

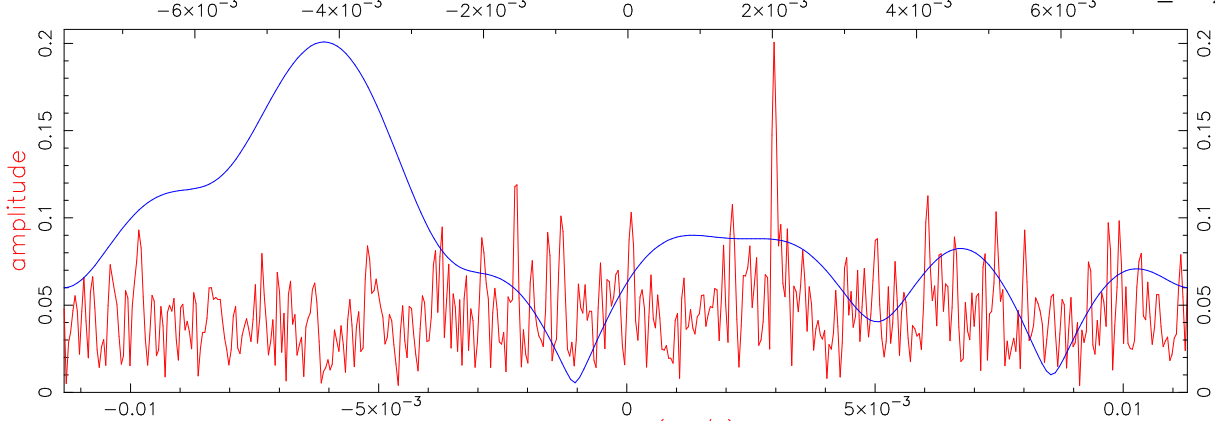
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Bo

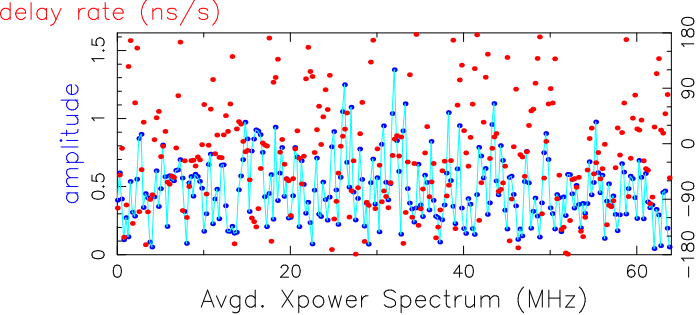
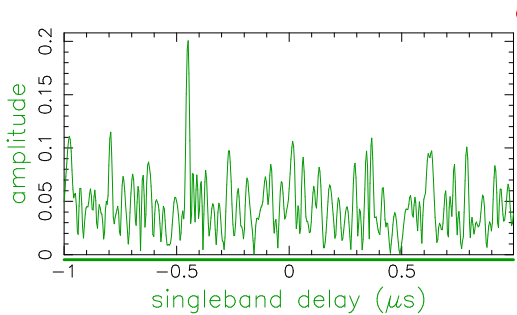
EFLSBERG - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)



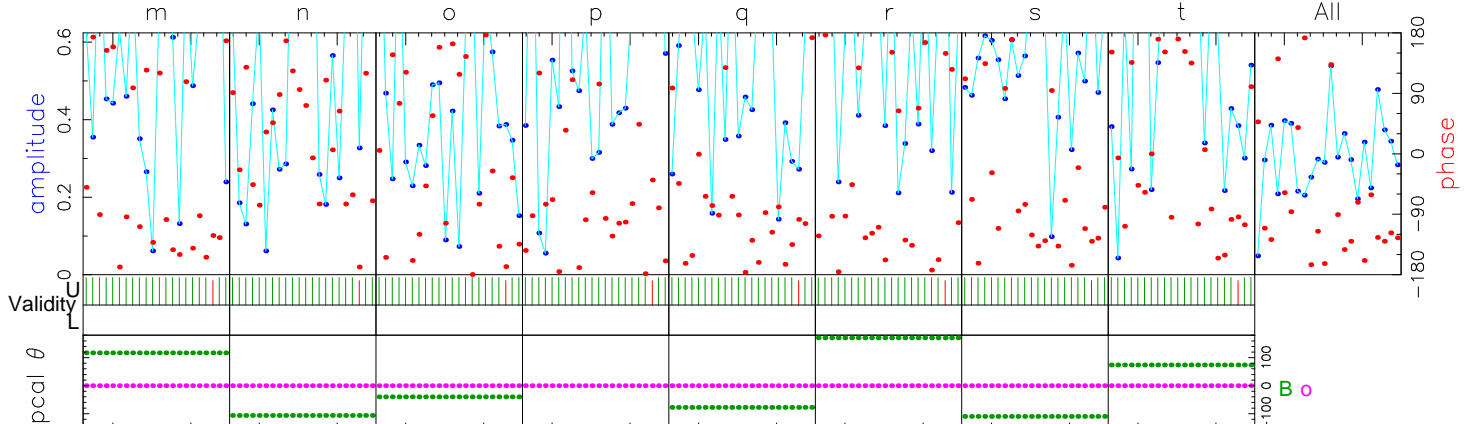
Fringe quality 0

SNR 5.9  
 Int time 112.059  
 Amp 0.208  
 Phase -128.3  
 PFD 2.7e-01  
 Delays (us)  
 SBD -0.450287  
 MBD -0.004259  
 Fringe rate (Hz)  
 0.257154  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



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

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



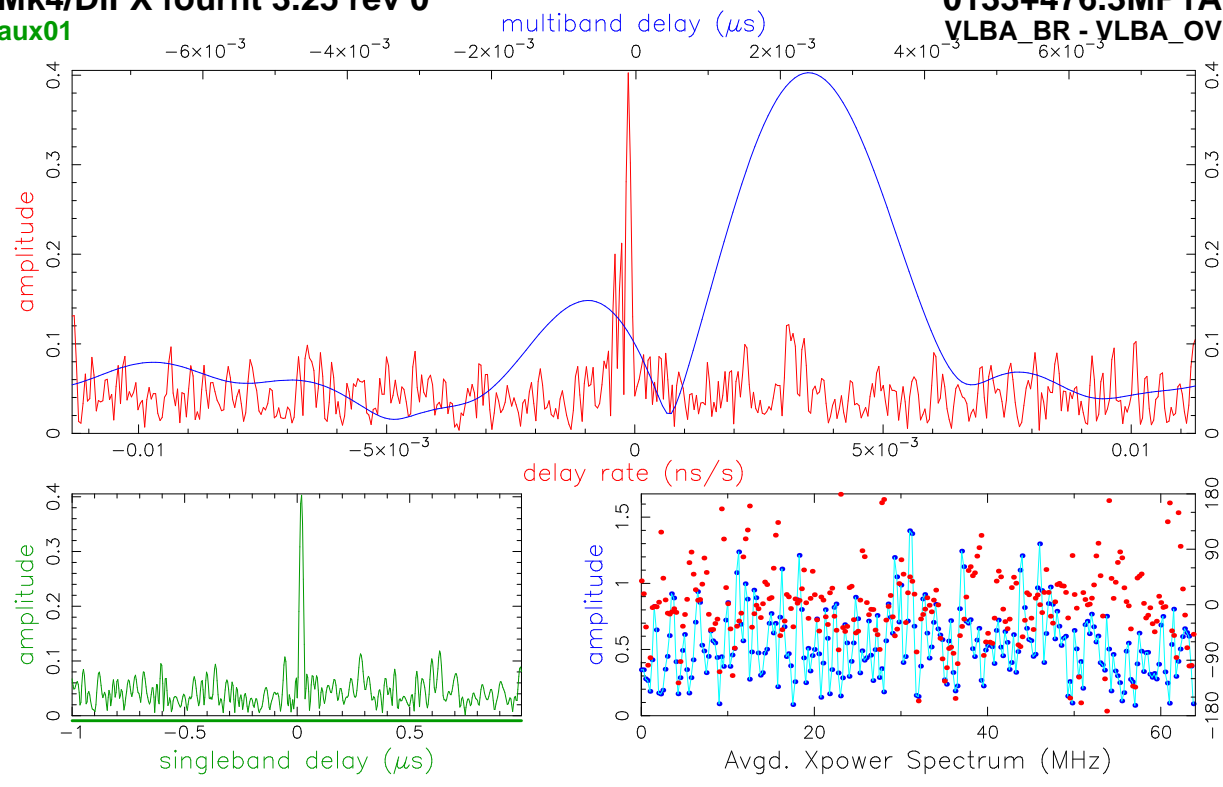
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-145.1	32.0	164.0	-92.3	-115.7	-149.1	-118.4	-132.8	Phase	-128.3
	0.3	0.2	0.1	0.3	0.3	0.4	0.3	0.3	Ampl.	0.2
	207.9	208.6	42.3	351.7	285.5	142.3	141.6	458.2	Sbd box	141.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:o	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	-5.60066380105E+03		Apriori delay (usec)		-5.60020641722E+03		Resid mbdelay (usec)		-4.25883E-03	+/- 1.9E-04
Sband delay (usec)	-5.60065670472E+03		Apriori clock (usec)		-6.0466892E+01		Resid sbdelay (usec)		-4.50287E-01	+/- 1.5E-03
Phase delay (usec)	-5.60020642135E+03		Apriori clockrate (us/s)		-6.7081106E-07		Resid phdelay (usec)		-4.13869E-06	+/- 6.3E-07
Delay rate (us/s)	-1.18288021538E+00		Apriori rate (us/s)		-1.18288320068E+00		Resid rate (us/s)		2.98530E-06	+/- 9.7E-09
Total phase (deg)			Apriori accel (us/s/s)		4.34489848720E-05		Resid phase (deg)		-128.3	+/- 19.6
	RMS	Theor.	Amplitude		0.208 +/- 0.036		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5	
ph/seg (deg)	67.8	45.9	Search (512X32)		0.188		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us) -1.000 1.000	
amp/seg (%)	72.3	80.2	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	
ph/frq (deg)	73.7	27.7	Inc. seg. avg.		0.238		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s) -0.011 0.011	
amp/frq (%)	50.4	48.3	Inc. frq. avg.		0.240		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	
B: az 302.9 el 37.3 pa 52.8	o: az 56.8 el 59.3 pa -95.8		u, v (fr/asec) 10150.828 4735.617						ion window (TEC) 0.00 0.00	
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/Bo..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/Bo.W.100.3MP1AB						simultaneous interpolator	

Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bo

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

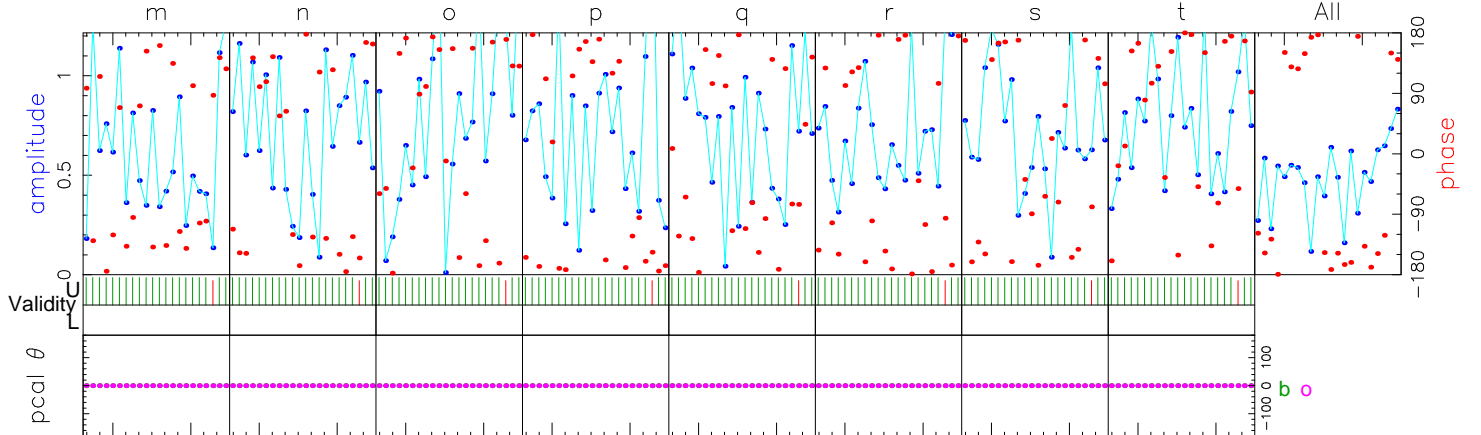


Fringe quality 9

SNR 11.7  
 Int time 112.043  
 Amp 0.405  
 Phase -176.7  
 PFD 1.1e-23  
 Delays (us)  
 SBD 0.018432  
 MBD 0.002372  
 Fringe rate (Hz)  
 -0.012537  
 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  
 2025:041:112946  
 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		
	-179.6	-179.5	169.7	-179.2	-129.9	-170.0	-170.4	159.9	Phase	-176.7		
	0.3	0.4	0.5	0.5	0.3	0.5	0.4	0.3	Ampl.	0.4		
	14.4	262.2	262.0	261.9	57.3	261.7	260.8	393.7	Sbd box	261.7		
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			
o	0	0	0	0	0	0	0	0	PC freqs			
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
o	1000	1000	1000	1000	1000	1000	1000	1000				
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Chan ids			
									Tracks			
Group delay (usec) (SBD)	6.10475725168E+02		Apriori delay (usec)		6.10457728138E+02		Resid mbdelay (usec)		2.37203E-03	+/- 9.3E-05		
Sband delay (usec)	6.10476160388E+02		Apriori clock (usec)		-2.0427818E+01		Resid sbdelay (usec)		1.84323E-02	+/- 7.3E-04		
Phase delay (usec)	6.10457722439E+02		Apriori clockrate (us/s)		9.5168881E-08		Resid phdelay (usec)		-5.69914E-06	+/- 3.1E-07		
Delay rate (us/s)	-7.12768250424E-02		Apriori rate (us/s)		-7.12766794962E-02		Resid rate (us/s)		-1.45546E-07	+/- 4.8E-09		
Total phase (deg)	75.9		Apriori accel (us/s/s)		8.34917747314E-06		Resid phase (deg)		-176.7	+/- 9.8		
	RMS	Theor.	Amplitude	0.405 +/- 0.035		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	34.2	22.9	Search (512X32)	0.392		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	48.0	40.0	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	22.5	13.8	Inc. seg. avg.	0.451		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	24.4	24.1	Inc. frq. avg.	0.408		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	o: az 56.8 el 59.3 pa -95.8		u, v (fr/asec) 614.877 1553.446						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/bo..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/bo.W.59.3MP1AB									

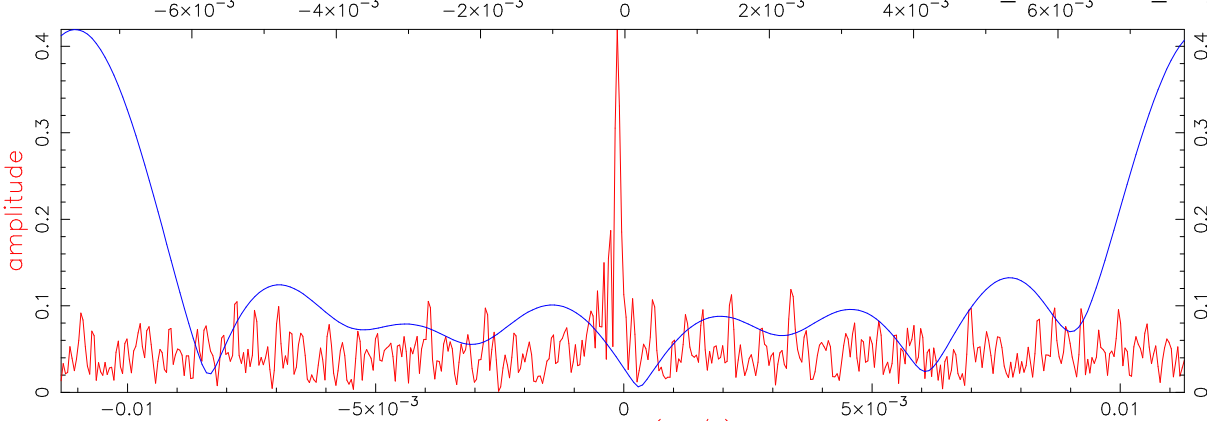
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bo

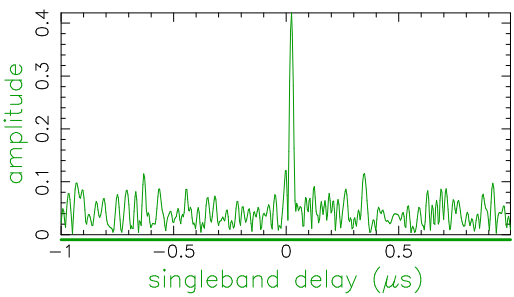
VLBA\_BR - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

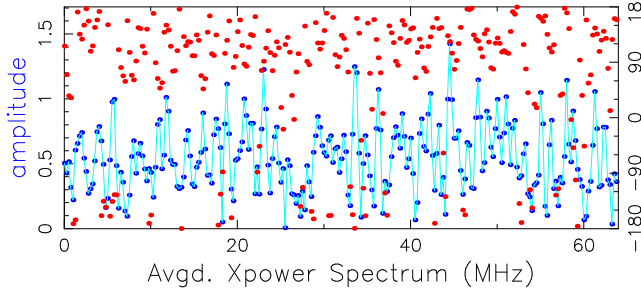


Fringe quality 9

SNR 12.1  
 Int time 112.043  
 Amp 0.419  
 Phase 123.8  
 PFD 8.1e-26  
 Delays (us)  
 SBD 0.023169  
 MBD -0.007618  
 Fringe rate (Hz)  
 -0.012193  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

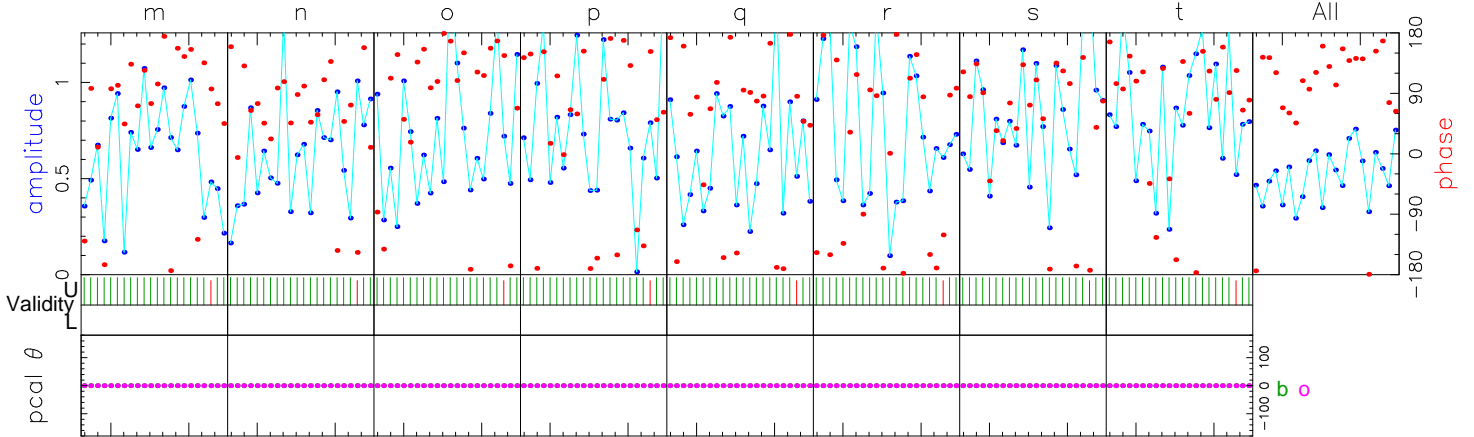


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112947  
 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		
o	0	0	0	0	0	0	0	0		
b:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:0	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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	6.10481360169E+02	Apriori delay (usec)	6.10457728138E+02	Resid mbdelay (usec)	-7.61797E-03	+/-	8.9E-05
Sband delay (usec)	6.10480896638E+02	Apriori clock (usec)	-2.0427818E+01	Resid sbdelay (usec)	2.31685E-02	+/-	7.1E-04
Phase delay (usec)	6.10457732131E+02	Apriori clockrate (us/s)	9.5168881E-08	Resid phdelay (usec)	3.99267E-06	+/-	3.0E-07
Delay rate (us/s)	-7.12768210490E-02	Apriori rate (us/s)	-7.12766794962E-02	Resid rate (us/s)	-1.41553E-07	+/-	4.7E-09
Total phase (deg)	16.5	Apriori accel (us/s/s)	8.34917747314E-06	Resid phase (deg)	123.8	+/-	9.4

ph/seg (deg)	39.5	RMS	22.1	Theor.	Amplitude	0.419 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	40.2	Search (512X32)	0.406	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	20.3	Inc. seg. avg.	0.486	Inc. frq. avg.	0.426	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	18.8	Inc. frq. avg.	0.426	u,v (fr/asec)	614.877 1553.446	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 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 614.877 1553.446 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bo.W.66.3MP1AB

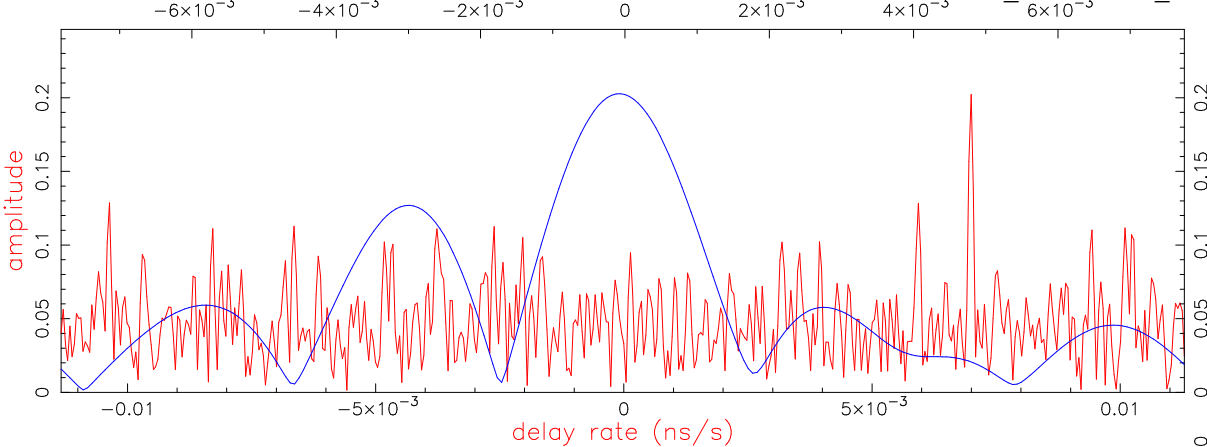
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bo

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

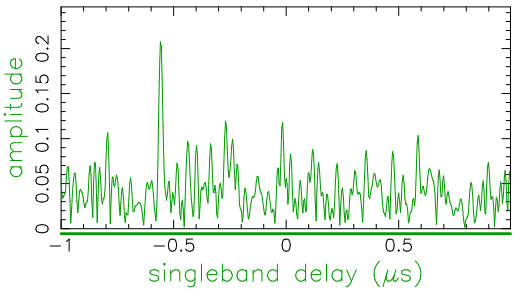
multiband delay ( $\mu$ s)



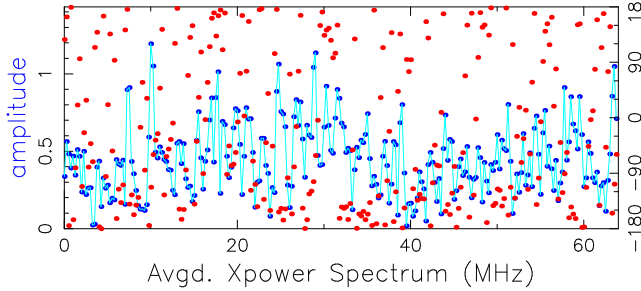
Fringe quality 0

SNR 6.1  
 Int time 112.043  
 Amp 0.246  
 Phase -97.8  
 PFD 8.4e-02  
 Delays (us)  
 SBD -0.557258  
 MBD -0.000158  
 Fringe rate (Hz)  
 0.603600  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

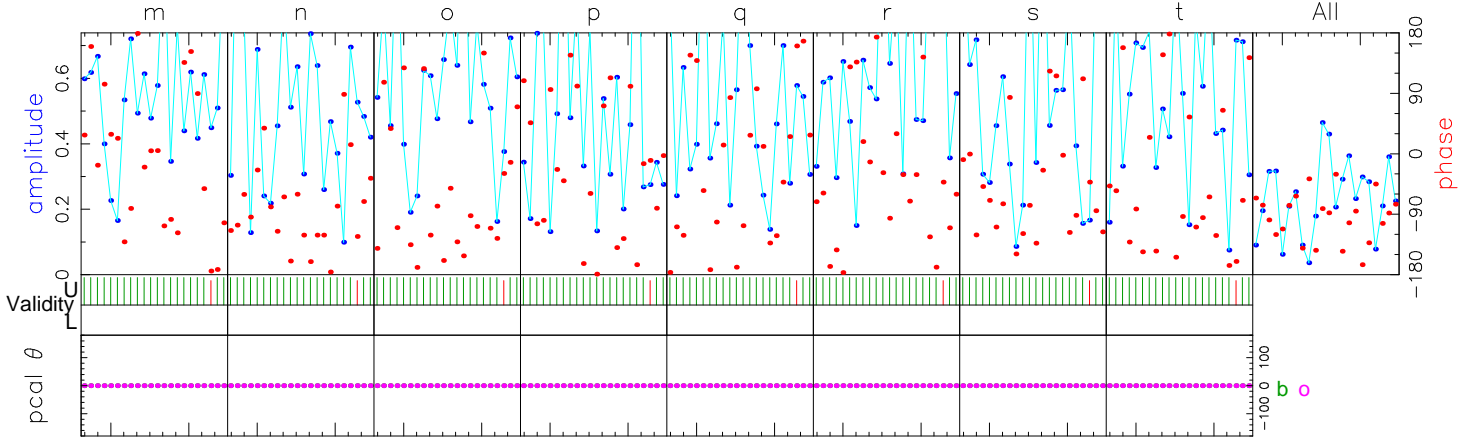
Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112949  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"



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
	-101.1	-89.8	-130.7	-109.8	-115.2	-77.6	-71.5	-112.7	Phase	-97.8
	0.2	0.4	0.3	0.1	0.1	0.3	0.4	0.3	Ampl.	0.2
	9.7	113.9	226.7	253.1	13.1	79.3	291.1	331.1	Sbd box	114.3
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	
o	0	0	0	0	0	0	0	0	PC freqs	
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	6.09895070358E+02	Apriori delay (usec)	6.10457728138E+02	Resid mbdelay (usec)	-1.57780E-04	+/-	1.8E-04
Sband delay (usec)	6.09900469638E+02	Apriori clock (usec)	-2.0427818E+01	Resid sbdelay (usec)	-5.57258E-01	+/-	1.4E-03
Phase delay (usec)	6.10457724983E+02	Apriori clockrate (us/s)	9.5168881E-08	Resid phdelay (usec)	-3.15538E-06	+/-	6.1E-07
Delay rate (us/s)	-7.12696723006E-02	Apriori rate (us/s)	-7.12766794962E-02	Resid rate (us/s)	7.00720E-06	+/-	9.4E-09
Total phase (deg)	154.8	Apriori accel (us/s/s)	8.34917747314E-06	Resid phase (deg)	-97.8	+/-	18.9

ph/seg (deg)	RMS 35.7	Theor. 44.3	Amplitude Search (512X32)	0.246 +/- 0.041	0.199	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	56.3	77.4	Interp.	0.000	0.199	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	22.1	26.7	Inc. seg. avg.	0.214	0.199	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	39.3	46.7	Inc. frq. avg.	0.228	0.199	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 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 614.877 1553.446 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/bo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/bo.W.75.3MP1AB

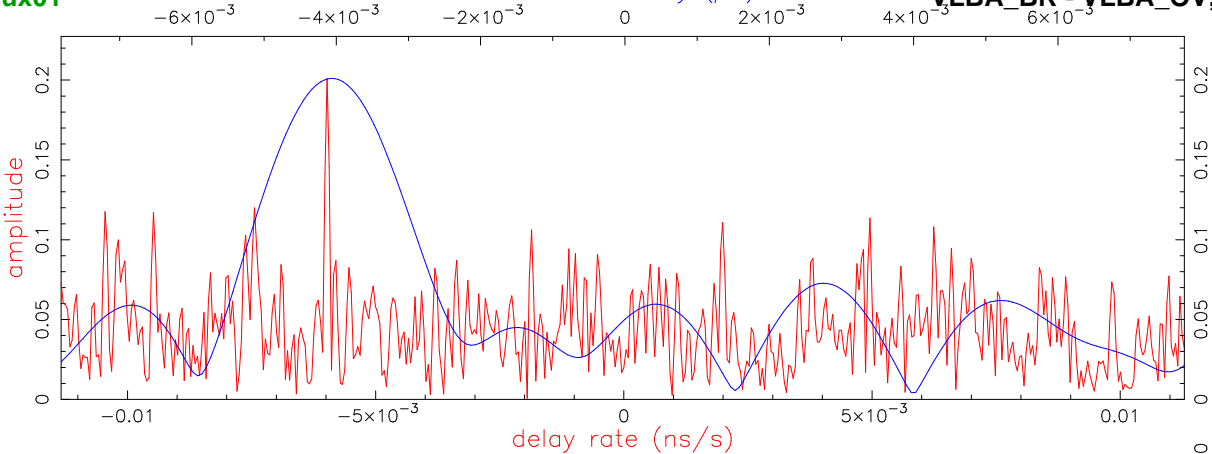
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, bo

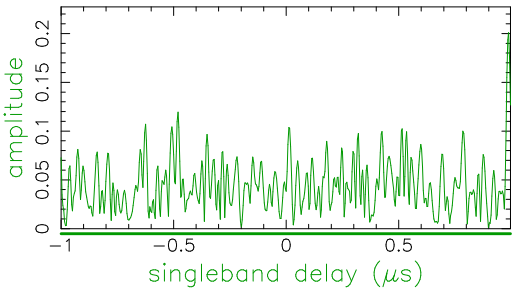
VLBA\_BR - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

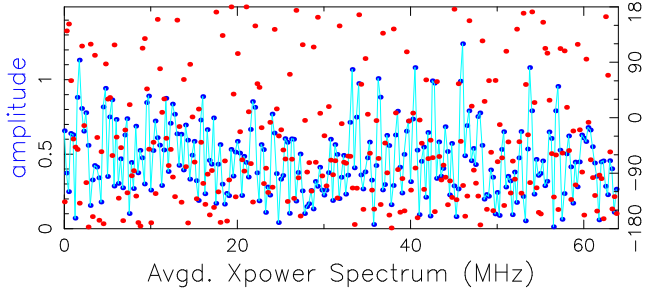


Fringe quality 0

SNR 5.9  
 Int time 112.043  
 Amp 0.227  
 Phase 157.1  
 PFD 2.6e-01  
 Delays (us)  
 SBD 0.987189  
 MBD -0.004083  
 Fringe rate (Hz)  
 -0.513991  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

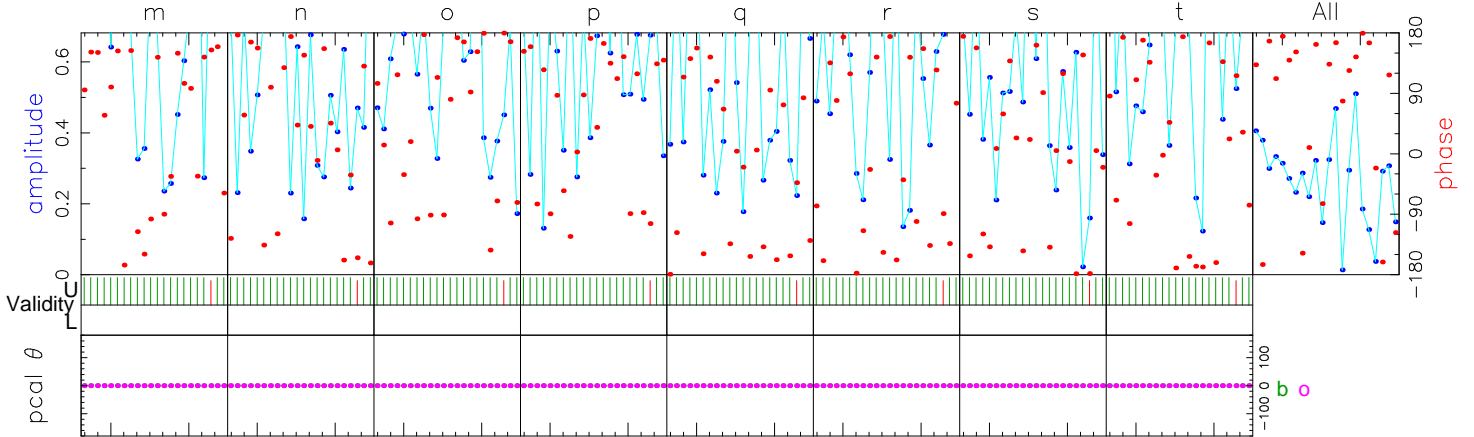


delay rate (ns/s)



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°51'29.100073"

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	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
b:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.11438019749E+02	Apriori delay (usec)	6.10457728138E+02	Resid mbdelay (usec)	-4.08339E-03	+/-	1.9E-04
Sband delay (usec)	6.11444916638E+02	Apriori clock (usec)	-2.0427818E+01	Resid sbdelay (usec)	9.87189E-01	+/-	1.5E-03
Phase delay (usec)	6.10457733203E+02	Apriori clockrate (us/s)	9.5168881E-08	Resid phdelay (usec)	5.06479E-06	+/-	6.3E-07
Delay rate (us/s)	-7.12826464186E-02	Apriori rate (us/s)	-7.12766794962E-02	Resid rate (us/s)	-5.96692E-06	+/-	9.7E-09
Total phase (deg)	49.7	Apriori accel (us/s/s)	8.34917747314E-06	Resid phase (deg)	157.1	+/-	19.6

ph/seg (deg)	66.7	RMS	Theor.	Amplitude	0.227 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	68.5	66.7	45.9	Search (512X32)	0.191	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	20.7	68.5	80.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	32.9	20.7	27.7	Inc. seg. avg.	0.229	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
		32.9	48.3	Inc. frq. avg.	0.210	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      o: az 56.8 el 59.3 pa -95.8      u, v (fr/asec) 614.877 1553.446      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/bo..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/bo.W.83.3MP1AB



Mk4/DiFX fourfit 3.25 rev 0

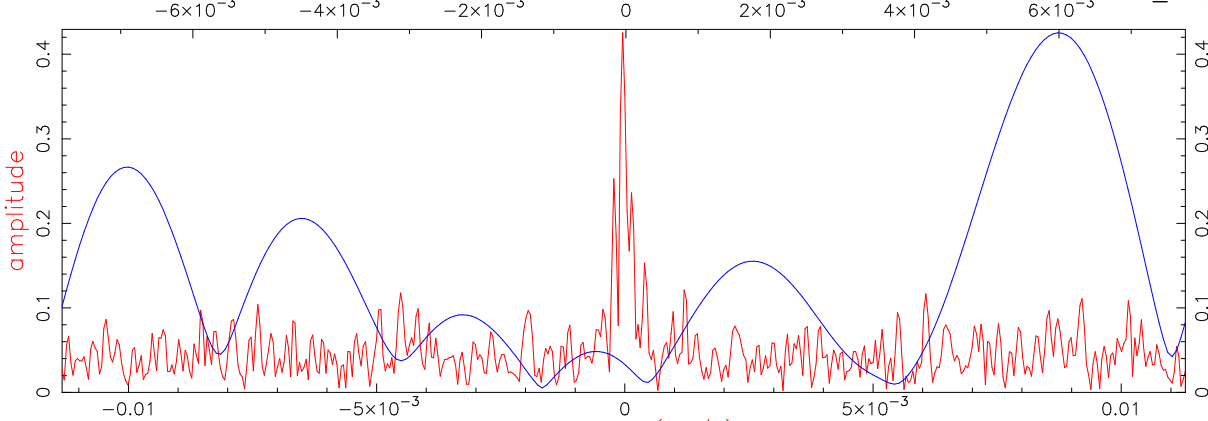
aux01

0133+476.3MP1AB, No0916, Bo

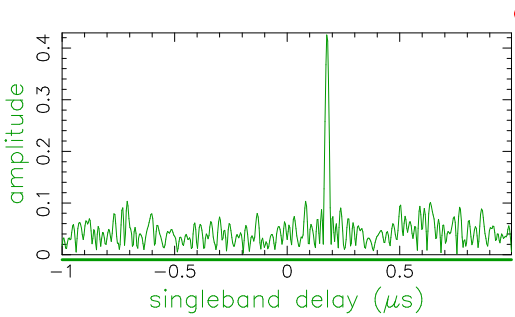
EFLSBERG - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

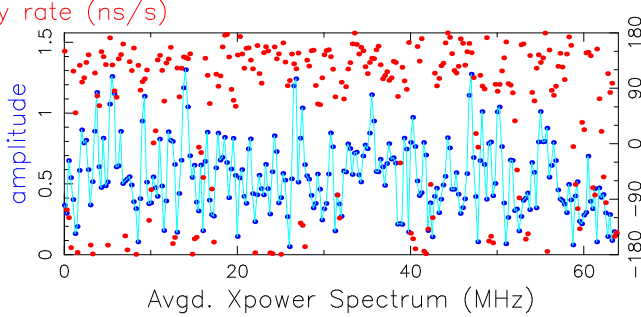
Fringe quality 9



SNR 12.4  
 Int time 112.059  
 Amp 0.429  
 Phase -53.0  
 PFD 2.3e-27  
 Delays (us)  
 SBD 0.177098  
 MBD 0.006007  
 Fringe rate (Hz)  
 -0.003762  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

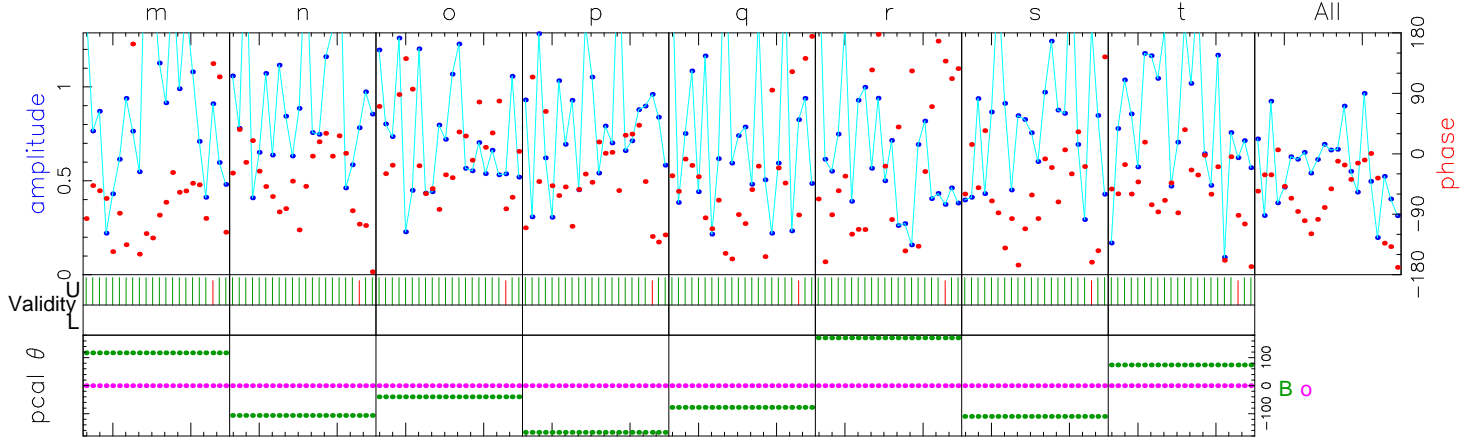


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112953  
 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
	-89.6	-31.7	3.4	-43.2	-71.2	-99.8	-66.7	-42.3	Phase	-53.0
	0.6	0.6	0.4	0.5	0.4	0.3	0.4	0.6	Ampl.	0.5
	302.0	302.2	303.1	302.3	303.6	303.7	303.7	302.5	Sbd box	302.3
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	
o	0	0	0	0	0	0	0	0	PC freqs	
B:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-5.60002853539E+03		Apriori delay (usec)		-5.60020641722E+03		Resid mbdelay (usec)		6.00682E-03	+/- 8.7E-05
Sband delay (usec)	-5.60002931947E+03		Apriori clock (usec)		-6.0466892E+01		Resid sbdelay (usec)		1.77098E-01	+/- 6.9E-04
Phase delay (usec)	-5.60020641893E+03		Apriori clockrate (us/s)		-6.7081106E-07		Resid phdelay (usec)		-1.71011E-06	+/- 3.0E-07
Delay rate (us/s)	-1.18288324435E+00		Apriori rate (us/s)		-1.18288320068E+00		Resid rate (us/s)		-4.36698E-08	+/- 4.6E-09
Total phase (deg)			Apriori accel (us/s/s)		4.34489848720E-05		Resid phase (deg)		-53.0	+/- 9.2

ph/seg (deg) 48.4 21.6 Search (512X32) 0.421 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 56.8 37.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 36.3 13.0 Inc. seg. avg. 0.538 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 30.3 22.8 Inc. frq. avg. 0.474 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 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 10150.828 4735.617 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Bo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Bo.W.90.3MP1AB

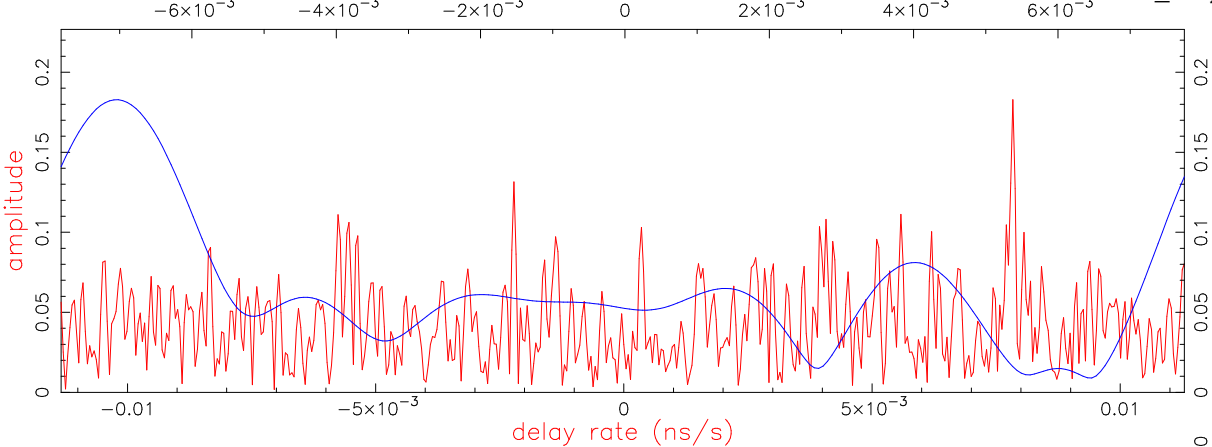
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Bo

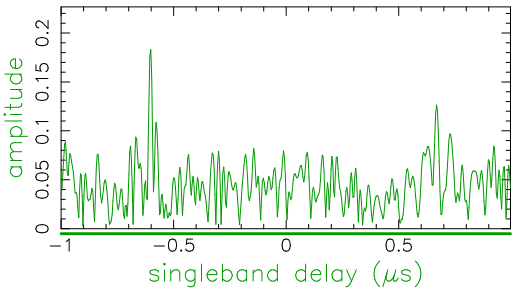
EFLSBERG - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

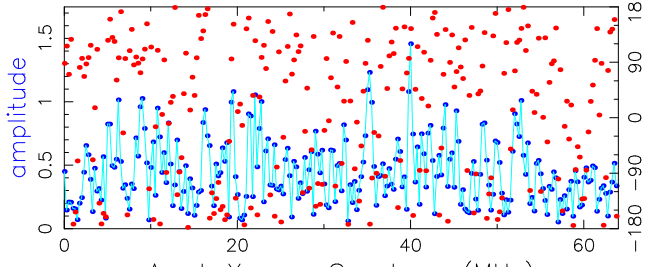


Fringe quality 0

SNR 5.3  
 Int time 112.059  
 Amp 0.227  
 Phase 106.7  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.602828  
 MBD -0.007045  
 Fringe rate (Hz)  
 0.674998  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

