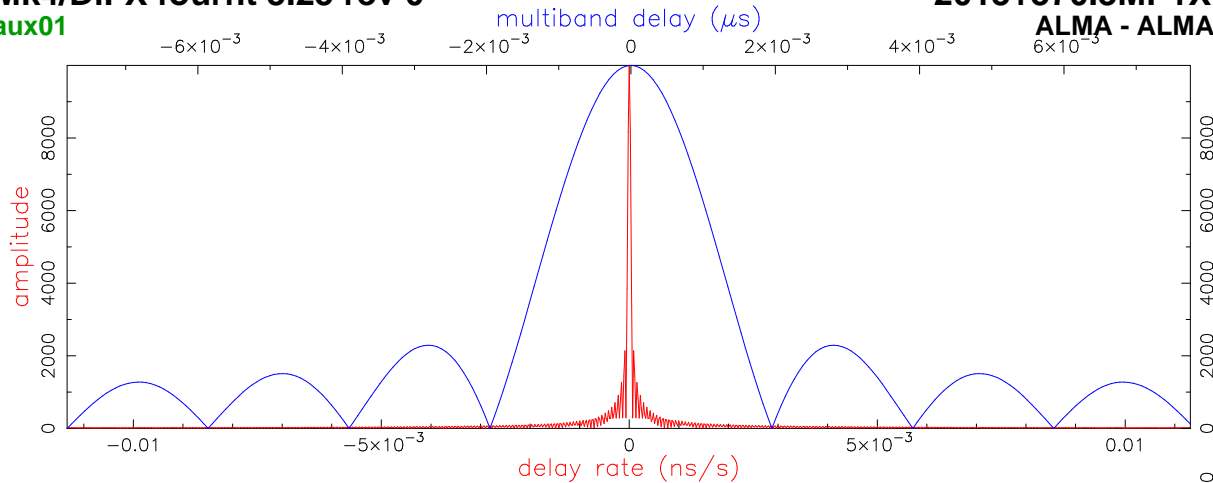


Mk4/DiFX fourfit 3.25 rev 0

aux01

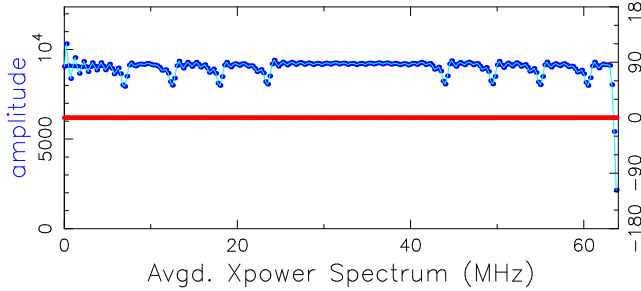
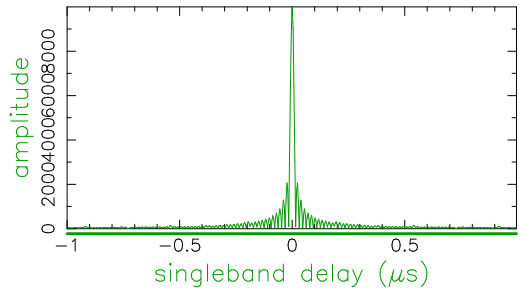
2013+370.3MP1XE, No0308, AA

ALMA - ALMA, fgroup W, pol XX



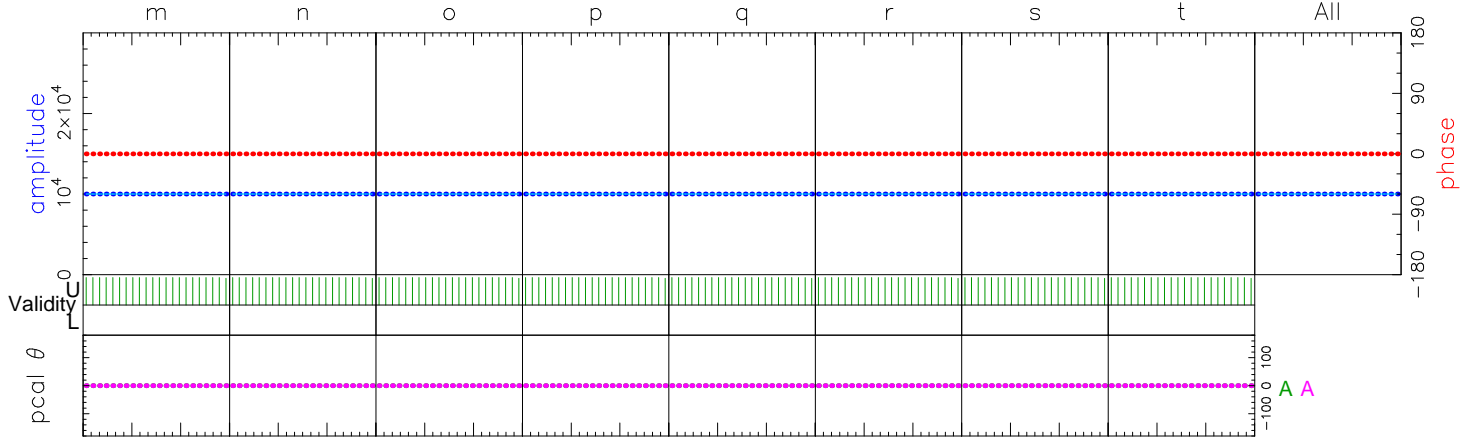
Fringe quality 9

SNR 366880.7  
 Int time 179.993  
 Amp 9999.999  
 Phase 0.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000000  
 MBD 0.000000  
 Fringe rate (Hz) 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110930  
 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
A	0	0	0	0	0	0	0	0	Ampl.	10000.0
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	PC phase	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Mani PC	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	PC amp	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Tracks	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Tracks	

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

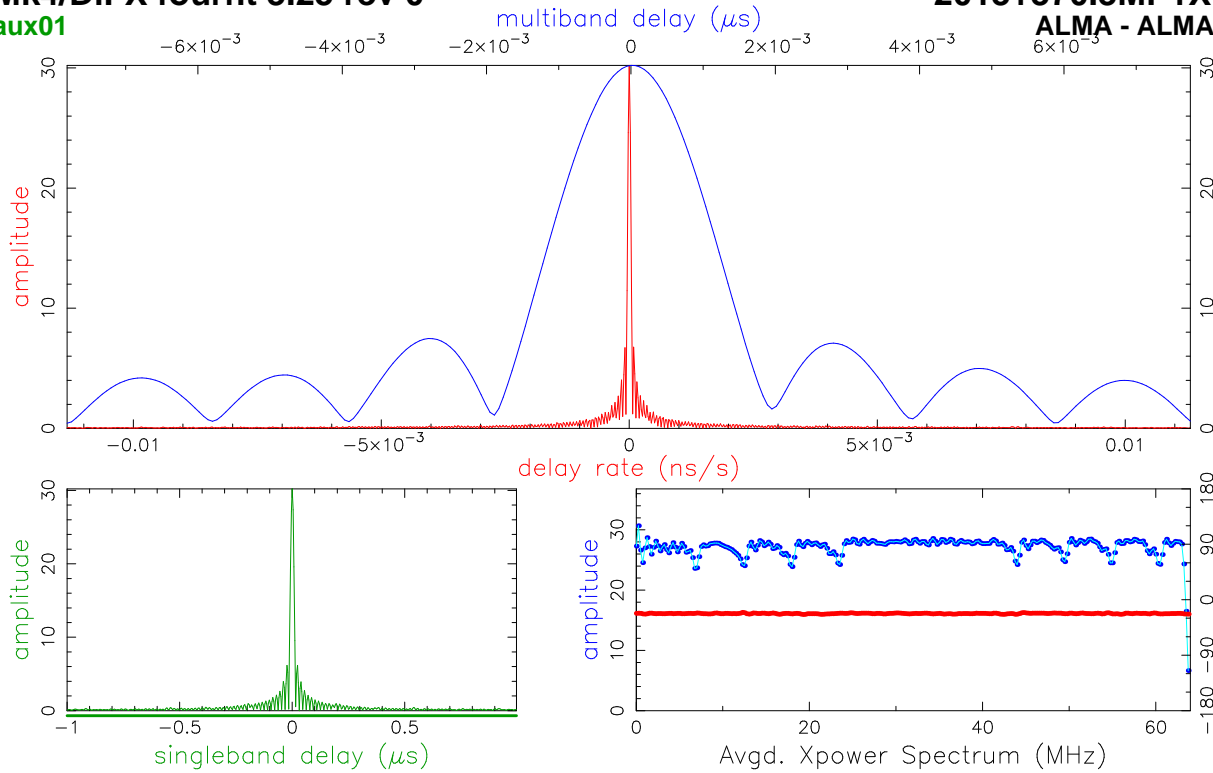
ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X32) 9999.999 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 A: az 19.3 el 26.3 pa -157.7 A: az 19.3 el 26.3 pa -157.7 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/No0308//AA..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AA.W.1.3MP1XE simultaneous interpolator

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AA

ALMA - ALMA, fgroup W, pol XY

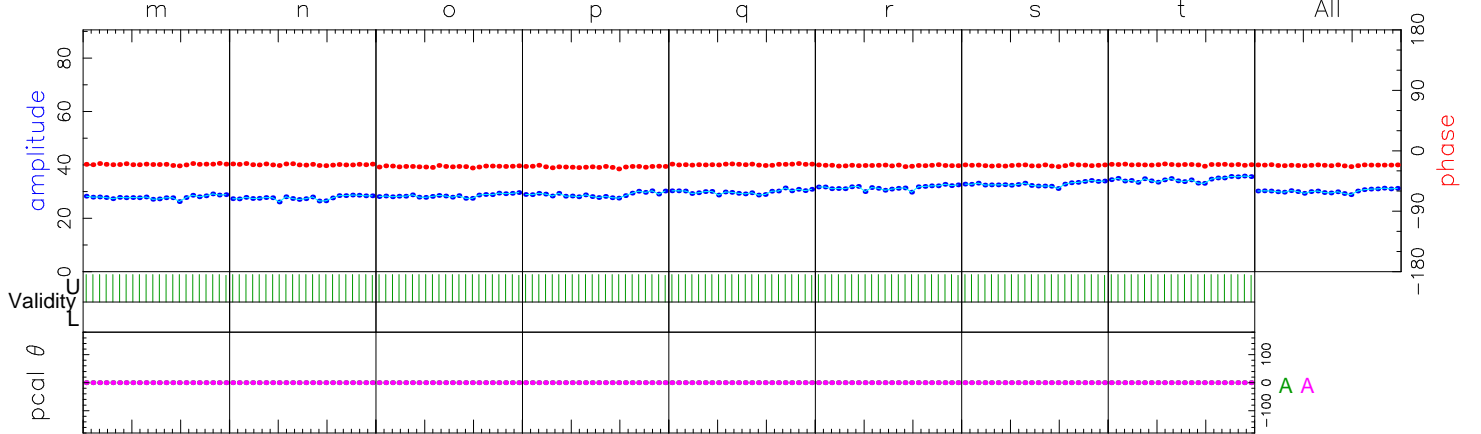


Fringe quality 9

SNR 1108.5  
 Int time 179.993  
 Amp 30.214  
 Phase -21.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000086  
 MBD 0.000020  
 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 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110935  
 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



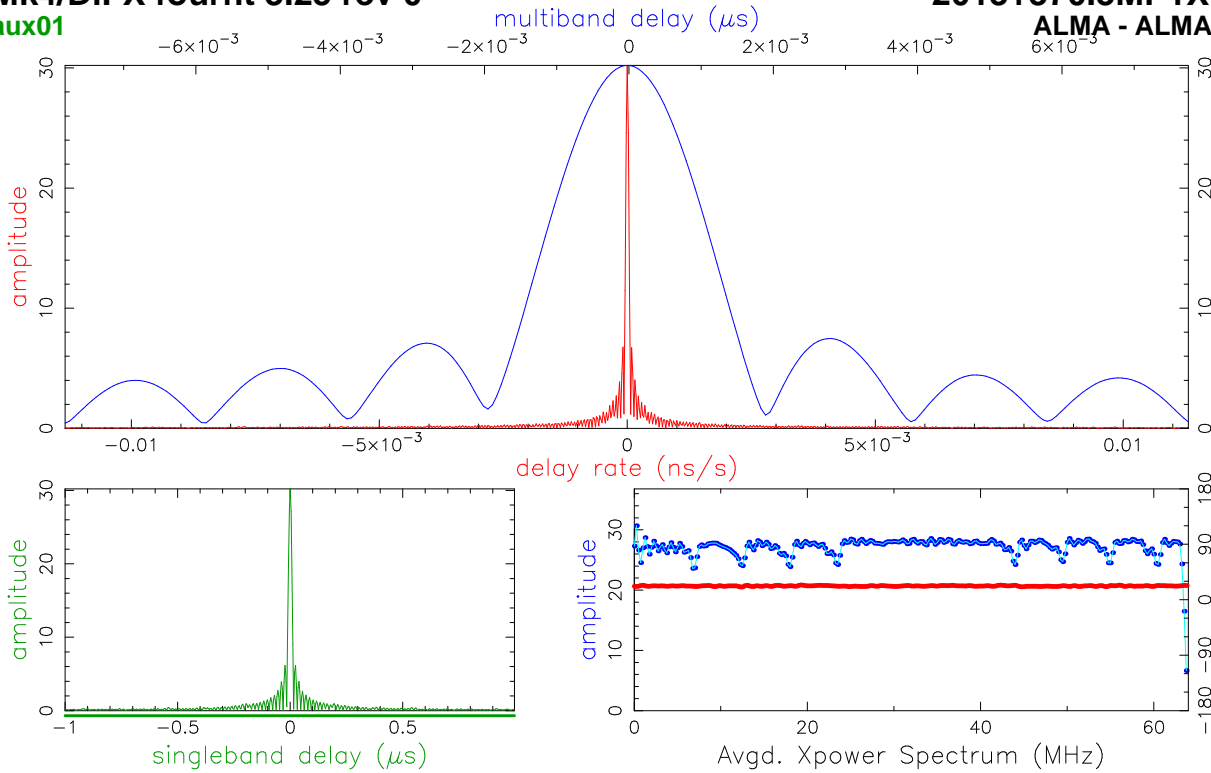
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-20.2	-20.5	-23.4	-23.9	-20.5	-21.9	-21.8	-20.7	Phase	-21.6	
	27.9	27.7	28.5	28.8	29.9	31.5	32.9	34.5	Ampl.	30.2	
	257.1	257.0	257.0	257.0	257.0	257.0	257.0	257.1	Sbd box	257.0	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
A	0	0	0	0	0	0	0	0	PC freqs		
A	0	0	0	0	0	0	0	0	PC freqs		
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
A	1000	1000	1000	1000	1000	1000	1000	1000			
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Tracks		
									Chan ids		
									Tracks		
Group delay (usec) (SBD)	2.05000000000E-05		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		2.05000E-05	+/- 9.8E-07	
Sband delay (usec)	8.57500000000E-05		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		8.57500E-05	+/- 7.8E-06	
Phase delay (usec)	-6.96962608295E-07		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-6.96963E-07	+/- 3.3E-09	
Delay rate (us/s)	4.25134571751E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		4.25135E-11	+/- 3.2E-11	
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-21.6	+/- 0.1	
ph/seg (deg)	RMS	Theor.	Amplitude	30.214 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	0.6	0.2	Search (1024X32)	30.207		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
ph/frq (deg)	2.1	0.4	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
amp/frq (%)	1.5	0.1	Inc. seg. avg.	30.214		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
	7.7	0.3	Inc. frq. avg.	30.220		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
A: az 19.3 el 26.3 pa -157.7		A: az 19.3 el 26.3 pa -157.7		u,v (fr/asec) 0.000 0.000						simultaneous interpolator	
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0308//AA..3MP1XE		Output file: /Exps/c241c/v2/3mm/1234/No0308//AA.W.15.3MP1XE							

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AA

ALMA - ALMA, fgroup W, pol XY

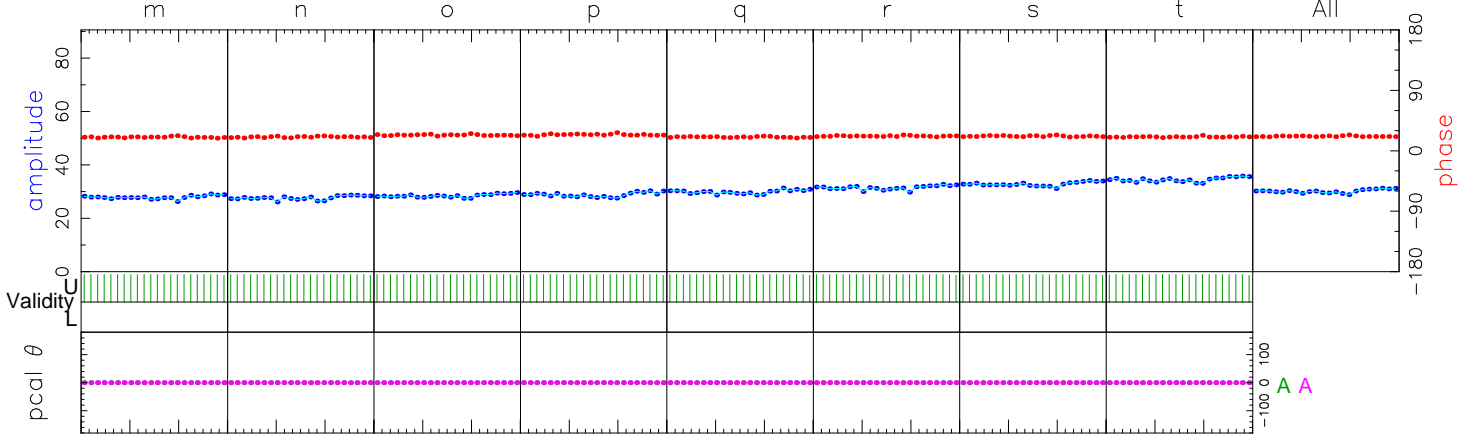


Fringe quality 9

SNR 1108.5  
 Int time 179.993  
 Amp 30.214  
 Phase 21.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000086  
 MBD -0.000020  
 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 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 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
	20.2	20.5	23.4	23.9	20.5	21.9	21.8	20.7	Phase	21.6
	27.9	27.7	28.5	28.8	29.9	31.5	32.9	34.5	Ampl.	30.2
	256.9	257.0	257.0	257.0	257.0	257.0	257.0	256.9	Sbd box	257.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
A	0	0	0	0	0	0	0	0	PC freqs	
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
A	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Tracks	
									Tracks	

Group delay (usec) (SBD) -2.050000000000E-05 Apriori delay (usec) 0.000000000000E+00 Resid mbdelay (usec) -2.050000E-05 +/- 9.8E-07  
 Sband delay (usec) -8.575000000000E-05 Apriori clock (usec) 0.000000000000E+00 Resid sbdelay (usec) -8.575000E-05 +/- 7.8E-06  
 Phase delay (usec) 6.96962608820E-07 Apriori clockrate (us/s) 0.000000000000E+00 Resid phdelay (usec) 6.96963E-07 +/- 3.3E-09  
 Delay rate (us/s) -4.25134571751E-11 Apriori rate (us/s) 0.000000000000E+00 Resid rate (us/s) -4.25135E-11 +/- 3.2E-11  
 Total phase (deg) 21.6 Apriori accel (us/s/s) 0.000000000000E+00 Resid phase (deg) 21.6 +/- 0.1

RMS Theor. Amplitude 30.214 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.6 0.2 Search (1024X32) 30.207 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 2.1 0.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 1.5 0.1 Inc. seg. avg. 30.214 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 7.7 0.3 Inc. frq. avg. 30.220 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

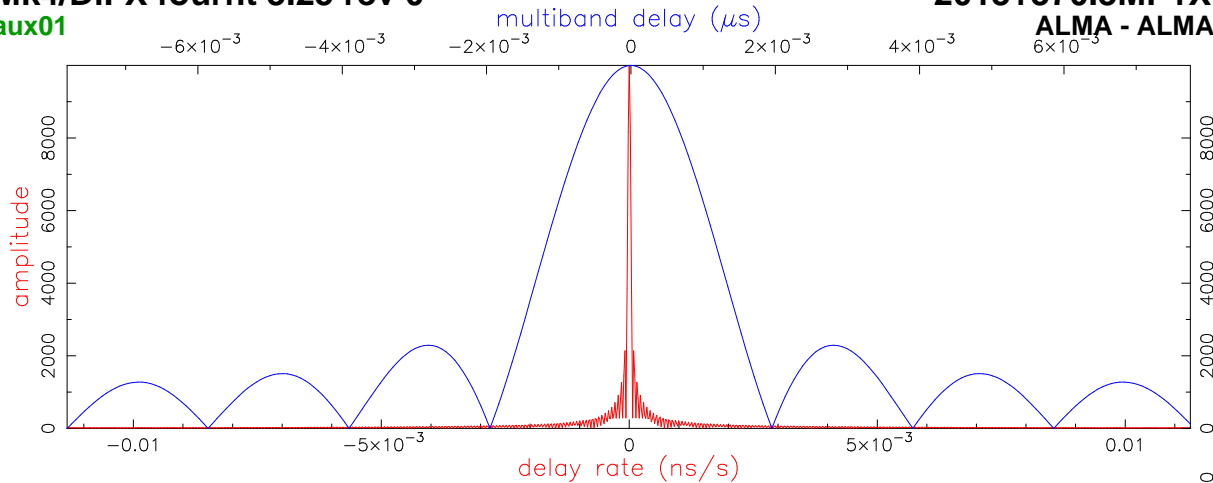
A: az 19.3 el 26.3 pa -157.7 A: az 19.3 el 26.3 pa -157.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AA..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AA.W.26.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

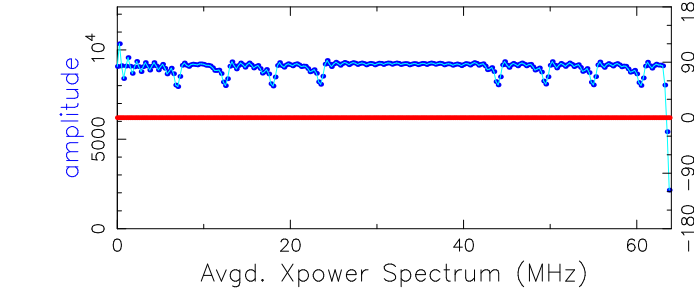
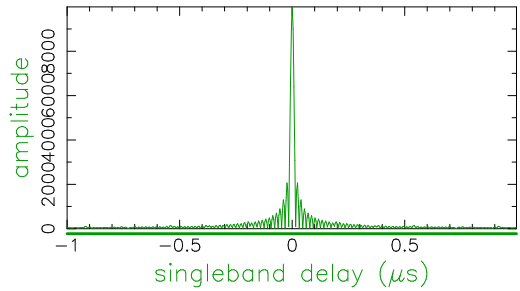
2013+370.3MP1XE, No0308, AA

ALMA - ALMA, fgroup W, pol YY



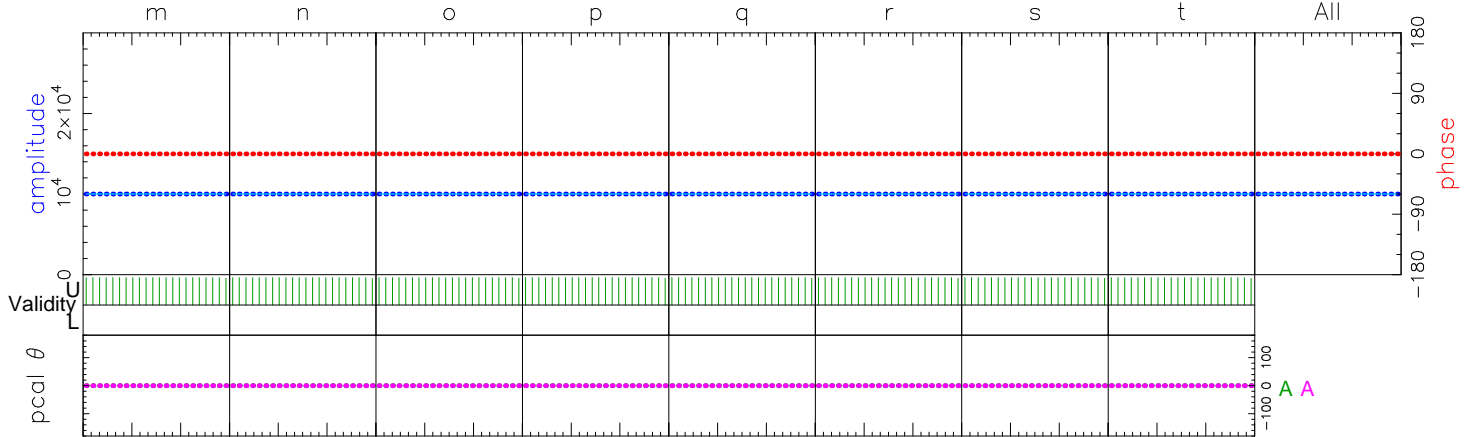
Fringe quality 9

SNR 366880.7  
 Int time 179.993  
 Amp 9999.999  
 Phase 0.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000000  
 MBD 0.000000  
 Fringe rate (Hz)  
 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110932  
 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
A	0	0	0	0	0	0	0	0	Ampl.	10000.0
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	257.0
A:A	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	PC phase	
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Mani PC	
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	PC amp	
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Tracks	
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Tracks	

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

ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X32) 9999.999 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 A: az 19.3 el 26.3 pa -157.7 A: az 19.3 el 26.3 pa -157.7 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/No0308//AA..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AA.W.6.3MP1XE simultaneous interpolator

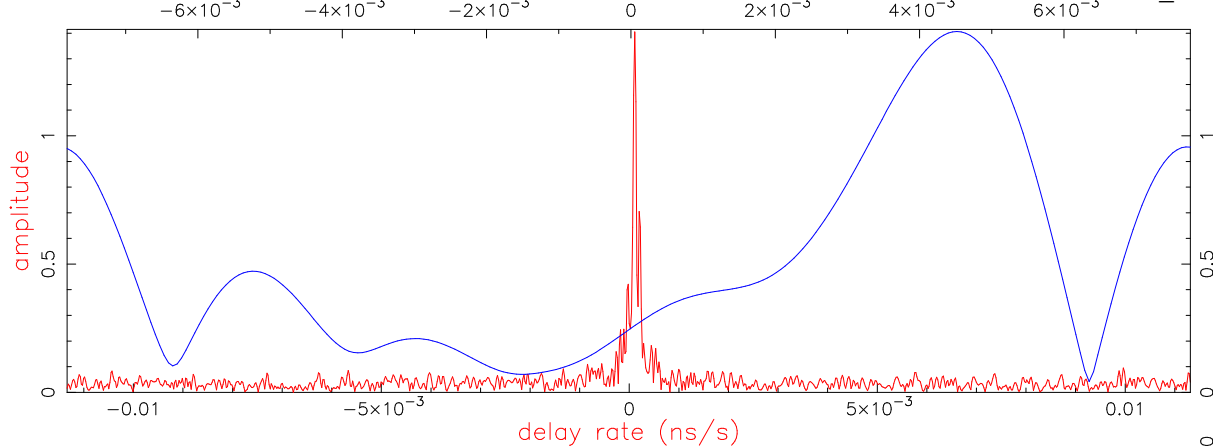
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ab

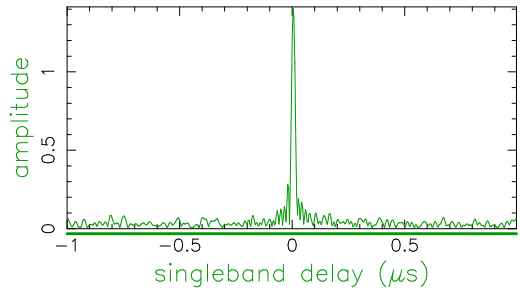
ALMA - VLBA\_BR, fgroup W, pol YR

multiband delay ( $\mu$ s)

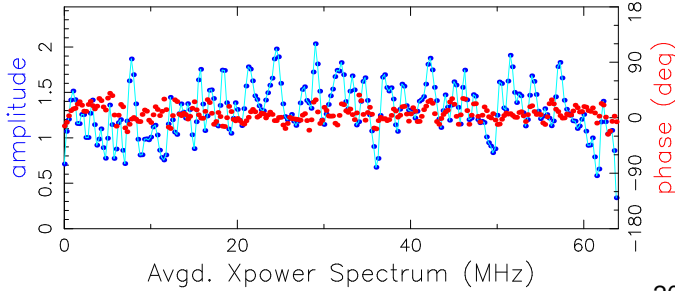


Fringe quality 4

SNR 51.9  
 Int time 179.801  
 Amp 1.415  
 Phase 10.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004953  
 MBD 0.004574  
 Fringe rate (Hz) 0.008652  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

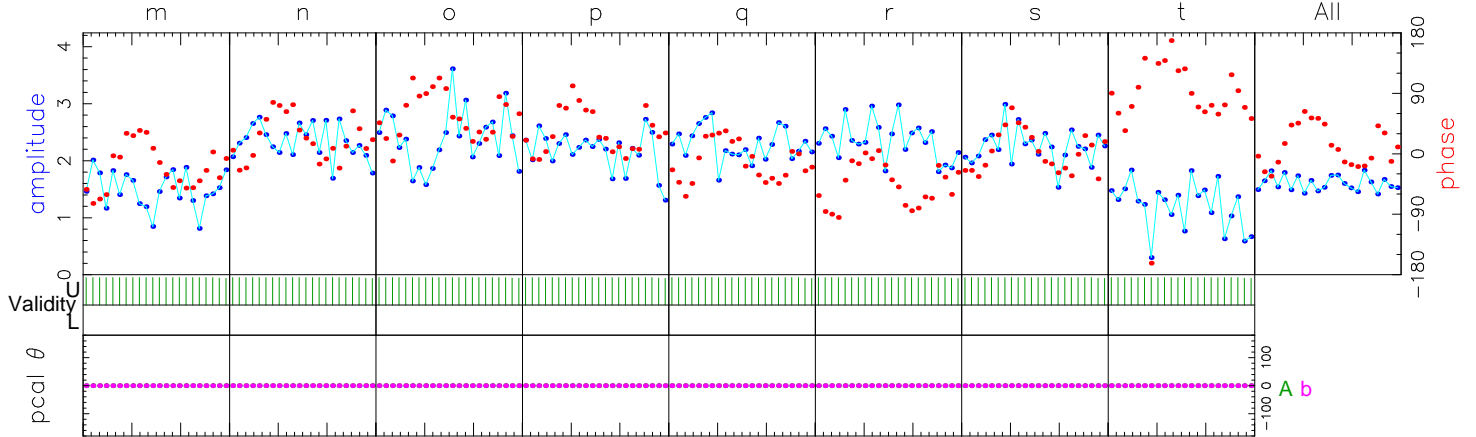


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110934  
 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
	-23.5	21.8	53.3	33.3	-13.0	-46.4	3.7	91.6	Phase	10.7
	1.3	2.0	2.0	1.9	2.0	2.0	2.0	1.0	Ampl.	1.8
	260.2	258.2	257.9	258.1	258.0	258.1	258.8	260.6	Sbd box	258.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
b	0	0	0	0	0	0	0	0	PC freqs	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-5.37419687019E+03	Apriori delay (usec)	-5.37420144375E+03	Resid mbdelay (usec)	4.57356E-03	+/-	2.1E-05
Sband delay (usec)	-5.37419649125E+03	Apriori clock (usec)	-2.1120835E+03	Resid sbdelay (usec)	4.95250E-03	+/-	1.7E-04
Phase delay (usec)	-5.37420144341E+03	Apriori clockrate (us/s)	-5.8727285E-07	Resid phdelay (usec)	3.45775E-07	+/-	7.1E-08
Delay rate (us/s)	-3.73956548213E-01	Apriori rate (us/s)	-3.73956648651E-01	Resid rate (us/s)	1.00438E-07	+/-	6.8E-10
Total phase (deg)	-120.7	Apriori accel (us/s/s)	-6.00484800075E-05	Resid phase (deg)	10.7	+/-	2.2

ph/seg (deg)	29.3	Theor.	5.2	Amplitude	1.415 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	16.2	Search (1024X32)	1.340	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	48.4	Inc. seg. avg.	1.599	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	36.5	Inc. frq. avg.	1.763	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

A: az 19.3 el 26.3 pa -157.7      b: az 72.6 el 36.8 pa -53.2      u,v (fr/asec) 2623.080 -11595.798      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ab..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ab.W.12.3MP1XE

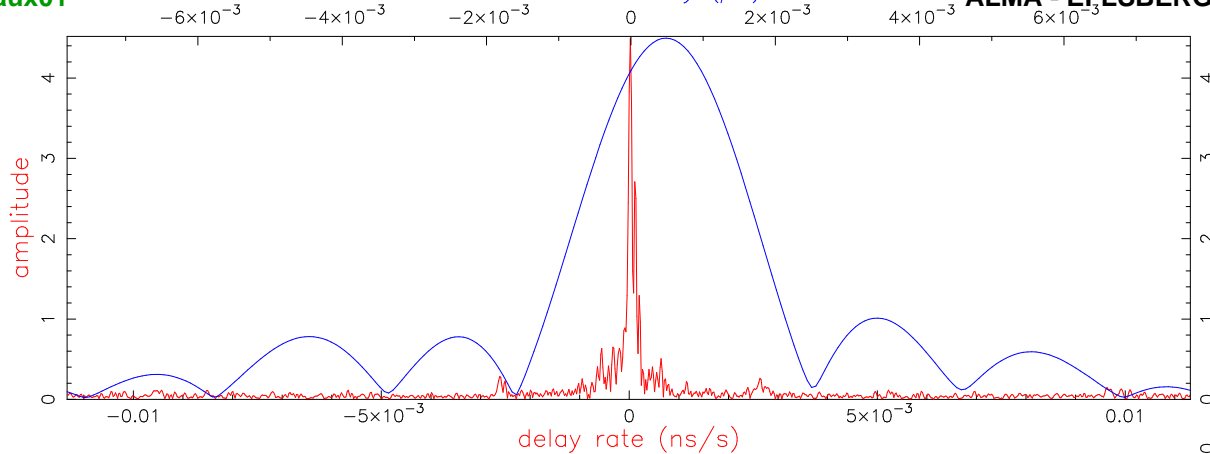
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AB

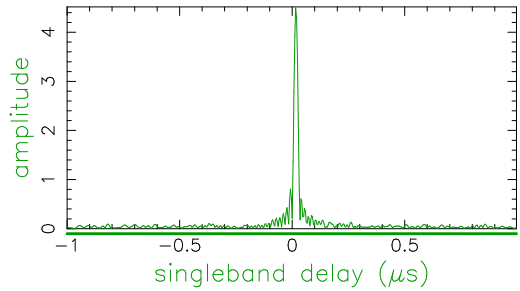
ALMA - EFLSBERG, fgroup W, pol YR

multiband delay ( $\mu$ s)

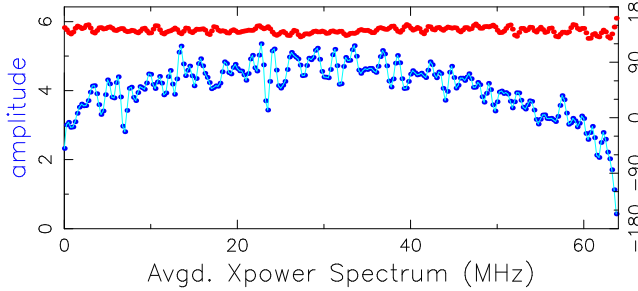


Fringe quality 6

SNR 165.8  
 Int time 179.964  
 Amp 4.518  
 Phase -34.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.016538  
 MBD 0.000510  
 Fringe rate (Hz) 0.001811  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

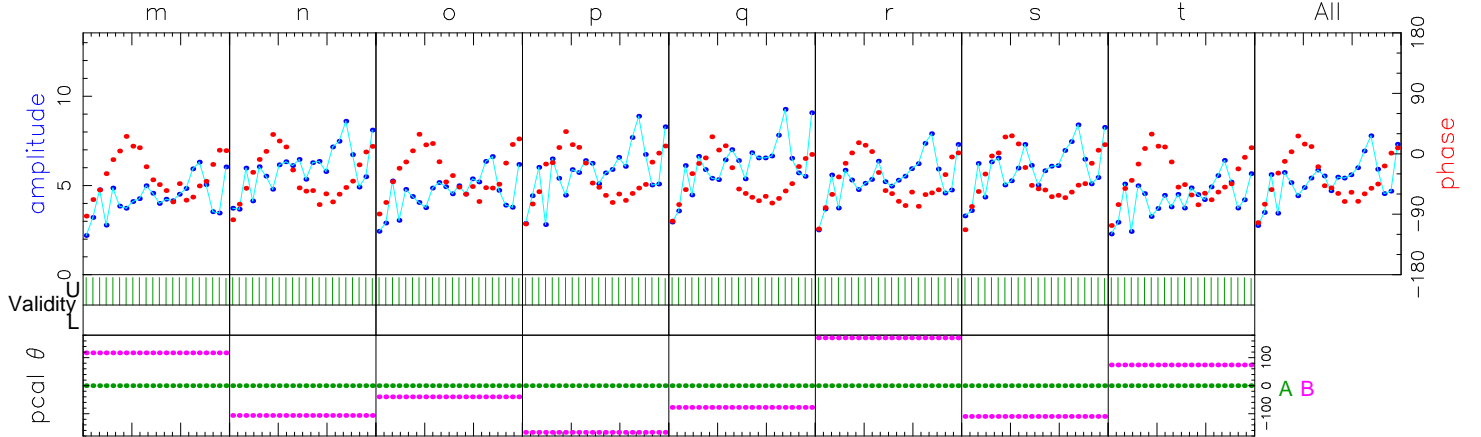


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110934  
 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
	-32.1	-33.8	-28.2	-33.0	-37.2	-40.1	-31.4	-34.9	Phase	-34.0
	3.7	5.0	3.9	4.9	5.3	4.6	5.0	3.7	Ampl.	4.5
	263.0	261.3	260.7	261.0	260.8	260.9	260.9	262.3	Sbd box	261.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
B	0	0	0	0	0	0	0	0	PC freqs	
A:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:B	0:118	0:-106	0:-40	0:-167	0:-77	0:171	0:-110	0:74	Mani PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-8.93727207610E+03	Apriori delay (usec)	-8.93728821069E+03	Resid mbdelay (usec)	5.09581E-04	+/-	6.5E-06
Sband delay (usec)	-8.93727167294E+03	Apriori clock (usec)	-2.0720437E+03	Resid sbdelay (usec)	1.65378E-02	+/-	5.2E-05
Phase delay (usec)	-8.93728821178E+03	Apriori clockrate (us/s)	1.7870709E-07	Resid phdelay (usec)	-1.09615E-06	+/-	2.2E-08
Delay rate (us/s)	1.04681734554E+00	Apriori rate (us/s)	1.04681732452E+00	Resid rate (us/s)	2.10229E-08	+/-	2.1E-10
Total phase (deg)	-202.6	Apriori accel (us/s/s)	-4.27528409017E-05	Resid phase (deg)	-34.0	+/-	0.7

ph/seg (deg)	34.1	1.6	Search (1024X32)	4.494	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	31.1	2.8	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)	3.9	1.0	Inc. seg. avg.	5.300	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 (%)	13.1	1.7	Inc. frq. avg.	4.504	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7      B: az 271.2 el 50.7 pa 52.9      u,v (fr/asec) -7585.086 -10689.398      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//AB..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//AB.W.13.3MP1XE

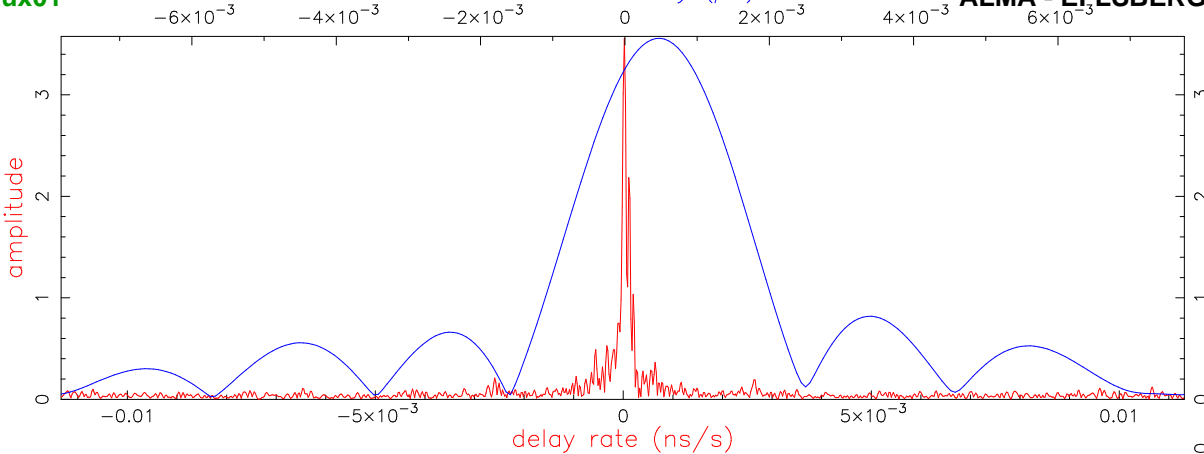
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AB

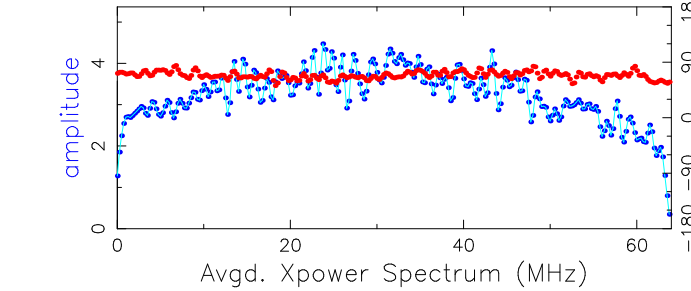
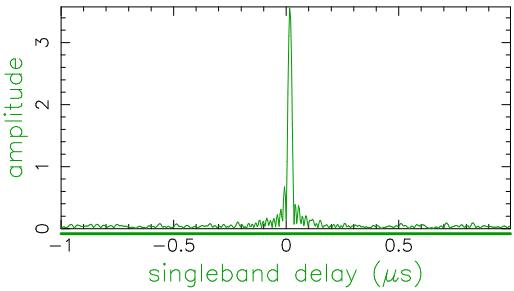
ALMA - EFLSBERG, fgroup W, pol XR

multiband delay ( $\mu$ s)



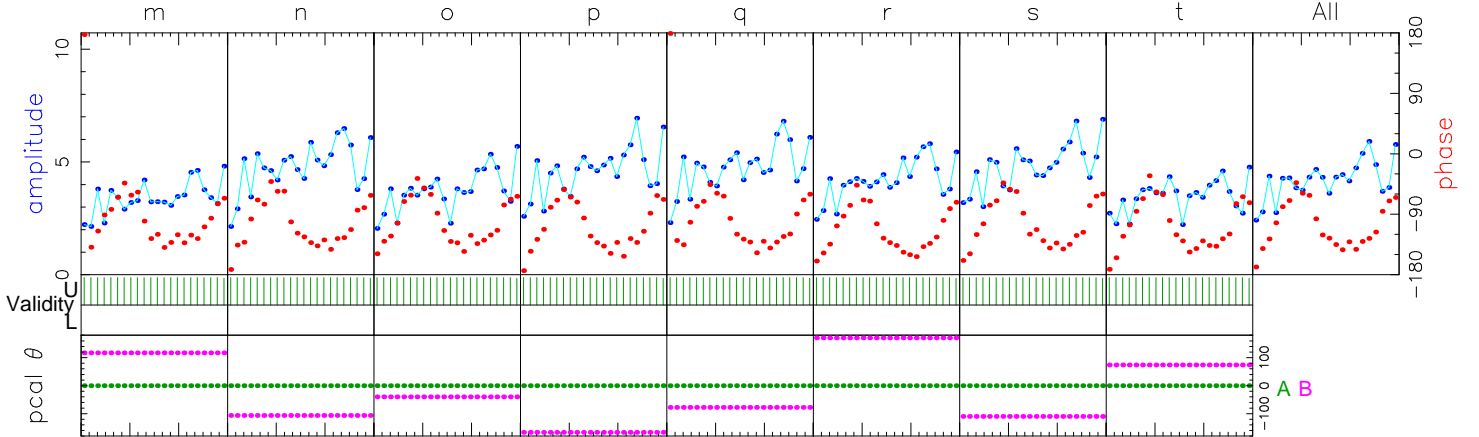
Fringe quality 6

SNR 131.2  
 Int time 179.964  
 Amp 3.576  
 Phase -106.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.016578  
 MBD 0.000497  
 Fringe rate (Hz) 0.001758  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110936  
 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
	-103.3	-104.5	-100.2	-109.9	-106.4	-114.8	-102.7	-106.2	Phase	-106.1
	2.9	4.1	3.2	3.9	4.0	3.6	4.0	2.8	Ampl.	3.6
	263.1	261.2	260.8	261.0	260.8	260.8	260.9	262.5	Sbd box	261.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
B	0	0	0	0	0	0	0	0	PC freqs	
A:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:B	0:118	0:-106	0:-40	0:-167	0:-77	0:171	0:-110	0:74	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-8.93727208870E+03	Apriori delay (usec)	-8.93728821069E+03	Resid mbdelay (usec)	4.96987E-04	+/-	8.3E-06
Sband delay (usec)	-8.93727163294E+03	Apriori clock (usec)	-2.0720437E+03	Resid sbdelay (usec)	1.65778E-02	+/-	6.6E-05
Phase delay (usec)	-8.93728821411E+03	Apriori clockrate (us/s)	1.7870709E-07	Resid phdelay (usec)	-3.42196E-06	+/-	2.8E-08
Delay rate (us/s)	1.04681734492E+00	Apriori rate (us/s)	1.04681732452E+00	Resid rate (us/s)	2.04065E-08	+/-	2.7E-10
Total phase (deg)	-274.8	Apriori accel (us/s/s)	-4.27528409017E-05	Resid phase (deg)	-106.1	+/-	0.9

ph/seg (deg) 33.8 2.0 Search (1024X32) 3.552 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 29.8 3.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 4.9 1.2 Inc. seg. avg. 4.207 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 13.5 2.2 Inc. frq. avg. 3.566 Data rate(Mb/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 A: az 19.3 el 26.3 pa -157.7 B: az 271.2 el 50.7 pa 52.9 u,v (fr/asec) -7585.086 -10689.398 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/No0308//AB..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AB.W.22.3MP1XE

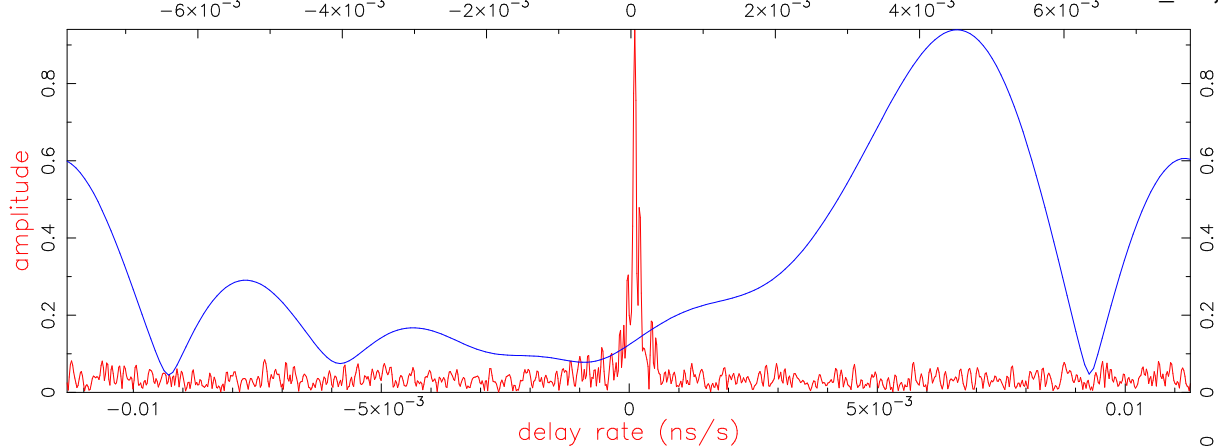
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ab

ALMA - VLBA\_BR, fgroup W, pol XR

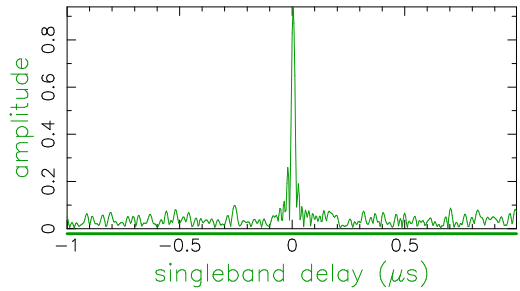
multiband delay ( $\mu$ s)



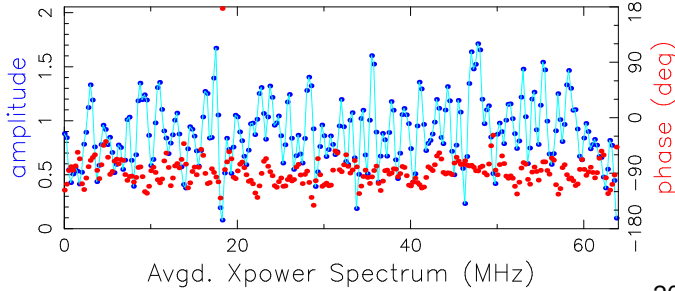
Fringe quality 5

SNR 34.5  
 Int time 179.801  
 Amp 0.940  
 Phase -91.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004349  
 MBD 0.004540  
 Fringe rate (Hz)  
 0.008687  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

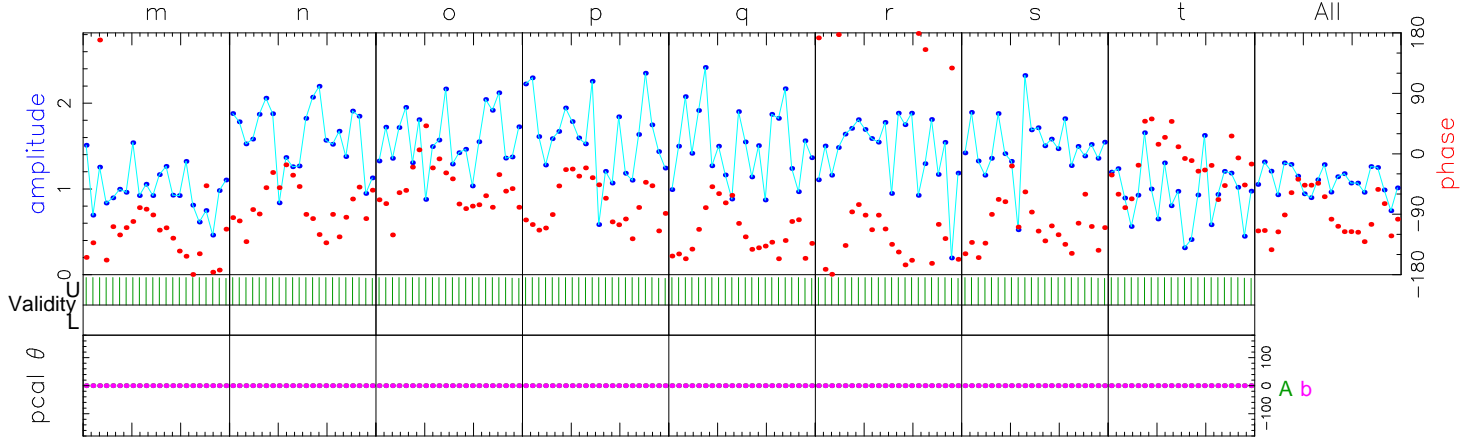
Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110936  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



delay rate (ns/s)



