

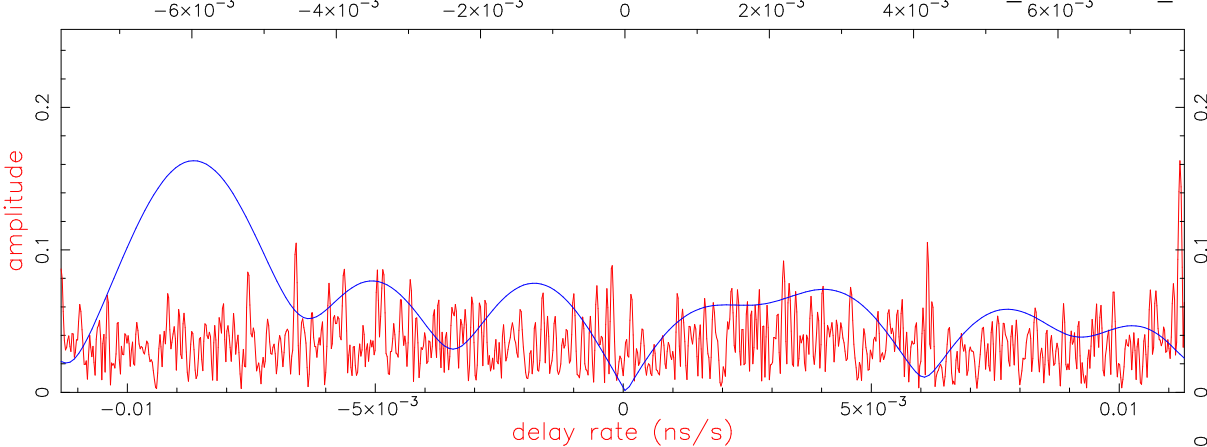
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, bf

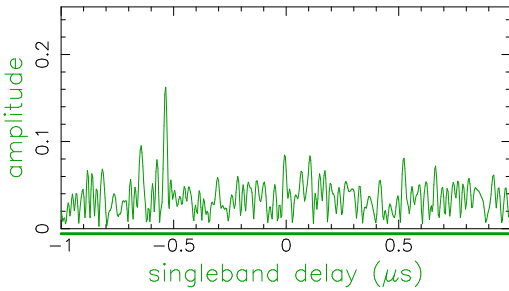
VLBA\_BR - VLBA\_FD, fgroup W, pol LR

multiband delay ( $\mu$ s)

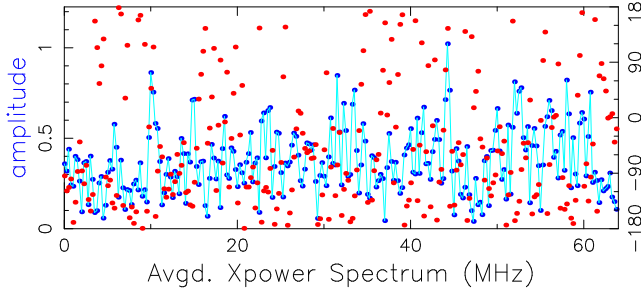


Fringe quality 0

SNR 6.0  
 Int time 179.987  
 Amp 0.255  
 Phase -98.2  
 PFD 2.3e-01  
 Delays (us)  
 SBD -0.536112  
 MBD -0.006012  
 Fringe rate (Hz)  
 0.968536  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

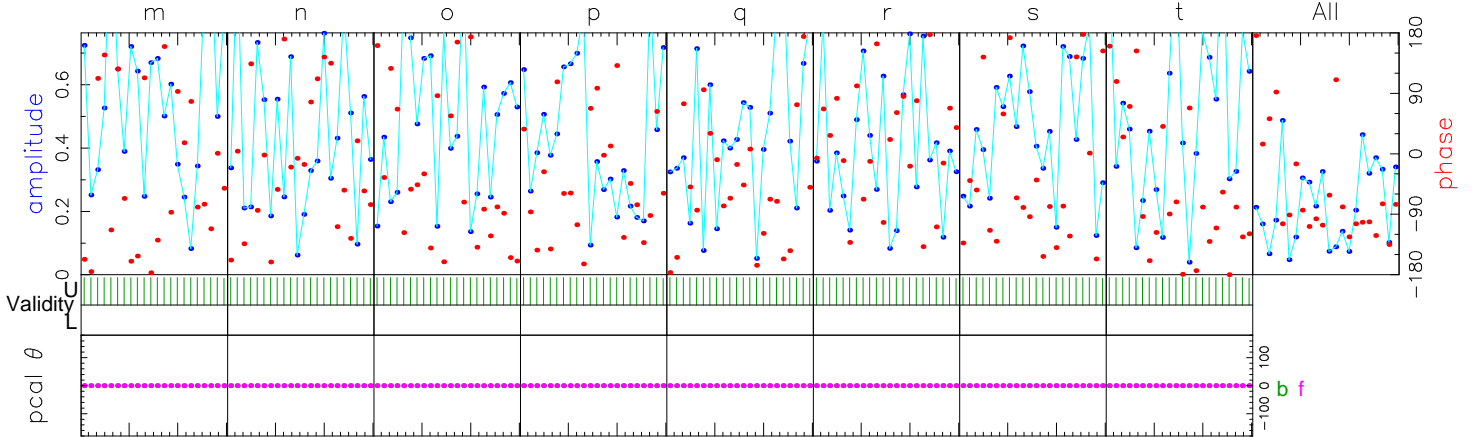


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110326  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-132.5	-58.5	-103.7	-76.2	-79.5	20.6	-108.8	-113.7	Phase	-98.2
	0.4	0.2	0.4	0.2	0.3	0.1	0.3	0.4	Ampl.	0.3
	119.8	272.5	120.3	177.5	86.1	292.3	141.8	273.1	Sbd box	119.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.39764395533E+03	Apriori delay (usec)	-1.39710669358E+03	Resid mbdelay (usec)	-6.01175E-03	+/-	1.8E-04
Sband delay (usec)	-1.39764280608E+03	Apriori clock (usec)	4.5806885E+00	Resid sbdelay (usec)	-5.36112E-01	+/-	1.4E-03
Phase delay (usec)	-1.39710669675E+03	Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	-3.16570E-06	+/-	6.2E-07
Delay rate (us/s)	-1.36399776113E-01	Apriori rate (us/s)	-1.36411019861E-01	Resid rate (us/s)	1.12437E-05	+/-	5.9E-09
Total phase (deg)	-308.9	Apriori accel (us/s/s)	2.35030181960E-05	Resid phase (deg)	-98.2	+/-	19.1

ph/seg (deg)	69.9	Theor.	44.8	Amplitude	0.255 +/- 0.042	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	85.6		78.2	Search (1024X32)	0.159	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	54.9		27.0	Inc. seg. avg.	0.265	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	40.7		47.1	Inc. frq. avg.	0.269	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 69.7 el 33.6 pa -51.9 f: az 64.6 el 38.2 pa -77.6 u, v (fr/asec) 1004.210 3054.640 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/bf..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/bf.W.17.3MP1UT

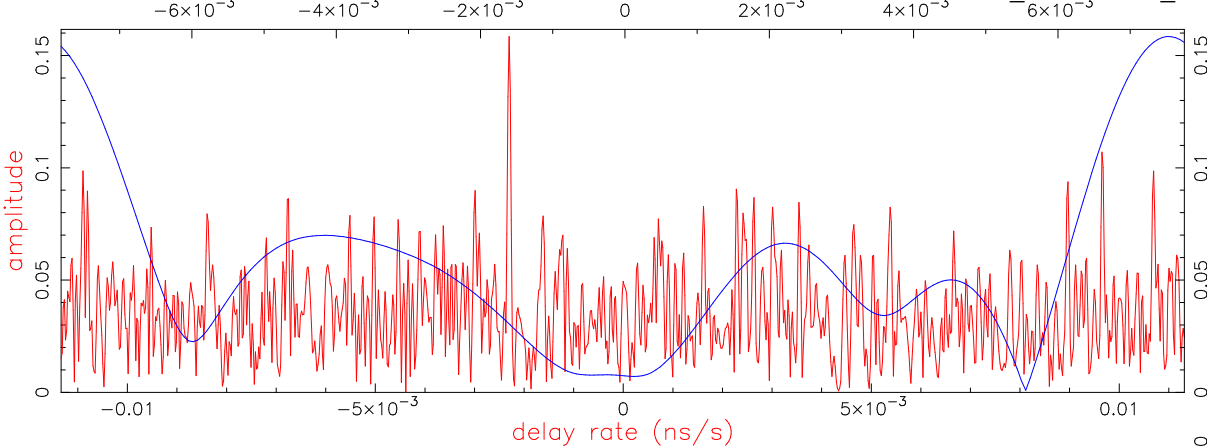
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, bf

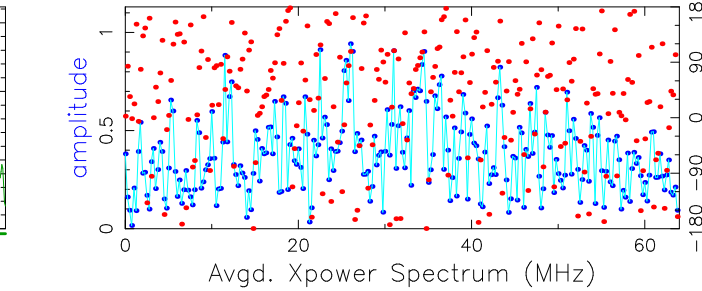
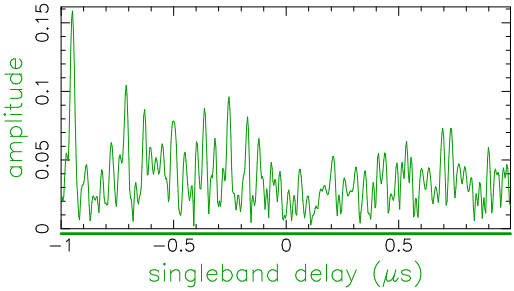
VLBA\_BR - VLBA\_FD, fgroup W, pol LL

multiband delay ( $\mu$ s)



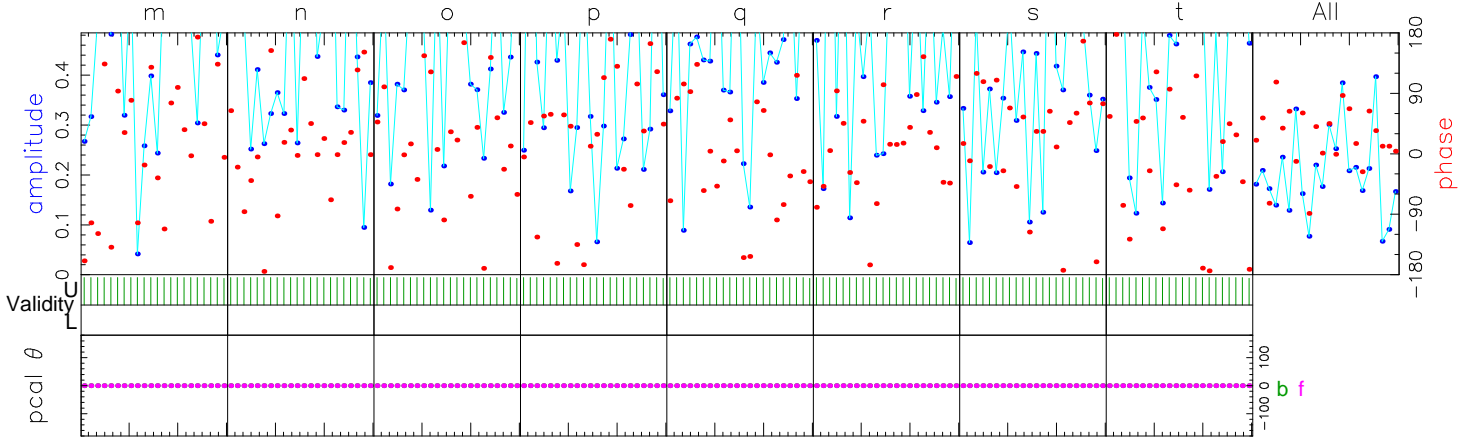
Fringe quality 0

SNR 5.8  
 Int time 179.987  
 Amp 0.162  
 Phase 31.7  
 PFD 5.0e-01  
 Delays (us)  
 SBD -0.950031  
 MBD -0.008100  
 Fringe rate (Hz)  
 -0.198851  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110322  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	79.9	13.6	13.2	96.2	-4.2	22.8	59.4	23.9		31.7
	0.1	0.3	0.2	0.2	0.2	0.3	0.2	0.1		0.2
	18.1	15.5	191.0	184.3	199.6	445.6	410.0	94.0		13.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	0	0	0	0	0	0	0	0		
f	0	0	0	0	0	0	0	0		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec) (SBD)	-1.39805229330E+03	Apriori delay (usec)	-1.39710669358E+03	Resid mbdelay (usec)	-8.09972E-03	+/-	1.9E-04
Sband delay (usec)	-1.39805672433E+03	Apriori clock (usec)	4.5806885E+00	Resid sbdelay (usec)	-9.50031E-01	+/-	1.5E-03
Phase delay (usec)	-1.39710669256E+03	Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	1.02081E-06	+/-	6.3E-07
Delay rate (us/s)	-1.36413328322E-01	Apriori rate (us/s)	-1.36411019861E-01	Resid rate (us/s)	-2.30846E-06	+/-	6.1E-09
Total phase (deg)	-179.0	Apriori accel (us/s/s)	2.35030181960E-05	Resid phase (deg)	31.7	+/-	19.7

ph/seg (deg)	46.9	Theor.	46.1	Amplitude	0.162 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	61.5		80.5	Search (1024X32)	0.156	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	39.5		27.8	Inc. seg. avg.	0.157	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	40.0		48.5	Inc. frq. avg.	0.168	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
b: az 69.7 el 33.6 pa -51.9		f: az 64.6 el 38.2 pa -77.6		u, v (fr/asec)	1004.210 3054.640	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/c241c/v2/3mm/1234/No0299/bf..3MP1UT		Output file: /Exps/c241c/v2/3mm/1234/No0299/bf.W.2.3MP1UT		simultaneous interpolator				

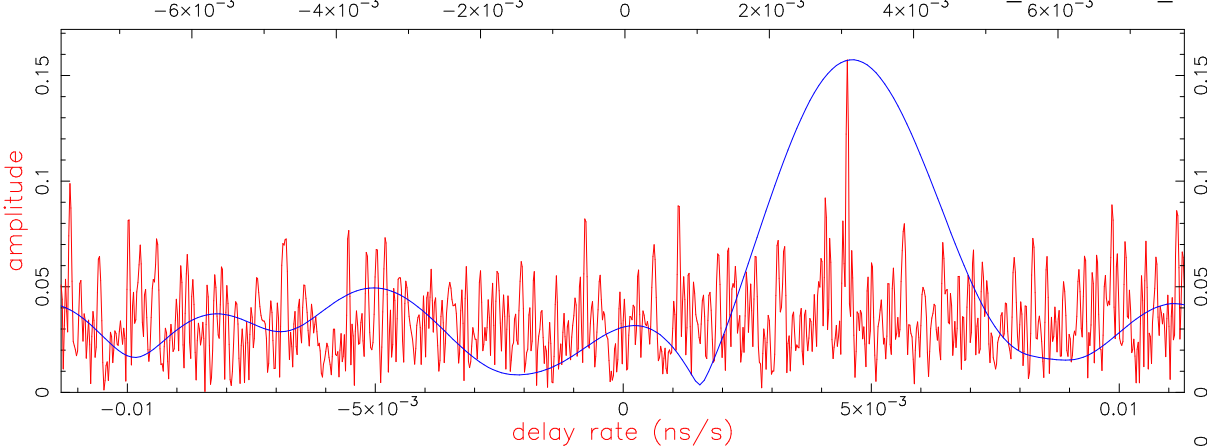
Mk4/DiFX fourfit 3.25 rev 0

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2013+370.3MP1UT, No0299, bf

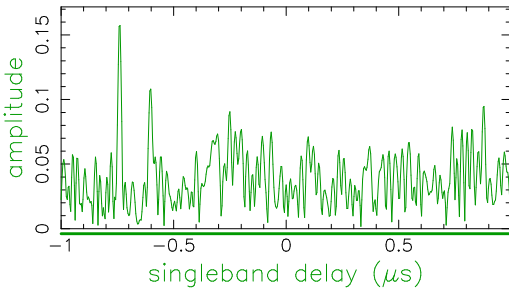
VLBA\_BR - VLBA\_FD, fgroup W, pol RL

multiband delay ( $\mu$ s)

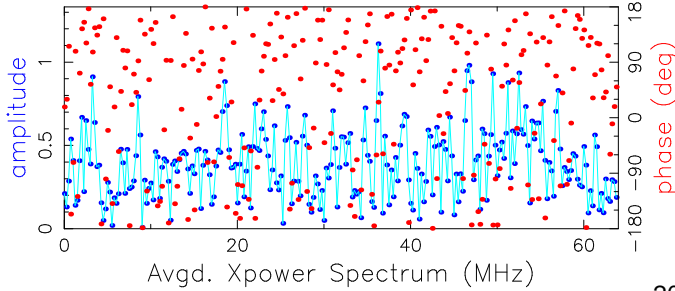


Fringe quality 0

SNR 5.9  
 Int time 179.987  
 Amp 0.172  
 Phase -155.3  
 PFD 3.7e-01  
 Delays (us)  
 SBD -0.740134  
 MBD 0.003116  
 Fringe rate (Hz)  
 0.389123  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

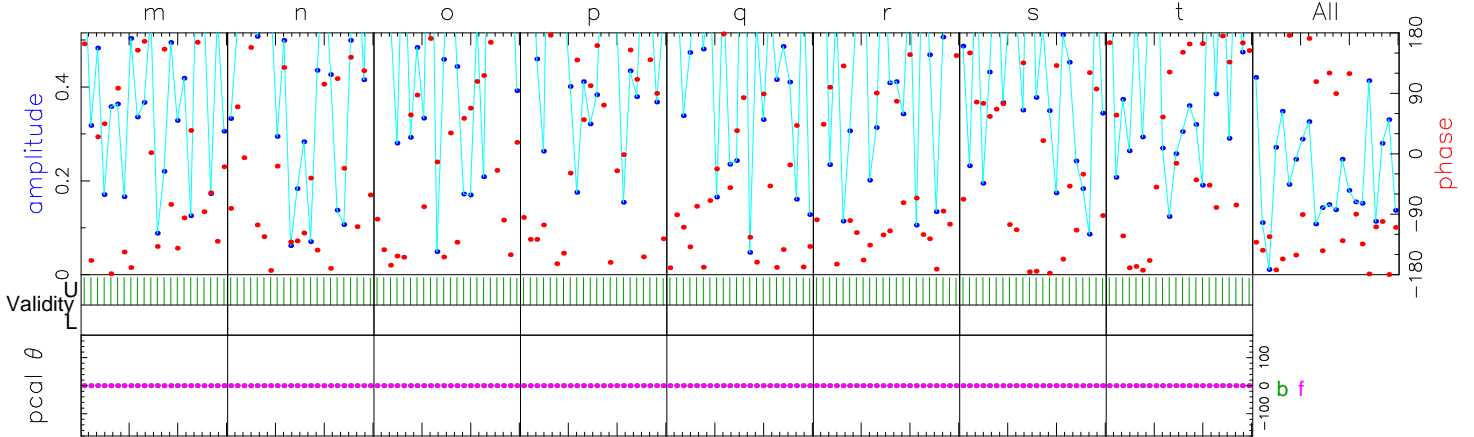


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110328  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-154.0	-157.1	-162.4	-170.2	-133.8	-136.2	147.9	-153.8	Phase	-155.3
	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	Ampl.	0.2
	435.6	383.6	83.2	202.4	468.1	266.2	458.4	217.0	Sbd box	67.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.39785357799E+03	Apriori delay (usec)	-1.39710669358E+03	Resid mbdelay (usec)	3.11560E-03	+/-	1.8E-04
Sband delay (usec)	-1.39784682808E+03	Apriori clock (usec)	4.5806885E+00	Resid sbdelay (usec)	-7.40134E-01	+/-	1.5E-03
Phase delay (usec)	-1.39710669859E+03	Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	-5.00945E-06	+/-	6.3E-07
Delay rate (us/s)	-1.36406502531E-01	Apriori rate (us/s)	-1.36411019861E-01	Resid rate (us/s)	4.51733E-06	+/-	6.0E-09
Total phase (deg)	-6.0	Apriori accel (us/s/s)	2.35030181960E-05	Resid phase (deg)	-155.3	+/-	19.4

ph/seg (deg)	51.9	Theor.	45.6	Amplitude	0.172 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	74.1	Search (1024X32)	0.154	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	26.9	Inc. seg. avg.	0.176	Inc. frq. avg.	0.159	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	31.0	Inc. frq. avg.	0.159			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 69.7 el 33.6 pa -51.9 f: az 64.6 el 38.2 pa -77.6 u, v (fr/asec) 1004.210 3054.640 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/bf..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/bf.W.25.3MP1UT

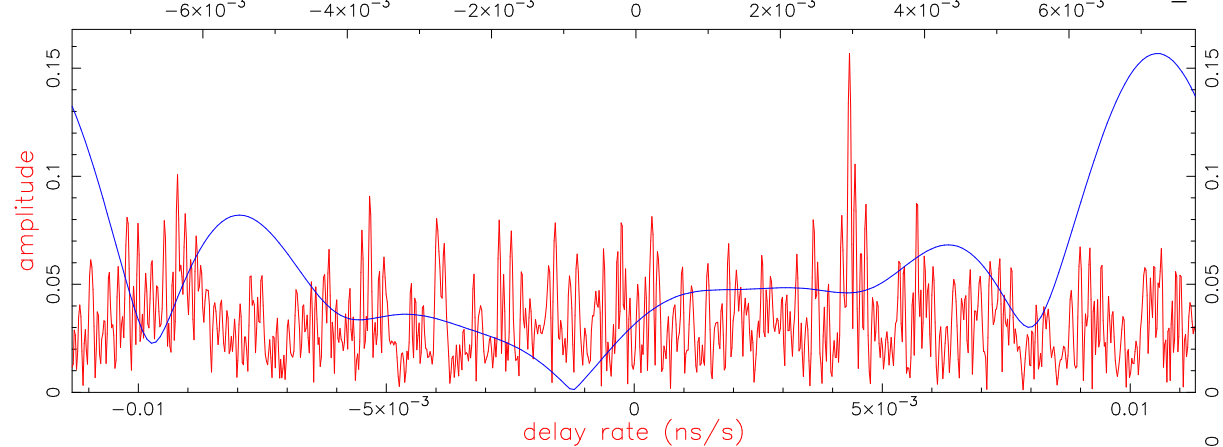
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, Bf

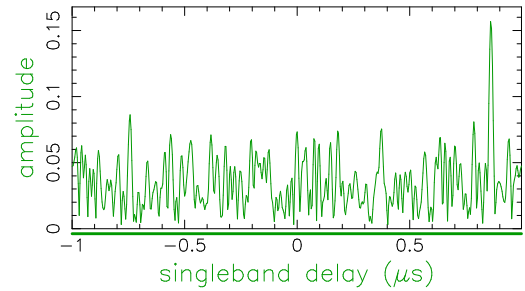
EFLSBERG - VLBA\_FD, fgroup W, pol LL

multiband delay ( $\mu$ s)

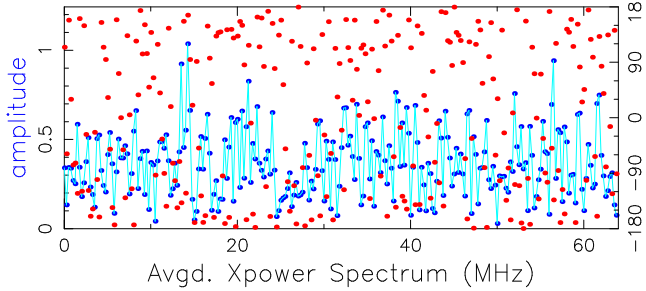


Fringe quality 0

SNR 5.8  
 Int time 179.969  
 Amp 0.168  
 Phase -77.8  
 PFD 5.7e-01  
 Delays (us)  
 SBD 0.860535  
 MBD 0.007235  
 Fringe rate (Hz)  
 0.374018  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

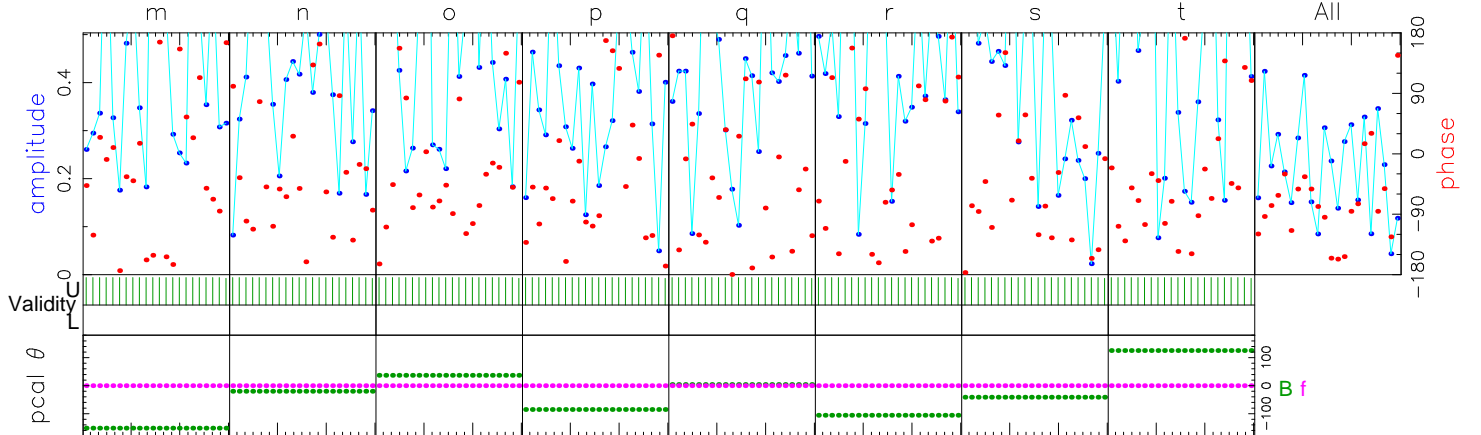


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110334  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-71.9	-67.3	-65.8	-84.3	-94.9	-158.1	-67.1	-63.8	Phase	-77.8
	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.3	Ampl.	0.2
	26.8	31.2	13.1	193.9	409.5	194.1	127.1	477.3	Sbd box	477.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	-151:0	-20:0	37:0	-85:0	4:0	-106:0	-41:0	125:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	3.85576093181E+03	Apriori delay (usec)		3.85489432155E+03	Resid mbdelay (usec)	7.23526E-03	+/-	1.9E-04	
Sband delay (usec)	3.85575485680E+03	Apriori clock (usec)		-3.5458263E+01	Resid sbdelay (usec)	8.60535E-01	+/-	1.5E-03	
Phase delay (usec)	3.85489431904E+03	Apriori clockrate (us/s)		-2.3975895E-07	Resid phdelay (usec)	-2.50796E-06	+/-	6.4E-07	
Delay rate (us/s)	-1.53104257756E+00	Apriori rate (us/s)		-1.53104691953E+00	Resid rate (us/s)	4.34197E-06	+/-	6.1E-09	
Total phase (deg)		231.1	Apriori accel (us/s/s)		-2.77335057736E-06	Resid phase (deg)	-77.8	+/-	19.8

ph/seg (deg) 55.7 46.4 Search (1024X32) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 78.8 80.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 35.1 28.0 Inc. seg. avg. 0.181 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.1 48.8 Inc. frq. avg. 0.166 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 267.2 el 53.9 pa 52.8 f: az 64.6 el 38.2 pa -77.6 u,v (fr/asec) 11017.048 1612.663 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/Bf..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/Bf.W.47.3MP1UT

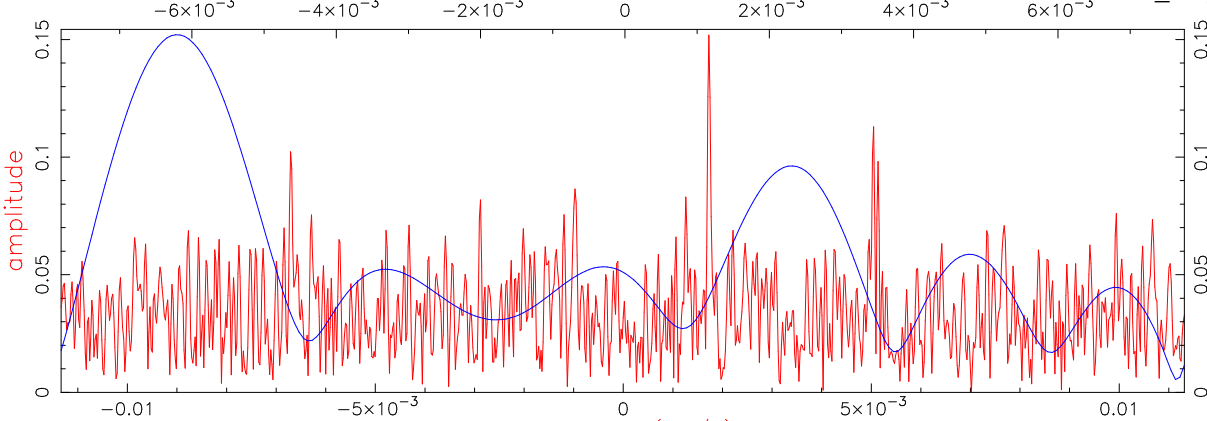
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, Bf

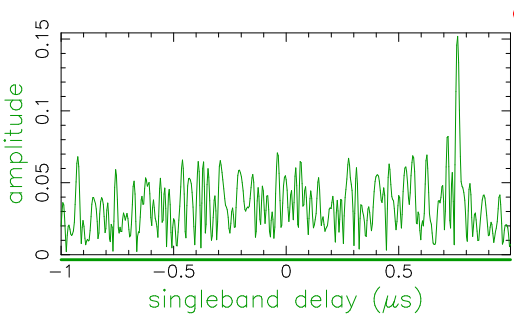
EFLSBERG - VLBA\_FD, fgroup W, pol RR

multiband delay ( $\mu$ s)

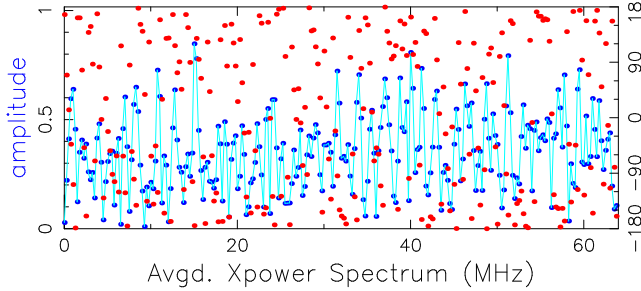


Fringe quality 0

SNR 5.6  
 Int time 179.969  
 Amp 0.154  
 Phase 6.8  
 PFD 9.2e-01  
 Delays (us)  
 SBD 0.760652  
 MBD -0.006260  
 Fringe rate (Hz)  
 0.149702  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

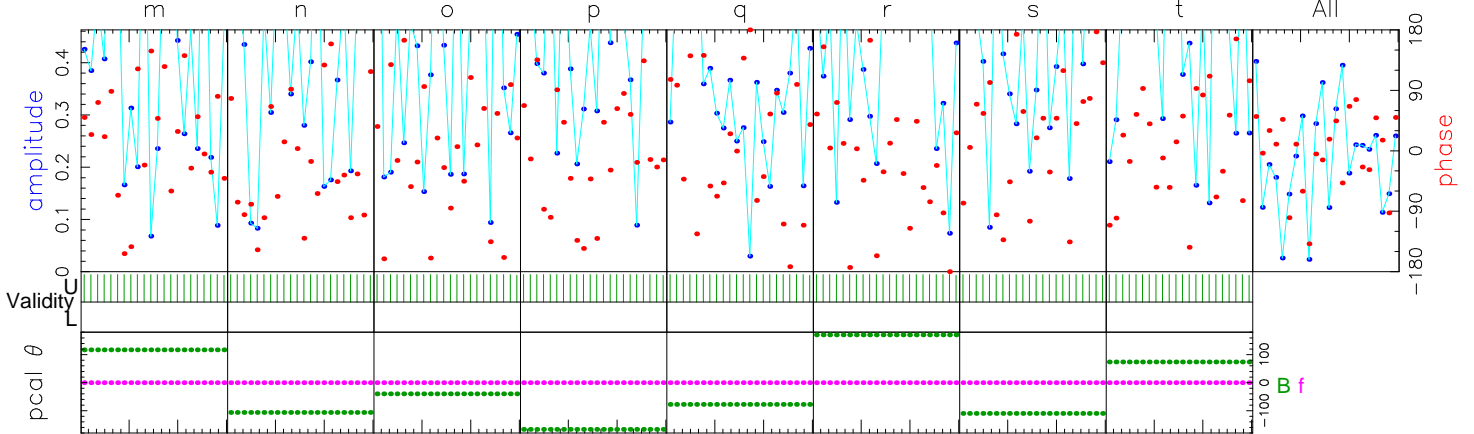


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110336  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	0	0	0	0	0	0	0	0		
f	0	0	0	0	0	0	0	0		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	3.85565368608E+03	Apriori delay (usec)	3.85489432155E+03	Resid mbdelay (usec)	-6.26047E-03	+/-	1.9E-04
Sband delay (usec)	3.85565497330E+03	Apriori clock (usec)	-3.5458263E+01	Resid sbdelay (usec)	7.60652E-01	+/-	1.5E-03
Phase delay (usec)	3.85489432177E+03	Apriori clockrate (us/s)	-2.3975895E-07	Resid phdelay (usec)	2.19862E-07	+/-	6.6E-07
Delay rate (us/s)	-1.53104518164E+00	Apriori rate (us/s)	-1.53104691953E+00	Resid rate (us/s)	1.73789E-06	+/-	6.3E-09
Total phase (deg)		Apriori accel (us/s/s)	-2.77335057736E-06	Resid phase (deg)	6.8	+/-	20.4

ph/seg (deg)	56.5	Theor.	Amplitude	0.154 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	78.9	47.9	Search (1024X32)	0.144	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	47.9	83.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	44.9	28.9	Inc. seg. avg.	0.163	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
		50.5	Inc. frq. avg.	0.157	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 267.2 el 53.9 pa 52.8 f: az 64.6 el 38.2 pa -77.6 u,v (fr/asec) 11017.048 1612.663 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/Bf..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/Bf.W.57.3MP1UT

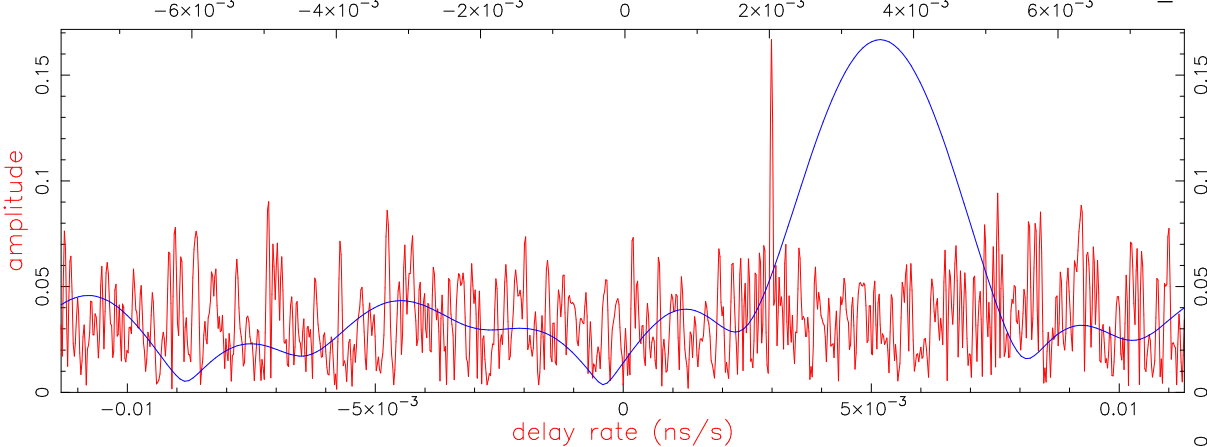
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, Bf

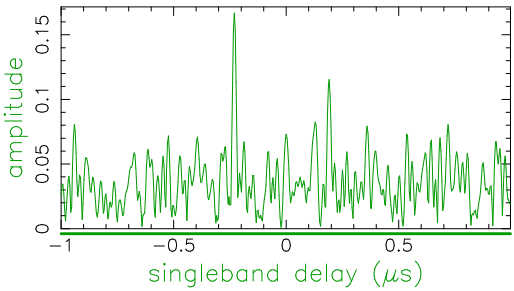
EFLSBERG - VLBA\_FD, fgroup W, pol LR

multiband delay ( $\mu$ s)

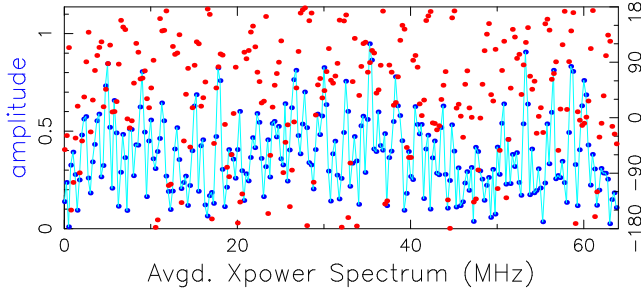


Fringe quality 0

SNR 6.1  
 Int time 179.969  
 Amp 0.172  
 Phase -93.1  
 PFD 1.2e-01  
 Delays (us)  
 SBD -0.230451  
 MBD 0.003536  
 Fringe rate (Hz) 0.257185  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

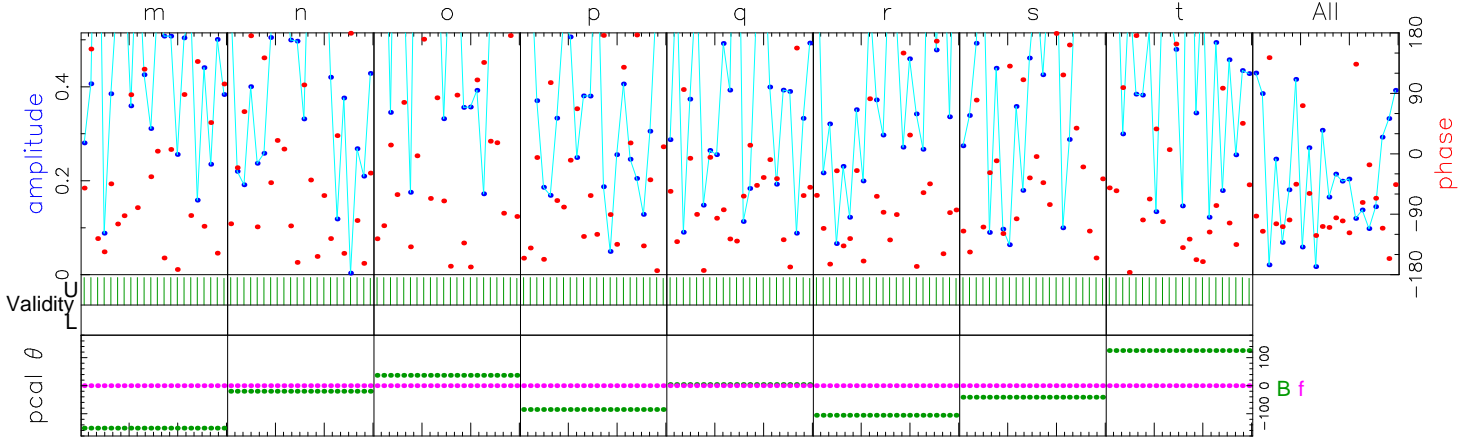


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build 2024:352:144904  
 2025:041:110338  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-107.2	-80.1	-91.4	-108.5	-81.8	-97.8	-75.1	-105.9	Phase	-93.1
	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.2	Ampl.	0.2
	442.0	501.6	129.1	73.9	68.9	16.4	463.7	116.9	Sbd box	198.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	-151:0	-20:0	37:0	-85:0	4:0	-106:0	-41:0	125:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	3.85466348241E+03	Apriori delay (usec)	3.85489432155E+03	Resid mbdelay (usec)	3.53586E-03	+/-	1.8E-04
Sband delay (usec)	3.85466387005E+03	Apriori clock (usec)	-3.5458263E+01	Resid sbdelay (usec)	-2.30451E-01	+/-	1.4E-03
Phase delay (usec)	3.85489431855E+03	Apriori clockrate (us/s)	-2.3975895E-07	Resid phdelay (usec)	-3.00152E-06	+/-	6.0E-07
Delay rate (us/s)	-1.53104393387E+00	Apriori rate (us/s)	-1.53104691953E+00	Resid rate (us/s)	2.98566E-06	+/-	5.8E-09
Total phase (deg)	215.8	Apriori accel (us/s/s)	-2.77335057736E-06	Resid phase (deg)	-93.1	+/-	18.7

ph/seg (deg)	RMS 60.3	Theor. 43.9	Amplitude Search (1024X32)	0.172 +/- 0.028	0.163	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	79.5	76.7	Interp.	0.000		Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	14.4	26.5	Inc. seg. avg.	0.170		Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	29.2	46.2	Inc. frq. avg.	0.159		Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 267.2 el 53.9 pa 52.8 f: az 64.6 el 38.2 pa -77.6 u,v (fr/asec) 11017.048 1612.663 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/Bf..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/Bf.W.68.3MP1UT

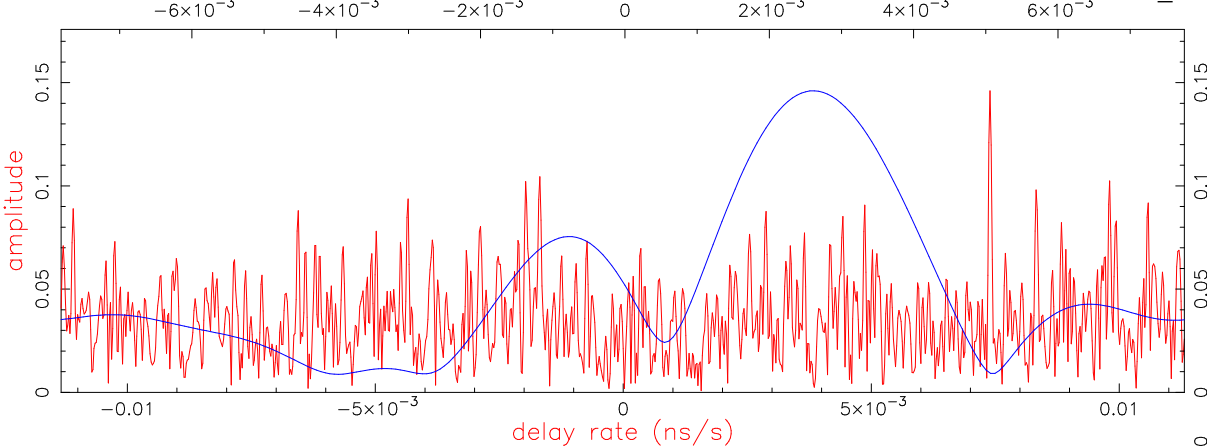
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, Bf

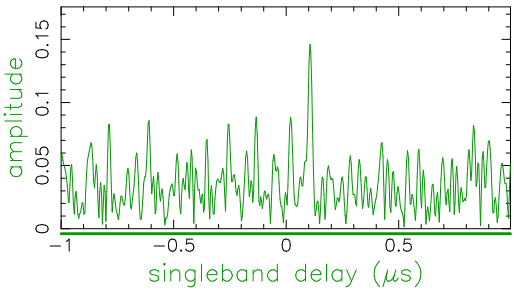
EFLSBERG - VLBA\_FD, fgroup W, pol RL

multiband delay ( $\mu$ s)

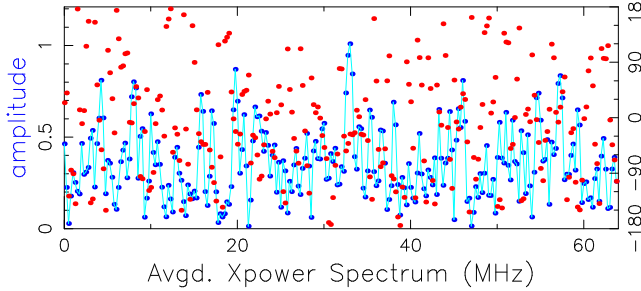


Fringe quality 0

SNR 5.4  
 Int time 179.969  
 Amp 0.176  
 Phase 85.4  
 PFD 1.0e+00  
 Delays (us)  
 SBD 0.106212  
 MBD 0.002602  
 Fringe rate (Hz)  
 0.638882  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

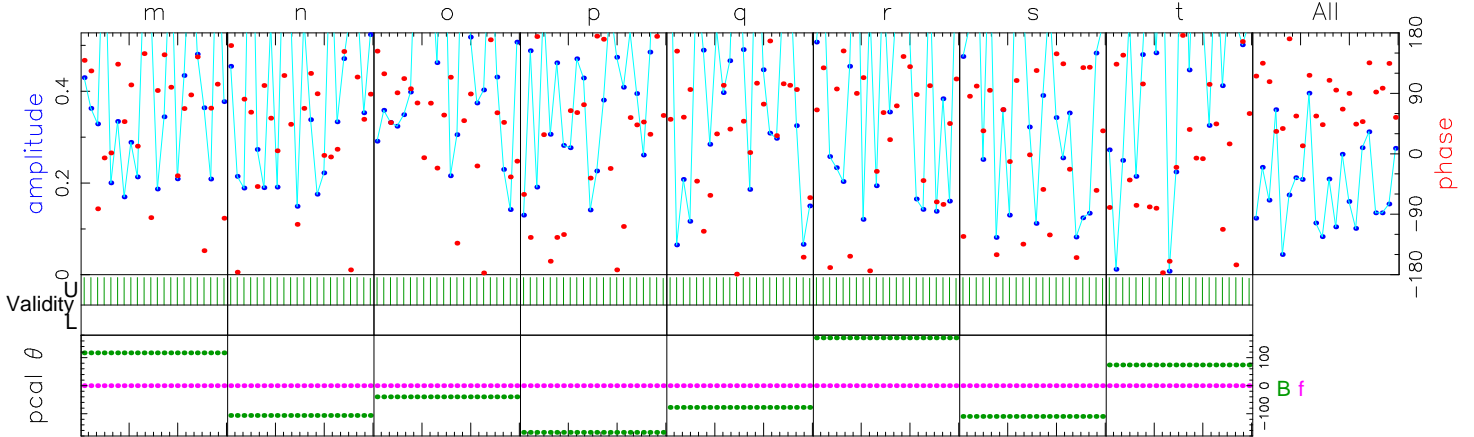


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110340  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	0	0	0	0	0	0	0	0		
f	0	0	0	0	0	0	0	0		
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:f	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec) (SBD)	3.85500629902E+03	Apriori delay (usec)	3.85489432155E+03	Resid mbdelay (usec)	2.60248E-03	+/-	2.0E-04
Sband delay (usec)	3.85500053330E+03	Apriori clock (usec)	-3.5458263E+01	Resid sbdelay (usec)	1.06212E-01	+/-	1.6E-03
Phase delay (usec)	3.85489432430E+03	Apriori clockrate (us/s)	-2.3975895E-07	Resid phdelay (usec)	2.75388E-06	+/-	6.9E-07
Delay rate (us/s)	-1.53103950274E+00	Apriori rate (us/s)	-1.53104691953E+00	Resid rate (us/s)	7.41679E-06	+/-	6.6E-09
Total phase (deg)	34.3	Apriori accel (us/s/s)	-2.77335057736E-06	Resid phase (deg)	85.4	+/-	21.3

ph/seg (deg)	40.6	Theor.	50.0	Amplitude	0.176 +/- 0.033	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	68.8	Search (1024X32)	0.146	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	48.7	Inc. seg. avg.	0.167	Inc. frq. avg.	0.167	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	57.0	Inc. frq. avg.	0.167			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 267.2 el 53.9 pa 52.8 f: az 64.6 el 38.2 pa -77.6 u,v (fr/asec) 11017.048 1612.663 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/Bf..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/Bf.W.79.3MP1UT