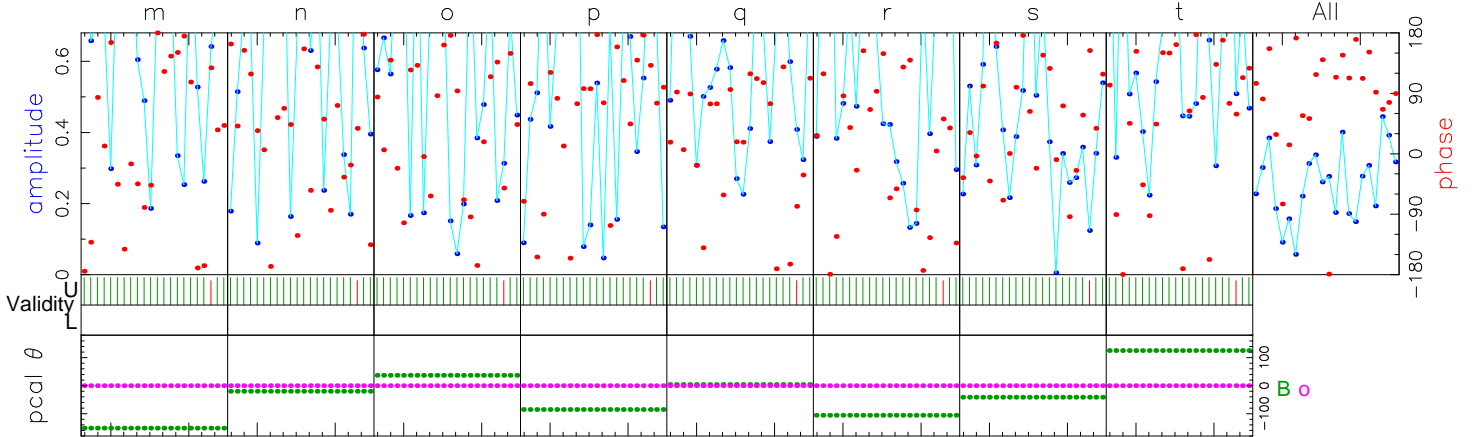


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:112955  
 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		
o	0	0	0	0	0	0	0	0		
B:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:0	-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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-5.60080721266E+03	Apriori delay (usec)	-5.60020641722E+03	Resid mbdelay (usec)	-7.04544E-03	+/-	2.0E-04
Sband delay (usec)	-5.60080924522E+03	Apriori clock (usec)	-6.0466892E+01	Resid sbdelay (usec)	-6.02828E-01	+/-	1.6E-03
Phase delay (usec)	-5.60020641377E+03	Apriori clockrate (us/s)	-6.7081106E-07	Resid phdelay (usec)	3.44156E-06	+/-	6.9E-07
Delay rate (us/s)	-1.18287536463E+00	Apriori rate (us/s)	-1.18288320068E+00	Resid rate (us/s)	7.83605E-06	+/-	1.1E-08
Total phase (deg)	-173.7	Apriori accel (us/s/s)	4.34489848720E-05	Resid phase (deg)	106.7	+/-	21.4

ph/seg (deg)	59.3	Theor.	50.2	Amplitude	0.227 +/- 0.042	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	66.3	Search (512X32)	0.177	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	26.7	Inc. seg. avg.	0.227	Inc. frq. avg.	0.212	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	50.7	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

B: az 302.9 el 37.3 pa 52.8 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 10150.828 4735.617 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Bo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Bo.W.95.3MP1AB

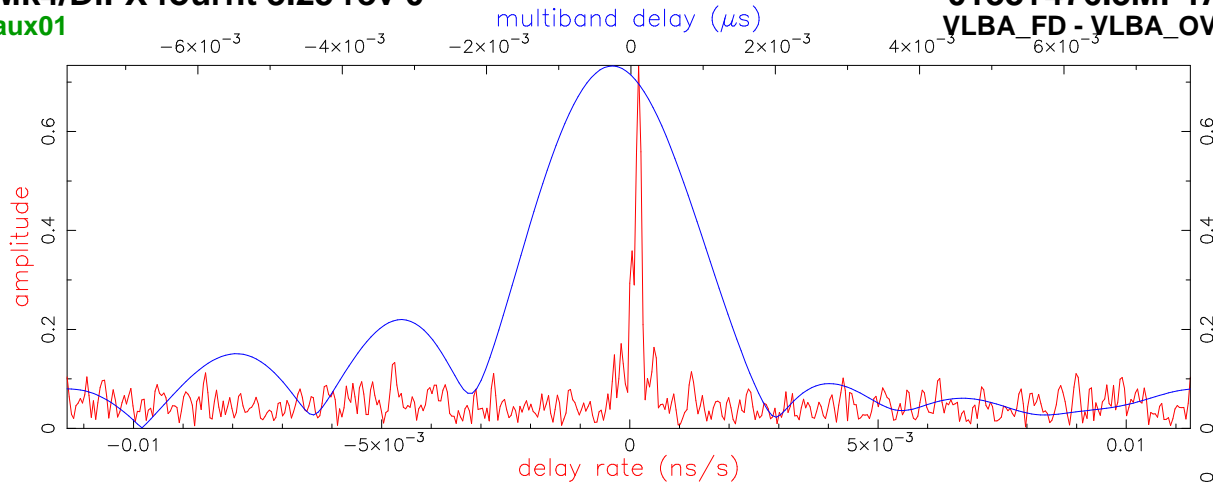


Mk4/DiFX fourfit 3.25 rev 0

aux01

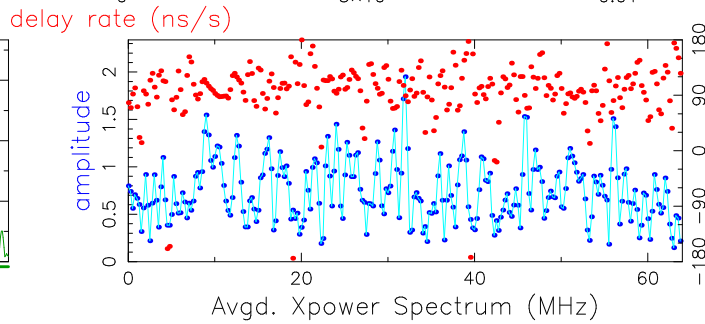
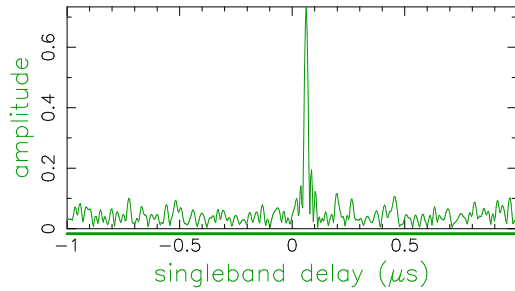
0133+476.3MP1AB, No0916, fo

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



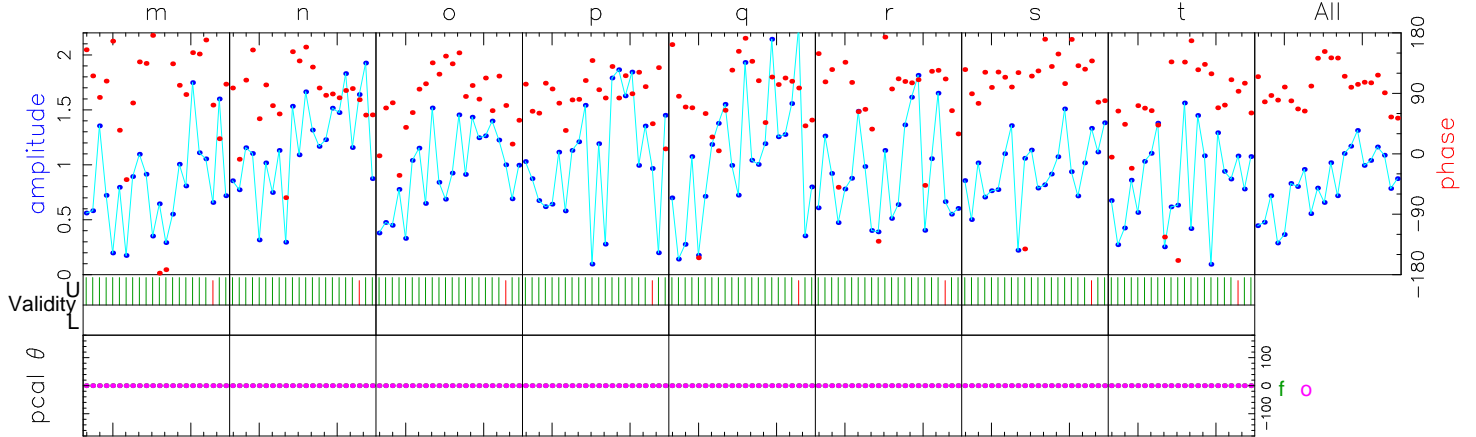
Fringe quality 9

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



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

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



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

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

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

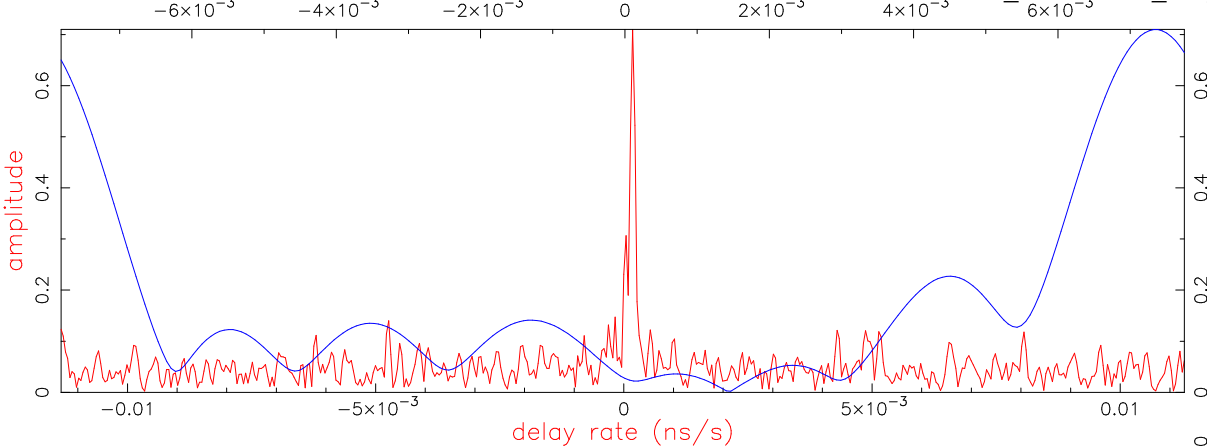
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, fo

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

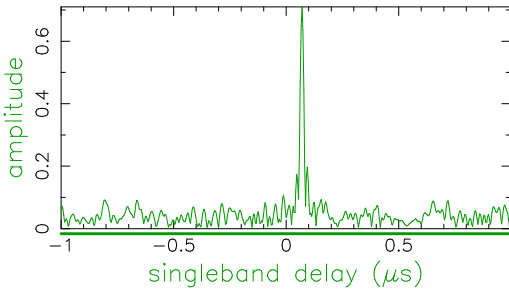
multiband delay ( $\mu$ s)



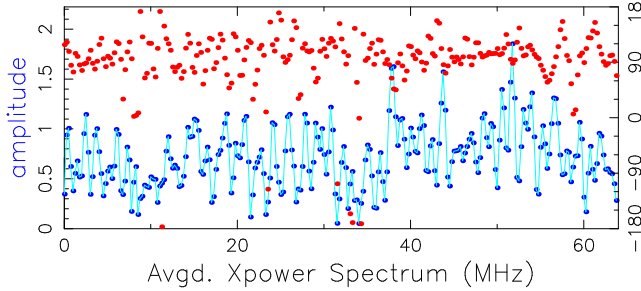
Fringe quality 9

SNR 20.6  
 Int time 112.059  
 Amp 0.710  
 Phase 104.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.070143  
 MBD 0.007347  
 Fringe rate (Hz)  
 0.016519  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

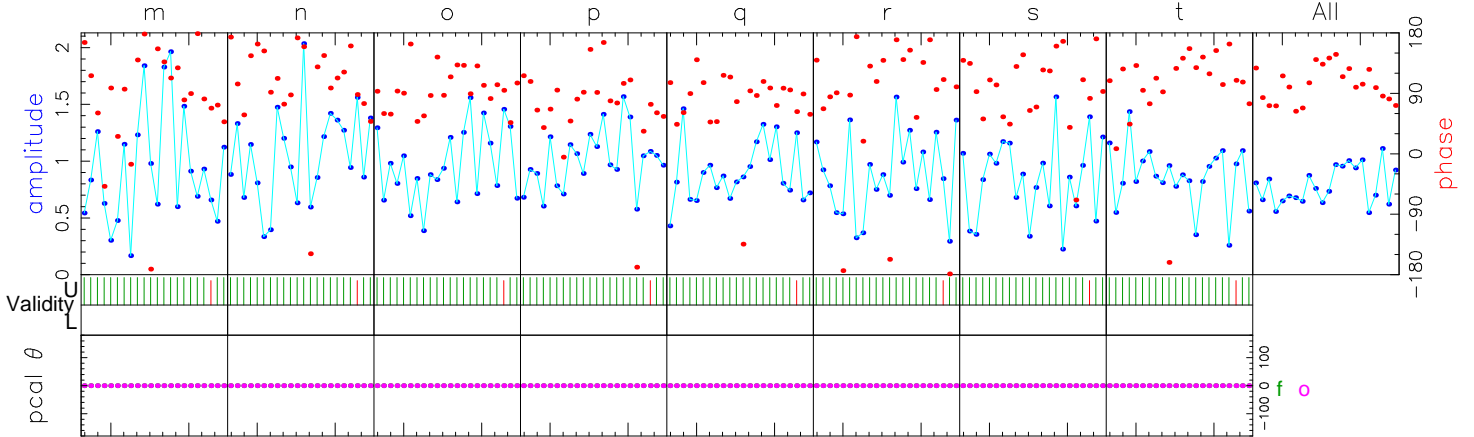
Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113008  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"



delay rate (ns/s)



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



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

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

ph/seg (deg)	RMS 26.0	Theor. 13.1	Amplitude Search (512X32)	0.710 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	24.8	22.8	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)	15.8	7.9	Inc. seg. avg.	0.766	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	12.4	13.8	Inc. frq. avg.	0.724	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 40.8 el 64.1 pa -123.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 1251.498 -1650.503 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fo.W.120.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

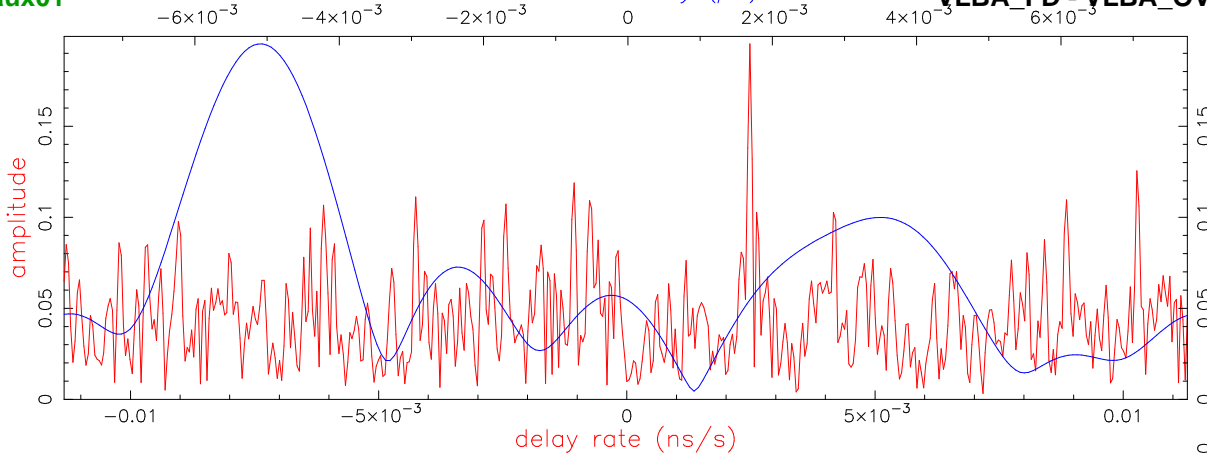
aux01

0133+476.3MP1AB, No0916, fo

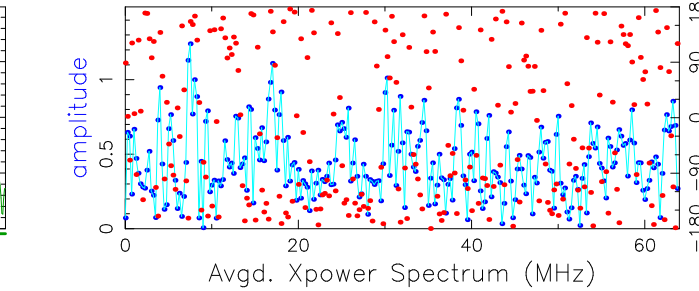
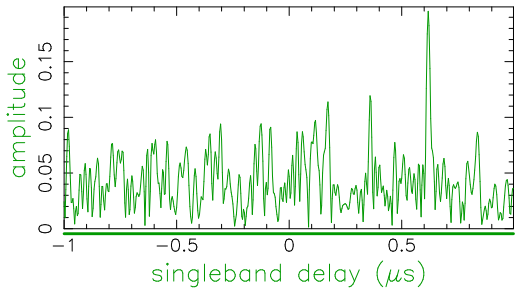
VLBA\_FD - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

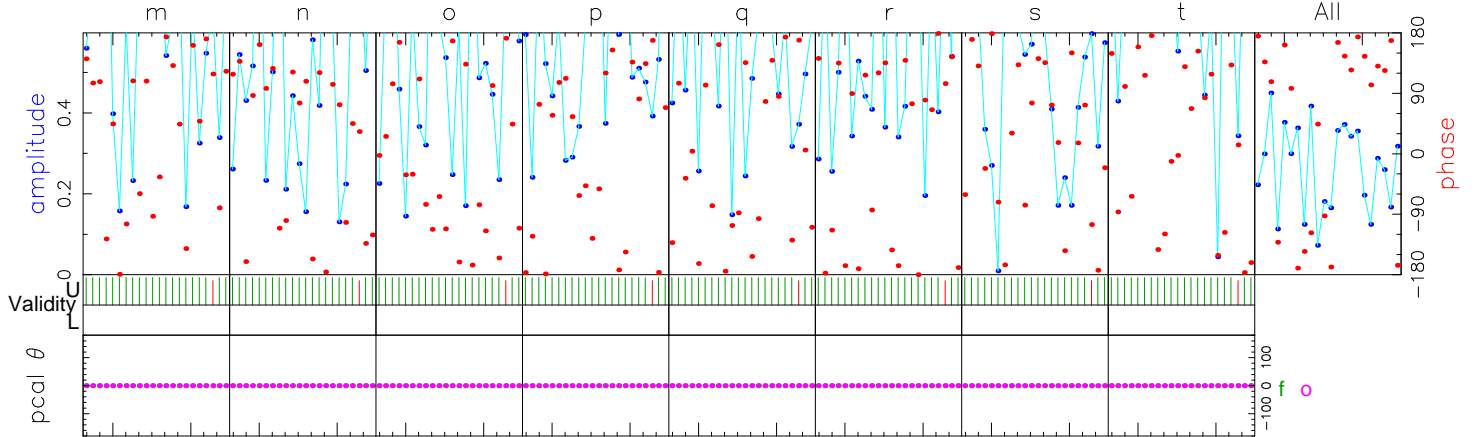


SNR 5.7  
 Int time 112.059  
 Amp 0.199  
 Phase 158.9  
 PFD 6.1e-01  
 Delays (us)  
 SBD 0.617586  
 MBD -0.005079  
 Fringe rate (Hz)  
 0.213862  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



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

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



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

Group delay (usec) (SBD)	8.01522774178E+02	Apriori delay (usec)		8.00902853055E+02	Resid mbdelay (usec)		-5.07888E-03	+/-	1.9E-04	
Sband delay (usec)	8.01520439555E+02	Apriori clock (usec)		-2.5008591E+01	Resid sbdelay (usec)		6.17586E-01	+/-	1.5E-03	
Phase delay (usec)	8.00902858178E+02	Apriori clockrate (us/s)		-4.3105211E-07	Resid phdelay (usec)		5.12382E-06	+/-	6.5E-07	
Delay rate (us/s)	-1.4725548990E-01	Apriori rate (us/s)		-1.47258031711E-01	Resid rate (us/s)		2.48272E-06	+/-	1.0E-08	
Total phase (deg)	73.3		Apriori accel (us/s/s)		-1.23857621493E-05	Resid phase (deg)		158.9	+/-	20.3

ph/seg (deg) 51.2 47.5 Search (512X32) 0.191 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 65.8 82.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 31.2 28.6 Inc. seg. avg. 0.202 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 51.1 50.0 Inc. frq. avg. 0.189 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 40.8 el 64.1 pa -123.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 1251.498 -1650.503 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/fo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/fo.W.122.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

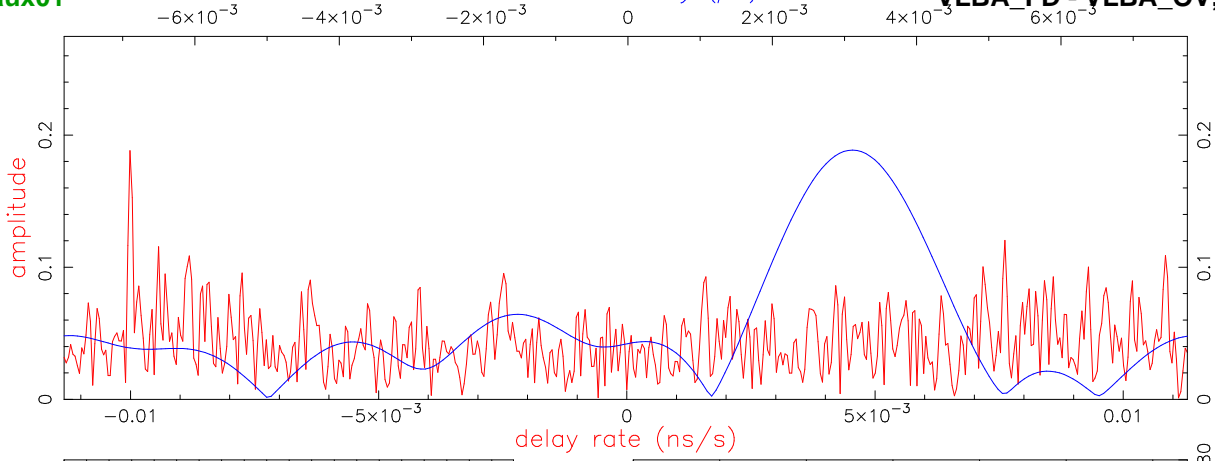
aux01

0133+476.3MP1AB, No0916, fo

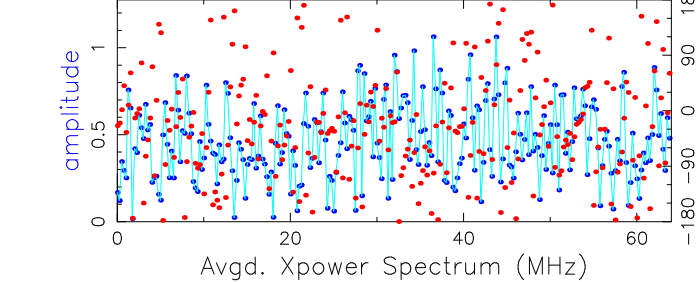
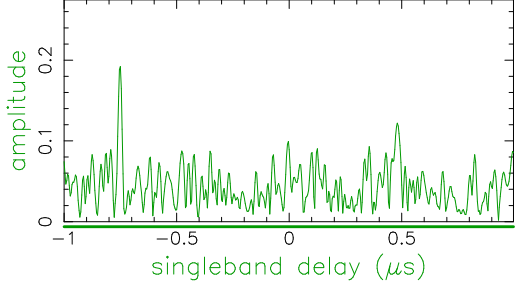
VLBA\_FD - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

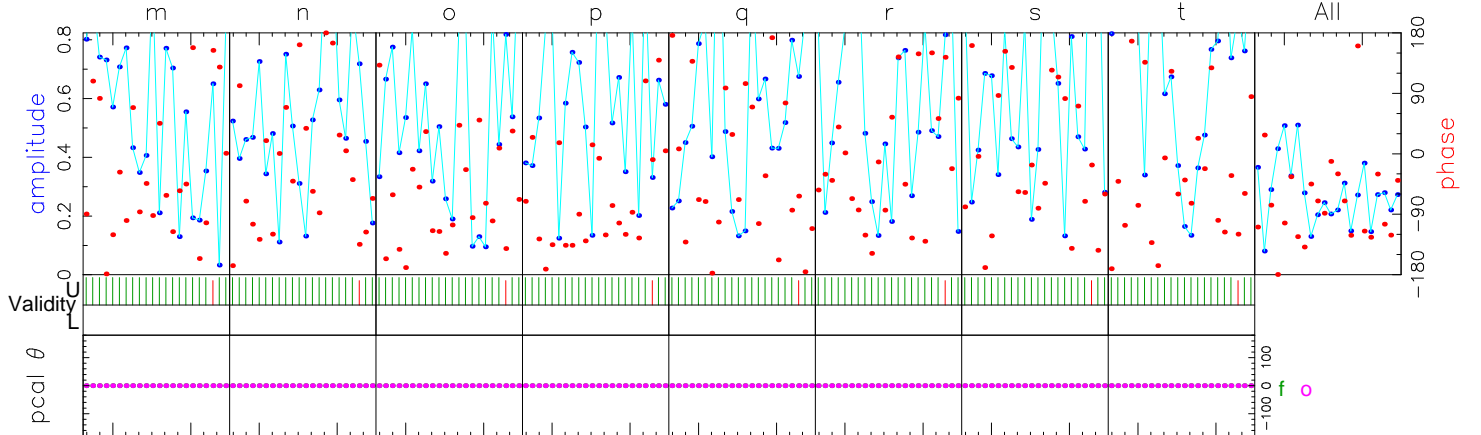


SNR 5.6  
 Int time 112.059  
 Amp 0.275  
 Phase -95.2  
 PFD 6.7e-01  
 Delays (us)  
 SBD -0.751466  
 MBD 0.003187  
 Fringe rate (Hz)  
 -0.863519  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



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

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



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

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

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

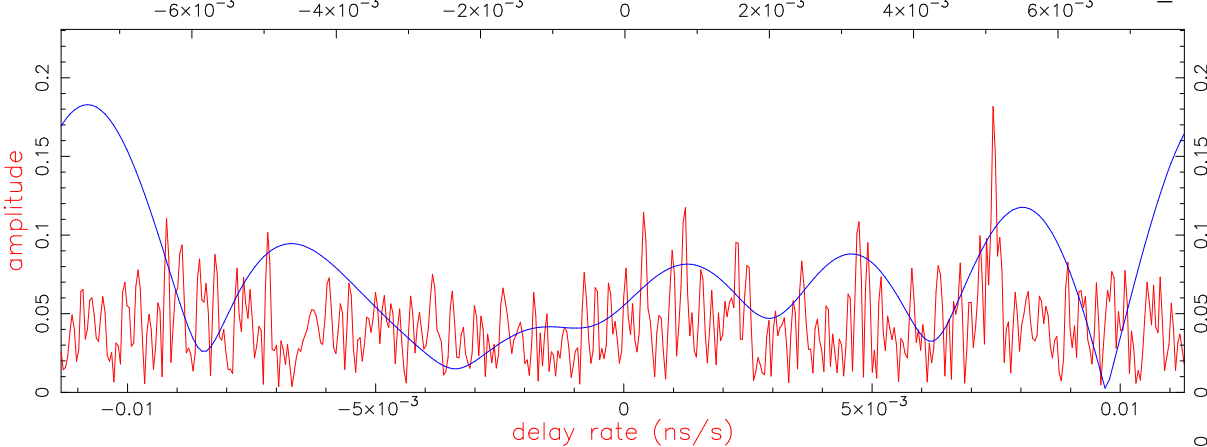
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, go

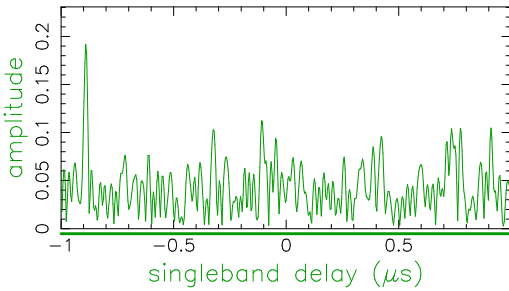
GLT - VLBA\_OV, fgroup W, pol LL

multiband delay ( $\mu\text{s}$ )

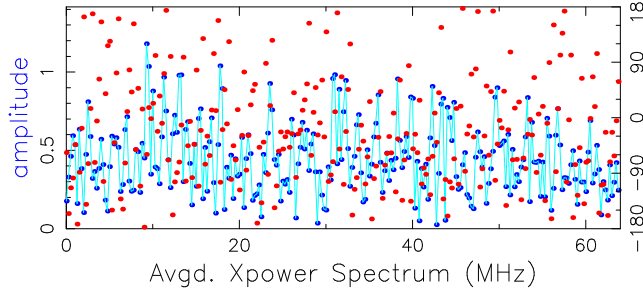


Fringe quality 0

SNR 5.6  
 Int time 112.059  
 Amp 0.231  
 Phase -130.3  
 PFD 8.0e-01  
 Delays (us)  
 SBD -0.889863  
 MBD -0.007557  
 Fringe rate (Hz)  
 0.639976  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

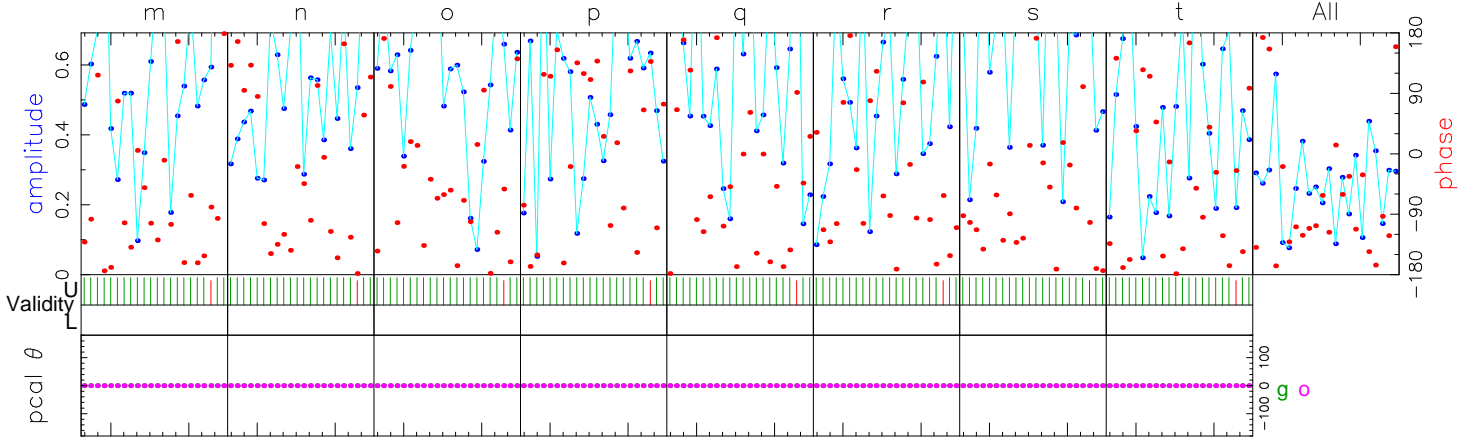


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113019  
 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
	-128.1	-170.8	-99.4	144.4	-169.9	-102.1	-103.3	-145.9	Phase	-130.3
	0.4	0.2	0.2	0.2	0.2	0.3	0.4	0.2	Ampl.	0.2
	29.0	56.3	180.2	176.1	426.1	167.0	392.2	415.7	Sbd box	29.2
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) 2.46648057432E+02 Apriori delay (usec) 2.47530614657E+02 Resid mbdelay (usec) -7.55722E-03 +/- 2.0E-04  
 Sband delay (usec) 2.46640751657E+02 Apriori clock (usec) -2.4602034E+01 Resid sbdelay (usec) -8.89863E-01 +/- 1.5E-03  
 Phase delay (usec) 2.47530610457E+02 Apriori clockrate (us/s) -4.0131115E-07 Resid phdelay (usec) -4.20050E-06 +/- 6.6E-07  
 Delay rate (us/s) -5.66816206405E-01 Apriori rate (us/s) -5.66823635889E-01 Resid rate (us/s) 7.42948E-06 +/- 1.0E-08  
 Total phase (deg) -77.5 Apriori accel (us/s/s) 2.94186222256E-05 Resid phase (deg) -130.3 +/- 20.6

RMS Theor. Amplitude 0.231 +/- 0.041 Pcdl mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 61.0 48.3 Search (512X32) 0.184 Pcdl rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 71.5 84.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 46.9 29.1 Inc. seg. avg. 0.232 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 44.5 50.9 Inc. frq. avg. 0.233 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 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 4868.271 4728.429 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/go..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/go.W.144.3MP1AB

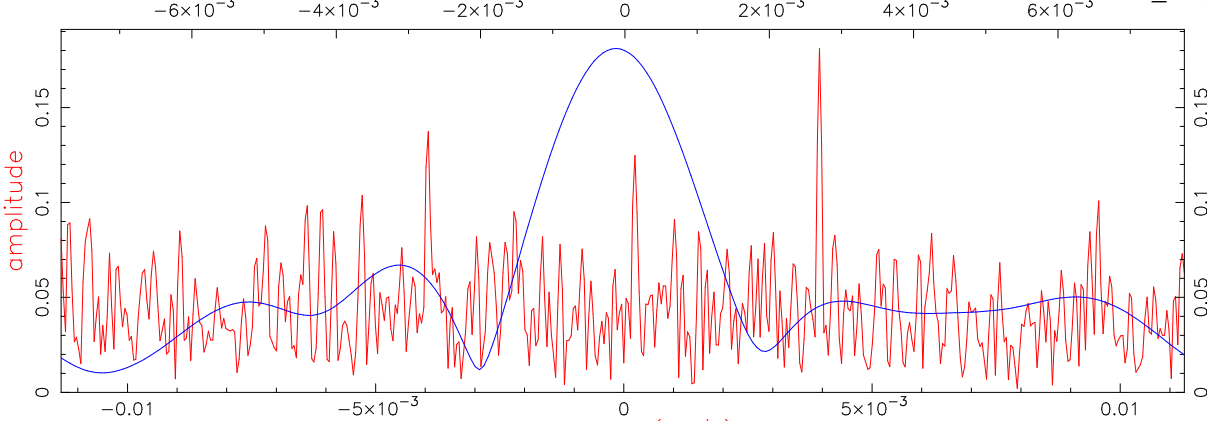
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, go

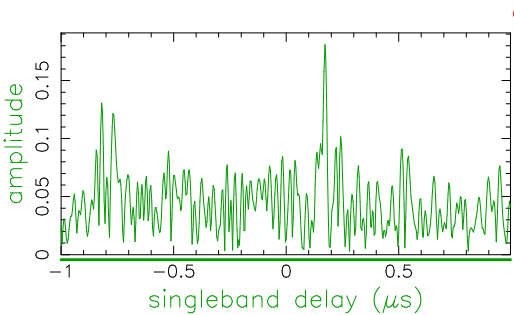
GLT - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

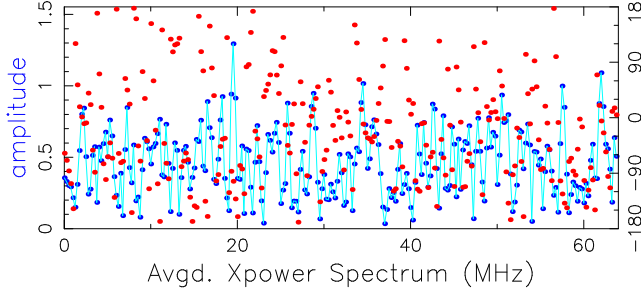


Fringe quality 0

SNR 5.3  
 Int time 112.059  
 Amp 0.191  
 Phase 156.7  
 PFD 1.0e+00  
 Delays (us)  
 SBD 0.172631  
 MBD -0.000130  
 Fringe rate (Hz)  
 0.340150  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

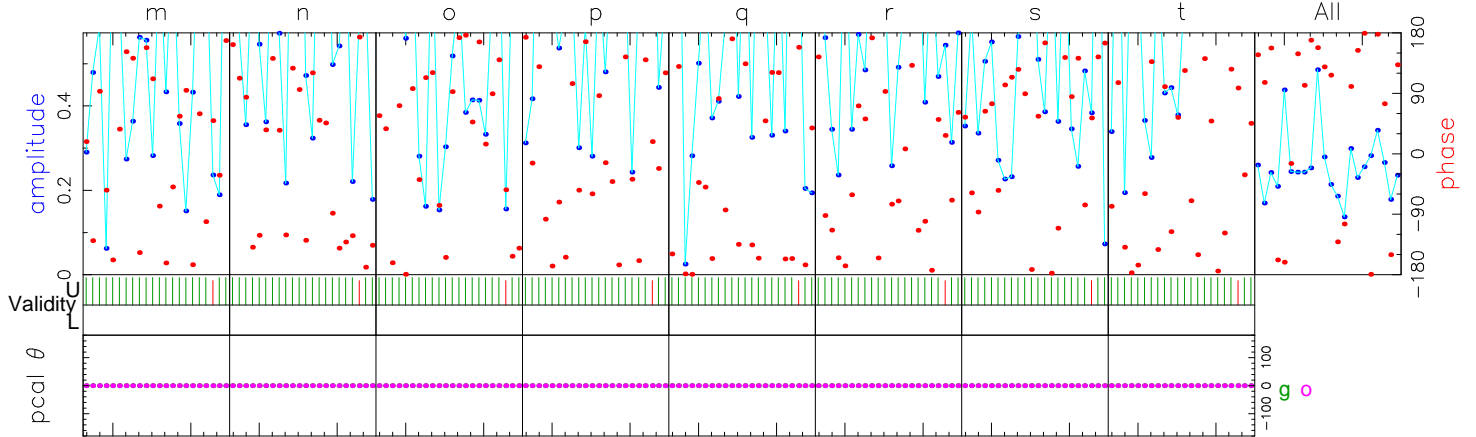


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113020  
 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
	-178.6	145.1	132.4	177.0	176.5	179.8	129.7	160.4	Phase	156.7
	0.1	0.2	0.3	0.1	0.3	0.1	0.2	0.2	Ampl.	0.2
	227.7	47.0	176.4	233.4	302.1	282.9	45.7	207.1	Sbd box	301.2
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	2.47702359291E+02	Apriori delay (usec)	2.47530614657E+02	Resid mbdelay (usec)	-1.30366E-04	+/-	2.1E-04
Sband delay (usec)	2.47703245657E+02	Apriori clock (usec)	-2.4602034E+01	Resid sbdelay (usec)	1.72631E-01	+/-	1.6E-03
Phase delay (usec)	2.47530619712E+02	Apriori clockrate (us/s)	-4.0131115E-07	Resid phdelay (usec)	5.05458E-06	+/-	7.0E-07
Delay rate (us/s)	-5.66819687086E-01	Apriori rate (us/s)	-5.66823635889E-01	Resid rate (us/s)	3.94880E-06	+/-	1.1E-08
Total phase (deg)	209.5	Apriori accel (us/s/s)	2.94186222256E-05	Resid phase (deg)	156.7	+/-	21.8

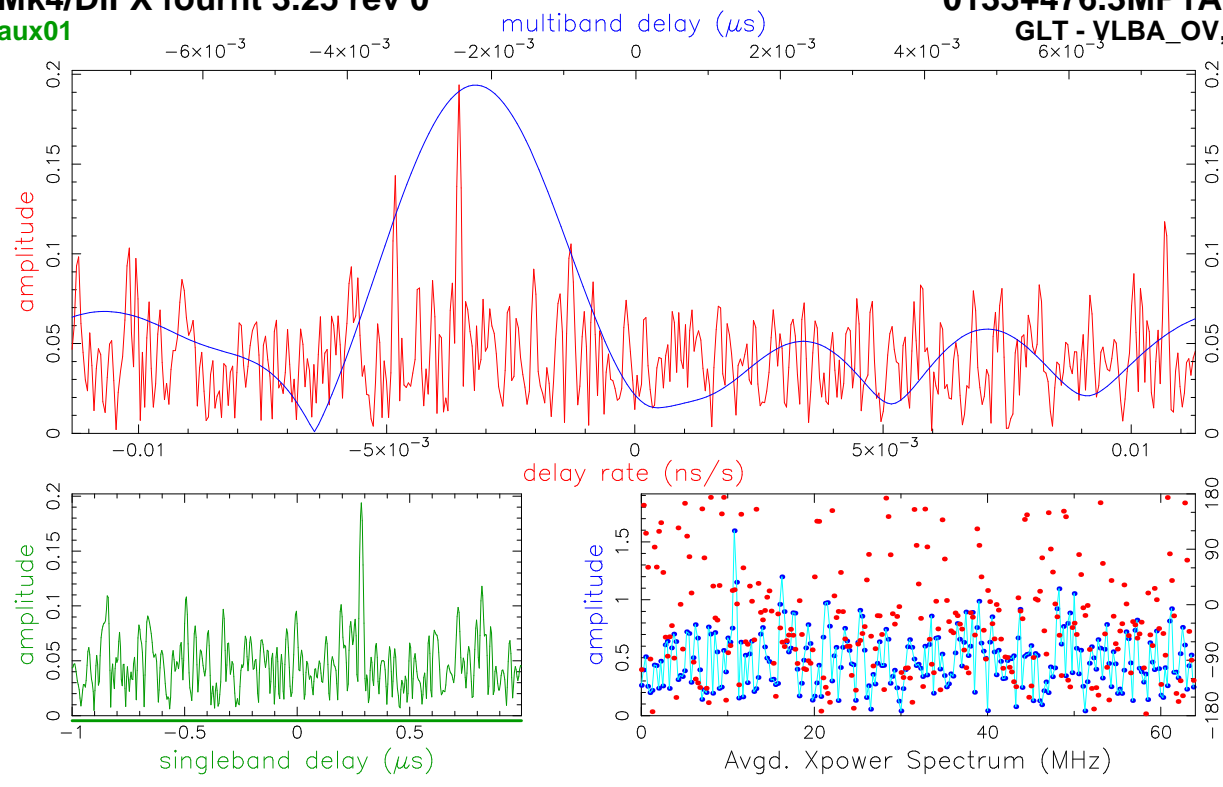
ph/seg (deg) 56.7 51.1 Search (512X32) 0.177 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 60.5 89.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 23.9 30.8 Inc. seg. avg. 0.195 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 35.9 53.8 Inc. frq. avg. 0.177 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 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 4868.271 4728.429 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/go..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/go.W.152.3MP1AB simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

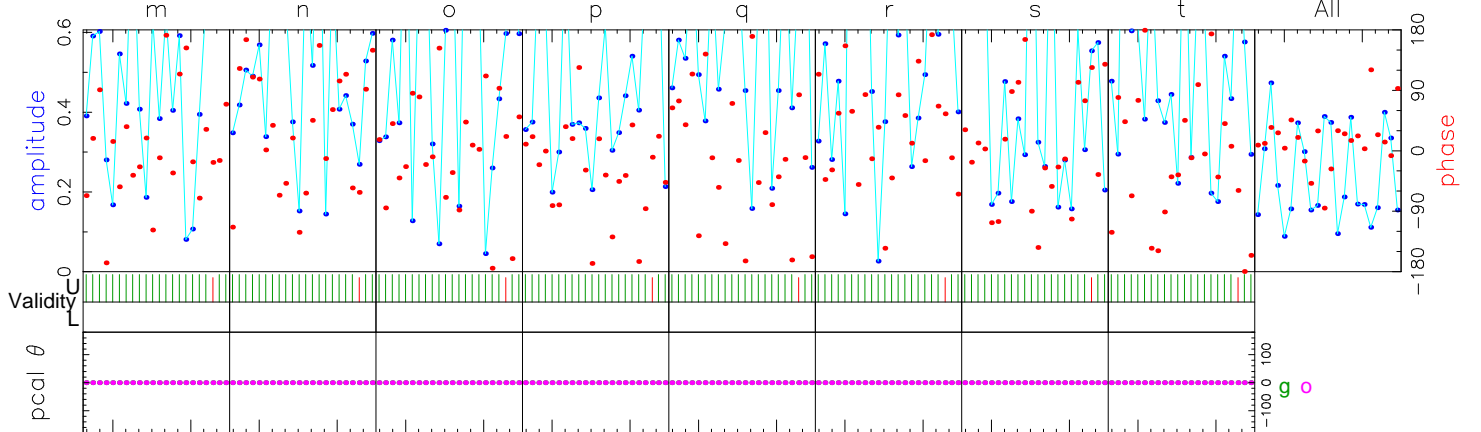
0133+476.3MP1AB, No0916, go

GLT - VLBA\_OV, fgroup W, pol LR



Fringe quality 0  
 SNR 5.6  
 Int time 112.059  
 Amp 0.202  
 Phase 9.1  
 PFD 6.9e-01  
 Delays (us)  
 SBD 0.284825  
 MBD -0.002221  
 Fringe rate (Hz)  
 -0.306515  
 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  
 2025:041:113022  
 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:o	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				
g	1000	1000	1000	1000	1000	1000	1000	1000				
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL				
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
Group delay (usec) (SBD)	2.47809643339E+02				2.47530614657E+02				Resid mbdelay (usec)	-2.22132E-03 +/- 1.9E-04		
Sband delay (usec)	2.47815439657E+02				-2.4602034E+01				Resid sbdelay (usec)	2.84825E-01 +/- 1.5E-03		
Phase delay (usec)	2.47530614952E+02				-4.0131115E-07				Resid phdelay (usec)	2.94746E-07 +/- 6.6E-07		
Delay rate (us/s)	-5.66827194226E-01				-5.66823635889E-01				Resid rate (us/s)	-3.55834E-06 +/- 1.0E-08		
Total phase (deg)			61.9		2.94186222256E-05				Resid phase (deg)	9.1 +/- 20.4		
ph/seg (deg)	41.6	47.8			0.184				PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	64.1	83.5			0.000				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	32.1	28.8			0.186				Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
amp/frq (%)	37.5	50.3			0.195				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									Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva									u,v (fr/asec) 4868.271 4728.429			simultaneous interpolator
Input file: /Exps/c241a/v2/3mm/1234/No0916/go..3MP1AB									Output file: /Exps/c241a/v2/3mm/1234/No0916/go.W.156.3MP1AB			

