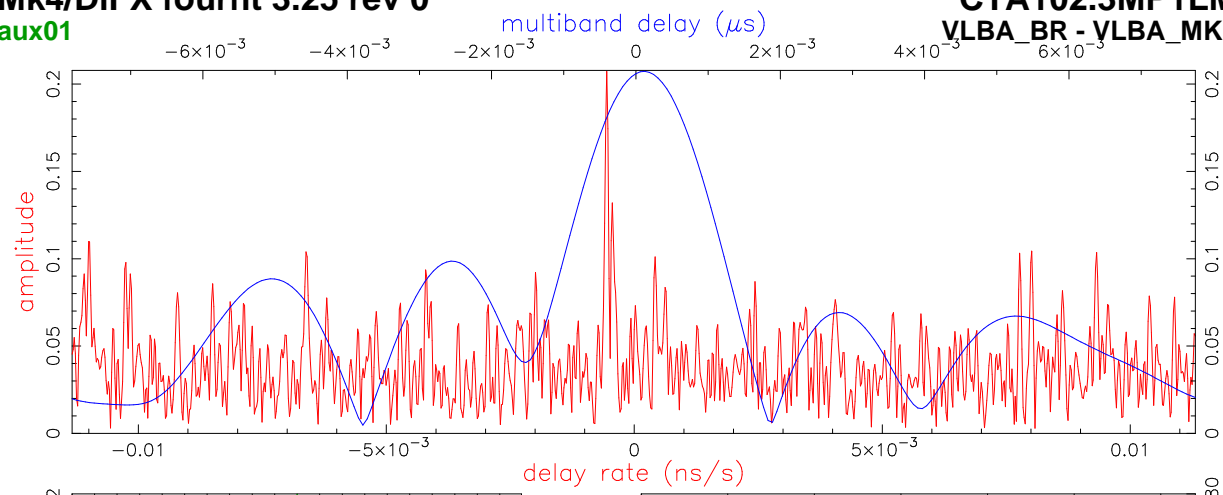


Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, bm

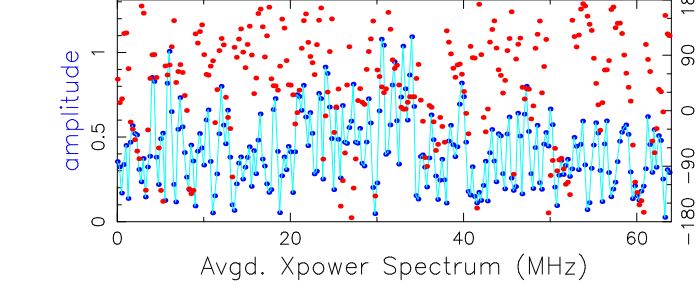
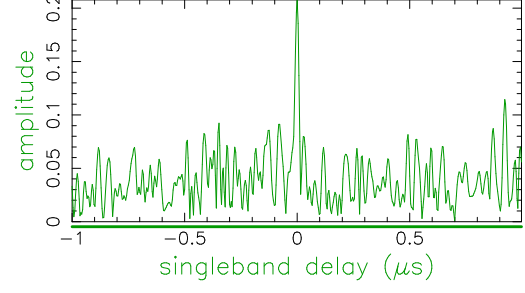
VLBA\_BR - VLBA\_MK, fgroup W, pol LL



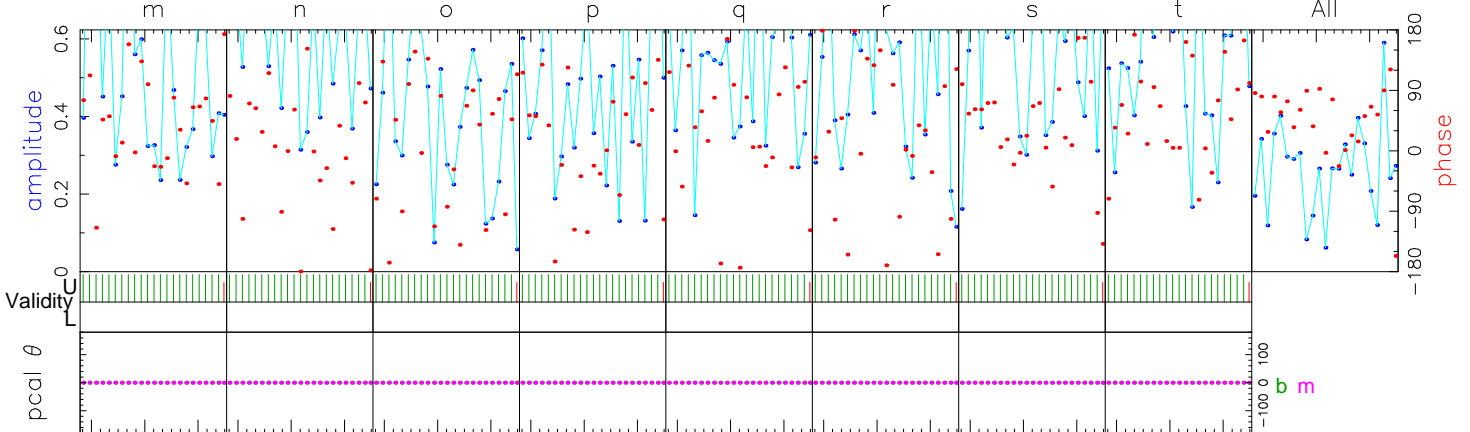
Fringe quality 9

SNR 7.2  
 Int time 162.816  
 Amp 0.208  
 Phase 59.3  
 PFD 6.7e-05  
 Delays (us)  
 SBD -0.000597  
 MBD 0.000095  
 Fringe rate (Hz)  
 -0.047852  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125844  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"



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
	62.1	32.5	99.7	62.0	69.9	106.6	50.3	50.8	Phase	59.3
	0.2	0.3	0.1	0.2	0.2	0.1	0.4	0.3	Ampl.	0.2
	153.4	493.3	186.9	206.2	192.3	450.2	257.0	162.5	Sbd box	256.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.85842892314E+03	Apriori delay (usec)	-6.85842901766E+03	Resid mbdelay (usec)	9.45213E-05	+/-	1.5E-04
Sband delay (usec)	-6.85842961466E+03	Apriori clock (usec)	4.1010456E+00	Resid sbdelay (usec)	-5.97000E-04	+/-	1.2E-03
Phase delay (usec)	-6.85842901574E+03	Apriori clockrate (us/s)	5.9094092E-07	Resid phdelay (usec)	1.91301E-06	+/-	5.1E-07
Delay rate (us/s)	-5.69011792616E-01	Apriori rate (us/s)	-5.69011237099E-01	Resid rate (us/s)	-5.55516E-07	+/-	5.4E-09
Total phase (deg)	-149.8	Apriori accel (us/s/s)	4.58846477215E-05	Resid phase (deg)	59.3	+/-	15.8

ph/seg (deg)	43.7	Theor.	37.9	Amplitude	0.208 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	62.8	Search (1024X32)	0.203	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	28.5	Inc. seg. avg.	0.219	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	38.8	Inc. frq. avg.	0.206	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
				Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 233.2 el 42.3 pa 33.2      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) 3383.484 4258.875      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/bm..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/bm.W.166.3MP1LM

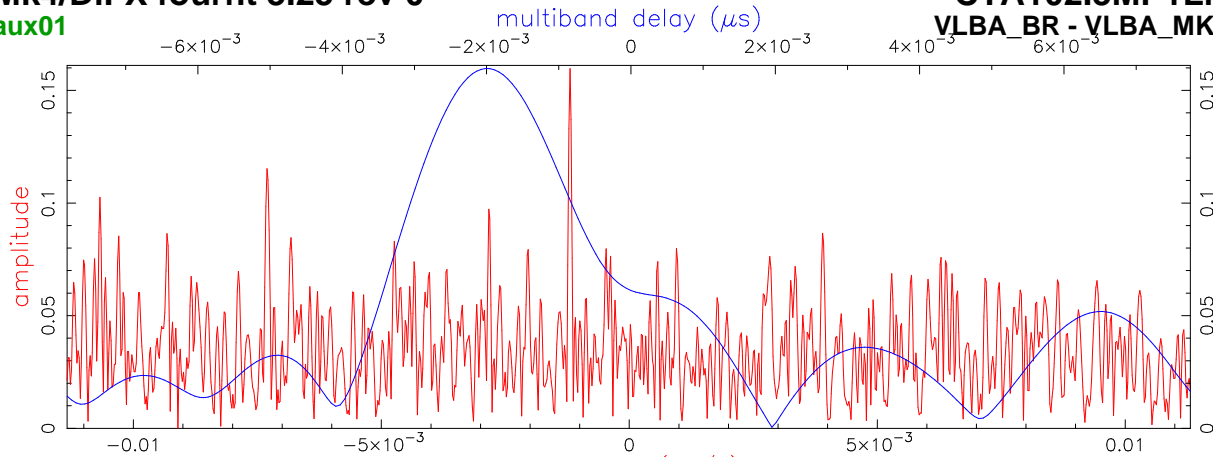


Mk4/DiFX fourfit 3.25 rev 0

aux01

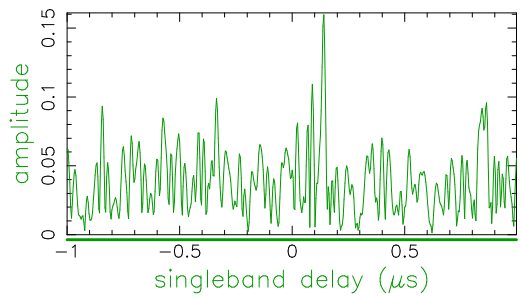
CTA102.3MP1LM, No0981, bm

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

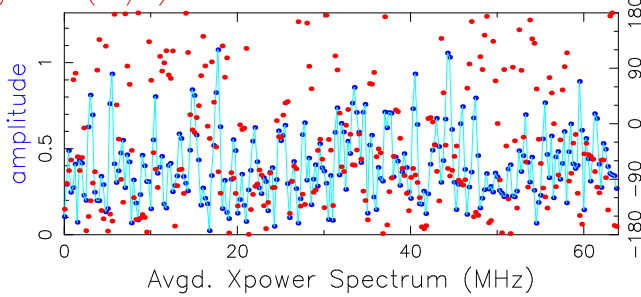


Fringe quality 0

SNR 5.6  
 Int time 162.816  
 Amp 0.161  
 Phase 104.9  
 PFD 9.3e-01  
 Delays (us)  
 SBD 0.139797  
 MBD -0.002025  
 Fringe rate (Hz)  
 -0.102988  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

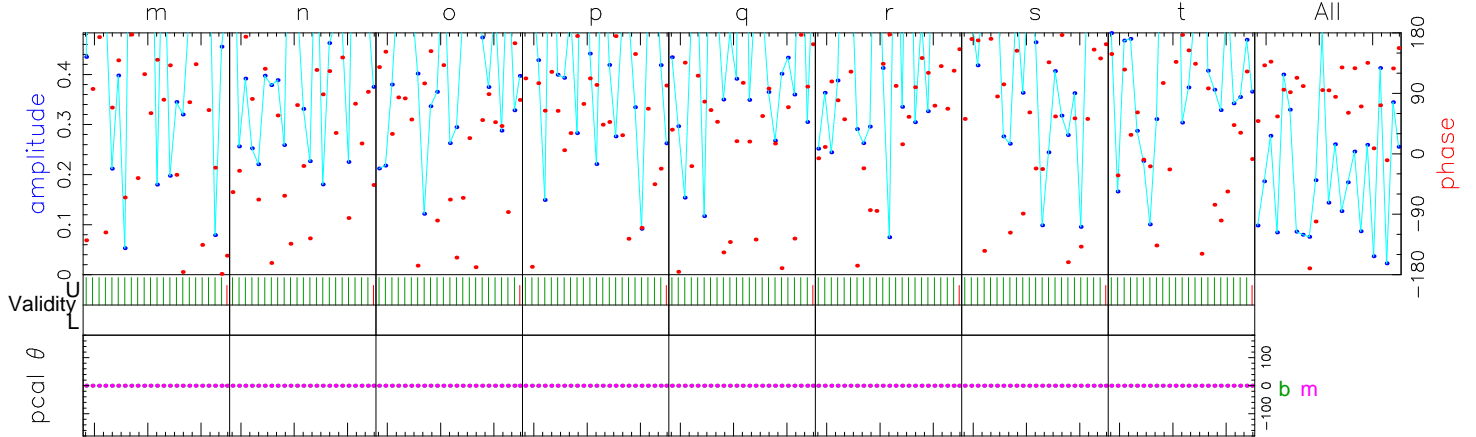


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125848  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	134.0	86.0	92.6	79.3	103.9	91.6	132.4	122.2	Phase	104.9
	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.1	Ampl.	0.2
	279.0	5.0	223.7	80.1	347.6	293.4	290.8	351.8	Sbd box	292.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	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	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.85829041753E+03	Apriori delay (usec)	-6.85842901766E+03	Resid mbdelay (usec)	-2.02488E-03	+/-	1.9E-04
Sband delay (usec)	-6.85828922016E+03	Apriori clock (usec)	4.1010456E+00	Resid sbdelay (usec)	1.39797E-01	+/-	1.5E-03
Phase delay (usec)	-6.85842901428E+03	Apriori clockrate (us/s)	5.9094092E-07	Resid phdelay (usec)	3.38218E-06	+/-	6.6E-07
Delay rate (us/s)	-5.69012432690E-01	Apriori rate (us/s)	-5.69011237099E-01	Resid rate (us/s)	-1.19559E-06	+/-	7.0E-09
Total phase (deg)	-104.3	Apriori accel (us/s/s)	4.58846477215E-05	Resid phase (deg)	104.9	+/-	20.5

ph/seg (deg)	55.7	Theor.	49.1	Amplitude	0.161 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	83.6	Search (1024X32)	0.158	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	23.3	Inc. seg. avg.	0.149	Inc. frq. avg.	0.152	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011	0.011
amp/frq (%)	36.4	Inc. frq. avg.	0.152			Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00	

b: az 233.2 el 42.3 pa 33.2      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) 3383.484 4258.875      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/bm..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/bm.W.181.3MP1LM

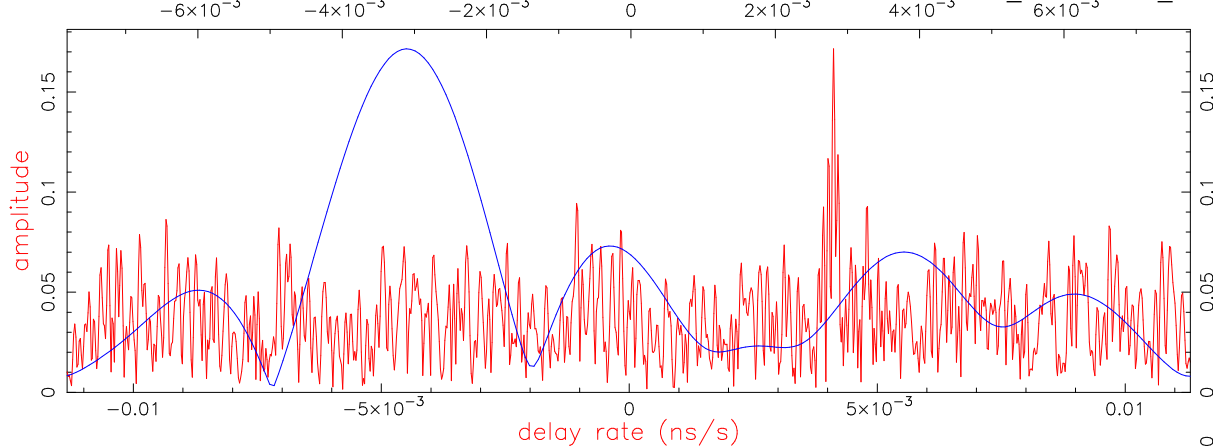
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, bm

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

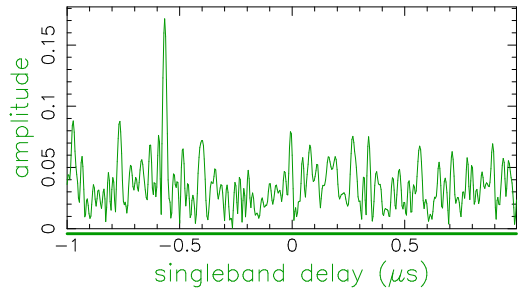
multiband delay ( $\mu$ s)



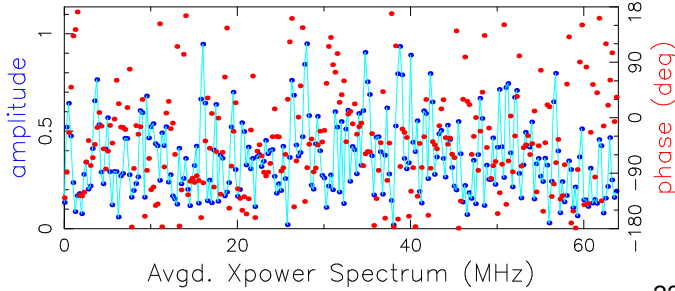
Fringe quality 0

SNR 6.0  
 Int time 162.816  
 Amp 0.181  
 Phase -72.8  
 PFD 2.4e-01  
 Delays (us)  
 SBD -0.566674  
 MBD -0.003114  
 Fringe rate (Hz)  
 0.354357  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

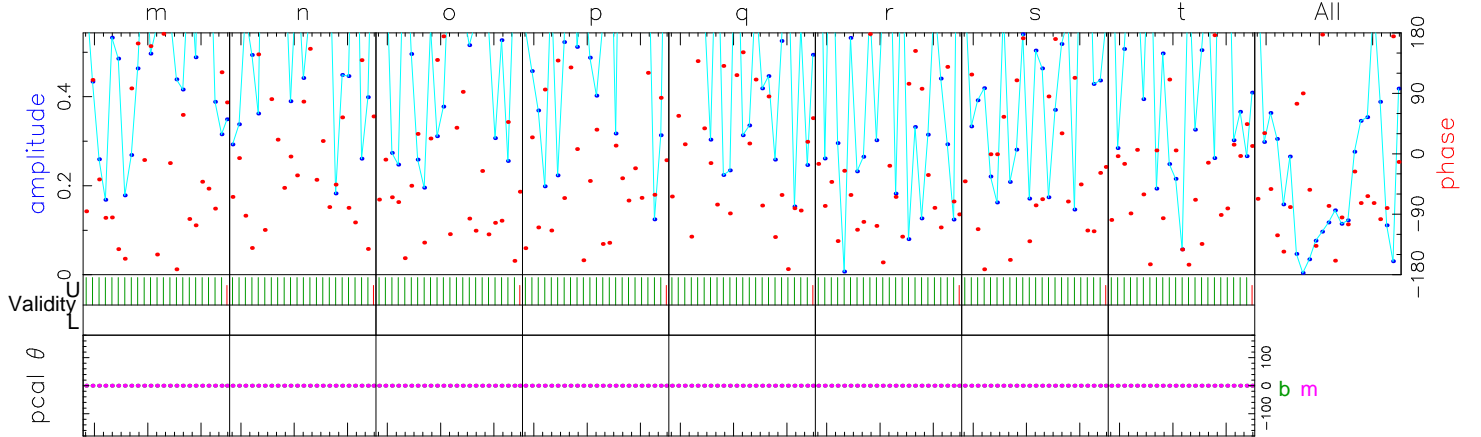
Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125850  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"



delay rate (ns/s)



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
	-93.3	-53.7	-79.1	-63.0	27.3	-82.1	-74.4	-72.6	Phase	-72.8
	0.2	0.2	0.3	0.2	0.0	0.3	0.1	0.3	Ampl.	0.2
	426.2	364.2	12.6	151.9	180.2	112.2	226.0	357.8	Sbd box	111.9
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.85899463174E+03	Apriori delay (usec)	-6.85842901766E+03	Resid mbdelay (usec)	-3.11409E-03	+/-	1.8E-04
Sband delay (usec)	-6.85899569216E+03	Apriori clock (usec)	4.1010456E+00	Resid sbdelay (usec)	-5.66674E-01	+/-	1.4E-03
Phase delay (usec)	-6.85842902001E+03	Apriori clockrate (us/s)	5.9094092E-07	Resid phdelay (usec)	-2.34786E-06	+/-	6.2E-07
Delay rate (us/s)	-5.69007123367E-01	Apriori rate (us/s)	-5.69011237099E-01	Resid rate (us/s)	4.11373E-06	+/-	6.6E-09
Total phase (deg)	-282.0	Apriori accel (us/s/s)	4.58846477215E-05	Resid phase (deg)	-72.8	+/-	19.1

ph/seg (deg)	69.8	Theor.	45.9	Amplitude	0.181 +/- 0.030	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	110.8	Search (1024X32)	0.168	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	42.9	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	39.3	Inc. seg. avg.	0.185	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
		Inc. frq. avg.	0.171	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 233.2 el 42.3 pa 33.2      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) 3383.484 4258.875      simultaneous interpolator

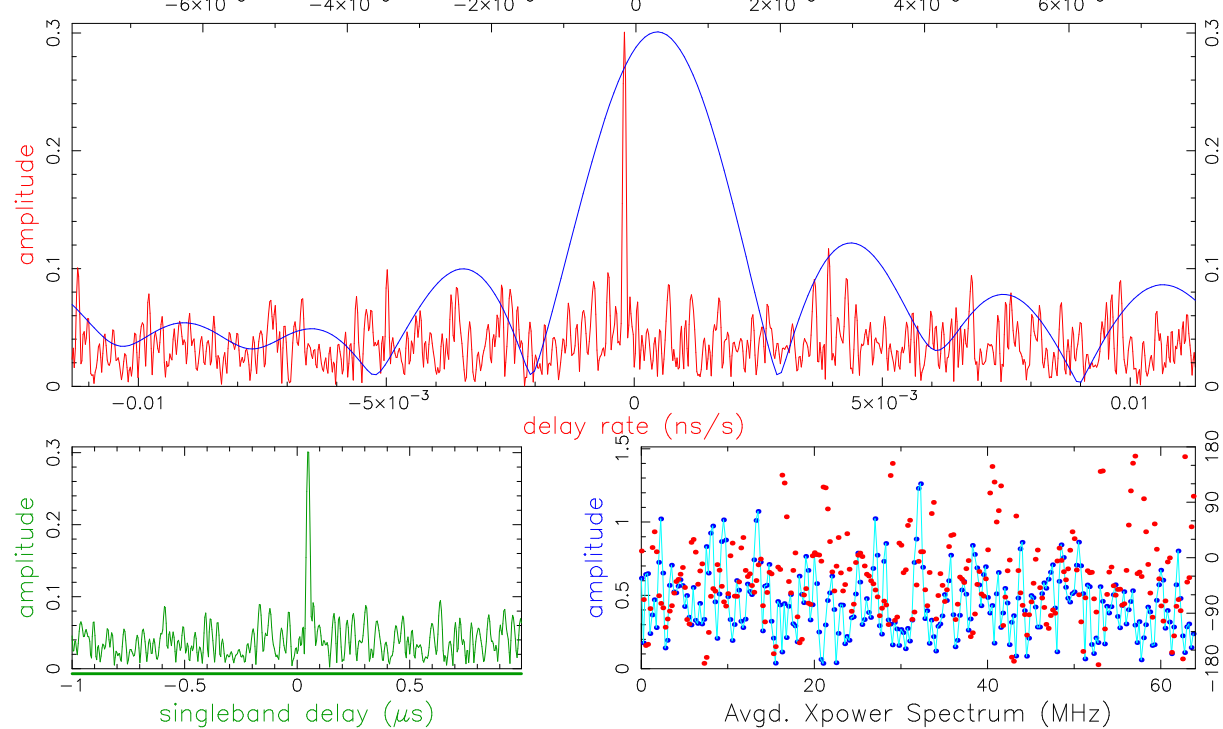
Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/bm..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/bm.W.185.3MP1LM

Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, fm

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

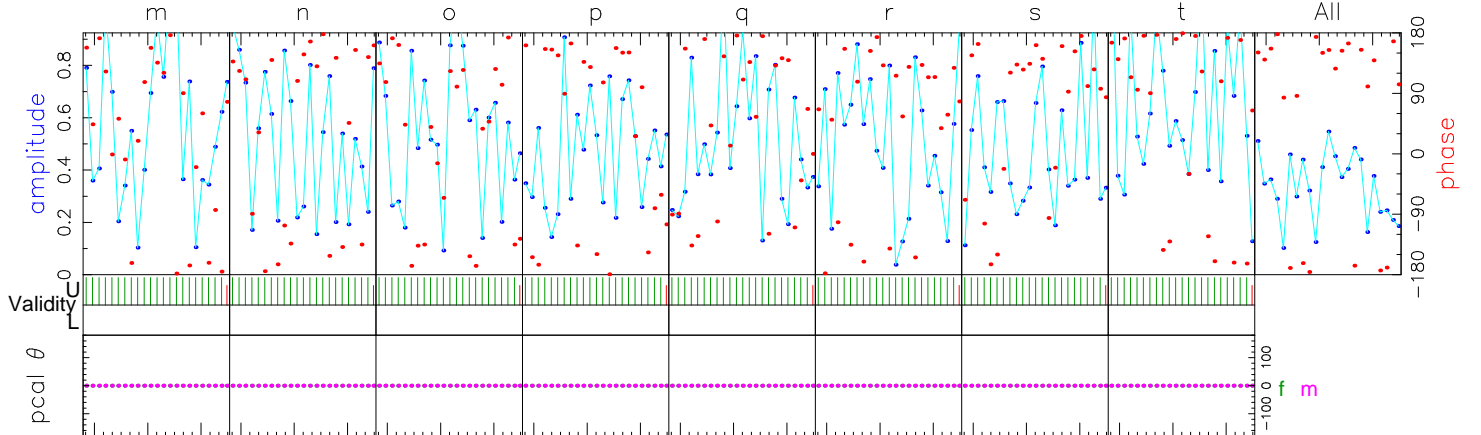


Fringe quality 9

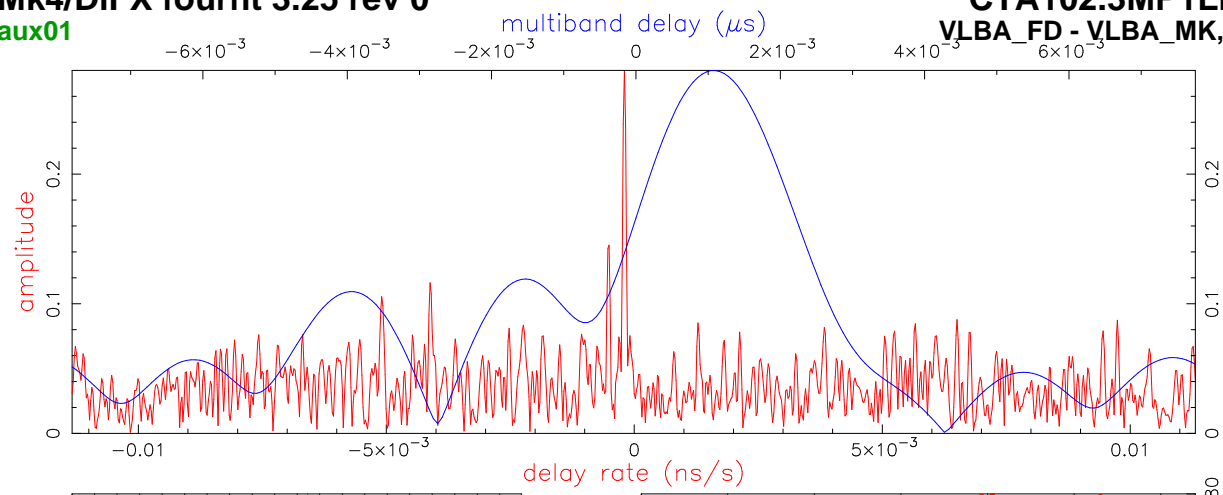
SNR 10.8  
 Int time 162.816  
 Amp 0.308  
 Phase 158.8  
 PFD 1.3e-18  
 Delays (us)  
 SBD 0.048803  
 MBD 0.000248  
 Fringe rate (Hz) -0.017626  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build 2025:003:204508  
 2025:041:125845  
 2024:113:095956  
 RA & Dec (J2000) 22h32m36.408901s +11°43'50.904060"

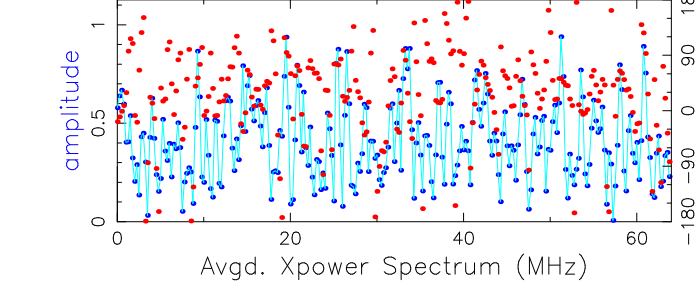
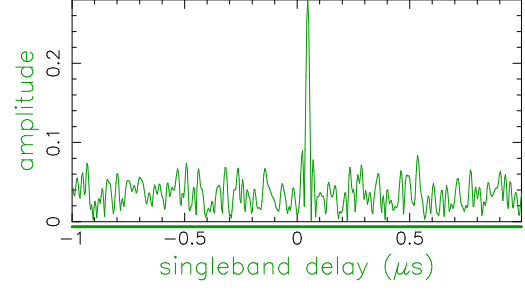
Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



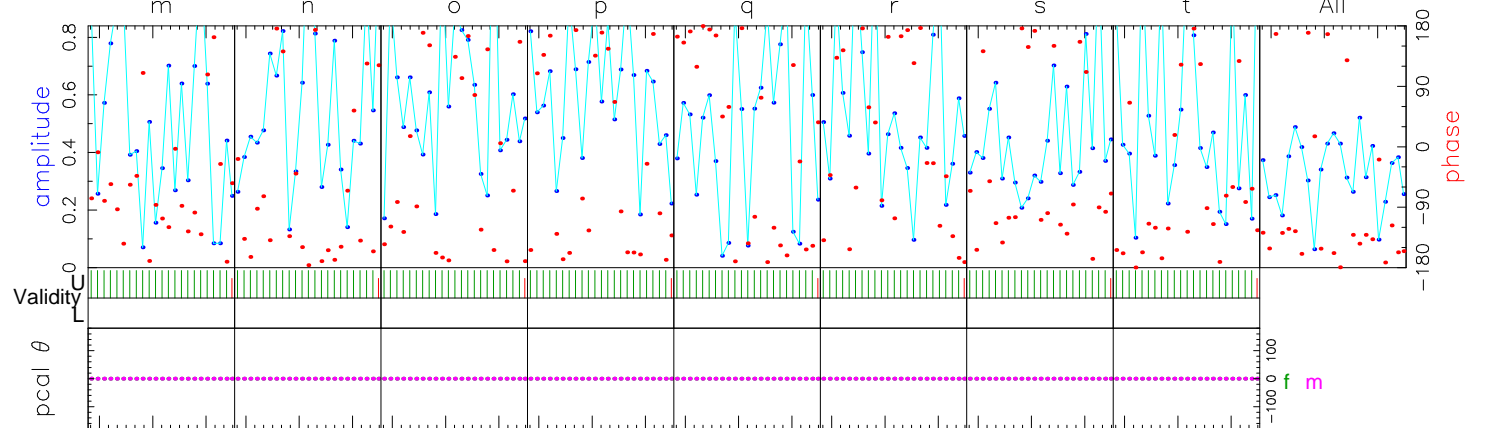
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
f	0	0	0	0	0	0	0	0		
m	0	0	0	0	0	0	0	0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec) (SBD)	-8.25492524512E+03				-8.25497236813E+03				2.48005E-04	+/- 1.0E-04
Sband delay (usec)	-8.25492356513E+03				-4.8381233E-01				4.88030E-02	+/- 8.0E-04
Phase delay (usec)	-8.25497236301E+03				6.4719931E-08				5.11928E-06	+/- 3.4E-07
Delay rate (us/s)	-9.98493081772E-01				-9.98492877150E-01				-2.04623E-07	+/- 3.7E-09
Total phase (deg)			-125.8		4.78404354136E-05				158.8	+/- 10.7
ph/seg (deg)	33.4	25.6			0.293					
amp/seg (%)	41.3	44.6			0.000					
ph/frq (deg)	9.9	15.1			0.310					
amp/frq (%)	28.4	26.3			0.294					
f: az 261.0 el 37.7 pa 60.2	m: az 190.4 el 81.9 pa 11.5		u, v (fr/asec) 5896.545 2243.856		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0981//fm..3MP1LM		Output file: /Exps/c241a/v2/3mm/1234/No0981//fm.W.170.3MP1LM		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us) -1.000 1.000			
									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	
									ion window (TEC) 0.00 0.00	



Fringe quality 9  
SNR 9.8  
Int time 162.816  
Amp 0.280  
Phase -152.4  
PFD 3.2e-14  
Delays (us)  
SBD 0.046833  
MBD 0.001074  
Fringe rate (Hz) -0.017659  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 191347.17  
Stop 191629.98  
FRT 191508.00  
Corr/FF/build  
2025:003:204508  
2025:041:125847  
2024:113:095956  
RA & Dec (J2000)  
22h32m36.408901s  
+11°43'50.904060"