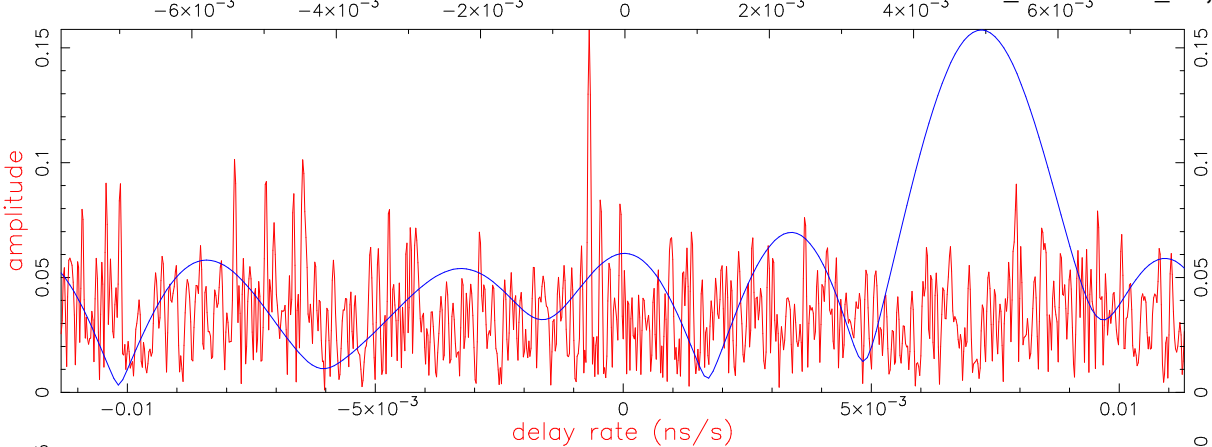
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, bf

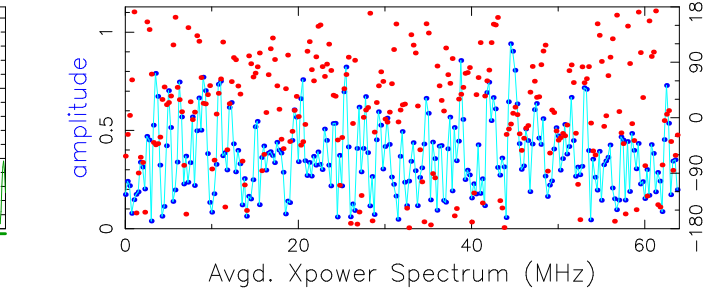
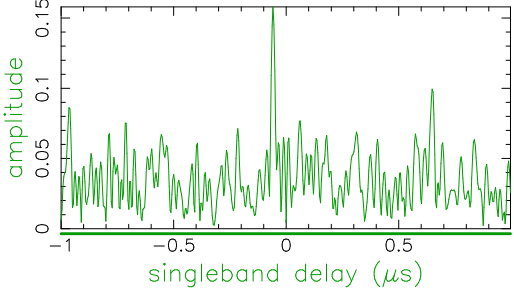
VLBA\_BR - VLBA\_FD, fgroup W, pol RR

multiband delay ( $\mu$ s)



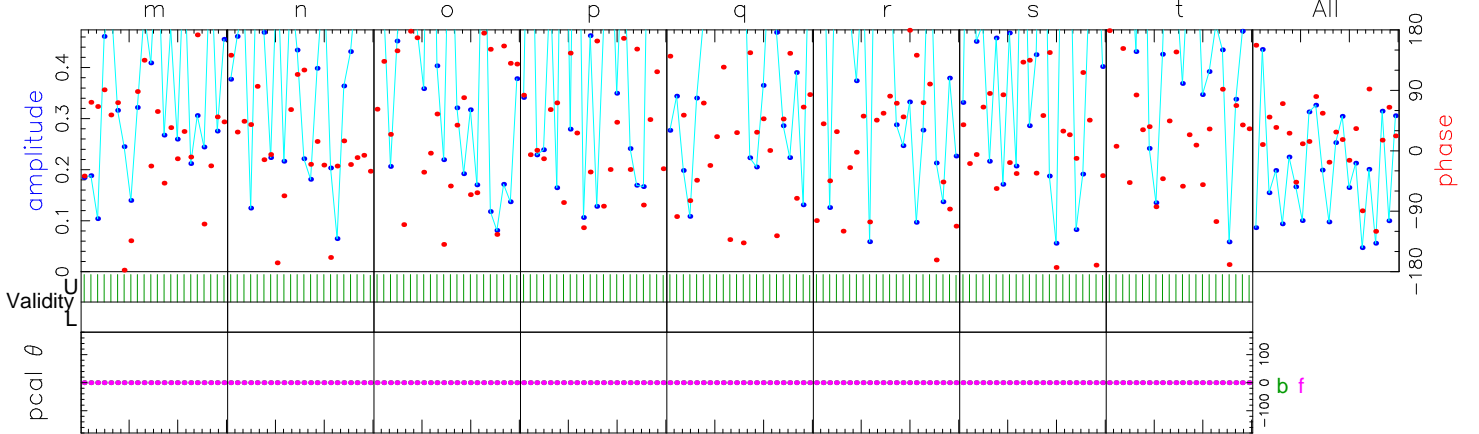
Fringe quality 0

SNR 5.8  
Int time 179.987  
Amp 0.158  
Phase 28.0  
PFD 5.9e-01  
Delays (us)  
SBD -0.058506  
MBD 0.004940  
Fringe rate (Hz)  
-0.059278  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110324  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	0	0	0	0	0	0	0	0	Ampl.	0.1
f	0	0	0	0	0	0	0	0	Sbd box	242.0
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
f	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Tracks	

Group delay (usec) (SBD)	-1.39716425372E+03	Apriori delay (usec)	-1.39710669358E+03	Resid mbdelay (usec)	4.93987E-03	+/-	1.9E-04
Sband delay (usec)	-1.39716520008E+03	Apriori clock (usec)	4.5806885E+00	Resid sbdelay (usec)	-5.85065E-02	+/-	1.5E-03
Phase delay (usec)	-1.39710669268E+03	Apriori clockrate (us/s)	5.2622099E-07	Resid phdelay (usec)	9.02121E-07	+/-	6.4E-07
Delay rate (us/s)	-1.36411708019E-01	Apriori rate (us/s)	-1.36411019861E-01	Resid rate (us/s)	-6.88158E-07	+/-	6.1E-09
Total phase (deg)	-182.7	Apriori accel (us/s/s)	2.35030181960E-05	Resid phase (deg)	28.0	+/-	19.8

ph/seg (deg)	58.1	Theor.	46.4	Amplitude	0.158 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	69.1	Search (1024X32)	0.155	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	48.9	Inc. seg. avg.	0.149	Inc. frq. avg.	0.150	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	42.9	Inc. frq. avg.	0.150			Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
b: az 69.7 el 33.6 pa -51.9		f: az 64.6 el 38.2 pa -77.6		u, v (fr/asec)	1004.210 3054.640	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/c241c/v2/3mm/1234/No0299/bf..3MP1UT		Output file: /Exps/c241c/v2/3mm/1234/No0299/bf.W.9.3MP1UT		simultaneous interpolator				

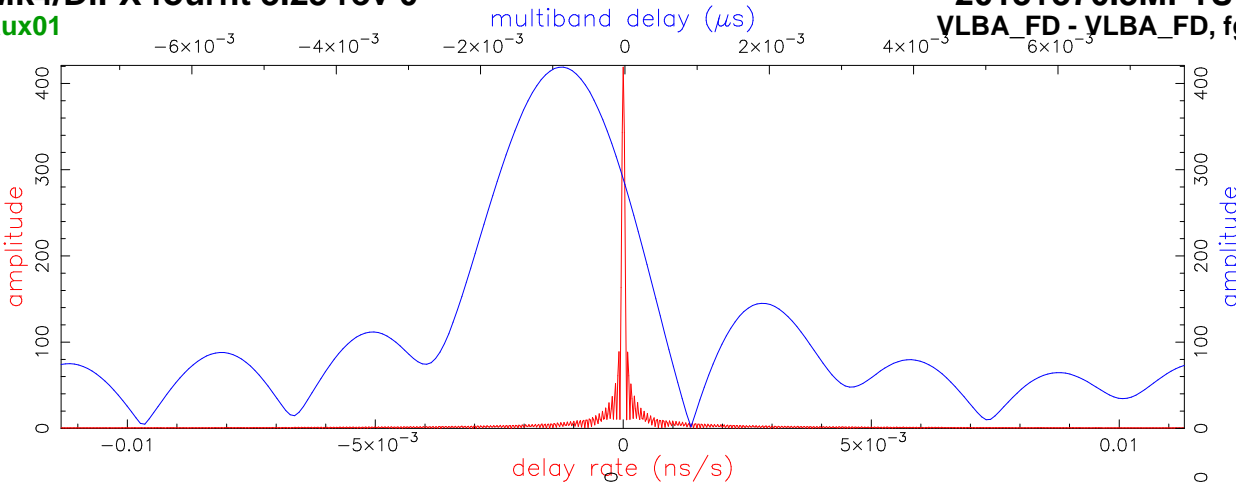


Mk4/DiFX fourfit 3.25 rev 0

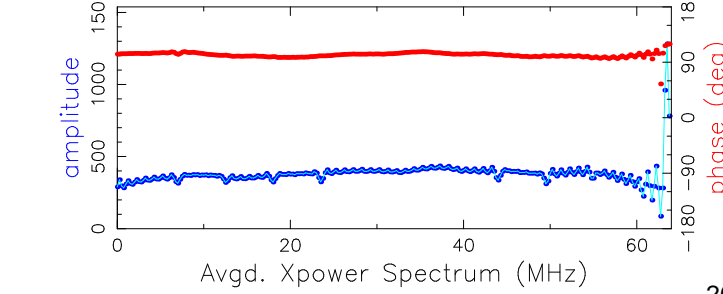
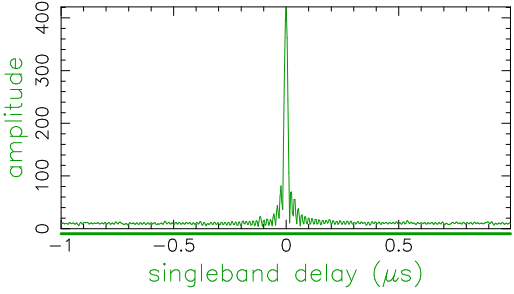
aux01

2013+370.3MP1UT, No0299, ff

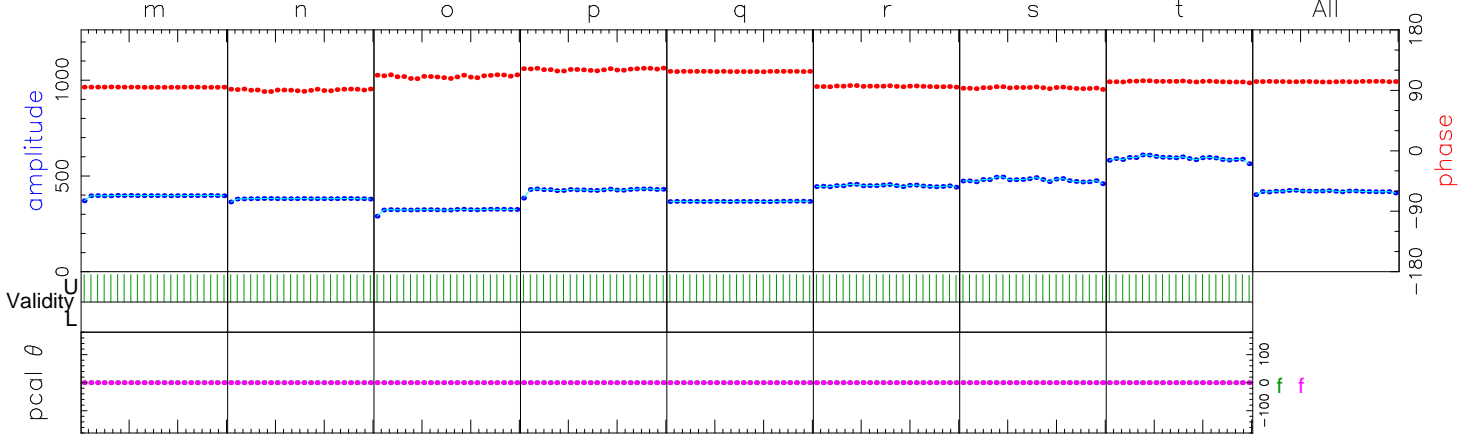
VLBA\_FD - VLBA\_FD, fgroup W, pol LR



Fringe quality 8  
 SNR 15446.8  
 Int time 179.987  
 Amp 421.037  
 Phase 102.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000836  
 MBD -0.000887  
 Fringe rate (Hz) 0.000007  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110347  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec) (SBD)	-8.870000000000E-04								Apriori delay (usec)	0.000000000000E+00
Sband delay (usec)	-8.357500000000E-04								Apriori clock (usec)	0.000000000000E+00
Phase delay (usec)	3.31948091795E-06								Apriori clockrate (us/s)	0.000000000000E+00
Delay rate (us/s)	7.79413381543E-11								Apriori rate (us/s)	0.000000000000E+00
Total phase (deg)			102.9						Apriori accel (us/s/s)	0.000000000000E+00
	RMS	Theor.	Amplitude	421.037 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
ph/seg (deg)	0.2	0.0	Search (1024X32)	417.359	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
amp/seg (%)	1.2	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	12.8	0.0	Inc. seg. avg.	419.127	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011		
amp/frq (%)	18.4	0.0	Inc. frq. avg.	426.571	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00	
f: az 64.6 el 38.2 pa -77.6			f: az 64.6 el 38.2 pa -77.6				u,v (fr/asec)	0.000 0.000	simultaneous interpolator	
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/3mm/1234/No0299//ff..3MP1UT				Output file: /Exps/c241c/v2/3mm/1234/No0299//ff.W.107.3MP1UT			

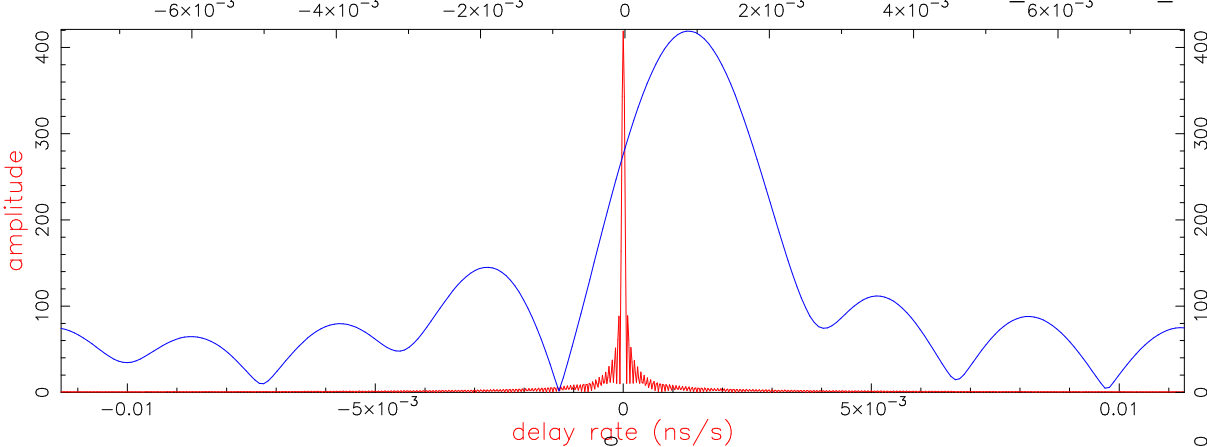
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, ff

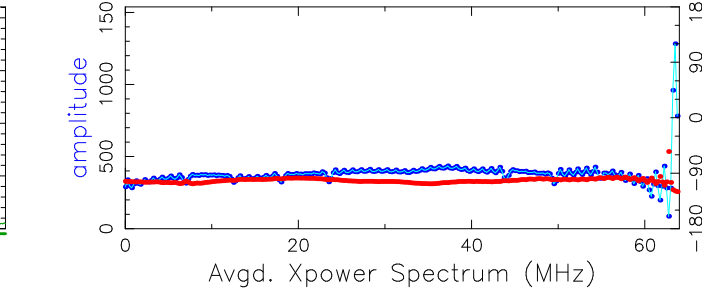
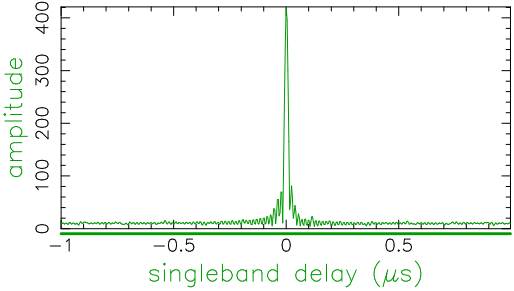
VLBA\_FD - VLBA\_FD, fgroup W, pol RL

multiband delay ( $\mu$ s)



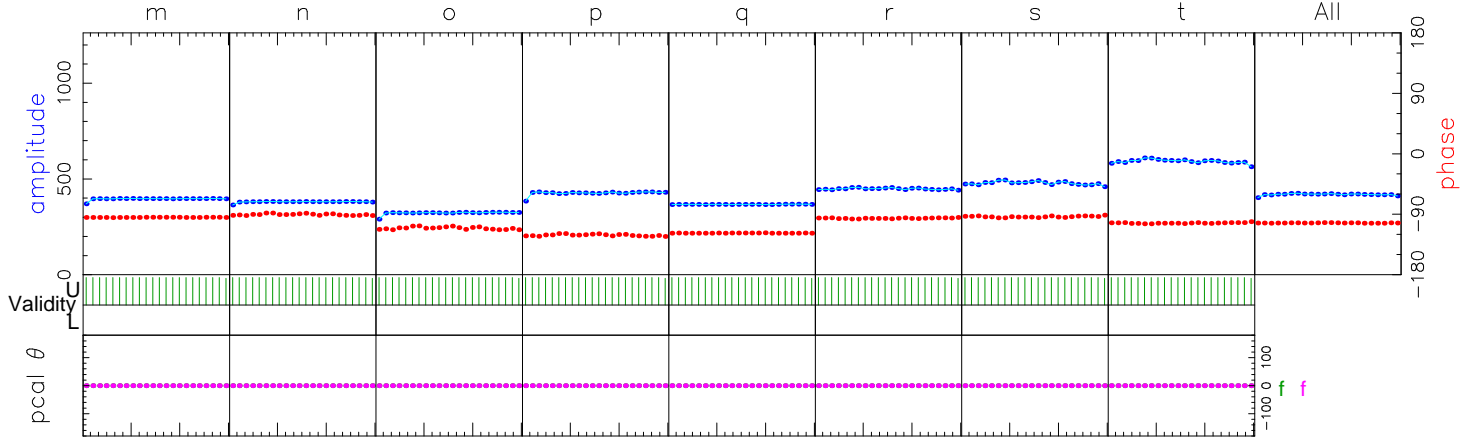
Fringe quality 8

SNR 15446.8  
 Int time 179.987  
 Amp 421.037  
 Phase -102.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000836  
 MBD 0.000887  
 Fringe rate (Hz)  
 -0.000007  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110349  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

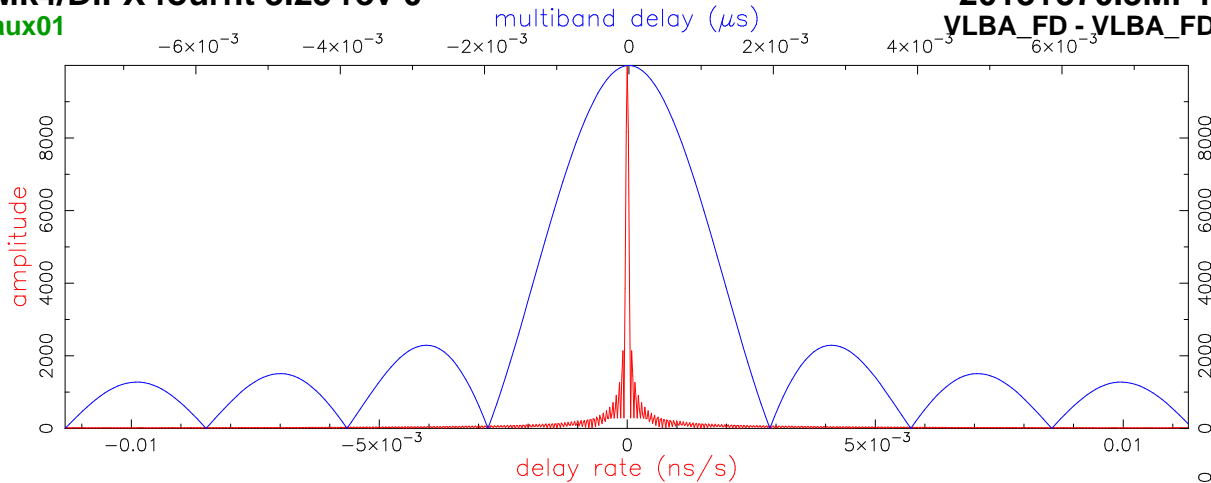
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



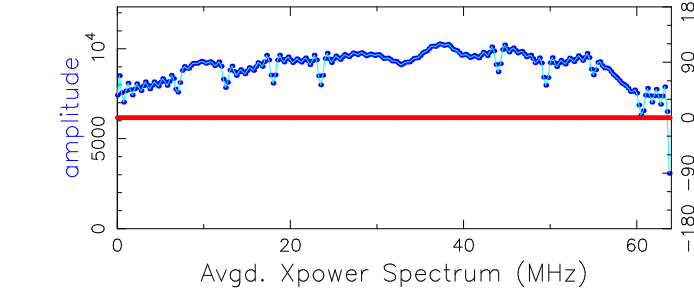
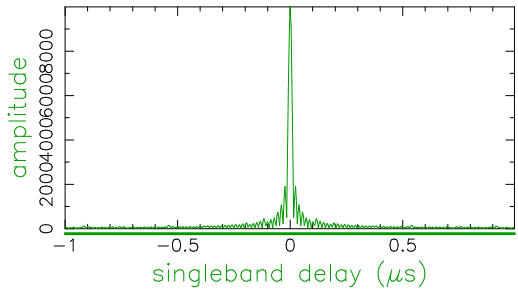
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-94.6	-90.4	-110.6	-121.0	-118.0	-95.9	-93.6	-103.1	Phase	-102.9
	396.1	380.6	322.6	426.4	367.2	448.7	478.6	592.3	Ampl.	426.6
	257.0	257.6	256.8	257.5	257.2	257.3	257.3	257.0	Sbd box	257.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	8.870000000000E-04	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	8.87000E-04	+/-	7.0E-08
Sband delay (usec)	8.357500000000E-04	Apriori clock (usec)	0.000000000000E+00	Resid sbdelay (usec)	8.35750E-04	+/-	5.6E-07
Phase delay (usec)	-3.31948091807E-06	Apriori clockrate (us/s)	0.000000000000E+00	Resid phdelay (usec)	-3.31948E-06	+/-	2.4E-10
Delay rate (us/s)	-7.79413381543E-11	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	-7.79413E-11	+/-	2.3E-12
Total phase (deg)		Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	-102.9	+/-	0.0

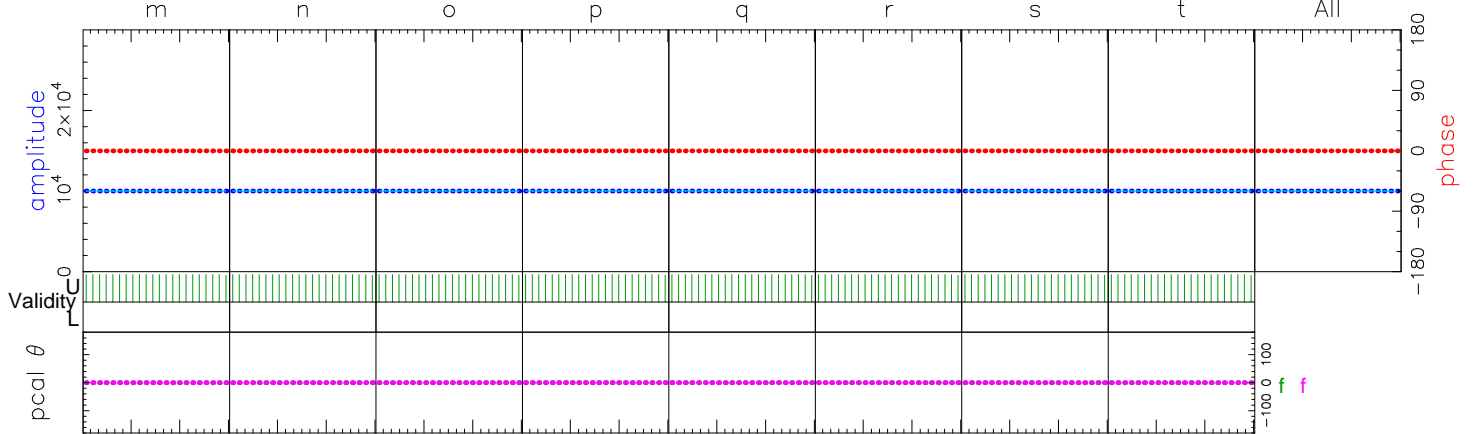
ph/seg (deg) 0.2 0.0 Search (1024X32) 417.359 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 1.2 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 12.8 0.0 Inc. seg. avg. 419.127 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 18.4 0.0 Inc. frq. avg. 426.571 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 f: az 64.6 el 38.2 pa -77.6 u, v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/ff..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/ff.W.116.3MP1UT



Fringe quality 9  
SNR 366874.9  
Int time 179.987  
Amp 9999.999  
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. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110343  
2024:113:095956  
RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"



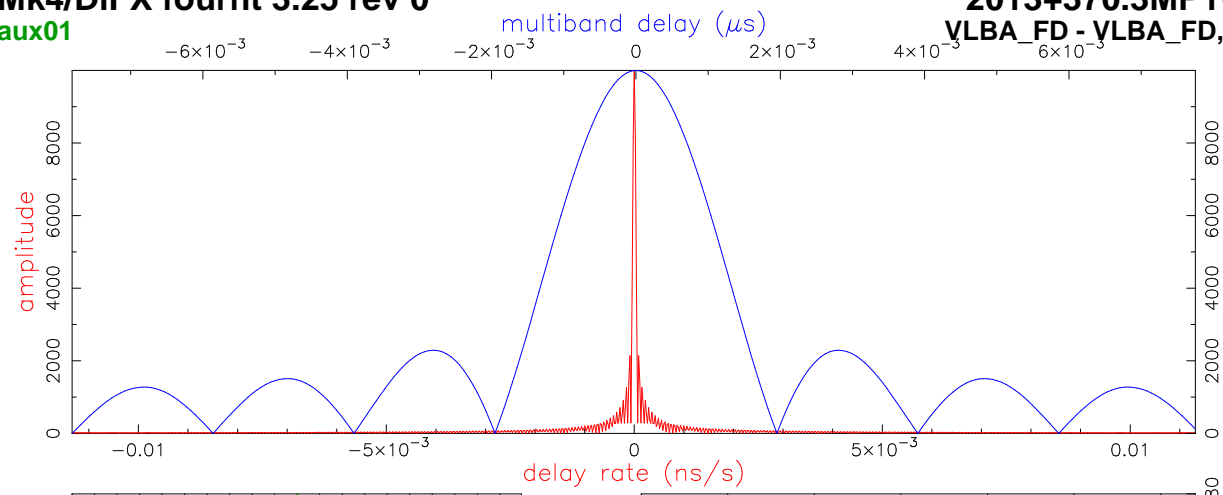
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



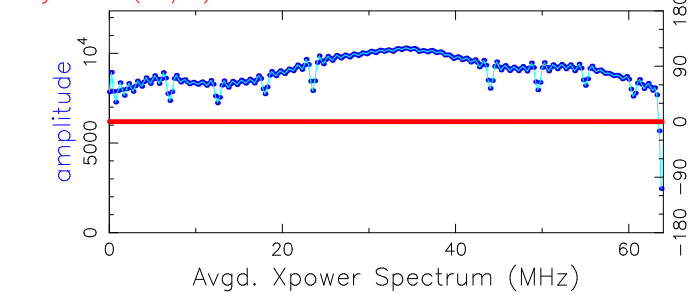
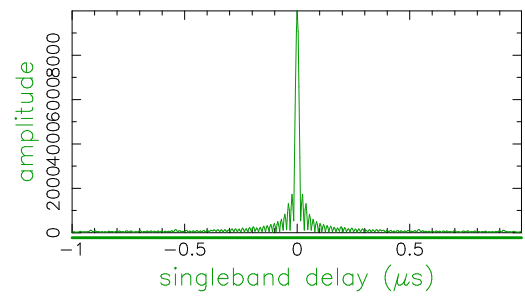
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
f	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	+/-	3.0E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	2.3E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	1.0E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	9.7E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/-	0.0

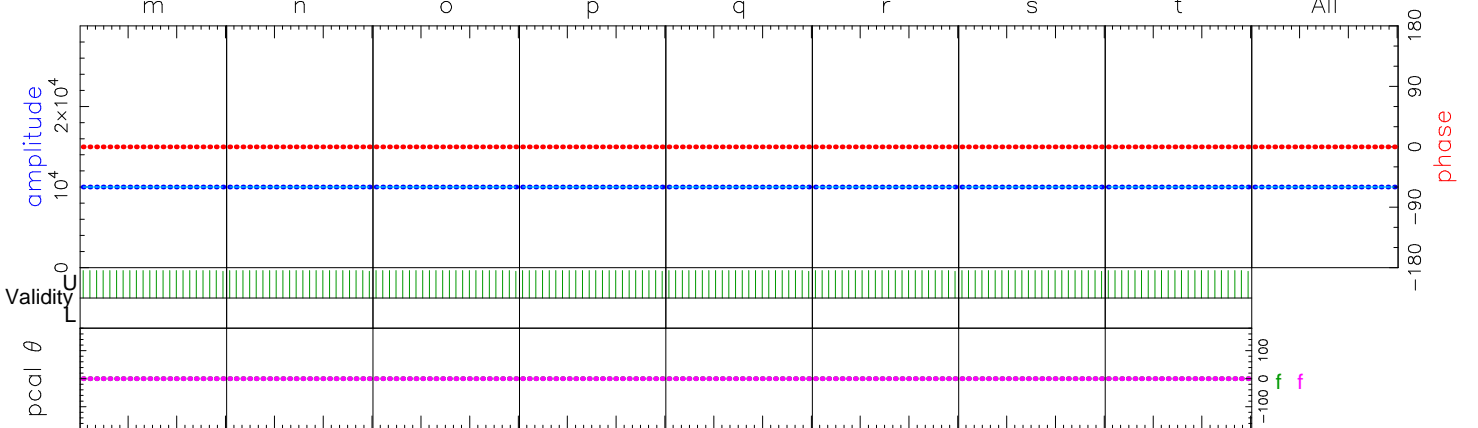
ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X32) 9999.999 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 f: az 64.6 el 38.2 pa -77.6 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/c241c/v2/3mm/1234/No0299/ff..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/ff.W.89.3MP1UT simultaneous interpolator



Fringe quality 9  
SNR 366874.9  
Int time 179.987  
Amp 9999.999  
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. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110345  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0	Ampl.	10000.0
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
f	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC freqs	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC phase	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Mani PC	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) 0.000000000000E+00 Apriori delay (usec) 0.000000000000E+00 Resid mbdelay (usec) 0.000000E+00 +/- 3.0E-09  
 Sband delay (usec) 0.000000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.000000E+00 +/- 2.3E-08  
 Phase delay (usec) 0.000000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.000000E+00 +/- 1.0E-11  
 Delay rate (us/s) 0.000000000000E+00 Apriori rate (us/s) 0.000000000000E+00 Resid rate (us/s) 0.000000E+00 +/- 9.7E-14  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.000000000000E+00 Resid phase (deg) 0.0 +/- 0.0

ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X32) 9999.999 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 f: az 64.6 el 38.2 pa -77.6 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/c241c/v2/3mm/1234/No0299/ff..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/ff.W.97.3MP1UT simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

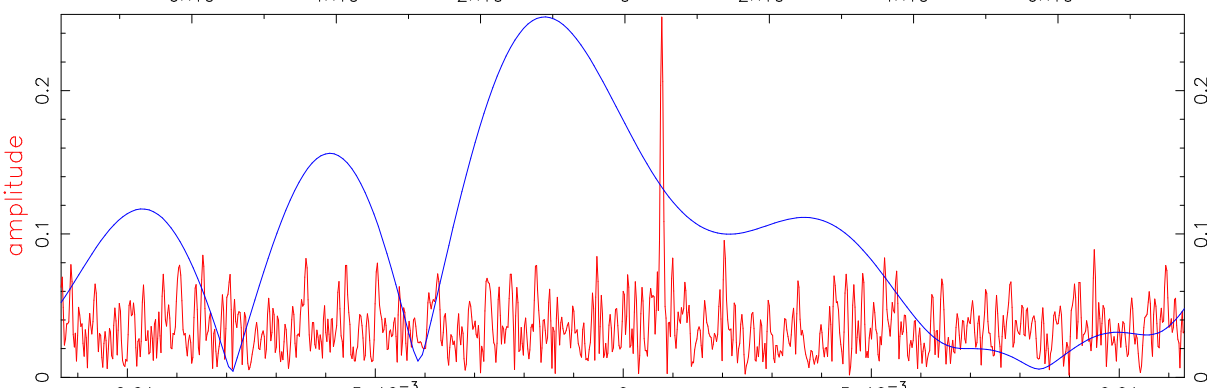
aux01

2013+370.3MP1UT, No0299, fg

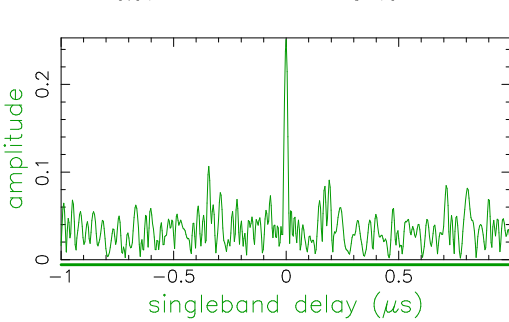
VLBA\_FD - GLT, fgroup W, pol RR

multiband delay ( $\mu$ s)

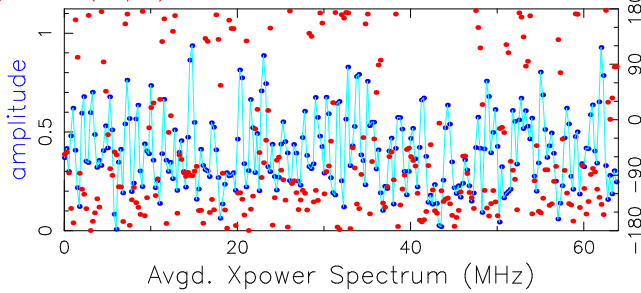
Fringe quality 9



SNR 9.3  
Int time 179.984  
Amp 0.253  
Phase -129.9  
PFD 3.6e-12  
Delays (us)  
SBD -0.000920  
MBD -0.001151  
Fringe rate (Hz)  
0.066889  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

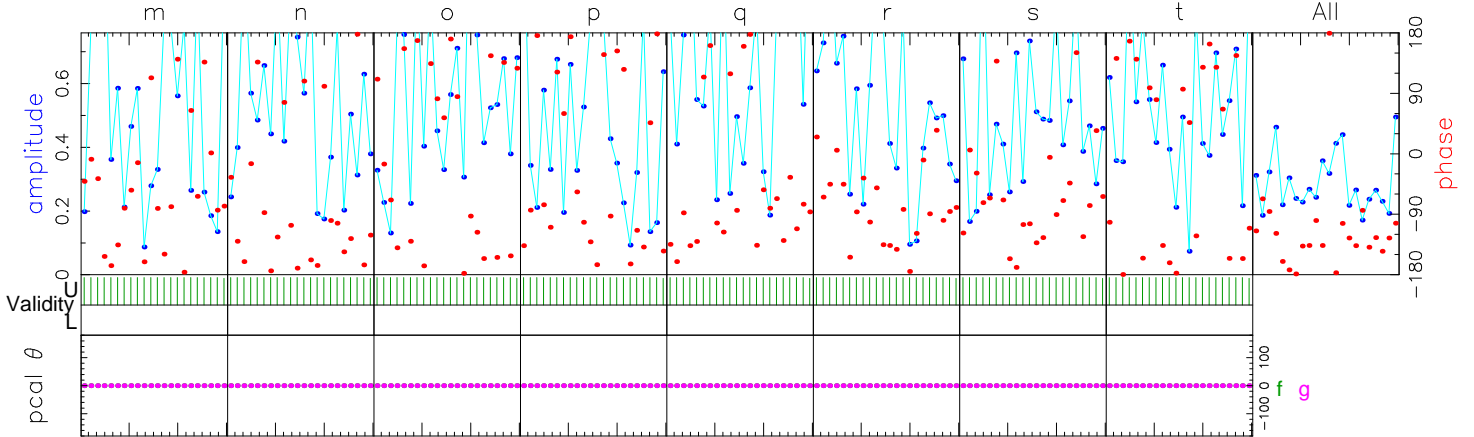


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110346  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-95.5	-142.3	173.6	-148.3	-118.0	-67.7	-99.1	174.5	Phase	-129.9
	0.2	0.3	0.3	0.3	0.5	0.4	0.3	0.3	Ampl.	0.3
	254.4	256.4	257.2	256.3	257.8	256.9	256.0	255.4	Sbd box	256.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-2.78093539255E+03	Apriori delay (usec)	-2.78093424182E+03	Resid mbdelay (usec)	-1.15073E-03	+/-	1.2E-04
Sband delay (usec)	-2.78093516132E+03	Apriori clock (usec)	-3.8657379E-01	Resid sbdelay (usec)	-9.19500E-04	+/-	9.3E-04
Phase delay (usec)	-2.78093424601E+03	Apriori clockrate (us/s)	-7.3414105E-07	Resid phdelay (usec)	-4.18842E-06	+/-	4.0E-07
Delay rate (us/s)	8.12445808927E-01	Apriori rate (us/s)	8.12445032410E-01	Resid rate (us/s)	7.76517E-07	+/-	3.8E-09
Total phase (deg)	-342.4	Apriori accel (us/s/s)	-1.68769804018E-05	Resid phase (deg)	-129.9	+/-	12.4

ph/seg (deg)	31.1	Theor.	29.0	Amplitude	0.253 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	38.5		50.6	Search (1024X32)	0.246	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	46.4		17.5	Inc. seg. avg.	0.258	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	37.2		30.5	Inc. frq. avg.	0.310	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 64.6 el 38.2 pa -77.6 g: az 145.6 el 48.8 pa -9.4 u,v (fr/asec) -5866.459 -4239.579 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fg..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fg.W.102.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

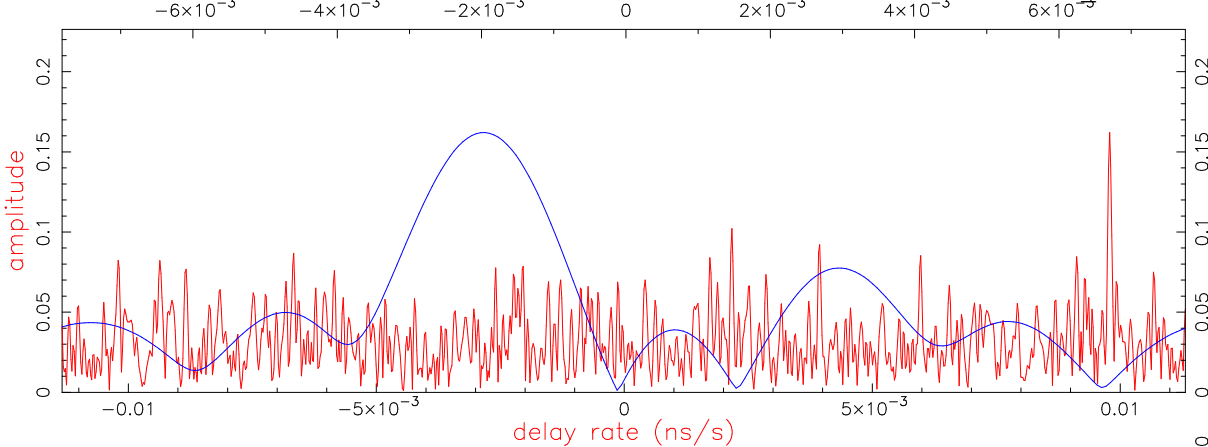
aux01

2013+370.3MP1UT, No0299, fg

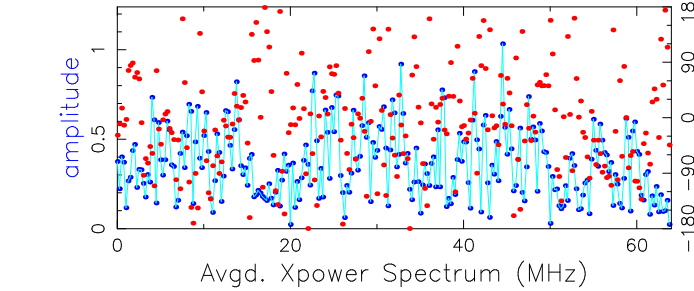
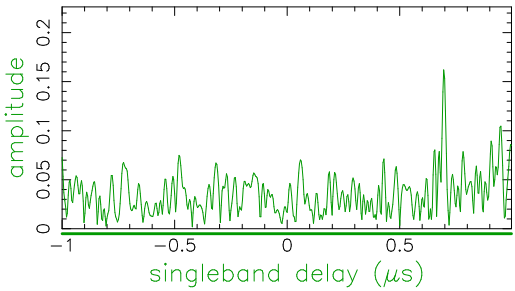
VLBA\_FD - GLT, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

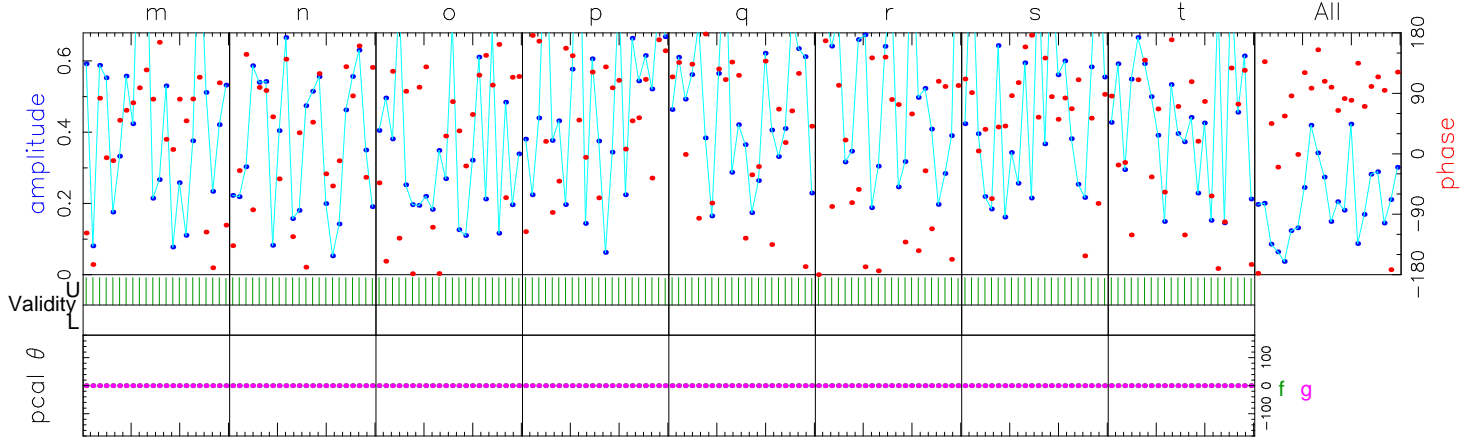


SNR 6.0  
 Int time 179.984  
 Amp 0.226  
 Phase 106.6  
 PFD 2.6e-01  
 Delays (us)  
 SBD 0.696168  
 MBD -0.001966  
 Fringe rate (Hz)  
 0.845061  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110348  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
g	0	0	0	0	0	0	0	0		
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-2.78023308320E+03	Apriori delay (usec)	-2.78093424182E+03	Resid mbdelay (usec)	-1.96638E-03	+/-	1.8E-04
Sband delay (usec)	-2.78023807382E+03	Apriori clock (usec)	-3.8657379E-01	Resid sbdelay (usec)	6.96168E-01	+/-	1.4E-03
Phase delay (usec)	-2.78093423838E+03	Apriori clockrate (us/s)	-7.3414105E-07	Resid phdelay (usec)	3.43882E-06	+/-	6.2E-07
Delay rate (us/s)	8.12454842734E-01	Apriori rate (us/s)	8.12445032410E-01	Resid rate (us/s)	9.81032E-06	+/-	5.9E-09
Total phase (deg)	-105.8	Apriori accel (us/s/s)	-1.68769804018E-05	Resid phase (deg)	106.6	+/-	19.2

ph/seg (deg)	50.4	Theor.	45.0	Amplitude	0.226 +/- 0.038	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	69.4	Search (1024X32)	0.160	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	24.7	Inc. seg. avg.	0.221	Inc. frq. avg.	0.219	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	32.2	Inc. frq. avg.	0.219			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 64.6 el 38.2 pa -77.6 g: az 145.6 el 48.8 pa -9.4 u,v (fr/asec) -5866.459 -4239.579 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fg..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fg.W.110.3MP1UT