Mk4/DiFX fourfit 3.25 rev 0

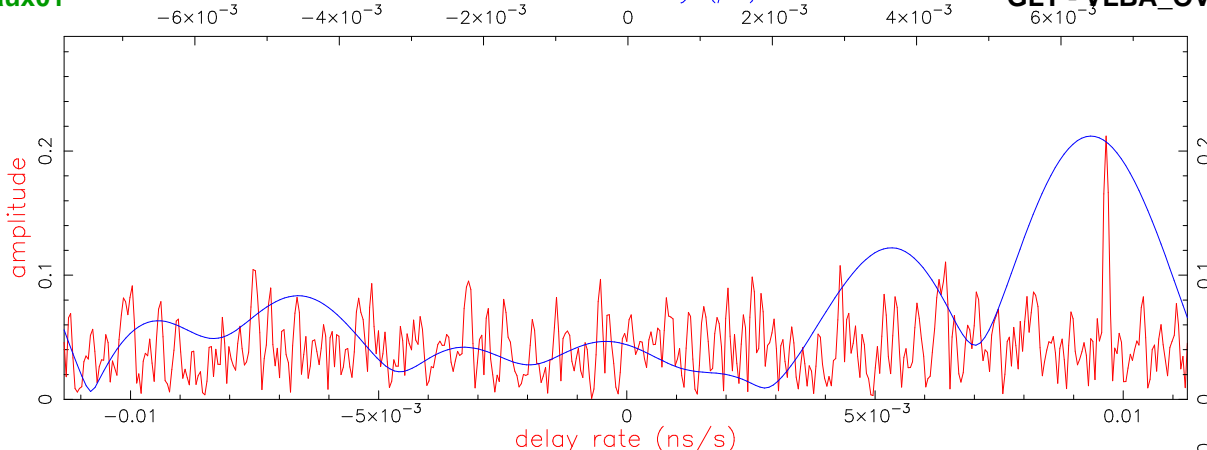
aux01

0133+476.3MP1AB, No0916, go

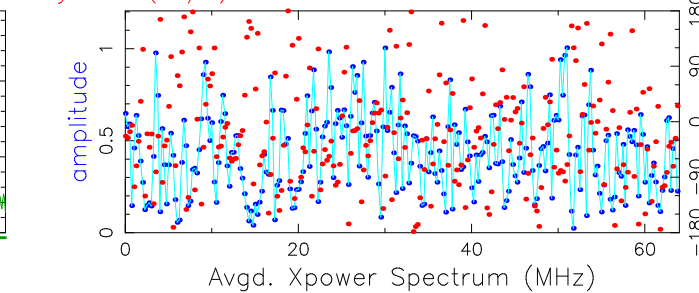
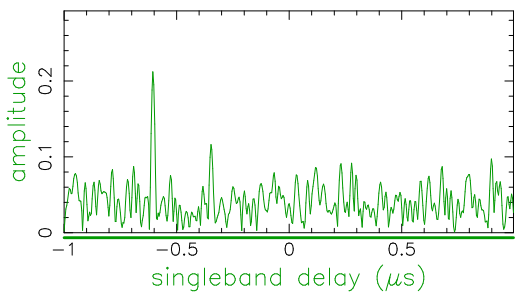
GLT - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

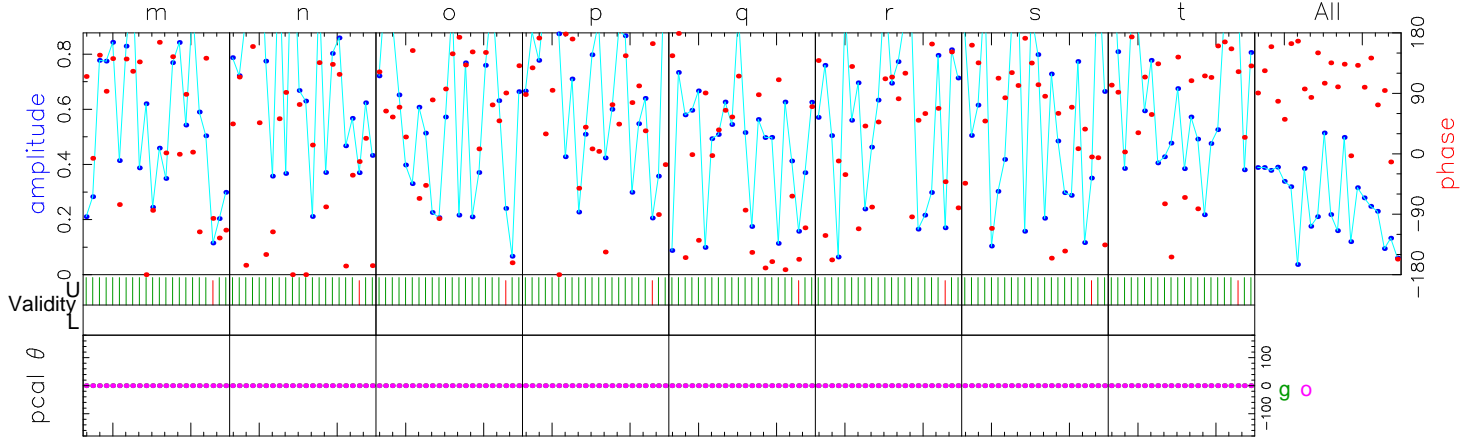


SNR 6.1  
 Int time 112.059  
 Amp 0.292  
 Phase 111.2  
 PFD 5.1e-02  
 Delays (us)  
 SBD -0.605155  
 MBD 0.006422  
 Fringe rate (Hz)  
 0.833860  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



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
	131.8	124.7	93.1	79.6	146.7	130.2	90.8	123.4	Phase	111.2
	0.3	0.4	0.4	0.3	0.1	0.2	0.3	0.5	Ampl.	0.3
	284.1	15.9	100.1	84.2	148.8	293.0	336.8	166.2	Sbd box	102.1
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	2.46927661825E+02	Apriori delay (usec)	2.47530614657E+02	Resid mbdelay (usec)	6.42217E-03	+/-	1.8E-04
Sband delay (usec)	2.46925459407E+02	Apriori clock (usec)	-2.4602034E+01	Resid sbdelay (usec)	-6.05155E-01	+/-	1.4E-03
Phase delay (usec)	2.47530618245E+02	Apriori clockrate (us/s)	-4.0131115E-07	Resid phdelay (usec)	3.58733E-06	+/-	6.0E-07
Delay rate (us/s)	-5.66813955598E-01	Apriori rate (us/s)	-5.66823635889E-01	Resid rate (us/s)	9.68029E-06	+/-	9.2E-09
Total phase (deg)	164.0	Apriori accel (us/s/s)	2.94186222256E-05	Resid phase (deg)	111.2	+/-	18.6

ph/seg (deg) 51.2 43.7 Search (512X32) 0.202 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 67.8 76.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 26.2 26.4 Inc. seg. avg. 0.286 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 41.4 46.0 Inc. frq. avg. 0.283 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 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 4868.271 4728.429 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/go..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/go.W.161.3MP1AB

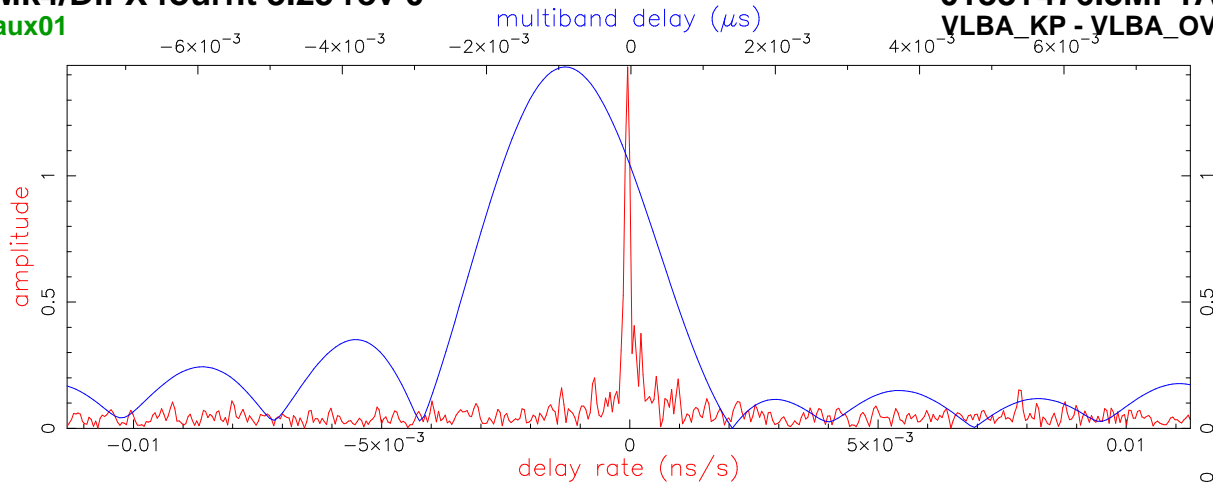


Mk4/DiFX fourfit 3.25 rev 0

aux01

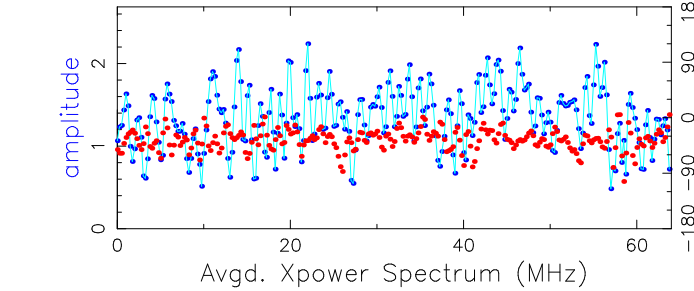
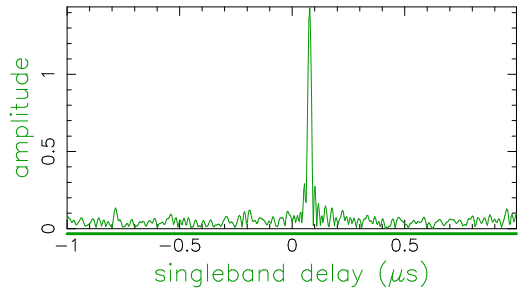
0133+476.3MP1AB, No0916, ko

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



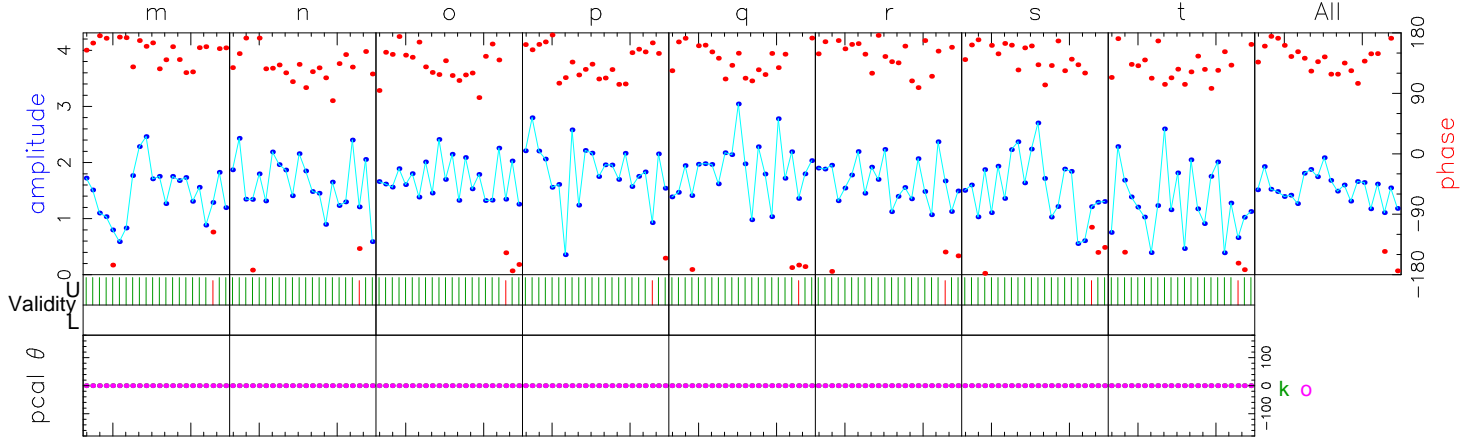
Fringe quality 8

SNR 41.6  
 Int time 112.059  
 Amp 1.438  
 Phase 145.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.077278  
 MBD -0.000933  
 Fringe rate (Hz)  
 -0.002583  
 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		
o	0	0	0	0	0	0	0	0		
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:0	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		
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	1.81980941336E+02	Apriori delay (usec)		1.81903749326E+02	Resid mbdelay (usec)		-9.32990E-04	+/- 2.6E-05	
Sband delay (usec)	1.81981027076E+02	Apriori clock (usec)		-2.4912970E+01	Resid sbdelay (usec)		7.72777E-02	+/- 2.1E-04	
Phase delay (usec)	1.81903754019E+02	Apriori clockrate (us/s)		-3.2906598E-07	Resid phdelay (usec)		4.69283E-06	+/- 8.9E-08	
Delay rate (us/s)	-4.89303555974E-02	Apriori rate (us/s)		-4.89303256169E-02	Resid rate (us/s)		-2.99805E-08	+/- 1.4E-09	
Total phase (deg)	133.6		Apriori accel (us/s/s)		-7.44176556953E-06	Resid phase (deg)		145.5	+/- 2.8

	RMS	Theor.	Amplitude	1.438 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	24.4	6.5	Search (512X32)	1.389	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
amp/seg (%)	18.9	11.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	9.3	3.9	Inc. seg. avg.	1.541	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011	
amp/frq (%)	12.0	6.8	Inc. frq. avg.	1.442	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      o: az 56.8 el 59.3 pa -95.8      u,v (fr/asec) 413.734 -1099.180      simultaneous interpolator

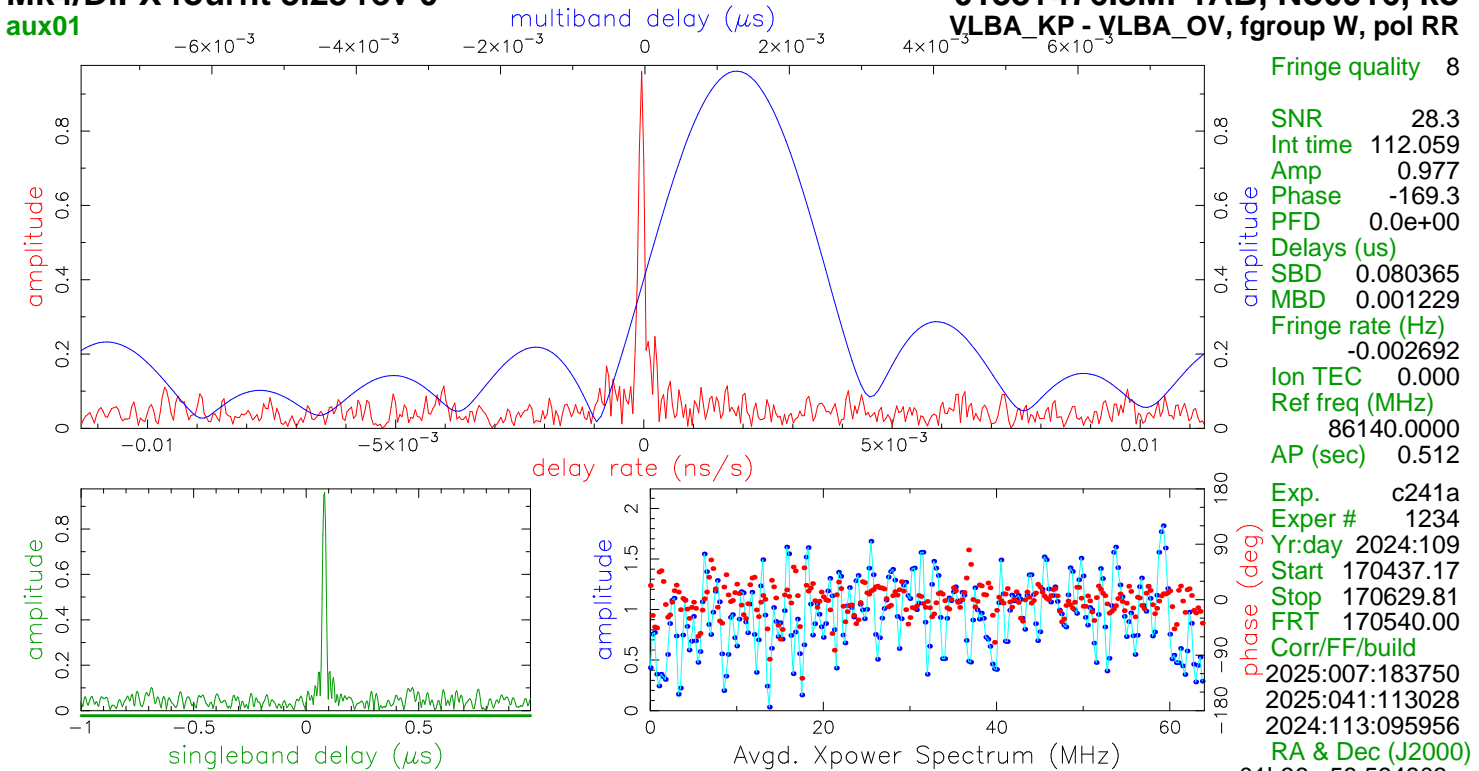
Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/ko..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/ko.W.167.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

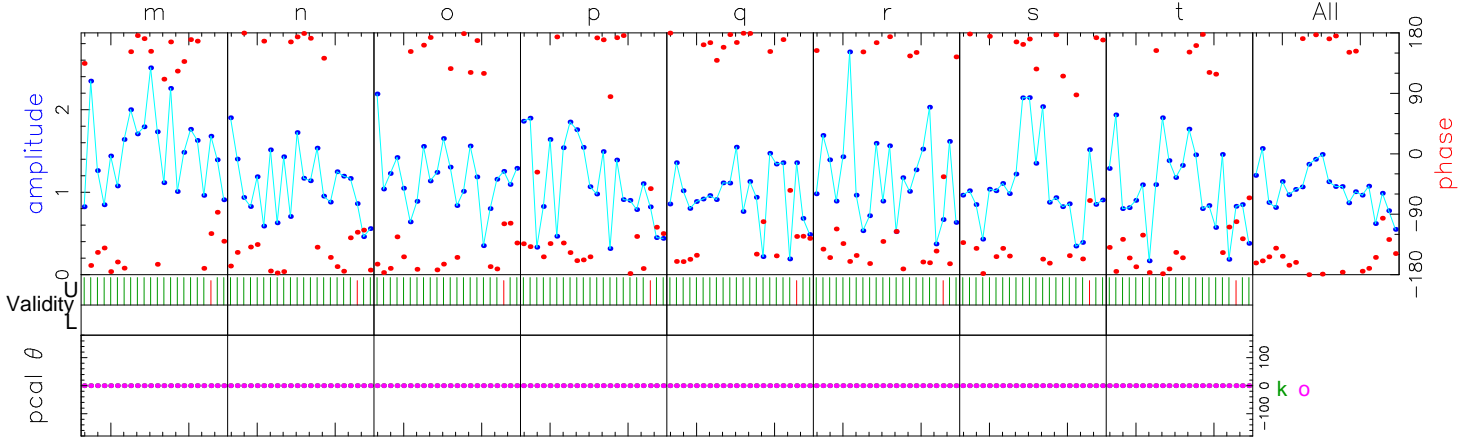
aux01

0133+476.3MP1AB, No0916, ko

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



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
178.7	-165.4	-171.4	-152.9	-173.6	-165.1	-174.3	-167.0		Phase	-169.3
1.3	1.0	1.0	0.9	0.9	1.0	0.9	0.9		Ampl.	1.0
277.6	277.5	277.3	277.2	277.3	277.9	277.7	278.4		Sbd box	277.6
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0		APs used	
k	0	0	0	0	0	0	0		PC freqs	
o	0	0	0	0	0	0	0		PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC	
k	1000	1000	1000	1000	1000	1000	1000		PC amp	
o	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.81983103555E+02	Apriori delay (usec)	1.81903749326E+02	Resid mbdelay (usec)	1.22923E-03	+/-	3.8E-05
Sband delay (usec)	1.81984114076E+02	Apriori clock (usec)	-2.4912970E+01	Resid sbdelay (usec)	8.03647E-02	+/-	3.0E-04
Phase delay (usec)	1.81903743868E+02	Apriori clockrate (us/s)	-3.2906598E-07	Resid phdelay (usec)	-5.45791E-06	+/-	1.3E-07
Delay rate (us/s)	-4.89303568643E-02	Apriori rate (us/s)	-4.89303256169E-02	Resid rate (us/s)	-3.12474E-08	+/-	2.0E-09
Total phase (deg)	178.9	Apriori accel (us/s/s)	-7.44176556953E-06	Resid phase (deg)	-169.3	+/-	4.1

ph/seg (deg)	RMS 24.6	Theor. 9.5	Amplitude Search (512X32)	0.977 +/- 0.035	0.924	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	25.7	16.6	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	9.1	5.7	Inc. seg. avg.	1.028	1.028	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	12.7	10.0	Inc. frq. avg.	0.966	0.966	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      o: az 56.8 el 59.3 pa -95.8      u,v (fr/asec) 413.734 -1099.180      simultaneous interpolator

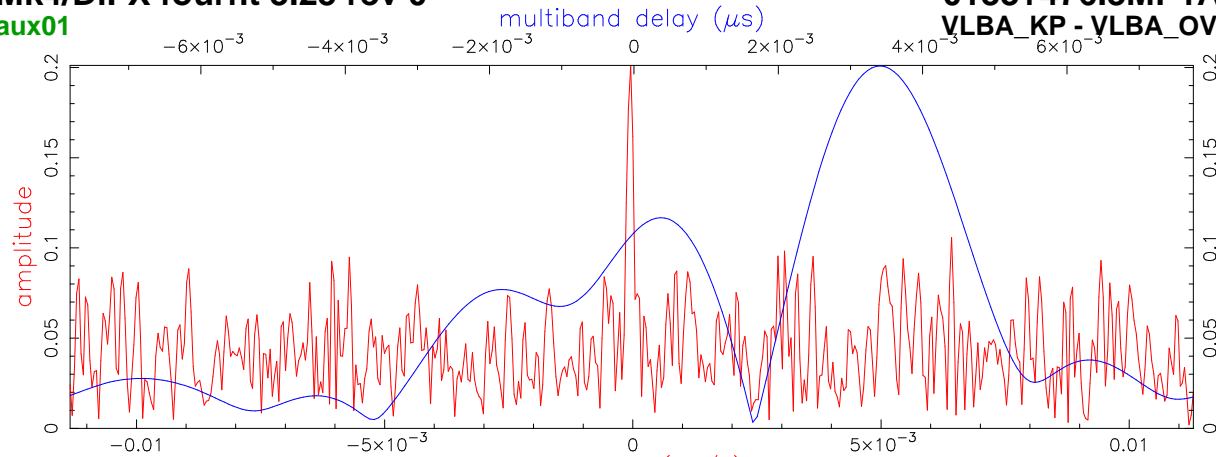
Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/ko..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/ko.W.171.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

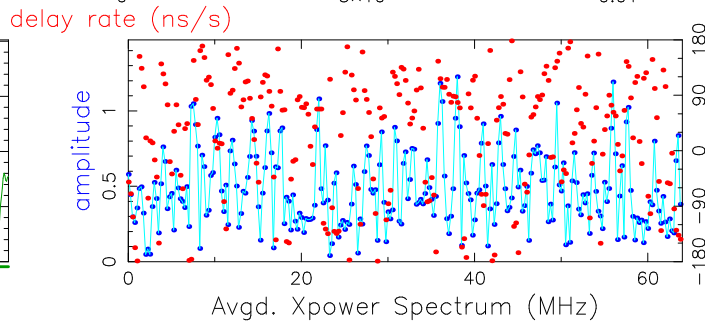
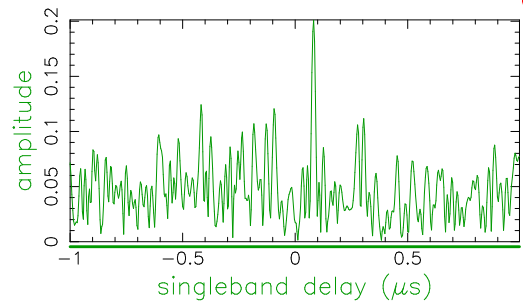
0133+476.3MP1AB, No0916, ko

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



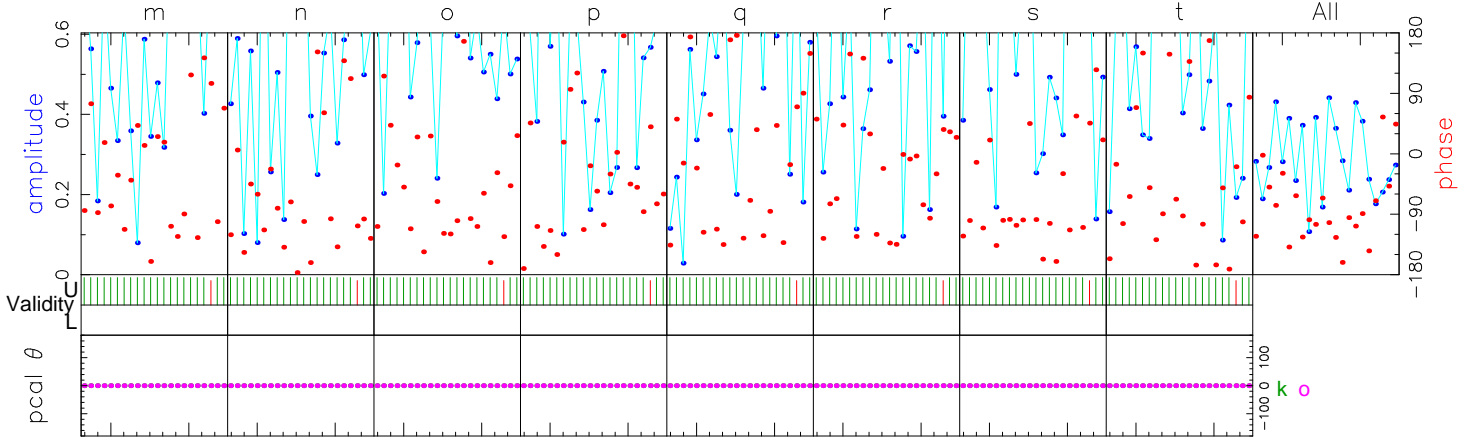
Fringe quality 0

SNR 5.8  
 Int time 112.059  
 Amp 0.201  
 Phase -93.5  
 PFD 3.0e-01  
 Delays (us)  
 SBD 0.081440  
 MBD 0.003417  
 Fringe rate (Hz)  
 -0.003277  
 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  
 2025:041:113029  
 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
	-76.1	-109.1	-87.6	-106.9	-121.0	-40.5	-84.2	-130.8	Phase	-93.5
	0.1	0.3	0.3	0.2	0.1	0.2	0.3	0.2	Ampl.	0.2
	332.0	266.3	140.1	349.6	3.6	403.8	276.5	280.6	Sbd box	277.8
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	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.81985291649E+02	Apriori delay (usec)	1.81903749326E+02	Resid mbdelay (usec)	3.41732E-03	+/-	1.9E-04
Sband delay (usec)	1.81985189576E+02	Apriori clock (usec)	-2.4912970E+01	Resid sbdelay (usec)	8.14402E-02	+/-	1.5E-03
Phase delay (usec)	1.81903746310E+02	Apriori clockrate (us/s)	-3.2906598E-07	Resid phdelay (usec)	-3.01626E-06	+/-	6.3E-07
Delay rate (us/s)	-4.89303636579E-02	Apriori rate (us/s)	-4.89303256169E-02	Resid rate (us/s)	-3.80410E-08	+/-	9.8E-09
Total phase (deg)	254.6	Apriori accel (us/s/s)	-7.44176556953E-06	Resid phase (deg)	-93.5	+/-	19.7

ph/seg (deg)	RMS 56.5	Theor. 46.1	Amplitude 512X32	0.201 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	64.5	80.5	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)	31.1	27.8	Inc. seg. avg.	0.219	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 (%)	36.3	48.6	Inc. frq. avg.	0.199	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

k: az 47.5 el 60.5 pa -111.0      o: az 56.8 el 59.3 pa -95.8      u,v (fr/asec) 413.734 -1099.180      simultaneous interpolator

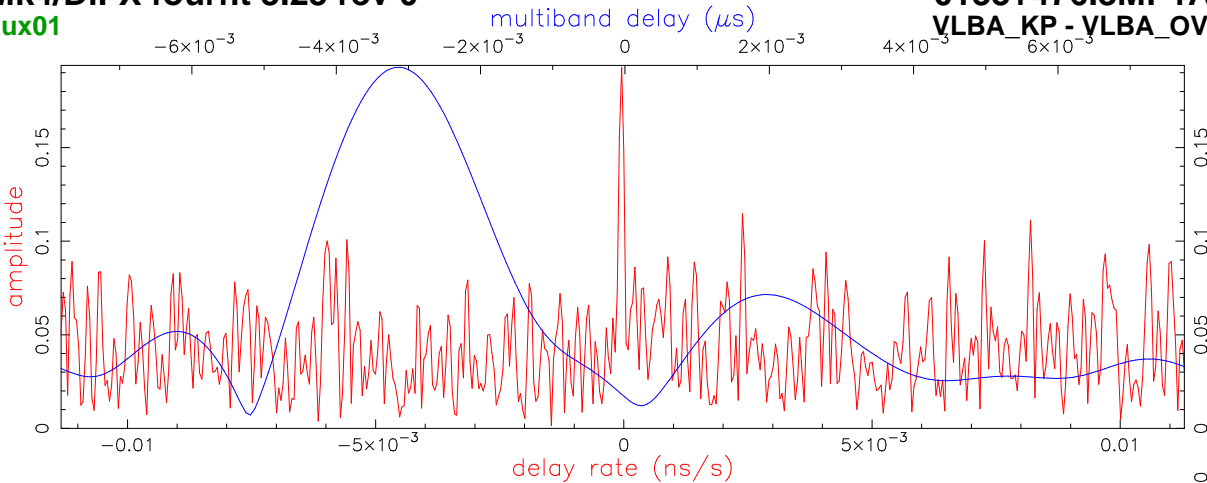
Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/ko..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/ko.W.175.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

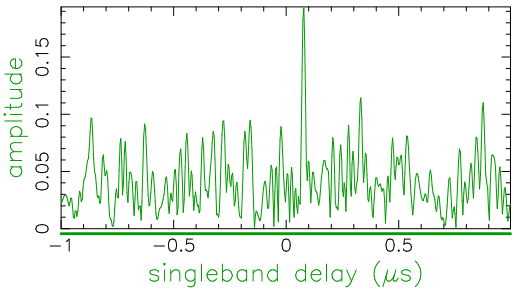
0133+476.3MP1AB, No0916, ko

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

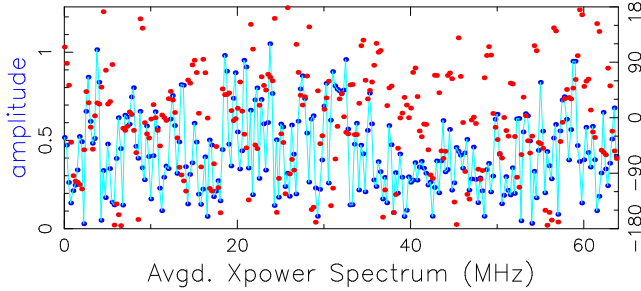


Fringe quality 0

SNR 5.6  
 Int time 112.059  
 Amp 0.194  
 Phase -148.8  
 PFD 7.0e-01  
 Delays (us)  
 SBD 0.077241  
 MBD -0.003147  
 Fringe rate (Hz)  
 -0.004310  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

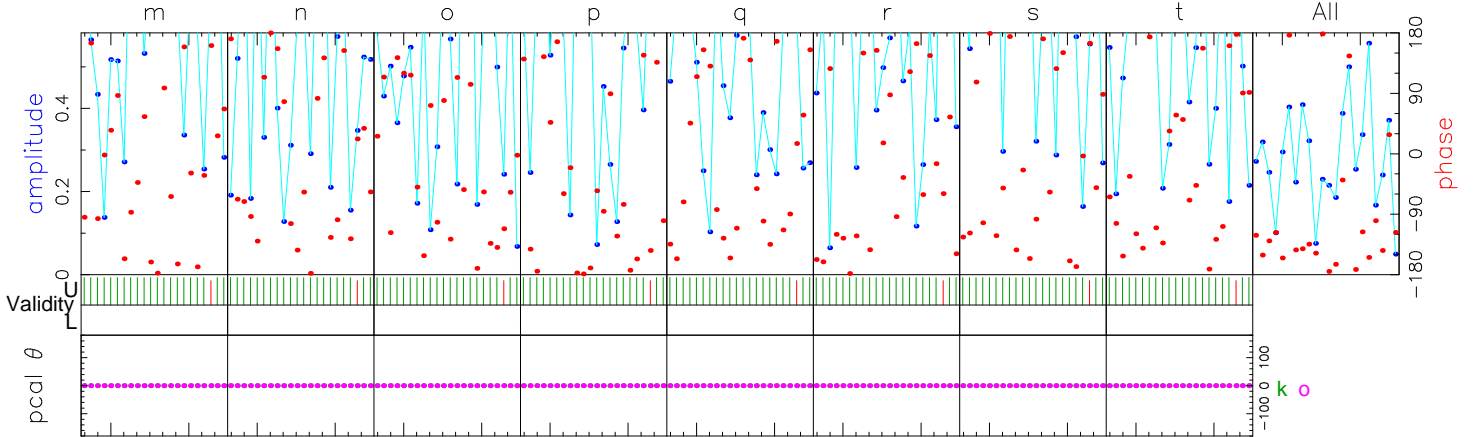


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113030  
 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
	-120.6	-146.7	-147.3	-172.1	-136.4	-147.1	-150.0	-137.2	Phase	-148.8
	0.1	0.2	0.1	0.3	0.2	0.2	0.3	0.2	Ampl.	0.2
	257.9	455.2	161.7	277.0	137.3	114.6	275.9	251.1	Sbd box	276.8
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	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	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	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.81978727336E+02	Apriori delay (usec)	1.81903749326E+02	Resid mbdelay (usec)	-3.14699E-03	+/-	1.9E-04
Sband delay (usec)	1.81980990076E+02	Apriori clock (usec)	-2.4912970E+01	Resid sbdelay (usec)	7.72408E-02	+/-	1.5E-03
Phase delay (usec)	1.81903744529E+02	Apriori clockrate (us/s)	-3.2906598E-07	Resid phdelay (usec)	-4.79739E-06	+/-	6.6E-07
Delay rate (us/s)	-4.89303756552E-02	Apriori rate (us/s)	-4.89303256169E-02	Resid rate (us/s)	-5.00383E-08	+/-	1.0E-08
Total phase (deg)	199.3	Apriori accel (us/s/s)	-7.44176556953E-06	Resid phase (deg)	-148.8	+/-	20.4

ph/seg (deg)	51.7	Theor.	47.9	Amplitude	0.194 +/- 0.035	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	78.6	Search (512X32)	0.189	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	16.5	Inc. seg. avg.	0.208	Inc. frq. avg.	0.177	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	46.8	Inc. frq. avg.	0.177			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

k: az 47.5 el 60.5 pa -111.0 o: az 56.8 el 59.3 pa -95.8 u, v (fr/asec) 413.734 -1099.180 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/ko..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/ko.W.179.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

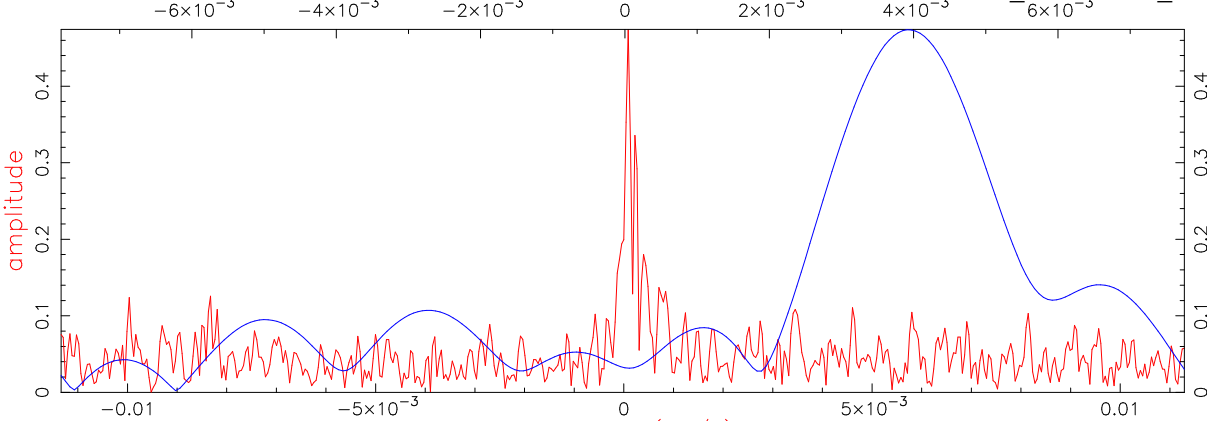
aux01

0133+476.3MP1AB, No0916, lo

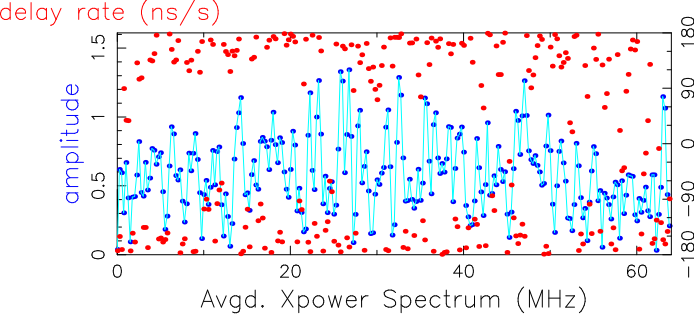
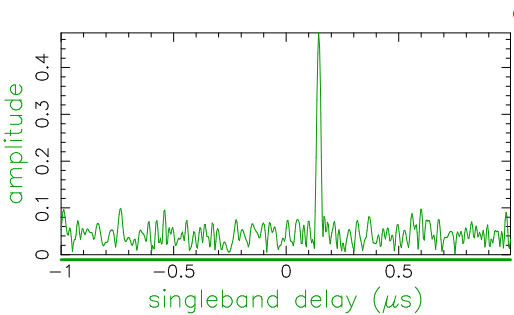
VLBA\_LA - VLBA\_OV, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 9

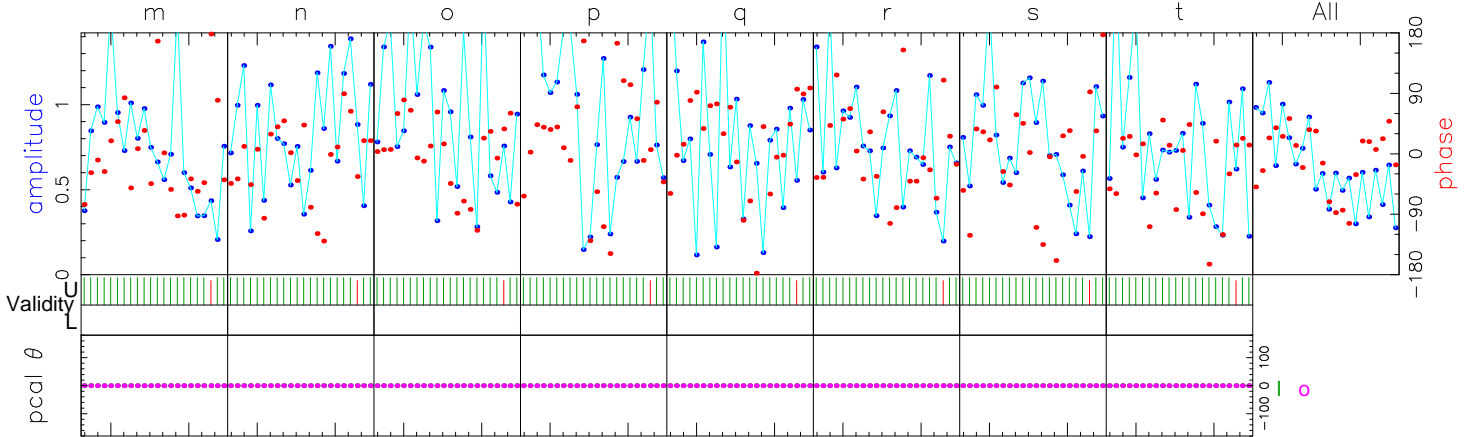


SNR 13.7  
 Int time 112.059  
 Amp 0.474  
 Phase 0.5  
 PFD 1.0e-34  
 Delays (us)  
 SBD 0.144915  
 MBD 0.003940  
 Fringe rate (Hz) 0.006834  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



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
	-22.3	1.7	3.8	14.9	21.0	-3.9	10.0	-21.4		Phase 0.5
	0.4	0.5	0.7	0.6	0.4	0.5	0.3	0.5		Ampl. 0.5
	292.1	294.3	294.2	294.1	293.7	294.9	179.1	293.7		Sbd box 294.1
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

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)	RMS 46.5	Theor. 19.6	Amplitude 0.474 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	61.3	34.2	Search (512X32) 0.466	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	17.1	11.8	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	19.8	20.6	Inc. seg. avg. 0.610	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s) -0.011 0.011
			Inc. frq. avg. 0.479	Data rate(Mb/s): 2048	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.197.3MP1AB

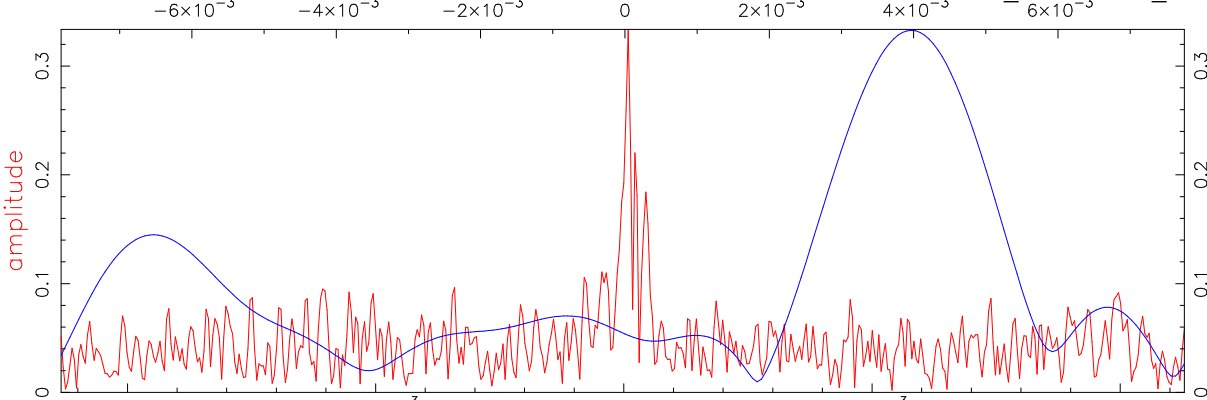
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, lo

