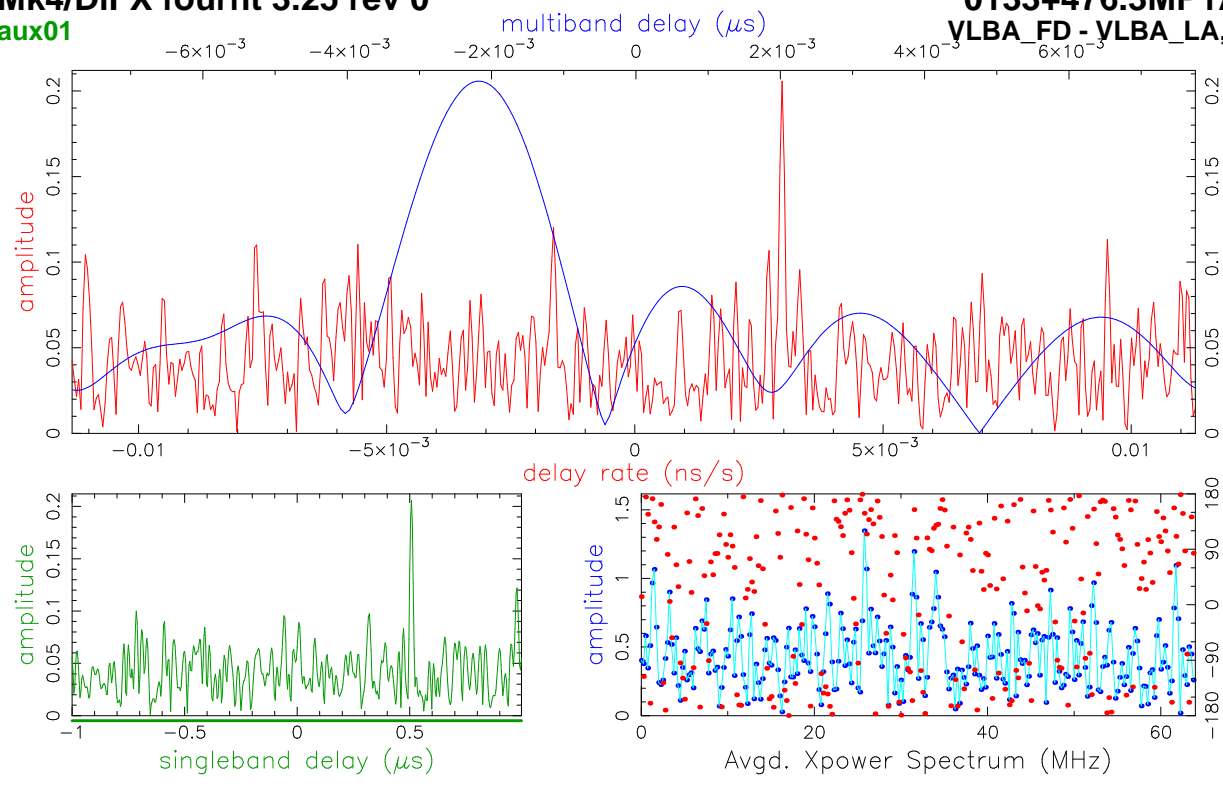
f: az 40.8 el 64.1 pa -123.1 l: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 75.435 -832.533 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fl.W.114.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

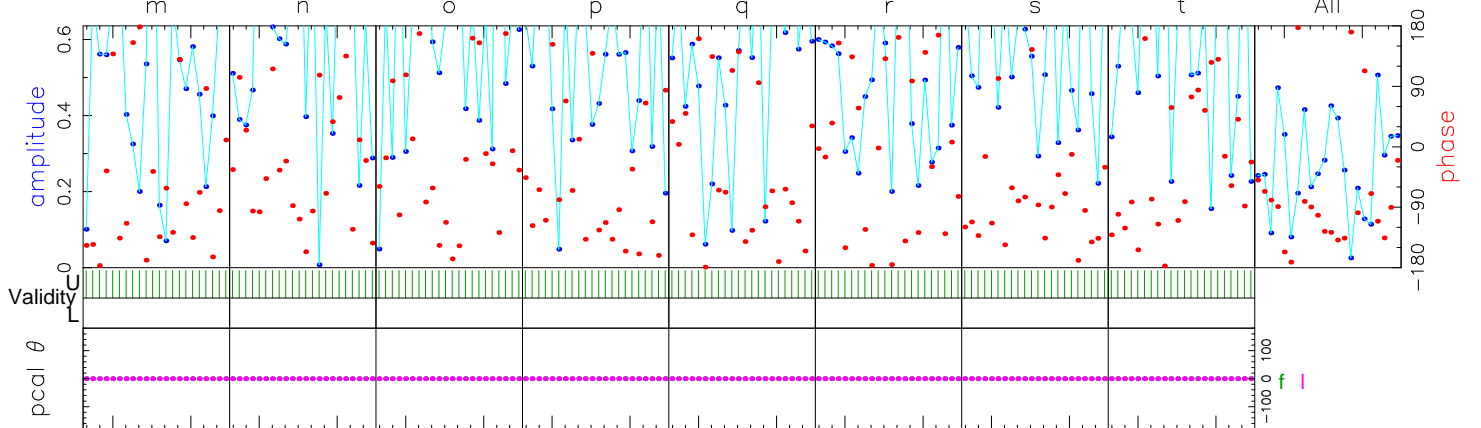
0133+476.3MP1AB, No0916, fl

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°51'29.100073"

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	
	-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		
									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)			Apriori accel (us/s/s)		-4.44302380777E-06		Resid phase (deg)		-107.2	+/- 19.2	
	RMS	Theor.	Amplitude	0.212 +/- 0.035		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	51.5	44.9	Search (512X32)	0.197		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	69.2	78.4	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	27.5	27.1	Inc. seg. avg.	0.211		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	38.4	47.3	Inc. frq. avg.	0.202		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.116.3MP1AB								

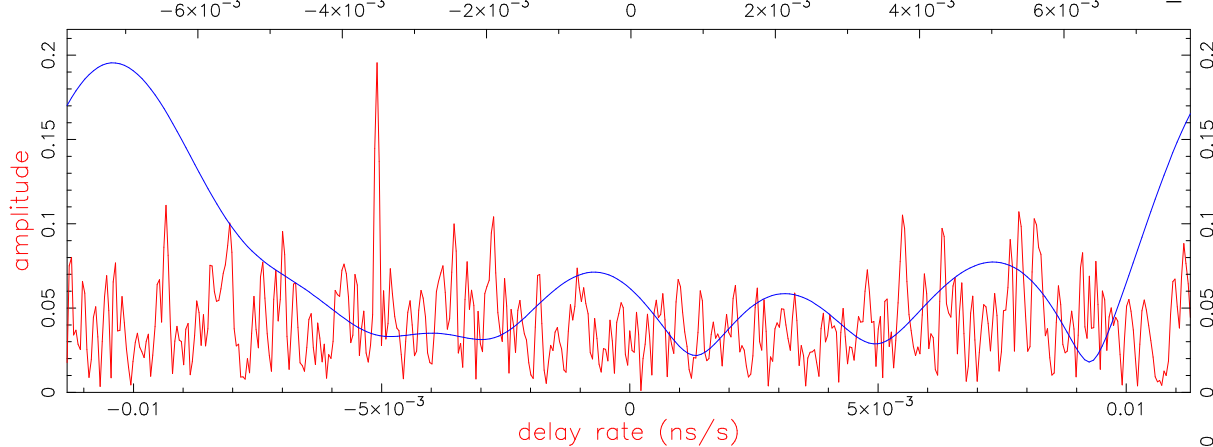
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, gl

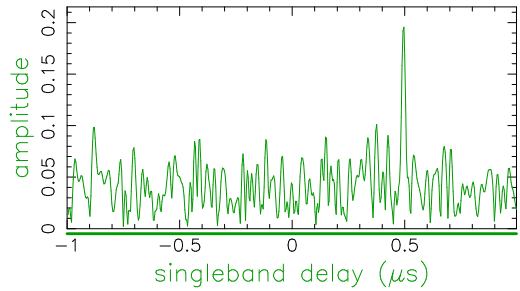
GLT - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)

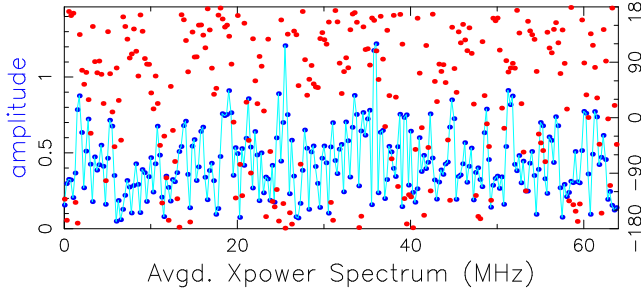


Fringe quality 0

SNR 5.7  
 Int time 112.640  
 Amp 0.215  
 Phase 147.3  
 PFD 4.4e-01  
 Delays (us)  
 SBD 0.494581  
 MBD -0.007152  
 Fringe rate (Hz)  
 -0.438090  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

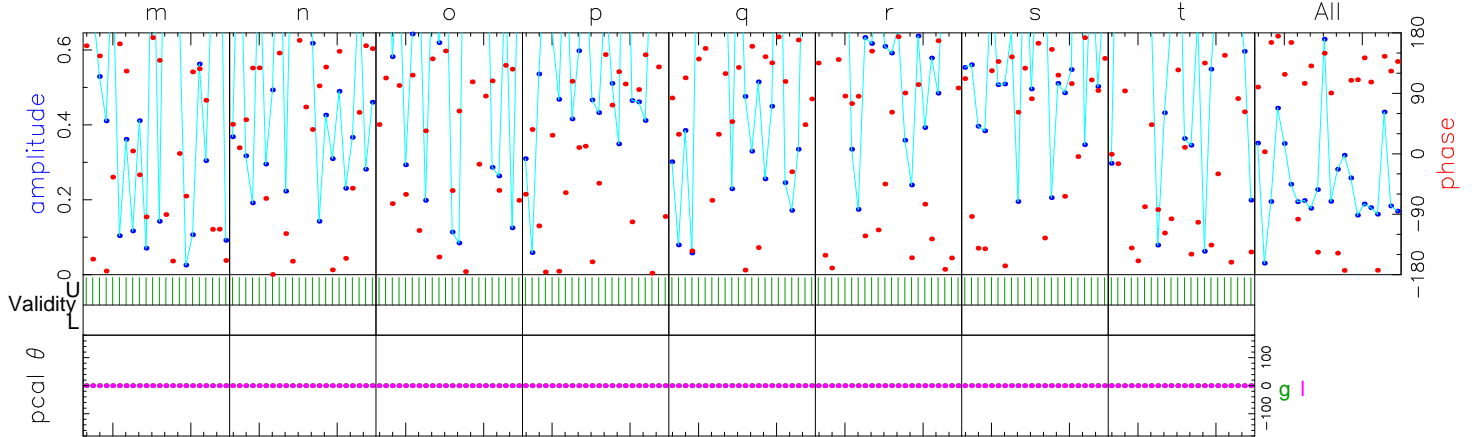


delay rate (ns/s)



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°51'29.10073"

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		
g	0	0	0	0	0	0	0	0		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-8.91409551990E+02	Apriori delay (usec)	-8.91902399775E+02	Resid mbdelay (usec)	-7.15222E-03	+/-	1.9E-04
Sband delay (usec)	-8.91407818275E+02	Apriori clock (usec)	8.7722073E+00	Resid sbdelay (usec)	4.94581E-01	+/-	1.5E-03
Phase delay (usec)	-8.91902395023E+02	Apriori clockrate (us/s)	3.1396196E-07	Resid phdelay (usec)	4.75142E-06	+/-	6.4E-07
Delay rate (us/s)	-4.28701978692E-01	Apriori rate (us/s)	-4.28696892904E-01	Resid rate (us/s)	-5.08579E-06	+/-	9.9E-09
Total phase (deg)	-110.6	Apriori accel (us/s/s)	3.73613605672E-05	Resid phase (deg)	147.3	+/-	19.9

ph/seg (deg)	52.6	Theor.	46.8	Amplitude	0.215 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	69.0	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)	40.2	Inc. seg. avg.	0.207	Inc. frq. avg.	0.221	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	41.9	Inc. frq. avg.	0.221			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
g: az 194.0 el 61.2 pa 4.9		l: az 50.4 el 66.3 pa -111.1		u, v (fr/asec)	3692.208 5546.399	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//gl..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916//gl.W.131.3MP1AB		simultaneous interpolator				

Mk4/DiFX fourfit 3.25 rev 0

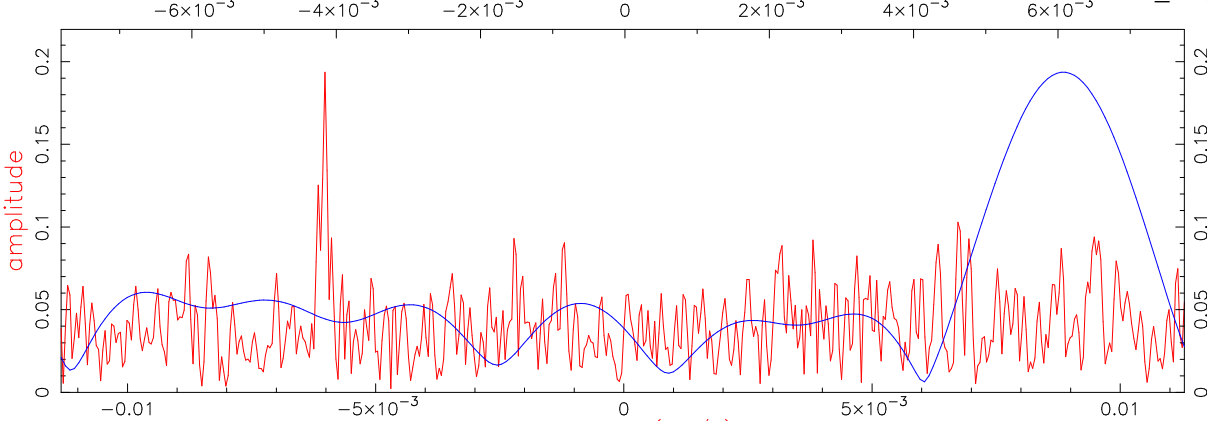
aux01

0133+476.3MP1AB, No0916, gl

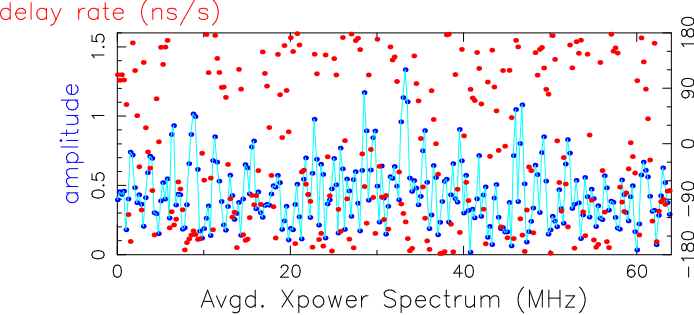
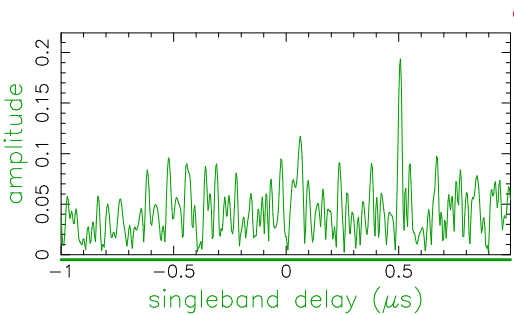
GLT - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

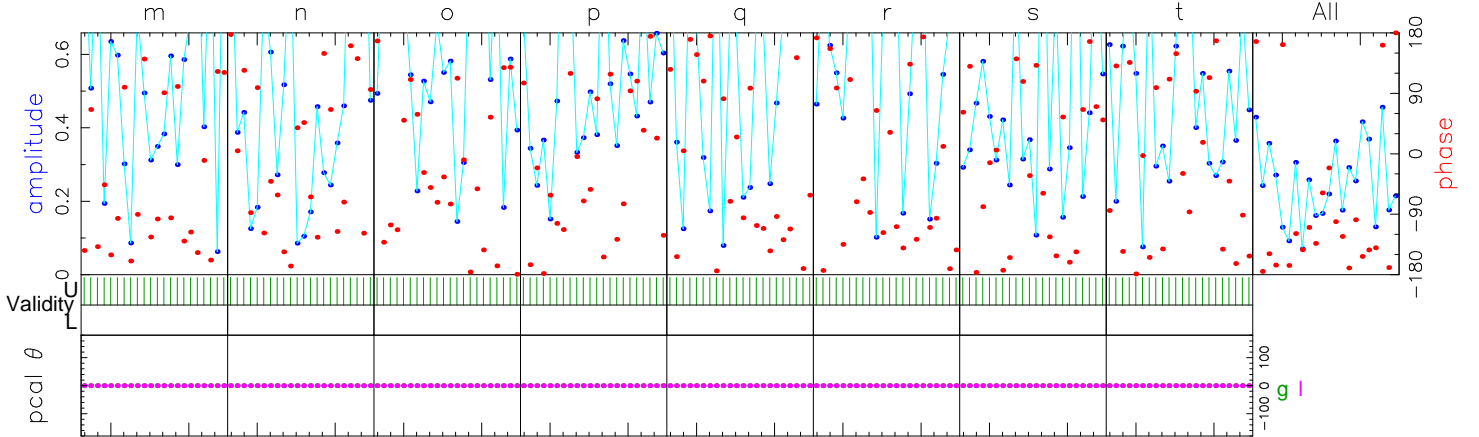


SNR 5.7  
 Int time 112.640  
 Amp 0.220  
 Phase -148.2  
 PFD 6.1e-01  
 Delays (us)  
 SBD 0.506724  
 MBD 0.006083  
 Fringe rate (Hz)  
 -0.518202  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113015  
 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		
g	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -8.91396316779E+02 Apriori delay (usec) -8.91902399775E+02 Resid mbdelay (usec) 6.08300E-03 +/- 1.9E-04  
 Sband delay (usec) -8.91395676025E+02 Apriori clock (usec) 8.7722073E+00 Resid sbdelay (usec) 5.06724E-01 +/- 1.5E-03  
 Phase delay (usec) -8.91902404553E+02 Apriori clockrate (us/s) 3.1396196E-07 Resid phdelay (usec) -4.77887E-06 +/- 6.5E-07  
 Delay rate (us/s) -4.28702908717E-01 Apriori rate (us/s) -4.28696892904E-01 Resid rate (us/s) -6.01581E-06 +/- 1.0E-08  
 Total phase (deg) -46.2 Apriori accel (us/s/s) 3.73613605672E-05 Resid phase (deg) -148.2 +/- 20.3

RMS Theor. Amplitude 0.220 +/- 0.039 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 44.0 47.5 Search (512X32) 0.188 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 63.1 82.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 17.0 28.6 Inc. seg. avg. 0.212 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 37.6 50.0 Inc. frq. avg. 0.199 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

g: az 194.0 el 61.2 pa 4.9 l: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 3692.208 5546.399 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916//gl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//gl.W.136.3MP1AB

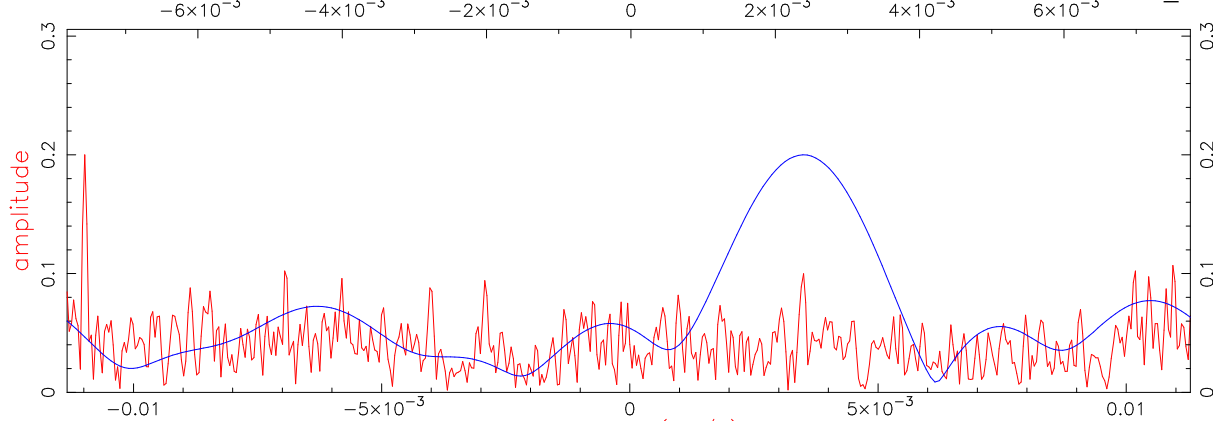
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, gl

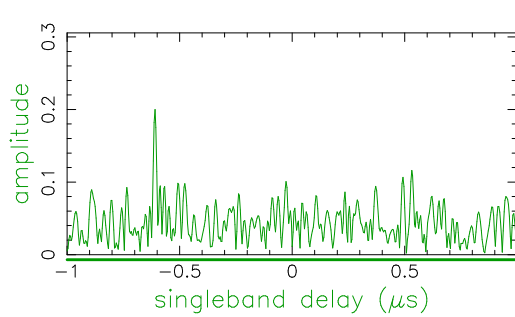
GLT - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

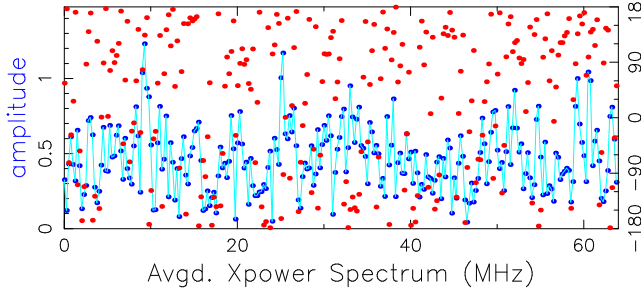


Fringe quality 0

SNR 5.8  
 Int time 112.640  
 Amp 0.306  
 Phase -72.1  
 PFD 3.3e-01  
 Delays (us)  
 SBD -0.609672  
 MBD 0.002387  
 Fringe rate (Hz)  
 -0.948470  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

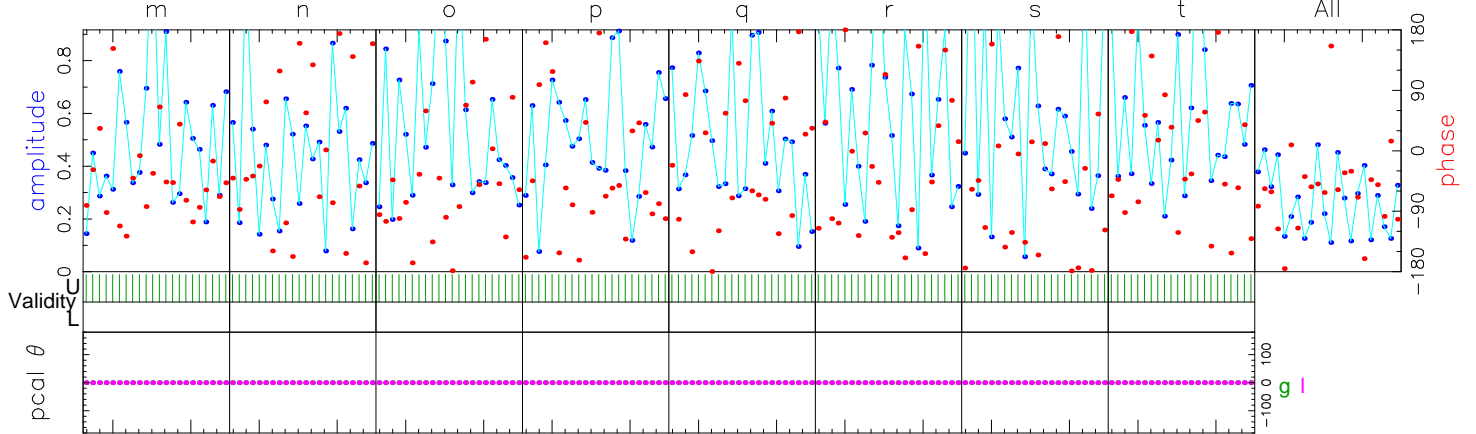


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113018  
 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		
g	0	0	0	0	0	0	0	0		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -8.92509387796E+02 Apriori delay (usec) -8.91902399775E+02 Resid mbdelay (usec) 2.38698E-03 +/- 1.9E-04  
 Sband delay (usec) -8.92512072275E+02 Apriori clock (usec) 8.7722073E+00 Resid sbdelay (usec) -6.09672E-01 +/- 1.5E-03  
 Phase delay (usec) -8.91902402099E+02 Apriori clockrate (us/s) 3.1396196E-07 Resid phdelay (usec) -2.32488E-06 +/- 6.4E-07  
 Delay rate (us/s) -4.28707903705E-01 Apriori rate (us/s) -4.28696892904E-01 Resid rate (us/s) -1.10108E-05 +/- 9.8E-09  
 Total phase (deg) -330.1 Apriori accel (us/s/s) 3.73613605672E-05 Resid phase (deg) -72.1 +/- 19.7

RMS Theor. Amplitude 0.306 +/- 0.053 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 53.4 46.3 Search (512X32) 0.188 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 70.9 80.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 24.3 27.9 Inc. seg. avg. 0.311 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 35.9 48.7 Inc. frq. avg. 0.288 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 g: az 194.0 el 61.2 pa 4.9 l: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 3692.208 5546.399 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916//gl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//gl.W.139.3MP1AB





Mk4/DiFX fourfit 3.25 rev 0

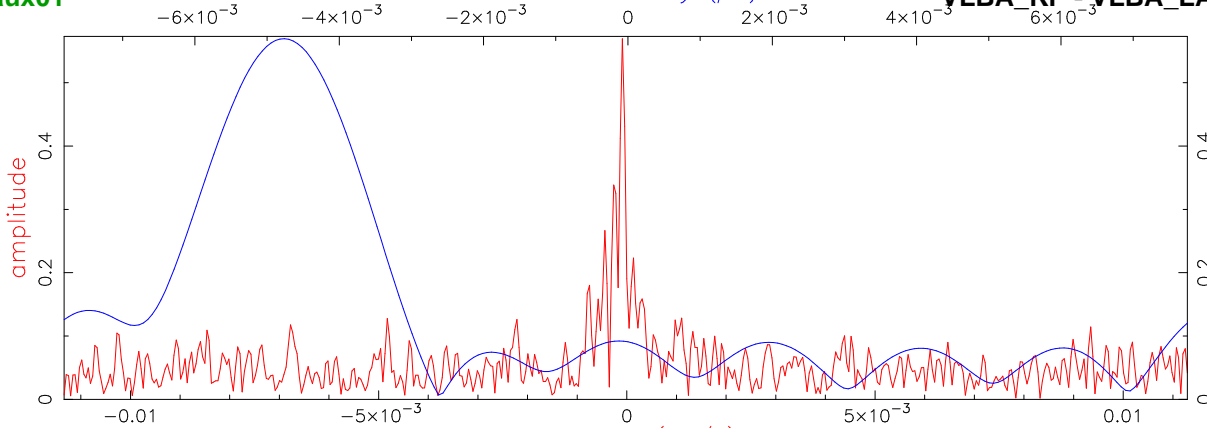
aux01

0133+476.3MP1AB, No0916, kl

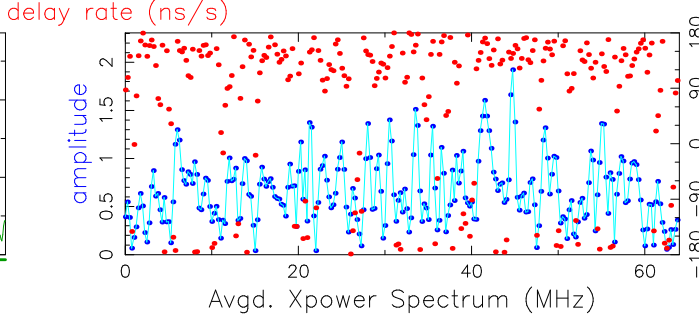
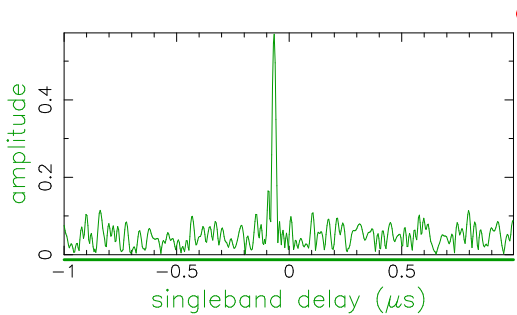
VLBA\_KP - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 9

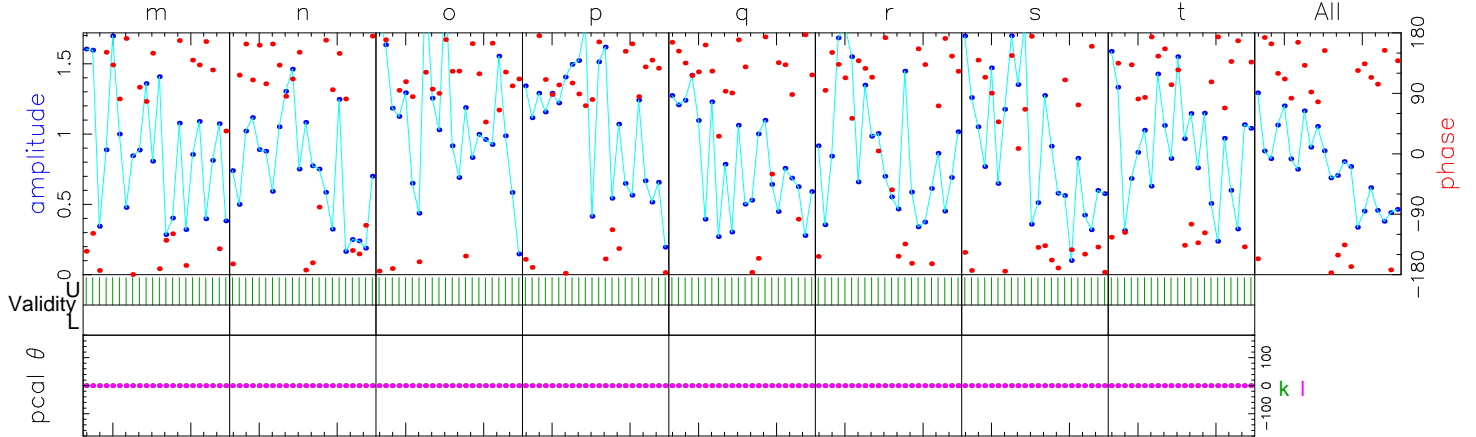


SNR 16.6  
 Int time 112.640  
 Amp 0.573  
 Phase 146.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.067465  
 MBD -0.004790  
 Fringe rate (Hz)  
 -0.009413  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113023  
 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
	161.5	147.8	133.1	141.1	142.4	136.7	155.1	160.6	Phase	146.1
	0.6	0.5	0.8	0.7	0.6	0.5	0.4	0.5	Ampl.	0.6
	239.6	239.5	239.6	239.4	239.9	240.0	240.7	240.1	Sbd box	239.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -9.57596554961E+02 Apriori delay (usec) -9.57529265106E+02 Resid mbdelay (usec) -4.78985E-03 +/- 6.5E-05  
 Sband delay (usec) -9.57596729606E+02 Apriori clock (usec) 8.4612713E+00 Resid sbdelay (usec) -6.74645E-02 +/- 5.2E-04  
 Phase delay (usec) -9.57529260394E+02 Apriori clockrate (us/s) 3.8620713E-07 Resid phdelay (usec) 4.71135E-06 +/- 2.2E-07  
 Delay rate (us/s) 8.91963080923E-02 Apriori rate (us/s) 8.91964173689E-02 Resid rate (us/s) -1.09277E-07 +/- 3.4E-09  
 Total phase (deg) -176.5 Apriori accel (us/s/s) 5.00972771992E-07 Resid phase (deg) 146.1 +/- 6.9

ph/seg (deg) 41.3 16.2 Theor. Amplitude 0.573 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 58.4 28.2 Search (512X32) 0.532 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 11.7 9.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 19.6 17.0 Inc. seg. avg. 0.742 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.570 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

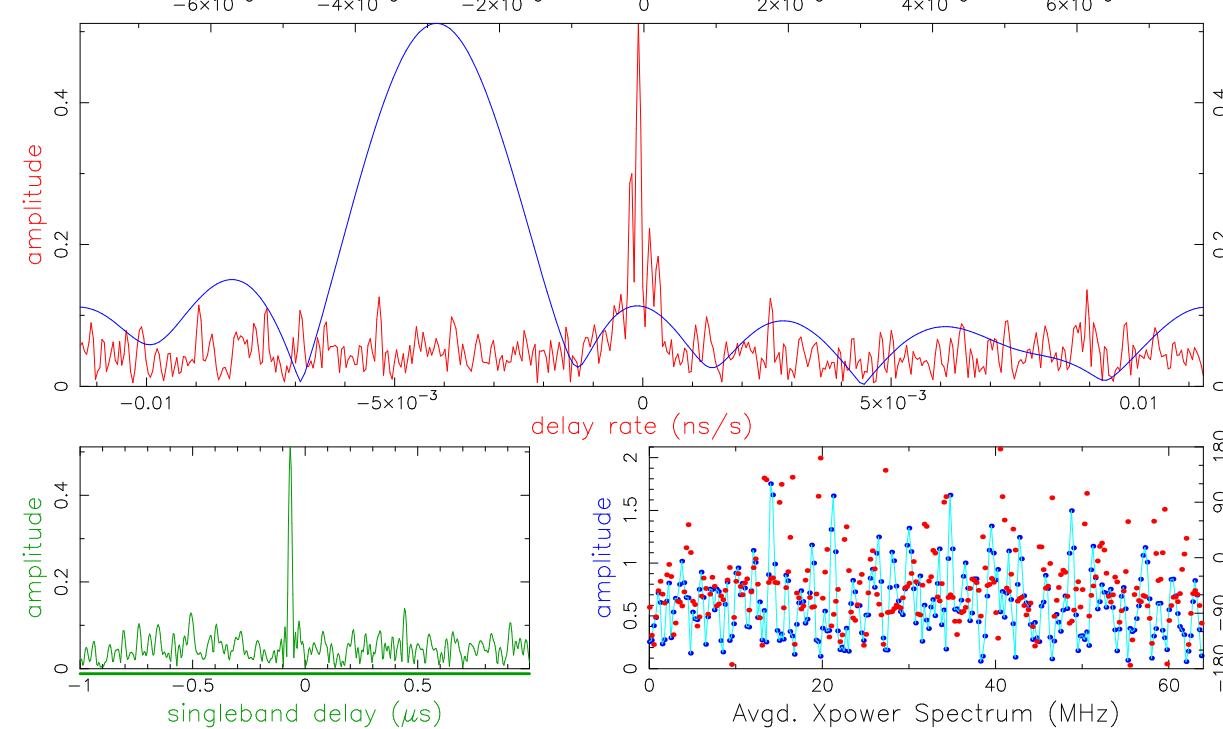
k: az 47.5 el 60.5 pa -111.0 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) -762.329 -281.210 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/kl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/kl.W.160.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, kl