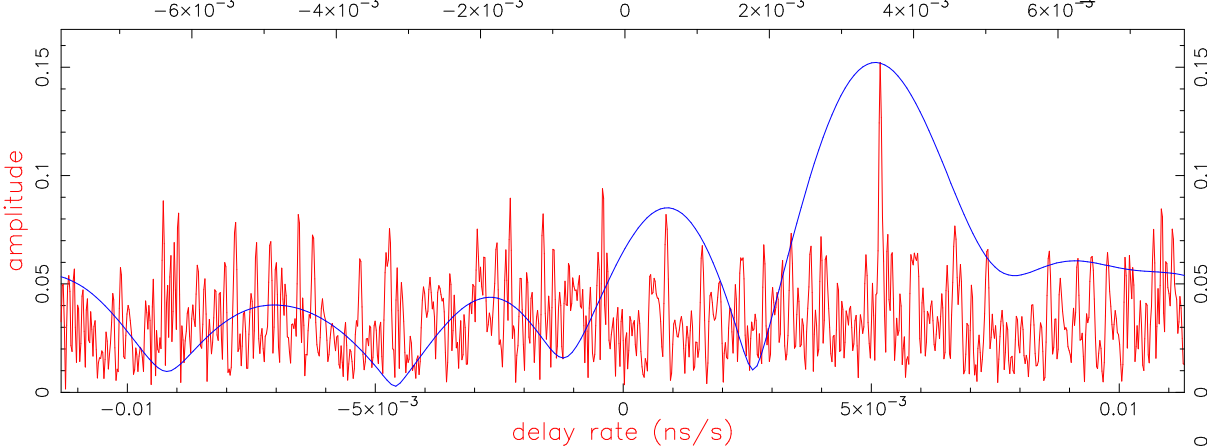
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fg

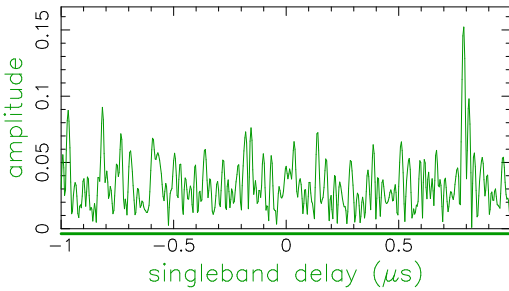
VLBA\_FD - GLT, fgroup W, pol RL

multiband delay ( $\mu$ s)

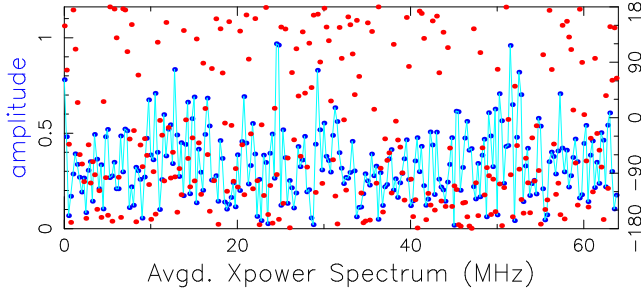


Fringe quality 0

SNR 5.6  
 Int time 179.984  
 Amp 0.167  
 Phase -101.1  
 PFD 8.9e-01  
 Delays (us)  
 SBD 0.787970  
 MBD 0.003451  
 Fringe rate (Hz)  
 0.446837  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

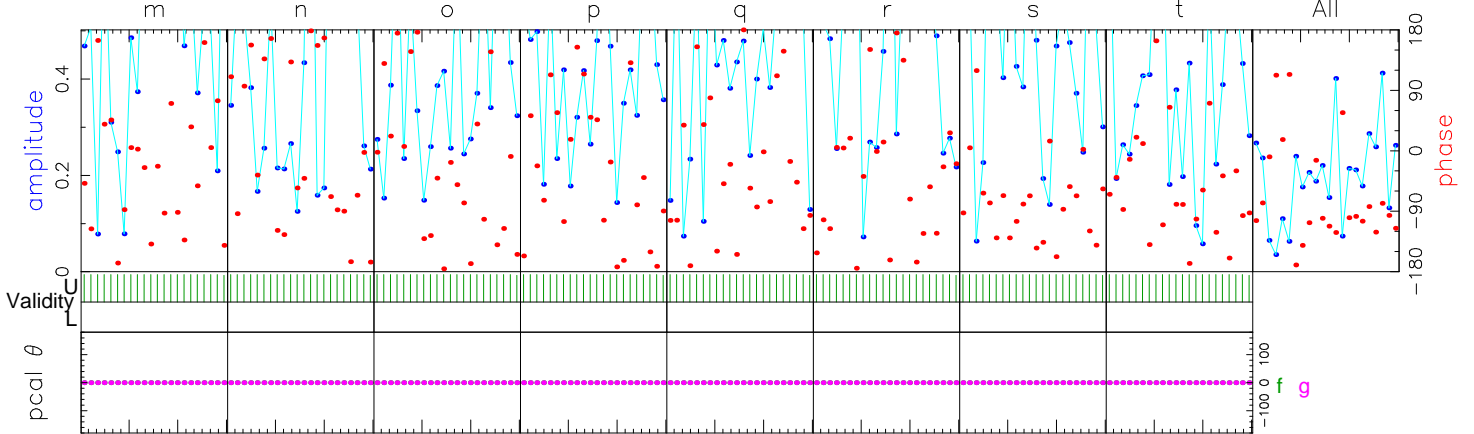


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110350  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-50.9	-127.6	-123.4	-121.1	-95.7	-122.0	-92.8	-87.1	Phase	-101.1
	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.2	Ampl.	0.2
	469.2	211.1	227.0	222.8	480.6	47.9	457.4	234.6	Sbd box	458.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-2.78014954086E+03	Apriori delay (usec)	-2.78093424182E+03	Resid mbdelay (usec)	3.45096E-03	+/-	1.9E-04
Sband delay (usec)	-2.78014627232E+03	Apriori clock (usec)	-3.8657379E-01	Resid sbdelay (usec)	7.87970E-01	+/-	1.5E-03
Phase delay (usec)	-2.78093424508E+03	Apriori clockrate (us/s)	-7.3414105E-07	Resid phdelay (usec)	-3.26154E-06	+/-	6.6E-07
Delay rate (us/s)	8.12450219739E-01	Apriori rate (us/s)	8.12445032410E-01	Resid rate (us/s)	5.18733E-06	+/-	6.3E-09
Total phase (deg)	-313.6	Apriori accel (us/s/s)	-1.68769804018E-05	Resid phase (deg)	-101.1	+/-	20.4

ph/seg (deg)	RMS 69.6	Theor. 47.8	Amplitude Search (1024X32)	0.167 +/- 0.030	0.148	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	69.8	83.3	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	28.4	28.8	Inc. seg. avg.	0.162	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	53.7	50.3	Inc. frq. avg.	0.161	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00	

f: az 64.6 el 38.2 pa -77.6      g: az 145.6 el 48.8 pa -9.4      u,v (fr/asec) -5866.459 -4239.579      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0299/fg..3MP1UT      Output file: /Exps/c241c/v2/3mm/1234/No0299/fg.W.120.3MP1UT

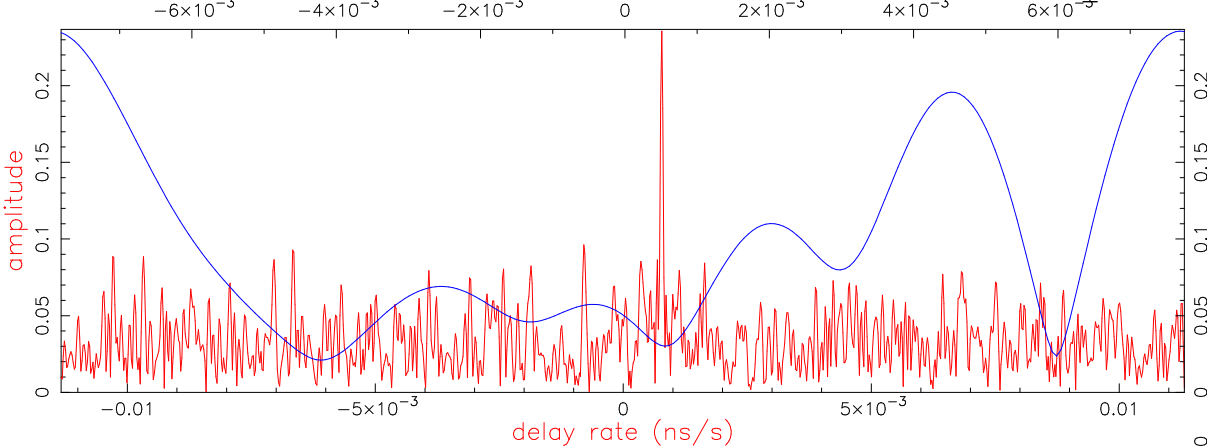
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fg

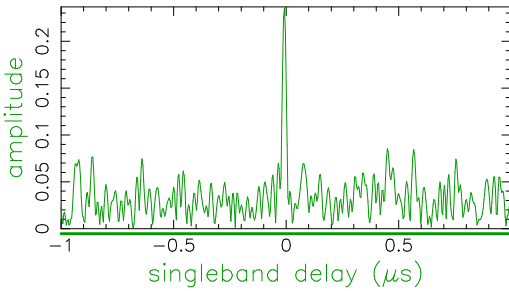
VLBA\_FD - GLT, fgroup W, pol LL

multiband delay ( $\mu$ s)

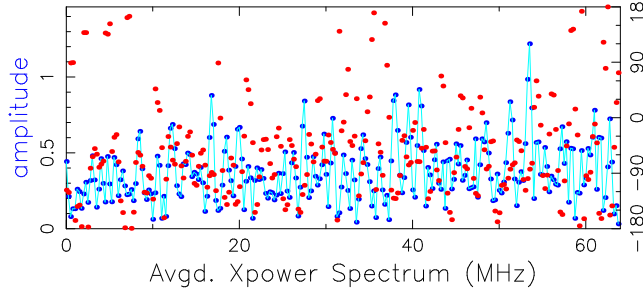


Fringe quality 9

SNR 8.7  
 Int time 179.984  
 Amp 0.237  
 Phase -87.2  
 PFD 8.2e-10  
 Delays (us)  
 SBD -0.008577  
 MBD -0.007947  
 Fringe rate (Hz)  
 0.067127  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

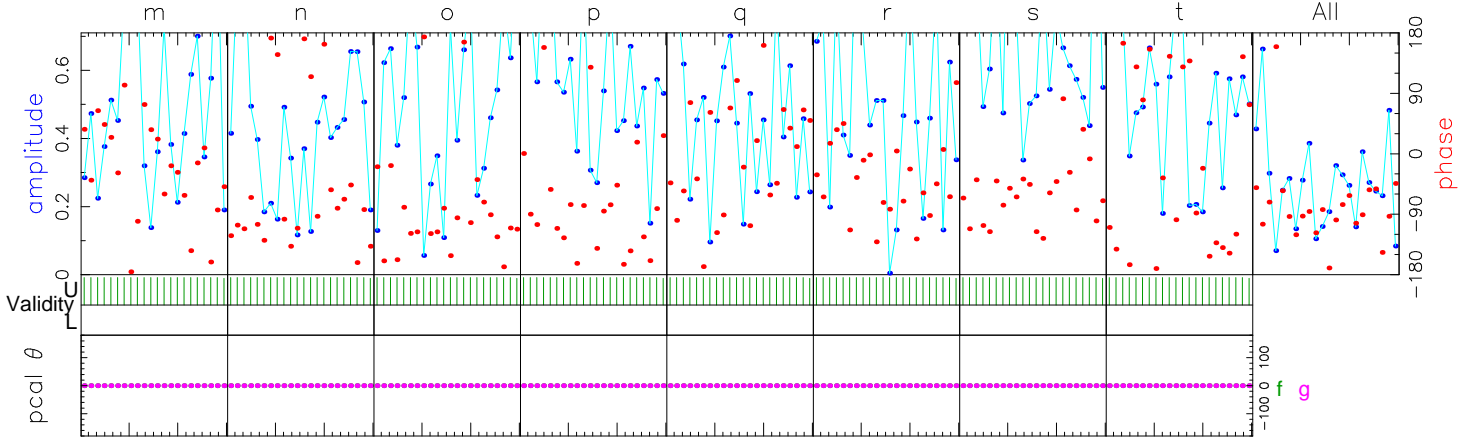


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110344  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-41.6	-109.3	-118.1	-94.0	-35.0	-39.7	-66.5	-170.8	Phase	-87.2
	0.2	0.3	0.4	0.3	0.1	0.3	0.5	0.3	Ampl.	0.3
	277.7	254.0	255.0	255.0	293.2	255.6	254.2	254.2	Sbd box	254.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
f,g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fg	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-2.78094218917E+03	Apriori delay (usec)	-2.78093424182E+03	Resid mbdelay (usec)	-7.94736E-03	+/-	1.3E-04
Sband delay (usec)	-2.78094281857E+03	Apriori clock (usec)	-3.8657379E-01	Resid sbdelay (usec)	-8.57675E-03	+/-	9.9E-04
Phase delay (usec)	-2.78093424463E+03	Apriori clockrate (us/s)	-7.3414105E-07	Resid phdelay (usec)	-2.81229E-06	+/-	4.3E-07
Delay rate (us/s)	8.12445811688E-01	Apriori rate (us/s)	8.12445032410E-01	Resid rate (us/s)	7.79279E-07	+/-	4.1E-09
Total phase (deg)	-299.7	Apriori accel (us/s/s)	-1.68769804018E-05	Resid phase (deg)	-87.2	+/-	13.2

ph/seg (deg)	39.2	Theor.	31.0	Amplitude	0.237 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	59.6		54.1	Search (1024X32)	0.229	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	51.6		18.7	Inc. seg. avg.	0.235	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	57.9		32.6	Inc. frq. avg.	0.294	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 64.6 el 38.2 pa -77.6 g: az 145.6 el 48.8 pa -9.4 u,v (fr/asec) -5866.459 -4239.579 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fg..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fg.W.92.3MP1UT



Mk4/DiFX fourfit 3.25 rev 0

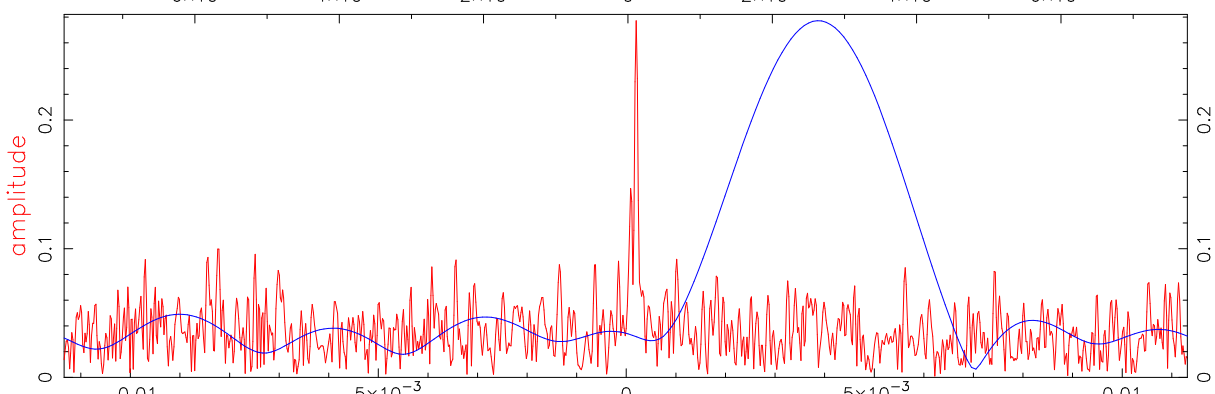
aux01

2013+370.3MP1UT, No0299, fk

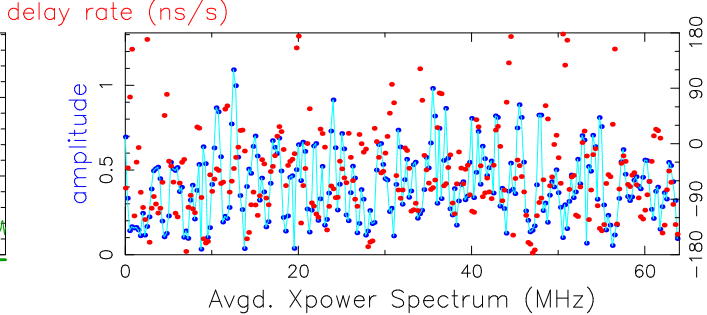
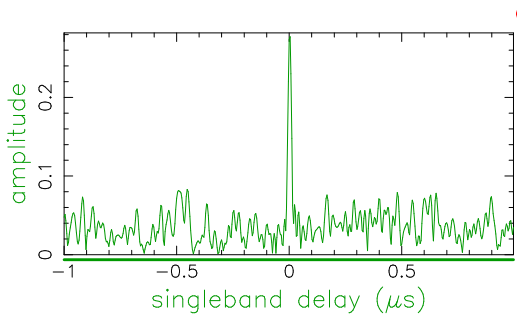
VLBA\_FD - VLBA\_KP, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 9

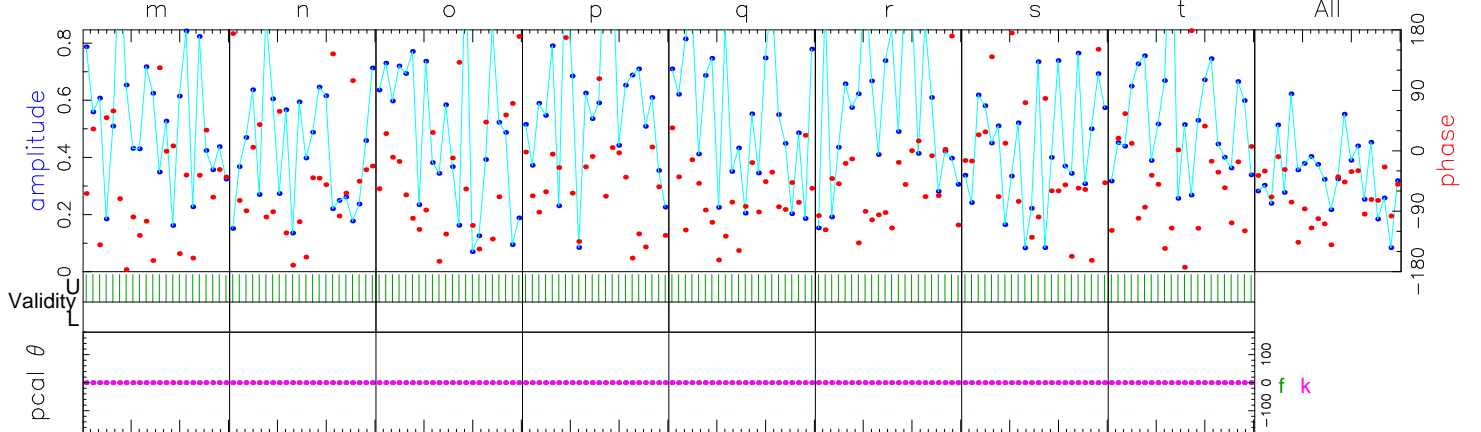


SNR 10.3  
 Int time 179.987  
 Amp 0.282  
 Phase -63.9  
 PFD 9.2e-17  
 Delays (us)  
 SBD 0.002251  
 MBD 0.002638  
 Fringe rate (Hz)  
 0.016650  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110349  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-71.0	-66.9	-58.7	-52.1	-66.2	-65.7	-65.1	-66.1	Phase	-63.9
	0.2	0.3	0.2	0.3	0.4	0.4	0.2	0.3	Ampl.	0.3
	211.7	132.7	256.4	257.6	258.4	258.2	63.7	101.1	Sbd box	257.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	1.60415208777E+03		Apriori delay (usec)	1.60414945019E+03	Resid mbdelay (usec)	2.63757E-03	+/-	1.0E-04		
Sband delay (usec)	1.60415170144E+03		Apriori clock (usec)	-9.5607758E-02	Resid sbdelay (usec)	2.25125E-03	+/-	8.3E-04		
Phase delay (usec)	1.60414944813E+03		Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-2.06211E-06	+/-	3.6E-07		
Delay rate (us/s)	-4.27372316796E-02		Apriori rate (us/s)	-4.27374249699E-02	Resid rate (us/s)	1.93290E-07	+/-	3.4E-09		
Total phase (deg)		166.4	Apriori accel (us/s/s)	-9.87647456868E-06	Resid phase (deg)	-63.9	+/-	11.1		

ph/seg (deg) 37.6 26.0 Amplitude 0.282 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 48.3 45.3 Search (1024X32) 0.270 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 6.3 15.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 26.1 27.3 Inc. seg. avg. 0.311 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 k: az 63.5 el 32.9 pa -72.7 u,v (fr/asec) 299.247 -730.838 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fk..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fk.W.113.3MP1UT

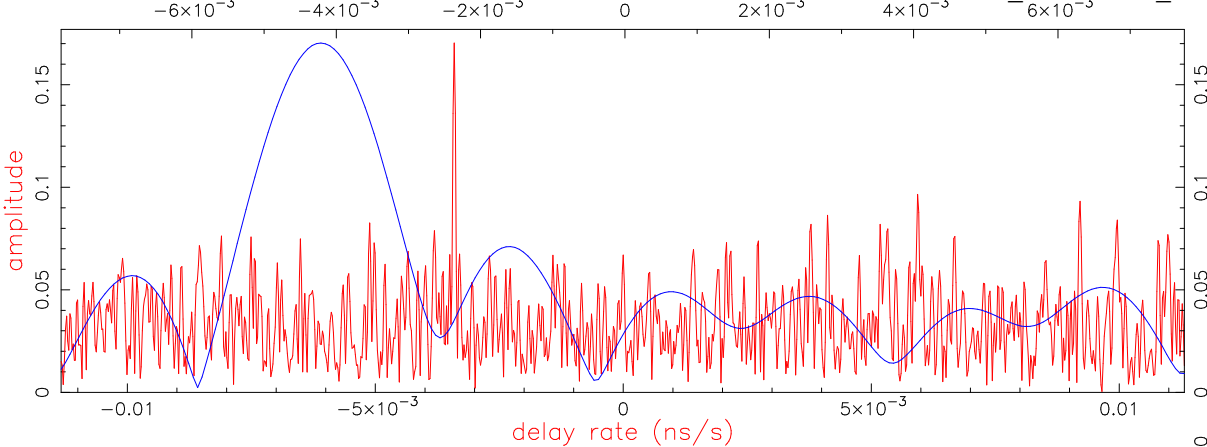
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fk

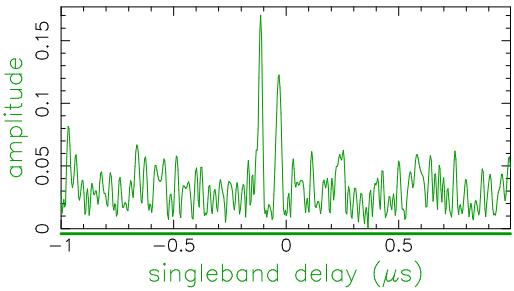
VLBA\_FD - VLBA\_KP, fgroup W, pol LR

multiband delay ( $\mu$ s)

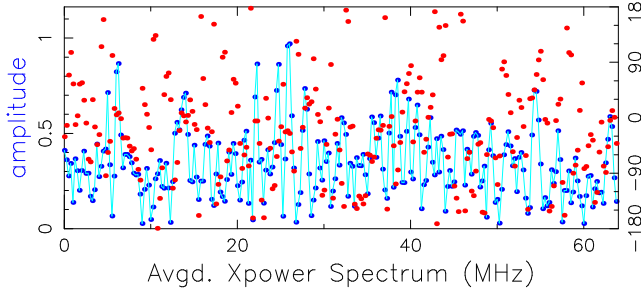


Fringe quality 0

SNR 6.3  
 Int time 179.987  
 Amp 0.177  
 Phase 155.9  
 PFD 5.2e-02  
 Delays (us)  
 SBD -0.113663  
 MBD -0.004227  
 Fringe rate (Hz)  
 -0.293550  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

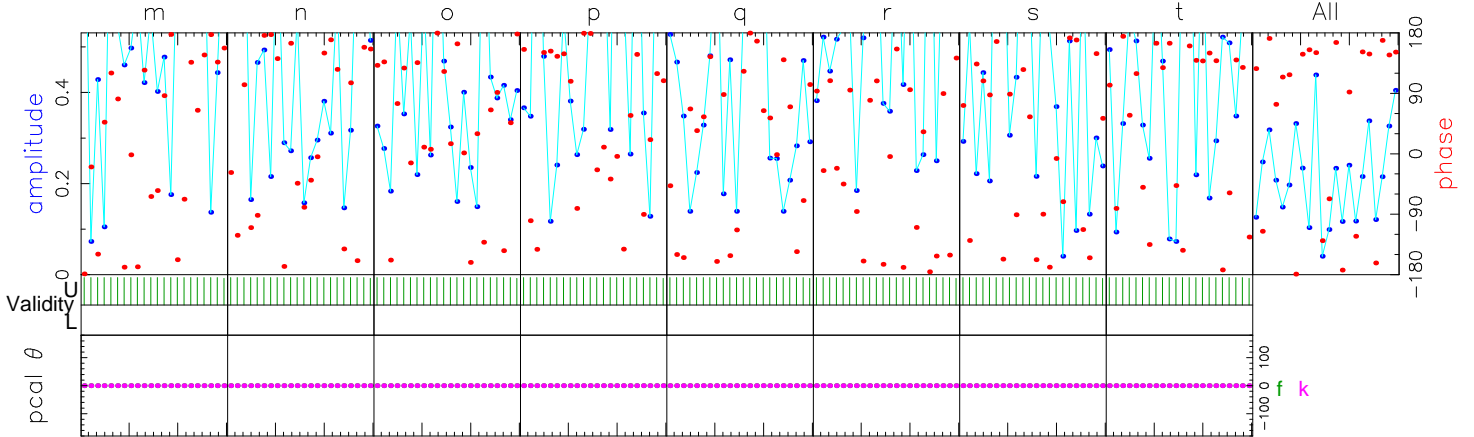


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110354  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0	155.9	155.9
k	0	0	0	0	0	0	0	0	0.2	0.2
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	227.9	227.9
f:k	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		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	1.60403584849E+03	Apriori delay (usec)	1.60414945019E+03	Resid mbdelay (usec)	-4.22671E-03	+/-	1.7E-04
Sband delay (usec)	1.60403578769E+03	Apriori clock (usec)	-9.5607758E-02	Resid sbdelay (usec)	-1.13663E-01	+/-	1.4E-03
Phase delay (usec)	1.60414945522E+03	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	5.02868E-06	+/-	5.9E-07
Delay rate (us/s)	-4.27408327891E-02	Apriori rate (us/s)	-4.27374249699E-02	Resid rate (us/s)	-3.40782E-06	+/-	5.7E-09
Total phase (deg)	26.2	Apriori accel (us/s/s)	-9.87647456868E-06	Resid phase (deg)	155.9	+/-	18.3

ph/seg (deg) 51.4 43.0 Search (1024X32) 0.168 Pcd mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 67.0 75.0 Interp. 0.000 Pcd rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 21.7 25.9 Inc. seg. avg. 0.177 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 29.5 45.2 Inc. frq. avg. 0.168 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 k: az 63.5 el 32.9 pa -72.7 u,v (fr/asec) 299.247 -730.838 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fk..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fk.W.128.3MP1UT

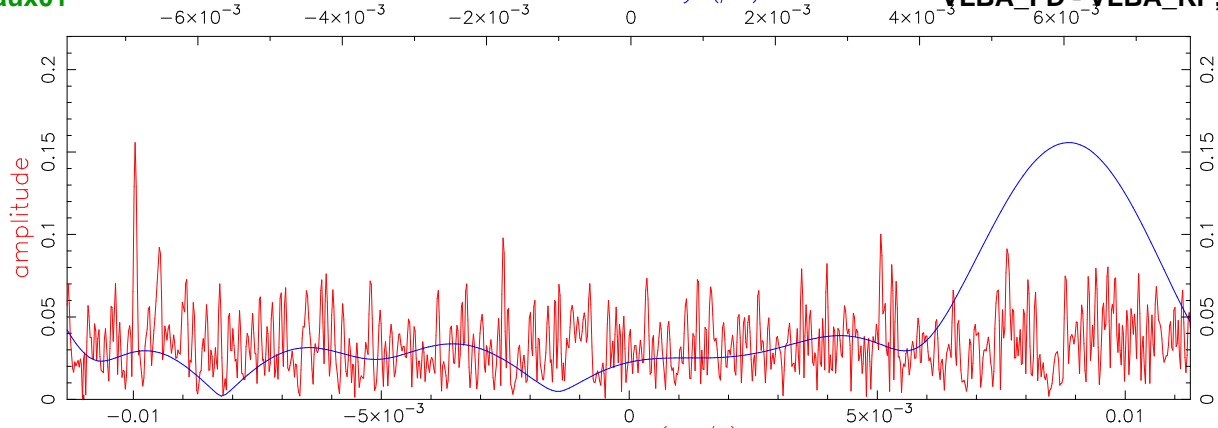
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fk

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

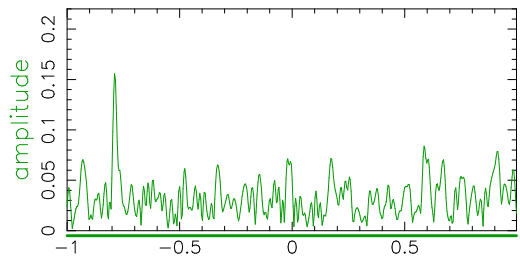
multiband delay ( $\mu$ s)



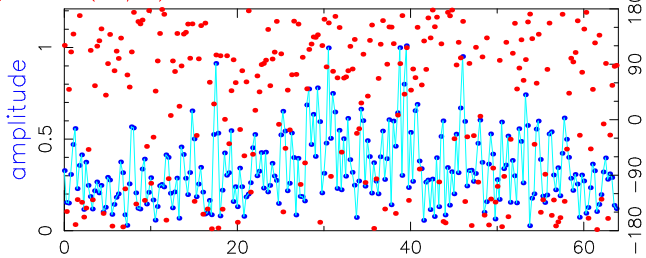
Fringe quality 0

SNR 5.7  
Int time 179.987  
Amp 0.220  
Phase -20.6  
PFD 7.0e-01  
Delays (us)  
SBD -0.788166  
MBD 0.006076  
Fringe rate (Hz)  
-0.859515  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

delay rate (ns/s)

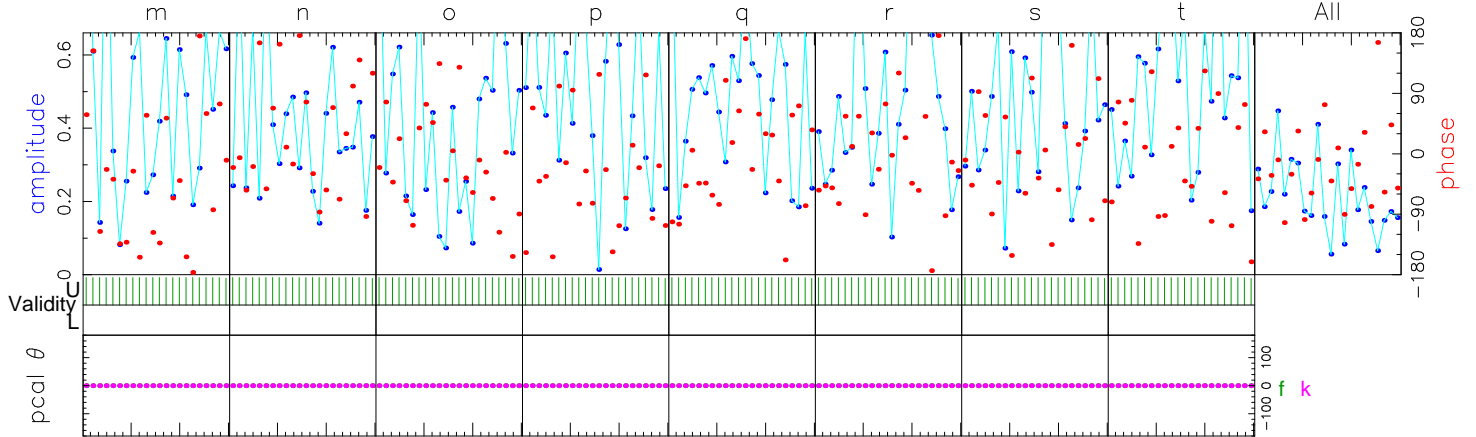


singleband delay ( $\mu$ s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110356  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

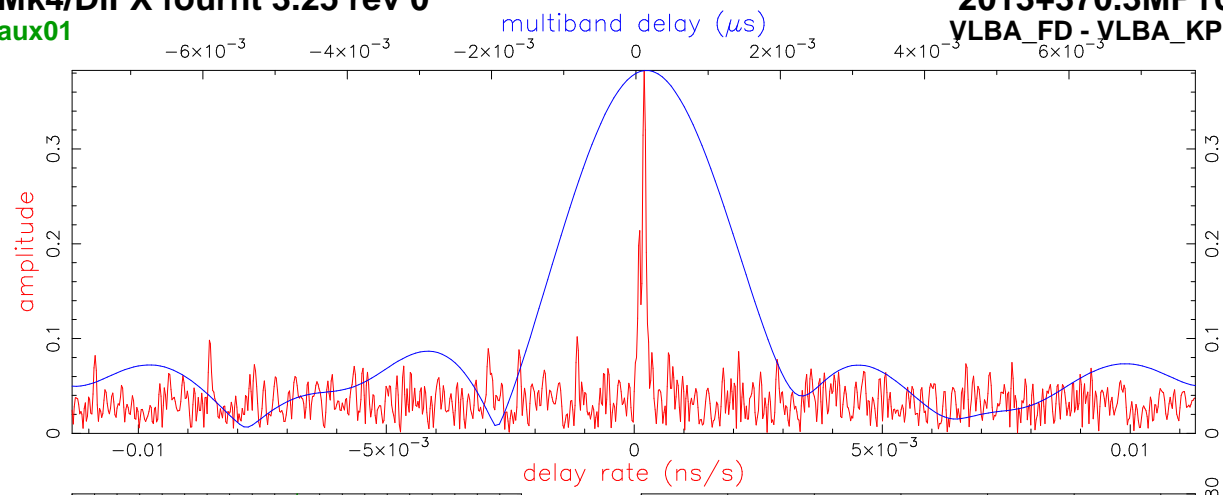
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-8.9	5.0	-21.4	-51.1	-31.1	-8.9	-41.6	15.5	Phase	-20.6
	0.1	0.2	0.3	0.3	0.3	0.2	0.3	0.2	Ampl.	0.2
	256.0	471.3	67.7	4.3	427.3	511.5	317.5	154.8	Sbd box	55.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.60335865161E+03	Apriori delay (usec)	1.60414945019E+03	Resid mbdelay (usec)	6.07642E-03	+/-	1.9E-04
Sband delay (usec)	1.60336128444E+03	Apriori clock (usec)	-9.5607758E-02	Resid sbdelay (usec)	-7.88166E-01	+/-	1.5E-03
Phase delay (usec)	1.60414944953E+03	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-6.62754E-07	+/-	6.4E-07
Delay rate (us/s)	-4.27474030894E-02	Apriori rate (us/s)	-4.27374249699E-02	Resid rate (us/s)	-9.97812E-06	+/-	6.2E-09
Total phase (deg)	209.8	Apriori accel (us/s/s)	-9.87647456868E-06	Resid phase (deg)	-20.6	+/-	20.0

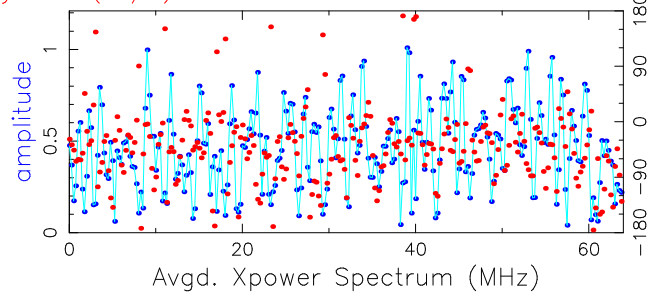
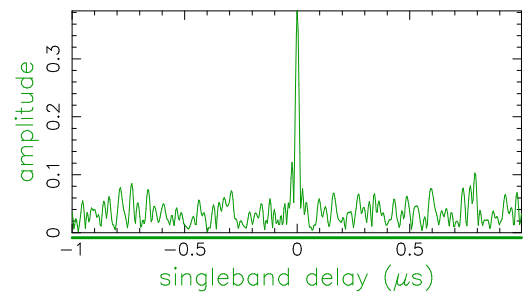
ph/seg (deg) 60.0 46.8 Amplitude 0.220 +/- 0.038 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 76.0 81.7 Search (1024X32) 0.150 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 24.9 28.2 Inc. seg. avg. 0.229 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 25.5 49.3 Inc. frq. avg. 0.209 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 k: az 63.5 el 32.9 pa -72.7 u, v (fr/asec) 299.247 -730.838 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fk..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fk.W.138.3MP1UT



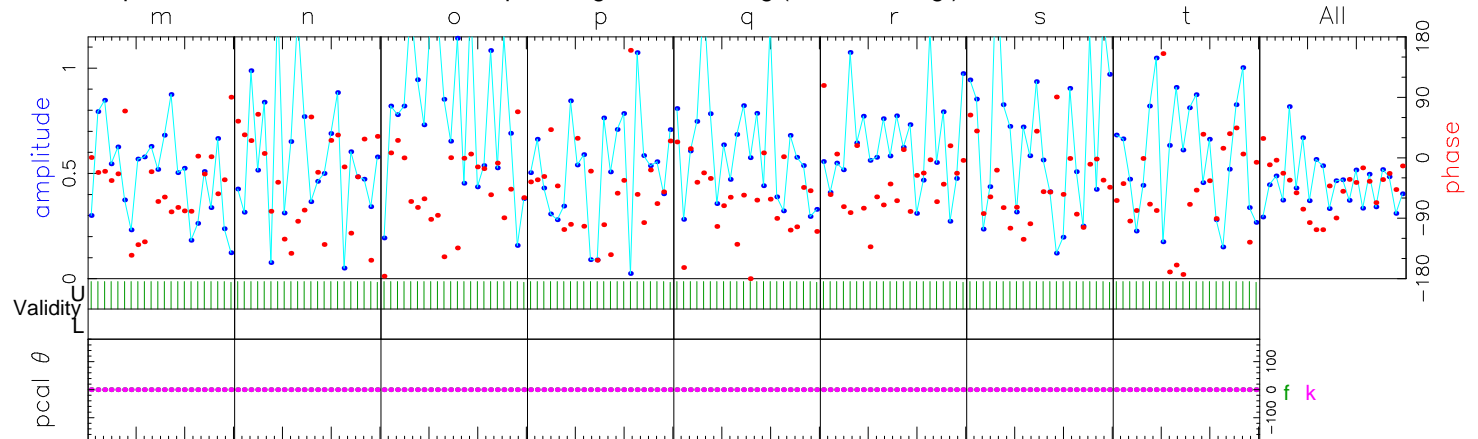
Fringe quality 9

SNR 14.0  
Int time 179.987  
Amp 0.383  
Phase -45.5  
PFD 2.4e-36  
Delays (us)  
SBD 0.000073  
MBD 0.000149  
Fringe rate (Hz) 0.016571  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110345  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-47.8	-19.4	-51.7	-55.2	-55.9	-40.4	-32.7	-54.8	Phase	-45.5
	0.4	0.3	0.5	0.4	0.4	0.5	0.4	0.3	Ampl.	0.4
	256.3	332.5	256.3	257.6	257.4	257.1	257.5	444.4	Sbd box	257.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.60414959908E+03	Apriori delay (usec)	1.60414945019E+03	Resid mbdelay (usec)	1.48884E-04	+/-	7.7E-05
Sband delay (usec)	1.60414952344E+03	Apriori clock (usec)	-9.5607758E-02	Resid sbdelay (usec)	7.32500E-05	+/-	6.1E-04
Phase delay (usec)	1.60414944873E+03	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-1.46793E-06	+/-	2.6E-07
Delay rate (us/s)	-4.27372325922E-02	Apriori rate (us/s)	-4.27374249699E-02	Resid rate (us/s)	1.92378E-07	+/-	2.5E-09
Total phase (deg)	184.8	Apriori accel (us/s/s)	-9.87647456868E-06	Resid phase (deg)	-45.5	+/-	8.2

ph/seg (deg) 34.2 19.1 Amplitude 0.383 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 37.0 33.4 Search (1024X32) 0.373 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 14.2 11.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 22.2 20.1 Inc. seg. avg. 0.432 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 k: az 63.5 el 32.9 pa -72.7 u, v (fr/asec) 299.247 -730.838 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fk..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fk.W.99.3MP1UT

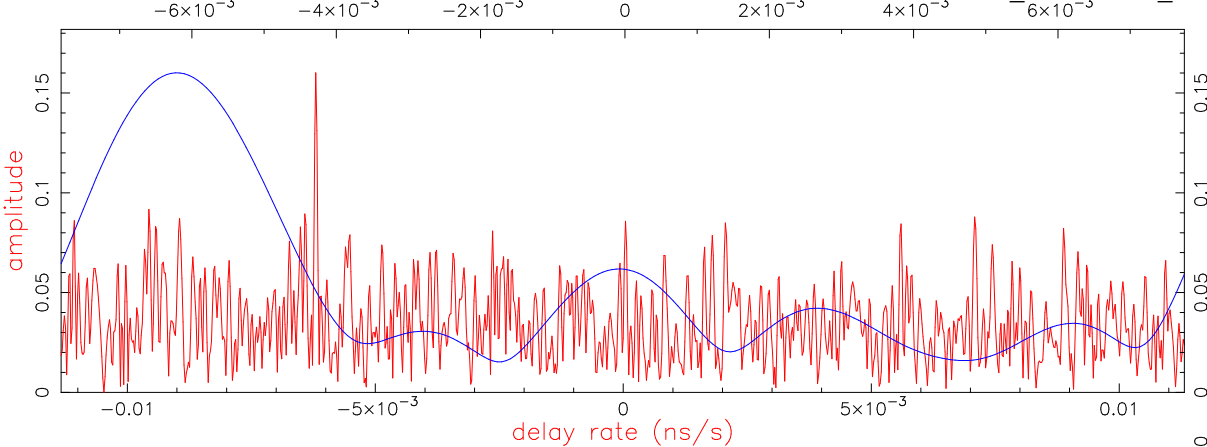
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fl

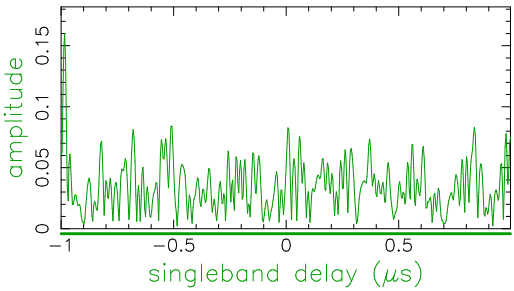
VLBA\_FD - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

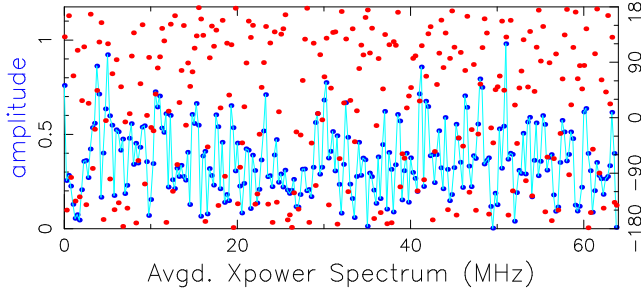


Fringe quality 0

SNR 5.9  
 Int time 179.987  
 Amp 0.182  
 Phase 8.4  
 PFD 4.0e-01  
 Delays (us)  
 SBD -0.984752  
 MBD -0.006216  
 Fringe rate (Hz)  
 -0.534213  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

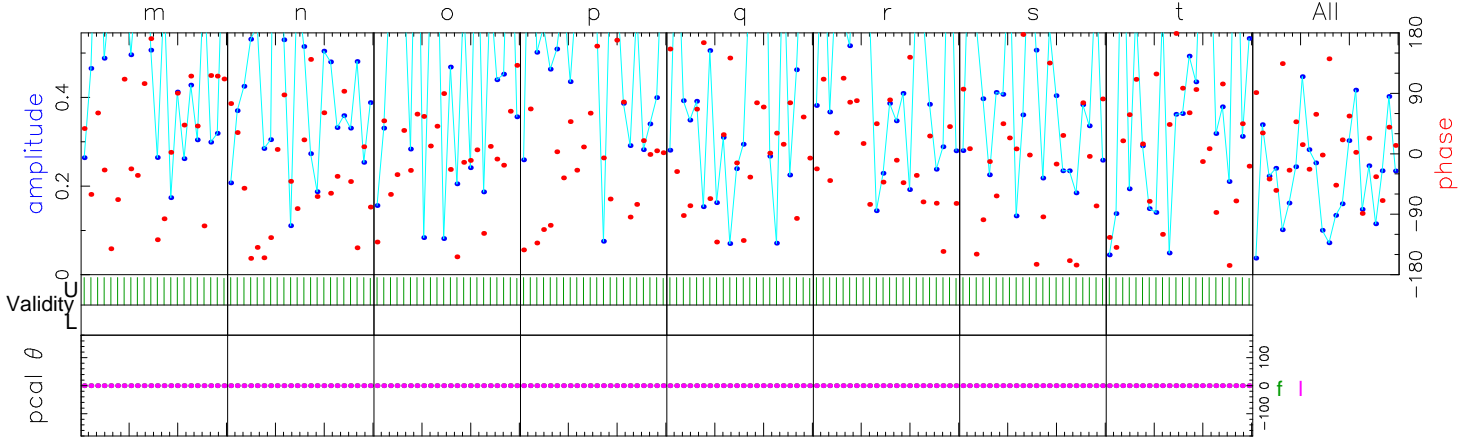


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110349  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:l	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		
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-8.05889740534E+01	Apriori delay (usec)	-7.95983830577E+01	Resid mbdelay (usec)	-6.21600E-03	+/-	1.8E-04
Sband delay (usec)	-8.05831345577E+01	Apriori clock (usec)	8.3656044E+00	Resid sbdelay (usec)	-9.84752E-01	+/-	1.5E-03
Phase delay (usec)	-7.95983827867E+01	Apriori clockrate (us/s)	2.8422100E-07	Resid phdelay (usec)	2.70980E-07	+/-	6.3E-07
Delay rate (us/s)	3.59323840512E-02	Apriori rate (us/s)	3.59385857343E-02	Resid rate (us/s)	-6.20168E-06	+/-	6.0E-09
Total phase (deg)	-249.6	Apriori accel (us/s/s)	-4.65536141395E-06	Resid phase (deg)	8.4	+/-	19.5

ph/seg (deg)	59.3	Theor.	45.7	Amplitude	0.182 +/- 0.031	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	78.7		79.7	Search (1024X32)	0.157	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	32.2		27.6	Inc. seg. avg.	0.191	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	50.5		48.1	Inc. frq. avg.	0.174	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
f: az 64.6 el 38.2 pa -77.6		l: az 67.7 el 38.5 pa -70.6		u,v (fr/asec)	-263.568 -805.384	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/c241c/v2/3mm/1234/No0299/fl..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fl.W.112.3MP1UT

