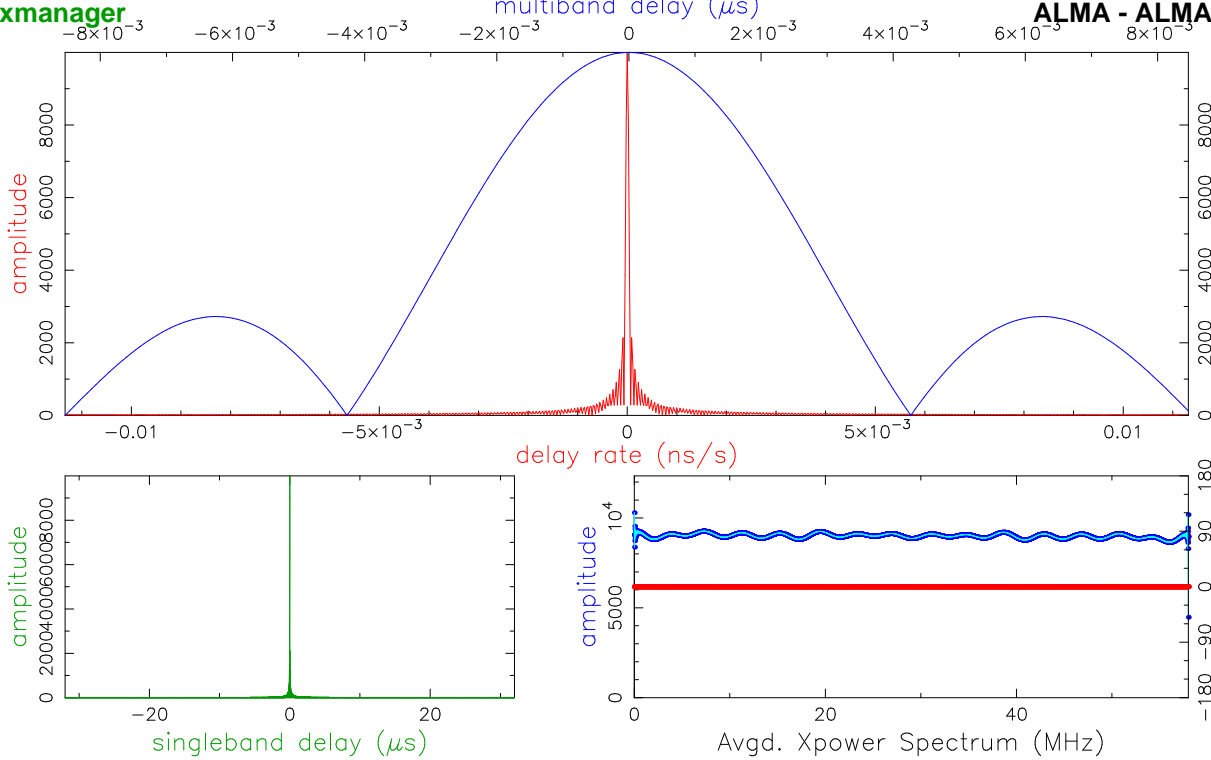


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

4C39_25.1RFYGV, No0014, AA

ALMA - ALMA, fgroup W, pol YY

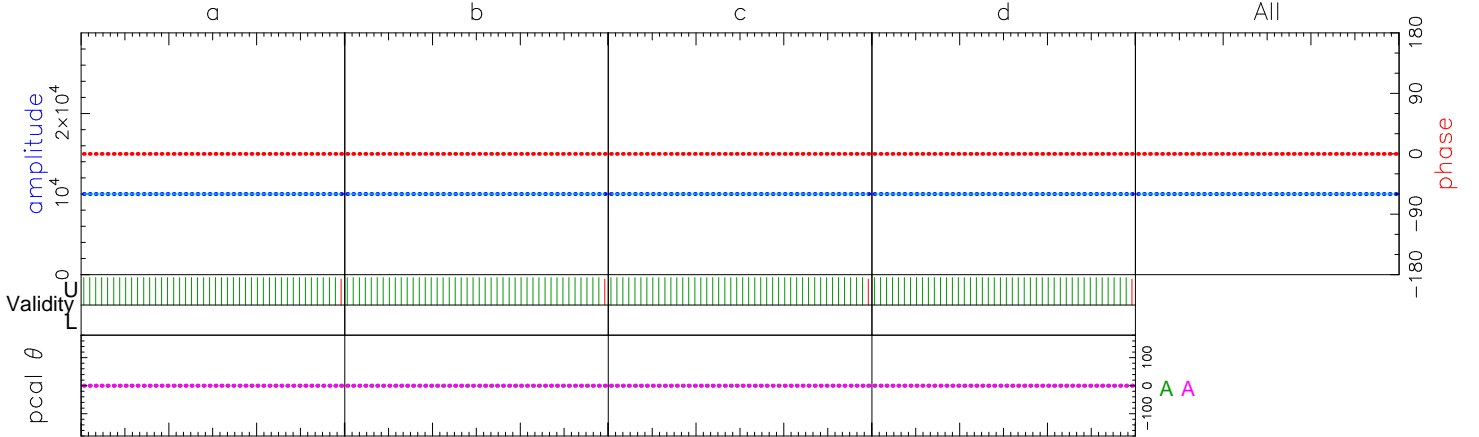


Fringe quality 9

SNR 246960.2
 Int time 179.987
 Amp 9999.999
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz) 0.000000
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064740
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
A	0	0	0	0		
A:A	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000		
A	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY		
A	W00UY	W01UY	W02UY	W03UY		

Group delay (usec)(sbd)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/- 9.8E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/- 3.8E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/- 1.5E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/- 1.4E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/- 0.0

ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	9999.999 +/- 0.040	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	0.0	Search (1024X16)	9999.999	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	Bits/sample:	2x2	SampCntNorm:	enabled
ph/frq (deg)	0.0	Inc. seg. avg.	10000.000	Inc. frq. avg.	9999.999	Sample rate (MSamp/s):	116	Data rate (Mb/s):	928	nlags:	7424 t_cohere infinite
amp/frq (%)	0.0	ion window (TEC)	0.00	0.00	0.00	sb window (us)	-32.000 32.000	mb window (us)	-0.009 0.009	dr window (ns/s)	-0.011 0.011

A: az 340.6 el 24.4 pa 156.8 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

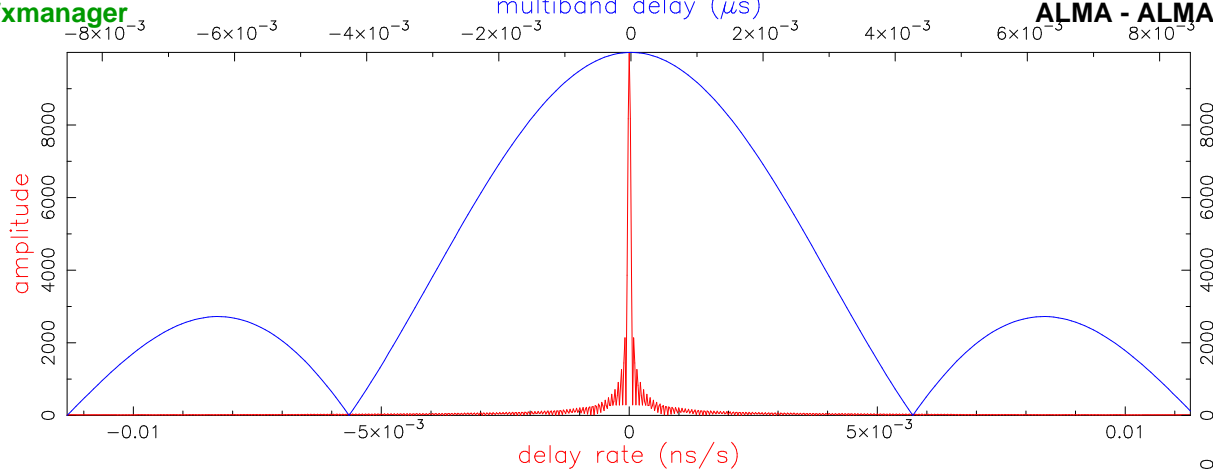
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AA..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AA.W.23.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

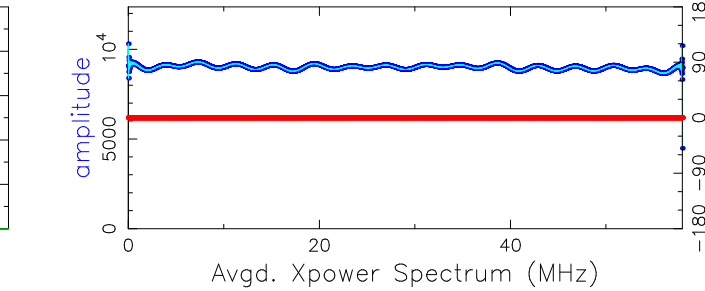
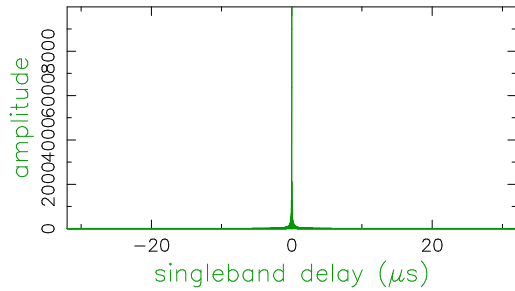
4C39_25.1RFYGV, No0014, AA

ALMA - ALMA, fgroup W, pol XX



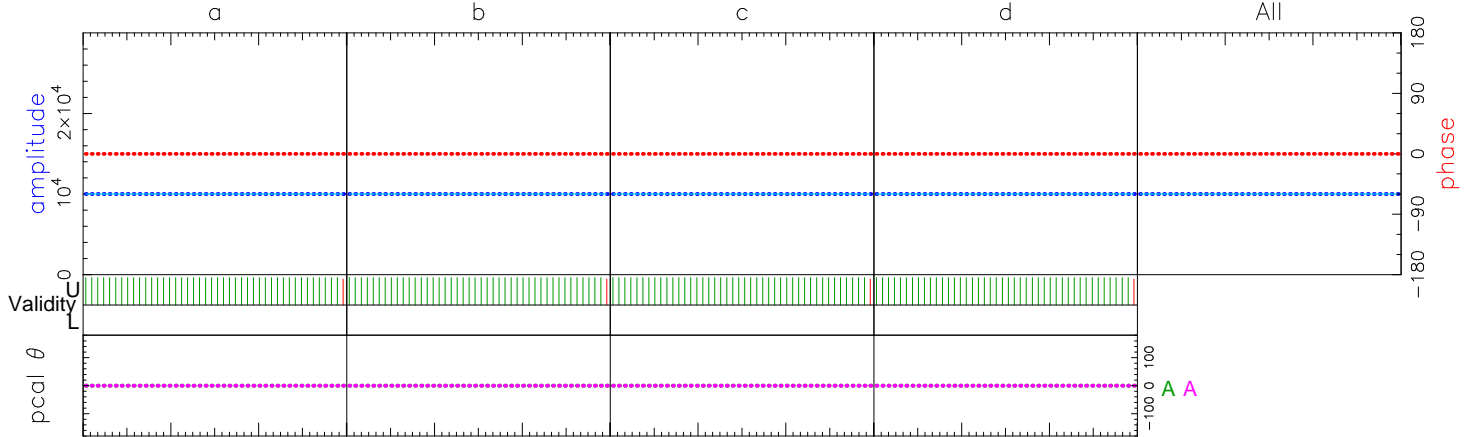
Fringe quality 9

SNR 246960.2
 Int time 179.987
 Amp 9999.999
 Phase 0.0
 PFD 0.0e+00
 Delays (us)
 SBD 0.000000
 MBD 0.000000
 Fringe rate (Hz)
 0.000000
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064722
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
A	0	0	0	0		
A:A	0:0	0:0	0:0	0:0		
A:A	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000		
A	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX		
A	W00UX	W01UX	W02UX	W03UX		

Group delay (usec)(sbd)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/- 9.8E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/- 3.8E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/- 1.5E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/- 1.4E-13
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/- 0.0

ph/seg (deg)	0.0	RMS	0.0	Theor.	0.0	Amplitude	9999.999 +/- 0.040	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	0.0	Search (1024X16)	9999.999	Interp.	0.000	Search	9999.999	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-32.000 32.000	
ph/frq (deg)	0.0	Inc. seg. avg.	10000.000	Inc. frq. avg.	9999.999	Inc. frq. avg.	9999.999	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.009 0.009
amp/frq (%)	0.0	Inc. frq. avg.	9999.999	u,v (fr/asec)	0.000 0.000	Sample rate (MSamp/s):	116	Data rate (Mb/s):	928	nlags: 7424 t_cohere infinite	ion window (TEC)	0.00 0.00

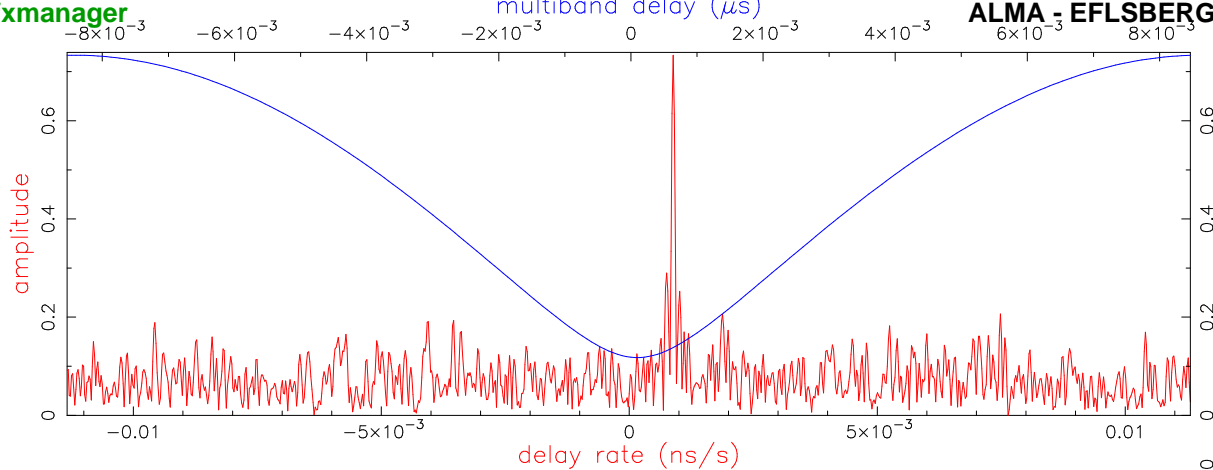
A: az 340.6 el 24.4 pa 156.8 A: az 340.6 el 24.4 pa 156.8 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AA..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AA.W.8.1RFYGV

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fxmanager

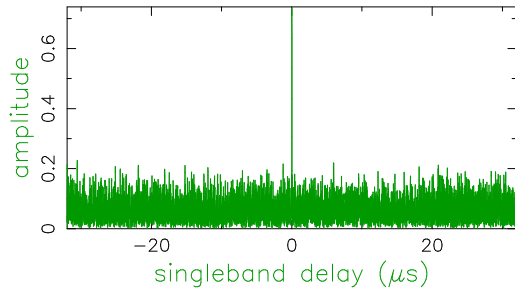
4C39_25.1RFYGV, No0014, AB

ALMA - EFLSBERG, fgroup W, pol XL

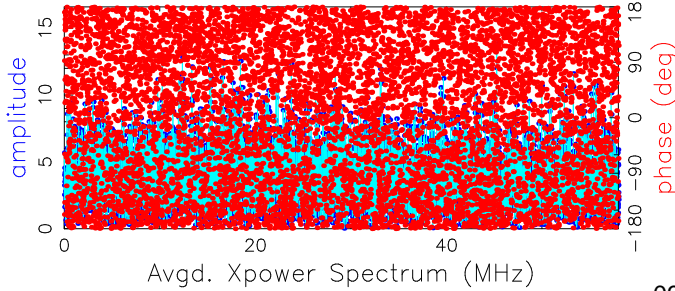


Fringe quality 9

SNR 12.9
 Int time 179.973
 Amp 0.739
 Phase -53.8
 PFD 1.2e-28
 Delays (us)
 SBD 0.011910
 MBD -0.008357
 Fringe rate (Hz)
 0.076732
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