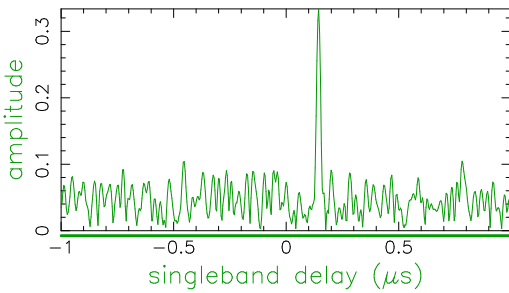
VLBA\_LA - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

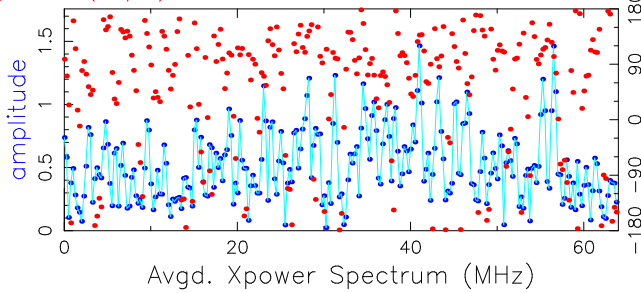


Fringe quality 9

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

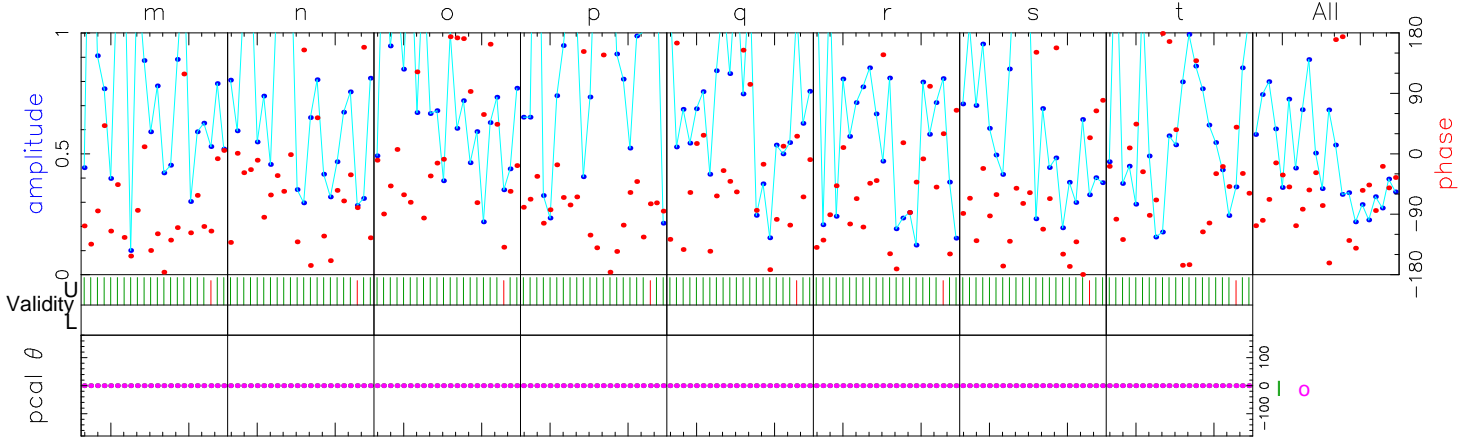


delay rate (ns/s)



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

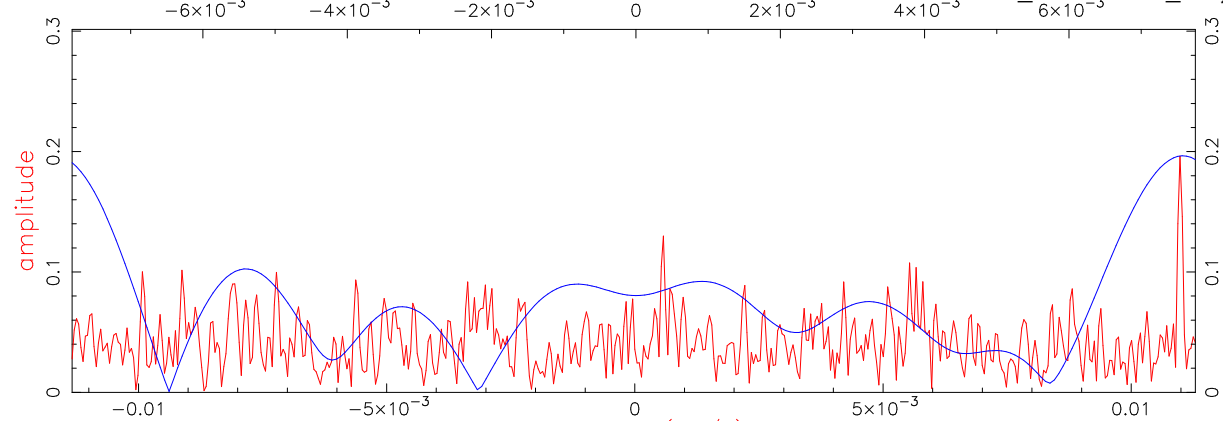
Mk4/DiFX fourfit 3.25 rev 0

aux01

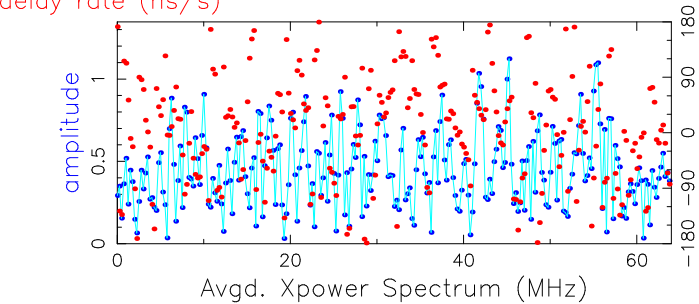
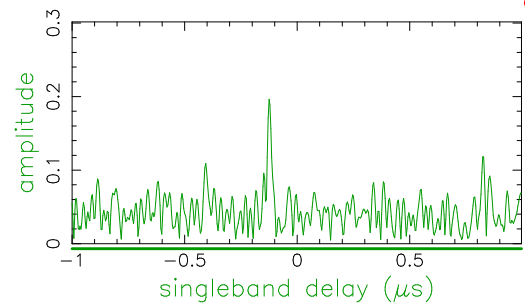
0133+476.3MP1AB, No0916, lo

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

multiband delay ( $\mu$ s)

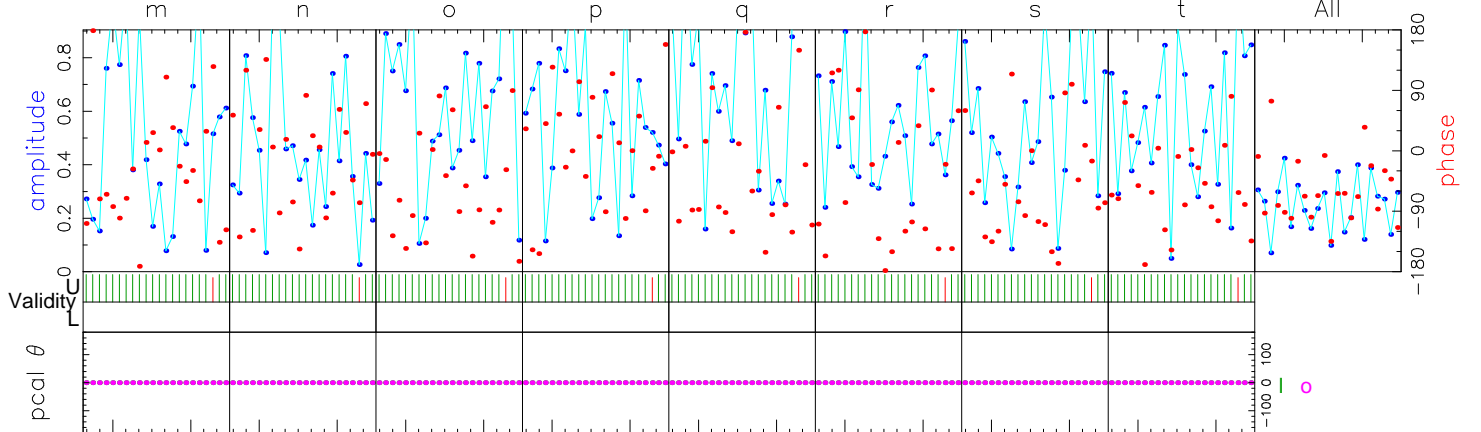


Fringe quality 0  
 SNR 5.7  
 Int time 112.059  
 Amp 0.302  
 Phase -62.0  
 PFD 5.0e-01  
 Delays (us)  
 SBD -0.123998  
 MBD 0.007631  
 Fringe rate (Hz) 0.949037  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113048  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.10073"



Avgd. Xpower Spectrum (MHz)

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-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)			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

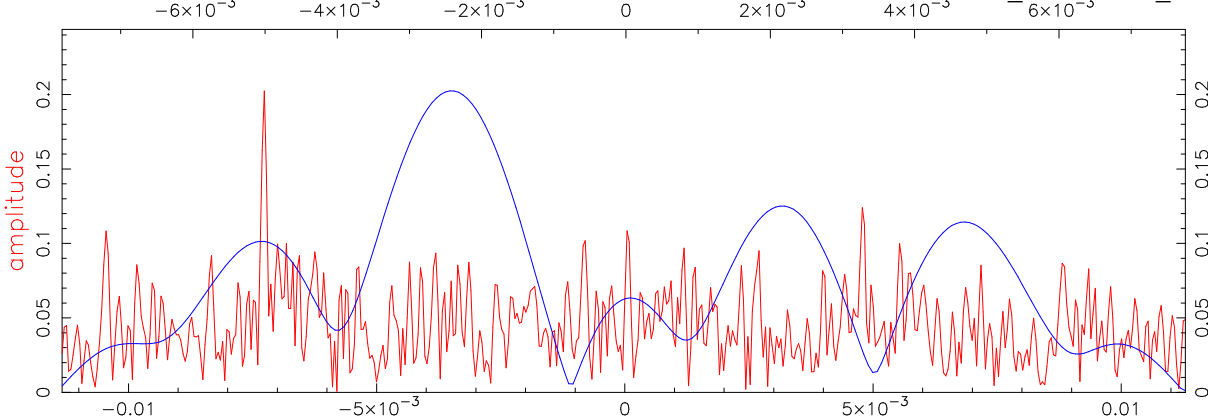
aux01

0133+476.3MP1AB, No0916, lo

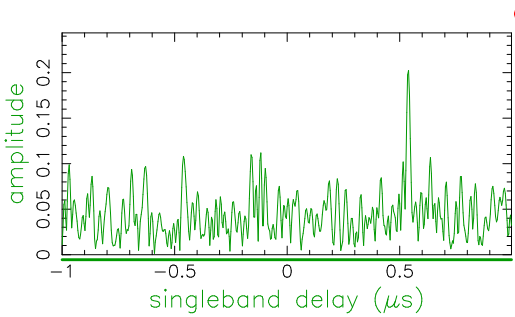
VLBA\_LA - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

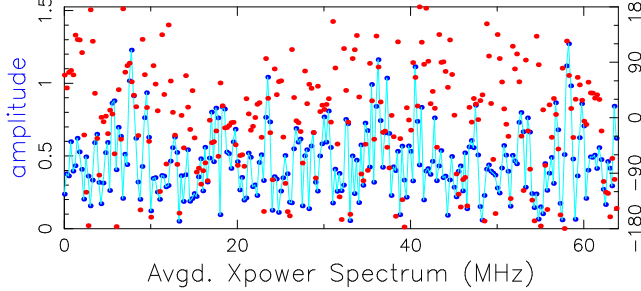
Fringe quality 0



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

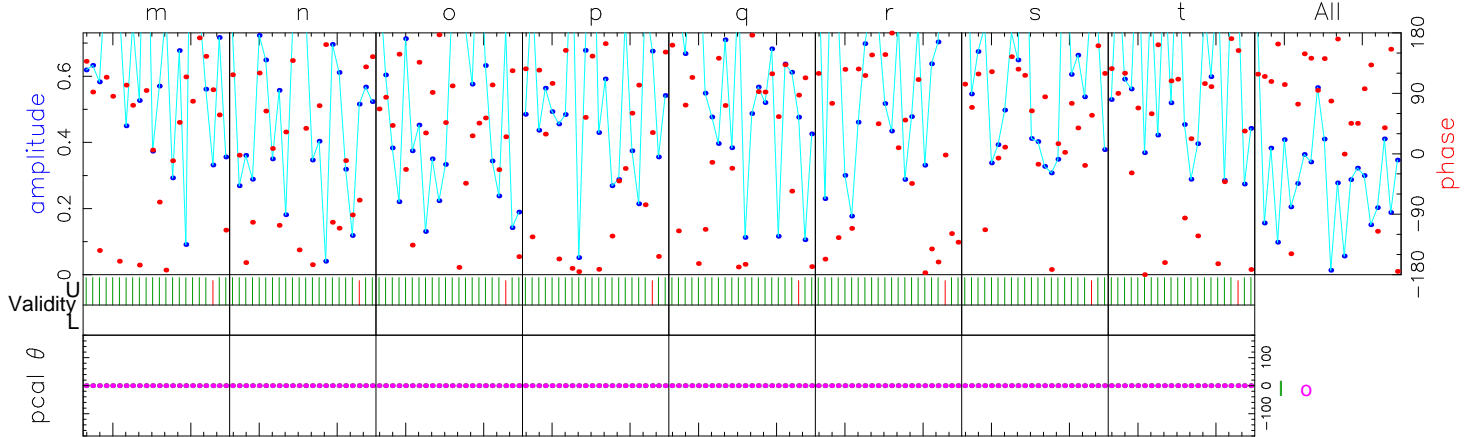


delay rate (ns/s)



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°51'29.100073"

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
	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	
									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 45.3 Search (512X32) 0.200 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 90.4 79.1 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 27.3 Inc. seg. avg. 0.267 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.9 47.7 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

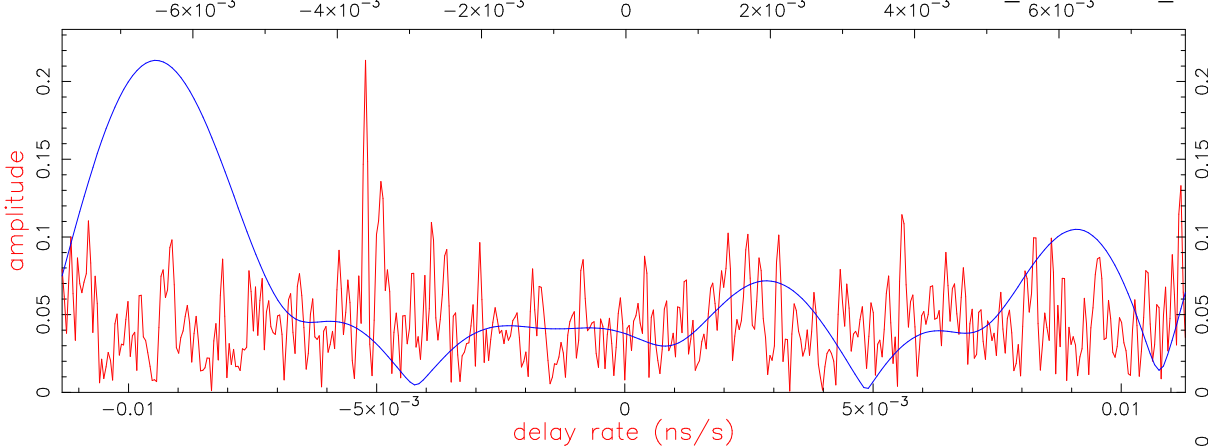
aux01

0133+476.3MP1AB, No0916, mo

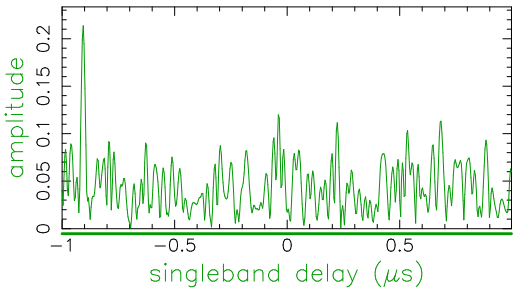
VLBA\_MK - VLBA\_OV, fgroup W, pol LL

multiband delay ( $\mu$ s)

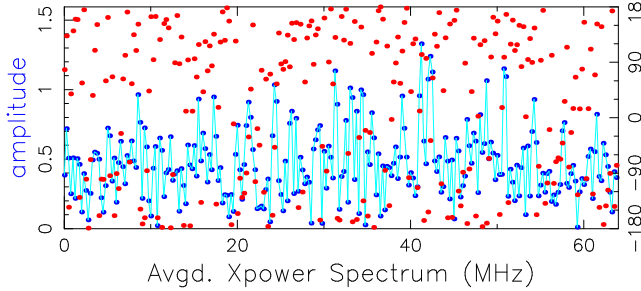
Fringe quality 0



SNR 6.2  
 Int time 112.059  
 Amp 0.234  
 Phase -137.8  
 PFD 4.0e-02  
 Delays (us)  
 SBD -0.906468  
 MBD -0.006521  
 Fringe rate (Hz)  
 -0.450108  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

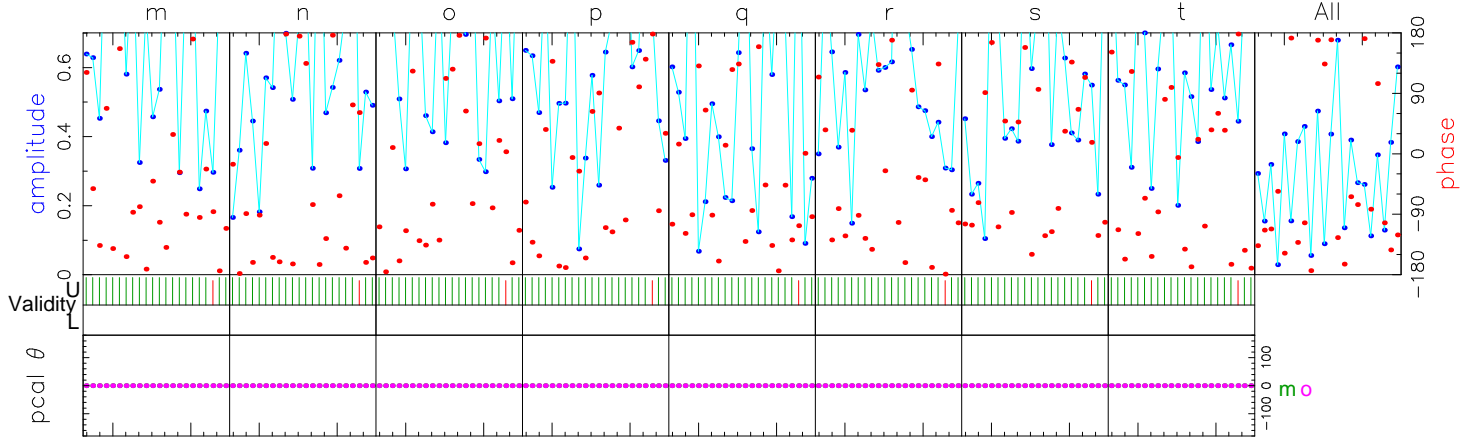


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113053  
 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
	-129.7	-167.4	-130.4	-147.2	-107.3	-124.0	-145.1	-161.6	Phase	-137.8
	0.3	0.3	0.3	0.1	0.3	0.2	0.2	0.2	Ampl.	0.2
	248.8	24.9	382.5	62.4	374.7	432.9	494.8	471.0	Sbd box	24.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	-9.85112443296E+03		Apriori delay (usec)		-9.85021166149E+03		Resid mbdelay (usec)		-6.52147E-03	+/- 1.8E-04
Sband delay (usec)	-9.85111812924E+03		Apriori clock (usec)		-2.4524275E+01		Resid sbdelay (usec)		-9.06468E-01	+/- 1.4E-03
Phase delay (usec)	-9.85021166593E+03		Apriori clockrate (us/s)		-4.9577204E-07		Resid phdelay (usec)		-4.44308E-06	+/- 6.0E-07
Delay rate (us/s)	4.27467476265E-01		Apriori rate (us/s)		4.27472701571E-01		Resid rate (us/s)		-5.22531E-06	+/- 9.2E-09
Total phase (deg)			Apriori accel (us/s/s)		2.99739789739E-05		Resid phase (deg)		-137.8	+/- 18.5

ph/seg (deg) 51.4 43.4 Search (512X32) 0.208 Pcdl mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 88.9 75.8 Interp. 0.000 Pcdl rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 21.7 26.2 Inc. seg. avg. 0.252 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 34.3 45.7 Inc. frq. avg. 0.226 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 m: az 45.2 el 23.3 pa -86.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) -3633.206 1051.746 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/mo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/mo.W.215.3MP1AB

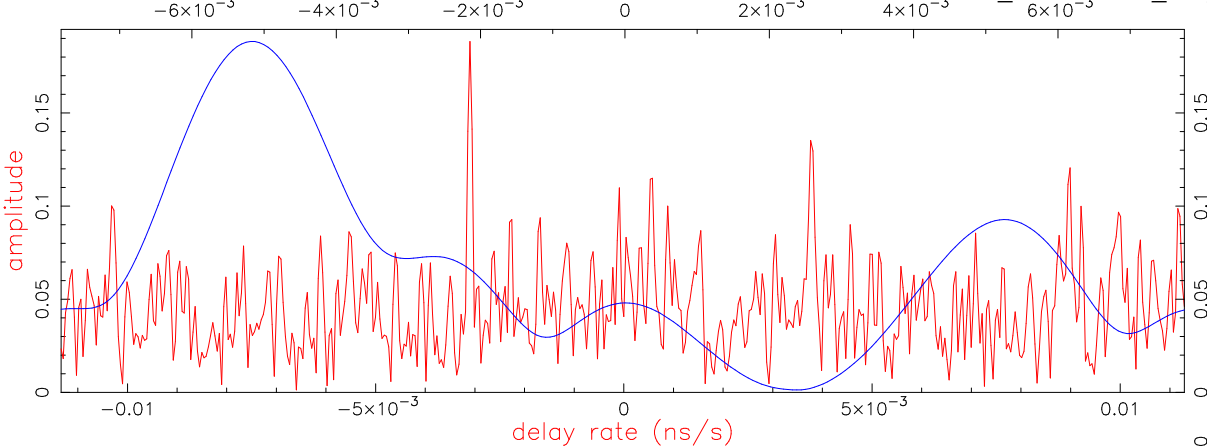
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, mo

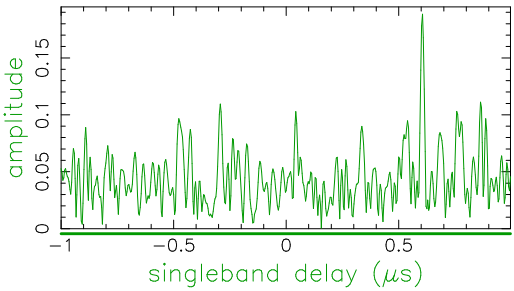
VLBA\_MK - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

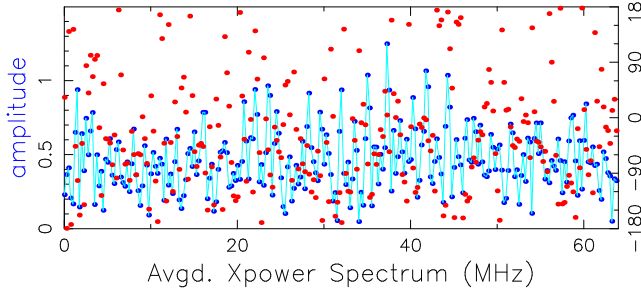


Fringe quality 0

SNR 5.5  
 Int time 112.059  
 Amp 0.195  
 Phase 126.1  
 PFD 9.3e-01  
 Delays (us)  
 SBD 0.604787  
 MBD -0.005186  
 Fringe rate (Hz)  
 -0.268390  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

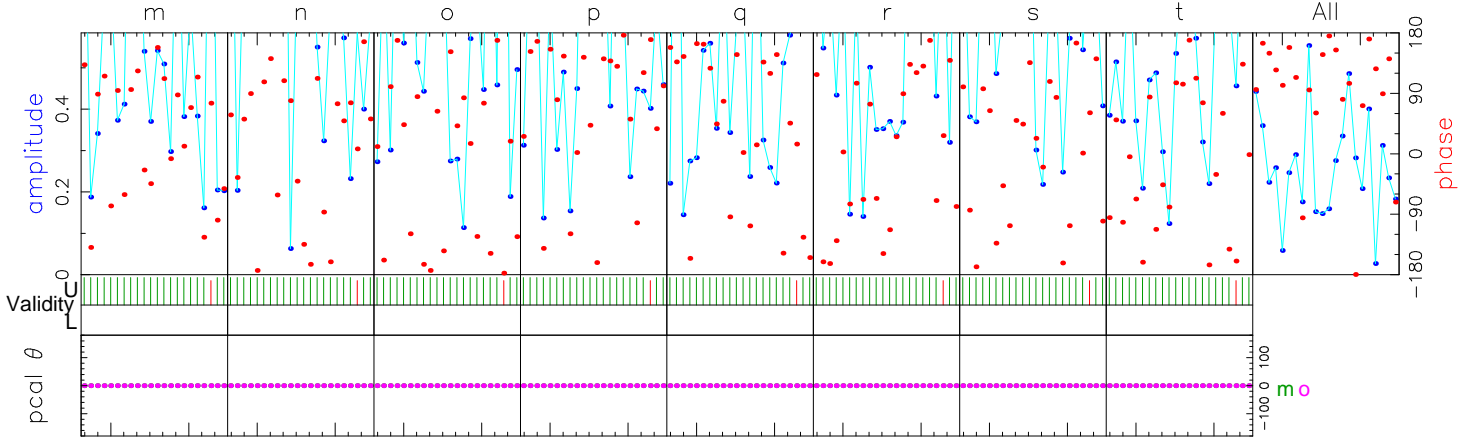


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113054  
 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
	94.0	105.9	-177.2	136.9	127.1	144.1	100.9	92.5	Phase	126.1
	0.3	0.2	0.3	0.4	0.2	0.2	0.2	0.1	Ampl.	0.2
	110.4	67.1	413.8	412.2	84.7	181.6	268.2	40.8	Sbd box	411.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-9.84960747253E+03	Apriori delay (usec)	-9.85021166149E+03	Resid mbdelay (usec)	-5.18604E-03	+/-	2.0E-04
Sband delay (usec)	-9.84960687474E+03	Apriori clock (usec)	-2.4524275E+01	Resid sbdelay (usec)	6.04787E-01	+/-	1.6E-03
Phase delay (usec)	-9.85021165742E+03	Apriori clockrate (us/s)	-4.9577204E-07	Resid phdelay (usec)	4.06592E-06	+/-	6.8E-07
Delay rate (us/s)	4.27469585834E-01	Apriori rate (us/s)	4.27472701571E-01	Resid rate (us/s)	-3.11574E-06	+/-	1.0E-08
Total phase (deg)	-61.4	Apriori accel (us/s/s)	2.99739789739E-05	Resid phase (deg)	126.1	+/-	21.0

ph/seg (deg)	RMS 56.9	Theor. 49.2	Amplitude Search (512X32)	0.195 +/- 0.036	0.180	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	78.5	85.8	Interp.	0.000	0.180	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	33.8	29.6	Inc. seg. avg.	0.199	0.197	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	46.4	51.7	Inc. frq. avg.	0.197	0.197	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

m: az 45.2 el 23.3 pa -86.1 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) -3633.206 1051.746 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/mo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/mo.W.218.3MP1AB

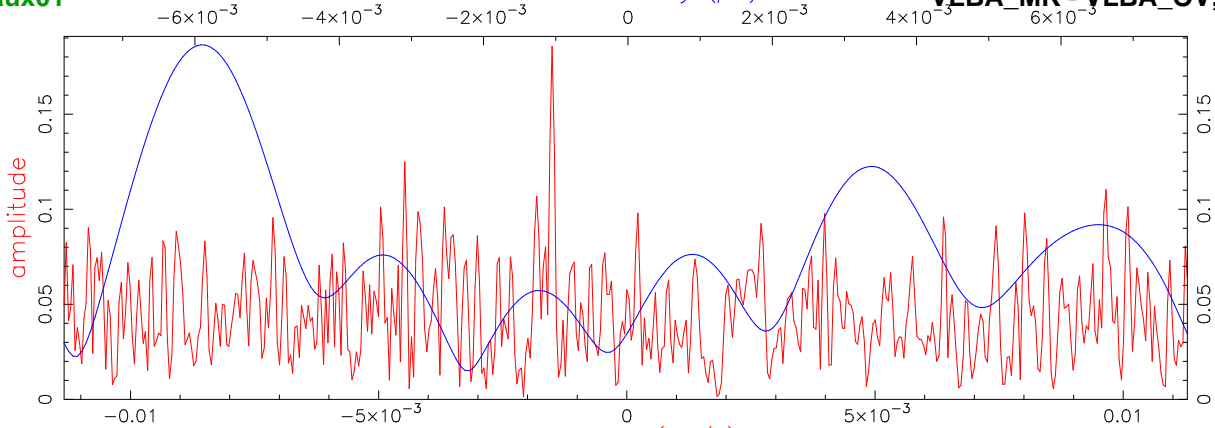
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, mo

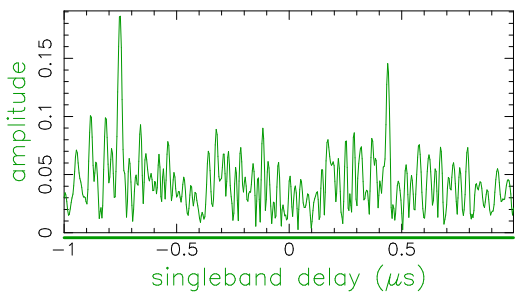
VLBA\_MK - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

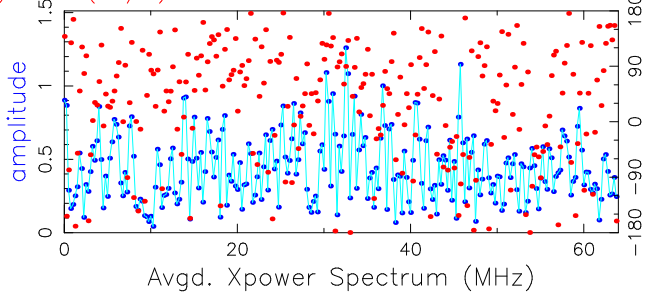


Fringe quality 0

SNR 5.5  
 Int time 112.059  
 Amp 0.191  
 Phase 119.7  
 PFD 9.1e-01  
 Delays (us)  
 SBD -0.751876  
 MBD -0.005810  
 Fringe rate (Hz)  
 -0.129659  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

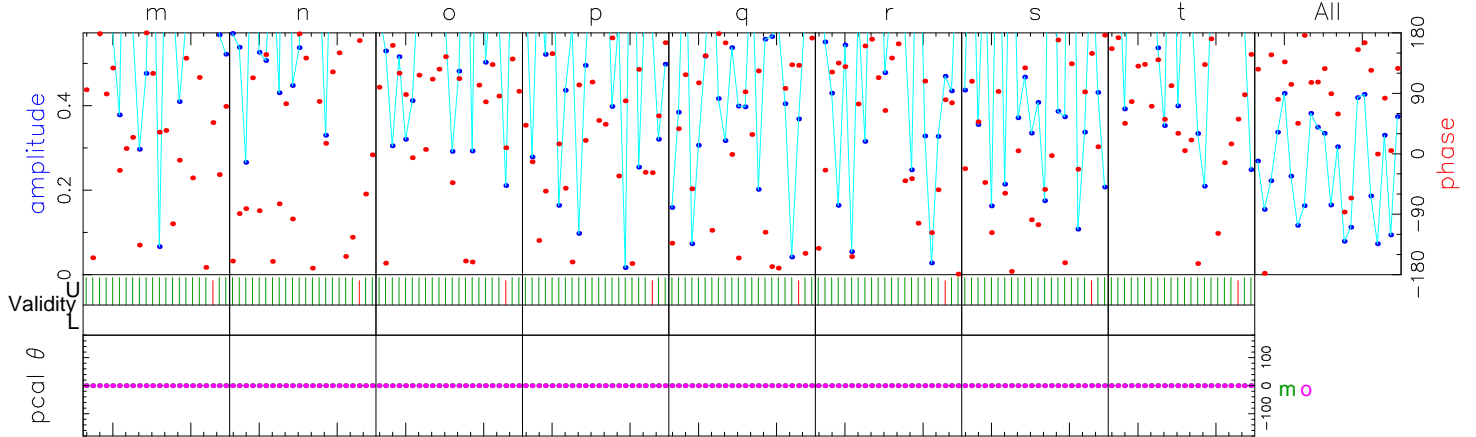


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113055  
 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		
m	0	0	0	0	0	0	0	0		
o	0	0	0	0	0	0	0	0		
m:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-9.85096747124E+03	Apriori delay (usec)	-9.85021166149E+03	Resid mbdelay (usec)	-5.80975E-03	+/-	2.0E-04
Sband delay (usec)	-9.85096353749E+03	Apriori clock (usec)	-2.4524275E+01	Resid sbdelay (usec)	-7.51876E-01	+/-	1.6E-03
Phase delay (usec)	-9.85021165763E+03	Apriori clockrate (us/s)	-4.9577204E-07	Resid phdelay (usec)	3.85950E-06	+/-	6.7E-07
Delay rate (us/s)	4.27471196354E-01	Apriori rate (us/s)	4.27472701571E-01	Resid rate (us/s)	-1.50522E-06	+/-	1.0E-08
Total phase (deg)	-67.8	Apriori accel (us/s/s)	2.99739789739E-05	Resid phase (deg)	119.7	+/-	20.9

ph/seg (deg)	69.9	Theor.	Amplitude	0.191 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	70.9	49.0	Search (512X32)	0.185	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	41.2	85.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	61.7	29.5	Inc. seg. avg.	0.186	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
		51.6	Inc. frq. avg.	0.194	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

m: az 45.2 el 23.3 pa -86.1      o: az 56.8 el 59.3 pa -95.8      u,v (fr/asec) -3633.206 1051.746      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/mo..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/mo.W.219.3MP1AB

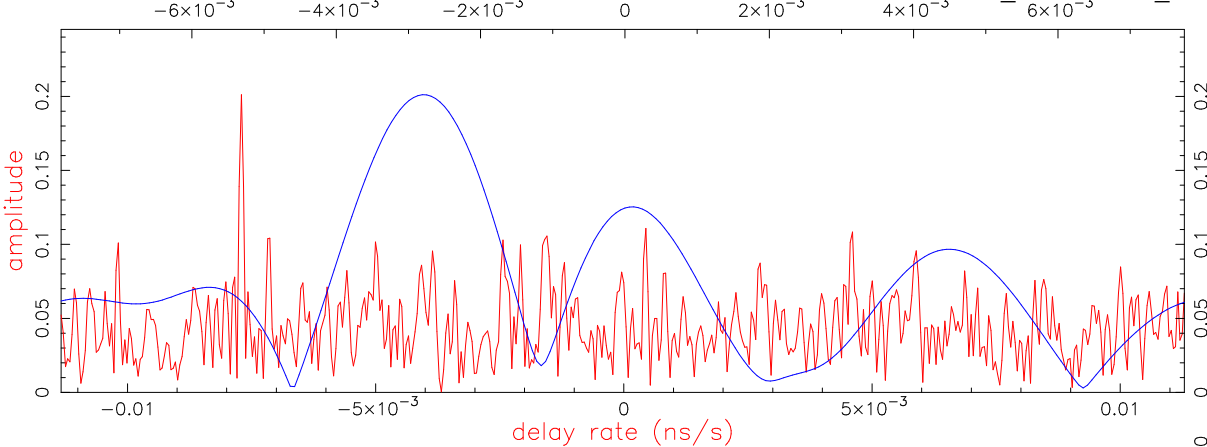
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, mo

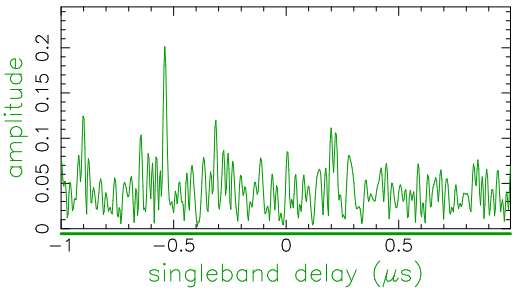
VLBA\_MK - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

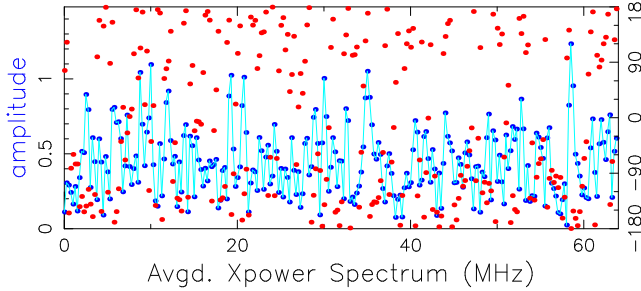


Fringe quality 0

SNR 5.8  
 Int time 112.059  
 Amp 0.245  
 Phase 134.2  
 PFD 3.1e-01  
 Delays (us)  
 SBD -0.539109  
 MBD -0.002790  
 Fringe rate (Hz)  
 -0.664660  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

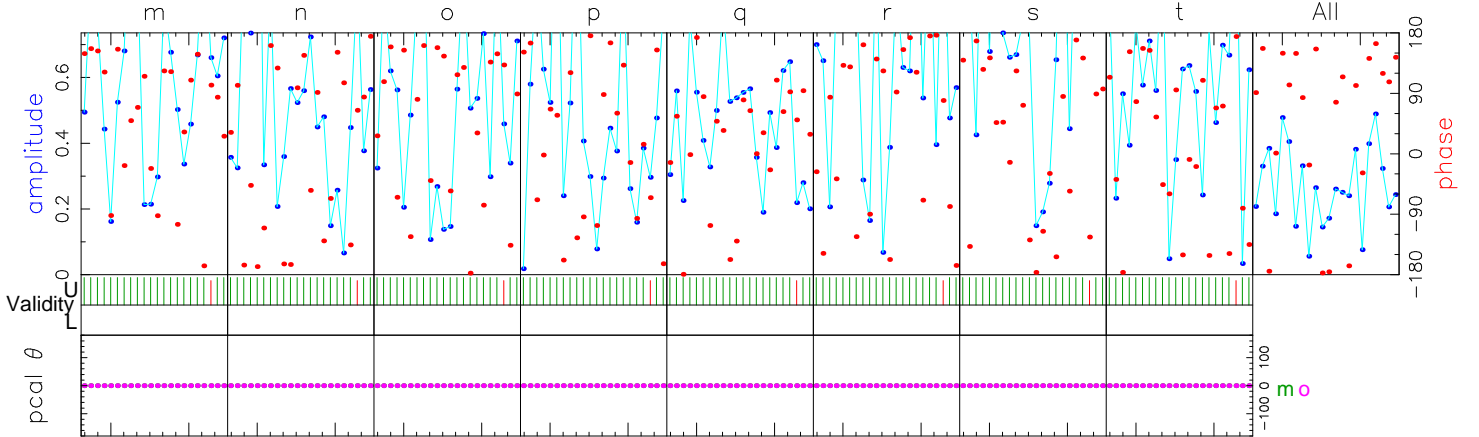


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113056  
 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
	114.8	175.1	137.5	152.0	57.1	154.6	127.6	147.6	Phase	134.2
	0.4	0.3	0.3	0.1	0.3	0.4	0.4	0.2	Ampl.	0.3
	464.6	124.8	238.7	243.7	281.8	118.9	483.8	487.3	Sbd box	119.0
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-9.85074570161E+03	Apriori delay (usec)	-9.85021166149E+03	Resid mbdelay (usec)	-2.79012E-03	+/-	1.9E-04
Sband delay (usec)	-9.85075076999E+03	Apriori clock (usec)	-2.4524275E+01	Resid sbdelay (usec)	-5.39109E-01	+/-	1.5E-03
Phase delay (usec)	-9.85021165716E+03	Apriori clockrate (us/s)	-4.9577204E-07	Resid phdelay (usec)	4.32721E-06	+/-	6.3E-07
Delay rate (us/s)	4.2746498526E-01	Apriori rate (us/s)	4.27472701571E-01	Resid rate (us/s)	-7.71604E-06	+/-	9.8E-09
Total phase (deg)	-53.3	Apriori accel (us/s/s)	2.99739789739E-05	Resid phase (deg)	134.2	+/-	19.7

ph/seg (deg)	64.6	Theor.	46.2	Amplitude	0.245 +/- 0.042	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	68.1		80.6	Search (512X32)	0.193	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	38.7		27.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	42.8		48.6	Inc. seg. avg.	0.250	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.255	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

m: az 45.2 el 23.3 pa -86.1      o: az 56.8 el 59.3 pa -95.8      u,v (fr/asec) -3633.206 1051.746      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/mo..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/mo.W.220.3MP1AB

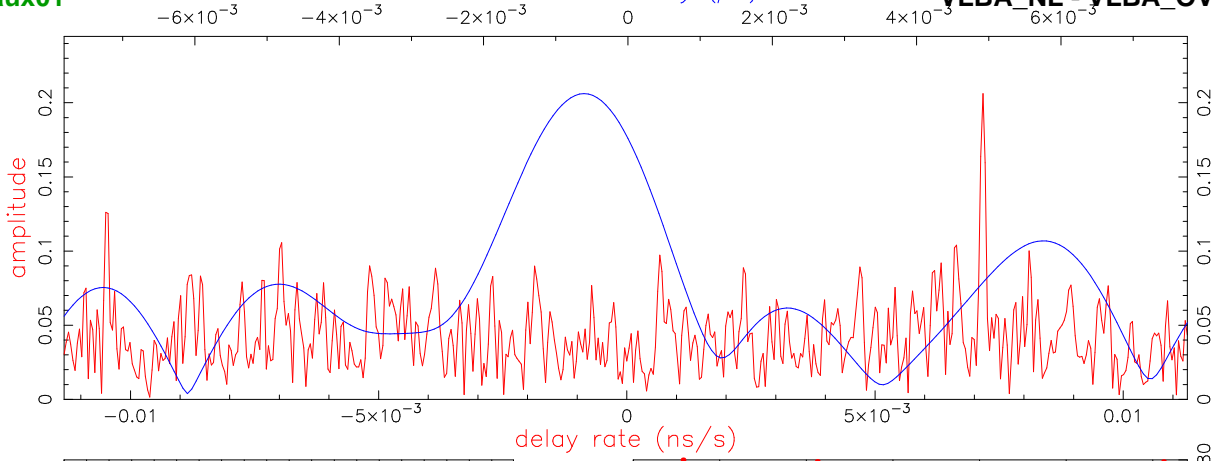
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, no

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

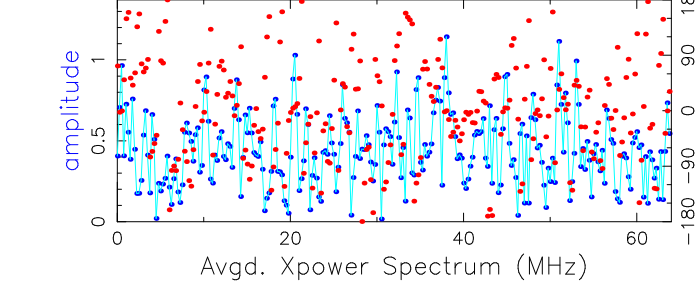
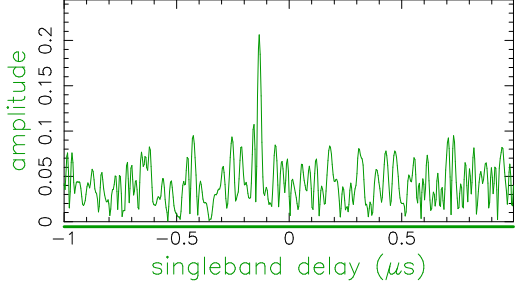
multiband delay ( $\mu$ s)