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-127.3	-81.3	-52.2	-71.6	-120.2	-139.3	-106.6	-11.1	Phase	-91.5
	0.8	1.4	1.3	1.3	1.3	1.1	1.2	0.7	Ampl.	1.2
	260.2	258.2	257.6	258.3	258.0	258.0	258.7	260.5	Sbd box	258.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
b	0	0	0	0	0	0	0	0	PC freqs	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-5.37419690423E+03	Apriori delay (usec)	-5.37420144375E+03	Resid mbdelay (usec)	4.53953E-03	+/-	3.1E-05
Sband delay (usec)	-5.37419709450E+03	Apriori clock (usec)	-2.1120835E+03	Resid sbdelay (usec)	4.34925E-03	+/-	2.5E-04
Phase delay (usec)	-5.37420144671E+03	Apriori clockrate (us/s)	-5.8727285E-07	Resid phdelay (usec)	-2.95066E-06	+/-	1.1E-07
Delay rate (us/s)	-3.73956547804E-01	Apriori rate (us/s)	-3.73956648651E-01	Resid rate (us/s)	1.00846E-07	+/-	1.0E-09
Total phase (deg)	-222.9	Apriori accel (us/s/s)	-6.00484800075E-05	Resid phase (deg)	-91.5	+/-	3.3

ph/seg (deg)	RMS 31.6	Theor. 7.8	Amplitude 0.940 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	23.2	13.6	Search (1024X32) 0.898	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	46.8	4.7	Interp. 0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	33.4	8.2	Inc. seg. avg. 1.087	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		ion window (TEC)	0.00	0.00
			Inc. frq. avg. 1.155	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

A: az 19.3 el 26.3 pa -157.7      b: az 72.6 el 36.8 pa -53.2      u,v (fr/asec) 2623.080 -11595.798      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ab..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ab.W.23.3MP1XE



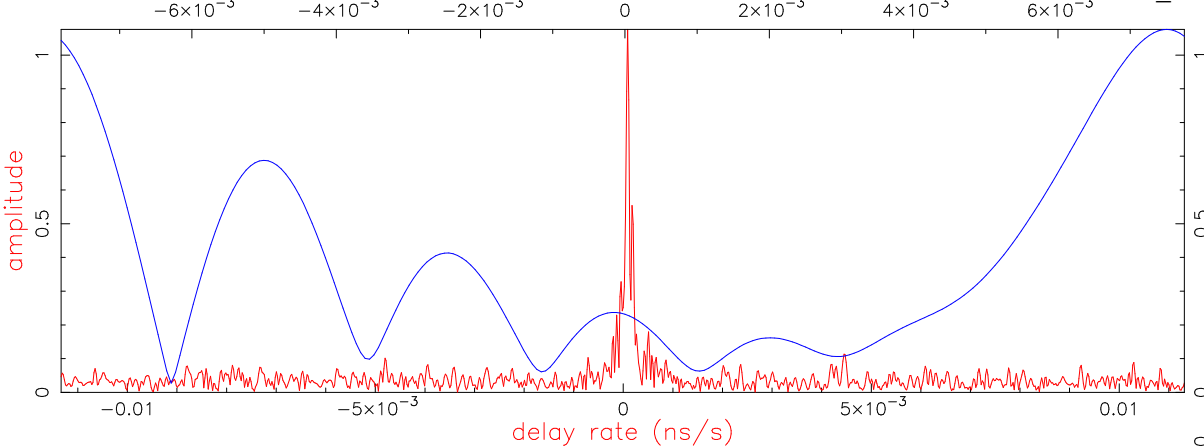
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ab

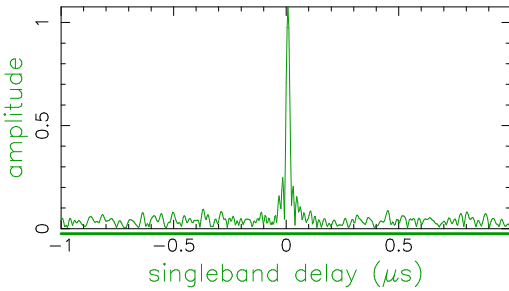
ALMA - VLBA\_BR, fgroup W, pol YL

multiband delay ( $\mu$ s)

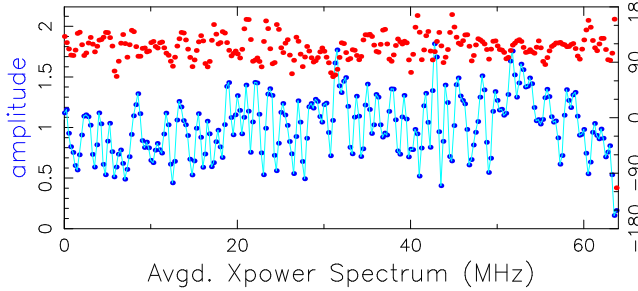


Fringe quality 5

SNR 39.5  
Int time 179.802  
Amp 1.076  
Phase 117.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.007775  
MBD 0.007504  
Fringe rate (Hz) 0.008562  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

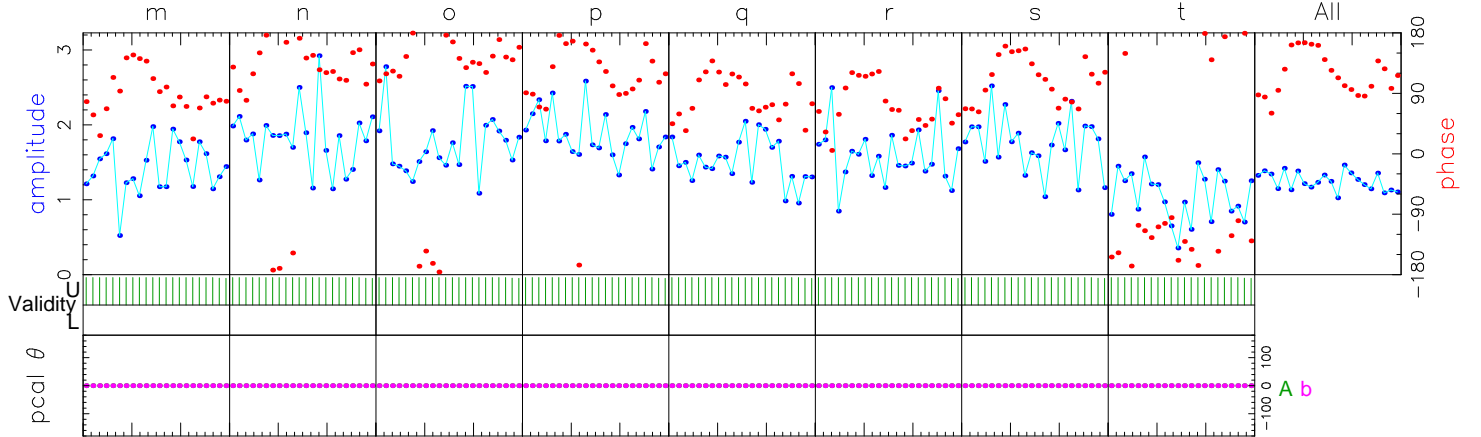


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 092000.00  
Stop 092300.22  
FRT 092130.00  
Corr/FF/build  
2024:352:180659  
2025:041:110938  
2024:113:095956  
RA & Dec (J2000)  
20h15m28.729786s  
+37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	87.3	140.5	149.2	123.9	84.4	69.4	109.7	-144.7	Phase	117.3
	1.2	1.5	1.6	1.5	1.3	1.3	1.5	0.9	Ampl.	1.3
	260.7	258.8	258.5	258.9	259.1	258.9	259.4	261.6	Sbd box	259.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
b	0	0	0	0	0	0	0	0	PC freqs	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.37419393931E+03	Apriori delay (usec)	-5.37420144375E+03	Resid mbdelay (usec)	7.50445E-03	+/-	2.8E-05
Sband delay (usec)	-5.37419366900E+03	Apriori clock (usec)	-2.1120835E+03	Resid sbdelay (usec)	7.77475E-03	+/-	2.2E-04
Phase delay (usec)	-5.37420143997E+03	Apriori clockrate (us/s)	-5.8727285E-07	Resid phdelay (usec)	3.78141E-06	+/-	9.4E-08
Delay rate (us/s)	-3.73956549254E-01	Apriori rate (us/s)	-3.73956648651E-01	Resid rate (us/s)	9.93965E-08	+/-	9.0E-10
Total phase (deg)	-14.1	Apriori accel (us/s/s)	-6.00484800075E-05	Resid phase (deg)	117.3	+/-	2.9

ph/seg (deg)	RMS 30.8	Theor. 6.8	Amplitude Search (1024X32)	1.076 +/- 0.027	1.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	19.6	11.9	Interp.	0.000	1.019	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	50.9	4.1	Inc. seg. avg.	1.242	1.242	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008
amp/frq (%)	32.3	7.2	Inc. frq. avg.	1.346	1.346	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

A: az 19.3 el 26.3 pa -157.7      b: az 72.6 el 36.8 pa -53.2      u,v (fr/asec) 2623.080 -11595.798      simultaneous interpolator

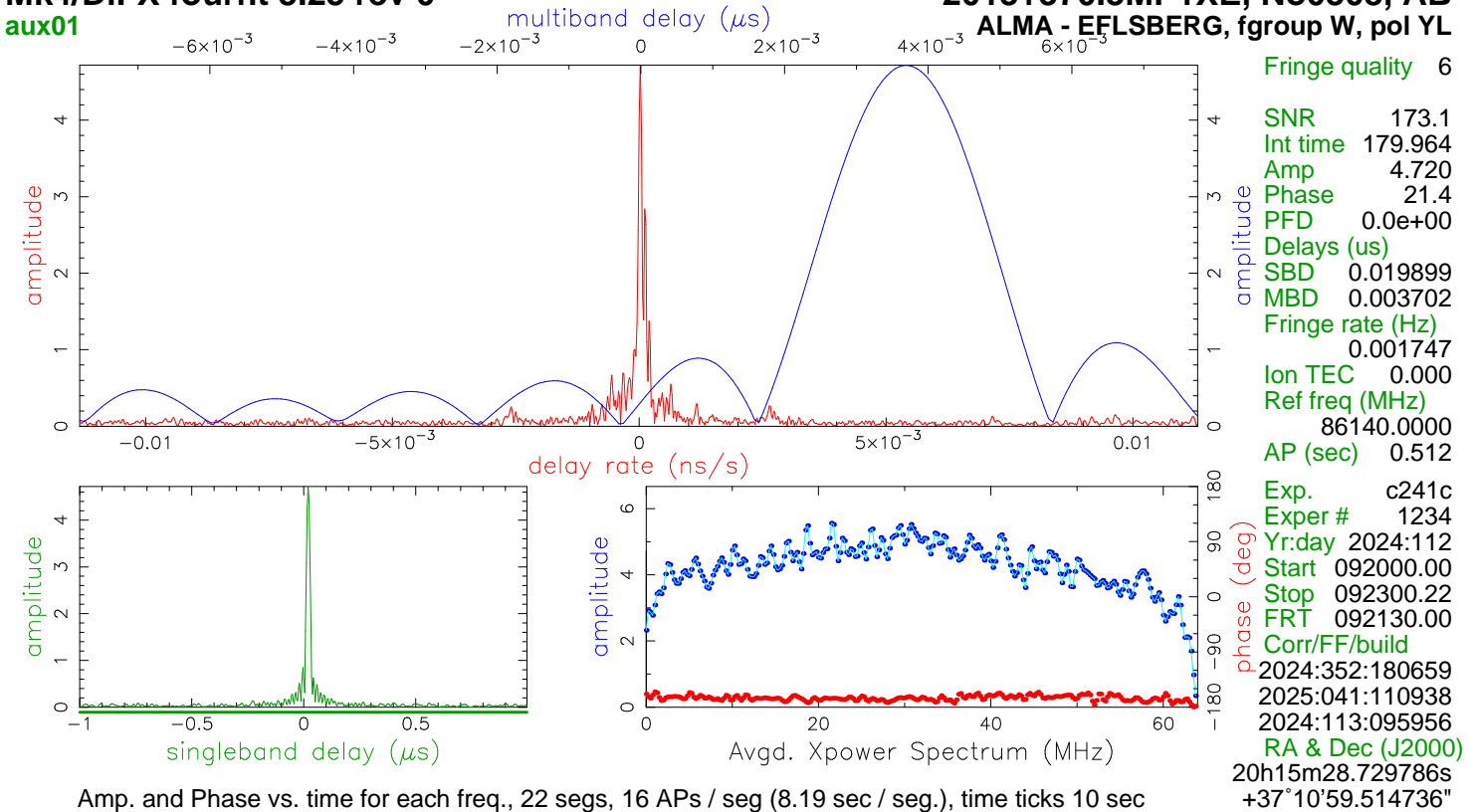
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ab..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ab.W.34.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

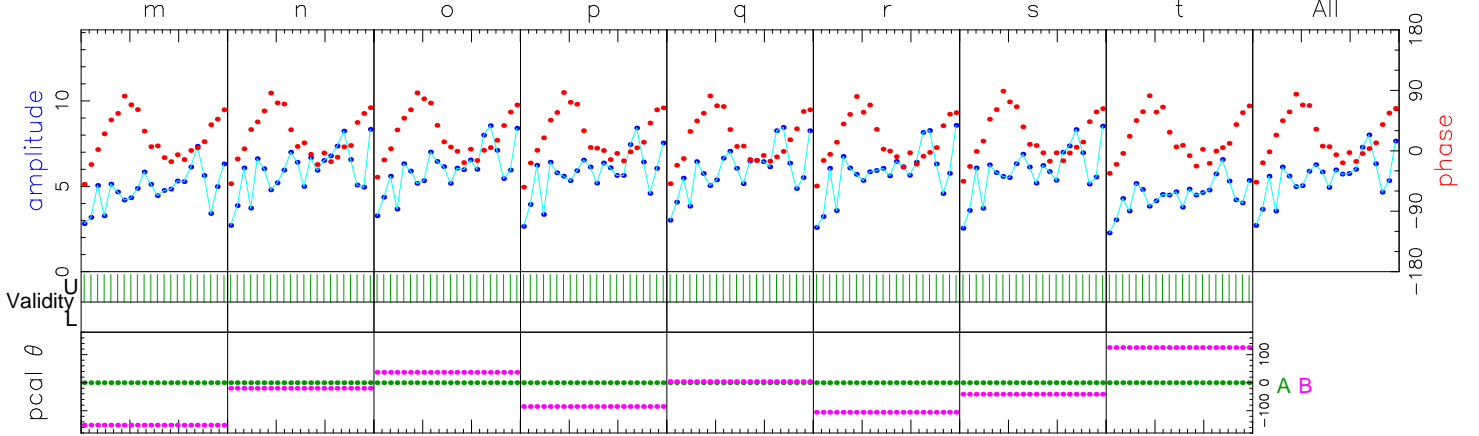
aux01

2013+370.3MP1XE, No0308, AB

ALMA - EFLSBERG, fgroup W, pol YL



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
20.1	21.6	25.2	22.7	19.4	17.7	23.4	20.6	20.6	Phase	21.4
4.2	5.0	5.1	4.9	5.0	4.9	5.0	3.8	3.8	Ampl.	4.7
263.4	262.3	261.6	261.6	261.7	261.9	262.0	263.1	263.1	Sbd box	262.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
B	0	0	0	0	0	0	0	0	PC freqs	
A:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:B	0:-151	0:-20	0:37	0:-85	0:4	0:-106	0:-41	0:125	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-8.93726888367E+03	Apriori delay (usec)	-8.93728821069E+03	Resid mbdelay (usec)	3.70202E-03	+/-	6.3E-06
Sband delay (usec)	-8.93726831169E+03	Apriori clock (usec)	-2.0720437E+03	Resid sbdelay (usec)	1.98990E-02	+/-	5.0E-05
Phase delay (usec)	-8.93728821000E+03	Apriori clockrate (us/s)	1.7870709E-07	Resid phdelay (usec)	6.89607E-07	+/-	2.1E-08
Delay rate (us/s)	1.04681734480E+00	Apriori rate (us/s)	1.04681732452E+00	Resid rate (us/s)	2.02860E-08	+/-	2.1E-10
Total phase (deg)	-147.3	Apriori accel (us/s/s)	-4.27528409017E-05	Resid phase (deg)	21.4	+/-	0.7

ph/seg (deg)	RMS 34.3	Theor. 1.6	Amplitude Search (1024X32)	4.720 +/- 0.027	4.624	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	31.7	2.7	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)	2.6	0.9	Inc. seg. avg.	5.580	5.580	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 (%)	9.1	1.6	Inc. frq. avg.	4.719	4.719	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7      B: az 271.2 el 50.7 pa 52.9      u,v (fr/asec) -7585.086 -10689.398      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//AB..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//AB.W.36.3MP1XE

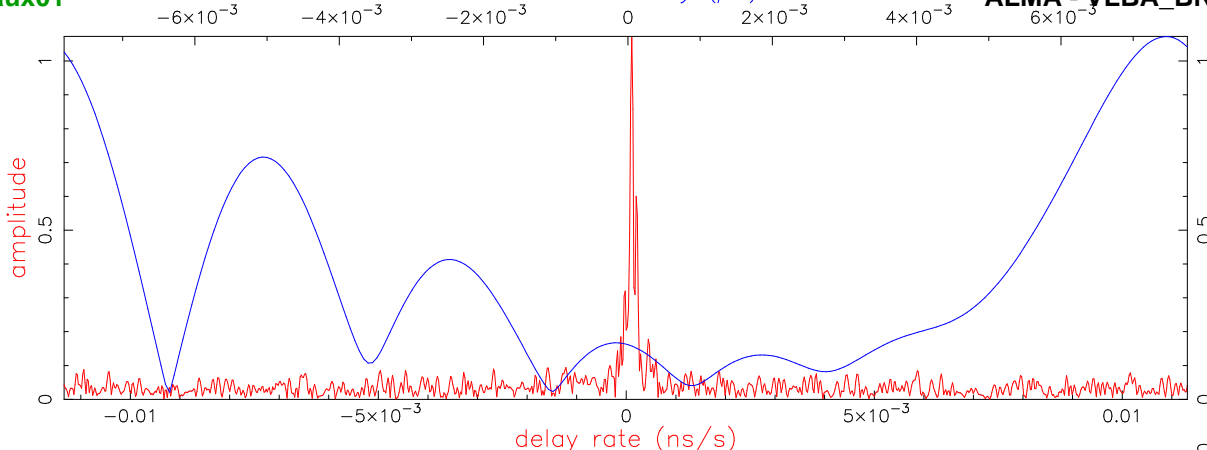
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ab

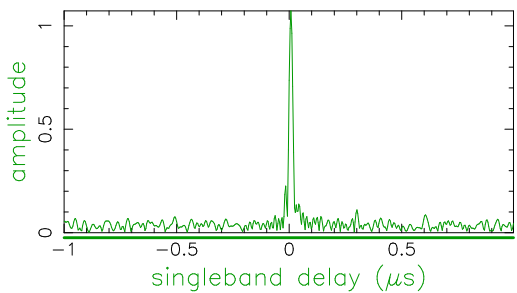
ALMA - VLBA\_BR, fgroup W, pol XL

multiband delay ( $\mu$ s)

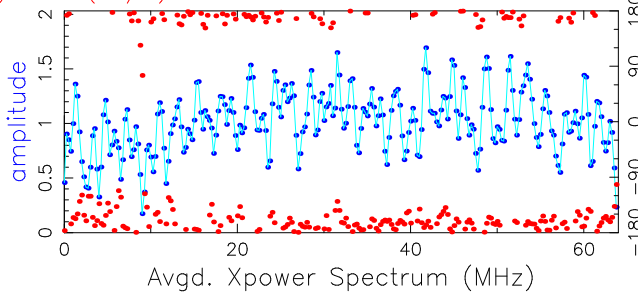


Fringe quality 5

SNR 39.3  
Int time 179.802  
Amp 1.073  
Phase -169.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.007556  
MBD 0.007444  
Fringe rate (Hz) 0.008672  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

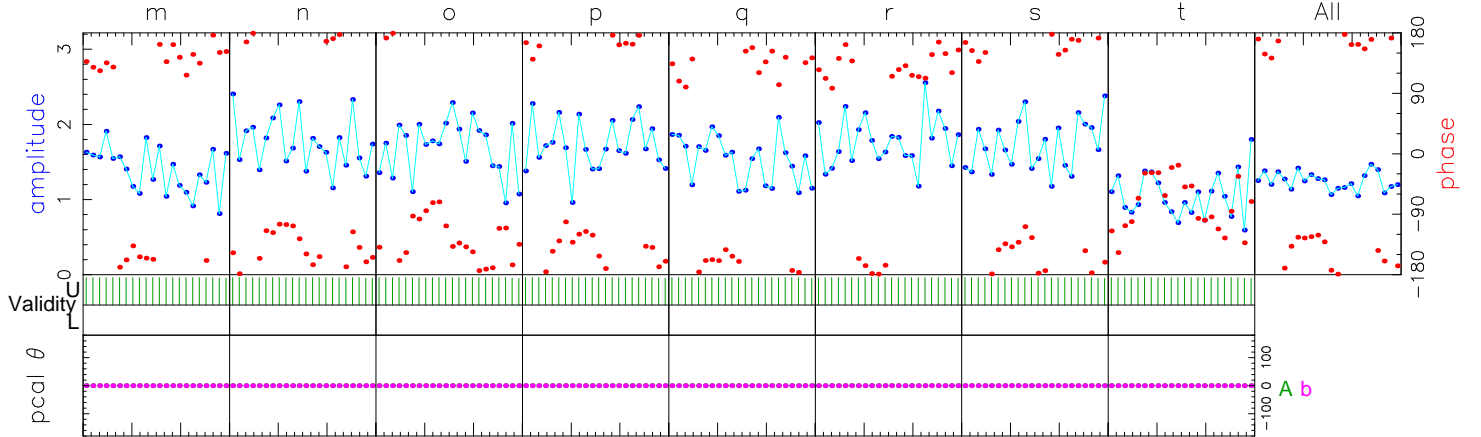


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 092000.00  
Stop 092300.22  
FRT 092130.00  
Corr/FF/build  
2024:352:180659  
2025:041:110932  
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
	161.3	-147.9	-134.8	-162.2	158.8	145.9	-171.3	-74.1	Phase	-169.3
	1.2	1.5	1.4	1.5	1.2	1.5	1.5	0.8	Ampl.	1.3
	260.6	259.0	258.6	258.6	259.0	259.0	259.5	261.7	Sbd box	258.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
b	0	0	0	0	0	0	0	0	PC freqs	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.37419399926E+03	Apriori delay (usec)	-5.37420144375E+03	Resid mbdelay (usec)	7.44450E-03	+/-	2.8E-05
Sband delay (usec)	-5.37419388725E+03	Apriori clock (usec)	-2.1120835E+03	Resid sbdelay (usec)	7.55650E-03	+/-	2.2E-04
Phase delay (usec)	-5.37420144922E+03	Apriori clockrate (us/s)	-5.8727285E-07	Resid phdelay (usec)	-5.46101E-06	+/-	9.4E-08
Delay rate (us/s)	-3.73956547977E-01	Apriori rate (us/s)	-3.73956648651E-01	Resid rate (us/s)	1.00673E-07	+/-	9.0E-10
Total phase (deg)	-300.8	Apriori accel (us/s/s)	-6.00484800075E-05	Resid phase (deg)	-169.3	+/-	2.9

ph/seg (deg)	RMS 30.6	Theor. 6.8	Amplitude Search (1024X32)	1.073 +/- 0.027	1.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	19.5	11.9	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)	49.4	4.1	Inc. seg. avg.	1.239	1.239	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	31.8	7.2	Inc. frq. avg.	1.326	1.326	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7      b: az 72.6 el 36.8 pa -53.2      u,v (fr/asec) 2623.080 -11595.798      simultaneous interpolator

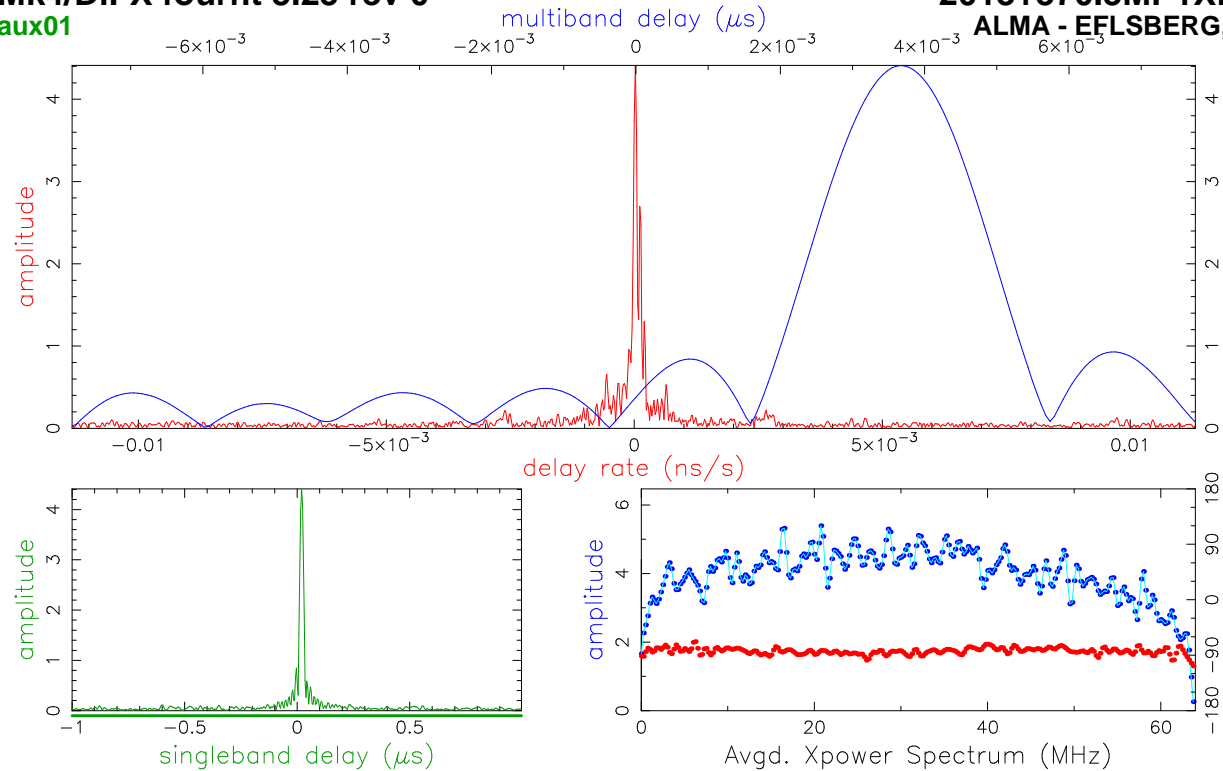
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ab..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ab.W.4.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AB

ALMA - EFLSBERG, fgroup W, pol XL

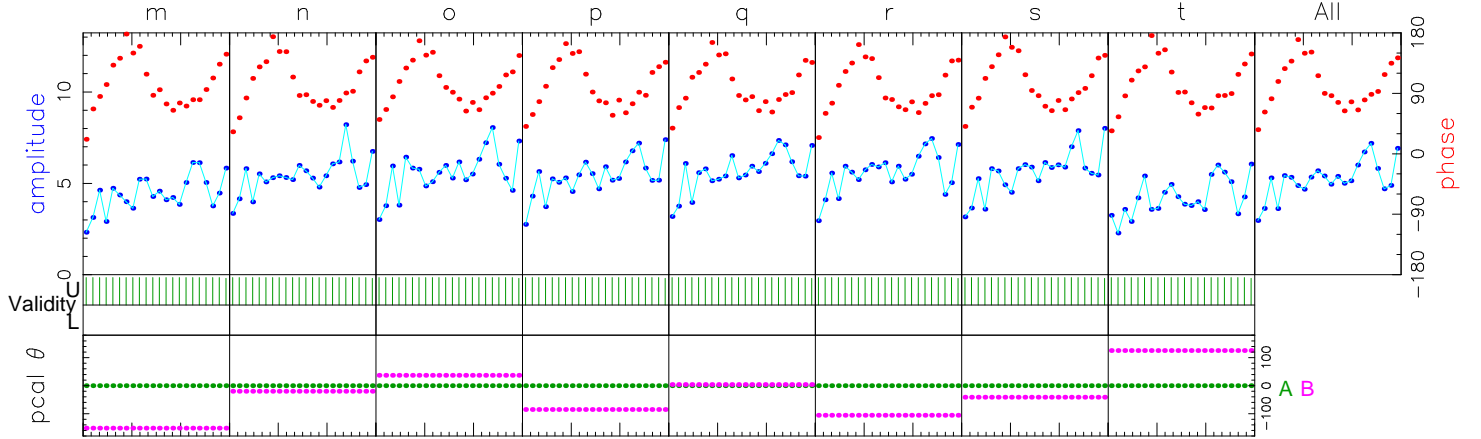


Fringe quality 6

SNR 161.9  
 Int time 179.964  
 Amp 4.412  
 Phase 103.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.019879  
 MBD 0.003682  
 Fringe rate (Hz) 0.001849  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110932  
 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
	104.8	103.9	104.8	101.2	101.8	99.4	105.7	103.8	Phase	103.1
	3.7	4.5	4.8	4.5	4.8	4.7	4.6	3.5	Ampl.	4.4
	263.7	262.3	261.6	261.6	261.7	261.8	262.0	263.1	Sbd box	262.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
B	0	0	0	0	0	0	0	0	PC freqs	
A:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:B	0:-151	0:-20	0:37	0:-85	0:4	0:-106	0:-41	0:125	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -8.93726890414E+03 Apriori delay (usec) -8.93728821069E+03 Resid mbdelay (usec) 3.68155E-03 +/- 6.7E-06  
 Sband delay (usec) -8.93726833194E+03 Apriori clock (usec) -2.0720437E+03 Resid sbdelay (usec) 1.98788E-02 +/- 5.3E-05  
 Phase delay (usec) -8.93728820736E+03 Apriori clockrate (us/s) 1.7870709E-07 Resid phdelay (usec) 3.32479E-06 +/- 2.3E-08  
 Delay rate (us/s) 1.04681734598E+00 Apriori rate (us/s) 1.04681732452E+00 Resid rate (us/s) 2.14636E-08 +/- 2.2E-10  
 Total phase (deg) -65.5 Apriori accel (us/s/s) -4.27528409017E-05 Resid phase (deg) 103.1 +/- 0.7

RMS Theor. Amplitude 4.412 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 34.3 1.7 Search (1024X32) 4.314 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 28.9 2.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 2.3 1.0 Inc. seg. avg. 5.223 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 11.0 1.7 Inc. frq. avg. 4.411 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

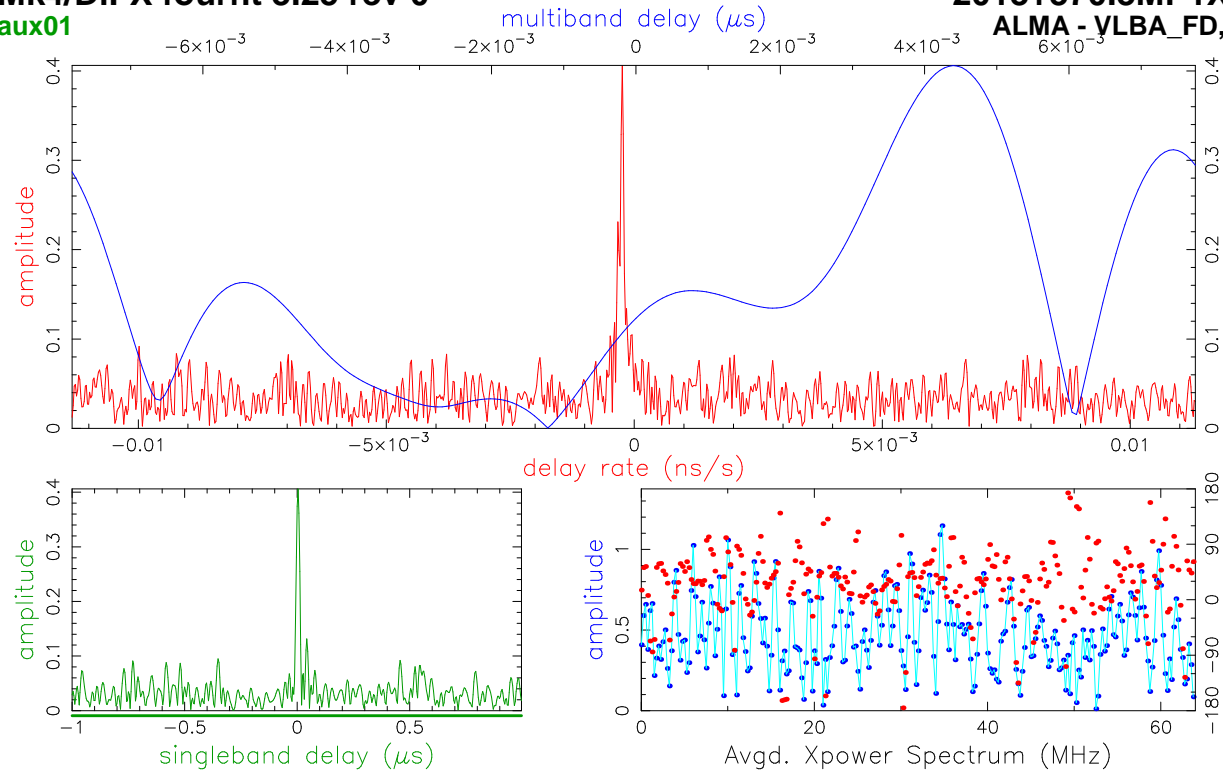
A: az 19.3 el 26.3 pa -157.7 B: az 271.2 el 50.7 pa 52.9 u,v (fr/asec) -7585.086 -10689.398 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AB..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AB.W.5.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Af

ALMA - VLBA\_FD, fgroup W, pol YR

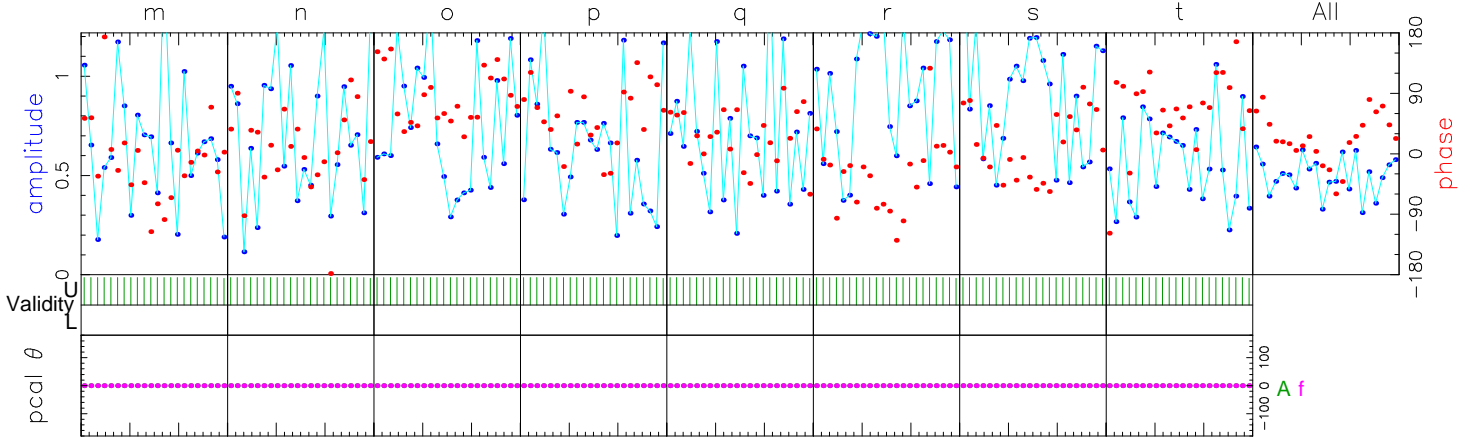


Fringe quality 8

SNR 14.9  
 Int time 179.986  
 Amp 0.406  
 Phase 24.3  
 PFD 1.0e-41  
 Delays (us)  
 SBD 0.003583  
 MBD 0.004383  
 Fringe rate (Hz)  
 -0.020742  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110933  
 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		
	-19.4	15.6	81.0	59.4	22.8	-35.1	8.9	76.5	Phase	24.3		
	0.4	0.5	0.6	0.5	0.5	0.6	0.6	0.4	Ampl.	0.5		
	260.1	258.5	257.9	258.4	257.9	257.6	258.4	260.6	Sbd box	257.9		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
A	0	0	0	0	0	0	0	0	PC freqs			
f	0	0	0	0	0	0	0	0	PC freqs			
A:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
A:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
f	1000	1000	1000	1000	1000	1000	1000	1000				
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids			
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Tracks			
Group delay (usec) (SBD)	-6.91776904233E+03		Apriori delay (usec)		-6.91777342494E+03		Resid mbdelay (usec)		4.38261E-03	+/- 7.3E-05		
Sband delay (usec)	-6.91776984219E+03		Apriori clock (usec)		-2.1075022E+03		Resid sbdelay (usec)		3.58275E-03	+/- 5.8E-04		
Phase delay (usec)	-6.91777342415E+03		Apriori clockrate (us/s)		-6.1051858E-08		Resid phdelay (usec)		7.83902E-07	+/- 2.5E-07		
Delay rate (us/s)	-4.81702620112E-01		Apriori rate (us/s)		-4.81702379313E-01		Resid rate (us/s)		-2.40799E-07	+/- 2.4E-09		
Total phase (deg)			Apriori accel (us/s/s)		-3.57666330802E-05		Resid phase (deg)		24.3	+/- 7.7		
	RMS	Theor.	Amplitude	0.406 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	36.7	18.0	Search (1024X32)	0.403		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	32.5	31.5	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	46.4	10.9	Inc. seg. avg.	0.476		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	37.3	19.0	Inc. frq. avg.	0.518		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
A: az 19.3 el 26.3 pa -157.7		f: az 65.6 el 42.1 pa -80.0		u, v (fr/asec) 3421.512 -8493.269				simultaneous interpolator				
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0308//Af..3MP1XE		Output file: /Exps/c241c/v2/3mm/1234/No0308//Af.W.10.3MP1XE								

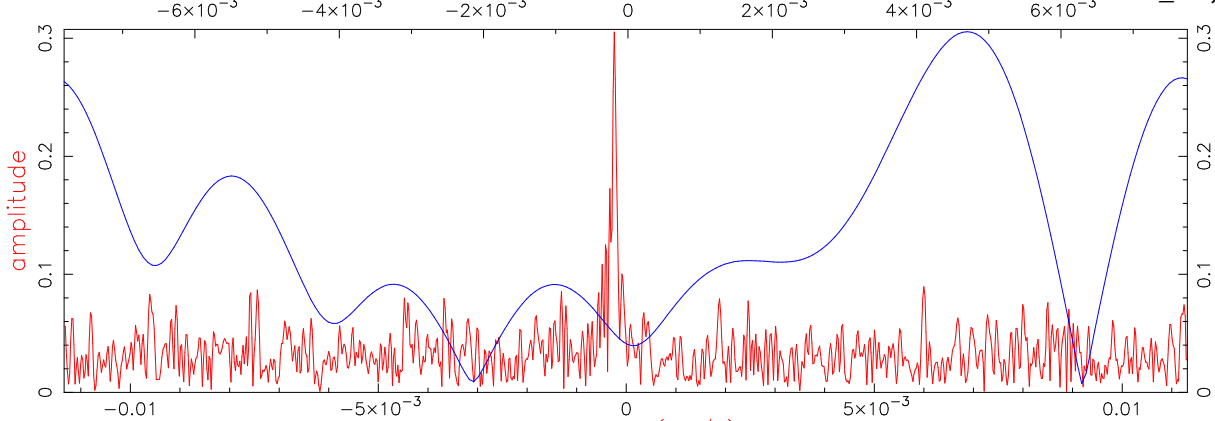
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Af

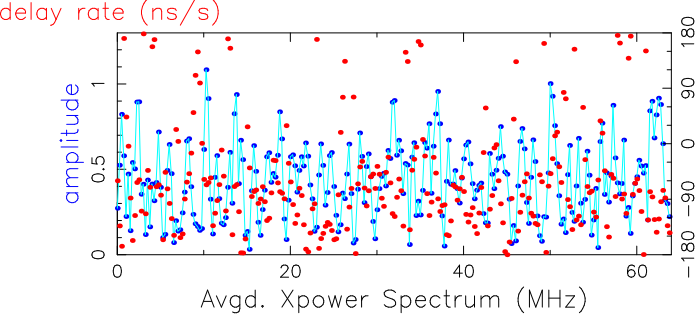
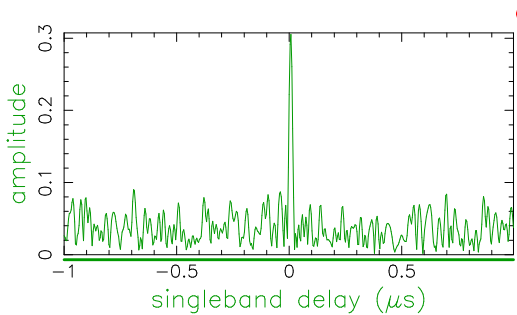
ALMA - VLBA\_FD, fgroup W, pol XR

multiband delay ( $\mu$ s)



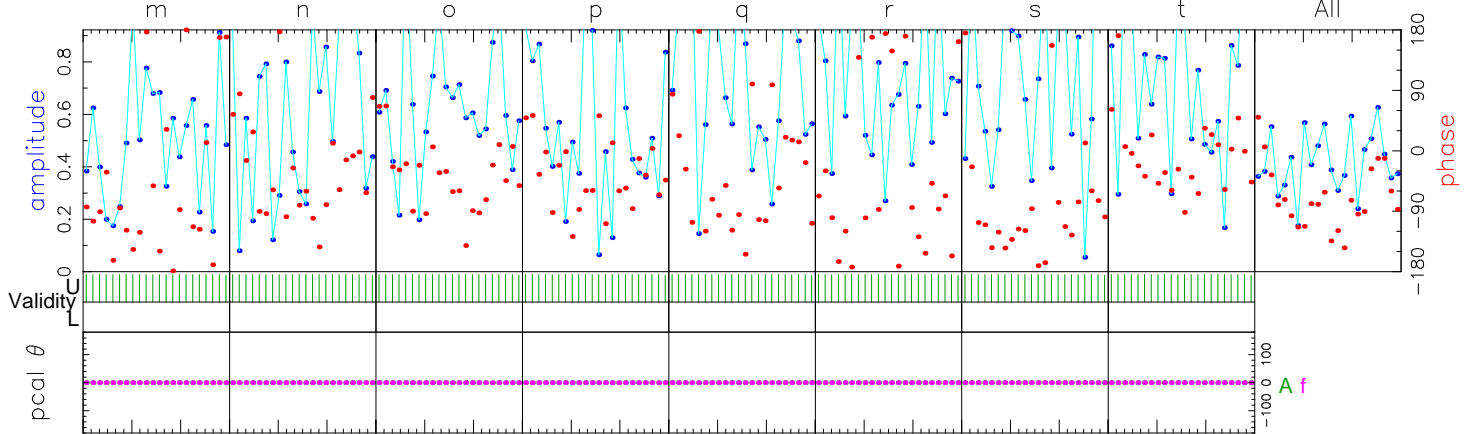
Fringe quality 9

SNR 11.3  
 Int time 179.986  
 Amp 0.307  
 Phase -68.6  
 PFD 4.0e-21  
 Delays (us)  
 SBD 0.006765  
 MBD 0.004650  
 Fringe rate (Hz)  
 -0.020244  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110936  
 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
	-133.7	-48.3	-35.4	-40.4	-59.2	-138.2	-109.4	-14.0	Phase	-68.6
	0.3	0.3	0.5	0.4	0.3	0.4	0.6	0.6	Ampl.	0.4
	260.1	258.3	257.8	258.4	259.1	258.0	259.3	260.2	Sbd box	258.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
A:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.91776877542E+03	Apriori delay (usec)	-6.91777342494E+03	Resid mbdelay (usec)	4.64952E-03	+/-	9.6E-05
Sband delay (usec)	-6.91776665994E+03	Apriori clock (usec)	-2.1075022E+03	Resid sbdelay (usec)	6.76500E-03	+/-	7.6E-04
Phase delay (usec)	-6.91777342715E+03	Apriori clockrate (us/s)	-6.1051858E-08	Resid phdelay (usec)	-2.21371E-06	+/-	3.3E-07
Delay rate (us/s)	-4.81702614326E-01	Apriori rate (us/s)	-4.81702379313E-01	Resid rate (us/s)	-2.35013E-07	+/-	3.1E-09
Total phase (deg)	-5.3	Apriori accel (us/s/s)	-3.57666330802E-05	Resid phase (deg)	-68.6	+/-	10.2

ph/seg (deg)	RMS 46.8	Theor. 23.8	Amplitude Search (1024X32)	0.295	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	52.3	41.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	51.8	14.4	Inc. seg. avg.	0.386	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 (%)	51.5	25.1	Inc. frq. avg.	0.416	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 f: az 65.6 el 42.1 pa -80.0 u,v (fr/asec) 3421.512 -8493.269 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Af..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Af.W.20.3MP1XE

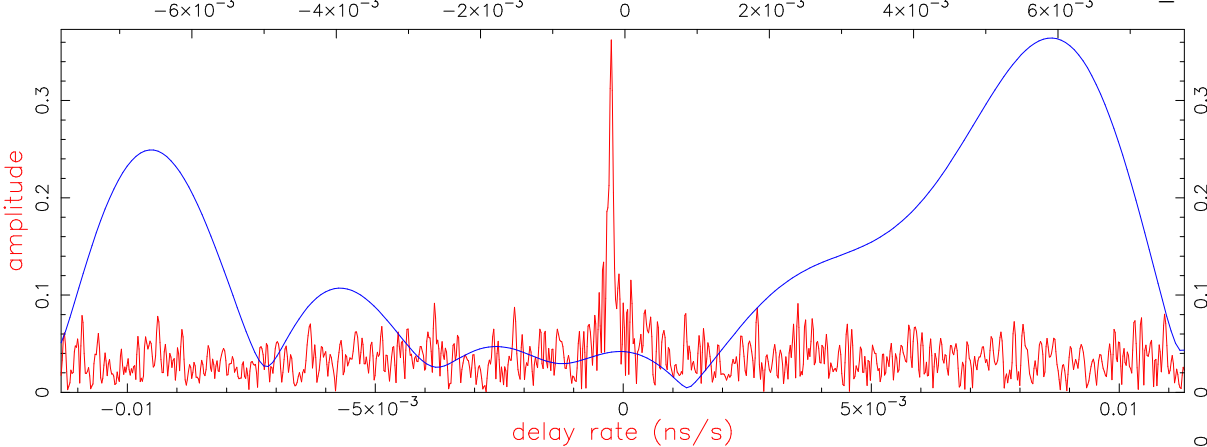
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Af

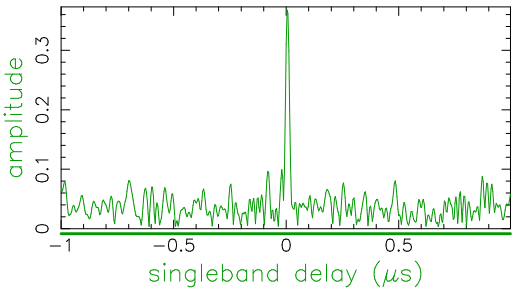
ALMA - VLBA\_FD, fgroup W, pol XL

multiband delay ( $\mu$ s)

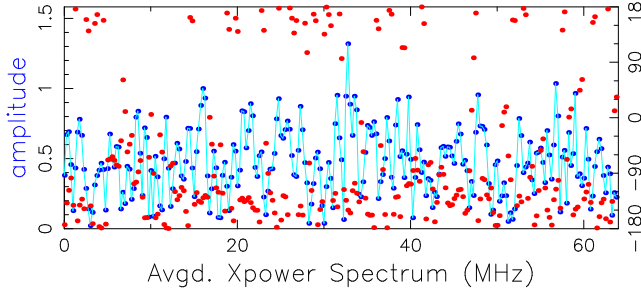


Fringe quality 9

SNR 13.7  
 Int time 179.986  
 Amp 0.373  
 Phase -143.7  
 PFD 3.5e-34  
 Delays (us)  
 SBD 0.005528  
 MBD 0.005766  
 Fringe rate (Hz)  
 -0.020348  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

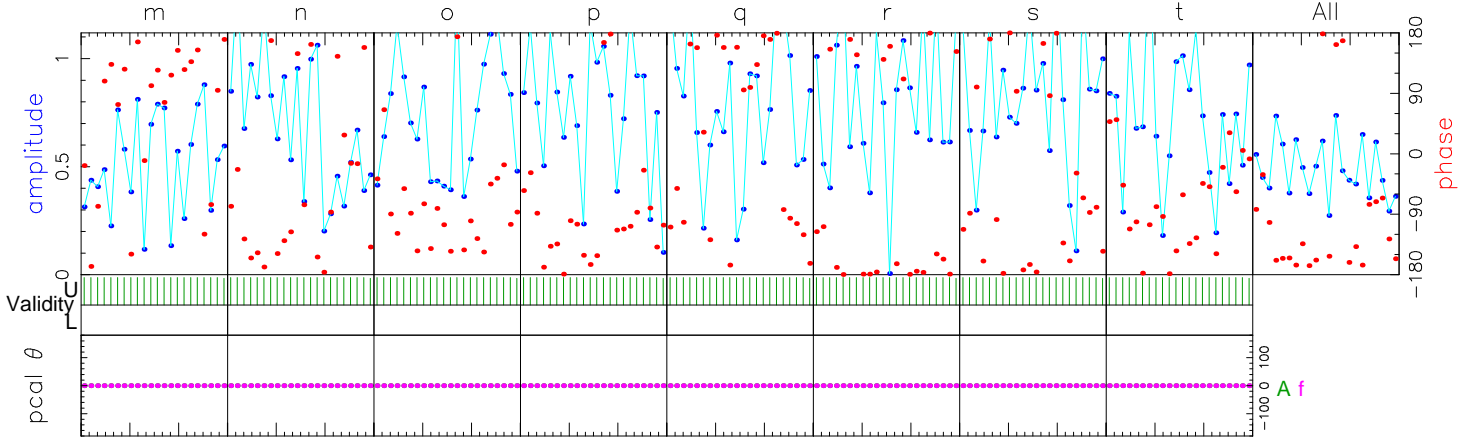


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110931  
 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		
A	0	0	0	0	0	0	0	0		
f	0	0	0	0	0	0	0	0		
A:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
f	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-6.91776765845E+03	Apriori delay (usec)	-6.91777342494E+03	Resid mbdelay (usec)	5.76648E-03	+/-	7.9E-05
Sband delay (usec)	-6.91776789644E+03	Apriori clock (usec)	-2.1075022E+03	Resid sbdelay (usec)	5.52850E-03	+/-	6.3E-04
Phase delay (usec)	-6.91777342957E+03	Apriori clockrate (us/s)	-6.1051858E-08	Resid phdelay (usec)	-4.63400E-06	+/-	2.7E-07
Delay rate (us/s)	-4.81702615537E-01	Apriori rate (us/s)	-4.81702379313E-01	Resid rate (us/s)	-2.36223E-07	+/-	2.6E-09
Total phase (deg)	-80.4	Apriori accel (us/s/s)	-3.57666330802E-05	Resid phase (deg)	-143.7	+/-	8.4

	RMS	Theor.	Amplitude	0.373 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	44.7	19.6	Search (1024X32)	0.357	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	47.3	34.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	49.2	11.8	Inc. seg. avg.	0.464	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	ion window (TEC)	0.00	0.00
amp/frq (%)	39.9	20.7	Inc. frq. avg.	0.450	Data rate(Mb/s): 2048	t_cohere infinite			

A: az 19.3 el 26.3 pa -157.7 f: az 65.6 el 42.1 pa -80.0 u,v (fr/asec) 3421.512 -8493.269 simultaneous interpolator