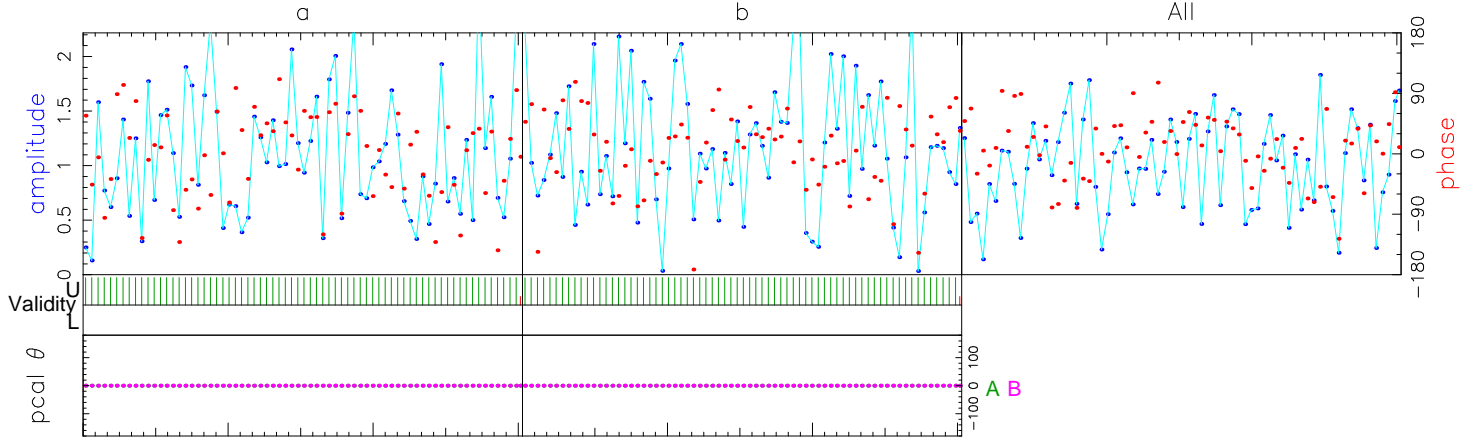


delay rate (ns/s)



Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064712
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70	86268.30	Freq (MHz)	All				
15.4	13.8	Phase	14.4				
0.6	0.9	Ampl.	0.7				
7427.6	7427.9	Sbd box	7427.8				
U/L 352/0	352/0	APs used					
A 0	0	PC freqs					
B 296	1000	PC freqs					
A:B 0:0	0:0	PC phase					
A:B 0:0	0:0	Manl PC					
A 1000	1000	PC amp					
B 1000	1000						
A W01UX	W02UX	Chan ids					
B W02UL	W03UL	Tracks					
		Chan ids					
		Tracks					
Group delay (usec)(sbd)	-2.10760321132E+03	Apriori delay (usec)	-2.10761192053E+03	Resid mbdelay (usec)	-8.35746E-03	+/-	4.2E-04
Sband delay (usec)	-2.10760001074E+03	Apriori clock (usec)	-2.0855352E+03	Resid sbdelay (usec)	1.19098E-02	+/-	7.4E-04
Phase delay (usec)	-2.10761192006E+03	Apriori clockrate (us/s)	-1.2300000E-06	Resid phdelay (usec)	4.65882E-07	+/-	2.9E-07
Delay rate (us/s)	3.21954374872E-01	Apriori rate (us/s)	3.21953484093E-01	Resid rate (us/s)	8.90779E-07	+/-	2.8E-09
Total phase (deg)	-354.2	Apriori accel (us/s/s)	-8.21951718434E-05	Resid phase (deg)	-53.8	+/-	8.9

ph/seg (deg)	RMS 48.0	Theor. 37.5	Amplitude Search (1024X8)	0.739 +/- 0.057	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-32.000	32.000
amp/seg (%)	66.3	65.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.009	0.009
ph/frq (deg)	0.0	6.3	Inc. seg. avg.	0.825	Bits/sample: 2x2	Sample rate(MISamp/s): 116	dr window (ns/s)	-0.011	0.011
amp/frq (%)	16.0	11.0	Inc. frq. avg.	0.731	Data rate(Mb/s): 464	nlags: 7424 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 340.6 el 24.4 pa 156.8 B: az 301.8 el 24.9 pa 44.0 u,v (fr/asec) -2403.200 -13210.756 simultaneous interpolator

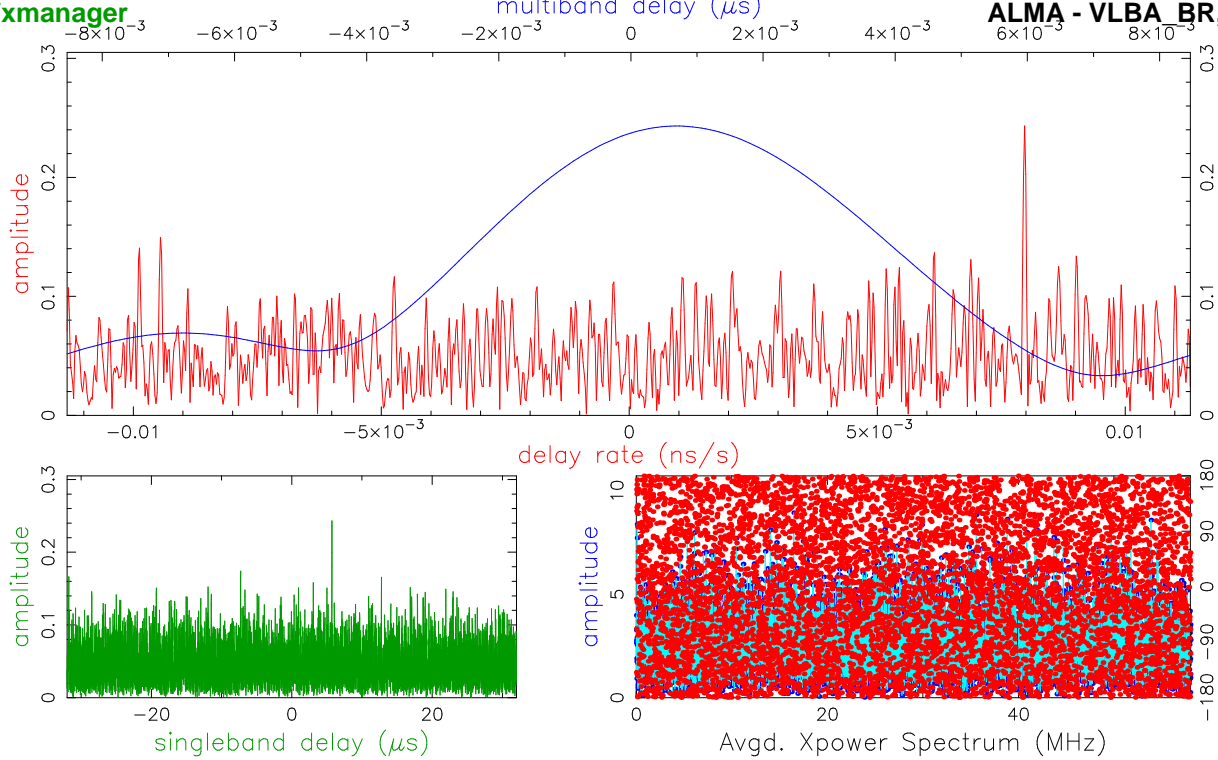
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AB..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AB.W.1.1RFYGV

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fxmanager

4C39_25.1RFYGV, No0014, Ab

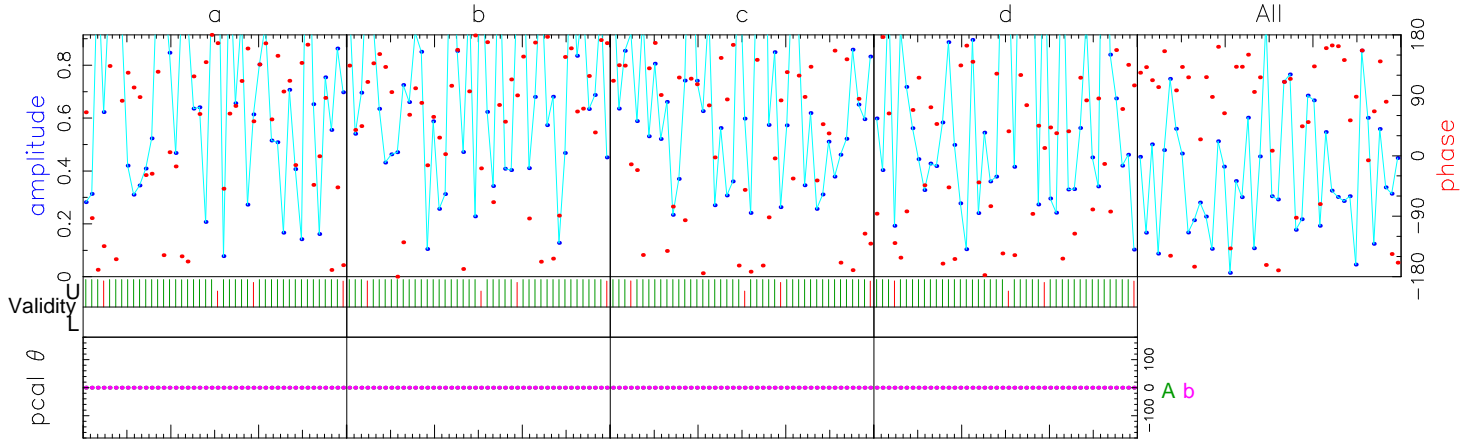
ALMA - VLBA BR, fgroup W, pol XL



Fringe quality 0

SNR 6.1
 Int time 177.572
 Amp 0.305
 Phase -50.9
 PFD 9.3e-01
 Delays (us)
 SBD 5.713953
 MBD 0.000679
 Fringe rate (Hz)
 0.686674
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064725
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
U/L	350/0	350/0	350/0	350/0		
A	0	0	0	0		
b	1000	1000	1000	1000		
A:b	0:0	0:0	0:0	0:0		
A:b	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000		
b	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX		
b	W01UL	W02UL	W03UL	W04UL		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.29174835456E+04	Apriori delay (usec)	-1.29232015581E+04	Resid mbdelay (usec)	6.79124E-04	+/-	4.0E-04
Sband delay (usec)	-1.29174876050E+04	Apriori clock (usec)	-2.1046125E+03	Resid sbdelay (usec)	5.71395E+00	+/-	1.6E-03
Phase delay (usec)	-1.29232015537E+04	Apriori clockrate (us/s)	-1.1300001E-06	Resid phdelay (usec)	4.34814E-06	+/-	6.1E-07
Delay rate (us/s)	-8.26205399787E-01	Apriori rate (us/s)	-8.26213371397E-01	Resid rate (us/s)	7.97161E-06	+/-	5.9E-09
Total phase (deg)	-126.9	Apriori accel (us/s/s)	-2.28492402813E-05	Resid phase (deg)	-50.9	+/-	18.9

ph/seg (deg)	RMS 62.0	Theor. 62.6	Amplitude Search (1024X16)	0.305 +/- 0.050	0.242	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	62.0	109.7	109.3	0.000	0.294	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-32.000 32.000
ph/frq (deg)	20.5	18.9	18.9	0.000	0.304	Bits/sample: 2x2	mb window (us)	-0.009 0.009
amp/frq (%)	51.0	33.1	33.1	0.294	0.294	Sample rate(MSamp/s): 116	dr window (ns/s)	-0.011 0.011
						Data rate(Mb/s): 928	ion window (TEC)	0.00 0.00
						nlags: 7424 t_cohere infinite		

A: az 340.6 el 24.4 pa 156.8 b: az 103.0 el 67.2 pa -57.0 u,v (fr/asec) 6084.962 -9275.549 simultaneous interpolator

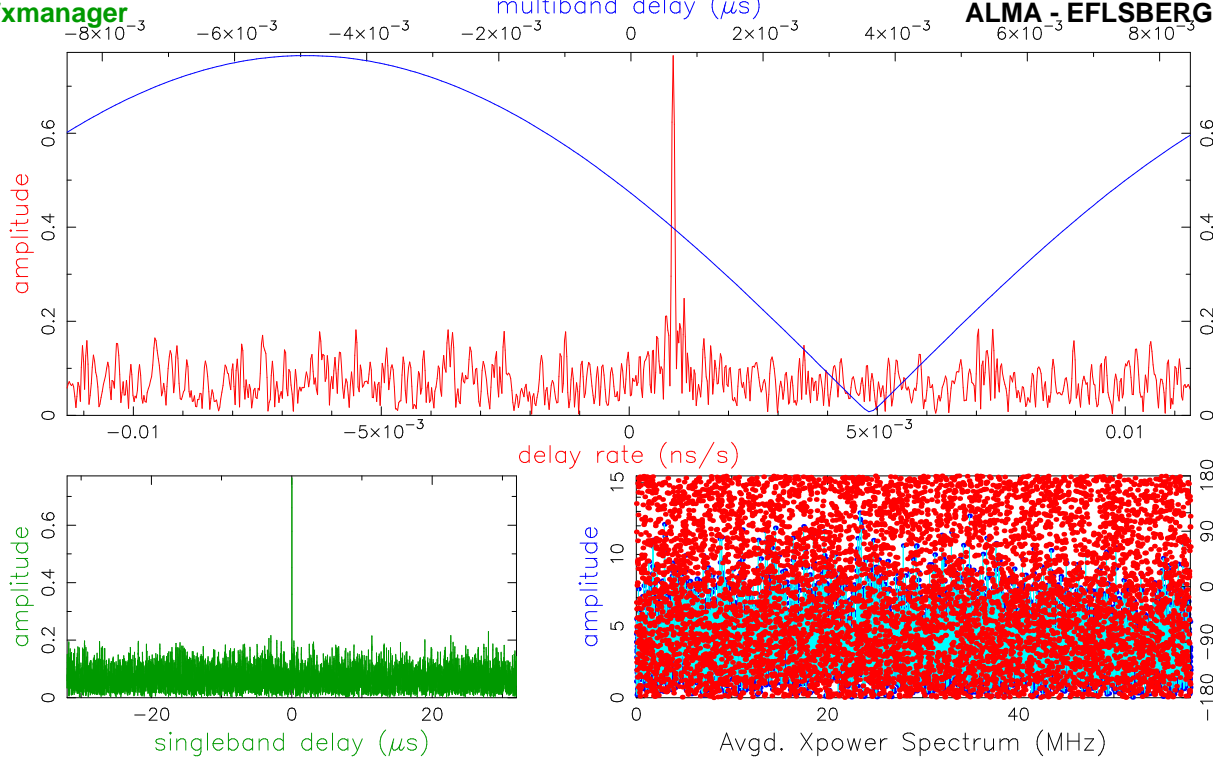
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Ab..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Ab.W.14.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

4C39_25.1RFYGV, No0014, AB

ALMA - EFLSBERG, fgroup W, pol XR

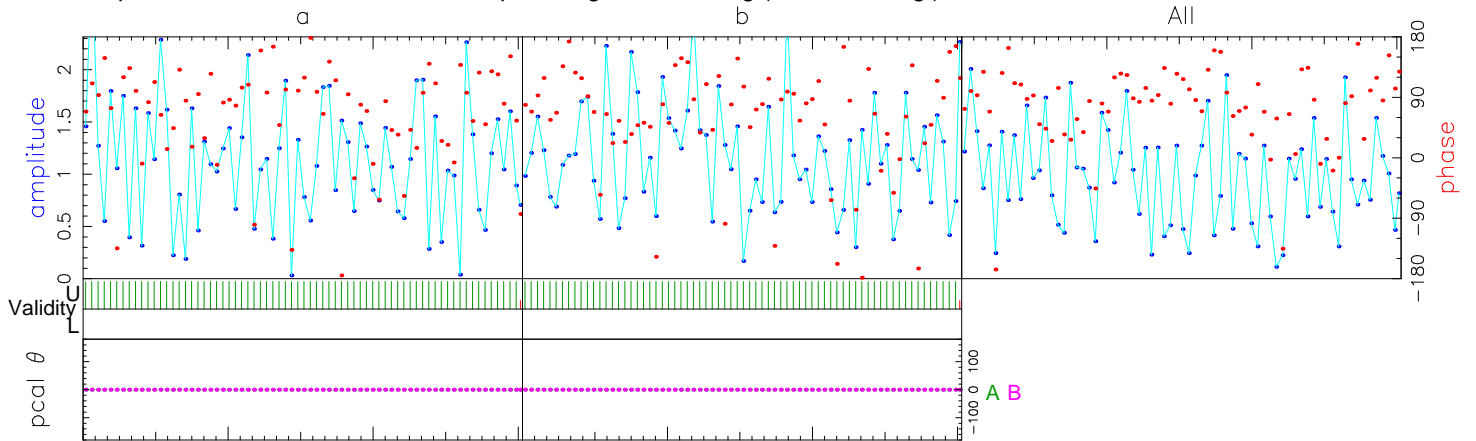


Fringe quality 9

SNR 13.4
 Int time 179.973
 Amp 0.772
 Phase 19.0
 PFD 7.0e-32
 Delays (us)
 SBD 0.014070
 MBD -0.004982
 Fringe rate (Hz) 0.076609
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064731
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70		86268.30		Fringe quality	
U/L	352/0	U/L	352/0	SNR	13.4
A	0	A	0	Int time	179.973
B	296	B	1000	Amp	0.772
A:B	0:0	A:B	0:0	Phase	19.0
A	1000	A	1000	PFD	7.0e-32
B	1000	B	1000	Delays (us)	
A	W01UX	A	W02UX	SBD	0.014070
B	W02UR	B	W03UR	MBD	-0.004982
Group delay (usec)(sbd)	-2.10759983608E+03	Apriori delay (usec)	-2.10761192053E+03	Fringe rate (Hz)	0.076609
Sband delay (usec)	-2.10759785101E+03	Apriori clock (usec)	-2.0855352E+03	Ion TEC	0.000
Phase delay (usec)	-2.10761191771E+03	Apriori clockrate (us/s)	-1.2300000E-06	Ref freq (MHz)	86140.0000
Delay rate (us/s)	3.21954373449E-01	Apriori rate (us/s)	3.21953484093E-01	AP (sec)	0.512
Total phase (deg)	-281.3	Apriori accel (us/s/s)	-8.21951718434E-05	Exp.	c211d
				Exper #	16383
				Yr:day	2021:117
				Start	011000.00
				Stop	011300.22
				FRT	011130.00
				Corr/FF/build	
				2021:194:235021	
				2021:195:064731	
				2021:057:122453	
				RA & Dec (J2000)	
				09h27m03.013937s	
				+39°02'20.851847"	

ph/seg (deg) 49.3 35.9 Amplitude 0.772 +/- 0.057 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 67.8 62.7 Search (1024X8) 0.749 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -32.000 32.000
 ph/frq (deg) 0.0 6.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 1.2 10.5 Inc. seg. avg. 0.822 Sample rate(MISamp/s): 116 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 464 nlags: 7424 t_cohere infinite ion window (TEC) 0.00 0.00

