

Mk4/DiFX fourfit 3.25 rev 0

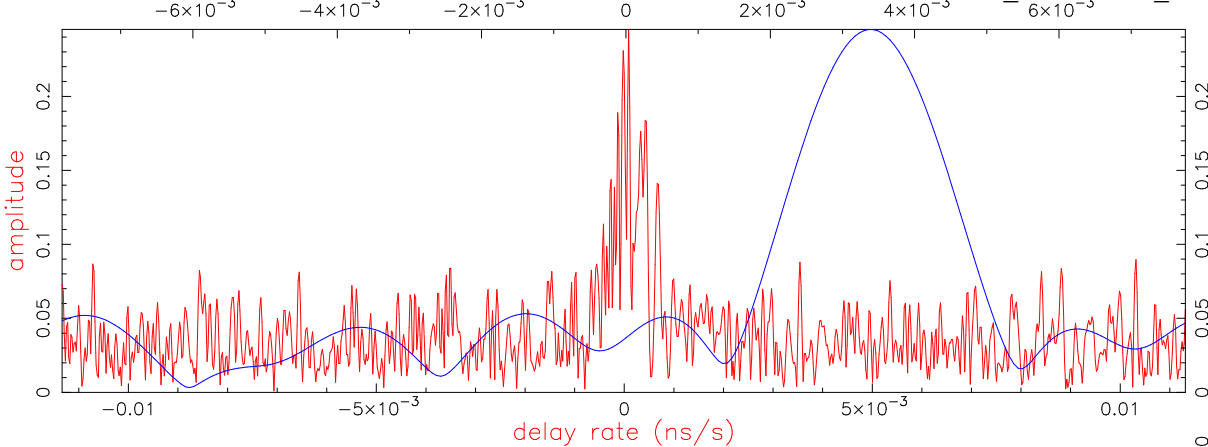
aux01

2013+370.3MP1N1, No0280, bk

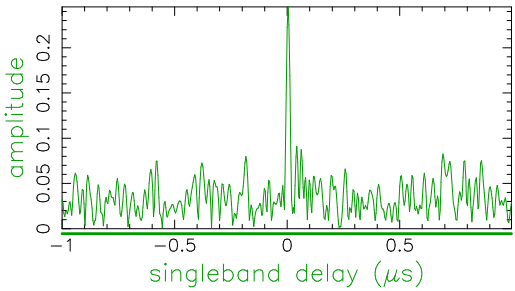
VLBA\_BR - VLBA\_KP, fgroup W, pol RR

multiband delay ( $\mu$ s)

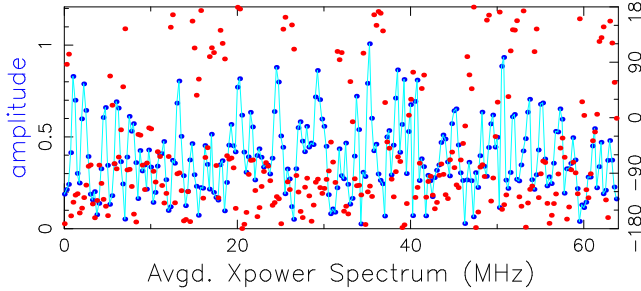
Fringe quality 9



SNR 9.0  
 Int time 179.991  
 Amp 0.245  
 Phase -113.4  
 PFD 4.4e-11  
 Delays (us)  
 SBD 0.004016  
 MBD 0.003391  
 Fringe rate (Hz) 0.006802  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

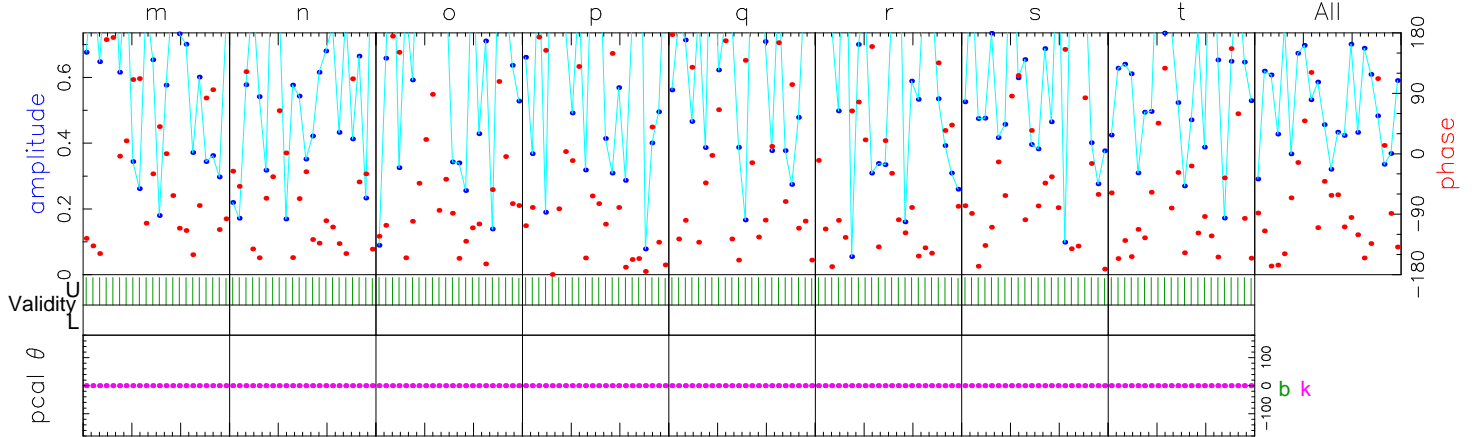


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:104943  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-111.0	-109.9	-96.1	-131.6	-122.5	-108.1	-97.3	-117.6	Phase	-113.4
	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	Ampl.	0.2
	257.0	69.0	169.2	257.3	258.6	480.0	184.6	258.5	Sbd box	258.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	9.32614336590E+02	Apriori delay (usec)	9.32610945954E+02	Resid mbdelay (usec)	3.39064E-03	+/-	1.2E-04
Sband delay (usec)	9.32614961954E+02	Apriori clock (usec)	4.4835548E+00	Resid sbdelay (usec)	4.01600E-03	+/-	9.6E-04
Phase delay (usec)	9.32610942298E+02	Apriori clockrate (us/s)	4.2423487E-07	Resid phdelay (usec)	-3.65591E-06	+/-	4.1E-07
Delay rate (us/s)	-2.21514879374E-01	Apriori rate (us/s)	-2.21514958338E-01	Resid rate (us/s)	7.89645E-08	+/-	3.9E-09
Total phase (deg)	205.0	Apriori accel (us/s/s)	9.76857733739E-06	Resid phase (deg)	-113.4	+/-	12.7

ph/seg (deg)	RMS 70.9	Theor. 29.9	Amplitude Search (1024X32)	0.235	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	124.9	52.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	13.2	18.0	Inc. seg. avg.	0.457	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 (%)	16.6	31.4	Inc. frq. avg.	0.239	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

b: az 60.8 el 24.5 pa -47.2 k: az 58.7 el 21.7 pa -65.8 u, v (fr/asec) 1605.105 2091.474 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/bk.W.10.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

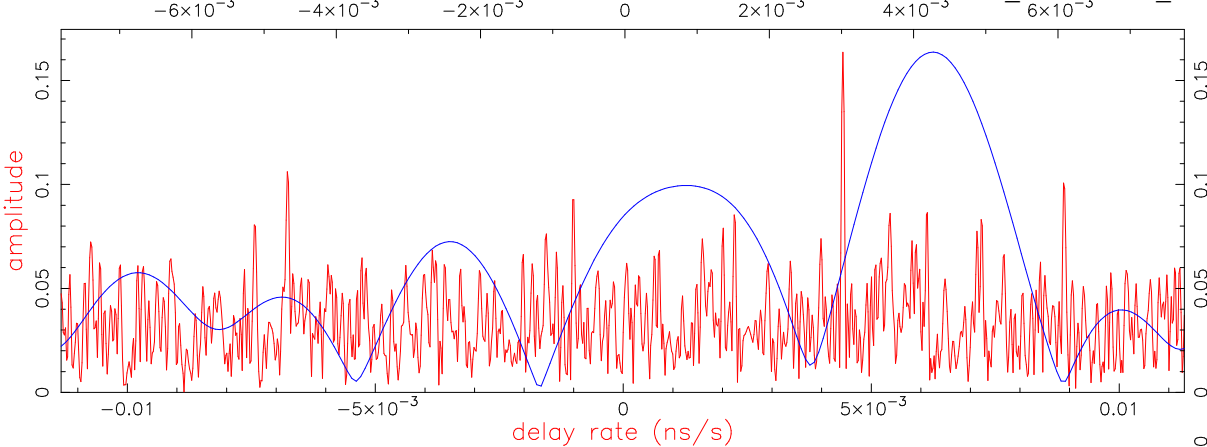
aux01

2013+370.3MP1N1, No0280, bk

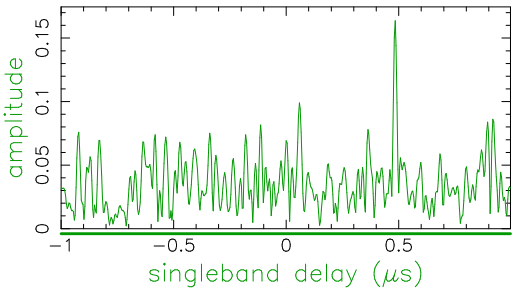
VLBA\_BR - VLBA\_KP, fgroup W, pol LR

multiband delay ( $\mu$ s)

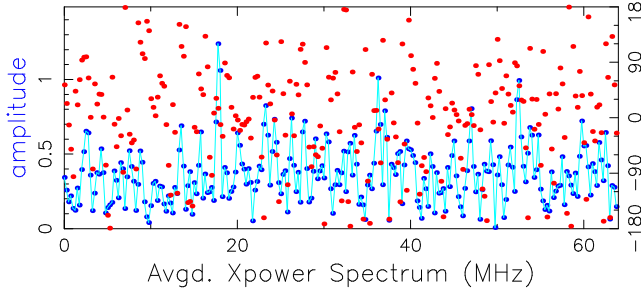
Fringe quality 0



SNR 6.0  
 Int time 179.991  
 Amp 0.175  
 Phase 149.2  
 PFD 2.1e-01  
 Delays (us)  
 SBD 0.483974  
 MBD 0.004245  
 Fringe rate (Hz)  
 0.382017  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

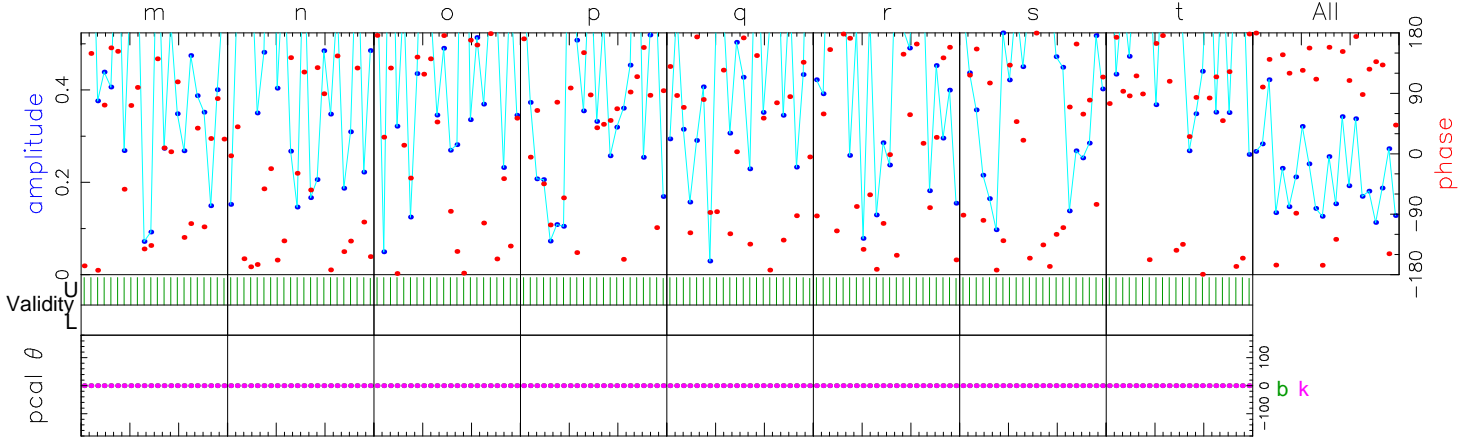


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:104944  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	9.33099565821E+02	Apriori delay (usec)	9.32610945954E+02	Resid mbdelay (usec)	4.24487E-03	+/-	1.8E-04
Sband delay (usec)	9.33094920204E+02	Apriori clock (usec)	4.4835548E+00	Resid sbdelay (usec)	4.83974E-01	+/-	1.4E-03
Phase delay (usec)	9.32610950765E+02	Apriori clockrate (us/s)	4.2423487E-07	Resid phdelay (usec)	4.81143E-06	+/-	6.1E-07
Delay rate (us/s)	-2.21510523500E-01	Apriori rate (us/s)	-2.21514958338E-01	Resid rate (us/s)	4.43484E-06	+/-	5.9E-09
Total phase (deg)	107.6	Apriori accel (us/s/s)	9.76857733739E-06	Resid phase (deg)	149.2	+/-	19.1

ph/seg (deg)	49.8	RMS	44.7	Theor.	44.7	Amplitude	0.175 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	61.1	Search (1024X32)	0.160	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	39.4	Inc. seg. avg.	0.181	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00
amp/frq (%)	43.6	Inc. frq. avg.	0.184									

b: az 60.8 el 24.5 pa -47.2 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 1605.105 2091.474 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/bk.W.17.3MP1N1

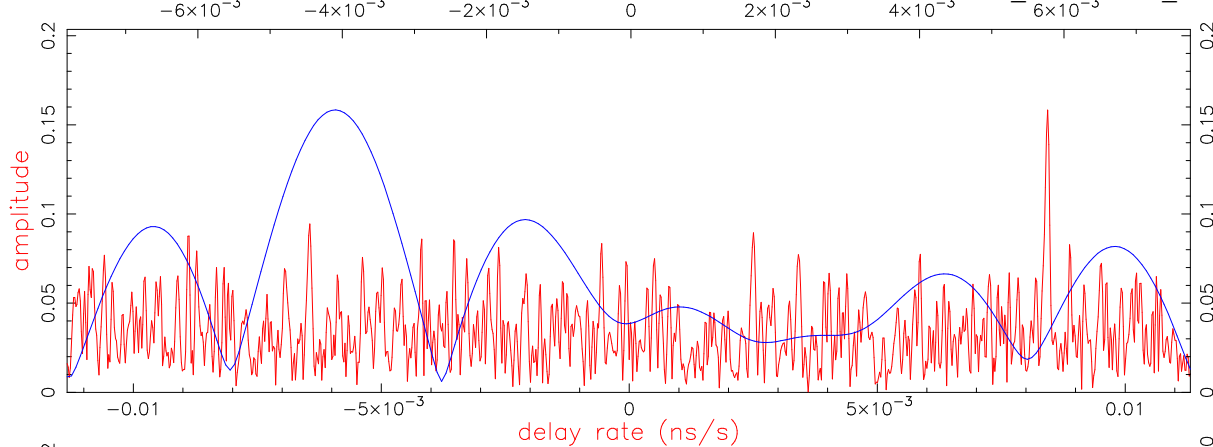
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, bk

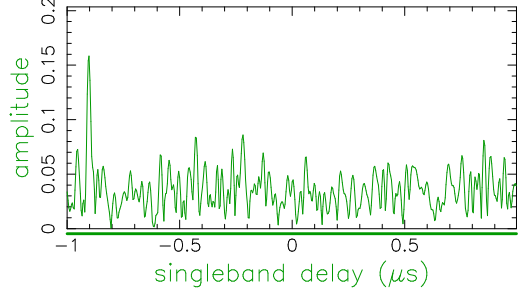
VLBA\_BR - VLBA\_KP, fgroup W, pol RL

multiband delay ( $\mu$ s)

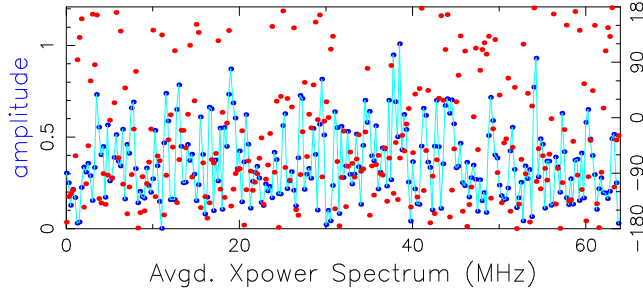


Fringe quality 0

SNR 5.9  
 Int time 179.991  
 Amp 0.204  
 Phase -21.4  
 PFD 4.2e-01  
 Delays (us)  
 SBD -0.903710  
 MBD -0.004116  
 Fringe rate (Hz) 0.728349  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

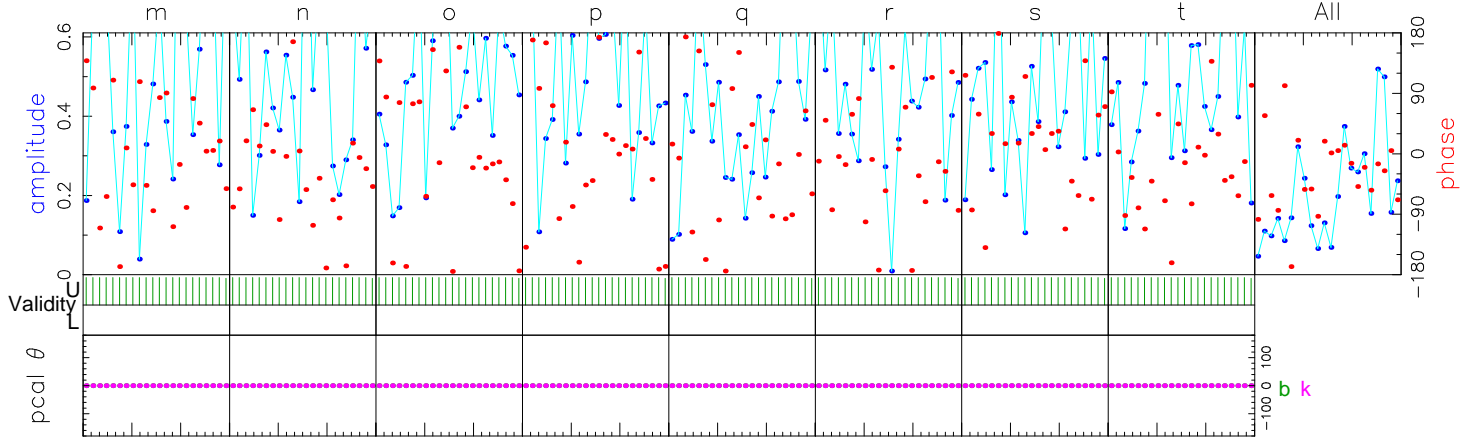


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build 2024:352:054246  
 2025:041:104949  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-14.2	-34.9	43.0	-43.2	-92.5	-15.7	10.2	-22.8	Phase	-21.4
	0.3	0.4	0.1	0.1	0.1	0.2	0.2	0.4	Ampl.	0.2
	25.0	25.7	403.7	466.1	189.8	484.3	401.1	25.7	Sbd box	25.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	9.31700579639E+02	Apriori delay (usec)	9.32610945954E+02	Resid mbdelay (usec)	-4.11631E-03	+/-	1.8E-04
Sband delay (usec)	9.31707235954E+02	Apriori clock (usec)	4.4835548E+00	Resid sbdelay (usec)	-9.03710E-01	+/-	1.5E-03
Phase delay (usec)	9.32610945263E+02	Apriori clockrate (us/s)	4.2423487E-07	Resid phdelay (usec)	-6.91348E-07	+/-	6.3E-07
Delay rate (us/s)	-2.21506502933E-01	Apriori rate (us/s)	-2.21514958338E-01	Resid rate (us/s)	8.45540E-06	+/-	6.0E-09
Total phase (deg)	297.0	Apriori accel (us/s/s)	9.76857733739E-06	Resid phase (deg)	-21.4	+/-	19.5

ph/seg (deg)	RMS 57.1	Theor. 45.8	Amplitude Search (1024X32)	0.156	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	86.2	79.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	42.7	27.6	Inc. seg. avg.	0.200	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	54.4	48.2	Inc. frq. avg.	0.205	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 60.8 el 24.5 pa -47.2 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 1605.105 2091.474 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/bk.W.28.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

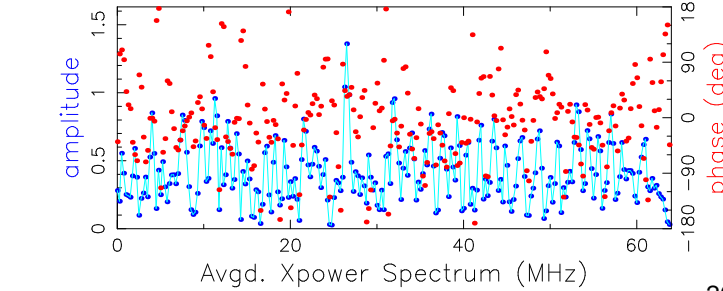
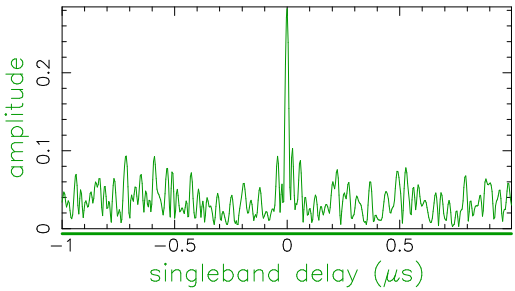
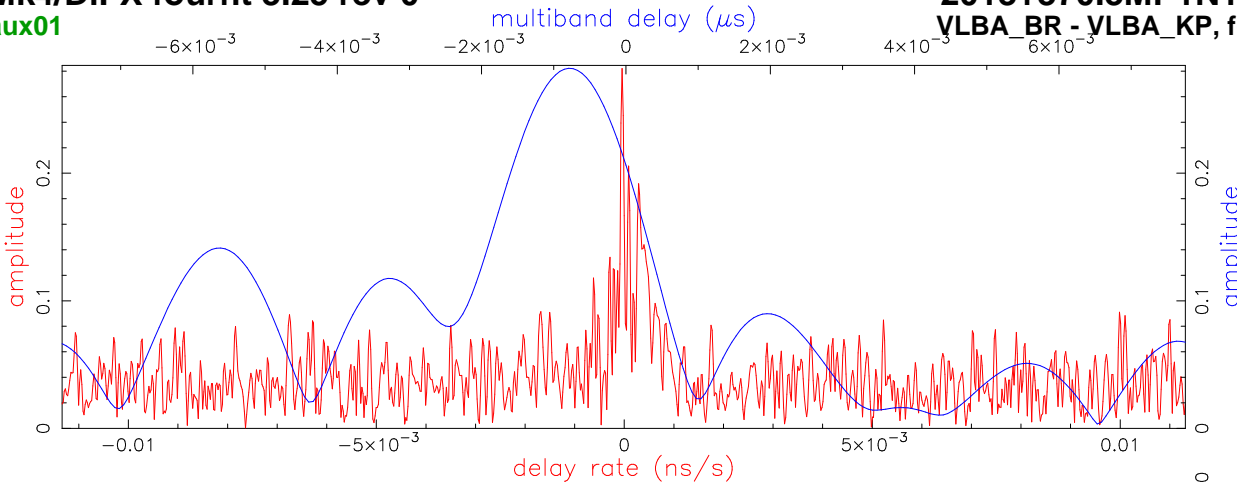
aux01

2013+370.3MP1N1, No0280, bk

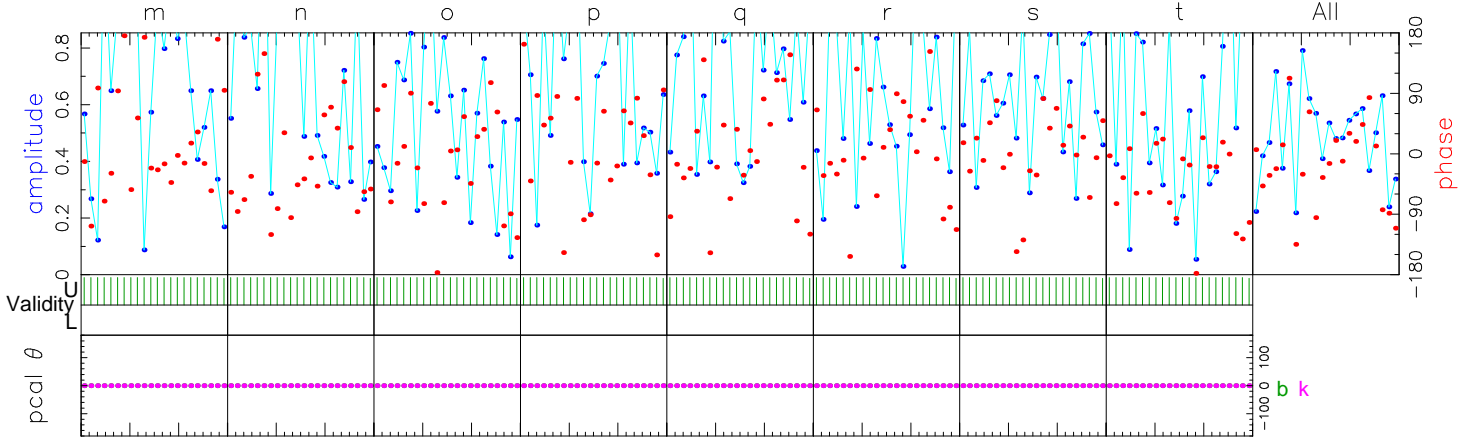
VLBA\_BR - VLBA\_KP, fgroup W, pol LL

Fringe quality 9

SNR 10.4  
 Int time 179.991  
 Amp 0.285  
 Phase -7.6  
 PFD 3.6e-17  
 Delays (us)  
 SBD -0.001165  
 MBD -0.000820  
 Fringe rate (Hz)  
 -0.004187  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:104941  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-18.1	-47.5	18.7	33.9	-8.5	-6.9	11.1	-31.4		-7.6
	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4		0.3
	256.8	256.0	198.9	256.2	257.4	312.3	256.8	256.7		256.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	0	0	0	0	0	0	0	0		
k	0	0	0	0	0	0	0	0		
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	9.32610125636E+02	Apriori delay (usec)	9.32610945954E+02	Resid mbdelay (usec)	-8.20318E-04	+/-	1.0E-04
Sband delay (usec)	9.32609780704E+02	Apriori clock (usec)	4.4835548E+00	Resid sbdelay (usec)	-1.16525E-03	+/-	8.3E-04
Phase delay (usec)	9.32610945710E+02	Apriori clockrate (us/s)	4.2423487E-07	Resid phdelay (usec)	-2.43532E-07	+/-	3.5E-07
Delay rate (us/s)	-2.21515006947E-01	Apriori rate (us/s)	-2.21514958338E-01	Resid rate (us/s)	-4.86085E-08	+/-	3.4E-09
Total phase (deg)	310.9	Apriori accel (us/s/s)	9.76857733739E-06	Resid phase (deg)	-7.6	+/-	11.0

ph/seg (deg)	62.0	Theor.	25.7	Amplitude	0.285 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	89.7	Search (1024X32)	0.274	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	29.0	Inc. seg. avg.	0.444	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	23.7	Inc. frq. avg.	0.299	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011 0.011
				Data rate(Mb/s): 2048			ion window (TEC)	0.00 0.00

b: az 60.8 el 24.5 pa -47.2 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 1605.105 2091.474 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/bk.W.5.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

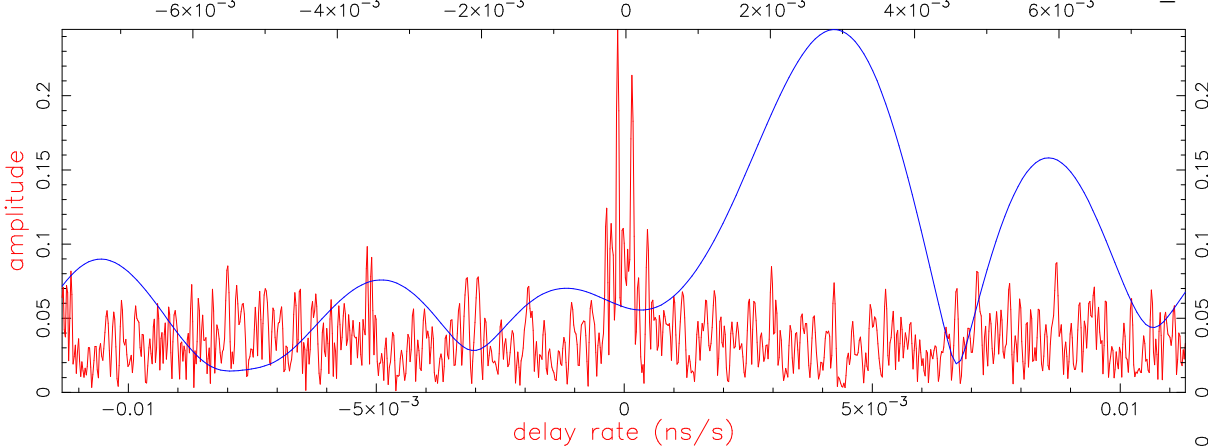
aux01

2013+370.3MP1N1, No0280, Bk

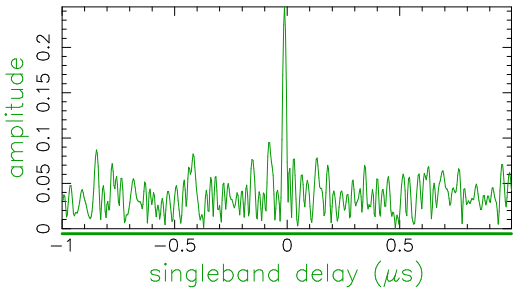
EFLSBERG - VLBA\_KP, fgroup W, pol LL

multiband delay ( $\mu$ s)

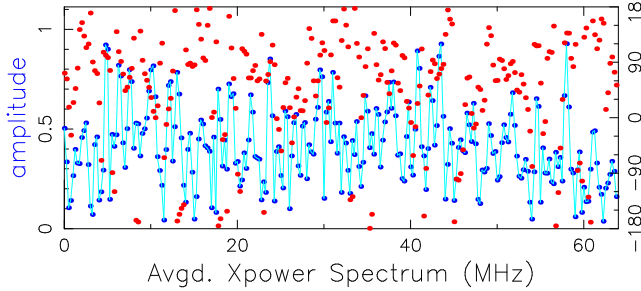
Fringe quality 9



SNR 9.0  
 Int time 179.967  
 Amp 0.245  
 Phase -86.4  
 PFD 5.3e-11  
 Delays (us)  
 SBD -0.011962  
 MBD 0.002881  
 Fringe rate (Hz)  
 -0.012030  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

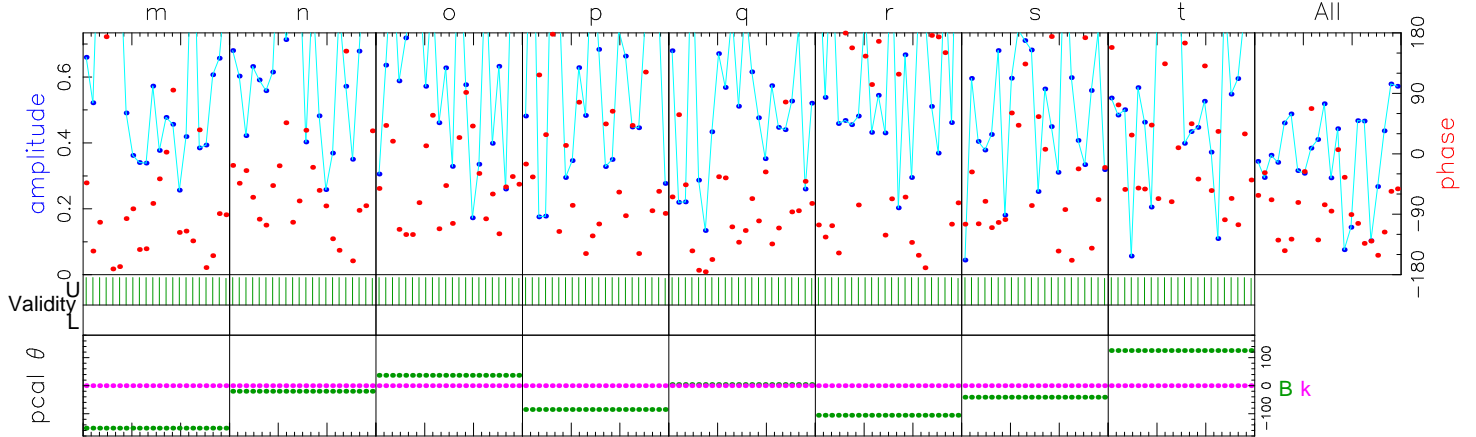


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105000  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-121.0	-57.9	-44.8	-85.7	-94.4	-137.9	-82.6	-41.1	Phase	-86.4
	0.4	0.4	0.3	0.2	0.3	0.4	0.2	0.2	Ampl.	0.3
	254.9	254.0	253.8	130.3	339.9	253.6	83.2	371.7	Sbd box	253.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:k	-151:0	-20:0	37:0	-85:0	4:0	-106:0	-41:0	125:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.09797788042E+04	Apriori delay (usec)	1.09797915481E+04	Resid mbdelay (usec)	2.88105E-03	+/-	1.2E-04
Sband delay (usec)	1.09797795859E+04	Apriori clock (usec)	-3.5552639E+01	Resid sbdelay (usec)	-1.19622E-02	+/-	9.6E-04
Phase delay (usec)	1.09797915453E+04	Apriori clockrate (us/s)	-3.4174508E-07	Resid phdelay (usec)	-2.78582E-06	+/-	4.1E-07
Delay rate (us/s)	-1.47480735893E+00	Apriori rate (us/s)	-1.47480721928E+00	Resid rate (us/s)	-1.39651E-07	+/-	4.0E-09
Total phase (deg)	257.8	Apriori accel (us/s/s)	-4.20058602310E-05	Resid phase (deg)	-86.4	+/-	12.8

ph/seg (deg)	53.6	Theor.	29.9	Search (1024X32)	0.239	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.2		52.2	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)	37.7		18.1	Inc. seg. avg.	0.323	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 (%)	38.2		31.5	Inc. frq. avg.	0.280	Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00	

B: az 252.9 el 63.3 pa 49.7 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 10581.147 -866.306 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/Bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/Bk.W.62.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

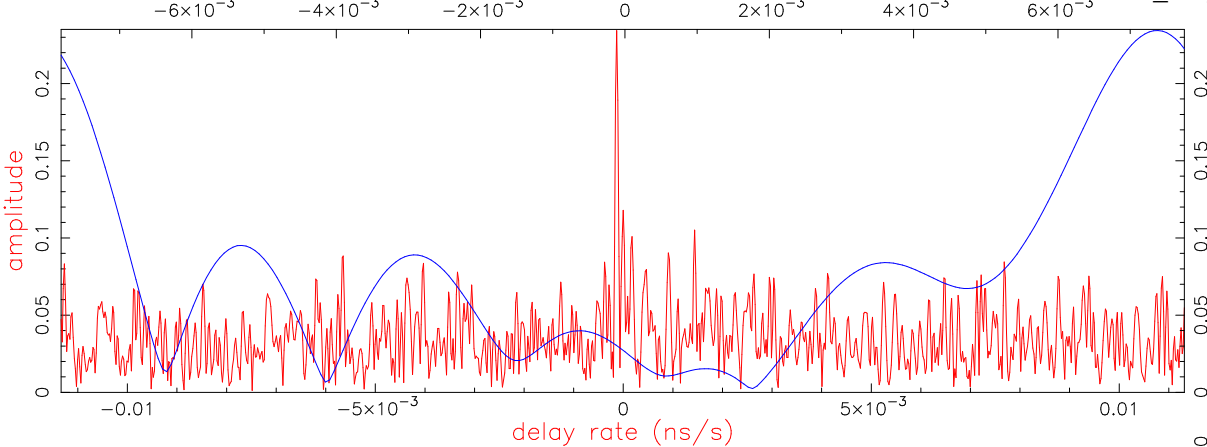
aux01

2013+370.3MP1N1, No0280, Bk

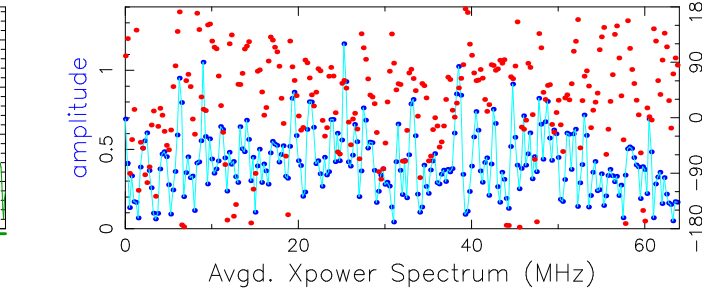
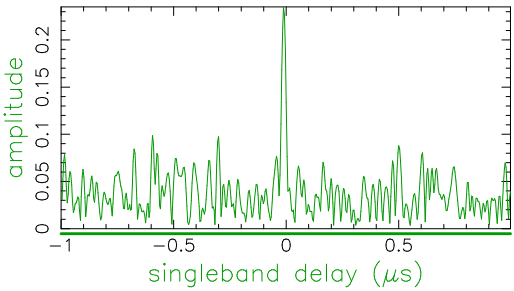
EFLSBERG - VLBA\_KP, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 9

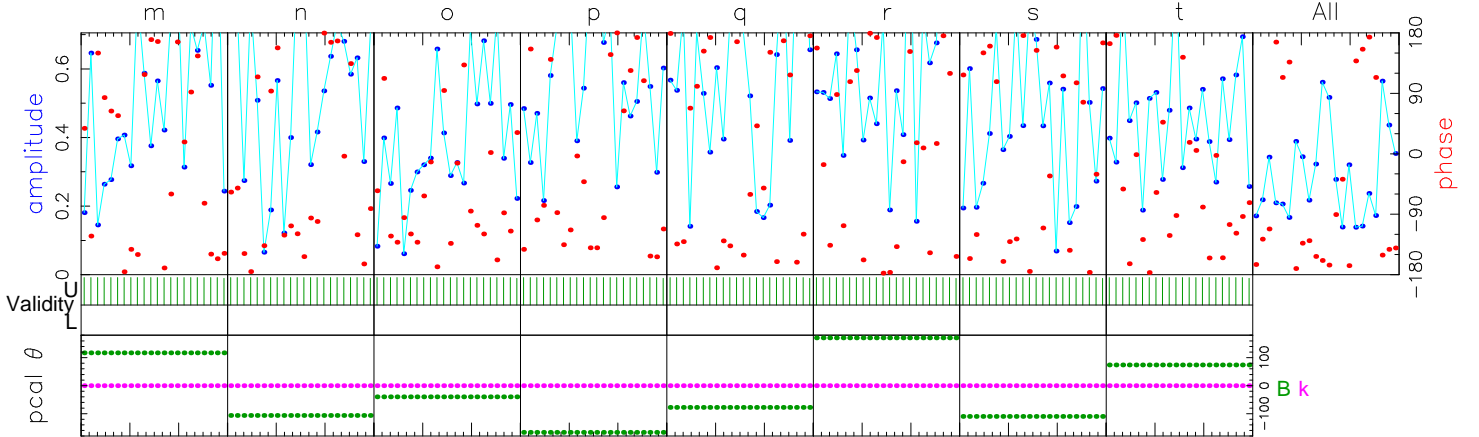


SNR 8.6  
Int time 179.967  
Amp 0.235  
Phase -157.0  
PFD 1.2e-09  
Delays (us)  
SBD -0.010862  
MBD 0.007394  
Fringe rate (Hz)  
-0.012409  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 080000.00  
Stop 080300.22  
FRT 080130.00  
Corr/FF/build  
2024:352:054246  
2025:041:105002  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-176.5	-141.9	-115.7	-145.3	-166.0	162.0	171.8	-99.2	Phase	-157.0
	0.2	0.3	0.2	0.3	0.4	0.3	0.2	0.2	Ampl.	0.3
	271.1	192.5	423.8	252.9	255.2	105.1	344.6	254.6	Sbd box	254.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:k	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.09797833167E+04	Apriori delay (usec)	1.09797915481E+04	Resid mbdelay (usec)	7.39353E-03	+/-	1.3E-04
Sband delay (usec)	1.09797806866E+04	Apriori clock (usec)	-3.5552639E+01	Resid sbdelay (usec)	-1.08615E-02	+/-	1.0E-03
Phase delay (usec)	1.09797915431E+04	Apriori clockrate (us/s)	-3.4174508E-07	Resid phdelay (usec)	-5.06431E-06	+/-	4.3E-07
Delay rate (us/s)	-1.47480736333E+00	Apriori rate (us/s)	-1.47480721928E+00	Resid rate (us/s)	-1.44053E-07	+/-	4.1E-09
Total phase (deg)	187.1	Apriori accel (us/s/s)	-4.20058602310E-05	Resid phase (deg)	-157.0	+/-	13.3

ph/seg (deg)	49.1	Theor.	31.2	Amplitude	0.235 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	61.1		54.4	Search (1024X32)	0.224	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	37.7		18.8	Inc. seg. avg.	0.255	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	32.5		32.8	Inc. frq. avg.	0.256	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 252.9 el 63.3 pa 49.7 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 10581.147 -866.306 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/Bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/Bk.W.76.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

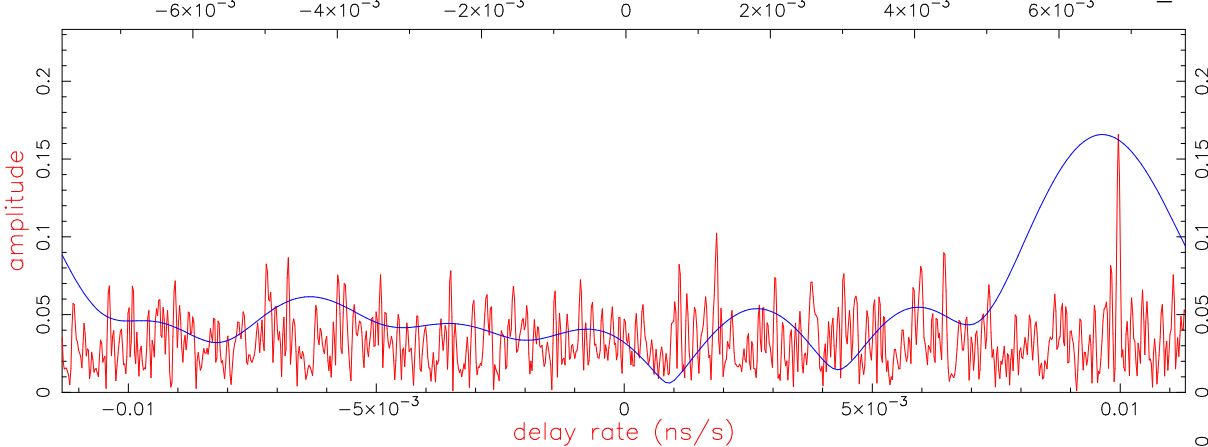
aux01

2013+370.3MP1N1, No0280, Bk

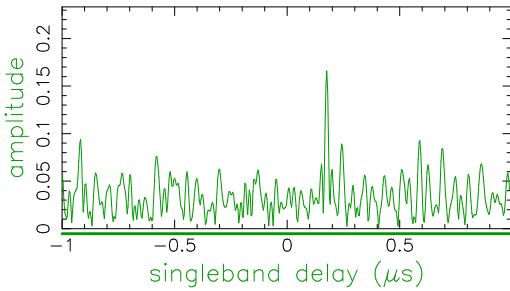
EFLSBERG - VLBA\_KP, fgroup W, pol LR

multiband delay ( $\mu$ s)

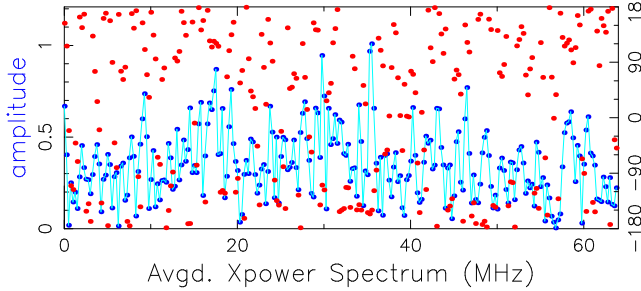
Fringe quality 0



SNR 6.1  
 Int time 179.967  
 Amp 0.233  
 Phase -60.0  
 PFD 1.4e-01  
 Delays (us)  
 SBD 0.175432  
 MBD 0.006590  
 Fringe rate (Hz) 0.858702  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

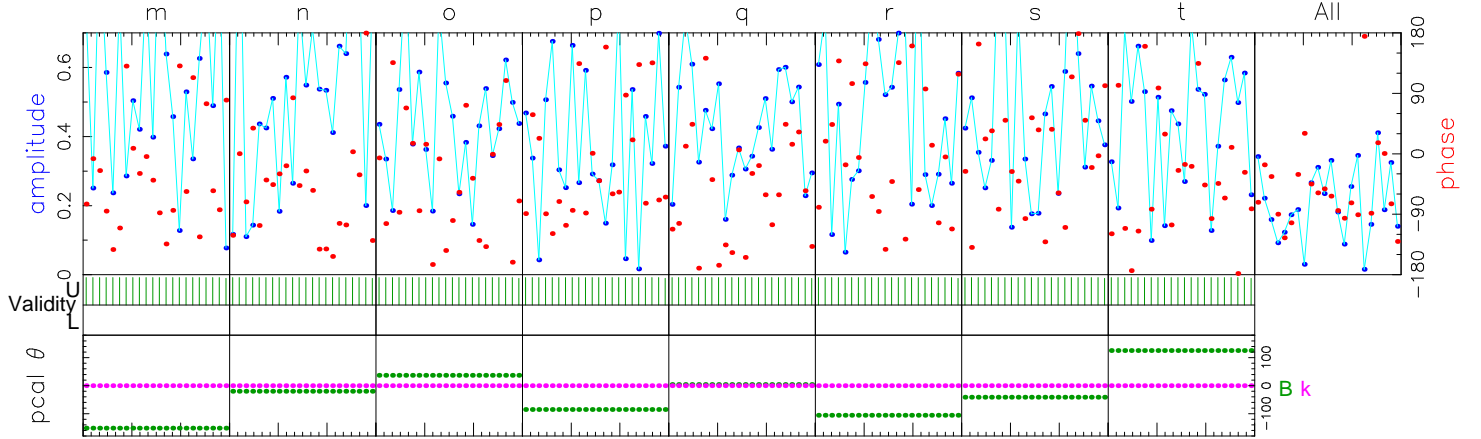


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build 2024:352:054246  
 2025:041:105005  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-64.5	-56.5	-51.9	-71.8	-39.4	-75.7	-15.2	-76.9	Phase	-60.0
	0.4	0.4	0.1	0.3	0.2	0.1	0.1	0.2	Ampl.	0.2
	301.0	302.1	431.7	284.8	13.1	154.0	408.7	39.0	Sbd box	301.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:k	-151:0	-20:0	37:0	-85:0	4:0	-106:0	-41:0	125:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.09799700133E+04	Apriori delay (usec)	1.09797915481E+04	Resid mbdelay (usec)	6.59022E-03	+/-	1.8E-04
Sband delay (usec)	1.09799669799E+04	Apriori clock (usec)	-3.5552639E+01	Resid sbdelay (usec)	1.75432E-01	+/-	1.4E-03
Phase delay (usec)	1.09797915462E+04	Apriori clockrate (us/s)	-3.4174508E-07	Resid phdelay (usec)	-1.93536E-06	+/-	6.1E-07
Delay rate (us/s)	-1.47479725060E+00	Apriori rate (us/s)	-1.47480721928E+00	Resid rate (us/s)	9.96868E-06	+/-	5.8E-09
Total phase (deg)	284.1	Apriori accel (us/s/s)	-4.20058602310E-05	Resid phase (deg)	-60.0	+/-	18.8

ph/seg (deg)	49.2	Theor.	44.1	Amplitude	0.233 +/- 0.038	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	67.9		77.0	Search (1024X32)	0.161	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	23.1		26.6	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	52.9		46.5	Inc. seg. avg.	0.225	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.218	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 252.9 el 63.3 pa 49.7 k: az 58.7 el 21.7 pa -65.8 u, v (fr/asec) 10581.147 -866.306 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/Bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/Bk.W.87.3MP1N1