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

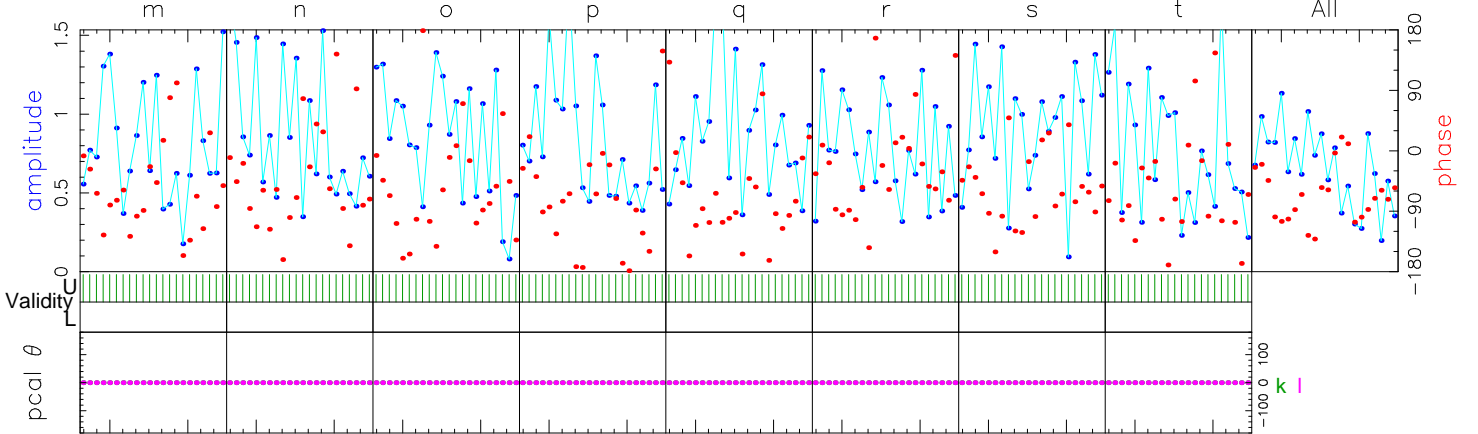


Fringe quality 9

SNR 14.9  
 Int time 112.640  
 Amp 0.512  
 Phase -69.8  
 PFD 1.1e-41  
 Delays (us)  
 SBD -0.066445  
 MBD -0.002874  
 Fringe rate (Hz)  
 -0.008855  
 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  
 2025:041:113024  
 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
	-70.9	-61.1	-73.5	-74.9	-83.1	-48.4	-68.0	-75.6	Phase	-69.8
	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	Ampl.	0.5
	240.0	240.4	240.0	240.4	239.8	240.3	239.6	239.5	Sbd box	240.0
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-9.57594639336E+02	Apriori delay (usec)	-9.57529265106E+02	Resid mbdelay (usec)	-2.87423E-03	+/-	7.3E-05
Sband delay (usec)	-9.57595710106E+02	Apriori clock (usec)	8.4612713E+00	Resid sbdelay (usec)	-6.64450E-02	+/-	5.8E-04
Phase delay (usec)	-9.57529267356E+02	Apriori clockrate (us/s)	3.8620713E-07	Resid phdelay (usec)	-2.25082E-06	+/-	2.5E-07
Delay rate (us/s)	8.91963145713E-02	Apriori rate (us/s)	8.91964173689E-02	Resid rate (us/s)	-1.02798E-07	+/-	3.8E-09
Total phase (deg)		Apriori accel (us/s/s)	5.00972771992E-07	Resid phase (deg)	-69.8	+/-	7.7

ph/seg (deg)	RMS 41.4	Theor. 18.1	Amplitude Search (512X32)	0.512 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	57.1	31.6	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)	11.5	10.9	Inc. seg. avg.	0.635	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	13.4	19.0	Inc. frq. avg.	0.510	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 47.5 el 60.5 pa -111.0      l: az 50.4 el 66.3 pa -111.1      u,v (fr/asec) -762.329 -281.210      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c241a/v2/3mm/1234/No0916/kl..3MP1AB    Output file: /Exps/c241a/v2/3mm/1234/No0916/kl.W.162.3MP1AB

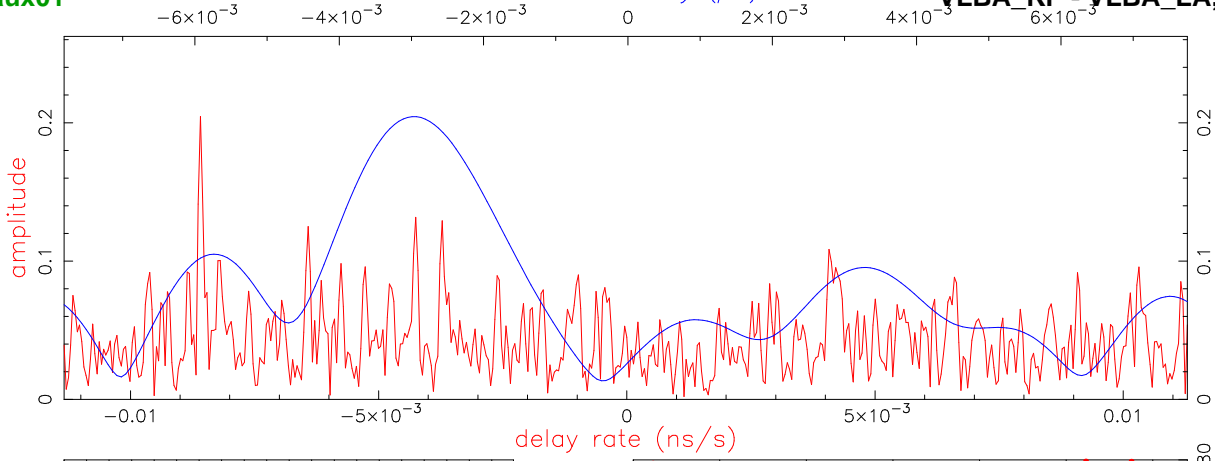
Mk4/DiFX fourfit 3.25 rev 0

aux01

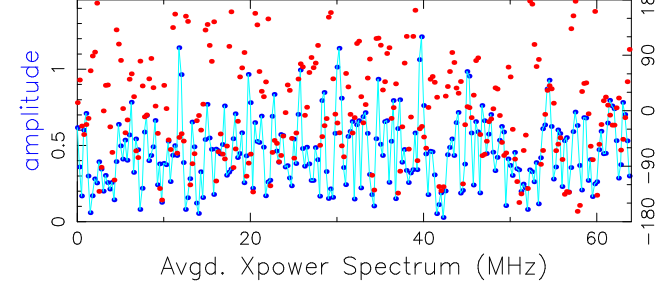
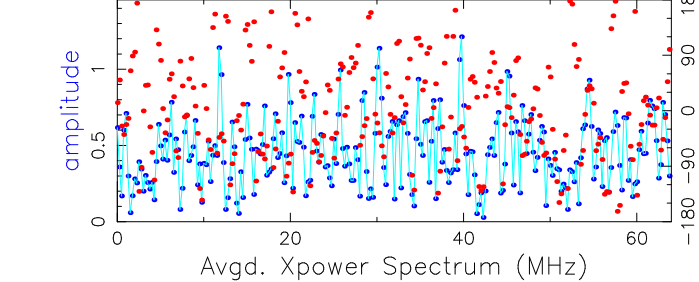
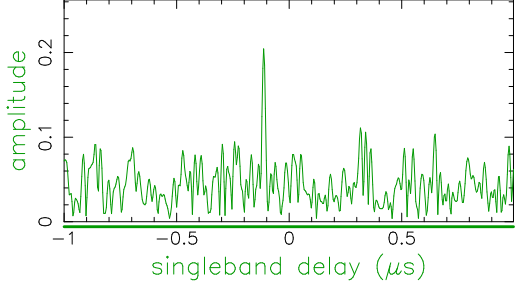
0133+476.3MP1AB, No0916, kl

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

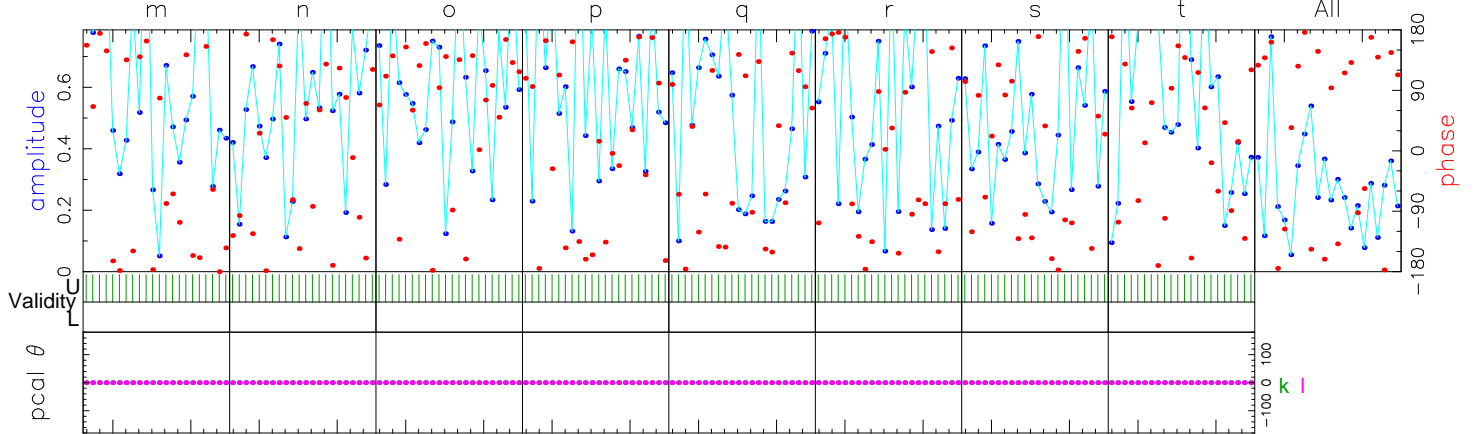
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 5.9  
 Int time 112.640  
 Amp 0.262  
 Phase 166.0  
 PFD 1.7e-01  
 Delays (us)  
 SBD -0.113124  
 MBD -0.002961  
 Fringe rate (Hz) -0.741498  
 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  
 2025:041:113026  
 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		
k	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec) (SBD)	-9.57641601525E+02									
Sband delay (usec)	-9.57642389606E+02									
Phase delay (usec)	-9.57529259753E+02									
Delay rate (us/s)	8.91878093092E-02									
Total phase (deg)			-156.7							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us										
Data rate(Mb/s): 2048										
nlags: 256 t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

ph/seg (deg) 59.1 45.3 Amplitude 0.262 +/- 0.044 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 85.3 79.0 Search (512X32) 0.193 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 38.2 27.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 49.9 47.7 Inc. seg. avg. 0.271 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 47.5 el 60.5 pa -111.0 l: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) -762.329 -281.210 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/kl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/kl.W.163.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

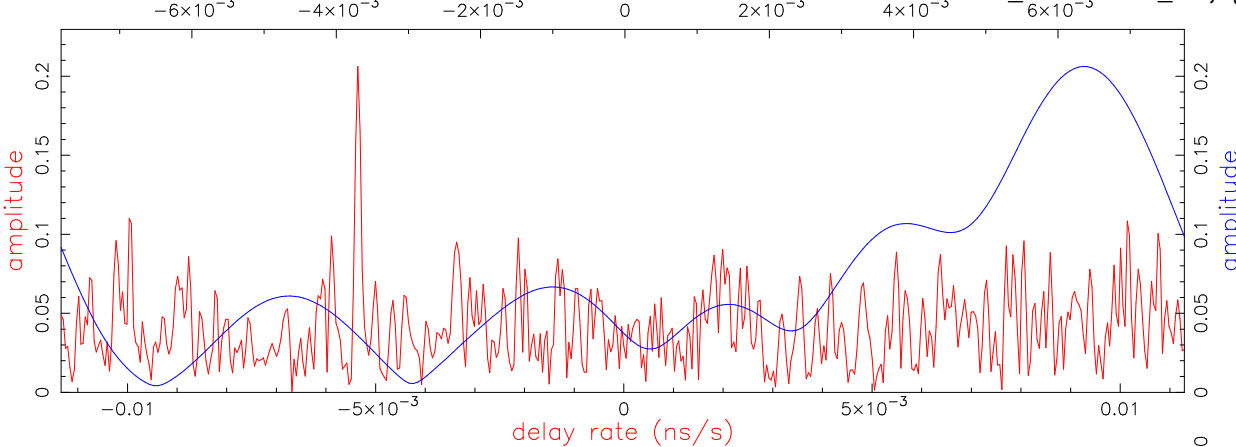
aux01

0133+476.3MP1AB, No0916, kl

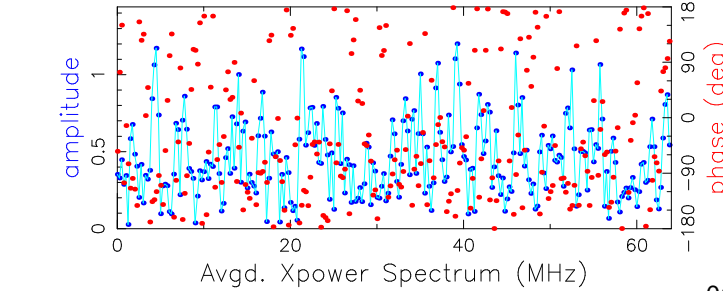
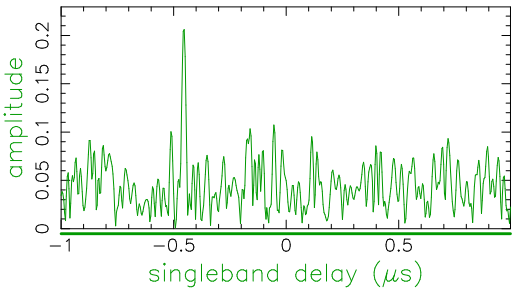
VLBA\_KP - VLBA\_LA, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

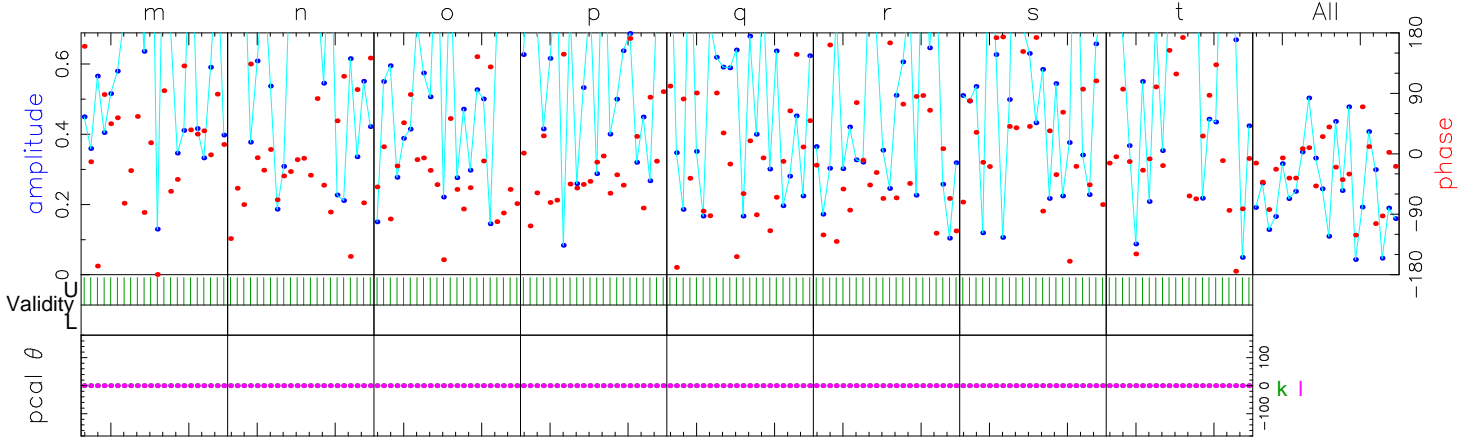


SNR 6.1  
 Int time 112.640  
 Amp 0.230  
 Phase -17.5  
 PFD 8.1e-02  
 Delays (us)  
 SBD -0.454854  
 MBD 0.006332  
 Fringe rate (Hz)  
 -0.460888  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113027  
 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		
k	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-9.57991682761E+02	Apriori delay (usec)	-9.57529265106E+02	Resid mbdelay (usec)	6.33234E-03	+/-	1.8E-04
Sband delay (usec)	-9.57984119356E+02	Apriori clock (usec)	8.4612713E+00	Resid sbdelay (usec)	-4.54854E-01	+/-	1.4E-03
Phase delay (usec)	-9.57529265669E+02	Apriori clockrate (us/s)	3.8620713E-07	Resid phdelay (usec)	-5.63565E-07	+/-	6.1E-07
Delay rate (us/s)	8.91910669114E-02	Apriori rate (us/s)	8.91964173689E-02	Resid rate (us/s)	-5.35046E-06	+/-	9.4E-09
Total phase (deg)	-340.1	Apriori accel (us/s/s)	5.00972771992E-07	Resid phase (deg)	-17.5	+/-	18.9

ph/seg (deg)	45.9	Theor.	44.3	Amplitude	0.230 +/- 0.038	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	63.3		77.3	Search (512X32)	0.200	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	32.4		26.7	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	45.7		46.6	Inc. seg. avg.	0.213	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

k: az 47.5 el 60.5 pa -111.0 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) -762.329 -281.210 simultaneous interpolator

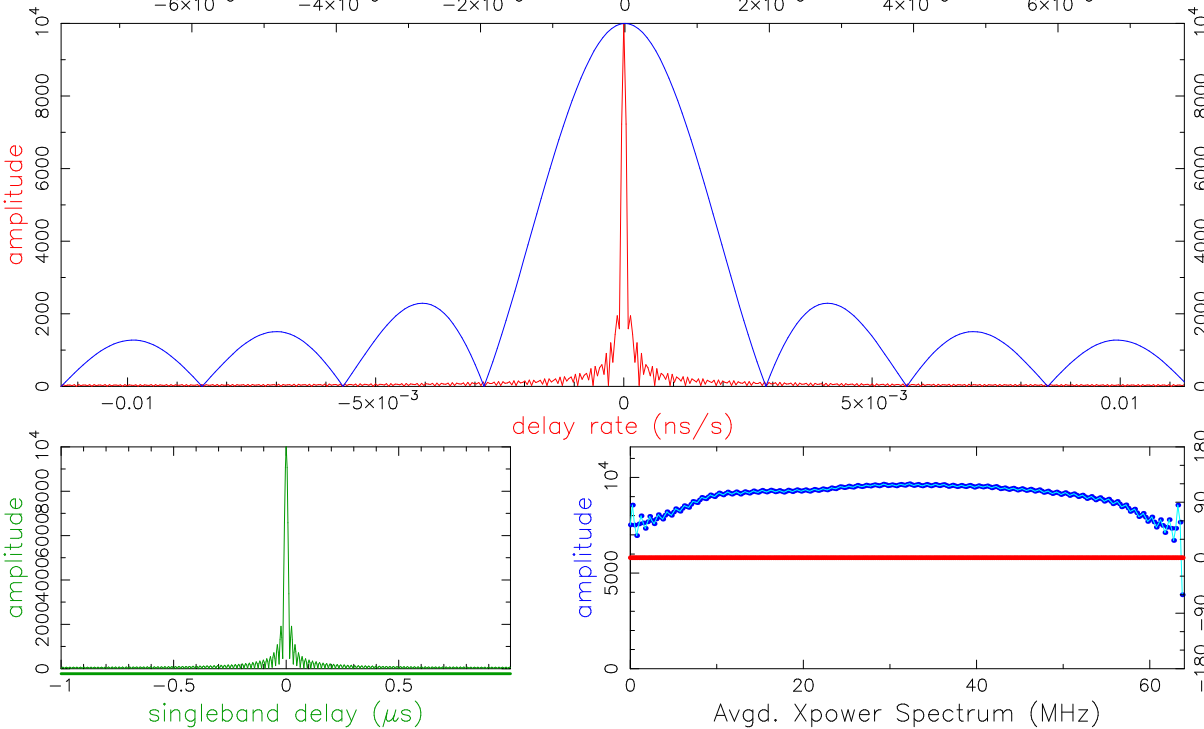
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/kl..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/kl.W.169.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

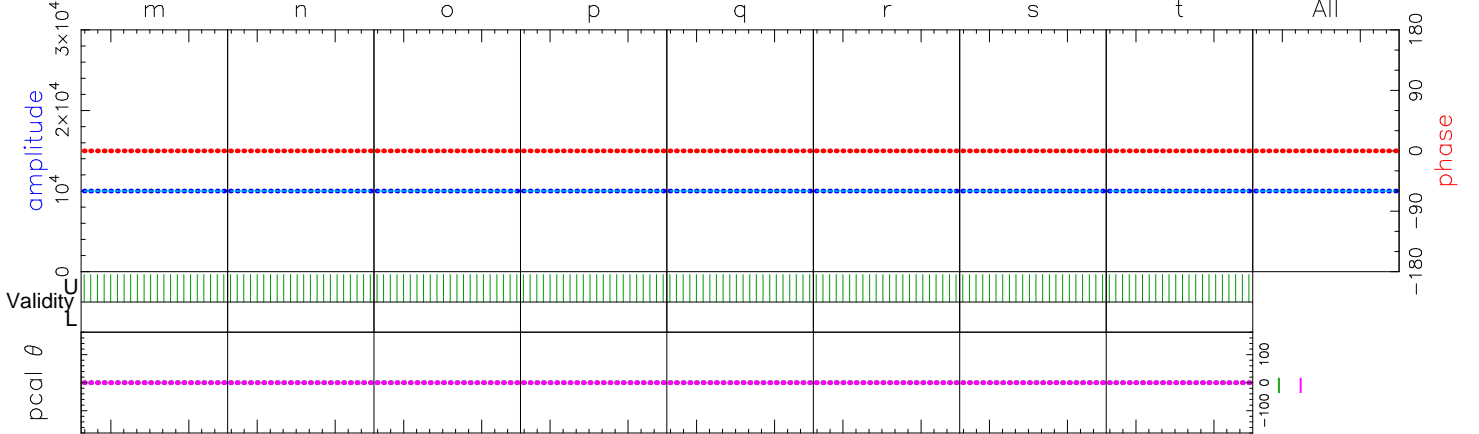
0133+476.3MP1AB, No0916, II

VLBA\_LA - VLBA\_LA, 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  
 2025:041:113032  
 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		
Ampl.	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0
Phase	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sbd box	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0
APs used	0	0	0	0	0	0	0	0	0	0
PC freqs	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
PC phase	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
Mani PC	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
PC amp	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Chan ids	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Tracks	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

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

RMS Theor. Amplitude 10000.000 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 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  
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 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  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

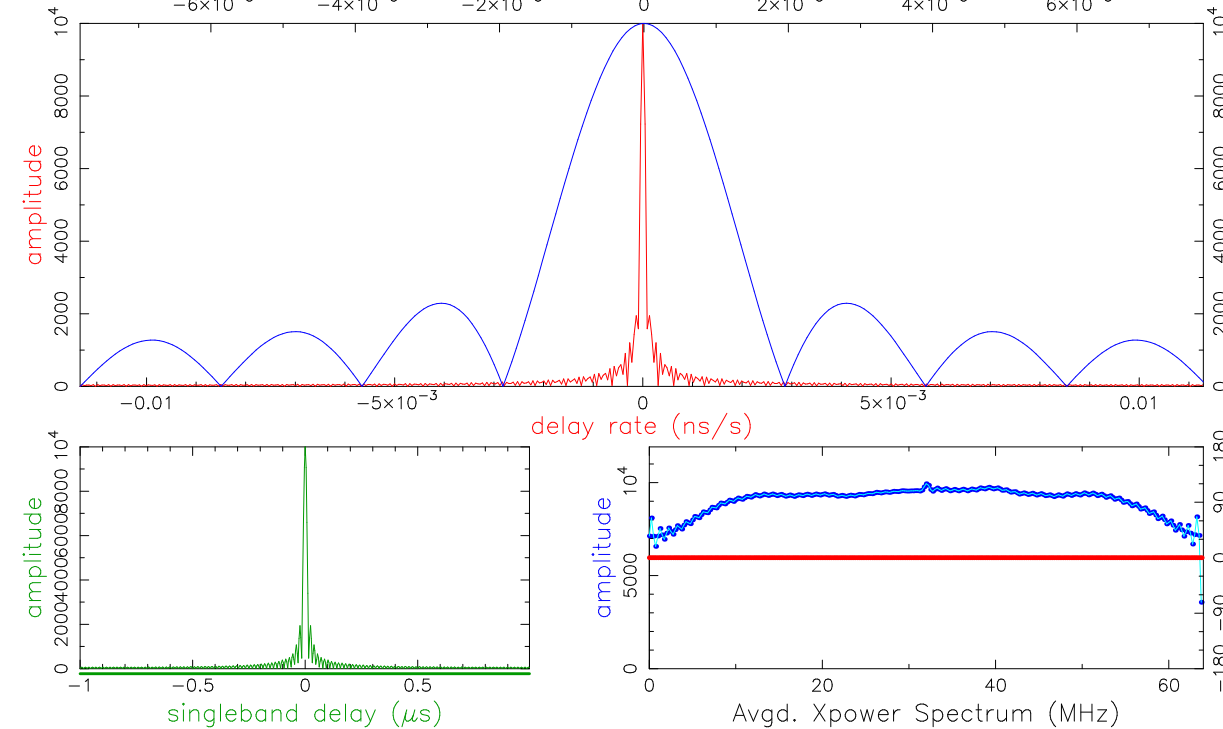
l: az 50.4 el 66.3 pa -111.1 i: az 50.4 el 66.3 pa -111.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/II..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/II.W.182.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, II

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

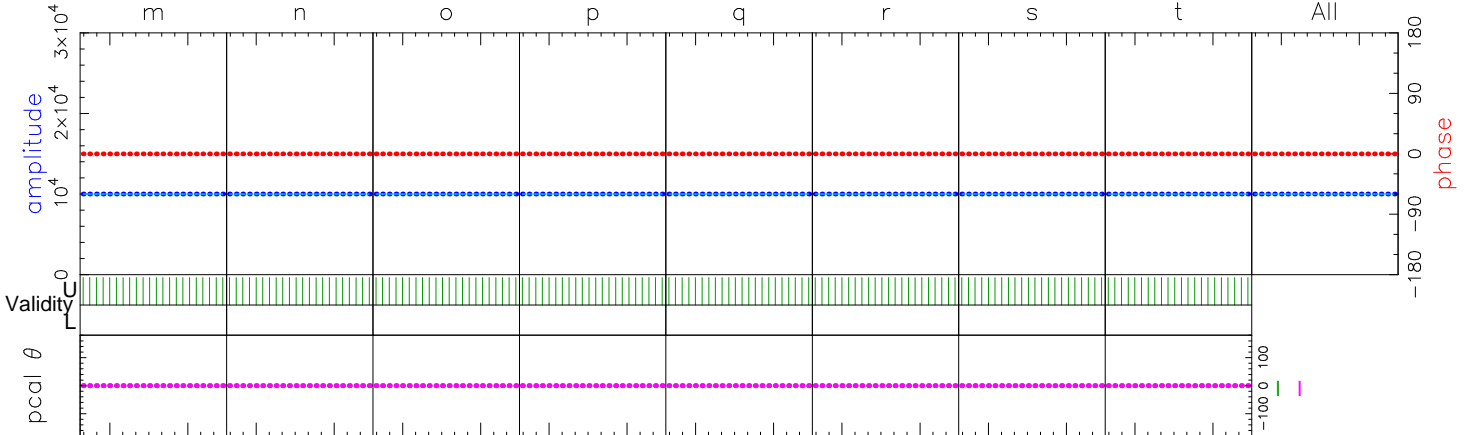


Fringe quality 9

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  
 2025:041:113033  
 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		
Ampl.	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0
Phase	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sbd box	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0
APs used	0	0	0	0	0	0	0	0		
PC freqs	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
PC phase	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ManI PC	1000	1000	1000	1000	1000	1000	1000	1000		
PC amp	1000	1000	1000	1000	1000	1000	1000	1000		
Chan ids	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Tracks	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 RMS 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  
 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 50.4 el 66.3 pa -111.1 i: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/II..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/II.W.184.3MP1AB

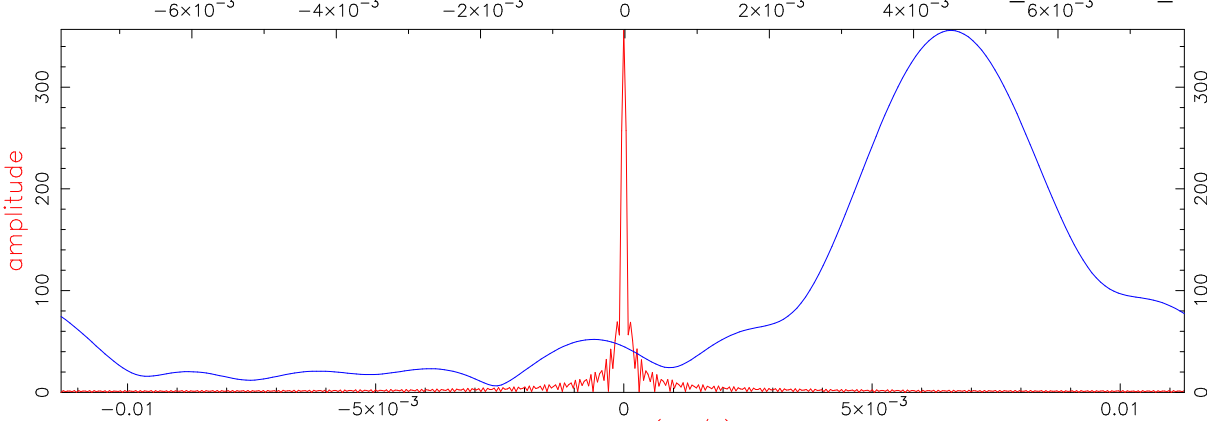
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, II

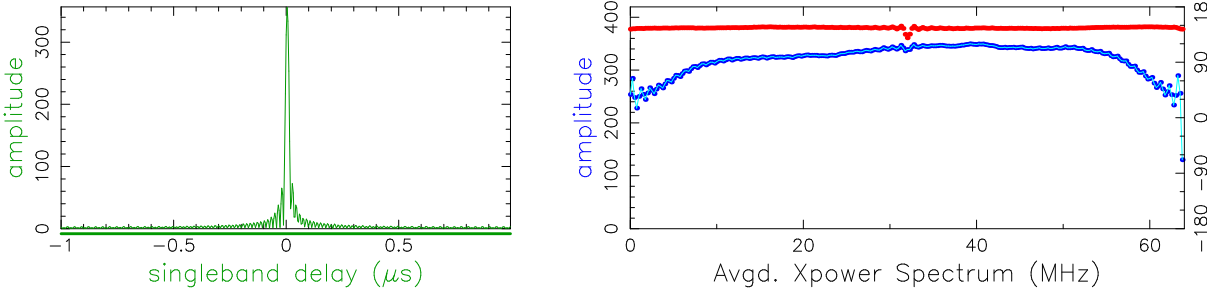
VLBA\_LA - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

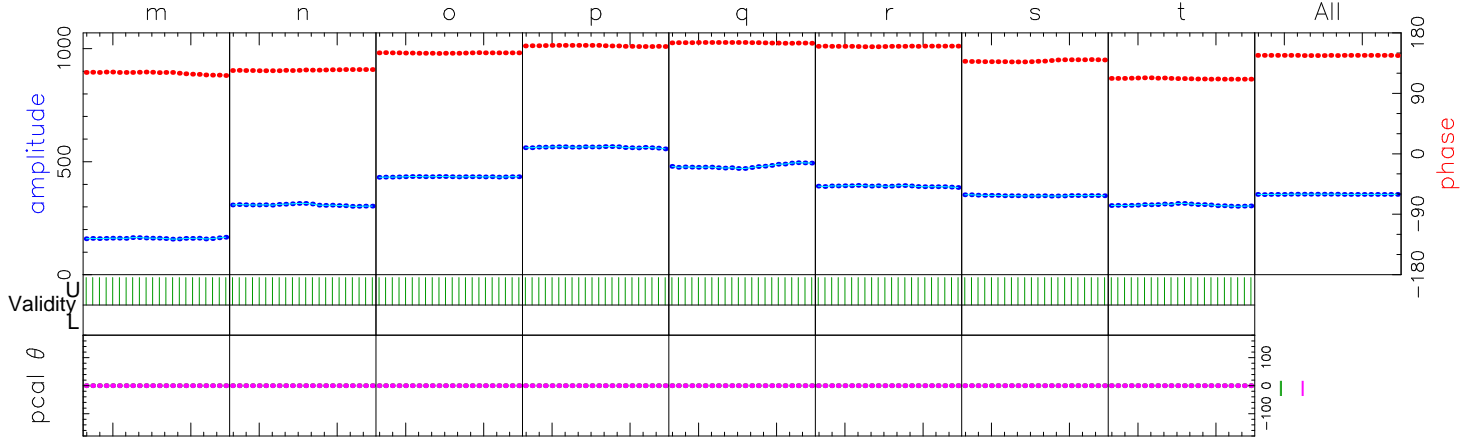


Fringe quality 6  
 Error code G  
 SNR 10354.8  
 Int time 112.640  
 Amp 356.779  
 Phase 146.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004584  
 MBD 0.004538  
 Fringe rate (Hz)  
 -0.000001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113034  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

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
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
	0	0	0	0	0	0	0	0		
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
	1000	1000	1000	1000	1000	1000	1000	1000		
	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) 4.537750000000E-03 Apriori delay (usec) 0.000000000000E+00 Resid mbdelay (usec) 4.53775E-03 +/- 1.0E-07  
 Sband delay (usec) 4.584250000000E-03 Apriori clock (usec) 0.000000000000E+00 Resid sbdelay (usec) 4.58425E-03 +/- 8.3E-07  
 Phase delay (usec) 4.72004730839E-06 Apriori clockrate (us/s) 0.000000000000E+00 Resid phdelay (usec) 4.72005E-06 +/- 3.6E-10  
 Delay rate (us/s) -8.50269143501E-12 Apriori rate (us/s) 0.000000000000E+00 Resid rate (us/s) -8.50269E-12 +/- 5.5E-12  
 Total phase (deg) 146.4 Apriori accel (us/s/s) 0.000000000000E+00 Resid phase (deg) 146.4 +/- 0.0

RMS Theor. Amplitude 356.779 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.1 0.0 Search (512X32) 354.166 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.3 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 23.0 0.0 Inc. seg. avg. 355.755 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 32.6 0.0 Inc. frq. avg. 374.694 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 50.4 el 66.3 pa -111.1 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916//II..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//II.W.186.3MP1AB

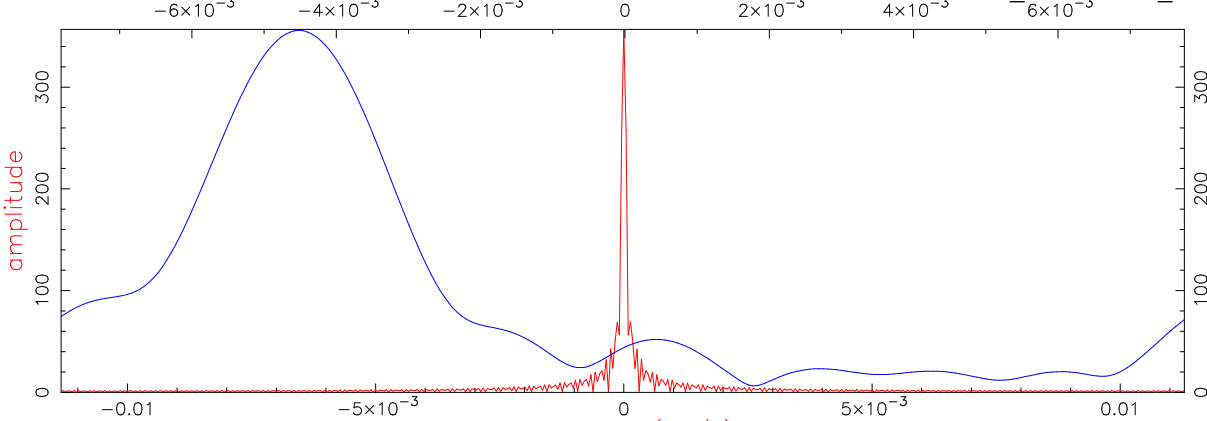
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, II

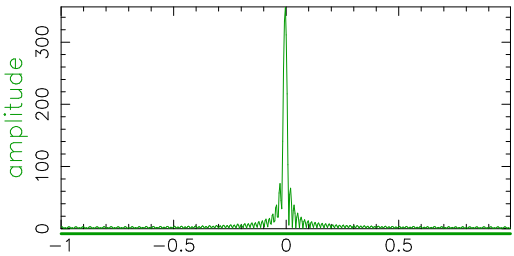
VLBA\_LA - VLBA\_LA, fgroup W, pol RL

multiband delay ( $\mu$ s)

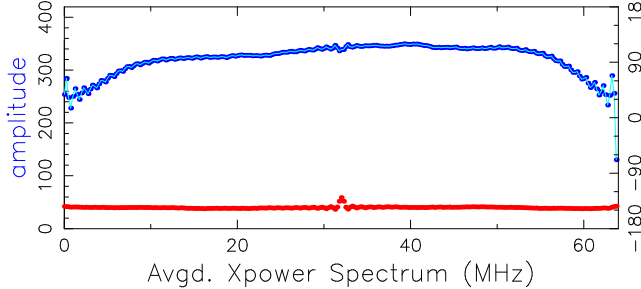


Fringe quality 6  
 Error code G  
 SNR 10354.8  
 Int time 112.640  
 Amp 356.779  
 Phase -146.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.004584  
 MBD -0.004538  
 Fringe rate (Hz)  
 0.000001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113035  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"