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		
	-101.2	-170.6	-168.4	-171.4	-172.2	-146.1	-131.2	-139.3	Phase	-152.4		
	0.3	0.3	0.3	0.4	0.4	0.2	0.3	0.3	Ampl.	0.3		
	269.8	268.6	269.8	269.0	268.3	478.0	155.9	270.8	Sbd box	269.0		
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			
m	0	0	0	0	0	0	0	0	PC freqs			
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
m	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Tracks			
Group delay (usec) (SBD)	-8.25492441918E+03		Apriori delay (usec)		-8.25497236813E+03		Resid mbdelay (usec)		1.07394E-03	+/- 1.1E-04		
Sband delay (usec)	-8.25492553488E+03		Apriori clock (usec)		-4.8381233E-01		Resid sbdelay (usec)		4.68333E-02	+/- 8.8E-04		
Phase delay (usec)	-8.25497237304E+03		Apriori clockrate (us/s)		6.4719931E-08		Resid phdelay (usec)		-4.91309E-06	+/- 3.8E-07		
Delay rate (us/s)	-9.98493082152E-01		Apriori rate (us/s)		-9.98492877150E-01		Resid rate (us/s)		-2.05003E-07	+/- 4.0E-09		
Total phase (deg)			Apriori accel (us/s/s)		4.78404354136E-05		Resid phase (deg)		-152.4	+/- 11.7		
	RMS	Theor.	Amplitude	0.280 +/- 0.029		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	52.8	28.1	Search (1024X32)	0.275		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	45.0	49.1	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	27.8	16.6	Inc. seg. avg.	0.294		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	26.9	29.0	Inc. frq. avg.	0.295		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 261.0 el 37.7 pa 60.2		m: az 190.4 el 81.9 pa 11.5		u,v (fr/asec) 5896.545 2243.856				simultaneous interpolator				
Control file: cf_1234_gmva		Input file: /Exps/c241a/v2/3mm/1234/No0981//fm..3MP1LM		Output file: /Exps/c241a/v2/3mm/1234/No0981//fm.W.177.3MP1LM								

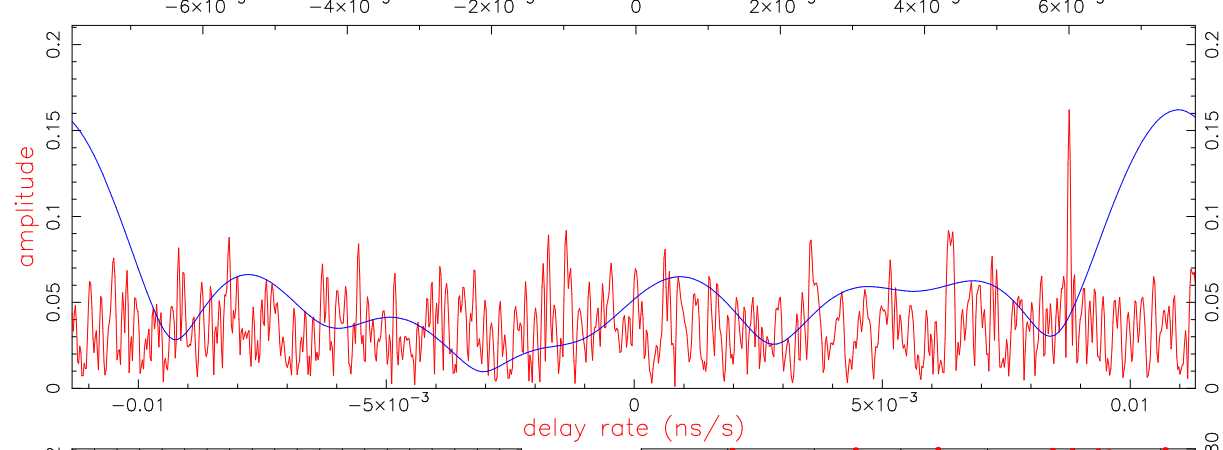
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, fm

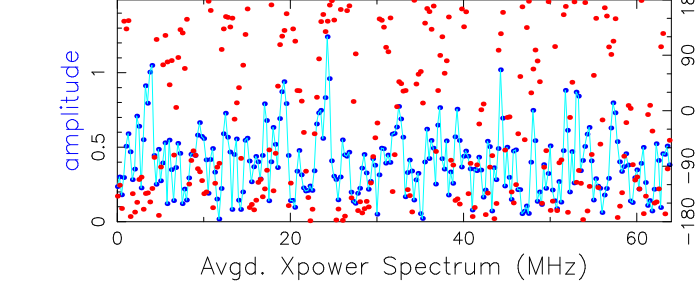
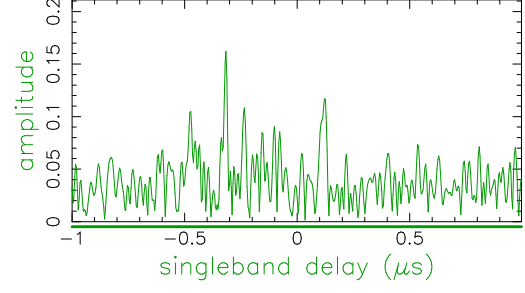
VLBA\_FD - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)



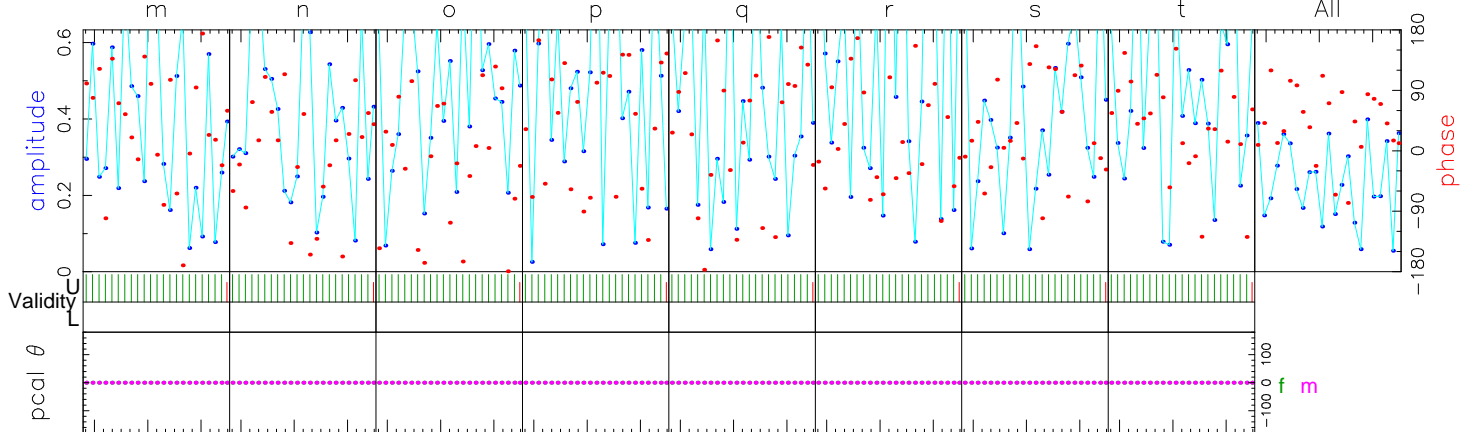
Fringe quality 0

SNR 5.7  
 Int time 162.816  
 Amp 0.211  
 Phase 47.0  
 PFD 8.1e-01  
 Delays (us)  
 SBD -0.317221  
 MBD 0.007495  
 Fringe rate (Hz)  
 0.755874  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125849  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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		
m	0	0	0	0	0	0	0	0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -8.25529299798E+03 Apriori delay (usec) -8.25497236813E+03 Resid mbdelay (usec) 7.49515E-03 +/- 1.9E-04  
 Sband delay (usec) -8.25528958938E+03 Apriori clock (usec) -4.8381233E-01 Resid sbdelay (usec) -3.17221E-01 +/- 1.5E-03  
 Phase delay (usec) -8.25497236661E+03 Apriori clockrate (us/s) 6.4719931E-08 Resid phdelay (usec) 1.51668E-06 +/- 6.5E-07  
 Delay rate (us/s) -9.98484102205E-01 Apriori rate (us/s) -9.98492877150E-01 Resid rate (us/s) 8.77494E-06 +/- 6.9E-09  
 Total phase (deg) -237.5 Apriori accel (us/s/s) 4.78404354136E-05 Resid phase (deg) 47.0 +/- 20.2

ph/seg (deg) 51.5 48.4 Search (1024X32) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 77.8 84.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 28.1 28.5 Inc. seg. avg. 0.228 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 43.6 49.8 Inc. frq. avg. 0.204 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 261.0 el 37.7 pa 60.2 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 5896.545 2243.856 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981//fm..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981//fm.W.183.3MP1LM simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

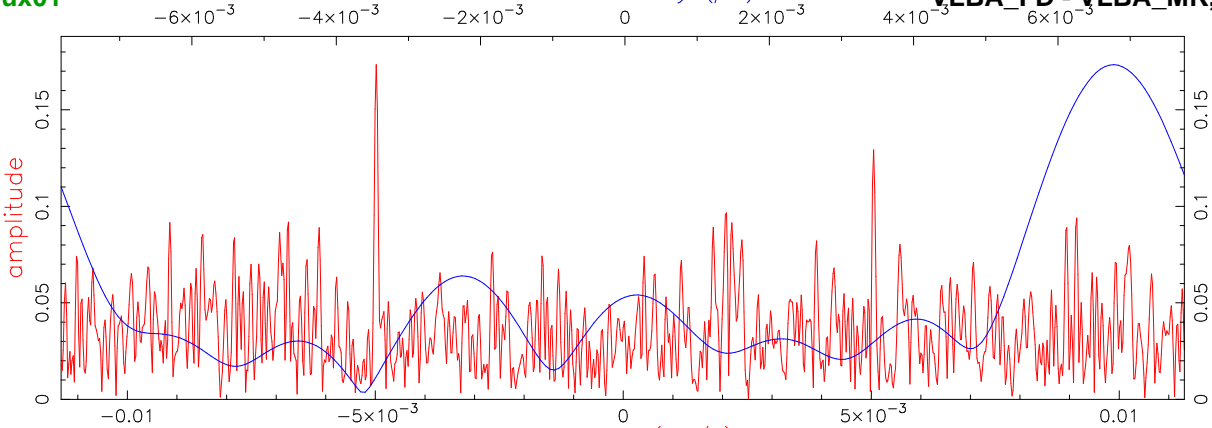
aux01

CTA102.3MP1LM, No0981, fm

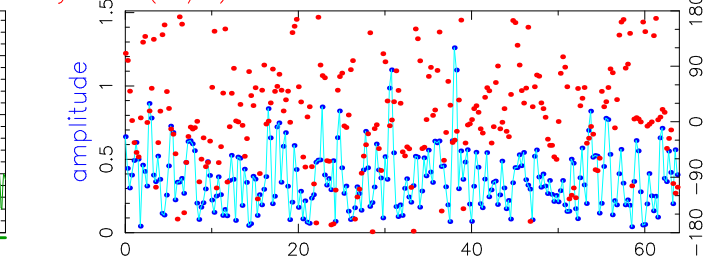
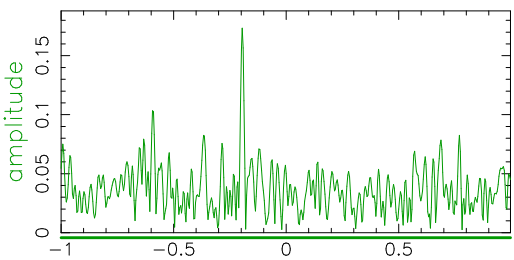
VLBA\_FD - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

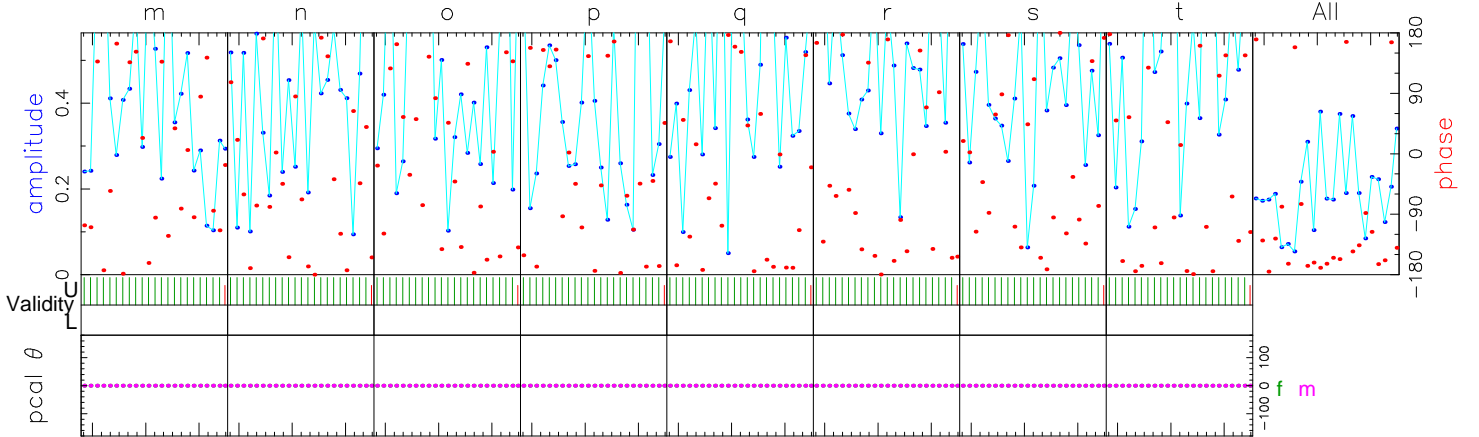


SNR 6.0  
 Int time 162.816  
 Amp 0.188  
 Phase -153.0  
 PFD 1.7e-01  
 Delays (us)  
 SBD -0.195233  
 MBD 0.006775  
 Fringe rate (Hz)  
 -0.430588  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125852  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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

Group delay (usec) (SBD)	-8.25516871834E+03	Apriori delay (usec)	-8.25497236813E+03	Resid mbdelay (usec)	6.77478E-03	+/-	1.8E-04
Sband delay (usec)	-8.25516760138E+03	Apriori clock (usec)	-4.8381233E-01	Resid sbdelay (usec)	-1.95233E-01	+/-	1.4E-03
Phase delay (usec)	-8.25497237306E+03	Apriori clockrate (us/s)	6.4719931E-08	Resid phdelay (usec)	-4.93249E-06	+/-	6.1E-07
Delay rate (us/s)	-9.98497875846E-01	Apriori rate (us/s)	-9.98492877150E-01	Resid rate (us/s)	-4.99870E-06	+/-	6.5E-09
Total phase (deg)	-77.5	Apriori accel (us/s/s)	4.78404354136E-05	Resid phase (deg)	-153.0	+/-	18.9

ph/seg (deg) 34.7 45.4 Search (1024X32) 0.170 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 57.0 79.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 24.3 26.8 Inc. seg. avg. 0.164 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 34.6 46.8 Inc. frq. avg. 0.177 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 261.0 el 37.7 pa 60.2 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 5896.545 2243.856 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/fm..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/fm.W.190.3MP1LM simultaneous interpolator

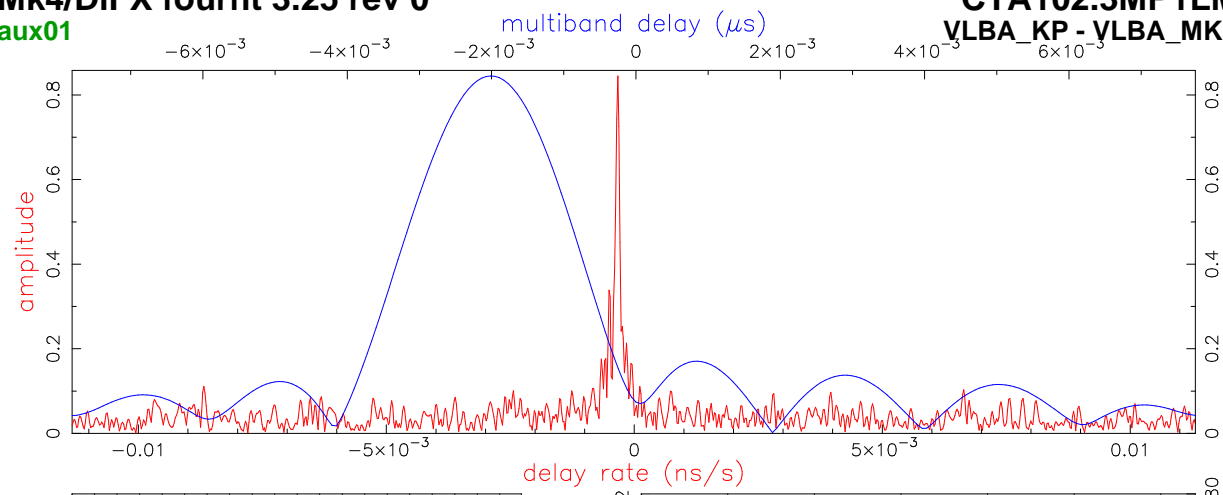


Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, km

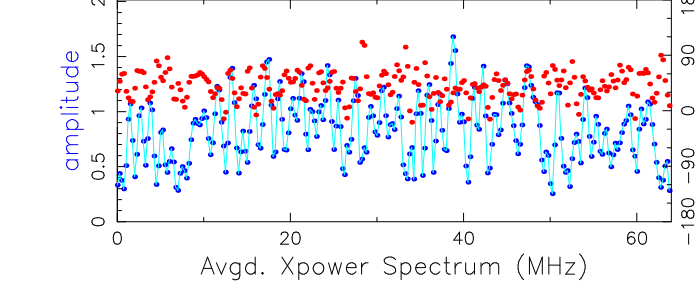
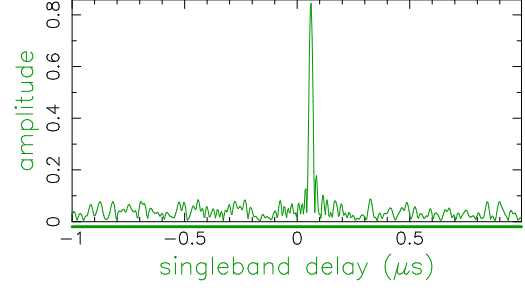
VLBA\_KP - VLBA\_MK, fgroup W, pol LL



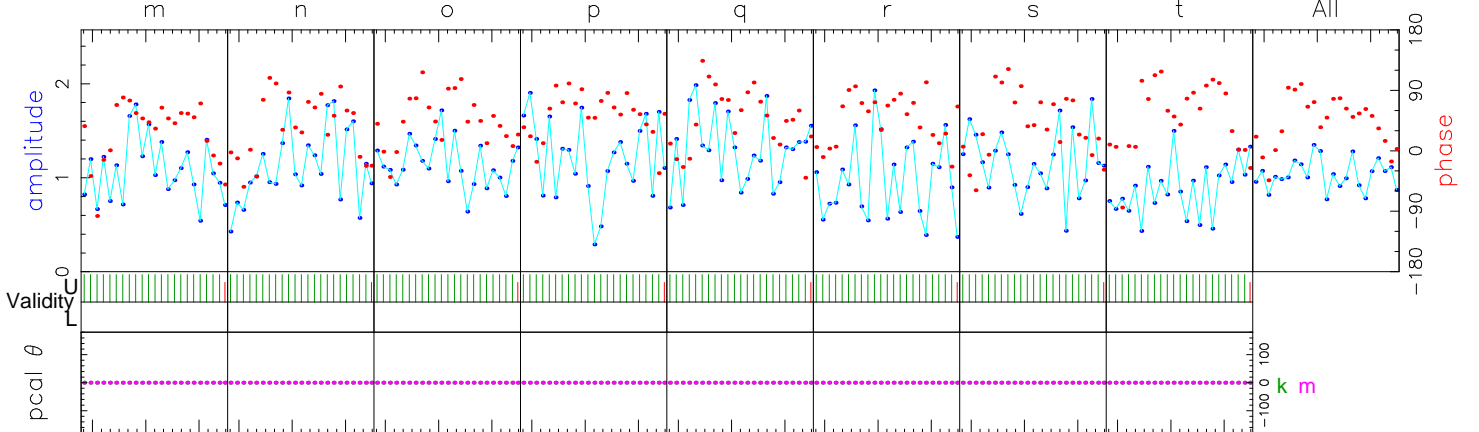
Fringe quality 8

SNR 29.9  
 Int time 162.816  
 Amp 0.858  
 Phase 45.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.060903  
 MBD -0.002040  
 Fringe rate (Hz) -0.027863  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125848  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"



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
	35.6	44.7	46.8	52.0	48.4	48.3	34.6	51.6	Phase	45.3
	0.9	0.8	0.9	1.0	0.9	0.8	0.8	0.6	Ampl.	0.8
	272.9	272.9	272.6	272.6	272.5	272.2	272.4	272.8	Sbd box	272.6
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.5046641110E+03	Apriori delay (usec)	-6.50472457159E+03	Resid mbdelay (usec)	-2.03951E-03	+/-	3.6E-05
Sband delay (usec)	-6.50466366859E+03	Apriori clock (usec)	-3.8739777E-01	Resid sbdelay (usec)	6.09030E-02	+/-	2.9E-04
Phase delay (usec)	-6.50472457012E+03	Apriori clockrate (us/s)	1.6670606E-07	Resid phdelay (usec)	1.46171E-06	+/-	1.2E-07
Delay rate (us/s)	-8.72934951189E-01	Apriori rate (us/s)	-8.72934627724E-01	Resid rate (us/s)	-3.23465E-07	+/-	1.3E-09
Total phase (deg)	-169.4	Apriori accel (us/s/s)	3.89908110886E-05	Resid phase (deg)	45.3	+/-	3.8

ph/seg (deg) 37.2 9.2 Amplitude 0.858 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 27.6 16.0 Interp. 0.826 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 7.2 5.4 Inc. seg. avg. 1.026 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 13.3 9.4 Inc. frq. avg. 0.846 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 254.7 el 43.8 pa 56.7 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 5152.255 2271.655 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981//km..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981//km.W.182.3MP1LM simultaneous interpolator

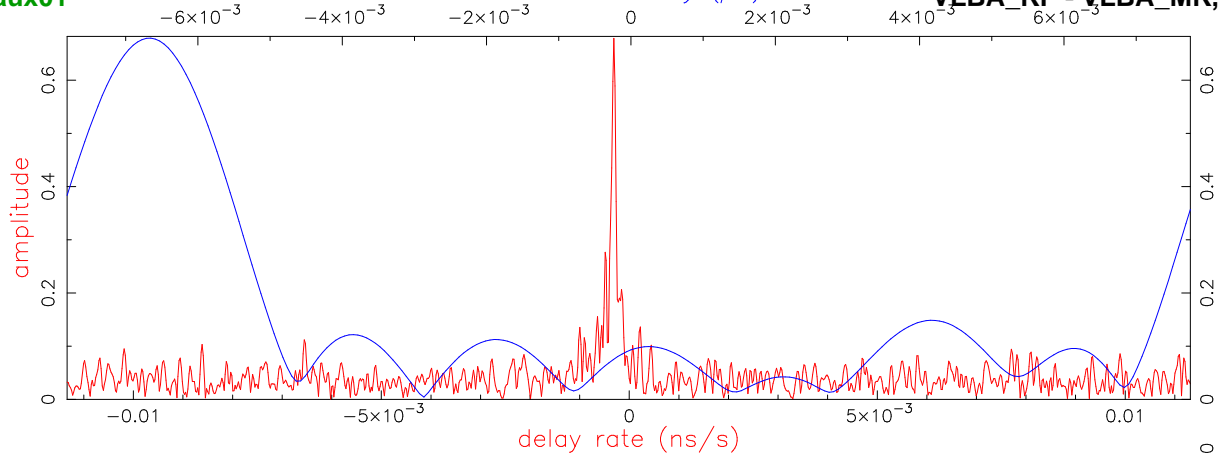
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, km

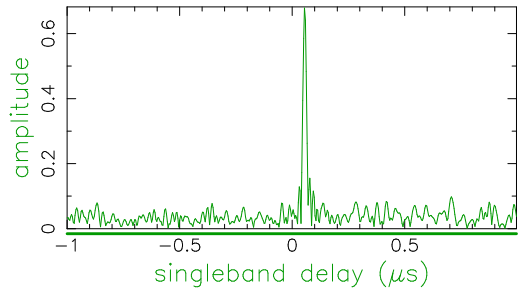
VLBA\_KP - VLBA\_MK, fgroup W, pol RR

multiband delay ( $\mu$ s)

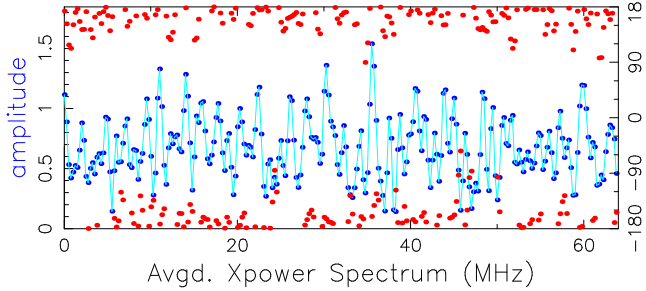


Fringe quality 9

SNR 23.8  
 Int time 162.816  
 Amp 0.682  
 Phase 173.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.055539  
 MBD -0.006649  
 Fringe rate (Hz)  
 -0.027465  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

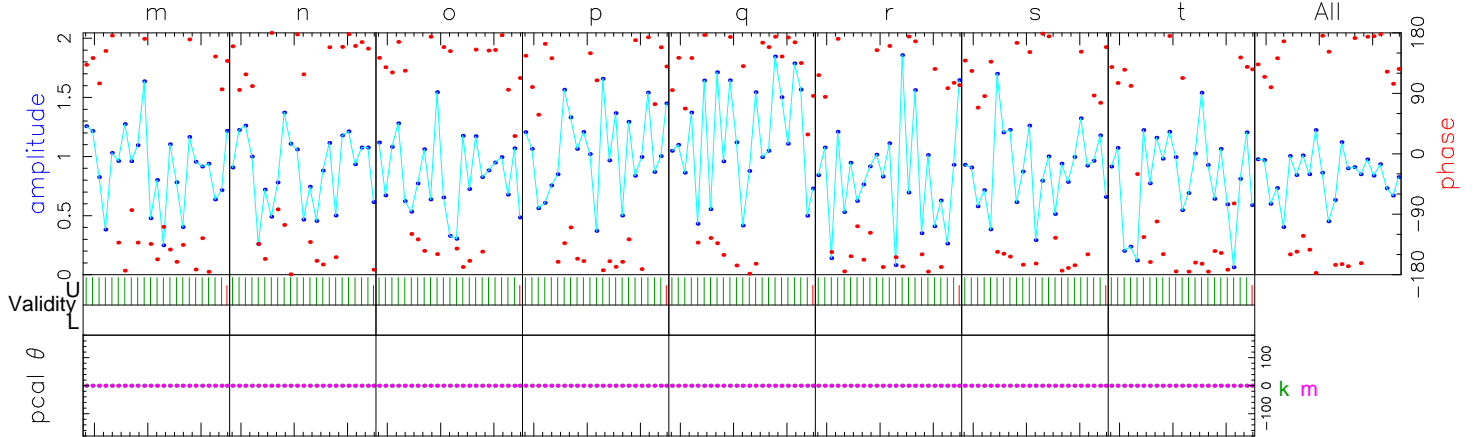


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125851  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-176.9	171.6	169.2	178.8	166.3	169.3	168.8	-177.8	Phase	173.5
	0.7	0.7	0.6	0.8	0.9	0.6	0.6	0.6	Ampl.	0.7
	271.0	271.2	271.1	271.1	271.1	271.6	270.9	272.1	Sbd box	271.2
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.50466872097E+03	Apriori delay (usec)	-6.50472457159E+03	Resid mbdelay (usec)	-6.64938E-03	+/-	4.6E-05
Sband delay (usec)	-6.50466903209E+03	Apriori clock (usec)	-3.8739777E-01	Resid sbdelay (usec)	5.55395E-02	+/-	3.6E-04
Phase delay (usec)	-6.50472456599E+03	Apriori clockrate (us/s)	1.6670606E-07	Resid phdelay (usec)	5.59349E-06	+/-	1.6E-07
Delay rate (us/s)	-8.72934946568E-01	Apriori rate (us/s)	-8.72934627724E-01	Resid rate (us/s)	-3.18844E-07	+/-	1.7E-09
Total phase (deg)	-41.3	Apriori accel (us/s/s)	3.89908110886E-05	Resid phase (deg)	173.5	+/-	4.8

ph/seg (deg)	RMS 37.7	Theor. 11.5	Amplitude Search (1024X32)	0.682 +/- 0.029	0.653	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	36.7	20.2	Interp.	0.000	0.824	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	7.2	6.8	Inc. seg. avg.	0.824	0.678	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	13.9	11.9	Inc. frq. avg.	0.678		Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 254.7 el 43.8 pa 56.7      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) 5152.255 2271.655      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/km..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/km.W.186.3MP1LM

Mk4/DiFX fourfit 3.25 rev 0

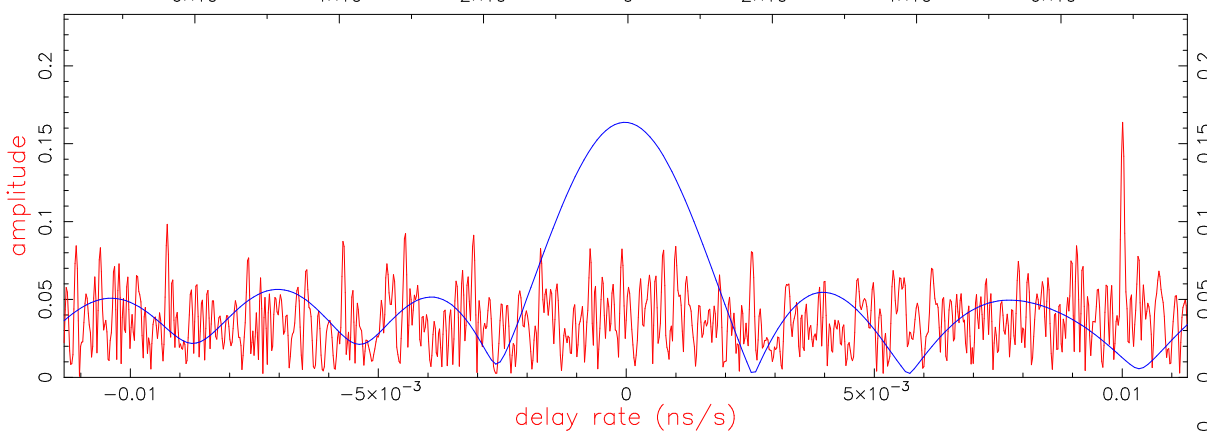
aux01

CTA102.3MP1LM, No0981, km

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

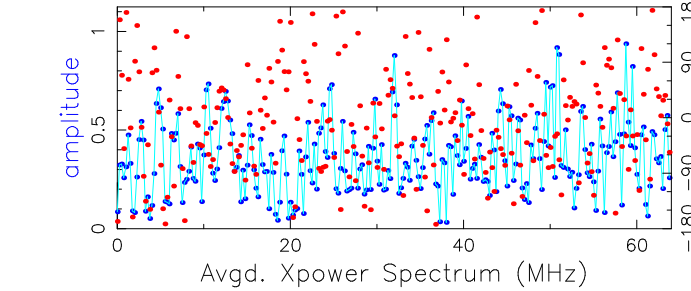
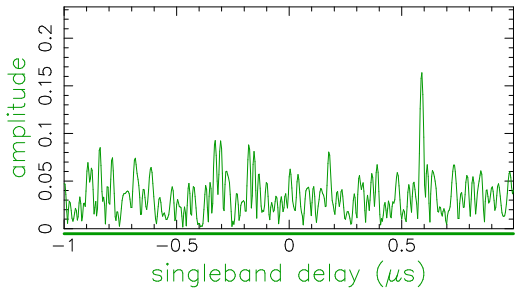
multiband delay ( $\mu$ s)

Fringe quality 0

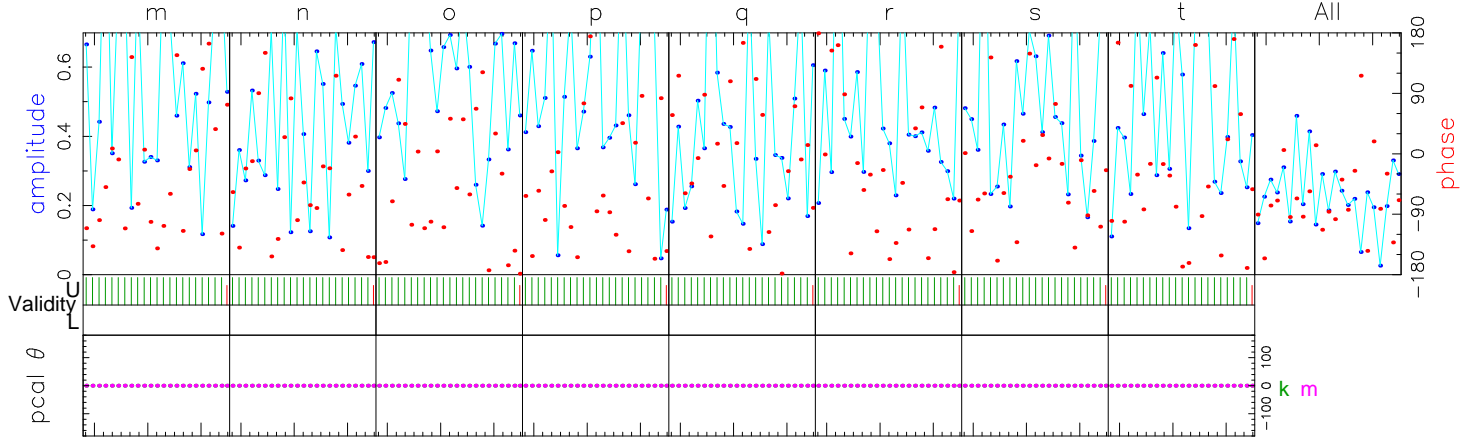


SNR 5.8  
 Int time 162.816  
 Amp 0.233  
 Phase -73.7  
 PFD 6.5e-01  
 Delays (us)  
 SBD 0.588678  
 MBD -0.000068  
 Fringe rate (Hz)  
 0.863617  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125852  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"