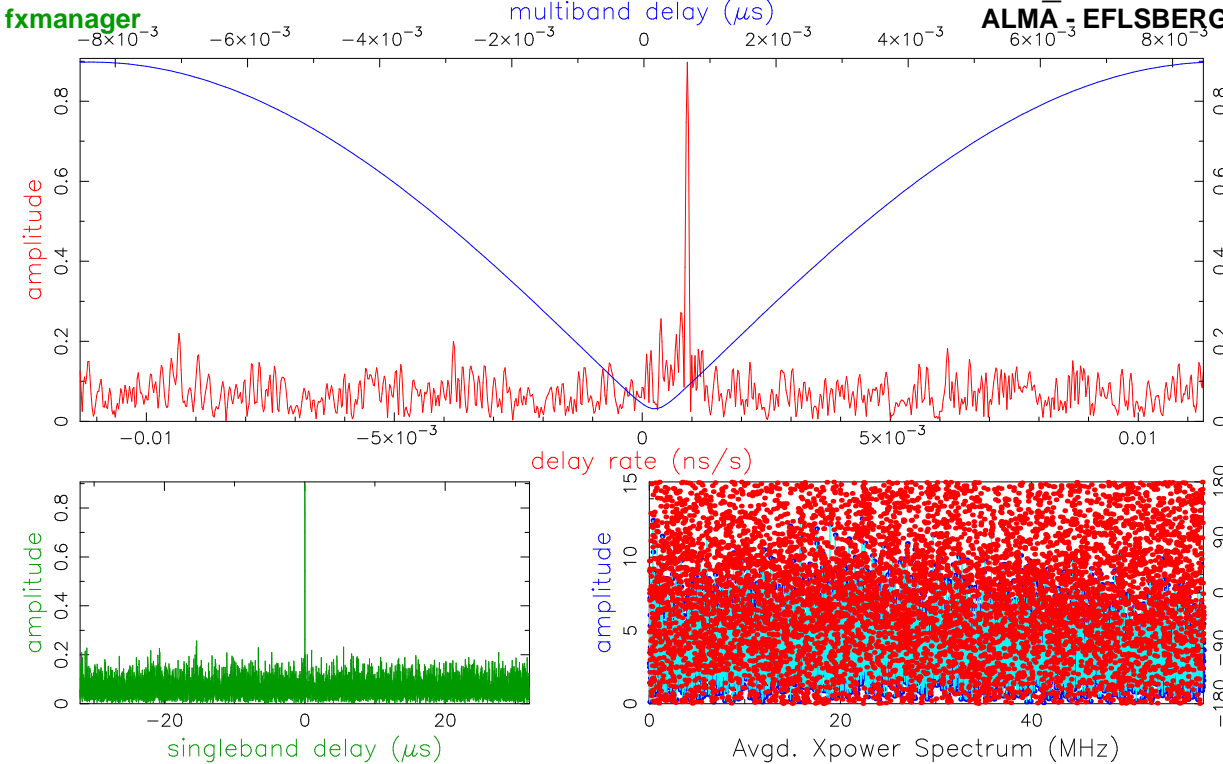
A: az 340.6 el 24.4 pa 156.8 B: az 301.8 el 24.9 pa 44.0 u,v (fr/asec) -2403.200 -13210.756 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AB..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AB.W.16.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

4C39_25.1RFYGV, No0014, AB

ALMA - EFLSBERG, fgroup W, pol YL

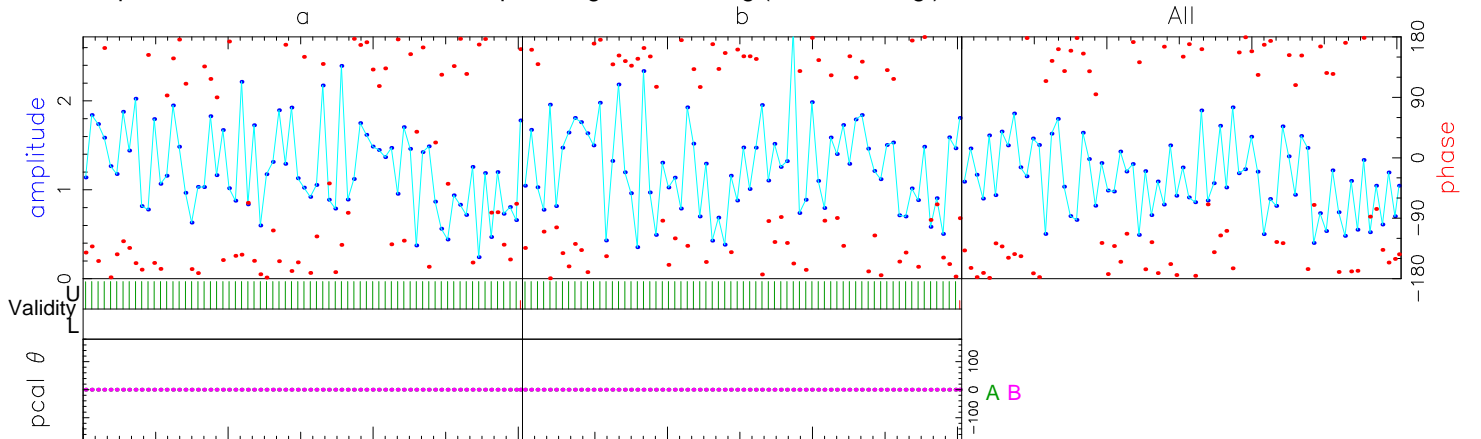


Fringe quality 9

SNR 15.8
 Int time 179.973
 Amp 0.907
 Phase -240.7
 PFD 0.0e+00
 Delays (us)
 SBD 0.011616
 MBD -0.008246
 Fringe rate (Hz)
 0.077195
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064740
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70		86268.30		Fringe quality	
-171.1	0.9	-173.7	0.9	9	
7427.8	352/0	7427.6	352/0	SNR	15.8
A 0	0	A 0	0	Int time	179.973
B 296	1000	B 1000	1000	Amp	0.907
A:B 0:0	0:0	A:B 0:0	0:0	Phase	-240.7
A 1000	1000	A 1000	1000	PFD	0.0e+00
B 1000	1000	B 1000	1000	Delays (us)	
A W01UY	W02UY	A W01UY	W02UY	SBD	0.011616
B W02UL	W03UL	B W02UL	W03UL	MBD	-0.008246
				Fringe rate (Hz)	0.077195
				Ion TEC	0.000
				Ref freq (MHz)	86140.0000
				AP (sec)	0.512
				Exp.	c211d
				Exper #	16383
				Yr:day	2021:117
				Start	011000.00
				Stop	011300.22
				FRT	011130.00
				Corr/FF/build	
				2021:194:235021	
				2021:195:064740	
				2021:057:122453	
				RA & Dec (J2000)	
				09h27m03.013937s	
				+39°02'20.851847"	
Group delay (usec)(sbd)	-2.10760310032E+03	Apriori delay (usec)	-2.10761192053E+03	Resid mbdelay (usec)	-8.24645E-03 +/- 3.4E-04
Sband delay (usec)	-2.10760030425E+03	Apriori clock (usec)	-2.0855352E+03	Resid sbdelay (usec)	1.16163E-02 +/- 6.0E-04
Phase delay (usec)	-2.10761192609E+03	Apriori clockrate (us/s)	-1.2300000E-06	Resid phdelay (usec)	-5.55936E-06 +/- 2.3E-07
Delay rate (us/s)	3.21954380251E-01	Apriori rate (us/s)	3.21953484093E-01	Resid rate (us/s)	8.96158E-07 +/- 2.2E-09
Total phase (deg)	-181.0	Apriori accel (us/s/s)	-8.21951718434E-05	Resid phase (deg)	-240.7 +/- 7.3

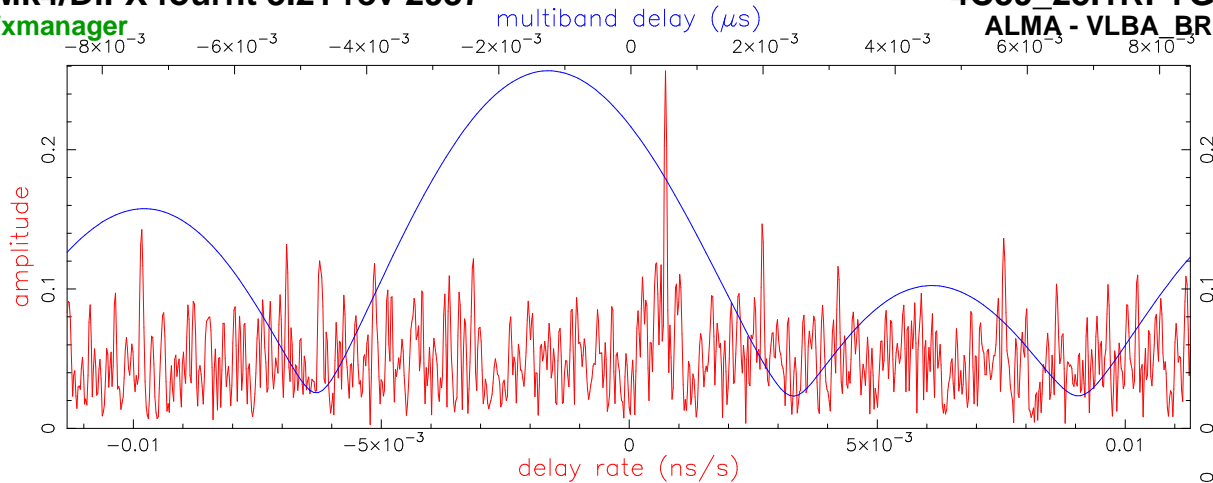
ph/seg (deg) 42.1 30.6 Search (1024X8) 0.858 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.0 53.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -32.000 32.000
 ph/frq (deg) 0.0 5.1 Inc. seg. avg. 0.992 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 3.5 9.0 Inc. frq. avg. 0.897 Sample rate(MISamp/s): 116 Data rate(Mb/s): 464 nlags: 7424 t_cohere infinite dr window (ns/s) -0.011 0.011
 A: az 340.6 el 24.4 pa 156.8 B: az 301.8 el 24.9 pa 44.0 u,v (fr/asec) -2403.200 -13210.756 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AB..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AB.W.22.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

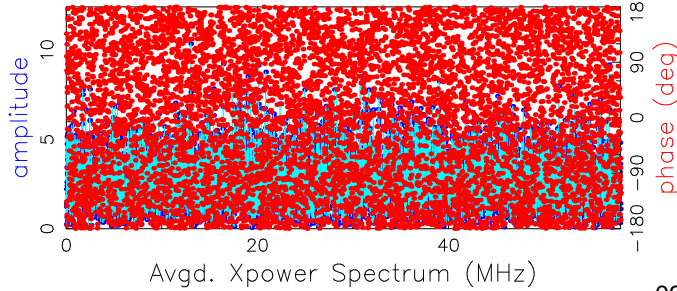
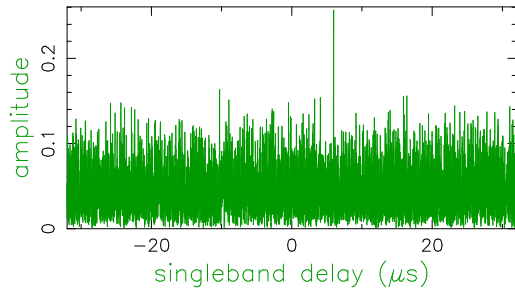
4C39_25.1RFYGV, No0014, Ab

ALMA - VLBA_BR, fgroup W, pol YR



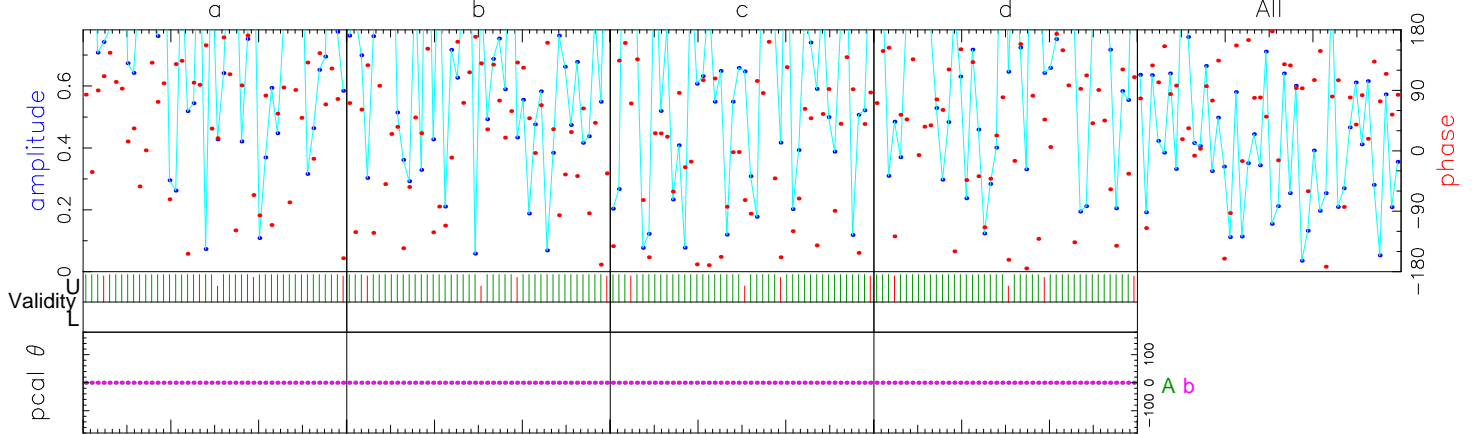
Fringe quality 0

SNR 6.4
 Int time 177.572
 Amp 0.261
 Phase -336.3
 PFD 3.0e-01
 Delays (us)
 SBD 5.955277
 MBD -0.001325
 Fringe rate (Hz)
 0.062996
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064744
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
U/L	350/0	350/0	350/0	350/0		
A	0	0	0	0		
b	1000	1000	1000	1000		
A:b	0:0	0:0	0:0	0:0		
A:b	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000		
b	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY		
b	W01UR	W02UR	W03UR	W04UR		
					Chan ids	
					Tracks	
					Chan ids	
					Tracks	

Group delay (usec)(sbd)	-1.29172466169E+04	Apriori delay (usec)	-1.29232015581E+04	Resid mbdelay (usec)	-1.32549E-03	+/- 3.8E-04
Sband delay (usec)	-1.29172462805E+04	Apriori clock (usec)	-2.1046125E+03	Resid sbdelay (usec)	5.95528E+00	+/- 1.5E-03
Phase delay (usec)	-1.29232015553E+04	Apriori clockrate (us/s)	-1.1300001E-06	Resid phdelay (usec)	2.74185E-06	+/- 5.8E-07
Delay rate (us/s)	-8.26212640070E-01	Apriori rate (us/s)	-8.26213371397E-01	Resid rate (us/s)	7.31326E-07	+/- 5.6E-09
Total phase (deg)	-52.3	Apriori accel (us/s/s)	-2.28492402813E-05	Resid phase (deg)	-336.3	+/- 18.0

ph/seg (deg)	RMS 70.9	Theor. 59.4	Amplitude Search (1024X16)	0.261 +/- 0.041	0.254	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-32.000	32.000
amp/seg (%)	70.9	59.4	Interp.	0.000	0.254	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.009	0.009
ph/frq (deg)	104.4	103.7	Inc. seg. avg.	0.270	0.254	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	25.4	18.0	Inc. frq. avg.	0.254	0.254	Sample rate(MISamp/s): 116		ion window (TEC)	0.00	0.00
	28.3	31.3				Data rate(Mb/s): 928	nlags: 7424 t_cohere infinite			