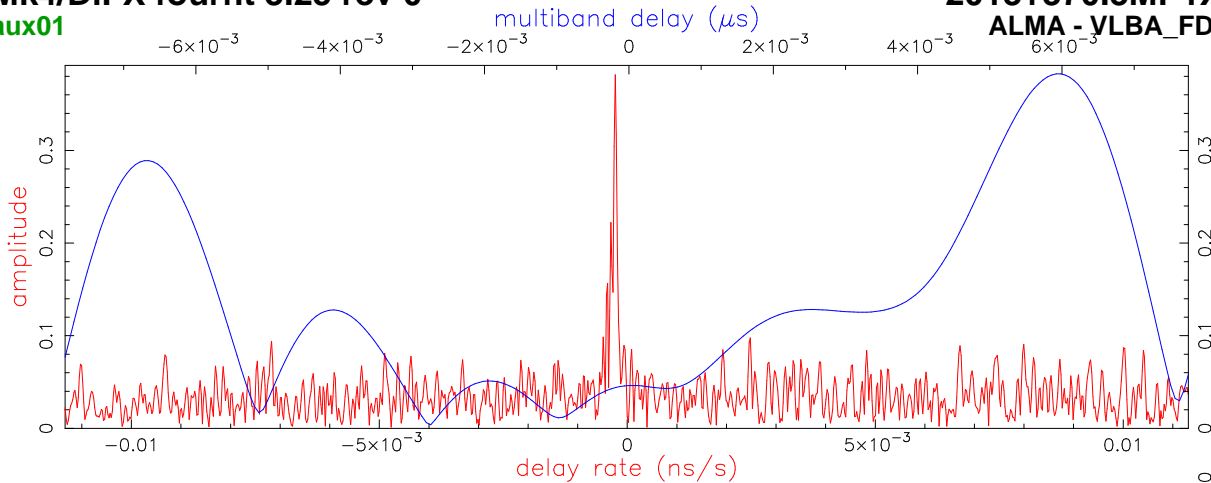
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Af..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Af.W.2.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

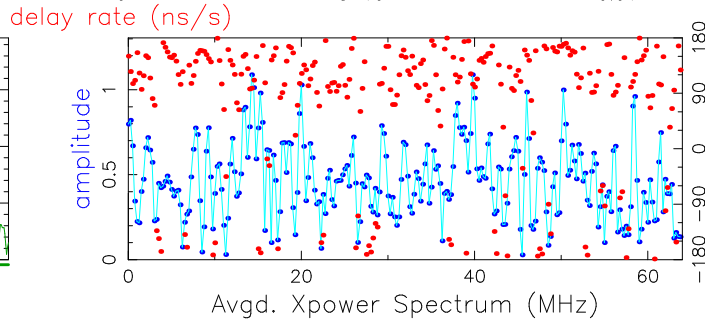
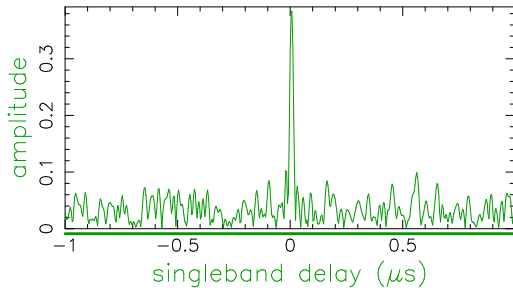
2013+370.3MP1XE, No0308, Af

ALMA - VLBA\_FD, fgroup W, pol YL



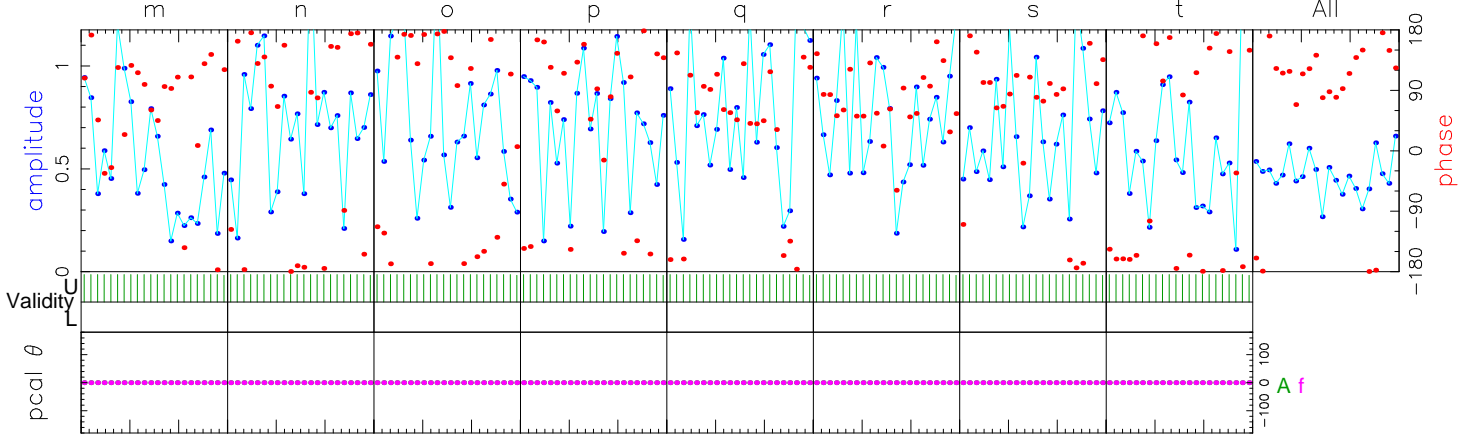
Fringe quality 8

SNR 14.4  
 Int time 179.986  
 Amp 0.392  
 Phase 133.8  
 PFD 2.4e-38  
 Delays (us)  
 SBD 0.005975  
 MBD 0.006038  
 Fringe rate (Hz)  
 -0.020877  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 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		
A	0	0	0	0	0	0	0	0	PC freqs	
f	0	0	0	0	0	0	0	0	PC freqs	
A:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.91776738705E+03	Apriori delay (usec)	-6.91777342494E+03	Resid mbdelay (usec)	6.03789E-03	+/-	7.6E-05
Sband delay (usec)	-6.91776744994E+03	Apriori clock (usec)	-2.1075022E+03	Resid sbdelay (usec)	5.97500E-03	+/-	6.0E-04
Phase delay (usec)	-6.91777342062E+03	Apriori clockrate (us/s)	-6.1051858E-08	Resid phdelay (usec)	4.31446E-06	+/-	2.6E-07
Delay rate (us/s)	-4.81702621670E-01	Apriori rate (us/s)	-4.81702379313E-01	Resid rate (us/s)	-2.42356E-07	+/-	2.5E-09
Total phase (deg)	-162.9	Apriori accel (us/s/s)	-3.57666330802E-05	Resid phase (deg)	133.8	+/-	8.0

ph/seg (deg)	37.3	Theor.	18.7	Amplitude	0.392 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	31.8	Search (1024X32)	0.379	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	42.8	Inc. seg. avg.	0.449	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	30.4	Inc. frq. avg.	0.474	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
				Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 f: az 65.6 el 42.1 pa -80.0 u, v (fr/asec) 3421.512 -8493.269 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Af..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Af.W.32.3MP1XE



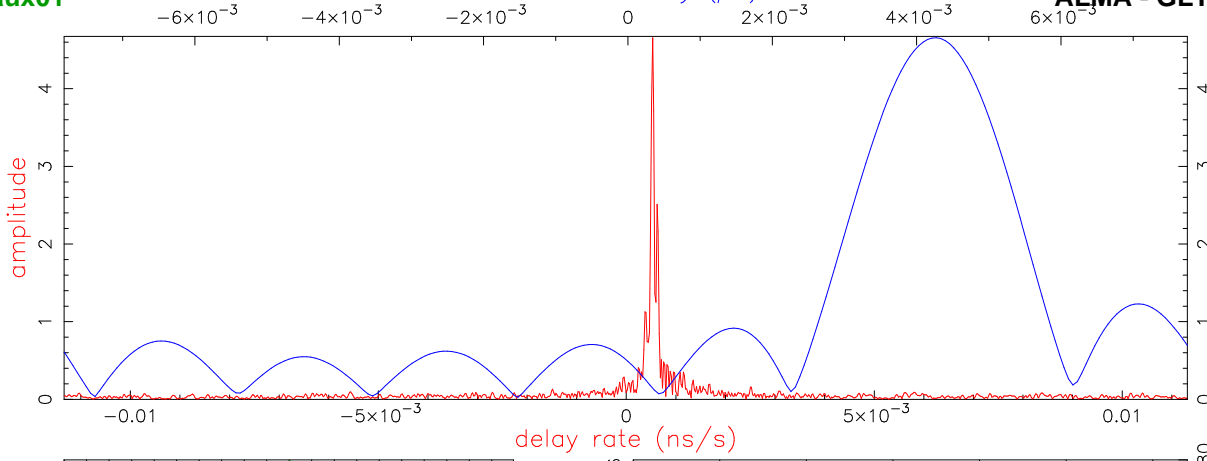
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ag

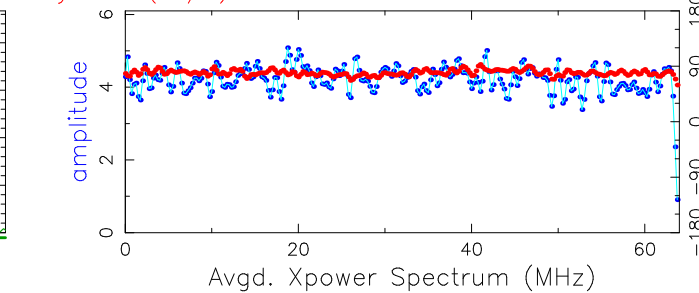
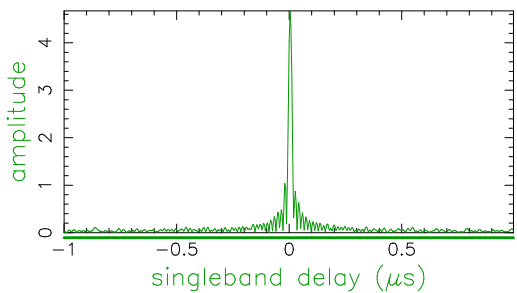
ALMA - GLT, fgroup W, pol YR

multiband delay ( $\mu$ s)



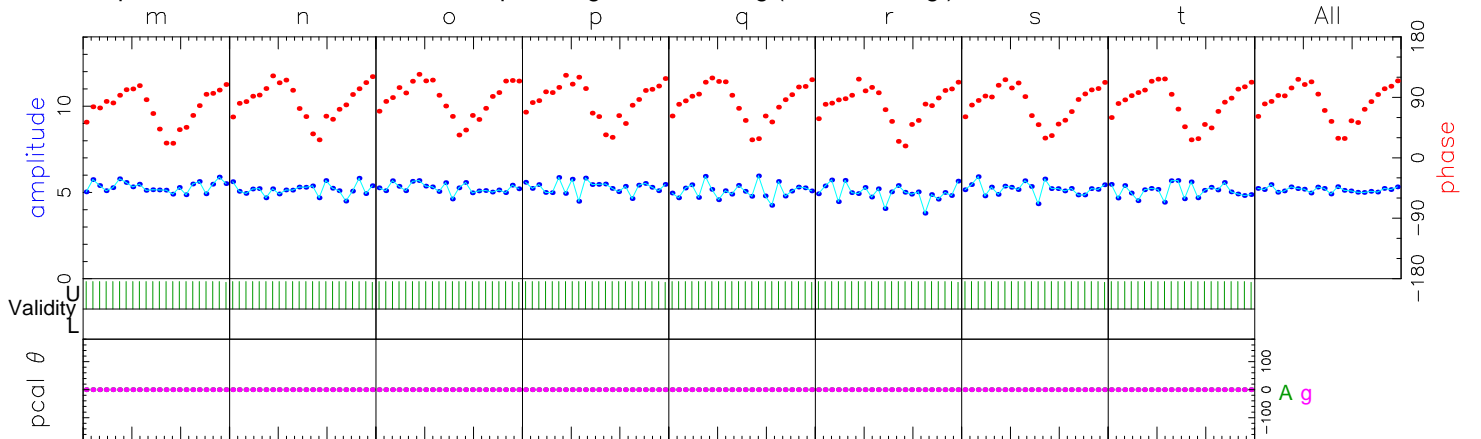
Fringe quality 7

SNR 171.3  
 Int time 179.984  
 Amp 4.674  
 Phase 82.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004565  
 MBD 0.004261  
 Fringe rate (Hz) 0.046375  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110933  
 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		
A	0	0	0	0	0	0	0	0		
g	0	0	0	0	0	0	0	0		
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
g	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-8.73794588247E+03	Apriori delay (usec)	-8.73795014385E+03	Resid mbdelay (usec)	4.26138E-03	+/-	6.3E-06
Sband delay (usec)	-8.73794557860E+03	Apriori clock (usec)	-2.1078896E+03	Resid sbdelay (usec)	4.56525E-03	+/-	5.0E-05
Phase delay (usec)	-8.73795014118E+03	Apriori clockrate (us/s)	-7.9519290E-07	Resid phdelay (usec)	2.67359E-06	+/-	2.2E-08
Delay rate (us/s)	3.07430129013E-01	Apriori rate (us/s)	3.07429590642E-01	Resid rate (us/s)	5.38371E-07	+/-	2.1E-10
Total phase (deg)	-58.0	Apriori accel (us/s/s)	-5.77523902932E-05	Resid phase (deg)	82.9	+/-	0.7

ph/seg (deg)	25.8	RMS	1.6	Theor.	4.674 +/- 0.027	Amplitude	4.674	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	10.9	Search (1024X32)	4.475	Search	4.475	Search	4.475	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	4.5	Interp.	0.000	Interp.	0.000	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	2.4	Inc. seg. avg.	5.163	Inc. seg. avg.	5.163	Inc. seg. avg.	5.163	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	4.671	Inc. frq. avg.	4.671	Inc. frq. avg.	4.671	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7      g: az 151.6 el 49.4 pa -7.9      u,v (fr/asec) -2281.144 -13039.298      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ag..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ag.W.11.3MP1XE

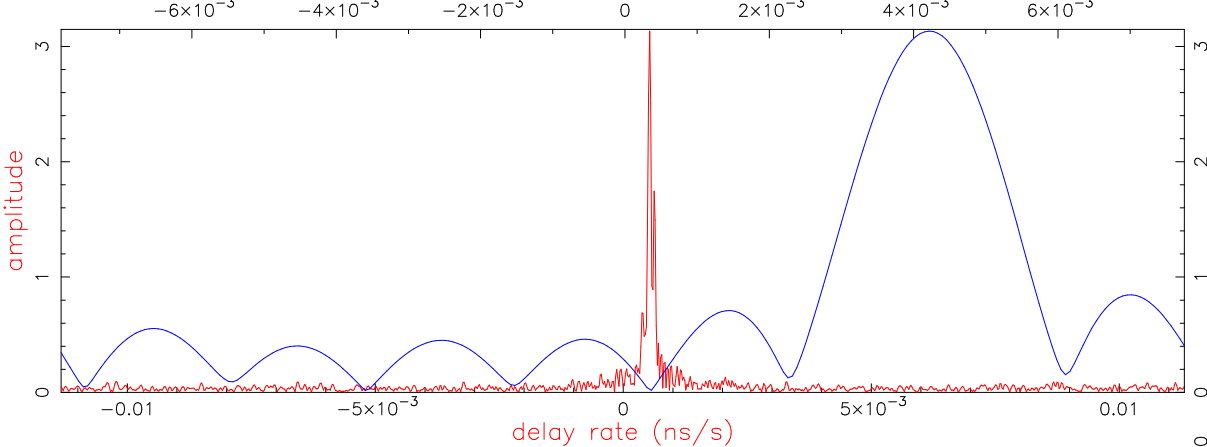
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ag

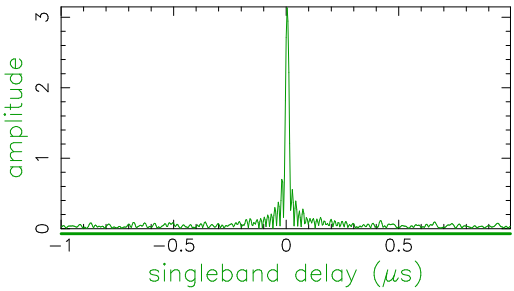
ALMA - GLT, fgroup W, pol XR

multiband delay ( $\mu$ s)

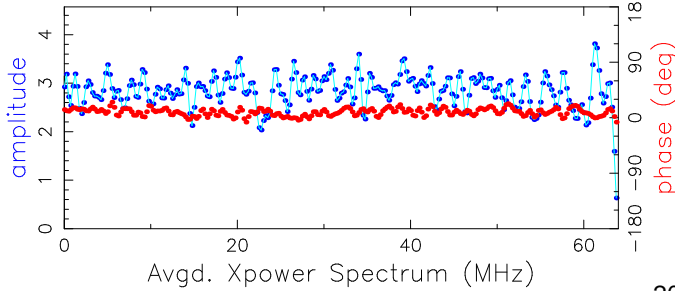


Fringe quality 7

SNR 115.4  
 Int time 179.984  
 Amp 3.148  
 Phase 14.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004665  
 MBD 0.004221  
 Fringe rate (Hz)  
 0.046398  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

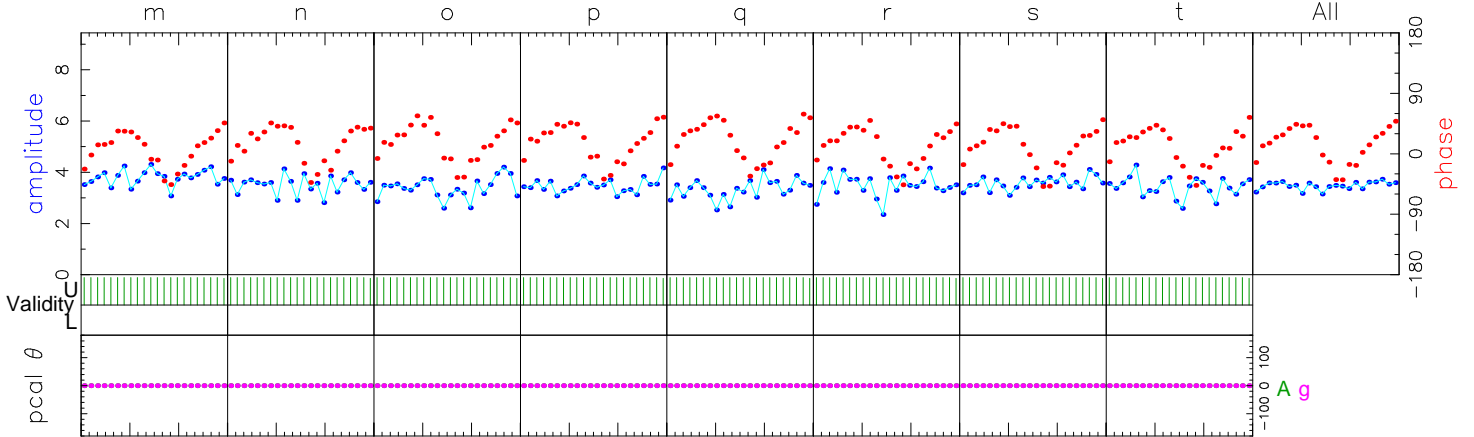


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110935  
 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		258.2
A	0	0	0	0	0	0	0	0		6.9
g	0	0	0	0	0	0	0	0		3.5
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		19.4
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		17.5
A	1000	1000	1000	1000	1000	1000	1000	1000		3.0
g	1000	1000	1000	1000	1000	1000	1000	1000		3.1
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX		258.1
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		258.4
										258.3
										12.5
										10.9
										3.2
										3.1
										257.9
										11.3
										3.1
										3.1
										4.54366E-07
										5.38636E-07
										14.1
										14.1

Group delay (usec) (SBD) -8.73794592272E+03 Apriori delay (usec) -8.73795014385E+03 Resid mbdelay (usec) 4.22113E-03 +/- 9.4E-06  
 Sband delay (usec) -8.73794547885E+03 Apriori clock (usec) -2.1078896E+03 Resid sbdelay (usec) 4.66500E-03 +/- 7.5E-05  
 Phase delay (usec) -8.73795014340E+03 Apriori clockrate (us/s) -7.9519290E-07 Resid phdelay (usec) 4.54366E-07 +/- 3.2E-08  
 Delay rate (us/s) 3.07430129278E-01 Apriori rate (us/s) 3.07429590642E-01 Resid rate (us/s) 5.38636E-07 +/- 3.1E-10  
 Total phase (deg) -126.9 Apriori accel (us/s/s) -5.77523902932E-05 Resid phase (deg) 14.1 +/- 1.0

RMS Theor. Amplitude 3.148 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 26.1 2.3 Search (1024X32) 2.983 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 11.6 4.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 5.0 1.4 Inc. seg. avg. 3.479 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 4.4 2.5 Inc. frq. avg. 3.144 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

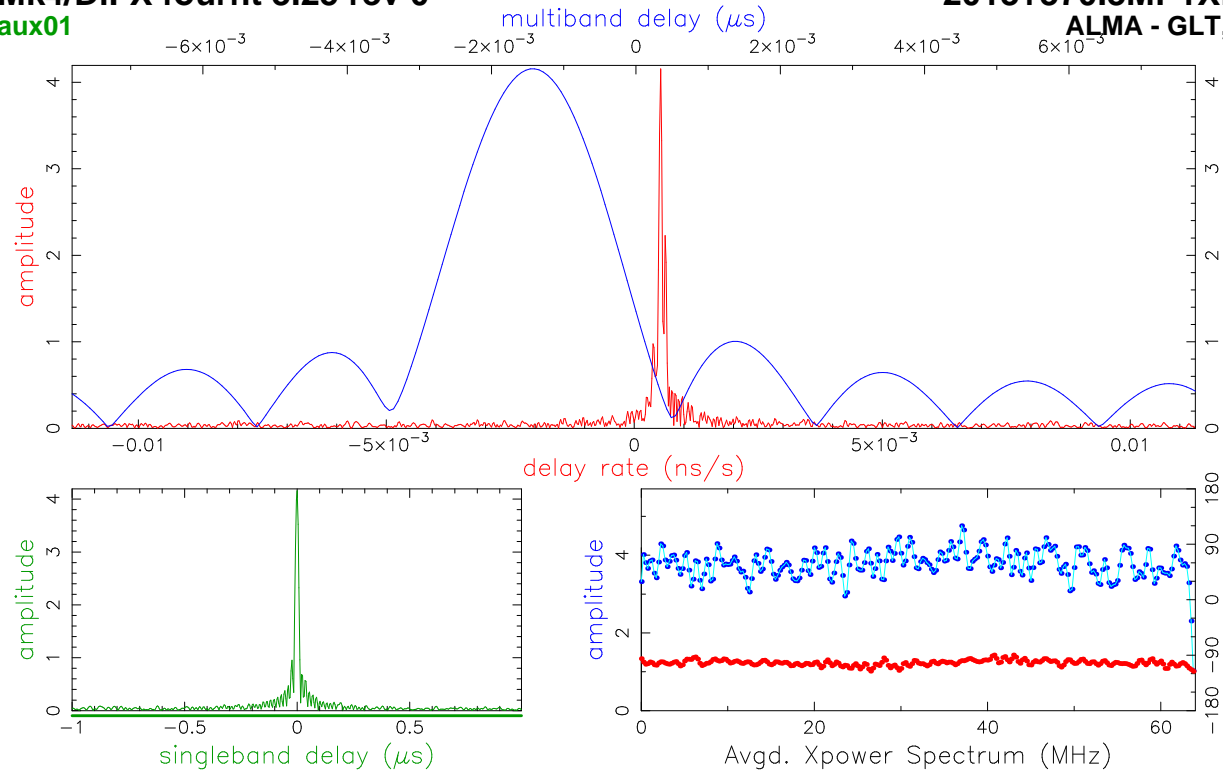
A: az 19.3 el 26.3 pa -157.7 g: az 151.6 el 49.4 pa -7.9 u,v (fr/asec) -2281.144 -13039.298 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Ag..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Ag.W.16.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ag

ALMA - GLT, fgroup W, pol YL

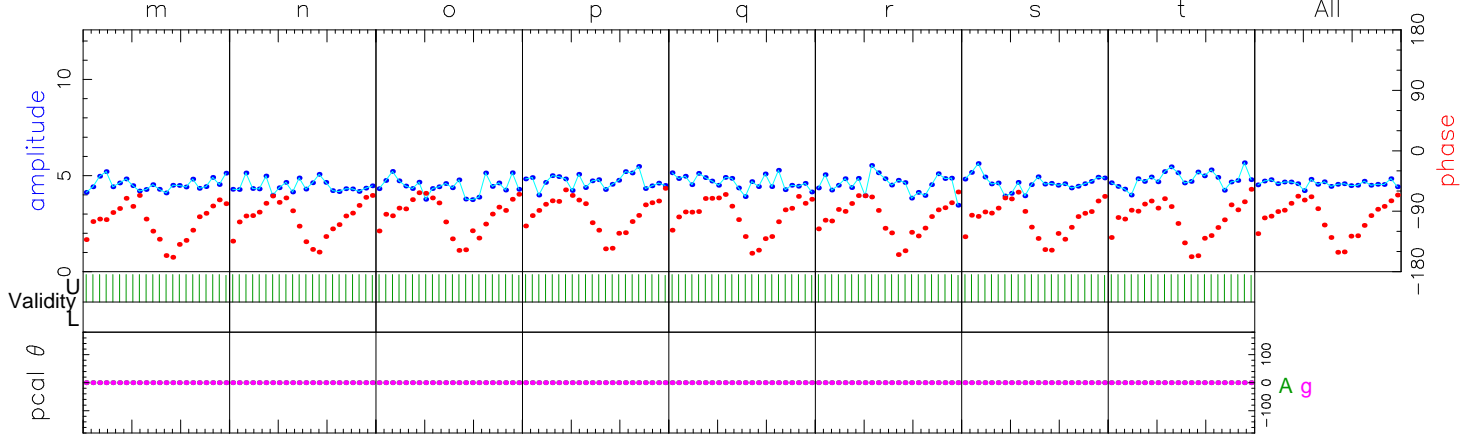


Fringe quality 7

SNR 153.7  
 Int time 179.984  
 Amp 4.195  
 Phase -98.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001134  
 MBD -0.001435  
 Fringe rate (Hz)  
 0.046336  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 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



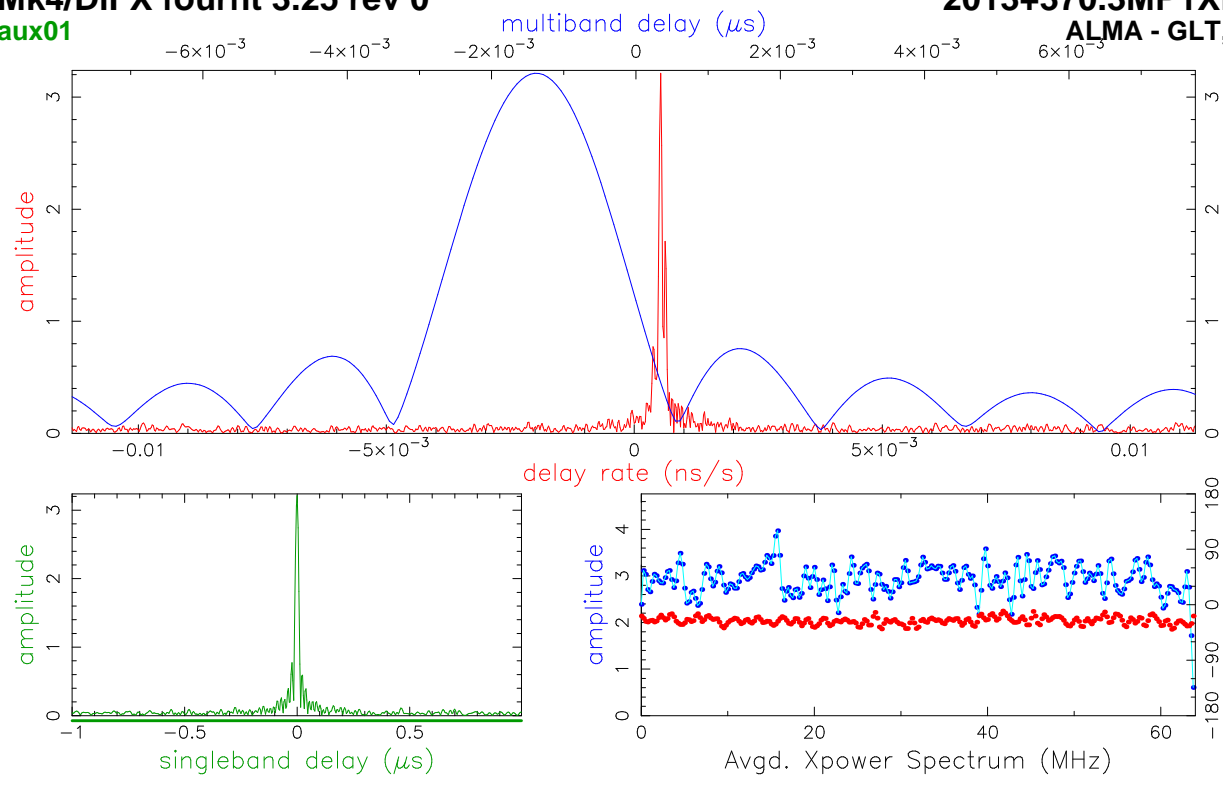
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-104.5	-100.6	-95.6	-93.1	-96.4	-98.6	-100.6	-100.9	Phase	-98.8
	4.1	4.0	4.0	4.3	4.2	4.1	4.2	4.3	Ampl.	4.2
	256.6	256.6	256.7	256.9	256.9	256.9	256.8	256.5	Sbd box	256.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-8.73795157872E+03	Apriori delay (usec)	-8.73795014385E+03	Resid mbdelay (usec)	-1.43487E-03	+/-	7.1E-06
Sband delay (usec)	-8.73795127810E+03	Apriori clock (usec)	-2.1078896E+03	Resid sbdelay (usec)	-1.13425E-03	+/-	5.6E-05
Phase delay (usec)	-8.73795014704E+03	Apriori clockrate (us/s)	-7.9519290E-07	Resid phdelay (usec)	-3.18508E-06	+/-	2.4E-08
Delay rate (us/s)	3.07430128561E-01	Apriori rate (us/s)	3.07429590642E-01	Resid rate (us/s)	5.37919E-07	+/-	2.3E-10
Total phase (deg)	-239.7	Apriori accel (us/s/s)	-5.77523902932E-05	Resid phase (deg)	-98.8	+/-	0.7

ph/seg (deg)	RMS 25.4	Theor. 1.7	Amplitude Search (1024X32)	4.195 +/- 0.027	4.061	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	10.0	3.1	Interp.	0.000	4.588	PCal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	3.9	1.1	Inc. seg. avg.	4.588	4.166	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	2.5	1.8	Inc. frq. avg.	4.166		Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7      g: az 151.6 el 49.4 pa -7.9      u,v (fr/asec) -2281.144 -13039.298      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ag..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ag.W.28.3MP1XE

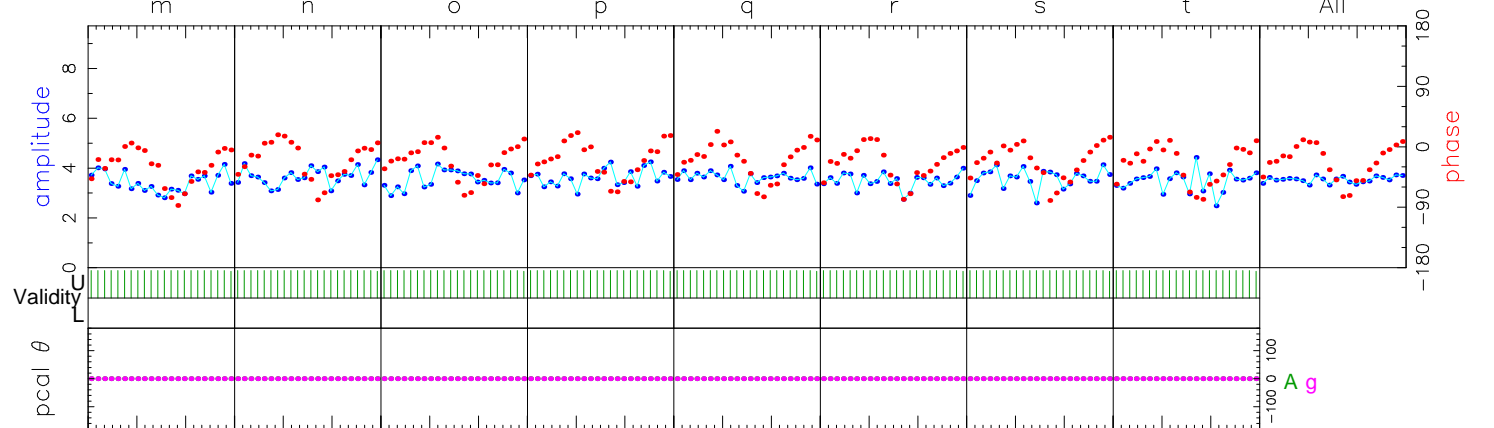


Fringe quality 7

SNR 118.7  
Int time 179.984  
Amp 3.239  
Phase -21.8  
PFD 0.0e+00  
Delays (us)  
SBD -0.001030  
MBD -0.001386  
Fringe rate (Hz) 0.046391  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 092000.00  
Stop 092300.22  
FRT 092130.00  
Corr/FF/build  
2024:352:180659  
2025:041:110931  
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	
	-28.2	-19.6	-20.3	-19.7	-18.5	-23.0	-20.8	-24.9	Phase	-21.8	
	3.1	3.3	3.2	3.3	3.3	3.2	3.3	3.1	Ampl.	3.2	
	256.7	256.6	256.7	256.9	257.0	256.8	256.7	256.4	Sbd box	256.7	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
A	0	0	0	0	0	0	0	0	PC freqs		
g	0	0	0	0	0	0	0	0	PC freqs		
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
A:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
g	1000	1000	1000	1000	1000	1000	1000	1000			
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks		
									Tracks		
Group delay (usec) (SBD)	-8.73795152997E+03		Apriori delay (usec)		-8.73795014385E+03		Resid mbdelay (usec)		-1.38612E-03	+/- 9.1E-06	
Sband delay (usec)	-8.73795117385E+03		Apriori clock (usec)		-2.1078896E+03		Resid sbdelay (usec)		-1.03000E-03	+/- 7.3E-05	
Phase delay (usec)	-8.73795014456E+03		Apriori clockrate (us/s)		-7.9519290E-07		Resid phdelay (usec)		-7.03526E-07	+/- 3.1E-08	
Delay rate (us/s)	3.07430129194E-01		Apriori rate (us/s)		3.07429590642E-01		Resid rate (us/s)		5.38552E-07	+/- 3.0E-10	
Total phase (deg)			Apriori accel (us/s/s)		-5.77523902932E-05		Resid phase (deg)		-21.8	+/- 1.0	
	RMS	Theor.	Amplitude	3.239 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	25.1	2.3	Search (1024X32)	3.127		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	10.2	4.0	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	3.6	1.4	Inc. seg. avg.	3.541		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	2.2	2.4	Inc. frq. avg.	3.220		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
A: az 19.3 el 26.3 pa -157.7		g: az 151.6 el 49.4 pa -7.9		u, v (fr/asec) -2281.144 -13039.298						simultaneous interpolator	
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0308//Ag..3MP1XE		Output file: /Exps/c241c/v2/3mm/1234/No0308//Ag.W.3.3MP1XE							

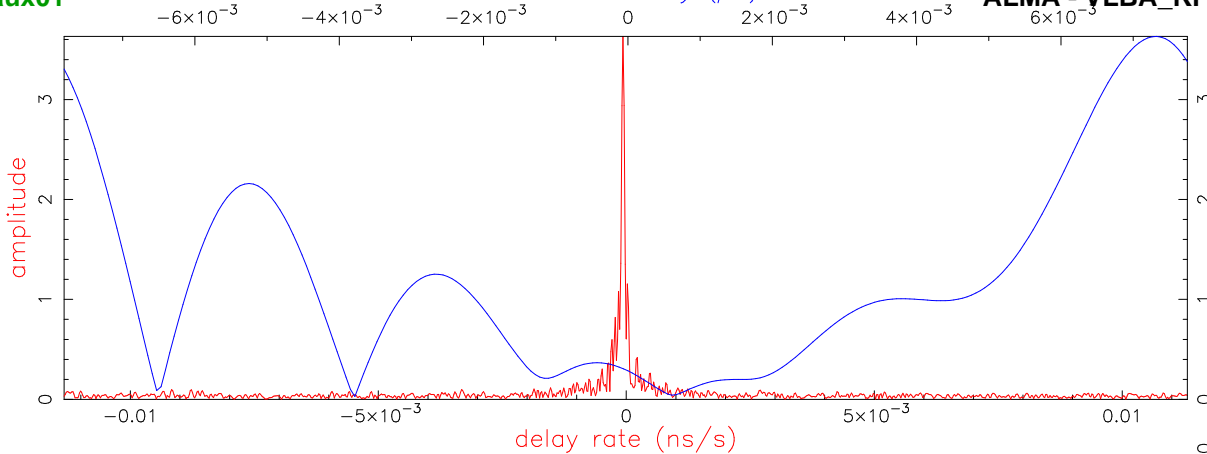
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ak

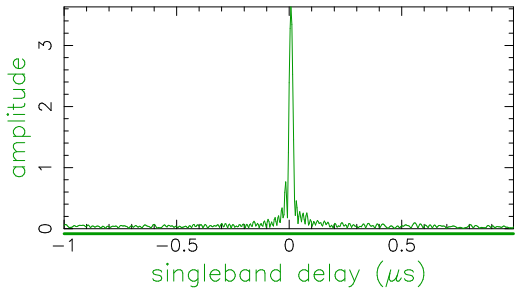
ALMA - VLBA\_KP, fgroup W, pol YR

multiband delay ( $\mu$ s)

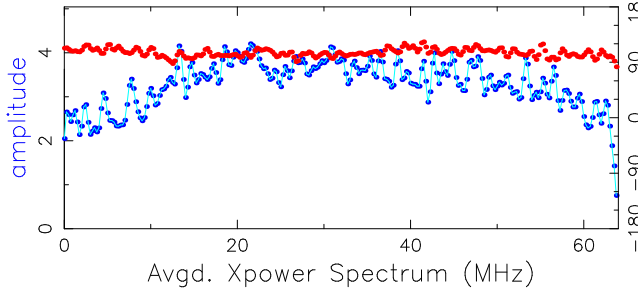


Fringe quality 5

SNR 133.2  
 Int time 179.987  
 Amp 3.632  
 Phase 113.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.008006  
 MBD 0.007323  
 Fringe rate (Hz)  
 -0.005646  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

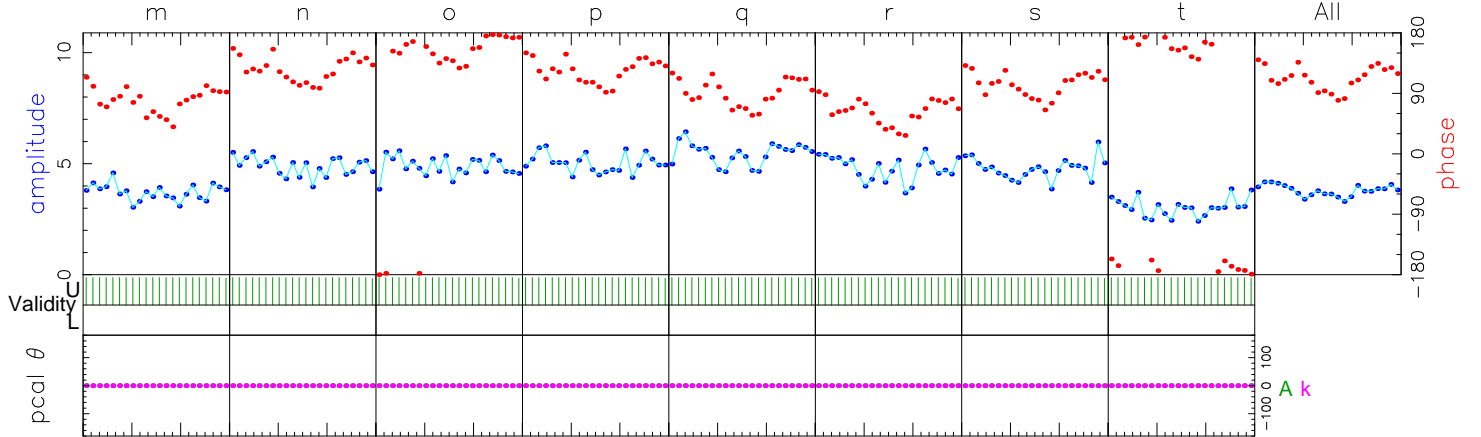


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110935  
 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		
A	0	0	0	0	0	0	0	0		
k	0	0	0	0	0	0	0	0		
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-5.37188826213E+03	Apriori delay (usec)	-5.37189558548E+03	Resid mbdelay (usec)	7.32335E-03	+/-	8.1E-06
Sband delay (usec)	-5.37188757973E+03	Apriori clock (usec)	-2.1075979E+03	Resid sbdelay (usec)	8.00575E-03	+/-	6.5E-05
Phase delay (usec)	-5.37189558182E+03	Apriori clockrate (us/s)	-1.6303799E-07	Resid phdelay (usec)	3.65371E-06	+/-	2.8E-08
Delay rate (us/s)	-5.36103447902E-01	Apriori rate (us/s)	-5.36103382359E-01	Resid rate (us/s)	-6.55430E-08	+/-	2.7E-10
Total phase (deg)	-150.6	Apriori accel (us/s/s)	-4.53332714966E-05	Resid phase (deg)	113.3	+/-	0.9

ph/seg (deg)	17.4	Theor.	2.0	Amplitude	3.632 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	8.1	Search (1024X32)	3.627	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	41.8	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	27.9	Inc. seg. avg.	3.796	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
		Inc. frq. avg.	4.360	Data rate (Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 k: az 64.9 el 36.7 pa -74.9 u, v (fr/asec) 3804.986 -9206.131 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Ak..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Ak.W.19.3MP1XE

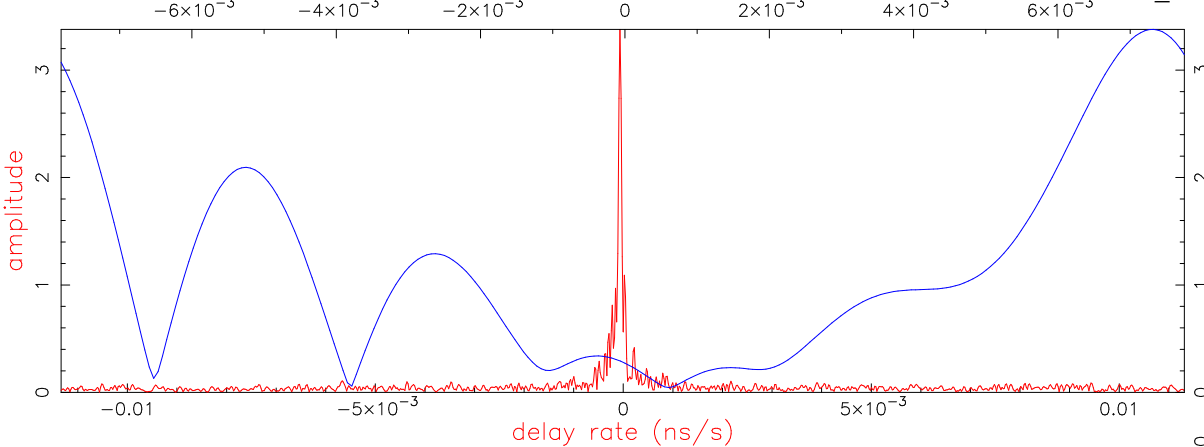
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ak

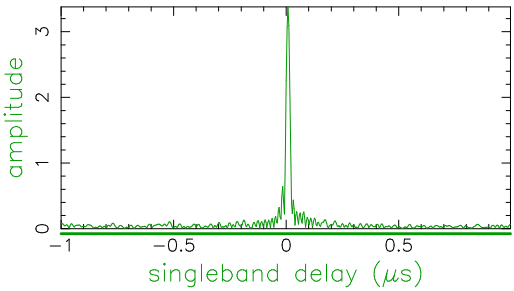
ALMA - VLBA\_KP, fgroup W, pol XR

multiband delay ( $\mu$ s)

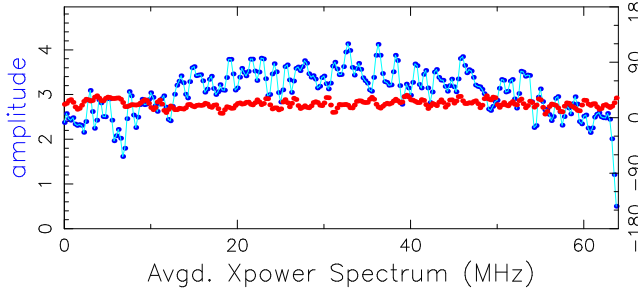


Fringe quality 5

SNR 124.0  
Int time 179.987  
Amp 3.380  
Phase 29.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.007888  
MBD 0.007314  
Fringe rate (Hz)  
-0.005645  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

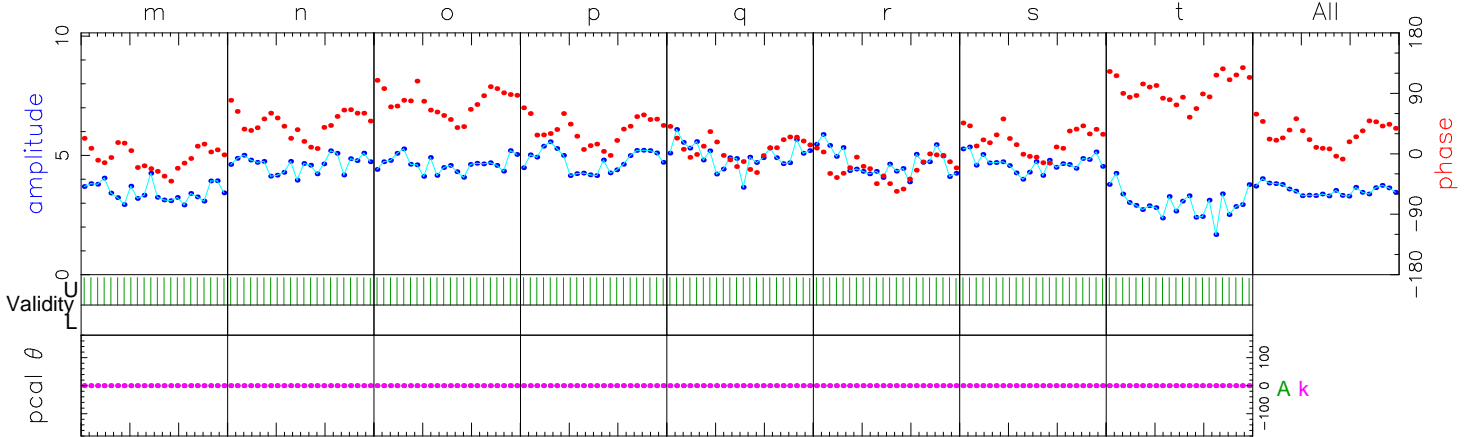


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 092000.00  
Stop 092300.22  
FRT 092130.00  
Corr/FF/build  
2024:352:180659  
2025:041:110938  
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
	-5.6	45.3	77.5	35.9	7.4	-21.3	20.9	97.6	Phase	29.0
	3.3	4.4	4.4	4.5	4.8	4.5	4.4	2.8	Ampl.	4.1
	260.7	258.8	258.6	258.7	259.1	258.6	259.4	261.0	Sbd box	259.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec) (SBD)	-5.37188827138E+03		Apriori delay (usec)		-5.37189558548E+03		Resid mbdelay (usec)		7.31410E-03	+/- 8.8E-06
Sband delay (usec)	-5.37188769773E+03		Apriori clock (usec)		-2.1075979E+03		Resid sbdelay (usec)		7.88775E-03	+/- 6.9E-05
Phase delay (usec)	-5.37189558454E+03		Apriori clockrate (us/s)		-1.6303799E-07		Resid phdelay (usec)		9.34177E-07	+/- 3.0E-08
Delay rate (us/s)	-5.36103447896E-01		Apriori rate (us/s)		-5.36103382359E-01		Resid rate (us/s)		-6.55373E-08	+/- 2.9E-10
Total phase (deg)			Apriori accel (us/s/s)		-4.53332714966E-05		Resid phase (deg)		29.0	+/- 0.9

ph/seg (deg) 18.0 2.2 Search (1024X32) 3.376 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 8.0 3.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 44.0 1.3 Inc. seg. avg. 3.548 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 29.4 2.3 Inc. frq. avg. 4.135 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  
A: az 19.3 el 26.3 pa -157.7 k: az 64.9 el 36.7 pa -74.9 u, v (fr/asec) 3804.986 -9206.131 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Ak..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Ak.W.33.3MP1XE

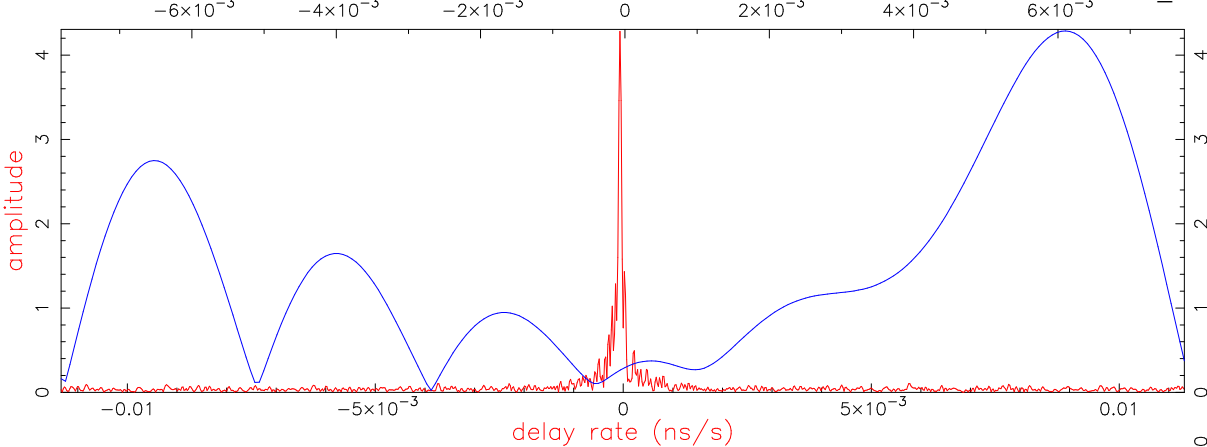
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ak

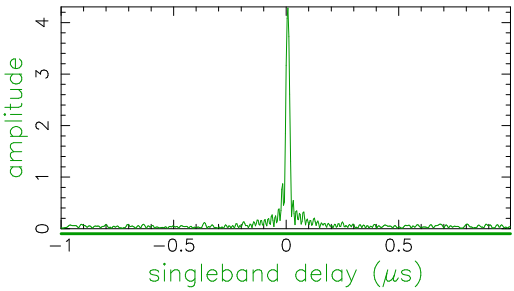
ALMA - VLBA\_KP, fgroup W, pol YL

multiband delay ( $\mu$ s)