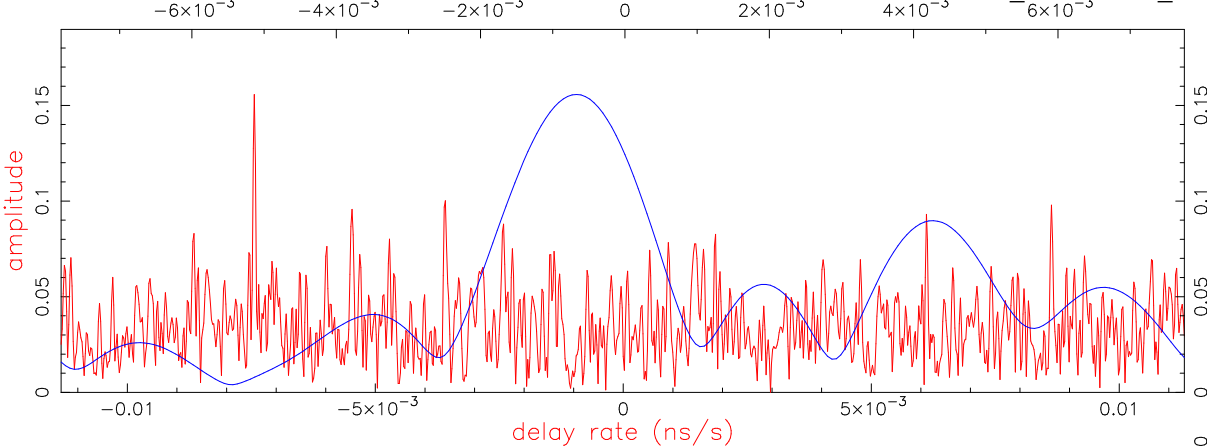
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fl

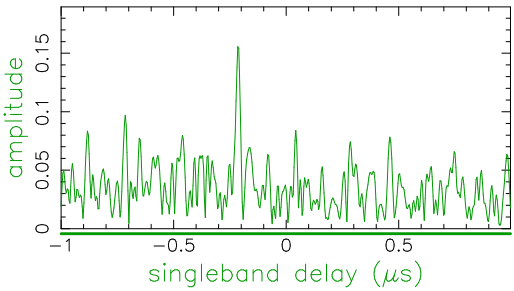
VLBA\_FD - VLBA\_LA, fgroup W, pol RL

multiband delay ( $\mu$ s)

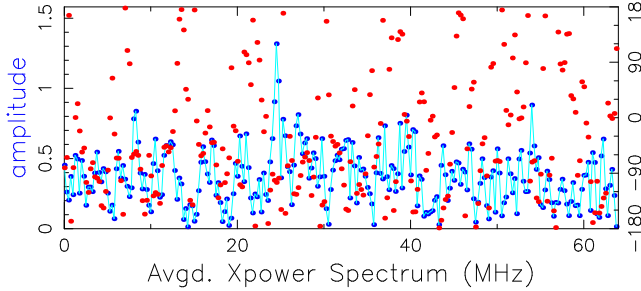


Fringe quality 0

SNR 5.8  
 Int time 179.987  
 Amp 0.190  
 Phase -18.4  
 PFD 5.9e-01  
 Delays (us)  
 SBD -0.213148  
 MBD -0.000662  
 Fringe rate (Hz)  
 -0.642273  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

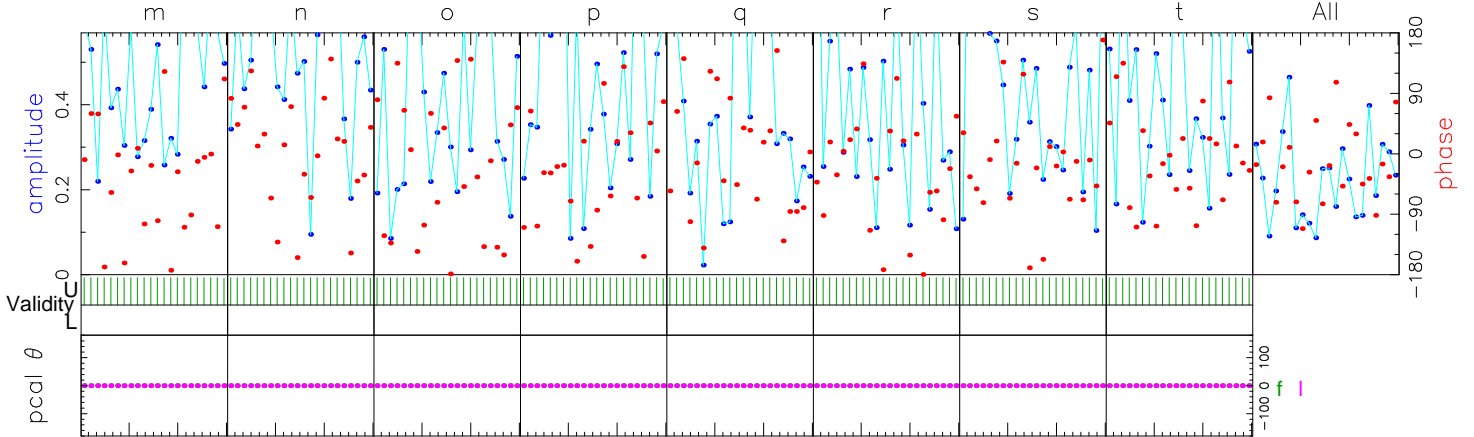


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110351  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-48.2	28.2	-75.8	-34.1	-8.9	-13.7	-30.1	-13.5	Phase	-18.4
	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.3	Ampl.	0.2
	313.2	256.5	508.5	467.1	99.3	311.8	161.1	74.2	Sbd box	202.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-7.98177948834E+01	Apriori delay (usec)	-7.95983830577E+01	Resid mbdelay (usec)	-6.61826E-04	+/-	1.9E-04
Sband delay (usec)	-7.98115310577E+01	Apriori clock (usec)	8.3656044E+00	Resid sbdelay (usec)	-2.13148E-01	+/-	1.5E-03
Phase delay (usec)	-7.95983836505E+01	Apriori clockrate (us/s)	2.8422100E-07	Resid phdelay (usec)	-5.92841E-07	+/-	6.4E-07
Delay rate (us/s)	3.59311295782E-02	Apriori rate (us/s)	3.59385857343E-02	Resid rate (us/s)	-7.45616E-06	+/-	6.1E-09
Total phase (deg)	-276.4	Apriori accel (us/s/s)	-4.65536141395E-06	Resid phase (deg)	-18.4	+/-	19.8

ph/seg (deg)	RMS 57.5	Theor. 46.4	Amplitude Search (1024X32)	0.154	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	75.8	81.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	33.8	28.0	Inc. seg. avg.	0.204	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	33.1	48.9	Inc. frq. avg.	0.187	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 64.6 el 38.2 pa -77.6	l: az 67.7 el 38.5 pa -70.6	u, v (fr/asec)	-263.568 -805.384	simultaneous interpolator					

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fl..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fl.W.123.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

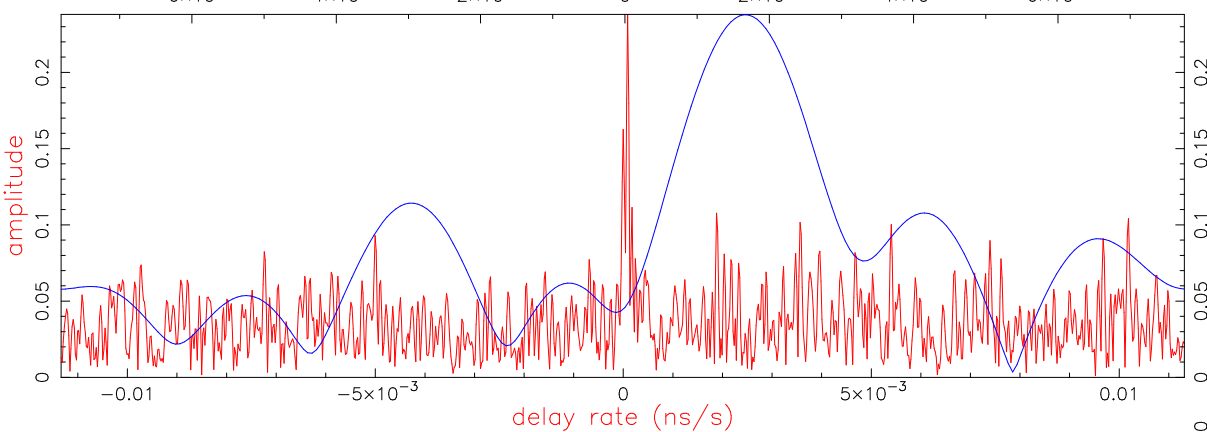
aux01

2013+370.3MP1UT, No0299, fl

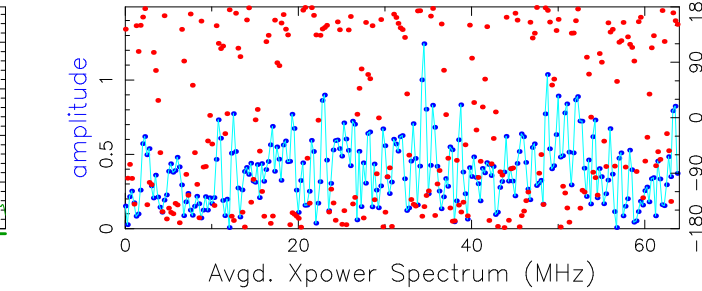
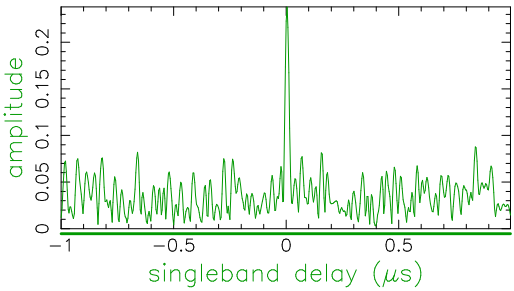
VLBA\_FD - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 9

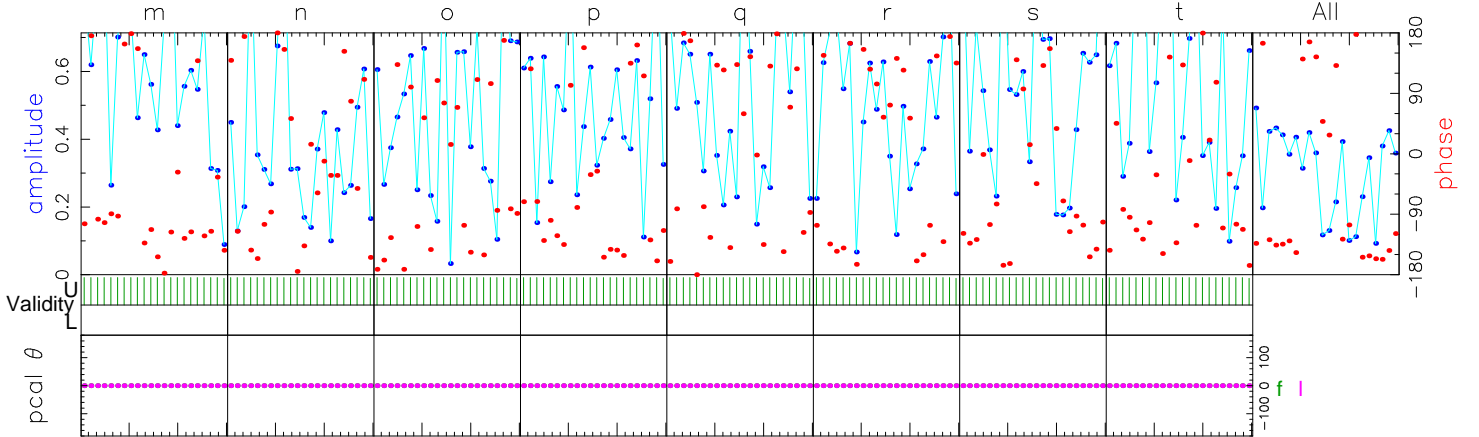


SNR 8.7  
 Int time 179.987  
 Amp 0.238  
 Phase -153.6  
 PFD 4.7e-10  
 Delays (us)  
 SBD 0.003504  
 MBD 0.001661  
 Fringe rate (Hz) 0.007887  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build 2024:352:144904  
 2025:041:110343  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

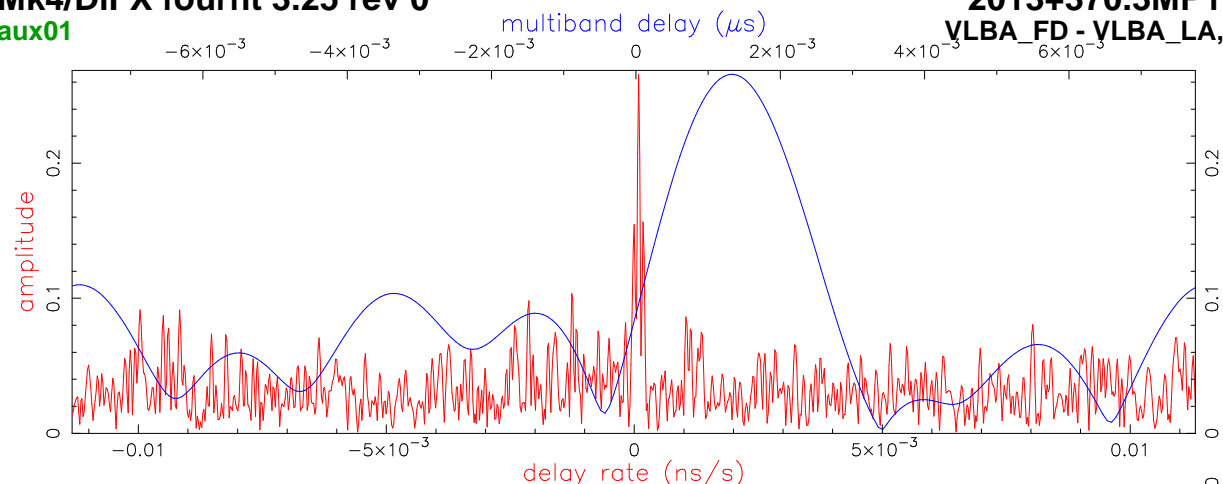


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-131.3	-164.8	163.5	-150.1	178.9	173.1	-131.3	-127.2	Phase	-153.6
	0.4	0.1	0.2	0.3	0.3	0.3	0.3	0.3	Ampl.	0.3
	258.4	21.4	329.1	299.1	258.4	257.1	343.2	258.3	Sbd box	257.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

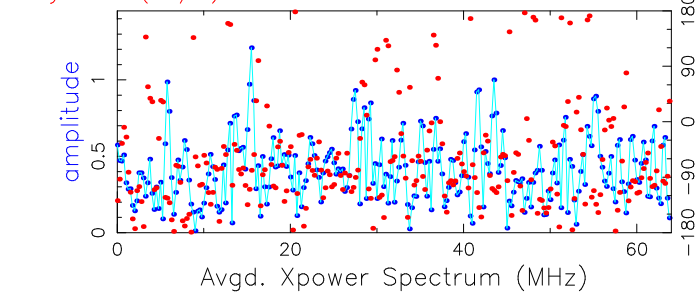
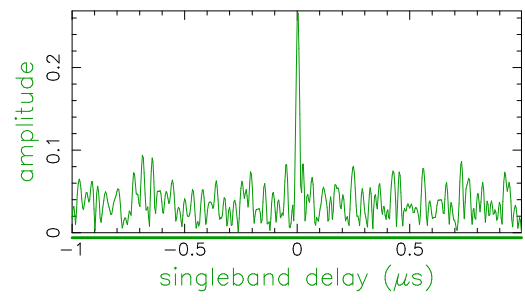
Group delay (usec) (SBD) -7.95967224841E+01 Apriori delay (usec) -7.95983830577E+01 Resid mbdelay (usec) 1.66057E-03 +/- 1.2E-04  
 Sband delay (usec) -7.95948793077E+01 Apriori clock (usec) 8.3656044E+00 Resid sbdelay (usec) 3.50375E-03 +/- 9.9E-04  
 Phase delay (usec) -7.95983880099E+01 Apriori clockrate (us/s) 2.8422100E-07 Resid phdelay (usec) -4.95225E-06 +/- 4.2E-07  
 Delay rate (us/s) 3.59386772899E-02 Apriori rate (us/s) 3.59385857343E-02 Resid rate (us/s) 9.15556E-08 +/- 4.1E-09  
 Total phase (deg) -51.5 Apriori accel (us/s/s) -4.65536141395E-06 Resid phase (deg) -153.6 +/- 13.1

ph/seg (deg) 60.9 30.8 Theor. Amplitude 0.238 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 60.2 53.7 Search (1024X32) 0.232 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 30.4 18.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 38.9 32.4 Inc. seg. avg. 0.267 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.251 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

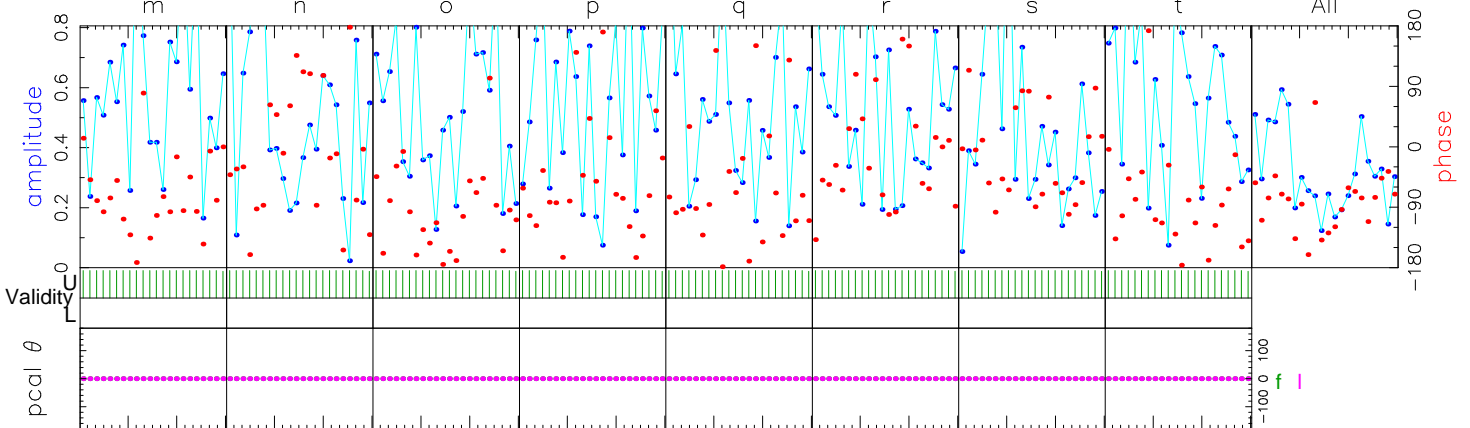
f: az 64.6 el 38.2 pa -77.6 l: az 67.7 el 38.5 pa -70.6 u,v (fr/asec) -263.568 -805.384 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fl..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fl.W.88.3MP1UT



Fringe quality 9  
SNR 9.9  
Int time 179.987  
Amp 0.269  
Phase -78.8  
PFD 1.4e-14  
Delays (us)  
SBD 0.002615  
MBD 0.001310  
Fringe rate (Hz) 0.007822  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build 2024:352:144904  
2025:041:110345  
2024:113:095956  
RA & Dec (J2000) 20h15m28.729786s  
+37°10'59.514736"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-80.0	-57.8	-93.0	-76.8	-106.0	-41.7	-40.0	-95.6	Phase	-78.8
	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.4	Ampl.	0.3
	257.3	110.7	258.2	256.8	258.4	495.3	256.4	258.6	Sbd box	257.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
l	0	0	0	0	0	0	0	0	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-7.95970730778E+01	Apriori delay (usec)	-7.95983830577E+01	Resid mbdelay (usec)	1.30998E-03	+/-	1.1E-04
Sband delay (usec)	-7.95957680577E+01	Apriori clock (usec)	8.3656044E+00	Resid sbdelay (usec)	2.61500E-03	+/-	8.7E-04
Phase delay (usec)	-7.95983855972E+01	Apriori clockrate (us/s)	2.8422100E-07	Resid phdelay (usec)	-2.53956E-06	+/-	3.7E-07
Delay rate (us/s)	3.59386765360E-02	Apriori rate (us/s)	3.59385857343E-02	Resid rate (us/s)	9.08017E-08	+/-	3.6E-09
Total phase (deg)	-336.7	Apriori accel (us/s/s)	-4.65536141395E-06	Resid phase (deg)	-78.8	+/-	11.6

ph/seg (deg) 45.8 27.3 Search (1024X32) 0.262 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 54.3 47.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 27.5 16.4 Inc. seg. avg. 0.292 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 26.9 28.7 Inc. frq. avg. 0.276 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
f: az 64.6 el 38.2 pa -77.6 l: az 67.7 el 38.5 pa -70.6 u,v (fr/asec) -263.568 -805.384 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fl..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fl.W.98.3MP1UT

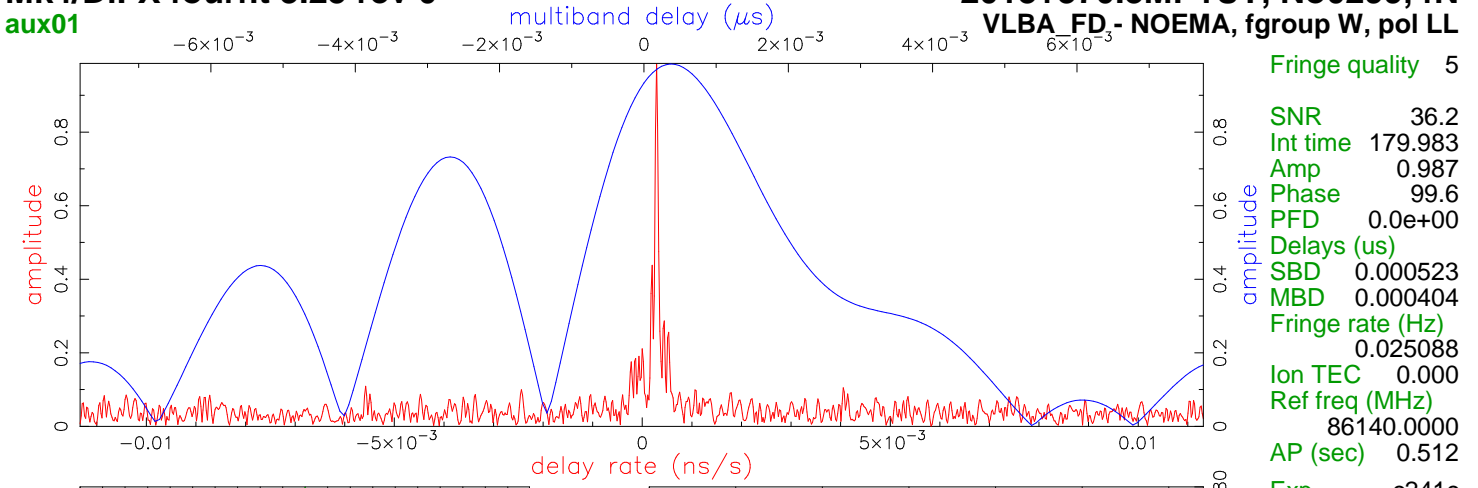


Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fN

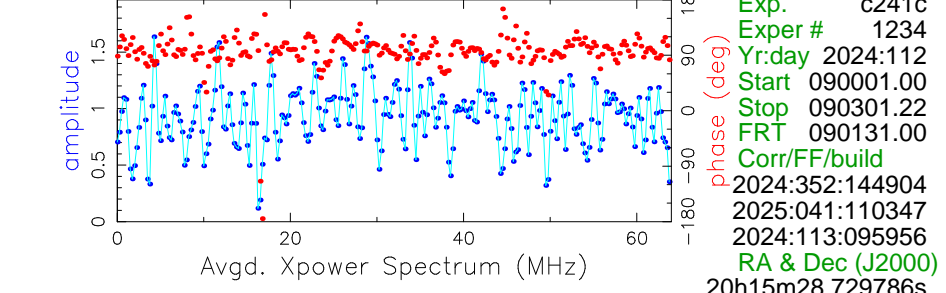
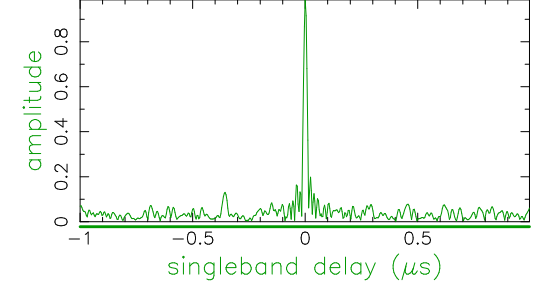
VLBA\_FD- NOEMA, fgroup W, pol LL



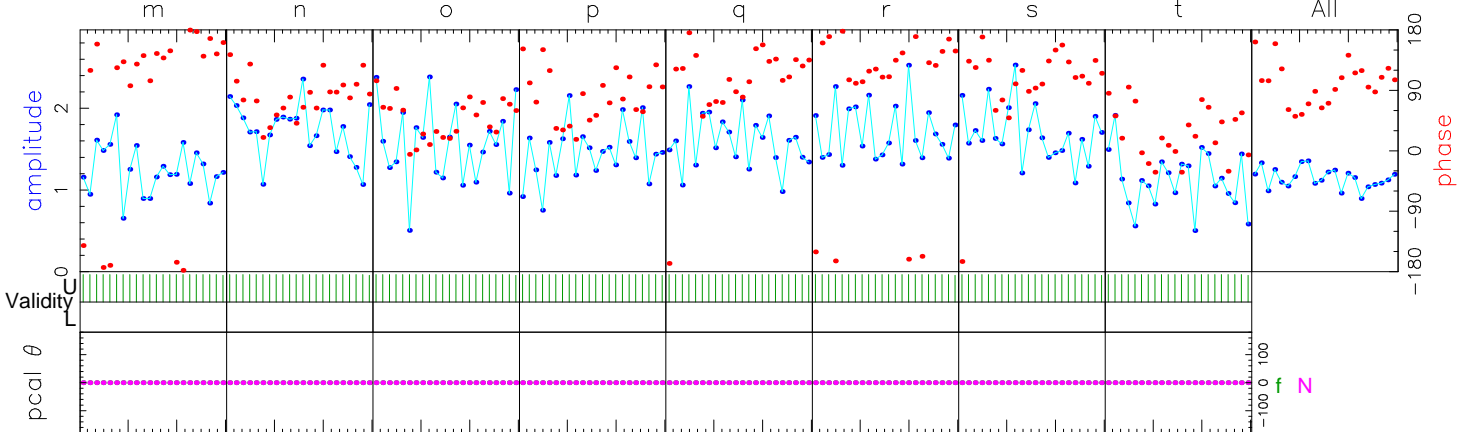
Fringe quality 5

SNR 36.2  
Int time 179.983  
Amp 0.987  
Phase 99.6  
PFD 0.0e+00  
Delays (us)  
SBD 0.000523  
MBD 0.000404  
Fringe rate (Hz) 0.025088  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build 2024:352:144904  
2025:041:110347  
2024:113:095956  
RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
N	0	0	0	0	0	0	0	0		
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
N	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-4.00025184318E+03	Apriori delay (usec)	-4.00025224758E+03	Resid mbdelay (usec)	4.04395E-04	+/-	3.0E-05
Sband delay (usec)	-4.00025172458E+03	Apriori clock (usec)	1.3413042E+01	Resid sbdelay (usec)	5.23000E-04	+/-	2.4E-04
Phase delay (usec)	-4.00025224437E+03	Apriori clockrate (us/s)	3.5920919E-08	Resid phdelay (usec)	3.21024E-06	+/-	1.0E-07
Delay rate (us/s)	1.59079267570E+00	Apriori rate (us/s)	1.59079238446E+00	Resid rate (us/s)	2.91247E-07	+/-	9.8E-10
Total phase (deg)	-118.7	Apriori accel (us/s/s)	8.15377497035E-06	Resid phase (deg)	99.6	+/-	3.2

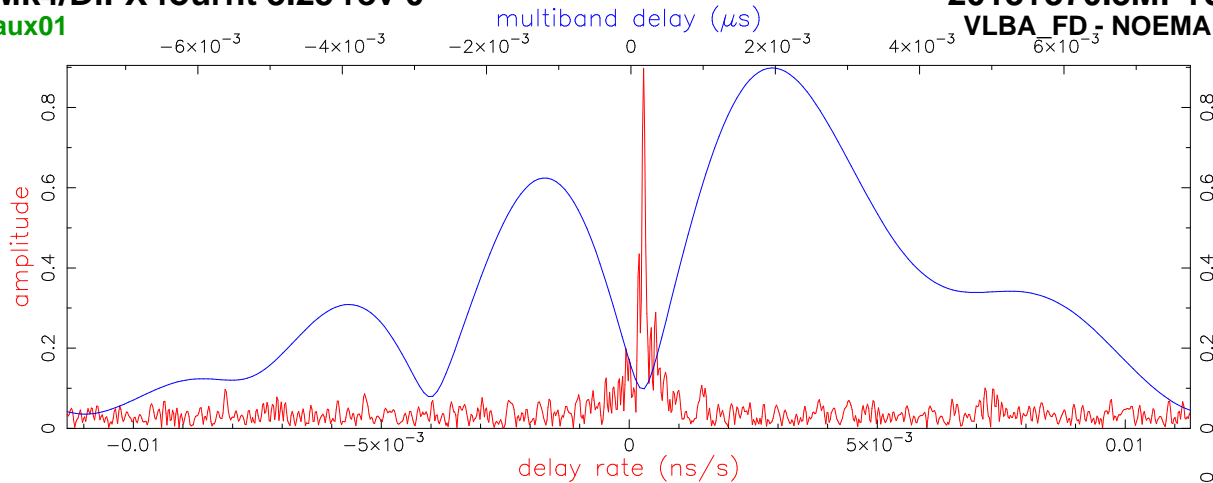
ph/seg (deg) 30.5 7.4 Search (1024X32) 0.971 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 20.1 13.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 48.4 4.5 Inc. seg. avg. 1.135 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 34.4 7.8 Inc. frq. avg. 1.264 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 N: az 274.7 el 54.4 pa 62.9 u,v (fr/asec) -11441.375 -800.643 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fN..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fN.W.106.3MP1UT simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

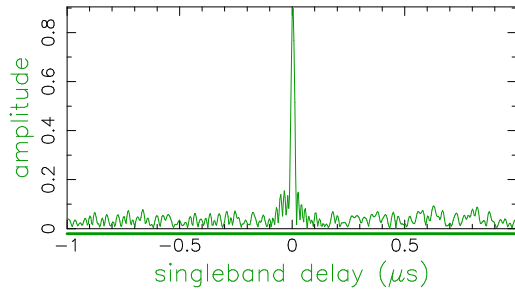
2013+370.3MP1UT, No0299, fN

VLBA\_FD - NOEMA, fgroup W, pol RR

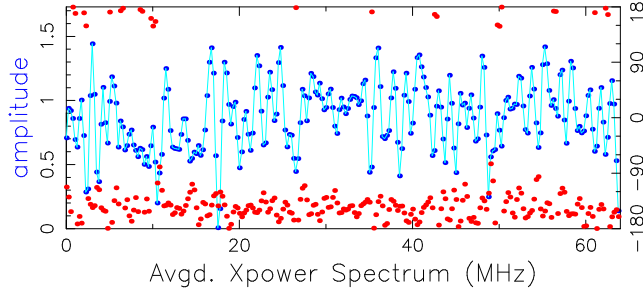


Fringe quality 5

SNR 33.2  
 Int time 179.983  
 Amp 0.905  
 Phase -139.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.002803  
 MBD 0.001904  
 Fringe rate (Hz)  
 0.025102  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

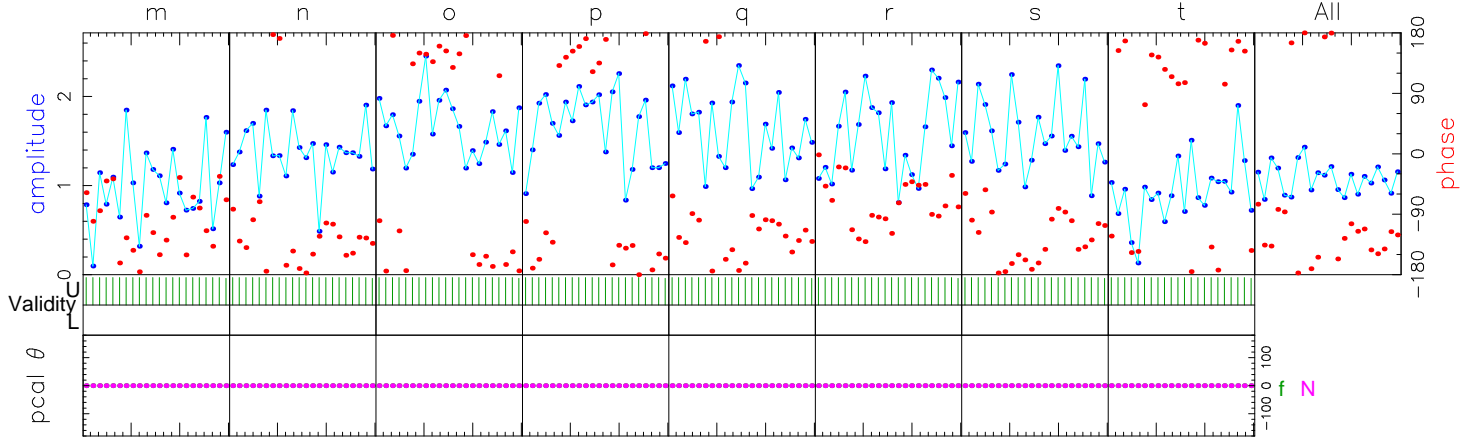


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110349  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-97.1	-138.9	174.6	-175.8	-128.6	-75.1	-120.9	157.6	Phase	-139.8
	0.8	1.2	1.3	1.3	1.4	1.3	1.3	0.7	Ampl.	1.2
	255.7	256.9	257.6	258.0	258.1	257.7	257.0	255.3	Sbd box	257.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
N	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-4.00025034331E+03	Apriori delay (usec)	-4.00025224758E+03	Resid mbdelay (usec)	1.90427E-03	+/-	3.3E-05
Sband delay (usec)	-4.00024944508E+03	Apriori clock (usec)	1.3413042E+01	Resid sbdelay (usec)	2.80250E-03	+/-	2.6E-04
Phase delay (usec)	-4.00025225208E+03	Apriori clockrate (us/s)	3.5920919E-08	Resid phdelay (usec)	-4.50785E-06	+/-	1.1E-07
Delay rate (us/s)	1.59079267587E+00	Apriori rate (us/s)	1.59079238446E+00	Resid rate (us/s)	2.91411E-07	+/-	1.1E-09
Total phase (deg)	-358.0	Apriori accel (us/s/s)	8.15377497035E-06	Resid phase (deg)	-139.8	+/-	3.5

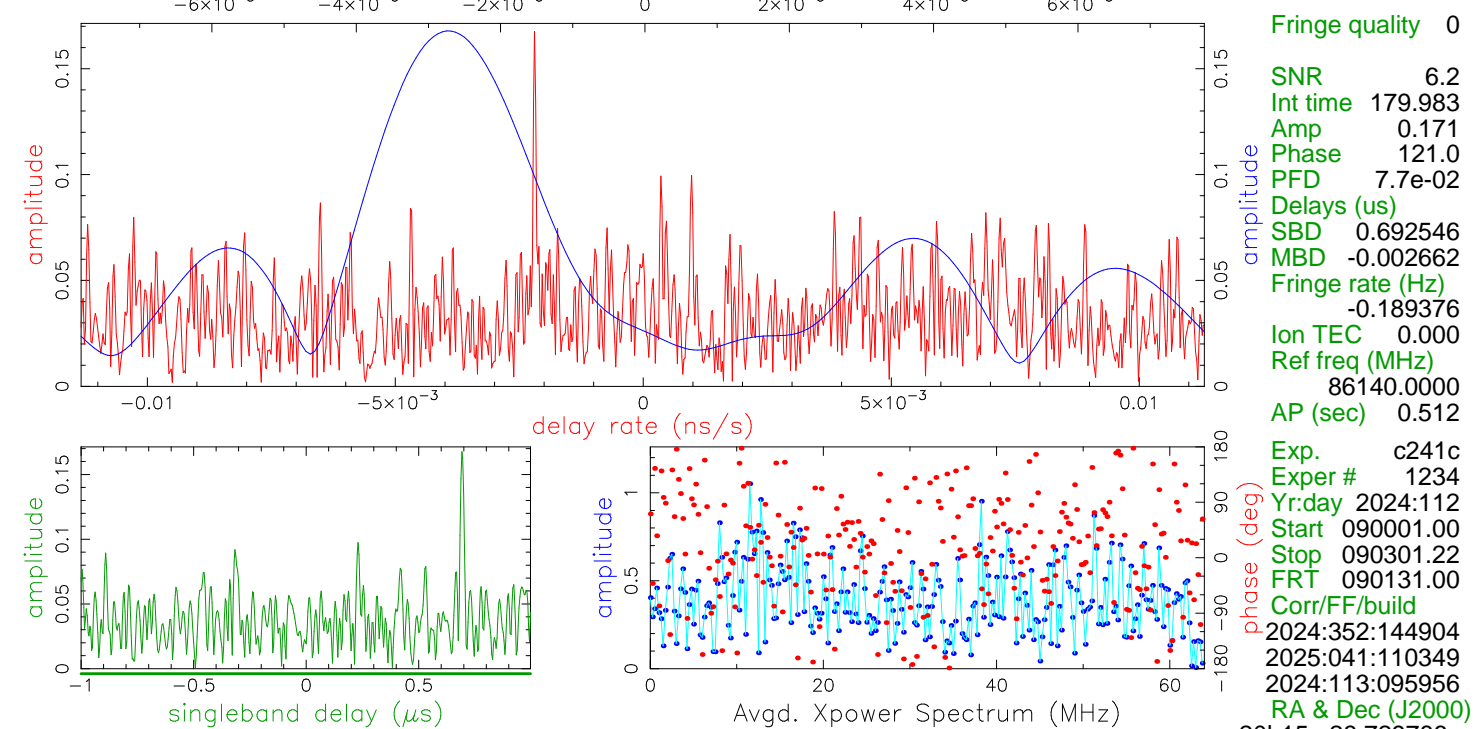
ph/seg (deg) 34.1 8.1 Amplitude 0.905 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 26.4 14.1 Search (1024X32) 0.891 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 47.9 4.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 39.1 8.5 Inc. seg. avg. 1.070 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 N: az 274.7 el 54.4 pa 62.9 u,v (fr/asec) -11441.375 -800.643 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fN..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fN.W.114.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

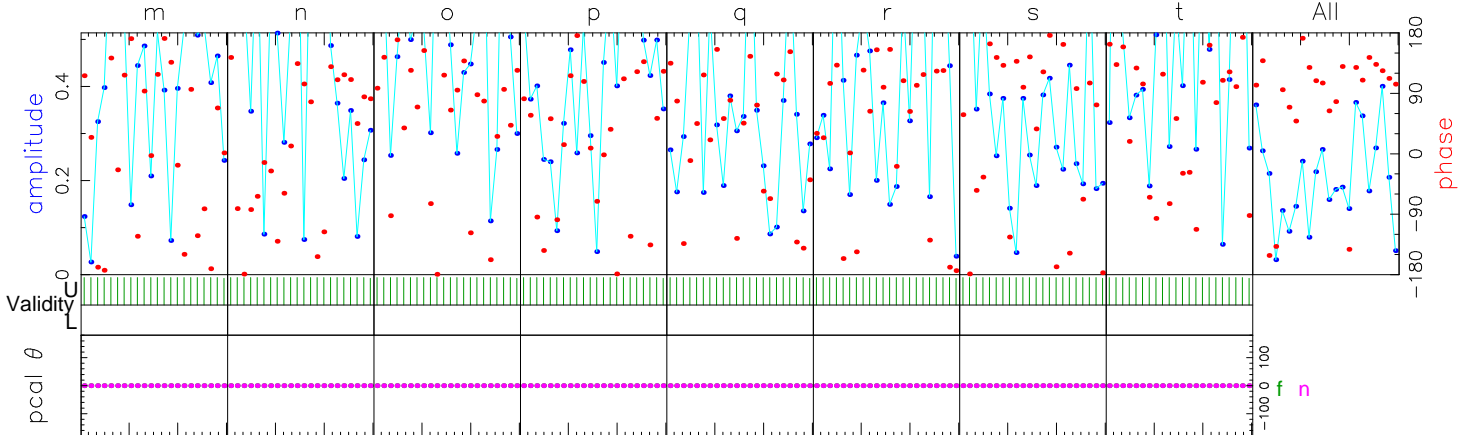
aux01

2013+370.3MP1UT, No0299, fn

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



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
153.4	175.6	108.1	104.2	96.0	118.8	141.8	120.3	120.3	Phase	121.0
0.1	0.1	0.3	0.2	0.1	0.3	0.1	0.2	0.2	Ampl.	0.2
43.1	130.8	434.6	363.1	386.4	434.9	266.1	282.6	282.6	Sbd box	434.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec) (SBD)	-3.39392693784E+03		Apriori delay (usec)	-3.39461177633E+03	Resid mbdelay (usec)	-2.66151E-03	+/-	1.8E-04		
Sband delay (usec)	-3.39391922983E+03		Apriori clock (usec)	3.3733177E-01	Resid sbdelay (usec)	6.92546E-01	+/-	1.4E-03		
Phase delay (usec)	-3.39461177243E+03		Apriori clockrate (us/s)	-2.4704002E-07	Resid phdelay (usec)	3.90303E-06	+/-	6.0E-07		
Delay rate (us/s)	2.35202305690E-01		Apriori rate (us/s)	2.35204504154E-01	Resid rate (us/s)	-2.19846E-06	+/-	5.7E-09		
Total phase (deg)		-27.8	Apriori accel (us/s/s)	7.37079109705E-06	Resid phase (deg)	121.0	+/-	18.5		
RMS	45.7	Theor. 43.4	Amplitude	0.171 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
ph/seg (deg)	45.7	43.4	Search (1024X32)	0.163	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
amp/seg (%)	62.8	75.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	30.4	26.2	Inc. seg. avg.	0.163	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011		
amp/frq (%)	48.7	45.7	Inc. frq. avg.	0.164	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00	
f: az 64.6 el 38.2 pa -77.6			n: az 79.4 el 51.2 pa -67.0		u, v (fr/asec)	-1688.975 -651.857		simultaneous interpolator		
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/3mm/1234/No0299/fn..3MP1UT		Output file: /Exps/c241c/v2/3mm/1234/No0299/fn.W.115.3MP1UT					

Mk4/DiFX fourfit 3.25 rev 0

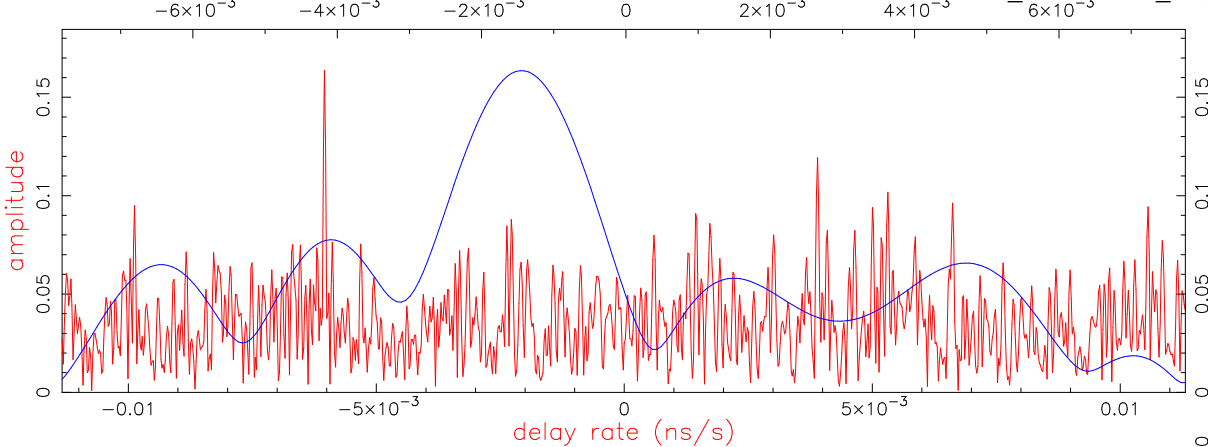
aux01

2013+370.3MP1UT, No0299, fn

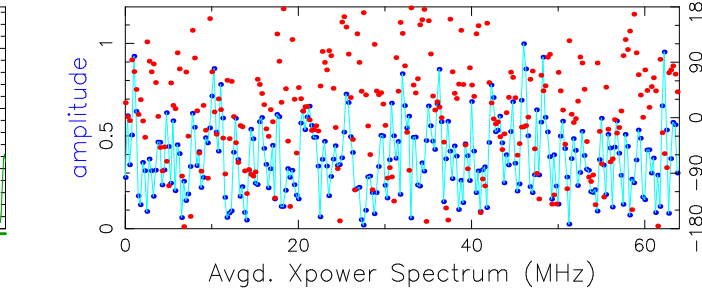
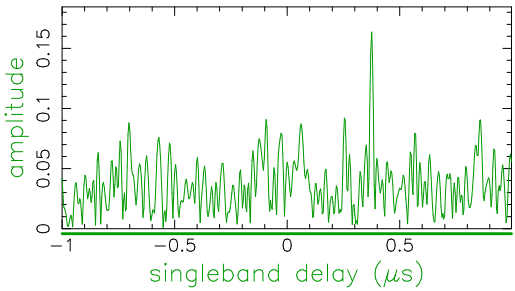
VLBA\_FD - VLBA\_NL, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

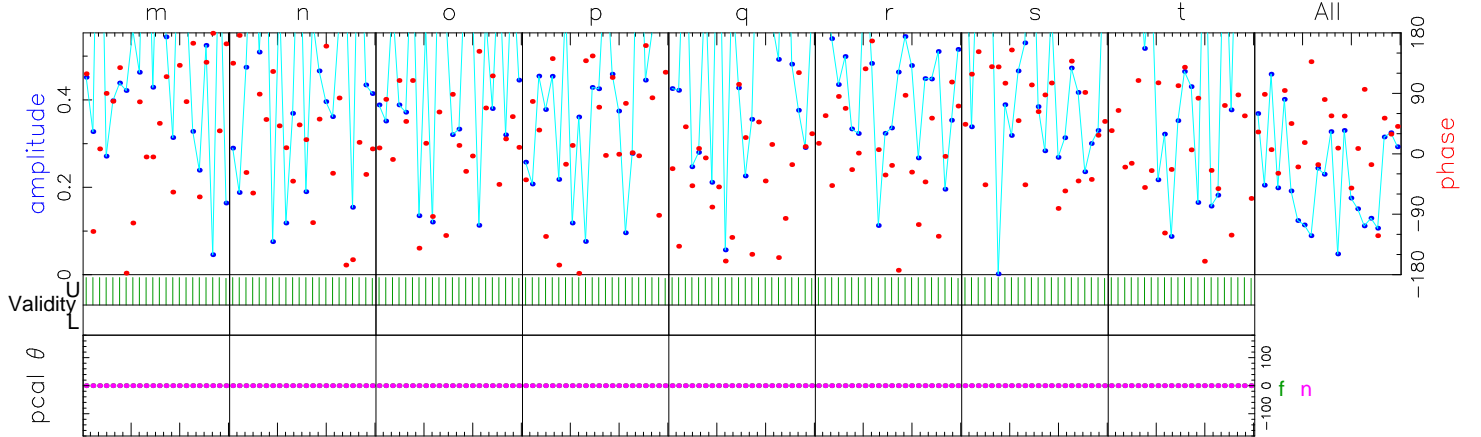


SNR 6.0  
 Int time 179.983  
 Amp 0.185  
 Phase 36.2  
 PFD 2.2e-01  
 Delays (us)  
 SBD 0.374933  
 MBD -0.001448  
 Fringe rate (Hz)  
 -0.521964  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110351  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