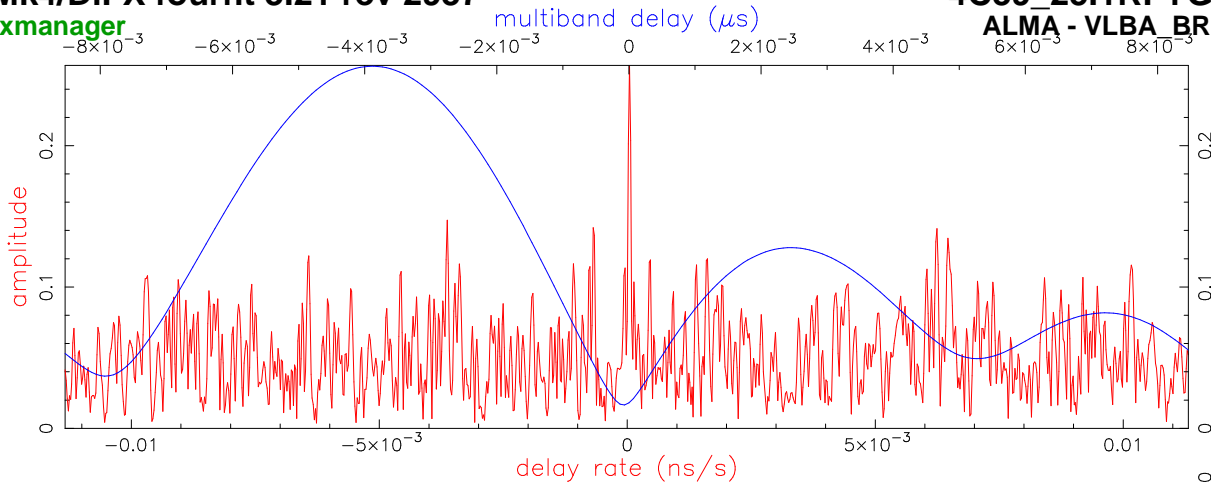
A: az 340.6 el 24.4 pa 156.8 b: az 103.0 el 67.2 pa -57.0 u,v (fr/asec) 6084.962 -9275.549 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Ab..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Ab.W.28.1RFYGV

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fxmanager

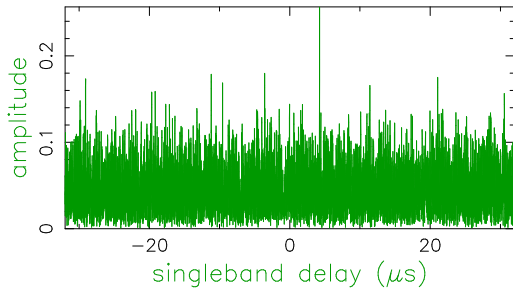
4C39_25.1RFYGV, No0014, Ab

ALMA - VLBA_BR, fgroup W, pol XR

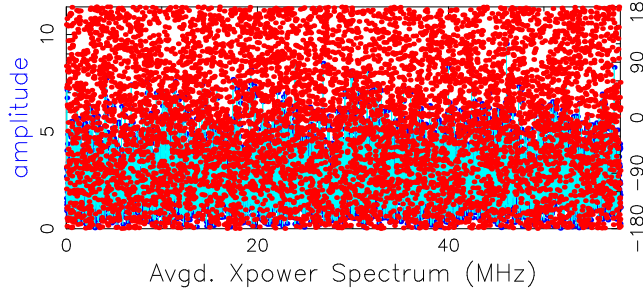


Fringe quality 0

SNR 6.3
Int time 177.572
Amp 0.257
Phase -67.6
PFD 4.5e-01
Delays (us)
SBD 4.242124
MBD -0.003873
Fringe rate (Hz)
0.003524
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

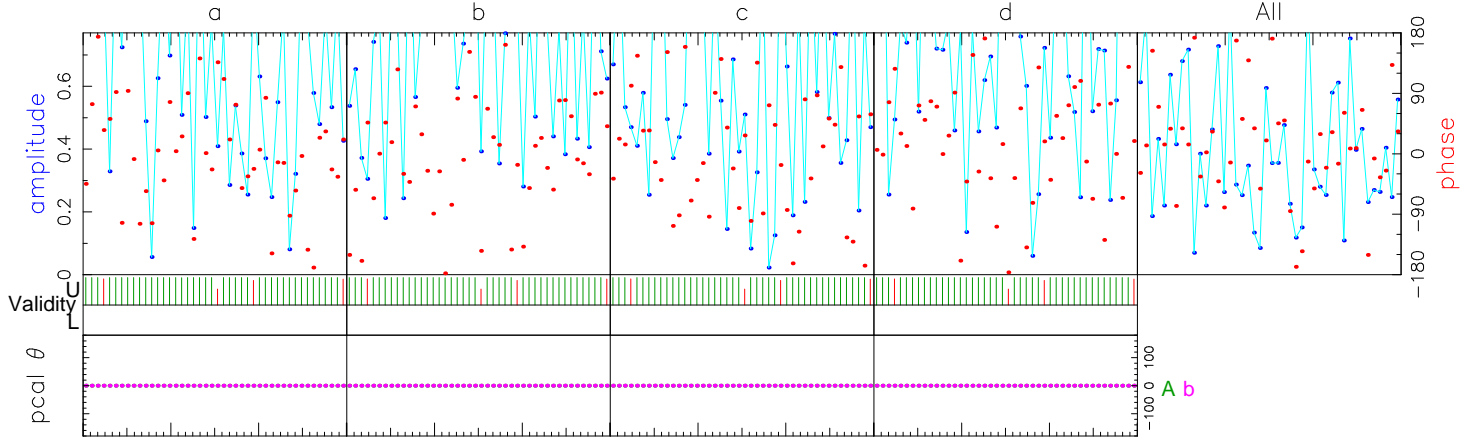


delay rate (ns/s)



Exp. c211d
Exper # 16383
Yr:day 2021:117
Start 011000.00
Stop 011300.22
FRT 011130.00
Corr/FF/build
2021:194:235021
2021:195:064804
2021:057:122453
RA & Dec (J2000)
09h27m03.013937s
+39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
U/L	350/0	350/0	350/0	350/0		
A	0	0	0	0	APs used	
b	1000	1000	1000	1000	PC freqs	
A:b	0:0	0:0	0:0	0:0	PC phase	
A	1000	1000	1000	1000	ManI PC	
b	1000	1000	1000	1000	PC amp	
A	W00UX	W01UX	W02UX	W03UX	Chan ids	
b	W01UR	W02UR	W03UR	W04UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.29189558308E+04		Apriori delay (usec)	-1.29232015581E+04	Resid mbdelay (usec)	-3.87275E-03 +/- 3.9E-04
Sband delay (usec)	-1.29189594345E+04		Apriori clock (usec)	-2.1046125E+03	Resid sbdelay (usec)	4.24212E+00 +/- 1.5E-03
Phase delay (usec)	-1.29232015578E+04		Apriori clockrate (us/s)	-1.1300001E-06	Resid phdelay (usec)	2.62394E-07 +/- 5.9E-07
Delay rate (us/s)	-8.26213330484E-01		Apriori rate (us/s)	-8.26213371397E-01	Resid rate (us/s)	4.09121E-08 +/- 5.7E-09
Total phase (deg)		-143.6	Apriori accel (us/s/s)	-2.28492402813E-05	Resid phase (deg)	-67.6 +/- 18.2

	RMS	Theor.	Amplitude	0.257 +/- 0.041	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	77.9	60.2	Search (1024X16)	0.251	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -32.000 32.000
amp/seg (%)	103.2	105.0	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.009 0.009
ph/frq (deg)	25.3	18.2	Inc. seg. avg.	0.259	Sample rate(MISamp/s): 116	dr window (ns/s) -0.011 0.011
amp/frq (%)	17.6	31.8	Inc. frq. avg.	0.253	Data rate(Mb/s): 928	ion window (TEC) 0.00 0.00

A: az 340.6 el 24.4 pa 156.8 b: az 103.0 el 67.2 pa -57.0 u,v (fr/asec) 6084.962 -9275.549 simultaneous interpolator

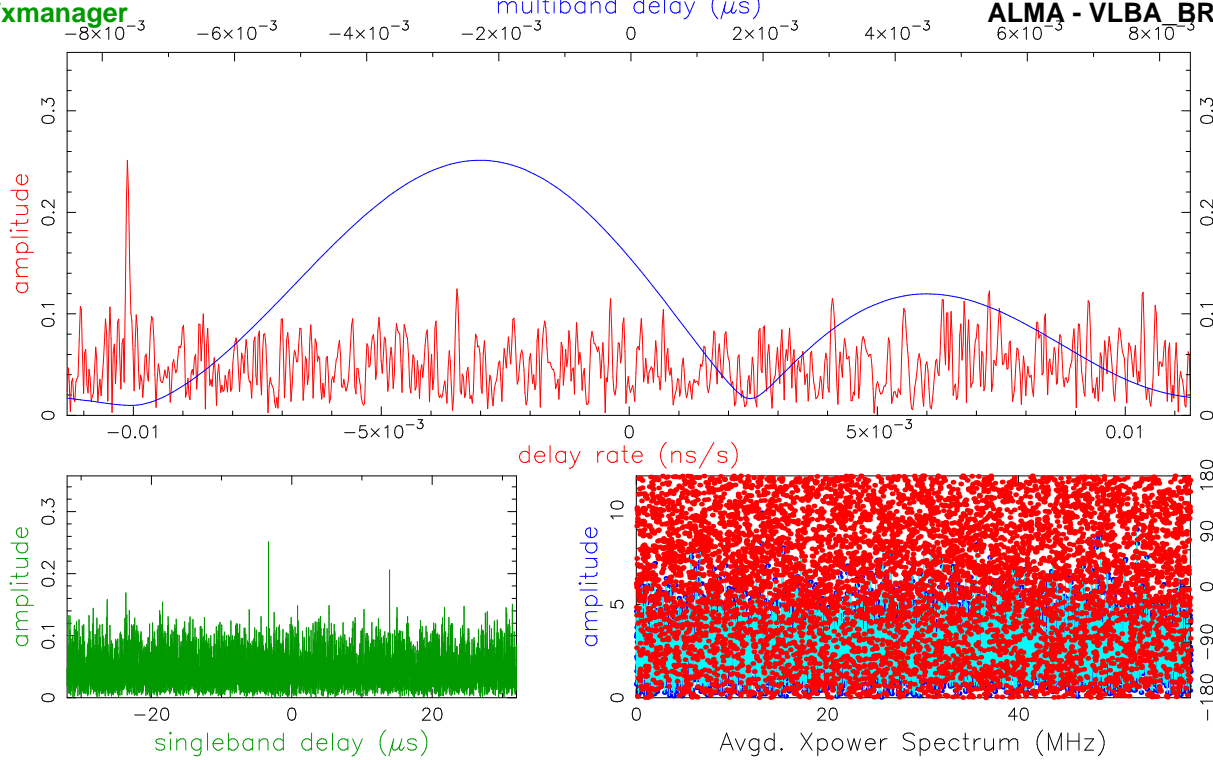
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Ab..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Ab.W.31.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

4C39_25.1RFYGV, No0014, Ab

ALMA - VLBA BR, fgroup W, pol YL

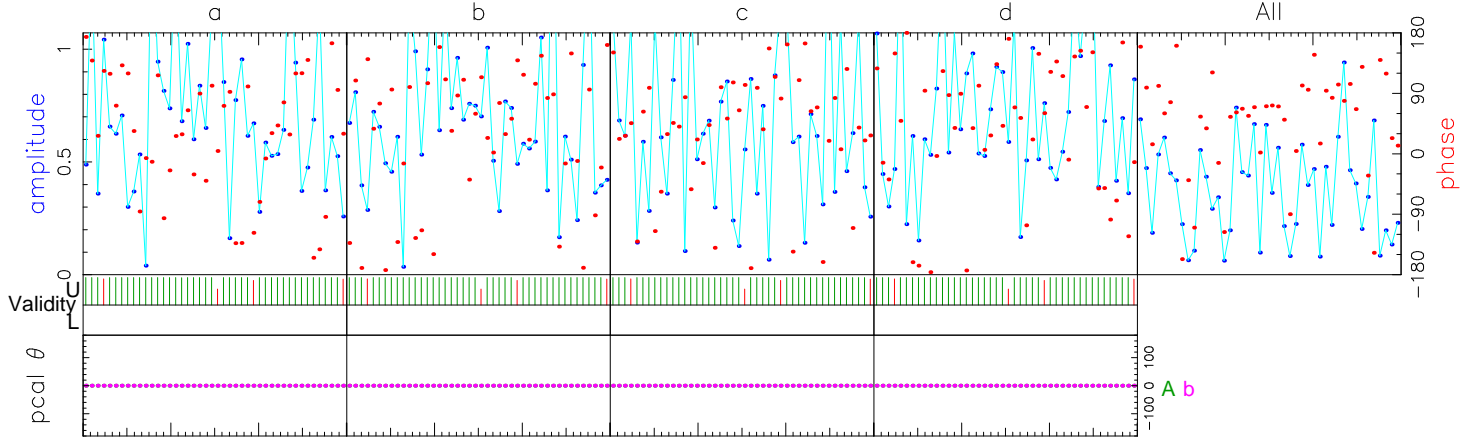


Fringe quality 0

SNR 6.2
 Int time 177.572
 Amp 0.358
 Phase 4.0
 PFD 7.4e-01
 Delays (us)
 SBD -3.310046
 MBD -0.002259
 Fringe rate (Hz)
 -0.871633
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064822
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
U/L	350/0	350/0	350/0	350/0		
A	0	0	0	0	APs used	
b	1000	1000	1000	1000	PC freqs	
A:b	0:0	0:0	0:0	0:0	PC phase	
A	1000	1000	1000	1000	Man PC	
b	1000	1000	1000	1000	PC amp	
A	W00UY	W01UY	W02UY	W03UY	Chan ids	
b	W01UL	W02UL	W03UL	W04UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.29265147500E+04		Apriori delay (usec)	-1.29232015581E+04	Resid mbdelay (usec)	-2.25858E-03 +/- 3.9E-04
Sband delay (usec)	-1.29265116041E+04		Apriori clock (usec)	-2.1046125E+03	Resid sbdelay (usec)	-3.31005E+00 +/- 1.5E-03
Phase delay (usec)	-1.29232015554E+04		Apriori clockrate (us/s)	-1.1300001E-06	Resid phdelay (usec)	2.65567E-06 +/- 6.0E-07
Delay rate (us/s)	-8.26223490186E-01		Apriori rate (us/s)	-8.26213371397E-01	Resid rate (us/s)	-1.01188E-05 +/- 5.8E-09
Total phase (deg)		288.1	Apriori accel (us/s/s)	-2.28492402813E-05	Resid phase (deg)	4.0 +/- 18.6

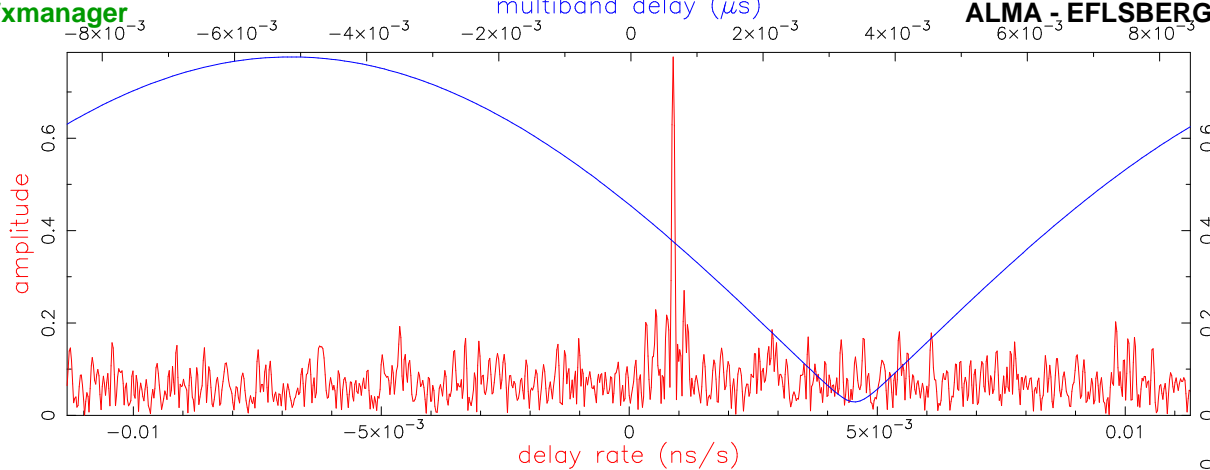
ph/seg (deg) RMS Theor. Amplitude 0.358 +/- 0.058 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 99.9 107.2 Search (1024X16) 0.248 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -32.000 32.000
 ph/frq (deg) 25.1 18.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 15.7 32.4 Inc. seg. avg. 0.342 Sample rate(MSamp/s): 116 Data rate(Mb/s): 928 nlags: 7424 t_cohere infinite dr window (ns/s) -0.011 0.011
 A: az 340.6 el 24.4 pa 156.8 b: az 103.0 el 67.2 pa -57.0 u,v (fr/asec) 6084.962 -9275.549 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Ab..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Ab.W.33.1RFYGV