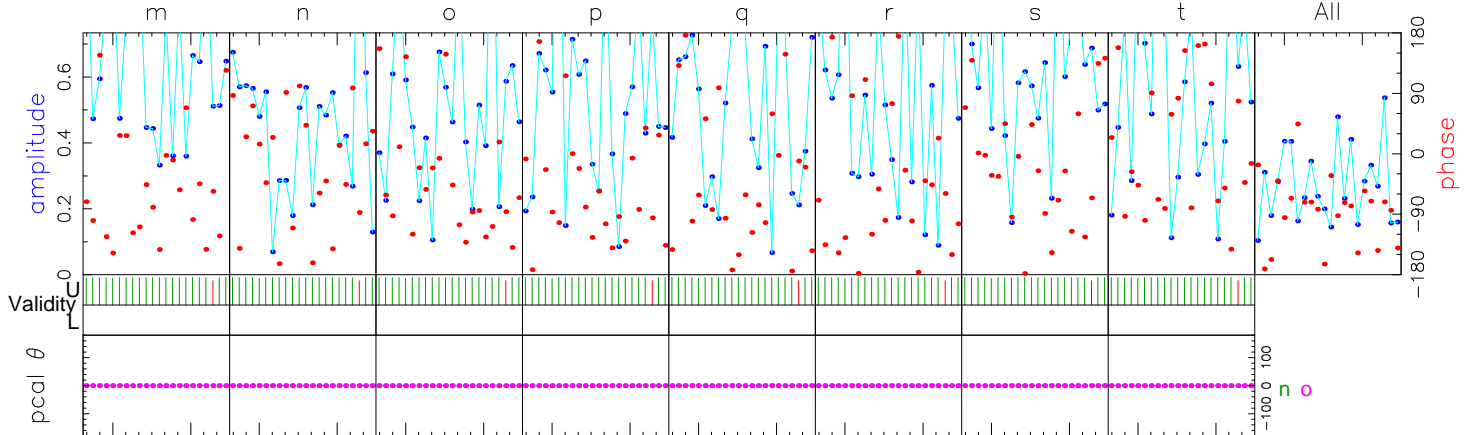
Fringe quality 0

SNR 6.0  
 Int time 111.924  
 Amp 0.245  
 Phase -85.7  
 PFD 1.4e-01  
 Delays (us)  
 SBD -0.133223  
 MBD -0.000622  
 Fringe rate (Hz) 0.618003  
 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  
 2025:041:113059  
 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
	-90.4	-9.7	-91.0	-81.2	-125.2	-111.2	-23.2	-80.9	Phase	-85.7
	0.4	0.1	0.3	0.4	0.3	0.3	0.2	0.2	Ampl.	0.3
	223.7	356.8	465.1	357.8	490.8	286.7	190.1	194.7	Sbd box	222.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
n	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	2.51943620655E+03		Apriori delay (usec)		2.51956182834E+03		Resid mbdelay (usec)		-6.21789E-04	+/- 1.8E-04
Sband delay (usec)	2.51942860534E+03		Apriori clock (usec)		-2.5345884E+01		Resid sbdelay (usec)		-1.33223E-01	+/- 1.4E-03
Phase delay (usec)	2.51956182557E+03		Apriori clockrate (us/s)		-1.8401209E-07		Resid phdelay (usec)		-2.76262E-06	+/- 6.2E-07
Delay rate (us/s)	-3.55545774269E-01		Apriori rate (us/s)		-3.5552948670E-01		Resid rate (us/s)		7.17440E-06	+/- 9.5E-09
Total phase (deg)	235.8		Apriori accel (us/s/s)		-8.41670514306E-06		Resid phase (deg)		-85.7	+/- 19.2

ph/seg (deg) 51.5 45.0 Search (512X32) 0.203 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 63.8 78.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.7 27.1 Inc. seg. avg. 0.247 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 34.5 47.4 Inc. frq. avg. 0.257 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 n: az 51.3 el 79.0 pa -119.7 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 3035.295 -384.215 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/no..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/no.W.223.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

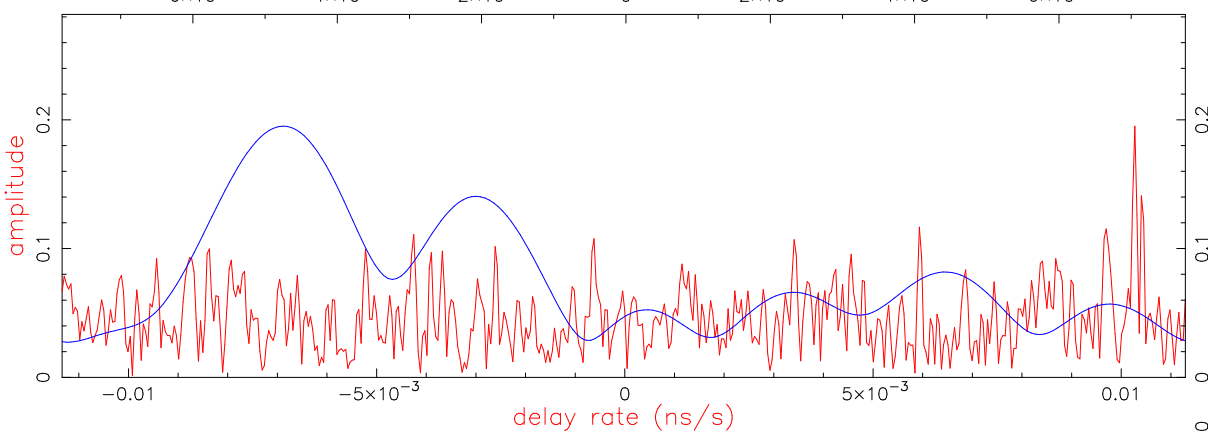
aux01

0133+476.3MP1AB, No0916, no

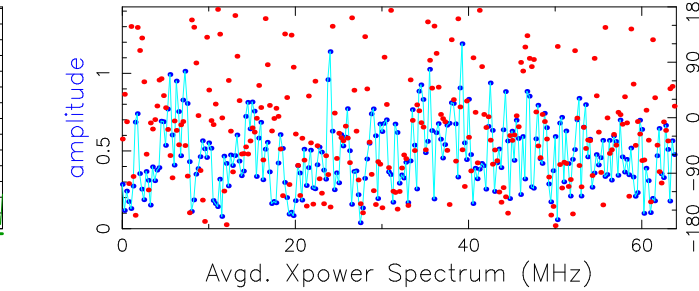
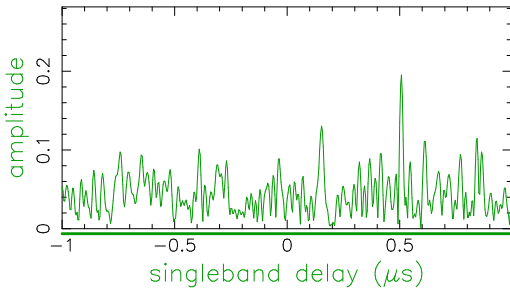
VLBA\_NL - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

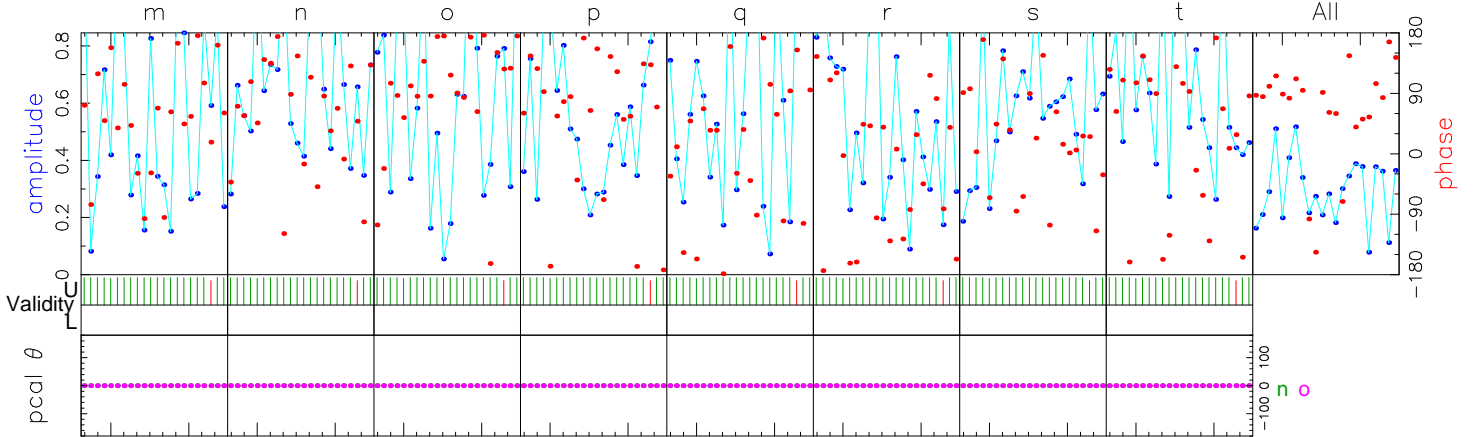


SNR 5.7  
 Int time 111.924  
 Amp 0.282  
 Phase 96.9  
 PFD 5.8e-01  
 Delays (us)  
 SBD 0.506994  
 MBD -0.004776  
 Fringe rate (Hz)  
 0.884554  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113100  
 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		
n	0	0	0	0	0	0	0	0		
o	0	0	0	0	0	0	0	0		
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	2.52007267750E+03	Apriori delay (usec)	2.51956182834E+03	Resid mbdelay (usec)	-4.77584E-03	+/-	1.9E-04
Sband delay (usec)	2.52006882259E+03	Apriori clock (usec)	-2.5345884E+01	Resid sbdelay (usec)	5.06994E-01	+/-	1.5E-03
Phase delay (usec)	2.51956183146E+03	Apriori clockrate (us/s)	-1.8401209E-07	Resid phdelay (usec)	3.12445E-06	+/-	6.5E-07
Delay rate (us/s)	-3.55542679873E-01	Apriori rate (us/s)	-3.55552948670E-01	Resid rate (us/s)	1.02688E-05	+/-	1.0E-08
Total phase (deg)	58.4	Apriori accel (us/s/s)	-8.41670514306E-06	Resid phase (deg)	96.9	+/-	20.2

ph/seg (deg)	64.1	Theor.	47.4	Amplitude	0.282 +/- 0.050	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	77.4	Search (512X32)	0.192	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	42.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	56.9	Inc. seg. avg.	0.317	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
		Inc. frq. avg.	0.291	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

n: az 51.3 el 79.0 pa -119.7      o: az 56.8 el 59.3 pa -95.8      u,v (fr/asec) 3035.295 -384.215      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/no..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/no.W.228.3MP1AB

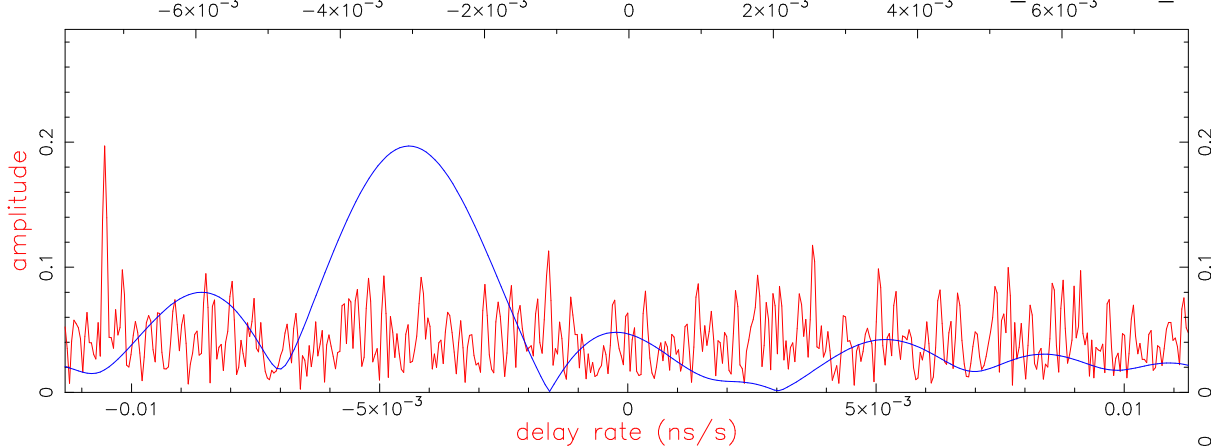
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, no

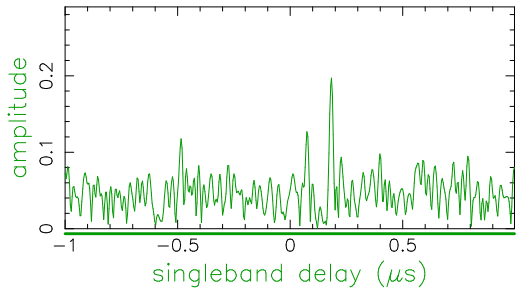
VLBA\_NL - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

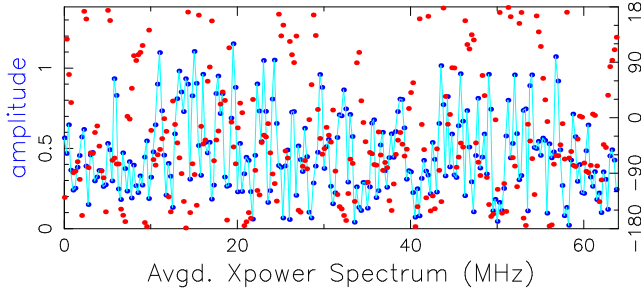


Fringe quality 0

SNR 5.7  
 Int time 111.924  
 Amp 0.290  
 Phase -98.4  
 PFD 5.0e-01  
 Delays (us)  
 SBD 0.182882  
 MBD -0.003068  
 Fringe rate (Hz)  
 -0.908093  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

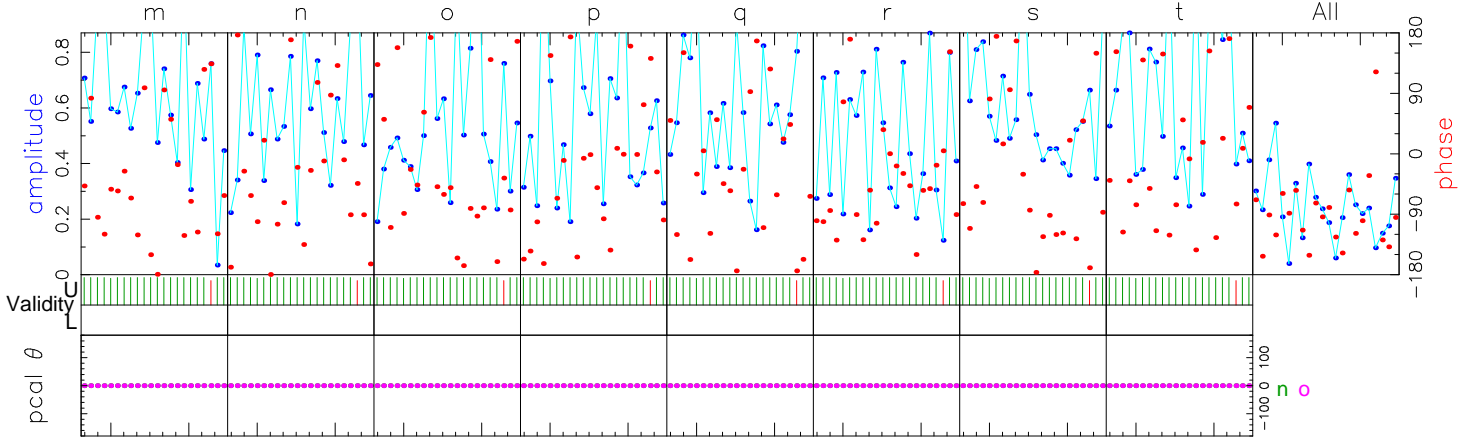


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113101  
 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
	-104.5	-93.4	-111.2	-83.8	-103.3	-84.6	-87.8	-116.5	Phase	-98.4
	0.3	0.3	0.4	0.2	0.2	0.4	0.4	0.3	Ampl.	0.3
	365.3	11.6	422.1	442.1	32.0	438.3	177.8	131.1	Sbd box	303.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
n	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	2.51974626014E+03		Apriori delay (usec)	2.51956182834E+03	Resid mbdelay (usec)	-3.06819E-03	+/-	1.9E-04		
Sband delay (usec)	2.51974470984E+03		Apriori clock (usec)	-2.5345884E+01	Resid sbdelay (usec)	1.82882E-01	+/-	1.5E-03		
Phase delay (usec)	2.51956182516E+03		Apriori clockrate (us/s)	-1.8401209E-07	Resid phdelay (usec)	-3.17390E-06	+/-	6.5E-07		
Delay rate (us/s)	-3.55563490732E-01		Apriori rate (us/s)	-3.5552948670E-01	Resid rate (us/s)	-1.05421E-05	+/-	9.9E-09		
Total phase (deg)		223.0	Apriori accel (us/s/s)	-8.41670514306E-06	Resid phase (deg)	-98.4	+/-	20.1		

ph/seg (deg) 44.7 47.1 Search (512X32) 0.195 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 65.0 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) 13.5 28.4 Inc. seg. avg. 0.271 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 22.0 49.5 Inc. frq. avg. 0.263 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 n: az 51.3 el 79.0 pa -119.7 o: az 56.8 el 59.3 pa -95.8 u, v (fr/asec) 3035.295 -384.215 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/no..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/no.W.233.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

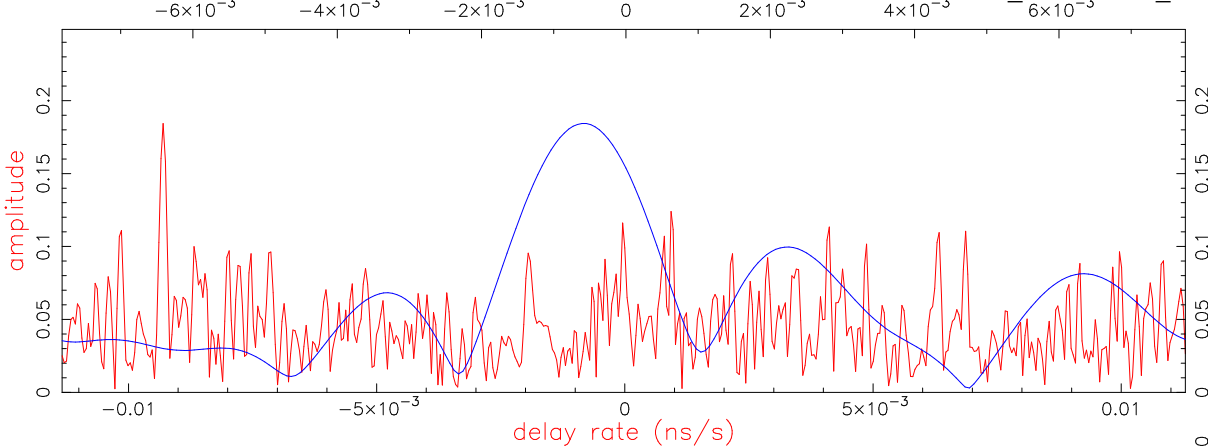
aux01

0133+476.3MP1AB, No0916, no

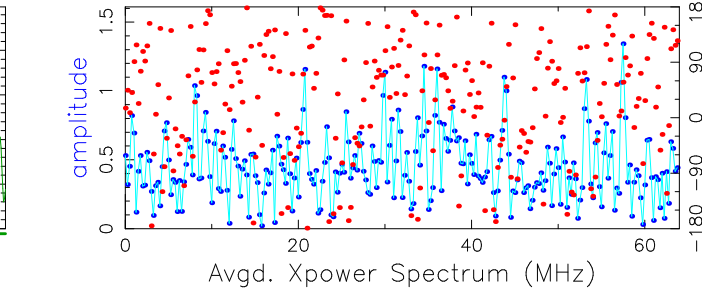
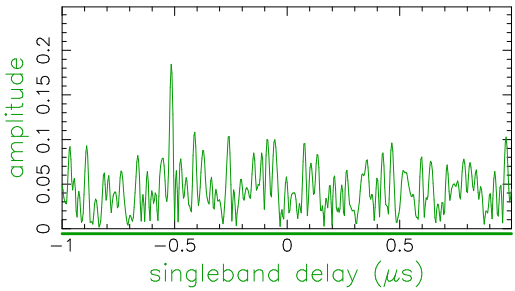
VLBA\_NL - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

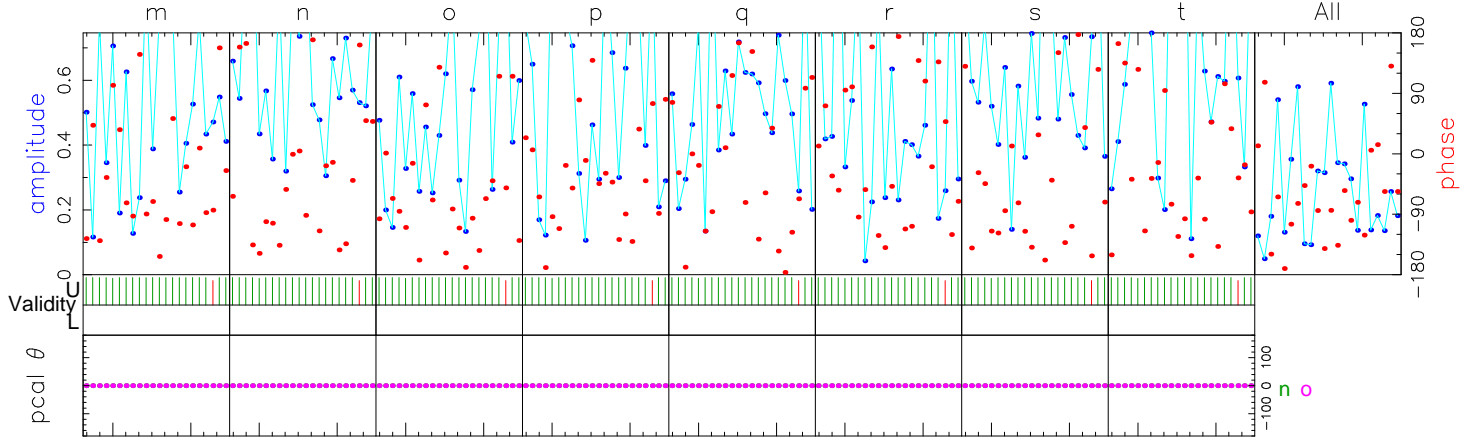


SNR 5.4  
 Int time 111.924  
 Amp 0.249  
 Phase -88.3  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.514652  
 MBD -0.000557  
 Fringe rate (Hz)  
 -0.801022  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113102  
 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		
n	0	0	0	0	0	0	0	0		
o	0	0	0	0	0	0	0	0		
n:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec) (SBD)	2.51904564639E+03				2.51956182834E+03				-5.56945E-04	+/- 2.0E-04
Sband delay (usec)	2.51904717584E+03				-2.5345884E+01				-5.14652E-01	+/- 1.6E-03
Phase delay (usec)	2.51956182549E+03				-1.8401209E-07				-2.84832E-06	+/- 6.9E-07
Delay rate (us/s)	-3.55562247746E-01				-3.55552948670E-01				-9.29908E-06	+/- 1.1E-08
Total phase (deg)			233.1		-8.41670514306E-06				-88.3	+/- 21.4
ph/seg (deg)	69.0	50.1			0.183					
amp/seg (%)	99.4	87.4			0.000					
ph/frq (deg)	30.8	30.2			0.262					
amp/frq (%)	35.7	52.7			0.241					
n: az 51.3 el 79.0 pa -119.7	o: az 56.8 el 59.3 pa -95.8		u, v (fr/asec) 3035.295 -384.215		PCal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/..no.W.238.3MP1AB		PCal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled		ion window (TEC) 0.00 0.00	

Validity  
 pcal  $\theta$   
 n o

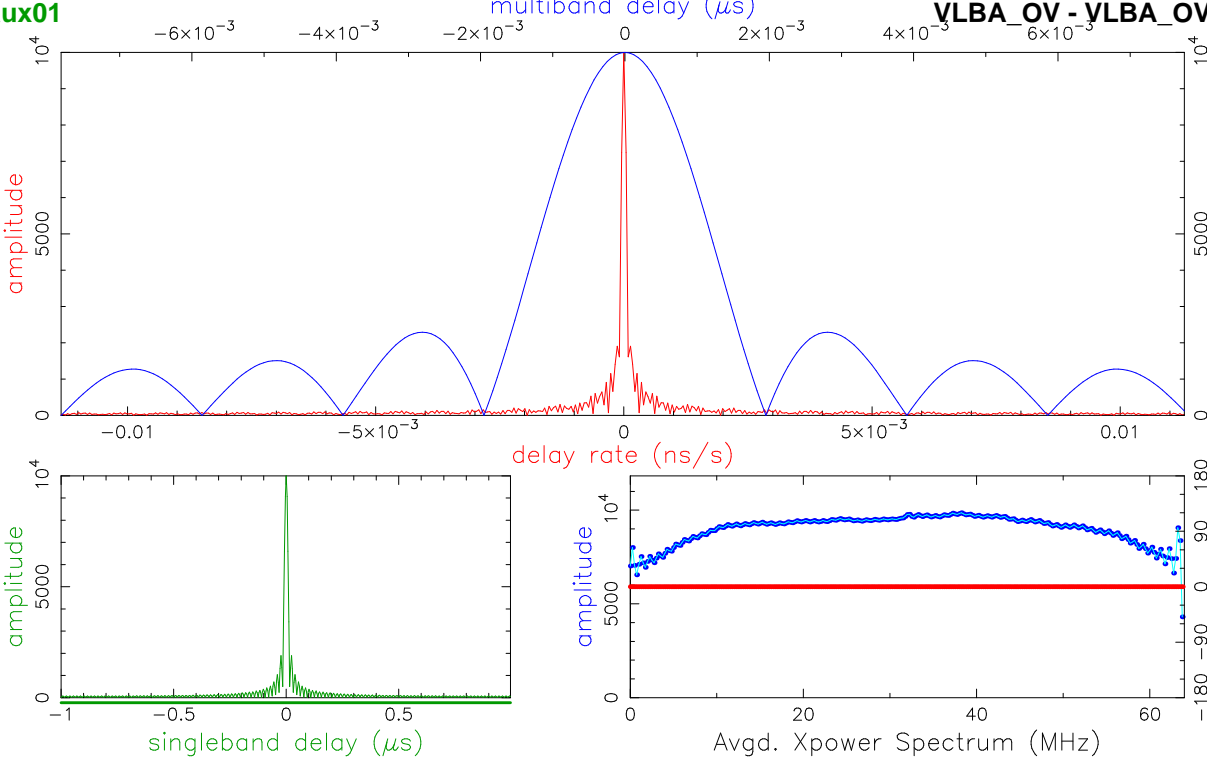


Mk4/DiFX fourfit 3.25 rev 0

aux01

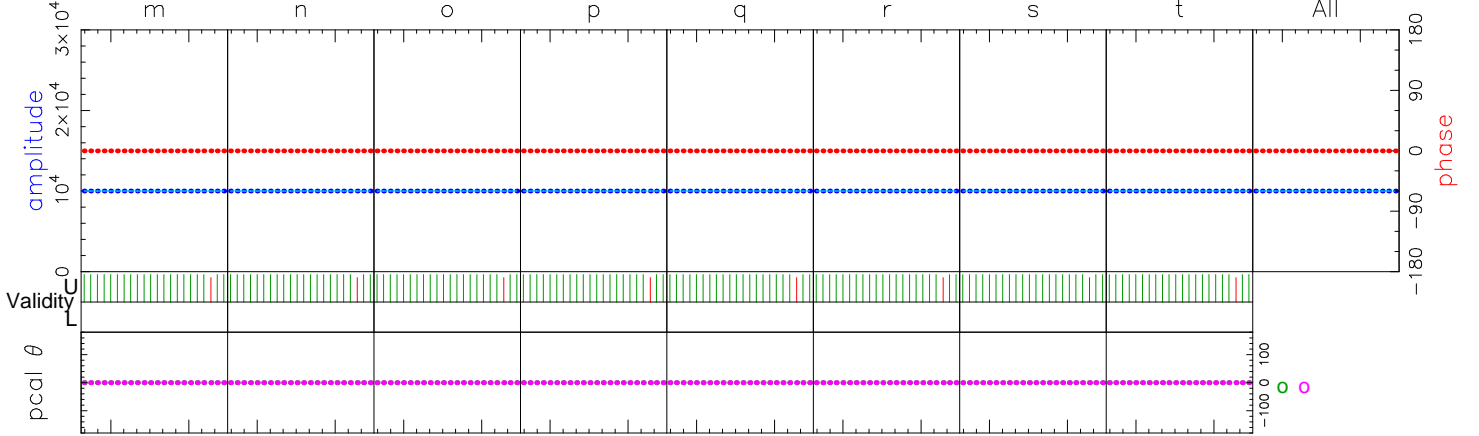
0133+476.3MP1AB, No0916, oo

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



Fringe quality 9  
 SNR 289481.6  
 Int time 112.059  
 Amp 10000.001  
 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  
 2025:041:113106  
 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
Ampl.	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0
Sbd box	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0
APs used	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0
PC freqs	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
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

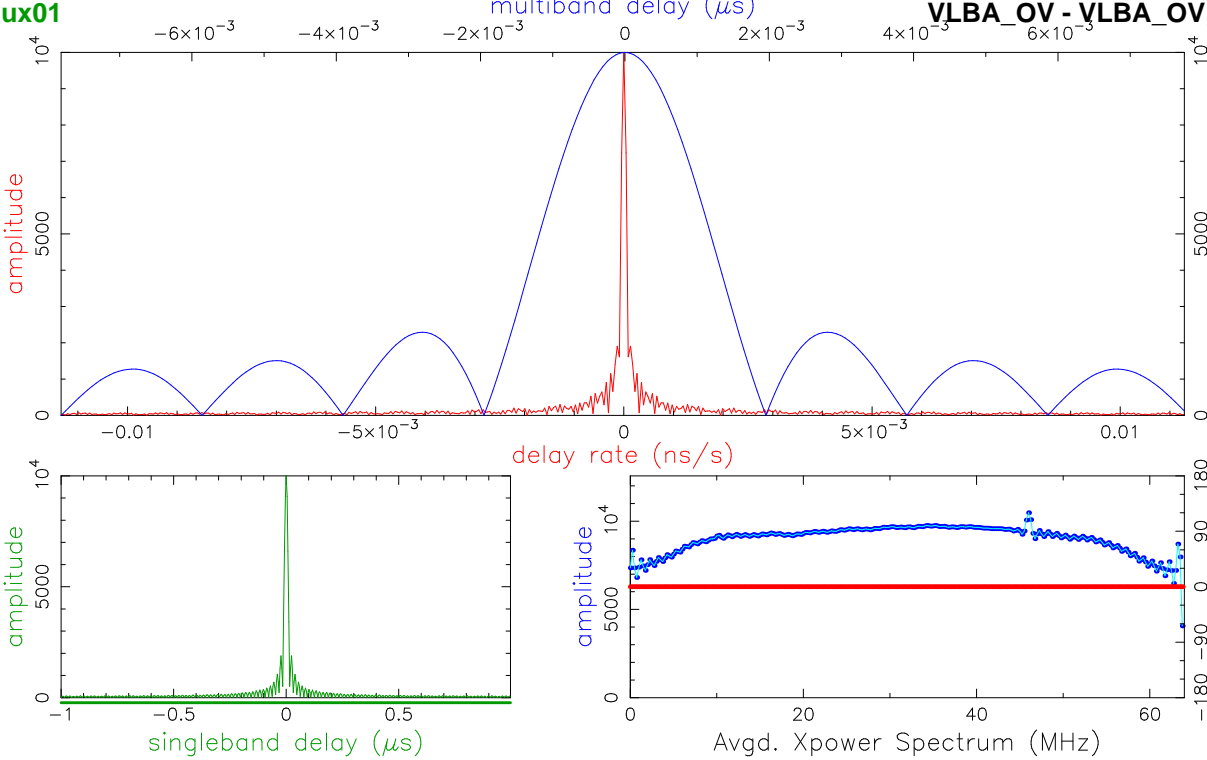
RMS Theor. Amplitude 10000.001 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (512X32) 10000.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 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. 10000.001 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 o: az 56.8 el 59.3 pa -95.8 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oo.W.241.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

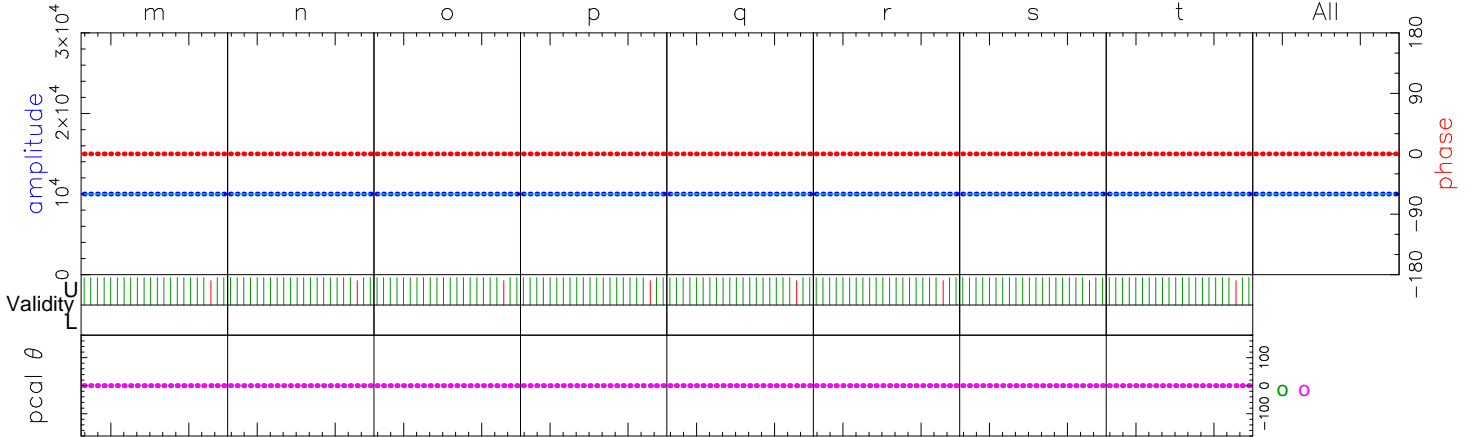
0133+476.3MP1AB, No0916, oo

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



Fringe quality 9  
 SNR 289481.7  
 Int time 112.059  
 Amp 10000.001  
 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  
 2025:041:113108  
 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		
o	0	0	0	0	0	0	0	0	Ampl.	10000.0
o	0	0	0	0	0	0	0	0	Sbd box	257.0
o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
o	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Chan ids	
									Tracks	
Group delay (usec) (SBD)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		+/- 3.7E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		+/- 3.0E-08
Phase delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		+/- 1.3E-11
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		+/- 2.0E-13
Total phase (deg)			0.0							+/- 0.0
ph/seg (deg)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
o: az 56.8 el 59.3 pa -95.8	o: az 56.8 el 59.3 pa -95.8		u,v (fr/asec) 0.000 0.000						simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/oo..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/oo.W.245.3MP1AB							

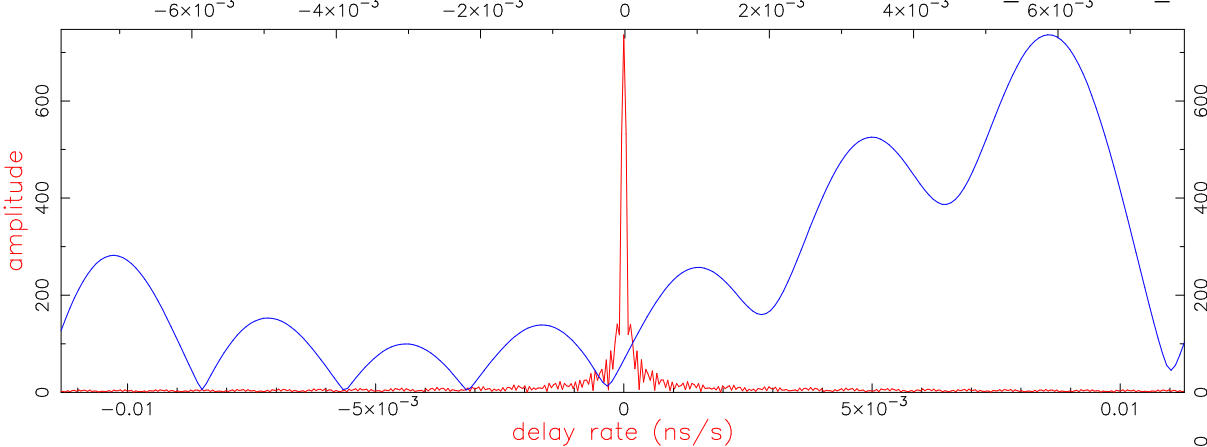
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oo

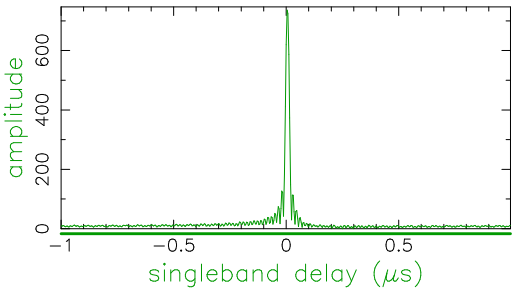
VLBA\_OV - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

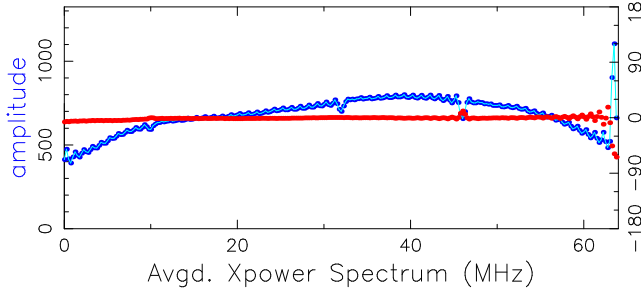


Fringe quality 5  
 Error code G  
 SNR 21635.3  
 Int time 112.059  
 Amp 747.380  
 Phase -5.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005496  
 MBD 0.005899  
 Fringe rate (Hz)  
 -0.000001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

delay rate (ns/s)

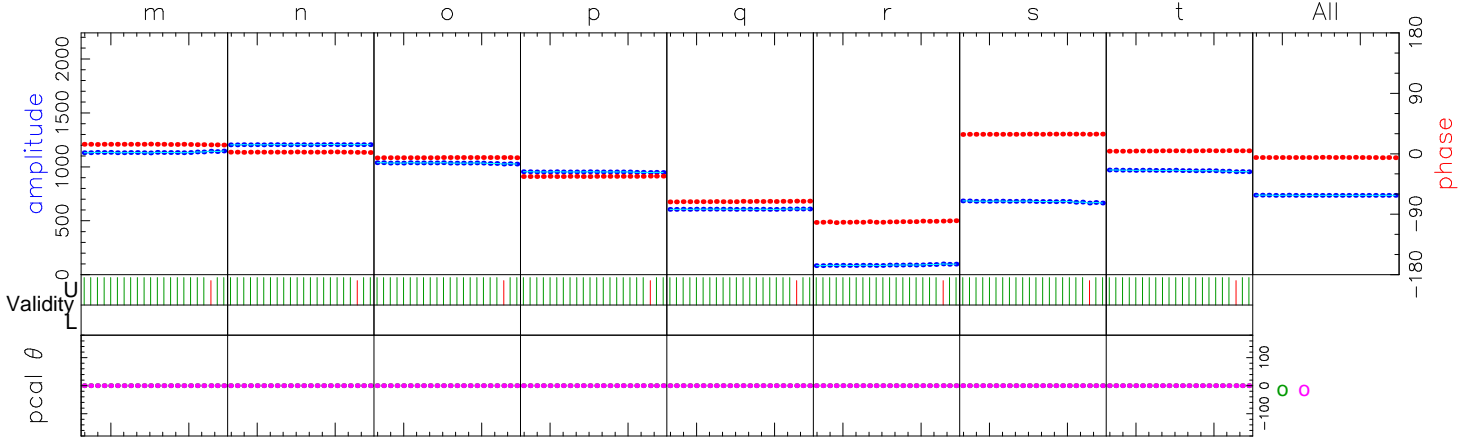


singleband delay ( $\mu$ s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113109  
 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
	13.9	2.4	-5.7	-33.6	-71.0	-101.1	29.1	4.3	Phase	-5.5
	1134.5	1205.3	1034.4	952.2	607.3	89.8	678.1	964.8	Ampl.	833.3
	258.4	258.1	258.4	258.2	258.3	260.7	258.3	258.0	Sbd box	258.4
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
o									Tracks	

Group delay (usec) (SBD)	5.89931250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	5.89931E-03	+/-	5.0E-08
Sband delay (usec)	5.49600000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	5.49600E-03	+/-	4.0E-07
Phase delay (usec)	-1.78232003304E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.78232E-07	+/-	1.7E-10
Delay rate (us/s)	-1.41711523917E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.41712E-11	+/-	2.6E-12
Total phase (deg)	-5.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-5.5	+/-	0.0

ph/seg (deg) 0.1 0.0 Theor. Amplitude 747.380 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 1.5 0.0 Search (512X32) 736.378 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.6 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.0 0.0 Inc. seg. avg. 736.190 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 o: az 56.8 el 59.3 pa -95.8 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oo.W.250.3MP1AB simultaneous interpolator

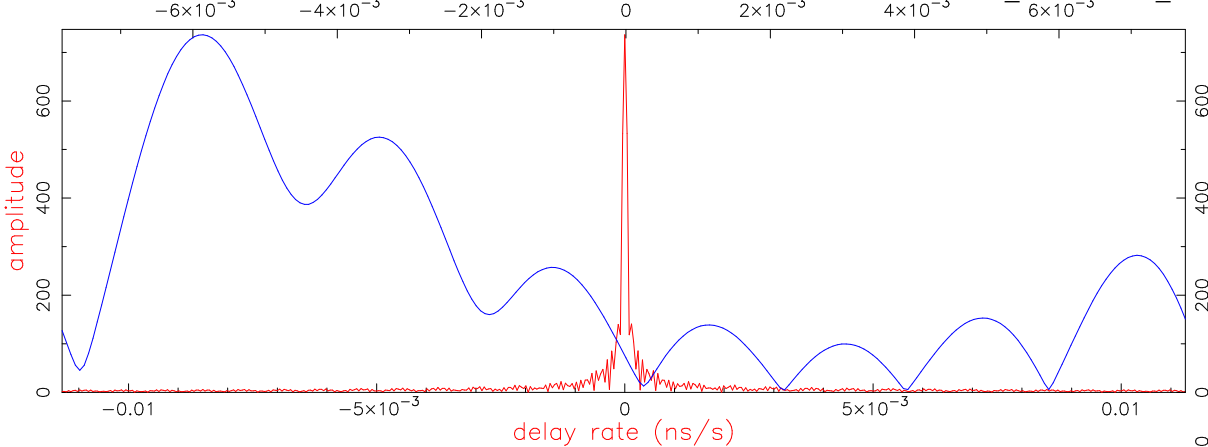
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oo

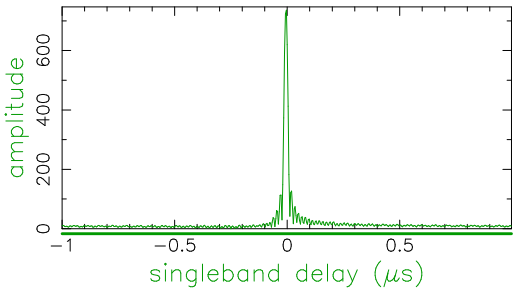
VLBA\_OV - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

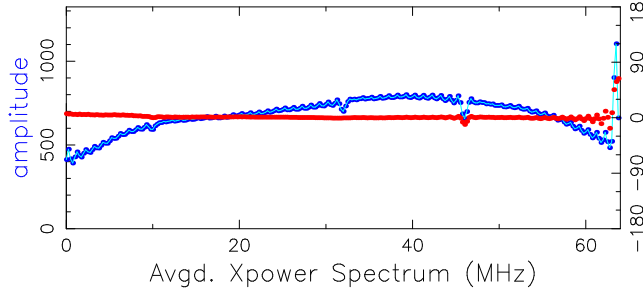


Fringe quality 5  
 Error code G  
 SNR 21635.3  
 Int time 112.059  
 Amp 747.380  
 Phase 5.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.005496  
 MBD -0.005899  
 Fringe rate (Hz)  
 0.000001  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

delay rate (ns/s)