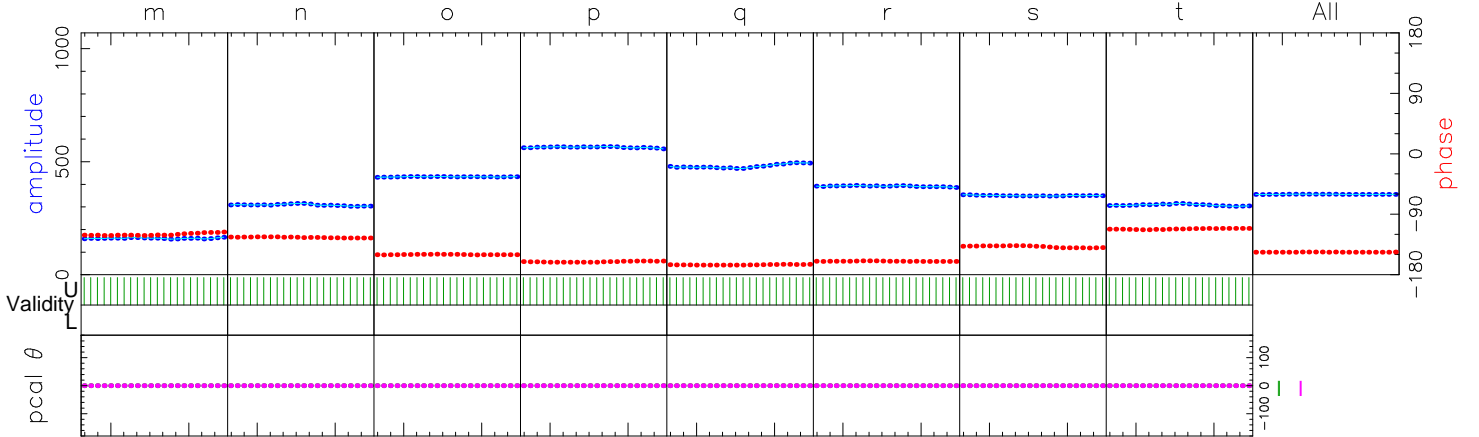
delay rate (ns/s)



singleband delay ( $\mu$ 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
	-120.0	-124.4	-149.9	-160.6	-165.1	-159.8	-138.2	-111.8	Phase	-146.4
	161.3	308.7	433.3	563.8	480.3	391.7	350.0	308.5	Ampl.	374.7
	255.5	255.9	255.7	255.6	255.9	256.1	256.1	256.0	Sbd box	255.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
	0	0	0	0	0	0	0	0	PC freqs	
	0	0	0	0	0	0	0	0	PC freqs	
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -4.53775000000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -4.53775E-03 +/- 1.0E-07  
 Sband delay (usec) -4.58425000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) -4.58425E-03 +/- 8.3E-07  
 Phase delay (usec) -4.72004730839E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -4.72005E-06 +/- 3.6E-10  
 Delay rate (us/s) 8.50269143501E-12 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) 8.50269E-12 +/- 5.5E-12  
 Total phase (deg) -146.4 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) -146.4 +/- 0.0

RMS Theor. Amplitude 356.779 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.1 0.0 Search (512X32) 354.166 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.3 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 23.0 0.0 Inc. seg. avg. 355.755 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 32.6 0.0 Inc. frq. avg. 374.694 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 50.4 el 66.3 pa -111.1 l: az 50.4 el 66.3 pa -111.1 u, v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/II..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/II.W.190.3MP1AB



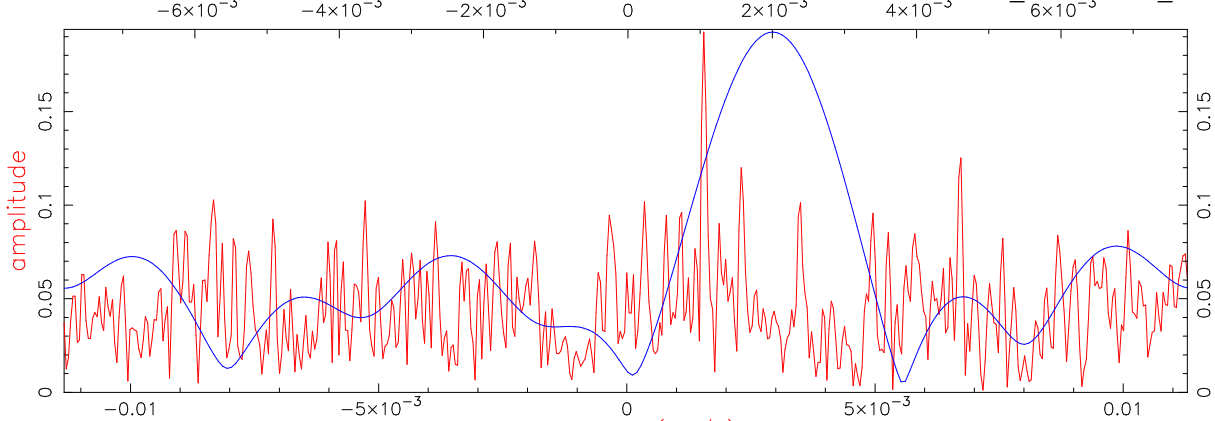
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Im

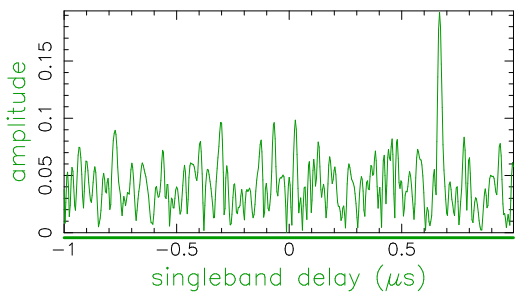
VLBA\_LA - VLBA\_MK, fgroup W, pol LL

multiband delay ( $\mu$ s)

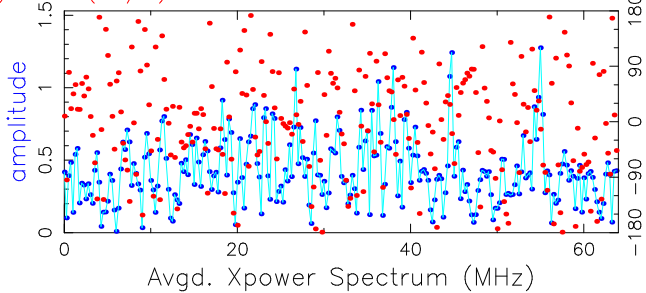


Fringe quality 0

SNR 5.6  
 Int time 112.640  
 Amp 0.194  
 Phase 123.5  
 PFD 7.6e-01  
 Delays (us)  
 SBD 0.668001  
 MBD 0.002007  
 Fringe rate (Hz) 0.132732  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

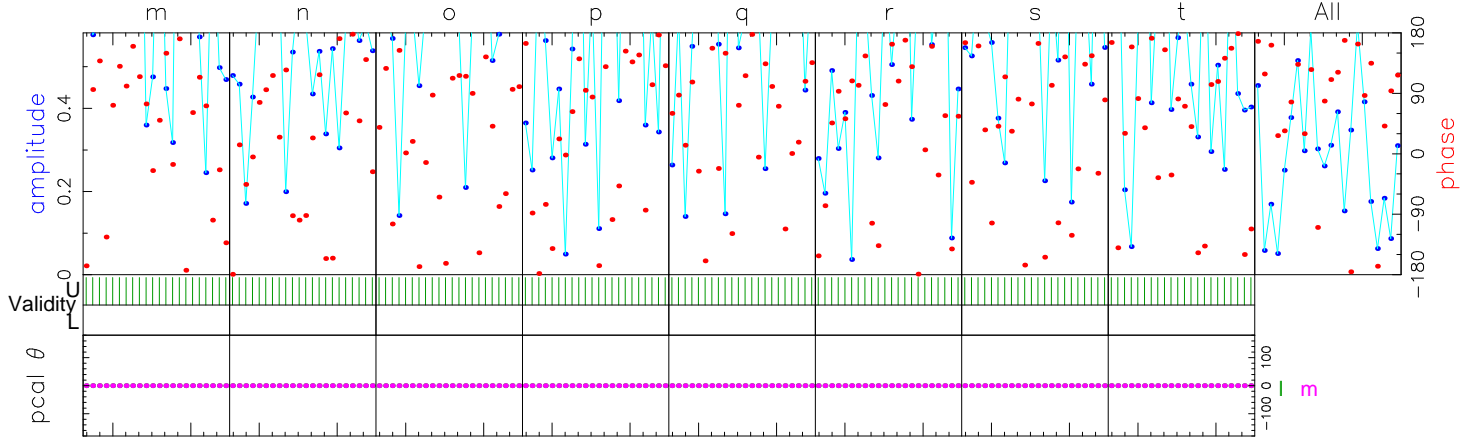


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113035  
 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
	133.1	99.9	94.1	146.6	106.8	106.0	107.6	145.6	Phase	123.5
	0.3	0.1	0.1	0.3	0.1	0.2	0.2	0.2	Ampl.	0.2
	17.6	433.7	304.1	429.3	285.3	449.0	406.5	448.2	Sbd box	428.0
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) 1.09903185576E+04 Apriori delay (usec) 1.09896446759E+04 Resid mbdelay (usec) 2.00665E-03 +/- 1.9E-04  
 Sband delay (usec) 1.09903126767E+04 Apriori clock (usec) -8.8499660E+00 Resid sbdelay (usec) 6.68001E-01 +/- 1.5E-03  
 Phase delay (usec) 1.09896446799E+04 Apriori clockrate (us/s) -2.1950107E-07 Resid phdelay (usec) 3.98218E-06 +/- 6.6E-07  
 Delay rate (us/s) -5.65597903671E-01 Apriori rate (us/s) -5.65599444557E-01 Resid rate (us/s) 1.54089E-06 +/- 1.0E-08  
 Total phase (deg) 261.7 Apriori accel (us/s/s) -3.79167173154E-05 Resid phase (deg) 123.5 +/- 20.5

RMS Theor. Amplitude 0.194 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 56.9 48.1 Search (512X32) 0.188 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 97.8 84.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 23.7 29.0 Inc. seg. avg. 0.216 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 42.9 50.6 Inc. frq. avg. 0.183 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 50.4 el 66.3 pa -111.1 m: az 45.2 el 23.3 pa -86.1 u,v (fr/asec) 4809.269 -1869.716 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Im..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Im.W.187.3MP1AB

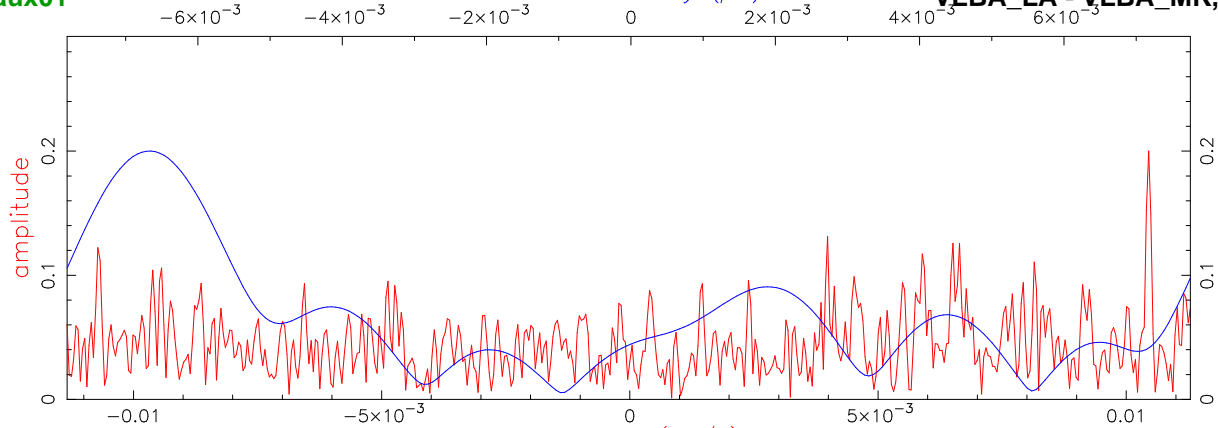
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Im

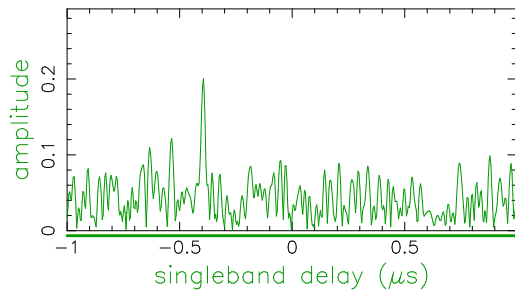
VLBA\_LA - VLBA\_MK, fgroup W, pol RR

multiband delay ( $\mu$ s)

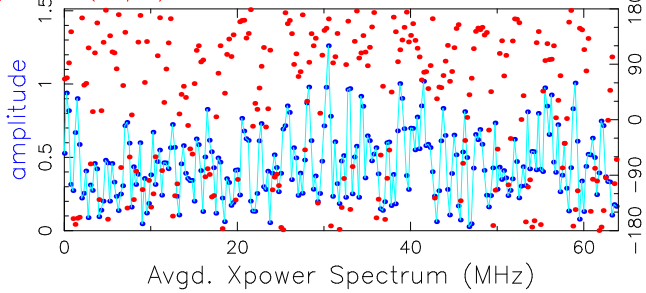


Fringe quality 0

SNR 5.8  
 Int time 112.640  
 Amp 0.292  
 Phase -12.2  
 PFD 3.2e-01  
 Delays (us)  
 SBD -0.394935  
 MBD -0.006693  
 Fringe rate (Hz) 0.901288  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

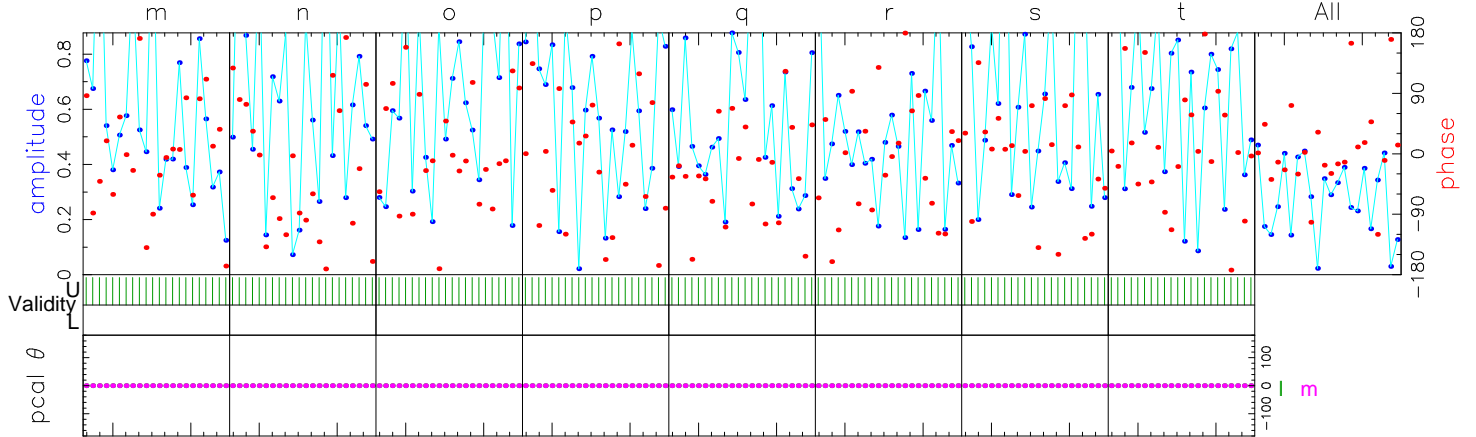


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113036  
 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
	-10.4	-104.1	-1.1	-21.9	-14.6	-40.9	2.8	-9.9	Phase	-12.2
	0.4	0.0	0.3	0.1	0.4	0.3	0.5	0.4	Ampl.	0.3
	118.3	48.1	406.9	507.0	63.3	510.9	261.2	218.9	Sbd box	155.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.09892473577E+04	Apriori delay (usec)	1.09896446759E+04	Resid mbdelay (usec)	-6.69325E-03	+/-	1.9E-04
Sband delay (usec)	1.09892497414E+04	Apriori clock (usec)	-8.8499660E+00	Resid sbdelay (usec)	-3.94935E-01	+/-	1.5E-03
Phase delay (usec)	1.09896446755E+04	Apriori clockrate (us/s)	-2.1950107E-07	Resid phdelay (usec)	-3.92681E-07	+/-	6.4E-07
Delay rate (us/s)	-5.65588981502E-01	Apriori rate (us/s)	-5.65599444557E-01	Resid rate (us/s)	1.04631E-05	+/-	9.8E-09
Total phase (deg)	126.1	Apriori accel (us/s/s)	-3.79167173154E-05	Resid phase (deg)	-12.2	+/-	19.7

ph/seg (deg)	68.1	RMS	46.2	Theor.	2.292 +/- 0.050	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	77.3	Search (512X32)	0.195	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)	40.3	Inc. seg. avg.	0.307	Inc. frq. avg.	0.271	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011	0.011
amp/frq (%)	50.8	Inc. frq. avg.	0.271			Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00	

l: az 50.4 el 66.3 pa -111.1 m: az 45.2 el 23.3 pa -86.1 u,v (fr/asec) 4809.269 -1869.716 simultaneous interpolator

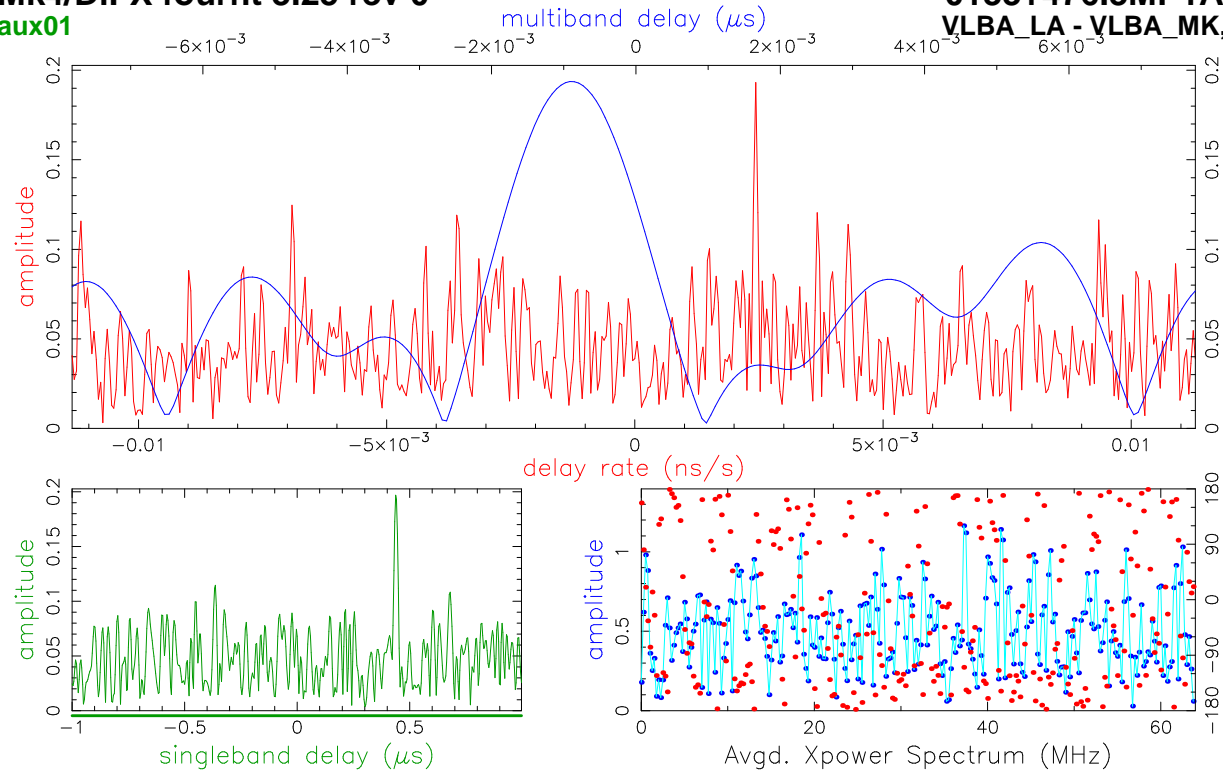
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Im..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Im.W.191.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

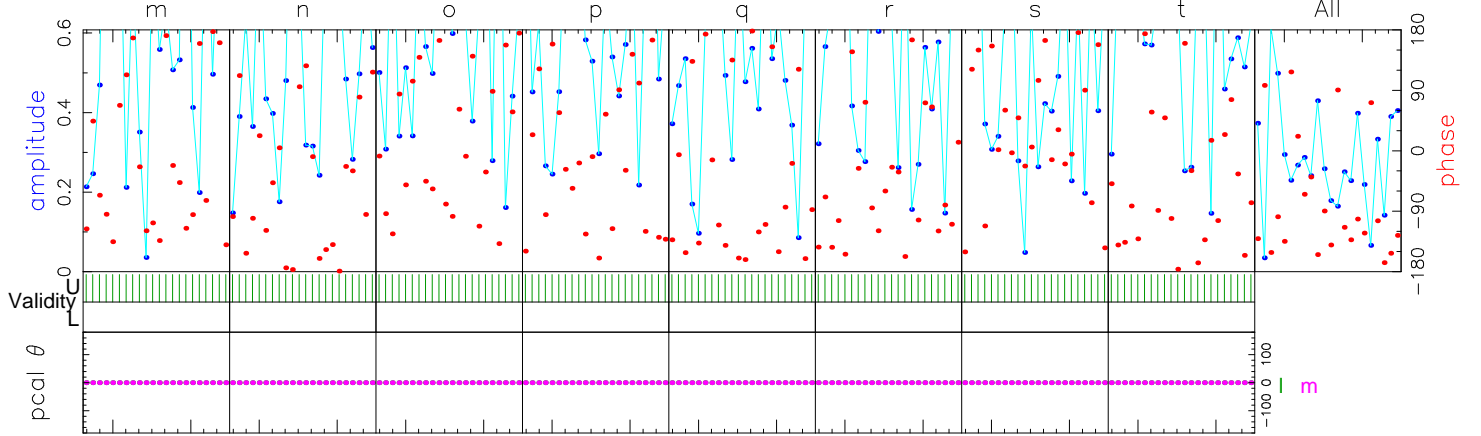
0133+476.3MP1AB, No0916, Im

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



Fringe quality 0  
 SNR 5.8  
 Int time 112.640  
 Amp 0.203  
 Phase -123.9  
 PFD 3.9e-01  
 Delays (us)  
 SBD 0.438953  
 MBD -0.000971  
 Fringe rate (Hz) 0.210277  
 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  
 2025:041:113037  
 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
	-122.9	-160.6	-104.0	-124.5	-133.9	-100.7	118.5	-117.8	Phase	-123.9
	0.3	0.2	0.1	0.1	0.3	0.3	0.0	0.3	Ampl.	0.2
	111.4	258.1	329.4	162.0	324.4	295.3	490.9	229.6	Sbd box	369.4
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) 1.09900812048E+04 Apriori delay (usec) 1.09896446759E+04 Resid mbdelay (usec) -9.71086E-04 +/- 1.9E-04  
 Sband delay (usec) 1.09900836289E+04 Apriori clock (usec) -8.8499660E+00 Resid sbdelay (usec) 4.38953E-01 +/- 1.5E-03  
 Phase delay (usec) 1.09896446719E+04 Apriori clockrate (us/s) -2.1950107E-07 Resid phdelay (usec) -3.99536E-06 +/- 6.4E-07  
 Delay rate (us/s) -5.65597003451E-01 Apriori rate (us/s) -5.65599444557E-01 Resid rate (us/s) 2.44111E-06 +/- 9.8E-09  
 Total phase (deg) 14.3 Apriori accel (us/s/s) -3.79167173154E-05 Resid phase (deg) -123.9 +/- 19.9

RMS Theor. Amplitude 0.203 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 74.2 46.6 Search (512X32) 0.189 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 80.5 81.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 52.1 28.1 Inc. seg. avg. 0.220 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 53.5 49.0 Inc. frq. avg. 0.191 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 50.4 el 66.3 pa -111.1 m: az 45.2 el 23.3 pa -86.1 u,v (fr/asec) 4809.269 -1869.716 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Im..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Im.W.193.3MP1AB

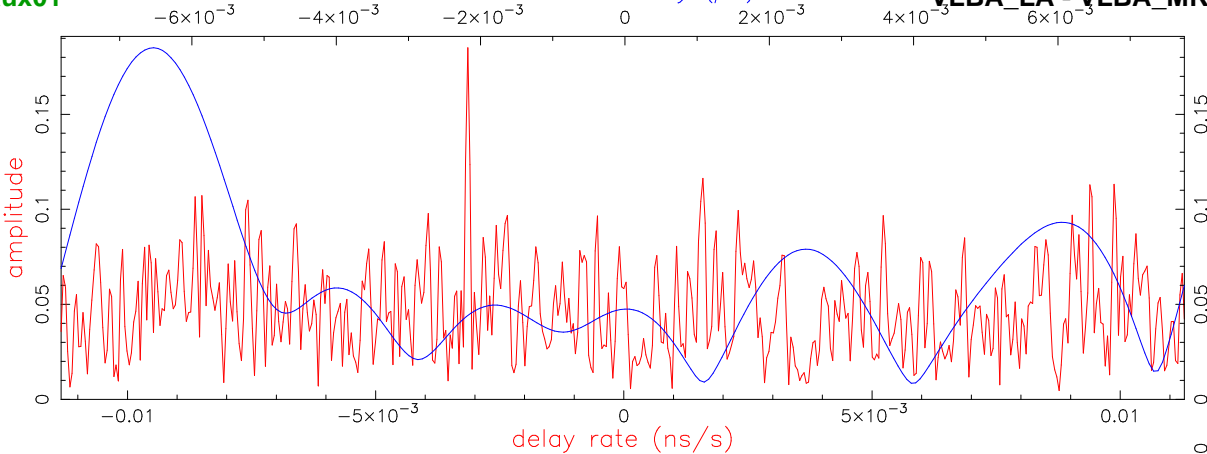
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Im

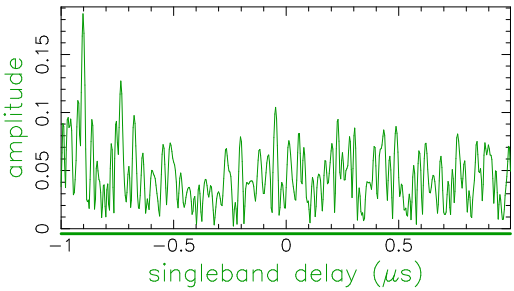
VLBA\_LA - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

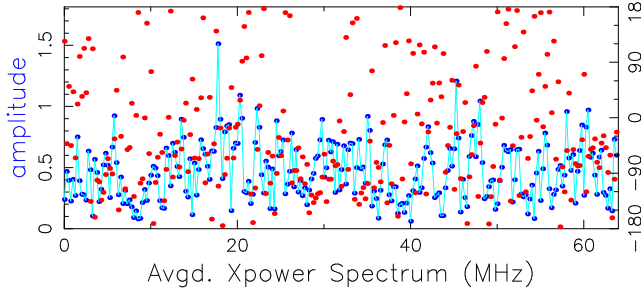


Fringe quality 0

SNR 5.4  
 Int time 112.640  
 Amp 0.191  
 Phase 55.2  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.902225  
 MBD -0.006531  
 Fringe rate (Hz)  
 -0.271133  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

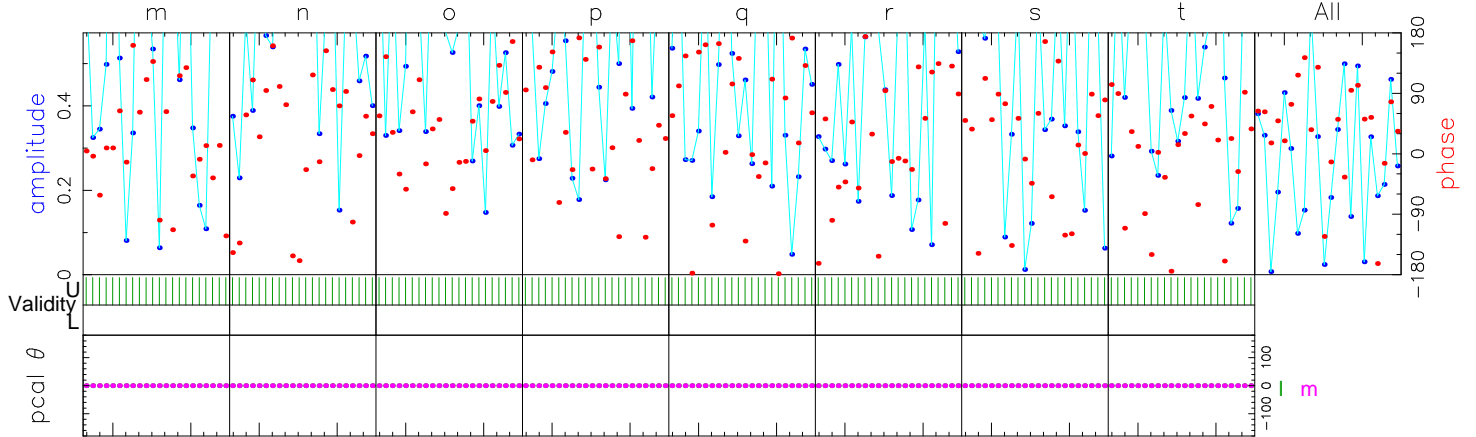


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113038  
 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
	33.3	91.2	41.5	38.4	107.6	62.7	73.1	32.0	Phase	55.2
	0.2	0.2	0.4	0.2	0.1	0.1	0.2	0.3	Ampl.	0.2
	202.4	239.1	26.1	107.3	384.3	31.6	366.7	81.7	Sbd box	26.0
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.09887475195E+04	Apriori delay (usec)	1.09896446759E+04	Resid mbdelay (usec)	-6.53144E-03	+/-	2.0E-04
Sband delay (usec)	1.09887424509E+04	Apriori clock (usec)	-8.8499660E+00	Resid sbdelay (usec)	-9.02225E-01	+/-	1.6E-03
Phase delay (usec)	1.09896446777E+04	Apriori clockrate (us/s)	-2.1950107E-07	Resid phdelay (usec)	1.77918E-06	+/-	6.9E-07
Delay rate (us/s)	-5.65602592143E-01	Apriori rate (us/s)	-5.65599444557E-01	Resid rate (us/s)	-3.14759E-06	+/-	1.1E-08
Total phase (deg)	193.4	Apriori accel (us/s/s)	-3.79167173154E-05	Resid phase (deg)	55.2	+/-	21.3

ph/seg (deg)	65.6	Theor.	50.1	Amplitude	0.191 +/- 0.036	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	101.1		87.4	Search (512X32)	0.183	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	31.4		30.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	41.6		52.7	Inc. seg. avg.	0.204	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.186	Data rate(Mb/s): 2048				

l: az 50.4 el 66.3 pa -111.1 m: az 45.2 el 23.3 pa -86.1 u,v (fr/asec) 4809.269 -1869.716 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Im..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Im.W.195.3MP1AB

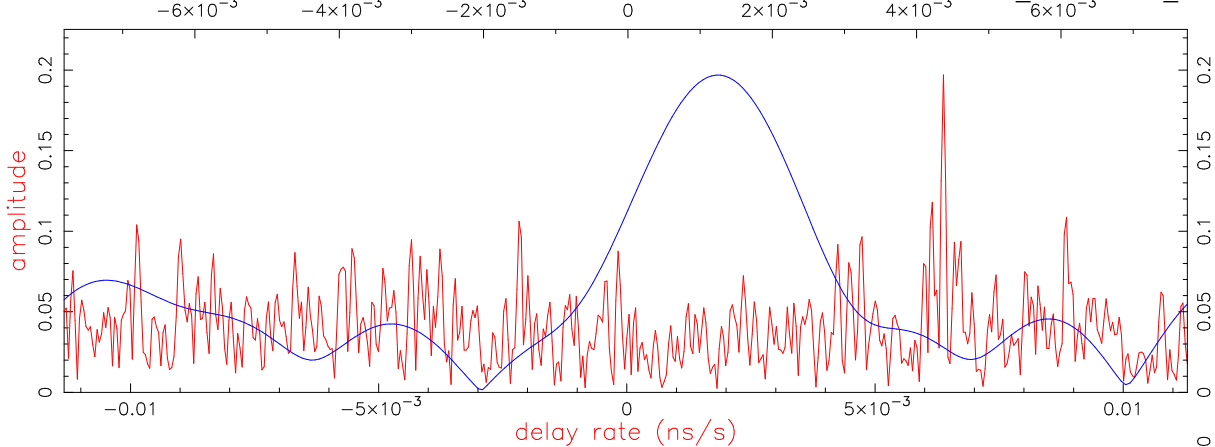
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, In

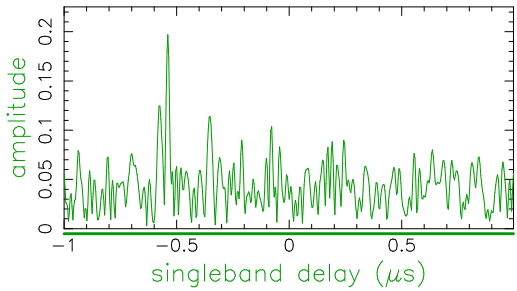
VLBA\_LA - VLBA\_NL, fgroup W, pol LL

multiband delay ( $\mu$ s)

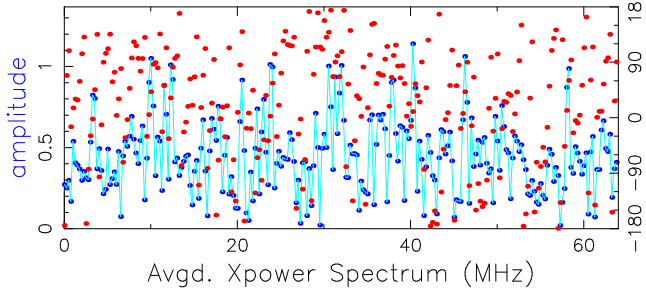


Fringe quality 0

SNR 5.7  
 Int time 112.505  
 Amp 0.225  
 Phase -45.9  
 PFD 4.9e-01  
 Delays (us)  
 SBD -0.539382  
 MBD 0.001243  
 Fringe rate (Hz)  
 0.549197  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

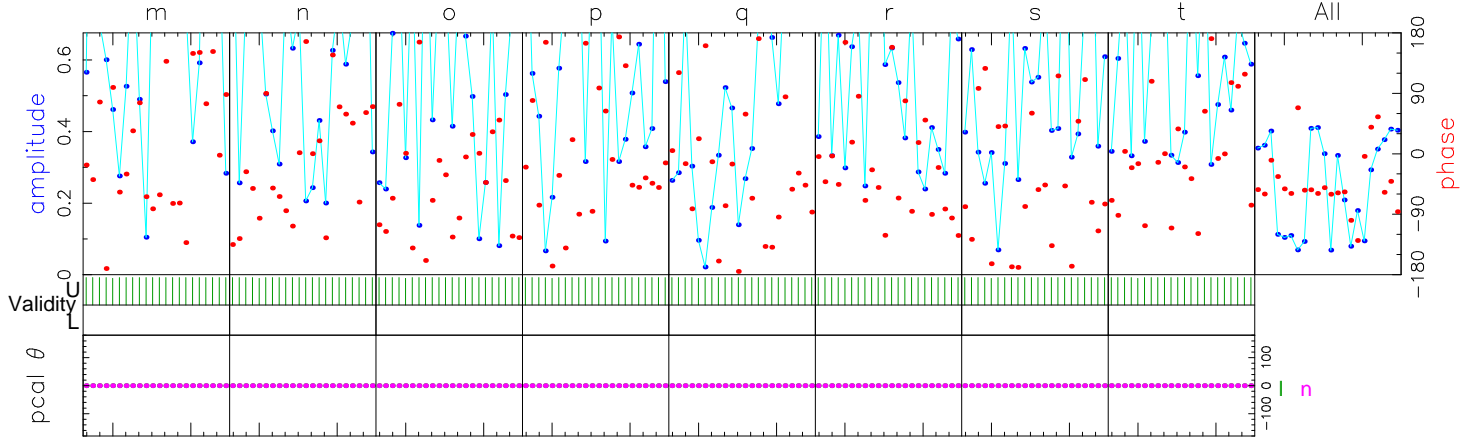


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113035  
 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
	-18.3	-27.5	-68.1	-43.3	-66.8	-50.8	-88.6	-4.5	Phase	-45.9
	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	Ampl.	0.2
	124.2	110.1	309.3	419.9	92.2	326.0	137.3	203.4	Sbd box	118.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.38067444545E+03	Apriori delay (usec)	-1.38012881391E+03	Resid mbdelay (usec)	1.24345E-03	+/-	1.9E-04
Sband delay (usec)	-1.38066819541E+03	Apriori clock (usec)	-8.0283566E+00	Resid sbdelay (usec)	-5.39382E-01	+/-	1.5E-03
Phase delay (usec)	-1.38012881538E+03	Apriori clockrate (us/s)	-5.3126102E-07	Resid phdelay (usec)	-1.47972E-06	+/-	6.5E-07
Delay rate (us/s)	2.17432581323E-01	Apriori rate (us/s)	2.17426205684E-01	Resid rate (us/s)	6.37564E-06	+/-	9.9E-09
Total phase (deg)	-56.6	Apriori accel (us/s/s)	4.73966801536E-07	Resid phase (deg)	-45.9	+/-	20.0

ph/seg (deg)	46.0	Theor.	47.0	Amplitude	0.225 +/- 0.039	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	73.9	Search (512X32)	0.193	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	30.6	Inc. seg. avg.	0.216	Inc. frq. avg.	0.222	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	28.3	Inc. frq. avg.	0.222	u,v (fr/asec)	-1859.232 -433.755	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

l: az 50.4 el 66.3 pa -111.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1859.232 -433.755 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ln..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ln.W.188.3MP1AB