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fxmanager

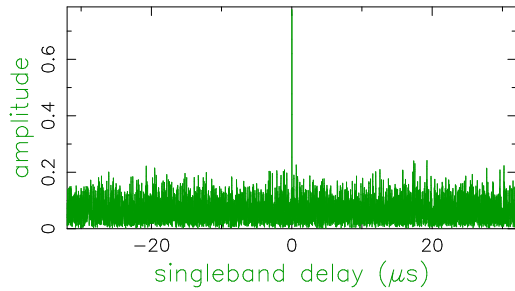
4C39_25.1RFYGV, No0014, AB

ALMA - EFLSBERG, fgroup W, pol YR

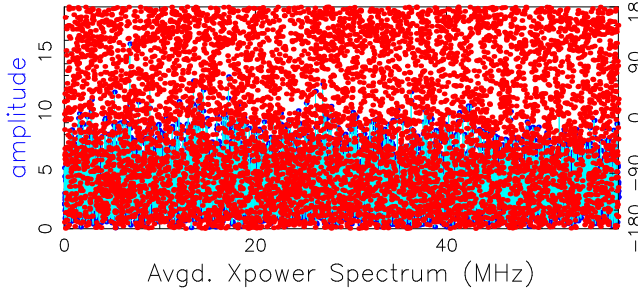


Fringe quality 9

SNR 13.7
 Int time 179.973
 Amp 0.786
 Phase 7.5
 PFD 2.6e-33
 Delays (us)
 SBD 0.014447
 MBD -0.005243
 Fringe rate (Hz)
 0.076800
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

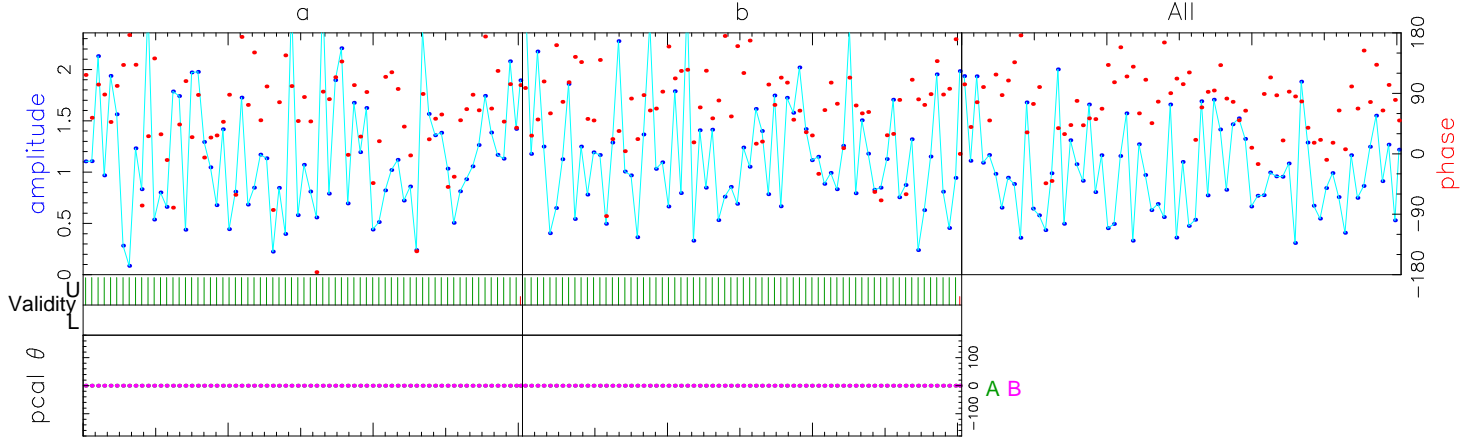


delay rate (ns/s)



Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064722
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70	86268.30	Freq (MHz)	All				
74.7	76.7	Phase	75.8				
0.7	0.8	Ampl.	0.8				
7428.3	7428.4	Sbd box	7428.4				
U/L 352/0	352/0	APs used					
A 0	0	PC freqs					
B 296	1000	PC freqs					
A:B 0:0	0:0	PC phase					
A:B 0:0	0:0	ManI PC					
A 1000	1000	PC amp					
B 1000	1000						
A W01UY	W02UY	Chan ids					
B W02UR	W03UR	Tracks					
		Chan ids					
		Tracks					
Group delay (usec)(sbd)	-2.10760009686E+03	Apriori delay (usec)	-2.10761192053E+03	Resid mbdelay (usec)	-5.24299E-03	+/-	4.0E-04
Sband delay (usec)	-2.10759747336E+03	Apriori clock (usec)	-2.0855352E+03	Resid sbdelay (usec)	1.44472E-02	+/-	6.9E-04
Phase delay (usec)	-2.10761191809E+03	Apriori clockrate (us/s)	-1.2300000E-06	Resid phdelay (usec)	2.44320E-06	+/-	2.7E-07
Delay rate (us/s)	3.21954375665E-01	Apriori rate (us/s)	3.21953484093E-01	Resid rate (us/s)	8.91572E-07	+/-	2.6E-09
Total phase (deg)	-292.9	Apriori accel (us/s/s)	-8.21951718434E-05	Resid phase (deg)	7.5	+/-	8.4

ph/seg (deg)	45.8	Theor.	35.3	Amplitude	0.786 +/- 0.057	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	62.2	Search (1024X8)	0.745	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-32.000 32.000	
ph/frq (deg)	0.0	Inc. seg. avg.	0.843	Inc. frq. avg.	0.774	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.009 0.009
amp/frq (%)	3.8	Inc. frq. avg.	0.774			Sample rate(MISamp/s): 116	dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s): 464	ion window (TEC)	0.00 0.00	
						nlags: 7424 t_cohere infinite			

A: az 340.6 el 24.4 pa 156.8 B: az 301.8 el 24.9 pa 44.0 u,v (fr/asec) -2403.200 -13210.756 simultaneous interpolator

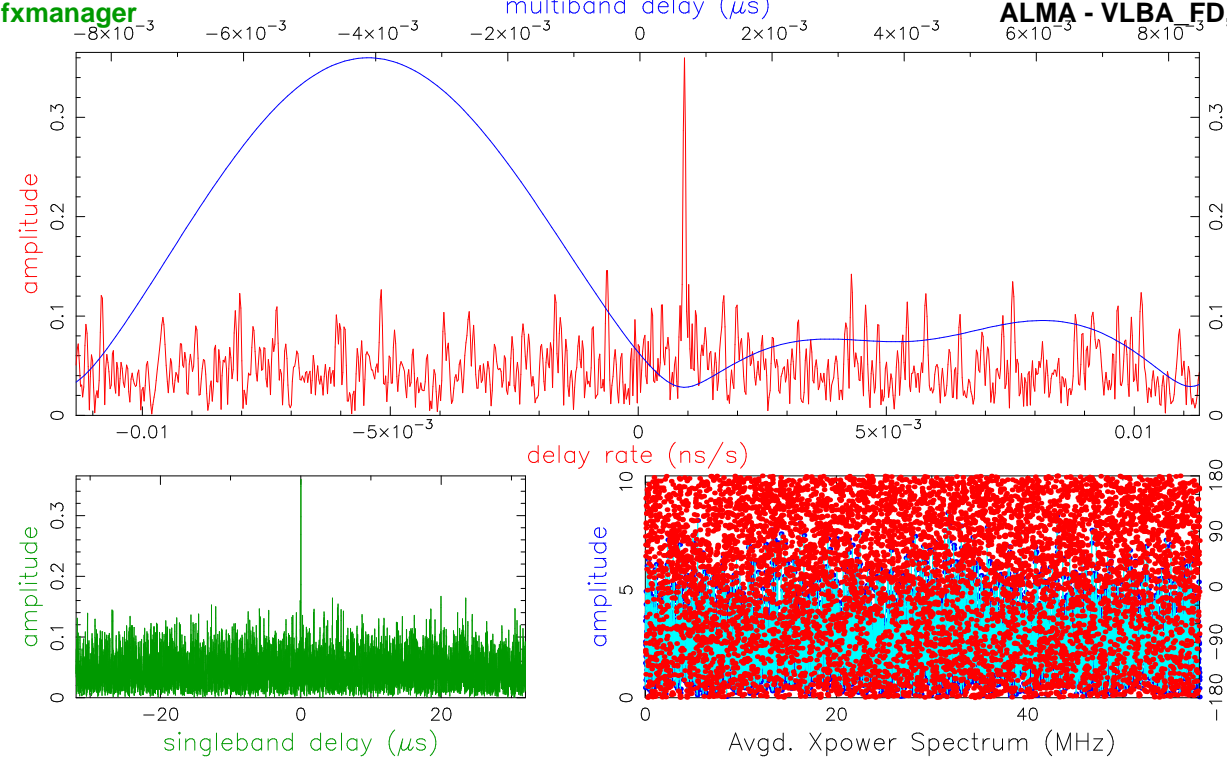
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AB..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AB.W.7.1RFYGV

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fxmanager

4C39_25.1RFYGV, No0014, Af

ALMA - VLBA FD, fgroup W, pol XL

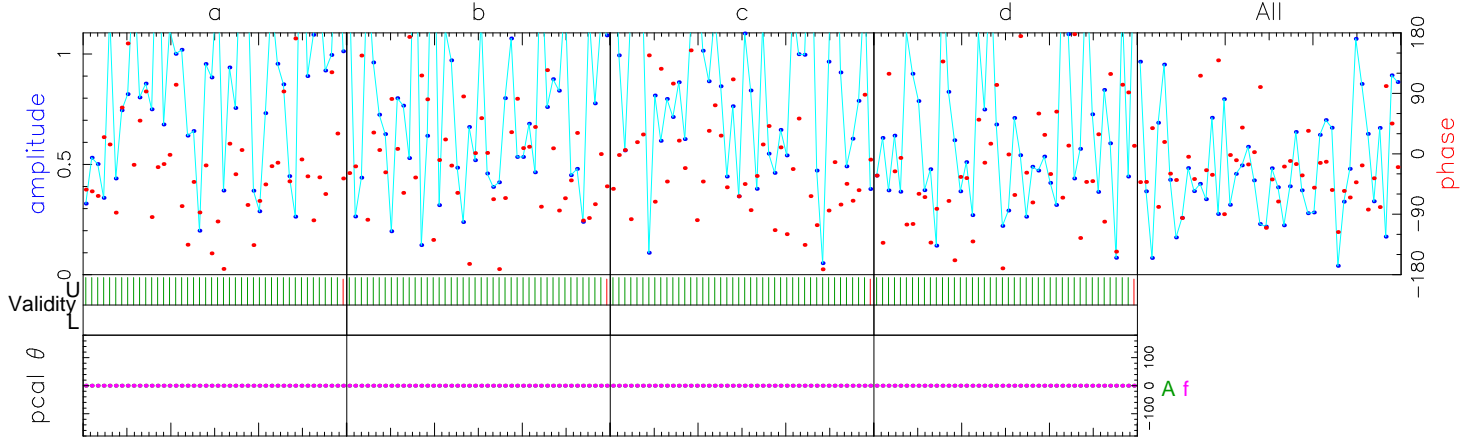


Fringe quality 9

SNR 9.0
 Int time 179.973
 Amp 0.365
 Phase -96.6
 PFD 6.3e-10
 Delays (us)
 SBD 0.015752
 MBD -0.004029
 Fringe rate (Hz) 0.080996
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build 2021:194:235021
 2021:195:064725
 2021:057:122453
 RA & Dec (J2000) 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
	-25.7	-30.3	-26.8	-33.9	Phase	-28.3
	0.5	0.4	0.4	0.2	Ampl.	0.4
	7428.2	3885.2	7428.5	8058.7	Sbd box	7428.7
U/L	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	PC freqs	
f	1000	1000	1000	1000	PC freqs	
A:f	0:0	0:0	0:0	0:0	PC phase	
A:f	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	Chan ids	
f	W01UL	W02UL	W03UL	W04UL	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.39846216999E+04		Apriori delay (usec)	-1.39846347374E+04	Resid mbdelay (usec)	-4.02913E-03 +/- 2.7E-04
Sband delay (usec)	-1.39846189854E+04		Apriori clock (usec)	-2.1178643E+03	Resid sbdelay (usec)	1.57520E-02 +/- 1.1E-03
Phase delay (usec)	-1.39846347384E+04		Apriori clockrate (us/s)	-1.3800001E-06	Resid phdelay (usec)	-9.12445E-07 +/- 4.1E-07
Delay rate (us/s)	-6.7162653857E-01		Apriori rate (us/s)	-6.71627494145E-01	Resid rate (us/s)	9.40289E-07 +/- 3.9E-09
Total phase (deg)		-198.6	Apriori accel (us/s/s)	-6.07588527112E-07	Resid phase (deg)	-96.6 +/- 12.7

	RMS	Theor.	Amplitude	0.365 +/- 0.041	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.0	42.2	Search (1024X16)	0.341	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -32.000 32.000
amp/seg (%)	76.4	73.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.009 0.009
ph/frq (deg)	4.7	12.7	Inc. seg. avg.	0.385	Sample rate(MISamp/s): 116	dr window (ns/s) -0.011 0.011
amp/frq (%)	27.4	22.2	Inc. frq. avg.	0.353	Data rate(Mb/s): 928	nlags: 7424 t_cohere infinite ion window (TEC) 0.00 0.00

A: az 340.6 el 24.4 pa 156.8 f: az 49.0 el 76.3 pa -123.1 u,v (fr/asec) 4956.102 -6241.017 simultaneous interpolator

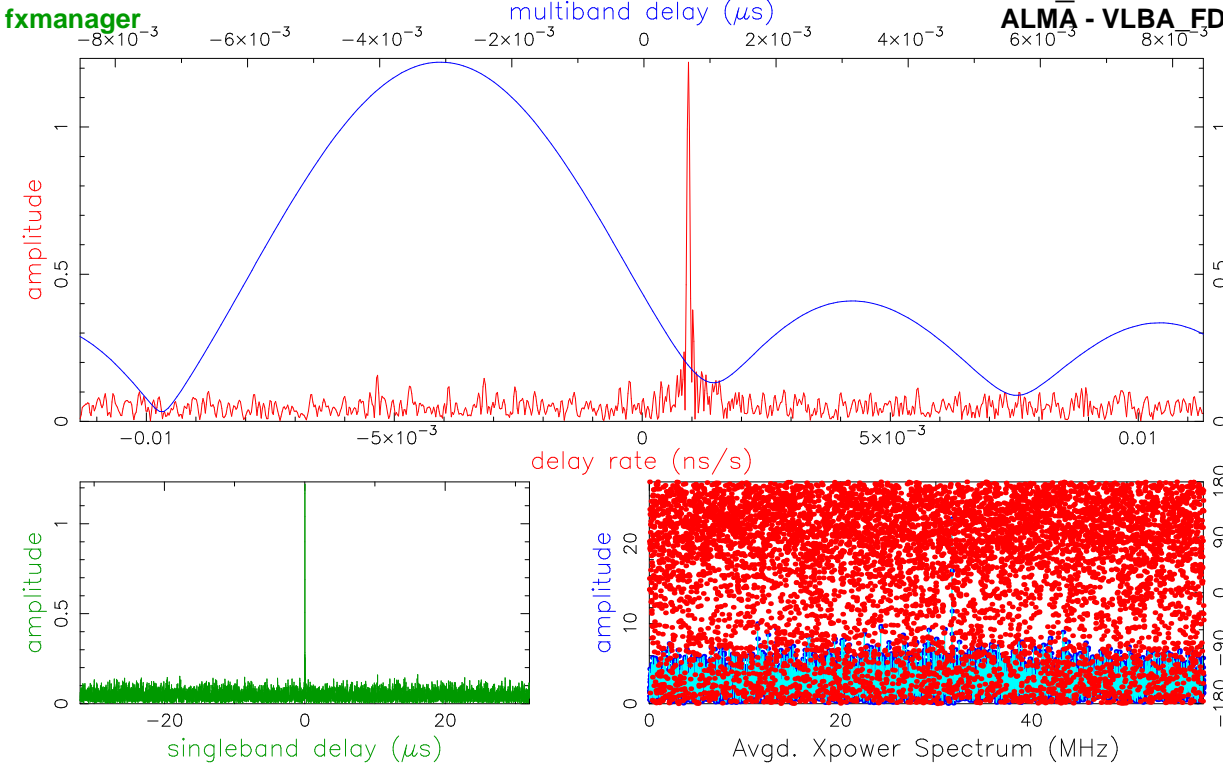
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Af..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Af.W.15.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