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
	-76.8	-70.3	-60.1	-89.9	-63.7	-91.8	-54.0	-83.5	Phase	-73.7
	0.4	0.2	0.2	0.3	0.1	0.2	0.3	0.2	Ampl.	0.2
	407.1	183.0	489.5	201.9	55.1	185.8	406.9	43.3	Sbd box	407.7
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.50413088955E+03	Apriori delay (usec)	-6.50472457159E+03	Resid mbdelay (usec)	-6.79684E-05	+/-	1.9E-04
Sband delay (usec)	-6.50413589409E+03	Apriori clock (usec)	-3.8739777E-01	Resid sbdelay (usec)	5.88678E-01	+/-	1.5E-03
Phase delay (usec)	-6.50472457396E+03	Apriori clockrate (us/s)	1.6670606E-07	Resid phdelay (usec)	-2.37553E-06	+/-	6.4E-07
Delay rate (us/s)	-8.72924601987E-01	Apriori rate (us/s)	-8.72934627724E-01	Resid rate (us/s)	1.00257E-05	+/-	6.8E-09
Total phase (deg)	-288.4	Apriori accel (us/s/s)	3.89908110886E-05	Resid phase (deg)	-73.7	+/-	19.9

ph/seg (deg)	57.8	Theor.	47.7	Amplitude	0.233 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	71.1	Search (1024X32)	0.161	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	15.2	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	36.4	Inc. seg. avg.	0.244	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.212	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 254.7 el 43.8 pa 56.7      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) 5152.255 2271.655      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/km..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/km.W.191.3MP1LM

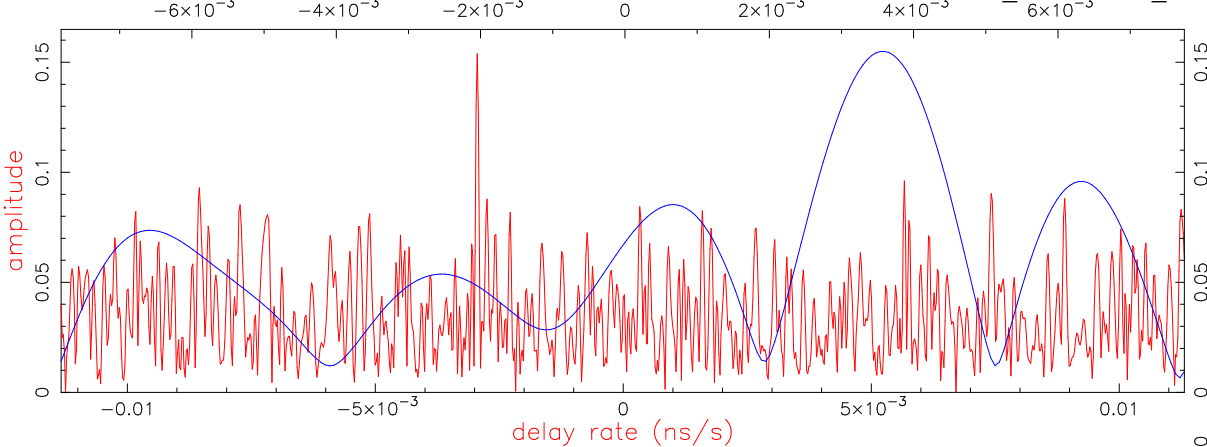
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, km

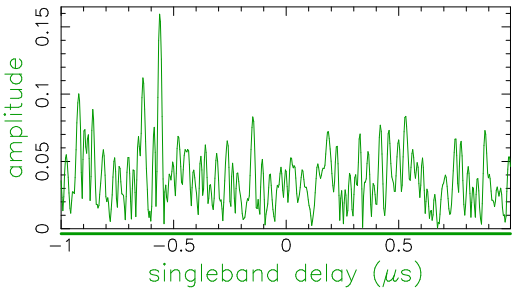
VLBA\_KP - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

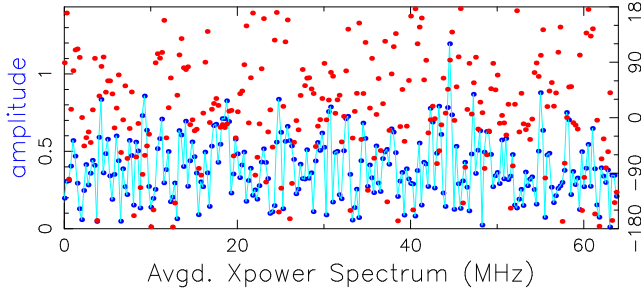


Fringe quality 0

SNR 5.6  
 Int time 162.816  
 Amp 0.165  
 Phase 7.0  
 PFD 9.3e-01  
 Delays (us)  
 SBD -0.561435  
 MBD 0.003457  
 Fringe rate (Hz)  
 -0.253228  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

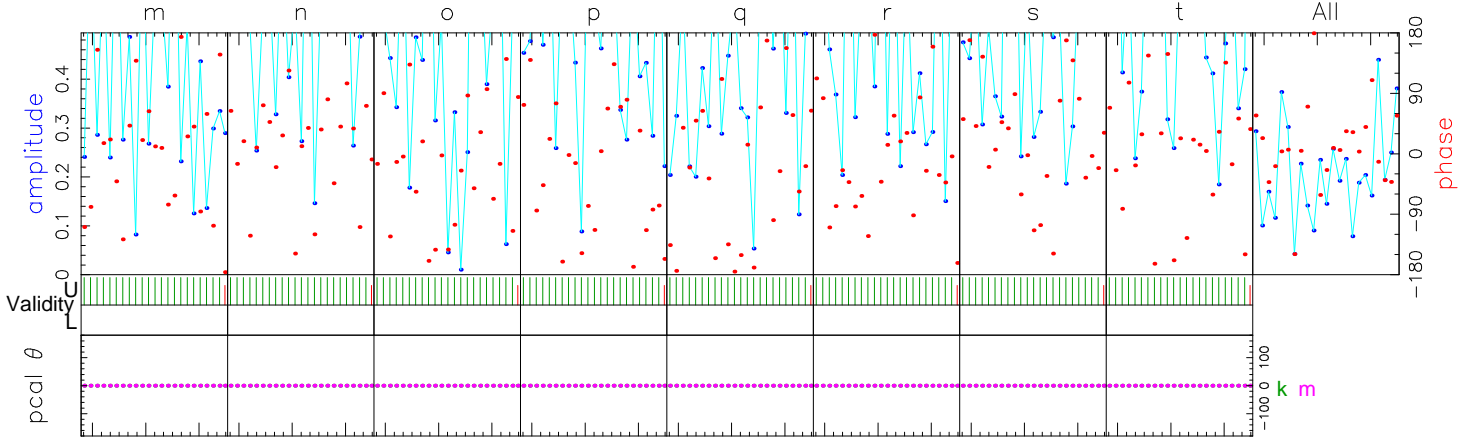


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125855  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-22.2	37.1	-28.8	-40.3	80.9	-23.5	23.2	25.7	Phase	7.0
	0.2	0.3	0.2	0.1	0.1	0.2	0.3	0.2	Ampl.	0.2
	391.8	113.1	350.1	280.5	459.4	482.2	114.3	449.7	Sbd box	113.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.50528361482E+03	Apriori delay (usec)	-6.50472457159E+03	Resid mbdelay (usec)	3.45677E-03	+/-	1.9E-04
Sband delay (usec)	-6.50528600659E+03	Apriori clock (usec)	-3.8739777E-01	Resid sbdelay (usec)	-5.61435E-01	+/-	1.5E-03
Phase delay (usec)	-6.50472457136E+03	Apriori clockrate (us/s)	1.6670606E-07	Resid phdelay (usec)	2.26146E-07	+/-	6.6E-07
Delay rate (us/s)	-8.72937567454E-01	Apriori rate (us/s)	-8.72934627724E-01	Resid rate (us/s)	-2.93973E-06	+/-	7.0E-09
Total phase (deg)	-207.7	Apriori accel (us/s/s)	3.89908110886E-05	Resid phase (deg)	7.0	+/-	20.5

ph/seg (deg)	62.7	RMS	49.1	Theor.	62.7	Amplitude	0.165 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	67.4	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)	45.2	Inc. seg. avg.	0.156	Inc. frq. avg.	0.165	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	50.8	Inc. frq. avg.	0.165	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

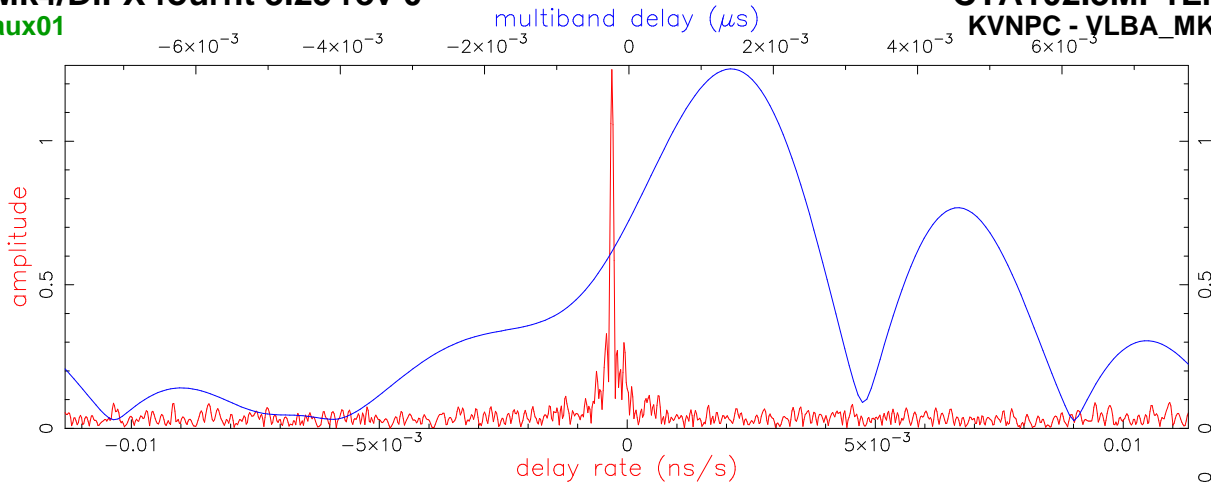
k: az 254.7 el 43.8 pa 56.7      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) 5152.255 2271.655      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/km..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/km.W.194.3MP1LM

Mk4/DiFX fourfit 3.25 rev 0

aux01

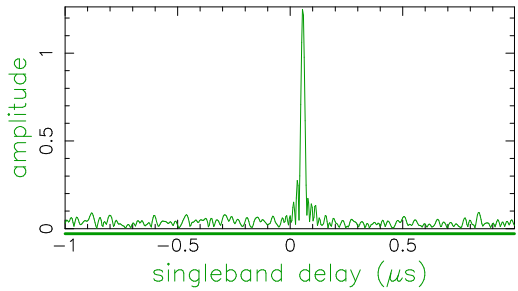
CTA102.3MP1LM, No0981, Lm

KVNPC - VLBA\_MK, fgroup W, pol LL

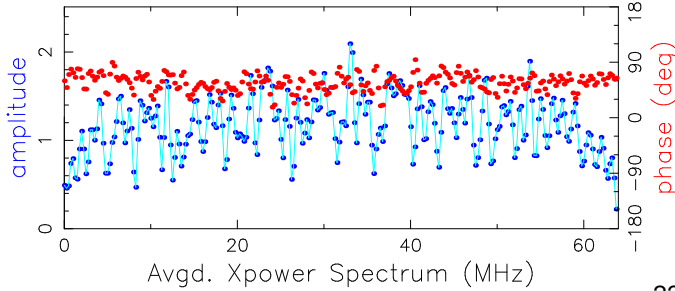


Fringe quality 6

SNR 44.1  
 Int time 162.658  
 Amp 1.264  
 Phase -34.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.056070  
 MBD 0.001494  
 Fringe rate (Hz)  
 -0.026951  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

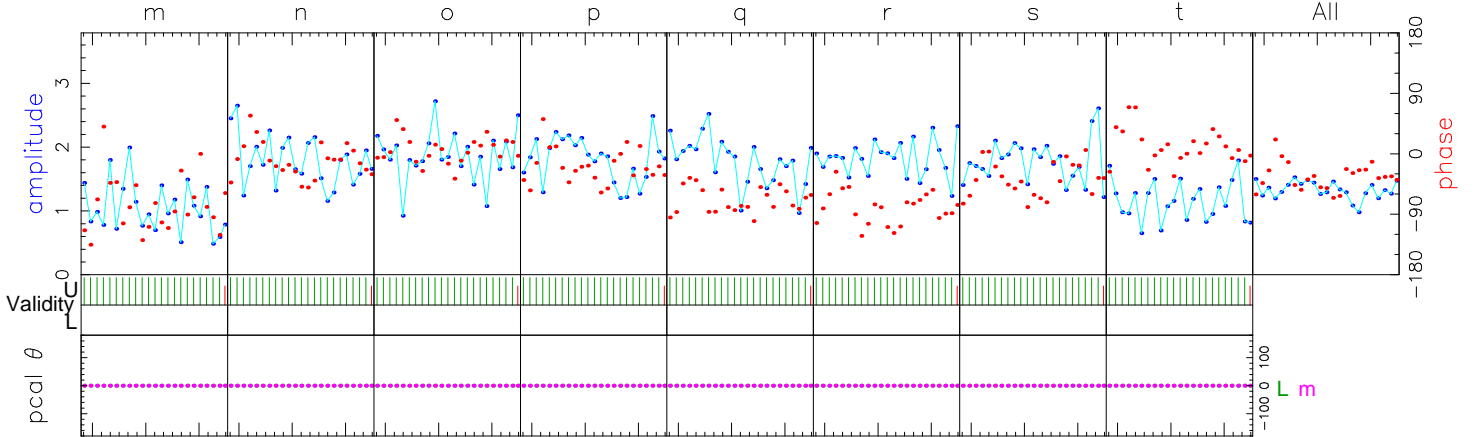


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125847  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-80.0	-11.3	4.1	-20.9	-68.3	-80.9	-38.8	8.9		Phase -34.7
	0.9	1.6	1.8	1.7	1.7	1.7	1.6	1.0		Ampl. 1.5
	273.7	271.8	270.8	270.9	271.2	271.2	271.7	273.3		Sbd box 271.4
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used
L	0	0	60000	0	0	0	4000	0		PC freqs
m	0	0	0	0	0	0	0	0		PC freqs
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
L	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
m	1000	1000	1000	1000	1000	1000	1000	1000		
L	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec) (SBD)	-1.38379718417E+04	Apriori delay (usec)	-1.38380202103E+04	Resid mbdelay (usec)	1.49365E-03	+/-	2.5E-05
Sband delay (usec)	-1.38379641401E+04	Apriori clock (usec)	-2.5982552E+01	Resid sbdelay (usec)	5.60702E-02	+/-	2.0E-04
Phase delay (usec)	-1.38380202115E+04	Apriori clockrate (us/s)	-7.4270390E-06	Resid phdelay (usec)	-1.12026E-06	+/-	8.4E-08
Delay rate (us/s)	1.21459392483E+00	Apriori rate (us/s)	1.21459423770E+00	Resid rate (us/s)	-3.12876E-07	+/-	8.9E-10
Total phase (deg)	-5.5	Apriori accel (us/s/s)	7.96974438716E-05	Resid phase (deg)	-34.7	+/-	2.6

ph/seg (deg)	RMS 20.0	Theor. 6.2	Amplitude Search (1024X32)	1.245	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	11.6	10.9	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)	39.8	3.7	Inc. seg. avg.	1.319	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 (%)	30.6	6.4	Inc. frq. avg.	1.486	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

L: az 89.7 el 19.3 pa -54.1 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) -7015.590 3680.330 simultaneous interpolator

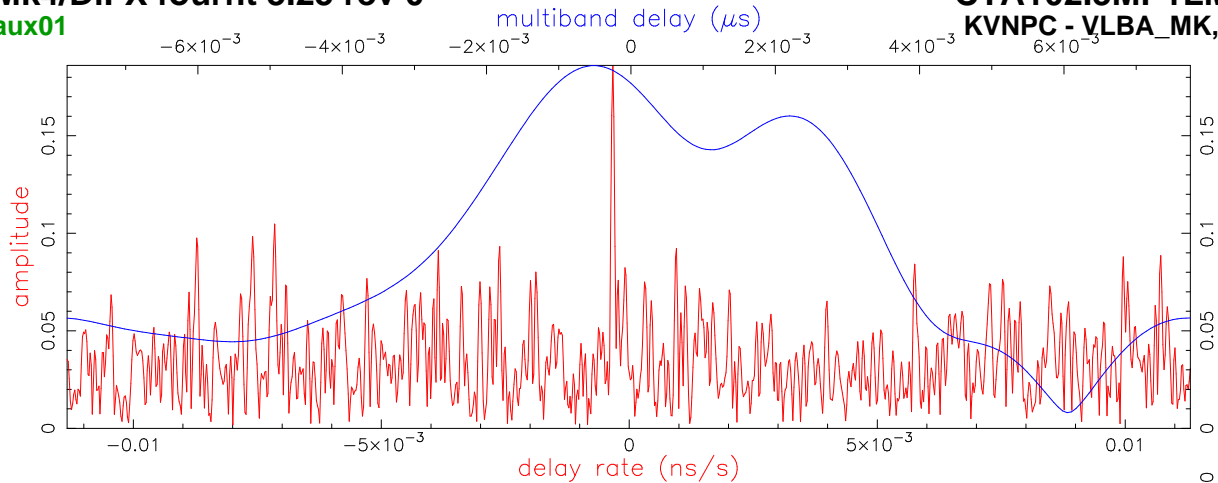
Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/Lm..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/Lm.W.180.3MP1LM

Mk4/DiFX fourfit 3.25 rev 0

aux01

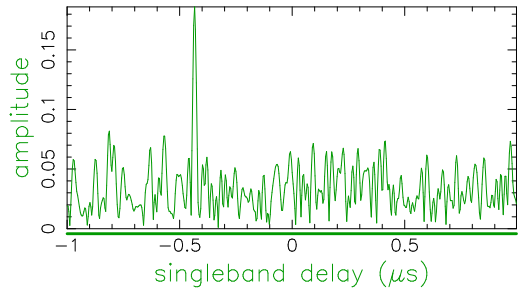
CTA102.3MP1LM, No0981, Lm

KVNPC - VLBA\_MK, fgroup W, pol RR

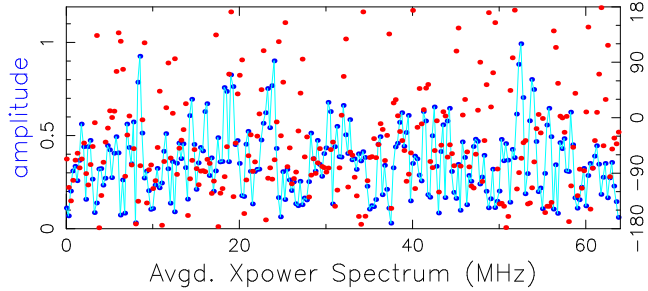


Fringe quality 0

SNR 6.5  
 Int time 162.658  
 Amp 0.186  
 Phase -19.9  
 PFD 1.2e-02  
 Delays (us)  
 SBD -0.433794  
 MBD -0.000522  
 Fringe rate (Hz)  
 -0.027952  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

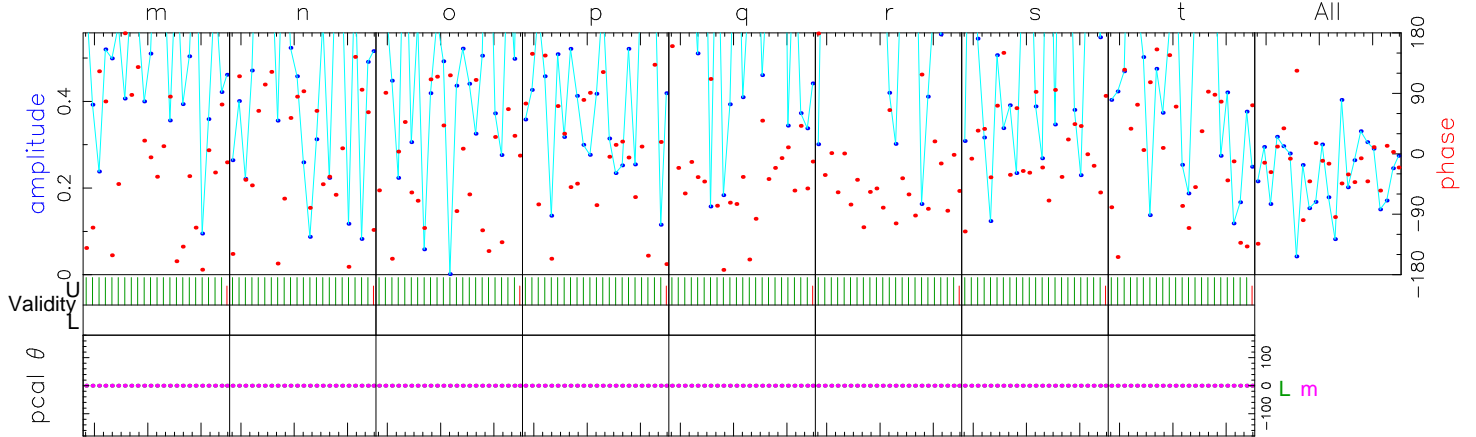


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125851  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-37.9	56.6	7.1	43.7	-41.0	-50.9	-4.3	62.5		-19.9
	0.1	0.1	0.1	0.1	0.5	0.5	0.4	0.2		0.2
	357.1	487.9	131.3	314.8	146.7	146.0	147.2	148.8		145.9
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		
L	0	0	60000	0	0	0	4000	0		
M	0	0	0	0	0	0	0	0		
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC freqs
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
L	1000	1000	1000	1000	1000	1000	1000	1000		Mani PC
m	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
L	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec) (SBD)	-1.38384582324E+04	Apriori delay (usec)	-1.38380202103E+04	Resid mbdelay (usec)	-5.22075E-04	+/-	1.7E-04
Sband delay (usec)	-1.38384540048E+04	Apriori clock (usec)	-2.5982552E+01	Resid sbdelay (usec)	-4.33794E-01	+/-	1.3E-03
Phase delay (usec)	-1.38380202110E+04	Apriori clockrate (us/s)	-7.4270390E-06	Resid phdelay (usec)	-6.41471E-07	+/-	5.7E-07
Delay rate (us/s)	1.21459391321E+00	Apriori rate (us/s)	1.21459423770E+00	Resid rate (us/s)	-3.24491E-07	+/-	6.1E-09
Total phase (deg)	-350.7	Apriori accel (us/s/s)	7.96974438716E-05	Resid phase (deg)	-19.9	+/-	17.7

ph/seg (deg)	50.2	Theor.	42.4	Amplitude	0.186 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	52.1		73.9	Search (1024X32)	0.182	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	56.8		25.0	Inc. seg. avg.	0.184	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	99.1		43.6	Inc. frq. avg.	0.215	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

L: az 89.7 el 19.3 pa -54.1      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) -7015.590 3680.330      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/Lm..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/Lm.W.187.3MP1LM

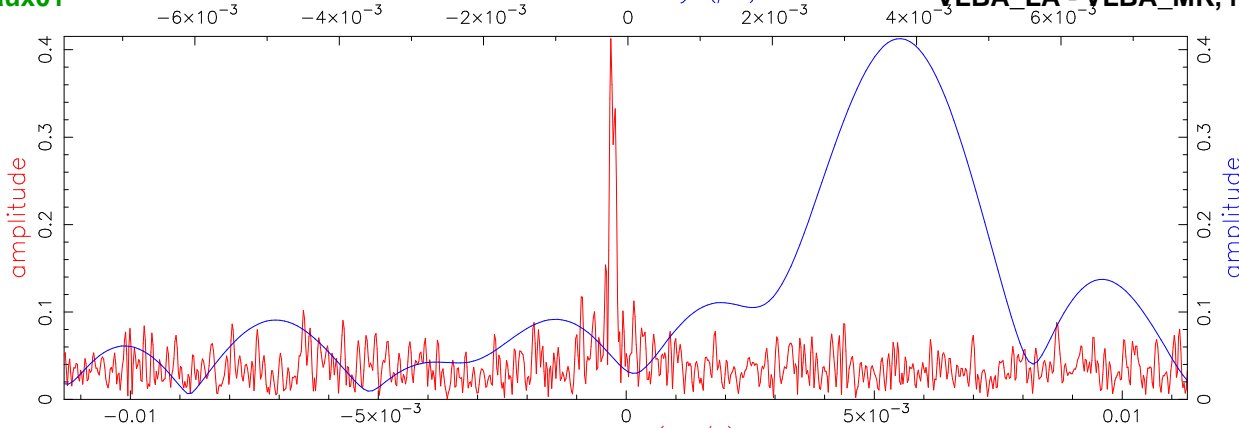
Mk4/DiFX fourfit 3.25 rev 0

aux01

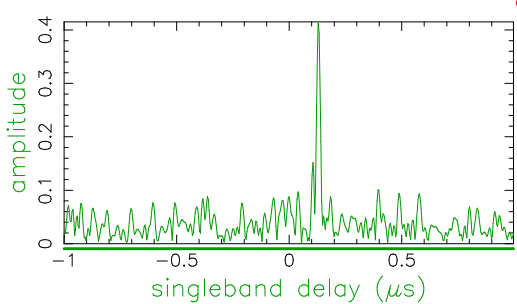
CTA102.3MP1LM, No0981, Im

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

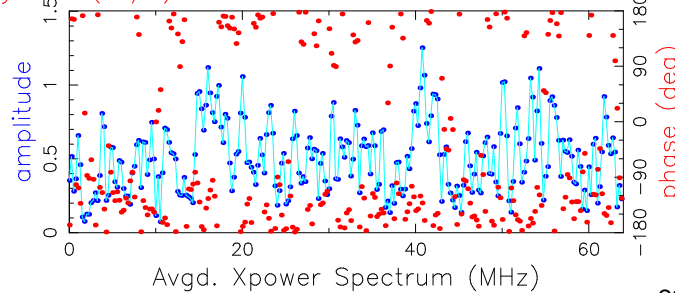
multiband delay ( $\mu$ s)



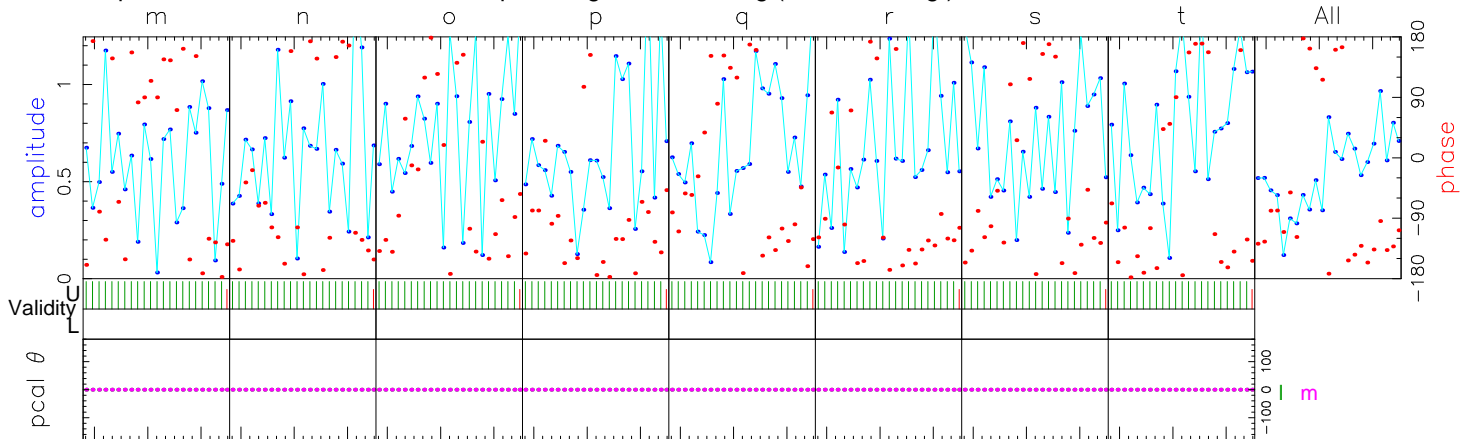
Fringe quality 9  
 SNR 14.5  
 Int time 162.816  
 Amp 0.415  
 Phase -143.7  
 PFD 4.5e-39  
 Delays (us)  
 SBD 0.129910  
 MBD 0.003799  
 Fringe rate (Hz)  
 -0.026193  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125853  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"



delay rate (ns/s)



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
	-174.5	-141.0	-131.6	-115.6	-138.7	-140.2	-143.1	-164.3	Phase	-143.7
	0.4	0.4	0.3	0.5	0.4	0.5	0.5	0.5	Ampl.	0.4
	291.1	290.2	290.6	290.0	290.5	290.3	289.9	289.5	Sbd box	290.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-7.99800983538E+03	Apriori delay (usec)	-7.99813863443E+03	Resid mbdelay (usec)	3.79905E-03	+/-	7.5E-05
Sband delay (usec)	-7.99800872443E+03	Apriori clock (usec)	-8.8516712E+00	Resid sbdelay (usec)	1.29910E-01	+/-	5.9E-04
Phase delay (usec)	-7.99813863907E+03	Apriori clockrate (us/s)	-2.1950107E-07	Resid phdelay (usec)	-4.63394E-06	+/-	2.6E-07
Delay rate (us/s)	-9.08529082154E-01	Apriori rate (us/s)	-9.08528778078E-01	Resid rate (us/s)	-3.04076E-07	+/-	2.7E-09
Total phase (deg)	-132.9	Apriori accel (us/s/s)	4.81685950633E-05	Resid phase (deg)	-143.7	+/-	7.9

ph/seg (deg) 47.5 19.0 Search (1024X32) 0.404 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 57.2 33.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 19.8 11.2 Inc. seg. avg. 0.523 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 16.5 19.5 Inc. frq. avg. 0.424 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 l: az 255.5 el 38.5 pa 53.4 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 5371.159 2901.720 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/Im..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/Im.W.192.3MP1LM

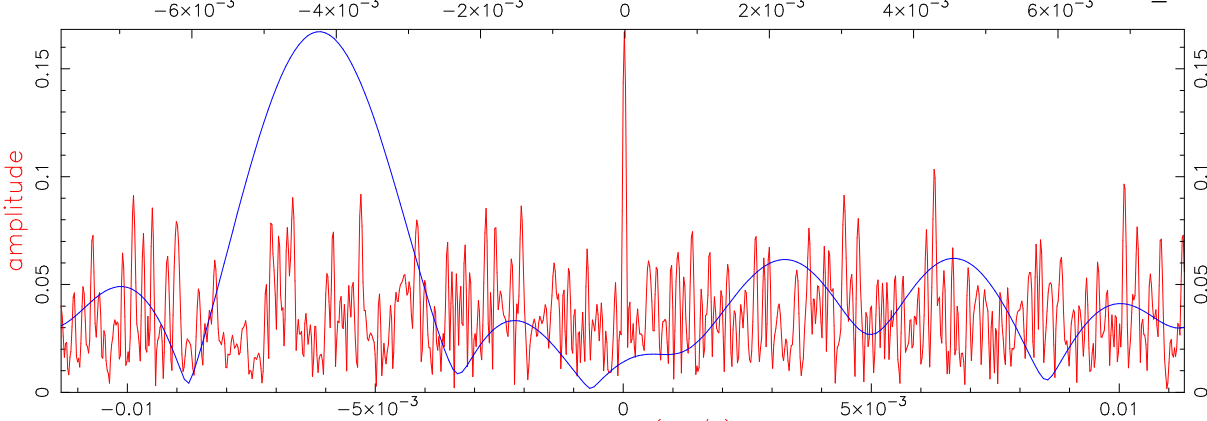
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, Lm

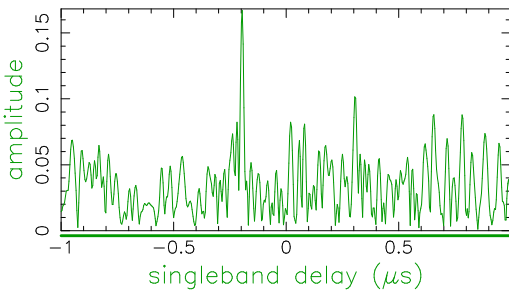
KVNPC - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)

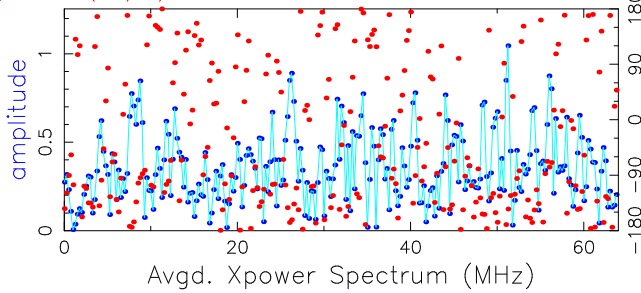


Fringe quality 0

SNR 5.9  
Int time 162.658  
Amp 0.168  
Phase 166.7  
PFD 4.3e-01  
Delays (us)  
SBD -0.196283  
MBD -0.004271  
Fringe rate (Hz) 0.001621  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

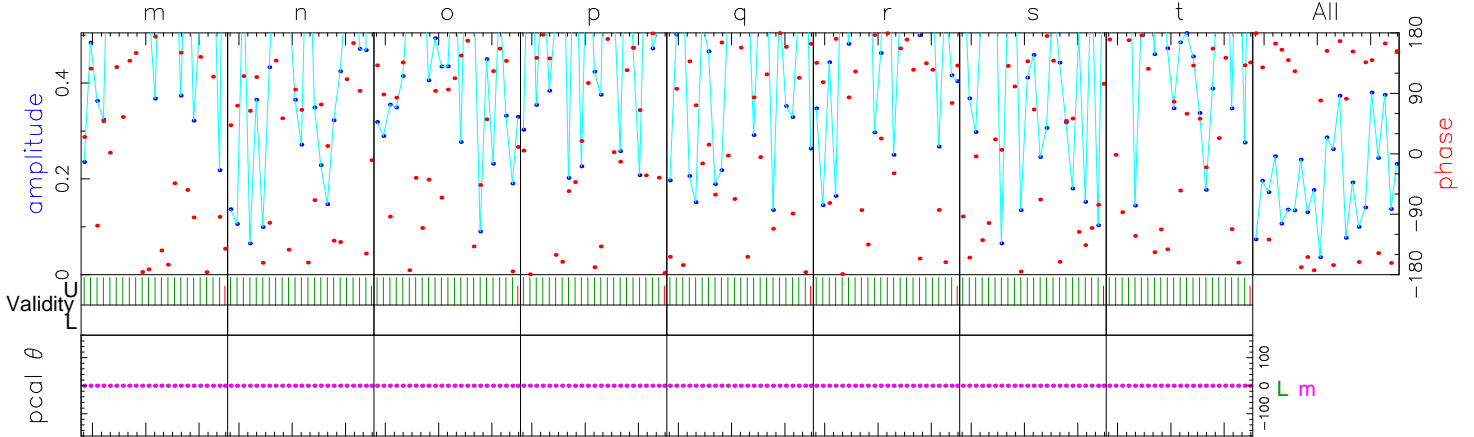


delay rate (ns/s)



Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 191347.17  
Stop 191629.98  
FRT 191508.00  
Corr/FF/build  
2025:003:204508  
2025:041:125853  
2024:113:095956  
RA & Dec (J2000)  
22h32m36.408901s  
+11°43'50.904060"

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
	175.7	142.4	150.6	178.1	172.9	162.1	-177.3	168.9	Phase	166.7
	0.2	0.1	0.1	0.2	0.1	0.3	0.1	0.2	Ampl.	0.2
	202.0	425.1	254.0	415.2	46.5	207.4	361.8	343.2	Sbd box	206.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
L	0	0	60000	0	0	0	4000	0	PC freqs	
M	0	0	0	0	0	0	0	0	PC freqs	
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
L	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
L	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.38382119815E+04	Apriori delay (usec)	-1.38380202103E+04	Resid mbdelay (usec)	-4.27115E-03	+/-	1.8E-04
Sband delay (usec)	-1.38382164931E+04	Apriori clock (usec)	-2.5982552E+01	Resid sbdelay (usec)	-1.96283E-01	+/-	1.5E-03
Phase delay (usec)	-1.38380202050E+04	Apriori clockrate (us/s)	-7.4270390E-06	Resid phdelay (usec)	5.37542E-06	+/-	6.3E-07
Delay rate (us/s)	1.21459425652E+00	Apriori rate (us/s)	1.21459423770E+00	Resid rate (us/s)	1.88150E-08	+/-	6.7E-09
Total phase (deg)	-164.1	Apriori accel (us/s/s)	7.96974438716E-05	Resid phase (deg)	166.7	+/-	19.5

ph/seg (deg)	38.3	RMS	46.8	Theor.	0.168 +/- 0.029	Amplitude	0.165	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	58.8	Search (1024X32)	0.165	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	0.165	SampCntNorm: enabled	sb window (us) -1.000 1.000
ph/frq (deg)	15.2	Inc. seg. avg.	0.145	Inc. frq. avg.	0.153	Bits/sample: 2x2	0.145	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	37.0	Inc. frq. avg.	0.153			Data rate(Mb/s): 2048	0.153	nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00

L: az 89.7 el 19.3 pa -54.1 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) -7015.590 3680.330 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/Lm..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/Lm.W.193.3MP1LM



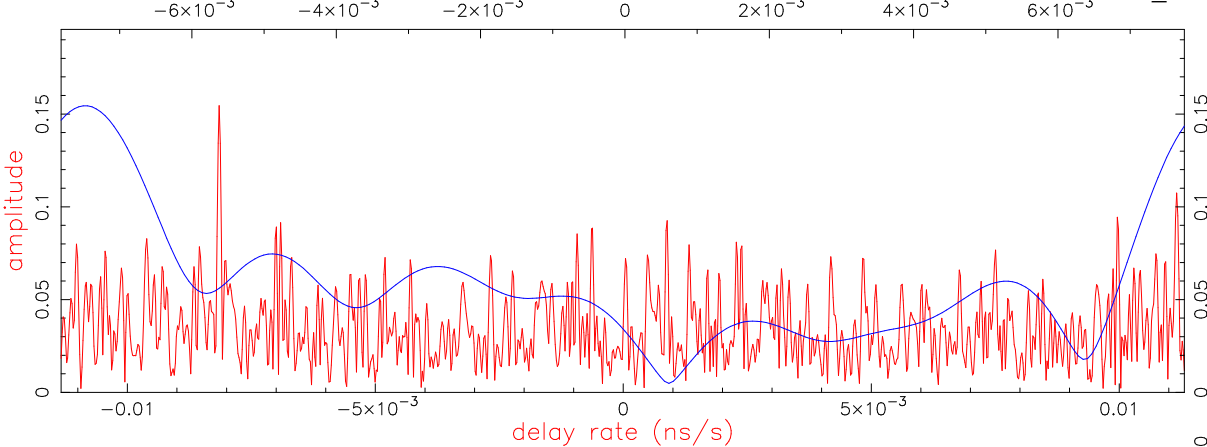
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, Lm

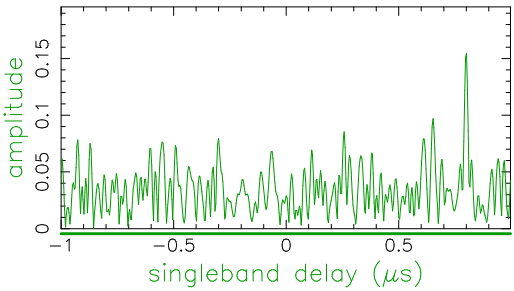
KVNPC - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

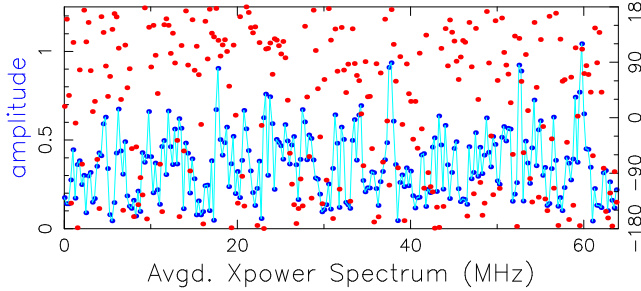


Fringe quality 0

SNR 5.5  
 Int time 162.658  
 Amp 0.196  
 Phase 73.3  
 PFD 1.0e+00  
 Delays (us)  
 SBD 0.799297  
 MBD -0.007493  
 Fringe rate (Hz)  
 -0.702549  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

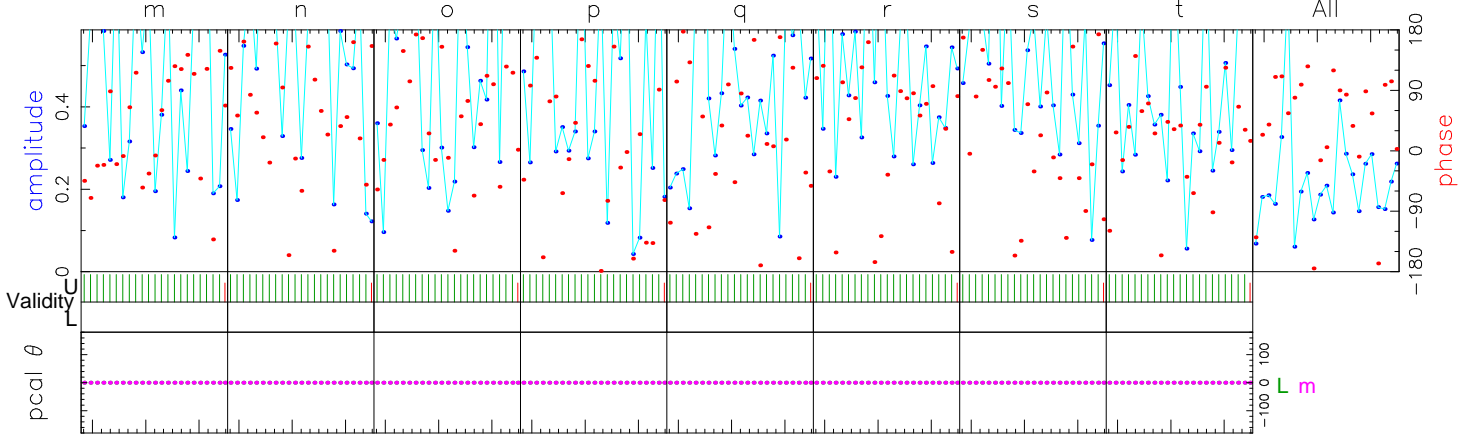


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125855  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	29.9	69.4	84.6	130.9	44.7	101.9	106.0	42.3	Phase	73.3
	0.2	0.3	0.3	0.1	0.1	0.2	0.1	0.3	Ampl.	0.2
	160.6	340.3	461.4	423.9	433.2	491.4	249.4	461.7	Sbd box	461.6
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
L	0	0	60000	0	0	0	4000	0	PC freqs	
M	0	0	0	0	0	0	0	0	PC freqs	
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
L:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
L	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
L	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.38372152029E+04	Apriori delay (usec)	-1.38380202103E+04	Resid mbdelay (usec)	-7.49254E-03	+/-	2.0E-04
Sband delay (usec)	-1.38372209136E+04	Apriori clock (usec)	-2.5982552E+01	Resid sbdelay (usec)	7.99297E-01	+/-	1.6E-03
Phase delay (usec)	-1.38380202080E+04	Apriori clockrate (us/s)	-7.4270390E-06	Resid phdelay (usec)	2.36229E-06	+/-	6.8E-07
Delay rate (us/s)	1.21458608180E+00	Apriori rate (us/s)	1.21459423770E+00	Resid rate (us/s)	-8.15590E-06	+/-	7.2E-09
Total phase (deg)	-257.5	Apriori accel (us/s/s)	7.96974438716E-05	Resid phase (deg)	73.3	+/-	21.0

ph/seg (deg)	63.0	RMS	Theor.	Amplitude	0.196 +/- 0.036	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	92.3	63.0	50.3	Search (1024X32)	0.152	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	38.7	92.3	87.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	43.5	38.7	29.7	Inc. seg. avg.	0.203	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
		43.5	51.8	Inc. frq. avg.	0.196	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

L: az 89.7 el 19.3 pa -54.1 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) -7015.590 3680.330 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/Lm..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/Lm.W.195.3MP1LM

Mk4/DiFX fourfit 3.25 rev 0

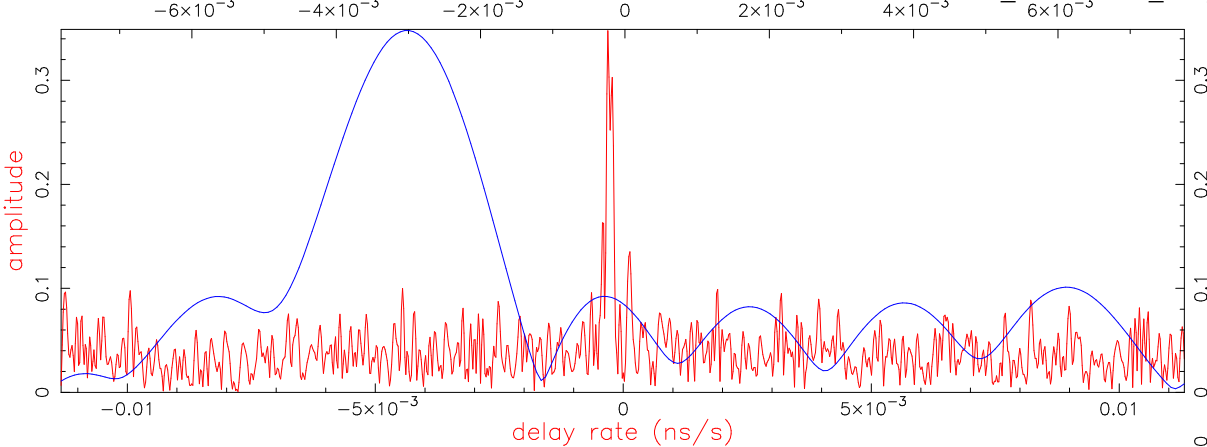
aux01

CTA102.3MP1LM, No0981, Im

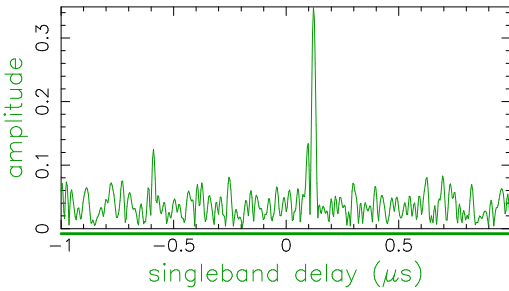
VLBA\_LA - VLBA\_MK, fgroup W, pol RR

multiband delay ( $\mu$ s)

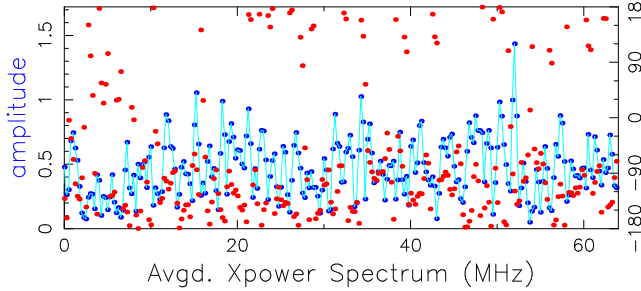
Fringe quality 9



SNR 12.2  
 Int time 162.816  
 Amp 0.349  
 Phase -132.5  
 PFD 1.1e-25  
 Delays (us)  
 SBD 0.121841  
 MBD -0.002982  
 Fringe rate (Hz)  
 -0.026261  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

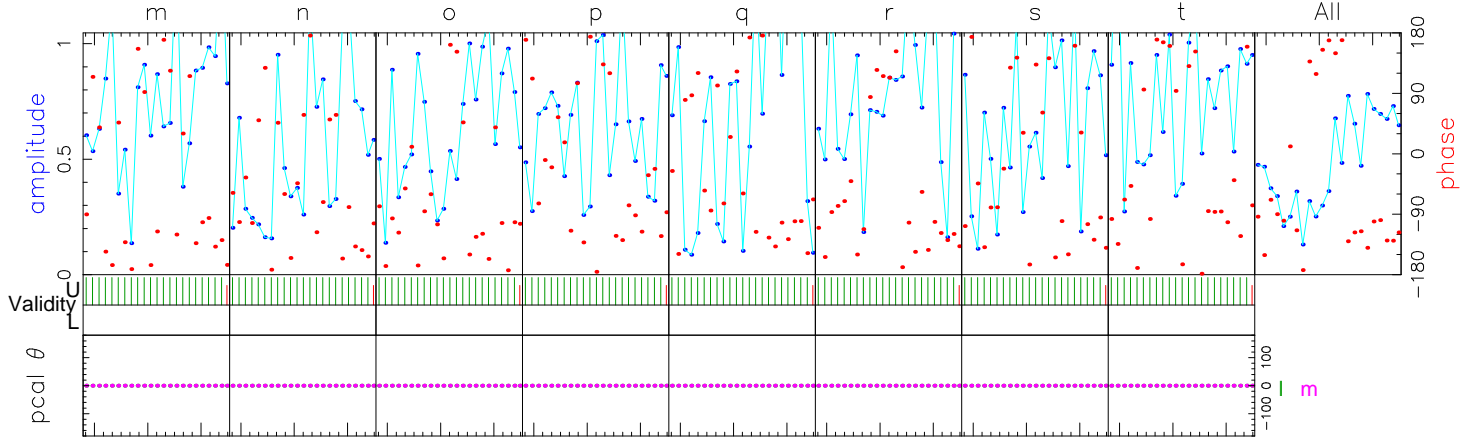


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125855  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-150.7	-115.4	-123.3	-119.0	-119.7	-130.8	-150.7	-141.2	Phase	-132.5
	0.4	0.2	0.4	0.2	0.5	0.5	0.3	0.4	Ampl.	0.3
	288.1	106.7	288.2	160.3	288.0	288.1	58.5	288.3	Sbd box	288.2
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-7.99801661638E+03		Apriori delay (usec)		-7.99813863443E+03		Resid mbdelay (usec)		-2.98195E-03	+/- 8.9E-05
Sband delay (usec)	-7.99801679293E+03		Apriori clock (usec)		-8.8516712E+00		Resid sbdelay (usec)		1.21841E-01	+/- 7.1E-04
Phase delay (usec)	-7.99813863871E+03		Apriori clockrate (us/s)		-2.1950107E-07		Resid phdelay (usec)		-4.27215E-06	+/- 3.0E-07
Delay rate (us/s)	-9.08529082946E-01		Apriori rate (us/s)		-9.08528778078E-01		Resid rate (us/s)		-3.04868E-07	+/- 3.2E-09
Total phase (deg)			Apriori accel (us/s/s)		4.81685950633E-05		Resid phase (deg)		-132.5	+/- 9.4

ph/seg (deg) 56.5 22.6 Search (1024X32) 0.342 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 68.4 39.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 15.6 13.3 Inc. seg. avg. 0.448 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 26.6 23.2 Inc. frq. avg. 0.348 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 l: az 255.5 el 38.5 pa 53.4 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 5371.159 2901.720 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/Im..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/Im.W.196.3MP1LM

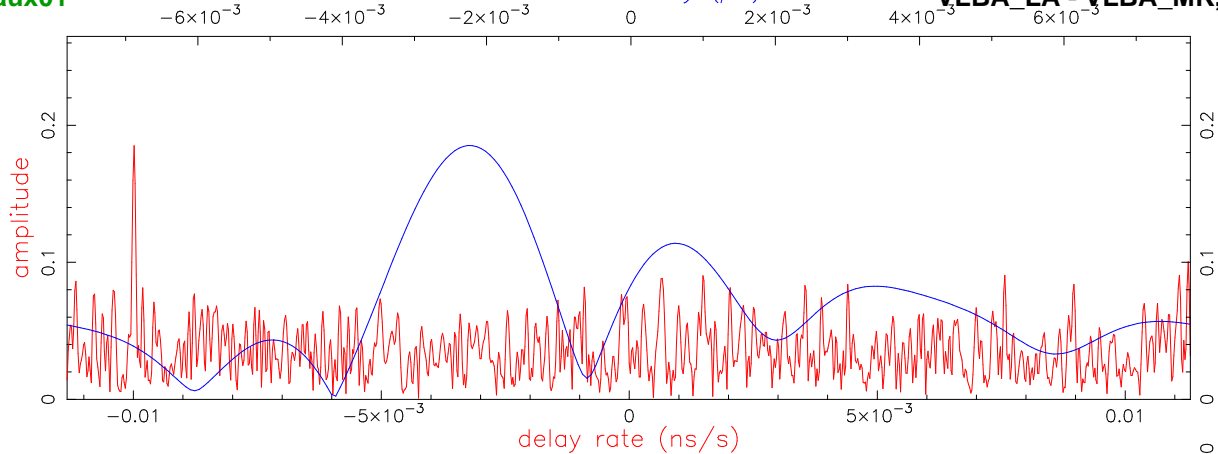
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, Im

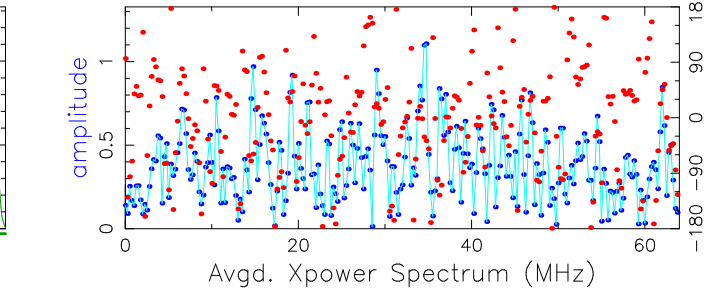
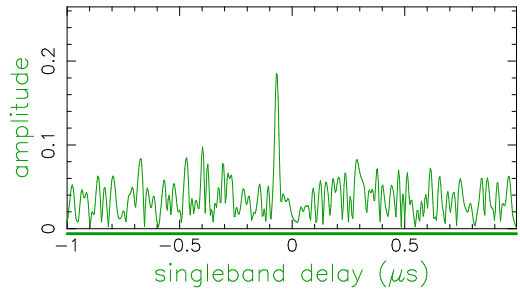
VLBA\_LA - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)



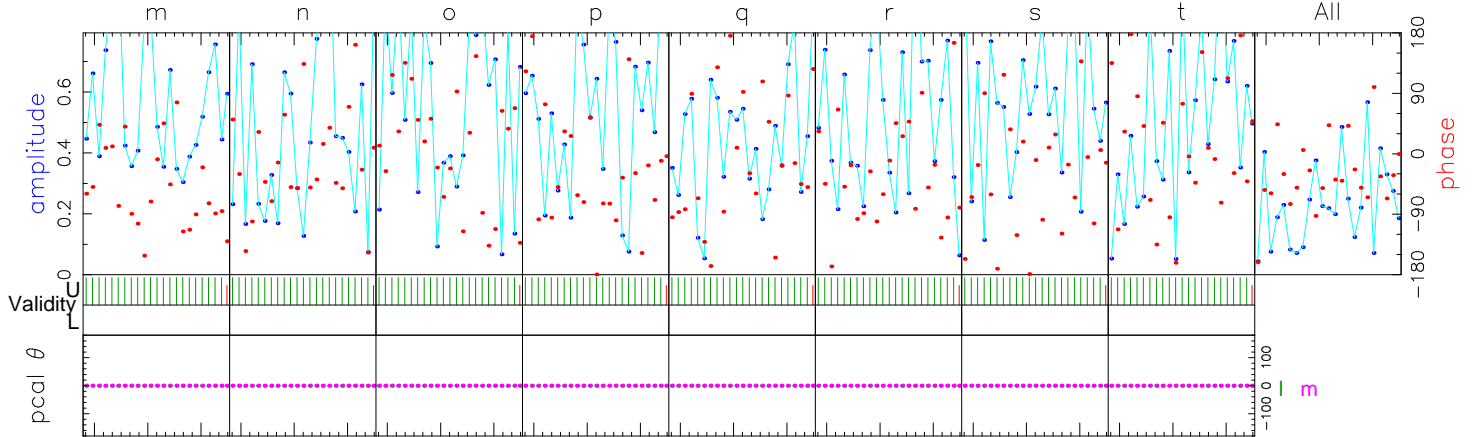
Fringe quality 0

SNR 6.6  
 Int time 162.816  
 Amp 0.265  
 Phase -38.7  
 PFD 8.1e-03  
 Delays (us)  
 SBD -0.068603  
 MBD -0.002189  
 Fringe rate (Hz)  
 -0.862144  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125858  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-57.8	-13.9	31.4	-57.8	-4.1	-52.2	-43.5	-32.5	Phase	-38.7
	0.5	0.4	0.2	0.3	0.0	0.4	0.3	0.2	Ampl.	0.3
	238.2	238.4	459.9	239.6	474.1	238.3	307.3	134.6	Sbd box	239.4
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-7.99820332324E+03	Apriori delay (usec)	-7.99813863443E+03	Resid mbdelay (usec)	-2.18881E-03	+/-	1.7E-04
Sband delay (usec)	-7.99820723743E+03	Apriori clock (usec)	-8.8516712E+00	Resid sbdelay (usec)	-6.86030E-02	+/-	1.3E-03
Phase delay (usec)	-7.99813863568E+03	Apriori clockrate (us/s)	-2.1950107E-07	Resid phdelay (usec)	-1.24857E-06	+/-	5.6E-07
Delay rate (us/s)	-9.08538786711E-01	Apriori rate (us/s)	-9.08528778078E-01	Resid rate (us/s)	-1.00086E-05	+/-	6.0E-09
Total phase (deg)	-27.9	Apriori accel (us/s/s)	4.81685950633E-05	Resid phase (deg)	-38.7	+/-	17.5

ph/seg (deg)	53.2	Theor.	41.9	Amplitude	0.265 +/- 0.040	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	78.3	Search (1024X32)	0.183	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	35.8	Inc. seg. avg.	0.261	Inc. frq. avg.	0.264	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	52.9	Inc. frq. avg.	0.264			Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

l: az 255.5 el 38.5 pa 53.4      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) 5371.159 2901.720      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/Im..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/Im.W.200.3MP1LM

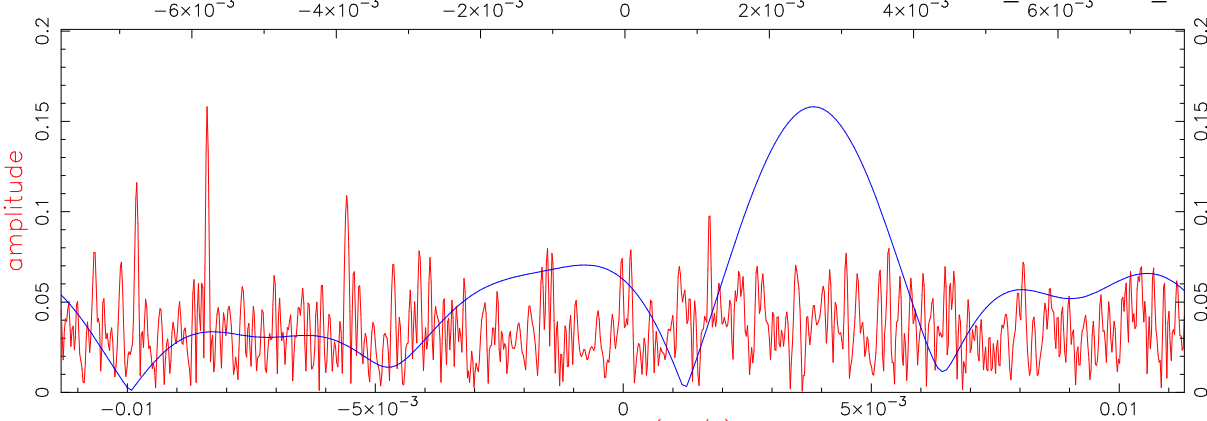
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, Im

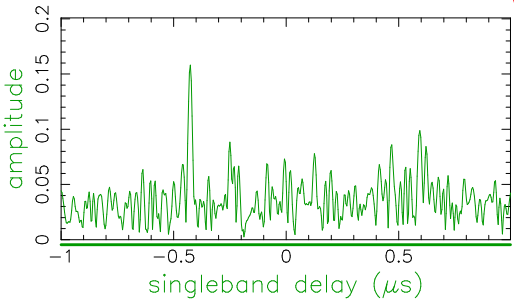
VLBA\_LA - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

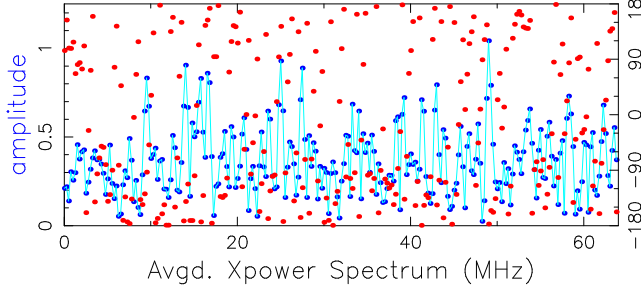


Fringe quality 0

SNR 5.5  
 Int time 162.816  
 Amp 0.201  
 Phase -65.8  
 PFD 9.8e-01  
 Delays (us)  
 SBD -0.426453  
 MBD 0.002593  
 Fringe rate (Hz)  
 -0.724537  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

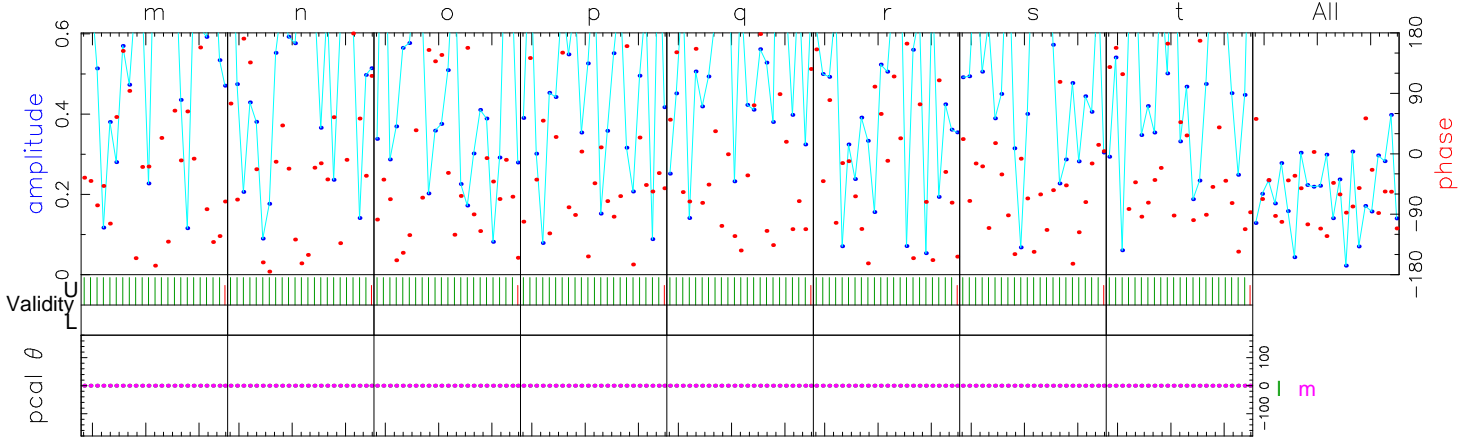


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125900  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-74.1	-30.4	-74.6	-68.8	-75.4	37.1	-64.4	-63.2	Phase	-65.8
	0.2	0.1	0.3	0.3	0.1	0.0	0.4	0.3	Ampl.	0.2
	394.6	392.8	269.3	149.3	467.0	376.0	148.4	115.8	Sbd box	147.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-7.99855791625E+03	Apriori delay (usec)	-7.99813863443E+03	Resid mbdelay (usec)	2.59318E-03	+/-	2.0E-04
Sband delay (usec)	-7.99856508718E+03	Apriori clock (usec)	-8.8516712E+00	Resid sbdelay (usec)	-4.26453E-01	+/-	1.6E-03
Phase delay (usec)	-7.99813863655E+03	Apriori clockrate (us/s)	-2.1950107E-07	Resid phdelay (usec)	-2.12157E-06	+/-	6.7E-07
Delay rate (us/s)	-9.08537189232E-01	Apriori rate (us/s)	-9.08528778078E-01	Resid rate (us/s)	-8.41115E-06	+/-	7.1E-09
Total phase (deg)	-55.0	Apriori accel (us/s/s)	4.81685950633E-05	Resid phase (deg)	-65.8	+/-	20.7

ph/seg (deg)	46.6	Theor.	49.7	Amplitude	0.201 +/- 0.036	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	64.5	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)	44.9	Inc. seg. avg.	0.190	Inc. frq. avg.	0.182	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	57.3	Inc. frq. avg.	0.182			Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
						Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
							ion window (TEC) 0.00 0.00

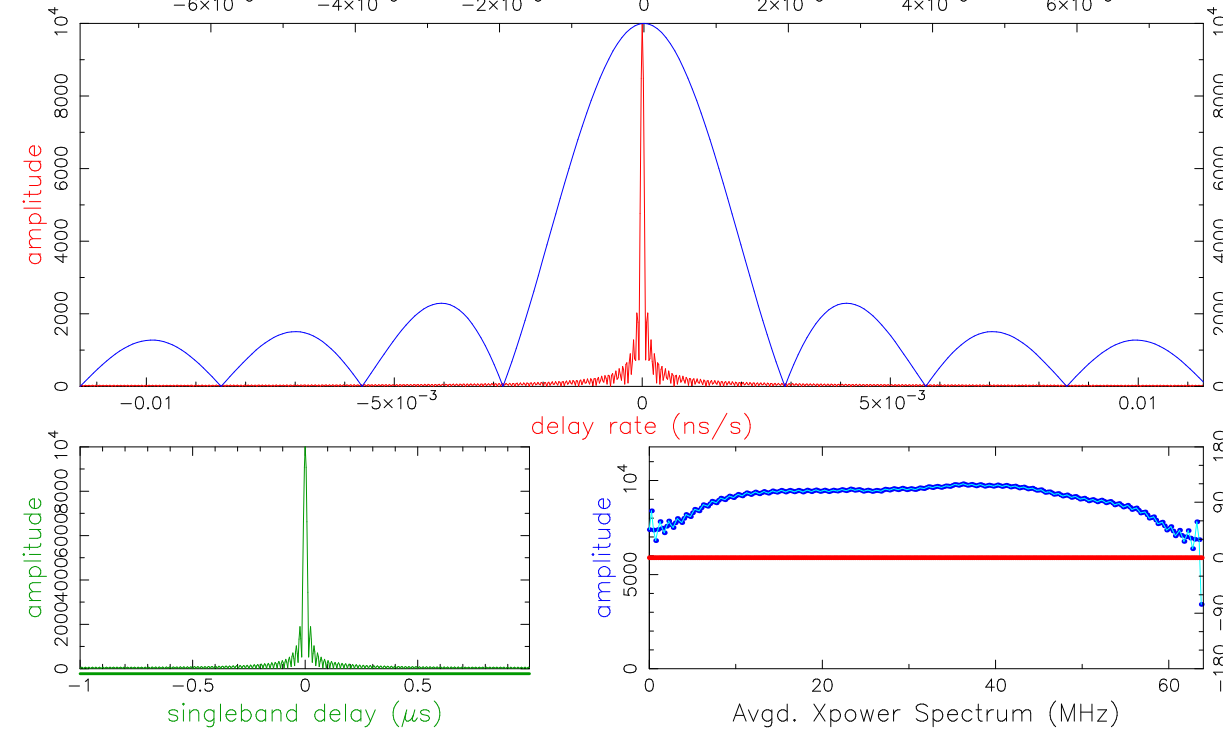
l: az 255.5 el 38.5 pa 53.4 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 5371.159 2901.720 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/Im..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/Im.W.206.3MP1LM