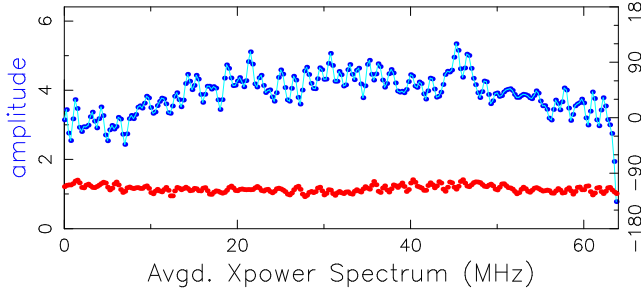


Fringe quality 5

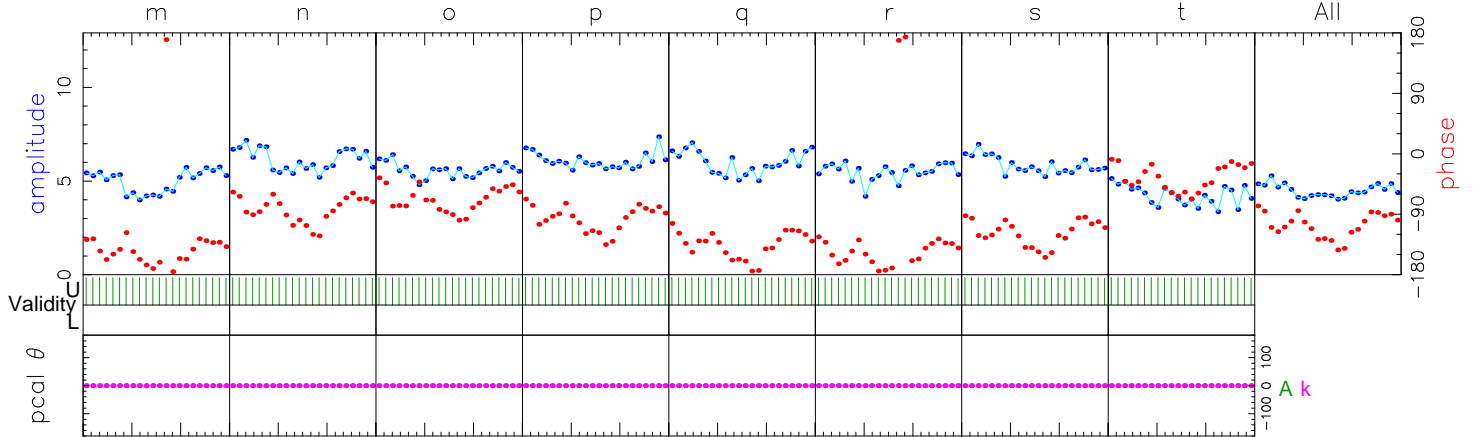
SNR 157.9  
 Int time 179.987  
 Amp 4.305  
 Phase -105.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006873  
 MBD 0.006048  
 Fringe rate (Hz) -0.005695  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110942  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"



delay rate (ns/s)



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-146.2	-81.7	-67.3	-95.3	-134.4	-150.8	-117.1	-34.4	Phase	-105.8
	4.8	5.9	5.3	5.8	5.7	5.2	5.6	4.0	Ampl.	5.3
	260.3	258.7	258.1	258.4	258.7	258.4	259.1	260.8	Sbd box	258.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.37188953731E+03	Apriori delay (usec)	-5.37189558548E+03	Resid mbdelay (usec)	6.04816E-03	+/-	6.9E-06
Sband delay (usec)	-5.37188871223E+03	Apriori clock (usec)	-2.1075979E+03	Resid sbdelay (usec)	6.87325E-03	+/-	5.5E-05
Phase delay (usec)	-5.37189558889E+03	Apriori clockrate (us/s)	-1.6303799E-07	Resid phdelay (usec)	-3.41224E-06	+/-	2.3E-08
Delay rate (us/s)	-5.36103448473E-01	Apriori rate (us/s)	-5.36103382359E-01	Resid rate (us/s)	-6.61141E-08	+/-	2.2E-10
Total phase (deg)	-9.7	Apriori accel (us/s/s)	-4.53332714966E-05	Resid phase (deg)	-105.8	+/-	0.7

ph/seg (deg)	18.2	Theor.	1.7	Amplitude	4.305 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	8.8	Search (1024X32)	4.195	Search	4.195	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	44.5	Inc. seg. avg.	4.496	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	26.3	Inc. frq. avg.	5.276	Inc. seg. avg.	4.496	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	5.276	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7 k: az 64.9 el 36.7 pa -74.9 u, v (fr/asec) 3804.986 -9206.131 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Ak..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Ak.W.40.3MP1XE

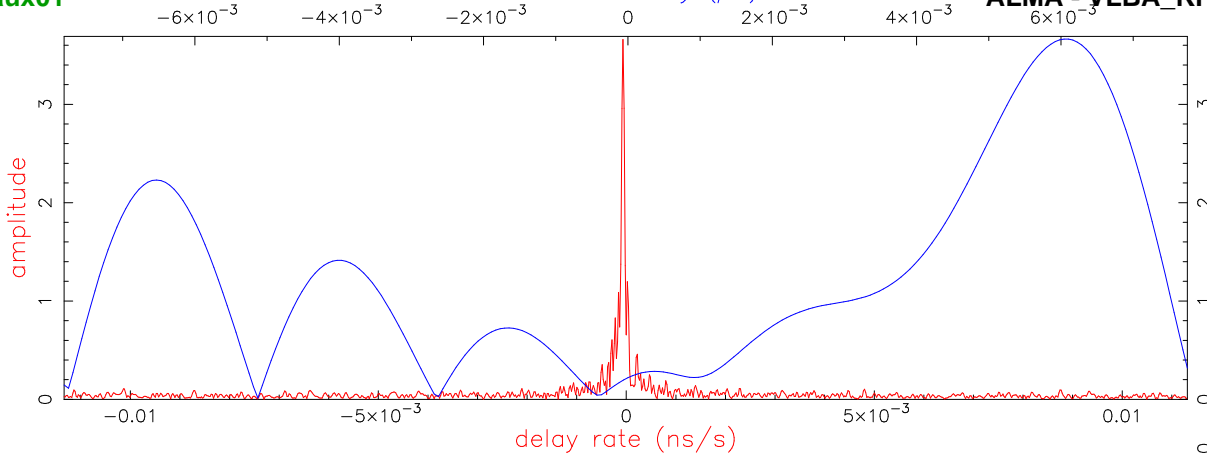
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ak

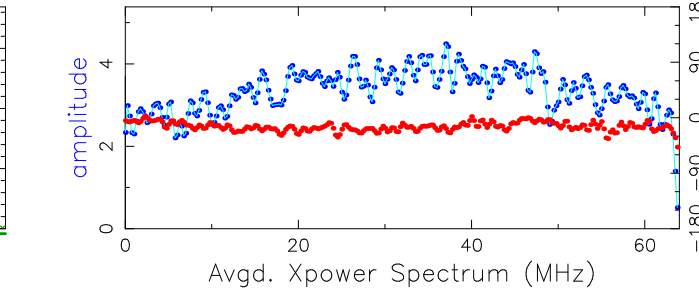
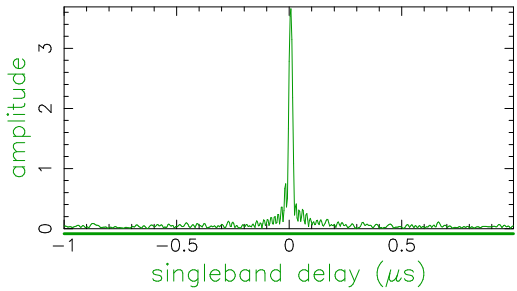
ALMA - VLBA\_KP, fgroup W, pol XL

multiband delay ( $\mu$ s)



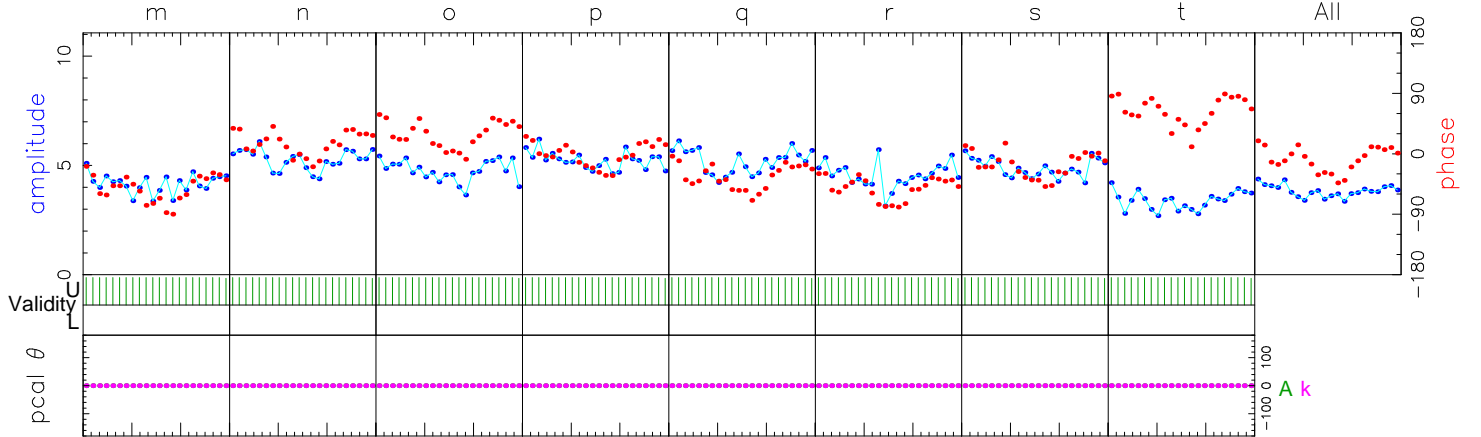
Fringe quality 5

SNR 135.4  
 Int time 179.987  
 Amp 3.691  
 Phase -7.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006612  
 MBD 0.006004  
 Fringe rate (Hz)  
 -0.005658  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110933  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-50.5	16.3	30.6	-0.5	-33.1	-50.4	-15.7	65.1		-7.5
	3.9	5.0	4.5	5.0	5.0	4.4	4.7	3.2	Ampl.	4.5
	260.4	258.7	258.0	258.4	258.6	258.4	259.1	260.8	Sbd box	258.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
k	0	0	0	0	0	0	0	0	PC freqs	
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-5.37188958178E+03	Apriori delay (usec)	-5.37189558548E+03	Resid mbdelay (usec)	6.00369E-03	+/-	8.0E-06
Sband delay (usec)	-5.37188897348E+03	Apriori clock (usec)	-2.1075979E+03	Resid sbdelay (usec)	6.61200E-03	+/-	6.4E-05
Phase delay (usec)	-5.37189558572E+03	Apriori clockrate (us/s)	-1.6303799E-07	Resid phdelay (usec)	-2.42485E-07	+/-	2.7E-08
Delay rate (us/s)	-5.36103448047E-01	Apriori rate (us/s)	-5.36103382359E-01	Resid rate (us/s)	-6.56875E-08	+/-	2.6E-10
Total phase (deg)	-271.4	Apriori accel (us/s/s)	-4.53332714966E-05	Resid phase (deg)	-7.5	+/-	0.8

ph/seg (deg)	17.8	Theor.	2.0	Amplitude	3.691 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	8.2		3.5	Search (1024X32)	3.604	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	44.2		1.2	Inc. seg. avg.	3.835	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	26.4		2.1	Inc. frq. avg.	4.460	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

A: az 19.3 el 26.3 pa -157.7 k: az 64.9 el 36.7 pa -74.9 u, v (fr/asec) 3804.986 -9206.131 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//Ak..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//Ak.W.7.3MP1XE



Mk4/DiFX fourfit 3.25 rev 0

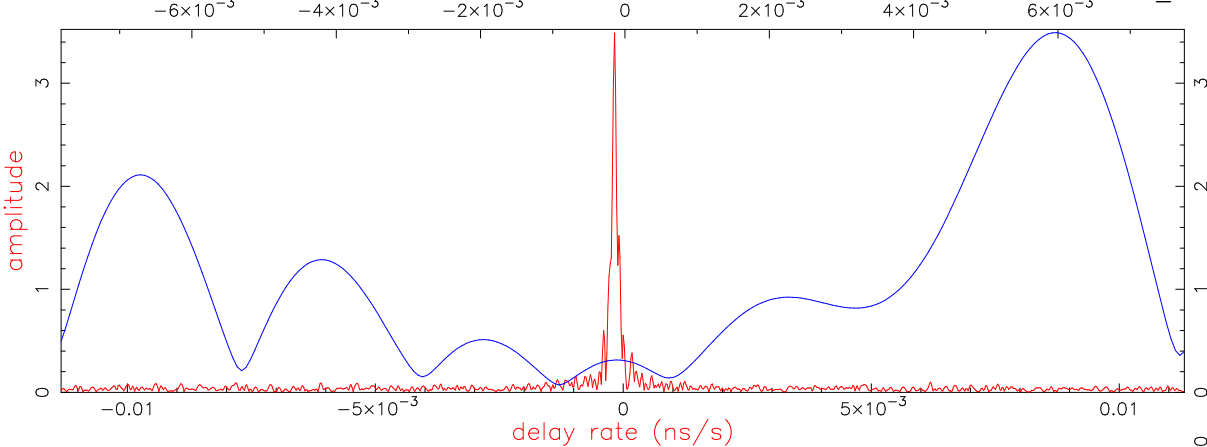
aux01

2013+370.3MP1XE, No0308, AI

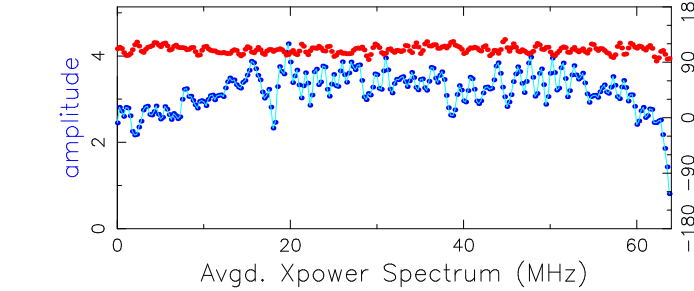
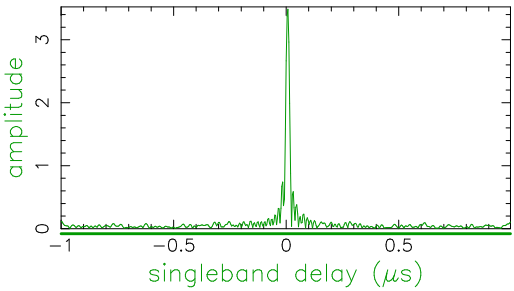
ALMA - VLBA\_LA, fgroup W, pol YR

multiband delay ( $\mu$ s)

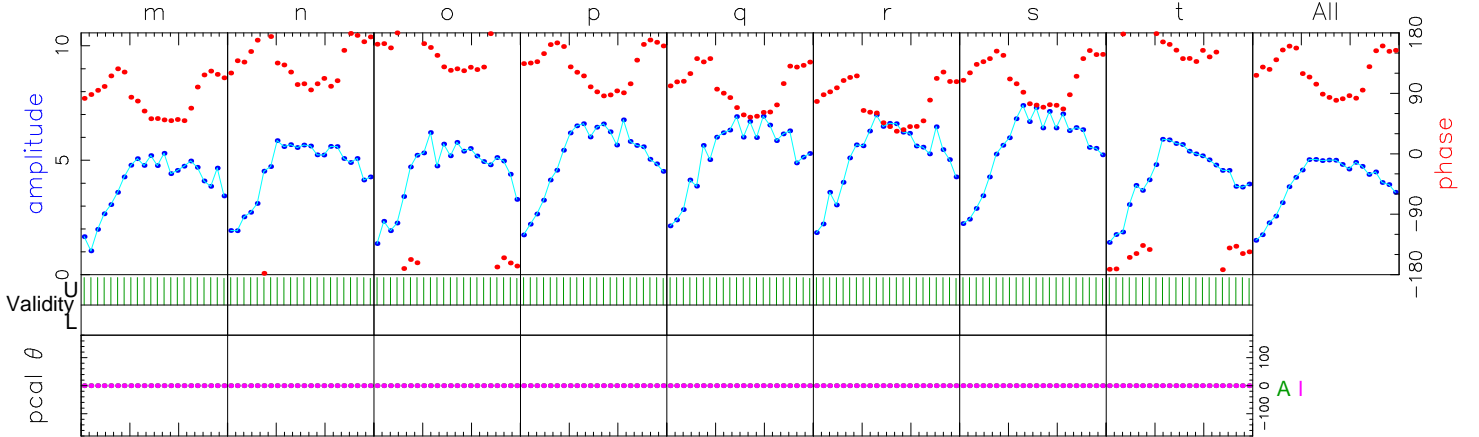
Fringe quality 3



SNR 129.2  
 Int time 179.986  
 Amp 3.523  
 Phase 117.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006520  
 MBD 0.005900  
 Fringe rate (Hz)  
 -0.014898  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110936  
 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		
A	0	0	0	0	0	0	0	0		
I	0	0	0	0	0	0	0	0		
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-6.95767456542E+03	Apriori delay (usec)	-6.95768046565E+03	Resid mbdelay (usec)	5.90023E-03	+/-	8.4E-06
Sband delay (usec)	-6.95767394565E+03	Apriori clock (usec)	-2.0991362E+03	Resid sbdelay (usec)	6.52000E-03	+/-	6.7E-05
Phase delay (usec)	-6.95768046186E+03	Apriori clockrate (us/s)	2.2316914E-07	Resid phdelay (usec)	3.78837E-06	+/-	2.9E-08
Delay rate (us/s)	-4.51475908104E-01	Apriori rate (us/s)	-4.51475735152E-01	Resid rate (us/s)	-1.72952E-07	+/-	2.7E-10
Total phase (deg)		Apriori accel (us/s/s)	-4.06330443685E-05	Resid phase (deg)	117.5	+/-	0.9

ph/seg (deg)	29.3	2.1	Search (1024X32)	3.447	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	33.8	3.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	39.6	1.3	Inc. seg. avg.	4.022	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	21.6	2.2	Inc. frq. avg.	4.152	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	dr window (ns/s)	-0.011	0.011
					Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00	

A: az 19.3 el 26.3 pa -157.7 I: az 69.3 el 42.3 pa -72.6 u, v (fr/asec) 3198.903 -9311.535 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AI..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AI.W.21.3MP1XE

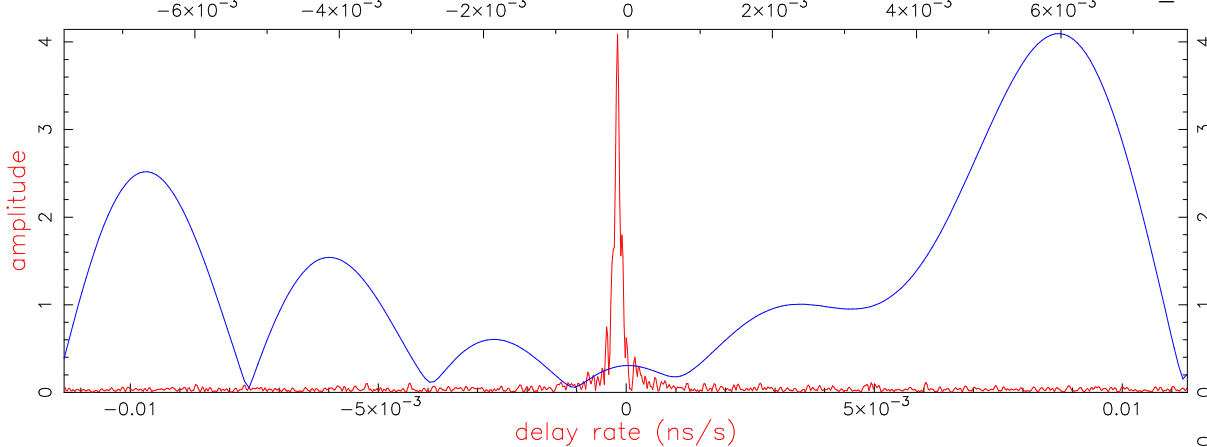
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AI

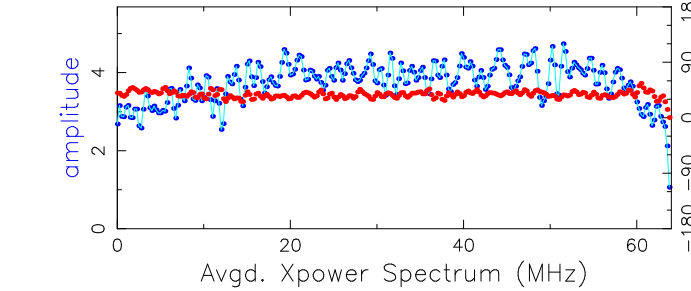
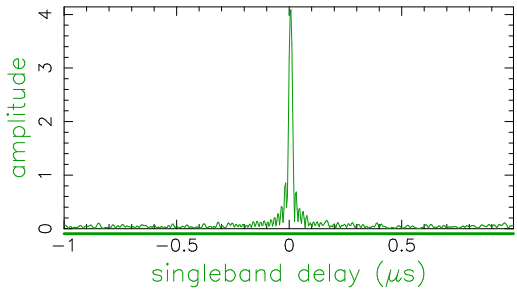
ALMA - VLBA\_LA, fgroup W, pol XR

multiband delay ( $\mu$ s)



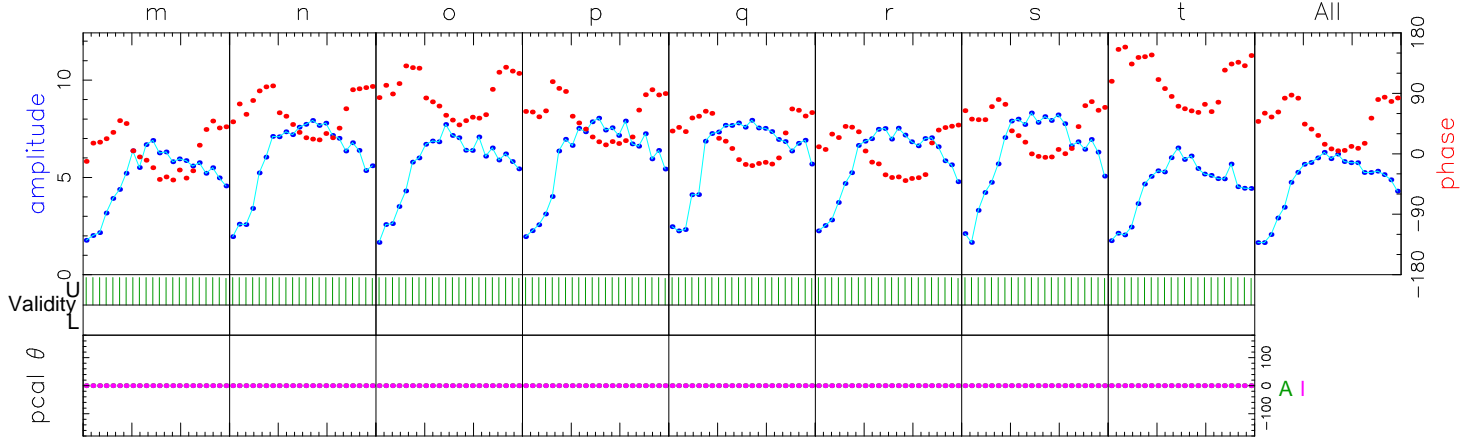
Fringe quality 3

SNR 152.0  
 Int time 179.986  
 Amp 4.143  
 Phase 42.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006329  
 MBD 0.005893  
 Fringe rate (Hz)  
 -0.014908  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 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		
A	0	0	0	0	0	0	0	0		
I	0	0	0	0	0	0	0	0		
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
I	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD) -6.95767457258E+03 Apriori delay (usec) -6.95768046565E+03 Resid mbdelay (usec) 5.89307E-03 +/- 7.1E-06  
 Sband delay (usec) -6.95767413665E+03 Apriori clock (usec) -2.0991362E+03 Resid sbdelay (usec) 6.32900E-03 +/- 5.7E-05  
 Phase delay (usec) -6.95768046428E+03 Apriori clockrate (us/s) 2.2316914E-07 Resid phdelay (usec) 1.36865E-06 +/- 2.4E-08  
 Delay rate (us/s) -4.51475908214E-01 Apriori rate (us/s) -4.51475735152E-01 Resid rate (us/s) -1.73062E-07 +/- 2.3E-10  
 Total phase (deg) -69.5 Apriori accel (us/s/s) -4.06330443685E-05 Resid phase (deg) 42.4 +/- 0.8

RMS Theor. Amplitude 4.143 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 30.4 1.8 Search (1024X32) 4.043 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 38.0 3.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 40.9 1.1 Inc. seg. avg. 4.778 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 21.7 1.9 Inc. frq. avg. 4.886 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 19.3 el 26.3 pa -157.7 I: az 69.3 el 42.3 pa -72.6 u, v (fr/asec) 3198.903 -9311.535 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AI..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AI.W.31.3MP1XE

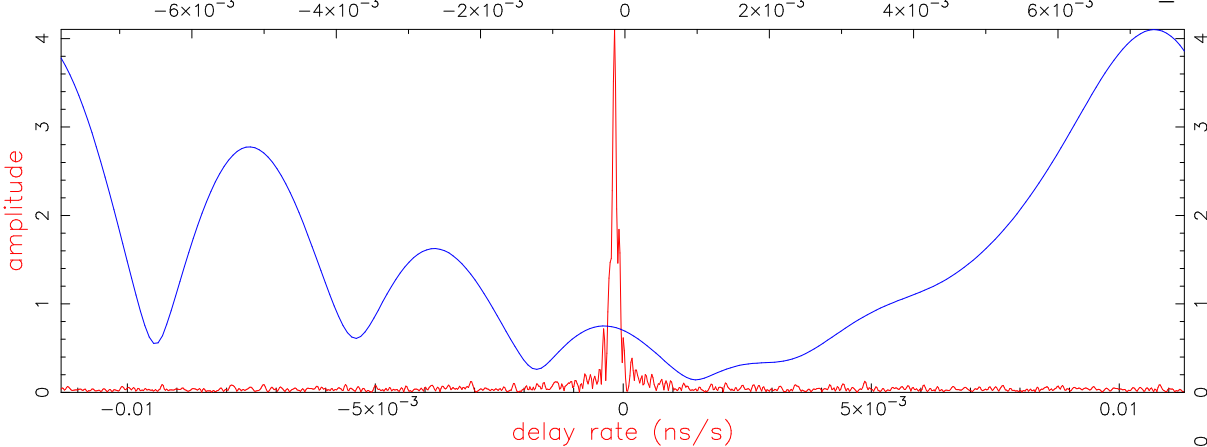
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AI

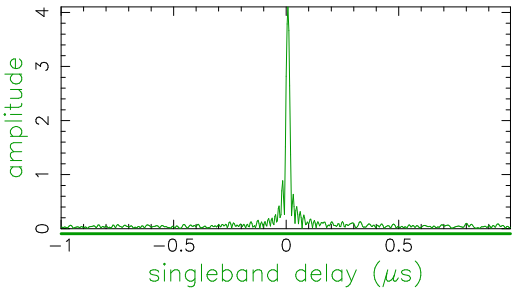
ALMA - VLBA\_LA, fgroup W, pol YL

multiband delay ( $\mu$ s)

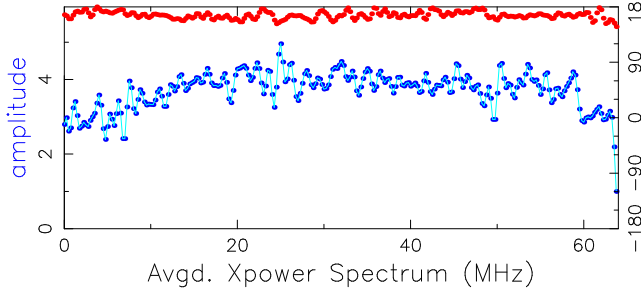


Fringe quality 3

SNR 150.6  
Int time 179.986  
Amp 4.104  
Phase 168.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.007481  
MBD 0.007318  
Fringe rate (Hz)  
-0.014948  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

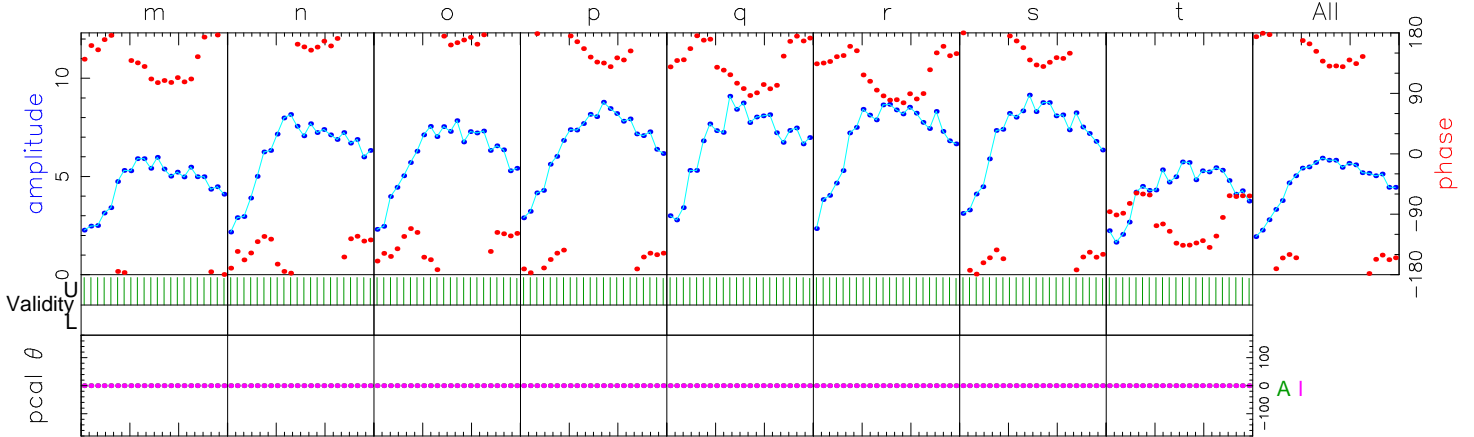


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 092000.00  
Stop 092300.22  
FRT 092130.00  
Corr/FF/build  
2024:352:180659  
2025:041:110942  
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
	141.8	-165.0	-157.7	172.3	131.6	116.2	172.4	-100.6	Phase	168.1
	4.0	5.4	5.2	5.8	5.8	6.1	6.1	3.7	Ampl.	5.3
	260.6	258.9	258.5	258.6	258.9	259.0	259.4	261.2	Sbd box	258.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
I	0	0	0	0	0	0	0	0	PC freqs	
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.95767314786E+03	Apriori delay (usec)	-6.95768046565E+03	Resid mbdelay (usec)	7.31779E-03	+/-	7.2E-06
Sband delay (usec)	-6.95767298490E+03	Apriori clock (usec)	-2.0991362E+03	Resid sbdelay (usec)	7.48075E-03	+/-	5.7E-05
Phase delay (usec)	-6.95768046023E+03	Apriori clockrate (us/s)	2.2316914E-07	Resid phdelay (usec)	5.42022E-06	+/-	2.5E-08
Delay rate (us/s)	-4.51475908685E-01	Apriori rate (us/s)	-4.51475735152E-01	Resid rate (us/s)	-1.73533E-07	+/-	2.4E-10
Total phase (deg)	56.1	Apriori accel (us/s/s)	-4.06330443685E-05	Resid phase (deg)	168.1	+/-	0.8

ph/seg (deg)	29.2	1.8	Search (1024X32)	4.075	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	32.1	3.1	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)	50.0	1.1	Inc. seg. avg.	4.735	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 (%)	34.8	1.9	Inc. frq. avg.	5.252	Data rate(Mb/s): 2048		ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 I: az 69.3 el 42.3 pa -72.6 u, v (fr/asec) 3198.903 -9311.535 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AI..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AI.W.41.3MP1XE

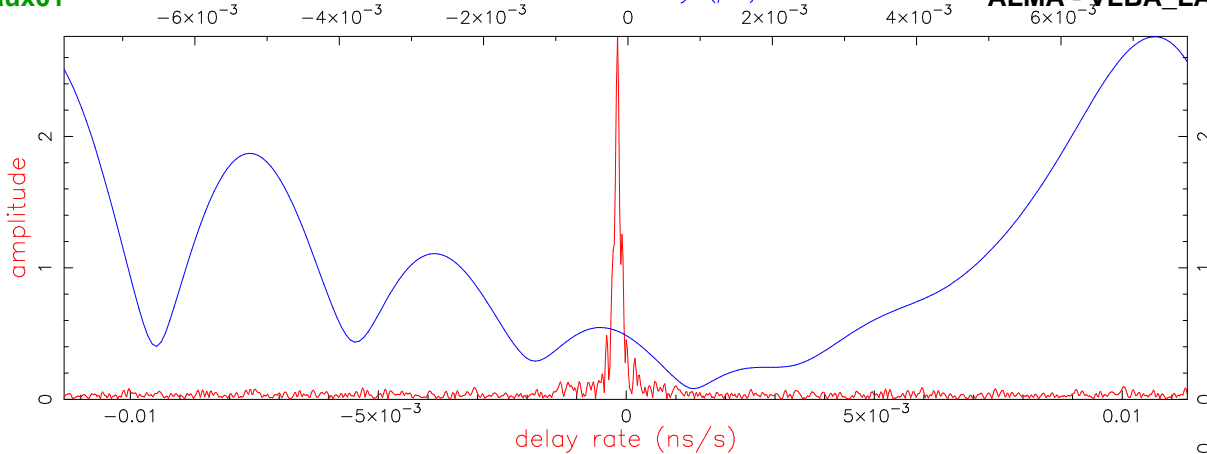
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AI

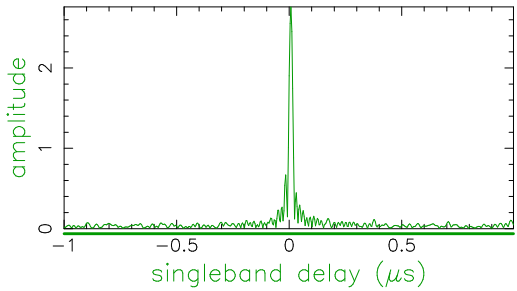
ALMA - VLBA\_LA, fgroup W, pol XL

multiband delay ( $\mu$ s)

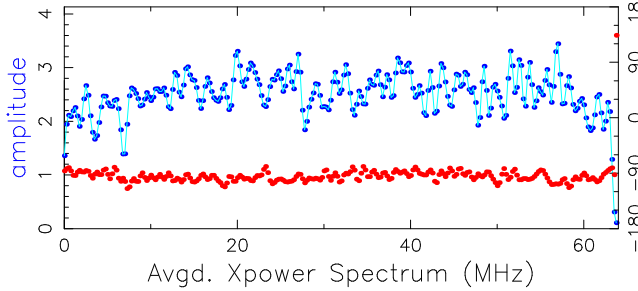


Fringe quality 3

SNR 101.3  
 Int time 179.986  
 Amp 2.761  
 Phase -94.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.007395  
 MBD 0.007276  
 Fringe rate (Hz)  
 -0.015116  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

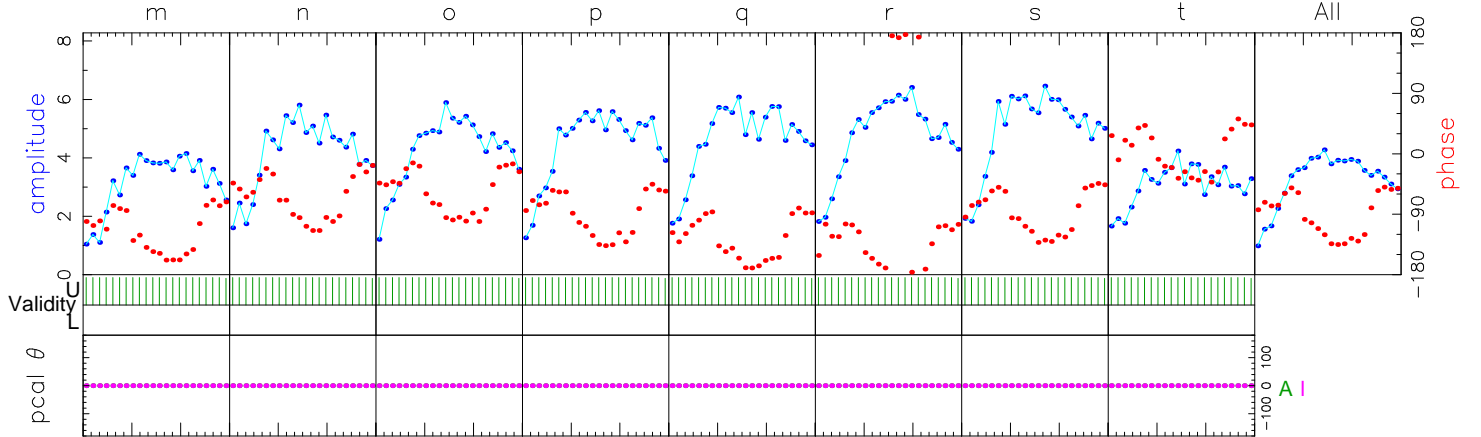


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110933  
 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
	-118.6	-67.8	-59.8	-91.9	-128.7	-147.0	-89.6	0.5	Phase	-94.0
	2.7	3.5	3.6	3.8	4.0	4.1	4.2	2.6	Ampl.	3.6
	260.7	258.9	258.6	258.7	258.9	258.9	259.3	261.2	Sbd box	258.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
I	0	0	0	0	0	0	0	0	PC freqs	
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.95767318945E+03	Apriori delay (usec)	-6.95768046565E+03	Resid mbdelay (usec)	7.27620E-03	+/-	1.1E-05
Sband delay (usec)	-6.95767307040E+03	Apriori clock (usec)	-2.0991362E+03	Resid sbdelay (usec)	7.39525E-03	+/-	8.5E-05
Phase delay (usec)	-6.95768046868E+03	Apriori clockrate (us/s)	2.2316914E-07	Resid phdelay (usec)	-3.03231E-06	+/-	3.6E-08
Delay rate (us/s)	-4.51475910630E-01	Apriori rate (us/s)	-4.51475735152E-01	Resid rate (us/s)	-1.75479E-07	+/-	3.5E-10
Total phase (deg)	-206.0	Apriori accel (us/s/s)	-4.06330443685E-05	Resid phase (deg)	-94.0	+/-	1.1

ph/seg (deg)	31.4	2.7	Search (1024X32)	2.750	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	36.1	4.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	50.7	1.6	Inc. seg. avg.	3.251	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	35.3	2.8	Inc. frq. avg.	3.551	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 I: az 69.3 el 42.3 pa -72.6 u,v (fr/asec) 3198.903 -9311.535 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AI..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AI.W.9.3MP1XE

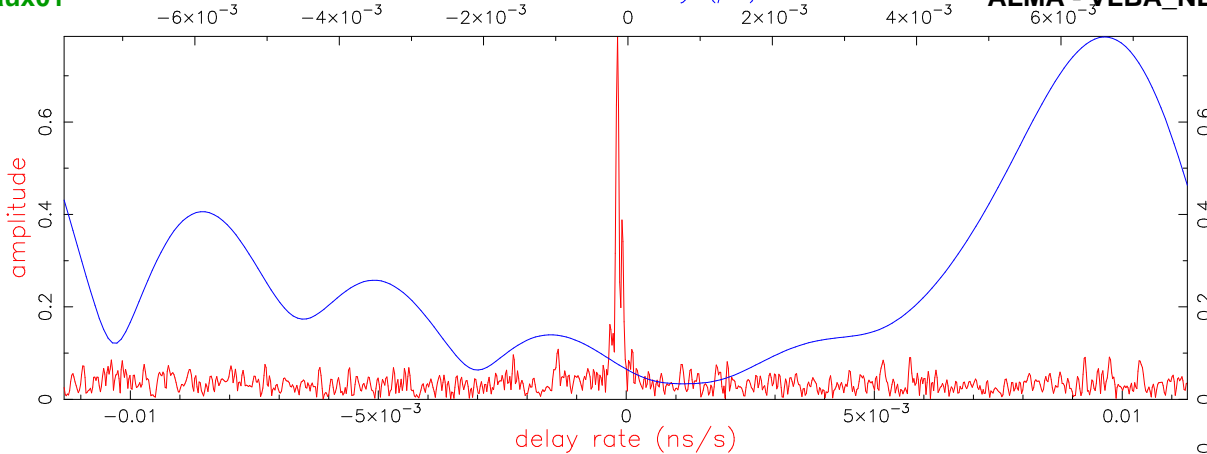
Mk4/DiFX fourfit 3.25 rev 0

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2013+370.3MP1XE, No0308, An

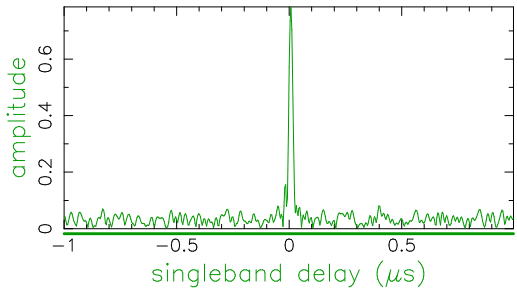
ALMA - VLBA\_NL, fgroup W, pol XL

multiband delay ( $\mu$ s)

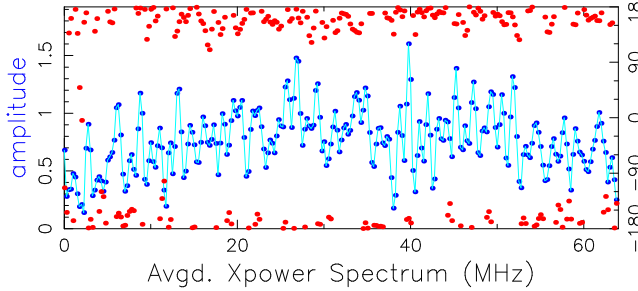


Fringe quality 5

SNR 28.8  
 Int time 179.983  
 Amp 0.785  
 Phase 178.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.007270  
 MBD 0.006587  
 Fringe rate (Hz)  
 -0.015748  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

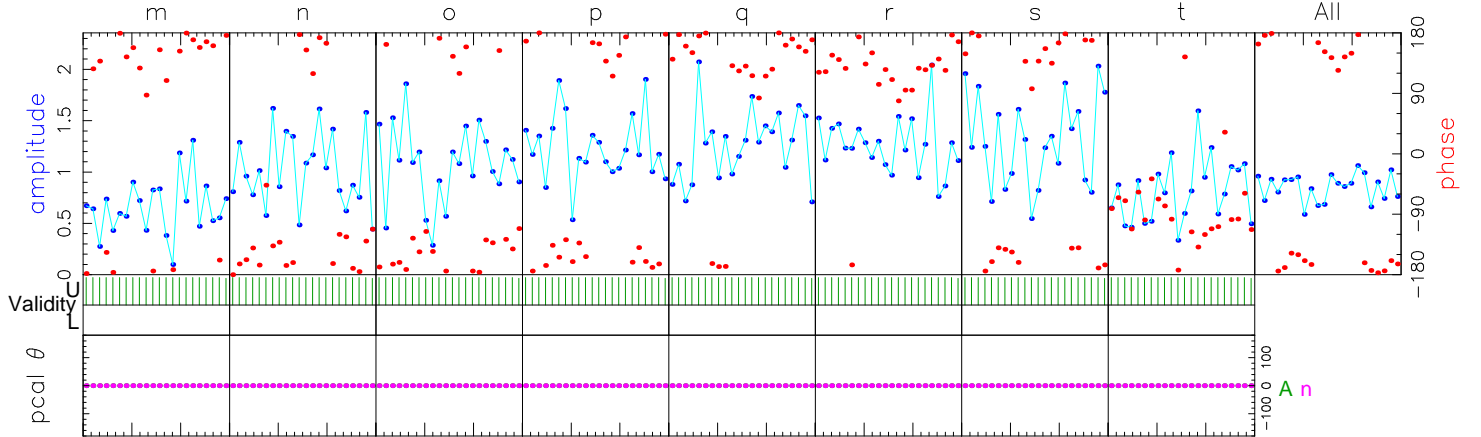


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110934  
 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		
A	0	0	0	0	0	0	0	0	Phase	178.5
n	0	0	0	0	0	0	0	0	Ampl.	0.9
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Sbd box	258.9
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	PC phase	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Mani PC	
									PC amp	
									Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec) (SBD)	-1.00254328156E+04	Apriori delay (usec)	-1.00254394025E+04	Resid mbdelay (usec)	6.58685E-03	+/-	3.8E-05
Sband delay (usec)	-1.00254321325E+04	Apriori clock (usec)	-2.1071653E+03	Resid sbdelay (usec)	7.27000E-03	+/-	3.0E-04
Phase delay (usec)	-1.00254393967E+04	Apriori clockrate (us/s)	-3.0809188E-07	Resid phdelay (usec)	5.75762E-06	+/-	1.3E-07
Delay rate (us/s)	-2.38570144855E-01	Apriori rate (us/s)	-2.38569962041E-01	Resid rate (us/s)	-1.82814E-07	+/-	1.2E-09
Total phase (deg)	131.2	Apriori accel (us/s/s)	-2.99216425477E-05	Resid phase (deg)	178.5	+/-	4.0

ph/seg (deg)	23.1	Theor.	9.3	Amplitude	0.785 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	18.4	Search (1024X32)	0.760	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	43.6	Inc. seg. avg.	0.842	Inc. frq. avg.	0.927	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	32.4	Inc. frq. avg.	0.927			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

A: az 19.3 el 26.3 pa -157.7 n: az 81.9 el 54.9 pa -68.0 u,v (fr/asec) 1674.243 -9235.958 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//An..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//An.W.14.3MP1XE

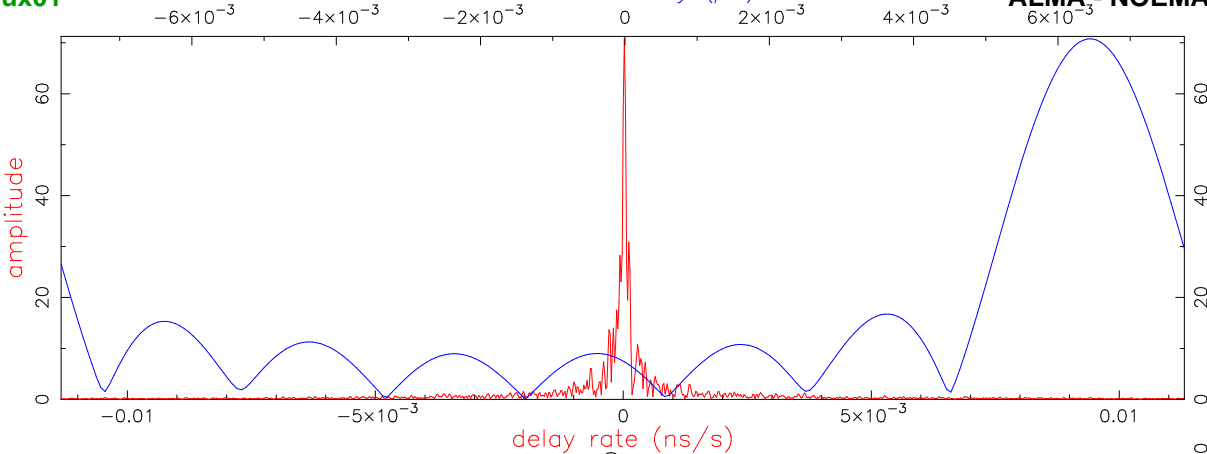
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AN

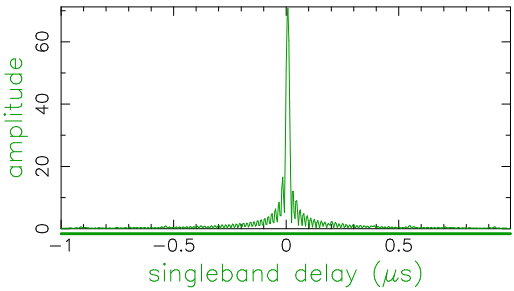
ALMA - NOEMA, fgroup W, pol XL

multiband delay ( $\mu$ s)

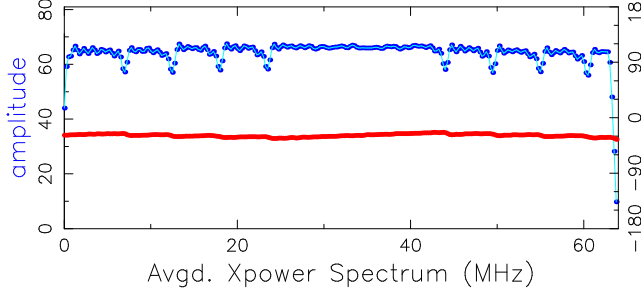


Fringe quality 7

SNR 2614.4  
 Int time 179.984  
 Amp 71.262  
 Phase -24.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006813  
 MBD 0.006440  
 Fringe rate (Hz)  
 0.002473  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

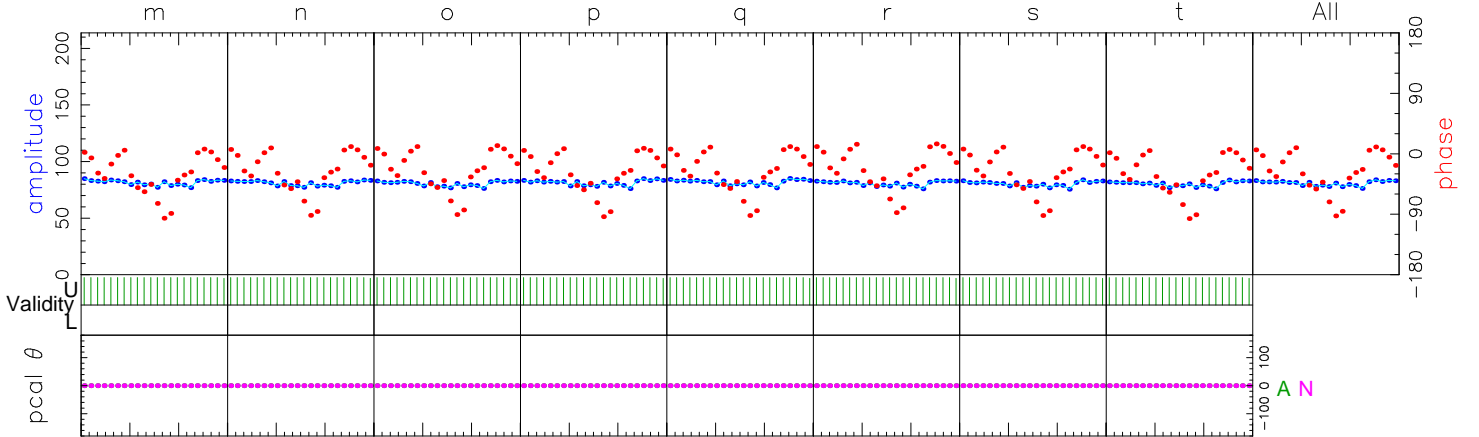


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110935  
 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
	-27.6	-23.9	-22.2	-25.5	-23.4	-19.4	-23.5	-28.4	Phase	-24.3
	71.5	71.0	70.5	71.2	71.6	70.6	70.3	70.3	Ampl.	70.9
	258.7	258.7	258.6	259.0	259.0	258.8	258.7	258.6	Sbd box	258.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
N	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD) -9.00723112938E+03 Apriori delay (usec) -9.00723756896E+03 Resid mbdelay (usec) 6.43958E-03 +/- 4.2E-07  
 Sband delay (usec) -9.00723075571E+03 Apriori clock (usec) -2.0940891E+03 Resid sbdelay (usec) 6.81325E-03 +/- 3.3E-06  
 Phase delay (usec) -9.00723756974E+03 Apriori clockrate (us/s) -2.5130939E-08 Resid phdelay (usec) -7.82458E-07 +/- 1.4E-09  
 Delay rate (us/s) 1.11277751543E+00 Apriori rate (us/s) 1.11277748672E+00 Resid rate (us/s) 2.87051E-08 +/- 1.4E-11  
 Total phase (deg) -92.6 Apriori accel (us/s/s) -3.77734026185E-05 Resid phase (deg) -24.3 +/- 0.0

RMS Theor. Amplitude 71.262 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 29.6 0.1 Search (1024X32) 69.232 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 13.8 0.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 3.1 0.1 Inc. seg. avg. 80.868 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.9 0.1 Inc. frq. avg. 70.877 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 19.3 el 26.3 pa -157.7 N: az 277.7 el 50.9 pa 62.3 u,v (fr/asec) -8054.478 -9901.056 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AN..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AN.W.18.3MP1XE