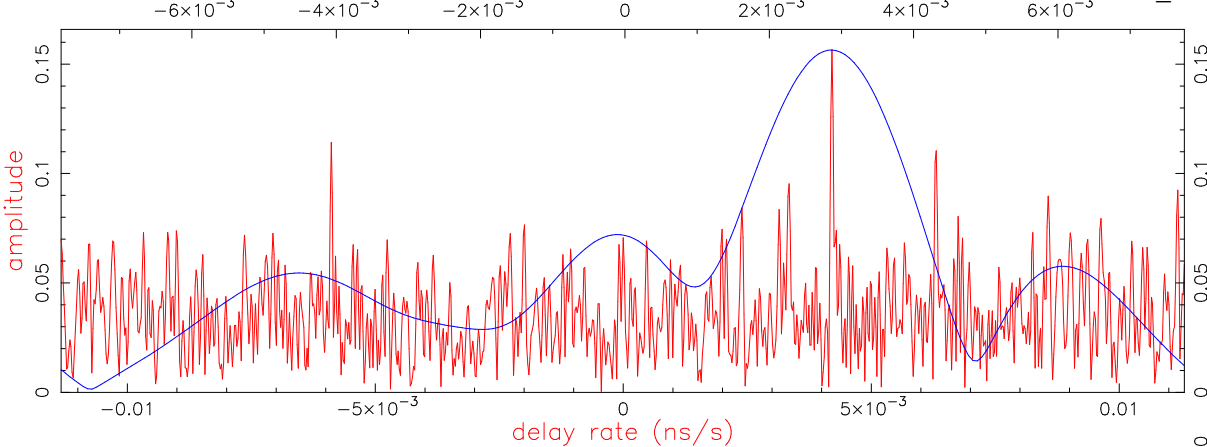
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, Bk

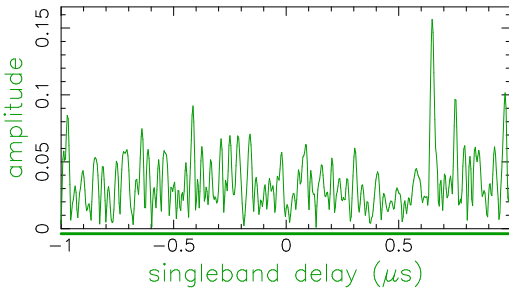
EFLSBERG - VLBA\_KP, fgroup W, pol RL

multiband delay ( $\mu$ s)

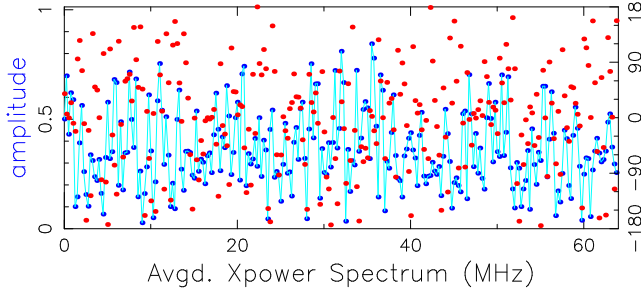


Fringe quality 0

SNR 5.7  
 Int time 179.967  
 Amp 0.166  
 Phase -107.1  
 PFD 6.8e-01  
 Delays (us)  
 SBD 0.648888  
 MBD 0.002862  
 Fringe rate (Hz)  
 0.362740  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

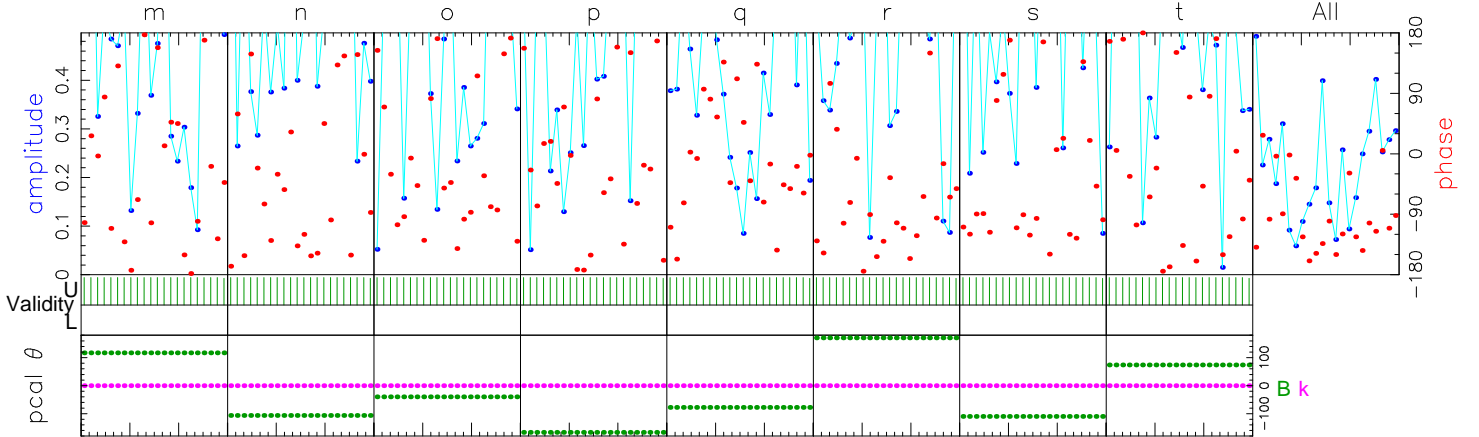


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105008  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-115.5	-138.2	-83.4	-119.1	-38.0	-111.0	-112.0	-134.4	Phase	-107.1
	0.1	0.2	0.2	0.1	0.2	0.3	0.3	0.1	Ampl.	0.2
	364.5	259.2	421.6	468.0	356.4	422.1	422.5	4.8	Sbd box	423.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:k	118:0	-106:0	-40:0	-167:0	-77:0	171:0	-110:0	74:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.09804350356E+04	Apriori delay (usec)	1.09797915481E+04	Resid mbdelay (usec)	2.86246E-03	+/-	1.9E-04
Sband delay (usec)	1.09804404356E+04	Apriori clock (usec)	-3.5552639E+01	Resid sbdelay (usec)	6.48888E-01	+/-	1.5E-03
Phase delay (usec)	1.09797915447E+04	Apriori clockrate (us/s)	-3.4174508E-07	Resid phdelay (usec)	-3.45423E-06	+/-	6.4E-07
Delay rate (us/s)	-1.47480300823E+00	Apriori rate (us/s)	-1.47480721928E+00	Resid rate (us/s)	4.21105E-06	+/-	6.2E-09
Total phase (deg)	237.0	Apriori accel (us/s/s)	-4.20058602310E-05	Resid phase (deg)	-107.1	+/-	19.9

ph/seg (deg)	58.2	Theor.	46.8	Amplitude	0.166 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	84.2	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)	34.9	Inc. seg. avg.	0.180	Inc. seg. avg.	0.180	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	42.3	Inc. frq. avg.	0.168	Inc. frq. avg.	0.168	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 252.9 el 63.3 pa 49.7 k: az 58.7 el 21.7 pa -65.8 u, v (fr/asec) 10581.147 -866.306 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/Bk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/Bk.W.95.3MP1N1



Mk4/DiFX fourfit 3.25 rev 0

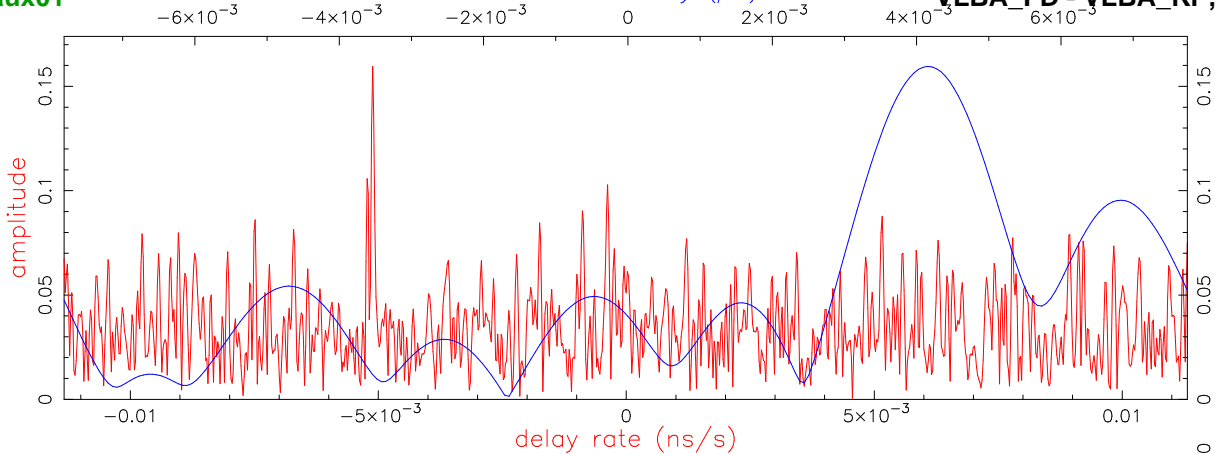
aux01

2013+370.3MP1N1, No0280, fk

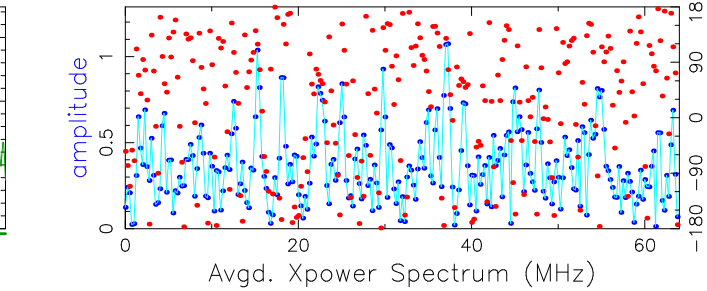
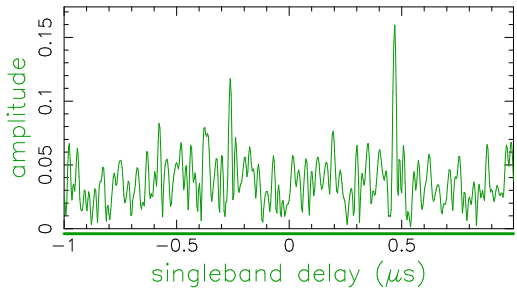
VLBA\_FD - VLBA\_KP, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

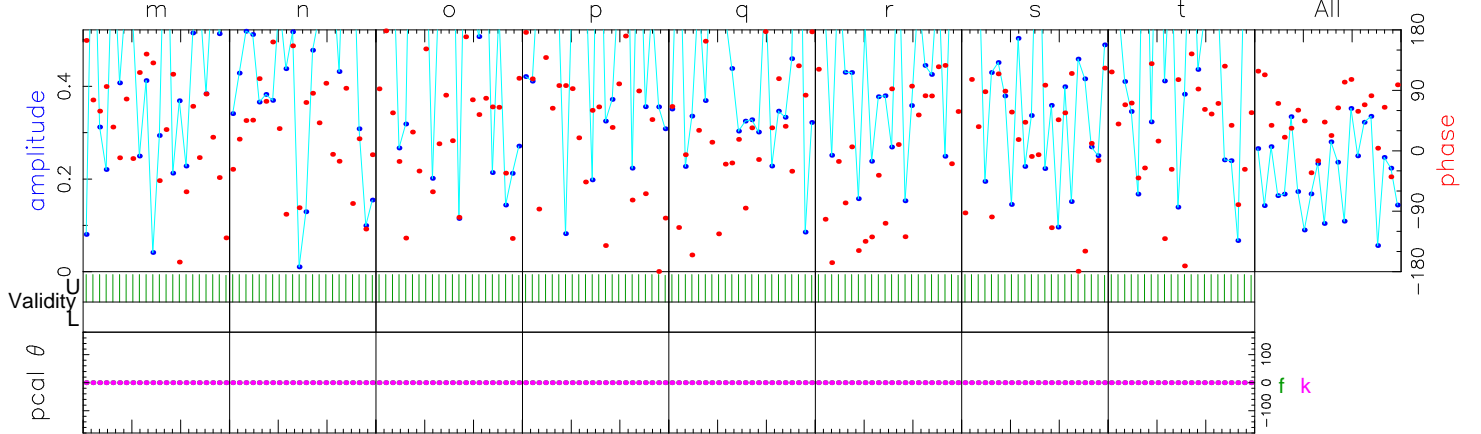


SNR 5.9  
 Int time 179.990  
 Amp 0.174  
 Phase 55.8  
 PFD 4.5e-01  
 Delays (us)  
 SBD 0.468374  
 MBD 0.004148  
 Fringe rate (Hz)  
 -0.441328  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105009  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	0	0	0	0	0	0	0	0	Ampl.	0.2
k	0	0	0	0	0	0	0	0	Sbd box	376.9
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
k	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
									Tracks	

Group delay (usec) (SBD)	1.69308952805E+03	Apriori delay (usec)	1.69261663027E+03	Resid mbdelay (usec)	4.14778E-03	+/-	1.9E-04
Sband delay (usec)	1.69308500452E+03	Apriori clock (usec)	-9.5237732E-02	Resid sbdelay (usec)	4.68374E-01	+/-	1.5E-03
Phase delay (usec)	1.69261663207E+03	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	1.80004E-06	+/-	6.3E-07
Delay rate (us/s)	-6.11992776931E-03	Apriori rate (us/s)	-6.11480438898E-03	Resid rate (us/s)	-5.12338E-06	+/-	6.1E-09
Total phase (deg)	247.2	Apriori accel (us/s/s)	-1.03467189688E-05	Resid phase (deg)	55.8	+/-	19.6

ph/seg (deg)	44.1	Theor.	45.9	Amplitude	0.174 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	62.1	Search (1024X32)	0.153	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)	24.4	Inc. seg. avg.	0.175	Inc. frq. avg.	0.164	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	42.4	Inc. frq. avg.	0.164			Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 60.7 el 26.7 pa -70.6		k: az 58.7 el 21.7 pa -65.8		u, v (fr/asec)	35.473 -757.219			simultaneous interpolator		

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/fk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/fk.W.103.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

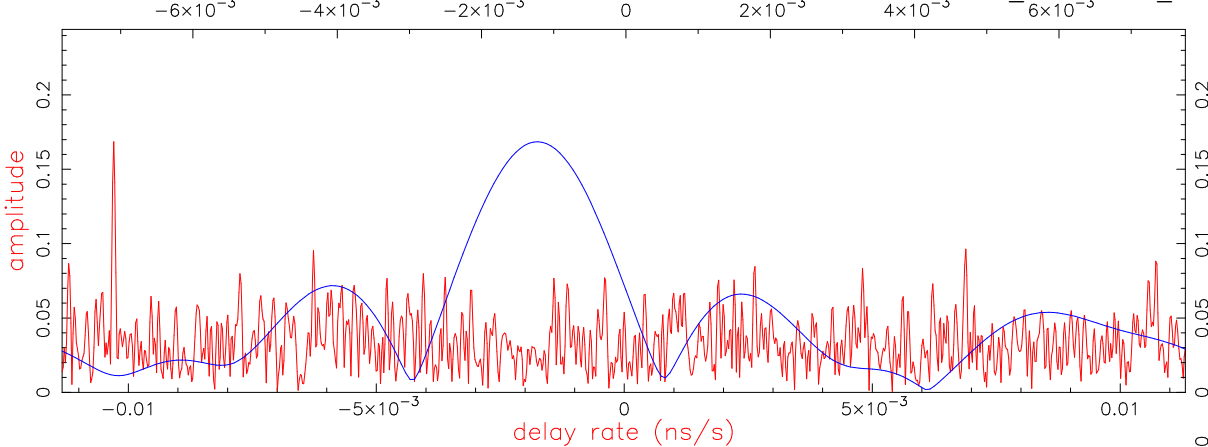
aux01

2013+370.3MP1N1, No0280, fk

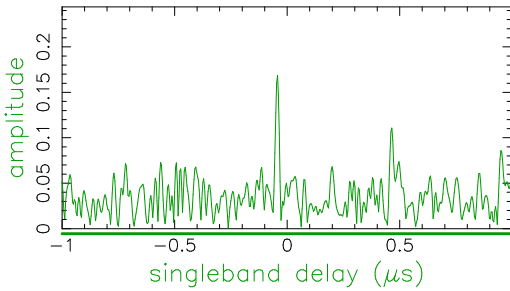
VLBA\_FD - VLBA\_KP, fgroup W, pol LR

multiband delay ( $\mu$ s)

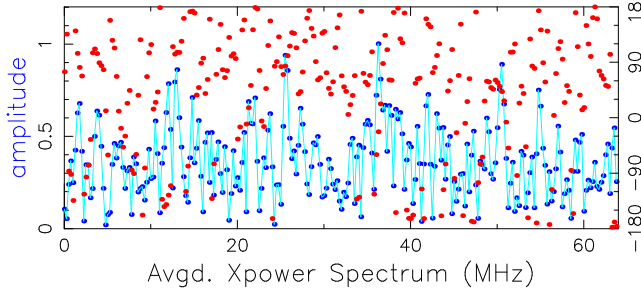
Fringe quality 0



SNR 6.2  
 Int time 179.990  
 Amp 0.244  
 Phase -33.0  
 PFD 7.0e-02  
 Delays (us)  
 SBD -0.043799  
 MBD -0.001247  
 Fringe rate (Hz)  
 -0.887828  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

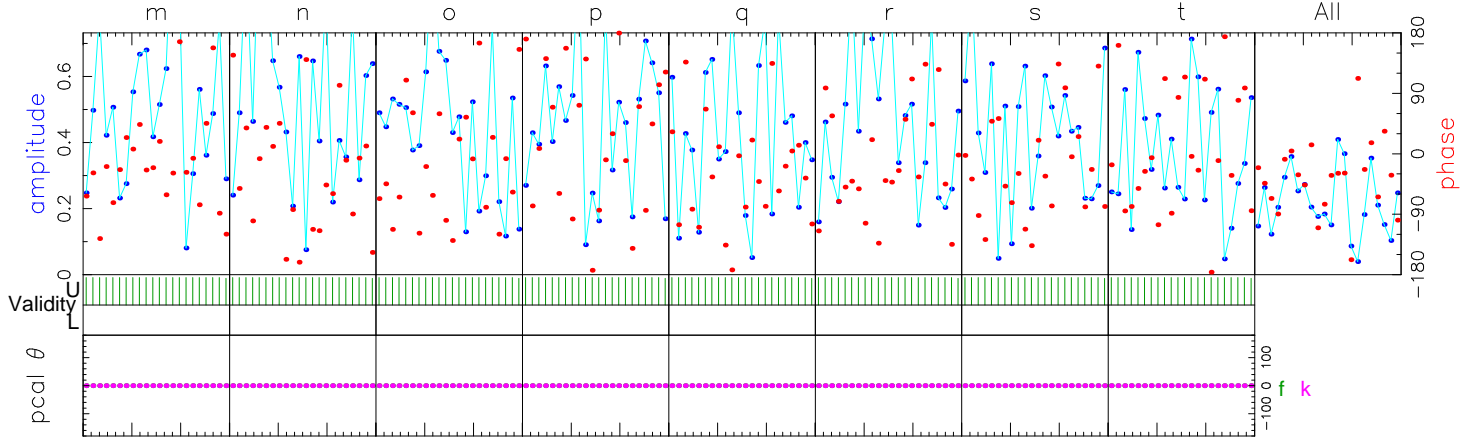


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105010  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-39.4	-30.3	-43.9	49.1	-40.0	-23.5	-36.2	-38.0	Phase	-33.0
	0.4	0.3	0.3	0.1	0.3	0.3	0.3	0.2	Ampl.	0.2
	145.3	204.9	476.3	10.5	144.0	222.4	364.1	111.0	Sbd box	245.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	1.69256850853E+03	Apriori delay (usec)	1.69261663027E+03	Resid mbdelay (usec)	-1.24674E-03	+/-	1.7E-04
Sband delay (usec)	1.69257283152E+03	Apriori clock (usec)	-9.5237732E-02	Resid sbdelay (usec)	-4.37987E-02	+/-	1.4E-03
Phase delay (usec)	1.69261662921E+03	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-1.06384E-06	+/-	6.0E-07
Delay rate (us/s)	-6.12511119565E-03	Apriori rate (us/s)	-6.11480438898E-03	Resid rate (us/s)	-1.03068E-05	+/-	5.7E-09
Total phase (deg)	158.4	Apriori accel (us/s/s)	-1.03467189688E-05	Resid phase (deg)	-33.0	+/-	18.5

ph/seg (deg)	RMS 54.6	Theor. 43.3	Amplitude Search (1024X32)	0.244 +/- 0.039	0.158	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	63.1	75.6	Interp.	0.000	0.158	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	34.3	26.1	Inc. seg. avg.	0.244	0.158	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	29.9	45.6	Inc. frq. avg.	0.232	0.158	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 60.7 el 26.7 pa -70.6 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 35.473 -757.219 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/fk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/fk.W.111.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

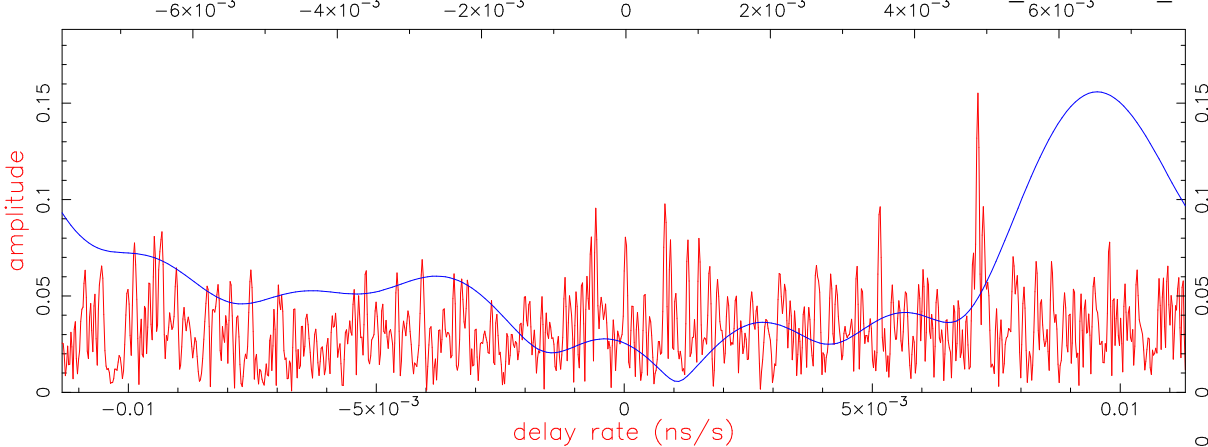
aux01

2013+370.3MP1N1, No0280, fk

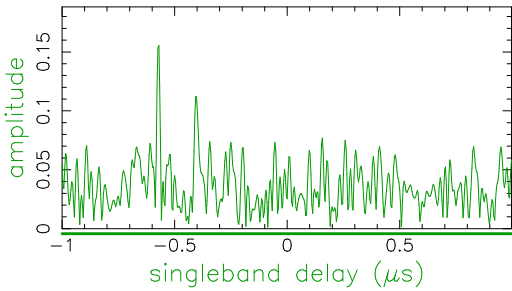
VLBA\_FD - VLBA\_KP, fgroup W, pol RL

multiband delay ( $\mu$ s)

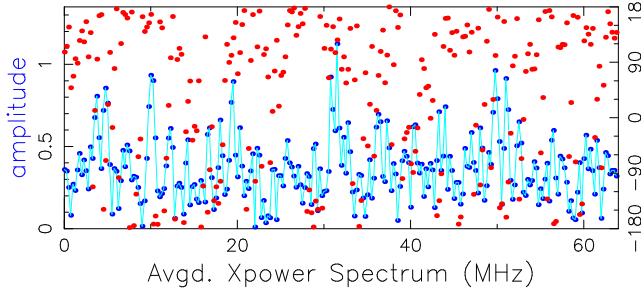
Fringe quality 0



SNR 5.8  
 Int time 179.990  
 Amp 0.188  
 Phase -43.3  
 PFD 4.9e-01  
 Delays (us)  
 SBD -0.572072  
 MBD 0.006421  
 Fringe rate (Hz)  
 0.614336  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

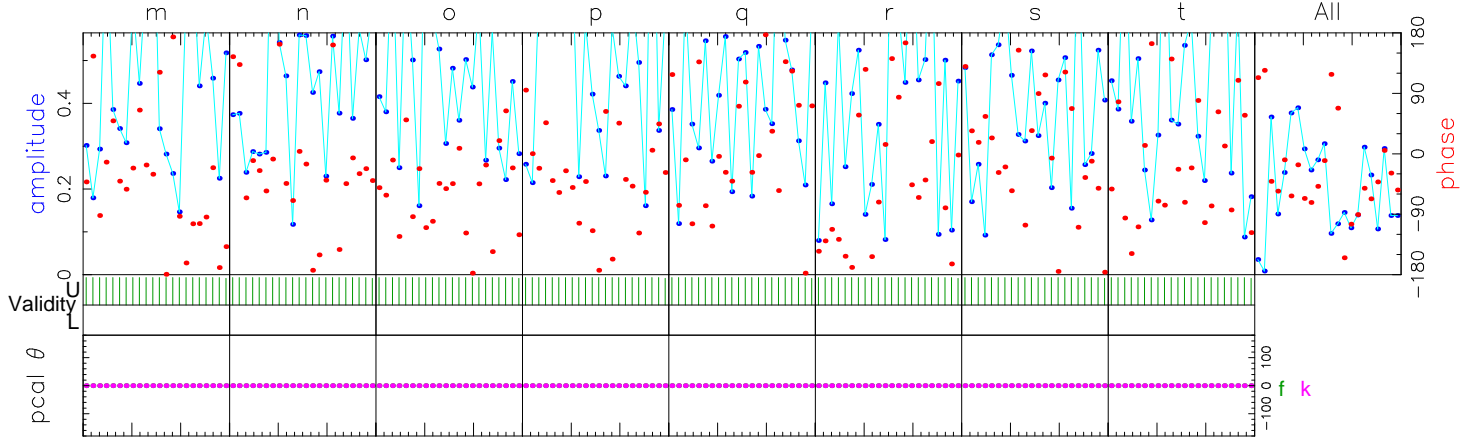


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105014  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-60.6	-40.0	-60.2	-33.8	22.0	-87.6	-5.0	-52.7	Phase	-43.3
	0.2	0.2	0.3	0.4	0.1	0.1	0.1	0.2	Ampl.	0.2
	363.3	345.9	110.6	111.0	208.2	118.8	173.9	281.6	Sbd box	110.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.69204492617E+03	Apriori delay (usec)	1.69261663027E+03	Resid mbdelay (usec)	6.42089E-03	+/-	1.9E-04
Sband delay (usec)	1.69204455802E+03	Apriori clock (usec)	-9.5237732E-02	Resid sbdelay (usec)	-5.72072E-01	+/-	1.5E-03
Phase delay (usec)	1.69261662888E+03	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-1.39498E-06	+/-	6.3E-07
Delay rate (us/s)	-6.10767256239E-03	Apriori rate (us/s)	-6.11480438898E-03	Resid rate (us/s)	7.13183E-06	+/-	6.1E-09
Total phase (deg)	148.1	Apriori accel (us/s/s)	-1.03467189688E-05	Resid phase (deg)	-43.3	+/-	19.6

ph/seg (deg) 73.2 46.0 Amplitude 0.188 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 73.9 80.4 Search (1024X32) 0.155 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 37.6 27.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 59.4 48.5 Inc. seg. avg. 0.183 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 f: az 60.7 el 26.7 pa -70.6 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 35.473 -757.219 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/fk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/fk.W.120.3MP1N1 simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

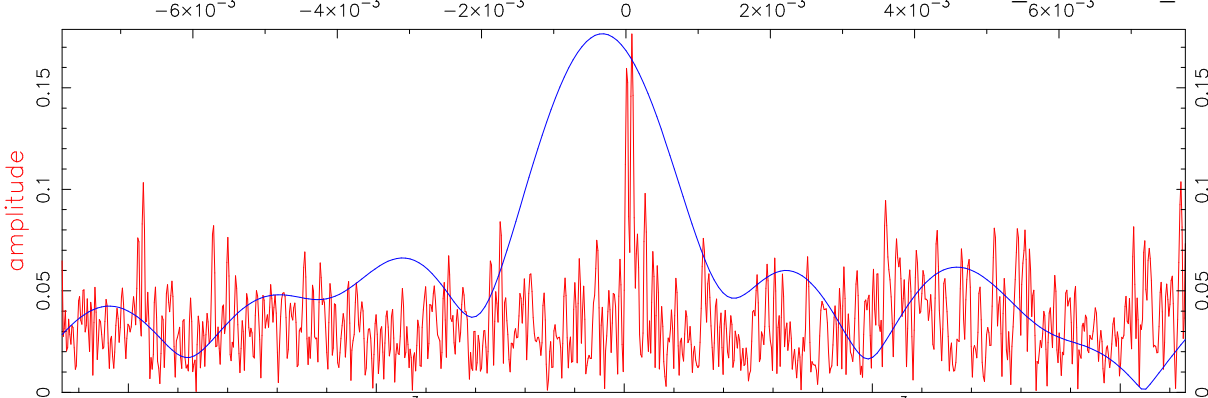
aux01

2013+370.3MP1N1, No0280, fk

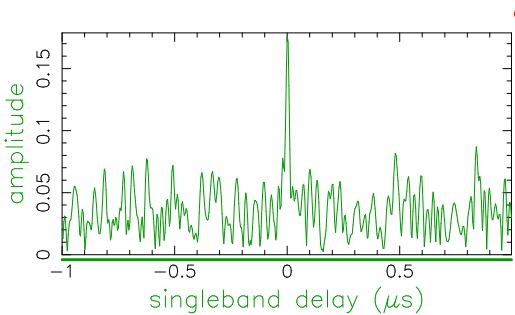
VLBA\_FD - VLBA\_KP, fgroup W, pol LL

multiband delay ( $\mu$ s)

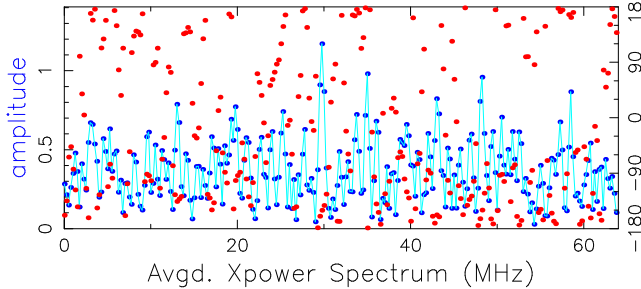
Fringe quality 0



SNR 6.6  
 Int time 179.990  
 Amp 0.179  
 Phase -128.8  
 PFD 7.7e-03  
 Delays (us)  
 SBD 0.001395  
 MBD -0.000295  
 Fringe rate (Hz)  
 0.014030  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

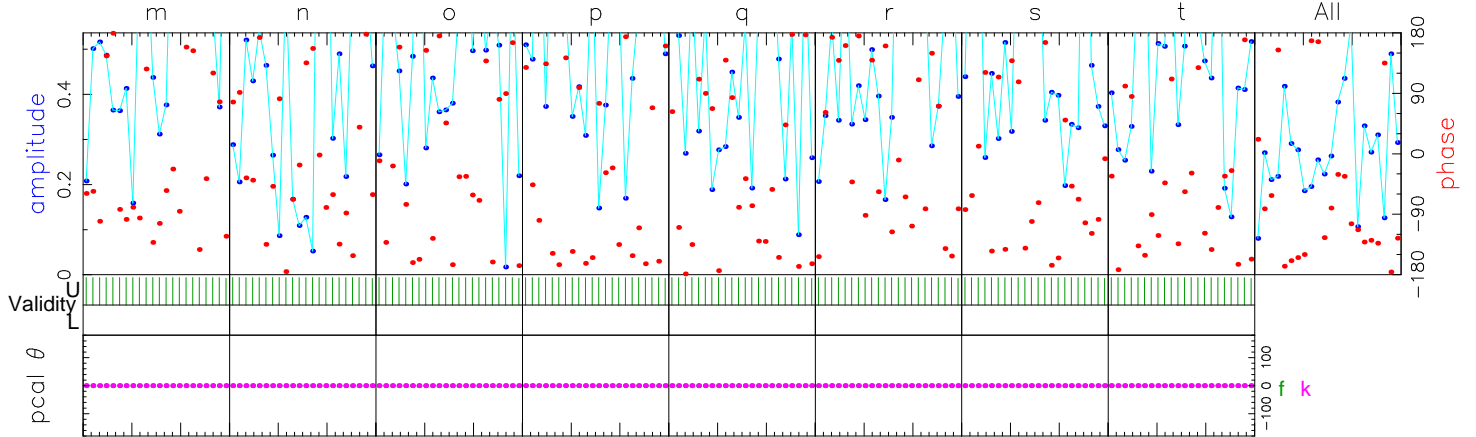


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105006  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-116.0	-84.5	-131.7	-158.3	-154.9	-141.6	-109.3	-119.9	Phase	-128.8
	0.2	0.1	0.2	0.3	0.1	0.1	0.2	0.2	Ampl.	0.2
	258.3	237.5	115.3	257.3	170.2	478.0	136.5	504.2	Sbd box	257.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	1.69261633518E+03	Apriori delay (usec)	1.69261663027E+03	Resid mbdelay (usec)	-2.95090E-04	+/-	1.7E-04
Sband delay (usec)	1.69261802552E+03	Apriori clock (usec)	-9.5237732E-02	Resid sbdelay (usec)	1.39525E-03	+/-	1.3E-03
Phase delay (usec)	1.69261662612E+03	Apriori clockrate (us/s)	-1.0198613E-07	Resid phdelay (usec)	-4.15341E-06	+/-	5.6E-07
Delay rate (us/s)	-6.11464151709E-03	Apriori rate (us/s)	-6.11480438898E-03	Resid rate (us/s)	1.62872E-07	+/-	5.4E-09
Total phase (deg)	62.6	Apriori accel (us/s/s)	-1.03467189688E-05	Resid phase (deg)	-128.8	+/-	17.5

ph/seg (deg)	60.4	Theor.	41.0	Amplitude	0.179 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	87.0		71.5	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	26.8		24.7	Inc. seg. avg.	0.224	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	32.7		43.1	Inc. frq. avg.	0.175	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
f: az 60.7 el 26.7 pa -70.6		k: az 58.7 el 21.7 pa -65.8		u, v (fr/asec)	35.473 -757.219	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0280/fk..3MP1N1		Output file: /Exps/c241c/v2/3mm/1234/No0280/fk.W.91.3MP1N1					simultaneous interpolator	

Mk4/DiFX fourfit 3.25 rev 0

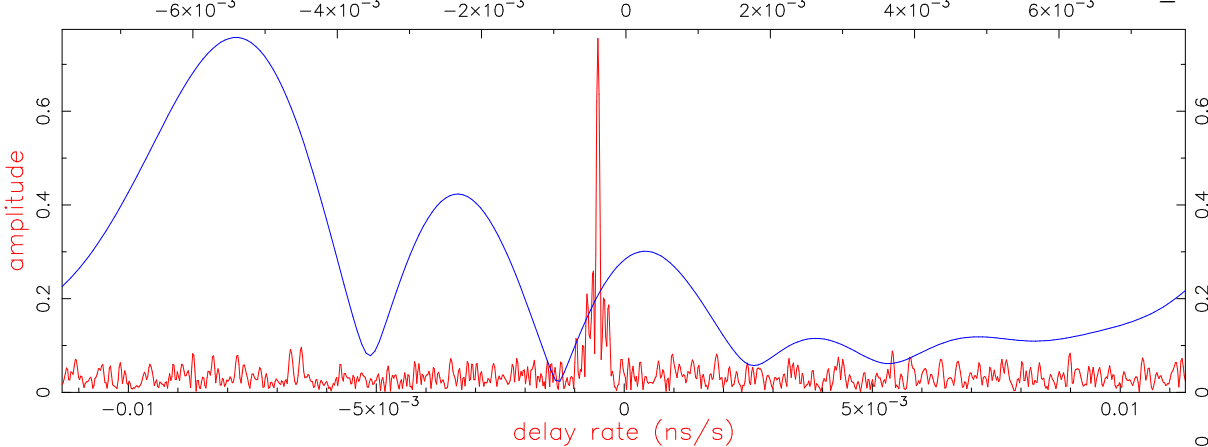
aux01

2013+370.3MP1N1, No0280, gk

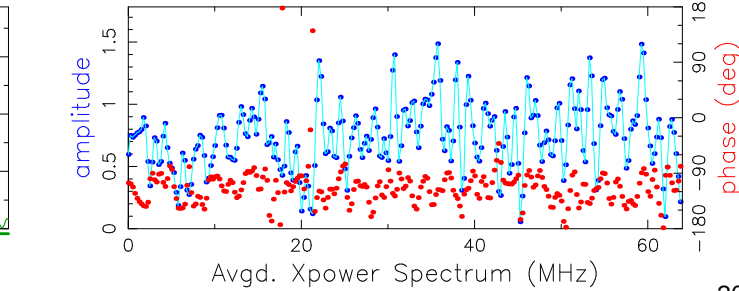
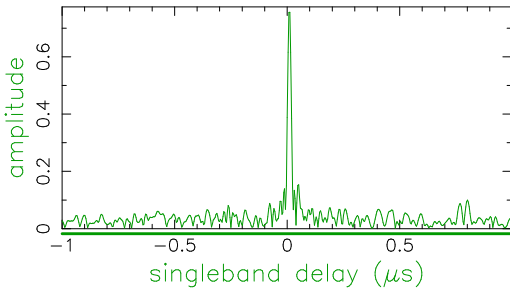
GLT - VLBA\_KP, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 5

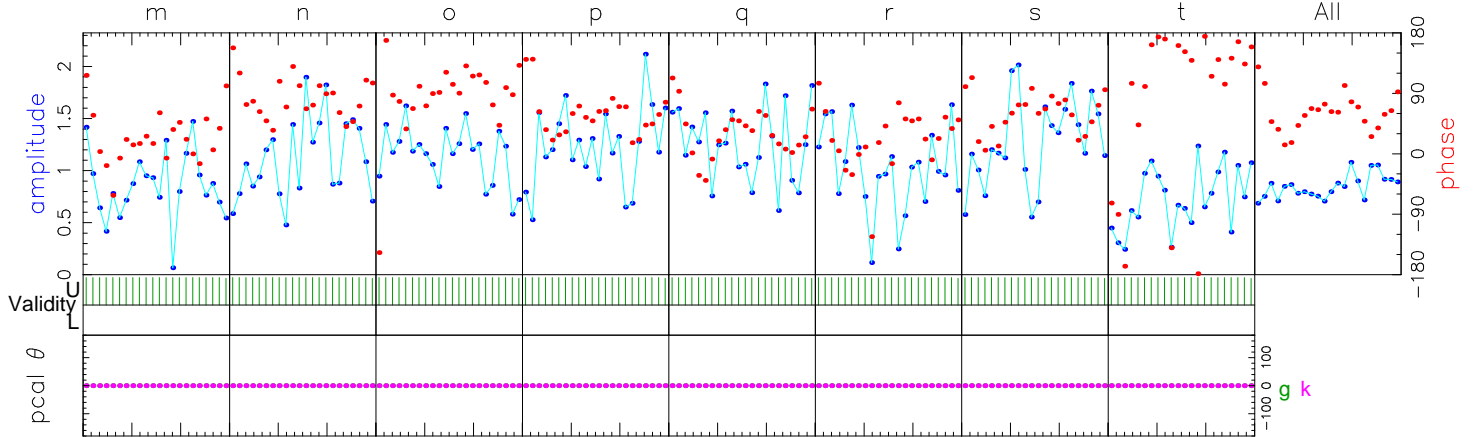


SNR 28.4  
 Int time 179.985  
 Amp 0.775  
 Phase 60.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.009769  
 MBD -0.005496  
 Fringe rate (Hz)  
 -0.045446  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105016  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0		
k	0	0	0	0	0	0	0	0		
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	7.47446635701E+03	Apriori delay (usec)		7.47445622798E+03	Resid mbdelay (usec)	-5.49597E-03	+/-	3.8E-05	
Sband delay (usec)	7.47446599673E+03	Apriori clock (usec)		2.8869247E-01	Resid sbdelay (usec)	9.76875E-03	+/-	3.0E-04	
Phase delay (usec)	7.47445622992E+03	Apriori clockrate (us/s)		6.3215492E-07	Resid phdelay (usec)	1.93849E-06	+/-	1.3E-07	
Delay rate (us/s)	-8.50789069281E-01	Apriori rate (us/s)		-8.50788541696E-01	Resid rate (us/s)	-5.27585E-07	+/-	1.3E-09	
Total phase (deg)		232.2	Apriori accel (us/s/s)		-9.42675697217E-06	Resid phase (deg)	60.1	+/-	4.0

ph/seg (deg)	27.9	9.5	Amplitude	0.775 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	17.0	16.5	Search (1024X32)	0.748	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	46.9	5.7	Inc. seg. avg.	0.836	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 (%)	30.2	10.0	Inc. frq. avg.	0.903	Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00	

g: az 128.2 el 46.4 pa -13.2 k: az 58.7 el 21.7 pa -65.8 u, v (fr/asec) 6121.072 2528.124 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/gk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/gk.W.126.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

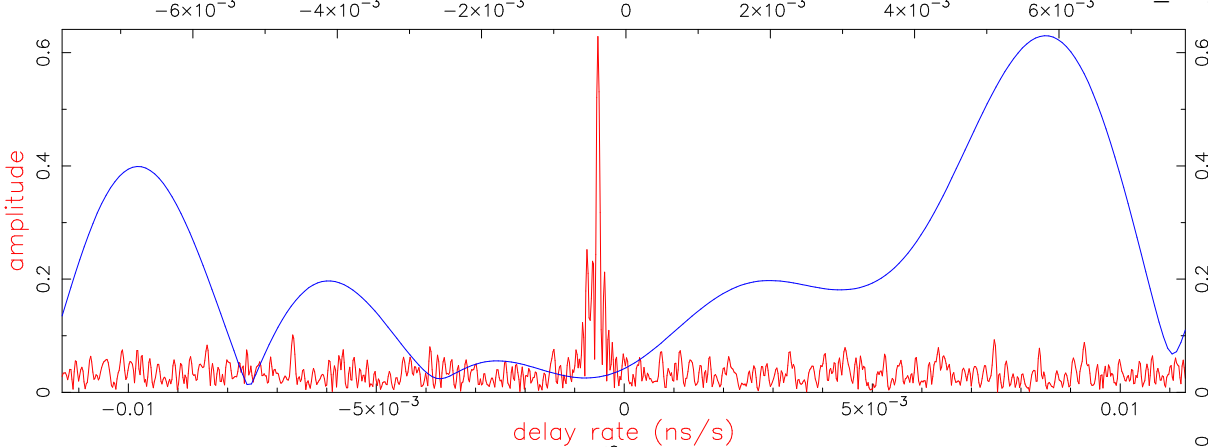
aux01

2013+370.3MP1N1, No0280, gk

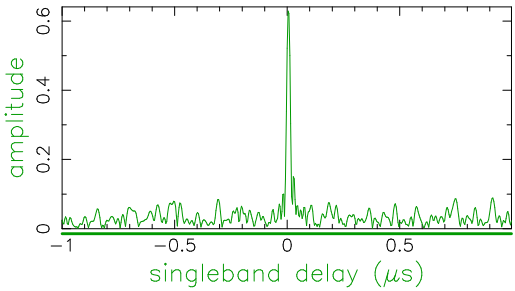
GLT - VLBA\_KP, fgroup W, pol RR

multiband delay ( $\mu$ s)

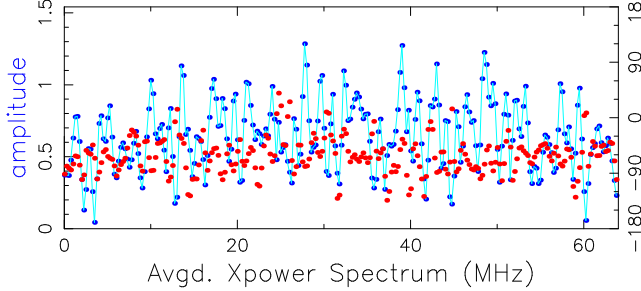
Fringe quality 7



SNR 23.5  
 Int time 179.985  
 Amp 0.641  
 Phase -66.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005643  
 MBD 0.005893  
 Fringe rate (Hz)  
 -0.045709  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

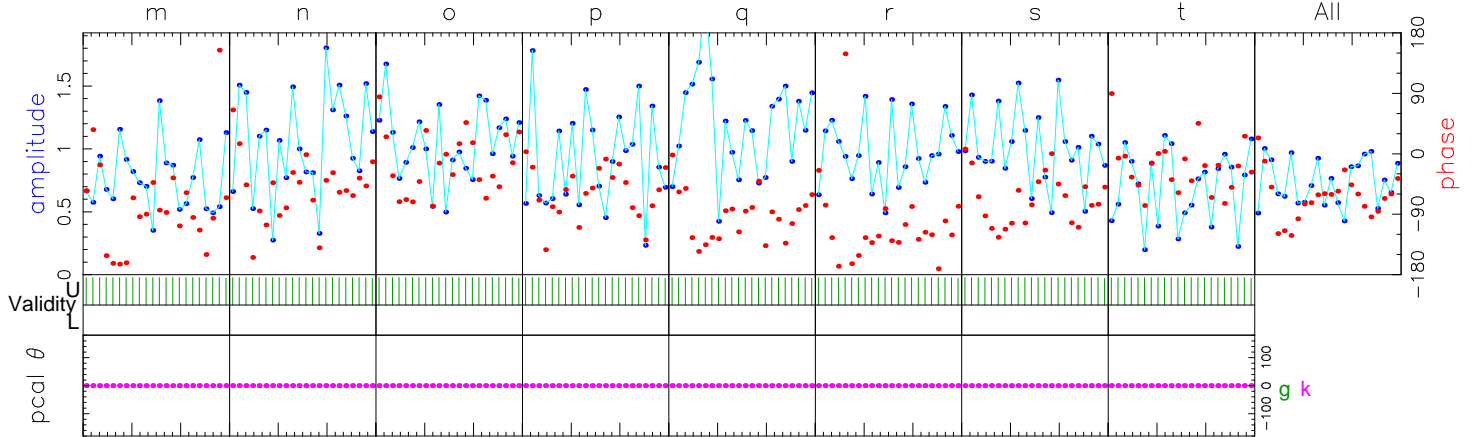


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105018  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-94.4	-47.3	-14.4	-54.0	-97.3	-121.3	-69.1	-20.2	Phase	-66.1
	0.5	0.8	0.8	0.8	1.0	0.8	0.8	0.6	Ampl.	0.8
	260.3	258.4	257.9	257.8	258.5	258.3	258.9	260.3	Sbd box	258.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	7.47446212097E+03	Apriori delay (usec)	7.47445622798E+03	Resid mbdelay (usec)	5.89300E-03	+/-	4.6E-05
Sband delay (usec)	7.47446187098E+03	Apriori clock (usec)	2.8869247E-01	Resid sbdelay (usec)	5.64300E-03	+/-	3.7E-04
Phase delay (usec)	7.47445622585E+03	Apriori clockrate (us/s)	6.3215492E-07	Resid phdelay (usec)	-2.13087E-06	+/-	1.6E-07
Delay rate (us/s)	-8.50789072328E-01	Apriori rate (us/s)	-8.50788541696E-01	Resid rate (us/s)	-5.30632E-07	+/-	1.5E-09
Total phase (deg)	106.0	Apriori accel (us/s/s)	-9.42675697217E-06	Resid phase (deg)	-66.1	+/-	4.9

ph/seg (deg)	RMS 33.9	Theor. 11.4	Amplitude Search (1024X32)	0.626	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	31.7	20.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	41.0	6.9	Inc. seg. avg.	0.724	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	29.9	12.0	Inc. frq. avg.	0.759	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

g: az 128.2 el 46.4 pa -13.2 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 6121.072 2528.124 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/gk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/gk.W.137.3MP1N1