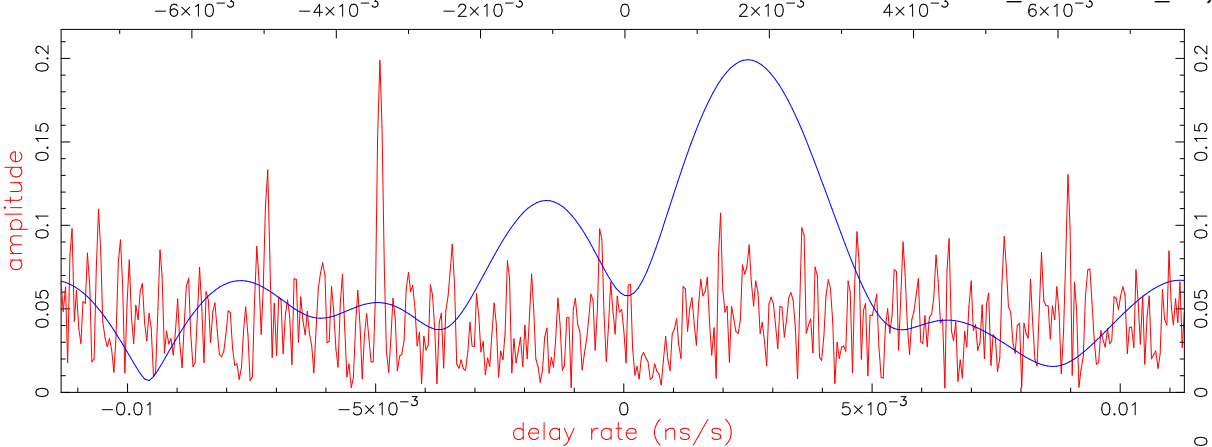
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, In

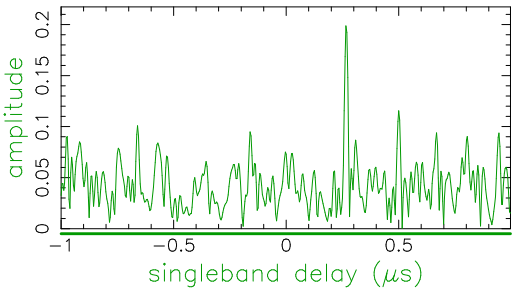
VLBA\_LA - VLBA\_NL, fgroup W, pol RR

multiband delay ( $\mu$ s)

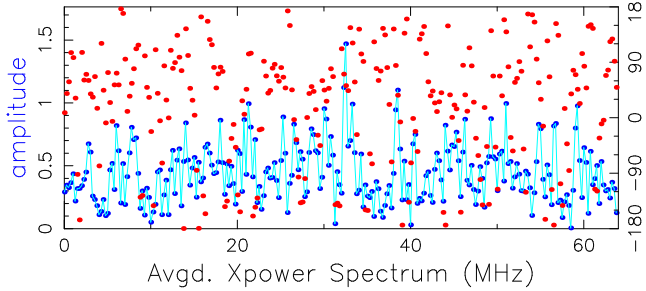


Fringe quality 0

SNR 5.8  
 Int time 112.505  
 Amp 0.217  
 Phase -118.8  
 PFD 3.0e-01  
 Delays (us)  
 SBD 0.266930  
 MBD 0.001777  
 Fringe rate (Hz)  
 -0.424213  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

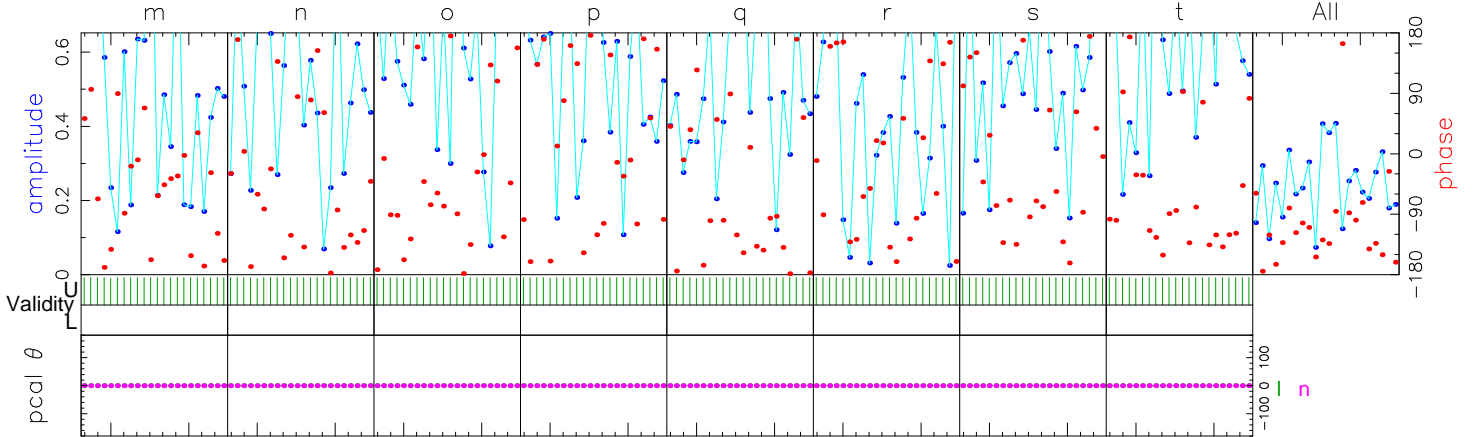


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113036  
 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		
l	0	0	0	0	0	0	0	0		
n	0	0	0	0	0	0	0	0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-1.37986141166E+03	Apriori delay (usec)	-1.38012881391E+03	Resid mbdelay (usec)	1.77724E-03	+/-	1.9E-04
Sband delay (usec)	-1.37986188416E+03	Apriori clock (usec)	-8.0283566E+00	Resid sbdelay (usec)	2.66930E-01	+/-	1.5E-03
Phase delay (usec)	-1.38012881773E+03	Apriori clockrate (us/s)	-5.3126102E-07	Resid phdelay (usec)	-3.82956E-06	+/-	6.3E-07
Delay rate (us/s)	2.17421280988E-01	Apriori rate (us/s)	2.17426205684E-01	Resid rate (us/s)	-4.92470E-06	+/-	9.8E-09
Total phase (deg)	-129.5	Apriori accel (us/s/s)	4.73966801536E-07	Resid phase (deg)	-118.8	+/-	19.7

ph/seg (deg)	39.9	Theor.	46.1	Amplitude	0.217 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	51.0		80.5	Search (512X32)	0.194	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	36.6		27.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	45.6		48.5	Inc. seg. avg.	0.199	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.215	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 50.4 el 66.3 pa -111.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1859.232 -433.755 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ln..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ln.W.192.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

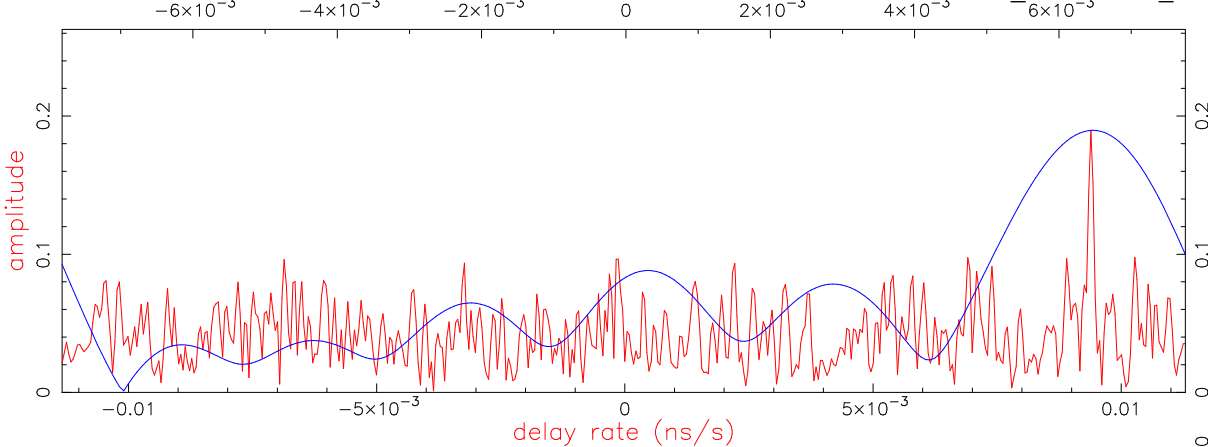
aux01

0133+476.3MP1AB, No0916, In

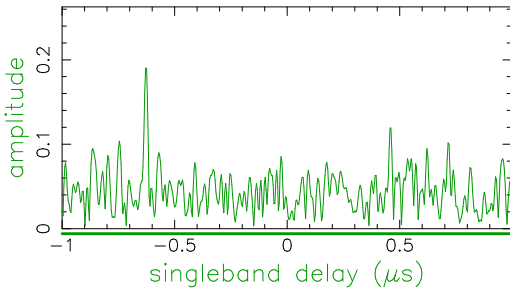
VLBA\_LA - VLBA\_NL, fgroup W, pol LR

multiband delay ( $\mu$ s)

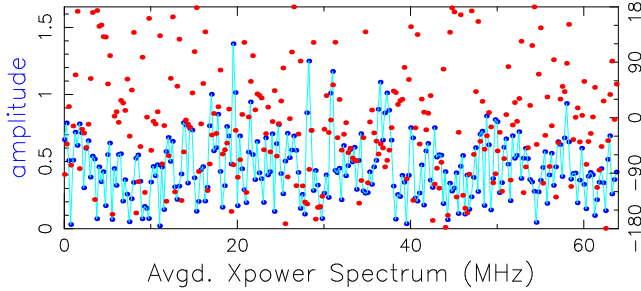
Fringe quality 0



SNR 5.6  
 Int time 112.505  
 Amp 0.263  
 Phase -126.0  
 PFD 6.6e-01  
 Delays (us)  
 SBD -0.627024  
 MBD 0.006525  
 Fringe rate (Hz) 0.811639  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

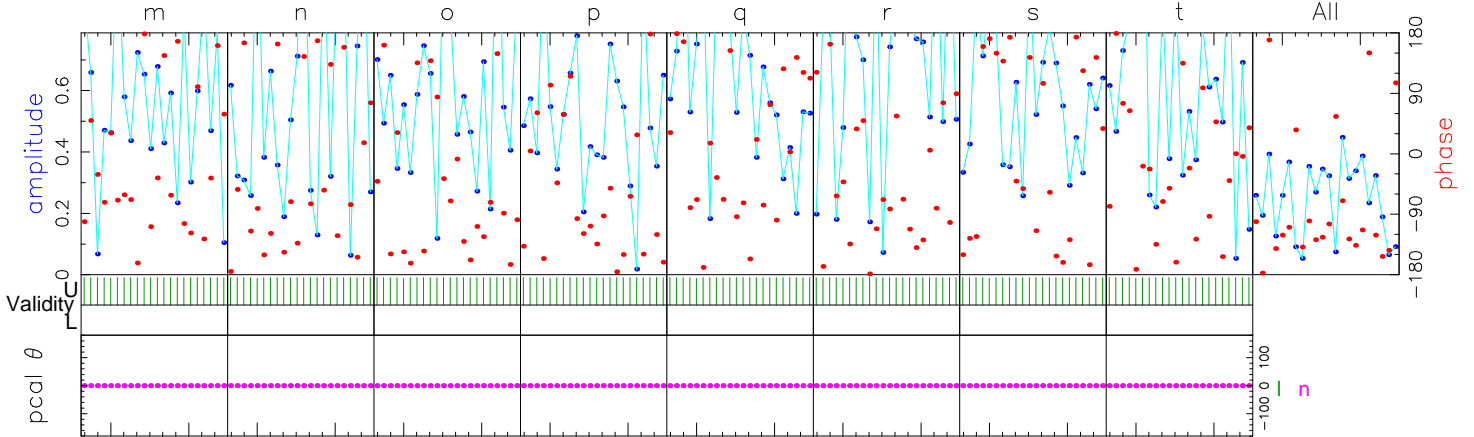


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113037  
 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		
l	0	0	0	0	0	0	0	0		
n	0	0	0	0	0	0	0	0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -1.38076291424E+03 Apriori delay (usec) -1.38012881391E+03 Resid mbdelay (usec) 6.52467E-03 +/- 1.9E-04  
 Sband delay (usec) -1.38075583841E+03 Apriori clock (usec) -8.0283566E+00 Resid sbdelay (usec) -6.27024E-01 +/- 1.5E-03  
 Phase delay (usec) -1.38012881797E+03 Apriori clockrate (us/s) -5.3126102E-07 Resid phdelay (usec) -4.06280E-06 +/- 6.6E-07  
 Delay rate (us/s) 2.17435628004E-01 Apriori rate (us/s) 2.17426205684E-01 Resid rate (us/s) 9.42232E-06 +/- 1.0E-08  
 Total phase (deg) -136.7 Apriori accel (us/s/s) 4.73966801536E-07 Resid phase (deg) -126.0 +/- 20.3

ph/seg (deg) 65.8 47.7 Search (512X32) 0.186 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 67.6 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) 43.2 28.8 Inc. seg. avg. 0.251 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 30.9 50.2 Inc. frq. avg. 0.270 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

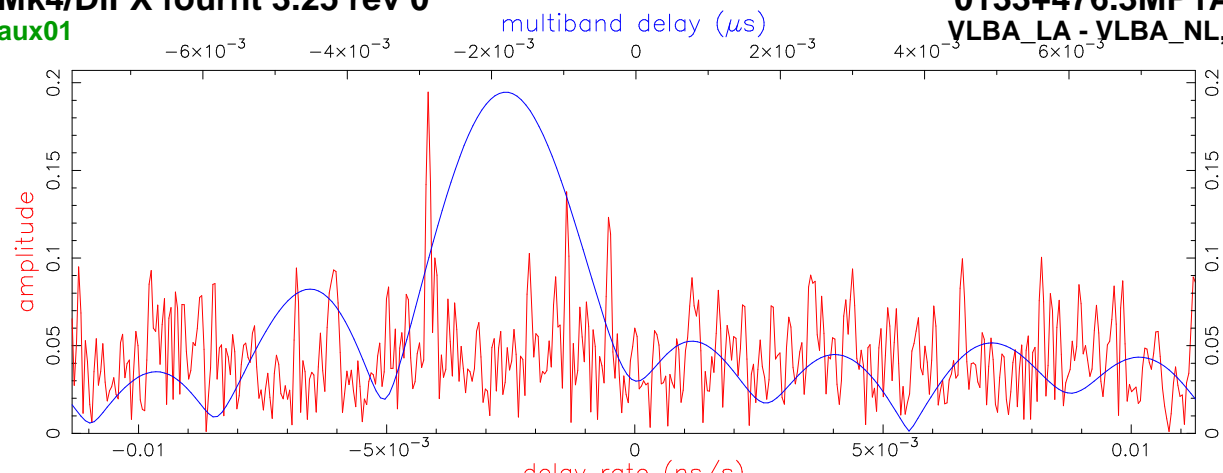
l: az 50.4 el 66.3 pa -111.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1859.232 -433.755 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ln..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ln.W.194.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, In

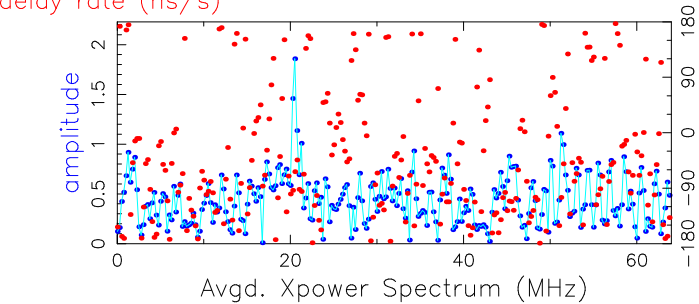
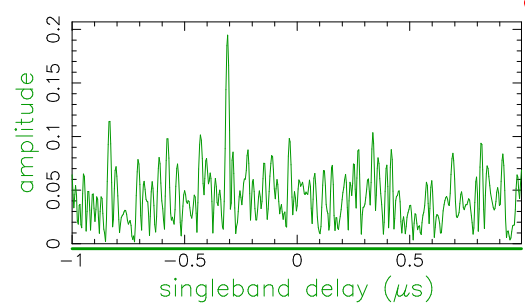
VLBA\_LA - VLBA\_NL, fgroup W, pol RL



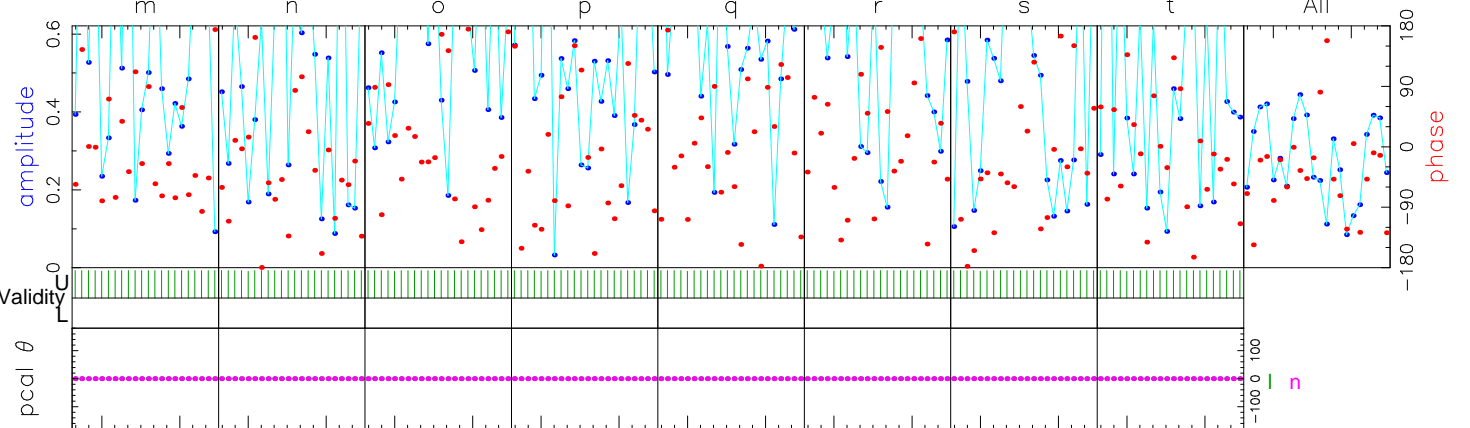
Fringe quality 0

SNR 5.7  
 Int time 112.505  
 Amp 0.207  
 Phase -40.0  
 PFD 5.7e-01  
 Delays (us)  
 SBD -0.309505  
 MBD -0.001811  
 Fringe rate (Hz) -0.359205  
 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  
 2025:041:113038  
 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		
l	0	0	0	0	0	0	0	0	APs used	
n	0	0	0	0	0	0	0	0	PC freqs	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -1.38044312443E+03 Apriori delay (usec) -1.38012881391E+03 Resid mbdelay (usec) -1.81052E-03 +/- 1.9E-04  
 Sband delay (usec) -1.38043831841E+03 Apriori clock (usec) -8.0283566E+00 Resid sbdelay (usec) -3.09505E-01 +/- 1.5E-03  
 Phase delay (usec) -1.38012881519E+03 Apriori clockrate (us/s) -5.3126102E-07 Resid phdelay (usec) -1.28912E-06 +/- 6.5E-07  
 Delay rate (us/s) 2.17422035667E-01 Apriori rate (us/s) 2.17426205684E-01 Resid rate (us/s) -4.17002E-06 +/- 1.0E-08  
 Total phase (deg) -50.7 Apriori accel (us/s/s) 4.73966801536E-07 Resid phase (deg) -40.0 +/- 20.2

ph/seg (deg) 62.5 47.3 Search (512X32) 0.191 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 69.9 82.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 10.3 28.5 Inc. seg. avg. 0.223 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 30.8 49.8 Inc. frq. avg. 0.185 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

l: az 50.4 el 66.3 pa -111.1 n: az 51.3 el 79.0 pa -119.7 u,v (fr/asec) -1859.232 -433.755 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ln..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ln.W.196.3MP1AB



Mk4/DiFX fourfit 3.25 rev 0

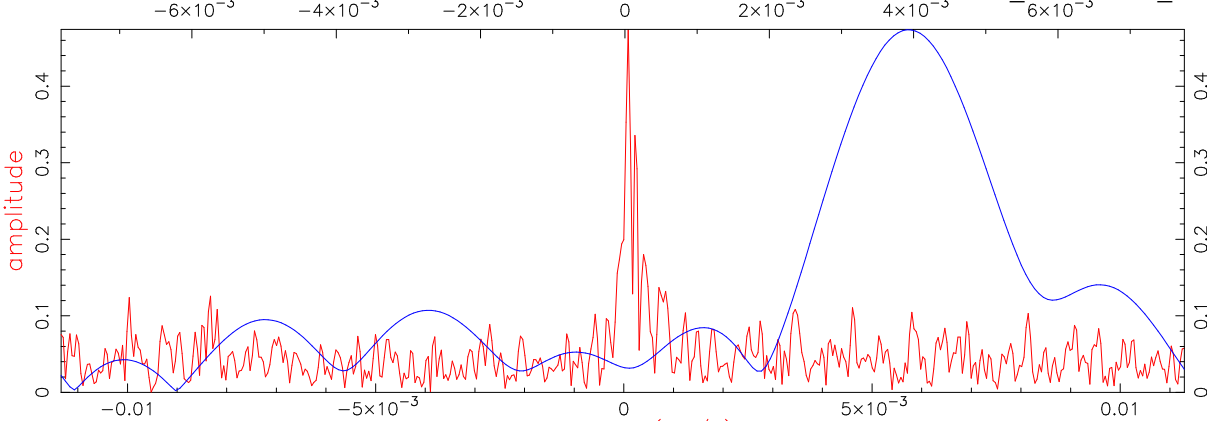
aux01

0133+476.3MP1AB, No0916, lo

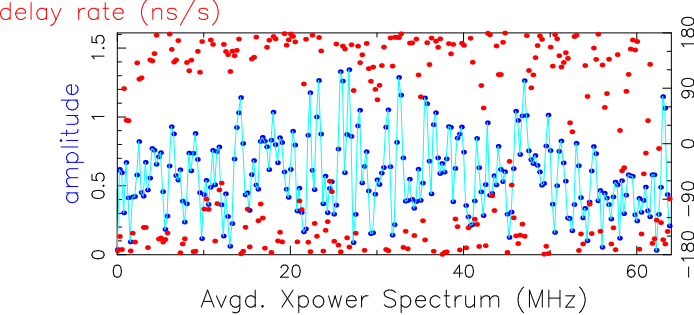
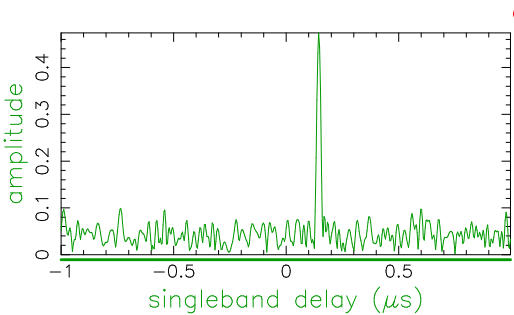
VLBA\_LA - VLBA\_OV, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 9

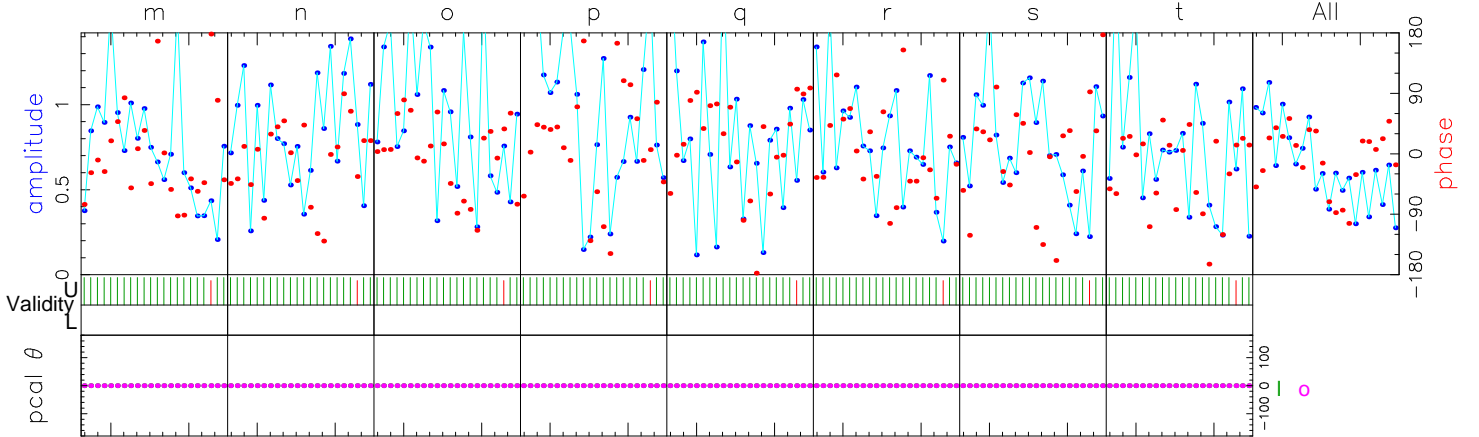


SNR 13.7  
 Int time 112.059  
 Amp 0.474  
 Phase 0.5  
 PFD 1.0e-34  
 Delays (us)  
 SBD 0.144915  
 MB 0.003940  
 Fringe rate (Hz) 0.006834  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113046  
 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		294.1
l	0	0	0	0	0	0	0	0		
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	1.13957757938E+03	Apriori delay (usec)		1.13943301443E+03	Resid mbdelay (usec)		3.93995E-03	+/- 7.9E-05	
Sband delay (usec)	1.13957792968E+03	Apriori clock (usec)		-3.3374241E+01	Resid sbdelay (usec)		1.44915E-01	+/- 6.3E-04	
Phase delay (usec)	1.13943301445E+03	Apriori clockrate (us/s)		-7.1527311E-07	Resid phdelay (usec)		1.62462E-08	+/- 2.7E-07	
Delay rate (us/s)	-1.38126663650E-01	Apriori rate (us/s)		-1.38126742986E-01	Resid rate (us/s)		7.93358E-08	+/- 4.1E-09	
Total phase (deg)	311.2		Apriori accel (us/s/s)		-7.94273834153E-06	Resid phase (deg)		0.5	+/- 8.3

ph/seg (deg)	46.5	19.6	Search (512X32)	0.466	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
amp/seg (%)	61.3	34.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us) -1.000 1.000				
ph/frq (deg)	17.1	11.8	Inc. seg. avg.	0.610	Bits/sample: 2x2		SampCntNorm: enabled				
amp/frq (%)	19.8	20.6	Inc. frq. avg.	0.479	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s) -0.011 0.011				
l: az 50.4 el 66.3 pa -111.1				o: az 56.8 el 59.3 pa -95.8				u,v (fr/asec) 1176.063 -817.970			
Control file: cf_1234_gmva				Input file: /Exps/c241a/v2/3mm/1234/No0916/lo..3MP1AB				Output file: /Exps/c241a/v2/3mm/1234/No0916/lo.W.197.3MP1AB			

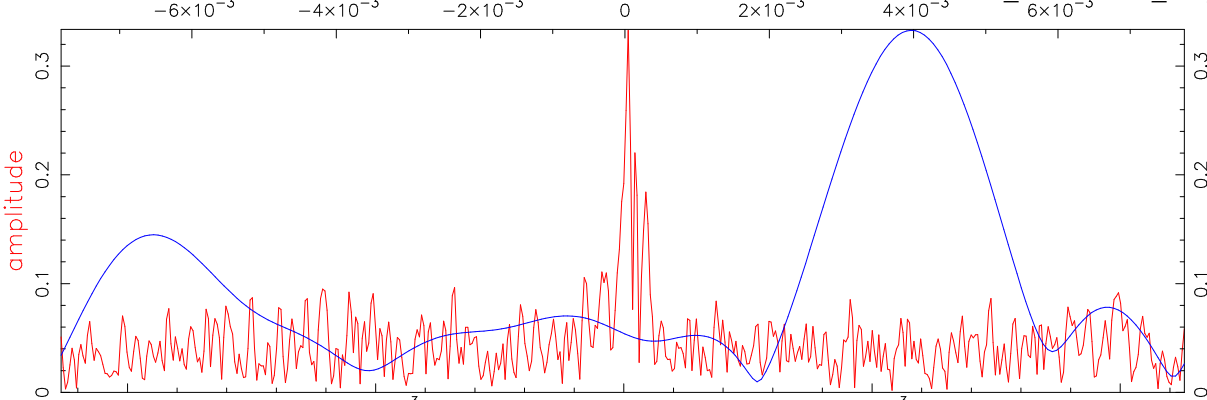
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, lo

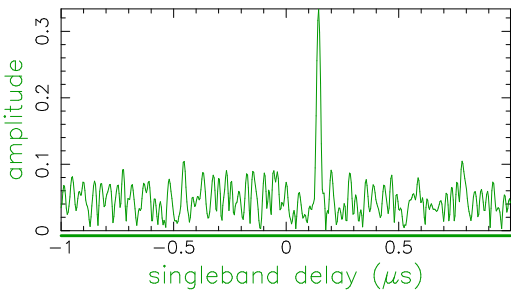
VLBA\_LA - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)



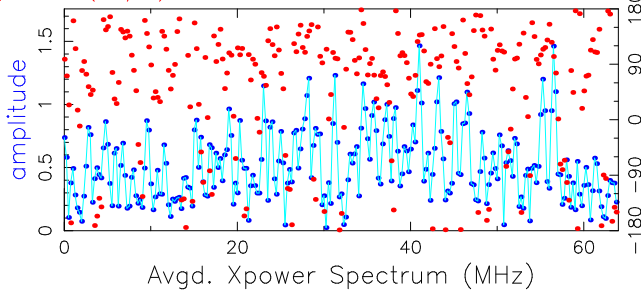
Fringe quality 9

SNR 9.7  
 Int time 112.059  
 Amp 0.334  
 Phase -77.2  
 PFD 4.5e-14  
 Delays (us)  
 SBD 0.143847  
 MBD 0.003970  
 Fringe rate (Hz) 0.007383  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



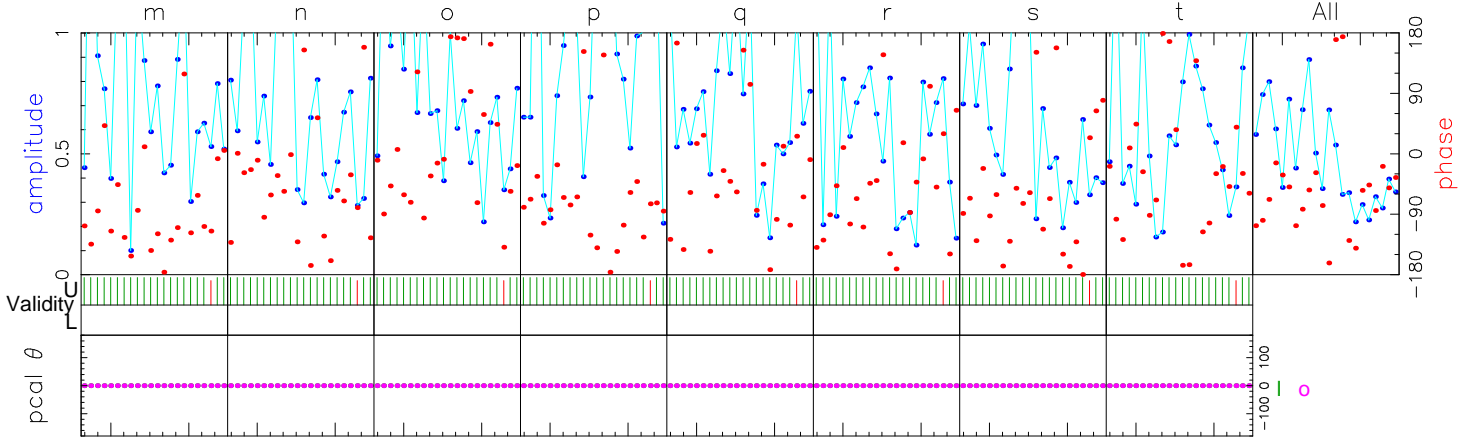
singleband delay ( $\mu$ s)

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  
 2025:041:113047  
 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
	-99.7	-52.0	-61.0	-92.1	-48.8	-76.5	-87.3	-77.0	Phase	-77.2
	0.4	0.4	0.3	0.6	0.3	0.3	0.4	0.2	Ampl.	0.3
	292.7	295.3	484.9	294.0	280.1	370.5	148.7	306.6	Sbd box	293.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.13957760897E+03	Apriori delay (usec)	1.13943301443E+03	Resid mbdelay (usec)	3.96954E-03	+/-	1.1E-04
Sband delay (usec)	1.13957686193E+03	Apriori clock (usec)	-3.3374241E+01	Resid sbdelay (usec)	1.43847E-01	+/-	8.9E-04
Phase delay (usec)	1.13943301194E+03	Apriori clockrate (us/s)	-7.1527311E-07	Resid phdelay (usec)	-2.48818E-06	+/-	3.8E-07
Delay rate (us/s)	-1.38126657281E-01	Apriori rate (us/s)	-1.38126742986E-01	Resid rate (us/s)	8.57043E-08	+/-	5.9E-09
Total phase (deg)	233.6	Apriori accel (us/s/s)	-7.94273834153E-06	Resid phase (deg)	-77.2	+/-	11.9

ph/seg (deg)	51.4	Theor.	27.8	Amplitude	0.334 +/- 0.035	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	74.3	Search (512X32)	0.332	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	20.5	Inc. seg. avg.	0.434	Inc. frq. avg.	0.336	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	33.2	Inc. frq. avg.	0.336			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

l: az 50.4 el 66.3 pa -111.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 1176.063 -817.970 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/lo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/lo.W.200.3MP1AB

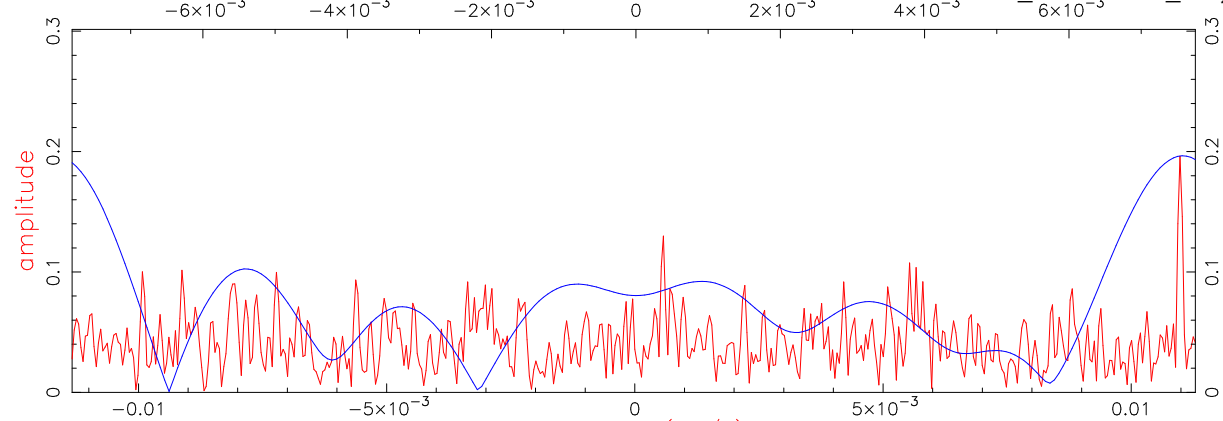
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, lo

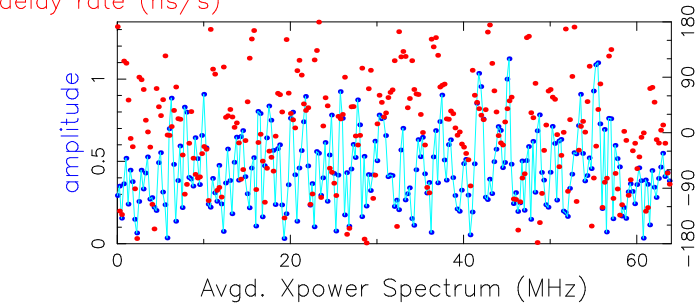
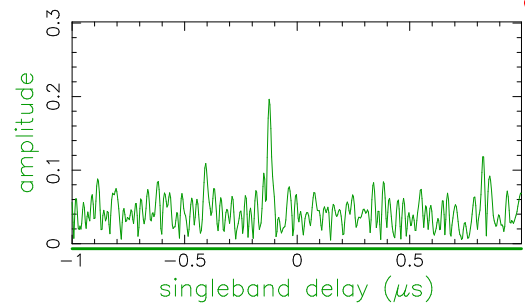
VLBA\_LA - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)