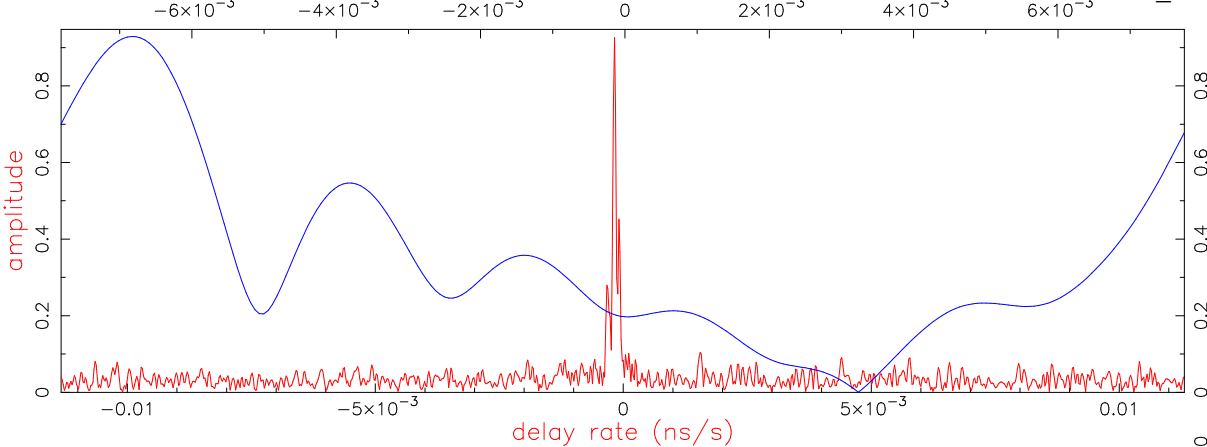
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, An

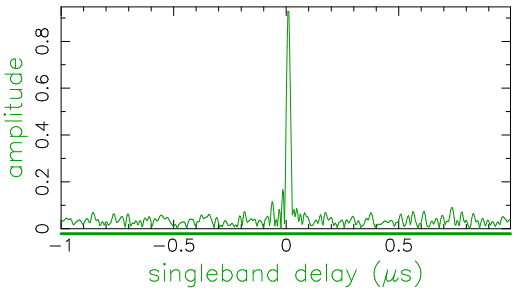
ALMA - VLBA\_NL, fgroup W, pol YR

multiband delay ( $\mu$ s)

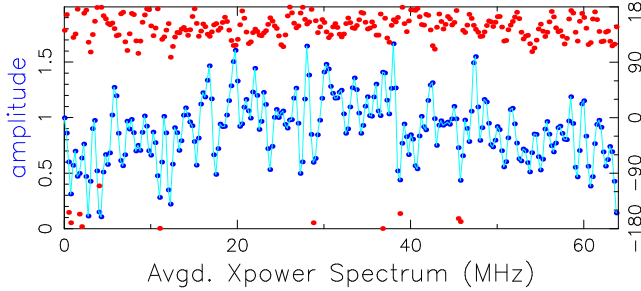


Fringe quality 5

SNR 34.8  
 Int time 179.983  
 Amp 0.947  
 Phase -20.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.009701  
 MBD -0.006925  
 Fringe rate (Hz)  
 -0.015763  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

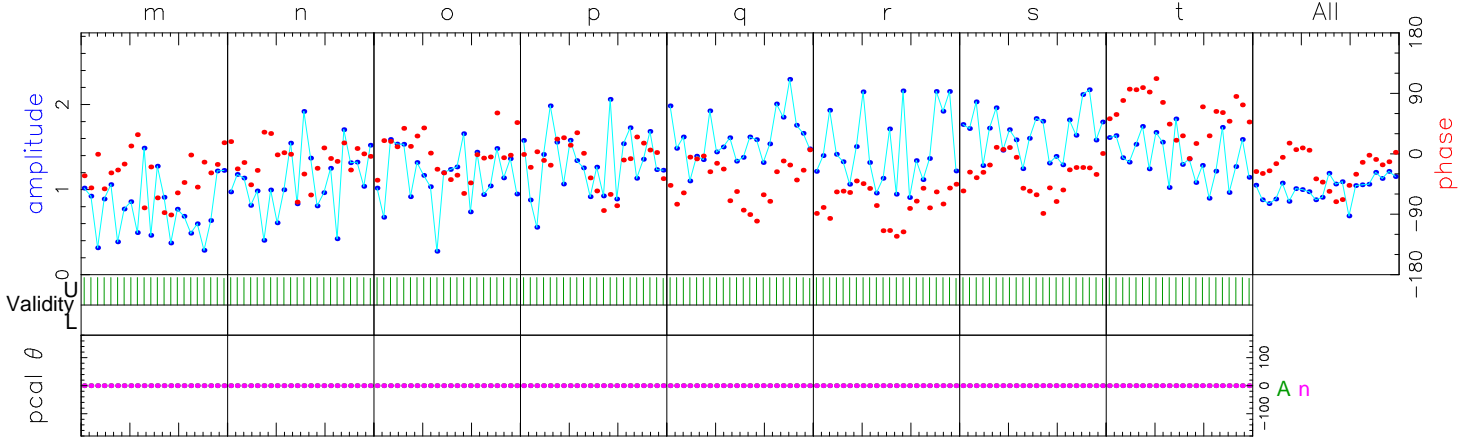


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110936  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-35.6	-10.6	0.9	-9.9	-40.2	-72.9	-30.1	63.2		Phase
	0.7	1.0	1.0	1.1	1.4	1.3	1.5	1.2		Ampl.
	261.1	259.1	258.9	259.0	259.6	259.3	260.0	261.1		Sbd box
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		259.5
A	0	0	0	0	0	0	0	0		APs used
n	0	0	0	0	0	0	0	0		PC freqs
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC
A	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
n	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		Chan ids
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec) (SBD)	-1.00254307029E+04	Apriori delay (usec)	-1.00254394025E+04	Resid mbdelay (usec)	-6.92543E-03	+/-	3.1E-05
Sband delay (usec)	-1.00254297010E+04	Apriori clock (usec)	-2.1071653E+03	Resid sbdelay (usec)	9.70150E-03	+/-	2.5E-04
Phase delay (usec)	-1.00254394032E+04	Apriori clockrate (us/s)	-3.0809188E-07	Resid phdelay (usec)	-6.65094E-07	+/-	1.1E-07
Delay rate (us/s)	-2.38570145039E-01	Apriori rate (us/s)	-2.38569962041E-01	Resid rate (us/s)	-1.82998E-07	+/-	1.0E-09
Total phase (deg)	-68.0	Apriori accel (us/s/s)	-2.99216425477E-05	Resid phase (deg)	-20.6	+/-	3.3

ph/seg (deg)	24.1	RMS	7.7	Theor.	0.947 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	15.6	Search (1024X32)	0.912	Amplitude	0.912	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	43.1	Interp.	1.004	Inc. seg. avg.	1.004	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	34.3	Inc. frq. avg.	1.149	Inc. frq. avg.	1.149	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
A:	az 19.3 el 26.3 pa -157.7	n:	az 81.9 el 54.9 pa -68.0	u,v (fr/asec)	1674.243 -9235.958	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/No0308//An..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//An.W.24.3MP1XE

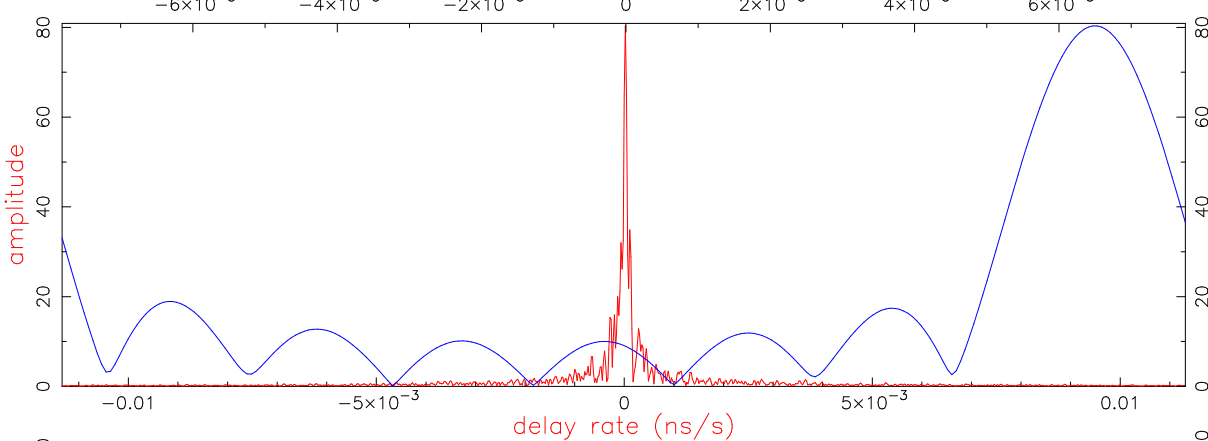
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AN

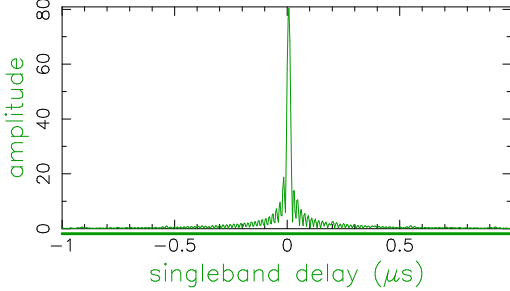
ALMA - NOEMA, fgroup W, pol YR

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

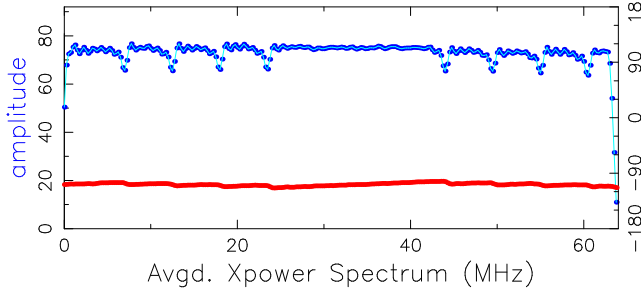


Fringe quality 7

SNR 2967.8  
 Int time 179.984  
 Amp 80.895  
 Phase -104.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006810  
 MBD 0.006494  
 Fringe rate (Hz) 0.002488  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

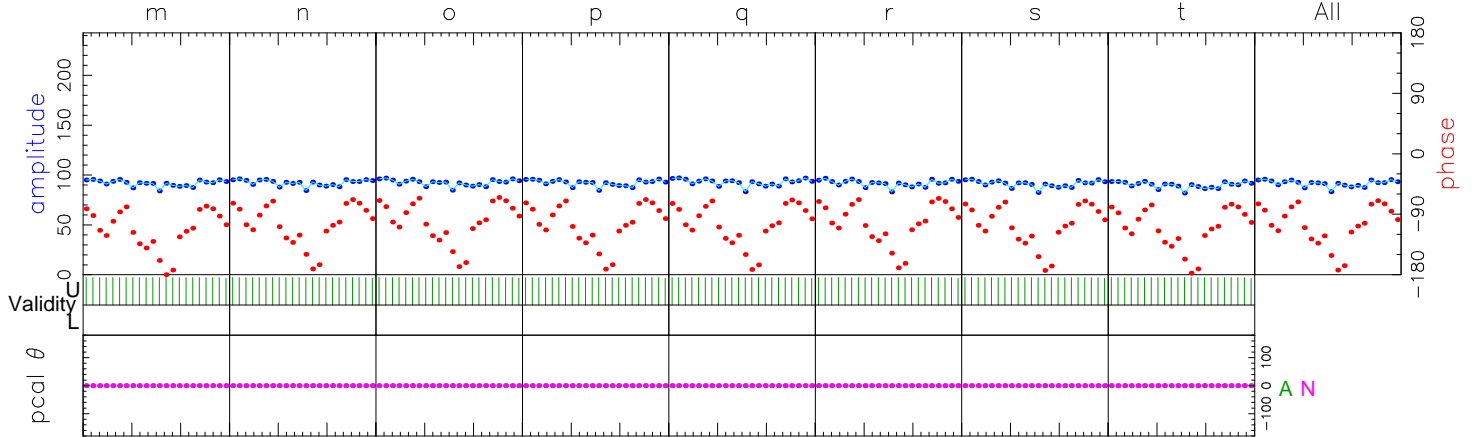


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 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
	-112.0	-103.2	-99.6	-103.3	-103.6	-101.1	-104.8	-109.1	Phase	-104.6
	80.6	81.0	81.2	80.8	81.4	80.6	80.0	78.9	Ampl.	80.5
	258.6	258.7	258.8	258.9	259.1	258.9	258.7	258.5	Sbd box	258.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
N	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-9.00723107503E+03	Apriori delay (usec)	-9.00723756896E+03	Resid mbdelay (usec)	6.49392E-03	+/-	3.7E-07
Sband delay (usec)	-9.00723075921E+03	Apriori clock (usec)	-2.0940891E+03	Resid sbdelay (usec)	6.80975E-03	+/-	2.9E-06
Phase delay (usec)	-9.00723757233E+03	Apriori clockrate (us/s)	-2.5130939E-08	Resid phdelay (usec)	-3.37191E-06	+/-	1.2E-09
Delay rate (us/s)	1.11277751561E+00	Apriori rate (us/s)	1.11277748672E+00	Resid rate (us/s)	2.88865E-08	+/-	1.2E-11
Total phase (deg)	-172.9	Apriori accel (us/s/s)	-3.77734026185E-05	Resid phase (deg)	-104.6	+/-	0.0

ph/seg (deg)	29.5	RMS	29.5	Theor.	0.1	Amplitude	80.895 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	13.9		13.9		0.2	Search (1024X32)	78.069	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	4.4		4.4		0.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	1.0		1.0		0.1	Inc. seg. avg.	91.735	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Inc. frq. avg.	80.543	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7 N: az 277.7 el 50.9 pa 62.3 u,v (fr/asec) -8054.478 -9901.056 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AN..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AN.W.29.3MP1XE



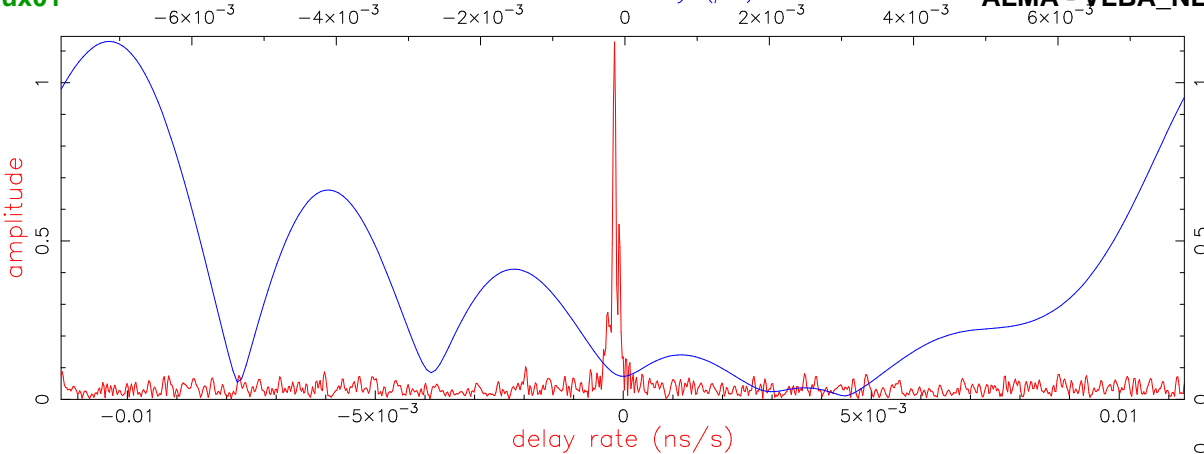
Mk4/DiFX fourfit 3.25 rev 0

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2013+370.3MP1XE, No0308, An

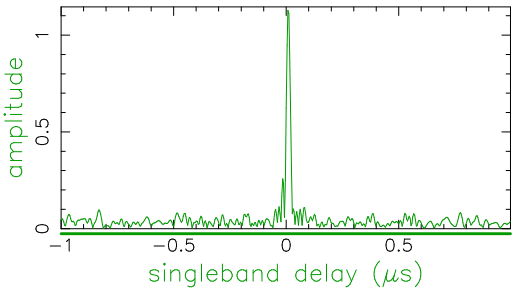
ALMA - VLBA\_NL, fgroup W, pol XR

multiband delay ( $\mu$ s)

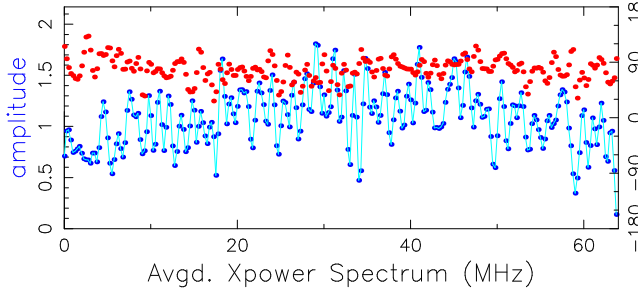


Fringe quality 5

SNR 42.0  
 Int time 179.983  
 Amp 1.146  
 Phase -90.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.009433  
 MBD -0.007076  
 Fringe rate (Hz)  
 -0.015808  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

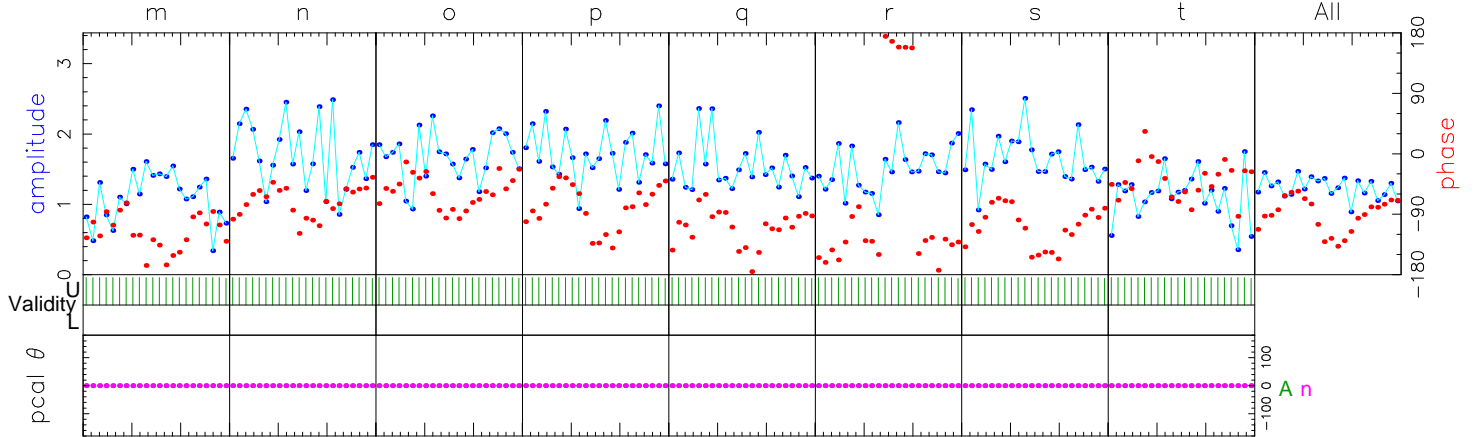


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110938  
 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
	-121.2	-72.1	-56.5	-79.2	-107.4	-150.3	-107.5	-39.2		-90.5
	1.0	1.6	1.5	1.5	1.4	1.3	1.5	1.0		1.3
	261.1	259.2	258.9	259.0	259.3	259.4	259.8	261.0		259.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
A	0	0	0	0	0	0	0	0		
n	0	0	0	0	0	0	0	0		
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC freqs
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
A	1000	1000	1000	1000	1000	1000	1000	1000		Manl PC
n	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX		Chan ids
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec) (SBD)	-1.00254308539E+04	Apriori delay (usec)	-1.00254394025E+04	Resid mbdelay (usec)	-7.07643E-03	+/-	2.6E-05
Sband delay (usec)	-1.00254299695E+04	Apriori clock (usec)	-2.1071653E+03	Resid sbdelay (usec)	9.43300E-03	+/-	2.0E-04
Phase delay (usec)	-1.00254394054E+04	Apriori clockrate (us/s)	-3.0809188E-07	Resid phdelay (usec)	-2.91972E-06	+/-	8.8E-08
Delay rate (us/s)	-2.38570145561E-01	Apriori rate (us/s)	-2.38569962041E-01	Resid rate (us/s)	-1.83519E-07	+/-	8.4E-10
Total phase (deg)	-137.9	Apriori accel (us/s/s)	-2.99216425477E-05	Resid phase (deg)	-90.5	+/-	2.7

ph/seg (deg)	24.6	Theor.	6.4	Amplitude	1.146 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	14.7		11.2	Search (1024X32)	1.096	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	39.5		3.9	Inc. seg. avg.	1.232	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	25.1		6.7	Inc. frq. avg.	1.329	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

A: az 19.3 el 26.3 pa -157.7      n: az 81.9 el 54.9 pa -68.0      u,v (fr/asec) 1674.243 -9235.958      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//An..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//An.W.35.3MP1XE

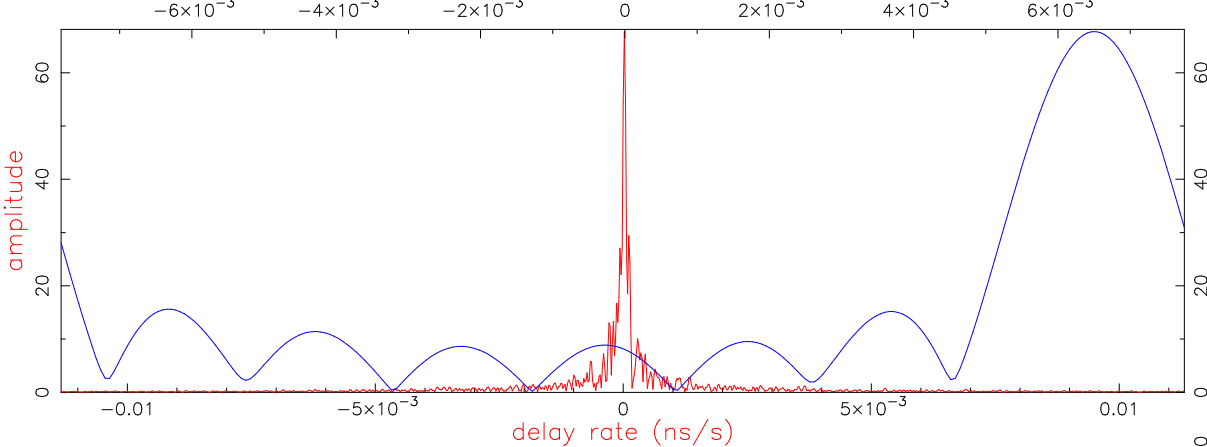
Mk4/DiFX fourfit 3.25 rev 0

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2013+370.3MP1XE, No0308, AN

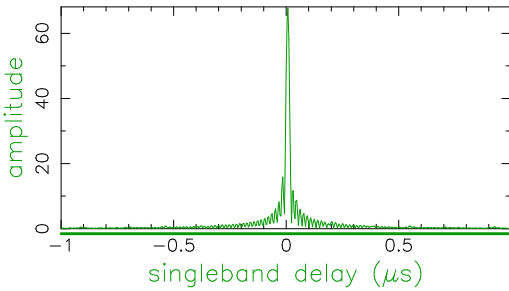
ALMA - NOEMA, fgroup W, pol XR

multiband delay ( $\mu$ s)

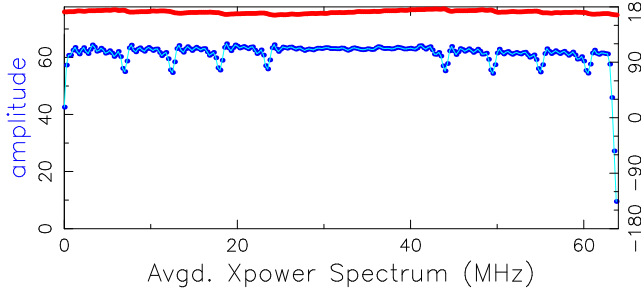


Fringe quality 7

SNR 2499.9  
 Int time 179.984  
 Amp 68.140  
 Phase 175.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006857  
 MBD 0.006499  
 Fringe rate (Hz)  
 0.002500  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

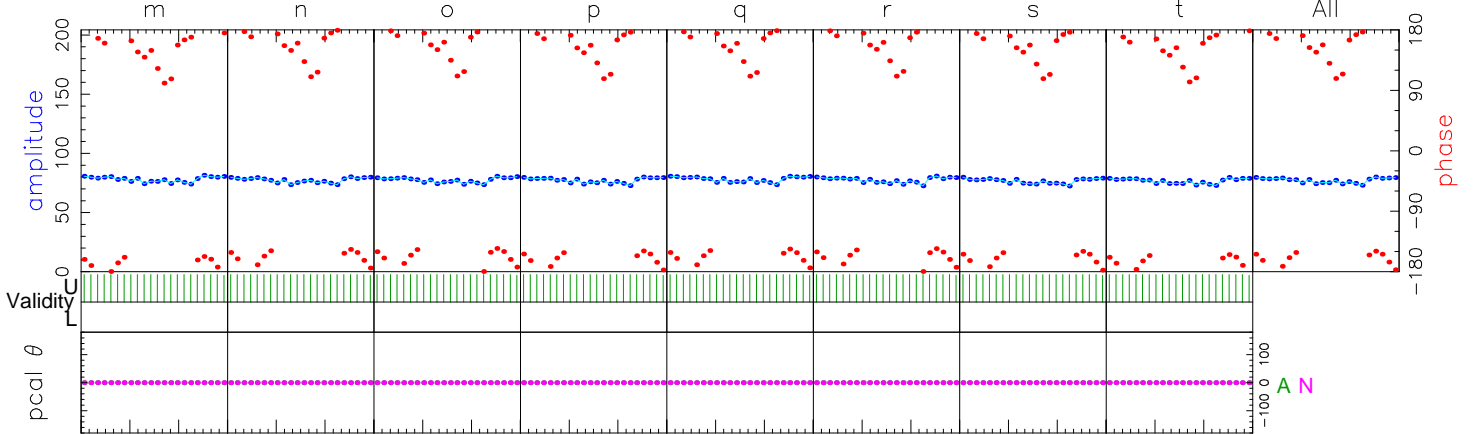


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110942  
 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
	168.5	178.4	179.9	175.7	178.4	179.7	175.5	171.1	Phase	175.9
	68.6	67.9	68.0	67.7	68.5	68.1	67.2	67.1	Ampl.	67.9
	258.7	258.6	258.7	258.9	259.0	258.9	258.7	258.6	Sbd box	258.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
N	0	0	0	0	0	0	0	0	PC freqs	
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
N	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-9.00723106959E+03	Apriori delay (usec)	-9.00723756896E+03	Resid mbdelay (usec)	6.49936E-03	+/-	4.3E-07
Sband delay (usec)	-9.00723071171E+03	Apriori clock (usec)	-2.0940891E+03	Resid sbdelay (usec)	6.85725E-03	+/-	3.4E-06
Phase delay (usec)	-9.00723756328E+03	Apriori clockrate (us/s)	-2.5130939E-08	Resid phdelay (usec)	5.67258E-06	+/-	1.5E-09
Delay rate (us/s)	1.11277751574E+00	Apriori rate (us/s)	1.11277748672E+00	Resid rate (us/s)	2.90239E-08	+/-	1.4E-11
Total phase (deg)	107.5	Apriori accel (us/s/s)	-3.77734026185E-05	Resid phase (deg)	175.9	+/-	0.0

ph/seg (deg)	29.5	RMS	29.5	Theor.	0.1	Amplitude	68.140 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	13.8		13.8		0.2	Search (1024X32)	65.703	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	4.5		4.5		0.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	0.8		0.8		0.1	Inc. seg. avg.	77.287	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Inc. frq. avg.	67.891	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7 N: az 277.7 el 50.9 pa 62.3 u,v (fr/asec) -8054.478 -9901.056 simultaneous interpolator

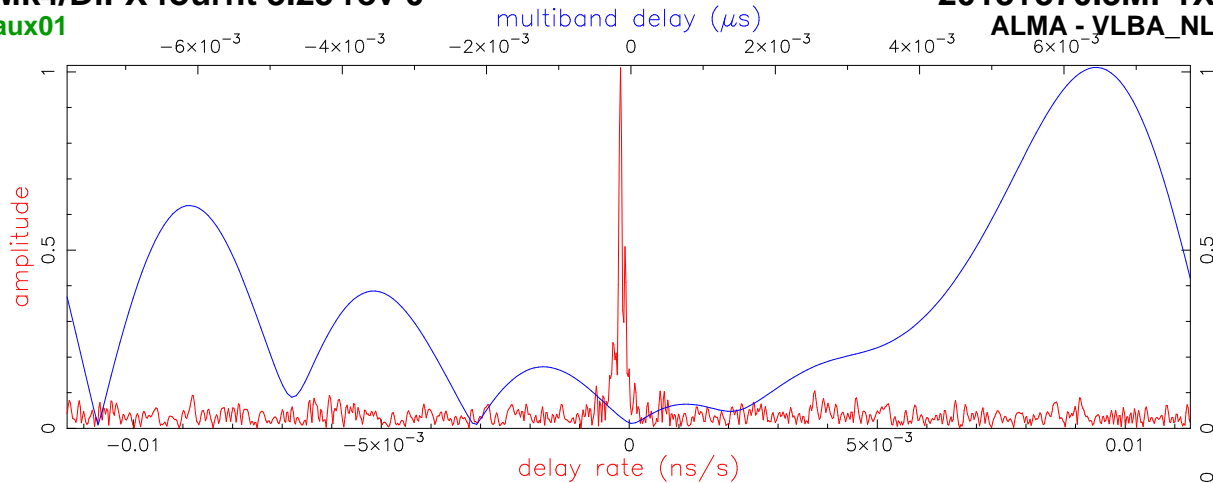
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AN..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AN.W.39.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

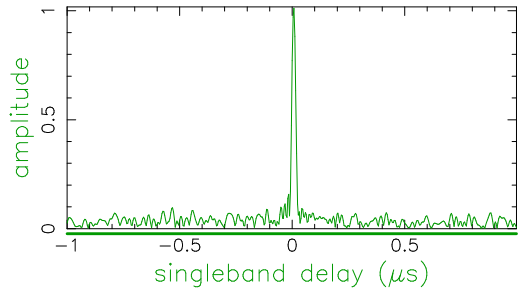
2013+370.3MP1XE, No0308, An

ALMA - VLBA\_NL, fgroup W, pol YL

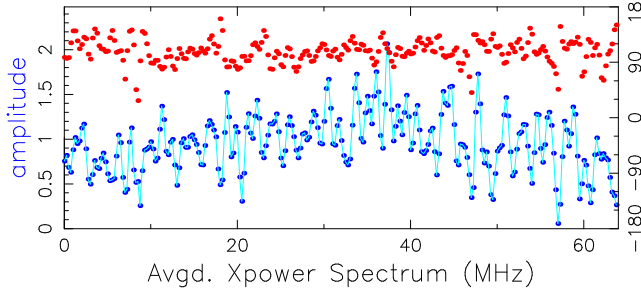


Fringe quality 5

SNR 37.4  
 Int time 179.983  
 Amp 1.018  
 Phase 111.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006762  
 MBD 0.006397  
 Fringe rate (Hz)  
 -0.015662  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

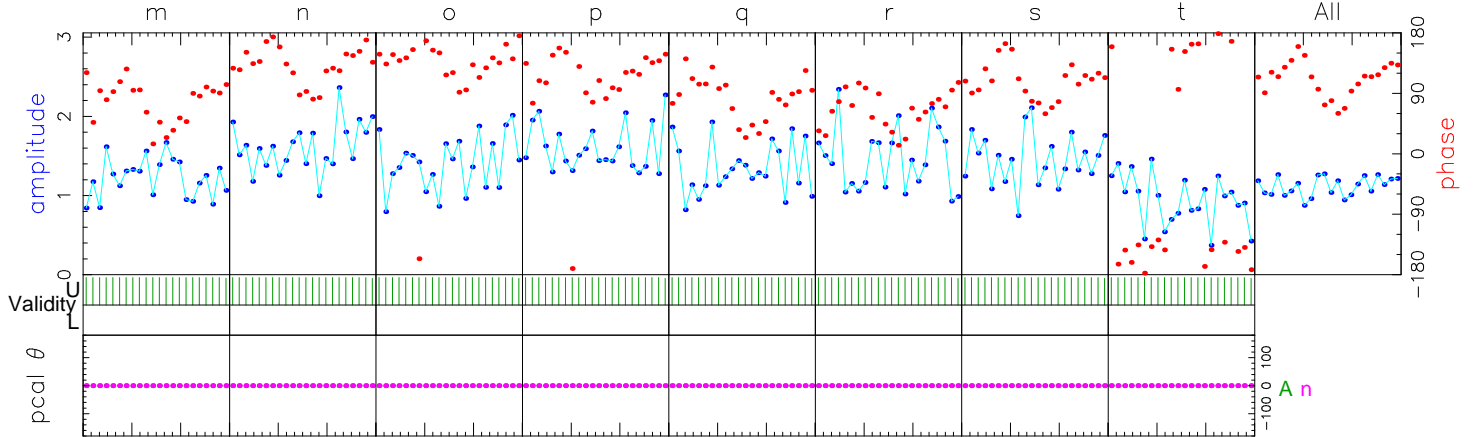


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110942  
 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		
A	0	0	0	0	0	0	0	0		
n	0	0	0	0	0	0	0	0		
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-1.00254330056E+04	Apriori delay (usec)	-1.00254394025E+04	Resid mbdelay (usec)	6.39692E-03	+/-	2.9E-05
Sband delay (usec)	-1.00254326410E+04	Apriori clock (usec)	-2.1071653E+03	Resid sbdelay (usec)	6.76150E-03	+/-	2.3E-04
Phase delay (usec)	-1.00254393989E+04	Apriori clockrate (us/s)	-3.0809188E-07	Resid phdelay (usec)	3.58756E-06	+/-	9.9E-08
Delay rate (us/s)	-2.38570143860E-01	Apriori rate (us/s)	-2.38569962041E-01	Resid rate (us/s)	-1.81819E-07	+/-	9.5E-10
Total phase (deg)	63.9	Apriori accel (us/s/s)	-2.99216425477E-05	Resid phase (deg)	111.3	+/-	3.1

ph/seg (deg)	25.4	Theor.	7.2	Amplitude	1.018 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	15.0		12.6	Search (1024X32)	0.997	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	45.2		4.3	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	28.2		7.6	Inc. seg. avg.	1.107	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	1.223	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7 n: az 81.9 el 54.9 pa -68.0 u,v (fr/asec) 1674.243 -9235.958 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//An..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//An.W.43.3MP1XE

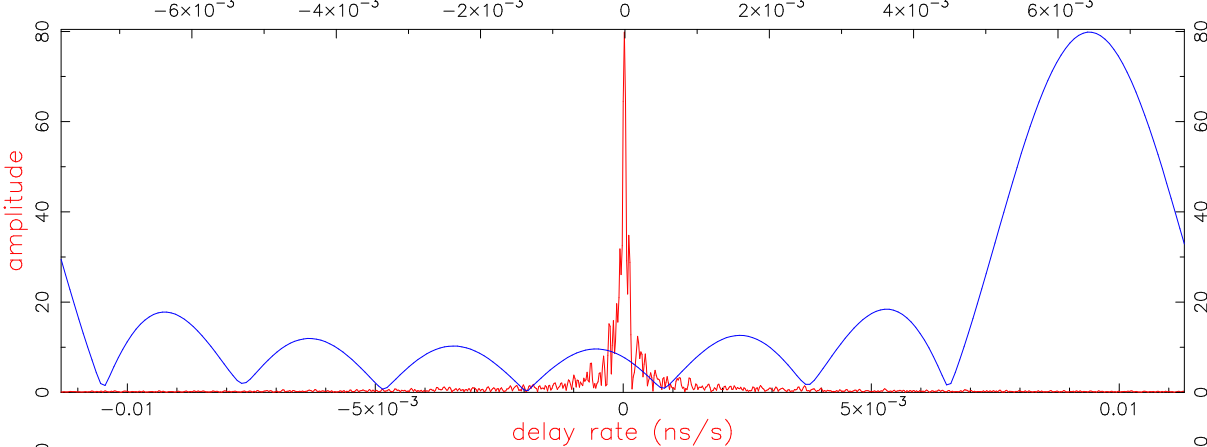
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AN

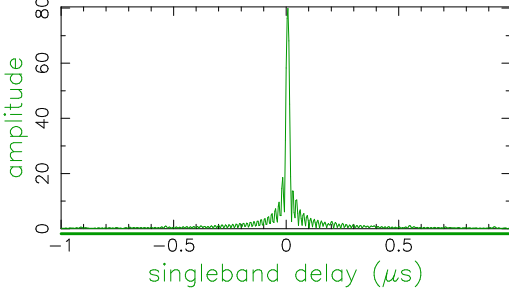
ALMA - NOEMA, fgroup W, pol YL

multiband delay ( $\mu$ s)

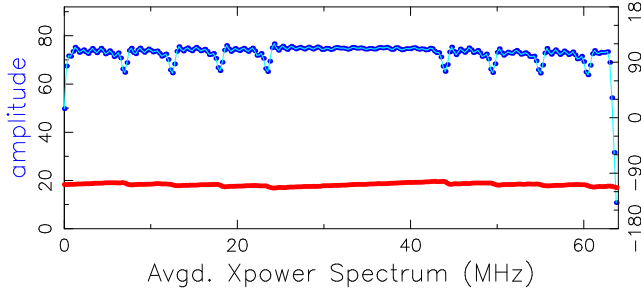


Fringe quality 7

SNR 2951.6  
 Int time 179.984  
 Amp 80.453  
 Phase -104.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006761  
 MBD 0.006431  
 Fringe rate (Hz) 0.002479  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

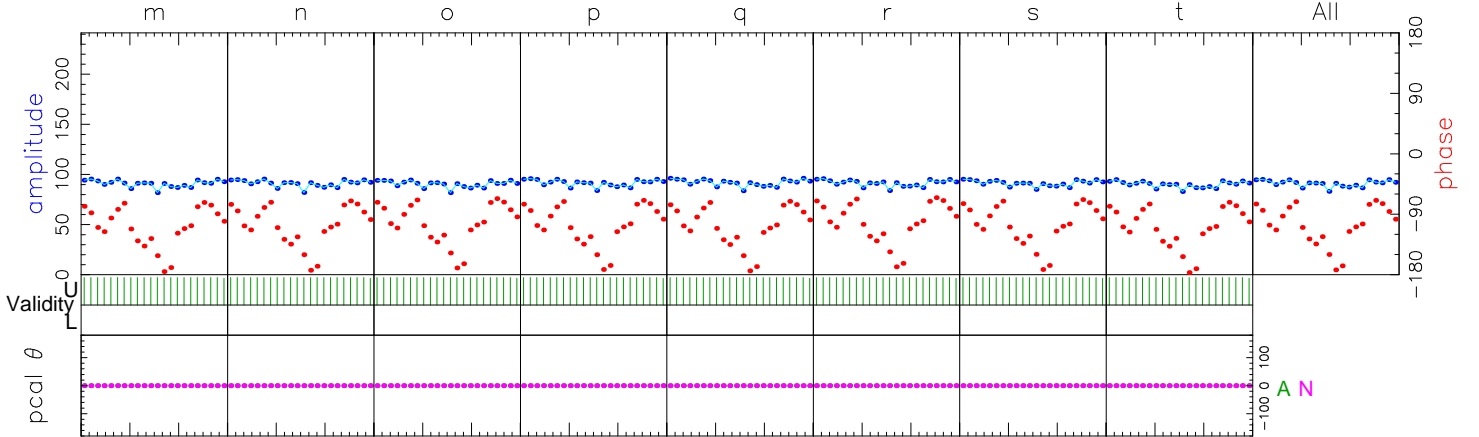


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110944  
 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		
A	0	0	0	0	0	0	0	0		
N	0	0	0	0	0	0	0	0		
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:N	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
N	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec) (SBD)	-9.00723113772E+03	Apriori delay (usec)	-9.00723756896E+03	Resid mbdelay (usec)	6.43124E-03	+/-	3.7E-07
Sband delay (usec)	-9.00723080771E+03	Apriori clock (usec)	-2.0940891E+03	Resid sbdelay (usec)	6.76125E-03	+/-	2.9E-06
Phase delay (usec)	-9.00723757233E+03	Apriori clockrate (us/s)	-2.5130939E-08	Resid phdelay (usec)	-3.37234E-06	+/-	1.3E-09
Delay rate (us/s)	1.11277751549E+00	Apriori rate (us/s)	1.11277748672E+00	Resid rate (us/s)	2.87731E-08	+/-	1.2E-11
Total phase (deg)	-172.9	Apriori accel (us/s/s)	-3.77734026185E-05	Resid phase (deg)	-104.6	+/-	0.0

ph/seg (deg)	29.5	RMS	29.5	Theor.	0.1	Amplitude	80.453 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	13.8		13.8		0.2	Search (1024X32)	78.123	Pcal rate:	0.000E+00, 0.000E+00 (us/s)			mb window (us)	-0.008	0.008
ph/frq (deg)	2.8		2.8		0.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm:	enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	0.9		0.9		0.1	Inc. seg. avg.	91.146	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	nlags:	256	ion window (TEC)	0.00	0.00
						Inc. frq. avg.	79.943	Data rate(Mb/s):	2048					

A: az 19.3 el 26.3 pa -157.7 N: az 277.7 el 50.9 pa 62.3 u,v (fr/asec) -8054.478 -9901.056 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AN..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AN.W.49.3MP1XE

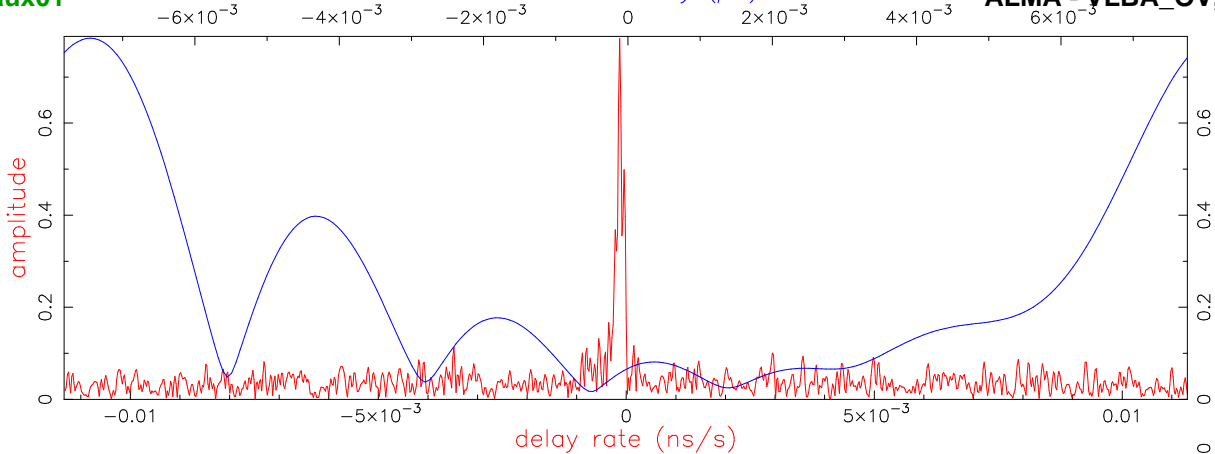
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ao

ALMA - VLBA\_OV, fgroup W, pol XL

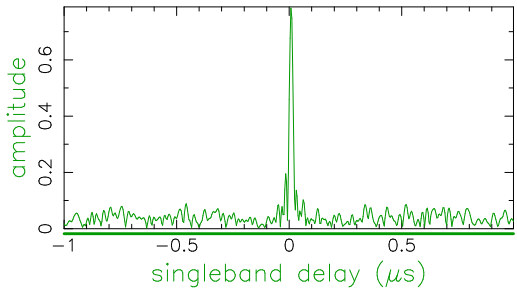
multiband delay ( $\mu$ s)



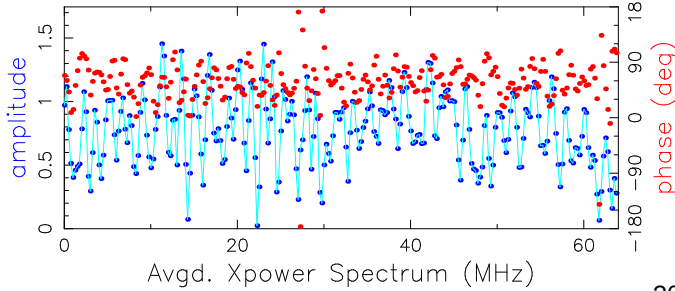
Fringe quality 5

SNR 28.6  
 Int time 175.775  
 Amp 0.788  
 Phase -115.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.008780  
 MBD -0.007397  
 Fringe rate (Hz)  
 -0.011437  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

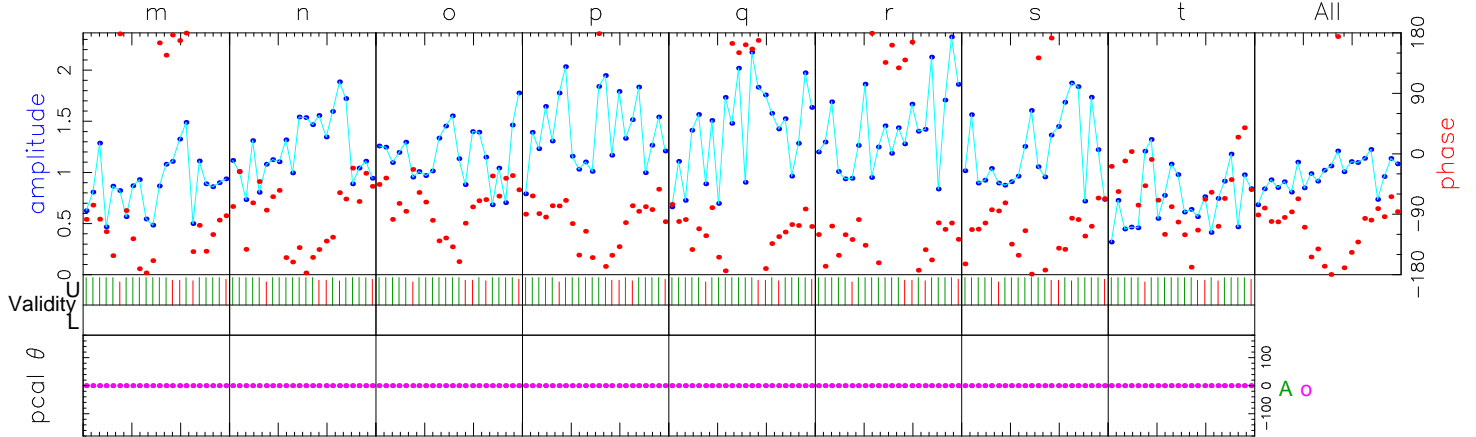


delay rate (ns/s)



Avgd. Xpower Spectrum (MHz)

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



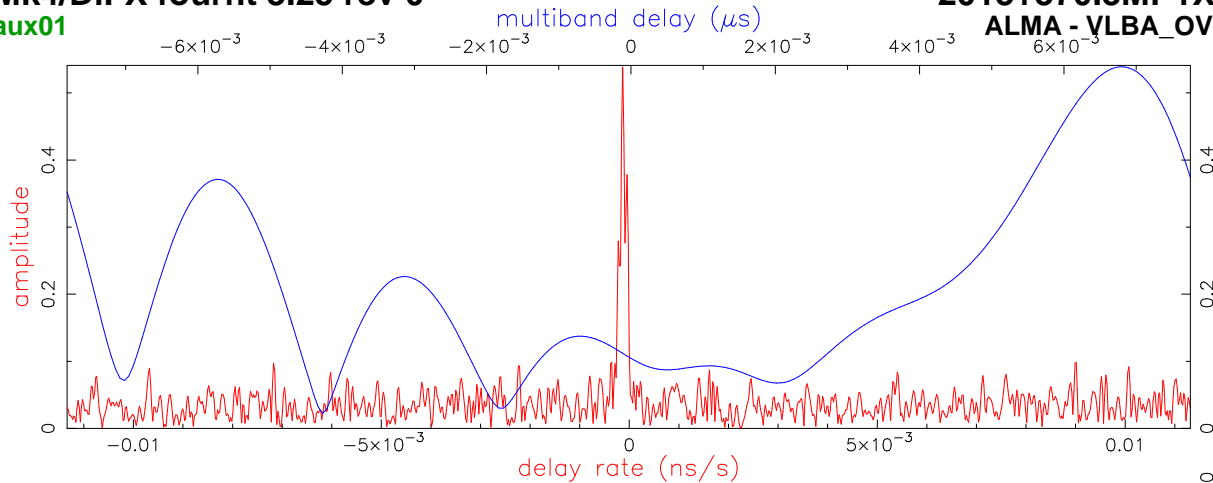
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-144.1	-96.1	-77.5	-102.8	-140.5	-149.3	-123.3	-59.3		-115.0	
	0.7	0.8	1.0	1.1	1.0	1.1	0.9	0.5		0.9	
	260.8	259.0	258.9	258.6	258.9	259.0	259.6	261.2		259.2	
U/L	348/0	348/0	348/0	348/0	348/0	348/0	348/0	348/0			
A	0	0	0	0	0	0	0	0			
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC freqs	
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
A	1000	1000	1000	1000	1000	1000	1000	1000		Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX		Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks	
										Tracks	
Group delay (usec) (SBD)	-4.53787681803E+03		Apriori delay (usec)		-4.53788504610E+03		Resid mbdelay (usec)		-7.39692E-03	+/- 3.8E-05	
Sband delay (usec)	-4.53787626560E+03		Apriori clock (usec)		-2.1325112E+03		Resid sbdelay (usec)		8.78050E-03	+/- 3.0E-04	
Phase delay (usec)	-4.53788504981E+03		Apriori clockrate (us/s)		-4.9210397E-07		Resid phdelay (usec)		-3.70757E-06	+/- 1.3E-07	
Delay rate (us/s)	-5.19062100159E-01		Apriori rate (us/s)		-5.19061967384E-01		Resid rate (us/s)		-1.32775E-07	+/- 1.3E-09	
Total phase (deg)			Apriori accel (us/s/s)		-5.50679409949E-05		Resid phase (deg)		-115.0	+/- 4.0	
	RMS	Theor.	Amplitude	0.788 +/- 0.028		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	36.8	9.3	Search (1024X32)	0.780		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000	
amp/seg (%)	31.0	16.3	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)	35.9	5.7	Inc. seg. avg.	0.971		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)		-0.011 0.011	
amp/frq (%)	28.4	9.9	Inc. frq. avg.	0.889		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
A: az 19.3 el 26.3 pa -157.7		o: az 66.1 el 33.9 pa -66.2		u,v (fr/asec) 3673.373 -10320.330						simultaneous interpolator	
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0308//Ao..3MP1XE		Output file: /Exps/c241c/v2/3mm/1234/No0308//Ao.W.27.3MP1XE							

Mk4/DiFX fourfit 3.25 rev 0

aux01

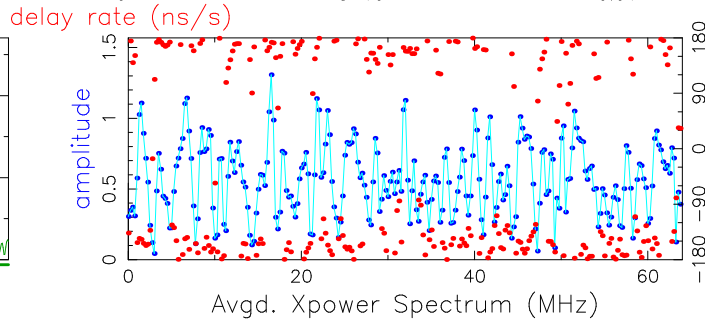
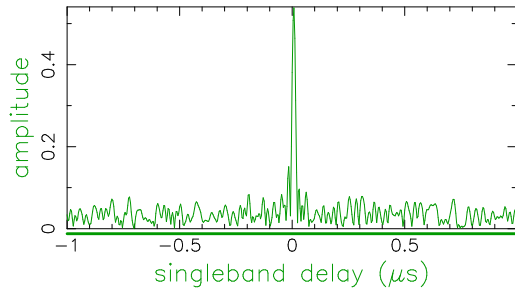
2013+370.3MP1XE, No0308, Ao