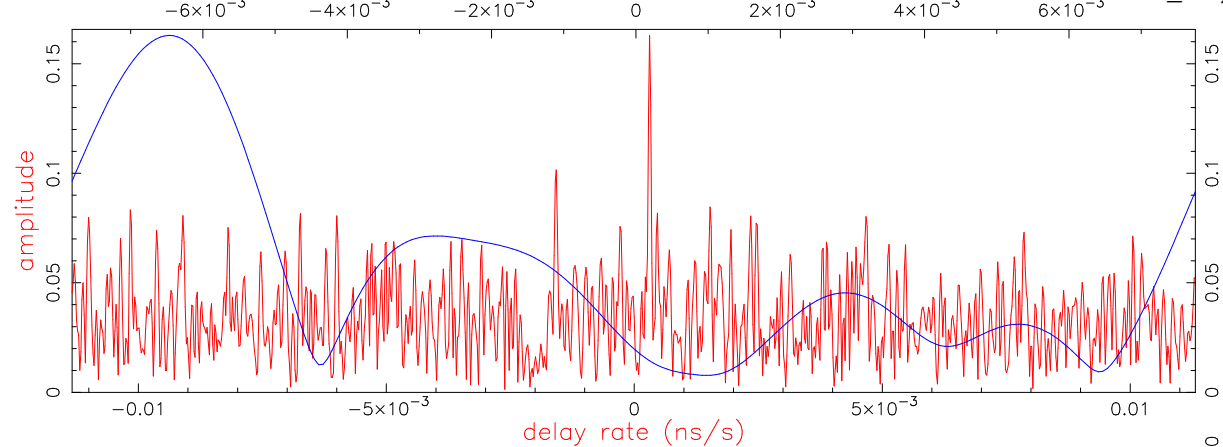
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, gk

GLT - VLBA\_KP, fgroup W, pol LR

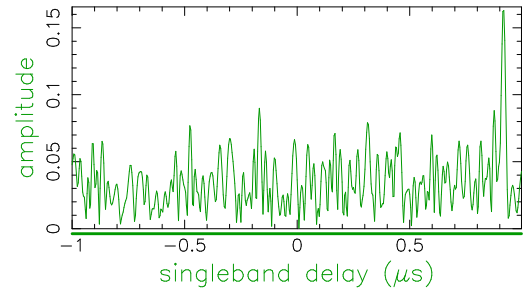
multiband delay ( $\mu$ s)



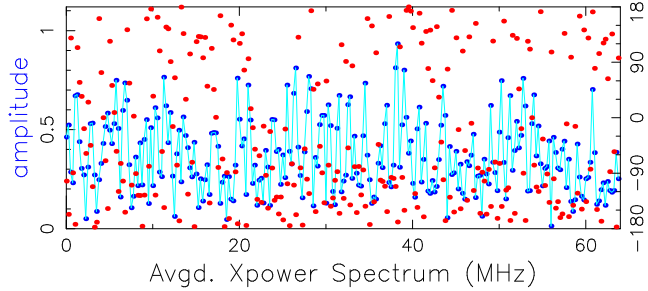
Fringe quality 0

SNR 6.1  
Int time 179.985  
Amp 0.166  
Phase 41.6  
PFD 1.5e-01  
Delays (us)  
SBD 0.916130  
MBD -0.006475  
Fringe rate (Hz) 0.026492  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

delay rate (ns/s)

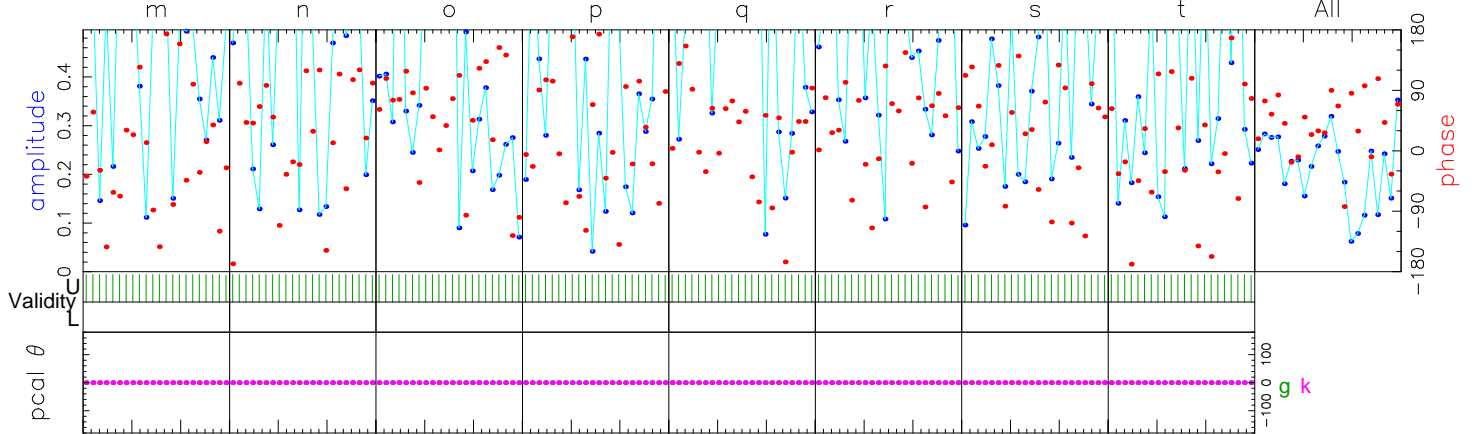


singleband delay ( $\mu$ s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 080000.00  
Stop 080300.22  
FRT 080130.00  
Corr/FF/build 2024:352:054246  
2025:041:105020  
2024:113:095956  
RA & Dec (J2000) 20h15m28.729786s  
+37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-36.2	61.0	69.1	8.1	27.4	41.4	53.5	35.2	Phase	41.6
	0.1	0.2	0.3	0.1	0.3	0.3	0.2	0.1	Ampl.	0.2
	135.6	318.8	491.2	112.7	333.4	491.9	118.4	105.4	Sbd box	491.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:k	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	
g	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	7.47537162749E+03	Apriori delay (usec)	7.47445622798E+03	Resid mbdelay (usec)	-6.47549E-03	+/-	1.8E-04
Sband delay (usec)	7.47537235773E+03	Apriori clock (usec)	2.8869247E-01	Resid sbdelay (usec)	9.16130E-01	+/-	1.4E-03
Phase delay (usec)	7.47445622932E+03	Apriori clockrate (us/s)	6.3215492E-07	Resid phdelay (usec)	1.34179E-06	+/-	6.1E-07
Delay rate (us/s)	-8.50788234153E-01	Apriori rate (us/s)	-8.50788541696E-01	Resid rate (us/s)	3.07544E-07	+/-	5.8E-09
Total phase (deg)	213.7	Apriori accel (us/s/s)	-9.42675697217E-06	Resid phase (deg)	41.6	+/-	18.9

ph/seg (deg)	46.4	Theor.	44.2	Amplitude	0.166 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	54.4	Search (1024X32)	0.161	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
ph/frq (deg)	38.1	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	47.8	Inc. seg. avg.	0.166	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
		Inc. frq. avg.	0.163	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00

g: az 128.2 el 46.4 pa -13.2 k: az 58.7 el 21.7 pa -65.8 u, v (fr/asec) 6121.072 2528.124 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/gk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/gk.W.149.3MP1N1

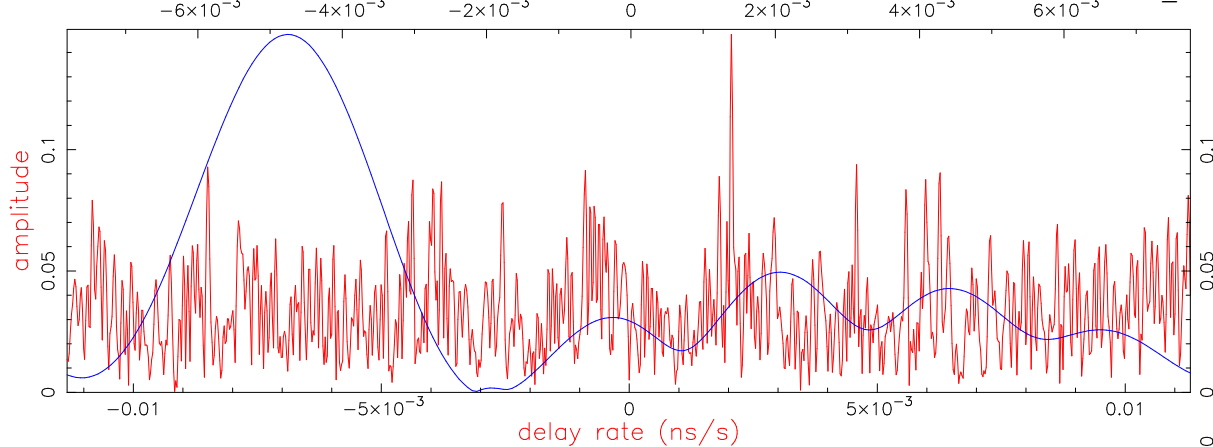
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, gk

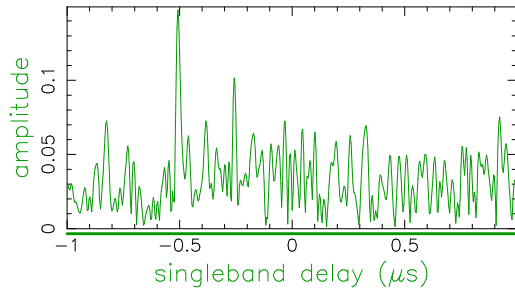
GLT - VLBA\_KP, fgroup W, pol RL

multiband delay ( $\mu$ s)

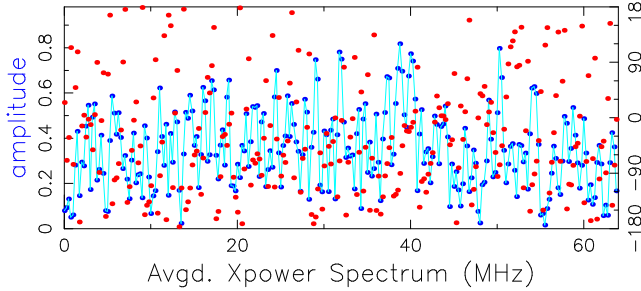


Fringe quality 0

SNR 5.4  
 Int time 179.985  
 Amp 0.150  
 Phase -96.9  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.507459  
 MBD -0.004745  
 Fringe rate (Hz)  
 0.176817  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

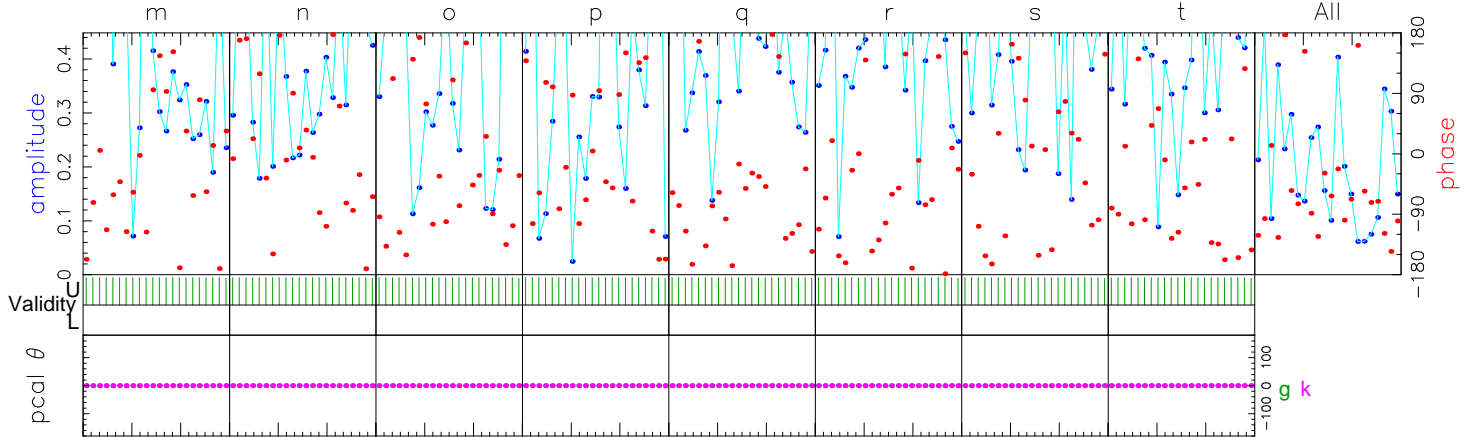


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105022  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-99.7	-77.2	-100.6	-93.7	-97.1	-99.1	-122.4	-88.4	Phase	-96.9
	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.1	Ampl.	0.1
	296.7	379.1	55.1	348.8	128.1	495.9	199.0	476.3	Sbd box	127.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	7.47395148253E+03	Apriori delay (usec)	7.47445622798E+03	Resid mbdelay (usec)	-4.74545E-03	+/-	2.0E-04
Sband delay (usec)	7.47394876873E+03	Apriori clock (usec)	2.8869247E-01	Resid sbdelay (usec)	-5.07459E-01	+/-	1.6E-03
Phase delay (usec)	7.47445622485E+03	Apriori clockrate (us/s)	6.3215492E-07	Resid phdelay (usec)	-3.12398E-06	+/-	6.8E-07
Delay rate (us/s)	-8.50786489021E-01	Apriori rate (us/s)	-8.50788541696E-01	Resid rate (us/s)	2.05268E-06	+/-	6.6E-09
Total phase (deg)	75.2	Apriori accel (us/s/s)	-9.42675697217E-06	Resid phase (deg)	-96.9	+/-	21.2

ph/seg (deg) 54.1 49.7 Search (1024X32) 0.144 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 89.2 86.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 13.8 29.9 Inc. seg. avg. 0.155 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.9 52.3 Inc. frq. avg. 0.133 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 g: az 128.2 el 46.4 pa -13.2 k: az 58.7 el 21.7 pa -65.8 u, v (fr/asec) 6121.072 2528.124 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/gk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/gk.W.157.3MP1N1

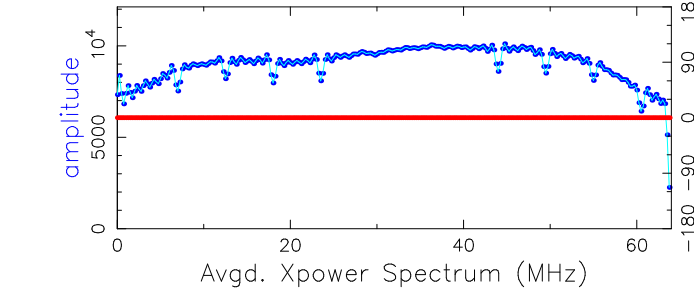
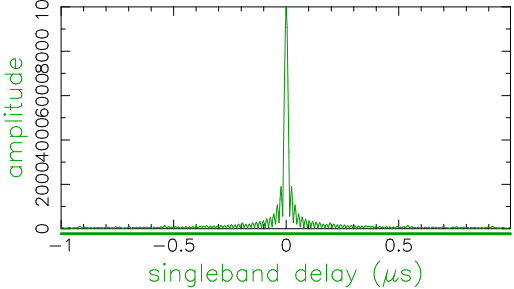
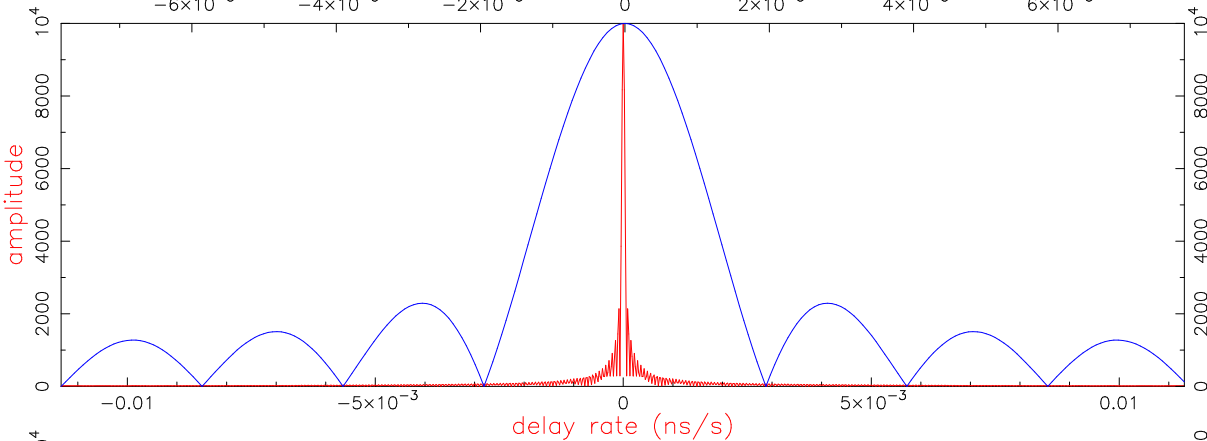


Mk4/DiFX fourfit 3.25 rev 0

aux01

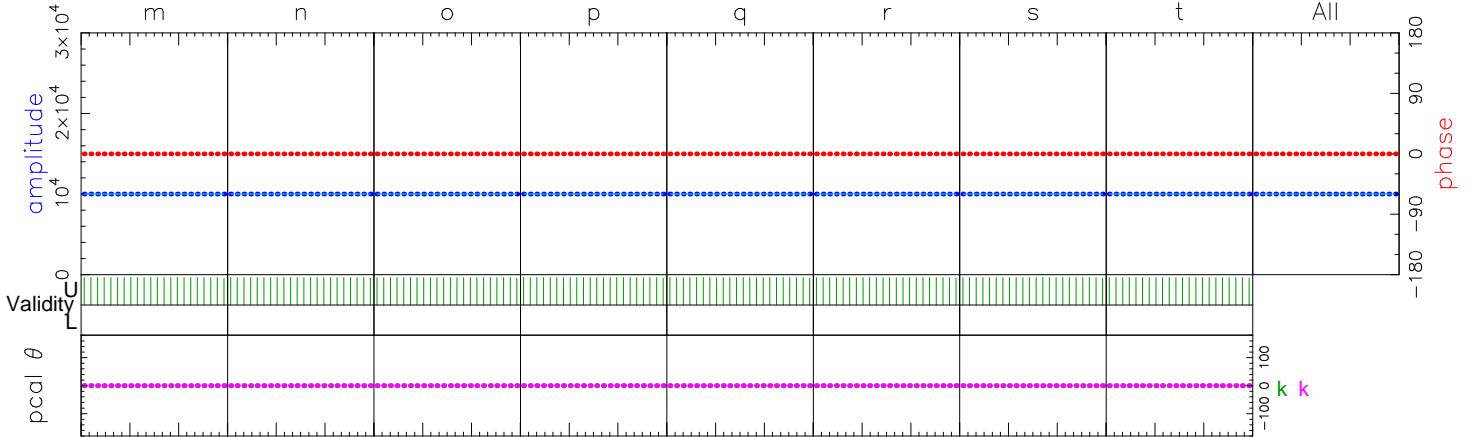
2013+370.3MP1N1, No0280, kk

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



Fringe quality 9  
 SNR 366880.3  
 Int time 179.992  
 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. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105026  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	10000.0	10000.0
k	0	0	0	0	0	0	0	0	Ampl.	10000.0
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Mani PC	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
									Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec) (SBD) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.0E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.3E-08  
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.0E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

ph/seg (deg) 0.0 0.0 Theor. Amplitude 10000.000 +/- 0.027 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  
 k: az 58.7 el 21.7 pa -65.8 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kk.W.173.3MP1N1 simultaneous interpolator



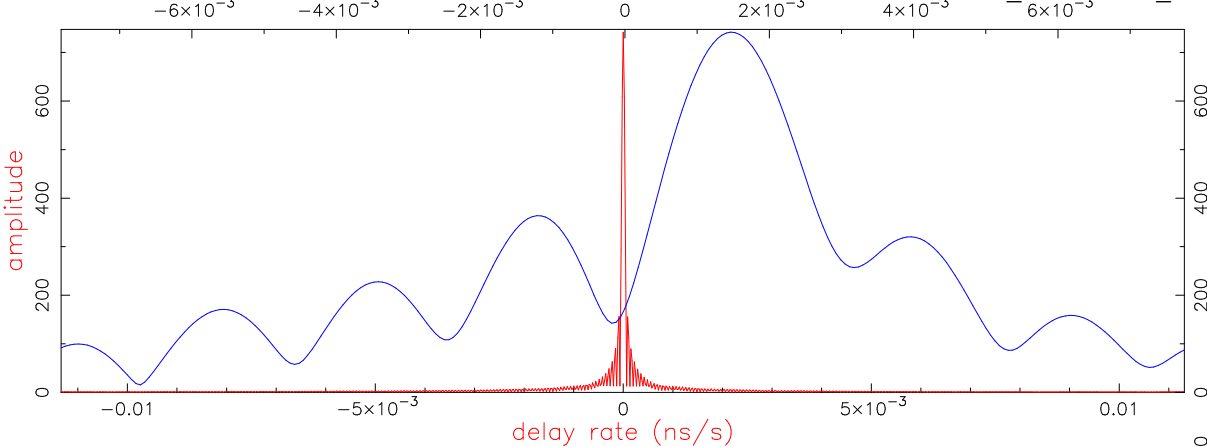
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kk

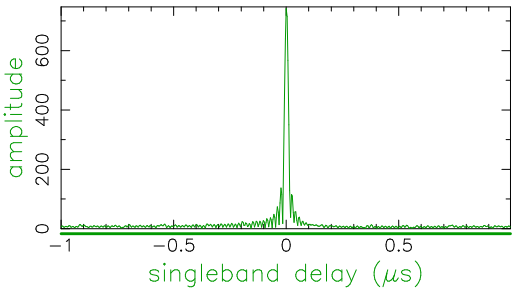
VLBA\_KP - VLBA\_KP, fgroup W, pol LR

multiband delay ( $\mu$ s)

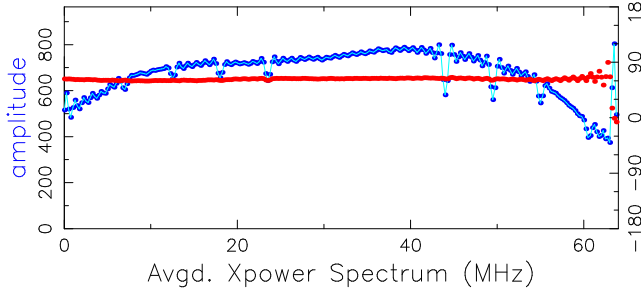


Fringe quality 6

SNR 27430.6  
 Int time 179.992  
 Amp 747.672  
 Phase 57.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001144  
 MBD 0.001493  
 Fringe rate (Hz)  
 -0.000004  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

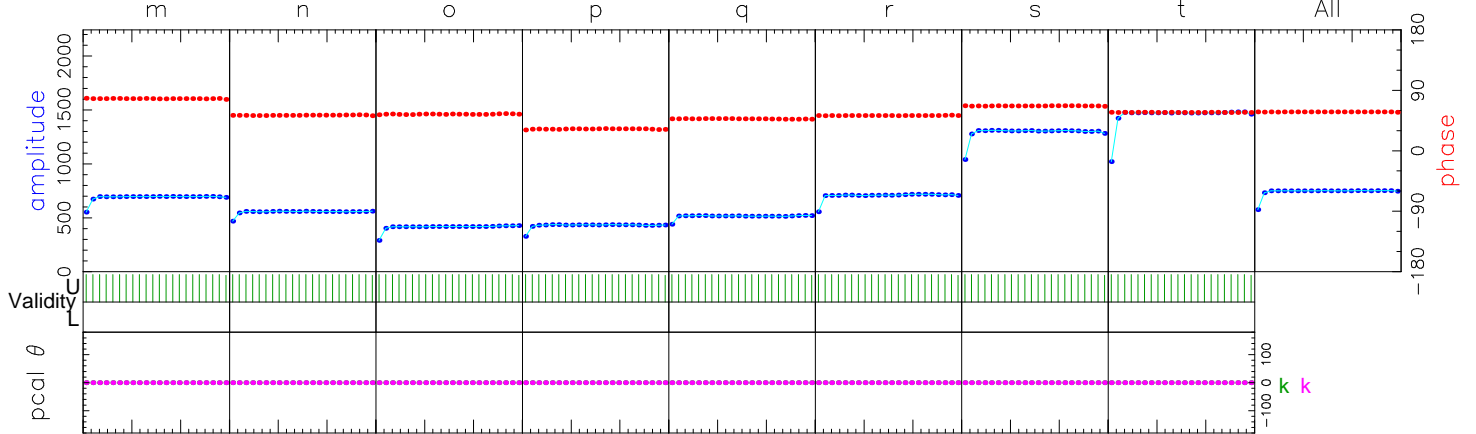


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105032  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	0	0	0	0	0	0	0	0		
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	1.49337500000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.49338E-03	+/-	4.0E-08
Sband delay (usec)	1.14375000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.14375E-03	+/-	3.1E-07
Phase delay (usec)	1.86505965153E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.86506E-06	+/-	1.3E-10
Delay rate (us/s)	-4.81819181317E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-4.81819E-11	+/-	1.3E-12
Total phase (deg)	57.8	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	57.8	+/-	0.0

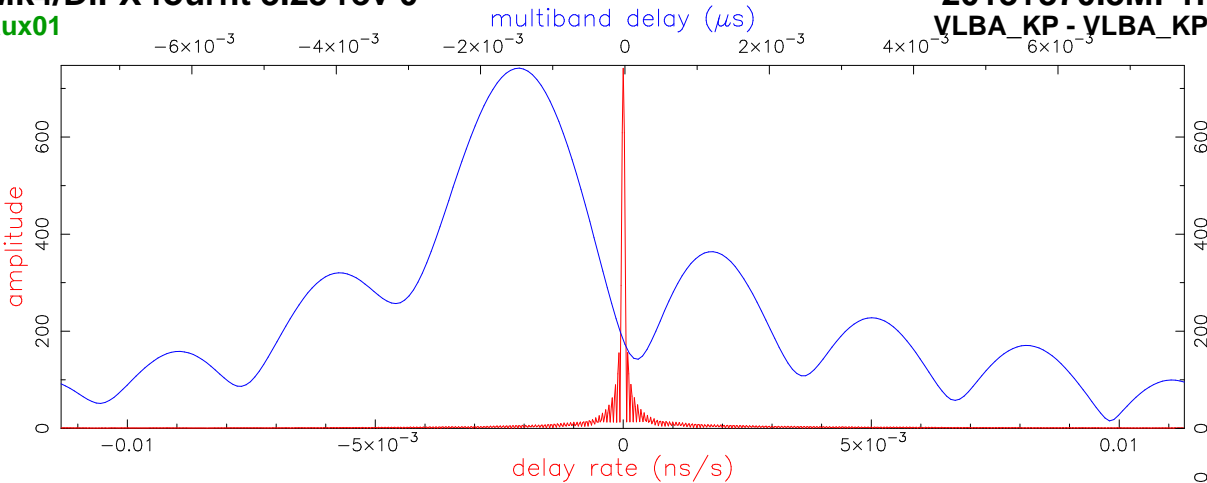
ph/seg (deg) 0.1 0.0 Search (1024X32) 741.994 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 4.9 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 14.7 0.0 Inc. seg. avg. 741.901 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 49.6 0.0 Inc. frq. avg. 755.911 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 58.7 el 21.7 pa -65.8 k: az 58.7 el 21.7 pa -65.8 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kk..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kk.W.200.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

aux01

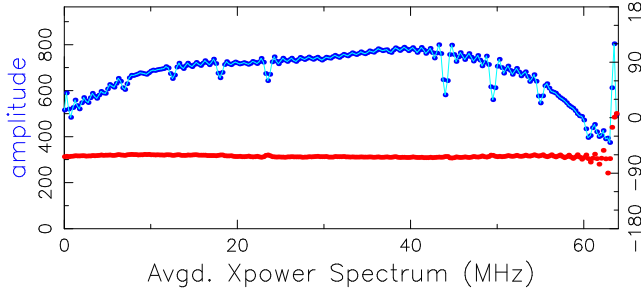
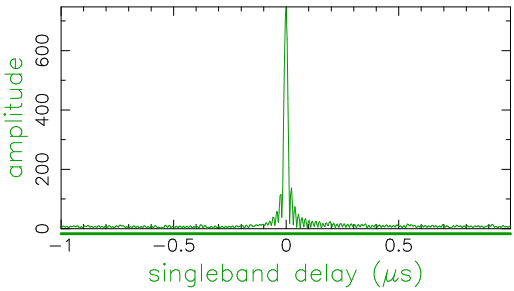
2013+370.3MP1N1, No0280, kk

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



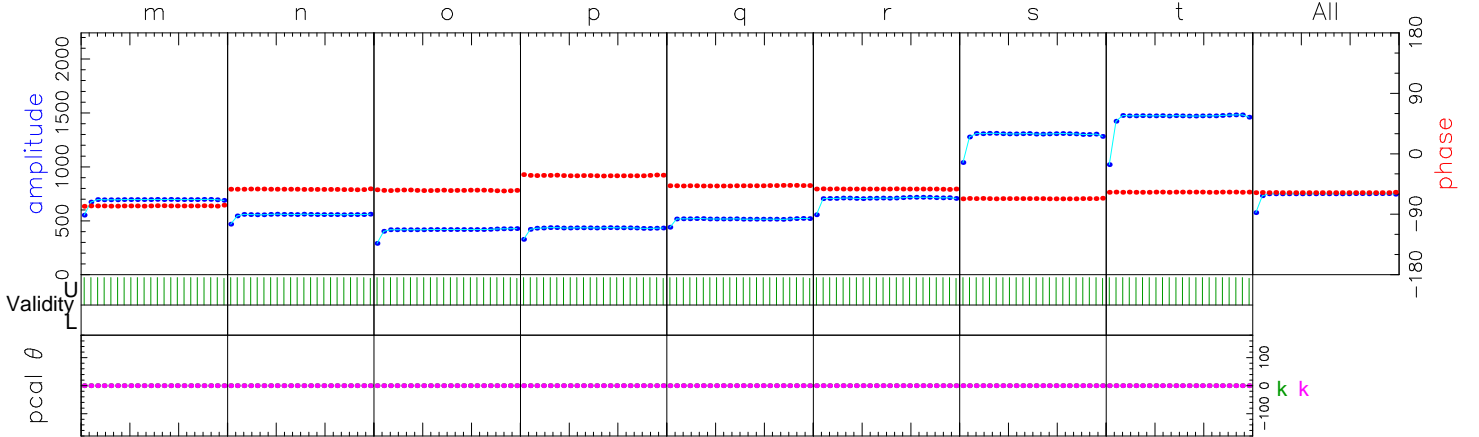
Fringe quality 6

SNR 27430.6  
 Int time 179.992  
 Amp 747.672  
 Phase -57.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001144  
 MBD -0.001493  
 Fringe rate (Hz) 0.000004  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105036  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-77.5	-52.8	-54.4	-32.4	-47.5	-52.4	-66.8	-57.1	Phase	-57.8
	689.1	554.2	413.5	428.6	514.1	704.7	1291.8	1451.2	Ampl.	755.9
	256.7	257.1	256.6	256.7	256.3	256.5	256.6	257.0	Sbd box	256.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:k	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	
k	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.49337500000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.49338E-03	+/-	4.0E-08
Sband delay (usec)	-1.14375000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.14375E-03	+/-	3.1E-07
Phase delay (usec)	-1.86505965151E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.86506E-06	+/-	1.3E-10
Delay rate (us/s)	4.81819181317E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	4.81819E-11	+/-	1.3E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-57.8	+/-	0.0

ph/seg (deg)	0.1	0.0	Search (1024X32)	741.994	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	4.9	0.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	14.7	0.0	Inc. seg. avg.	741.901	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	49.6	0.0	Inc. frq. avg.	755.911	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 58.7 el 21.7 pa -65.8      k: az 58.7 el 21.7 pa -65.8      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kk..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kk.W.213.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

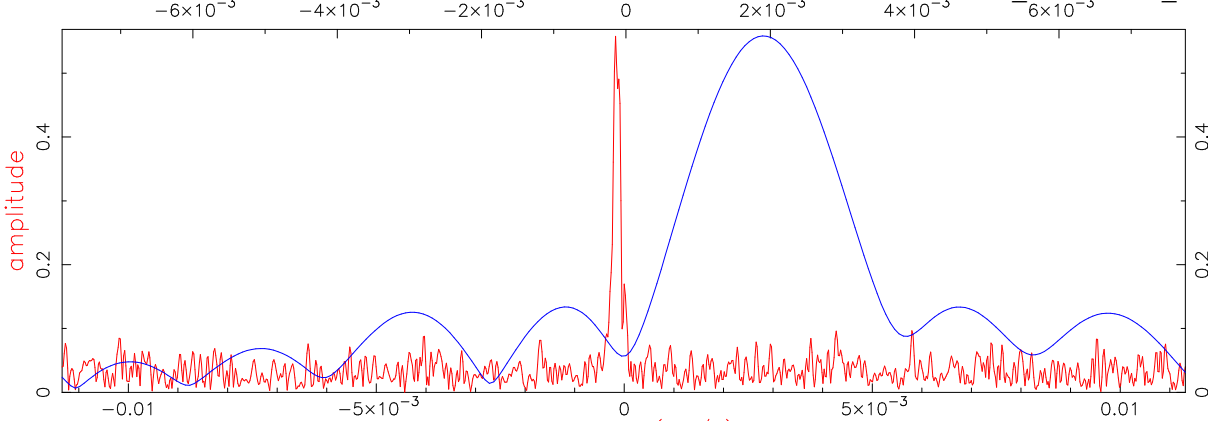
aux01

2013+370.3MP1N1, No0280, kl

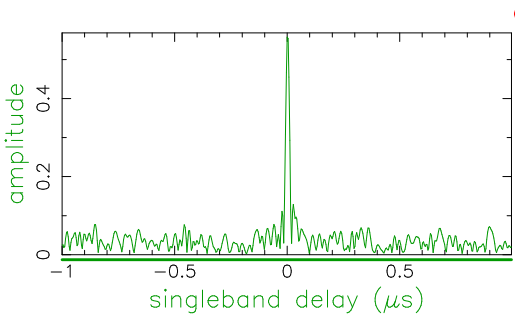
VLBA\_KP - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)

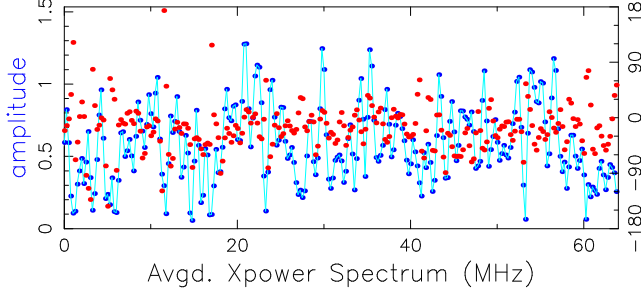
Fringe quality 9



SNR 20.9  
 Int time 179.990  
 Amp 0.569  
 Phase -19.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001799  
 MBD 0.001953  
 Fringe rate (Hz)  
 -0.015034  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

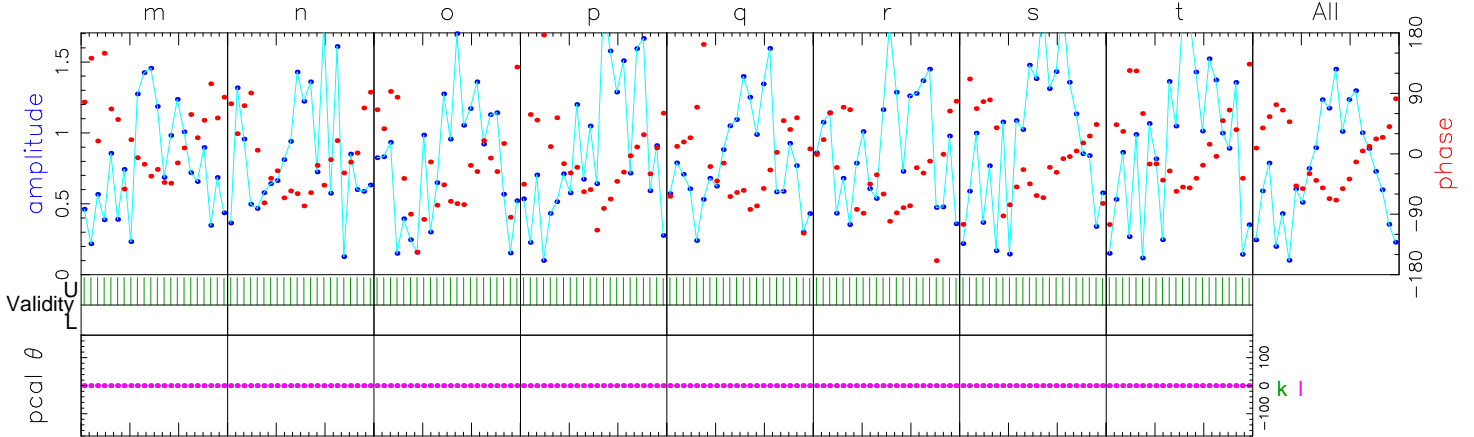


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105025  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-1.93015632815E+03	Apriori delay (usec)	-1.93015828150E+03	Resid mbdelay (usec)	1.95335E-03	+/-	5.2E-05
Sband delay (usec)	-1.93015648275E+03	Apriori clock (usec)	8.4598198E+07	Resid sbdelay (usec)	1.79875E-03	+/-	4.1E-04
Phase delay (usec)	-1.93015828212E+03	Apriori clockrate (us/s)	3.8620713E-07	Resid phdelay (usec)	-6.25892E-07	+/-	1.8E-07
Delay rate (us/s)	5.73933368445E-02	Apriori rate (us/s)	5.73935113694E-02	Resid rate (us/s)	-1.74525E-07	+/-	1.7E-09
Total phase (deg)	-152.0	Apriori accel (us/s/s)	6.53115503860E-06	Resid phase (deg)	-19.4	+/-	5.5

ph/seg (deg)	51.4	12.9	Search (1024X32)	0.556	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.1	22.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	15.0	7.8	Inc. seg. avg.	0.725	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 (%)	10.8	13.6	Inc. frq. avg.	0.566	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

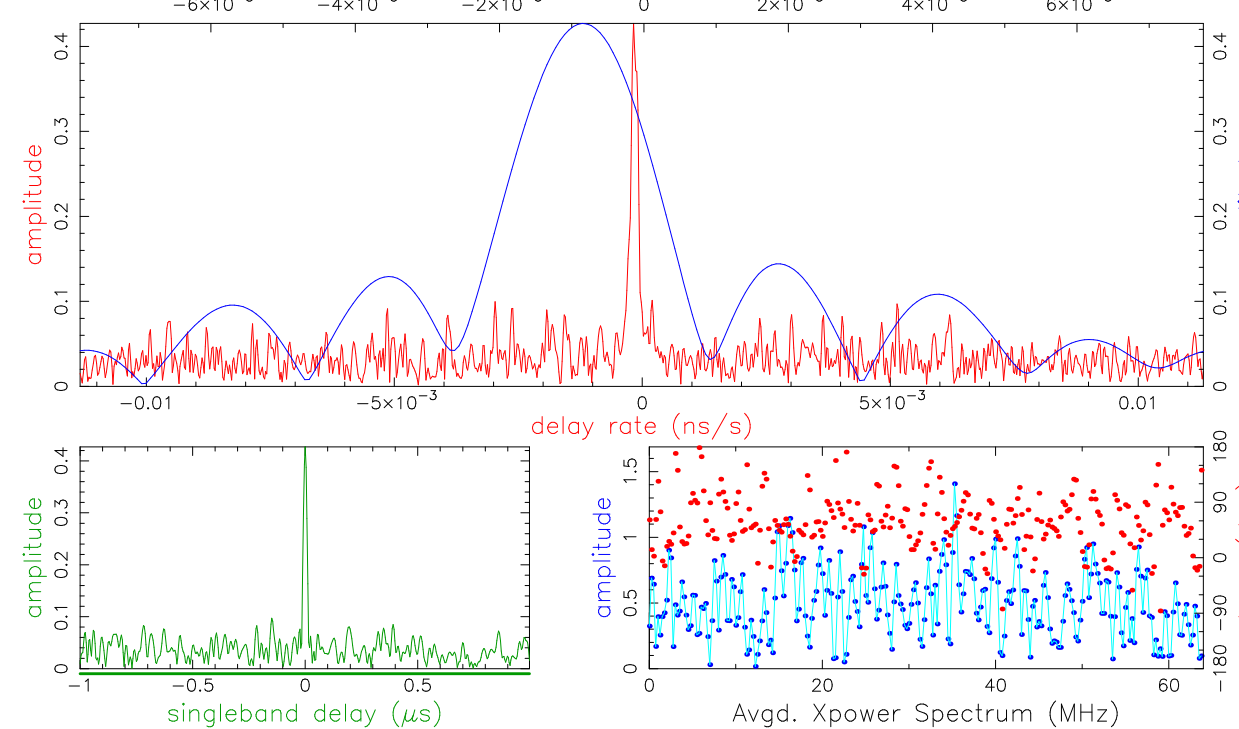
k: az 58.7 el 21.7 pa -65.8      l: az 62.2 el 27.5 pa -64.5      u,v (fr/asec) -408.704 2.692      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kl..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kl.W.169.3MP1N1

# Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kl

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

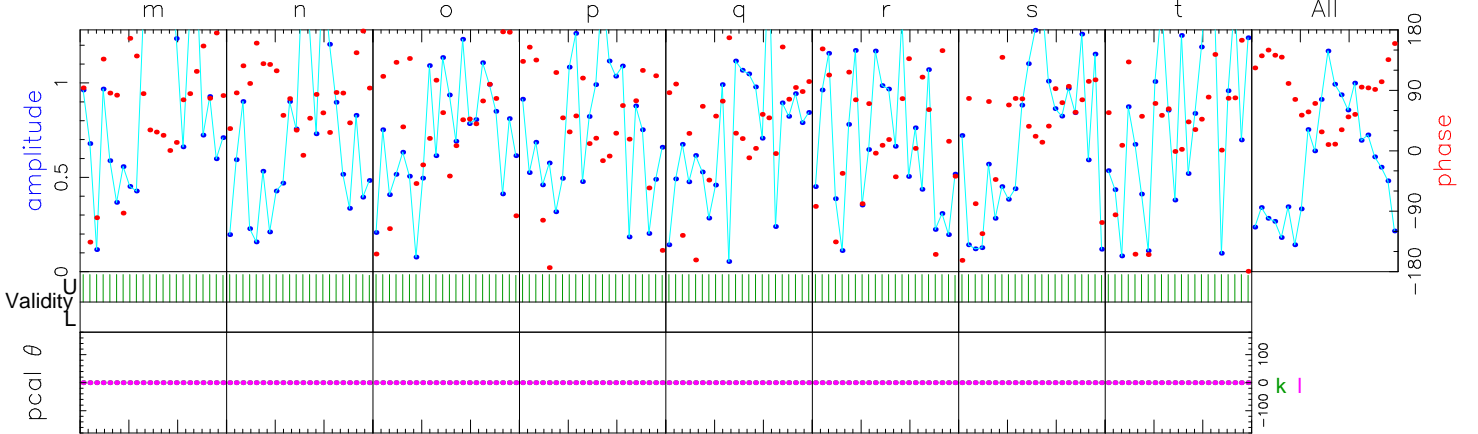


Fringe quality 9

SNR 15.7  
Int time 179.990  
Amp 0.427  
Phase 65.5  
PFD 0.0e+00  
Delays (us)  
SBD -0.000154  
MBD -0.000847  
Fringe rate (Hz) -0.014473  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 080000.00  
Stop 080300.22  
FRT 080130.00  
Corr/FF/build 2024:352:054246  
2025:041:105028  
2024:113:095956  
RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	0	0	0	0	0	0	0	0	APs used	
l	0	0	0	0	0	0	0	0	PC freqs	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.93015912852E+03	Apriori delay (usec)	-1.93015828150E+03	Resid mbdelay (usec)	-8.47022E-04	+/-	6.9E-05
Sband delay (usec)	-1.93015843600E+03	Apriori clock (usec)	8.4598198E+07	Resid sbdelay (usec)	-1.54500E-04	+/-	5.5E-04
Phase delay (usec)	-1.93015827939E+03	Apriori clockrate (us/s)	3.8620713E-07	Resid phdelay (usec)	2.1172E-06	+/-	2.4E-07
Delay rate (us/s)	5.73933433576E-02	Apriori rate (us/s)	5.73935113694E-02	Resid rate (us/s)	-1.68012E-07	+/-	2.3E-09
Total phase (deg)	-67.1	Apriori accel (us/s/s)	6.53115503860E-06	Resid phase (deg)	65.5	+/-	7.3

ph/seg (deg) 50.2 17.2 Search (1024X32) 0.414 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 79.5 29.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 8.9 10.3 Inc. seg. avg. 0.552 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 18.1 18.1 Inc. frq. avg. 0.424 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

k: az 58.7 el 21.7 pa -65.8 l: az 62.2 el 27.5 pa -64.5 u,v (fr/asec) -408.704 2.692 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kl...3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kl.W.181.3MP1N1

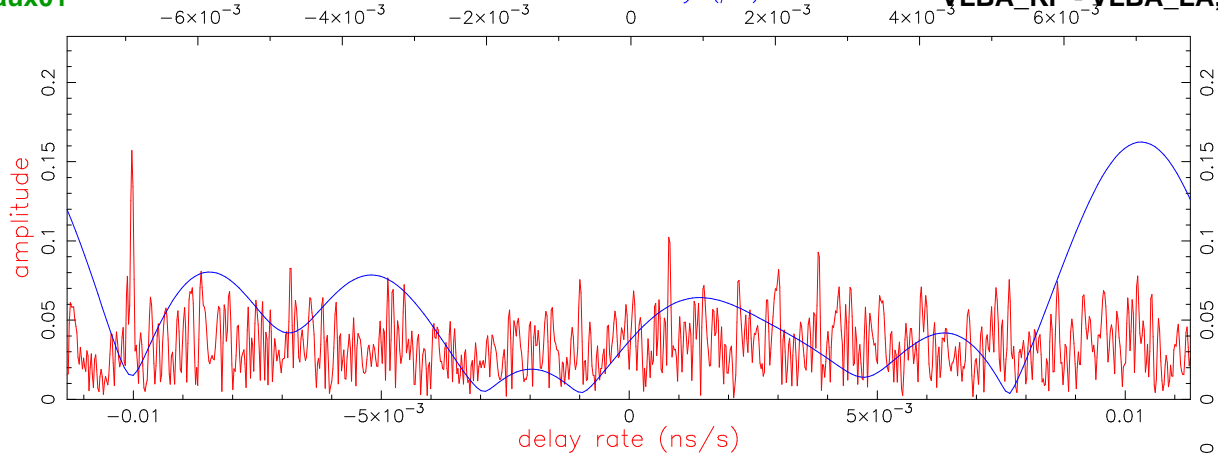
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kl

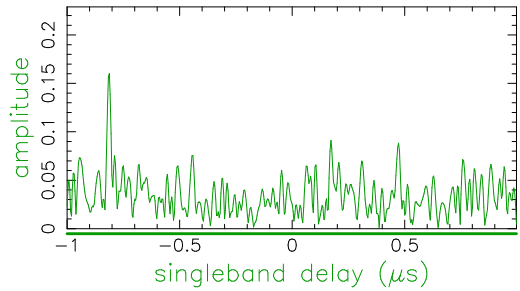
VLBA\_KP - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

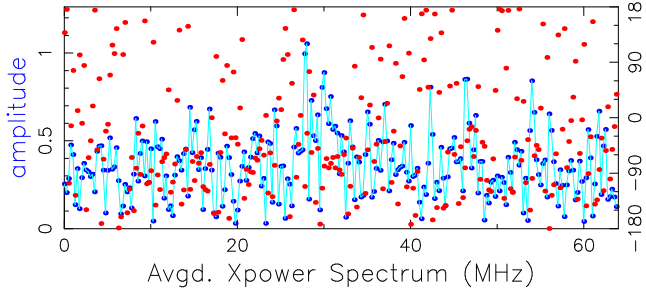


Fringe quality 0

SNR 5.9  
Int time 179.990  
Amp 0.229  
Phase -0.9  
PFD 3.0e-01  
Delays (us)  
SBD -0.813960  
MBD -0.008301  
Fringe rate (Hz)  
-0.864596  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