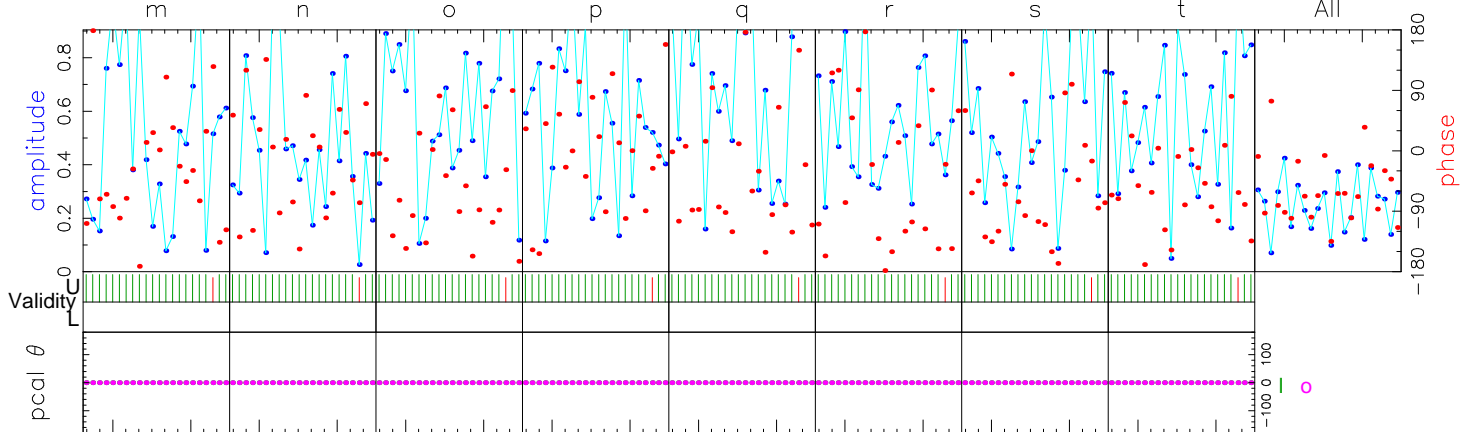
Fringe quality 0

SNR 5.7  
 Int time 112.059  
 Amp 0.302  
 Phase -62.0  
 PFD 5.0e-01  
 Delays (us)  
 SBD -0.123998  
 MBD 0.007631  
 Fringe rate (Hz) 0.949037  
 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  
 2025:041:113048  
 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
	-75.9	-6.7	-64.5	-11.9	-77.5	-159.7	-63.4	-57.3	Phase	-62.0
	0.5	0.2	0.4	0.2	0.4	0.2	0.4	0.5	Ampl.	0.3
	509.9	112.8	353.6	269.7	152.1	273.1	495.6	24.6	Sbd box	225.3
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec) (SBD)	1.13931564580E+03		Apriori delay (usec)	1.13943301443E+03	Resid mbdelay (usec)	7.63136E-03	+/-	1.9E-04		
Sband delay (usec)	1.13930901693E+03		Apriori clock (usec)	-3.3374241E+01	Resid sbdelay (usec)	-1.23998E-01	+/-	1.5E-03		
Phase delay (usec)	1.13943301243E+03		Apriori clockrate (us/s)	-7.1527311E-07	Resid phdelay (usec)	-1.99876E-06	+/-	6.5E-07		
Delay rate (us/s)	-1.38115725612E-01		Apriori rate (us/s)	-1.38126742986E-01	Resid rate (us/s)	1.10174E-05	+/-	9.9E-09		
Total phase (deg)		248.8	Apriori accel (us/s/s)	-7.94273834153E-06	Resid phase (deg)	-62.0	+/-	20.1		

ph/seg (deg) 49.7 47.0 Search (512X32) 0.192 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 57.0 82.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.0 28.4 Inc. seg. avg. 0.286 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 42.2 49.5 Inc. frq. avg. 0.312 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  
 l: az 50.4 el 66.3 pa -111.1 o: az 56.8 el 59.3 pa -95.8 u, v (fr/asec) 1176.063 -817.970 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/lo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/lo.W.203.3MP1AB

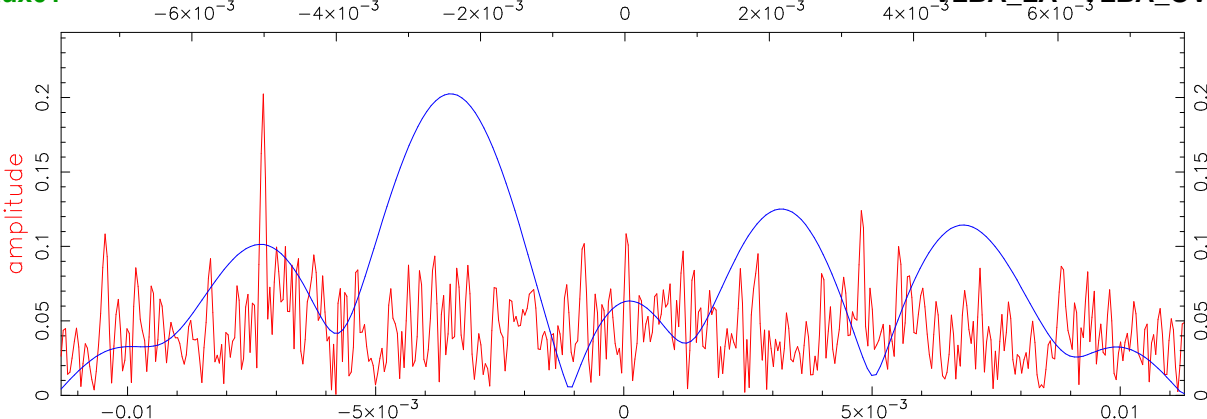
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, lo

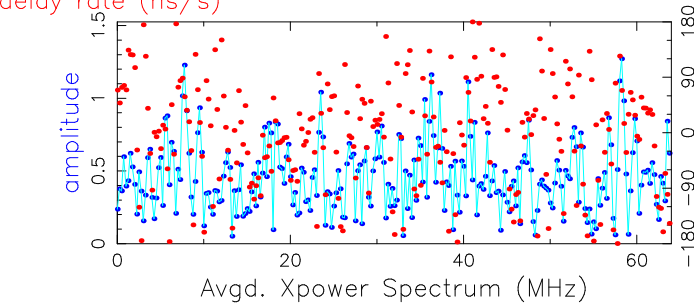
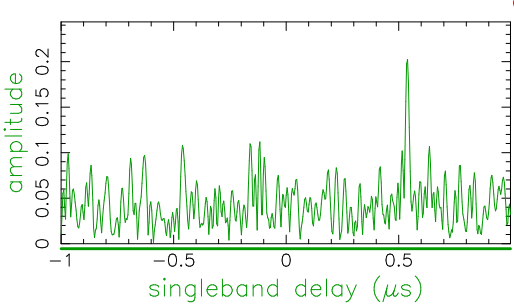
VLBA\_LA - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)



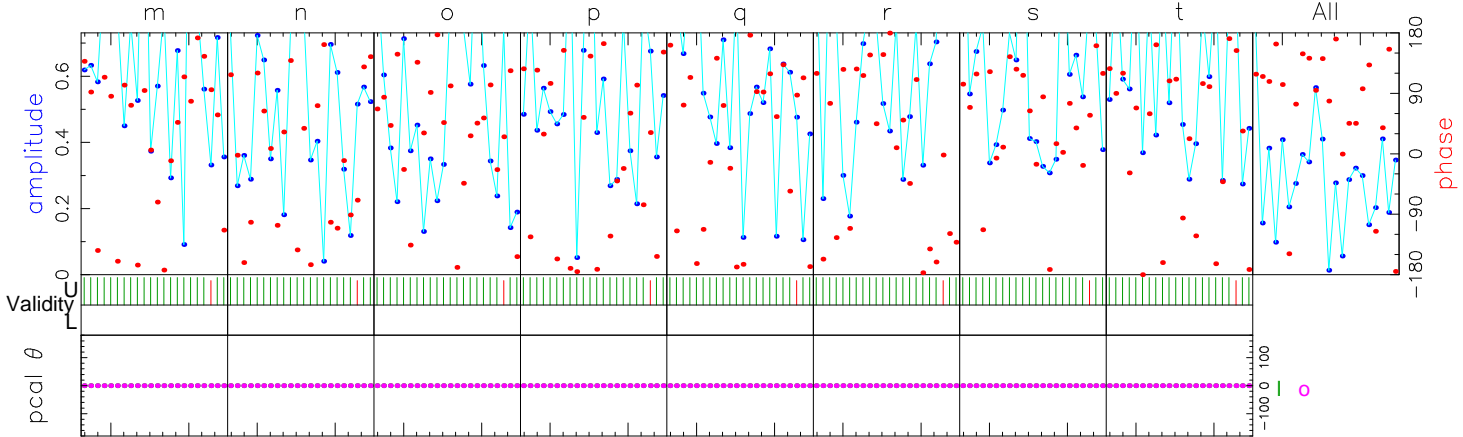
Fringe quality 0

SNR 5.9  
Int time 112.059  
Amp 0.244  
Phase 116.9  
PFD 1.8e-01  
Delays (us)  
SBD 0.537620  
MBD -0.002454  
Fringe rate (Hz) -0.624798  
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  
2025:041:113050  
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
	109.7	154.4	64.1	157.1	145.6	144.5	82.5	127.5	Phase	116.9
	0.4	0.1	0.3	0.2	0.3	0.2	0.4	0.4	Ampl.	0.3
	394.3	96.2	109.1	35.0	354.5	208.9	384.4	362.8	Sbd box	394.6
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.13997743577E+03	Apriori delay (usec)	1.13943301443E+03	Resid mbdelay (usec)	-2.45366E-03	+/-	1.8E-04
Sband delay (usec)	1.13997063418E+03	Apriori clock (usec)	-3.3374241E+01	Resid sbdelay (usec)	5.37620E-01	+/-	1.5E-03
Phase delay (usec)	1.13943301820E+03	Apriori clockrate (us/s)	-7.1527311E-07	Resid phdelay (usec)	3.77037E-06	+/-	6.2E-07
Delay rate (us/s)	-1.38133996269E-01	Apriori rate (us/s)	-1.38126742986E-01	Resid rate (us/s)	-7.25328E-06	+/-	9.6E-09
Total phase (deg)	67.7	Apriori accel (us/s/s)	-7.94273834153E-06	Resid phase (deg)	116.9	+/-	19.3

ph/seg (deg)	57.7	Theor.	45.3	Amplitude	0.244 +/- 0.041	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	90.4	Search (512X32)	0.200	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	38.2	Inc. seg. avg.	0.267	Inc. frq. avg.	0.251	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	45.9	Inc. frq. avg.	0.251			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

l: az 50.4 el 66.3 pa -111.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 1176.063 -817.970 simultaneous interpolator

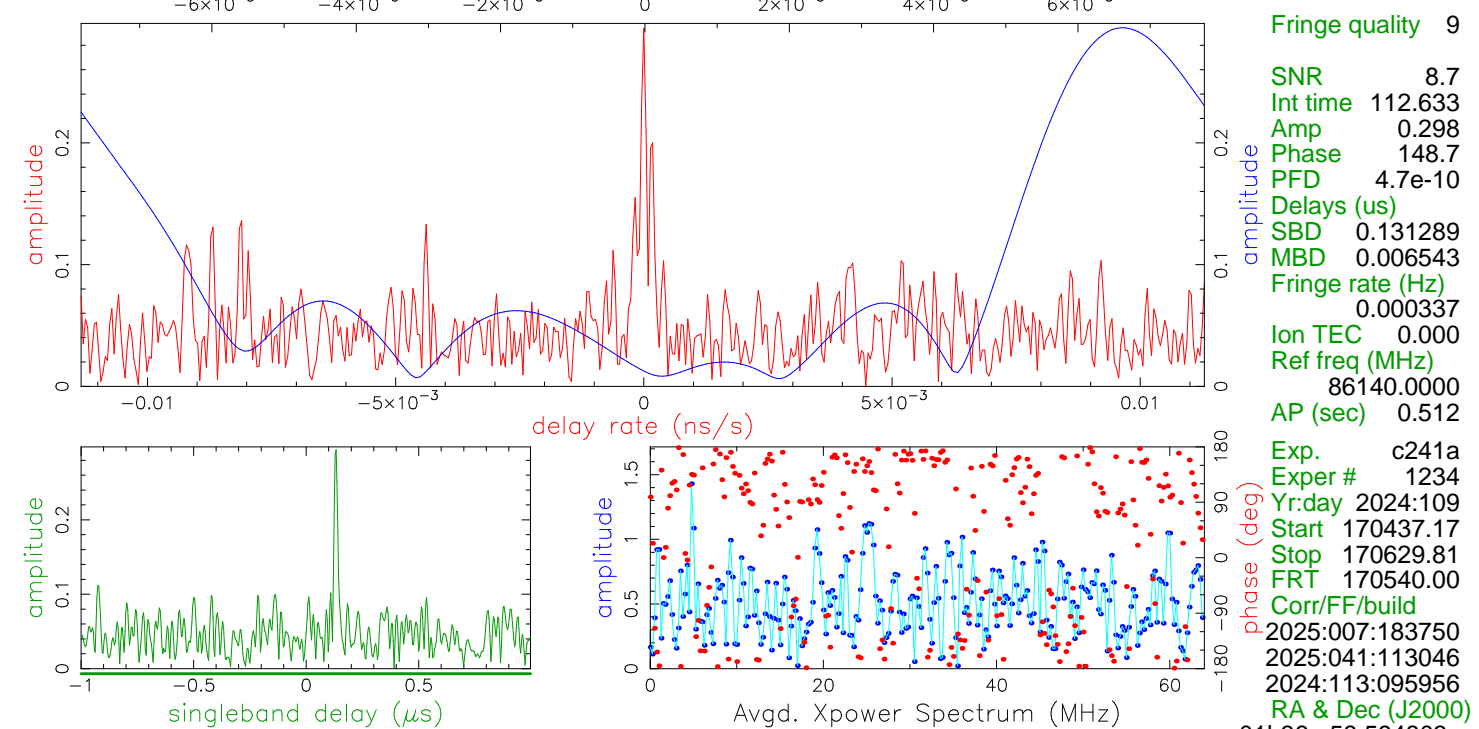
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/lo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/lo.W.206.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

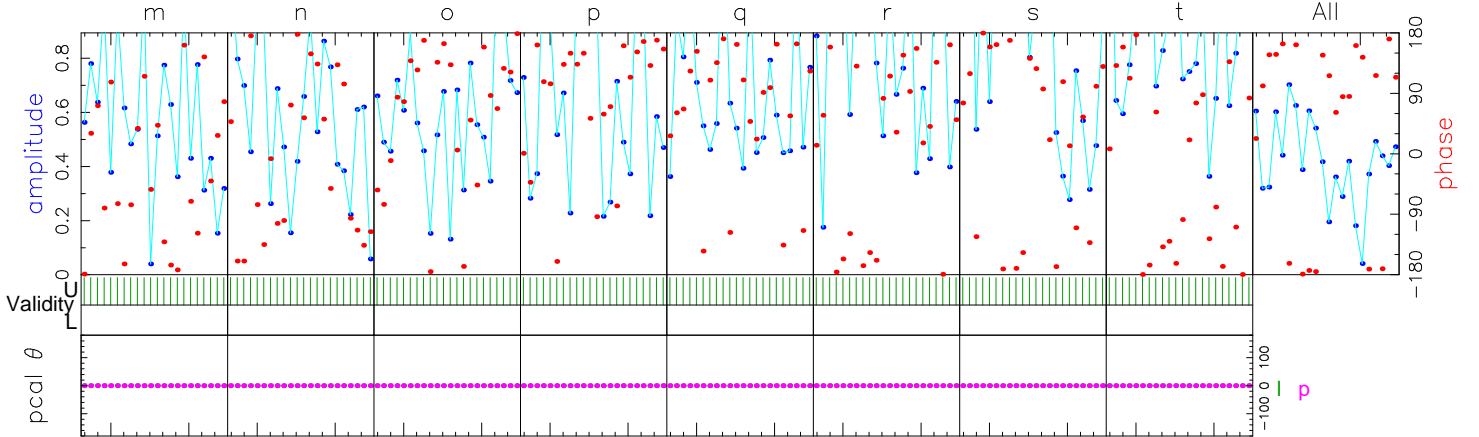
aux01

0133+476.3MP1AB, No0916, lp

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



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
	-154.0	-152.9	110.3	137.2	125.4	149.7	150.5	172.2	Phase	148.7
	0.1	0.1	0.3	0.3	0.4	0.5	0.5	0.4	Ampl.	0.3
	196.8	259.1	13.5	290.5	292.2	291.2	290.6	290.5	Sbd box	290.6
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	3.11436502101E+02	Apriori delay (usec)	3.11304959601E+02	Resid mbdelay (usec)	6.54250E-03	+/-	1.3E-04
Sband delay (usec)	3.11436248601E+02	Apriori clock (usec)	-1.4018665E+01	Resid sbdelay (usec)	1.31289E-01	+/-	1.0E-03
Phase delay (usec)	3.11304964397E+02	Apriori clockrate (us/s)	-6.1269804E-07	Resid phdelay (usec)	4.79556E-06	+/-	4.3E-07
Delay rate (us/s)	-3.17872016194E-02	Apriori rate (us/s)	-3.17872055363E-02	Resid rate (us/s)	3.91691E-09	+/-	6.6E-09
Total phase (deg)	227.9	Apriori accel (us/s/s)	3.20364818143E-08	Resid phase (deg)	148.7	+/-	13.2

ph/seg (deg)	46.5	Theor.	31.1	Amplitude	0.298 +/- 0.034	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	66.7		54.2	Search (512X32)	0.290	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	39.6		18.7	Inc. seg. avg.	0.366	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	48.0		32.7	Inc. frq. avg.	0.307	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

l: az 50.4 el 66.3 pa -111.1 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) 271.814 126.348 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/lp..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/lp.W.198.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

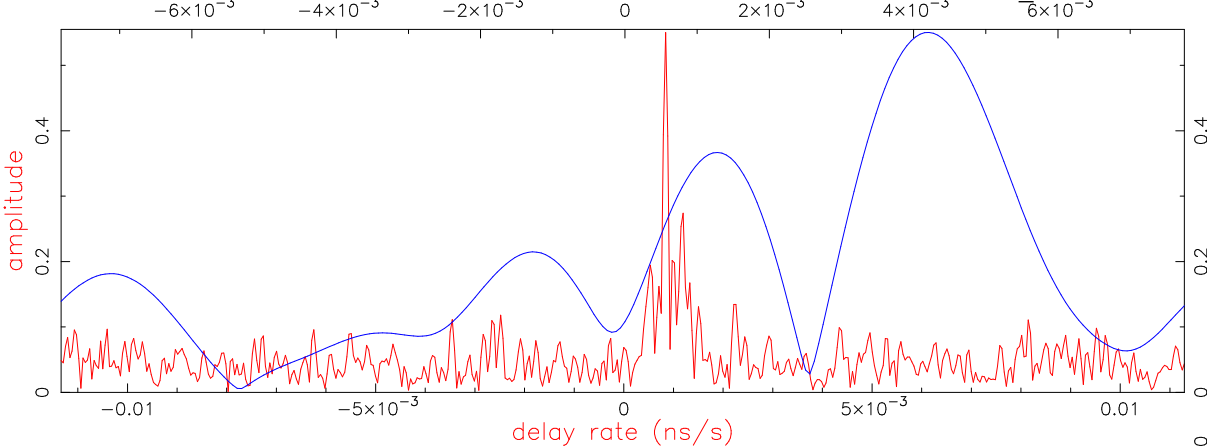
aux01

0133+476.3MP1AB, No0916, IP

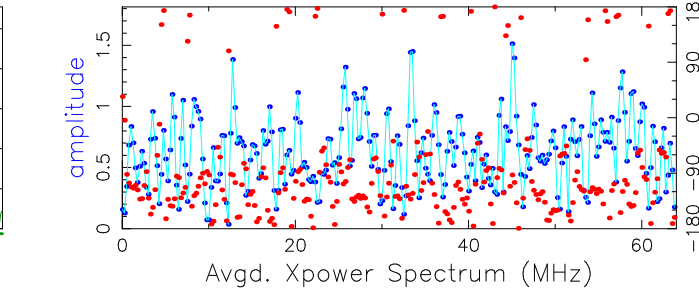
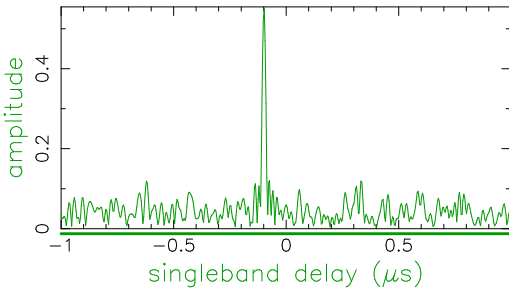
VLBA\_LA - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 8

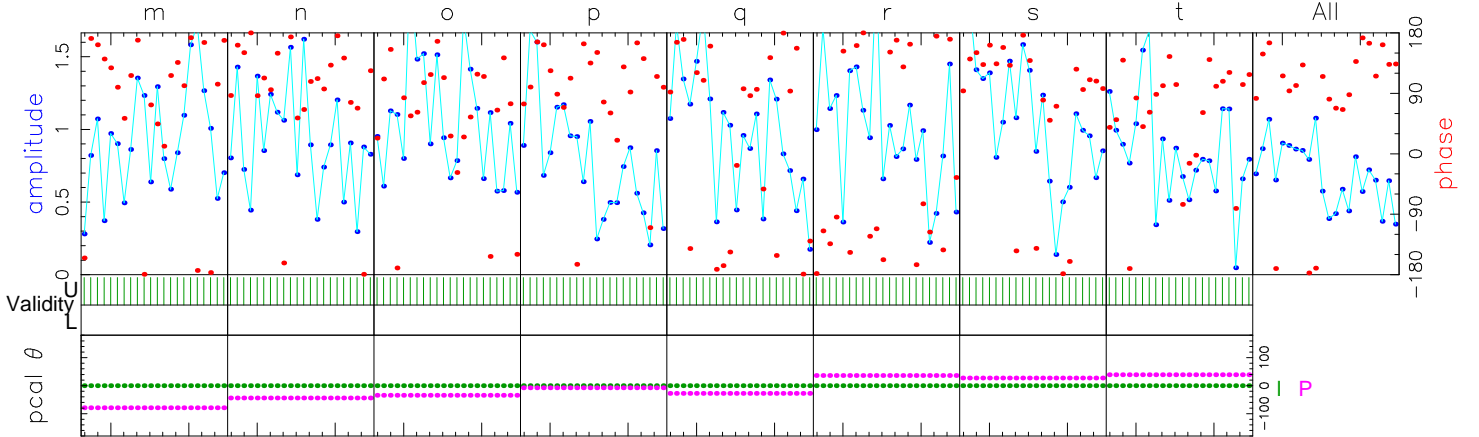


SNR 16.1  
 Int time 112.640  
 Amp 0.555  
 Phase 133.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.098663  
 MBD 0.004167  
 Fringe rate (Hz)  
 0.071501  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113046  
 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		
I	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	7.19595034283E+03	Apriori delay (usec)		7.19605555055E+03	Resid mbdelay (usec)	4.16728E-03	+/-	6.8E-05	
Sband delay (usec)	7.19595688755E+03	Apriori clock (usec)		-7.3006306E+00	Resid sbdelay (usec)	-9.86630E-02	+/-	5.4E-04	
Phase delay (usec)	7.19605555485E+03	Apriori clockrate (us/s)		-8.3223814E-07	Resid phdelay (usec)	4.30102E-06	+/-	2.3E-07	
Delay rate (us/s)	1.18919512551E+00	Apriori rate (us/s)		1.18919429545E+00	Resid rate (us/s)	8.30058E-07	+/-	3.5E-09	
Total phase (deg)		178.1	Apriori accel (us/s/s)		-3.98305563205E-05	Resid phase (deg)	133.4	+/-	7.1

ph/seg (deg)	38.8	16.7	Search (512X32)	0.524	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	45.6	29.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	40.5	10.1	Inc. seg. avg.	0.664	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	25.3	17.6	Inc. frq. avg.	0.654	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011	0.011
I: az 50.4 el 66.3 pa -111.1		P: az 307.1 el 35.7 pa 71.7		u, v (fr/asec) -10203.315 -3537.969		ion window (TEC) 0.00 0.00				
Control file: cf_1234_gmva		Input file: /Exps/c241a/v2/3mm/1234/No0916/IP..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/IP.W.199.3MP1AB						

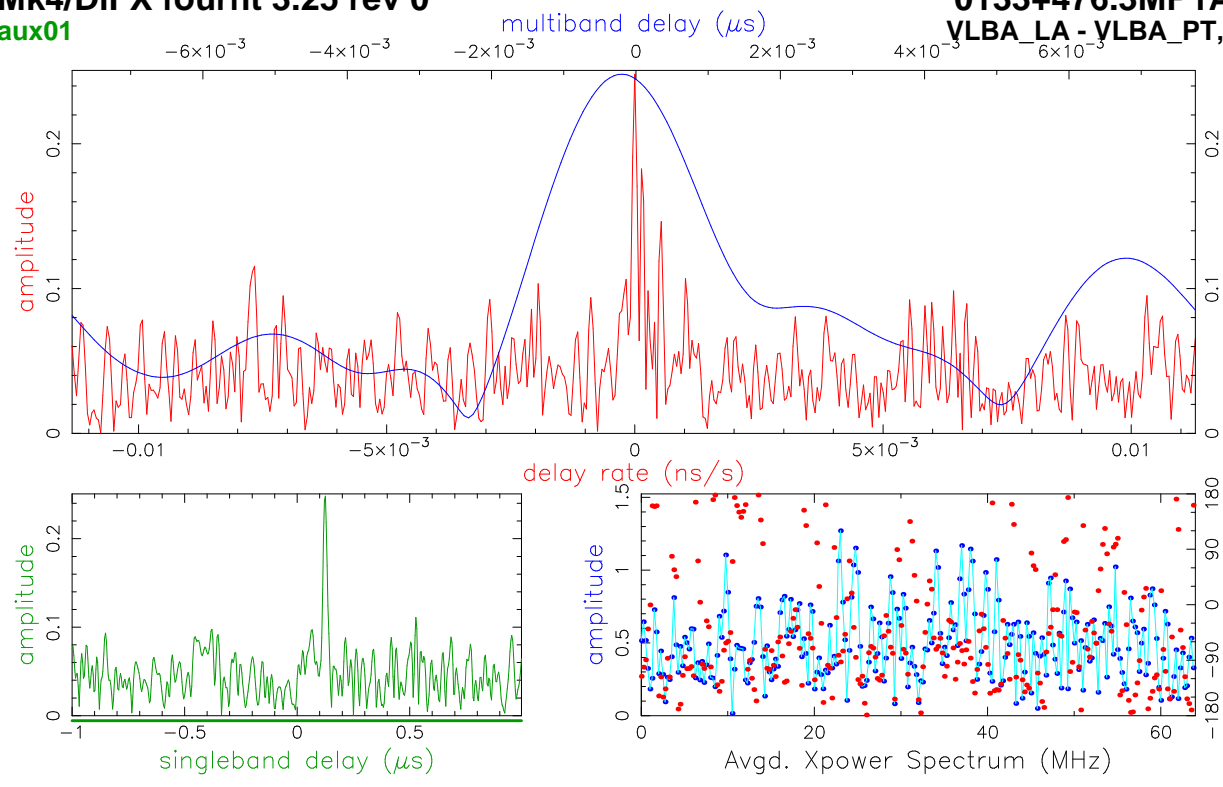
simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, lp

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

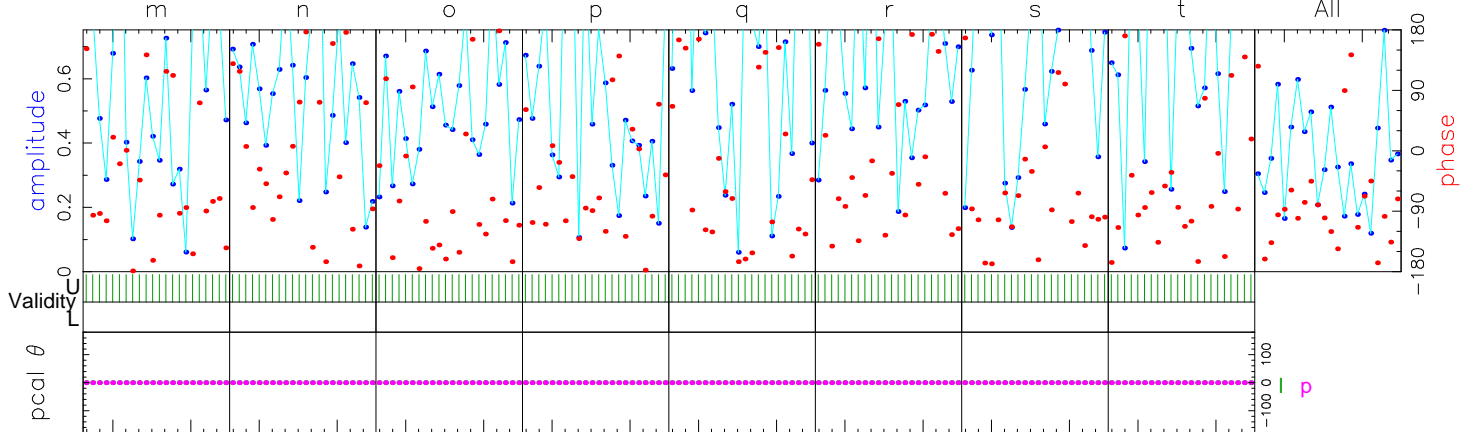


Fringe quality 9

SNR 7.3  
 Int time 112.633  
 Amp 0.251  
 Phase -106.1  
 PFD 2.7e-05  
 Delays (us)  
 SBD 0.123529  
 MBD -0.000195  
 Fringe rate (Hz) 0.000793  
 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  
 2025:041:113047  
 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
	-85.7	-89.3	-123.5	-70.6	-159.3	-95.3	-112.4	-88.7	Phase	-106.1
	0.1	0.1	0.2	0.3	0.4	0.3	0.4	0.4	Ampl.	0.3
	312.7	74.1	415.8	287.6	289.2	144.6	288.5	289.9	Sbd box	288.6
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec) (SBD)	3.11429764445E+02					3.11304959601E+02			Resid mbdelay (usec)	-1.95156E-04 +/- 1.5E-04
Sband delay (usec)	3.11428488851E+02					-1.4018665E+01			Resid sbdelay (usec)	1.23529E-01 +/- 1.2E-03
Phase delay (usec)	3.11304956180E+02					-6.1269804E-07			Resid phdelay (usec)	-3.42110E-06 +/- 5.1E-07
Delay rate (us/s)	-3.17871963336E-02					-3.17872055363E-02			Resid rate (us/s)	9.20275E-09 +/- 7.8E-09
Total phase (deg)			-26.9			3.20364818143E-08			Resid phase (deg)	-106.1 +/- 15.7
	RMS	Theor.	Amplitude	0.251 +/- 0.034					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	60.5	36.9	Search (512X32)	0.241					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	76.7	64.5	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	30.4	22.3	Inc. seg. avg.	0.299					Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	44.4	38.9	Inc. frq. avg.	0.261					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
										ion window (TEC) 0.00 0.00
l: az 50.4 el 66.3 pa -111.1			p: az 49.1 el 64.2 pa -111.4			u, v (fr/asec) 271.814 126.348				simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c241a/v2/3mm/1234/No0916/lp..3MP1AB			Output file: /Exps/c241a/v2/3mm/1234/No0916/lp.W.201.3MP1AB				

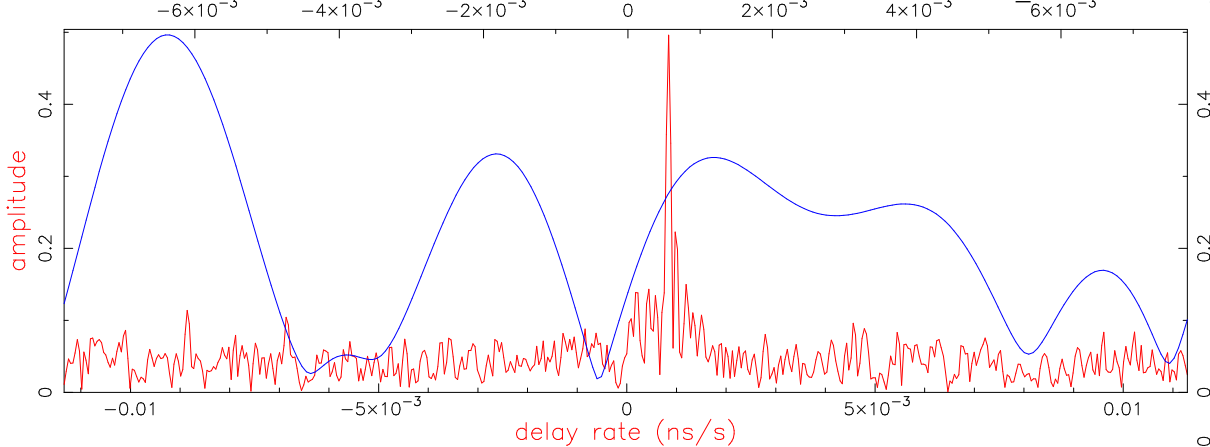
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IP

VLBA\_LA - PICOVEL, fgroup W, pol RR

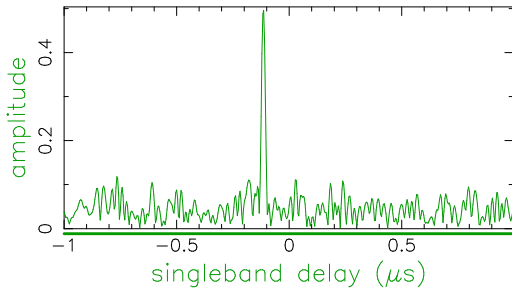
multiband delay ( $\mu$ s)



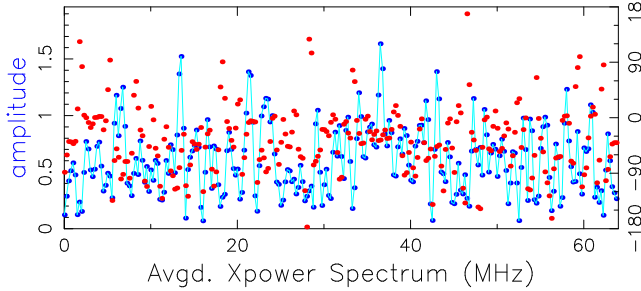
Fringe quality 7

SNR 14.6  
 Int time 112.640  
 Amp 0.504  
 Phase 150.9  
 PFD 4.6e-40  
 Delays (us)  
 SBD -0.114843  
 MBD -0.006423  
 Fringe rate (Hz)  
 0.071423  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

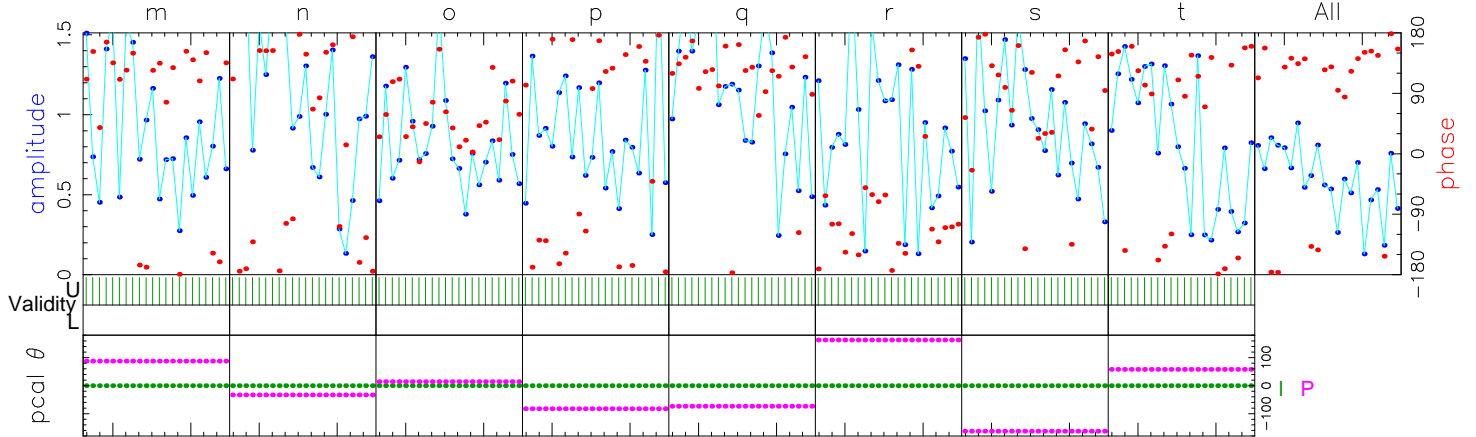
Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113048  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"



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
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0		
I	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:P	0:88	0:33	0:15	0:82	0:74	0:163	0:163	0:58		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	7.19593975283E+03	Apriori delay (usec)	7.19605555055E+03	Resid mbdelay (usec)	-6.42272E-03	+/-	7.4E-05
Sband delay (usec)	7.19594070780E+03	Apriori clock (usec)	-7.3006306E+00	Resid sbdelay (usec)	-1.14843E-01	+/-	5.9E-04
Phase delay (usec)	7.1960555542E+03	Apriori clockrate (us/s)	-8.3223814E-07	Resid phdelay (usec)	4.86577E-06	+/-	2.5E-07
Delay rate (us/s)	1.18919512460E+00	Apriori rate (us/s)	1.18919429545E+00	Resid rate (us/s)	8.29151E-07	+/-	3.9E-09
Total phase (deg)	195.7	Apriori accel (us/s/s)	-3.98305563205E-05	Resid phase (deg)	150.9	+/-	7.9

ph/seg (deg)	RMS 35.5	Theor. 18.4	Amplitude Search (512X32)	0.504 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	46.2	32.1	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)	57.0	11.1	Inc. seg. avg.	0.571	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011	0.011
amp/frq (%)	47.7	19.4	Inc. frq. avg.	0.673	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

I: az 50.4 el 66.3 pa -111.1 P: az 307.1 el 35.7 pa 71.7 u,v (fr/asec) -10203.315 -3537.969 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IP.W.202.3MP1AB