ALMA - VLBA\_OV, fgroup W, pol YR



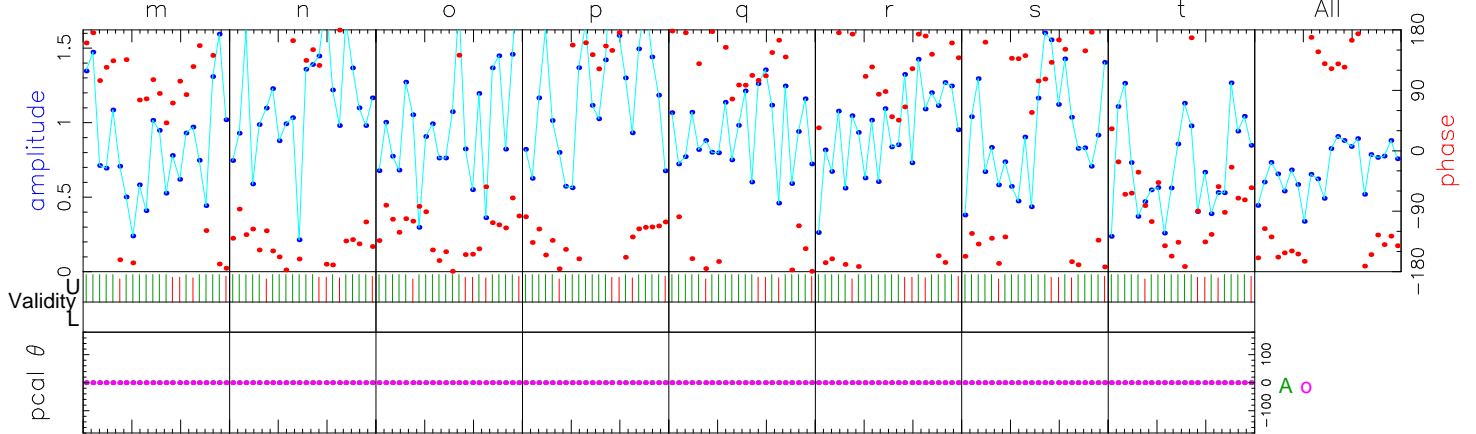
Fringe quality 7

SNR 19.6  
 Int time 175.775  
 Amp 0.541  
 Phase -170.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006974  
 MBD 0.006744  
 Fringe rate (Hz)  
 -0.011422  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110941  
 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
	136.2	-155.9	-121.8	-156.6	156.3	148.7	169.7	-82.9	Phase	-170.5
	0.6	0.9	0.8	0.9	0.6	0.6	0.7	0.4	Ampl.	0.7
	260.5	258.8	258.3	258.9	258.5	258.4	259.2	260.7	Sbd box	258.8
U/L	348/0	348/0	348/0	348/0	348/0	348/0	348/0	348/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-4.53787830231E+03	Apriori delay (usec)	-4.53788504610E+03	Resid mbdelay (usec)	6.74380E-03	+/-	5.5E-05
Sband delay (usec)	-4.53787807185E+03	Apriori clock (usec)	-2.1325112E+03	Resid sbdelay (usec)	6.97425E-03	+/-	4.4E-04
Phase delay (usec)	-4.53788505160E+03	Apriori clockrate (us/s)	-4.9210397E-07	Resid phdelay (usec)	-5.49832E-06	+/-	1.9E-07
Delay rate (us/s)	-5.19062099978E-01	Apriori rate (us/s)	-5.19061967384E-01	Resid rate (us/s)	-1.32594E-07	+/-	1.8E-09
Total phase (deg)	-124.2	Apriori accel (us/s/s)	-5.50679409949E-05	Resid phase (deg)	-170.5	+/-	5.8

ph/seg (deg)	37.8	Theor.	13.6	Amplitude	0.541 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	39.8		23.8	Search (1024X32)	0.538	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	52.3		8.3	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	40.1		14.4	Inc. seg. avg.	0.671	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.693	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7      o: az 66.1 el 33.9 pa -66.2      u, v (fr/asec) 3673.373 -10320.330      simultaneous interpolator

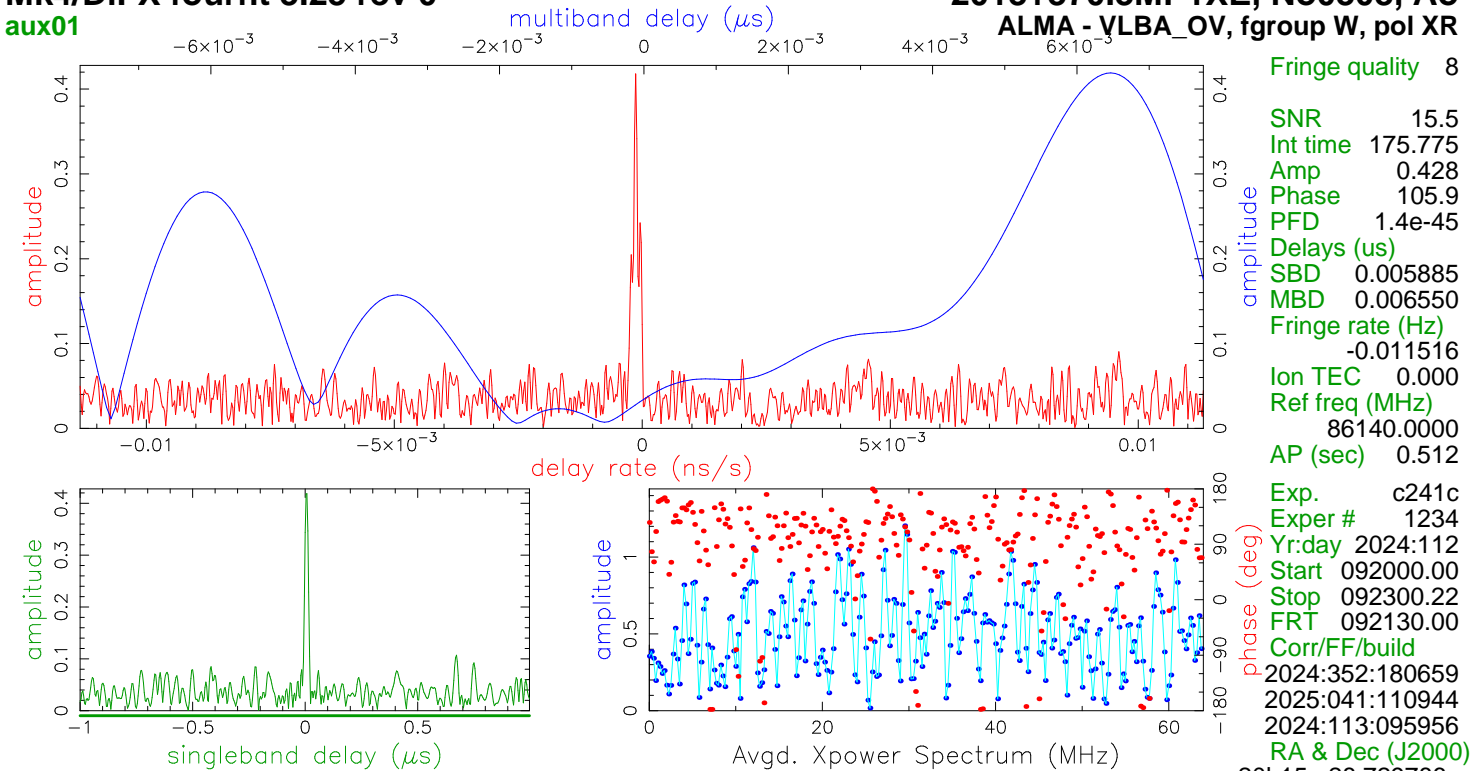
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ao..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ao.W.38.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

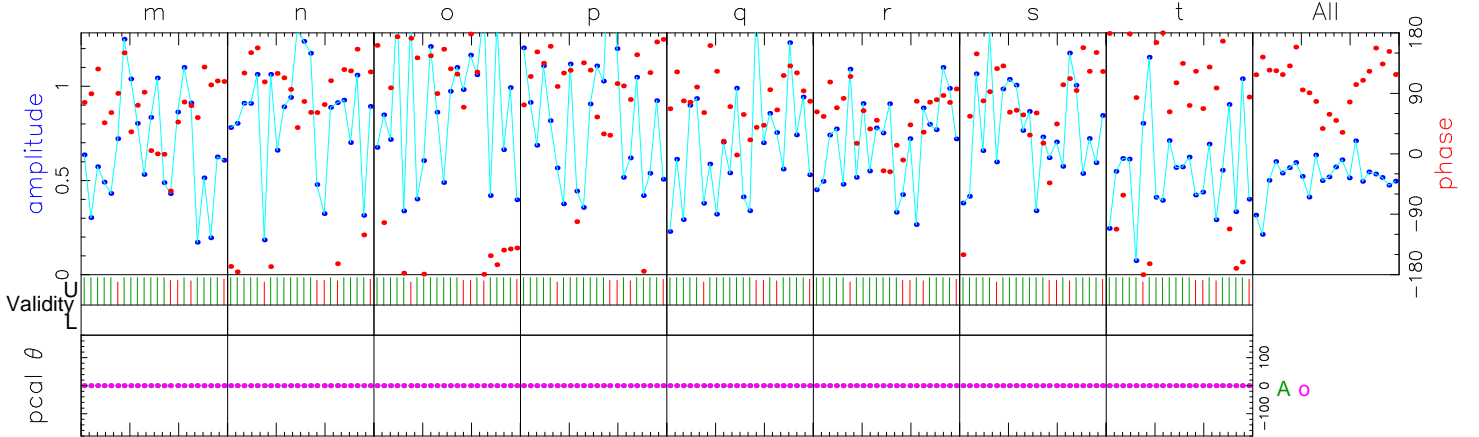
aux01

2013+370.3MP1XE, No0308, Ao

ALMA - VLBA\_OV, fgroup W, pol XR



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
	69.9	124.7	162.7	110.5	80.0	59.3	92.4	163.9	Phase	105.9
	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.3	Ampl.	0.5
	260.5	258.8	258.7	258.0	258.4	258.3	258.9	261.0	Sbd box	258.5
U/L	348/0	348/0	348/0	348/0	348/0	348/0	348/0	348/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-4.53787849625E+03	Apriori delay (usec)	-4.53788504610E+03	Resid mbdelay (usec)	6.54986E-03	+/-	7.0E-05
Sband delay (usec)	-4.53787916160E+03	Apriori clock (usec)	-2.1325112E+03	Resid sbdelay (usec)	5.88450E-03	+/-	5.6E-04
Phase delay (usec)	-4.53788504269E+03	Apriori clockrate (us/s)	-4.9210397E-07	Resid phdelay (usec)	3.41341E-06	+/-	2.4E-07
Delay rate (us/s)	-5.19062101072E-01	Apriori rate (us/s)	-5.19061967384E-01	Resid rate (us/s)	-1.33688E-07	+/-	2.3E-09
Total phase (deg)	-207.8	Apriori accel (us/s/s)	-5.50679409949E-05	Resid phase (deg)	105.9	+/-	7.4

ph/seg (deg)	RMS 36.5	Theor. 17.2	Amplitude Search (1024X32)	0.428 +/- 0.028	0.416	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	31.7	30.1	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	43.4	10.4	Inc. seg. avg.	0.495	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	30.7	18.2	Inc. frq. avg.	0.508	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00	

A: az 19.3 el 26.3 pa -157.7      o: az 66.1 el 33.9 pa -66.2      u,v (fr/asec) 3673.373 -10320.330      simultaneous interpolator

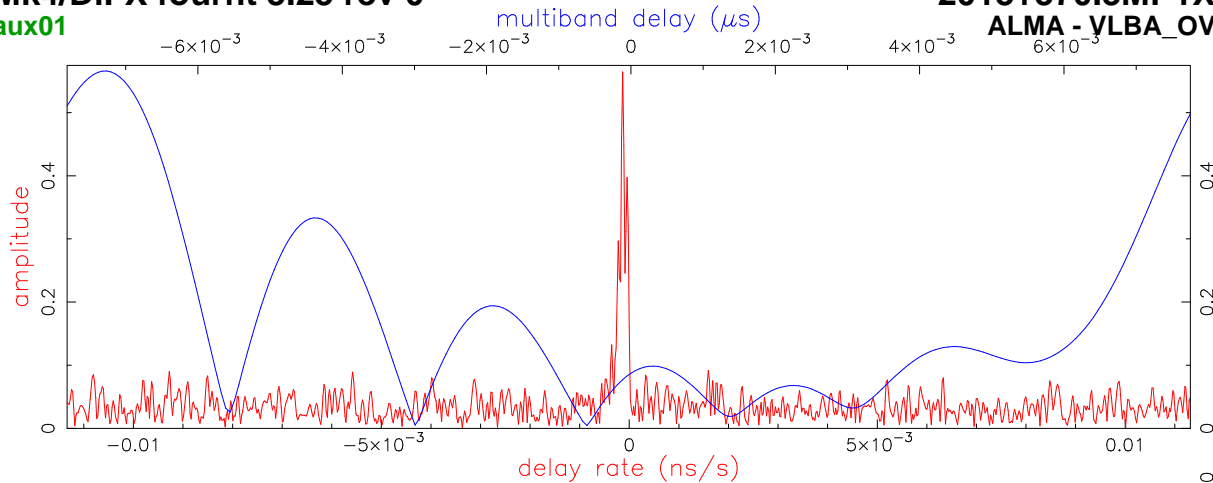
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ao..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ao.W.48.3MP1XE

# Mk4/DiFX fourfit 3.25 rev 0

aux01

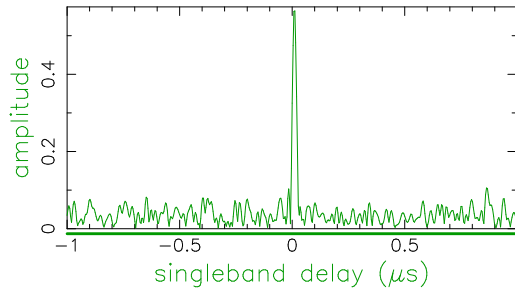
# 2013+370.3MP1XE, No0308, Ao

ALMA - VLBA\_OV, fgroup W, pol YL

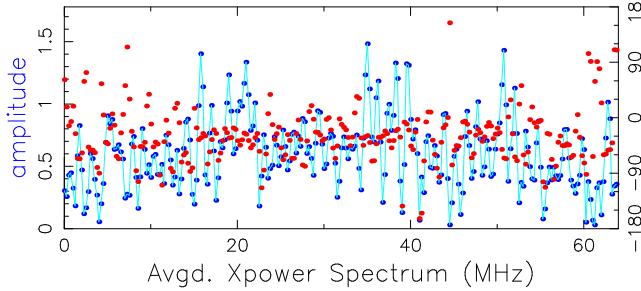


Fringe quality 8

SNR 20.8  
 Int time 175.775  
 Amp 0.575  
 Phase 165.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.009836  
 MBD -0.007372  
 Fringe rate (Hz)  
 -0.011339  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

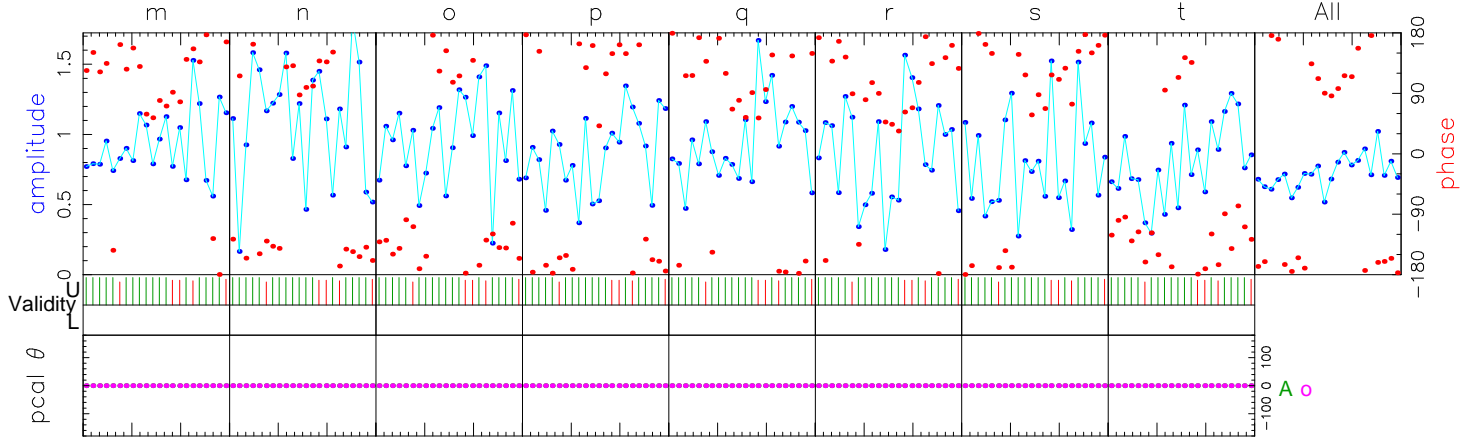


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110946  
 2024:113:095956  
 RA & Dec (J2000)  
 20h15m28.729786s  
 +37°10'59.514736"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	131.6	-179.4	-160.1	172.7	140.0	124.8	152.4	-138.8	Phase	165.1
	0.7	0.8	0.7	0.7	0.6	0.6	0.6	0.6	Ampl.	0.6
	261.2	259.3	258.6	258.9	259.1	259.0	259.2	261.3	Sbd box	259.5
U/L	348/0	348/0	348/0	348/0	348/0	348/0	348/0	348/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
o	0	0	0	0	0	0	0	0	PC freqs	
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-4.53787679315E+03	Apriori delay (usec)	-4.53788504610E+03	Resid mbdelay (usec)	-7.37205E-03	+/-	5.2E-05
Sband delay (usec)	-4.53787521035E+03	Apriori clock (usec)	-2.1325112E+03	Resid sbdelay (usec)	9.83575E-03	+/-	4.1E-04
Phase delay (usec)	-4.53788504078E+03	Apriori clockrate (us/s)	-4.9210397E-07	Resid phdelay (usec)	5.32469E-06	+/-	1.8E-07
Delay rate (us/s)	-5.19062099020E-01	Apriori rate (us/s)	-5.19061967384E-01	Resid rate (us/s)	-1.31636E-07	+/-	1.7E-09
Total phase (deg)	-148.6	Apriori accel (us/s/s)	-5.50679409949E-05	Resid phase (deg)	165.1	+/-	5.5

ph/seg (deg)	40.4	Theor.	12.8	Search (1024X32)	0.564	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	33.0		22.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	37.0		7.8	Inc. seg. avg.	0.710	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	18.2		13.6	Inc. frq. avg.	0.650	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7      o: az 66.1 el 33.9 pa -66.2      u,v (fr/asec) 3673.373 -10320.330      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ao..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ao.W.60.3MP1XE

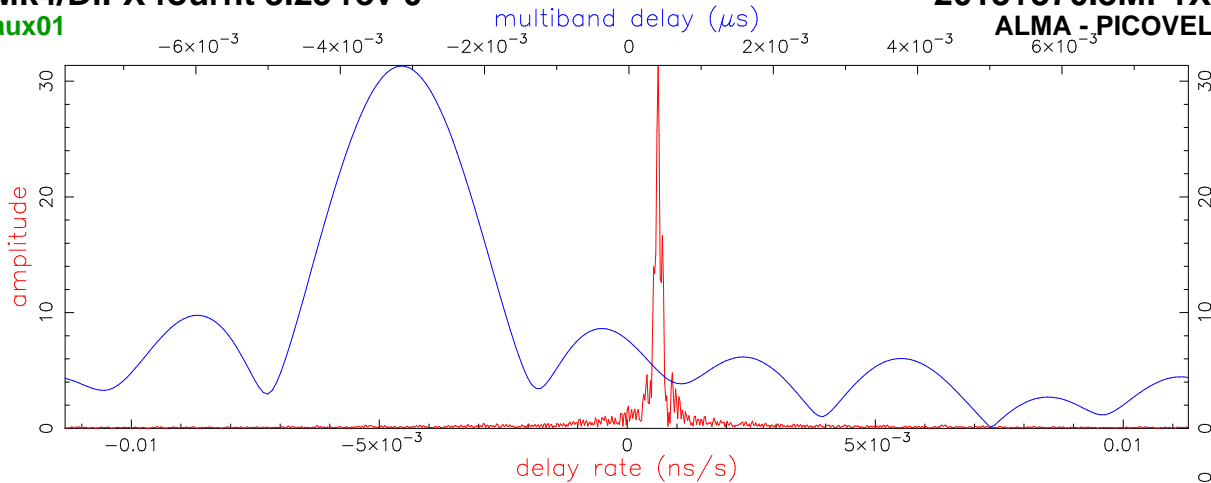


Mk4/DiFX fourfit 3.25 rev 0

aux01

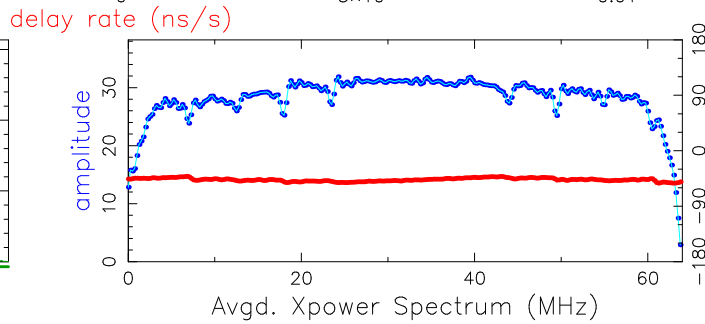
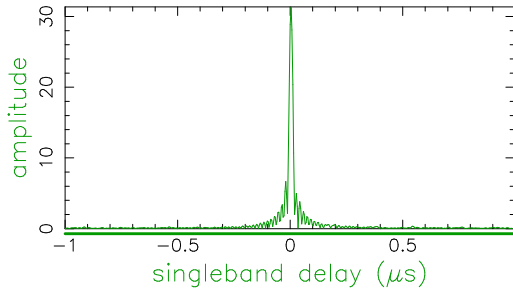
2013+370.3MP1XE, No0308, AP

ALMA - PICOVEL, fgroup W, pol XL



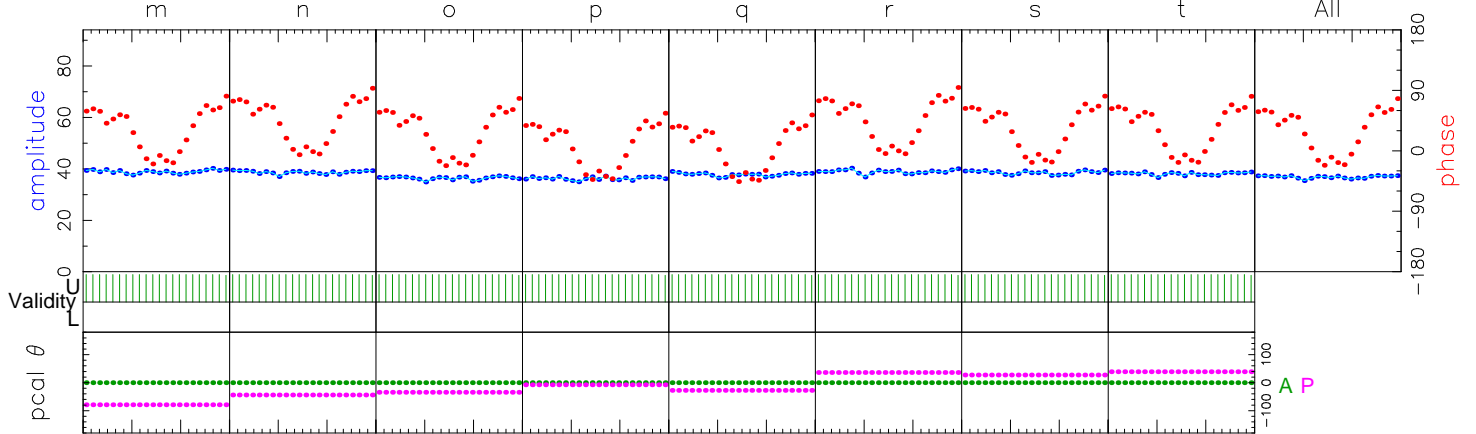
Fringe quality 6

SNR 1149.3  
 Int time 179.982  
 Amp 31.366  
 Phase 31.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003631  
 MBD -0.003152  
 Fringe rate (Hz) 0.053445  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110943  
 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		
A	0	0	0	0	0	0	0	0	Ampl.	32.3
P	0	0	0	0	0	0	0	0	Sbd box	257.9
A:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
A:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39	PC freqs	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Mani PC	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
									Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec) (SBD)	-1.02503871736E+04	Apriori delay (usec)	-1.02503840212E+04	Resid mbdelay (usec)	-3.15236E-03	+/-	9.4E-07
Sband delay (usec)	-1.02503803905E+04	Apriori clock (usec)	-2.1065479E+03	Resid sbdelay (usec)	3.63075E-03	+/-	7.5E-06
Phase delay (usec)	-1.02503840202E+04	Apriori clockrate (us/s)	-6.0906900E-07	Resid phdelay (usec)	1.00836E-06	+/-	3.2E-09
Delay rate (us/s)	1.08866329369E+00	Apriori rate (us/s)	1.08866267325E+00	Resid rate (us/s)	6.20443E-07	+/-	3.1E-11
Total phase (deg)	-180.7	Apriori accel (us/s/s)	-2.44075533123E-05	Resid phase (deg)	31.3	+/-	0.1

ph/seg (deg)	32.1	RMS	32.1	Theor.	0.2	Amplitude	31.366 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	17.8		0.4			Search (1024X32)	30.497	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	16.3		0.1			Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	4.1		0.2			Inc. seg. avg.	36.912	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
						Inc. frq. avg.	32.311	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7 P: az 283.5 el 56.5 pa 76.9 u,v (fr/asec) -7868.697 -8399.501 simultaneous interpolator

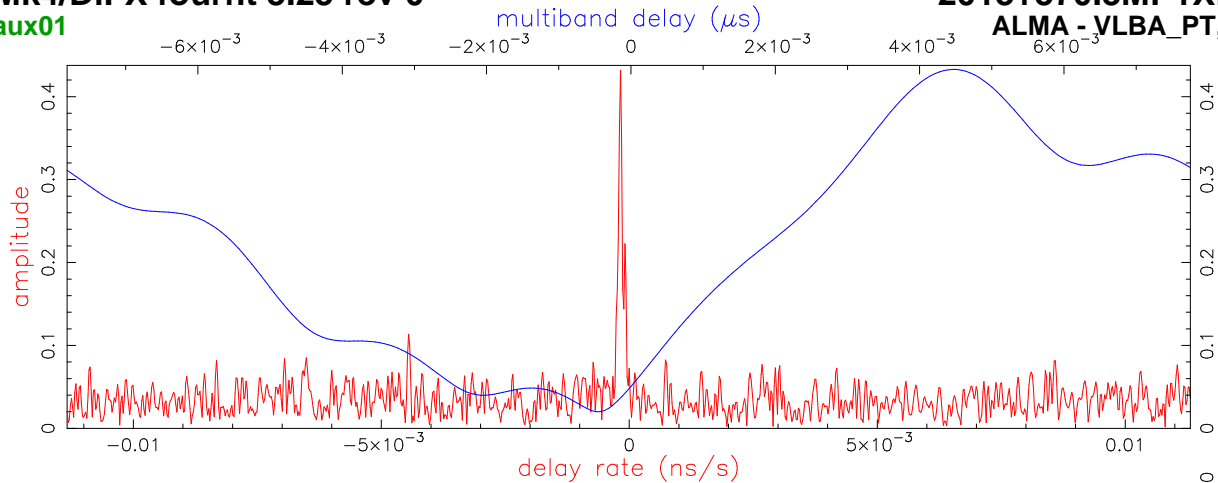
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AP..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AP.W.45.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

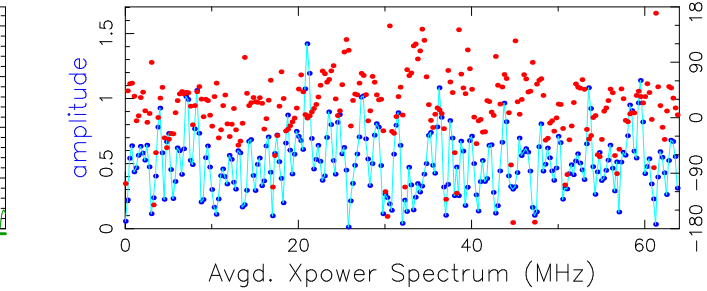
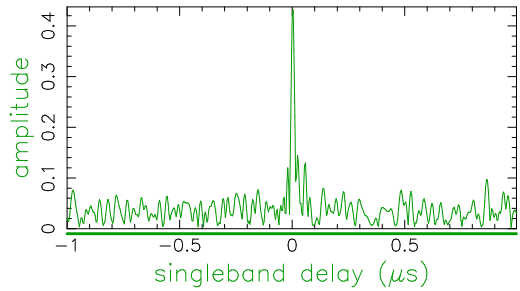
2013+370.3MP1XE, No0308, Ap

ALMA - VLBA\_PT, fgroup W, pol XL



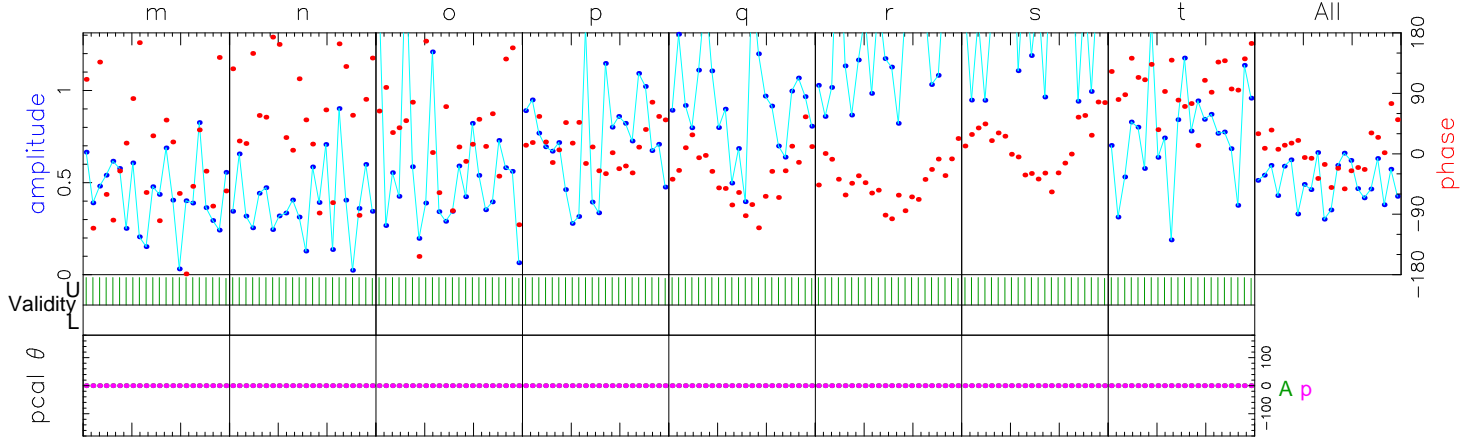
Fringe quality 7

SNR 16.1  
 Int time 179.986  
 Amp 0.438  
 Phase 2.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.002514  
 MBD 0.004346  
 Fringe rate (Hz)  
 -0.014917  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110943  
 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
	-7.2	77.4	39.4	9.8	-29.4	-43.0	9.1	106.0	Phase	2.0
	0.1	0.2	0.4	0.6	0.7	1.1	0.6	0.6	Ampl.	0.6
	219.5	343.7	257.6	258.1	258.0	258.3	258.6	261.1	Sbd box	257.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.42625217837E+03	Apriori delay (usec)	-6.42625652413E+03	Resid mbdelay (usec)	4.34576E-03	+/-	6.8E-05
Sband delay (usec)	-6.42625400963E+03	Apriori clock (usec)	-2.1131555E+03	Resid sbdelay (usec)	2.51450E-03	+/-	5.4E-04
Phase delay (usec)	-6.42625652407E+03	Apriori clockrate (us/s)	-3.8952890E-07	Resid phdelay (usec)	6.53005E-08	+/-	2.3E-07
Delay rate (us/s)	-4.83499569851E-01	Apriori rate (us/s)	-4.83499396679E-01	Resid rate (us/s)	-1.73171E-07	+/-	2.2E-09
Total phase (deg)	-354.0	Apriori accel (us/s/s)	-4.20978076094E-05	Resid phase (deg)	2.0	+/-	7.1

ph/seg (deg)	31.3	Theor.	16.7	Amplitude	0.438 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	29.2	Search (1024X32)	0.429	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	59.3	Inc. seg. avg.	0.485	Inc. seg. avg.	0.485	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	92.1	Inc. frq. avg.	0.599	Inc. frq. avg.	0.599	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

A: az 19.3 el 26.3 pa -157.7      p: az 67.5 el 40.3 pa -73.6      u,v (fr/asec) 3428.495 -9252.252      simultaneous interpolator

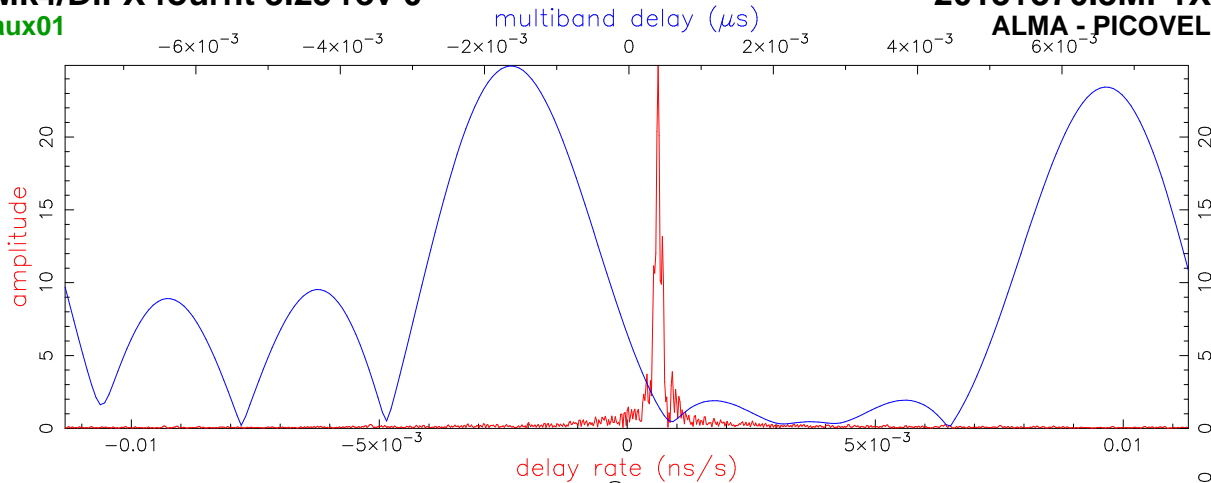
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ap..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ap.W.46.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

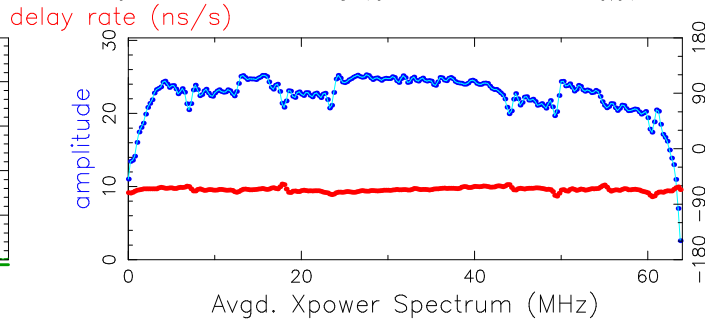
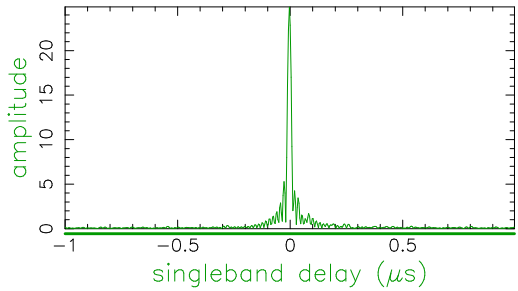
2013+370.3MP1XE, No0308, AP

ALMA - PICOVEL, fgroup W, pol YR



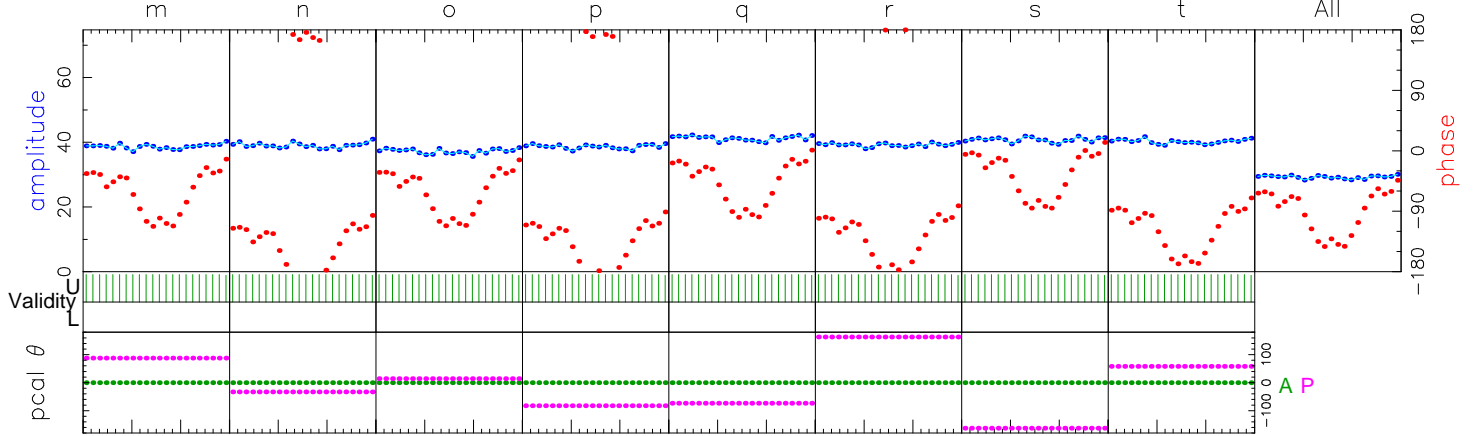
Fringe quality 4

SNR 913.1  
 Int time 179.982  
 Amp 24.920  
 Phase -89.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003671  
 MBD -0.001631  
 Fringe rate (Hz)  
 0.053483  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110945  
 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

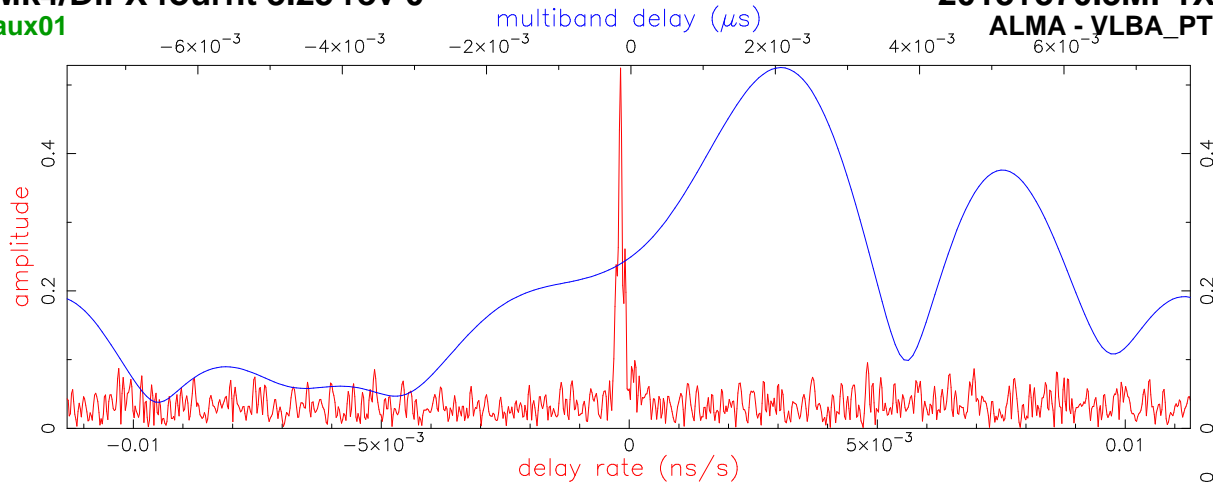


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
A	0	0	0	0	0	0	0	0		
P	0	0	0	0	0	0	0	0		
A:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:P	0:88	0:33	0:15	0:82	0:74	0:163	0:163	0:58		
A	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec) (SBD)	-1.02503856526E+04	Apriori delay (usec)	-1.02503840212E+04	Resid mbdelay (usec)	-1.63133E-03	+/-	1.2E-06
Sband delay (usec)	-1.02503876922E+04	Apriori clock (usec)	-2.1065479E+03	Resid sbdelay (usec)	-3.67100E-03	+/-	9.4E-06
Phase delay (usec)	-1.02503840241E+04	Apriori clockrate (us/s)	-6.0906900E-07	Resid phdelay (usec)	-2.89524E-06	+/-	4.0E-09
Delay rate (us/s)	1.08866329414E+00	Apriori rate (us/s)	1.08866267325E+00	Resid rate (us/s)	6.20889E-07	+/-	3.9E-11
Total phase (deg)	-301.8	Apriori accel (us/s/s)	-2.44075533123E-05	Resid phase (deg)	-89.8	+/-	0.1

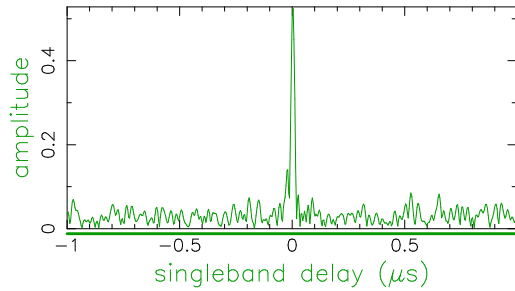
ph/seg (deg)	32.0	0.3	Search (1024X32)	24.163	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	17.7	0.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	48.7	0.2	Inc. seg. avg.	29.303	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	34.9	0.3	Inc. frq. avg.	33.553	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 P: az 283.5 el 56.5 pa 76.9 u,v (fr/asec) -7868.697 -8399.501 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AP..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AP.W.55.3MP1XE

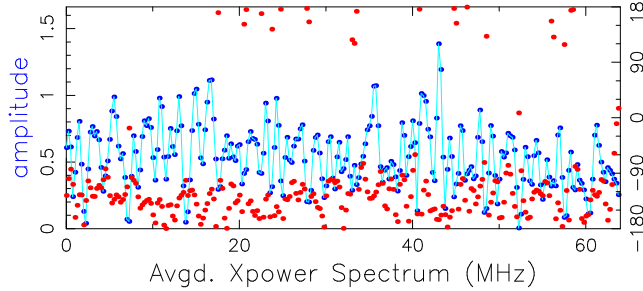


Fringe quality 7

SNR 19.4  
Int time 179.986  
Amp 0.528  
Phase -122.9  
PFD 0.0e+00  
Delays (us)  
SBD 0.002794  
MBD 0.002004  
Fringe rate (Hz)  
-0.014536  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

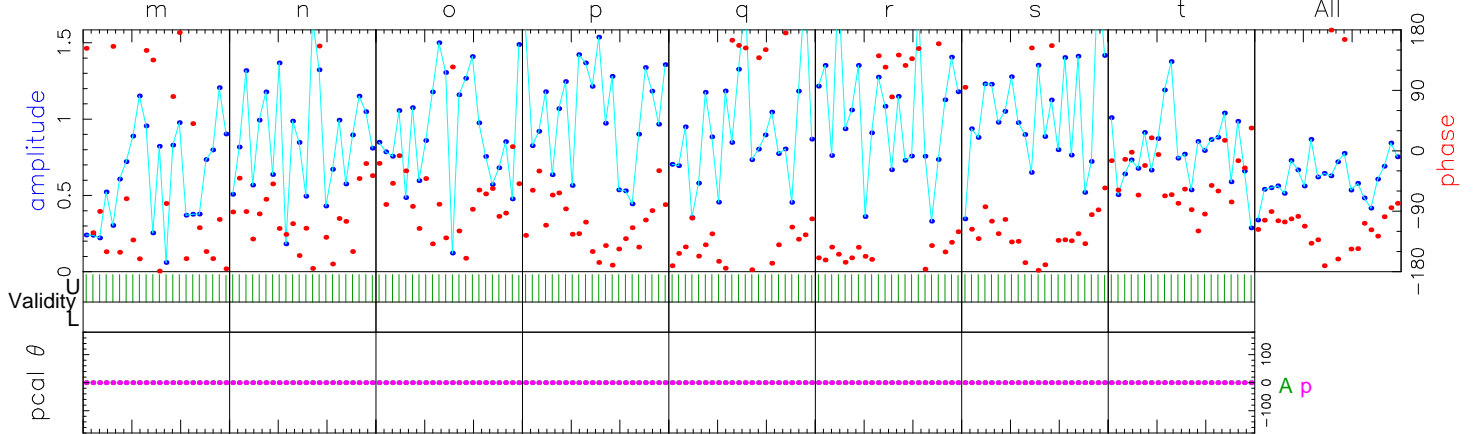


delay rate (ns/s)



Exp. c241c  
Exper # 1234  
Yr:day 2024:112  
Start 092000.00  
Stop 092300.22  
FRT 092130.00  
Corr/FF/build  
2024:352:180659  
2025:041:110945  
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
	-160.0	-105.9	-79.7	-110.2	-162.3	-175.2	-126.9	-43.0	Phase	-122.9
	0.4	0.6	0.7	0.8	0.8	0.8	0.8	0.6	Ampl.	0.7
	260.0	257.4	257.8	257.4	257.5	257.3	258.0	260.0	Sbd box	257.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.42625452006E+03	Apriori delay (usec)	-6.42625652413E+03	Resid mbdelay (usec)	2.00407E-03	+/-	5.6E-05
Sband delay (usec)	-6.42625373038E+03	Apriori clock (usec)	-2.1131555E+03	Resid sbdelay (usec)	2.79375E-03	+/-	4.4E-04
Phase delay (usec)	-6.42625652810E+03	Apriori clockrate (us/s)	-3.8952890E-07	Resid phdelay (usec)	-3.96267E-06	+/-	1.9E-07
Delay rate (us/s)	-4.83499565425E-01	Apriori rate (us/s)	-4.83499396679E-01	Resid rate (us/s)	-1.68746E-07	+/-	1.8E-09
Total phase (deg)	-118.9	Apriori accel (us/s/s)	-4.20978076094E-05	Resid phase (deg)	-122.9	+/-	5.9

ph/seg (deg)	31.1	Theor.	13.9	Amplitude	0.528 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	29.7		24.2	Search (1024X32)	0.507	Pcal rate:	0.000E+00, 0.000E+00 (us/s)			mb window (us)	-0.008	0.008
ph/frq (deg)	49.0		8.4	Inc. seg. avg.	0.602	Bits/sample:	2x2	SampCntNorm:	enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	40.5		14.6	Inc. frq. avg.	0.685	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	nlags:	256	ion window (TEC)	0.00	0.00

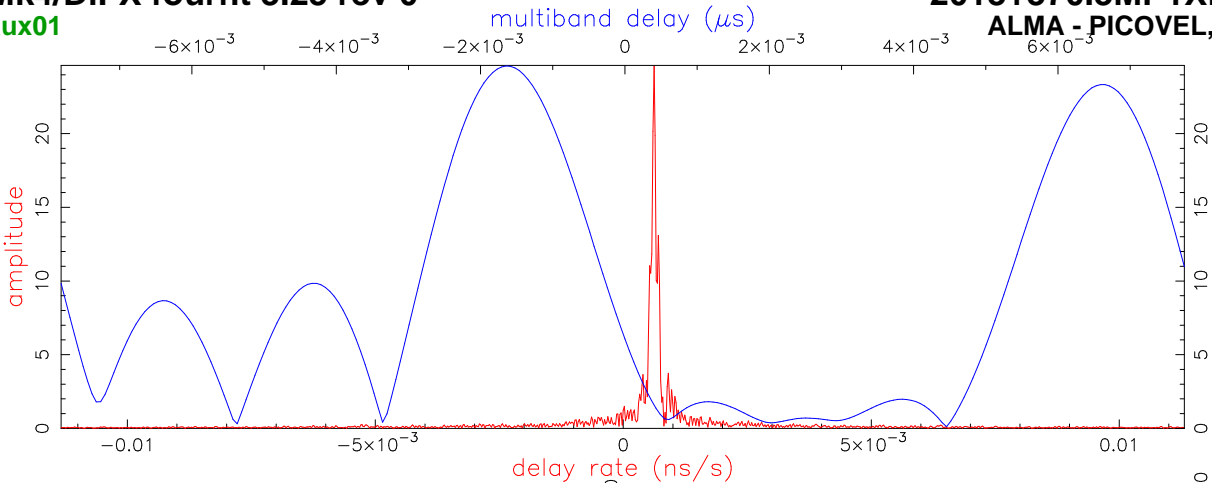
A: az 19.3 el 26.3 pa -157.7      p: az 67.5 el 40.3 pa -73.6      u, v (fr/asec) 3428.495 -9252.252      simultaneous interpolator  
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ap..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ap.W.57.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

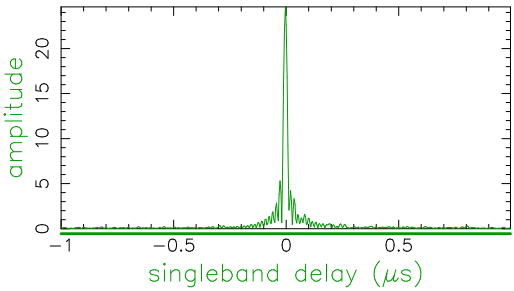
2013+370.3MP1XE, No0308, AP

ALMA - PICOVEL, fgroup W, pol XR

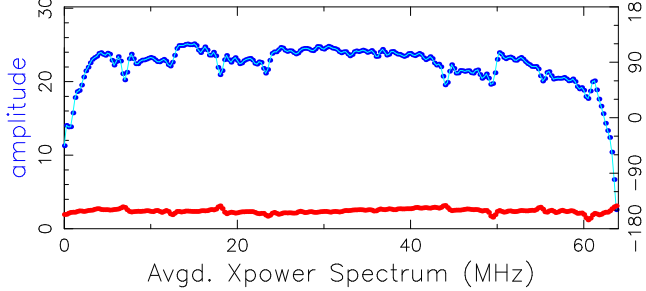


Fringe quality 4

SNR 902.6  
 Int time 179.982  
 Amp 24.634  
 Phase -174.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003643  
 MBD -0.001629  
 Fringe rate (Hz)  
 0.053485  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