Mk4/DiFX fourfit 3.25 rev 0

aux01

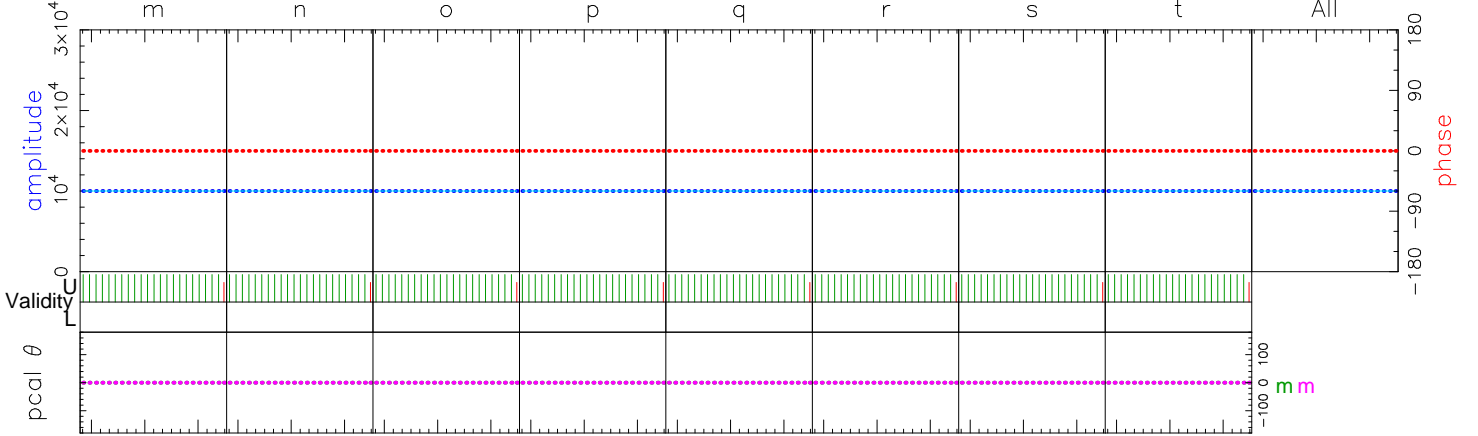
CTA102.3MP1LM, No0981, mm

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



Fringe quality 9  
 SNR 348936.3  
 Int time 162.816  
 Amp 10000.000  
 Phase 0.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000000  
 MBD 0.000000  
 Fringe rate (Hz) 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125856  
 2024:113:095956  
 RA & Dec (J2000) 22h32m36.408901s +11°43'50.904060"

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		
m	0	0	0	0	0	0	0	0		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	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 +/- 3.1E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.5E-08  
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.1E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 1.1E-13  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

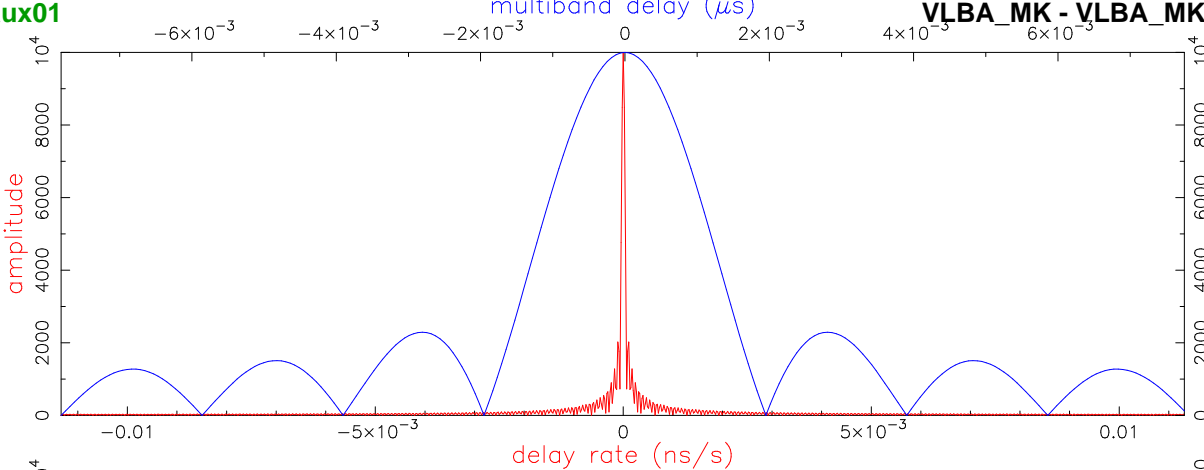
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.000 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 m: az 190.4 el 81.9 pa 11.5 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981//mm..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981//mm.W.199.3MP1LM simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

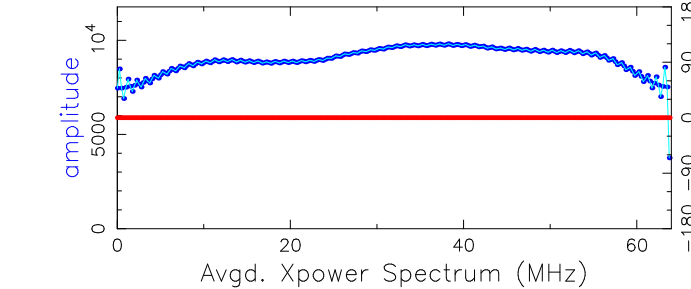
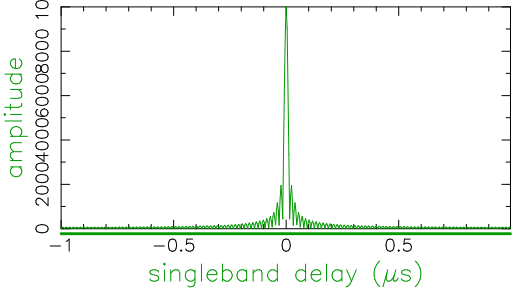
aux01

CTA102.3MP1LM, No0981, mm

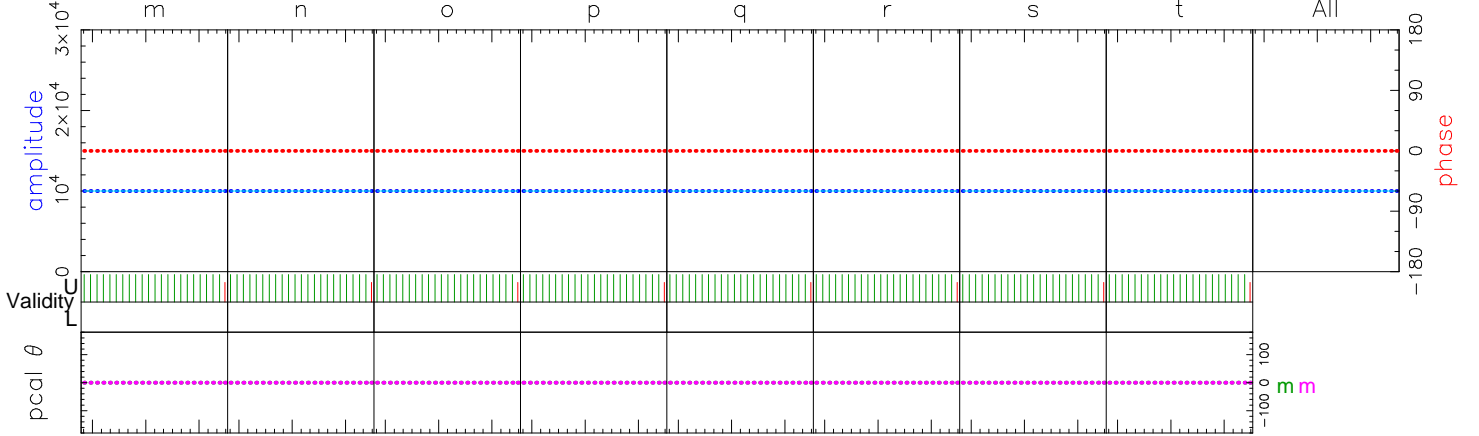
VLBA\_MK - VLBA\_MK, fgroup W, pol RR



Fringe quality 9  
 SNR 348936.3  
 Int time 162.816  
 Amp 10000.000  
 Phase 0.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000000  
 MBD 0.000000  
 Fringe rate (Hz) 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125859  
 2024:113:095956  
 RA & Dec (J2000) 22h32m36.408901s +11°43'50.904060"



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		
m	0	0	0	0	0	0	0	0		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.1E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.5E-08  
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.1E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 1.1E-13  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

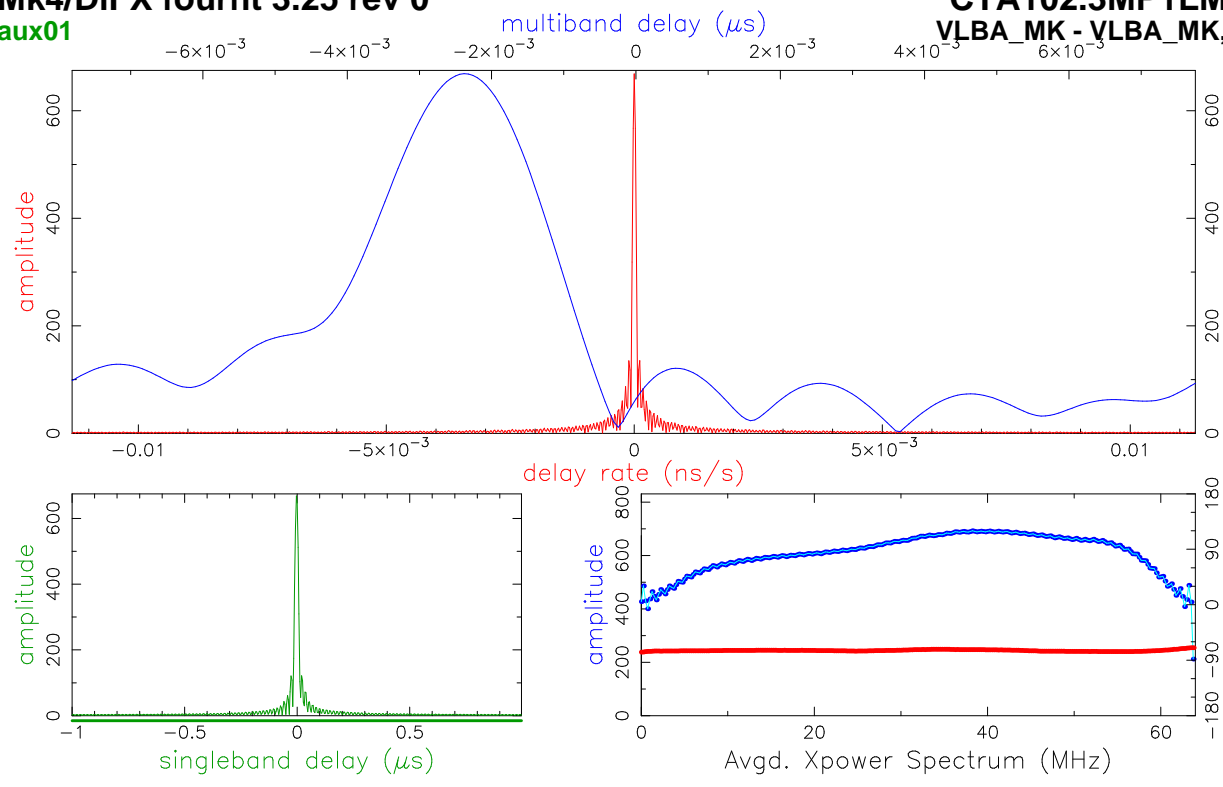
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.000 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 m: az 190.4 el 81.9 pa 11.5 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981//mm..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981//mm.W.203.3MP1LM simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, mm

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

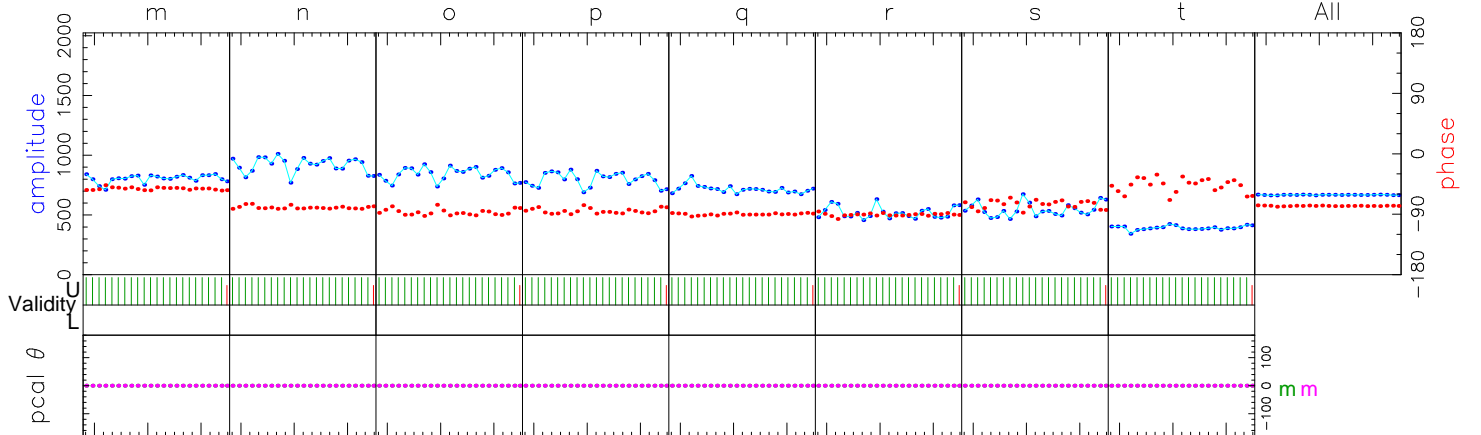


Fringe quality 7

SNR 23549.4  
 Int time 162.816  
 Amp 674.892  
 Phase -77.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002638  
 MBD -0.002332  
 Fringe rate (Hz) 0.000016  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125901  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



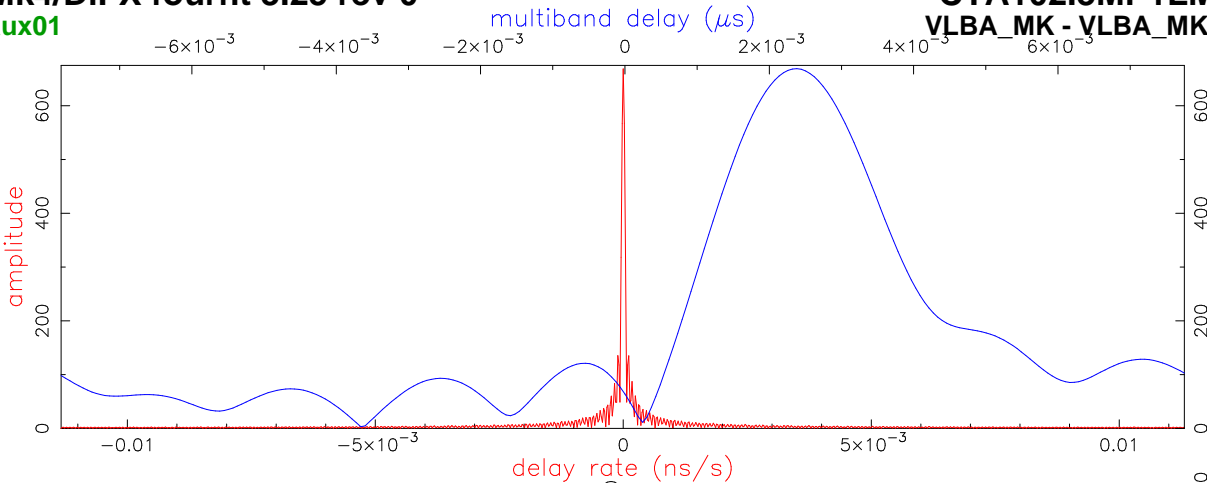
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-51.9	-80.0	-87.2	-85.3	-90.0	-90.7	-75.8	-47.3	Phase	-77.6	
	804.9	919.0	841.7	798.0	716.2	520.3	542.7	386.1	Ampl.	691.1	
	256.0	255.8	256.5	256.6	256.1	256.6	256.8	256.9	Sbd box	256.3	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used		
m	0	0	0	0	0	0	0	0	PC freqs		
m	0	0	0	0	0	0	0	0	PC freqs		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
m	1000	1000	1000	1000	1000	1000	1000	1000			
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec) (SBD)	-2.33206250000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-2.33206E-03	+/- 4.6E-08	
Sband delay (usec)	-2.63800000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-2.63800E-03	+/- 3.7E-07	
Phase delay (usec)	-2.50096055482E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-2.50096E-06	+/- 1.6E-10	
Delay rate (us/s)	1.79973635374E-10		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		1.79974E-10	+/- 1.7E-12	
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-77.6	+/- 0.0	
	RMS	Theor.	Amplitude	674.892 +/- 0.029	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	0.4	0.0	Search (1024X32)	667.565	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000	
amp/seg (%)	1.0	0.0	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008	0.008
ph/frq (deg)	18.5	0.0	Inc. seg. avg.	668.337	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011	0.011	
amp/frq (%)	26.0	0.0	Inc. frq. avg.	691.095	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00
m: az 190.4 el 81.9 pa 11.5	m: az 190.4 el 81.9 pa 11.5		u,v (fr/asec) 0.000		0.000		simultaneous interpolator				
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0981//mm...3MP1LM		Output file: /Exps/c241a/v2/3mm/1234/No0981//mm.W.209.3MP1LM								

Mk4/DiFX fourfit 3.25 rev 0

aux01

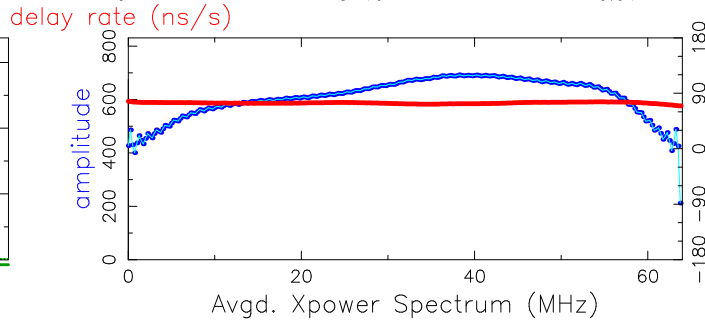
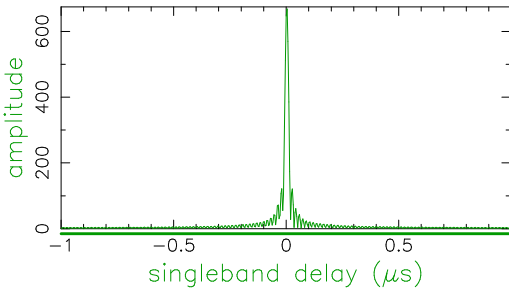
CTA102.3MP1LM, No0981, mm

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



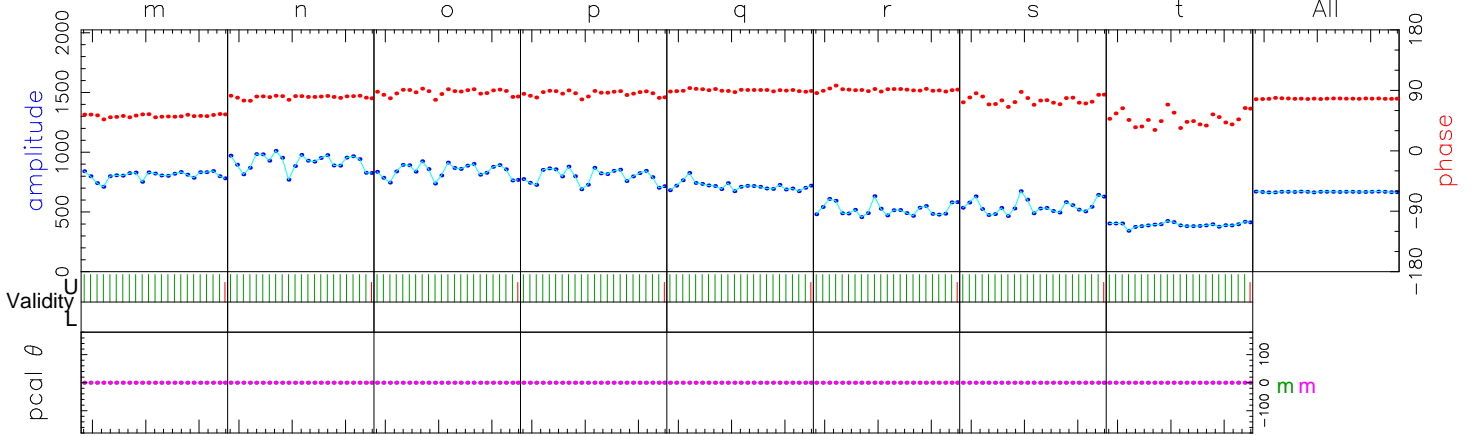
Fringe quality 7

SNR 23549.4  
 Int time 162.816  
 Amp 674.892  
 Phase 77.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.002638  
 MBD 0.002332  
 Fringe rate (Hz)  
 -0.000016  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125902  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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		
m	0	0	0	0	0	0	0	0		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD) 2.33206250000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 2.33206E-03 +/- 4.6E-08  
 Sband delay (usec) 2.63800000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 2.63800E-03 +/- 3.7E-07  
 Phase delay (usec) 2.50096055482E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 2.50096E-06 +/- 1.6E-10  
 Delay rate (us/s) -1.79973635374E-10 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -1.79974E-10 +/- 1.7E-12  
 Total phase (deg) 77.6 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 77.6 +/- 0.0

ph/seg (deg) 0.4 0.0 Search (1024X32) 667.565 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 1.0 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) 18.5 0.0 Inc. seg. avg. 668.337 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 26.0 0.0 Inc. frq. avg. 691.095 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 m: az 190.4 el 81.9 pa 11.5 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981//mm...3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981//mm.W.212.3MP1LM simultaneous interpolator



Mk4/DiFX fourfit 3.25 rev 0

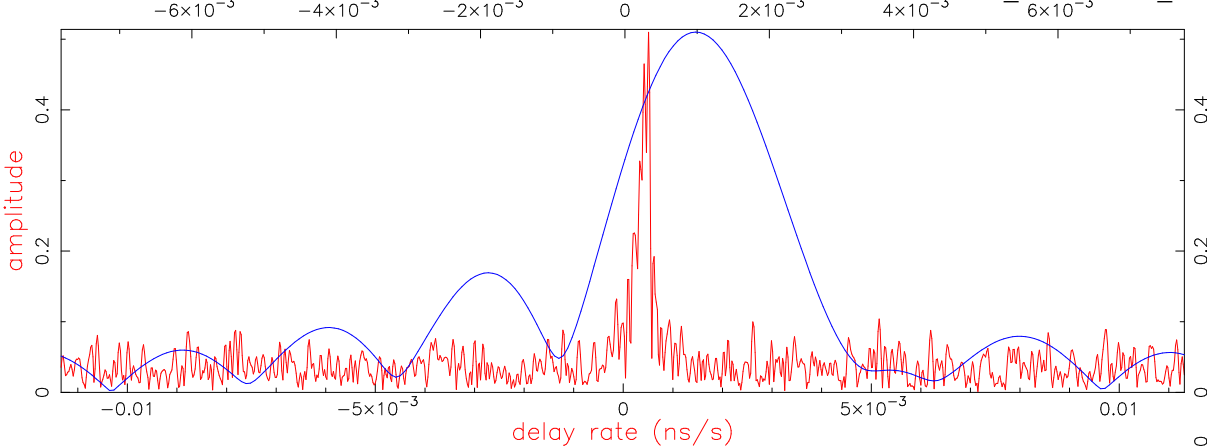
aux01

CTA102.3MP1LM, No0981, mo

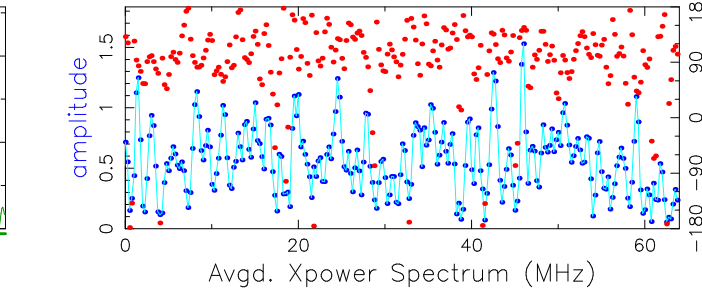
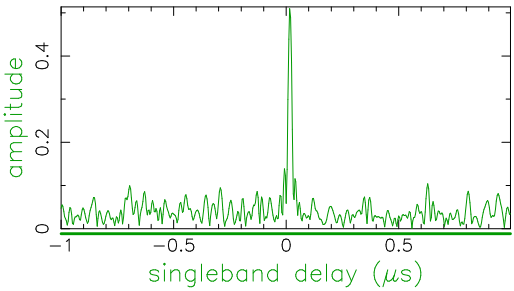
VLBA\_MK - VLBA\_OV, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 9

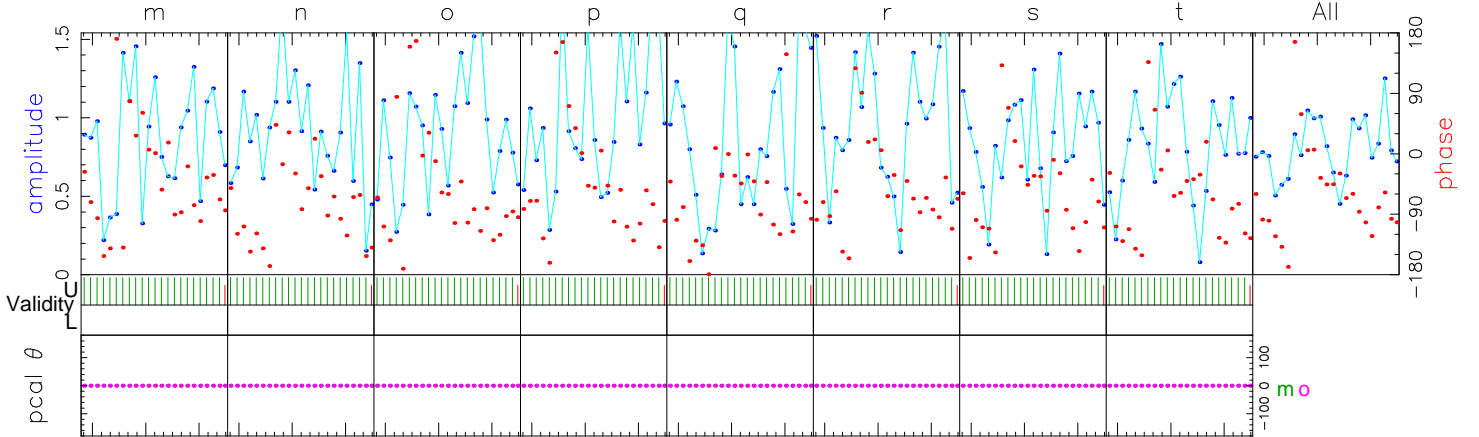


SNR 17.9  
 Int time 162.816  
 Amp 0.514  
 Phase -72.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.016703  
 MBD 0.001019  
 Fringe rate (Hz) 0.044730  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125859  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-46.4	-72.5	-92.1	-86.5	-71.1	-62.3	-63.1	-80.9	Phase	-72.6
	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	Ampl.	0.5
	260.9	261.2	260.6	261.4	261.4	261.9	261.4	261.2	Sbd box	261.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	5.59233954098E+03	Apriori delay (usec)	5.59232289682E+03	Resid mbdelay (usec)	1.01916E-03	+/-	6.1E-05
Sband delay (usec)	5.59233959957E+03	Apriori clock (usec)	-2.4528128E+01	Resid sbdelay (usec)	1.67028E-02	+/-	4.8E-04
Phase delay (usec)	5.59232289448E+03	Apriori clockrate (us/s)	-4.9577204E-07	Resid phdelay (usec)	-2.33974E-06	+/-	2.1E-07
Delay rate (us/s)	7.12541670538E-01	Apriori rate (us/s)	7.12541151263E-01	Resid rate (us/s)	5.19275E-07	+/-	2.2E-09
Total phase (deg)	46.9	Apriori accel (us/s/s)	-3.60250063260E-05	Resid phase (deg)	-72.6	+/-	6.4

ph/seg (deg)	RMS 56.2	Theor. 15.3	Amplitude Search (1024X32)	0.514 +/- 0.029	0.488	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	68.0	26.8	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	16.0	9.0	Inc. seg. avg.	0.779	0.000	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	9.7	15.8	Inc. frq. avg.	0.519	0.000	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

m: az 190.4 el 81.9 pa 11.5      o: az 244.0 el 47.1 pa 47.0      u,v (fr/asec) -4211.149 -2882.402      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981//mo..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981//mo.W.204.3MP1LM

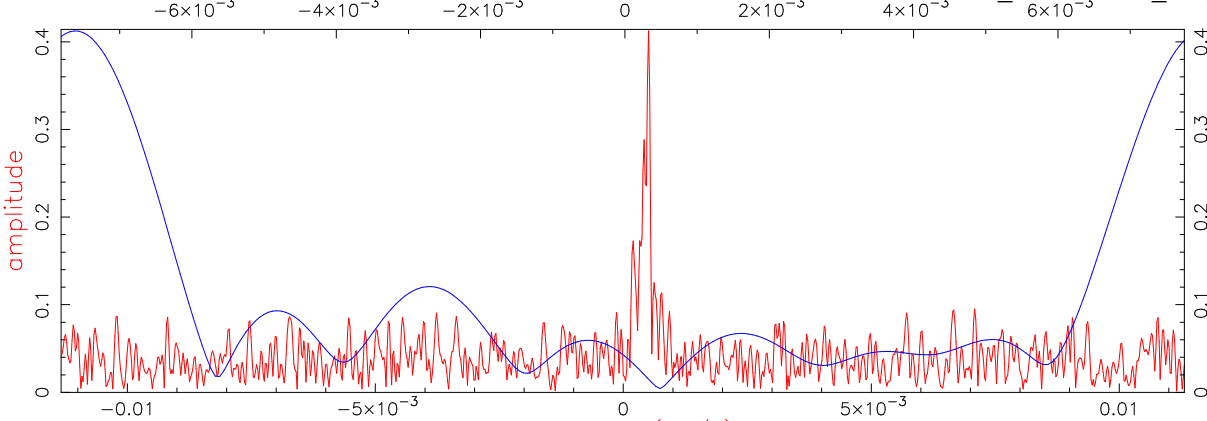
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, mo

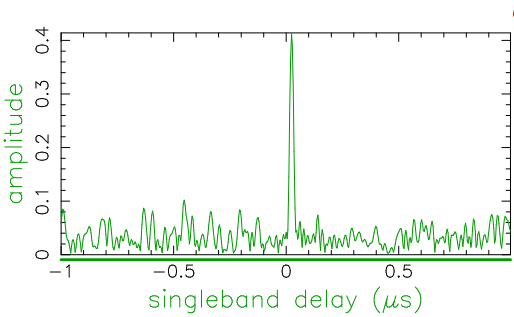
VLBA\_MK - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

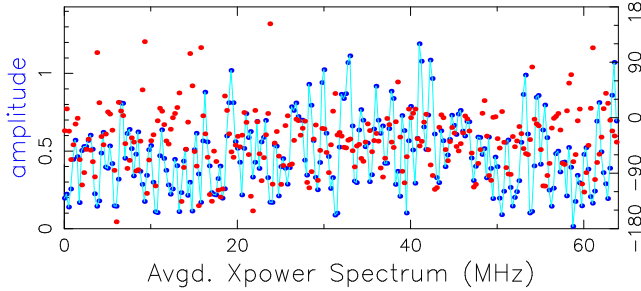


Fringe quality 9

SNR 14.4  
 Int time 162.816  
 Amp 0.414  
 Phase -34.3  
 PFD 8.9e-39  
 Delays (us)  
 SBD 0.024210  
 MBD -0.007596  
 Fringe rate (Hz)  
 0.044571  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

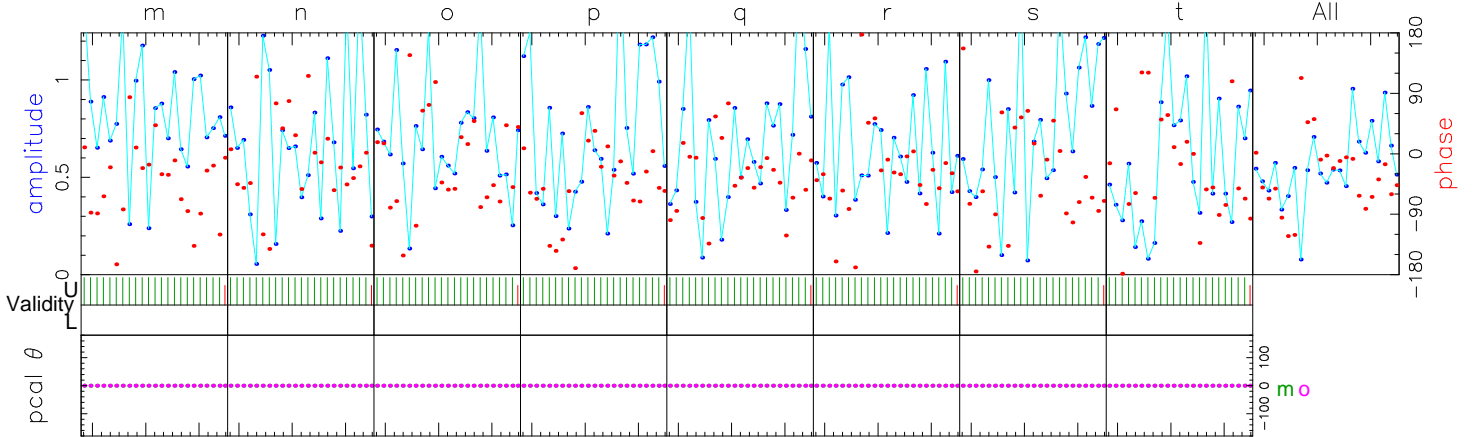


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125901  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-45.7	-21.9	-21.1	-35.2	-26.8	-37.9	-55.8	-25.5	Phase	-34.3
	0.5	0.4	0.3	0.5	0.5	0.4	0.4	0.3	Ampl.	0.4
	262.9	263.8	263.8	263.1	263.6	262.4	263.3	262.8	Sbd box	263.2
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec) (SBD)	5.59234655079E+03	Apriori delay (usec)		5.59232289682E+03	Resid mbdelay (usec)		-7.59603E-03	+/- 7.5E-05	
Sband delay (usec)	5.59234710707E+03	Apriori clock (usec)		-2.4528128E+01	Resid sbdelay (usec)		2.42103E-02	+/- 6.0E-04	
Phase delay (usec)	5.59232289571E+03	Apriori clockrate (us/s)		-4.9577204E-07	Resid phdelay (usec)		-1.10754E-06	+/- 2.6E-07	
Delay rate (us/s)	7.12541668686E-01	Apriori rate (us/s)		7.12541151263E-01	Resid rate (us/s)		5.17423E-07	+/- 2.7E-09	
Total phase (deg)		Apriori accel (us/s/s)		-3.60250063260E-05	Resid phase (deg)		-34.3	+/- 7.9	