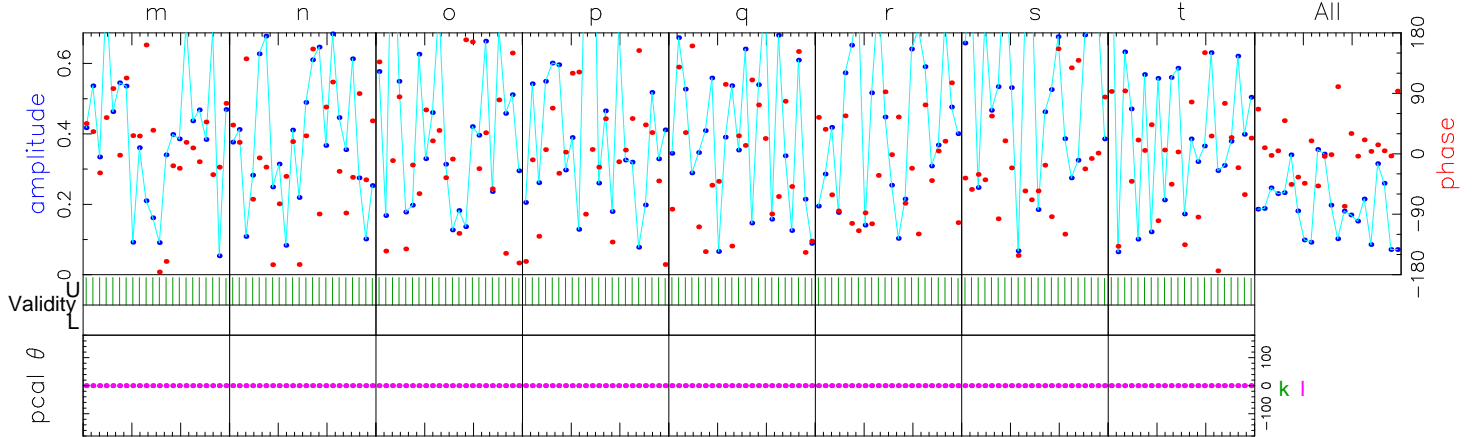


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 080000.00  
Stop 080300.22  
FRT 080130.00  
Corr/FF/build  
2024:352:054246  
2025:041:105030  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	0	0	0	0	0	0	0	0		
l	0	0	0	0	0	0	0	0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-1.93097908228E+03	Apriori delay (usec)	-1.93015828150E+03	Resid mbdelay (usec)	-8.30078E-03	+/-	1.8E-04
Sband delay (usec)	-1.93097224200E+03	Apriori clock (usec)	8.4598198E+00	Resid sbdelay (usec)	-8.13960E-01	+/-	1.4E-03
Phase delay (usec)	-1.93015828153E+03	Apriori clockrate (us/s)	3.8620713E-07	Resid phdelay (usec)	-2.88561E-08	+/-	6.2E-07
Delay rate (us/s)	5.73834742624E-02	Apriori rate (us/s)	5.73935113694E-02	Resid rate (us/s)	-1.00371E-05	+/-	6.0E-09
Total phase (deg)	-133.5	Apriori accel (us/s/s)	6.53115503860E-06	Resid phase (deg)	-0.9	+/-	19.3

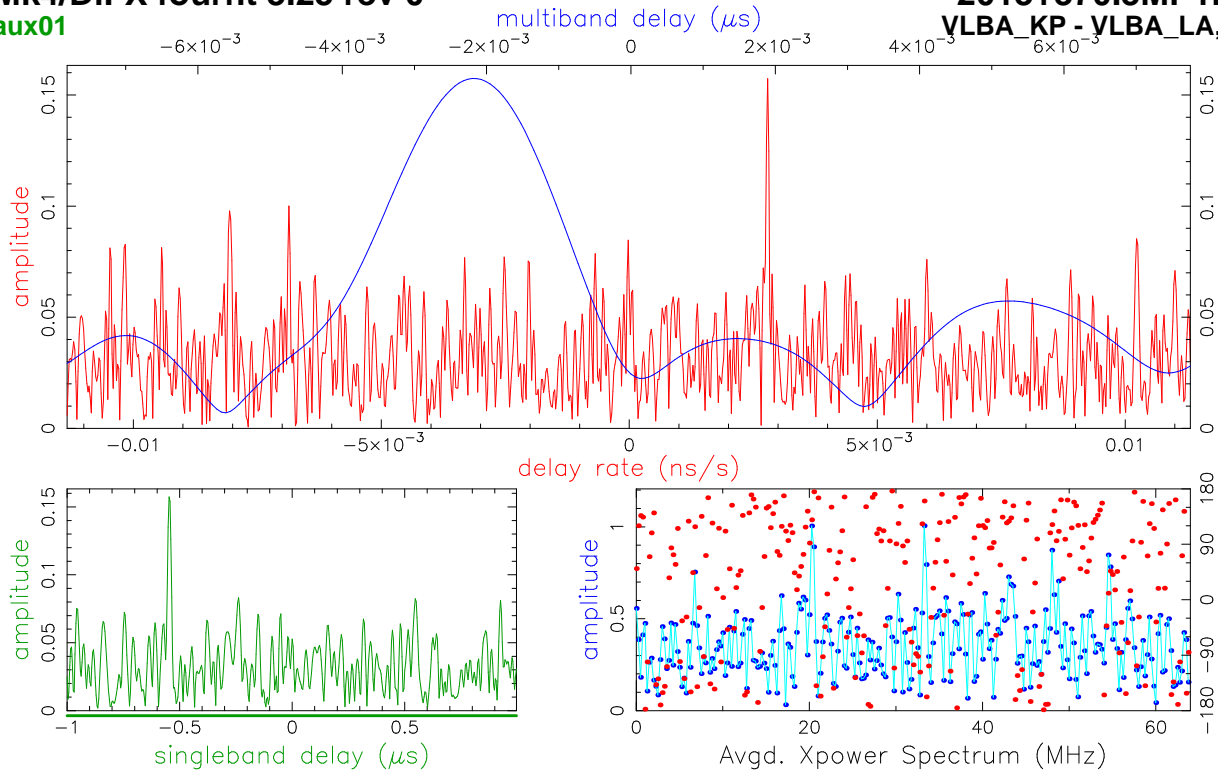
ph/seg (deg)	43.3	Theor.	45.2	Amplitude	0.229 +/- 0.039	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	57.8	Search (1024X32)	0.159	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	29.0	Inc. seg. avg.	0.212	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	48.2	Inc. frq. avg.	0.220	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011	
k: az 58.7 el 21.7 pa -65.8		l: az 62.2 el 27.5 pa -64.5		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0280/kl..3MP1N1		u,v (fr/asec) -408.704 2.692		simultaneous interpolator		
				Output file: /Exps/c241c/v2/3mm/1234/No0280/kl.W.192.3MP1N1				

Mk4/DiFX fourfit 3.25 rev 0

aux01

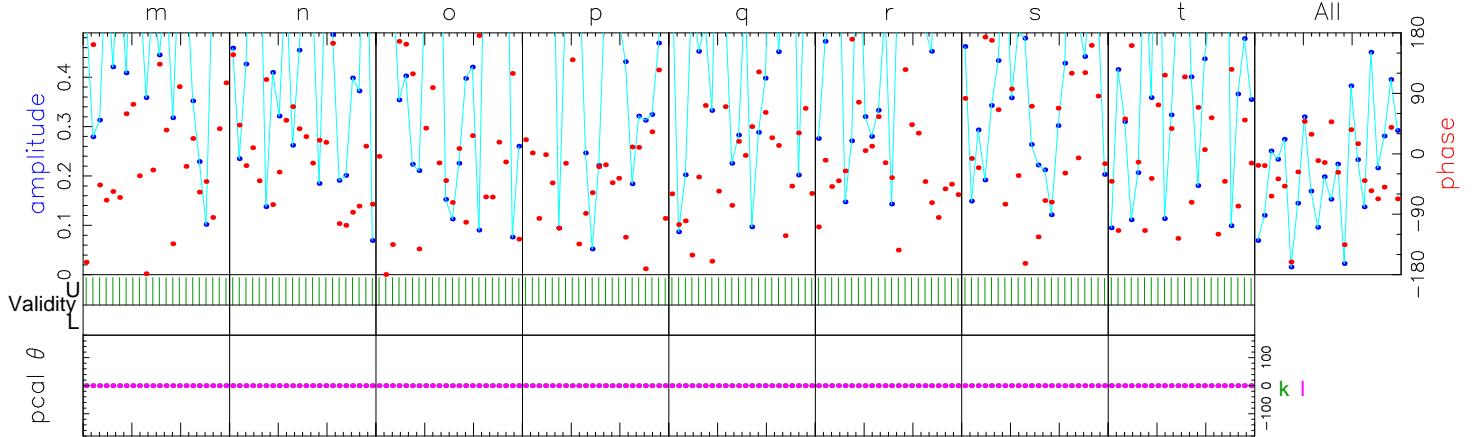
2013+370.3MP1N1, No0280, kl

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



Fringe quality 0  
 SNR 5.8  
 Int time 179.990  
 Amp 0.163  
 Phase -17.6  
 PFD 4.8e-01  
 Delays (us)  
 SBD -0.545398  
 MBD -0.002124  
 Fringe rate (Hz)  
 0.240661  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105032  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All						
	-2.8	0.0	-31.8	-35.1	-20.9	-32.8	81.0	-15.5		Phase	-17.6					
	0.1	0.2	0.1	0.3	0.2	0.3	0.1	0.1		Ampl.	0.2					
	142.0	346.8	177.3	117.0	288.4	484.9	412.7	288.9		Sbd box	117.4					
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used						
k	0	0	0	0	0	0	0	0		PC freqs						
l	0	0	0	0	0	0	0	0		PC freqs						
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase						
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC						
k	1000	1000	1000	1000	1000	1000	1000	1000		PC amp						
l	1000	1000	1000	1000	1000	1000	1000	1000								
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids						
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks						
										Tracks						
Group delay (usec) (SBD)	-1.93070728002E+03									Apriori delay (usec)	-1.93015828150E+03	Resid mbdelay (usec)	-2.12353E-03	+/-	1.9E-04	
Sband delay (usec)	-1.93070367950E+03									Apriori clock (usec)	8.4598198E+07	Resid sbdelay (usec)	-5.45398E-01	+/-	1.5E-03	
Phase delay (usec)	-1.93015828206E+03									Apriori clockrate (us/s)	3.8620713E-07	Resid phdelay (usec)	-5.66344E-07	+/-	6.3E-07	
Delay rate (us/s)	5.73963052036E-02									Apriori rate (us/s)	5.73935113694E-02	Resid rate (us/s)	2.79383E-06	+/-	6.1E-09	
Total phase (deg)			-150.1							Apriori accel (us/s/s)	6.53115503860E-06	Resid phase (deg)	-17.6	+/-	19.6	
	RMS	Theor.	Amplitude	0.163 +/- 0.028						Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	53.9	46.0	Search (1024X32)	0.156						Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	78.5	80.3	Interp.	0.000						Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	42.8	27.7	Inc. seg. avg.	0.165						Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	43.8	48.4	Inc. frq. avg.	0.160						Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
k: az 58.7 el 21.7 pa -65.8			l: az 62.2 el 27.5 pa -64.5							u, v (fr/asec) -408.704 2.692					simultaneous interpolator	
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/3mm/1234/No0280/kl..3MP1N1							Output file: /Exps/c241c/v2/3mm/1234/No0280/kl.W.204.3MP1N1						

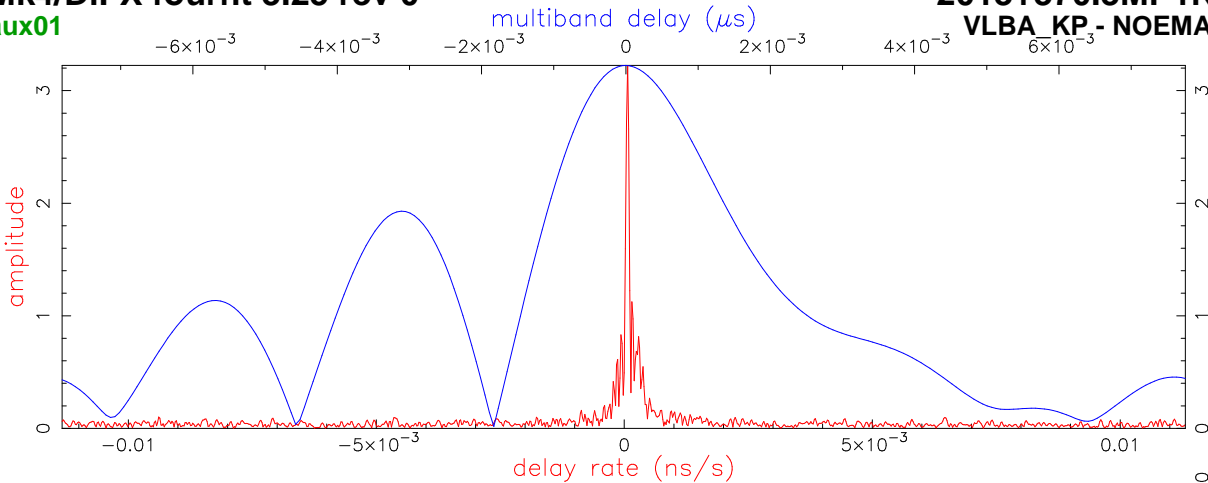


Mk4/DiFX fourfit 3.25 rev 0

aux01

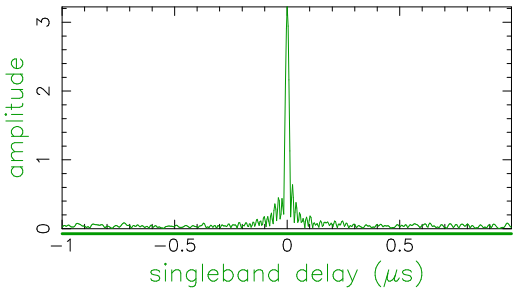
2013+370.3MP1N1, No0280, kN

VLBA\_KP - NOEMA, fgroup W, pol LL

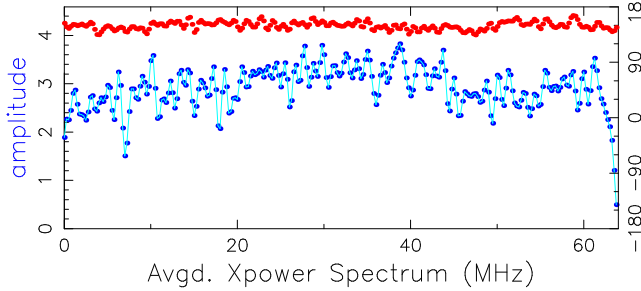


Fringe quality 4

SNR 118.3  
 Int time 179.981  
 Amp 3.224  
 Phase 151.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000140  
 MBD 0.000004  
 Fringe rate (Hz)  
 0.006618  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

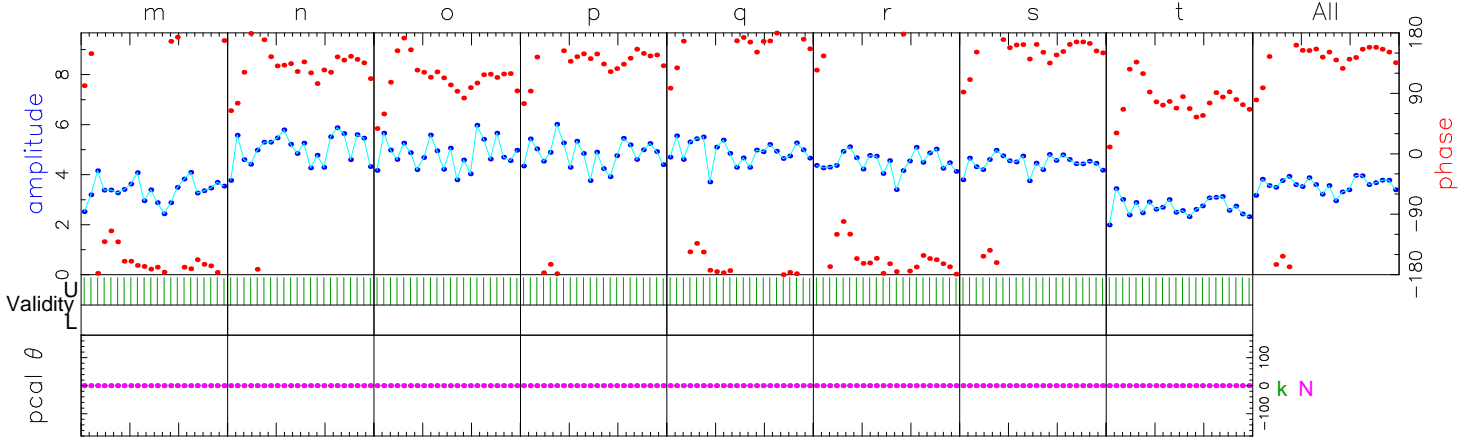


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105026  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-169.5	132.3	111.7	143.5	175.5	-162.9	158.9	77.7	Phase	151.3
	3.1	4.5	4.3	4.4	4.4	4.0	4.0	2.4	Ampl.	3.9
	255.2	256.8	257.5	257.4	257.2	257.4	256.4	254.8	Sbd box	257.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
k:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:N	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	
N	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.13031443949E+04	Apriori delay (usec)	-1.13031443990E+04	Resid mbdelay (usec)	4.14895E-06	+/-	9.2E-06
Sband delay (usec)	-1.13031442593E+04	Apriori clock (usec)	1.3508152E+01	Resid sbdelay (usec)	1.39750E-04	+/-	7.3E-05
Phase delay (usec)	-1.13031443942E+04	Apriori clockrate (us/s)	1.3790705E-07	Resid phdelay (usec)	4.87755E-06	+/-	3.1E-08
Delay rate (us/s)	1.51335173490E+00	Apriori rate (us/s)	1.51335165807E+00	Resid rate (us/s)	7.68317E-08	+/-	3.0E-10
Total phase (deg)	-40.7	Apriori accel (us/s/s)	4.83327735700E-05	Resid phase (deg)	151.3	+/-	1.0

ph/seg (deg)	27.1	2.3	Search (1024X32)	3.101	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	14.0	4.0	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	44.1	1.4	Inc. seg. avg.	3.588	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	30.0	2.4	Inc. frq. avg.	3.890	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

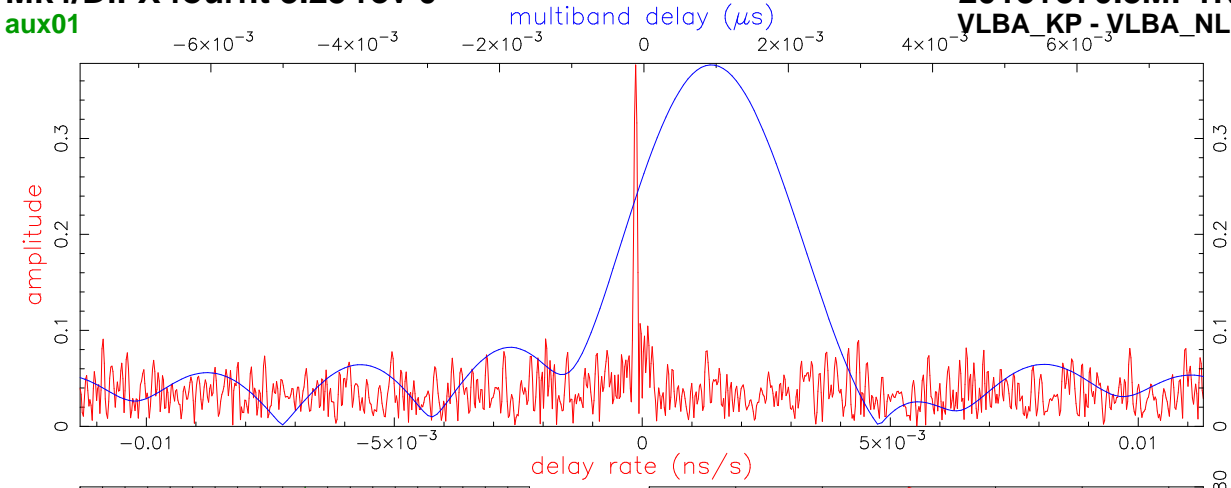
k: az 58.7 el 21.7 pa -65.8 N: az 263.8 el 65.1 pa 62.6 u,v (fr/asec) -10852.240 1733.849 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kN..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kN.W.172.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kn

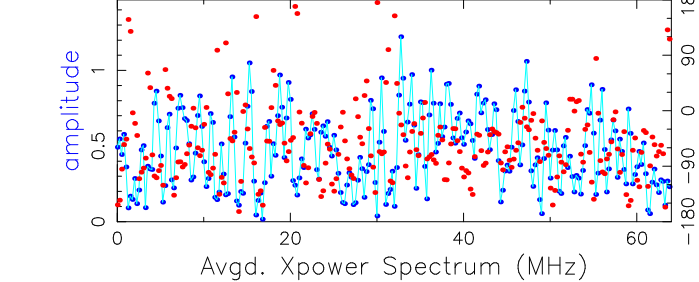
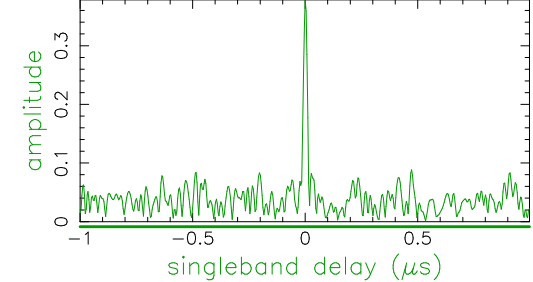
VLBA\_KP - VLBA\_NL, fgroup W, pol LL



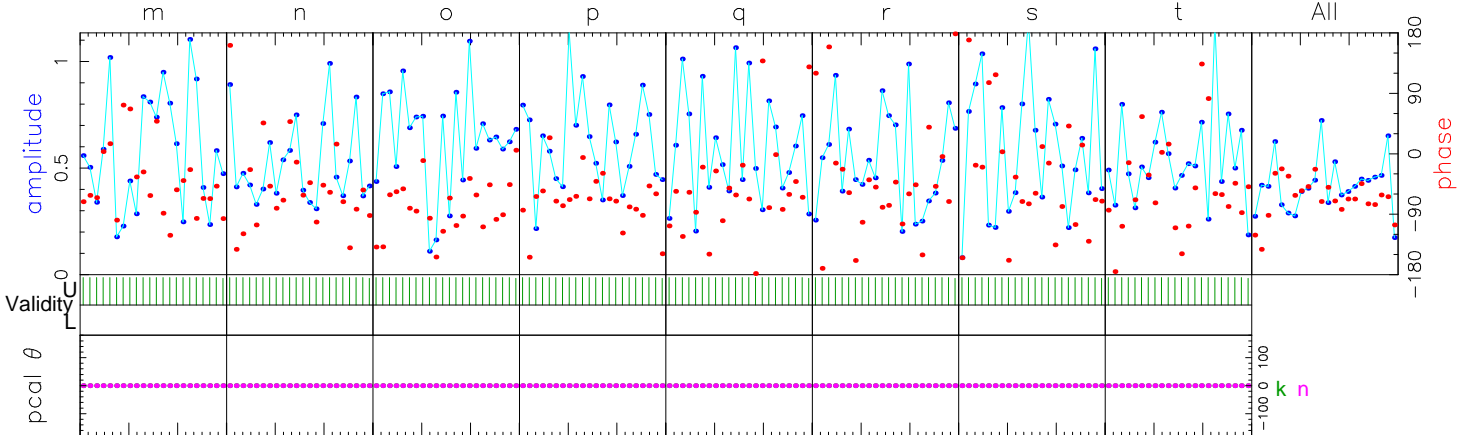
Fringe quality 9

SNR 13.9  
 Int time 179.986  
 Amp 0.378  
 Phase -63.8  
 PFD 2.6e-35  
 Delays (us)  
 SBD 0.000860  
 MBD 0.000955  
 Fringe rate (Hz) -0.011438  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105027  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-47.3	-64.7	-74.4	-67.8	-66.0	-67.7	-53.6	-64.2	Phase	-63.8
	0.4	0.3	0.5	0.5	0.4	0.3	0.3	0.3	Ampl.	0.4
	256.5	257.1	257.5	257.2	257.7	258.2	256.7	256.8	Sbd box	257.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.87698385222E+03	Apriori delay (usec)	-5.87698480758E+03	Resid mbdelay (usec)	9.55358E-04	+/-	7.8E-05
Sband delay (usec)	-5.87698394708E+03	Apriori clock (usec)	4.3346024E-01	Resid sbdelay (usec)	8.60500E-04	+/-	6.2E-04
Phase delay (usec)	-5.87698480964E+03	Apriori clockrate (us/s)	-1.4505389E-07	Resid phdelay (usec)	-2.05820E-06	+/-	2.7E-07
Delay rate (us/s)	2.07018682211E-01	Apriori rate (us/s)	2.07018814998E-01	Resid rate (us/s)	-1.32787E-07	+/-	2.6E-09
Total phase (deg)		Apriori accel (us/s/s)	2.19168340787E-05	Resid phase (deg)	-63.8	+/-	8.3

ph/seg (deg) 29.4 19.4 Search (1024X32) 0.376 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 35.0 33.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 9.4 11.7 Inc. seg. avg. 0.399 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 21.4 20.4 Inc. frq. avg. 0.373 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 58.7 el 21.7 pa -65.8 n: az 72.1 el 40.3 pa -63.2 u,v (fr/asec) -1474.418 354.498 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kn..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kn.W.179.3MP1N1

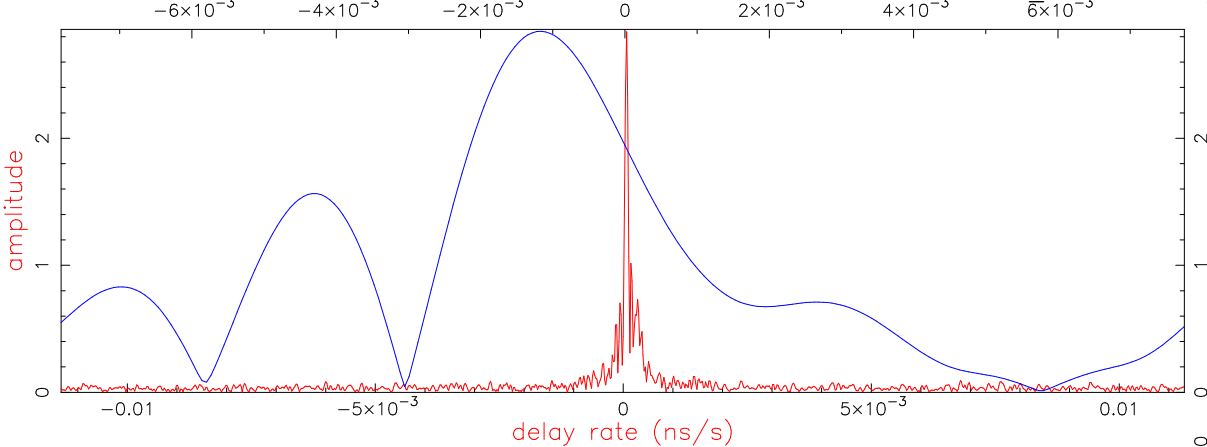
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kN

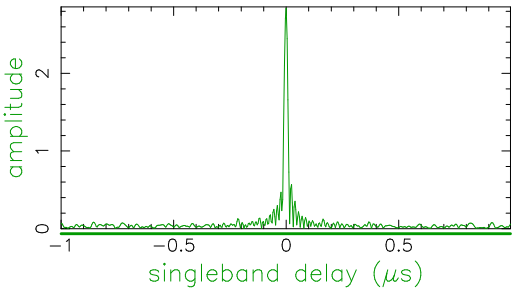
VLBA\_KP - NOEMA, fgroup W, pol RR

multiband delay ( $\mu$ s)

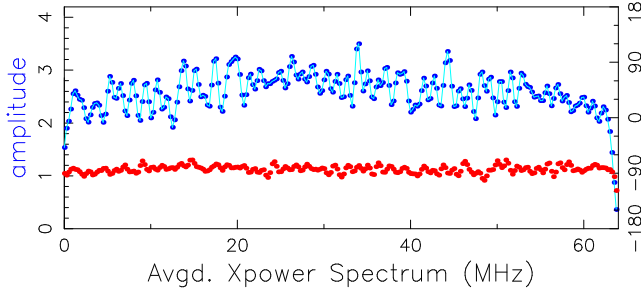


Fringe quality 4

SNR 104.8  
 Int time 179.981  
 Amp 2.857  
 Phase -80.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000992  
 MBD -0.001221  
 Fringe rate (Hz) 0.006641  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

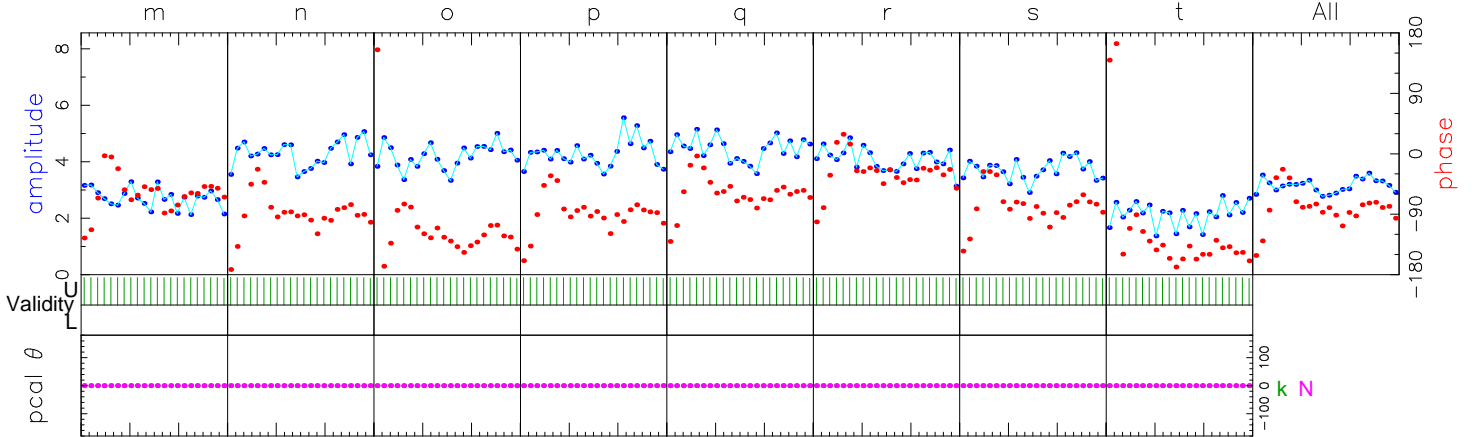


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105029  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



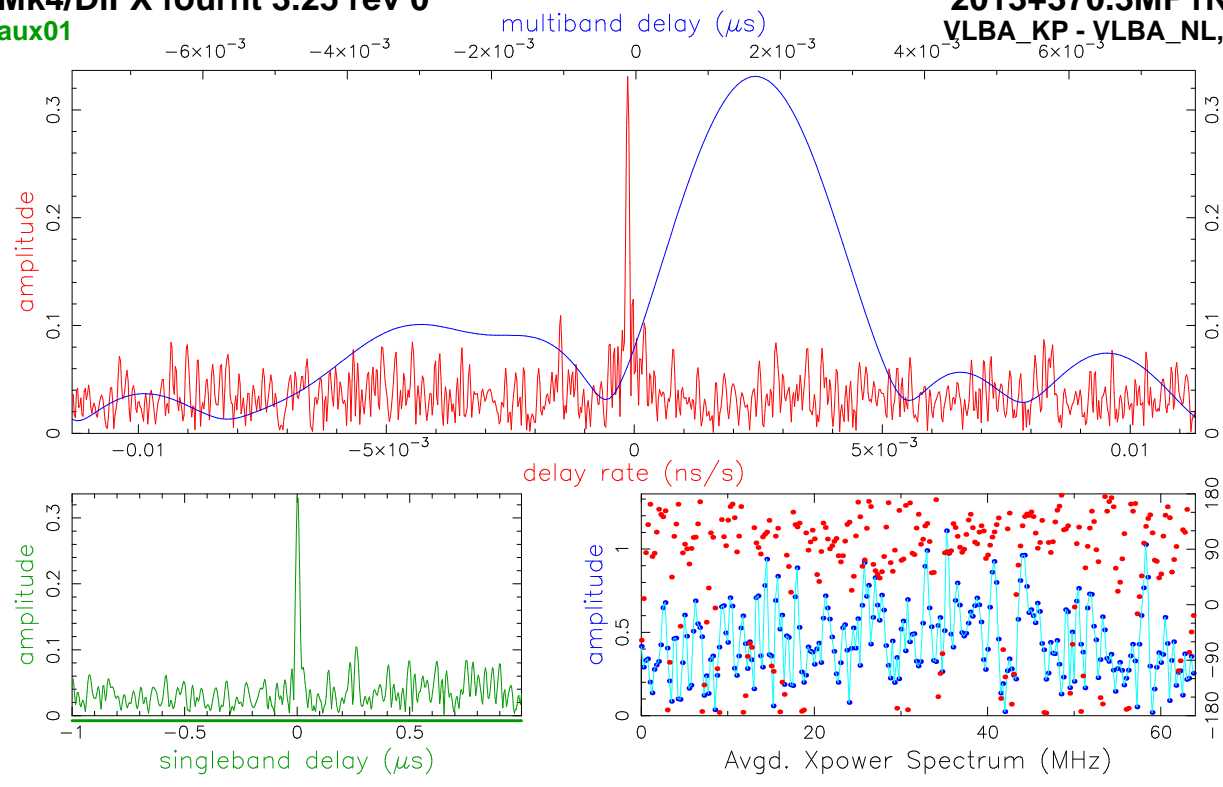
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-60.7	-88.8	-124.1	-87.6	-58.2	-28.5	-78.5	-144.9	Phase	-80.6
	2.4	3.8	3.8	3.9	4.0	3.6	3.3	1.9	Ampl.	3.3
	255.0	256.8	257.1	257.1	256.9	257.1	256.1	254.7	Sbd box	256.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
k:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:N	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	
N	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.13031456205E+04	Apriori delay (usec)	-1.13031443990E+04	Resid mbdelay (usec)	-1.22148E-03	+/-	1.0E-05
Sband delay (usec)	-1.13031453908E+04	Apriori clock (usec)	1.3508152E+01	Resid sbdelay (usec)	-9.91750E-04	+/-	8.2E-05
Phase delay (usec)	-1.13031444016E+04	Apriori clockrate (us/s)	1.3790705E-07	Resid phdelay (usec)	-2.60061E-06	+/-	3.5E-08
Delay rate (us/s)	1.51335173517E+00	Apriori rate (us/s)	1.51335165807E+00	Resid rate (us/s)	7.70939E-08	+/-	3.4E-10
Total phase (deg)	-272.6	Apriori accel (us/s/s)	4.83327735700E-05	Resid phase (deg)	-80.6	+/-	1.1

ph/seg (deg)	27.2	Theor.	2.6	Amplitude	2.857 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	13.4		4.5	Search (1024X32)	2.694	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	40.3		1.5	Inc. seg. avg.	3.159	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	30.3		2.7	Inc. frq. avg.	3.346	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 58.7 el 21.7 pa -65.8 N: az 263.8 el 65.1 pa 62.6 u,v (fr/asec) -10852.240 1733.849 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kN..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kN.W.185.3MP1N1

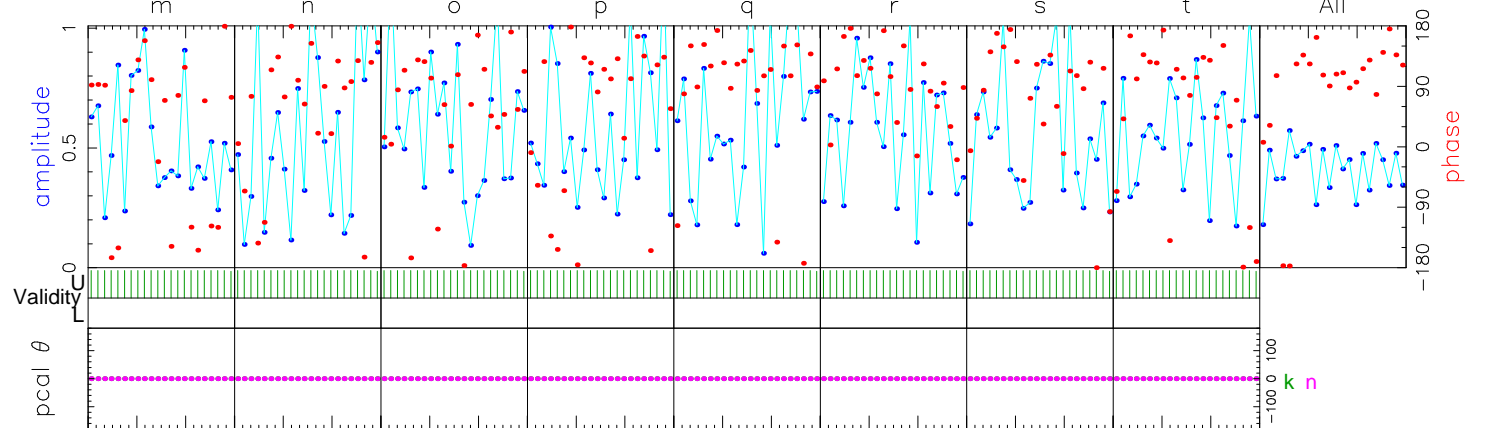


Fringe quality 9

SNR 12.3  
Int time 179.986  
Amp 0.337  
Phase 119.4  
PFD 1.3e-26  
Delays (us)  
SBD 0.001820  
MBD 0.001686  
Fringe rate (Hz) -0.011700  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 080000.00  
Stop 080300.22  
FRT 080130.00  
Corr/FF/build  
2024:352:054246  
2025:041:105029  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

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



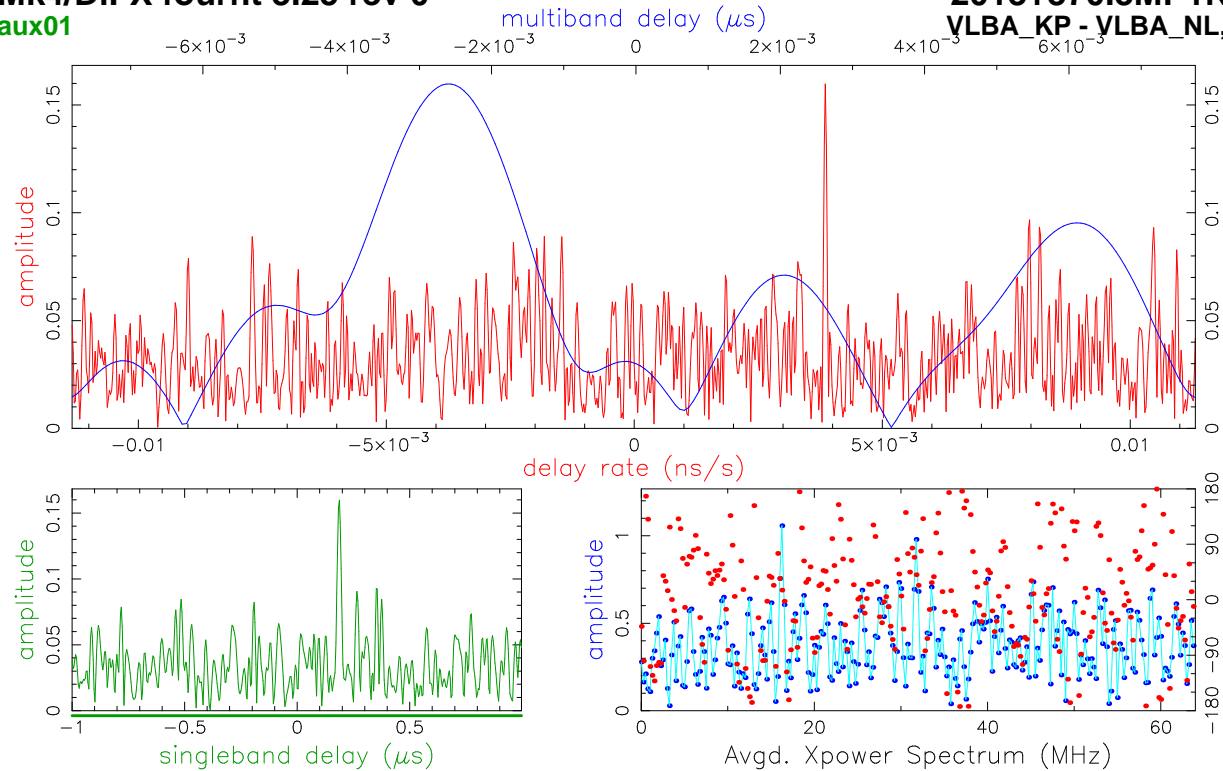
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	132.5	125.8	81.7	142.7	132.2	100.5	109.2	132.3	Phase	119.4		
	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.3	Ampl.	0.3		
	258.4	257.3	258.0	256.8	256.8	258.2	257.9	257.8	Sbd box	257.5		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
k	0	0	0	0	0	0	0	0	PC freqs			
n	0	0	0	0	0	0	0	0	PC freqs			
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
k:n	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			
n	1000	1000	1000	1000	1000	1000	1000	1000				
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Tracks			
Group delay (usec) (SBD)	-5.87698312160E+03		Apriori delay (usec)		-5.87698480758E+03		Resid mbdelay (usec)		1.68598E-03	+/- 8.8E-05		
Sband delay (usec)	-5.87698298733E+03		Apriori clock (usec)		4.3346024E-01		Resid sbdelay (usec)		1.82025E-03	+/- 7.0E-04		
Phase delay (usec)	-5.87698480373E+03		Apriori clockrate (us/s)		-1.4505389E-07		Resid phdelay (usec)		3.84983E-06	+/- 3.0E-07		
Delay rate (us/s)	2.07018679171E-01		Apriori rate (us/s)		2.07018814998E-01		Resid rate (us/s)		-1.35826E-07	+/- 2.9E-09		
Total phase (deg)			Apriori accel (us/s/s)		2.19168340787E-05		Resid phase (deg)		119.4	+/- 9.3		
	RMS	Theor.	Amplitude	0.337 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	42.3	21.8	Search (1024X32)	0.325		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	37.5	38.0	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	22.2	13.1	Inc. seg. avg.	0.387		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	22.1	22.9	Inc. frq. avg.	0.340		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
k: az 58.7 el 21.7 pa -65.8	n: az 72.1 el 40.3 pa -63.2		u, v (fr/asec) -1474.418 354.498						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/3mm/1234/No0280/kn..3MP1N1		Output file: /Exps/c241c/v2/3mm/1234/No0280/kn.W.186.3MP1N1									

Mk4/DiFX fourfit 3.25 rev 0

aux01

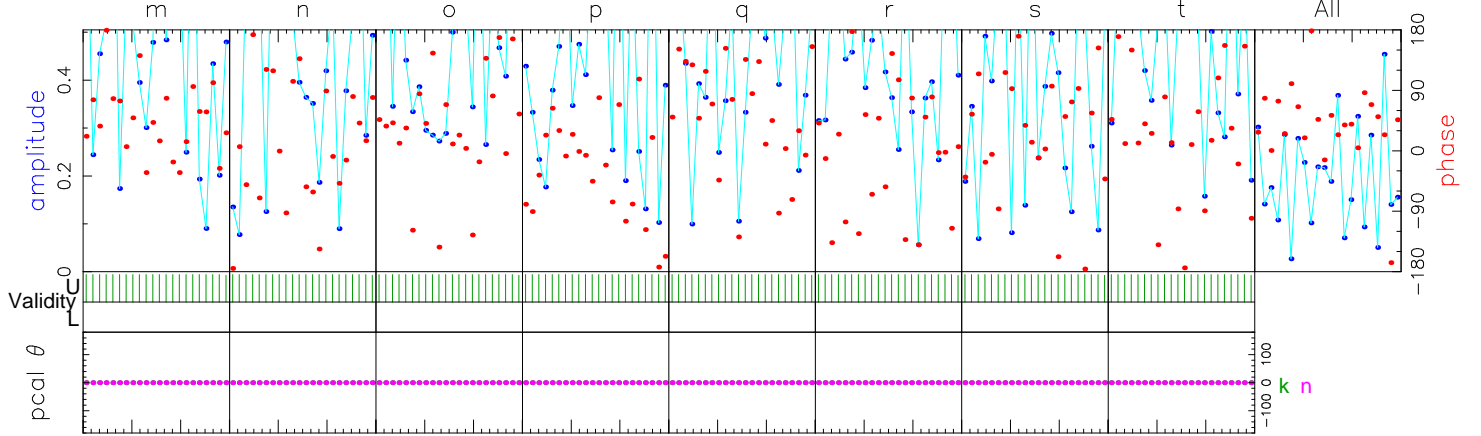
2013+370.3MP1N1, No0280, kn

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



Fringe quality 0  
 SNR 5.9  
 Int time 179.986  
 Amp 0.168  
 Phase 36.7  
 PFD 3.9e-01  
 Delays (us)  
 SBD 0.186528  
 MBD -0.002624  
 Fringe rate (Hz) 0.331643  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build 2024:352:054246  
 2025:041:105031  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	43.7	22.9	41.1	-0.7	76.9	-30.5	47.4	48.3	Phase	36.7
	0.3	0.1	0.3	0.2	0.2	0.1	0.1	0.2	Ampl.	0.2
	305.0	326.0	113.7	303.5	380.4	69.9	309.9	441.2	Sbd box	304.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) -5.87679993131E+03 Apriori delay (usec) -5.87698480758E+03 Resid mbdelay (usec) -2.62374E-03 +/- 1.8E-04  
 Sband delay (usec) -5.87679828008E+03 Apriori clock (usec) 4.3346024E-01 Resid sbdelay (usec) 1.86528E-01 +/- 1.5E-03  
 Phase delay (usec) -5.87698480640E+03 Apriori clockrate (us/s) -1.4505389E-07 Resid phdelay (usec) 1.18202E-06 +/- 6.3E-07  
 Delay rate (us/s) 2.07022665047E-01 Apriori rate (us/s) 2.07018814998E-01 Resid rate (us/s) 3.85005E-06 +/- 6.0E-09  
 Total phase (deg) -80.3 Apriori accel (us/s/s) 2.19168340787E-05 Resid phase (deg) 36.7 +/- 19.5

RMS Theor. Amplitude 0.168 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 53.3 45.6 Search (1024X32) 0.158 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 70.8 79.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 36.6 27.5 Inc. seg. avg. 0.158 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 53.2 48.0 Inc. frq. avg. 0.167 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

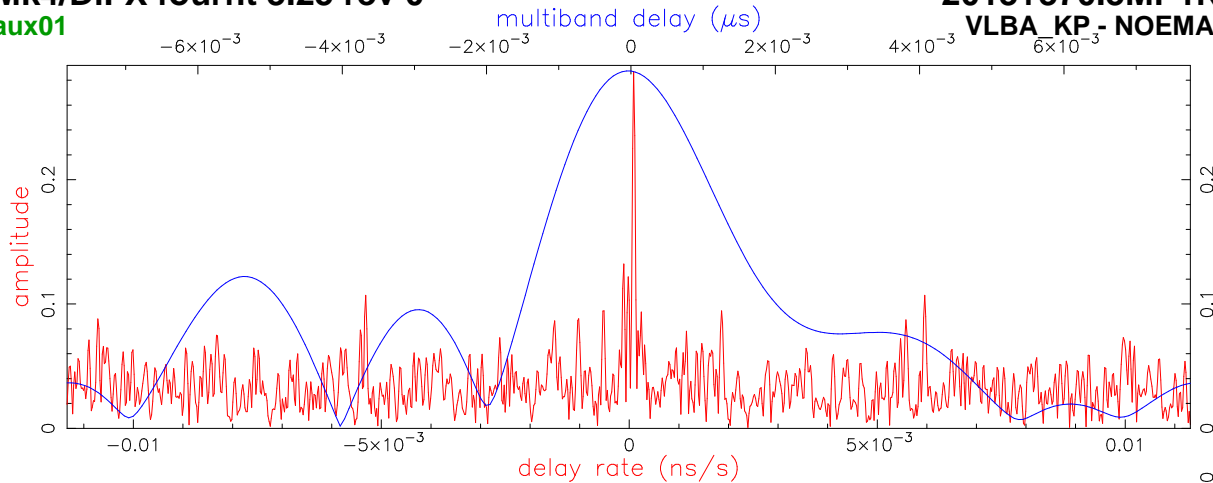
k: az 58.7 el 21.7 pa -65.8 n: az 72.1 el 40.3 pa -63.2 u,v (fr/asec) -1474.418 354.498 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kn..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kn.W.197.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

aux01

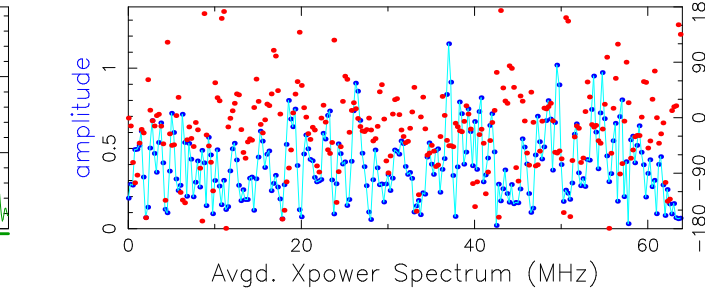
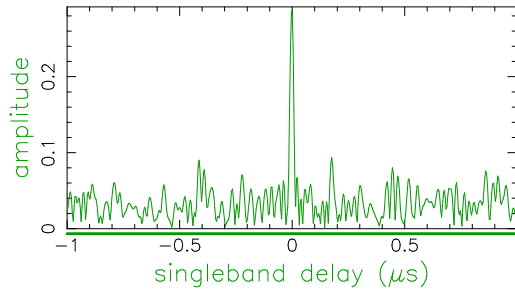
2013+370.3MP1N1, No0280, kN