4C39_25.1RFYGV, No0014, Af

ALMA - VLBA_FD, fgroup W, pol YR

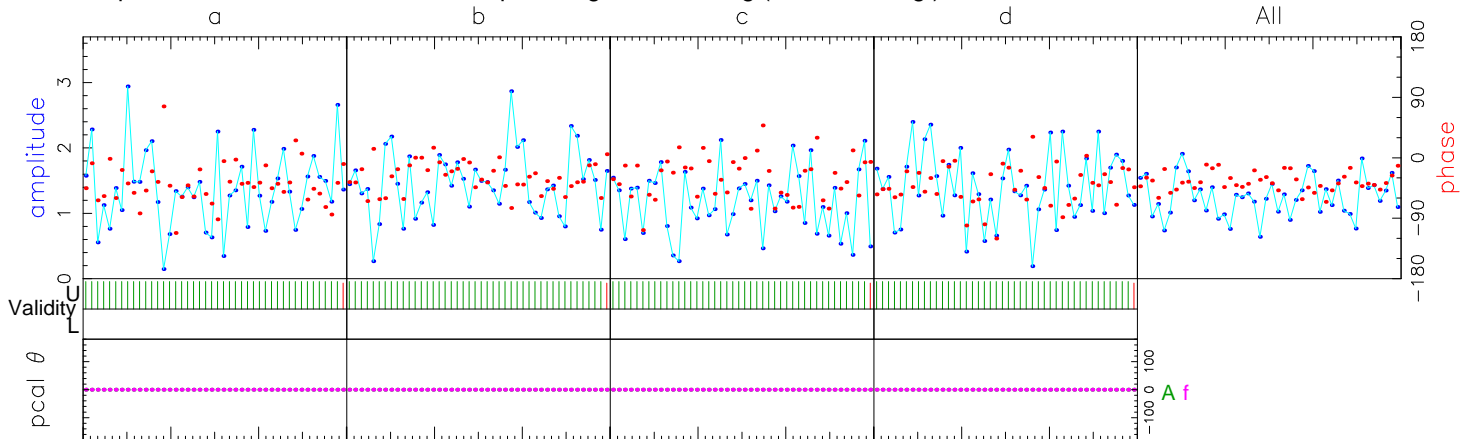


Fringe quality 9

SNR 30.4
 Int time 179.973
 Amp 1.233
 Phase -105.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.016039
 MBD -0.003082
 Fringe rate (Hz)
 0.080713
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064745
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
	-43.0	-30.2	-32.5	-41.3	Phase	-36.8
	1.2	1.4	1.0	1.3	Ampl.	1.2
	7428.8	7428.7	7428.8	7428.7	Sbd box	7428.7
U/L	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	PC freqs	
f	1000	1000	1000	1000	PC freqs	
A:f	0:0	0:0	0:0	0:0	PC phase	
A:f	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY	Chan ids	
f	W01UR	W02UR	W03UR	W04UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.39846207532E+04		Apriori delay (usec)	-1.39846347374E+04	Resid mbdelay (usec)	-3.08241E-03 +/- 8.0E-05
Sband delay (usec)	-1.39846186983E+04		Apriori clock (usec)	-2.1178643E+03	Resid sbdelay (usec)	1.60392E-02 +/- 3.1E-04
Phase delay (usec)	-1.39846347386E+04		Apriori clockrate (us/s)	-1.3800001E-06	Resid phdelay (usec)	-1.18656E-06 +/- 1.2E-07
Delay rate (us/s)	-6.71626557143E-01		Apriori rate (us/s)	-6.71627494145E-01	Resid rate (us/s)	9.37002E-07 +/- 1.2E-09
Total phase (deg)		-207.1	Apriori accel (us/s/s)	-6.07588527112E-07	Resid phase (deg)	-105.1 +/- 3.8

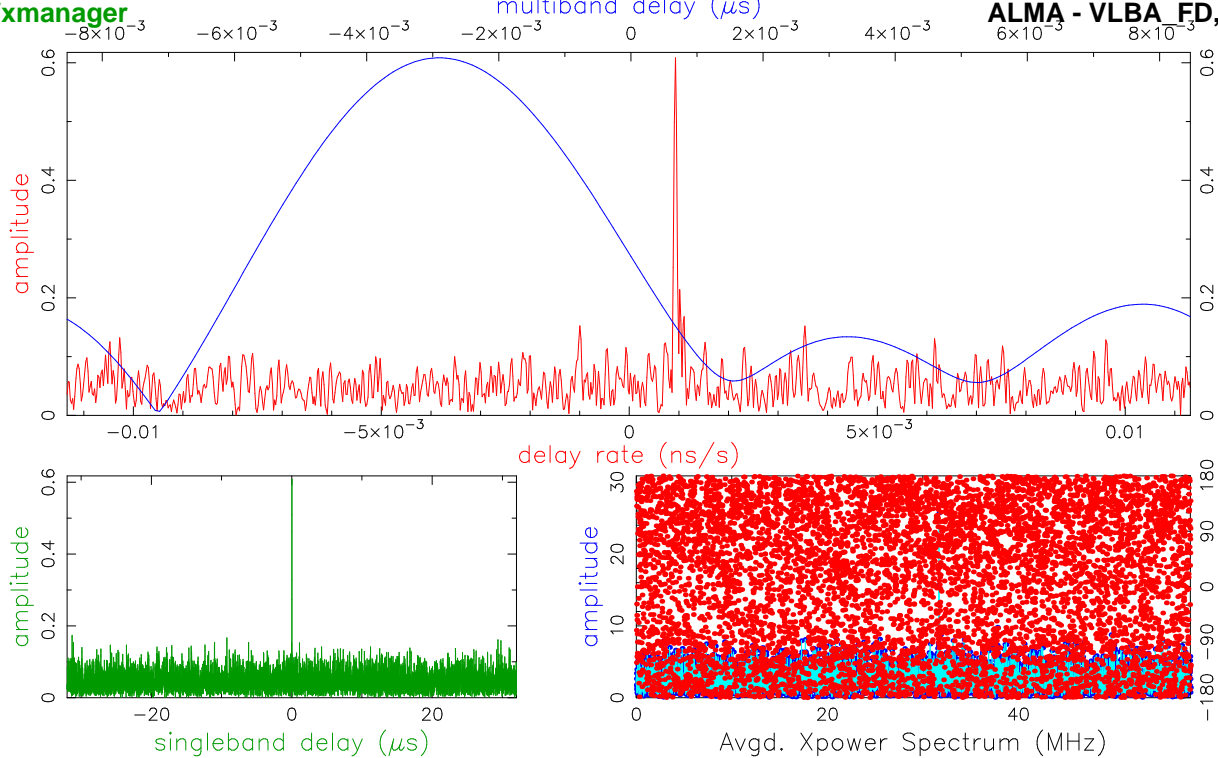
ph/seg (deg) 13.7 12.5 Search (1024X16) 1.233 +/- 0.041 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 24.5 21.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -32.000 32.000
 ph/frq (deg) 7.8 3.8 Inc. seg. avg. 1.227 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 10.3 6.6 Inc. frq. avg. 1.227 Sample rate(MSamp/s): 116 Data rate(Mb/s): 928 nlags: 7424 t_cohere infinite dr window (ns/s) -0.011 0.011
 A: az 340.6 el 24.4 pa 156.8 f: az 49.0 el 76.3 pa -123.1 u,v (fr/asec) 4956.102 -6241.017 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Af..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Af.W.30.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

4C39_25.1RFYGV, No0014, Af

ALMA - VLBA_FD, fgroup W, pol XR

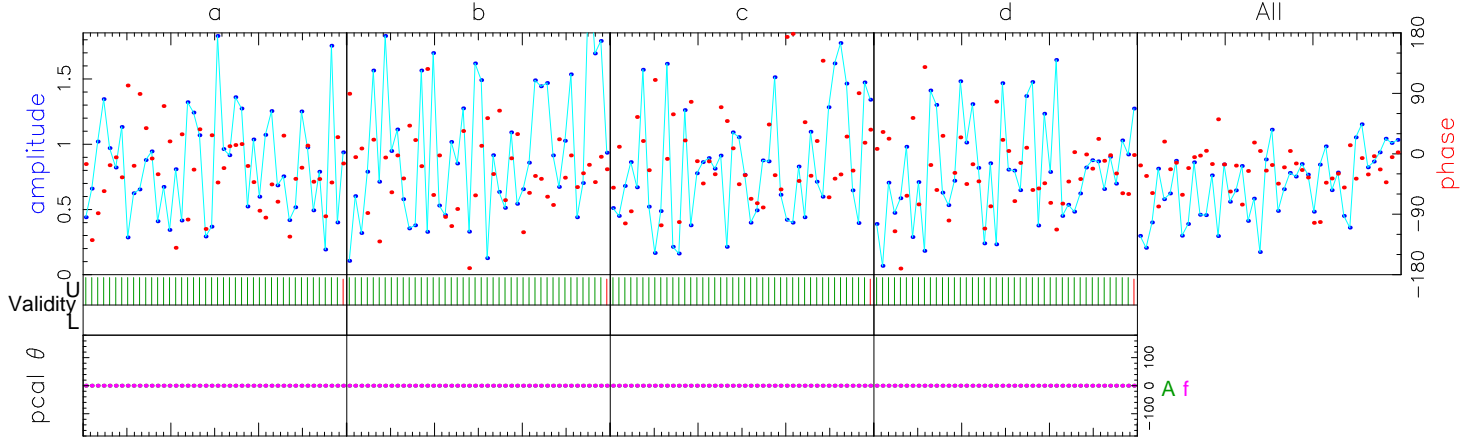


Fringe quality 9

SNR 15.2
 Int time 179.973
 Amp 0.618
 Phase -93.2
 PFD 1.4e-42
 Delays (us)
 SBD 0.015731
 MBD -0.002909
 Fringe rate (Hz) 0.080591
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064804
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
	-26.4	-27.8	-13.6	-30.5	Phase	-25.0
	0.6	0.7	0.5	0.6	Ampl.	0.6
	7428.4	7428.3	7429.2	7428.6	Sbd box	7428.6
U/L	352/0	352/0	352/0	352/0	APs used	
A	0	0	0	0	PC freqs	
f	1000	1000	1000	1000	PC freqs	
A:f	0:0	0:0	0:0	0:0	PC phase	
A:f	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000		
A	W00UX	W01UX	W02UX	W03UX	Chan ids	
f	W01UR	W02UR	W03UR	W04UR	Tracks	
					Chan ids	
					Tracks	
Group delay (usec)(sbd)	-1.39846205802E+04		Apriori delay (usec)	-1.39846347374E+04	Resid mbdelay (usec)	-2.90942E-03 +/- 1.6E-04
Sband delay (usec)	-1.39846190067E+04		Apriori clock (usec)	-2.1178643E+03	Resid sbdelay (usec)	1.57308E-02 +/- 6.2E-04
Phase delay (usec)	-1.39846347382E+04		Apriori clockrate (us/s)	-1.3800001E-06	Resid phdelay (usec)	-8.04907E-07 +/- 2.4E-07
Delay rate (us/s)	-6.71626558560E-01		Apriori rate (us/s)	-6.71627494145E-01	Resid rate (us/s)	9.35585E-07 +/- 2.3E-09
Total phase (deg)		-195.2	Apriori accel (us/s/s)	-6.07588527112E-07	Resid phase (deg)	-93.2 +/- 7.5

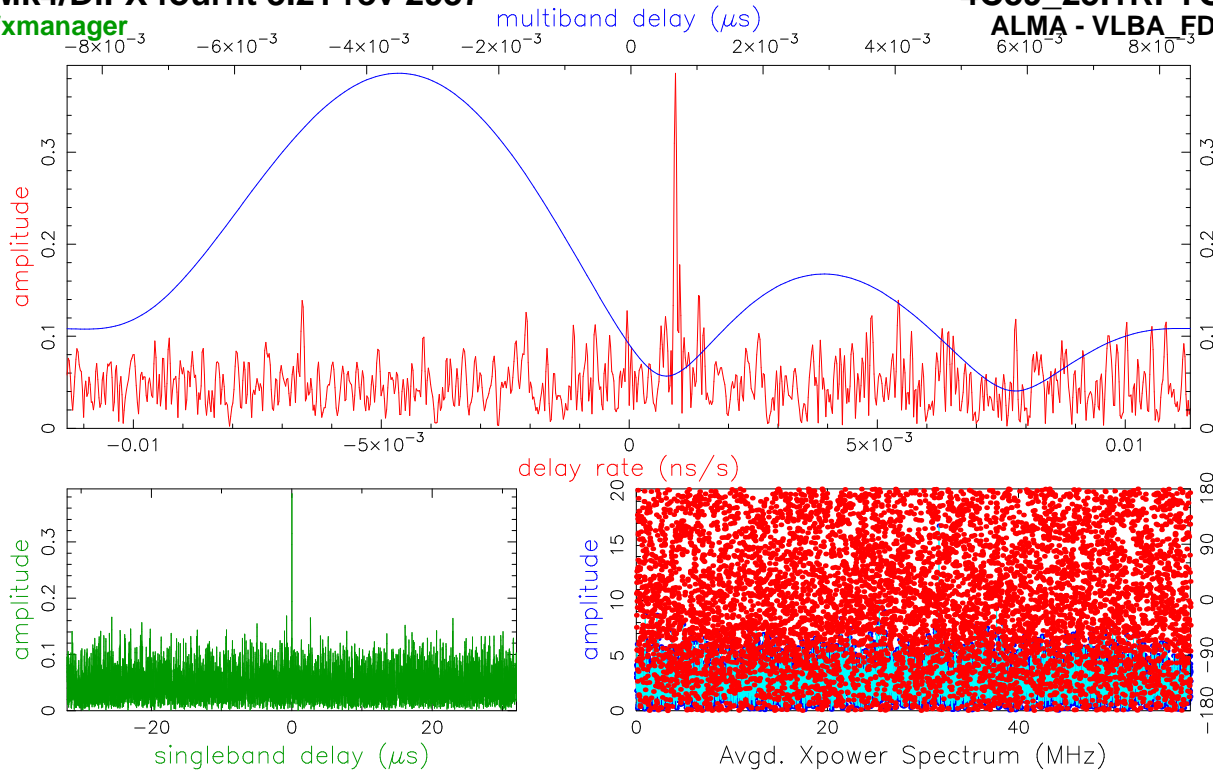
ph/seg (deg) 30.1 25.0 Amplitude 0.618 +/- 0.041 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 43.2 43.6 Search (1024X16) 0.593 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -32.000 32.000
 ph/frq (deg) 9.2 7.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.009 0.009
 amp/frq (%) 11.0 13.1 Inc. seg. avg. 0.627 Sample rate(MISamp/s): 116 Data rate(Mb/s): 928 nlags: 7424 t_cohere infinite dr window (ns/s) -0.011 0.011
 A: az 340.6 el 24.4 pa 156.8 f: az 49.0 el 76.3 pa -123.1 u,v (fr/asec) 4956.102 -6241.017 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Af..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Af.W.32.1RFYGV

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fxmanager

4C39_25.1RFYGV, No0014, Af

ALMA - VLBA FD, fgroup W, pol YL

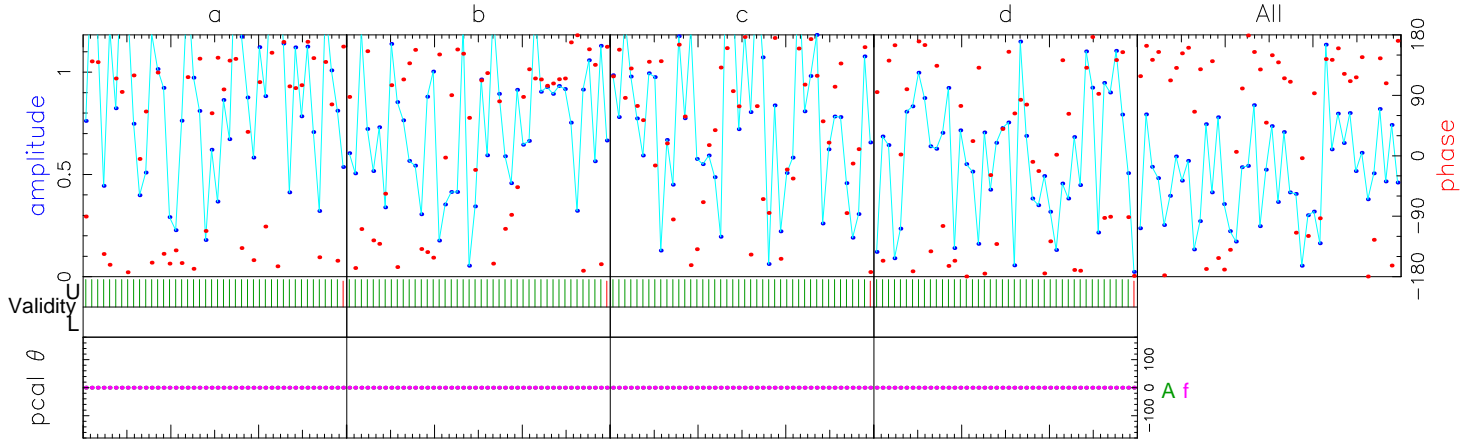


Fringe quality 9

SNR 9.7
 Int time 179.973
 Amp 0.394
 Phase 81.7
 PFD 8.2e-13
 Delays (us)
 SBD 0.015410
 MBD -0.003490
 Fringe rate (Hz)
 0.080842
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064823
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 44 segs, 8 APs / seg (4.10 sec / seg.), time ticks 5 sec