	RMS	Theor.	Amplitude	0.414 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	54.1	19.0	Search (1024X32)	0.394	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	56.8	33.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	13.3	11.2	Inc. seg. avg.	0.533	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
amp/frq (%)	19.2	19.6	Inc. frq. avg.	0.413	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

m: az 190.4 el 81.9 pa 11.5      o: az 244.0 el 47.1 pa 47.0      u,v (fr/asec) -4211.149 -2882.402      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981//mo..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981//mo.W.210.3MP1LM

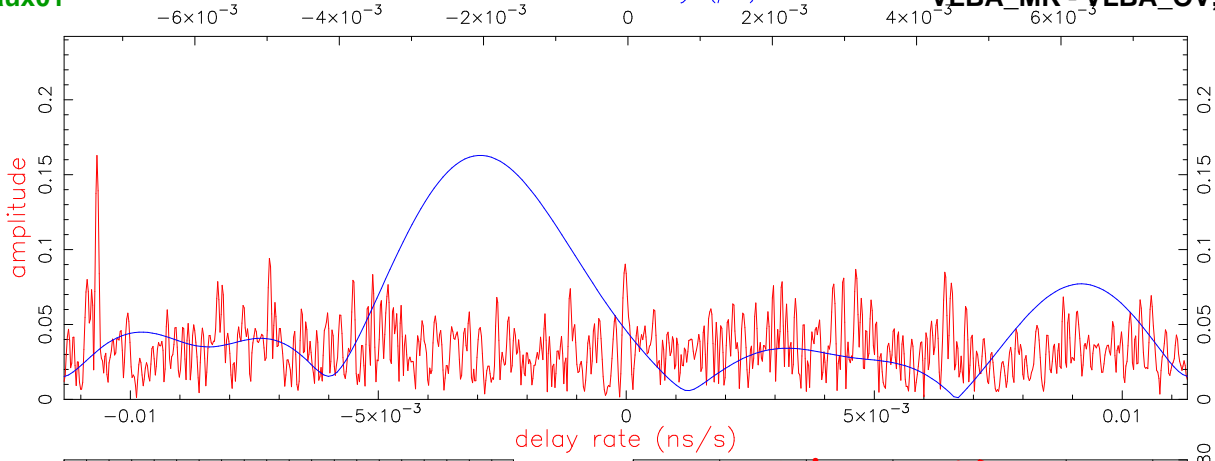
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, mo

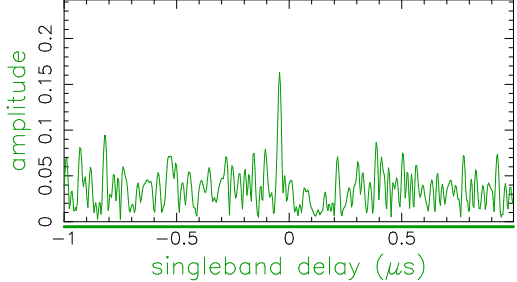
VLBA\_MK - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

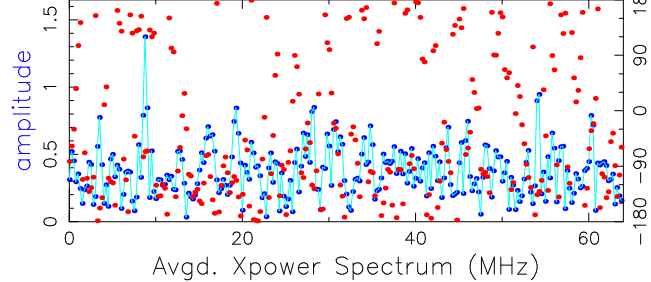


Fringe quality 0

SNR 5.7  
 Int time 162.816  
 Amp 0.242  
 Phase 124.5  
 PFD 8.0e-01  
 Delays (us)  
 SBD -0.042695  
 MBD -0.002030  
 Fringe rate (Hz)  
 -0.921022  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

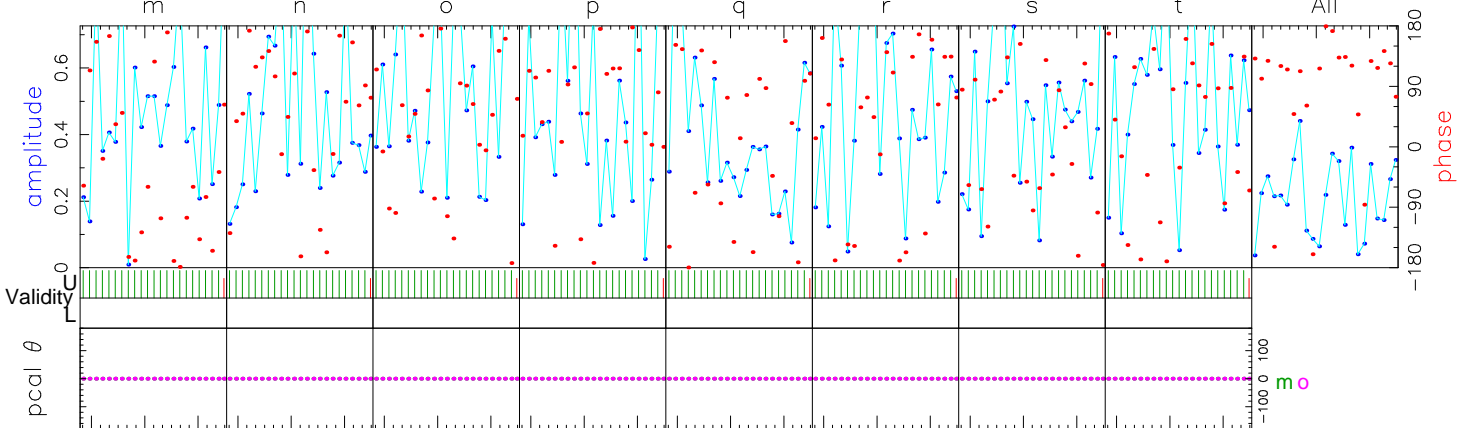


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125903  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-157.3	116.8	98.1	102.1	146.2	122.6	99.2	140.8	Phase	124.5
	0.2	0.3	0.2	0.4	0.3	0.4	0.1	0.3	Ampl.	0.2
	214.6	294.8	24.7	245.7	219.7	27.3	490.8	402.0	Sbd box	246.1
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	5.59227399192E+03	Apriori delay (usec)	5.59232289682E+03	Resid mbdelay (usec)	-2.02990E-03	+/-	1.9E-04
Sband delay (usec)	5.59228020157E+03	Apriori clock (usec)	-2.4528128E+01	Resid sbdelay (usec)	-4.26953E-02	+/-	1.5E-03
Phase delay (usec)	5.59232290083E+03	Apriori clockrate (us/s)	-4.9577204E-07	Resid phdelay (usec)	4.01593E-06	+/-	6.5E-07
Delay rate (us/s)	7.12530459106E-01	Apriori rate (us/s)	7.12541151263E-01	Resid rate (us/s)	-1.06922E-05	+/-	6.9E-09
Total phase (deg)	244.0	Apriori accel (us/s/s)	-3.60250063260E-05	Resid phase (deg)	124.5	+/-	20.2

ph/seg (deg)	51.2	Theor.	48.3	Amplitude	0.242 +/- 0.043	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	74.7	Search (1024X32)	0.159	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	38.2	Inc. seg. avg.	0.230	Inc. frq. avg.	0.240	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	40.0	Inc. frq. avg.	0.240			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

m: az 190.4 el 81.9 pa 11.5      o: az 244.0 el 47.1 pa 47.0      u,v (fr/asec) -4211.149 -2882.402      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981//mo..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981//mo.W.213.3MP1LM

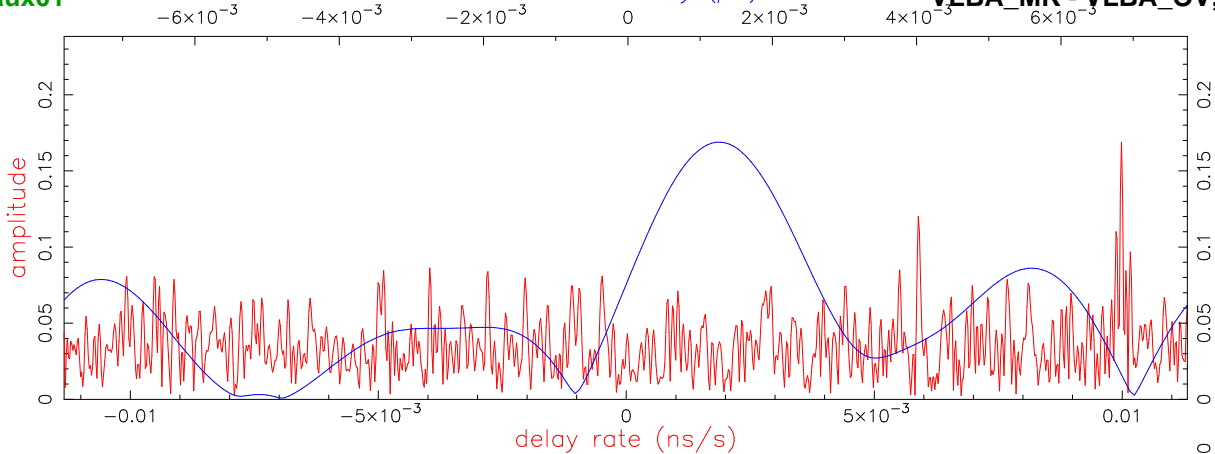
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, mo

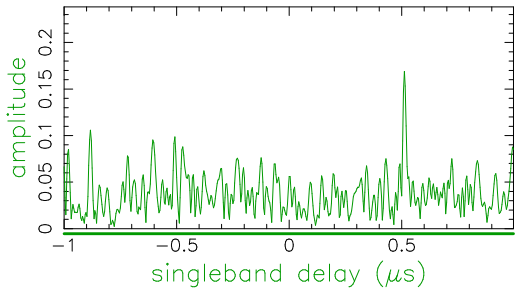
VLBA\_MK - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

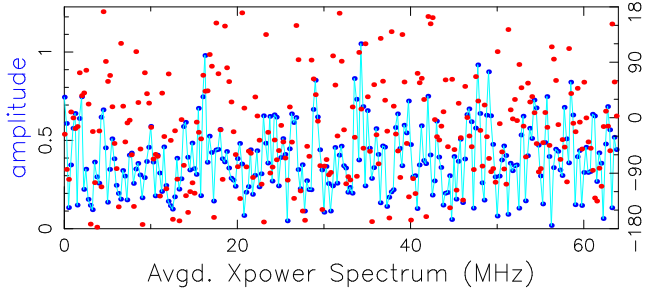


Fringe quality 0

SNR 5.9  
 Int time 162.816  
 Amp 0.238  
 Phase 100.8  
 PFD 3.8e-01  
 Delays (us)  
 SBD 0.511995  
 MBD 0.001275  
 Fringe rate (Hz) 0.861969  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

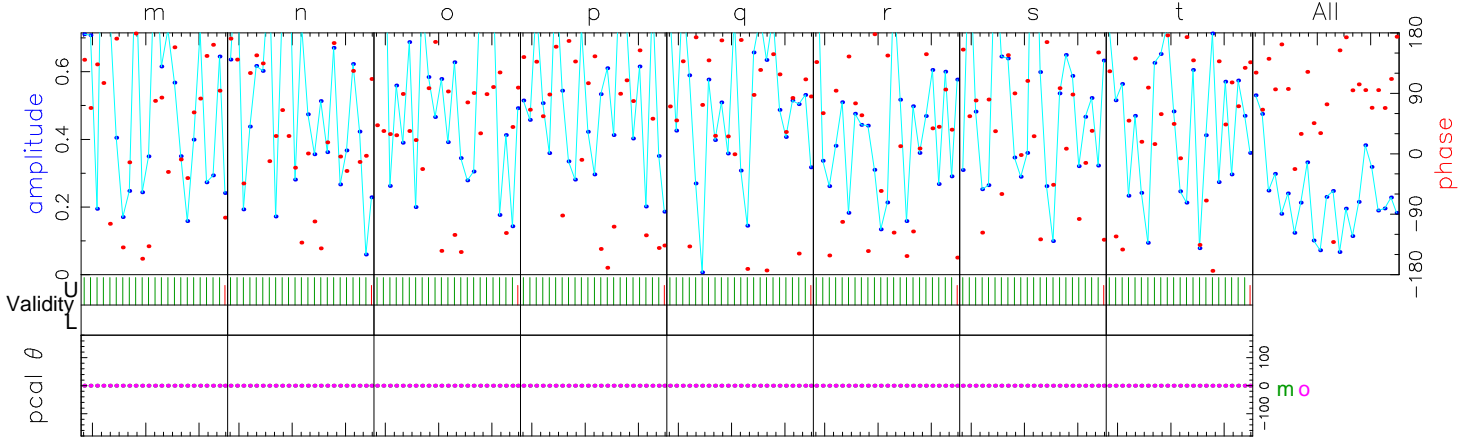


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125905  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



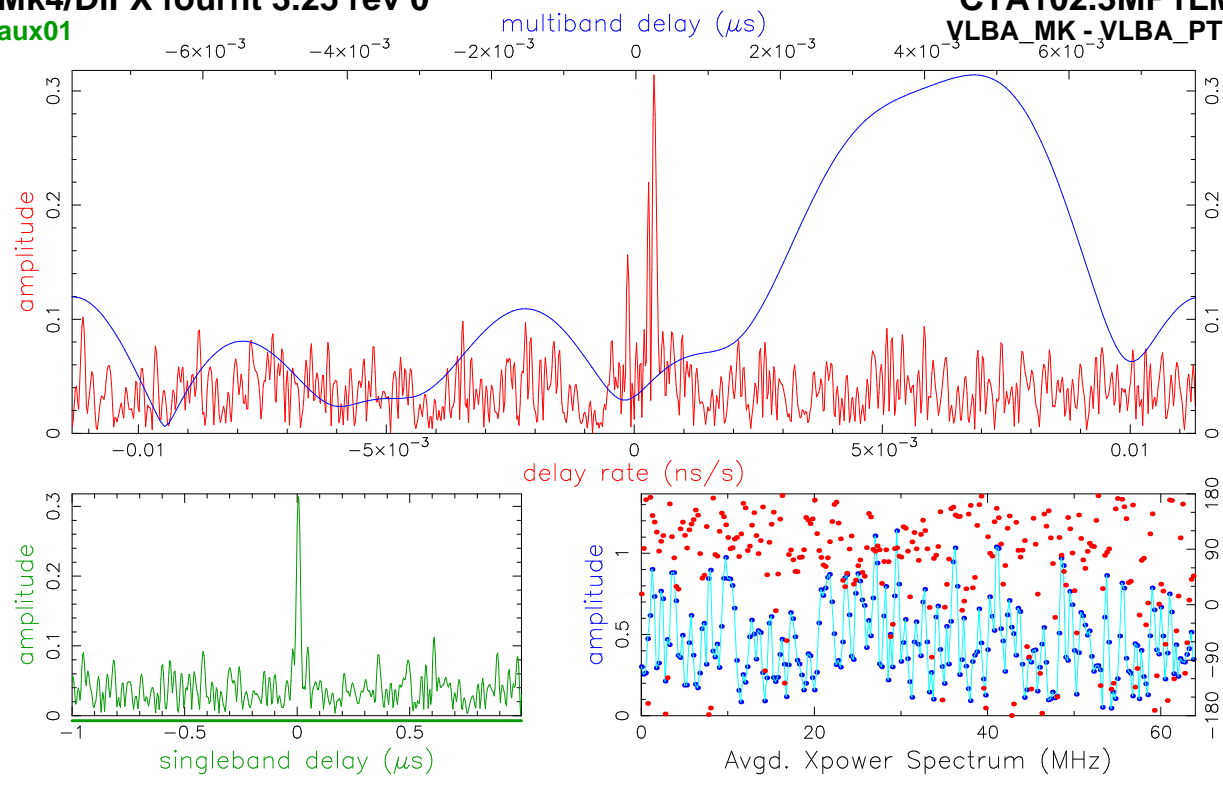
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	114.8	87.6	61.8	128.9	117.8	127.1	52.3	117.5	Phase	100.8
	0.3	0.1	0.4	0.3	0.4	0.1	0.3	0.2	Ampl.	0.2
	137.2	396.8	388.8	128.3	388.9	153.2	443.0	102.2	Sbd box	388.1
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	5.59283979697E+03	Apriori delay (usec)	5.59232289682E+03	Resid mbdelay (usec)	1.27515E-03	+/-	1.8E-04
Sband delay (usec)	5.59283489232E+03	Apriori clock (usec)	-2.4528128E+01	Resid sbdelay (usec)	5.11995E-01	+/-	1.5E-03
Phase delay (usec)	5.59232290007E+03	Apriori clockrate (us/s)	-4.9577204E-07	Resid phdelay (usec)	3.25188E-06	+/-	6.3E-07
Delay rate (us/s)	7.12551157868E-01	Apriori rate (us/s)	7.12541151263E-01	Resid rate (us/s)	1.00066E-05	+/-	6.7E-09
Total phase (deg)	220.3	Apriori accel (us/s/s)	-3.60250063260E-05	Resid phase (deg)	100.8	+/-	19.4

ph/seg (deg)	54.4	Theor.	46.6	Amplitude	0.238 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	78.1	Search (1024X32)	0.167	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	32.4	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	39.9	Inc. seg. avg.	0.249	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.244	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

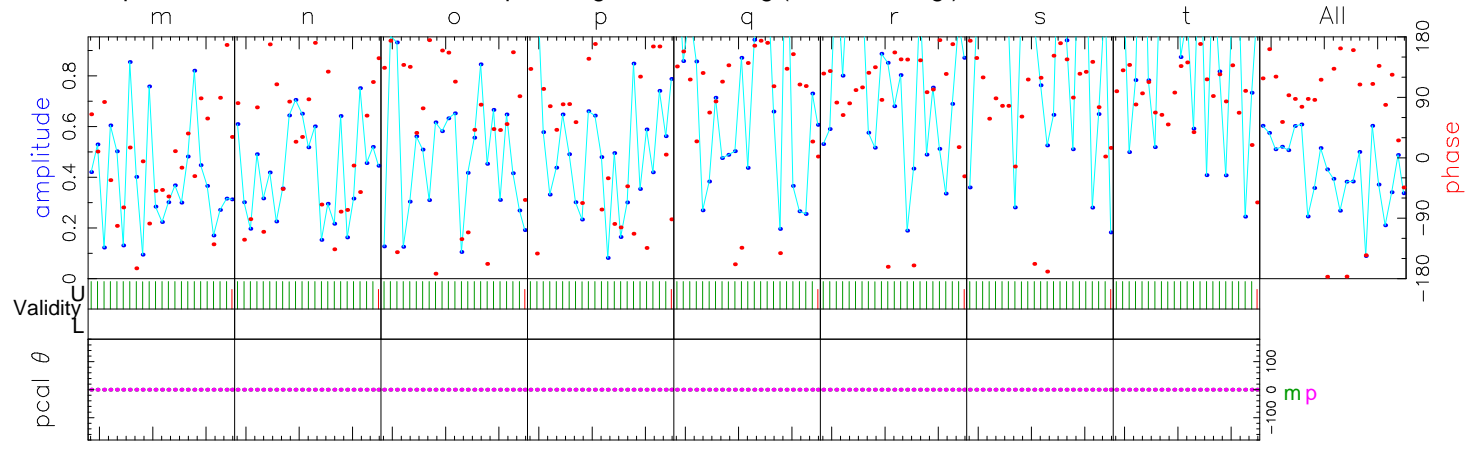
m: az 190.4 el 81.9 pa 11.5      o: az 244.0 el 47.1 pa 47.0      u,v (fr/asec) -4211.149 -2882.402      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981//mo..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981//mo.W.215.3MP1LM



Fringe quality 9  
SNR 11.1  
Int time 162.744  
Amp 0.318  
Phase 112.9  
PFD 3.3e-20  
Delays (us)  
SBD 0.005462  
MBD 0.004654  
Fringe rate (Hz) 0.033677  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 191347.17  
Stop 191629.98  
FRT 191508.00  
Corr/FF/build 2025:003:204508  
2025:041:125859  
2024:113:095956  
RA & Dec (J2000) 22h32m36.408901s +11°43'50.904060"

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		
	-9.9	66.0	128.9	173.3	135.7	113.7	112.8	99.9	Phase	112.9		
	0.2	0.1	0.2	0.1	0.5	0.5	0.6	0.7	Ampl.	0.4		
	484.5	502.2	426.2	267.1	257.6	258.9	258.0	258.0	Sbd box	258.4		
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used			
m	0	0	0	0	0	0	0	0	PC freqs			
p	0	0	0	0	0	0	0	0	PC freqs			
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
p	1000	1000	1000	1000	1000	1000	1000	1000				
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Tracks			
Group delay (usec) (SBD)	7.44921631219E+03		Apriori delay (usec)		7.44921165811E+03		Resid mbdelay (usec)		4.65408E-03	+/- 9.8E-05		
Sband delay (usec)	7.44921712036E+03		Apriori clock (usec)		-5.1717548E+00		Resid sbdelay (usec)		5.46225E-03	+/- 7.8E-04		
Phase delay (usec)	7.44921166175E+03		Apriori clockrate (us/s)		-3.9319698E-07		Resid phdelay (usec)		3.64093E-06	+/- 3.3E-07		
Delay rate (us/s)	8.99982812337E-01		Apriori rate (us/s)		8.99982421383E-01		Resid rate (us/s)		3.90954E-07	+/- 3.5E-09		
Total phase (deg)	195.5		Apriori accel (us/s/s)		-4.48371532300E-05		Resid phase (deg)		112.9	+/- 10.3		
ph/seg (deg)	RMS	Theor.	Amplitude	0.318 +/- 0.029		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
amp/seg (%)	52.3	24.8	Search (1024X32)	0.307		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
ph/frq (deg)	55.8	43.2	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	60.4	14.6	Inc. seg. avg.	0.393		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
	73.2	25.5	Inc. frq. avg.	0.356		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
m: az 190.4 el 81.9 pa 11.5	p: az 255.3 el 40.4 pa 54.7		u,v (fr/asec) -5317.286 -2664.718						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No0981//mp..3MP1LM		Output file: /Exps/c241a/v2/3mm/1234/No0981//mp.W.205.3MP1LM									

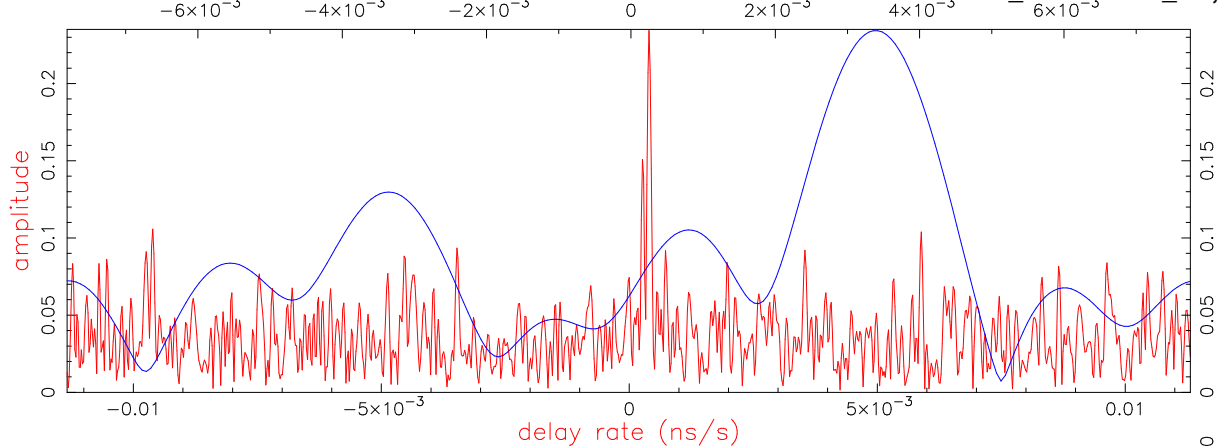
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, mp

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

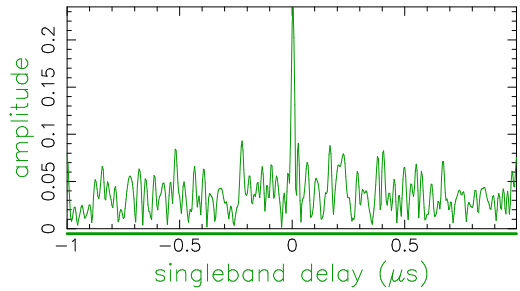
multiband delay ( $\mu$ s)



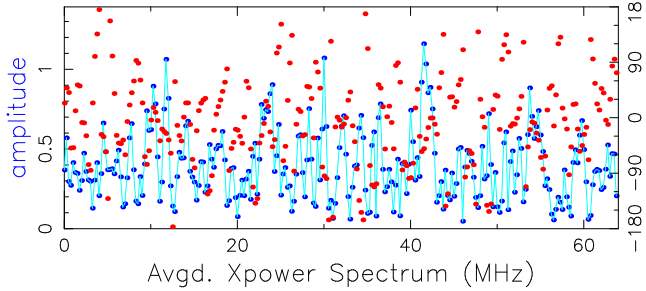
Fringe quality 9

SNR 8.2  
 Int time 162.744  
 Amp 0.235  
 Phase -13.0  
 PFD 4.3e-08  
 Delays (us)  
 SBD 0.003294  
 MBD 0.003383  
 Fringe rate (Hz) 0.034981  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

delay rate (ns/s)

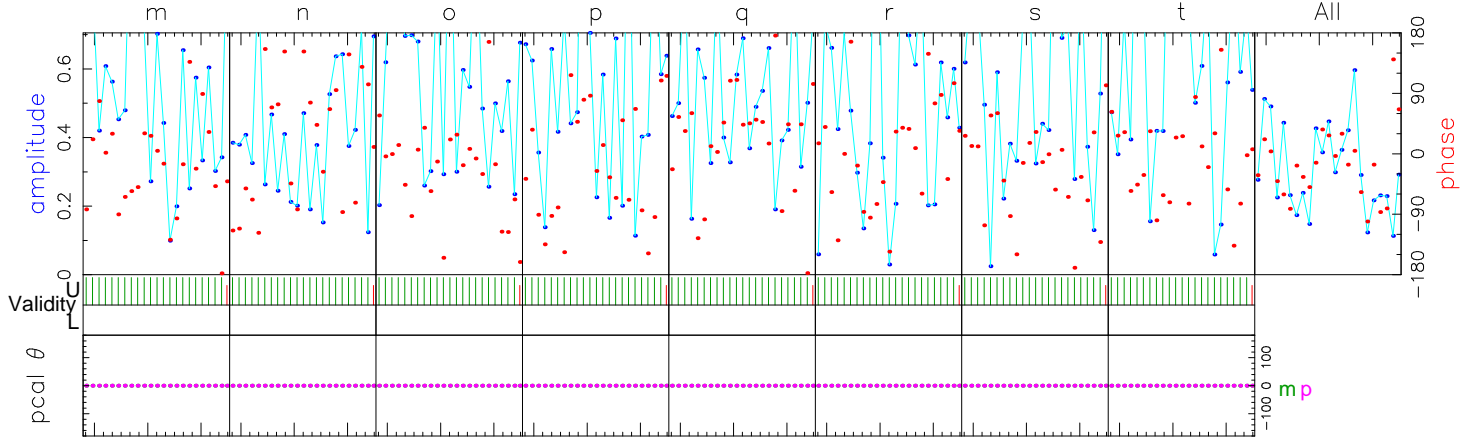


singleband delay ( $\mu$ s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125901  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-19.7	163.3	-16.9	-33.8	28.7	-7.2	-15.1	-22.9	Phase	-13.0
	0.3	0.0	0.4	0.1	0.2	0.2	0.3	0.4	Ampl.	0.2
	257.6	379.6	258.4	479.0	257.2	111.5	257.8	257.2	Sbd box	257.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	7.44921504097E+03	Apriori delay (usec)	7.44921165811E+03	Resid mbdelay (usec)	3.38286E-03	+/-	1.3E-04
Sband delay (usec)	7.44921495161E+03	Apriori clock (usec)	-5.1717548E+00	Resid sbdelay (usec)	3.29350E-03	+/-	1.1E-03
Phase delay (usec)	7.44921165769E+03	Apriori clockrate (us/s)	-3.9319698E-07	Resid phdelay (usec)	-4.20289E-07	+/-	4.5E-07
Delay rate (us/s)	8.99982827481E-01	Apriori rate (us/s)	8.99982421383E-01	Resid rate (us/s)	4.06098E-07	+/-	4.8E-09
Total phase (deg)	69.6	Apriori accel (us/s/s)	-4.48371532300E-05	Resid phase (deg)	-13.0	+/-	14.0

ph/seg (deg)	RMS 53.7	Theor. 33.5	Amplitude Search (1024X32)	0.235 +/- 0.029	0.230	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	64.1	58.5	Interp.	0.000	0.230	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	74.7	19.8	Inc. seg. avg.	0.266	0.235	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	54.0	34.5	Inc. frq. avg.	0.235	0.235	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

m: az 190.4 el 81.9 pa 11.5      p: az 255.3 el 40.4 pa 54.7      u,v (fr/asec) -5317.286 -2664.718      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981//mp..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981//mp.W.211.3MP1LM

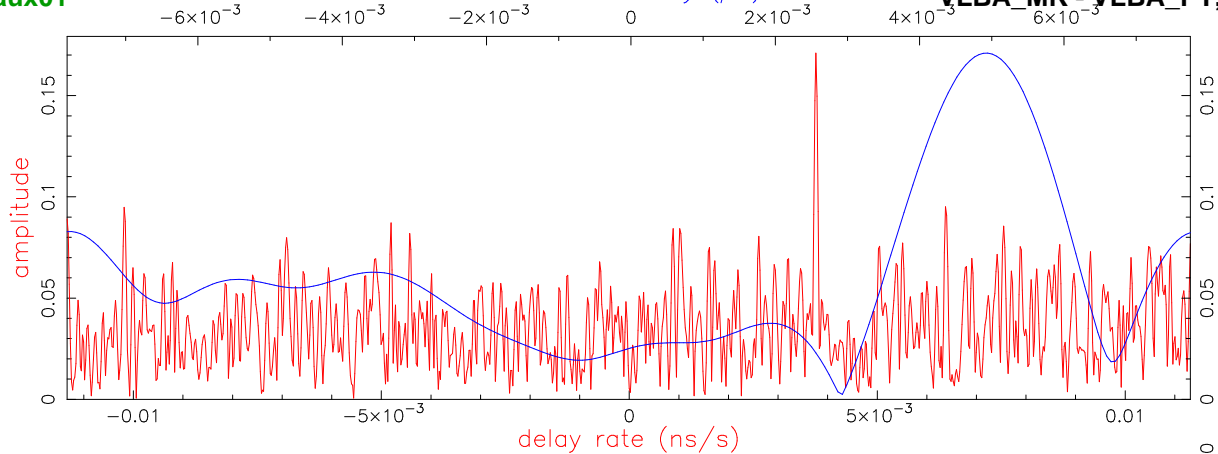
# Mk4/DiFX fourfit 3.25 rev 0

aux01

# CTA102.3MP1LM, No0981, mp

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

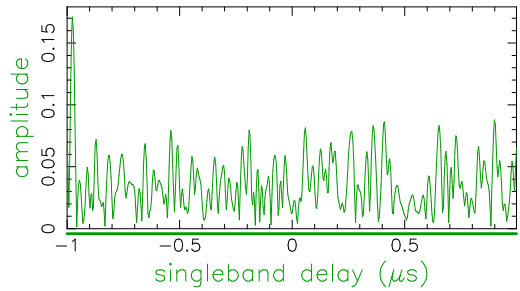
multiband delay ( $\mu$ s)



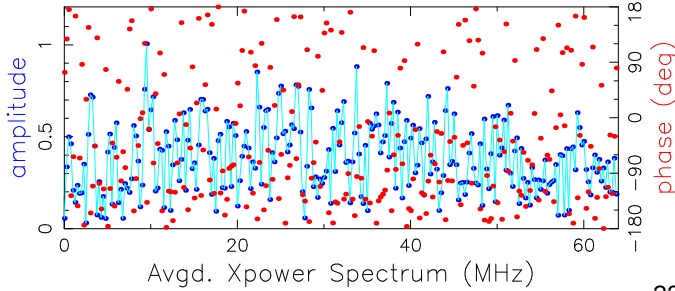
Fringe quality 0

SNR 6.0  
 Int time 162.744  
 Amp 0.179  
 Phase 93.4  
 PFD 2.6e-01  
 Delays (us)  
 SBD -0.976011  
 MBD 0.004943  
 Fringe rate (Hz)  
 0.323955  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