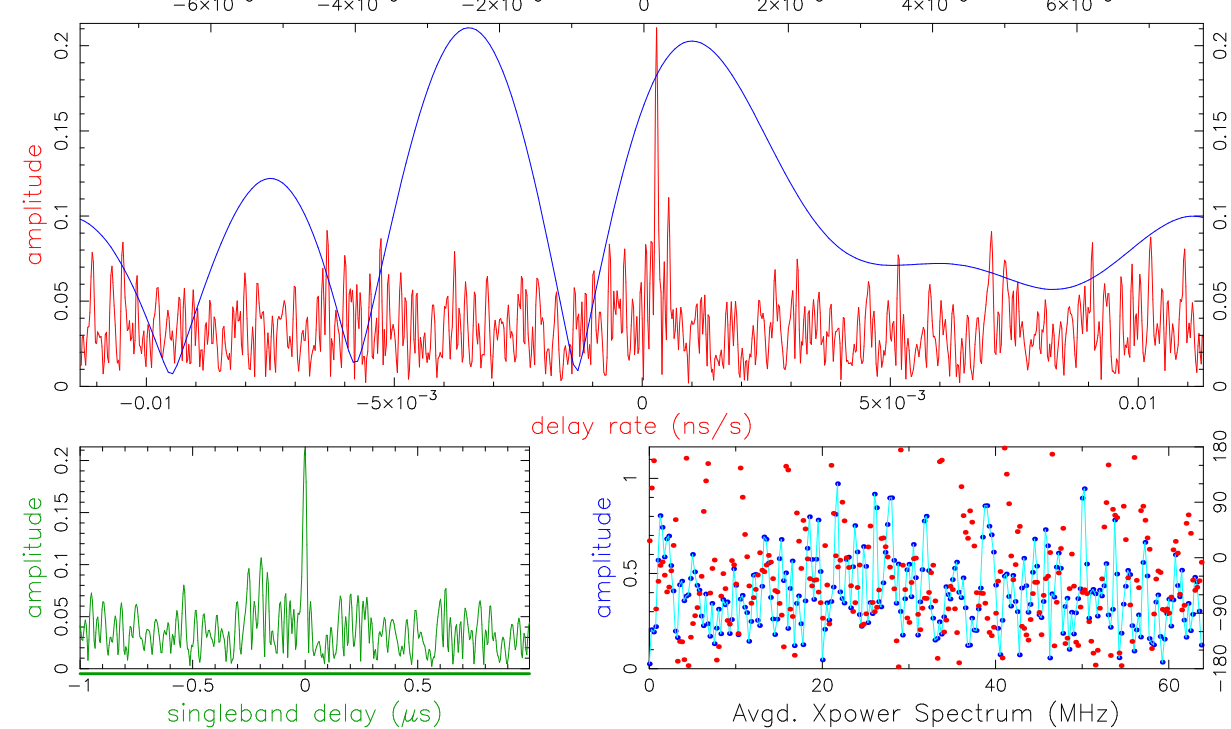
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0	Ampl.	0.2
n	0	0	0	0	0	0	0	0	Sbd box	353.0
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
n	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Tracks	
Group delay (usec) (SBD)	-3.39423822481E+03								Resid mbdelay (usec)	-1.44848E-03 +/- 1.8E-04
Sband delay (usec)	-3.39423684358E+03								Resid sbdelay (usec)	3.74933E-01 +/- 1.4E-03
Phase delay (usec)	-3.39461177517E+03								Resid phdelay (usec)	1.16767E-06 +/- 6.2E-07
Delay rate (us/s)	2.35198444670E-01								Resid rate (us/s)	-6.05948E-06 +/- 5.9E-09
Total phase (deg)			-112.6						Resid phase (deg)	36.2 +/- 19.1
	RMS	Theor.	Amplitude	0.185 +/- 0.031					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.0	44.8	Search (1024X32)	0.158					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	77.2	78.2	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	33.3	27.0	Inc. seg. avg.	0.194					Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	31.8	47.1	Inc. frq. avg.	0.192					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
f: az 64.6 el 38.2 pa -77.6			n: az 79.4 el 51.2 pa -67.0						u,v (fr/asec) -1688.975 -651.857	simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/3mm/1234/No0299/fn..3MP1UT						Output file: /Exps/c241c/v2/3mm/1234/No0299/fn.W.124.3MP1UT	

Mk4/DiFX fourfit 3.25 rev 0

aux01

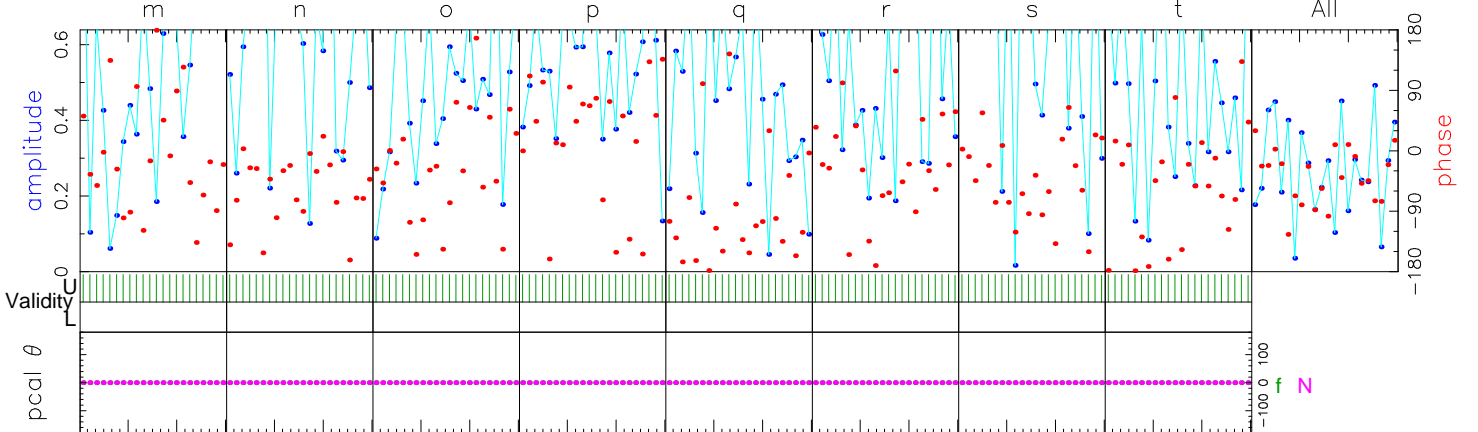
2013+370.3MP1UT, No0299, fN

VLBA\_FD- NOEMA, fgroup W, pol LR



Fringe quality 9  
 SNR 7.8  
 Int time 179.983  
 Amp 0.213  
 Phase -38.3  
 PFD 9.1e-07  
 Delays (us)  
 SBD -0.001439  
 MBD -0.002431  
 Fringe rate (Hz) 0.024754  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build 2024:352:144904  
 2025:041:110352  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-35.6	-54.6	-18.1	72.2	-128.3	-26.3	-36.2	-34.8	Phase	-38.3	
	0.2	0.4	0.2	0.3	0.3	0.3	0.4	0.2	Ampl.	0.3	
	40.8	256.1	21.4	257.7	257.9	257.7	257.0	32.8	Sbd box	256.6	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
f	0	0	0	0	0	0	0	0	PC freqs		
N	0	0	0	0	0	0	0	0	PC freqs		
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
N	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec) (SBD)	-4.00025467824E+03		Apriori delay (usec)		-4.00025224758E+03		Resid mbdelay (usec)		-2.43067E-03	+/- 1.4E-04	
Sband delay (usec)	-4.00025368633E+03		Apriori clock (usec)		1.3413042E+01		Resid sbdelay (usec)		-1.43875E-03	+/- 1.1E-03	
Phase delay (usec)	-4.00025224881E+03		Apriori clockrate (us/s)		3.5920919E-08		Resid phdelay (usec)		-1.23353E-06	+/- 4.7E-07	
Delay rate (us/s)	1.59079267182E+00		Apriori rate (us/s)		1.59079238446E+00		Resid rate (us/s)		2.87365E-07	+/- 4.5E-09	
Total phase (deg)			Apriori accel (us/s/s)		8.15377497035E-06		Resid phase (deg)		-38.3	+/- 14.7	
	RMS	Theor.	Amplitude	0.213 +/- 0.027	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	39.9	34.4	Search (1024X32)	0.210	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000	
amp/seg (%)	65.4	60.0	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008	0.008
ph/frq (deg)	59.4	20.7	Inc. seg. avg.	0.231	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011	0.011	
amp/frq (%)	61.0	36.2	Inc. frq. avg.	0.289	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00
f: az 64.6 el 38.2 pa -77.6	N: az 274.7 el 54.4 pa 62.9		u, v (fr/asec) -11441.375 -800.643						simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/3mm/1234/No0299/fN..3MP1UT		Output file: /Exps/c241c/v2/3mm/1234/No0299/fN.W.125.3MP1UT								

Mk4/DiFX fourfit 3.25 rev 0

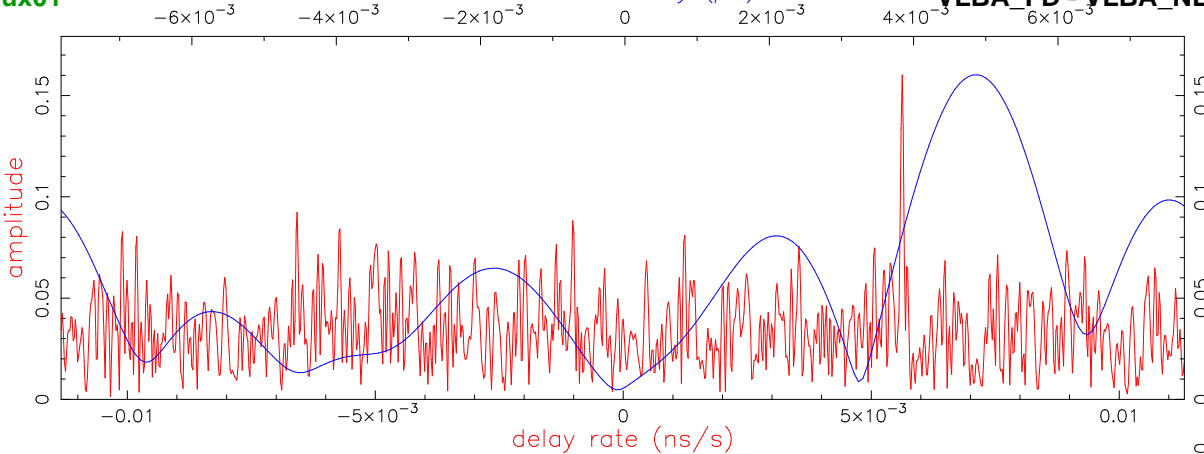
aux01

2013+370.3MP1UT, No0299, fn

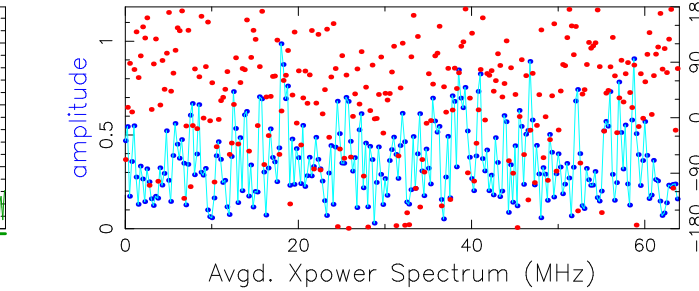
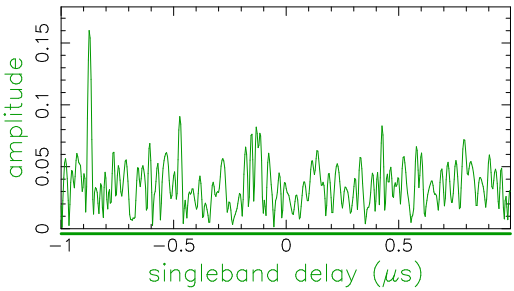
VLBA\_FD - VLBA\_NL, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 0

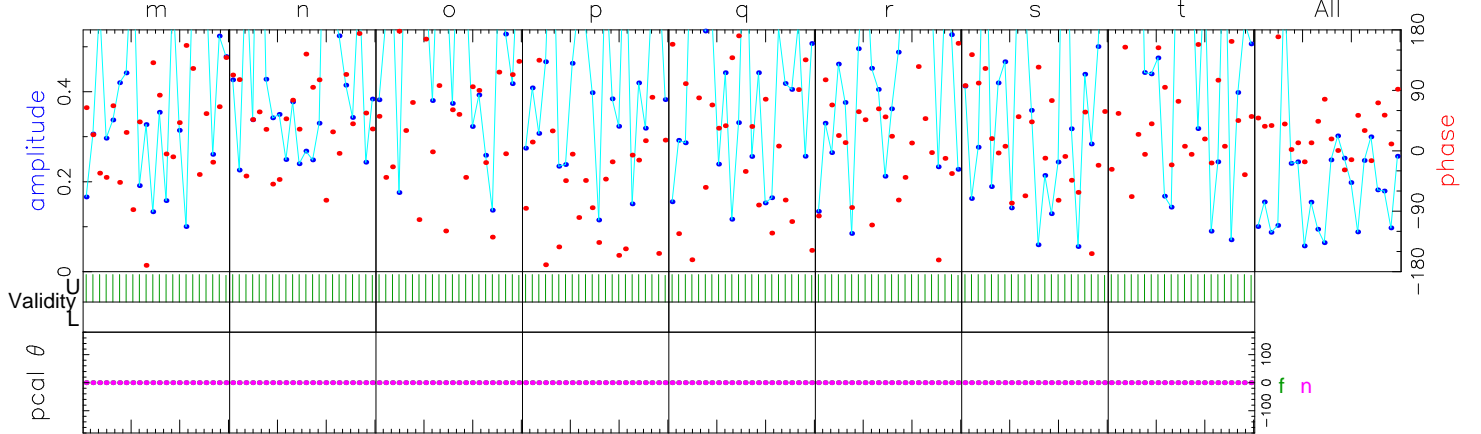


SNR 5.9  
 Int time 179.983  
 Amp 0.179  
 Phase 24.7  
 PFD 3.3e-01  
 Delays (us)  
 SBD -0.873841  
 MBD 0.004904  
 Fringe rate (Hz)  
 0.485770  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110354  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
n	0	0	0	0	0	0	0	0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -3.39548187199E+03 Apriori delay (usec) -3.39461177633E+03 Resid mbdelay (usec) 4.90435E-03 +/- 1.8E-04  
 Sband delay (usec) -3.39548561683E+03 Apriori clock (usec) 3.3733177E-01 Resid sbdelay (usec) -8.73841E-01 +/- 1.5E-03  
 Phase delay (usec) -3.39461177554E+03 Apriori clockrate (us/s) -2.4704002E-07 Resid phdelay (usec) 7.98072E-07 +/- 6.2E-07  
 Delay rate (us/s) 2.35210143458E-01 Apriori rate (us/s) 2.35204504154E-01 Resid rate (us/s) 5.63930E-06 +/- 6.0E-09  
 Total phase (deg) -124.1 Apriori accel (us/s/s) 7.37079109705E-06 Resid phase (deg) 24.7 +/- 19.3

RMS Theor. Amplitude 0.179 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 44.0 45.3 Search (1024X32) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 80.8 79.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 34.4 27.3 Inc. seg. avg. 0.165 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 46.7 47.7 Inc. frq. avg. 0.176 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

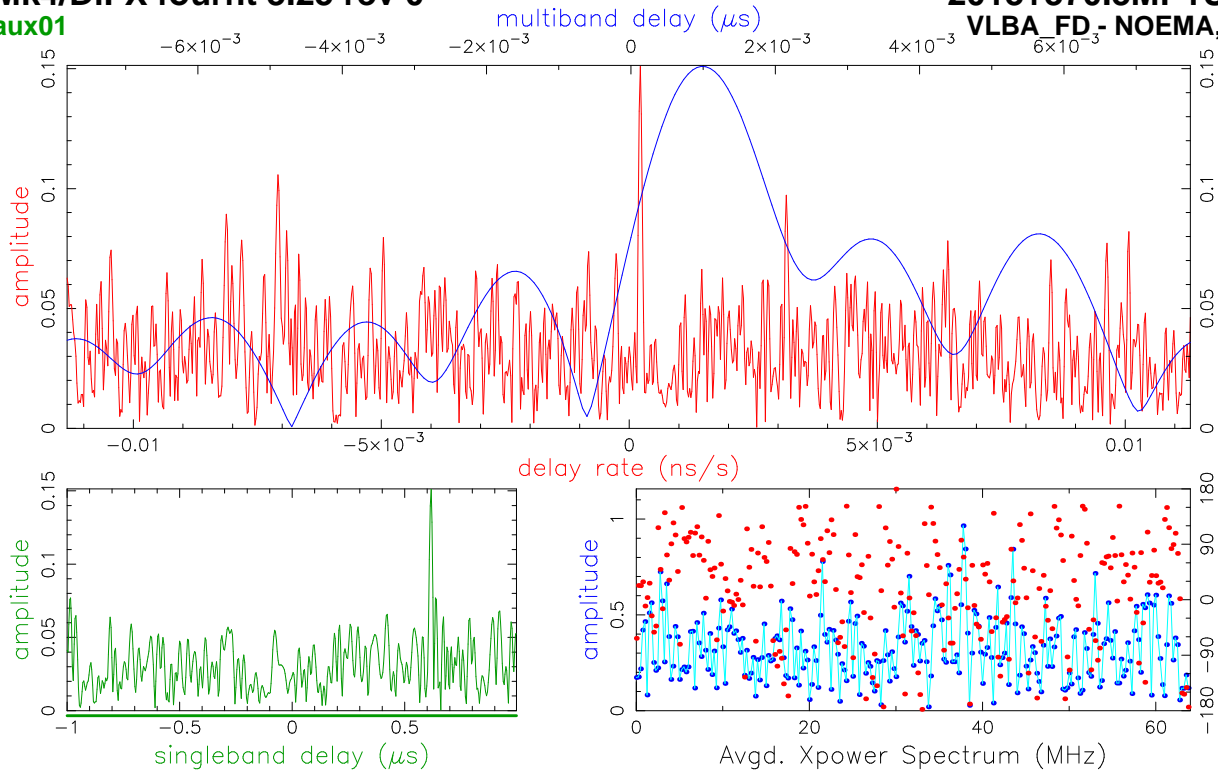
f: az 64.6 el 38.2 pa -77.6 n: az 79.4 el 51.2 pa -67.0 u,v (fr/asec) -1688.975 -651.857 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fn..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fn.W.129.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fN

VLBA\_FD- NOEMA, fgroup W, pol RL

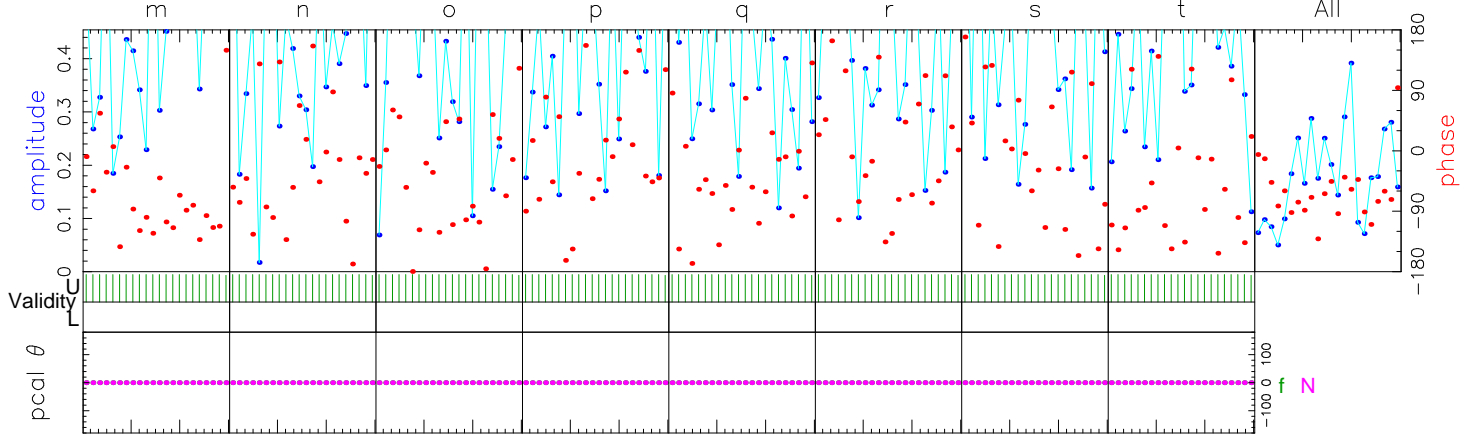


Fringe quality 0

SNR 5.6  
 Int time 179.983  
 Amp 0.151  
 Phase -67.6  
 PFD 9.7e-01  
 Delays (us)  
 SBD 0.616602  
 MBD 0.000978  
 Fringe rate (Hz)  
 0.018474  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110354  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	
	-88.8	-59.3	-42.2	-40.0	-45.5	-35.2	-85.1	-88.1	Phase	-67.6	
	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.2	Ampl.	0.1	
	414.8	9.8	452.9	350.9	233.9	110.3	115.4	152.1	Sbd box	414.9	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
f	0	0	0	0	0	0	0	0	PC freqs		
N	0	0	0	0	0	0	0	0	PC freqs		
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
f:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
N	1000	1000	1000	1000	1000	1000	1000	1000			
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks		
									Tracks		
Group delay (usec) (SBD)	-3.99964189436E+03		Apriori delay (usec)		-4.00025224758E+03		Resid mbdelay (usec)		9.78215E-04	+/- 2.0E-04	
Sband delay (usec)	-3.99963564583E+03		Apriori clock (usec)		1.3413042E+01		Resid sbdelay (usec)		6.16602E-01	+/- 1.6E-03	
Phase delay (usec)	-4.00025224976E+03		Apriori clockrate (us/s)		3.5920919E-08		Resid phdelay (usec)		-2.17873E-06	+/- 6.7E-07	
Delay rate (us/s)	1.59079259891E+00		Apriori rate (us/s)		1.59079238446E+00		Resid rate (us/s)		2.14459E-07	+/- 6.4E-09	
Total phase (deg)			Apriori accel (us/s/s)		8.15377497035E-06		Resid phase (deg)		-67.6	+/- 20.6	
RMS	44.4	48.4	Amplitude		0.151 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		
ph/seg (deg)	61.1	84.5	Search (1024X32)		0.148		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
amp/seg (%)	26.4	29.2	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	56.2	50.9	Inc. seg. avg.		0.133		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011	
amp/frq (%)			Inc. frq. avg.		0.143		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 64.6 el 38.2 pa -77.6	N: az 274.7 el 54.4 pa 62.9		u, v (fr/asec)		-11441.375 -800.643				simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/3mm/1234/No0299/fN..3MP1UT		Output file: /Exps/c241c/v2/3mm/1234/No0299/fN.W.130.3MP1UT								



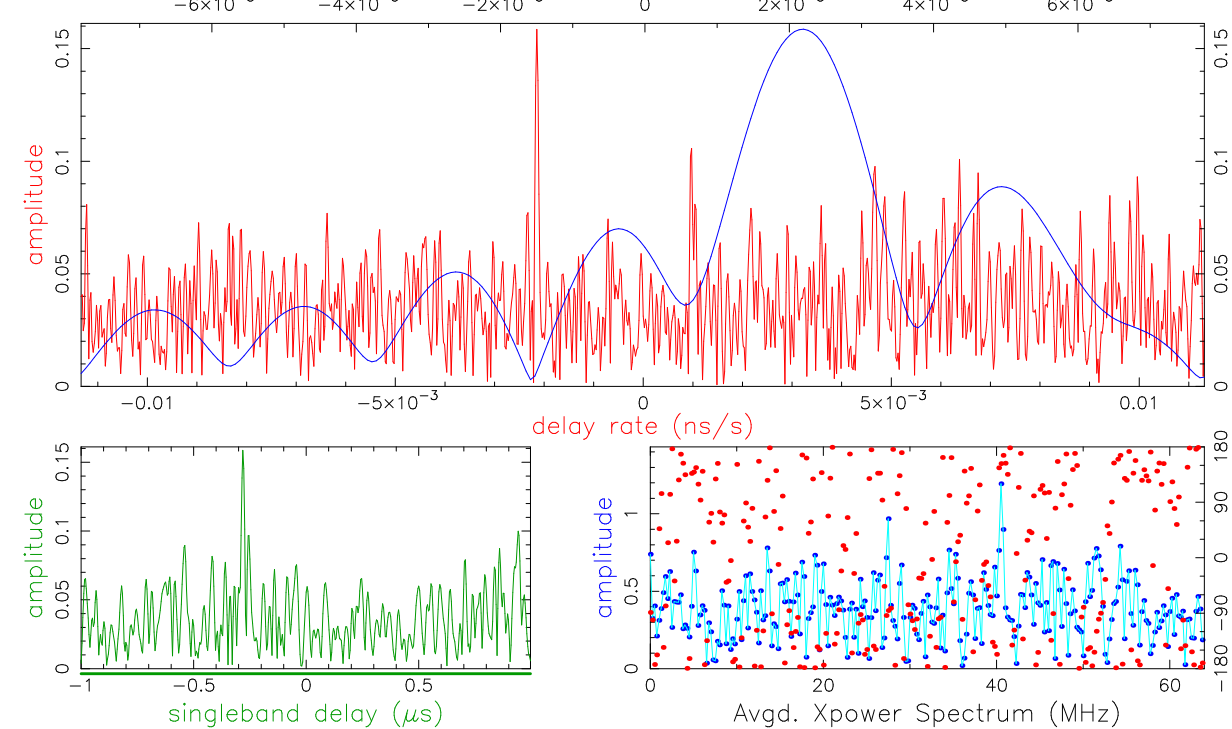


Mk4/DiFX fourfit 3.25 rev 0

aux01

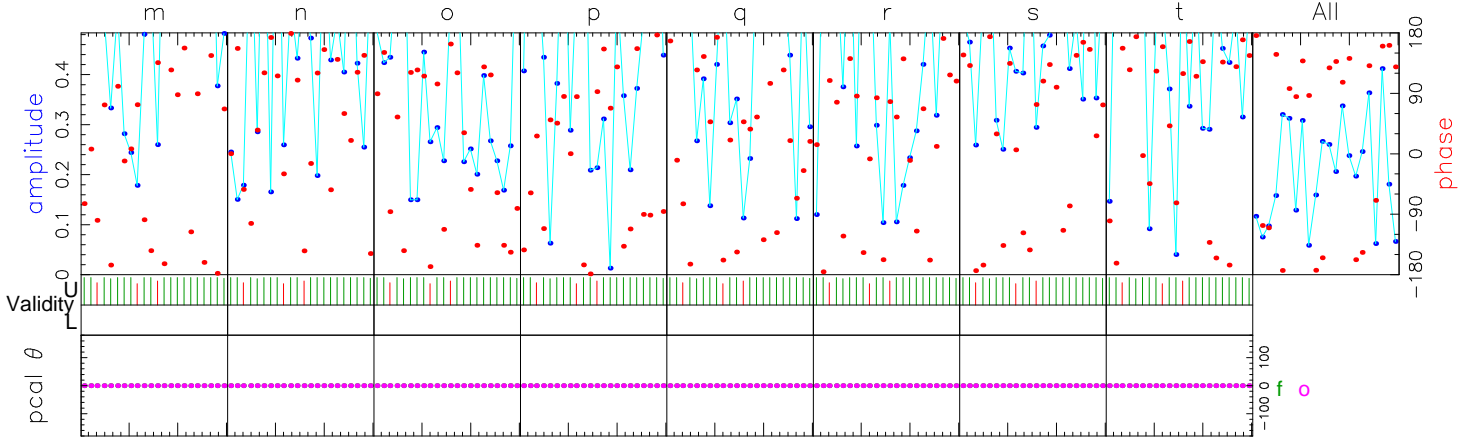
2013+370.3MP1UT, No0299, fo

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



Fringe quality 0  
 SNR 5.8  
 Int time 175.213  
 Amp 0.161  
 Phase 153.5  
 PFD 6.7e-01  
 Delays (us)  
 SBD -0.280776  
 MBD 0.002202  
 Fringe rate (Hz)  
 -0.184653  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110349  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0		
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	2.41048148192E+03	Apriori delay (usec)	2.41076052996E+03	Resid mbdelay (usec)	2.20197E-03	+/-	1.9E-04
Sband delay (usec)	2.41047975421E+03	Apriori clock (usec)	-2.5008522E+01	Resid sbdelay (usec)	-2.80776E-01	+/-	1.5E-03
Phase delay (usec)	2.41076053491E+03	Apriori clockrate (us/s)	-4.3105211E-07	Resid phdelay (usec)	4.95065E-06	+/-	6.4E-07
Delay rate (us/s)	-1.41062525052E-02	Apriori rate (us/s)	-1.41041088619E-02	Resid rate (us/s)	-2.14364E-06	+/-	6.3E-09
Total phase (deg)		Apriori accel (us/s/s)	-1.94654338027E-05	Resid phase (deg)	153.5	+/-	19.9

ph/seg (deg)	54.5	RMS	46.4	Theor.	46.4	Amplitude	0.161 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	72.8	Search (1024X32)	0.155	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	23.3	Inc. seg. avg.	0.160	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00
amp/frq (%)	45.3	Inc. frq. avg.	0.150									

f: az 64.6 el 38.2 pa -77.6      o: az 64.1 el 30.3 pa -64.3      u,v (fr/asec) 84.286 -1835.788      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0299/fo..3MP1UT      Output file: /Exps/c241c/v2/3mm/1234/No0299/fo.W.117.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

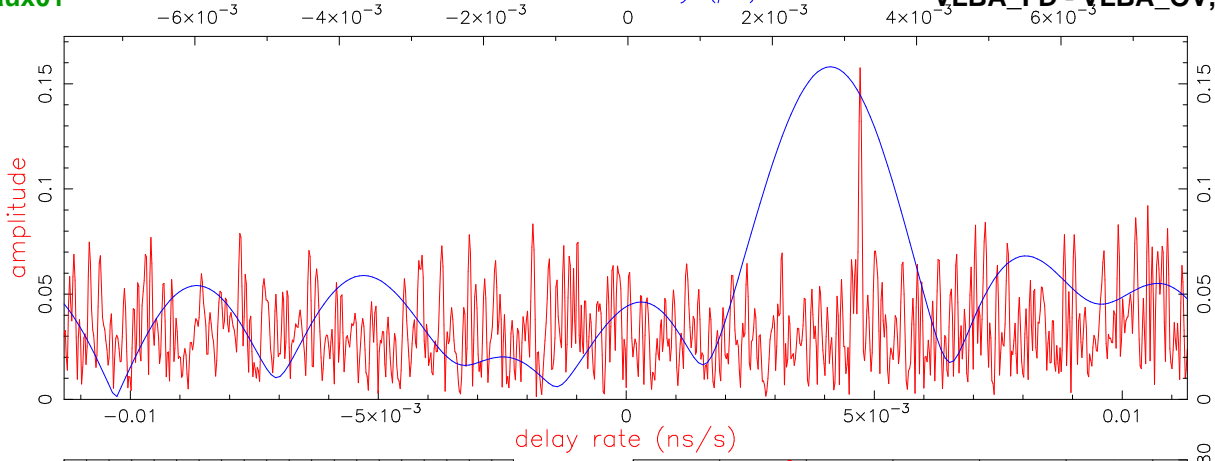
aux01

2013+370.3MP1UT, No0299, fo

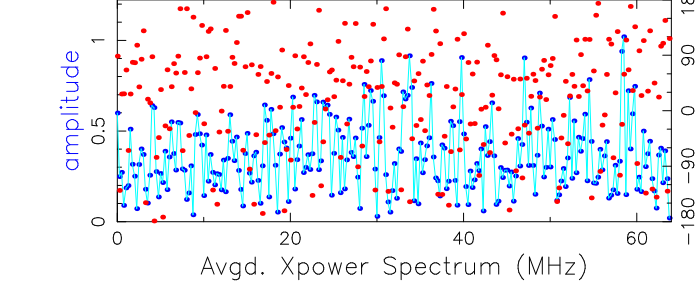
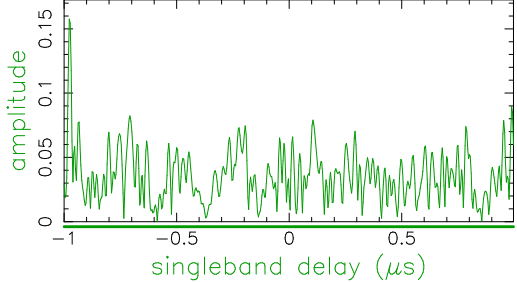
VLBA\_FD - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

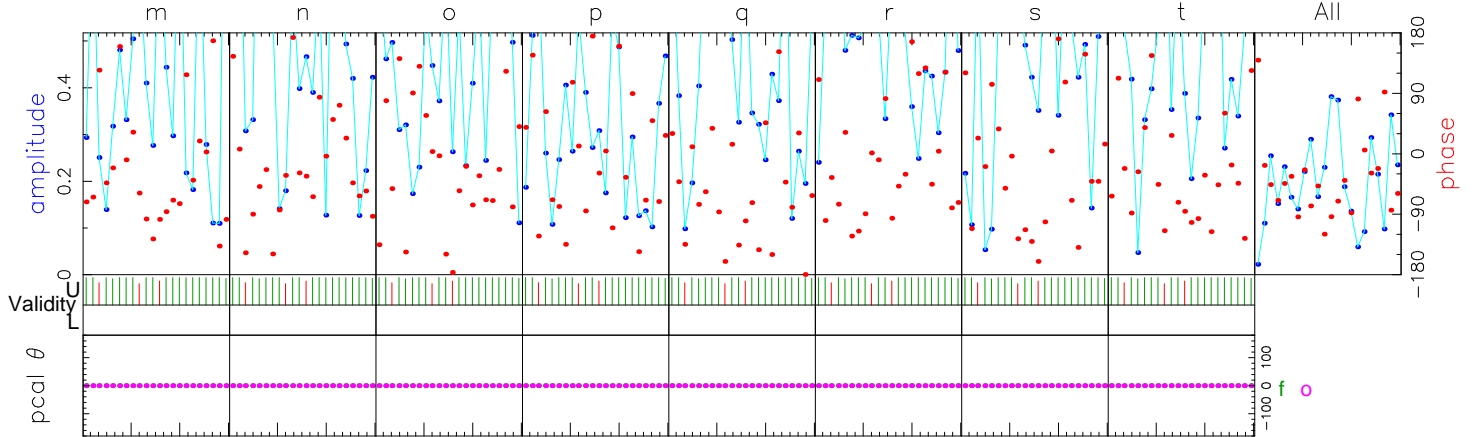


SNR 5.8  
 Int time 175.213  
 Amp 0.173  
 Phase -58.0  
 PFD 5.4e-01  
 Delays (us)  
 SBD -0.974978  
 MBD 0.002881  
 Fringe rate (Hz)  
 0.406275  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110354  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-66.3	-15.4	-55.5	-98.4	-61.7	-61.6	-53.1	-65.9		-58.0
	0.3	0.2	0.1	0.0	0.2	0.2	0.1	0.2	Ampl.	0.2
	9.2	400.8	80.1	509.4	386.8	52.2	452.8	19.6	Sbd box	7.4
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	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	
o: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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	2.40977903613E+03	Apriori delay (usec)	2.41076052996E+03	Resid mbdelay (usec)	2.88117E-03	+/-	1.9E-04
Sband delay (usec)	2.40978555221E+03	Apriori clock (usec)	-2.5008522E+01	Resid sbdelay (usec)	-9.74978E-01	+/-	1.5E-03
Phase delay (usec)	2.41076052809E+03	Apriori clockrate (us/s)	-4.3105211E-07	Resid phdelay (usec)	-1.87120E-06	+/-	6.4E-07
Delay rate (us/s)	-1.40993924162E-02	Apriori rate (us/s)	-1.41041088619E-02	Resid rate (us/s)	4.71645E-06	+/-	6.2E-09
Total phase (deg)		Apriori accel (us/s/s)	-1.94654338027E-05	Resid phase (deg)	-58.0	+/-	19.7

ph/seg (deg)	63.8	Theor.	45.9	Amplitude	0.173 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	63.5	Search (1024X32)	0.157	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	24.6	Inc. seg. avg.	0.160	Inc. frq. avg.	0.158	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	39.8	Inc. frq. avg.	0.158			Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011	
f: az 64.6 el 38.2 pa -77.6		o: az 64.1 el 30.3 pa -64.3		u, v (fr/asec)	84.286 -1835.788	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/c241c/v2/3mm/1234/No0299/fo..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fo.W.127.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

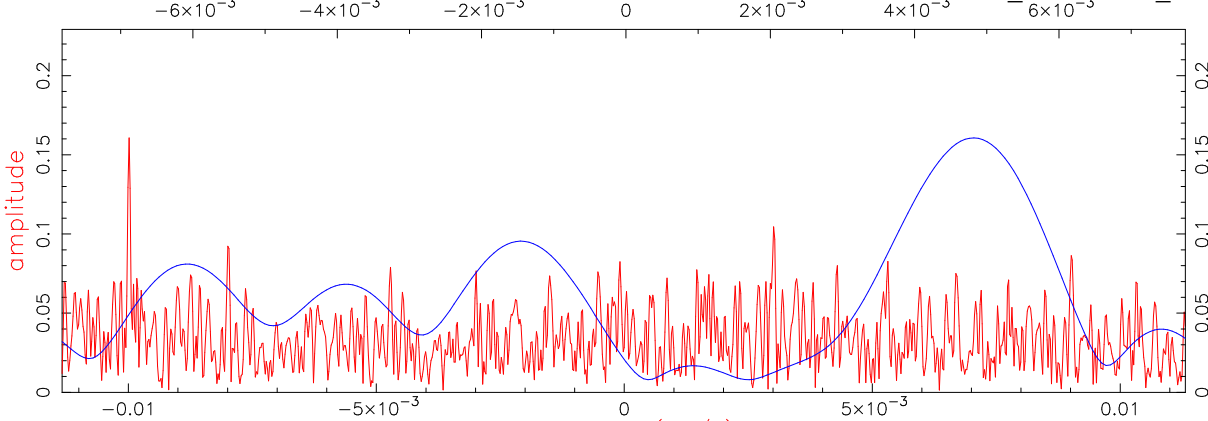
aux01

2013+370.3MP1UT, No0299, fo

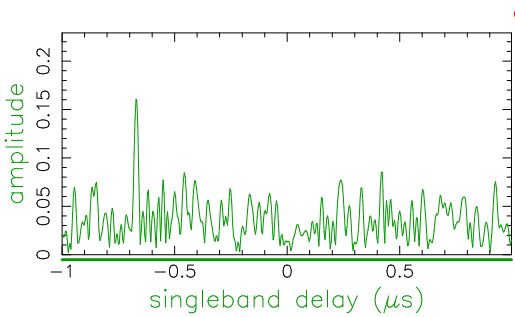
VLBA\_FD - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

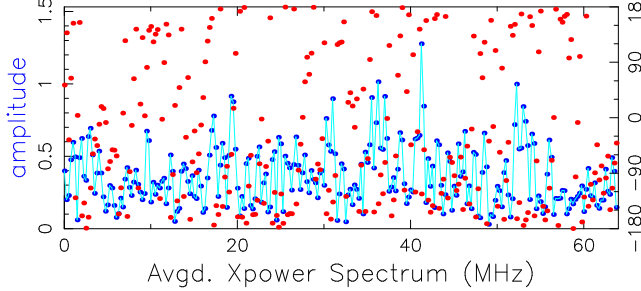
Fringe quality 0



SNR 5.9  
Int time 175.213  
Amp 0.229  
Phase 0.2  
PFD 3.9e-01  
Delays (us)  
SBD -0.670272  
MBD 0.004829  
Fringe rate (Hz)  
-0.860974  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

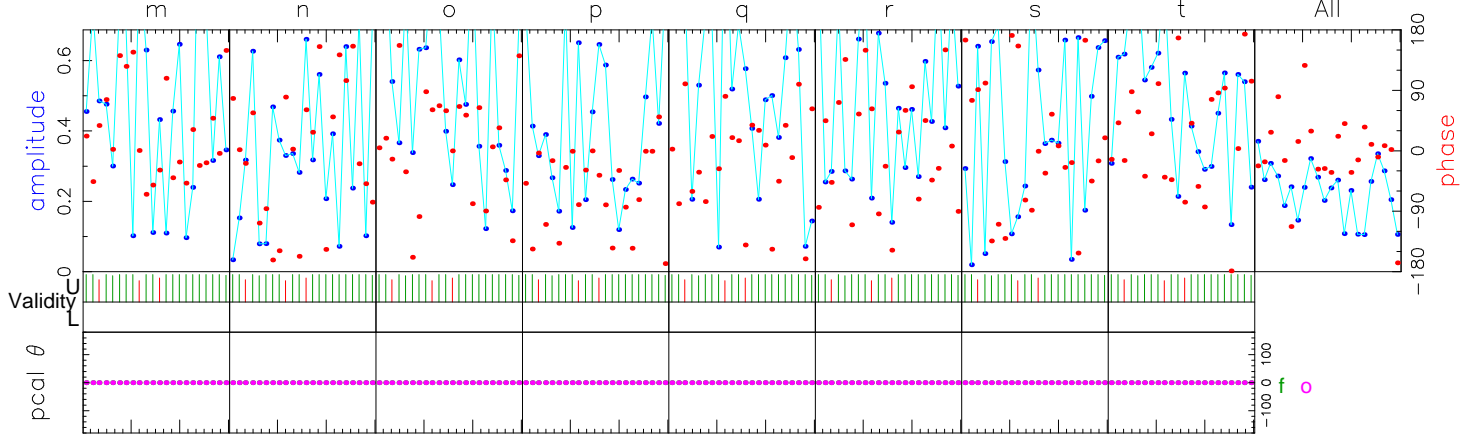


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110355  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-0.3	55.6	24.7	-52.2	7.7	3.5	-57.8	32.7	Phase	0.2
	0.4	0.1	0.3	0.3	0.4	0.2	0.2	0.3	Ampl.	0.2
	38.2	119.4	457.8	86.3	224.9	366.1	117.4	505.5	Sbd box	85.4
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	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:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	2.41009348378E+03	Apriori delay (usec)		2.41076052996E+03	Resid mbdelay (usec)		4.82883E-03	+/-	1.8E-04	
Sband delay (usec)	2.41009025771E+03	Apriori clock (usec)		-2.5008522E+01	Resid sbdelay (usec)		-6.70272E-01	+/-	1.5E-03	
Phase delay (usec)	2.41076052996E+03	Apriori clockrate (us/s)		-4.3105211E-07	Resid phdelay (usec)		6.88953E-09	+/-	6.3E-07	
Delay rate (us/s)	-1.41141039203E-02	Apriori rate (us/s)		-1.41041088619E-02	Resid rate (us/s)		-9.99506E-06	+/-	6.1E-09	
Total phase (deg)	18.4		Apriori accel (us/s/s)		-1.94654338027E-05	Resid phase (deg)		0.2	+/-	19.5

ph/seg (deg)	58.0	Theor.	45.3	Amplitude	0.229 +/- 0.039	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	61.7	Search (1024X32)	0.153	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	42.6	Inc. seg. avg.	0.245	Inc. frq. avg.	0.240	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	44.5	Inc. frq. avg.	0.240			Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011		
f: az 64.6 el 38.2 pa -77.6		o: az 64.1 el 30.3 pa -64.3		u,v (fr/asec) 84.286 -1835.788		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/c241c/v2/3mm/1234/No0299/fo..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fo.W.137.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

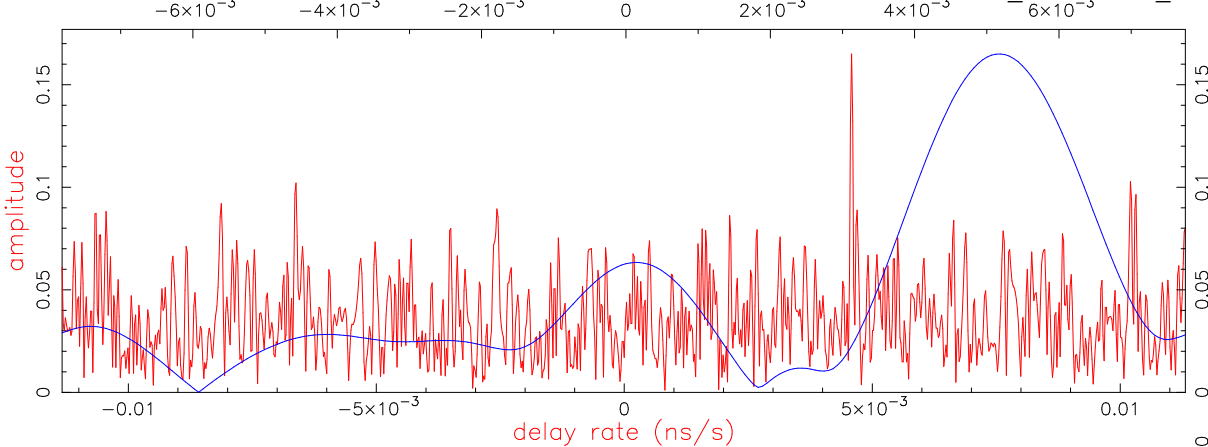
aux01

2013+370.3MP1UT, No0299, fo

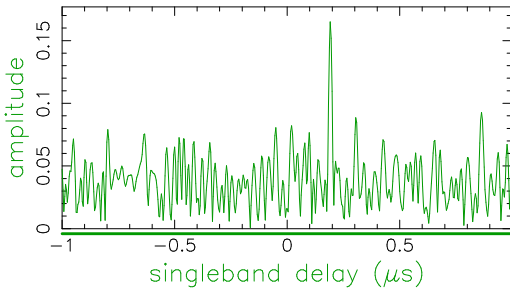
VLBA\_FD - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

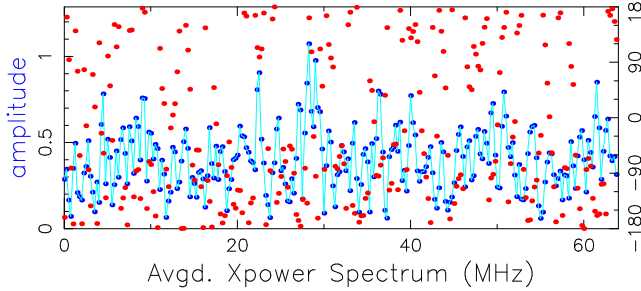
Fringe quality 0



SNR 6.0  
Int time 175.213  
Amp 0.177  
Phase -162.5  
PFD 2.5e-01  
Delays (us)  
SBD 0.191872  
MBD 0.005193  
Fringe rate (Hz)  
0.396352  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