VLBA\_KP - NOEMA, fgroup W, pol LR



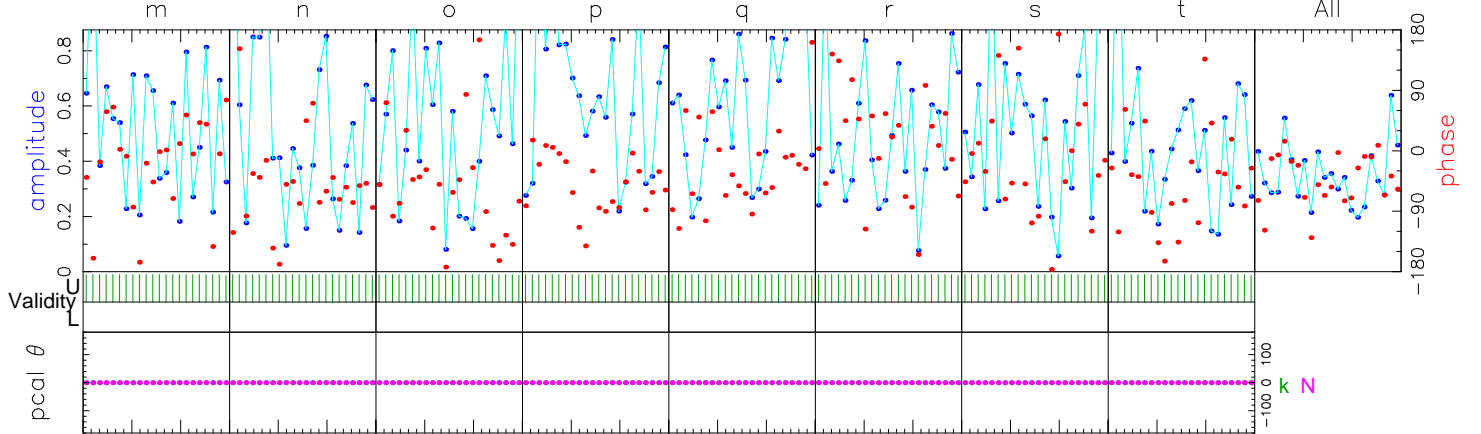
Fringe quality 9

SNR 10.7  
 Int time 179.981  
 Amp 0.292  
 Phase -40.0  
 PFD 2.1e-18  
 Delays (us)  
 SBD -0.001690  
 MBD -0.000116  
 Fringe rate (Hz)  
 0.006785  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105031  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-3.9	-66.5	-78.7	-40.0	-32.0	3.5	-12.2	-68.1	Phase	-40.0
	0.2	0.3	0.3	0.5	0.4	0.2	0.3	0.3	Ampl.	0.3
	254.5	256.8	258.5	256.6	257.0	28.5	255.9	255.6	Sbd box	256.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
k:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:N	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	
N	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.13031445153E+04	Apriori delay (usec)	-1.13031443990E+04	Resid mbdelay (usec)	-1.16301E-04	+/-	1.0E-04
Sband delay (usec)	-1.13031460893E+04	Apriori clock (usec)	1.3508152E+01	Resid sbdelay (usec)	-1.69025E-03	+/-	8.0E-04
Phase delay (usec)	-1.13031444003E+04	Apriori clockrate (us/s)	1.3790705E-07	Resid phdelay (usec)	-1.29043E-06	+/-	3.5E-07
Delay rate (us/s)	1.51335173683E+00	Apriori rate (us/s)	1.51335165807E+00	Resid rate (us/s)	7.87619E-08	+/-	3.3E-09
Total phase (deg)	-232.0	Apriori accel (us/s/s)	4.83327735700E-05	Resid phase (deg)	-40.0	+/-	10.7

ph/seg (deg)	RMS 38.0	Theor. 25.1	Amplitude Search (1024X32)	0.277	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	42.2	43.8	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)	34.2	15.1	Inc. seg. avg.	0.321	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	32.7	26.4	Inc. frq. avg.	0.311	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 58.7 el 21.7 pa -65.8 N: az 263.8 el 65.1 pa 62.6 u,v (fr/asec) -10852.240 1733.849 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kN..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kN.W.198.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

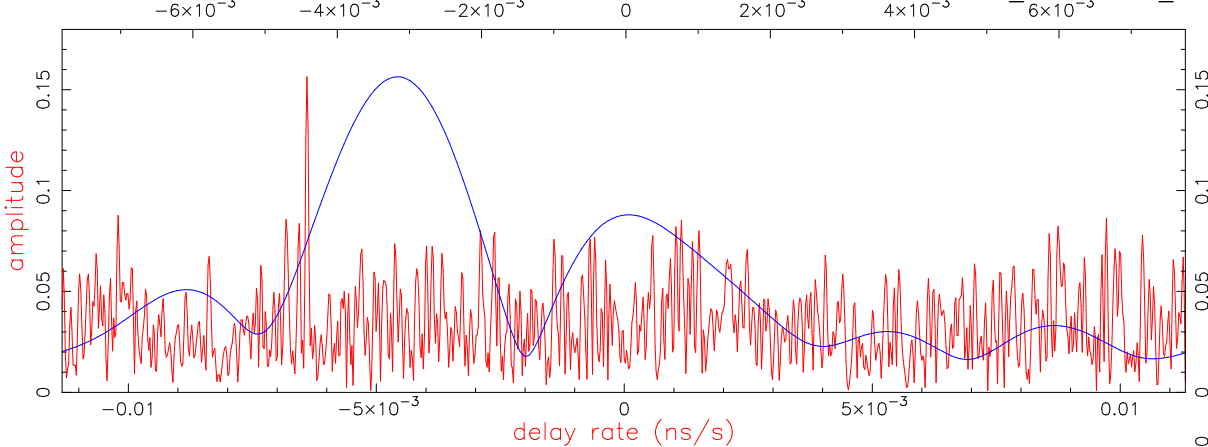
aux01

2013+370.3MP1N1, No0280, kn

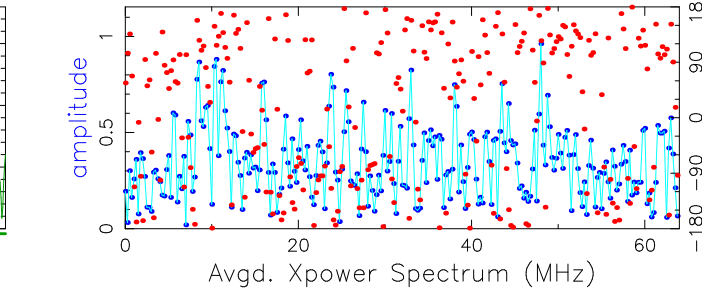
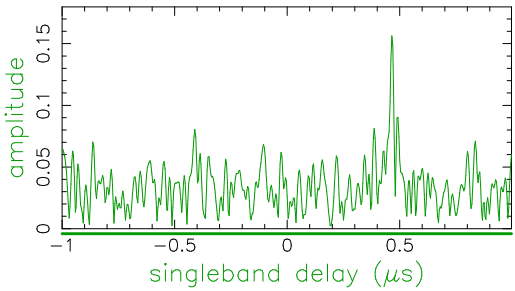
VLBA\_KP - VLBA\_NL, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

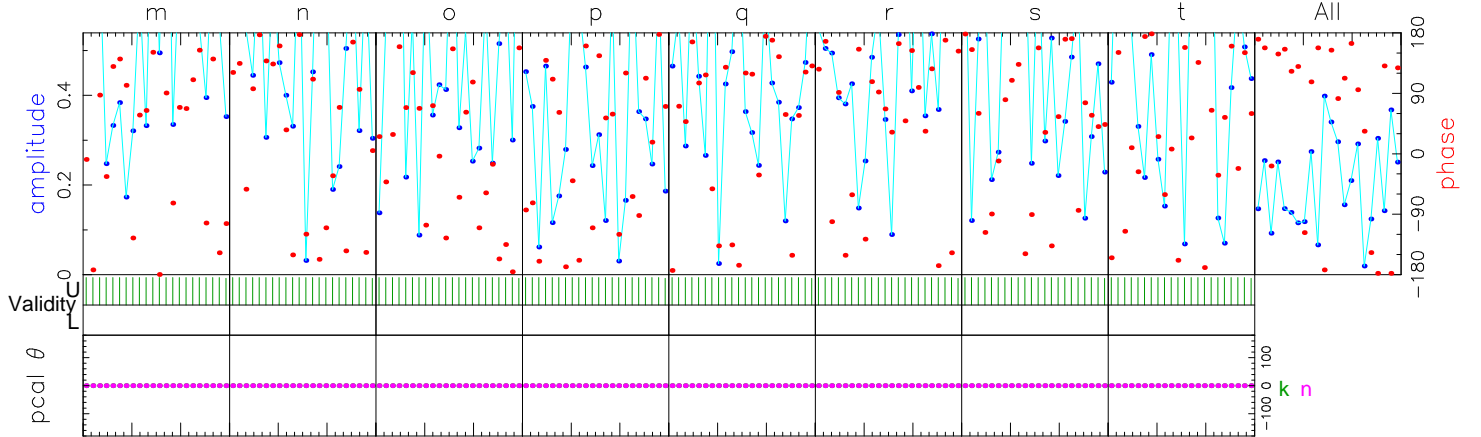


SNR 5.8  
 Int time 179.986  
 Amp 0.180  
 Phase 148.8  
 PFD 6.3e-01  
 Delays (us)  
 SBD 0.465775  
 MBD -0.003137  
 Fringe rate (Hz)  
 -0.551177  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105033  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	119.1	168.2	-179.3	-154.4	148.3	138.0	150.6	128.9	Phase	148.8
	0.3	0.3	0.1	0.1	0.2	0.3	0.2	0.1	Ampl.	0.2
	10.6	376.8	216.4	35.8	171.4	109.2	372.1	7.3	Sbd box	376.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
n	0	0	0	0	0	0	0	0	PC freqs	
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:n	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	
n	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec) (SBD)	-5.87651919477E+03		Apriori delay (usec)		-5.87698480758E+03		Resid mbdelay (usec)		-3.13719E-03	+/- 1.9E-04
Sband delay (usec)	-5.87651903258E+03		Apriori clock (usec)		4.3346024E-01		Resid sbdelay (usec)		4.65775E-01	+/- 1.5E-03
Phase delay (usec)	-5.87698480278E+03		Apriori clockrate (us/s)		-1.4505389E-07		Resid phdelay (usec)		4.79903E-06	+/- 6.4E-07
Delay rate (us/s)	2.07012416382E-01		Apriori rate (us/s)		2.07018814998E-01		Resid rate (us/s)		-6.39862E-06	+/- 6.2E-09
Total phase (deg)	31.9		Apriori accel (us/s/s)		2.19168340787E-05		Resid phase (deg)		148.8	+/- 19.9

ph/seg (deg) 56.8 46.6 Search (1024X32) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 71.2 81.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 31.7 28.1 Inc. seg. avg. 0.176 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 49.2 49.0 Inc. frq. avg. 0.172 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 58.7 el 21.7 pa -65.8 n: az 72.1 el 40.3 pa -63.2 u, v (fr/asec) -1474.418 354.498 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kn..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kn.W.210.3MP1N1

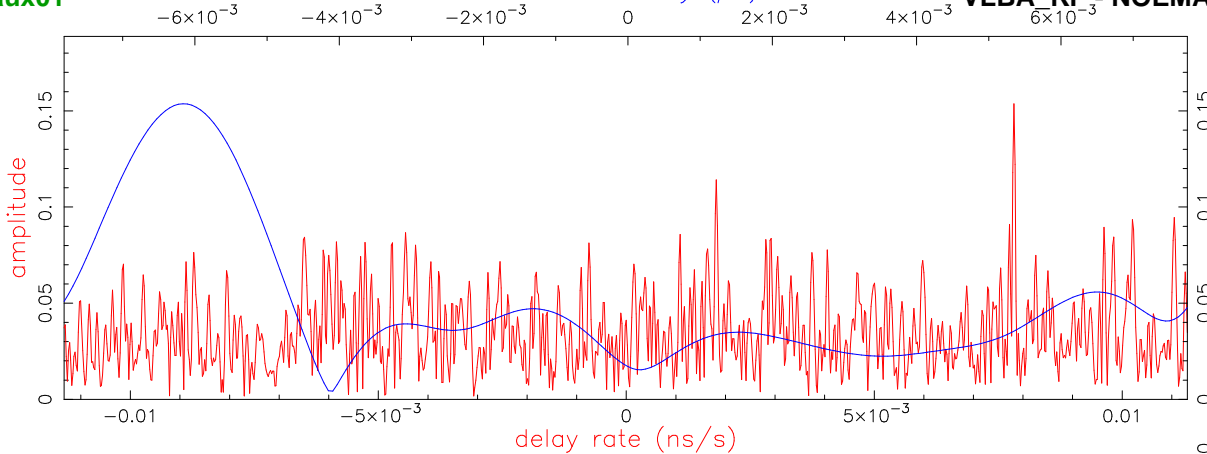
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kN

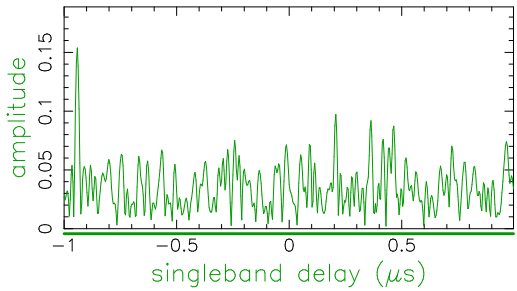
VLBA\_KP - NOEMA, fgroup W, pol RL

multiband delay ( $\mu$ s)

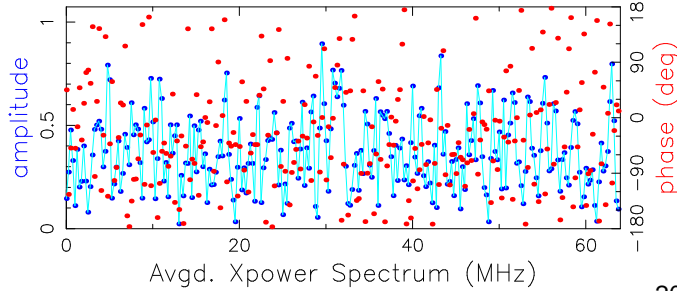


Fringe quality 0

SNR 5.6  
 Int time 179.981  
 Amp 0.189  
 Phase -40.5  
 PFD 8.7e-01  
 Delays (us)  
 SBD -0.941675  
 MBD -0.006158  
 Fringe rate (Hz)  
 0.674976  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

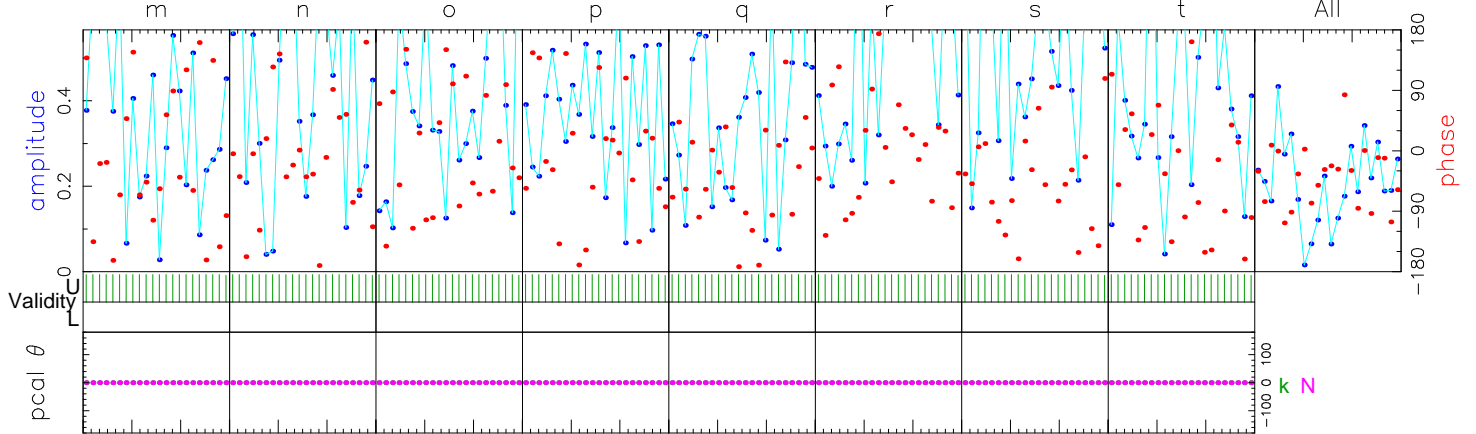


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105033  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-78.5	-31.5	-29.6	-33.7	-54.7	-6.9	-53.4	-62.4	Phase	-40.5
	0.1	0.2	0.1	0.1	0.2	0.3	0.3	0.2	Ampl.	0.2
	35.2	126.0	10.8	505.2	298.3	16.1	97.3	206.9	Sbd box	15.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
k:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:N	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	
N	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.13040880567E+04	Apriori delay (usec)	-1.13031443990E+04	Resid mbdelay (usec)	-6.15767E-03	+/-	1.9E-04
Sband delay (usec)	-1.13040860743E+04	Apriori clock (usec)	1.3508152E+01	Resid sbdelay (usec)	-9.41675E-01	+/-	1.5E-03
Phase delay (usec)	-1.13031444003E+04	Apriori clockrate (us/s)	1.3790705E-07	Resid phdelay (usec)	-1.30464E-06	+/-	6.6E-07
Delay rate (us/s)	1.51335949387E+00	Apriori rate (us/s)	1.51335165807E+00	Resid rate (us/s)	7.83580E-06	+/-	6.3E-09
Total phase (deg)	-232.4	Apriori accel (us/s/s)	4.83327735700E-05	Resid phase (deg)	-40.5	+/-	20.3

ph/seg (deg)	45.1	Theor.	47.6	Amplitude	0.189 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	72.3		83.1	Search (1024X32)	0.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	24.7		28.7	Inc. seg. avg.	0.191	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	38.4		50.1	Inc. frq. avg.	0.180	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 58.7 el 21.7 pa -65.8 N: az 263.8 el 65.1 pa 62.6 u,v (fr/asec) -10852.240 1733.849 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kN..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kN.W.212.3MP1N1



Mk4/DiFX fourfit 3.25 rev 0

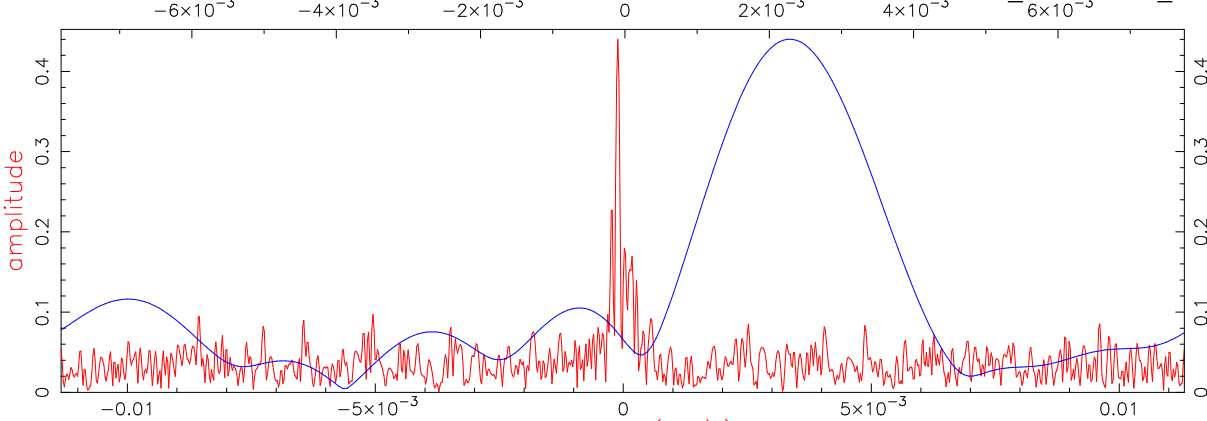
aux01

2013+370.3MP1N1, No0280, ko

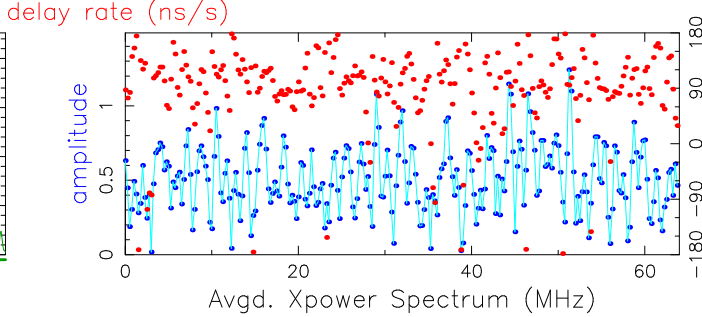
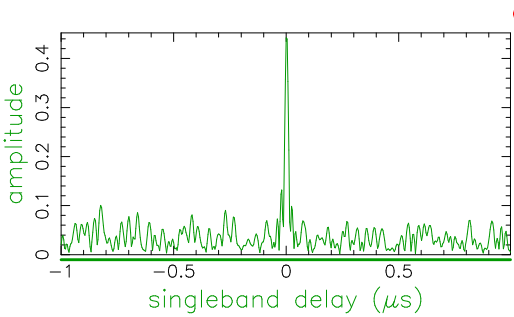
VLBA\_KP - VLBA\_OV, fgroup W, pol LL

multiband delay ( $\mu$ s)

Fringe quality 9

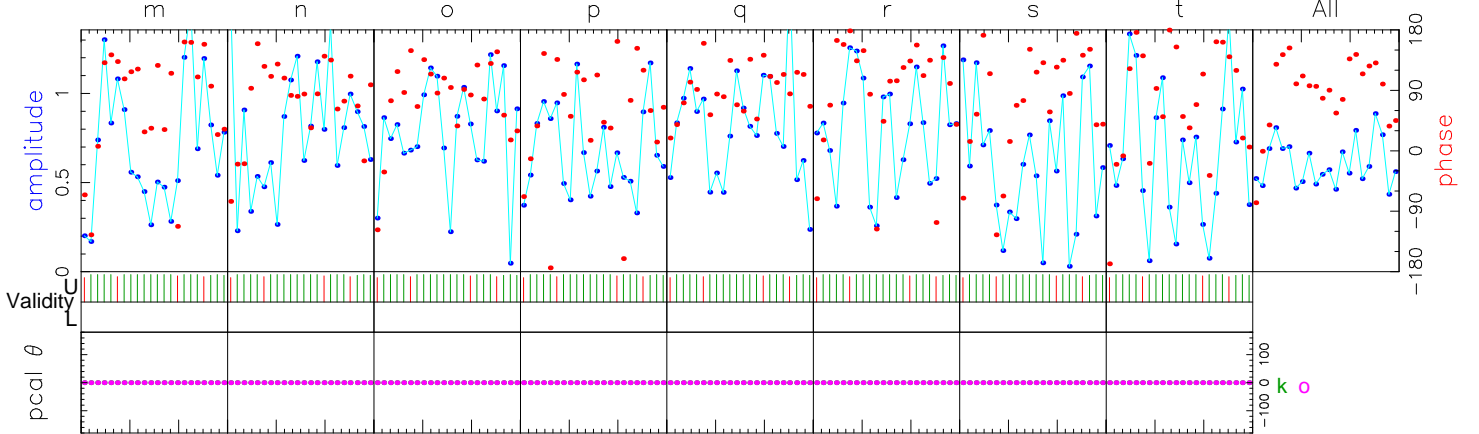


SNR 16.5  
 Int time 177.093  
 Amp 0.452  
 Phase 101.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001841  
 MBD 0.002228  
 Fringe rate (Hz)  
 -0.009400  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105031  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	120.2	85.4	92.7	92.7	93.5	123.8	106.5	104.5	Phase	101.4
	0.4	0.5	0.6	0.4	0.7	0.5	0.3	0.3	Ampl.	0.4
	257.3	257.4	258.0	257.1	257.9	258.0	256.7	256.6	Sbd box	257.5
U/L	349/0	349/0	349/0	349/0	349/0	349/0	349/0	349/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.42871169069E+02	Apriori delay (usec)	6.42868940817E+02	Resid mbdelay (usec)	2.22825E-03	+/-	6.6E-05
Sband delay (usec)	6.42870781567E+02	Apriori clock (usec)	-2.4911732E+01	Resid sbdelay (usec)	1.84075E-03	+/-	5.2E-04
Phase delay (usec)	6.42868944087E+02	Apriori clockrate (us/s)	-3.2906598E-07	Resid phdelay (usec)	3.26934E-06	+/-	2.2E-07
Delay rate (us/s)	6.17859539791E-02	Apriori rate (us/s)	6.17860630984E-02	Resid rate (us/s)	-1.09119E-07	+/-	2.2E-09
Total phase (deg)	303.7	Apriori accel (us/s/s)	-8.71817770347E-06	Resid phase (deg)	101.4	+/-	7.0

ph/seg (deg)	RMS 54.0	Theor. 16.3	Amplitude Search (1024X32)	0.452 +/- 0.027	0.436	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	44.0	28.4	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)	15.1	9.8	Inc. seg. avg.	0.584	0.584	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	26.4	17.2	Inc. frq. avg.	0.445	0.445	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

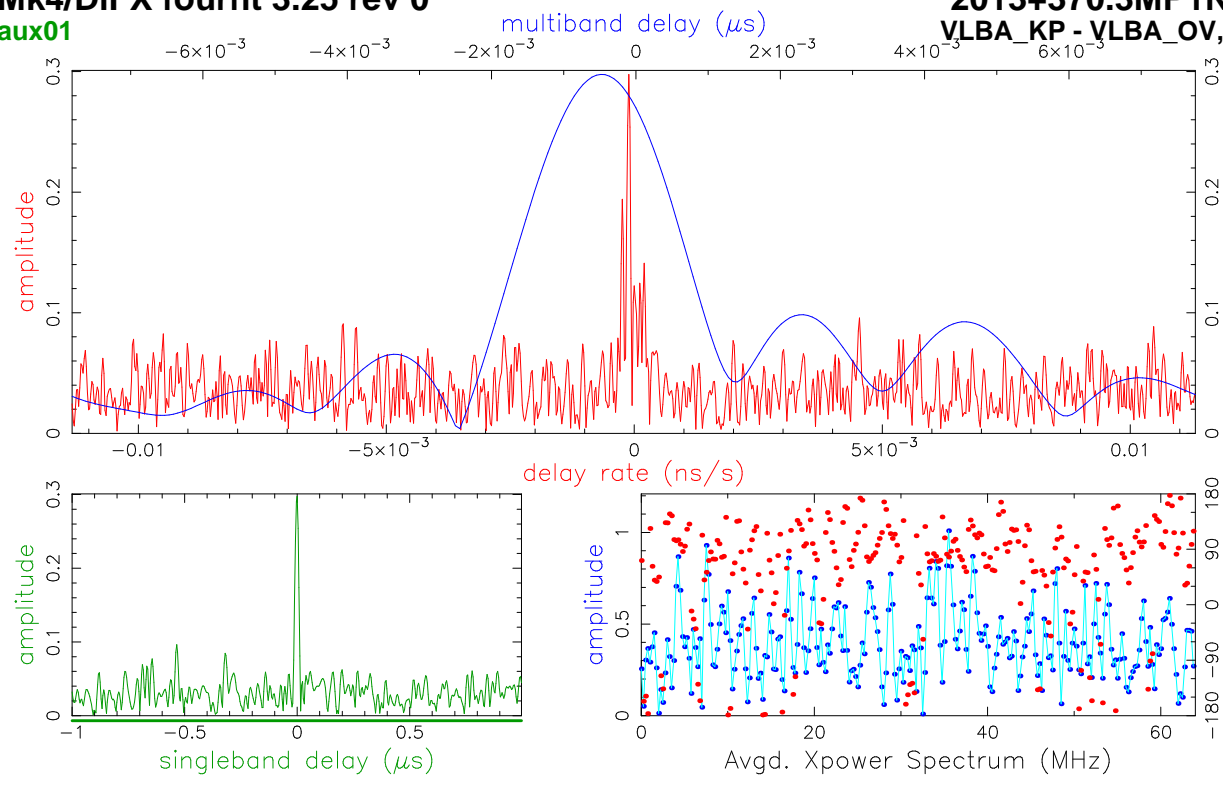
k: az 58.7 el 21.7 pa -65.8      o: az 57.7 el 19.8 pa -57.9      u,v (fr/asec) -452.715 -1051.420      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/ko..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/ko.W.194.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, ko  
VLBA\_KP - VLBA\_OV, fgroup W, pol RR

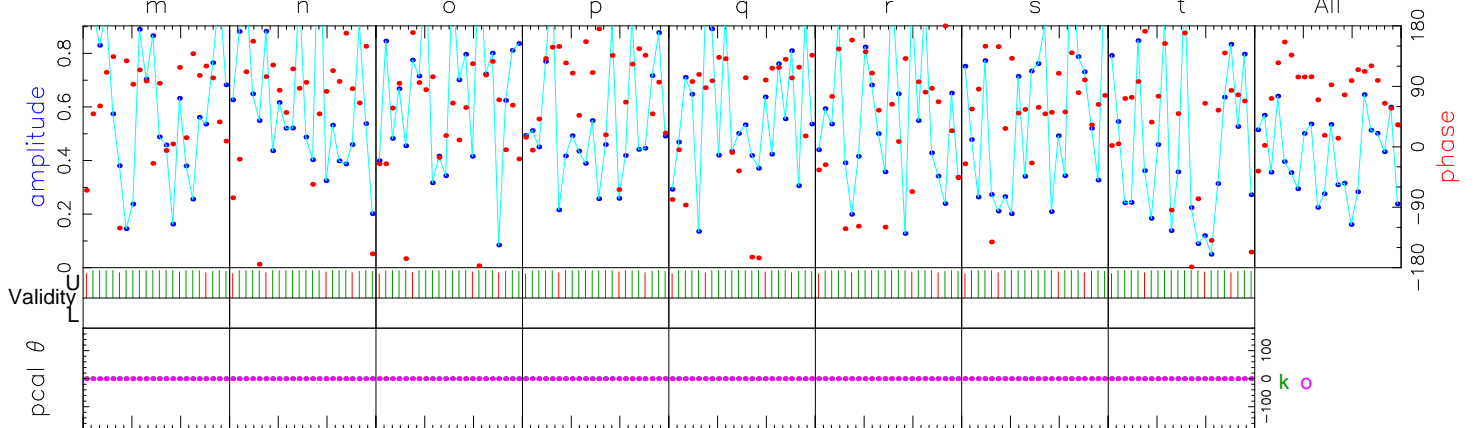


Fringe quality 9

SNR 11.0  
Int time 177.093  
Amp 0.301  
Phase 86.1  
PFD 1.5e-19  
Delays (us)  
SBD -0.001413  
MBD -0.000503  
Fringe rate (Hz)  
-0.009021  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 080000.00  
Stop 080300.22  
FRT 080130.00  
Corr/FF/build  
2024:352:054246  
2025:041:105032  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

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



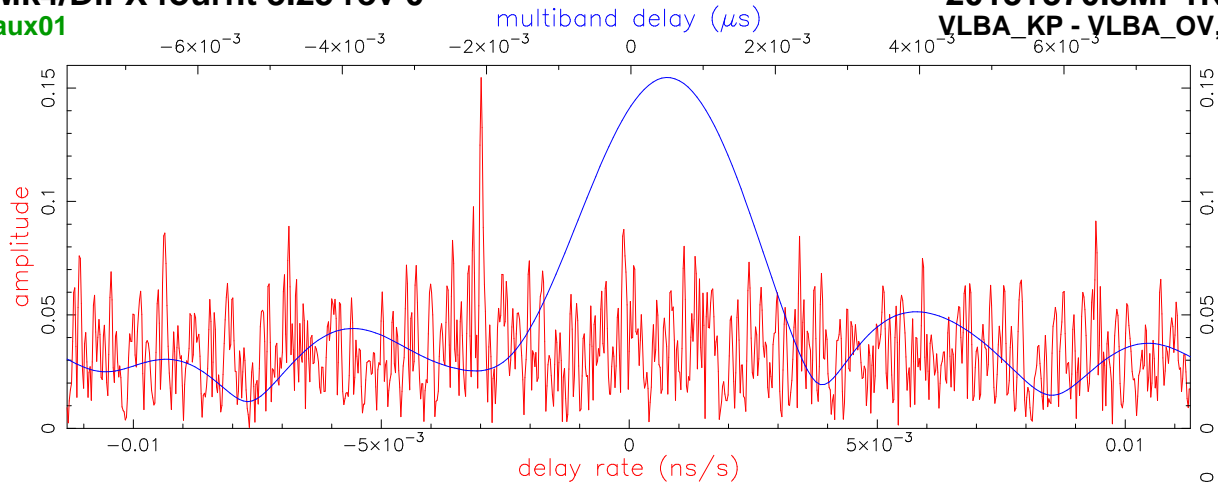
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	349/0	349/0	349/0	349/0	349/0	349/0	349/0	349/0		
k	0	0	0	0	0	0	0	0		
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec) (SBD)	72.6	93.8	72.6	102.1	102.7	73.1	73.0	97.2		
Sband delay (usec)	0.3	0.4	0.3	0.3	0.3	0.2	0.4	0.2		
Phase delay (usec)	481.1	256.3	255.9	257.2	256.3	450.1	256.2	340.6		
Delay rate (us/s)	0.3	0.4	0.3	0.3	0.3	0.2	0.4	0.2		
Total phase (deg)			288.4							86.1
Apriori delay (usec)										-5.03248E-04
Apriori clock (usec)										-1.41275E-03
Apriori clockrate (us/s)										-3.2906598E-07
Apriori rate (us/s)										6.17860630984E-02
Apriori accel (us/s/s)										-8.71817770347E-06
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										86.1
Pcal mode:	MANUAL		MANUAL		MANUAL		MANUAL		PC period (AP's) 5, 5	
Pcal rate:	0.000E+00		0.000E+00		0.000E+00		0.000E+00		us/s	
Bits/sample:	2x2		2x2		2x2		2x2		SampCntNorm: enabled	
Data rate (MSamp/s):	128 MBpts		32 Amb		0.016 us		0.016 us		dr window (ns/s)	
Data rate (Mb/s):	2048		2048		2048		2048		nlags: 256 t_cohere infinite	
ion window (TEC)	0.00		0.00		0.00		0.00		0.00	
ph/seg (deg)	46.9	24.4	46.9	24.4	46.9	24.4	46.9	24.4	46.9	24.4
amp/seg (%)	61.0	42.6	61.0	42.6	61.0	42.6	61.0	42.6	61.0	42.6
ph/frq (deg)	15.4	14.8	15.4	14.8	15.4	14.8	15.4	14.8	15.4	14.8
amp/frq (%)	20.2	25.8	20.2	25.8	20.2	25.8	20.2	25.8	20.2	25.8
k: az 58.7 el 21.7 pa -65.8	o: az 57.7 el 19.8 pa -57.9		u, v (fr/asec) -452.715 -1051.420		simultaneous interpolator					
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/3mm/1234/No0280/ko..3MP1N1		Output file: /Exps/c241c/v2/3mm/1234/No0280/ko.W.207.3MP1N1							

Mk4/DiFX fourfit 3.25 rev 0

aux01

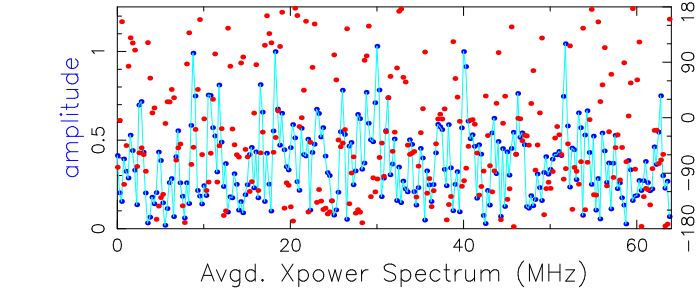
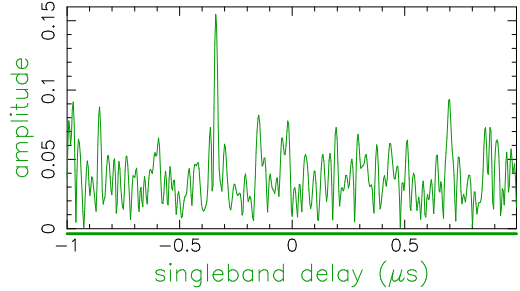
2013+370.3MP1N1, No0280, ko

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



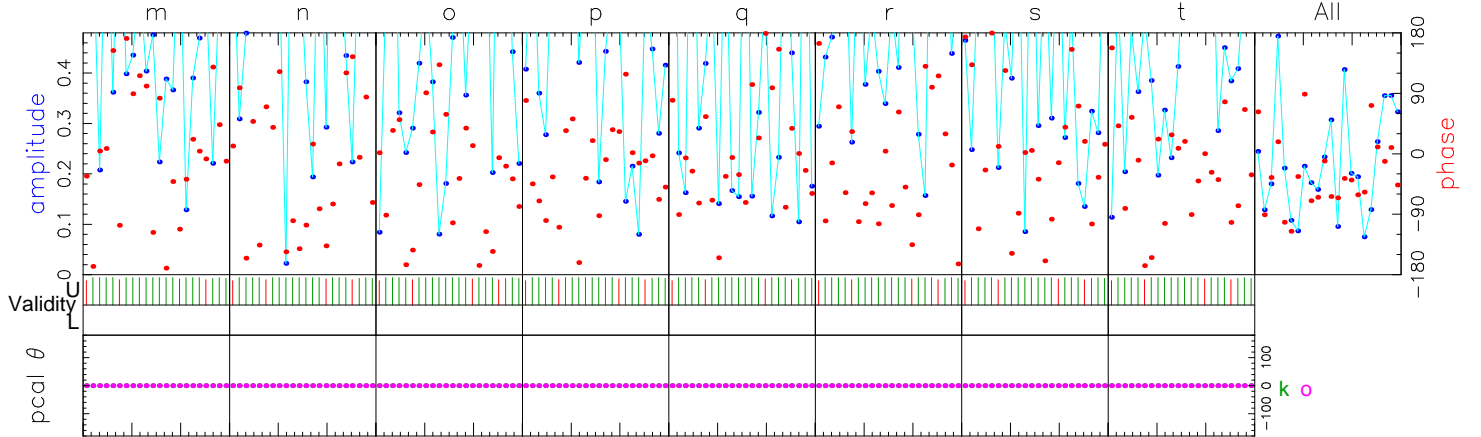
Fringe quality 0

SNR 5.7  
 Int time 177.093  
 Amp 0.160  
 Phase -25.2  
 PFD 8.5e-01  
 Delays (us)  
 SBD -0.338915  
 MBD 0.000541  
 Fringe rate (Hz)  
 -0.257274  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105037  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-10.3	-47.5	-22.1	-9.9	-27.9	-44.8	-68.1	-13.9	Phase	-25.2
	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.2	Ampl.	0.1
	53.9	67.0	8.4	169.5	231.5	225.0	102.8	94.8	Sbd box	170.2
U/L	349/0	349/0	349/0	349/0	349/0	349/0	349/0	349/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	6.42525731459E+02	Apriori delay (usec)	6.42868940817E+02	Resid mbdelay (usec)	5.40641E-04	+/-	1.9E-04
Sband delay (usec)	6.42530025567E+02	Apriori clock (usec)	-2.4911732E+01	Resid sbdelay (usec)	-3.38915E-01	+/-	1.5E-03
Phase delay (usec)	6.42868940004E+02	Apriori clockrate (us/s)	-3.2906598E-07	Resid phdelay (usec)	-8.13472E-07	+/-	6.5E-07
Delay rate (us/s)	6.17830764076E-02	Apriori rate (us/s)	6.17860630984E-02	Resid rate (us/s)	-2.98669E-06	+/-	6.3E-09
Total phase (deg)	177.1	Apriori accel (us/s/s)	-8.71817770347E-06	Resid phase (deg)	-25.2	+/-	20.3

ph/seg (deg)	RMS 53.2	Theor. 47.3	Amplitude Search (1024X32)	0.160 +/- 0.028	0.151	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	81.6	82.6	Interp.	0.000	0.172	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	23.5	28.6	Inc. seg. avg.	0.172	0.148	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	47.9	50.0	Inc. frq. avg.	0.148		Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 58.7 el 21.7 pa -65.8      o: az 57.7 el 19.8 pa -57.9      u,v (fr/asec) -452.715 -1051.420      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/ko..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/ko.W.216.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

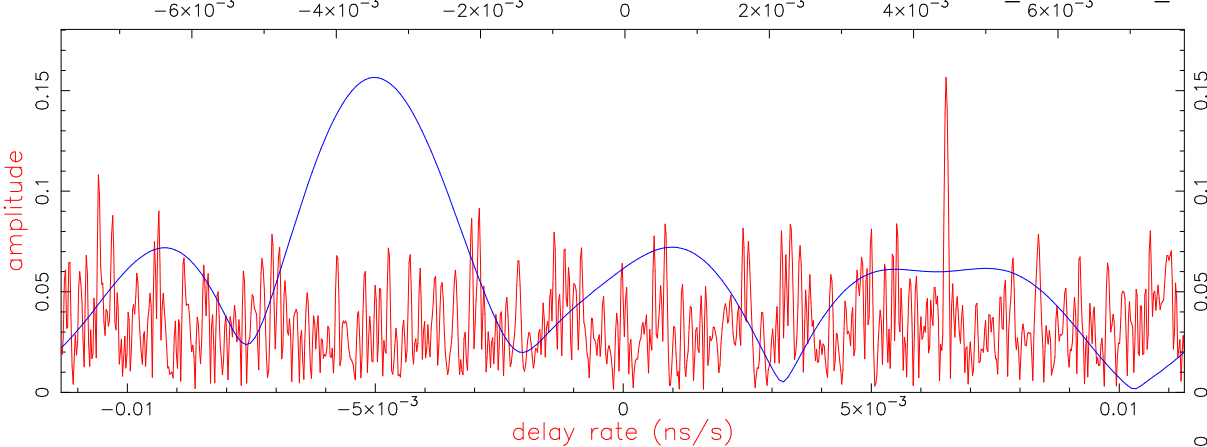
aux01

2013+370.3MP1N1, No0280, ko

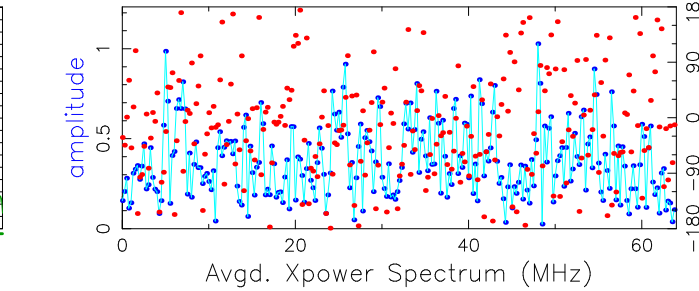
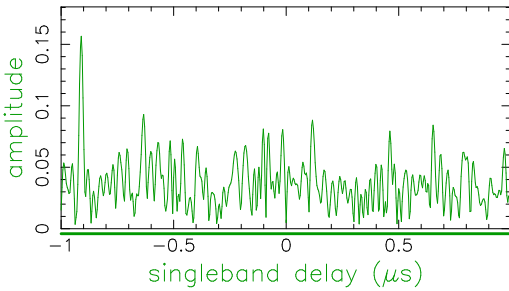
VLBA\_KP - VLBA\_OV, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

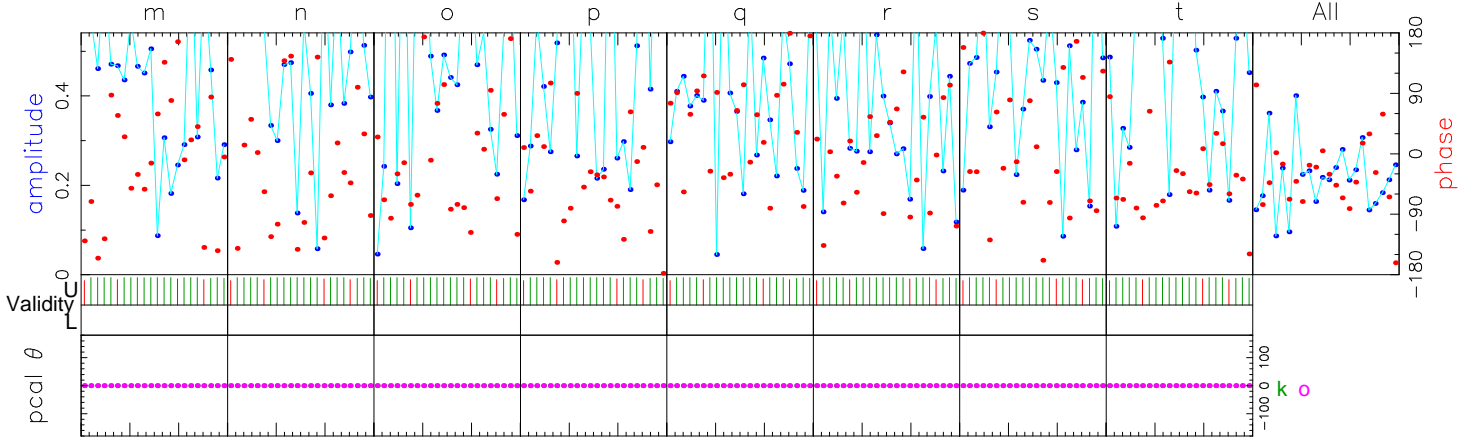


SNR 5.7  
 Int time 177.093  
 Amp 0.180  
 Phase -34.9  
 PFD 7.6e-01  
 Delays (us)  
 SBD -0.910772  
 MBD -0.003487  
 Fringe rate (Hz)  
 0.561804  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105042  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-28.6	-29.1	-64.8	-50.5	28.7	-7.9	-51.0	-45.0	Phase	-34.9
	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.4	Ampl.	0.2
	329.4	378.8	283.9	23.2	241.7	94.0	130.2	24.0	Sbd box	23.8
U/L	349/0	349/0	349/0	349/0	349/0	349/0	349/0	349/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	6.41959204152E+02	Apriori delay (usec)	6.42868940817E+02	Resid mbdelay (usec)	-3.48667E-03	+/-	1.9E-04
Sband delay (usec)	6.41958168817E+02	Apriori clock (usec)	-2.4911732E+01	Resid sbdelay (usec)	-9.10772E-01	+/-	1.5E-03
Phase delay (usec)	6.42868939693E+02	Apriori clockrate (us/s)	-3.2906598E-07	Resid phdelay (usec)	-1.12404E-06	+/-	6.5E-07
Delay rate (us/s)	6.17925850808E-02	Apriori rate (us/s)	6.17860630984E-02	Resid rate (us/s)	6.52198E-06	+/-	6.3E-09
Total phase (deg)	167.5	Apriori accel (us/s/s)	-8.71817770347E-06	Resid phase (deg)	-34.9	+/-	20.1

ph/seg (deg)	52.5	Theor.	46.9	Amplitude	0.180 +/- 0.032	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	61.2	Search (1024X32)	0.150	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	32.5	Inc. seg. avg.	0.188	Inc. frq. avg.	0.179	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	53.8	Inc. frq. avg.	0.179			Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 58.7 el 21.7 pa -65.8      o: az 57.7 el 19.8 pa -57.9      u,v (fr/asec) -452.715 -1051.420      simultaneous interpolator