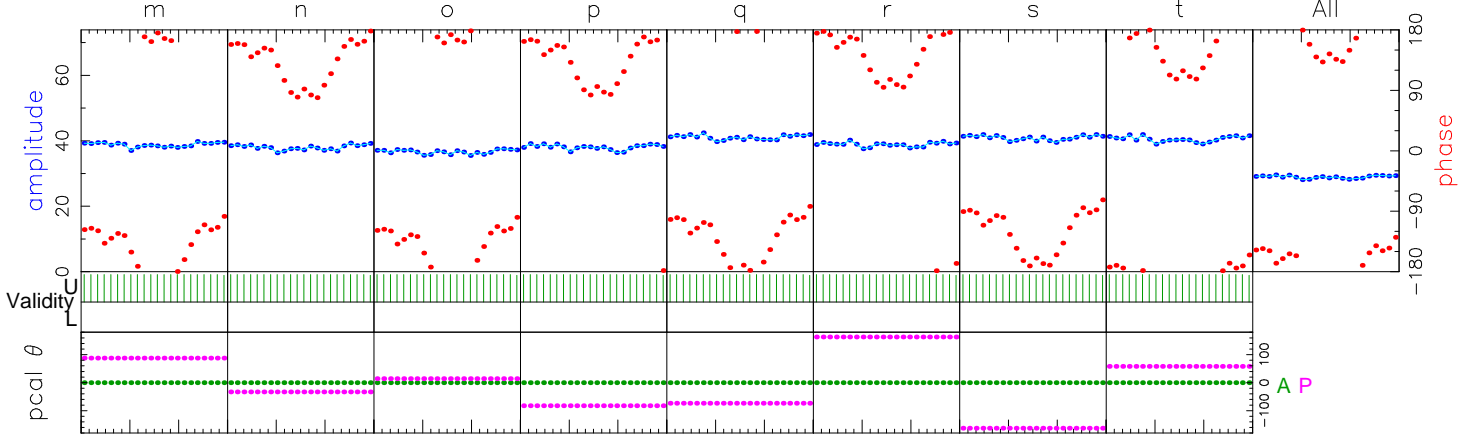


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110947  
 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
	-144.1	132.3	-145.8	136.1	-128.8	147.2	-118.1	159.9	Phase	-174.6
	33.0	32.4	31.2	32.4	34.9	33.1	34.8	34.5	Ampl.	33.3
	255.5	255.4	255.4	255.9	256.2	255.5	256.0	255.8	Sbd box	256.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
A:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:P	0:88	0:33	0:15	0:82	0:74	0:163	0:163	0:58	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-1.02503856504E+04	Apriori delay (usec)	-1.02503840212E+04	Resid mbdelay (usec)	-1.62914E-03	+/-	1.2E-06
Sband delay (usec)	-1.02503876642E+04	Apriori clock (usec)	-2.1065479E+03	Resid sbdelay (usec)	-3.64300E-03	+/-	9.5E-06
Phase delay (usec)	-1.02503840269E+04	Apriori clockrate (us/s)	-6.0906900E-07	Resid phdelay (usec)	-5.63000E-06	+/-	4.1E-09
Delay rate (us/s)	1.08866329415E+00	Apriori rate (us/s)	1.08866267325E+00	Resid rate (us/s)	6.20905E-07	+/-	3.9E-11
Total phase (deg)	-26.6	Apriori accel (us/s/s)	-2.44075533123E-05	Resid phase (deg)	-174.6	+/-	0.1

ph/seg (deg)	32.1	0.3	Search (1024X32)	23.888	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	17.7	0.5	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)	49.0	0.2	Inc. seg. avg.	28.982	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	35.4	0.3	Inc. frq. avg.	33.273	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 P: az 283.5 el 56.5 pa 76.9 u,v (fr/asec) -7868.697 -8399.501 simultaneous interpolator

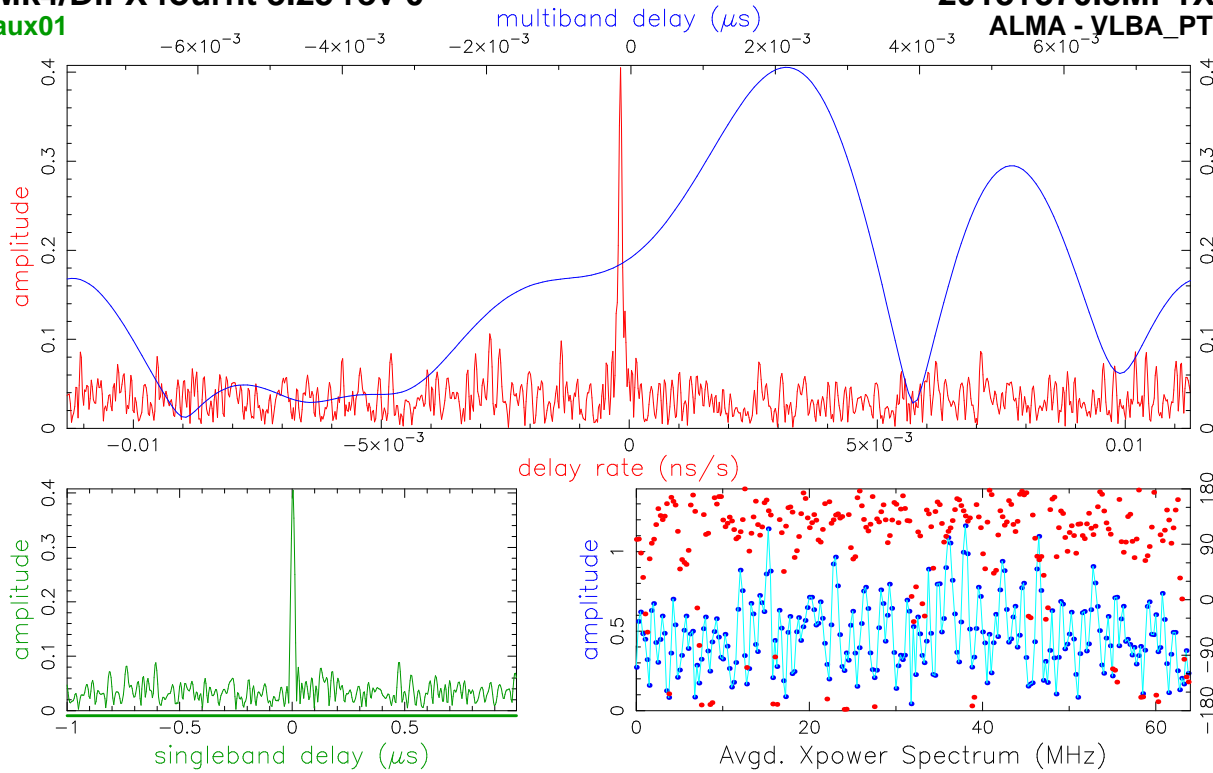
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AP..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AP.W.68.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ap

ALMA - VLBA\_PT, fgroup W, pol XR

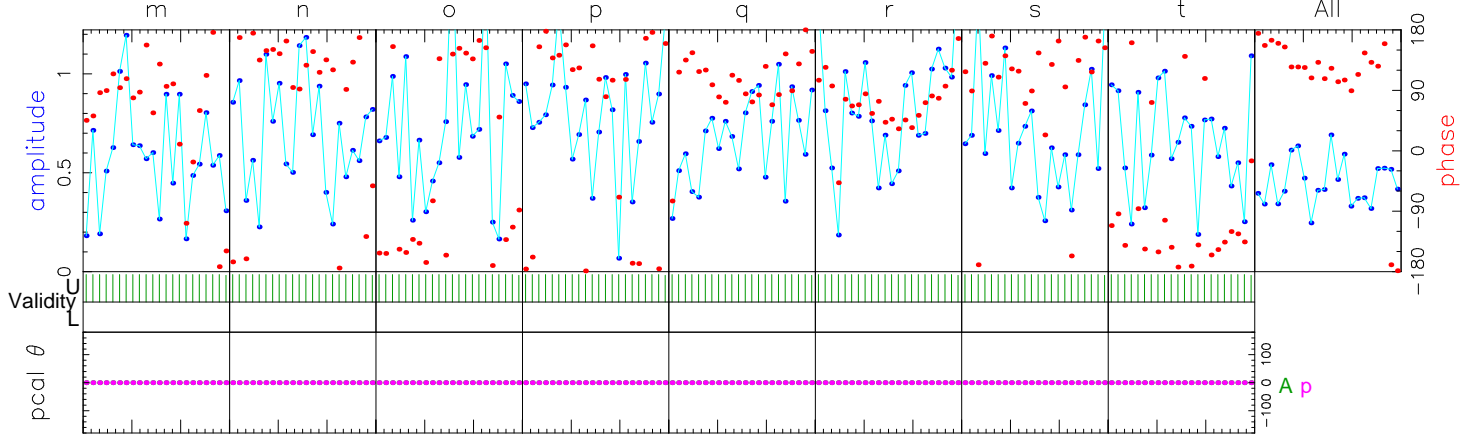


Fringe quality 7

SNR 15.0  
 Int time 179.986  
 Amp 0.408  
 Phase 135.8  
 PFD 4.6e-42  
 Delays (us)  
 SBD 0.002850  
 MBD 0.002101  
 Fringe rate (Hz) -0.014810  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110947  
 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	
	93.9	149.3	-173.9	152.3	104.7	80.7	134.8	-137.1	Phase	135.8	
	0.4	0.5	0.5	0.7	0.6	0.7	0.6	0.4	Ampl.	0.5	
	258.3	257.5	257.0	257.4	257.3	257.6	258.1	259.2	Sbd box	257.7	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
A	0	0	0	0	0	0	0	0	PC freqs		
p	0	0	0	0	0	0	0	0	PC freqs		
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
p	1000	1000	1000	1000	1000	1000	1000	1000			
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Tracks		
Group delay (usec) (SBD)	-6.42625442341E+03		Apriori delay (usec)		-6.42625652413E+03		Resid mbdelay (usec)		2.10073E-03	+/- 7.3E-05	
Sband delay (usec)	-6.42625367413E+03		Apriori clock (usec)		-2.1131555E+03		Resid sbdelay (usec)		2.85000E-03	+/- 5.8E-04	
Phase delay (usec)	-6.42625651976E+03		Apriori clockrate (us/s)		-3.8952890E-07		Resid phdelay (usec)		4.37782E-06	+/- 2.5E-07	
Delay rate (us/s)	-4.83499568608E-01		Apriori rate (us/s)		-4.83499396679E-01		Resid rate (us/s)		-1.71929E-07	+/- 2.4E-09	
Total phase (deg)			Apriori accel (us/s/s)		-4.20978076094E-05		Resid phase (deg)		135.8	+/- 7.7	
RMS	27.2	18.0	Amplitude		0.408 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		
ph/seg (deg)	27.2	18.0	Search (1024X32)		0.394		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
amp/seg (%)	29.9	31.4	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us) -0.008 0.008	
ph/frq (deg)	52.2	10.8	Inc. seg. avg.		0.432		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011	
amp/frq (%)	41.1	18.9	Inc. frq. avg.		0.531		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00	
A: az 19.3 el 26.3 pa -157.7		p: az 67.5 el 40.3 pa -73.6		u, v (fr/asec) 3428.495 -9252.252						simultaneous interpolator	
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0308//Ap..3MP1XE		Output file: /Exps/c241c/v2/3mm/1234/No0308//Ap.W.69.3MP1XE							

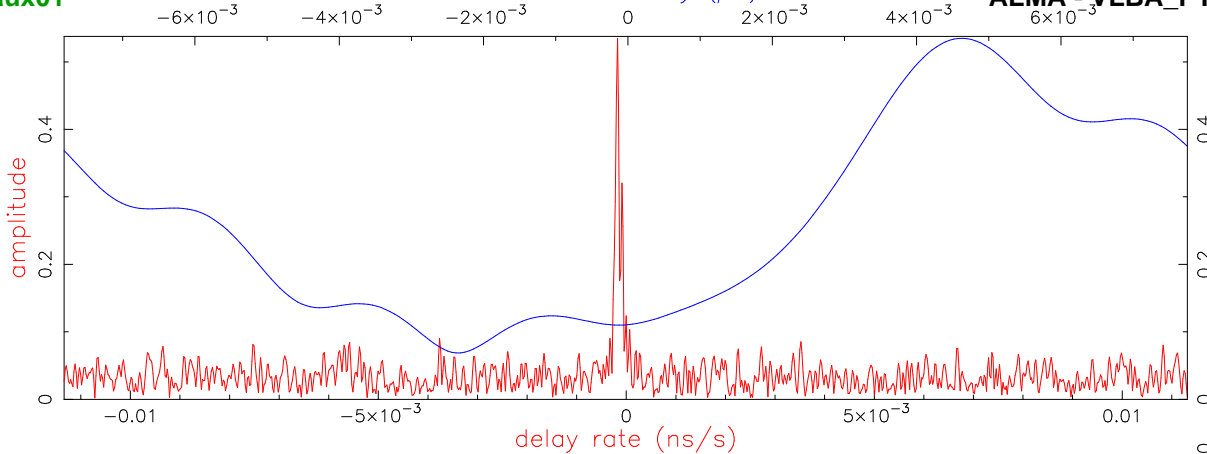
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, Ap

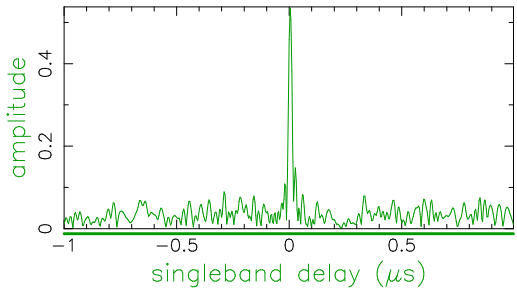
ALMA - VLBA\_PT, fgroup W, pol YL

multiband delay ( $\mu$ s)

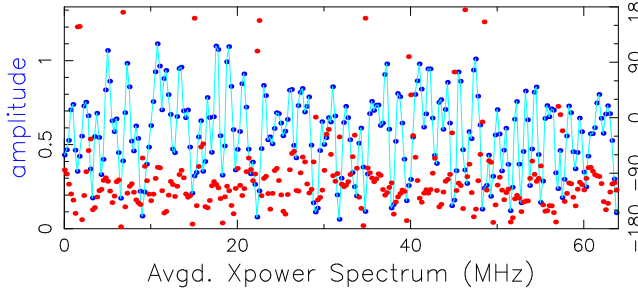


Fringe quality 7

SNR 19.7  
 Int time 179.986  
 Amp 0.538  
 Phase -111.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004825  
 MBD 0.004672  
 Fringe rate (Hz)  
 -0.014397  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

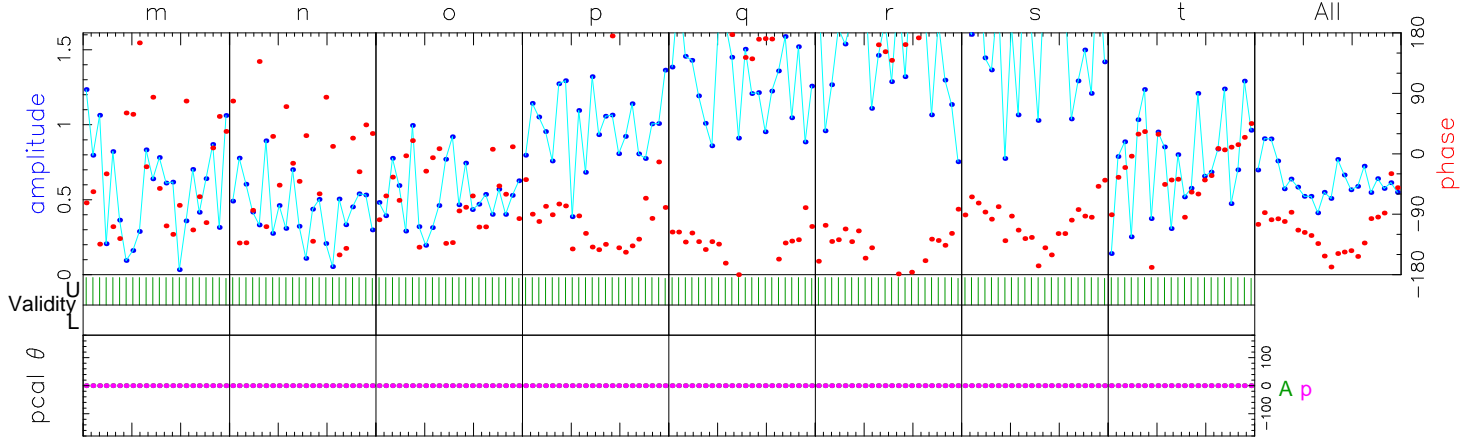


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110952  
 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
	-67.1	-62.3	-64.5	-104.5	-147.7	-152.8	-100.0	-8.1		-111.7
	0.3	0.1	0.3	0.8	1.1	1.3	1.4	0.6	Ampl.	0.7
	259.6	506.1	258.3	258.3	258.3	258.3	258.7	261.1	Sbd box	258.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
p	0	0	0	0	0	0	0	0	PC freqs	
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.42625185237E+03	Apriori delay (usec)	-6.42625652413E+03	Resid mbdelay (usec)	4.67176E-03	+/-	5.5E-05
Sband delay (usec)	-6.42625169913E+03	Apriori clock (usec)	-2.1131555E+03	Resid sbdelay (usec)	4.82500E-03	+/-	4.4E-04
Phase delay (usec)	-6.42625652773E+03	Apriori clockrate (us/s)	-3.8952890E-07	Resid phdelay (usec)	-3.60156E-06	+/-	1.9E-07
Delay rate (us/s)	-4.83499563813E-01	Apriori rate (us/s)	-4.83499396679E-01	Resid rate (us/s)	-1.67133E-07	+/-	1.8E-09
Total phase (deg)	-107.7	Apriori accel (us/s/s)	-4.20978076094E-05	Resid phase (deg)	-111.7	+/-	5.8

ph/seg (deg)	33.4	Theor.	13.6	Amplitude	0.538 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	28.1		23.8	Search (1024X32)	0.511	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	58.6		8.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	88.8		14.3	Inc. seg. avg.	0.611	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.714	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

A: az 19.3 el 26.3 pa -157.7      p: az 67.5 el 40.3 pa -73.6      u, v (fr/asec) 3428.495 -9252.252      simultaneous interpolator

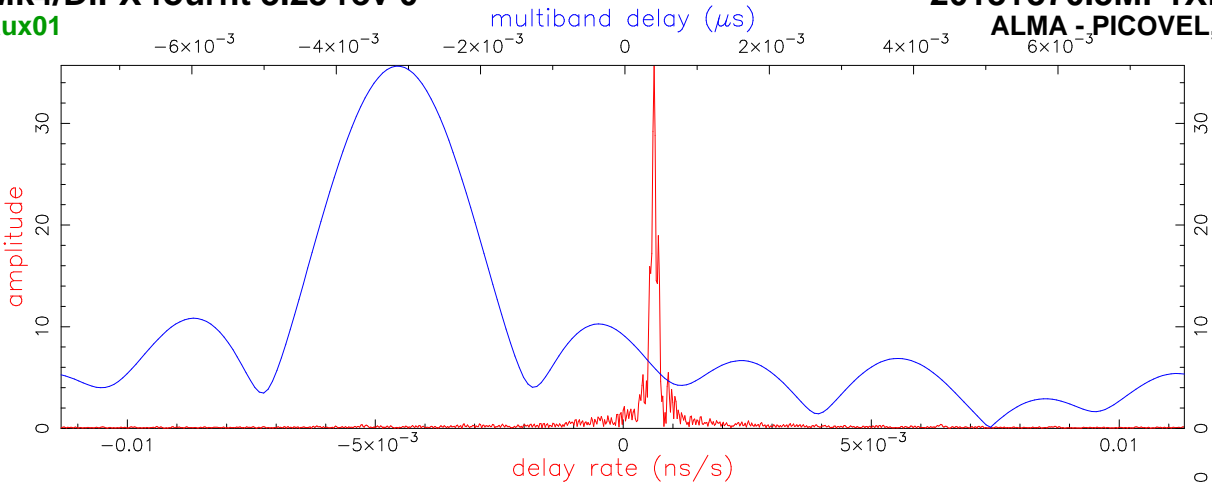
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//Ap..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//Ap.W.74.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

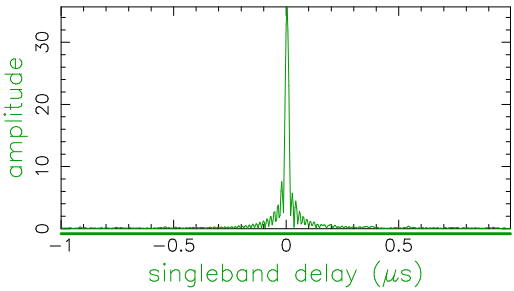
2013+370.3MP1XE, No0308, AP

ALMA - PICOVEL, fgroup W, pol YL

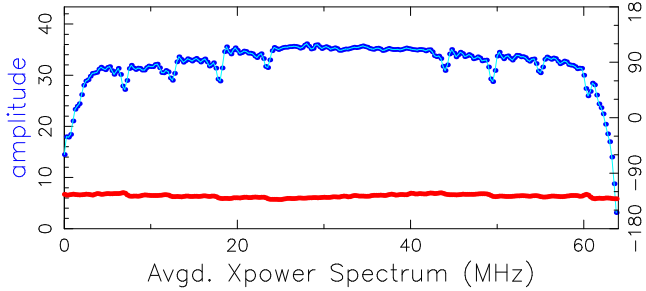


Fringe quality 6

SNR 1308.5  
 Int time 179.982  
 Amp 35.710  
 Phase -49.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003561  
 MBD -0.003151  
 Fringe rate (Hz)  
 0.053454  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

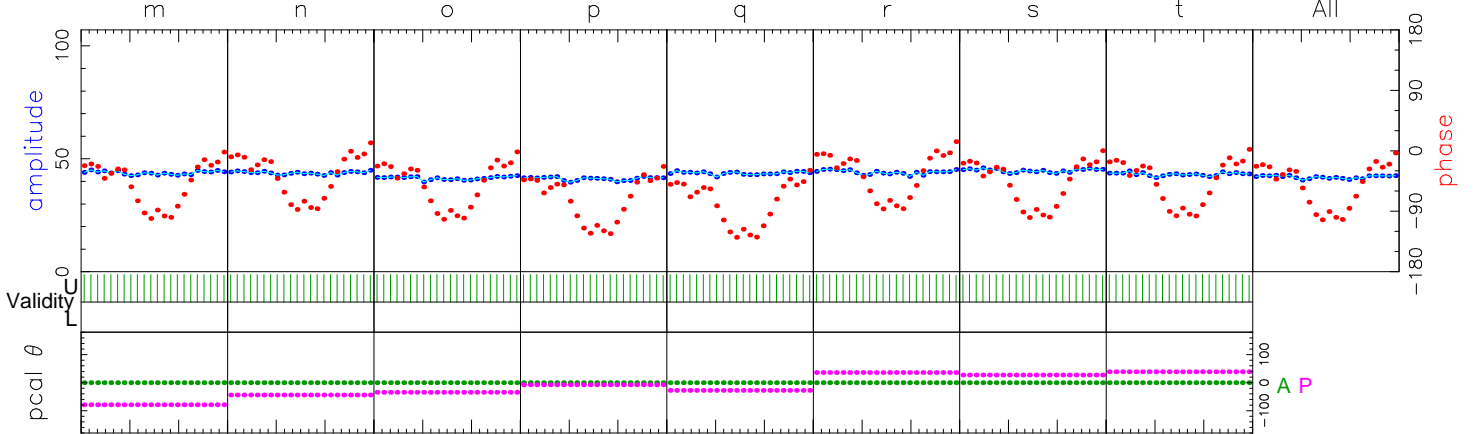


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110957  
 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
	-47.5	-34.9	-47.9	-70.0	-75.9	-33.0	-45.7	-44.2	Phase	-49.6
	37.4	37.3	35.4	35.1	37.2	37.5	38.1	36.7	Ampl.	36.8
	257.8	257.8	257.6	258.1	258.4	258.1	258.2	257.9	Sbd box	257.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
A:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:P	0:-79	0:-44	0:-34	0:-8	0:-28	0:36	0:27	0:39	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.02503871722E+04	Apriori delay (usec)	-1.02503840212E+04	Resid mbdelay (usec)	-3.15092E-03	+/-	8.3E-07
Sband delay (usec)	-1.02503804600E+04	Apriori clock (usec)	-2.1065479E+03	Resid sbdelay (usec)	3.56125E-03	+/-	6.6E-06
Phase delay (usec)	-1.02503840228E+04	Apriori clockrate (us/s)	-6.0906900E-07	Resid phdelay (usec)	-1.59997E-06	+/-	2.8E-09
Delay rate (us/s)	1.08866329379E+00	Apriori rate (us/s)	1.08866267325E+00	Resid rate (us/s)	6.20543E-07	+/-	2.7E-11
Total phase (deg)	-261.6	Apriori accel (us/s/s)	-2.44075533123E-05	Resid phase (deg)	-49.6	+/-	0.1

ph/seg (deg)	32.1	RMS	32.1	Theor.	0.2	Amplitude	35.710 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	17.7		0.4			Search (1024X32)	34.698	Pcal rate:	0.000E+00, 0.000E+00 (us/s)			mb window (us)	-0.008	0.008	
ph/frq (deg)	16.6		0.1			Inc. seg. avg.	41.989	Bits/sample:	2x2	SampCntNorm:	enabled	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	4.2		0.2			Inc. frq. avg.	36.823	Data rate (MSamp/s):	128 MBpts 32 Amb 0.016 us	nlags:	256	t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 P: az 283.5 el 56.5 pa 76.9 u,v (fr/asec) -7868.697 -8399.501 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AP..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AP.W.82.3MP1XE

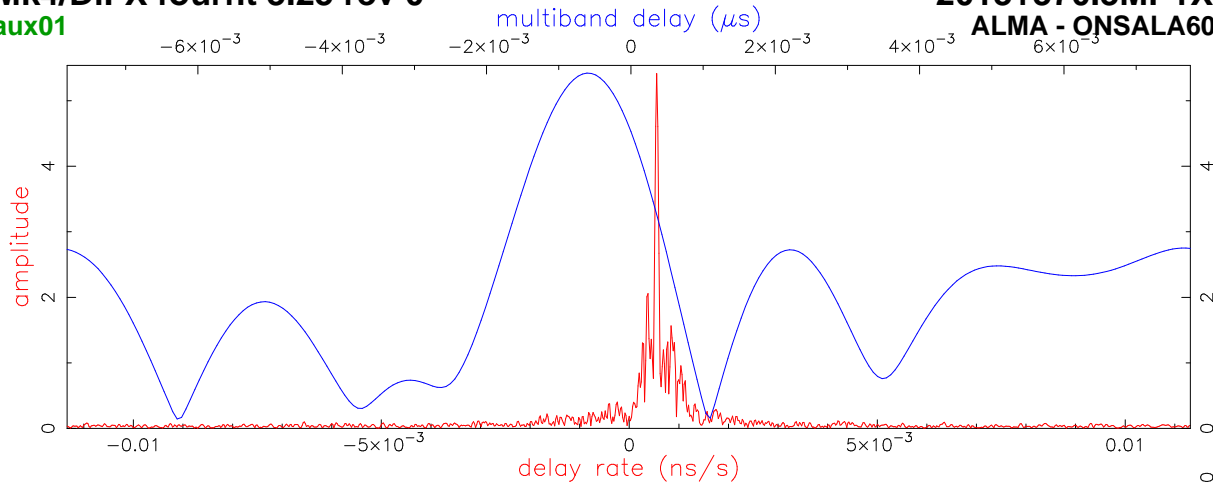


Mk4/DiFX fourfit 3.25 rev 0

aux01

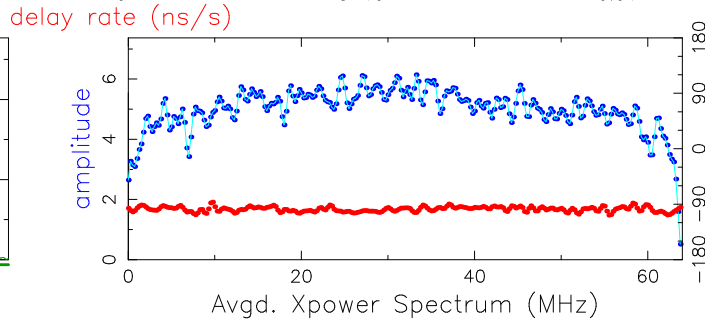
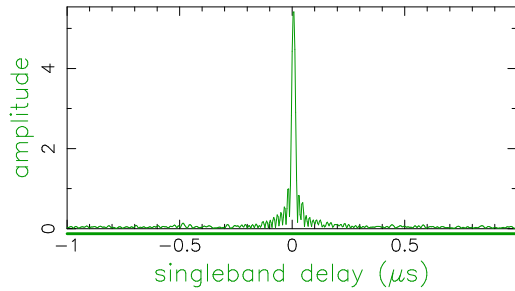
2013+370.3MP1XE, No0308, AX

ALMA - ONSALA60, fgroup W, pol XL



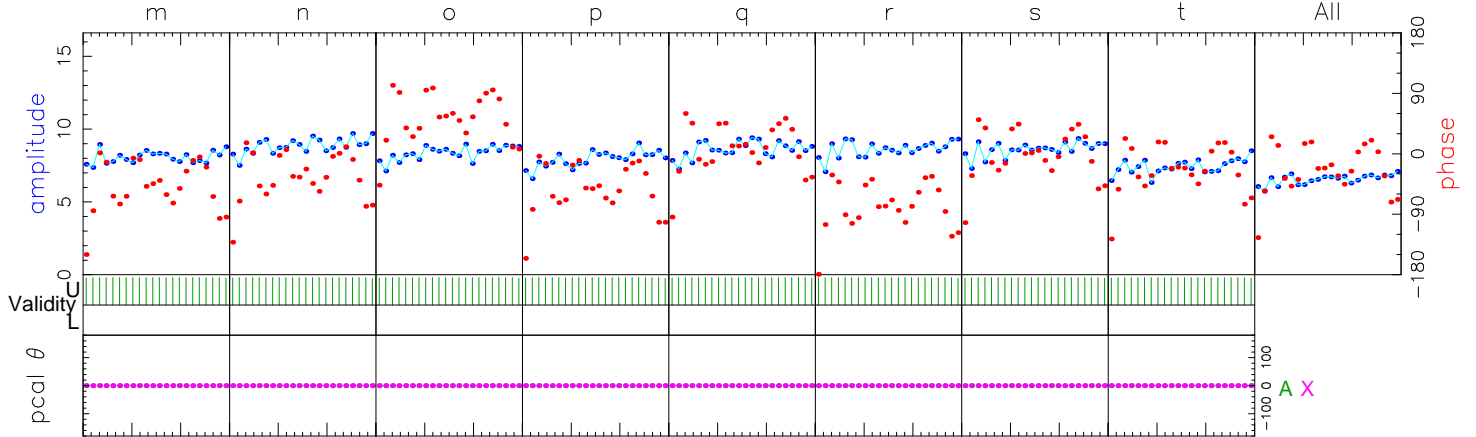
Fringe quality 4

SNR 203.0  
 Int time 179.886  
 Amp 5.540  
 Phase -22.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005920  
 MBD -0.000644  
 Fringe rate (Hz)  
 0.047570  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 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
	-47.9	-32.6	55.7	-51.1	9.5	-76.6	0.8	-21.9		Phase
	6.6	7.4	6.9	6.6	7.1	7.2	7.0	6.2		Ampl.
	259.8	258.2	258.1	257.8	258.1	258.1	258.2	258.8		Sbd box
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		258.5
A	0	0	0	0	0	0	0	0		APs used
X	0	0	0	0	0	0	0	0		PC freqs
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
A	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
X	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX		Chan ids
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec) (SBD)	-8.34325127415E+03	Apriori delay (usec)	-8.34325063014E+03	Resid mbdelay (usec)	-6.44009E-04	+/-	5.3E-06
Sband delay (usec)	-8.34324471039E+03	Apriori clock (usec)	-2.2203435E+03	Resid sbdelay (usec)	5.91975E-03	+/-	4.2E-05
Phase delay (usec)	-8.34325063085E+03	Apriori clockrate (us/s)	-1.2274550E-06	Resid phdelay (usec)	-7.13607E-07	+/-	1.8E-08
Delay rate (us/s)	9.84211744599E-01	Apriori rate (us/s)	9.84211192356E-01	Resid rate (us/s)	5.52243E-07	+/-	1.7E-10
Total phase (deg)	-122.9	Apriori accel (us/s/s)	-5.15252770595E-05	Resid phase (deg)	-22.1	+/-	0.6

ph/seg (deg)	RMS 36.2	Theor. 1.3	Amplitude Search (1024X32)	5.540 +/- 0.027	5.320	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	19.4	2.3	Interp.	0.000	6.561	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	45.0	0.8	Inc. seg. avg.	6.561	6.880	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	25.1	1.4	Inc. frq. avg.	6.880		Data rate(Mb/s): 2048	Data rate(Mb/s): 2048	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 X: az 267.3 el 47.6 pa 42.5 u,v (fr/asec) -7142.855 -11714.469 simultaneous interpolator

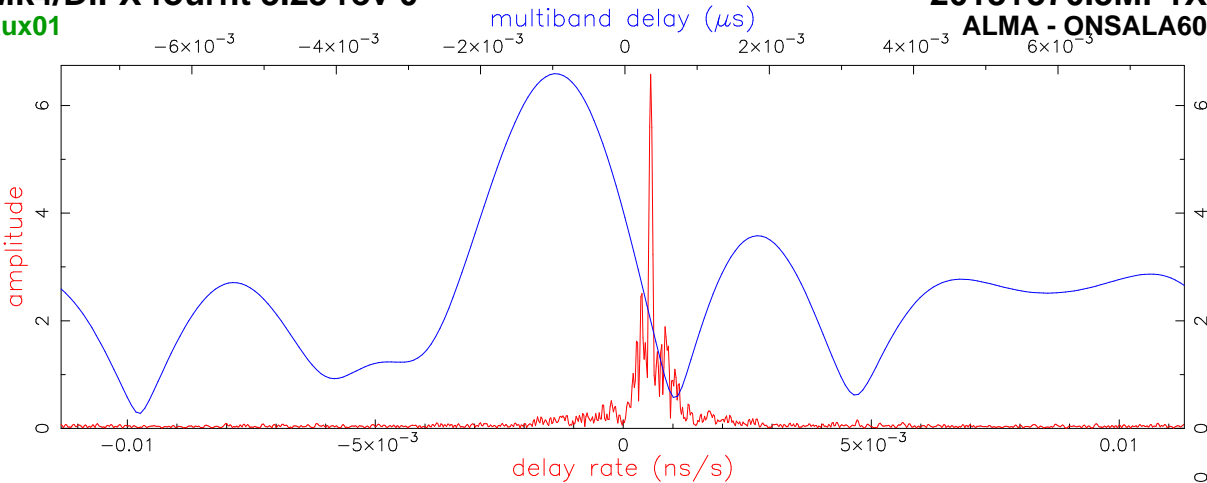
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AX..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AX.W.25.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

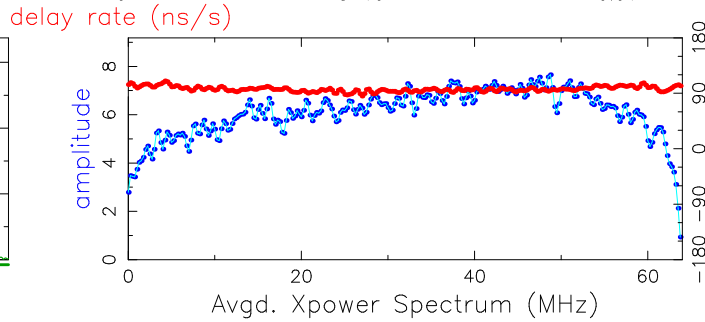
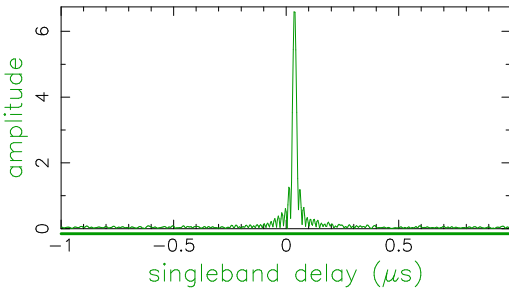
2013+370.3MP1XE, No0308, AX

ALMA - ONSALA60, fgroup W, pol YR



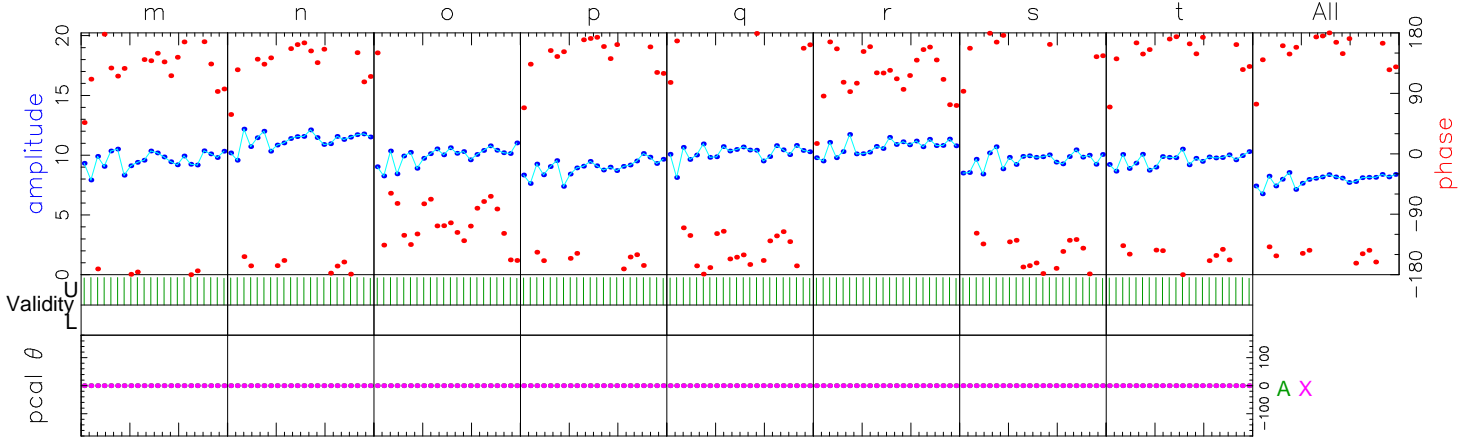
Fringe quality 4

SNR 247.2  
 Int time 179.886  
 Amp 6.746  
 Phase 174.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.037074  
 MBD -0.001014  
 Fringe rate (Hz) 0.047649  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110938  
 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		
A	0	0	0	0	0	0	0	0		
X	0	0	0	0	0	0	0	0		
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY		Chan ids
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec) (SBD)	-8.34322039443E+03	Apriori delay (usec)	-8.34325063014E+03	Resid mbdelay (usec)	-1.01429E-03	+/-	4.4E-06
Sband delay (usec)	-8.34321355639E+03	Apriori clock (usec)	-2.2203435E+03	Resid sbdelay (usec)	3.70738E-02	+/-	3.5E-05
Phase delay (usec)	-8.34325062451E+03	Apriori clockrate (us/s)	-1.2274550E-06	Resid phdelay (usec)	5.63080E-06	+/-	1.5E-08
Delay rate (us/s)	9.84211745515E-01	Apriori rate (us/s)	9.84211192356E-01	Resid rate (us/s)	5.53160E-07	+/-	1.4E-10
Total phase (deg)	73.8	Apriori accel (us/s/s)	-5.15252770595E-05	Resid phase (deg)	174.6	+/-	0.5

ph/seg (deg)	RMS 35.9	Theor. 1.1	Amplitude Search (1024X32)	6.746 +/- 0.027	6.543	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	19.1	1.9	Interp.	0.000	7.960	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	44.4	0.7	Inc. seg. avg.	7.960	8.292	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	1.1	Inc. frq. avg.	8.292		Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 X: az 267.3 el 47.6 pa 42.5 u,v (fr/asec) -7142.855 -11714.469 simultaneous interpolator

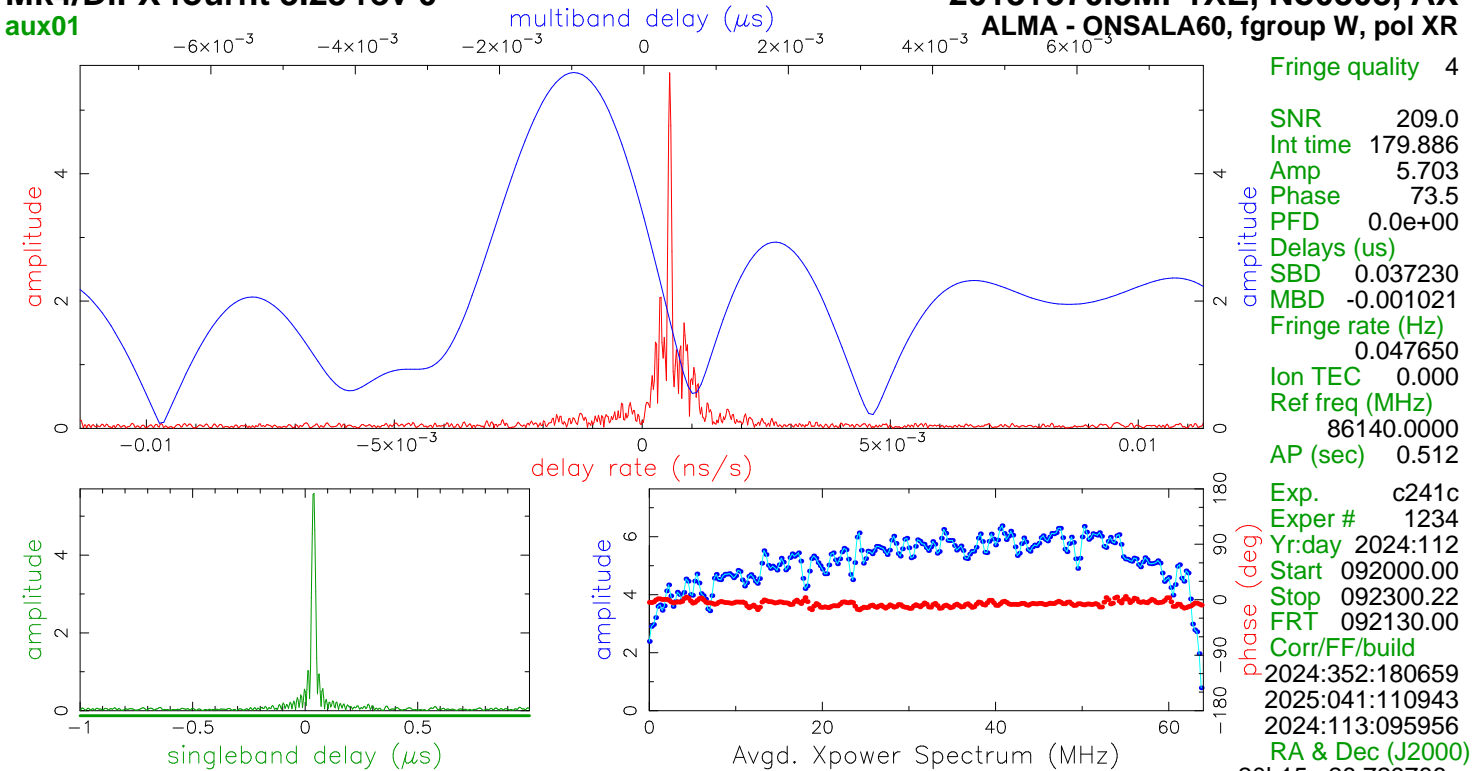
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AX..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AX.W.37.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AX

ALMA - ONSALA60, fgroup W, pol XR



Fringe quality 4

SNR 209.0

Int time 179.886

Amp 5.703

Phase 73.5

PFD 0.0e+00

Delays (us)

SBD 0.037230

MBD -0.001021

Fringe rate (Hz)

0.047650

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c241c

Exper # 1234

Yr:day 2024:112

Start 092000.00

Stop 092300.22

FRT 092130.00

Corr/FF/build

2024:352:180659

2025:041:110943

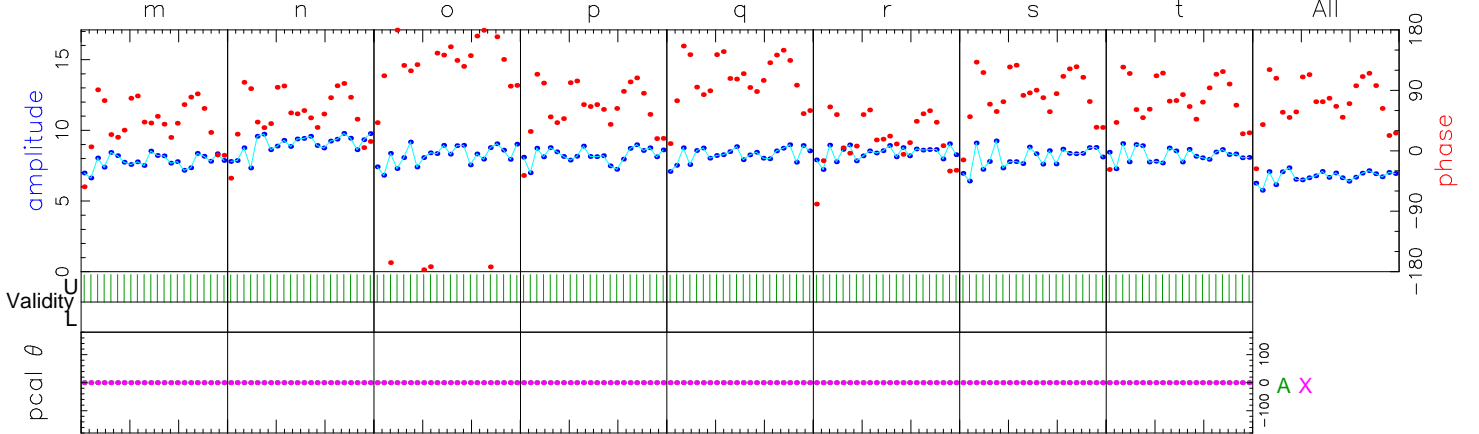
2024:113:095956

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
	42.7	57.3	145.5	66.0	108.0	18.8	85.5	75.4	Phase	73.5
	6.5	7.5	6.8	6.8	6.9	7.0	6.7	6.8	Ampl.	6.9
	267.5	266.4	266.0	265.9	265.9	266.1	266.1	267.2	Sbd box	266.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-8.34322040115E+03	Apriori delay (usec)	-8.34325063014E+03	Resid mbdelay (usec)	-1.02101E-03	+/-	5.2E-06
Sband delay (usec)	-8.34321340014E+03	Apriori clock (usec)	-2.2203435E+03	Resid sbdelay (usec)	3.72300E-02	+/-	4.1E-05
Phase delay (usec)	-8.34325062777E+03	Apriori clockrate (us/s)	-1.2274550E-06	Resid phdelay (usec)	2.36955E-06	+/-	1.8E-08
Delay rate (us/s)	9.84211745521E-01	Apriori rate (us/s)	9.84211192356E-01	Resid rate (us/s)	5.53165E-07	+/-	1.7E-10
Total phase (deg)	-27.3	Apriori accel (us/s/s)	-5.15252770595E-05	Resid phase (deg)	73.5	+/-	0.5

ph/seg (deg)	RMS 35.9	Theor. 1.3	Amplitude Search (1024X32)	5.703 +/- 0.027	5.549	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	19.5	2.2	Interp.	0.000	6.749	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	42.4	0.8	Inc. seg. avg.	6.749	6.878	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	21.2	1.4	Inc. frq. avg.	6.878		Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 X: az 267.3 el 47.6 pa 42.5 u,v (fr/asec) -7142.855 -11714.469 simultaneous interpolator

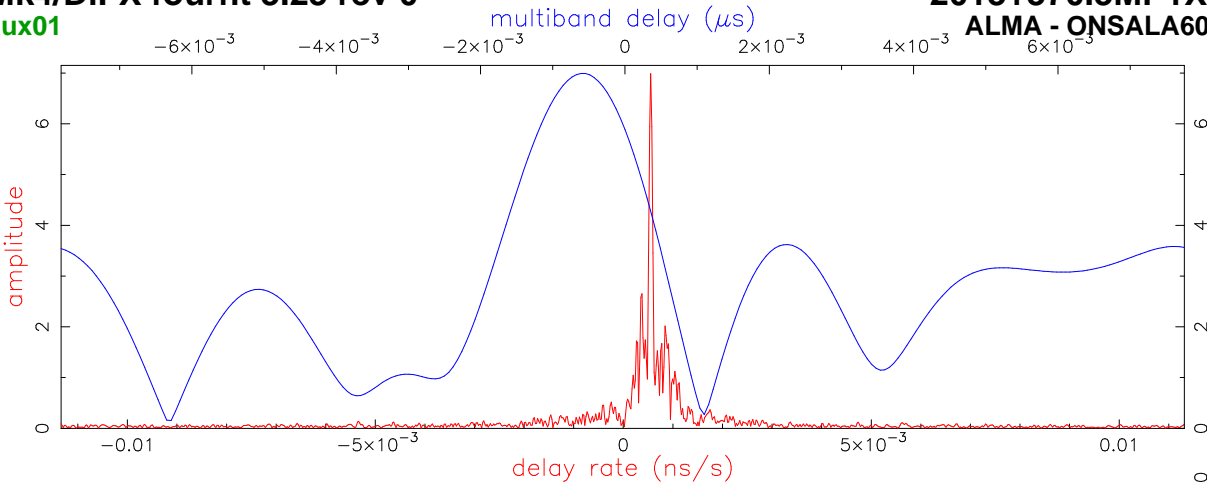
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AX..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AX.W.44.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

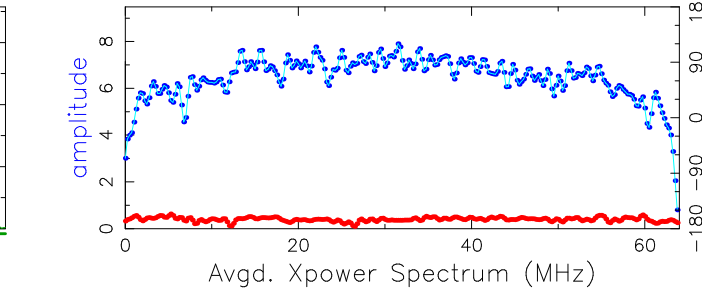
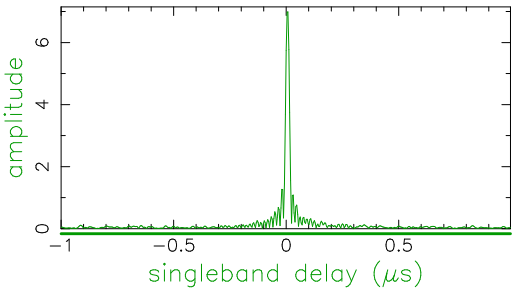
2013+370.3MP1XE, No0308, AX

ALMA - ONSALA60, fgroup W, pol YL



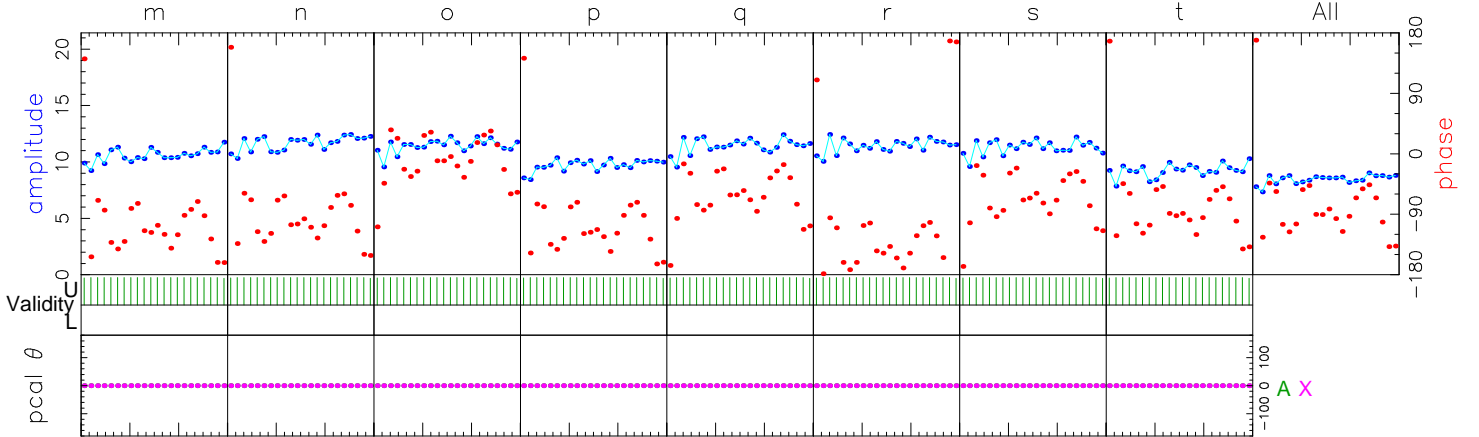
Fringe quality 4

SNR 262.0  
 Int time 179.886  
 Amp 7.150  
 Phase -89.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005886  
 MBD -0.000633  
 Fringe rate (Hz)  
 0.047592  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110945  
 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
	-115.8	-102.8	-9.2	-115.6	-60.8	-144.6	-65.5	-91.2	Phase	-89.4
	8.8	9.7	9.5	8.0	9.5	9.4	9.3	7.6	Ampl.	9.0
	259.8	258.2	258.2	257.8	258.2	258.1	258.2	258.6	Sbd box	258.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
X	0	0	0	0	0	0	0	0	PC freqs	
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-8.34325126327E+03	Apriori delay (usec)	-8.34325063014E+03	Resid mbdelay (usec)	-6.33134E-04	+/-	4.1E-06
Sband delay (usec)	-8.34324474414E+03	Apriori clock (usec)	-2.2203435E+03	Resid sbdelay (usec)	5.88600E-03	+/-	3.3E-05
Phase delay (usec)	-8.34325063302E+03	Apriori clockrate (us/s)	-1.2274550E-06	Resid phdelay (usec)	-2.88373E-06	+/-	1.4E-08
Delay rate (us/s)	9.84211744854E-01	Apriori rate (us/s)	9.84211192356E-01	Resid rate (us/s)	5.52498E-07	+/-	1.4E-10
Total phase (deg)	-190.2	Apriori accel (us/s/s)	-5.15252770595E-05	Resid phase (deg)	-89.4	+/-	0.4

ph/seg (deg)	RMS 36.2	Theor. 1.0	Amplitude 7.150 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	19.3	1.8	Search (1024X32) 6.875	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	45.5	0.6	Inc. seg. avg. 8.471	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	27.4	1.1	Inc. frq. avg. 8.974	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