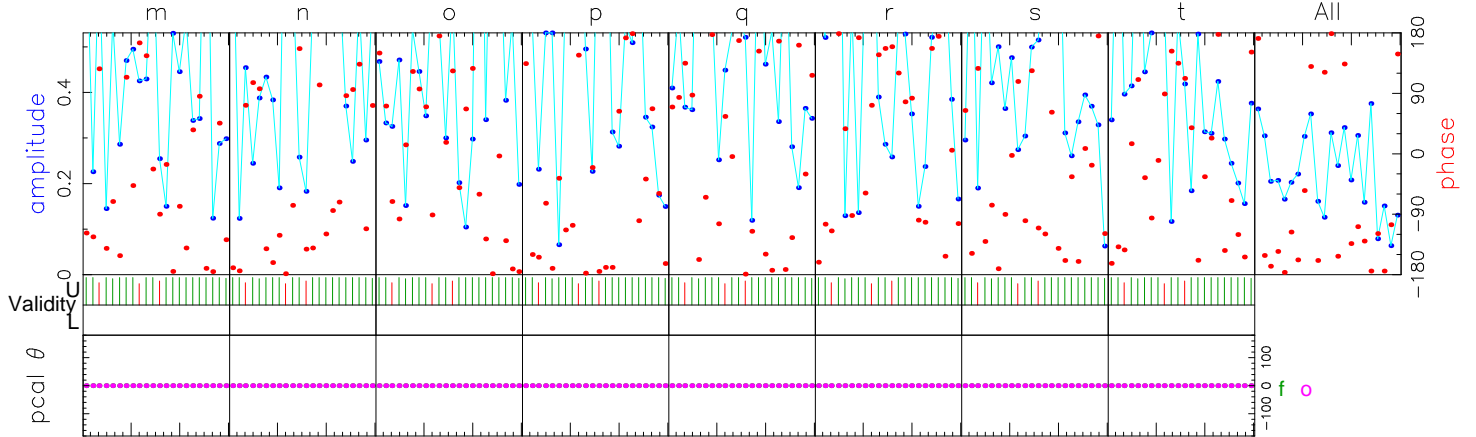


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110357  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-143.6	-170.1	-159.0	-158.8	172.0	-169.9	-132.2	-173.8	Phase	-162.5
	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.1	Ampl.	0.2
	168.6	182.8	133.5	305.4	176.9	121.1	1.5	220.7	Sbd box	306.1
U/L	347/0	347/0	347/0	347/0	347/0	347/0	347/0	347/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	2.41095322303E+03				2.41076052996E+03				Resid mbdelay (usec)	5.19308E-03 +/- 1.8E-04
Sband delay (usec)	2.41095240221E+03				-2.5008522E+01				Resid sbdelay (usec)	1.91872E-01 +/- 1.4E-03
Phase delay (usec)	2.41076052472E+03				-4.3105211E-07				Resid phdelay (usec)	-5.24126E-06 +/- 6.2E-07
Delay rate (us/s)	-1.40995076135E-02				-1.41041088619E-02				Resid rate (us/s)	4.60125E-06 +/- 6.0E-09
Total phase (deg)		-144.4			-1.94654338027E-05				Resid phase (deg)	-162.5 +/- 19.2

ph/seg (deg) 44.1 44.6 Search (1024X32) 0.162 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 65.3 77.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 19.1 27.1 Inc. seg. avg. 0.184 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 38.9 47.3 Inc. frq. avg. 0.166 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 o: az 64.1 el 30.3 pa -64.3 u, v (fr/asec) 84.286 -1835.788 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fo..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fo.W.146.3MP1UT

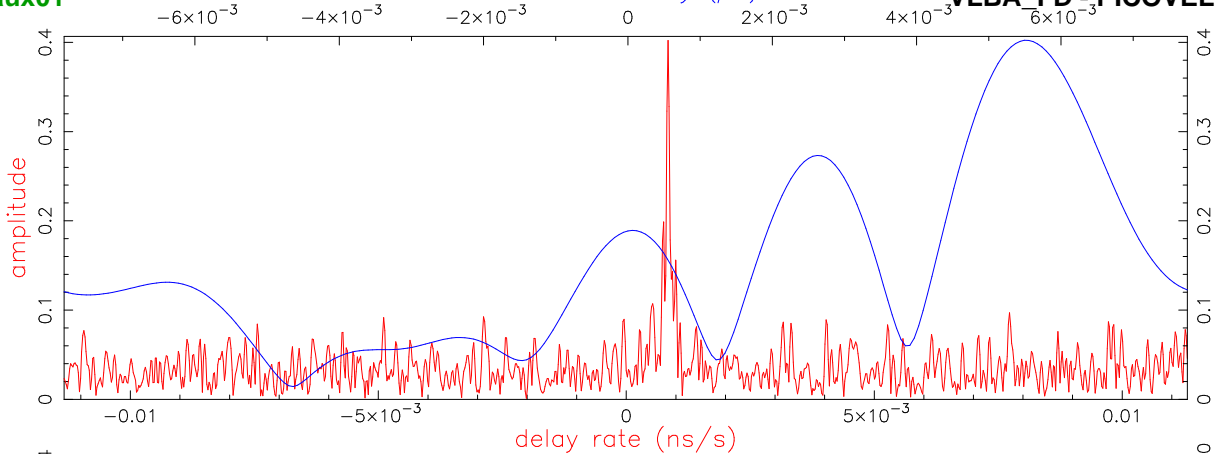
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fP

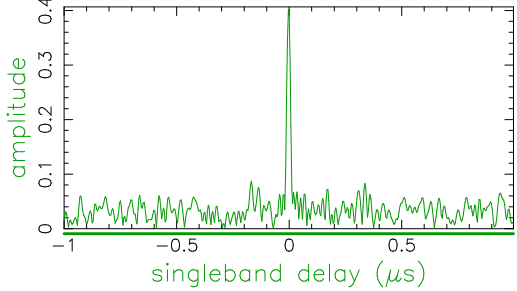
VLBA\_FD - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)

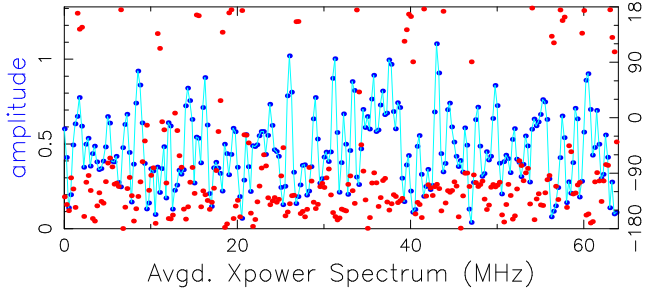


Fringe quality 8

SNR 14.9  
 Int time 179.981  
 Amp 0.407  
 Phase 135.5  
 PFD 1.3e-41  
 Delays (us)  
 SBD -0.002706  
 MBD 0.005555  
 Fringe rate (Hz)  
 0.073072  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

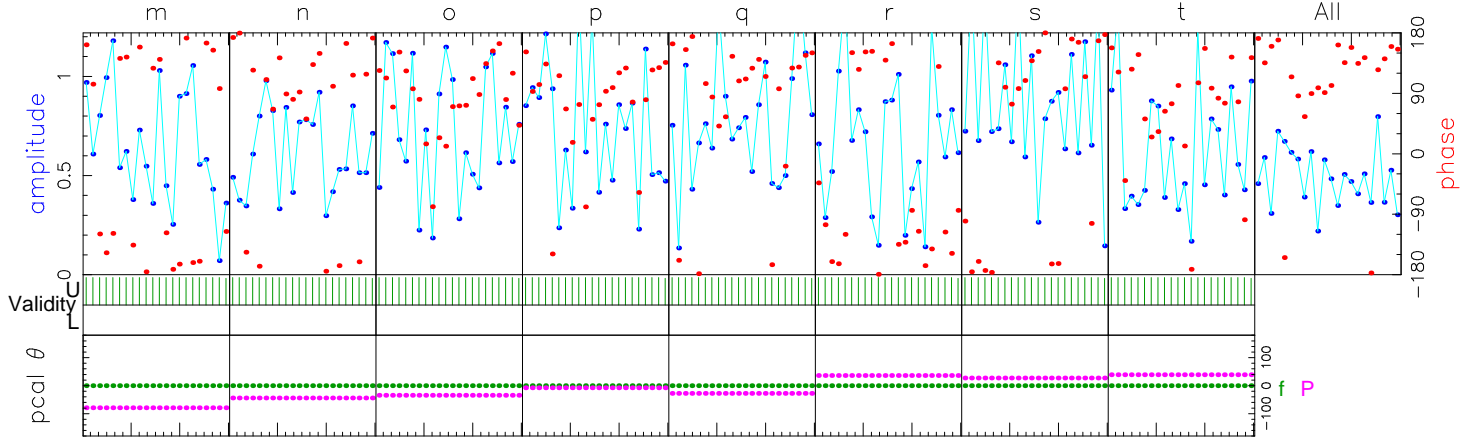


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110355  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-176.1	131.9	90.2	100.8	124.3	-157.6	158.6	100.3	Phase	135.5
	0.5	0.4	0.5	0.5	0.6	0.4	0.6	0.4	Ampl.	0.5
	254.8	256.2	256.3	256.4	256.9	256.6	255.8	255.2	Sbd box	256.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.20493067230E+03	Apriori delay (usec)	-5.20492060219E+03	Resid mbdelay (usec)	5.55489E-03	+/-	7.3E-05
Sband delay (usec)	-5.20492330794E+03	Apriori clock (usec)	9.5510483E-01	Resid sbdelay (usec)	-2.70575E-03	+/-	5.8E-04
Phase delay (usec)	-5.20492059782E+03	Apriori clockrate (us/s)	-5.4801714E-07	Resid phdelay (usec)	4.36897E-06	+/-	2.5E-07
Delay rate (us/s)	1.55076528974E+00	Apriori rate (us/s)	1.55076444145E+00	Resid rate (us/s)	8.48292E-07	+/-	2.4E-09
Total phase (deg)		Apriori accel (us/s/s)	2.13150165267E-05	Resid phase (deg)	135.5	+/-	7.7

ph/seg (deg) 36.0 18.1 Search (1024X32) 0.391 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 41.5 31.5 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 10.9 Inc. seg. avg. 0.471 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 29.5 19.0 Inc. frq. avg. 0.497 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 P: az 281.9 el 60.4 pa 78.6 u,v (fr/asec) -11141.178 687.941 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fP..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fP.W.134.3MP1UT simultaneous interpolator

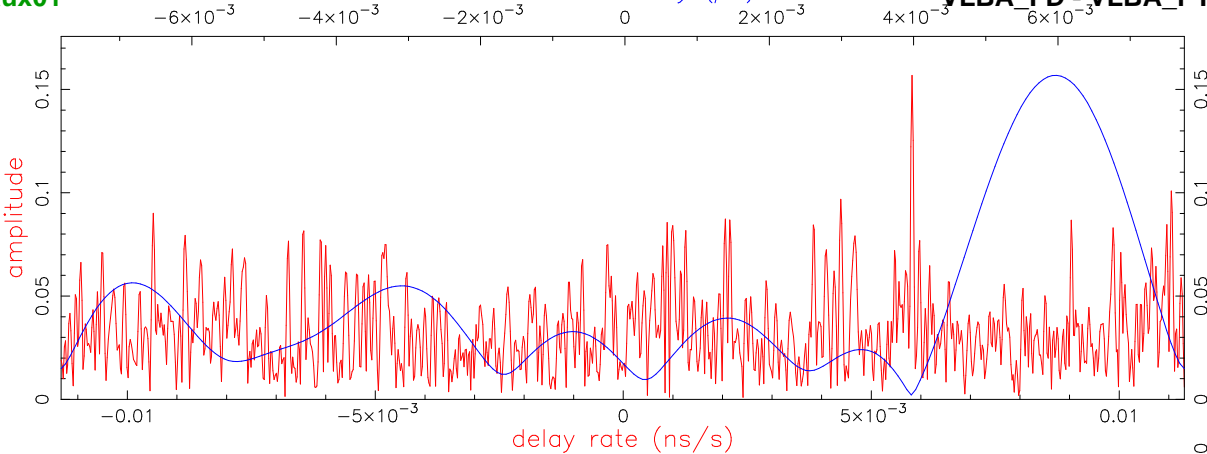
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fp

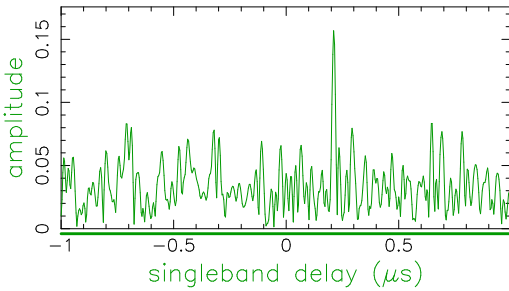
VLBA\_FD - VLBA\_PT, fgroup W, pol LL

multiband delay ( $\mu$ s)

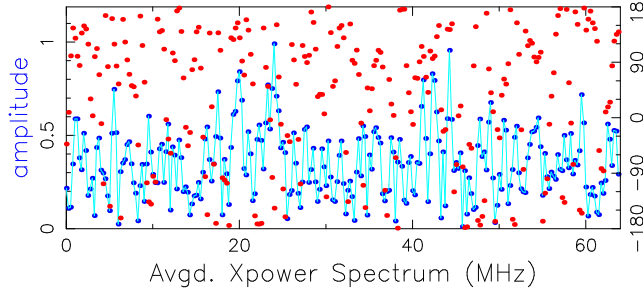


Fringe quality 0

SNR 5.8  
Int time 179.987  
Amp 0.176  
Phase -28.6  
PFD 6.4e-01  
Delays (us)  
SBD 0.211509  
MBD 0.005991  
Fringe rate (Hz) 0.503106  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

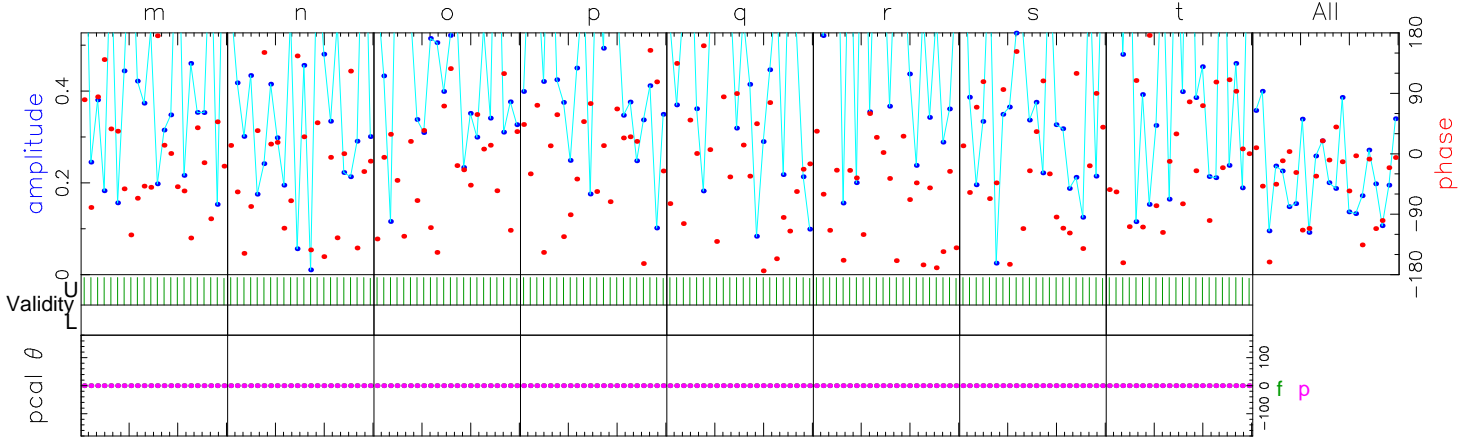


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build 2024:352:144904  
2025:041:110355  
2024:113:095956  
RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-31.4	-28.8	-35.1	3.0	-35.9	-52.9	-15.4	-28.6	Phase	-28.6
	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	Ampl.	0.2
	482.6	248.9	176.5	17.1	365.0	331.9	88.2	147.1	Sbd box	311.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	4.89329943577E+02	Apriori delay (usec)	4.89120827907E+02	Resid mbdelay (usec)	5.99067E-03	+/-	1.9E-04
Sband delay (usec)	4.89332337407E+02	Apriori clock (usec)	-5.6529655E+00	Resid sbdelay (usec)	2.11509E-01	+/-	1.5E-03
Phase delay (usec)	4.89120826986E+02	Apriori clockrate (us/s)	-3.2847705E-07	Resid phdelay (usec)	-9.21155E-07	+/-	6.4E-07
Delay rate (us/s)	5.79709663124E-03	Apriori rate (us/s)	5.79125607439E-03	Resid rate (us/s)	5.84056E-06	+/-	6.2E-09
Total phase (deg)	13.2	Apriori accel (us/s/s)	-6.31843167904E-06	Resid phase (deg)	-28.6	+/-	19.9

ph/seg (deg)	55.8	RMS	46.6	Theor.	0.176 +/- 0.030	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	72.8	Search (1024X32)	0.154	Amplitude	0.176 +/- 0.030	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	17.6	Interp.	0.000	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	27.3	Inc. seg. avg.	0.188	Inc. seg. avg.	0.188	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.163	Inc. frq. avg.	0.163	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

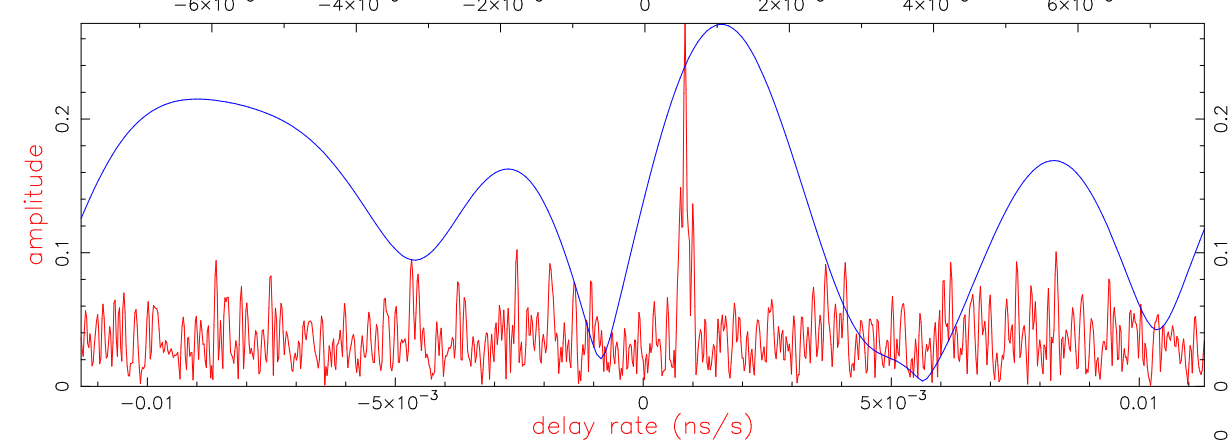
f: az 64.6 el 38.2 pa -77.6 p: az 66.0 el 36.5 pa -71.6 u, v (fr/asec) -47.644 -757.867 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fp..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fp.W.135.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fP

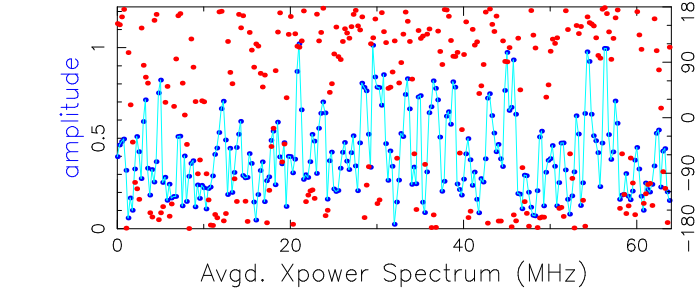
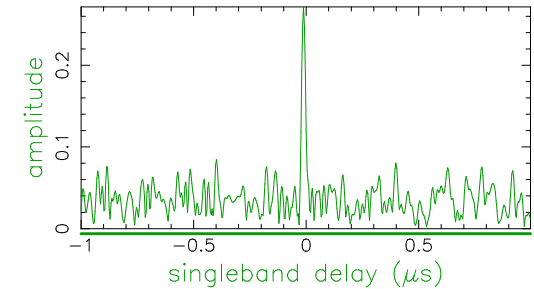
VLBA\_FD - PICOVEL, fgroup W, pol RR



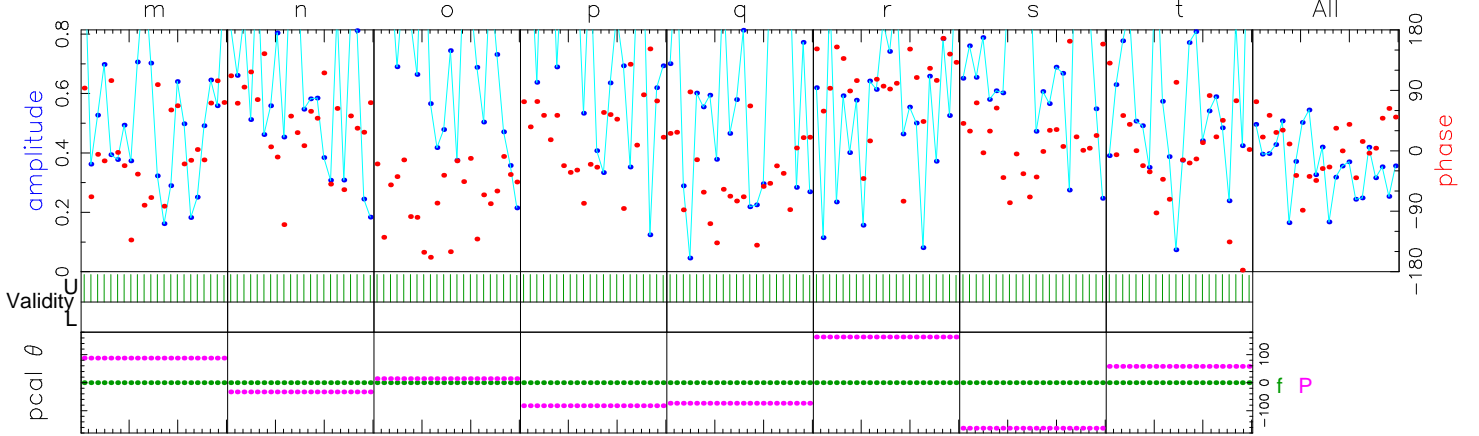
Fringe quality 9

SNR 9.9  
 Int time 179.981  
 Amp 0.272  
 Phase 9.0  
 PFD 5.9e-15  
 Delays (us)  
 SBD -0.011930  
 MBD 0.001057  
 Fringe rate (Hz) 0.072488  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build 2024:352:144904  
 2025:041:110357  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s  
 +37°10'59.514736"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:88	0:33	0:15	0:-82	0:-74	0:163	0:-163	0:58	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec) (SBD)	-5.20493517021E+03								1.05698E-03	+/- 1.1E-04
Sband delay (usec)	-5.20493253219E+03								-1.19300E-02	+/- 8.7E-04
Phase delay (usec)	-5.20492060190E+03								2.91070E-07	+/- 3.7E-07
Delay rate (us/s)	1.55076528296E+00								8.41511E-07	+/- 3.6E-09
Total phase (deg)		-233.2							9.0	+/- 11.5
Apriori delay (usec)					-5.20492060219E+03				Resid mbdelay (usec)	
Apriori clock (usec)					9.5510483E-01				Resid sbdelay (usec)	
Apriori clockrate (us/s)					-5.4801714E-07				Resid phdelay (usec)	
Apriori rate (us/s)					1.55076444145E+00				Resid rate (us/s)	
Apriori accel (us/s/s)					2.13150165267E-05				Resid phase (deg)	
ph/seg (deg)	40.7	27.0	Search (1024X32)	0.269	0.272 +/- 0.027				PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	50.3	47.2	Interp.	0.000	0.269				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	60.8	16.3	Inc. seg. avg.	0.326	0.326				Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	66.8	28.5	Inc. frq. avg.	0.408	0.408				Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
f: az 64.6 el 38.2 pa -77.6			P: az 281.9 el 60.4 pa 78.6						Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/3mm/1234/No0299/fP..3MP1UT							ion window (TEC) 0.00 0.00
										simultaneous interpolator

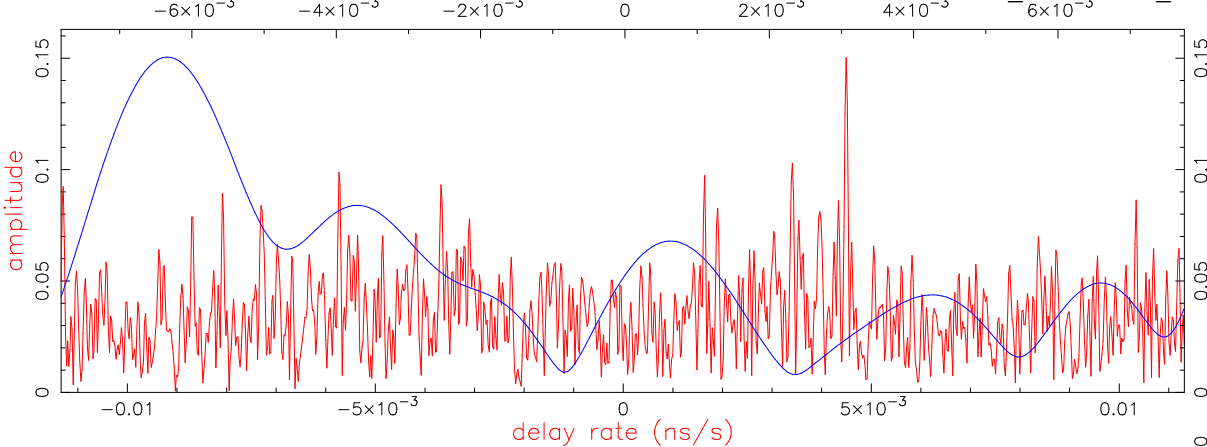
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fp

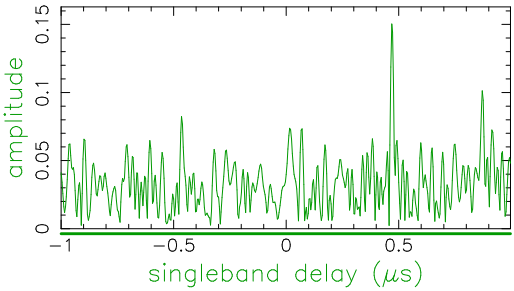
VLBA\_FD - VLBA\_PT, fgroup W, pol RR

multiband delay ( $\mu$ s)

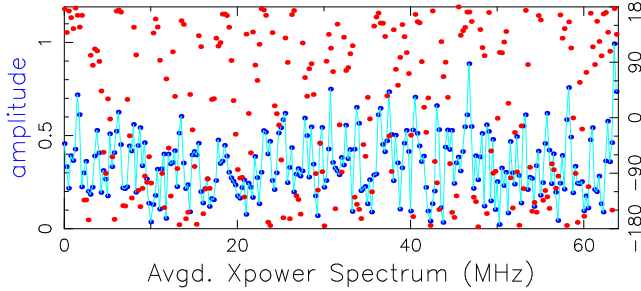


Fringe quality 0

SNR 5.6  
 Int time 179.987  
 Amp 0.163  
 Phase -100.7  
 PFD 9.3e-01  
 Delays (us)  
 SBD 0.470077  
 MBD -0.006281  
 Fringe rate (Hz)  
 0.387258  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

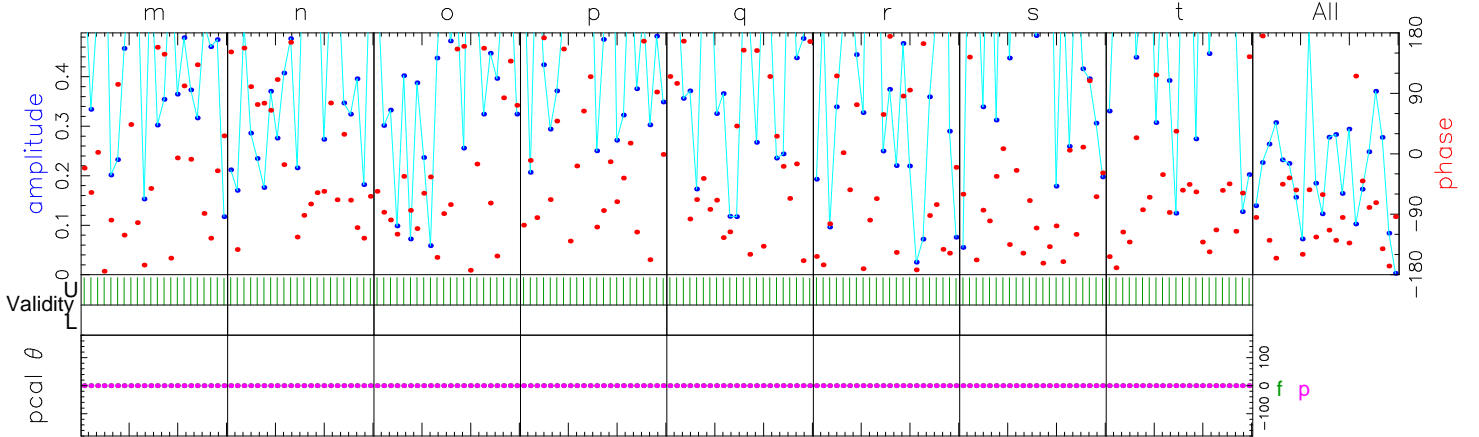


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110358  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-82.7	-72.3	-123.1	-46.4	-142.5	-117.7	-112.1	-89.2	Phase	-100.7
	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.4	Ampl.	0.2
	20.6	235.3	449.7	480.8	171.9	261.9	452.6	376.8	Sbd box	377.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	4.89583296517E+02		Apriori delay (usec)		4.89120827907E+02		Resid mbdelay (usec)		-6.28139E-03	+/- 1.9E-04
Sband delay (usec)	4.89590904657E+02		Apriori clock (usec)		-5.6529655E+00		Resid sbdelay (usec)		4.70077E-01	+/- 1.5E-03
Phase delay (usec)	4.89120824660E+02		Apriori clockrate (us/s)		-3.2847705E-07		Resid phdelay (usec)		-3.24685E-06	+/- 6.6E-07
Delay rate (us/s)	5.79575175912E-03		Apriori rate (us/s)		5.79125607439E-03		Resid rate (us/s)		4.49568E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-6.31843167904E-06		Resid phase (deg)		-100.7	+/- 20.5

ph/seg (deg) 52.5 48.0 Search (1024X32) 0.149 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 81.0 83.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.9 28.9 Inc. seg. avg. 0.169 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 57.0 50.5 Inc. frq. avg. 0.157 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 p: az 66.0 el 36.5 pa -71.6 u,v (fr/asec) -47.644 -757.867 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fp..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fp.W.147.3MP1UT

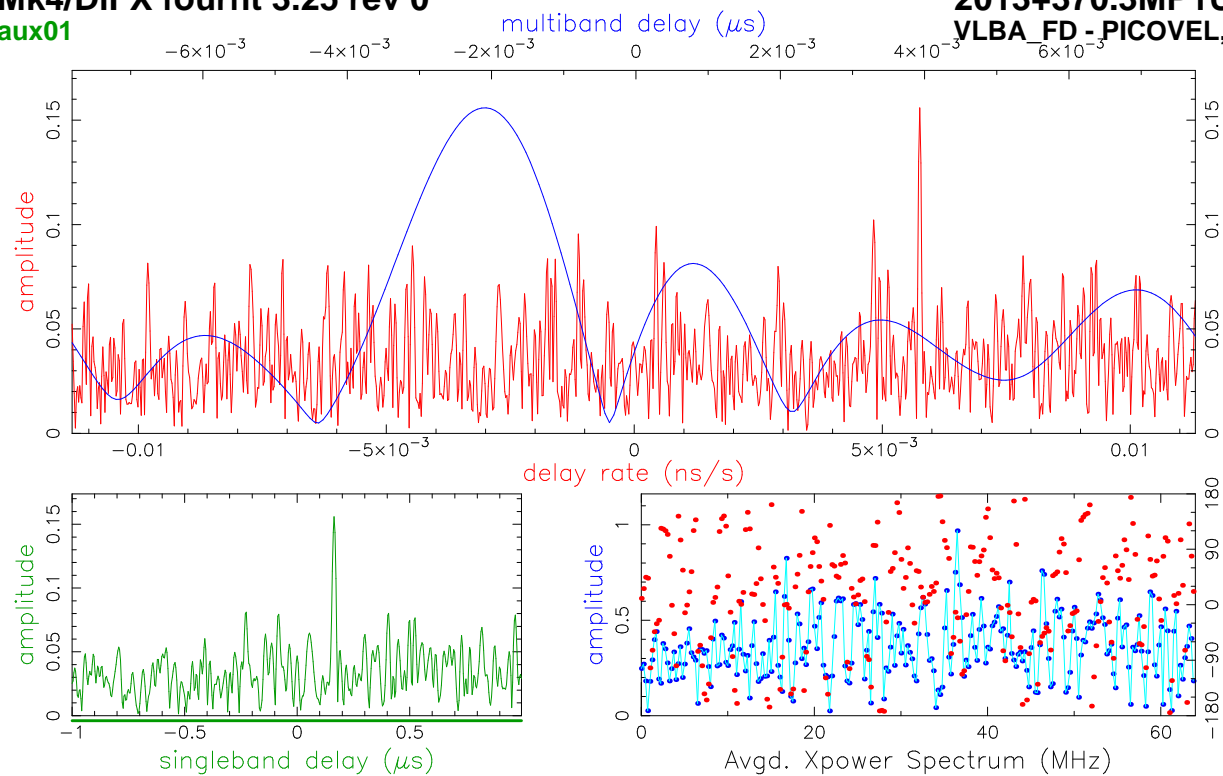


# Mk4/DiFX fourfit 3.25 rev 0

aux01

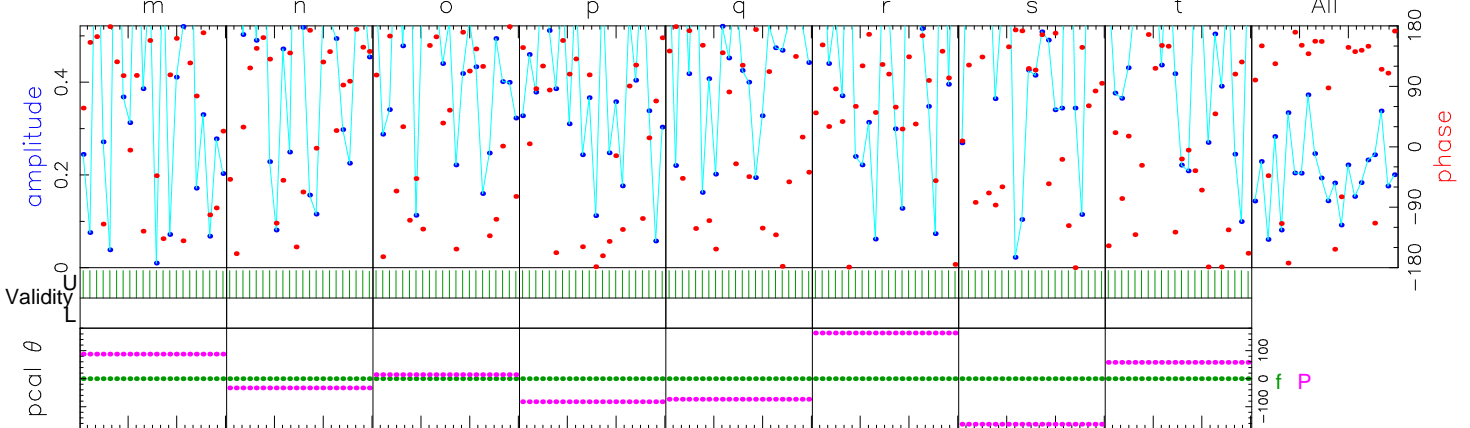
# 2013+370.3MP1UT, No0299, fP

VLBA\_FD - PICOVEL, fgroup W, pol LR



Fringe quality 0  
 SNR 5.7  
 Int time 179.981  
 Amp 0.174  
 Phase 152.7  
 PFD 7.3e-01  
 Delays (us)  
 SBD 0.164103  
 MBD -0.002094  
 Fringe rate (Hz)  
 0.496734  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110400  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:P	0:88	0:33	0:15	0:-82	0:-74	0:163	0:-163	0:58		
f	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -5.20475082147E+03 Apriori delay (usec) -5.20492060219E+03 Resid mbdelay (usec) -2.09428E-03 +/- 1.9E-04  
 Sband delay (usec) -5.20475649869E+03 Apriori clock (usec) 9.5510483E-01 Resid sbdelay (usec) 1.64103E-01 +/- 1.5E-03  
 Phase delay (usec) -5.20492059727E+03 Apriori clockrate (us/s) -5.4801714E-07 Resid phdelay (usec) 4.92270E-06 +/- 6.5E-07  
 Delay rate (us/s) 1.55077020804E+00 Apriori rate (us/s) 1.55076444145E+00 Resid rate (us/s) 5.76658E-06 +/- 6.2E-09  
 Total phase (deg) -89.5 Apriori accel (us/s/s) 2.13150165267E-05 Resid phase (deg) 152.7 +/- 20.0

ph/seg (deg) 59.8 Theor. 47.0 Amplitude 0.174 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 59.3 82.0 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.0 28.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.3 49.4 Inc. seg. avg. 0.171 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 P: az 281.9 el 60.4 pa 78.6 u,v (fr/asec) -11141.178 687.941 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fP..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fP.W.151.3MP1UT simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

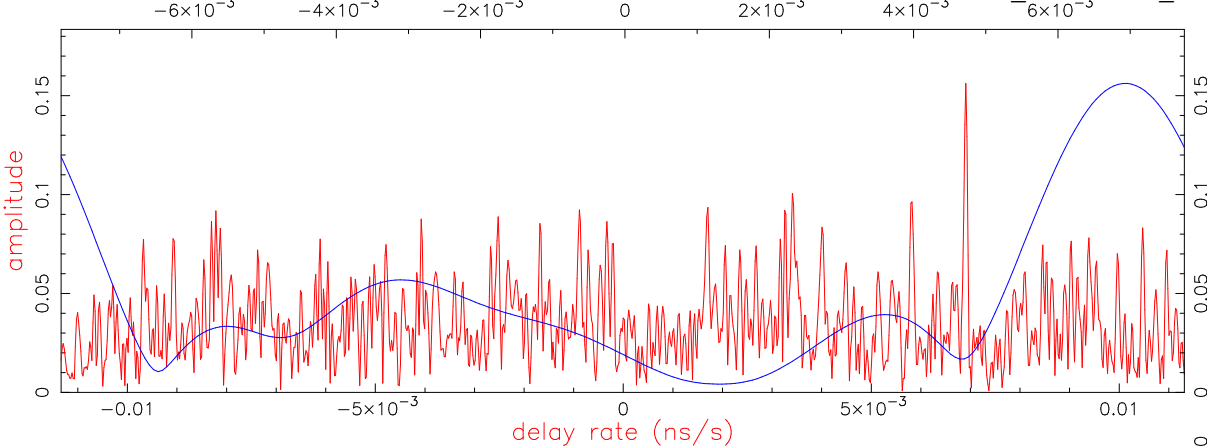
aux01

2013+370.3MP1UT, No0299, fp

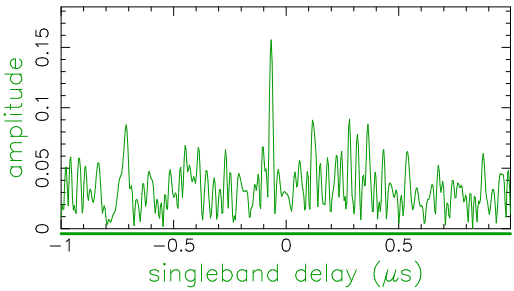
VLBA\_FD - VLBA\_PT, fgroup W, pol LR

multiband delay ( $\mu$ s)

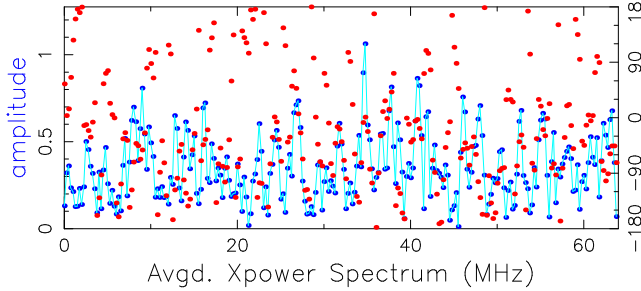
Fringe quality 0



SNR 5.7  
 Int time 179.987  
 Amp 0.184  
 Phase -178.8  
 PFD 6.8e-01  
 Delays (us)  
 SBD -0.067078  
 MBD 0.006959  
 Fringe rate (Hz)  
 0.596418  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

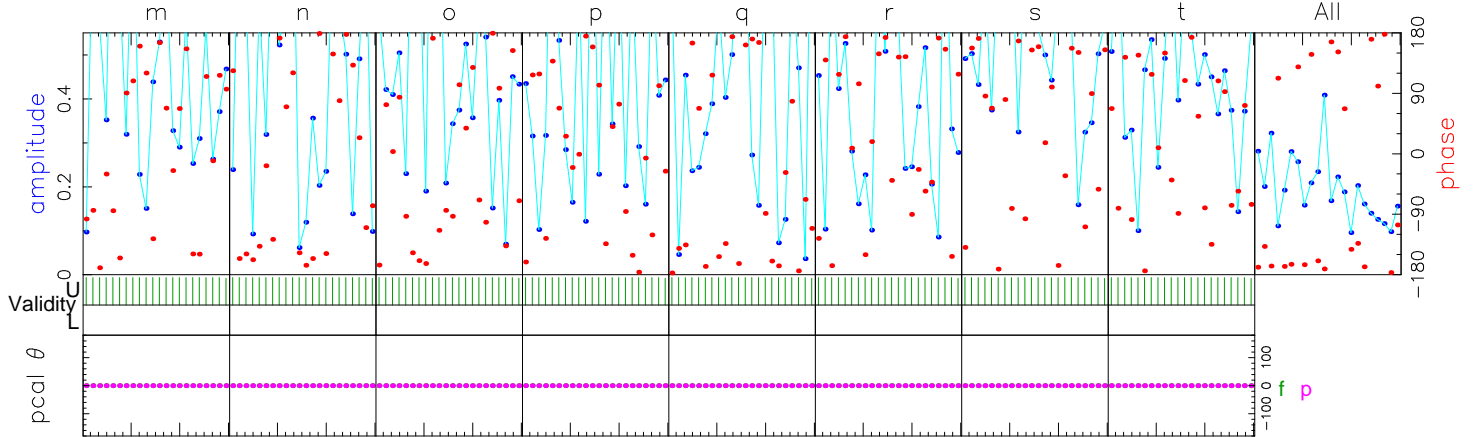


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110401  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
p	0	0	0	0	0	0	0	0		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec) (SBD)	4.89049661478E+02					4.89120827907E+02			6.95857E-03	+/- 1.9E-04
Sband delay (usec)	4.89053749657E+02					-5.6529655E+00			-6.70782E-02	+/- 1.5E-03
Phase delay (usec)	4.89120822141E+02					-3.2847705E-07			-5.76601E-06	+/- 6.4E-07
Delay rate (us/s)	5.79817989539E-03					5.79125607439E-03			6.92382E-06	+/- 6.2E-09
Total phase (deg)			-137.1			-6.31843167904E-06			-178.8	+/- 19.9
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Search (1024X32)										
Inc. seg. avg.										
Inc. frq. avg.										
Bits/sample: 2x2										
SampCntNorm: enabled										
Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us										
Data rate(Mb/s): 2048										
nlags: 256 t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

ph/seg (deg) 43.1 46.8  
 amp/seg (%) 55.1 81.6  
 ph/frq (deg) 19.8 28.2  
 amp/frq (%) 46.5 49.2  
 f: az 64.6 el 38.2 pa -77.6  
 p: az 66.0 el 36.5 pa -71.6  
 u,v (fr/asec) -47.644 -757.867  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fp..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fp.W.154.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

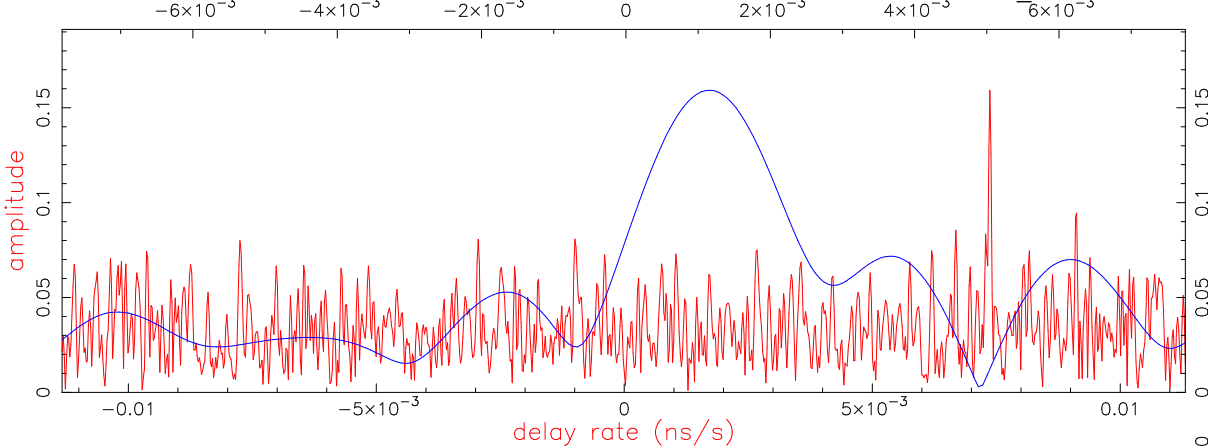
aux01

2013+370.3MP1UT, No0299, fP

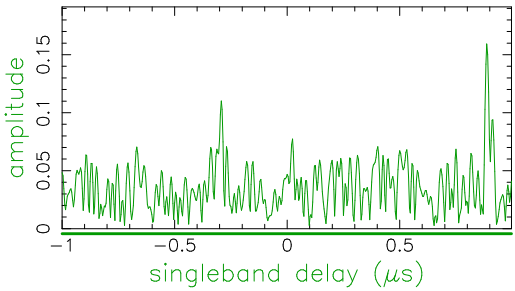
VLBA\_FD - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)