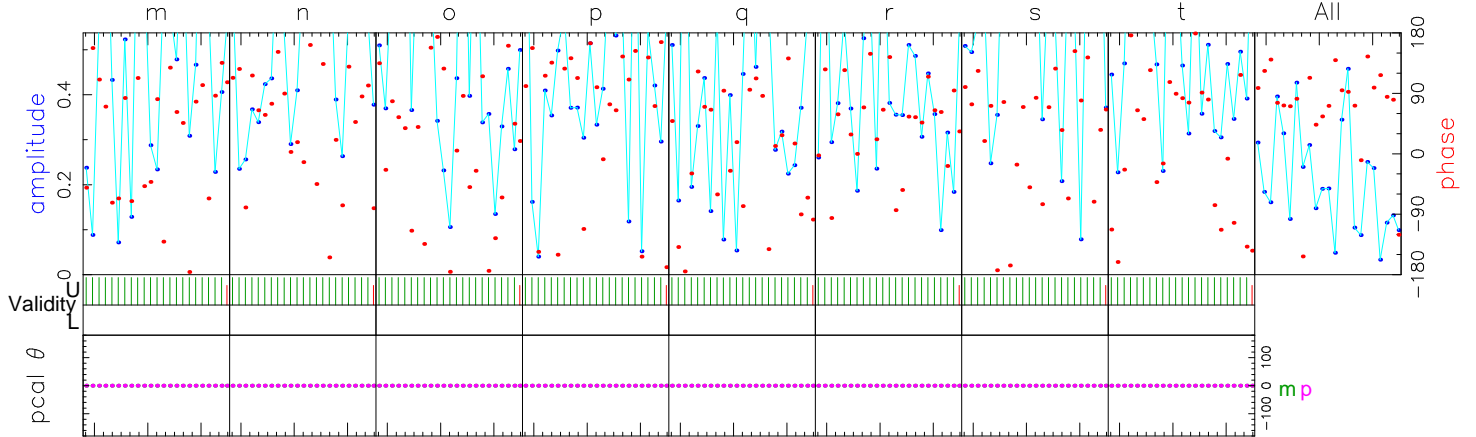
Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125903  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"



delay rate (ns/s)

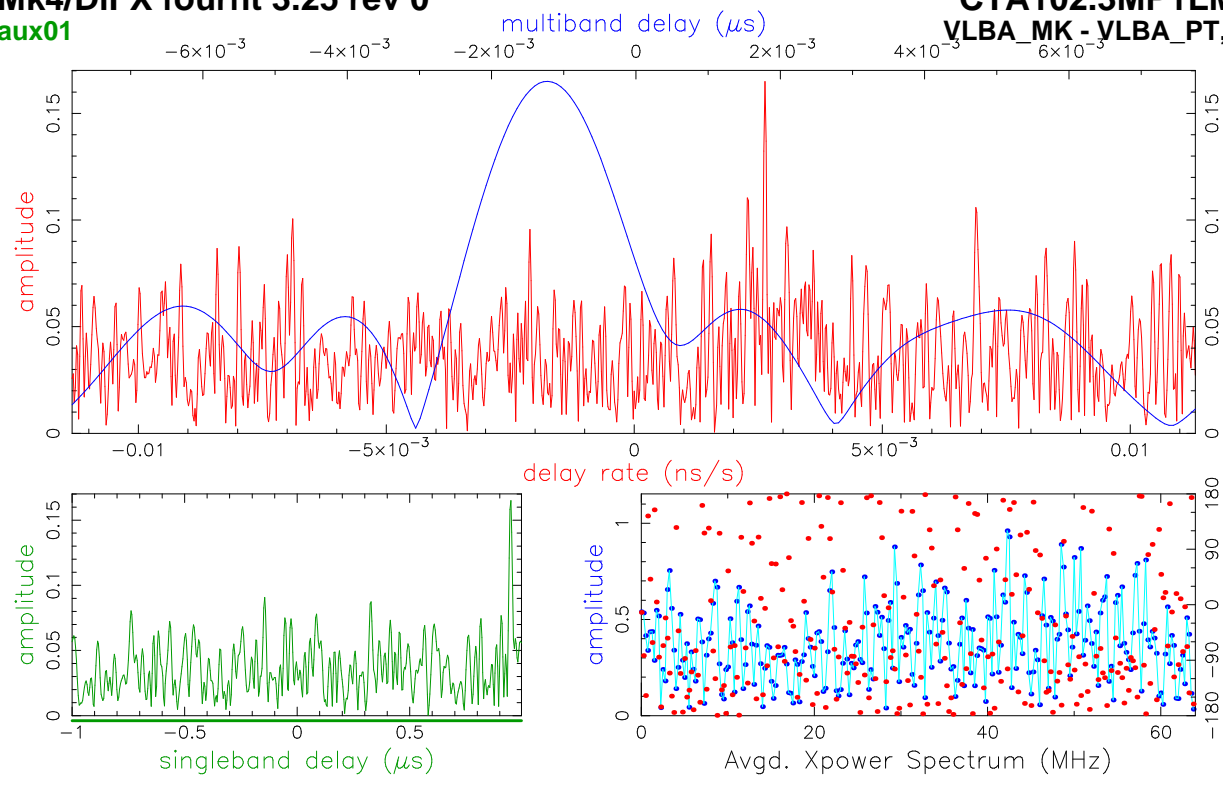


Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



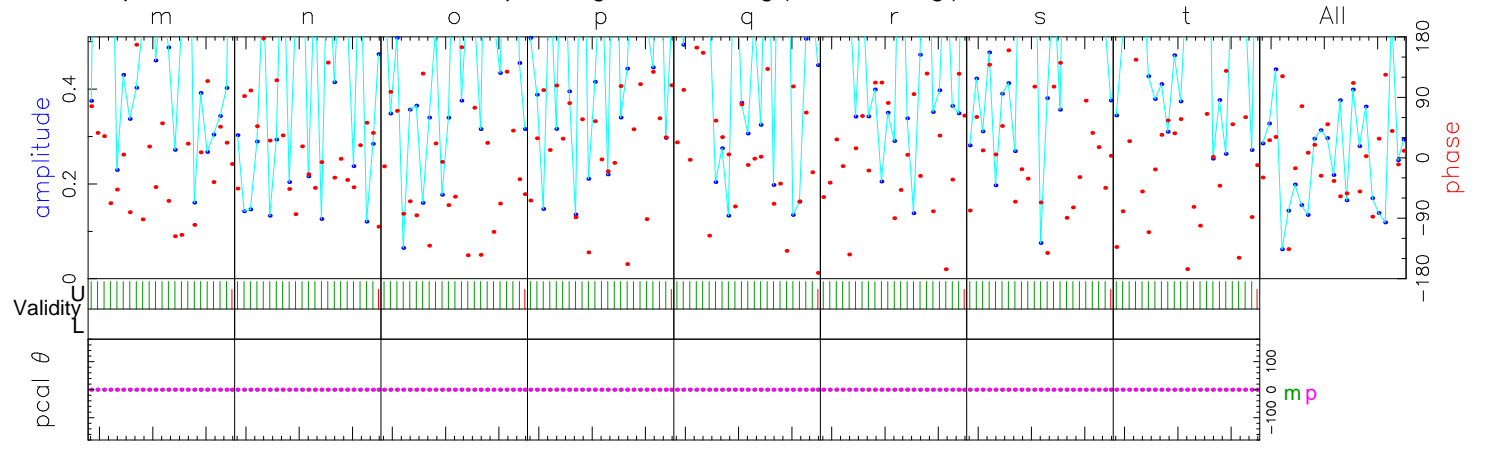
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	86.7	99.5	65.5	128.7	64.0	71.8	76.4	115.2	Phase	93.4
	0.2	0.2	0.2	0.3	0.0	0.2	0.2	0.1	Ampl.	0.2
	377.9	422.3	31.4	6.9	178.4	5.8	341.5	467.1	Sbd box	7.1
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	7.44823222604E+03		Apriori delay (usec)		7.44921165811E+03		Resid mbdelay (usec)		4.94293E-03	+/- 1.8E-04
Sband delay (usec)	7.44823564711E+03		Apriori clock (usec)		-5.1717548E+00		Resid sbdelay (usec)		-9.76011E-01	+/- 1.4E-03
Phase delay (usec)	7.44921166112E+03		Apriori clockrate (us/s)		-3.9319698E-07		Resid phdelay (usec)		3.01337E-06	+/- 6.2E-07
Delay rate (us/s)	8.99986182177E-01		Apriori rate (us/s)		8.99982421383E-01		Resid rate (us/s)		3.76079E-06	+/- 6.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.48371532300E-05		Resid phase (deg)		93.4	+/- 19.2

ph/seg (deg) 48.9 46.0 Amplitude 0.179 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 72.5 80.3 Search (1024X32) 0.165 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 26.5 27.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.8 47.4 Inc. seg. avg. 0.169 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 m: az 190.4 el 81.9 pa 11.5 p: az 255.3 el 40.4 pa 54.7 u,v (fr/asec) -5317.286 -2664.718 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981//mp..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981//mp.W.214.3MP1LM



Fringe quality 0  
SNR 5.8  
Int time 162.744  
Amp 0.170  
Phase 6.6  
PFD 5.5e-01  
Delays (us)  
SBD 0.948065  
MBD -0.001263  
Fringe rate (Hz)  
0.227615  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 191347.17  
Stop 191629.98  
FRT 191508.00  
Corr/FF/build  
2025:003:204508  
2025:041:125905  
2024:113:095956  
RA & Dec (J2000)  
22h32m36.408901s  
+11°43'50.904060"

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	
	-2.8	0.1	-11.2	41.2	-5.8	7.4	4.7	-8.3		6.6	
	0.3	0.2	0.1	0.3	0.1	0.2	0.2	0.1		0.2	
	130.2	261.3	31.3	411.9	68.2	317.3	288.1	346.9		499.7	
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0			
m	0	0	0	0	0	0	0	0			
p	0	0	0	0	0	0	0	0			
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
m	1000	1000	1000	1000	1000	1000	1000	1000			
p	1000	1000	1000	1000	1000	1000	1000	1000			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
									Chan ids		
									Tracks		
									Tracks		
Group delay (usec) (SBD)	7.45016352002E+03		Apriori delay (usec)		7.44921165811E+03		Resid mbdelay (usec)		-1.26309E-03	+/- 1.9E-04	
Sband delay (usec)	7.45015972286E+03		Apriori clock (usec)		-5.1717548E+00		Resid sbdelay (usec)		9.48065E-01	+/- 1.5E-03	
Phase delay (usec)	7.44921165832E+03		Apriori clockrate (us/s)		-3.9319698E-07		Resid phdelay (usec)		2.13114E-07	+/- 6.4E-07	
Delay rate (us/s)	8.99985063766E-01		Apriori rate (us/s)		8.99982421383E-01		Resid rate (us/s)		2.64238E-06	+/- 6.8E-09	
Total phase (deg)			Apriori accel (us/s/s)		-4.48371532300E-05		Resid phase (deg)		6.6	+/- 19.7	
	RMS	Theor.	Amplitude	0.170 +/- 0.029		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	63.7	47.3	Search (1024X32)	0.159		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	90.3	82.6	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	18.4	27.9	Inc. seg. avg.	0.198		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	45.3	48.7	Inc. frq. avg.	0.158		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
m: az 190.4 el 81.9 pa 11.5		p: az 255.3 el 40.4 pa 54.7		u,v (fr/asec) -5317.286 -2664.718						simultaneous interpolator	
Control file: cf_1234_gmva		Input file: /Exps/c241a/v2/3mm/1234/No0981//mp..3MP1LM		Output file: /Exps/c241a/v2/3mm/1234/No0981//mp.W.216.3MP1LM							

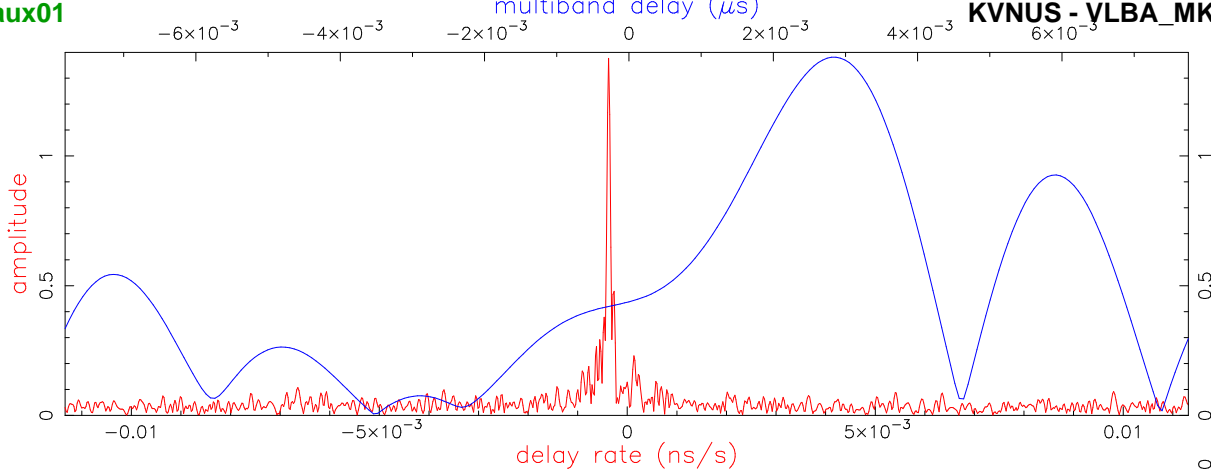


Mk4/DiFX fourfit 3.25 rev 0

aux01

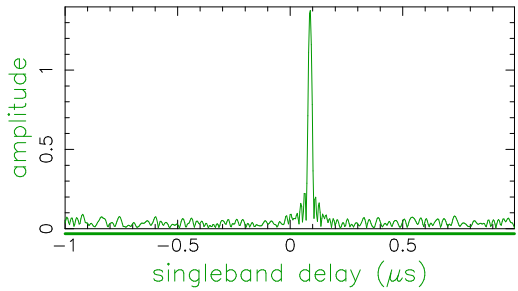
CTA102.3MP1LM, No0981, um

KVNUS - VLBA\_MK, fgroup W, pol LL

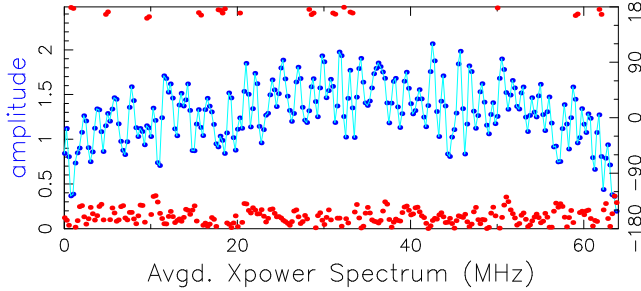


Fringe quality 5

SNR 48.8  
 Int time 162.660  
 Amp 1.399  
 Phase 100.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.088184  
 MBD 0.002743  
 Fringe rate (Hz)  
 -0.033250  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

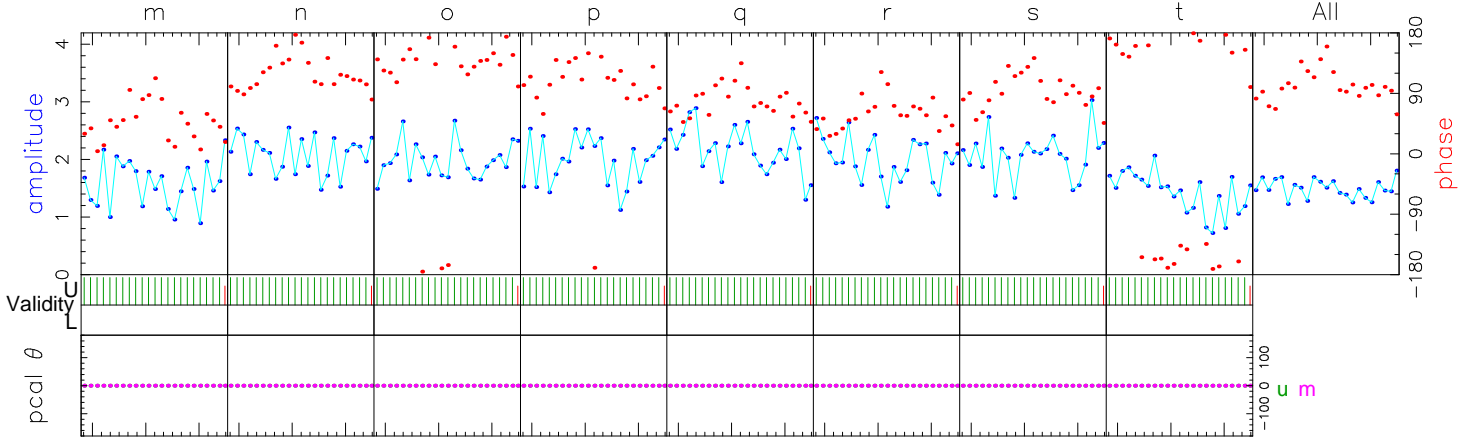


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125852  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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		
u	0	0	60000	0	0	0	0	0		
m	0	0	0	0	0	0	0	0		
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-1.35862929060E+04	Apriori delay (usec)	-1.35863737738E+04	Resid mbdelay (usec)	2.74279E-03	+/-	2.2E-05
Sband delay (usec)	-1.35862855893E+04	Apriori clock (usec)	7.9781723E-01	Resid sbdelay (usec)	8.81845E-02	+/-	1.8E-04
Phase delay (usec)	-1.35863737705E+04	Apriori clockrate (us/s)	1.7726098E-07	Resid phdelay (usec)	3.25430E-06	+/-	7.6E-08
Delay rate (us/s)	1.23962044617E+00	Apriori rate (us/s)	1.23962083216E+00	Resid rate (us/s)	-3.85998E-07	+/-	8.1E-10
Total phase (deg)	-213.0	Apriori accel (us/s/s)	7.78552228140E-05	Resid phase (deg)	100.9	+/-	2.3

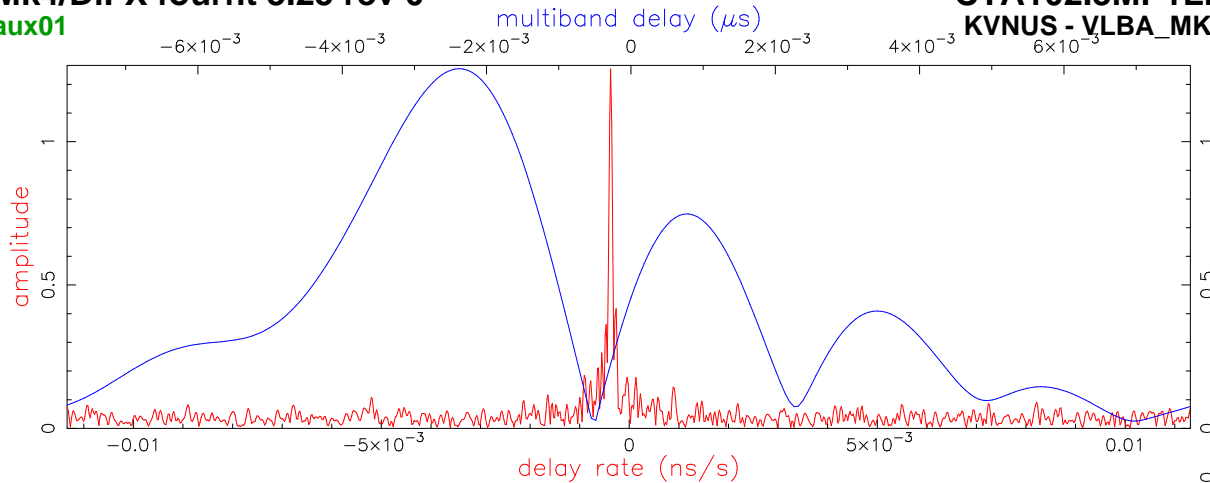
ph/seg (deg) 22.8 5.6 Search (1024X32) 1.333 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 13.0 9.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 47.6 3.3 Inc. seg. avg. 1.488 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 29.8 5.8 Inc. frq. avg. 1.730 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 u: az 89.5 el 20.0 pa -56.2 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) -7164.246 3408.599 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/um..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/um.W.188.3MP1LM simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

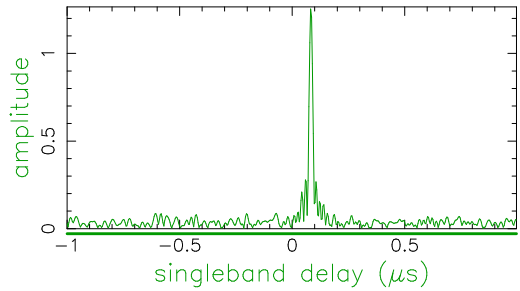
CTA102.3MP1LM, No0981, um

KVNUS - VLBA\_MK, fgroup W, pol RR

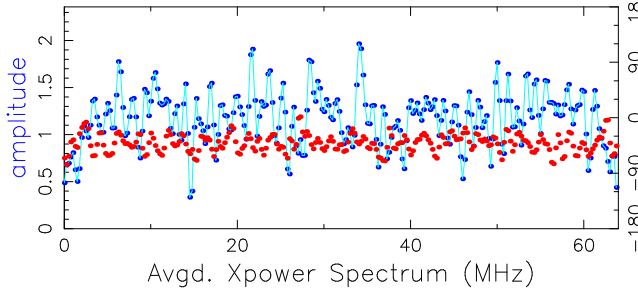


Fringe quality 5

SNR 44.1  
 Int time 162.660  
 Amp 1.266  
 Phase -135.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.083255  
 MBD -0.002325  
 Fringe rate (Hz)  
 -0.033028  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

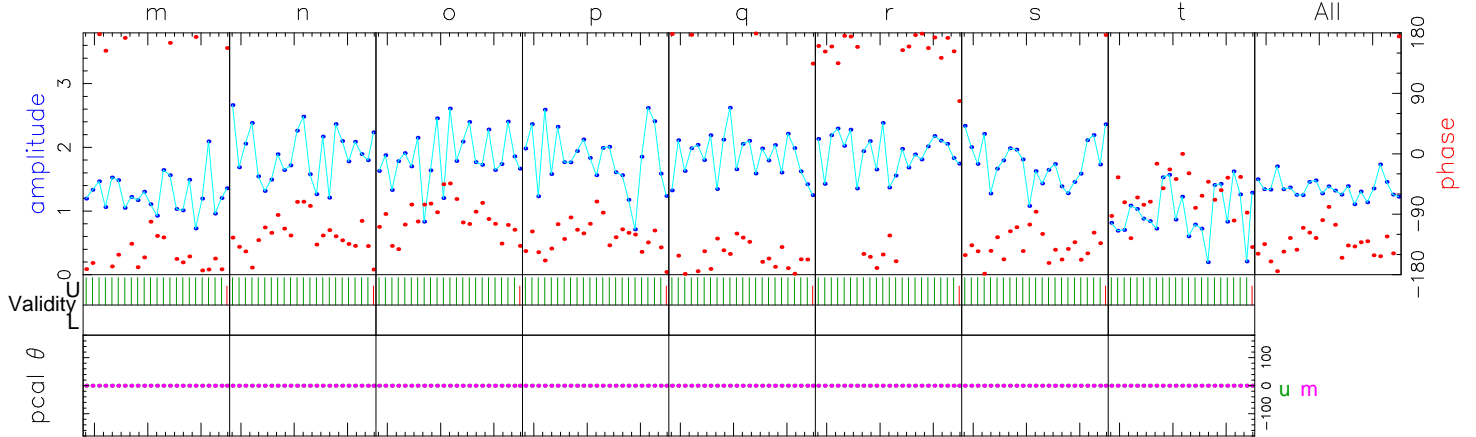


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125855  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-163.5	-120.7	-95.6	-122.9	-158.0	171.5	-139.5	-59.4	Phase	-135.6
	1.2	1.7	1.7	1.7	1.7	1.7	1.6	0.8	Ampl.	1.5
	280.1	278.4	278.2	278.0	278.0	278.2	279.1	281.0	Sbd box	278.3
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
u	0	0	60000	0	0	0	4000	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-1.35862979736E+04					-1.35863737738E+04			Resid mbdelay (usec)	-2.32480E-03 +/- 2.5E-05
Sband delay (usec)	-1.35862905183E+04					7.9781723E-01			Resid sbdelay (usec)	8.32555E-02 +/- 2.0E-04
Phase delay (usec)	-1.35863737781E+04					1.7726098E-07			Resid phdelay (usec)	-4.37119E-06 +/- 8.4E-08
Delay rate (us/s)	1.23962044874E+00					1.23962083216E+00			Resid rate (us/s)	-3.83423E-07 +/- 8.9E-10
Total phase (deg)			-89.4			7.78552228140E-05			Resid phase (deg)	-135.6 +/- 2.6
	RMS	Theor.	Amplitude	1.266 +/- 0.029					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	23.1	6.2	Search (1024X32)	1.228					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	13.9	10.9	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	44.5	3.7	Inc. seg. avg.	1.353					Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	31.7	6.4	Inc. frq. avg.	1.507					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
u: az 89.5 el 20.0 pa -56.2			m: az 190.4 el 81.9 pa 11.5			u,v (fr/asec) -7164.246 3408.599				simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c241a/v2/3mm/1234/No0981//um..3MP1LM			Output file: /Exps/c241a/v2/3mm/1234/No0981//um.W.197.3MP1LM				

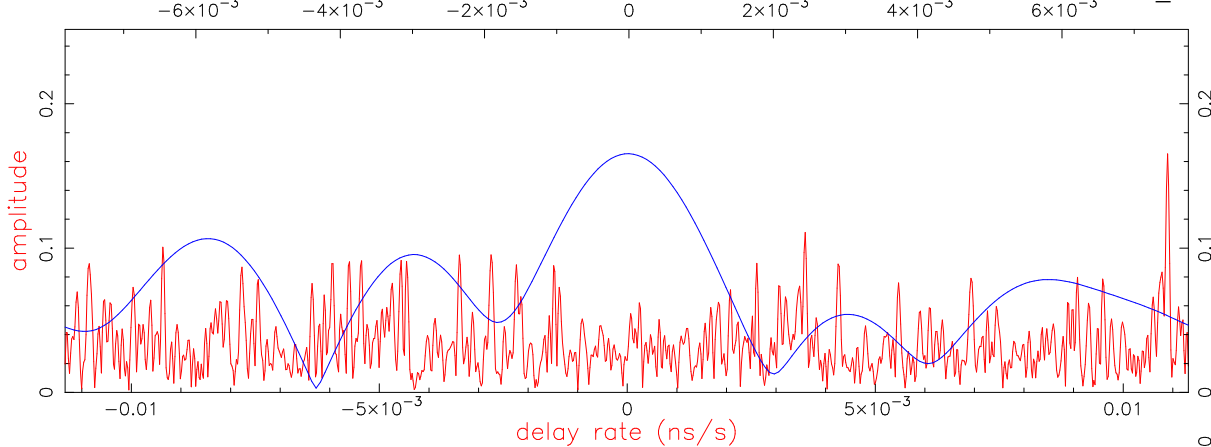
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, um

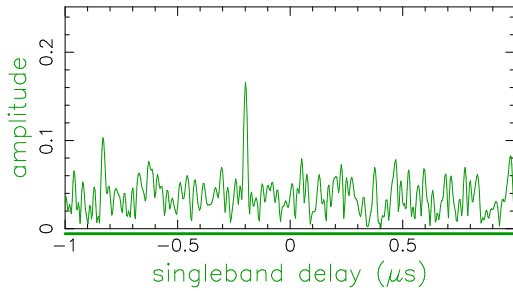
KVNUS - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)

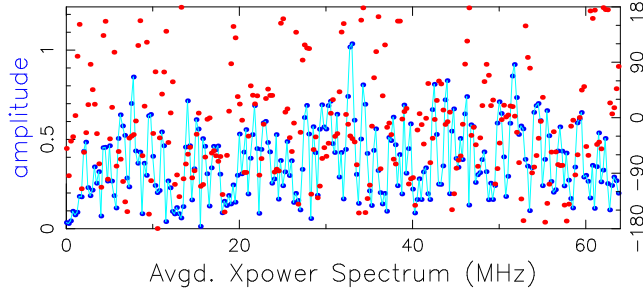


Fringe quality 0

SNR 5.8  
 Int time 162.660  
 Amp 0.252  
 Phase -157.8  
 PFD 5.8e-01  
 Delays (us)  
 SBD -0.198362  
 MBD 0.000006  
 Fringe rate (Hz)  
 0.940276  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

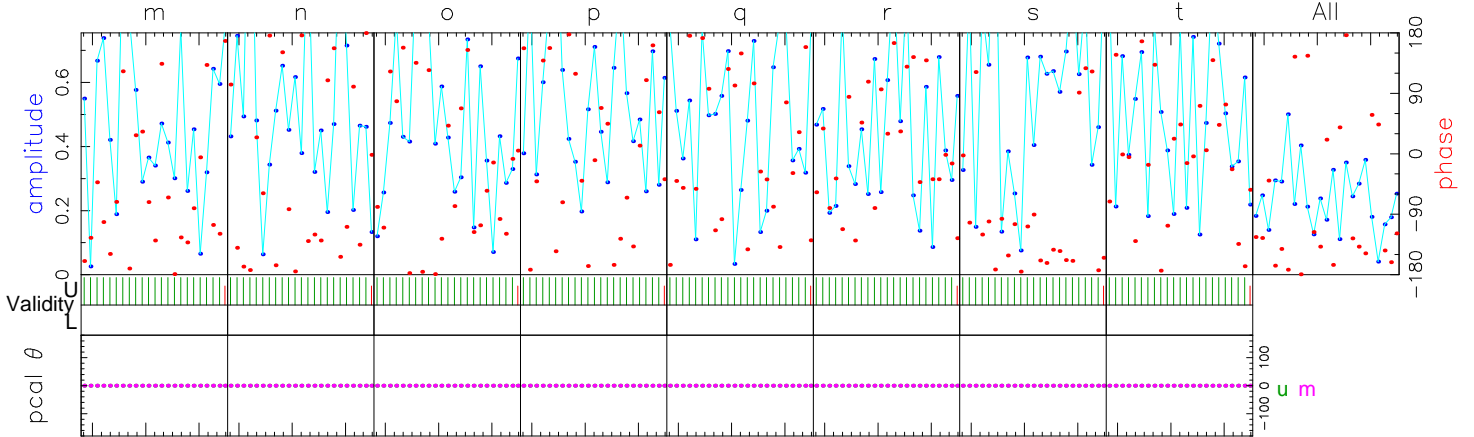


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125859  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-134.8	-160.5	168.5	-161.6	-161.7	16.4	-151.2	36.9	Phase	-157.8
	0.3	0.6	0.2	0.3	0.2	0.0	0.6	0.1	Ampl.	0.3
	455.9	206.3	314.9	235.3	320.0	283.5	206.3	192.2	Sbd box	206.2
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	60000	0	0	0	4000	0	PC freqs	
u	0	0	0	0	0	0	0	0	PC freqs	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.35865768927E+04	Apriori delay (usec)	-1.35863737738E+04	Resid mbdelay (usec)	6.05375E-06	+/-	1.9E-04
Sband delay (usec)	-1.35865721360E+04	Apriori clock (usec)	7.9781723E-01	Resid sbdelay (usec)	-1.98362E-01	+/-	1.5E-03
Phase delay (usec)	-1.35863737789E+04	Apriori clockrate (us/s)	1.7726098E-07	Resid phdelay (usec)	-5.08856E-06	+/-	6.4E-07
Delay rate (us/s)	1.23963174783E+00	Apriori rate (us/s)	1.23962083216E+00	Resid rate (us/s)	1.09157E-05	+/-	6.8E-09
Total phase (deg)	-111.7	Apriori accel (us/s/s)	7.78552228140E-05	Resid phase (deg)	-157.8	+/-	19.8

ph/seg (deg)	76.8	Theor.	47.4	Search (1024X32)	0.164	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	76.0		82.8	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	99.5		28.0	Inc. seg. avg.	0.270	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	78.0		48.8	Inc. frq. avg.	0.258	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

u: az 89.5 el 20.0 pa -56.2      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) -7164.246 3408.599      simultaneous interpolator

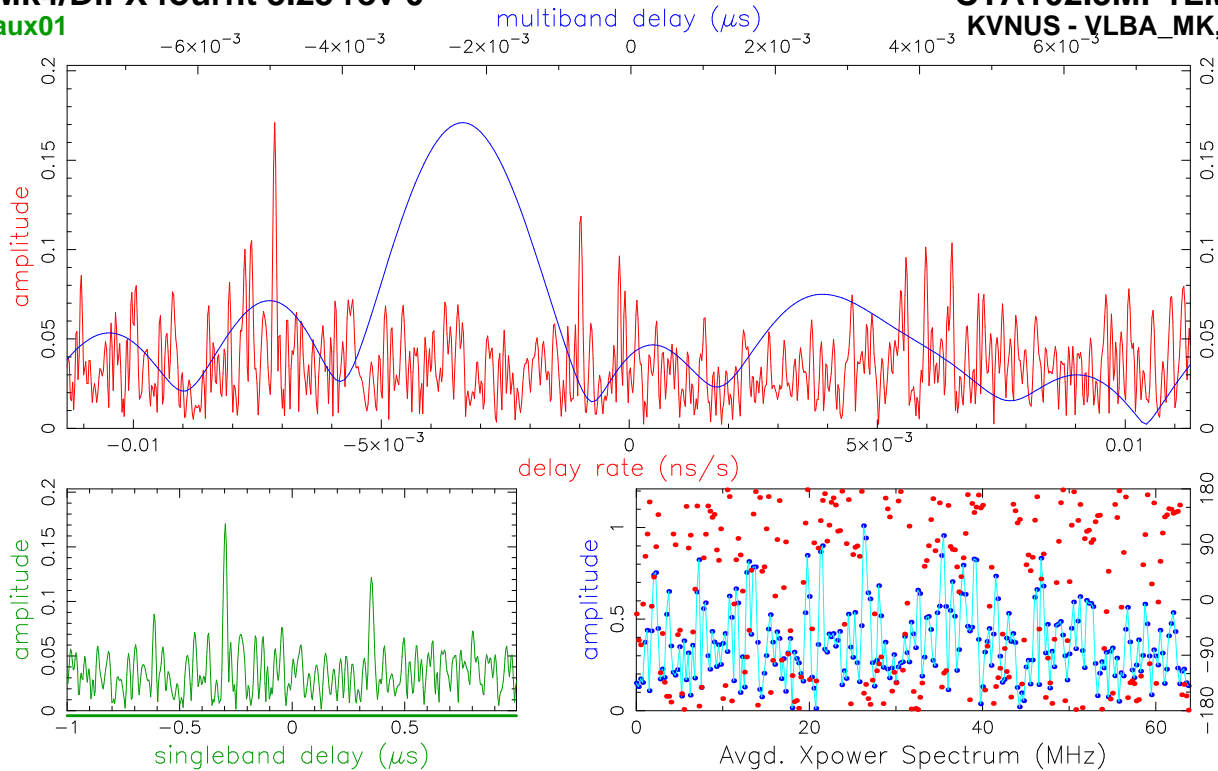
Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/um..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/um.W.202.3MP1LM

Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, um

KVNUS - VLBA\_MK, fgroup W, pol RL

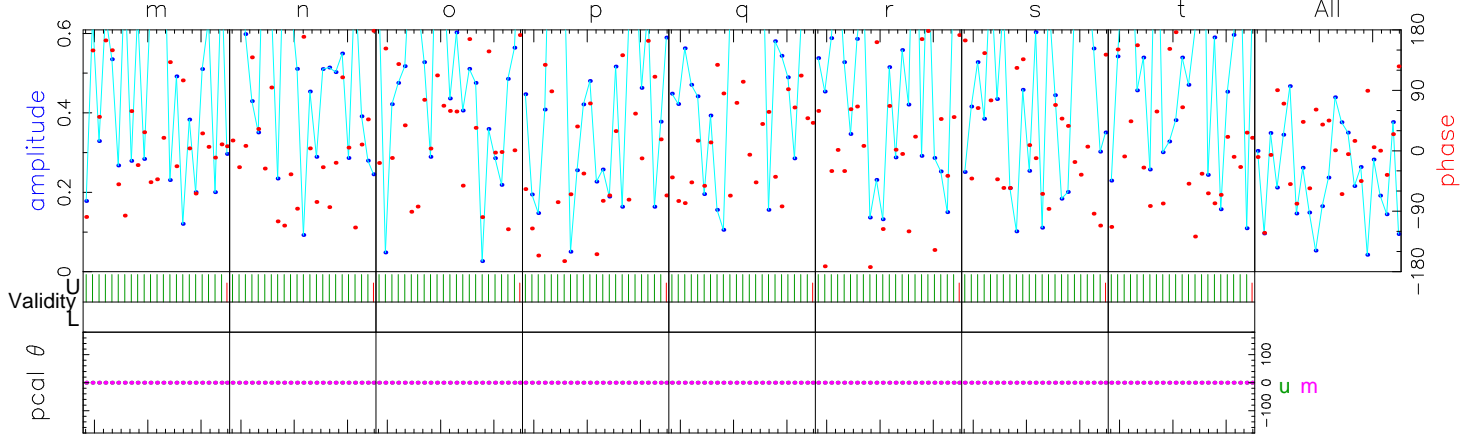


Fringe quality 0

SNR 6.0  
 Int time 162.660  
 Amp 0.203  
 Phase -0.9  
 PFD 2.6e-01  
 Delays (us)  
 SBD -0.297352  
 MBD -0.002345  
 Fringe rate (Hz)  
 -0.617756  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125901  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-3.9	-22.1	39.6	-10.1	4.5	31.2	-12.9	-12.9	Phase	-0.9
	0.2	0.3	0.1	0.1	0.3	0.2	0.2	0.3	Ampl.	0.2
	432.0	263.6	344.7	290.5	378.9	404.4	67.6	390.5	Sbd box	180.9
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
m	0	0	60000	0	0	0	4000	0	PC freqs	
u	0	0	0	0	0	0	0	0	PC freqs	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	-1.35866729934E+04					-1.35863737738E+04			Resid mbdelay (usec)	-2.34463E-03 +/- 1.8E-04
Sband delay (usec)	-1.35866711258E+04					7.9781723E-01			Resid sbdelay (usec)	-2.97352E-01 +/- 1.4E-03
Phase delay (usec)	-1.35863737738E+04					1.7726098E-07			Resid phdelay (usec)	-2.89825E-08 +/- 6.2E-07
Delay rate (us/s)	1.23961366063E+00					1.23962083216E+00			Resid rate (us/s)	-7.17154E-06 +/- 6.6E-09
Total phase (deg)			-314.8			7.78552228140E-05			Resid phase (deg)	-0.9 +/- 19.2
	RMS	Theor.	Amplitude	0.203 +/- 0.034					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	58.1	46.0	Search (1024X32)	0.167					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	80.9	80.3	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	24.3	27.1	Inc. seg. avg.	0.219					Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	38.9	47.4	Inc. frq. avg.	0.193					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
u: az 89.5 el 20.0 pa -56.2			m: az 190.4 el 81.9 pa 11.5			u,v (fr/asec) -7164.246 3408.599				simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c241a/v2/3mm/1234/No0981/um..3MP1LM			Output file: /Exps/c241a/v2/3mm/1234/No0981/um.W.208.3MP1LM				

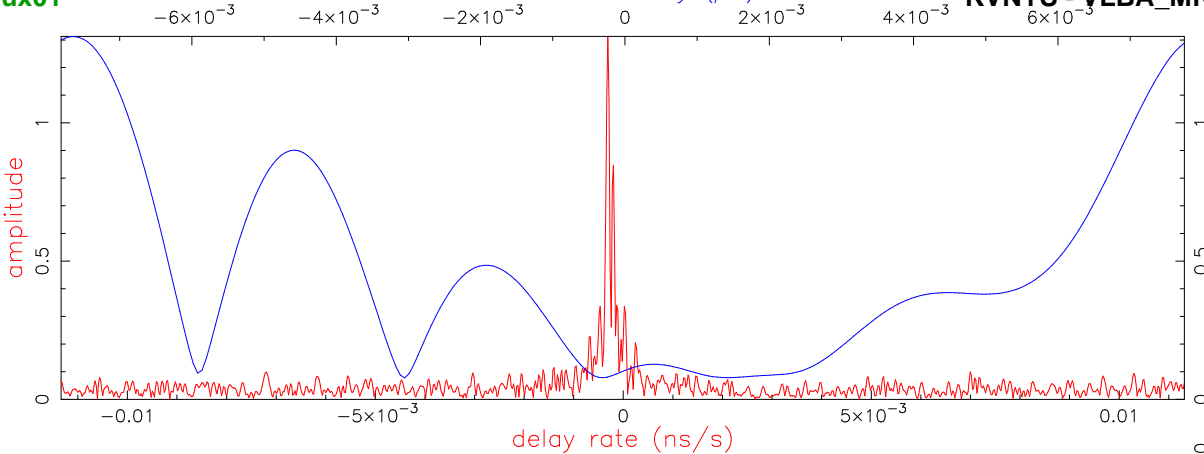
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, ym

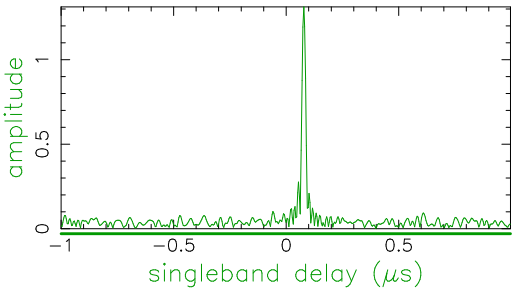
KVNYS - VLBA\_MK, fgroup W, pol LL

multiband delay ( $\mu$ s)

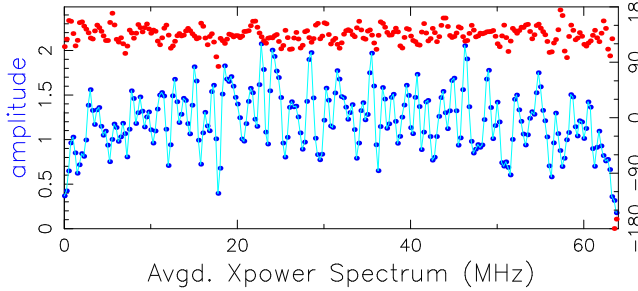


Fringe quality 5

SNR 45.8  
 Int time 162.691  
 Amp 1.313  
 Phase 42.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.078159  
 MBD -0.007644  
 Fringe rate (Hz)  
 -0.027252  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

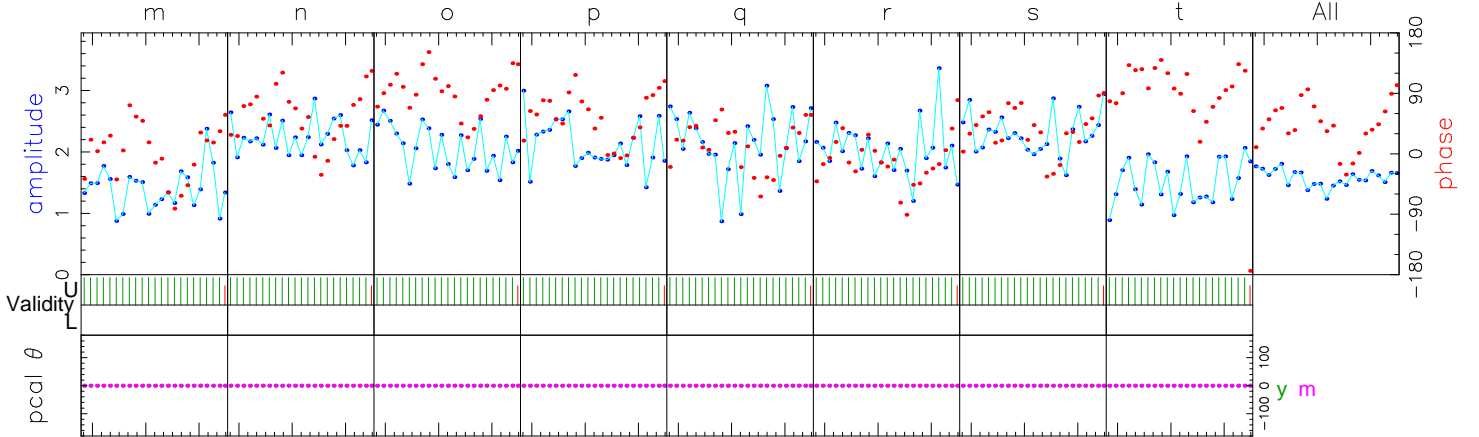


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125852  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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		
y	0	0	60000	0	0	0	4000	0		
m	0	0	0	0	0	0	0	0		
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD) -1.42257811850E+04 Apriori delay (usec) -1.42258516660E+04 Resid mbdelay (usec) -7.64403E-03 +/- 2.4E-05  
 Sband delay (usec) -1.42257735070E+04 Apriori clock (usec) 5.8879566E+08 Resid sbdelay (usec) 7.81590E-02 +/- 1.9E-04  
 Phase delay (usec) -1.42258516646E+04 Apriori clockrate (us/s) 1.4061018E-08 Resid phdelay (usec) 1.38098E-06 +/- 8.1E-08  
 Delay rate (us/s) 1.22246334198E+00 Apriori rate (us/s) 1.22246365835E+00 Resid rate (us/s) -3.16368E-07 +/- 8.6E-10  
 Total phase (deg) -139.4 Apriori accel (us/s/s) 8.19381214062E-05 Resid phase (deg) 42.8 +/- 2.5

ph/seg (deg) 34.6 RMS 34.6 Theor. 6.0 Amplitude 1.313 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 22.6 10.5 Search (1024X32) 1.274 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.5 3.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 32.0 6.2 Inc. seg. avg. 1.569 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 1.633 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

y: az 88.8 el 18.1 pa -54.0 m: az 190.4 el 81.9 pa 11.5 u,v (fr/asec) -7059.091 3720.893 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241a/v2/3mm/1234/No0981/ym..3MP1LM Output file: /Exps/c241a/v2/3mm/1234/No0981/ym.W.189.3MP1LM

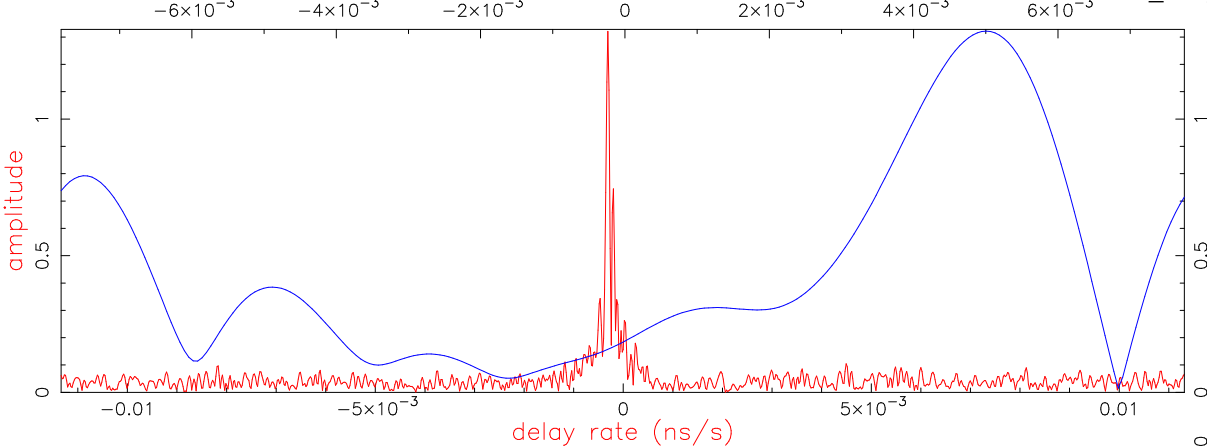
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, ym

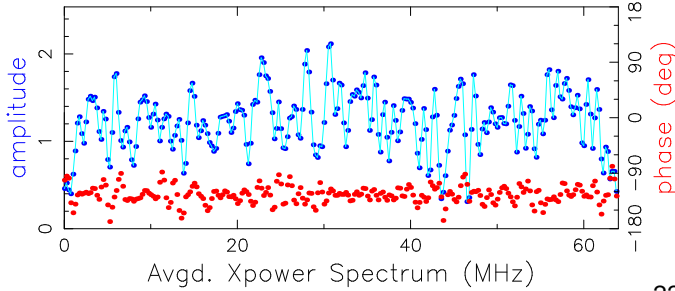
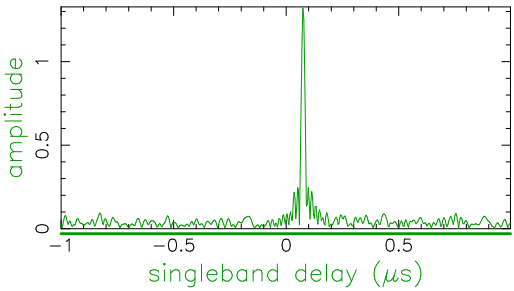
KVNSY - VLBA\_MK, fgroup W, pol RR

multiband delay ( $\mu$ s)



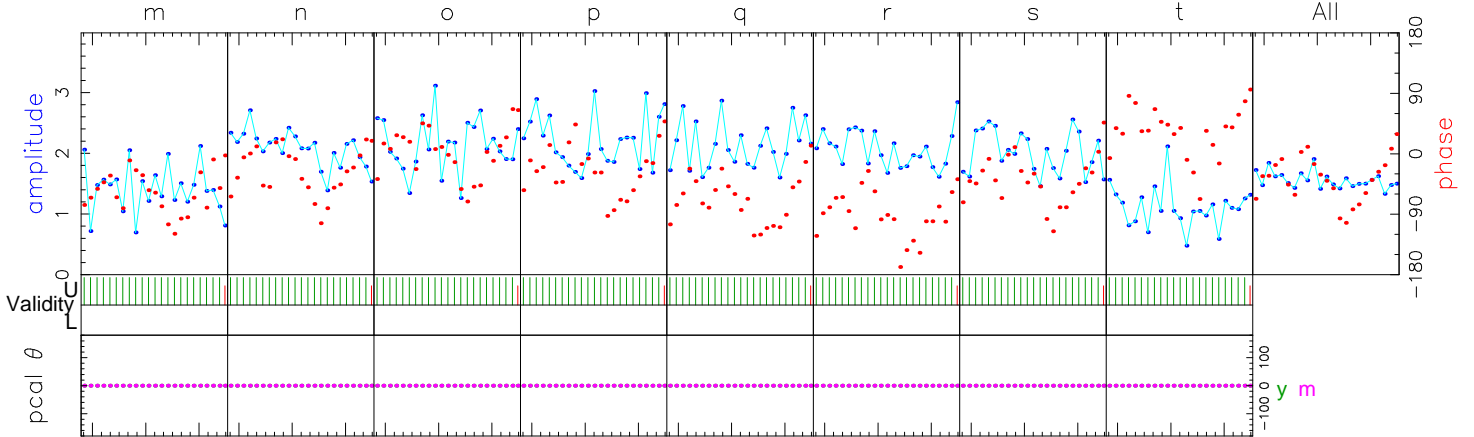
Fringe quality 5

SNR 46.3  
 Int time 162.691  
 Amp 1.328  
 Phase -37.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.075109  
 MBD 0.005049  
 Fringe rate (Hz)  
 -0.027081  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125856  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-58.0	-25.2	1.5	-24.0	-65.8	-89.2	-39.6	36.3		Phase -37.0
	1.2	1.8	1.7	1.8	1.8	1.7	1.7	0.9		Ampl. 1.6
	278.0	276.0	276.1	275.8	276.1	276.0	276.9	278.8		Sbd box 276.2
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used
y	0	0	60000	0	0	0	4000	0		PC freqs
m	0	0	0	0	0	0	0	0		PC freqs
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
m	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Chan ids
										Tracks
Group delay (usec) (SBD)	-1.42257841170E+04								5.04899E-03	+/- 2.3E-05
Sband delay (usec)	-1.42257765572E+04								7.51088E-02	+/- 1.9E-04
Phase delay (usec)	-1.42258516672E+04								-1.19221E-06	+/- 8.0E-08
Delay rate (us/s)	1.22246334396E+00								-3.14383E-07	+/- 8.5E-10
Total phase (deg)			-219.2						-37.0	+/- 2.5
				Apriori delay (usec)	-1.42258516660E+04				Resid mbdelay (usec)	
				Apriori clock (usec)	5.8879566E+00				Resid sbdelay (usec)	
				Apriori clockrate (us/s)	1.4061018E-08				Resid phdelay (usec)	
				Apriori rate (us/s)	1.22246365835E+00				Resid rate (us/s)	
				Apriori accel (us/s/s)	8.19381214062E-05				Resid phase (deg)	
ph/seg (deg)	33.0	5.9		Search (1024X32)	1.301				PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	20.2	10.4		Interp.	0.000				PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	43.1	3.5		Inc. seg. avg.	1.552				Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	29.8	6.1		Inc. frq. avg.	1.579				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
y: az 88.8 el 18.1 pa -54.0				m: az 190.4 el 81.9 pa 11.5						u,v (fr/asec) -7059.091 3720.893
Control file: cf_1234_gmva				Input file: /Exps/c241a/v2/3mm/1234/No0981/ym..3MP1LM						Output file: /Exps/c241a/v2/3mm/1234/No0981/ym.W.198.3MP1LM

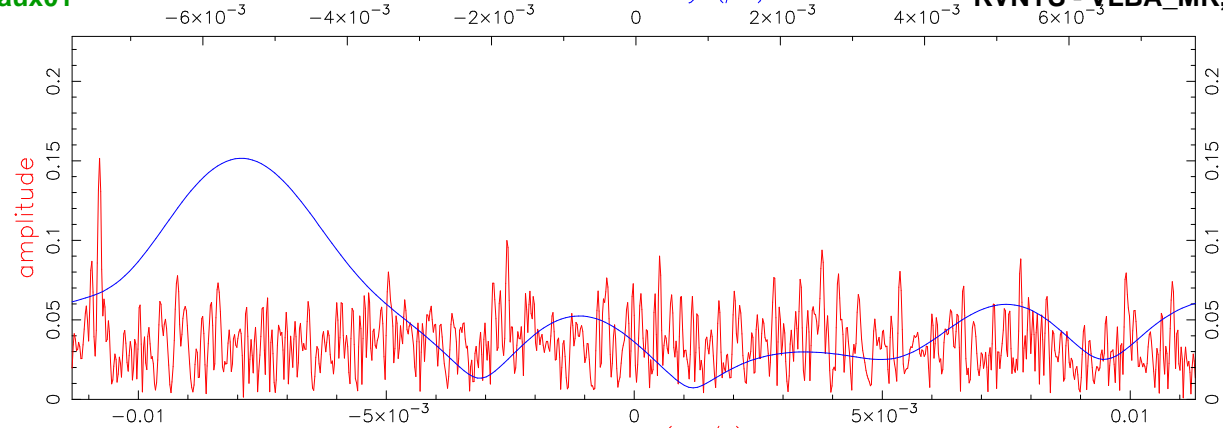
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, ym

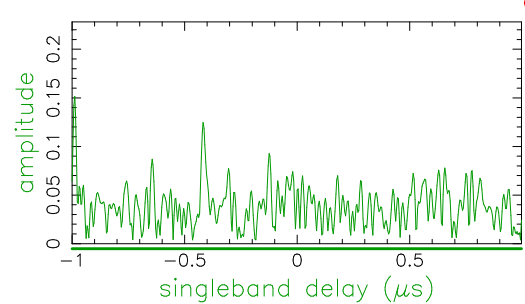
KVNYS - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)

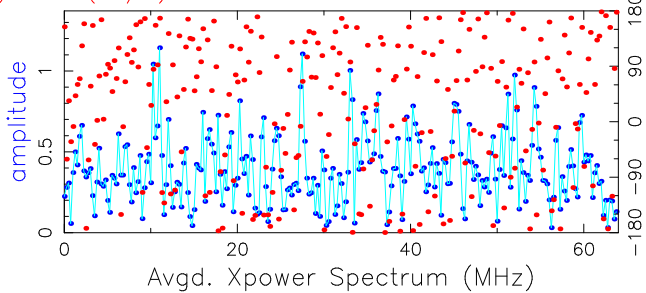


Fringe quality 0

SNR 5.3  
Int time 162.691  
Amp 0.228  
Phase -55.4  
PFD 1.0e+00  
Delays (us)  
SBD -0.988946  
MBD -0.005483  
Fringe rate (Hz)  
-0.930831  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

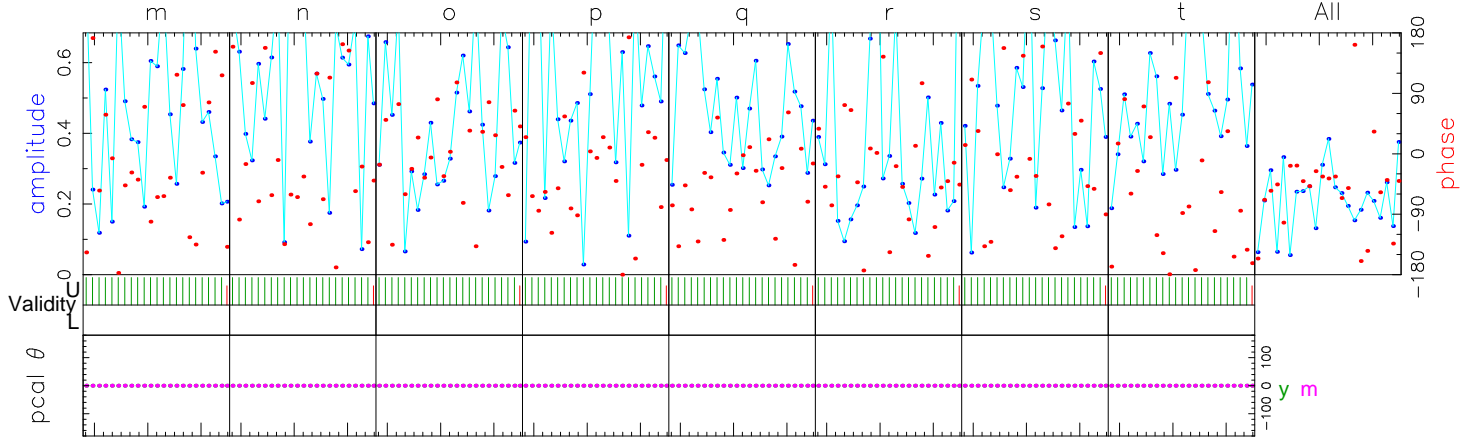


delay rate (ns/s)



Exp. c241a  
Exper # 1234  
Yr:day 2024:109  
Start 191347.17  
Stop 191629.98  
FRT 191508.00  
Corr/FF/build  
2025:003:204508  
2025:041:125858  
2024:113:095956  
RA & Dec (J2000)  
22h32m36.408901s  
+11°43'50.904060"

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		
	-98.6	-88.9	6.2	-40.4	-48.7	-34.9	-66.8	-112.2		Phase		
	0.2	0.3	0.3	0.4	0.3	0.3	0.1	0.2		Ampl.		
	43.8	416.2	244.4	4.4	461.8	493.8	123.5	151.5		Sbd box		
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used		
y	0	0	60000	0	0	0	4000	0		PC freqs		
m	0	0	0	0	0	0	0	0		PC freqs		
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase		
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC		
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp		
m	1000	1000	1000	1000	1000	1000	1000	1000				
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks		
										Tracks		
Group delay (usec) (SBD)	-1.42268415237E+04		Apriori delay (usec)		-1.42258516660E+04		Resid mbdelay (usec)		-5.48273E-03	+/- 2.0E-04		
Sband delay (usec)	-1.42268406122E+04		Apriori clock (usec)		5.8879566E+08		Resid sbdelay (usec)		-9.88946E-01	+/- 1.6E-03		
Phase delay (usec)	-1.42258516677E+04		Apriori clockrate (us/s)		1.4061018E-08		Resid phdelay (usec)		-1.78644E-06	+/- 7.0E-07		
Delay rate (us/s)	1.22245285232E+00		Apriori rate (us/s)		1.22246365835E+00		Resid rate (us/s)		-1.08060E-05	+/- 7.4E-09		
Total phase (deg)			Apriori accel (us/s/s)		8.19381214062E-05		Resid phase (deg)		-55.4	+/- 21.6		
	RMS	Theor.	Amplitude	0.228 +/- 0.043		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	56.1	51.8	Search (1024X32)	0.149		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	70.4	90.5	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	42.5	30.6	Inc. seg. avg.	0.228		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	41.5	53.3	Inc. frq. avg.	0.240		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
y: az 88.8 el 18.1 pa -54.0	m: az 190.4 el 81.9 pa 11.5		u,v (fr/asec) -7059.091 3720.893						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241a/v2/3mm/1234/No09811/ym..3MP1LM		Output file: /Exps/c241a/v2/3mm/1234/No09811/ym.W.201.3MP1LM									

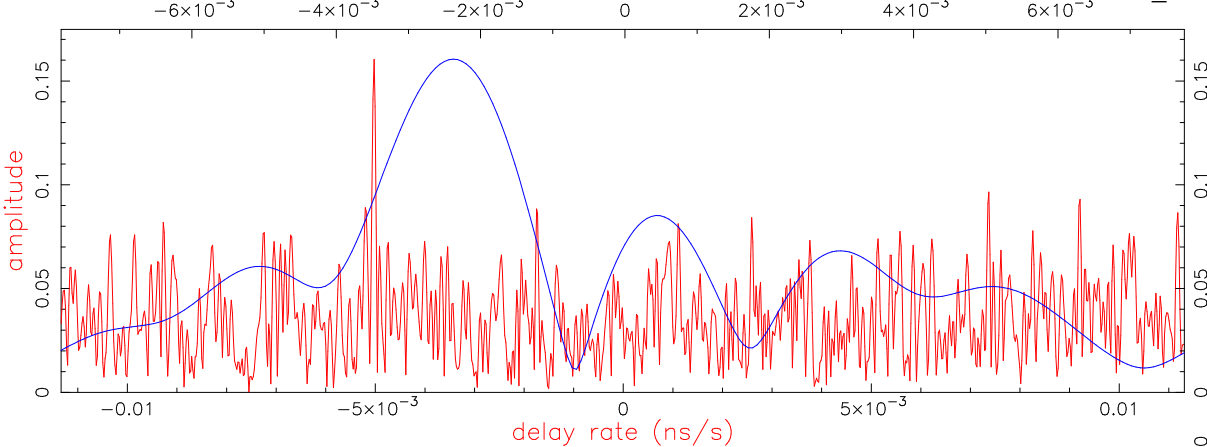
Mk4/DiFX fourfit 3.25 rev 0

aux01

CTA102.3MP1LM, No0981, ym

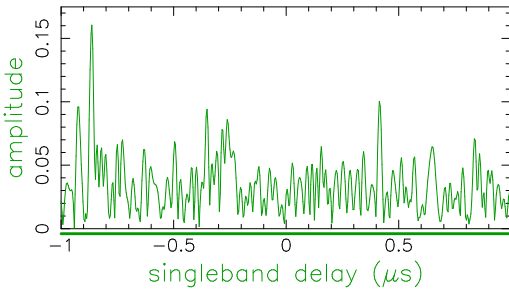
KVNYS - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

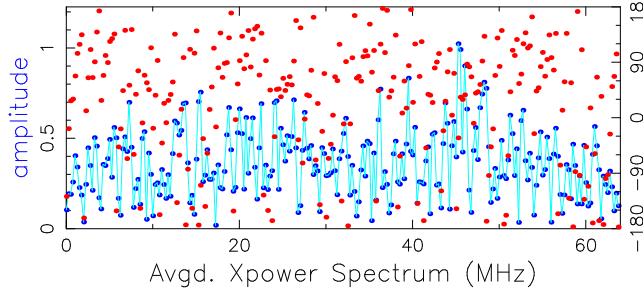


Fringe quality 0

SNR 5.6  
 Int time 162.691  
 Amp 0.175  
 Phase -122.4  
 PFD 9.1e-01  
 Delays (us)  
 SBD -0.864139  
 MBD -0.002419  
 Fringe rate (Hz)  
 -0.433086  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

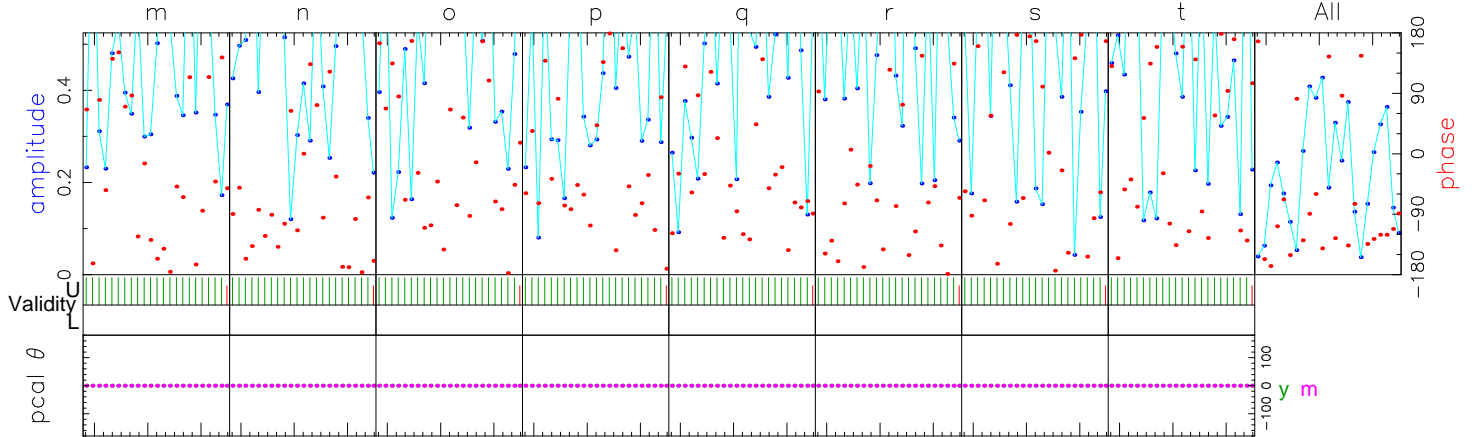


delay rate (ns/s)



Exp. c241a  
 Exper # 1234  
 Yr:day 2024:109  
 Start 191347.17  
 Stop 191629.98  
 FRT 191508.00  
 Corr/FF/build  
 2025:003:204508  
 2025:041:125900  
 2024:113:095956  
 RA & Dec (J2000)  
 22h32m36.408901s  
 +11°43'50.904060"

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
	-168.5	-125.1	-38.8	-107.6	-82.5	-140.9	-138.1	-118.9	Phase	-122.4
	0.2	0.3	0.1	0.1	0.2	0.3	0.2	0.2	Ampl.	0.2
	290.1	192.6	145.3	381.8	312.9	63.9	158.6	311.4	Sbd box	35.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
y	0	0	60000	0	0	0	4000	0	PC freqs	
m	0	0	0	0	0	0	0	0	PC freqs	
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.42267134597E+04	Apriori delay (usec)	-1.42258516660E+04	Resid mbdelay (usec)	-2.41875E-03	+/-	1.9E-04
Sband delay (usec)	-1.42267158050E+04	Apriori clock (usec)	5.8879566E+08	Resid sbdelay (usec)	-8.64139E-01	+/-	1.5E-03
Phase delay (usec)	-1.42258516699E+04	Apriori clockrate (us/s)	1.4061018E-08	Resid phdelay (usec)	-3.94808E-06	+/-	6.6E-07
Delay rate (us/s)	1.22245863065E+00	Apriori rate (us/s)	1.22246365835E+00	Resid rate (us/s)	-5.02770E-06	+/-	7.0E-09
Total phase (deg)	-304.6	Apriori accel (us/s/s)	8.19381214062E-05	Resid phase (deg)	-122.4	+/-	20.4

ph/seg (deg)	61.2	Theor.	48.9	Amplitude	0.175 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	84.5		85.4	Search (1024X32)	0.159	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	43.9		28.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	41.6		50.4	Inc. seg. avg.	0.175	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.177	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

y: az 88.8 el 18.1 pa -54.0      m: az 190.4 el 81.9 pa 11.5      u,v (fr/asec) -7059.091 3720.893      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241a/v2/3mm/1234/No0981/ym..3MP1LM      Output file: /Exps/c241a/v2/3mm/1234/No0981/ym.W.207.3MP1LM