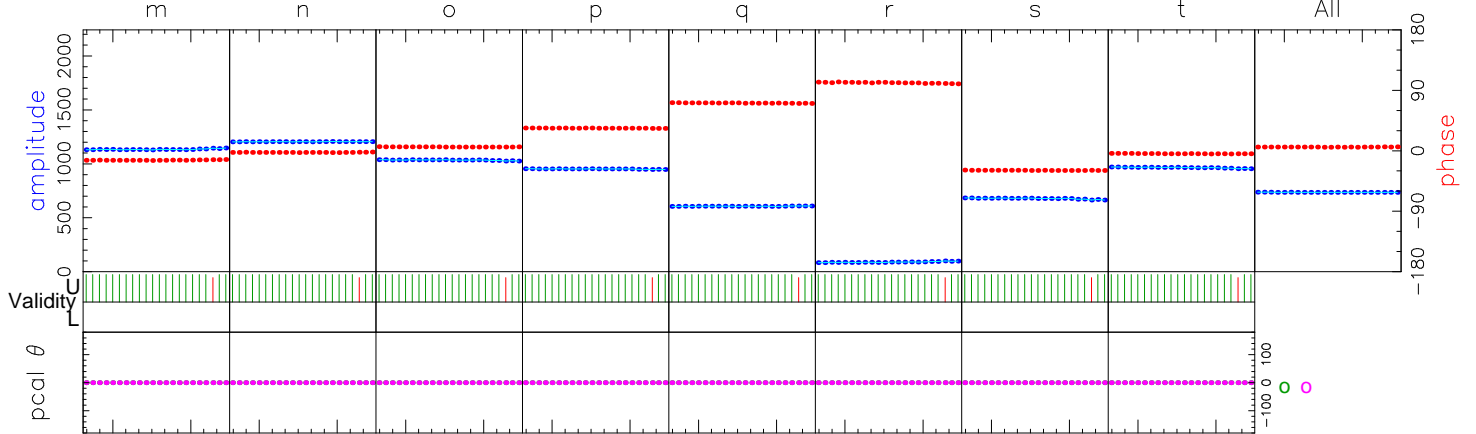


singleband delay ( $\mu$ s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113110  
 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
	-13.9	-2.4	5.7	33.6	71.0	101.1	-29.1	-4.3	Phase	5.5
	1134.5	1205.3	1034.4	952.2	607.3	89.8	678.1	964.8	Ampl.	833.3
	255.6	255.9	255.6	255.8	255.7	253.3	255.7	256.0	Sbd box	255.6
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.89931250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-5.89931E-03	+/-	5.0E-08
Sband delay (usec)	-5.49600000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-5.49600E-03	+/-	4.0E-07
Phase delay (usec)	1.78232003304E-07	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.78232E-07	+/-	1.7E-10
Delay rate (us/s)	1.41711523917E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.41712E-11	+/-	2.6E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	5.5	+/-	0.0

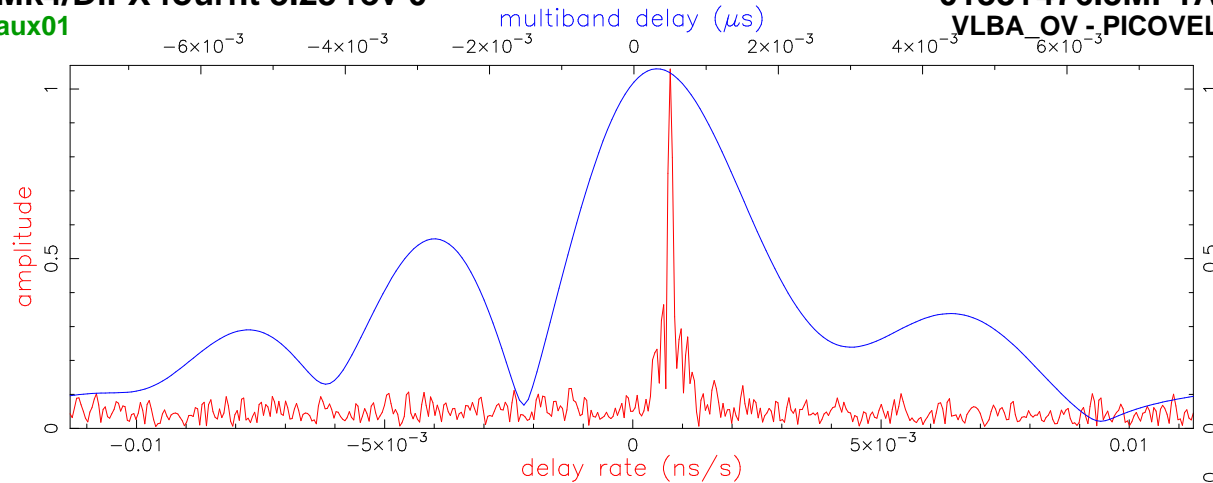
ph/seg (deg) 0.1 0.0 Theor. Amplitude 747.380 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 1.5 0.0 Search (512X32) 736.378 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.6 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.0 0.0 Inc. seg. avg. 736.190 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 o: az 56.8 el 59.3 pa -95.8 o: az 56.8 el 59.3 pa -95.8 u, v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oo.W.255.3MP1AB simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

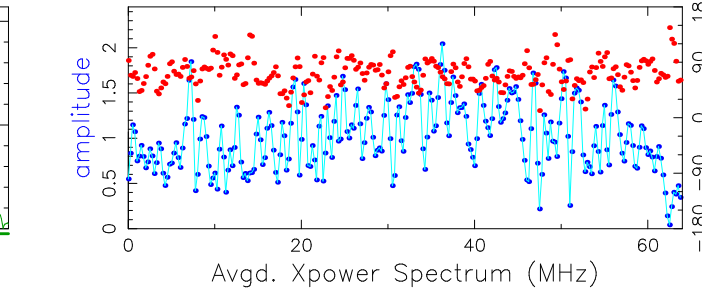
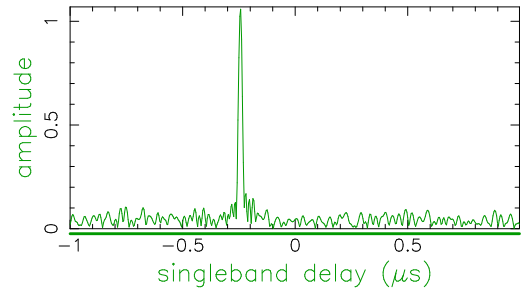
0133+476.3MP1AB, No0916, oP

VLBA\_OV - PICOVEL, fgroup W, pol LL



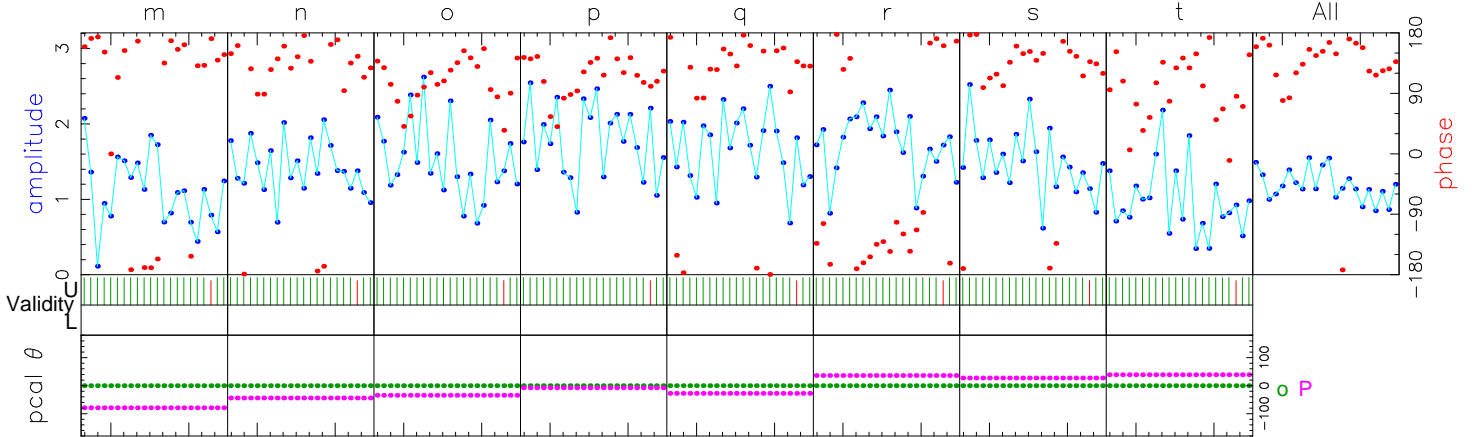
Fringe quality 5

SNR 30.9  
 Int time 112.059  
 Amp 1.070  
 Phase 142.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.243404  
 MBD 0.000270  
 Fringe rate (Hz)  
 0.064796  
 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  
 2025:041:113107  
 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
	163.5	144.3	104.6	119.2	150.5	-156.0	148.9	98.8	Phase	142.8
	0.9	1.2	1.3	1.5	1.4	1.4	1.3	0.7	Ampl.	1.2
	193.3	194.7	194.8	194.9	195.2	195.0	195.0	192.6	Sbd box	194.7
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.05637280629E+03	Apriori delay (usec)	6.05662253612E+03	Resid mbdelay (usec)	2.70172E-04	+/-	3.5E-05
Sband delay (usec)	6.05637913237E+03	Apriori clock (usec)	2.6073610E+01	Resid sbdelay (usec)	-2.43404E-01	+/-	2.8E-04
Phase delay (usec)	6.05662254072E+03	Apriori clockrate (us/s)	-1.1696503E-07	Resid phdelay (usec)	4.60414E-06	+/-	1.2E-07
Delay rate (us/s)	1.32732179066E+00	Apriori rate (us/s)	1.32732103844E+00	Resid rate (us/s)	7.52222E-07	+/-	1.8E-09
Total phase (deg)	236.8	Apriori accel (us/s/s)	-3.18878179790E-05	Resid phase (deg)	142.8	+/-	3.7

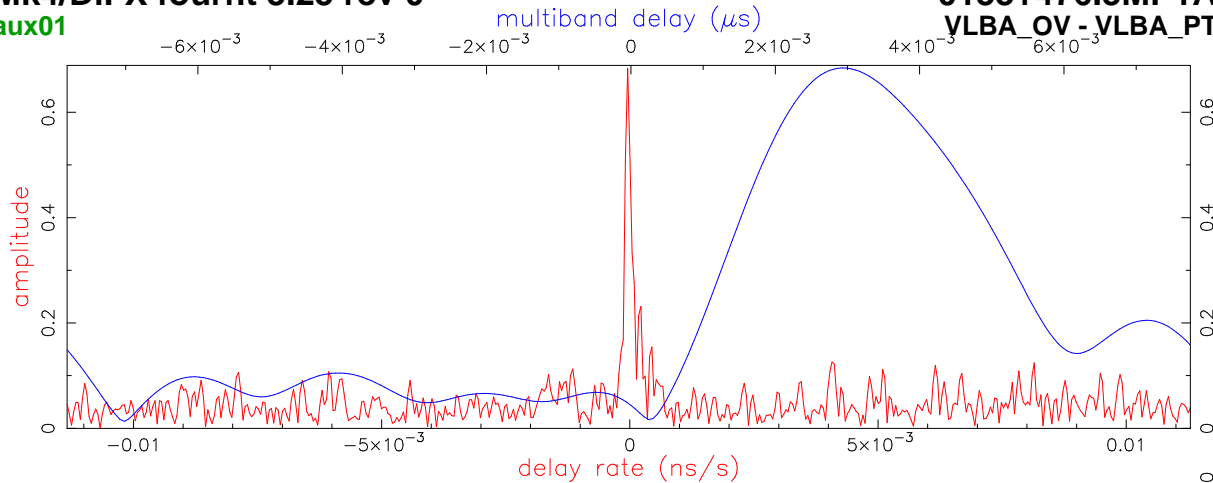
ph/seg (deg) 27.2 8.7 Amplitude 1.070 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 22.0 15.2 Search (512X32) 1.037 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 37.0 5.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 28.1 9.2 Inc. seg. avg. 1.177 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 o: az 56.8 el 59.3 pa -95.8 P: az 307.1 el 35.7 pa 71.7 u,v (fr/asec) -11379.378 -2719.999 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/oP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oP.W.243.3MP1AB simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

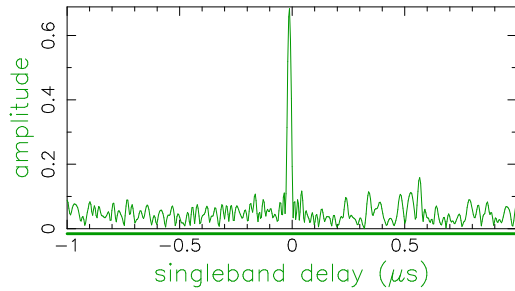
0133+476.3MP1AB, No0916, op

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

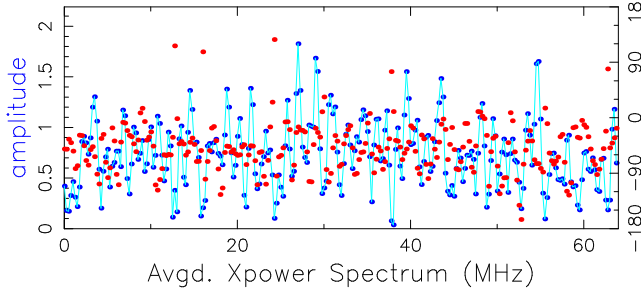


Fringe quality 7

SNR 19.9  
 Int time 112.052  
 Amp 0.689  
 Phase 128.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.012857  
 MBD 0.002881  
 Fringe rate (Hz)  
 -0.005423  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

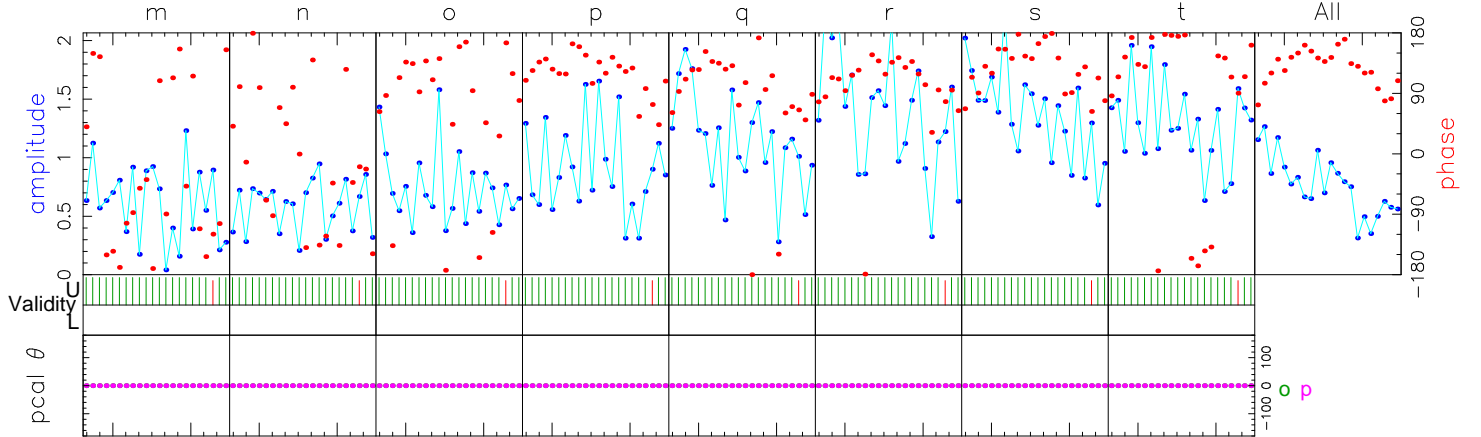


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113108  
 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		
o	0	0	0	0	0	0	0	0		
p	0	0	0	0	0	0	0	0		
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-8.28140799164E+02	Apriori delay (usec)	-8.28128054831E+02	Resid mbdelay (usec)	2.88067E-03	+/-	5.4E-05
Sband delay (usec)	-8.28140911831E+02	Apriori clock (usec)	1.9355576E+01	Resid sbdelay (usec)	-1.28570E-02	+/-	4.3E-04
Phase delay (usec)	-8.28128050683E+02	Apriori clockrate (us/s)	1.0257507E-07	Resid phdelay (usec)	4.14779E-06	+/-	1.9E-07
Delay rate (us/s)	1.06339474498E-01	Apriori rate (us/s)	1.06339537449E-01	Resid rate (us/s)	-6.29511E-08	+/-	2.8E-09
Total phase (deg)	-102.9	Apriori accel (us/s/s)	7.97477482334E-06	Resid phase (deg)	128.6	+/-	5.7

ph/seg (deg)	26.8	Theor.	13.5	Amplitude	0.689 +/- 0.035	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	38.2		23.5	Search (512X32)	0.650	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	47.7		8.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	60.8		14.2	Inc. seg. avg.	0.747	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.734	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

o: az 56.8 el 59.3 pa -95.8 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) -904.249 944.318 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916//op..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//op.W.244.3MP1AB

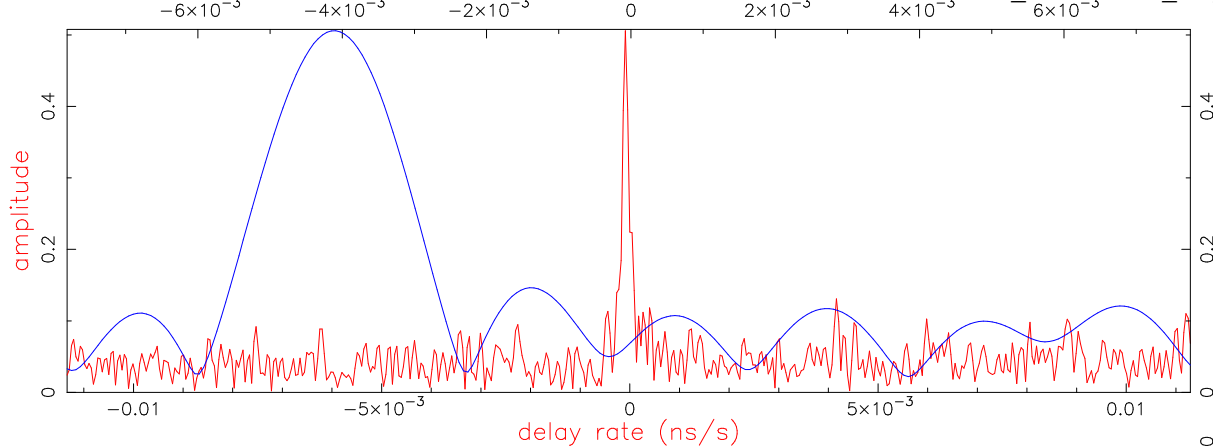
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, op

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

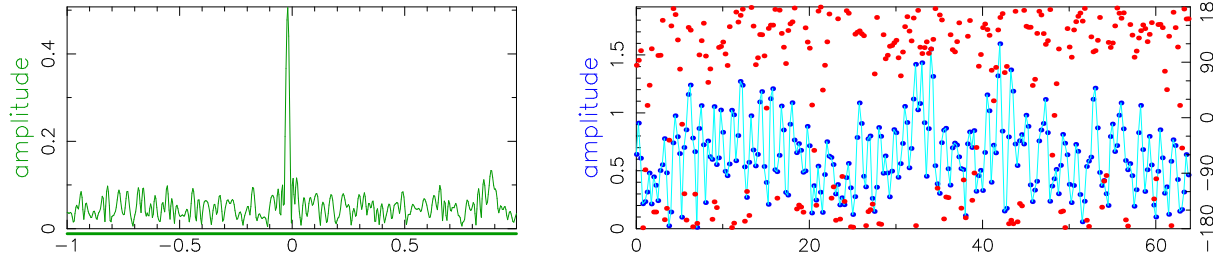
multiband delay ( $\mu$ s)



Fringe quality 9

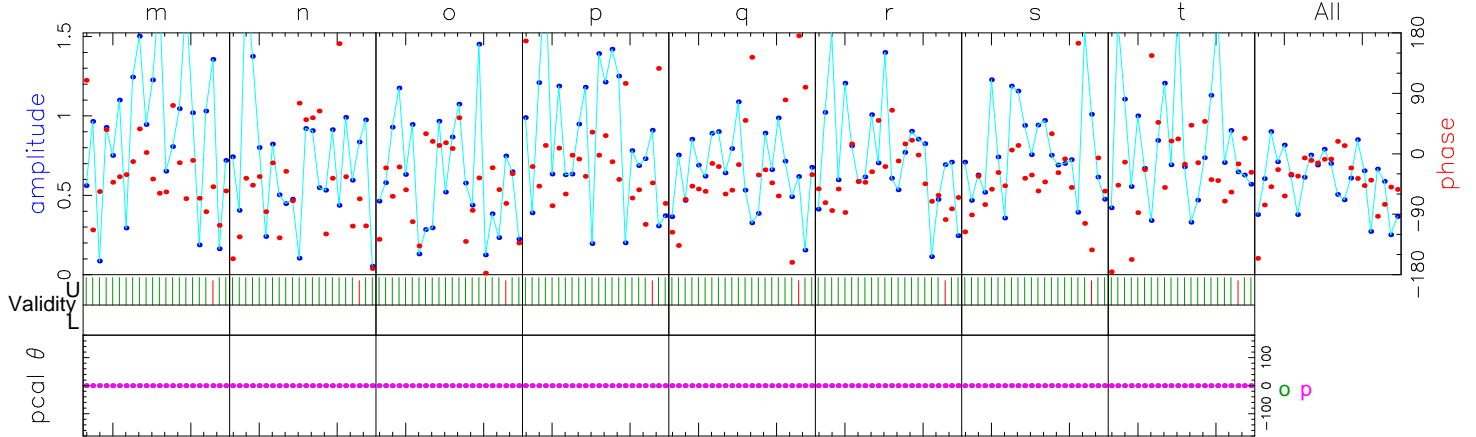
SNR 14.7  
Int time 112.052  
Amp 0.508  
Phase -34.7  
PFD 1.0e-40  
Delays (us)  
SBD -0.020313  
MBD -0.004131  
Fringe rate (Hz)  
-0.006063  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

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  
2025:041:113109  
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
	-32.0	-49.6	-34.5	-22.6	-43.7	-36.5	-44.2	-23.5	Phase	-34.7
	0.6	0.4	0.4	0.6	0.4	0.6	0.6	0.6	Ampl.	0.5
	252.4	251.8	252.2	251.6	252.0	251.3	251.2	251.9	Sbd box	251.8
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-8.28147810904E+02				-8.28128054831E+02				Resid mbdelay (usec)	-4.13107E-03 +/- 7.4E-05
Sband delay (usec)	-8.28148367581E+02				1.9355576E+01				Resid sbdelay (usec)	-2.03128E-02 +/- 5.9E-04
Phase delay (usec)	-8.28128055948E+02				1.0257507E-07				Resid phdelay (usec)	-1.11758E-06 +/- 2.5E-07
Delay rate (us/s)	1.06339467061E-01				1.06339537449E-01				Resid rate (us/s)	-7.03881E-08 +/- 3.9E-09
Total phase (deg)		-266.2			7.97477482334E-06				Resid phase (deg)	-34.7 +/- 7.8
	RMS	Theor.	Amplitude	0.508 +/- 0.035					Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	38.0	18.3	Search (512X32)	0.475					Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	39.8	31.9	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	10.6	11.0	Inc. seg. avg.	0.571					Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	19.6	19.2	Inc. frq. avg.	0.503					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
o: az 56.8 el 59.3 pa -95.8			p: az 49.1 el 64.2 pa -111.4						u,v (fr/asec) -904.249 944.318	ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva			Input file: /Exps/c241a/v2/3mm/1234/No0916//op..3MP1AB						Output file: /Exps/c241a/v2/3mm/1234/No0916//op.W.248.3MP1AB	simultaneous interpolator

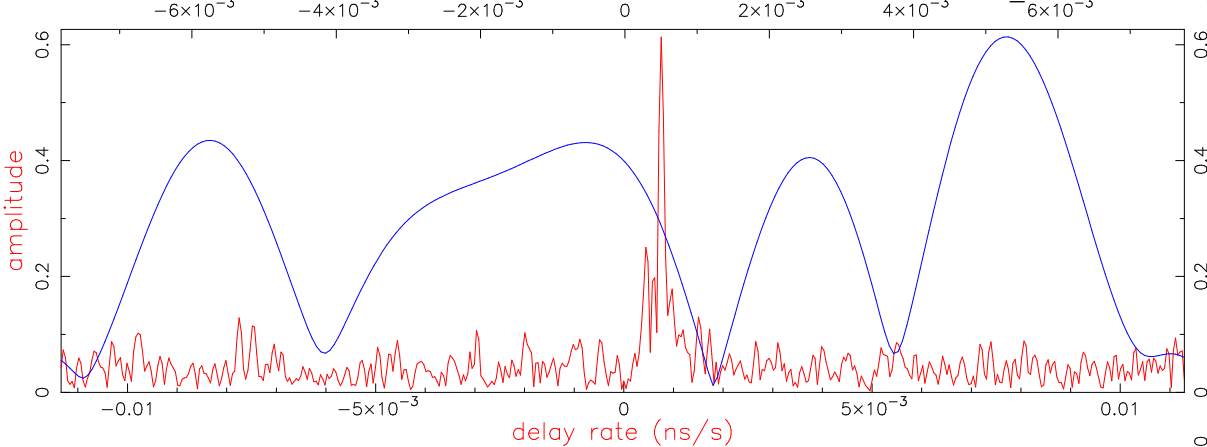
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oP

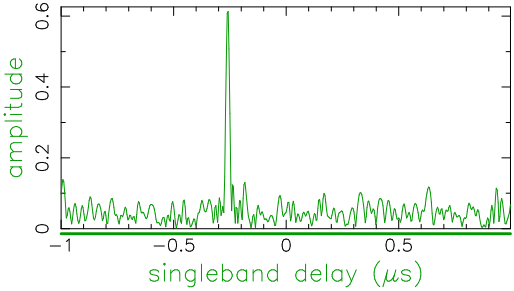
VLBA\_OV - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)

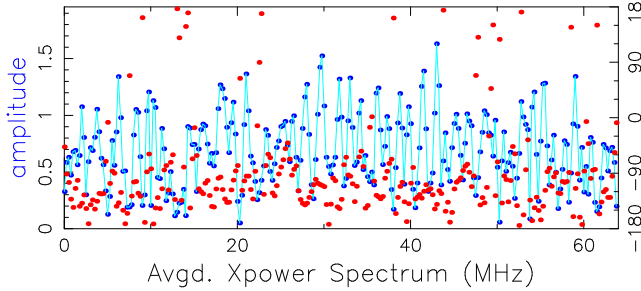


Fringe quality 7

SNR 18.1  
 Int time 112.059  
 Amp 0.626  
 Phase 74.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.259594  
 MBD 0.005255  
 Fringe rate (Hz)  
 0.065336  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

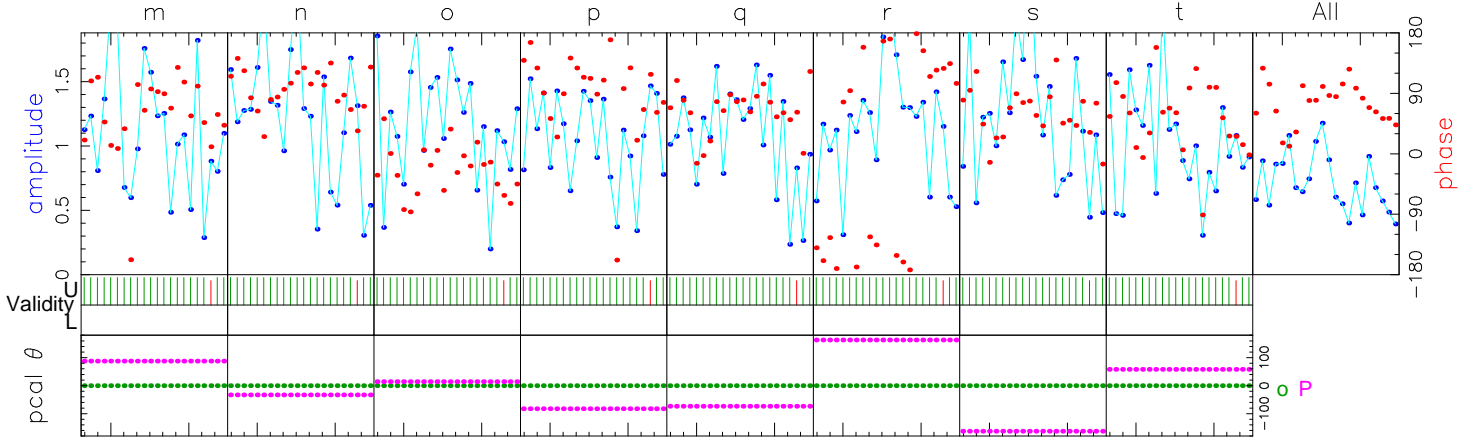


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113109  
 2024:113:095956  
 RA & Dec (J2000)  
 01h36m58.594803s  
 +47°51'29.100073"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	67.8	93.3	-27.1	104.1	69.8	174.7	63.1	51.0	Phase	74.0
	0.8	1.1	1.0	0.8	0.9	1.1	0.8	0.8	Ampl.	0.9
	189.4	191.2	191.3	192.0	191.5	191.6	191.0	189.3	Sbd box	190.5
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
P	0	0	0	0	0	0	0	0	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:88	0:33	0:15	0:82	0:74	0:163	0:163	0:58	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) 6.05636216604E+03 Apriori delay (usec) 6.05662253612E+03 Resid mbdelay (usec) 5.25492E-03 +/- 6.0E-05  
 Sband delay (usec) 6.05636294187E+03 Apriori clock (usec) 2.6073610E+01 Resid sbdelay (usec) -2.59594E-01 +/- 4.8E-04  
 Phase delay (usec) 6.05662253851E+03 Apriori clockrate (us/s) -1.1696503E-07 Resid phdelay (usec) 2.38714E-06 +/- 2.0E-07  
 Delay rate (us/s) 1.32732179693E+00 Apriori rate (us/s) 1.32732103844E+00 Resid rate (us/s) 7.58491E-07 +/- 3.1E-09  
 Total phase (deg) 168.1 Apriori accel (us/s/s) -3.18878179790E-05 Resid phase (deg) 74.0 +/- 6.3

ph/seg (deg) RMS Theor. Amplitude 0.626 +/- 0.035 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 31.0 14.8 Search (512X32) 0.600 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 37.6 25.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 61.0 9.0 Inc. seg. avg. 0.696 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 50.6 15.6 Inc. frq. avg. 0.917 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

o: az 56.8 el 59.3 pa -95.8 P: az 307.1 el 35.7 pa 71.7 u,v (fr/asec) -11379.378 -2719.999 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oP..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oP.W.249.3MP1AB



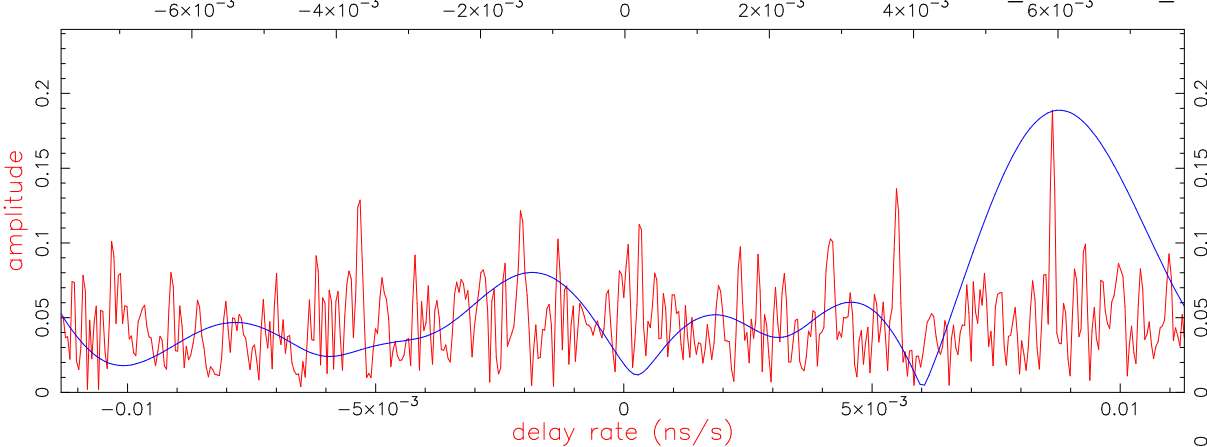
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, op

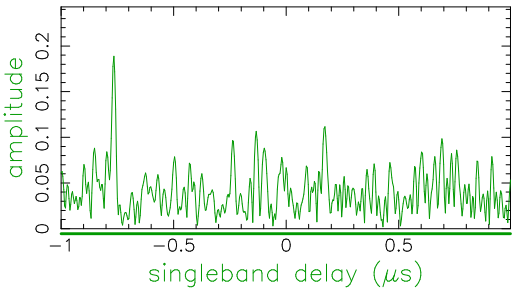
VLBA\_OV - VLBA\_PT, fgroup W, pol LR

multiband delay ( $\mu$ s)

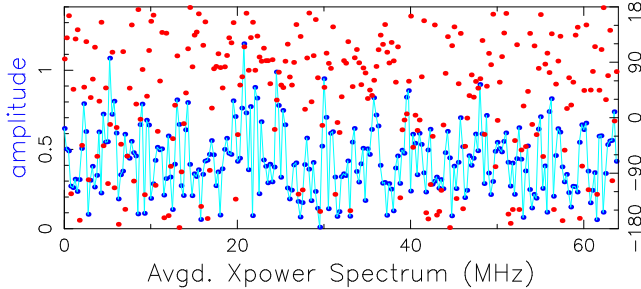


Fringe quality 0

SNR 5.5  
 Int time 112.052  
 Amp 0.243  
 Phase -165.7  
 PFD 9.3e-01  
 Delays (us)  
 SBD -0.766017  
 MBD 0.006009  
 Fringe rate (Hz)  
 0.743738  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

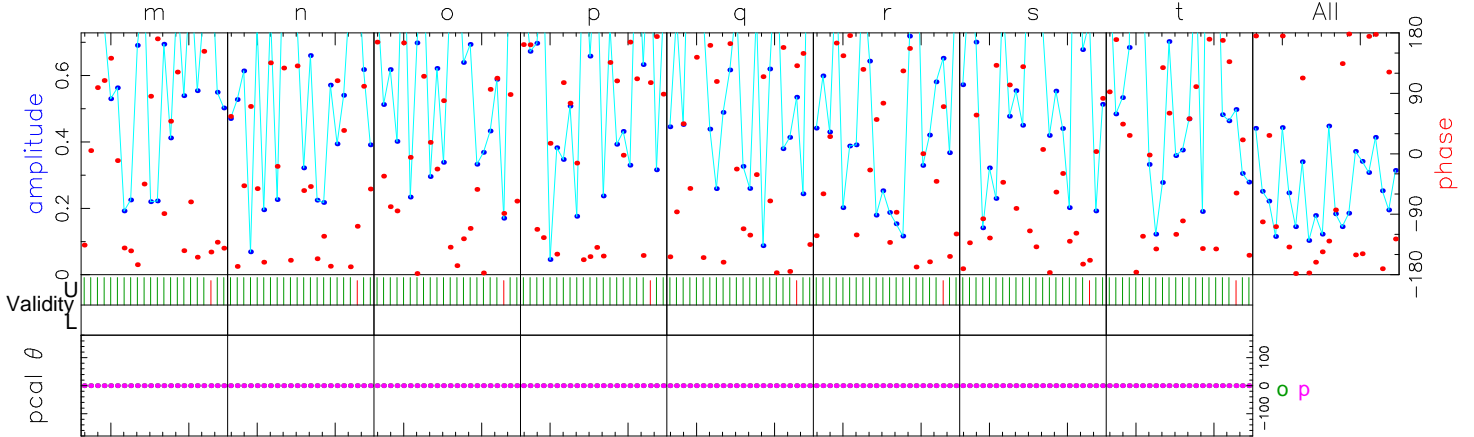


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113110  
 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
	-157.7	-170.6	-165.6	167.1	-142.1	-164.7	-122.7	161.0	Phase	-165.7
	0.2	0.2	0.2	0.4	0.3	0.2	0.3	0.3	Ampl.	0.2
	119.7	439.7	110.8	60.5	328.9	27.6	452.0	208.3	Sbd box	60.9
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-8.28887670984E+02	Apriori delay (usec)	-8.28128054831E+02	Resid mbdelay (usec)	6.00885E-03	+/-	2.0E-04
Sband delay (usec)	-8.28894071831E+02	Apriori clock (usec)	1.9355576E+01	Resid sbdelay (usec)	-7.66017E-01	+/-	1.6E-03
Phase delay (usec)	-8.28128060175E+02	Apriori clockrate (us/s)	1.0257507E-07	Resid phdelay (usec)	-5.34450E-06	+/-	6.8E-07
Delay rate (us/s)	1.06348171513E-01	Apriori rate (us/s)	1.06339537449E-01	Resid rate (us/s)	8.63406E-06	+/-	1.0E-08
Total phase (deg)	-37.3	Apriori accel (us/s/s)	7.97477482334E-06	Resid phase (deg)	-165.7	+/-	21.0

ph/seg (deg)	54.1	Theor.	49.1	Amplitude	0.243 +/- 0.044	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	70.5		85.8	Search (512X32)	0.185	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	26.9		29.6	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	31.2		51.7	Inc. seg. avg.	0.246	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.236	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

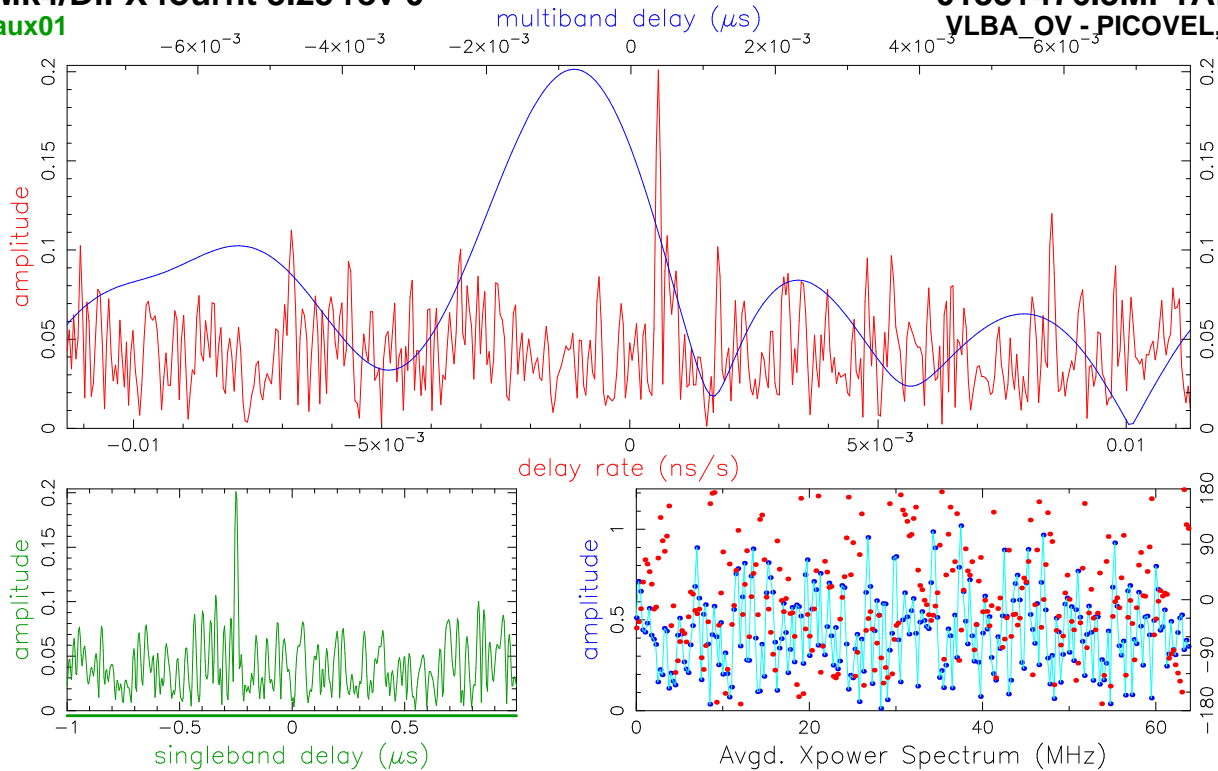
o: az 56.8 el 59.3 pa -95.8      p: az 49.1 el 64.2 pa -111.4      u, v (fr/asec) -904.249 944.318      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0916/op..3MP1AB      Output file: /Exps/c241a/v2/3mm/1234/No0916/op.W.253.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

aux01

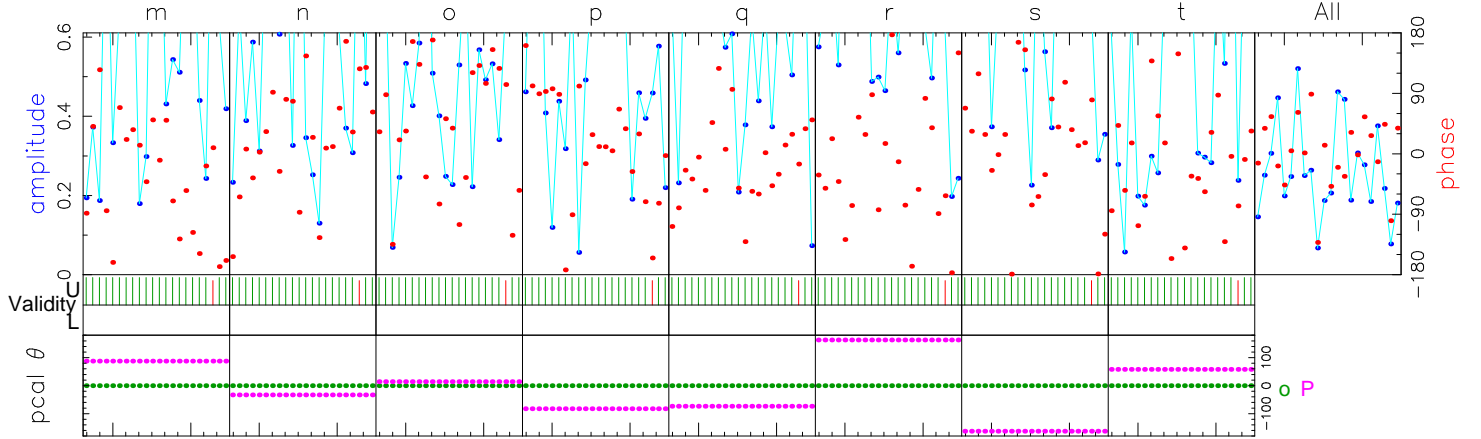
0133+476.3MP1AB, No0916, oP

VLBA\_OV - PICOVEL, fgroup W, pol LR



Fringe quality 0  
 SNR 5.9  
 Int time 112.059  
 Amp 0.204  
 Phase 9.9  
 PFD 2.2e-01  
 Delays (us)  
 SBD -0.248684  
 MBD -0.000710  
 Fringe rate (Hz) 0.050543  
 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  
 2025:041:113110  
 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
	-20.9	40.1	56.2	33.4	-11.0	-47.6	44.1	-10.1	Phase	9.9
	0.2	0.2	0.1	0.3	0.4	0.2	0.3	0.2	Ampl.	0.2
	128.6	388.0	482.0	272.0	193.0	239.7	506.4	268.2	Sbd box	193.3
U/L	220/0	220/0	220/0	220/0	220/0	220/0	220/0	220/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:P	0:88	0:33	0:15	0:82	0:74	0:163	0:163	0:58	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
o	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)	6.05637182624E+03		Apriori delay (usec)		6.05662253612E+03		Resid mbdelay (usec)		-7.09881E-04	+/- 1.8E-04
Sband delay (usec)	6.05637385187E+03		Apriori clock (usec)		2.6073610E+01		Resid sbdelay (usec)		-2.48684E-01	+/- 1.5E-03
Phase delay (usec)	6.05662253644E+03		Apriori clockrate (us/s)		-1.1696503E-07		Resid phdelay (usec)		3.20747E-07	+/- 6.3E-07
Delay rate (us/s)	1.32732162519E+00		Apriori rate (us/s)		1.32732103844E+00		Resid rate (us/s)		5.86757E-07	+/- 9.7E-09
Total phase (deg)	104.0		Apriori accel (us/s/s)		-3.18878179790E-05		Resid phase (deg)		9.9	+/- 19.5
ph/seg (deg)	RMS 52.3	Theor. 45.7	Amplitude Search (512X32)		0.204 +/- 0.035		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5	
amp/seg (%)	65.6	79.7	Interp.		0.195		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	40.6	27.5	Inc. seg. avg.		0.201		Bits/sample: 2x2		mb window (us)	-0.008 0.008
amp/frq (%)	47.1	48.0	Inc. frq. avg.		0.215		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
							Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00
							nlags: 256 t_cohere infinite			
o: az 56.8 el 59.3 pa -95.8	P: az 307.1 el 35.7 pa 71.7		u, v (fr/asec)		-11379.378 -2719.999				simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916/oP..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/oP.W.254.3MP1AB							