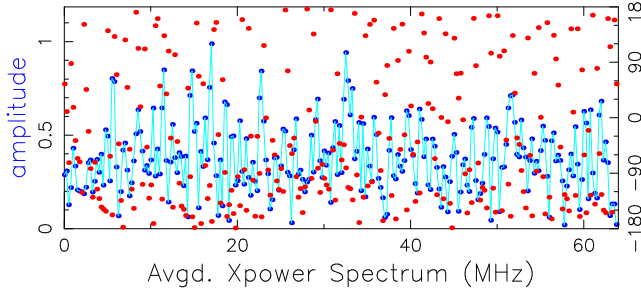
Fringe quality 0



SNR 5.9  
 Int time 179.981  
 Amp 0.191  
 Phase -8.3  
 PFD 4.5e-01  
 Delays (us)  
 SBD 0.887326  
 MBD 0.001172  
 Fringe rate (Hz) 0.636792  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

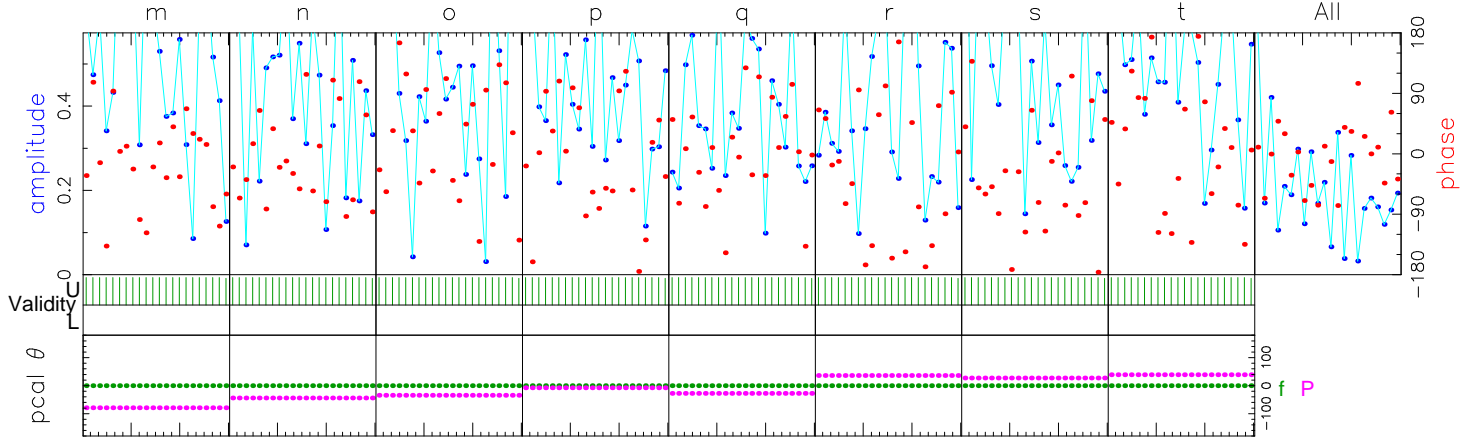


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110402  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-13.8	-11.8	5.8	-16.3	22.0	22.3	-40.6	4.8	Phase	-8.3
	0.4	0.3	0.2	0.2	0.2	0.0	0.2	0.1	Ampl.	0.2
	484.0	357.5	184.0	182.9	34.3	458.4	313.4	186.9	Sbd box	484.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.20402880495E+03	Apriori delay (usec)	-5.20492060219E+03	Resid mbdelay (usec)	1.17224E-03	+/-	1.9E-04
Sband delay (usec)	-5.20403327594E+03	Apriori clock (usec)	9.5510483E-01	Resid sbdelay (usec)	8.87326E-01	+/-	1.5E-03
Phase delay (usec)	-5.20492060246E+03	Apriori clockrate (us/s)	-5.4801714E-07	Resid phdelay (usec)	-2.68420E-07	+/-	6.3E-07
Delay rate (us/s)	1.55077183397E+00	Apriori rate (us/s)	1.55076444145E+00	Resid rate (us/s)	7.39252E-06	+/-	6.1E-09
Total phase (deg)	-250.5	Apriori accel (us/s/s)	2.13150165267E-05	Resid phase (deg)	-8.3	+/-	19.6

ph/seg (deg)	47.4	Theor.	45.9	Amplitude	0.191 +/- 0.033	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	83.2	Search (1024X32)	0.158	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	23.7	Inc. seg. avg.	0.186	Inc. frq. avg.	0.180	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	49.4	Inc. frq. avg.	0.180			Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
f: az 64.6 el 38.2 pa -77.6		P: az 281.9 el 60.4 pa 78.6		u, v (fr/asec)	-11141.178 687.941	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/c241c/v2/3mm/1234/No0299/fP..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fP.W.160.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

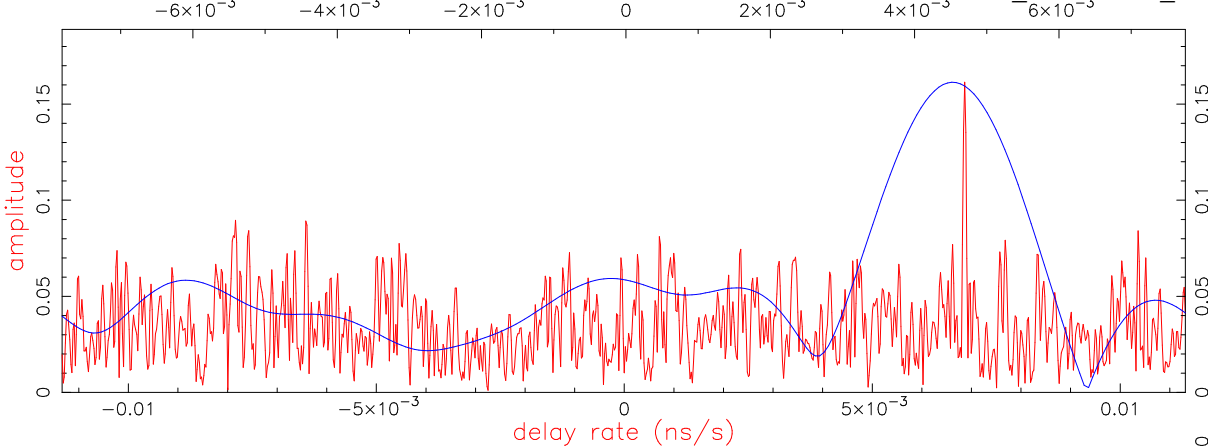
aux01

2013+370.3MP1UT, No0299, fp

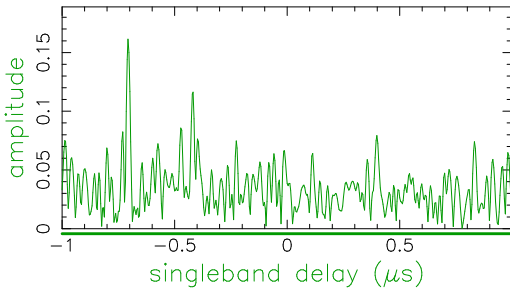
VLBA\_FD - VLBA\_PT, fgroup W, pol RL

multiband delay ( $\mu$ s)

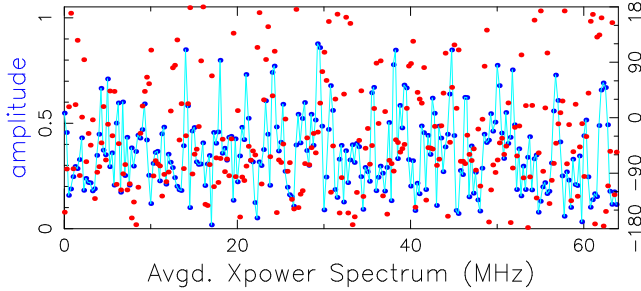
Fringe quality 0



SNR 5.9  
 Int time 179.987  
 Amp 0.189  
 Phase 24.3  
 PFD 3.3e-01  
 Delays (us)  
 SBD -0.706695  
 MBD 0.004535  
 Fringe rate (Hz)  
 0.593084  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

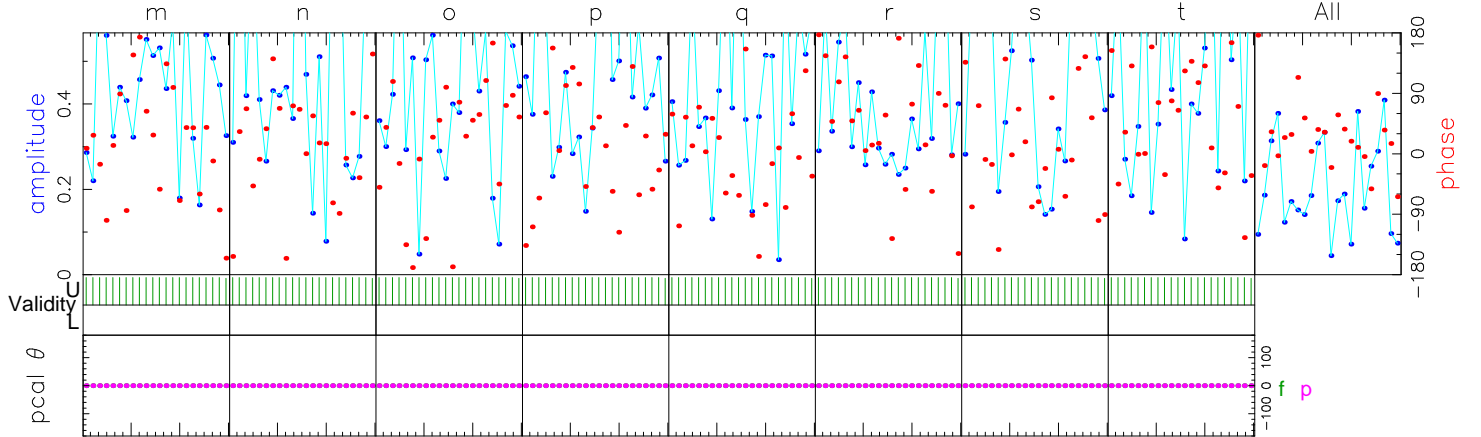


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110403  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
p	0	0	0	0	0	0	0	0		
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec) (SBD)	4.88406613067E+02		Apriori delay (usec)		4.89120827907E+02		Resid mbdelay (usec)		4.53516E-03	+/- 1.8E-04
Sband delay (usec)	4.88414133157E+02		Apriori clock (usec)		-5.6529655E+00		Resid sbdelay (usec)		-7.06695E-01	+/- 1.5E-03
Phase delay (usec)	4.89120828691E+02		Apriori clockrate (us/s)		-3.2847705E-07		Resid phdelay (usec)		7.84073E-07	+/- 6.2E-07
Delay rate (us/s)	5.79814119681E-03		Apriori rate (us/s)		5.79125607439E-03		Resid rate (us/s)		6.88512E-06	+/- 6.0E-09
Total phase (deg)			66.0		Apriori accel (us/s/s)		-6.31843167904E-06		24.3	+/- 19.3

ph/seg (deg) 51.1 45.3 Search (1024X32) 0.160 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 72.2 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) 33.5 27.3 Inc. seg. avg. 0.184 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 19.2 47.7 Inc. frq. avg. 0.194 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 p: az 66.0 el 36.5 pa -71.6 u,v (fr/asec) -47.644 -757.867 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fp..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fp.W.166.3MP1UT

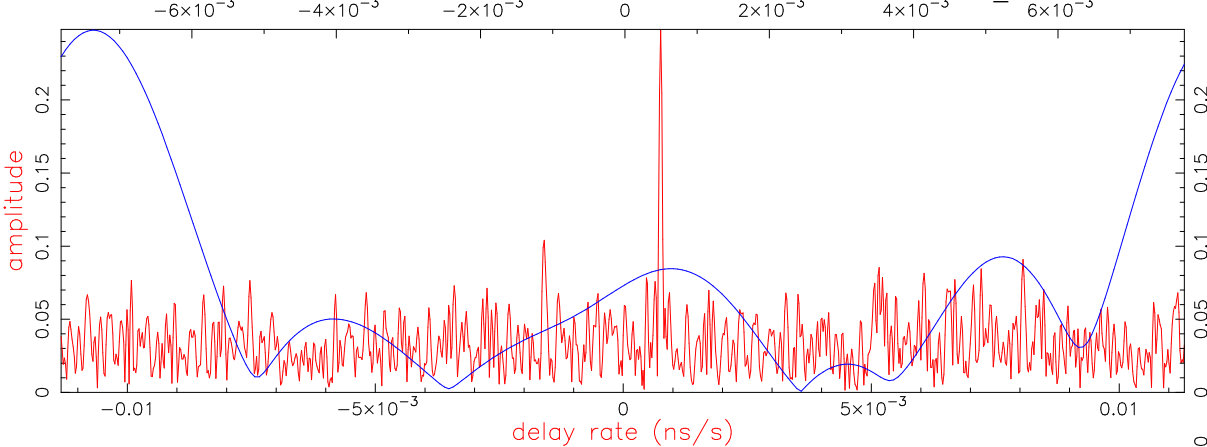
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fX

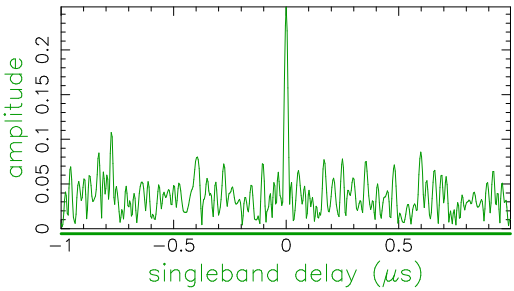
VLBA\_FD - ONSALA60, fgroup W, pol LL

multiband delay ( $\mu$ s)

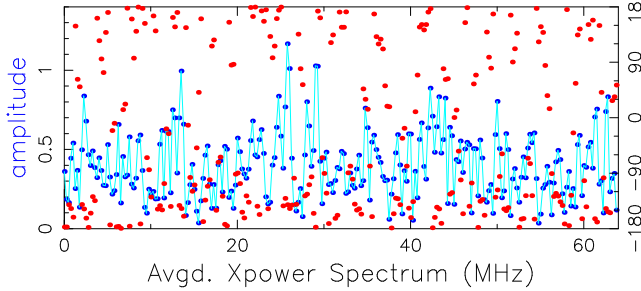


Fringe quality 9

SNR 9.1  
 Int time 179.880  
 Amp 0.248  
 Phase -82.1  
 PFD 1.9e-11  
 Delays (us)  
 SBD -0.000253  
 MBD -0.007372  
 Fringe rate (Hz) 0.063993  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

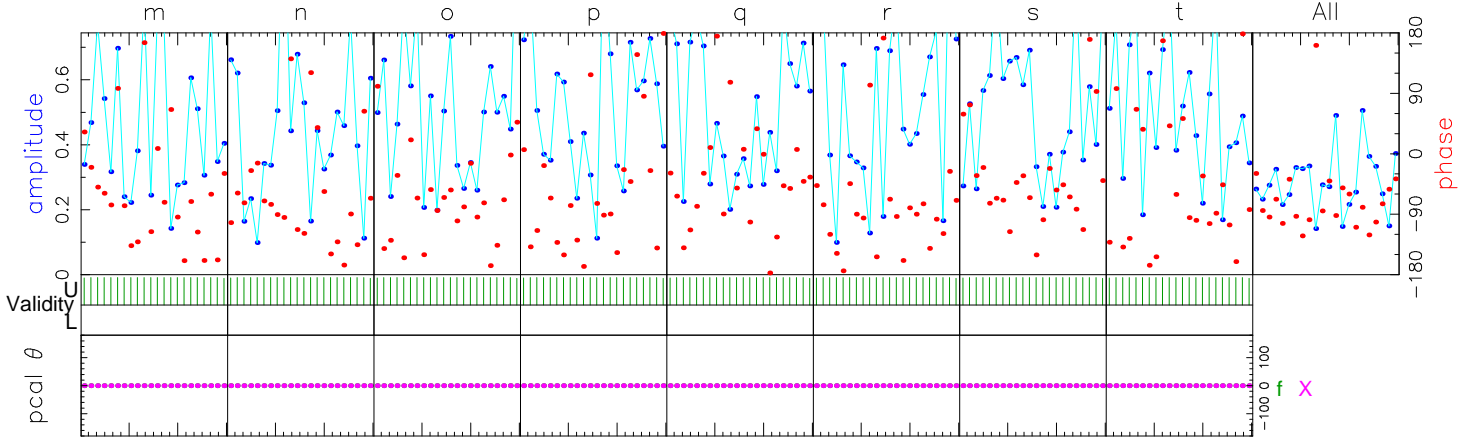


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build 2024:352:144904  
 2025:041:110350  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-75.6	-97.3	-72.8	-104.9	-51.4	-91.4	-61.1	-126.9	Phase	-82.1
	0.2	0.3	0.2	0.2	0.3	0.4	0.3	0.1	Ampl.	0.3
	249.7	256.6	93.6	255.3	257.2	257.9	256.7	443.6	Sbd box	256.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-3.19219657520E+03	Apriori delay (usec)	-3.19218920283E+03	Resid mbdelay (usec)	-7.37237E-03	+/-	1.2E-04
Sband delay (usec)	-3.19218945608E+03	Apriori clock (usec)	-1.1284000E+02	Resid sbdelay (usec)	-2.53250E-04	+/-	9.5E-04
Phase delay (usec)	-3.19218920548E+03	Apriori clockrate (us/s)	-1.1664031E-06	Resid phdelay (usec)	-2.64854E-06	+/-	4.1E-07
Delay rate (us/s)	1.47918542056E+00	Apriori rate (us/s)	1.47918467766E+00	Resid rate (us/s)	7.42897E-07	+/-	3.9E-09
Total phase (deg)	-57.6	Apriori accel (us/s/s)	-6.36421350462E-06	Resid phase (deg)	-82.1	+/-	12.6

ph/seg (deg)	36.9	Theor.	29.6	Amplitude	0.248 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	40.7		51.6	Search (1024X32)	0.235	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	26.9		17.8	Inc. seg. avg.	0.254	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	30.1		31.1	Inc. frq. avg.	0.254	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 64.6 el 38.2 pa -77.6 X: az 262.8 el 50.3 pa 42.2 u, v (fr/asec) -10652.465 -2659.057 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fX..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fX.W.119.3MP1UT

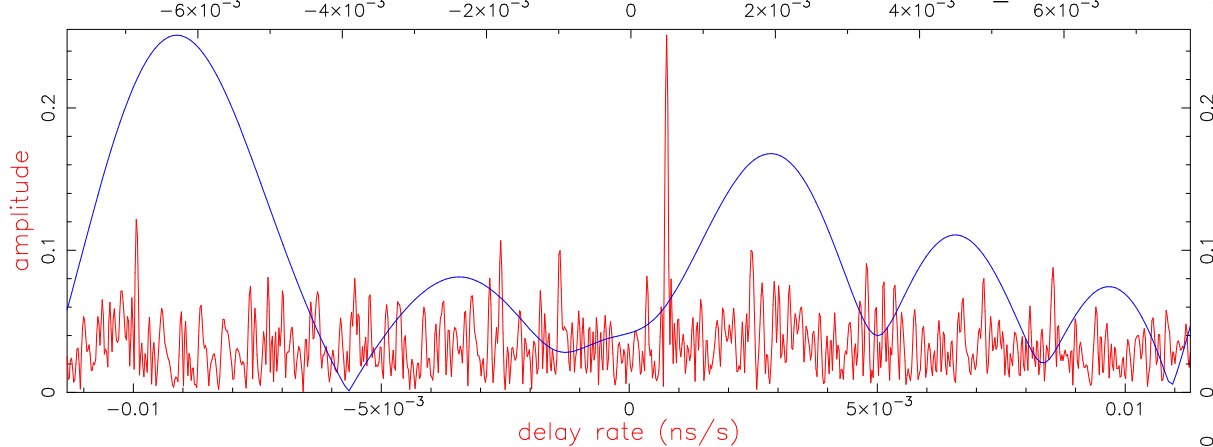
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fX

VLBA\_FD - ONSALA60, fgroup W, pol RR

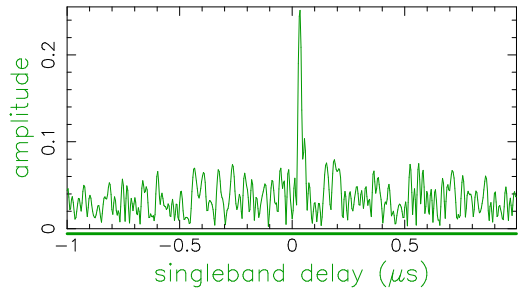
multiband delay ( $\mu$ s)



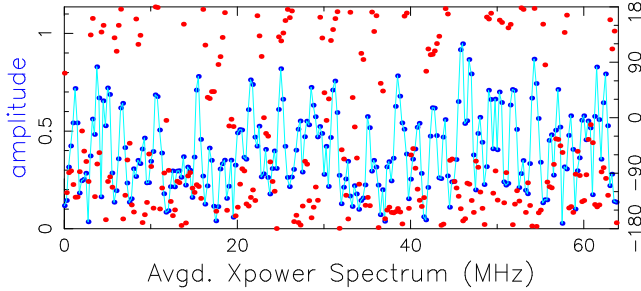
Fringe quality 9

SNR 9.3  
 Int time 179.880  
 Amp 0.255  
 Phase -47.5  
 PFD 1.8e-12  
 Delays (us)  
 SBD 0.033709  
 MBD -0.006310  
 Fringe rate (Hz)  
 0.064207  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

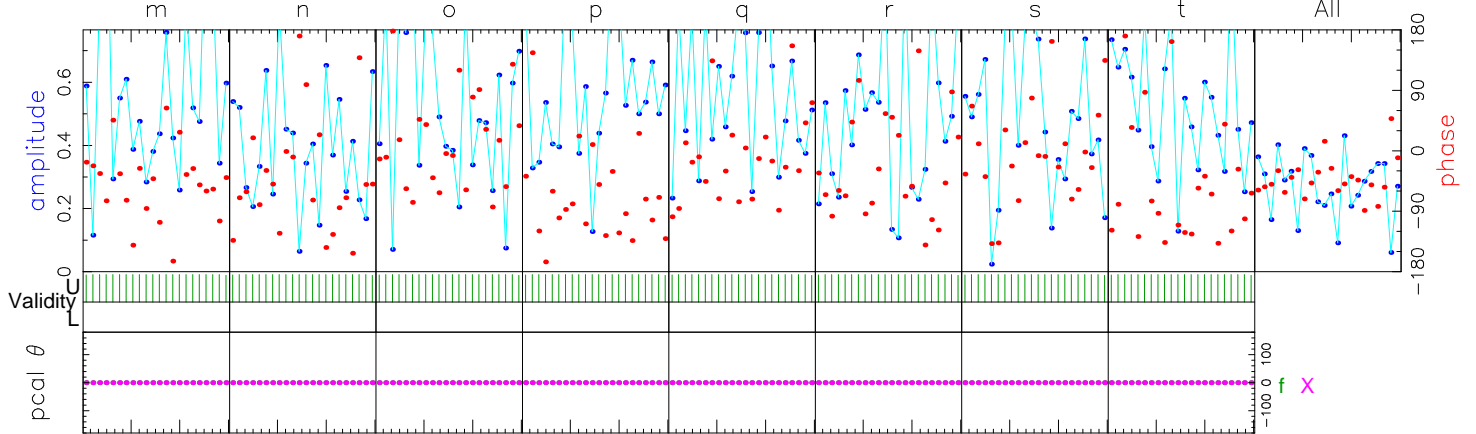
Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110353  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



delay rate (ns/s)



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-49.5	-79.8	-5.0	-87.1	-21.5	-48.4	-3.9	-106.3	Phase	-47.5
	0.4	0.2	0.3	0.4	0.3	0.2	0.3	0.2	Ampl.	0.3
	265.7	264.3	250.8	265.4	265.6	264.5	265.3	434.2	Sbd box	265.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-3.19214863770E+03	Apriori delay (usec)	-3.19218920283E+03	Resid mbdelay (usec)	-6.30987E-03	+/-	1.2E-04
Sband delay (usec)	-3.19215549383E+03	Apriori clock (usec)	-1.1284000E+02	Resid sbdelay (usec)	3.37090E-02	+/-	9.2E-04
Phase delay (usec)	-3.19218920436E+03	Apriori clockrate (us/s)	-1.1664031E-06	Resid phdelay (usec)	-1.53271E-06	+/-	4.0E-07
Delay rate (us/s)	1.47918542305E+00	Apriori rate (us/s)	1.47918467766E+00	Resid rate (us/s)	7.45383E-07	+/-	3.8E-09
Total phase (deg)		Apriori accel (us/s/s)	-6.36421350462E-06	Resid phase (deg)	-47.5	+/-	12.3

ph/seg (deg)	RMS 30.1	Theor. 28.7	Amplitude Search (1024X32)	0.255 +/- 0.027	0.244	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	39.1	50.2	Interp.	0.000	0.244	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	41.8	17.3	Inc. seg. avg.	0.243	0.243	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	36.1	30.3	Inc. frq. avg.	0.295	0.295	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
						Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
							ion window (TEC) 0.00 0.00

f: az 64.6 el 38.2 pa -77.6 X: az 262.8 el 50.3 pa 42.2 u, v (fr/asec) -10652.465 -2659.057 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fX..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fX.W.126.3MP1UT

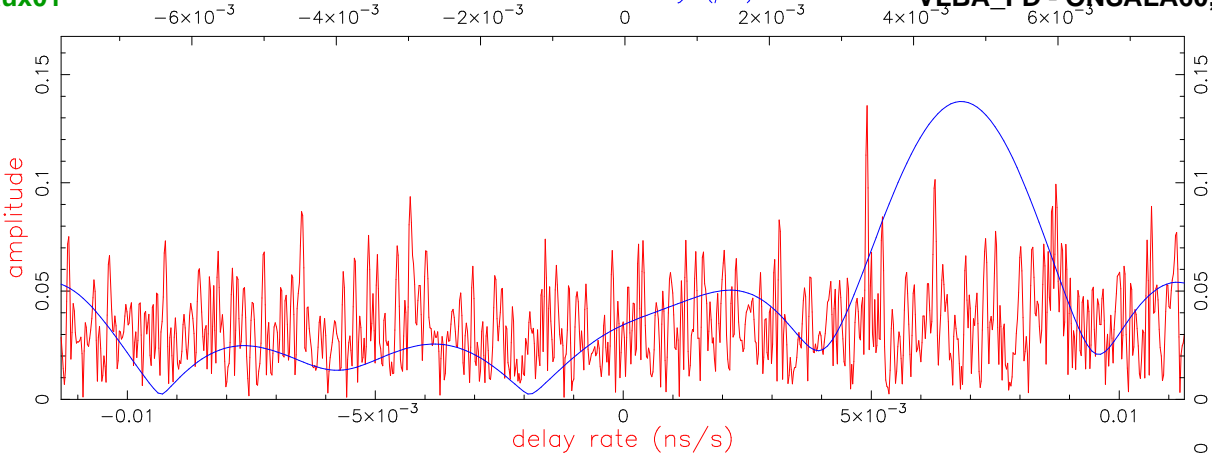
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fX

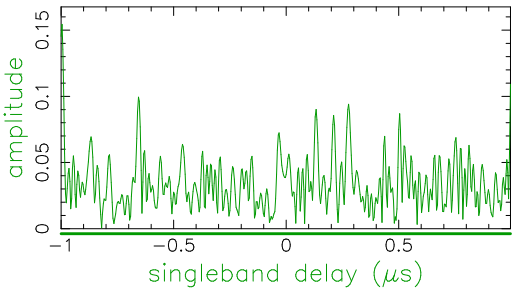
VLBA\_FD - ONSALA60, fgroup W, pol LR

multiband delay ( $\mu$ s)

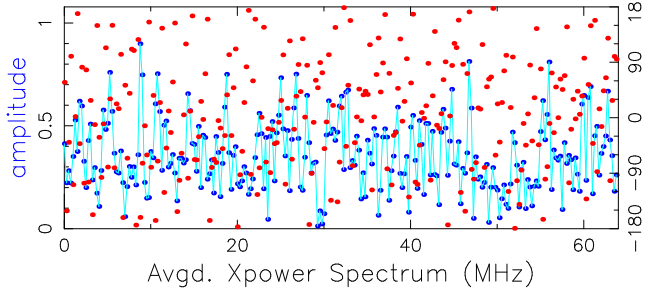


Fringe quality 0

SNR 5.7  
 Int time 179.880  
 Amp 0.168  
 Phase -3.2  
 PFD 8.0e-01  
 Delays (us)  
 SBD -0.996891  
 MBD 0.004469  
 Fringe rate (Hz)  
 0.423356  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

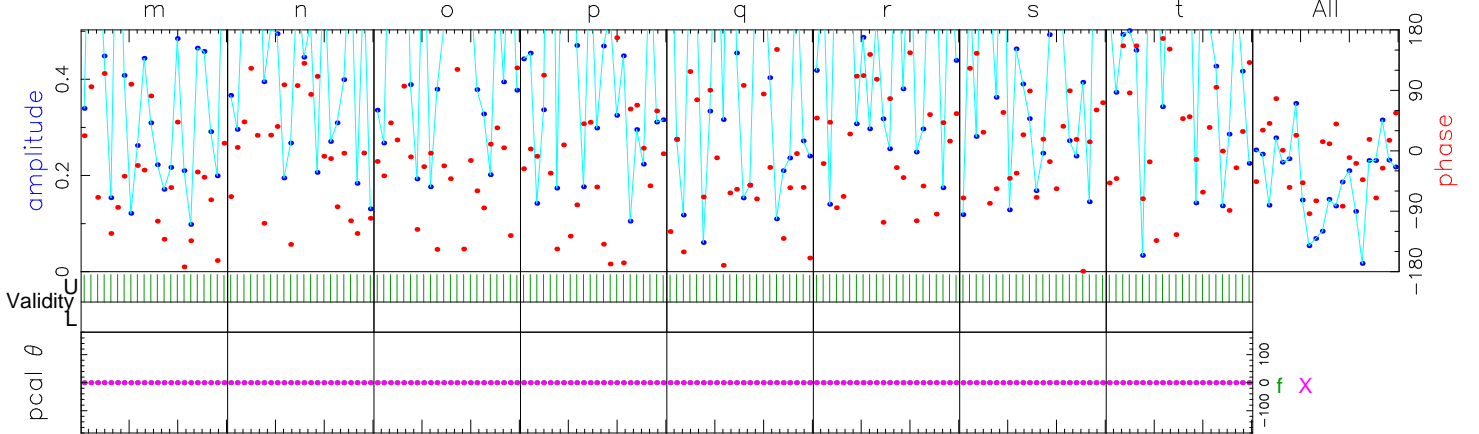


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110355  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-26.4	23.4	-8.1	-32.7	-39.4	8.8	25.0	12.1	Phase	-3.2
	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	Ampl.	0.1
	208.0	320.4	219.3	145.5	232.8	174.0	113.6	448.8	Sbd box	1.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-3.19318473381E+03	Apriori delay (usec)	-3.19218920283E+03	Resid mbdelay (usec)	4.46902E-03	+/-	1.9E-04
Sband delay (usec)	-3.19318609358E+03	Apriori clock (usec)	-1.1284000E+02	Resid sbdelay (usec)	-9.96891E-01	+/-	1.5E-03
Phase delay (usec)	-3.19218920293E+03	Apriori clockrate (us/s)	-1.1664031E-06	Resid phdelay (usec)	-1.01851E-07	+/-	6.5E-07
Delay rate (us/s)	1.47918959241E+00	Apriori rate (us/s)	1.47918467766E+00	Resid rate (us/s)	4.91475E-06	+/-	6.2E-09
Total phase (deg)	-338.6	Apriori accel (us/s/s)	-6.36421350462E-06	Resid phase (deg)	-3.2	+/-	20.2

ph/seg (deg)	RMS 47.6	Theor. 47.3	Amplitude 0.168 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	47.6	47.3	Search (1024X32) 0.152	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	57.9	82.5	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	27.7	28.5	Inc. seg. avg. 0.152	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011	
	27.3	49.8	Inc. frq. avg. 0.143	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00

f: az 64.6 el 38.2 pa -77.6 X: az 262.8 el 50.3 pa 42.2 u, v (fr/asec) -10652.465 -2659.057 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fX..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fX.W.136.3MP1UT

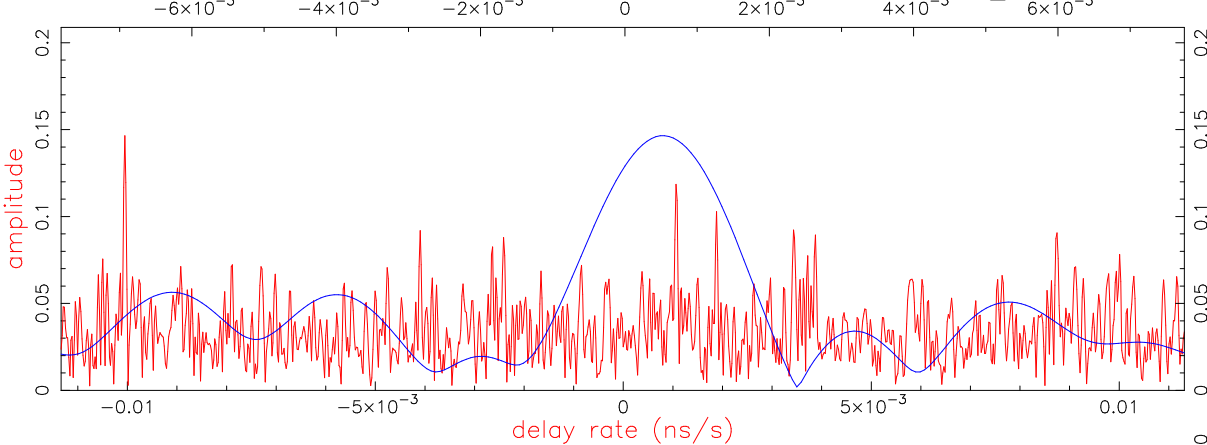
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fX

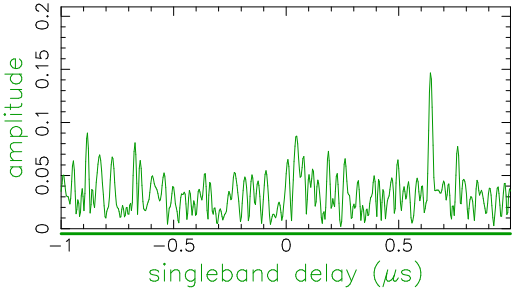
VLBA\_FD - ONSALA60, fgroup W, pol RL

multiband delay ( $\mu$ s)

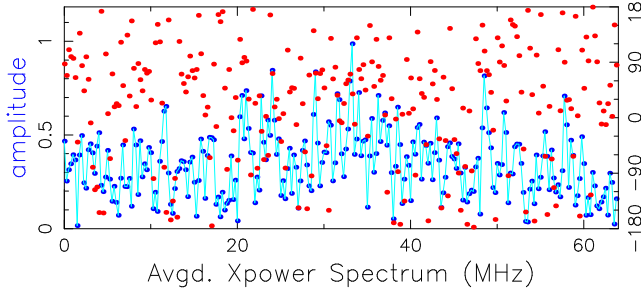


Fringe quality 0

SNR 5.4  
 Int time 179.880  
 Amp 0.209  
 Phase -110.0  
 PFD 1.0e+00  
 Delays (us)  
 SBD 0.641632  
 MBD 0.000549  
 Fringe rate (Hz)  
 -0.867591  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

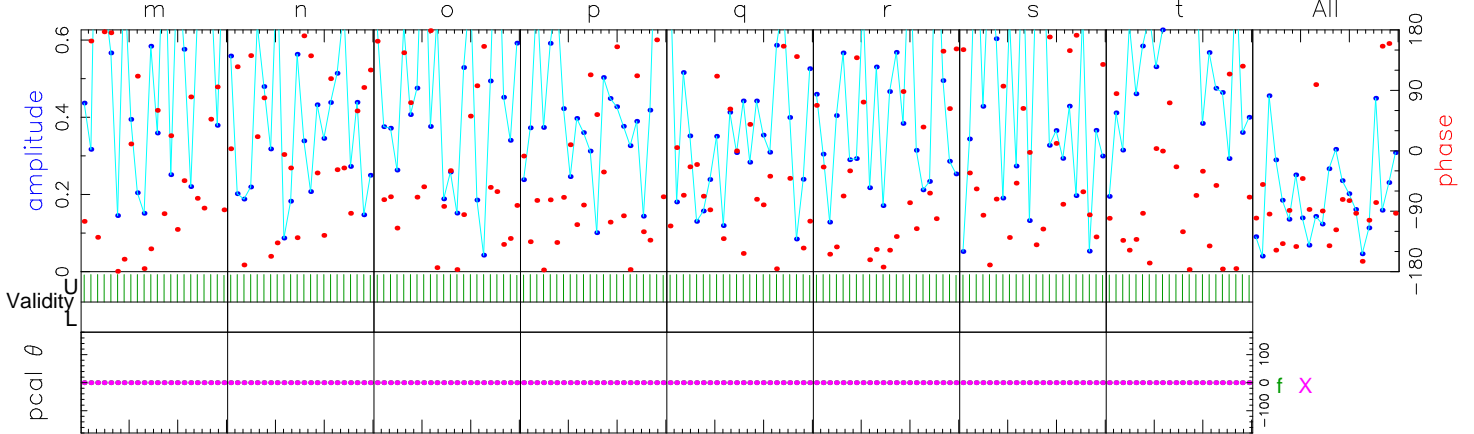


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110357  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-120.3	-23.1	-95.1	-115.3	-92.8	-125.4	-107.5	-117.9	Phase	-110.0
	0.3	0.0	0.2	0.3	0.2	0.2	0.3	0.2	Ampl.	0.2
	29.0	364.5	460.6	107.8	148.5	284.4	81.9	339.1	Sbd box	421.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-3.19154802864E+03	Apriori delay (usec)	-3.19218920283E+03	Resid mbdelay (usec)	5.49191E-04	+/-	2.0E-04
Sband delay (usec)	-3.19154757083E+03	Apriori clock (usec)	-1.1284000E+02	Resid sbdelay (usec)	6.41632E-01	+/-	1.6E-03
Phase delay (usec)	-3.19218920638E+03	Apriori clockrate (us/s)	-1.1664031E-06	Resid phdelay (usec)	-3.54703E-06	+/-	6.8E-07
Delay rate (us/s)	1.47917460580E+00	Apriori rate (us/s)	1.47918467766E+00	Resid rate (us/s)	-1.00719E-05	+/-	6.6E-09
Total phase (deg)	-85.4	Apriori accel (us/s/s)	-6.36421350462E-06	Resid phase (deg)	-110.0	+/-	21.2

ph/seg (deg)	53.0	Theor.	49.7	Amplitude	0.209 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	84.2	Search (1024X32)	0.145	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	37.7	Inc. seg. avg.	0.207	Inc. frq. avg.	0.189	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	41.3	Inc. frq. avg.	0.189			Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 64.6 el 38.2 pa -77.6 X: az 262.8 el 50.3 pa 42.2 u, v (fr/asec) -10652.465 -2659.057 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fX..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fX.W.145.3MP1UT

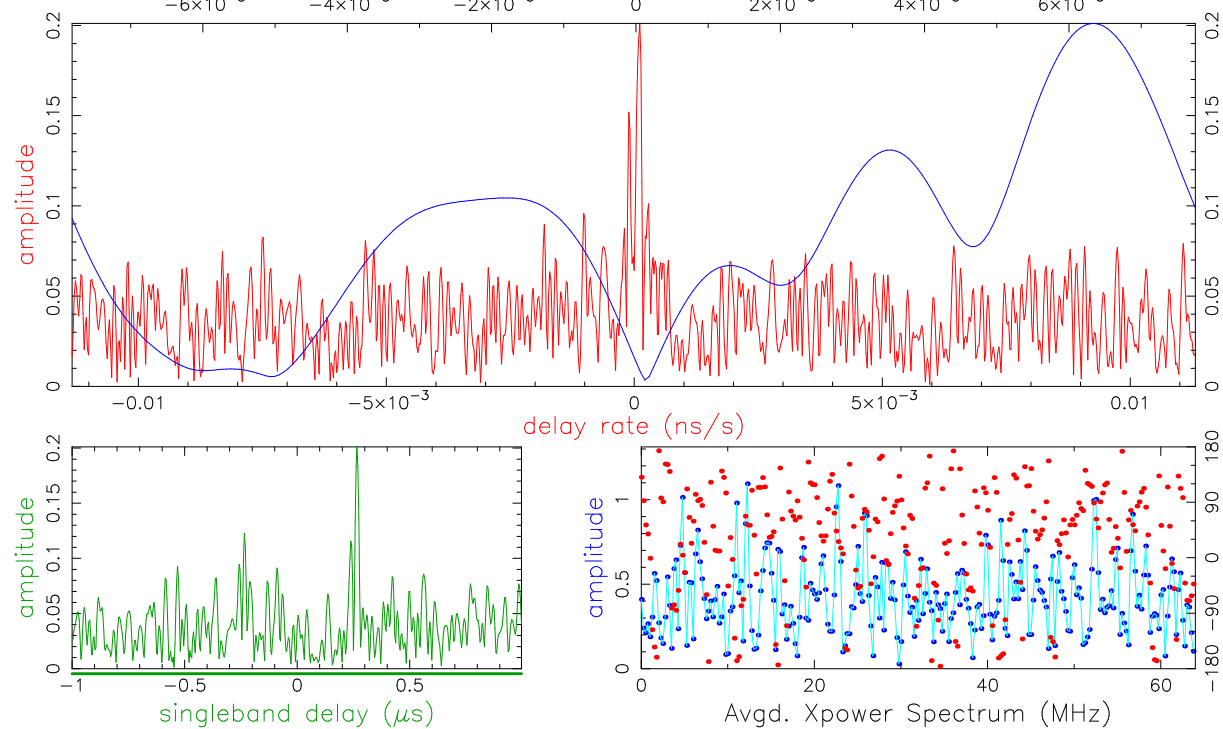


Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fY

VLBA\_FD - YEBES40M, fgroup W, pol LL

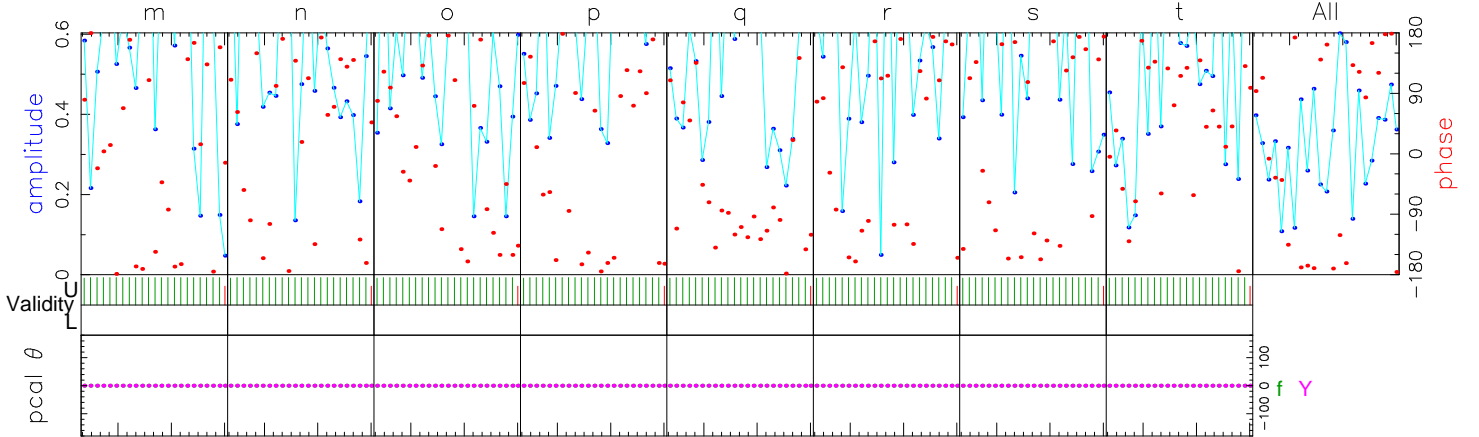


Fringe quality 0

SNR 7.0  
 Int time 162.267  
 Amp 0.201  
 Phase 172.9  
 PFD 3.7e-04  
 Delays (us)  
 SBD 0.265531  
 MBD 0.006337  
 Fringe rate (Hz) 0.008751  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090018.41  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build 2024:352:144904  
 2025:041:110455  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
f	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -5.14665102760E+03 Apriori delay (usec) -5.14692298920E+03 Resid mbdelay (usec) 6.33660E-03 +/- 1.5E-04  
 Sband delay (usec) -5.14665745845E+03 Apriori clock (usec) 1.1070905E+02 Resid sbdelay (usec) 2.65531E-01 +/- 1.2E-03  
 Phase delay (usec) -5.14692298363E+03 Apriori clockrate (us/s) 1.5059889E-02 Resid phdelay (usec) 5.57407E-06 +/- 5.3E-07  
 Delay rate (us/s) 1.52597845579E+00 Apriori rate (us/s) 1.52597835420E+00 Resid rate (us/s) 1.01590E-07 +/- 5.6E-09  
 Total phase (deg) 68.5 Apriori accel (us/s/s) 1.83899283318E-05 Resid phase (deg) 172.9 +/- 16.4

RMS Theor. Amplitude 0.201 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 70.5 39.2 Search (1024X32) 0.198 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 93.5 68.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 46.0 23.1 Inc. seg. avg. 0.271 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 50.3 40.4 Inc. frq. avg. 0.241 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 64.6 el 38.2 pa -77.6 Y: az 276.0 el 60.7 pa 71.6 u, v (fr/asec) -10965.996 181.610 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fY...3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fY.W.362.3MP1UT

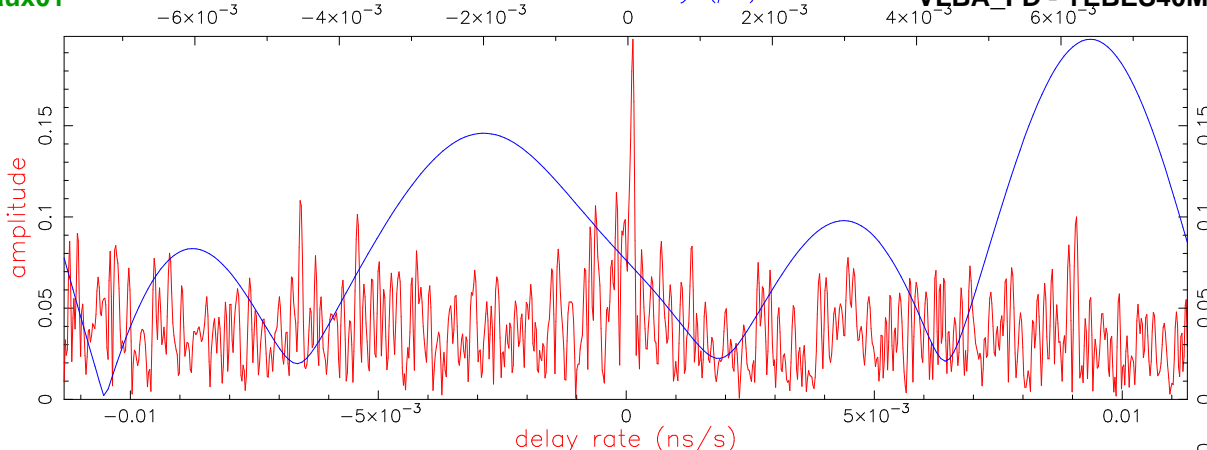
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fY