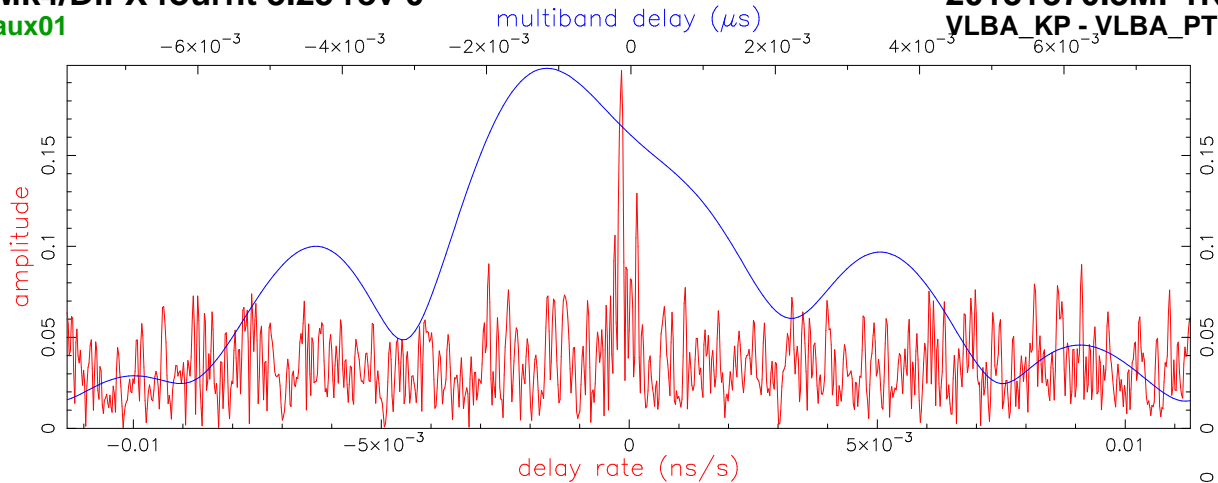
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/ko..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/ko.W.221.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

aux01

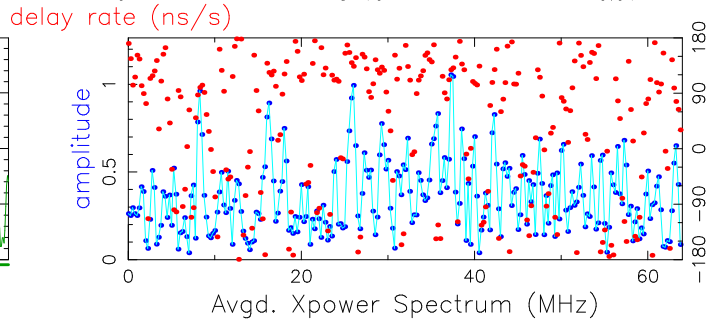
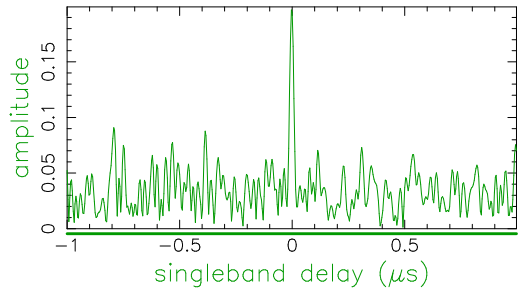
2013+370.3MP1N1, No0280, kp

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



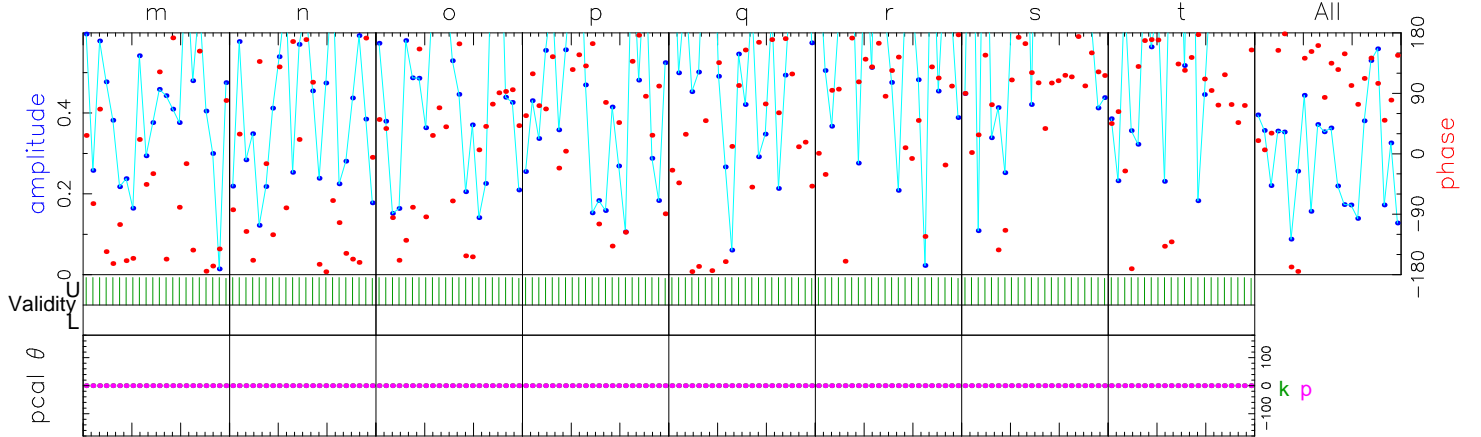
Fringe quality 9

SNR 7.3  
 Int time 179.991  
 Amp 0.200  
 Phase 118.6  
 PFD 3.9e-05  
 Delays (us)  
 SBD -0.002235  
 MBD -0.000999  
 Fringe rate (Hz)  
 -0.013367  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105030  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-164.3	-149.1	72.0	116.4	73.3	110.5	118.9	124.2	Phase	118.6
	0.1	0.1	0.2	0.2	0.1	0.2	0.5	0.4	Ampl.	0.2
	54.3	158.1	330.1	257.6	201.0	227.7	256.1	257.2	Sbd box	256.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
kp	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	
p	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.26484361021E+03	Apriori delay (usec)	-1.26484261101E+03	Resid mbdelay (usec)	-9.99191E-04	+/-	1.5E-04
Sband delay (usec)	-1.26484484626E+03	Apriori clock (usec)	-5.5565453E+00	Resid sbdelay (usec)	-2.23525E-03	+/-	1.2E-03
Phase delay (usec)	-1.26484260719E+03	Apriori clockrate (us/s)	-2.2649092E-07	Resid phdelay (usec)	3.82441E-06	+/-	5.0E-07
Delay rate (us/s)	3.41994851988E-02	Apriori rate (us/s)	3.41996403715E-02	Resid rate (us/s)	-1.55173E-07	+/-	4.9E-09
Total phase (deg)	-66.0	Apriori accel (us/s/s)	4.35449369797E-06	Resid phase (deg)	118.6	+/-	15.7

ph/seg (deg)	RMS 52.6	Theor. 36.7	Amplitude Search (1024X32)	0.196	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	80.6	64.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	56.0	22.1	Inc. seg. avg.	0.246	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 (%)	76.4	38.6	Inc. frq. avg.	0.215	Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00	

k: az 58.7 el 21.7 pa -65.8      p: az 60.8 el 25.4 pa -65.1      u,v (fr/asec) -243.198 19.867      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kp..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kp.W.191.3MP1N1

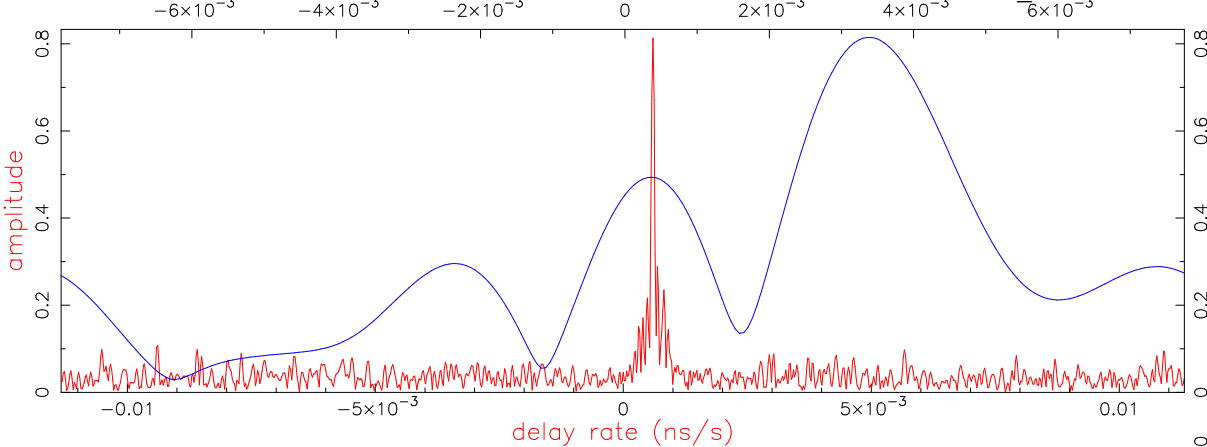
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kP

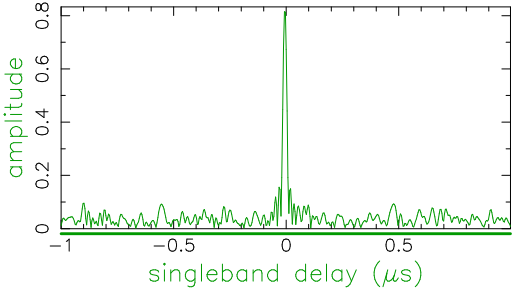
VLBA\_KP - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)

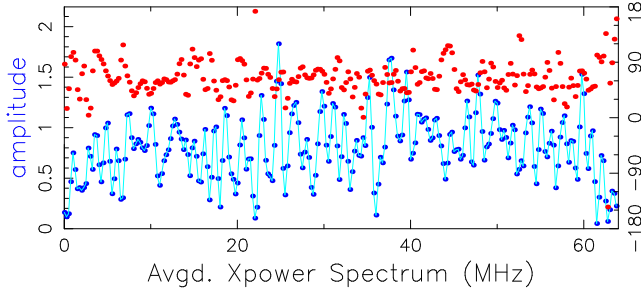


Fringe quality 5

SNR 30.5  
 Int time 179.980  
 Amp 0.833  
 Phase -43.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.005913  
 MBD 0.003300  
 Fringe rate (Hz) 0.051859  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

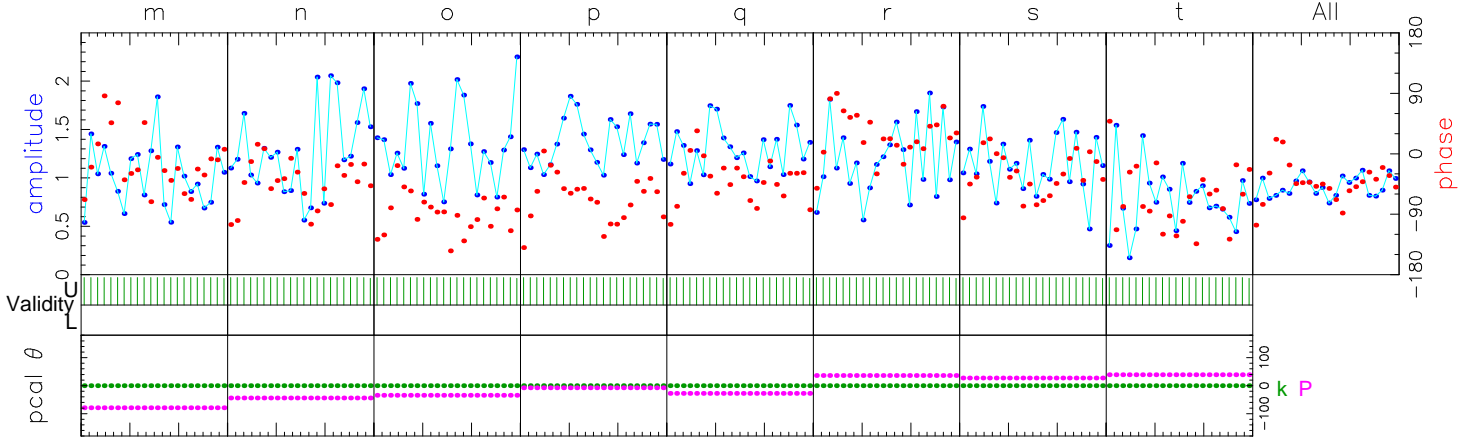


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105031  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-12.8	-42.3	-90.6	-66.2	-39.8	32.6	-29.3	-77.4		Phase -43.1
	0.8	1.1	1.2	1.2	1.1	1.0	1.0	0.6		Ampl. 1.0
	253.8	255.1	255.8	255.9	256.1	255.8	255.6	253.3		Sbd box 255.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used
k	0	0	0	0	0	0	0	0		PC freqs
P	0	0	0	0	0	0	0	0		PC freqs
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
k:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39		Mani PC
k	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
P	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec) (SBD)	-1.22804922212E+04	Apriori delay (usec)	-1.22804798963E+04	Resid mbdelay (usec)	3.30006E-03	+/-	3.6E-05
Sband delay (usec)	-1.22804858090E+04	Apriori clock (usec)	1.0523167E+00	Resid sbdelay (usec)	-5.91275E-03	+/-	2.8E-04
Phase delay (usec)	-1.22804798977E+04	Apriori clockrate (us/s)	-4.4603102E-07	Resid phdelay (usec)	-1.38967E-06	+/-	1.2E-07
Delay rate (us/s)	1.42784558832E+00	Apriori rate (us/s)	1.42784498629E+00	Resid rate (us/s)	6.02032E-07	+/-	1.2E-09
Total phase (deg)	-138.6	Apriori accel (us/s/s)	6.02851685387E-05	Resid phase (deg)	-43.1	+/-	3.8

ph/seg (deg) 28.3 8.8 Search (1024X32) 0.801 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 15.6 15.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 42.4 5.3 Inc. seg. avg. 0.901 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 30.1 9.3 Inc. frq. avg. 0.995 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 58.7 el 21.7 pa -65.8 P: az 277.4 el 72.2 pa 83.5 u,v (fr/asec) -10225.908 3148.140 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kP..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kP.W.196.3MP1N1

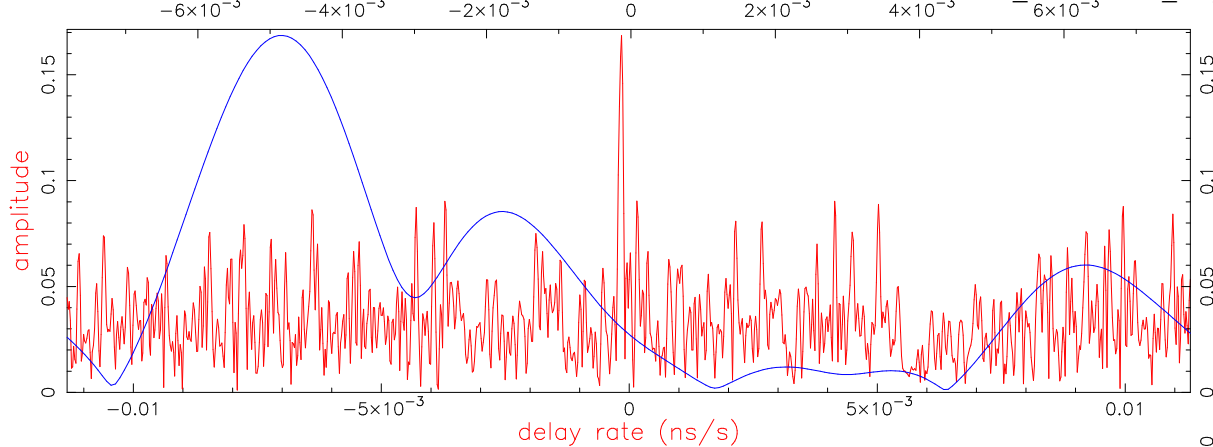
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kp

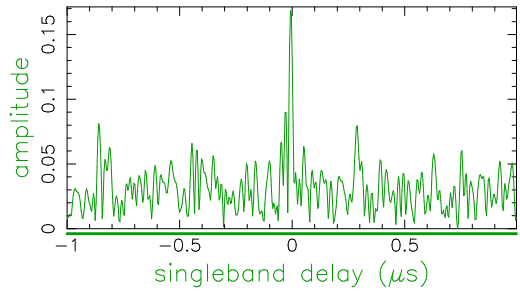
VLBA\_KP - VLBA\_PT, fgroup W, pol RR

multiband delay ( $\mu$ s)

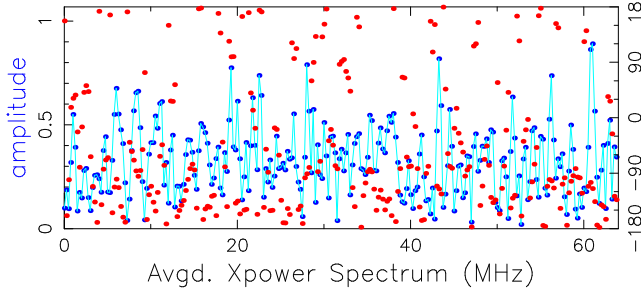


Fringe quality 0

SNR 6.3  
Int time 179.991  
Amp 0.171  
Phase -137.6  
PFD 4.3e-02  
Delays (us)  
SBD -0.006246  
MBD -0.004811  
Fringe rate (Hz)  
-0.013617  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

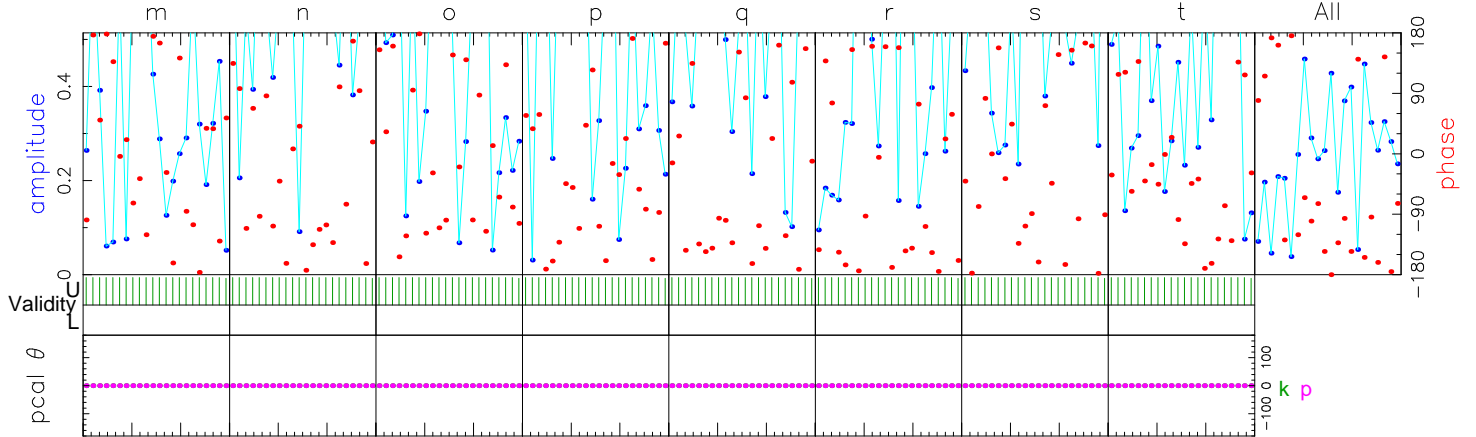


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 080000.00  
Stop 080300.22  
FRT 080130.00  
Corr/FF/build  
2024:352:054246  
2025:041:105032  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-108.8	-136.2	-144.8	-98.1	-156.0	-165.1	-137.3	-92.6	Phase	-137.6
	0.1	0.2	0.2	0.1	0.2	0.3	0.2	0.2	Ampl.	0.2
	369.3	358.0	450.3	71.1	450.0	256.1	329.8	270.7	Sbd box	255.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
kp	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	
p	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-1.26484742196E+03			Apriori delay (usec)	-1.26484261101E+03			Resid mbdelay (usec)	-4.81094E-03	+/- 1.7E-04
Sband delay (usec)	-1.26484885726E+03			Apriori clock (usec)	-5.5565453E+00			Resid sbdelay (usec)	-6.24625E-03	+/- 1.4E-03
Phase delay (usec)	-1.26484261545E+03			Apriori clockrate (us/s)	-2.2649092E-07			Resid phdelay (usec)	-4.43777E-06	+/- 5.9E-07
Delay rate (us/s)	3.41994822965E-02			Apriori rate (us/s)	3.41996403715E-02			Resid rate (us/s)	-1.58075E-07	+/- 5.6E-09
Total phase (deg)		-322.2		Apriori accel (us/s/s)	4.35449369797E-06			Resid phase (deg)	-137.6	+/- 18.2

ph/seg (deg) 58.7 42.7 Search (1024X32) 0.167 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 86.6 74.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 30.5 25.8 Inc. seg. avg. 0.199 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 39.2 45.0 Inc. frq. avg. 0.168 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
k: az 58.7 el 21.7 pa -65.8 p: az 60.8 el 25.4 pa -65.1 u,v (fr/asec) -243.198 19.867 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kp..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kp.W.205.3MP1N1 simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

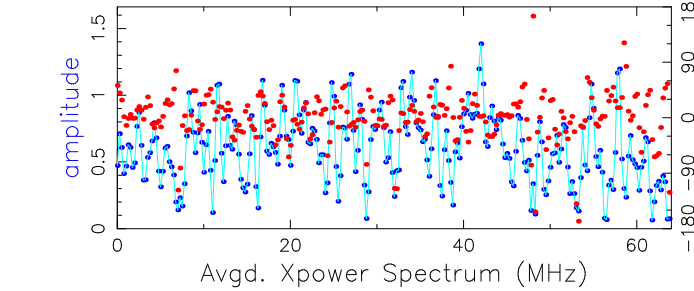
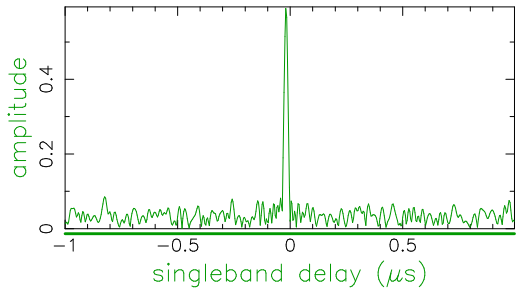
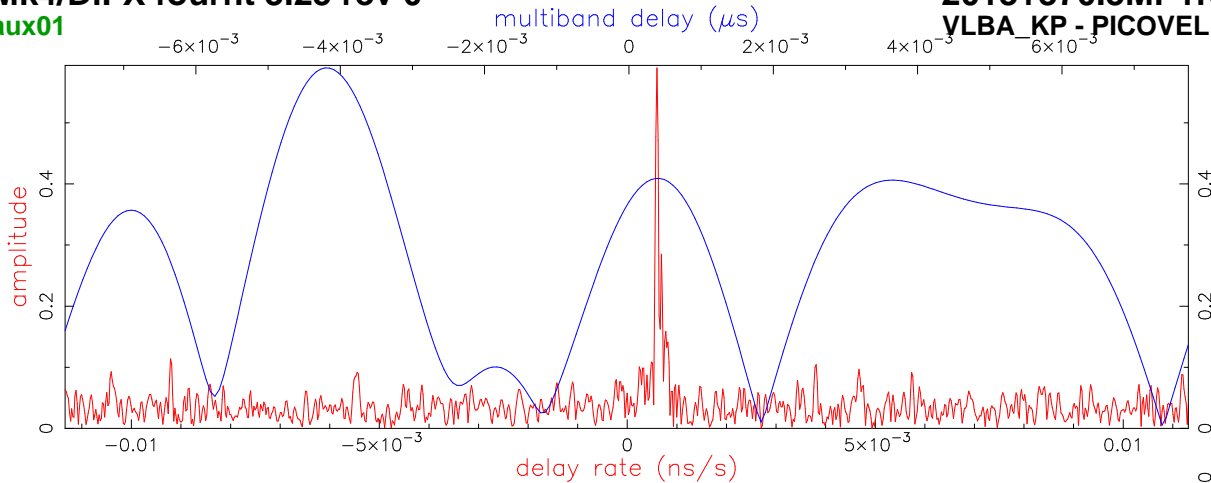
aux01

2013+370.3MP1N1, No0280, kP

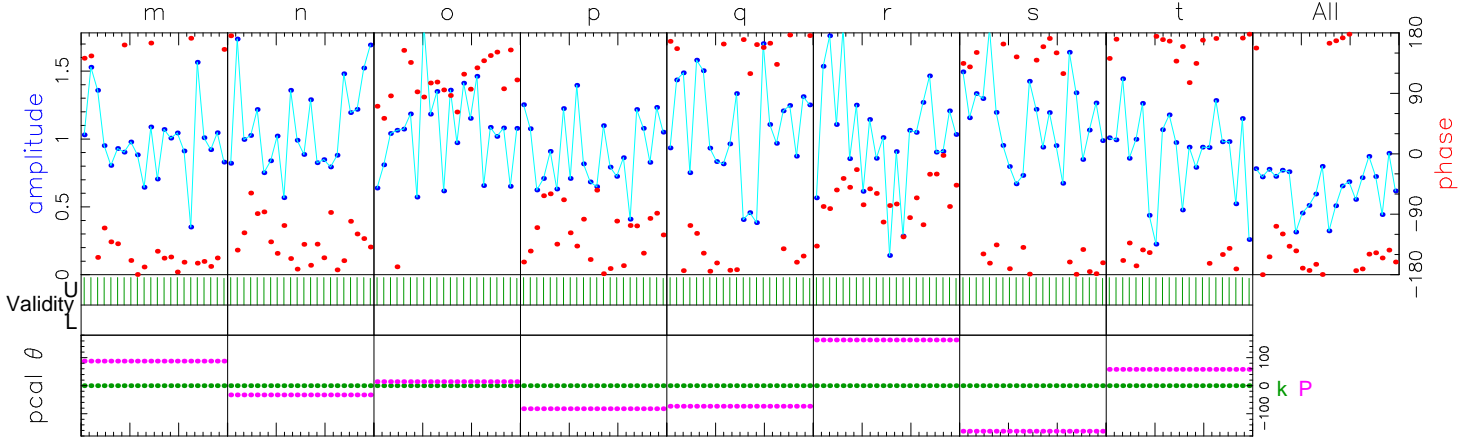
VLBA\_KP - PICOVEL, fgroup W, pol RR

Fringe quality 7

SNR 21.8  
 Int time 179.980  
 Amp 0.594  
 Phase -161.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.018514  
 MBD -0.004168  
 Fringe rate (Hz)  
 0.051779  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105033  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-168.3	-133.5	111.3	-119.9	-174.5	-62.8	176.1	179.2	Phase	-161.9
	0.9	0.9	0.9	0.7	0.9	0.9	1.0	0.8	Ampl.	0.9
	251.2	252.8	252.7	253.5	253.5	253.2	252.8	251.2	Sbd box	252.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:P	0:88	0:33	0:15	0:-82	0:-74	0:163	0:-163	0:58	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec) (SBD)	-1.22804996888E+04		Apriori delay (usec)		-1.22804798963E+04		Resid mbdelay (usec)		-4.16750E-03	+/- 5.0E-05
Sband delay (usec)	-1.22804984103E+04		Apriori clock (usec)		1.0523167E+00		Resid sbdelay (usec)		-1.85140E-02	+/- 4.0E-04
Phase delay (usec)	-1.22804799015E+04		Apriori clockrate (us/s)		-4.4603102E-07		Resid phdelay (usec)		-5.22057E-06	+/- 1.7E-07
Delay rate (us/s)	1.42784558739E+00		Apriori rate (us/s)		1.42784498629E+00		Resid rate (us/s)		6.01103E-07	+/- 1.6E-09
Total phase (deg)			Apriori accel (us/s/s)		6.02851685387E-05		Resid phase (deg)		-161.9	+/- 5.3

RMS Theor. Amplitude 0.594 +/- 0.027  
 ph/seg (deg) 23.7 12.3 Search (1024X32) 0.576  
 amp/seg (%) 28.4 21.5 Interp. 0.000  
 ph/frq (deg) 59.1 7.4 Inc. seg. avg. 0.631  
 amp/frq (%) 50.6 13.0 Inc. frq. avg. 0.876  
 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 k: az 58.7 el 21.7 pa -65.8 P: az 277.4 el 72.2 pa 83.5 u,v (fr/asec) -10225.908 3148.140 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kP..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kP.W.211.3MP1N1



Mk4/DiFX fourfit 3.25 rev 0

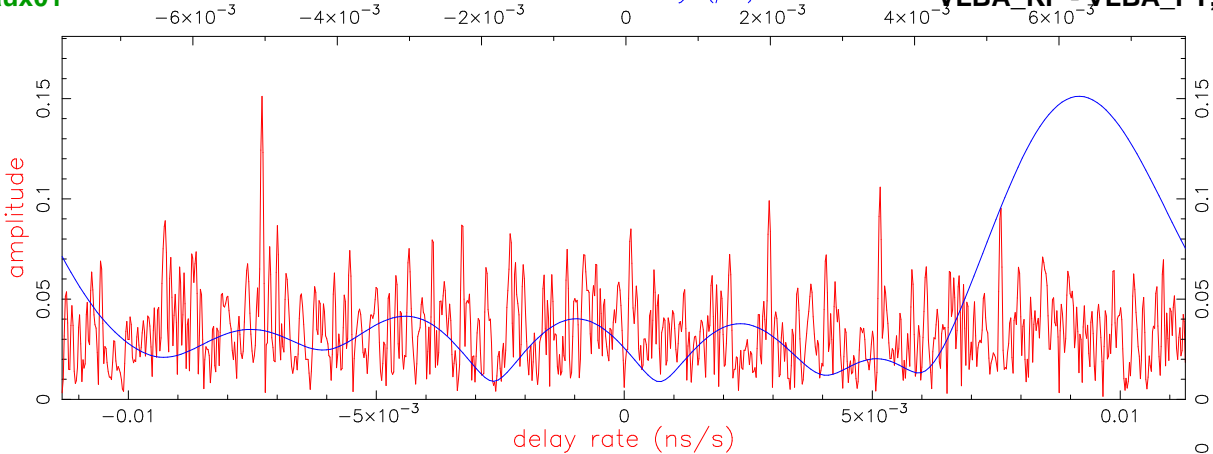
aux01

2013+370.3MP1N1, No0280, kp

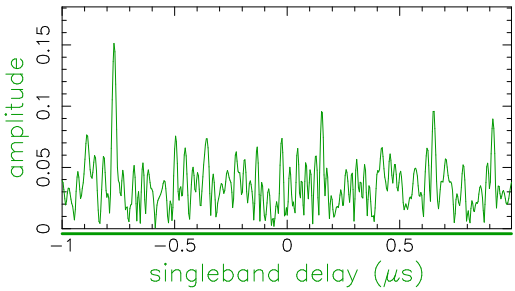
VLBA\_KP - VLBA\_PT, fgroup W, pol LR

multiband delay ( $\mu$ s)

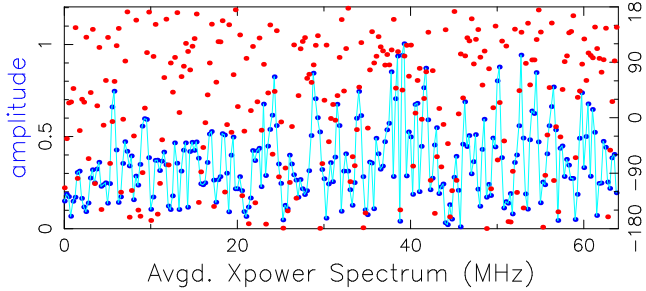
Fringe quality 0



SNR 5.6  
 Int time 179.991  
 Amp 0.181  
 Phase 168.1  
 PFD 9.6e-01  
 Delays (us)  
 SBD -0.768793  
 MBD 0.006275  
 Fringe rate (Hz)  
 -0.630575  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

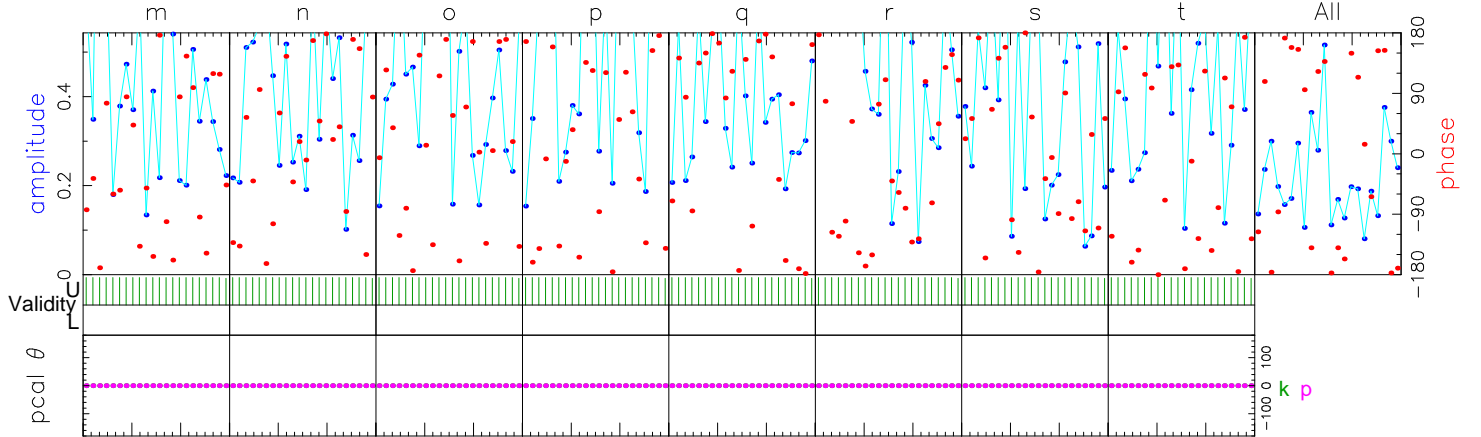


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105036  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-155.3	129.3	173.6	149.5	162.1	-174.7	173.6	172.3	Phase	168.1
	0.2	0.1	0.2	0.3	0.3	0.2	0.1	0.2	Ampl.	0.2
	192.5	405.5	289.7	75.0	444.9	57.3	296.3	259.2	Sbd box	60.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
kp	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	
p	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.26561758607E+03	Apriori delay (usec)	-1.26484261101E+03	Resid mbdelay (usec)	6.27494E-03	+/-	2.0E-04
Sband delay (usec)	-1.26561140401E+03	Apriori clock (usec)	-5.5565453E+00	Resid sbdelay (usec)	-7.68793E-01	+/-	1.5E-03
Phase delay (usec)	-1.26484260559E+03	Apriori clockrate (us/s)	-2.2649092E-07	Resid phdelay (usec)	5.42145E-06	+/-	6.6E-07
Delay rate (us/s)	3.41923200161E-02	Apriori rate (us/s)	3.41996403715E-02	Resid rate (us/s)	-7.32036E-06	+/-	6.4E-09
Total phase (deg)	-16.5	Apriori accel (us/s/s)	4.35449369797E-06	Resid phase (deg)	168.1	+/-	20.6

ph/seg (deg)	RMS 60.6	Theor. 48.3	Amplitude Search (1024X32)	0.181 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	60.6	48.3	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)	82.3	84.4	Inc. seg. avg.	0.195	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	24.5	29.1	Inc. frq. avg.	0.169	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00
	38.6	50.9							

k: az 58.7 el 21.7 pa -65.8 p: az 60.8 el 25.4 pa -65.1 u,v (fr/asec) -243.198 19.867 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kp..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kp.W.213.3MP1N1

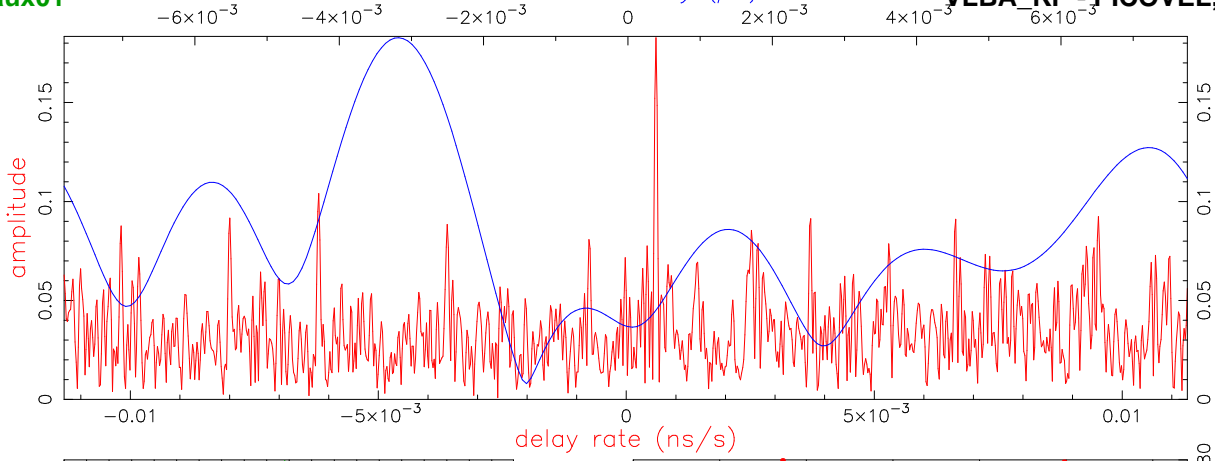
Mk4/DiFX fourfit 3.25 rev 0

aux01

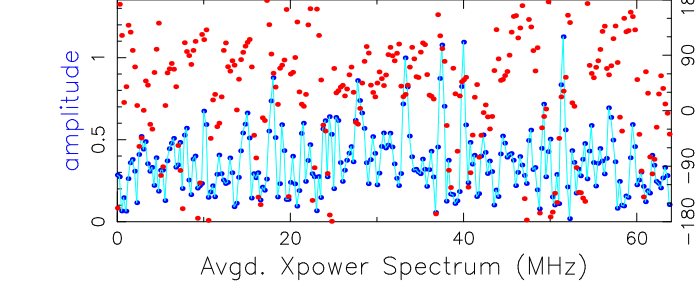
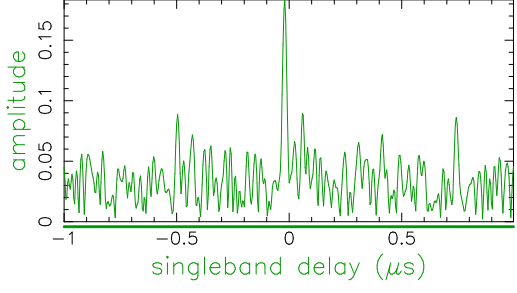
2013+370.3MP1N1, No0280, kP

VLBA\_KP - PICOVEL, fgroup W, pol LR

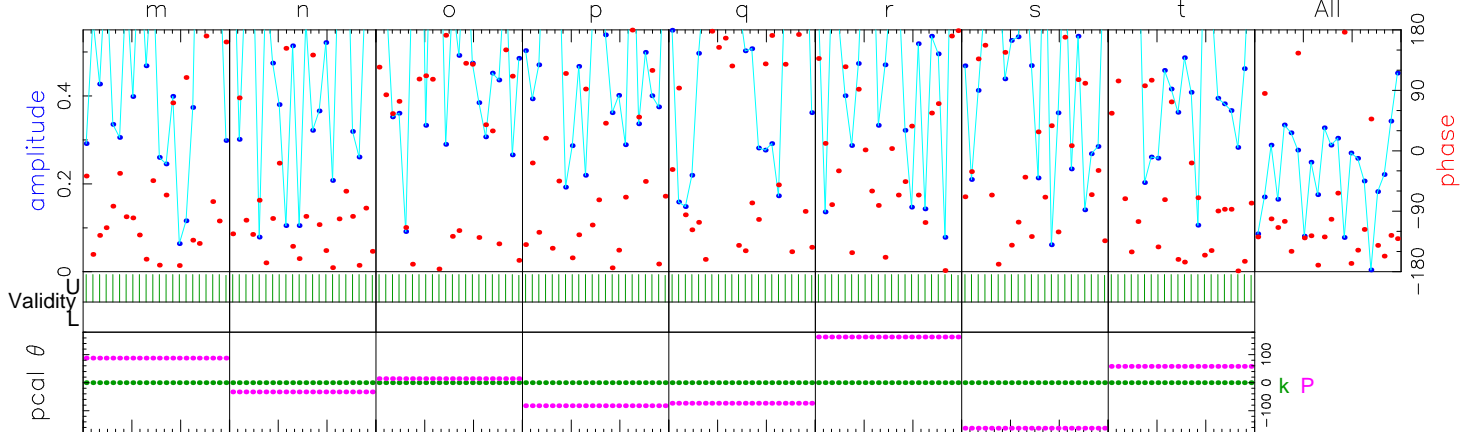
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 6.7  
 Int time 179.980  
 Amp 0.183  
 Phase -132.8  
 PFD 2.6e-03  
 Delays (us)  
 SBD -0.020306  
 MBD -0.003200  
 Fringe rate (Hz) 0.051443  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build 2024:352:054246  
 2025:041:105036  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-115.1	-118.1	140.1	-100.9	-157.6	-49.2	-119.8	-127.3	Phase	-132.8
	0.3	0.4	0.3	0.2	0.3	0.1	0.2	0.2	Ampl.	0.2
	251.6	253.0	251.6	215.5	253.5	1.4	219.8	8.3	Sbd box	251.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:P	0:88	0:33	0:15	0:-82	0:-74	0:163	0:-163	0:58	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec) (SBD)	-1.22804987215E+04			Apriori delay (usec)	-1.22804798963E+04		Resid mbdelay (usec)	-3.20019E-03	+/-	1.6E-04
Sband delay (usec)	-1.22805002028E+04			Apriori clock (usec)	1.0523167E+00		Resid sbdelay (usec)	-2.03065E-02	+/-	1.3E-03
Phase delay (usec)	-1.22804799006E+04			Apriori clockrate (us/s)	-4.4603102E-07		Resid phdelay (usec)	-4.28266E-06	+/-	5.5E-07
Delay rate (us/s)	1.42784558349E+00			Apriori rate (us/s)	1.42784498629E+00		Resid rate (us/s)	5.97208E-07	+/-	5.3E-09
Total phase (deg)		-228.3		Apriori accel (us/s/s)	6.02851685387E-05		Resid phase (deg)	-132.8	+/-	17.0
RMS	58.0	40.0		Amplitude	0.183 +/- 0.027		Pcal mode: MANUAL, MANUAL			
ph/seg (deg)	62.2	69.8		Search (1024X32)	0.178		Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	53.1	24.1		Interp.	0.000		Bits/sample: 2x2	mb window (us)	-0.008	0.008
ph/frq (deg)	57.3	42.1		Inc. seg. avg.	0.186		SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)				Inc. frq. avg.	0.220		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	ion window (TEC)	0.00	0.00
							Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	
k: az 58.7 el 21.7 pa -65.8		P: az 277.4 el 72.2 pa 83.5		u, v (fr/asec)	-10225.908 3148.140					simultaneous interpolator
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0280/kP..3MP1N1		Output file: /Exps/c241c/v2/3mm/1234/No0280/kP.W.214.3MP1N1						

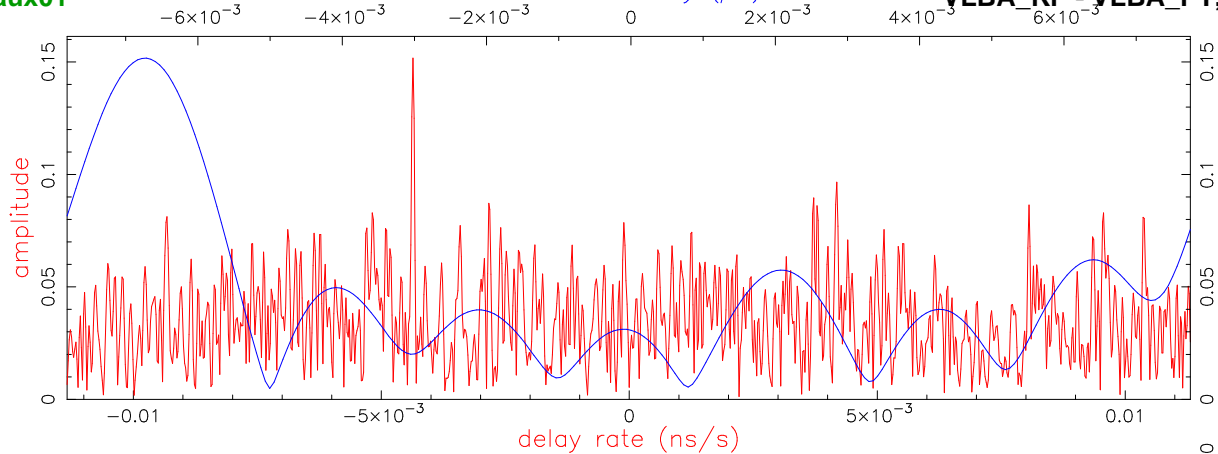
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1N1, No0280, kp

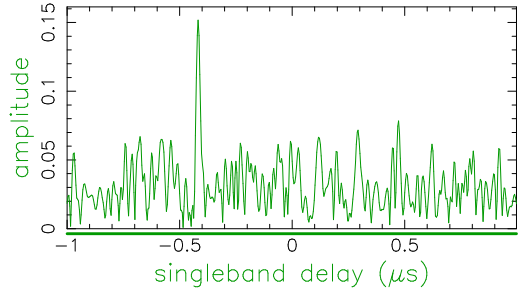
VLBA\_KP - VLBA\_PT, fgroup W, pol RL

multiband delay ( $\mu$ s)

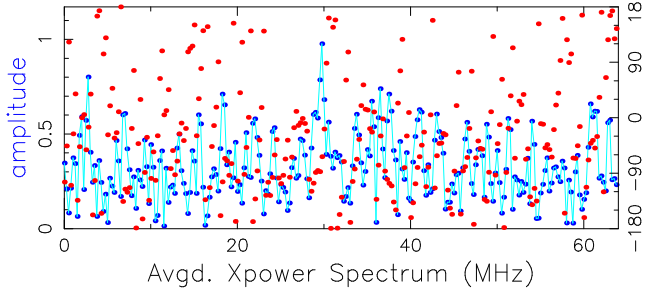


Fringe quality 0

SNR 5.6  
 Int time 179.991  
 Amp 0.161  
 Phase -120.7  
 PFD 9.6e-01  
 Delays (us)  
 SBD -0.418032  
 MBD -0.006736  
 Fringe rate (Hz)  
 -0.376088  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