	86151.11	86209.70	86268.30	86326.89	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0		
A	0	0	0	0		
f	1000	1000	1000	1000		
A:f	0:0	0:0	0:0	0:0		
A:f	0:0	0:0	0:0	0:0		
A	1000	1000	1000	1000		
f	1000	1000	1000	1000		
A	W00UY	W01UY	W02UY	W03UY		
f	W01UL	W02UL	W03UL	W04UL		

Group delay (usec)(sbd)	-1.39846211608E+04	Apriori delay (usec)	-1.39846347374E+04	Resid mbdelay (usec)	-3.49003E-03	+/-	2.5E-04
Sband delay (usec)	-1.39846193275E+04	Apriori clock (usec)	-2.1178643E+03	Resid sbdelay (usec)	1.54099E-02	+/-	9.8E-04
Phase delay (usec)	-1.39846347326E+04	Apriori clockrate (us/s)	-1.3800001E-06	Resid phdelay (usec)	4.83651E-06	+/-	3.8E-07
Delay rate (us/s)	-6.7162655645E-01	Apriori rate (us/s)	-6.71627494145E-01	Resid rate (us/s)	9.38500E-07	+/-	3.7E-09
Total phase (deg)	-20.3	Apriori accel (us/s/s)	-6.07588527112E-07	Resid phase (deg)	81.7	+/-	11.8

ph/seg (deg)	55.5	Theor.	39.1	Amplitude	0.394 +/- 0.041	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-32.000	32.000
amp/seg (%)	64.3		68.3	Search (1024X16)	0.366	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled		mb window (us)	-0.009	0.009
ph/frq (deg)	18.9		11.8	Inc. seg. avg.	0.408	Bits/sample: 2x2	Sample rate(MSamp/s): 116		dr window (ns/s)	-0.011	0.011
amp/frq (%)	31.7		20.6	Inc. frq. avg.	0.387	Data rate(Mb/s): 928	nlags: 7424 t_cohere infinite		ion window (TEC)	0.00	0.00

A: az 340.6 el 24.4 pa 156.8 f: az 49.0 el 76.3 pa -123.1 u,v (fr/asec) 4956.102 -6241.017 simultaneous interpolator

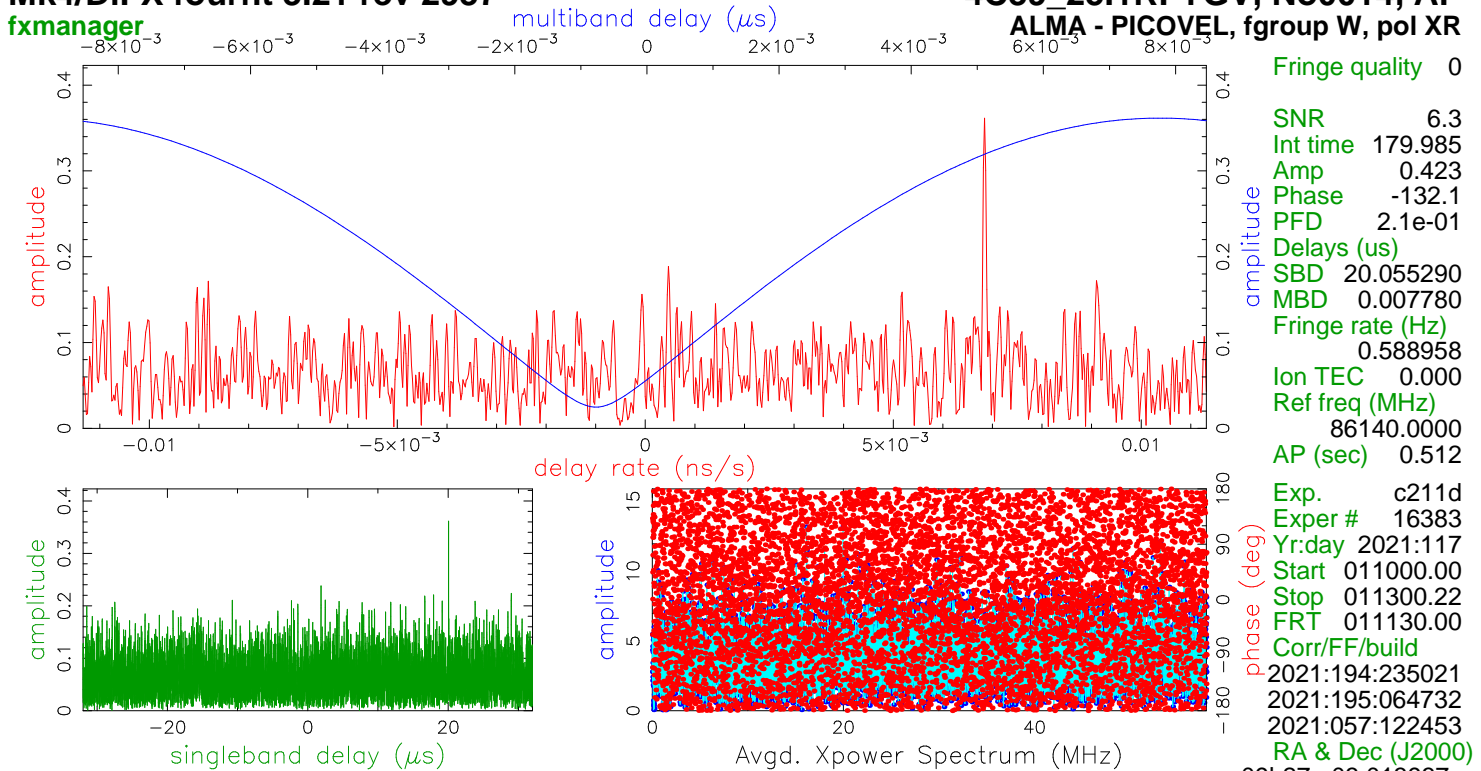
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/Af..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/Af.W.34.1RFYGV

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fxmanager

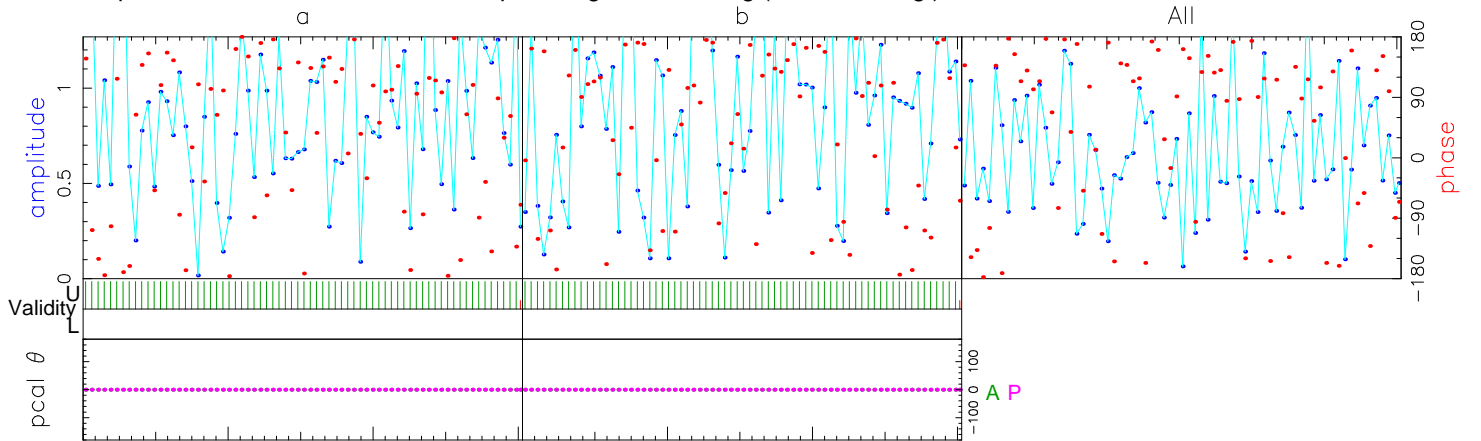
4C39_25.1RFYGV, No0014, AP

ALMA - PICOVEL, fgroup W, pol XR



Fringe quality 0
 SNR 6.3
 Int time 179.985
 Amp 0.423
 Phase -132.1
 PFD 2.1e-01
 Delays (us)
 SBD 20.055290
 MBD 0.007780
 Fringe rate (Hz) 0.588958
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064732
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70	86268.30	Freq (MHz)	All				
148.9	148.6	Phase	148.7				
0.4	0.5	Ampl.	0.4				
12598.1	12077.7	Sbd box	12077.8				
U/L 352/0	352/0	APs used					
A 0	0	PC freqs					
P 1000	1000	PC freqs					
A:P 0:0	0:0	PC phase					
A:P 0:0	0:0	ManI PC					
A 1000	1000	PC amp					
P 1000	1000						
A W01UX	W02UX	Chan ids					
P W02UR	W03UR	Tracks					
		Chan ids					
		Tracks					
Group delay (usec)(sbd)	-1.84984401753E+03	Apriori delay (usec)	-1.86990513084E+03	Resid mbdelay (usec)	7.77998E-03	+/-	8.6E-04
Sband delay (usec)	-1.84984984009E+03	Apriori clock (usec)	-2.1065220E+03	Resid sbdelay (usec)	2.00553E+01	+/-	1.5E-03
Phase delay (usec)	-1.86990512605E+03	Apriori clockrate (us/s)	-6.3000007E-07	Resid phdelay (usec)	4.79593E-06	+/-	5.8E-07
Delay rate (us/s)	5.24187819819E-01	Apriori rate (us/s)	5.24180982598E-01	Resid rate (us/s)	6.83722E-06	+/-	5.6E-09
Total phase (deg)	-121.6	Apriori accel (us/s/s)	-7.15794717295E-05	Resid phase (deg)	-132.1	+/-	18.1

ph/seg (deg)	RMS 71.3	Theor. 76.3	Amplitude Search (1024X8)	0.423 +/- 0.067	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-32.000	32.000
amp/seg (%)	123.5	133.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.009	0.009
ph/frq (deg)	0.0	12.8	Inc. seg. avg.	0.416	Bits/sample: 2x2	Sample rate(MISamp/s): 116	dr window (ns/s)	-0.011	0.011
amp/frq (%)	6.8	22.3	Inc. frq. avg.	0.412	Data rate(Mb/s): 464	nlags: 7424 t_cohere infinite	ion window (TEC)	0.00	0.00

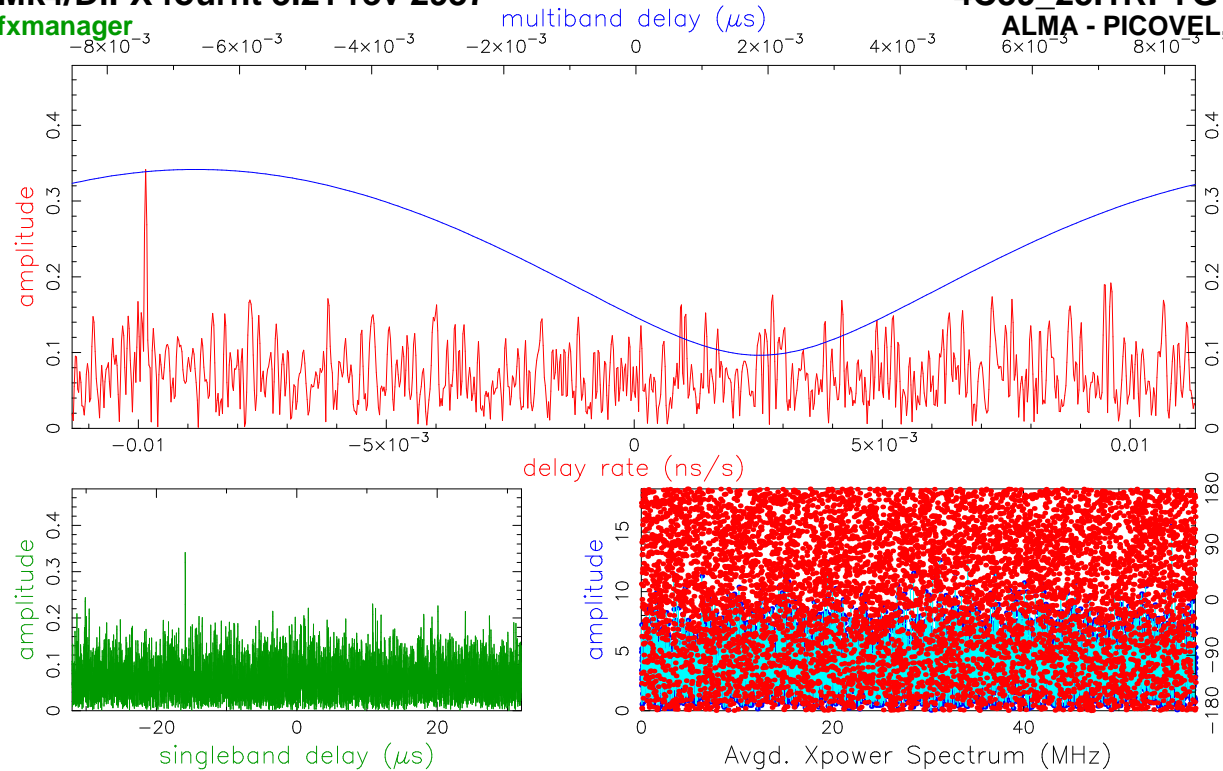
A: az 340.6 el 24.4 pa 156.8 P: az 301.7 el 24.1 pa 61.3 u,v (fr/asec) -3888.579 -11367.939 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AP..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AP.W.18.1RFYGV

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fxmanager

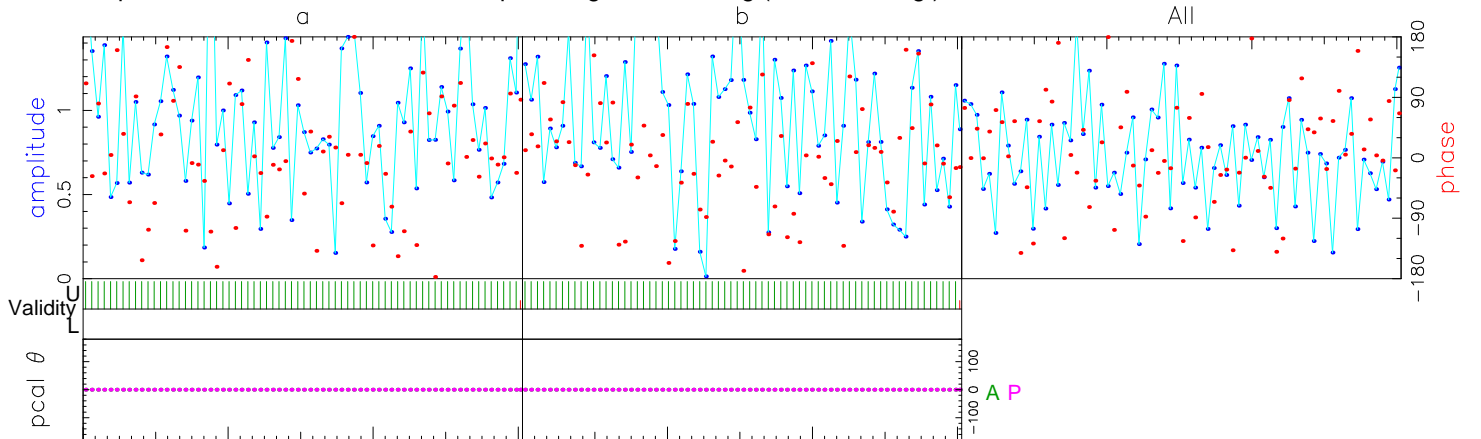
4C39_25.1RFYGV, No0014, AP

ALMA - PICOVEL, fgroup W, pol XL



Fringe quality 0
 SNR 6.0
 Int time 179.985
 Amp 0.479
 Phase 131.5
 PFD 8.4e-01
 Delays (us)
 SBD -15.876008
 MBD -0.006612
 Fringe rate (Hz)
 -0.847542
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064713
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70	86268.30	Freq (MHz)	All
14.1	13.0	Phase	13.4
0.3	0.6	Ampl.	0.5
435.7	3742.1	Sbd box	3741.8
U/L 352/0	352/0	APs used	
A 0	0	PC freqs	
P 1000	1000	PC freqs	
A:P 0:0	0:0	PC phase	
A:P 0:0	0:0	Manl PC	
A 1000	1000	PC amp	
P 1000	1000		
A W01UX	W02UX	Chan ids	
P W02UL	W03UL	Tracks	
		Chan ids	
		Tracks	