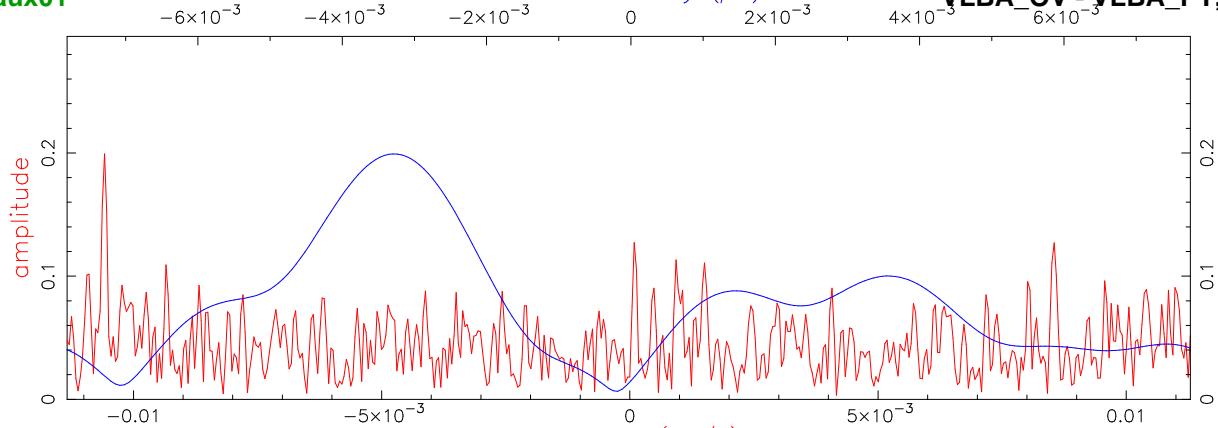
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, op

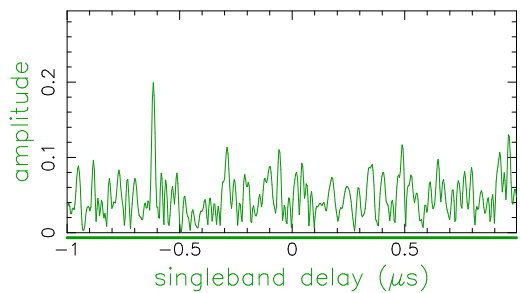
VLBA\_OV - VLBA\_PT, fgroup W, pol RL

multiband delay ( $\mu$ s)

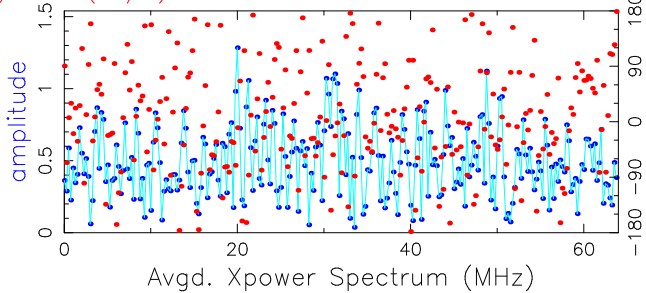


Fringe quality 0

SNR 5.8  
 Int time 112.052  
 Amp 0.295  
 Phase 138.6  
 PFD 3.9e-01  
 Delays (us)  
 SBD -0.616913  
 MBD -0.003279  
 Fringe rate (Hz)  
 -0.914158  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

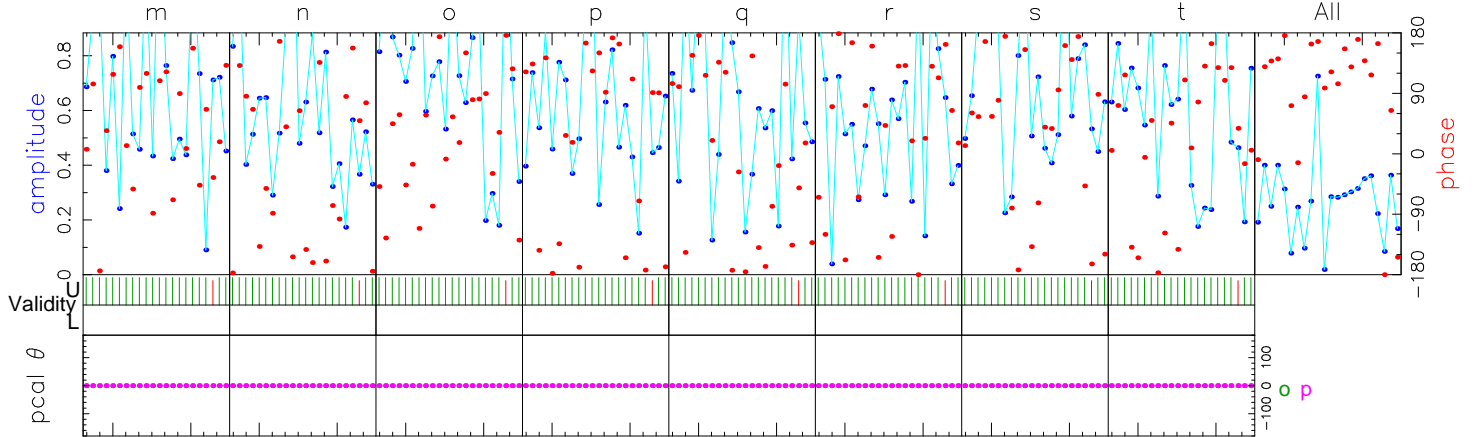


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113111  
 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		
o	0	0	0	0	0	0	0	0		
p	0	0	0	0	0	0	0	0		
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-8.28740708661E+02	Apriori delay (usec)	-8.28128054831E+02	Resid mbdelay (usec)	-3.27883E-03	+/-	1.9E-04
Sband delay (usec)	-8.28744968081E+02	Apriori clock (usec)	1.9355576E+01	Resid sbdelay (usec)	-6.16913E-01	+/-	1.5E-03
Phase delay (usec)	-8.28128050360E+02	Apriori clockrate (us/s)	1.0257507E-07	Resid phdelay (usec)	4.47054E-06	+/-	6.4E-07
Delay rate (us/s)	1.06328924979E-01	Apriori rate (us/s)	1.06339537449E-01	Resid rate (us/s)	-1.06125E-05	+/-	9.8E-09
Total phase (deg)	-92.9	Apriori accel (us/s/s)	7.97477482334E-06	Resid phase (deg)	138.6	+/-	19.9

ph/seg (deg)	57.5	Theor.	46.6	Amplitude	0.295 +/- 0.051	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	81.3	Search (512X32)	0.190	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	52.3	Inc. seg. avg.	0.305	Inc. frq. avg.	0.320	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	44.3	Inc. frq. avg.	0.320			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

o: az 56.8 el 59.3 pa -95.8 p: az 49.1 el 64.2 pa -111.4 u,v (fr/asec) -904.249 944.318 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/op..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/op.W.258.3MP1AB

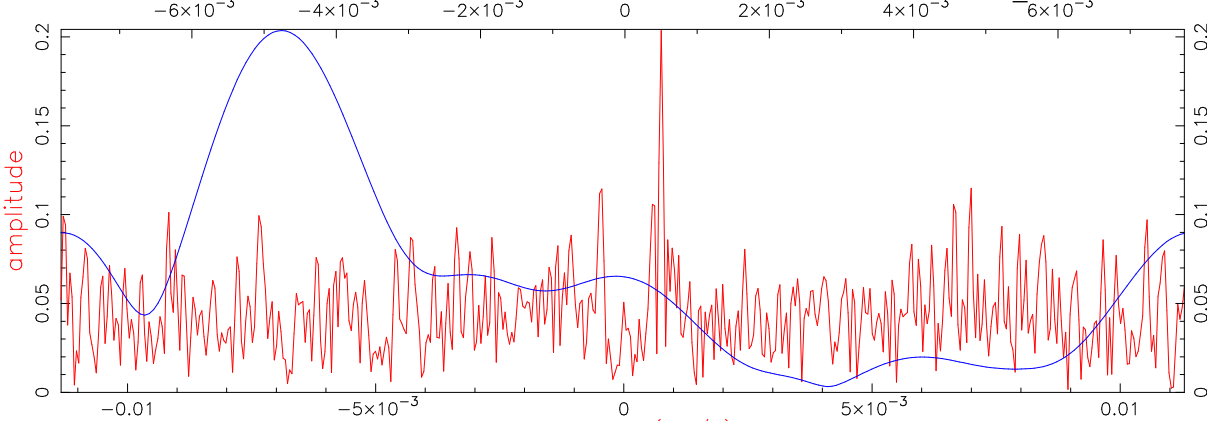
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oP

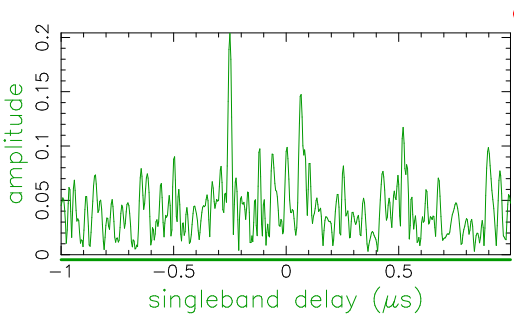
VLBA\_OV - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)

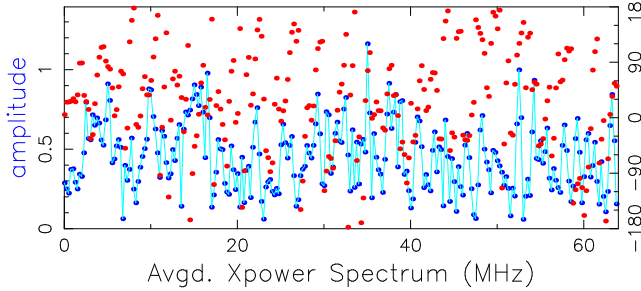


Fringe quality 0

SNR 5.9  
 Int time 112.059  
 Amp 0.204  
 Phase 94.1  
 PFD 2.1e-01  
 Delays (us)  
 SBD -0.250468  
 MBD -0.004762  
 Fringe rate (Hz)  
 0.065628  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

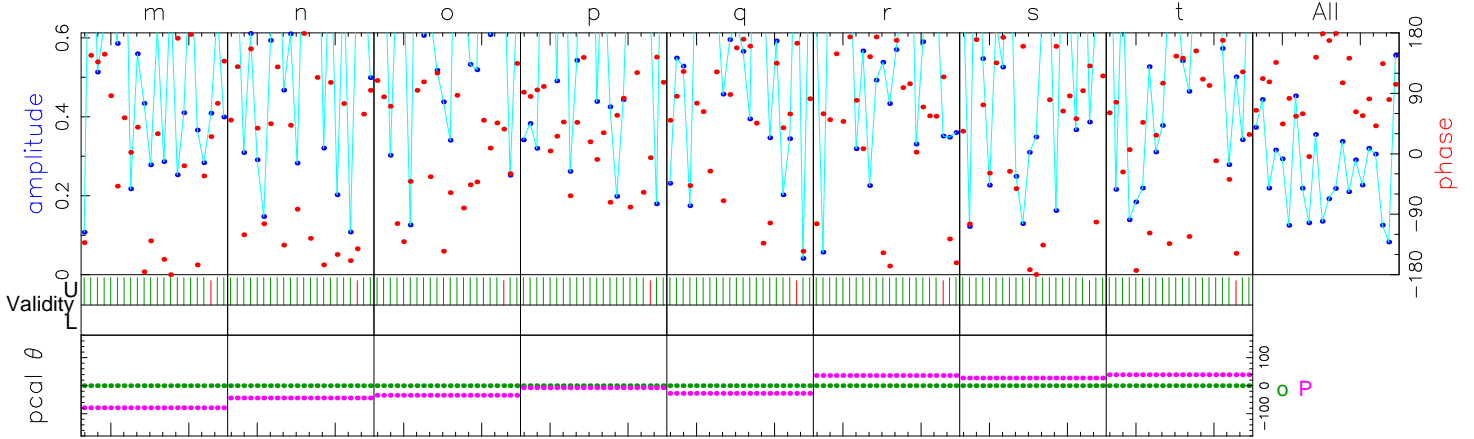


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170437.17  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113111  
 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				
o:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
o:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39				
P	1000	1000	1000	1000	1000	1000	1000	1000				
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL				
Group delay (usec) (SBD)	6.05636777460E+03		Apriori delay (usec)		6.05662253612E+03		Resid mbdelay (usec)		-4.76152E-03	+/- 1.8E-04		
Sband delay (usec)	6.05637206812E+03		Apriori clock (usec)		2.6073610E+01		Resid sbdelay (usec)		-2.50468E-01	+/- 1.5E-03		
Phase delay (usec)	6.05662253915E+03		Apriori clockrate (us/s)		-1.1696503E-07		Resid phdelay (usec)		3.03294E-06	+/- 6.3E-07		
Delay rate (us/s)	1.32732180032E+00		Apriori rate (us/s)		1.32732103844E+00		Resid rate (us/s)		7.61881E-07	+/- 9.6E-09		
Total phase (deg)	188.1		Apriori accel (us/s/s)		-3.18878179790E-05		Resid phase (deg)		94.1	+/- 19.4		
ph/seg (deg)	RMS 47.7	Theor. 45.5	Amplitude Search (512X32)		0.204 +/- 0.035		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	66.5	79.5	Interp.		0.000		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	30.5	27.5	Inc. seg. avg.		0.206		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	29.9	47.9	Inc. frq. avg.		0.208		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011		
o: az 56.8 el 59.3 pa -95.8	P: az 307.1 el 35.7 pa 71.7		u, v (fr/asec)		-11379.378 -2719.999		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/oP..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916/oP.W.259.3MP1AB									

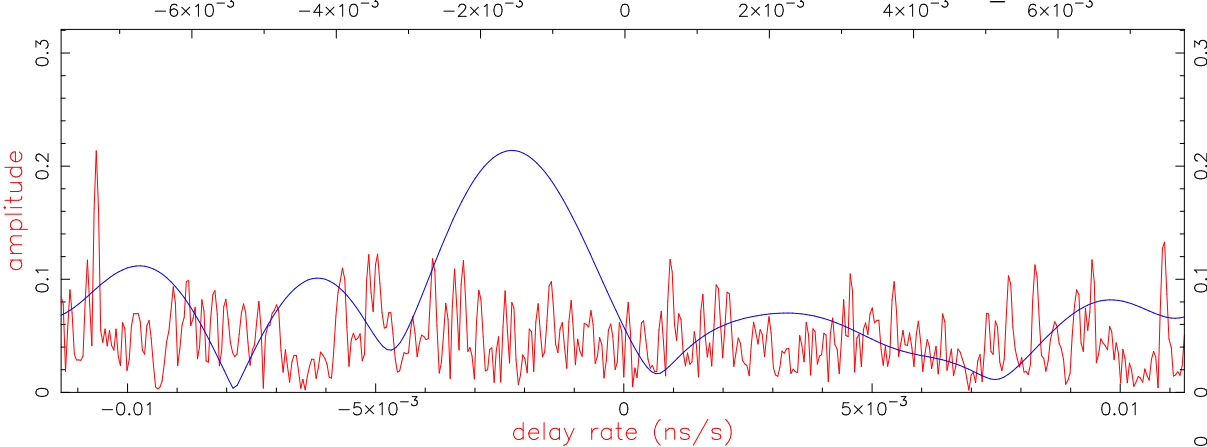
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oY

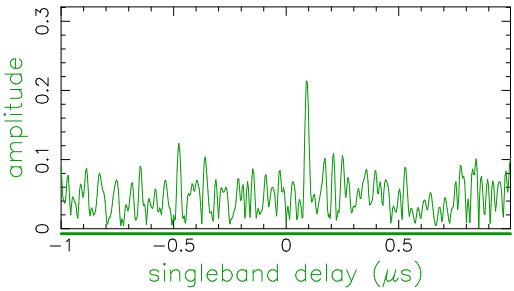
VLBA\_OV - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)

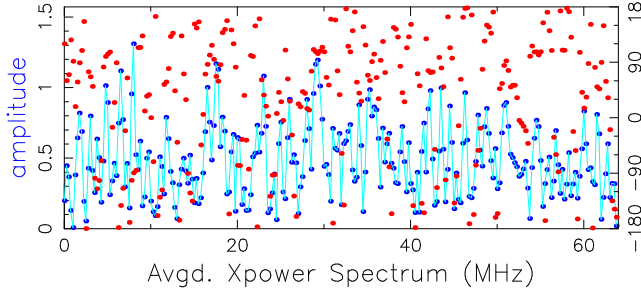


Fringe quality 0

SNR 5.9  
Int time 99.191  
Amp 0.321  
Phase 84.5  
PFD 2.0e-01  
Delays (us)  
SBD 0.091549  
MBD -0.001504  
Fringe rate (Hz)  
-0.916180  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

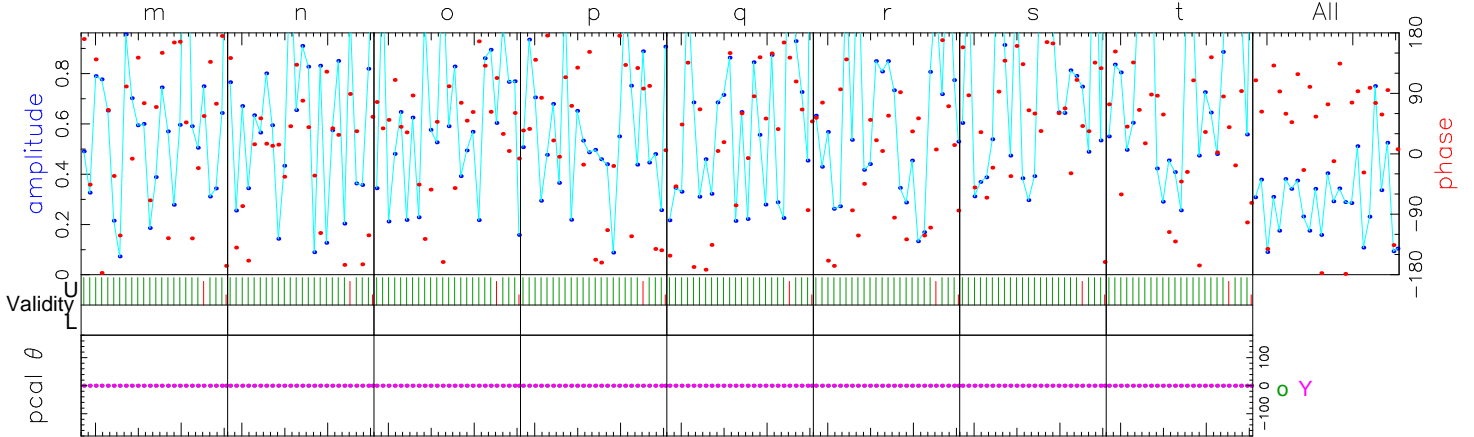


delay rate (ns/s)



Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 170449.97  
Stop 170629.81  
FRT 170540.00  
Corr/FF/build  
2025:007:183750  
2025:041:113138  
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
	116.7	45.9	59.6	124.3	108.8	36.3	103.8	54.8	Phase	84.5
	0.3	0.3	0.4	0.3	0.4	0.2	0.6	0.5	Ampl.	0.3
	436.2	464.8	274.0	165.9	291.8	49.5	280.4	509.9	Sbd box	280.4
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	5.61702768605E+03	Apriori delay (usec)	5.61693543962E+03	Resid mbdelay (usec)	-1.50357E-03	+/-	1.8E-04
Sband delay (usec)	5.61702698887E+03	Apriori clock (usec)	1.3561375E+02	Resid sbdelay (usec)	9.15492E-02	+/-	1.5E-03
Phase delay (usec)	5.61693544235E+03	Apriori clockrate (us/s)	1.6949411E-02	Resid phdelay (usec)	2.72595E-06	+/-	6.3E-07
Delay rate (us/s)	1.29014113330E+00	Apriori rate (us/s)	1.29015176924E+00	Resid rate (us/s)	-1.06359E-05	+/-	1.1E-08
Total phase (deg)	1.4	Apriori accel (us/s/s)	-3.28950790347E-05	Resid phase (deg)	84.5	+/-	19.4

ph/seg (deg)	65.4	RMS	48.5	Theor.	0.321 +/- 0.054	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	77.8	Search (512X32)	0.209	Interp.	0.000	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	38.5	Inc. seg. avg.	0.331	Inc. frq. avg.	0.329	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	38.3	Inc. frq. avg.	0.329	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

o: az 56.8 el 59.3 pa -95.8 Y: az 305.2 el 37.5 pa 68.1 u, v (fr/asec) -11061.740 -3087.049 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oY...3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oY.W.293.3MP1AB

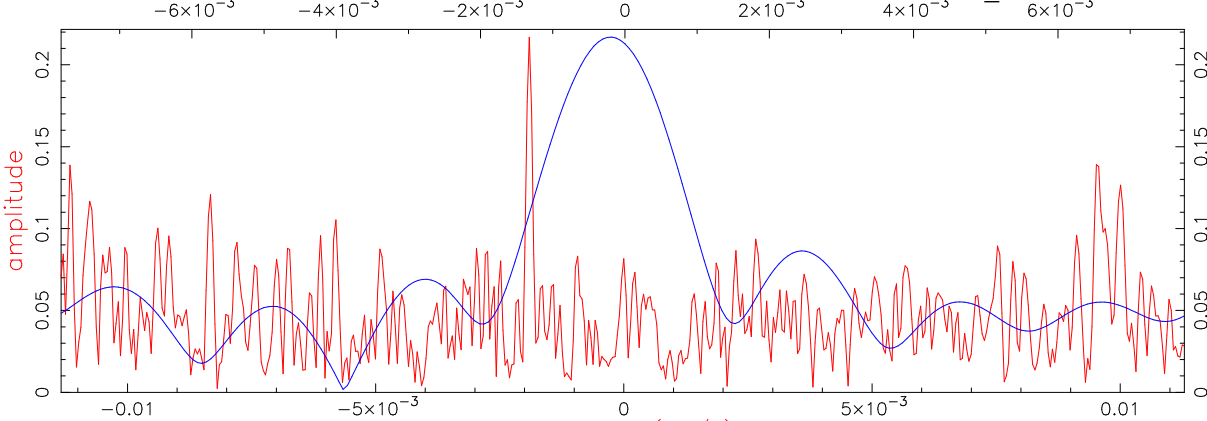
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oY

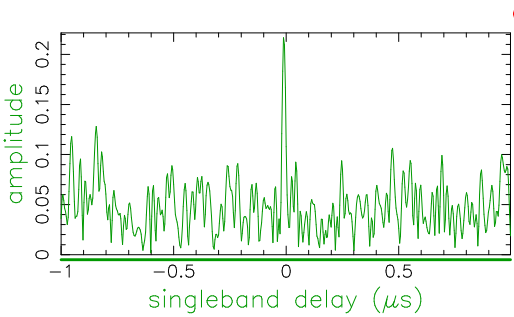
VLBA\_OV - YEYES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)

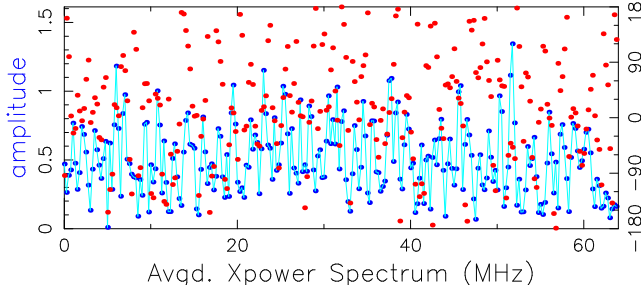


Fringe quality 0

SNR 6.0  
 Int time 99.191  
 Amp 0.222  
 Phase -92.8  
 PFD 1.5e-01  
 Delays (us)  
 SBD -0.010444  
 MBD -0.000170  
 Fringe rate (Hz)  
 -0.164313  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

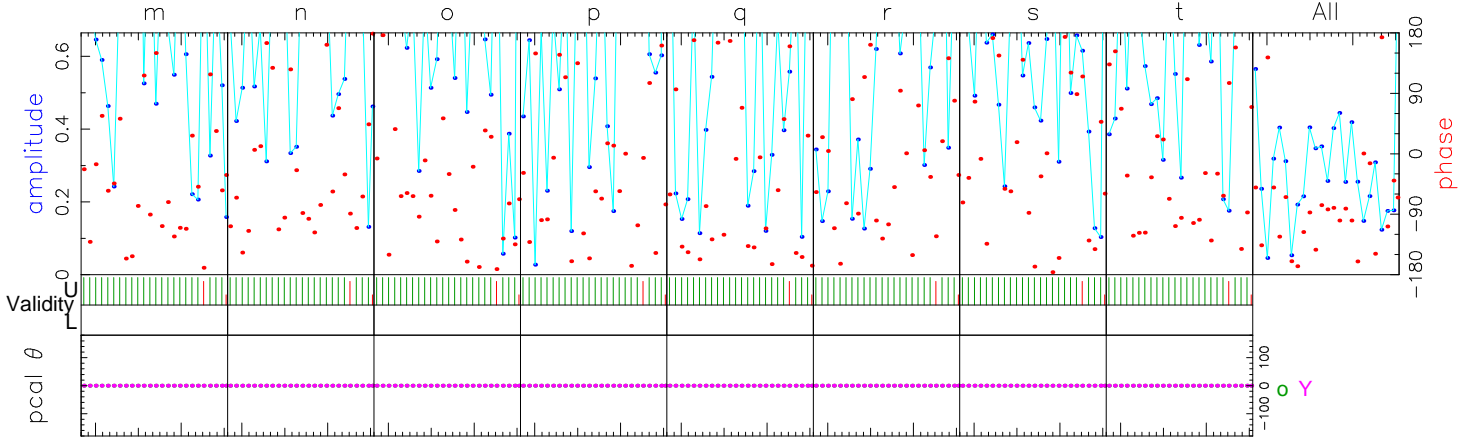


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170449.97  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113140  
 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
	-91.4	-98.3	-71.6	-91.6	-127.8	-80.8	-115.8	-92.8	Phase	-92.8
	0.3	0.4	0.2	0.2	0.1	0.2	0.1	0.3	Ampl.	0.2
	16.8	203.3	380.3	443.4	468.8	348.0	511.6	43.8	Sbd box	254.3
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	5.61691964446E+03	Apriori delay (usec)	5.61693543962E+03	Resid mbdelay (usec)	-1.70161E-04	+/-	1.8E-04
Sband delay (usec)	5.61692499587E+03	Apriori clock (usec)	1.3561375E+02	Resid sbdelay (usec)	-1.04437E-02	+/-	1.4E-03
Phase delay (usec)	5.61693543663E+03	Apriori clockrate (us/s)	1.6949411E-06	Resid phdelay (usec)	-2.99111E-06	+/-	6.2E-07
Delay rate (us/s)	1.29014986172E+00	Apriori rate (us/s)	1.29015176924E+00	Resid rate (us/s)	-1.90752E-06	+/-	1.1E-08
Total phase (deg)	184.1	Apriori accel (us/s/s)	-3.28950790347E-05	Resid phase (deg)	-92.8	+/-	19.2

ph/seg (deg)	54.0	Theor.	48.0	Amplitude	0.222 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	73.0		83.8	Search (512X32)	0.214	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	19.9		27.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	38.4		47.4	Inc. seg. avg.	0.214	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.203	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

o: az 56.8 el 59.3 pa -95.8 Y: az 305.2 el 37.5 pa 68.1 u,v (fr/asec) -11061.740 -3087.049 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oY..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oY.W.295.3MP1AB

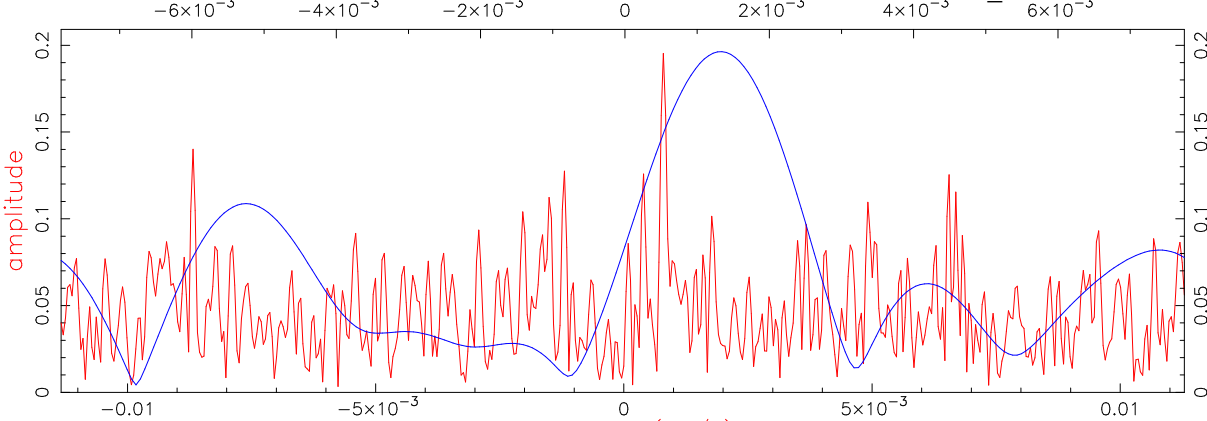
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oY

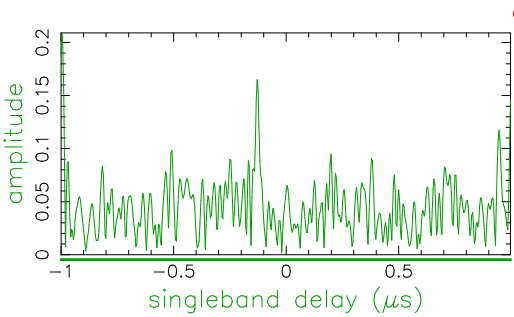
VLBA\_OV - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

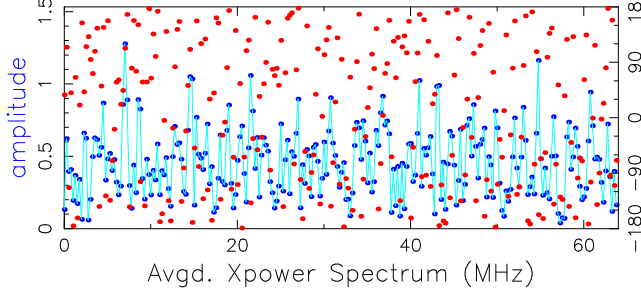


Fringe quality 0

SNR 5.7  
 Int time 99.191  
 Amp 0.209  
 Phase -164.1  
 PFD 5.5e-01  
 Delays (us)  
 SBD -0.995627  
 MBD 0.001218  
 Fringe rate (Hz)  
 0.067941  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

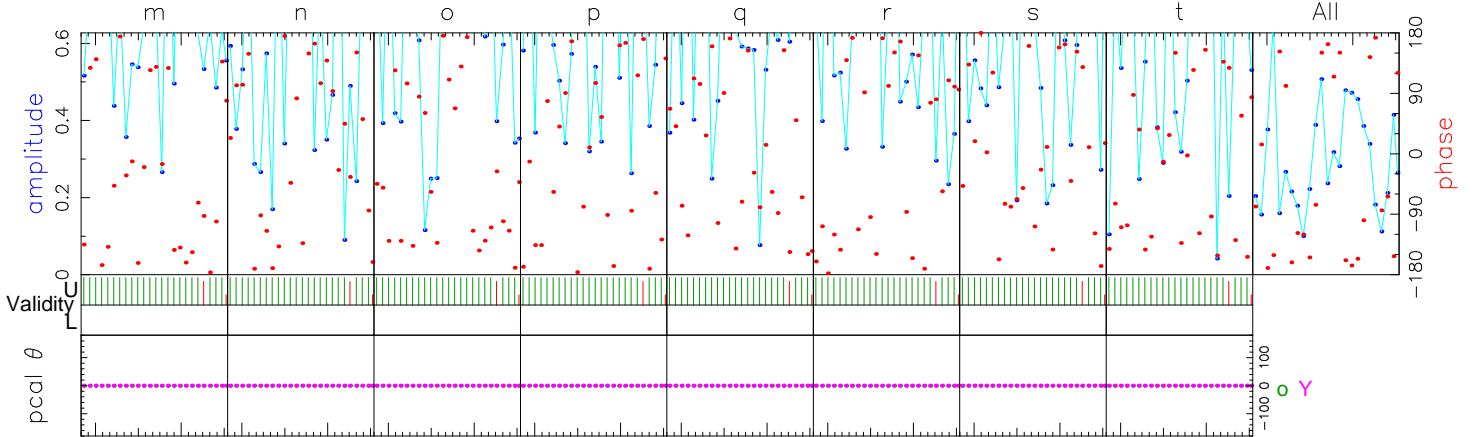


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170449.97  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113141  
 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
	-170.2	156.1	-152.8	-160.0	-146.2	-177.3	-135.9	-144.4	Phase	-164.1
	0.4	0.1	0.3	0.3	0.0	0.4	0.1	0.1	Ampl.	0.2
	1.5	434.4	323.8	470.3	223.3	77.4	353.8	10.1	Sbd box	2.1
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) 5.61593665718E+03 Apriori delay (usec) 5.61693543962E+03 Resid mbdelay (usec) 1.21755E-03 +/- 1.9E-04  
 Sband delay (usec) 5.61593981312E+03 Apriori clock (usec) 1.3561375E+02 Resid sbdelay (usec) -9.95627E-01 +/- 1.5E-03  
 Phase delay (usec) 5.61693543433E+03 Apriori clockrate (us/s) 1.6949411E-02 Resid phdelay (usec) -5.29185E-06 +/- 6.5E-07  
 Delay rate (us/s) 1.29015255797E+00 Apriori rate (us/s) 1.29015176924E+00 Resid rate (us/s) 7.88732E-07 +/- 1.1E-08  
 Total phase (deg) 112.8 Apriori accel (us/s/s) -3.28950790347E-05 Resid phase (deg) -164.1 +/- 20.2

ph/seg (deg) RMS Theor. Amplitude 0.209 +/- 0.037 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 64.3 50.4 Search (512X32) 0.203 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 81.2 88.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 23.9 28.5 Inc. seg. avg. 0.221 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

o: az 56.8 el 59.3 pa -95.8 Y: az 305.2 el 37.5 pa 68.1 u, v (fr/asec) -11061.740 -3087.049 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oY...3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oY.W.299.3MP1AB

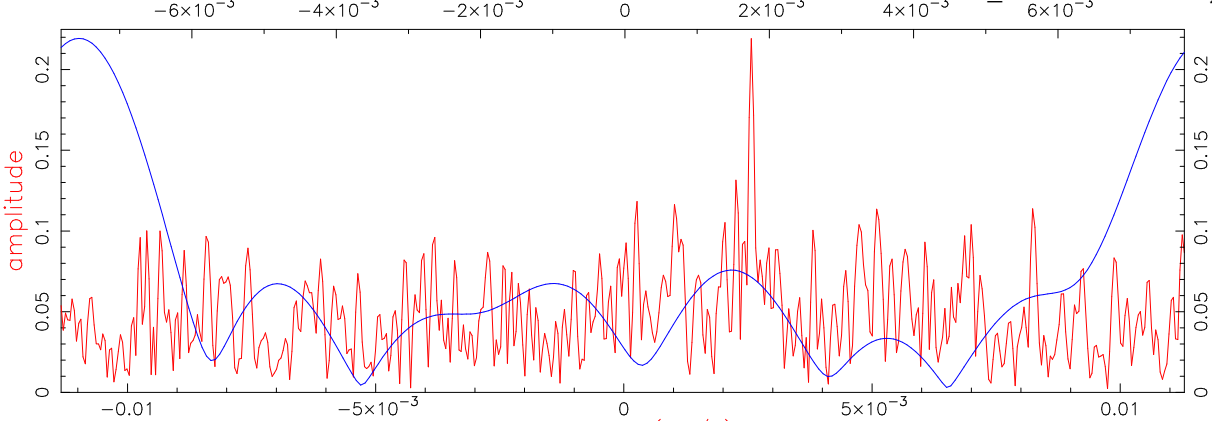
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, oY

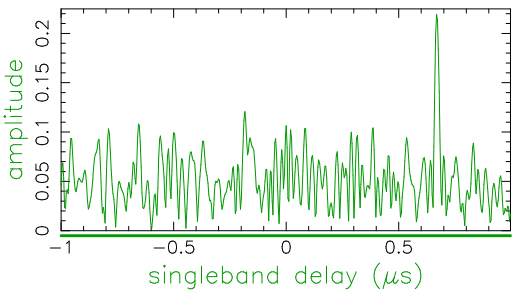
VLBA\_OV - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

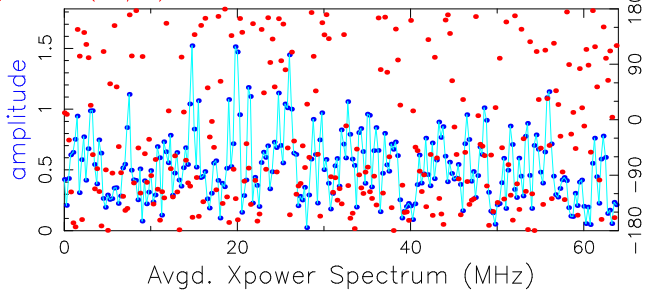


Fringe quality 0

SNR 6.0  
 Int time 99.191  
 Amp 0.225  
 Phase 91.0  
 PFD 1.2e-01  
 Delays (us)  
 SBD 0.669058  
 MBD -0.007525  
 Fringe rate (Hz)  
 0.219889  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

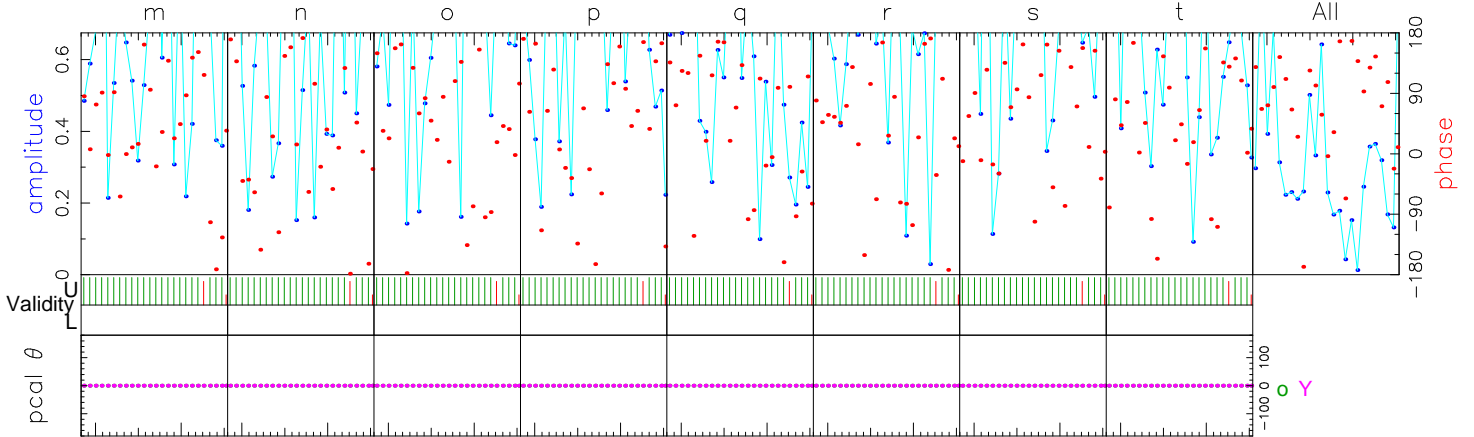


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170449.97  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113142  
 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
	69.3	155.9	91.8	106.0	107.0	77.3	95.4	78.2	Phase	91.0
	0.3	0.1	0.2	0.2	0.2	0.3	0.3	0.3	Ampl.	0.2
	162.2	185.2	109.2	2.7	265.9	357.0	165.1	338.9	Sbd box	428.3
U/L	195/0	195/0	195/0	195/0	195/0	195/0	195/0	195/0	APs used	
o	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	5.61759979007E+03	Apriori delay (usec)	5.61693543962E+03	Resid mbdelay (usec)	-7.52456E-03	+/-	1.8E-04
Sband delay (usec)	5.61760449787E+03	Apriori clock (usec)	1.3561375E+02	Resid sbdelay (usec)	6.69058E-01	+/-	1.4E-03
Phase delay (usec)	5.61693544256E+03	Apriori clockrate (us/s)	1.6949411E-02	Resid phdelay (usec)	2.93598E-06	+/-	6.2E-07
Delay rate (us/s)	1.29015432194E+00	Apriori rate (us/s)	1.29015176924E+00	Resid rate (us/s)	2.55270E-06	+/-	1.1E-08
Total phase (deg)	7.9	Apriori accel (us/s/s)	-3.28950790347E-05	Resid phase (deg)	91.0	+/-	19.1

ph/seg (deg)	62.3	RMS	47.8	Theor.	0.225 +/- 0.037	Amplitude	0.210	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	101.4	Search (512X32)	0.000	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	0.210	SampCntNorm: enabled	sb window (us)	-1.000 1.000
ph/frq (deg)	30.4	Inc. seg. avg.	0.236	Inc. frq. avg.	0.215	Bits/sample: 2x2	0.210	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011
amp/frq (%)	29.1	Inc. frq. avg.	0.215	Inc. frq. avg.	0.215	Data rate(Mb/s): 2048	0.215	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

o: az 56.8 el 59.3 pa -95.8 Y: az 305.2 el 37.5 pa 68.1 u,v (fr/asec) -11061.740 -3087.049 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/oY..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/oY.W.303.3MP1AB

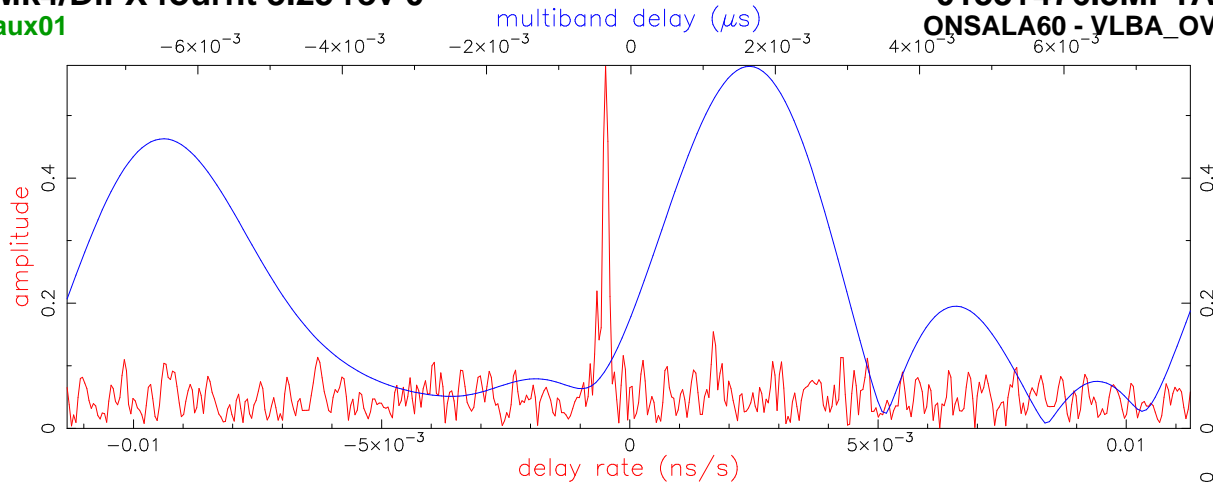


Mk4/DiFX fourfit 3.25 rev 0

aux01

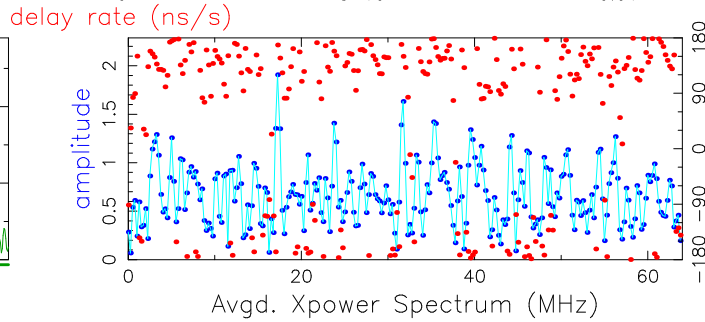
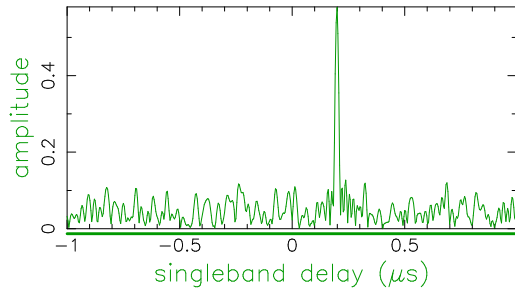
0133+476.3MP1AB, No0916, Xo