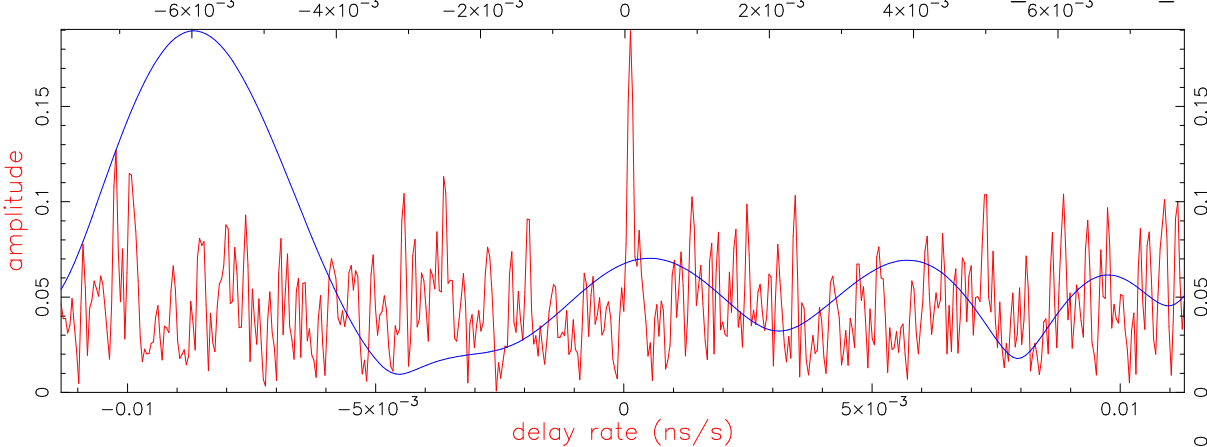
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, lp

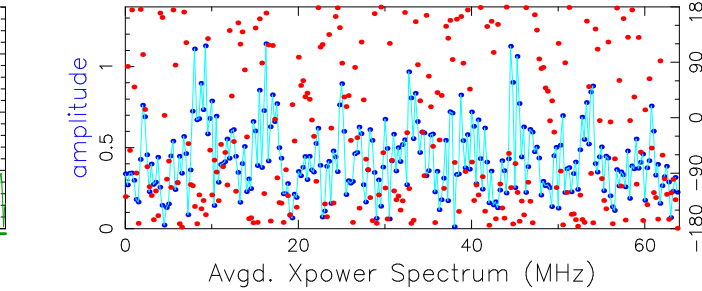
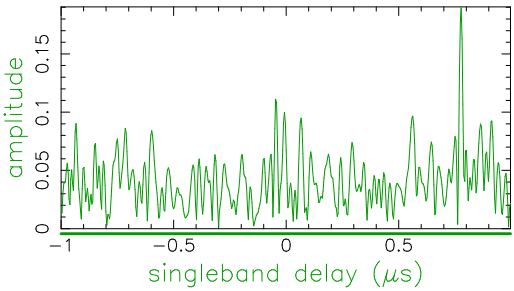
VLBA\_LA - VLBA\_PT, fgroup W, pol LR

multiband delay ( $\mu$ s)



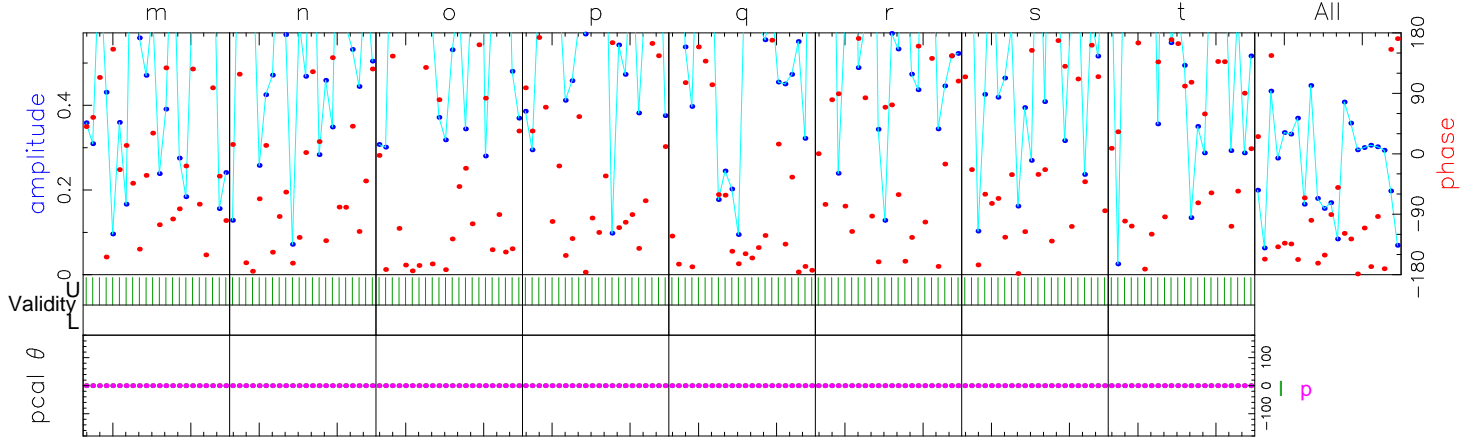
Fringe quality 0

SNR 5.5  
 Int time 112.633  
 Amp 0.190  
 Phase -139.4  
 PFD 8.6e-01  
 Delays (us)  
 SBD 0.776586  
 MBD -0.005993  
 Fringe rate (Hz)  
 0.011937  
 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  
 2025:041:113048  
 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
	-83.2	-122.0	-156.5	-118.6	-169.0	-134.5	-100.9	-139.0	Phase	-139.4
	0.1	0.1	0.4	0.2	0.4	0.2	0.2	0.2	Ampl.	0.2
	401.8	342.9	455.6	220.9	456.2	52.4	335.2	467.8	Sbd box	455.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	3.12080216509E+02		Apriori delay (usec)		3.11304959601E+02		Resid mbdelay (usec)		-5.99309E-03	+/- 2.0E-04
Sband delay (usec)	3.12081545351E+02		Apriori clock (usec)		-1.4018665E+01		Resid sbdelay (usec)		7.76586E-01	+/- 1.6E-03
Phase delay (usec)	3.11304955106E+02		Apriori clockrate (us/s)		-6.1269804E-07		Resid phdelay (usec)		-4.49568E-06	+/- 6.7E-07
Delay rate (us/s)	-3.17870669594E-02		Apriori rate (us/s)		-3.17872055363E-02		Resid rate (us/s)		1.38577E-07	+/- 1.0E-08
Total phase (deg)			Apriori accel (us/s/s)		3.20364818143E-08		Resid phase (deg)		-139.4	+/- 20.7

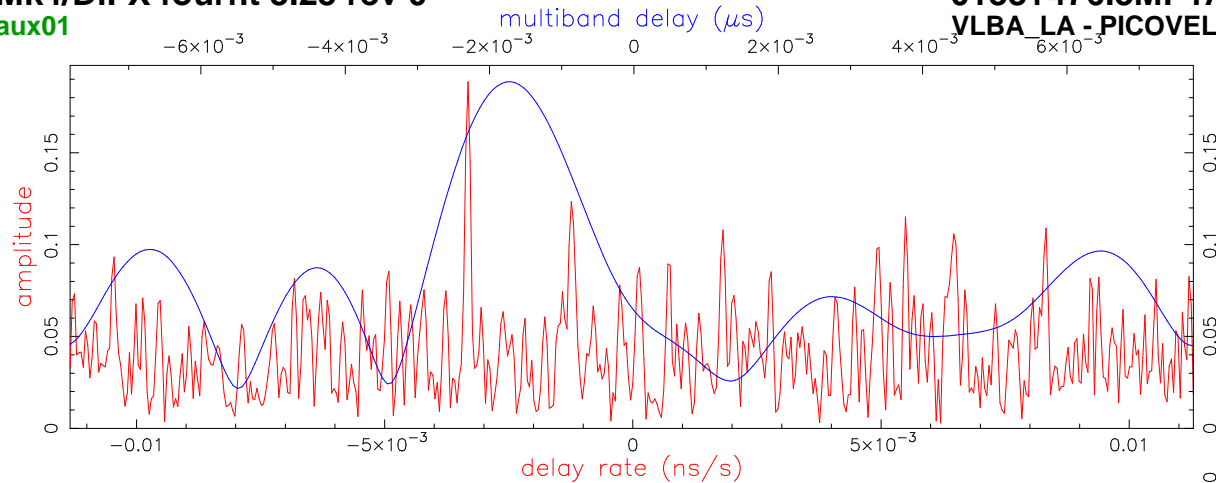
ph/seg (deg) 54.4 48.6 Search (512X32) 0.187 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 69.4 84.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.1 29.3 Inc. seg. avg. 0.192 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 51.7 51.2 Inc. frq. avg. 0.184 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 l: az 50.4 el 66.3 pa -111.1 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) 271.814 126.348 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/lp..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/lp.W.204.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

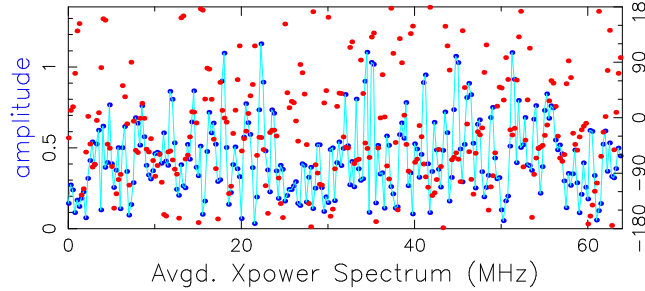
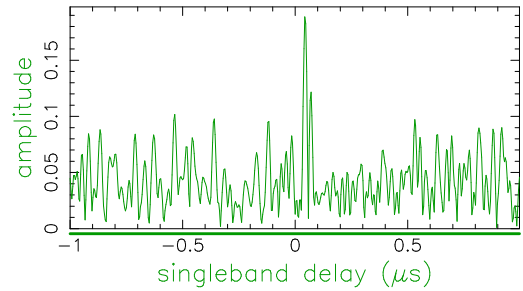
0133+476.3MP1AB, No0916, IP

VLBA\_LA - PICOVEL, fgroup W, pol LR



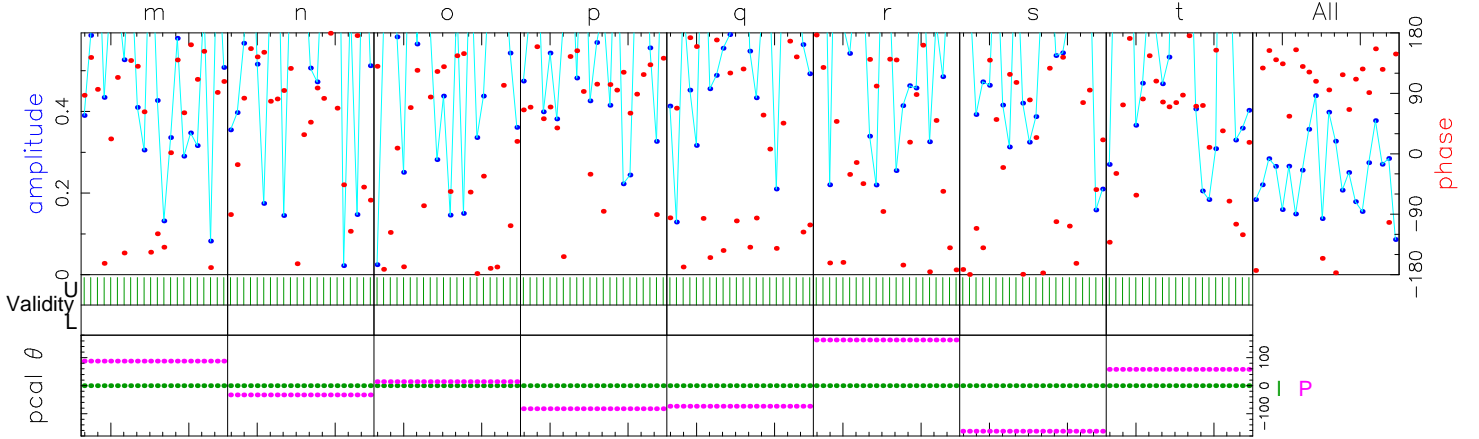
Fringe quality 0

SNR 5.5  
 Int time 112.640  
 Amp 0.198  
 Phase 129.3  
 PFD 8.5e-01  
 Delays (us)  
 SBD 0.044284  
 MBD -0.001713  
 Fringe rate (Hz)  
 -0.285162  
 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  
 2025:041:113049  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100773"

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		
I	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:P	0:88	0:33	0:15	0:82	0:74	0:163	0:163	0:58		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	7.19610071290E+03	Apriori delay (usec)		7.1960555055E+03	Resid mbdelay (usec)	-1.71265E-03	+/-	2.0E-04	
Sband delay (usec)	7.19609983455E+03	Apriori clock (usec)		-7.3006306E+00	Resid sbdelay (usec)	4.42840E-02	+/-	1.6E-03	
Phase delay (usec)	7.19605555472E+03	Apriori clockrate (us/s)		-8.3223814E-07	Resid phdelay (usec)	4.17114E-06	+/-	6.7E-07	
Delay rate (us/s)	1.18919098500E+00	Apriori rate (us/s)		1.18919429545E+00	Resid rate (us/s)	-3.31045E-06	+/-	1.0E-08	
Total phase (deg)		174.1	Apriori accel (us/s/s)		-3.98305563205E-05	Resid phase (deg)	129.3	+/-	20.7

ph/seg (deg)	RMS 44.7	Theor. 48.6	Amplitude Search (512X32)	0.184	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	56.4	84.7	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)	42.1	29.3	Inc. seg. avg.	0.192	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	46.9	51.1	Inc. frq. avg.	0.210	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

I: az 50.4 el 66.3 pa -111.1 P: az 307.1 el 35.7 pa 71.7 u, v (fr/asec) -10203.315 -3537.969 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IP.W.205.3MP1AB

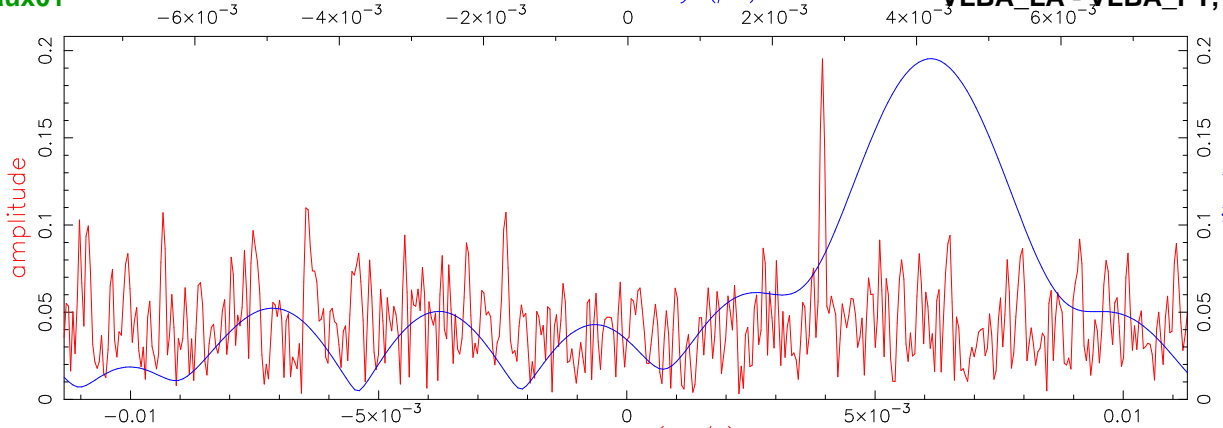
Mk4/DiFX fourfit 3.25 rev 0

aux01

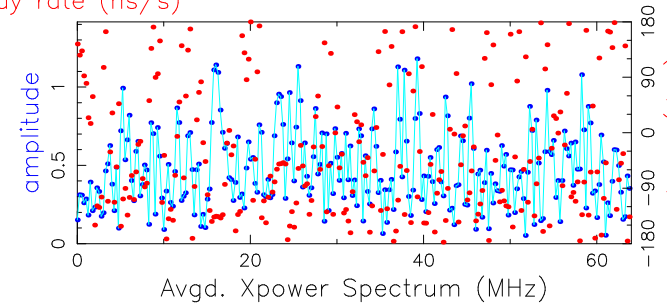
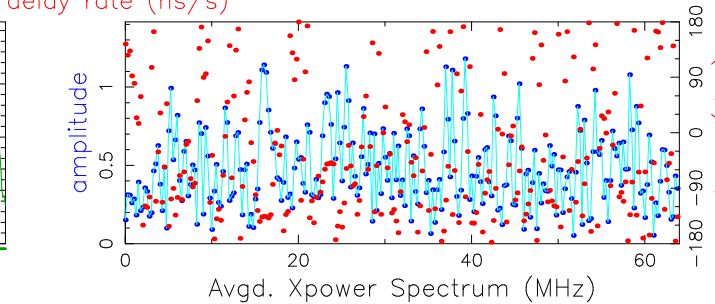
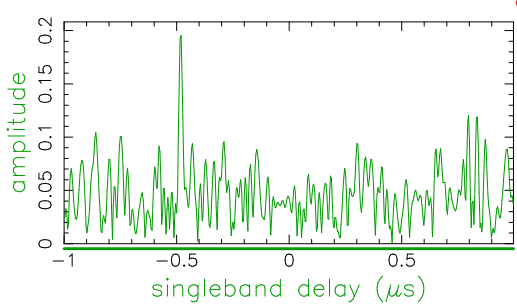
0133+476.3MP1AB, No0916, lp

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

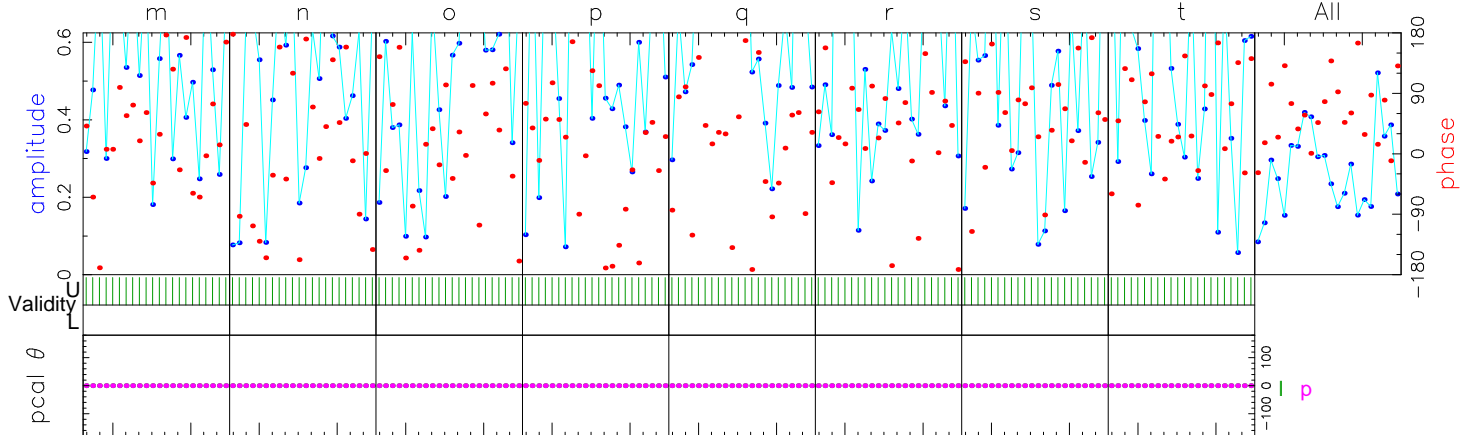
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 5.7  
 Int time 112.633  
 Amp 0.208  
 Phase 55.0  
 PFD 4.3e-01  
 Delays (us)  
 SBD -0.482042  
 MBD 0.004159  
 Fringe rate (Hz) 0.340176  
 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  
 2025:041:113050  
 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		
l	0	0	0	0	0	0	0	0		
p	0	0	0	0	0	0	0	0		
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec) (SBD)	3.10824743923E+02		Apriori delay (usec)		3.11304959601E+02		Resid mbdelay (usec)		4.15932E-03	+/- 1.9E-04
Sband delay (usec)	3.10822917851E+02		Apriori clock (usec)		-1.4018665E+01		Resid sbdelay (usec)		-4.82042E-01	+/- 1.5E-03
Phase delay (usec)	3.11304961373E+02		Apriori clockrate (us/s)		-6.1269804E-07		Resid phdelay (usec)		1.77210E-06	+/- 6.4E-07
Delay rate (us/s)	-3.17832564273E-02		Apriori rate (us/s)		-3.17872055363E-02		Resid rate (us/s)		3.94911E-06	+/- 9.9E-09
Total phase (deg)	134.2		Apriori accel (us/s/s)		3.20364818143E-08		Resid phase (deg)		55.0	+/- 19.9
ph/seg (deg)	RMS 50.5	Theor. 46.8	Amplitude 512X32	0.192	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		sb window (us)	-1.000 1.000
amp/seg (%)	64.8	81.6	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)	12.6	28.2	Inc. seg. avg.	0.213	Bits/sample: 2x2		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	44.2	49.2	Inc. frq. avg.	0.186	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
l: az 50.4 el 66.3 pa -111.1      p: az 49.1 el 64.2 pa -111.4      u,v (fr/asec) 271.814 126.348      simultaneous interpolator Control file: cf_1234_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/lp..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/lp.W.207.3MP1AB										

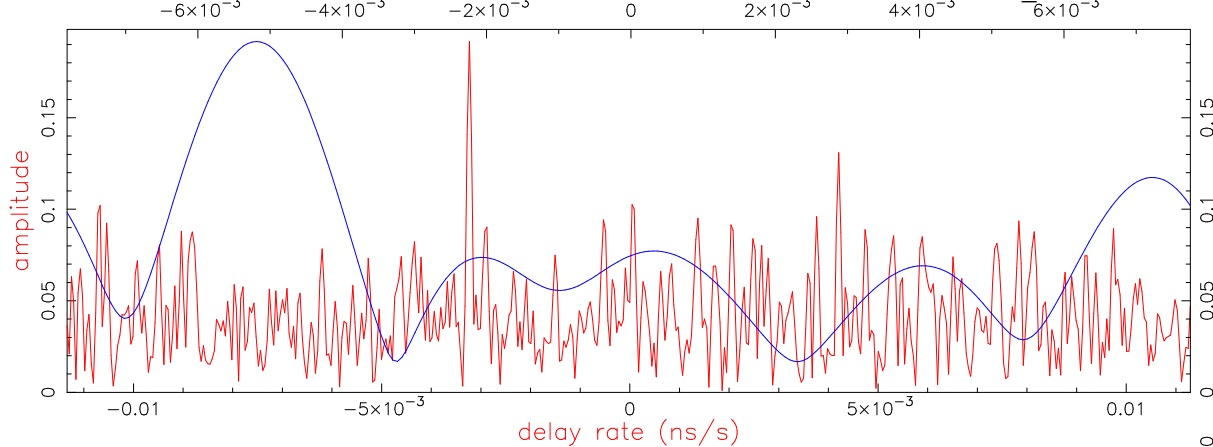
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IP

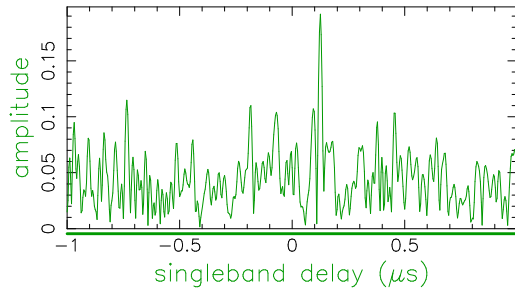
VLBA\_LA - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)

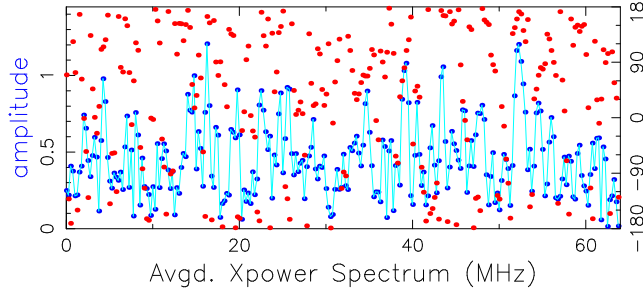


Fringe quality 0

SNR 5.6  
 Int time 112.640  
 Amp 0.198  
 Phase -173.0  
 PFD 8.0e-01  
 Delays (us)  
 SBD 0.124856  
 MBD -0.005188  
 Fringe rate (Hz)  
 -0.279007  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

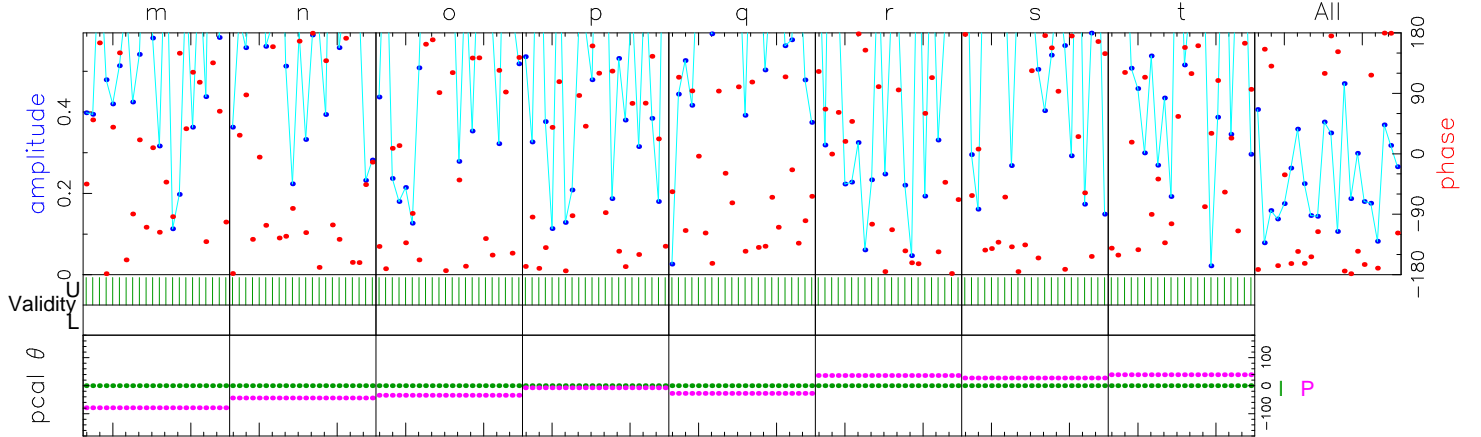


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113050  
 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		
I	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
I:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39		
I	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD) 7.19617536285E+03 Apriori delay (usec) 7.19605555055E+03 Resid mbdelay (usec) -5.18770E-03 +/- 2.0E-04  
 Sband delay (usec) 7.19618040605E+03 Apriori clock (usec) -7.3006306E+00 Resid sbdelay (usec) 1.24856E-01 +/- 1.5E-03  
 Phase delay (usec) 7.19605554497E+03 Apriori clockrate (us/s) -8.3223814E-07 Resid phdelay (usec) -5.57906E-06 +/- 6.6E-07  
 Delay rate (us/s) 1.18919105645E+00 Apriori rate (us/s) 1.18919429545E+00 Resid rate (us/s) -3.23900E-06 +/- 1.0E-08  
 Total phase (deg) -128.2 Apriori accel (us/s/s) -3.98305563205E-05 Resid phase (deg) -173.0 +/- 20.6

RMS Theor. Amplitude 0.198 +/- 0.036 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 44.6 48.3 Search (512X32) 0.188 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 63.0 84.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 40.5 29.1 Inc. seg. avg. 0.183 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 62.1 50.8 Inc. frq. avg. 0.200 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 50.4 el 66.3 pa -111.1 P: az 307.1 el 35.7 pa 71.7 u, v (fr/asec) -10203.315 -3537.969 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IP.W.208.3MP1AB

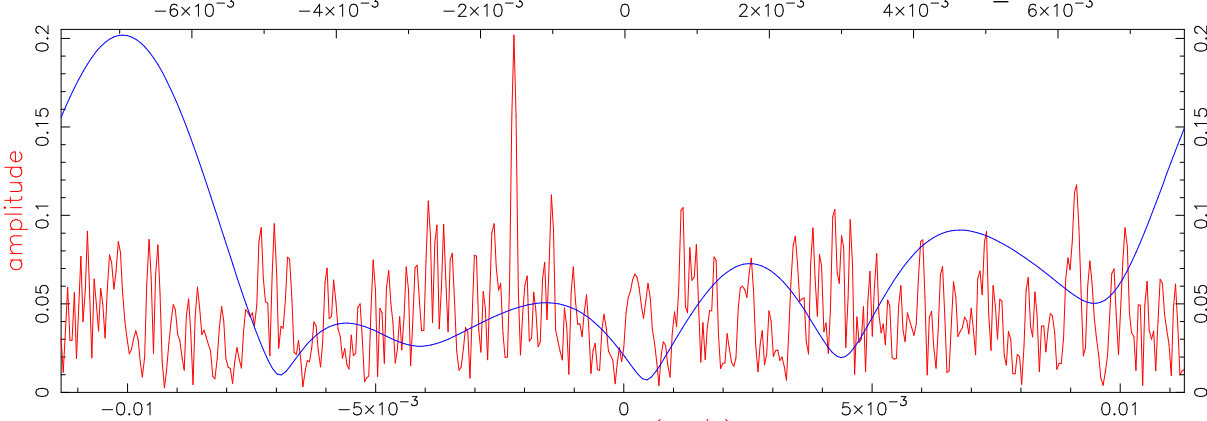
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IX

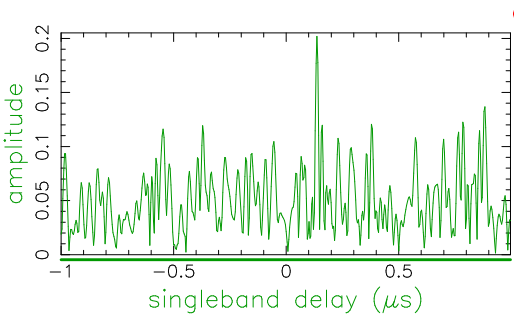
VLBA\_LA - ONSALA60, fgroup W, pol LL

multiband delay ( $\mu$ s)

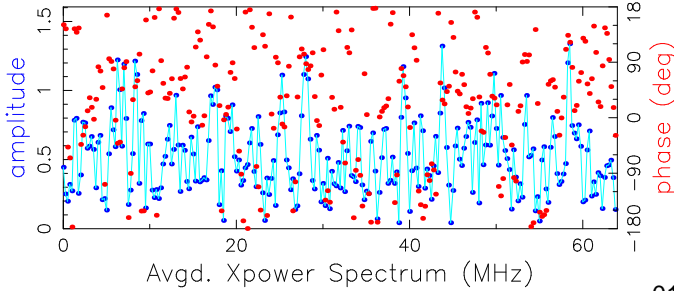


Fringe quality 0

SNR 5.5  
 Int time 98.816  
 Amp 0.205  
 Phase -76.5  
 PFD 9.1e-01  
 Delays (us)  
 SBD 0.136777  
 MBD -0.006957  
 Fringe rate (Hz)  
 -0.191115  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

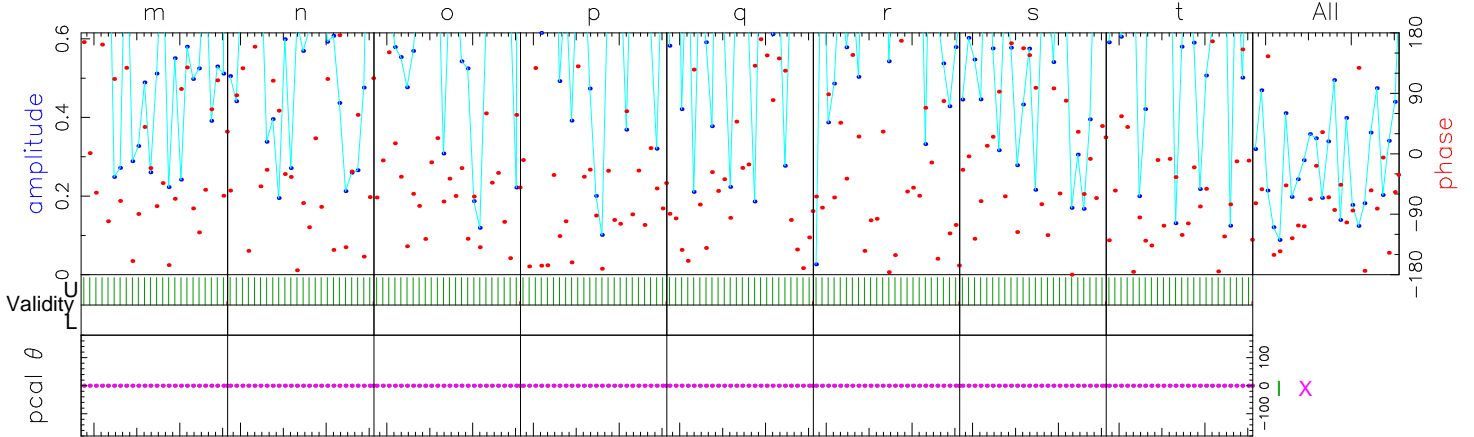


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113216  
 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
	-80.5	-104.9	-46.8	-85.1	-112.8	-82.2	-26.9	-82.2	Phase	-76.5
	0.1	0.1	0.4	0.3	0.2	0.2	0.1	0.2	Ampl.	0.2
	35.0	315.1	291.7	378.5	100.9	253.3	97.9	98.2	Sbd box	292.0
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.25095651111E+03	Apriori delay (usec)	6.25082284266E+03	Resid mbdelay (usec)	-6.95654E-03	+/-	2.0E-04
Sband delay (usec)	6.25095961916E+03	Apriori clock (usec)	-1.2097383E+02	Resid sbdelay (usec)	1.36777E-01	+/-	1.6E-03
Phase delay (usec)	6.25082284019E+03	Apriori clockrate (us/s)	-1.4506241E-06	Resid phdelay (usec)	-2.46614E-06	+/-	6.7E-07
Delay rate (us/s)	9.45606042849E-01	Apriori rate (us/s)	9.45608261502E-01	Resid rate (us/s)	-2.21865E-06	+/-	1.2E-08
Total phase (deg)	163.4	Apriori accel (us/s/s)	-5.55016523604E-05	Resid phase (deg)	-76.5	+/-	20.9

ph/seg (deg)	63.5	Theor.	Amplitude	0.205 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	75.4	52.2	Search (512X32)	0.200	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	30.6	29.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	46.7	51.5	Inc. seg. avg.	0.209	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.	0.200	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00

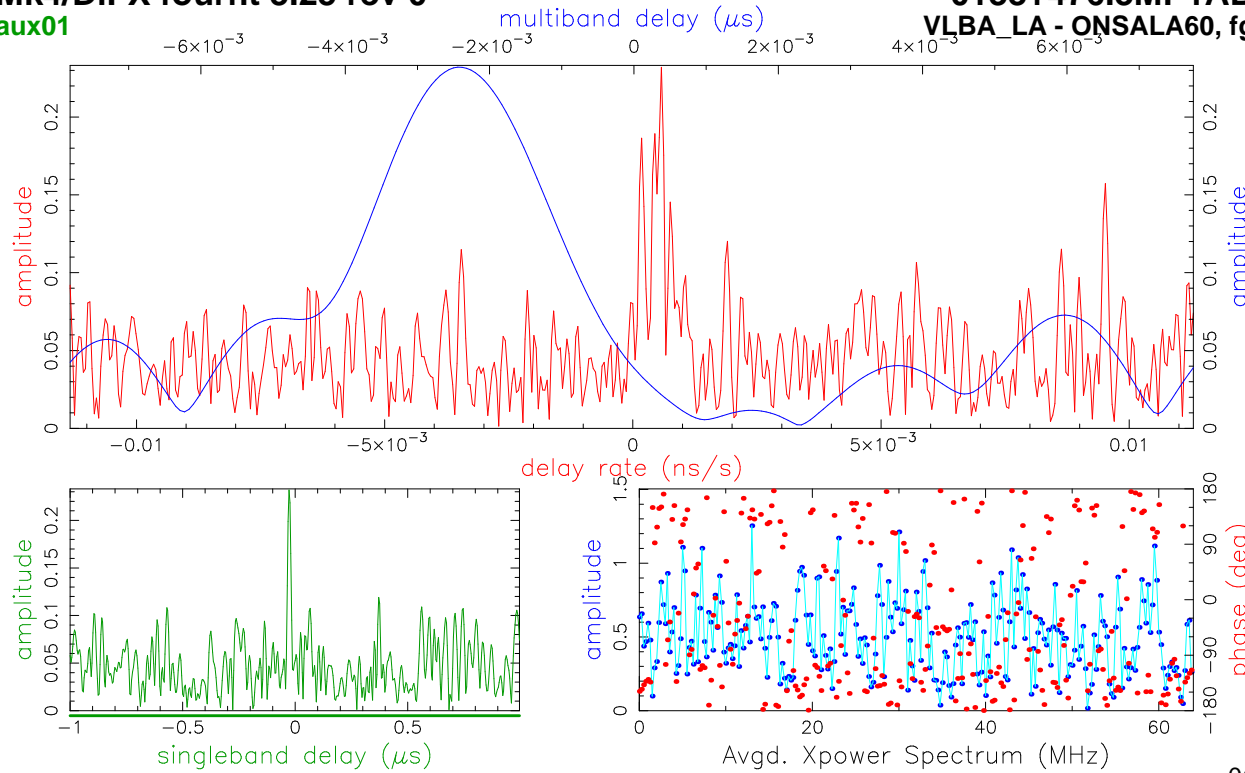
I: az 50.4 el 66.3 pa -111.1 X: az 301.3 el 38.5 pa 43.4 u, v (fr/asec) -8128.991 -6334.376 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IX..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IX.W.353.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IX