A: az 19.3 el 26.3 pa -157.7 X: az 267.3 el 47.6 pa 42.5 u,v (fr/asec) -7142.855 -11714.469 simultaneous interpolator

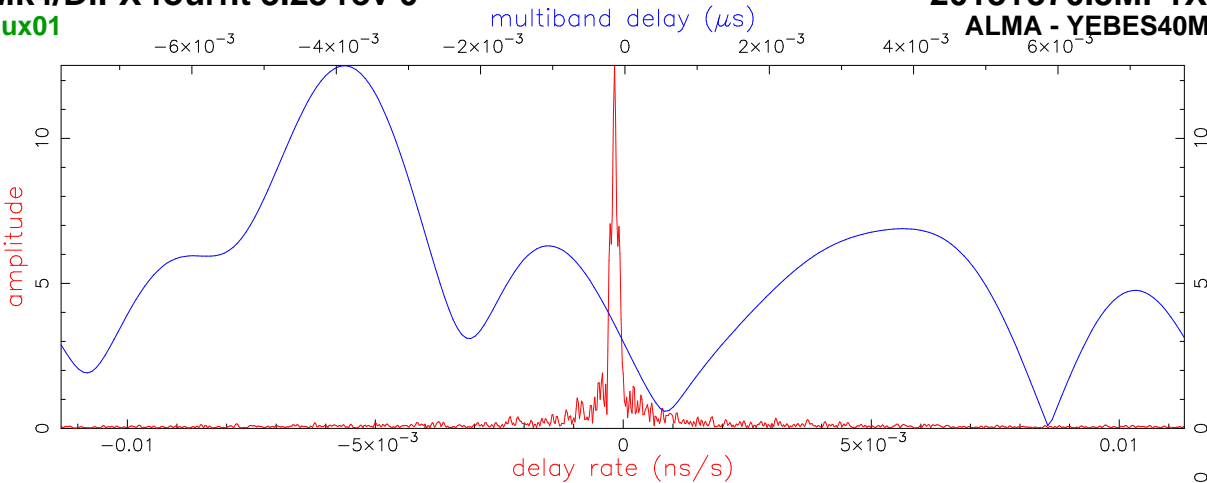
Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AX..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AX.W.56.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

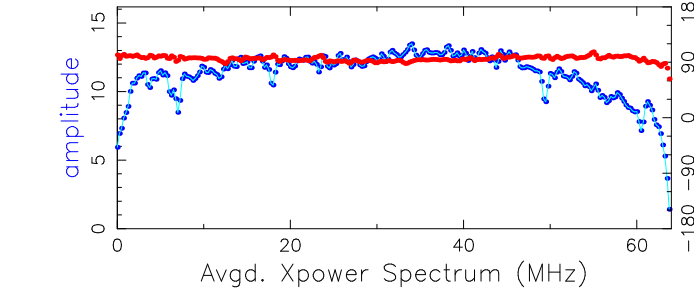
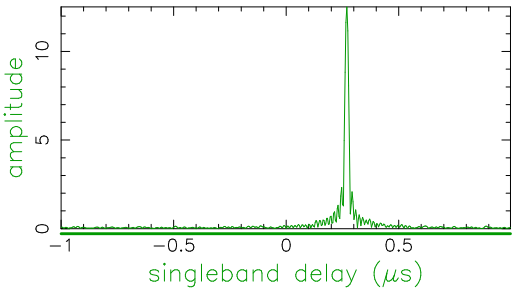
2013+370.3MP1XE, No0308, AY

ALMA - YEBES40M, fgroup W, pol XL



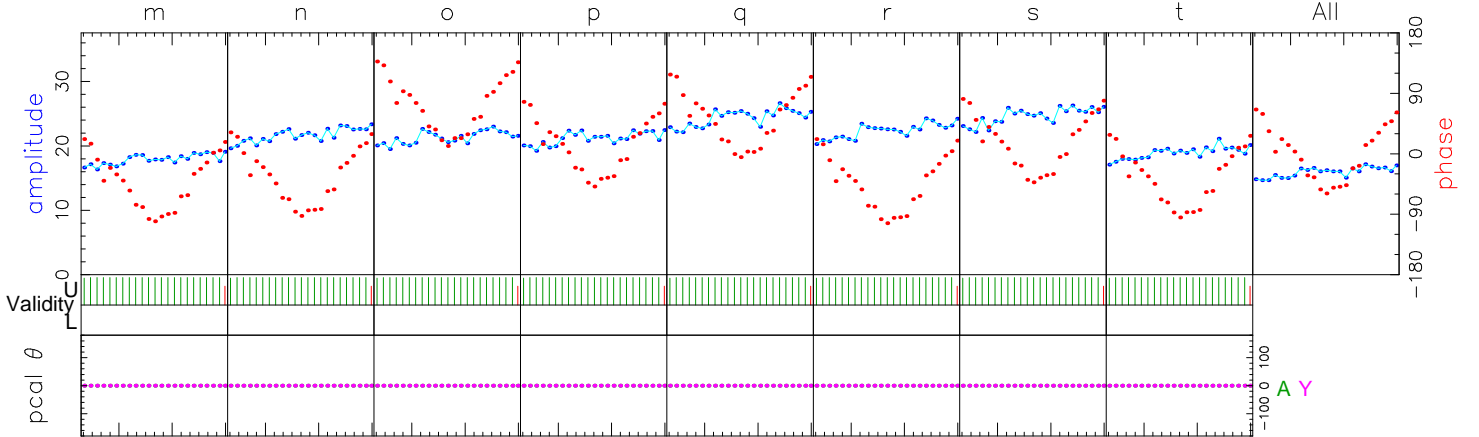
Fringe quality 3

SNR 436.1  
 Int time 162.295  
 Amp 12.521  
 Phase 0.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.269091  
 MBD -0.003902  
 Fringe rate (Hz)  
 -0.015208  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092017.41  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:111125  
 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
	-42.5	-32.9	73.6	12.4	53.4	-44.3	17.0	-35.8	Phase	0.5
	14.1	17.0	16.8	16.6	19.2	17.5	19.3	14.9	Ampl.	16.9
	327.4	325.8	325.5	325.6	325.3	325.1	325.6	325.2	Sbd box	325.9
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
A:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.02239065676E+04	Apriori delay (usec)	-1.02241682905E+04	Resid mbdelay (usec)	-3.90209E-03	+/-	2.5E-06
Sband delay (usec)	-1.02238991995E+04	Apriori clock (usec)	-1.9967914E+03	Resid sbdelay (usec)	2.69091E-01	+/-	2.0E-05
Phase delay (usec)	-1.02241682905E+04	Apriori clockrate (us/s)	1.4449371E-06	Resid phdelay (usec)	1.75341E-08	+/-	8.5E-09
Delay rate (us/s)	1.06046838049E+00	Apriori rate (us/s)	1.06046855704E+00	Resid rate (us/s)	-1.76548E-07	+/-	9.0E-11
Total phase (deg)	-196.4	Apriori accel (us/s/s)	-2.71636287421E-05	Resid phase (deg)	0.5	+/-	0.3

ph/seg (deg)	39.0	0.6	Search (1024X32)	12.473	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	27.9	1.1	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)	49.7	0.4	Inc. seg. avg.	15.932	Bits/sample: 2x2	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	37.6	0.6	Inc. frq. avg.	16.906	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 Y: az 278.5 el 56.9 pa 70.7 u,v (fr/asec) -7668.843 -8895.888 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AY..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AY.W.400.3MP1XE

# Mk4/DiFX fourfit 3.25 rev 0

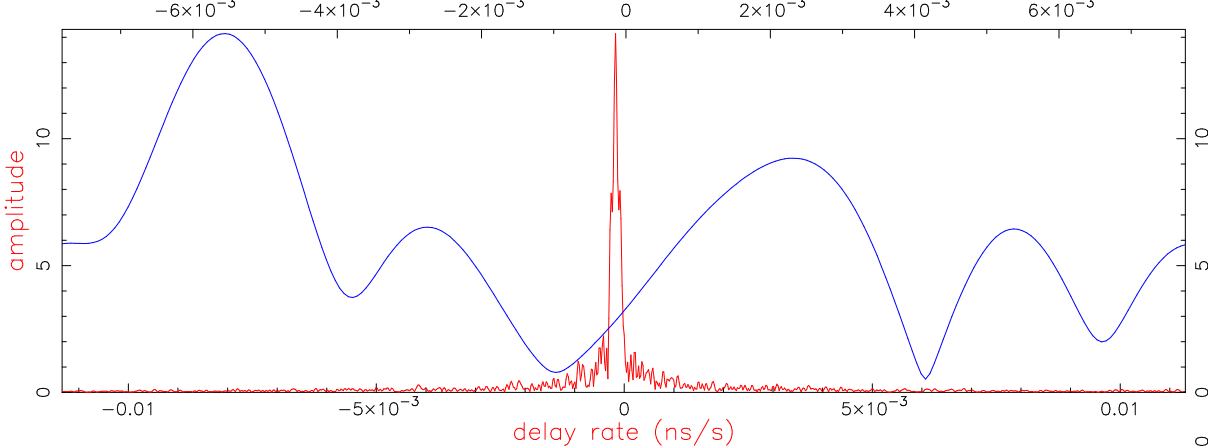
aux01

# 2013+370.3MP1XE, No0308, AY

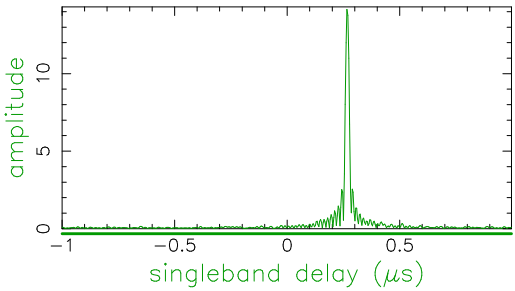
ALMA - YEYES40M, fgroup W, pol YR

multiband delay ( $\mu$ s)

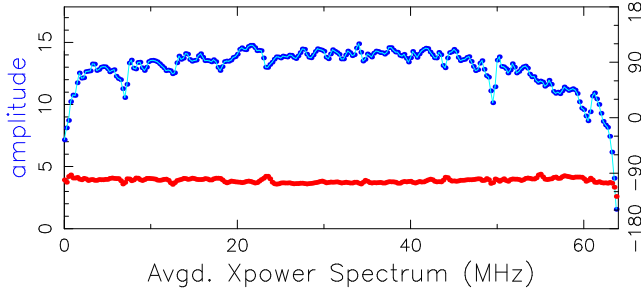
Fringe quality 3



SNR 498.6  
 Int time 162.295  
 Amp 14.313  
 Phase 157.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.267019  
 MBD -0.005531  
 Fringe rate (Hz)  
 -0.015173  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

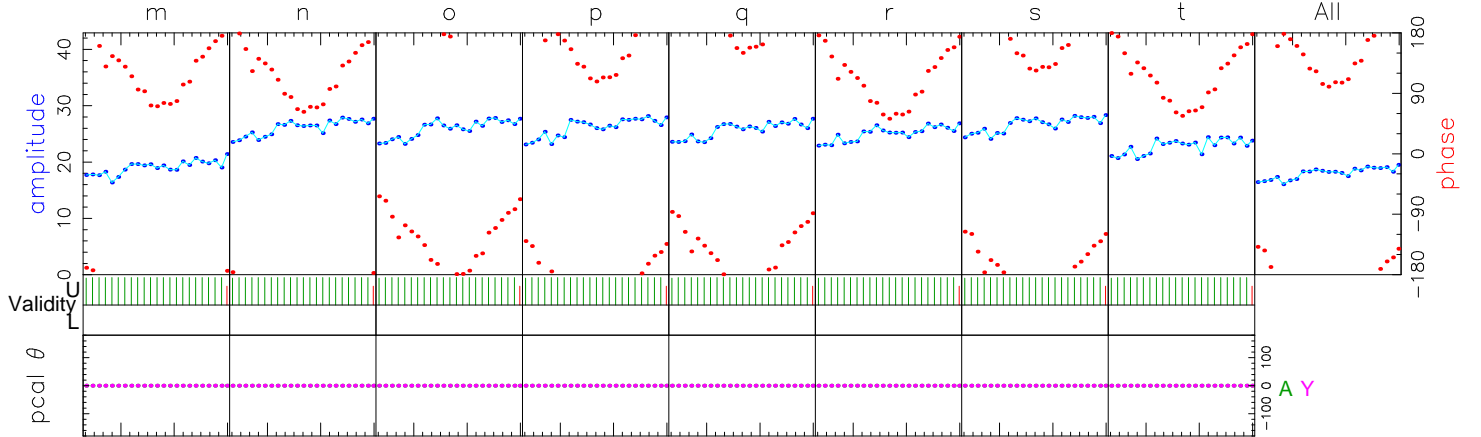


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092017.41  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:111127  
 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
	126.2	119.9	-128.5	164.6	-149.7	110.5	-179.5	114.8	Phase	157.3
	15.0	20.6	20.5	20.6	20.2	19.6	20.9	17.9	Ampl.	19.4
	326.8	324.8	325.4	325.1	325.0	324.7	325.0	325.1	Sbd box	325.4
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
A:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD) -1.02239081969E+04 Apriori delay (usec) -1.02241682905E+04 Resid mbdelay (usec) -5.53141E-03 +/- 2.2E-06  
 Sband delay (usec) -1.02239012718E+04 Apriori clock (usec) -1.9967914E+03 Resid sbdelay (usec) 2.67019E-01 +/- 1.7E-05  
 Phase delay (usec) -1.02241682855E+04 Apriori clockrate (us/s) 1.4449371E-06 Resid phdelay (usec) 5.07334E-06 +/- 7.4E-09  
 Delay rate (us/s) 1.06046838090E+00 Apriori rate (us/s) 1.06046855704E+00 Resid rate (us/s) -1.76140E-07 +/- 7.9E-11  
 Total phase (deg) -39.6 Apriori accel (us/s/s) -2.71636287421E-05 Resid phase (deg) 157.3 +/- 0.2

RMS Theor. Amplitude 14.313 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 38.8 0.6 Search (1024X32) 13.924 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 26.6 1.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 50.4 0.3 Inc. seg. avg. 17.995 Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us dr window (ns/s) -0.011 0.011  
 amp/frq (%) 38.0 0.6 Inc. frq. avg. 19.402 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 19.3 el 26.3 pa -157.7 Y: az 278.5 el 56.9 pa 70.7 u,v (fr/asec) -7668.843 -8895.888 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AY..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AY.W.414.3MP1XE

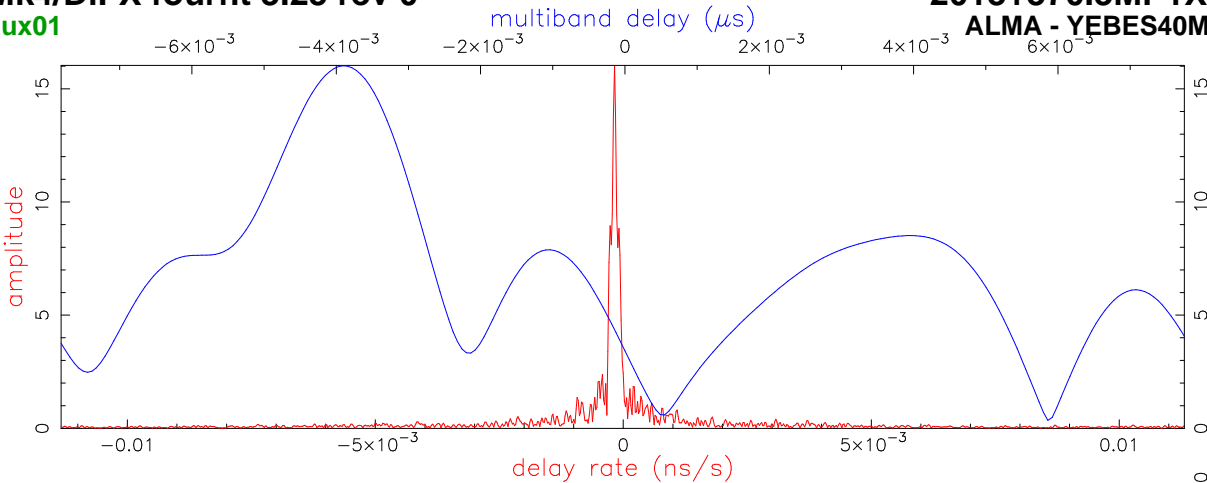


Mk4/DiFX fourfit 3.25 rev 0

aux01

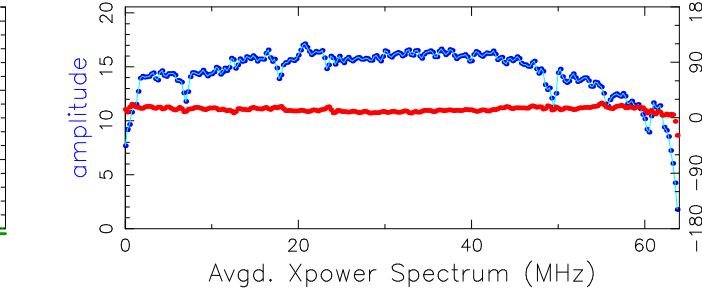
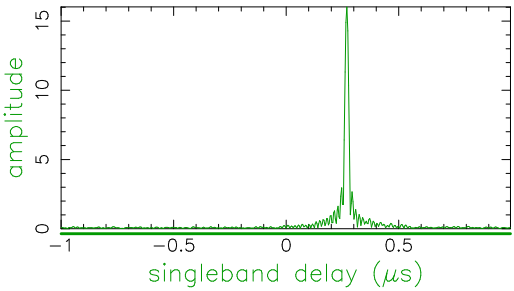
2013+370.3MP1XE, No0308, AY

ALMA - YEBES40M, fgroup W, pol YL



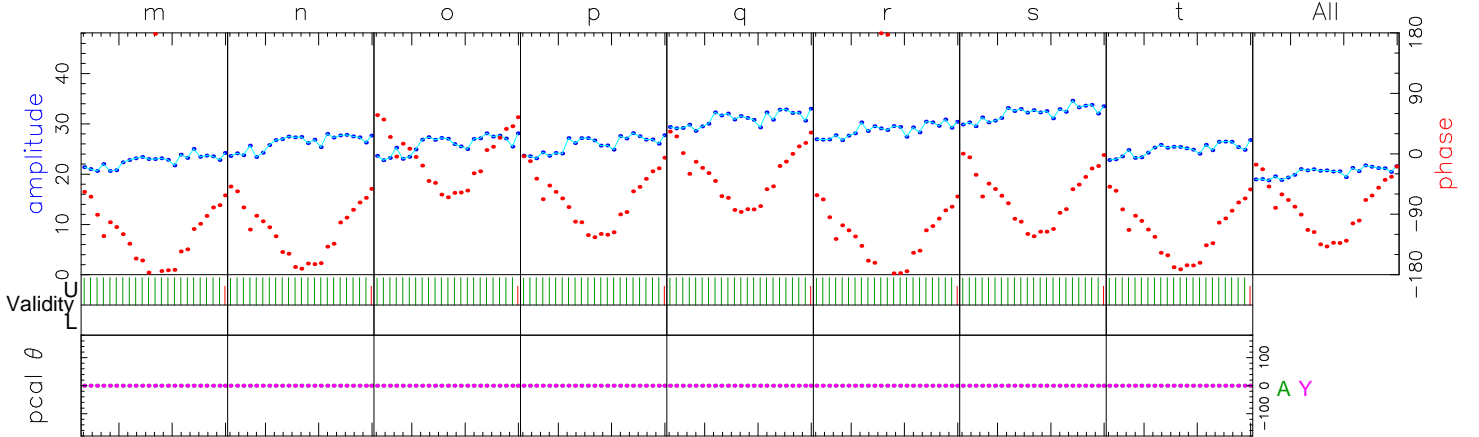
Fringe quality 3

SNR 558.5  
 Int time 162.295  
 Amp 16.034  
 Phase -81.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.269092  
 MBD -0.003910  
 Fringe rate (Hz)  
 -0.015207  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092017.41  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:111132  
 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
	-123.6	-114.5	-7.7	-69.0	-31.1	-126.6	-65.0	-114.8	Phase	-81.5
	17.7	20.6	20.3	20.4	24.5	22.6	25.2	19.5	Ampl.	21.4
	327.3	325.8	325.6	325.5	325.4	325.1	325.6	325.2	Sbd box	325.9
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
Y	0	0	0	0	0	0	0	0	PC freqs	
A:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-1.02239065752E+04	Apriori delay (usec)	-1.02241682905E+04	Resid mbdelay (usec)	-3.90969E-03	+/-	1.9E-06
Sband delay (usec)	-1.02238991983E+04	Apriori clock (usec)	-1.9967914E+03	Resid sbdelay (usec)	2.69092E-01	+/-	1.5E-05
Phase delay (usec)	-1.02241682932E+04	Apriori clockrate (us/s)	1.4449371E-06	Resid phdelay (usec)	-2.62715E-06	+/-	6.6E-09
Delay rate (us/s)	1.06046838050E+00	Apriori rate (us/s)	1.06046855704E+00	Resid rate (us/s)	-1.76540E-07	+/-	7.0E-11
Total phase (deg)	-278.4	Apriori accel (us/s/s)	-2.71636287421E-05	Resid phase (deg)	-81.5	+/-	0.2

ph/seg (deg)	38.8	RMS	38.8	Theor.	0.5	Amplitude	16.034 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	27.6		0.9	Search (1024X32)	15.976	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	49.0		0.3	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	36.4		0.5	Inc. seg. avg.	20.359	Data rate(MSamp/s):	128 MBpts 32 Amb 0.016 us	dr window (ns/s)	-0.011	0.011	
				Inc. frq. avg.	21.366	Data rate(Mb/s):	2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7 Y: az 278.5 el 56.9 pa 70.7 u,v (fr/asec) -7668.843 -8895.888 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c241c/v2/3mm/1234/No0308//AY..3MP1XE Output file: /Exps/c241c/v2/3mm/1234/No0308//AY.W.436.3MP1XE

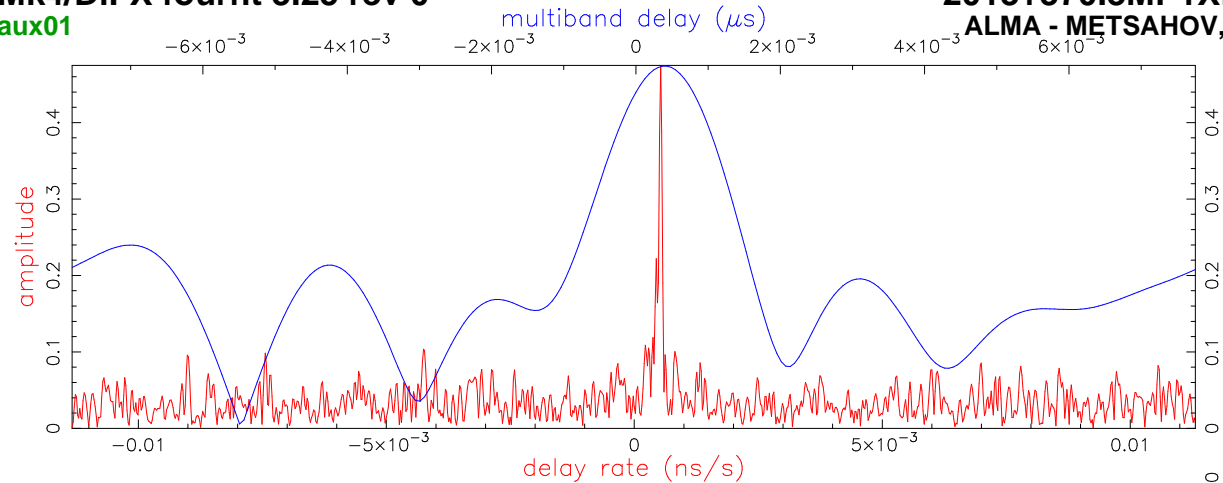


Mk4/DiFX fourfit 3.25 rev 0

aux01

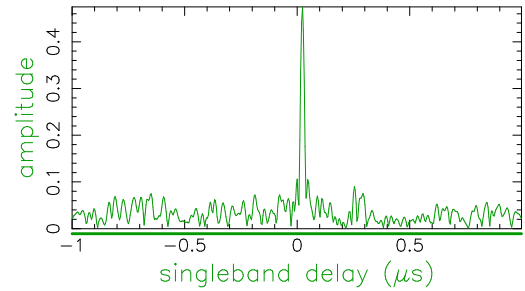
2013+370.3MP1XE, No0308, AZ

ALMA - METSAHOV, fgroup W, pol YR

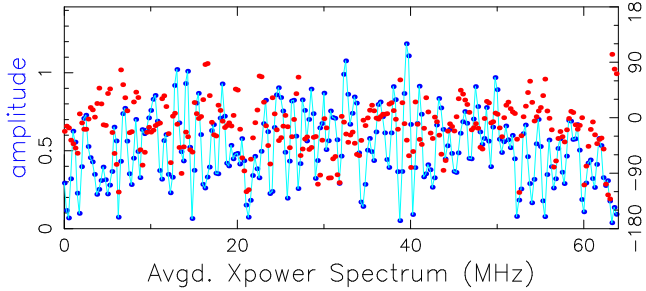


Fringe quality 8

SNR 17.4  
 Int time 179.944  
 Amp 0.475  
 Phase -113.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.023058  
 MBD 0.000393  
 Fringe rate (Hz) 0.045868  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

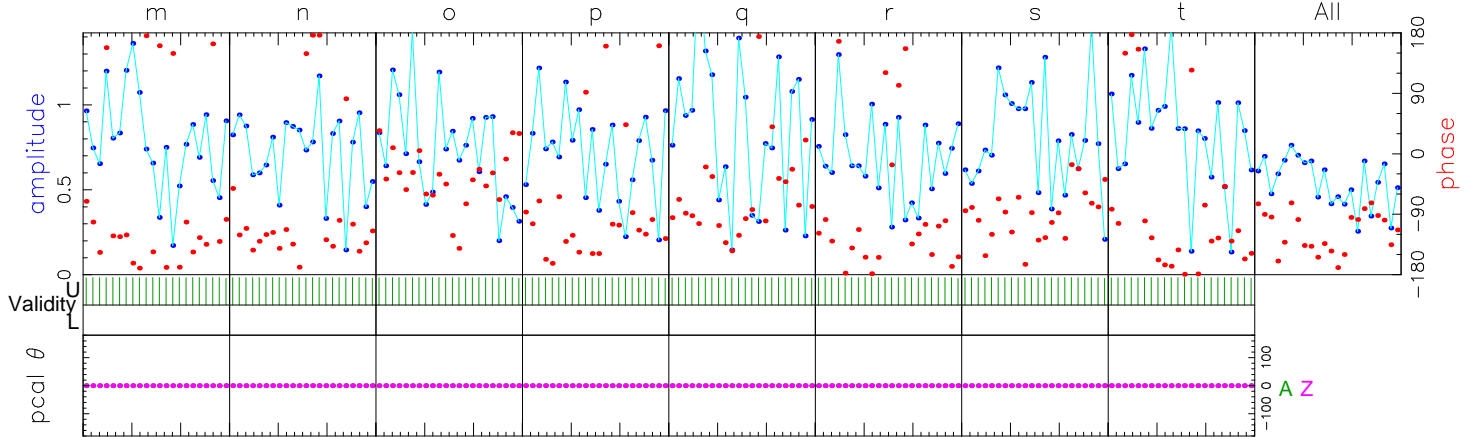


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110935  
 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	-133.6	-33.2	-121.5	-75.1	-152.3	-90.7	-143.3	Phase	-113.1
	0.6	0.6	0.6	0.5	0.6	0.5	0.7	0.6	Ampl.	0.6
	264.2	262.2	262.9	262.3	262.8	262.9	262.4	262.9	Sbd box	262.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.53131209653E+03	Apriori delay (usec)	-6.53132811413E+03	Resid mbdelay (usec)	3.92598E-04	+/-	6.2E-05
Sband delay (usec)	-6.53130505613E+03	Apriori clock (usec)	-2.1076709E+03	Resid sbdelay (usec)	2.30580E-02	+/-	5.0E-04
Phase delay (usec)	-6.53132811778E+03	Apriori clockrate (us/s)	-6.2069187E-07	Resid phdelay (usec)	-3.64839E-06	+/-	2.1E-07
Delay rate (us/s)	9.97729644788E-01	Apriori rate (us/s)	9.97729112306E-01	Resid rate (us/s)	5.32482E-07	+/-	2.0E-09
Total phase (deg)	-23.5	Apriori accel (us/s/s)	-6.23090363185E-05	Resid phase (deg)	-113.1	+/-	6.6

ph/seg (deg)	30.0	Theor.	15.4	Amplitude	0.475 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	33.1	Search (1024X32)	0.467	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	45.0	Inc. seg. avg.	0.526	Inc. frq. avg.	0.591	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	28.8	Inc. frq. avg.	0.591			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

A: az 19.3 el 26.3 pa -157.7      Z: az 275.1 el 41.2 pa 38.4      u,v (fr/asec) -7249.062 -12538.377      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308/AZ..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308/AZ.W.17.3MP1XE

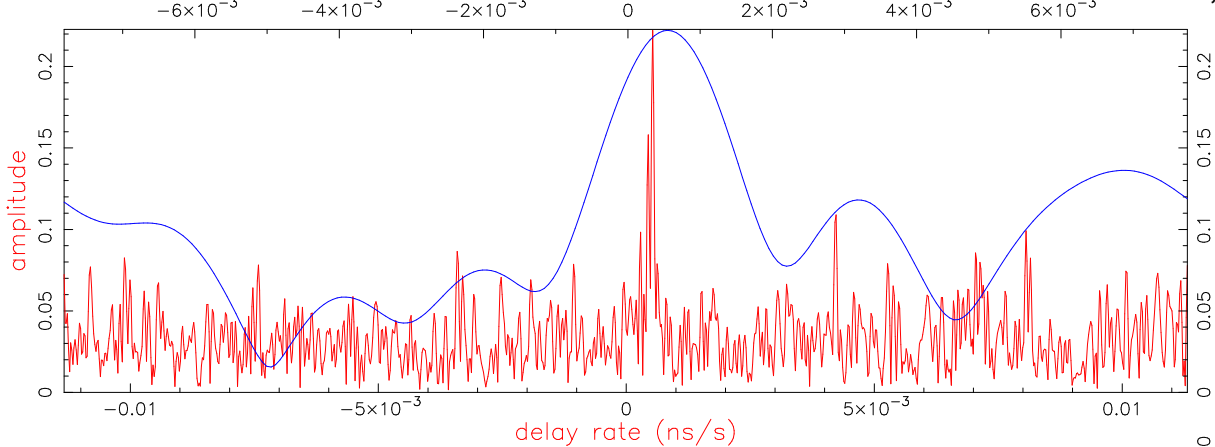
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AZ

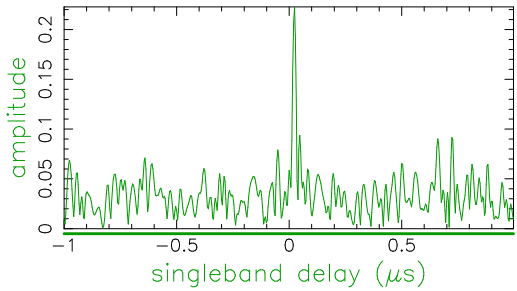
ALMA - METSAHOV, fgroup W, pol XR

multiband delay ( $\mu$ s)

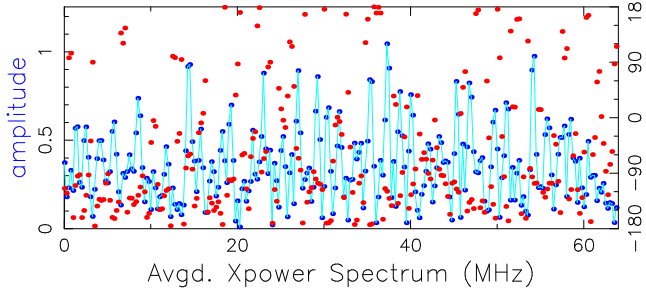


Fringe quality 9

SNR 8.2  
 Int time 179.944  
 Amp 0.223  
 Phase 138.9  
 PFD 5.6e-08  
 Delays (us)  
 SBD 0.022923  
 MBD 0.000535  
 Fringe rate (Hz)  
 0.046434  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

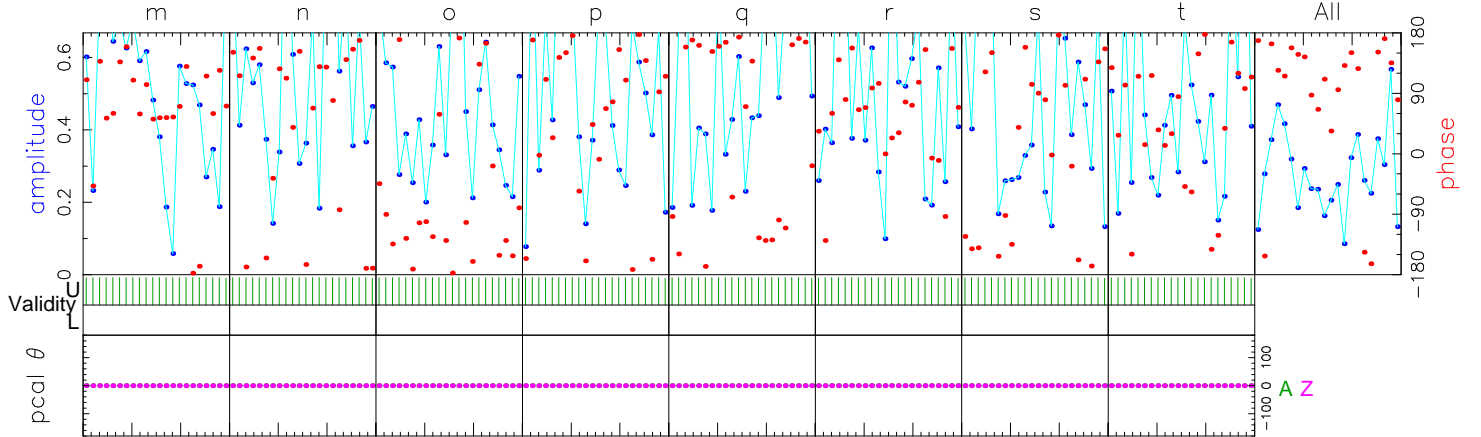


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110937  
 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		
A	0	0	0	0	0	0	0	0	APs used	
Z	0	0	0	0	0	0	0	0	PC freqs	
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec) (SBD)	-6.53131195437E+03	Apriori delay (usec)	-6.53132811413E+03	Resid mbdelay (usec)	5.34754E-04	+/-	1.3E-04
Sband delay (usec)	-6.53130519063E+03	Apriori clock (usec)	-2.1076709E+03	Resid sbdelay (usec)	2.29235E-02	+/-	1.1E-03
Phase delay (usec)	-6.53132810965E+03	Apriori clockrate (us/s)	-6.2069187E-07	Resid phdelay (usec)	4.47980E-06	+/-	4.5E-07
Delay rate (us/s)	9.97729651355E-01	Apriori rate (us/s)	9.97729112306E-01	Resid rate (us/s)	5.39049E-07	+/-	4.3E-09
Total phase (deg)	-131.4	Apriori accel (us/s/s)	-6.23090363185E-05	Resid phase (deg)	138.9	+/-	14.0

ph/seg (deg)	44.2	Theor.	32.9	Amplitude	0.223 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	58.3	Search (1024X32)	0.215	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	50.6	Inc. seg. avg.	0.243	Inc. seg. avg.	0.243	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	45.6	Inc. frq. avg.	0.285	Inc. frq. avg.	0.285	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

A: az 19.3 el 26.3 pa -157.7      Z: az 275.1 el 41.2 pa 38.4      u,v (fr/asec) -7249.062 -12538.377      simultaneous interpolator

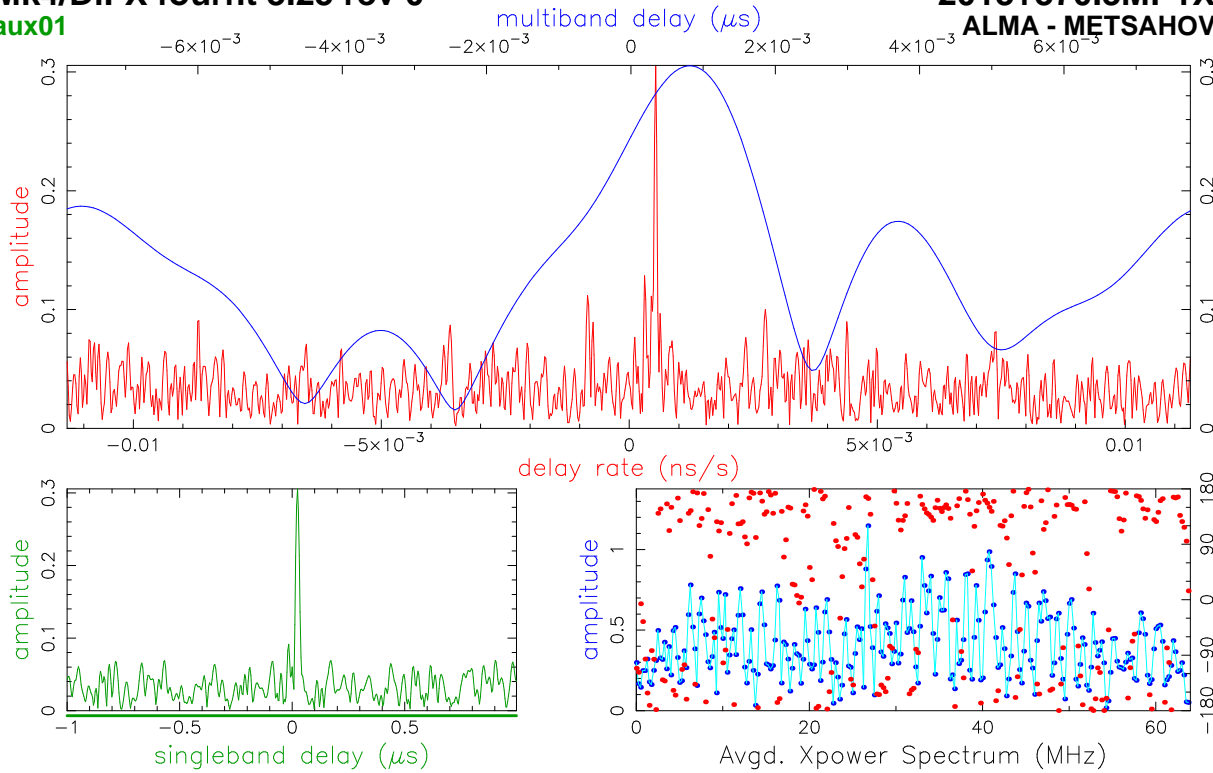
Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308/AZ..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308/AZ.W.30.3MP1XE

Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AZ

ALMA - METSAHOV, fgroup W, pol YL

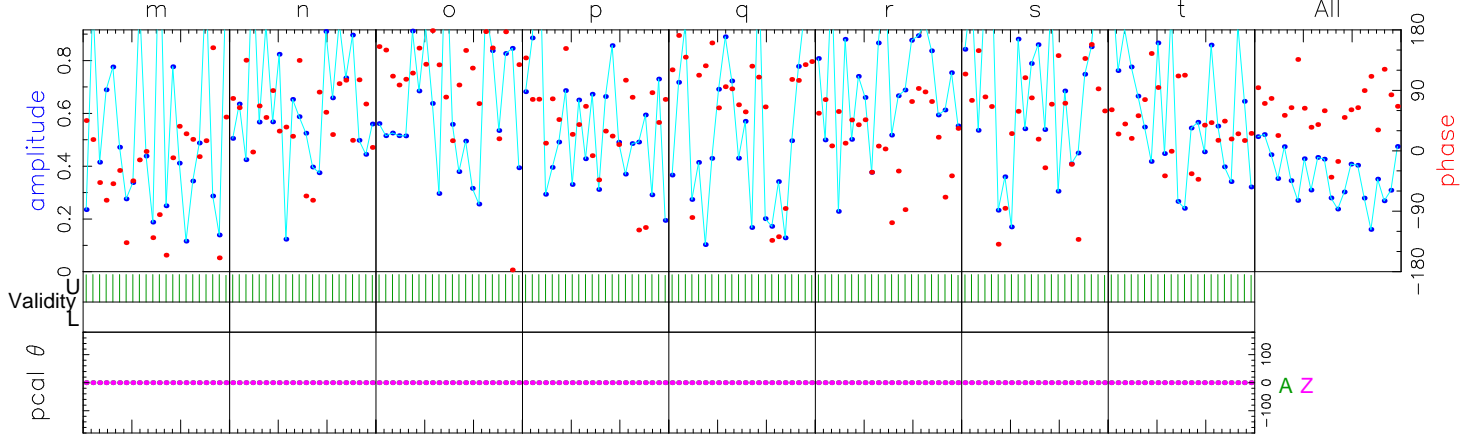


Fringe quality 9

SNR 11.2  
 Int time 179.944  
 Amp 0.306  
 Phase 62.1  
 PFD 1.0e-20  
 Delays (us)  
 SBD 0.023256  
 MBD 0.000812  
 Fringe rate (Hz) 0.045832  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110942  
 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		
	-17.6	53.5	131.5	56.3	116.2	25.5	81.8	34.0	Phase	62.1		
	0.3	0.4	0.5	0.3	0.4	0.5	0.5	0.5	Ampl.	0.4		
	265.0	263.2	263.1	262.4	261.6	262.6	262.7	263.3	Sbd box	263.0		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
A	0	0	0	0	0	0	0	0	PC freqs			
Z	0	0	0	0	0	0	0	0	PC freqs			
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
Z	1000	1000	1000	1000	1000	1000	1000	1000				
A	W00UY	W01UY	W02UY	W03UY	W04UY	W05UY	W06UY	W07UY	Chan ids			
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Chan ids			
									Tracks			
Group delay (usec) (SBD)	-6.53131167744E+03		Apriori delay (usec)		-6.53132811413E+03		Resid mbdelay (usec)		8.11692E-04	+/- 9.7E-05		
Sband delay (usec)	-6.53130485788E+03		Apriori clock (usec)		-2.1076709E+03		Resid sbdelay (usec)		2.32562E-02	+/- 7.7E-04		
Phase delay (usec)	-6.53132811213E+03		Apriori clockrate (us/s)		-6.2069187E-07		Resid phdelay (usec)		2.00146E-06	+/- 3.3E-07		
Delay rate (us/s)	9.97729644369E-01		Apriori rate (us/s)		9.97729112306E-01		Resid rate (us/s)		5.32063E-07	+/- 3.2E-09		
Total phase (deg)			Apriori accel (us/s/s)		-6.23090363185E-05		Resid phase (deg)		62.1	+/- 10.2		
	RMS	Theor.	Amplitude	0.306 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	39.5	24.0	Search (1024X32)	0.298		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	36.1	41.9	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	52.8	14.5	Inc. seg. avg.	0.334		Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	42.0	25.3	Inc. frq. avg.	0.408		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
A: az 19.3 el 26.3 pa -157.7		Z: az 275.1 el 41.2 pa 38.4		u, v (fr/asec) -7249.062 -12538.377				simultaneous interpolator				
Control file: cf_1234_gmva		Input file: /Exps/c241c/v2/3mm/1234/No0308/AZ..3MP1XE		Output file: /Exps/c241c/v2/3mm/1234/No0308/AZ.W.42.3MP1XE								

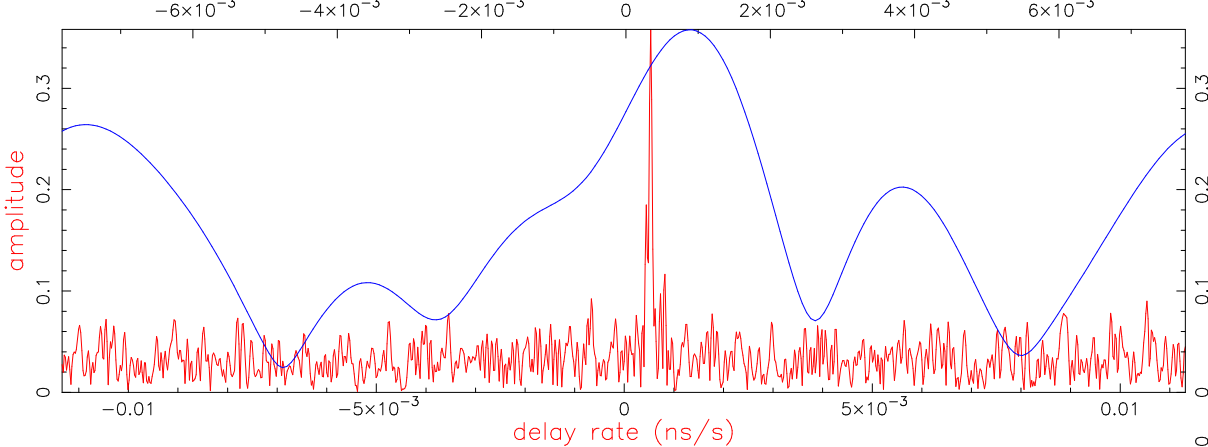
Mk4/DiFX fourfit 3.25 rev 0

aux01

2013+370.3MP1XE, No0308, AZ

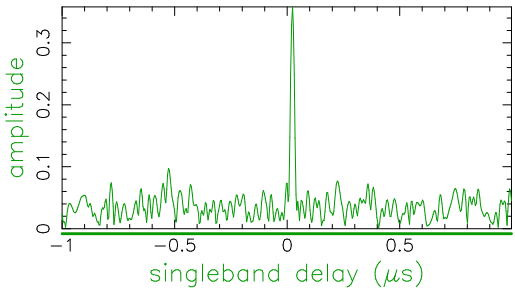
ALMA - METSAHOV, fgroup W, pol XL

multiband delay ( $\mu$ s)

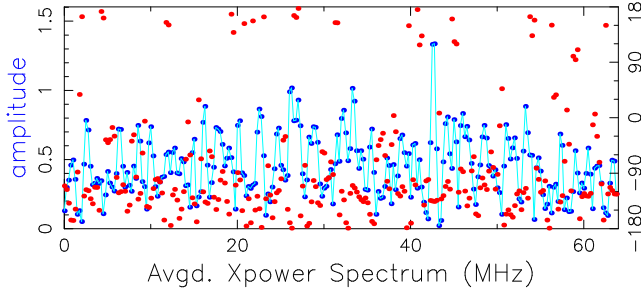


Fringe quality 9

SNR 13.1  
 Int time 179.944  
 Amp 0.358  
 Phase 128.8  
 PFD 6.5e-31  
 Delays (us)  
 SBD 0.023377  
 MBD 0.000886  
 Fringe rate (Hz) 0.046265  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

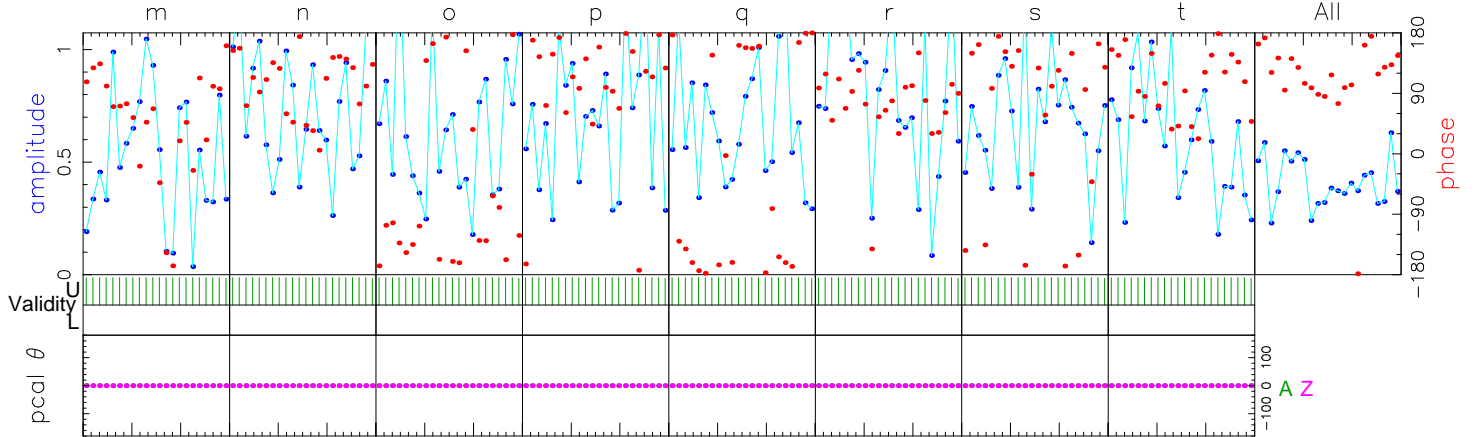


delay rate (ns/s)



Exp. c241c  
 Exper # 1234  
 Yr:day 2024:112  
 Start 092000.00  
 Stop 092300.22  
 FRT 092130.00  
 Corr/FF/build  
 2024:352:180659  
 2025:041:110933  
 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
	65.0	106.2	-146.5	137.0	-172.6	83.1	151.0	99.6	Phase	128.8
	0.4	0.6	0.5	0.5	0.6	0.7	0.5	0.4	Ampl.	0.5
	264.5	263.1	262.3	261.7	262.6	262.8	262.7	262.9	Sbd box	263.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
Z	0	0	0	0	0	0	0	0	PC freqs	
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	W04UX	W05UX	W06UX	W07UX	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec) (SBD)	-6.53131160319E+03	Apriori delay (usec)	-6.53132811413E+03	Resid mbdelay (usec)	8.85942E-04	+/-	8.3E-05
Sband delay (usec)	-6.53130473688E+03	Apriori clock (usec)	-2.1076709E+03	Resid sbdelay (usec)	2.33773E-02	+/-	6.6E-04
Phase delay (usec)	-6.53132810997E+03	Apriori clockrate (us/s)	-6.2069187E-07	Resid phdelay (usec)	4.15323E-06	+/-	2.8E-07
Delay rate (us/s)	9.97729649395E-01	Apriori rate (us/s)	9.97729112306E-01	Resid rate (us/s)	5.37090E-07	+/-	2.7E-09
Total phase (deg)	-141.6	Apriori accel (us/s/s)	-6.23090363185E-05	Resid phase (deg)	128.8	+/-	8.7

ph/seg (deg)	RMS 30.7	Theor. 20.5	Amplitude Search (1024X32)	0.358 +/- 0.027	0.348	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	33.8	35.7	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)	55.8	12.3	Inc. seg. avg.	0.390	0.390	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us	nlags: 256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	53.0	21.5	Inc. frq. avg.	0.509	0.509	Data rate(Mb/s): 2048	t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 19.3 el 26.3 pa -157.7      Z: az 275.1 el 41.2 pa 38.4      u,v (fr/asec) -7249.062 -12538.377      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c241c/v2/3mm/1234/No0308//AZ..3MP1XE      Output file: /Exps/c241c/v2/3mm/1234/No0308//AZ.W.8.3MP1XE