ONSALA60 - VLBA\_OV, fgroup W, pol LL



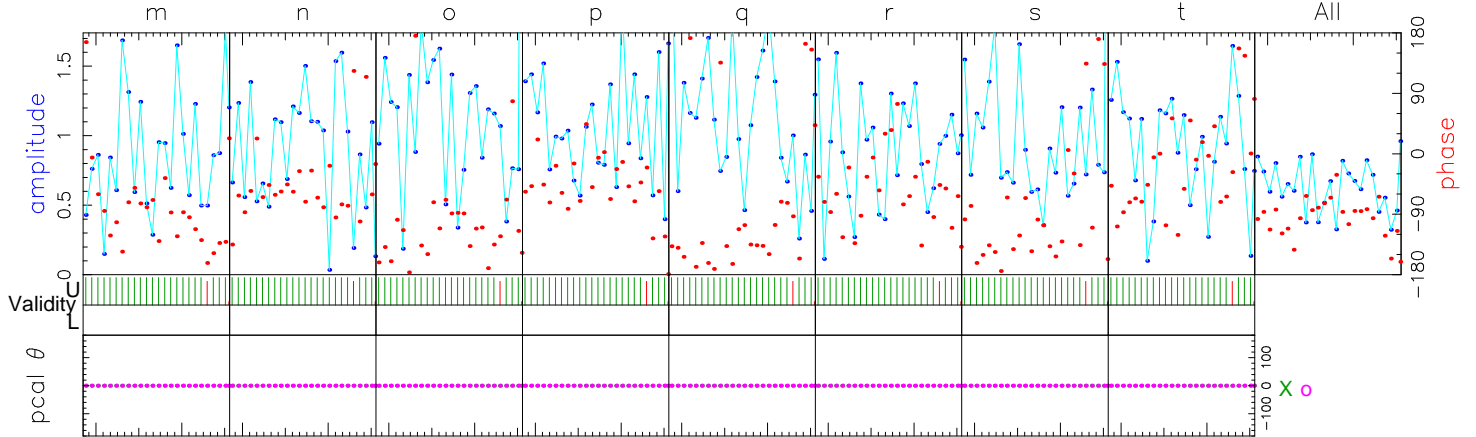
Fringe quality 8

SNR 15.7  
 Int time 98.235  
 Amp 0.580  
 Phase -93.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.198702  
 MBD 0.001626  
 Fringe rate (Hz)  
 -0.043689  
 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  
 2025:041:113246  
 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
	-104.5	-64.6	-128.1	-41.4	-144.6	-56.0	-130.3	-50.9	Phase	-93.9
	0.7	0.8	0.9	0.9	1.0	0.6	0.7	0.5	Ampl.	0.7
	308.2	307.8	308.0	308.4	308.1	307.6	309.0	309.1	Sbd box	307.9
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
X	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.11118507722E+03	Apriori delay (usec)	-5.11138982822E+03	Resid mbdelay (usec)	1.62600E-03	+/-	6.9E-05
Sband delay (usec)	-5.11119112622E+03	Apriori clock (usec)	8.7599586E+01	Resid sbdelay (usec)	1.98702E-01	+/-	5.5E-04
Phase delay (usec)	-5.11138983125E+03	Apriori clockrate (us/s)	7.3535102E-07	Resid phdelay (usec)	-3.02697E-06	+/-	2.4E-07
Delay rate (us/s)	-1.08373551167E+00	Apriori rate (us/s)	-1.08373500449E+00	Resid rate (us/s)	-5.07183E-07	+/-	4.1E-09
Total phase (deg)	-23.0	Apriori accel (us/s/s)	4.75589140189E-05	Resid phase (deg)	-93.9	+/-	7.3

ph/seg (deg) 26.7 18.2 Search (512X32) 0.543 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 30.5 31.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.9 10.3 Inc. seg. avg. 0.597 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 38.7 18.0 Inc. frq. avg. 0.736 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 X: az 301.3 el 38.5 pa 43.4 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 9305.053 5516.406 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916//Xo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//Xo.W.406.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

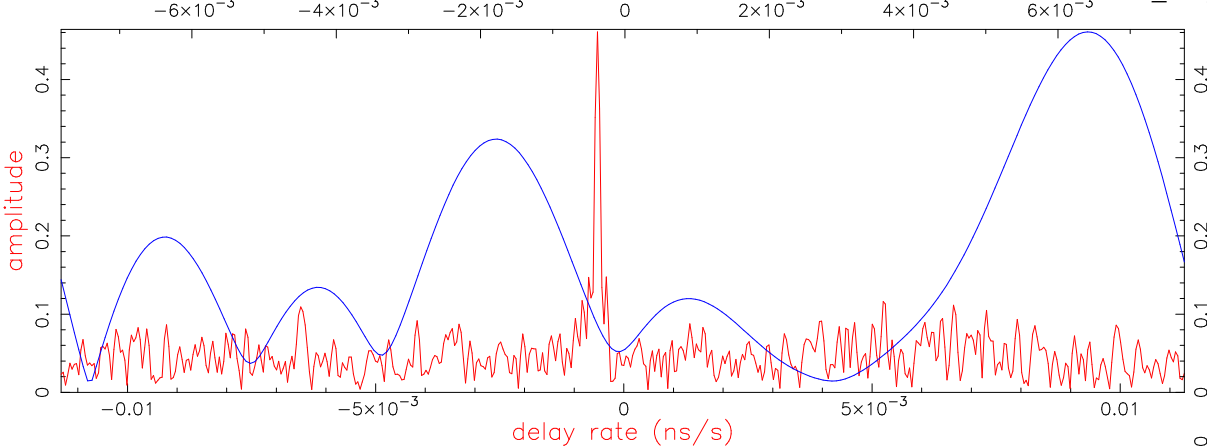
aux01

0133+476.3MP1AB, No0916, Xo

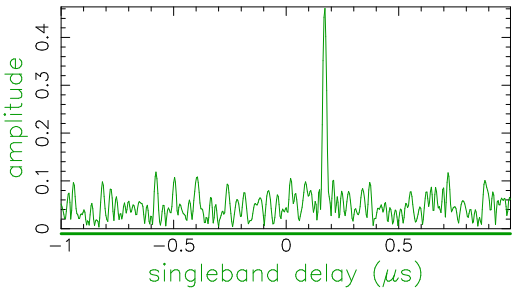
ONSALA60 - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

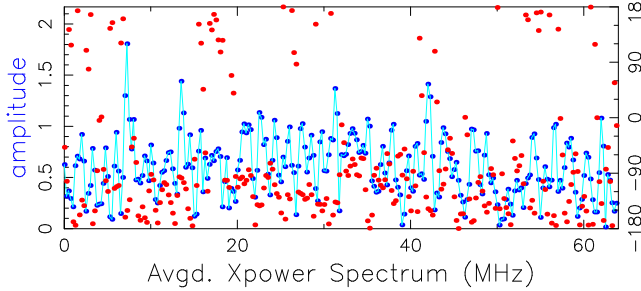
Fringe quality 9



SNR 12.6  
 Int time 98.235  
 Amp 0.464  
 Phase -34.4  
 PFD 4.3e-28  
 Delays (us)  
 SBD 0.170832  
 MBD 0.006386  
 Fringe rate (Hz)  
 -0.043991  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

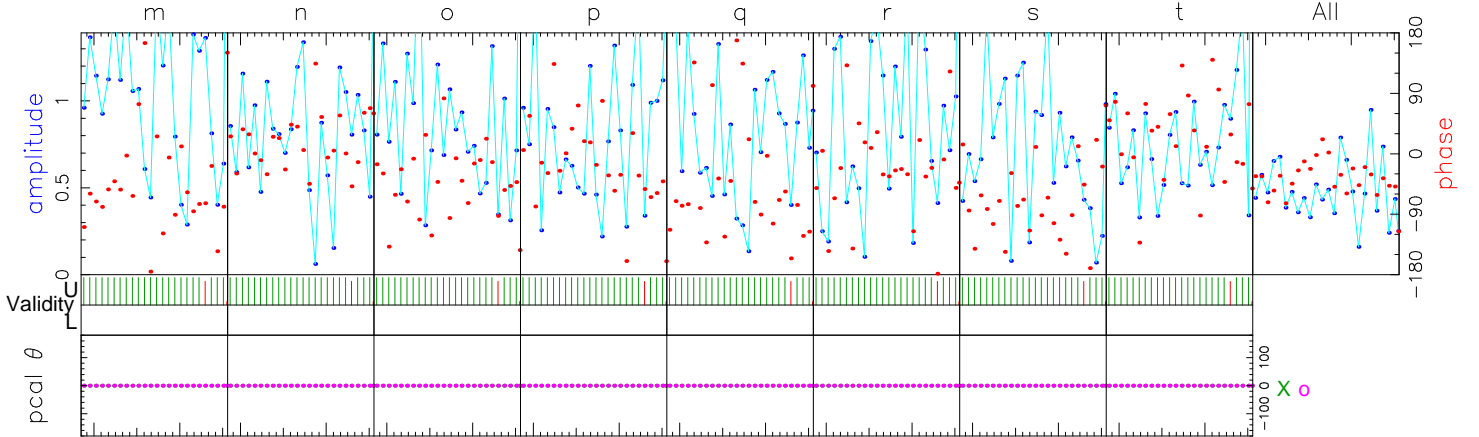


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113247  
 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
	-55.7	15.4	-48.4	-21.5	-84.6	-18.8	-82.6	26.2	Phase	-34.4
	0.7	0.7	0.6	0.5	0.6	0.6	0.5	0.5	Ampl.	0.6
	300.4	301.3	301.5	301.9	301.4	301.0	301.4	303.0	Sbd box	300.7
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
X	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-5.11121156691E+03	Apriori delay (usec)	-5.11138982822E+03	Resid mbdelay (usec)	6.38631E-03	+/-	8.6E-05
Sband delay (usec)	-5.11121899572E+03	Apriori clock (usec)	8.7599586E+01	Resid sbdelay (usec)	1.70832E-01	+/-	6.9E-04
Phase delay (usec)	-5.11138982933E+03	Apriori clockrate (us/s)	7.3535102E-07	Resid phdelay (usec)	-1.11074E-06	+/-	2.9E-07
Delay rate (us/s)	-1.08373551518E+00	Apriori rate (us/s)	-1.08373500449E+00	Resid rate (us/s)	-5.10692E-07	+/-	5.2E-09
Total phase (deg)	-323.6	Apriori accel (us/s/s)	4.75589140189E-05	Resid phase (deg)	-34.4	+/-	9.1

ph/seg (deg)	23.2	Theor.	22.8	Amplitude	0.464 +/- 0.037	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	38.4	Search (512X32)	0.432	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	44.8	Inc. seg. avg.	0.460	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	28.7	Inc. frq. avg.	0.566	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
X:	az 301.3 el 38.5 pa 43.4	o:	az 56.8 el 59.3 pa -95.8	u,v (fr/asec)	9305.053 5516.406	ion window (TEC)	0.00	0.00	

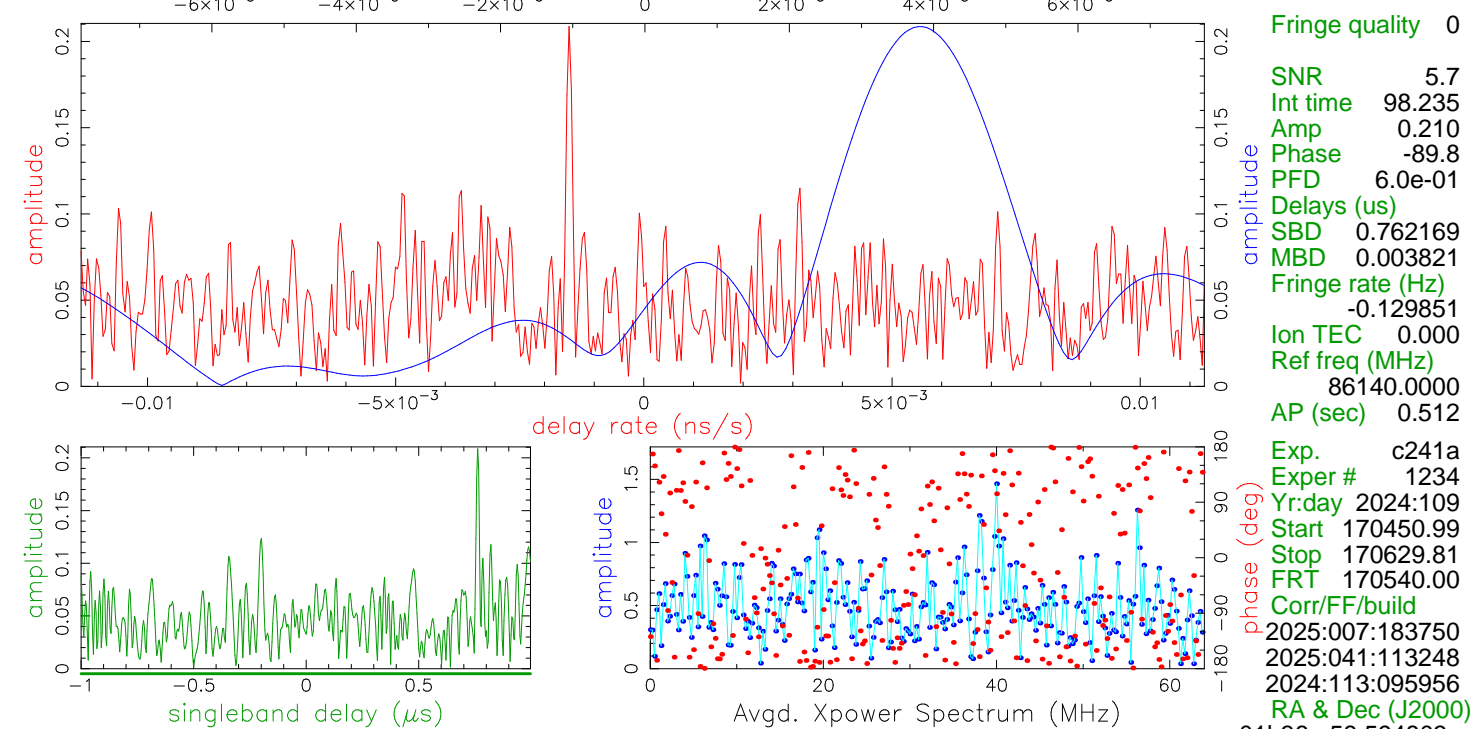
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Xo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Xo.W.408.3MP1AB

Mk4/DiFX fourfit 3.25 rev 0

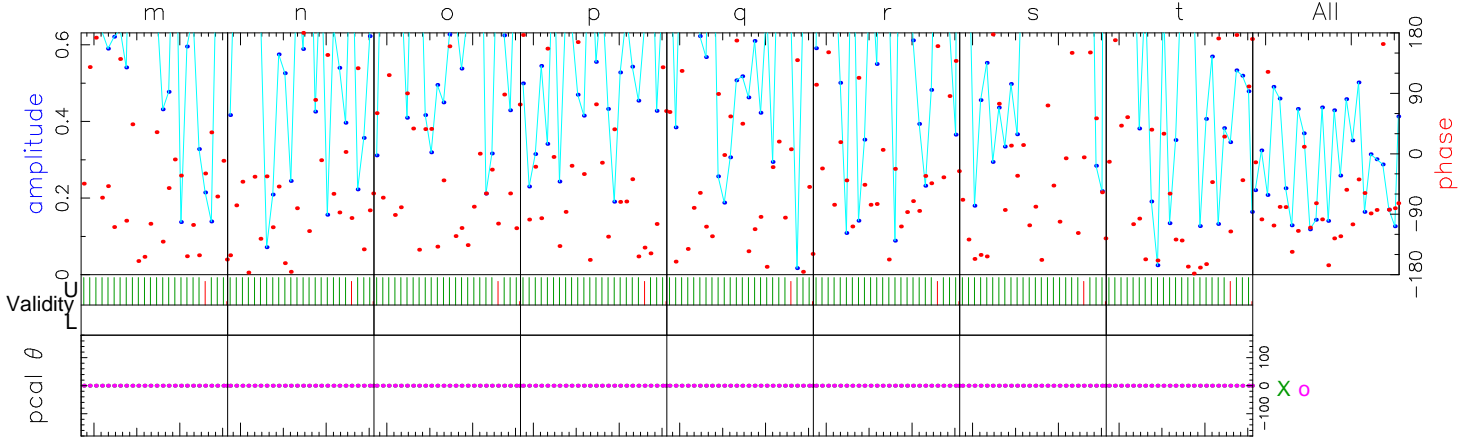
aux01

0133+476.3MP1AB, No0916, Xo

ONSALA60 - VLBA\_OV, fgroup W, pol LR



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	
	-92.8	-89.5	-78.8	-101.3	-109.3	-70.3	-85.5	-121.4	Phase	-89.8	
	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.1	Ampl.	0.2	
	206.7	136.1	167.8	265.3	17.8	473.1	279.3	416.9	Sbd box	452.1	
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used		
X	0	0	0	0	0	0	0	0	PC freqs		
o	0	0	0	0	0	0	0	0	PC freqs		
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
o	1000	1000	1000	1000	1000	1000	1000	1000			
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec) (SBD)	-5.11062038182E+03		Apriori delay (usec)		-5.11138982822E+03		Resid mbdelay (usec)		3.82141E-03	+/- 1.9E-04	
Sband delay (usec)	-5.11062765897E+03		Apriori clock (usec)		8.7599586E+01		Resid sbdelay (usec)		7.62169E-01	+/- 1.5E-03	
Phase delay (usec)	-5.11138983112E+03		Apriori clockrate (us/s)		7.3535102E-07		Resid phdelay (usec)		-2.89436E-06	+/- 6.5E-07	
Delay rate (us/s)	-1.08373651192E+00		Apriori rate (us/s)		-1.08373500449E+00		Resid rate (us/s)		-1.50744E-06	+/- 1.1E-08	
Total phase (deg)			Apriori accel (us/s/s)		4.75589140189E-05		Resid phase (deg)		-89.8	+/- 20.2	
	RMS	Theor.	Amplitude	0.210 +/- 0.037		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	53.3	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 (%)	73.5	88.3	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	18.4	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 (%)	32.8	49.9	Inc. frq. avg.	0.192		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
X: az 301.3 el 38.5 pa 43.4	o: az 56.8 el 59.3 pa -95.8		u, v (fr/asec) 9305.053 5516.406						simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0916//Xo..3MP1AB		Output file: /Exps/c241a/v2/3mm/1234/No0916//Xo.W.412.3MP1AB								

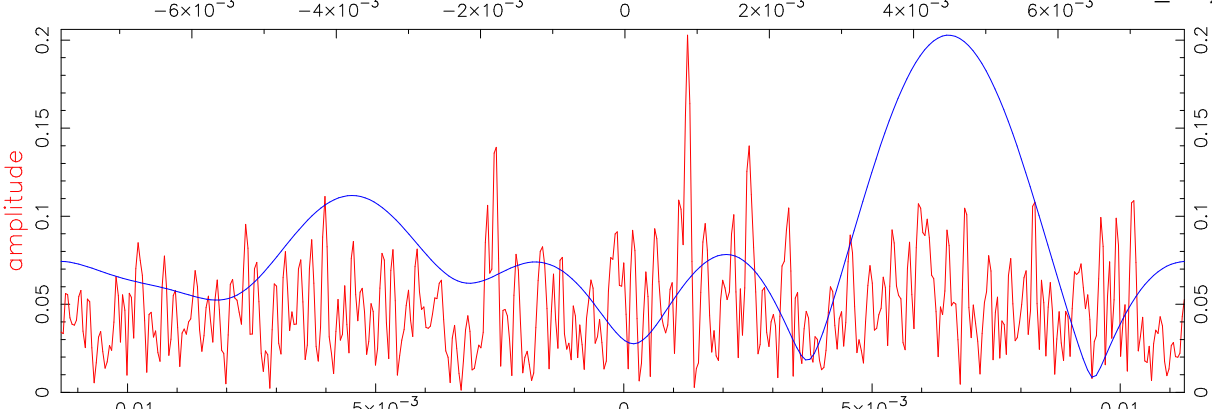
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Xo

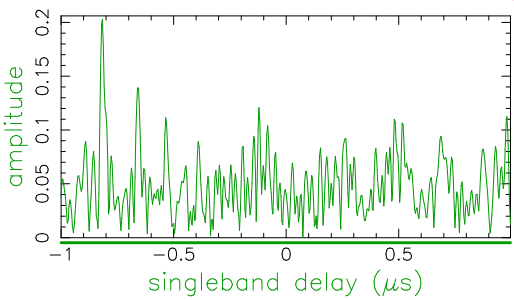
ONSALA60 - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

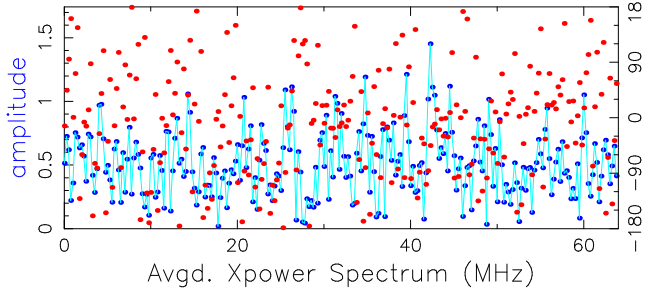


Fringe quality 0

SNR 5.6  
 Int time 98.235  
 Amp 0.206  
 Phase -122.8  
 PFD 8.1e-01  
 Delays (us)  
 SBD -0.817816  
 MBD 0.004456  
 Fringe rate (Hz)  
 0.111715  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

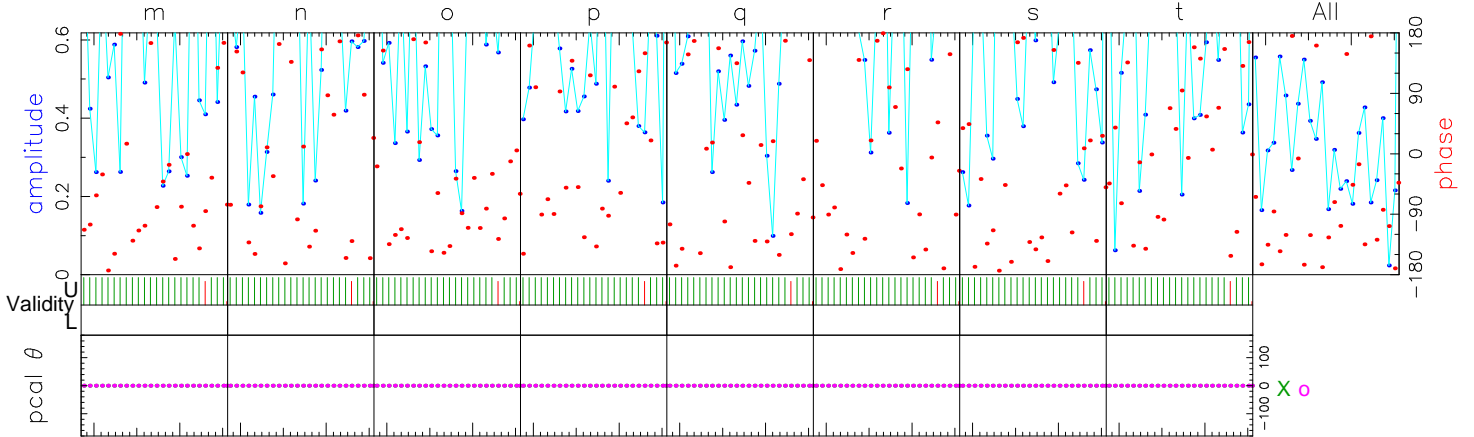


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113249  
 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
	-105.5	168.5	-96.9	-95.3	-129.2	-125.5	-124.6	-58.6	Phase	-122.8
	0.3	0.3	0.4	0.1	0.2	0.3	0.3	0.0	Ampl.	0.2
	509.2	48.9	495.1	185.9	23.0	117.8	385.7	411.1	Sbd box	47.6
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
X	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.11221349696E+03	Apriori delay (usec)	-5.11138982822E+03	Resid mbdelay (usec)	4.45627E-03	+/-	2.0E-04
Sband delay (usec)	-5.11220764422E+03	Apriori clock (usec)	8.7599586E+01	Resid sbdelay (usec)	-8.17816E-01	+/-	1.6E-03
Phase delay (usec)	-5.11138983218E+03	Apriori clockrate (us/s)	7.3535102E-07	Resid phdelay (usec)	-3.96154E-06	+/-	6.7E-07
Delay rate (us/s)	-1.08373370759E+00	Apriori rate (us/s)	-1.08373500449E+00	Resid rate (us/s)	1.29690E-06	+/-	1.2E-08
Total phase (deg)	-52.0	Apriori accel (us/s/s)	4.75589140189E-05	Resid phase (deg)	-122.8	+/-	20.6

ph/seg (deg)	54.5	Theor.	51.6	Amplitude	0.206 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	98.9	Search (512X32)	0.197	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	Inc. seg. avg.	0.239	Inc. frq. avg.	0.208	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	57.6					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

X: az 301.3 el 38.5 pa 43.4 o: az 56.8 el 59.3 pa -95.8 u, v (fr/asec) 9305.053 5516.406 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916/Xo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916/Xo.W.416.3MP1AB

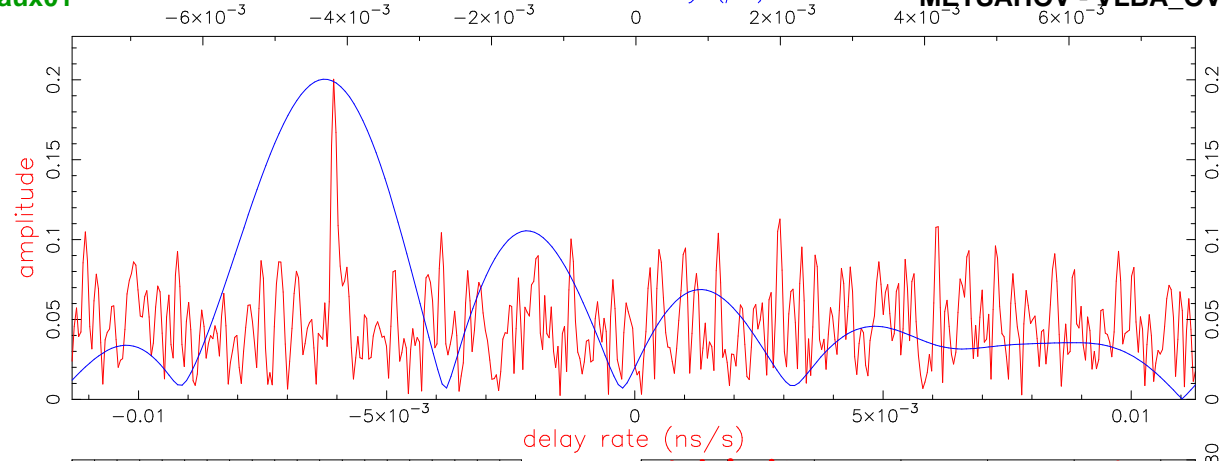
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Zo

MEṬSAHOV - VLBA\_OV, fgroup W, pol LL

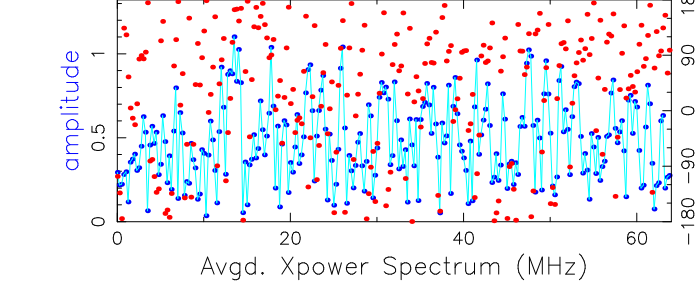
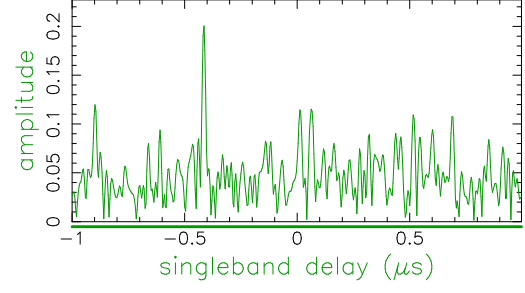
multiband delay ( $\mu$ s)



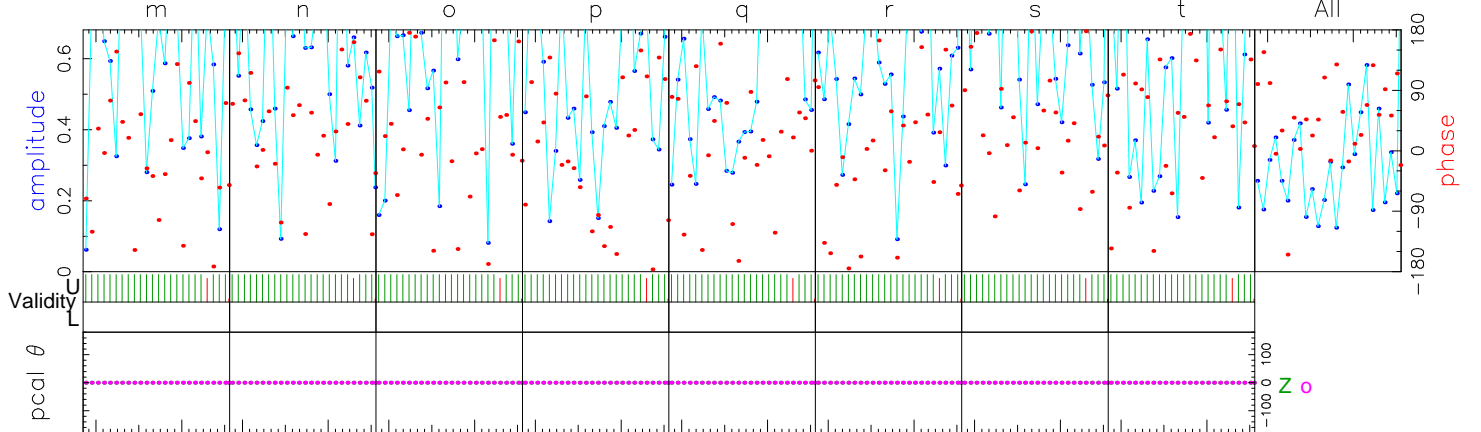
Fringe quality 0

SNR 5.5  
 Int time 98.165  
 Amp 0.227  
 Phase 46.0  
 PFD 9.4e-01  
 Delays (us)  
 SBD -0.414970  
 MBD -0.004336  
 Fringe rate (Hz)  
 -0.522972  
 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  
 2025:041:113229  
 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	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0		
Z	0	0	0	0	0	0	0	0		
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD) -6.33762251839E+03 Apriori delay (usec) -6.33721193245E+03 Resid mbdelay (usec) -4.33594E-03 +/- 2.0E-04  
 Sband delay (usec) -6.33762690195E+03 Apriori clock (usec) -2.4950565E+01 Resid sbdelay (usec) -4.14970E-01 +/- 1.6E-03  
 Phase delay (usec) -6.33721193097E+03 Apriori clockrate (us/s) 1.2858790E-07 Resid phdelay (usec) 1.48220E-06 +/- 6.8E-07  
 Delay rate (us/s) -1.02575298020E+00 Apriori rate (us/s) -1.02574690901E+00 Resid rate (us/s) -6.07119E-06 +/- 1.2E-08  
 Total phase (deg) -264.1 Apriori accel (us/s/s) 5.56241021887E-05 Resid phase (deg) 46.0 +/- 21.0

ph/seg (deg) 58.3 52.5 Search (512X32) 0.197 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 79.6 91.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 22.4 29.7 Inc. seg. avg. 0.236 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 28.6 51.8 Inc. frq. avg. 0.211 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Z: az 307.5 el 34.7 pa 36.0 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 8814.657 6373.282 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0916//Zo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//Zo.W.372.3MP1AB



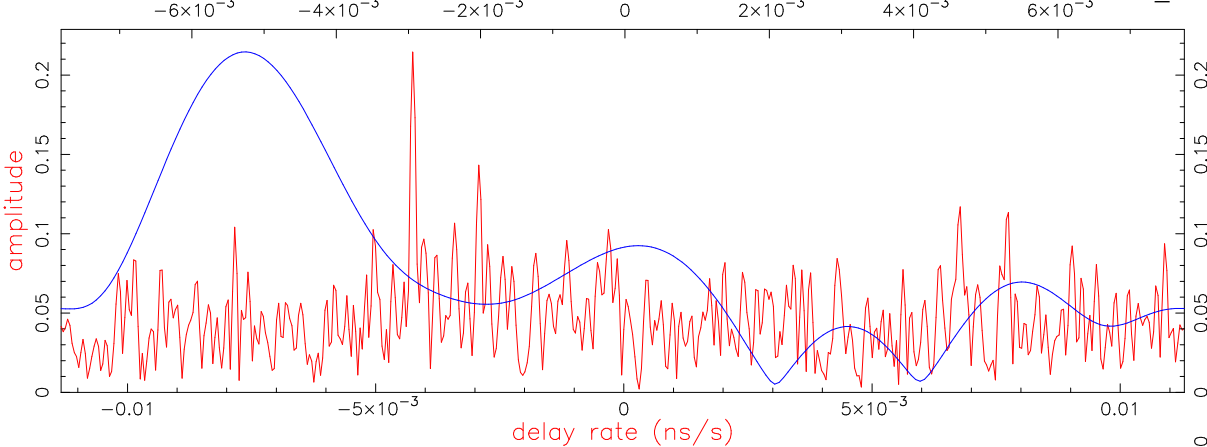
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Zo

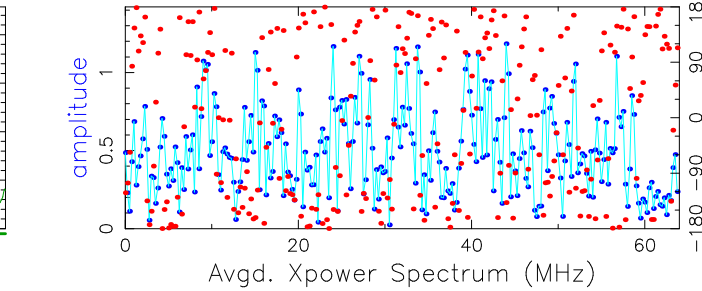
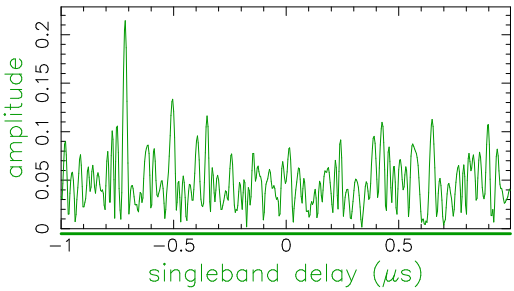
METSAHOV - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)



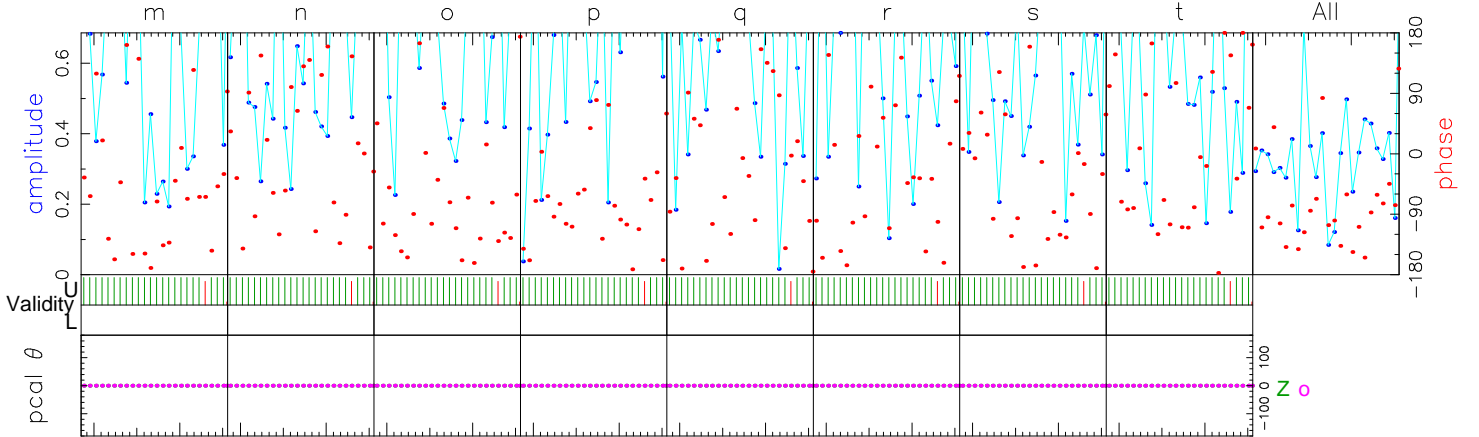
Fringe quality 0

SNR 5.8  
 Int time 98.165  
 Amp 0.229  
 Phase -93.0  
 PFD 2.7e-01  
 Delays (us)  
 SBD -0.715826  
 MBD -0.005301  
 Fringe rate (Hz)  
 -0.366292  
 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  
 2025:041:113234  
 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
	-89.5	-106.3	-103.6	-83.6	-80.1	-122.7	-61.2	-136.8	Phase	-93.0
	0.3	0.2	0.5	0.5	0.1	0.1	0.2	0.1	Ampl.	0.2
	147.5	358.7	73.9	74.3	60.1	194.0	24.9	156.3	Sbd box	73.7
U/L	193/0	193/0	193/0	193/0	193/0	193/0	193/0	193/0	APs used	
Z	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.33792035799E+03	Apriori delay (usec)	-6.33721193245E+03	Resid mbdelay (usec)	-5.30054E-03	+/-	1.9E-04
Sband delay (usec)	-6.33792775820E+03	Apriori clock (usec)	-2.4950565E+01	Resid sbdelay (usec)	-7.15826E-01	+/-	1.5E-03
Phase delay (usec)	-6.33721193545E+03	Apriori clockrate (us/s)	1.2858790E-07	Resid phdelay (usec)	-2.99841E-06	+/-	6.3E-07
Delay rate (us/s)	-1.02575116130E+00	Apriori rate (us/s)	-1.02574690901E+00	Resid rate (us/s)	-4.25229E-06	+/-	1.1E-08
Total phase (deg)	-43.0	Apriori accel (us/s/s)	5.56241021887E-05	Resid phase (deg)	-93.0	+/-	19.6

ph/seg (deg) 58.2 49.0 Search (512X32) 0.211 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 81.2 85.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 27.0 27.7 Inc. seg. avg. 0.256 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 68.8 48.4 Inc. frq. avg. 0.214 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Z: az 307.5 el 34.7 pa 36.0 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 8814.657 6373.282 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//Zo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//Zo.W.381.3MP1AB simultaneous interpolator

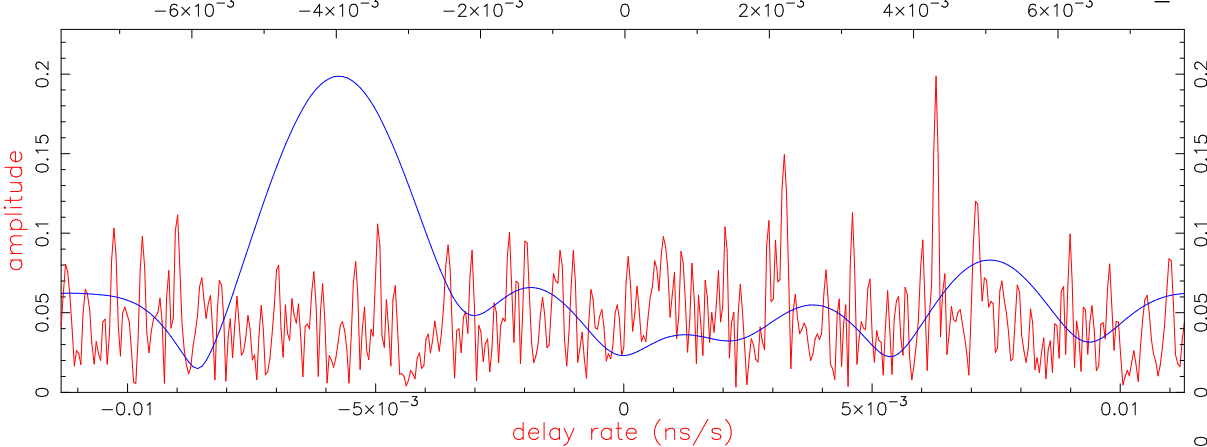
Mk4/DiFX fourfit 3.25 rev 0

aux01

0133+476.3MP1AB, No0916, Zo

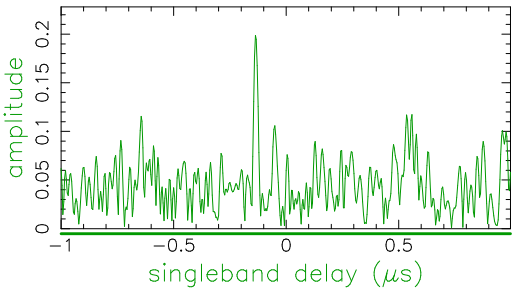
METSAHOV - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

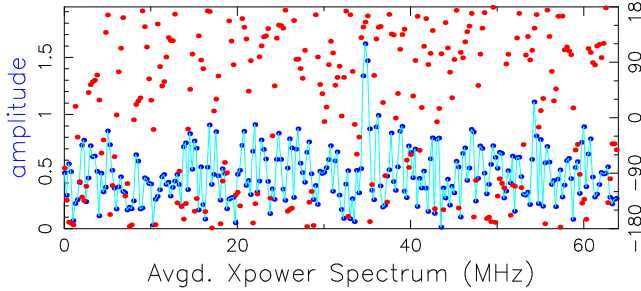


Fringe quality 0

SNR 5.4  
 Int time 98.165  
 Amp 0.228  
 Phase 74.9  
 PFD 9.7e-01  
 Delays (us)  
 SBD -0.135375  
 MBD -0.003953  
 Fringe rate (Hz)  
 0.541849  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

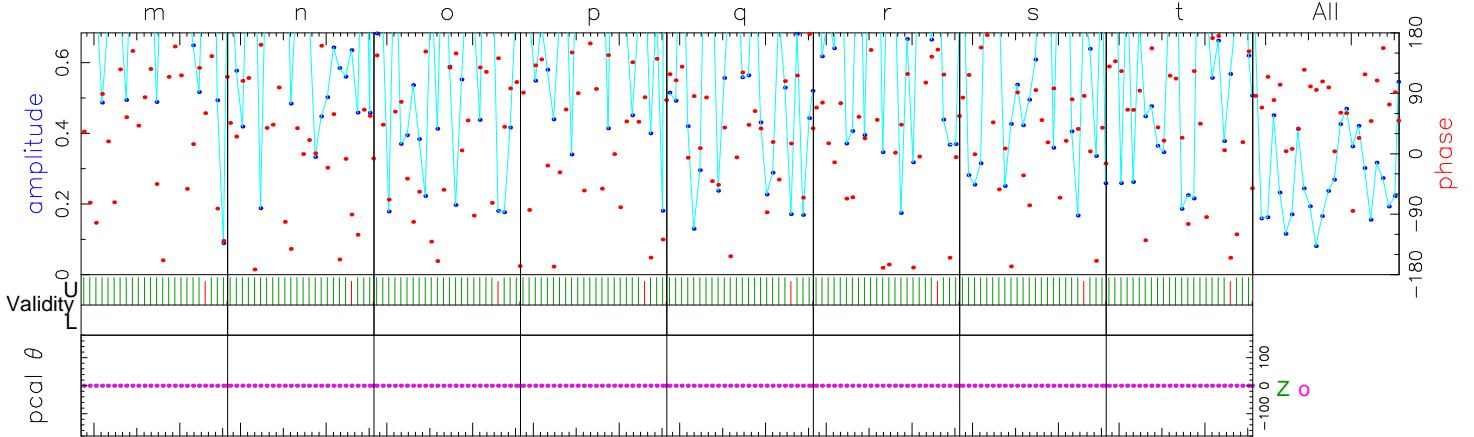


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 170450.99  
 Stop 170629.81  
 FRT 170540.00  
 Corr/FF/build  
 2025:007:183750  
 2025:041:113235  
 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		
Z	0	0	0	0	0	0	0	0		
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec) (SBD)	-6.33734088531E+03				-6.33721193245E+03					
Sband delay (usec)	-6.33734730695E+03				-2.4950565E+01					
Phase delay (usec)	-6.33721193003E+03				1.2858790E-07					
Delay rate (us/s)	-1.02574061868E+00				-1.02574690901E+00					
Total phase (deg)			-235.1		5.56241021887E-05					
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode:	MANUAL	MANUAL								
Pcal rate:	0.000E+00	0.000E+00								
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)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								
Chan ids										
Tracks										
Chan ids										
Tracks										
PCal period (AP's)	5	5								
simultaneous interpolator										

ph/seg (deg) 51.3 52.8 Amplitude 0.228 +/- 0.042 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 80.3 92.1 Search (512X32) 0.196 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 27.9 29.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 33.8 52.1 Inc. seg. avg. 0.225 Data rate (MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Z: az 307.5 el 34.7 pa 36.0 o: az 56.8 el 59.3 pa -95.8 u,v (fr/asec) 8814.657 6373.282 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//Zo..3MP1AB Output file: /Exps/c241a/v2/3mm/1234/No0916//Zo.W.384.3MP1AB