VLBA\_LA - ONSALA60, fgroup W, pol RR

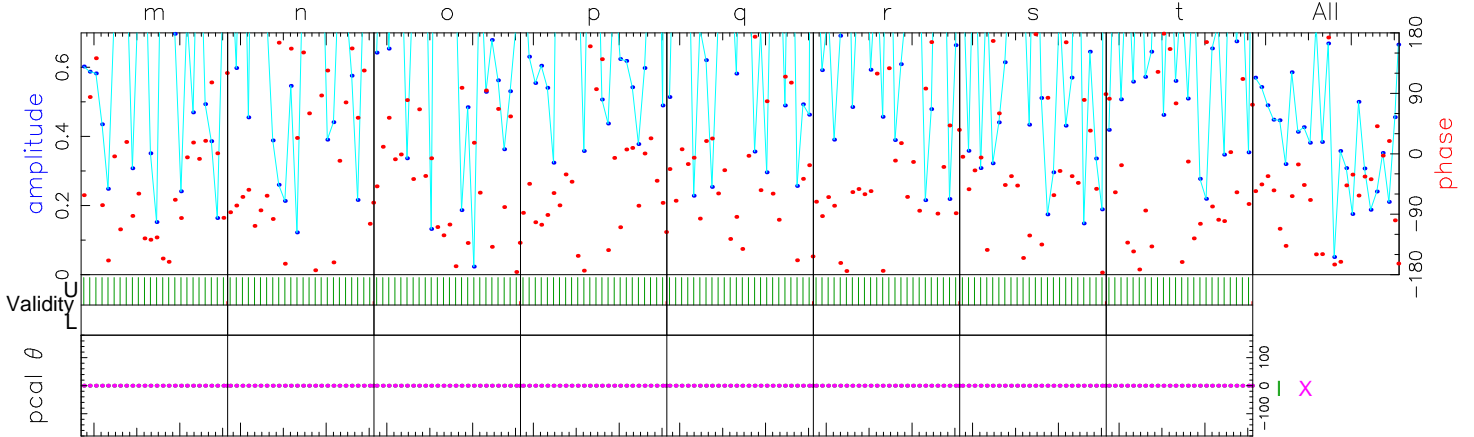


Fringe quality 0

SNR 6.3  
 Int time 98.816  
 Amp 0.233  
 Phase -72.9  
 PFD 1.6e-02  
 Delays (us)  
 SBD -0.026514  
 MBD -0.002365  
 Fringe rate (Hz)  
 0.048452  
 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  
 2025:041:113221  
 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	
	-78.9	-115.1	-59.2	-63.3	-51.0	-74.7	-54.9	-131.7	Phase	-72.9	
	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	Ampl.	0.2	
	408.8	297.9	499.1	251.4	248.1	455.5	241.1	416.2	Sbd box	250.2	
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used		
I	0	0	0	0	0	0	0	0	PC freqs		
X	0	0	0	0	0	0	0	0	PC freqs		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
X	1000	1000	1000	1000	1000	1000	1000	1000			
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec) (SBD)	6.25078922735E+03		Apriori delay (usec)		6.25082284266E+03		Resid mbdelay (usec)		-2.36531E-03	+/- 1.7E-04	
Sband delay (usec)	6.25079632866E+03		Apriori clock (usec)		-1.2097383E+02		Resid sbdelay (usec)		-2.65140E-02	+/- 1.4E-03	
Phase delay (usec)	6.25082284030E+03		Apriori clockrate (us/s)		-1.4506241E-02		Resid phdelay (usec)		-2.35201E-06	+/- 5.8E-07	
Delay rate (us/s)	9.45608823986E-01		Apriori rate (us/s)		9.45608261502E-01		Resid rate (us/s)		5.62484E-07	+/- 1.0E-08	
Total phase (deg)	166.9		Apriori accel (us/s/s)		-5.55016523604E-05		Resid phase (deg)		-72.9	+/- 18.1	
	RMS	Theor.	Amplitude	0.233 +/- 0.037		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	60.0	45.2	Search (512X32)	0.226		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	98.7	79.0	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	32.6	25.6	Inc. seg. avg.	0.305		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	29.3	44.7	Inc. frq. avg.	0.232		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
I: az 50.4 el 66.3 pa -111.1		X: az 301.3 el 38.5 pa 43.4		u, v (fr/asec) -8128.991 -6334.376						simultaneous interpolator	
Control file: cf_1234_gmva		Input file: /Exps/c241a/v2/3mm/1234/No0916/IX..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/IX.W.360.3MP1AB							

Mk4/DiFX fourfit 3.25 rev 0

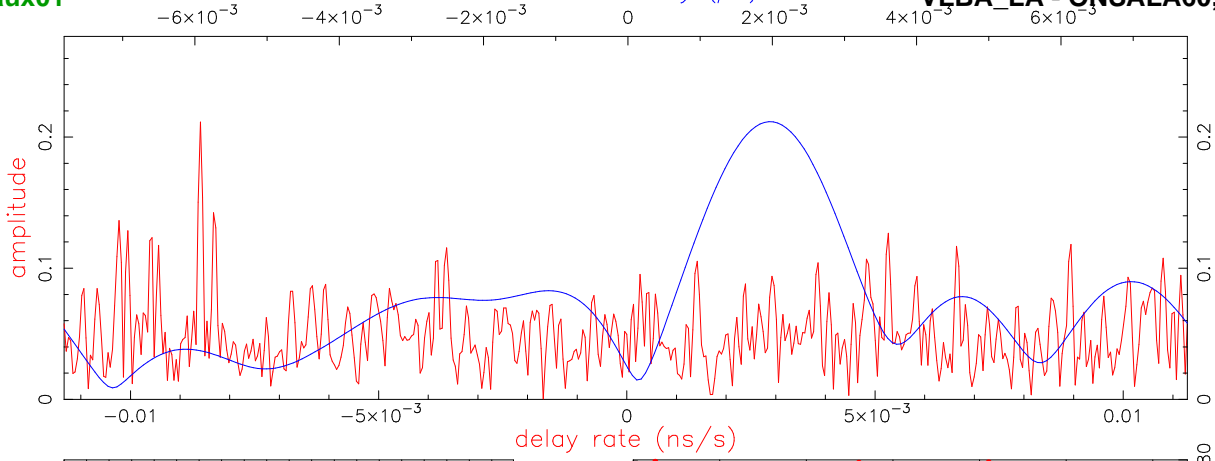
aux01

0133+476.3MP1AB, No0916, IX

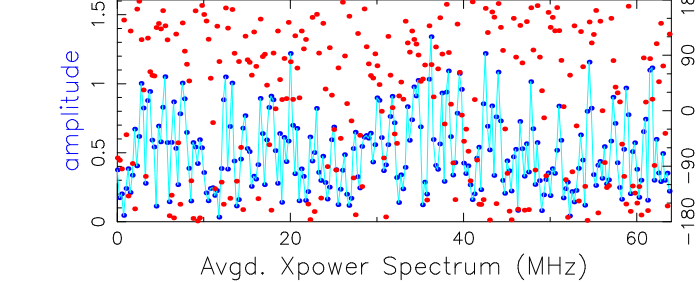
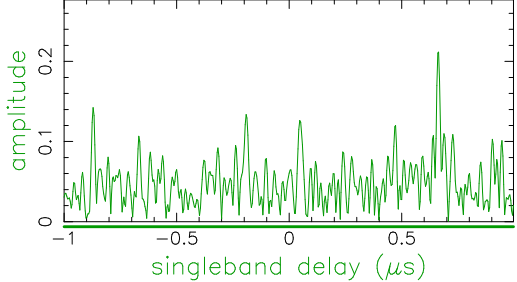
VLBA\_LA - ONSALA60, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

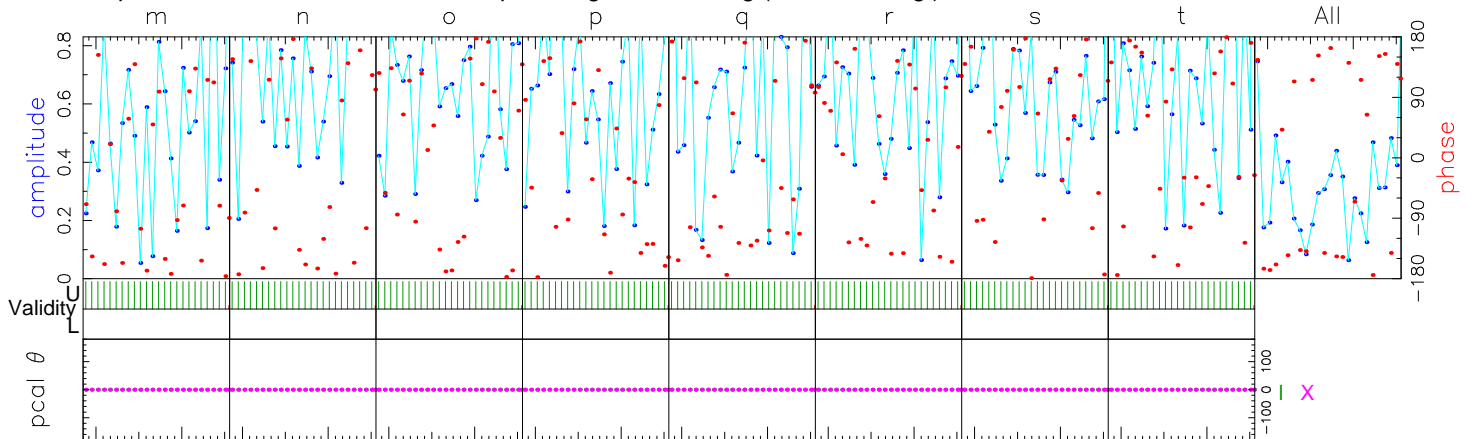


SNR 5.9  
 Int time 98.816  
 Amp 0.277  
 Phase 176.2  
 PFD 2.4e-01  
 Delays (us)  
 SBD 0.662224  
 MBD 0.001917  
 Fringe rate (Hz)  
 -0.739259  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113225  
 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		
I	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	6.25148100928E+03	Apriori delay (usec)	6.25082284266E+03	Resid mbdelay (usec)	1.91663E-03	+/-	1.8E-04
Sband delay (usec)	6.25148506641E+03	Apriori clock (usec)	-1.2097383E+02	Resid sbdelay (usec)	6.62224E-01	+/-	1.5E-03
Phase delay (usec)	6.25082284834E+03	Apriori clockrate (us/s)	-1.4506241E-06	Resid phdelay (usec)	5.68041E-06	+/-	6.3E-07
Delay rate (us/s)	9.45599679432E-01	Apriori rate (us/s)	9.45608261502E-01	Resid rate (us/s)	-8.58207E-06	+/-	1.1E-08
Total phase (deg)	56.0	Apriori accel (us/s/s)	-5.55016523604E-05	Resid phase (deg)	176.2	+/-	19.5

ph/seg (deg)	55.7	Theor.	48.8	Amplitude	0.277 +/- 0.047	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	84.1	Search (512X32)	0.205	Search	0.000E+00	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	29.3	Interp.	0.000	Inc. seg. avg.	0.292	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	39.1	Inc. frq. avg.	0.267	Inc. frq. avg.	0.267	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

I: az 50.4 el 66.3 pa -111.1 X: az 301.3 el 38.5 pa 43.4 u,v (fr/asec) -8128.991 -6334.376 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IX..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IX.W.363.3MP1AB

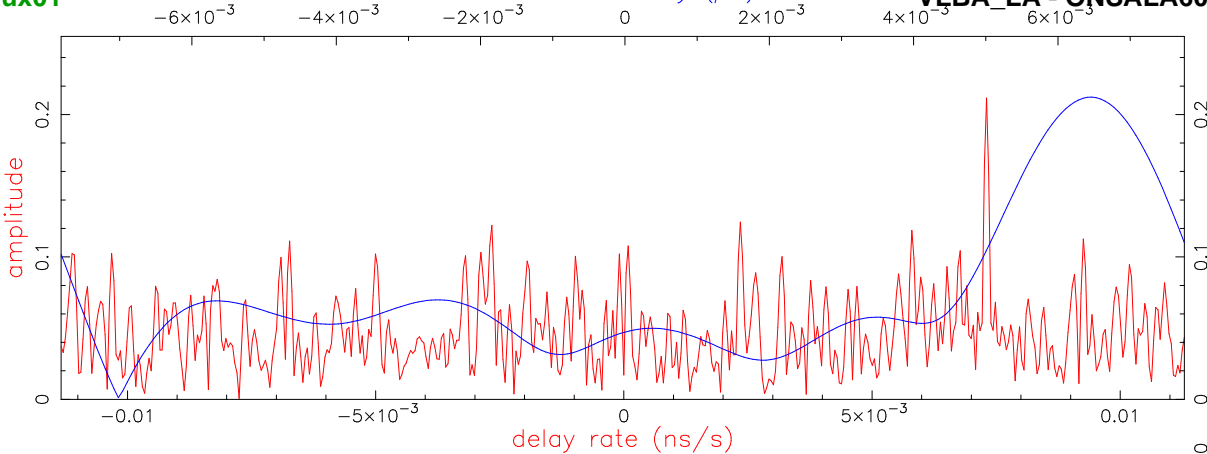
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IX

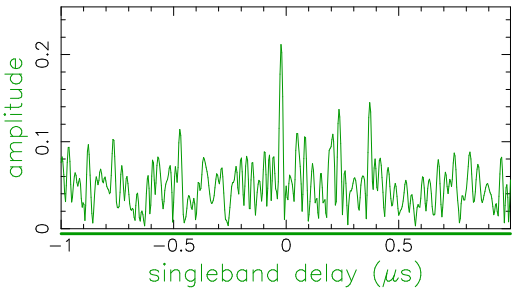
VLBA\_LA - ONSALA60, fgroup W, pol RL

multiband delay ( $\mu$ s)

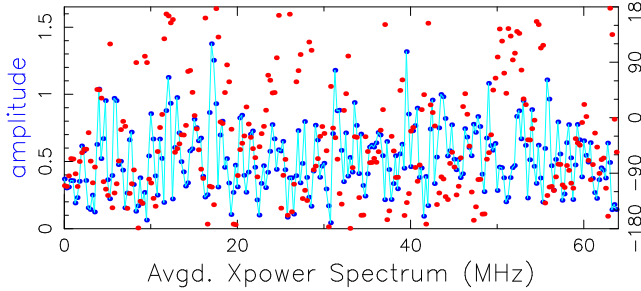


Fringe quality 0

SNR 5.8  
 Int time 98.816  
 Amp 0.255  
 Phase -47.4  
 PFD 3.3e-01  
 Delays (us)  
 SBD -0.022298  
 MBD 0.006553  
 Fringe rate (Hz)  
 0.629632  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

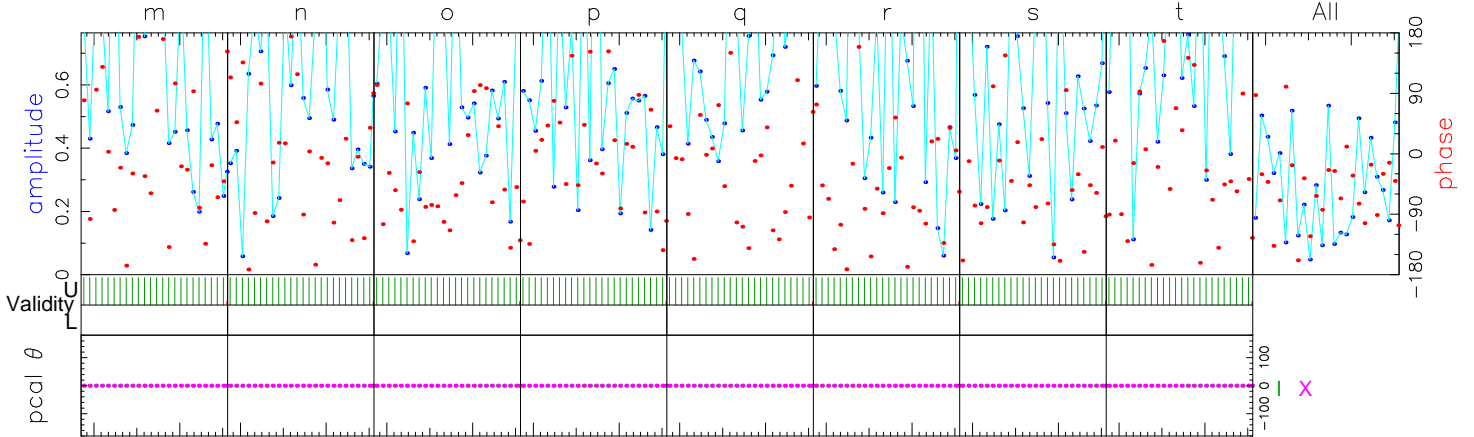


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113226  
 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
	-61.2	-29.7	-67.4	11.3	-40.0	-57.0	-52.9	-62.7	Phase	-47.4
	0.1	0.1	0.4	0.3	0.2	0.4	0.3	0.2	Ampl.	0.2
	306.0	147.3	445.2	273.5	11.6	251.3	151.3	192.3	Sbd box	251.3
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.25079814576E+03	Apriori delay (usec)	6.25082284266E+03	Resid mbdelay (usec)	6.55311E-03	+/-	1.9E-04
Sband delay (usec)	6.25080054416E+03	Apriori clock (usec)	-1.2097383E+02	Resid sbdelay (usec)	-2.22985E-02	+/-	1.5E-03
Phase delay (usec)	6.25082284113E+03	Apriori clockrate (us/s)	-1.4506241E-06	Resid phdelay (usec)	-1.52717E-06	+/-	6.4E-07
Delay rate (us/s)	9.45615570900E-01	Apriori rate (us/s)	9.45608261502E-01	Resid rate (us/s)	7.30940E-06	+/-	1.1E-08
Total phase (deg)	192.5	Apriori accel (us/s/s)	-5.55016523604E-05	Resid phase (deg)	-47.4	+/-	19.7

ph/seg (deg)	58.6	RMS	58.6	Theor.	49.4	Amplitude	0.255 +/- 0.044	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	81.0	58.6	49.4	Search (512X32)	0.207	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	28.2	81.0	86.2	Inc. seg. avg.	0.246	Inc. frq. avg.	0.248	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	45.9	28.2	27.9	Inc. frq. avg.	0.248	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

I: az 50.4 el 66.3 pa -111.1 X: az 301.3 el 38.5 pa 43.4 u, v (fr/asec) -8128.991 -6334.376 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IX..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IX.W.368.3MP1AB



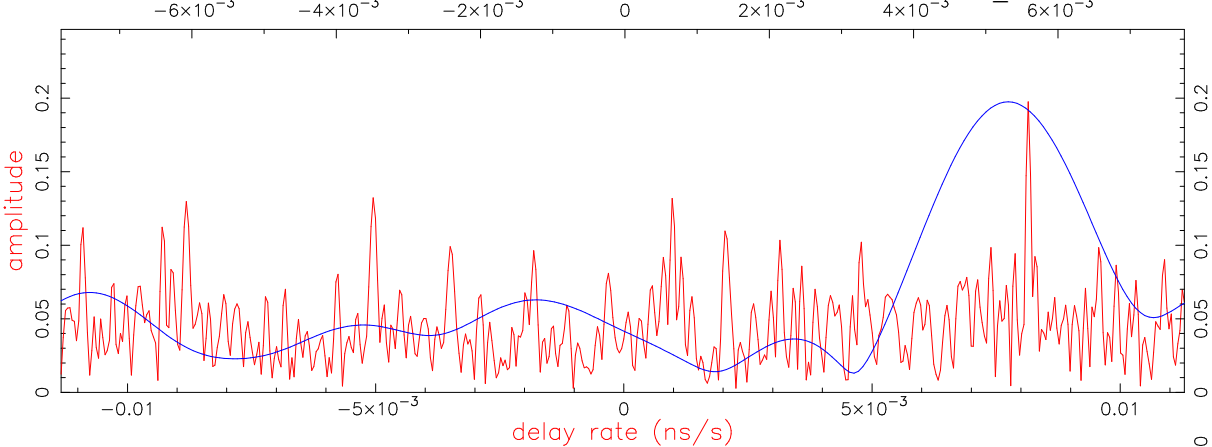
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IY

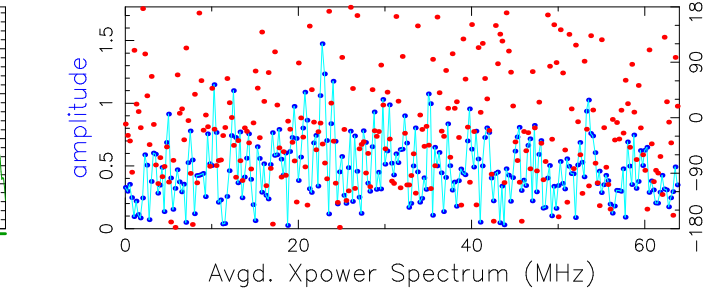
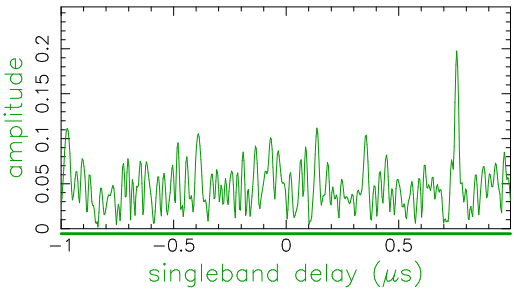
VLBA\_LA - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



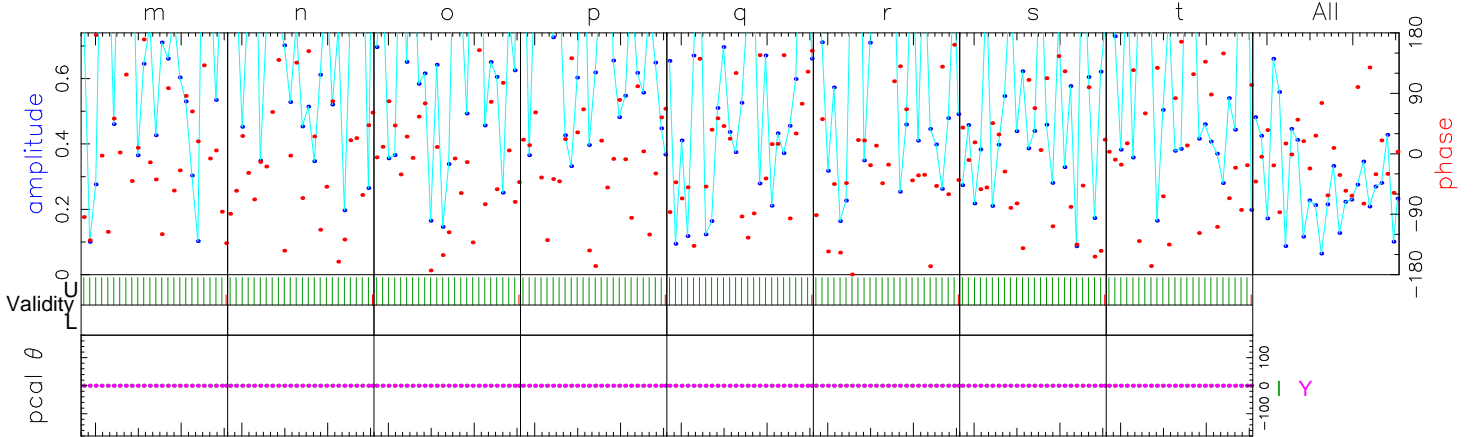
Fringe quality 0

SNR 5.4  
 Int time 99.772  
 Amp 0.247  
 Phase -16.7  
 PFD 9.8e-01  
 Delays (us)  
 SBD 0.757713  
 MBD 0.005305  
 Fringe rate (Hz)  
 0.702178  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170449.97  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113135  
 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	-31.3	-8.7	-7.7	45.7	-16.0	-34.7	-17.7	Phase	-16.7
	0.2	0.3	0.4	0.4	0.0	0.3	0.2	0.2	Ampl.	0.2
	221.3	96.6	451.2	99.5	316.7	398.2	228.1	347.2	Sbd box	451.0
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.75712375881E+03	Apriori delay (usec)	6.75636845405E+03	Resid mbdelay (usec)	5.30475E-03	+/-	2.0E-04
Sband delay (usec)	6.75712616755E+03	Apriori clock (usec)	1.0223952E+02	Resid sbdelay (usec)	7.57713E-01	+/-	1.6E-03
Phase delay (usec)	6.75636845351E+03	Apriori clockrate (us/s)	9.7966795E-07	Resid phdelay (usec)	-5.39795E-07	+/-	6.9E-07
Delay rate (us/s)	1.15203317785E+00	Apriori rate (us/s)	1.15202502626E+00	Resid rate (us/s)	8.15159E-06	+/-	1.2E-08
Total phase (deg)	210.9	Apriori accel (us/s/s)	-4.08378173762E-05	Resid phase (deg)	-16.7	+/-	21.2

ph/seg (deg)	RMS 55.0	Theor. 53.1	Amplitude Search (512X32)	0.196	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	89.0	92.7	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)	27.7	30.0	Inc. seg. avg.	0.251	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	48.2	52.4	Inc. frq. avg.	0.222	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

I: az 50.4 el 66.3 pa -111.1 Y: az 305.2 el 37.5 pa 68.1 u,v (fr/asec) -9885.677 -3905.019 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IY...3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IY.W.286.3MP1AB

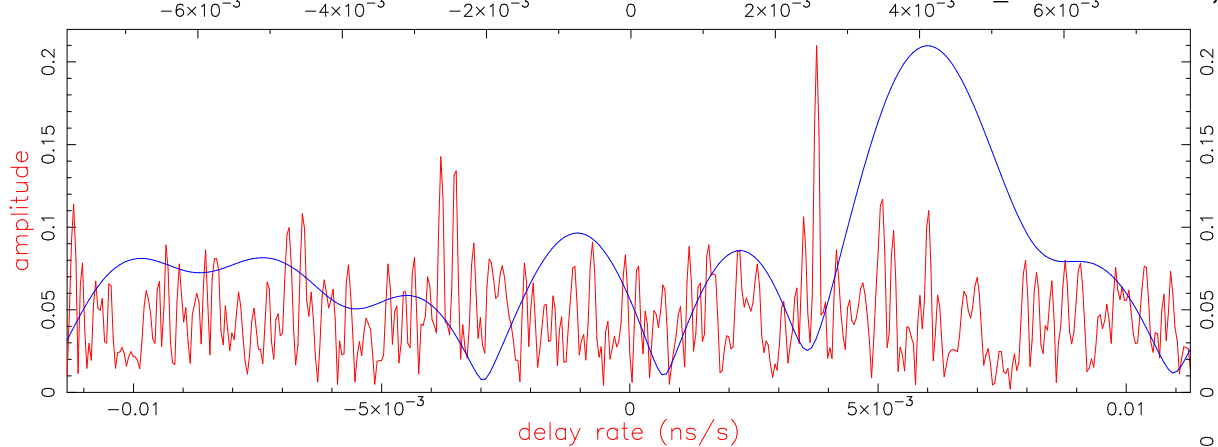
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IY

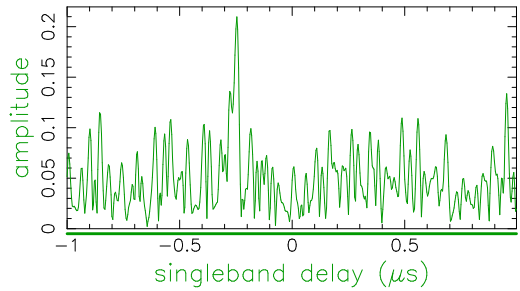
VLBA\_LA - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)

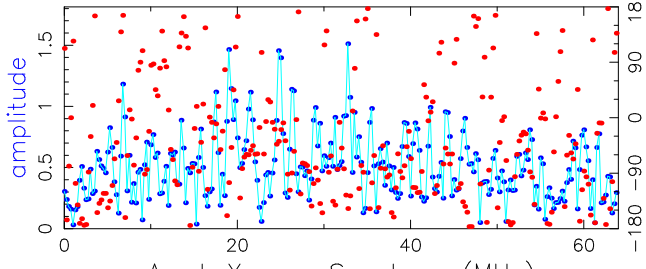


Fringe quality 0

SNR 5.7  
 Int time 99.772  
 Amp 0.220  
 Phase -89.0  
 PFD 4.6e-01  
 Delays (us)  
 SBD -0.245947  
 MBD 0.004115  
 Fringe rate (Hz) 0.325211  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

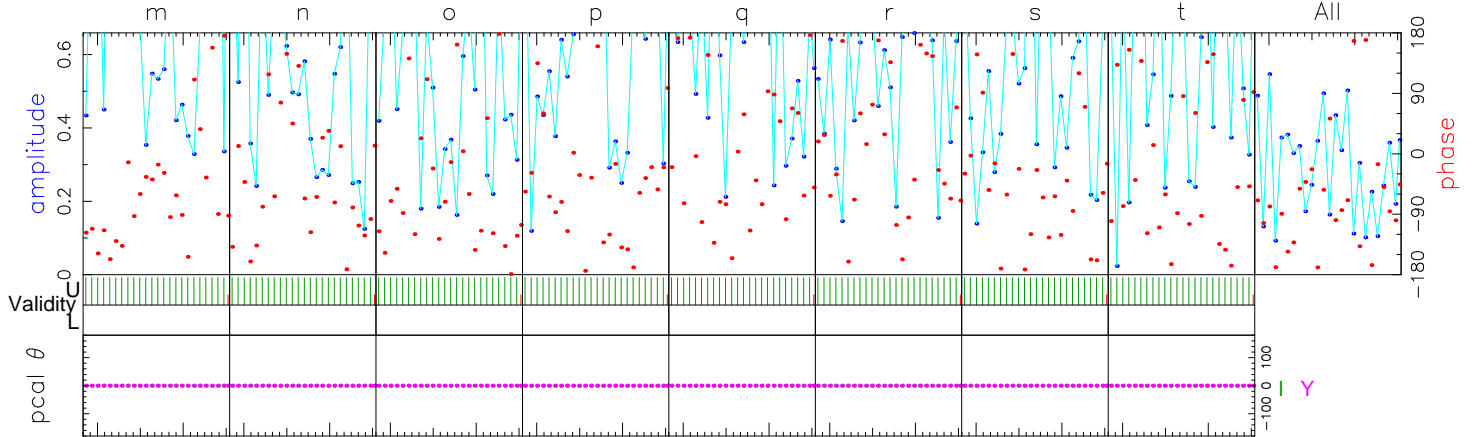


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170449.97  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113136  
 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		
I	0	0	0	0	0	0	0	0		
Y	0	0	0	0	0	0	0	0		
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	6.75612256908E+03	Apriori delay (usec)	6.75636845405E+03	Resid mbdelay (usec)	4.11502E-03	+/-	1.9E-04
Sband delay (usec)	6.75612250705E+03	Apriori clock (usec)	1.0223952E+02	Resid sbdelay (usec)	-2.45947E-01	+/-	1.5E-03
Phase delay (usec)	6.75636845118E+03	Apriori clockrate (us/s)	9.7966795E-07	Resid phdelay (usec)	-2.87061E-06	+/-	6.4E-07
Delay rate (us/s)	1.15202880163E+00	Apriori rate (us/s)	1.15202502626E+00	Resid rate (us/s)	3.77538E-06	+/-	1.1E-08
Total phase (deg)	138.6	Apriori accel (us/s/s)	-4.08378173762E-05	Resid phase (deg)	-89.0	+/-	20.0

ph/seg (deg)	59.1	Theor.	50.0	Amplitude	0.220 +/- 0.038	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	77.1	Search (512X32)	0.205	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	39.2	Inc. seg. avg.	0.224	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	56.4	Inc. frq. avg.	0.212	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

I: az 50.4 el 66.3 pa -111.1 Y: az 305.2 el 37.5 pa 68.1 u, v (fr/asec) -9885.677 -3905.019 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IY..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IY.W.288.3MP1AB

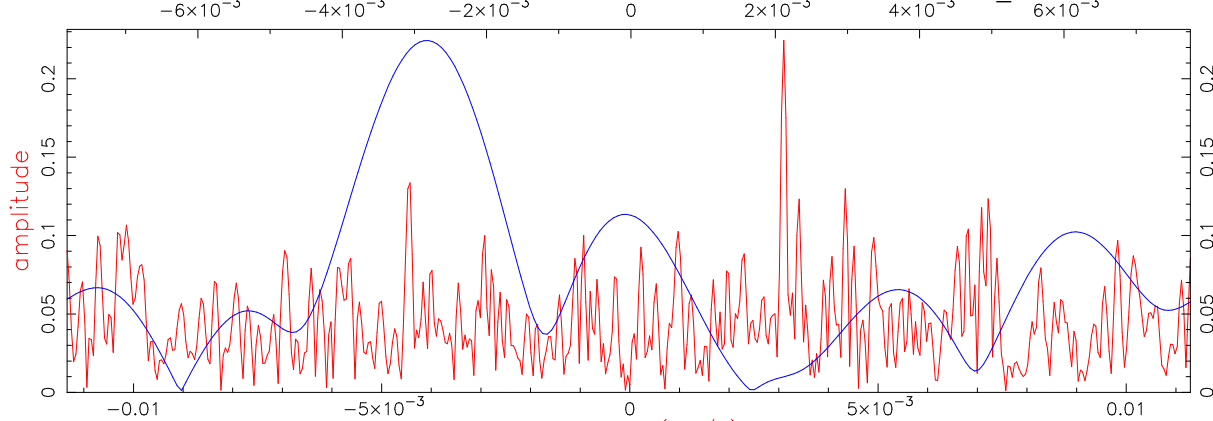
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IY

VLBA\_LA - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

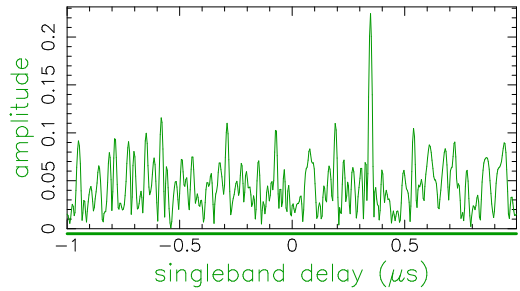


Fringe quality 0

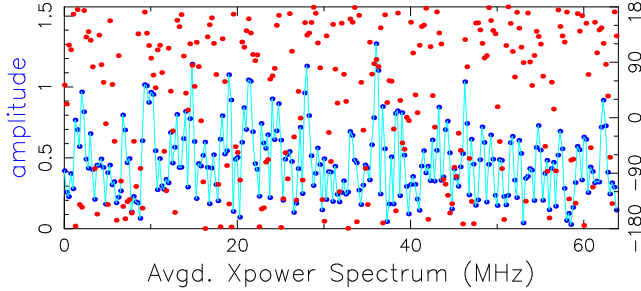
SNR 6.1  
Int time 99.772  
Amp 0.232  
Phase -138.3  
PFD 5.6e-02  
Delays (us)  
SBD 0.347620  
MBD -0.002832  
Fringe rate (Hz)  
0.266345  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 170449.97  
Stop 170629.81  
FRT 170540.00  
Corr/FF/build  
2025:007:183750  
2025:041:113137  
2024:113:095956  
RA & Dec (J2000)  
01h36m58.594803s  
+47°51'29.10073"

delay rate (ns/s)

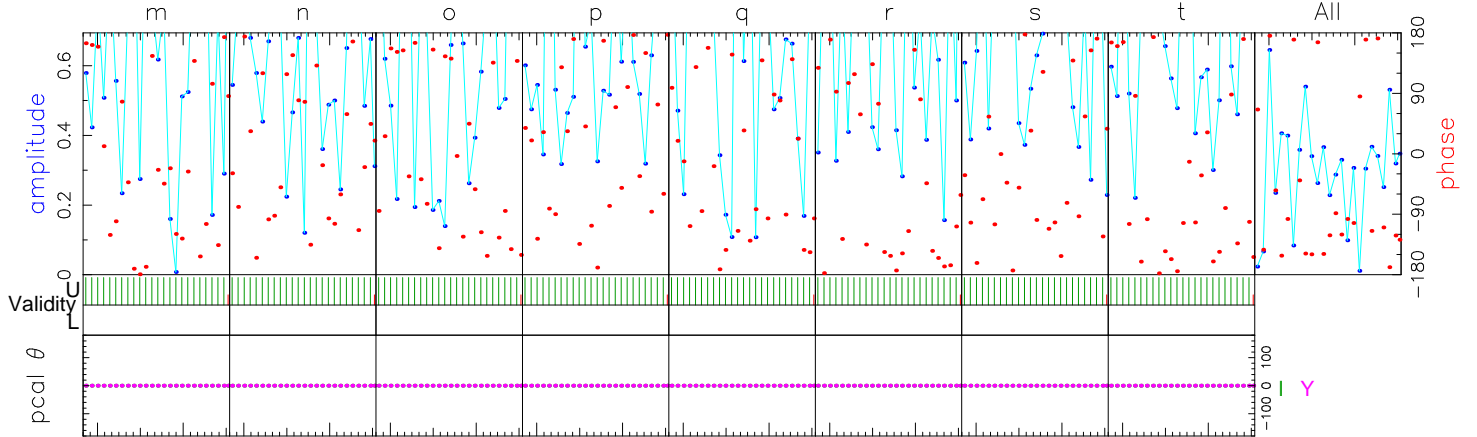


singleband delay ( $\mu$ s)