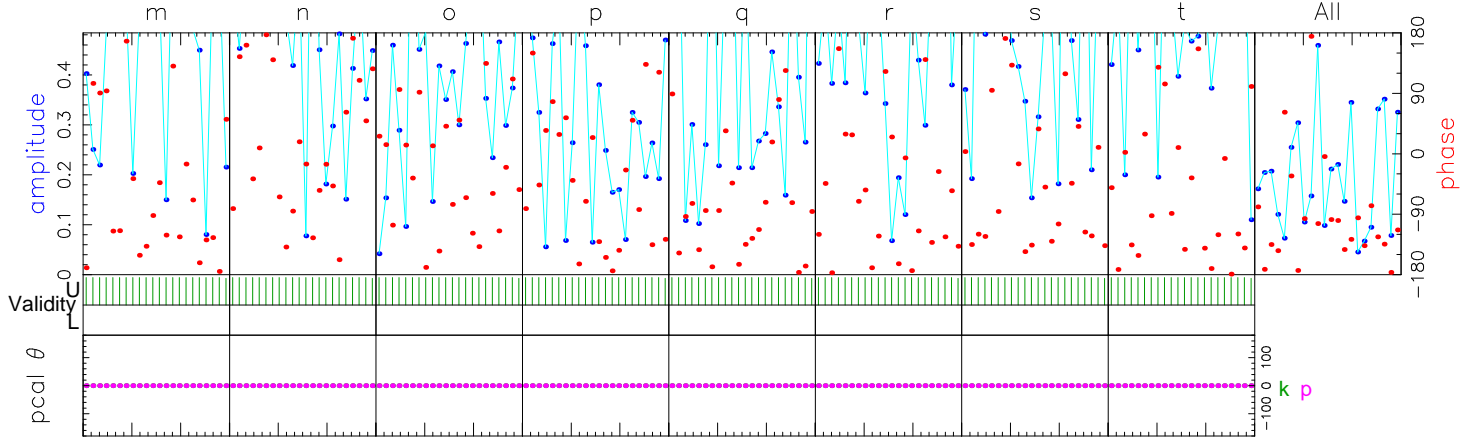


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105043  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-132.5	-141.0	-83.4	-118.0	-106.8	-118.7	-119.7	-133.2	Phase	-120.7
	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	Ampl.	0.1
	332.1	403.7	353.3	232.4	90.0	231.1	285.7	149.1	Sbd box	150.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
kp	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	
p	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.26525559717E+03	Apriori delay (usec)	-1.26484261101E+03	Resid mbdelay (usec)	-6.73616E-03	+/-	1.9E-04
Sband delay (usec)	-1.26526064326E+03	Apriori clock (usec)	-5.5565453E+00	Resid sbdelay (usec)	-4.18032E-01	+/-	1.5E-03
Phase delay (usec)	-1.26484261491E+03	Apriori clockrate (us/s)	-2.2649092E-07	Resid phdelay (usec)	-3.89341E-06	+/-	6.6E-07
Delay rate (us/s)	3.41952743641E-02	Apriori rate (us/s)	3.41996403715E-02	Resid rate (us/s)	-4.36601E-06	+/-	6.4E-09
Total phase (deg)	-305.3	Apriori accel (us/s/s)	4.35449369797E-06	Resid phase (deg)	-120.7	+/-	20.6

ph/seg (deg)	57.8	Theor.	48.3	Amplitude	0.161 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	79.7	Search (1024X32)	0.150	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	19.6	Inc. seg. avg.	0.156	Inc. frq. avg.	0.148	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	36.9	Inc. frq. avg.	0.148			Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 58.7 el 21.7 pa -65.8      p: az 60.8 el 25.4 pa -65.1      u,v (fr/asec) -243.198 19.867      simultaneous interpolator

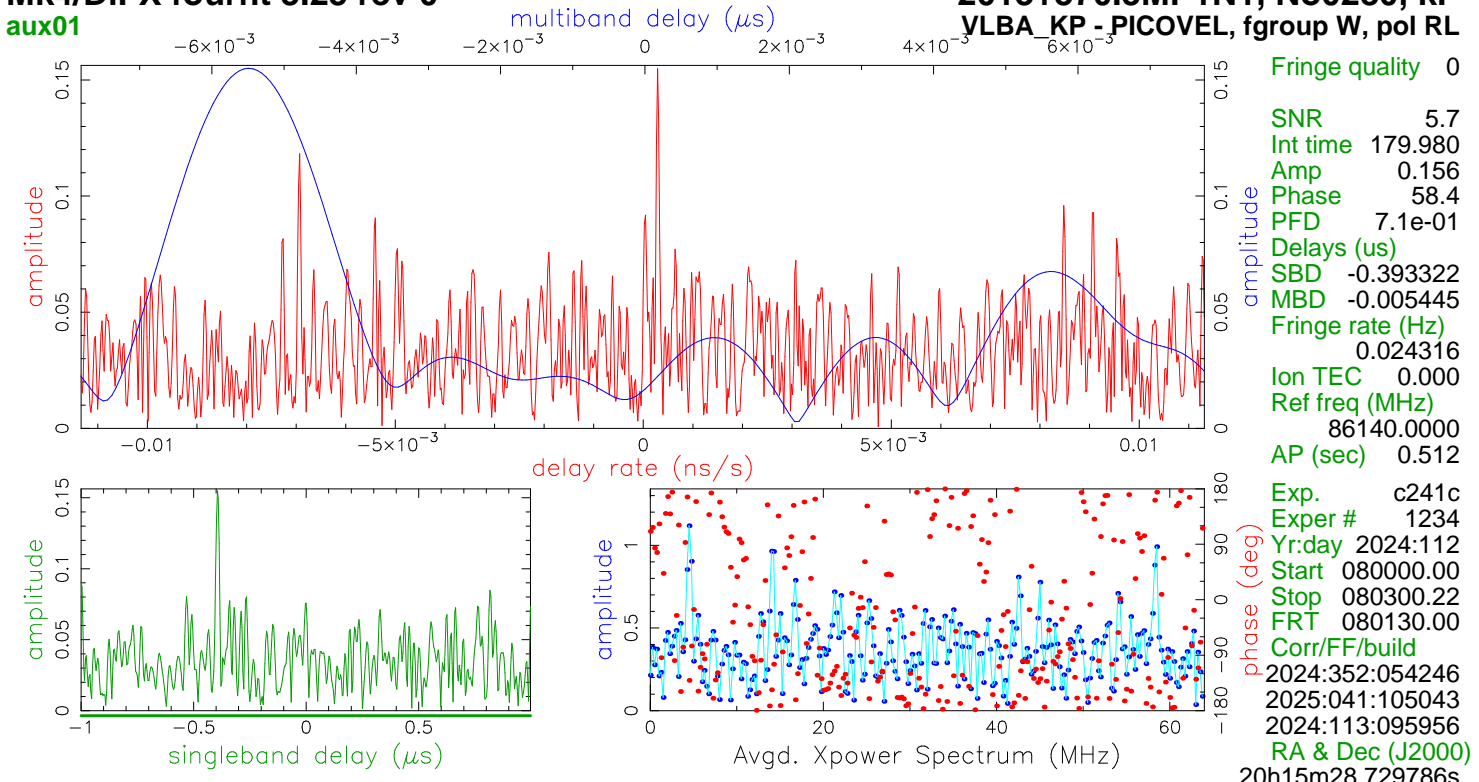
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kp..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kp.W.224.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

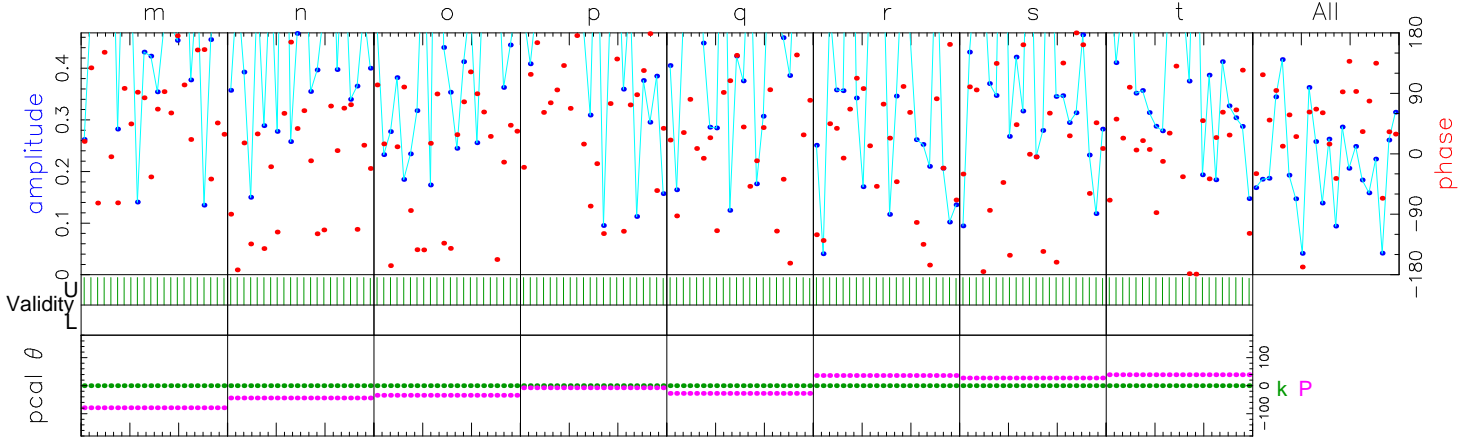
aux01

2013+370.3MP1N1, No0280, kP

VLBA\_KP - PICOVEL, fgroup W, pol RL



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



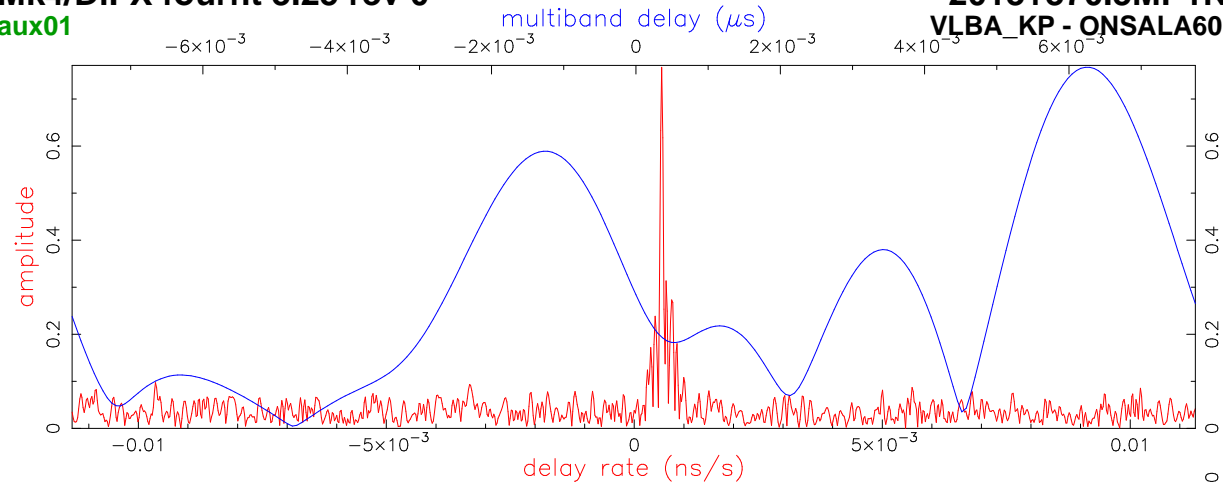
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	62.1	30.0	83.4	87.0	50.6	49.3	75.7	43.8	Phase	58.4	
	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	Ampl.	0.1	
	179.9	241.4	77.2	45.1	175.1	467.8	501.2	427.3	Sbd box	156.3	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
k	0	0	0	0	0	0	0	0	PC freqs		
P	0	0	0	0	0	0	0	0	PC freqs		
k:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
k:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39	Manl PC		
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
P	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks		
									Tracks		
Group delay (usec) (SBD)	-1.22808759665E+04		Apriori delay (usec)		-1.22804798963E+04		Resid mbdelay (usec)		-5.44520E-03	+/- 1.9E-04	
Sband delay (usec)	-1.22808732188E+04		Apriori clock (usec)		1.0523167E+00		Resid sbdelay (usec)		-3.93322E-01	+/- 1.5E-03	
Phase delay (usec)	-1.22804798944E+04		Apriori clockrate (us/s)		-4.4603102E-07		Resid phdelay (usec)		1.88216E-06	+/- 6.4E-07	
Delay rate (us/s)	1.42784526858E+00		Apriori rate (us/s)		1.42784498629E+00		Resid rate (us/s)		2.82289E-07	+/- 6.2E-09	
Total phase (deg)			Apriori accel (us/s/s)		6.02851685387E-05		Resid phase (deg)		58.4	+/- 20.0	
	RMS	Theor.	Amplitude	0.156 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	59.3	46.9	Search (1024X32)	0.153		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	71.0	81.8	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	22.1	28.3	Inc. seg. avg.	0.161		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	33.0	49.4	Inc. frq. avg.	0.145		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
k: az 58.7 el 21.7 pa -65.8	P: az 277.4 el 72.2 pa 83.5		u, v (fr/asec) -10225.908 3148.140		simultaneous interpolator						
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/3mm/1234/No0280/kP..3MP1N1		Output file: /Exps/c241c/v2/3mm/1234/No0280/kP.W.228.3MP1N1								

Mk4/DiFX fourfit 3.25 rev 0

aux01

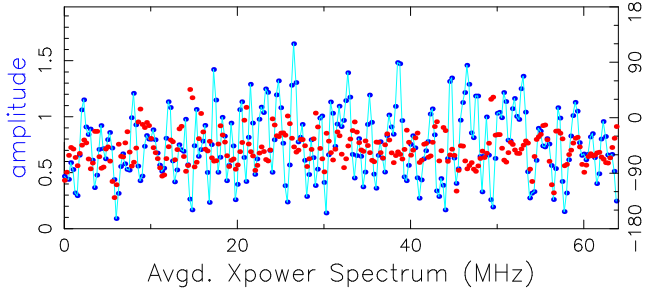
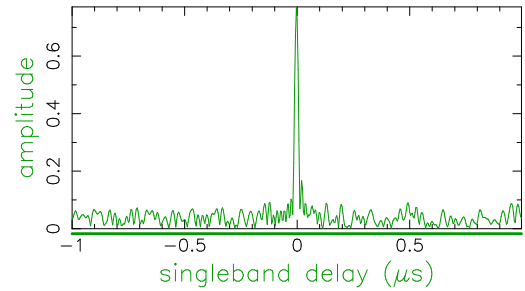
2013+370.3MP1N1, No0280, kX

VLBA\_KP - ONSALA60, fgroup W, pol LL



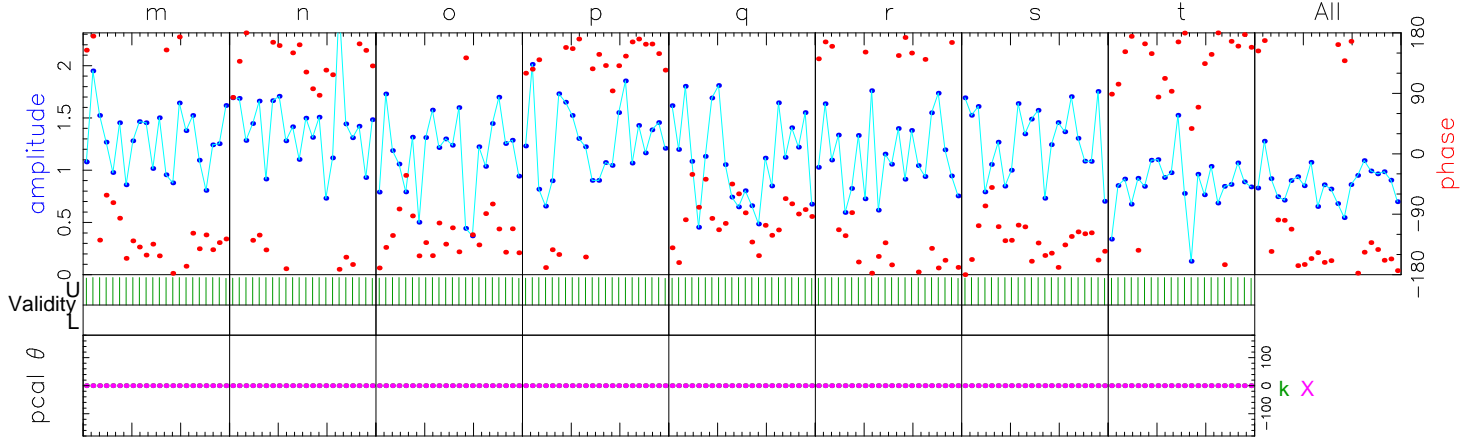
Fringe quality 7

SNR 28.3  
 Int time 179.812  
 Amp 0.771  
 Phase -159.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003093  
 MBD 0.006279  
 Fringe rate (Hz) 0.047354  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105031  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-143.1	160.4	-121.9	153.9	-96.1	-173.8	-131.3	147.9	Phase	-159.2
	1.1	1.0	1.0	1.1	1.0	1.1	1.1	0.7	Ampl.	1.0
	255.7	256.0	255.8	255.7	255.6	255.9	255.7	254.6	Sbd box	256.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.01913832851E+04	Apriori delay (usec)	-1.01913739387E+04	Resid mbdelay (usec)	6.27859E-03	+/-	3.8E-05
Sband delay (usec)	-1.01913770317E+04	Apriori clock (usec)	-1.1274055E+02	Resid sbdelay (usec)	-3.09300E-03	+/-	3.0E-04
Phase delay (usec)	-1.01913739438E+04	Apriori clockrate (us/s)	-1.0644170E-06	Resid phdelay (usec)	-5.13344E-06	+/-	1.3E-07
Delay rate (us/s)	1.45725077005E+00	Apriori rate (us/s)	1.45725022032E+00	Resid rate (us/s)	5.49732E-07	+/-	1.3E-09
Total phase (deg)	-187.9	Apriori accel (us/s/s)	3.21998563245E-05	Resid phase (deg)	-159.2	+/-	4.1

ph/seg (deg)	RMS 31.3	Theor. 9.5	Amplitude Search (1024X32)	0.771 +/- 0.027	0.751	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	25.0	16.6	Interp.	0.000	0.865	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	47.0	5.7	Inc. seg. avg.	0.865	0.989	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	33.6	10.0	Inc. frq. avg.	0.989		Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 58.7 el 21.7 pa -65.8 X: az 247.2 el 58.1 pa 38.6 u,v (fr/asec) -10463.825 -218.401 simultaneous interpolator

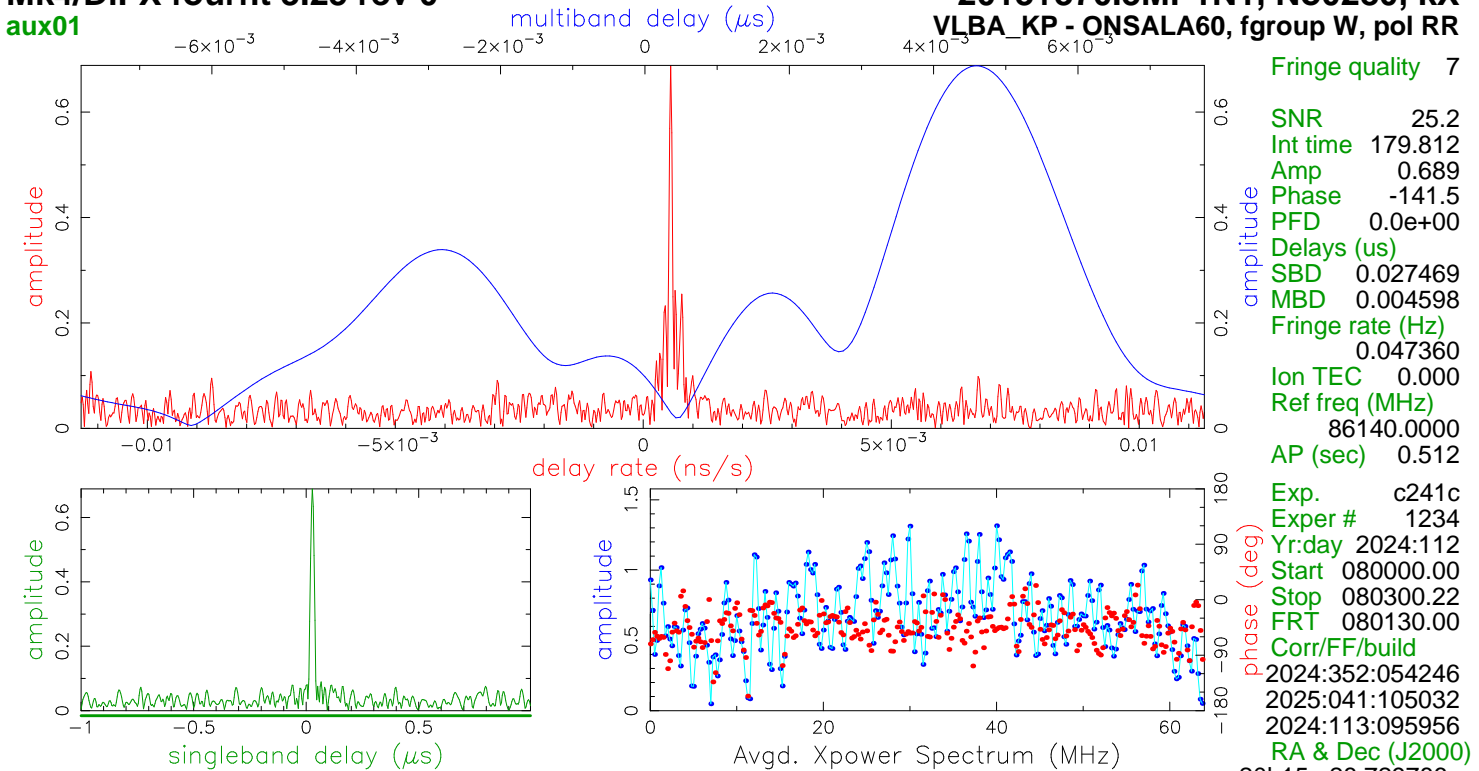
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kX..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kX.W.193.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

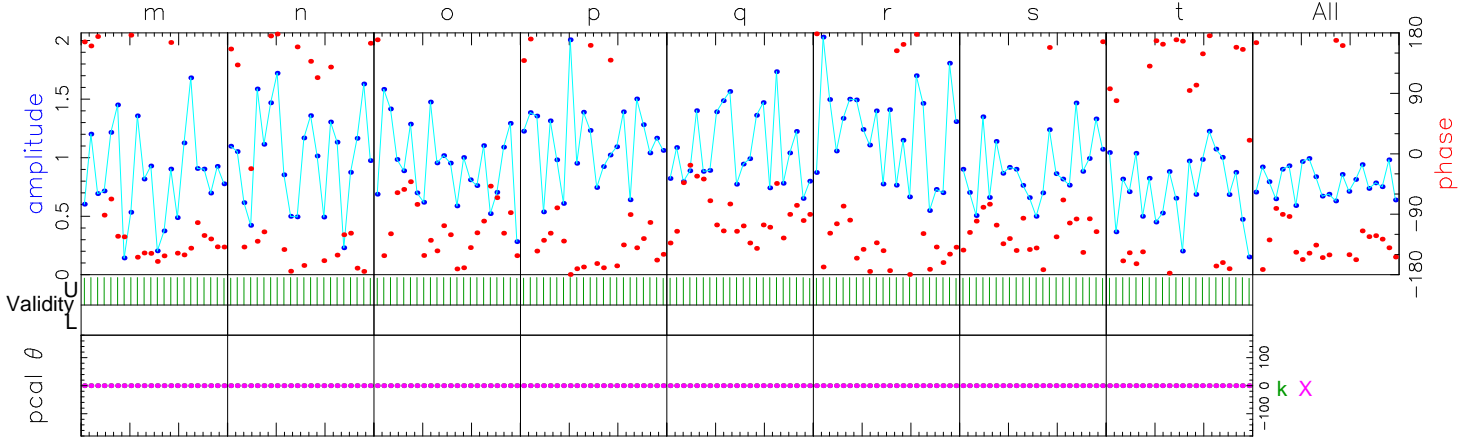
aux01

2013+370.3MP1N1, No0280, kX

VLBA\_KP - ONSALA60, fgroup W, pol RR



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



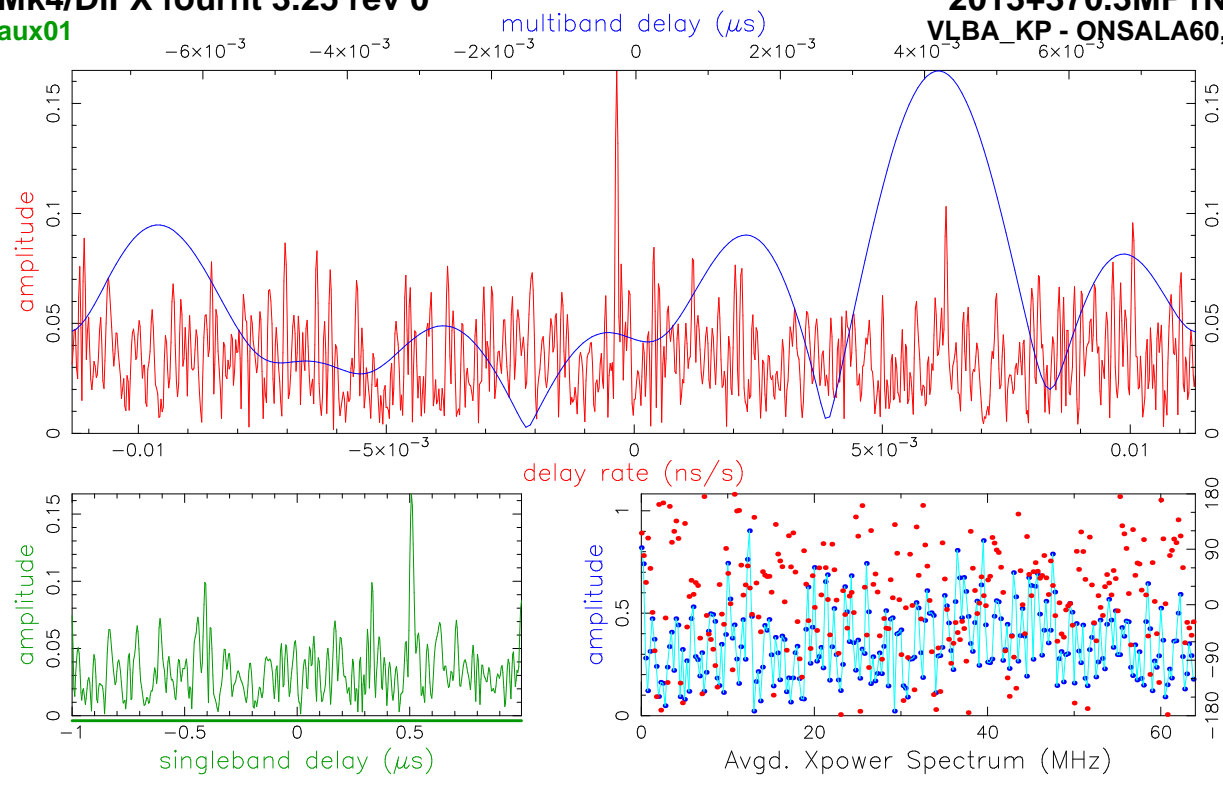
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-143.3	-176.8	-113.4	-155.7	-90.0	-148.8	-122.2	164.8	Phase	-141.5
	0.7	0.8	0.7	0.9	0.9	1.0	0.7	0.6	Ampl.	0.8
	263.8	264.4	264.0	263.5	263.3	263.8	263.2	263.0	Sbd box	264.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-1.01913537156E+04					-1.01913739387E+04			Resid mbdelay (usec)	4.59812E-03 +/- 4.3E-05
Sband delay (usec)	-1.01913464695E+04					-1.1274055E+02			Resid sbdelay (usec)	2.74692E-02 +/- 3.4E-04
Phase delay (usec)	-1.01913739433E+04					-1.0644170E-06			Resid phdelay (usec)	-4.56400E-06 +/- 1.5E-07
Delay rate (us/s)	1.45725077013E+00					1.45725022032E+00			Resid rate (us/s)	5.49807E-07 +/- 1.4E-09
Total phase (deg)			-170.3			3.21998563245E-05			Resid phase (deg)	-141.5 +/- 4.5
	RMS	Theor.	Amplitude	0.689 +/- 0.027					Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	30.9	10.7	Search (1024X32)	0.674					Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	23.8	18.6	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	37.0	6.4	Inc. seg. avg.	0.783					Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s) -0.011 0.011
amp/frq (%)	25.3	11.2	Inc. frq. avg.	0.793					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
k: az 58.7 el 21.7 pa -65.8			X: az 247.2 el 58.1 pa 38.6			u, v (fr/asec) -10463.825 -218.401				simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c241c/v2/3mm/1234/No0280/kX..3MP1N1			Output file: /Exps/c241c/v2/3mm/1234/No0280/kX.W.206.3MP1N1				

Mk4/DiFX fourfit 3.25 rev 0

aux01

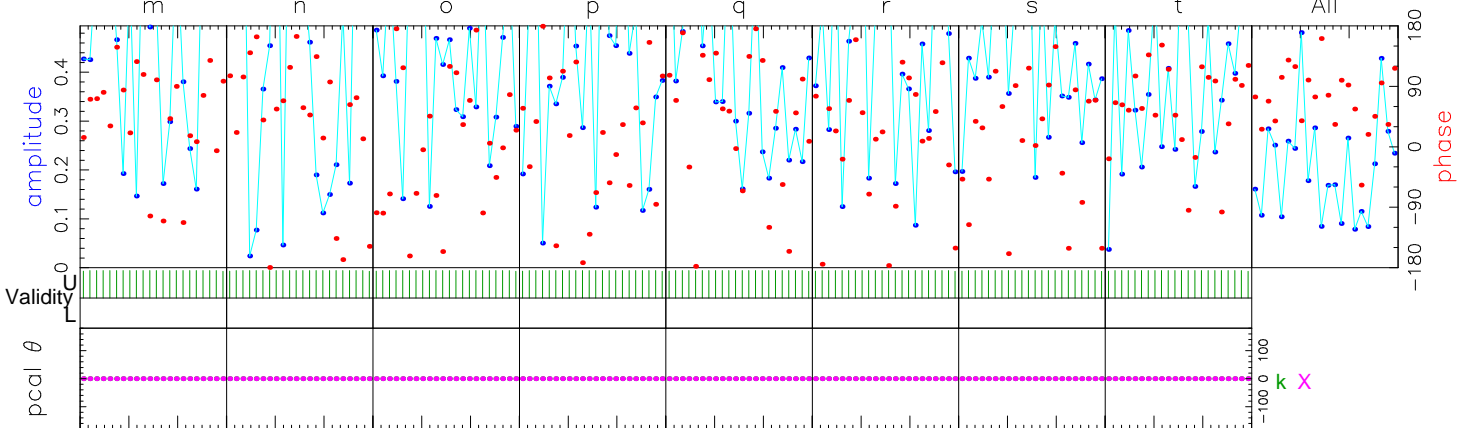
2013+370.3MP1N1, No0280, kX

VLBA\_KP - ONSALA60, fgroup W, pol LR



Fringe quality 0  
 SNR 6.0  
 Int time 179.812  
 Amp 0.165  
 Phase 72.8  
 PFD 1.7e-01  
 Delays (us)  
 SBD 0.508295  
 MBD 0.004210  
 Fringe rate (Hz) -0.030282  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build 2024:352:054246  
 2025:041:105036  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	77.8	89.2	-59.7	24.2	106.4	64.3	70.8	78.1	Phase	72.8	
	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	Ampl.	0.2	
	388.3	388.2	157.2	142.3	500.6	458.1	106.8	385.8	Sbd box	387.1	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
k	0	0	0	0	0	0	0	0	PC freqs		
X	0	0	0	0	0	0	0	0	PC freqs		
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
k:X	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		
X	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec) (SBD)	-1.01908697283E+04		Apriori delay (usec)		-1.01913739387E+04		Resid mbdelay (usec)		4.21039E-03	+/- 1.8E-04	
Sband delay (usec)	-1.01908656437E+04		Apriori clock (usec)		-1.1274055E+02		Resid sbdelay (usec)		5.08295E-01	+/- 1.4E-03	
Phase delay (usec)	-1.01913739364E+04		Apriori clockrate (us/s)		-1.0644170E+02		Resid phdelay (usec)		2.34786E-06	+/- 6.1E-07	
Delay rate (us/s)	1.45724986877E+00		Apriori rate (us/s)		1.45725022032E+00		Resid rate (us/s)		-3.51549E-07	+/- 5.9E-09	
Total phase (deg)			Apriori accel (us/s/s)		3.21998563245E-05		Resid phase (deg)		72.8	+/- 18.9	
	RMS	Theor.	Amplitude	0.165 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	46.1	44.4	Search (1024X32)	0.161		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	69.2	77.5	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	59.8	26.8	Inc. seg. avg.	0.160		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	44.0	46.8	Inc. frq. avg.	0.173		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
k: az 58.7 el 21.7 pa -65.8	X: az 247.2 el 58.1 pa 38.6		u, v (fr/asec) -10463.825 -218.401						simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c241c/v2/3mm/1234/No0280/kX..3MP1N1		Output file: /Exps/c241c/v2/3mm/1234/No0280/kX.W.215.3MP1N1								

Mk4/DiFX fourfit 3.25 rev 0

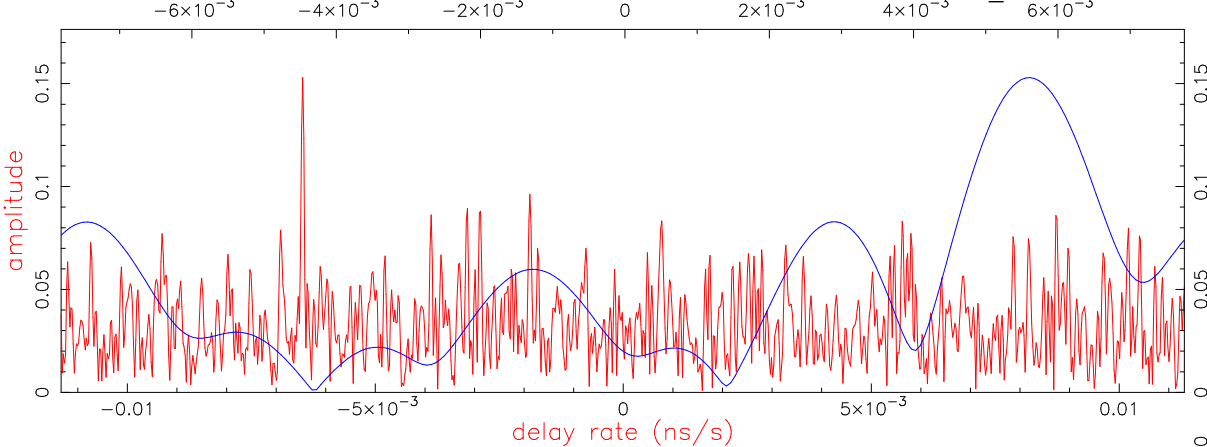
aux01

2013+370.3MP1N1, No0280, kX

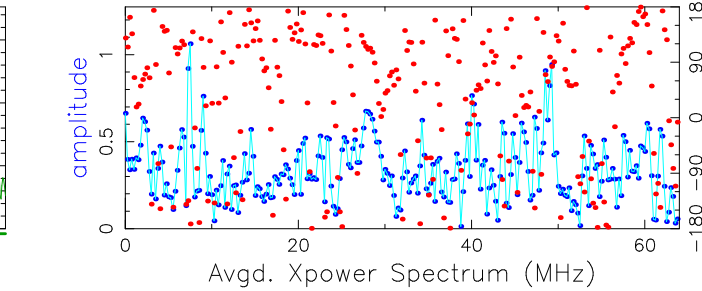
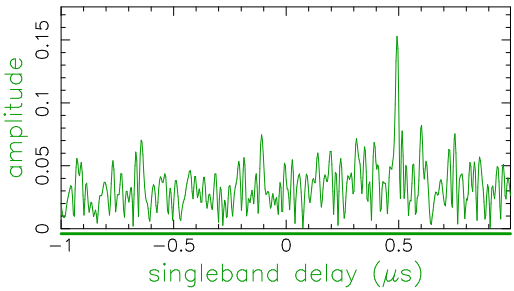
VLBA\_KP - ONSALA60, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

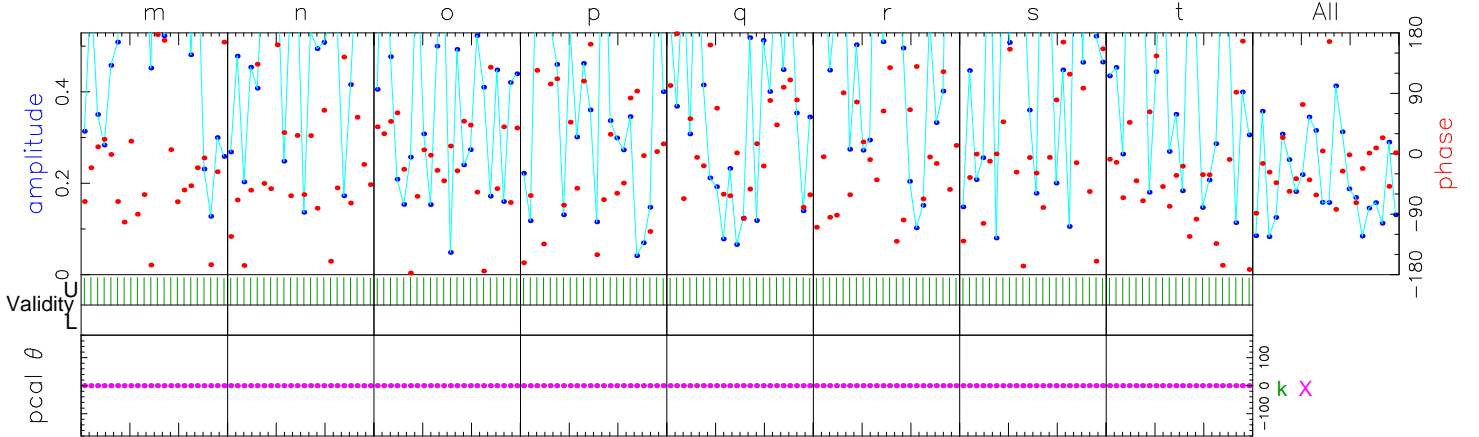


SNR 5.6  
 Int time 179.812  
 Amp 0.176  
 Phase -28.6  
 PFD 8.9e-01  
 Delays (us)  
 SBD 0.492977  
 MBD 0.005606  
 Fringe rate (Hz)  
 -0.558728  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105043  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-46.9	-38.6	-7.8	35.8	24.0	-25.3	-35.2	-59.2	Phase	-28.6
	0.3	0.2	0.2	0.0	0.2	0.2	0.2	0.2	Ampl.	0.2
	110.6	381.1	65.3	283.3	329.3	92.4	367.5	23.8	Sbd box	383.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:X	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	
X	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.01908839573E+04	Apriori delay (usec)	-1.01913739387E+04	Resid mbdelay (usec)	5.60636E-03	+/-	1.9E-04
Sband delay (usec)	-1.01908809615E+04	Apriori clock (usec)	-1.1274055E+02	Resid sbdelay (usec)	4.92977E-01	+/-	1.5E-03
Phase delay (usec)	-1.01913739396E+04	Apriori clockrate (us/s)	-1.0644170E-06	Resid phdelay (usec)	-9.23533E-07	+/-	6.6E-07
Delay rate (us/s)	1.45724373404E+00	Apriori rate (us/s)	1.45725022032E+00	Resid rate (us/s)	-6.48628E-06	+/-	6.3E-09
Total phase (deg)	-57.4	Apriori accel (us/s/s)	3.21998563245E-05	Resid phase (deg)	-28.6	+/-	20.3

ph/seg (deg)	51.9	Theor.	47.7	Amplitude	0.176 +/- 0.031	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	72.6	Search (1024X32)	0.149	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	38.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	43.7	Inc. seg. avg.	0.178	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
		Inc. frq. avg.	0.172	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 58.7 el 21.7 pa -65.8 X: az 247.2 el 58.1 pa 38.6 u, v (fr/asec) -10463.825 -218.401 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kX..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kX.W.223.3MP1N1

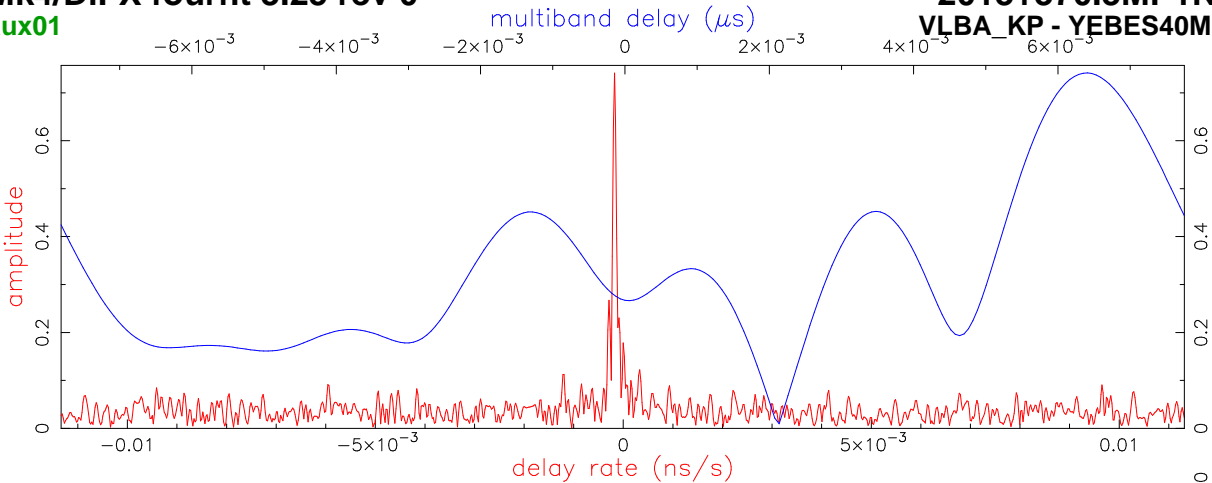


Mk4/DiFX fourfit 3.25 rev 0

aux01

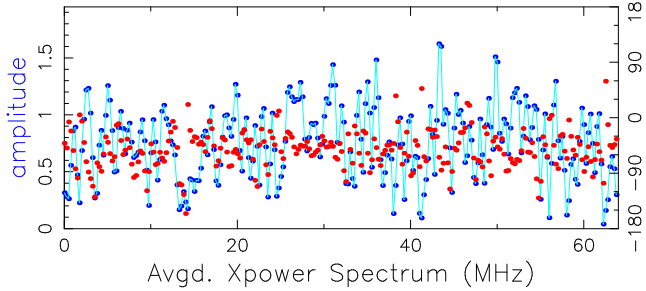
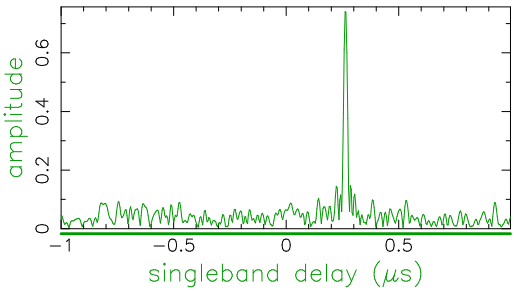
2013+370.3MP1N1, No0280, kY

VLBA\_KP - YEBES40M, fgroup W, pol LL



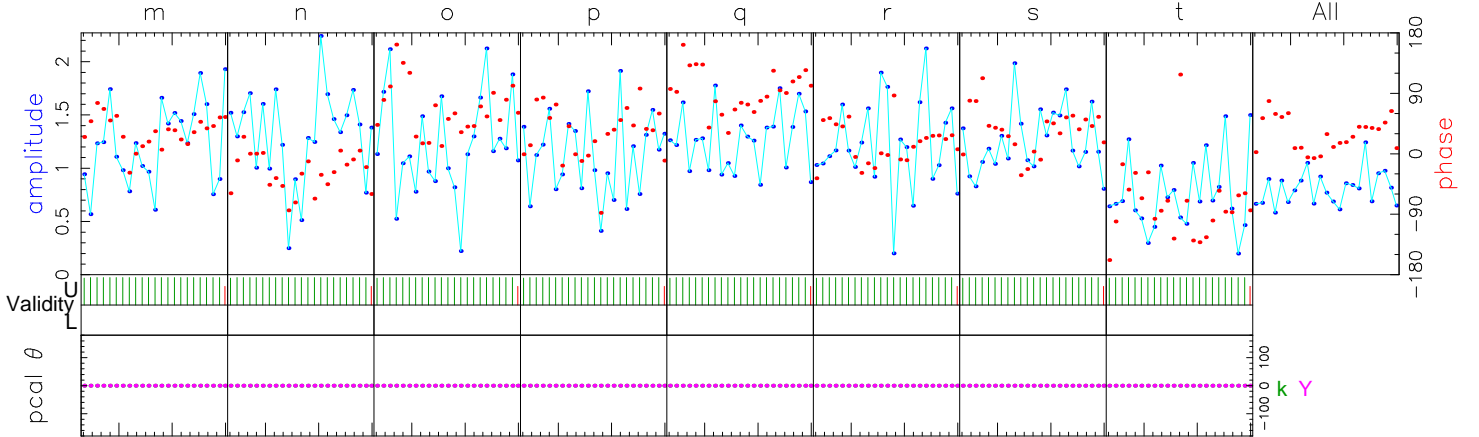
Fringe quality 6

SNR 26.4  
 Int time 162.316  
 Amp 0.757  
 Phase 30.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.263586  
 MBD 0.006443  
 Fringe rate (Hz)  
 -0.015972  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080017.41  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105117  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	34.3	-23.6	65.1	33.6	96.1	13.7	33.0	-87.4	Phase	30.0
	1.1	1.2	1.0	0.9	1.1	1.1	1.1	0.6	Ampl.	1.0
	324.0	324.1	324.6	324.1	323.9	324.1	323.6	322.0	Sbd box	324.5
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	
Y	0	0	0	0	0	0	0	0	PC freqs	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:Y	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	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.21528497993E+04	Apriori delay (usec)	-1.21531062420E+04	Resid mbdelay (usec)	6.44269E-03	+/-	4.1E-05
Sband delay (usec)	-1.21528426563E+04	Apriori clock (usec)	1.1079886E+02	Resid sbdelay (usec)	2.63586E-01	+/-	3.3E-04
Phase delay (usec)	-1.21531062411E+04	Apriori clockrate (us/s)	1.6079750E-02	Resid phdelay (usec)	9.67749E-07	+/-	1.4E-07
Delay rate (us/s)	1.41432102898E+00	Apriori rate (us/s)	1.41432121440E+00	Resid rate (us/s)	-1.85420E-07	+/-	1.5E-09
Total phase (deg)	-217.9	Apriori accel (us/s/s)	5.69911361064E-05	Resid phase (deg)	30.0	+/-	4.3

ph/seg (deg)	24.3	RMS	24.3	Theor.	10.4	Amplitude	0.757 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	21.6	Search (1024X32)	0.725	sb window (us)	-1.000	1.000		Pcal rate:	0.000E+00, 0.000E+00 (us/s)	mb window (us)	-0.008	0.008	
ph/frq (deg)	61.3	Interp.	0.000	dr window (ns/s)	-0.011	0.011		Bits/sample:	2x2	SampCntNorm: enabled	ion window (TEC)	0.00	0.00
amp/frq (%)	41.9	Inc. seg. avg.	0.799	Data rate (MSamp/s):	128 MBpts	32 Amb	0.016 us	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite		
		Inc. frq. avg.	1.013										