VLBA\_FD - YEBES40M, fgroup W, pol RR

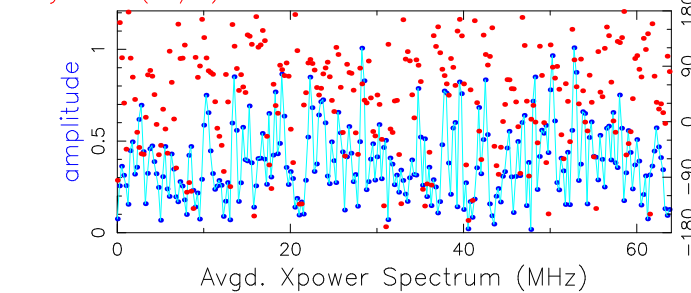
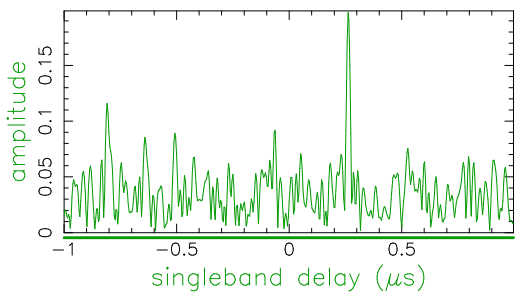
multiband delay ( $\mu$ s)



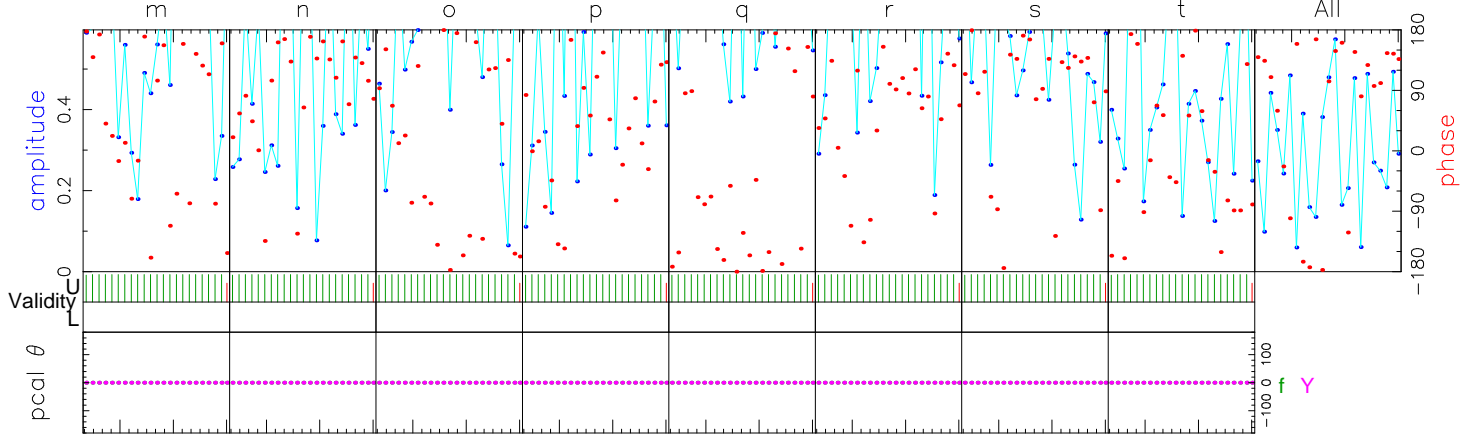
Fringe quality 0

SNR 6.9  
 Int time 162.267  
 Amp 0.199  
 Phase 142.6  
 PFD 6.3e-04  
 Delays (us)  
 SBD 0.262902  
 MBD 0.006434  
 Fringe rate (Hz)  
 0.010590  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090018.41  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110457  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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
	164.4	113.2	-172.7	78.7	-165.3	101.4	135.7	-127.8	Phase	142.6
	0.2	0.4	0.3	0.2	0.4	0.3	0.3	0.1	Ampl.	0.2
	340.4	323.0	164.4	322.1	325.1	323.3	355.5	262.9	Sbd box	324.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-5.1466665532E+03	Apriori delay (usec)	-5.14692298920E+03	Resid mbdelay (usec)	6.43388E-03	+/-	1.6E-04
Sband delay (usec)	-5.14666008695E+03	Apriori clock (usec)	1.1070905E+02	Resid sbdelay (usec)	2.62902E-01	+/-	1.2E-03
Phase delay (usec)	-5.14692298460E+03	Apriori clockrate (us/s)	1.5059889E-06	Resid phdelay (usec)	4.59831E-06	+/-	5.3E-07
Delay rate (us/s)	1.52597847714E+00	Apriori rate (us/s)	1.52597835420E+00	Resid rate (us/s)	1.22935E-07	+/-	5.7E-09
Total phase (deg)		Apriori accel (us/s/s)	1.83899283318E-05	Resid phase (deg)	142.6	+/-	16.5

ph/seg (deg) 57.7 39.7 Search (1024X32) 0.193 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 93.0 69.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 57.6 23.4 Inc. seg. avg. 0.245 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 60.9 40.8 Inc. frq. avg. 0.245 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 Y: az 276.0 el 60.7 pa 71.6 u,v (fr/asec) -10965.996 181.610 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fY...3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fY.W.374.3MP1UT

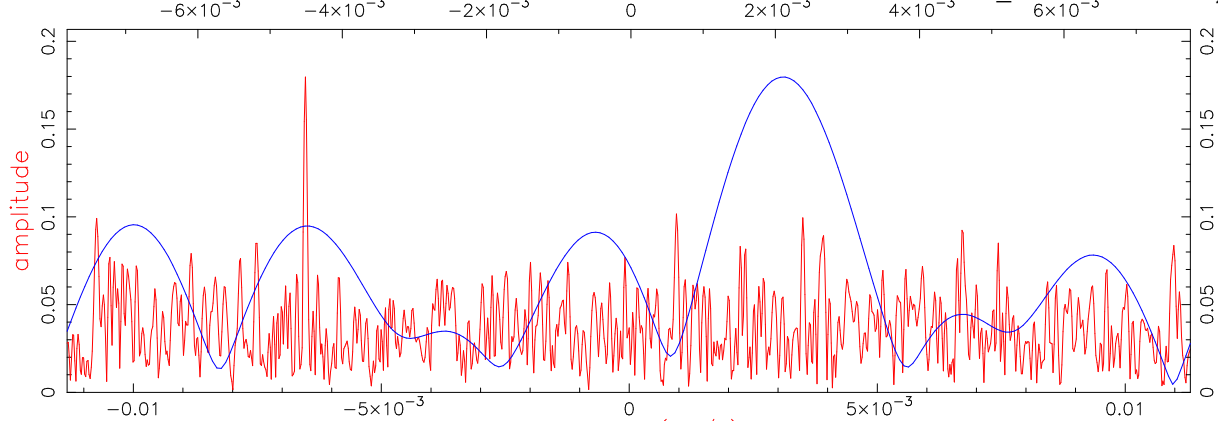
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fY

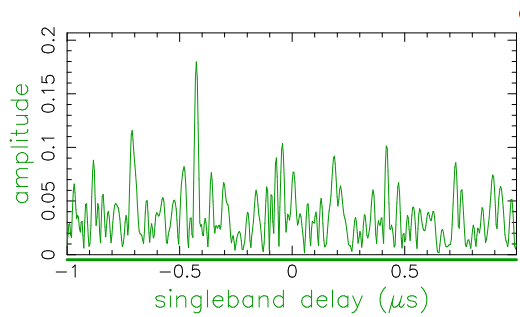
VLBA\_FD - YEYES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

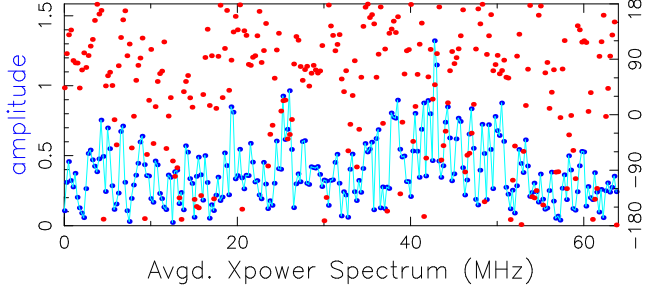


Fringe quality 0

SNR 6.3  
 Int time 162.267  
 Amp 0.207  
 Phase -150.6  
 PFD 5.1e-02  
 Delays (us)  
 SBD -0.425734  
 MBD 0.002109  
 Fringe rate (Hz)  
 -0.562707  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

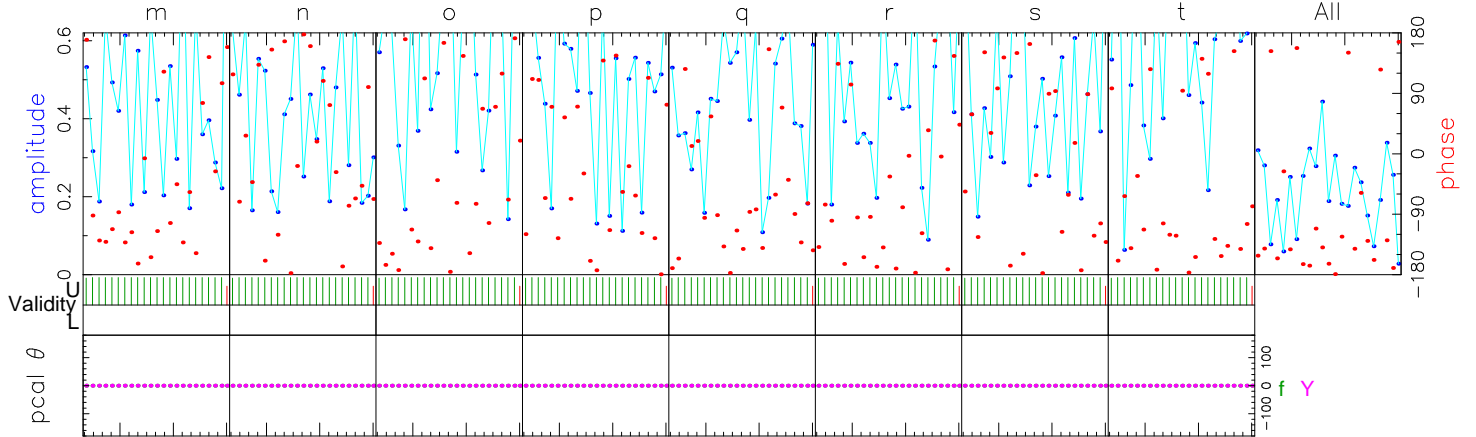


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090018.41  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110500  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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
	-140.1	-169.4	-175.6	-162.1	-113.0	-144.1	-174.5	-150.4	Phase	-150.6
	0.3	0.0	0.3	0.1	0.2	0.2	0.1	0.4	Ampl.	0.2
	147.4	54.6	147.0	45.4	483.2	474.2	68.9	148.1	Sbd box	148.0
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-5.1473427529E+03	Apriori delay (usec)	-5.14692298920E+03	Resid mbdelay (usec)	2.10891E-03	+/-	1.7E-04
Sband delay (usec)	-5.14734872345E+03	Apriori clock (usec)	1.1070905E+02	Resid sbdelay (usec)	-4.25734E-01	+/-	1.4E-03
Phase delay (usec)	-5.14692299406E+03	Apriori clockrate (us/s)	1.5059889E-02	Resid phdelay (usec)	-4.85659E-06	+/-	5.9E-07
Delay rate (us/s)	1.52597182173E+00	Apriori rate (us/s)	1.52597835420E+00	Resid rate (us/s)	-6.53247E-06	+/-	6.3E-09
Total phase (deg)	-254.9	Apriori accel (us/s/s)	1.83899283318E-05	Resid phase (deg)	-150.6	+/-	18.3

ph/seg (deg) 45.6 43.9 Search (1024X32) 0.177 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 59.6 76.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 23.2 25.9 Inc. seg. avg. 0.195 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 60.9 45.2 Inc. frq. avg. 0.198 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 64.6 el 38.2 pa -77.6 Y: az 276.0 el 60.7 pa 71.6 u,v (fr/asec) -10965.996 181.610 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fY...3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fY.W.384.3MP1UT

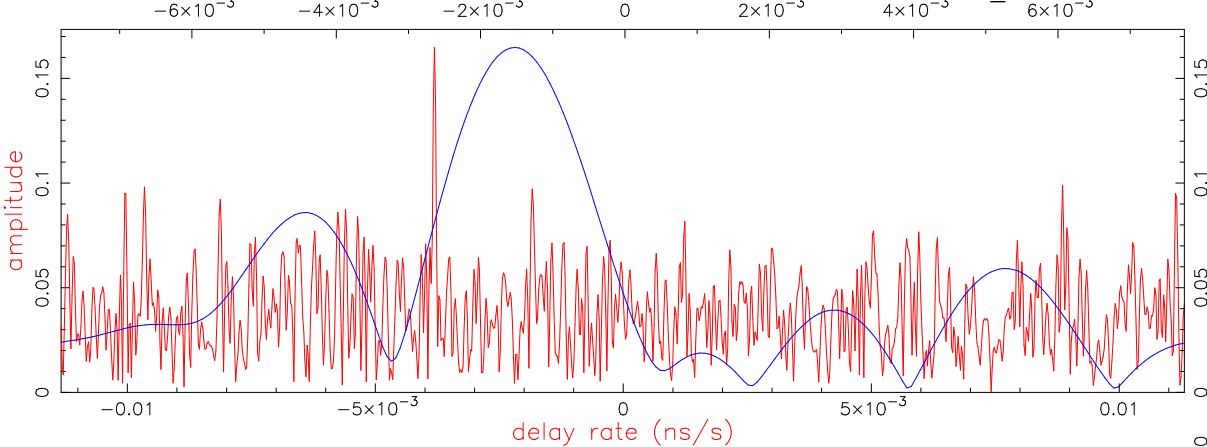
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fY

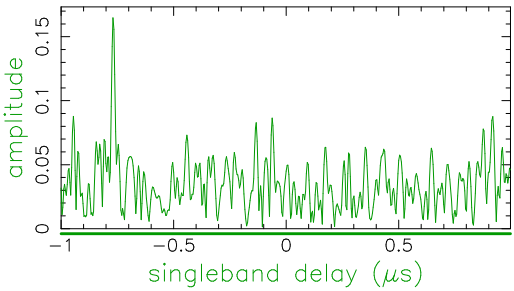
VLBA\_FD - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

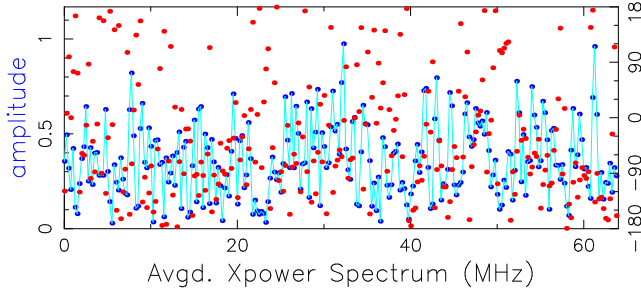


Fringe quality 0

SNR 5.8  
 Int time 162.267  
 Amp 0.173  
 Phase 79.1  
 PFD 6.4e-01  
 Delays (us)  
 SBD -0.768705  
 MBD -0.001507  
 Fringe rate (Hz)  
 -0.327736  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

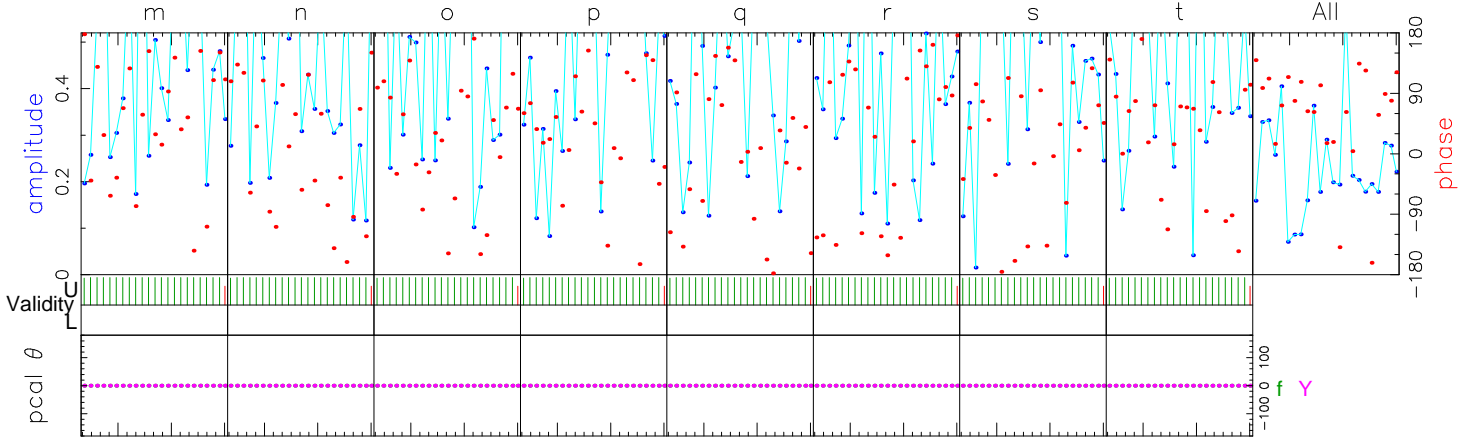


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090018.41  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110501  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 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	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
f	0	0	0	0	0	0	0	0		
Y	0	0	0	0	0	0	0	0		
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Y	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		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-5.14769012097E+03	Apriori delay (usec)	-5.14692298920E+03	Resid mbdelay (usec)	-1.50677E-03	+/-	1.9E-04
Sband delay (usec)	-5.14769169470E+03	Apriori clock (usec)	1.1070905E+02	Resid sbdelay (usec)	-7.68705E-01	+/-	1.5E-03
Phase delay (usec)	-5.14692298665E+03	Apriori clockrate (us/s)	1.5059889E-06	Resid phdelay (usec)	2.55066E-06	+/-	6.4E-07
Delay rate (us/s)	1.52597454952E+00	Apriori rate (us/s)	1.52597835420E+00	Resid rate (us/s)	-3.80469E-06	+/-	6.8E-09
Total phase (deg)	-25.2	Apriori accel (us/s/s)	1.83899283318E-05	Resid phase (deg)	79.1	+/-	19.9

ph/seg (deg)	54.4	Theor.	47.7	Amplitude	0.173 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	80.5		83.2	Search (1024X32)	0.159	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	23.7		28.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	30.2		49.1	Inc. seg. avg.	0.184	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.166	Data rate(Mb/s): 2048	t_cohere infinite			

f: az 64.6 el 38.2 pa -77.6 Y: az 276.0 el 60.7 pa 71.6 u, v (fr/asec) -10965.996 181.610 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fY...3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fY.W.391.3MP1UT

Mk4/DiFX fourfit 3.25 rev 0

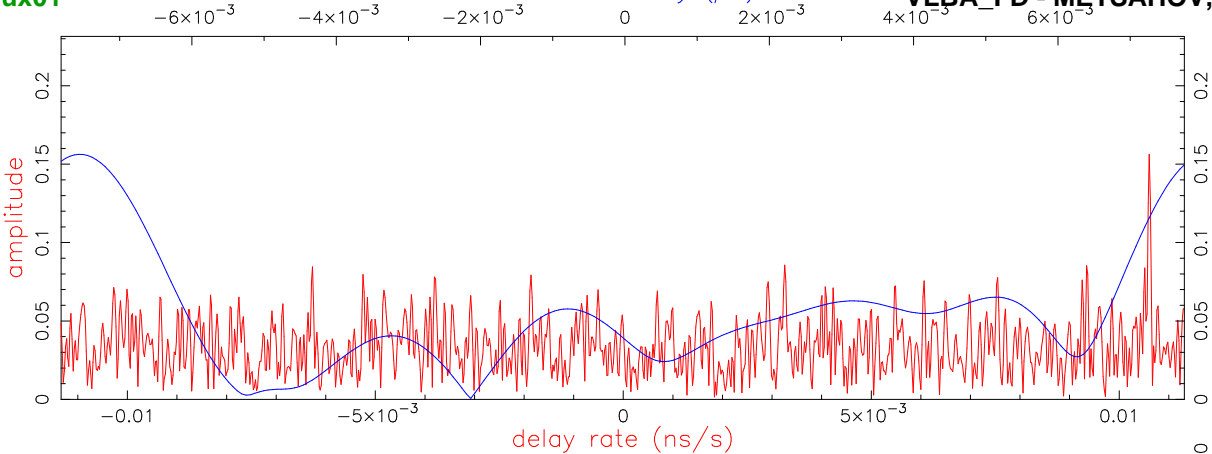
aux01

2013+370.3MP1UT, No0299, fZ

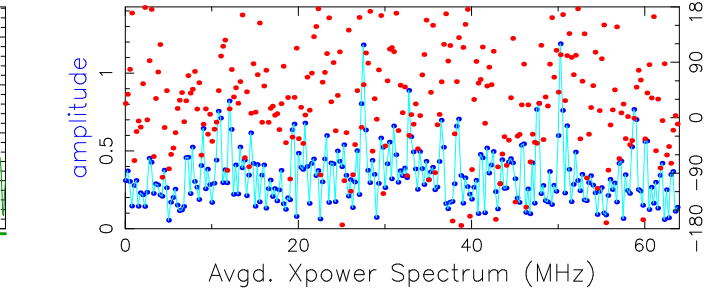
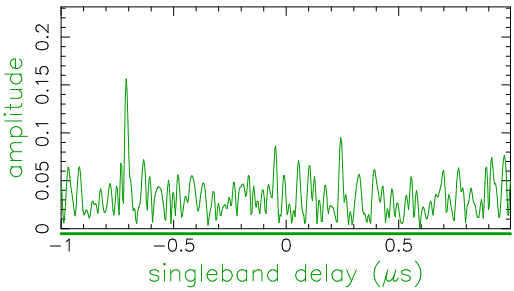
VLBA\_FD - METSAHOV, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

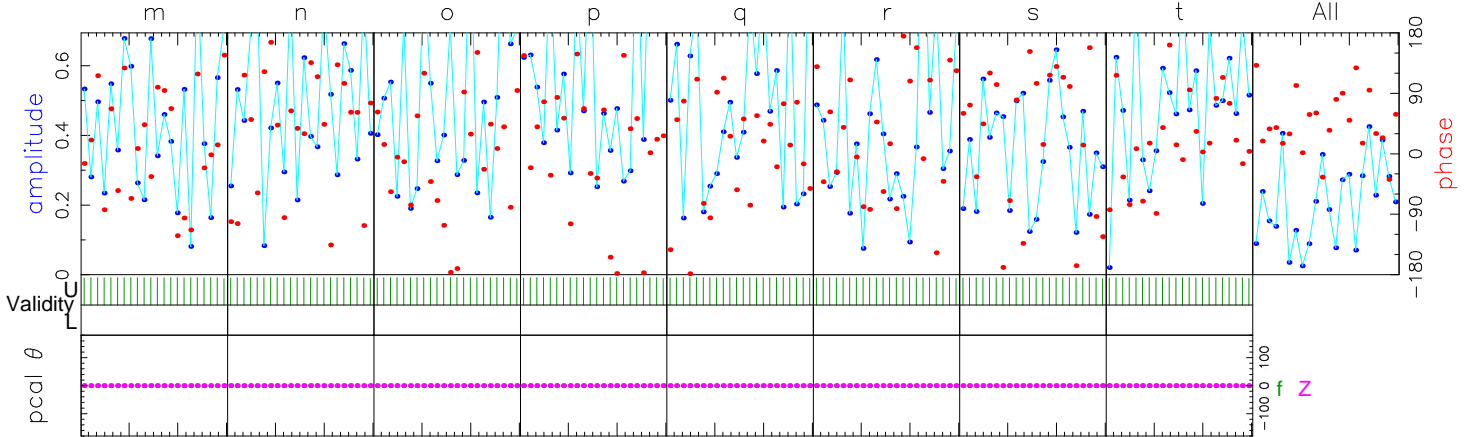


SNR 5.7  
 Int time 179.777  
 Amp 0.232  
 Phase 38.7  
 PFD 6.9e-01  
 Delays (us)  
 SBD -0.710413  
 MBD 0.008095  
 Fringe rate (Hz)  
 0.914728  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110346  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0		
Z	0	0	0	0	0	0	0	0		
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:Z	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		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -1.40491112165E+03 Apriori delay (usec) -1.40420046634E+03 Resid mbdelay (usec) 8.09469E-03 +/- 1.9E-04  
 Sband delay (usec) -1.40491087959E+03 Apriori clock (usec) -1.6793823E-01 Resid sbdelay (usec) -7.10413E-01 +/- 1.5E-03  
 Phase delay (usec) -1.40420046509E+03 Apriori clockrate (us/s) -5.5964001E-07 Resid phdelay (usec) 1.24762E-06 +/- 6.4E-07  
 Delay rate (us/s) 1.50557484351E+00 Apriori rate (us/s) 1.50556422443E+00 Resid rate (us/s) 1.06191E-05 +/- 6.2E-09  
 Total phase (deg) -22.6 Apriori accel (us/s/s) -1.70207084452E-05 Resid phase (deg) 38.7 +/- 20.0

ph/seg (deg) 44.7 46.8 Amplitude 0.232 +/- 0.040 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 81.8 81.7 Search (1024X32) 0.147 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.4 28.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 41.6 49.3 Inc. seg. avg. 0.231 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.230 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 64.6 el 38.2 pa -77.6 Z: az 270.9 el 43.7 pa 38.6 u,v (fr/asec) -10851.178 -3474.759 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fZ..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fZ.W.100.3MP1UT

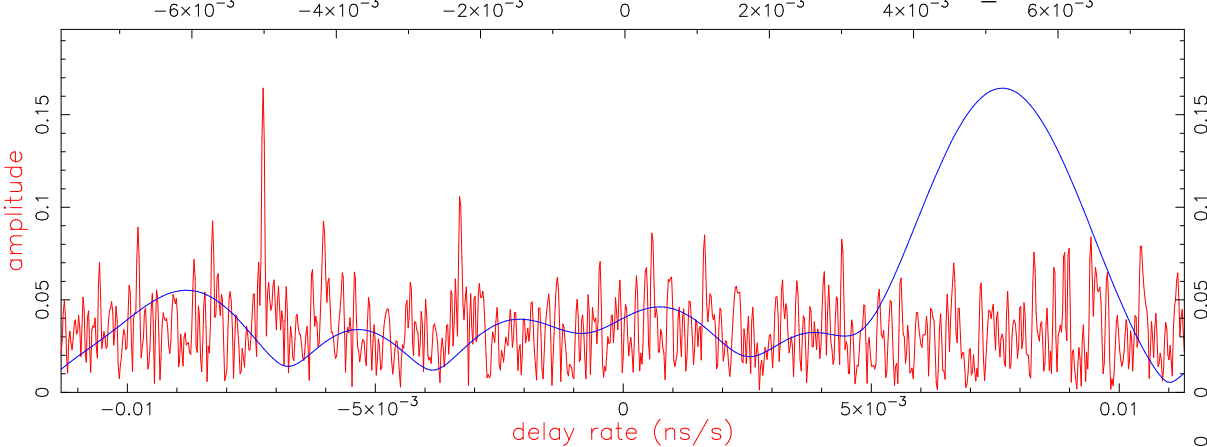
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fZ

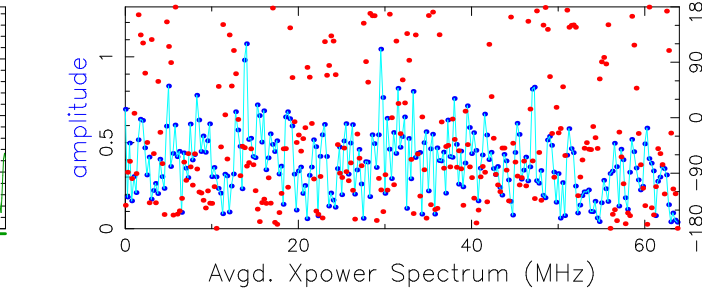
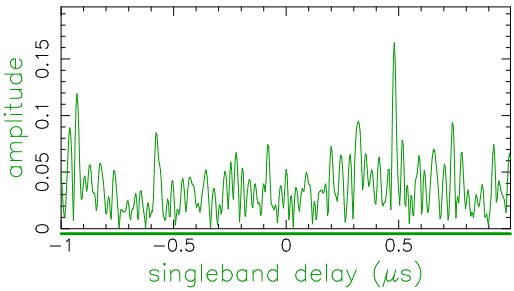
VLBA\_FD - METSAHOV, fgroup W, pol LR

multiband delay ( $\mu$ s)



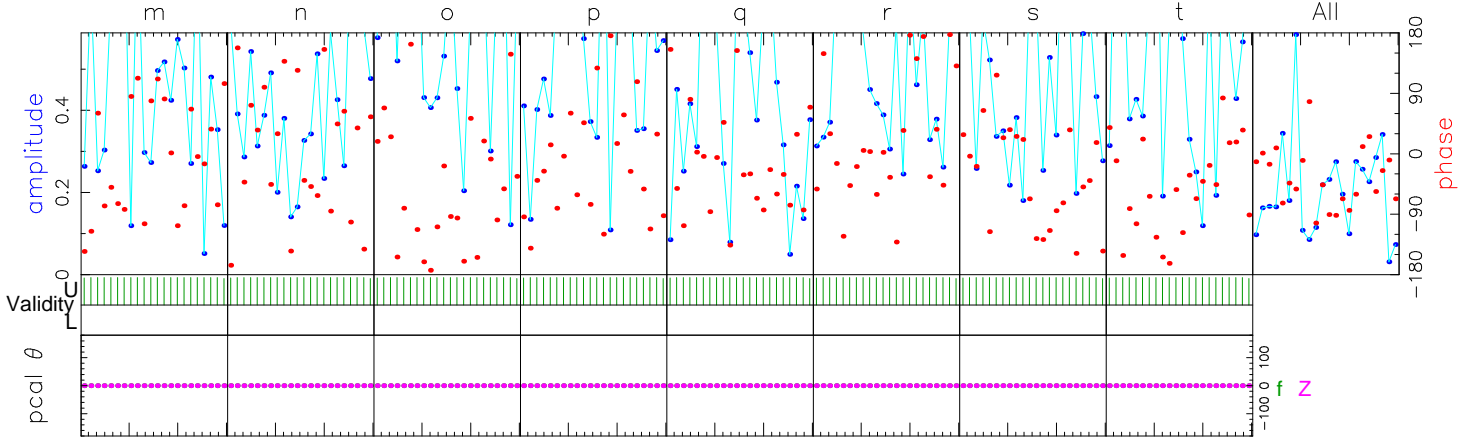
Fringe quality 0

SNR 6.0  
 Int time 179.777  
 Amp 0.196  
 Phase -43.6  
 PFD 1.9e-01  
 Delays (us)  
 SBD 0.480060  
 MBD 0.005223  
 Fringe rate (Hz) -0.626705  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110348  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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
	-47.4	-22.9	-72.0	-31.9	-32.2	-40.9	-35.0	-56.4	Phase	-43.6
	0.1	0.0	0.2	0.3	0.3	0.1	0.2	0.3	Ampl.	0.2
	253.8	120.9	1.4	120.7	379.2	384.3	362.8	389.3	Sbd box	379.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.40372649323E+03	Apriori delay (usec)	-1.40420046634E+03	Resid mbdelay (usec)	5.22310E-03	+/-	1.8E-04
Sband delay (usec)	-1.40372040634E+03	Apriori clock (usec)	-1.6793823E-01	Resid sbdelay (usec)	4.80060E-01	+/-	1.4E-03
Phase delay (usec)	-1.40420046774E+03	Apriori clockrate (us/s)	-5.5964001E-07	Resid phdelay (usec)	-1.40653E-06	+/-	6.1E-07
Delay rate (us/s)	1.50555694901E+00	Apriori rate (us/s)	1.50556422443E+00	Resid rate (us/s)	-7.27542E-06	+/-	5.9E-09
Total phase (deg)	-104.9	Apriori accel (us/s/s)	-1.70207084452E-05	Resid phase (deg)	-43.6	+/-	19.0

ph/seg (deg)	RMS 44.6	Theor. 44.5	Amplitude Search (1024X32)	0.159	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	76.2	77.7	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	17.1	26.9	Inc. seg. avg.	0.188	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 (%)	41.7	46.9	Inc. frq. avg.	0.182	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

f: az 64.6 el 38.2 pa -77.6      Z: az 270.9 el 43.7 pa 38.6      u,v (fr/asec) -10851.178 -3474.759      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0299/fZ..3MP1UT      Output file: /Exps/c241c/v2/3mm/1234/No0299/fZ.W.109.3MP1UT

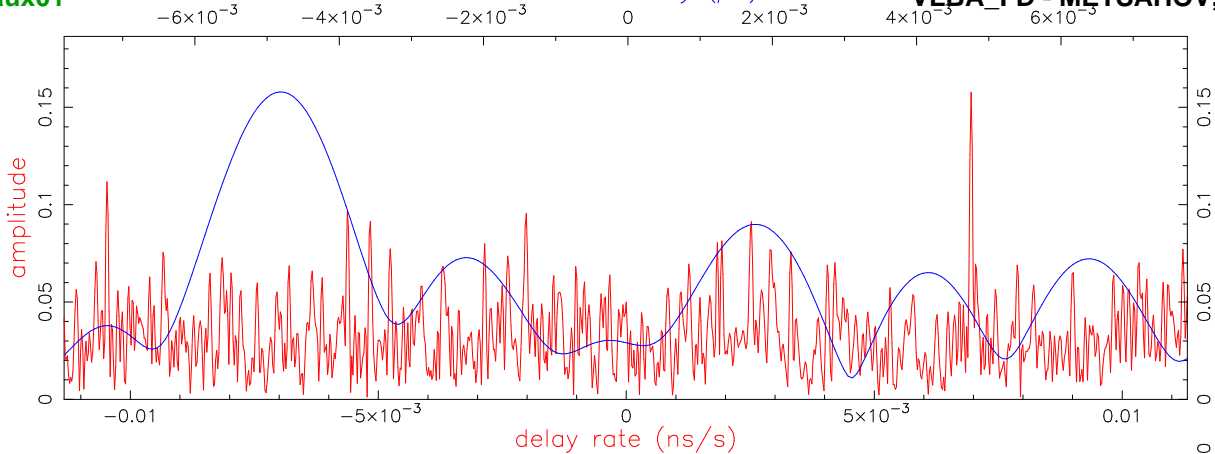
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fZ

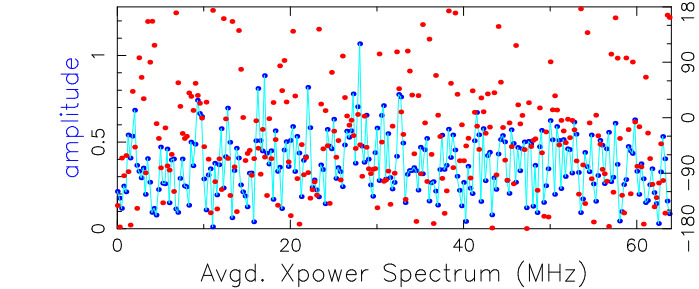
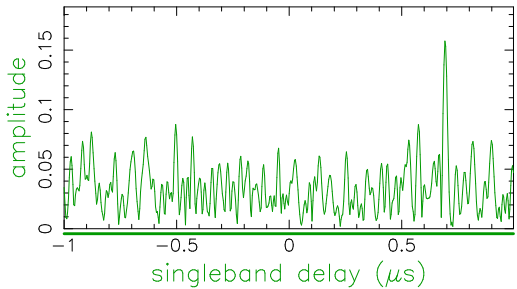
VLBA\_FD - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu$ s)



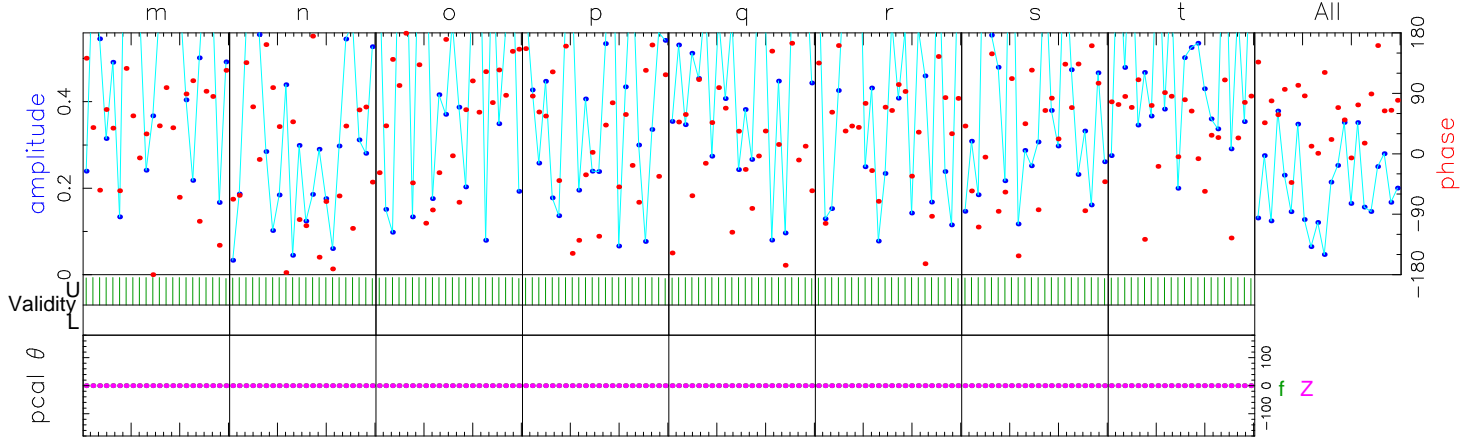
Fringe quality 0

SNR 5.8  
Int time 179.777  
Amp 0.186  
Phase 65.5  
PFD 5.1e-01  
Delays (us)  
SBD 0.692608  
MBD -0.004763  
Fringe rate (Hz)  
0.598960  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 090001.00  
Stop 090301.22  
FRT 090131.00  
Corr/FF/build  
2024:352:144904  
2025:041:110350  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 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	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0	Phase	65.5
Z	0	0	0	0	0	0	0	0	Ampl.	0.2
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	434.3
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC phase	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Mani PC	
									PC amp	
									Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec) (SBD) -1.40350210434E+03 Apriori delay (usec) -1.40420046634E+03 Resid mbdelay (usec) -4.76300E-03 +/- 1.9E-04  
 Sband delay (usec) -1.40350785884E+03 Apriori clock (usec) -1.6793823E-01 Resid sbdelay (usec) 6.92608E-01 +/- 1.5E-03  
 Phase delay (usec) -1.40420046422E+03 Apriori clockrate (us/s) -5.5964001E-07 Resid phdelay (usec) 2.11319E-06 +/- 6.3E-07  
 Delay rate (us/s) 1.50557117776E+00 Apriori rate (us/s) 1.50556422443E+00 Resid rate (us/s) 6.95333E-06 +/- 6.1E-09  
 Total phase (deg) 4.2 Apriori accel (us/s/s) -1.70207084452E-05 Resid phase (deg) 65.5 +/- 19.7

ph/seg (deg) RMS Theor. Amplitude 0.186 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 47.6 46.1 Search (1024X32) 0.156 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 65.8 80.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 30.6 27.8 Inc. seg. avg. 0.183 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 55.8 48.5 Inc. frq. avg. 0.182 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 64.6 el 38.2 pa -77.6 Z: az 270.9 el 43.7 pa 38.6 u, v (fr/asec) -10851.178 -3474.759 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fZ..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fZ.W.122.3MP1UT

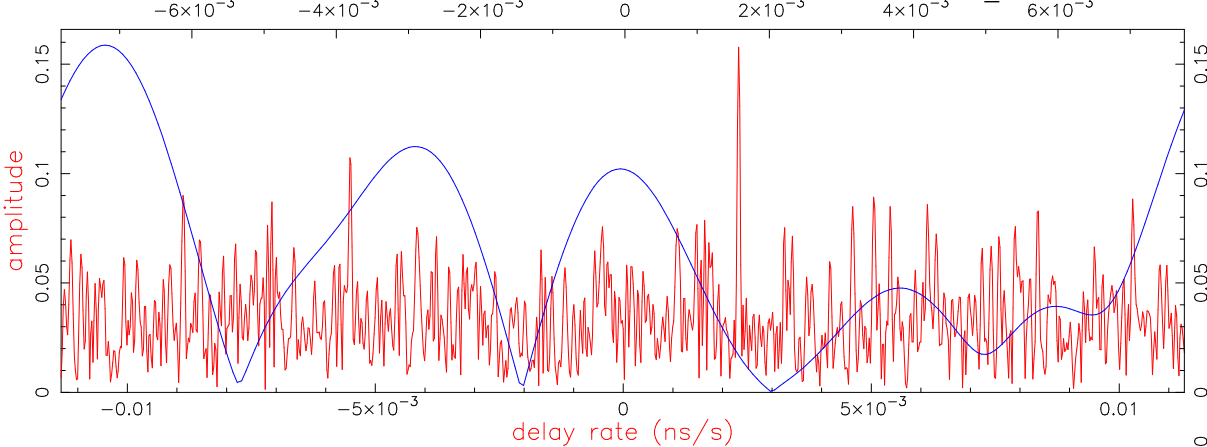
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1UT, No0299, fZ

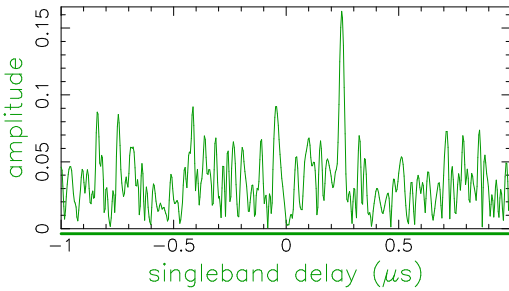
VLBA\_FD - METSAHOV, fgroup W, pol LL

multiband delay ( $\mu$ s)

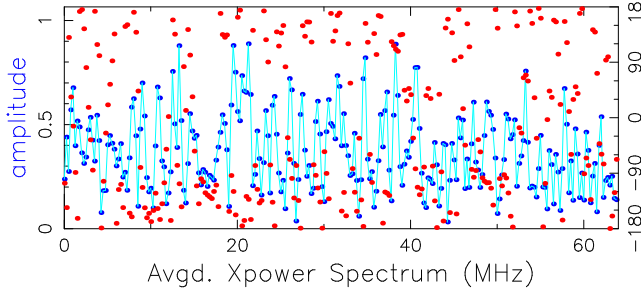


Fringe quality 0

SNR 6.0  
 Int time 179.777  
 Amp 0.166  
 Phase -103.7  
 PFD 2.5e-01  
 Delays (us)  
 SBD 0.246955  
 MBD -0.007314  
 Fringe rate (Hz)  
 0.201464  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

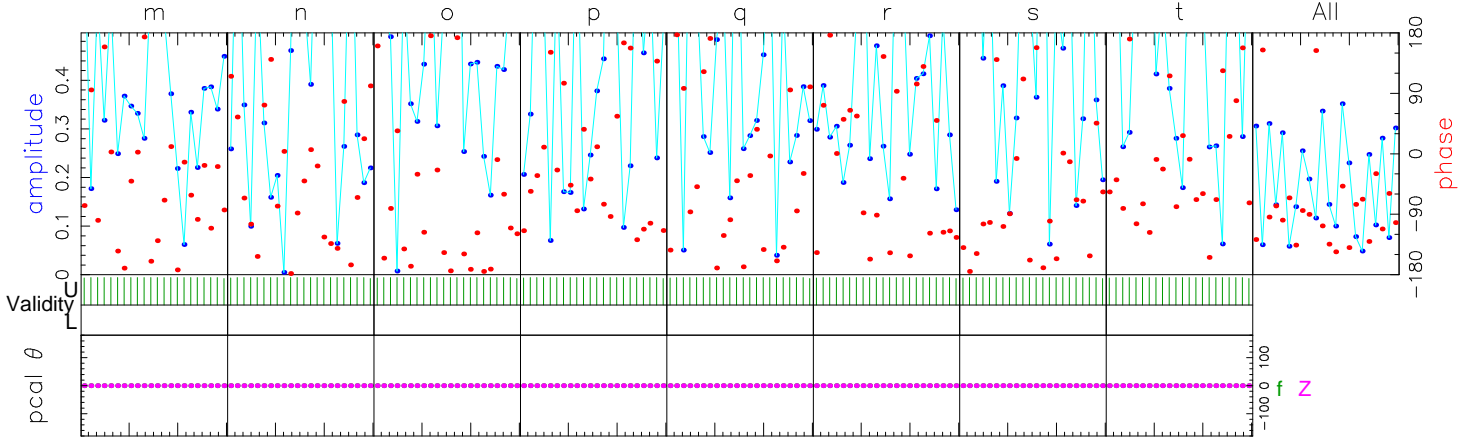


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 090001.00  
 Stop 090301.22  
 FRT 090131.00  
 Corr/FF/build  
 2024:352:144904  
 2025:041:110344  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-87.4	-94.0	-143.6	-69.9	-102.1	-152.9	-142.4	-56.1	Phase	-103.7
	0.2	0.1	0.3	0.2	0.2	0.0	0.2	0.3	Ampl.	0.2
	197.7	293.3	320.2	319.5	449.6	2.2	456.8	246.7	Sbd box	320.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.40395778042E+03	Apriori delay (usec)	-1.40420046634E+03	Resid mbdelay (usec)	-7.31408E-03	+/-	1.8E-04
Sband delay (usec)	-1.40395351109E+03	Apriori clock (usec)	-1.6793823E-01	Resid sbdelay (usec)	2.46955E-01	+/-	1.4E-03
Phase delay (usec)	-1.40420046968E+03	Apriori clockrate (us/s)	-5.5964001E-07	Resid phdelay (usec)	-3.34267E-06	+/-	6.2E-07
Delay rate (us/s)	1.50556656323E+00	Apriori rate (us/s)	1.50556422443E+00	Resid rate (us/s)	2.33880E-06	+/-	5.9E-09
Total phase (deg)		Apriori accel (us/s/s)	-1.70207084452E-05	Resid phase (deg)	-103.7	+/-	19.2

ph/seg (deg)	44.2	Theor.	45.0	Amplitude	0.166 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	63.9	Search (1024X32)	0.157	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	39.3	Inc. seg. avg.	0.148	Inc. frq. avg.	0.176	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	57.7	Inc. frq. avg.	0.176			Data rate(Mb/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
						Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
							ion window (TEC) 0.00 0.00

f: az 64.6 el 38.2 pa -77.6 Z: az 270.9 el 43.7 pa 38.6 u, v (fr/asec) -10851.178 -3474.759 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0299/fz..3MP1UT Output file: /Exps/c241c/v2/3mm/1234/No0299/fz.W.91.3MP1UT