Avgd. Xpower Spectrum (MHz)

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
	-151.5	-123.7	-127.7	-94.2	-141.6	-169.4	-107.2	-141.3	Phase	-138.3
	0.3	0.1	0.2	0.1	0.2	0.4	0.3	0.4	Ampl.	0.2
	358.8	237.8	66.6	12.2	193.9	346.5	181.4	288.0	Sbd box	346.0
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	6.75670937164E+03	Apriori delay (usec)	6.75636845405E+03	Resid mbdelay (usec)	-2.83242E-03	+/-	1.8E-04
Sband delay (usec)	6.75671607455E+03	Apriori clock (usec)	0.220	Resid sbdelay (usec)	3.47620E-01	+/-	1.4E-03
Phase delay (usec)	6.75636844960E+03	Apriori clockrate (us/s)	9.7966795E-07	Resid phdelay (usec)	-4.45947E-06	+/-	6.0E-07
Delay rate (us/s)	1.15202811825E+00	Apriori rate (us/s)	1.15202502626E+00	Resid rate (us/s)	3.09200E-06	+/-	1.0E-08
Total phase (deg)	89.3	Apriori accel (us/s/s)	-4.08378173762E-05	Resid phase (deg)	-138.3	+/-	18.7

ph/seg (deg)	58.6	RMS	46.7	Theor.	2.220	Amplitude	0.232 +/- 0.038	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	76.0	Search (512X32)	0.000	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	27.1	Inc. seg. avg.	0.230	Inc. frq. avg.	0.225	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	41.4	Inc. frq. avg.	0.225	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

I: az 50.4 el 66.3 pa -111.1 Y: az 305.2 el 37.5 pa 68.1 u,v (fr/asec) -9885.677 -3905.019 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IY...3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IY.W.290.3MP1AB

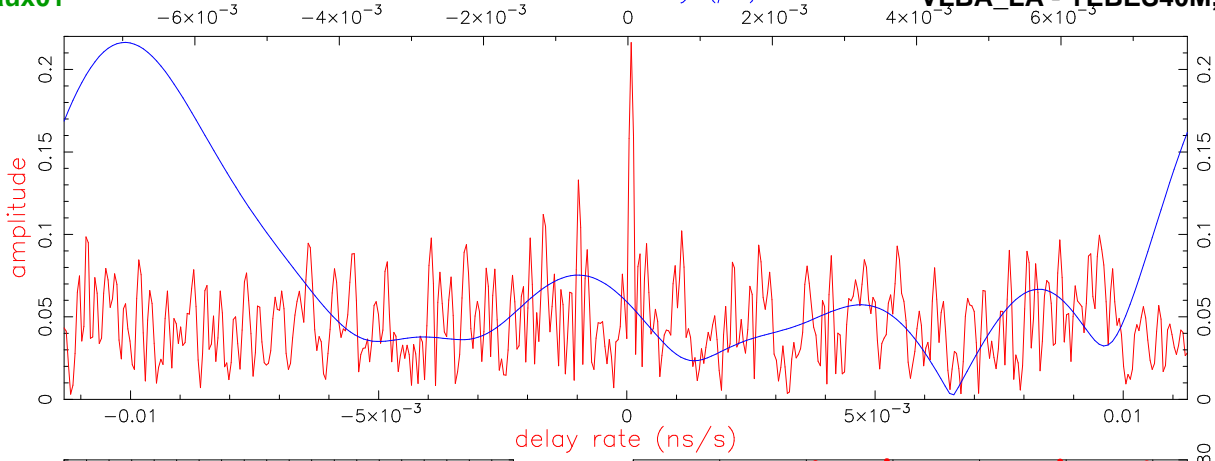
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IY

VLBA\_LA - YEBES40M, fgroup W, pol RL

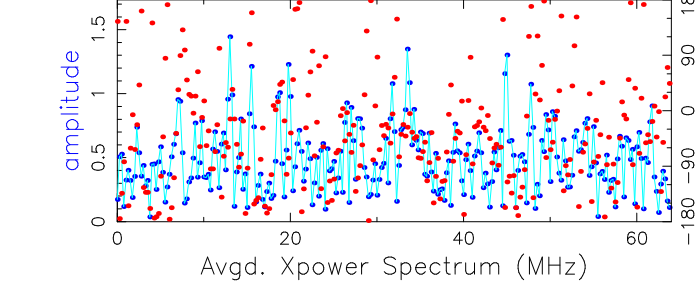
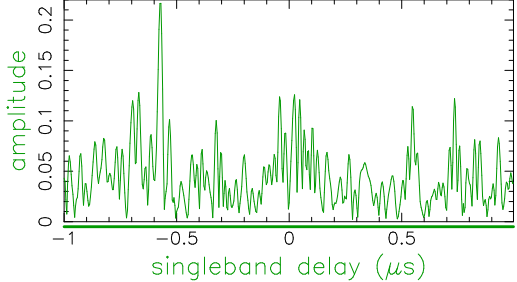
multiband delay ( $\mu$ s)



Fringe quality 0

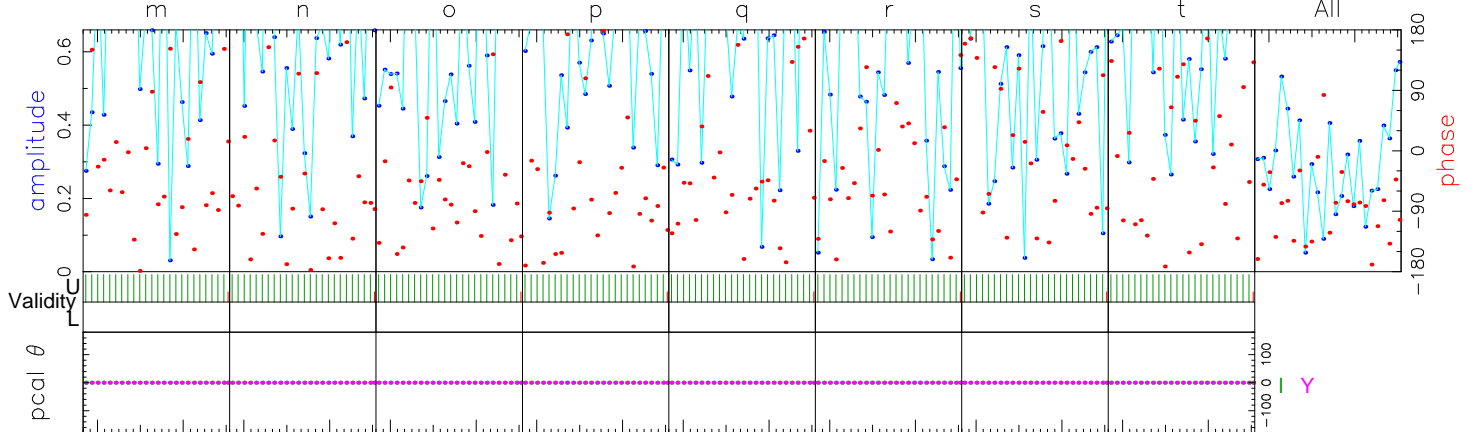
SNR 6.0  
Int time 99.772  
Amp 0.220  
Phase -85.8  
PFD 1.1e-01  
Delays (us)  
SBD -0.572223  
MBD -0.006996  
Fringe rate (Hz) 0.007556  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 170449.97  
Stop 170629.81  
FRT 170540.00  
Corr/FF/build 2025:007:183750  
2025:041:113138  
2024:113:095956  
RA & Dec (J2000) 01h36m58.594803s +47°51'29.100073"



Amplitude vs. phase (deg) vs. Avgd. Xpower Spectrum (MHz)

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
	-71.1	-119.7	-86.3	-86.8	-82.4	-30.1	-128.6	-128.4	Phase	-85.8
	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.1	Ampl.	0.2
	445.2	205.9	110.3	108.0	84.8	69.0	184.8	262.4	Sbd box	110.5
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.75579895815E+03	Apriori delay (usec)	6.75636845405E+03	Resid mbdelay (usec)	-6.99590E-03	+/-	1.8E-04
Sband delay (usec)	6.75579623080E+03	Apriori clock (usec)	1.0223952E+02	Resid sbdelay (usec)	-5.72223E-01	+/-	1.4E-03
Phase delay (usec)	6.75636845129E+03	Apriori clockrate (us/s)	9.7966795E-07	Resid phdelay (usec)	-2.76583E-06	+/-	6.1E-07
Delay rate (us/s)	1.15202511397E+00	Apriori rate (us/s)	1.15202502626E+00	Resid rate (us/s)	8.77138E-08	+/-	1.1E-08
Total phase (deg)	141.8	Apriori accel (us/s/s)	-4.08378173762E-05	Resid phase (deg)	-85.8	+/-	19.1

ph/seg (deg)	55.2	Theor.	47.7	Amplitude	0.220 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	68.4	Search (512X32)	0.215	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	36.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	42.9	Inc. seg. avg.	0.219	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
		Inc. frq. avg.	0.221	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

I: az 50.4 el 66.3 pa -111.1 Y: az 305.2 el 37.5 pa 68.1 u, v (fr/asec) -9885.677 -3905.019 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IY..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IY.W.292.3MP1AB

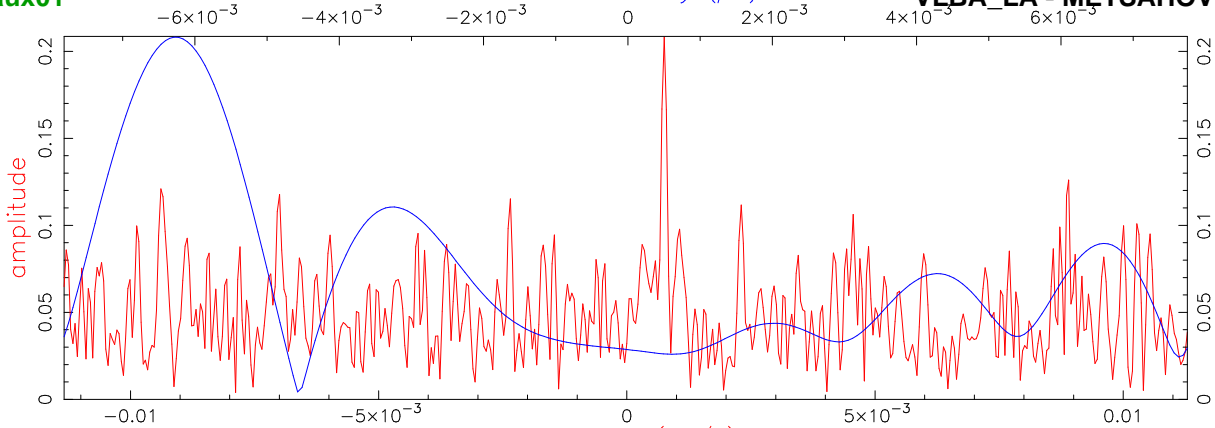
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IZ

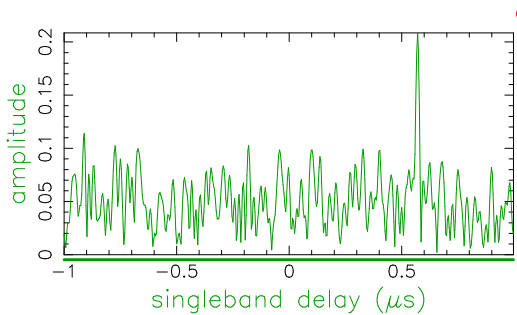
VLBA\_LA - METSAHOV, fgroup W, pol LL

multiband delay ( $\mu$ s)

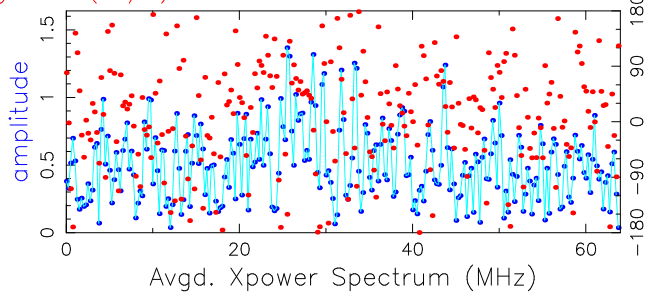


Fringe quality 0

SNR 5.7  
 Int time 98.746  
 Amp 0.209  
 Phase -169.2  
 PFD 6.1e-01  
 Delays (us)  
 SBD 0.570439  
 MBD -0.006266  
 Fringe rate (Hz)  
 0.065011  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

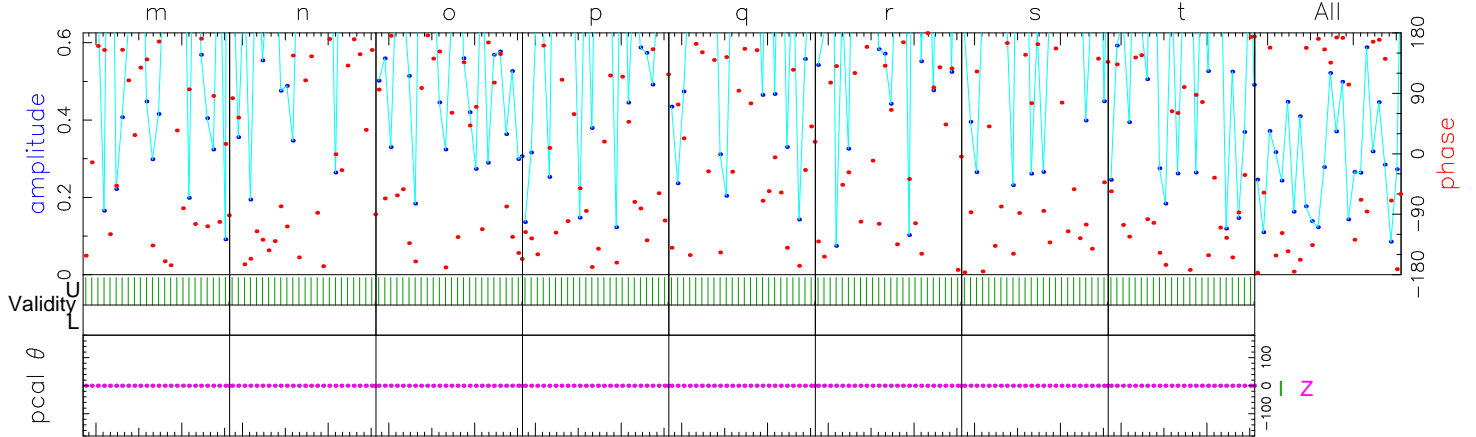


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113216  
 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
	-146.8	176.4	-177.4	-131.7	122.6	171.1	-154.4	-162.0	Phase	-169.2
	0.2	0.4	0.2	0.2	0.1	0.3	0.3	0.2	Ampl.	0.2
	29.8	403.8	100.2	75.2	110.3	198.9	84.7	271.5	Sbd box	403.0
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) 7.47721680630E+03 Apriori delay (usec) 7.47664494688E+03 Resid mbdelay (usec) -6.26558E-03 +/- 1.9E-04  
 Sband delay (usec) 7.47721538563E+03 Apriori clock (usec) -8.4236755E+00 Resid sbdelay (usec) 5.70439E-01 +/- 1.5E-03  
 Phase delay (usec) 7.47664494143E+03 Apriori clockrate (us/s) -8.4386101E-07 Resid phdelay (usec) -5.45534E-06 +/- 6.5E-07  
 Delay rate (us/s) 8.87620920742E-01 Apriori rate (us/s) 8.87620166026E-01 Resid rate (us/s) 7.54716E-07 +/- 1.1E-08  
 Total phase (deg) 91.6 Apriori accel (us/s/s) -6.35668405302E-05 Resid phase (deg) -169.2 +/- 20.3

RMS Theor. Amplitude 0.209 +/- 0.037 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 52.4 50.6 Search (512X32) 0.207 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 79.6 88.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 35.3 28.6 Inc. seg. avg. 0.214 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 41.5 50.0 Inc. frq. avg. 0.202 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 50.4 el 66.3 pa -111.1 Z: az 307.5 el 34.7 pa 36.0 u, v (fr/asec) -7638.594 -7191.252 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IZ..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IZ.W.352.3MP1AB

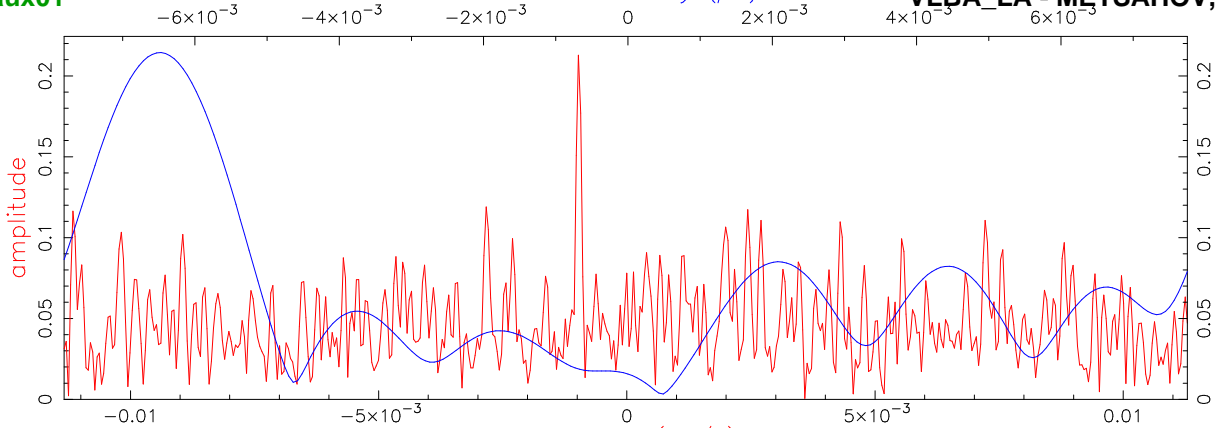
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IZ

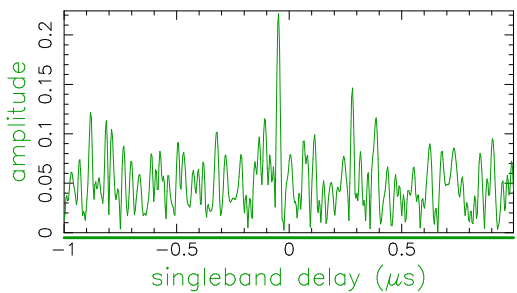
VLBA\_LA - METSAHOV, fgroup W, pol RR

multiband delay ( $\mu$ s)

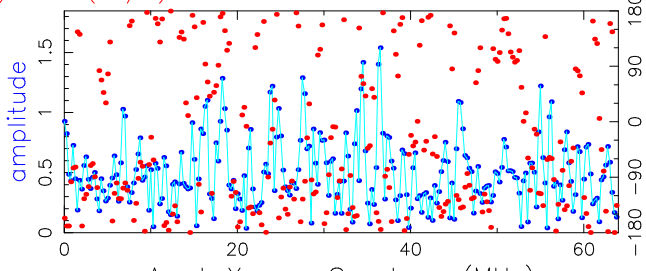


Fringe quality 0

SNR 6.1  
 Int time 98.746  
 Amp 0.224  
 Phase 85.1  
 PFD 7.6e-02  
 Delays (us)  
 SBD -0.048108  
 MBD -0.006354  
 Fringe rate (Hz)  
 -0.085569  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

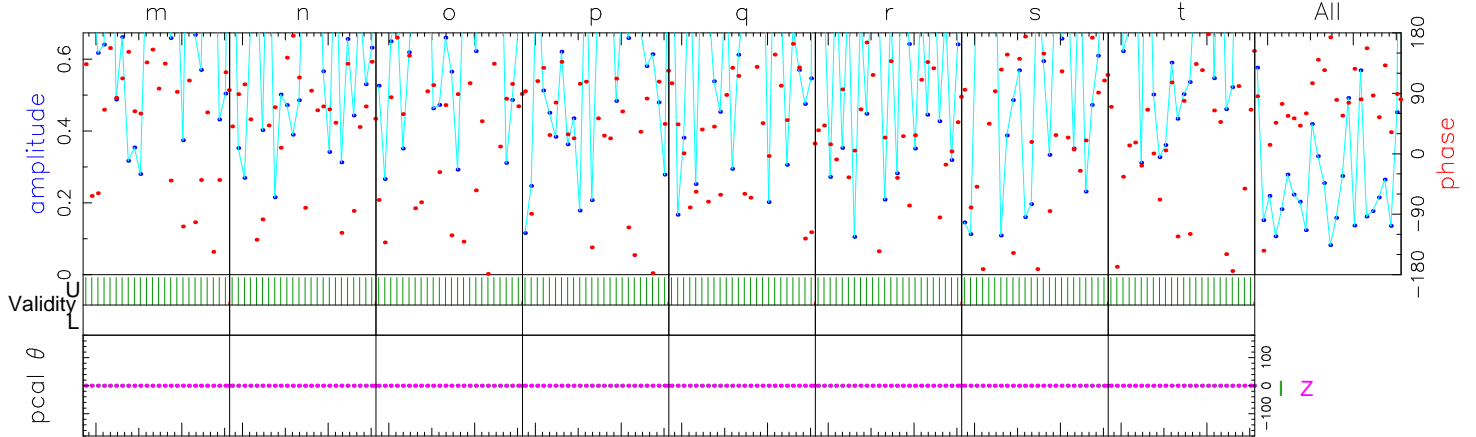


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113221  
 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
	121.9	67.0	87.9	79.6	77.8	52.4	97.0	89.2	Phase	85.1
	0.3	0.3	0.2	0.3	0.1	0.2	0.2	0.2	Ampl.	0.2
	186.7	48.6	269.3	258.6	505.8	285.5	43.2	315.4	Sbd box	244.7
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	7.47659171776E+03	Apriori delay (usec)	7.47664494688E+03	Resid mbdelay (usec)	-6.35412E-03	+/-	1.8E-04
Sband delay (usec)	7.47659683938E+03	Apriori clock (usec)	-8.4236755E+00	Resid sbdelay (usec)	-4.81075E-02	+/-	1.4E-03
Phase delay (usec)	7.47664494963E+03	Apriori clockrate (us/s)	-8.4386101E-07	Resid phdelay (usec)	2.74365E-06	+/-	6.1E-07
Delay rate (us/s)	8.87619172659E-01	Apriori rate (us/s)	8.87620166026E-01	Resid rate (us/s)	-9.93367E-07	+/-	1.1E-08
Total phase (deg)	345.9	Apriori accel (us/s/s)	-6.35668405302E-05	Resid phase (deg)	85.1	+/-	18.9

ph/seg (deg)	47.6	Theor.	47.1	Search (512X32)	0.209	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.4		82.3	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	22.4		26.7	Inc. seg. avg.	0.197	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	29.8		46.5	Inc. frq. avg.	0.207	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

I: az 50.4 el 66.3 pa -111.1      Z: az 307.5 el 34.7 pa 36.0      u,v (fr/asec) -7638.594 -7191.252      simultaneous interpolator

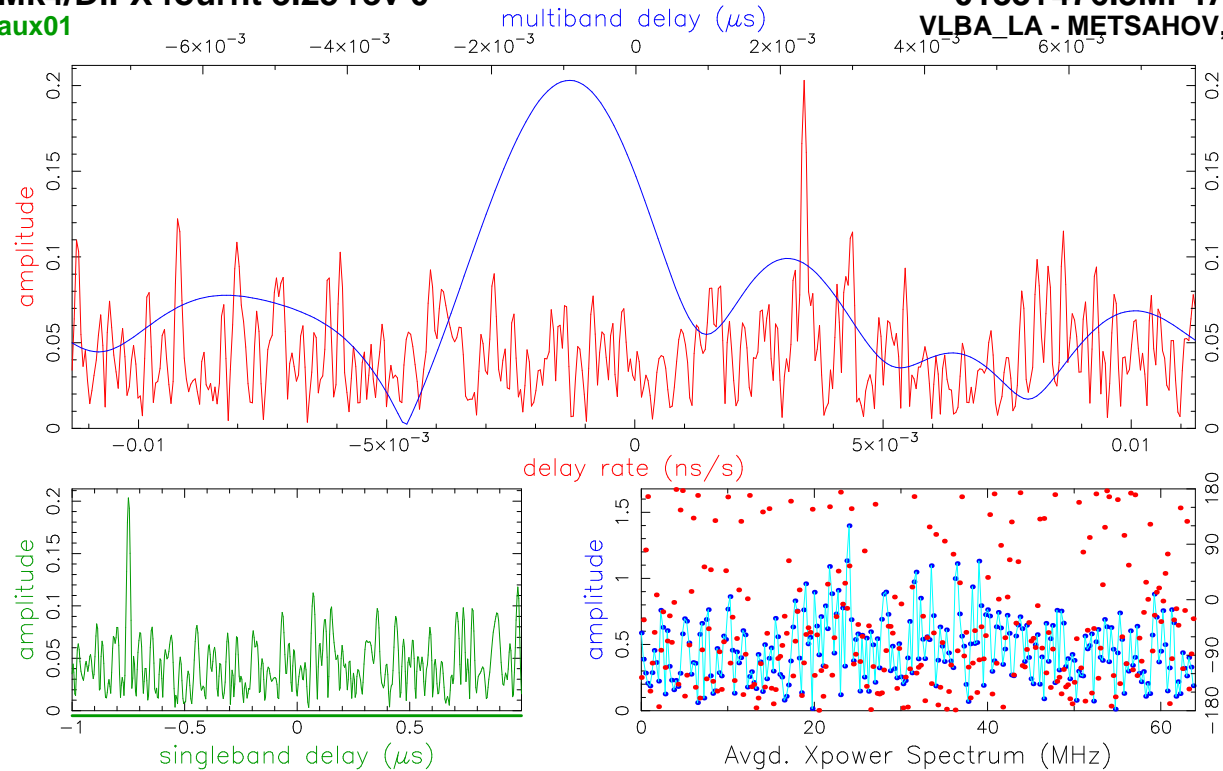
Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/IZ..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/IZ.W.358.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

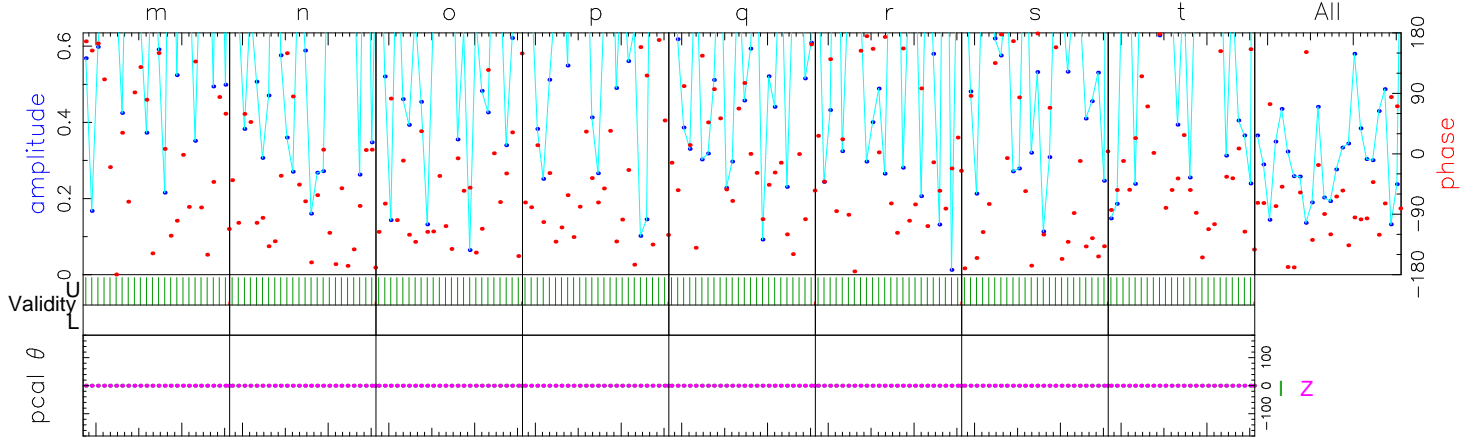
0133+476.3MP1AB, No0916, IZ

VLBA\_LA - METSAHOV, fgroup W, pol LR



Fringe quality 0  
 SNR 5.5  
 Int time 98.746  
 Amp 0.212  
 Phase -85.0  
 PFD 8.4e-01  
 Delays (us)  
 SBD -0.749135  
 MBD -0.000930  
 Fringe rate (Hz) 0.295098  
 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  
 2025:041:113223  
 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
	-149.5	-78.3	-91.8	-82.1	-10.9	-90.7	-136.5	-64.5	Phase	-85.0
	0.1	0.3	0.3	0.3	0.2	0.3	0.2	0.2	Ampl.	0.2
	392.9	370.6	184.3	92.4	28.5	276.5	473.6	408.4	Sbd box	65.2
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) 7.47589401640E+03 Apriori delay (usec) 7.47664494688E+03 Resid mbdelay (usec) -9.30478E-04 +/- 2.0E-04  
 Sband delay (usec) 7.47589581163E+03 Apriori clock (usec) -8.4236755E+00 Resid sbdelay (usec) -7.49135E-01 +/- 1.6E-03  
 Phase delay (usec) 7.47664494414E+03 Apriori clockrate (us/s) -8.4386101E-07 Resid phdelay (usec) -2.73961E-06 +/- 6.7E-07  
 Delay rate (us/s) 8.87623591823E-01 Apriori rate (us/s) 8.87620166026E-01 Resid rate (us/s) 3.42580E-06 +/- 1.2E-08  
 Total phase (deg) 175.8 Apriori accel (us/s/s) -6.35668405302E-05 Resid phase (deg) -85.0 +/- 20.7

RMS Theor. Amplitude 0.212 +/- 0.038 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 72.1 51.7 Search (512X32) 0.197 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 78.7 90.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 46.3 29.3 Inc. seg. avg. 0.230 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 42.4 51.1 Inc. frq. avg. 0.220 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 50.4 el 66.3 pa -111.1 Z: az 307.5 el 34.7 pa 36.0 u, v (fr/asec) -7638.594 -7191.252 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IZ..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IZ.W.361.3MP1AB

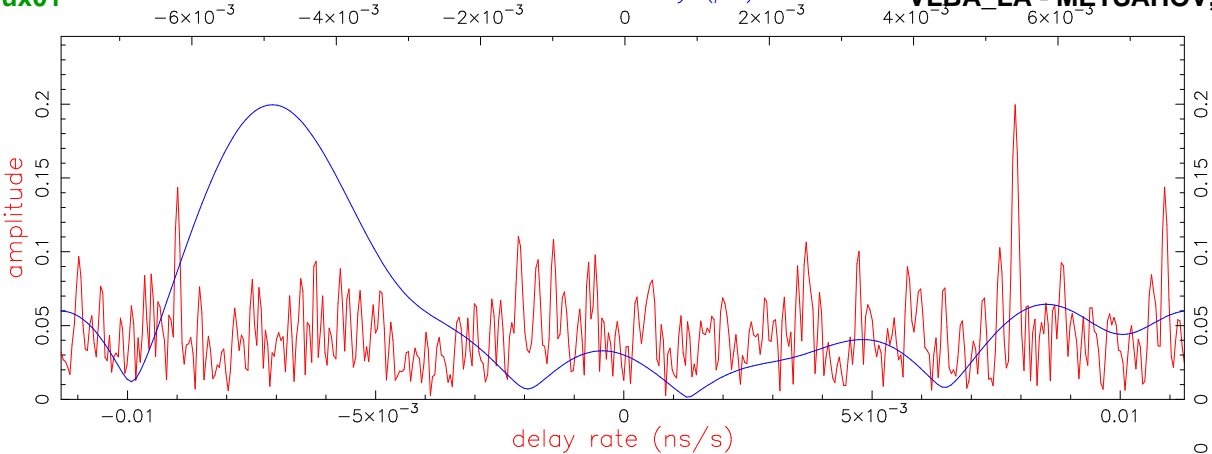
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, IZ

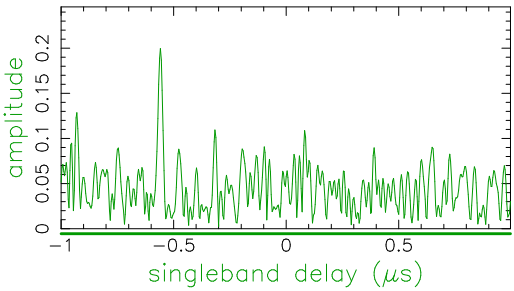
VLBA\_LA - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu$ s)

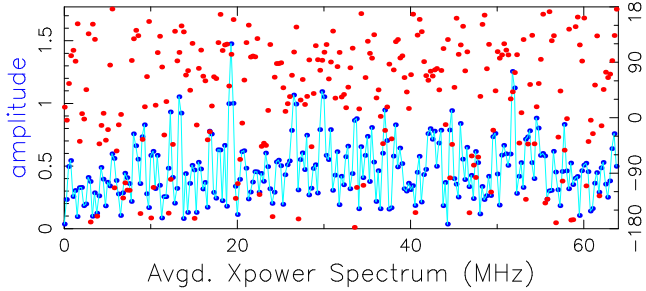


Fringe quality 0

SNR 5.4  
 Int time 98.746  
 Amp 0.246  
 Phase -175.6  
 PFD 9.7e-01  
 Delays (us)  
 SBD -0.558738  
 MBD -0.004889  
 Fringe rate (Hz)  
 0.680693  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

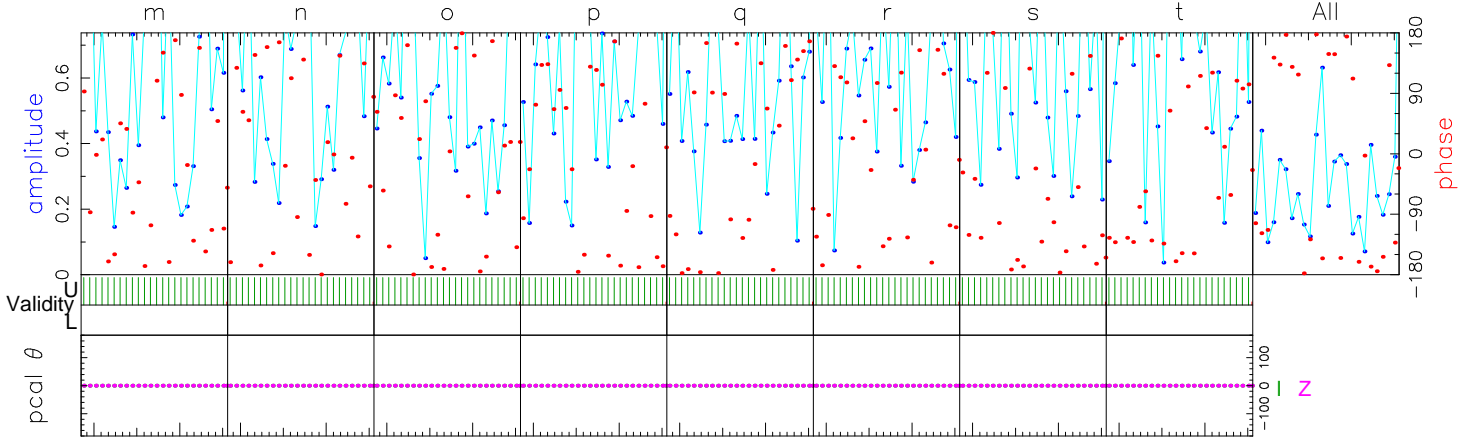


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113226  
 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
	-143.7	176.0	179.5	163.0	168.1	-170.7	-155.4	-177.9	Phase	-175.6
	0.2	0.1	0.2	0.3	0.3	0.2	0.4	0.3	Ampl.	0.2
	316.4	48.5	11.2	28.7	69.7	209.4	113.6	278.3	Sbd box	114.0
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
I	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
I	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	7.47609318321E+03	Apriori delay (usec)	7.47664494688E+03	Resid mbdelay (usec)	-4.88867E-03	+/-	2.0E-04
Sband delay (usec)	7.47608620863E+03	Apriori clock (usec)	-8.4236755E+00	Resid sbdelay (usec)	-5.58738E-01	+/-	1.6E-03
Phase delay (usec)	7.47664494122E+03	Apriori clockrate (us/s)	-8.4386101E-07	Resid phdelay (usec)	-5.66374E-06	+/-	6.8E-07
Delay rate (us/s)	8.87628068198E-01	Apriori rate (us/s)	8.87620166026E-01	Resid rate (us/s)	7.90217E-06	+/-	1.2E-08
Total phase (deg)	85.2	Apriori accel (us/s/s)	-6.35668405302E-05	Resid phase (deg)	-175.6	+/-	21.1

ph/seg (deg)	55.2	Theor.	52.8	Amplitude	0.246 +/- 0.045	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	78.4	Search (512X32)	0.191	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	19.5	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	36.3	Inc. seg. avg.	0.232	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.227	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

I: az 50.4 el 66.3 pa -111.1 Z: az 307.5 el 34.7 pa 36.0 u,v (fr/asec) -7638.594 -7191.252 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/IZ..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/IZ.W.365.3MP1AB