Group delay (usec)(sbd)	-1.88578374249E+03	Apriori delay (usec)	-1.86990513084E+03	Resid mbdelay (usec)	-6.61164E-03	+/-	9.0E-04
Sband delay (usec)	-1.88578113912E+03	Apriori clock (usec)	-2.1065220E+03	Resid sbdelay (usec)	-1.58760E+01	+/-	1.6E-03
Phase delay (usec)	-1.86990513041E+03	Apriori clockrate (us/s)	-6.3000007E-07	Resid phdelay (usec)	4.31806E-07	+/-	6.2E-07
Delay rate (us/s)	5.24171143478E-01	Apriori rate (us/s)	5.24180982598E-01	Resid rate (us/s)	-9.83912E-06	+/-	5.9E-09
Total phase (deg)	142.0	Apriori accel (us/s/s)	-7.15794717295E-05	Resid phase (deg)	131.5	+/-	19.1

ph/seg (deg)	RMS 75.9	Theor. 80.4	Amplitude 0.479 +/- 0.080	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-32.000	32.000
amp/seg (%)	140.3	140.3	Search (1024X8) 0.323	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.009	0.009
ph/frq (deg)	0.0	13.5	Interp. 0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 116	dr window (ns/s)	-0.011	0.011
amp/frq (%)	28.1	23.6	Inc. seg. avg. 0.516	Data rate(Mb/s): 464	nlags: 7424 t_cohere infinite	ion window (TEC)	0.00	0.00
			Inc. frq. avg. 0.463					

A: az 340.6 el 24.4 pa 156.8 P: az 301.7 el 24.1 pa 61.3 u,v (fr/asec) -3888.579 -11367.939 simultaneous interpolator

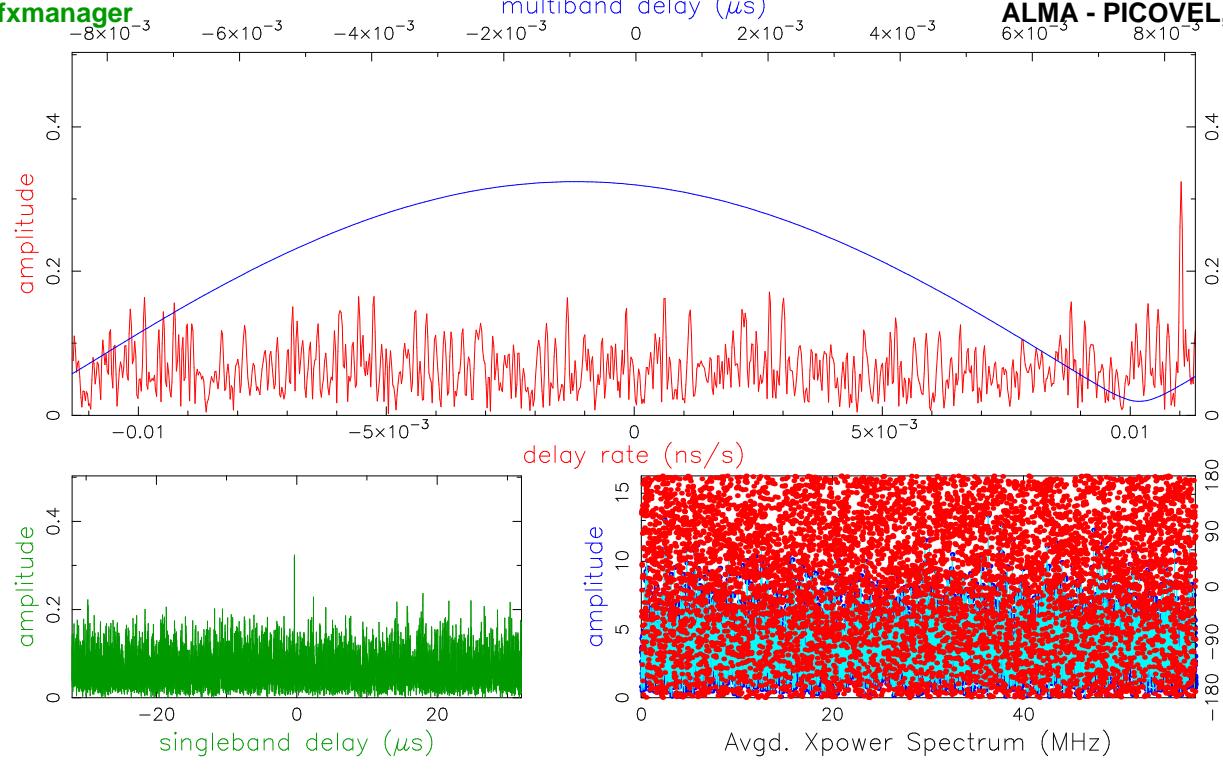
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AP..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AP.W.2.1RFYGV

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fxmanager

4C39_25.1RFYGV, No0014, AP

ALMA - PICOVEL, fgroup W, pol YL

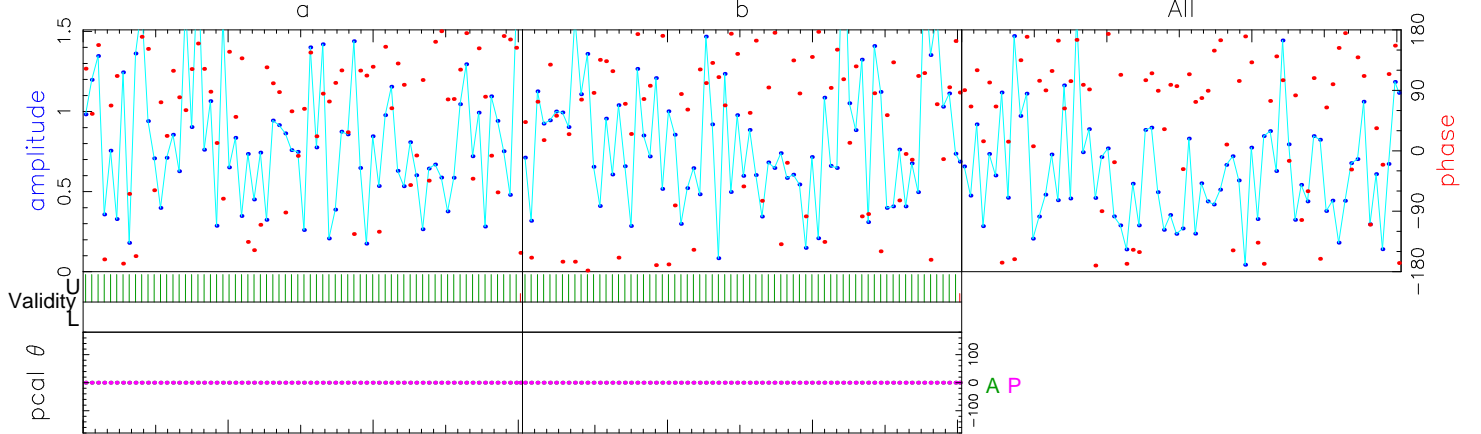


Fringe quality 0

SNR 5.7
 Int time 179.985
 Amp 0.503
 Phase 50.4
 PFD 1.0e+00
 Delays (us)
 SBD -0.337861
 MBD -0.000713
 Fringe rate (Hz)
 0.949712
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064741
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70	86268.30	Freq (MHz)	All
127.5	123.2	Phase	125.2
0.5	0.5	Ampl.	0.5
10143.2	4968.1	Sbd box	7346.6
U/L 352/0	352/0	APs used	
A 0	0	PC freqs	
P 1000	1000	PC freqs	
A:P 0:0	0:0	PC phase	
A:P 0:0	0:0	Manl PC	
A 1000	1000	PC amp	
P 1000	1000		
A W01UY	W02UY	Chan ids	
P W02UL	W03UL	Tracks	
		Chan ids	
		Tracks	

Group delay (usec)(sbd)	-1.87024717687E+03	Apriori delay (usec)	-1.86990513084E+03	Resid mbdelay (usec)	-7.12697E-04	+/-	9.5E-04
Sband delay (usec)	-1.87024299209E+03	Apriori clock (usec)	-2.1065220E+03	Resid sbdelay (usec)	-3.37861E-01	+/-	1.7E-03
Phase delay (usec)	-1.86990512681E+03	Apriori clockrate (us/s)	-6.3000007E-07	Resid phdelay (usec)	4.03858E-06	+/-	6.4E-07
Delay rate (us/s)	5.24192007814E-01	Apriori rate (us/s)	5.24180982598E-01	Resid rate (us/s)	1.10252E-05	+/-	6.2E-09
Total phase (deg)	60.8	Apriori accel (us/s/s)	-7.15794717295E-05	Resid phase (deg)	50.4	+/-	19.9

ph/seg (deg)	RMS 73.2	Theor. 84.0	Amplitude Search (1024X8)	0.503 +/- 0.088	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-32.000	32.000
amp/seg (%)	133.1	146.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.009	0.009
ph/frq (deg)	0.0	14.1	Inc. seg. avg.	0.458	Bits/sample: 2x2	Sample rate(MISamp/s): 116	dr window (ns/s)	-0.011	0.011
amp/frq (%)	6.1	24.6	Inc. frq. avg.	0.481	Data rate(Mb/s): 464	nlags: 7424 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 340.6 el 24.4 pa 156.8 P: az 301.7 el 24.1 pa 61.3 u,v (fr/asec) -3888.579 -11367.939 simultaneous interpolator

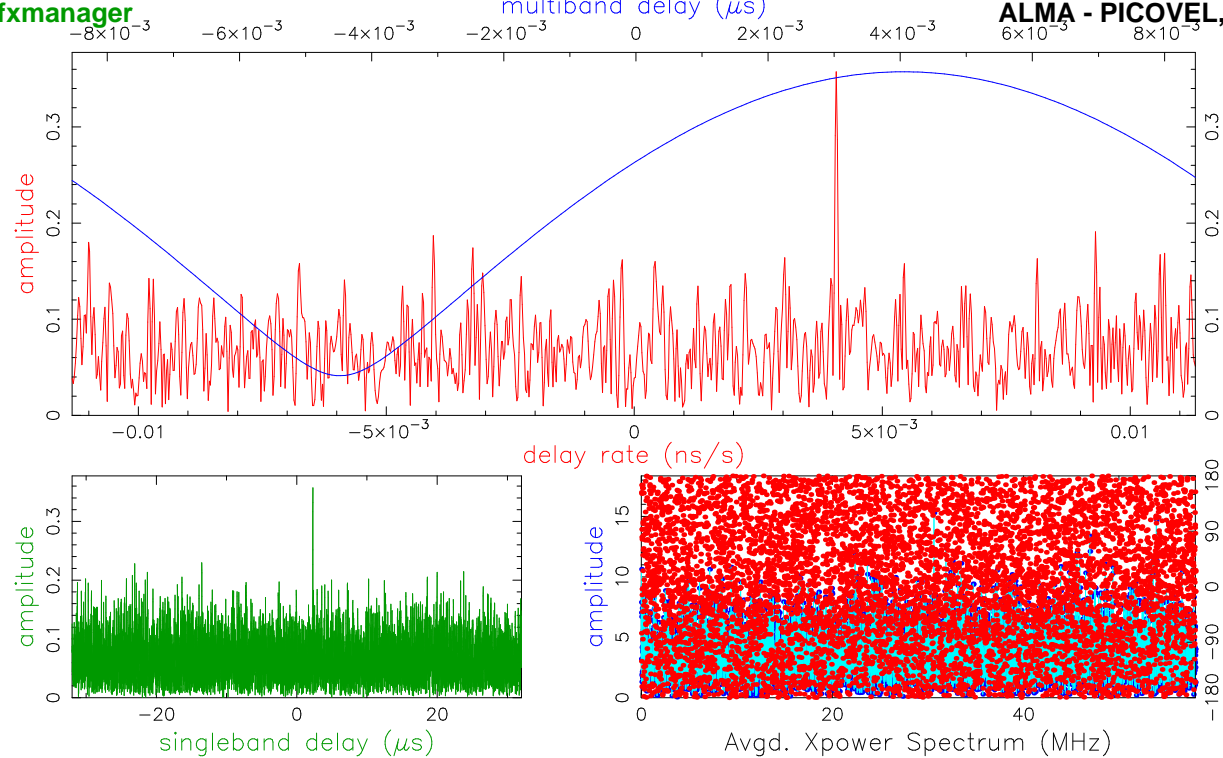
Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AP..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AP.W.25.1RFYGV

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

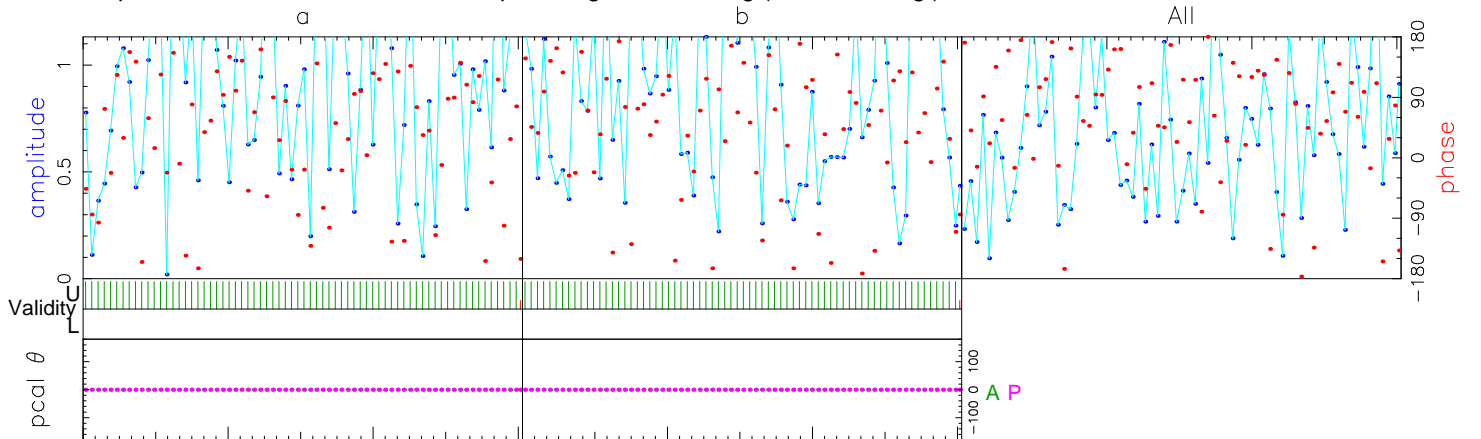
4C39_25.1RFYGV, No0014, AP

ALMA - PICOVEL, fgroup W, pol YR



Fringe quality 0
 SNR 6.2
 Int time 179.985
 Amp 0.378
 Phase -58.9
 PFD 3.3e-01
 Delays (us)
 SBD 2.289306
 MBD 0.003981
 Fringe rate (Hz)
 0.350949
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c211d
 Exper # 16383
 Yr:day 2021:117
 Start 011000.00
 Stop 011300.22
 FRT 011130.00
 Corr/FF/build
 2021:194:235021
 2021:195:064722
 2021:057:122453
 RA & Dec (J2000)
 09h27m03.013937s
 +39°02'20.851847"

Amp. and Phase vs. time for each freq., 71 segs, 5 APs / seg (2.56 sec / seg.), time ticks 5 sec



86209.70		86268.30		Freq (MHz)		All
U/L	352/0	352/0	0	Phase		87.5
A	0	0	0	Ampl.		0.4
P	1000	1000	0	Sbd box		7956.1
A:P	0:0	0:0	0:0	APs used		
A:P	0:0	0:0	0:0	PC freqs		
A	1000	1000	1000	PC phase		
P	1000	1000	1000	ManI PC		
A	W01UY	W02UY	W03UR	PC amp		
P	W02UR	W03UR		Chan ids		
				Tracks		
				Chan ids		
				Tracks		

Group delay (usec)(sbd)	-1.86761421620E+03	Apriori delay (usec)	-1.86990513084E+03	Resid mbdelay (usec)	3.98131E-03	+/-	8.7E-04
Sband delay (usec)	-1.86761582519E+03	Apriori clock (usec)	-2.1065220E+03	Resid sbdelay (usec)	2.28931E+00	+/-	1.5E-03
Phase delay (usec)	-1.86990512802E+03	Apriori clockrate (us/s)	-6.3000007E-07	Resid phdelay (usec)	2.82011E-06	+/-	5.9E-07
Delay rate (us/s)	5.24185056773E-01	Apriori rate (us/s)	5.24180982598E-01	Resid rate (us/s)	4.07418E-06	+/-	5.7E-09
Total phase (deg)	-48.4	Apriori accel (us/s/s)	-7.15794717295E-05	Resid phase (deg)	-58.9	+/-	18.3

ph/seg (deg)	RMS 70.9	Theor. 77.3	Amplitude Search (1024X8)	0.378 +/- 0.060	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-32.000	32.000
amp/seg (%)	133.4	134.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.009	0.009
ph/frq (deg)	0.0	13.0	Inc. seg. avg.	0.378	Bits/sample: 2x2	Sample rate(MISamp/s): 116	dr window (ns/s)	-0.011	0.011
amp/frq (%)	11.5	22.6	Inc. frq. avg.	0.368	Data rate(Mb/s): 464	nlags: 7424 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 340.6 el 24.4 pa 156.8 P: az 301.7 el 24.1 pa 61.3 u,v (fr/asec) -3888.579 -11367.939 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211d/v1/1234/No0014/AP..1RFYGV Output file: /Exps/c211d/v1/1234/No0014/AP.W.9.1RFYGV