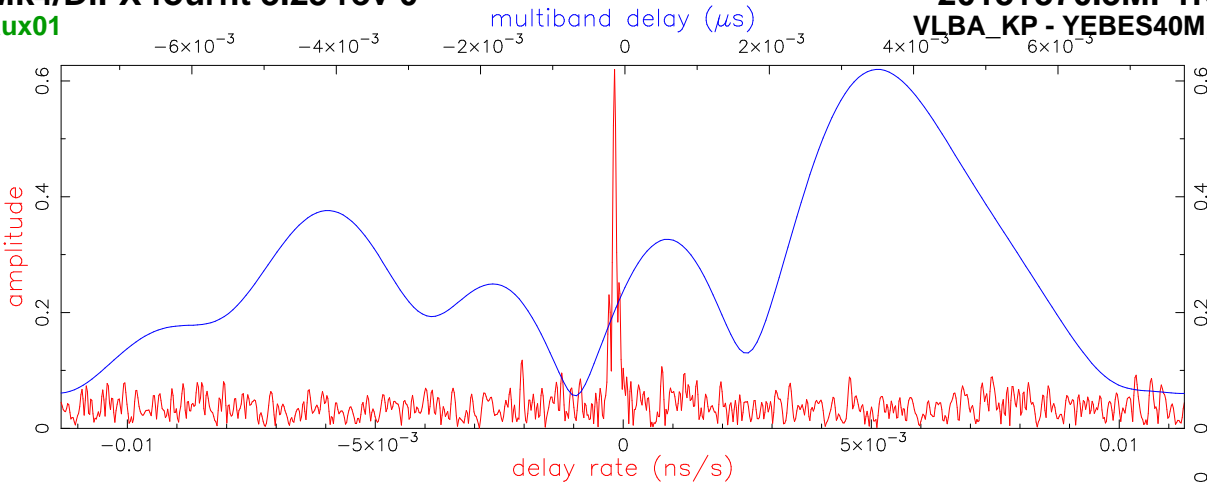
k: az 58.7 el 21.7 pa -65.8      Y: az 266.8 el 72.1 pa 72.3      u,v (fr/asec) -10132.020 2620.307      simultaneous interpolator  
 Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kY..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kY.W.370.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

aux01

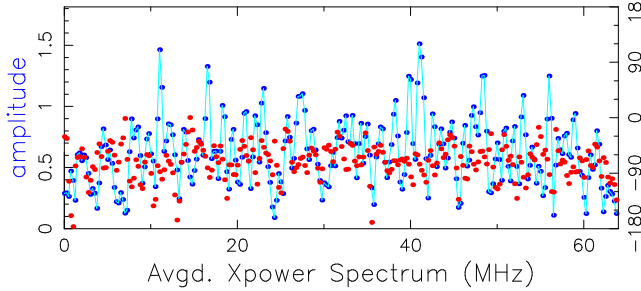
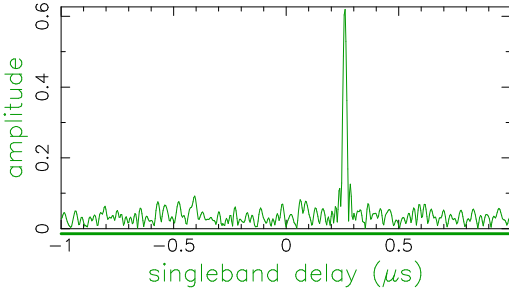
2013+370.3MP1N1, No0280, kY

VLBA\_KP - YEBES40M, fgroup W, pol RR



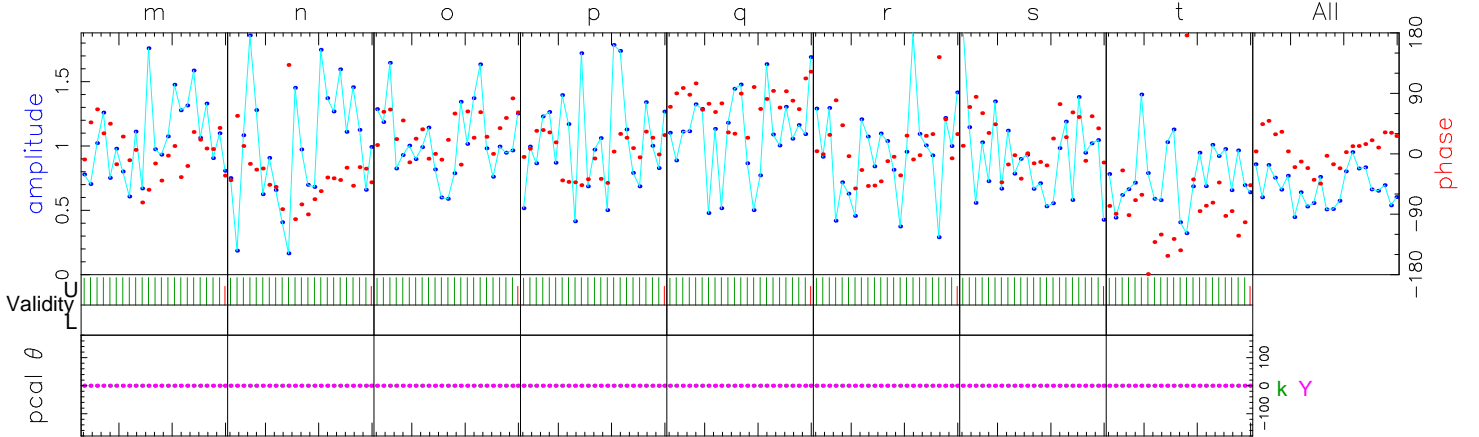
Fringe quality 8

SNR 21.8  
 Int time 162.316  
 Amp 0.627  
 Phase 7.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.260335  
 MBD 0.003471  
 Fringe rate (Hz)  
 -0.016050  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080017.41  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105119  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		323.6
k	0	0	0	0	0	0	0	0	Phase	7.8
Y	0	0	0	0	0	0	0	0	Ampl.	0.8
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
Y	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	

Group delay (usec) (SBD)	-1.21528527712E+04	Apriori delay (usec)	-1.21531062420E+04	Resid mbdelay (usec)	3.47081E-03	+/-	5.0E-05
Sband delay (usec)	-1.21528459073E+04	Apriori clock (usec)	1.1079886E+02	Resid sbdelay (usec)	2.60335E-01	+/-	3.9E-04
Phase delay (usec)	-1.21531062418E+04	Apriori clockrate (us/s)	1.6079750E-02	Resid phdelay (usec)	2.52815E-07	+/-	1.7E-07
Delay rate (us/s)	1.41432102808E+00	Apriori rate (us/s)	1.41432121440E+00	Resid rate (us/s)	-1.86324E-07	+/-	1.8E-09
Total phase (deg)	-240.1	Apriori accel (us/s/s)	5.69911361064E-05	Resid phase (deg)	7.8	+/-	5.2

ph/seg (deg)	25.0	Theor.	12.6	Amplitude	0.627 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	23.0		22.0	Search (1024X32)	0.600	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	55.4		7.4	Inc. seg. avg.	0.663	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	39.1		13.0	Inc. frq. avg.	0.838	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 58.7 el 21.7 pa -65.8 Y: az 266.8 el 72.1 pa 72.3 u,v (fr/asec) -10132.020 2620.307 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kY..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kY.W.381.3MP1N1

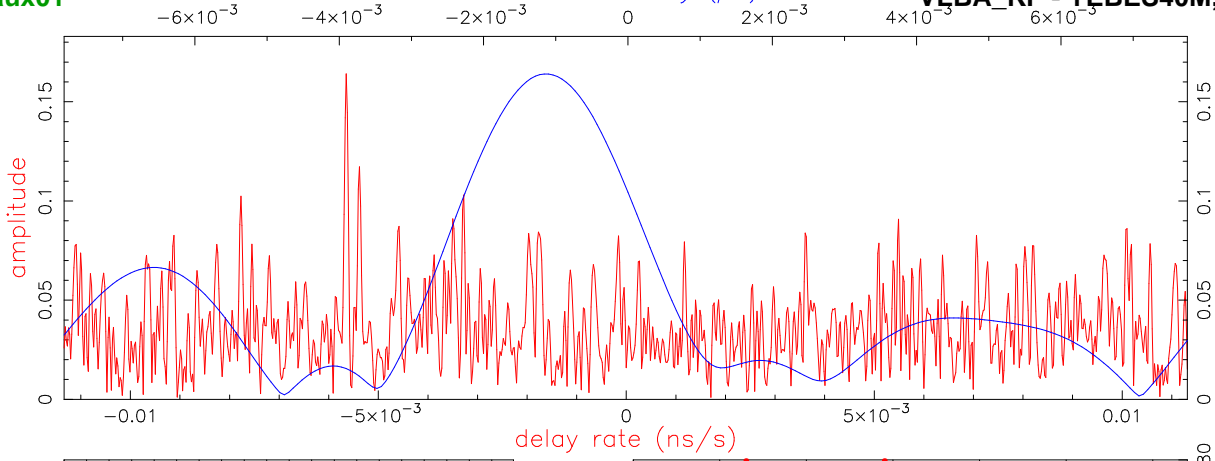
# Mk4/DiFX fourfit 3.25 rev 0

aux01

# 2013+370.3MP1N1, No0280, kY

VLBA\_KP - YEBES40M, fgroup W, pol LR

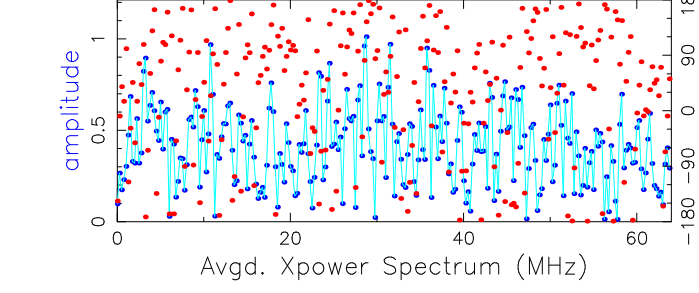
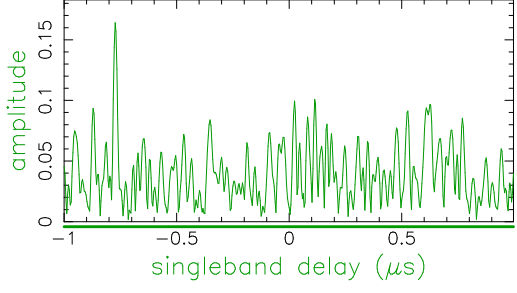
multiband delay ( $\mu$ s)



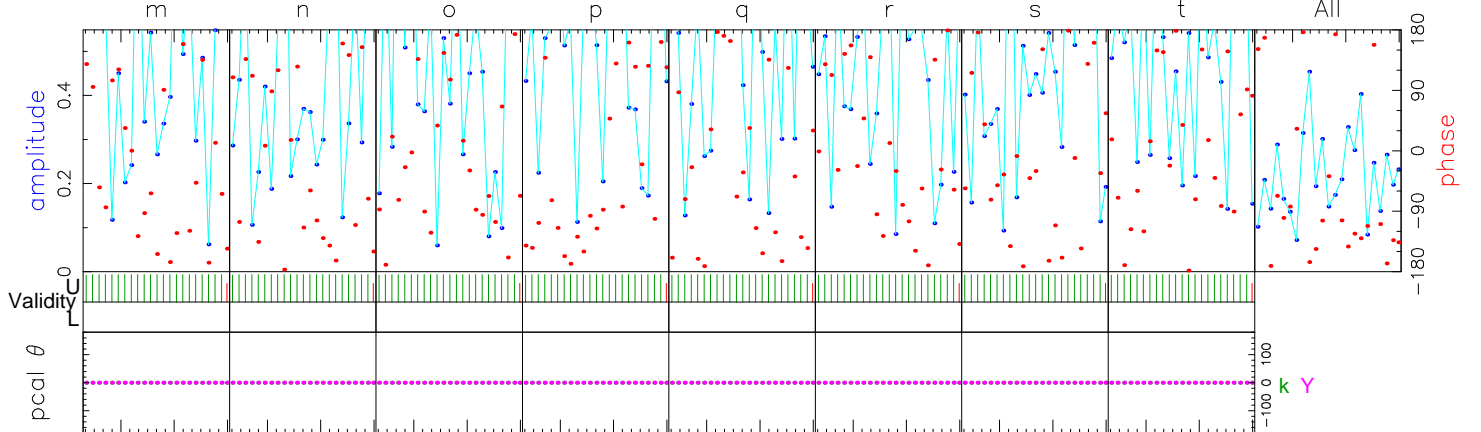
Fringe quality 0

SNR 5.7  
 Int time 162.316  
 Amp 0.183  
 Phase -140.0  
 PFD 6.9e-01  
 Delays (us)  
 SBD -0.772557  
 MBD -0.001121  
 Fringe rate (Hz)  
 -0.487751  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080017.41  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105125  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-133.9	-158.6	-108.0	-143.5	-150.5	-93.7	-152.1	-145.0	Phase	-140.0	
	0.2	0.3	0.2	0.3	0.3	0.1	0.2	0.1	Ampl.	0.2	
	389.2	233.2	100.2	61.1	495.0	457.2	60.9	304.1	Sbd box	59.2	
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		
Y	0	0	0	0	0	0	0	0	PC freqs		
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
k:Y	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		
Y	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec) (SBD)	-1.21538729881E+04		Apriori delay (usec)		-1.21531062420E+04		Resid mbdelay (usec)		-1.12106E-03	+/- 1.9E-04	
Sband delay (usec)	-1.21538787990E+04		Apriori clock (usec)		1.1079886E+02		Resid sbdelay (usec)		-7.72557E-01	+/- 1.5E-03	
Phase delay (usec)	-1.21531062465E+04		Apriori clockrate (us/s)		1.6079750E-02		Resid phdelay (usec)		-4.51491E-06	+/- 6.4E-07	
Delay rate (us/s)	1.41431555210E+00		Apriori rate (us/s)		1.41432121440E+00		Resid rate (us/s)		-5.66230E-06	+/- 6.8E-09	
Total phase (deg)			Apriori accel (us/s/s)		5.69911361064E-05		Resid phase (deg)		-140.0	+/- 20.0	
	RMS	Theor.	Amplitude	0.183 +/- 0.032		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	56.8	47.9	Search (1024X32)	0.159		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	67.9	83.6	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	25.3	28.2	Inc. seg. avg.	0.182		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	41.3	49.3	Inc. frq. avg.	0.172		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
k: az 58.7 el 21.7 pa -65.8		Y: az 266.8 el 72.1 pa 72.3		u, v (fr/asec) -10132.020 2620.307		simultaneous interpolator					
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0280/kY..3MP1N1		Output file: /Exps/c241c/v2/3mm/1234/No0280/kY.W.389.3MP1N1							

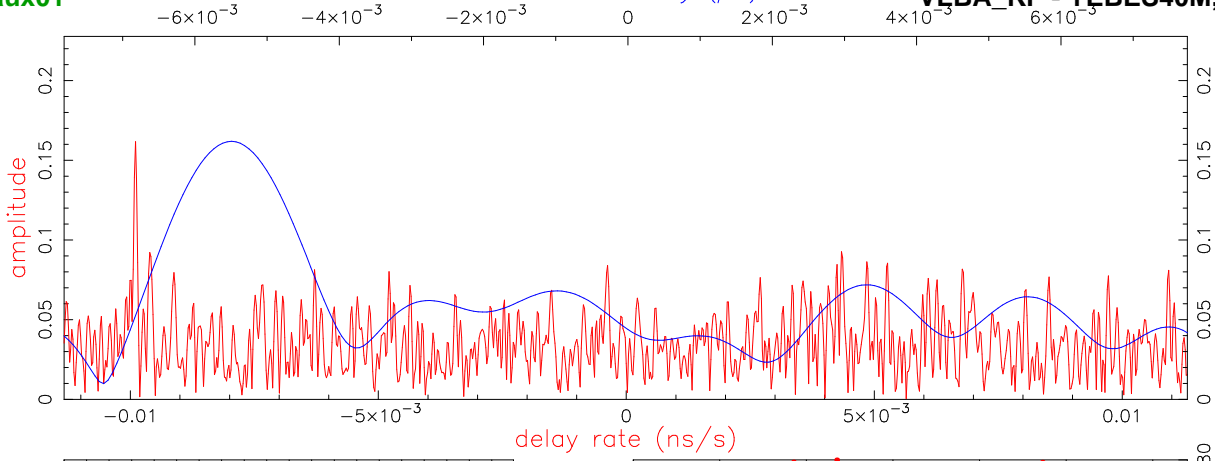
Mk4/DiFX fourfit 3.25 rev 0

aux01

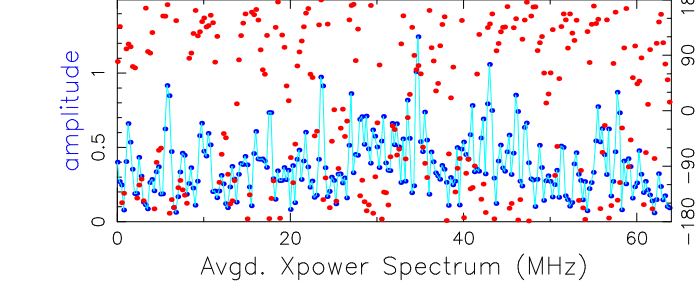
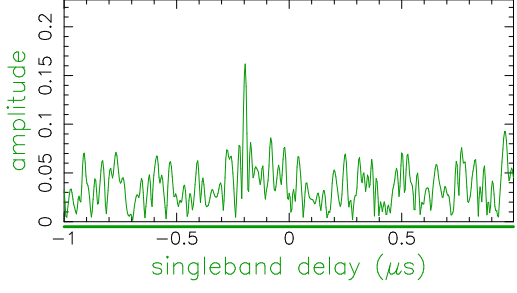
2013+370.3MP1N1, No0280, kY

VLBA\_KP - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

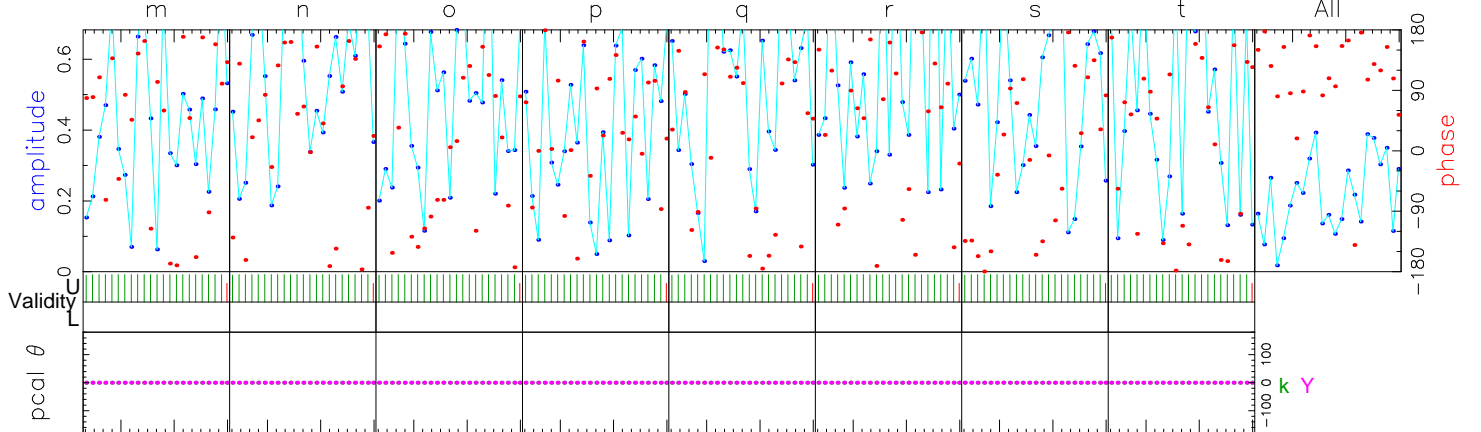


Fringe quality 0  
 SNR 5.7  
 Int time 162.316  
 Amp 0.228  
 Phase 130.0  
 PFD 8.4e-01  
 Delays (us)  
 SBD -0.196151  
 MBD -0.005539  
 Fringe rate (Hz)  
 -0.854566  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080017.41  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105127  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



Avgd. Xpower Spectrum (MHz)

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

Group delay (usec) (SBD)	-1.21532992809E+04	Apriori delay (usec)	-1.21531062420E+04	Resid mbdelay (usec)	-5.53890E-03	+/-	1.9E-04
Sband delay (usec)	-1.21533023933E+04	Apriori clock (usec)	1.1079886E+02	Resid sbdelay (usec)	-1.96151E-01	+/-	1.5E-03
Phase delay (usec)	-1.21531062378E+04	Apriori clockrate (us/s)	1.6079750E-02	Resid phdelay (usec)	4.19349E-06	+/-	6.5E-07
Delay rate (us/s)	1.41431129373E+00	Apriori rate (us/s)	1.41432121440E+00	Resid rate (us/s)	-9.92067E-06	+/-	6.9E-09
Total phase (deg)	-117.9	Apriori accel (us/s/s)	5.69911361064E-05	Resid phase (deg)	130.0	+/-	20.2

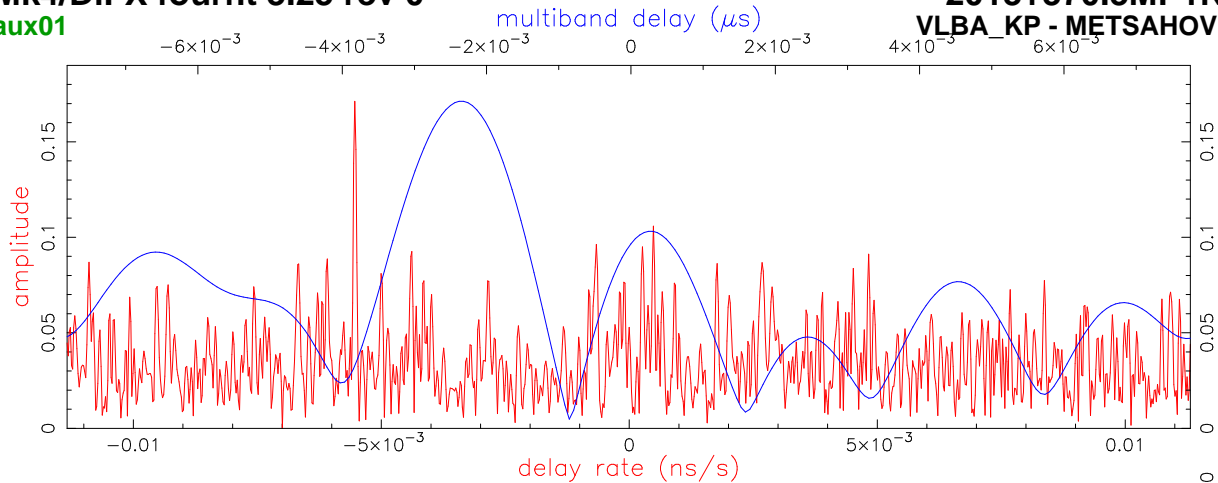
ph/seg (deg) 45.1 48.5 Search (1024X32) 0.160 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 73.3 84.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.9 28.6 Inc. seg. avg. 0.224 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 54.3 50.0 Inc. frq. avg. 0.218 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 58.7 el 21.7 pa -65.8 Y: az 266.8 el 72.1 pa 72.3 u, v (fr/asec) -10132.020 2620.307 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kY..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kY.W.394.3MP1N1 simultaneous interpolator

# Mk4/DiFX fourfit 3.25 rev 0

aux01

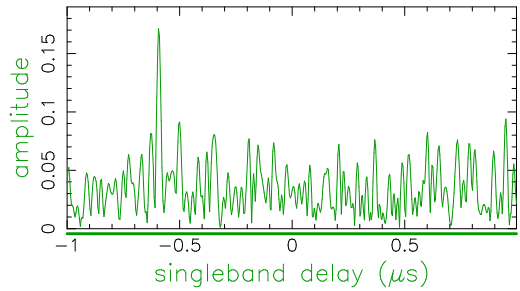
# 2013+370.3MP1N1, No0280, kZ

VLBA\_KP - METSAHOV, fgroup W, pol LL

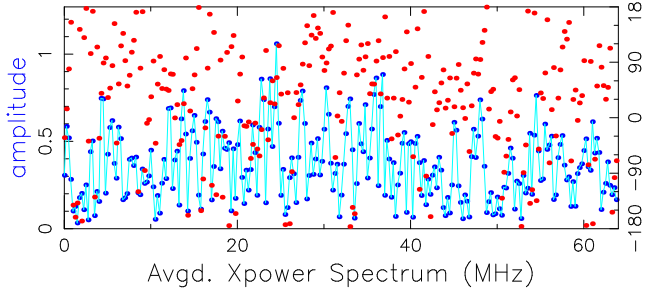


Fringe quality 0

SNR 6.3  
 Int time 179.774  
 Amp 0.190  
 Phase 104.6  
 PFD 4.0e-02  
 Delays (us)  
 SBD -0.592846  
 MBD -0.002317  
 Fringe rate (Hz)  
 -0.477558  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

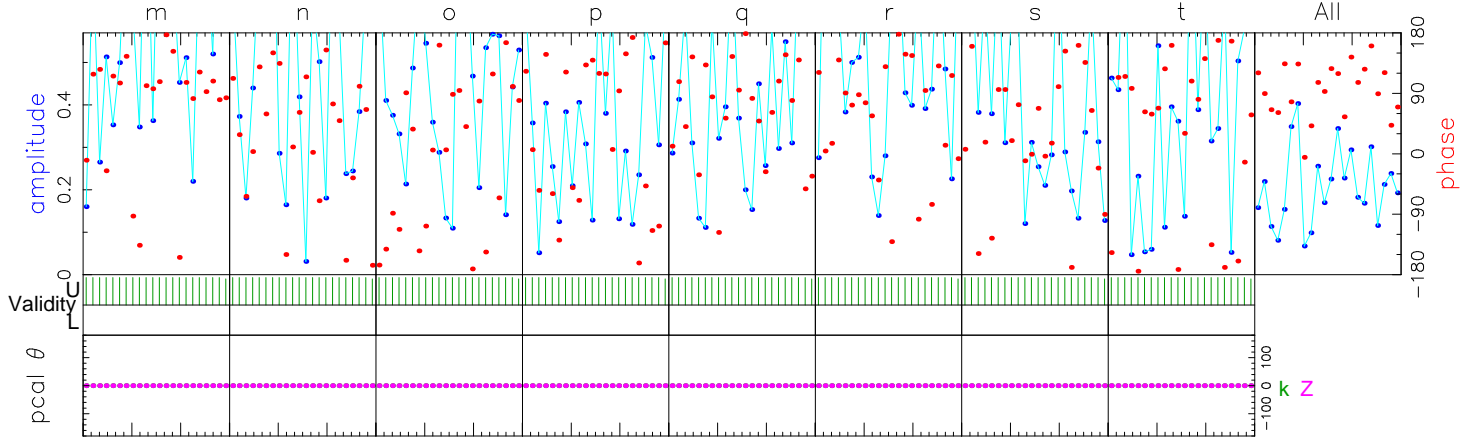


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105026  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	0	0	0	0	0	0	0	0	APs used	
Z	0	0	0	0	0	0	0	0	PC freqs	
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:Z	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	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-8.56658247540E+03	Apriori delay (usec)	-8.56598640880E+03	Resid mbdelay (usec)	-2.31660E-03	+/-	1.7E-04
Sband delay (usec)	-8.56657925505E+03	Apriori clock (usec)	-7.0682526E-02	Resid sbdelay (usec)	-5.92846E-01	+/-	1.4E-03
Phase delay (usec)	-8.56598640542E+03	Apriori clockrate (us/s)	-4.5765388E-07	Resid phdelay (usec)	3.37460E-06	+/-	5.9E-07
Delay rate (us/s)	1.52065453171E+00	Apriori rate (us/s)	1.52066007568E+00	Resid rate (us/s)	-5.54398E-06	+/-	5.6E-09
Total phase (deg)		Apriori accel (us/s/s)	2.24079851152E-05	Resid phase (deg)	104.6	+/-	18.2

ph/seg (deg)	40.7	RMS	42.7	Theor.	40.7	Amplitude	0.190 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	55.5		74.4		55.5	Search (1024X32)	0.164	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	37.3		25.7		37.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	59.2		44.9		59.2	Inc. seg. avg.	0.180	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	ion window (TEC)	0.00	0.00
						Inc. frq. avg.	0.193	Data rate(Mb/s): 2048	t_cohere infinite			

k: az 58.7 el 21.7 pa -65.8      Z: az 257.0 el 51.1 pa 37.4      u, v (fr/asec) -10928.182 -980.756      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kZ..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kZ.W.171.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

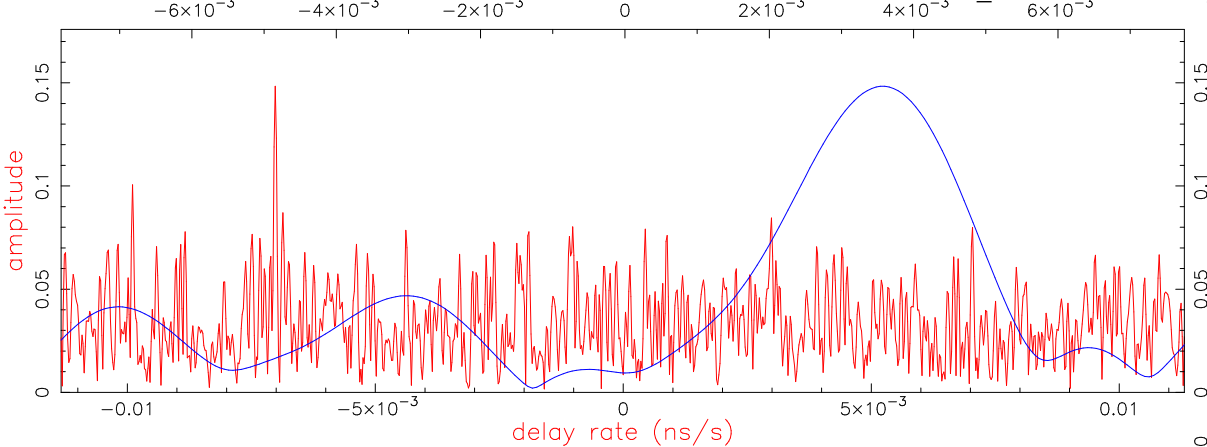
aux01

2013+370.3MP1N1, No0280, kZ

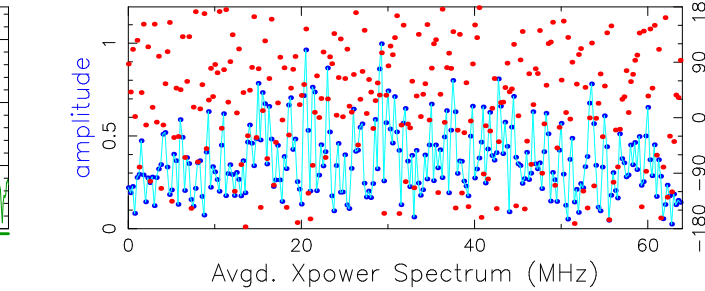
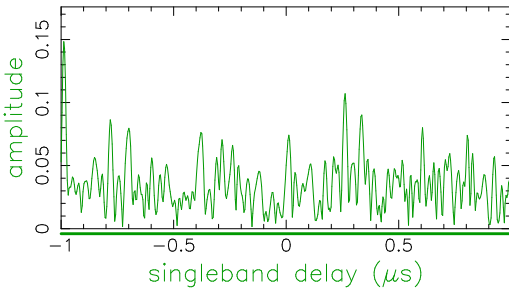
VLBA\_KP - METSAHOV, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 0

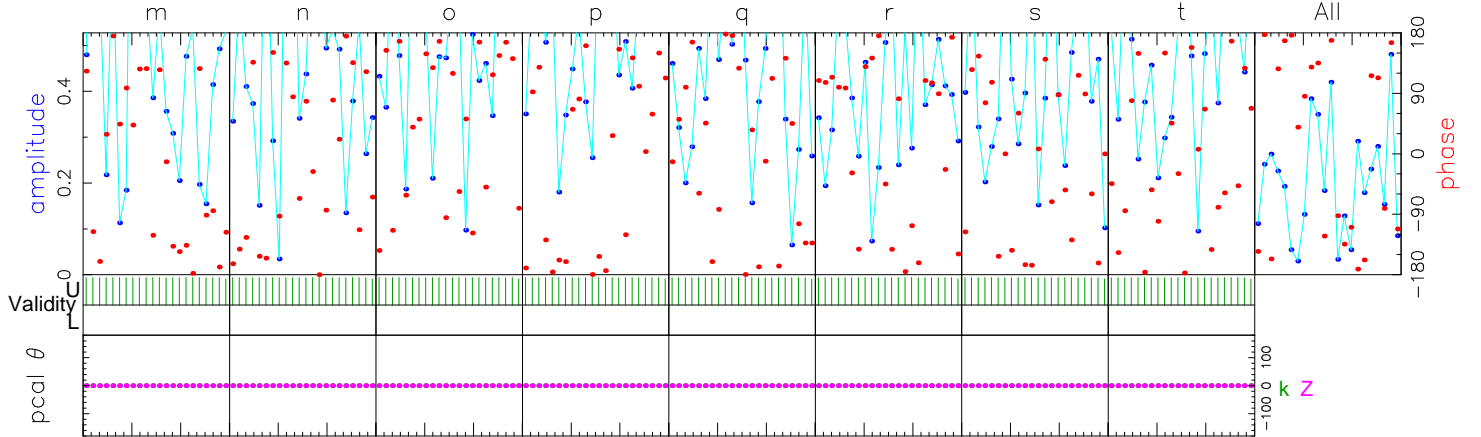


SNR 5.5  
 Int time 179.774  
 Amp 0.176  
 Phase 166.4  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.987212  
 MBD 0.003563  
 Fringe rate (Hz)  
 -0.606093  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105029  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-178.0	171.1	170.6	138.9	-179.5	145.7	166.9	-140.9	Phase	166.4
	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	Ampl.	0.2
	392.9	57.2	249.2	406.6	5.9	453.3	279.8	338.5	Sbd box	4.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:Z	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	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-8.56696722037E+03	Apriori delay (usec)	-8.56598640880E+03	Resid mbdelay (usec)	3.56343E-03	+/-	2.0E-04
Sband delay (usec)	-8.56697362055E+03	Apriori clock (usec)	-7.0682526E-02	Resid sbdelay (usec)	-9.87212E-01	+/-	1.6E-03
Phase delay (usec)	-8.56598640343E+03	Apriori clockrate (us/s)	-4.5765388E-07	Resid phdelay (usec)	5.36710E-06	+/-	6.7E-07
Delay rate (us/s)	1.52065303954E+00	Apriori rate (us/s)	1.52066007568E+00	Resid rate (us/s)	-7.03614E-06	+/-	6.5E-09
Total phase (deg)		Apriori accel (us/s/s)	2.24079851152E-05	Resid phase (deg)	166.4	+/-	20.9

ph/seg (deg)	61.3	Theor.	49.1	Amplitude	0.176 +/- 0.032	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	91.0		85.7	Search (1024X32)	0.145	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	27.2		29.6	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	36.2		51.7	Inc. seg. avg.	0.177	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.165	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 58.7 el 21.7 pa -65.8      Z: az 257.0 el 51.1 pa 37.4      u,v (fr/asec) -10928.182 -980.756      simultaneous interpolator

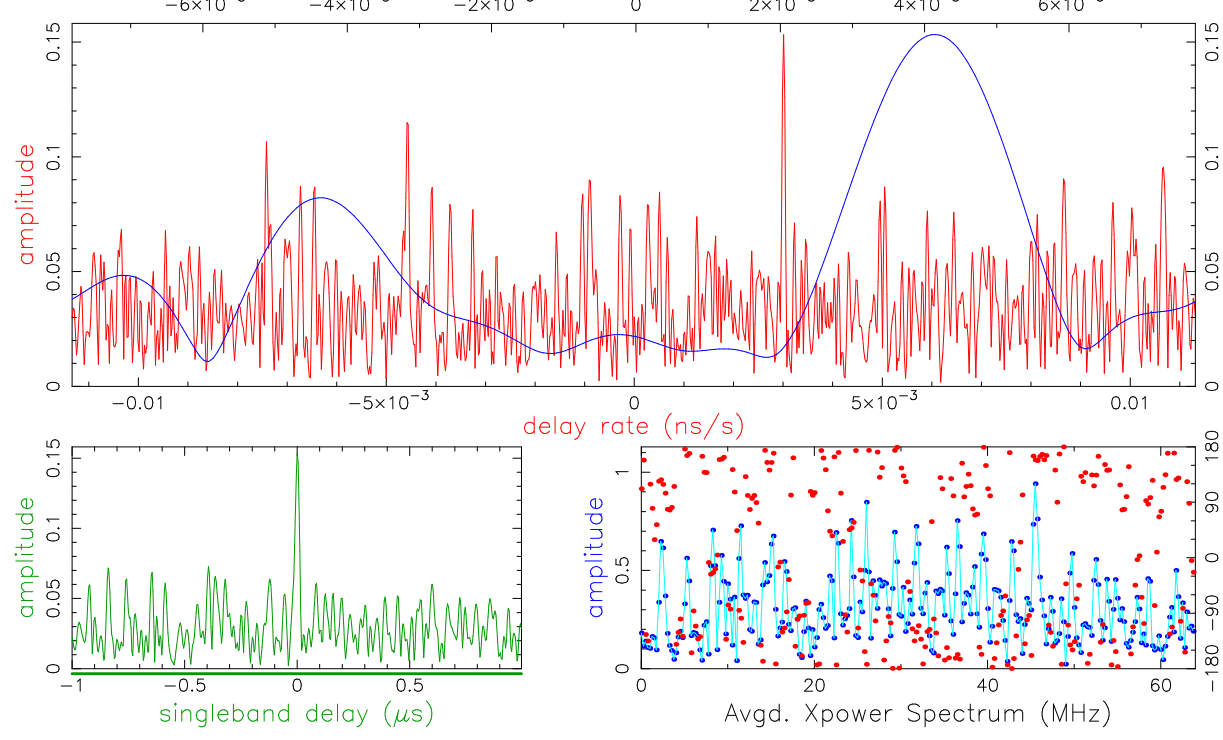
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kZ..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kZ.W.182.3MP1N1

Mk4/DiFX fourfit 3.25 rev 0

aux01

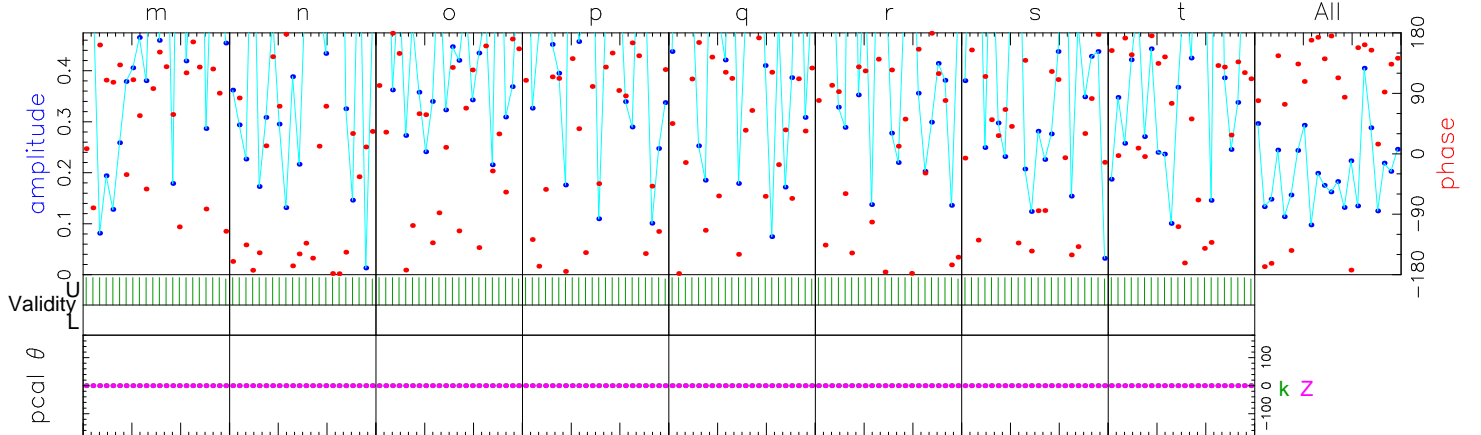
2013+370.3MP1N1, No0280, kZ

VLBA\_KP - METSAHOV, fgroup W, pol LR



Fringe quality 0  
 SNR 5.6  
 Int time 179.774  
 Amp 0.158  
 Phase 141.2  
 PFD 8.9e-01  
 Delays (us)  
 SBD 0.000770  
 MBD 0.004187  
 Fringe rate (Hz) 0.259199  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build 2024:352:054246  
 2025:041:105031  
 2024:113:095956  
 RA & Dec (J2000) 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	130.4	-177.2	125.1	139.0	104.4	156.2	120.7	142.8	Phase	141.2
	0.2	0.2	0.1	0.3	0.2	0.3	0.0	0.2	Ampl.	0.2
	14.1	24.3	290.1	257.1	174.5	258.5	163.9	281.6	Sbd box	257.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:Z	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	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-8.56598222214E+03	Apriori delay (usec)	-8.56598640880E+03	Resid mbdelay (usec)	4.18666E-03	+/-	1.9E-04
Sband delay (usec)	-8.56598563855E+03	Apriori clock (usec)	-7.0682526E-02	Resid sbdelay (usec)	7.70250E-04	+/-	1.5E-03
Phase delay (usec)	-8.56598640424E+03	Apriori clockrate (us/s)	-4.5765388E-07	Resid phdelay (usec)	4.55405E-06	+/-	6.6E-07
Delay rate (us/s)	1.52066308472E+00	Apriori rate (us/s)	1.52066007568E+00	Resid rate (us/s)	3.00904E-06	+/-	6.3E-09
Total phase (deg)	49.9	Apriori accel (us/s/s)	2.24079851152E-05	Resid phase (deg)	141.2	+/-	20.3

ph/seg (deg) 47.5 47.7 Search (1024X32) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 56.9 83.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 26.2 28.8 Inc. seg. avg. 0.154 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.9 50.2 Inc. frq. avg. 0.151 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 k: az 58.7 el 21.7 pa -65.8 Z: az 257.0 el 51.1 pa 37.4 u,v (fr/asec) -10928.182 -980.756 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0280/kZ..3MP1N1 Output file: /Exps/c241c/v2/3mm/1234/No0280/kZ.W.196.3MP1N1 simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

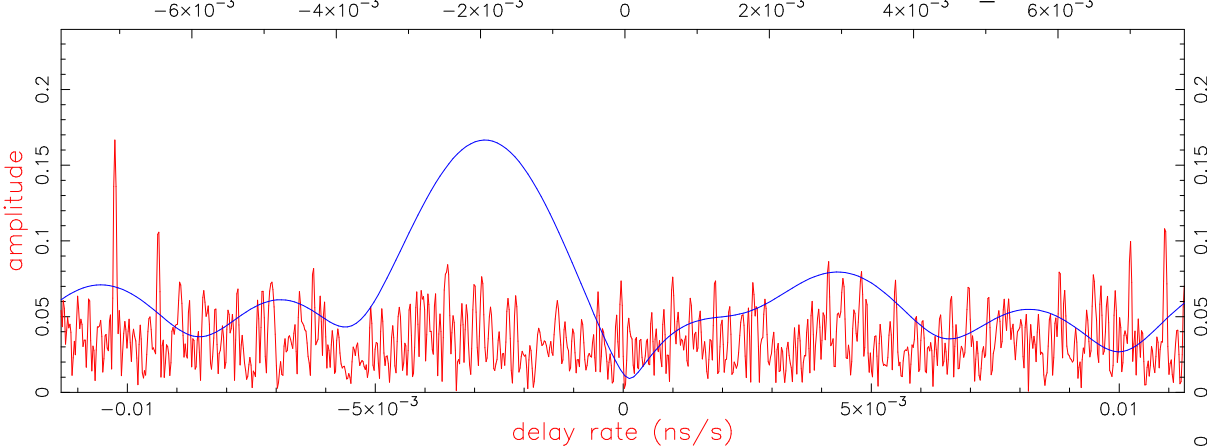
aux01

2013+370.3MP1N1, No0280, kZ

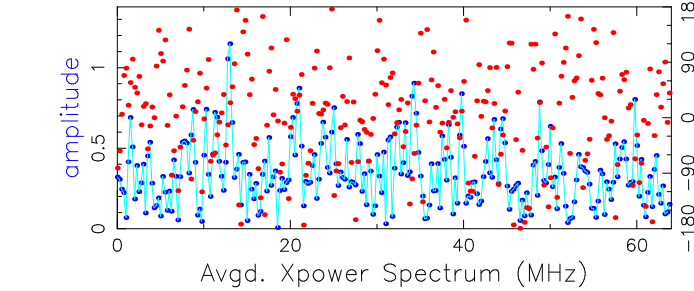
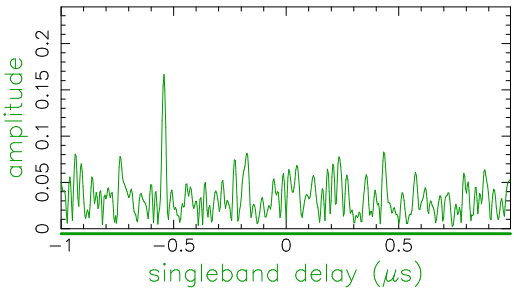
VLBA\_KP - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

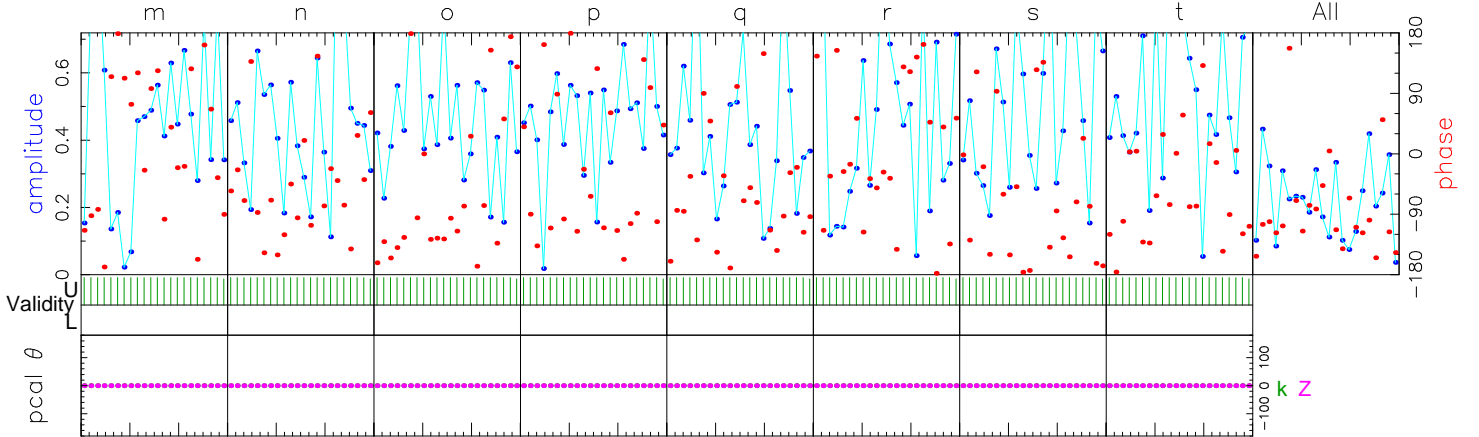


SNR 6.1  
 Int time 179.774  
 Amp 0.240  
 Phase -104.6  
 PFD 1.2e-01  
 Delays (us)  
 SBD -0.543265  
 MBD -0.001947  
 Fringe rate (Hz)  
 -0.884086  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 080000.00  
 Stop 080300.22  
 FRT 080130.00  
 Corr/FF/build  
 2024:352:054246  
 2025:041:105033  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-89.1	-70.5	-133.4	-122.5	-91.8	-132.4	-139.3	-73.3		-104.6
	0.1	0.4	0.4	0.2	0.3	0.1	0.3	0.4		0.2
	329.8	118.0	118.4	103.4	119.3	81.1	194.6	118.5		117.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	0	0	0	0	0	0	0	0		
Z	0	0	0	0	0	0	0	0		
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec) (SBD)	-8.56653523080E+03	Apriori delay (usec)	-8.56598640880E+03	Resid mbdelay (usec)	-1.94701E-03	+/-	1.8E-04
Sband delay (usec)	-8.56652967405E+03	Apriori clock (usec)	-7.0682526E-02	Resid sbdelay (usec)	-5.43265E-01	+/-	1.4E-03
Phase delay (usec)	-8.56598641217E+03	Apriori clockrate (us/s)	-4.5765388E-07	Resid phdelay (usec)	-3.37350E-06	+/-	6.0E-07
Delay rate (us/s)	1.52064981232E+00	Apriori rate (us/s)	1.52066007568E+00	Resid rate (us/s)	-1.02634E-05	+/-	5.8E-09
Total phase (deg)	-195.9	Apriori accel (us/s/s)	2.24079851152E-05	Resid phase (deg)	-104.6	+/-	18.8

ph/seg (deg)	52.9	RMS	44.0	Theor.	52.9	Amplitude	0.240 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	74.2	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)	30.8	Inc. seg. avg.	0.247	Inc. frq. avg.	0.245	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	55.6	Inc. frq. avg.	0.245	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 58.7 el 21.7 pa -65.8      Z: az 257.0 el 51.1 pa 37.4      u, v (fr/asec) -10928.182 -980.756      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0280/kZ..3MP1N1      Output file: /Exps/c241c/v2/3mm/1234/No0280/kZ.W.209.3MP1N1